MICROFILMED DEC 7 1984
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STATE OF OHIO
DEPARTMENT OF HIGHWAYS
TRU- 80-8.90

HUBBARD TOWNSHIP
TRUMBULL COUNTY

GRADE SEPARATION WITH THE NEW YORK CENTRAL RAILROAD COMPANY AND THE ERIE-LACKAWANNA RAILROAD COMPANY

I-IG-80-5(9)245

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 THE PROVISIONS OF SECTION 5511.02 OF THE REVISED CODE OF OHIO.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

1/401

TRUMBULL COUNTY
TRU- 80-8.90

Project designation TRU-I-80-8.90 appearing throughout this plan shall be considered to read TRU-80-8.90

MICROFILMED AUG 31 REPRODUCTION

CONVENTIONAL SIGNS

STATE LINE
COUNTY LINE
TOWNSHIP LINE
SECTION LINE
CENTER LINE
CORPORATION LINE
FENCE LINE
GUARD RAIL (EXISTING)
GUARD RAIL (PROPOSED)
STEAM RAILROAD — or
POWER POLES
TELEPHONE POLES
TREES (EXISTING)
TREES OR STUMPS (TO BE REMOVED)
LIMITED ACCESS AND RIGHT OF WAY — LA — RW
LIMITED ACCESS ONLY — LA
RIGHT OF WAY ONLY — RW
EXISTING RIGHT OF WAY
CONSTRUCTION LIMITS

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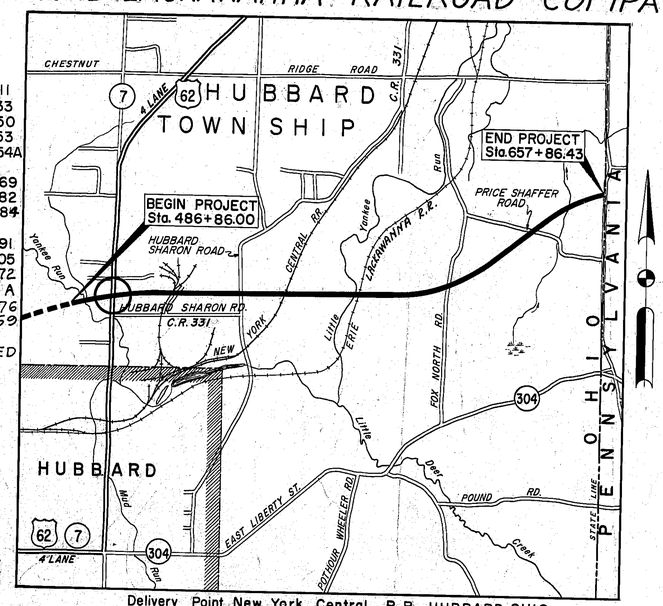
SHEETS № 14, 15, 294, 377 & 399 DELETED

Sheets Nos. 18-A & 19 revised 3-16-64 C.E.H.



Delivery Point New York Central R.R. HUBBARD, OHIO
Average Haul From Siding ———— 1.8 Miles

LOCATION MAP

SCALE OF MILES 0 1 2 3

HORIZ. SCALE- PLAN & PROFILE 0 25 50 Ft. 100 Ft. 150 Ft. 200 Ft.

VERT. SCALE-PROFILE 0 5 Ft. 10 Ft. 15 Ft. 20 Ft.

HORIZ. & VERT. SCALE-X-SECTIONS 0 10 Ft. 20 Ft. 30 Ft. 40 Ft.

PORTION TO BE IMPROVED
PORTION UNDER SEPARATE CONTRACT
STATE ROADS & LOCAL ROADS

LINE DATA

	I-80-5(9)245	IG-80-5(9) 245	I-IG-80-5(9) 245
Begin Project	Sta. 486+86.00	Sta. 545+25.00	Sta. 486+86.00
Suspend Project	Sta. 545+25.00		
Resume Project	Sta. 574+75.00		
End Project	Sta. 657+86.43	Sta. 574+75.00	Sta. 657+86.43
Additions &/or Deductions			
LENGTH OF PROJECT	14,150.43 Ft. or 2.680 Mi.	2,950.00 Ft. or 0.558 Mi.	17,100.43 Ft. or 3.238 Mi.
Add for Approaches*			
Main Line	136.00 Ft.		136.00 Ft.
U.S.R. 62 & S.R. 7	1,695.00 Ft.		1,695.00 Ft.
Reconst. Hubbard-Sharon Rd.	345.75 Ft.		345.75 Ft.
Reloc. Fox-North Rd.	3,264.00 Ft.		3,264.00 Ft.
Reloc. Price-Shaffer Rd.	2,279.51 Ft.		2,279.51 Ft.
Reloc. State Line Rd.	2,735.78 Ft.		2,735.78 Ft.
LENGTH OF WORK	24,606.47 Ft. or 4.661 Mi.	2,950.00 Ft. or 0.558 Mi.	27,556.47 Ft. or 5.219 Mi

*See Sheet No. 2

1963 SPECIFICATIONS

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 M. Gearhart
Date Oct 28 1963 Division Deputy Director

Approved D.H. Sherman
Date 11-8-63 Engineer of Bridges

Approved R.D. Ricketts
Date 11-12-63 Engineer of Location and Design

Approved R.E. Shultz
Date 11-12-63 Deputy Director of Design & Construction

Approved T.H. Board
Date 11-12-63 Deputy Director, Division of R/W

Approved T.W. Wilson
Date 12-5-63 Deputy Director, of Planning and Programming

Approved _____
Date _____ First Assistant Director

Approved P.E. Masheter
Date 12/5/63 Director of Highways

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

R.R.A. No. 1-A	1-20-58	R.R.A. No. 4-B	1-20-58	R.R.A. No. 4C	10-15-63	T-35	1-2-56
B-T-70-71	11-15-60	SP-53	6-30-61	I-8 M.H. NO. 1	2-1-63	R.R.A. No. 5	11-3-58
B-T-71 R	3-2-53	HW-E	2-1-63	I-8 M.H. NO. 1-A	2-1-63	L-2	4-1-50
DR-1	1-33-55	I-1	11-15-60	F-2	2-1-63	L-3	4-1-50
CSB-2-56 Sht. 2&3	2-2-59	I-8 C.B. 2-2A & B	2-1-63	F-3	2-1-63	L-3-A	4-1-50
AR-1-57	4-2-62	I-8 C.B. 2-3 & 2-4	2-1-63	I-12	2-1-63	L.J. NO. 1	7-1-55
FAC I-1	3-8-63	I-8 C.B. NO. 5	2-1-63	I-15 NO. 1	11-15-60	R1-1	7-15-58
FAC I-2	3-8-63	I-8 C.B. NO. 6	2-1-63	I-15 NO. 2 A	8-17-60	R.R.A. NO. 1	2-1-63
G-7.07	6-1-56	ESB-1-62	1-15-63	I-15 NO. 5 A	2-1-63	R.R.A. NO. 2	1-20-58
HW-A & B	7-15-57	I-8 C.B. NO. 8	2-1-63	I-15 NO. 6	2-1-63	T-J	9-12-60
HW-C	7-15-57	AS-1-54	7-5-62	I-21-23	8-1-56	L-1	4-1-50
						I-14 G	1-22-52

SUPPLEMENTAL SPECIFICATIONS

S-101	7-12-62
M-106.11	7-26-61
B-112	8-21-61
CE-101.04	5-22-56
I-212	R-6-23-61
I-125	R-6-26-61
I-127	R-1-15-62
M-107.18	R-4-3-61
S-103	R-2-16-55
S-107	R-2-16-55
L-120	R-7-2-62
I-122	R-4-5-61

STATE OF OHIO HARRY O. WAGNER 23701 REGISTERED PROFESSIONAL ENGINEER
Exp. 12/31/63
Harry O. Wagner P.E.

FILE NO. TRUMBULL COUNTY TRU- 80-8.90
DATE OF LETTING _____ 19____
CONTRACT NO. _____

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED

DIVISION ENGINEER _____ DATE _____

SCHEMATIC PLAN

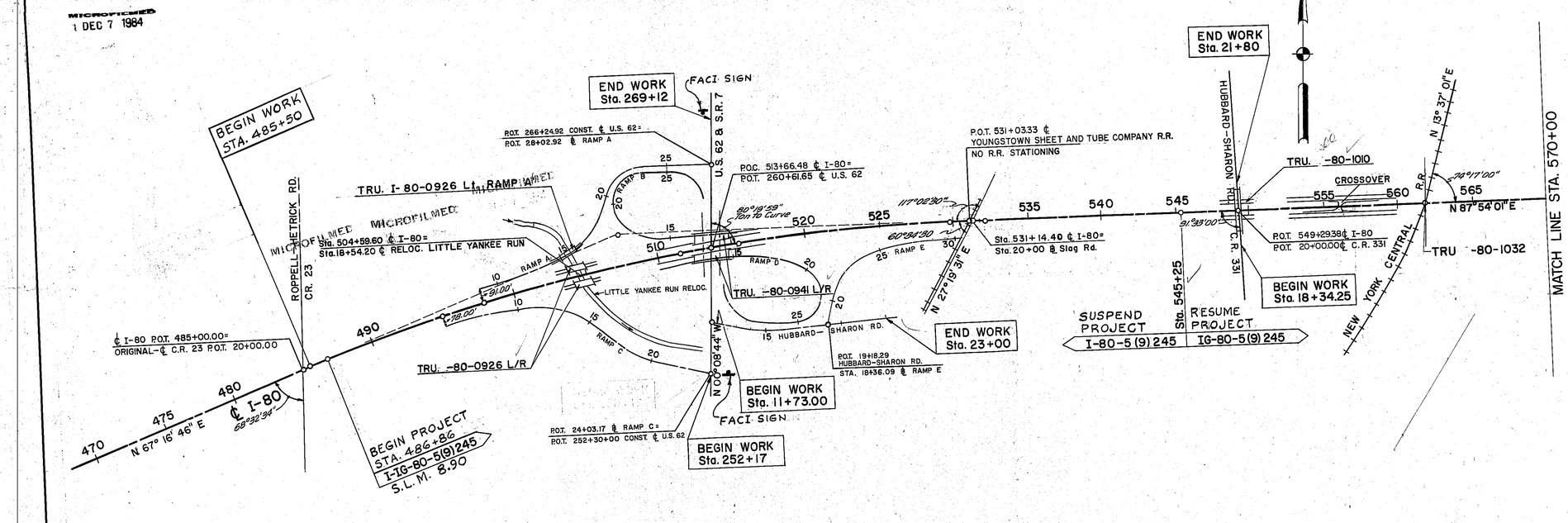
SCALE 1" = 400'

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

2/101

TRUMBULL COUNTY TRU-I-80-8.90

MICROFILMED
DEC 7 1984



WORK LENGTHS

MAIN LINE
Begin Work Sta. 485+50.00
Begin Project Sta. 486+86.00
Length 136.00 Lin. Ft.

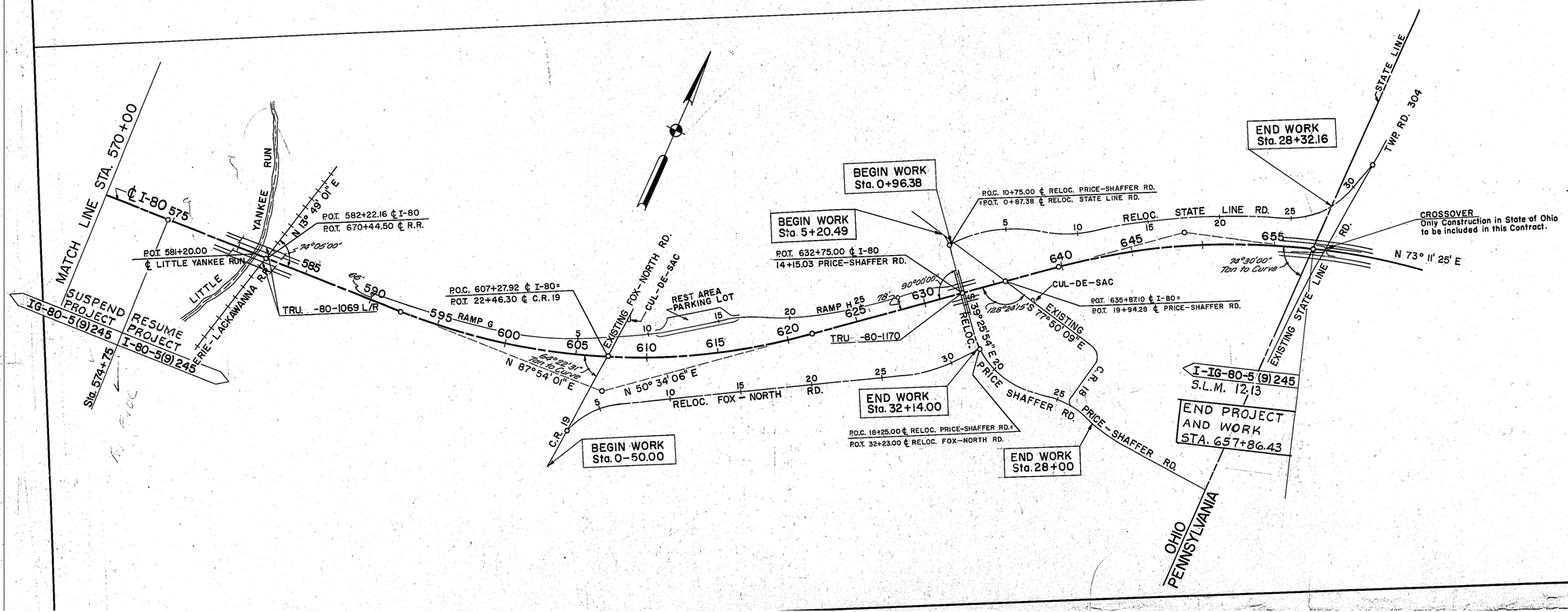
U.S.R. 62 & S.R. 7
Begin Work Sta. 252+17.00
End Work Sta. 269+12.00
Length 1,695.00 Lin. Ft.

RECONSTR. HUBBARD-SHARON RD.
Begin Work Sta. 18+34.25
End Work Sta. 21+80.00
Lenght 345.75 Lin. Ft.

RELOC. FOX-NORTH RD.
Begin Work Sta. 0-50.00
End Work Sta. 32+14.00
Lenght 3,264.00 Lin. Ft.

RELOC. PRICE-SHAFFER RD.
Begin Work Sta. 5+20.49
End Work Sta. 28+00.00
Length 2,279.51 Lin. Ft.

RELOC. STATE LINE RD.
Begin Work Sta. 0+96.38
End Work Sta. 28+32.16
Length 2,735.78 Lin. Ft.



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

3/401

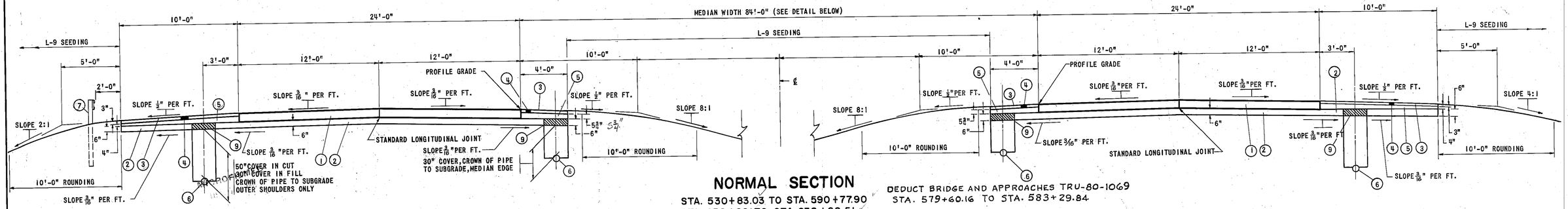
TRUMBULL COUNTY TRU-I-80-8.90

TYPICAL SECTIONS

TYPE T-71

NOT TO SCALE

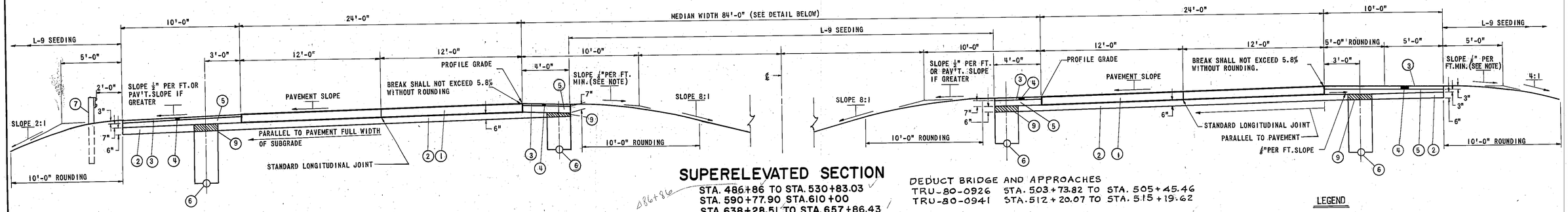
NOTE:
ADJACENT TO SPEED CHANGE LANES & RAMPS, THE THICKNESS OF THE B-21 SHALL BE INCREASED TO 6" WITH A COMPENSATING REDUCTION IN THICKNESS OF THE B-112.



NORMAL SECTION

STA. 530+83.03 TO STA. 590+77.90
STA. 630+00 TO STA. 638+28.51

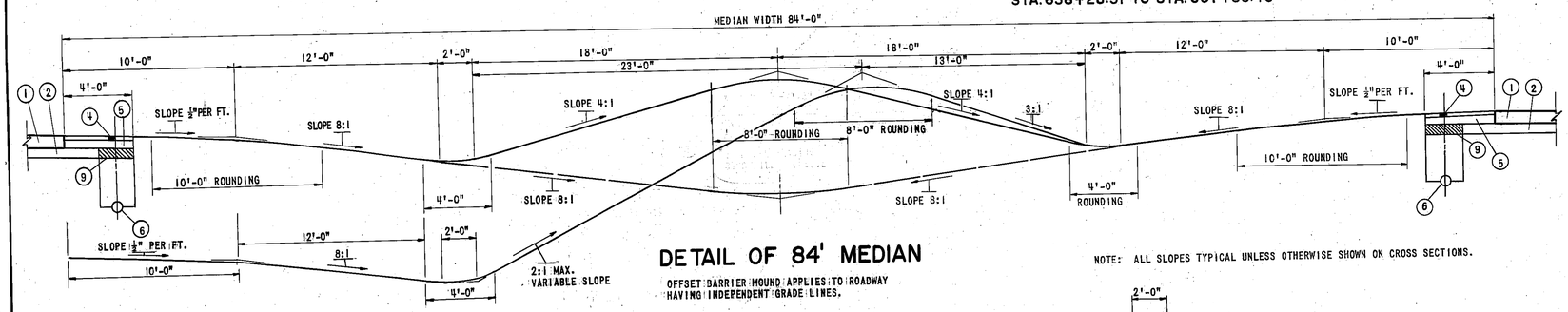
DEDUCT BRIDGE AND APPROACHES TRU-80-1069
STA. 579+60.16 TO STA. 583+29.84



SUPERELEVATED SECTION

STA. 486+86 TO STA. 530+83.03
STA. 590+77.90 STA. 610+00
STA. 638+28.51 TO STA. 657+86.43

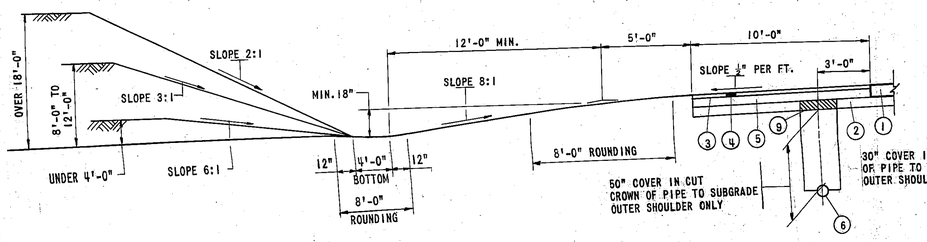
DEDUCT BRIDGE AND APPROACHES
TRU-80-0926 STA. 503+73.82 TO STA. 505+45.46
TRU-80-0941 STA. 512+20.07 TO STA. 515+19.62



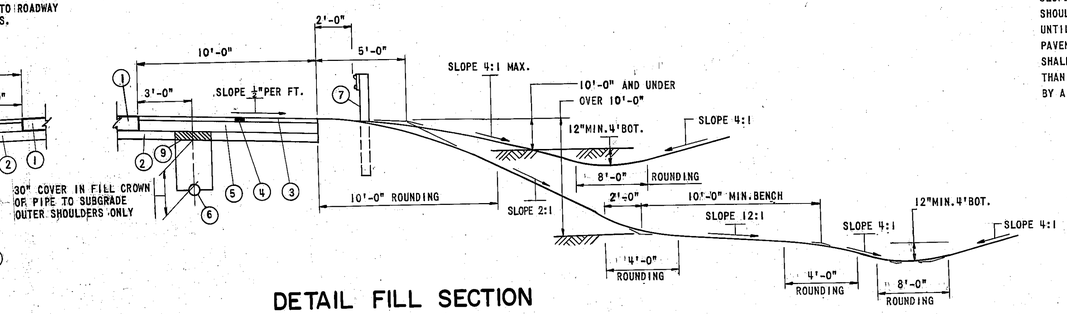
DETAIL OF 84' MEDIAN

OFFSET BARRIER MOUND APPLIES TO ROADWAY HAVING INDEPENDENT GRADE LINES.

NOTE: ALL SLOPES TYPICAL UNLESS OTHERWISE SHOWN ON CROSS SECTIONS.



DETAIL CUT SECTION



DETAIL FILL SECTION

LEGEND

1. T-71 10" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
2. I-22 SUBBASE, A OR B GRADING MODIFIED AS PER GENERAL NOTE
3. T-31 BITUMINOUS SURFACE TREATMENT USING 0.008 CU.YD. NO. 6 AGGREGATE PER SQ. YD. AND 0.25 GAL. BITUMINOUS MATERIAL PER SQ. YD. (SEE NOTE IN PROPOSAL)
4. B-21 3" WATERPROOFED AGGREGATE BASE COURSE (TYPE "A" T-35 MATERIAL MAY BE USED IN CONSTRUCTION OF THIS COURSE - (SEE NOTE IN PROPOSAL)
5. B-112 POROUS BASE COURSE
6. I-1 6" PIPE, CLASS I-3
7. I-15 GUARD RAIL STEEL BEAM STANDARD TYPE (DEEP)
9. REMOVE SUBBASE FOR WIDTH OF ITEM I-1 TRENCH AND REPLACE WITH TYPE 3 BACKFILL IMMEDIATELY PRIOR TO PLACING ITEM B-112 POROUS BASE COURSE. COST SHALL BE INCLUDED IN PRICE BID PER LIN. FT. FOR ITEM I-1.

* THICKNESS SHOWN IS DESIGN THICKNESS AS DESCRIBED IN SEC. B-21.01.

NOTES

IN SUPERELEVATED SECTIONS THE MEDIAN PAVED SHOULDER SHALL SLOPE AWAY FROM THE PAVEMENT ON THE LOW SIDE AS SHOWN. AT THE HIGH SIDE, THE MEDIAN PAVEMENT SHALL SLOPE AWAY FROM THE PAVEMENT AT THE RATE OF 1/4" PER FOOT UNTIL THE BREAK BETWEEN SHOULDER & PAVEMENT REACHES 5.8% AFTER WHICH THE SAME ANGLE SHALL BE MAINTAINED UNTIL THE SLOPE OF THE SHOULDER WOULD BE LESS THAN 1/8" PER FOOT, AFTER WHICH PAVEMENT SLOPE SHALL BE EXTENDED THROUGH THE SHOULDER. THE OUTSIDE SHOULDER SHALL RECEIVE THE SAME TREATMENT EXCEPT THAT, WHERE THE SLOPE WOULD BE LESS THAN 1/8" PER FOOT, THE PAVEMENT SLOPE & 1/8" SHOULDER SLOPE SHALL BE JOINED BY A GENTLE ROUNDING.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

TRUMBULL COUNTY TRU-I-80-8.90

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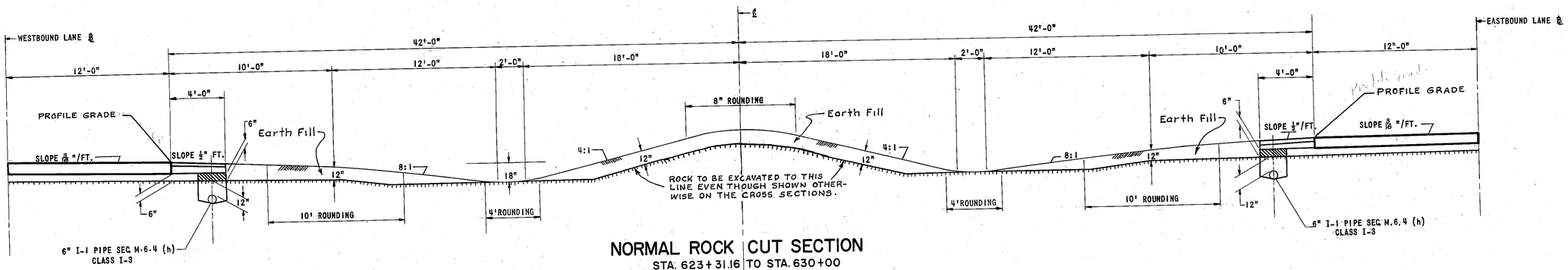
TYPICAL SECTIONS

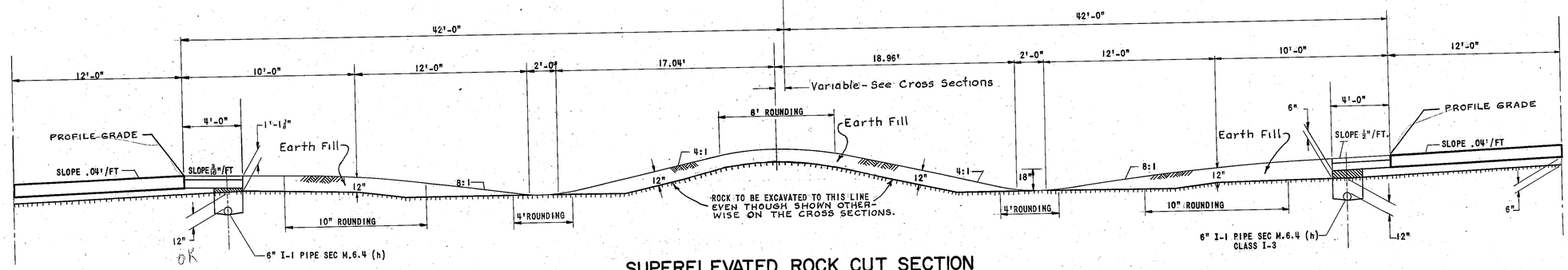
TYPE T-71

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



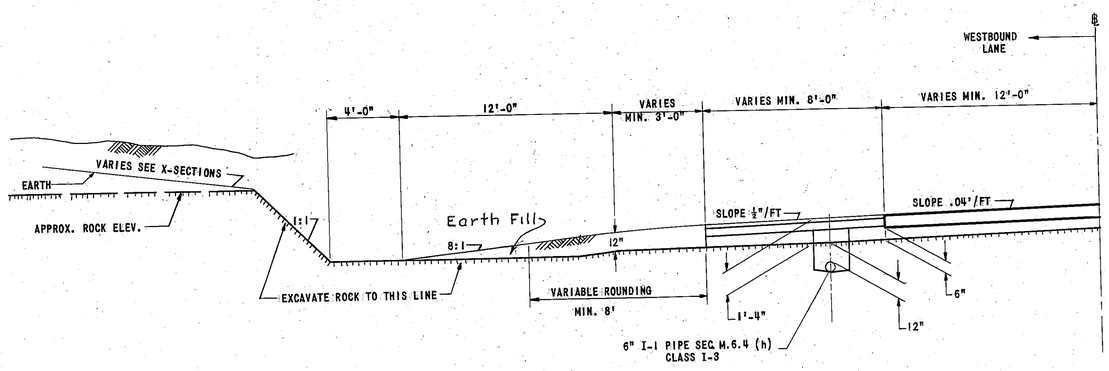
NORMAL ROCK CUT SECTION

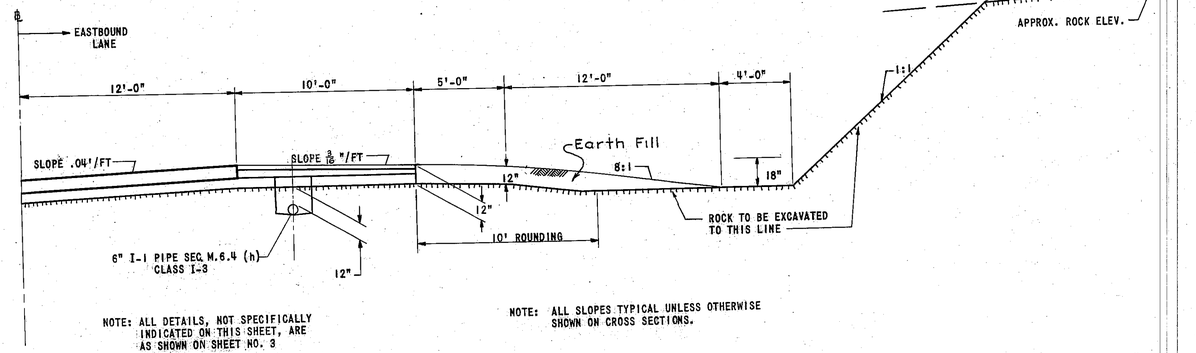
STA. 623+31.16 TO STA. 630+00



SUPERELEVATED ROCK CUT SECTION

STA. 610+00 TO STA. 623+31.16





NOTE: ALL DETAILS, NOT SPECIFICALLY INDICATED ON THIS SHEET, ARE AS SHOWN ON SHEET NO. 3

NOTE: ALL SLOPES TYPICAL UNLESS OTHERWISE SHOWN ON CROSS SECTIONS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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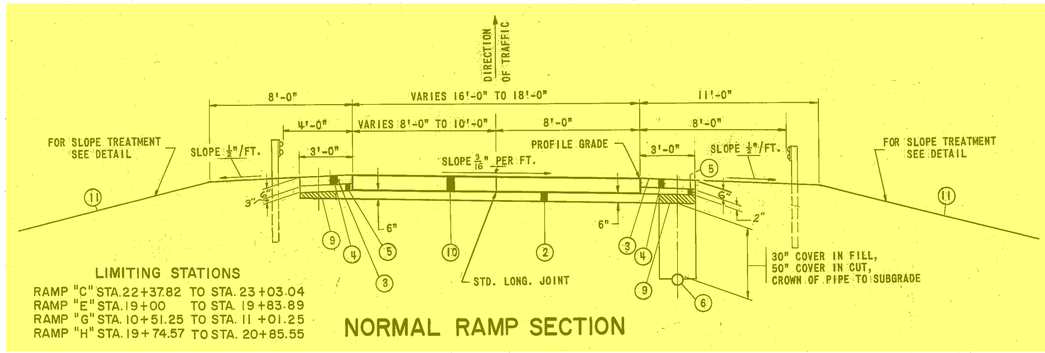
TRUMBULL COUNTY TRU-I-80-8.90

TYPICAL SECTIONS

TYPE T-71

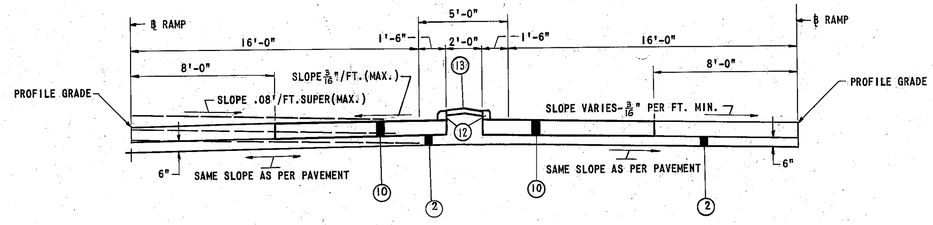
SCALE 1/4" = 1'-0"



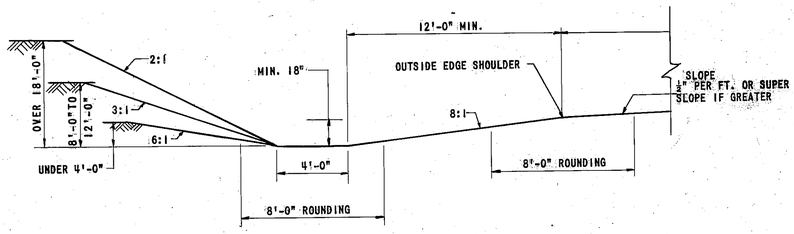
LIMITING STATIONS

RAMP "C" STA. 22+37.82 TO STA. 23+03.04
RAMP "E" STA. 19+00 TO STA. 19+83.89
RAMP "G" STA. 10+51.25 TO STA. 11+01.25
RAMP "H" STA. 19+74.57 TO STA. 20+85.55

NORMAL RAMP SECTION



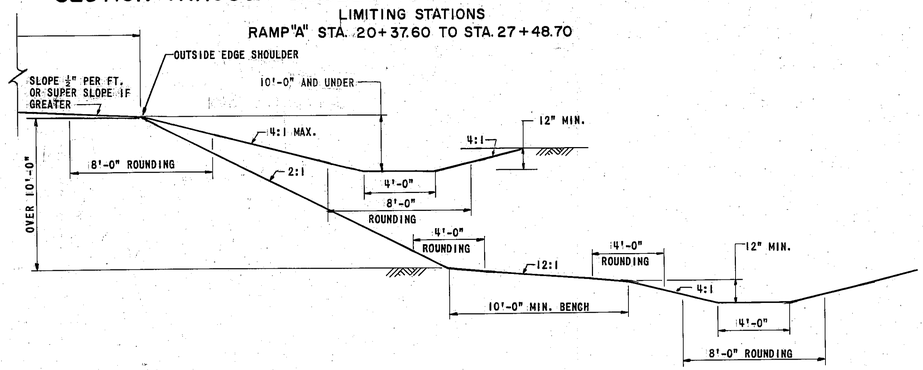
SECTION THROUGH DOUBLE RAMP SHOWING PAVED DIVIDER



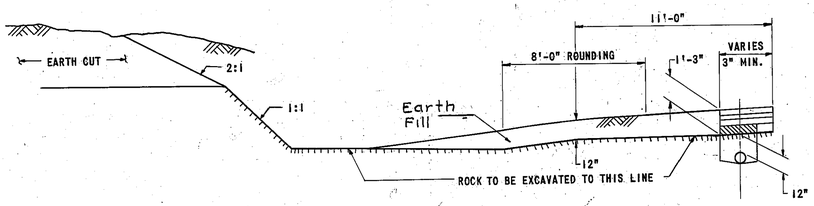
DETAIL CUT SECTION

LIMITING STATIONS

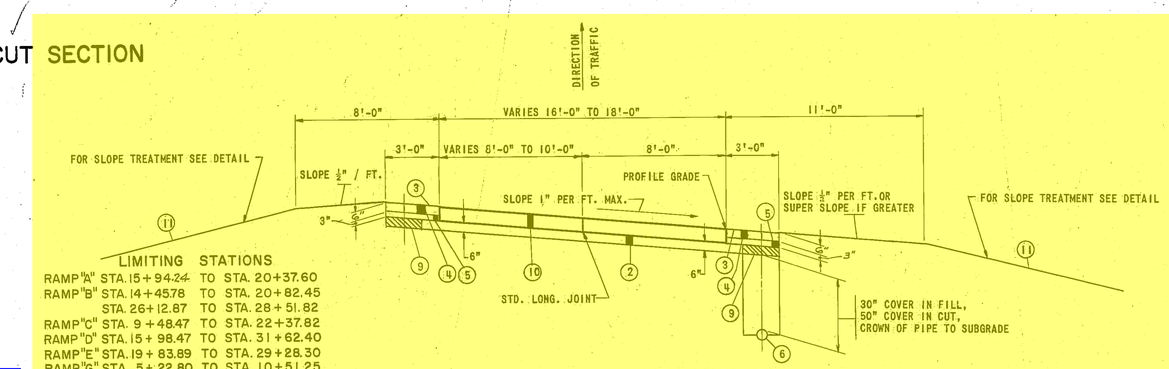
RAMP "A" STA. 20+37.60 TO STA. 27+48.70



DETAIL FILL SECTION



DETAIL ROCK CUT SECTION



LIMITING STATIONS

RAMP "A" STA. 15+94.24 TO STA. 20+37.60
RAMP "B" STA. 14+45.78 TO STA. 20+82.45
STA. 26+12.87 TO STA. 28+51.82
RAMP "C" STA. 9+48.47 TO STA. 22+37.82
RAMP "D" STA. 15+98.47 TO STA. 31+62.40
RAMP "E" STA. 19+83.89 TO STA. 29+28.30
RAMP "G" STA. 5+22.80 TO STA. 10+51.25
RAMP "H" STA. 16+20.87 TO STA. 19+74.57
STA. 20+85.55 TO STA. 23+18.21

SUPERELEVATED RAMP SECTION

RAMP "G" ON-RAMP
RAMP "H" OFF-RAMP

LEGEND

(10) ITEM T-71 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT

(3) ITEM T-31 BITUMINOUS SURFACE TREATMENT USING 0.008 CU.YD.NO.6 AGGREGATE SQ.YD. & 0.25 GALLON BITUMINOUS MATERIAL PER. SQ. YD. (SEE NOTE IN PROPOSAL)

(5) ITEM B-112 POROUS BASE COURSE

*(4) ITEM B-216 WATERPROOFED AGGREGATE BASE COURSE (TYPE "A" T-35 MATERIAL MAY BE USED IN CONSTRUCTION OF THIS COURSE - (SEE NOTE IN PROPOSAL)

(2) ITEM I-22 SUBBASE A OR B GRADING, MOD. AS PER GENERAL NOTE.

(6) ITEM I-1 6" PIPE, CLASS I-3

(11) ITEM L-9 SEEDING AND PROTECTING

(9) REMOVE SUBBASE FOR WIDTH OF ITEM I-1 TRENCH & REPLACE WITH TYPE 3 BACKFILL IMMEDIATELY PRIOR TO PLACING ITEM B-112 POROUS BASE COURSE. COST SHALL BE INCLUDED IN PRICE BID PER LINEAL FOOT FOR ITEM I-1.

(12) ITEM I-12 PORTLAND CEMENT CONCRETE CURB STANDARD TYPE 2-A

(13) ITEM I-21 CONCRETE MEDIAN PAVEMENT - 4" TYPE 1

* THICKNESS SHOWN IS DESIGN THICKNESS AS DESCRIBED IN SEC. B-21.01.

NOTE

ALL SLOPES TYPICAL UNLESS OTHERWISE SHOWN ON CROSS-SECTIONS.

TYPICAL SECTIONS

TYPE T-71 & B-19

SCALE AS NOTED

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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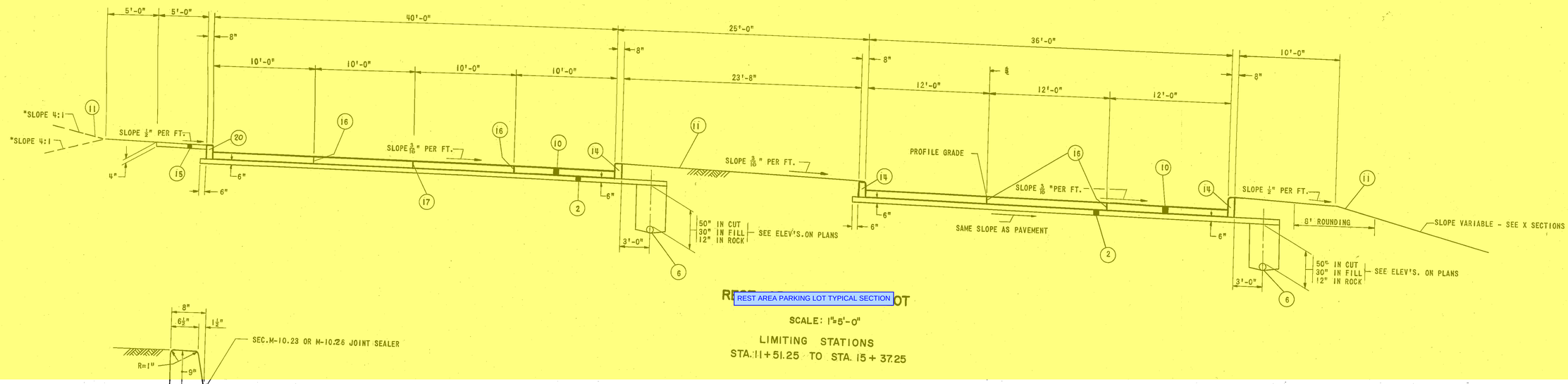
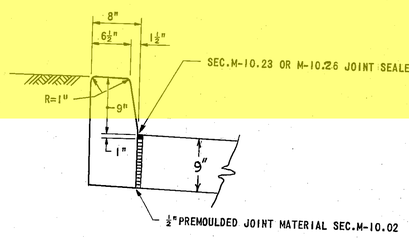
401

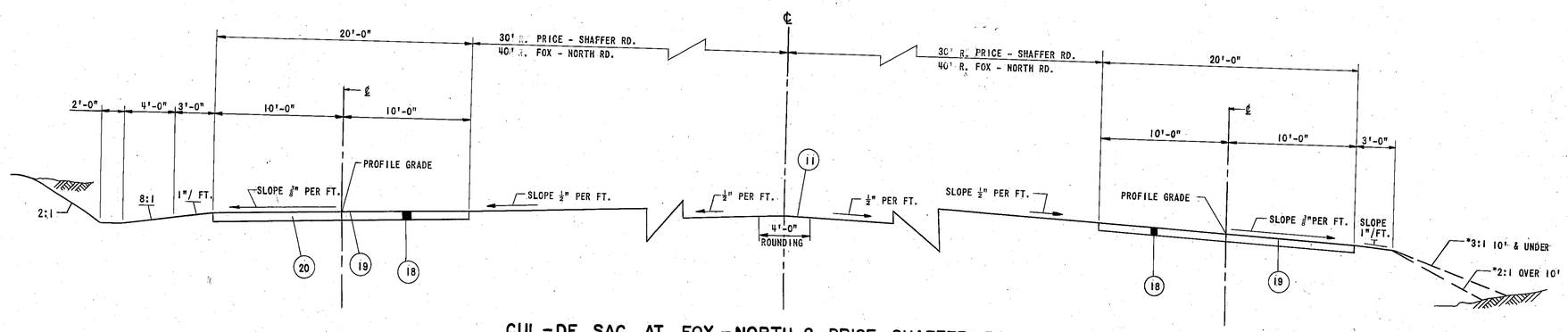
TRUMBULL COUNTY TRU-I-80-8.90





TYPE 7 PORTLAND CEMENT
CONCRETE CURB DETAIL

SCALE: 1" = 1'-0"



CUL-DE SAC AT FOX-NORTH & PRICE-SHAFFER ROAD

NOT TO SCALE

PRICE-SHAFFER ROAD
LIMITING STATIONS
STA. 0+00 TO STA. 7+27

FOX-NORTH ROAD
LIMITING STATIONS

LEGEND

(10) ITEM T-71 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT.
(2) ITEM I-22 SUBBASE GRADING A OR B, MODIFIED AS PER GENERAL NOTE.
(14) ITEM I-12 TYPE 7 PORTLAND CEMENT CONCRETE CURB.
(15) ITEM I-13 PORTLAND CEMENT CONCRETE SIDEWALK, 4".
(6) ITEM I-1, 6" PIPE, CLASS I-3
(11) ITEM L-9 SEEDING & PROTECTING
(16) STANDARD LONGITUDINAL JOINT
(17) STANDARD LONGITUDINAL KEY JOINT WITHOUT TIE BAR
(18) ITEM B-19 8" AGGREGATE BASE COURSE
(19) ITEM SPECIAL, FURNISHING & MIXING CALCIUM CHLORIDE WITH AGGREGATE
(20) ITEM I-12 PORTLAND CEMENT CONCRETE CURB, STANDARD TYPE-6

NOTE

* ALL SLOPES TYPICAL UNLESS OTHERWISE SHOWN ON X-SECTIONS.

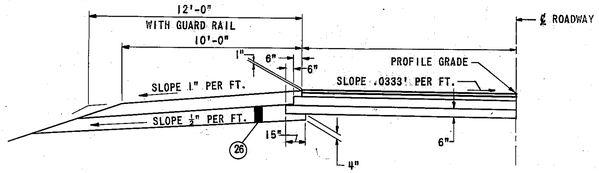
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

TRUMBULL COUNTY TRU-I-80-8.90

TYPICAL SECTIONS

TYPE T-71 & T-35 on B-19

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

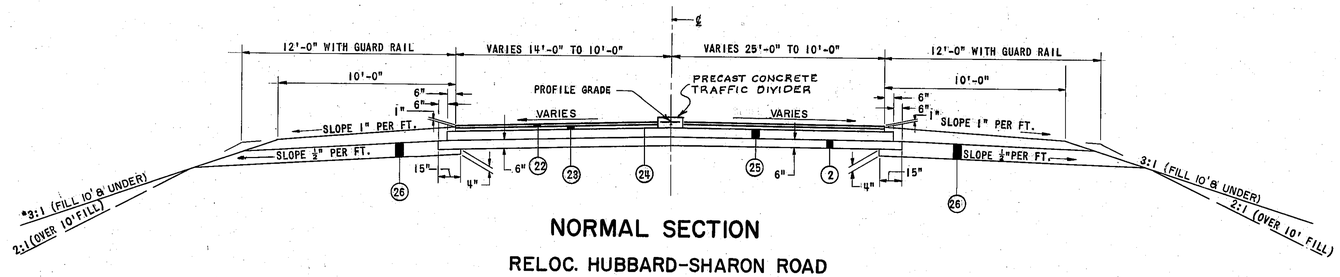


SUPERELEVATED SECTION

RELOC. HUBBARD-SHARON ROAD

LIMITING STATIONS

LT. STA. 20+04.76 TO STA. 22+00.00



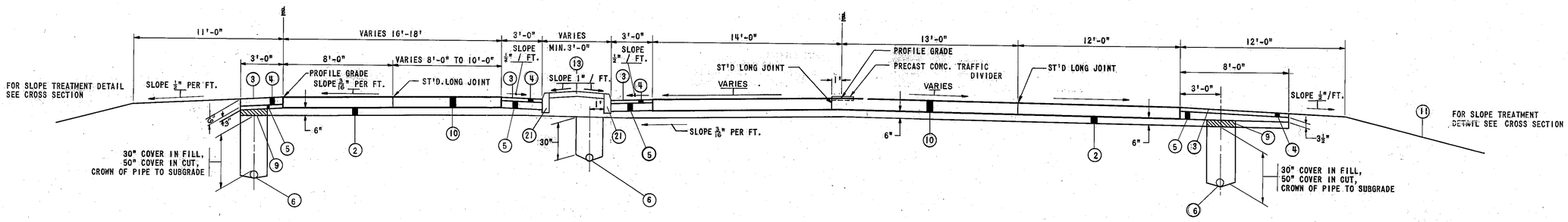
NORMAL SECTION

RELOC. HUBBARD-SHARON ROAD

RT. STA. 19+75 TO STA. 23+00

LT. STA. 19+75 TO STA. 20+04.76

LT. STA. 22+00 TO STA. 23+00



RAMP D

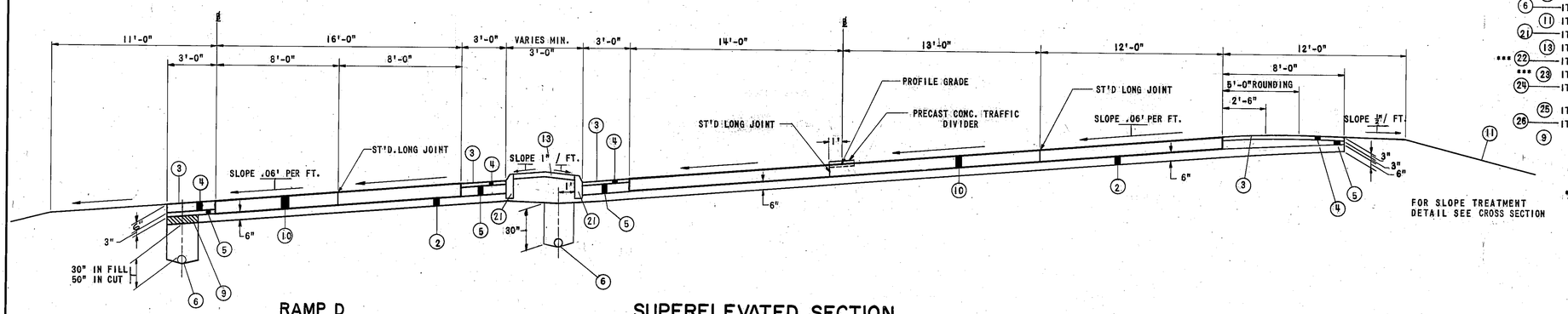
NORMAL SECTION

RELOC. HUBBARD-SHARON ROAD

LT. STA. 12+21.50 TO STA. 12+49.10

STA. 12+49.10 TO STA. 15+28.17

STA. 15+32.00 TO STA. 19+75.00



RAMP D

SUPERELEVATED SECTION

RELOC. HUBBARD-SHARON ROAD

LIMITING STATIONS

STA. 15+28.17 TO STA. 15+32.00

LEGEND

- (10) ITEM T-71 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
- ** (2) ITEM I-22 SUBBASE, GRADING A OR B, MODIFIED AS PER GENERAL NOTE.
- *** (4) ITEM B-21 WATERPROOFED AGGREGATE BASE COURSE (SEE PROPOSAL NOTE) - Depth as Noted
- (3) ITEM T-31 BITUMINOUS SURFACE TREATMENT USING 0.008 CU. YD. NO.6 AGGREGATE PER SQ. YD. AND 0.25 GAL. BITUMINOUS MATERIAL PER SQ. YD. (SEE PROPOSAL NOTE)
- (5) ITEM B-112 POROUS BASE COURSE
- (6) ITEM I-1 6" PIPE, CLASS I-3
- (11) ITEM L-9 SEEDING & PROTECTING
- (21) ITEM I-12 CONCRETE CURB - STANDARD TYPE 6
- (13) ITEM I-21 4" PORTLAND CEMENT CONCRETE MEDIAN PAVEMENT-STANDARD TYPE 1.
- *** (22) ITEM T-35 1½" ASPHALTIC CONCRETE SURFACE COURSE TYPE A (70-85).
- *** (23) ITEM B-35 2½" ASPHALTIC CONCRETE LEVELING COURSE (70-85).
- (24) ITEM T-30 BITUMINOUS PRIME COAT, SEC. M-5.7, RT-2 OR RT-3 APPLIED AT THE RATE OF 0.40 GALLON PER SQ. YD.
- (25) ITEM B-19 6" AGGREGATE BASE COURSE
- (26) ITEM I-9 STONE UNDERDRAIN NO.2 (SEE GENERAL NOTE FOR SPACING)
- (9) REMOVE SUBBASE FOR WIDTH OF ITEM I-1 TRENCH AND REPLACE WITH TYPE 3 BACKFILL IMMEDIATELY PRIOR TO PLACING ITEM B-112 POROUS BASE COURSE. COST SHALL BE INCLUDED IN PRICE BID PER LINEAL FT. FOR ITEM I-1.

** WHEN I-22 IS USED UNDER FLEXIBLE PAVEMENT ON SIDE ROADS, THE REQUIREMENT, THAT NOT MORE THAN TEN PERCENT PASS A NO. 200 SIEVE, IS WAIVED.

*** THICKNESS SHOWN FOR (4), (22), AND (23) ARE DESIGN THICKNESSES AS DESCRIBED IN SEC. B-21.01, SEC. T-35.01 AND SEC. B-35.01.

* FOR CUT DITCH TREATMENT SEE STANDARD DRAWING R1-1.

NOTE

ALL SLOPES TYPICAL UNLESS OTHERWISE SHOWN ON CROSS-SECTIONS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

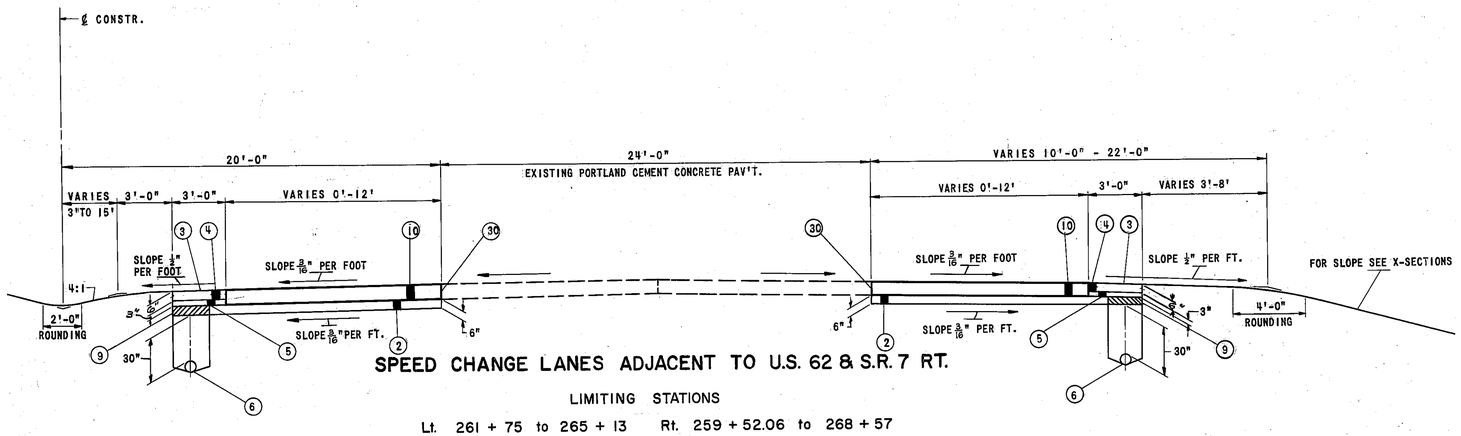
TRUMBULL COUNTY TRU-I-80-8.90

8/401

TYPICAL SECTIONS

TYPE T-71 & T-35 on B-19

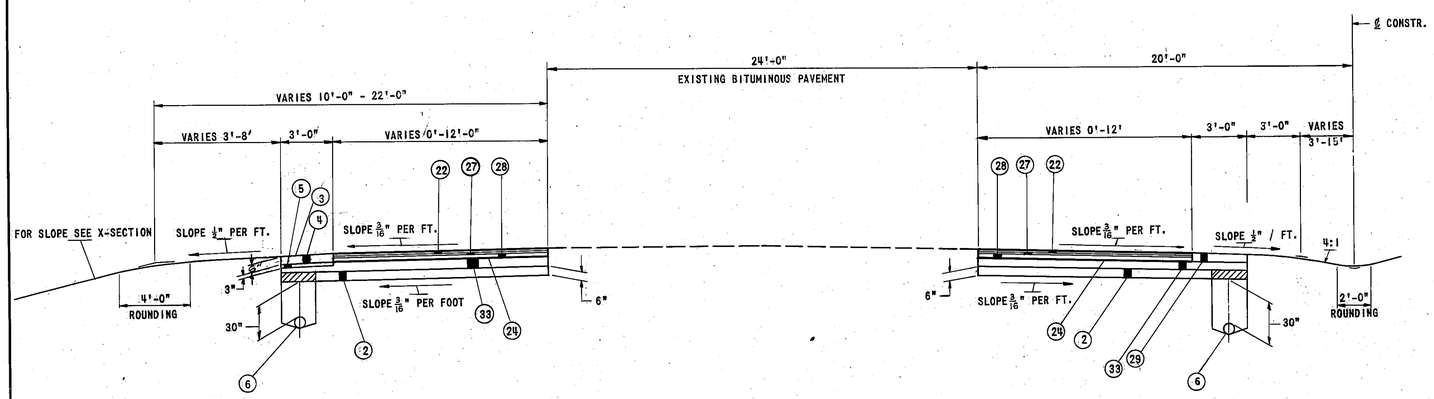
SCALE: 1/4" = 1'-0"



SPEED CHANGE LANES ADJACENT TO U.S. 62 & S.R. 7 RT.

LIMITING STATIONS

Lt. 261 + 75 to 265 + 13 Rt. 259 + 52.06 to 268 + 57



SPEED CHANGE LANES ADJACENT TO U.S. 62 & S.R. 7 LT.

LIMITING STATIONS

Lt. 255 + 84 to 263 + 83.67 Rt. 256 + 40.0 to 259 + 75.5

NOTE

ALL SLOPES TYPICAL UNLESS OTHERWISE SHOWN ON CROSS SECTIONS.

LOCATION OF EXPANSION BOLT JOINTS 30" C/C

NORTHBOUND LANE OF U.S. 62 & S.R. 7

EAST SIDE	BOLTS
STA. 254+72 - 256+01	51
STA. 258+40 - 268+57	407
WEST SIDE	
STA. 261+75 - 265+13	135
TOTAL ESTIMATE	593 EXP. HOOK BOLTS @ 30" C/C

PAYMENT FOR THE ABOVE EXPANSION BOLT JOINTS TO BE INCLUDED IN AMOUNT BID FOR ITEM T-71 9" REINFORCED PORTLAND CEMENT CONCRETE.

LEGEND

(10) ITEM T-71 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT

(3) ITEM T-31 BITUMINOUS SURFACE TREATMENT USING 0.008 CU. YD. NO. 6 AGGREGATE PER SQ. YD. AND 0.25 GAL. BITUMINOUS MATERIAL PER SQ. YD. (SEE PROPOSED NOTE.)

(5) ITEM B-112 POROUS BASE COURSE

* (4) ITEM B-21 6" WATERPROOFED AGGREGATE BASE COURSE (SEE PROPOSAL NOTE)

** (2) ITEM I-22 SUBBASE, GRADING A OR B, MODIFIED AS PER GENERAL NOTE.

(6) ITEM I-1 6" PIPE, CLASS I-3

* (22) ITEM T-35 1½" ASPHALTIC CONCRETE SURFACE COURSE TYPE "C" (70-85).

* (27) ITEM B-35 1½" ASPHALTIC CONCRETE LEVELING COURSE (70-85)

* (28) ITEM B-35 3" ASPHALTIC CONCRETE BASE COURSE (70-85)

(24) ITEM T-30 BITUMINOUS PRIME COAT, SEC.M-5.7, RT-2 OR RT-3 APPLIED AT THE RATE OF 0.40 GALLON PER SQ. YD.

(29) ITEM I-18 6" STABILIZED CRUSHED AGGREGATE SHOULDERS & APPROACHES

(33) ITEM B-19 12" AGGREGATE BASE COURSE

(30) STANDARD EXPANSION BOLT JOINT

(9) REMOVE SUBBASE FOR WIDTH OF ITEM I-1 TRENCH AND REPLACE WITH TYPE 3 BACKFILL IMMEDIATELY PRIOR TO PLACING ITEM B-112 POROUS BASE COURSE. COST SHALL BE INCLUDED IN PRICE BID PER LINEAL FT. FOR ITEM I-1.

* THICKNESS SHOWN FOR (4), (22), (27) AND (28) ARE DESIGN THICKNESSES AS DESCRIBED IN SEC. B-21.01, SEC. T-35.01, SEC. B-35.01,

** WHEN I-22 IS USED UNDER FLEXIBLE PAVEMENT ON SIDE ROADS, THE REQUIREMENT, THAT NOT MORE THAN TEN PERCENT PASS A NO. 200 SIEVE, IS WAIVED.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

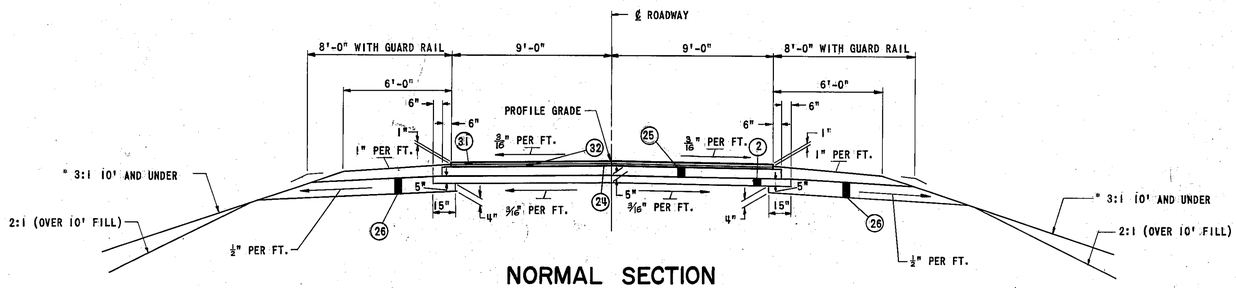
9
401

TRUMBULL COUNTY TRU-I-80-8.90

TYPICAL SECTIONS

TYPE T-35 on B-19

SCALE 1/4"=1'-0"

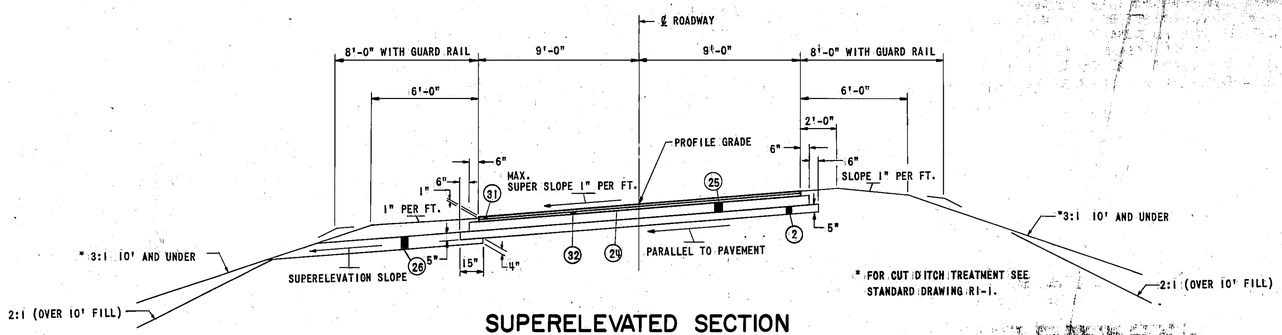


NORMAL SECTION

RELOC. FOX-NORTH ROAD
RELOC. PRICE-SHAFFER ROAD
RELOC. STATE LINE ROAD

LIMITING STATIONS
RELOC. FOX-NORTH ROAD
STA. 6+75.33 TO STA. 26+09.63
STA. 30+20.06 TO STA. 31+67.02
RELOC. PRICE-SHAFFER ROAD
STA. 5+70 TO STA. 8+19.23
STA. 12+23.43 TO STA. 16+44.11
RELOC. STATE LINE ROAD
STA. 1+41.50 TO STA. 1+49.70

DEDUCT BRIDGE AND APPROACHES
TRU-80-1170 STA. 12+49.28 TO STA. 15+80.78



* FOR CUT DITCH TREATMENT SEE STANDARD DRAWING RI-1.

SUPERELEVATED SECTION

RELOC. FOX-NORTH ROAD
RELOC. PRICE-SHAFFER ROAD
RELOC. STATE LINE ROAD

LIMITING STATIONS
RELOC. FOX-NORTH ROAD
STA. 1+00 TO STA. 6+75.33
STA. 26+09.63 TO STA. 30+20.06
RELOC. PRICE-SHAFFER ROAD
STA. 8+19.23 TO STA. 12+23.43
STA. 16+44.11 TO STA. 27+50
RELOC. STATE LINE ROAD
STA. 1+49.70 TO STA. 28+32.16

LEGEND

*(31) ITEM T-35 1½" ASPHALTIC CONCRETE SURFACE COURSE TYPE C (70-85)

*(32) ITEM B-35 2" ASPHALTIC CONCRETE LEVELING COURSE (70-85)

(24) ITEM T-30 BITUMINOUS PRIME COAT, SEC. M-5.7, RT-2 OR RT-3 APPLIED AT THE RATE OF 0.40 GAL. PER SQ. YD.

(25) ITEM B-19 6" " AGGREGATE BASE COURSE

**(2) ITEM I-22 5" SUBBASE GRADING A OR B AS MODIFIED AS PER GENERAL NOTE

(26) ITEM I-9 STONE UNDERDRAIN NO. 2 (SEE GENERAL NOTES FOR SPACING)

* THICKNESS SHOWN FOR (31) AND (32) ARE DESIGN THICKNESSES AS DESCRIBED IN SEC. T-35.01 AND SEC. B-35.01, RESPECTIVELY.

** WHEN I-22 IS USED UNDER FLEXIBLE PAVEMENT ON SIDE ROADS, THE REQUIREMENT, THAT NOT MORE THAN TEN PERCENT PASS A NO. 200 SIEVE, IS WAIVED.

NOTE

* ALL SLOPES TYPICAL UNLESS OTHERWISE SHOWN ON CROSS SECTIONS.

GENERAL NOTES

SEEDING AND PROTECTING

I-80 AND RAMPS

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.

U.S. 62 AND S.R. 7

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

ALL OTHER SIDE ROADS

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 L-9.11, BE USED THROUGHOUT THE LIMITS OF THIS PROJECT.

FOR I-80	FOR REST AREA
65% KENTUCKY 31 FESCUE	45% KENTUCKY BLUEGRASS
25% KENTUCKY BLUEGRASS	35% ILLAHEE FESCUE
5% RED TOP	20% RED TOP
5% ALSIKE	

REMOVAL OF TREES AND STUMPS

ALL TREES AND STUMPS LYING WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM E-9, REMOVAL OF TREES AND STUMPS, EXCEPT THAT THOSE TREES AND STUMPS 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	I-80-5(9)245	IG-80-5(9)245
12"-18"	471	469	2
18"-24"	107	101	6
24"-30"	54	51	3
30"-36"	33	30	3
36"-42"	13	10	3
42"-48"	6	5	1
OVER 48"	1	1	0

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

REMOVAL OF EXISTING PIPE

THE REMOVAL OF ALL EXISTING PIPE DRAINS WITHIN THE LIMITS OF PROPOSED EXCAVATION ITEMS SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICES BID FOR THE RESPECTIVE EXCAVATION ITEMS, UNLESS OTHERWISE ITEMIZED IN THE PLANS.

UTILITIES

THE CONTRACTOR SHALL NOTIFY AT LEAST 48 HOURS BEFORE BREAKING GROUND ALL PUBLIC SERVICE CORPORATIONS HAVING WIRE, POLES, PIPE, CONDUITS, MANHOLES OR OTHER STRUCTURES THAT MAY BE AFFECTED BY THIS OPERATION INCLUDING ALL STRUCTURES WHICH ARE AFFECTED AND NOT SHOWN ON THESE PLANS. ANY AND ALL WORK REQUIRED FOR PUBLIC OR PRIVATE UTILITIES WILL BE DONE BY AND AT THE EXPENSE OF THEIR RESPECTIVE OWNERS, UNLESS OTHERWISE NOTED ON THESE PLANS.

ROUNDING OF CORNERS ON CROSS-SECTIONS

THE ROUNDED CORNERS, SHOWN ON STANDARD DRAWING RH-1, AS MODIFIED BY THE TYPICAL SECTIONS, APPLY TO ALL CROSS SECTIONS, EVEN THOUGH OTHERWISE SHOWN IN THESE PLANS.

R/W MONUMENTS, FEDERAL PROJECT MARKERS AND SECTION MARKERS

EXISTING R/W MONUMENTS, FEDERAL PROJECT MARKERS AND SECTION MARKERS THAT WILL BE REMOVED BY CONSTRUCTION, SHALL BE PROTECTED BY THE CONTRACTOR AS PER SECTION G-7.09 UNTIL THEY CAN BE WITNESSED, REFERENCED AND RESET BY THE ENGINEER.

ELEVATION DATUM

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

LOCATION AND SIZE OF PIPES

THE LOCATION, TYPE, DEPTH AND SIZE OF ALL EXISTING PIPES ARE SHOWN AS NEAR EXACT AS THE AVAILABLE INFORMATION WILL PERMIT. THE STATE WILL NOT BE RESPONSIBLE FOR ANY VARIATIONS FOUND DURING CONSTRUCTION.

CENTERLINE REFERENCE MONUMENTS

MONUMENTS SHALL BE CONSTRUCTED OF CLASS "C" CONCRETE POURED IN A CIRCULAR HOLE EIGHT (8) INCHES IN DIAMETER AND FORTY-FOUR (44) INCHES IN DEPTH. TOP OF CONCRETE SHALL BE FINISHED AT A DEPTH OF TWO (2) INCHES BELOW GROUND LEVEL AND THE UPPER SIX (6) INCH PORTION OF THE CONCRETE SHALL BE FORMED. A ½"×6" STEEL ROD SHALL BE EMBEDDED IN THE WET CONCRETE AS DIRECTED BY THE ENGINEER TO MARK THE CENTERLINE AND STATION.

FOR LOCATION, SEE SHEET NO. 78.

CONSTRUCTION LAYOUT STAKES

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

PART WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY OF BUILDING PORTIONS OF THIS PROJECT UNDER TRAFFIC AND CONSTRUCTING THE PAVEMENT PART AT A TIME, EXTREME CARE SHALL BE TAKEN TO PREVENT THE CONSTRUCTION OF A BUTT JOINT ON CENTERLINE IN THE B-19 AND I-22 COURSES. THIS SHALL BE ACCOMPLISHED BY BUILDING THE B-19 AND I-22 COURSES, PLACED WITH THE FIRST PORTION OF THE PAVEMENT BUILT, AT LEAST EIGHTEEN INCHES BEYOND THE CENTERLINE AND BY SURFACING NO CLOSER THAN EIGHTEEN INCHES TO THIS EDGE OF THE ABOVE COURSES. WHEN THE SECOND PORTION OF THE PAVEMENT IS BUILT, AT LEAST TWELVE INCHES OF THESE PROJECTING COURSES SHALL BE BROKEN DOWN AND THOROUGHLY KEYED IN WITH THE NEWLY PLACED CORRESPONDING COURSES IN THE SECOND PORTION OF THE PAVEMENT BUILT. PAYMENT FOR THIS OPERATION SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE PERTINENT PAVEMENT ITEMS.

DESIGN SPEED

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

SPECIAL DITCHES

FOR SPECIAL DITCH GRADES, SEE CROSS-SECTIONS.

ROCK SUBGRADE

THE CONTRACTOR SHALL BE PAID FOR THE THICKNESS OF I-22 MATERIAL SHOWN ON THE TYPICAL SECTIONS IN ROCK EXCAVATION AREAS. ANY POCKETS IN THE ROCK BELOW THE PLAN SUBGRADE ELEVATION SHALL DRAIN EITHER LONGITUDINALLY OR LATERALLY AND ALL IRREGULARITIES IN THE ROCK BELOW THIS ELEVATION SHALL BE FILLED WITH I-22 MATERIAL AT NO ADDITIONAL COST TO THE STATE.

ITEM S.S. C.E.-101.04 COMPACTION USING HEAVY PNEUMATIC TIRED ROLLER

AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR USE IN PROOF ROLLING OF SUBGRADE ON THE MAIN LINE AND RAMP PAVEMENTS AS DIRECTED BY THE ENGINEER. PROOF ROLLING WILL NOT BE REQUESTED WHERE ROCK OR SHALE OCCURS IN SUBGRADE AND IN AREAS WHERE SUBBASE HAS BEEN THICKENED TO REPLACE FROST SUSCEPTIBLE SILTS. IN LIEU OF THE REQUIREMENTS OF C.E.-101.04, A MINIMUM OF ONE COVERAGE WILL BE REQUIRED TO CHECK THE SUBGRADE. MOISTURE CONTENT OF THE TOP 12" OF SUBGRADE SHALL NOT EXCEED OPTIMUM AT THE TIME OF PROOF ROLLING. TIRE PRESSURE AND TOTAL LOAD SHALL BE VARIED AS DIRECTED BY THE ENGINEER WITHIN THE LIMITS PROVIDED IN SUPPLEMENTAL SPECIFICATION NO. C.E.-101.04.

THE NUMBER OF HOURS ESTIMATED FOR USE UNDER THIS ITEM FOR I-80-5(9)245 IS 70 HOURS AND FOR IG-80-5(9)245 IS 13 HOURS.

ITEM I-22 SUBBASE, GRADING "A" OR "B", AS PER PLAN

THE MATERIAL FURNISHED FOR THIS ITEM SHALL MEET THE REQUIREMENTS OF GRADING "A" OR "B" OF SEC. I-22.02 EXCEPT THAT, FOR EITHER GRADING, NO MORE THAN 10 PER CENT OF THE MATERIAL SHALL PASS A NO. 200 SIEVE AFTER ALL OPERATIONS OF PLACEMENT AND COMPACTION HAVE BEEN COMPLETED.

ITEM I-5 6" PIPE SPECIALS, AS PER PLAN

PIPE SPECIALS LISTED UNDER THIS ITEM SHALL CONFORM WITH THE CLASS OF PIPE AND TYPE OF BACKFILL IN THE CONSTRUCTION OF WHICH THE SPECIAL BECOMES A PART.

FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS:

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

1. U.S. 62 AND S.R. 7 END OF WORK NORTH OF I-80
2. U.S. 62 AND S.R. 7 BEGINNING OF WORK SOUTH OF I-80

SIGN DETAILS SHALL BE AS SPECIFIED ON STANDARD DRAWING FACI-1, "CODE N-43(2)144", AND THE SIGNS SHALL BE ERECTED IN ACCORDANCE WITH STANDARD DRAWING FACI-2. ADDITIONAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH NOTES IN THE PROPOSAL.

ROADSIDE CLEANUP, AS PER PLAN, ITEM L-6

ROADSIDE CLEANUP, AS PER PLAN, ITEM L-6, SHALL CONSIST TO [illegible] THE REMOVAL OF ITEM L-6 OF THE [illegible] SPECIFICATIONS. INCLUDE [illegible] LEVELING WITHIN THE R/W LIMITS AREAS INCLUDED IN THE [illegible] YANKEE CREEK CHANNEL RELOCATION, AND THE [illegible] THAT [illegible] WILL REMAIN AND ALL [illegible] SHALL BE [illegible]

THE [illegible] UNIT PRICE BID PER UNIT FOR ITEM L-6, [illegible] CLEANUP, AS PER PLAN, MEASURED IN ACCORDANCE WITH THE SPECIFICATIONS SHALL CONSTITUTE FULL COMPENSATION [illegible] ADDITION TO THE REQUIREMENTS OF ITEM L-6, THE [illegible] ABOVE. ALL AREAS SHALL BE SEEDED UNDER ITEM E-9 [illegible] PROTECTING AS PER PLAN.

(THIS NOTE IS CONTINUED ON SHEET NO. 13)

SPRINGS

AN ESTIMATED AMOUNT OF 6" PIPE CLASS I-3 SEC. M-6.4(h) AND I-9 STONE UNDERDRAINS Nº 1 AS PER PLAN HAS BEEN PROVIDED TO OUTLET ANY SPRINGS WHICH MAY BE ENCOUNTERED DURING CONSTRUCTION. THE LOCATIONS, GRADES AND DEPTHS REQUIRED SHALL BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION. THE SIZES AND ESTIMATED AMOUNTS ARE LISTED AS FOLLOWS:

ITEM I-1 6" PIPE CLASS I-3 SEC. M-6.4(h) = 50 L.F.
ITEM I-9 STONE UNDERDRAINS Nº 1 AS PER PLAN = 12 L.F.

SEE SHEET Nº 288 FOR SPRING DRAIN DETAILS.

CO-OPERATION BETWEEN CONTRACTORS

IT IS ANTICIPATED THAT ADJACENT PROJECTS IN THE STATE OF PENNSYLVANIA ON THE EAST AND THE STATE OF OHIO ON THE WEST WILL BE UNDER CONSTRUCTION PRIOR TO THE COMPLETION OF THIS PROJECT. FULL CO-OPERATION [illegible] THE CONTRACTORS IN THOSE AREAS WHERE NEEDED TO MEET [illegible] LINES, PAVEMENTS, GUARD RAILS, ETC., IS REQUIRED. IN ADDITION TO [illegible] ABOVE, CO-OPERATION WILL BE NECESSARY WITH THE [illegible] OFFICES OF THE STATE OF PA. IN THEIR WORK [illegible] THE [illegible] CONSTRUCTION BETWEEN RELOCATED STATE [illegible] ROAD [illegible] AND EXISTING STATE LINE ROAD.

FIELD OFFICE

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

REPLACEMENT

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

ITEM I-9 STONE UNDERDRAINS, NO. 2

STONE UNDERDRAINS SHALL BE PLACED AT FIFTY (50) FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS AND AT TWENTY-FIVE (25) FOOT INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS, EXCEPT WHERE UNDERDRAINS HAVE BEEN PROVIDED.

SANITARY FLOW INTO HIGHWAY DRAINAGE SYSTEMS

THIS PLAN MAKES NO PROVISION FOR CONNECTING, NOR SHALL THE ENGINEER OR CONTRACTOR CONNECT, ANY EXISTING OR NEW DRAINAGE INTO THE HIGHWAY DRAINAGE SYSTEM WHEN SUCH DRAINS CARRY FLOW FROM ANY PLUMBING FIXTURES INCLUDING FLOOR DRAINS AND SINK DRAINS OR DRAINS FROM LIVESTOCK LOTS OR BARNS OR POLLUTED WATER OF ANY KIND.

EXISTING PIPE CARRYING FLOW WHICH COMES WITHIN THE CATEGORY OUTLINED ABOVE SHALL BE PLUGGED WITH CLASS "E" CONCRETE AT THE RIGHT-OF-WAY LINE. PAYMENT FOR SAID PLUGGING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR "ITEM E-1 ROADWAY EXCAVATION.

TREATED SANITARY FLOW INTO HIGHWAY DRAINAGE SYSTEM

ON INTERSECTING ROADS NOT ON THE INTERSTATE SYSTEM, TREATED SANITARY FLOW MAY BE DISCHARGED INTO THE HIGHWAY DRAINAGE SYSTEM, PROVIDED, THE OWNER HAS SECURED THE APPROVAL OF THE LOCAL HEALTH AUTHORITIES AND HAS ACQUIRED FROM THE STATE HIGHWAY DEPARTMENT THE OFFICIAL PERMIT TO HAVE THE CONNECTION MADE.

IN EACH CASE WHERE A PERMIT HAS BEEN ISSUED FOR A SANITARY CONNECTION TO BE MADE AND THE CONNECTION IS TO BE MADE INTO A HIGHWAY DRAINAGE PIPE, IT SHALL BE PROVIDED WITH AN INSPECTION WELL, IN ACCORDANCE WITH THE DETAIL SHOWN ON SHEET NO. 288, LOCATED APPROXIMATELY ONE FOOT INSIDE THE RIGHT-OF-WAY.

ONE(1) INSPECTION WELL HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

SEALING OF PIPE JOINTS

WHERE CONNECTIONS ARE MADE BETWEEN RIGID AND FLEXIBLE PIPE SECTIONS OR BETWEEN PIPE SECTIONS OF DIFFERENT KIND OR TYPE OF END FABRICATION, WHETHER REQUIRED BY THE PLANS, ARISING FROM PERMISSIBLE USE OF OPTIONAL MATERIALS, OR ENCOUNTERED IN CONNECTION TO EXISTING FACILITIES, THE JOINT SHALL BE SEALED, IF SEALING IS REQUIRED BY THE SPECIFICATIONS, BY MEANS OF A CLASS "E" CONCRETE COLLAR HAVING A MINIMUM THICKNESS OF 6 INCHES AND A MINIMUM LENGTH OF 12 INCHES. PAYMENT FOR SEALING AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT PIPE ITEM.

GUARD RAIL POST ANCHORS

AT LOCATIONS WHERE PIER FOOTINGS INTERFERE WITH INSTALLATION OF FULL LENGTH GUARD RAIL POSTS, SHORT POSTS SHALL BE PROVIDED AND SHALL BE ANCHORED IN ACCORDANCE WITH THE DETAIL SHOWN ON STANDARD DRAWING I-15 NO. 6.

COST OF PROVIDING AND INSTALLING NECESSARY ANCHORS SHALL BE INCLUDED IN THE UNIT BID PRICE PER LINEAL FOOT FOR GUARD RAIL.

GENERAL NOTES

ITEM I-10 RIPRAP, USING 6" REINFORCED CONCRETE

PAYMENT FOR CUT-OFF WALLS AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQ. YD. OF "ITEM I-10 RIPRAP, USING 6" REINFORCED CONCRETE AS PER PLAN".

PIPE

WHEN BELL AND SPIGOT PIPE IS USED, ANY NECESSARY PIPE CUT-OFFS WILL BE MADE AT THE SPIGOT END OF THE LENGTH OF PIPE ADJACENT TO THE END LENGTH. WHEN TONGUE AND GROOVE PIPE IS USED THE LENGTH OF PIPE NEXT TO THE END LENGTH SHALL BE CUT AND BUTT JOINT FORMED WITH A COLLAR 12" LARGER THAN THE OUTSIDE DIAMETER AND 12" IN LENGTH. THE COST OF THE JOINT AND COLLAR SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR THE PERTINENT PIPE ITEM. COLLARS SHALL BE CLASS "E" CONCRETE.

EROSION CONTROL AT BRIDGES

SODDED CHANNELS SHALL BE PROVIDED AT ENDS OF BRIDGES WHERE REQUIRED BY THE PLANS. COST OF ALL WORK NECESSARY TO COMPLETE THE ITEM SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE YARD FOR "ITEM L-10 SODDING FOR SPECIAL BERM AND SLOPE PROTECTION, AS PER PLAN".

EROSION CONTROL AT HEADWALLS

AN EIGHTEEN (18") INCH WIDE STRIP OF SOD, SHALL BE PLACED ALONG THE BACK AND BOTH ENDS OF EACH HEADWALL TO PREVENT EROSION. THE QUANTITY OF SODDING REQUIRED TO PREVENT EROSION AT THE HEADWALLS IS INCLUDED IN THE QUANTITIES FOR ITEM L-10, SODDING.

MANHOLES IN SLOPED AREAS

MANHOLE CASTINGS SHALL BE SET TO CONFORM WITH THE PLANE OF THE FINISHED SLOPES WHERE MANHOLES ARE REQUIRED IN SLOPE AREAS. THE UNIT PRICE BID FOR EACH MANHOLE SHALL INCLUDE SETTING THE MANHOLE CASTING TO CONFORM TO THE ABOVE.

UNDERDRAINS, ITEM I-1 CLASS I-3

UNDERDRAINS, CLASS I-3 SHALL PARALLEL THE PROFILE GRADE UNLESS OTHERWISE SHOWN ON THE PLANS.

FIELD DRAINS

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

EXISTING COLLECTORS AND ISOLATED FARM TILES WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF THE ROADWAY DITCHES SHALL BE OUTLETTED INTO THE ROADWAY DITCH. THE OPTIMUM OUTLET ELEVATION SHALL BE, IF POSSIBLE, ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH.

LATERAL TILE FIELDS WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY ITEM I-1 CLASS H-2 PIPE 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:

I-1	8"	PIPE CLASS B-1	25 LIN. FT.
I-1	6"	PIPE CLASS H-2	250 LIN. FT.
I-1	8"	PIPE CLASS F-4 OUTLETS FOR ROADWAY DRAINAGE	20 LIN. FT.
I-5	6"	PIPE SPECIALS FOR H-2	10 EACH
I-10		DUMPED ROCK CHANNEL PROTECTION	10 CU. YD.

ESTIMATED QUANTITIES

NONE OF THE ABOVE LISTED ESTIMATED QUANTITIES ARE TO BE DELIVERED TO THE PROJECT UNTIL SO ORDERED BY THE ENGINEER.

ITEM L-9 COMMERCIAL FERTILIZER

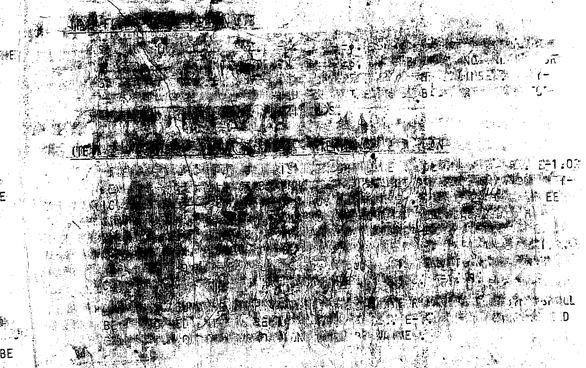
ALL AREAS TO BE SEEDED UNDER ITEM L-9 OR SODDED UNDER ITEM L-10 SHALL HAVE COMMERCIAL FERTILIZER (12-12-12) APPLIED AT THE RATE OF TWENTY (20) POUNDS PER 1,000 SQUARE FEET.

ITEM L-9 AGRICULTURAL LIMING MATERIAL

THE LOCATION AND NEED FOR AGRICULTURAL LIMING MATERIAL WILL BE DETERMINED BY LABORATORY TESTS AFTER ROUGH GRADING OPERATIONS HAVE BEEN PERFORMED. QUANTITIES OF AGRICULTURAL LIMING MATERIAL, AS SHOWN ON THE PLANS ARE SUFFICIENT FOR TREATING THE ENTIRE PROJECT AND MAY BE PARTIALLY NON-PERFORMED BECAUSE OF AREAS WHERE TESTS INDICATE LIMING MATERIAL IS NOT NEEDED. WHERE USED, AGRICULTURAL LIMING MATERIAL SHALL BE APPLIED AT THE RATE OF ONE HUNDRED (100) POUNDS PER 1,000 SQUARE FEET.

STREAM BANK PROTECTION

THE EAST BANK OF THE LITTLE YANKEE CREEK IN THE VICINITY OF STATION 581+75 IS TO REMAIN AS NEAR UNDISTURBED AS IS POSSIBLE. REMOVE ALL TREES NECESSARY FOR THE CONSTRUCTION OF THE BRIDGES, BUT LEAVE THE STUMPS IN PLACE.



REMOVING PIPE

THE UNSTRUCTURE ENDS OF ALL PIPE OR TILE LINES WHICH ARE CONNECTED BY EARTHWORK OPERATIONS AND, WHERE INDICATED, THE ENDS OF PIPE LINES TO BE ABANDONED IN PLACE, SHALL BE EFFECTIVELY BLOCKED AND COVERED. BROKEN PIPES OR PORTIONS OF PIPE OR TILE SHALL BE REMOVED UNTIL A WHOLE UNDAMAGED LENGTH IS ENCOUNTERED. THIS PIPE SHALL THEN BE BLOCKED WITH CONCRETE, PATA STONE OR BRICK LAID IN MORTAR, OR A PRECAST CLAY OR CONCRETE STOPPER. PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR REMOVE-1, ROADWAY EXCAVATION.

DRAINAGE OF BASE MATERIAL

WHERE THE BASE MATERIAL IS DRAINED BY I-9 STONE UNDERDRAINS, THE CONTRACTOR SHALL FINISH, SEED, AND MULCH THE SLOPES SO AS NOT TO IMPEDE DRAINAGE OF THE BASE MATERIAL.

CONNECTIONS TO EXISTING PIPE

AT PLACES WHERE THE PLANS PROVIDE FOR PROPOSED DRAINAGE PIPE TO BE CONNECTED TO EXISTING PIPES, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING PIPE BOTH AS TO LINE AND GRADE BEFORE HE STARTS TO LAY THE PROPOSED PIPE. THE COST OF THIS OPERATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT PIPE ITEM.

EROSION CONTROL

ITEMS I-10, I-14, AND L-10 ARE PROVIDED IN THESE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE WILL NOT BE REMOVED IN ORDER TO PLACE ANY OF THESE ITEMS. THE ENGINEER SHALL CHECK AND NONPERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES FOR THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

MAINTENANCE OF TRAFFIC

U.S. 62 AND S.R. 7:

TWO WAY TRAFFIC SHALL BE MAINTAINED ON EXISTING U.S. 62 AND S.R. 7 AT ALL TIMES BY USE OF THE EXISTING PAVEMENT. THE CONTRACTOR SHALL SAFEGUARD THE TRAVELING PUBLIC BY PROVIDING PLATFORMS, NETS, OR OTHER SUITABLE PROTECTION ABOVE THE TRAVELED LANES, WHILE THE OVERHEAD BRIDGES ARE UNDER CONSTRUCTION AT THIS LOCATION. SUITABLE MINIMUM HORIZONTAL AND VERTICAL CLEARANCE SHALL BE MAINTAINED SO AS TO ENABLE SAFE, UNINTERRUPTED TRAVEL BY VEHICLES USING THIS ROADWAY.

HUBBARD-SHARON ROAD:

HUBBARD-SHARON ROAD SHALL BE CLOSED TO TRAFFIC DURING CONSTRUCTION OF THE BRIDGE OVER I-80. LOCAL TRAFFIC WILL BE MAINTAINED TO THE SOUTH BY USE OF EXISTING HUBBARD-SHARON ROAD. THROUGH TRAFFIC WILL BE DETOURED VIA U.S. 62, S.R. 7 AND CHESTNUT RIDGE ROAD.

RELOCATED HUBBARD-SHARON ROAD WILL BE BUILT UNDER TRAFFIC AS FOLLOWS:

TWO-WAY TRAFFIC WILL BE MAINTAINED ON EXISTING HUBBARD-SHARON ROAD WHILE CONSTRUCTING THE TWO SOUTHERLY LANES OF THE RELOCATION BETWEEN STA. 12+00 AND STA. 20+00, AND ON THE TEMPORARY WIDENING TO THE NORTH OF EXISTING HUBBARD-SHARON ROAD WHILE CONSTRUCTING THE RELOCATION BETWEEN STA. 20+00 AND 23+00. FOLLOWING THE ABOVE CONSTRUCTION, TRAFFIC WILL BE RE-ROUTED ONTO THE RELOCATION WHILE THE REMAINDER OF RELOCATED HUBBARD-SHARON ROAD IS CONSTRUCTED.

FOX-NORTH ROAD:

TWO-WAY TRAFFIC WILL BE MAINTAINED ON EXISTING FOX-NORTH PAVEMENT DURING CONSTRUCTION OF RELOCATED FOX-NORTH ROAD BETWEEN STA. 2+00 AND STA. 33+23. STA. 0+50 TO STA. 2+00 WILL BE BUILT BY PART WIDTH CONSTRUCTION METHODS AND ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALTIC CONCRETE COURSES.

RELOCATION OF PRICE-SHAFFER ROAD AND THE PRICE-SHAFFER BRIDGE OVER I-80.

PRICE-SHAFFER ROAD-TWO-WAY TRAFFIC WILL BE MAINTAINED ON PRICE-SHAFFER ROAD BY USE OF EXISTING PAVEMENT DURING CONSTRUCTION OF RELOCATED PRICE-SHAFFER ROAD BETWEEN STA. 10+50 AND STA. 25+50. STA. 5+20 TO STA. 10+50 AND STA. 25+50 TO STA. 28+00 WILL BE BUILT BY PART WIDTH CONSTRUCTION METHODS AND ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALTIC CONCRETE COURSES.

AFTER COMPLETION OF THE RELOC. PRICE-SHAFFER ROAD BRIDGE OVER I-80, RELOC. PRICE-SHAFFER ROAD AND RELOC. FOX-NORTH ROAD, EXISTING FOX-NORTH ROAD AND EXISTING PRICE-SHAFFER ROAD SHALL BE ABANDONED AND PERMANENTLY CLOSED TO TRAFFIC AT THE I-80 CROSSINGS. CONSTRUCTION OF THESE RELOCATIONS SHALL BE ACCOMPLISHED PRIOR TO CONSTRUCTION OF I-80 AT THESE LOCATIONS.

SIGN SUPPORTS:

I-129.14 MEASUREMENT

The pay quantity "I-129 Concrete For Sign Support Foundations, As Per Plan" shall be based on dimensions specified by the contract plans or the Engineer instead of on plan quantity.

I-129.15 PAYMENT

Payment for additional concrete (Specified By The Engineer) is to be paid for at the unit price bid for Item I-129 Concrete For Sign Support Foundations, As Per Plan.

Payment for Reinforcing Steel shall be included in the unit price bid for the above item.

See Sheets No's 34 and 50 for Layout of Sign Supports at Sta. 497+85 E.B. and Sta. 656+30 W.B. and sheets Nos. 373 thru 376 for Details of Construction.

LIGHTS, SIGNS, AND BARRICADES

THE CONTRACTOR SHALL, IN ADDITION TO THE GENERAL REQUIREMENTS OF SEC. G-7.07, ON THIS PROJECT PERFORM THE FOLLOWING:

(A) PROVIDE, ERECT, AND MAINTAIN MOVABLE GATES ON INTERSECTING ROADS CLOSED TO TRAFFIC AT ALL POINTS WHERE LOCAL TRAFFIC MOVEMENT TERMINATES.

(B) PROVIDE, ERECT, AND MAINTAIN LIGHTS, SIGNS, AND BARRICADES AT THE WORK LIMITS ON ALL INTERSECTING ROADS WHICH REMAIN OPEN TO TRAFFIC.

(C) PROVIDE, ERECT, AND MAINTAIN STANDARD 40"x24" SIZE "ROAD CLOSED" SIGNS, SIGN SUPPORTS, AND LIGHTS AT THE FOLLOWING LOCATIONS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC:

1. HUBBARD-SHARON ROAD AT INTERSECTION WITH CHESTNUT RIDGE ROAD.
2. HUBBARD-SHARON ROAD AT INTERSECTION WITH U.S. 62 AND 7.

LIGHTS, BARRICADES, AND DANGER AND WARNING SIGNS SHALL BE PROVIDED AT LOCATIONS SHOWN ABOVE IN ACCORDANCE WITH SEC. G-7.07. BARRICADES AND GATES SHALL BE AS DETAILED ON STANDARD CONSTRUCTION DRAWING NO. G-7.07. SIGN SUPPORTS AND LIGHTS FOR "ROAD CLOSED" SIGNS SHALL BE AS DETAILED IN THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES."

PAYMENT FOR PROVIDING, ERECTING, MAINTAINING, AND REMOVING BARRICADES, GATES, LIGHTS, SIGNS, AND SIGN SUPPORTS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM I-3, "MAINTAINING TRAFFIC."

PAYMENT FOR TEMPORARY ROADWAYS

PAYMENT FOR CONSTRUCTION, MAINTENANCE, AND SUBSEQUENT REMOVAL, WHEREVER REQUIRED, OF TEMPORARY ROADWAYS NOT SEPARATELY ITEMIZED UNDER ITEM S-15, EXCEPT FOR FURNISHING AND PLACING OF ITEMS I-4, AND T-10, FOR MAINTAINING TRAFFIC, SHALL BE INCLUDED IN THE LUMP SUM BID FOR "MAINTAINING TRAFFIC". ESTIMATED QUANTITIES ARE PROVIDED AS FOLLOWS FOR ITEMS T-10 AND M-10:

ITEM T-10, TRAFFIC COMPACTED SURFACE COURSE	200 C.Y.
ITEM I-4, CALCIUM CHLORIDE FOR DUST CONTROL	4.0 TONS

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.

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE PERFORMED ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH TEMPORARY GUIDE MARKERS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL UP TO A LEVEL NOT MORE THAN 3" BELOW THE EXISTING BITUMINOUS PAVEMENT EDGE AND NOT MORE THAN 9" BELOW THE EXISTING CONCRETE PAVEMENT EDGE SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND THE EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL BY THE ENGINEER.

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.

REINFORCED ENDS ON CORRUGATED METAL PIPE

REINFORCED ENDS WILL BE REQUIRED FOR THE EXPOSED ENDS OF ALL CORRUGATED METAL PIPE, CLASS F-4 SEC. M-6.4(c), WHERE THE EXPOSED ENDS ARE UNPROTECTED BY HEADWALLS, CATCH BASINS, OR MANHOLES.

PIPE CLASSIFICATION

WHERE A CONFLICT EXISTS REGARDING PIPE DESCRIPTION (CLASS, BACKFILL, OR SECTION DESIGNATION) THE DESCRIPTION SHOWN ON PLAN, PROFILE, CROSSECTION OR DETAIL SHALL BE DISREGARDED AND THE DESCRIPTION SHOWN IN THE SUBSUMMARY AND THE GENERAL-SUMMARY SHALL GOVERN. ALL PIPE SHOWN THROUGHOUT THESE PLANS AS "CLASS F-1" SHALL BE CONSIDERED TO READ "CLASS F-4."

GENERAL NOTES

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 BELEIVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE STATE OF OHIO MAKES NO GUARANTEES AS TO THEIR ACCURACY OR COMPLETENESS.

PAVEMENT REMOVAL OUTSIDE NORMAL CONSTRUCTION LIMITS

AFTER THE EXISTING PAVEMENT HAS BEEN REMOVED, THE OLD ROADWAY SHALL BE PLOWED, HARROWED, AND DRAGGED TO A SMOOTH GRADE, THE OLD DITCHES FILLED, AND THE ENTIRE AREA SLOPED TO DRAIN AND LEFT IN A NEAT CONDITION READY FOR SEEDING. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ROADWAY EXCAVATION, ITEM E-1. SEEDING SHALL BE MEASURED AND PAID FOR IN ACCORDANCE WITH ITEM L-9.

SEQUENCE OF CONSTRUCTION OPERATIONS

- UNDERDRAINS SHALL BE INSTALLED AND BACKFILLED TO SUBGRADE ELEVATION, IMMEDIATELY PRIOR TO CONSTRUCTION OF THE SUBBASE, EXCEPT THAT, WHERE SUBSURFACE CONDITIONS ARE SUCH THAT IMPROVEMENT OF AN UNSTABLE SUBGRADE CAN BE ACCOMPLISHED THROUGH THE DRYING ACTION OF DEEP UNDERDRAINS, THE PROJECT ENGINEER MAY AUTHORIZE OR REQUIRE THE CONTRACTOR TO DELAY THE CONSTRUCTION OF THE SUBBASE AS NECESSARY.
- THE SUBBASE SHALL THEN BE CONSTRUCTED UNDER THE CONCRETE PAVEMENT AREA AND EXTENDED OUT TO COVER THE POROUS BACKFILL FOR THE UNDERDRAIN.
- THE PAVEMENT SHALL BE CONSTRUCTED.
- AFTER THE SURFACE OF THE SUBBASE IN THE SHOULDER AREA IS IN PLACE AND COMPACTED AS SPECIFIED, AND IMMEDIATELY PRIOR TO PLACING THE POROUS BASE COURSE, THE MATERIAL LOCATED ABOVE AND WITHIN THE UNDERDRAIN TRENCH SHALL BE REMOVED TO THE DEPTH NECESSARY TO EXPOSE CLEAN TYPE 3 BACKFILL. THE TRENCH SO EXCAVATED SHALL BE BACKFILLED WITH NEW TYPE 3 BACKFILL MATERIAL.

  IF, AFTER TESTING THE SUBBASE MATERIAL FOR COMPOSITION IN THE SHOULDER AREA, IT IS FOUND THAT REMOVAL OF CONTAMINATED MATERIAL FROM THE SURFACE IS NECESSARY, SUCH MATERIAL SHALL BE REPLACED WITH MATERIAL MEETING THE REQUIREMENTS OF "ITEM B-112 POROUS BASE COURSE" AT THE EXPENSE OF THE CONTRACTOR.

  POROUS BASE COURSE SHALL THEN BE CONSTRUCTED AND CONSTRUCTION OF THE WATERPROOFED AGGREGATE COURSE SHALL FOLLOW IMMEDIATELY.

  PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE PERTINENT ITEMS AFFECTED.

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 T. J.

GUARD RAIL FLARES

WHERE PROPOSED GUARD RAIL FLARES ARE CONSTRUCTED OF RAIL ELEMENTS WHICH HAVE NOT BEEN FABRICATED EXACTLY TO FIT THE CURVATURE SHOWN ON THE PLANS, THE TWO END POSTS OF EACH FLARED SECTION SHALL BE ENCASED IN A MINIMUM 4 INCH THICKNESS OF CLASS "E" CONCRETE FOR THE FULL DEPTH OF THE POST BELOW THE GROUND LINE. PAYMENT FOR ENCASEMENT, IF REQUIRED, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE GUARD RAIL.

SUPERELEVATION

SUPERELEVATED CURVES SHALL BE BUILT WITHOUT CROWN. THE CROWN SHALL BE WORKED OUT OF THE PAVEMENT IN THE PORTION BETWEEN THE BEGINNING OF THE TRANSITION AND THE POINT WHERE THE SUPERELEVATION EQUALS TWICE THE CROWN.

NON-RIGID PAVEMENT REMOVAL

REMOVAL AND DISPOSAL OF EXISTING NON-RIGID PAVEMENTS, UNLESS OTHERWISE INDICATED ON THESE PLANS SHALL BE MEASURED AND PAID FOR AS ITEM E-1, ROADWAY EXCAVATION.

GUARD RAIL ADJUSTMENT

THE STATIONING OF INDIVIDUAL RUNS OF GUARD RAIL SHALL BE ADJUSTED, IF NECESSARY, BY THE ENGINEER AT THE TIME OF CONSTRUCTION TO ACCOMMODATE THE STANDARD PANEL LENGTHS FURNISHED.

ITEM SPECIAL, DRILL AND BALLOONED

THE CONTRACTOR SHALL REMOVE THE STONE SLAB, WELL COVER AND PUMPING EQUIPMENT SHALL BE REMOVED AND DISPOSED OF.

THE CASING SHALL BE CUT OFF AT LEAST TWO FEET BELOW THE PROPOSED FINISHED GRADE, BUT NOT CLOSER TO PAVEMENT AREAS THAN LEAST TWO FEET. BACKFILL THE CASING TO GRADE ELEVATION IN THE PROPOSED PAVEMENT AREA, AND BACKFILL WITH CLASS "A" CONCRETE OR A STANDARD APPROVED TYPE.

THE UNIT PRICE BID FOR EACH "DRILLED AND BALLOONED" SHALL INCLUDE CONSIDERATION FOR LABOR, TOOLS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE ITEM, IN THE ESTIMATED QUANTITY OF 7 EA.

[illegible]

FLUE

[illegible] SPACING [illegible] ONE R.

VAULT TYPE TOILET

TO BE CONSTRUCTED IN ACCORDANCE WITH STANDARD DRAWING [illegible] WITH THE FOLLOWING EXCEPTIONS:

(1) THE CONCRETE FLOOR SLAB SHALL BE CONSTRUCTED IN SECTIONS EXCEPT AT THE CONCRETE FOUNDATION WALLS AS SHOWN ON THE STANDARD DRAWING AND AS REQUIRED BY ITEM NO. 4-B.

(2) THE FOUNDATION FOR THE FLUE IS TO BE IS TO BE FINISHED SMOOTH, [illegible] SHAPED WITH A RADIUS OF 3". THE SEAT SHALL BE FINISHED THE SAME AS THE FLOOR.

(3) ADD A FLOOR DRAIN IN THE CENTER OF EACH TOILET ROOM AND SLOPE THE FLOORS TO IT AT THE RATE OF ¼" TO THE FOOT. THE DIMENSION OF THE FLOOR DRAIN TO BE APPROXIMATELY 4".

(4) OMIT 1" T.&G. SHEATHING SHOWN FOR INTERIOR OF TOILET ROOMS AND ADD ¾" EXTERIOR GRADE PLYWOOD.

REST AREAS GENERAL NOTES

REST AREA TREE PROTECTION

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

ITEM SPECIAL

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

TOPSOIL FOR "L" ITEMS

THIS SHALL BE OBTAINED FROM STOCKPILES PROVIDED BY ITEM E-1.03(a) AREAS INDICATED ON THE PLANS FOR THESE ITEMS SHALL BE PREPARED AS PLANTING BEDS, EXCAVATED TO A DEPTH OF 12 INCHES AND BACK-FILLED WITH A MIXTURE OF 1/3 TOPSOIL, 1/3 SAND AND 1/3 PEAT MOSS. THIS MIXTURE SHALL BE USED FOR L-14 AND L-16 ITEMS ALSO.

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

TREES, STUMPS AND CLUMPS OF BRUSH THAT ARE NOT MARKED TO BE SAVED ARE TO BE REMOVED. WITHIN THE REST AREAS ONLY THOSE TREES INDICATED BY THE ENGINEER SHALL BE REMOVED. CARE SHALL BE EXERCISED BY THE CONTRACTOR IN PERFORMACE OF THIS WORK SO THAT NO DAMAGE IS DONE TO TREES INDICATED BY THE ENGINEER TO BE SAVED.

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

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

ITEM L-17 PRUNING EXISTING TREES

ALL TREES WITHIN THE REST AREAS THAT ARE INDICATED TO BE SAVED BY THE ENGINEER SHALL BE PRUNED IN ACCORDANCE WITH ITEM L-17 AND IN ADDITION TO L-17 REQUIREMENTS, LOW LIMBS SHALL BE REMOVED TO OBTAIN SEVEN (7) FOOT CLEARANCE ABOVE THE GROUND AS DIRECTED. THE NUMBER AND SIZE OF TREES TO BE PRUNED MAY BE ESTIMATED FROM INFORMATION SHOWN RELATIVE TO EXISTING TREES AND THE PERCENTAGE TO BE REMOVED.

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

ITEM L-5 SEEDING AND PROTECTING REST AREAS

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

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

THE SEED MIXTURE SHALL BE AS FOLLOWS:

45% KENTUCKY BLUE GRASS
35% ILLAHEE FESCUE
20% RED TOP

ITEM L-3 PLACING STOCKPILED TOPSOIL

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

ITEM L-6 ROADSIDE CLEANUP, MODIFIED

THIS ITEM IS ESTIMATED FOR PERFORMANCE ON ALL EARTH AREAS OUTSIDE THE EXCAVATED OR FILLED AREAS WITHIN THE REST AREAS, AS DIRECTED. TREE PRUNING AND REMOVAL OF TREES AND STUMPS WILL BE DONE UNDER OTHER ITEMS. IN ADDITION TO THE SPECIFIED REQUIREMENTS OF L-6 THE FOLLOWING WORK SHALL BE PERFORMED. AREAS OUTSIDE THE TREE ROOT AREAS SHALL BE FITTED AND GRADED TO OBTAIN DRAINAGE AWAY FROM ALL STRUCTURES AND TO PREVENT PONDING AT ANY POINT. ALL ROUGH UNEVEN AREAS INCLUDING FENCE ROWS SHALL BE GRADED TO ELIMINATE HUMPS OR DEPRESSIONS THAT WOULD INTERFERE WITH A 24 INCH MOWER. FENCE SHALL BE REMOVED FROM TREES AND THE TREE TRUNKS REPAIRED. BOULDERS SHALL BE REMOVED AND DISPOSED OF OR BURIED TO A MINIMUM DEPTH OF 12 FEET. STONE PILES SHALL BE REMOVED AND DISPOSED OF OR BURIED TO A MINIMUM DEPTH OF 12 FEET.
THE UNIT PRICE BID FOR ITEM L-6, ROADSIDE CLEANUP-MODIFIED, SHALL CONSTITUTE FULL PAYMENT FOR THIS ITEM AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

PRESSURE WATER SYSTEM

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

SEWAGE CHLORINATION UNIT

V O I D

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

BASIS OF PAYMENT

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

AEROBIC SEWAGE TREATMENT PLANT: SEE DETAILS ON PLANS

METHOD OF MEASUREMENT

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

BASIS OF PAYMENT

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

BITUMINOUS JOINTS

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

V O I D

GALVANIZED PIPE

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

GENERAL NOTES CONCERNING THE BUILDINGS

THE BUILDINGS ARE TO BE CONSTRUCTED AT THE LOCATIONS AND ELEVATIONS SHOWN ON THE PLANS. EXCAVATING AND BACK-FILLING SHALL BE AS SPECIFIED UNDER E-1. AGGREGATE FOR SUBGRADE UNDER FLOORS SHALL BE AS SPECIFIED UNDER D-10.

- CONCRETE WORK -

CONCRETE WORK

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

1. EXTENT OF WORK

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

7-16-62
5-24-62

REST AREAS-ROADSIDE TOILETS AND STORAGE UNIT

GENERAL NOTES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

TRUMBULL COUNTY TRU-I-80-8.90

16/401

CARPENTRY AND MISCELLANEOUS (CONTINUED)

4. INSULATION

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

5. INSULATION VENTS

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

6. TOILET PARTITIONS

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

7. TOILET ROOM ACCESSORIES

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

8. GLAZING

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

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

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

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

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

9. CAULKING

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

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

10. FINISH HARDWARE

A. SEE "COOR HARDWARE SCHEDULE" ON PLANS.

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

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

D. FINISH FOR LOCKSETS SHALL BE AS SHOWN.

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

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

VOID

ELECTRICAL

1. NOTES

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

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

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

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

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

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

2. EXTENT OF WORK

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

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

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

3. INSPECTION

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

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

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

4. SERVICE

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

5. SERVICE ENTRANCE CONDUCTORS

THE CONTRACTOR SHALL FURNISH AND INSTALL THREE 1/C AWG NO. 4/0 TYPE RHW CONDUCTORS FROM THE SERVICE POLE, AT EACH SITE, THROUGH 2½" WROUGHT IRON, GALVANIZED CONDUIT TO THE SERVICE PANEL IN THE UTILITY BUILDING AT EACH SITE. THE CABLE SHALL BE GENERAL ELECTRIC NO. S.I.L. 58004 OR APPROVED EQUAL. THIS ITEM SHALL NOT BE INCLUDED IN THE UNIT PRICE BID FOR ITEM SPECIAL, ROADSIDE TOILET AND STORAGE UNIT. PAYMENT FOR SERVICE ENTRANCE CONDUCTORS SHALL BE THE ACTUAL LINEAL FEET OF ITEM S-25, SERVICE ENTRANCE CABLE, FURNISHED AND INSTALLED, AND IN ACCORDANCE WITH ITEM S-25.

VOID

5. LIGHTING CONDUITS

A. THE CONTRACTOR SHALL FURNISH AND INSTALL THE 1" GALVANIZED ALLOY STEEL CONDUIT (M-106.11) DIRECT BURIED COMPLETE WITH 2-1/C #10 HEAVY WALL RHW 600 VOLT CABLES AS DETAILED ON DRAWING NO. 201. CONDUIT AND WIRE SHALL SHALL TERMINATE IN THE STORAGE ROOM PANEL BOARD AND SHALL BE EXTENDED 6" ABOVE FINISHED GRADE AND CAPPED AT THE WELL SHELTER AND MOTORIST'S SERVICE SHELTER. PAYMENT FOR LIGHTING CONDUITS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM SPECIAL, ROADSIDE TOILET AND STORAGE UNIT. PAYMENT SHALL INCLUDE EXCAVATION, BACKFILLING, COMPACTING, CONDUIT, CONDUIT FITTINGS AND CABLE, FURNISHED AND INSTALLED, AND IN ACCORDANCE WITH SEC. S-25.

ELECTRICAL (CONTINUED)

6. PANELBOARD

A. PANEL BOARD SHALL BE DESIGNED FOR A SINGLE PHASE, 3 WIRE 120/240 A-C SYSTEM. IT SHALL MEET REQUIREMENTS FOR SERVICE ENTRANCE EQUIPMENT AND THE MAINS RATING AT 60 AMPS., 8-CIRCUIT.

B. OVERCURRENT PROTECTIVE DEVICES SHALL BE 15 AMP. SINGLE POLE CIRCUIT BREAKERS FOR BUILDING LIGHTS.

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

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

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

7. HEATING UNITS AND CONTROLS

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

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

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

VOID

7. PHOTOELECTRIC CONTROL SWITCH

A. LIGHTING CIRCUIT DESIGN SHALL PROVIDE MANUAL BY-PASS SWITCHING FOR LOBBY CIRCUIT AND TOILET ROOMS CIRCUIT IN ADDITION TO AUTOMATIC PHOTO ELECTRIC CONTROL.

B. CONTROL SWITCH SHALL BE A G.E. CATALOG NO. CH20G016, "FISHER PIERCE", "TORK" OR APPROVED EQUAL.

C. SWITCH SHALL BE MOUNTED AT POINT DIRECTED ON 2" CONDUIT WITH 3-1/C #12 CABLES. MOUNT 5'-0" ABOVE ROOF ON TOILET BUILDING ORIENTED TO "NORTH".

8. WIRE AND WIRING

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

B. ALL WIRING SHALL BE RUN CONCEALED.

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

D. NO WIRE LESS THAN NO. 12 AWG SHALL BE USED. WIRE SIZE FOR LONG RUNS SHALL BE SUCH SIZE THAT THE DROP IN POTENTIAL TO THE FARTHEST OUTLET SHALL NOT EXCEED 2 °/₀ UNDER MAXIMUM LOAD.

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

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

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

10. OUTLET BOXES AND FITTINGS

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

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

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

11. SWITCHES

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

VOID

9. BUILDING WIRING (ROADSIDE TOILET AND STORAGE UNIT, MOTORIST'S SERVICE SHELTER, AND WELL SHELTER)

A. WIRE, CONDUIT, DEVICES AND FIXTURES BEYOND THE MAIN PANEL BOARD AND CAPPED CONDUITS ~~WILL BE~~ BY OTHERS.

part

Alternate s

7-17-62

ELECTRICAL WORK - LIGHTING

DESCRIPTION

THIS ITEM SHALL CONSIST OF FURNISHING ALL NECESSARY MATERIAL, LABOR, AND FACILITIES REQUIRED TO COMPLETE THE ELECTRICAL INSTALLATION IN ACCORDANCE WITH THE DESIGNS, DIMNSIONS AND DETAILS SHOWN IN THE PLANS AND DESCRIBED IN THE SPECIFICATIONS.

ALL MATERIAL, WORKMANSHIP AND CONSTRUCTION METHODS, EXCEPT AS MODIFIED HEREIN, SHALL CONFORM TO THE GENERAL REQUIREMENTS OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, CONSTRUCTION AND MATERIAL SPECIFICATIONS.

THE CONTRACTOR SHALL ALSO COMPLY WITH THE NATIONAL ELECTRIC CODE OF THE NATIONAL BUREAU OF FIRE UNDERWRITES.

MATERIALS - GENERAL

MATERIALS TO BE FURNISHED MAY BE SPECIFIED IN THE PLAN BY A GIVEN MANUFACTURER'S CATALOG NUMBER OR TYPE. TH IS FOR DESCRIPTIVE PURPOSES ONLY AND THE CONTRACTOR M ASSUME THAT APPROVED EQUAL MATERIALS MAY BE FURNISHED.

CONDUIT -

CONDUIT AND COUPLINGS SHALL BE HOT DIPPED GALVANIZ, ALLOY STEEL, SEC. 106.11, FOR DIRECT BURIAL.

PAYMENT FOR CONDUIT SHALL BE MADE AT THE CONTRAC UNIT PRICE FOR EACH SIZE AND SHALL BE FULL COMPENSATION R FURNISHING AND INSTALLING CONDUIT, AND ALL MATERIALS INCLUIG ALL FITTINGS & NIPPLES, EXCAVATION, TRENCHING, BACKFILL, RESTORION, SURPLUS MATERIAL DISPOSAL AND ALL INCIDENTAL TOOLS OR EQUMENT REQUIRED TO COMPLETE THE WORK.

WIRE AND CABLE -

WIRE AND CABLE INSTALLATION SHALL CONFORM TO TH ABOVE SPECIFICATIONS AND SHALL BE OF THE SIZES AND TYPE SHOWN ON THE PLANS.

WIRE AND CABLE INSTALLED IN CONDUIT SHALL MEET FEDERAL AVIATION AGENCY SPECIFICATION NO. L-824 PE A, SHALL BE STRANDED SINGLE CONDUCTOR NO. 4 AWG COPPER CA E G.E. No. SI 58089, OR APPROVED EQUAL.

PAYMENT FOR WIRE AND CABLE SHALL BE MADE AT THE CONACT UNIT PRICE WHICH SHALL INCLUDE ALL TESTING, SPLICING, MATERIAL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPITE THIS ITEM.

THE CONTRACTOR SHALL FURNISH ALL NECESSARY EQUIPMT AND DEMONSTRATE TO THE SATISFACTION OF THE ENGINEER TT ALL CIRCUITS ARE FREE OF SHORT CIRCUITS AND UNSPECIFIED GROUNDS, AND ARE PROPERLY CONNECTED AND OPERABLE. SYSTEM AND EQUIPMENT GROUNDING SHALL BE TESTED BY APPROVED METHOD IN THE PRESENCE OF THE ENGINEER.

CABLE MARKERS

THE CONTRACTOR SHALL FURNISH AND INSTALL CONCRETE MARKERS (SEE DETAIL) AS SHOWN ON THE PLANS.

COST OF THE MARKERS SLL BE INCLUDED IN THE UNIT PRICE BID FOR 2" CONDUIT.

TRENCHING

TRENCH SHALL BE PROVIDED FOR ALL UNDERGROUND CONDUIT AT THE LOCATIONS AND IN CONFORMITY TO THE DESIGN, DETAILS A DIMENSIONS SHOWN ON THE PLANS.

TRENCH MAY BE EXCAVATED MANUALLY OR WIT MECHANICAL TRENCHING EQUIPMENT. TRENCH WALLS SHALL BE ESSENTIALLY VERTICAL SO THAT A MINIMUM OF SHOULDER SURFACE IS DISTURBED. ANY DEVIATION FROM THE PLAN LINE OF TRH MUST BE APPROVED BY THE PROJECT ENGINEER.

TRENCHING (CONTINUED)

TRENCH BOTTOM SHALL BE SMOOTH AND FREE OF COARSE AGGREGATE. MINIMUM WIDTH OF TRENCH BOTTOM SHALL BE EIGHT INCHES. MINIMUM DEPTH SHALL BE 30 INCHES.

TRENCH SHALL BE LOCATED AS SHOWN ON THE PLANS. TRENCHES SHALL NOT BE EXCESSIVELY WET OR CONTAIN POOLS OF WATER DURING BACKFILLING OPERATIONS. TRENCHES SHALL BE BACKFILLED IN LAYERS SPECIFIED AND SHALL BE COMPACTED WITH MECHANICAL TAMPERS TO DENSITY SPECIFIED UNDER ITEM E-1, ROADWAY EXCAVATION AND EMBANKMENT, TABLE II, CONDITION I.

PAYMENT FOR TRENCHES SHALL BE MADE AT THE CONTRACT UNIT PRICE BID. PRICE SHALL INCLUDE EXCAVATION, BACKFILL, RESTORATION, REMOVAL OF ROCK DISPOSAL OF SURPLUS MATERIAL, AND GRADED BACKFILL, AND FOR ALL PREPARATION, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK.

RESTORATION (IF APPLICABLE)

ALL AREAS DISTURBED BY EXCAVATION REQUIRED FOR INSTALLATION OF TRENCH, PULL BOXES, DUCTS, LIGHTING STANDARD FOUNDATIONS, CONTROL CENTER FOUNDATIONS, SERVICE POLES, STORING OF EXCAVATED EARTH AND OTHER MATERIALS, CABLE LAYING AND OTHER WORK SHALL BE RESTORED TO ITS ORIGINAL CONDITION.

WHERE SOD IS ESTABLISHED, IT SHALL BE CAREFULLY STRIPPED AND REPLACED AS SOON AS BACKFILLING IS COMPLETED. BACKFILLING OF AREA WHERE SOD IS REMOVED SHALL BE STOPPED AT A DEPTH EQUAL TO THE THICKNESS OF THE SOD TO BE USED WITH PROPER ALLOWANCE FOR SETTLEMENT.

PAVED AREAS SHALL BE PLACED IN A MANNER EQUIVALENT TO ORIGINAL SURFACE OR AS DETAILED ON THE PLANS. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR MAINTAINING ALL DISTURBED SURFACES AND REPLACEMENTS UNTIL FINAL ACCEPTANCE.

NO SEPARATE PAYMENT SHALL BE MADE FOR RESTORATION. THE COST OF RESTORATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR INSTALLATAION OF LIGHTING SYSTEM ITEMS WHICH REQUIRE EXCAVATION OR OTHERWISE CAUSE EXISTING GROUND SURFACE TO BE DISTURBED.

GROUNDING

ALL SERVICE EQUIPMENT SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH N.E.C. REQUIREMENTS. 5/8" X 8' COPPERCLAD GROUND RODS WITH APPROVED THERMAL TYPE CONNECION AND #4 SOLID BARE WIRE SHALL BE USED UNLESS OTHERWISE NOTED. ROD CONNECTIONS SHALL BE PAINTED WITH TWO COATS OF GLYPTAL INSULATING ENAMEL AFTER INSTALLATION. RESISTANCE TO GROUND SHALL NOT EXCEED 25 OHMS.

LIGHTING STANDARDS

LIGHTING STANDARDS ON RAMPS SHALL BE UNION METAL MFG. CO., DESIGN 440A, 30'-0", 11 GAUGE STEEL, ANCHOR BASE TYPE WITH MODIFICATION 2C HANDHOLE, FRAME AND COVER WITH SINGLE 10'-0" BRACKET ARM, № H-270-D2. ON SPEED CHANGE LANES LIGHT POLES SHALL HAVE 15'-0" ARMS AS PER NO. J-270-F2.

LIGHTING STANDARDS ON ISLANDS SHALL BE THE SAME AS FOR RAMPS EXCEPT THEY SHALL HAVE DOUBLE 12'-0" BRACKET ARMS, № H-270-E2, OR APPROVED EQUAL.

EACH OF THE ABOVE SHALL HAVE HOOKS BUILT IN FOR SUPPORT OF THE INTERNAL WIRING. CONDUCTORS SHALL BE SUITABLY ATTACHED TO RELIEVE STRAIN AT THE BRACKET INLET.

LIGHTING STANDARDS IN PICNIC AREA SHALL BE UNION METAL CO. 21'-3" UPRIGHT STANDARD NO 70805-Y10 OR APPROVED EQUAL.

FINISH PAINT COATS SHALL CONSIST OF ENAMEL AS SPECIFIED UNDER ITEM M-9, SECTION M-9.23, GREEN ENAMEL.

LIGHTING STANDARD FOUNDATIONS - S-25.11

FOUNDATIONS SHALL CONFORM TO ABOVE SPECIFICATION AND SHALL BE SIZED AS NOTED ON THE PLANS.

PAYMENT SHALL BE MADE ON THE BASIS OF UNIT PRICE BID FOR EACH SIZE, WHICH SHALL INCLUDE ALL MATERIAL, LABOR, AND EQUIPMENT NECESSARY TO COMPLETE THE INSTALLATION.

SERVICE POLE - POWER AND TELEPHONE

THE CONTRACTOR SHALL FURNISH AND INSTALL SERVICE POLES AS DETAILED, COMPLETE WITH SERVICE EQUIPMENT AS SHOWN ON THE TYPICAL DETAIL FOR ELECTRIC SERVICE POLE, SHEET NO 205-G

POLES SHALL BE A.S.A. CLASS 4, 35'-0" SOUTHERN YELLOW PINE, CREOSOTE TREATED.

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT AND APPURTENANCES SHOWN ON SERVICE POLE.

THE CONTRACTOR SHALL CONTACT THE UTILITY COMPAN IES SERVING THE AREA AND VERIFY JOINT POLE REQUIREMENTS.

GUY WIRE WILL NOT BE PERMITTED IN THE PARK AREA. IF SUPPORT IS REQUIRED, STRAIN BLOCKING METHOD SHALL BE USED, AS APPROVED BY THE POWER COMPANY.

CLEARANCE BETWEEN POWER LINES AND TELEPHONE LINES SHALL BE APPROVED BY BOTH UTILITIES.

PAYMENT SHALL BE MADE ON THE BASIS OF UNIT PRICE BID AND SHALL INCLUDE ALL MATERIALS, LABOR, AND USE OF EQUIPMENT NECESSARY TO COMPLETE THIS ITEM, INCLUDING SERVICE SWITCH.

SERVICE SWITCH

SERVICE SWITCH SHALL BE WATERTIGHT NEMA 4 CONSTRUCTION OF A.I.S.A. 302 OR 303 STAINLESS STEEL WITH FLANGE MOUNTED OPERATING HANDLE WHICH CAN BE LOCKED IN BOTH ON AND OFF POSITION. SWITCH SHALL BE 60 AMPERES, 240 VOLTS.

TELEPHONE SERVICE CONDUIT

THE CONTRACTOR SHALL FURNISH AND INSTALL A CONDUIT RUN FROM THE SERVICE POLE CONTACT POINT TO THE MOTORIST'S SERVICES SHELTER AS SHOWN ON THE LINE DRAWINGS AND DETAILS ON SHEET 201 1 1/4" CONDUIT SHALL TERMINATE IN AN L.B. CONDULET AND EXTEND WITH 3/4" X 4" NIPPLE THROUGH TELEPHONE STAND. A PULL WIRE SHALL BE DRAWN IN THE CONDUIT FOR THE TELEPHONE COMPANY'S USE.

ISLAND AND RAMP CIRCUITS

ISLAND AND RAMP CIRCUITS SHALL CONSIST OF THREE 240 VOLT CIRCUITS OF #4 TYPE RHW-NEOPRENE JACKETED CABLE ENCLOSED IN 2" CONDUIT EXTENDING FROM SERVICE EQUIPMENT TO THE ISLAND. CIRCUITS SHALL BE DIVIDED AT THE ISLAND TO PROVIDE A SEPARATE FUSED CIRCUIT FOR THE ISLAND AND EACH RAMP.

RAMP CIRCUIT CONDUITS SHALL EXTEND 5 FEET BEYOND PAVEMENT AND A CABLE MARKER SHALL BE PLACED AT THAT POINT.

PICNIC AREA CIRCUITS

PICNIC AREA CIRCUITS SHALL CONSIST OF TWO 240 VOLT CIRCUITS OF #4 TYPE RHW-NEOPRENE JACKETED CABLE ENCLOSED IN 2" CONDUIT EXTENDED FROM SERVICE PANEL. THE CIRCUITS SHALL BE ARRANGED TO PROVIDE FUTURE SEPARATE SWITCHING FOR ONE OF THE CENTER LUMINAIRES.

LUMINAIRE STANDARD LOCATIONS

LOCATION OF ISLAND AND RAMP STANDARDS SHALL BE AS SHOWN ON PLANS.

PICNIC AREA STANDARDS ARE SHOWN IN APPROXIMATE LOCATIONS AND ARE SUBJECT TO FINAL LOCATION BY THE PROJECT ENGINEER AND LANDSCAPE ARCHITECT.

CONTROL CENTER

FOR RAMP, ISLAND AND YARD LIGHTS SHALL CONSIST OF NEMA I ENCLOSURE, LOCATED IN THE UTILITY ROOM, WITH ONE (1)-60 AMP. 240 VOLT, 2 POLE MAGNETIC CONTACTOR CONNECTED TO LOAD SIDE OF MAIN BREAKER IN PANEL BOARD (SHEET NO 205-D), OPERATE WITH THE PROPOSED PHOTO-ELECTRIC CONTROL ON BUILDING ROOF. (SHEET NO. 205-D)

A.S.A. - I.E.S. TYPE LIGHT DISTRIBUTION

A.S.A. - I.E.S. TYPE DISTRIBUTION SPECIFIED MEANS THE RESULTANT FINAL LIGHT PATTERN OBTAINED ON THE ROADWAY SURFACE. CONTRACTOR SHALL BE RESPONSIBLE IN SEEING THAT ANY ADJUSTMENTS NECESSARY ARE PERFORMED TO OBTAIN THE RESULTANT DISTRIBUTION SPECIFIED.

BALLASTS

PICNIC AREA LIGHTING UNITS SHALL HAVE 250 WATT, 230-460 VOLT REGULATOR TYPE BALLASTS INSTALLED ON BALLAST HANGER LOCATED IN POLE TRANSFORMER BASE. LINE MATERIALS INDUSTRIES, CAT. NO. WLU28A2.

LUMINAIRES

LUMINAIRES SHALL BE MERCURY VAPOR TYPE, SUITABLE FOR USE ON MULTIPLE CIRCUIT, 240 VOLT 60 CYCLE OPERATION AND SHALL BE COMPLETE WITH LAMPS.

LUMINAIRES PLACED ADJACENT TO TRAVELLED ROADWAYS OR WITHIN THE PARKING AREAS SHALL BE 400 WATT, PROVIDE A.S.A. - I.E.S. TYPE III DISTRIBUTION WITH A.S.A. CODE NO. H-33-I.C.D. LAMP, AND SHALL HAVE AN INTEGRAL 230/460 VOLT REGULATED OUTPUT BALLAST. THE LUMINAIRE SHALL BE SIMILAR, IN DESIGN AND CONSTRUCTION, TO GENERAL ELECTRIC TYPE M-400 CATALOGUE NO. G704G009.

LUMINAIRES FOR THE PICNIC AREAS SHALL BE 250 WATT, PROVIDE A.S.A. I.E.S. TYPE IV. DISTRIBUTION WITH A.S.A. CODE NO. H-37-5 KC/W LAMP. THE LUMINAIRE SHALL BE SIMILAR, IN DESIGN AND CONSTRUCTION, TO LINE MATERIALS CORPORATION TYPE 2D CATALOGUE NO LM19B3

POLE AND BRACKET CABLE

CABLE FURNISHED AND INSTALLED WITHIN LIGHTING STANDARDS AND BRACKET ARMS (ABOVE HANDHOLE OR TRANSFORMER BASE DOOR) SHALL CONSIST OF 2-1/C, STRANDED #12 AWG, TYPE RHW, NEOPRENE JACKETED CONDUCTORS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

TRUMBULL COUNTY TRU-I-80-8.90

COMPUTATIONS

PAVEMENT & BASE

[redacted]

13,309.01 [redacted] = 10,984.2 S.Y.

[redacted]

[redacted] = [redacted]

[redacted] = [redacted]

[redacted] = [

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

18-A
401

TRUMBULL COUNTY TRU-I-80-8.90

COMPUTATIONS

PAVEMENT & BASE

B-112 POROUS BASE COURSE

I-80

STA. 486+86 TO STA. 503+98.82
4520 S.Y. × 5.2" AVG. DEPTH/36 = 653 C.Y.

STA. 505+20.46 TO STA. 512+45.07
1874 S.Y. × 5.4" AVG. DEPTH/36 = 281 C.Y.

STA. 515+44.57 TO
STA. 545+25.00
9212 S.Y. × 4.8" AVG. DEPTH/36 = 1236 C.Y.

STA. 574+75.00 TO STA. 579+85.16
1587 S.Y. × 5.8" AVG. DEPTH/36 = 256 C.Y.

STA. 583+04.84 TO STA. 657+86.43
23,407 S.Y. × 5.55" AVG. DEPTH/36 = 3,609 C.Y.

RAMP "A"

STA. 8+69.19 TO STA. 14+58.25
STA. 15+69.24 TO STA. 27+58
1003.4 S.Y. × 3.4" AVG. DEPTH/36 = 95 C.Y.

RAMP "B"

STA. 10+50 TO STA. 10+95
STA. 13+37 TO STA. 28+51.82
967.9 S.Y. × 3.8" AVG. DEPTH/36 = 102 C.Y.

RAMP "C"

STA. 5+00 TO STA. 23+55
1440.3 S.Y. × 4.8" AVG. DEPTH/36 = 192 C.Y.

RAMP "D"

STA. 11+50 TO STA. 12+34
STA. 13+75 TO STA. 32+72.81
1341.0 S.Y. × 4.6" AVG. DEPTH/36 = 171 C.Y.

RAMP "E"

STA. 18+51.89 TO
STA. 32+28.30
1088.0 S.Y. × 4.9" AVG. DEPTH/36 = 148 C.Y.

U.S. 62 AND S.R. 7 SPEED CHANGE LANES
STA. 259+52.06 TO STA. 265+82.06
705.6 S.Y. ×3.5" AVG. DEPTH/36 = 69 C.Y.

RELOC. HUBBARD-SHARON ROAD

STA. 11+73.4 TO STA. 19+75
965.0 S.Y. × 4.9" AVG. DEPTH/36 = 131 C.Y.

RAMP "G"

STA. 2+00 TO STA. 11+01.25
532.9 S.Y. × 4" AVG. DEPTH/36 = 59 C.Y.

RAMP "H"
STA. 16+20.87 TO STA. 27+20.49
921.4 S.Y. × 3.7" AVG. DEPTH/36 = 95 C.Y.
TOTAL I-80-5(9)245 7,097 C.Y.

B-112 POROUS BASE COURSE

IG-80-5(9)245

STA. 545+25.00 TO STA. 574+75
9178 S.Y. × 5.8" AVG. DEPTH/36 = 1,479 C.Y.
TOTAL IG-80-5(9)245 = 1,479 C.Y.

TOTAL I-IG-80-5(9)245 = 8,594 C.Y.

T-35 ASPHALTIC CONCRETE SURFACE COURSE

U.S. 62 AND S.R. 7 SPEED CHANGE LANES AND CROSSOVERS

STA. 252+20 TO STA. 265+82
20,502 S.F. ×.1042/27 = 79.1 C.Y.

RELOC. HUBBARD-SHARON ROAD

STA. 19+75 TO STA. 23+00
10,060 S.F. ×.125/27 = 46.6 C.Y.* TYPE "A"

RELOC. PRICE-SHAFFER ROAD

STA. 5+20.49 TO STA. 12+49.28
13,119 S.F. ×.1042/27 = 50.7 C.Y.

STA. 15+80.78 TO STA. 27+50
21,046 S.F. ×.1042/27 = 81.2 C.Y.

STA. 25+30 (CONNECTOR LT.)
2786 S.F. ×.1042/27 = 10.8 C.Y.

RELOC. FOX-NORTH ROAD

STA. 0+50 TO STA. 31+67
59,731 S.F. ×.1042/27 = 230.5 C.Y.

RELOC. STATE LINE ROAD

STA. 1+50 TO STA. 28+32.16
50,329 S.F. ×.1042/27 = 194.2 C.Y.

TOTAL I-80-5(9)245 = 693.1 C.Y.

TOTAL I-IG-80-5(9)245 = 693 C.Y.

* TYPE A

B-35 ASPHALTIC CONCRETE LEVELING COURSE

U.S. 62 AND S.R. 7 SPEED CHANGE LANES AND CROSSOVERS.

STA. 252+20 TO STA. 265+82
20,502 S.F. ×.1042/27 = 79.1 C.Y.

RELOC. HUBBARD-SHARON ROAD

STA. 19+75 TO STA. 23+00
10,060 S.F. ×.208/27 = 77.5 C.Y.

RELOC. PRICE-SHAFFER ROAD

STA. 5+20.49 TO STA. 12+49.28
13,119 S.F. ×.16667/27 = 81.0 C.Y.

STA. 15+80.78 TO STA. 27+50
21,046 S.F. ×.16667/27 = 130.0 C.Y.

STA. 25+30 (CONNECTOR LT.)
2786 S.F. ×.16667/27 = 17.2 C.Y.

RELOC. FOX-NORTH ROAD

STA. 0-50 TO STA. 31+67
59,731 S.F. ×.16667/27 = 368.7 C.Y.

RELOC. STATE LINE ROAD

STA. 1+50 TO STA. 28+32.16
50,329 S.F. ×.16667/27 = 310.7 C.Y.

TOTAL I-80-5(9)245 = 1,064.4 C.Y.

TOTAL I-IG-80-5(9)245 = 1,065 C.Y.

B-35 ASPHALTIC CONCRETE BASE COURSE

U.S. 62 AND S.R. 7 SPEED CHANGE LANES AND CROSSOVERS

STA. 252+20 TO STA. 265+82
20,502 S.F. ×.25/27 = 189.8 C.Y.

TOTAL I-80-5(9)245 = 189.8 C.Y.

TOTAL I-IG-80-5(9)245 = 190 C.Y.

T-30 BITUMINOUS PRIME COAT

U.S. 62 AND S.R. 7 SPEED CHANGE LANES AND CROSSOVERS

STA. 252+20 TO STA. 265+82
20,502 S.F. ×.40/9 = 912 GAL.

RELOC. HUBBARD-SHARON ROAD

STA. 19+75 TO STA. 23+00
10,387 S.F. ×.40/9 = 462 GAL.

RELOC. PRICE-SHAFFER ROAD

STA. 5+20.49 TO STA. 12+49.28
13,119 S.F. ×.40/9 = 583 GAL.

STA. 15+80.78 TO STA. 27+50
21,046 S.F. ×.40/9 = 936 GAL.

STA. 25+30 (CONNECTOR LT.)
2944 S.F. ×.40/9 = 131 GAL.

RELOC. FOX-NORTH ROAD

STA. 0-50 TO STA. 31+67
63,019 S.F. ×.40/9 = 2,801 GAL.

RELOC. STATE LINE ROAD

STA. 1+50 TO STA. 28+32.16
53,180 S.F. ×.40/9 = 2,364 GAL.

TOTAL I-80-5(9)245 = 8,189 GAL.

TOTAL I-IG-80-5(9)245 = 8,189 GAL.

B-19 AGGREGATE BASE COURSE

U.S. 62 AND S.R. 7 SPEED CHANGE LANES AND CROSSOVERS

STA. 252+20 TO STA. 265+82
26,937 S.F. ×1.0/27 = 998 C.Y.

RELOC. HUBBARD-SHARON ROAD

STA. 19+75 TO STA. 23+00
10,387 S.F. ×.5/27 = 193 C.Y.

RELOC. PRICE-SHAFFER ROAD

STA. 5+20.49 TO STA. 12+74.28
14,322 S.F. ×.5/27 = 265 C.Y.

STA. 15+55.78 TO STA. 27+50
22,690 S.F. ×.5/27 = 420 C.Y.

STA. 25+30 (CONNECTOR,LT.)
2944 S.F. ×.5/27 = 55 C.Y.

RELOC. FOX-NORTH ROAD

STA. 0-50 TO STA. 31+67
63,018 S.F. ×.5/27 = 1,167 C.Y.

RELOC. STATE LINE ROAD

STA. 1+50 TO STA. 28+32.16
53,180 S.F. ×.5/27 = 985 C.Y.

CUL DE SACS

FOX-NORTH ROAD
9200 S.F. ×.6667/27 = 227 C.Y.

PRICE-SHAFFER ROAD
8175 S.F. ×.6667/27 = 202 C.Y.

TOTAL I-80-5(9)245 = 4,512 C.Y.

TOTAL I-IG-80-5(9)245 = 4,512 C.Y.

T-18 STABILIZED CRUSHED AGGREGATE SHOULDERS & APPROACHES

U.S. 62 AND S.R. 7 SPEED CHANGE LANES

3061 S.F. ×.5/27 = 57 C.Y.

TOTAL I-80-5(9)245 = 57 C.Y.

TOTAL I-IG-80-5(9)245 = 57 C.Y.

EARTHWORK QUANTITIES

STATION TO STATION		EXCAVATION	EMBANKMENT	EMBANKMENT + 15 %
I-80-5(9)245				
MAINLINE		99,322 ~~211,671~~		
485+50	495+00	23,665	46,879	53,911
495+00	505+00		87,339	100,440
505+00	515+00	1,003	147,399	149,508
515+00	525+00	1,634	131,572	151,308
525+00	535+00	5,639	51,361	59,065
535+00	545+25	6,376	229,628	264,072
574+75	585+00	2,385	166,709	191,715
585+00	595+00	2,064	48,302	55,547
595+00	605+00	89,762	881	1,013
605+00	615+00	275,762		
615+00	625+00	110,418	12,505	14,381
625+00	635+00	2,482	102,782	118,199
635+00	645+00	3,569	71,324	82,023
645+00	655+00	6,843	8,800	10,120
655+00	657+86.43			
U.S. 62 AND S.R. 7				
INTERCHANGE				
RAMP "A"		9,687	19,606	22,547
RAMP "B"		94,817	24,721	28,429
RAMP "C"		9,358	22,652	26,050
RAMP "D"		11,059	30,788	35,406
RAMP "E"		2,153	31,058	35,717
LITTLE YANKEE CR.		6,117	10	12
TRASH DUMP RT. RAMP "C"		621	621	714
SIDE ROADS				
U.S. 62 AND S.R. 7		6,313	1,973	2,269
HUBBARD-SHARON		8,960	2,141	2,462
FOX-NORTH RD.		6,243	10,726	12,335
PRICE-SHAFFER		1,733	55,925	64,314
STATE LINE RD.		39,788	175,272	201,563
PRICE-SHAFFER CUL-DE-SAC		105	2,107	2,423
FOX-NORTH CUL-DE-SAC		2,861	82	94
REST AREA				
RAMP "G"		9,150	2,206	2,537
PARKING AREA		30,053	2,138	2,459
RAMP "H"		89,889		
SUB-TOTAL		1,071,580	1,487,507	1,690,633
Deduct Corr. Rock Excav. (652)			—	—
Add Earth Fill Rock Area		—	13,573	15,609
TOTAL I-80-5(9)245		~~1,070,928~~	1,501,080	1,706,242
IG-80-5(9)245		959,179		
MAINLINE				
545+25	555+00	208,545	0	0
555+00	565+00	239,458	286	329
565+00	574+75	278,742	1,561	1,795
TOTAL IG-80-5(9)245		726,745	1,847	2,124
TOTAL I-IG-80-5(9)245		~~1,797,673~~ 1,685,942	1,502,927	1,708,366

E-4 BORROW USING GRANULAR MATERIAL — AS PER PLAN

I-80-5(9)245

MAINLINE	EMBANKMENT	EMBANKMENT + 5%
533+00 - 534+00	2,193	2,303
TOTAL I-IG-80-5(9)245	2,193	2,303

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

TRUMBULL COUNTY TRU-I-80-8.90

18-B 401

COMPUTATIONS

I-80-5(9)245

REQUIRED EMBANKMENT +15% 1,706,242 C.Y.
TOTAL EXCAVATION 1,070,928

NET (635,314 C.Y.)

IG-80-5(9)245

TOTAL REQUIRED EMBANKMENT +15% 2,124 C.Y.
TOTAL EXCAVATION 726,745
AVAILABLE EXCAVATION 724,621 C.Y.

EXCESS EXCAVATION 89,307 C.Y.

E-1 COMPACTED SUBGRADE

I-80-5(9)245

FROM T-71 = 83,269 S.Y.
FROM T-31 = 40,293 S.Y.

DEDUCT FOR ROCK SUBGRADE STA.610-629
123,562 S.Y.-16,821 S.Y.= 106,741 S.Y.

RAMP "A"
FROM T-71 = 3,374 S.Y.
FROM T-31 = 1,003 S.Y.

RAMP "B"
FROM T-71 = 3,005 S.Y.
FROM T-31 = 968 S.Y.

RAMP "C"
FROM T-71 = 2,625 S.Y.
FROM T-31 = 1,440 S.Y.

RAMP "D"
FROM T-71 = 3,149 S.Y.
FROM T-31 = 1,341 S.Y.

RAMP "E"
FROM T-71 = 2,358 S.Y.
FROM T-31 = 1,021 S.Y.

U.S. 62 AND S.R. 7 SPEED CHANGE LANES
FROM T-71 = 1,387 S.Y.
FROM T-31 = 706 S.Y.

RELOC. HUBBARD-SHARON ROAD
FROM T-71 = 3,665 S.Y.
FROM T-31 = 965 S.Y.

RAMP "G"
FROM T-71 = 1,582 S.Y.
FROM T-31 = 533 S.Y.

RAMP "H"
FROM T-71 = 1,364
FROM T-31= 467

E-1 COMPACTED SUBGRADE CONT'D.

REST AREA PARKING LOT
FROM T-71 = 3,884 S.Y.

RELOC. PRICE-SHAFFER ROAD
FROM B-19 = 37,012 S.F./9 = 4,112.4 S.Y.
CONNECTOR = 2,944 S.F./9 = 327.1 S.Y.

RELOC. FOX-NORTH ROAD
FROM B-19 = 63,018 S.F./9 = 7,002.0 S.Y.

RELOC. STATE LINE ROAD
FROM B-19 = 53,180 S.F./9 = 5,908.9 S.Y.

USE T-35 AREA= 20,136 S.Y. IN LIEU OF B-19 AREA LISTED

CUL-DE-SACS
FROM B-19 = 17,375 S.F./9 = 1,930.6 S.Y.

163,645 S.Y.
~~TOTAL I-80-5(9)245 =~~
BRIDGES AND APPROACHES 1,451 S.Y.
X-OVER (Sheet 50) 140 S.Y.
TOTAL I-80-5(9) 245 165,236 S.Y.

E-1 COMPACTED SUBGRADE

IG-80-5(9)245

FROM T-71 = 15,733 S.Y.
FROM T-31 = 9,178 S.Y.
X-OVER (Sheet 40) 640 S.Y.

TOTAL IG-80-5(9)245 25,523 S.Y.

TOTAL I-IG-80-5(9)245 = 190,759 S.Y.

E-11 WATER

$\frac{\text{VOLUME} \times 5}{1,000}$ = M. GALLONS

EMBANKMENT = 1,502,927 C.Y.
B-19 = 4,701 C.Y.
I-18 = 78 C.Y.
I-22 = 29,138 C.Y.
COMPACTED SUBGRADE
165,236 ×12/36 = 55,079 C.Y.
TOTAL VOLUME = 1,591,923 C.Y.

$\frac{1,591,923 \times 5}{1,000}$ = 7,960 M-GAL.

TOTAL I-80-5(9)245 = 7,960 M-GAL.

E-11 WATER

$\frac{\text{VOLUME} \times 5}{1,000}$ = M. GALLONS

EMBANKMENT = 1,847 C.Y.
I-22 = 4,265 C.Y.
COMPACTED SUBGRADE
24,911 ×12/36 = 8,303 C.Y.
I-18 = 90 C.Y.
TOTAL VOLUME = 14,505 C.Y.

$\frac{14,505 \times 5}{1,000}$ = 73 M-GAL.

TOTAL IG-80-5(9)245 = 73 M-GAL.

TOTAL I-IG-80-5(9)245 = 8,033 M-GAL.

L-9 SEEDING 3 LBS./1000 SQ. FT.

I-80-5(9)245

FROM SHEET 379 TOTAL R/W ACQUIRED
187.61 AC. ×43,560 / 9 908,032 S.Y.

DEDUCTIONS

T-71 = 109,805 S.Y.
T-31 = 48,872 S.Y.
T-35 = 20,136 S.Y.
B-19 = 1,931 S.Y.
I-18 = 340 S.Y. - 199,283 S.Y.
SODDING= 18,199 S.Y. 708,749 S.Y.
TOTAL SEEDING AREA - 123,111 S.Y.
DEDUCT IG-80-5(9)245 585,638 S.Y.
NET SEEDING AREA I-80-5(9)245

L-9 SEEDING 3 LBS./1000 SQ. FT.

IG-80-5(9)245

STA. 545+25 TO STA. 574+75 123,111 S.Y.

DEDUCTIONS
T-71 = 15,733 S.Y.
T-31 = 9,792 S.Y.
SODDING= 2,948 S.Y. - 28,473 S.Y.
TOTAL SEEDING AREA = 94,638 S.Y.

TOTAL IG-80-5(9)245 = 94,638 S.Y.

TOTAL I-IG-80-5(9)245 = 680,276 S.Y.

L-9 COMMERCIAL FERTILIZER 20 LBS./1000 SQ.FT.

I-80-5(9)245

AREA SEEDED = 585,638 S.Y.
AREA SODDED = + 18,199 S.Y.
603,837 S.Y.

$\frac{603,837 \times 9 \times 20}{2000 \times 1000}$ = 54.35 TONS

TOTAL I-80-5(9)245 = 54.35 TONS

L-9 COMMERCIAL FERTILIZER 20 LBS./1000 SQ.FT.

IG-80-5(9)245

AREA SEEDED = 94,638 S.Y.
AREA SODDED = + 2,948 S.Y.
97,586 S.Y.

$\frac{97,586 \times 9 \times 20}{2000 \times 1000}$ = 8.78 TONS

TOTAL IG-80-5(9)245 = 8.78 TONS

TOTAL I-IG-80-5(9)245 63.13 TONS

L-9 AGRICULTURAL LIMING MATERIAL 100 LBS./1000 S.F.

I-80-5(9)245

AREA SEEDED = 585,638 S.Y.
AREA SODDED = + 18,199 S.Y.
603,837 S.Y.

$\frac{603,837 \times 9 \times 100}{2000 \times 1000}$ = 271.73 TONS

TOTAL I-80-5(9)245 = 271.73 TONS

L-9 AGRICULTURAL LIMING MATERIAL 100 LBS./1000 S.F.

IG-80-5(9)245

L-9 AGRICULTURAL LIMING MATERIAL
100 LBS./1000 S.F.

$\frac{97,586 \times 9 \times 100}{2000 \times 1000}$ = 43.91 TONS

TOTAL IG-80-5(9)245 43.91 TONS

TOTAL I-IG-80-5(9)245 = 315.64 TONS

LANE LINES & CENTERLINES (I-125)

I-80-5(9)245

		4" LINES	6" LINES
SEE HOME LINES	14,150 ×2 =		28,300'
RAMP "A"		305'	
RAMP "B"		258'	
RAMP "C"		258'	
RAMP "D"		258'	
RAMP "E"		305'	
REST AREA (RAMPS G & H)		1,563'	
TOTAL I-80-5(9)245		1947'	28,300'
PAY LENGTH		730' = 0.14 MI.	10.36 MI.

LANE LINES & CENTERLINES (I-125)

IG-80-5(9)245

		4" LINES	6" LINES
SEE HOME LINES	2950 × 2 =		5900'
PAY LENGTH			2213' = 0.42 MI

TOTAL I-IG-80-5(9)245 0.14 MI (4") 2.50 MI (6")

CENTERLINE LINES (8") I-125

I-80-5(9)245

RAMP "A"	230'
RAMP "B"	480'
RAMP "C"	480'
RAMP "D"	480'
RAMP "E"	230'
REST AREA (INCL. RAMPS G & H)	710
TOTAL I-IG-5-(9)245 =	2610' = 0.49 MILES

I-127 DELINEATORS

I-80-5(9)245

STA. 486+86 TO STA. 657+86.43 = 17,100.43 L.F.
DEDUCTIONS:
BRIDGES = 1848.08
IG-80-5(9)245 = 2,950.00 -3,798.08 L.F.
16,302.35 L.F.

TOTAL I-80-5(9)245 = 32,604.70 L.F.

RAMP "A"
STA. 8+69.19 TO STA. 14+58.25 = 589.06'
STA. 15+69.24 TO STA. 27+58 = 1,188.76' 1,777.82 L.F.

RAMP "B"
STA. 10+50 TO STA. 10+95 = 40.00'
STA. 13+37 TO STA. 28+51.82 = 1,514.82' 1,554.82 L.F.

RAMP "C"
STA. 5+00 TO STA. 23+55 1,855.00 L.F.

RAMP "D"
STA. 11+50 TO STA. 12+34 = 84.00'
STA. 13+75 TO STA. 32+72.81 = 1,897.81' 1,981.81 L.F.

RAMP "E"
STA. 18+51.89 TO STA. 20+88 = 1,136.11'
STA. 31+13 TO STA. 32+24.30 = 115.30' 1,251.41 L.F.

RAMP "G"
STA. 2+00 TO STA. 11+01.25 901.25 L.F.

PARKING AREA
STA. 11+01.25 TO STA. 16+20.87 519.62 L.F.

RAMP "H"
STA. 16+20.87 TO STA. 27+20.49 1,099.62 L.F.
43,546.05 L.F.

$\frac{43,546.05}{100}$ = 435 + 1 = 436 EA.

TOTAL I-80-5(9)245 = 436 EA.

I-127 DELINEATORS

IG-80-5(9)245

STA. 545+25 TO STA. 574+75 = 2,950 L.F.
BOTH SIDES = 2,950 L.F.
5,900 L.F.

$\frac{5,900}{100}$ = 59 EA.

TOTAL IG-80-5(9)245 = 59 EA.

TOTAL I-IG-80-5(9)245 = 495 EA.

EDGE LINES (I-125)

I-80-5(9)245

STA. 486+86.00 TO STA. 545+25.00 = 5,839'
STA. 574+75.00 TO STA. 657+86.43 = 8,311'
14,150'

14,150' × 4 = 56,600'

RAMP "A"	2,145
RAMP "B"	2,019
RAMP "C"	2,823
RAMP "D"	3,349
RAMP "E"	2,047
REST AREA (INCL. RAMPS G & H)	5,600
	17,983
TOTAL I-80-5(9)245	74,583 = 14.13 MILES

EDGE LINES (I-125)

IG-80-5(9)245

STA. 545+25.00 TO STA. 574+75.00 = 2,950'
2,950 × 4 = 11,800.00' =
TOTAL IG-80-5(9)245 2.23 MILES

TOTAL I-IG-80-5(9)245 16.36 MILES

CURB AND ISLAND MARKING (I-125) LUMP SUM

DIAGONAL STRIPES (I-125) LUMP SUM

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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TRUMBULL COUNTY
TRU-I-80-8,90

GENERAL SUMMARY

ITEM	SHEET NUMBER 18-A	18-B	33	34	35	36	37	38	39	40	41	42	43	44	45	46	357	TOTAL THIS SHEET	TOTAL SHEET 20	TOTAL SHEET 21	100% STATE	I-80 -5(9) TOTAL	IG-80 -5(9) TOTAL	ITEM	TOTAL QUAN. TYPE CODE 7221	UNIT	DESCRIPTION
																											ROADWAY
	1,685,242																	1,685,104				959,179			1,685,104		
E-1	~~1,797,673~~																9,180	~~1,806,853~~				1,010,928	735,925	E-1	~~1,806,853~~	C.Y.	ROADWAY EXCAVATION, METHOD "B", AS PER PLAN.
E-1		190,759																190,759				165,236	25,523	E-1	190,759	S.Y.	COMPACTED SUBGRADE
E-2												LUMP						LUMP				LUMP		E-2	LUMP	LUMP	COFFERDAMS, CRIBS AND SHEETING
E-4	2303																	2,303				2,303		E-4	2,303	C.Y.	BORROW USING GRANULAR MATERIAL AS PER PLAN.
CE 101.04																				83		70	13	SCE101.04	83	HRS.	COMPACTION USING HEAVY PNEUMATIC TIRED ROLLER.
I-129																				13.5		13.5		I-129	13.5	C.Y.	CONCRETE FOR SIGN SUPPORT FOUNDATIONS, AS PER PLAN
E-9																				LUMP		LUMP		E-9	LUMP	LUMP	REMOVAL OF TREES AND STUMPS, as per plan
E-9																				LUMP		LUMP	LUMP	E-9	LUMP	LUMP	REMOVAL OF TREES AND STUMPS.
E-10																						LUMP		E-10	LUMP	LUMP	REMOVAL OF 2½ STORY FRAME DWELLING, 2-FRAME SHEDS, 2 STORY FRAME SHED AND GARAGE, AND FRAME CHICKEN HOUSE-PARCEL NO. 90 WL.
E-10																						LUMP		E-10	LUMP	LUMP	REMOVAL OF 2½ STORY FRAME DWELLING, 1 STORY FRAME GARAGE, CONCRETE BLOCK GARAGE, CONCRETE BLOCK SHED AND FRAME BARN-PARCEL NO. 91 WL.
E-10																						LUMP		E-10	LUMP	LUMP	REMOVAL OF 1 STORY CONCRETE BLOCK COMMERCIAL BUILDING AND GREENHOUSE - PARCEL NO. 91 WL.
E-10																						LUMP		E-10	LUMP	LUMP	REMOVAL OF 1½ STORY BRICK DWELLING WITH ATTACHED BRICK GARAGE - PARCEL NO. 91 WL.
E-10																						LUMP		E-10	LUMP	LUMP	REMOVAL OF 1½ STORY FRAME DWELLING WITH ATTACHED CONCRETE BLOCK GARAGE - PARCEL NO. 92 WL.
E-10																						LUMP		E-10	LUMP	LUMP	REMOVAL OF 2½ STORY FRAME DWELLING & FRAME GARAGE - PARCEL NO. 95 WL.
E-10																						LUMP		E-10	LUMP	LUMP	REMOVAL OF 2 STORY FRAME DWELLING & FRAME GARAGE - PARCEL NO. 95 WL.
E-10																						LUMP		E-10	LUMP	LUMP	REMOVAL OF 2½ STORY FRAME DWELLING, 1-STORY FRAME COTTAGE, AND FRAME BARN AND GARAGE - PARCEL NO. 99 WL.
E-10																							LUMP	E-10	LUMP	LUMP	REMOVAL OF CORRUGATED METAL SHED AND BRICK INCINERATOR - PARCEL NO. 108 WL.
E-11		8,033																8,033				7,960	73	E-11	8,033	M. GAL.	WATER
I-4																				4		4		I-4	4	TONS	CALCIUM CHLORIDE FOR DUST CONTROL
I-8																				32		27	5	I-8	32	EACH	CENTERLINE REFERENCE MONUMENTS, AS PER PLAN
I-13																				574	574			I-13	574	S.F.	7" CONCRETE SIDEWALK
I-13																				3175	3175			I-13	3175	S.F.	4" CONCRETE SIDEWALK
I-15																			130			130		I-15	130	L.F.	GUARD RAIL REMOVED AND DISPOSED OF.
I-15				575.0	975.0	1,200.0	1775.0	800.0	200.0	275	50.0	1462.5	587.5					7,900	6,262.5	6087.5		19,754	496	I-15	20,250	L.F.	GUARD RAIL, STEEL BEAM, STANDARD TYPE (DEEP)
I-15					300.0													300.0				300.0		I-15	300	L.F.	GUARD RAIL, STEEL BEAM, BARRIER TYPE (DEEP)
I-125		Lump																LUMP				LUMP		I-125	LUMP	LUMP	CURB AND ISLAND MARKING
I-125		0.14																0.14				0.14		I-125	0.14	MILES	LANE LINES AND CENTER LINES, 4"
I-125		2.50																2.50				2.08	0.42	I-125	2.50	MILES	LANE LINES AND CENTER LINES, 6"
I-125		16.36																16.36				14.13	2.23	I-125	16.36	MILES	EDGE LINES, 4"
I-125																				LUMP		LUMP		I-125	LUMP	LUMP	PARKING LOT STALL MARKING
I-125		0.49																				0.49		I-125	0.49	MILES	CHANNELIZING LINES
I-127																				150		122	28	I-127	150	EACH	DELINEATORS, TYPE A-1, POST MOUNTED
I-127																				242		242		I-127	242	EACH	DELINEATORS, TYPE C-2, POST MOUNTED
I-127																				4		4		I-127	4	EACH	DELINEATORS, TYPE C-3, POST MOUNTED
I-17												827						827				827		I-17	827	S.F.	GALVANIZED METAL OR PRECAST REINFORCED CONCRETE CELLULAR RETAINING WALL
L-3																				11,000		11,000		L-3	11,000	S.Y.	PLACING STOCKPILED TOPSOIL
I-125		Lump																LUMP				LUMP		I-125	LUMP	LUMP	DIAGONAL STRIPES
L-6																			495	123		618		L-6	618	UNITS	ROADSIDE CLEANUP, MODIFIED AS PER PLAN.
L-16																				20	20			L-16	20	C.Y.	AGGREGATE FOR TREE HOLES
L-9		680,276																680,276				585,638	94,638	L-9	680,276	S.Y.	SEEDING AND PROTECTING, AS PER PLAN.
L-9		63.13																63.13				54.35	8.78	L-9	63.13	TONS	COMMERCIAL FERTILIZER (12-12-12)
L-9		315.64																315.64				271.73	43.91	L-9	315.64	TONS	AGRICULTURAL LIMING MATERIAL, AS PER PLAN.
L-14																				6	6			L-14	6	Each	ACER RUBRUM 1¾" - 2" B & B, 24"
L-10						279	205	806	1019	1486	444	599	1359	2237	79			8513	6860	5658		18,083	2948	L-10	21,031	S.Y.	SODDING
L-10					58													58		58		116		L-10	116	S.Y.	SODDING FOR SPECIAL BERM AND SLOPE PROTECTION, AS PER PLAN
L-120			384	580	142	384	512		302	495	852	128	256	256	384	128		4803	1026			4180	1649	L-120	5829	S.Y.	JUTE MATTING
L-13																				1348	17	1095	236	L-13	1348	EACH	CORNUS RACEMOSA (GRAY DOGWOOD) 2' TO 3'
L-13																				744		561	183	L-13	744	EACH	FORSYTHIA INTERMEDIA (BORDER FORSYTHIA) 2' TO 3'
L-13																				1059		851	208	L-13	1059	EACH	CORNUS S. FLAVIROMEA (GOLDEN TWIG DOGWOOD) 2' TO 3'
L-13																				1655		1371	284	L-13	1655	EACH	LONICERA MORROWI (MORROW HONEYSUCKLE) 2' TO 3'
L-13																				28		20	8	L-13	28	EACH	HAMAMELIS VIRGINIANA (WITCH HAZEL) 4' TO 5'
L-13																				583		477	106	L-13	583	EACH	CORNUS STOLONIFERA (RED OSIER DOGWOOD) 2' TO 3'
L-14																				2	2			L-14	2	EACH	AESCULUS GLABRA 1¾" - 2" B&B 24"
L-13																				16	16			L-13	16	EACH	ARONIA ARBITIFOLIA 2'-3' B&B 12"
L-14																				22	8	14		L-14	22	EACH	LIQUIDAMBAR 2½" TO 2" B & B 24" (STYRACIFLUA)
L-16																				8	8			L-16	8	EACH	QUERCUS PALUSTRIS 6" TO 7" B & B 76", FURNISHED, MOVED AND RESET
L-16																				3		3		L-16	3	EACH	ACER RUBRUM 6" TO 7" B & B 76", FURNISHED, MOVED AND RESET
L-14																				75		60	15	L-14	75	EACH	MALUS FLORIBUNDA (JAPANESE FLOWERING CRAB APPLE) 4' TO 5'
L-14																				60		45	15	L-14	60	EACH	MALUS P. ELEYI (ELEY CRAB APPLE) 4' TO 5'
L-14																				24		20	4	L-14	24	EACH	AMELANCHIER CANADENSIS (COMMON SHADBLOW) 4' TO 5'
L-14																				55		45	10	L-14	55	EACH	MALUS ATRO SANGUINEA (CARMINE CRAB) 4' TO 5'
L-14																				22		18	4	L-14	22	EACH	CERCIS CANADENSIS (BUSH FORM JUDAS TREE) 4' TO 5'
L-17																				LUMP		LUMP		L-17	LUMP	LUMP	PRUNING EXISTING TREES
T-10																				200		200		T-10	200	C.Y.	TRAFFIC COMPACTED SURFACE COURSE FOR MAINTAINING TRAFFIC
SPECIAL																			1	19.11		19.12		SPECIAL	19.12	S.Y.	FURNISHING AND MIXING CALCIUM CHLORIDE WITH AGGREGATE
S-15																			LUMP			LUMP		S-15	LUMP	LUMP	TEMPORARY RUNAROUND ROAD, AS PER PLAN
S-15																			108			108		S-15	108	C.Y.	FURNISHING AND PLACING AGGREGATE FOR TRAFFIC BOUND SURFACE COURSE.
I-129																				1	1			I-129	1	EACH	OVERHEAD SIGN SUPPORT, NO. 7.2 DESIGN 1, 48 FOOT SPAN
I-129																				1		1		I-129	1	EACH	OVERHEAD SIGN SUPPORT, NO. 7.4 DESIGN 1, 68 FOOT SPAN
I-25																				34,249	9643	24,606		I-25	34,249	L.F.	FENCE, TYPE 47
I-25																				2800		2800		I-25	2800	L.F.	REST AREA FENCE.
SPECIAL																				7		7		SPECIAL	7	EACH	DRILLED WELLS ABANDONED
SPECIAL																				1	1			SPECIAL	1	EACH	MOTORISTS SERVICES SHELTER
SPECIAL																				1	1			SPECIAL	1	EACH	WELL SHELTER
S-25																				975	975			S-25	975	L.F.	No. 4 SERVICE CABLE IN CONDUIT
SPECIAL																				1	1			SPECIAL	1	EACH	ROADSIDE TOILET AND STORAGE UNIT
SPECIAL																				5	5			SPECIAL	5	EACH	CHARCOAL GRILL AND SERVING TABLE
SPECIAL																				10	10			SPECIAL	10	EACH	PICNIC TABLES WITH CONCRETE SLAB
S-25																				470	470			S-25	470	L.F.	½" GALVANIZED ALLOY STEEL CONDUIT SEC. M-106.11
S-25																				310	310			S-25	310	L.F.	2" GALVANIZED ALLOY STEEL CONDUIT SEC. M-106.11
S-25																				1	1			S-25	1	EACH	SERVICE POLE, AS PER PLAN

Rev. 3-16-64 C.E.H.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
					1-14-64 1-16-64

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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TRUMBULL COUNTY
TRU-I-80-8.90

SUB - SUMMARY

ITEM	SHEET NUMBER 47	48	49	50	126	127	134	135	147	148	160	161	174	175	183	184	185	194		100% STATE THIS SHEET	I-80 -5(9) THIS SHEET	IG-80-5(9) THIS SHEET	ITEM	TOTAL THIS SHEET	UNIT	DESCRIPTION
																							TYPE CODE 7221			
																										ROADWAY
I-15															130.0						130		I-15	130	L.F.	GUARD RAIL REMOVED AND DISPOSED OF
I-15	300.0	2000.0	962.5	200.0	875.0						475.0		425.0	525.0	25.0	475					6,262.5		I-15	6,262.5	L.F.	GUARD RAIL, STEEL BEAM, STANDARD TYPE (DEEP)
L-6										292		203									495		L-6	495	UNITS	ROADSIDE CLEANUP, MODIFIED AS PER PLAN
L-10	527	1954	947	68	612	1641	1	4	193	7	1		1			489	397	18			6860		L-10	6860	S.Y.	SODDING
L-120	256	258	256	256																	1026		L-120	1026	S.Y.	JUTE MATTING
SPECIAL																	1				1		SPECIAL	1	S.Y.	FURNISHING AND MIXING CALCIUM CHLORIDE WITH AGGREGATE
S-15																		LUMP			LUMP		S-15	LUMP	LUMP	TEMPORARY RUNAROUND ROAD AS PER PLAN
S-15																		108			108		S-15	108	C.Y.	FURNISHING AND PLACING AGGREGATE FOR TRAFFIC BOUND SURFACE COURSE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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TRUMBULL COUNTY
TRU-I-80-8.90

SUB - SUMMARY

ITEM	375	290	200	201	212	213	214	215	234	235	236	257	254	255	256	283	287	378	379	10	11	12	100% STATE THIS SHEET	I-80 -5(9) THIS SHEET	IG-80-5(9) THIS SHEET	ITEM TYPE CODE 7221	TOTAL THIS SHEET	UNIT	DESCRIPTION
	SHEET NUMBER																												ROADWAY
																				83				70	13	SSCE 101.04	83	HOURS	COMPACTION USING HEAVY PNEUMATIC-TIRED ROLLER
CE-101.04																								13.5	-	I-129	13.5	C.Y.	CONCRETE FOR SIGN SUPPORT FOUNDATIONS, AS PER PLAN
I-129	13.5															LUMP	-							LUMP		E-9	LUMP	LUMP	REMOVAL OF TREES AND STUMPS, as per plan
E-9																				Lump				Lump	Lump	E-9	Lump	Lump	Removal of Trees and Stumps
E-9																													

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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TRUMBULL COUNTY
TRU-I-80-8.90

GENERAL SUMMARY

100% State

ITEM	SHEET NUMBER 10	11		33	34	35	36	37	38	39	40	41	42	43	44	45	46	TOTAL THIS SHEET		TOTAL SHEET 23	TOTAL SHEET 24	TOTAL I-80 -5(9)	TOTAL IG-80 -5(9)	ITEM (TYPE CODE 7221)	TOTAL QUAN.	UNIT	DESCRIPTION
																											DRAINAGE
E-3								67			23,820							23,887		104	3479	3,650	23,820	E-3	27,470	C.Y.	CHANNEL EXCAVATION
E-12																				96	66	162		E-12	162	L.F.	PIPE REMOVED, 15" AND UNDER
E-12																				30		30		E-12	30	L.F.	PIPE REMOVED, OVER 15"
E-12																				154		154		E-12	154	L.F.	PIPE REMOVED FOR RE-USE, OVER 15"
I-1				72	124		90				90	120				30		526		382	50	748	210	I-1	958	L.F.	6" PIPE CLASS A-1 SEC. M-6.6(b), SEC. M-6.8(b), OR Sec. M-6.5(b)
I-1		25																25				25		I-1	25	L.F.	8" PIPE CLASS B-1
I-1				70	58		118	174		120	692	140	86	64	94		54	1670		1560	244	2642	832	I-1	3474	L.F.	15" PIPE CLASS A-1 SEC. M-6.6(a), SEC. M-6.8(b), OR Sec. M-6.5(b)
I-1																62		62		272		334		I-1	334	L.F.	18" PIPE CLASS A-1 SEC. M-6.6(a), SEC. M-6.8(b), OR Sec. M-6.5(b)
I-1											72					62		134				62	72	I-1	134	L.F.	21" PIPE CLASS A-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
I-1																				336		336		I-1	336	L.F.	21" PIPE CLASS A-1 SEC. M-6.6(c)
I-1																				96		96		I-1	96	L.F.	24" PIPE CLASS A-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
I-1																					110	110		I-1	110	L.F.	24" PIPE CLASS A-1 SEC. M-6.6(b) OR SEC. M-6.8(b)
I-1																					158	158		I-1	158	L.F.	24" PIPE CLASS A-1 SEC. M-6.4(d)
I-1																				122		122		I-1	122	L.F.	27" PIPE CLASS A-1 SEC. M-6.6(c) OR SEC. M-6.4(d)
I-1																				68		68		I-1	68	L.F.	30" PIPE CLASS A-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
I-1																					164	164		I-1	164	L.F.	30" PIPE CLASS A-1 SEC. M-6.4(d)
I-1											74							74					74	I-1	74	L.F.	36" PIPE CLASS A-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
I-1											164							164					164	I-1	164	L.F.	42" PIPE CLASS A-1
I-1													128					128				128		I-1	128	L.F.	42" PIPE CLASS A-1 SEC. M-6.6(d) PIPE UNDER RAILROAD
I-1								580										580				580		I-1	580	L.F.	48" PIPE CLASS A-1 SEC. M-6.6(d)
I-1																				150		150		I-1	150	L.F.	54" PIPE CLASS A-1 SEC. M-6.6(a)
I-1																					128	128		I-1	128	L.F.	54" PIPE CLASS A-1 SEC. M-6.4(d) 8 GAGE
I-1																				302	116	418		I-1	418	L.F.	60" PIPE CLASS A-1 SEC. M-6.4(g) 10-10GAGE
I-1																				230		230		I-1	230	L.F.	30" PIPE CLASS A-1 SEC. M-6.6(b) OR SEC. M-6.8(b)
I-1																				244		244		I-1	244	L.F.	24" PIPE CLASS B-1
I-1					480													480				480		I-1	480	L.F.	33" PIPE CLASS B-1 SEC. M-6.6(b)
I-1											50							50					50	I-1	50	L.F.	36" PIPE UNDER RAILROAD, CLASS D-1 SEC. M-6.6 (d)
I-1						44				16								60		52		112		I-1	112	L.F.	15" PIPE CLASS D-1
I-1											38							38					38	I-1	38	L.F.	27" PIPE CLASS D-1 SEC. M-6.4(c)
I-1											52							52					52	I-1	52	L.F.	36" PIPE CLASS F-4
I-1																			55		55			I-1	55	L.F.	4" PIPE CLASS E-1 SEC. M-6.8(a)
I-1				44	118		364	76		38	66	276		130	38	38	254	1442		908		2008	342	I-1	2350	L.F.	15" PIPE CLASS E-1
I-1																				650		650		I-1	650	L.F.	18" PIPE CLASS E-1
I-1											142							142					142	I-1	142	L.F.	27" PIPE CLASS E-1
I-1				442														442				442		I-1	442	L.F.	30" PIPE CLASS E-1
I-1				374	450													824				824		I-1	824	L.F.	33" PIPE CLASS E-1
I-1				20	60	20	50	40		10	90	40	60	20	20	20	10	460		112	4	446	130	I-1	576	L.F.	6" PIPE CLASS F-4
I-1	30	20				20	20	20					30	20	20			180		190	10	380		I-1	380	L.F.	8" PIPE CLASS F-4, Sec. M-6.4(c)
I-1																					160	160		I-1	160	L.F.	12" PIPE CLASS F-4
I-1						50	50	86		66			100	136				488		122		610		I-1	610	L.F.	15" PIPE CLASS F-4
I-1													62					62				62		I-1	62	L.F.	21" PIPE CLASS F-4
I-1													40					40				40		I-1	40	L.F.	24" PIPE CLASS F-4
I-1																					50	50		I-1	50	L.F.	29" X 18" PIPE CLASS G-1, Sec. M-6.4(j)(c)
I-1																					765	765		I-1	765	L.F.	4" PIPE CLASS H-2
I-1		250																250				250		I-1	250	L.F.	6" PIPE CLASS H-2
I-8	1																	1				1		I-8	1	EA.	INSPECTION WELLS, AS PER PLAN
I-1	50			3266	2702	2756	3880	4481	3992	3996	3982	4032	2794	4002	3748	1594		45,275		22,276	1208	64,859	3900	I-1	68,759	L.F.	6" PIPE CLASS I-3
I-1													180			2200	3762	6,142		2114	1696	9,952		I-1	9,952	L.F.	6" PIPE CLASS I-3 SEC. M-6.4(h)
I-2					1.5	0.7	0.3	39		0.3	0.8	0.3	1.8	0.3	0.3	0.4		45.7		130.5	10.5	185.6	1.1	I-2	186.7	C.Y.	MASONRY
I-5							2	4		2			2					10		4		14		I-5	14	EA.	15" PIPE SPECIALS CLASS F-4
I-5		10		5	7	5	7	6		1	7	8	6	4	4	4	1	75		50	6	116	15	I-5	131	EA.	6" PIPE SPECIALS, AS PER PLAN
I-6																				84		84		I-6	84	L.F.	RELAYING PIPE 24" TYPE 4 BACKFILL
I-6																				32		32		I-6	32	L.F.	RELAYING PIPE 24" X 30" TYPE 4 BACKFILL
I-8										2								2		4		6		I-8	6	EA.	STANDARD NO. 2-2-A CATCH BASIN
I-8											2							2		1		1	2	I-8	3	EA.	STANDARD NO. 2-3 CATCH BASIN
I-8											1							1					1	I-8	1	EA.	Std. NO. 2-3 CATCH BASIN MODIFIED AS PER PLAN
I-8				1							2							3		3		4	2	I-8	6	EA.	STANDARD NO. 5 CATCH BASIN
I-8					2		1	1									1	5		3	3	11		I-8	11	EA.	STANDARD NO. 6 CATCH BASIN
I-8				2	5	1	3	4		2	3	4	1	2	2	3	1	33		7		33	7	I-8	40	EA.	STANDARD NO. 8 CATCH BASIN
I-8				2	1						3						1	7		3		7	3	I-8	10	EA.	STANDARD NO. 1 MANHOLE
I-9																				134	3128	3262		I-9	3262	L.F.	STONE UNDERDRAIN NO. 2
I-10		10			14	2	3	5		3	36	66	178	248	2	2		569		269	238	996	80	I-10	1076	C.Y.	DUMPED ROCK CHANNEL PROTECTION
I-10								88										88		109	5	202		I-10	202	S.Y.	RIPRAP, USING 6" REINFORCED CONCRETE, AS PER PLAN
I-14																		32		200		232		I-14	232	L.F.	Std. PAVED GUTTER, TYPE 1, MODIFIED AS PER PLAN
I-14																				53		53		I-14	53	L.F.	PAVED GUTTER, STANDARD TYPE 2
I-14											568							568			33	33	568	I-14	601	L.F.	Std. PAVED GUTTER, TYPE 1
I-16																				6		6		I-16	6	EA.	INLETS ABANDONED
S-24											LUMP									LUMP		LUMP		S-24	LUMP	LUMP	REMOVAL OF EXISTING STRUCTURES

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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401

TRUMBULL COUNTY
TRU-I-80-8.90

SUB - SUMMARY

ITEM	SHEET NUMBER 47	48	49	50	126	127	134	135	147	148	160	161	174	175	183	184	185	194	I-80 -5(9) THIS SHEET	IG-80-5(9) THIS SHEET	ITEM	TOTAL THIS SHEET	UNIT	DESCRIPTION
																					TYPE CODE 7221			
																								DRAINAGE
E-3										104									104		E-3	104	C.Y.	CHANNEL EXCAVATION
E-12	50	24								22									96		E-12	96	L.F.	PIPE REMOVED, 15" AND UNDER
E-12																30			30		E-12	30	L.F.	PIPE REMOVED, OVER 15"
E-12																	154		154		E-12	154	L.F.	PIPE REMOVED FOR RE-USE, OVER 15"
I-1	30			30		50		22		52			26					172	382		I-1	382	L.F.	6" PIPE CLASS A-1 SEC. M-6.6(b), SEC. M-6.8(b), OR Sec. M-6.5(b)
I-1		92	64	114	54			142		146	34		132			326	164	292	1560		I-1	1560	L.F.	15" PIPE CLASS A-1 SEC. M-6.6(a), SEC. M-6.8(b), OR Sec. M-6.5(b)
I-1	90														94	88			272		I-1	272	L.F.	18" PIPE CLASS A-1 SEC. M-6.6(a), SEC. M-6.8(b), OR Sec. M-6.5(b)
I-1																					I-1		L.F.	21" PIPE CLASS A-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
I-1							336												336		I-1	336	L.F.	21" PIPE CLASS A-1 SEC. M-6.6(c)
I-1																		96	96		I-1	96	L.F.	24" PIPE CLASS A-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
I-1																					I-1		L.F.	24" PIPE CLASS A-1 SEC. M-6.6(b) OR SEC. M-6.8(b)
I-1																					I-1		L.F.	24" PIPE CLASS A-1 SEC. M-6.4(d)
I-1	122																		122		I-1	122	L.F.	27" PIPE CLASS A-1 SEC. M-6.6(c) OR SEC. M-6.4(d)
I-1										68									68		I-1	68	L.F.	30" PIPE CLASS A-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
I-1																					I-1		L.F.	30" PIPE CLASS A-1 SEC. M-6.4(d)
I-1																					I-1		L.F.	36" PIPE CLASS A-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
I-1																					I-1		L.F.	42" PIPE CLASS A-1
I-1																					I-1		L.F.	42" PIPE CLASS A-1 SEC. M-6.6(d) PIPE UNDER RAILROAD
I-1																					I-1		L.F.	48" PIPE CLASS A-1 SEC. M-6.6(d)
I-1																		150	150		I-1	150	L.F.	54" PIPE CLASS A-1 SEC. M-6.6(a)
I-1																					I-1			54" PIPE CLASS A-1 SEC. M-6.4(d) 8 GAGE
I-1			302																302		I-1	302	L.F.	60" PIPE CLASS A-1 SEC. M-6.4(g) 10-10 GAGE
I-1			230																230		I-1	230	L.F.	30" PIPE CLASS A-1 SEC. M-6.6(b) OR SEC. M-6.8(b)
I-1					244														244		I-1	244	L.F.	24" PIPE CLASS B-1
I-1																					I-1		L.F.	33" PIPE CLASS B-1 Sec. M-6.6(b)
I-1	38															14			52		I-1	52	L.F.	15" PIPE CLASS D-1
I-1																					I-1		L.F.	27" PIPE CLASS D-1 SEC. M-6.4(c)
I-1																					I-1		L.F.	36" PIPE CLASS F-4
I-1																					I-1		L.F.	4" PIPE CLASS E-1
I-1	250	38	38													582			908		I-1	908	L.F.	15" PIPE CLASS E-1
I-1	650																		650		I-1	650	L.F.	18" PIPE CLASS E-1
I-1																					I-1		L.F.	27" PIPE CLASS E-1
I-1																					I-1		L.F.	30" PIPE CLASS E-1
I-1																					I-1		L.F.	33" PIPE CLASS E-1
I-1	20	20	20	20												12		20	112		I-1	112	L.F.	6" PIPE CLASS F-4
I-1		20	20	10	20			10	10	20	10	20	10			10		30	190		I-1	190	L.F.	8" PIPE CLASS F-4, Sec. M-6.4(c)
I-1																					I-1		L.F.	12" PIPE CLASS F-4
I-1			64								58								122		I-1	122	L.F.	15" PIPE CLASS F-4
I-1																					I-1		L.F.	21" PIPE CLASS F-4
I-1																					I-1		L.F.	24" PIPE CLASS F-4
I-1																					I-1		L.F.	29" X 18" PIPE CLASS G-1, Sec. M-6.4(j)(c)
I-1																					I-1		L.F.	6" PIPE CLASS H-2
I-1	1575	4040	4024	1207	928	398	646	1042	1016	878	718	1094	790	470		2098	384	968	22,276		I-1	22,276	L.F.	6" PIPE CLASS I-3
I-1	2114																		2,114		I-1	2,114	L.F.	6" PIPE CLASS I-3 SEC. M-6.4(h)
I-2	1.3	0.3	66.4	0.3	0.7		0.4	6.0		14.8	0.3		0.3					39.7	130.5		I-2	130.5	C.Y.	MASONRY
I-5			2								2								4		I-5	4	EA.	15" PIPE SPECIALS CLASS F-4
I-5	3	4	4	5	3	1		4	1	6	2	2	2			3		10	50		I-5	50	EA.	6" PIPE SPECIALS, AS PER PLAN
I-6																	84		84		I-6	84	L.F.	RELAYING PIPE 24" TYPE 4 BACKFILL
I-6																	32		32		I-6	32	L.F.	RELAYING PIPE 24" X 30" TYPE 4 BACKFILL
I-8								1					1					2	4		I-8	4	EA.	STANDARD NO. 2-2-A CATCH BASIN
I-8					1														1		I-8	1	EA.	STANDARD NO. 2-3 CATCH BASIN
I-8																2	1		3		I-8	3	EA.	STANDARD NO. 5 CATCH BASIN
I-8					1	1												1	3		I-8	3	EA.	STANDARD NO. 6 CATCH BASIN
I-8	2	2	2	1															7		I-8	7	EA.	STANDARD NO. 8 CATCH BASIN
I-8	1															2			3		I-8	3	EA.	STANDARD NO. 1 MANHOLE
I-9																		134	134		I-9	134	L.F.	STONE UNDERDRAIN NO. 2
I-10	24	160	32	4	25						3							21	269		I-10	269	C.Y.	DUMPED ROCK CHANNEL PROTECTION
I-10			109																109		I-10	109	S.Y.	RIPRAP, USING 6" REINFORCED CONCRETE, AS PER PLAN
I-14																200			200		I-14	200	L.F.	PAVED GUTTER, TYPE 1, MODIFIED AS PER PLAN
I-14			53																53		I-14	53	L.F.	PAVED GUTTER, STANDARD TYPE 2
I-16															1	5			6		I-16	6	EA.	INLETS ABANDONED
S-24												LUMP							LUMP		S-24	LUMP	LUMP	REMOVAL OF EXISTING STRUCTURES

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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TRUMBULL COUNTY
TRU-I-80-8.90

SUB - SUMMARY

ITEM	SHEET NUMBER 200	201	202	212	213	214	215	234	235	236	251	254	255	256	283	159				100% State	I-80 -5(9) THIS SHEET	IG-80-5(9) THIS SHEET	ITEM	TOTAL THIS SHEET	UNIT	DESCRIPTION
																							TYPE CODE 7221			
																										DRAINAGE
E-3								31					27	233		3188					3479		E-3	3479	C.Y.	CHANNEL EXCAVATION
E-12											66										66		E-12	66	L.F.	PIPE REMOVED, 15" AND UNDER
E-12																							E-12		L.F.	PIPE REMOVED, OVER 15"
E-12																							E-12		L.F.	PIPE REMOVED FOR RE-USE, OVER 15"
F-1		26	24																		50		I-1	50	L.F.	6" PIPE CLASS A-1 SEC. M-6.6(b), SEC. M-6.8(b), OR Sec. M-6.5(b)
F-1	52	192																			244		I-1	244	L.F.	15" PIPE CLASS A-1 SEC. M-6.6(a), SEC. M-6.8(b), OR Sec. M-6.5(b)
F-1																							I-1		L.F.	18" PIPE CLASS A-1 SEC. M-6.6(a), SEC. M-6.8(b), OR Sec. M-6.5(b)
F-1																							I-1		L.F.	21" PIPE CLASS A-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
F-1																							I-1		L.F.	21" PIPE CLASS A-1 SEC. M-6.6(c)
F-1									110														I-1		L.F.	24" PIPE CLASS A-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
F-1								158													110		I-1	110	L.F.	24" PIPE CLASS A-1 SEC. M-6.6(b) OR SEC. M-6.8(b)
F-1																					158		I-1	158	L.F.	24" PIPE CLASS A-1 SEC. M-6.4(d)
F-1																							I-1		L.F.	27" PIPE CLASS A-1 SEC. M-6.6(c) OR SEC. M-6.4(d)
F-1														164									I-1		L.F.	30" PIPE CLASS A-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
F-1																					164		I-1	164	L.F.	30" PIPE CLASS A-1 SEC. M-6.4(d)
F-1																							I-1		L.F.	36" PIPE CLASS A-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
																							I-1		L.F.	42" PIPE CLASS A-1
F-1																							I-1		L.F.	42" PIPE CLASS A-1 SEC. M-6.6(d) PIPE UNDER RAILROAD
F-1																							I-1		L.F.	48" PIPE CLASS A-1 SEC. M-6.6(d)
F-1										128													I-1		L.F.	54" PIPE CLASS A-1 SEC. M-6.6(a)
F-1													116								128		I-1	128	L.F.	54" PIPE CLASS A -1 SEC. M-6.4(g) 8 GAGE
F-1																					116		I-1	116	L.F.	60" PIPE CLASS A-1 SEC. M-6.4(g) 10-10 GAGE
																							I-1		L.F.	30" PIPE CLASS A-1 SEC. M-6.6(b) OR SEC. M-6.8(b)
F-1																							I-1		L.F.	24" PIPE CLASS B-1
F-1																							I-1		L.F.	33" PIPE CLASS B-1 SEC. M-6.6(b)
F-1																							I-1		L.F.	36" PIPE UNDER RAILROAD, CLASS D-1, SEC. M-6.6 (d)
F-1																							I-1		L.F.	15" PIPE CLASS D-1
F-1																							I-1		L.F.	27" PIPE CLASS D-1 SEC. M-6.4(c)
F-1																							I-1		L.F.	36" PIPE CLASS E-4
F-1																	55			55			I-1	55	L.F.	4" PIPE CLASS E-1
F-1																							I-1		L.F.	15" PIPE CLASS E-1
F-1																							I-1		L.F.	18" PIPE CLASS E-1
F-1																							I-1		L.F.	27" PIPE CLASS E-1
F-1																							I-1		L.F.	30" PIPE CLASS E-1
																							I-1		L.F.	33" PIPE CLASS E-1
F-1		4																			4		I-1	4	L.F.	6" PIPE CLASS F-4
F-1	10																				10		I-1	10	L.F.	8" PIPE CLASS F-4, Sec. M-6.4 (c)
F-1											108			52							160		I-1	160	L.F.	12" PIPE CLASS F-4
																							I-1		L.F.	15" PIPE CLASS F-4
F-1																							I-1		L.F.	21" PIPE CLASS F-4
F-1				50																			I-1		L.F.	24" PIPE CLASS F-4
F-1																					50		I-1	50	L.F.	29" X 18" PIPE CLASS G-1, Sec. M-6.4(j)(c)
F-1																	765				765		I-1	765	L.F.	4" PIPE CLASS H-2
																							I-1		L.F.	6" PIPE CLASS H-2
I-8																							I-8		EA.	INSPECTION WELLS, AS PER PLAN
F-1	716	492																			1208		I-1	1208	L.F.	6" PIPE CLASS I-3
F-1		724	972																		1696		I-1	1696	L.F.	6" PIPE CLASS I-3 SEC. M-6.4(h)
F-2	0.3	0.5						0.7	0.8	1.9	0.5		4.8	1.0							10.5		I-2	10.5	C.Y.	MASONRY
F-5																							I-5		EA.	15" PIPE SPECIALS CLASS F-4
F-5	1	3	2																		6		I-5	6	EA.	6" PIPE SPECIALS, AS PER PLAN
F-6																							I-6		L.F.	RELAYING PIPE 24" TYPE 4 BACKFILL
F-6																							I-6		L.F.	RELAYING PIPE 24" X 30" TYPE 4 BACKFILL
F-8																							I-8		EA.	STANDARD NO. 2-2-A CATCH BASIN
F-8																							I-8		EA.	STANDARD NO. 2-3 CATCH BASIN
F-8																							I-8		EA.	NO. 2-3 CATCH BASIN MODIFIED AS PER PLAN
F-8																							I-8		EA.	STANDARD NO. 5 CATCH BASIN
F-8	1	2																			3		I-8	3	EA.	STANDARD NO. 6 CATCH BASIN
F-8																							I-8		EA.	STANDARD NO. 8 CATCH BASIN
F-8																							I-8		EA.	STANDARD NO. 1 MANHOLE
F-9				248	342	342	300	224	284	228		360	400	400							3128		I-9	3128	L.F.	STONE UNDERDRAIN NO. 2
F-10	23								157	11			28	19							238		I-10	238	C.Y.	DUMPED ROCK CHANNEL PROTECTION
F-10										5											5		I-10	5	S.Y.	RIPRAP, USING 6" REINFORCED CONCRETE, AS PER PLAN
F-14																							I-14		L.F.	PAVED GUTTER, TYPE 1, MODIFIED AS PER PLAN
F-14										33													I-14		L.F.	PAVED GUTTER, STANDARD TYPE 2
F-16																					33		I-14	33	L.F.	PAVED GUTTER, TYPE 1
																							I-16		EA.	INLETS ABANDONED
S-24																							S-24		LUMP	REMOVAL OF EXISTING STRUCTURES

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

25/401

TRUMBULL COUNTY
TRU-I-80-8.90

GENERAL SUMMARY

ITEM	SHEET NUMBER 18	18-A	18-B		34	35	36	37	38	39	40	42	46	49	50	126	127	TOTAL THIS SHEET		TOTAL SHEET 26	100% STATE	I-80 -5(9)	IG-80 -5(9)	ITEM TYPE CODE 7221	TOTAL QUAN.	UNIT	DESCRIPTION
																											PAVEMENT
B-19		4512								4								4516		165		4681		B-19	4681	C.Y.	AGGREGATE BASE COURSE
B-21	6228										51				11			6290				5474	816	B-21	6290	C.Y.	WATERPROOFED AGGREGATE BASE COURSE
B-35		1065								1								1066				1066		B-35	1066	C.Y.	ASPHALTIC CONCRETE LEVELING COURSE (70-85)
B-35		190																190				190		B-35	190	C.Y.	ASPHALTIC CONCRETE BASE COURSE (70-85)
B-112		8594																8594				7115	1479	B-112	8594	C.Y.	POROUS BASE COURSE
I-7					133	378	245			189		267				89		1301		150		1451		I-7	1451	S.Y.	REINFORCED CONCRETE APPROACH SLAB (T = 13")
I-12					106	106	106						106				789	1213		889		2102		I-12	2102	L.F.	STANDARD TYPE 2-A CONCRETE CURB
I-12																				1858		1858		I-12	1858	L.F.	STANDARD TYPE 6 CONCRETE CURB
I-12																592		592		1091		1683		I-12	1683	L.F.	STANDARD TYPE 8 CONCRETE CURB
I-12																				1512		1512		I-12	1512	L.F.	STANDARD TYPE 7 CONCRETE CURB
I-18		57									90	107			21			275				78	197	I-18	275	C.Y.	STABILIZED CRUSHED AGGREGATE SHOULDERS AND APPROACHES
I-21																	172	172		163		335		I-21	335	S.F.	4" STANDARD TYPE 1 PORTLAND CEMENT CONCRETE MEDIAN PAVEMENT
I-22	33,547										113				28			33,688				29,423	4265	I-22	33,688	C.Y.	SUBBASE, GRADING A OR B, AS PER PLAN
I-23																				82		82		I-23	82	EA.	PRECAST WHITE PORTLAND CEMENT CONCRETE TRAFFIC DIVIDERS
T-30		8189																8189				8189		T-30	8189	GAL.	BITUMINOUS PRIME COAT ; SEC. M-5.7, RT. 2 OR RT. 3
T-31	14,478										153				35			14,666				12,218	2,448	T-31	14,666	GAL.	BITUMINOUS SURFACE TREATMENT-BITUMINOUS MATERIAL, AS PER PLAN
T-31	459										5				1			465				386	79	T-31	465	C.Y.	BITUMINOUS SURFACE TREATMENT-NO. 6 AGGREGATE
T-35		47																47				47		T-35	47	C.Y.	ASPHALTIC CONCRETE SURFACE COURSE TYPE A (70-85)
T-35		646								1								647		14		661		T-35	661	C.Y.	ASPHALTIC CONCRETE SURFACE COURSE TYPE C (70-85)
T-71	26,536																	26,536				26,536		T-71	26,536	S.Y.	9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
T-71	98,996																	98,996				83,263	15,733	T-71	98,996	S.Y.	10" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
																											STRUCTURES OVER 20' SPAN
																											SEE SHEET NOS. 345 AND 348 FOR ESTIMATED QUANTITIES BRIDGE NO. TRU-80-1034 UNDER NEW YORK CENTRAL R.R.
																											SEE SHEET NO. 307 FOR ESTIMATED QUANTITIES BRIDGE NO. TRU-80-0926 RAMP "A" OVER LITTLE YANKEE RUN
																											SEE SHEET NO. 313 FOR ESTIMATED QUANTITIES BRIDGE NO. TRU-80-0926 OVER LITTLE YANKEE RUN
																											SEE SHEET NO. 329 & 337 FOR ESTIMATED QUANTITIES BRIDGE NO. TRU-80-0941 OVER U.S.R. 62 & S.R. 7.
																											SEE SHEET NO. 339 FOR ESTIMATED QUANTITIES BRIDGE NO. TRU-80-1010 UNDER HUBBARD-SHARON ROAD
																											SEE SHEET NO. 366 FOR ESTIMATED QUANTITIES BRIDGE NO. TRU-80-1069 OVER ERIE-LACKAWANNA R.R. & LITTLE YANKEE CREEK
																											SEE SHEET NO. 368 FOR ESTIMATED QUANTITIES BRIDGE NO. TRU-80-1170 UNDER PRICE-SHAFFER ROAD
																		LUMP			LUMP	LUMP	LUMP		LUMP	LUMP	CONSTRUCTION LAYOUT STAKES
I-3																		LUMP				LUMP	LUMP	I-3	LUMP	LUMP	MAINTAINING TRAFFIC

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

26
401

TRUMBULL COUNTY
TRU-I-80-8.90

SUB - SUMMARY

ITEM	SHEET NUMBER 134	135	147	160	161	174	175	194	200	201	202	212	214	234	235	236	256	283	100 % STATE	I-80 -5(9) THIS SHEET	IG-80-5(9) THIS SHEET	ITEM	TOTAL THIS SHEET	UNIT	DESCRIPTION
																						TYPE CODE 7221			PAVEMENT
B-19												32	12		25	17	79			165		B-19	165	C.Y.	AGGREGATE BASE COURSE
I-7														75	75					150		I-7	150	S.Y.	REINFORCED CONCRETE APPROACH SLAB (t = 13")
I-12	100	789																		889		I-12	889	L.F.	STANDARD TYPE 2-A CURB
I-12								542		385	100									1858		I-12	1858	L.F.	STANDARD TYPE 6 CURB
I-12	100		100	100	531															1091		I-12	1091	L.F.	STANDARD TYPE 8 PORTLAND CEMENT CONCRETE CURB
I-12						88	528		475											1512		I-12	1512	L.F.	TYPE 7 PORTLAND CEMENT CONCRETE CURB,
I-12										1512															
I-21	31		28	29				58			17									163		I-21	163	S.F.	4" STANDARD TYPE 1 PORTLAND CEMENT CONCRETE MEDIAN PAVEMENT
I-23								82												82		I-23	82	EA.	PRECAST WHITE PORTLAND CEMENT CONCRETE TRAFFIC DIVIDERS
T-35												7					7			14		T-35	14	C.Y.	ASPHALTIC CONCRETE SURFACE COURSE TYPE C, (70-85)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED

SUPERELEVATION CHART

I-80

D = 0°28' Rt. MAX. SUPER FOR 24' = 0.38' S = 0.0156

STATION	PROFILE GRADE	EASTBOUND LANE		WESTBOUND LANE	
		℄	RIGHT EDGE	℄	LEFT EDGE
484+74.28	945.68	945.87	945.68	945.87	945.68
+75	945.67	945.86	945.67	945.86	945.67
485+00	945.40	945.53	945.34	945.59	945.46
+25	945.15	945.21	945.02	945.34	945.28
+50	944.92	944.92	944.73	945.11	945.11
+69.28	944.75	944.65	944.46	944.94	945.04
+86	944.61	944.43	944.24	944.80	944.98
+88.28	944.60	944.41	944.22	944.79	944.98
486+00	944.50	944.31	944.12	944.69	944.88
+25	944.32	944.13	944.94	944.51	944.70
+50	944.16	943.97	943.78	944.35	944.54
+75	944.01	943.82	943.63	944.20	944.39
487+00	943.88	943.69	943.50	944.07	944.26
+25	943.76	943.57	943.38	943.95	944.14
+50	943.64	943.45	943.26	943.83	944.02
+75	943.52	943.33	943.14	943.71	943.90
488+00	943.40	943.21	943.02	943.59	943.78
+25	943.28	943.09	942.90	943.47	943.66
+50	943.16	943.97	942.78	943.35	943.54
+75	943.04	942.85	942.66	943.23	943.42
489+00	942.92	942.73	942.54	943.11	943.30
+25	942.80	942.61	942.42	942.99	943.18
+50	942.68	942.49	942.30	942.87	943.06
+75	942.56	942.37	942.18	942.75	942.94
490+00	942.44	942.25	942.06	942.63	942.82
+25	942.32	942.13	941.94	942.51	942.70
+50	942.20	942.01	941.82	942.39	942.58
+75	942.08	941.89	941.70	942.27	942.46
491+00	941.96	941.77	941.58	942.15	942.34
+25	941.84	941.65	941.46	942.03	942.22
+50	941.72	941.53	941.34	941.91	942.10
+75	941.60	941.41	941.22	941.79	941.98
492+00	941.48	941.29	941.10	941.67	941.86
+25	941.36	941.17	940.98	941.55	941.74
+50	941.24	941.05	940.86	941.43	941.62
+75	941.12	940.93	940.74	941.31	941.50
493+00	941.00	940.81	940.62	941.19	941.38
+25	940.88	940.69	940.50	941.07	941.26
+50	940.76	940.57	940.38	940.95	941.14
+75	940.64	940.45	940.26	940.83	941.02
494+00	940.52	940.33	940.14	940.71	940.90
+25	940.40	940.21	940.02	940.59	940.78
+50	940.28	940.09	939.90	946.47	940.66
+75	940.16	939.97	939.78	940.35	940.54
495+00	940.04	939.85	939.66	940.23	940.42
+25	939.92	939.73	939.54	940.11	940.30
+50	939.80	939.61	939.42	939.99	940.78
+75	939.68	939.49	939.30	939.87	940.06
496+00	939.56	939.37	939.18	939.75	939.94
+25	939.44	939.25	939.06	939.63	939.82
+50	939.32	939.13	938.94	939.51	939.70
+75	939.20	939.01	938.82	939.39	939.58
497+00	939.08	938.89	938.70	939.27	939.46
+25	938.96	938.77	938.58	939.15	939.34

I-80

D = 0°28' Rt. MAX. SUPER FOR 24' = 0.38' S = 0.0156

STATION	PROFILE GRADE	EASTBOUND LANE		WESTBOUND LANE	
		℄	RIGHT EDGE	℄	LEFT EDGE
497+50	938.84	938.65	938.46	939.03	939.22
+75	938.72	938.53	938.34	938.91	939.10
498+00	938.60	938.41	938.22	938.79	938.98
+25	938.48	938.29	938.10	938.67	938.86
+50	938.36	938.17	937.98	938.55	938.74
+75	938.26	938.07	938.88	938.45	938.64
499+00	938.18	937.99	937.80	938.37	938.56
+25	938.14	937.95	937.76	938.33	938.52
+50	938.12	937.93	937.74	938.31	938.50
+75	938.14	937.95	937.76	938.33	938.52
500+00	938.18	937.99	937.80	938.37	938.56
+25	938.26	938.07	937.88	938.45	938.64
+50	938.37	937.18	938.99	938.56	938.75
+75	938.50	938.31	938.12	938.69	938.88
501+00	938.67	938.48	938.29	938.86	939.05
+25	938.87	938.68	938.49	939.06	939.25
+50	939.09	938.90	938.71	939.28	939.47
+75	939.35	939.16	938.97	939.54	939.73
502+00	939.64	939.45	939.26	939.83	940.02
+25	939.96	939.77	939.58	940.15	940.34
+50	940.31	940.12	939.93	940.50	940.69
+75	940.68	940.49	940.30	940.87	941.06
503+00	941.09	940.90	940.71	941.28	921.47
+25	941.54	941.35	951.16	941.73	941.92
+50	942.00	941.81	941.62	942.19	942.38
+75	942.50	942.31	942.12	942.69	942.88
504+00	943.03	942.84	942.65	943.22	943.41
+25	943.60	943.41	943.22	943.79	943.98
+50	944.18	943.99	943.80	944.37	944.56
+75	944.78	944.59	944.40	944.97	945.16
505+00	945.39	945.20	945.01	945.58	945.77
+25	946.00	945.81	945.62	946.19	946.38
+50	946.60	946.41	946.22	946.79	946.98
+75	947.20	947.01	946.82	947.39	947.58
506+00	947.81	947.62	947.43	948.00	948.19
+25	948.42	948.23	948.04	948.61	948.80
+50	949.02	948.83	948.64	949.21	949.40
+75	949.62	949.43	949.24	949.81	950.00
507+00	950.23	950.04	949.85	950.42	950.61
+25	950.48	950.65	950.46	951.03	951.22
+50	951.44	951.25	951.06	951.63	951.82
+75	952.04	951.85	951.66	952.23	952.42
508+00	952.65	952.46	952.27	952.84	953.03
+25	953.26	953.07	952.88	953.45	953.64
+50	953.86	953.67	953.48	954.05	954.24
+75	954.46	954.27	954.08	954.65	954.84
509+00	955.07	954.88	954.69	955.26	955.45
+25	955.68	955.49	955.30	955.87	956.06
+50	956.28	956.09	955.90	956.47	956.66
+75	956.88	956.69	956.50	957.07	957.26
510+00	957.49	957.30	957.11	957.68	957.87
+25	958.10	957.91	957.72	958.29	958.48
+50	958.70	958.51	958.32	958.89	959.08
+75	959.30	959.11	958.92	959.49	959.68

I-80

D = 0°28' Rt. MAX. SUPER FOR 24' = 0.38' S = 0.0156

STATION	PROFILE GRADE	EASTBOUND LANE		WESTBOUND LANE	
		℄	RIGHT EDGE	℄	LEFT EDGE
511+00	959.91	959.72	959.53	960.10	960.29
+25	960.52	960.33	960.14	960.71	960.90
+50	961.12	960.93	960.74	961.31	961.50
+75	961.72	961.53	961.34	961.91	963.10
512+00	962.33	962.14	961.95	962.52	962.71
+25	962.94	962.75	962.56	963.13	963.32
+50	963.54	963.35	963.16	963.63	963.92
+75	964.14	963.95	963.76	964.33	964.52
513+00	964.75	964.56	964.37	964.94	965.13
+25	965.36	965.17	964.98	965.55	965.74
+50	965.96	965.77	965.58	966.15	966.34
+75	966.56	966.37	966.18	966.75	966.94
514+00	967.17	966.98	966.79	967.36	967.55
+25	967.78	967.59	967.40	967.97	968.16
+50	968.38	968.19	968.00	968.57	968.76
+75	968.98	968.79	968.60	969.17	969.36
515+00	969.59	969.40	969.21	969.78	969.97
+25	970.19	970.00	969.81	970.38	970.57
+50	970.78	970.59	970.40	970.97	971.16
+75	971.35	971.16	970.97	971.54	971.73
516+00	971.90	971.71	971.52	972.09	972.28
+25	972.44	972.25	972.06	972.63	972.82
+50	972.97	972.78	972.59	973.16	973.35
+75	973.49	973.30	973.11	973.68	973.87
517+00	973.99	973.80	973.61	974.18	974.37
+25	974.48	974.29	974.10	974.67	974.86
+50	974.95	974.76	974.57	975.14	975.33
+75	975.41	975.22	975.03	975.60	975.79
518+00	975.86	975.67	975.48	976.05	976.24
+25	976.30	976.11	975.92	976.49	976.68
+50	976.72	976.53	976.34	976.91	977.10
+75	977.12	976.93	976.74	977.31	977.50
519+00	977.51	977.32	977.13	977.70	977.89
+25	977.89	977.70	977.51	978.08	978.27
+50	978.25	978.06	977.87	978.44	978.63
+75	978.60	978.41	978.22	978.79	978.98
520+00	978.94	978.75	978.56	979.13	979.32
+25	979.26	979.07	978.88	979.45	979.64
+50	979.57	979.38	979.19	979.76	979.95
+75	979.87	979.68	979.49	980.06	980.25
521+00	980.15	979.96	979.77	980.34	980.53
+25	980.42	980.23	980.04	980.61	980.80
+50	980.67	980.48	980.29	980.86	981.05
+75	980.91	980.72	980.53	981.10	981.29
522+00	981.13	980.94	980.75	981.32	981.51
+25	981.34	981.15	980.96	981.53	981.72
+50	981.54	981.35	981.16	981.73	981.92
+75	981.73	981.54	981.35	981.92	982.11
523+00	981.90	981.71	981.52	982.09	982.28
+25	982.06	981.87	981.68	982.25	982.44
+50	982.20	982.01	982.82	982.39	982.58
+75	982.33	982.14	981.95	982.52	982.71
524+00	982.45	982.26	982.07	982.64	982.83
+25	982.56	982.37	982.18	982.75	982.94

I-80

D = 0°28' Rt. MAX. SUPER FOR 24' = 0.33' S = 0.0156

STATION	PROFILE GRADE	EASTBOUND LANE		WESTBOUND LANE	
		℄	RIGHT EDGE	℄	LEFT EDGE
524+50	982.67	982.48	982.29	982.86	983.05
+75	982.78	982.59	982.40	982.97	983.16
525+00	982.89	982.70	982.51	983.08	983.27
+25	983.00	982.81	982.62	983.19	983.38
+50	983.11	982.92	982.73	983.30	983.49
+75	983.22	983.03	982.84	983.41	983.60
526+00	983.33	983.14	982.95	983.52	983.71
+25	983.44	983.25	983.06	983.63	983.82
+50	983.55	983.36	983.17	983.74	983.93
+75	983.66	983.47	983.28	983.85	984.04
527+00	983.77	983.58	983.39	983.96	984.15
+25	983.88	983.69	983.50	984.07	984.26
+50	983.98	983.79	983.60	984.17	984.36
+75	984.09	983.90	983.71	984.28	984.47
528+00	984.20	984.01	983.82	984.39	984.58
+25	984.31	984.12	983.93	984.50	984.69
+50	984.42	984.23	984.04	984.61	984.80
+75	984.53	984.34	984.15	984.72	984.91
529+00	984.64	984.45	984.26	984.83	985.02
+25	984.75	984.56	984.37	984.94	985.13
+50	984.86	984.67	984.48	985.05	985.24
+69.03	984.94	984.75	984.56	985.13	985.32
+75	984.97	984.81	984.62	985.16	985.32
+88.03	985.03	984.93	984.74	985.22	985.32
530+00	985.08	985.04	984.85	985.27	985.32
+25	985.19	985.23	985.04	985.38	985.34
+50	985.30	985.41	985.22	985.49	985.38
+75	985.41	985.58	985.39	985.60	985.43
+83.03	985.45	985.64	985.45	985.64	985.45

SUPERELEVATION CHART

I.R. 80 SUPERELEVATION

I-80

D = 1°16' Lt. MAX. SUPER FOR 24' = 0.96' S = 0.040

STATION	EASTBOUND LANE			WESTBOUND LANE		
	PROFILE GRADE	℄	RIGHT EDGE	PROFILE GRADE	℄	LEFT EDGE
590+77.90	966.91	967.10	966.91	966.91	967.10	966.91
591+00	967.57	967.76	967.63	967.57	967.70	967.51
+25	968.31	968.50	968.43	968.31	968.38	968.19
+50	969.05	969.24	969.23	969.05	969.06	968.87
+53.90	969.17	969.36	969.36	969.17	969.17	968.98
+75	969.80	970.03	970.10	969.80	969.73	969.50
592+00	970.54	970.82	970.96	970.54	970.40	970.12
+25	971.28	971.60	971.83	971.28	971.06	970.73
+30.90	971.46	971.80	972.04	971.46	971.22	970.88
+50	972.02	972.39	972.69	972.02	971.72	971.35
+75	972.76	973.18	973.56	972.76	972.38	971.96
593+00	973.51	973.98	974.43	973.51	973.05	972.59
+07.90	973.74	974.22	974.70	973.74	973.26	972.78
+25	974.25	974.73	975.21	974.25	973.77	973.29
+50	974.99	975.47	975.95	974.99	974.51	974.03
+75	975.74	976.22	976.70	975.74	975.26	974.78
594+00	976.48	976.96	977.44	976.48	976.00	975.52
+25	977.22	977.70	978.18	977.22	976.74	976.26
+50	977.96	978.44	978.92	977.96	977.48	977.00
+75	978.70	979.18	979.66	978.70	978.22	977.74
595+00	979.44	979.92	980.40	979.44	978.96	978.48
+25	980.19	980.67	981.15	980.19	979.71	979.23
+50	980.93	981.41	981.89	980.93	980.45	979.97
+75	981.68	982.16	982.64	981.68	981.20	980.72
596+00	982.42	982.90	983.38	982.42	981.94	981.46
+25	983.16	983.64	984.12	983.16	982.68	982.20
+50	983.90	984.38	984.86	983.90	983.42	982.94
+75	984.64	985.12	985.60	984.64	984.16	983.68
597+00	985.39	985.87	986.35	985.39	984.91	984.43
+25	986.13	986.61	987.09	986.13	985.65	985.17
+50	986.87	987.35	987.83	986.87	986.39	985.91
+75	987.62	988.10	988.58	987.62	987.14	986.66
598+00	988.36	988.84	989.32	988.36	987.88	987.40
+25	989.10	989.58	990.06	989.10	988.62	988.14
+50	989.84	990.32	990.80	989.84	989.36	988.88
+75	990.58	991.06	991.54	990.58	990.10	989.62
599+00	991.33	991.81	992.29	991.33	990.85	990.37
+25	992.07	992.55	993.03	992.07	991.59	991.11
+50	992.81	993.29	993.77	992.81	992.33	991.85
+75	993.56	994.04	994.52	993.56	993.08	992.60
600+00	994.30	994.78	995.26	994.30	993.82	993.34
+25	995.04	995.52	996.00	995.04	994.56	994.08
+50	995.78	996.26	996.74	995.78	995.30	994.82
+75	996.52	997.00	997.48	996.52	996.04	995.56
601+00	997.27	997.75	998.23	997.27	996.79	996.31
+25	998.01	998.49	998.97	998.01	997.53	997.05
+50	998.75	999.23	999.71	998.75	998.27	997.79
+75	999.50	999.98	1000.46	999.50	999.02	998.54
602+00	1000.24	1000.72	1001.20	1000.24	999.76	999.28
+25	1000.98	1001.46	1001.94	1000.98	1000.50	1000.02
+50	1001.72	1002.20	1002.68	1001.72	1001.24	1000.76
+75	1002.46	1002.94	1003.42	1002.46	1001.98	1001.50
603+00	1003.21	1003.69	1004.17	1003.21	1003.73	1003.25

I-80

D = 1°16' Lt. MAX. SUPER FOR 24' = 0.96' S = 0.040

STATION	EASTBOUND LANE			WESTBOUND LANE		
	PROFILE GRADE	℄	RIGHT EDGE	PROFILE GRADE	℄	LEFT EDGE
603+25	1003.95	1004.43	1004.91	1003.94	1003.46	1003.46
+50	1004.69	1005.17	1005.65	1004.66	1004.18	1003.70
+75	1005.44	1005.92	1006.40	1005.38	1004.90	1004.42
604+00	1006.17	1006.65	1007.13	1006.07	1005.59	1005.11
+25	1006.89	1007.37	1007.85	1006.75	1006.27	1005.79
+50	1007.60	1008.08	1008.56	1007.41	1006.93	1006.45
+75	1008.29	1008.77	1009.25	1008.07	1007.59	1007.11
605+00	1008.98	1009.46	1009.94	1008.71	1008.23	1007.75
+25	1009.65	1010.13	1010.61	1009.33	1008.85	1008.37
+50	1010.30	1010.78	1011.26	1009.94	1009.46	1008.98
+75	1010.95	1011.43	1011.91	1010.54	1010.06	1009.58
606+00	1011.58	1012.06	1012.54	1011.13	1010.65	1010.17
+25	1012.19	1012.66	1013.15	1011.69	1011.21	1010.73
+50	1012.79	1013.27	1013.75	1012.25	1011.77	1011.29
+75	1013.37	1013.85	1014.33	1012.79	1012.31	1011.83
607+00	1013.95	1014.43	1014.91	1013.32	1012.84	1012.36
+25	1014.51	1014.99	1015.47	1013.83	1013.35	1012.87
+50	1015.06	1015.54	1016.02	1014.33	1013.85	1013.37
+75	1015.60	1016.08	1016.56	1014.83	1014.35	1013.87
608+00	1016.12	1016.60	1017.08	1015.30	1014.82	1014.34
+25	1016.62	1017.10	1017.58	1015.75	1015.27	1014.79
+50	1017.11	1017.59	1018.07	1016.20	1015.72	1015.24
+75	1017.59	1018.07	1018.55	1016.62	1016.14	1015.66
609+00	1018.07	1018.55	1019.03	1017.05	1016.57	1016.09
+25	1018.52	1019.00	1019.48	1017.45	1016.97	1016.49
+50	1018.96	1019.44	1019.92	1017.84	1017.36	1016.88
+75	1019.39	1019.87	1020.35	1018.22	1017.74	1017.26
610+00	1019.80	1020.28	1020.76	1018.58	1018.10	1017.62
+25	1020.20	1020.68	1021.16	1018.93	1018.45	1017.97
+50	1020.58	1021.06	1021.54	1019.26	1018.78	1018.30
+75	1020.95	1021.43	1021.91	1019.58	1019.10	1018.62
611+00	1021.32	1021.80	1022.28	1019.89	1019.41	1018.93
+25	1021.66	1022.14	1022.62	1020.19	1019.71	1019.23
+50	1021.99	1022.47	1022.95	1020.46	1019.98	1019.50
+75	1022.32	1022.80	1023.28	1020.74	1020.26	1019.78
612+00	1022.62	1023.10	1023.58	1020.99	1020.51	1020.03
+25	1022.91	1023.39	1023.87	1021.22	1020.74	1020.26
+50	1023.19	1023.67	1024.15	1021.44	1020.96	1020.48
+75	1023.45	1023.93	1024.41	1021.65	1021.17	1020.69
613+00	1023.71	1024.19	1024.67	1021.85	1021.37	1020.89
+25	1023.95	1024.43	1024.91	1022.02	1021.55	1021.07
+50	1024.17	1024.65	1025.13	1022.20	1021.72	1021.24
+75	1024.39	1024.87	1025.35	1022.36	1021.88	1021.40
614+00	1024.59	1025.07	1025.55	1022.50	1022.02	1021.54
+25	1024.77	1025.25	1025.73	1022.63	1022.15	1021.67
+50	1024.94	1025.42	1025.90	1022.74	1022.26	1021.78
+75	1025.09	1025.57	1026.05	1022.84	1022.36	1021.88
615+00	1025.24	1025.72	1026.20	1022.93	1022.45	1021.97
+25	1025.37	1025.85	1026.33	1023.00	1022.52	1022.04
+50	1025.49	1025.97	1026.45	1023.06	1022.58	1022.10
+75	1025.60	1026.08	1026.56	1023.11	1022.63	1022.15
616+00	1025.69	1026.17	1026.65	1023.14	1022.66	1022.18
+25	1025.76	1026.24	1026.72	1023.15	1022.67	1022.19

I-80

D = 1°16' Lt. MAX. SUPER FOR 24' = 0.96' S = 0.040

STATION	EASTBOUND LANE			WESTBOUND LANE		
	PROFILE GRADE	℄	RIGHT EDGE	PROFILE GRADE	℄	LEFT EDGE
+50	1025.82	1026.30	1026.78	1023.15	1022.67	1022.19
+75	1025.87	1026.35	1026.83	1023.14	1022.66	1022.18
617+00	1025.92	1026.40	1026.88	1023.12	1022.64	1022.16
+25	1025.94	1026.42	1026.90	1023.08	1022.60	1022.12
+50	1025.95	1026.43	1026.91	1023.03	1022.55	1022.07
+75	1025.95	1026.43	1026.91	1022.96	1022.48	1022.00
618+00	1025.93	1026.41	1026.89	1022.88	1022.40	1021.92
+25	1025.90	1026.38	1026.86	1022.79	1022.31	1021.83
+50	1025.85	1026.33	1026.81	1022.68	1022.20	1021.72
+75	1025.79	1026.27	1026.75	1022.56	1022.08	1021.60
619+00	1025.72	1026.20	1026.68	1022.42	1021.94	1021.46
+25	1025.64	1026.12	1026.60	1022.27	1021.79	1021.31
+50	1025.54	1026.02	1026.50	1022.11	1021.63	1021.15
+75	1025.43	1025.91	1026.39	1021.93	1021.45	1020.97
620+00	1025.31	1025.79	1026.27	1021.74	1021.26	1020.78
+25	1025.17	1025.65	1026.13	1021.54	1020.96	1020.38
+50	1025.02	1025.50	1025.98	1021.32	1020.84	1020.36
+75	1024.85	1025.33	1025.81	1021.09	1020.61	1020.13
621+00	1024.67	1025.15	1025.63	1020.85	1020.37	1019.89
+25	1024.48	1024.92	1025.32	1020.59	1020.18	1019.75
+50	1024.28	1024.67	1025.00	1020.31	1019.98	1019.59
+75	1024.06	1024.40	1024.65	1020.03	1019.78	1019.44
+78.16	1024.03	1024.36	1024.61	1019.99	1019.75	1019.41
622+00	1023.83	1024.12	1024.30	1019.72	1019.55	1019.25
+25	1023.58	1023.83	1023.92	1019.41	1019.32	1019.07
+50	1023.32	1023.52	1023.54	1019.08	1019.06	1018.86
+55.16	1023.27	1023.46	1023.46	1019.01	1019.01	1018.82
+75	1023.05	1023.24	1023.19	1018.74	1018.79	1018.60
623+00	1022.77	1022.96	1022.85	1018.38	1018.49	1018.30
+25	1022.47	1022.66	1022.49	1018.01	1018.18	1017.99
+31.16	1022.39	1022.58	1022.39	1017.92	1018.11	1017.92

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

29
401

TRUMBULL COUNTY TRU-I-80-8.90

SUPERELEVATION CHART

I-80

D= 1° 15' 12" RT. MAX. SUPER FOR 24' = 0.96' S= 0.040

STA.	E.B. LANE			W.B. LANE		
	P.G.	℄	RT. EDGE	P.G.	℄	LT. EDGE
638+28.51	982.00	982.19	982.00	977.94	978.13	977.94
+50	981.25	981.39	981.20	977.30	977.49	977.35
+75	980.38	980.45	980.26	976.55	976.74	976.67
639+00	979.51	979.52	979.33	975.80	975.99	975.98
+04.51	979.35	979.35	979.16	975.66	975.85	975.85
+25	978.64	978.58	978.35	975.05	975.28	975.34
+50	977.77	977.63	977.35	974.30	974.58	974.72
+75	976.90	976.68	976.36	973.55	973.87	974.09
+81.51	976.67	976.43	976.10	973.35	973.68	973.92
640+00	976.03	975.73	975.36	972.80	973.17	973.47
+25	975.16	974.78	974.37	972.05	972.47	972.84
+50	974.29	973.83	973.37	971.30	971.76	972.22
+58.51	973.00	973.51	973.03	971.04	971.52	972.00
+75	973.42	972.94	972.46	970.55	971.03	971.51
641+00	972.55	972.07	971.59	969.80	970.28	970.76
+25	971.68	971.20	970.72	969.05	969.53	970.01
+50	970.81	970.33	969.85	968.30	968.78	969.26
+75	969.94	969.46	968.98	967.55	968.03	968.51
642+00	969.07	968.59	968.11	966.80	967.28	967.76
+25	968.20	967.72	967.24	966.05	966.53	967.01
+50	967.33	966.85	966.37	965.30	965.78	966.26
+75	966.46	965.98	965.50	964.55	965.03	965.51
643+00	965.59	965.11	964.63	963.80	964.28	964.76
+25	964.72	964.24	963.76	963.05	963.53	964.01
+50	963.85	963.37	962.89	962.30	962.78	963.26
+75	962.98	962.50	962.02	961.55	962.03	962.51
644+00	962.11	961.63	961.15	960.80	961.28	961.76
+25	961.24	960.76	960.28	960.05	960.53	961.01
+50	960.37	959.89	959.41	959.30	959.78	960.26
+75	959.50	959.02	958.54	958.55	959.03	959.51
645+00	958.63	958.15	957.67	957.80	958.28	958.76
+25	957.76	957.28	956.80	957.05	957.53	958.01
+50	956.89	956.41	955.93	956.30	956.78	957.26
+75	956.02	955.54	955.06	955.55	956.03	956.51
646+00	955.16	954.68	954.20	954.80	955.28	955.76
+25	954.31	953.83	953.35	954.05	954.53	955.01
+50	953.47	952.99	952.51	953.30	953.78	954.26
+75	952.66	952.18	951.70	952.55	953.03	953.51
647+00	951.85	951.37	950.89	951.80	952.28	952.76
+25	951.06	950.58	950.10	951.05	951.53	952.01
+50	950.28	949.80	949.32	950.30	950.78	951.26
+75	949.52	949.04	948.56	949.55	950.03	950.51
648+00	948.77	948.29	947.81	948.81	949.29	949.77
+25	948.04	947.56	947.08	948.08	948.56	949.04
+50	947.32	946.84	946.36	947.36	947.84	948.32
+75	946.62	946.14	945.66	946.66	947.14	947.62
649+00	945.93	945.45	944.97	945.98	946.46	946.94
+25	945.25	944.77	944.29	945.30	945.78	946.26
+50	944.59	944.11	943.63	944.64	945.12	945.60
+75	943.94	943.46	942.98	944.00	944.48	944.96
650+00	943.31	942.83	942.35	943.37	943.85	944.33
+25	942.69	942.21	941.73	942.75	943.23	943.71
+50	942.09	941.61	941.13	942.15	942.63	943.11

I-80

D= 1° 15' 12" RT. MAX. SUPER FOR 24' = 0.96' S= 0.040

STA.	E.B. LANE			W.B. LANE		
	P.G.	℄	RT. EDGE	P.G.	℄	LT. EDGE
+75	941.50	941.02	940.54	941.56	942.04	942.52
651+00	940.92	940.44	939.96	940.99	941.47	941.95
+25	940.36	939.88	939.40	940.42	940.90	941.38
+50	939.81	939.33	938.85	939.88	940.36	940.84
+75	939.28	938.80	938.32	939.35	939.83	940.31
652+00	938.76	938.28	937.80	938.82	939.30	939.78
+25	938.26	937.78	937.30	938.32	938.80	939.28
+50	937.78	937.30	936.82	937.84	938.32	938.80
+75	937.31	936.83	936.35	937.36	937.84	938.32
653+00	936.84	936.36	935.88	936.89	937.37	937.85
+25	936.40	935.92	935.44	936.45	936.93	937.41
+50	935.97	935.49	935.01	936.02	936.50	936.98
+75	935.55	935.07	934.59	935.59	936.07	936.55
654+00	935.14	934.66	934.18	935.18	935.66	936.14
+25	934.73	934.25	933.77	934.77	935.25	935)73
+50	934.32	933.84	933.36	934.36	934.84	935.32
+75	933.91	933.43	932.95	933.94	934.42	934.90
655+00	933.50	933.02	932.54	933.53	934.01	934.49
+25	933.09	932.61	932.13	933.12	933.60	934.08
+50	932.68	932.20	931.72	932.70	933.18	933.66
+75	932.27	931.79	931.31	932.29	932.77	933.25
656+00	931.86	931.38	930.90	931.88	932.36	932.84
+25	931.45	930.97	930.49	931.46	931.94	932.42
+50	931.04	930.56	930.08	931.05	931.53	932.01
+75	930.63	930.15	929.67	930.64	931.12	931.60
657+00	930.22	929.74	929.26	930.22	930.70	931.18
+25	929.82	929.34	928.86	929.81	930.29	930.77
+50	929.41	928.93	928.45	929.40	929.88	930.36
+70.41	929.07	928.59	928.11	929.06	929.54	930.02
+75	929.00	928.53	928.06	928.99	929.46	929.93
+86.41	928.81	928.37	927.93	928.80	929.24	929.68

I-80

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

30/401

TRUMBULL COUNTY TRU-I-80-8.90

SUPERELEVATION CHART

Ramp A

STA.	P.G.	RT. EDGE
14+50	940.75	942.03
+75	941.14	942.42
15+00	941.54	942.82
+25	941.94	943.22
+50	942.33	943.61
+75	942.72	944.00
16+00	943.12	944.40
+25	943.52	944.80
+50	943.91	945.19
+75	944.30	945.58
17+00	944.70	945.98
+17.06	944.97	946.25
+25	945.10	946.33
+50	945.49	946.58
+75	945.87	946.82
18+00	946.23	947.04
+25	946.57	947.23
+44.56	946.80	947.35
+50	946.87	947.39
+75	947.15	947.53
19+00	947.42	947.65
+25	947.65	947.73
+41.06	947.79	947.79
+50	947.86	947.81
+75	948.05	947.86
20+00	948.21	947.87
+25	948.35	947.87
+37.60	948.41	947.86
+50	948.46	947.84
+75	948.56	947.79
21+00	948.66	947.75
+25	948.76	947.71
+50	948.86	947.67
+65.06	948.92	947.64
+75	948.96	947.68
22+00	949.06	947.78
+12.89	949.11	947.83
+25	949.16	947.95
+50	949.26	948.19
+75	949.36	948.43
23+00	949.46	948.68
+24.89	949.56	948.92
+50	949.66	949.16
+75	949.76	949.40
24+00	949.86	949.65
+25	949.96	949.90
+36.89	950.01	950.01
+50	950.06	950.13
+75	950.16	950.38
+80.89	950.18	950.43

Ramp B

STA.	P.G.	LT. EDGE
16+50	955.66	956.94
+75	955.02	956.30
17+00	954.38	955.66
+25	953.74	955.02
+50	953.10	954.38
+75	952.46	953.74
18+00	951.82	953.10
+25	951.18	952.46
+50	950.54	951.82
+75	949.90	951.18
19+00	949.26	950.54
+25	948.62	949.90
+50	947.98	949.26
+75	947.36	948.64
20+00	946.83	948.11
+25	946.41	947.69
+50	946.08	947.36
+75	945.86	947.14
21+00	945.74	947.02
+25	945.73	947.01
+50	945.82	947.10
+75	946.01	947.29
22+00	946.30	947.58
+25	946.68	947.96
+30.15	946.76	948.04
+34.77	946.83	948.11
+40.30	946.91	948.16
+61.45	947.24	948.37
+82.60	947.56	948.57
23+00	947.83	948.74
+24.89	948.21	948.97
+50	948.60	949.22
+75	948.99	949.47
24+00	949.35	949.69
+25	949.67	949.92
+36.89	949.80	950.05
+50	949.94	950.19
+75	950.17	950.43
+80.89	950.21	950.50
25+00	950.34	950.74
+25	950.48	951.03
+35.41	950.51	951.11

Ramp C

STA.	P.G.	LT. EDGE
11+98.47	934.92	936.20
12+00	934.91	936.19
+25	934.72	936.00
+50	934.52	935.80
+75	934.32	935.60
13+00	934.13	935.41
+25	933.94	935.22
+50	933.74	935.02
+75	933.54	934.82
14+00	933.35	934.63
+18.90	933.20	934.48
+25	933.16	934.41
+50	932.96	934.08
+75	932.76	933.76
15+00	932.57	933.44
+09.90	932.49	933.31
+25	932.38	933.13
+50	932.18	932.80
+75	931.98	932.48
16+00	931.79	932.16
+25	931.60	931.85
+50	931.40	931.53
+74.90	931.21	931.21
+75	931.20	931.20
17+00	931.01	930.88
+25	930.82	930.57
+50	930.62	930.24
+75	930.43	929.93
18+00	930.28	929.65
+02.90	930.27	929.63
+25	930.15	929.51
+50	930.04	929.40
+75	929.95	929.31
19+00	929.89	929.25
+25	929.86	929.22
+50	929.85	929.21
+75	929.86	929.22
20+00	929.90	929.26
+09.82	929.93	929.29
+25	929.97	929.41
+50	930.06	929.62
+75	930.17	929.86
21+00	930.31	930.12
+25	930.47	930.40
+37.82	930.56	930.56
+50	930.66	930.69
+75	930.86	930.95
22+00	931.06	931.22
+25	931.26	931.48
+37.82	931.36	931.61

Ramp D

STA.	P.G.	LT. EDGE
18+50	971.41	972.69
+75	971.09	972.37
19+00	970.70	971.98
+25	970.23	971.51
+50	969.69	970.97
+75	969.08	970.38
20+00	968.39	969.71
+25	967.64	968.99
+50	966.81	968.19
+75	965.90	967.30
21+00	964.94	966.37
+25	963.93	965.37
+50	962.92	964.36
+75	961.92	963.36
22+00	960.91	962.35
+25	959.90	961.34
+50	958.89	960.33
29+00	936.94	937.90
+25	936.83	937.79
+50	936.80	937.76
+75	936.85	937.81
30+00	936.99	937.95
+25	937.21	938.17
+50	937.52	938.48
+75	937.91	938.87

Ramp E

STA.	P.G.	LT. EDGE
19+83.89	958.41	958.67
20+00	958.66	959.10
+25	959.12	959.81
+29.89	959.23	959.98
+50	959.67	960.67
+75	960.30	961.55
21+00	961.02	962.38
+25	961.78	963.14
+50	962.54	963.90
+75	963.30	964.66
22+00	964.07	965.43
+25	964.83	966.19
+50	965.59	966.95
+75	966.35	967.71
23+00	967.11	968.47
+25	967.87	969.23
+50	968.64	970.00
+75	969.40	970.76
24+00	970.16	971.52
+25	970.92	972.28
+50	971.68	972.93
+75	972.44	973.44
25+00	973.21	973.96
+25	973.97	974.47
+50	974.73	974.98
+75	975.49	975.74
26+00	976.25	976.50
+50	977.78	978.04
+75	978.52	979.02
27+00	979.22	979.97
+25	979.88	980.88
+50	980.50	981.75
+75	981.09	982.45
28+00	981.63	982.99
+25	982.13	983.49
+50	982.59	983.84
+75	983.01	984.01
29+00	983.39	984.14
+25	983.73	984.21

Reloc. HUBBARD – SHARON RD.

STA.	LT. EDGE	P.G.	RT. EDGE
12+50	935.10	935.32	935.43
+75	935.29	935.51	935.75
13+00	935.57	935.79	936.15
+11.17	935.72	935.94	936.35
+25	935.91	936.15	936.63
+50	936.25	936.62	937.23
+75	936.67	937.16	937.89
+78.17	936.73	937.24	937.99
14+00	937.18	937.80	938.66
+25	937.80	938.53	939.51
+45.17	938.34	939.18	940.26
+50	938.50	939.34	940.45
+75	939.41	940.25	941.48
15+00	940.40	941.24	942.60
+25	941.49	942.33	943.81
+28.17	941.63	942.47	943.97
+32	941.81	942.65	944.15
+50	942.67	943.46	944.89
+75	943.87	944.59	945.87
16+00	945.07	945.72	946.88
+22	946.12	946.71	947.76
+25	946.27	946.85	947.89
16+50	947.47	947.98	948.89
+75	948.67	949.11	949.90
17+00	949.87	950.24	950.90
+25	951.04	951.34	951.88
+50	952.15	952.38	952.79
+75	953.13	953.35	953.64
18+00	954.05	954.27	954.43
+25	954.90	955.12	955.16
+50	955.70	955.92	956.01
+75	956.43	956.65	956.43

RAMP G SUPERELEVATION

STA.	P.G.	RT. EDGE
7+00	1011.29	1011.93
+25	1011.89	1012.53
+50	1012.49	1013.13
+75	1013.09	1013.73
8+00	1013.69	1014.33
+25	1014.29	1014.93
+50	1014.89	1015.53
+73.25	1015.45	1016.09
+75	1015.49	1016.12
9+00	1016.09	1016.60
+25	1016.69	1017.07
+50	1017.29	1017.55
+75	1017.89	1018.02
10+00	1018.49	1018.50
+01.25	1018.52	1018.52
+25	1019.08	1018.96
+50	1019.67	1019.43
+51.25	1019.70	1019.45

RAMP H SUPERELEVATION

STA.	P.G.	RT. EDGE
16+20.87	1029.54	1029.02
+25	1029.53	1028.98
+50	1029.46	1028.79
+75.87	1029.31	1028.51
17+00	1029.09	1028.29
+25	1028.80	1028.00
+50	1028.43	1027.63
+64.57	1028.17	1027.37
+75	1027.98	1027.23
18+00	1027.45	1026.83
+25	1026.89	1026.39
+50	1026.33	1025.96
+75	1025.76	1025.51
19+00	1025.20	1025.08
+25	1024.64	1024.64
+50	1024.08	1024.21
+74.57	1023.52	1023.77

SUPERELEVATION CHART

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

TRUMBULL COUNTY TRU-I-80-8.90

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Reloc. FOX – NORTH RD.

STA.	LT. EDGE	P.G.	RT. EDGE
0-25	1016.57	1016.87	1016.57
0+00	1016.43	1016.59	1016.29
+25	1016.45	1016.46	1016.16
+50	1016.37	1015.50	1016.20
+75	1016.40	1016.67	1016.37
+81.25	1017.07	1016.76	1016.45
1+00	1017.43	1017.02	1016.61
+25	1018.08	1017.52	1016.96
+50	1018.86	1018.16	1017.46
+54	1019.00	1018.28	1017.56
+75	1019.60	1018.88	1018.16
2+00	1020.33	1019.61	1018.89
+25	1021.06	1020.34	1019.62
+50	1021.78	1021.06	1020.34
+75	1022.50	1021.78	1021.06
3+00	1023.23	1022.51	1021.79
+25	1023.96	1023.24	1022.52
+50	1024.68	1023.96	1023.24
+75	1025.40	1024.68	1023.96
4+00	1026.13	1025.41	1024.69
+25	1026.86	1026.14	1025.42
+50	1027.58	1026.86	1026.14
+75	1028.30	1027.58	1026.86
5+00	1029.03	1028.31	1027.59
+03.33	1029.13	1028.41	1017.69
+25	1029.65	1029.04	1028.43
+50	1030.25	1029.76	1029.27
+75	1030.84	1030.48	1030.12
+75.33	1030.85	1030.49	1030.13
6+00	1031.45	1031.21	1030.97
+25	1032.05	1031.94	1031.80
+50	1032.65	1032.66	1032.54
+75	1033.24	1033.38	1033.24
+75.33	1033.25	1033.39	1033.25
26+09.63	1043.94	1044.08	1043.94
+25	1043.10	1043.24	1043.18
+50	1041.80	1041.94	1042.00
+75	1040.45	1040.64	1040.83
27+00	1039.02	1039.33	1039.64
+09.63	1038.47	1038.83	1039.19
+25	1037.58	1038.02	1038.46
+50	1036.16	1036.72	1037.28
+75	1034.73	1035.42	1036.11
+81.63	1034.35	1035.07	1035.79
28+00	1033.39	1034.11	1034.83
+25	1032.08	1032.80	1033.52
+48.06	1030.92	1031.63	1032.36
+50	1030.83	1031.54	1032.25
+75	1029.76	1030.35	1030.94
29+00	1028.76	1029.22	1029.68
+20.06	1028.01	1028.37	1028.73
+25	1027.83	1028.17	1028.51
+50	1026.99	1027.20	1027.41
+75	1026.16	1026.30	1026.39
30+00	1025.36	1025.48	1025.44
+20.06	1024.72	1024.86	1024.72

Reloc. PRICE – SHAFFER RD.

STA.	LT. EDGE	P.G.	RT. EDGE
8+19.23	1008.96	1009.10	1008.96
+25	1009.11	1009.22	1009.08
+50	1009.74	1009.73	1009.59
+75	1010.38	1010.24	1010.10
9+00	1011.01	1010.75	1010.49
+19.23	1011.50	1011.14	1010.78
+25	1011.65	1011.26	1010.87
+50	1012.28	1011.77	1011.26
+75	1012.92	1012.28	1011.64
+91.23	1013.33	1012.61	1011.89
10+00	1013.51	1012.79	1012.07
+25	1014.02	1013.30	1012.58
+50	1014.53	1013.81	1013.09
+51.43	1014.56	1013.84	1013.12
+75	1014.92	1014.32	1013.72
11+00	1015.31	1014.83	1014.35
+23.43	1015.67	1015.31	1014.95
+25	1015.69	1015.34	1014.99
+50	1016.08	1015.85	1015.62
+75	1016.46	1016.36	1016.22
12+00	1016.85	1016.87	1016.73
+23.43	1017.21	1017.35	1017.21
16+44.11	1022.68	1022.82	1022.68
+50	1022.65	1022.79	1022.90
+75	1022.47	1022.61	1022.62
17+00	1022.23	1022.37	1022.51
+25	1021.81	1022.07	1022.33
+44.11	1021.43	1021.79	1022.15
+50	1021.31	1021.70	1022.09
+75	1020.75	1021.26	1021.77
18+00	1020.12	1020.76	1021.40
+16.11	1019.68	1020.40	1021.12
+25	1019.48	1020.20	1020.92
+50	1018.85	1019.57	1020.29
+75	1018.14	1018.86	1019.58
19+00	1017.39	1018.11	1018.83
+25	1016.57	1017.29	1018.01
+50	1015.67	1016.39	1017.11
+75	1014.71	1015.43	1016.15
20+00	1013.69	1014.41	1015.13
+25	1012.64	1013.36	1014.08
+50	1011.58	1012.30	1013.02
+75	1010.52	1011.24	1011.96
21+00	1009.47	1010.19	1010.91
+25	1008.42	1009.14	1009.86
+50	1007.36	1008.08	1008.80
+75	1006.30	1007.02	1007.74
22+00	1005.25	1005.97	1006.69
+25	1004.20	1004.92	1005.64
+38.60	1003.62	1004.34	1005.06
+50	1003.21	1003.86	1004.51
+75	1002.29	1002.80	1003.31
+87.51	1001.84	1002.28	1002.72
23+00	1001.38	1001.75	1002.12
+25	1000.53	1000.76	1000.99
+50	999.79	999.87	999.95

Reloc. PRICE – SHAFFER RD. (Cont'd)

STA.	LT. EDGE	P.G.	RT. EDGE
+64.60	999.41	999.41	999.41
+75	999.16	999.10	999.04
24+00	998.66	998.46	998.26
+25	998.28	997.93	997.58
+41.69	998.08	997.64	997.20
+50	997.99	997.50	997.01
+75	997.20	997.20	996.57
+90.60	997.81	997.09	996.37
25+00	997.73	997.01	996.29
+25	997.67	996.95	996.23
+50	997.71	996.99	996.27
+75	997.87	997.15	996.43
26+00	998.14	997.42	996.70
+25	998.54	997.82	997.10
+42.43	998.89	998.17	997.45
+50	999.00	998.32	997.64
+75	999.48	998.95	998.42
27+00	1000.08	999.69	999.30
+05.43	1000.23	999.87	999.51
+25	1000.79	1000.54	1000.29
+50	1001.62	1001.51	1001.37
+75	1002.56	1002.60	1002.46
+93.43	1003.33	1003.47	1003.33
28+00	EXISTING ROAD	1003.8	EXISTING ROAD

Reloc. STATE LINE RD.

STA.	LT. EDGE	P.G.	RT. EDGE
1+49.70	1016.22	1016.36	1016.22
+50	1016.23	1016.37	1016.23
+75	1016.84	1016.85	1016.71
2+00	1017.28	1017.17	1017.03
+49.70	1017.70	1017.34	1016.98
+50	1017.70	1017.34	1016.98
+75	1017.68	1017.19	1016.70
3+00	1018.43	1016.88	1016.27
+21.70	1017.21	1016.49	1015.77
+25	1017.13	1016.41	1015.69
+50	1016.51	1015.79	1015.07
+75	1015.73	1015.01	1014.29
4+00	1014.79	1014.07	1013.35
+25	1013.69	1012.97	1012.25
+50	1012.44	1011.72	1011.00
+75	1011.03	1010.31	1009.59
5+00	1009.54	1008.82	1008.10
+25	1008.05	1007.33	1006.61
+50	1006.54	1005.84	1005.12
+75	1005.07	1004.35	1003.63
+83.03	1004.59	1003.87	1003.15
6+00	1003.50	1002.86	1002.22
+25	1001.88	1001.37	1000.86
+50	1000.27	999.88	999.53
+56.74	999.83	999.48	999.13
+75	998.65	998.39	998.13
7+00	997.04	996.90	996.76
+25	995.42	995.41	995.40
+27.03	995.29	995.29	995.29
+50	993.81	993.92	994.03
+75	992.19	992.43	992.67
+97.32	990.75	991.10	991.45
8+00	990.58	990.94	991.60
+25	988.96	989.45	989.94
+50	987.34	987.96	988.58
+71.03	985.99	986.71	987.43
+75	985.75	986.47	987.19
9+00	984.26	984.98	985.70
+25	982.77	983.49	984.21
+50	981.28	982.00	982.72
+63.12	980.50	981.22	981.94
+75	979.74	980.51	981.18
10+00	978.46	979.02	979.58
+25	977.08	977.53	977.98
+35.12	976.52	976.93	977.34
+50	975.69	976.04	976.39
+75	974.31	974.55	974.79
11+00	972.93	973.06	973.19
+25	971.55	971.57	971.59
+30	971.27	971.27	971.27
+50	970.14	970.08	970.02
+69.71	969.03	968.91	968.79
+75	968.73	968.59	968.45
+87.71	968.01	967.83	967.65
12+00	967.28	967.10	966.92
+25	965.79	965.61	965.43
+50	964.30	964.12	963.94
+75	962.81	962.63	962.45
13+00	961.32	961.14	960.96

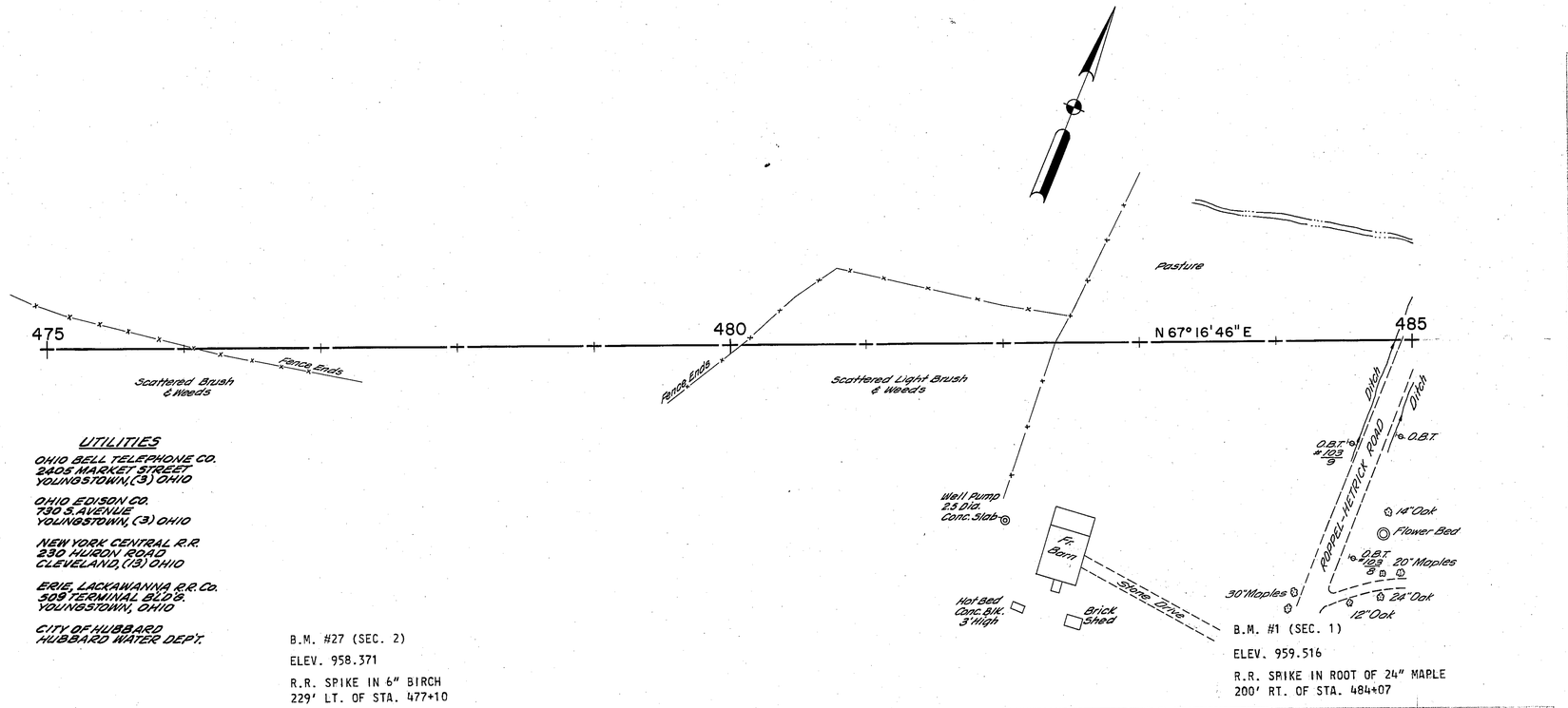
Reloc. STATE LINE RD. (Cont'd)

STA.	LT. EDGE	P.G.	RT. EDGE
+25	959.83	959.65	959.47
+50	958.34	958.16	957.98
+75	956.85	956.67	956.49
14+00	955.36	955.18	955.00
+25	953.87	953.69	953.51
+50	952.38	952.20	952.02
+75	950.89	950.71	950.53
15+00	949.40	949.22	949.04
+25	947.91	947.73	947.55
+50	946.42	946.24	946.06
+75	944.93	944.75	944.57
16+00	943.44	943.26	943.08
+25	941.95	941.77	941.59
+50	940.46	940.28	940.10
+75	938.97	938.79	938.61
17+00	937.48	937.30	937.12
+25	935.99	935.81	935.63
+50	934.50	934.32	934.14
+75	933.01	932.83	932.65
18+00	931.52	931.34	931.16
+25	930.07	929.89	929.71
+50	928.70	928.52	928.34
+75	927.40	927.22	927.04
19+00	926.19	926.01	925.83
+25	925.05	924.87	924.69
+50	923.99	923.81	923.63
+75	923.01	922.83	922.65
20+00	922.11	921.93	921.75
+25	921.28	921.10	920.92
+50	920.54	920.36	920.18
+75	919.88	919.70	919.52
21+00	919.29	919.11	918.93
+25	918.77	918.59	918.41
+50	918.35	918.17	917.99
+75	918.00	917.82	917.64
22+00	917.72	917.54	917.36
+25	917.48	917.30	917.12
+50	917.25	917.07	916.89
+75	917.02	916.84	916.66
23+00	916.78	916.60	916.42
+25	916.54	916.36	916.18
+50	916.31	916.13	915.95
+56.25	916.25	916.07	915.89
+75	915.99	915.90	915.81
+80.25	915.91	915.85	915.79
+92	915.74	915.74	915.74
24+00	915.62	915.66	915.70
+25	915.26	915.42	915.58
+34.86	915.12	915.33	915.54
+50	914.90	915.19	915.48
+75	914.54	914.96	915.38
25+00	914.18	914.72	915.26
+25	913.82	914.48	915.14
+36	913.66	914.38	915.10
+50	913.53	914.25	914.97
+75	913.29	914.01	914.73
26+00	913.02	913.74	914.46
+25	912.72	913.44	914.16
+50	912.41	913.13	913.85

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

32
401

TRUMBULL COUNTY TRU-I-80-8.90



UTILITIES

OHIO BELL TELEPHONE CO.
2405 MARKET STREET
YOUNGSTOWN, (3) OHIO

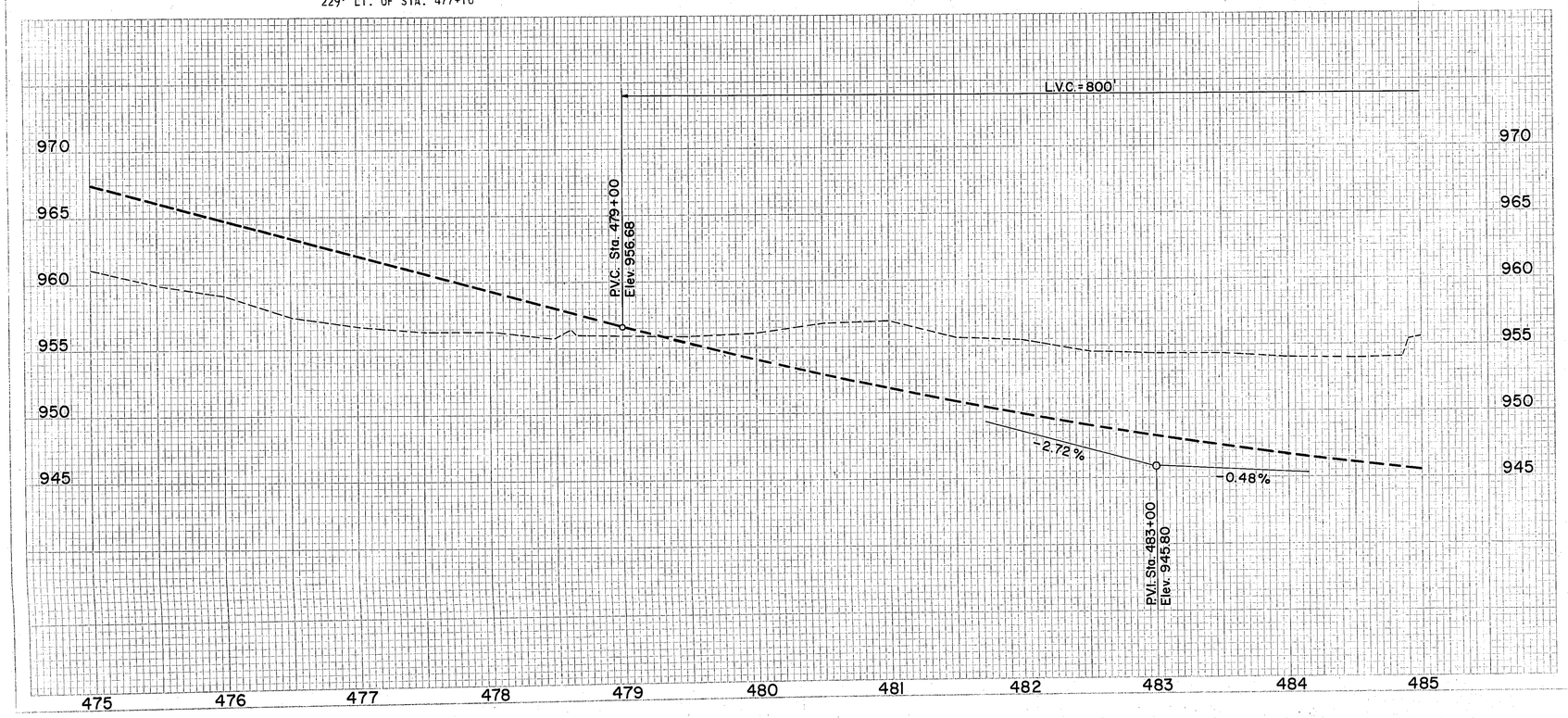
OHIO EDISON CO.
730 S. AVENUE
YOUNGSTOWN, (3) OHIO

NEW YORK CENTRAL R.R.
230 HURON ROAD
CLEVELAND, (13) OHIO

ERIE, LACKAWANNA R.R. CO.
509 TERMINAL BLD'G.
YOUNGSTOWN, OHIO

CITY OF HUBBARD
HUBBARD WATER DEP'T.

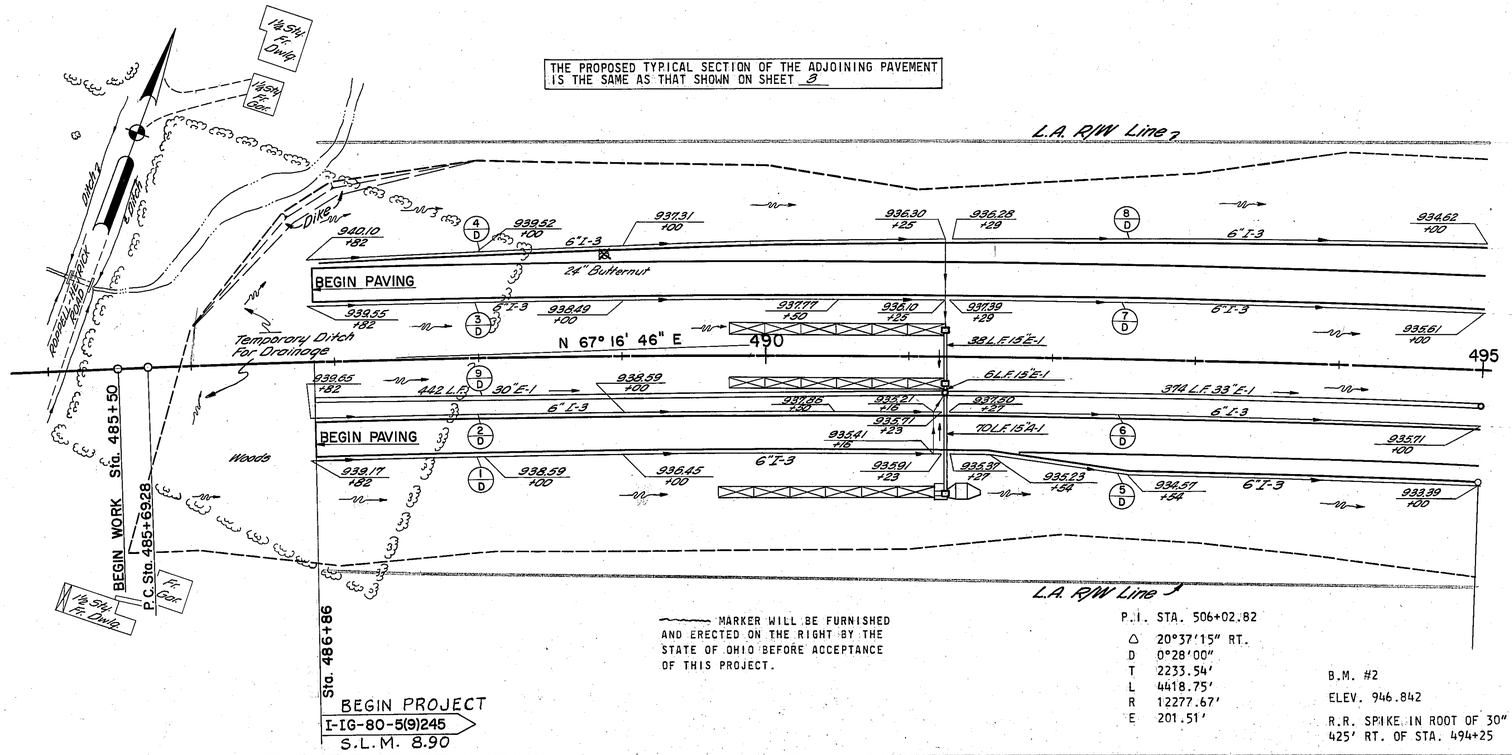
B.M. #27 (SEC. 2)
ELEV. 958.371
R.R. SPIKE IN 6" BIRCH
229' LT. OF STA. 477+10



ESTIMATED QUANTITIES

SEE SHEET NO.					

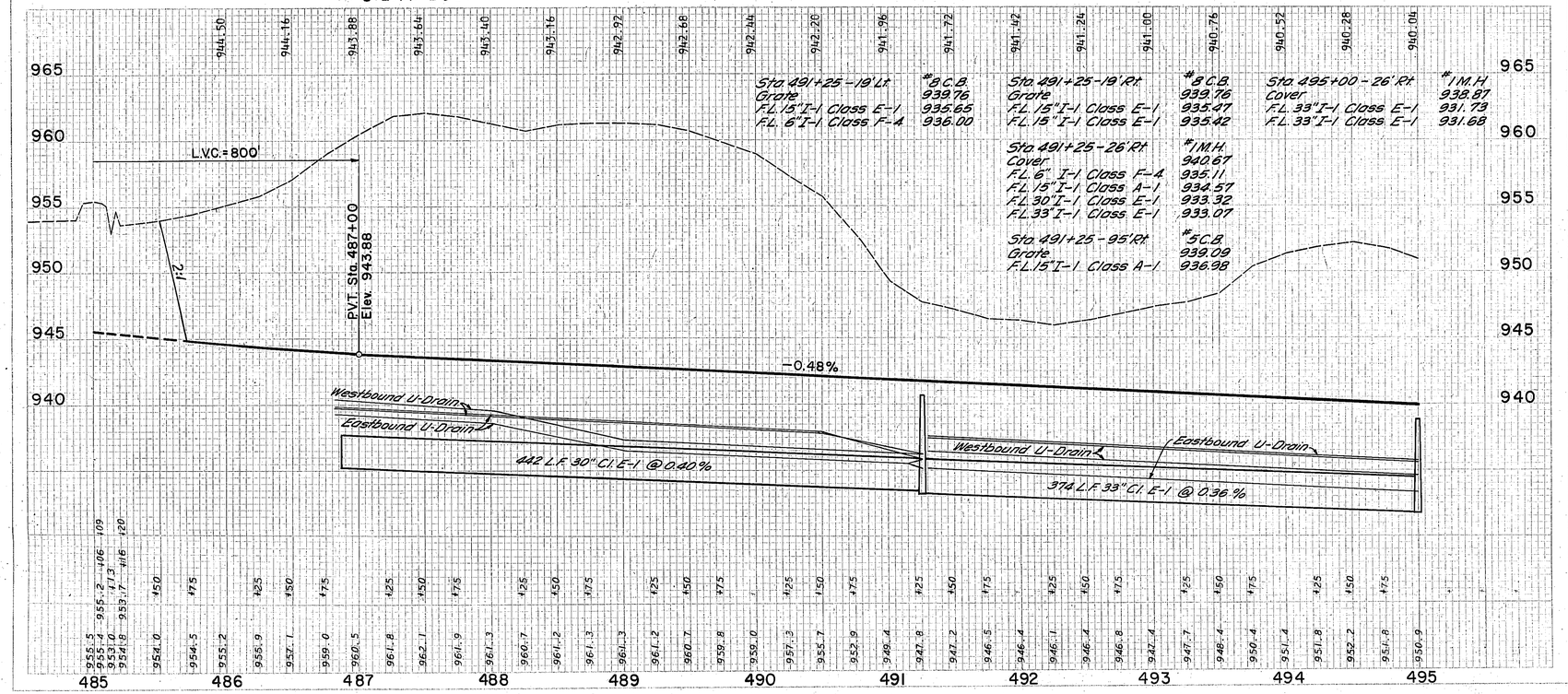
THE PROPOSED TYPICAL SECTION OF THE ADJOINING PAVEMENT IS THE SAME AS THAT SHOWN ON SHEET 8



MARKER WILL BE FURNISHED AND ERECTED ON THE RIGHT BY THE STATE OF OHIO BEFORE ACCEPTANCE OF THIS PROJECT.

P.I. STA. 506+02.82
Δ 20°37'15" RT.
D 0°28'00"
T 2233.54'
L 4418.75'
R 12277.67'
E 201.51'

B.M. #2
ELEV. 946.842
R.R. SPIKE IN ROOT OF 30" WHITE OAK 425' RT. OF STA. 494+25



ESTIMATED QUANTITIES

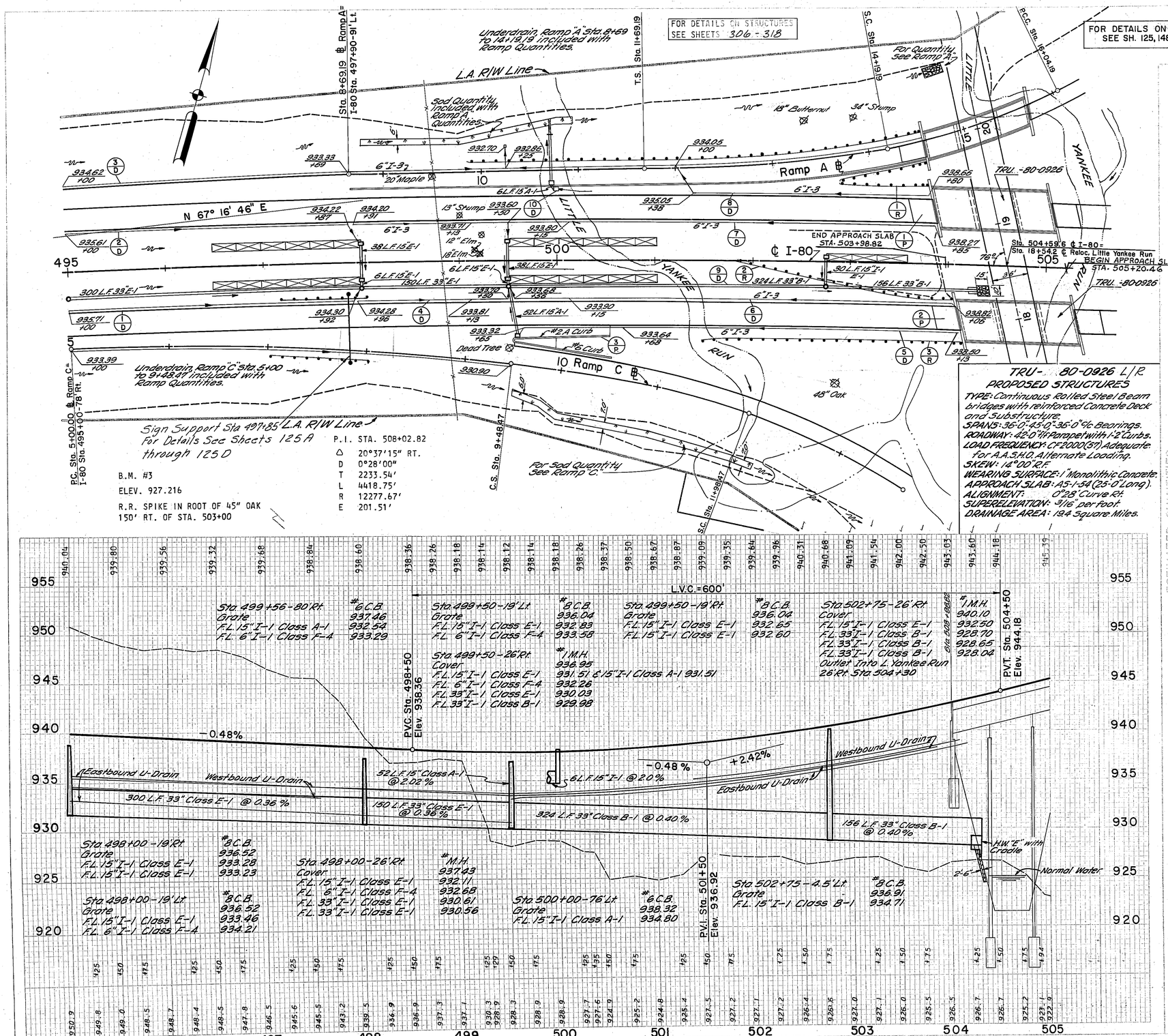
For Sec. M-4.9(b)

REF. NO.	STATION TO STATION	SIDE	CL. A-1 M=6.6(b) or 6.8(b) ≠ 6" L.F.	CL. A-1 M=6.6(b) or 6.8(b) ≠ 15" L.F.	CL. E-1/CL. E-1 15" L.F.	CL. E-1/CL. E-1 30" L.F.	CL. E-1/CL. E-1 33" L.F.	CL. F-4 6" L.F.	CL. I-3 6" U-Drain SHALLOW L.F.	CL. I-3 6" U-Drain DEEP L.F.	I-5 For 6" I-3 30° BEND EACH	I-5 For 6" I-3 90° BEND EACH	I-5 For 6" I-3 DBL. TEE EACH	I-5 For 6" I-3 TEE EACH	I-5 Catch Basin No. 5 EACH	I-8 Catch Basin No. 8 EACH	I-8 Manhole No. 1 EACH	L-120 Jute Matting SQ. YD.
1-D	486+82 to 491+23	Rt.																
2-D	486+82 to 491+23	Rt.																
3-D	486+82 to 491+25	Lt.																
4-D	486+82 to 491+25	Lt.																
5-D	491+27 to 495+00	Rt.																
6-D	491+27 to 495+00	Rt.																
7-D	491+29 to 495+00	Lt.																
8-D	491+29 to 495+00	Lt.																
9-D	486+82 to 495+00	Rt.																
TOTALS				30	42			10	218	222	1		1	1	1	2	2	384
								10	444				1					
									452	224		1						
									218	374								
									374									
									370	370								
								20	2076	1190	1	1	1	2	1	2	2	384
			70	44	442	374											2	
			70	44	442	374												
			72	70	44	442	374											

Sta. 485 + 00 to Sta. 495 + 00

DIST.	STATE	PROJECT	
2	OHIO	HG-80-5(9)245	34 / 401

TRUMBULL COUNTY TRU-I-80-8.90

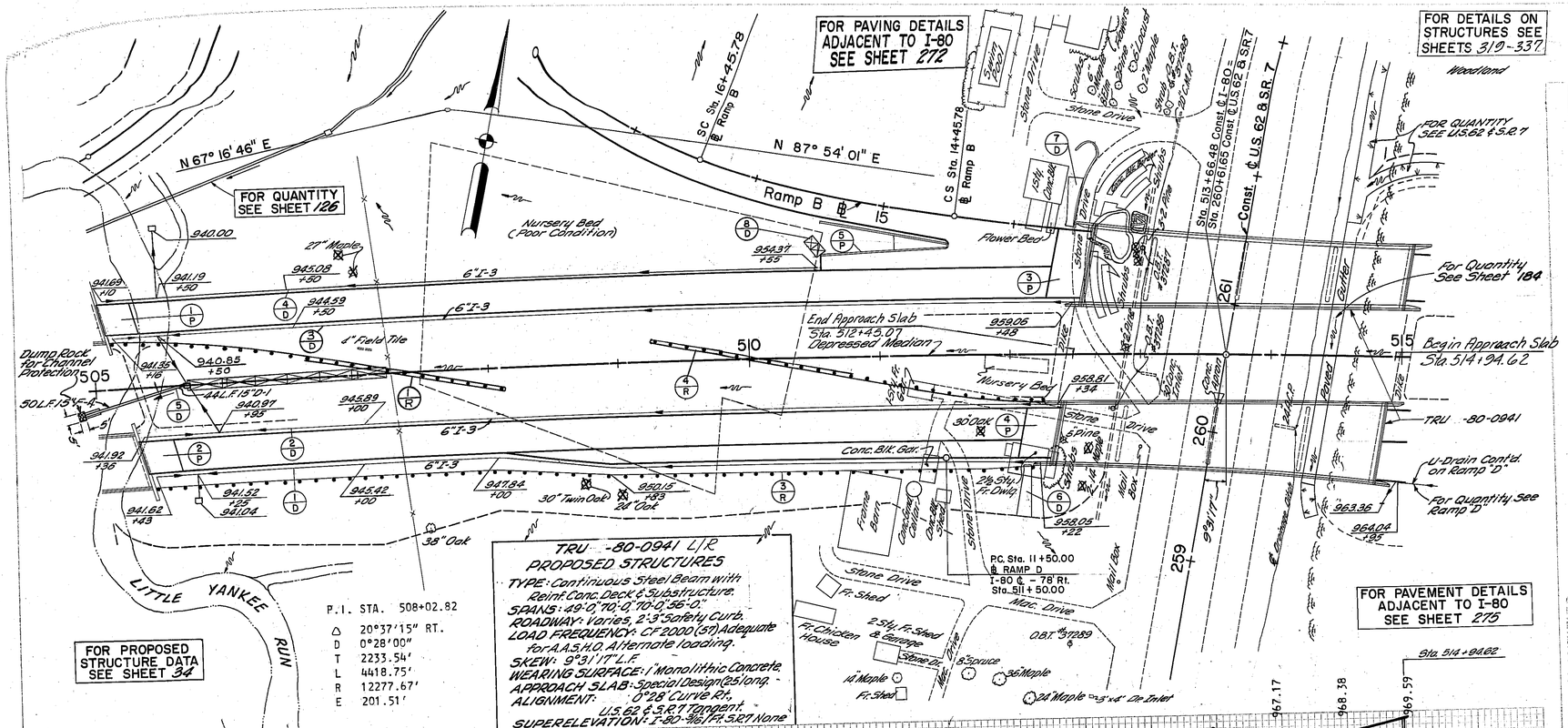


ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 CL. B-1 M-6.6(b) 33" L.F.	I-1 CL. E-1 15" L.F.	I-1 CL. E-1 33" L.F.	I-1 CL. F-4 6" L.F.	I-2 Masonry Std. Type M-6.6(b)or 6.8(b) 2-A Curb #6 CU. YD.	I-2 CL. A-1 M-6.6(a) 6.8(b) #15" L.F.	I-2 CL. A-1 M-6.6(b)or 6.8(b) #6" L.F.	CL. I-3 6" U-Drain SHALLOW L.F.	CL. I-3 6" U-Drain DEEP L.F.	for 6" I-3 90° BEND	for 6" I-3 60° BEND	I-5 TEE	I-7 Conc. Approach Slab SQ. YD.	I-7 Catch Basin No. 6 Each	I-8 Catch Basin No. 8 Each	I-10 Dumped Rock Channel Protection CU. YD.	I-15 Guard Rail L.F.	L-120 Jute Matting SQ. YD.
1-D	495+00 to 497+92	Rt.											1	1						
2-D	495+00 to 497+87	Lt.											1	1						
3-D	497+00 to 497+90	Lt.										1								
4-D	497+98 to 499+50	Rt.								10	158	1								
5-D	499+63 to 504+12	Rt.			90					10	354	1								
6-D	499+56 to 504+05	Rt.								10	454	1								
7-D	497+91 to 503+97	Lt.								10	604	1								
8-D	501+38 to 503+90	Lt.					94				242									
9-D	493+00 to 504+30	Rt.						1.47	52								480	118	450	580
10-D	500+00	Lt.							6											
1-P	502+90.5 to 503+78	Lt.																		
2-P	501+80 to 504+05	Rt.																		
3-P	501+52.5 to 504+15	Rt.																		
TOTALS									106								480	118	450	580
1-P	503+60 to 503+85	Lt.																		
2-P	503+86 to 504+11	Rt.																		
3-P	499+53 to 500+53	Rt.																		
TOTALS																	480	118	450	580

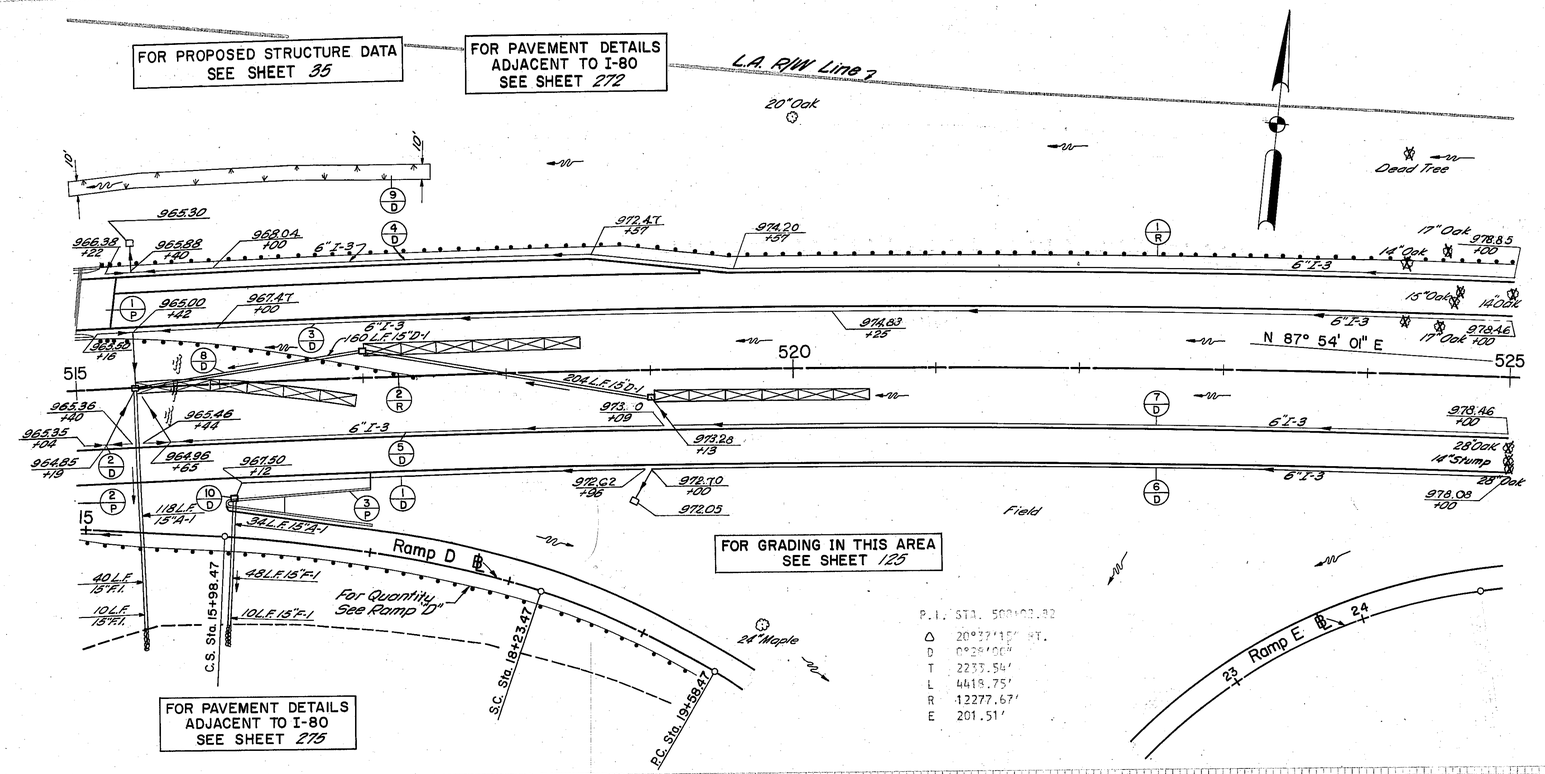
Per M-6.5(b)

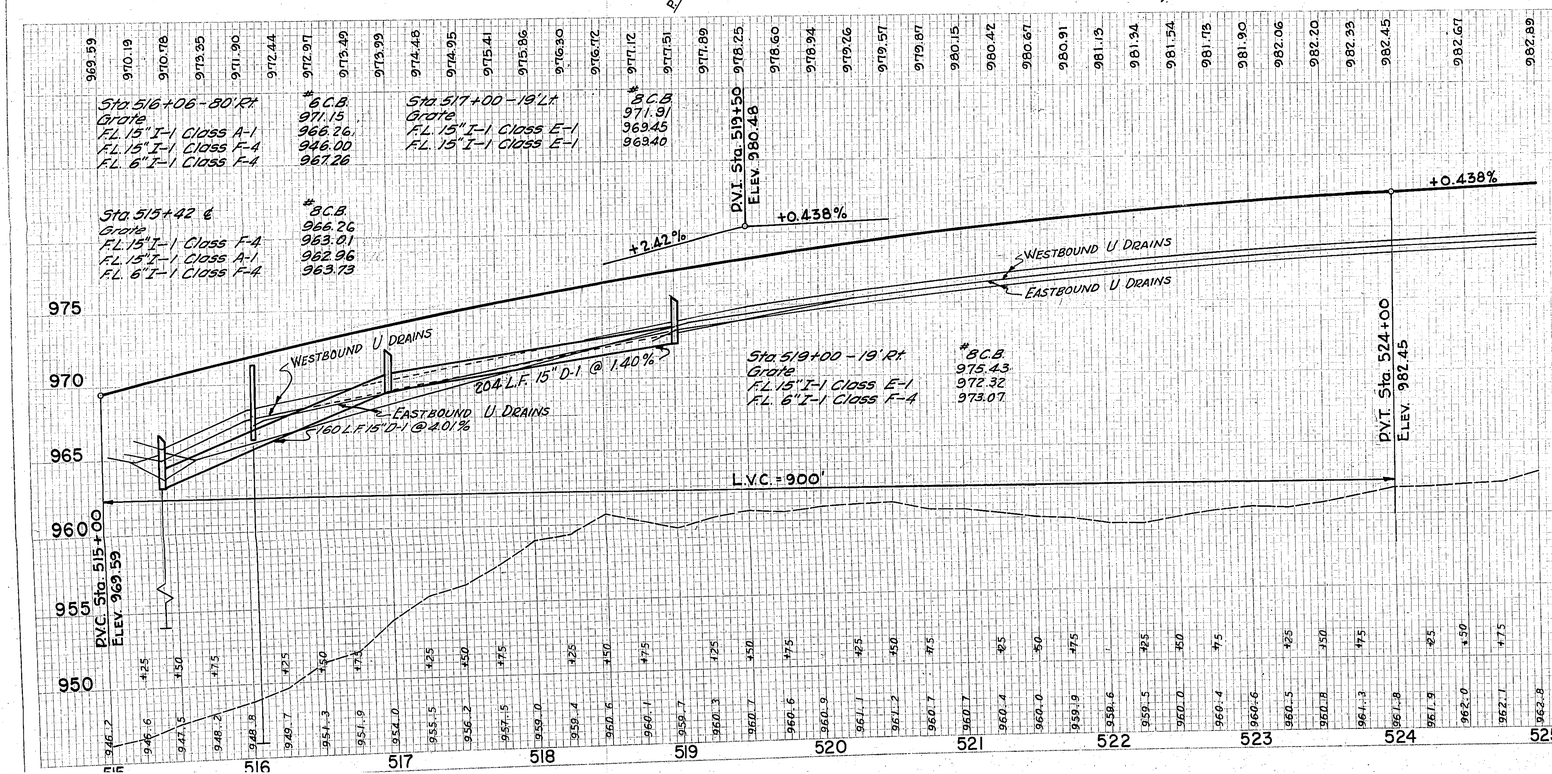
Sta. 495+00 to Sta. 505+00



ESTIMATED QUANTITIES

SER. NO.	STATION TO STATION	SIDE	CL. D-1 15" L.F.	I-1 Class F-4 6" L.F.	I-1 Class F-4 8" L.F.	I-1 Class F-4 15" L.F.	Cl. I-3 U-Drain 15" SHALLOW L.F.	I-2 Masonry CU. YD.	I-5 For 6" I-3 30° BEND EACH	I-5 For 6" I-3 TEE EACH	I-5 For 6" I-3 WYE EACH	I-7 Reinforced Concrete Approach Slab SQ. YD.	I-8 Catch Basin No. 8 EACH	I-10 Dumped Rock Channel Protection CU. YD.	I-15 Guard Rail L.F.	I-15 Guard Rail Barrier L.F.	I-12 Std. Type 2-A Curb Berm/Slope Protection L.F.	I-10 Sodding For Spec. Jute Matting SQ. YD.	L-120 SQ. YD.	SEE SHEET NO.
1-D	505+43 to 512+22	RT.		10							1	1								
2-D	505+36 to 512+34	RT.		10							1	1								
3-D	505+13 to 512+48	LT.							1											
4-D	505+10 to 510+55	LT.			44															
5-D	505+20 to 505+70	RT.																		
6-D	512+10	RT.																		
7-D	512+30	LT.																		
8-D	510+50	LT.																		
1-R	508+14 to 509+14	LT.						.68							150					
2-R	508+46 to 512+16	RT.				50	726									150				
3-R	509+25 to 512+25	RT.				10	764													
4-R							578													
1-P	505+07 to 505+32	LT.												106						
2-P	505+34 to 505+59	RT.																		
3-P	512+31 to 512+56	LT.																		
4-P	512+10 to 512+35	RT.																		
5-P	510+36 to 511+36	LT.																		
								66.7												
								66.7												
								144.5												
								100.0												
															150					
															675					
															150					





ESTIMATED QUANTITIES

ITEM NO.	SYSTEM NO. STATION	SIDE	I-1 CL A-1 M-6.8(a) ≠ 6" L.F.	I-1 CL A-1 M-6.8(a) ≠ 15" L.F.	I-1 CL E-1 M-6.8(b) ≠ 15" L.F.	I-1 CL F-4 6" L.F.	I-1 CL F-4 8" L.F.	I-1 CL F-4 15" L.F.	I-2 CL I-3 MASONRY U-Drain SHALLOW L.F.	I-5 For 6" U-Drain 60° W'YE 60° Bend EACH	I-5 For 6" U-Drain TEE EACH	I-7 Reinforced Concrete Approach Slab CU. YD.	I-8 Catch Basin No. 6 EACH	I-8 Catch Basin No. 8 EACH	I-10 Dumped Rock Channel Protection CU. YD.	I-12 Std. Type 2-A Curb L.F.	I-15 Guard Rail L.F.	L-10 Sodding SQ. YD.	L-120 Jute Matting SQ. YD.
1-D	517+08 to 518+96	Rt.				10	10	10	194		1								
2-D	515+04 to 515+40	Rt.				10	10	10	72										
3-D	515+16 to 525+00	Lt.							1012										
4-D	516+22 to 522+00	Lt.							989										
5-D	518+44 to 519+09	Rt.				10	10	10	400	1									
6-D	518+88 to 523+00	Rt.							614										
7-D	519+00 to 525+00	Rt.				10	10	10	600										
8-D	515+42 to 519+00	℄																	
9-D	515+00 to 517+50	Lt.																	
10-D	516+06	Rt.																	
1-P	515+22 to 524+97	Lt.		118	364				50										
2-P	515+15 to 517+40	℄																	
1-P	515+02 to 525+27	Lt.																	
2-P	514+87 to 525+12	Rt.																	
3-P	516+03 to 517+03	Rt.																	
TOTALS			90	118	364	90	20	50	3880	3	2	2	2	3	3	106	1200	279	384

\# For M-6.8(b)

Sta. 515 + 00 to Sta. 525 + 00

FED. RD. DIVISION	STATE	PROJECT	TOTAL SHEETS
2	OHIO	I-IG-80-5(9)245	37 / 401

TRUMBULL COUNTY TRU-I-80-8.90

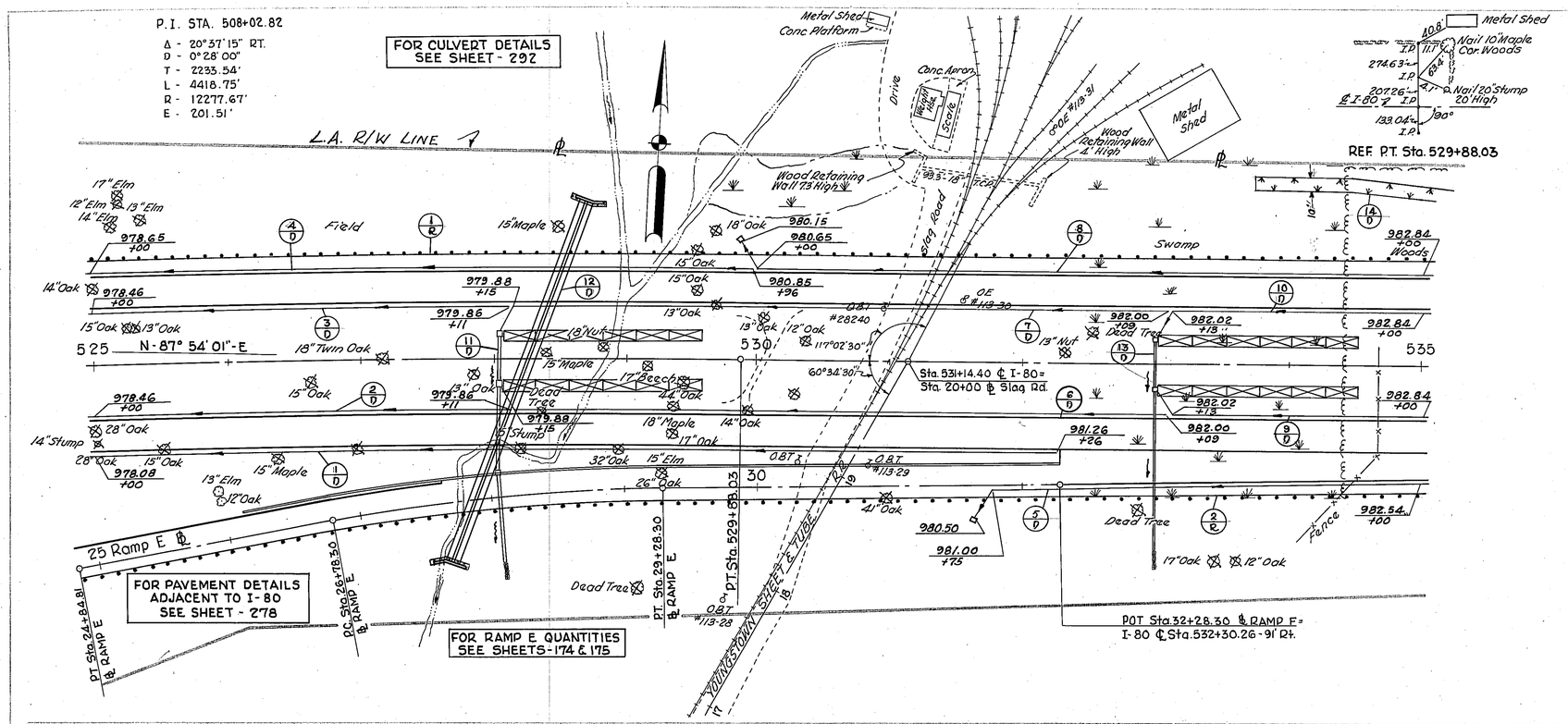
P.I. STA. 508+02.82

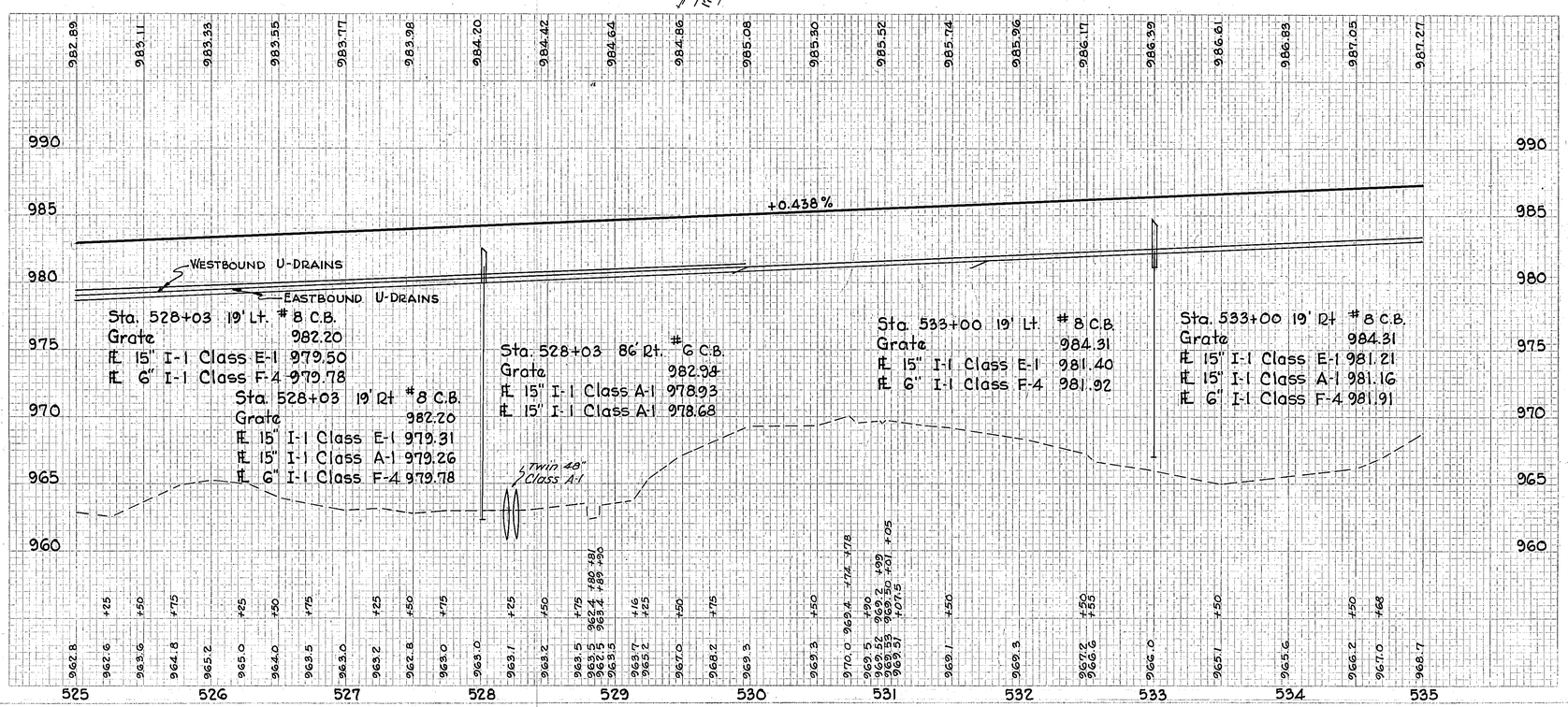
Δ - 20°37'15" RT.
D - 0°28'00"
T - 2233.54'
L - 4418.75'
R - 12277.67'
E - 201.51'

FOR CULVERT DETAILS SEE SHEET - 292

FOR PAVEMENT DETAILS ADJACENT TO I-80 SEE SHEET - 278

FOR RAMP E QUANTITIES SEE SHEETS - 174 & 175



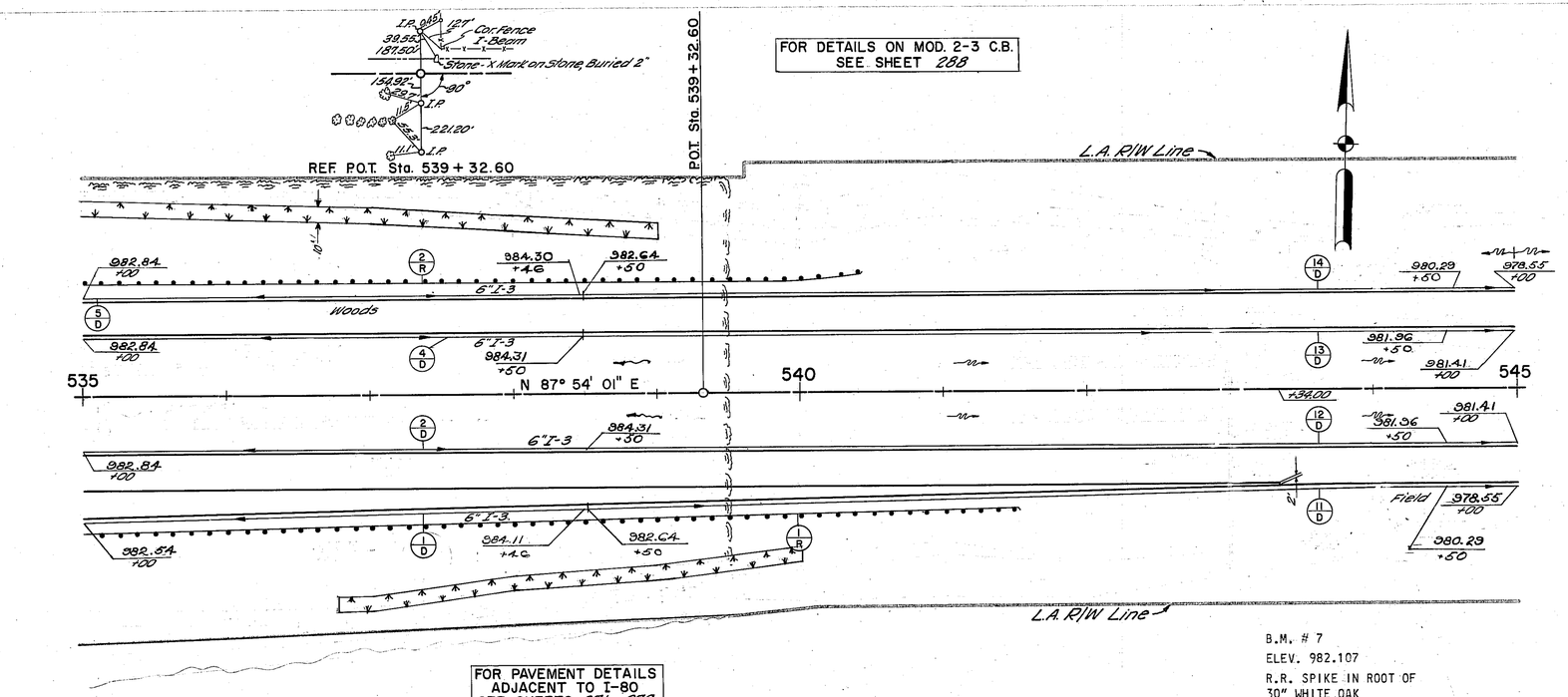


ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	E-3 Channel Exc. M-5.6(a) or M-6.8(b) ℄ 15" CU. YD.	CL. A-1 Sec. M-6.6(a) 48" L.F.	CL. E-1 15" L.F.	I-1	CL. F-4 6" L.F.	CL. F-4 8" L.F.	CL. F-4 15" L.F.	CL. I-3 & I-3 BOUN SHAUN L.F.	I-2 MASON CU. YD.	I-3 & F-4 BEND 6" EA.	F-4 BEND 15" EA.	I-8 Catch Basin 8 EA.	I-8 6 EA.	I-10 Dumped Rip Rap Rock Channel Protection CU. YD.	I-10 Rip Rap Grouted Concrete S.Y.D.	I-15 Guard Rail L.F.	L-10 Sodding SQ. YD.	L-120 Jute Matting SQ. YD.	SHEET NO.
1-D	525+00 to 532+26	Rt.								726											
2-D	525+00 to 528+11	Rt.								311											
3-D	525+00 to 528+11	Lt.								311											
4-D	525+00 to 528+36	Lt.								496											
5-D	531+65 to 535+00	Rt.								339											
6-D	528+04 to 533+03	Rt.								495											
7-D	528+04 to 533+03	Lt.								514											
8-D	529+27 to 535+00	Lt.								197											
9-D	533+00 to 535+00	Rt.								197											
10-D	533+00 to 535+00	Lt.								197											
11-D	528+04 to 529+57	℄									26			2	1	2.5	88		10.6	2.56	292
12-D	528+26	℄									38.43										
13-D	533+00 to 534+52	℄									.26										
14-D	533+15 to 535+00	Lt.										2	2	2	2	2.5				2.56	
1-R	534+97 to 534+97																		194.4		
2-R	528+23 to 535+00																	1000 775			
	Sta. 525+00 to Sta. 535+00		90	580	38		67	84	38												

For M-45(b)

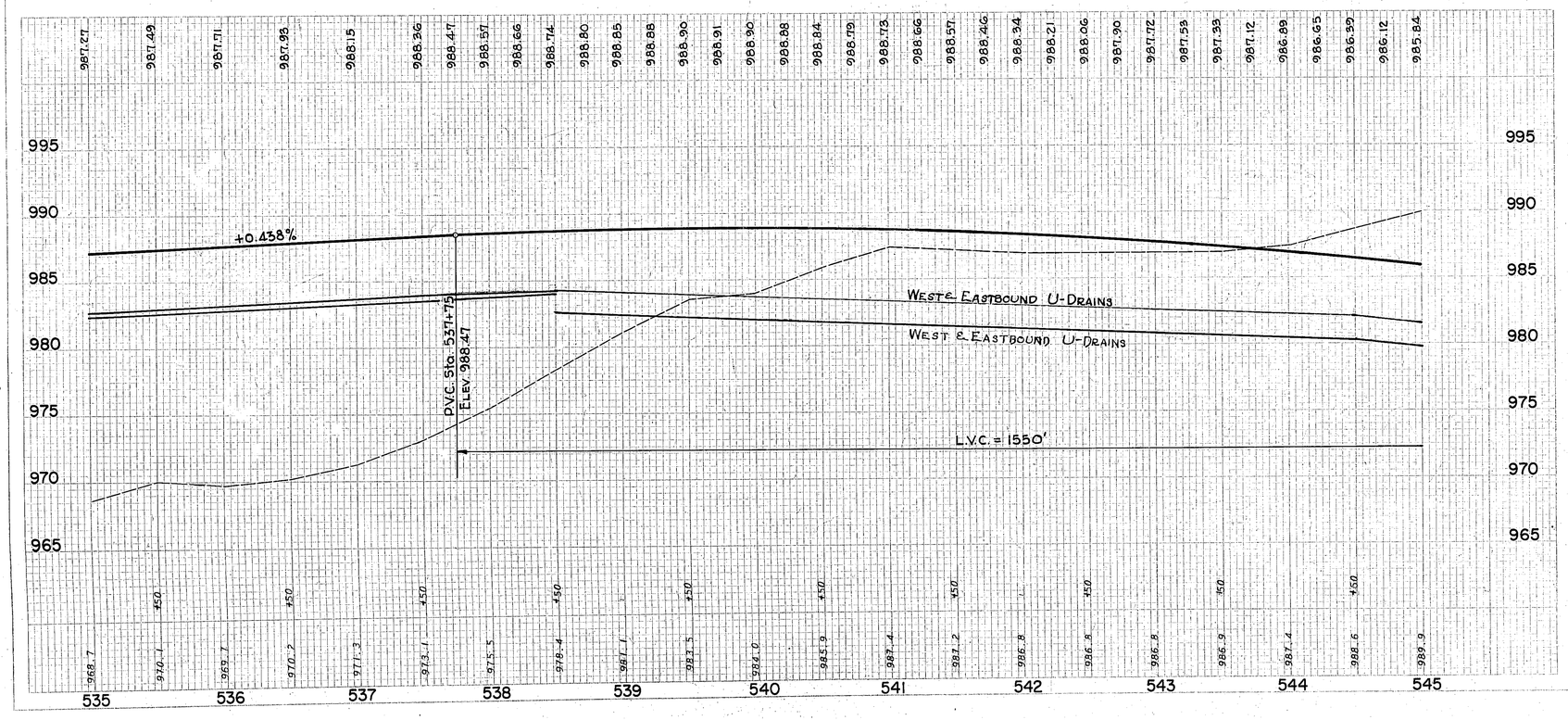
| | | | | | | | | | | | | | | | | | |



FOR DETAILS ON MOD. 2-3 C.B.
SEE SHEET 288

FOR PAVEMENT DETAILS
ADJACENT TO I-80
SEE SHEETS 271 - 278

B.M. # 7
ELEV. 982.107
R.R. SPIKE IN ROOT OF
30" WHITE OAK
152' RT. OF STA. 539+20



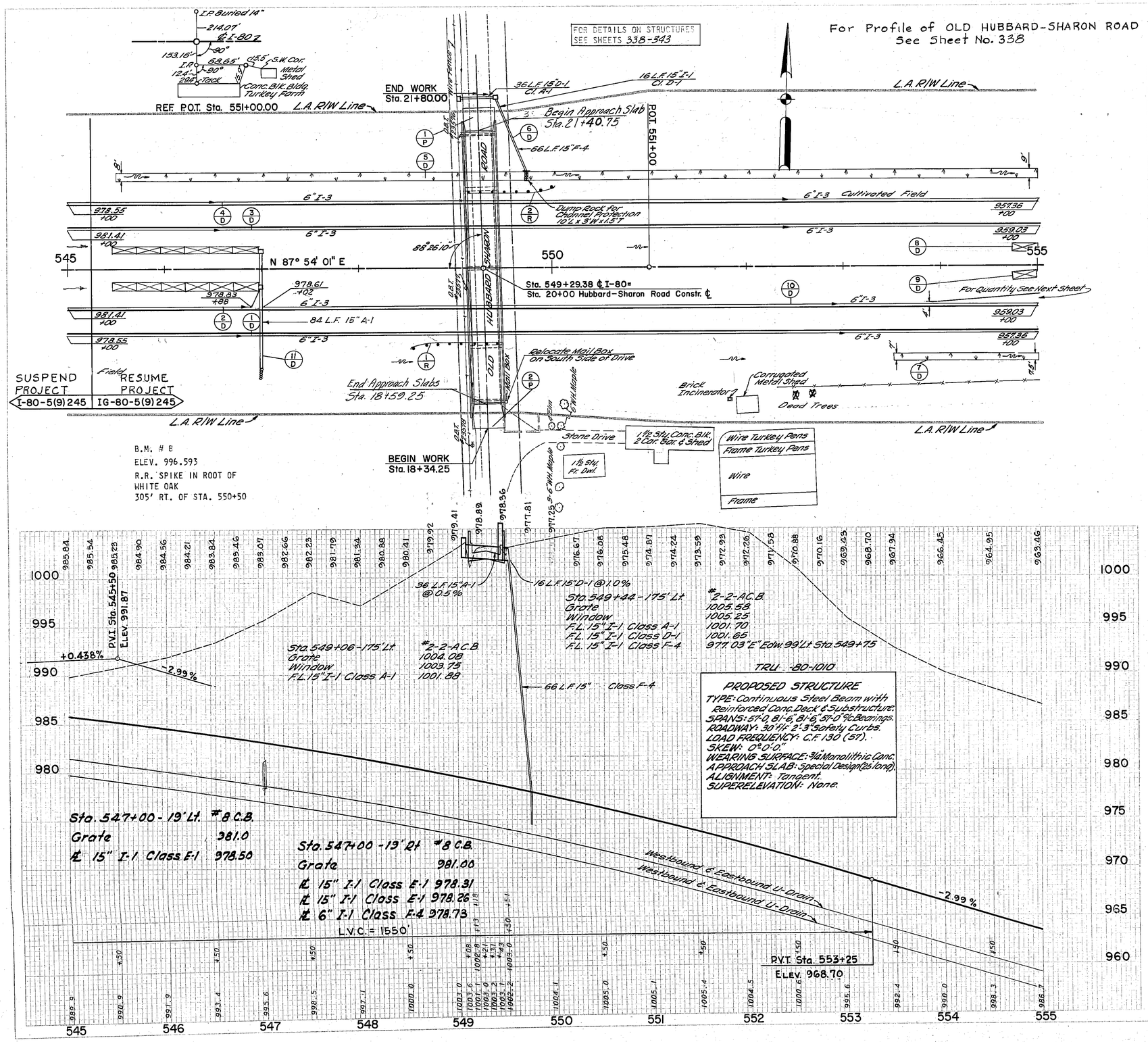
Sta. 535+00 to Sta. 545+00

ESTIMATED QUANTITIES

| | | |

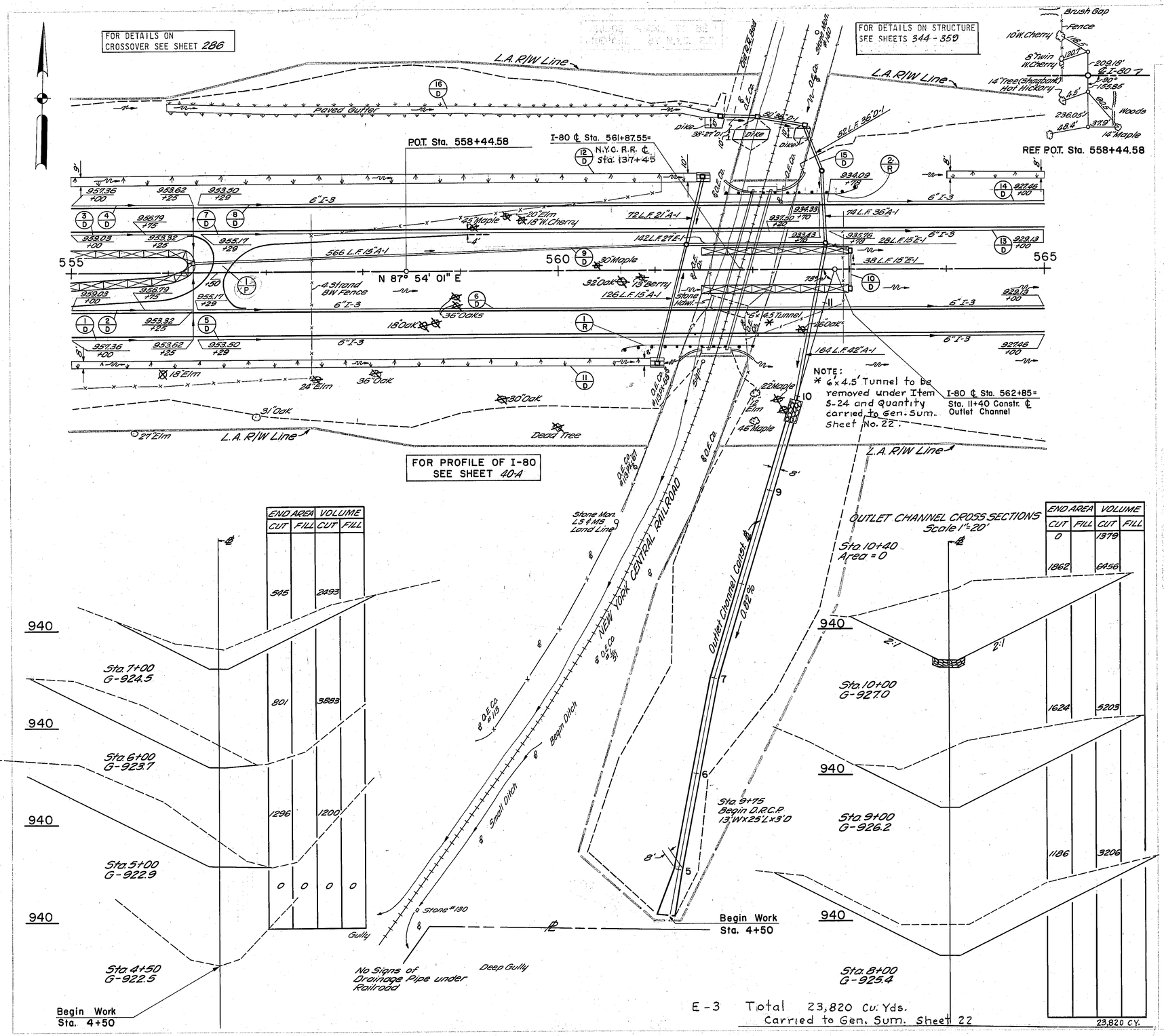
IG-80-5(9)245

TRUMBULL COUNTY TRU-I-80-8.90



Sta. 545+00 to Sta. 555+00

PAGE NO.	LOCATION TO STATION	SIDE	I-2 Masonry	I-5 For I-3 & 2-3 Bend & Bend 15"	I-1 Cl. E-1	I-1 Cl. I-3 6" U-Drain	I-1 Cl. F-4	I-1 Cl. A-1	I-1 Cl. D-1	I-1 Cl. F-4	T-35 Asph. Conc. Surf. Course	B-35 Asph. Conc. Level Course	B-19 Aggregate Base Course	I-7 Reinforced Concrete Approach Slab	I-8 Catch Basin No. 2-2-A	I-10 Dumped Rock Channel Protection	I-15 Guard Rail	L-10 Sodding	L-120 Jute Matting	REMARKS	ITEM NO.	PAGE NO.
			CU. YD.	EACH	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	CU. YD.	CU. YD.	CU. YD.	EACH	EACH	CU. YD.	L.F.	SQ. YD.	SQ. YD.			
1-D	545+00 to 555+00	Rt.								10										IG-80-5(9)245	302	
2-D	545+00 to 546+85	Rt.																897.2	24	I-80-5(9)245 1.5 Y.	101.8	
3-D	545+00 to 555+00	Lt.																1.0	24	IG-80-5(9)245 10 1.5 Y.	101.8	
4-D	545+00 to 555+00	Lt.																120.8				
5-D	545+50 to 555+00	Lt.																	254	IG-80-5(9)245	200.0	
6-D	549+75	Lt.															1000					
7-D	553+50 to 555+00	Rt.															1000			I-80-5(9)245	3	
8-D	554+75 to 555+00	Lt.														1.5						
9-D	554+75 to 555+00	Rt.																		I-80-5(9)245	2	
10-D	547+00 to 555+00	Rt.													2							
11-D	547+00	℄																		I-80-5(9)245	189	
1-P	549+50 to 549+50	Rt.												94.4								
2-P	549+10 to 550+10	Lt.												94.4								
1-R	145' Lt. to 167' Lt.	Lt.									0.2	0.5	2							I-80-5(9)245	189	
2-R	100' Rt. to 165' Rt.	Rt.									0.2	0.5	2									
																				I-80-5(9)245	2	
																				I-80-5(9)245	38	
																38						
				2																I-80-5(9)245	2	
																				I-80-5(9)245	1	
			.26																	I-80-5(9)245	.3	
																				I-80-5(9)245 50 L.F.	2000	
																				IG-80-5(9)245 1950 L.F.	1996	
																				I-80-5(9)245 50 L.F.	66	
																				IG-80-5(9)245 1946 L.F.	66	
																				I-80-5(9)245	16	
																				I-80-5(9)245	120	
																				I-80-5(9)245	10	
																				I-80-5(9)245	1.0	
																				I-80-5(9)245	1.0	
																				I-80-5(9)245	4	



ITEM	UNIT	355+00 to 356+25	355+00 to 356+25	355+00 to 356+25	355+00 to 356+25	356+29 to 565+00	356+29 to 565+00	356+29 to 565+00	356+29 to 562+70	356+29 to 562+70	356+25 to 562+75	355+00 to 561+94	355+00 to 561+43	562+78 to 565+00	562+78 to 565+00	562+75	556+00 to 561+69	564+00 to 565+00	560+62 to 562+00	561+70 to 563+08	556+50	TOTALS
1-O	PK																					
2-O	PK																					
3-O	Lt.																					
4-O	Lt.																					
5-O	PK																					
6-O	PK																					
7-O	Lt.																					
8-O	Lt.																					
9-O	PK																					
10-O	LtPK																					
11-O	PK																					
12-O	Lt.																					
13-O	Lt.																					
14-O	Lt.																					
15-O	Lt.																					
16-O	Lt.																					
17-O	Lt.																					
1-P																			560+62 to 562+00			
2-P																			561+70 to 563+08			
1-P																					556+50	

ESTIMATED QUANTITIES

ITEM	UNIT	B-21 Water-Proof Aggr. Bas. Crse.	CL. A-1 SECT. M-6.5 (Item M-6.5(b)) 6"	CL. A-1 SECT. M-6.5 (Item M-6.5(b)) 15"	CL. A-1 SECT. M-6.5 (Item M-6.5(b)) 21"	CL. A-1 SECT. M-6.5 (Item M-6.5(b)) 36"	CL. B-1 (Item M-6.4(c)) 42"	CL. B-1 (Item M-6.4(c)) 27"	CL. E-1 36"	CL. E-1 15"	CL. E-1 18"	CL. E-1 27"	CL. F-4 6"	CL. I-3 6" U-Drain SHALLOW DEEP	MAS.	I-2 30° Bend	I-5 FOR I-3 6" 90° Bend	I-5 FOR I-3 90° TEE
		CU. YD.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	CU.YD.	EA.	EA.	EA.
1-O	PK	30																
2-O	PK																	
3-O	Lt.																	
4-O	Lt.			30														
5-O	PK																	
6-O	PK																	
7-O	Lt.																	
8-O	Lt.																	
9-O	PK																	
10-O	LtPK																	
11-O	PK																	
12-O	Lt.																	
13-O	Lt.																	
14-O	Lt.																	
15-O	Lt.																	
16-O	Lt.																	
17-O	Lt.																	
1-P																		
2-P																		
1-P																		
TOTALS		30	692.72	74	164.33	52	66	142	90	10	10	20	20	20	10	1	3	3

ITEM	UNIT	I-1 CL. D-1 Dumped Rock Channel Protection 36"	I-8 C.B. NO. 8	I-8 C.B. NO. 5	I-8 C.B. NO. 2-3	I-8 C.B. MOD. 2-3	I-5 FOR I-3 90° Bend	I-5 FOR I-3 90° TEE	I-10 M.H. NO. 1	I-14 Paved Gutter Type I Mod.	I-15 GUARD RAIL	I-22 SUBBASE	I-18 Stabilized Cr. Aggr. Shldrs. B. App.	L-10 SODDING	L-10 JUTE MATTING NO. 6	L-20 AGRR. MAT'L	T-31 BIT. MAT'L	SEE SHEET NO.
		L.F.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	L.F.	L.F.	C.Y.	CU. YD.	S.Y.	S.Y.	C.Y.	GAL.	
1-O	PK																	
2-O	PK																	
3-O	Lt.																	
4-O	Lt.	36												299				
5-O	PK		2	2										226				
6-O	PK																	
7-O	Lt.													528				
8-O	Lt.													690				
9-O	PK																	
10-O	LtPK																	
11-O	PK																	
12-O	Lt.																	
13-O	Lt.																	
14-O	Lt.																	
15-O	Lt.																	
16-O	Lt.																	
17-O	Lt.																	
1-P																		
2-P																		
1-P																		
TOTALS		50	3	3	2	2	3	3	1	568	275	119	90	1488.499	5	153		

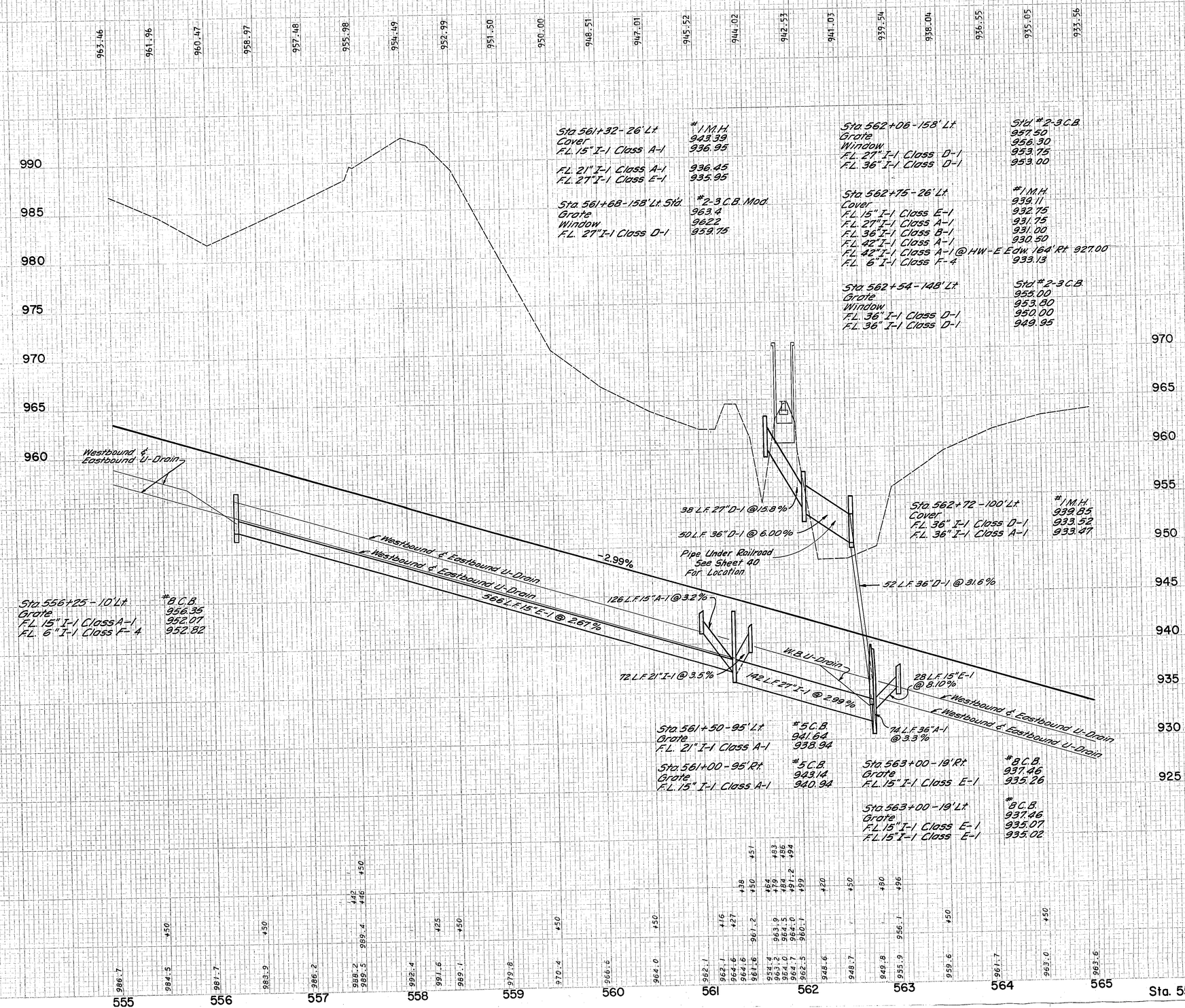
Pipe Under Railroad

Sta. 555+00 to Sta. 565+00 — Plan

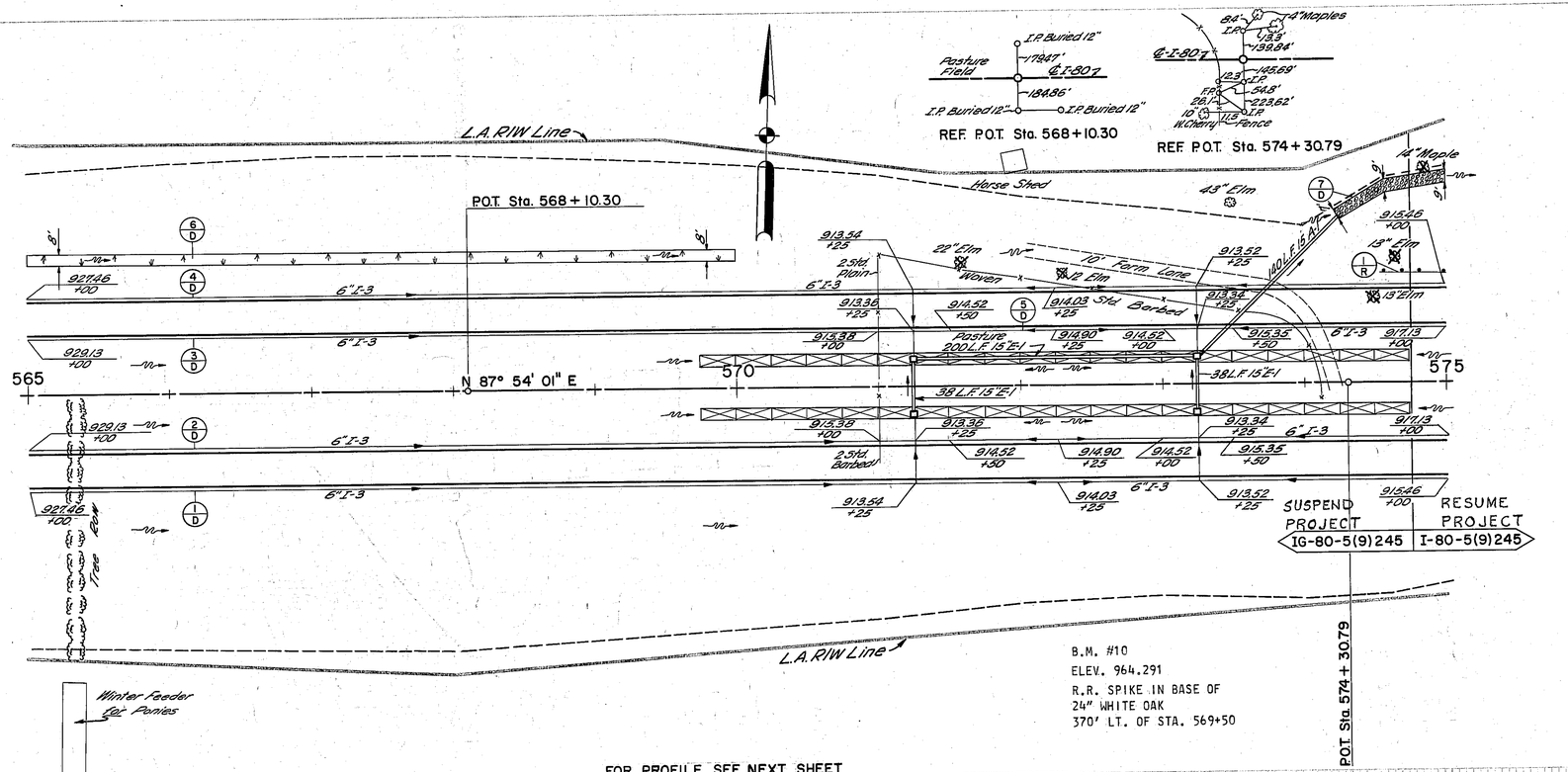
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

40-A
401

TRUMBULL COUNTY TRU-I-80-8.90



Sta. 555+00 to Sta. 565+00 – Profile



B.M. #10
ELEV. 964.291
R.R. SPIKE IN BASE OF
24" WHITE OAK
370' LT. OF STA. 569+50

FOR PROFILE SEE NEXT SHEET

ESTIMATED QUANTITIES

ITEM NO.	STATION TO STATION	SIDE	CL A-1 M-6.6(a) M-6.8(b) T.E.	CL A-1 M-6.6(b) M-6.8(b) T.E.	I-1 CL E-1 15"	CL F-4 6"	CL I-3 6" U-Drain Shallow	I-2 Masonry	I-5 For 6" I-3 TEE	I-5 For 6" I-3 DBL. TEE	I-8 Catch Basin No. 8	I-10 Dumped Rock Channel Protection	I-15 Guard Rail	L-10 Sodding	L-120 Jute Matting	SEE SHEET NO.
			L.F.	L.F.	L.F.	L.F.	L.F.	CU. YD.			EACH	CU. YD.	L.F.	SQ. YD.	SQ. YD.	
1-D	565+00 to 575+00	RT.	60			20	1000		2	2	4				852	
2-D	565+00 to 575+00	RT.				20	1016									
3-D	565+00 to 575+00	LT.	60			20	1016									
4-D	565+00 to 575+00	LT.					1000		2	2				444		
5-D	571+25 to 574+25	℄		140	276			.26				66				
6-D	565+00 to 570+00	LT.											50.0			
7-D	574+25 to 575+00	LT.														
1-R	574+54 to 575+04	LT.														

IG-80-5(9)245	852
IG-80-5(9)245	444
IG-80-5(9)245 21 L.F.	
I-80-5(9)245 29 L.F.	50.0
IG-80-5(9)245 44 C.Y.	
I-80-5(9)245 22 C.Y.	66
IG-80-5(9)245	4
IG-80-5(9)245	4
IG-80-5(9)245	4
IG-80-5(9)245	.9
IG-80-5(9)245 3932 L.F.	
I-80-5(9)245 100 L.F.	4032
IG-80-5(9)245	40
IG-80-5(9)245	276
IG-80-5(9)245	140
IG-80-5(9)245	120

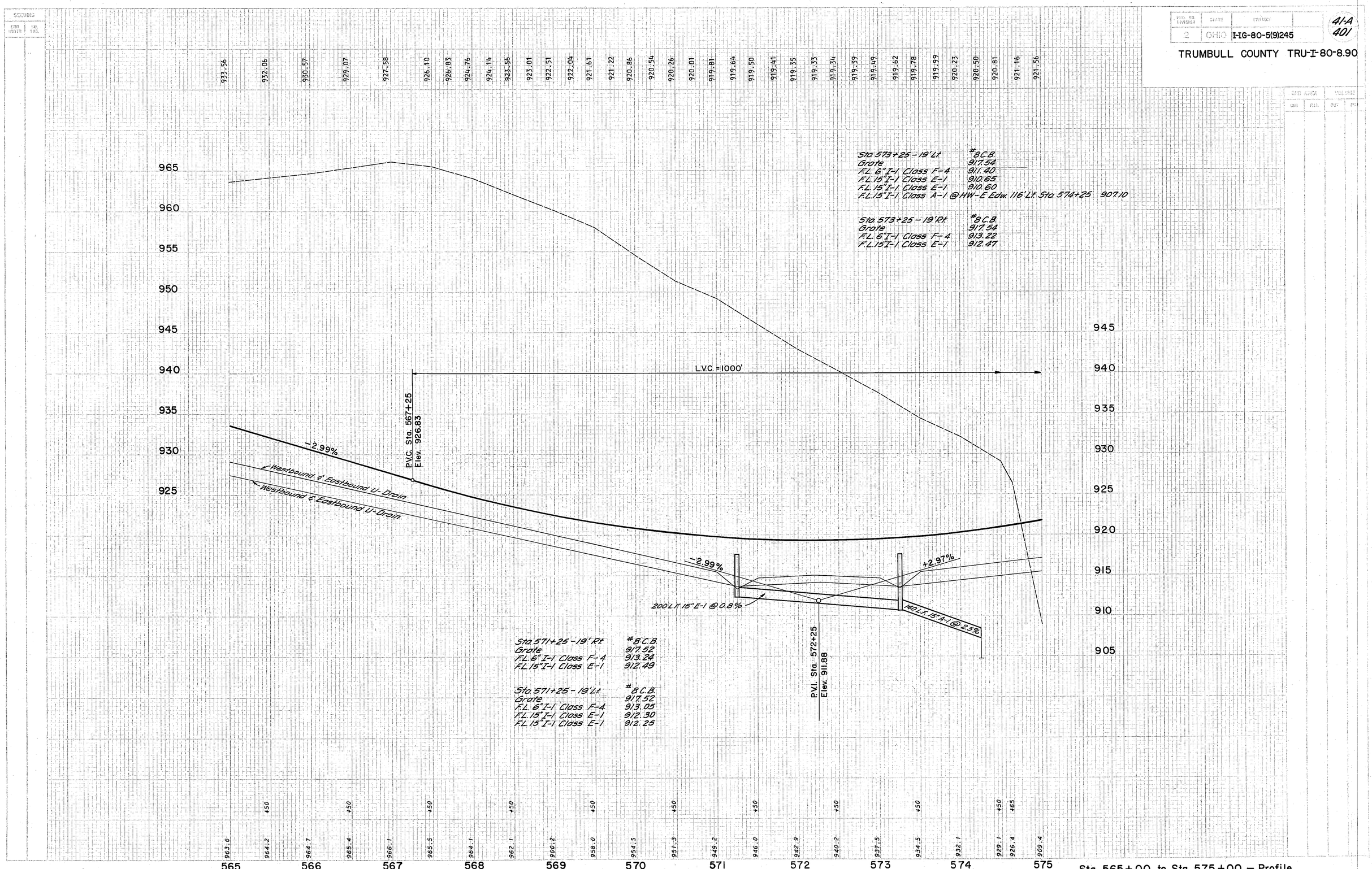
Sta. 565+00 to Sta. 575+00 – Plan

55.

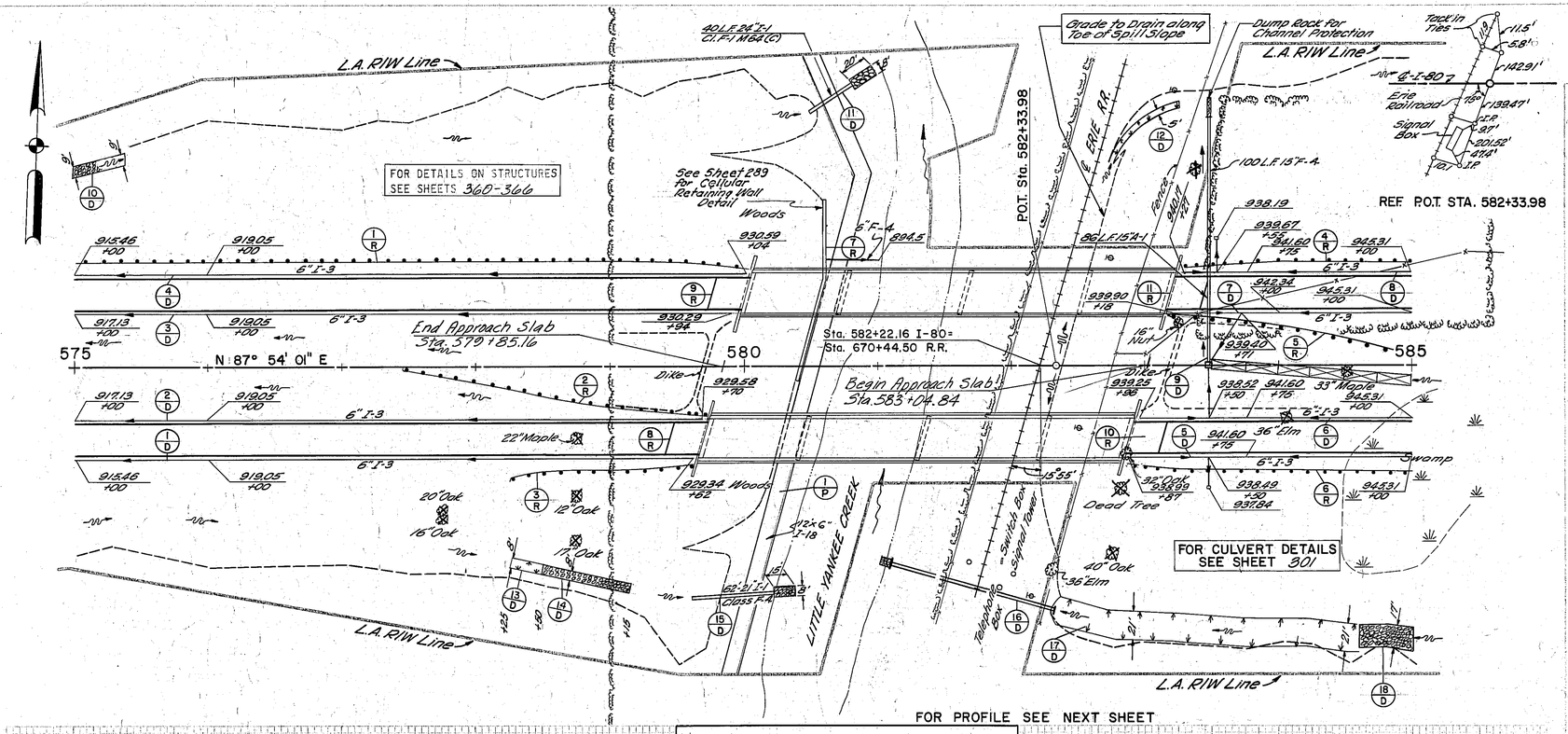
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

41-A
401

TRUMBULL COUNTY TRU-I-80-8.90



Sta. 565+00 to Sta. 575+00 — Profile



TRU -80-1069
PROPOSED STRUCTURES

TYPE: 4 Span continuous steel rolled beam with concrete deck and substructure.
SPANS: 72'-0", 90'-0", 90'-0", 63'-0" c-c Bearings.
ROADWAY: 30'-0" F/F Curbs - 2'-3" Safety Curbs.
LOAD FREQUENCY: CF 2000 (S7) Adequate for A.A.S.H.O. alternate loading.
SKEW: 15°55'00" L.F.
WEARING SURFACE: 1" Monolithic Concrete.
APPROACH: A-5-1-54 (25'-0" long).
ALIGNMENT: Tangent.
SUPERELEVATION: None.
DRAINAGE AREA: 37 Sq. Miles.
TRACKS: One.

REF. NO.	STATION TO STATION	SEE NOTE	I-1 CL. A-1 M-6.6(a) or M-6.8(b) ≠15" L.F.	I-1B CL. A-1 STAB. CRUSH. M-6.5(d) AGGR. APPR. CY.	15" L.F.	24" L.F.	I-1 CL. F-4 6" L.F.	8" L.F.	21" L.F.	CL. I-3 6" U-Drain SHALLOW L.F.	I-2 MASONRY CU.YD.
1-D	575+00 to 579+62	Rt.								462	
2-D	575+00 to 579+70	Rt.								470	
3-D	575+00 to 579+94	Lt.								494	
4-D	575+00 to 580+04	Lt.								504	
5-D	582+87 to 585+00	Rt.					10			226	
6-D	582+96 to 585+00	Rt.					10			233	
7-D	583+18 to 585+00	Lt.					10			216	
8-D	583+27 to 585+00	Lt.					10			189	
9-D	583+50	@Lt.	96			100					
10-D	575+00 to 579+40	Lt.									
11-D	580+50 to 580+82	Lt.				40					
12-D	582+74 to 583+27	Lt.									
13-D	579+25 to 579+50	Rt.									
14-D	579+50 to 579+75	Rt.									
15-D	579+63 to 580+25	Rt.									
16-D	581+09 to 582+30	Rt.							62		
17-D	582+30 to 584+60	Rt.		128							1.52
18-D	584+60 to 585+00	Rt.									
1-R	575+104 to 580+104	Lt.						40	10		180
2-R	577+45 to 579+70	℄									
3-R	578+23.5 to 579+61	Rt.									
4-R	583+29 to 584+94.5	Lt.									
5-R	583+19 to 585+44	℄									
6-R	582+86 to 584+98.5	Rt.									
7-R	580+50	Lt.									
8-R	579+77	Lt.									
9-R	579+80										
10-R	583+13										
11-R	583+45										
1-P	580+50	℄									
			96	107	128	100	40	60	30	62	2794.180

(Pipe under Railroad)

REF. NO.	I-2 CU.YD.	I-3 Drain	I-5 For 6" I-3 15° Bend	I-5 60° WYE	I-5 TEE	I-7 For 15" F-1 23° Bend	I-7 Reinforced Concrete Approach Slab	I-8 Catch Basin No. 8	I-10 Damaged Rock Channel Protection	I-15 Guard Rail	I-5 Class F-4 6" Tee	I-17 Cellular Retaining Wall	L-10 Sod	E-2 Temporary Surface Water Control	L-120 Jute Matting
			EACH	EACH	EACH	EACH	EACH	EACH	CU.YD.	L.F.	EACH	SQ.FT.	S.Y.	L.S.	SQ.YD.
1-D															
2-D															
3-D			1												
4-D			1												
5-D				1		1									
6-D				1		1									
7-D				1		1									
8-D				1		1									
9-D						2		1							128
10-D															
11-D															
12-D															
13-D															
14-D															
15-D															
16-D															
17-D	1.52														
18-D															
1-R									3	500.0			40		
2-R									34	2250			22		
3-R									15	1375					
4-R										1625					
5-R										2250					
6-R										2125					
7-R									48						
8-R									11						
9-R									4						
10-R															
11-R									63						
1-P	26														
	1.52		1	1	1	2		1	63	2125	1	827	537	L.S.	128

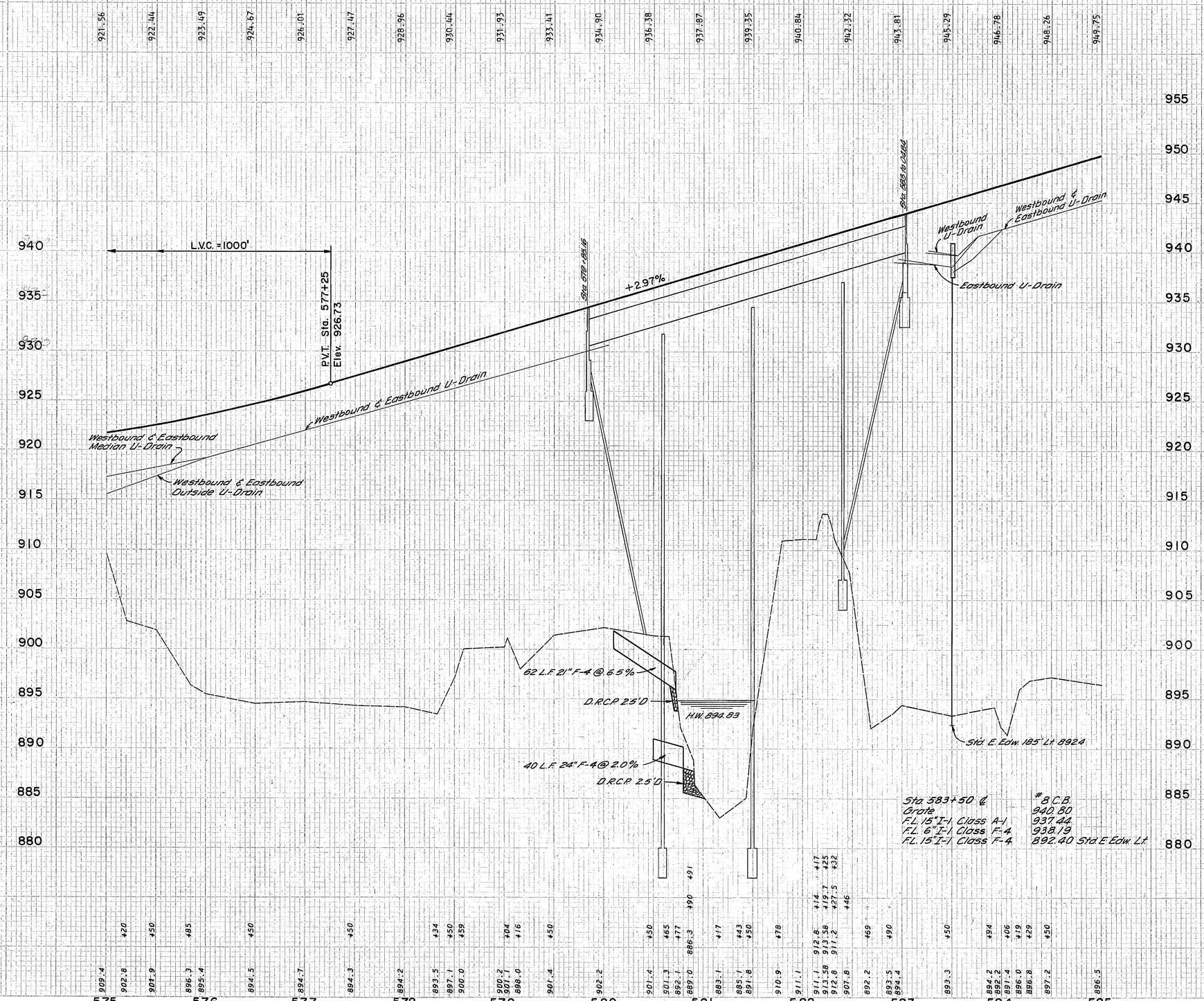
SHEDDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

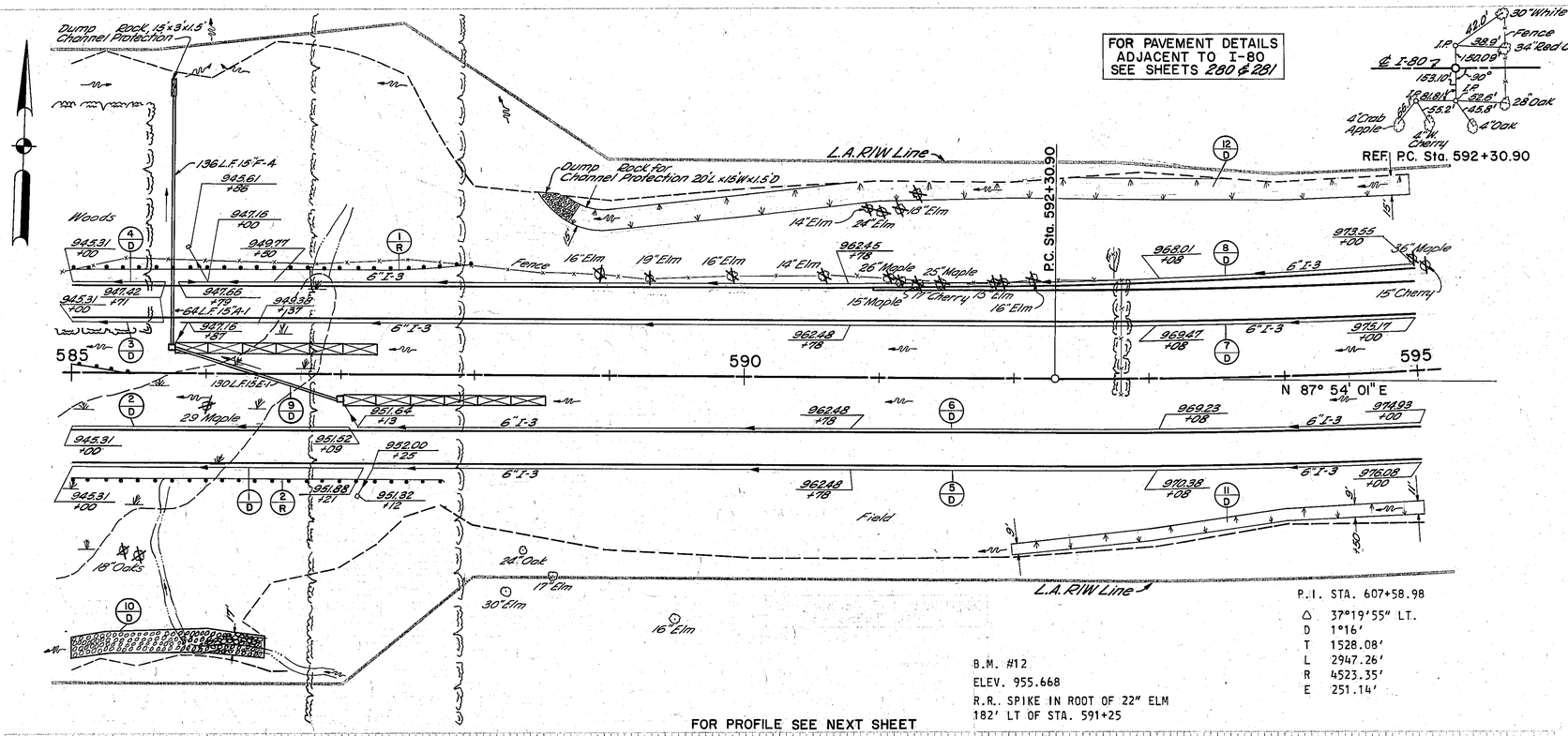
42A
401

TRUMBULL COUNTY TRU-I-80-8.90

SHO AREA		VOLUME	
CUT	FILL	CUT	FILL



Sta. 575+00 to Sta. 585+00 – Profile

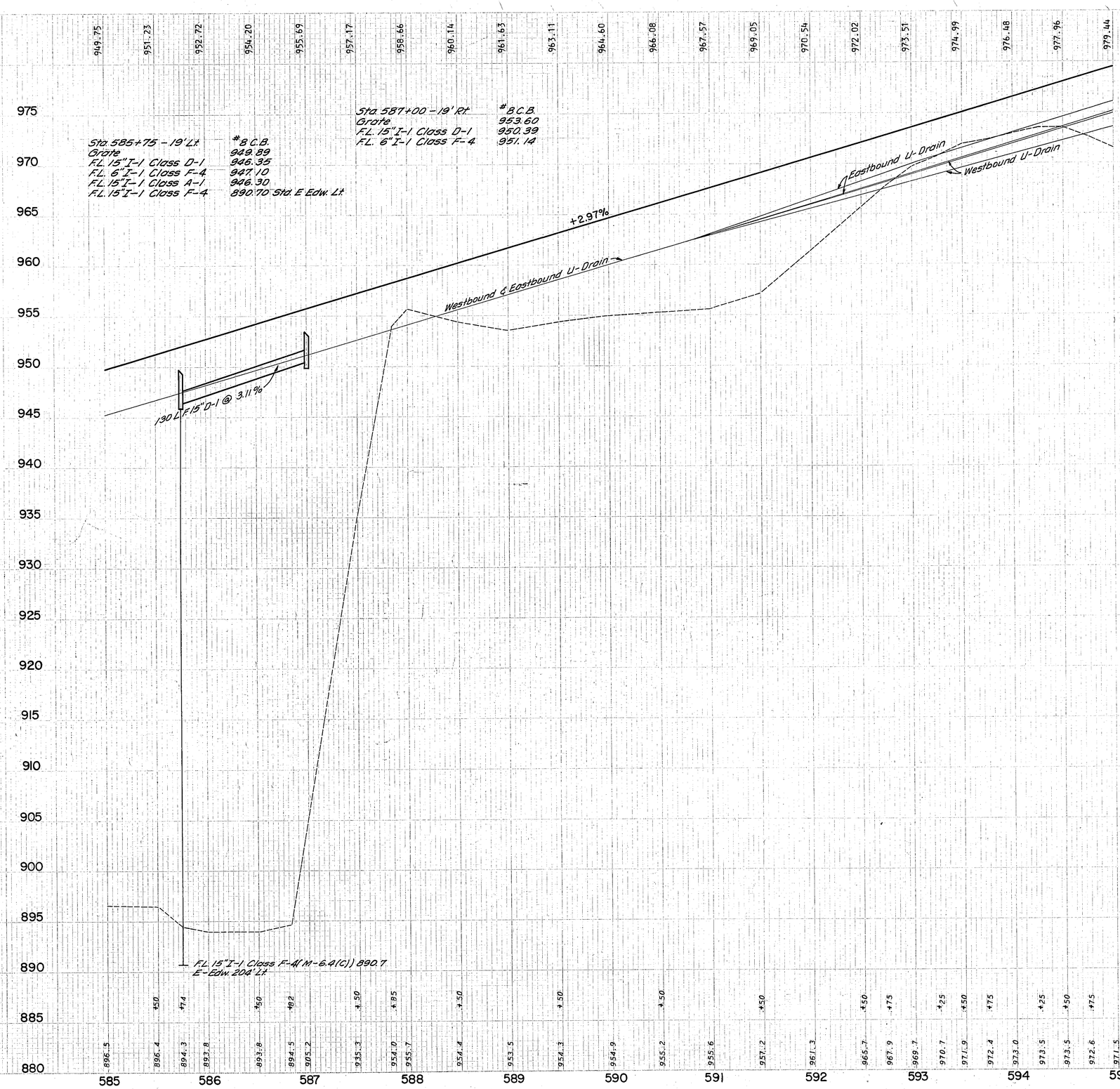


Sta. 585+00 to Sta. 595+00 – Plan

REF. NO.	STATION TO STATION	SIDE	CL A-1 M-6.6(a)or M-6.8(b) EACH	CL E-1 15" L.F.	CL F-4 6" L.F.	CL F-4 8" L.F.	CL F-4 15" L.F.	CL I-3 6" U-Drain Shallow L.F.	I-2 MASONRY CU.YD.
			#or M-6.5(b)						
1-D	585+00 to 587+21	Rt.						222	
2-D	585+00 to 587+09	Rt.						210	
3-D	585+00 to 585+71	Lt.						72	
4-D	585+00 to 585+71	Lt.						72	
5-D	587+25 to 595+00	Rt.			10			790	
6-D	587+13 to 595+00	Rt.						790	
7-D	585+79 to 595+00	Lt.						918	
8-D	585+79 to 595+00	Lt.			10			918	
9-D	585+25 to 587+00	Lt&Rt.	64	130			136	928	26
10-D	585+00 to 586+45	Rt.							
11-D	592+00 to 595+00	Rt.							
12-D	588+50 to 595+00	Lt.							
1-R	584+95 to 588+04	Lt.							
2-R	584+98 to 587+74	Rt.							
TOTALS			64	130	20	20	136	4002	3

REF. NO.	STATION TO STATION	I-8 Catch Basin No. 8 EACH	I-10 Dumped Rock Channel Protection CU. YD.	I-15 Guard Rail L.F.	L-10 Sodding SQ. YD.	L-120 Jute Matting SQ. YD.
1-D	585+00 to 587+21					256
2-D	585+00 to 587+09				1	
3-D	585+00 to 585+71				304	
4-D	585+00 to 585+71				1054	
5-D	587+25 to 595+00					
6-D	587+13 to 595+00					
7-D	585+79 to 595+00					
8-D	585+79 to 595+00					
9-D	585+25 to 587+00			312.5		
10-D	585+00 to 586+45			275.0		
11-D	592+00 to 595+00					
12-D	588+50 to 595+00					
1-R	584+95 to 588+04					
2-R	584+98 to 587+74					
TOTALS		2	17	312.5	1359	256

REF. NO.	STATION TO STATION	I-5 For 6" I-3 60° BEND EACH	I-5 WYE EACH
1-D	585+00 to 587+21	1	
2-D	585+00 to 587+09	1	
3-D	585+00 to 585+71		
4-D	585+00 to 585+71		
5-D	587+25 to 595+00	1	
6-D	587+13 to 595+00	1	
7-D	585+79 to 595+00		
8-D	585+79 to 595+00		
9-D	585+25 to 587+00		
10-D	585+00 to 586+45		
11-D	592+00 to 595+00		
12-D	588+50 to 595+00		
1-R	584+95 to 588+04		
2-R	584+98 to 587+74		
TOTALS		2	2



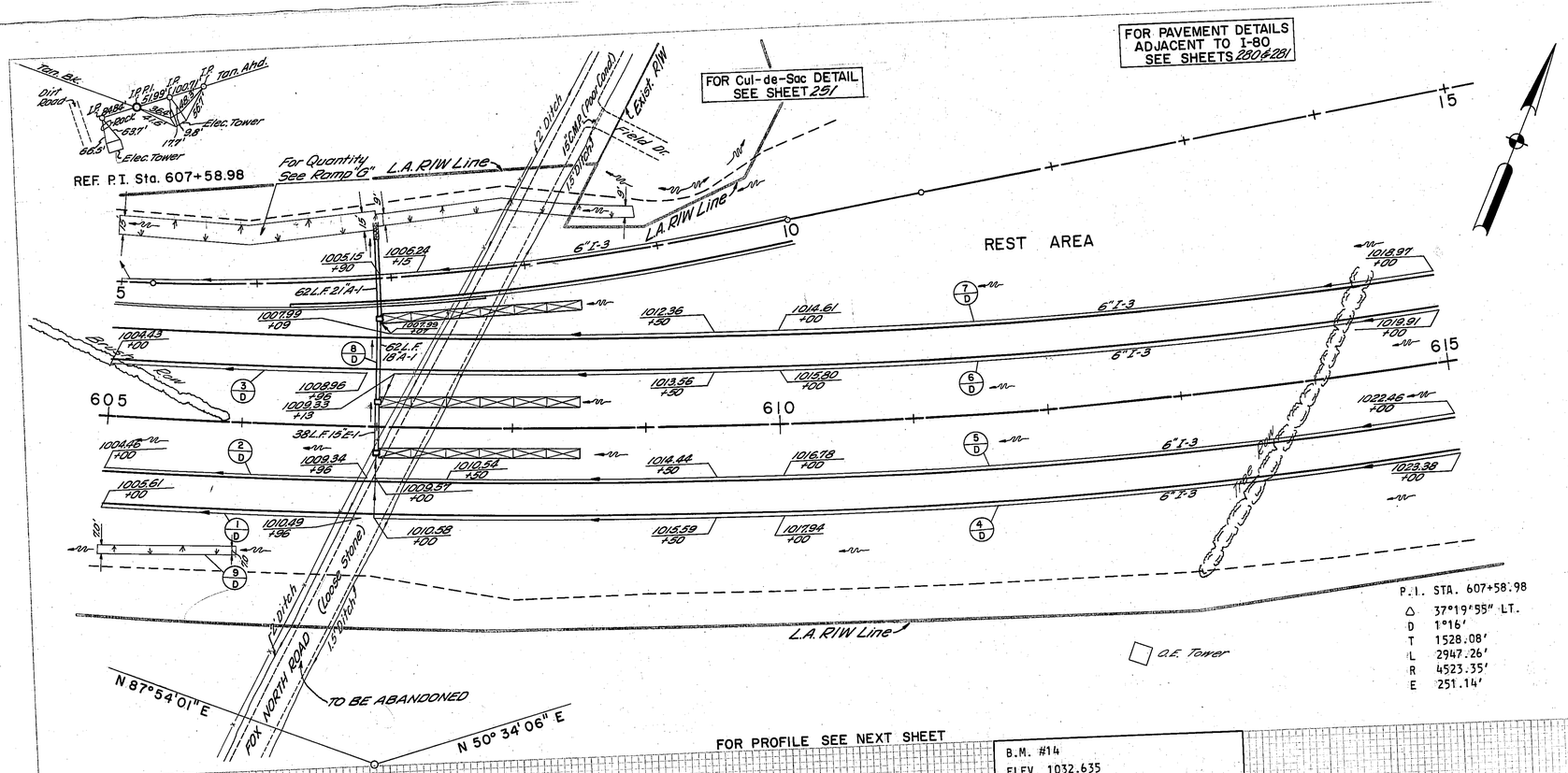
Sta. 585+00 to Sta. 595+00 – Profile

ESTIMATED QUANTITIES for H.S.(b)

ITEM NO.	STATION TO STATION	SIDE	1-2 Masonry	1-5 Pipe Spec. 60' 6" U-Drain BEND W/C	1-8 Catch Basin No. 8	1-8 Manhole No. 1	L-10 Sodding	L-120 Jute Matting	SEE SHEET NO.	1-10 Dumped Rock For Channel Protection
			CU. YD.	EACH	EACH	EACH	SQ. YD.	SQ. YD.		CU. YD.
1	595+00 to 596+96	Rt.								
2	595+00 to 596+96	Lt.								
3	596+96 to 597+02	Rt.								
4	596+96 to 597+02	Lt.								
5	597+02 to 598+00	Rt.								
6	597+02 to 598+00	Lt.								
7	598+00 to 599+00	Rt.								
8	598+00 to 599+00	Lt.								
9	599+00 to 600+00	Rt.								
10	599+00 to 600+00	Lt.								
11	600+00 to 601+00	Rt.								
12	600+00 to 601+00	Lt.								
13	601+00 to 602+00	Rt.								
14	601+00 to 602+00	Lt.								
15	602+00 to 603+00	Rt.								
16	602+00 to 603+00	Lt.								
17	603+00 to 604+00	Rt.								
18	603+00 to 604+00	Lt.								
19	604+00 to 605+00	Rt.								
20	604+00 to 605+00	Lt.								
	TOTAL		31	2	2	2	1237	256		2

ITEM NO.	STATION TO STATION	SIDE	Cu. Al. Cu. E-1 Masonry Bond 15"	1-2 Pipe Class F-1 C.I. 15"	1-2 Pipe Class F-1 C.I. 6"	1-3 Pipe Class F-1 C.I. 8"	1-3 Drain Shallow
			L.F.	L.F.	L.F.	L.F.	L.F.
1	595+00 to 596+96	Rt.					196
2	595+00 to 596+96	Lt.					196
3	596+96 to 597+02	Rt.					210
4	596+96 to 597+02	Lt.					210
5	597+02 to 598+00	Rt.					90
6	597+02 to 598+00	Lt.					90
7	598+00 to 599+00	Rt.					100
8	598+00 to 599+00	Lt.					100
9	599+00 to 600+00	Rt.					100
10	599+00 to 600+00	Lt.					100
11	600+00 to 601+00	Rt.					100
12	600+00 to 601+00	Lt.					100
13	601+00 to 602+00	Rt.					100
14	601+00 to 602+00	Lt.					100
15	602+00 to 603+00	Rt.					100
16	602+00 to 603+00	Lt.					100
17	603+00 to 604+00	Rt.					100
18	603+00 to 604+00	Lt.					100
19	604+00 to 605+00	Rt.					100
20	604+00 to 605+00	Lt.					100
	TOTAL		34	38	2	2	2400

Sta. 595+00 to Sta. 605+00



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 CL A-1 M-6.6(a) or M-6.8(b) 6"	I-1 CL A-1 M-6.6(a) or M-6.8(b) 15"	I-1 CL A-1 M-6.6(a) or M-6.8(b) 21"	I-1 CL E-1 M-6.9(a) 15"	I-1 CL E-1 M-6.9(a) 21"	CL F-4 6"	CL F-4 8"	CL F-3 6" U-Drain Shallow M6.4(h)	I-2 MASONRY	I-5 For 6" U-Drain Tee	I-5 For 6" U-Drain 90° Bend	I-5 For 6" U-Drain 60° Bend	I-8 Catch Basin No. 8	I-10 Dumped Rock Channel Protection	I-10 Sodding	L-10 Jute Matting	L-120	SEE SHEET NO.
			L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	CU. YD.	EACH	EACH	EACH	EACH	CU. YD.	SQ. YD.	SQ. YD.		
1-D	℄ CH 00 to 606+96	Rt.						196						1						
2-D	℄ CH 00 to 606+96	Rt.						196						1						
3-D	℄ CH 00 to 606+96	Lt.						196						1						
4-D	℄ CH 00 to 615+00	Rt.	30					250		550				1						
5-D	℄ CH 00 to 615+00	Rt.						260		550				1						
6-D	℄ CH 00 to 615+00	Lt.				10		251		550				1						
7-D	℄ CH 18 to 615+00	Lt.				10		245		550				1						
8-D	℄ CH 09 to 615+00	Lt.			62		38				.36									
9-D	℄ CH 00			62																
10-D	℄ CH 00 to 606+00	Rt.													3	2	2	77	394	
			30	62	62	38	20	1594	2200		.4									

Sta. 605+00 to Sta. 615+00 – Plan

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-80-5(9)245

45-A
401

TRUMBULL COUNTY TRU-I-80-8.90

SEEDING	
END WIDTH	SO YDS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

EASTBOUND

1008.98 1009.65 1010.30 1010.95 1011.58 1012.19 1012.79 1013.37 1013.95 1014.51 1015.06 1015.60 1016.12 1016.62 1017.11 1017.59 1018.07 1018.52 1018.96 1019.39 1019.80 1020.20 1020.58 1020.95 1021.32 1021.66 1021.99 1022.32 1022.62 1022.91 1023.19 1023.45 1023.71 1023.95 1024.17 1024.39 1024.59 1024.77 1024.94 1025.09 1025.24

WESTBOUND

1008.71 1009.33 1009.94 1010.54 1011.13 1011.69 1012.25 1012.79 1013.32 1013.83 1014.33 1014.83 1015.30 1015.75 1016.20 1016.62 1017.05 1017.45 1017.84 1018.22 1018.58 1018.93 1019.26 1019.58 1019.89 1020.19 1020.46 1020.74 1020.99 1021.22 1021.44 1021.65 1021.85 1022.03 1022.20 1022.36 1022.50 1022.63 1022.74 1022.84 1022.93

B.M. #14
ELEV. 1032.635
HIGH POINT OF TOP HUGE BOULDER
MARKED IN RED PAINT
250' RT. OF STA. 608+00 AND ABOUT
40' E. OF R.I. NEAR POWER TOWER

Sta. 607+00 - 8' Lt. #8 C.B.
Grate 1011.50
FL. 18" I.-I. Class A-1 1007.20
FL. 21" I.-I. Class A-1 1006.95
FL. 2" I.-I. @ 1-1/2" E. 1006.95
FL. 6" I.-I. Class F-4 1007.95

Sta. 607+00 - 19' Lt. #8 C.B.
Grate 1011.47
FL. 15" I.-I. Class D-1 1007.93
FL. 18" I.-I. Class A-1 1007.68
FL. 6" I.-I. Class F-4 1008.68

Sta. 607+00 - 19' Rt. #8 C.B.
Grate 1011.86
FL. 15" I.-I. Class D-1 1008.15
FL. 6" I.-I. Class F-4 1008.90

1050 1045 1040 1035 1030 1025 1020 1015 1010 1005 1000 995

E.B.
W.B.
Eastbound U-Drain
Westbound U-Drain
+2.97%
Eastbound U-Drain
Westbound U-Drain

L.V.C. = 3000' E.B.
L.V.C. = 2700' W.B.

1004.2 1005.6 1006.7 1007.9 1009.3 1010.0 1011.6 1013.0 1014.8 1016.5 1016.9 1017.2 1016.9 1015.5 1018.1 1020.7 1021.1 1022.7 1024.0 1024.9 1025.4 1026.3 1027.0 1027.7 1028.4 1029.1 1030.4 1031.7 1033.1 1034.8 1036.0 1037.5 1038.5 1040.0 1040.8 1041.5 1042.1 1041.8 1042.4 1043.1 1044.0 1045.5 1045.6 1045.9 1046.5

+13 +15 +20 +25 +33 +35 +41 +45 +46 +50 +52 +25 +50 +75 +25 +50 +75 +25 +50 +75 +25 +50 +75 +25 +50 +75 +25 +50 +75 +25 +50 +75 +25 +50 +75 +25 +50 +75

605 606 607 608 609 610 611 612 613 614 615

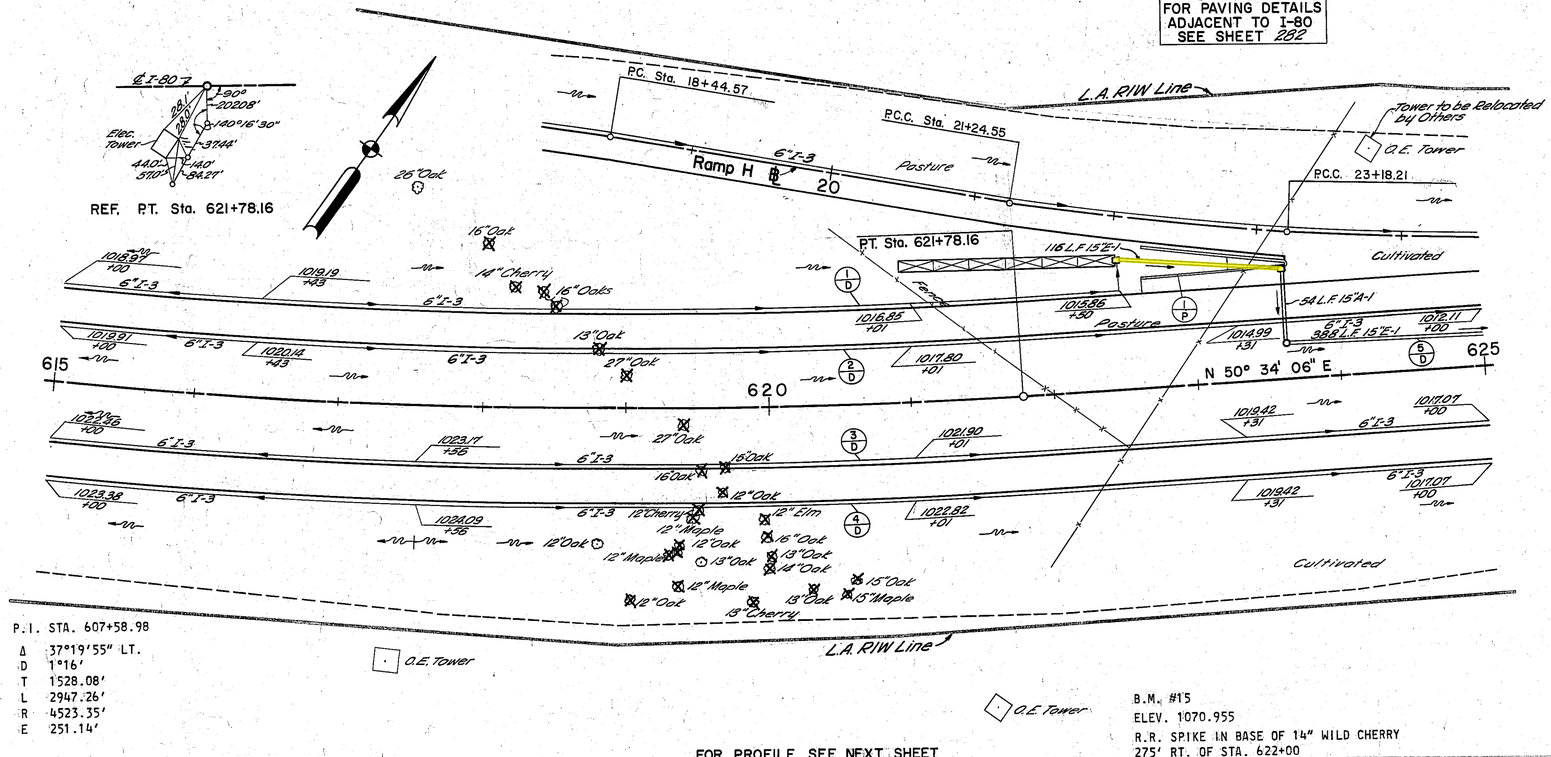
Sta. 605+00 to Sta. 615+00 – Profile

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

46
401

TRUMBULL COUNTY TRU-I-80-8.90

FOR PAVING DETAILS ADJACENT TO I-80 SEE SHEET 282



P.I. STA. 607+58.98

Δ	37°19'55" LT.
D	1°16'
T	1528.08'
L	2947.26'
R	4523.35'
E	251.14'

O.E. Tower

B.M. #15
ELEV. 1070.955
R.R. SPIKE IN BASE OF 14" WILD CHERRY
275' RT. OF STA. 622+00

FOR PROFILE SEE NEXT SHEET

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	CL A-1 M-6.6(0)or M-6.6(N) L.F.	CL E-1 15" L.F.	CL F-4 I-1 6" L.F.	CL T-3 M-6.4(N) 6" L.F.	I-5 For 6" I-3 90° Bend EACH	I-8 Catch Basin No. 5 EACH	I-8 Catch Basin No. 8 EACH	I-12 Manhole No. 1 EACH	I-12 Std. Type 2-A Curb L.F.	I-120 Jute Matting SQ.YD.	SEE SHEET NO.
1-D	615+00 to 622+50	Lt.											
2-D	622+00 to 625+00	Lt.			10	762							
3-D	615+00 to 625+00	Rt.				1000							
4-D	615+00 to 625+00	Rt.				1000							
5-D	622+50 to 625+00	Lt.	54	254									
1-P	622+65.16 to 623+65.16	Lt.									106	128	
TOTALS			54	254	10	3762	1	1	1	1	106	128	

M-6.5(6)

Sta. 615+00 to Sta. 625+00 — Plan

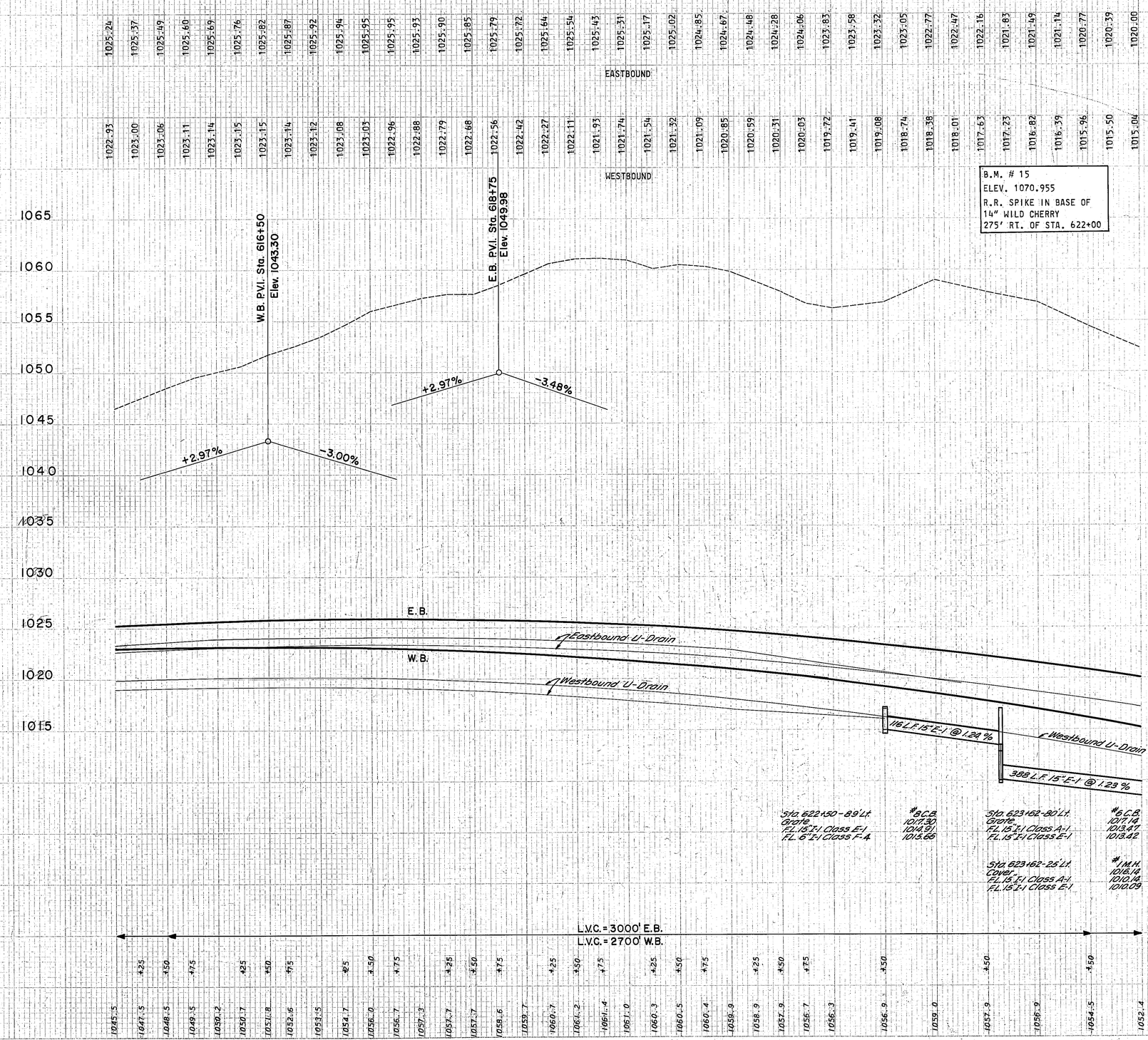
SEEDING	
END VERTIC	CU. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	HG-80-5(9)245	

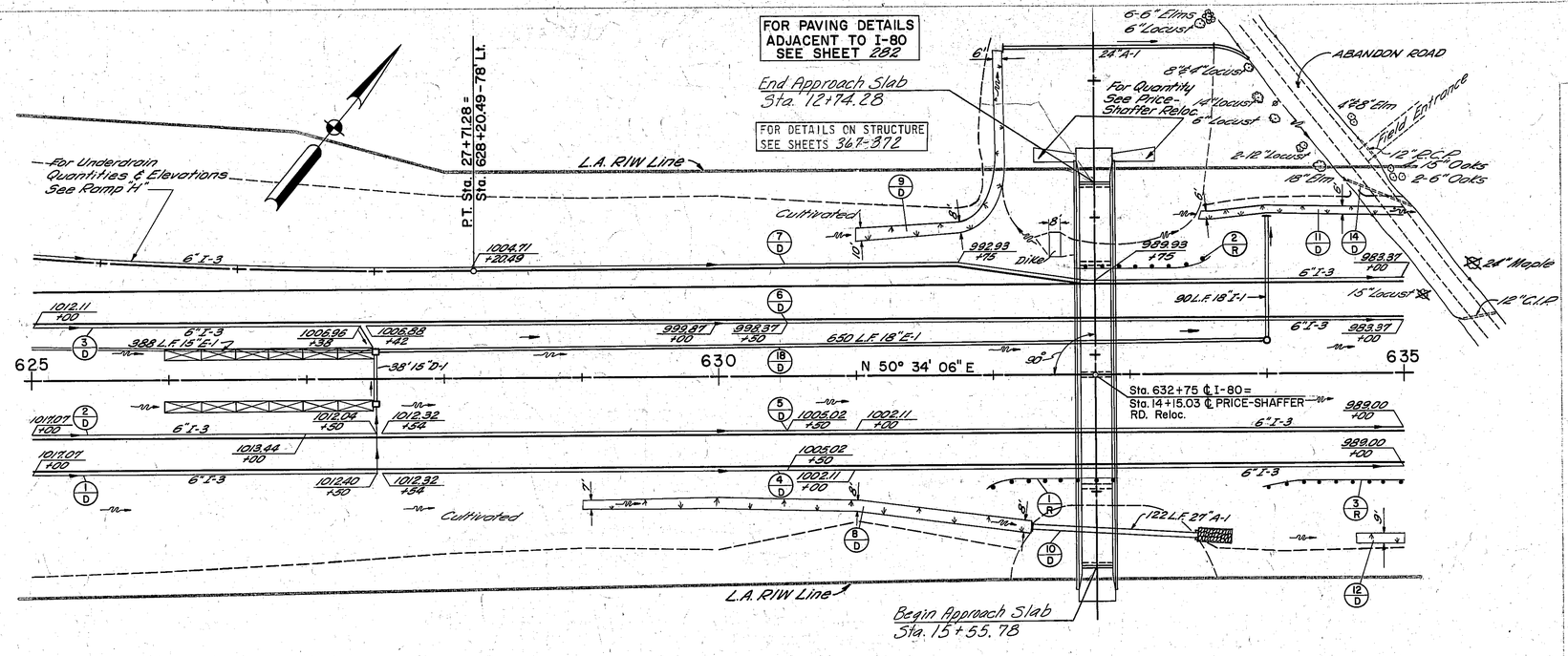
46A
401

TRUMBULL COUNTY TRU-I-80-8.90

END AREA		VOLUME	
CUT	FILL	CUT	FILL



Sta. 615+00 to Sta. 625+00 — Profile



B.M. #16
ELEV. 983.704
R.R. SPIKE IN BASE OF 12" WILD CHERRY
185' LT. OF STA. 634+00

FOR PROFILE SEE NEXT SHEET

TRU-80-1170
PROPOSED STRUCTURE

TYPE: Continuous Steel Beam with Reinforced Deck & Sub-Structure.
SPANS: 57'-0", 81'-6", 81'-6", 57'-0"
ROADWAY: 24' F/F, 2'-3" Safety Curbs.
LOAD FREQUENCY: C.F. = 130 (31).
SKEW: 0°00'
WEARING SURFACE: 3¼" Monolithic Conc.
APPROACH SLAB: Special Design.
ALIGNMENT: Tangent.

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	E-12 Pipe Removed 15" & Under ≠ 6" L.F.	CL. A-1 M-6.6(a) or M-6.8(b) L.F.	CL. A-1 M-6.6(a) or M-6.8(b) ≠ 18" L.F.	CL. A-1 M-6.6(a) or M-6.4(d) 27" L.F.	I-1 CL. D-1 15" L.F.	CL. E-1 15" L.F.	CL. E-1 18" L.F.	CL. F-4 6" L.F.	CL. I-3 6" U-Drain SHALLOW M6.4(h) L.F.	I-2 MASONRY CU.YD.	I-5 For 6" I-3 90° BEND EACH	I-5 For 6" I-3 60° BEND EACH	I-5 For 6" I-3 TEE EACH	I-8 Catch Basin No. 8 EACH	I-8 Manhole No. 1 EACH	I-10 Dumped Rock Channel Protection CU. YD.	I-15 Guard Rail L.F.	L-10 Sodding SQ. YD.	L-120 Jute Matting SQ. YD.	SEE SHEET NO.
				≠ 6.5(b)																		
1-D	625+00 to 627+50	Rt.		30																		
2-D	625+00 to 627+50	Rt.								10	250											
3-D	625+00 to 627+38	Lt.								10	260											
4-D	627+54 to 635+00	Rt.									248											
5-D	627+54 to 635+00	Lt.									346											
6-D	627+42 to 635+00	Lt.									400											
7-D	628+20 to 635+00	Lt.									308											
8-D	629+00 to 632+25	Rt.									250											
9-D	631+00 to 632+00	Lt.									325											
10-D	632+25 to 633+50	Rt.					122				346											
11-D	633+60 to 635+00	Lt.																				
12-D	634+65 to 635+00	Rt.																				
13-D	625+00 to 634+00	Rt.						38	250	650												
14-D	634+60 to 635+07	Lt.	50		90																	
1-R	631+90 to 632+90	Rt.																				
2-R	632+60 to 633+60	Lt.																				
3-R	634+00 to 635+00	Rt.																				
TOTALS			50	30	90	122	38	250	650	20	1575	2.14	1	1	1	2	1	24	3000	527	256	
																			100.0	277	256	
																			100.0	118		
																			100.0	3		
																		23		93		
												.94								35		
												.30								1		

Sta. 625+00 to Sta. 635+00-Plan

DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

47-A
401

TRUMBULL COUNTY TRU-I-80-8.90

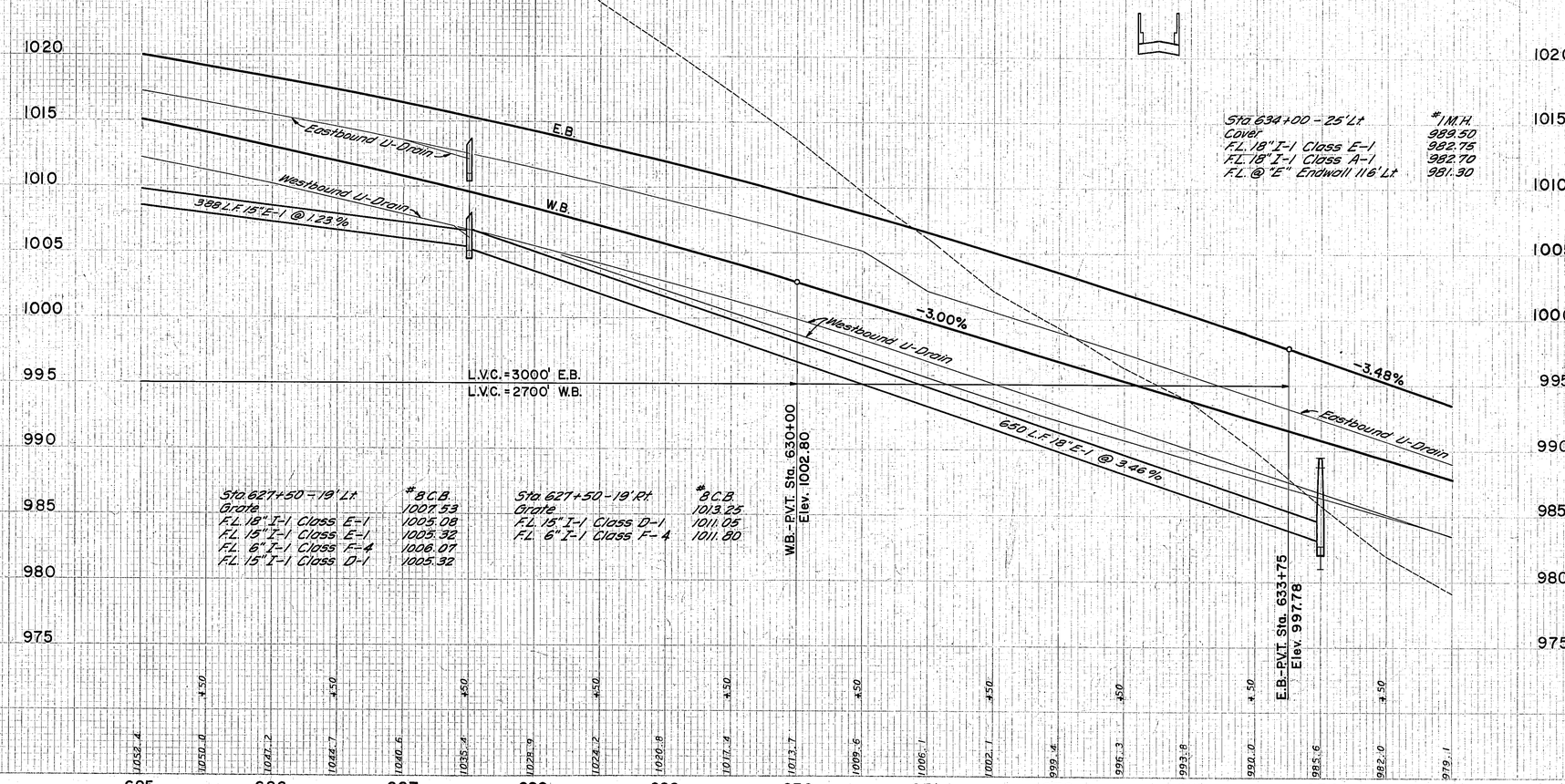
END AREA		VOLUME	
CUT	FILL	CUT	FILL

SEEDING

END YARDS	YD. PER

EASTBOUND: 1020.00, 1019.59, 1019.17, 1018.74, 1018.29, 1017.83, 1017.36, 1016.87, 1016.37, 1015.86, 1015.33, 1014.79, 1014.24, 1013.67, 1013.09, 1012.49, 1011.88, 1011.26, 1010.63, 1009.98, 1009.32, 1008.64, 1007.95, 1007.25, 1006.54, 1005.81, 1005.07, 1004.31, 1003.54, 1002.76, 1001.96, 1001.15, 1000.33, 999.49, 998.64, 997.78, 996.91, 995.7, 993.5

WESTBOUND: 1015.04, 1014.56, 1014.06, 1013.55, 1013.03, 1012.50, 1011.95, 1011.38, 1010.81, 1010.21, 1009.61, 1008.99, 1008.36, 1007.71, 1007.05, 1006.38, 1005.69, 1004.99, 1004.27, 1003.54, 1002.80, 1001.30, 999.80, 998.30, 996.80, 995.30, 993.80, 992.30, 990.80, 989.30, 987.80

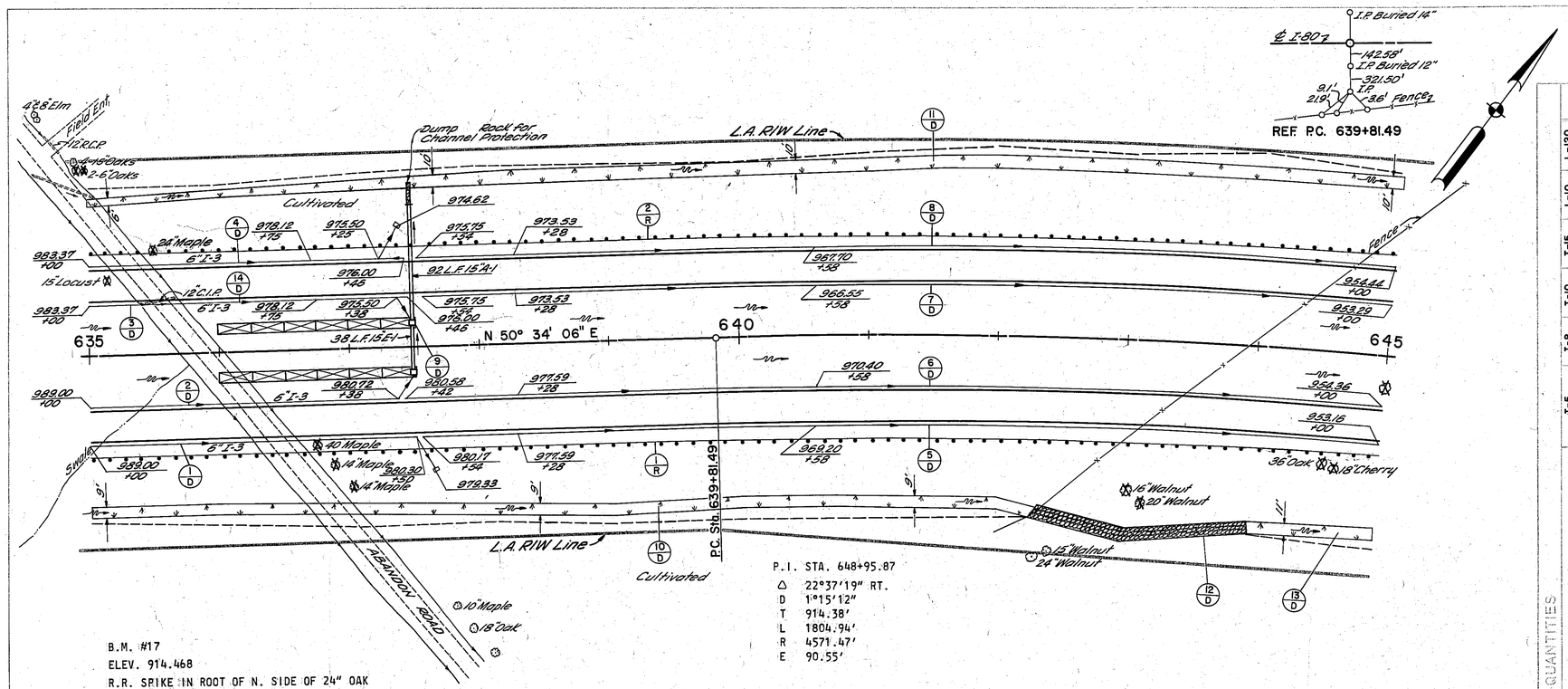


Sta. 625+00 to Sta. 635+00 - Profile

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

48
401

TRUMBULL COUNTY TRU-I-80-8.90



P.I. STA. 648+95.87
Δ 22°37'19" RT.
D 1°15'12"
T 914.38'
L 1804.94'
R 4571.47'
E 90.55'

B.M. #17
ELEV. 914.468
R.R. SPIKE IN ROOT OF N. SIDE OF 24" OAK
250' LT. OF STA. 643+00

FOR PROFILE SEE NEXT SHEET

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	T-5 For 6" T-3 60° BEND. EACH	T-5 For 6" T-3 60° WYE EACH	I-8 Catch Basin No. 8 EACH	I-10 Dumped Rock Channel Protection CU. YD.	I-15 Guard Rail L.F.	L-10 Sodding SQ. YD.	L-120 Jute Matting SQ. YD.	SEE SHEET NO.
1-D	635+00 to 637+50	Rt.								
2-D	635+00 to 637+38	Rt.								
3-D	635+00 to 637+46	Lt.								
4-D	635+00 to 637+46	Lt.								
5-D	637+54 to 645+00	Rt.								
6-D	637+62 to 645+00	Rt.								
7-D	637+54 to 645+00	Lt.								
8-D	637+54 to 645+00	Lt.								
9-D	637+50	℄								
10-D	635+00 to 642+31	Rt.								
11-D	635+00 to 645+00	Lt.								
12-D	642+90 to 644+00	Rt.								
13-D	642+00 to 645+00	Rt.								
14-D	635+00 to 635+68	Lt.	1	1						
			1	1						
1-R	635+00 to 645+00	Rt.			2	3		731	258	
2-R	635+00 to 645+00	Lt.						1100		
						157		123		
							1000.0			
							1000.0			
TOTALS			2	2	2	160	2000.0	1954	258	

for M.G.S.(2)

REF. NO.	STATION TO STATION	SIDE	E-12 Pipe Removed M.G.S. (or) 15" & Under L.F.	CL. A-1 Removed M.G.S. (or) F-15" L.F.	CL. E-1 15" L.F.	CL. F-4 6" L.F.	CL. I-1 8" L.F.	CL. I-3 6" U-Drain Shallow L.F.	I-2 Masonry CU. YD.
1-D	635+00 to 637+50	Rt.						270	
2-D	635+00 to 637+38	Rt.				10		250	
3-D	635+00 to 637+46	Lt.				10		258	
4-D	635+00 to 637+46	Lt.				10		266	
5-D	637+54 to 645+00	Rt.						746	
6-D	637+62 to 645+00	Rt.						759	
7-D	637+54 to 645+00	Lt.						746	
8-D	637+54 to 645+00	Lt.						746	
9-D	637+50	℄							
10-D	635+00 to 642+31	Rt.		92	38				.26
11-D	635+00 to 645+00	Lt.							
12-D	642+90 to 644+00	Rt.							
13-D	642+00 to 645+00	Rt.							
14-D	635+00 to 635+68	Lt.	24						
1-R	635+00 to 645+00	Rt.							
2-R	635+00 to 645+00	Lt.							
TOTALS			24	92	38	20	20	4000	.3

Sta. 635+00 to Sta. 645+00 — Plan

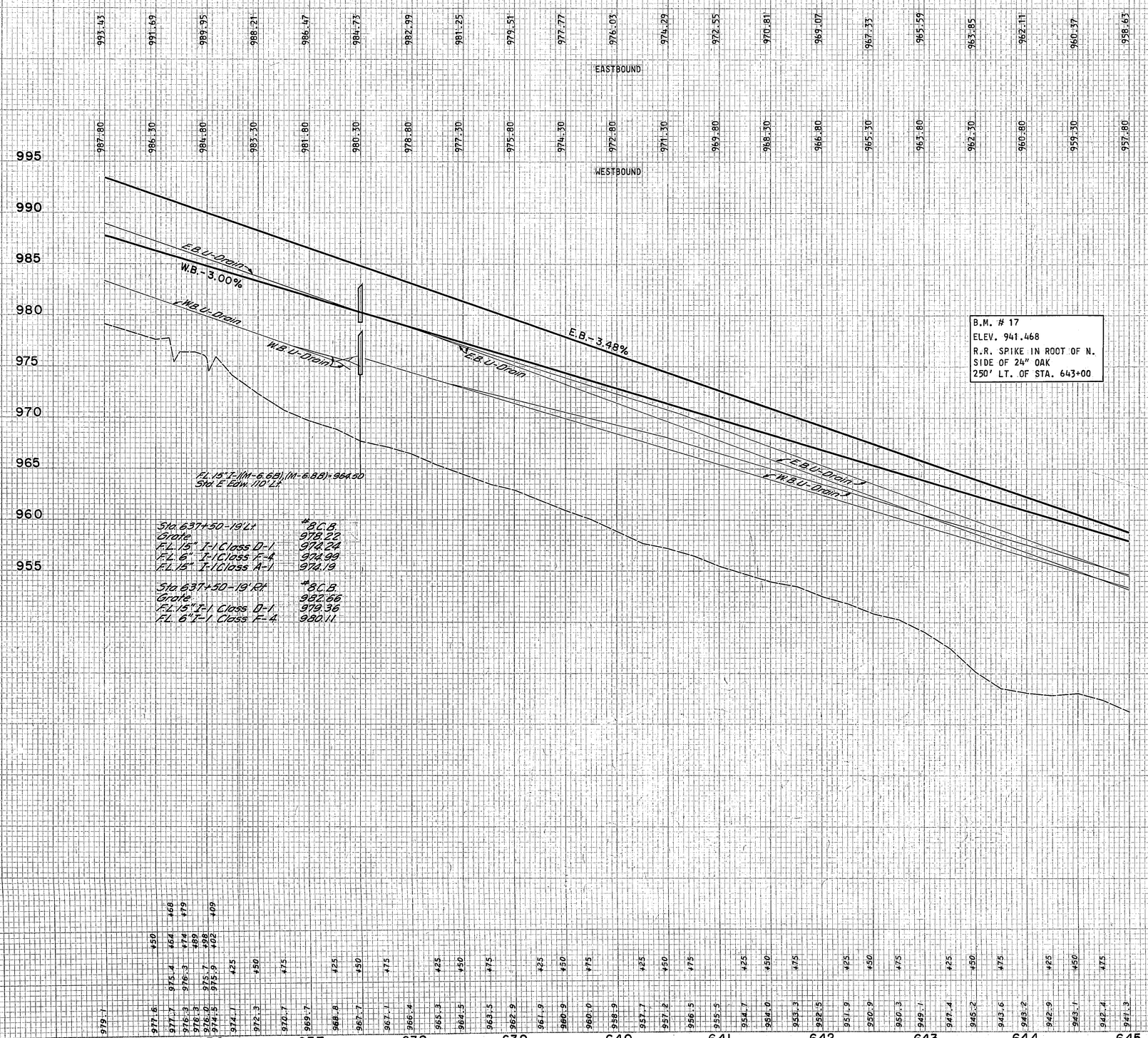
SEEDING	
END WIDTH	SQ YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

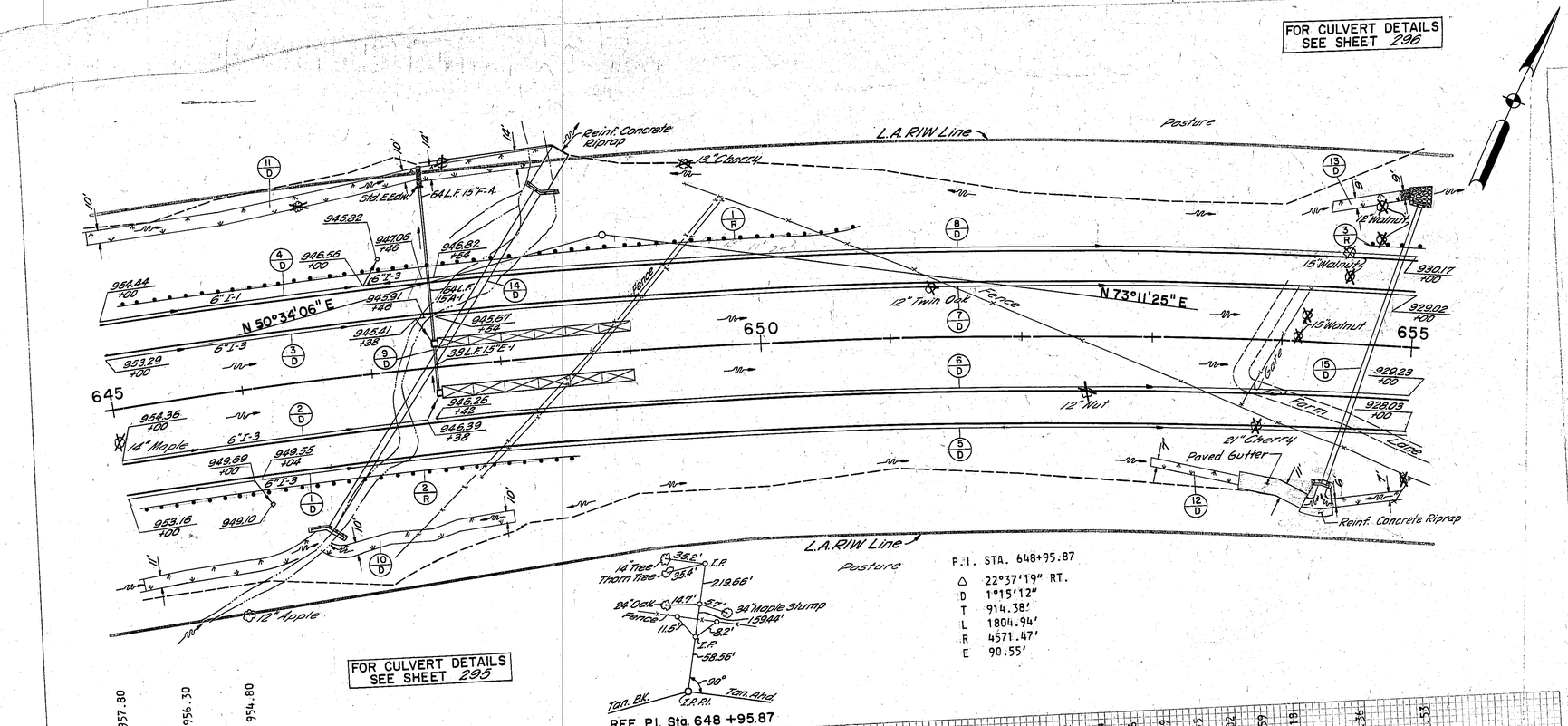
48A
401

TRUMBULL COUNTY TRU-I-80-8.90

END AREA		VOLUME	
CUT	FILL	CUT	FILL



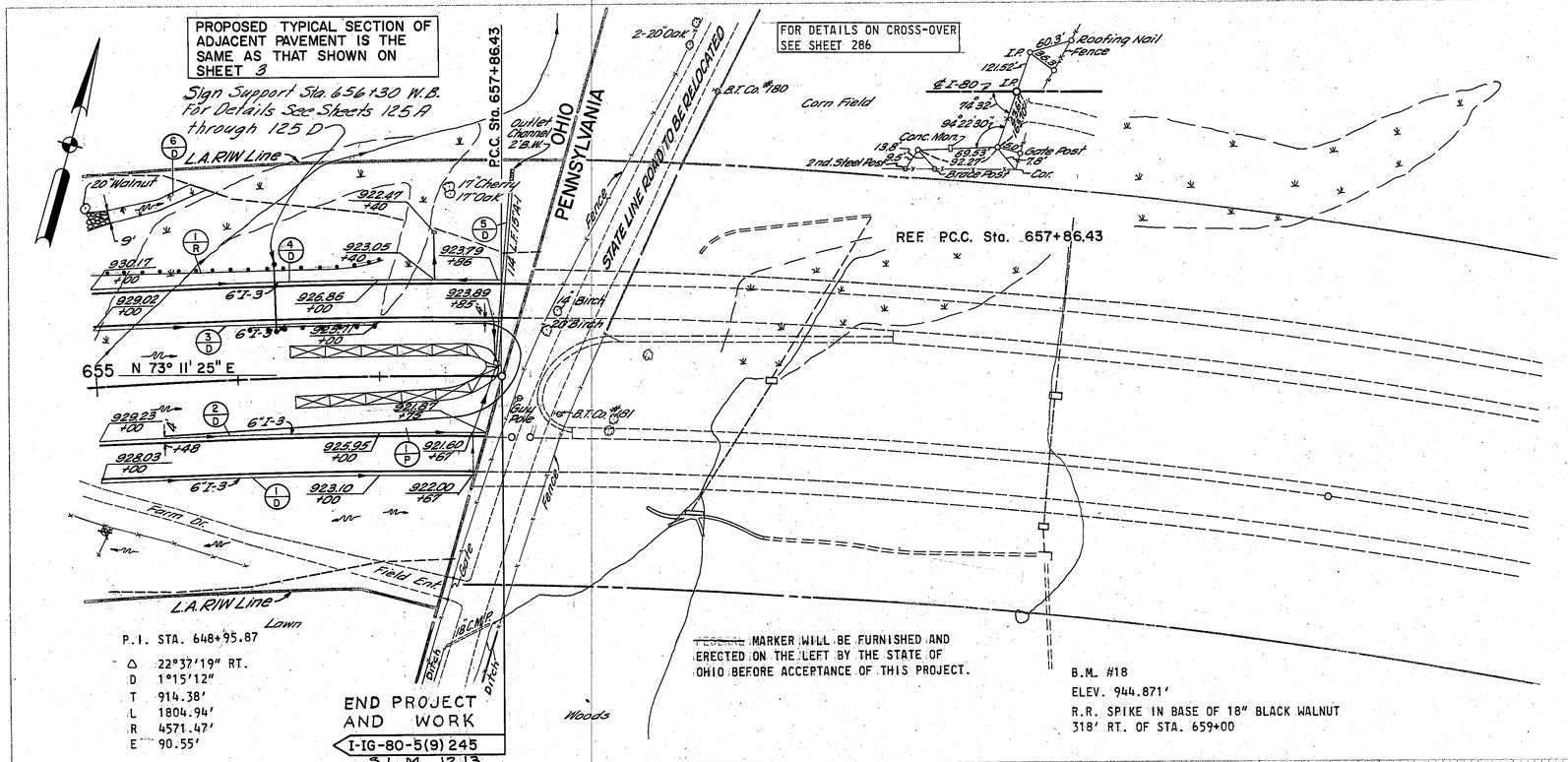
Sta. 635+00 to Sta. 645+00 — Profile

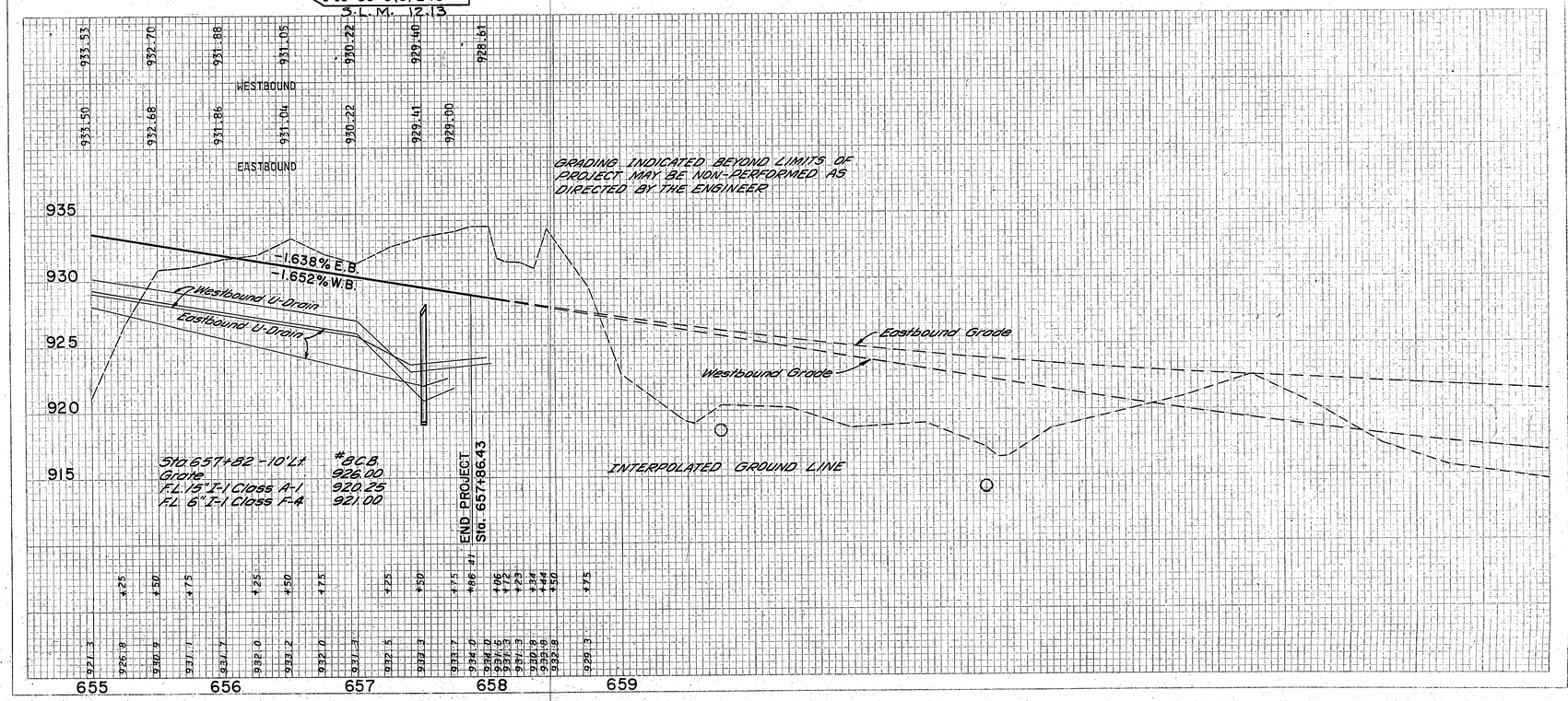


ESTIMATED QUANTITIES

For M.G.5(b)

REF. NO.	STATION TO STATION	SIDE	I-1 CL. A-1 M-6.6(b) or M-6.4(a) 15" L.F.	I-1 CL. A-1 M-6.8(b) or M-6.6(a) 30" L.F.	I-1 CL. A-1 M-6.8(b) 60" L.F.	I-1 CL. E-1 15" L.F.	I-1 CL. E-1 6" L.F.	CL. F-4 8" L.F.	CL. F-4 15" L.F.	CL. I-3 6" U-Drain Shallow L.F.	I-2 Mason CU. YD.	I-5 For 6" I-3 Grate Bend EACH	I-5 For F-4 25° Bend 15" WYE EACH	I-5 EACH	I-8 C.B. NO. 8 EACH	I-10 Concr. Riprap CU. YD.	I-10 Dumped Rock Channel Protection CU. YD.	I-14 Paved Gutter Type 2 L.F.	I-15 Guard Rail L.F.	L-10 Sodding SQ. YD.	L-120 Jute Matting SQ. YD.	SEE SHEET NO.
1-D	645+00 to 645+69	Rt.					10	10														
2-D	645+00 to 647+50	Rt.					10	10														
3-D	645+00 to 647+46	Lt.																				
4-D	646+00 to 647+46	Lt.																				
5-D	646+00 to 655+00	Rt.								112												
6-D	647+42 to 655+00	Rt.								250												
7-D	647+54 to 655+00	Lt.								258												
8-D	647+54 to 655+00	Lt.								258												
9-D	647+50	Rt.					38		64		26											
10-D	648+00 to 648+00	Rt.																				
11-D	648+00 to 649+50	Lt.																				
12-D	653+00 to 654+90	Rt.																				
13-D	653+00 to 654+35	Lt.																				
14-D	647+44																					
15-D	654+70																					
16-D	654+45 to 655+00	Rt.																				
1-R	645+00 to 650+75	Lt.																				
2-R	645+00 to 648+50	Rt.																				
3-R	654+62 to 655+00	Lt.																				
Sta. 645+00 to Sta. 655+00					302						5430 / 1188											
					230																	





Sta. 655+00 to Sta. 657+86.43

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	B-21 Water Proof Aggr. Base Course CU. YD.	CL. A-1 M-6.6(b) M-6.8(b) #6 L.F.	CL. A-1 M-6.6(b) M-6.8(b) #15 L.F.	I-1 CL. I-3 6" U-Drain Shallow L.F.	I-1 CL. I-3 6" U-Drain Deep L.F.	I-1 CL. F-4 6" L.F.	I-1 CL. F-4 8" L.F.	I-2 Masonry CU. YD.	I-5 For 6" I-3 Dbl. Tee 90° Bend EACH	I-5 For 6" I-3 60° Bend EACH	I-5 For 6" I-3 90° Bend EACH	I-8 Catch Basin No. 8 EACH	I-10 Dumped Rock Channel Protection CU. YD.	I-15 Guard Rail L.F.	I-18 Stabilized Or. Aggr. Shoulders & Approach CU. YD.	I-22 Sub-base CU. YD.	L-10 Sodding SQ. YD.	L-120 Jute Matting SQ. YD.	T-31 No. 6 Aggr. CU. YD.	T-31 Bit. Mat'l. GAL.	SEE SHEET NO.
			CU. YD.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	CU. YD.	EACH	EACH	EACH	EACH	CU. YD.	L.F.	CU. YD.	CU. YD.	SQ. YD.	SQ. YD.	CU. YD.	GAL.	
1-D	655+00 to 657+67	Rt.	30		267								1										
2-D	655+00 to 657+75	Rt.			316			10					1										
3-D	655+00 to 657+85	Lt.			314			10															
4-D	655+00 to 657+86	Lt.			310			10			1												
5-D	657+82	℄		114						.26													
6-D	655+15 to 655+75	Lt.																					
1-R	655+00 to 657+00	Lt.																					
1-P	655+48 to 657+86.43	℄														200.0							
														1	37		21	28	1/67	1/256	1/35		
			11	30	114	1207	20	10	9		1	1	1	1	4	200.0	21	28	68	256	35		

For M-6.5(b)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(6)245	

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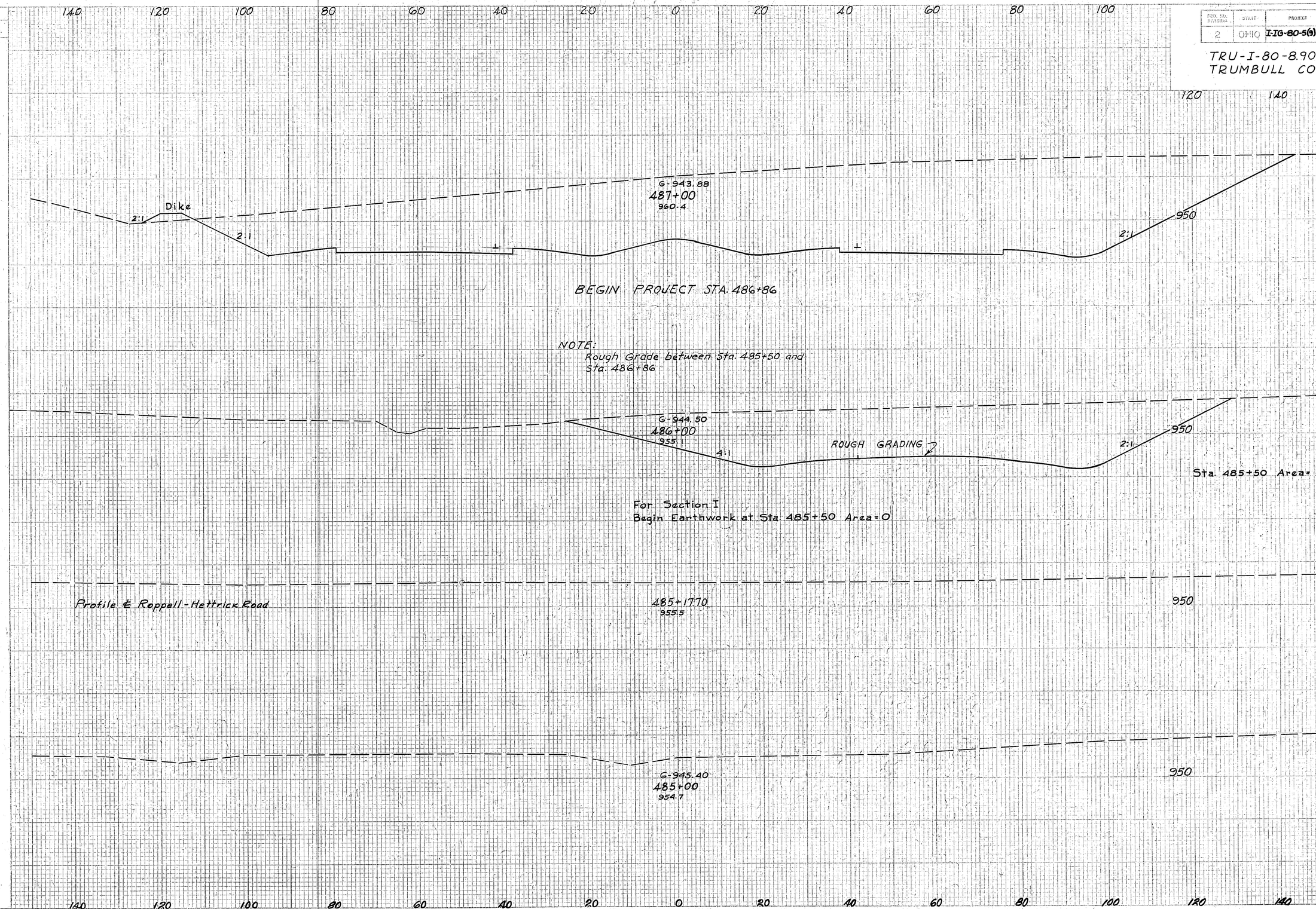
TRU-I-80-8.90
TRUMBULL COUNTY



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
3800	0	10022	0
1612	0	1492	0
0	0	0	0

Sta. 485+00 to Sta. 487+00

SEEDING	
END POINTS	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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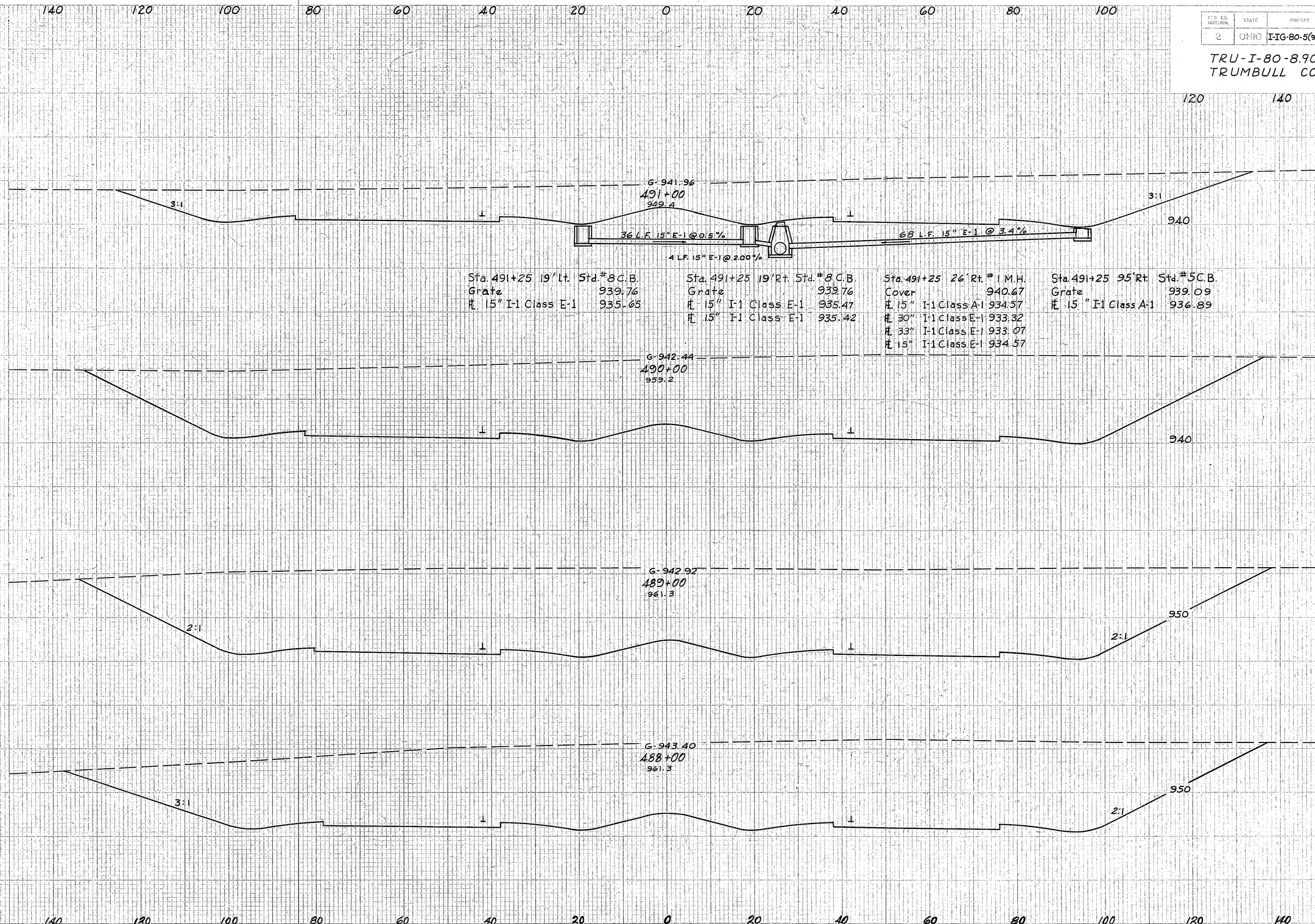
401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2004	0	11290	0
4093	0	15950	0
4520	0	16342	0
4305	0	15009	0

Sta. 488+00 to Sta. 491+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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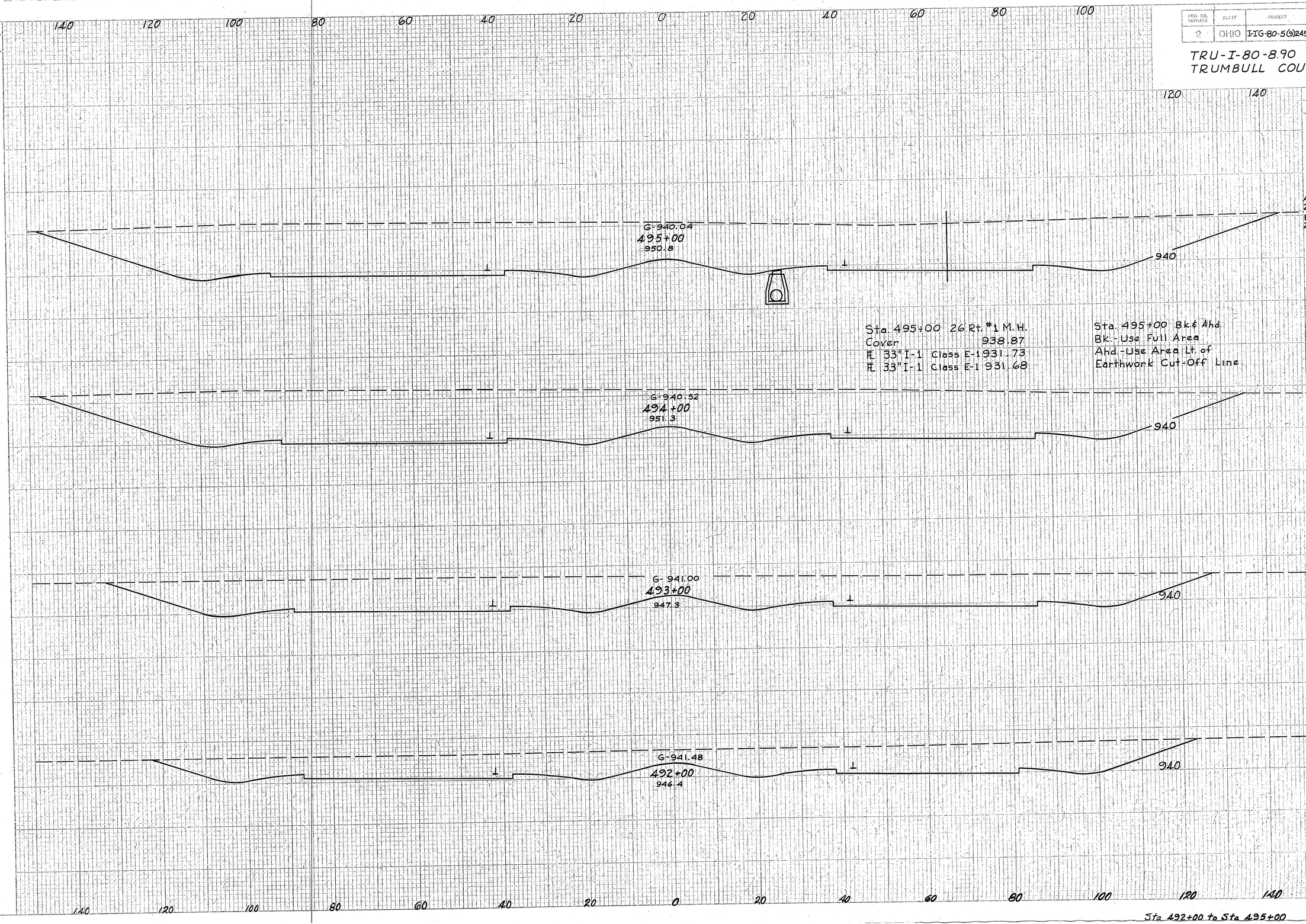
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING	
FED. ADMIN	ST. FDS.



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
Ahead 2304 Back 2999	0	9674	0	
2920	0	8641	0	
1746	0	5330	0	
1132	0	5807	0	

Sta 492+00 to Sta 495+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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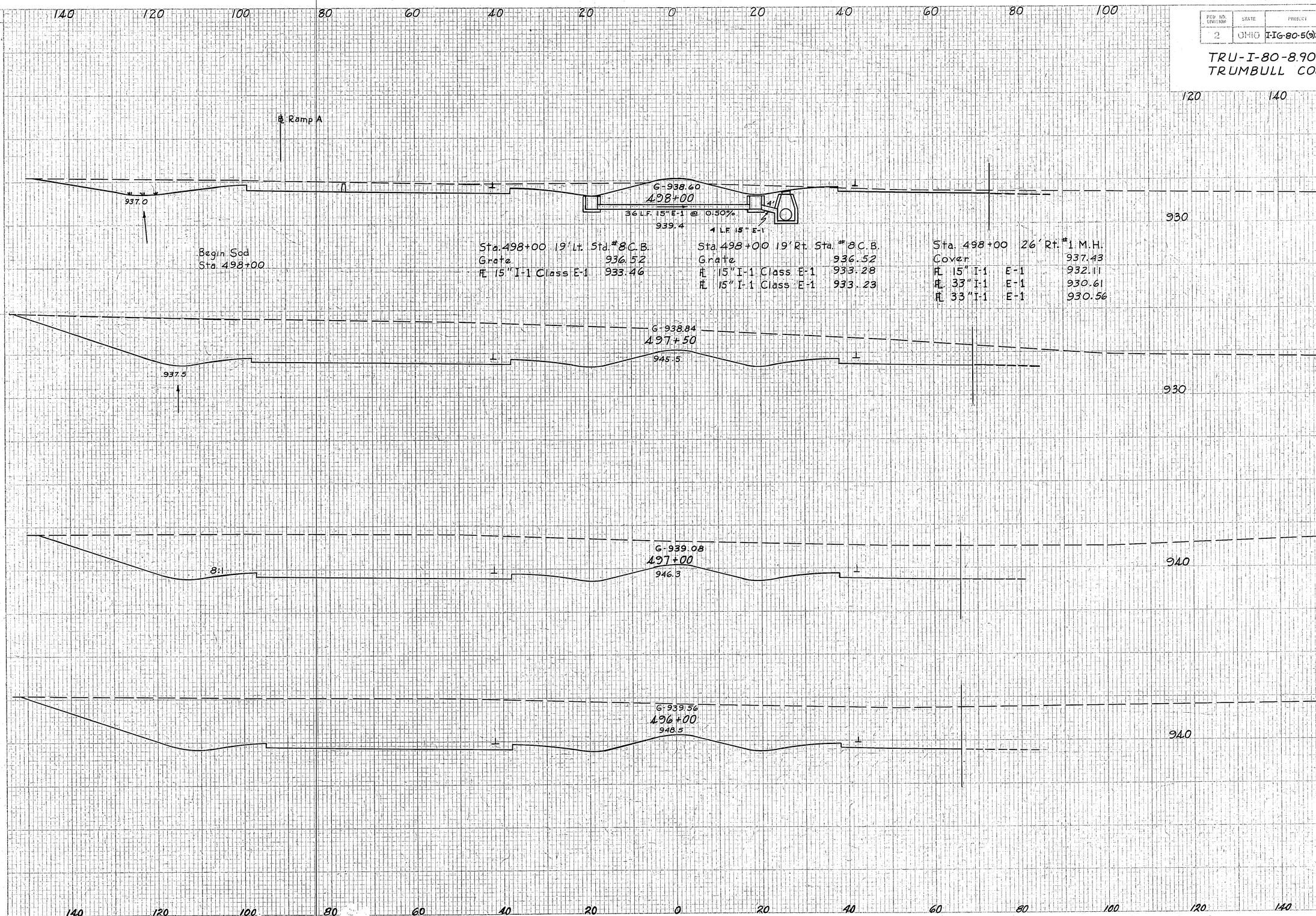
401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
370	10	1911	9
1694	0	3187	0
1748	0	7144	0
2110	0	9820	0

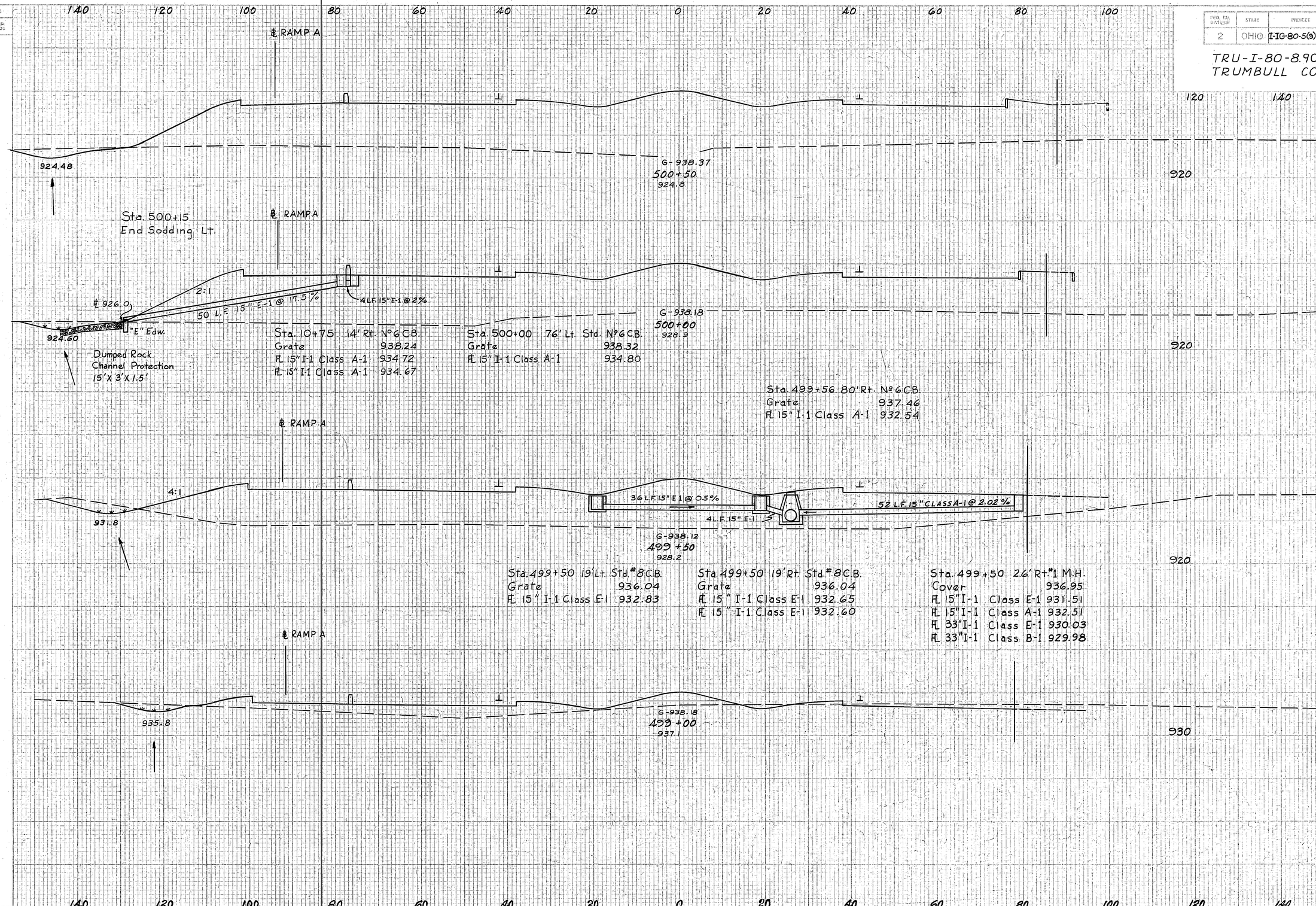
Sta. 496+00 to Sta. 498+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(S)245	

55
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
28	2114	47	3667
23	1846	51	3248
32	1662	77	1773
51	253	780	487

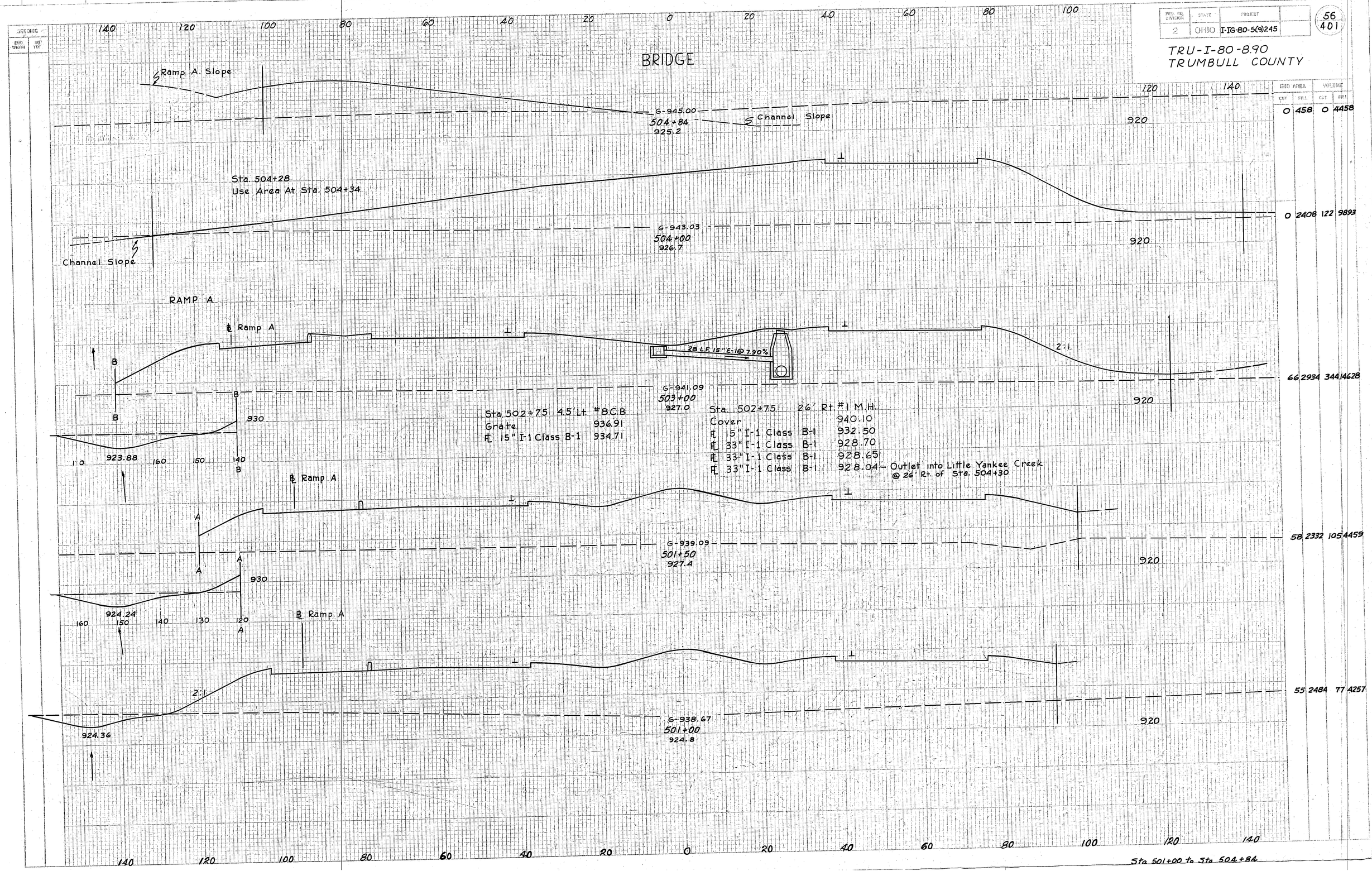


Sta. 499+00 to Sta. 500+50

REG. OR DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

56
401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	458	0	4458
0	2408	122	9893
66	2934	344	14628
58	2332	105	4459
55	2484	77	4257

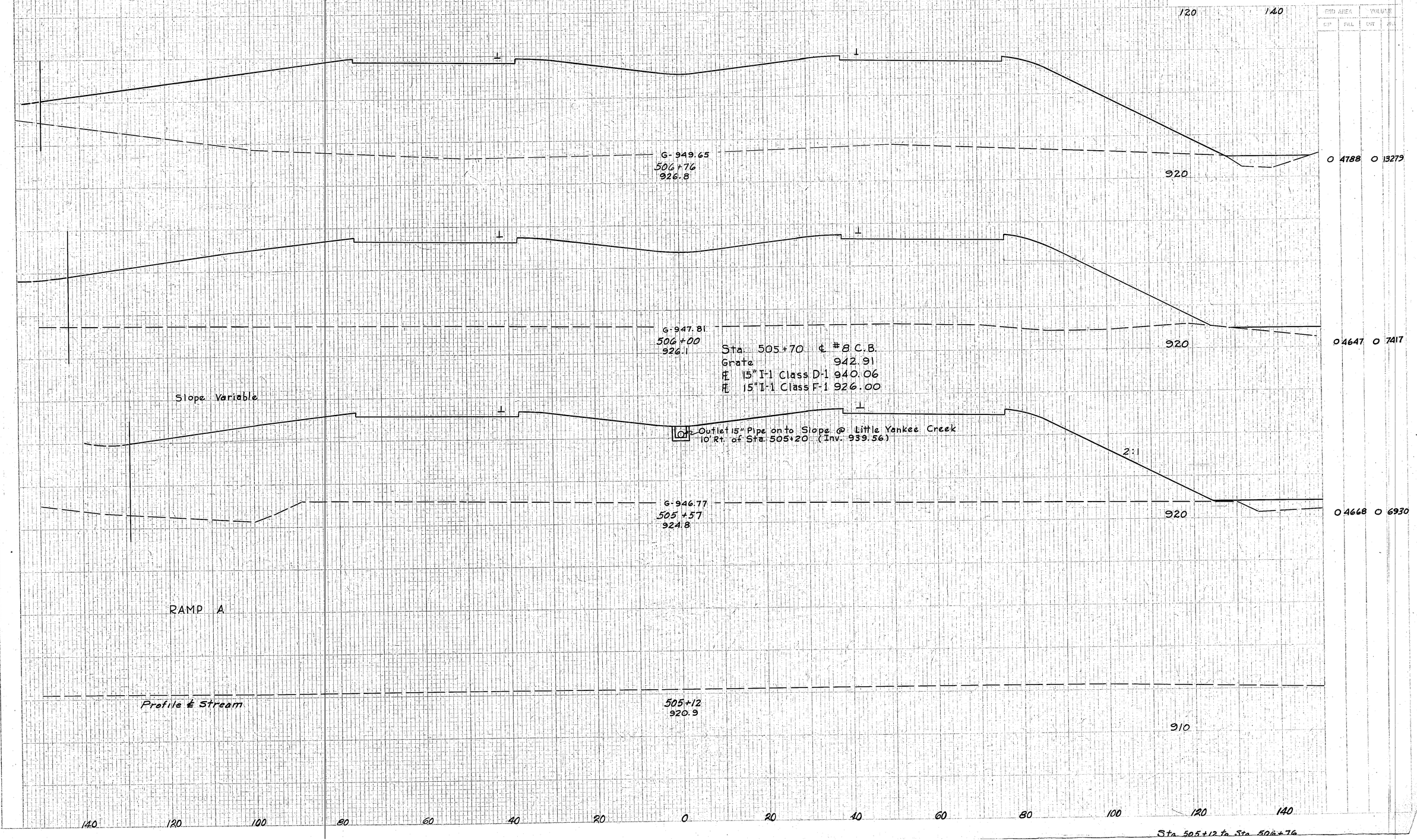
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-I6-80-5(9)245	

57
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING	
END WARIN	50. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL



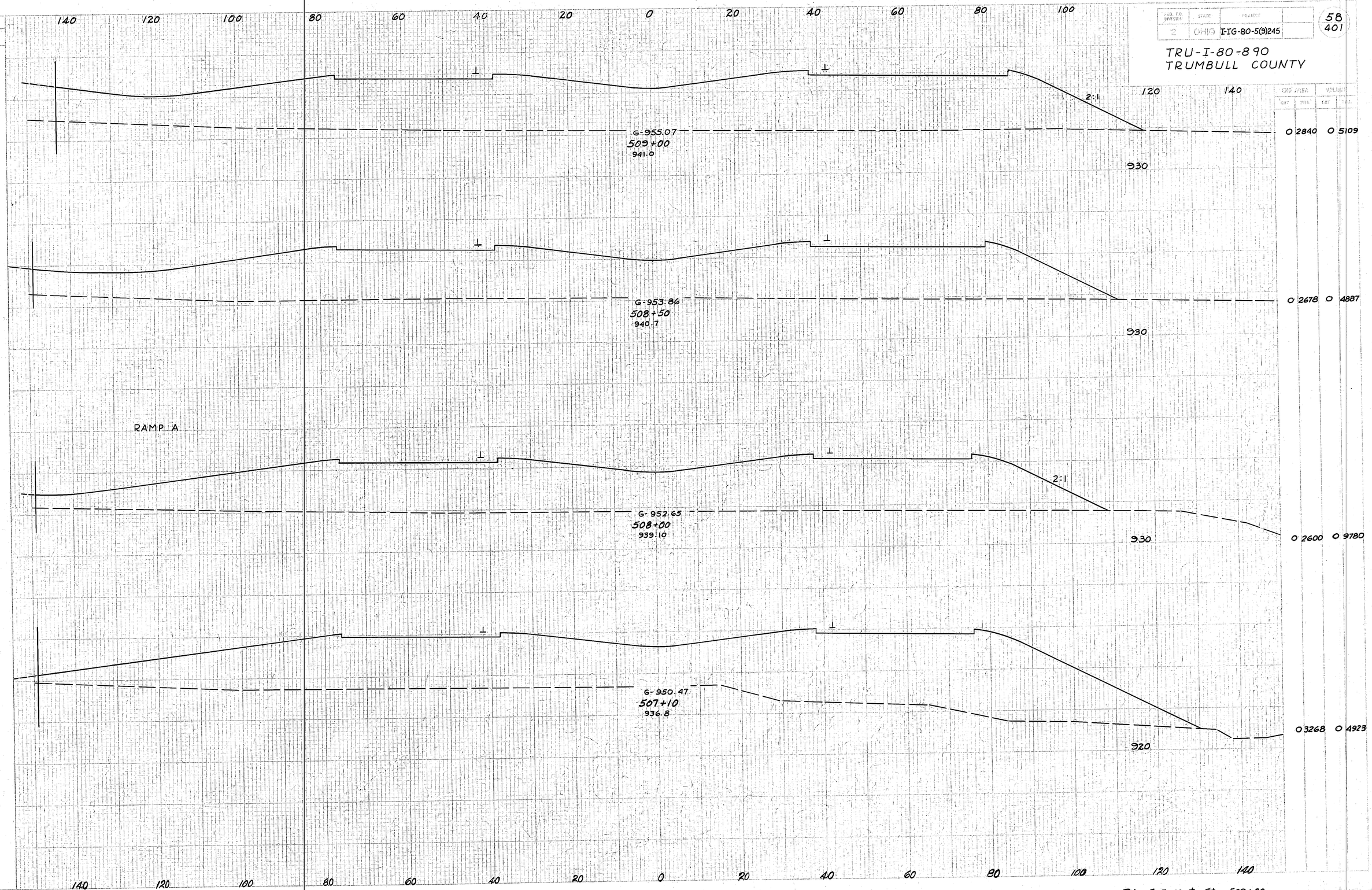
Sta. 505+12 to Sta. 506+76

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-80-5(9)245

58
401

TRU-I-80-890
TRUMBULL COUNTY

SEEDING	
DIST. WIDTH	SQ. YDS.



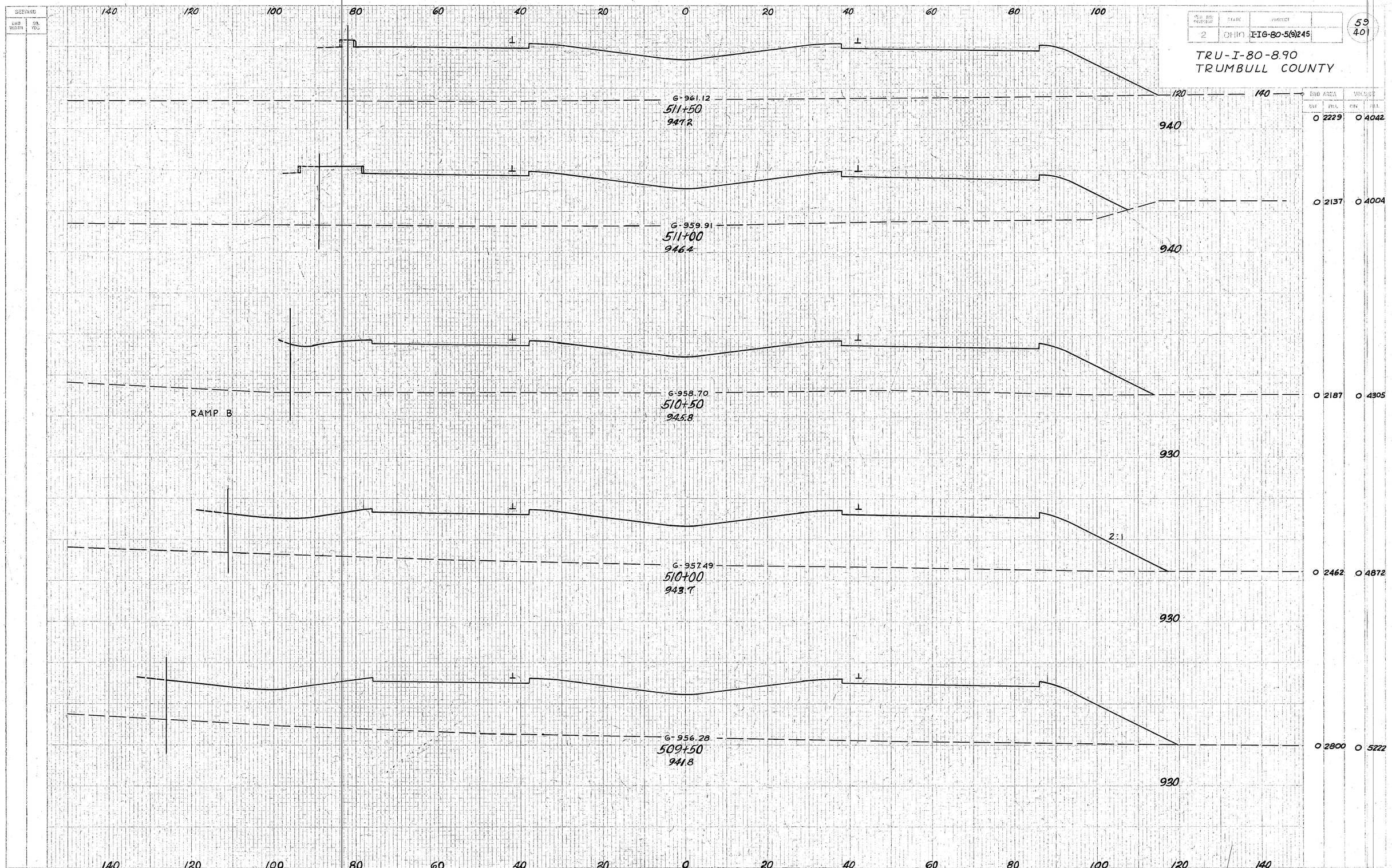
END AREA		VOLUME	
CUT	FILL	CUT	FILL

Sta. 507+10 to Sta. 509+00

SHEET NO. NUMBER	STATE	PROJECT	
2	OHIO	I-IG-80-5(8)245	

55
40

TRU-I-80-8.90
TRUMBULL COUNTY



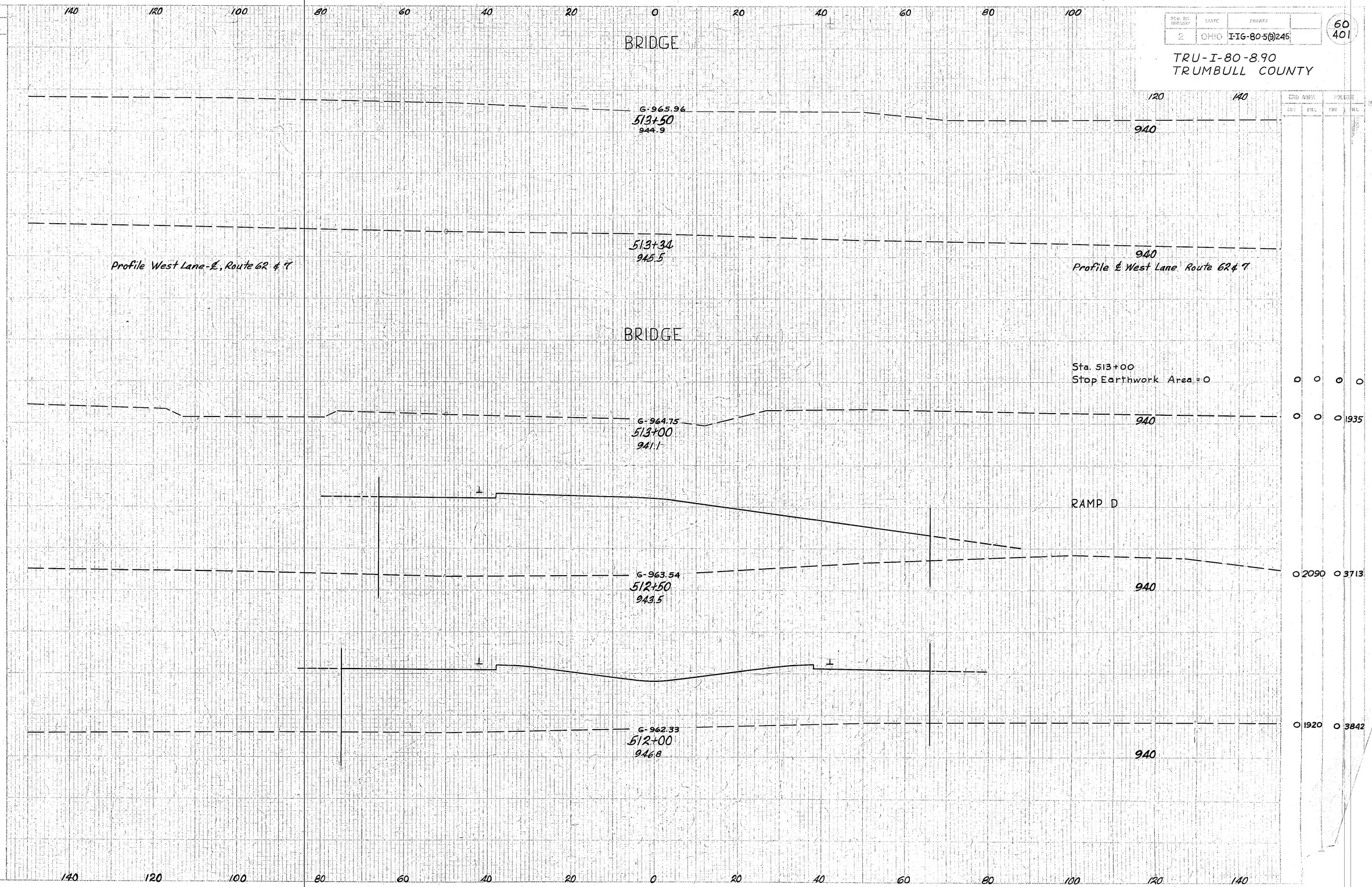
END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	2229	0	4042
0	2137	0	4004
0	2187	0	4305
0	2462	0	4872
0	2800	0	5222

SECTION	
END WIDTH	SQ YDS.

SEQ. NO. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(8)245	

60
401

TRU-I-80-8.90
TRUMBULL COUNTY

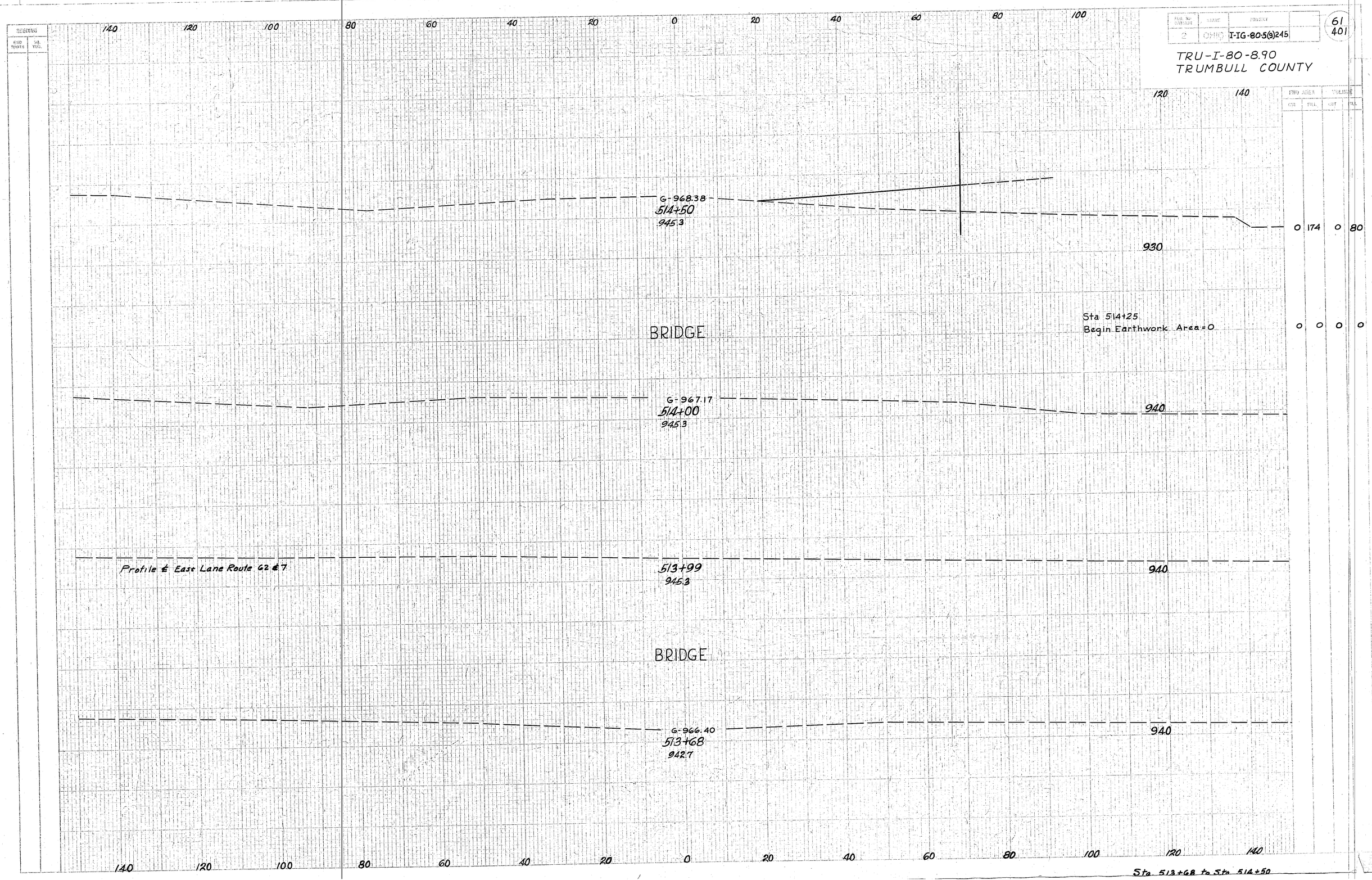


END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0	0	0
0	0	0	1935
0 2090	0 3713		
0 1920	0 3842		

FED. No. SUFFIX	STATE	PROJECT	
2	OHIO	I-IG-80-5(6)245	

61
401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	174	0	80
0	0	0	0

Sta 513+68 to Sta 514+50

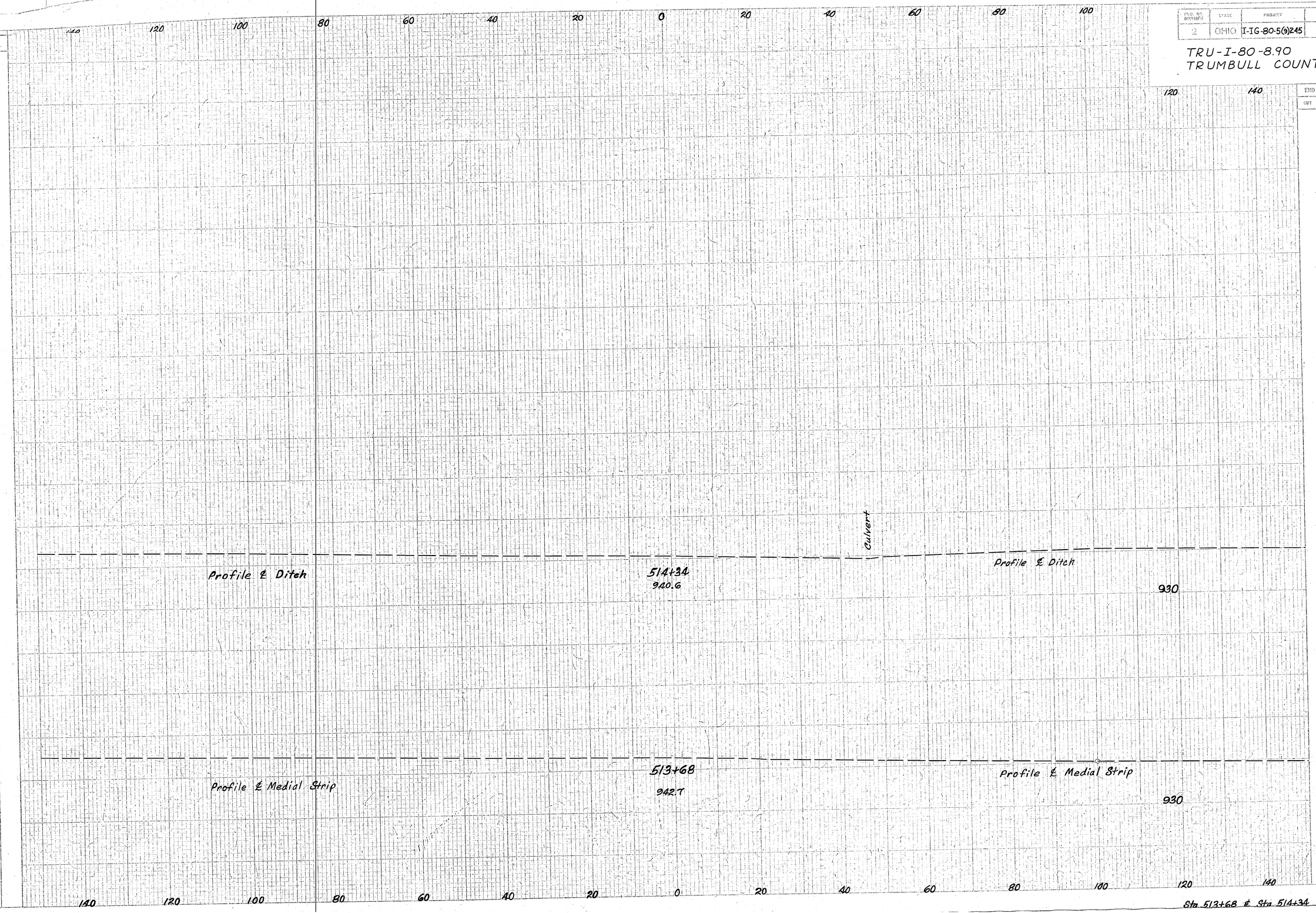
PLD. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

62
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

SLOPE STAKES	
END WIDTH	SQ. YDS.

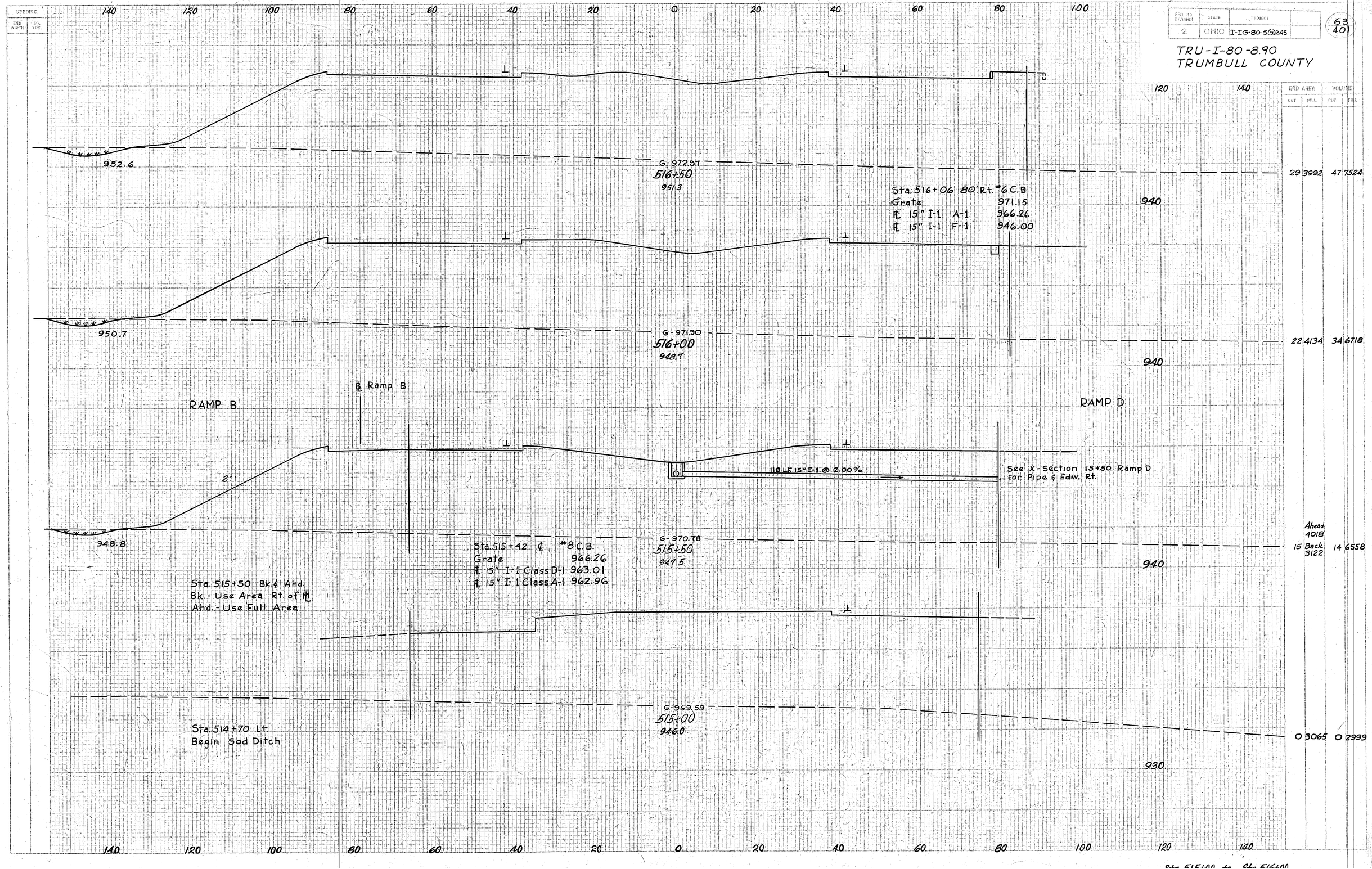


PLOTTED 1/17/61 GJW

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-80-5(6)245

63
401

TRU-I-80-8.90
TRUMBULL COUNTY

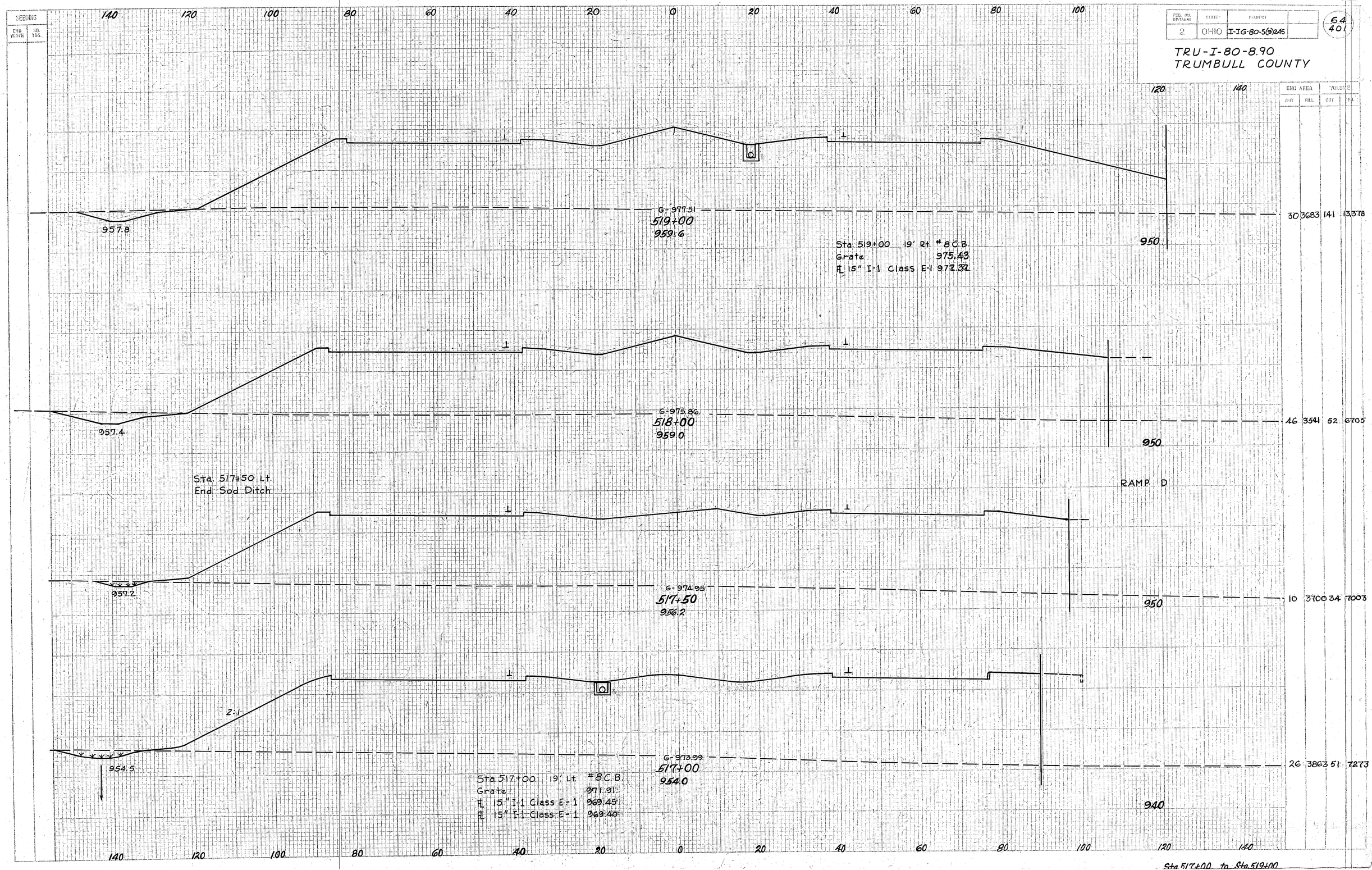


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(6)245	

64
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
30	3683	141	13,378
46	3541	52	6705
10	3700	34	7003
26	3863	51	7273

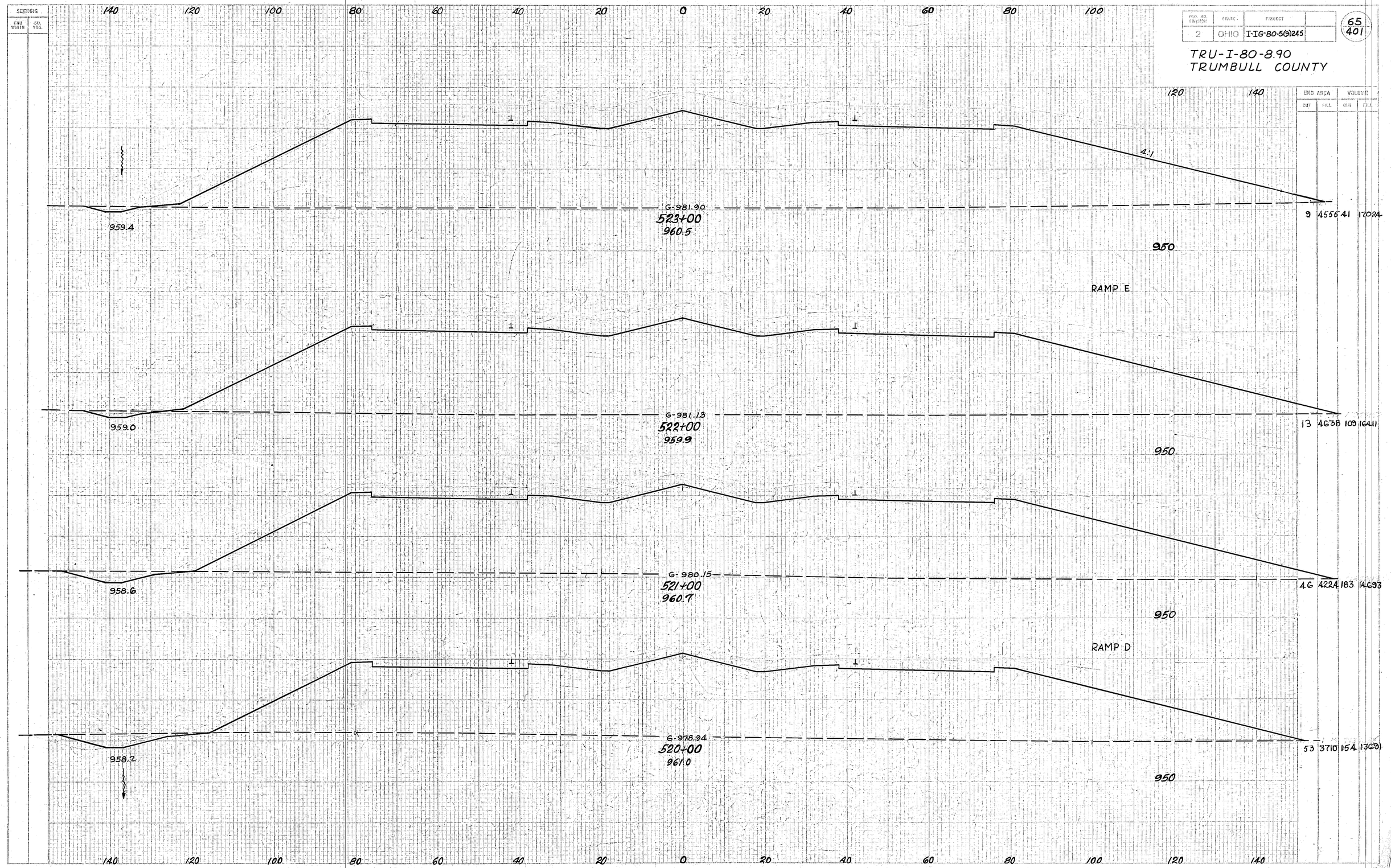
Sta 517+00 to Sta 519+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(S)245	

65
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
9	4555.41	17024	
13	4638	109	16411
46	4224.183		14693
53	3710.154		13691

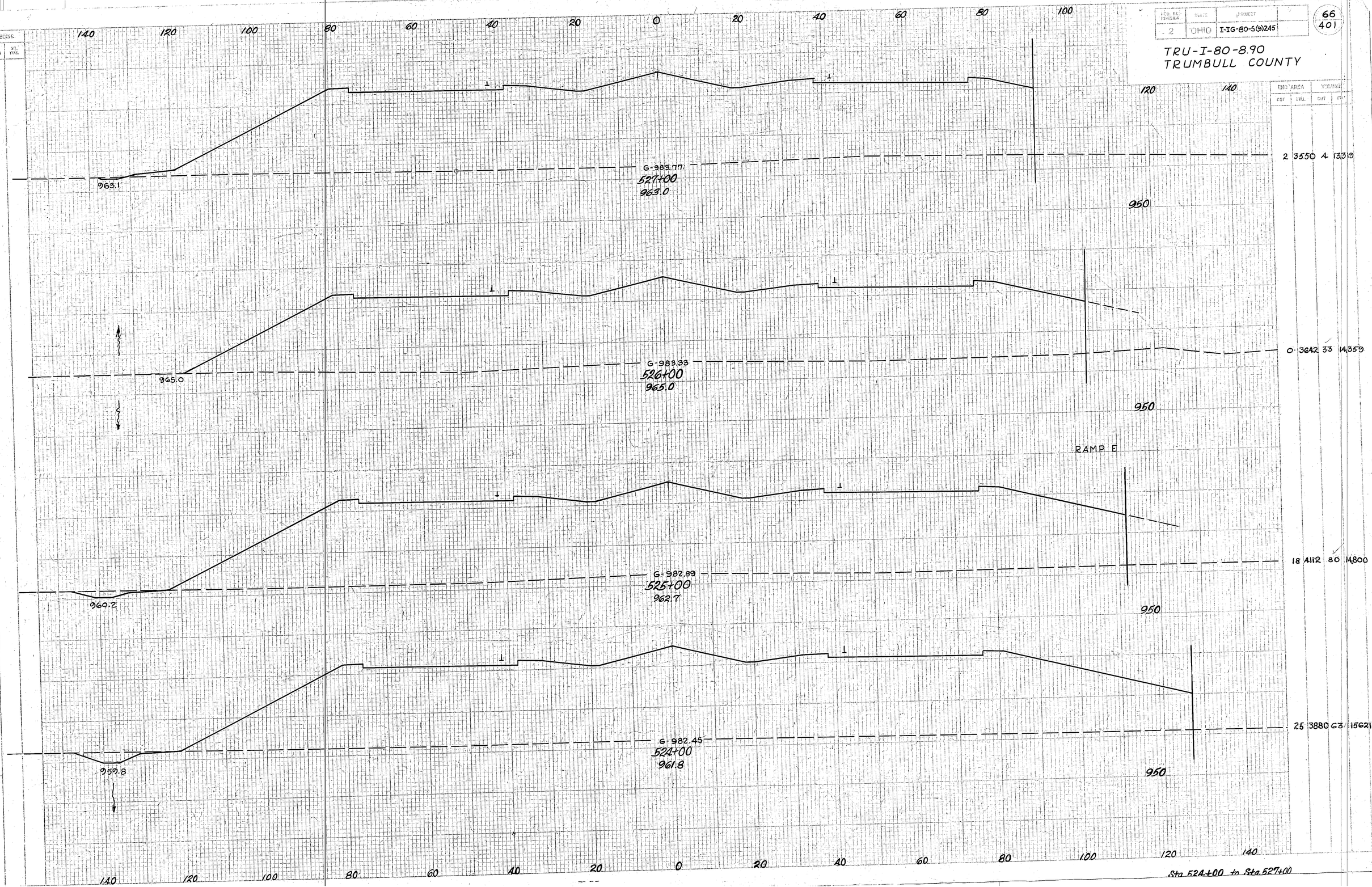
Sta. 520+00 to Sta. 523+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(S)245	

66
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING	
FED. WIDTH	NO. POS.



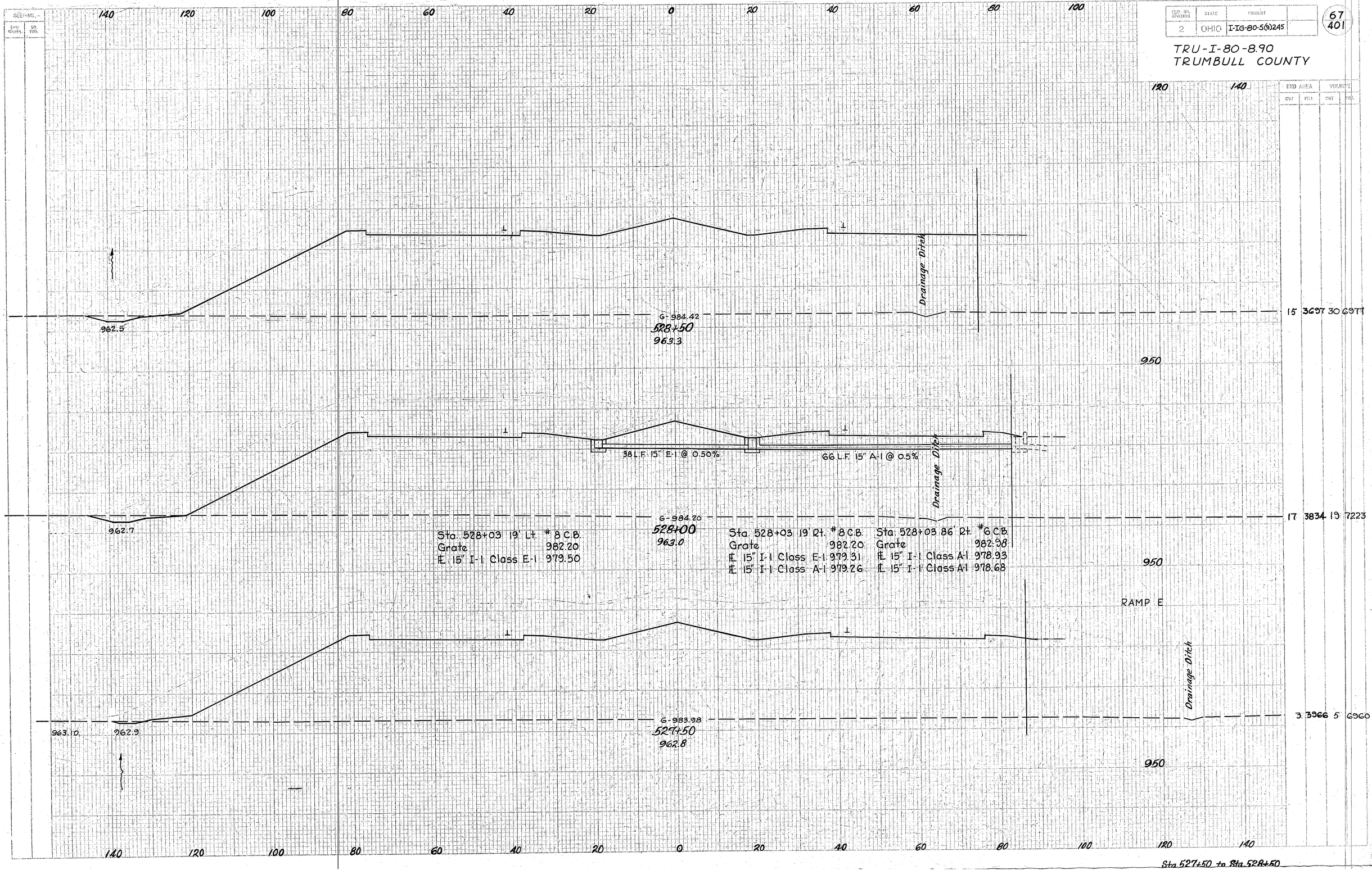
END AREA		VOLUME	
CUT	FILL	CUT	FILL

Sta 524+00 to Sta 527+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(6)245	

67
401

TRU-I-80-8.90
TRUMBULL COUNTY



Sta 527+50 to Sta 528+50

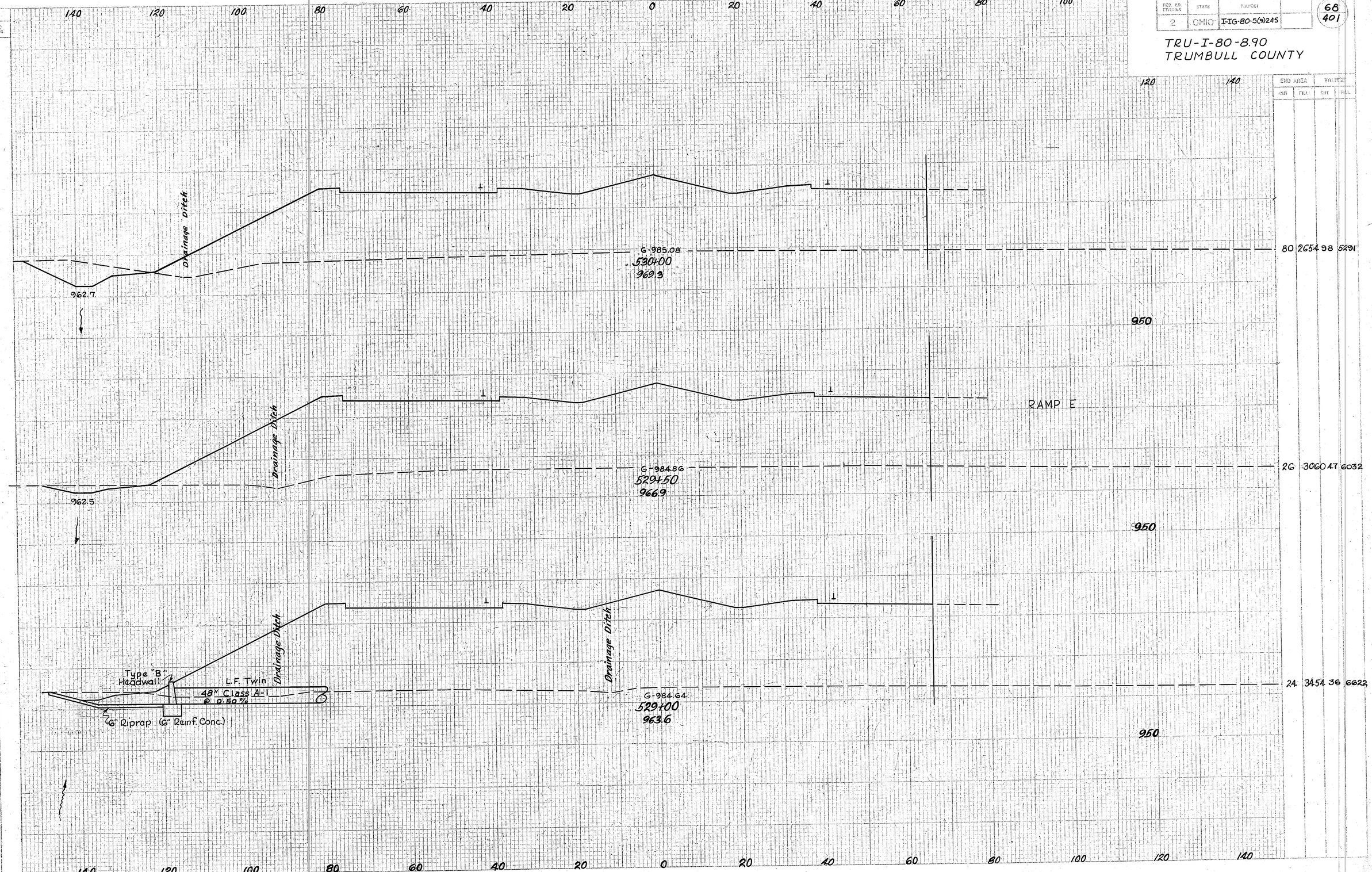
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

68
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING	
CUT WIDTH	SS TYPE

END AREA		VOLUME	
CUT	FILL	CUT	FILL



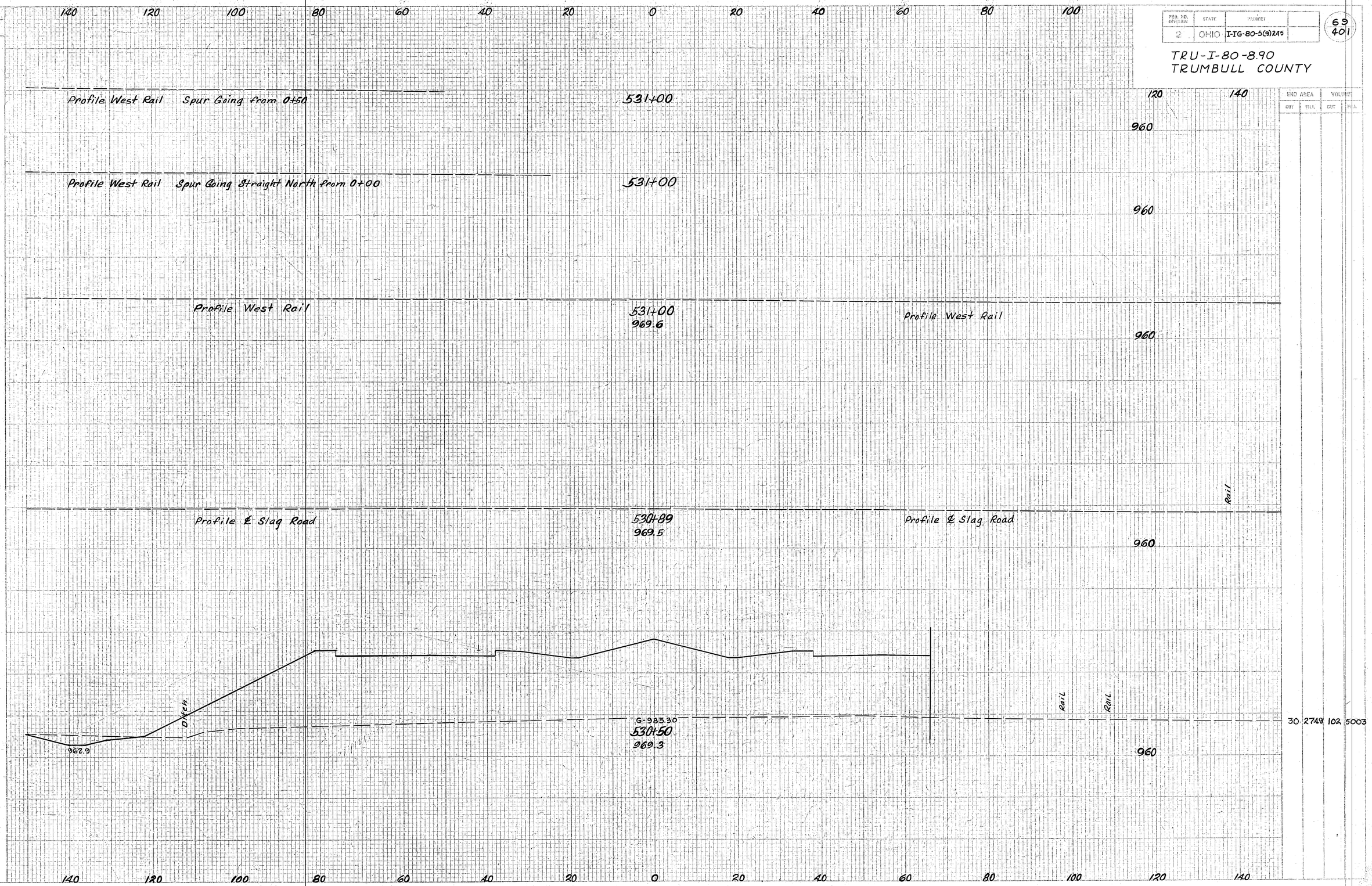
Sta 529+00 to Sta 530+00

SEEDING	
END WIDTH	SQ YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

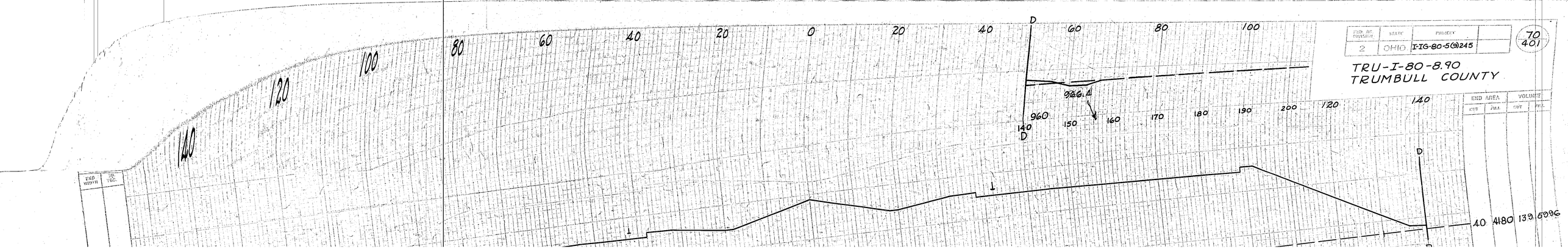
69
401

TRU-I-80-8.90
TRUMBULL COUNTY



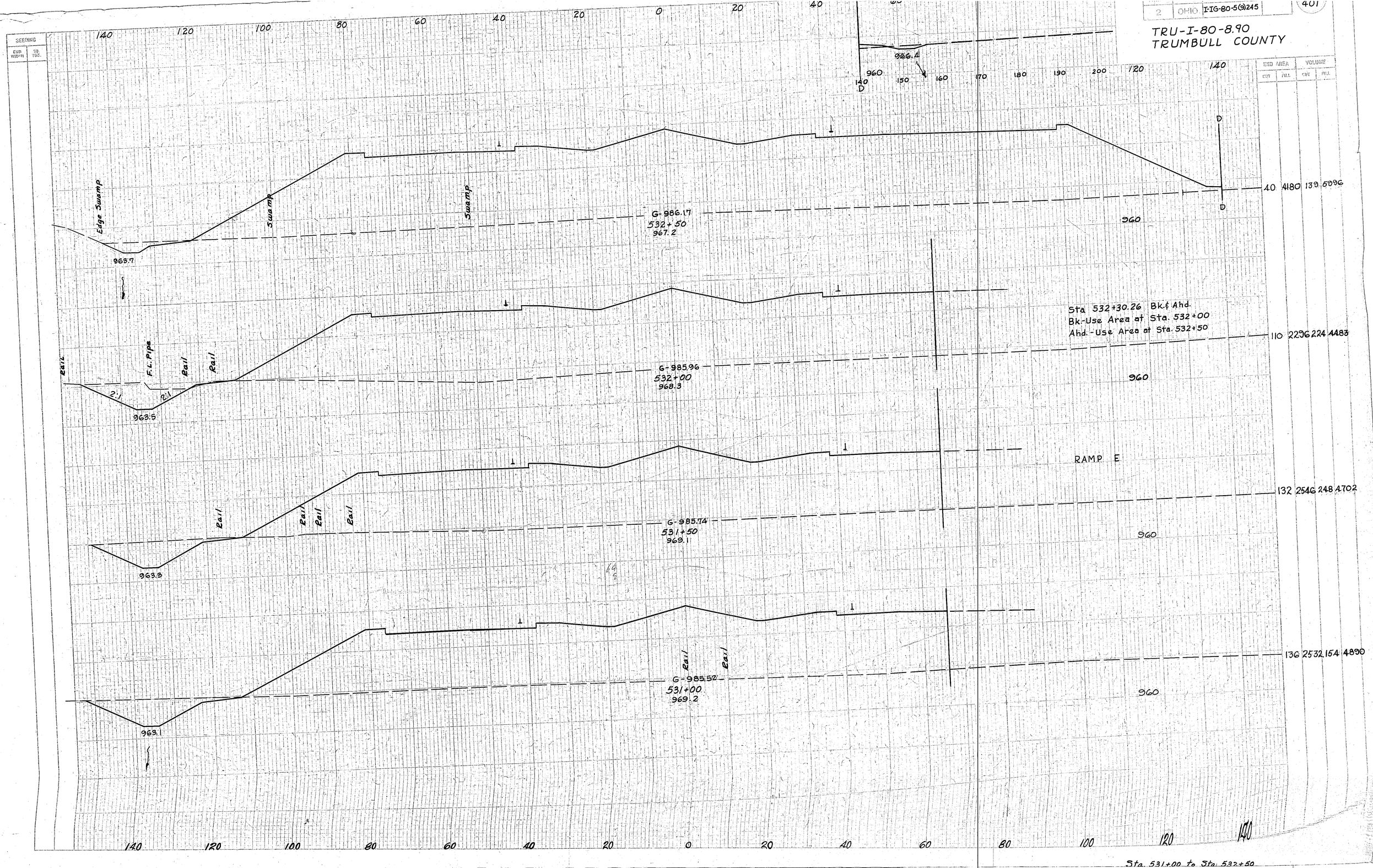
END AREA		VOLUME	
CUT	FILL	CUT	FILL

Sta 530+50 to Sta 531+00


FED. RD. DIVISION
STATE
PROJECT
2
OHIO
I-IG-80-5(3)245
70
401
TRU-I-80-8.90
TRUMBULL COUNTY
END AREA
VOLUME
CUT
FILL
CUT
FILL
END WIDTH
TO TOC
80
60
40
20
0
20
40
60
80
100
120
140
D
960
140
150
160
170
180
190
200
120
140
D
D
40 4180 139.5996

2	OHIO	I-IG-80-5(9)245	401

TRU-I-80-8.90
TRUMBULL COUNTY



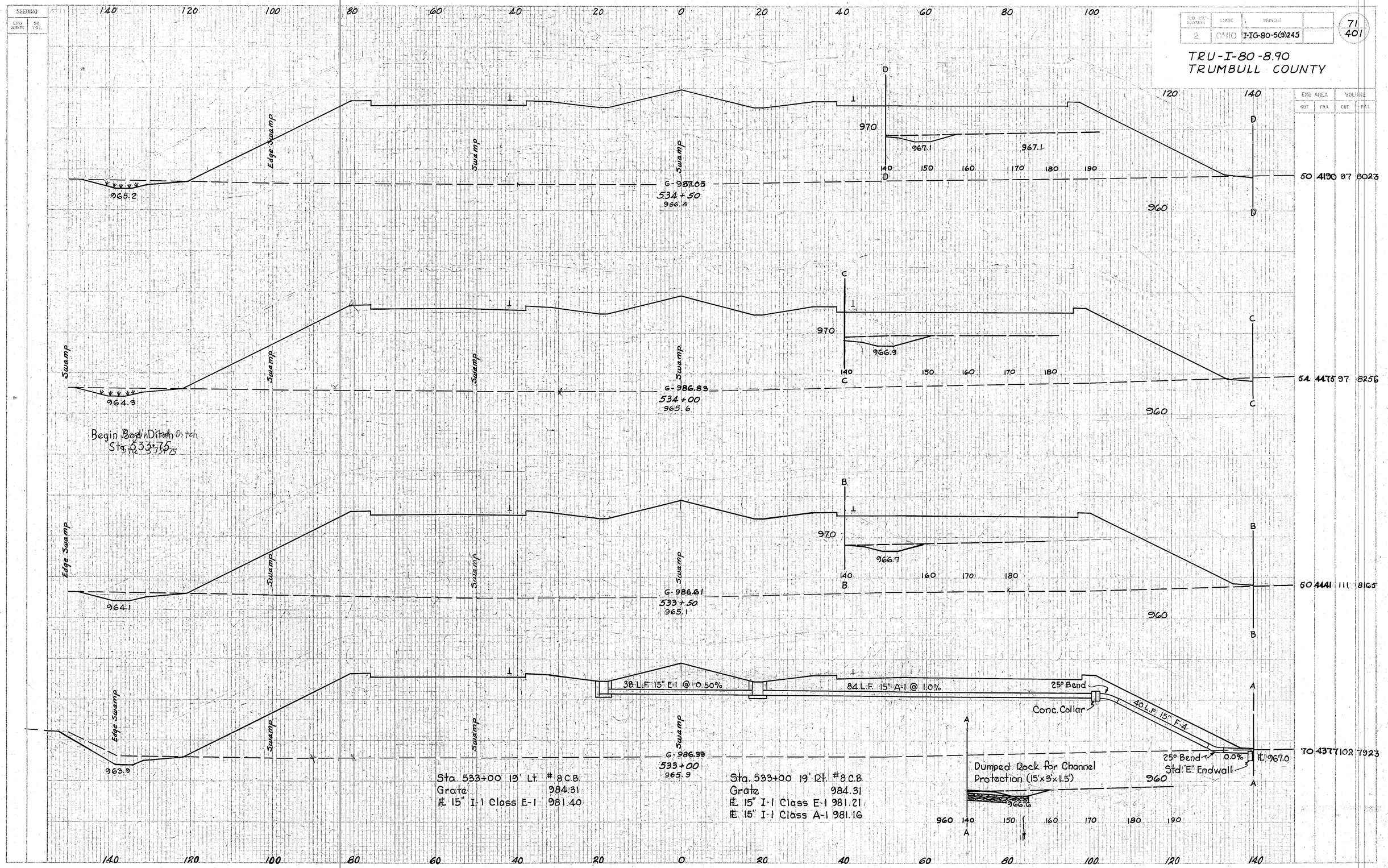
Sta. 531+00 to Sta. 532+50

FED. ROAD DIST.	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

71
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING	
ERO. WIN/IN	SQ. YDS.

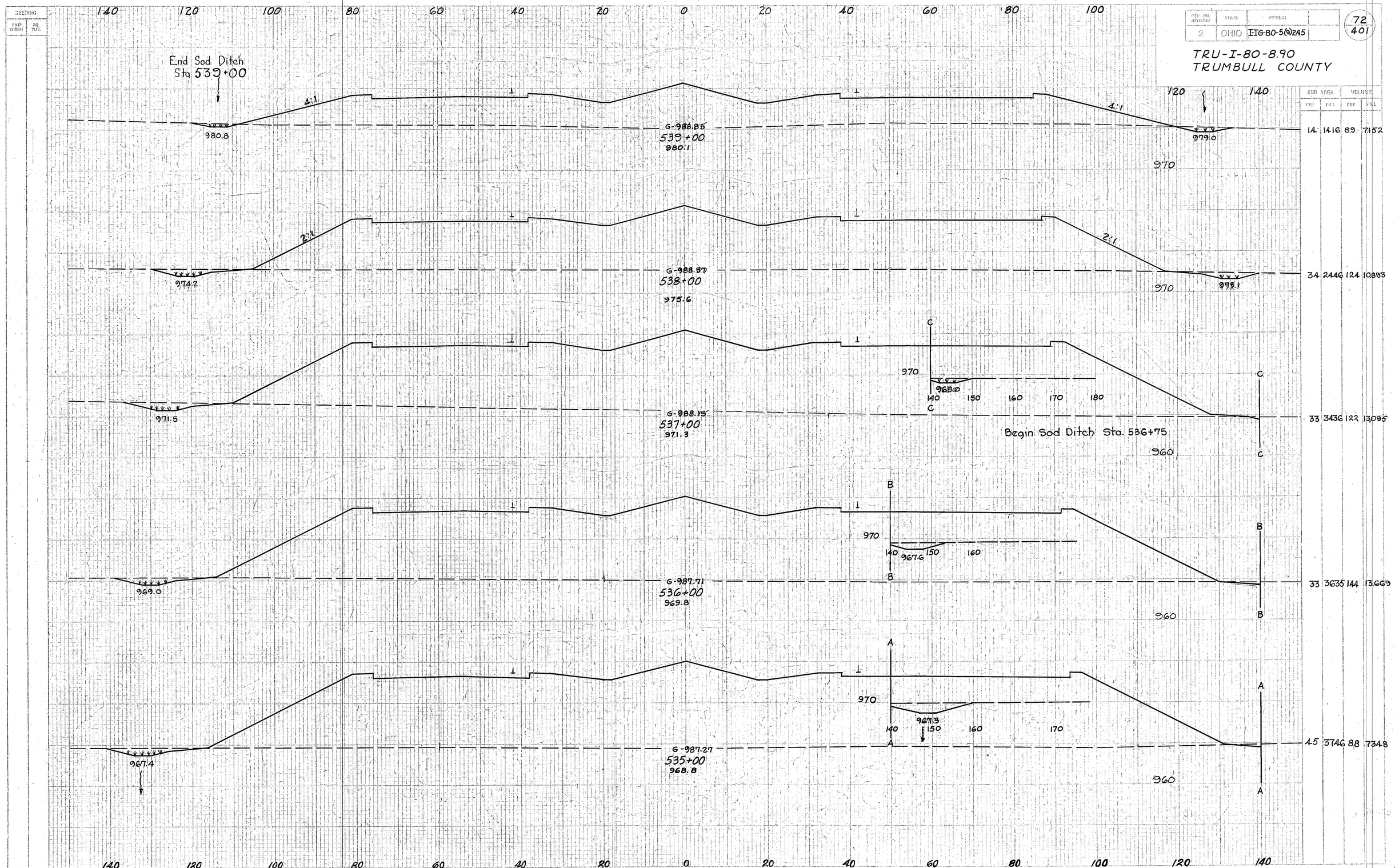


END AREA		VOLUME	
CUT	FILL	CUT	FILL

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	FIG-80-5(Q)245	

72
401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
14	1416	89	7152
34	2446	124	10893
33	3436	122	13095
33	3635	144	13669
45	3746	88	7348

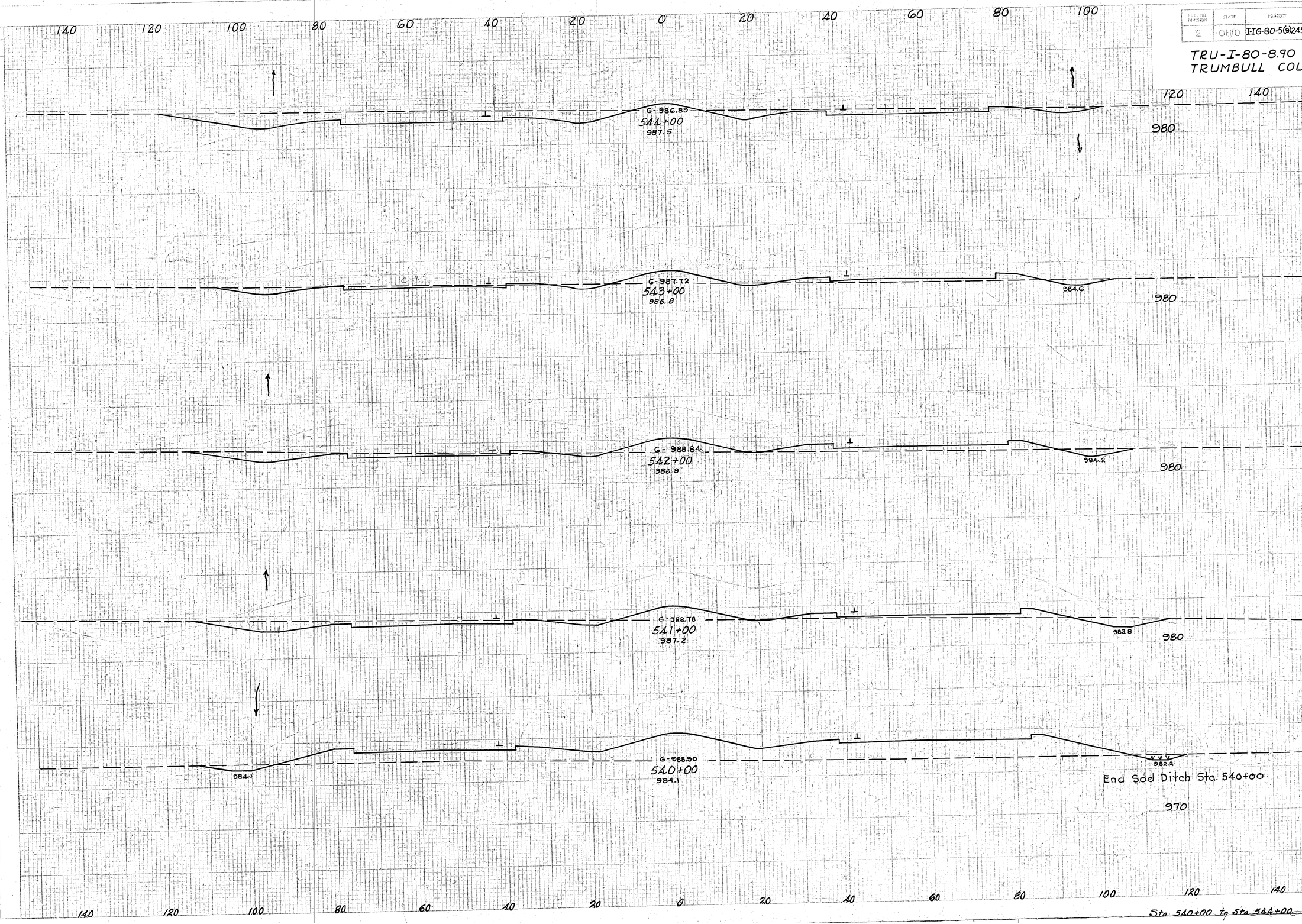
Sta. 536+00 to Sta. 539+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

73
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING	
END WIDTH	SQ. YDS.



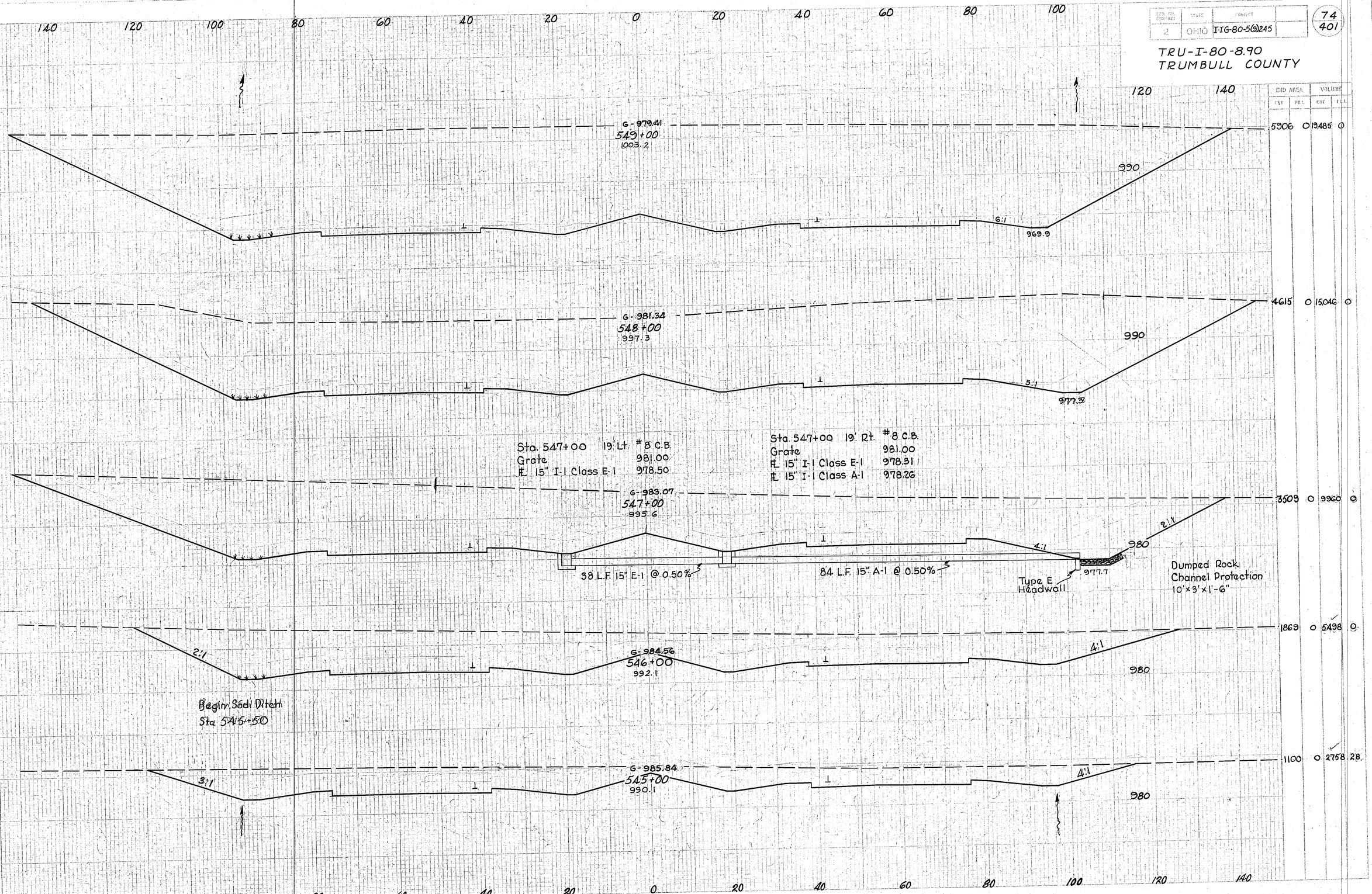
END AREA		VOLUME	
CUT	FILL	CUT	FILL
389	16	841	213
65	100	313	467
104	152	663	483
254	109	515	1470
24	685	70	3891

SEEDING	
END 9210 TH	SD YD

STA. NO. DESCRIPTION	STATE	PROJECT	
2	OHIO	I-IG-80-5(3)245	

74
401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
5906	0	19,485	0
4615	0	15,046	0
3509	0	9960	0
1869	0	5498	0
1100	0	2758	28

Sta. 545+00 to Sta. 549+00

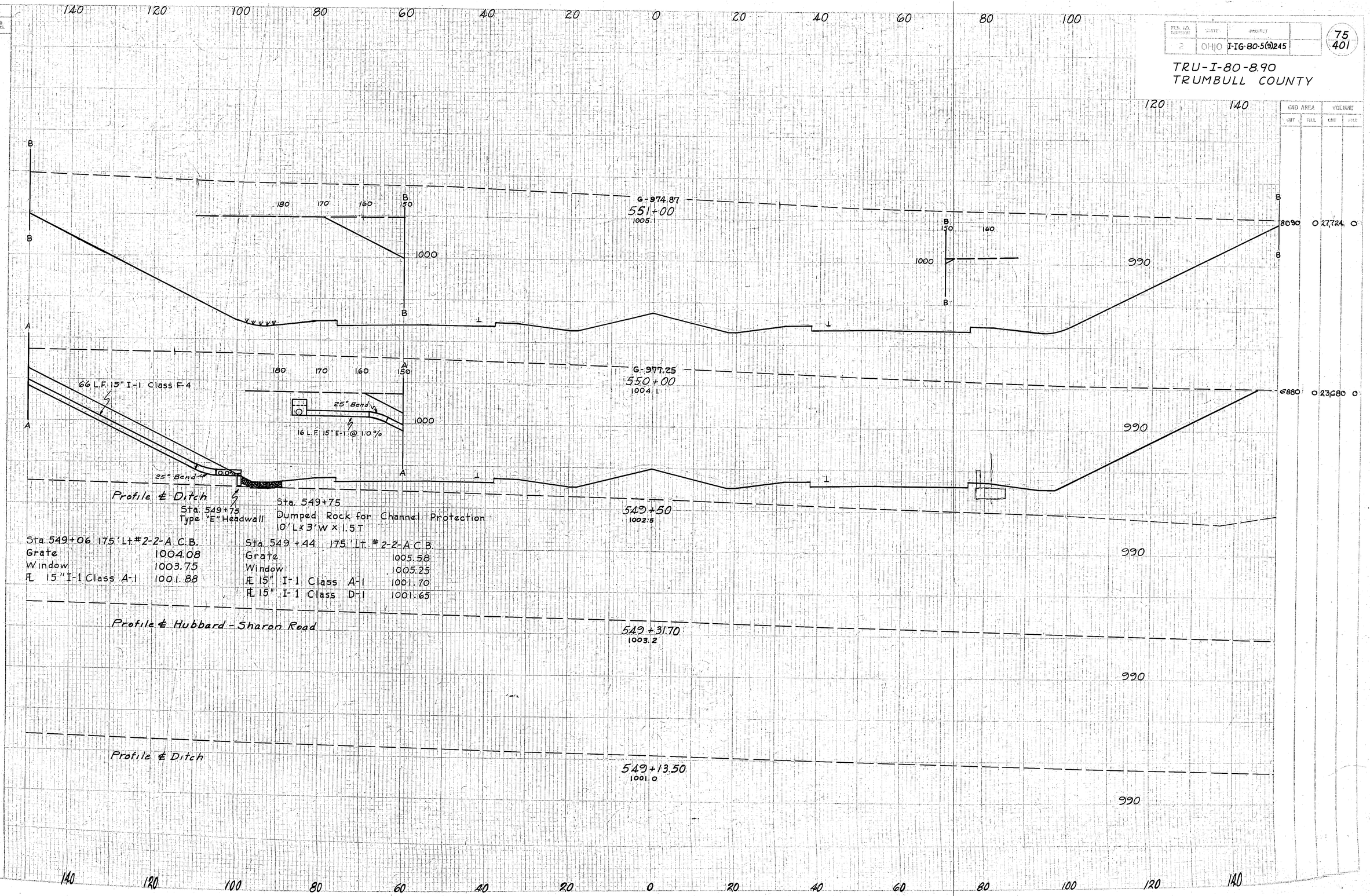
SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

75
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL



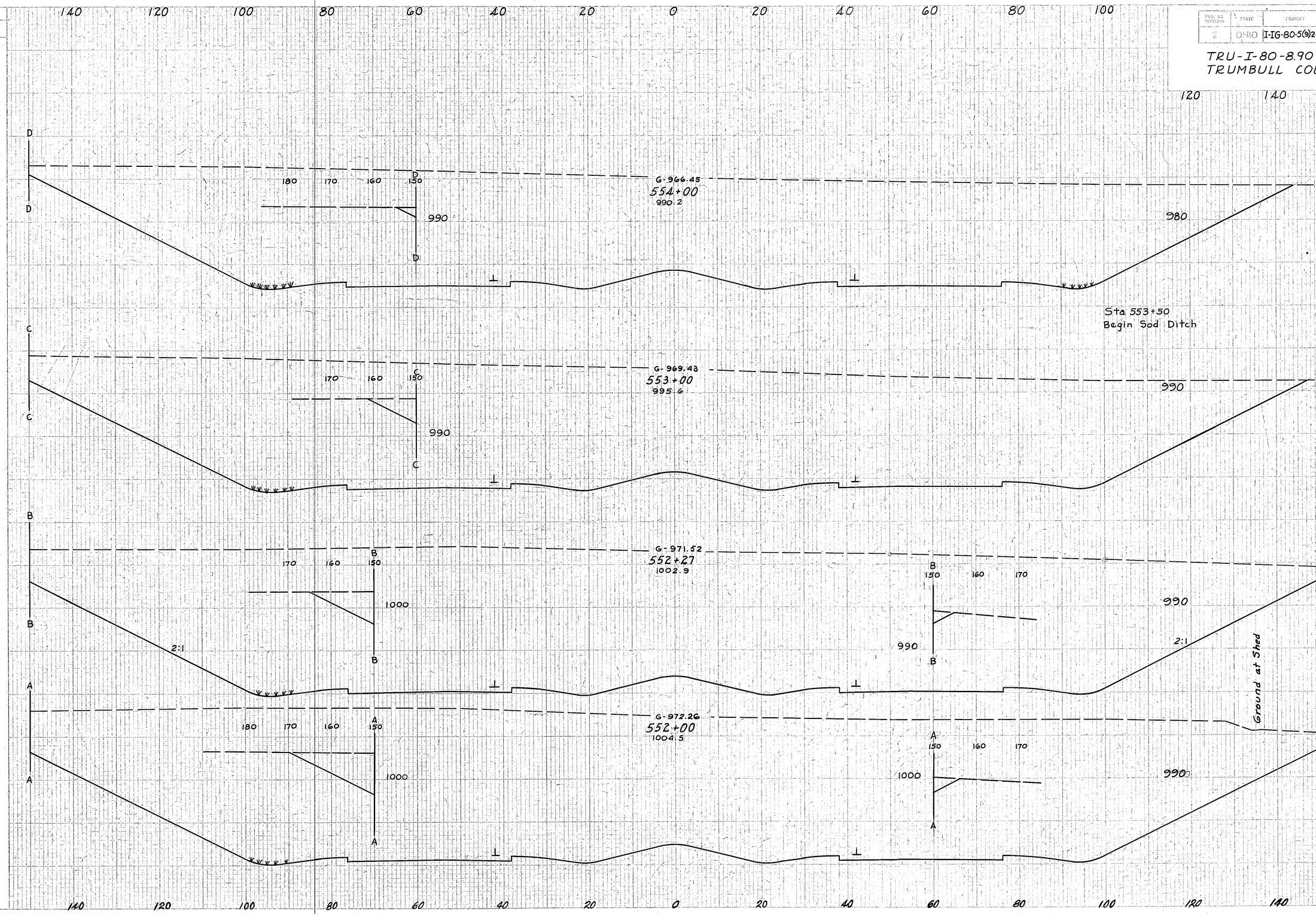
Sta. 549+13.50 to Sta. 551+00

SEEDING	
END VOLUME	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

76
401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
6233	0	24298	0
6888	0	20564	0
8324	0	8596	0
8868	0	31192	0

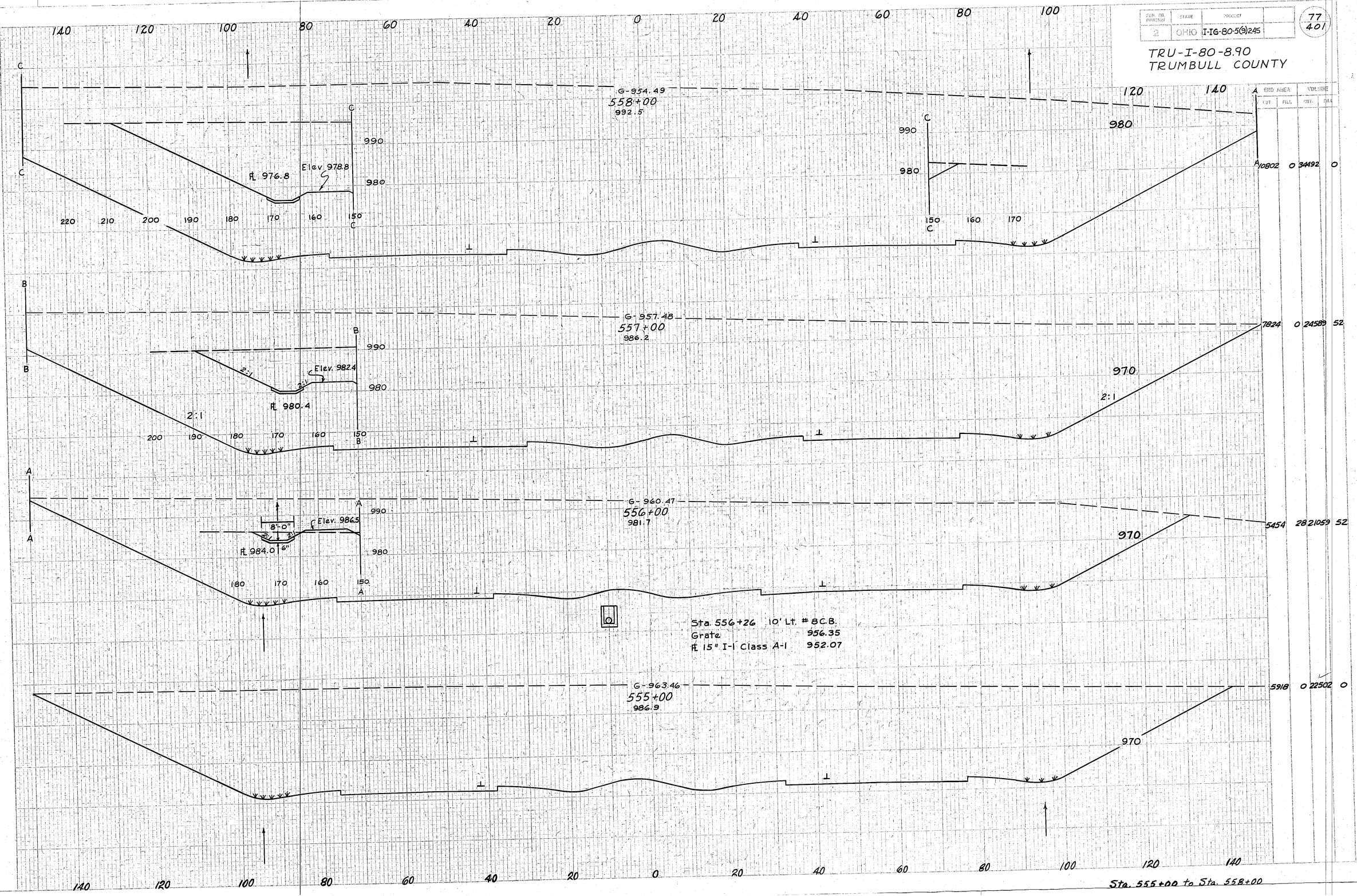
Sta. 552+00 to Sta. 554+00

SEEDING	
END AREA	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-80-5(S)245

77
401

TRU-I-80-8.90
TRUMBULL COUNTY

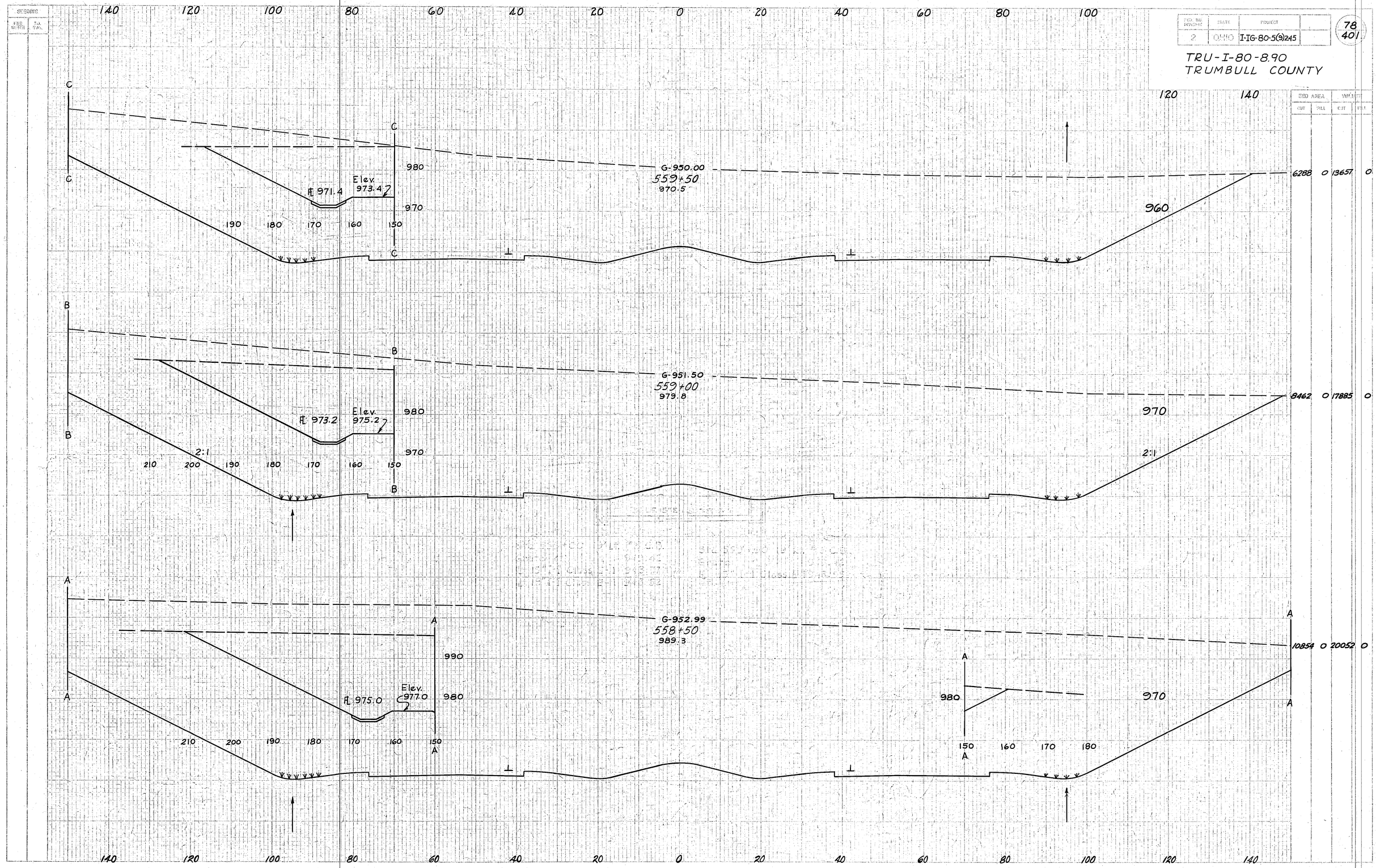


Sta. 555+00 to Sta. 558+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

78
401

TRU-I-80-8.90
TRUMBULL COUNTY



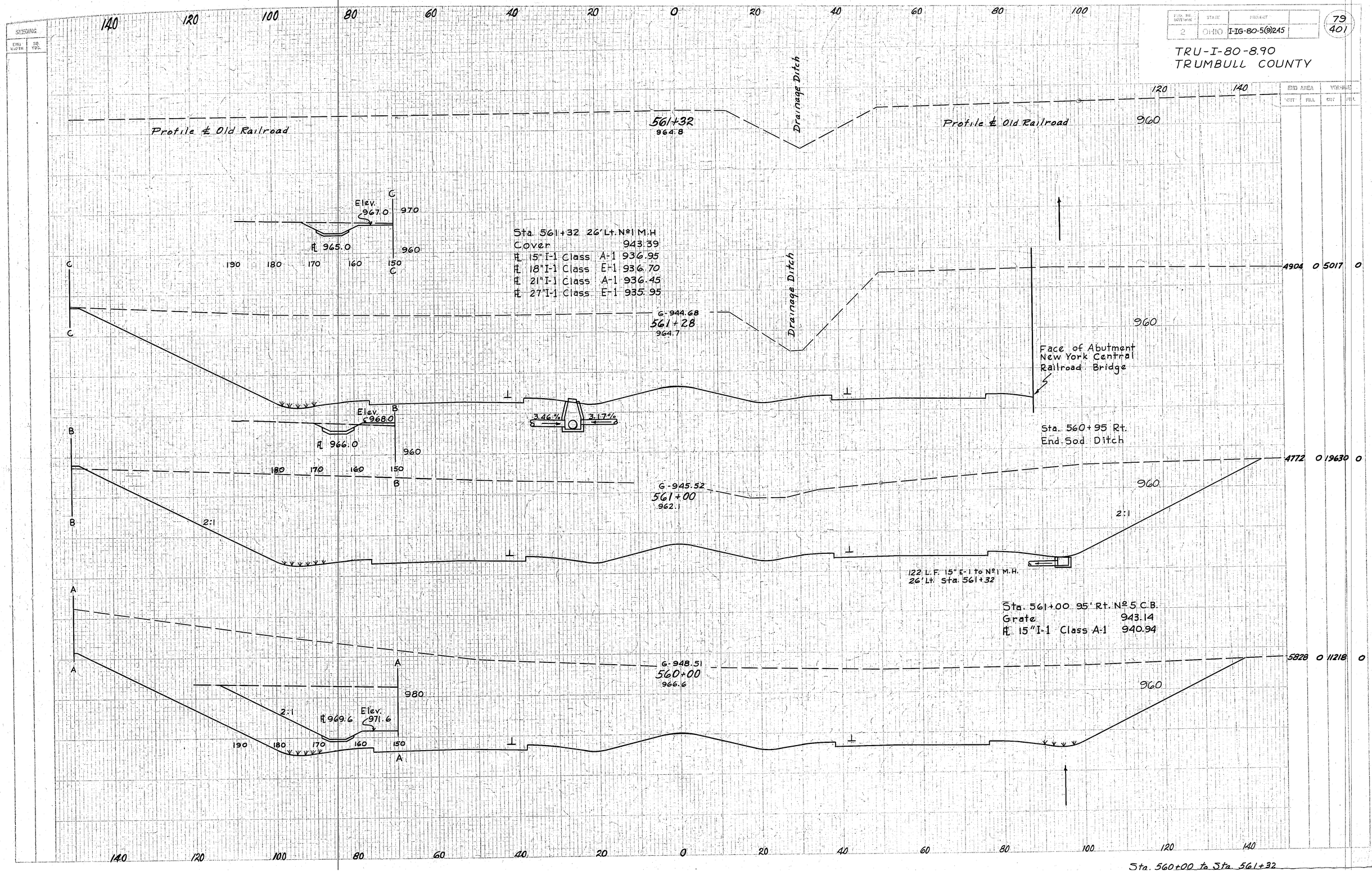
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

79
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

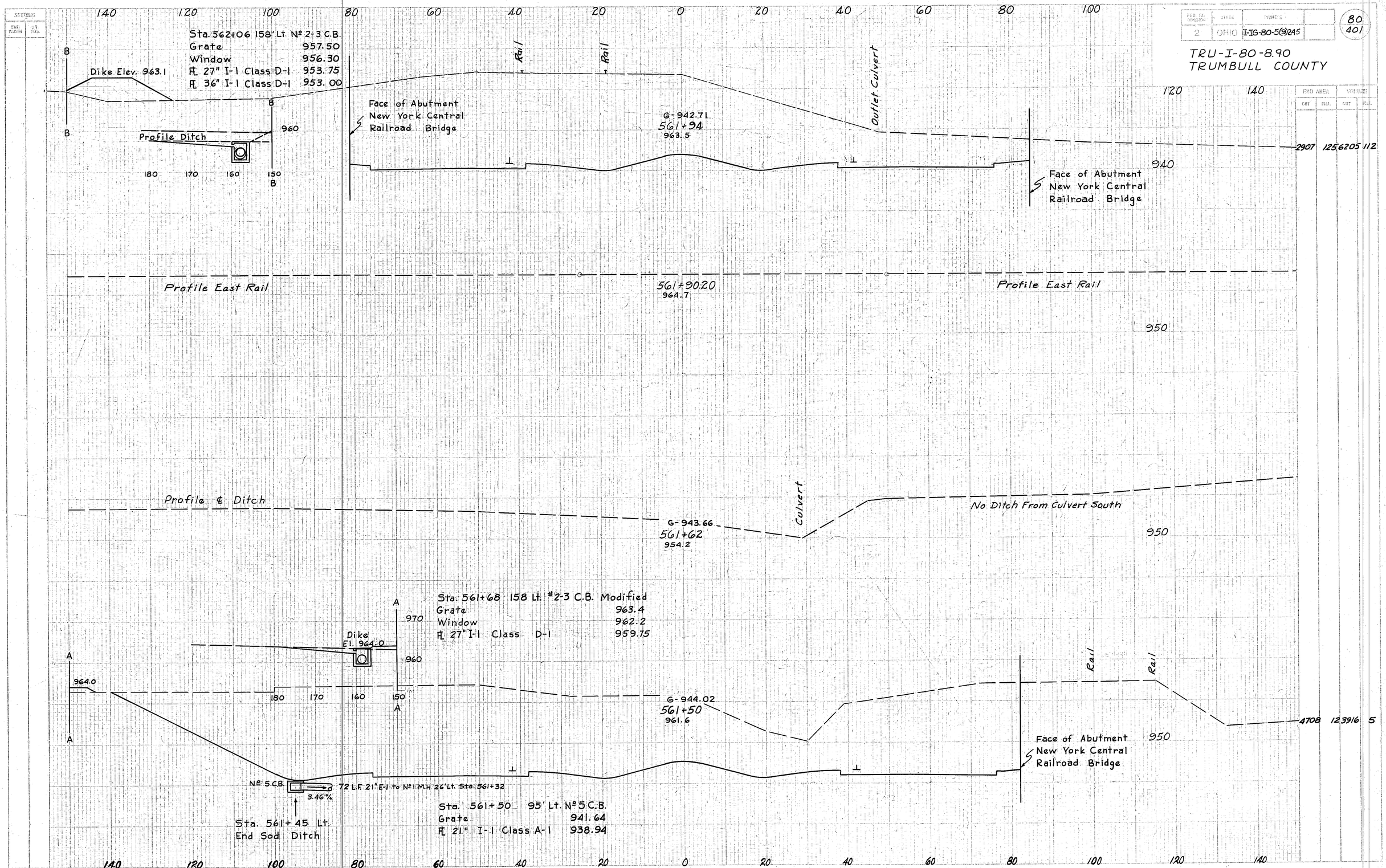


Sta. 560+00 to Sta. 561+32

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

80
401

TRU-I-80-8.90
TRUMBULL COUNTY



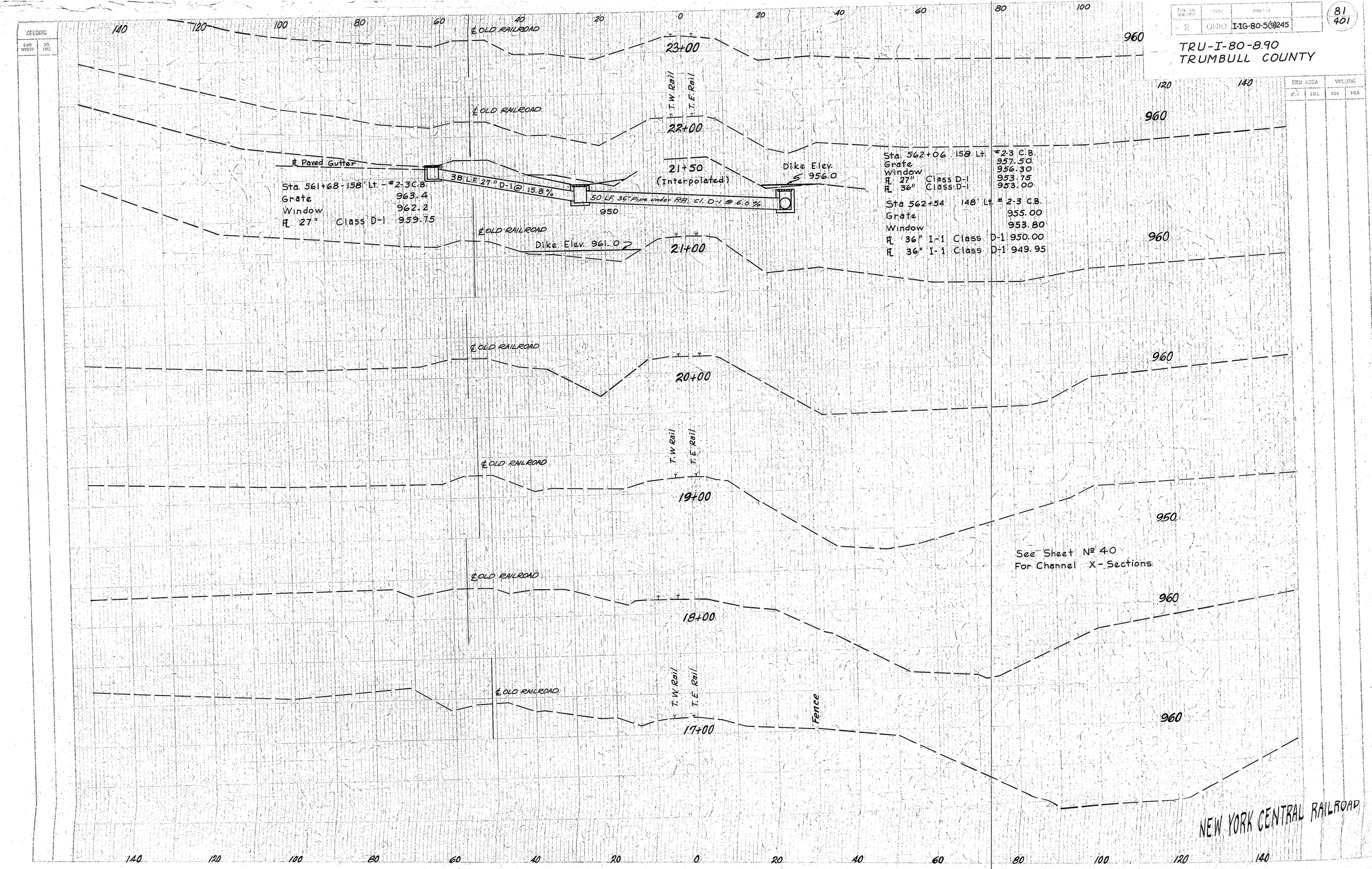
SEEDING	
END WIDTH	SQ. YDS

PROJ. NO. DESIGNATION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

81
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

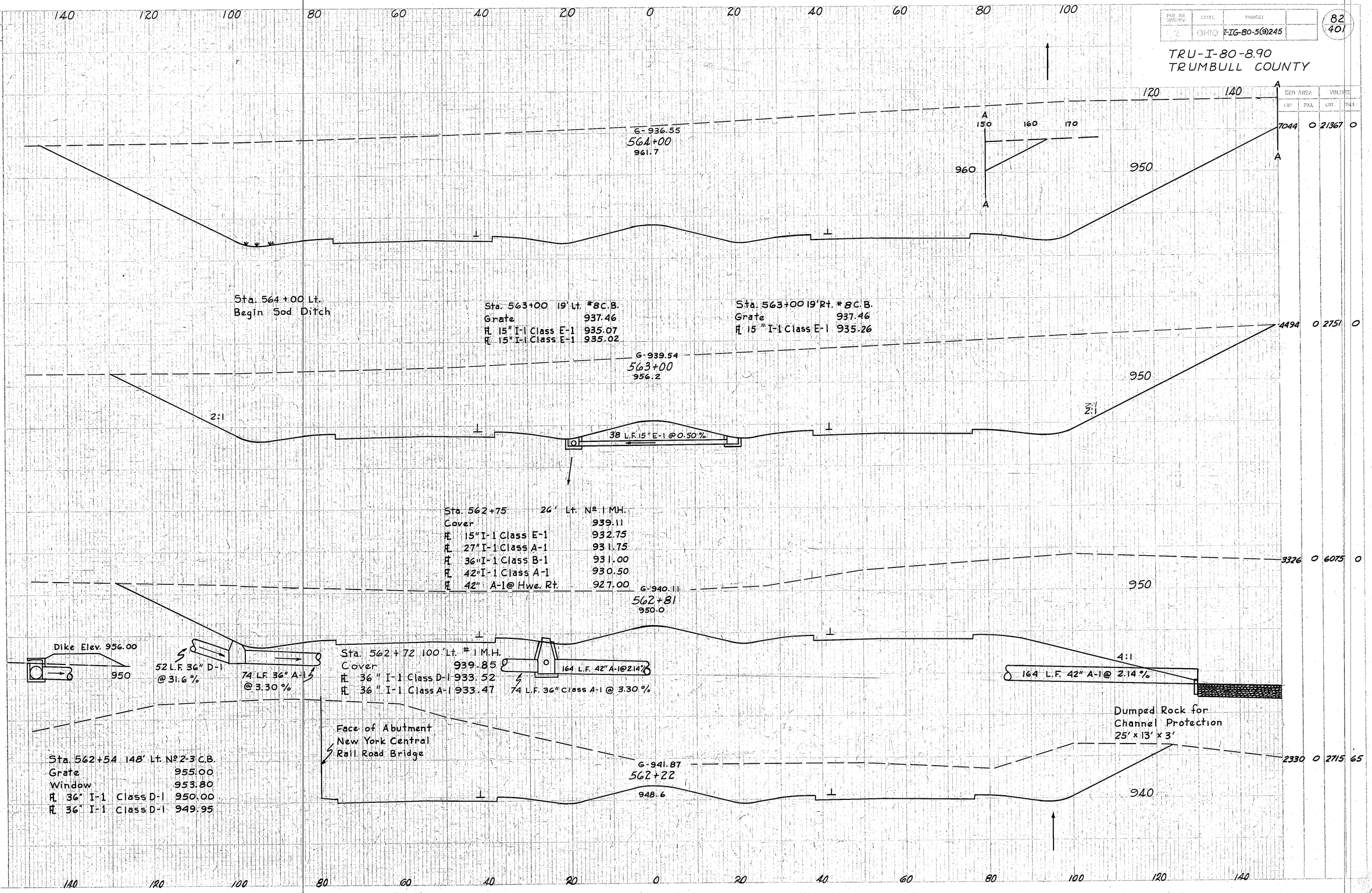


FED. RD. DIVISION	STATE	PROJECT	
12	OHIO	I-IG-80-5(9)245	

82
401

TRU-I-80-8.90
TRUMBULL COUNTY

BEGINNING	
END VIDER	SQ. YDS.



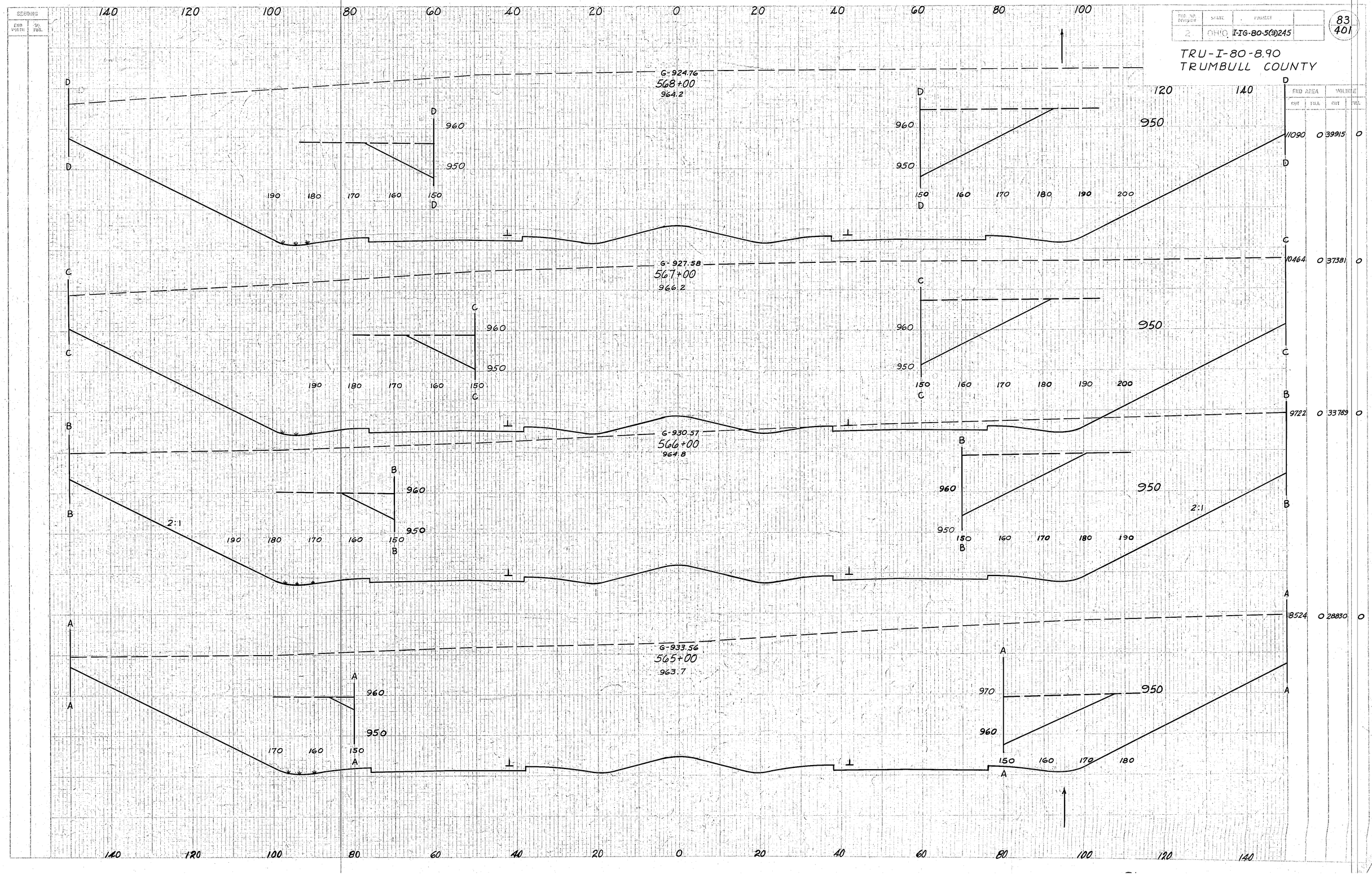
END AREA		VOLUME	
CUT	FILL	CUT	FILL
7044	0	21367	0
4494	0	2751	0
3326	0	6075	0
2330	0	2715	65

Sta. 562+22 to Sta. 564+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

83
401

TRU-I-80-8.90
TRUMBULL COUNTY



TRU-I-80-8.40
TRUMBULL COUNTY

SEEDING	
LND WIDTH	SD DES.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
190	3116	991	2998
1084	738	4389	793
3002	0	13722	0
4408	0	18889	0

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

G-921.56
575+00
909.3

Dumped Rock for Channel Protection 9' x 2.5'
892.9

915.4
6:1
4:1
900

G-920.92
574+58
927.6

897.0
2:1
7:1
915.6
920
3:1

G-920.23
574+00
932.2

Sta. 574+25
Begin Dumped Rock for Channel Protection
7' x 2.5'
6:1
℄ 916.73

Sta. 573+25 19 Lt. No 8 C.B.
Grate 917.54
℄ 15" I-1 E-1 910.65
℄ 15" I-1 E-1 910.60
℄ 15" I-1 A-1 116' Lt. 907.10

Sta. 573+25 19' Rt. #8 C.B.
Grate 917.54
℄ 15" I-1 Class E-1 912.47

8:1
915.9
920
2:1

G-919.49
573+00
937.7

38 L.F. 15" E-1 @ 5.00%

2:1
℄ 916.97
916.3
930
2:1

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

Sta. 573+00 to Sta. 575+00

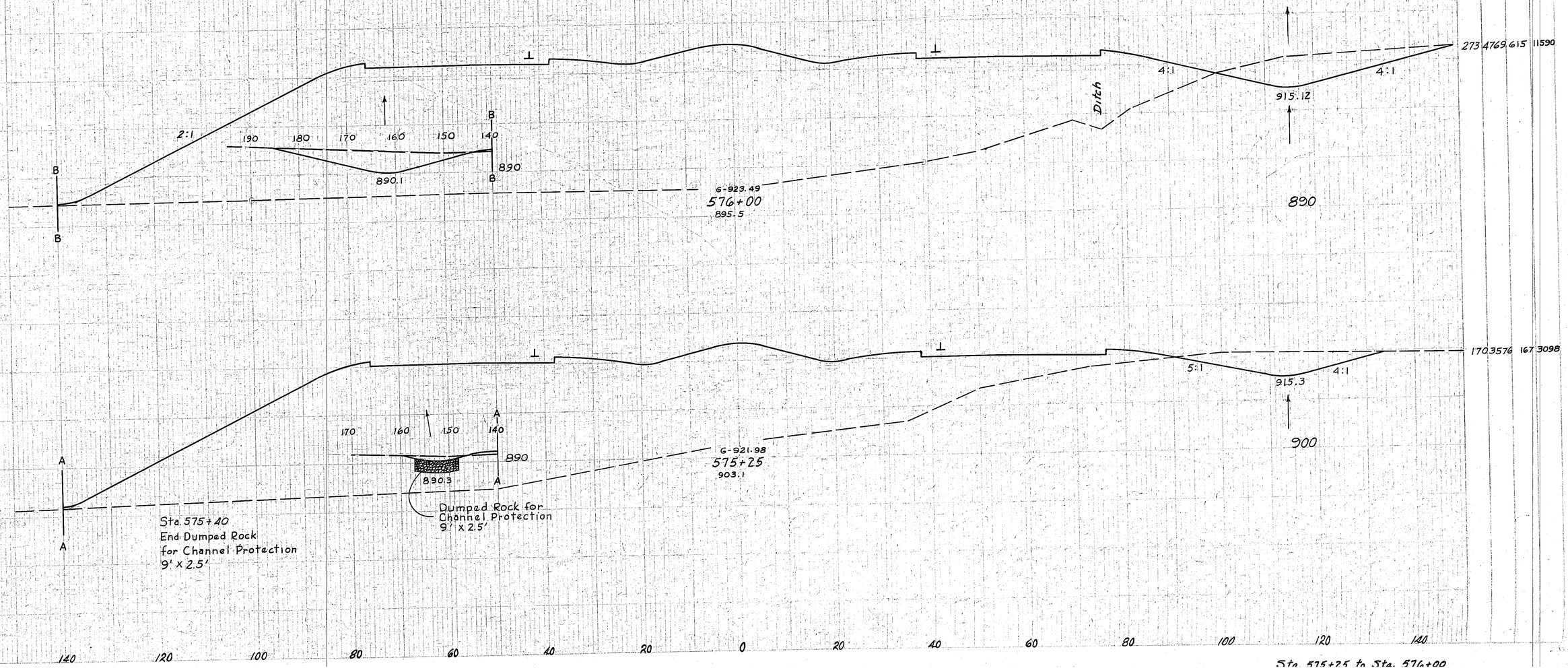
SEEDING	
END MILEPOST	SQ. YDS.

		I-IG-80-5(9)245	

86
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL



Sta. 575+25 to Sta. 576+00

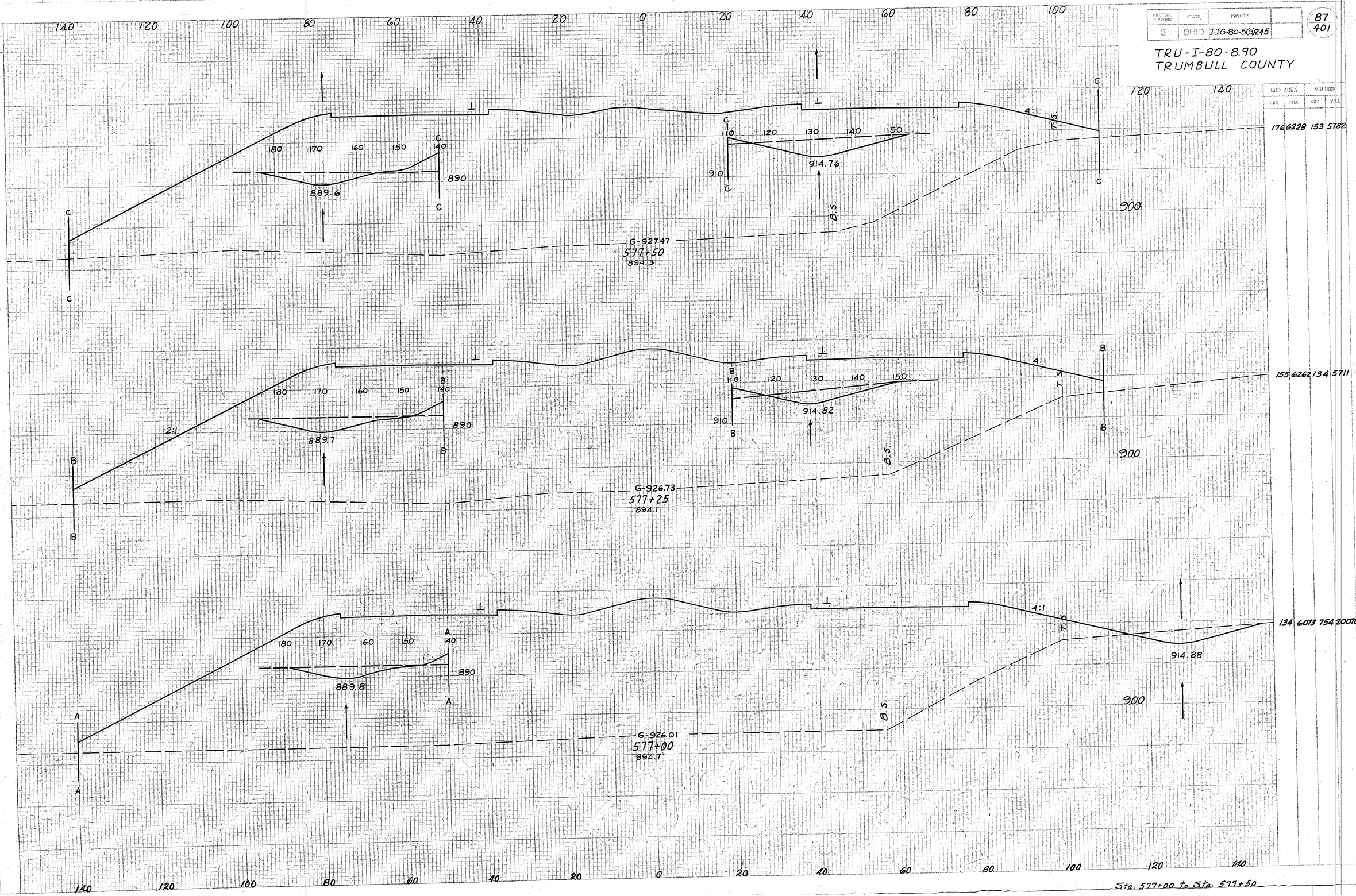
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	IIG-80-5(9)245	

87
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING	
BIND WIDTH	SQ. YDS.

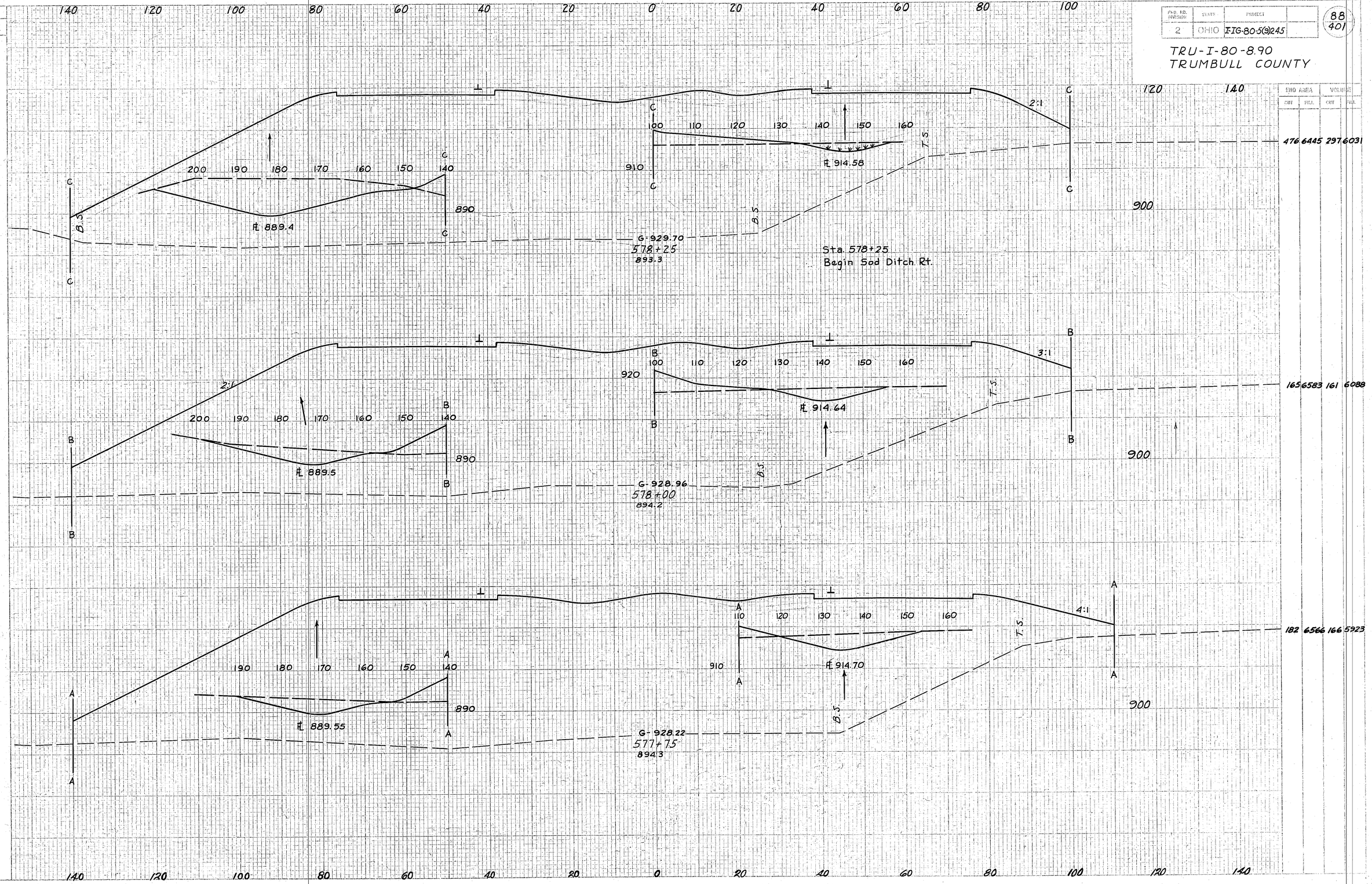
END AREA		VOLUMES	
CUT	FILL	CUT	FILL
176	6228	153	5782
155	6262	134	5711
134	6073	754	20078



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	FIG-80-5(9)245	

88
401

TRU-I-80-8.90
TRUMBULL COUNTY



Sta. 577+75 to Sta. 578+25

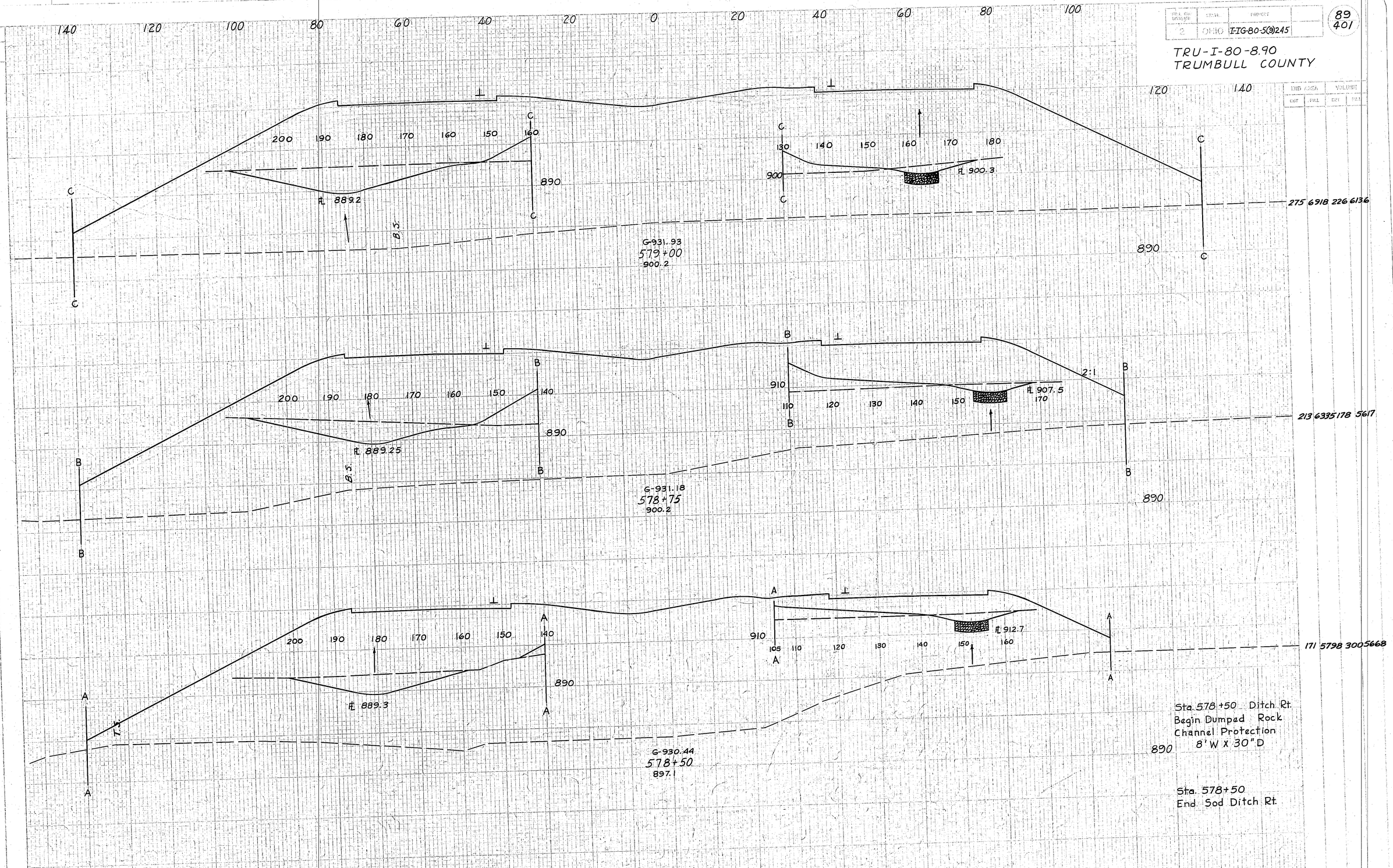
SEEDING	
SEED WIDTH	20 FT.

FED. AID DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

89
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL



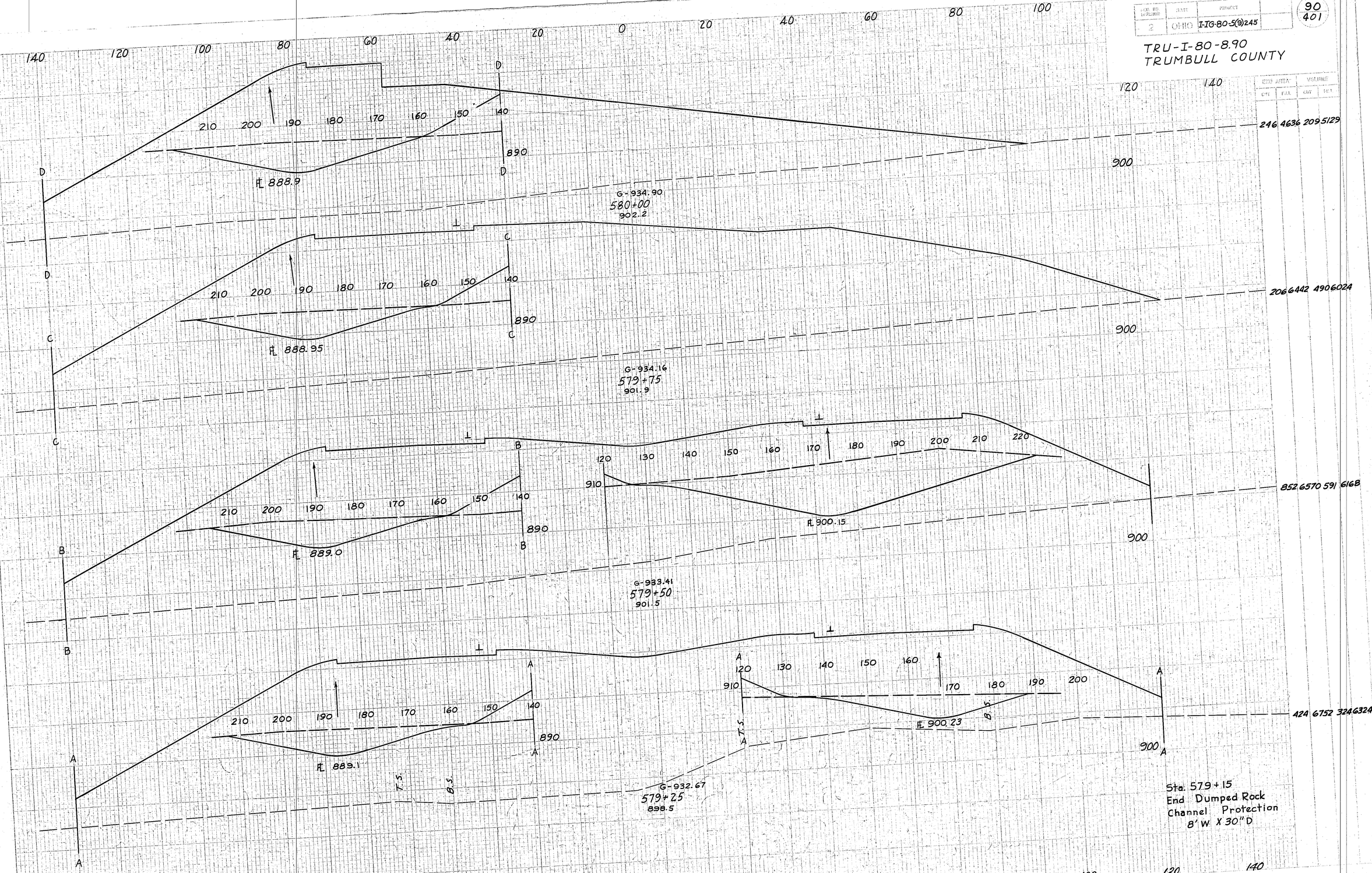
SEEDING	
END WIDTH	NO. TONS

CODE NO. DISTRICT	STATE	PROJECT
2	OHIO	I-IG-80-5(3)245

90
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL



Sta. 579+25 to Sta. 580+00

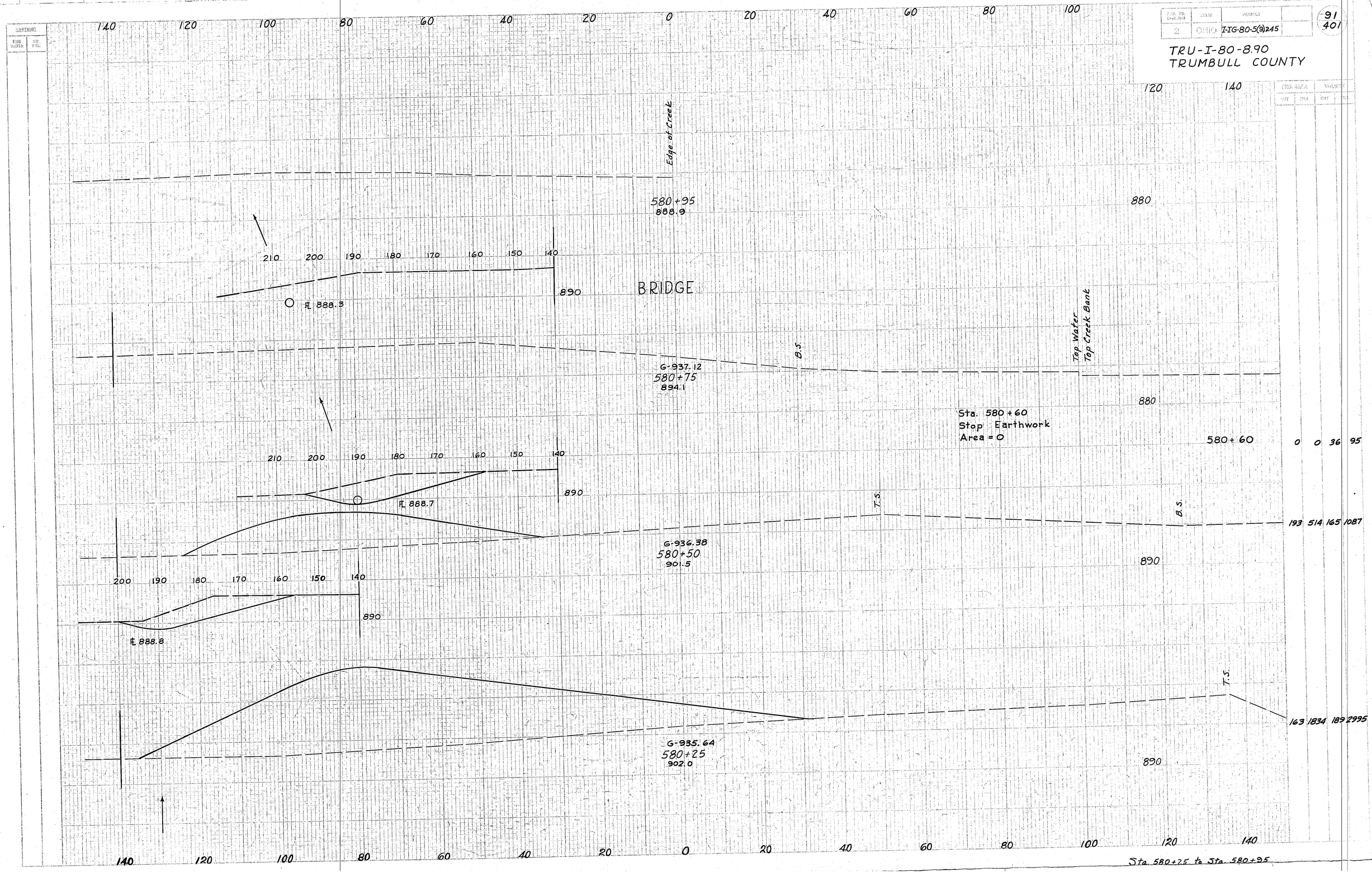
SHEETING	
ENG WORK	SO FOG

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

91
401

TRU-I-80-8.90
TRUMBULL COUNTY

CUB. YDS.			
CUT	FILL	CUT	FILL



Sta. 580+25 to Sta. 580+95

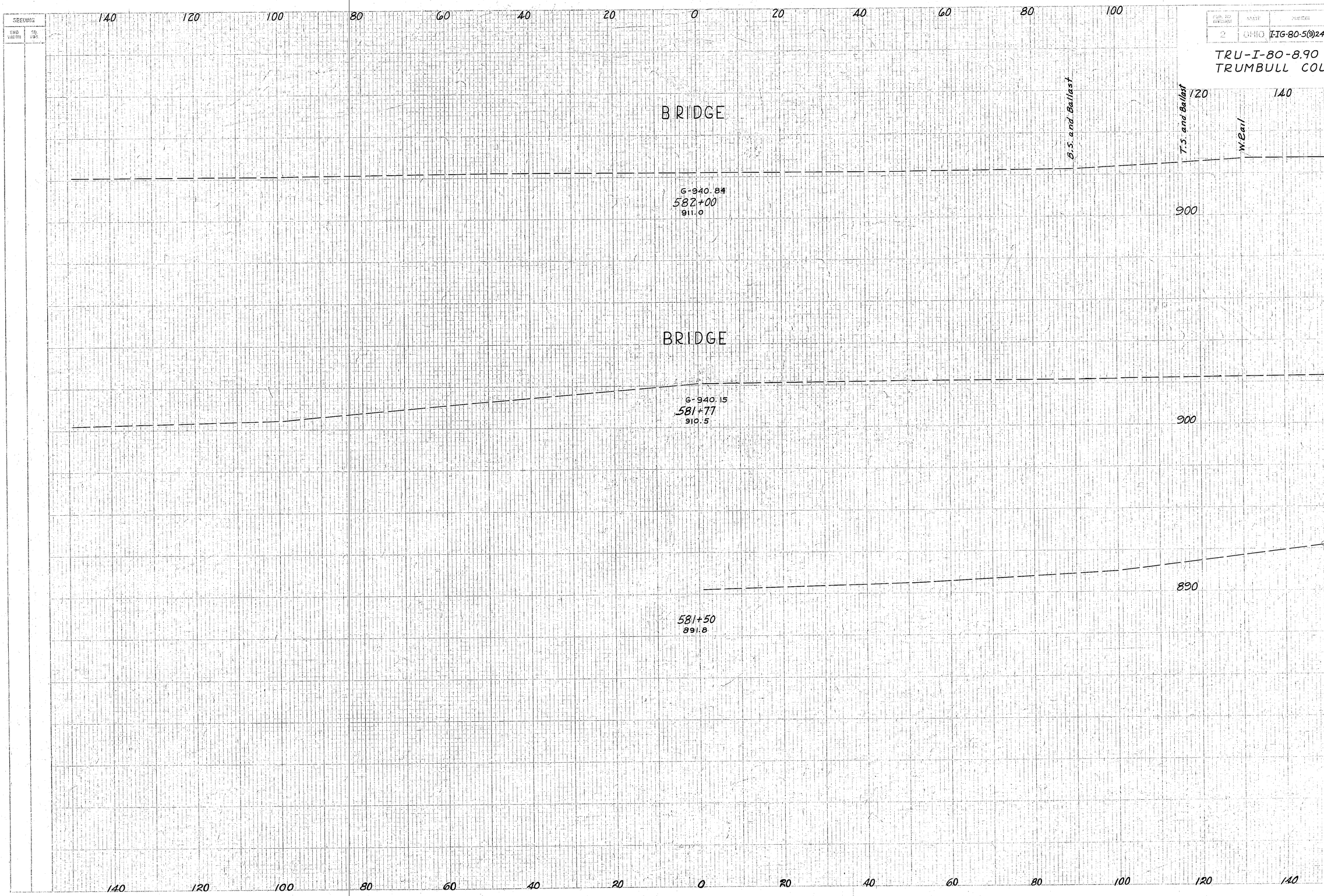
SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

92
401

TRU-I-80-8.90
TRUMBULL COUNTY

AREA		VOLUME	
CUT	FILL	CUT	FILL

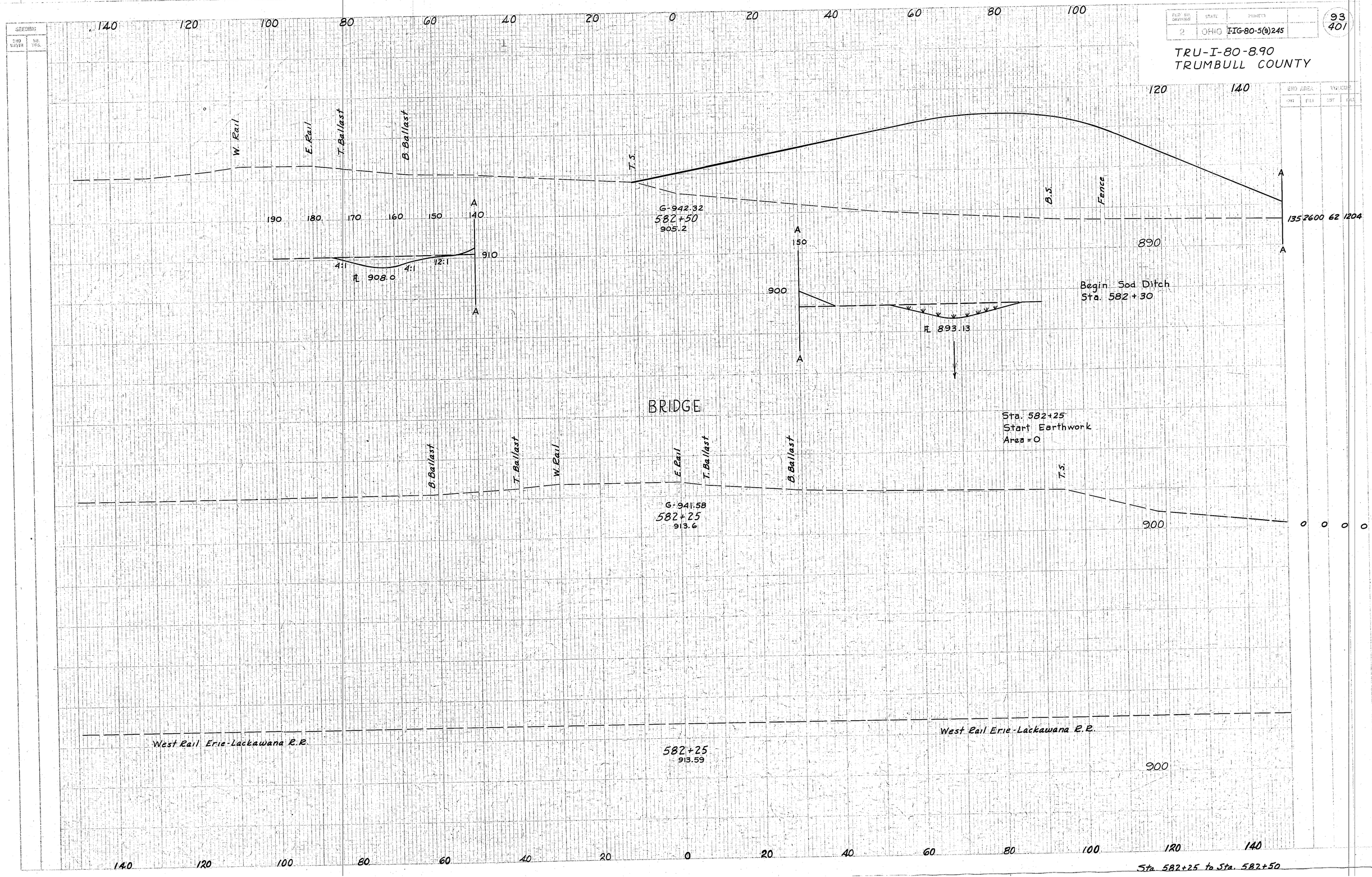


Sta. to Sta. 582+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	FIG-80-5(8)245	

93
401

TRU-I-80-8.90
TRUMBULL COUNTY



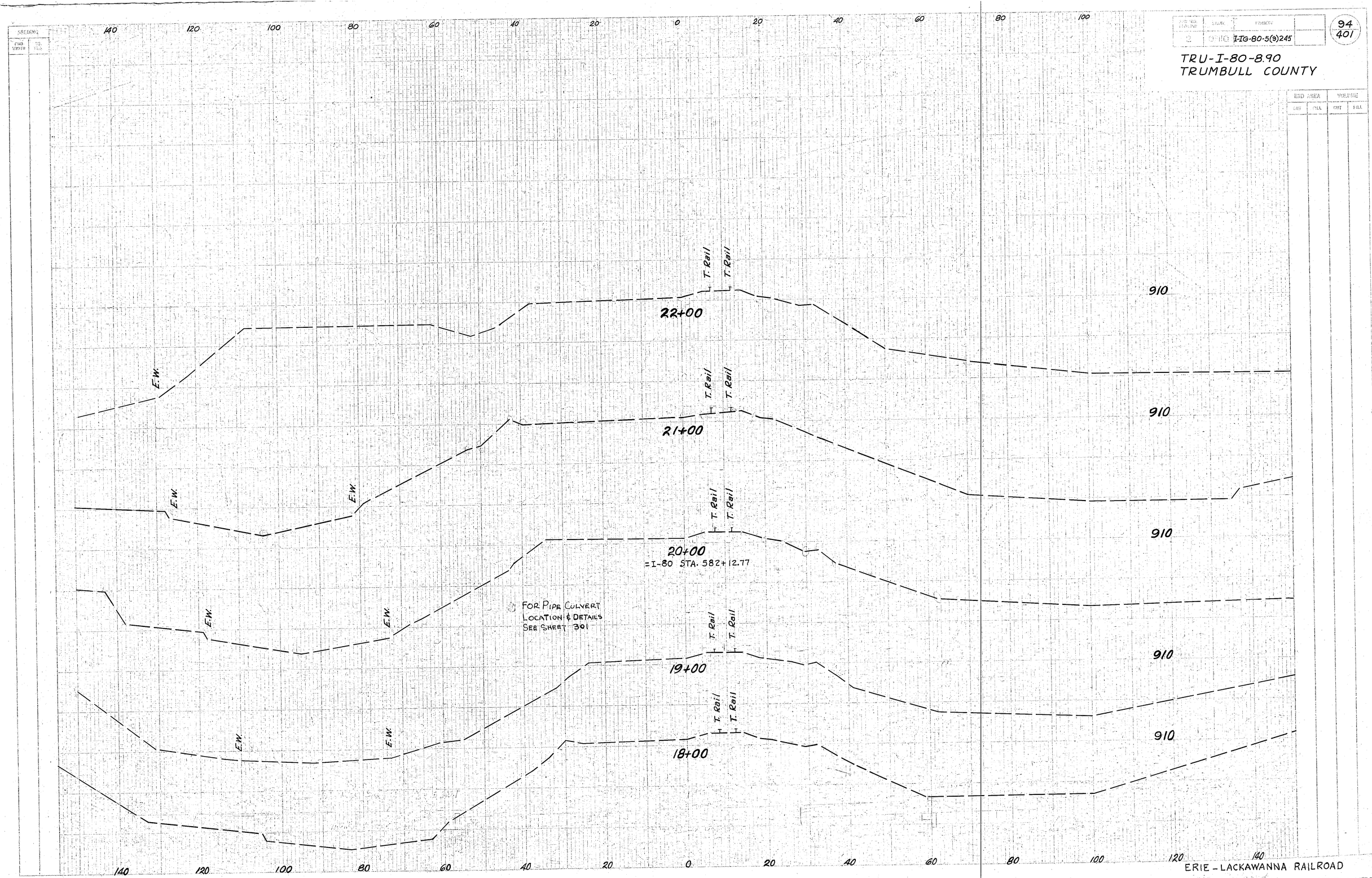
Sta. 582+25 to Sta. 582+50

STATE	PROJECT	
OHIO	I-IG-80-5(9)245	

94
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL



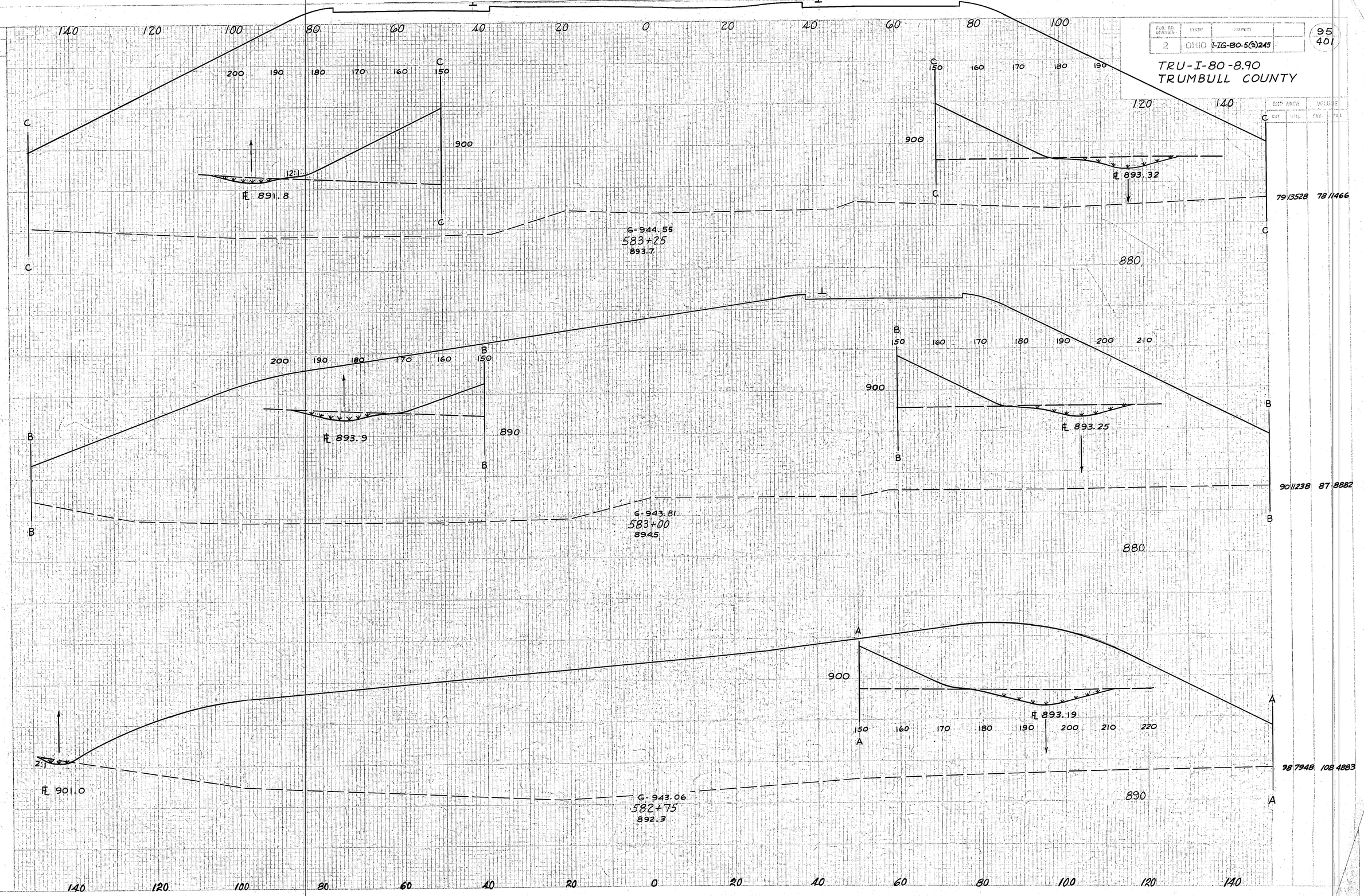
SEEDING	
ERO MIXTURE	SQ. YDS.

PROJ. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(6)245	

95
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL



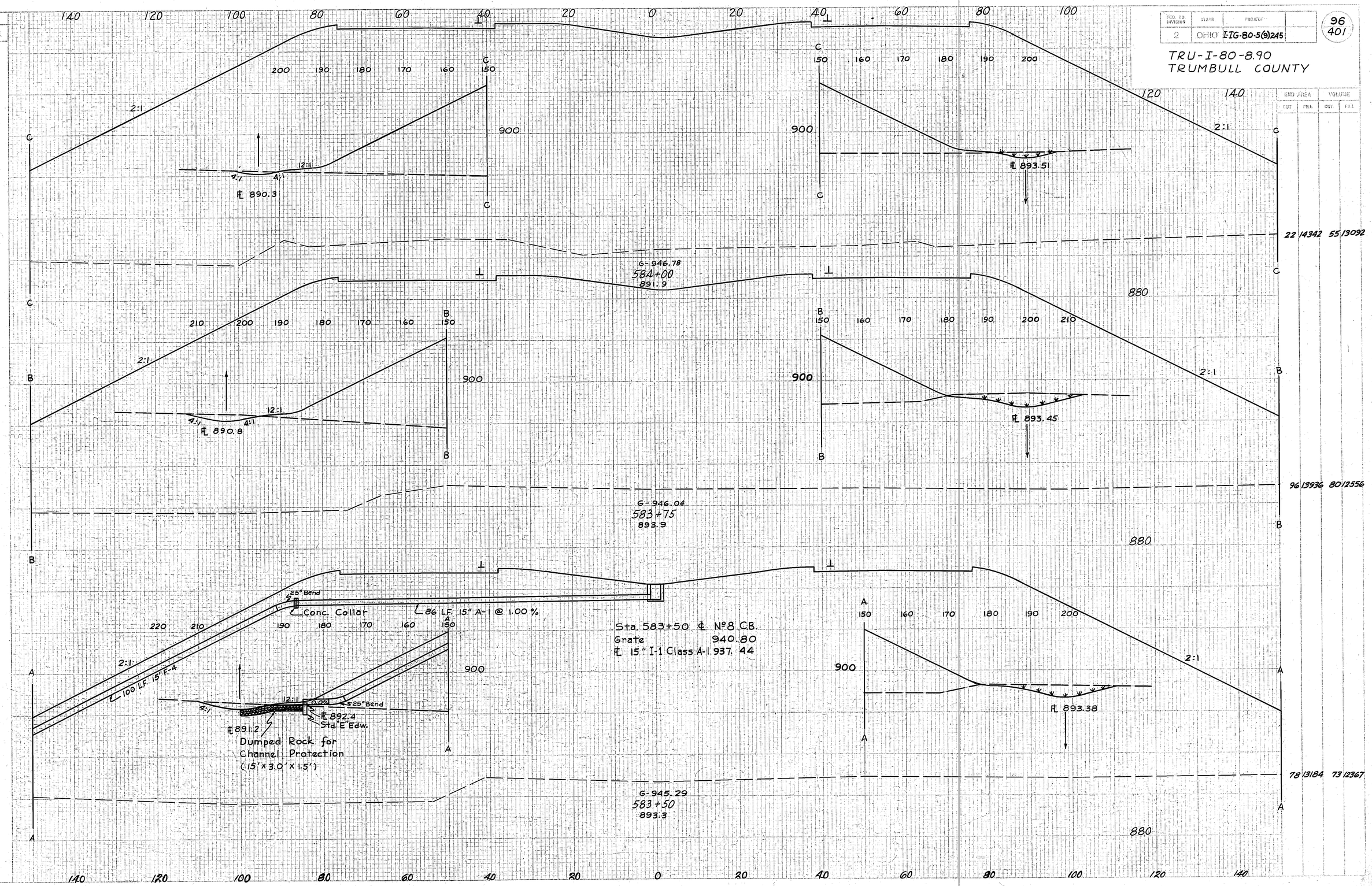
SEEDING	
END WEIGHT	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

96
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL



Sta. 583+50 to Sta. 584+00

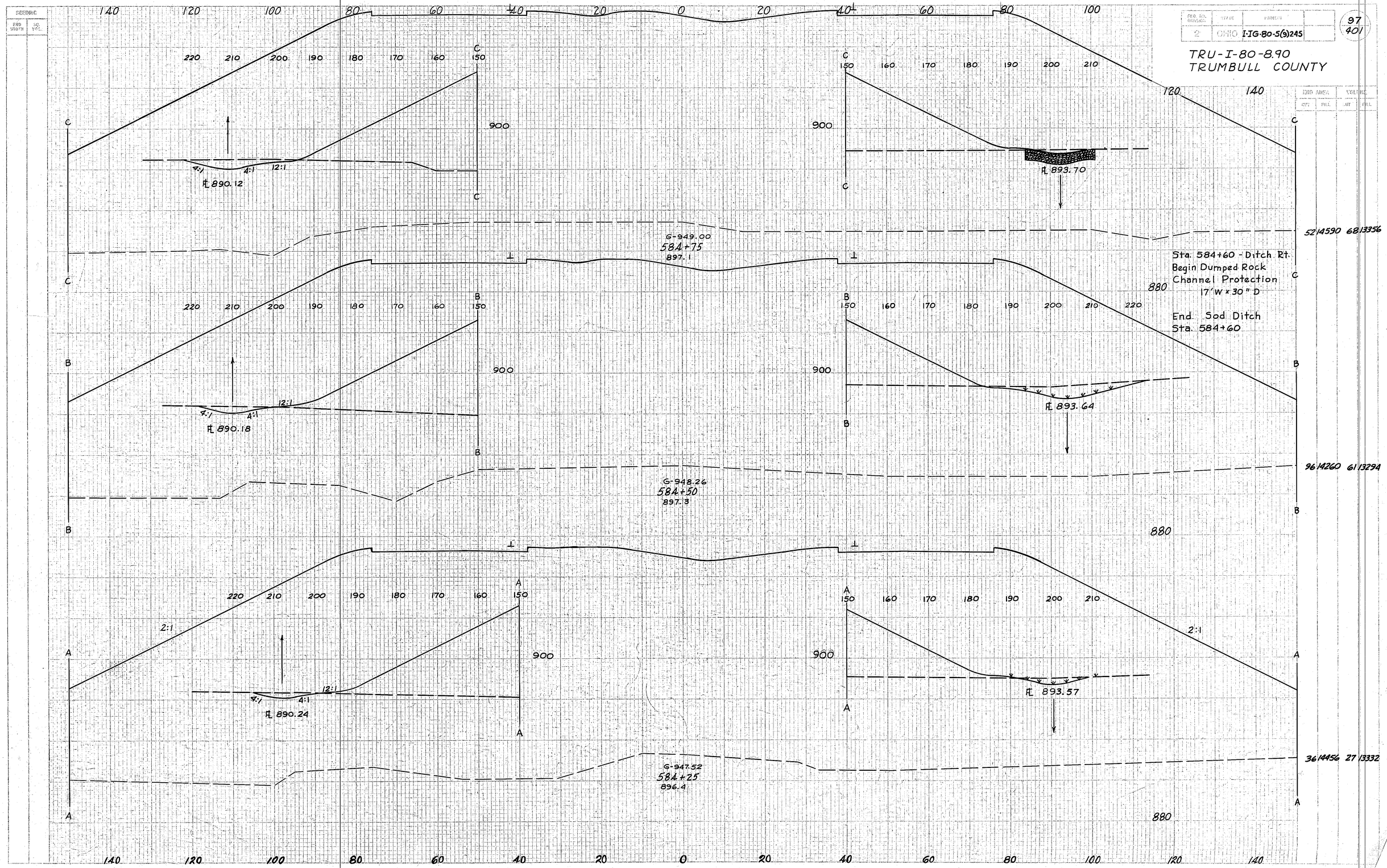
SEEDING	
SEED WIDTH	SEED TYPE

PROJ. NO. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(3)245	

97
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL



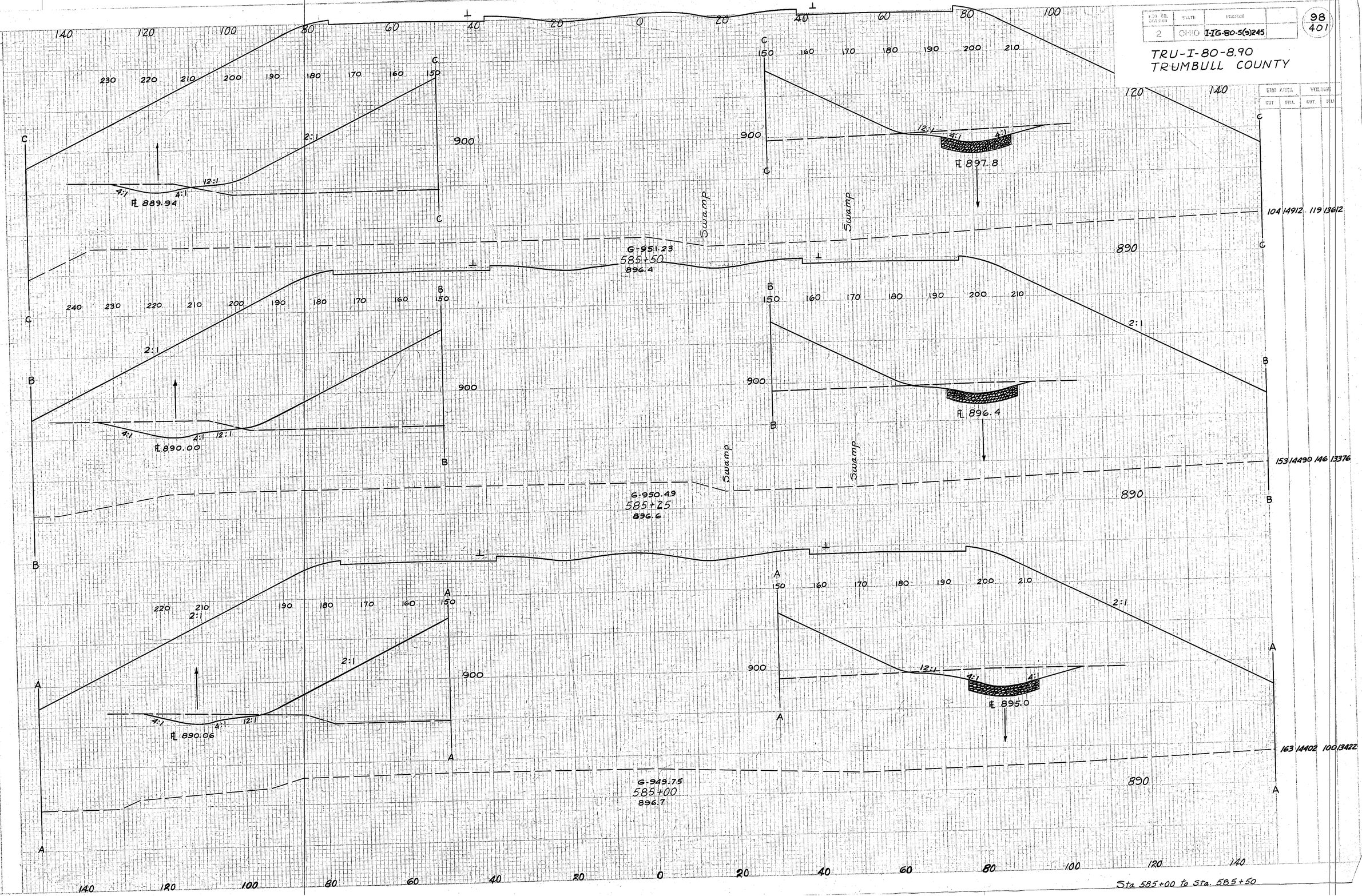
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-80-5(3)245

98
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL



Sta. 585+00 to Sta. 585+50

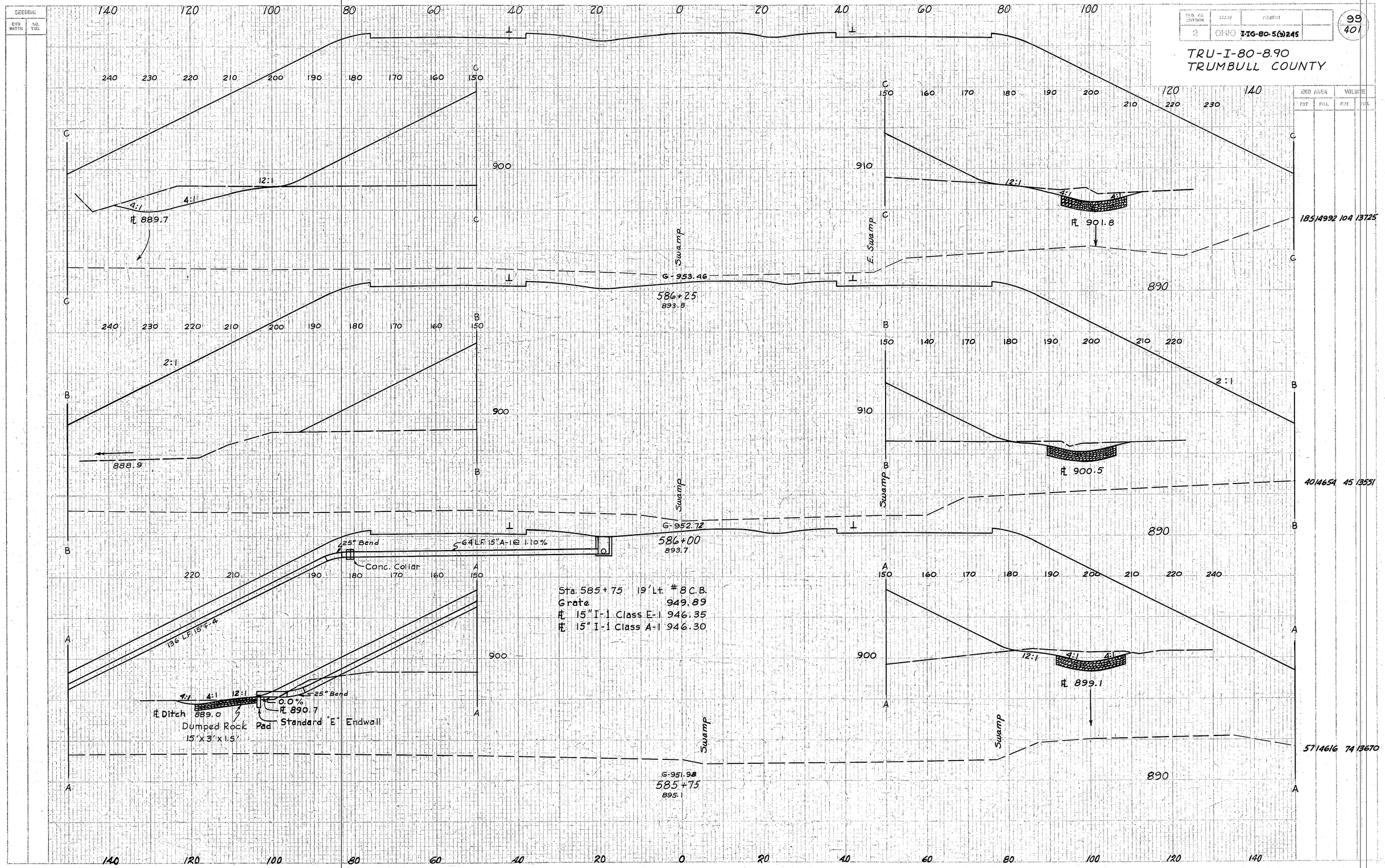
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

99
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL



Sta. 585+75 to Sta. 586+25

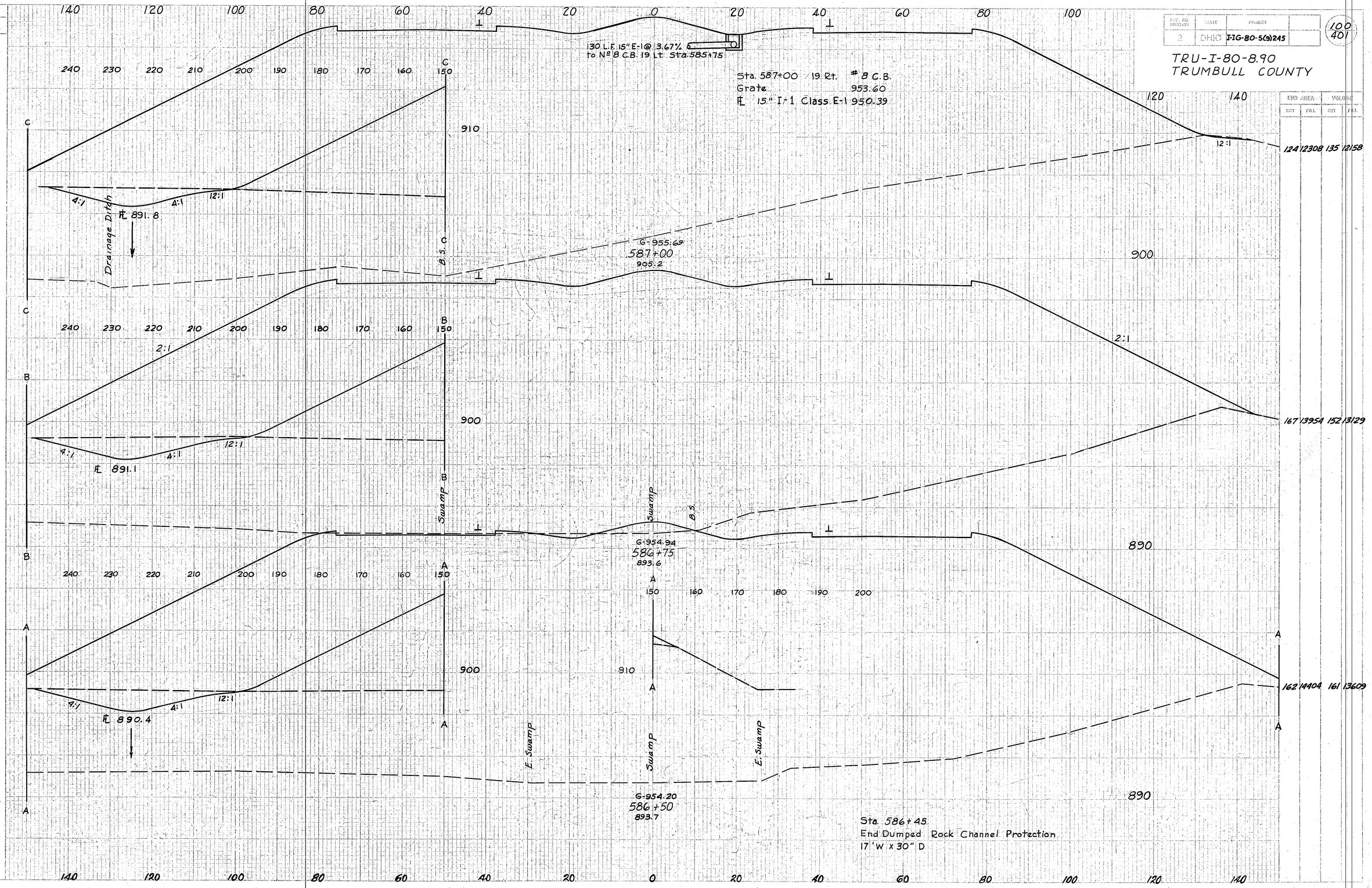
SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

100
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL



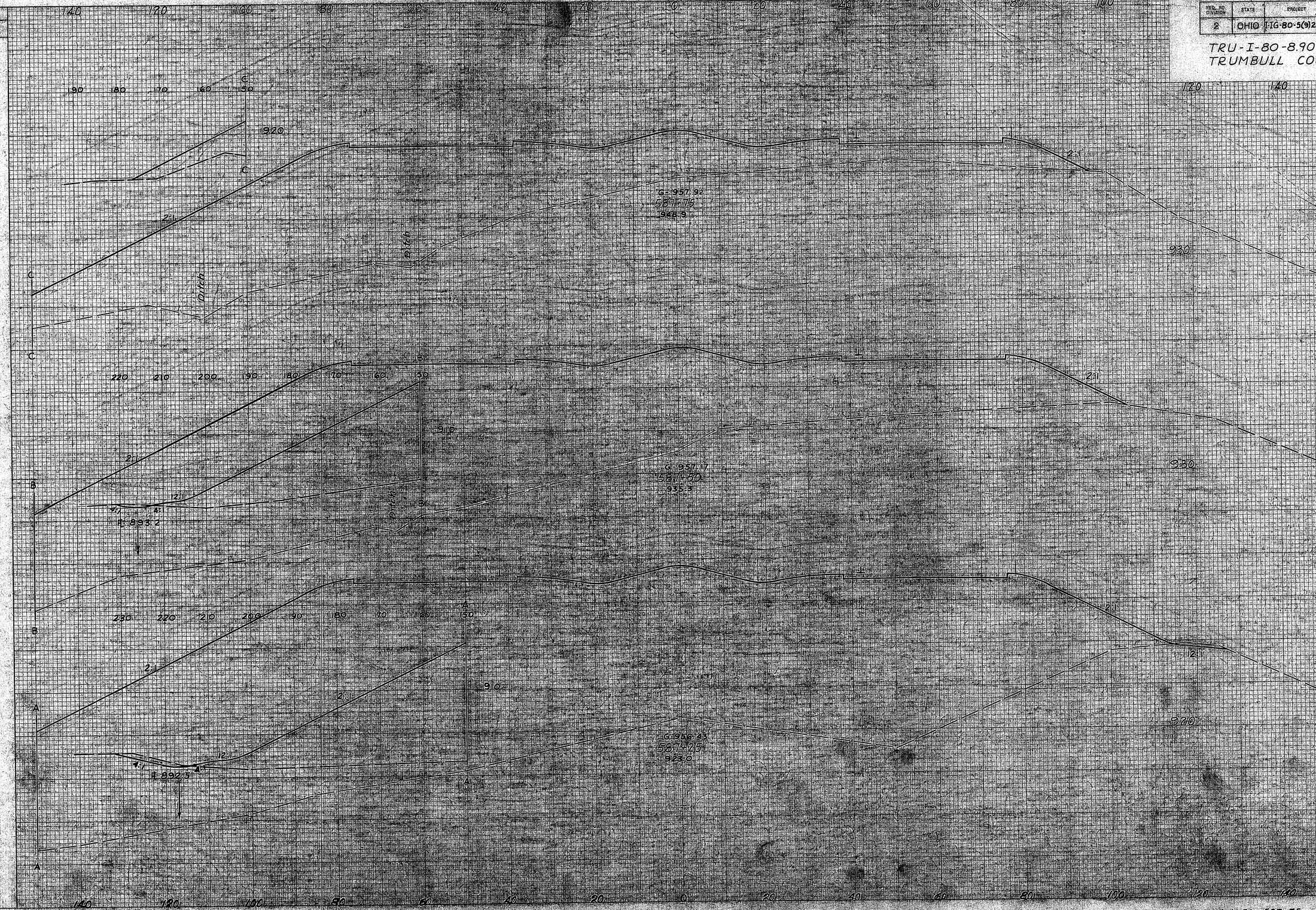
SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

1.01
4.01

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL



0 3522 3 4704

6 6638 15 7738

27/0078 70/0363

Sta. 581+25 to Sta. 581+75

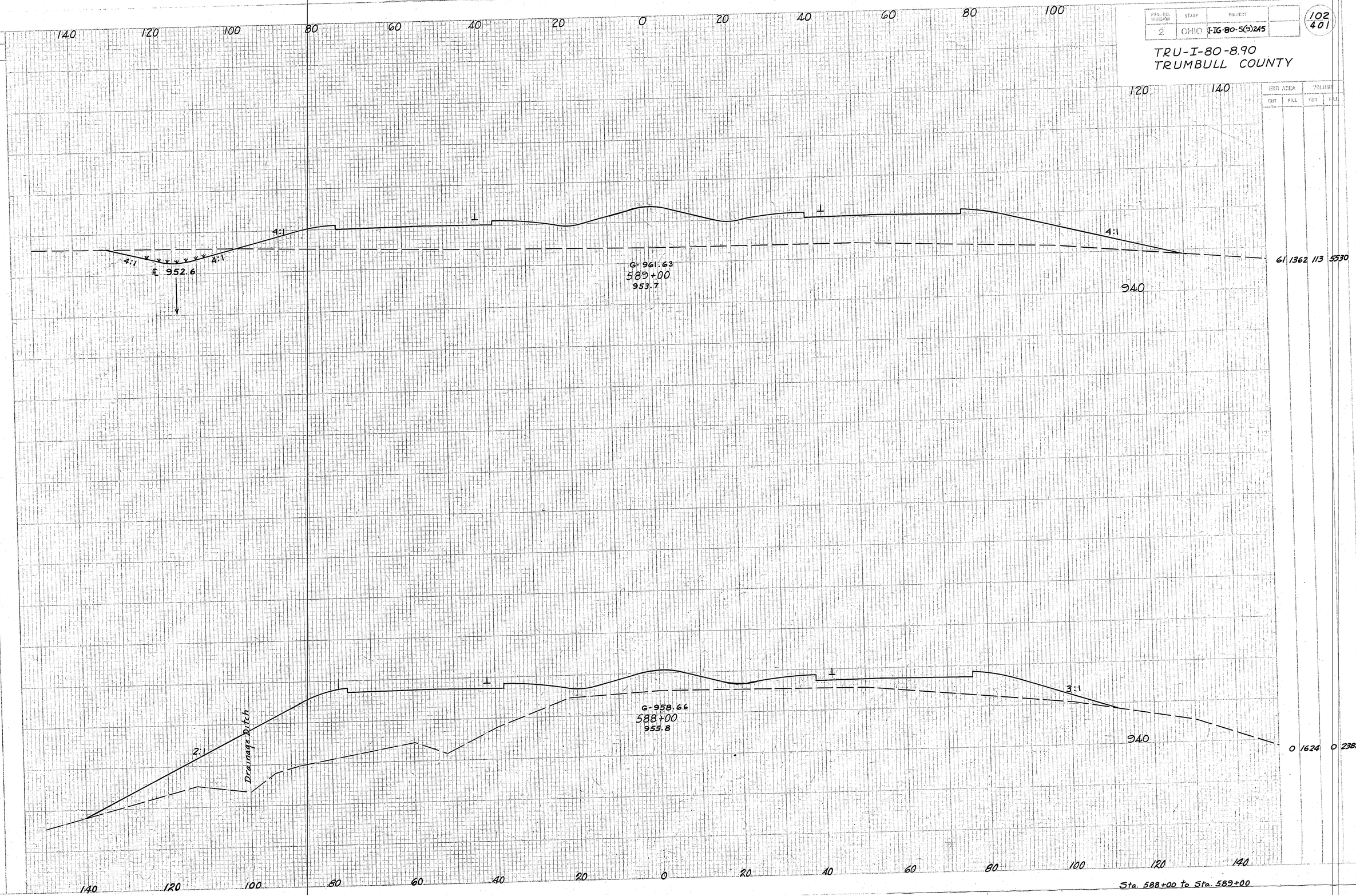
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(3)245	

102
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING	
END WATER	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL



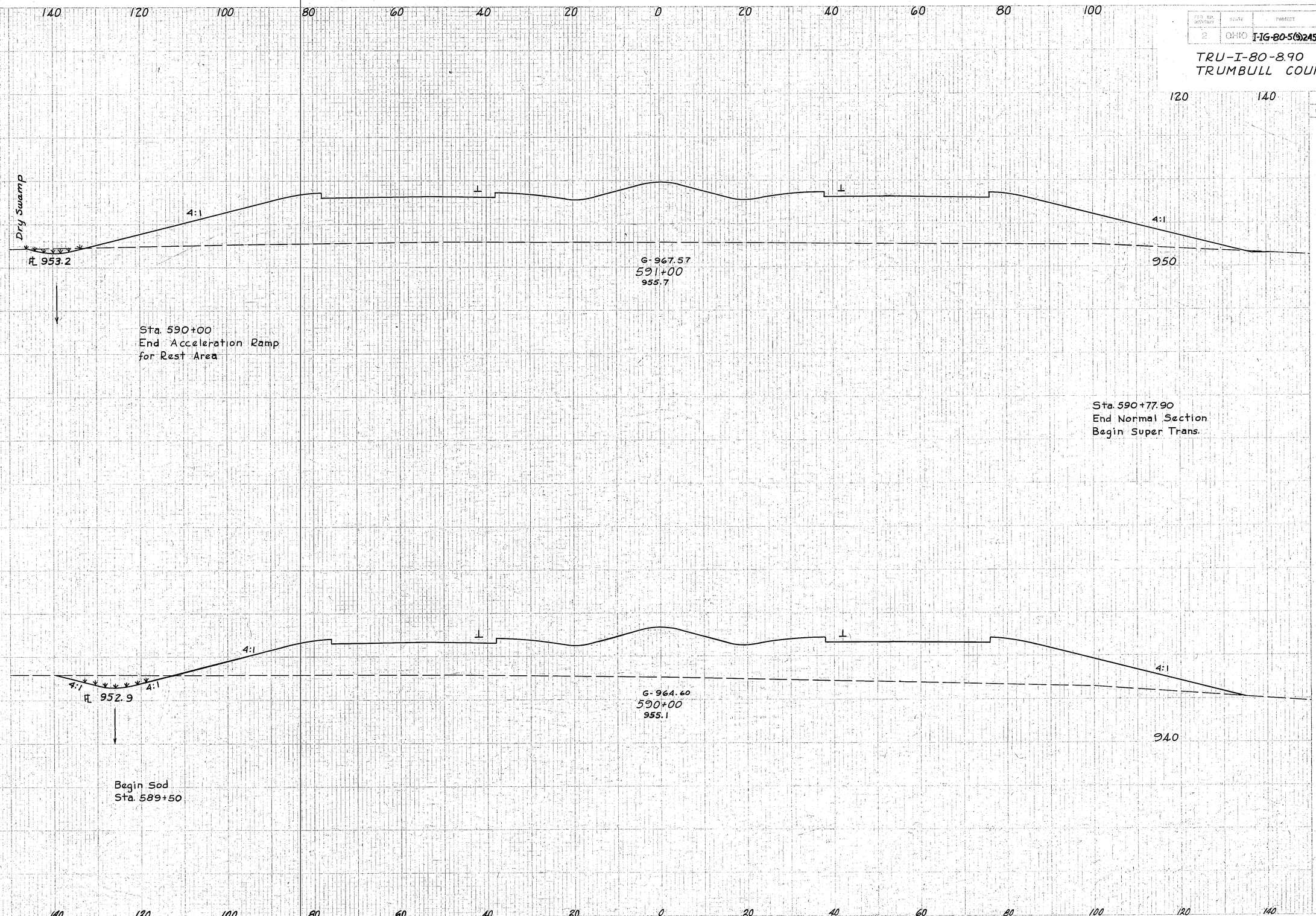
Sta. 588+00 to Sta. 589+00

SEEDING	
END WIDTH	SD VOL.

FED. RD. DISTRICT	STATE	PROJECT	
2	OHIO	I-IG-80-5(S)245	

103
401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
12	1195	22	5565
0	1810	113	5874

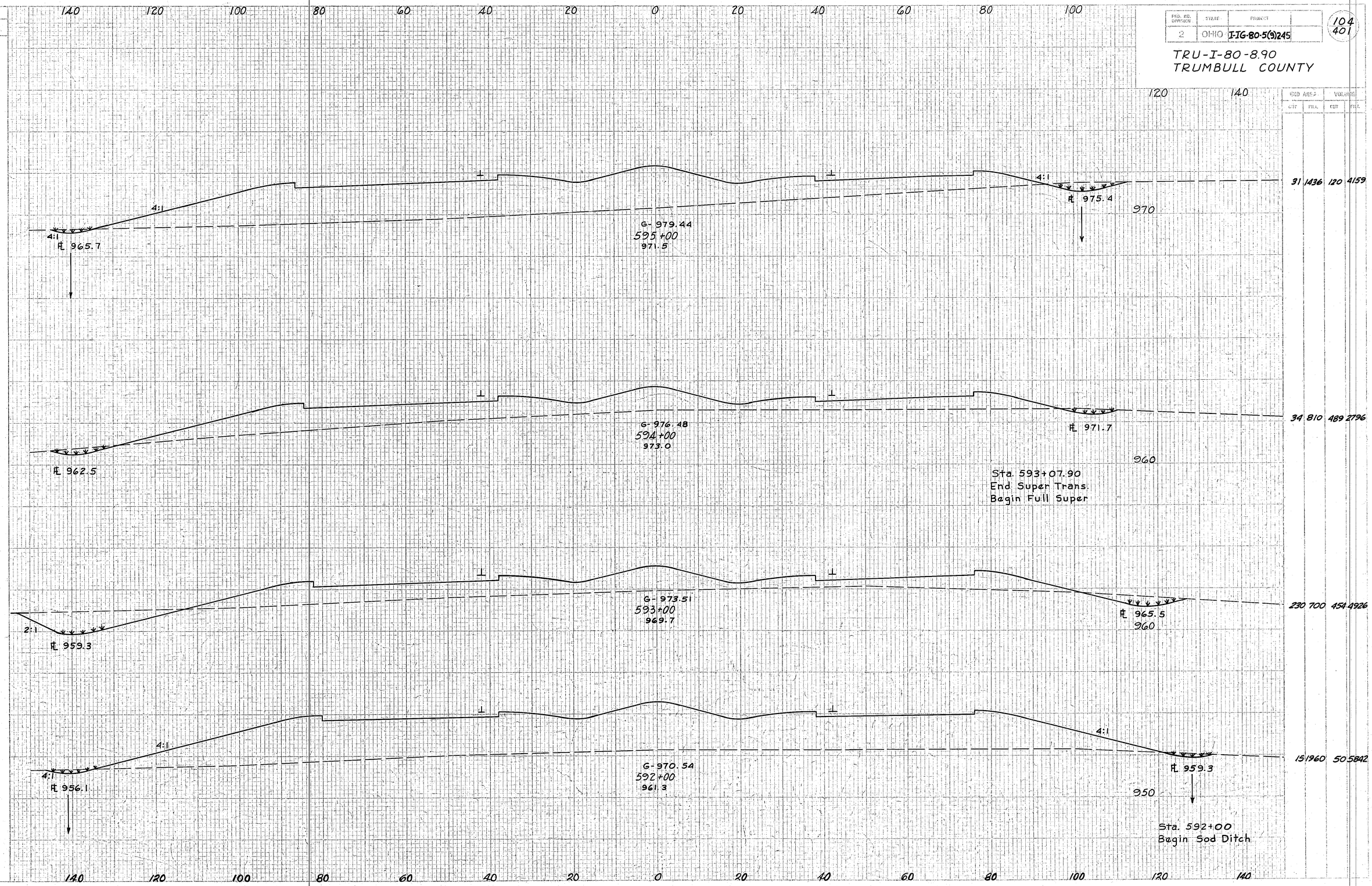
Sta. 590+00 to Sta. 591+00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-80-5(9)245

104
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING	
EXT. WATER	SO. TYPE



END AREA		VOLUME	
CUT	FILL	CUT	FILL
31	1436	120	4159
34	810	489	2796
230	700	454	4926
151	960	505	842

Sta. 592+00 to Sta. 595+00

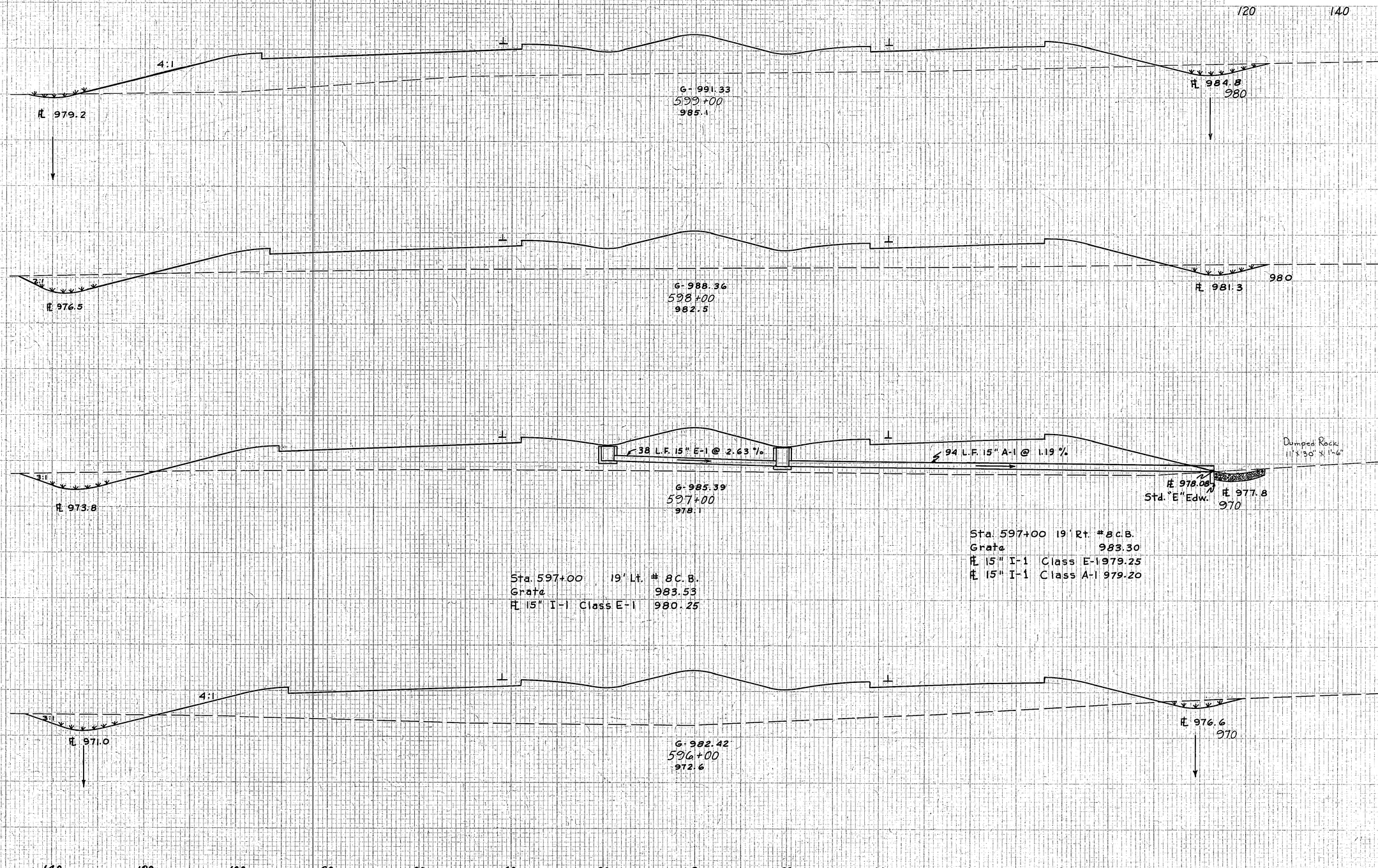
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

105
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING	
END WIDTH	SQ YDS

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
50	1258	341	4233	
134	1028	418	4404	
92	1350	367	5248	
106	1484	254	5407	



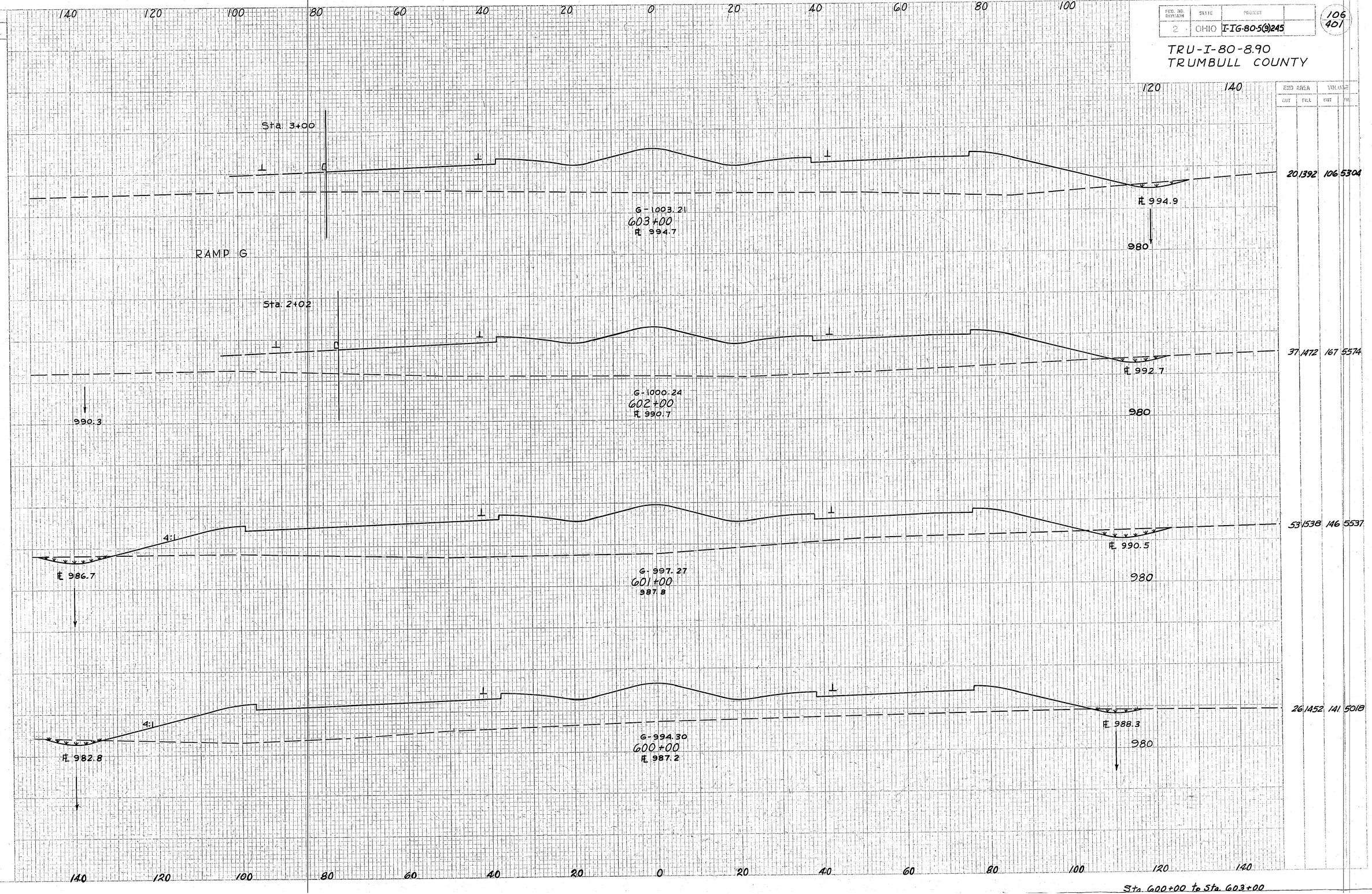
SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-80-5(9)245

106
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL



Sta. 600+00 to Sta. 603+00

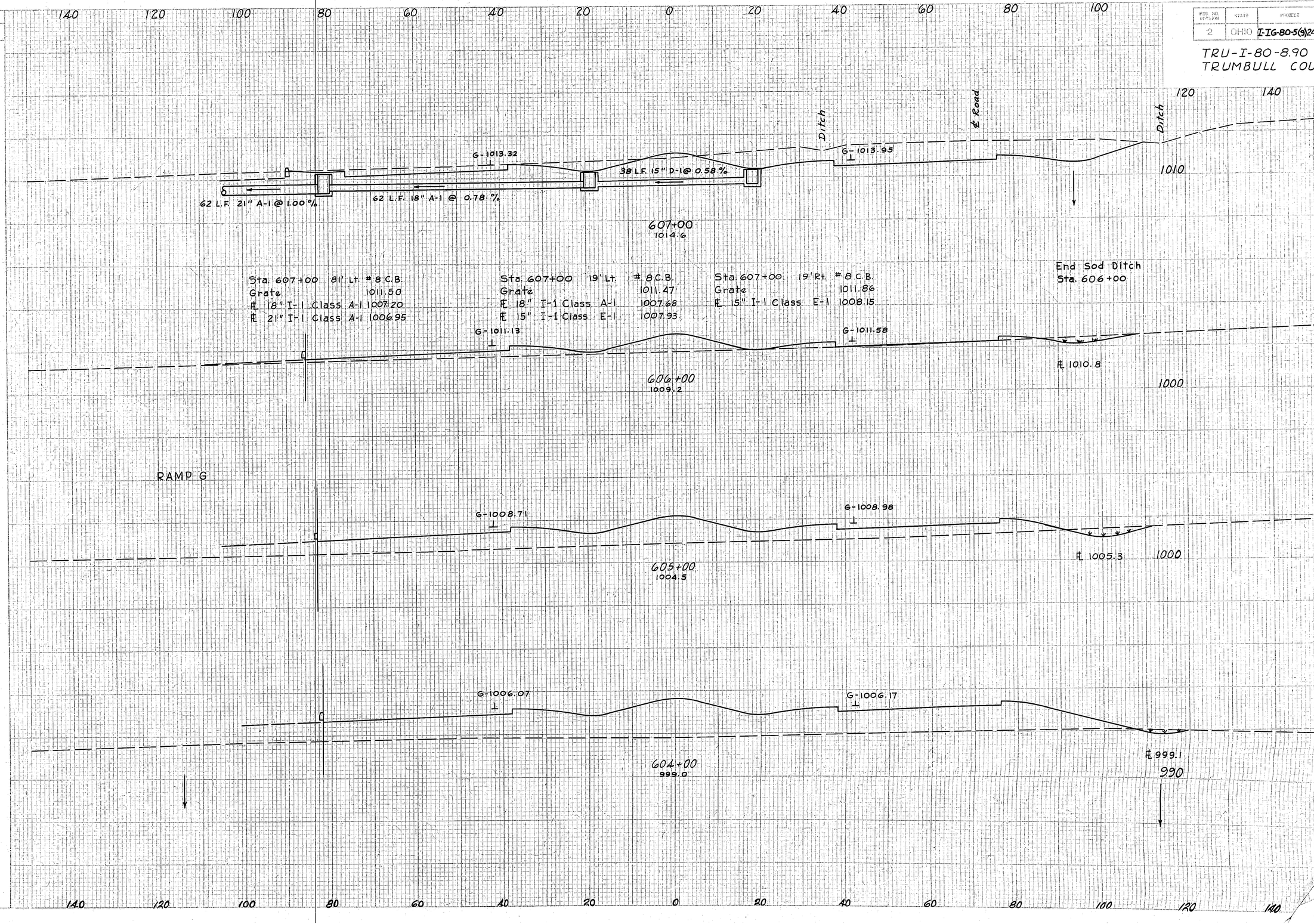
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(6)245	

107
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING

END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
510	12	989	381
24	194	98	478
29	604	70	3059
9	1048	54	4518

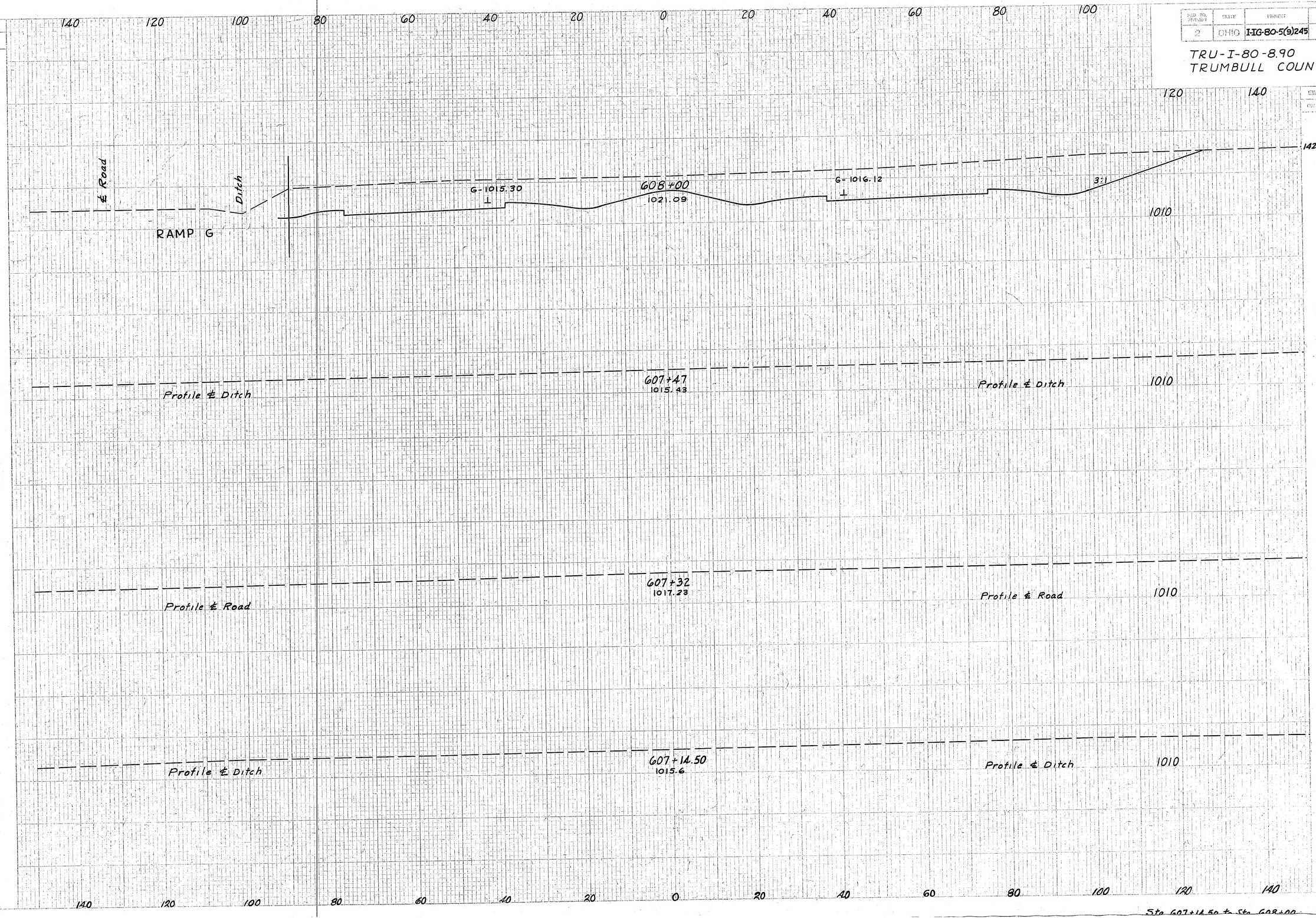
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

108
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING	
CUB YDS/M	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1420	0	3574	22



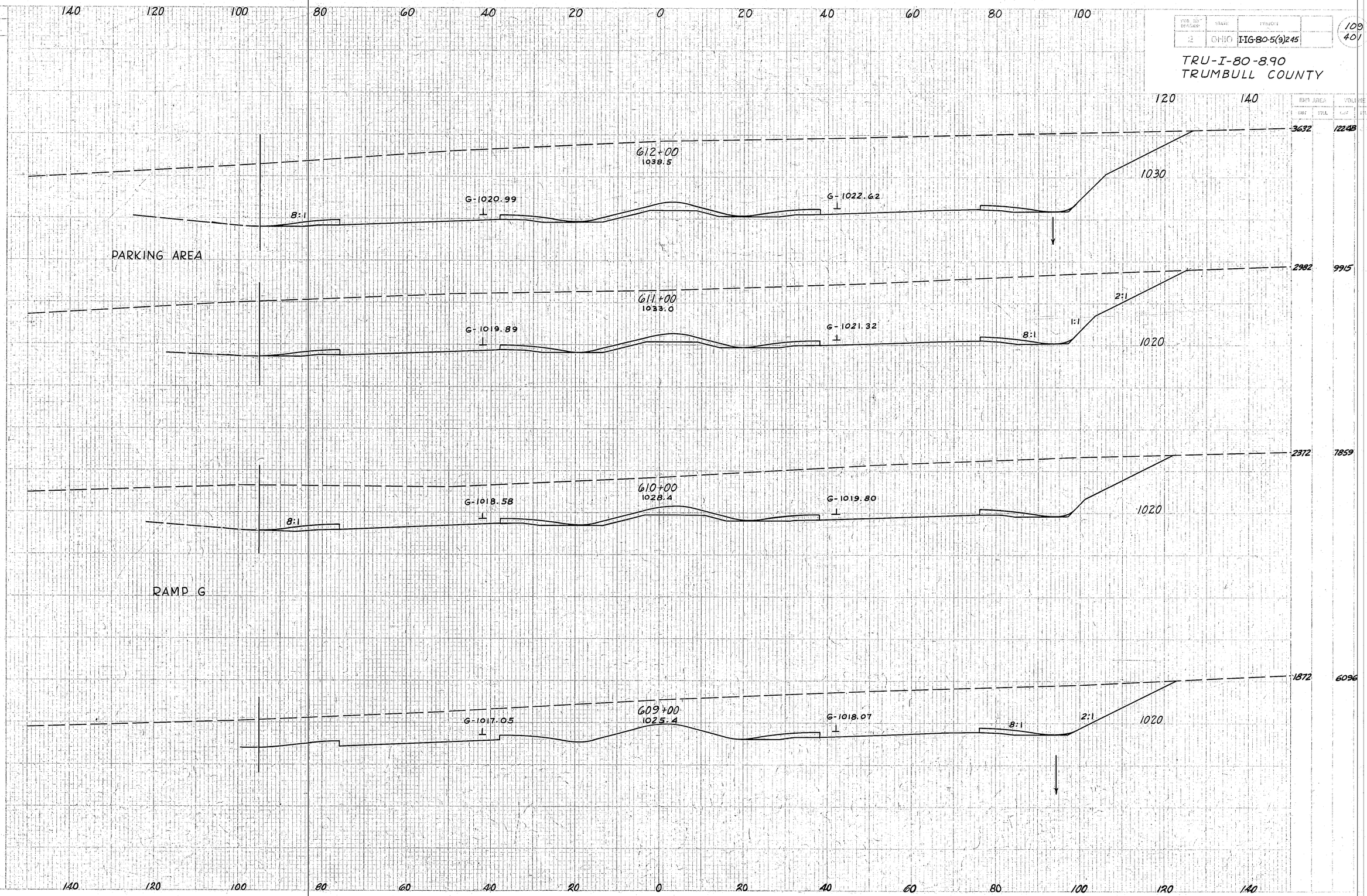
Sta 607+14.50 to Sta 608+00

SEQUENCE	
END WATER	SQ YDS.

VER. SEC. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

109
401

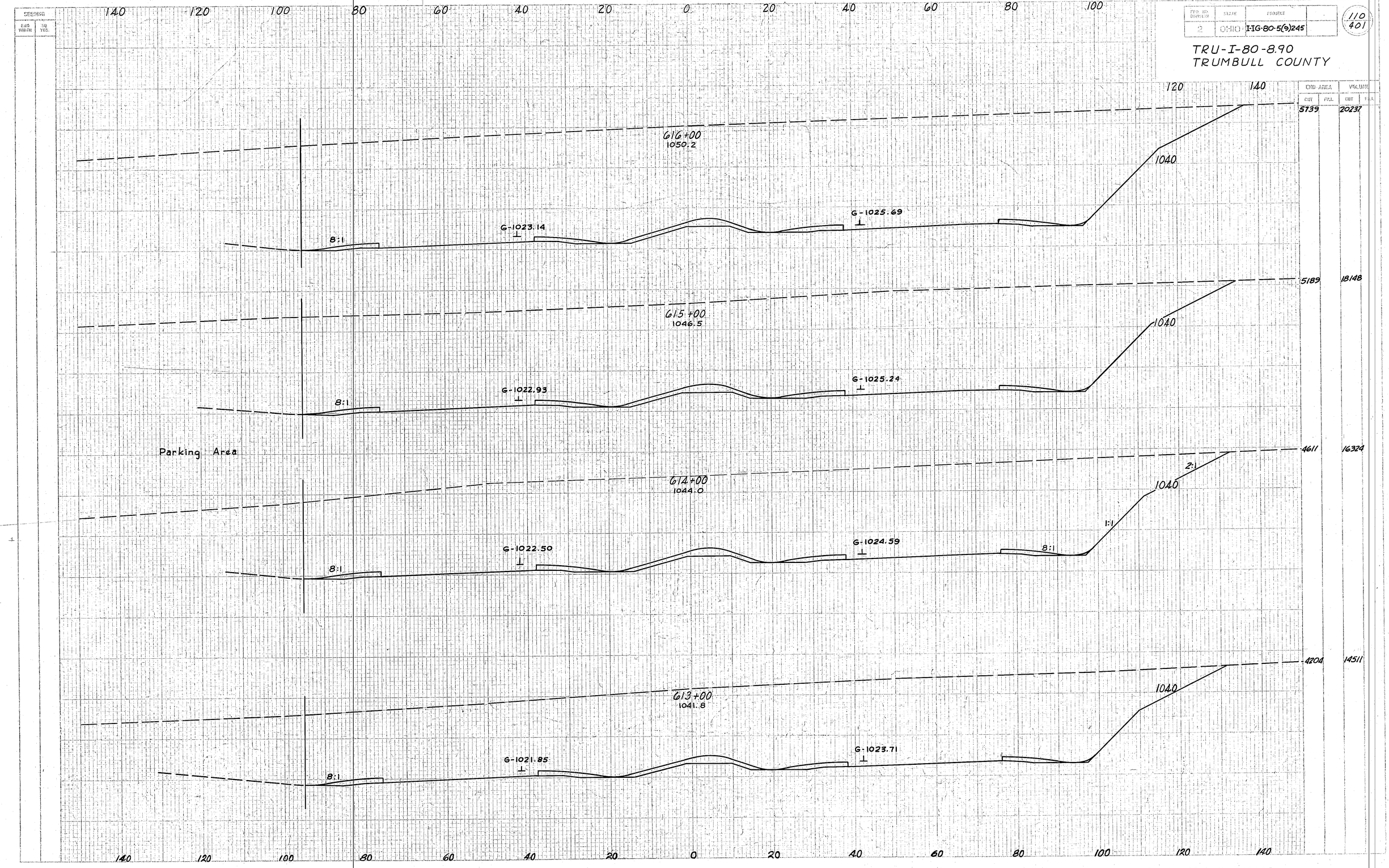
TRU-I-80-8.90
TRUMBULL COUNTY



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(3)245	

110
401

TRU-I-80-8.90
TRUMBULL COUNTY



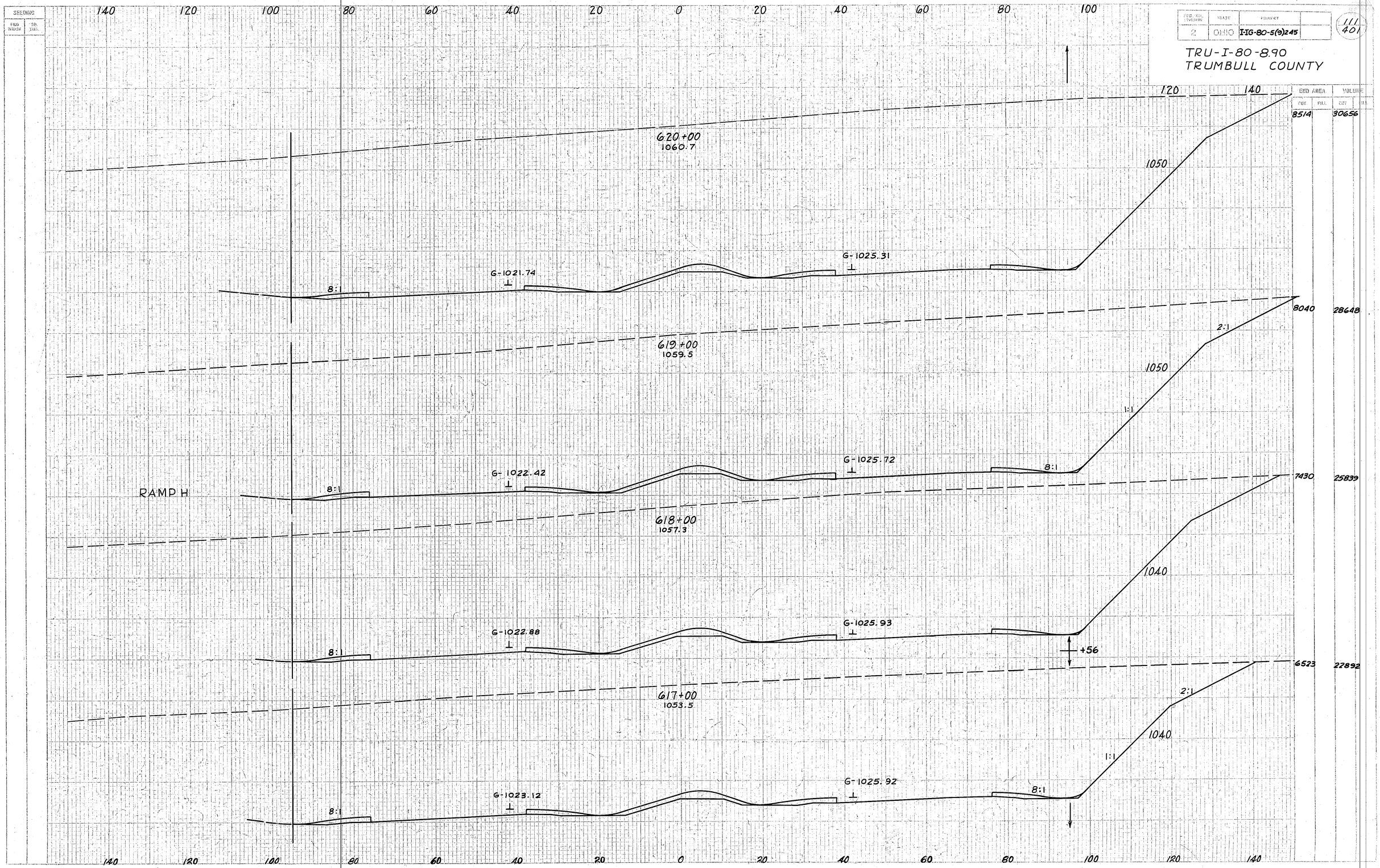
END AREA		VOLUME	
CUT	FILL	CUT	FILL
5739		20237	
5189		18148	
4611		16324	
4204		14511	

Sta. 613+00 to Sta. 616+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(8)245	

111
401

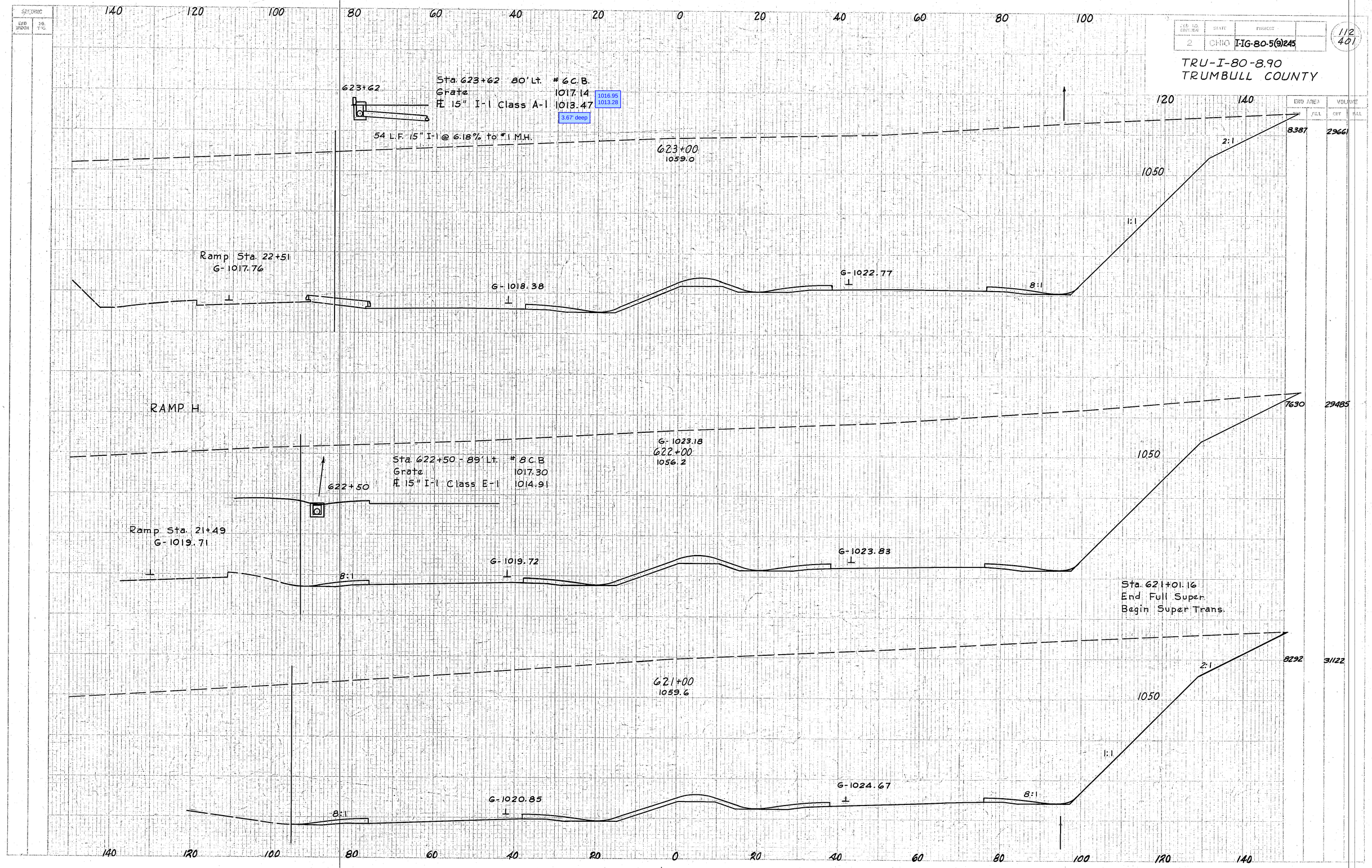
TRU-I-80-8.90
TRUMBULL COUNTY



CONTR. NO. ENGINEER	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

112
401

TRU-I-80-8.90
TRUMBULL COUNTY

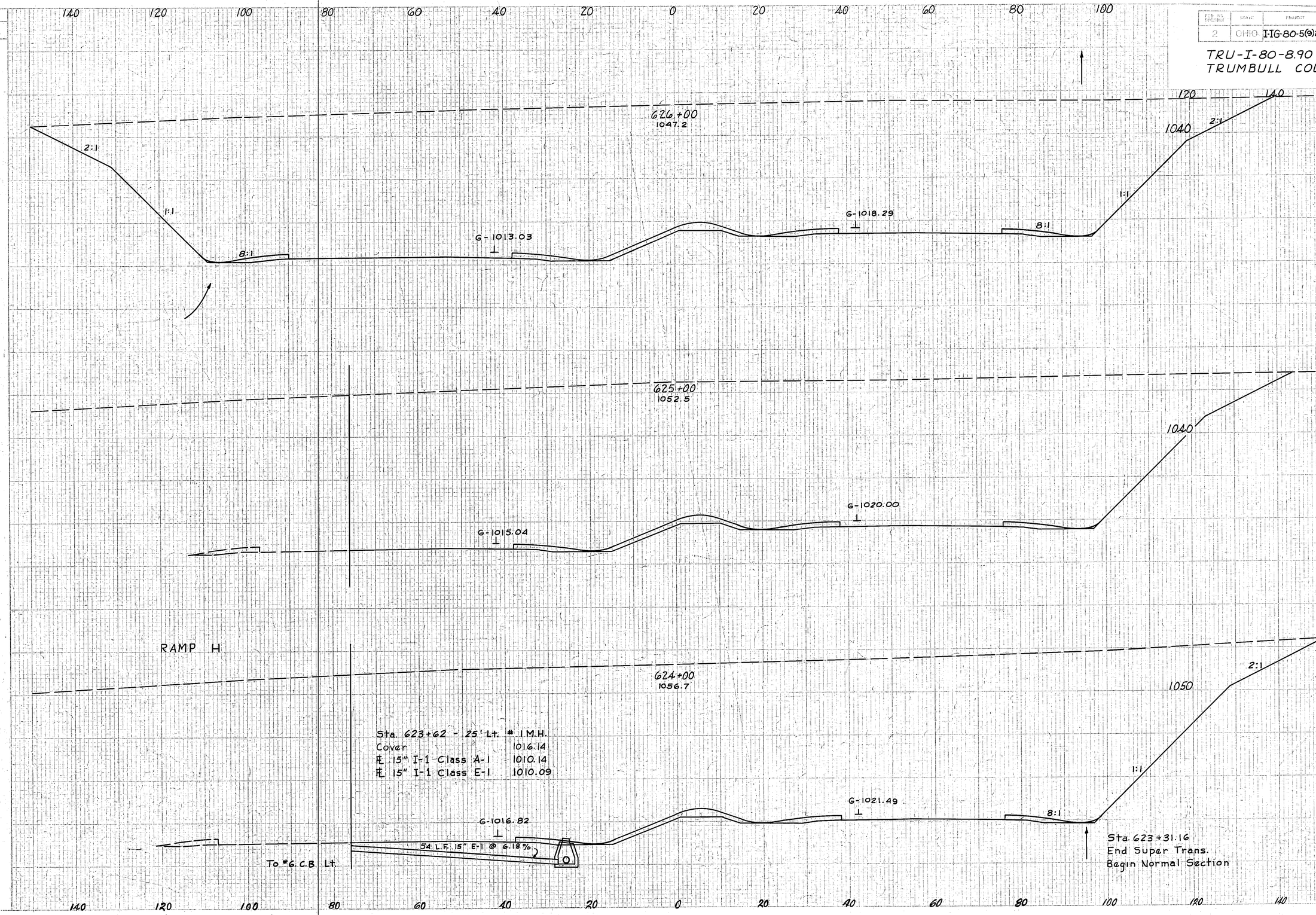


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

113
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING	
END WIDTH	SQ. YDS.



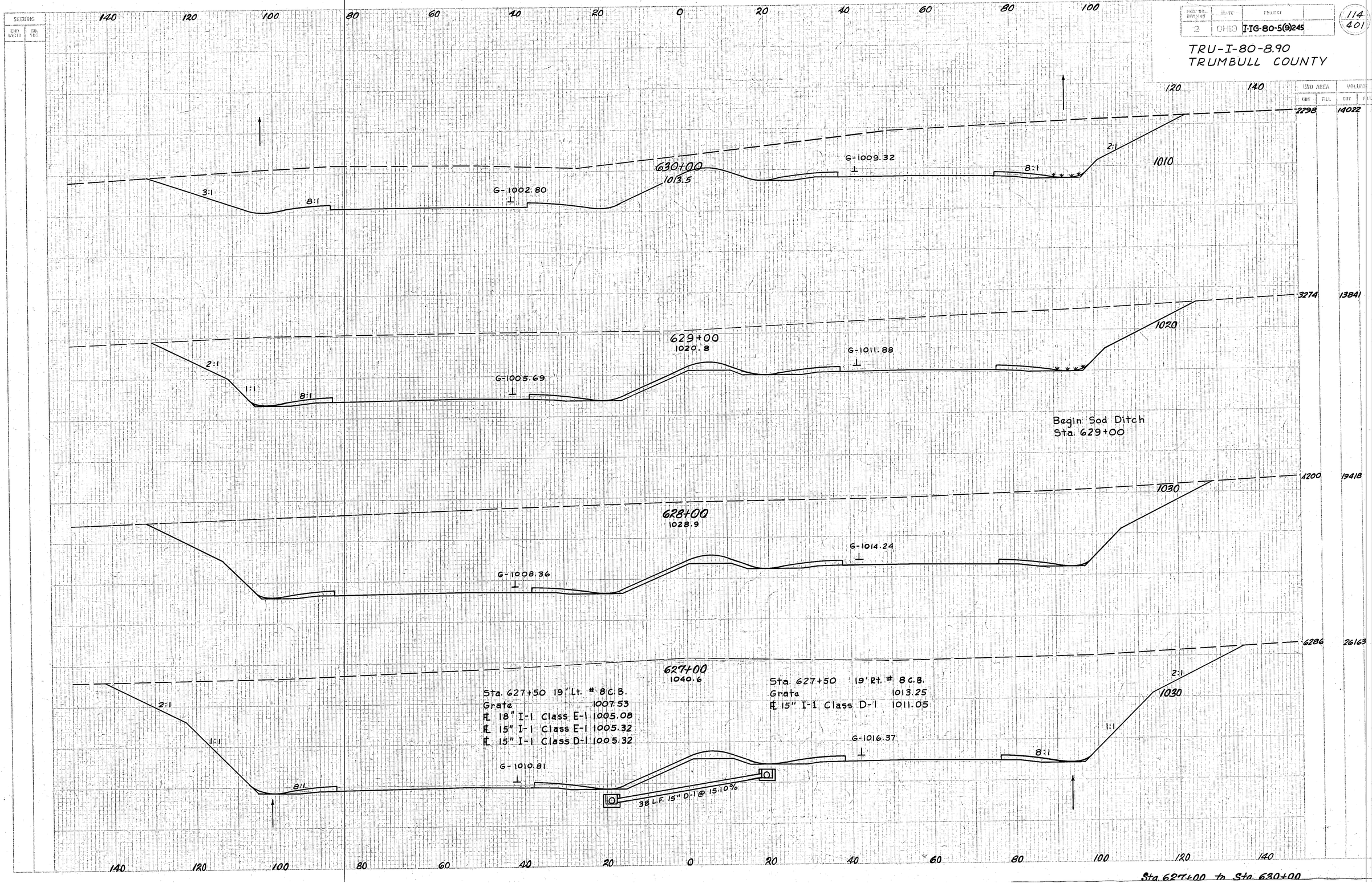
END AREA		VOLUME	
CUT	FILL	CUT	FILL
7842		27468	
6991		27318	
7761		29904	

Sta. 624+00 to Sta. 626+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

114
401

TRU-I-80-8.90
TRUMBULL COUNTY



Sta. 627+00 to Sta. 630+00

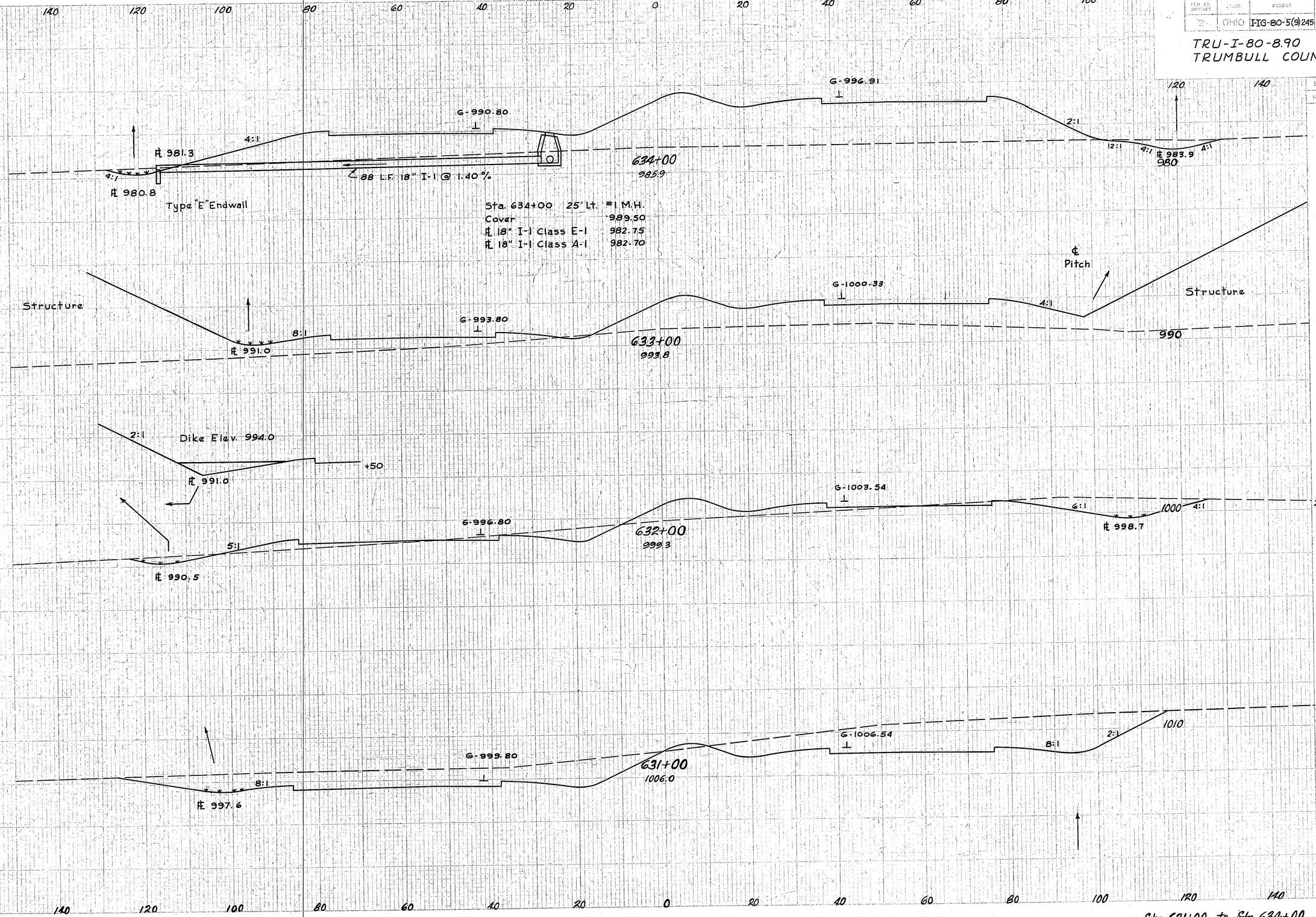
SEEDING	
CUP WATER	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

115
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL



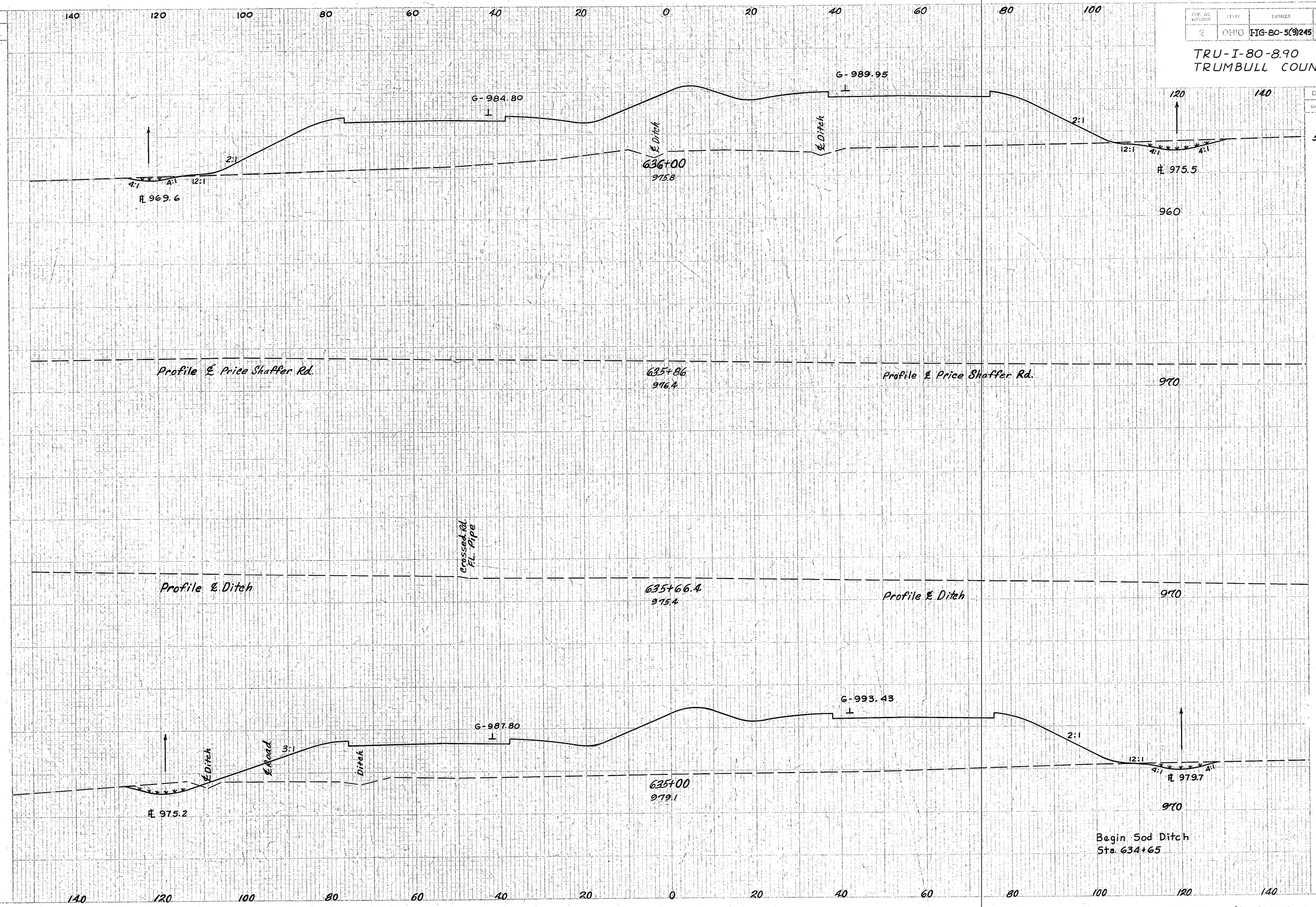
Sta. 631+00 to Sta. 634+00

SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

116
401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
50	2196	202	7792
59	2012	206	6398

Sta. 635+00 to Sta. 636+00

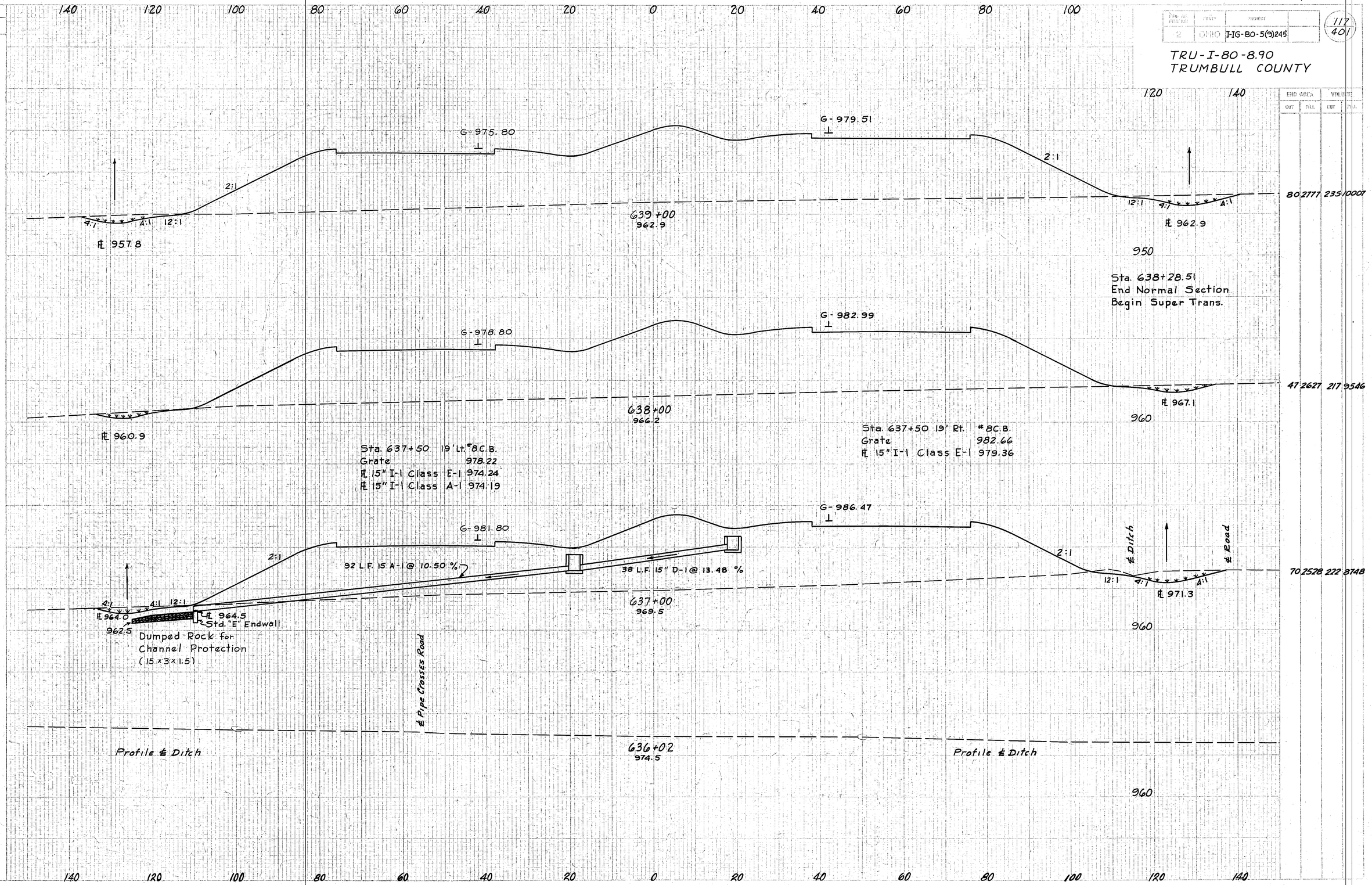
SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIST. NO.	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

117
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL



Sta. 636+02 to Sta. 639+00

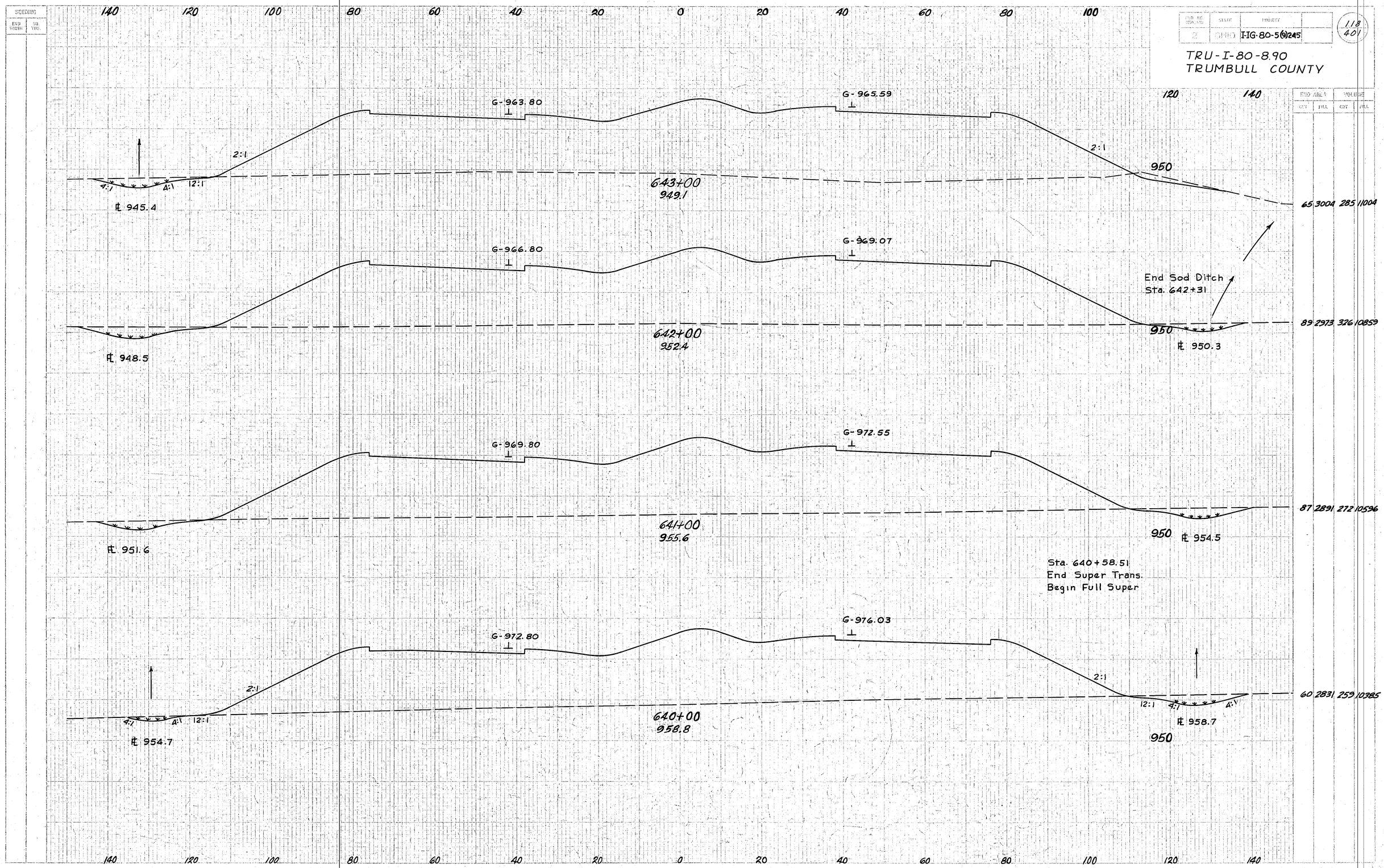
SEEDING	
END VISCIN	SQ. YDS.

END OF STA. NO.	STATE	PROJECT	
2	OHIO	I-IG-80-5(0)245	

118
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

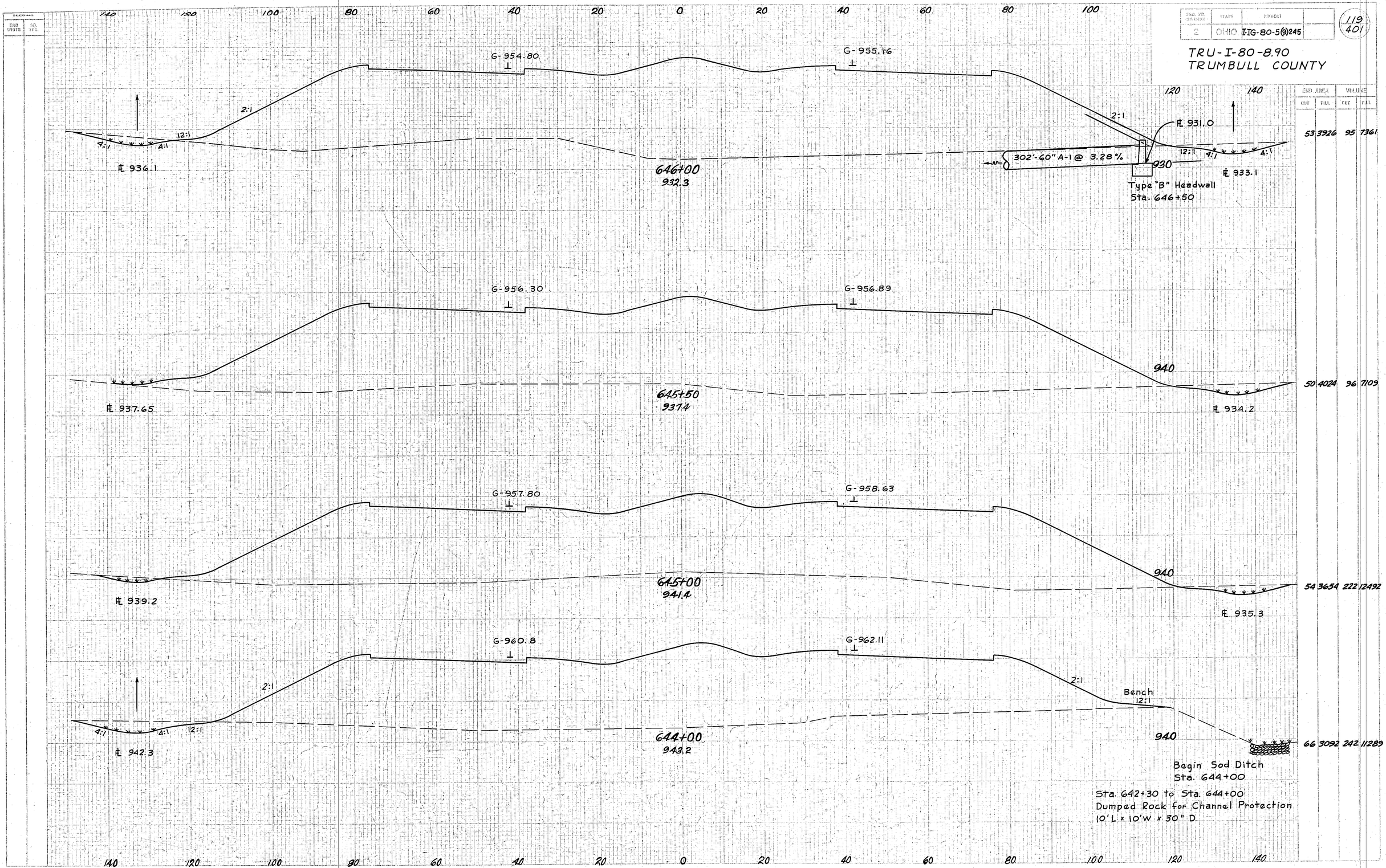


Sta. 640+00 to Sta. 643+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	FIG-80-5(9)245	

119
401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
53	3926	95	7361
50	4024	96	7109
54	3654	222	12492
66	3092	242	11289

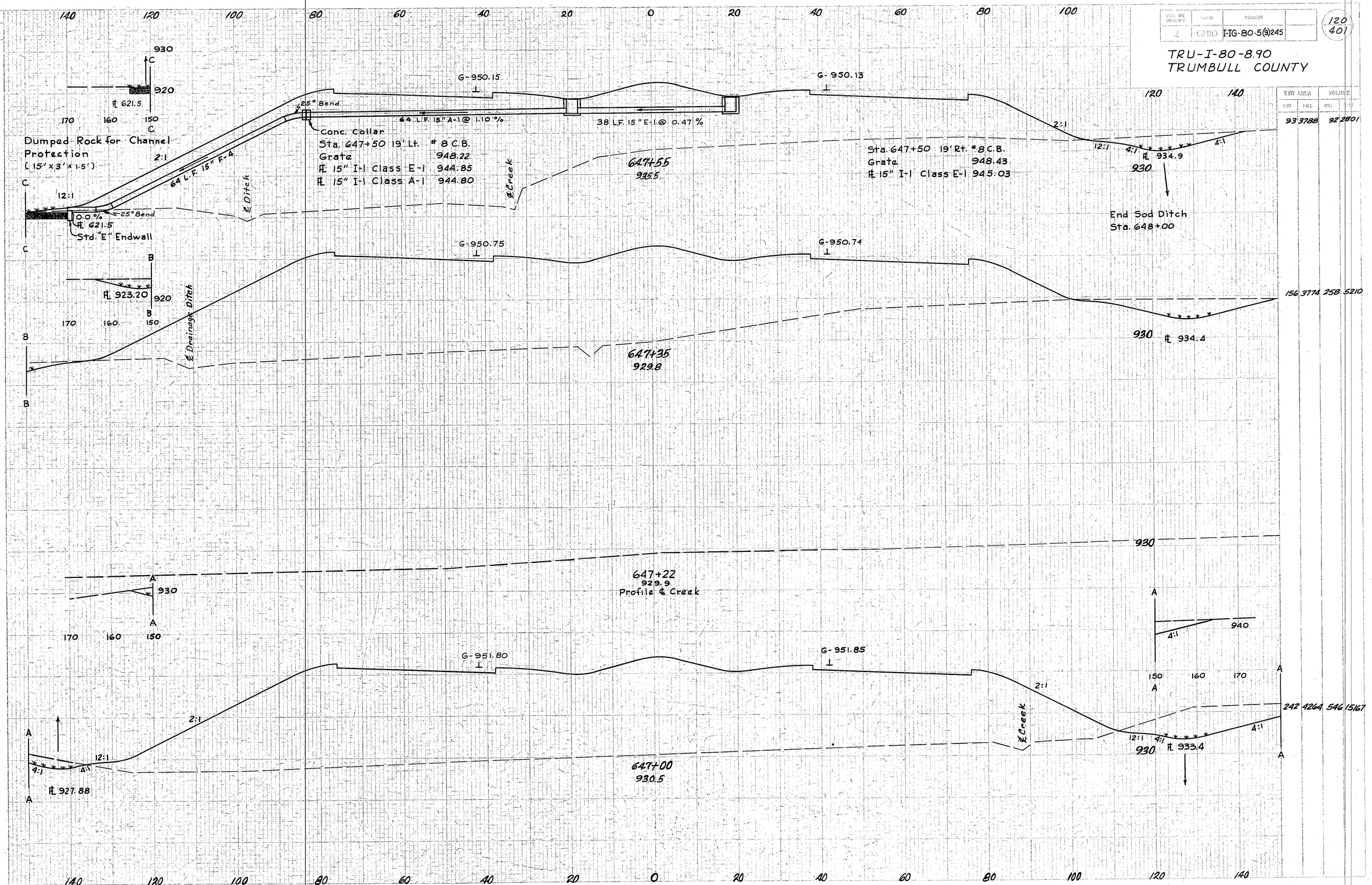
SECTIONS	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	HG-80-5(9)245	

120
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
93.3788		92.2801	



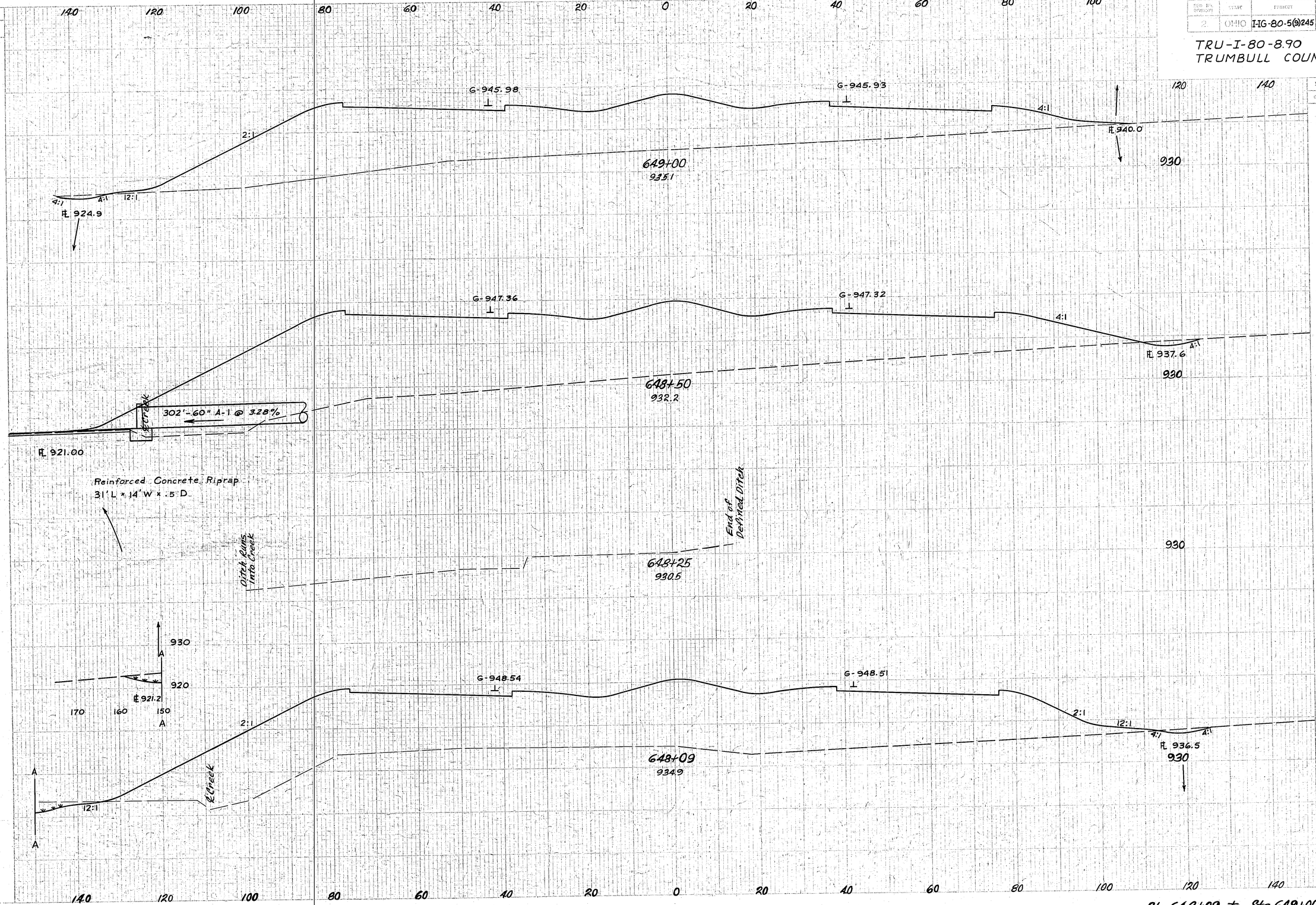
Sta. 647+00 to Sta. 647+55

SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

121
401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
12 2124		22 4952	
12 3224		44 4636	
46 2882		139 6670	

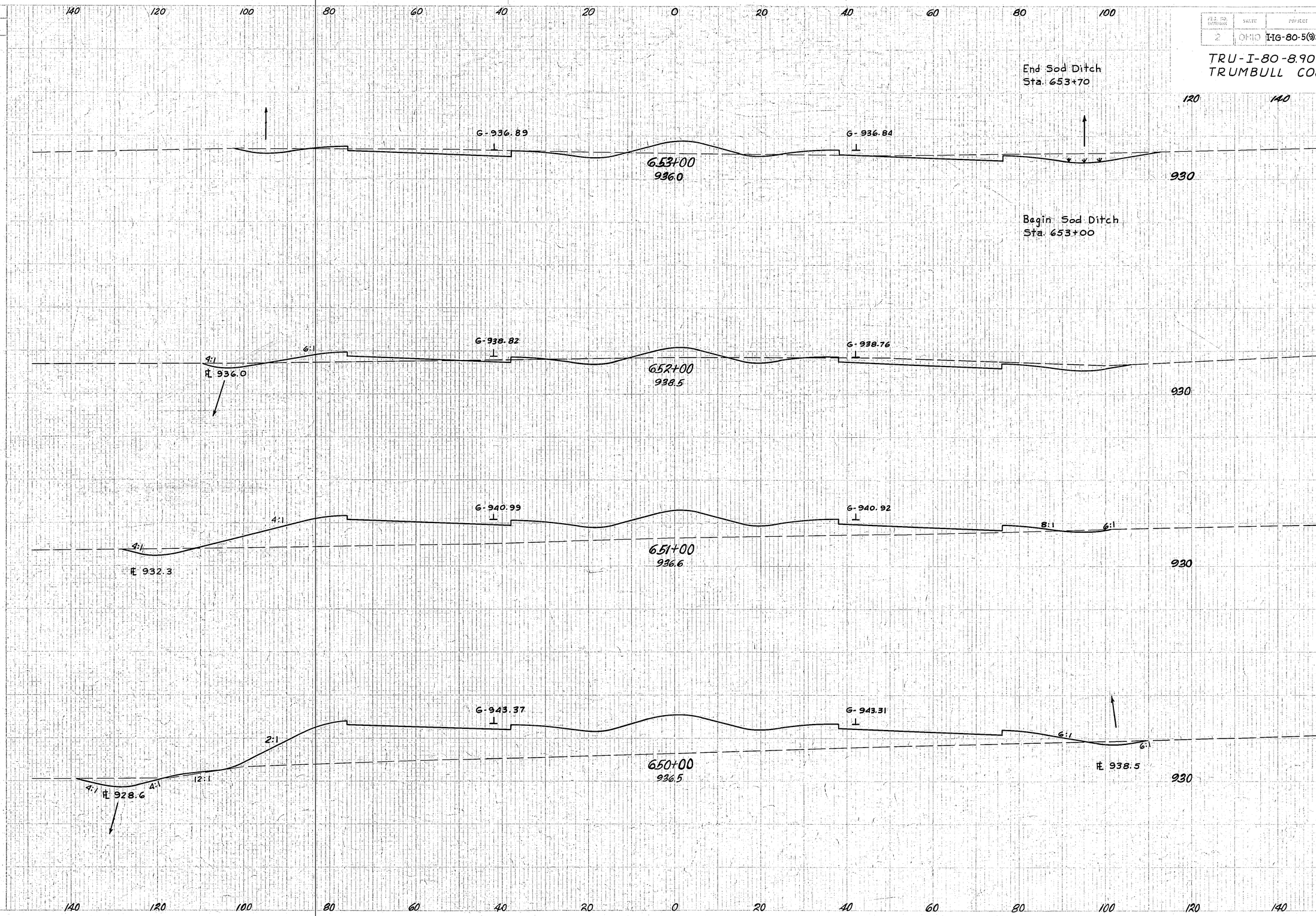
Sta 648+09 to Sta 649+00

SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

122
401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
173	72	596	313
149	97	320	1528
24	728	122	3415
42	1116	100	6000

SL-650+00 to Sta. 653+00

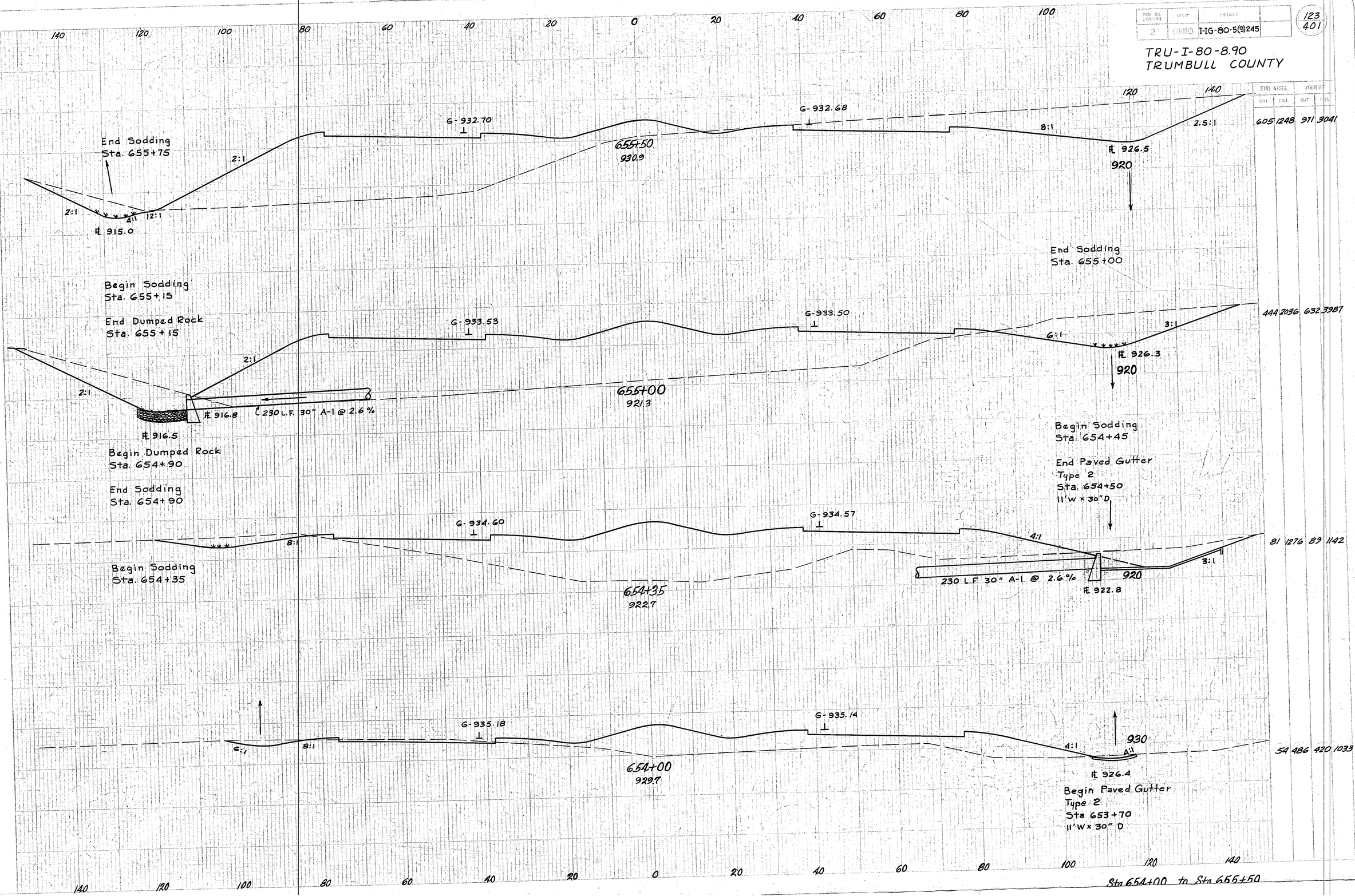
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

123
401

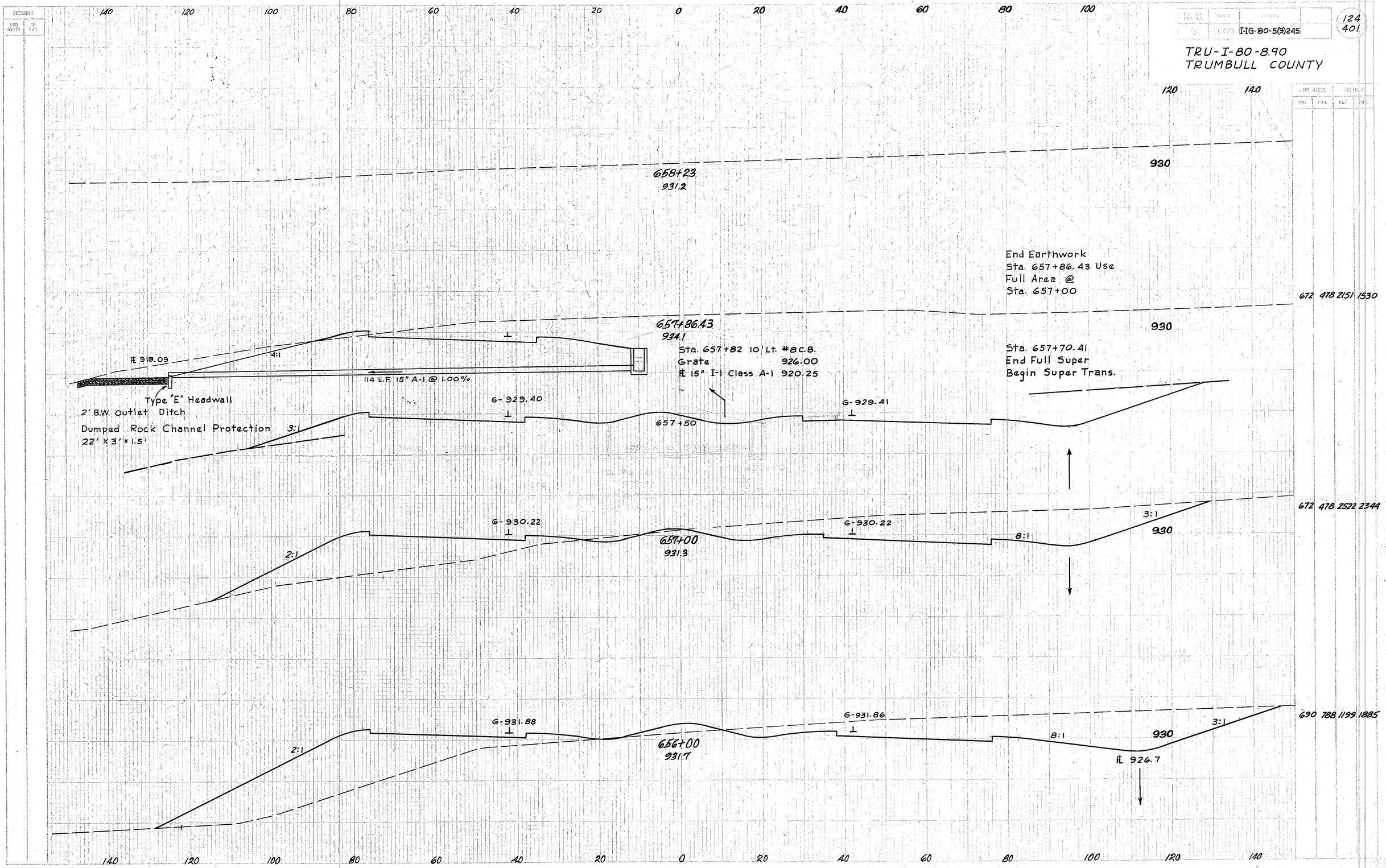
TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
605	1248	971	3041
444	2036	632	3987
81	1276	89	1142
54	486	420	1033



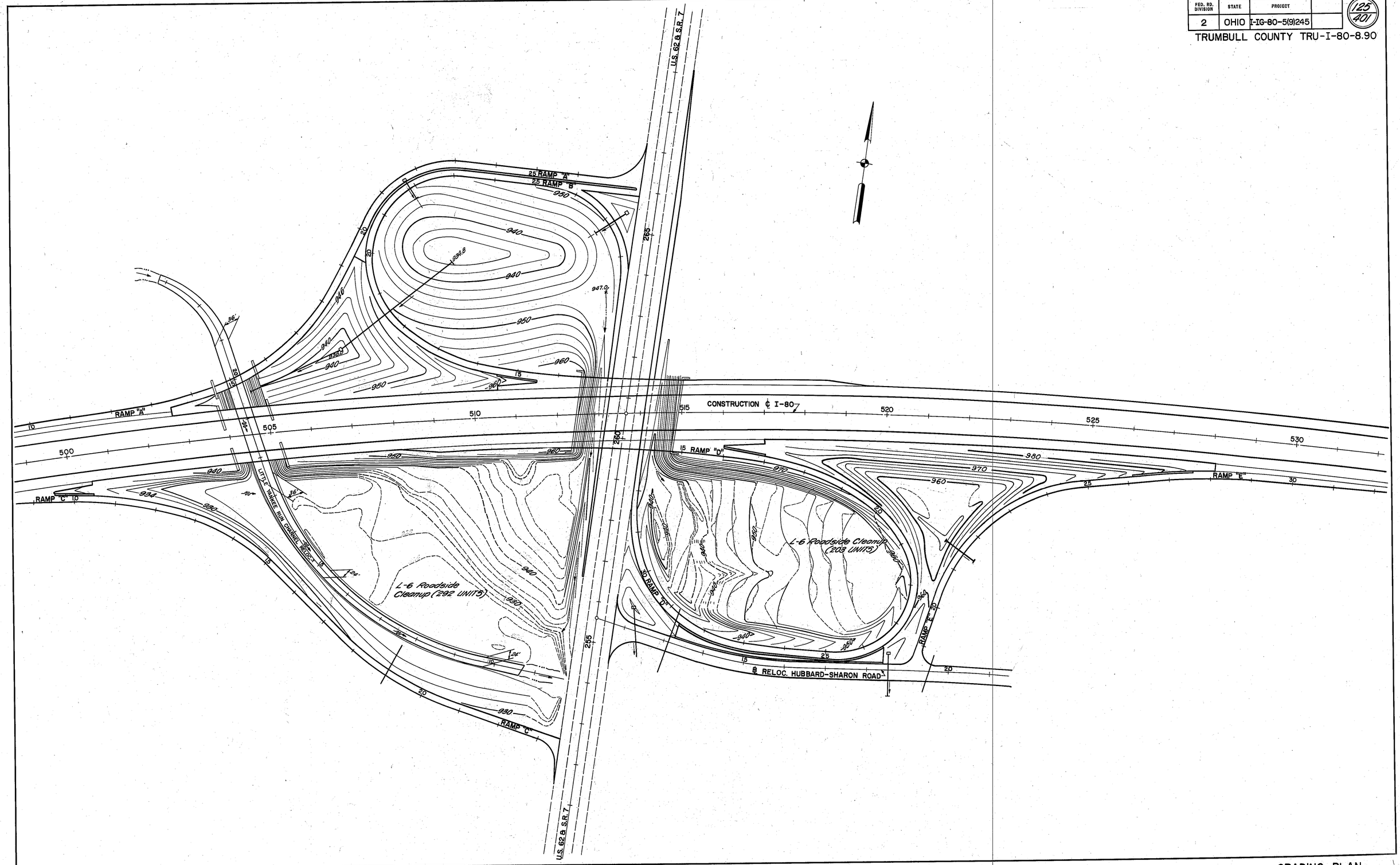
Sta 654+00 to Sta 655+50


I-IG-80-5(9)245
124
401
TRU-I-80-8.90
TRUMBULL COUNTY
658+23
931.2
930
End Earthwork
Sta. 657+86.43 Use
Full Area @
Sta. 657+00
672 478 2151 1530
657+86.43
934.1
Sta. 657+82 10' Lt. #8 C.B.
Grate 926.00
℄ 15" I-1 Class A-1 920.25
Sta. 657+70.41
End Full Super
Begin Super Trans.
℄ 919.09
4:1
114 L.F. 15" A-1 @ 1.00%
Type "E" Headwall
2' B.W. Outlet Ditch
Dumped Rock Channel Protection
22' x 3' x 1.5'
3:1
G-929.40
657+50
G-929.41
672 478 2522 2344
G-930.22
657+00
931.3
G-930.22
2:1
8:1
3:1
930
690 788 1199 1885
G-931.88
656+00
931.7
G-931.86
2:1
8:1
930
3:1
℄ 926.7
140 120 100 80 60 40 20 0 20 40 60 80 100 120 140
Sta. 656+00 to Sta. 658+23

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

125/401

TRUMBULL COUNTY TRU-I-80-8.90

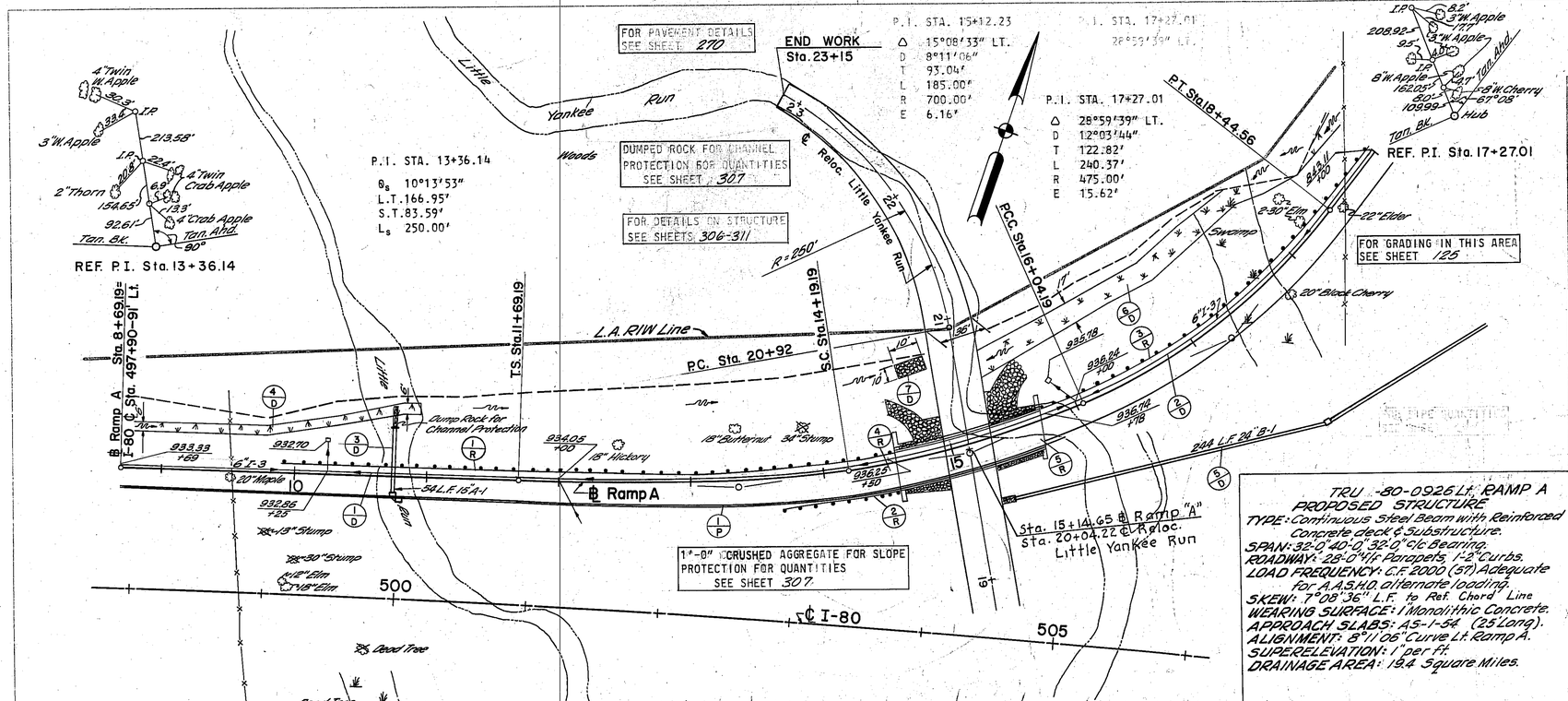


GRADING PLAN

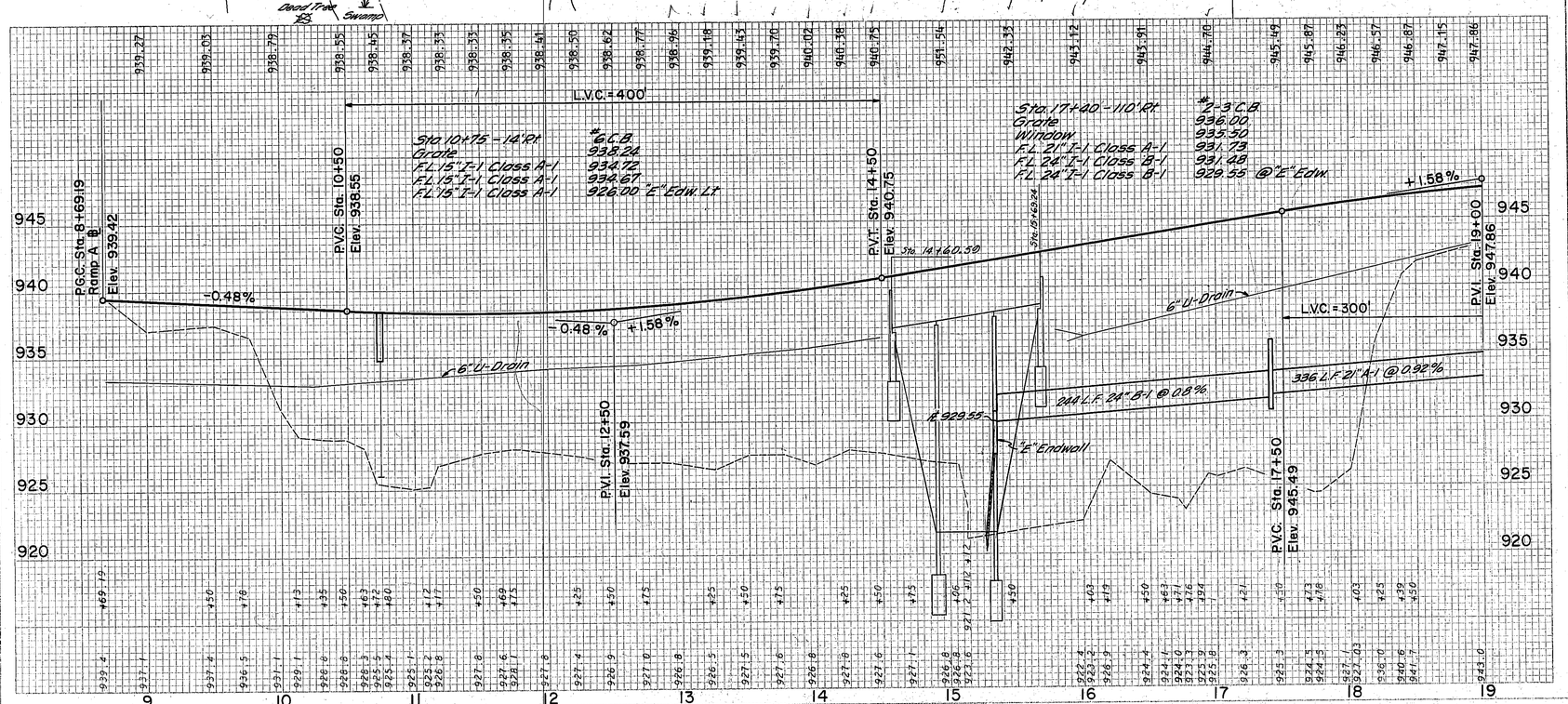
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

126/401

TRUMBULL COUNTY TRU-I-80-8.90



TRU -80-0926 Lt. RAMP A
PROPOSED STRUCTURE
TYPE: Continuous Steel Beam with Reinforced Concrete deck & Substructure.
SPAN: 32'-0" 40'-0" 32'-0" c/c Bearing.
ROADWAY: 28'-0" f/f Parapets, 1-2" Curbs.
LOAD FREQUENCY: C.F. 2000 (5T) Adequate for A.A.S.H.O. alternate loading.
SKEW: 7°08'36" L.F. to Ref. Chord Line
WEARING SURFACE: 1" Monolithic Concrete.
APPROACH SLABS: AS-1-54 (25' Long).
ALIGNMENT: 5°11'06" Curve Lt. Ramp A.
SUPERELEVATION: 1" per ft.
DRAINAGE AREA: 19.4 Square Miles.



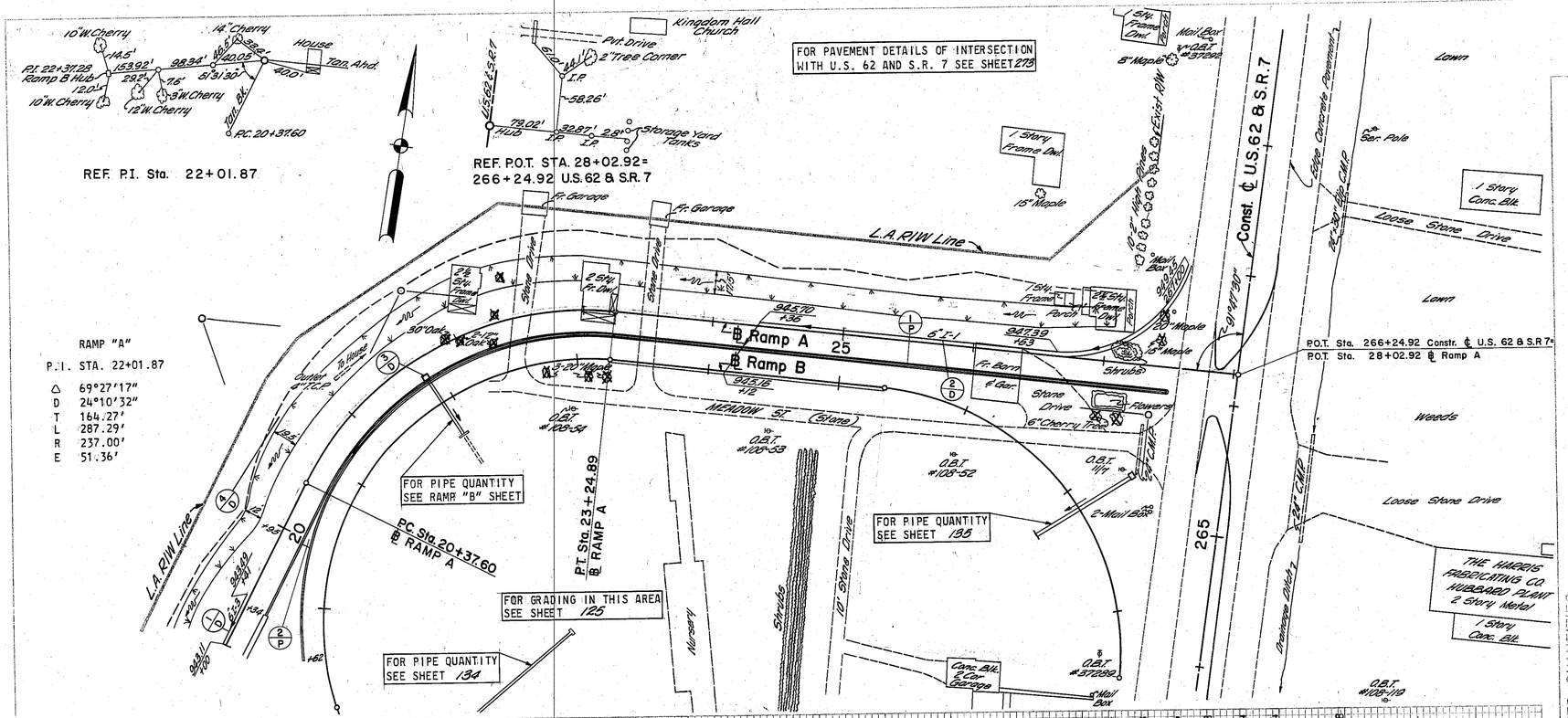
ESTIMATED QUANTITIES for M-6.5(b)

REF. NO.	STATION TO STATION	SIDE	CL. A-1 Pipe 18" 68.19 ft. 15" L.F.	CL. B-1 24" L.F.	CL. F-4 8" L.F.	CL. I-3 6" U-Drain Shallow L.F.	I-1 Masonry CU. YD.	I-2 For 6" U-Drain TEE	I-5 60° WYE	I-7 Reinforced Concrete Approach Slab SQ. YD.	I-8 Catch Basin No. 2-3 EACH	I-8 Catch Basin No. 6 EACH	I-10 Sodding SQ. YD.	I-10 Dumped Rock Channel Protection CU. YD.	I-12 Type 8 P.C.C. Curb L.F.	I-15 Guard Rail L.F.	SEE SHEET NO.
1-P	8+69.19 to 14+50	Lt.										1	1				
2-P	15+78 to 19+00	Lt.	54		10	594							143	4			
3-P	10+75	Rt.			10	334	.26						2	2			
4-P	8+80 to 10+95	Lt.									1		466				
5-P	15+34 to 17+40	Rt.		244			.41										
6-P	15+40 to 18+50	Lt.												19			
7-P	14+76 to 14+96	Lt.															
1-P	9+91.5 to 14+54	Lt.								44.5							
2-P	15+66.5 to 18+54	Rt.								44.5							
3-P	15+75 to 19+00	Lt.															
4-P	14+32 to 16+75	℄															
5-P	10+10 to 10+96	℄															
1-P	8+69.19 to 14+60.59	Rt.															
TOTALS			54	244	20	928	1.7	1	2	89.0	1	1	612	25	592	8750	

RAMP A Sta. 8+69.19 to Sta. 19+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-G-80-5(9)245	127 / 401

TRUMBULL COUNTY TRU-I-80-8.90



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 Cl. A-1 M-6.6(a) or 6.8(b) Pipe L.F.	I-1 Cl. I-3 6" U-Drain SHALLOW L.F.	I-5 For 6" U-Drain Pipe EACH	I-8 Catch Basin No. 6 EACH	L-10 Sodding SQ. YD.	I-21 P.C.C. Median Pav't. SQ. YD.	I-12 Std. Type 2-A Curb L.F.
			for M-6.5(b)						
1-D	19+00 to 19+41	Lt.	40				164		
2-D	24+36 to 26+00 (US 62)	Lt.	50	358	1	1			
3-D	27+65 to 27+00	Rt.							
4-D	19+00 to 27+00	Lt.							
1-P	19+34 to 24+48.70	Rt.						172	789
2-P	20+37.60 to 24+48.70	Rt.							
TOTALS			90	358	1	1	164	172	789

RAMP A Sta. 19+00 to Sta. 27+58

SHEET NO.	TOTAL SHEETS
2	OHIO I-IG-80-5(9)245

128
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
104.1764	174.3409		
84.1918	78.2461		
0.740	0.685		
0	0	0	0

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

930

2:1

4:1 ℄ 923.3 4:1 12:1

G-943.91
16+50
924.4

930

2:1

4:1 ℄ 923.0 4:1 12:1

G-943.12
16+00
922.5

930

E.Water E.Water E.Water

G-942.33
15+50
921.4

Sta. 15+34 50' Rt. "E" Edw.
℄ 24" I-1 Class E-1 926.89

BRIDGE

E.Water E.Water

Sta. 14+86 Ditch Lt.
Dumped Rock for Channel Protection
20' L. x 10' W x 2.5' T

℄ 920.5

G-941.54
15+00
926.8

Channel

930

Begin Earthwork
Sta. 15+00
Area = 0

140 120 100 80 60 40 20

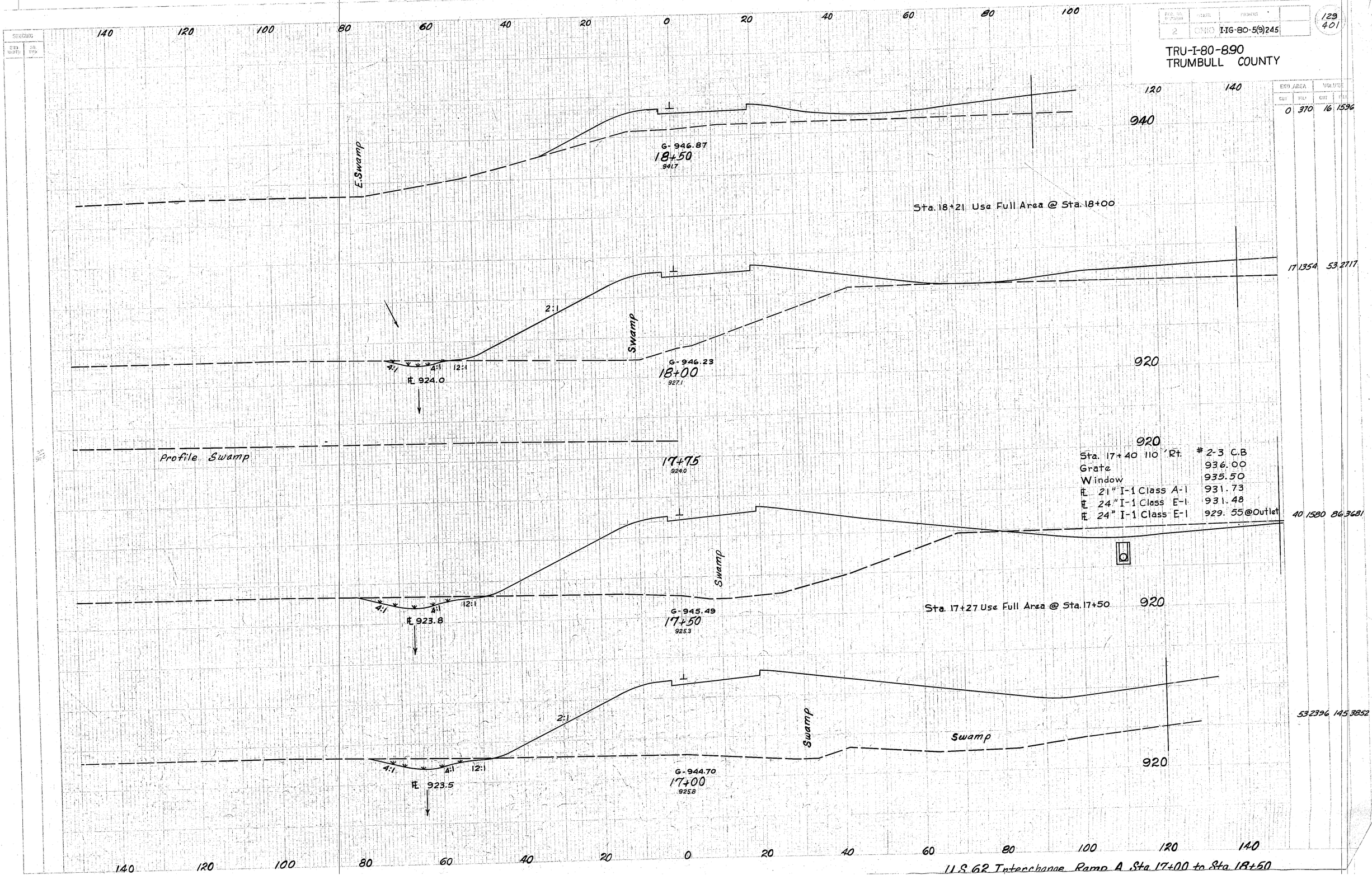
SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

123
401

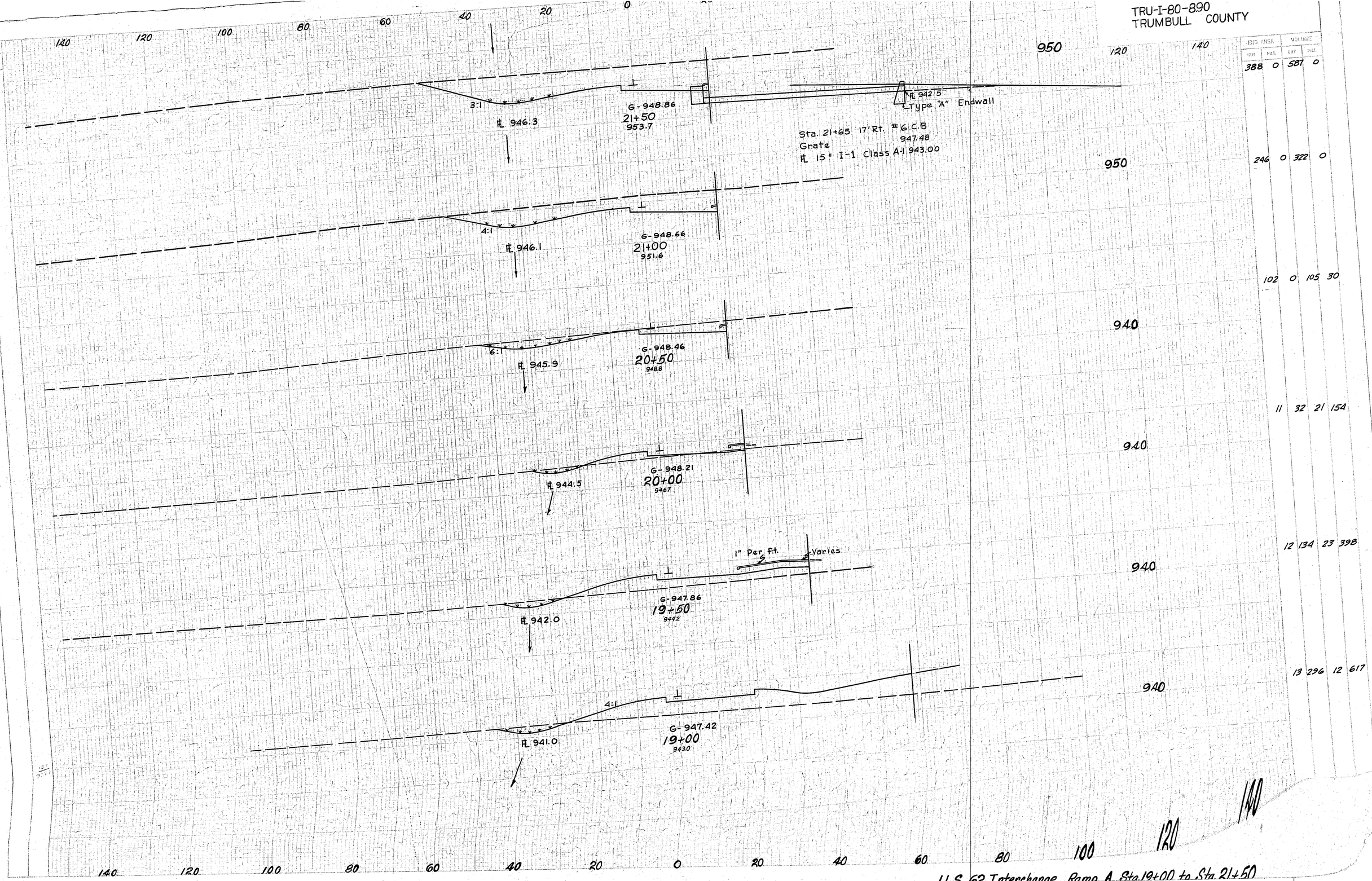
TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	370	16	1596



U.S. 62 Interchange Ramp A Sta. 17+00 to Sta. 18+50

TRU-I-80-8.90
TRUMBULL COUNTY

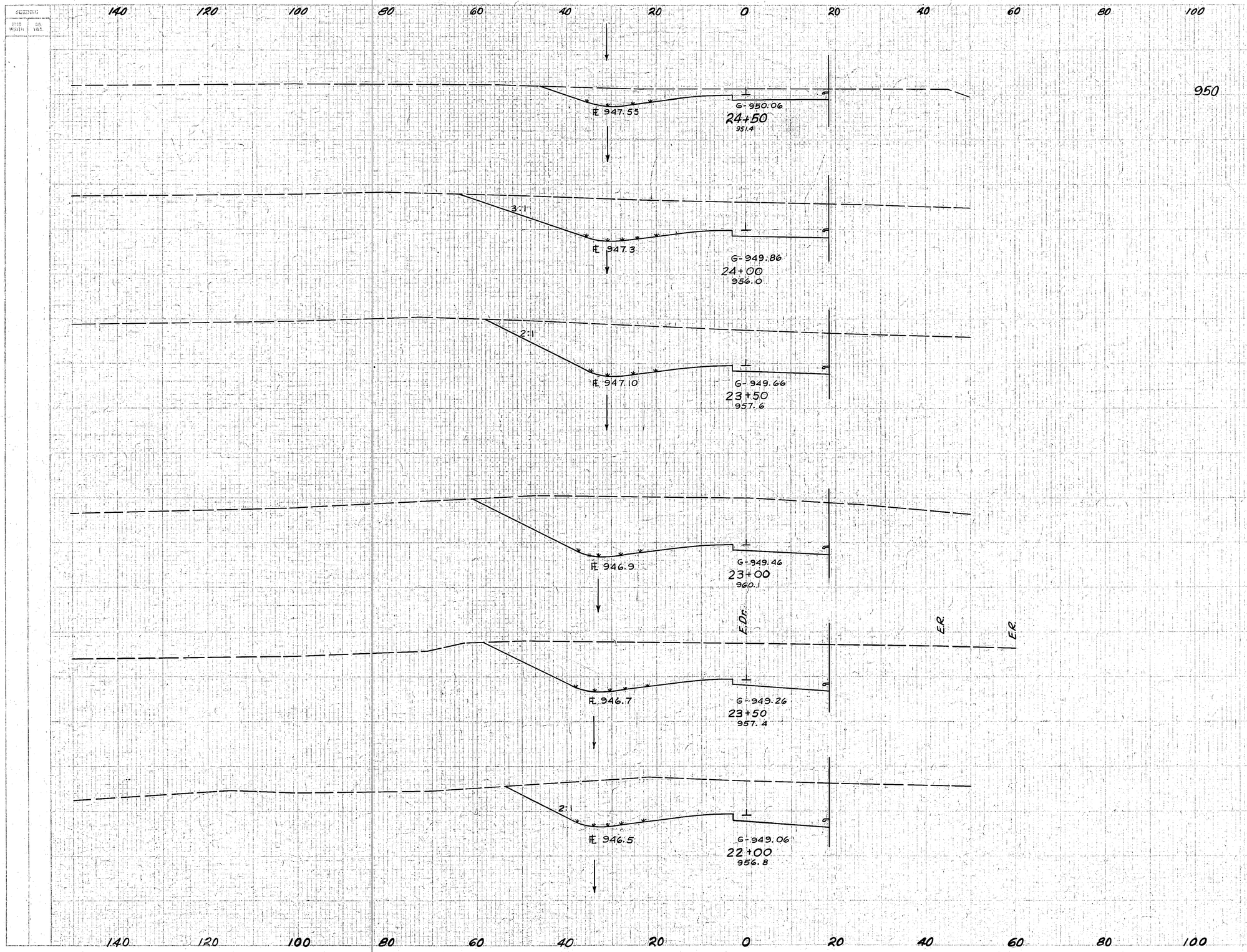


U.S. 62 Interchange Ramp A Sta.19+00 to Sta.21+50

PROJECT NUMBERS	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

131
401

TRU-I-80-8.90
TRUMBULL COUNTY



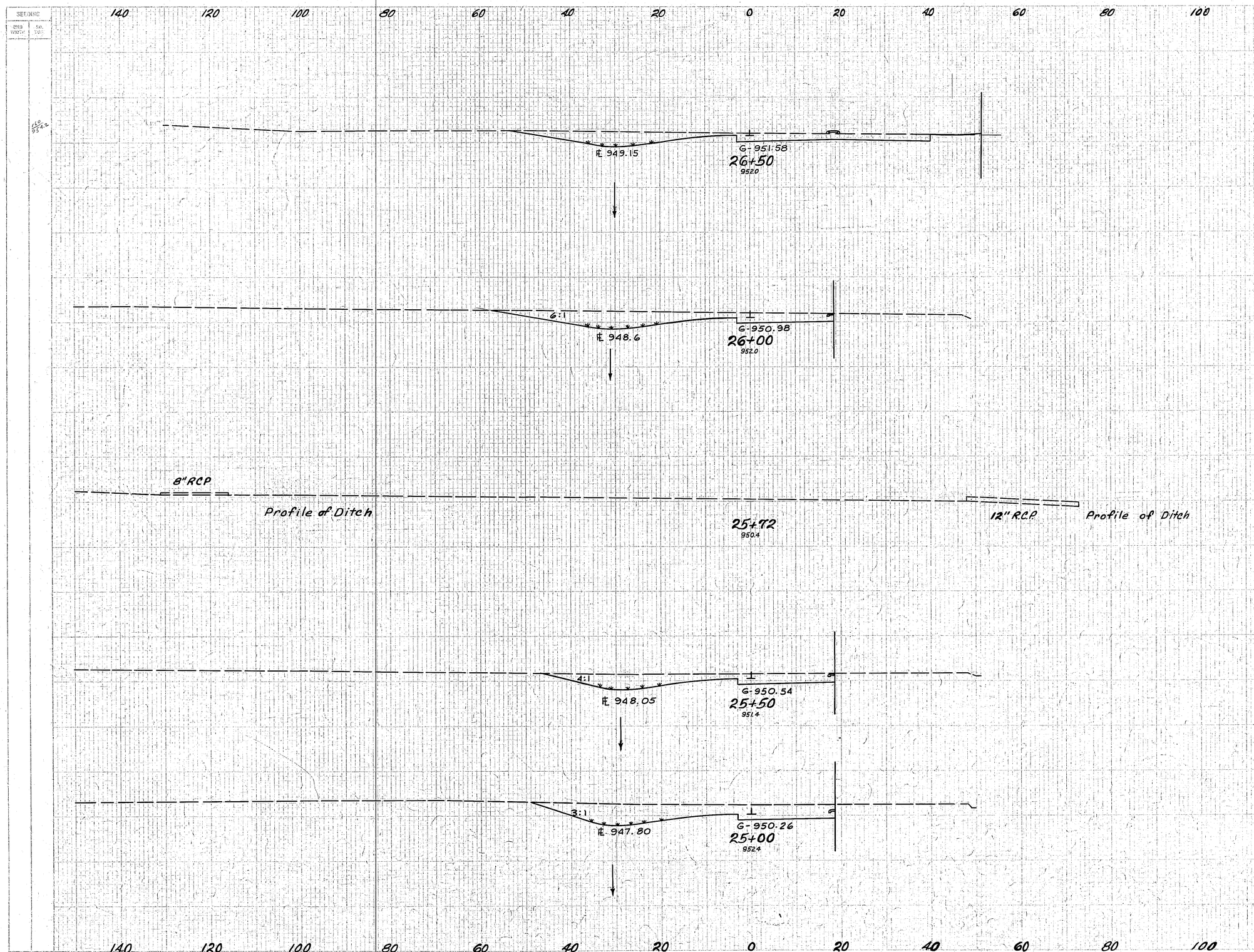
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
166	0	668	0
556	0	1122	0
656	0	1385	0
840	0	1346	0
614	0	1135	0
612	0	926	0

U.S. 62 Interchange Ramp A Sta 22+00 to Sta 24+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

(132 401)

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
154	0	298	0
168	0	276	0
130	0	317	0
212	0	350	0

U.S. 62 Interchange Ramp A Sta 25+00 to Sta 26+50

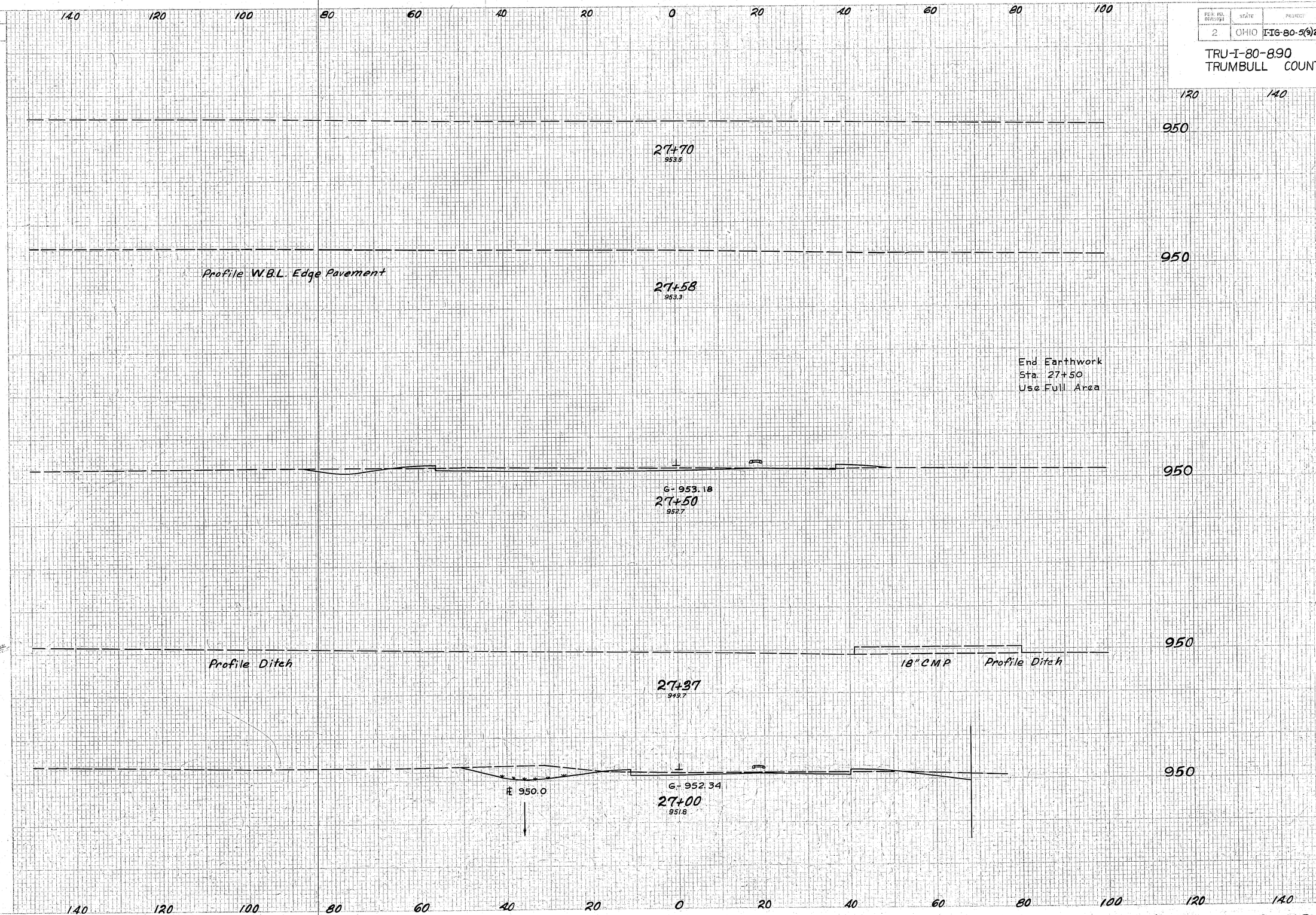
SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

133
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

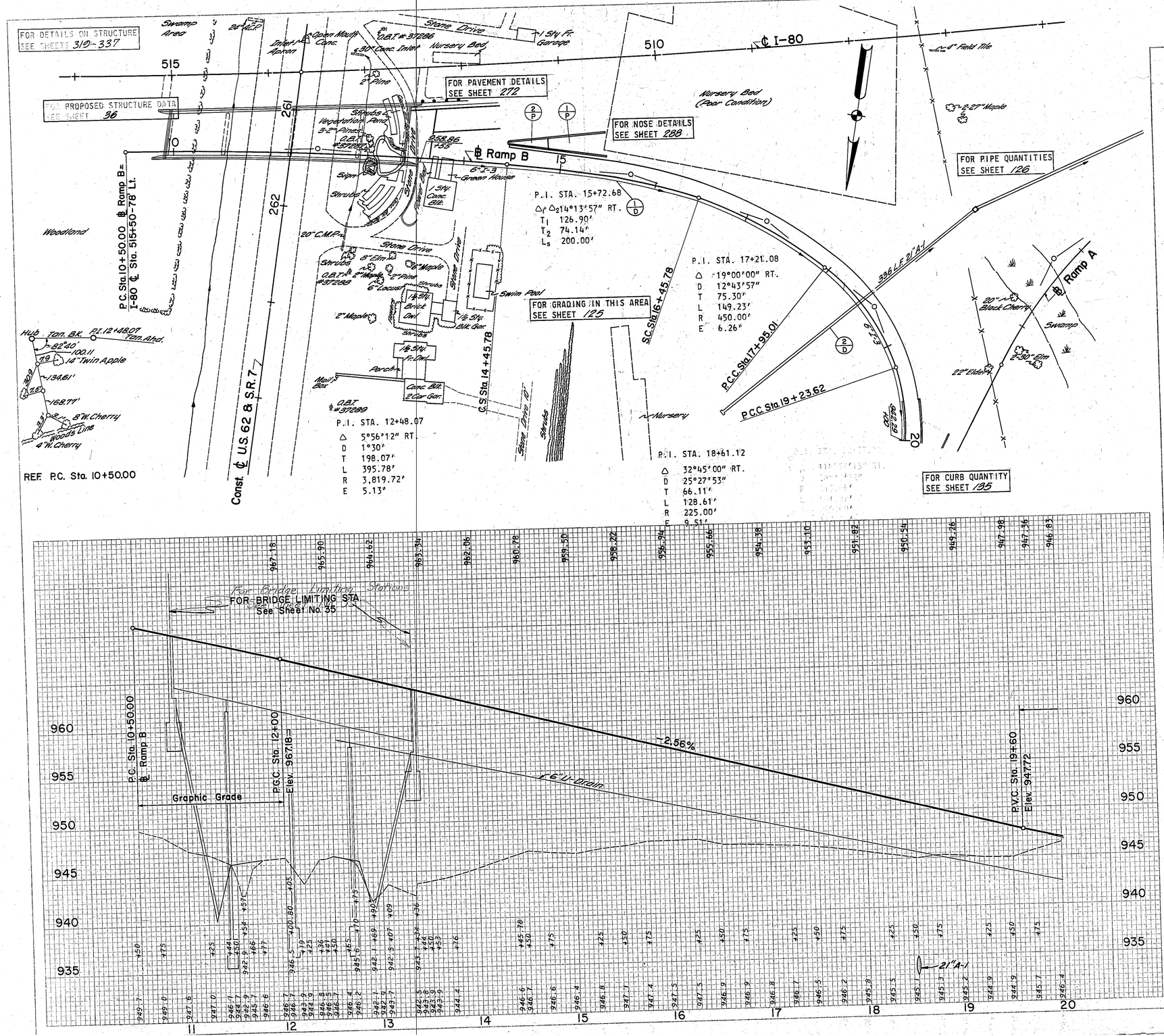


U.S. 62 Interchange Ramp A Sta 27+00 to Sta 27+70

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-80-5(9)245

134
401

TRUMBULL COUNTY TRU-I-80-8.90



ESTIMATED QUANTITIES

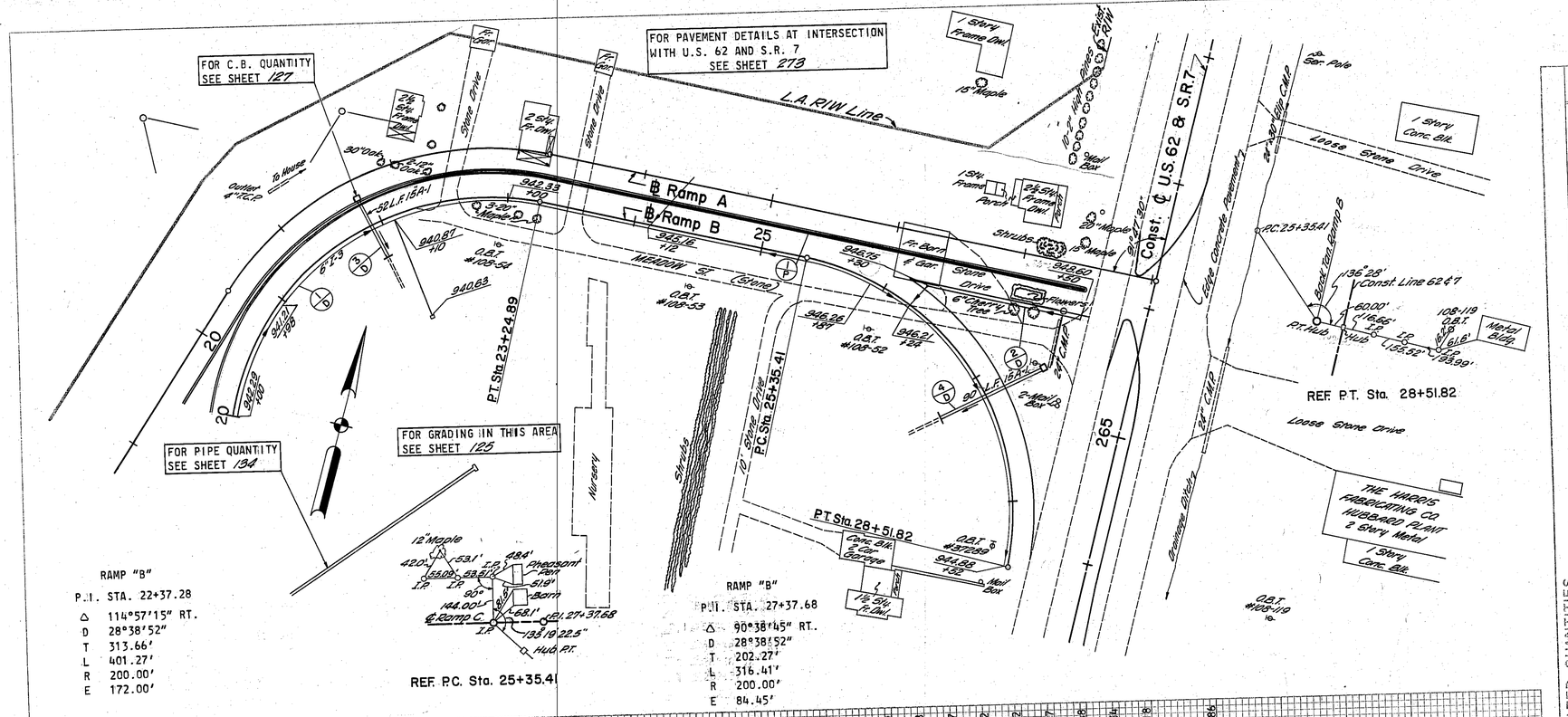
REF. NO.	STATION TO STATION	SIDE	T-1 CL. A-1 M-6.6 (C) 21" L.F.	T-1 CL-I-3 6" U-Drain Shallow L.F.	T-2 Masonry CU.YD.	I-12 Std. Type 6 Curb L.F.	L-10 Sodding SQ.YD.	I-21 P.C.C. Median Pav't. SQ.YD.	SEE SHEET NO.
1-D	18+55 to 20+00	Rt.		646	.36		/		1
2-D	18+50	℄	336						
1-D	14+45.78 to 15+05.78	Lt.				100		91	91
2-D	14+50	Lt.							
TOTALS			336	646	.4	100			

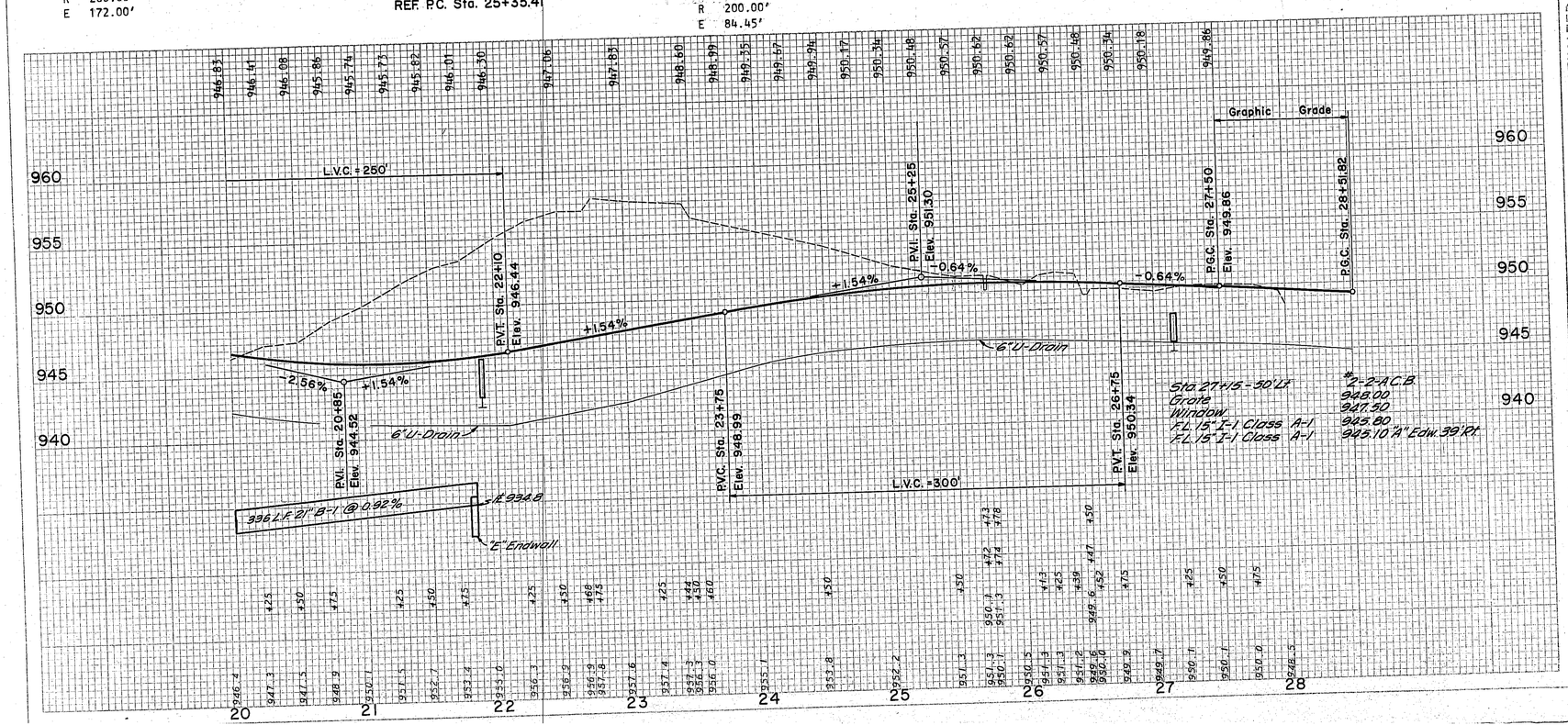
RAMP B Sta. 10+50 to Sta. 20+00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-80-5(9)245

TRUMBULL COUNTY TRU-I-80-8.90

135
401





ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 CL. A-1 M-6.6(b) or 6.8(b) 24" RCP L.F.	I-1 CL. F-4 M-6.6(b) or 6.8(b) 8" L.F.	I-1 CL. 1-3 6" U-Drain Shallow L.F.	I-2 Masonry CU. YD.	L-10 Sodding SQ. YD.	SEE SHEET NO.
1-P	20+00 to 28+52	Rt.	22		922		2	
2-P	26+30 to 27+50	Lt.			120	3.00	2	
3-P	21+92	Rt.		52		3.00		
4-P	27+15	Rt.		90				
5-P	22+00	Rt.						
1-P	19+62 to 27+48.70	Lt.						
TOTALS			22	142	1042	6.0	4	

REF. NO.	I-5 For 6" I-3 60° BEND EACH	I-5 60° WYE EACH	I-5 TEE EACH	I-8 Catch Basin No. 2-2-A EACH	I-12 Std. Type 2A Curb L.F.
1-P	1	1	2	1	
2-P					709
TOTALS	1	1	2	1	709

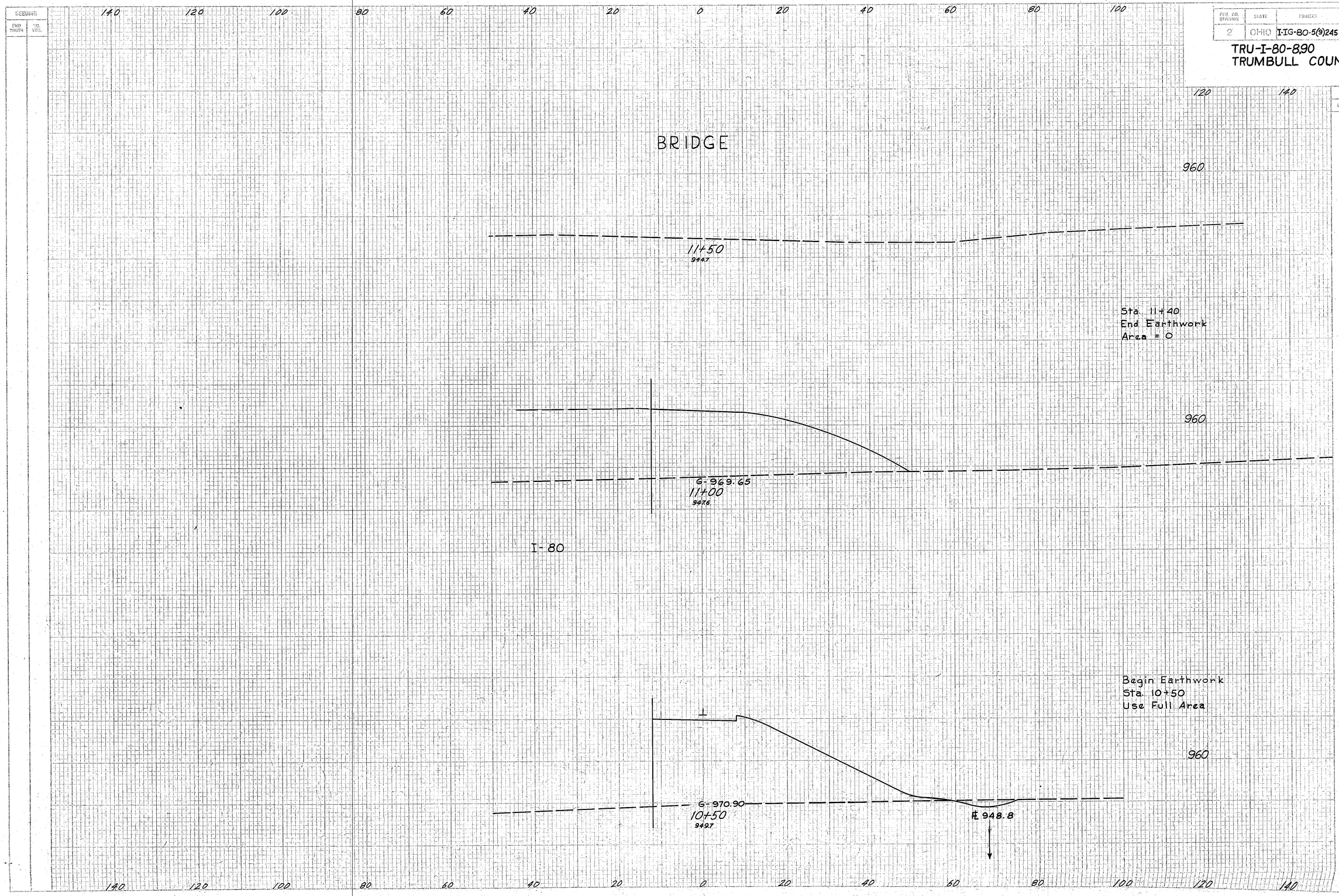
#ex M-6.5(b)

RAMP B Sta. 20+00 to Sta. 28+51.82

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-80-5(3)245

136
401

TRU-I-80-8,90
TRUMBULL COUNTY

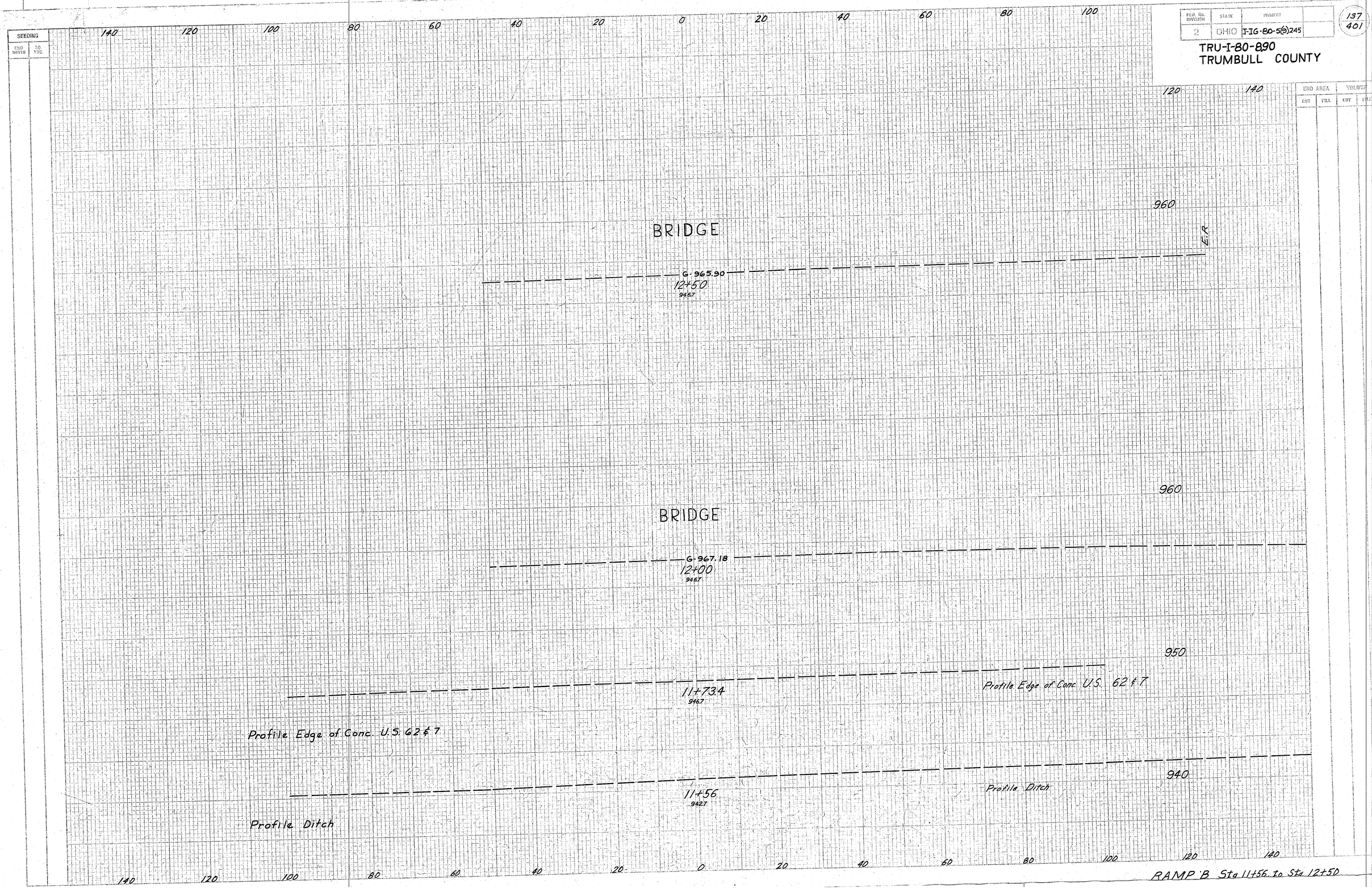


END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0	0	563
0	760	20	1592
22	960	0	0

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(S)245	

137
401

TRU-I-80-8,90
TRUMBULL COUNTY



RAMP B Sta 11+56 to Sta 12+50

SEEDING	
END AREA	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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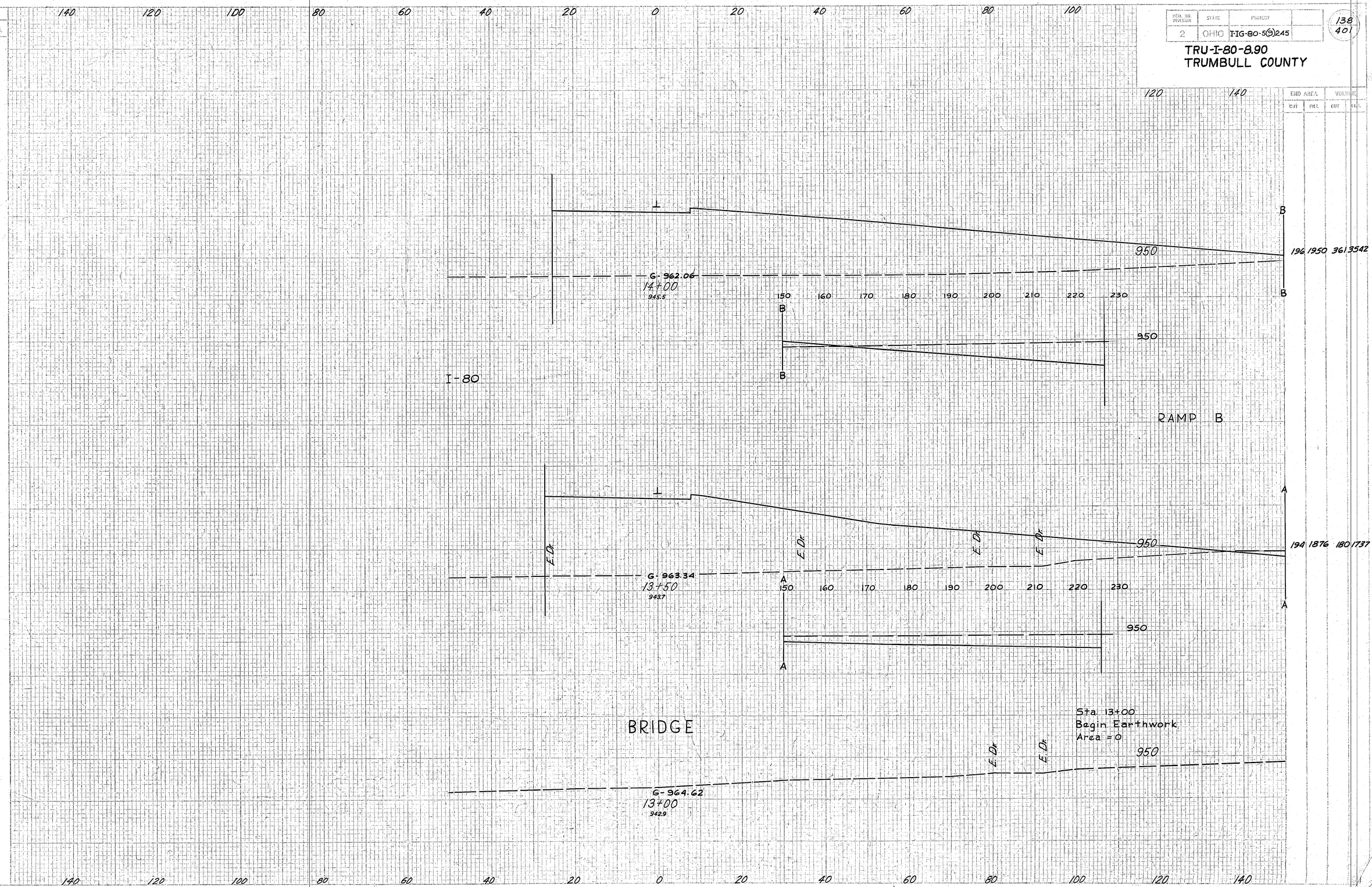
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL



RAMP B Sta 13+00 to Sta 14+00

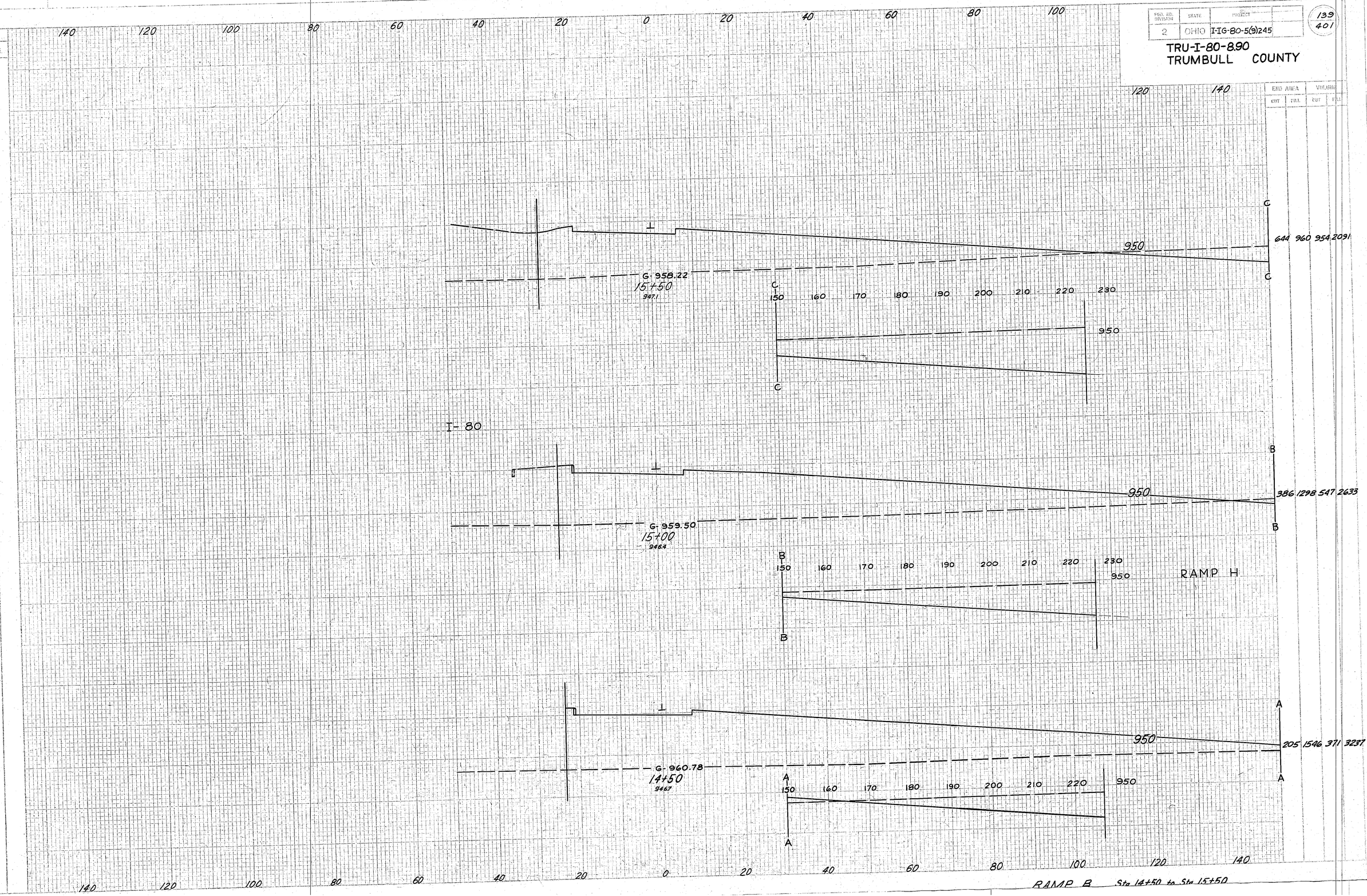
SEEDING	
END POINTS	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-80-5(9)245

139
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

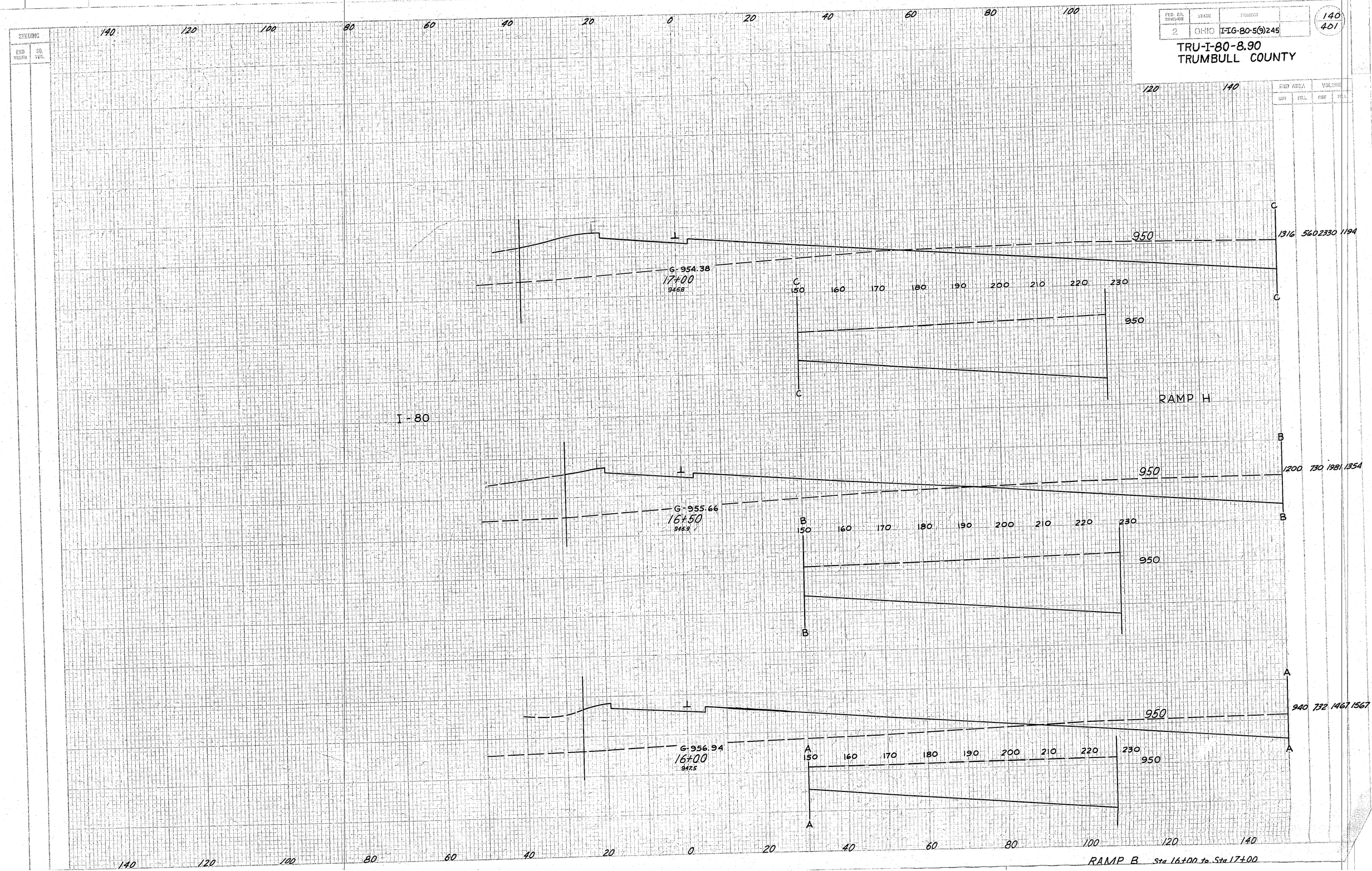


RAMP B Sta 14+50 to Sta 15+50

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-80-5(S)245

140
401

TRU-I-80-8.90
TRUMBULL COUNTY



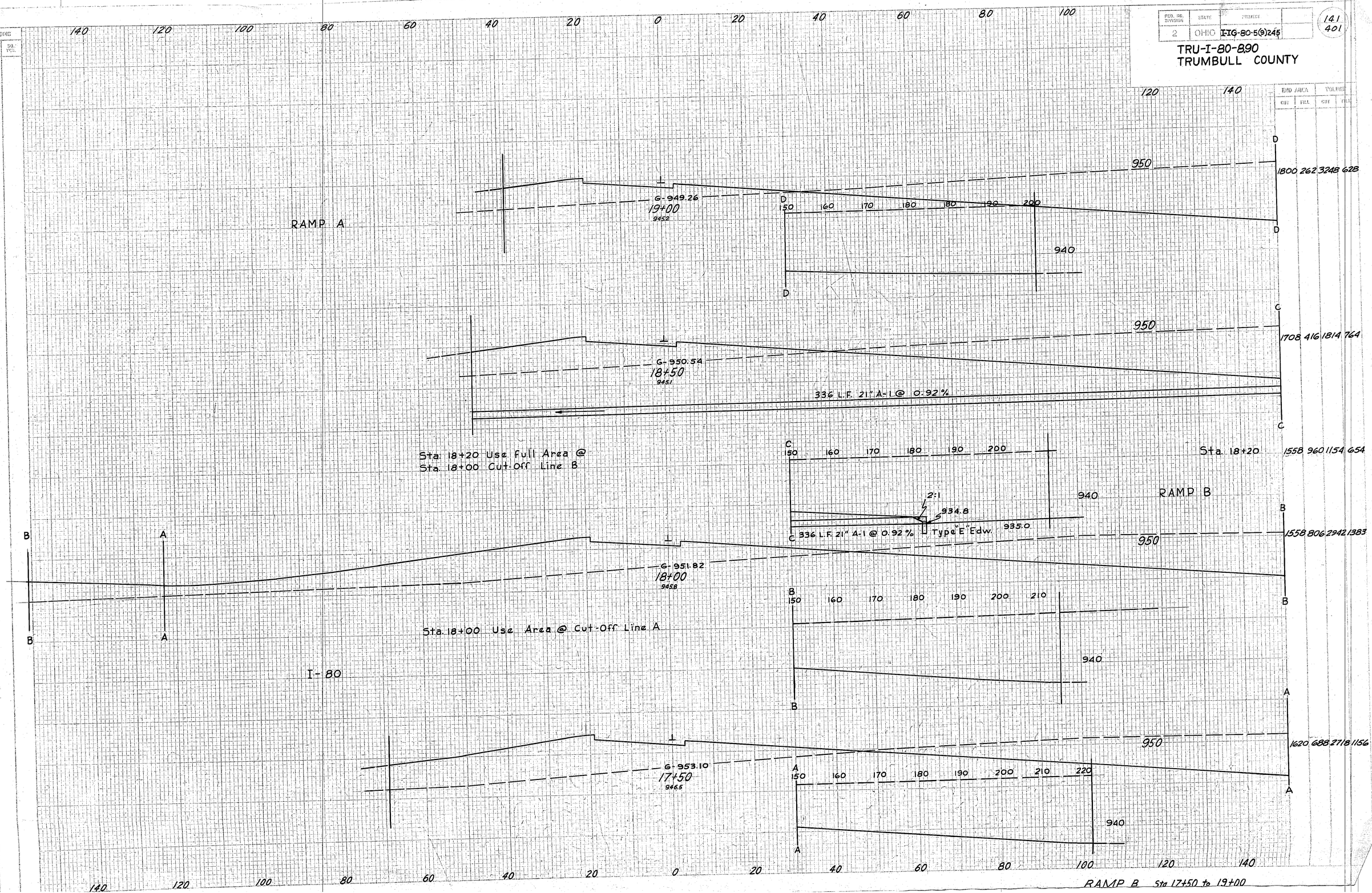
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

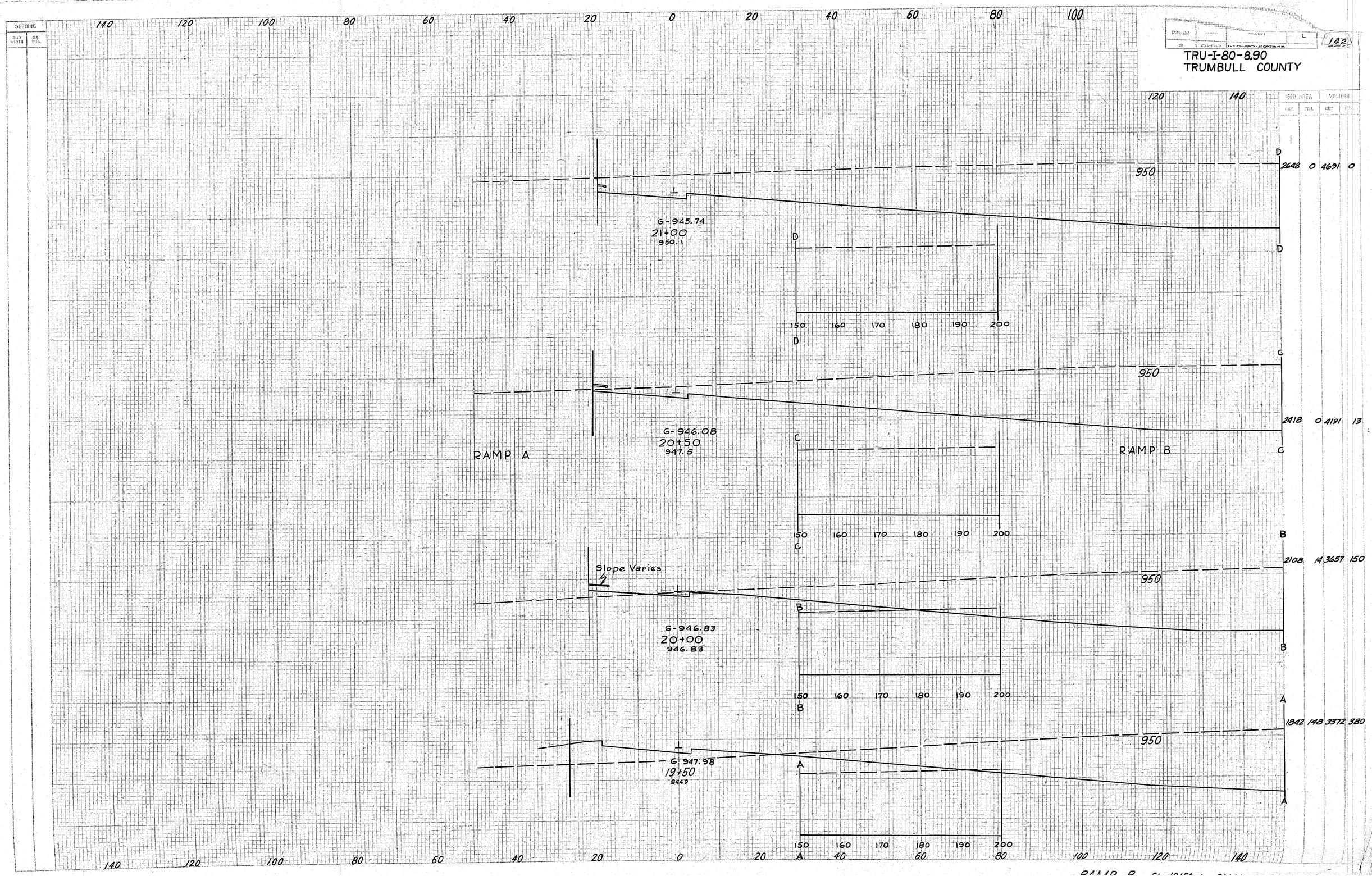
141
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING	
END WIDTH	SQ. YDS.

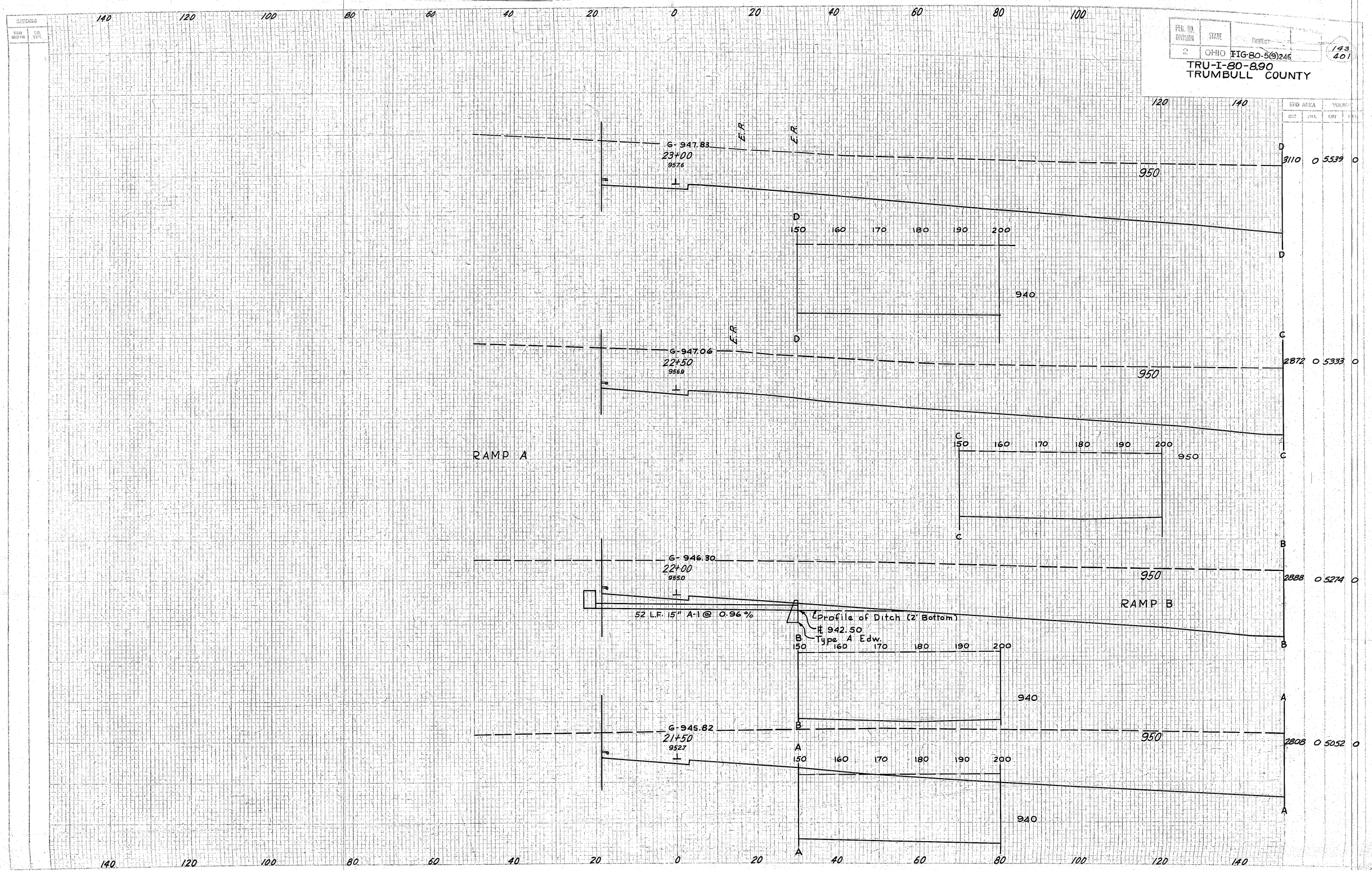
END AREA		VOLUME	
CUT	FILL	CUT	FILL




TRU-I-80-8.90
TRUMBULL COUNTY
142
SEEDING
SEED WIDTH
SD. YDS.
SEED AREA
VOLUME
CUT
FILL
G-945.74
21+00
950.1
G-946.08
20+50
947.5
RAMP A
RAMP B
Slope Varies
G-946.83
20+00
946.83
G-947.98
19+50
944.9
950
2648 0 4691 0
2418 0 4191 13
2108 14 3657 150
1842 148 3372 380
150 160 170 180 190 200
140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	FIG-80-5(9)245	143 401

TRU-I-80-8.90
TRUMBULL COUNTY



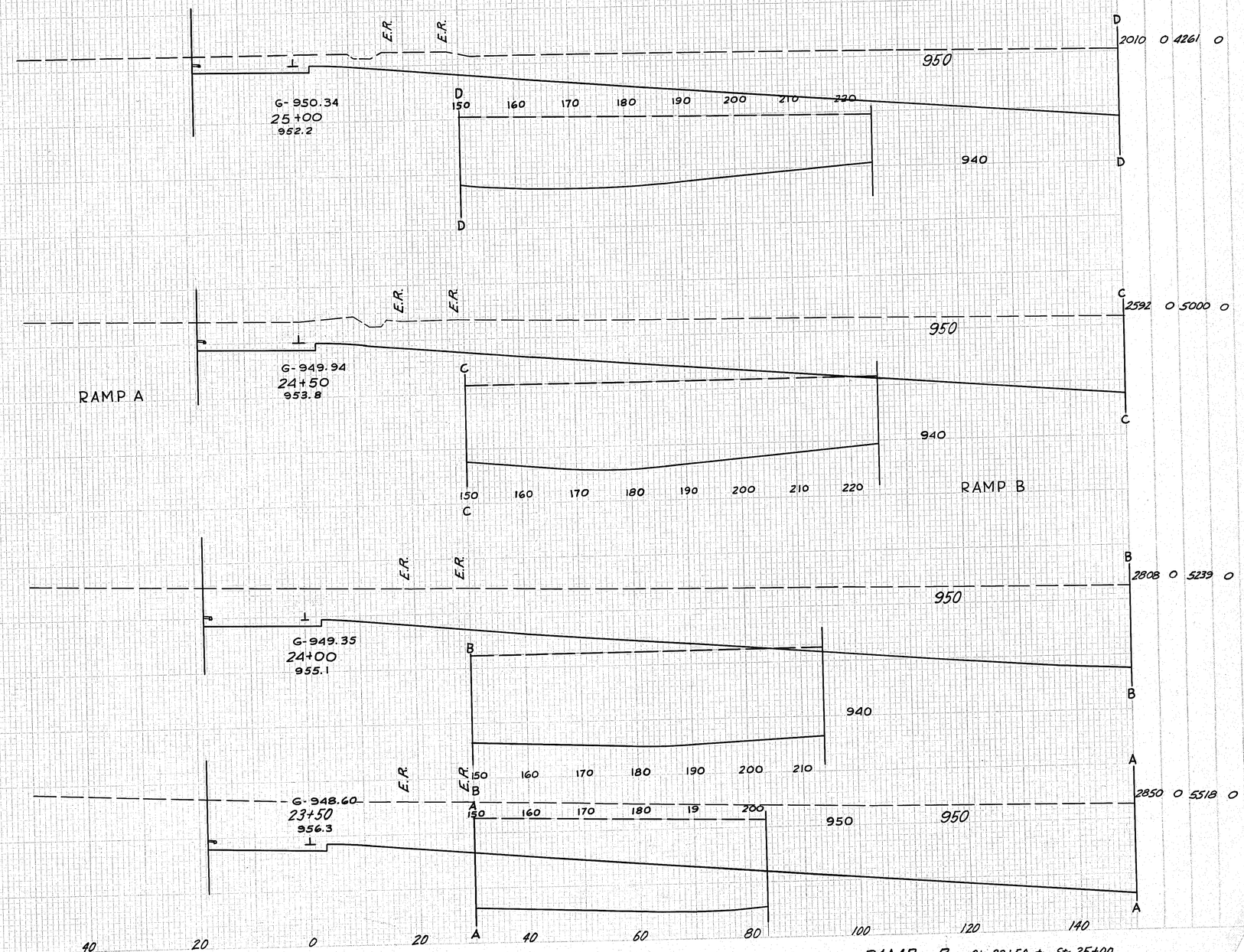
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	FIG-80-5(3)245

144
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING	
FIND VOLUME	NO. YDS.

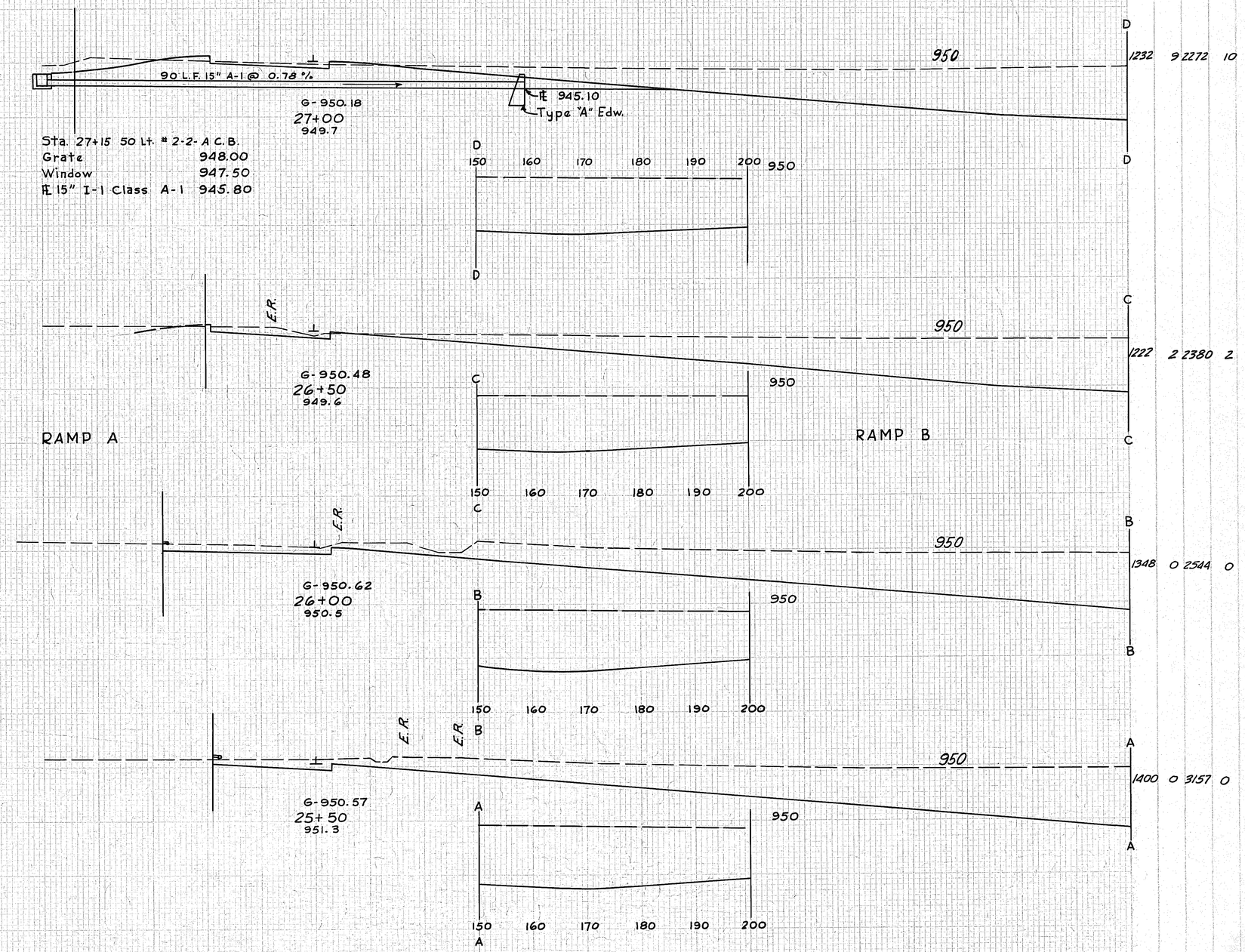
END AREA		VOLUME	
CUT	FILL	CUT	FILL



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

145
401

TRU-I-80-8.90
TRUMBULL COUNTY



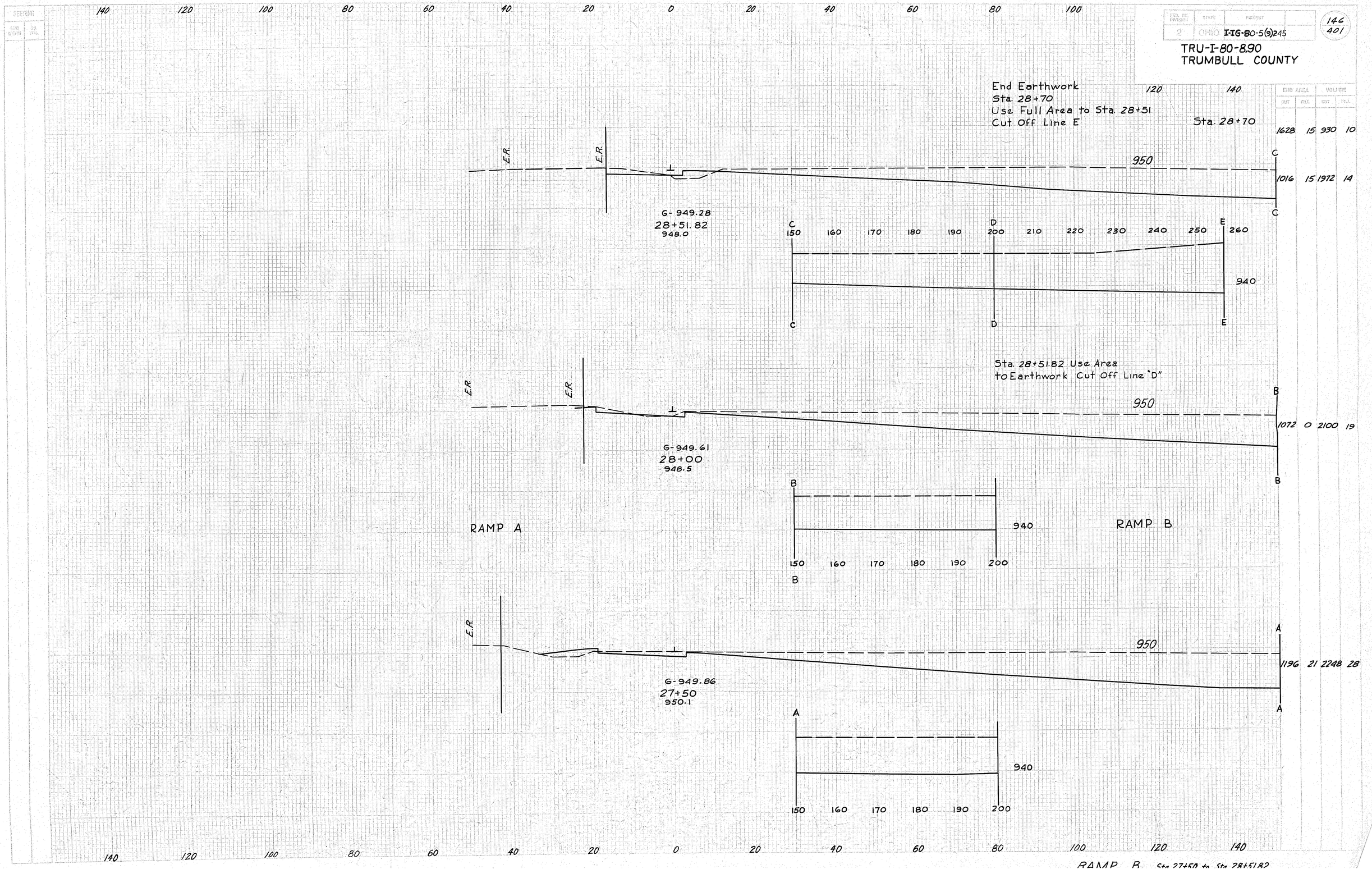
END AREA		VOLUME	
CUT	FILL	CUT	FILL

RAMP B Sta. 25+50 to Sta. 27+00

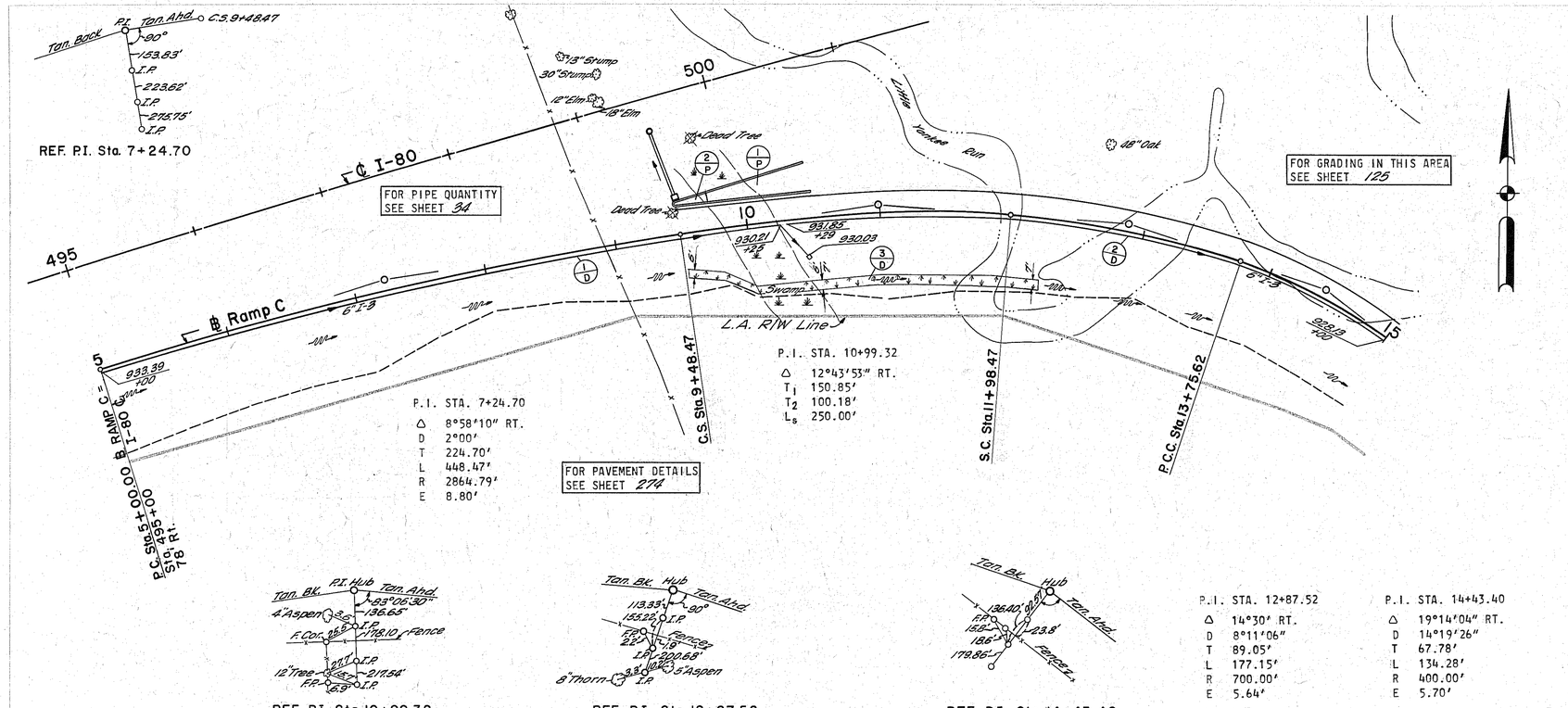
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

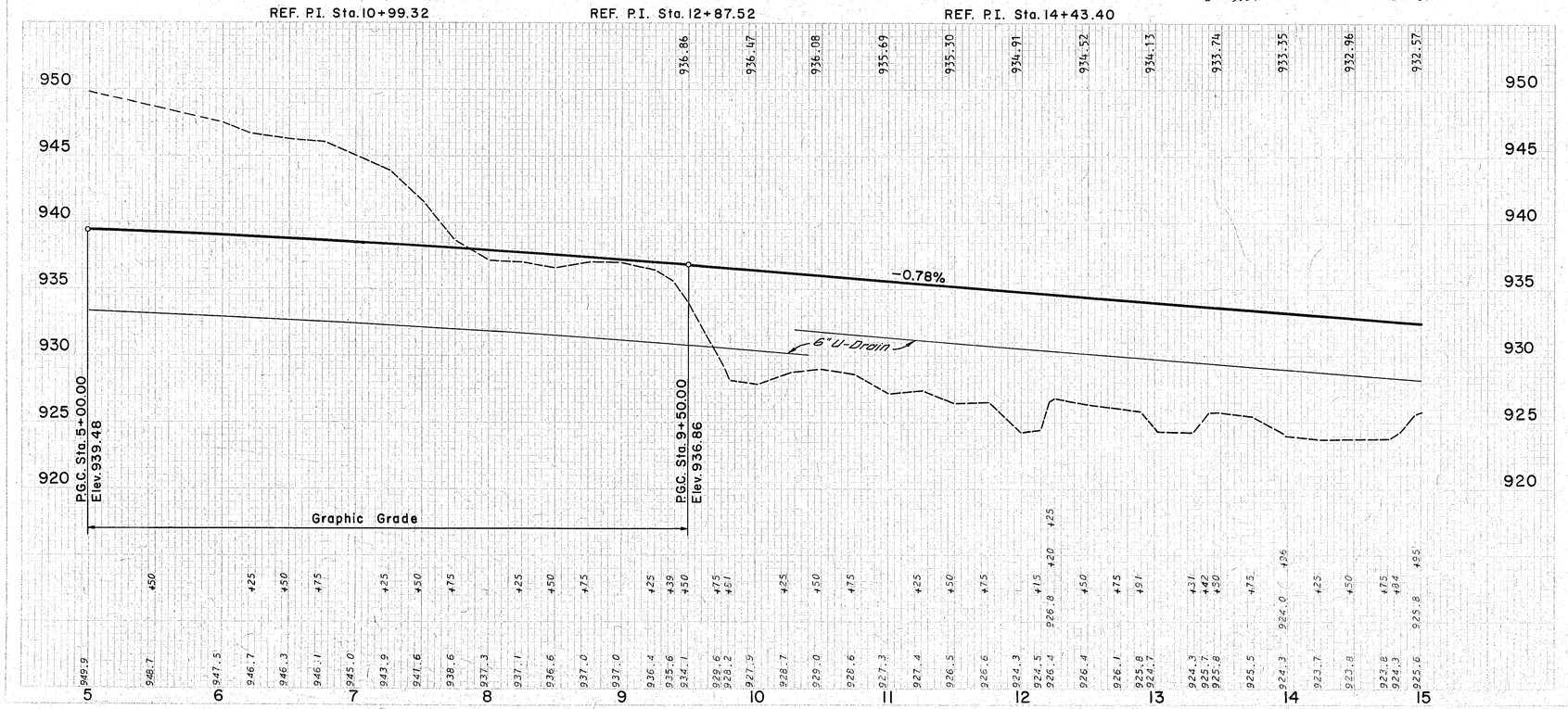
146
401

TRU-I-80-8.90
TRUMBULL COUNTY



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	1628	15	930	10
	1016	15	1972	14
	1072	0	2100	19
	1196	21	2248	28





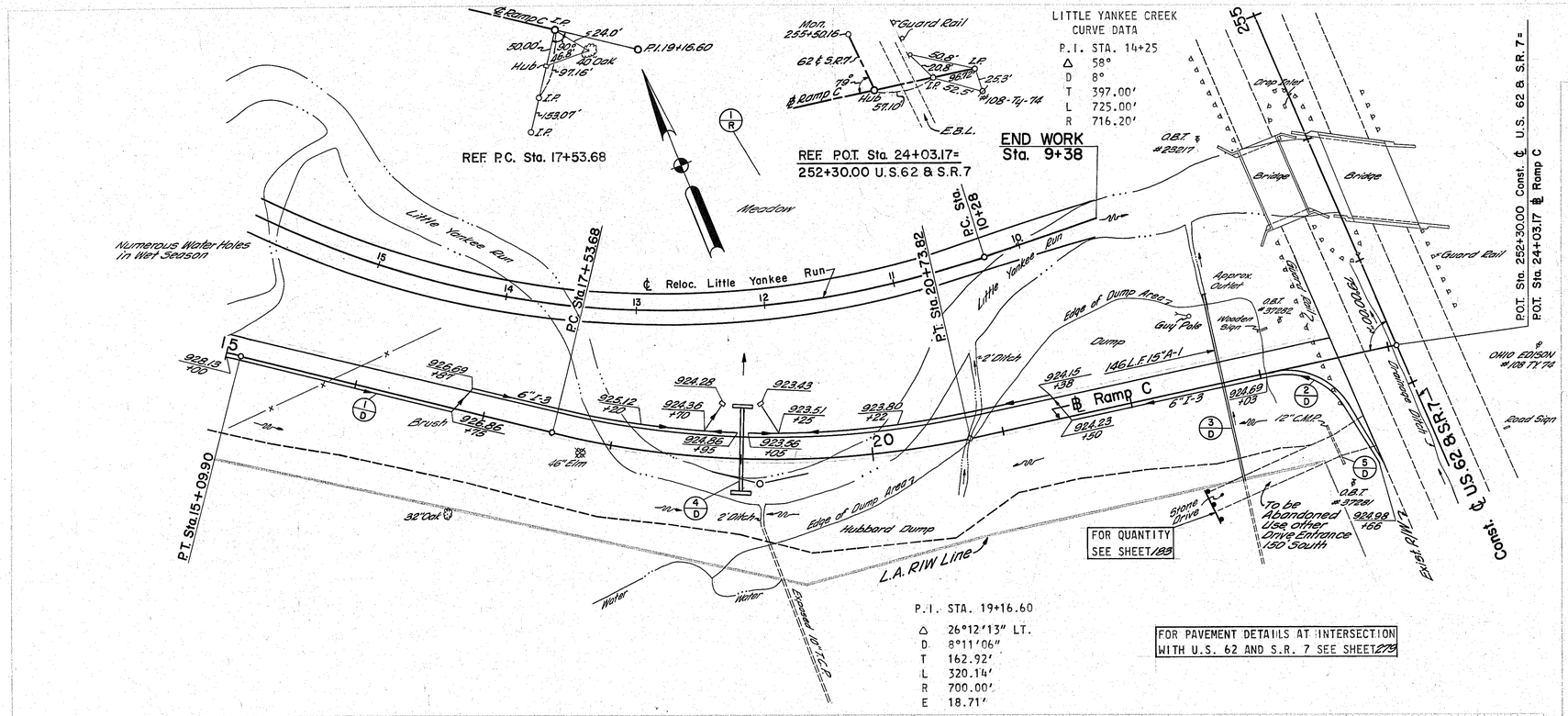
REF. NO.	STATION TO STATION	SIDE	I-1 CL. I-3 6" U-Drain L.F.	I-1 CL. F-4 8" L.F.	I-5 For 6" U-Drain W/ Wyes EACH	I-12 Std. Type 6" Curb L.F.	1-21 P.C.C. Median Pav't. SQ. YD.	L-10 Sodding SQ. YD.
1-D	5+00 to 10+40	Rt.	546	10	1		28	193
2-D	10+29 to 15+00	Rt.	470			100		
3-D	9+50 to 12+25	Rt.						
1-P	9+48.47 to 10+48.47	Lt.						
2-P	9+50	Lt.						
TOTALS			1016	10	1	100	28	193

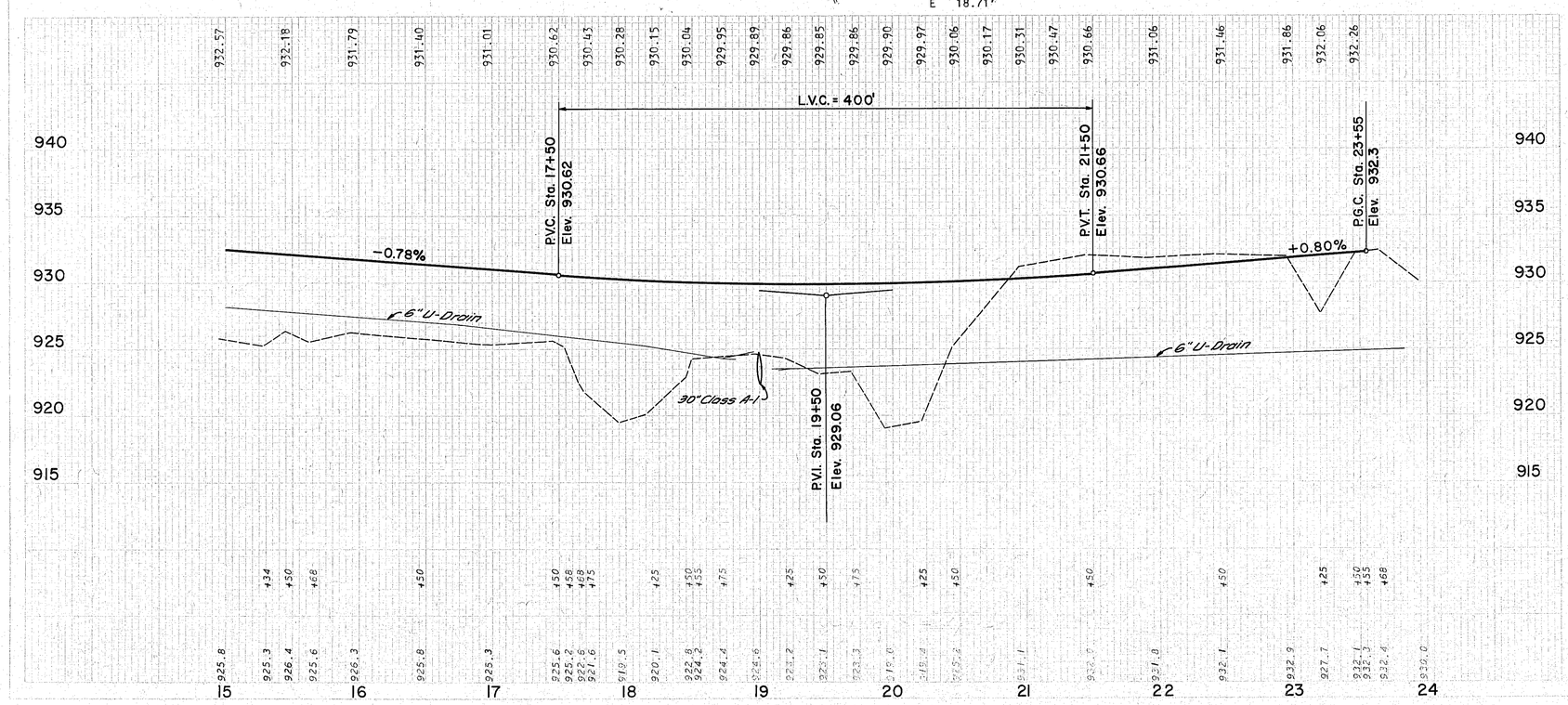
ESTIMATED QUANTITIES

RAMP C Sta. 5+00 to Sta. 15+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	148 401

TRUMBULL COUNTY TRU-I-80-8.90





ESTIMATED QUANTITIES

		E-3 Channel Excavation (Under 15') CU. YD.	E-12 Pipe Removed L.F.	CL. A-1 M-6.6(b) or 6.8(b) ≠6" L.F.	I-1 CL. A-1 M-6.6(b)(M-6.8(b) 30" ≠15" L.F.	CL. F-4 8"	CL. T-3 6" U-Drain Shallow
1-D	15+00 to 18+95 RT.			26		10	384
2-D	19+05 to 23+66 (US 62) RT.			26		10	494
3-D	22+70	6			146		
4-D	19+00	6		68			
5-D	23+45	RT.	22				
1-R	Yankee Creek I-80 US 62						

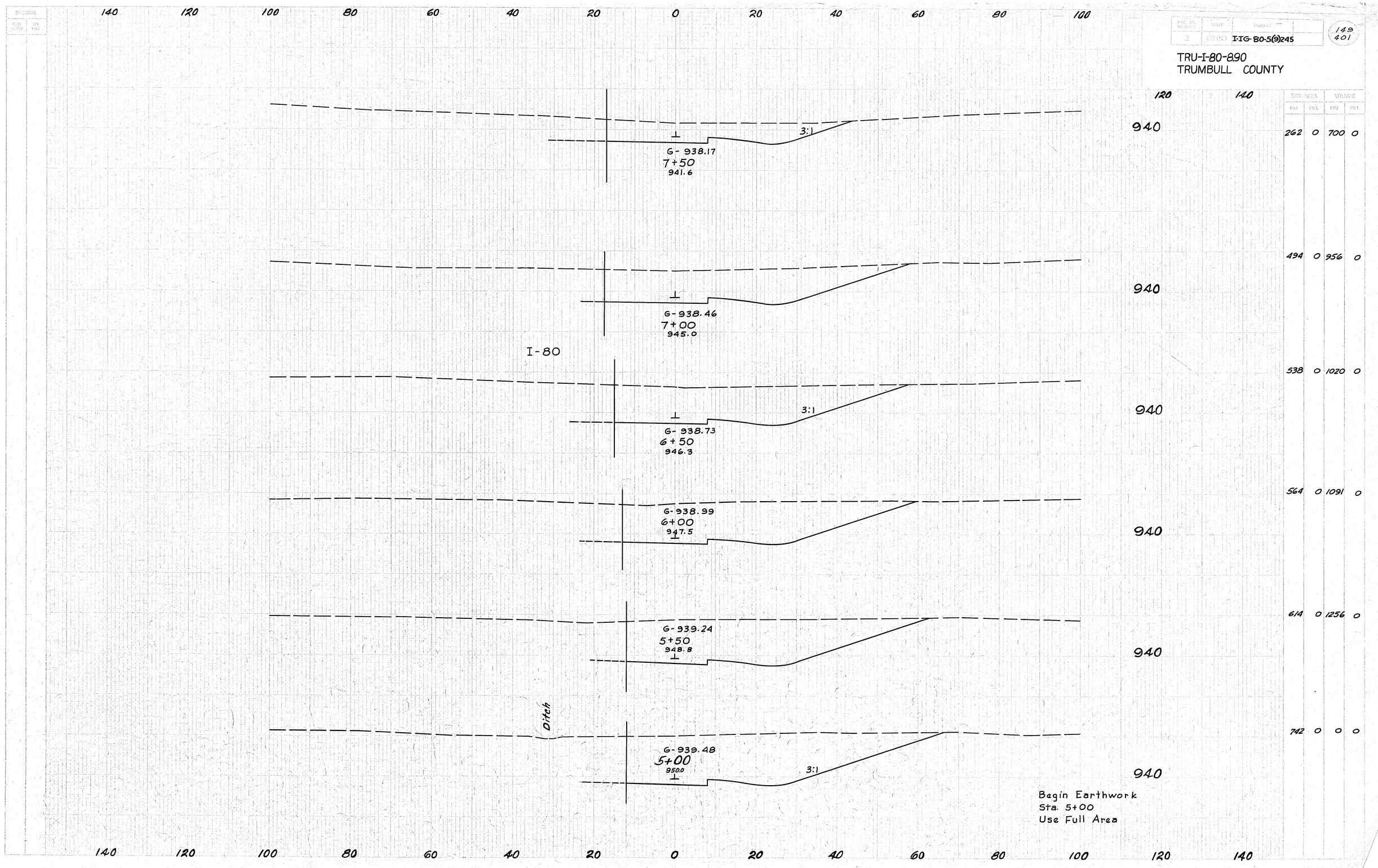
	I-2 Masonry CU. YD.	I-5 For 6" U-Drain 60° W.Y.E. 60° BEND EACH	L-6 Roadside Cleanup UNITS	L-10 Sodding SQ. YD.
1-D	14.8	1 1	292	7
2-D		2 2		
3-D				
4-D				
5-D				
1-R				
	14.8	4	292	7

RAMP C Sta. 15+00 to Sta. 23+55

SHEETING	
TOTAL SHEETS	SHEET NO.

PROJ. NO. SHEET NO.	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	149 401

TRU-I-80-8.90
TRUMBULL COUNTY



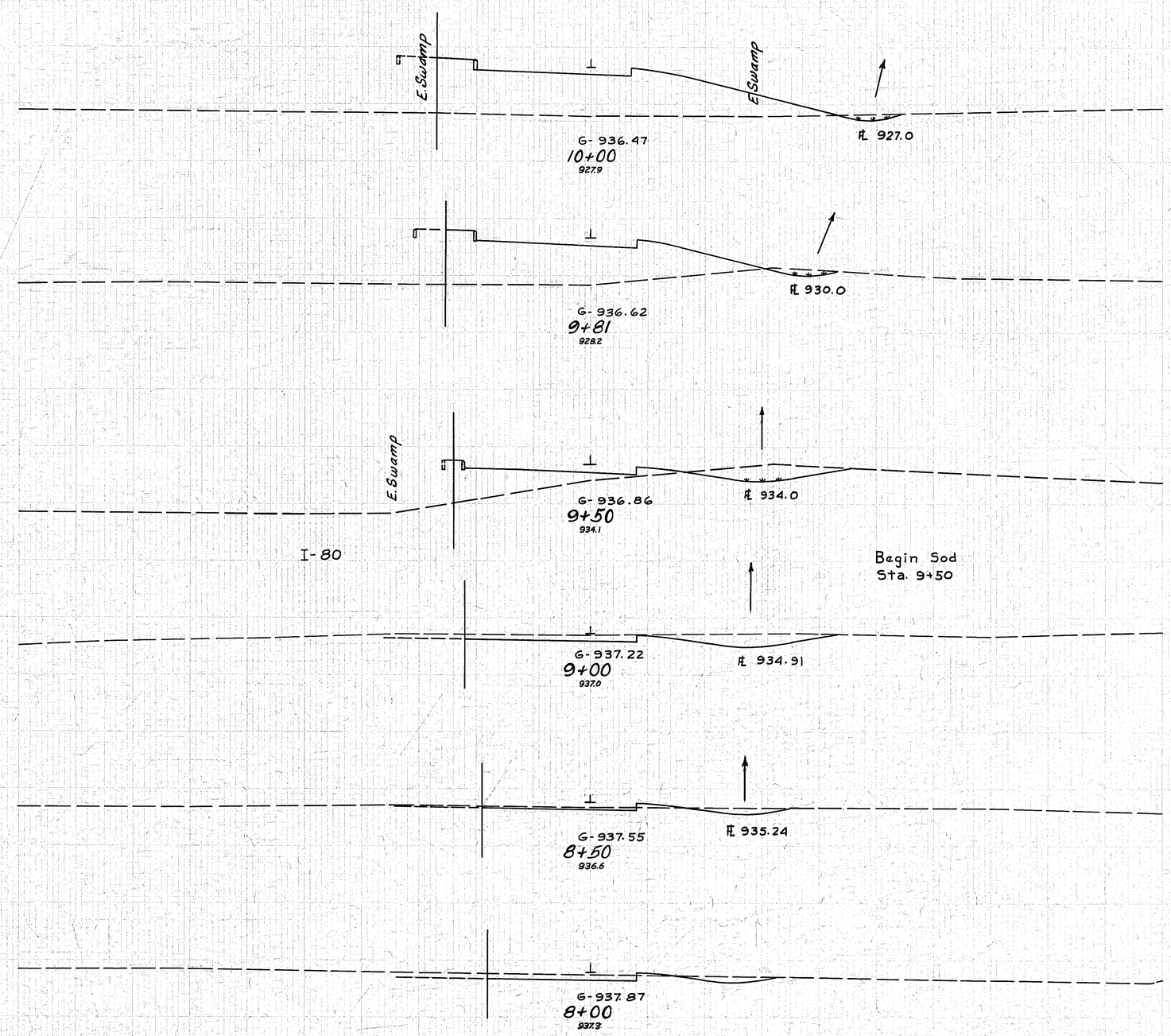
	AREA CUT	AREA FILL	VOLUME CUT	VOLUME FILL
	262	0	700	0
	494	0	956	0
	538	0	1020	0
	564	0	1091	0
	614	0	1256	0
	742	0	0	0

U.S. 62 Interchange Ramp C Sta.5+00 to Sta.7+50

STATE	PROJECT
OHIO	I-IG-80-5(9)245

150
401

TRU-I-80-8.90
TRUMBULL COUNTY

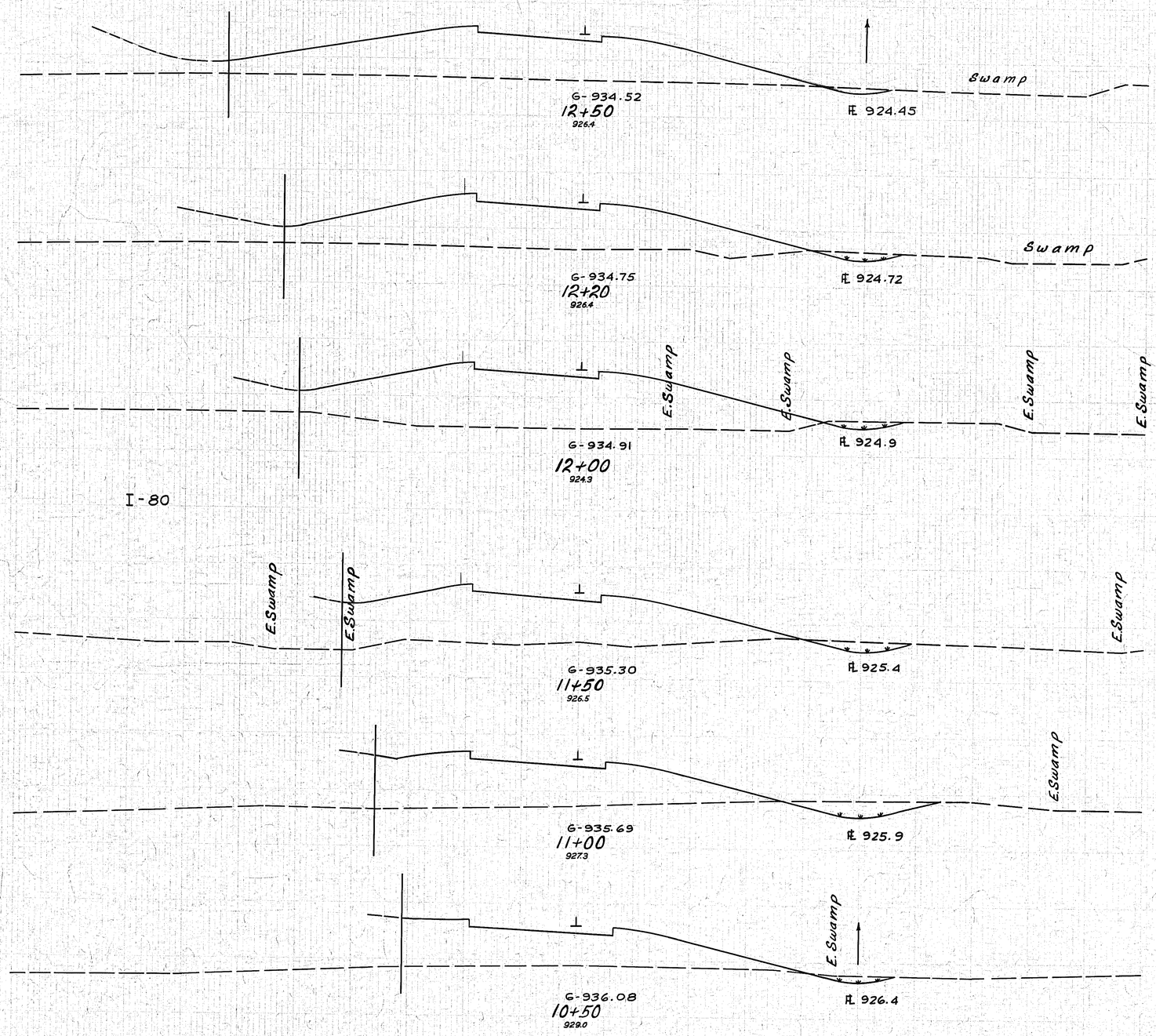


	AREA CUT	AREA FILL	VOLUME CUT	VOLUME FILL
930	8	430	6	275
930	10	352	38	268
930	57	115	122	106
930	75	0	92	3
930	24	3	56	5
930	36	2	276	2

U.S. 62 Tuscarawas Ramp C Sta. 8+00 to Sta. 10+00

PROJ. NO. PRIVATE	SHEET	TOTAL SHEETS
2	OHIO I-IG-80-5(S)245	131 401

TRU-I-80-8.90
TRUMBULL COUNTY



CUT AREA	FILL	CUT VOLUME	FILL
8	598	13	638
15	550	10	461
13	696	32	1152
22	548	66	961
49	490	56	781
12	354	18	726

I-IG-80-5(9)245

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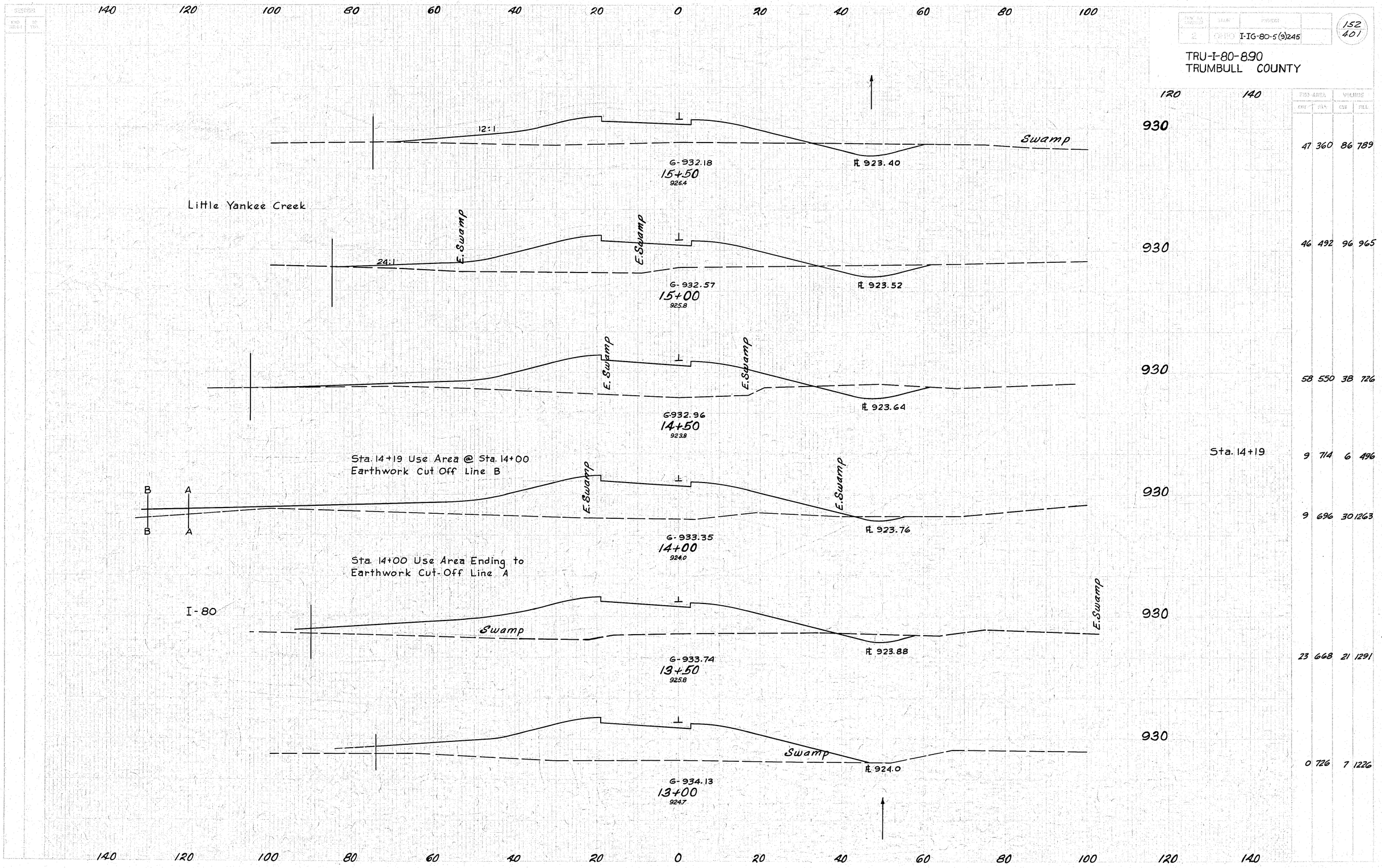
401

TRU-I-80-890
TRUMBULL COUNTY



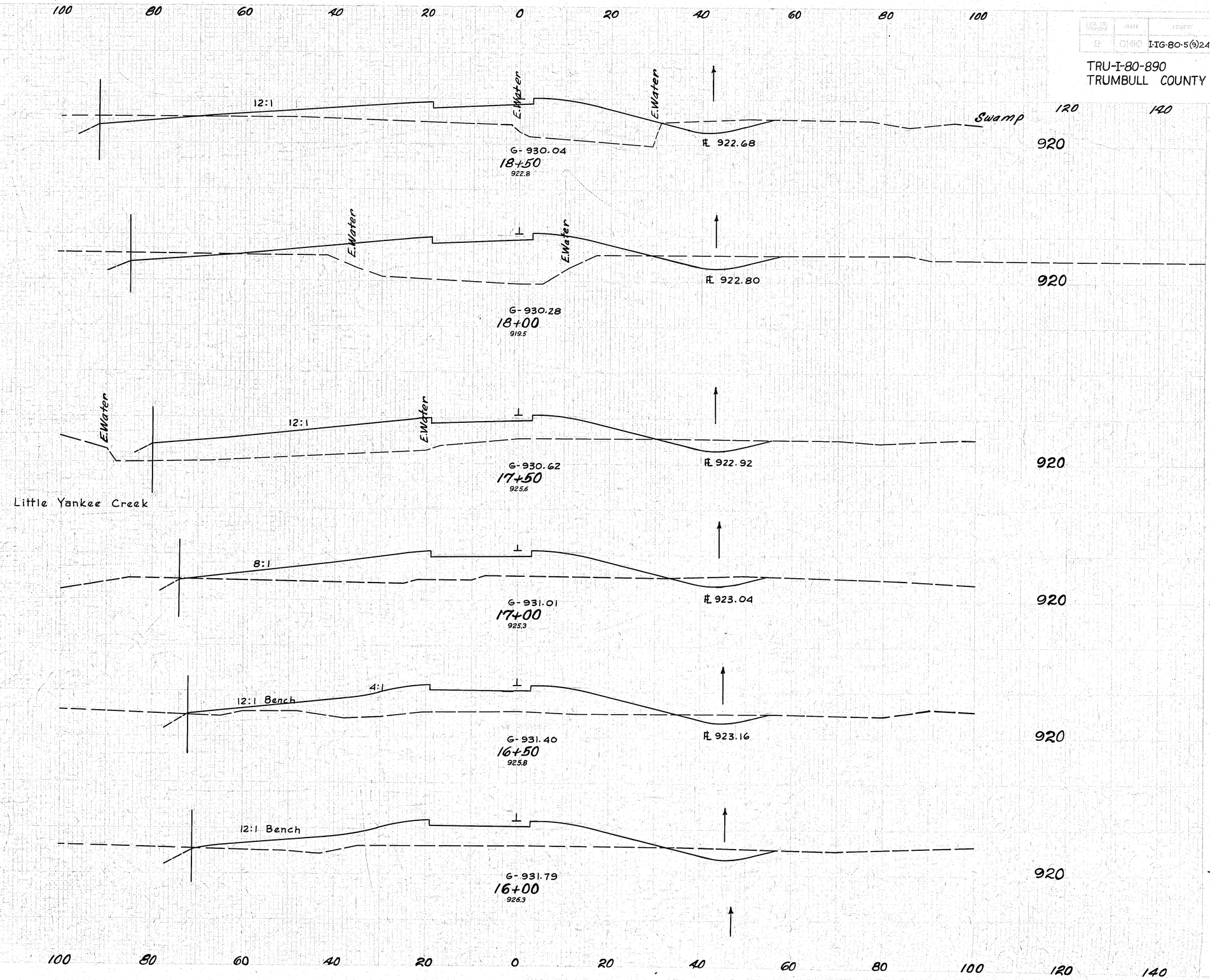
	AREA CUT	AREA FILL	VOLUME CUT	VOLUME FILL
	47	360	86	789
	46	492	96	965
	58	550	38	726
Sta. 14+19	9	714	6	496
	9	696	30	1263
	23	668	21	1291
	0	726	7	1226

U.S. 62 Interchange Ramp C Sta. 13+00 to Sta. 15+50

LEG. NO. VIGINITY	STATE	COUNTY	
2	OHIO	I-IG-80-5(S)245	

153
401

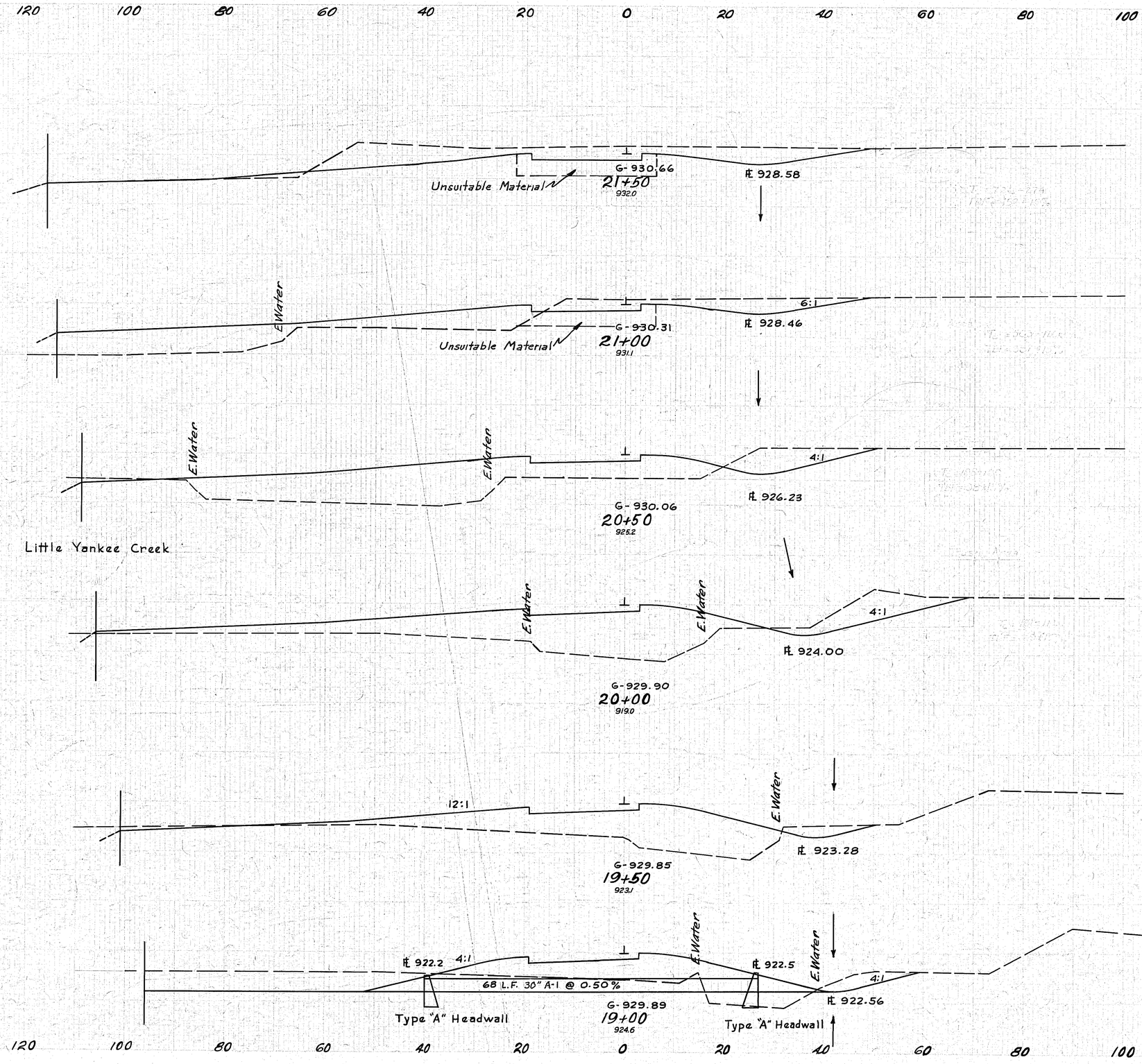
TRU-I-80-890
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
65	402	129	830
74	494	105	941
39	522	64	844
30	390	51	713
25	380	58	661
38	334	79	642

2	OHIO	I-IG-80-5(9)245	154 401

TRU-I-80-8.90
TRUMBULL COUNTY

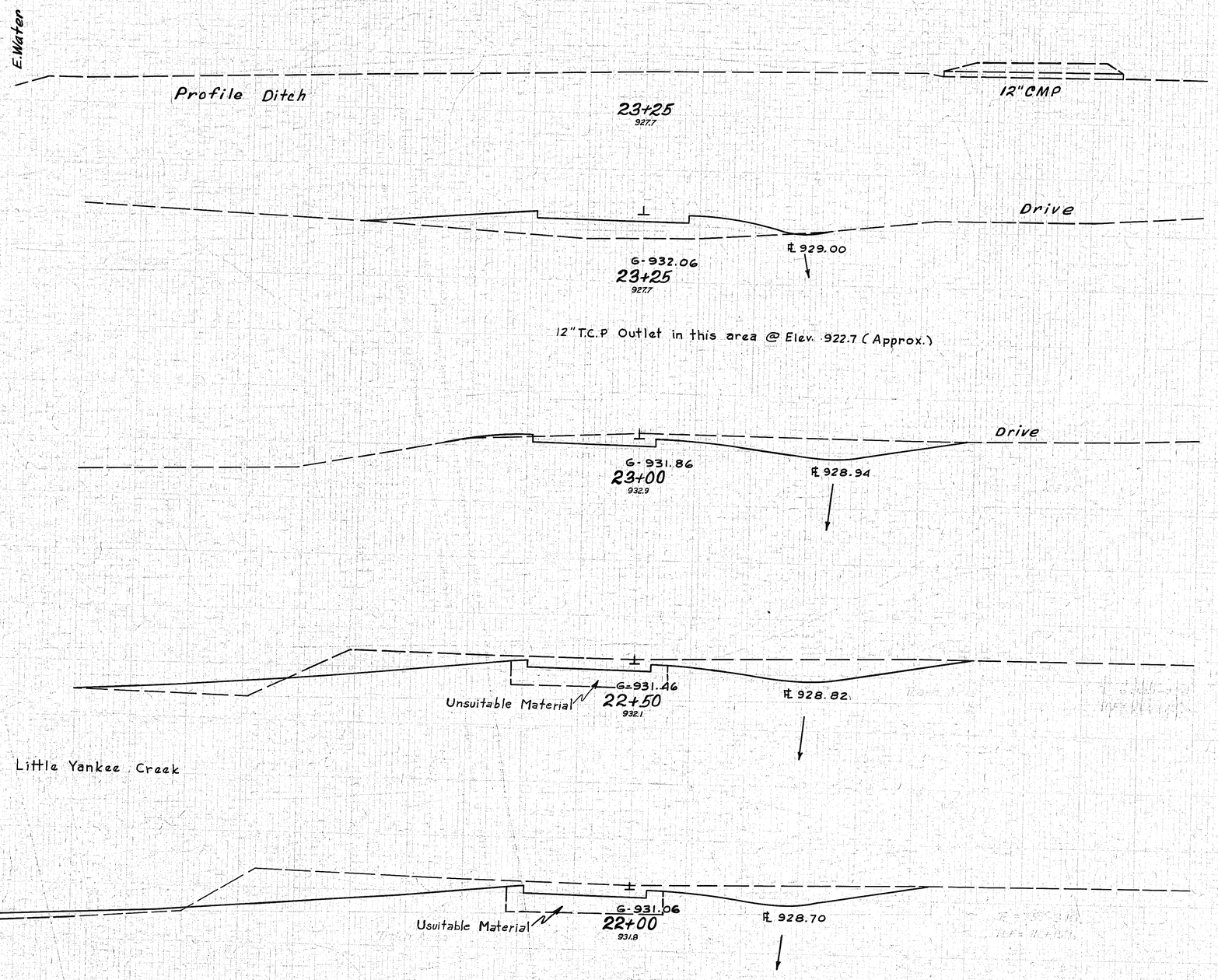


	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
930	274	12	361	561
930	116	360	200	396
930	100	558	196	337
930	112	576	141	250
930	40	444	109	242
930	78	334	132	681

PROJ NO. SECTION	SHEET	PROJECT	
2	GRAPH	I-IG-80-5(G)245	

155
401

TRU-I-80-8.90
TRUMBULL COUNTY

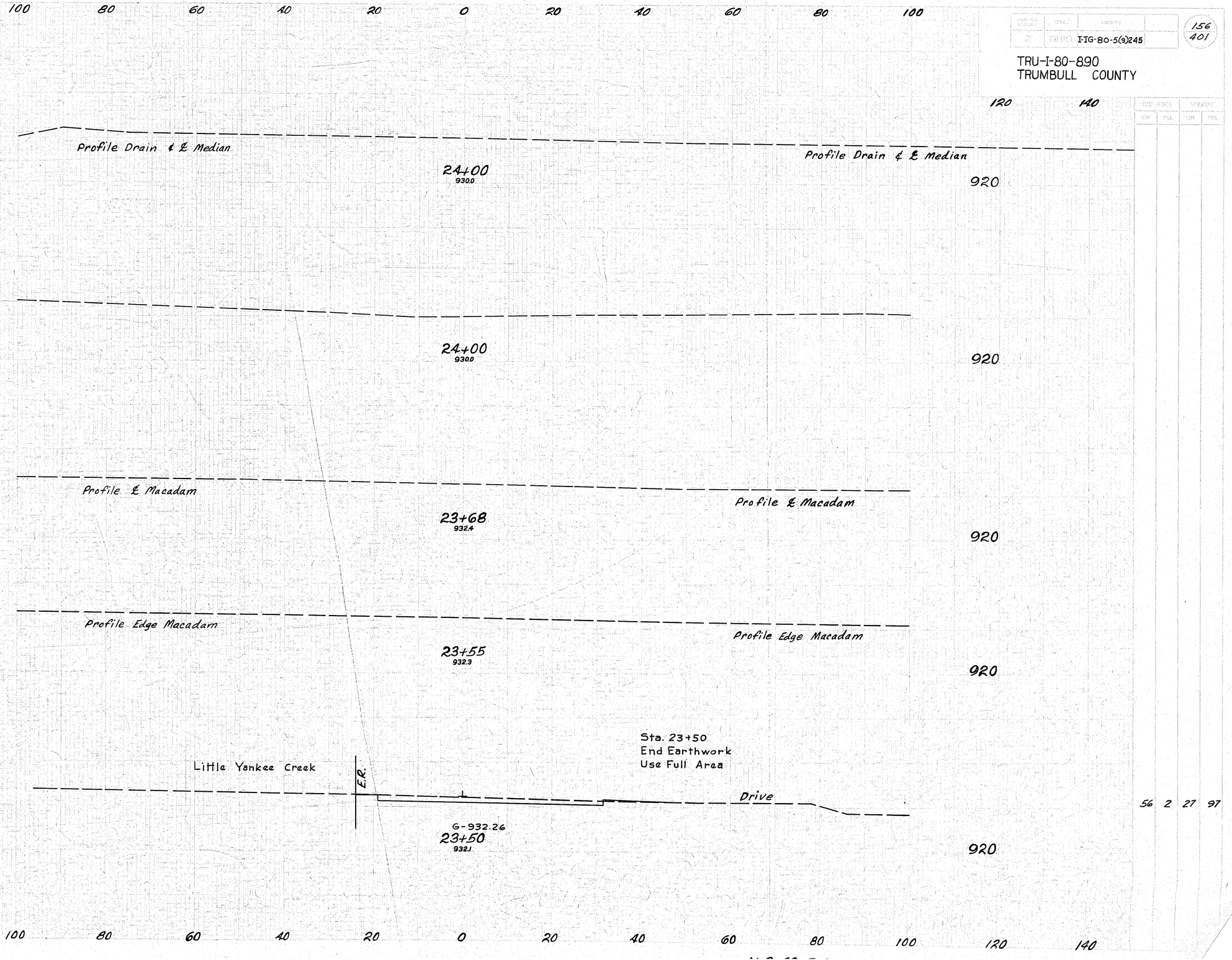


CUM AREA		VOLUME	
CUT	FILL	CUT	FILL
2	196	70	268
150	3	394	970
276	50	576	1150
346	32	574	935

PROJ. NO. OPTIONAL	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

156
401

TRU-I-80-890
TRUMBULL COUNTY

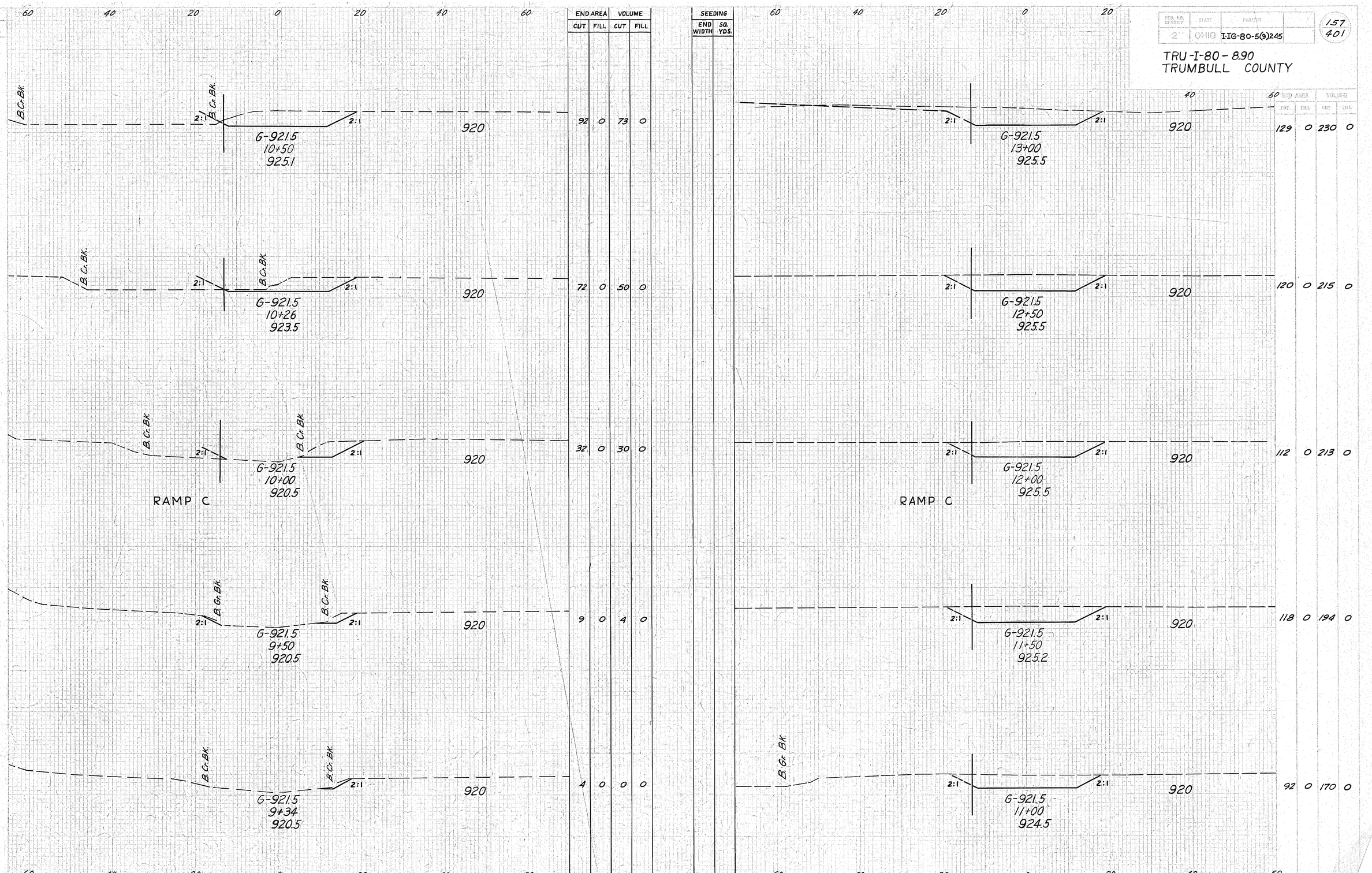


56 2 27 97

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

157
401

TRU-I-80-8.90
TRUMBULL COUNTY



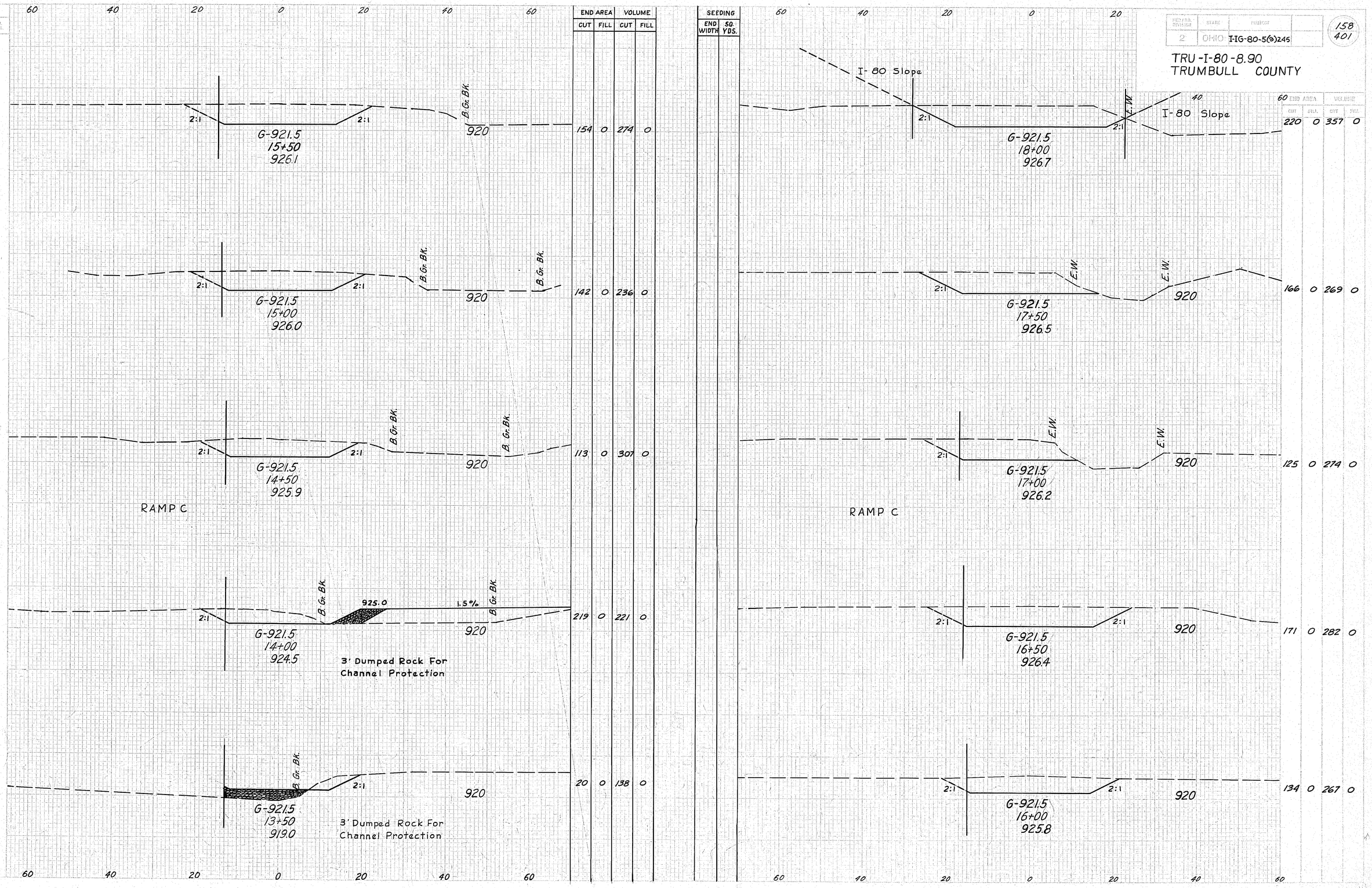
LITTLE YANKEE RUN CHANNEL CHANGE

Sta 9+34 to Sta 13+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(6)245	

158
401

TRU-I-80-8.90
TRUMBULL COUNTY



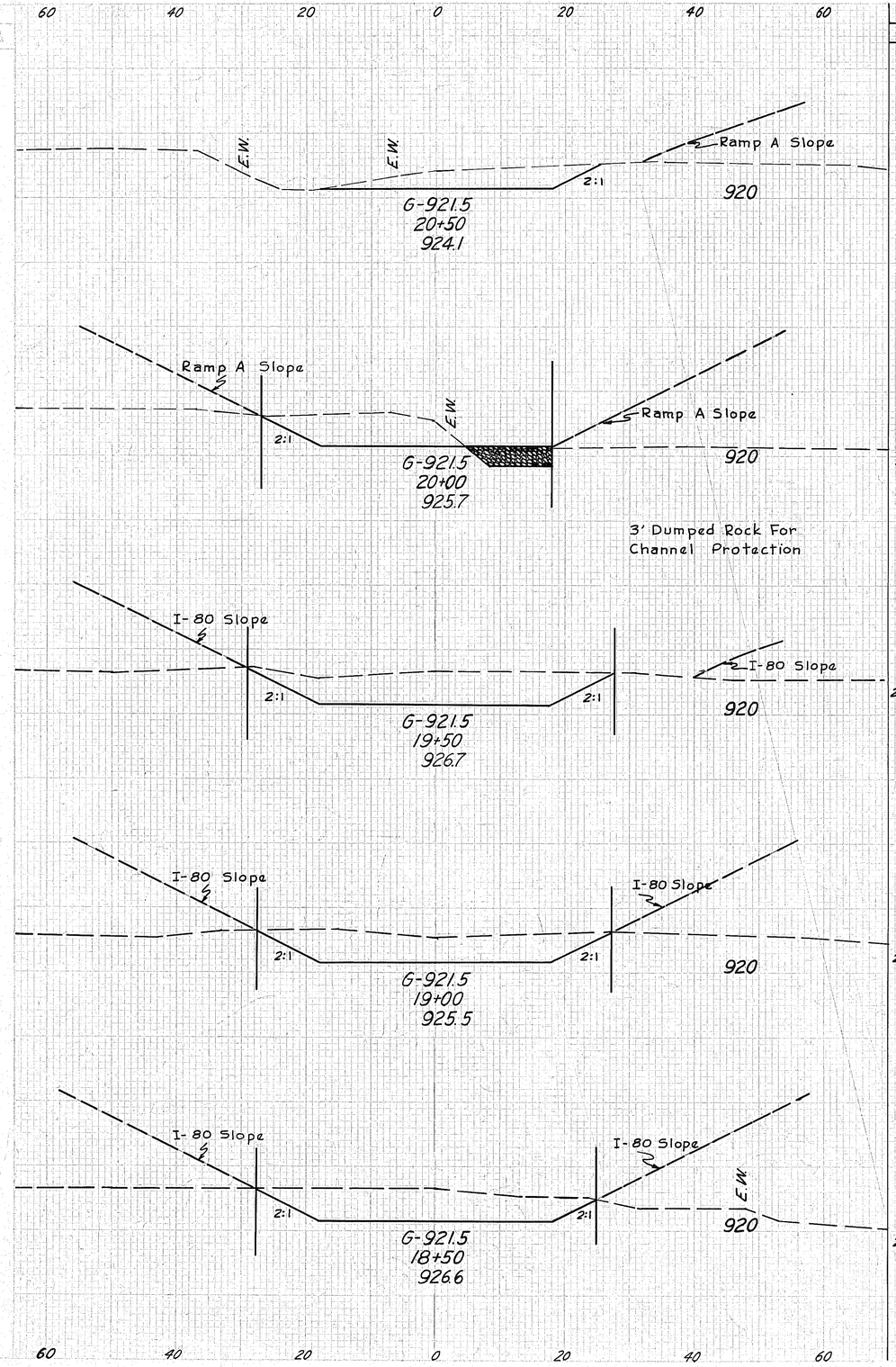
LITTLE YANKEE RUN CHANNEL CHANGE

Sta. 13+50 to Sta. 18+00

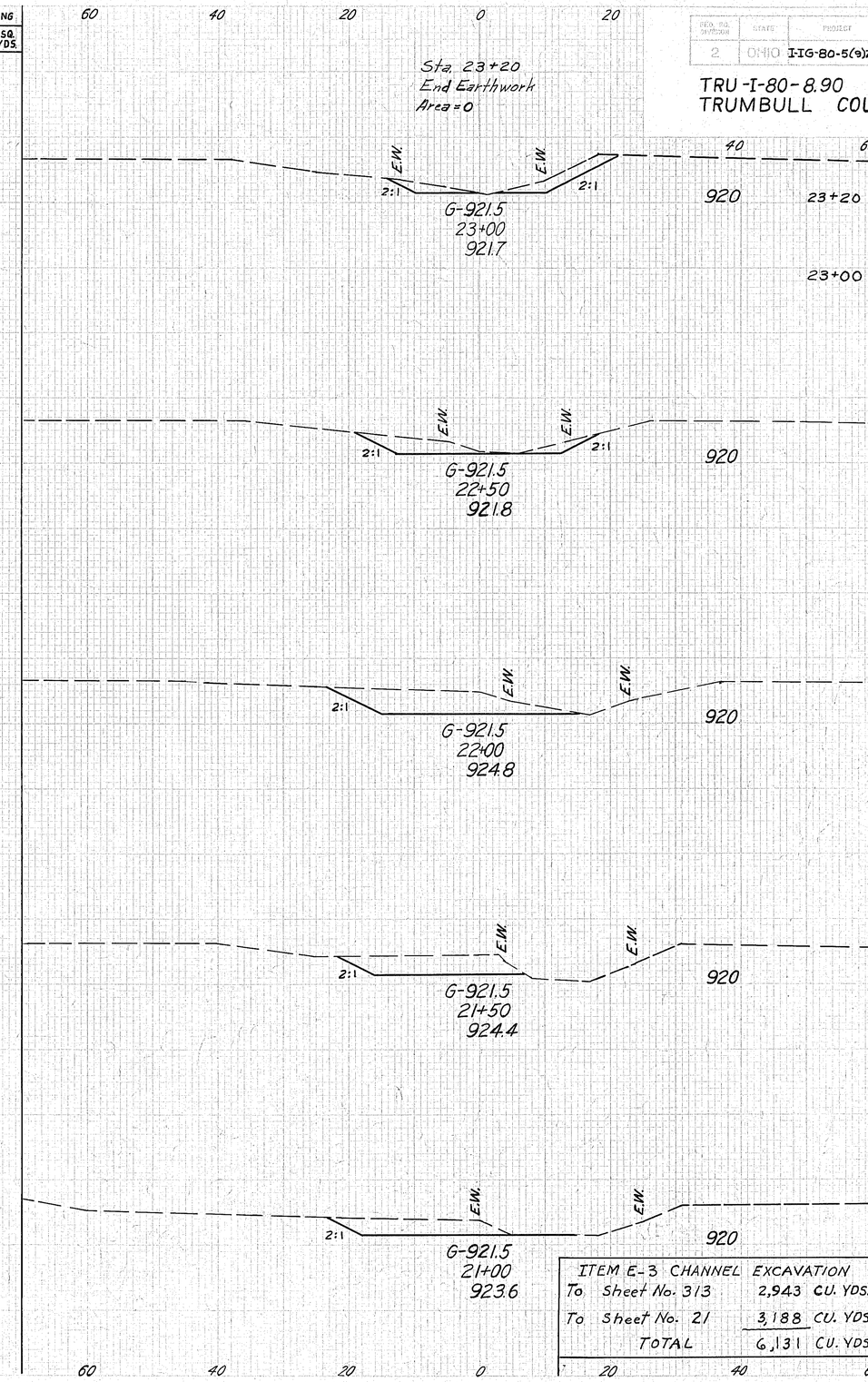
FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

15-9
401

TRU-I-80-8.90
TRUMBULL COUNTY



SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		96	0	197	5
		117	5	319	5
		228	0	401	0
		205	0	383	0
		209	0	397	0



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
23+20	0	0	14	0
23+00	38	0	76	0
	44	0	129	0
	95	0	153	0
	70	0	117	0
	56	0	141	0

ITEM E-3 CHANNEL EXCAVATION		
To Sheet No. 313	2,943 CU. YDS.	
To Sheet No. 21	3,188 CU. YDS.	
TOTAL	6,131 CU. YDS.	SH. 157, SH. 158, SH. 159 } 6,131

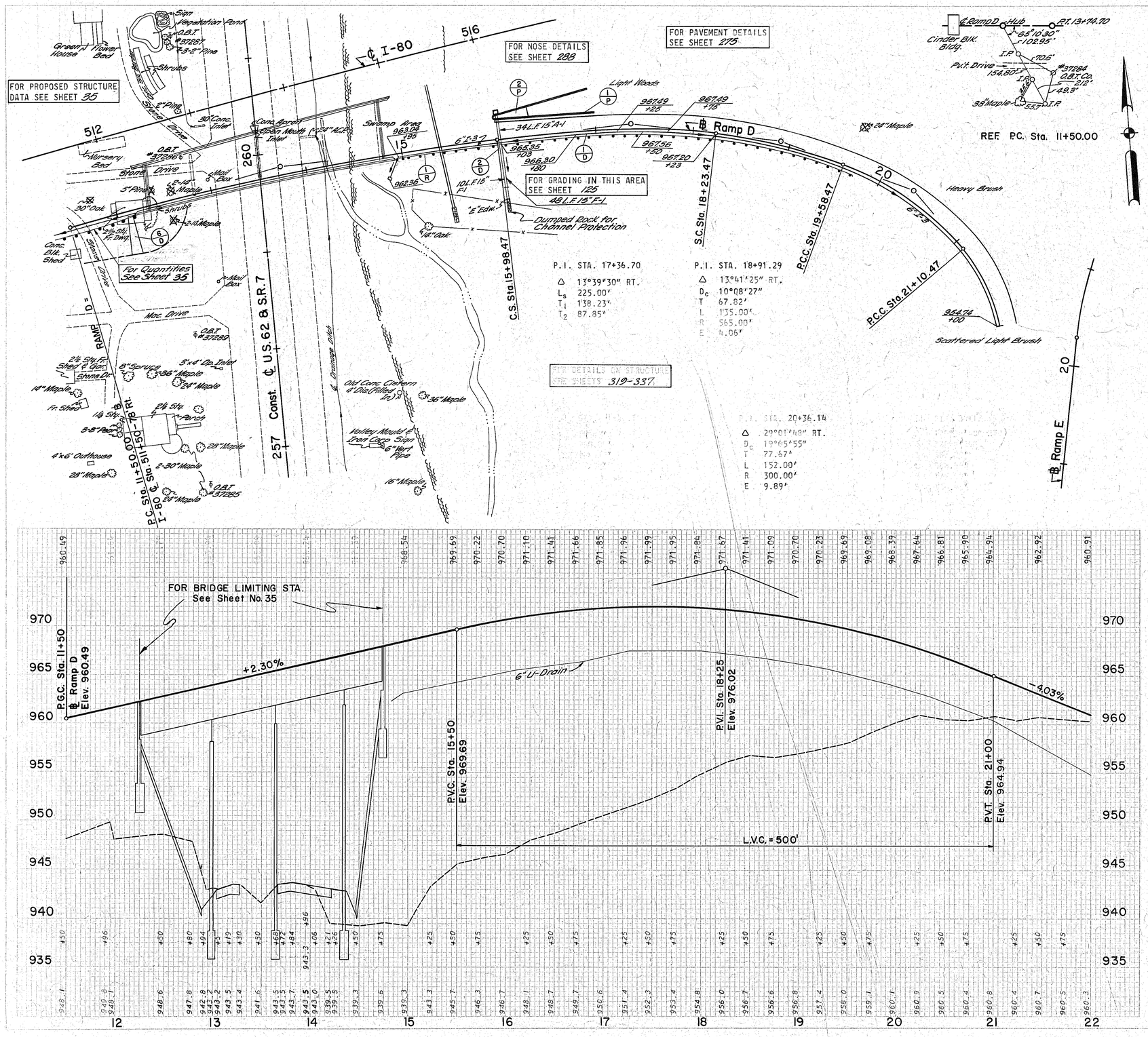
LITTLE YANKEE RUN CHANNEL CHANGE

Sta. 18+50 to Sta. 23+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

160
401

TRUMBULL COUNTY TRU-I-80-8.90



SEE SHEET NO.		L-10 Sodding SQ. YD.	I-21 P.C.C. Median Pav't SQ. YD.	I-15 Guard Rail L.F.	I-12 Std. Type 6 Curb L.F.	I-10 Dumped Rock Channel Protection CU. YD.
		1				
			28	475.0	100	2.5
TOTALS		1	28	475.0	100	3

ESTIMATED QUANTITIES

For M-6.5(b)

I-2 MASONRY CU. YD.	I-5 For 6" U-Drain 60° BEND EACH	I-5 For 6" U-Drain WYE EACH	I-5 For CL. F-4 25° BEND EACH
.26	1	1	2
.3	1	1	2

CL. A-1 M-6.6(a) or 6.8(b) or #15 L.F.	CL. F-4 For I-3 8" L.F.	CL. F-4 15" L.F.	I-1 CL. F-4 L.F.	CL. I-3 6" U-Drain DEEP L.F.	CL. I-3 6" U-Drain SHALLOW L.F.
34	10	58	56	100	618
34	10	58	100	618	

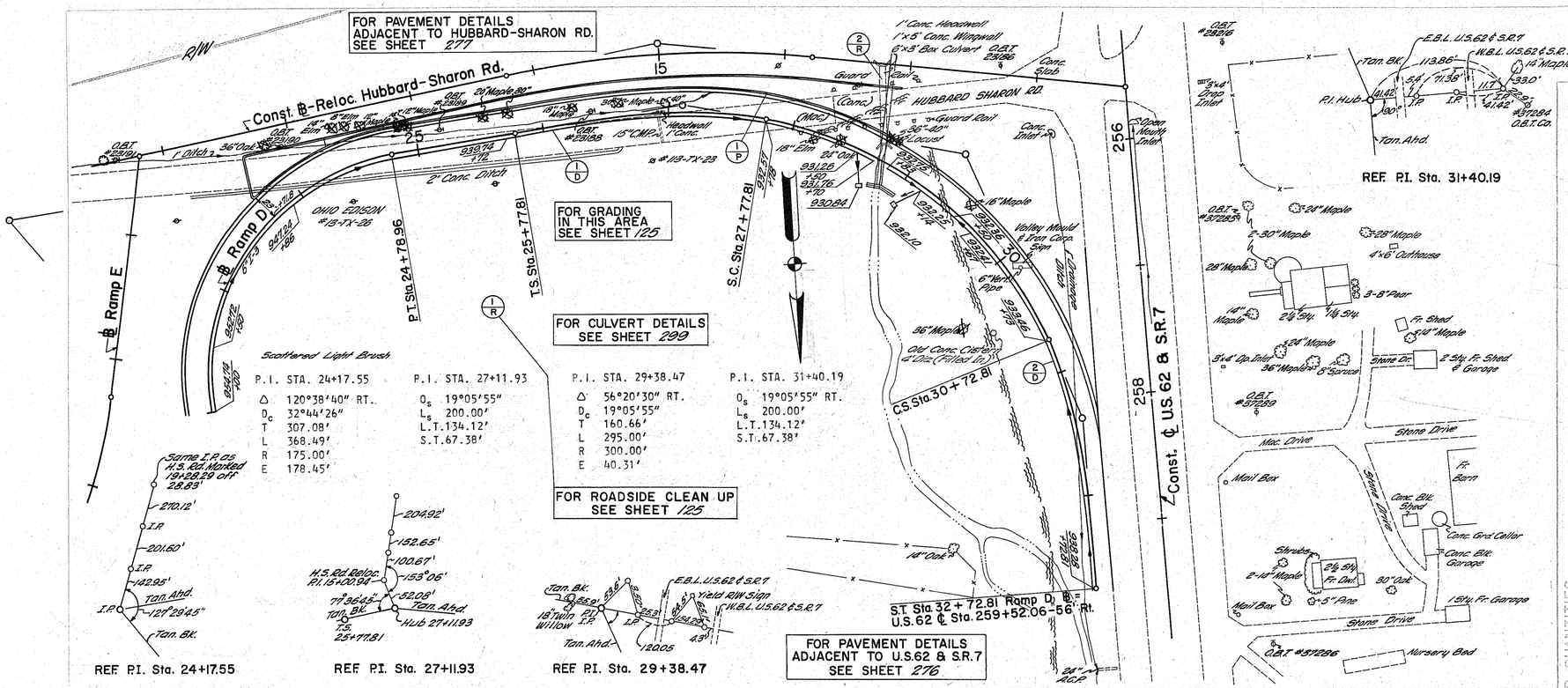
GEN. NOTE	STATION TO STATION	SIDE
1-D	14+83 to 22+00	Rt.
2-D	16+00	Rt.
1-P	14+94 to 19+69	Rt.
2-P	Inside Ramp D Loop	
1-P	15+98.47 to 16+98.47	Lt.
2-P	16+00	Lt.

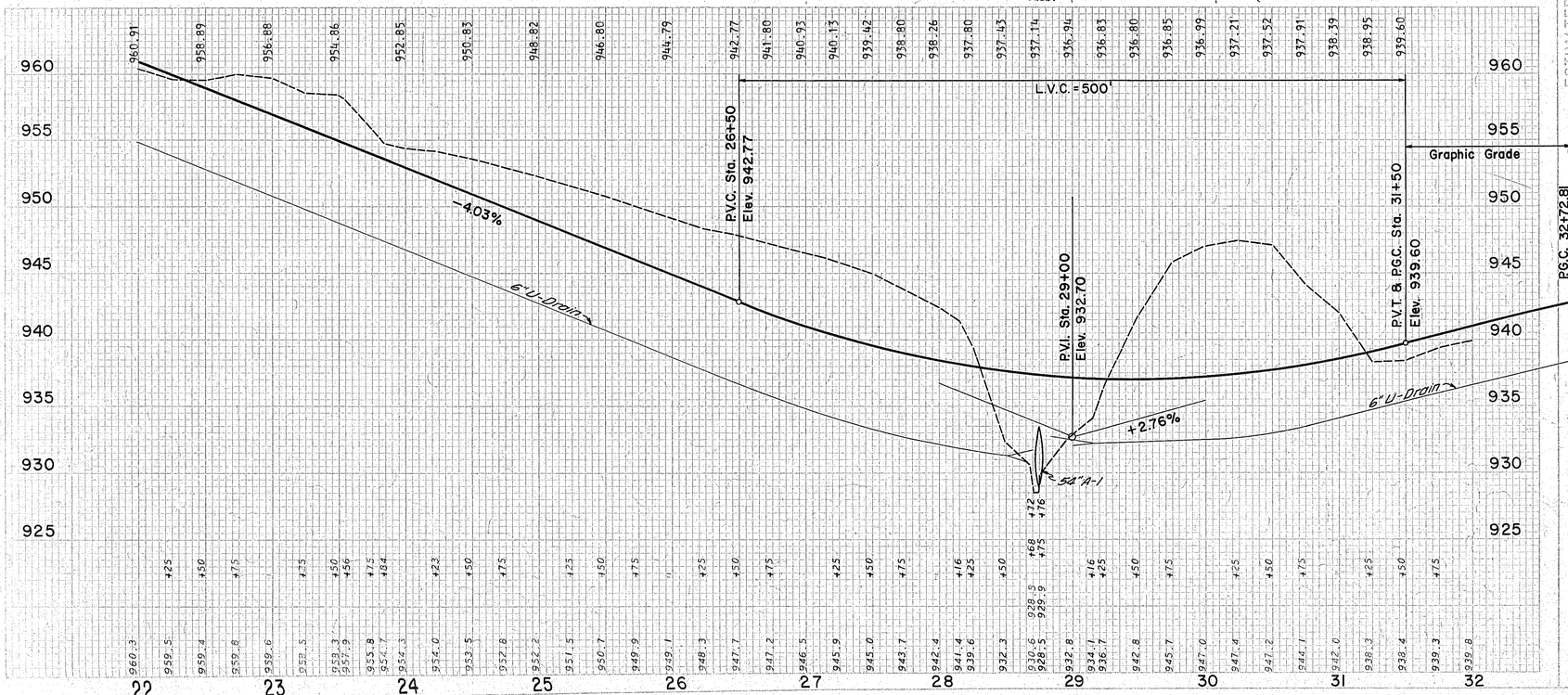
RAMP D Sta. 11+50 to Sta. 22+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

161/401

TRUMBULL COUNTY TRU-I-80-8.90





ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 CL. F-4 CL. I-3 6" U-Drain 8" L.F.	I-1 CL. F-4 CL. I-3 6" U-Drain Deep L.F.	I-5 For 6" U-Drain 60° WYE L.F.	L-6 Roadside Clean Up UNITS	S-24 Removal Exist. Struct. LUMP	I-12 Std. Type 6 Curb L.F.	SEE SHEET NO.
1-D	22+00 to 28+70	RT.	10	686	1				
2-D	28+83 to 32+13	RT.	10	406	1				
1-P	Inside Ramp D Loop 28+50 LF	LT.				203	Lump	531	
1-P	23+77 to 28+78	LT.							
TOTALS			20	1094	2	203	Lump	531	

RAMP D Sta. 22+00 to Sta. 32+72.81

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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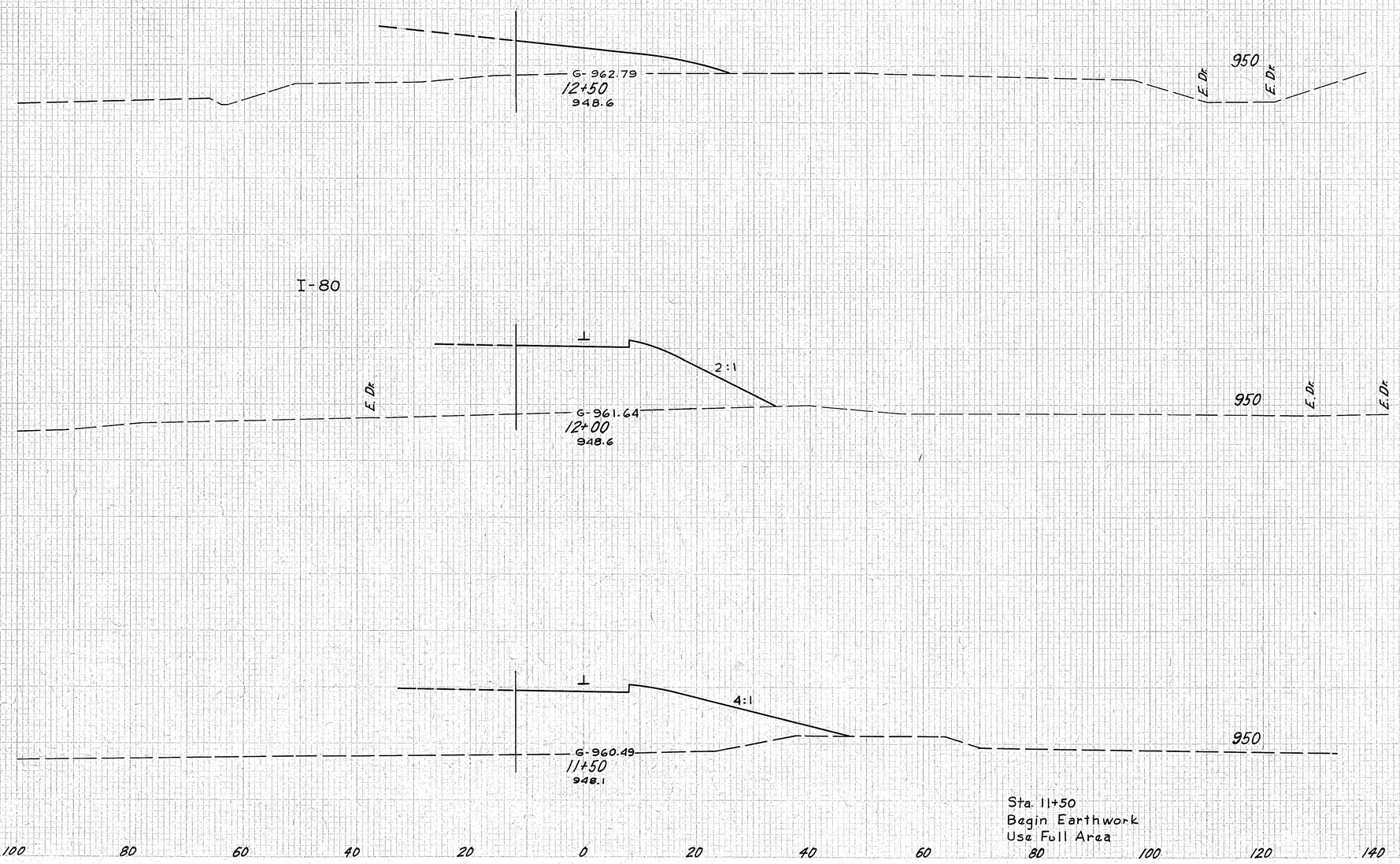
401

TRU-I-80-8.90
TRUMBULL COUNTY



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
Sta. 12+80	0	0	0	76
	0	136	0	515
	0	420	0	842
	0	490	0	0

RAMP D Sta. 11+50 to Sta. 12+50

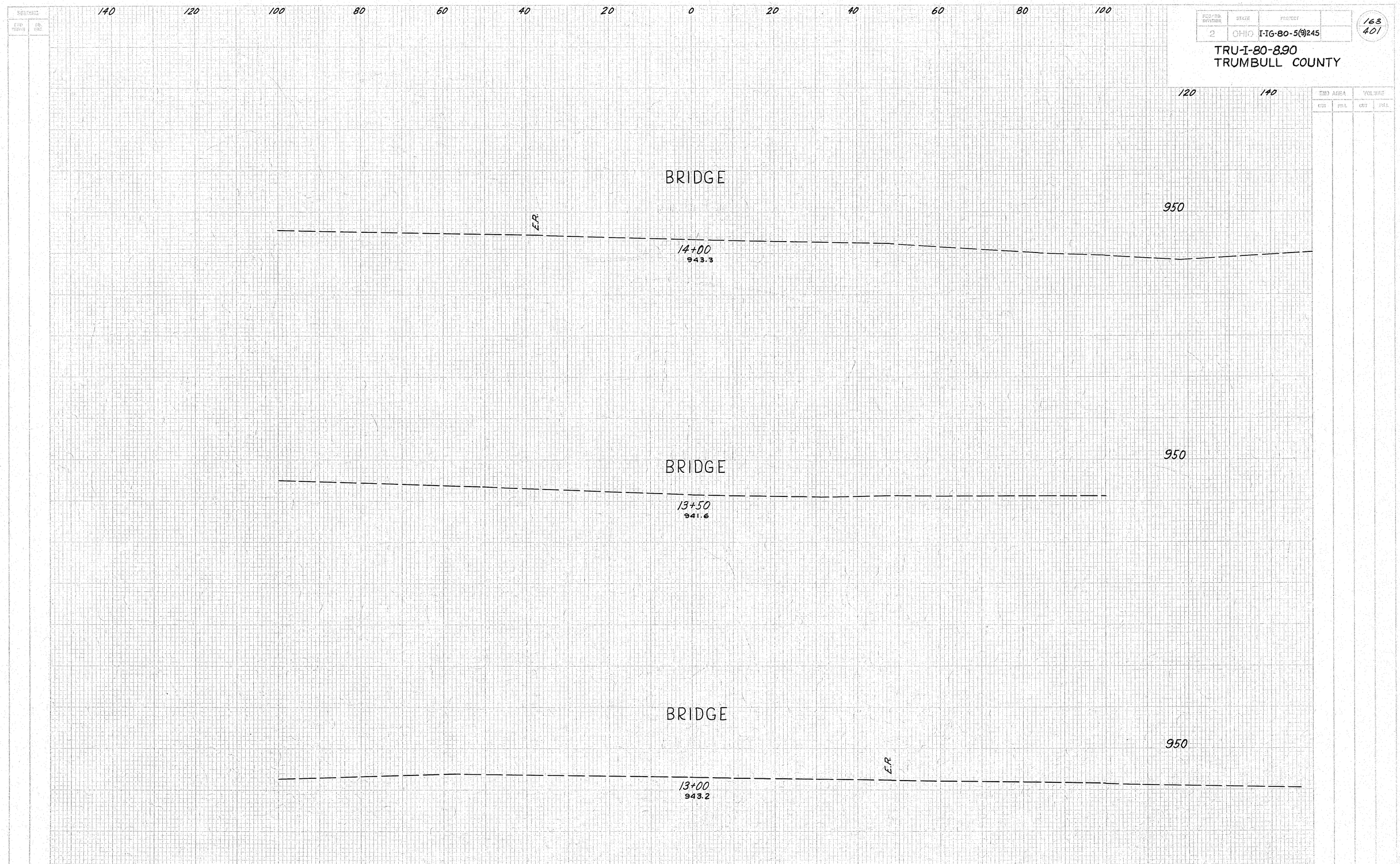
SEARCHING	
CUT (MINUS)	FILL (PLUS)

FED. RTD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

168
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

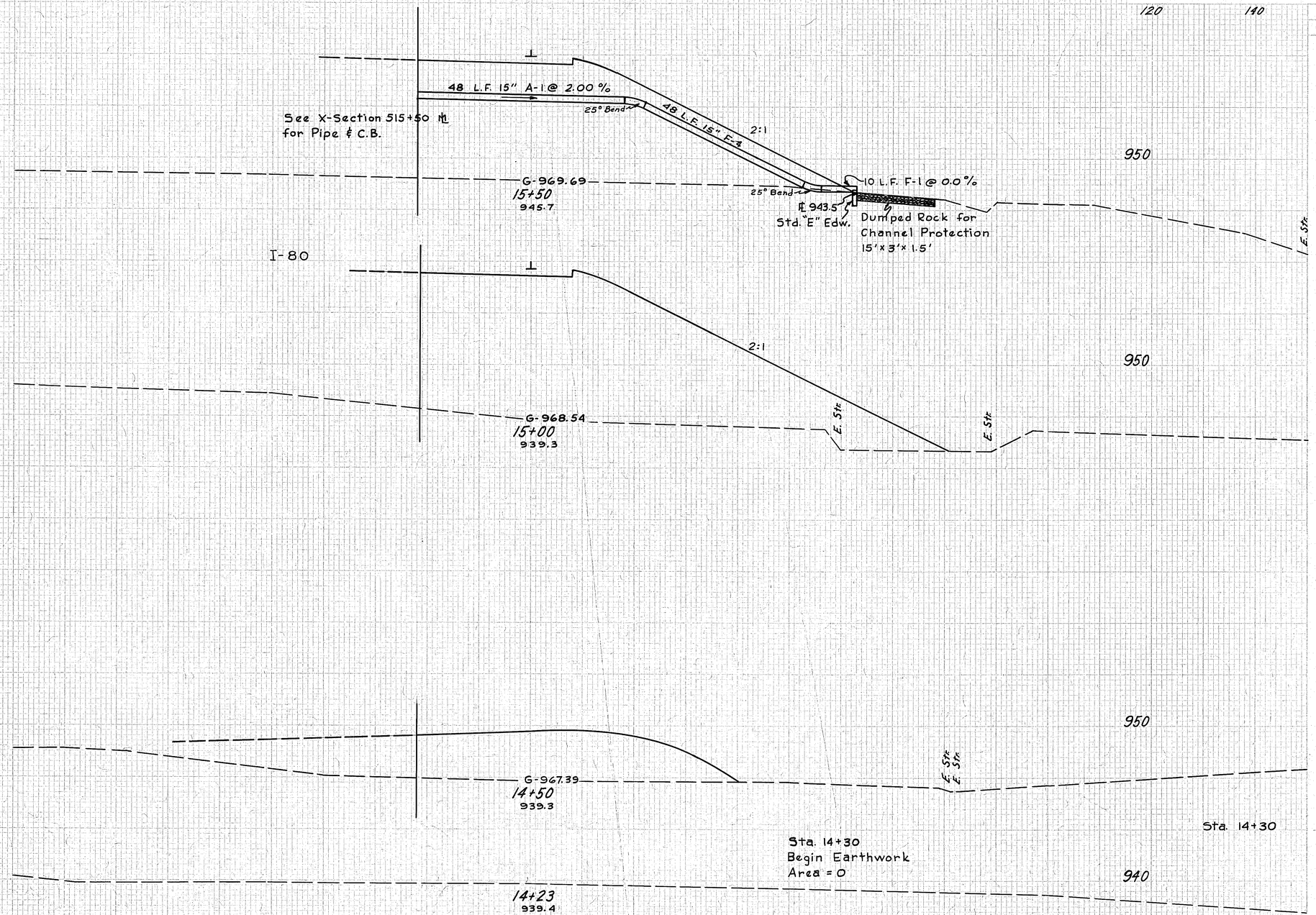


RAMP D Sta 13+00 to Sta 14+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

164
401

TRU-I-80-8.90
TRUMBULL COUNTY

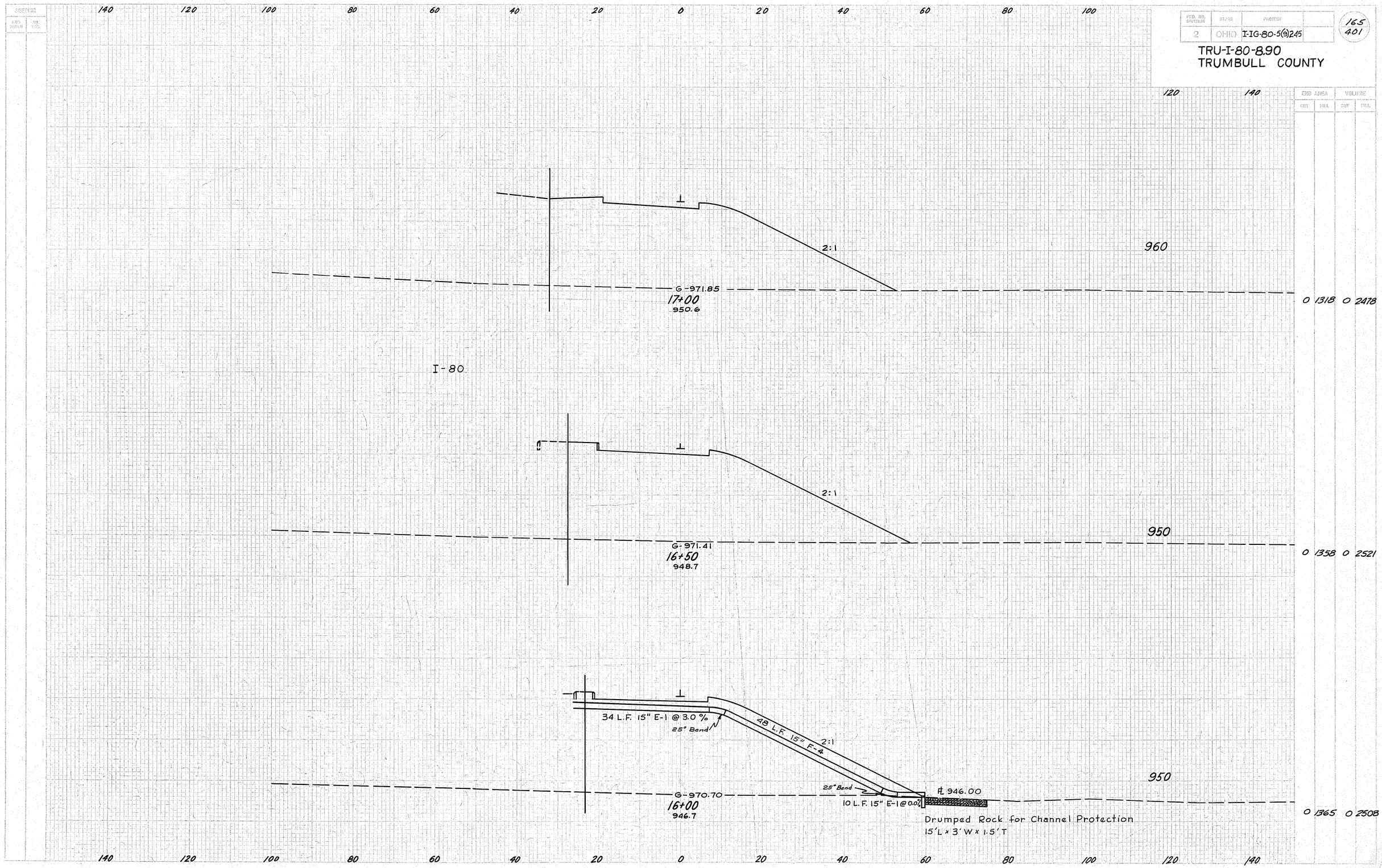


STD. AREA		VOLUME	
CUT	FILL	CUT	FILL
0	1344	0	2950
0	1842	0	2161
0	492	0	182
Sta. 14+30		0	0 0 0

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(6)245	

165
401

TRU-I-80-8.90
TRUMBULL COUNTY



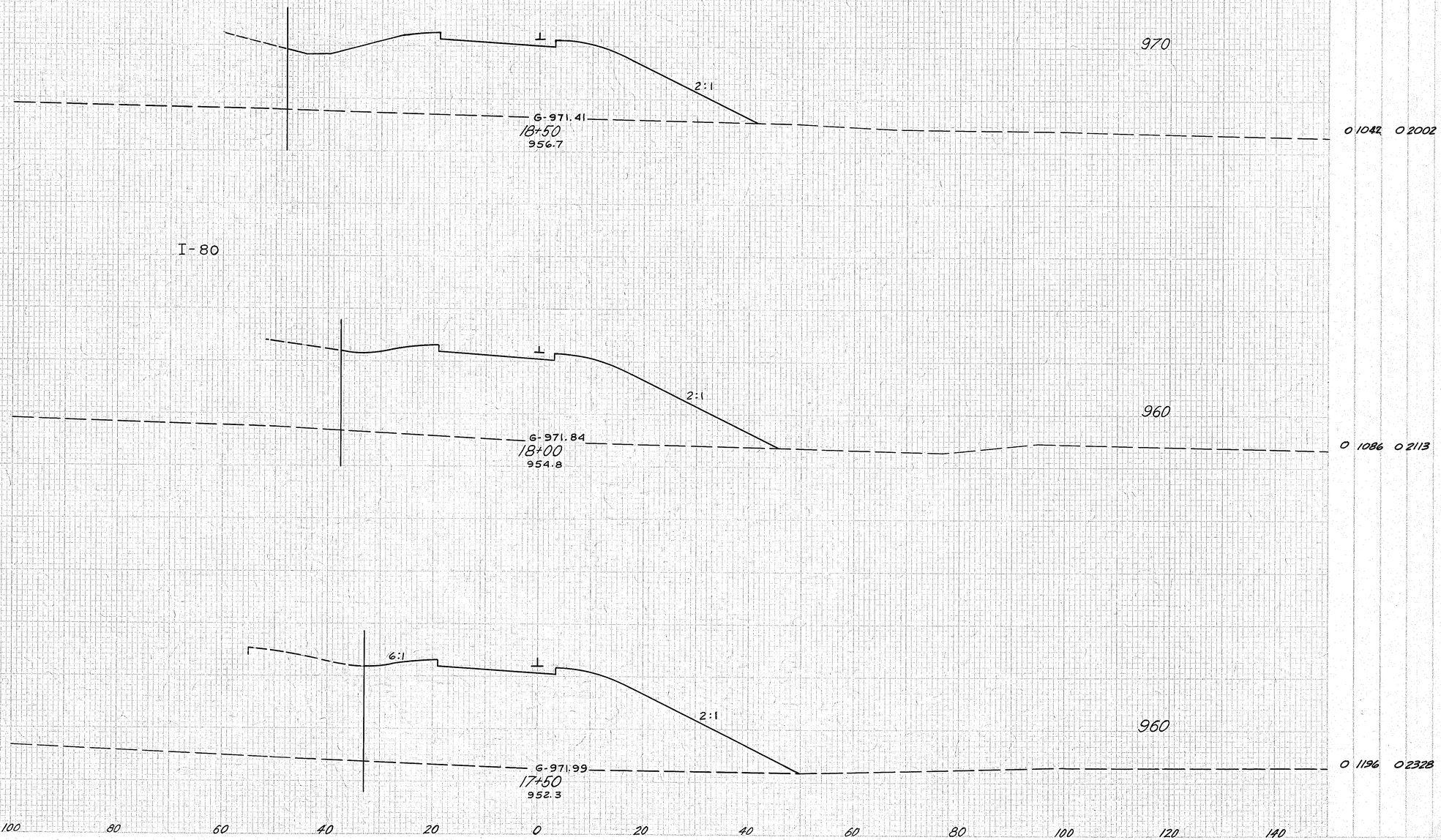
RAMP D Sta. 16+00 to Sta. 17+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

166
401

TRU-I-80-8.90
TRUMBULL COUNTY

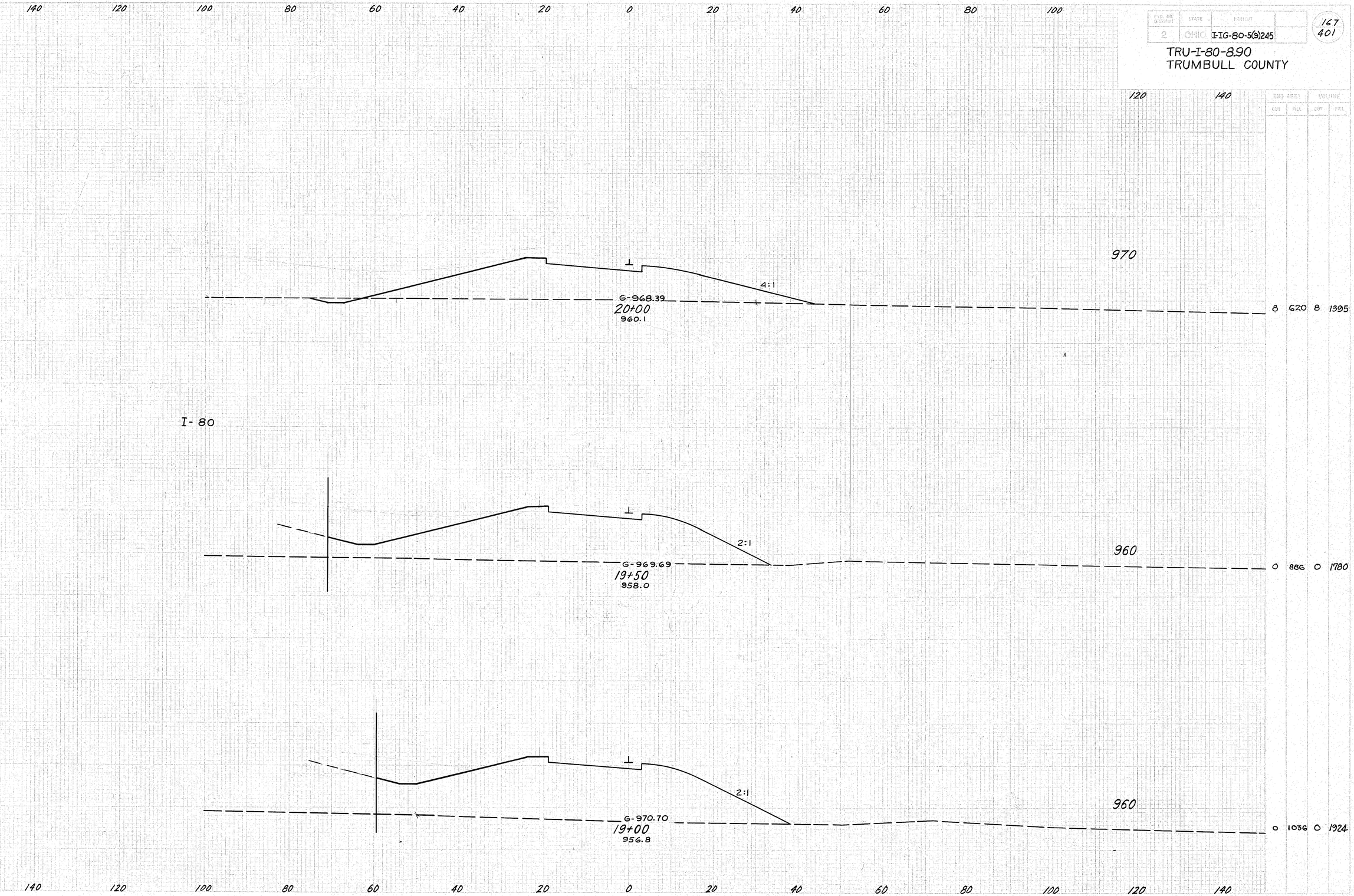
CUBIC YARDS		CUBIC YARDS	
CUT	FILL	CUT	FILL



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

167
401

TRU-I-80-8.90
TRUMBULL COUNTY



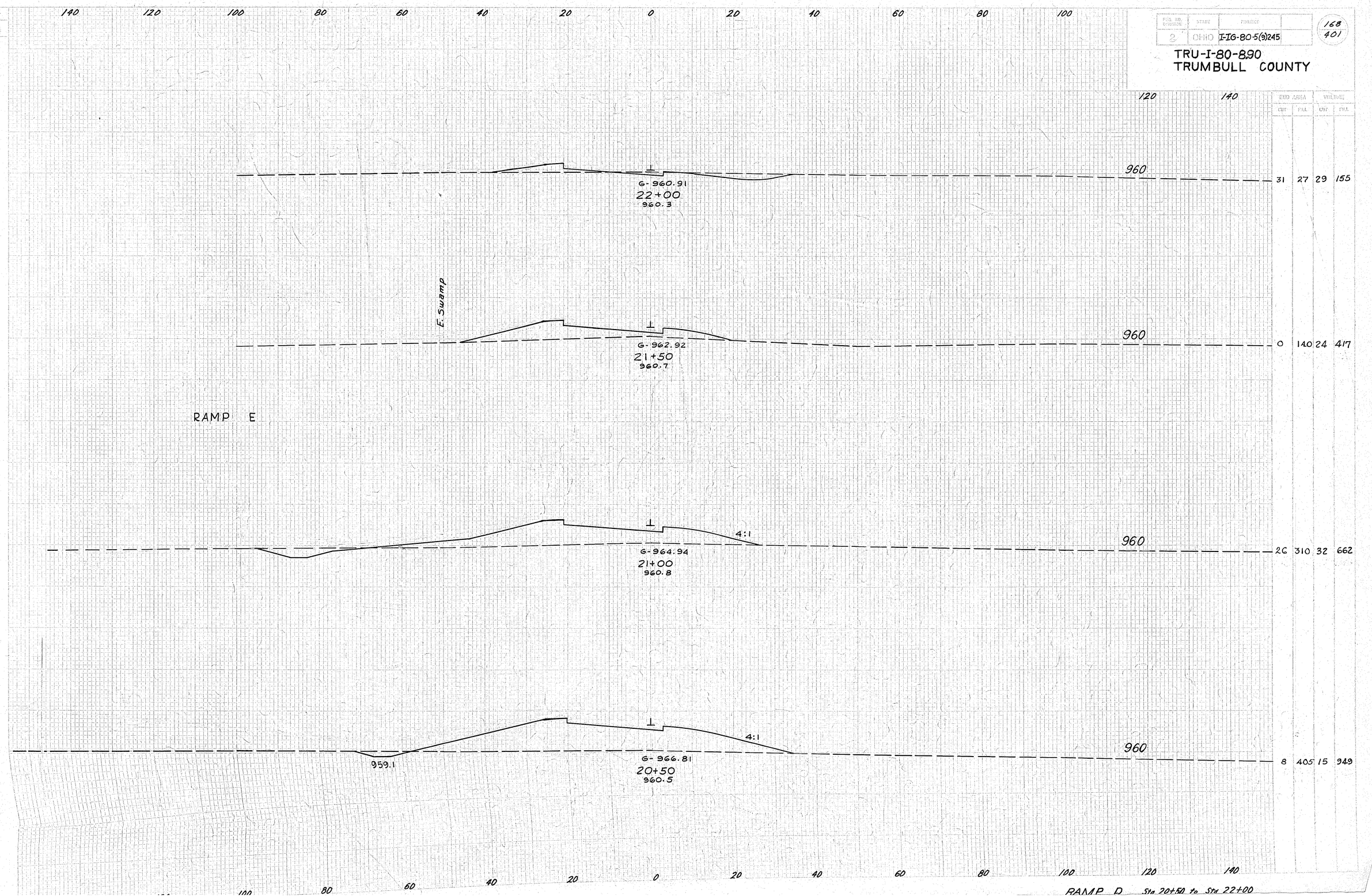
END AREA		VOLUME	
CUT	FILL	CUT	FILL

RAMP D

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(6)245	

168
401

TRU-I-80-8.90
TRUMBULL COUNTY

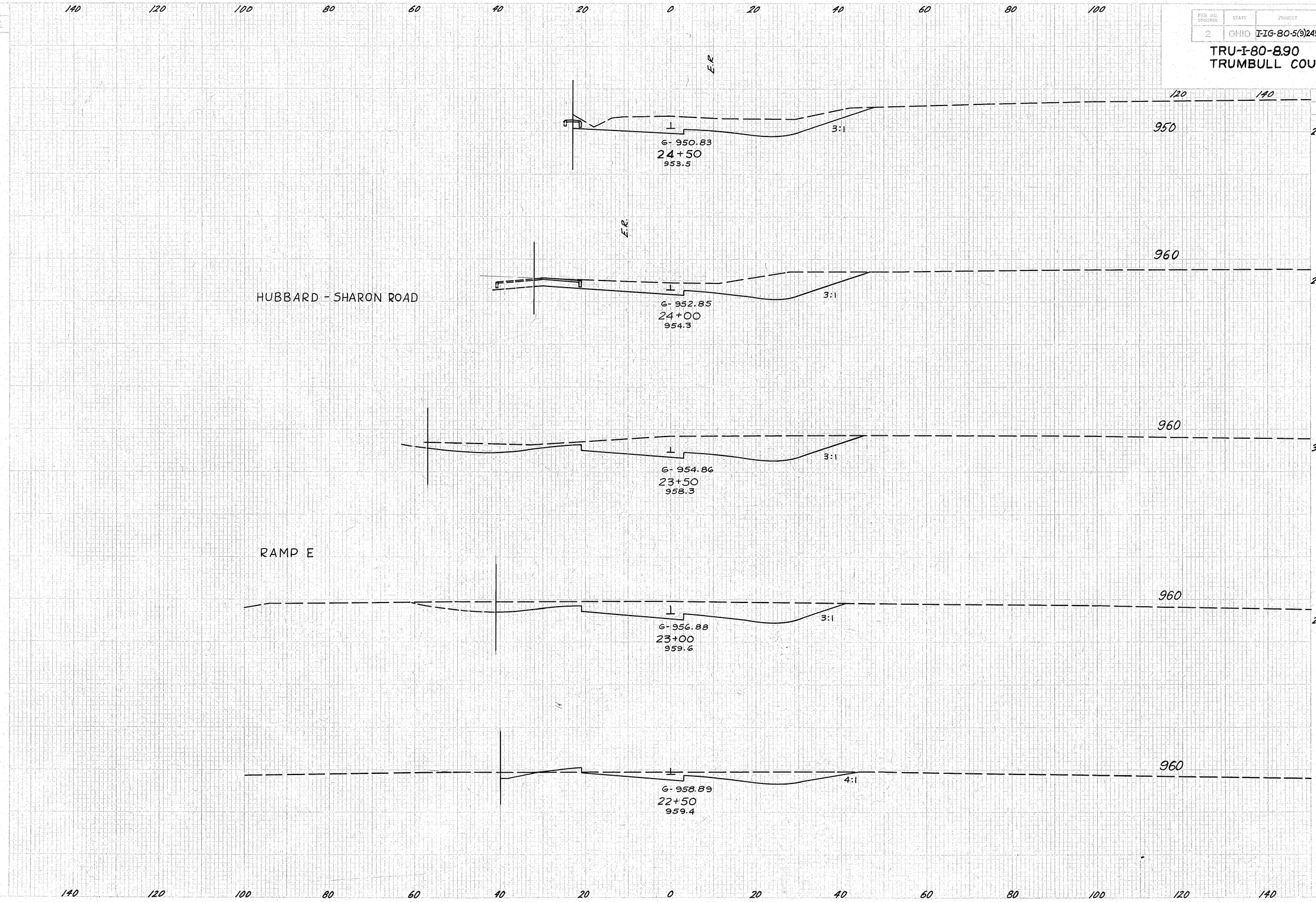


SEEDING	
MIX WATER	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

169
401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
202	0	374	0
202	0	474	0
310	0	500	0
230	0	298	5
98	5	107	49

RAMP D Sta 22+50 to Sta 24+50

SEED. NO. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

170
401

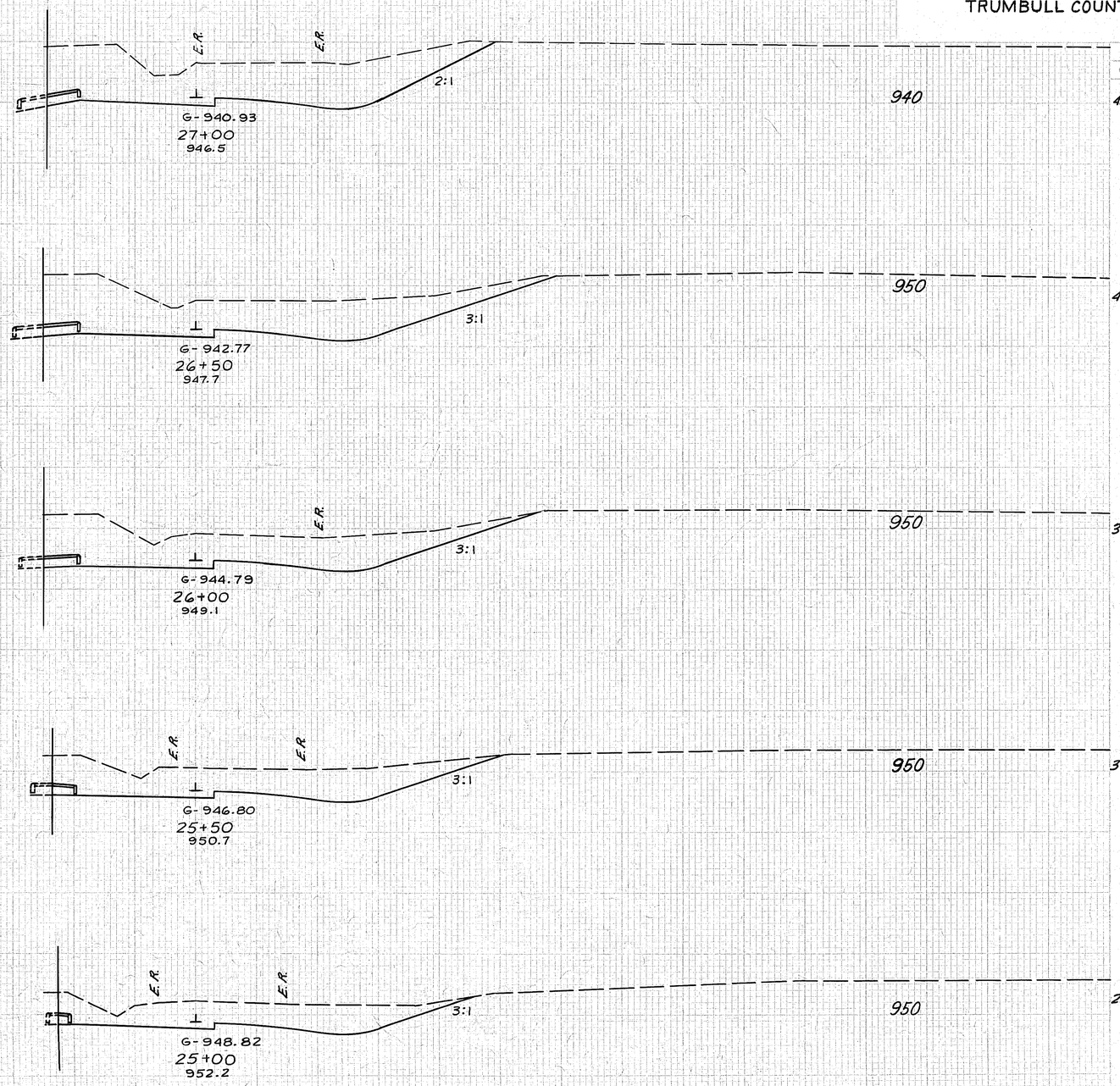
TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING

CBU CUTTH	SQ. YDS.

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

HUBBARD-SHARON ROAD



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
459	0	838	0
446	0	756	0
370	0	625	0
305	0	501	0
236	0	406	0

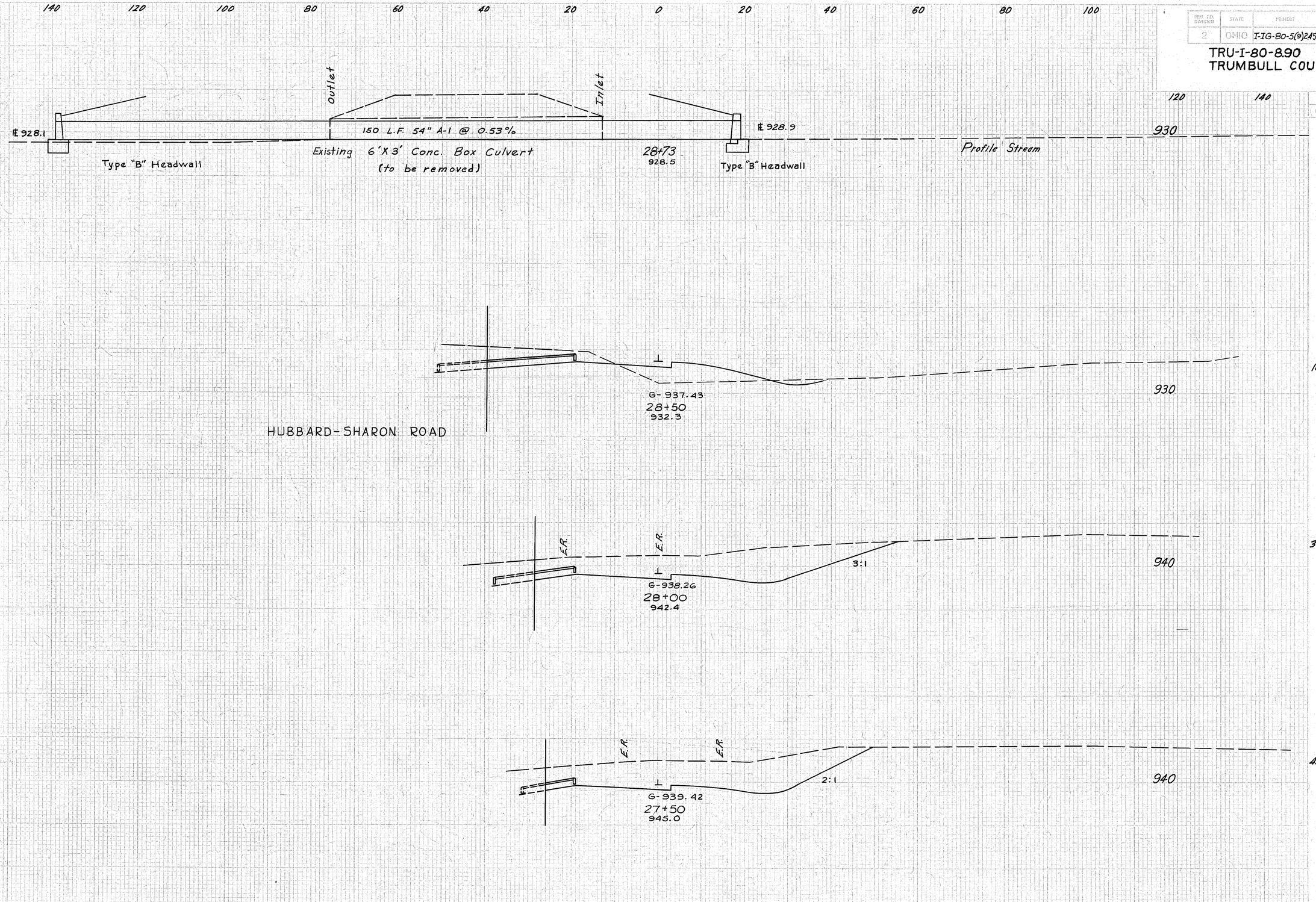
140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

RAMP D Sta. 25+00 to 27+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

171
401

TRU-I-80-8.90
TRUMBULL COUNTY



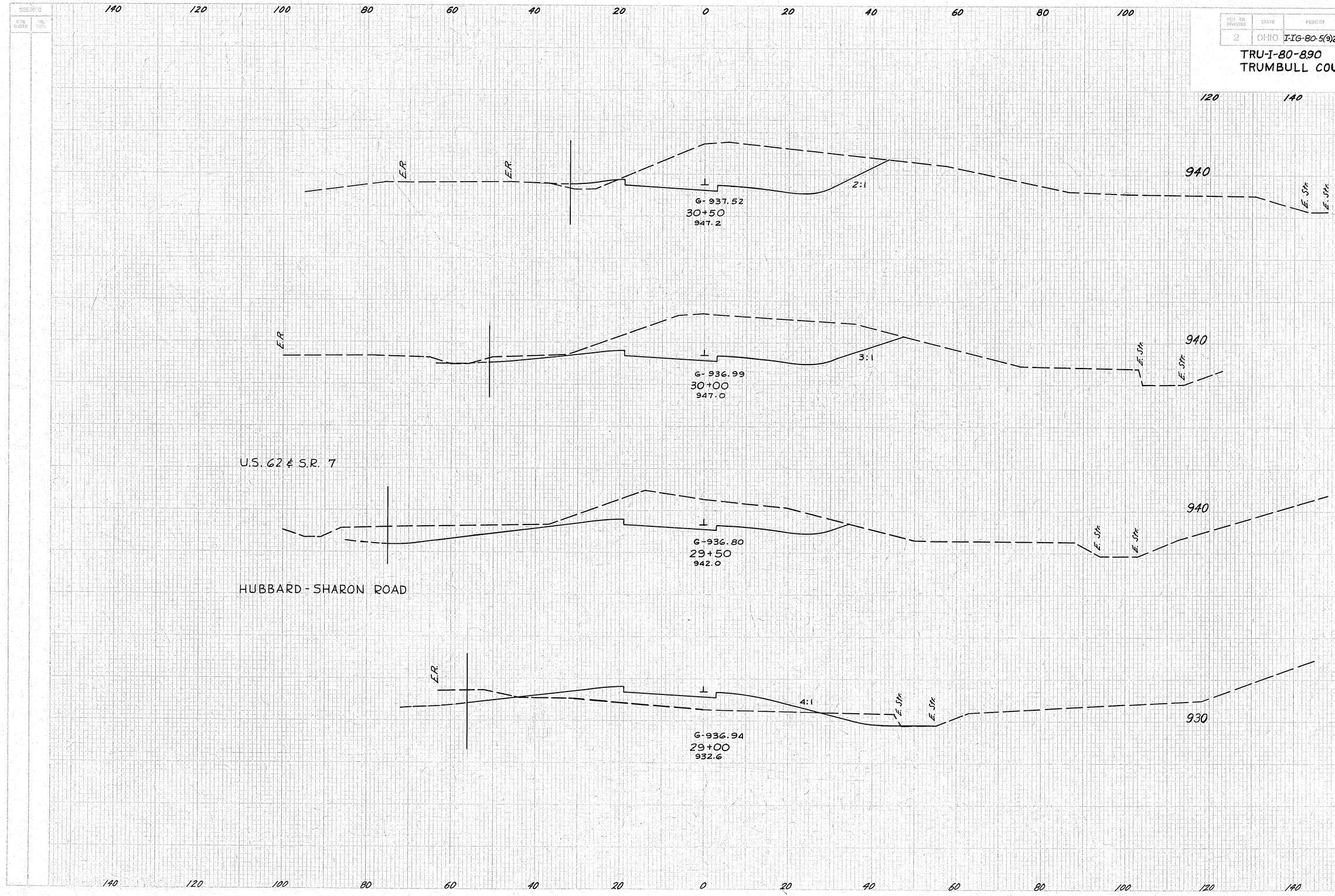
END AREA		VOLUME	
CUT	FILL	CUT	FILL
106	100	467	92
398	0	761	0
424	0	818	0

RAMP D Sta 27+50 to Sta 28+73

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

172
401

TRU-I-80-8.90
TRUMBULL COUNTY



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	490	10	1004	9
	594	0	972	0
	456	0	444	159
	24	172	120	252

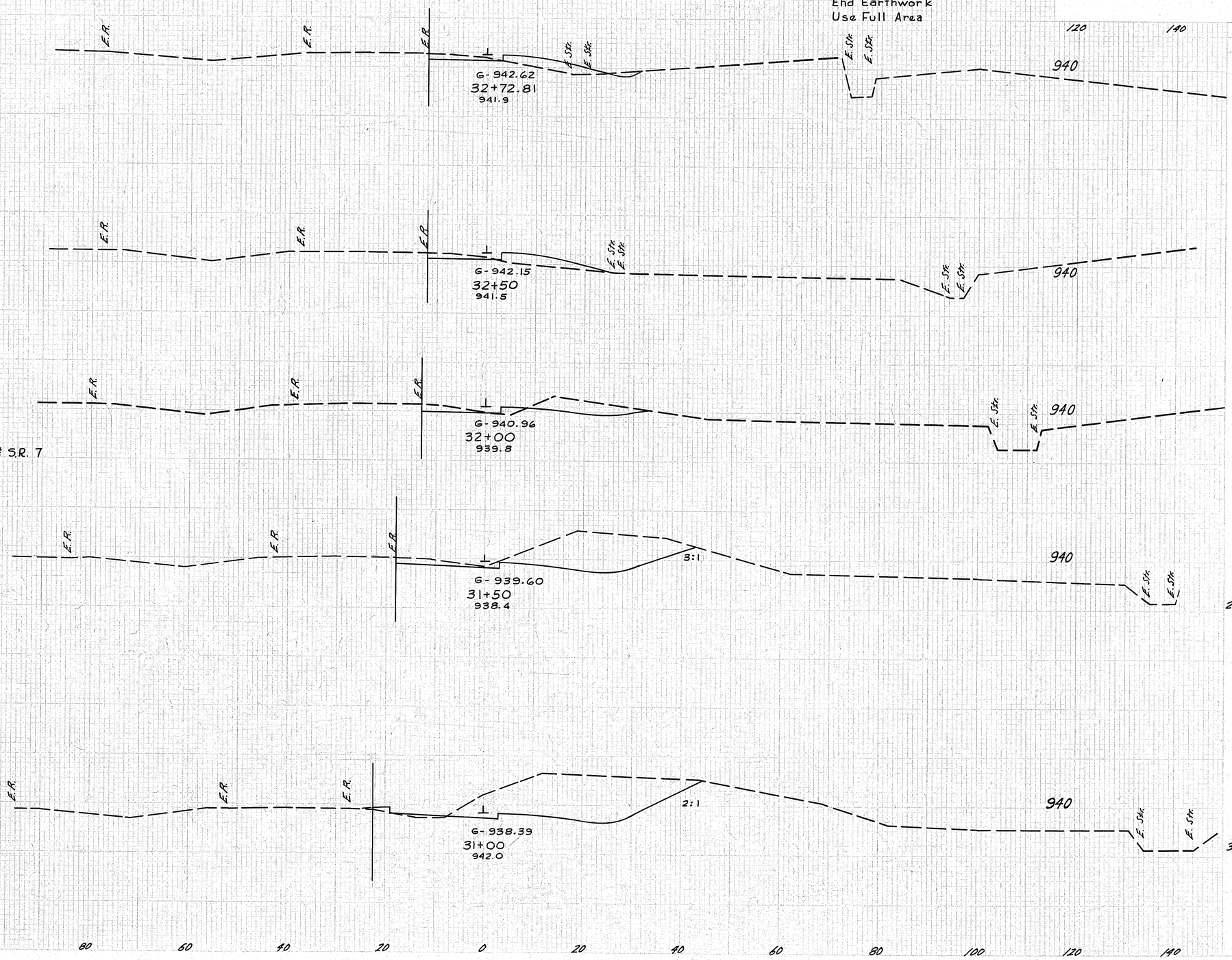
RAMP D Sta. 29+00 to Sta. 30+50

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-80-5(9)245

173
401

TRU-I-80-8.90
TRUMBULL COUNTY

Sta. 32+72+81
End Earthwork
Use Full Area



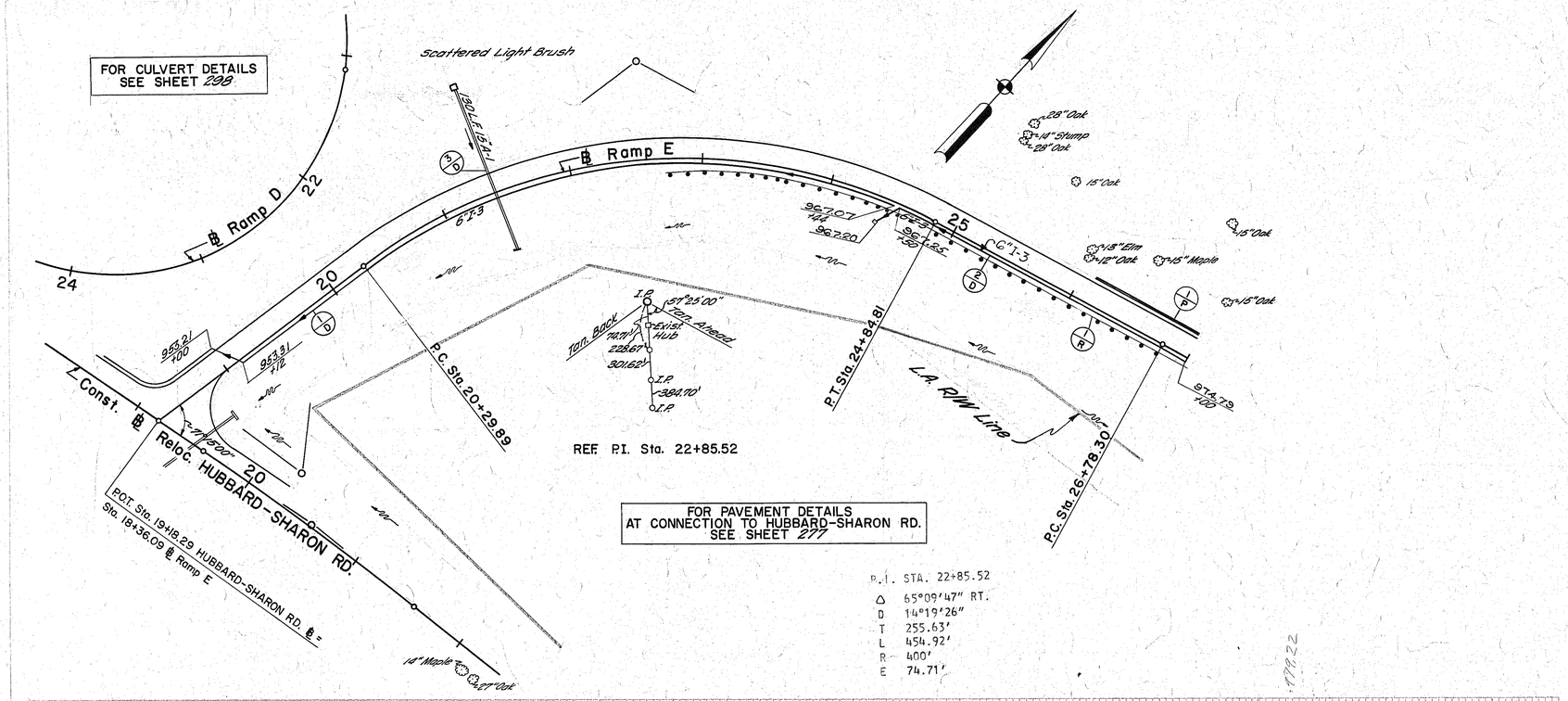
U.S. 62 & S.R. 7

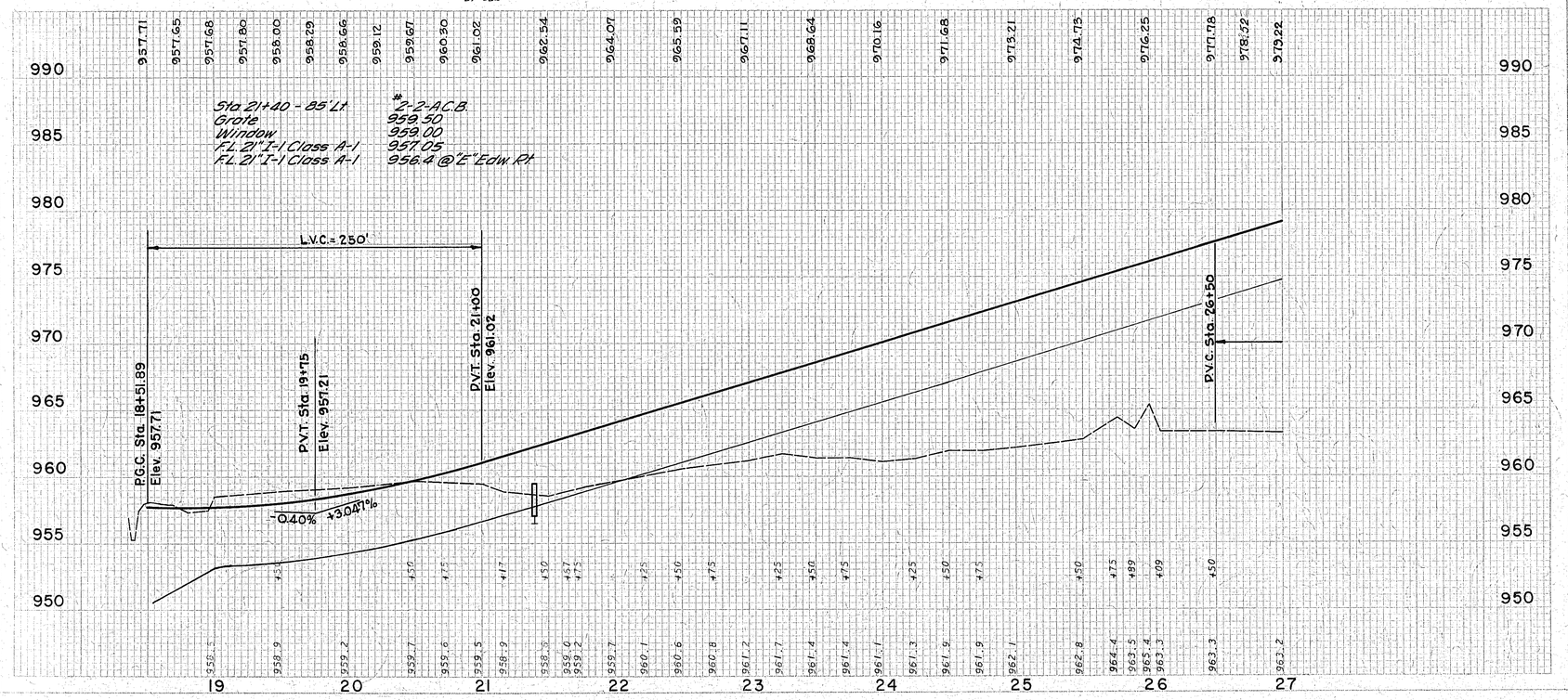
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	33	12	18	18
	11	32	74	34
	69	5	258	5
	210	0	481	6
	310	6	741	15

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

174
401

TRUMBULL COUNTY TRU-I-80-8.90





ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	CL. A-1 M-6.6(a) or 6.8(b) ± 6" L.F.	CL. A-1 M-6.6(a) or 6.8(b) ± 15" L.F.	CL. F-4 8" Shallow L.F.	CL. I-3 6" U-Drain L.F.	I-1 Masonary CU. YD.
1-D	19+00 to 21+44	Rt.	26				
2-D	21+40 to 27+00	Rt.					
3-D	21+40	℄		132			
1-R	21+75 to 21+98	Lt.			10	592	.26
	22+75 to 21+98					258	
1-R	26+11.63 to 27+00	Lt.					
TOTALS			26	132	10	850	.3

REF. NO.	I-5 For 6" U-Drain 60° BEND EACH	I-8 Catch Basin No. 2-2-A EACH	I-12 Type 8 P.C.C. Curb L.F.	I-15 Guard Rail L.F.	L-10 Sodding SQ. YD.
1-D	1				
2-D	1	1			1
3-D	1				
1-R				425.0	
1-R			88		
TOTALS	2	1	88	425.0	1

SEE SHEET NO.

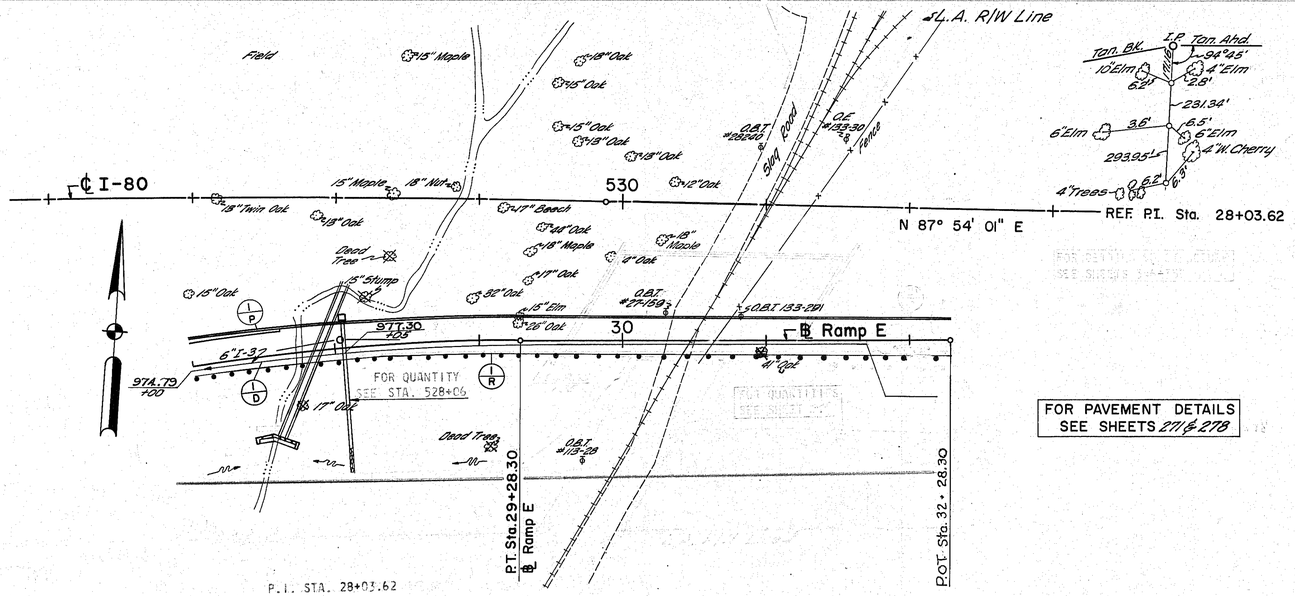
For M-6.5(b)

RAMP E Sta. 18 + 51.89 to Sta. 27 + 00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

175
401

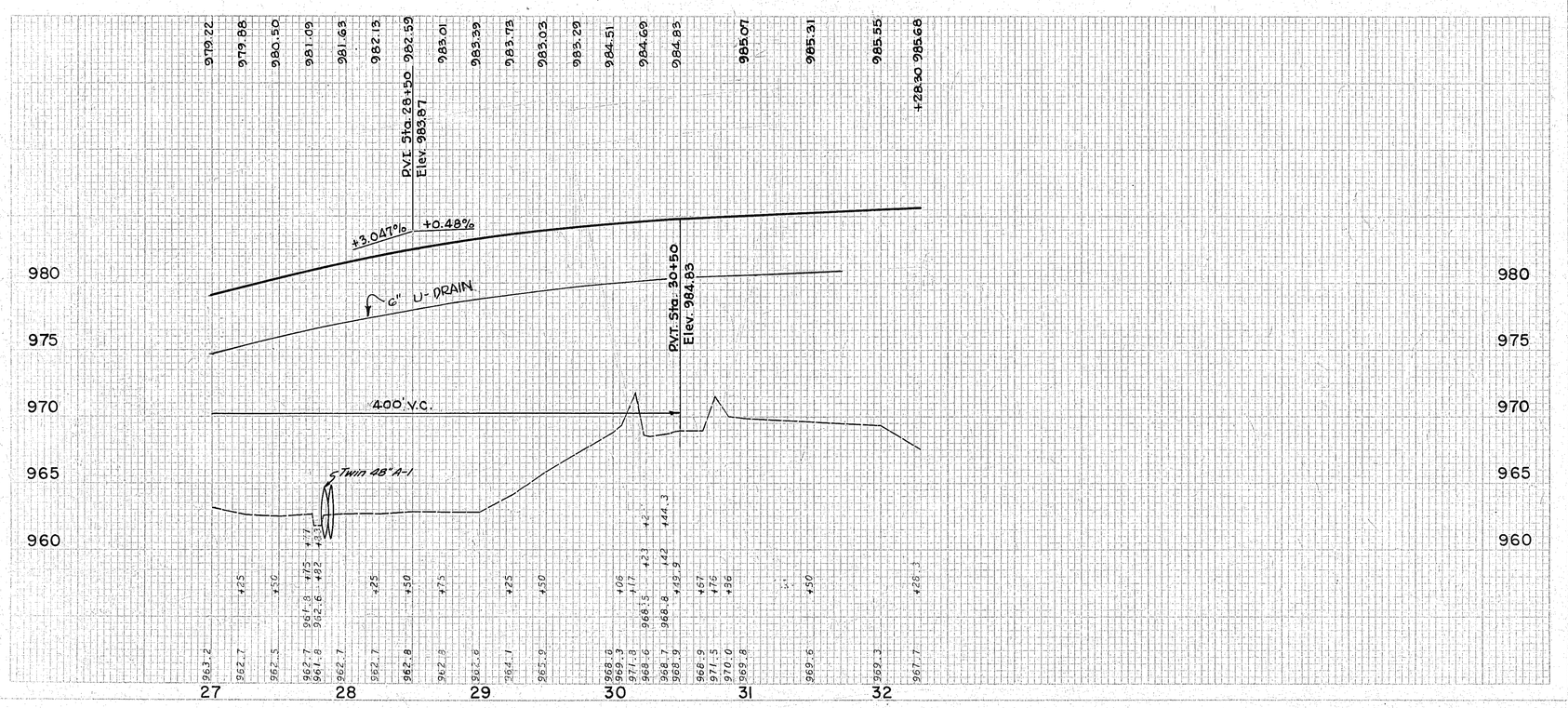
TRUMBULL COUNTY TRU-I-80-8.90



FOR PAVEMENT DETAILS SEE SHEETS 271 & 278

P.I. STA. 28+03.62

Δ	10°00'00" RT.
D	4°00'00"
T	125.32'
L	250'
R	1432.39'
E	5.47'



DWG. NO.	STATION TO STATION	SIDE	I-1 CL. I-3 6" U-Drain L.F.	I-12 Type 8 P.C.C. Curb L.F.	I-15 Guard Rail L.F.
1-D	27+00 to 31+70	Rt	470		
1-P	26+38 to 32+25	Rt			525
1-P	27+00 to 32+28.30	Lt		528	
TOTALS			470	528	525

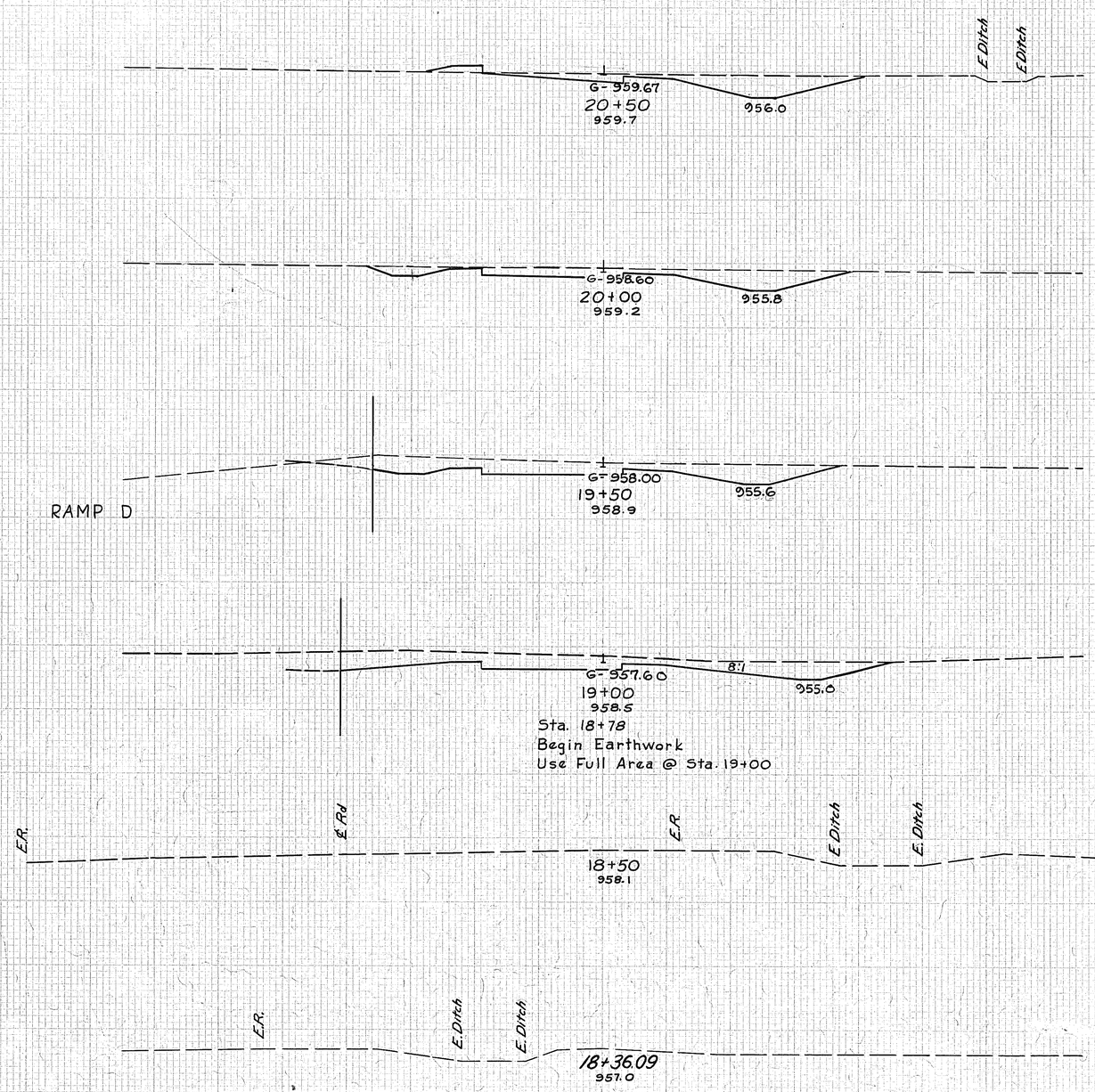
ESTIMATED QUANTITIES

RAMP E Sta. 27+00 to Sta. 32+28.30

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(6)245	

176
401

TRU-I-80-8.90
TRUMBULL COUNTY



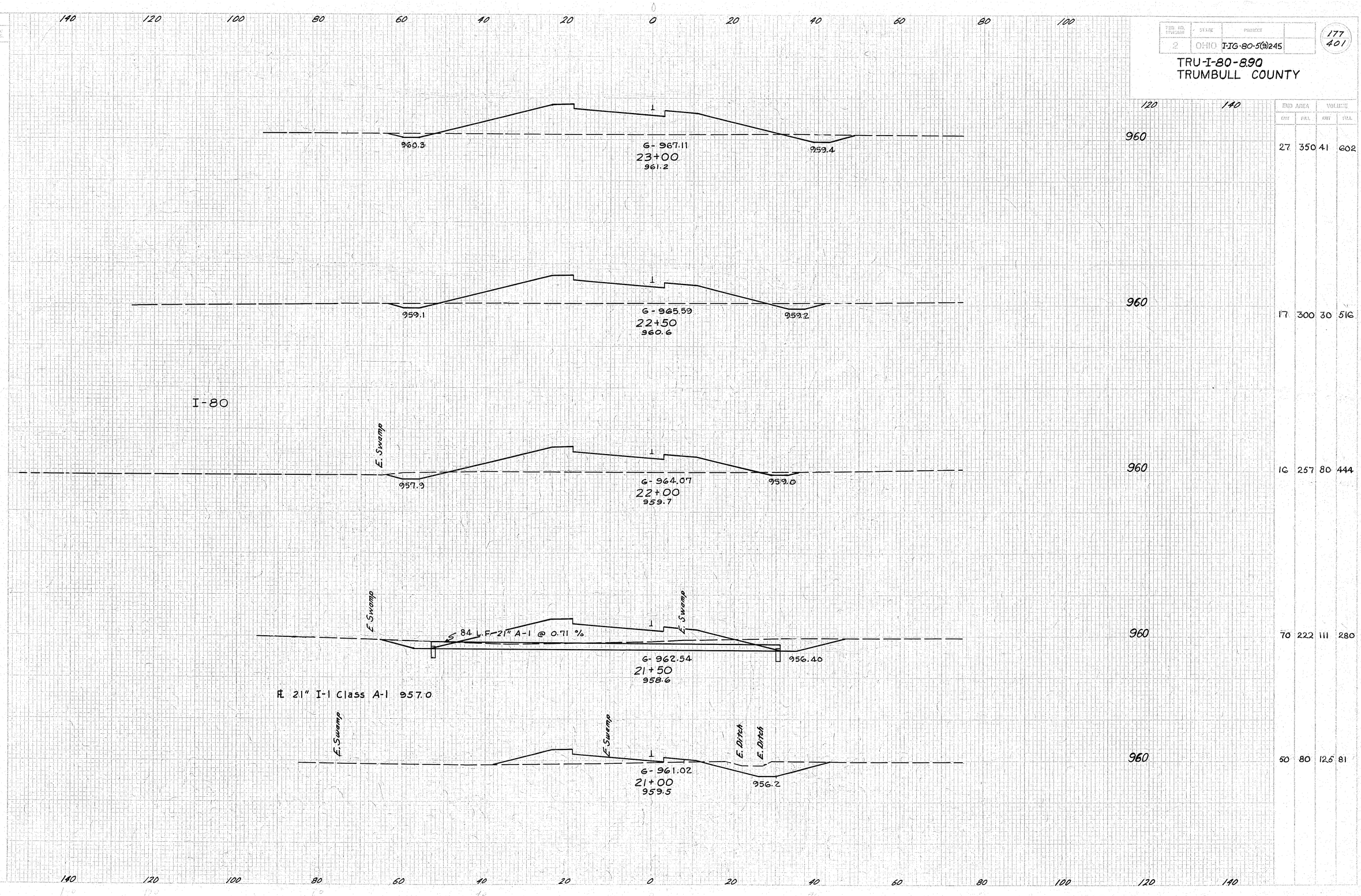
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
960	85	7	175	7
960	107	0	236	0
960	151	0	293	0
960	165	0	110	0
Sta 18+78	104	0	0	0
960				
960				

RAMP E Sta 18+36.09 to Sta 20+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

177
401

TRU-I-80-8.90
TRUMBULL COUNTY



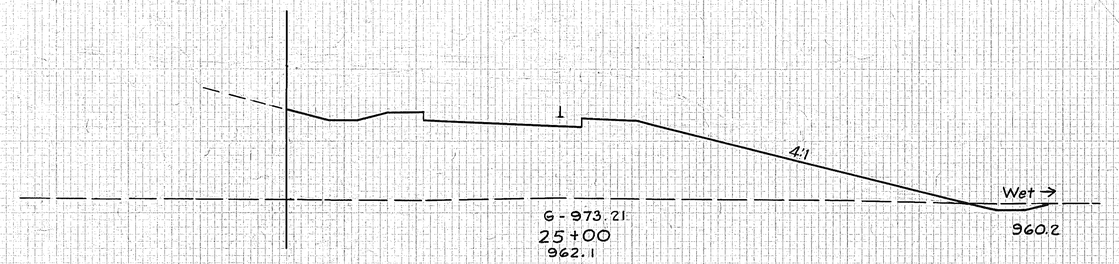
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	27	350	41	602
	17	300	30	516
	10	257	80	444
	70	222	111	280
	50	80	125	81

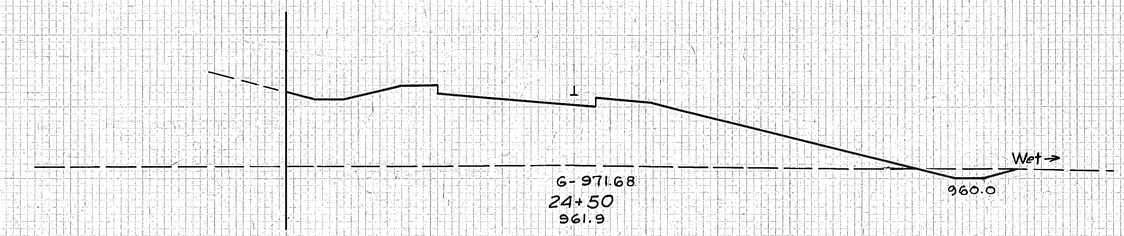
RAMP E Sta 21+00 to Sta 23+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

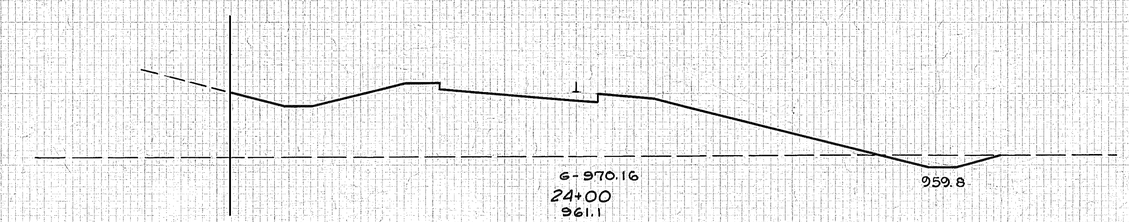
178
401

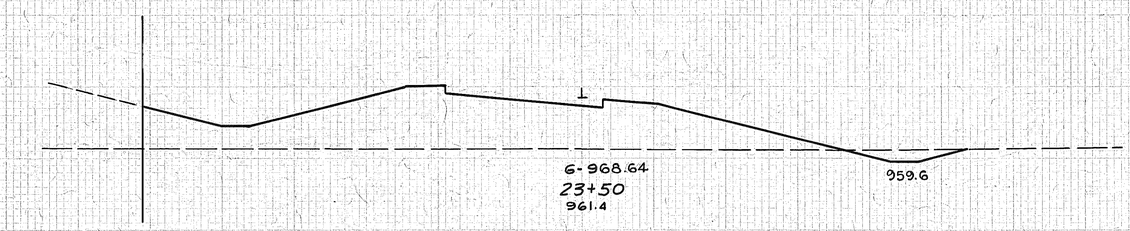
TRU-I-80-8.90
TRUMBULL COUNTY





I-80





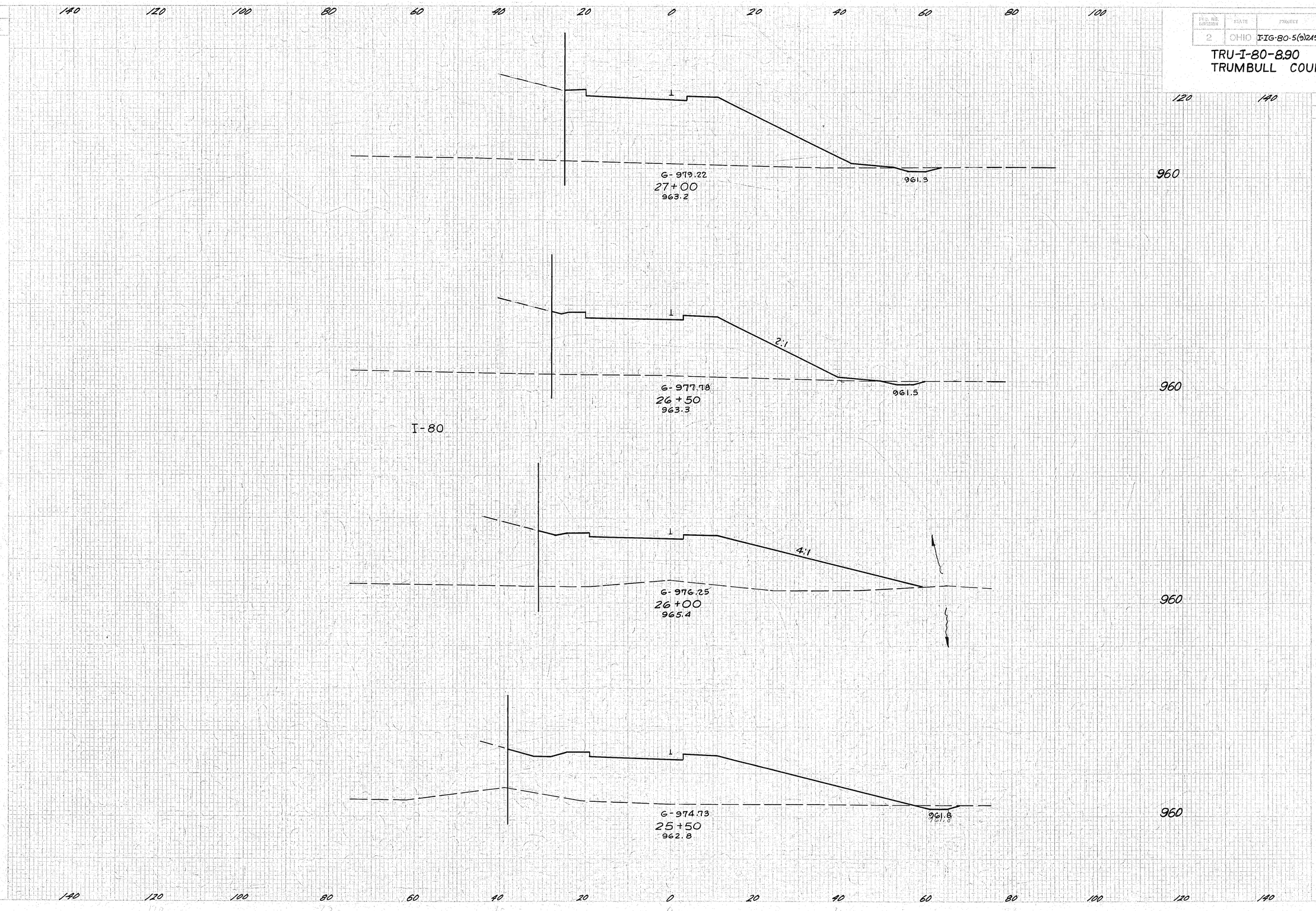
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
8	821	17	1373	
10	662	25	1206	
17	640	30	1065	
15	510	39	797	

RAMP E Sta 23+50 to Sta 25+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(6)245	

179
401

TRU-I-80-8.90
TRUMBULL COUNTY



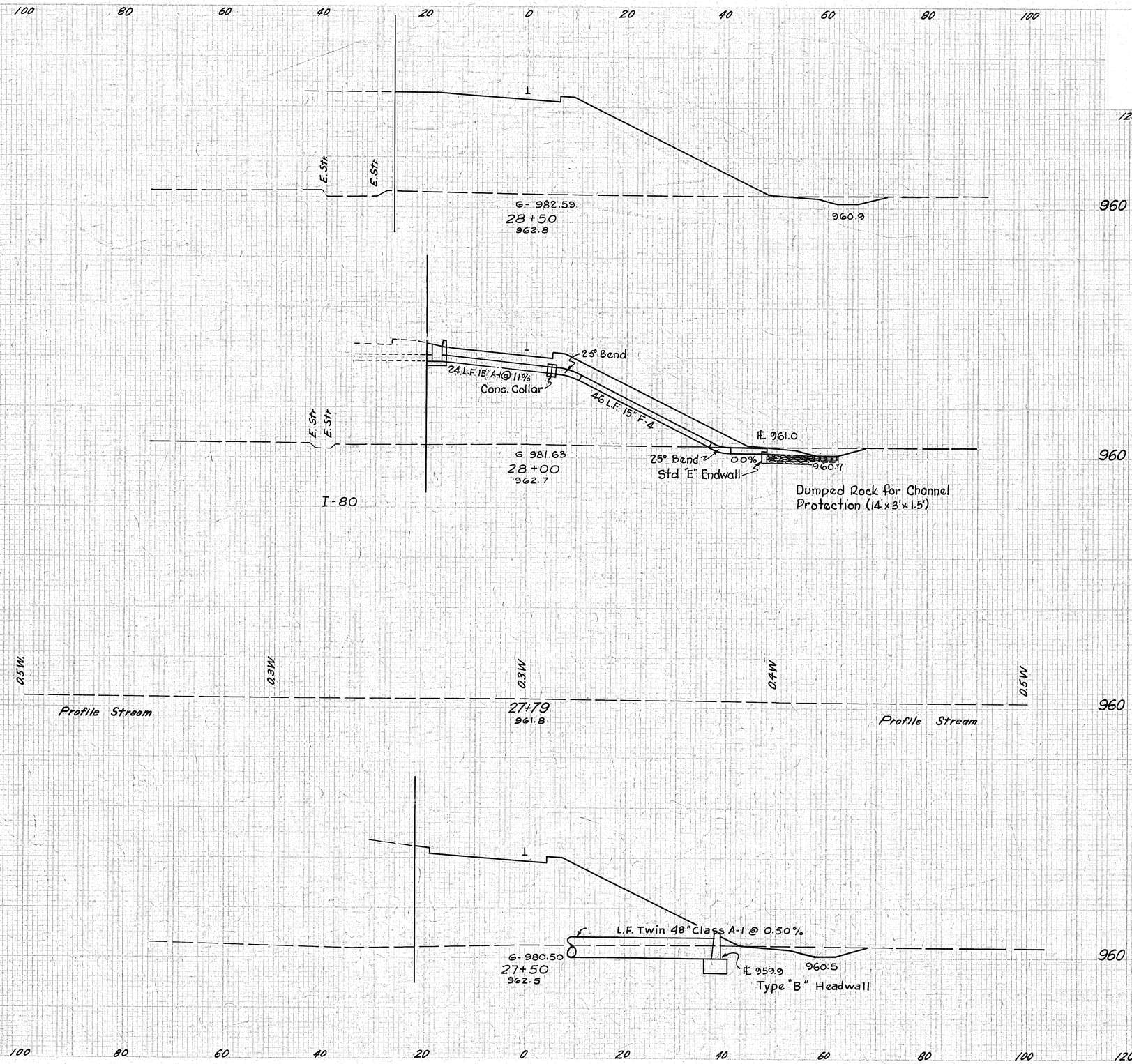
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	7	863	11	1503
	5	760	5	1445
	0	800	6	1463
	6	780	13	1483

RAMP E Sta 25+50 to Sta 27+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

180
401

TRU-I-80-8.90
TRUMBULL COUNTY



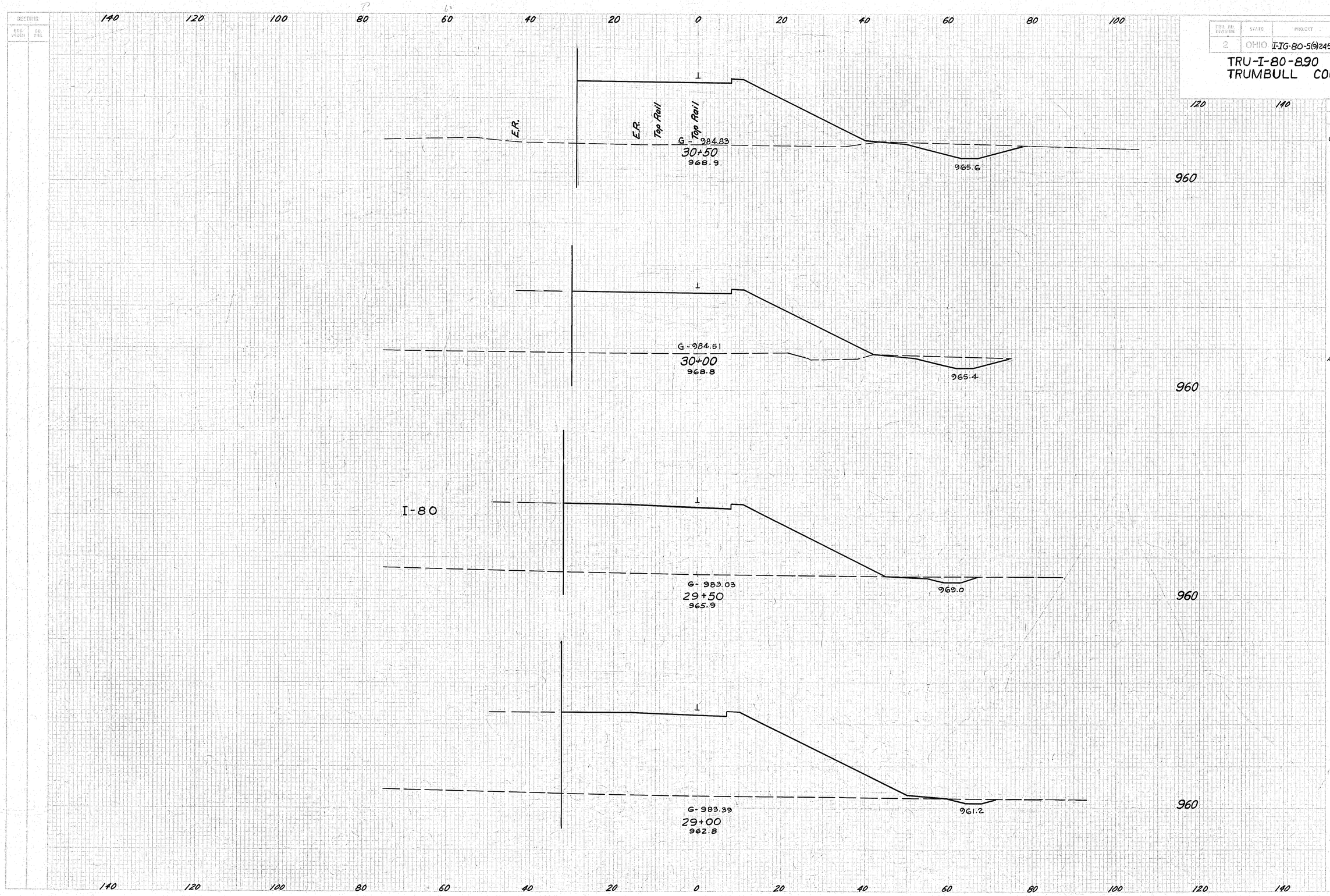
END AREA		VOLUME	
CUT	FILL	CUT	FILL
16	1087	32	1804
18	861	42	1575
27	840	32	1577

RAMP 5 Sta. 27+50 to Sta. 28+50

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-80-5(9)245

181
101

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
62	874	37	1611
42	866	48	1723
10	994	14	2110
5	1284	20	2196

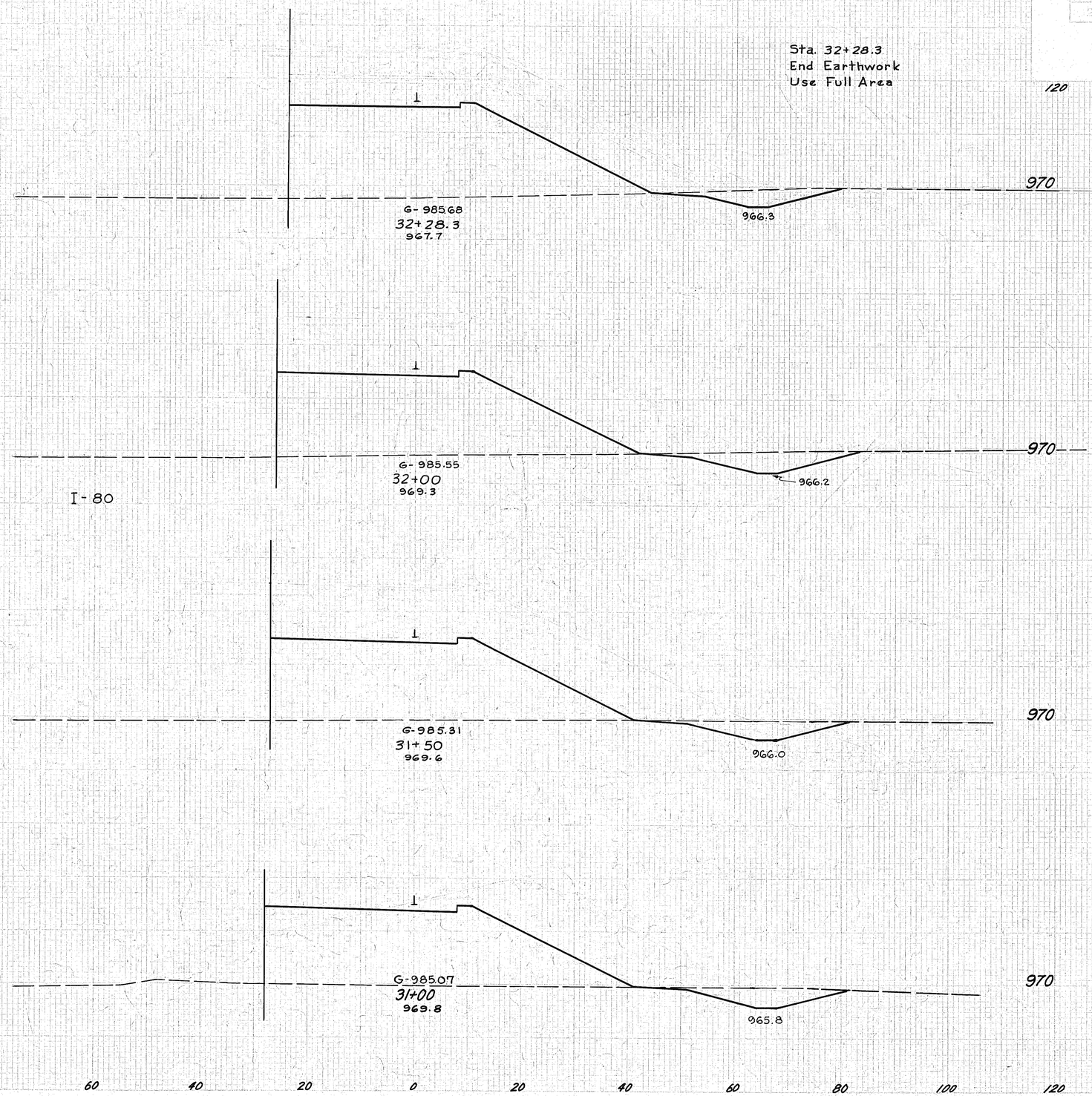
RAMP F Sta 29+00 to Sta 30+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

182
401

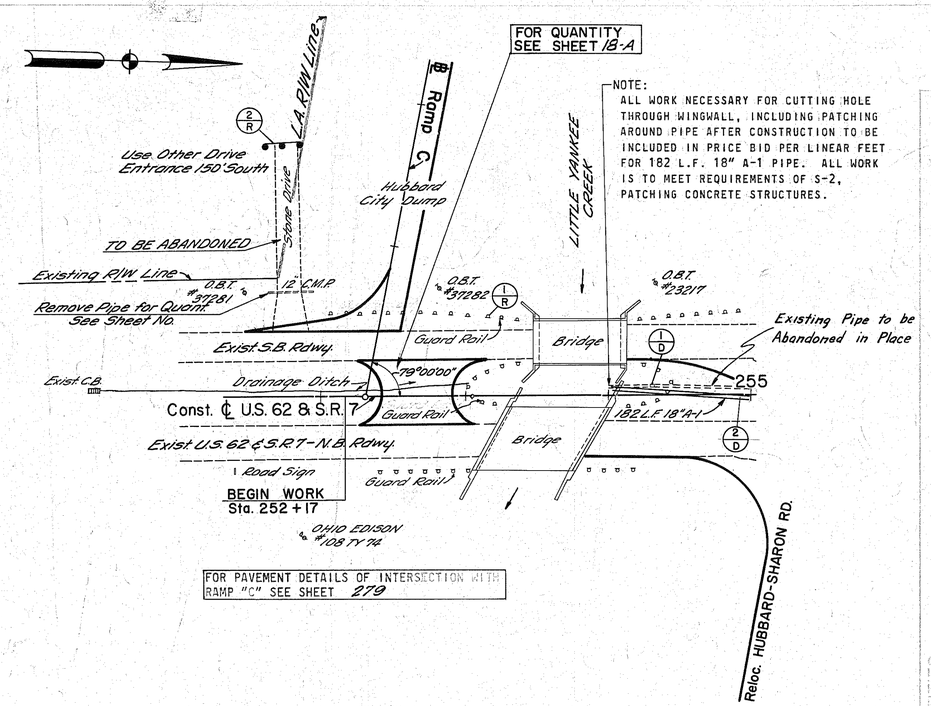
TRU-I-80-890
TRUMBULL COUNTY

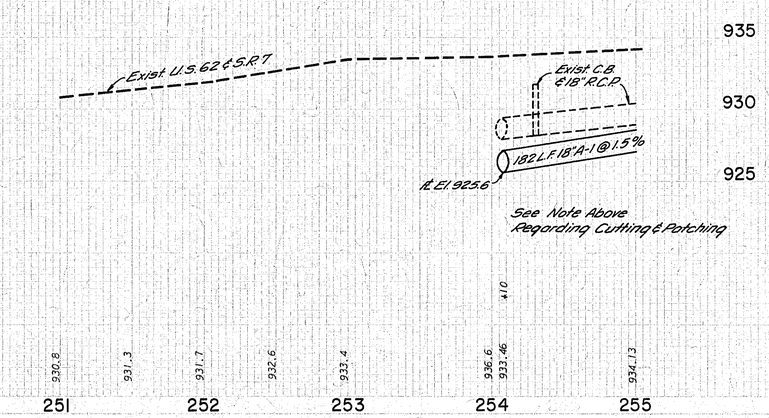
Sta. 32+28.3
End Earthwork
Use Full Area



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
60	890	130	1602
80	840	139	1530
70	812	130	1504
70	812	122	1561

RAMP E Sta 31+00 to Sta 32+28.3





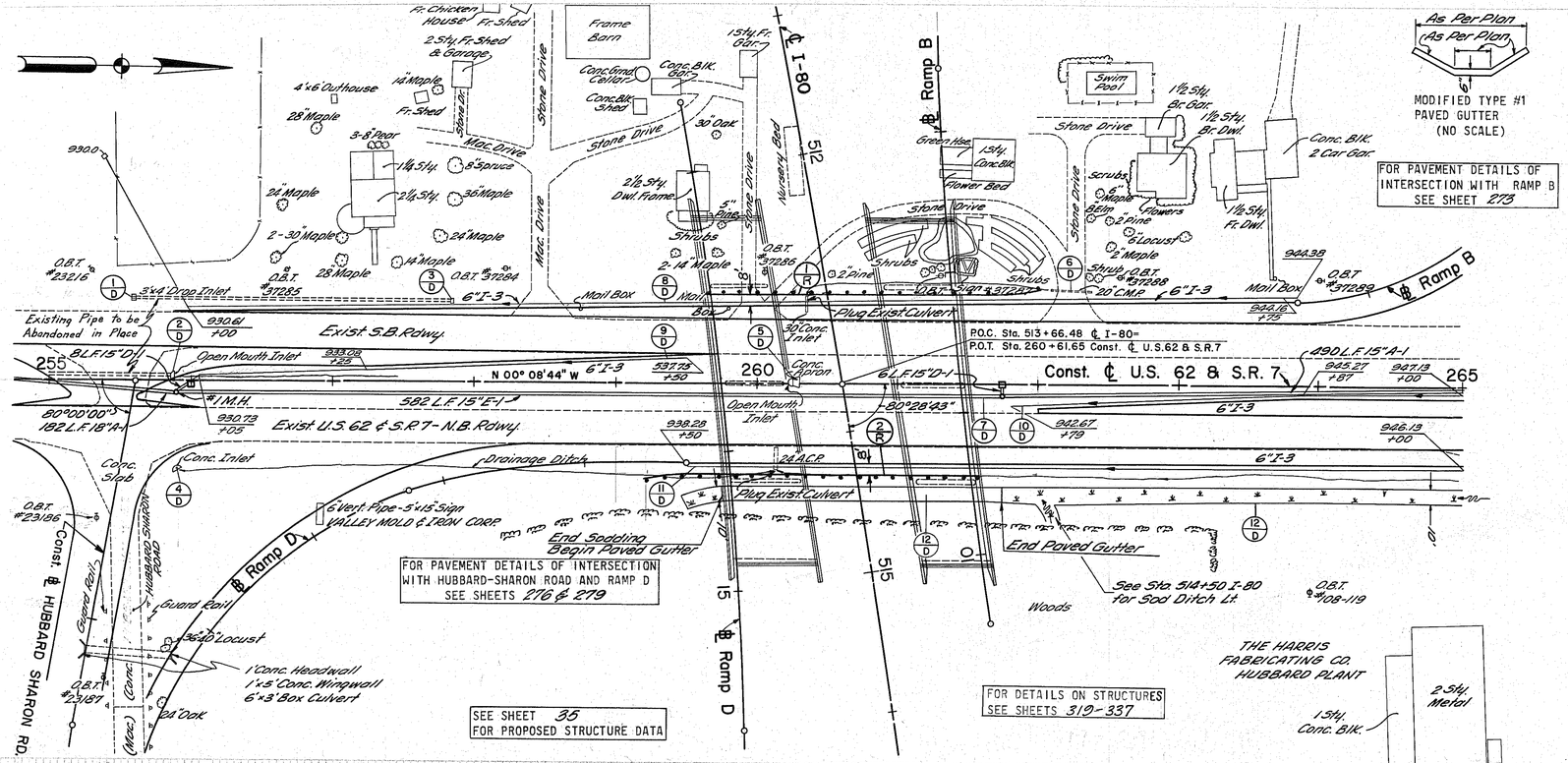
ESTIMATED QUANTITIES

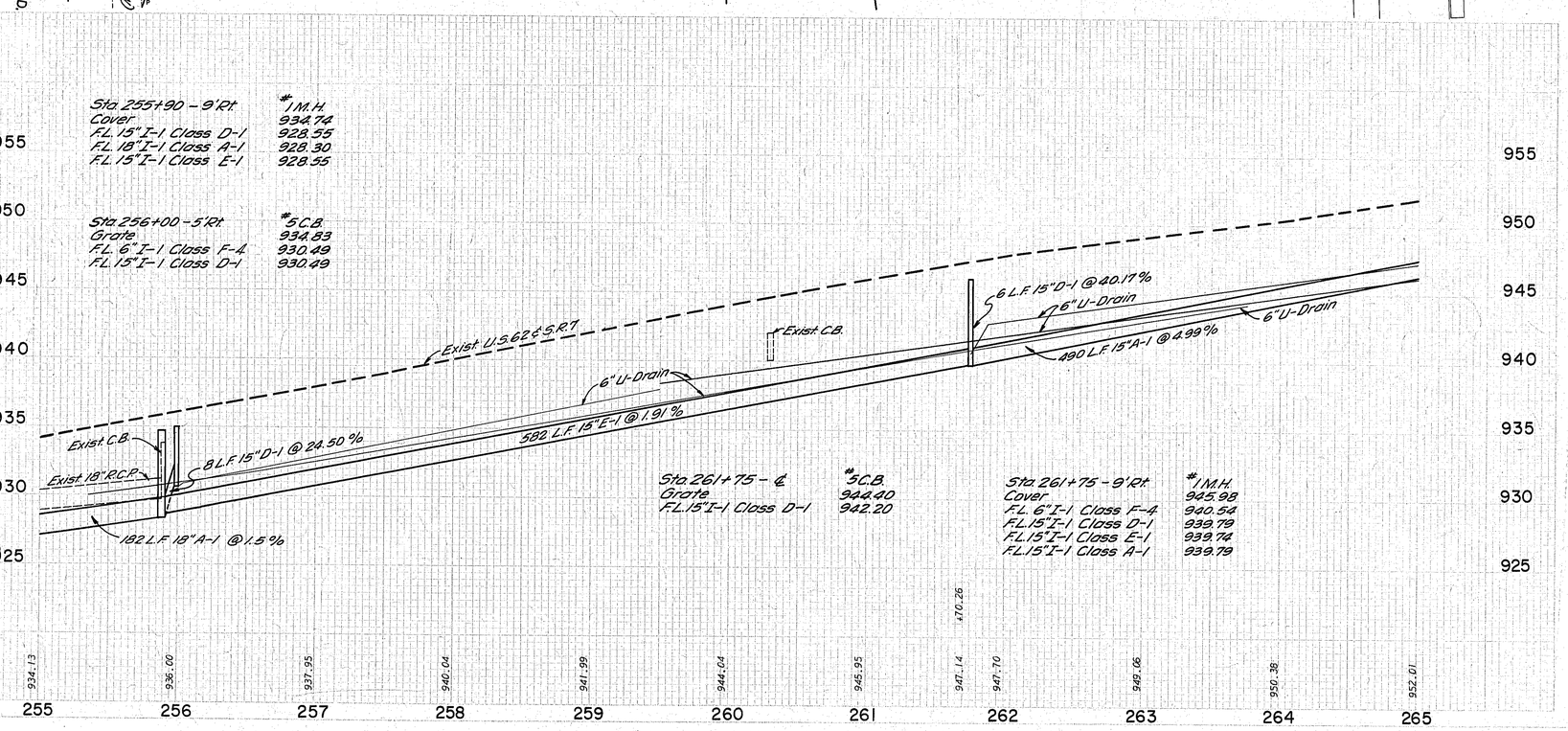
ITEM NO.	STATION TO STATION	SIDE	I-1 CL. A-1 Mat'l (b) or ≠18" L.F.	I-15 Guard Rail Removed & Disp. L.F.	I-15 Guard Rail L.F.
1-D	254+30	Lt.	94		
2-D	254+06 to 255+00	L & R			
1-R	252+07 to 253+37	Lt.		130.0	25
2-R	251+95	Lt.			
TOTALS			94	130.0	25

or M-6.5(b)

I-IG Inlet Aband. EACH
1

U.S.62 & S.R.7 - Sta. 251+00 to Sta. 255+00

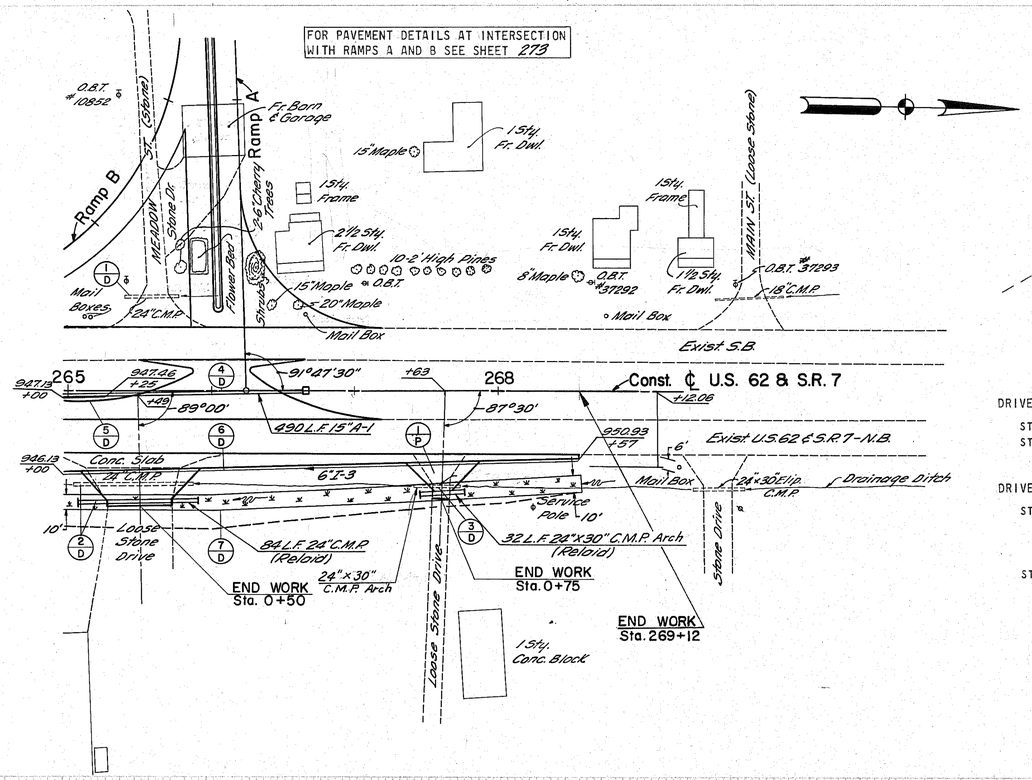


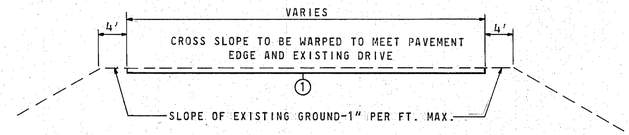


PAY ITEM	STATION TO STATION	SIDE	E-12 Pipe Removed (Over 15") L.F.	I-1 CL. A-1 M-6.6(a) or M-6.8(b) Pipe 15" L.F.	I-1 CL. D-1 Pipe 15" L.F.	I-1 CL. E-1 Pipe 15" L.F.	I-1 CL. F-4 Pipe 6"	I-1 CL. I-3 Pipe 6"	I-8 Catch Basin No. 5 EACH	I-8 Manhole No. 1 EACH	I-14 Med. Paved Gutter Type 1 L.F.	I-16 Inlets Aband. EACH	L-10 Sodding SQ. YD.	I-5 Pipe Special 60° BEND L.F.	I-15 Guard Rail L.F.
1-D	255+60	Lt.													
2-D	255+89	Lt.													
3-D	257+84	Lt.													
4-D	258+90	Rt.													
5-D	260+25	℄													
6-D	262+08 to 262+38	Lt.	30												
7-D	262+00 to 262+00	Rt.													
8-D	262+38 to 263+00	Lt.													
9-D	262+00 to 263+50	Lt. & Rt.													
10-D	261+25 to 263+00	Rt.													
11-D	259+50 to 263+00	Rt.													
12-D	259+50 to 263+00	Rt.													
1-R	259+64.5 to 262+02	Lt.									237.5				
2-R	259+23 to 261+60.5	Rt.									231.5				
TOTALS			30	326	88	14	582	12	10	2	200	5	489	2	475

For M-6.5(b)

U.S. 62 & S.R. 7 - Sta. 255+00 to Sta. 265+00





TYPICAL SECTION – DRIVEWAYS

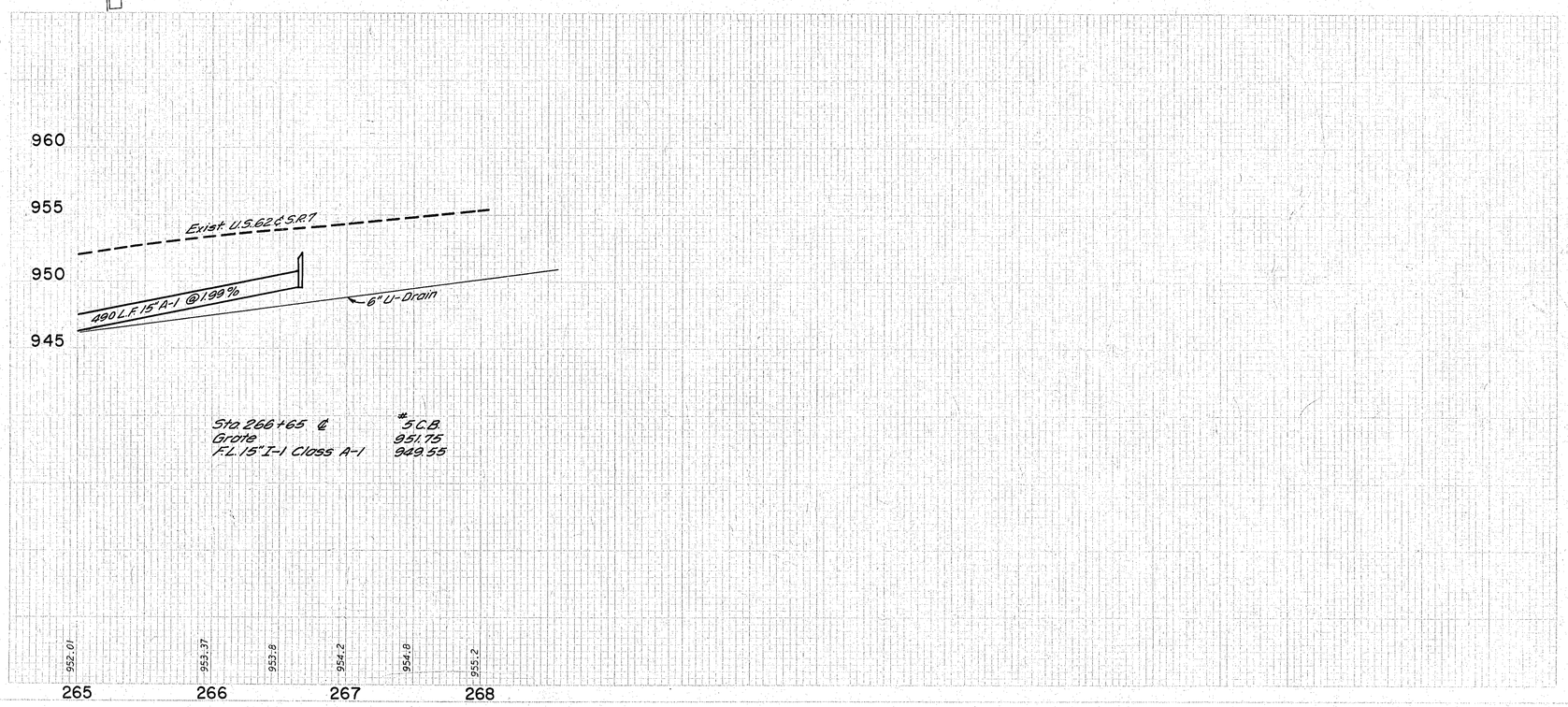
DRIVEWAY RIGHT STA. 265+49

STA. 0+55 TO STA. 0+75, ITEM T-70, 9" PORTLAND CEMENT CONCRETE PAVEMENT
STA. 0+75 TO STA. 0+80, ITEM B-19, 9" AGGREGATE BASE COURSE

DRIVEWAY RIGHT STA. 267+63

STA. 0+52 TO STA. 0+69, ITEM T-31, BITUMINOUS SURFACE TREATMENT ON ITEM B-21, 3" WATERPROOFED AGGREGATE BASE COURSE ON ITEM B-112, 6" POROUS BASE COURSE (SEE PROPOSAL NOTE)

STA. 0+69 TO STA. 0+75, ITEM B-19, 8" AGGREGATE BASE COURSE, STABILIZED WITH CALCIUM CHLORIDE.



ESTIMATED QUANTITIES

For M-6.5(b)

ITEM NO.	STATION TO STATION	E-12 Pipe Rem. Per Linear Ft. Over 15"	CL. A-1 M-5.6(a) or 5.8(b) # 15"	CL. I-3 I-1 Pipe 6"	I-6 Relaying Pipe Type 4 Backfill 24" x 30"	24"	I-8 Catch Basin No. 5	SPECIAL Furnishing & Mixing Calcium Chloride With Aggregate CU.YD.	L-10 Sodding	SEE SHEET NO.
		L.F.	L.F.	L.F.	L.F.	L.F.	EACH		SQ.YD.	
1-D	265+00 to 265+78	Lt. 38					1			
2-D	265+03 to 265+86	Rt. 84							397	
3-D	267+41 to 267+74	Rt. 84			84					
4-D	265+00 to 266+65	Both 32			32			1		
5-D	265+00 to 265+80	Lt. & Rt.	164							
6-D	265+00 to 268+57	Rt.		26						
7-D	265+00 to 268+57	Rt.		358						
1-B	267+63	Rt.								
TOTALS		154	164	384	32	84	1	1	397	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(6)245	

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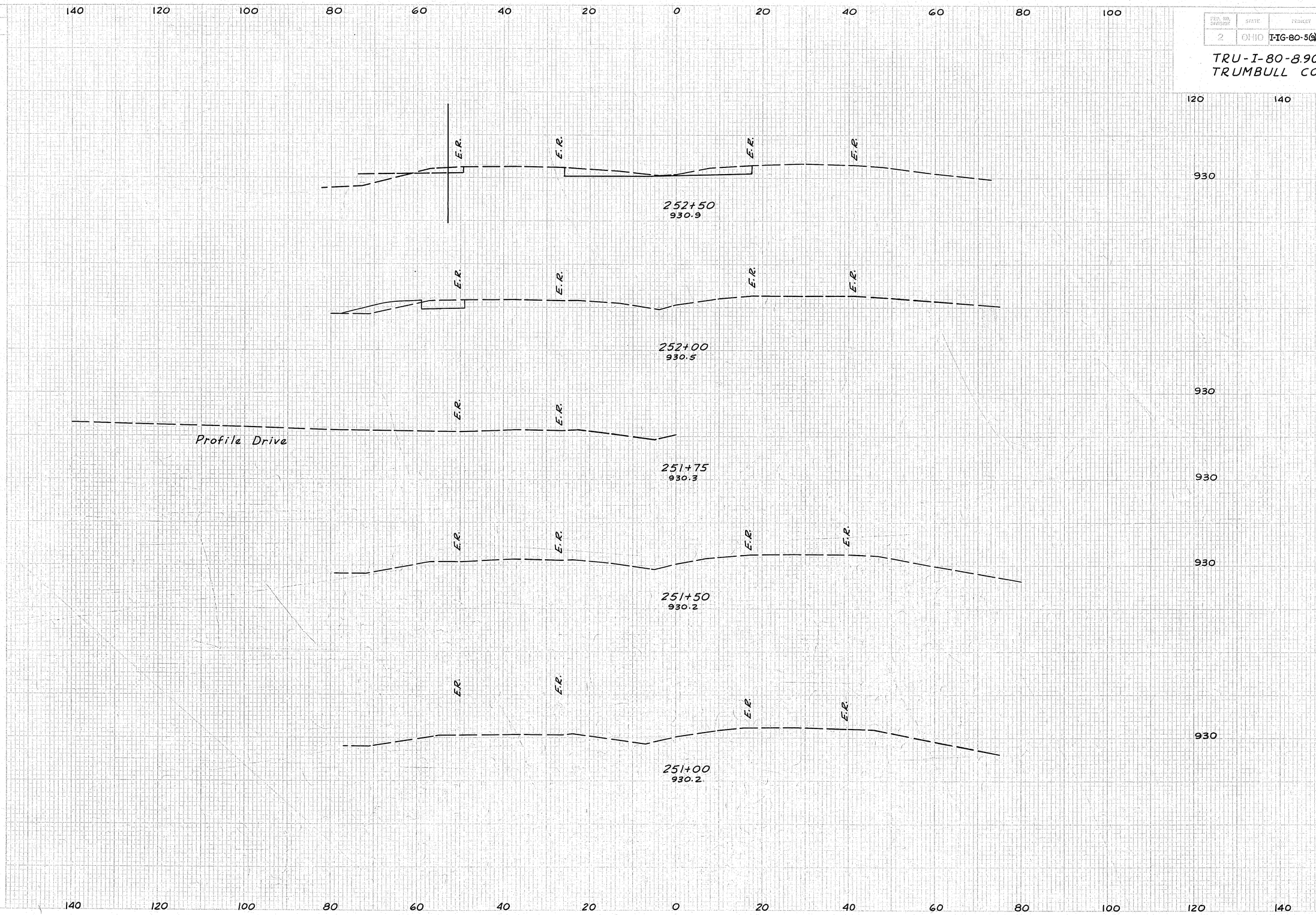
401

TRU-I-80-8.90
TRUMBULL COUNTY



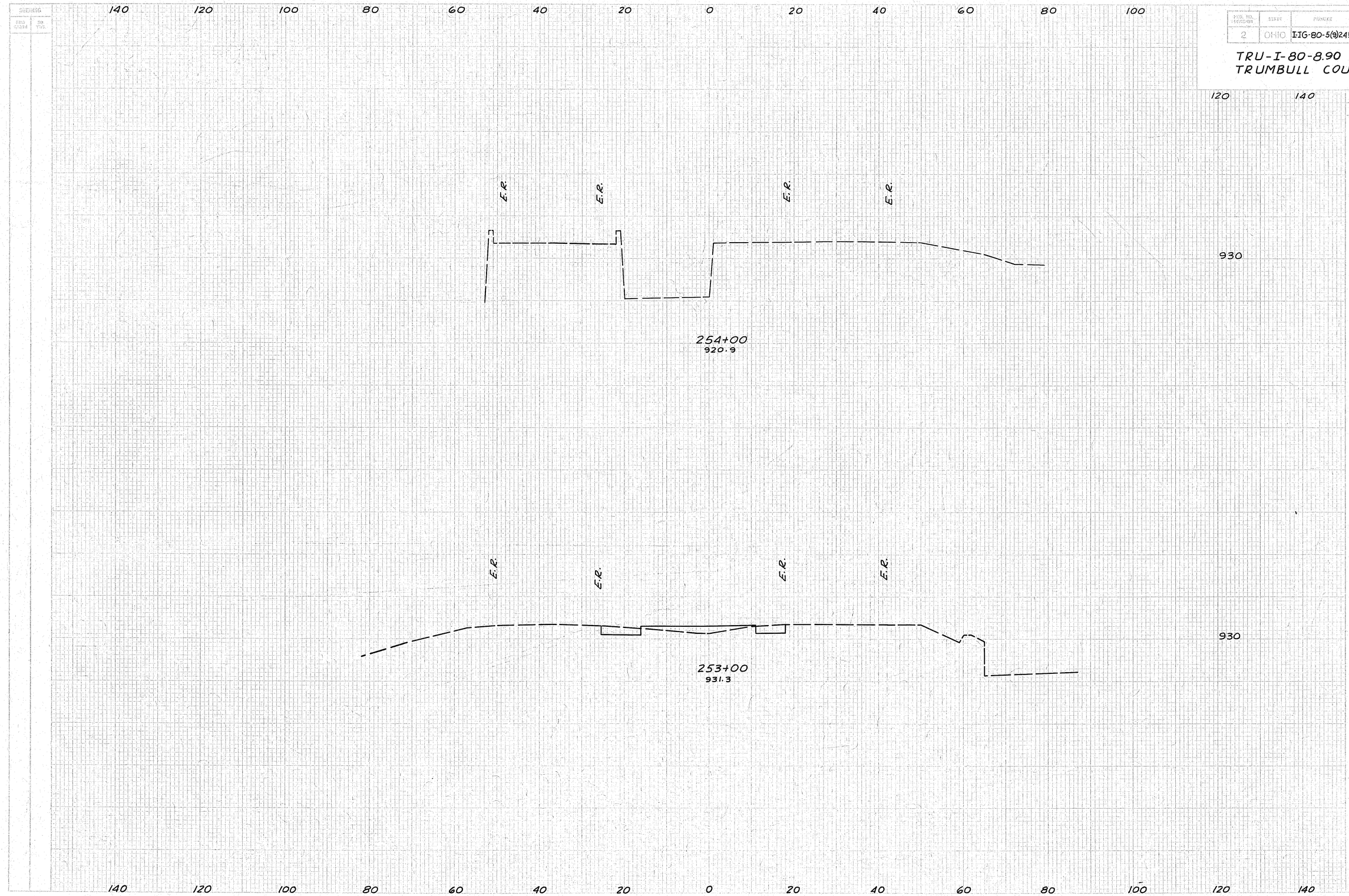
END AREA		VOLUME	
CUT	FILL	CUT	FILL
70	0	85	25
22	21	0	0

US 62 & SR 7

FED. RD. DISTRICT	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

187
401

TRU-I-80-8.90
TRUMBULL COUNTY



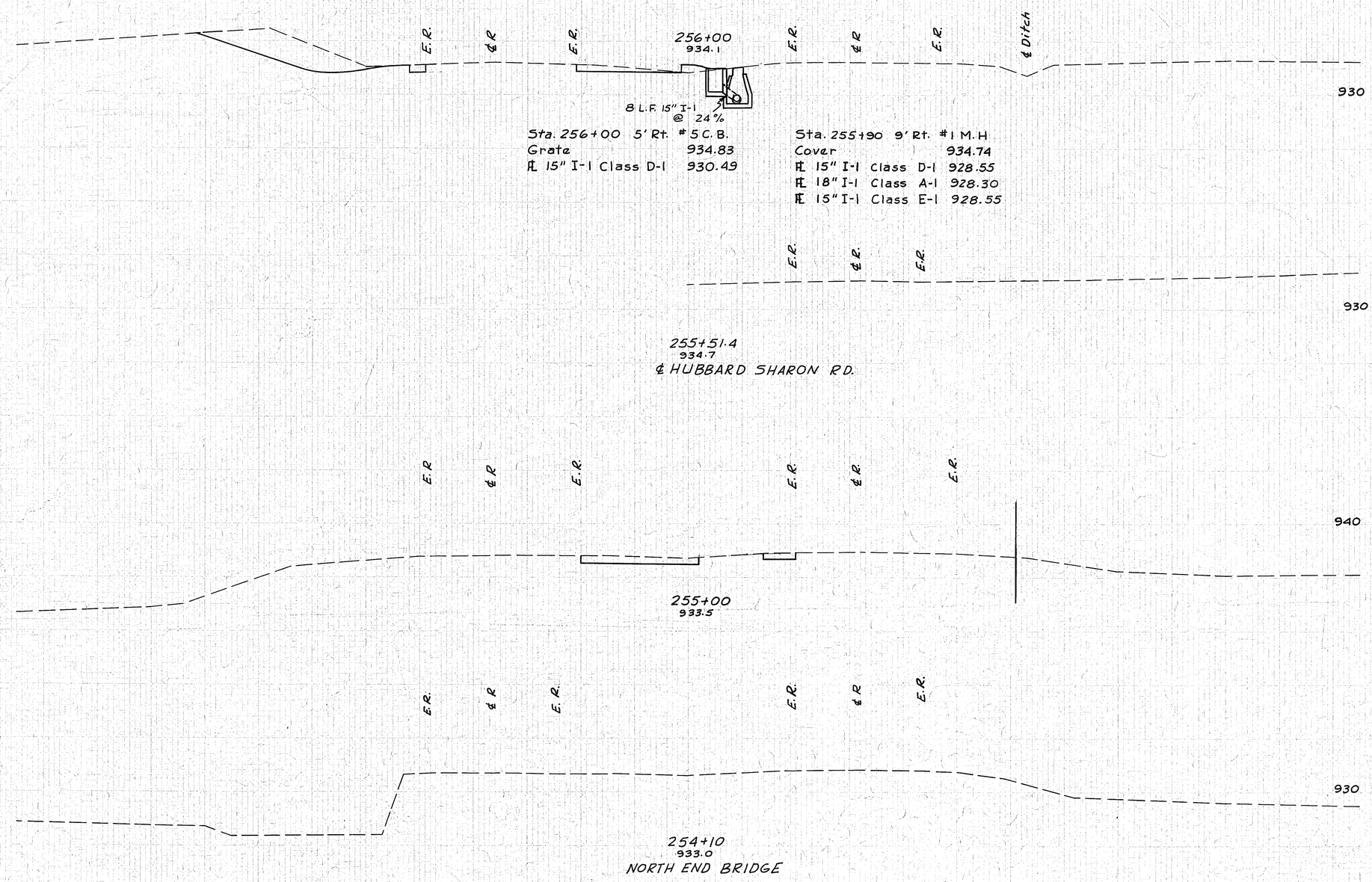
END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0	68	65
37	35	99	32

115.62 & SP 7

FED. RD. DIST. NO.	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

188
401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
145	6	346	11
42	0	78	0
2050		320	

SHEET NO. OF TOTAL SHEETS	STATE	PROJECT
2	OHIO	I-IG-80-5(9)245

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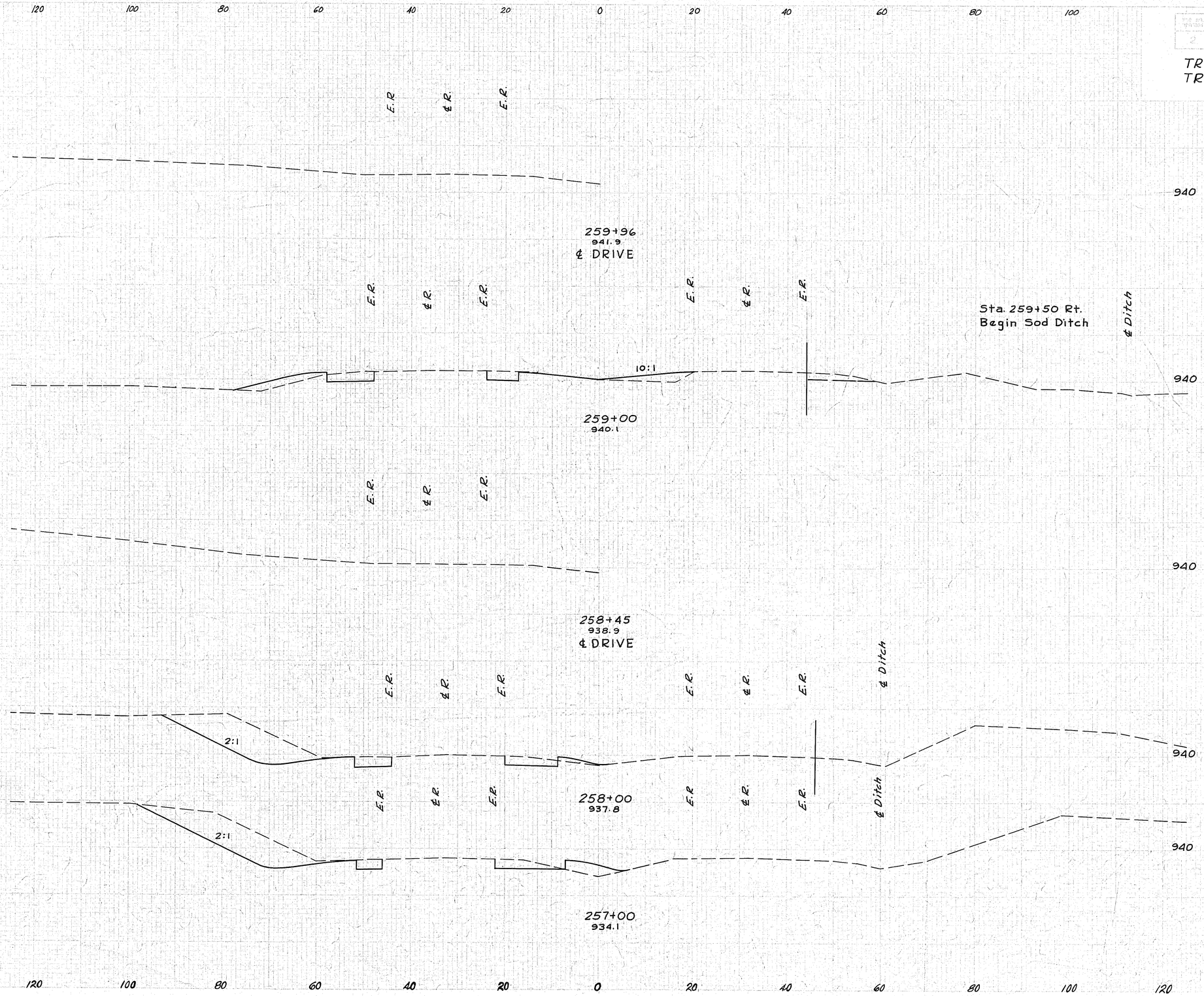
TRU-I-80-8.90
TRUMBULL COUNTY

BRO. AREA		VOLUME	
CUT	FILL	CUT	FILL
38	53	502	111
233	7	885	65
245	28	722	63

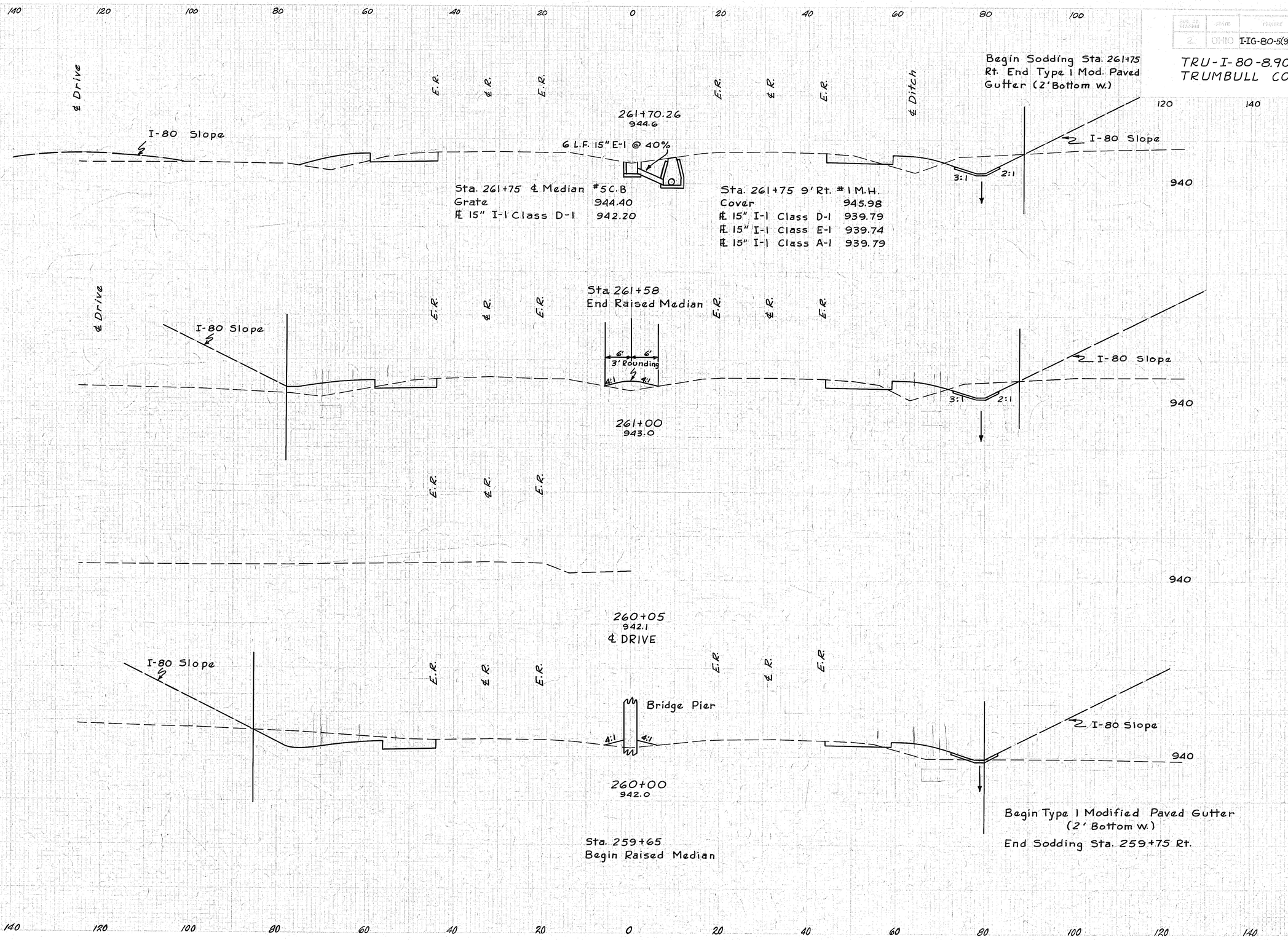


SEEDING	
END STATION	NO. LBS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

190
401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
100	77	237	252
82	117	378	315
122	53	296	196

SEEDING	
SEED SMITH	SQ. YDS.

CTR. NO. JUNCTION	STATE	PROJECT	
2	OHIO	I-IG-80-5(⊖)245	

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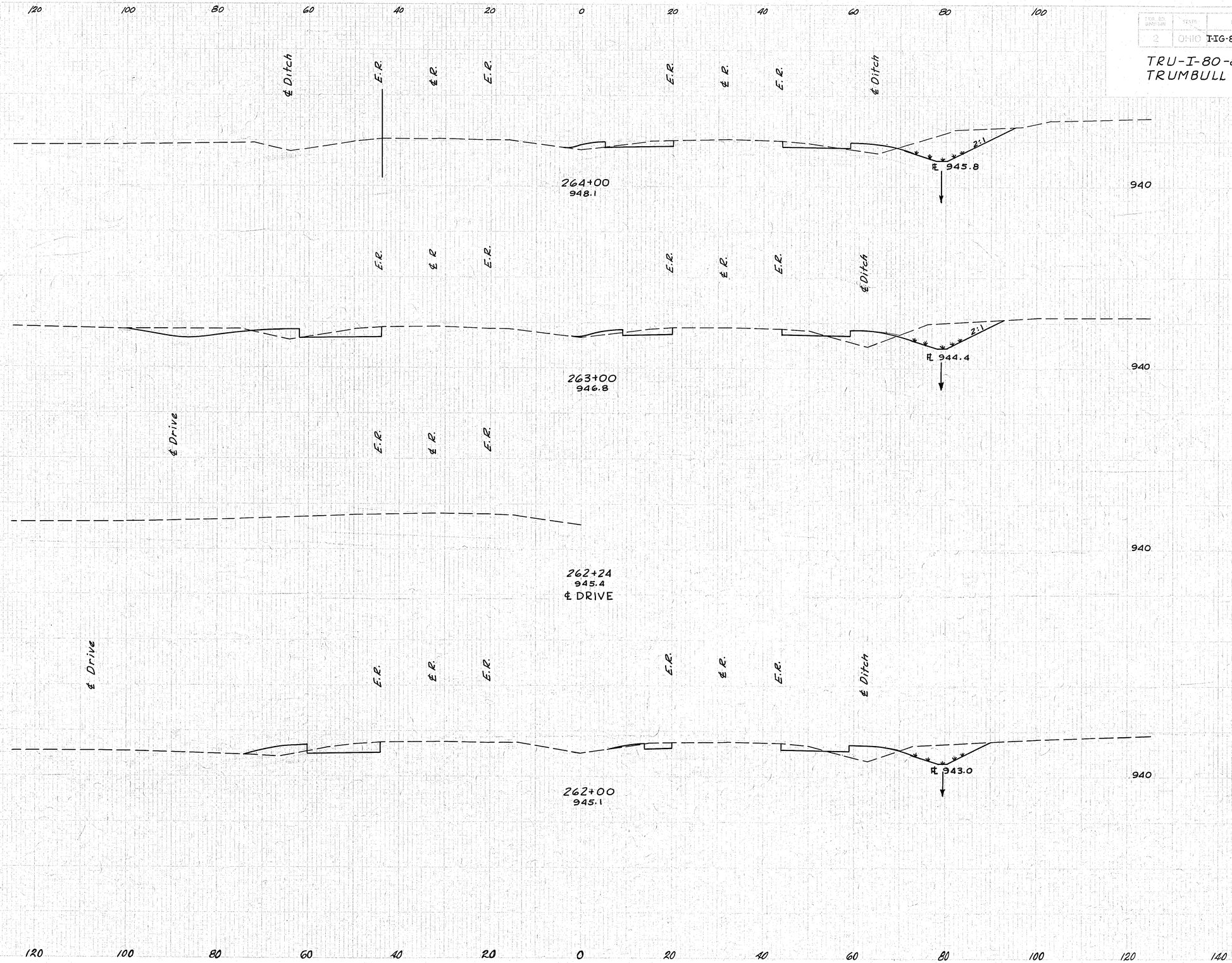
401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
133	30	580	165
180	59	541	220
112	60	117	75

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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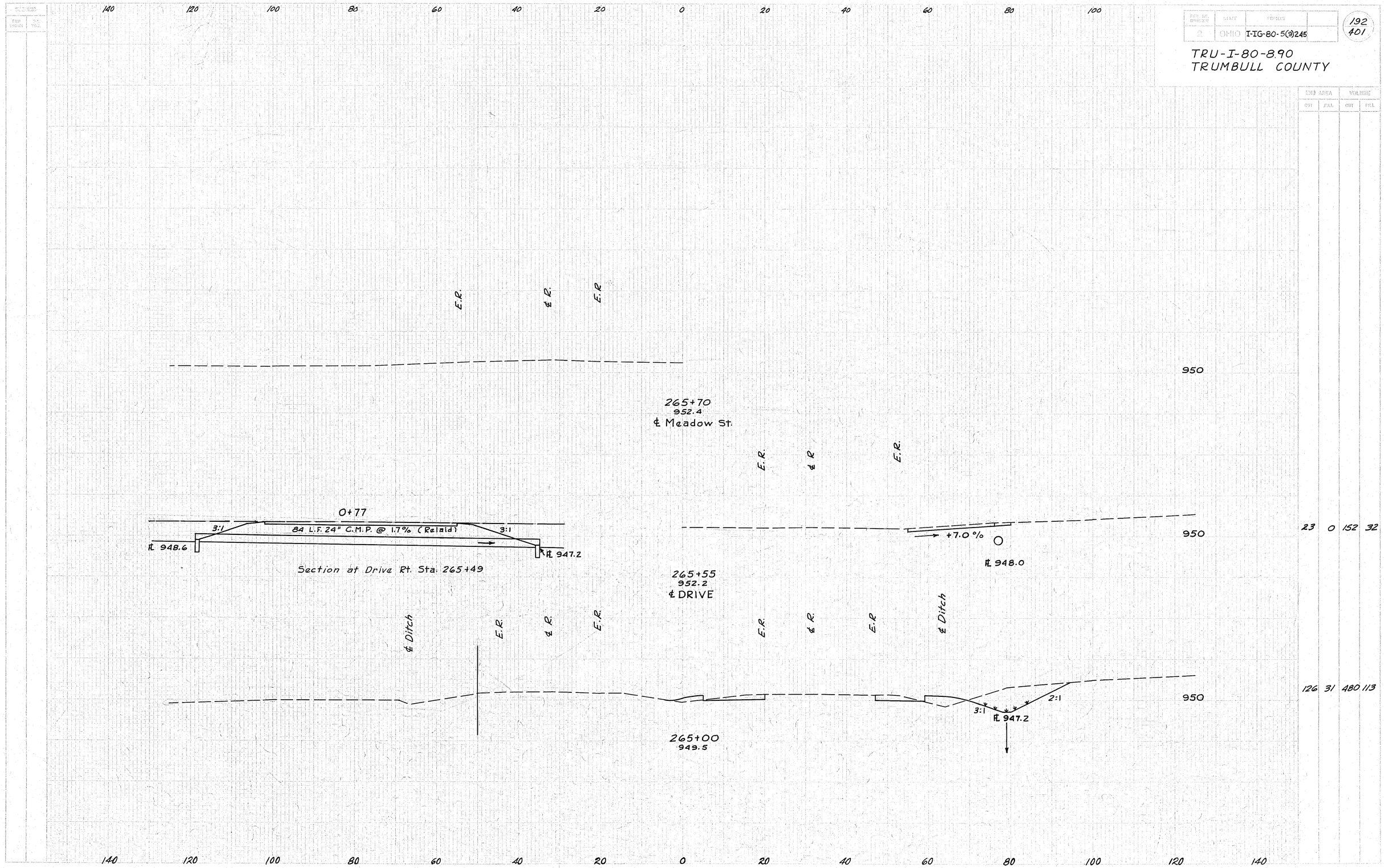
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL



US 62 & SR 7

PROJ. NO. SECTION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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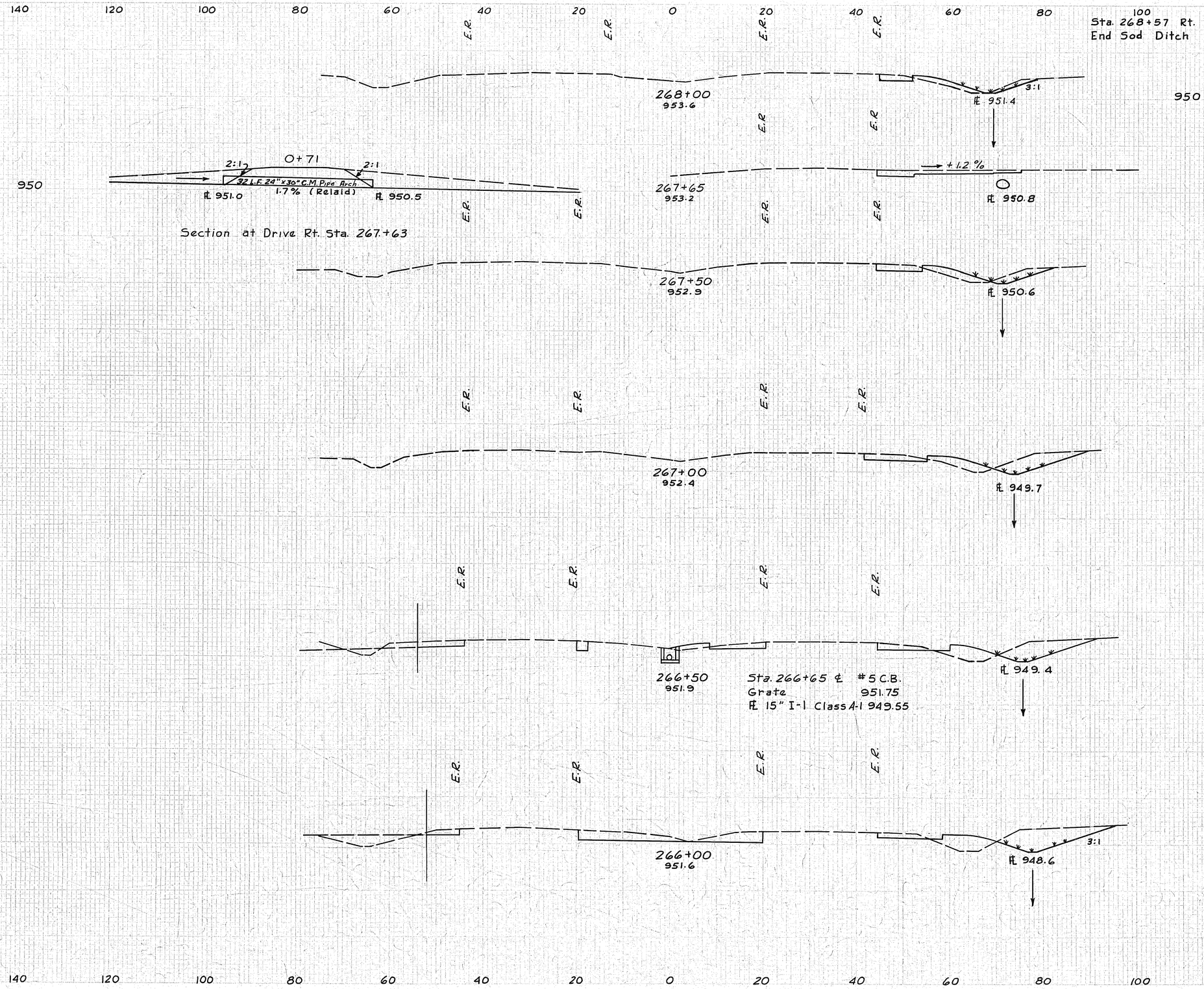
TRU-I-80-8.90
TRUMBULL COUNTY

Sta. 268+57 Rt.
End Sod Ditch



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
20	17	34	11
33	0	19	6
35	22	97	45
70	27	164	62
107	40	265	75
179	41	168	34

US 62 & SR 7

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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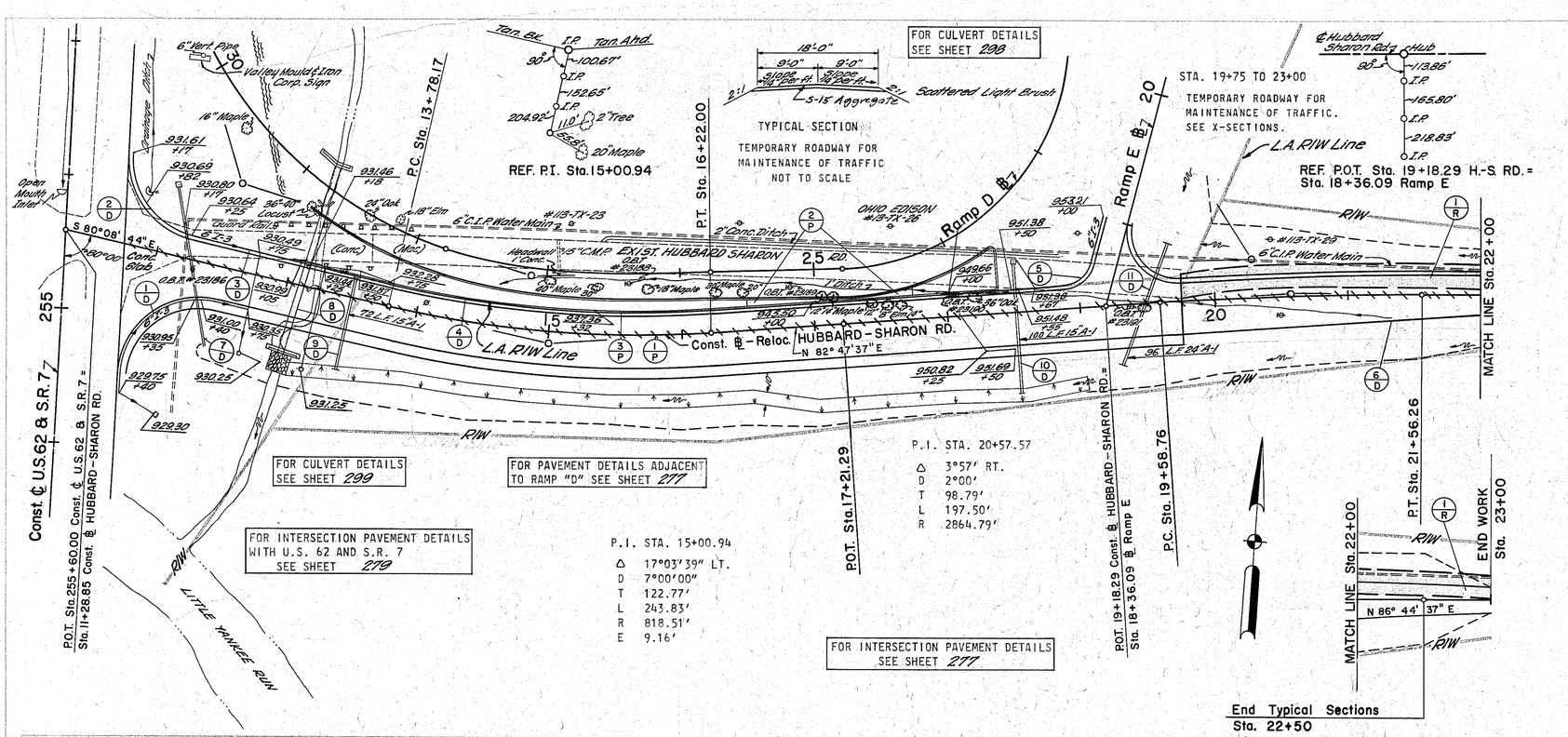
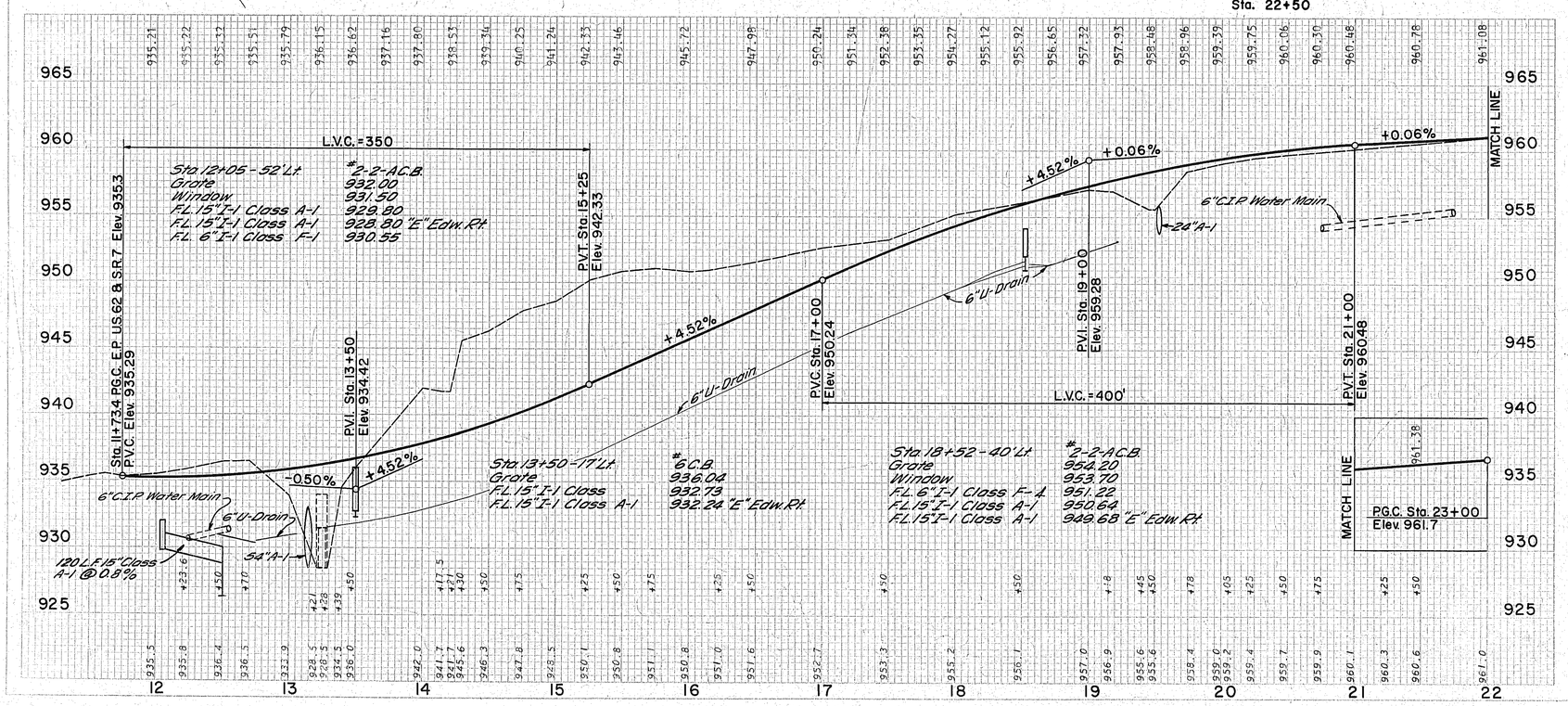
TRUMBULL COUNTY TRU-I-80-8.90





ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 CL. A-1 M-6.6(a) or M-6.8(b) or F-6	I-1 CL. A-1 M-6.6(a) or M-6.8(b) or F-15	I-1 CL. A-1 M-6.6(a) or M-6.8(b) or F-24	I-1 CL. F-4 M-6.6(a) 54"	I-1 CL. F-4 8"	I-1 CL. I-3 6" U-Drain Shallow	I-2 Masonry	I-5 For 6" U-Drain 60°PW 45° BEND	I-5 For 6" U-Drain TEE	I-8 Catch Basin No. 2-2A	I-8 Catch Basin No. 6	I-8 Catch Basin Temp. Run-around	S-15 Furn. And Placing Surf. Crse.	I-9 Stone U-Drain No. 2	I-10 Dumped Rock Channel Protection	I-12 Std. Type 6 Curb	I-21 P.C.C. Median Pav't.	I-23 Concrete Traffic Dividers	L-10 Sodding	STEEL SHEET NO.
						L.F.			CU.YD.	EACH		EACH		LUMP	CU.YD.	L.F.	CU.YD.	L.F.	SQ.YD.	EACH	SQ.YD.	
1-D	254+40 (US.62) to 12+75	Rt.									1											18
2-D	256+77 (US.62) to 12+17	Lt.					10	118												1		82
3-D	12+25 to 13+05	Lt.&Rt.	44					86												10		58
4-D	13+18 to 18+50	Lt.&Rt.	128				10	126												1		542
5-D	18+55 to 19+00 (Ramp E)	Lt.					10	530												1		21.8
6-D	19+25 to 23+00	Lt.&Rt.					10	108												5		134
7-D	12+26	℄			120				.26								20.8					108
8-D	13+13	℄							3572													LUMP
9-D	13+50	℄				150			.96													2
10-D	18+52	℄			72				.96													1
11-D	19+52	℄			100			96	.82													134
1-P	11+74 to 19+00	℄																				108
2-P	16+49 to 17+13	Lt.																				LUMP
3-P	19+05 to 18+35	Lt.																				2
4-P	18+76 to 23+00	Lt.																				1
TOTALS			172	292	96	150	30	968	327	3	4	2	1	LUMP	108	134	21.8	542	58	82	18	

or Sec. M-6.5(b)

Reloc. HUBBARD SHARON RD. Sta. 11+73.4 to Sta. 23+00

FED. RD. DISTRICT	STATE	PROJECT	
2	OHIO	I-IG-80-5(S)245	

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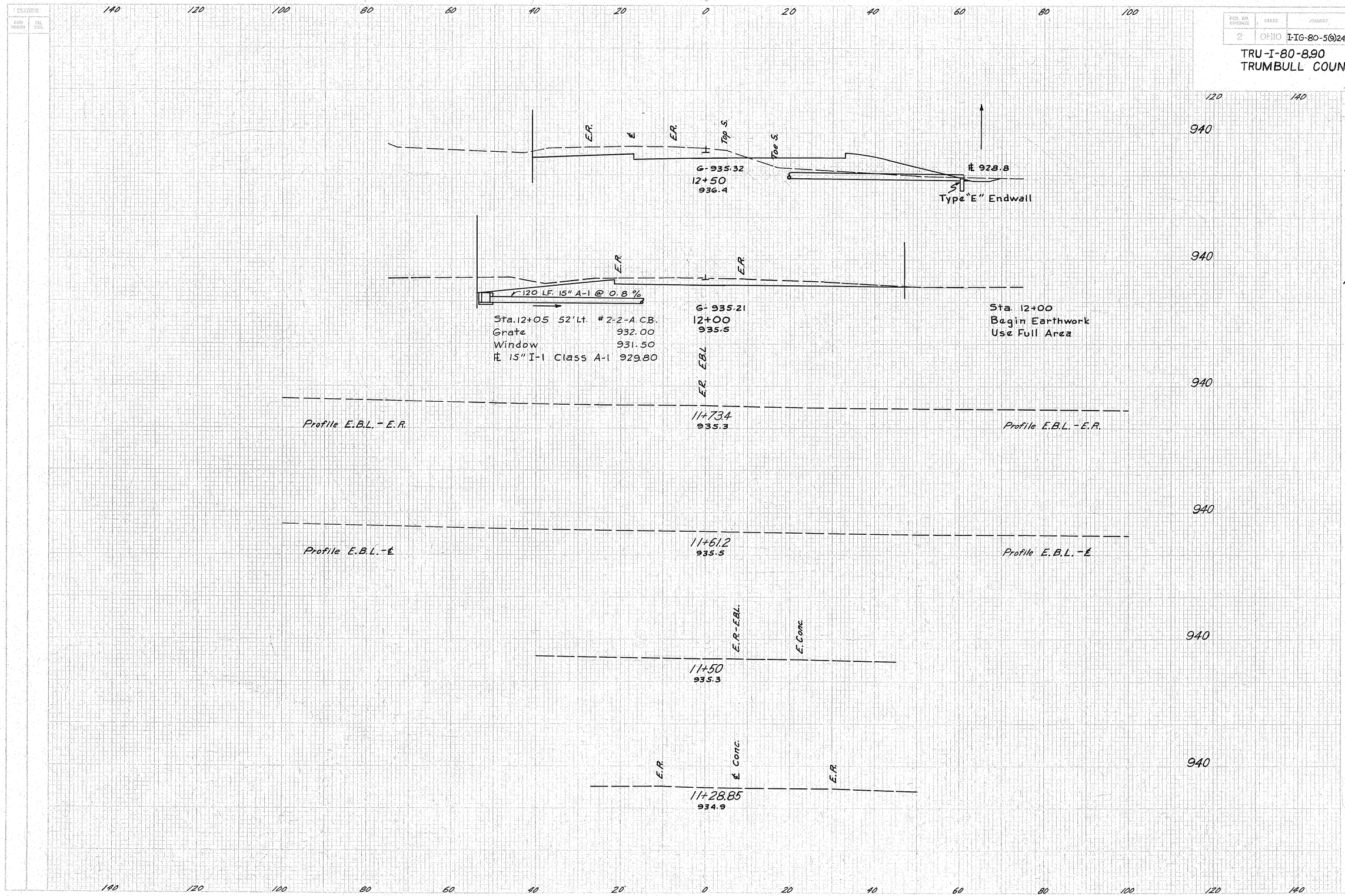
401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
112	128	246	118
154	0	0	0

RELOC. HUBBARD-SHARON RD. Sta. 11+28.85 to Sta. 12+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(S)245	

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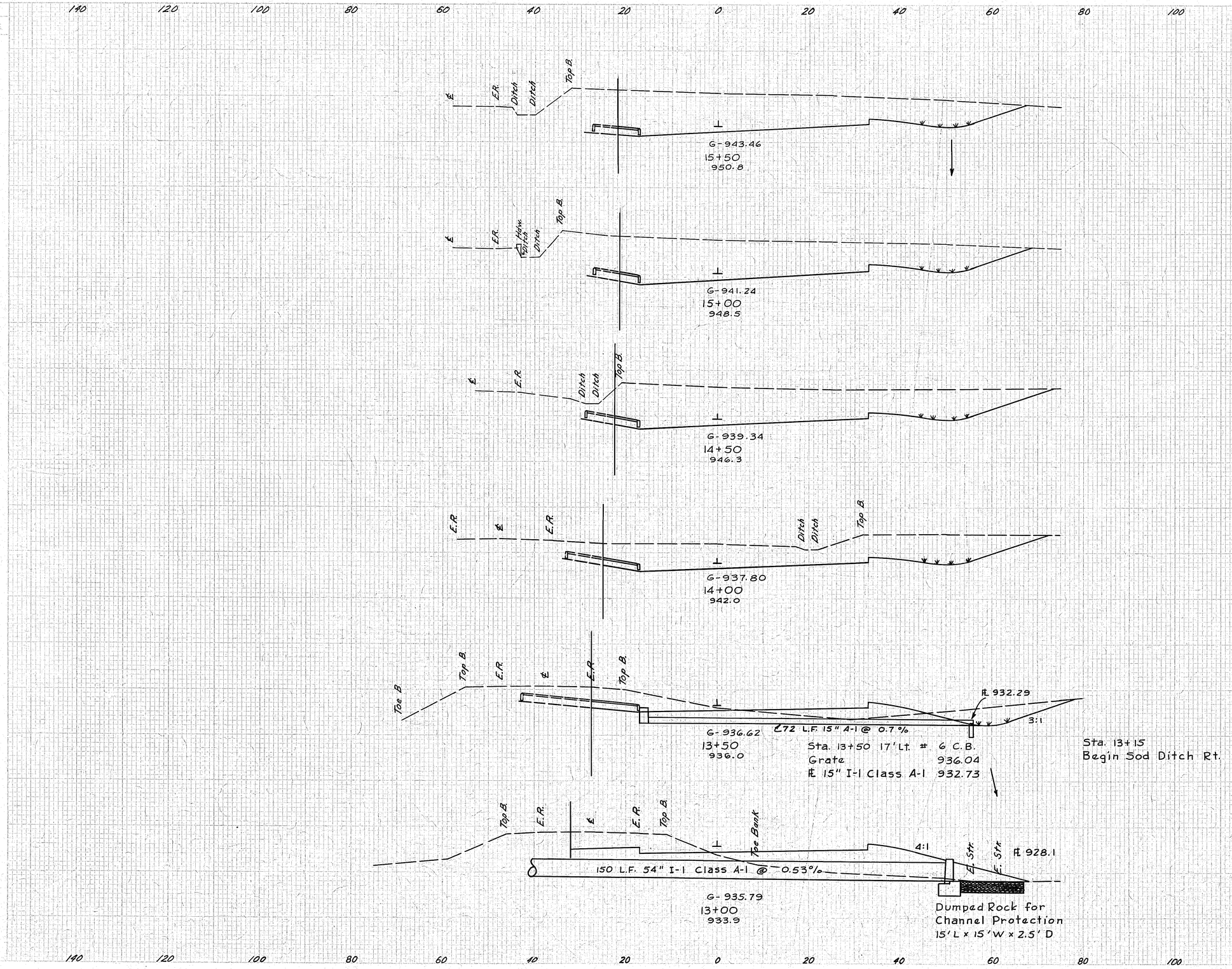
401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
590	0	1106	0
605	0	1132	0
618	0	994	0
455	0	603	63
196	68	270	304
96	260	192	359

RELOC. HUBBARD-SHARON RD. Sta. 13+00 to Sta. 15+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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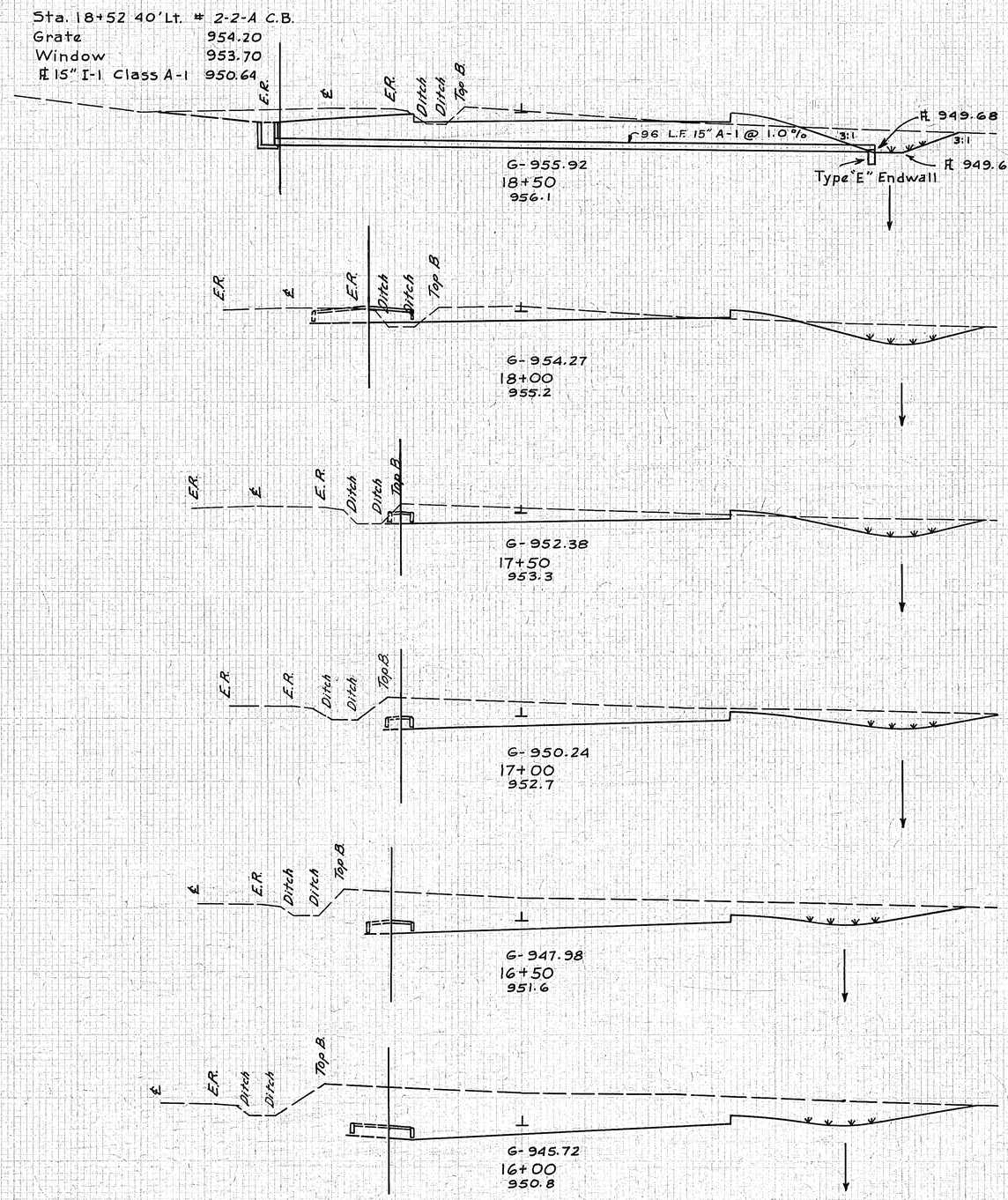
TRU-I-80-8.90
TRUMBULL COUNTY



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
950	147	22	248	33
950	121	14	434	13
950	348	0	552	0
950	248	0	532	0
950	327	0	699	0
950	428	0	942	0

RELOC. HUBBARD-SHARON RD. Sta 16+00 to Sta 18+50

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-80-5(3)245

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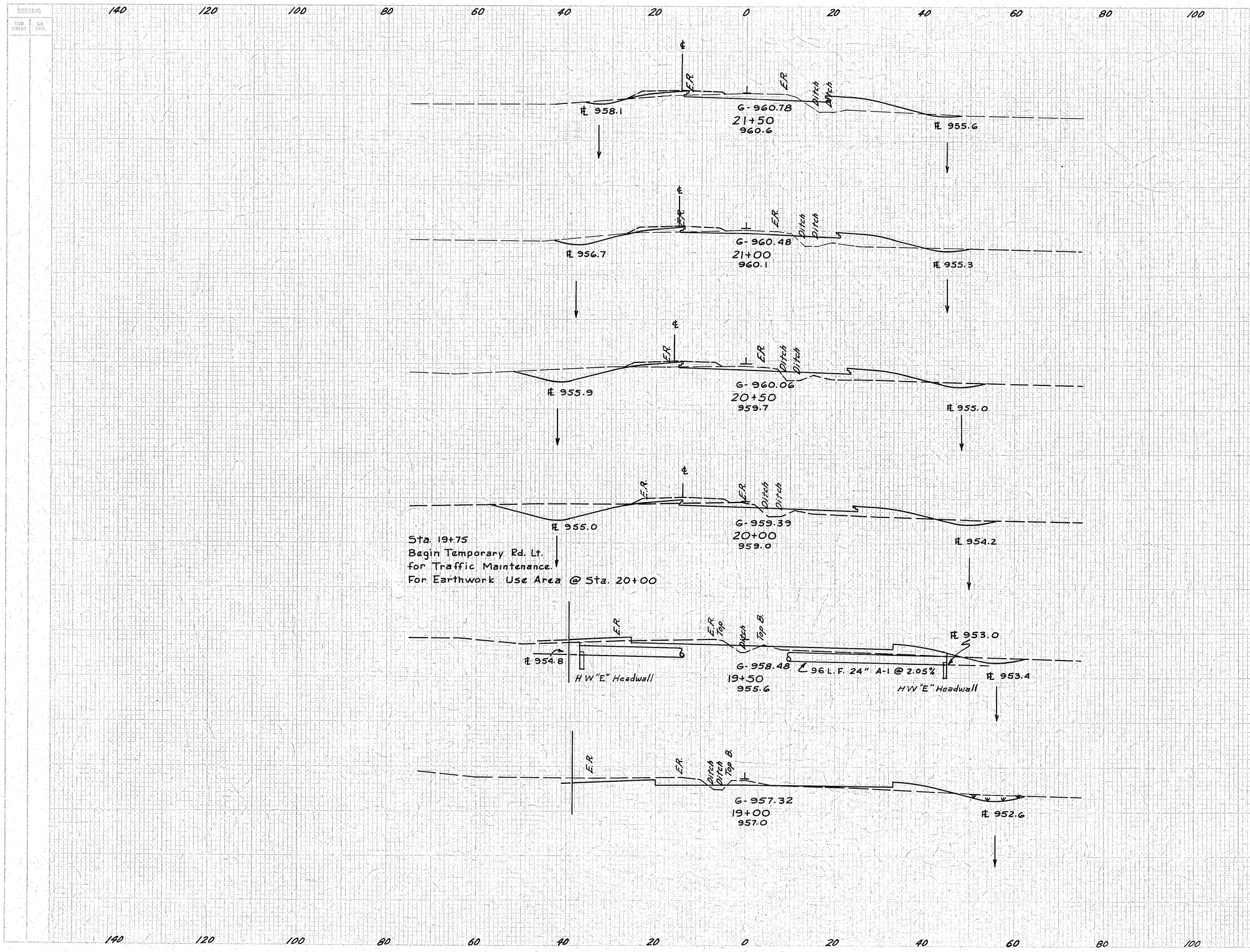
TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
40	76	78	188
44	76	110	138
75	73	167	130
105	67	128	129
33	72	85	99
59	35	191	53

RELOC. HUBBARD-SHARON RD. Sta. 19+00 to Sta. 21+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(3)245	

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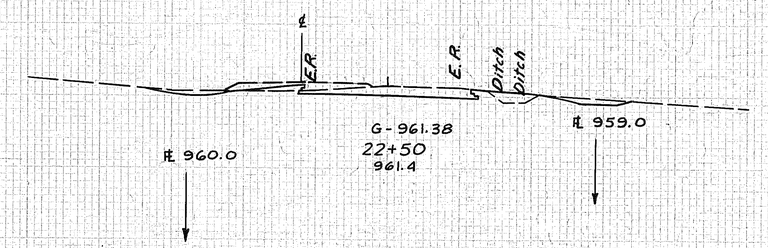
TRU-I-80-8.90
TRUMBULL COUNTY

Sta. 23+00
End Temparary Rd. Lt.
for Traffic Maintenance.
For Earthwork Use Area @ Sta. 22+50

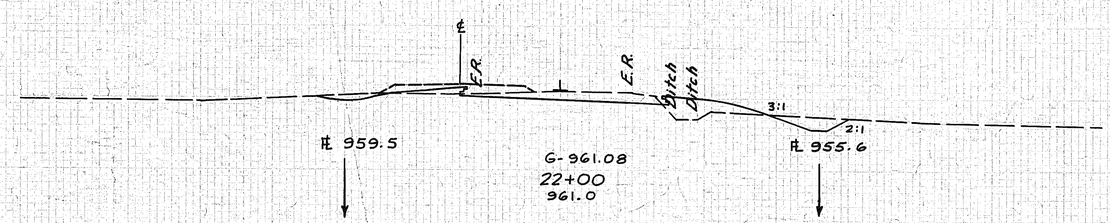
End Work Sta. 23+00

Sta. 23+00
End Earthwork
Area 25 Cut



		END AREA		VOLUME	
		CUT	FILL	CUT	FILL
Sta 23+00		25	0	66	161
End Typical Sections Sta. 22+50	960	46	13	95	185

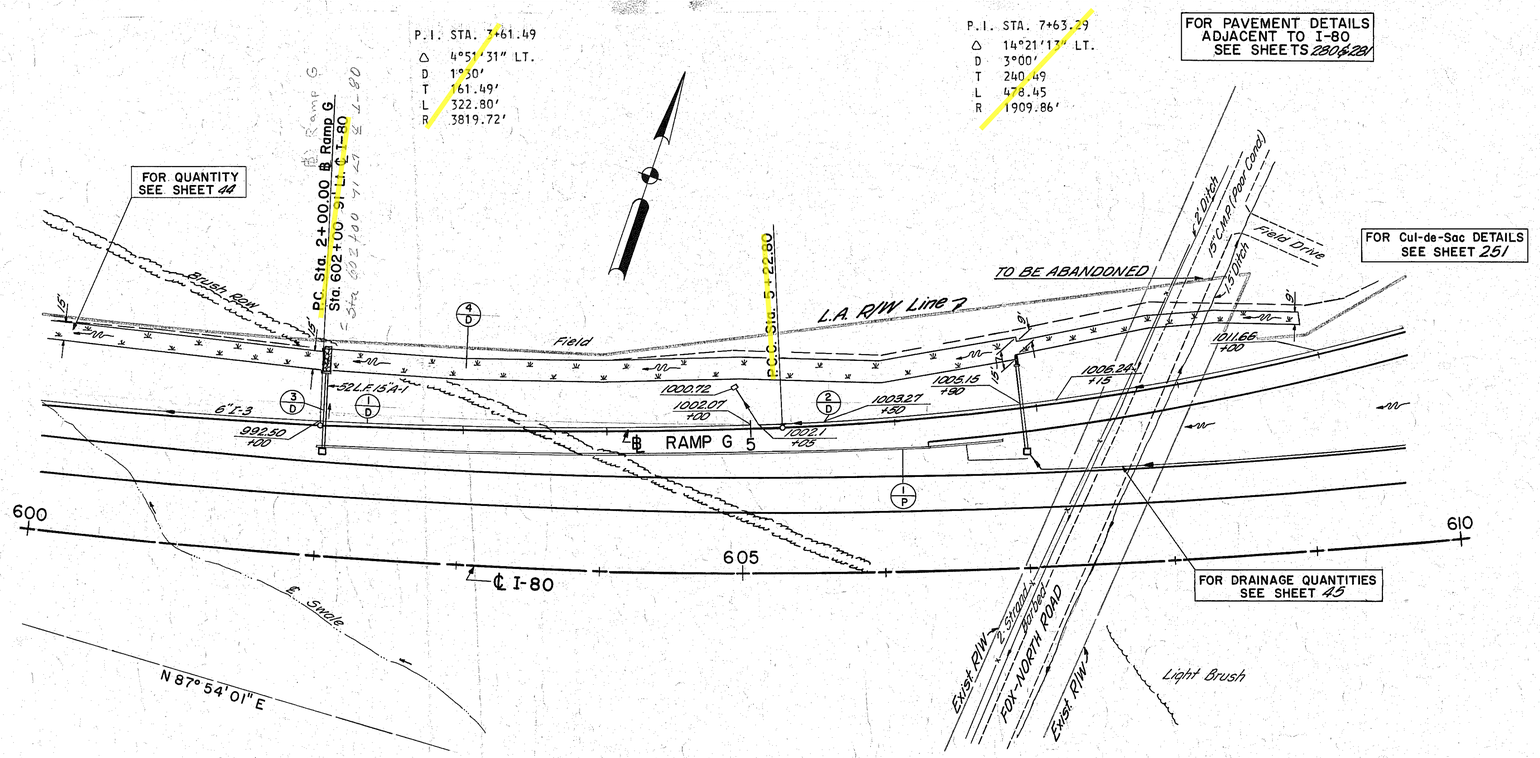
213 x 250

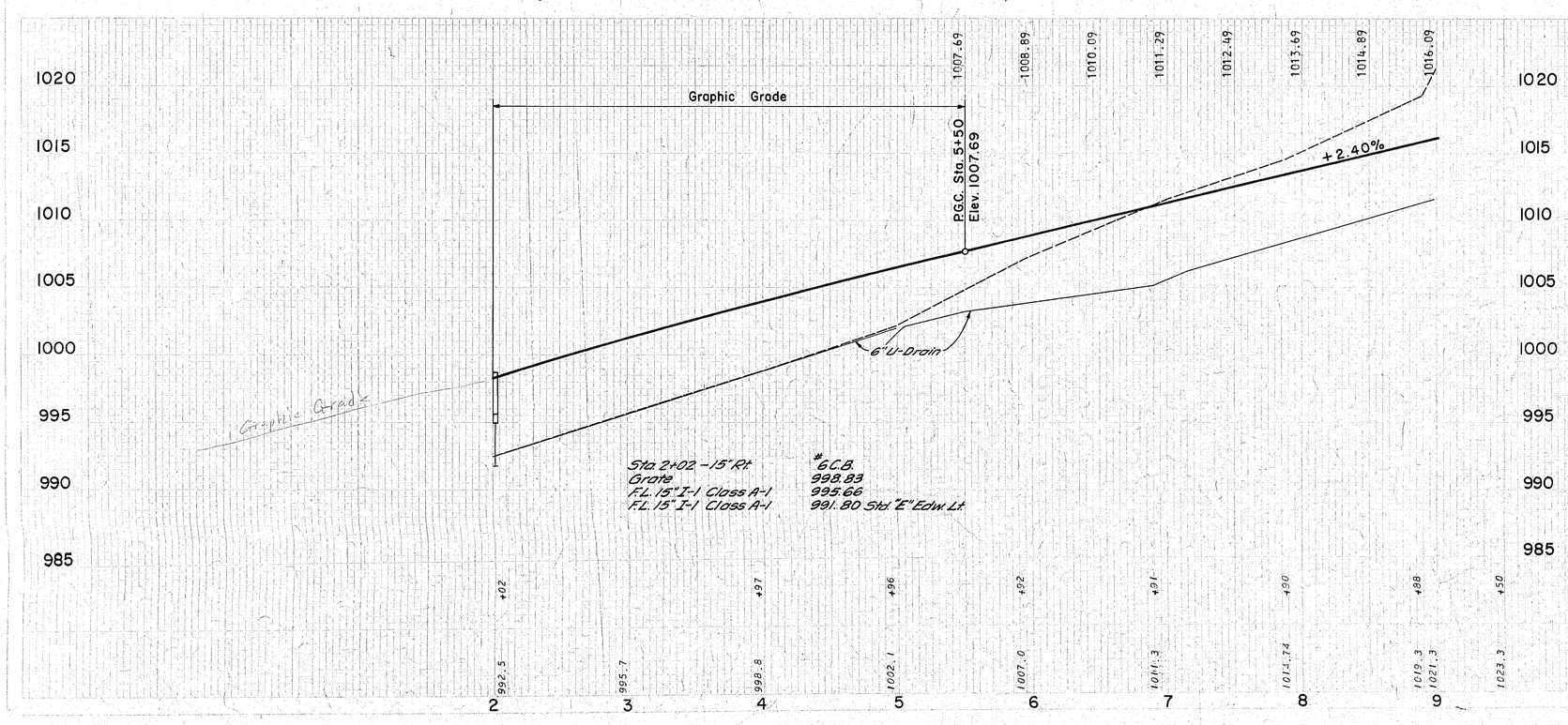


960

57 38 90 168

RELOC. HUBBARD-SHARON RD.



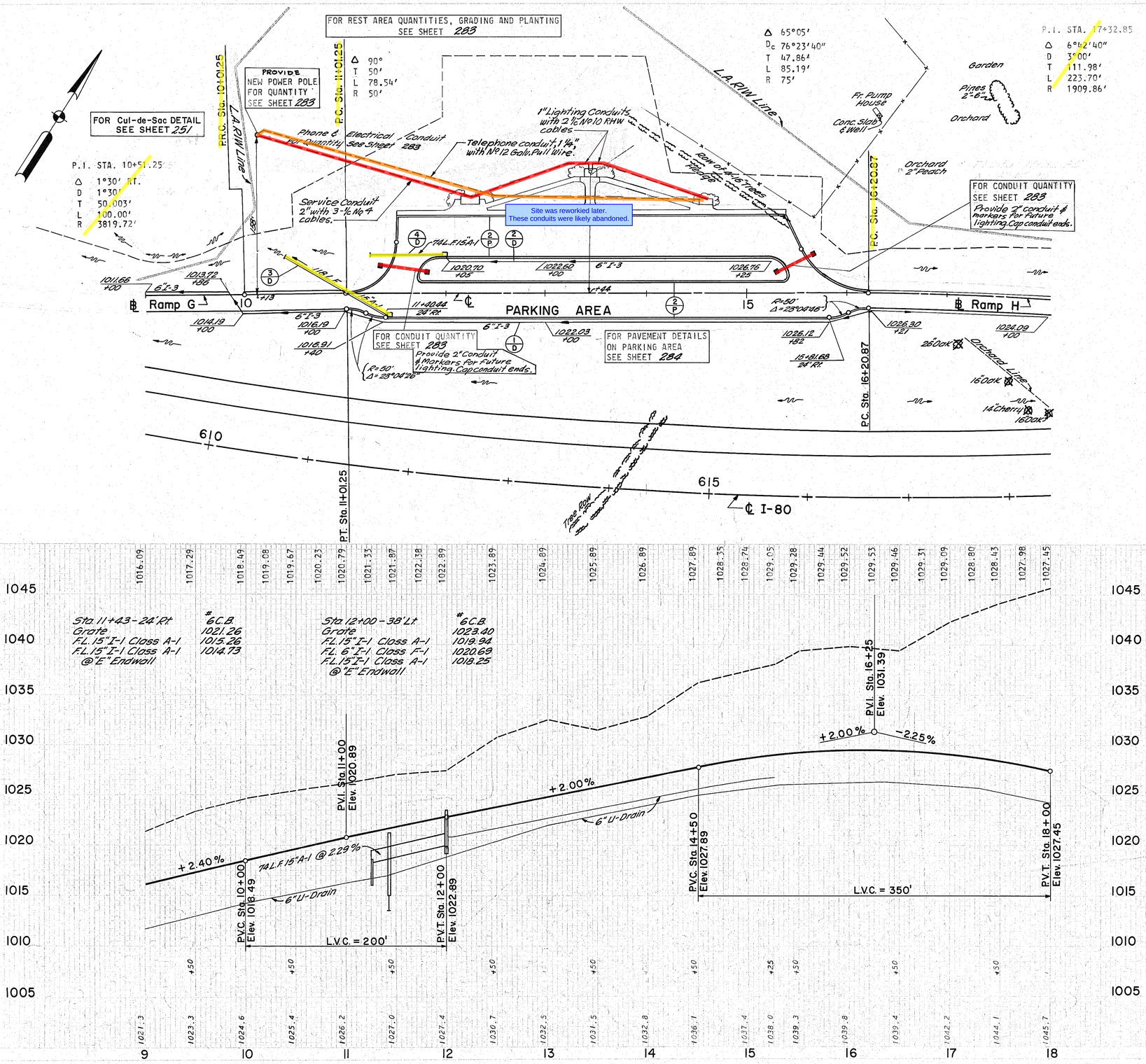


ESTIMATED QUANTITIES

SHEET NO.	STRUCTURE NO.	LOCATION	I-8 Catch Basin No. 6 EACH	I-10 Dumped Rock Channel Protection CU. YD.	I-12 Type 8 P.C.C. Curb L.F.	L-10 Sodding SQ. YD.
1-D		2+00 to 5+00 Lt.	1	2.3		1
2-D		4+95 to 9+00 Lt.				1015
3-D		2+02 ℄				
4-D		2+00 Lt.				
1-P		2+00 to 6+72.80 Rt.			475	
TOTALS			1	2.3	475	1016

SHEET NO.	STRUCTURE NO.	LOCATION	#ex.M-6.5(b) I-1 CL. A-1 M-6.6(g) or 6.8(b) ≠15 L.F.	CL. F-4 8" L.F.	CL. I-3 6" U-Drain Shallow L.F.	I-2 Masonry CU. YD.	I-5 For 6" U-Drain 60° BEND EACH
1-D		2+00 to 5+00 Lt.					
2-D		4+95 to 9+00 Lt.	52	10	300	.26	1
3-D		2+02 ℄			416		
4-D		2+00 Lt.					
1-P		2+00 to 6+72.80 Rt.					
TOTALS			52	10	716	.3	1

RAMP G ROADSIDE REST AREA



I-12 Type-6 P.C.C. Curb L.F.	I-2 Masonry CU. YD.	I-5 For 6"U-Drain 60° BEND EACH	I-8 Catch Basin No. 6 EACH	I-12 Type 7 P.C.C. Curb Mod. L.F.	L-10 Sodding SQ. YD.
		2			2
		1			1
			1		1
	.26				
	.26				
305	.5	3	2	1512	1512

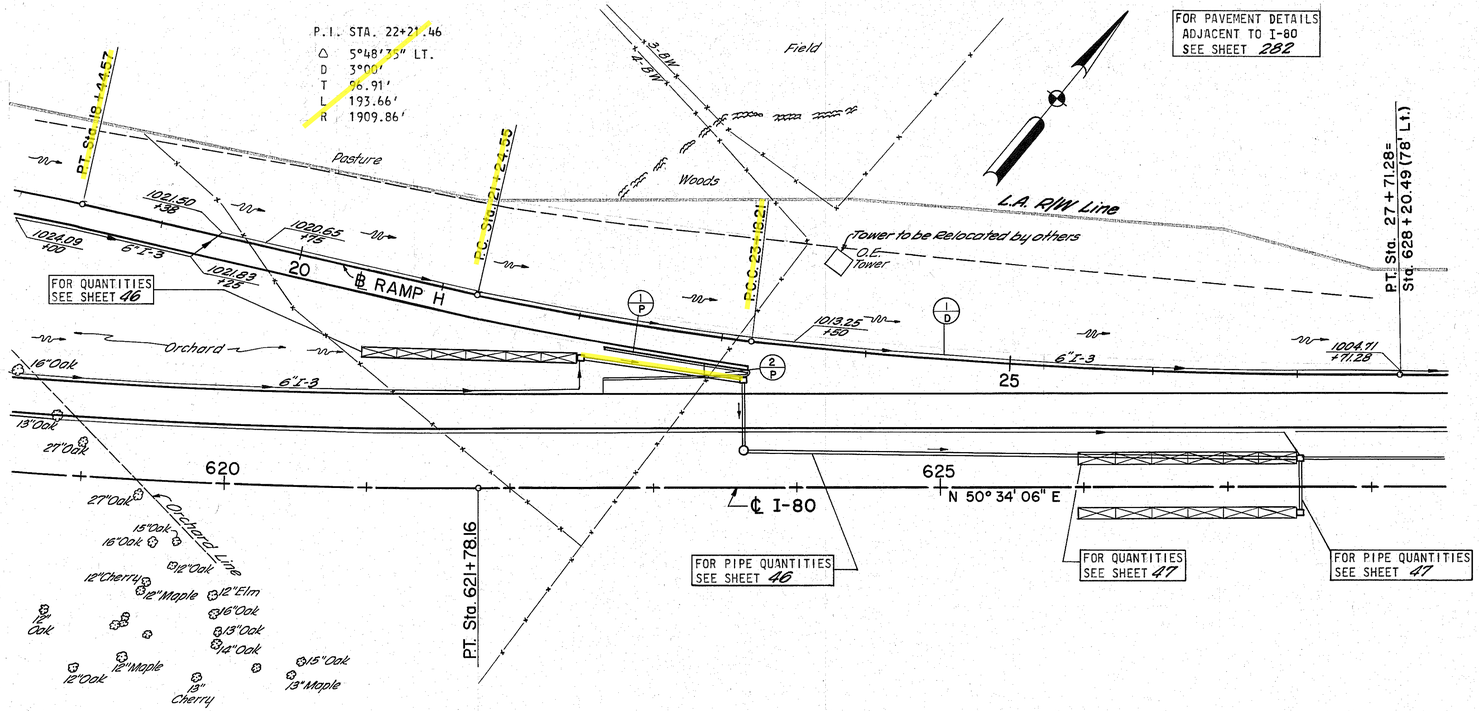
CL. A-1 M-6.6(b) or 6.8(b) # 15" L.F.	CL. F-4 6" L.F.	CL. I-3 6" U-Drain Shallow M6.4(h) L.F.	CL. I-3 6" U-Drain Shallow M6.4(h) L.F.
26	4	398	500
		94	224
118			
74			

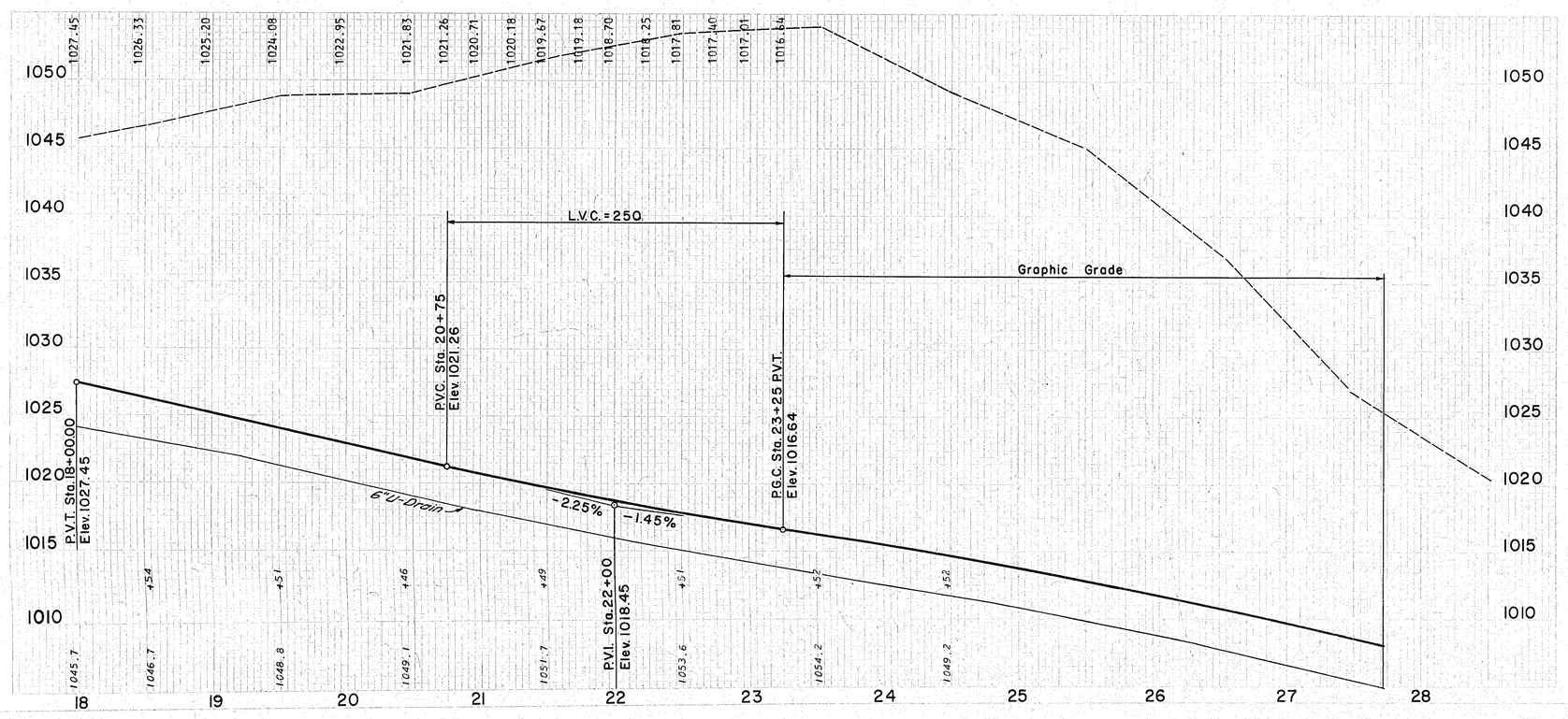
or M-6.5(b)

1-0	9+00 to 18+00	Rt.	724	724
2-0	12+05 to 15+25	Lt.	492	492
3-0	11+43 to 12+00	Rt.	4	4
4-0	11+25 to 12+00	Lt.	192	192
2-P	11+01 to 16+20.87	Lt. & Rt.	26	26

ESTIMATED QUANTITIES

ROADSIDE REST AREA





ESTIMATED QUANTITIES

SEE SHEET NO.	STATION TO STATION	SIDE	I-1 CL. A-1 M-66(b) or 6β(b)	I-1 CL. I-3 6" U-Drain M 64 (h)	I-21 P.C.C. Median Pav't. SQ. YD.	I-12 Std. Type 6" Curb L.F.	I-5 For 6" U-Drain 60° BEND EACH
1-O	18+00 to 27+71	RHUL	L.F. 24	L.F. 972	17	100	
1-P	22+18.21 to 23+18.21	RH					2
2-P	23+00	RH					
TOTALS			24	972	17	100	2

FED. RD. DISTRICT	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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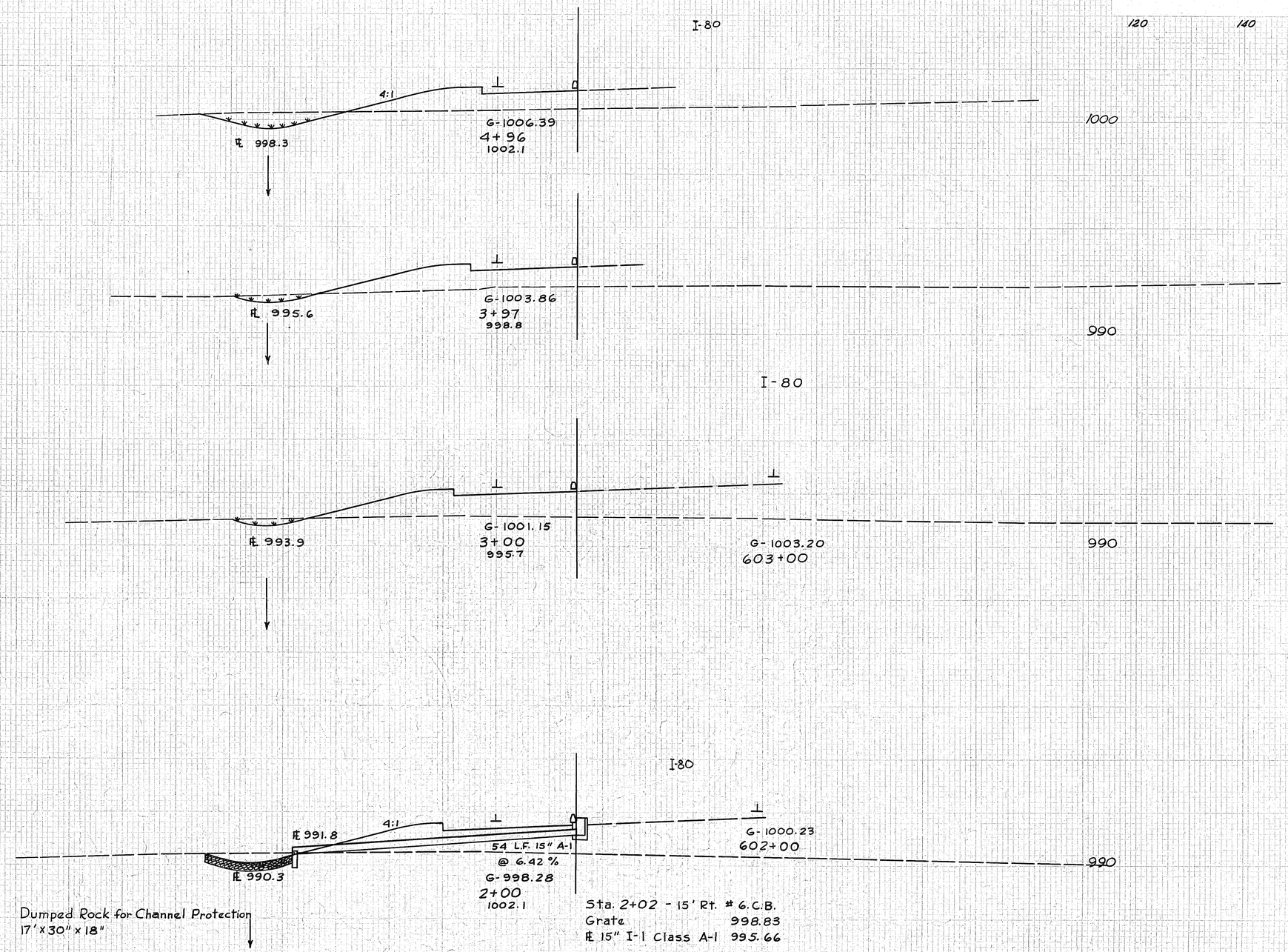
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
57	131	136	522
17	154	57	607
15	184	72	724
24	207	0	0

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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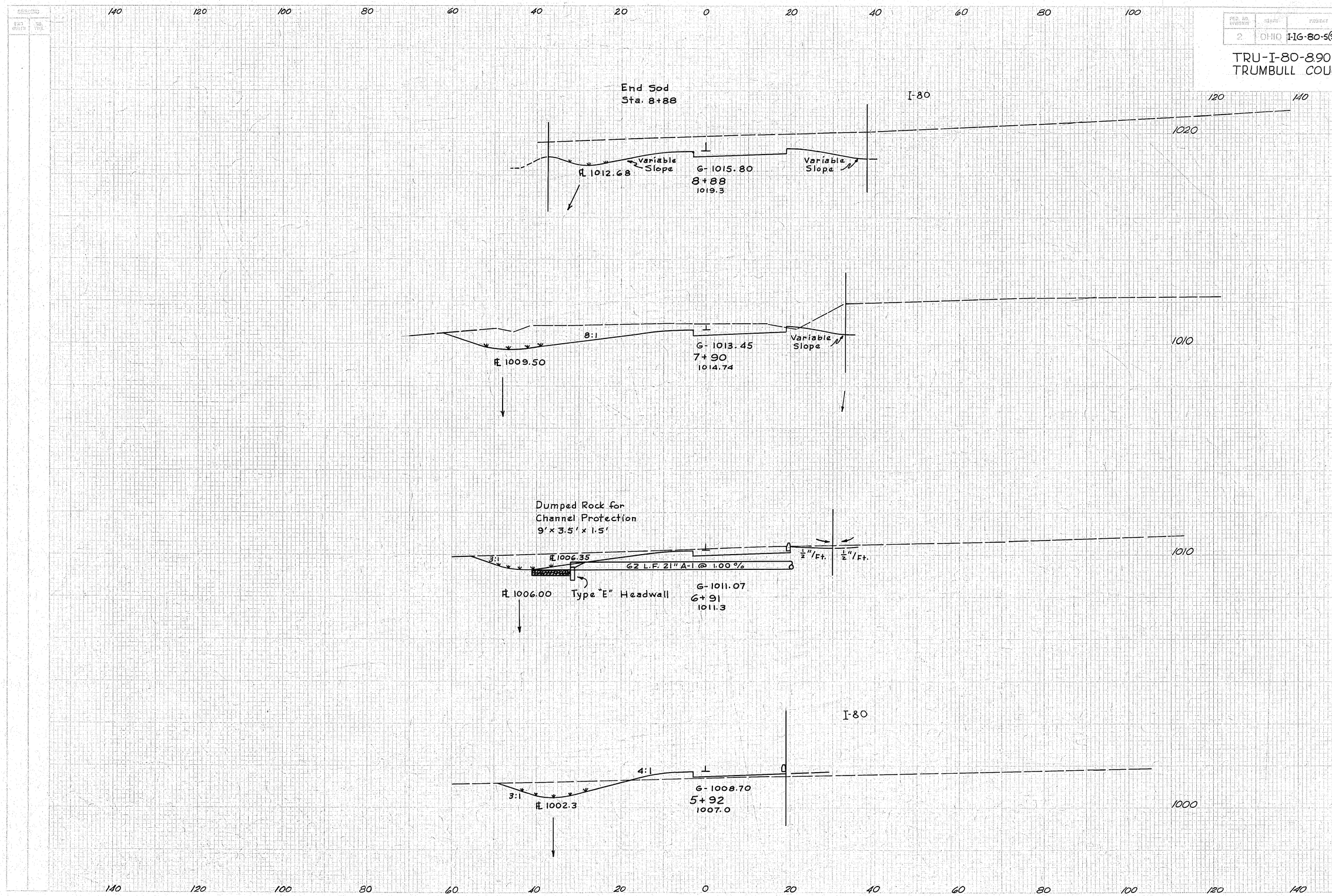
TRU-I-80-8.90
TRUMBULL COUNTY



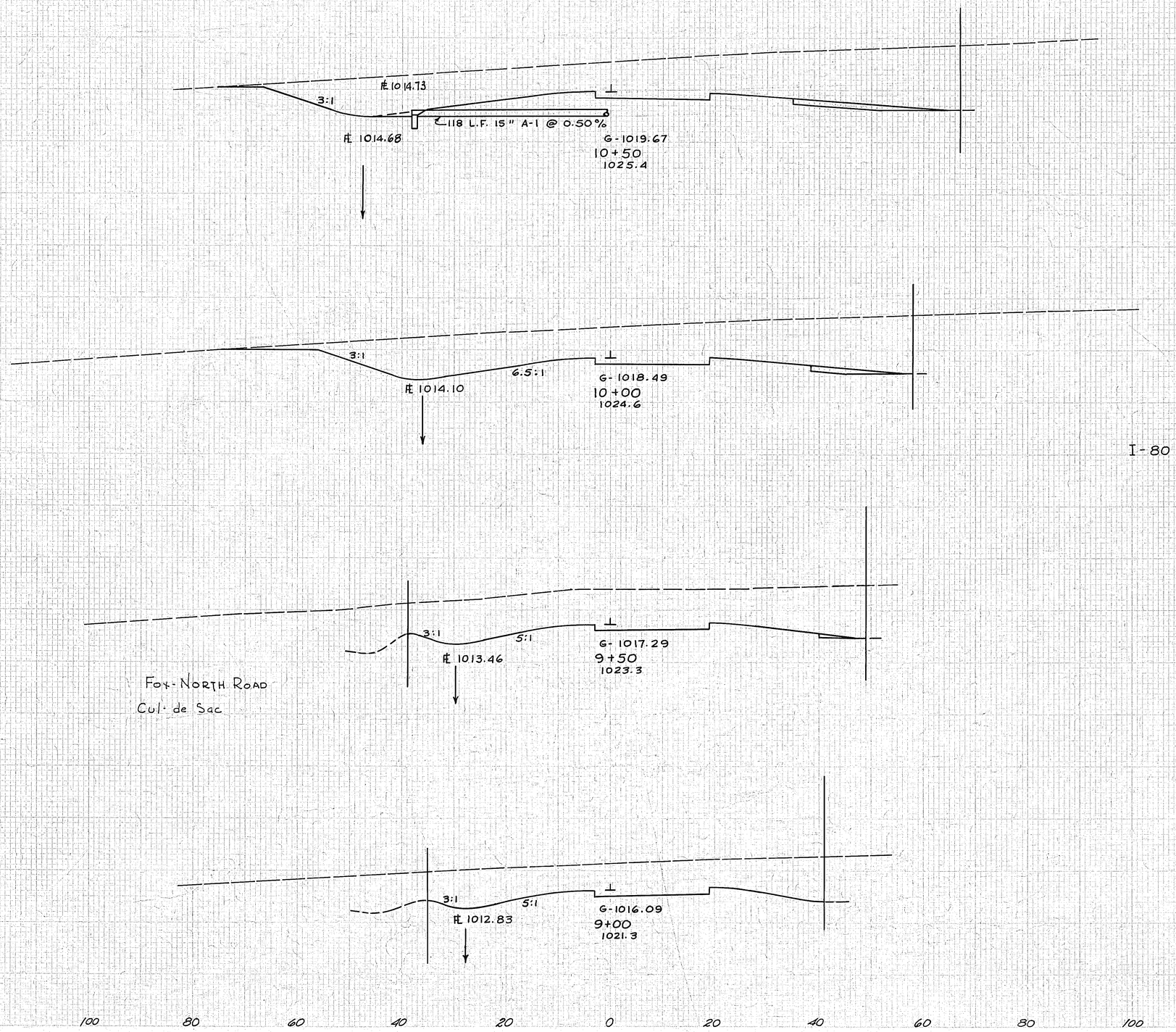
END AREA		VOLUME	
CUT	FILL	CUT	FILL
310	0	1209	2
296	1	781	2
130	0	367	59
70	32	226	290

RAMP C Sta. 5+92 to 8+88

SCALES	
HOR.	VERT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(5)245	205 401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1030		1741	
850		1426	
690		1095	
493	0	192	

RAMP G Sta. 9+00 to 10+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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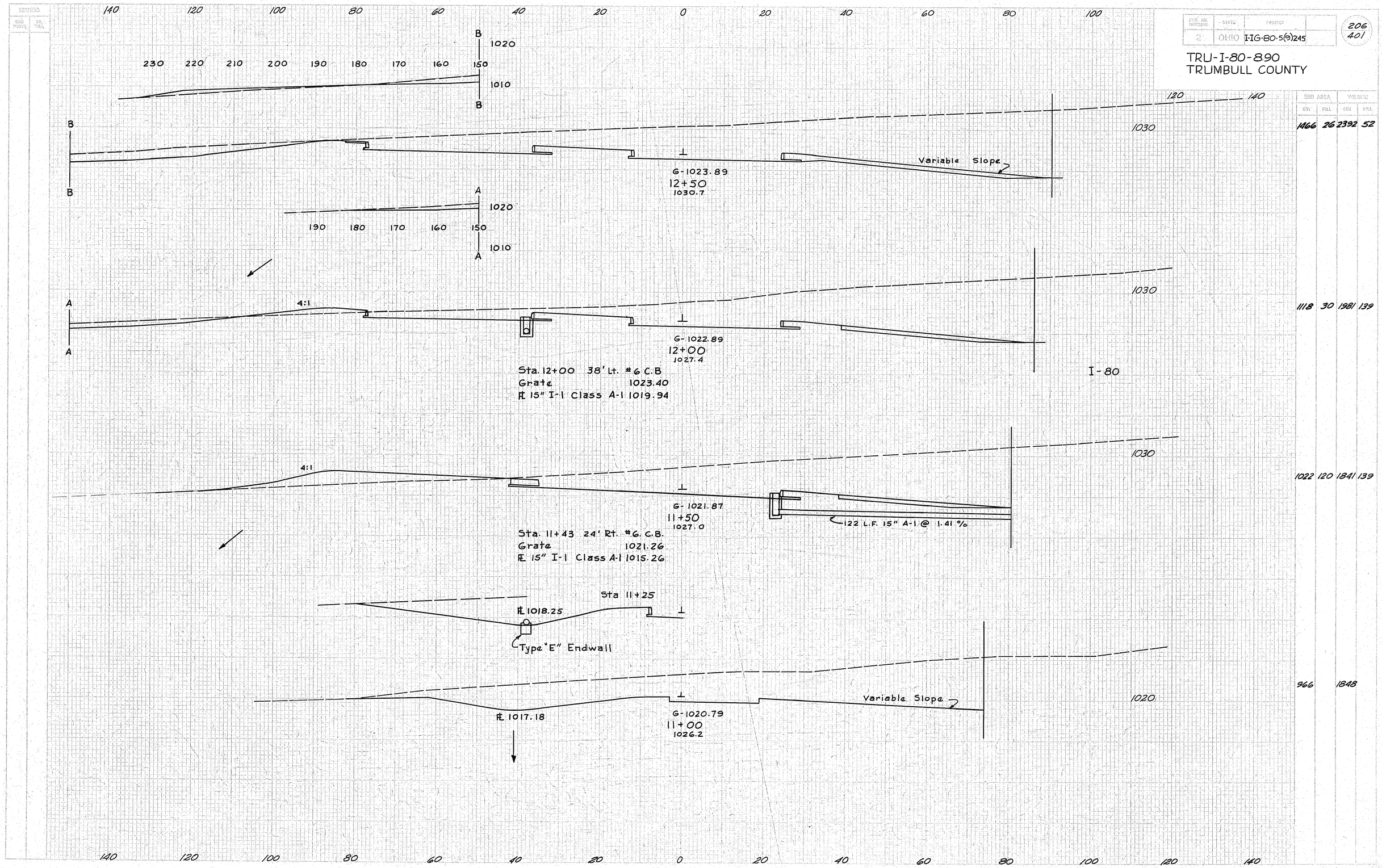
TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1466	26	2392	52
1118	30	1981	139
1022	120	1841	139
966		1848	

RAMP G Sta. 11+00 to 12+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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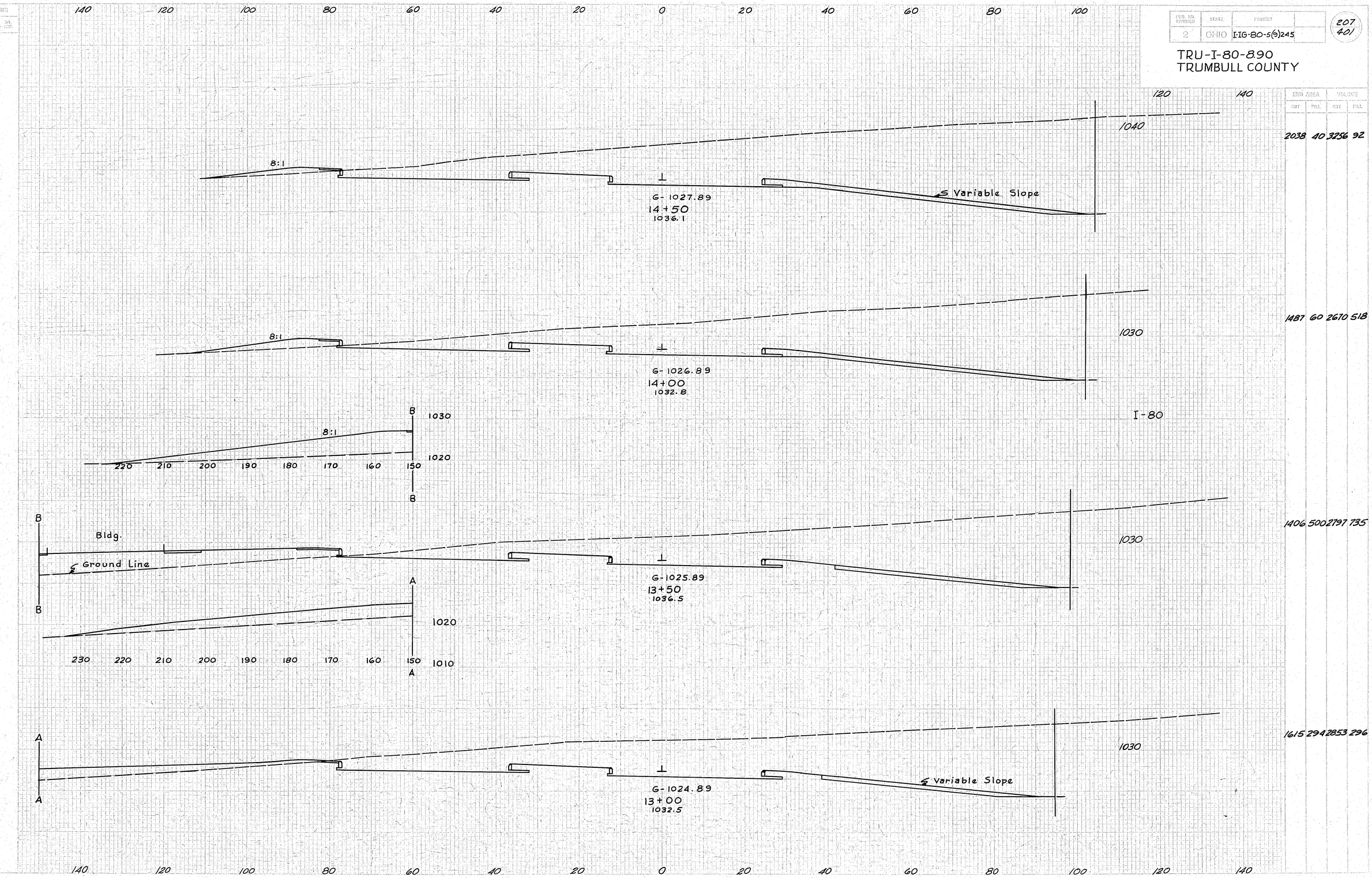
TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
2038	40	3256	92
1487	60	2670	518
1406	500	2797	735
1615	294	2853	296

RAMP G Sta 13+00 - 14+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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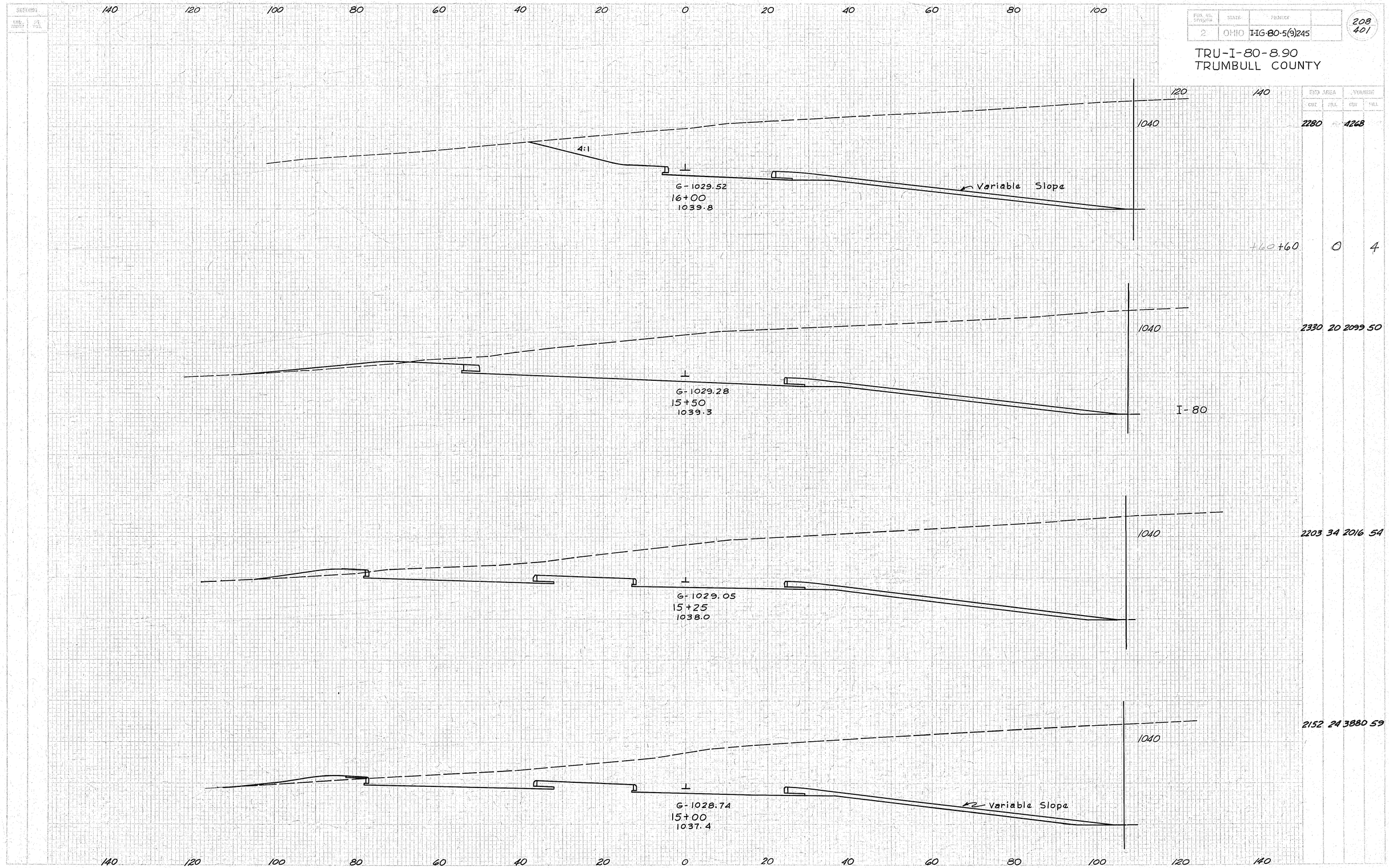
TRU-I-80-8.90
TRUMBULL COUNTY



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	2280	4268		
+60 +60			0	4
	2330	20	2099	50
	2203	34	2016	54
	2152	24	3880	59

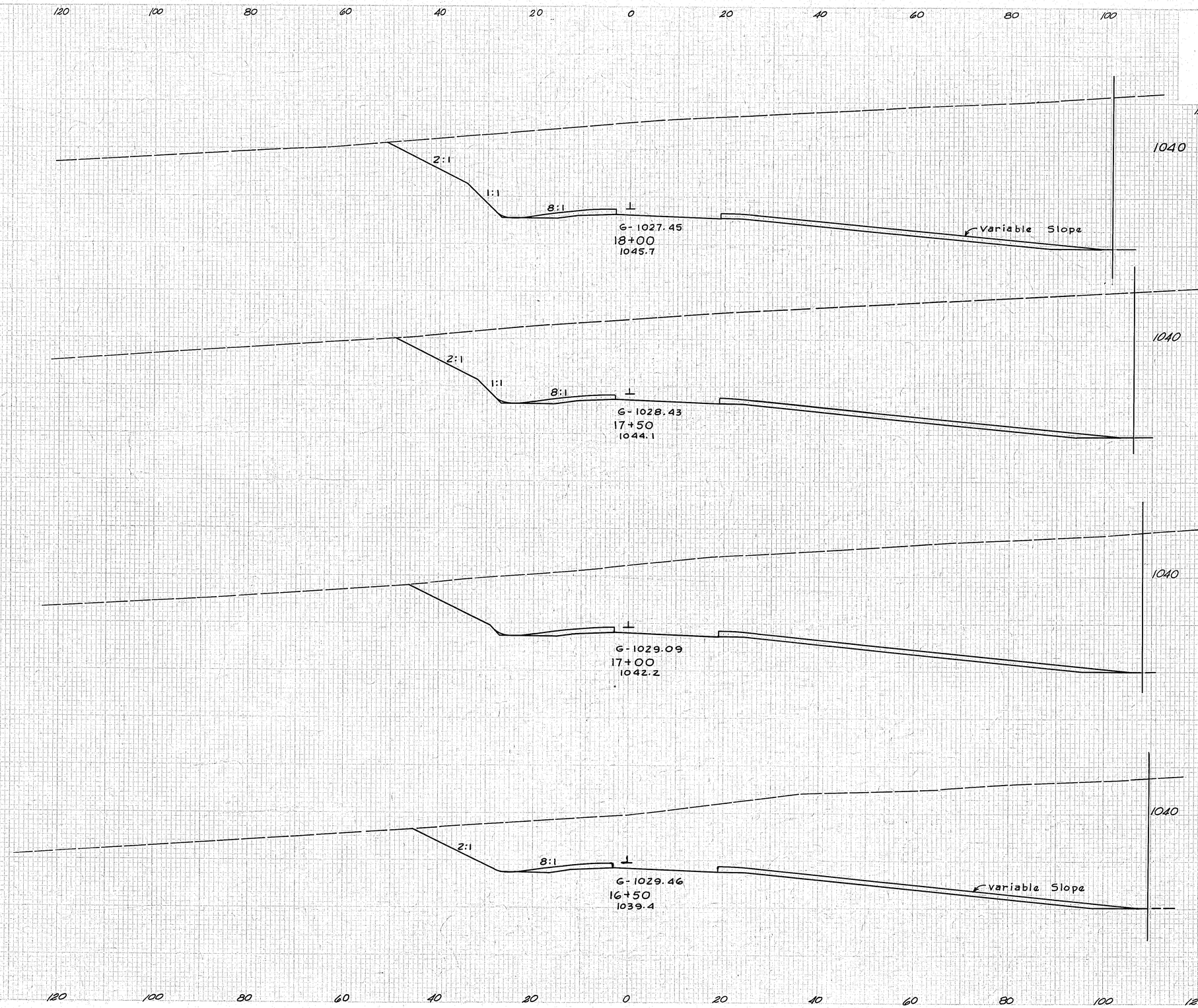
RAMP H Sta 15+00 to 16+00

SCALES	
END AREA	SQ. YDS.

FED. RD. DIST. NO.	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

209
401

TRU-I-80-8.90
TRUMBULL COUNTY



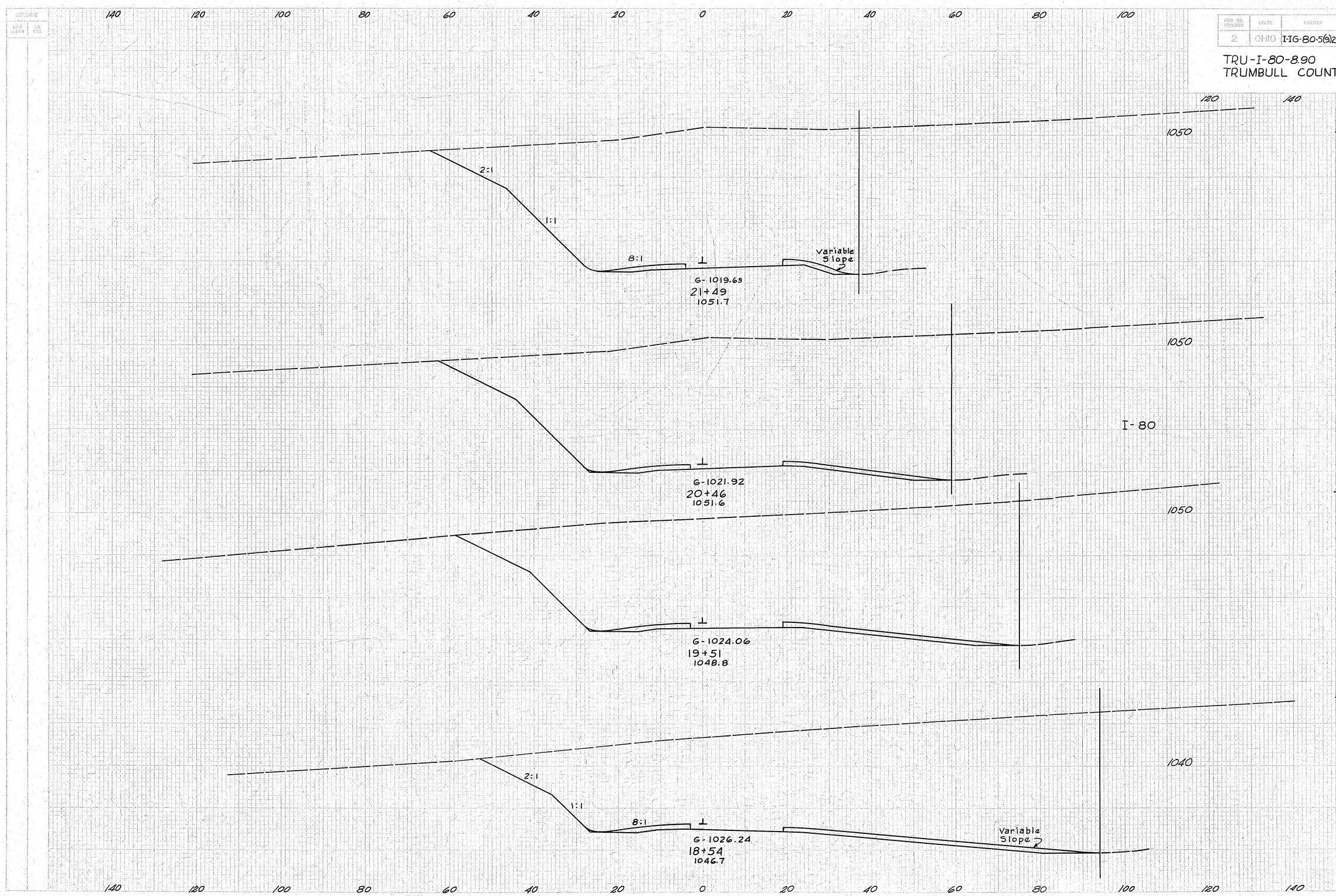
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	3298		5956	
	3134		5554	
I-80	2864		5065	
	2606		4524	

RAMP H Sta. 16+00 to 18+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(6)245	

210
401

TRU-I-80-8.90
TRUMBULL COUNTY



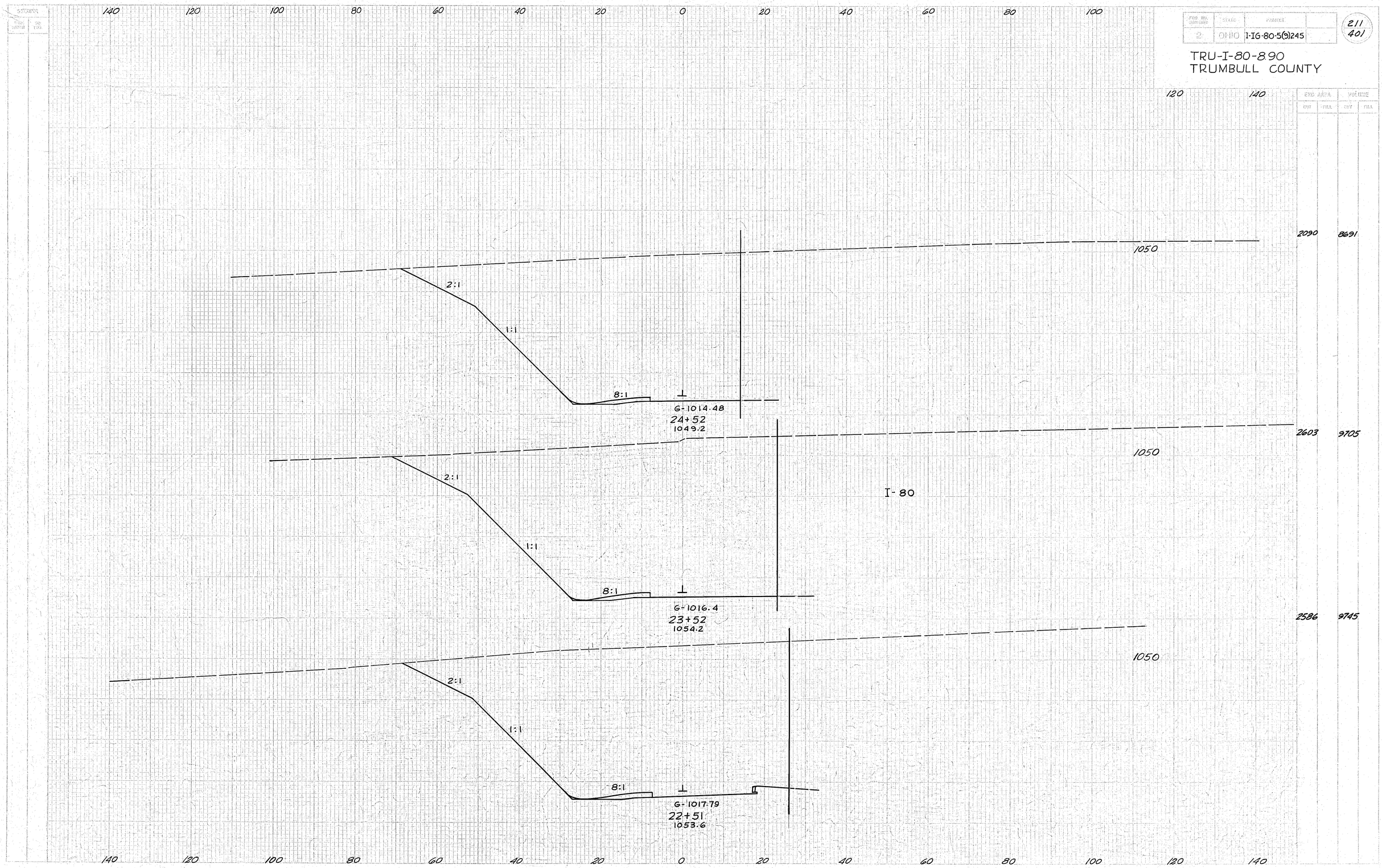
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2573		10826	
3103		11170	
3246		11949	
3406		6704	

RAMP H Sta. 18+54 to 21+49

FED. RD. DIST. NO.	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

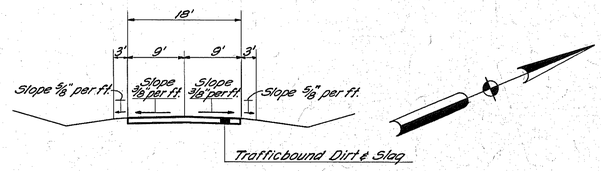
211
401

TRU-I-80-8.90
TRUMBULL COUNTY

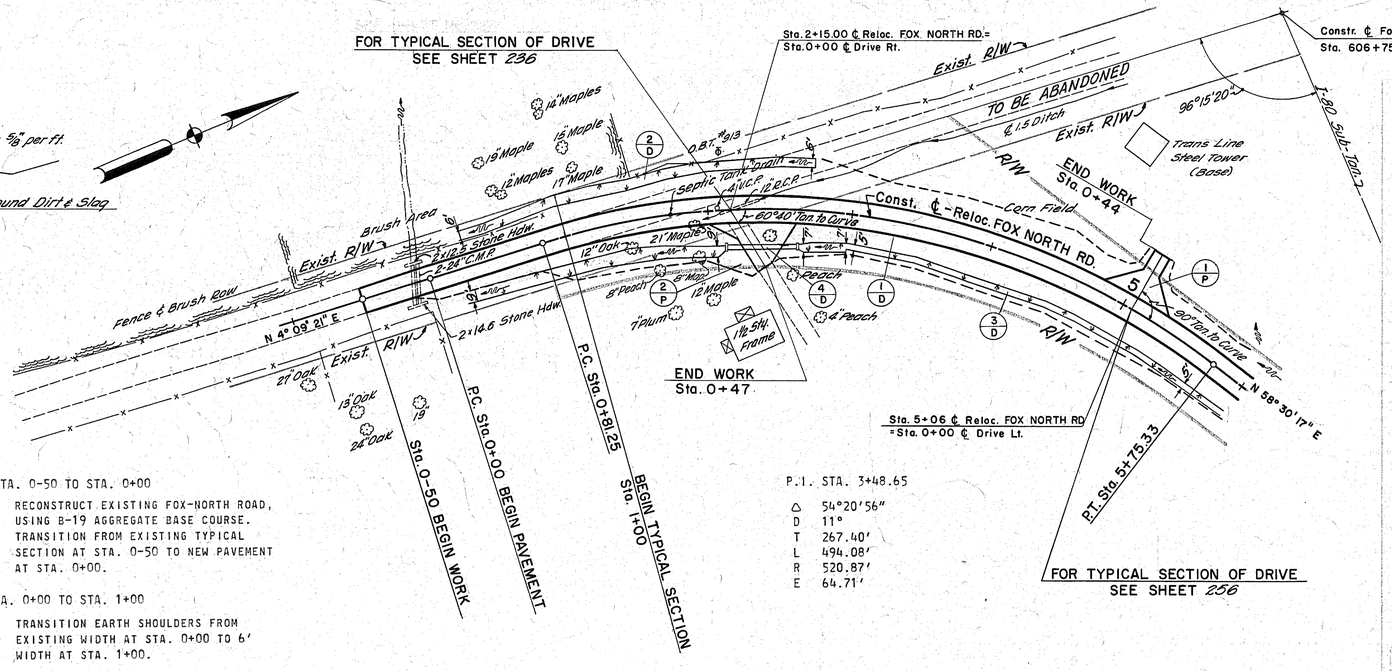


END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2090		8691	
2603		9705	
2586		9745	

RAMP H Sta 22151 to 24153



TYPICAL SECTION
EXISTING FOX-NORTH RD.



STA. 0-50 TO STA. 0+00

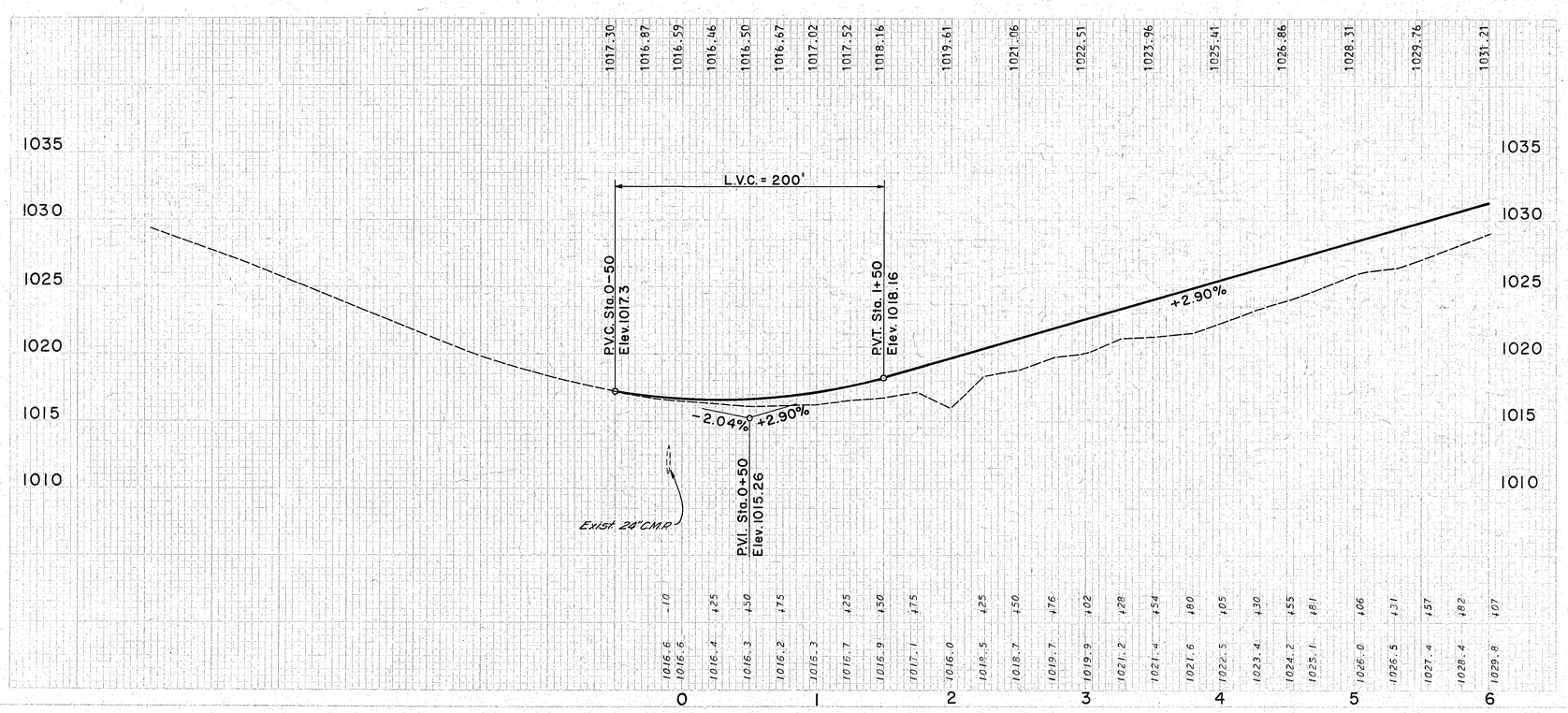
RECONSTRUCT EXISTING FOX-NORTH ROAD, USING B-19 AGGREGATE BASE COURSE. TRANSITION FROM EXISTING TYPICAL SECTION AT STA. 0-50 TO NEW PAVEMENT AT STA. 0+00.

STA. 0+00 TO STA. 1+00

TRANSITION EARTH SHOULDERS FROM EXISTING WIDTH AT STA. 0+00 TO 6' WIDTH AT STA. 1+00.

P.I. STA. 3+48.65

Δ	54°20'56"
D	11°
T	267.40'
L	494.08'
R	520.87'
E	64.71'



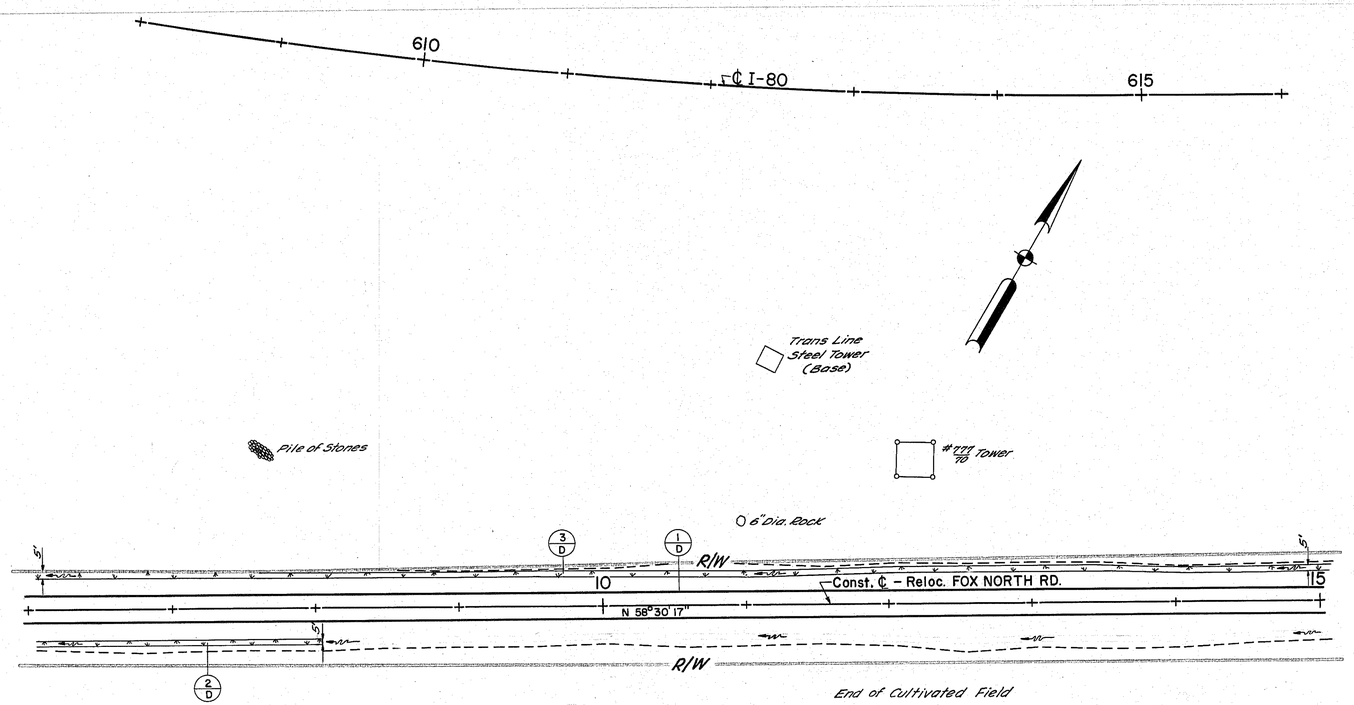
REF. NO.	STATION TO STATION	SIDE	T-35 Asphaltic Concrete Surface Course CU. YD.	L-10 Sodding SQ. YD.	I-9 Stone U-Drain L.F.	B-19 Aggr. Base Crse. CU. YD.	I-1 CL. G-1 29"X18" M-4.4(36) L.F.
1-D	0+00 to 6+00	RW/Lt	7	184			
2-D	0+00 to 2+16	Lt		433			
3-D	0+25 to 6+00	Rt					
4-D	2+25	Rt					
1-P	5+00 (Driveway)	Lt				15.2	50
2-P	2+15	Rt				16.8	
TOTALS			7	617	248	32.0	50

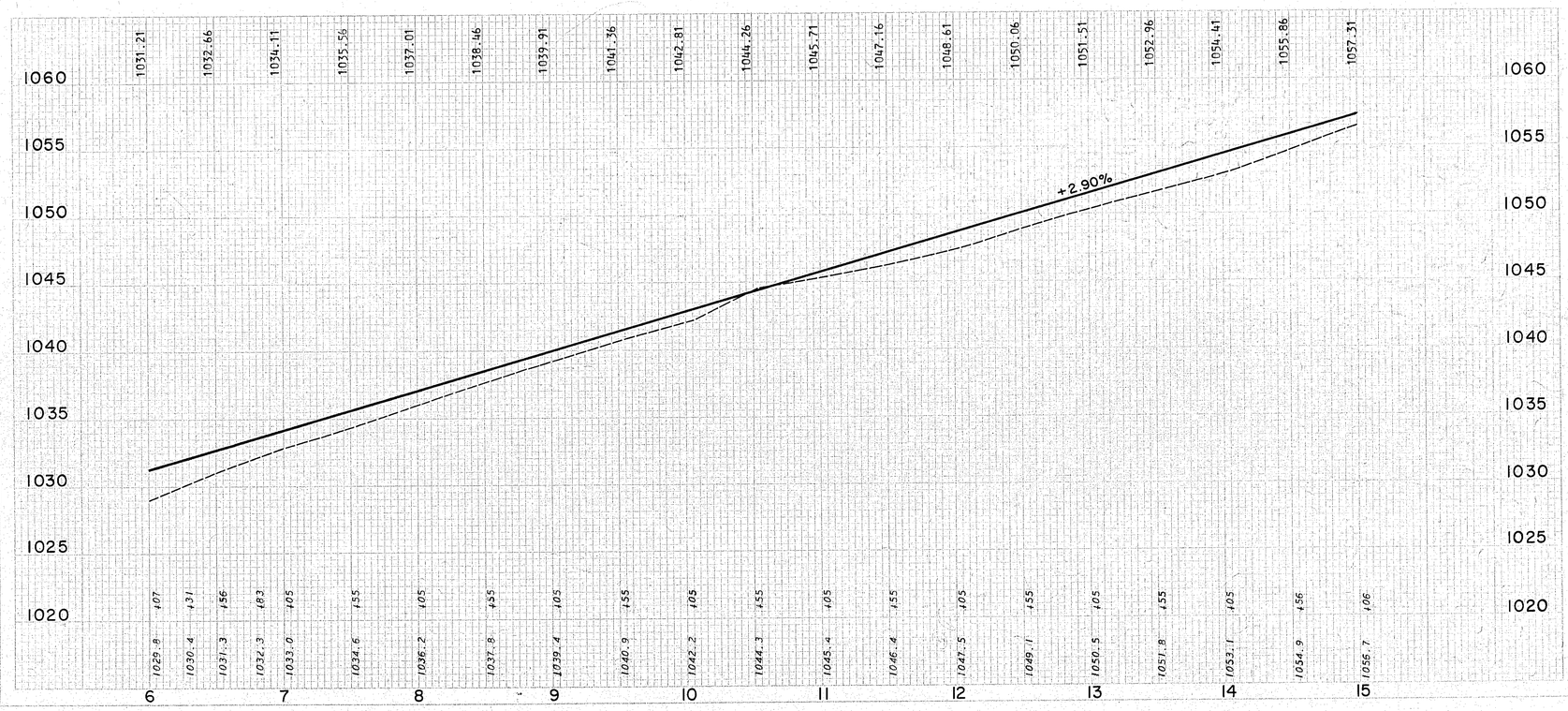
ESTIMATED QUANTITIES

Reloc. FOX-NORTH RD. Sta. 0-50 to Sta. 6+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	213 401

TRUMBULL COUNTY TRU-I-80-8.90



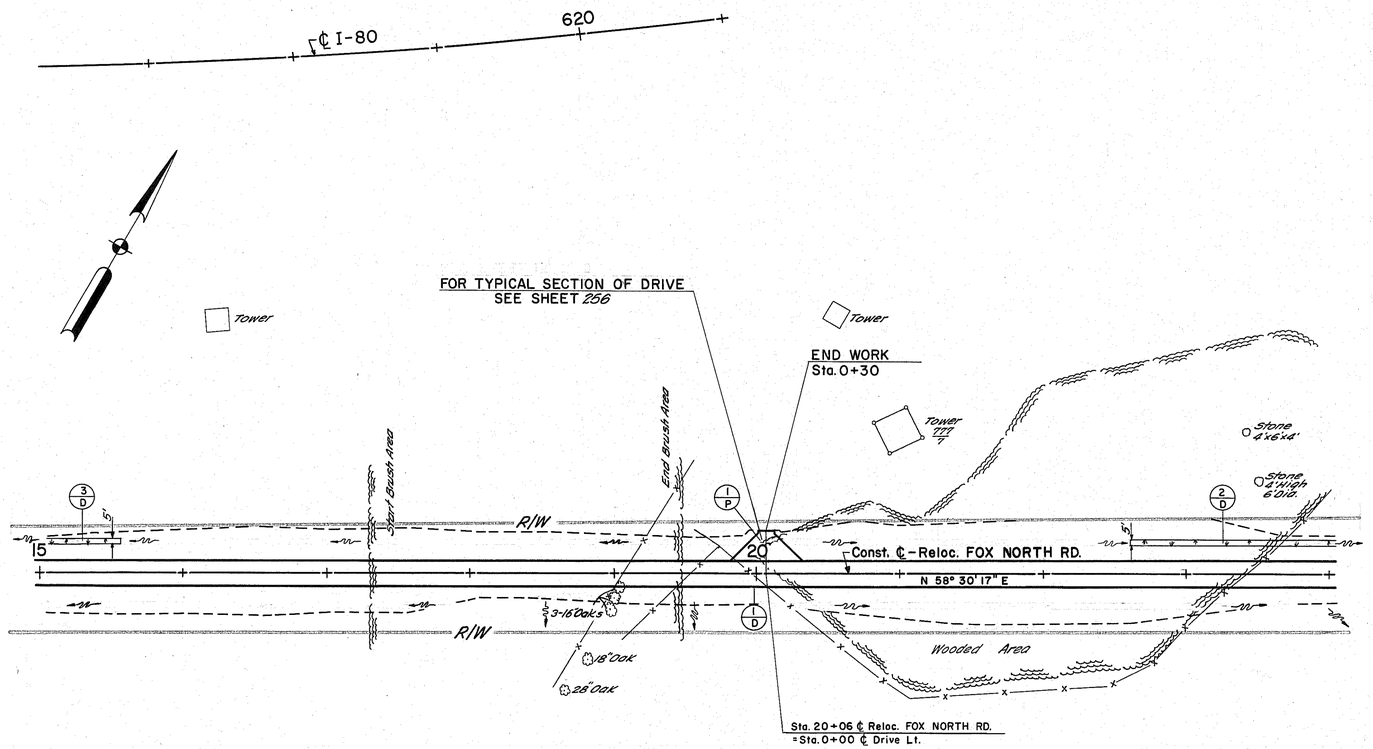


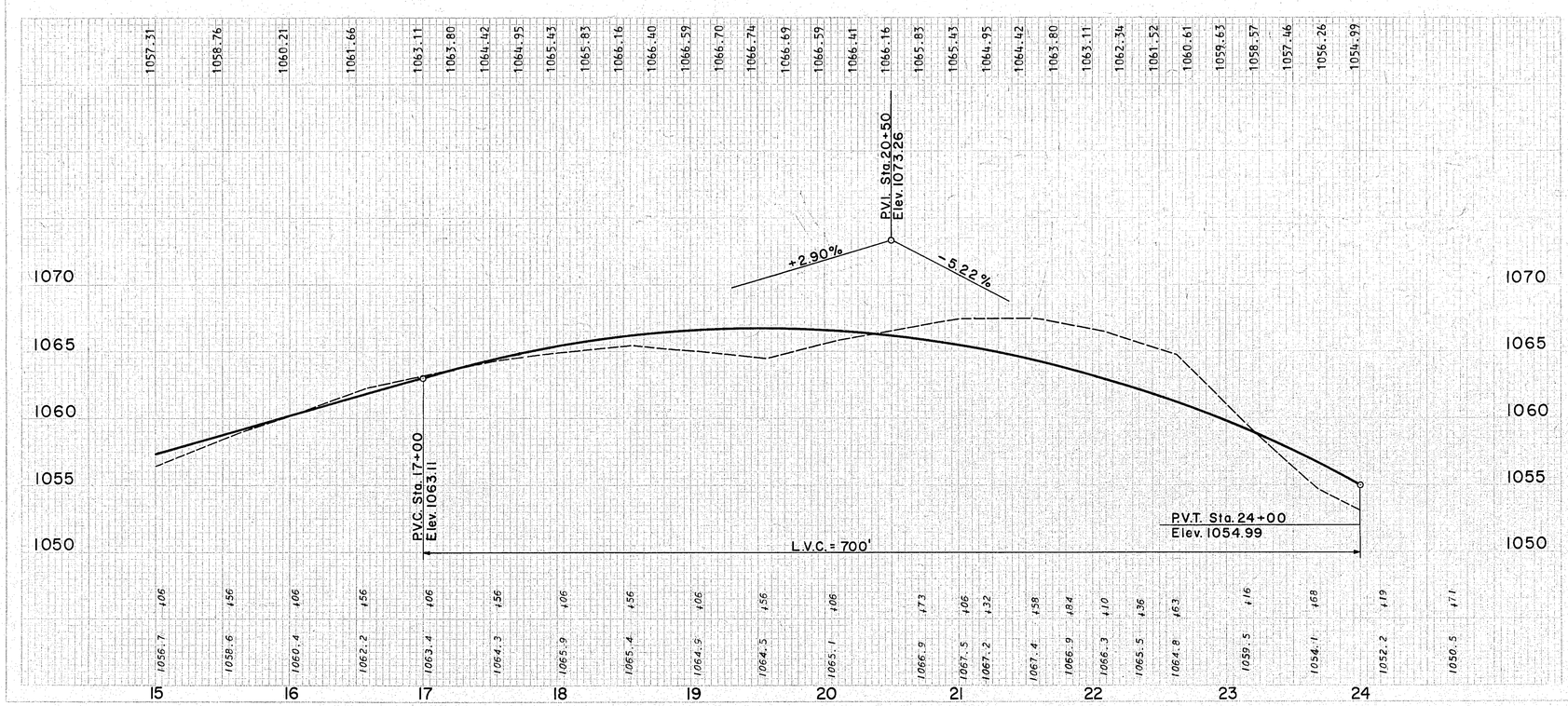
ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	QUANTITY	SEE SHEET NO.
L-10	Sodding	SQ. YD.	114 530	644
I-9	Stone U-Drain	L.F.	342	342

ITEM NO.	STATION TO STATION	SIDE
1-D	6+25 to 15+00	RWLK
2-D	6+00 to 8+05	Rt.
3-D	6+00 to 15+56	Lt.

Reloc. FOX-NORTH RD. Sta. 6+00 to 15+00





ESTIMATED QUANTITIES

CODE NO.	ITEM	UNIT	TOTALS
L-10	Sodding	SQ. YD.	106.0
I-9	Stone U-Drain	L.F.	342
B-19	Aggr. Base Crse 6" Depth	CU. YD.	12

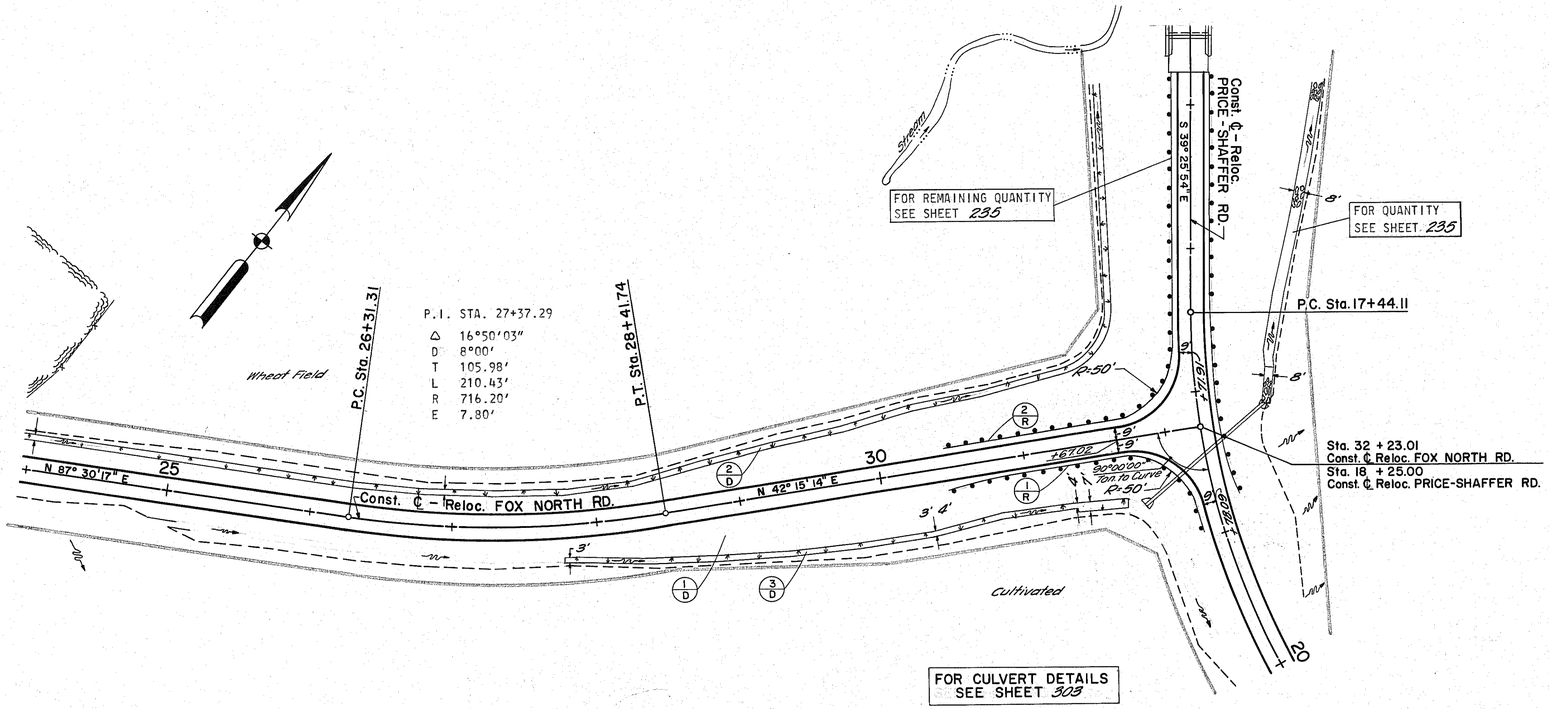
CODE NO.	STATION TO STATION	SIDE
1-D	15+25 to 24+00	RHLt.
2-D	22+63 to 24+00	Lt.
3-D	15+00 to 15+56	Lt.
1-P	20+06	Lt.

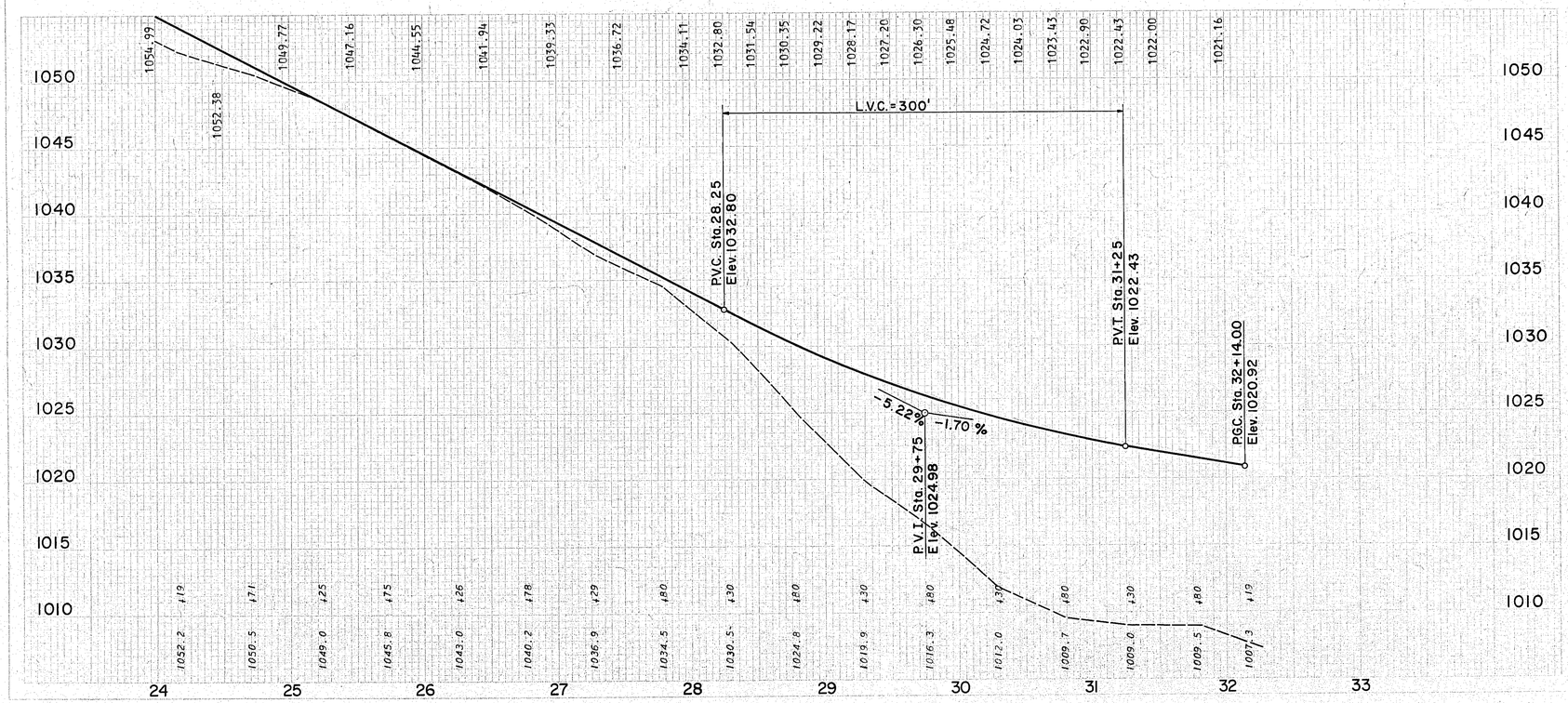
Reloc. FOX-NORTH RD. Sta. 15+00 to 24+00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-80-5(9)245

215
401

TRUMBULL COUNTY TRU-I-80-8.90

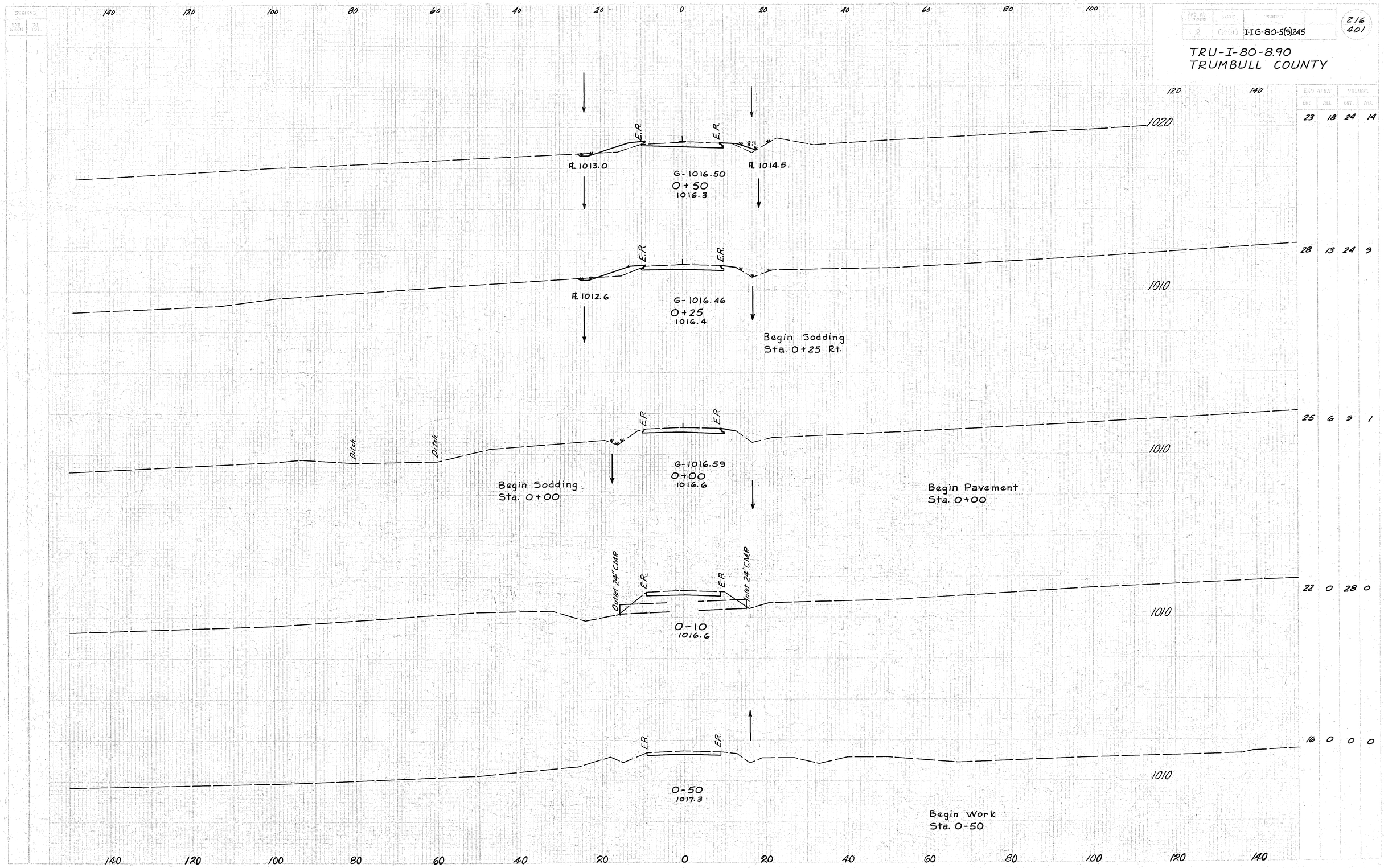




| ESTIMATED QUANTITIES | | |

SHEET NO.	STATE	PROJECT	
12	OHIO	I-IG-80-5(9)245	216 401

TRU-I-80-8.90
TRUMBULL COUNTY



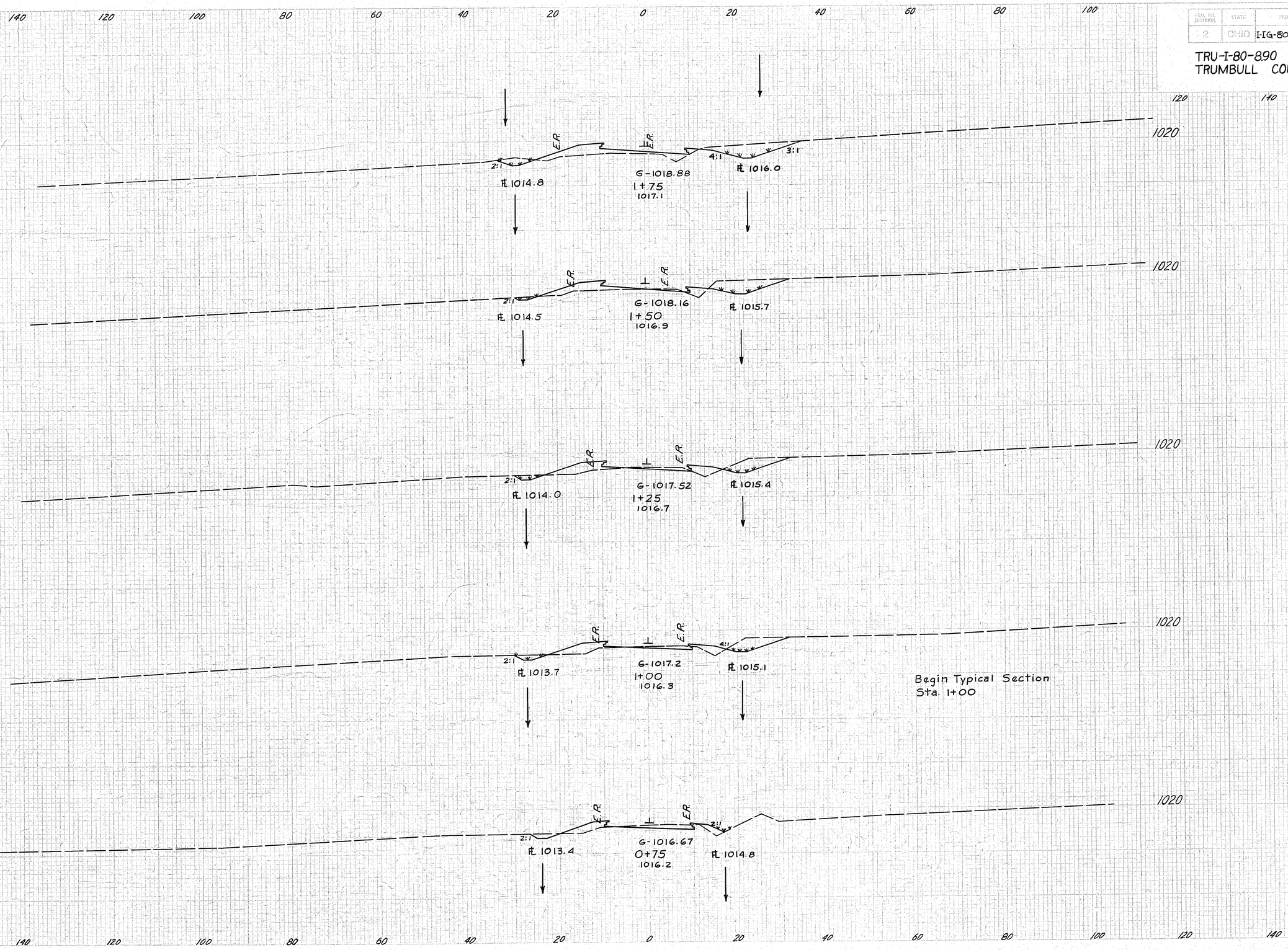
	END AREA		VOLUME	
	EXC	FILL	CUT	FILL

FOX NORTH ROAD RELOC.
Sta. 0-50 to Sta. 0+50

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-80-5(8)245

217
401

TRU-I-80-8.90
TRUMBULL COUNTY



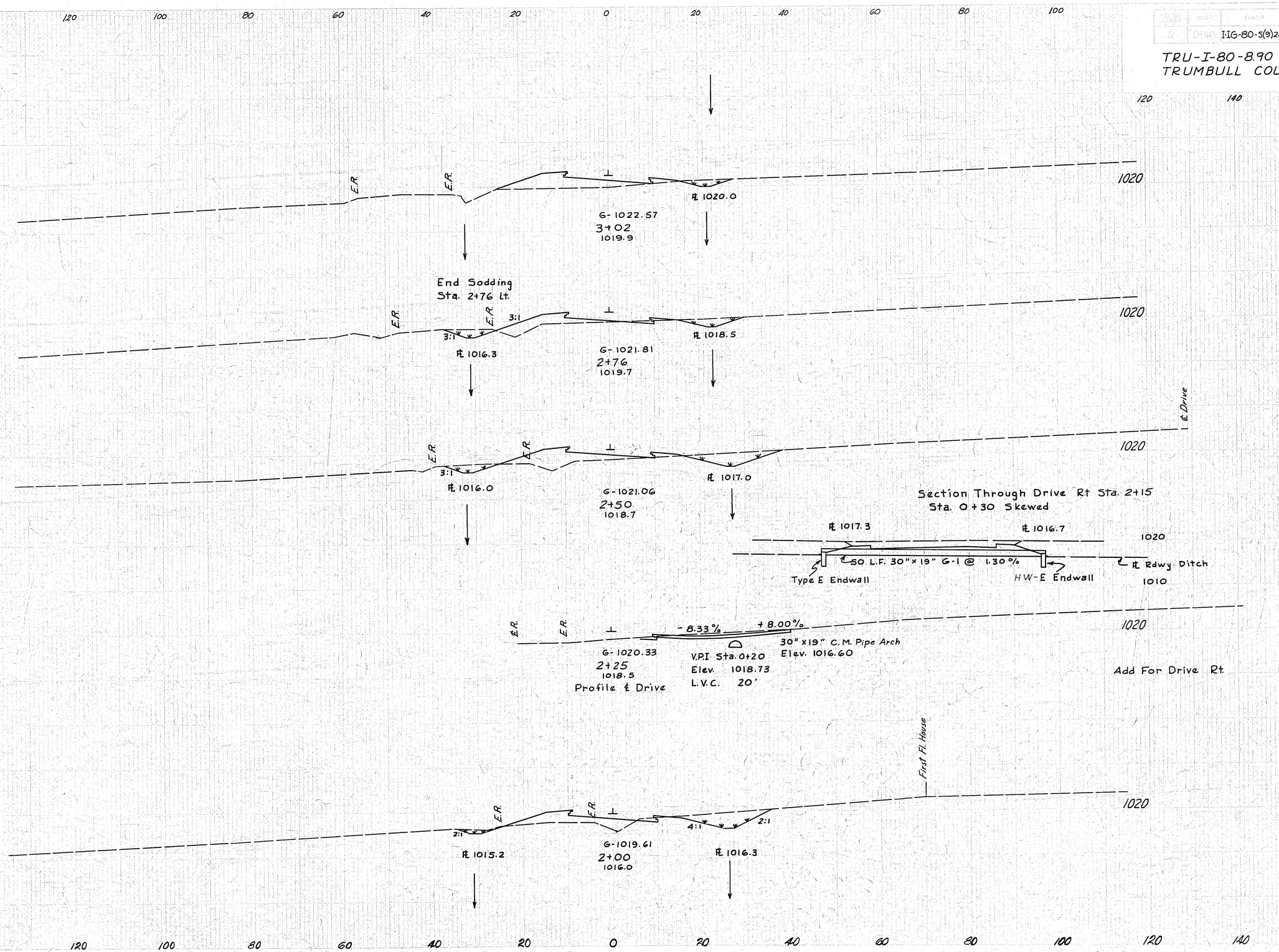
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
57	47	48	22
47	39	41	19
4	39	38	18
42	33	28	13
18	22	19	18

FOX NORTH ROAD RELOC. Sta. 0+75 to Sta. 1+75

SHEET NO.	TOTAL SHEETS
218	401

STATE	FEDERAL AID PROJECT
OHIO	I-IG-80-5(9)245

TRU-I-80-8.90
TRUMBULL COUNTY



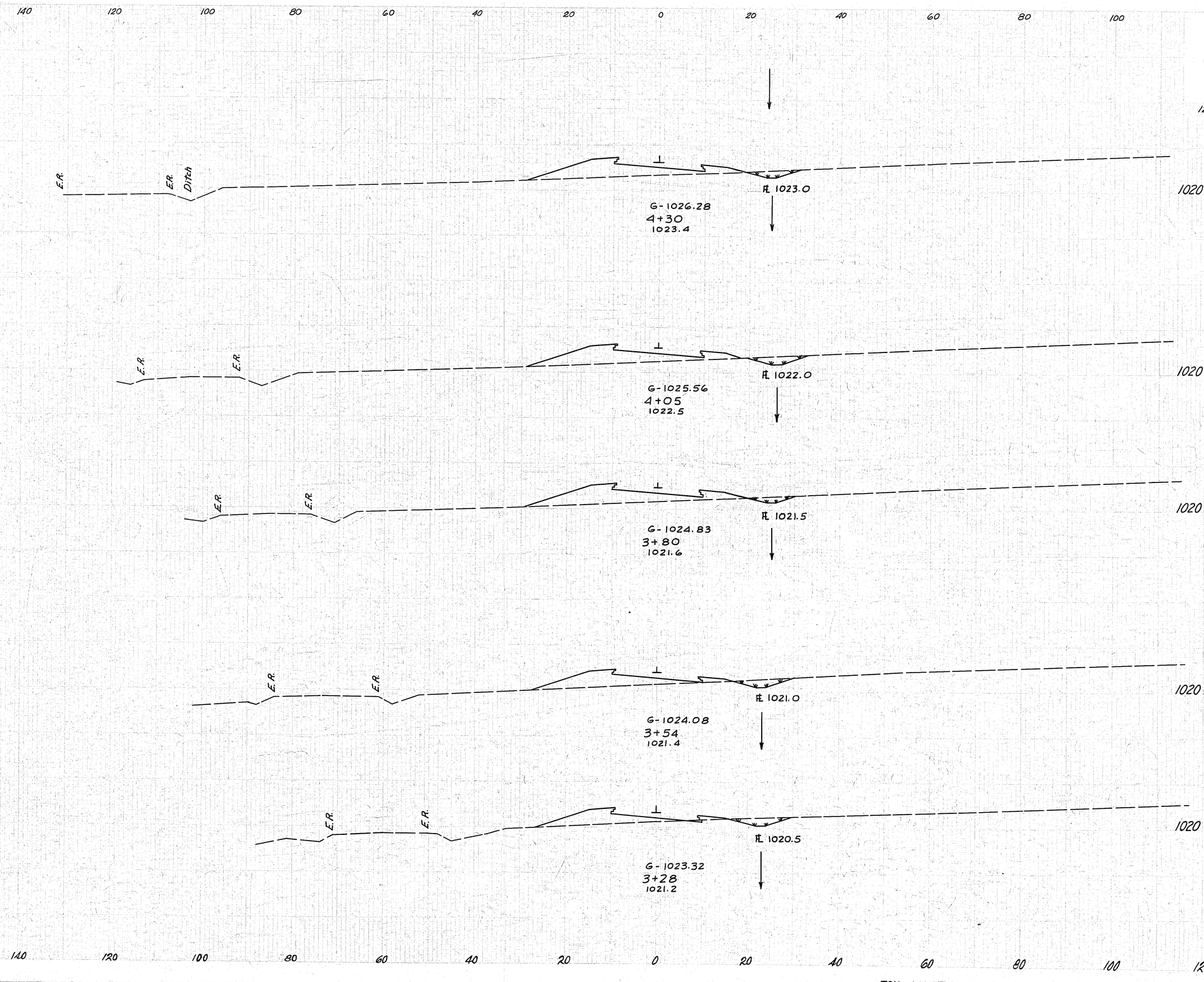
AREA CUT	AREA FILL	VOLUME CUT	VOLUME FILL
13	89	24	66
37	54	33	53
32	56	82	107
57	60	53	24
5	0		

FOX NORTH ROAD RELOC. Sta. 2+00 to Sta. 3+02

STATE	PROJECT
OHIO	I-IG-80-5(9)245

219
401

TRU-I-80-8.90
TRUMBULL COUNTY

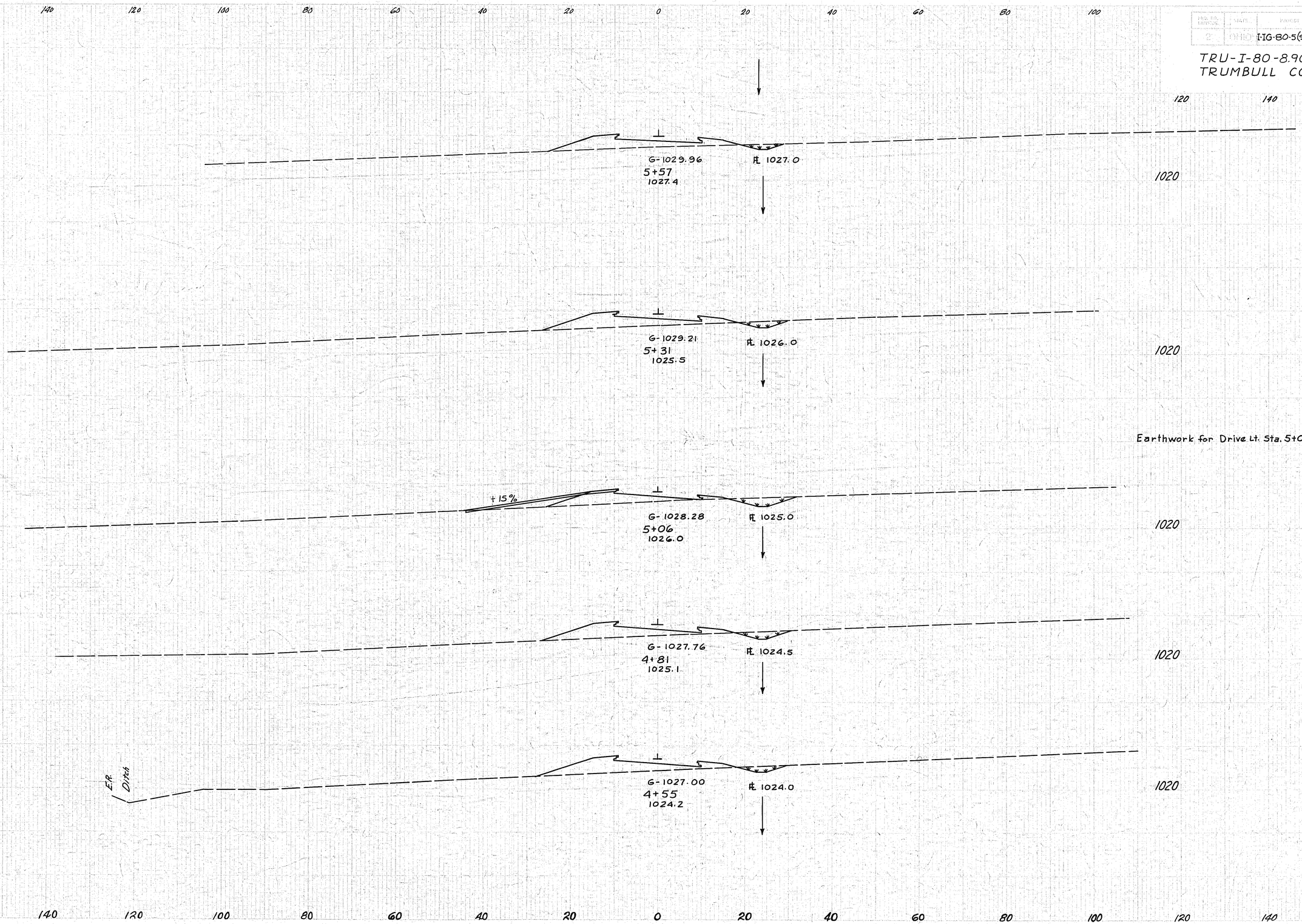


END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
14	104	14	98
16	108	12	98
10	104	12	93
15	89	15	76
16	70	14	74

FOX NORTH ROAD RELOC

REG. NO.	STATE	PROJECT	
2	OHIO	I-IG-80-5(e)245	220 401

TRU-I-80-8.90
TRUMBULL COUNTY



AREA CUT	AREA FILL	VOLUME CUT	VOLUME FILL
8	82	10	85
13	94	16	79
		1	11
22	76	18	69
16	74	15	84
16	101	14	95

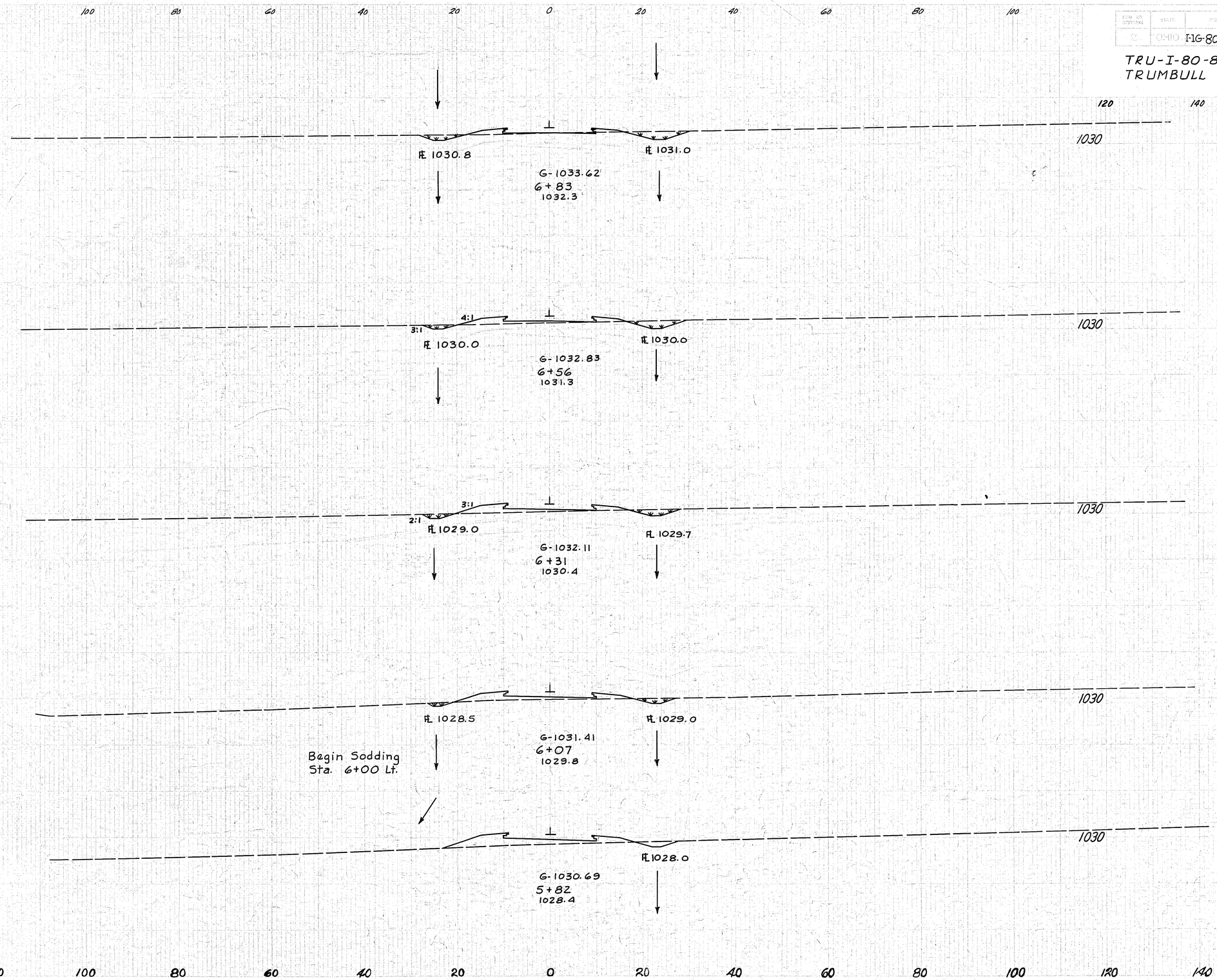
Earthwork for Drive Lt. Sta. 5+06

FOX NORTH ROAD RELOC Sta 4+55 to Sta 5+57

FED. AID PROJECT	STATE	CONTROL
	OHIO	I-IG-80-5(9)245

22.1
401

TRU-I-80-8.90
TRUMBULL COUNTY

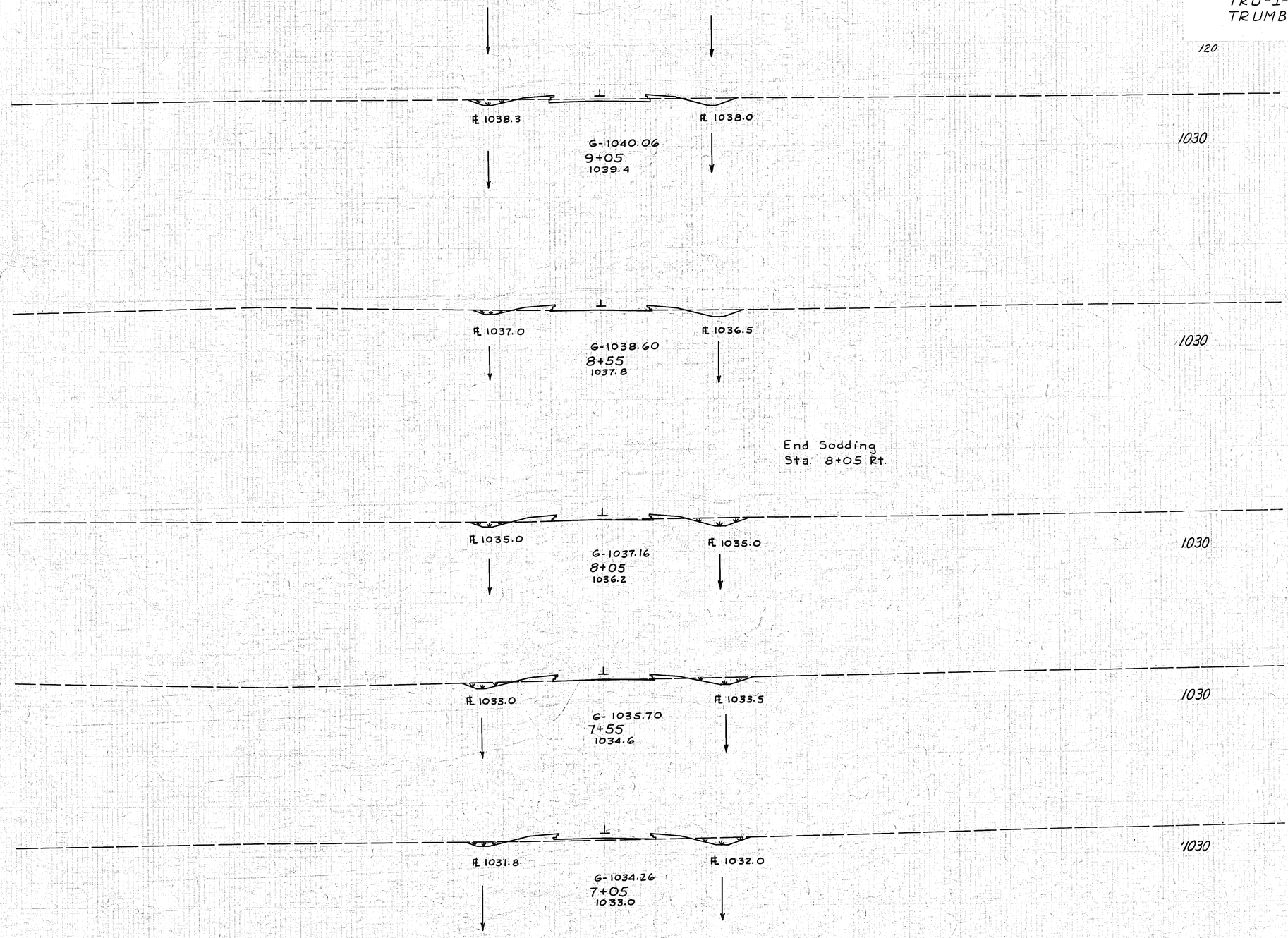


AREA CUT	AREA FILL	VOLUME CUT	VOLUME FILL
27	14	24	20
20	27	17	28
16	34	11	32
9	37	7	46
7	63	7	67

FOX NORTH ROAD RELOC Sta. 5+83 to Sta. 6+83

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO	I-IG-80-5(8)245	222 401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUMES	
CUT	FILL	CUT	FILL
30	7	42	18
16	12	33	25
20	15	39	26
22	13	36	34
17	24	18	15

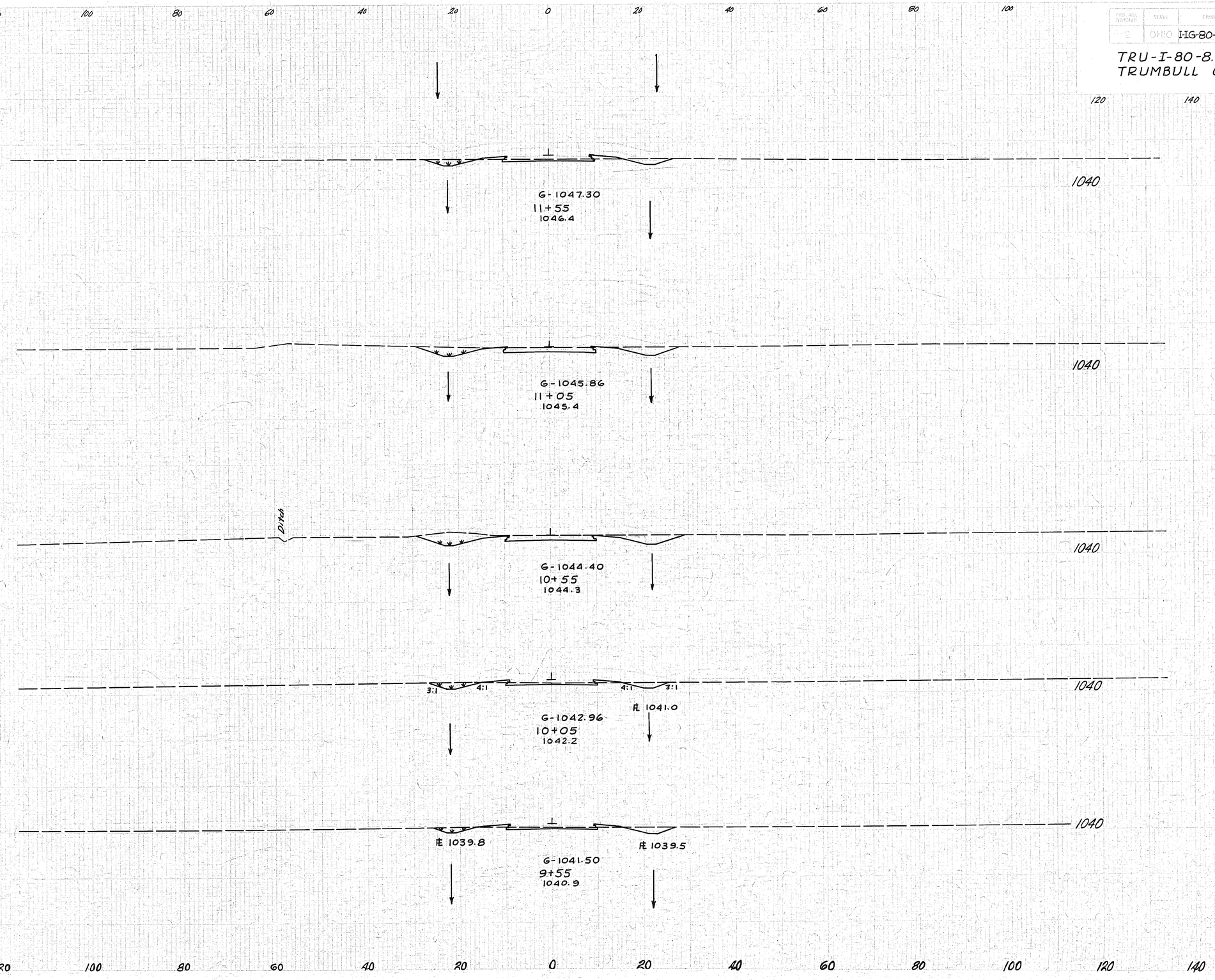
FOX NORTH ROAD RELOC.

Sta. 7+05 to Sta. 9+05

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

223
401

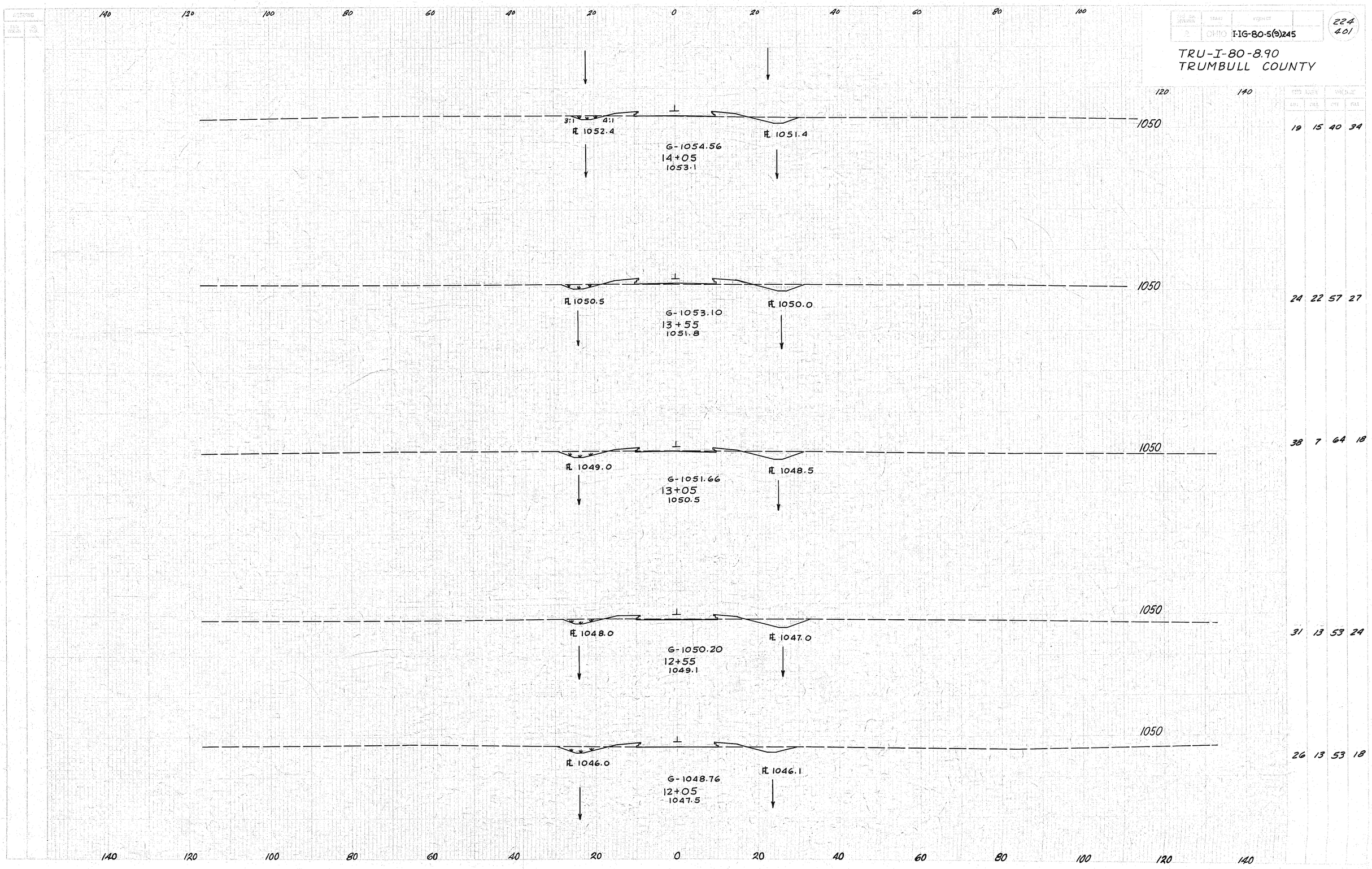
TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
31	7	86	6
62	0	133	0
82	0	106	6
33	6	59	11
31	6	56	12

2	OHIO	I-IG-80-5(9)245	224 401

TRU-I-80-8.90
TRUMBULL COUNTY

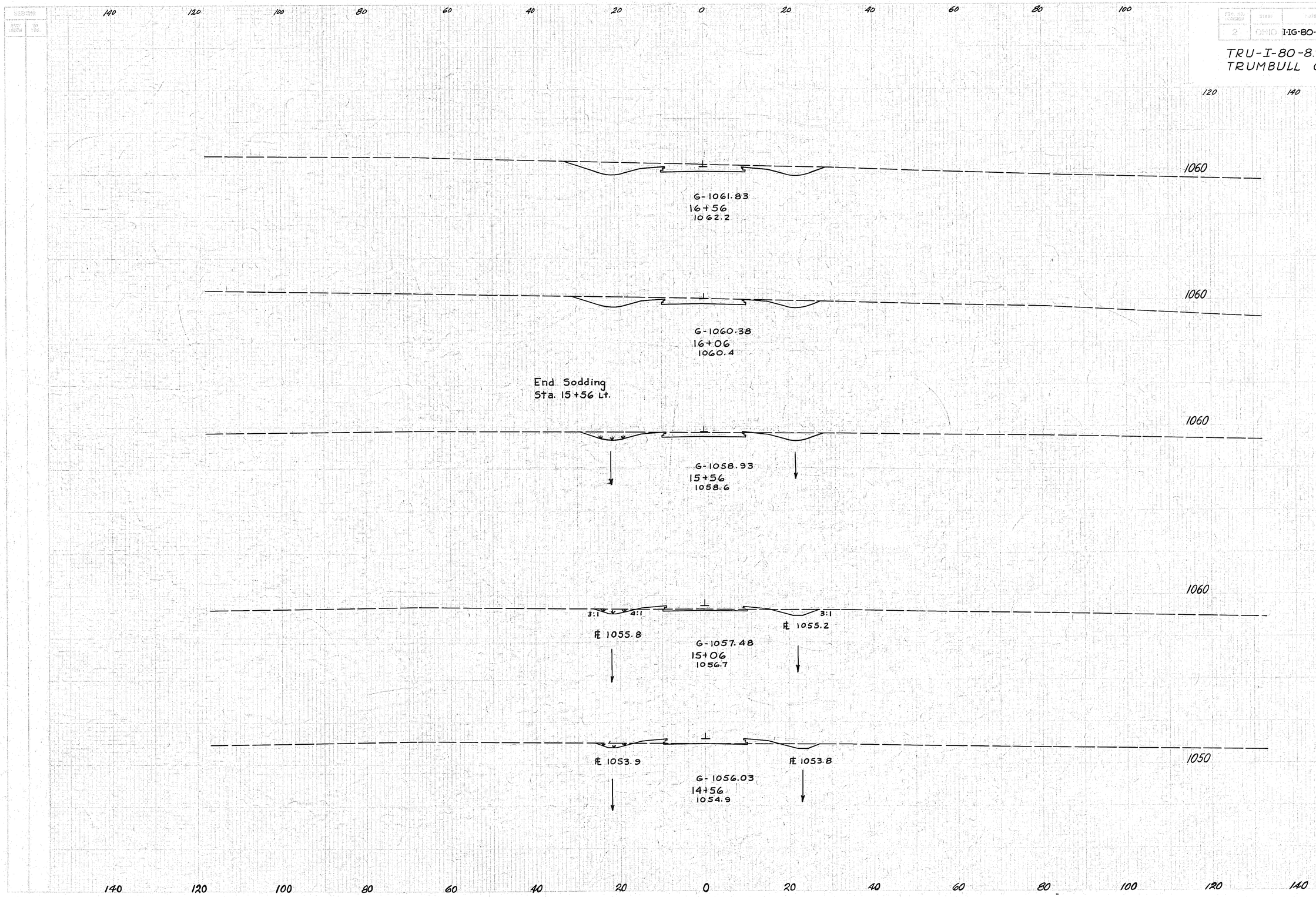


BRIDGE AREA CUT	BRIDGE AREA FILL	UNCLASS. CUT	UNCLASS. FILL
19	15	40	34
24	22	57	27
38	7	64	18
31	13	53	24
26	13	53	18

FOX NORTH ROAD DEICE

SHEET NO. NUMBER	STATE	NUMBER	
2	OHIO	I-IG-80-5(6)245	225 401

TRU-I-80-8.90
TRUMBULL COUNTY



	EXC. AREA CUT	EXC. AREA FILL	VOLUME CUT	VOLUME FILL
	120	0	172	0
	66	0	121	0
	65	0	85	6
	27	7	39	18
	15	13	32	26

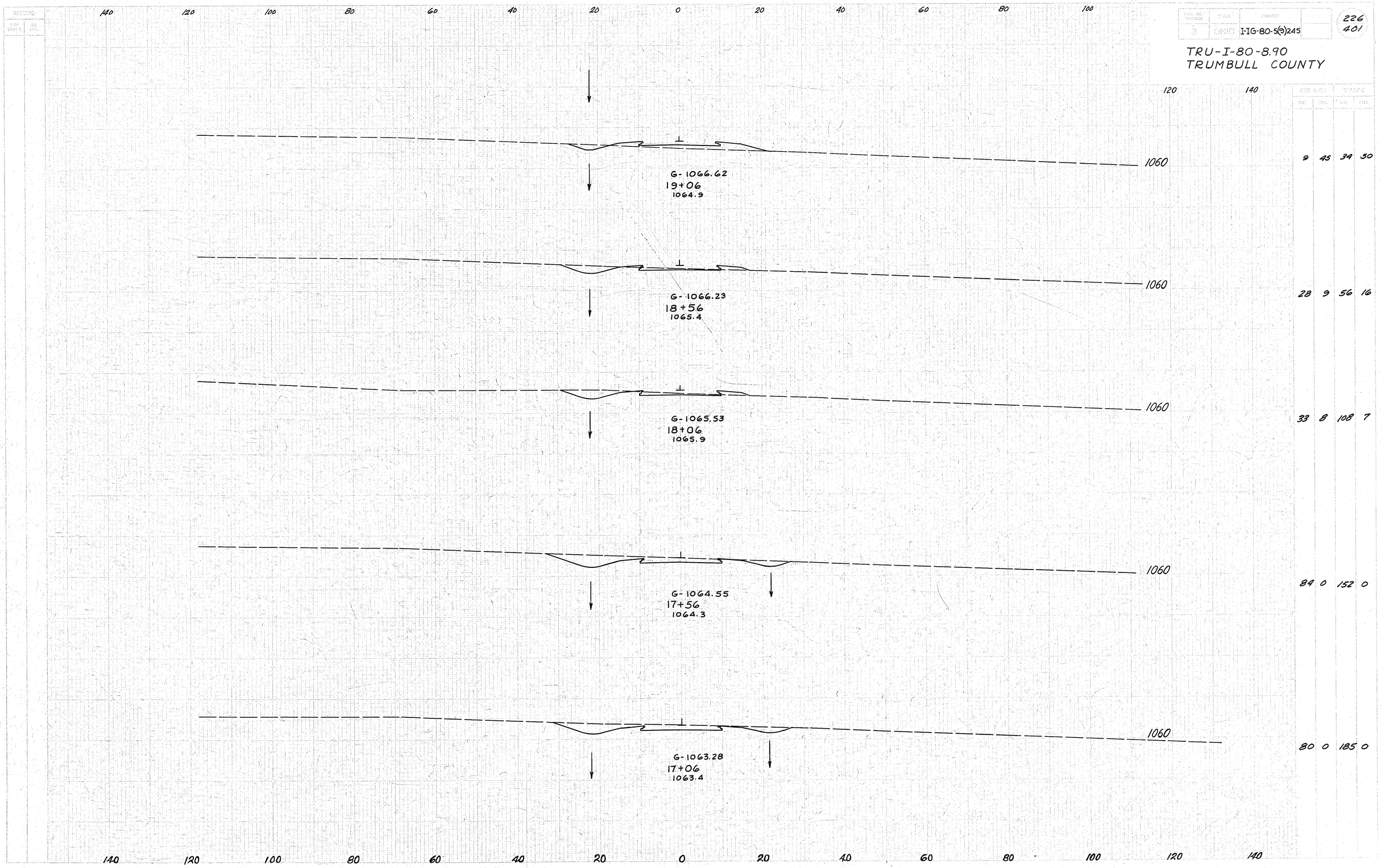
FOX NORTH ROAD RELOC.

Sta. 14+56 to Sta. 16+56

FEDERAL HIGHWAY ADMINISTRATION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

226
401

TRU-I-80-8.90
TRUMBULL COUNTY



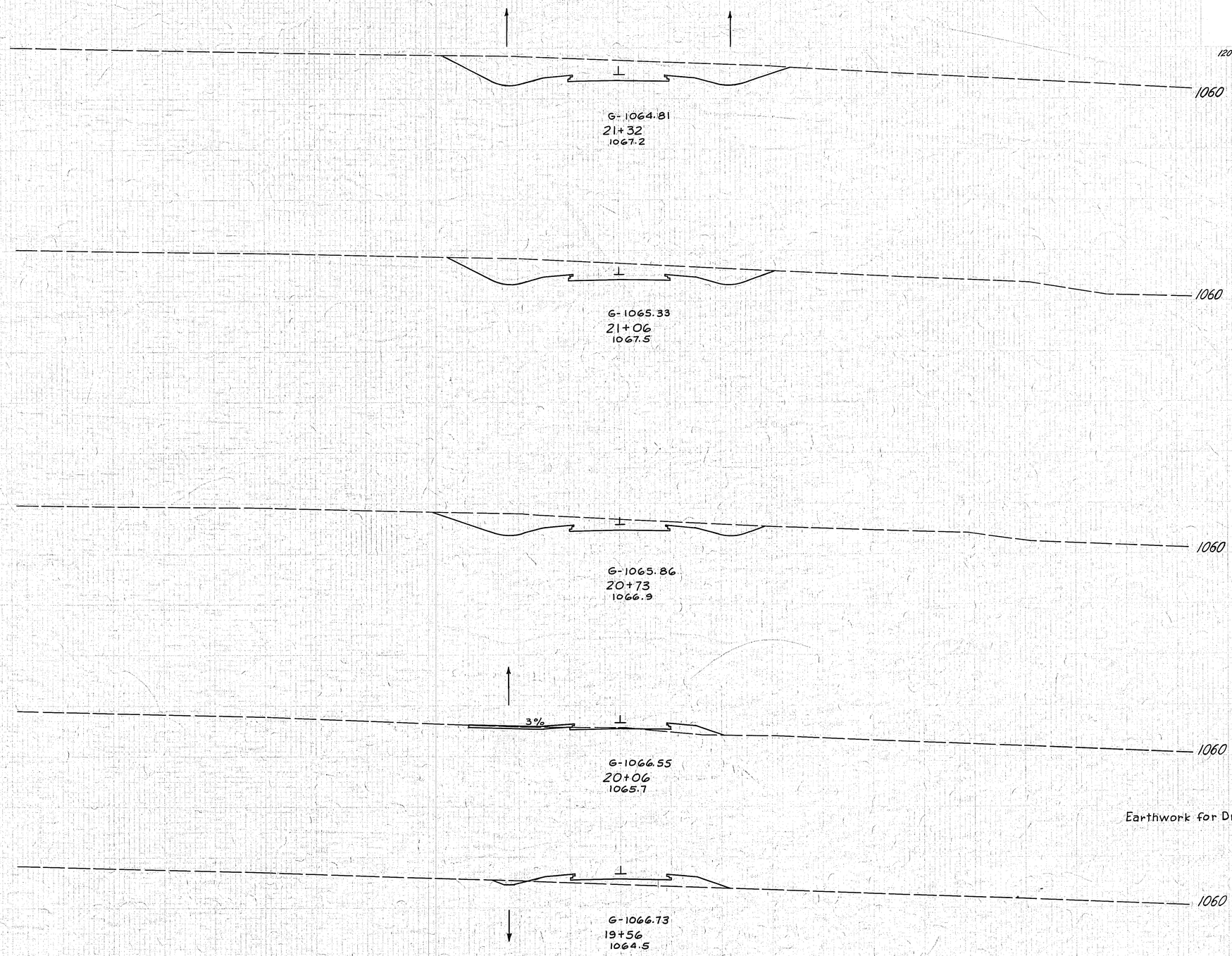
AREA		VOLUME	
CUT	FILL	CUT	FILL
9	45	34	50
28	9	56	16
33	8	108	7
84	0	152	0
80	0	185	0

FOX NORTH ROAD RELOC. Sta 17+06 to Sta 19+06

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

227
401

TRU-I-80-8.90
TRUMBULL COUNTY



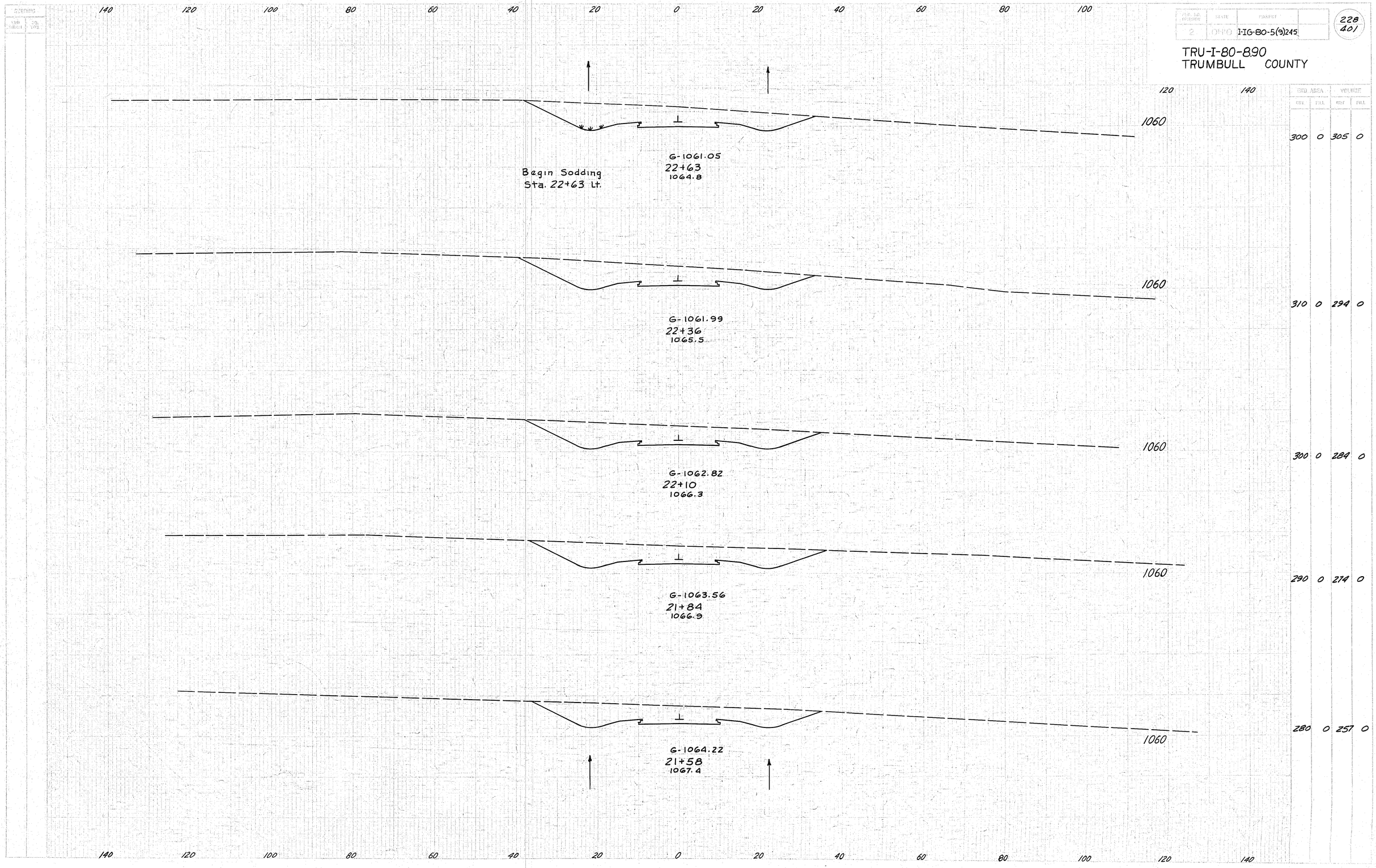
	AREA CUT	AREA FILL	VOLUME CUT	VOLUME FILL
	254	0	267	0
	196	0	170	0
	~~144~~ 144	~~0~~ 0	~~197~~ 197	~~27~~ 27
	15	22	18	74
Earthwork for Driveway Lt. Sta. 20+06				5
	5	58	13	95

FOX NORTH ROAD RELOC. Sta. 19+56 to Sta. 21+32

SHEET NO.	TOTAL SHEETS
2	228 401

STATE	PROJECT
OHIO	I-IG-80-5(9)245

TRU-I-80-8.90
TRUMBULL COUNTY

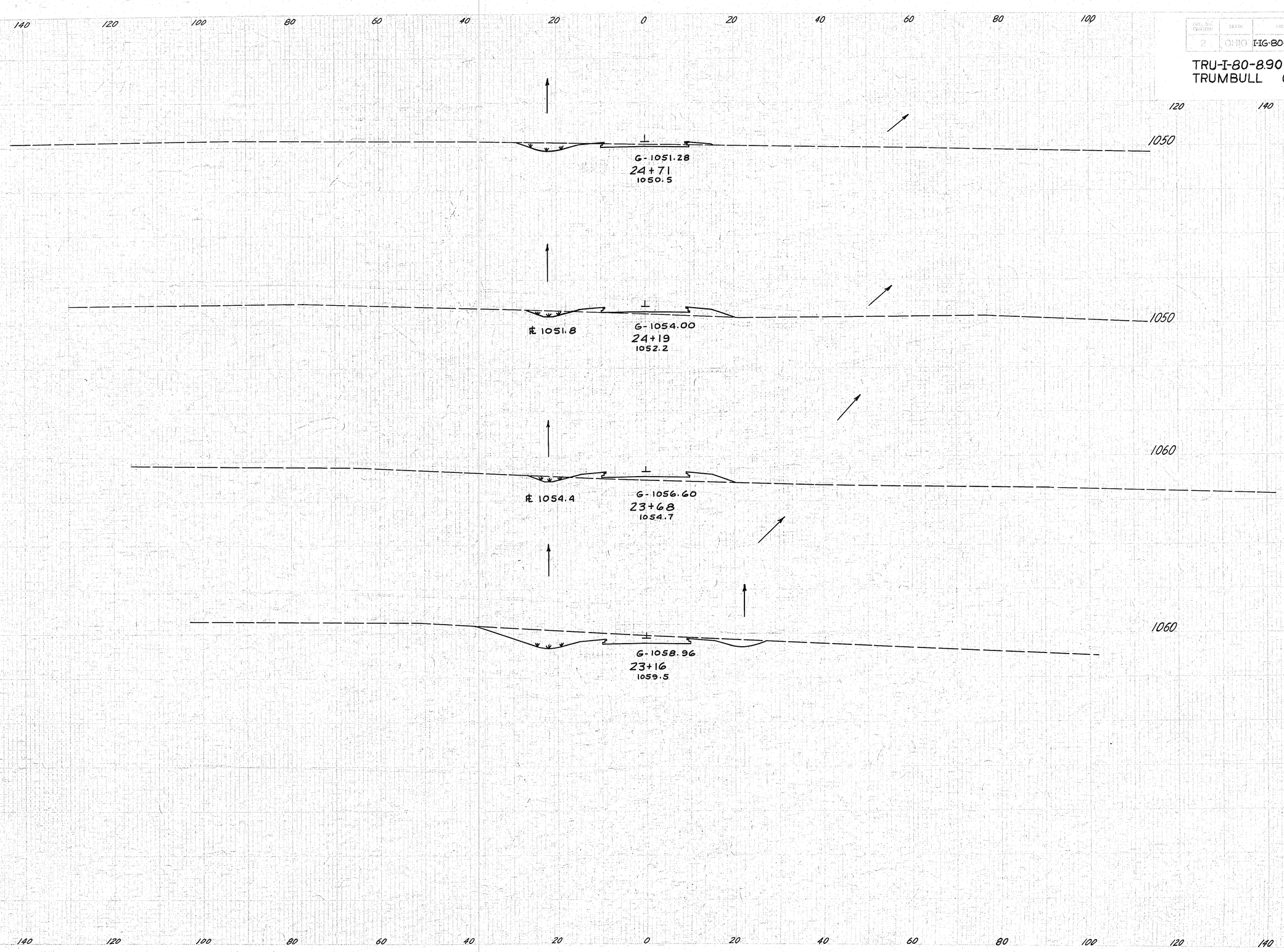


ERO. AREA CUT	ERO. AREA FILL	VOLUME CUT	VOLUME FILL
300	0	305	0
310	0	294	0
300	0	284	0
290	0	274	0
280	0	257	0

SHEET NO.	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

229
401

TRU-I-80-8.90
TRUMBULL COUNTY



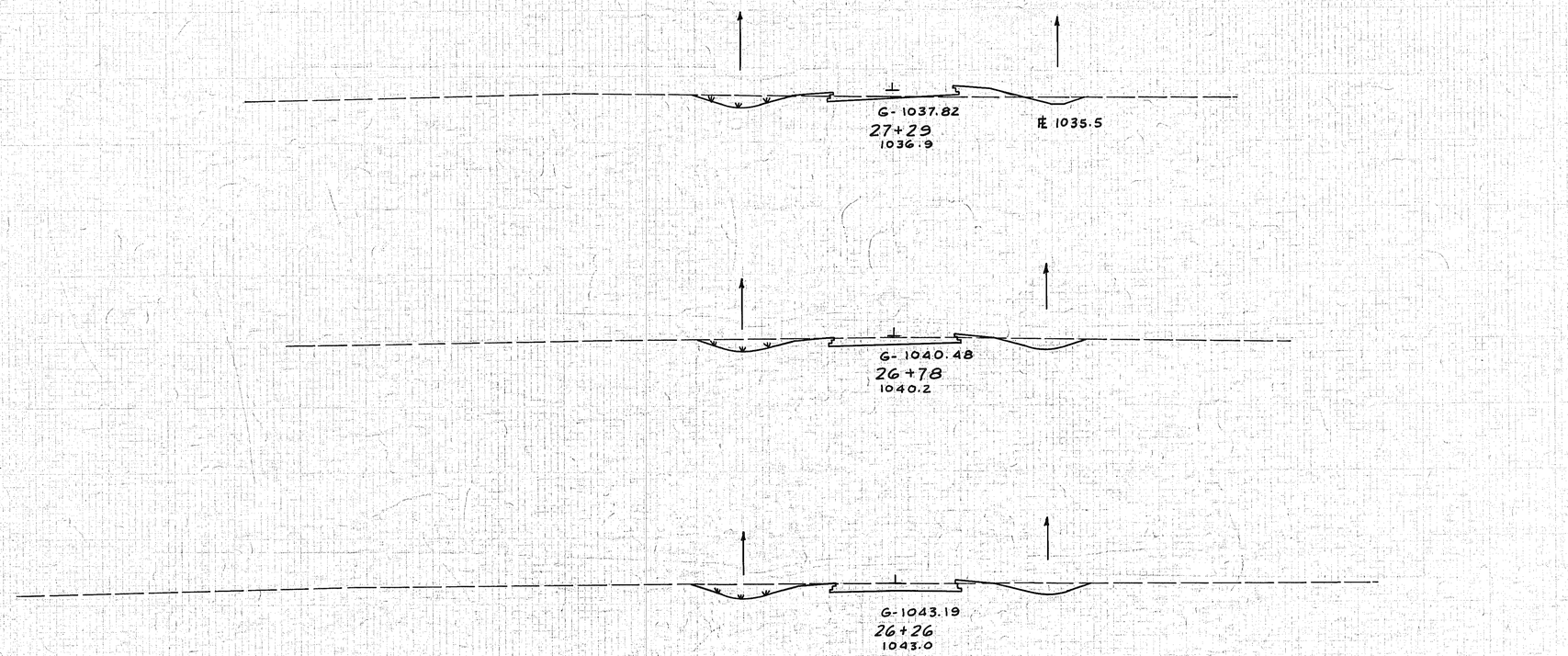
END AREA		VOLUME	
CUT	FILL	CUT	FILL
35	5	44	36
11	32	18	71
8	43	131	41
128	0	254	0

FOX NORTH ROAD RELOC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

230
401

TRU-I-80-8.90
TRUMBULL COUNTY



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1030	35	15	92	17
1040	62	3	123	6
1040	66	3	325	6
1040	66	3	325	6
1050	108	0	143	5

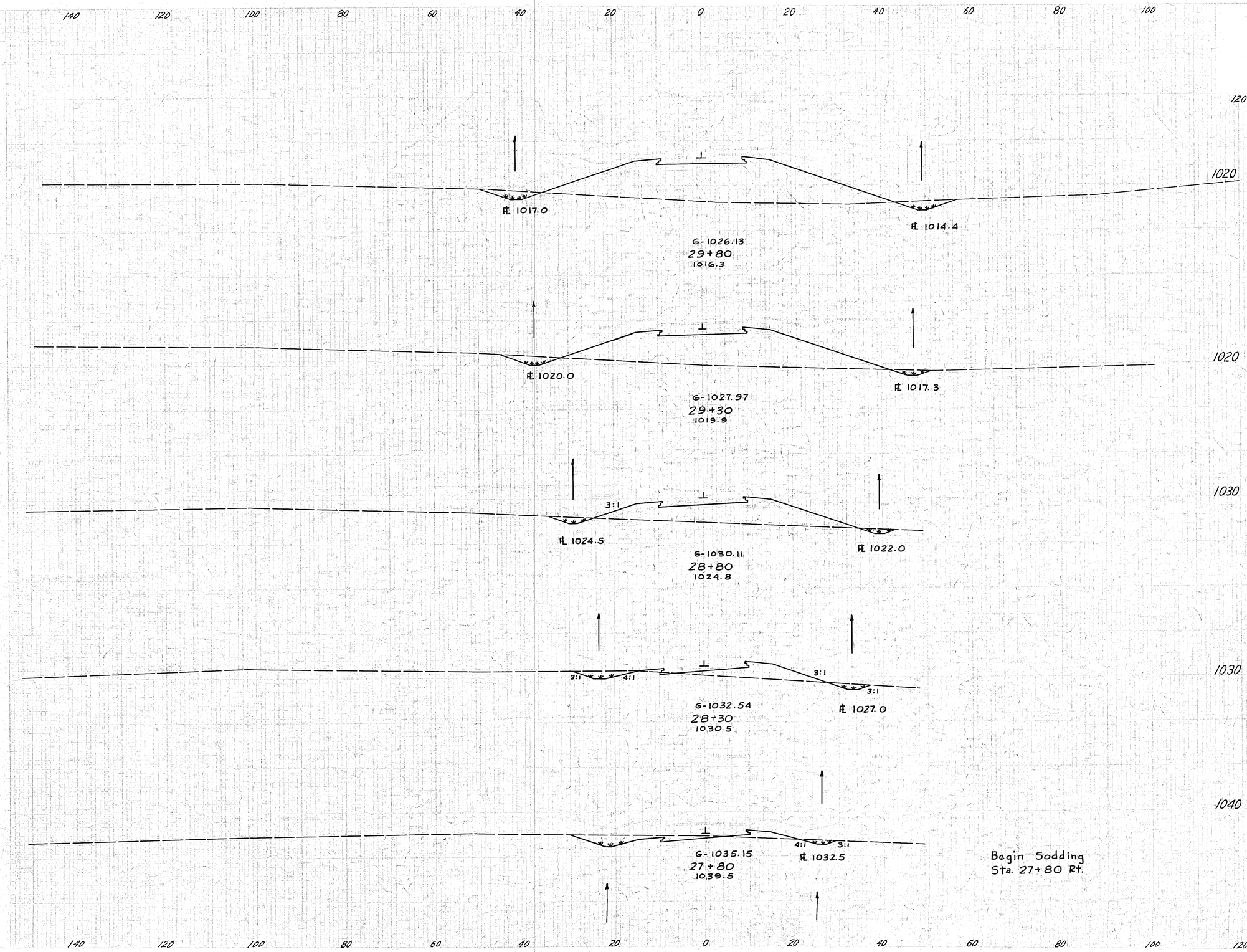
FOX NORTH ROAD RELOC

Sta 25+23 to Sta 27+29

STATE	PROJECT
OHIO	I-IG-80-5(9)245

231
401

TRU-I-80-8.90
TRUMBULL COUNTY

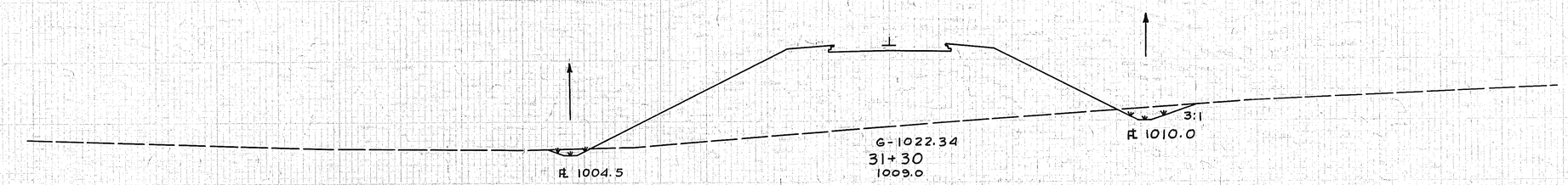


END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
37	400	59	652
27	304	40	476
16	210	41	267
~~22~~ 28	~~78~~ 78	~~74~~ 74	~~87~~ 87
52	16	82	29

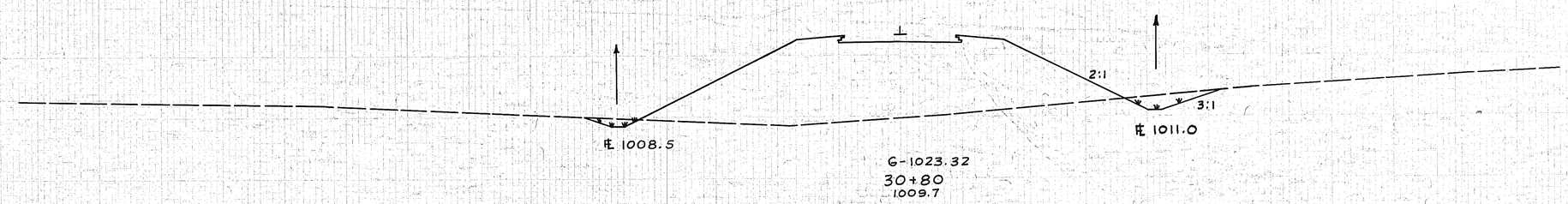
SHEET NO.	STATE	PROJECT	
2	OHIO	HG-80-5(9)245	

232
401

TRU-I-80-890
TRUMBULL COUNTY



AREA CUT	AREA FILL	VOLUME CUT	VOLUME FILL
23	772	52	1381



AREA CUT	AREA FILL	VOLUME CUT	VOLUME FILL
33	720	60	1161

AREA CUT	AREA FILL	VOLUME CUT	VOLUME FILL
32	534	64	865

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

FOX NORTH ROAD RELOC. Sta. 30+30 to Sta. 31+30

I-IG-80-5(6)245

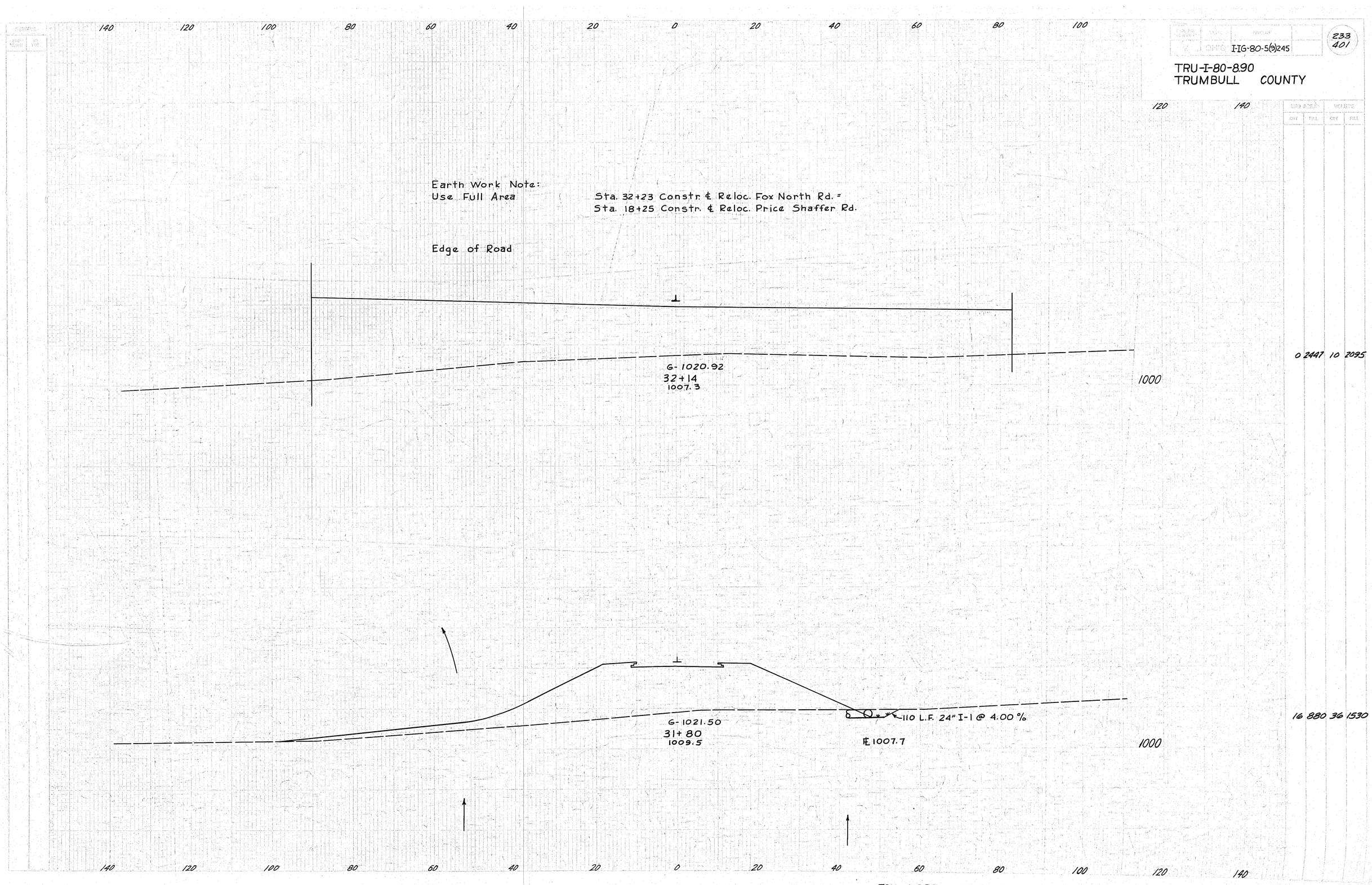
233
401

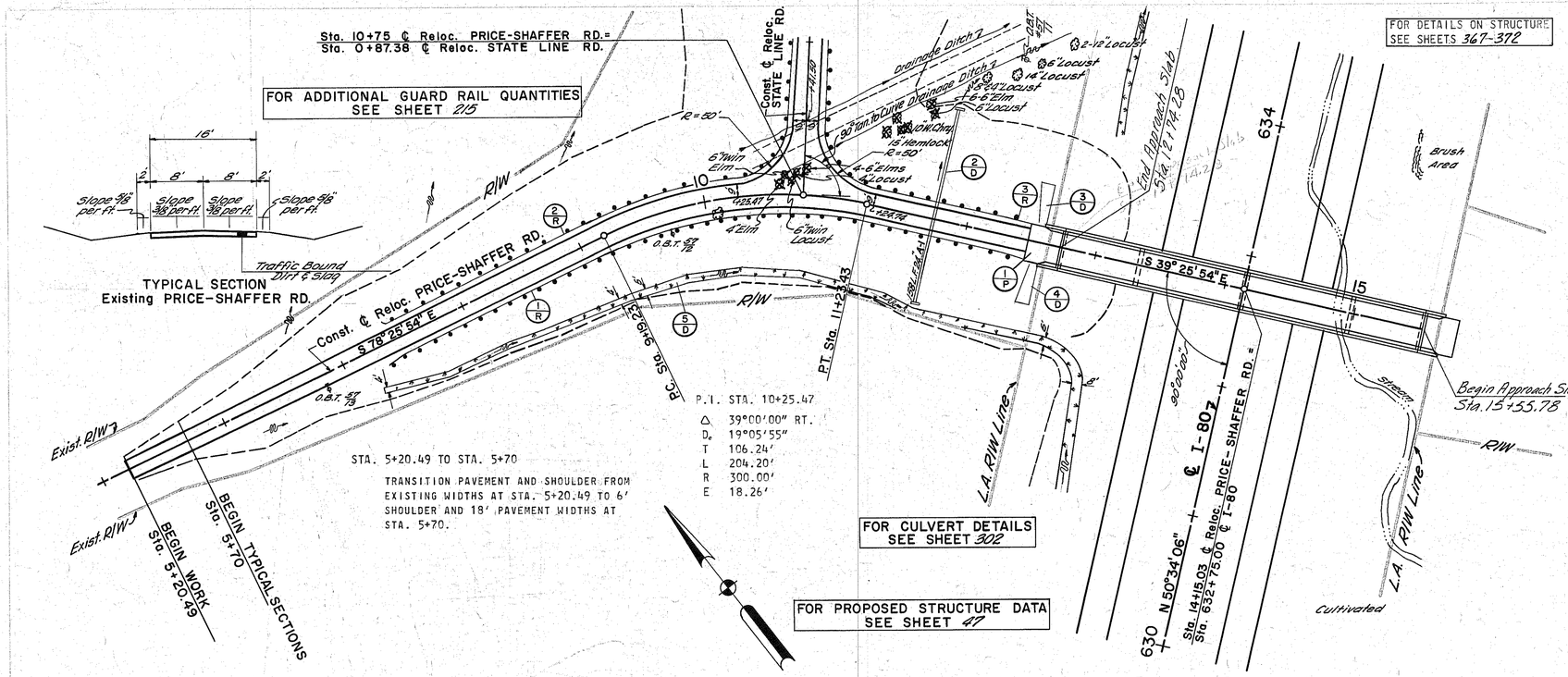
TRU-I-80-8.90
TRUMBULL COUNTY

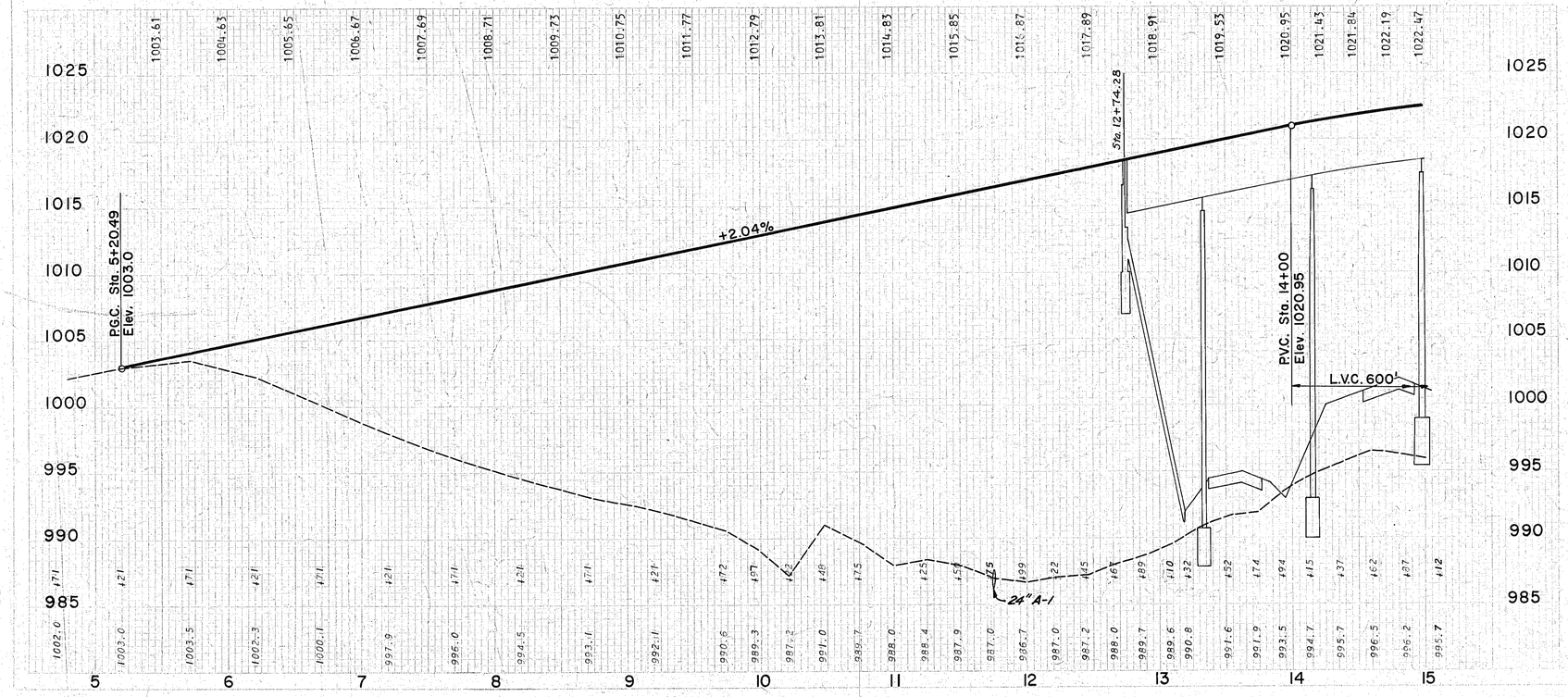
END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	2447	10	2095
16	880	36	1530

Earth Work Note:
Use Full Area

Sta. 32+23 Constr. & Reloc. Fox North Rd. =
Sta. 18+25 Constr. & Reloc. Price Shaffer Rd.

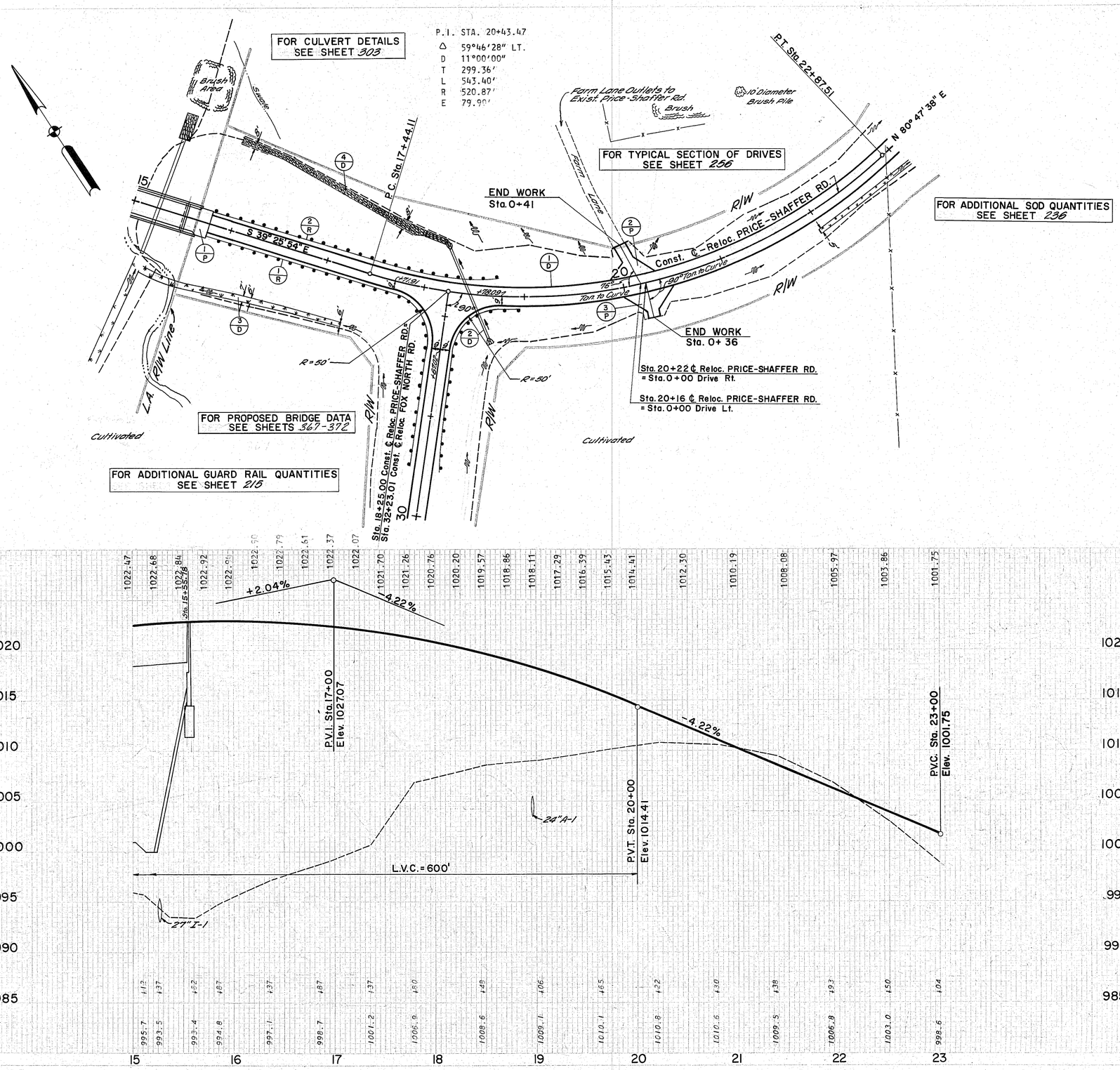






ITEM	I-9 Stone U-Drain	I-10 Sodding For Spec. Berm/Slope Protection	I-15 Guard Rail	I-10 Sodding	I-7 Reinforced Concrete Approach Slab	I-2 Masonry	E-3 Channel Exc.	I-1 Cl. A-1 Sec. M-6.4(d) 24"
UNIT	L.F.	L.F.	L.F.	SQ. YD.	SQ. YD.	CU. YD.	CU. YD.	L.F.
1-D 6+50 to 12+25 Rt.&Lt. ℄	224	29		3	75.0	.72	31	158
2-D 11+75 Lt.		29						
3-D 12+55 Rt.			525.0					
4-D 12+55 Rt.			262.5					
5-D 7+21 to 11+75 Rt.			112.5	258				
6-D 12+65 to 11+75 Rt.				80				
1-P 7+30 to 12+55 Rt.	58							
2-P 7+325 to 10+00 Lt.								
3-P 11+425 to 12+55 Lt.								
1-P 12+48 to 12+73 ℄	224			321	75.0	.7	31	158

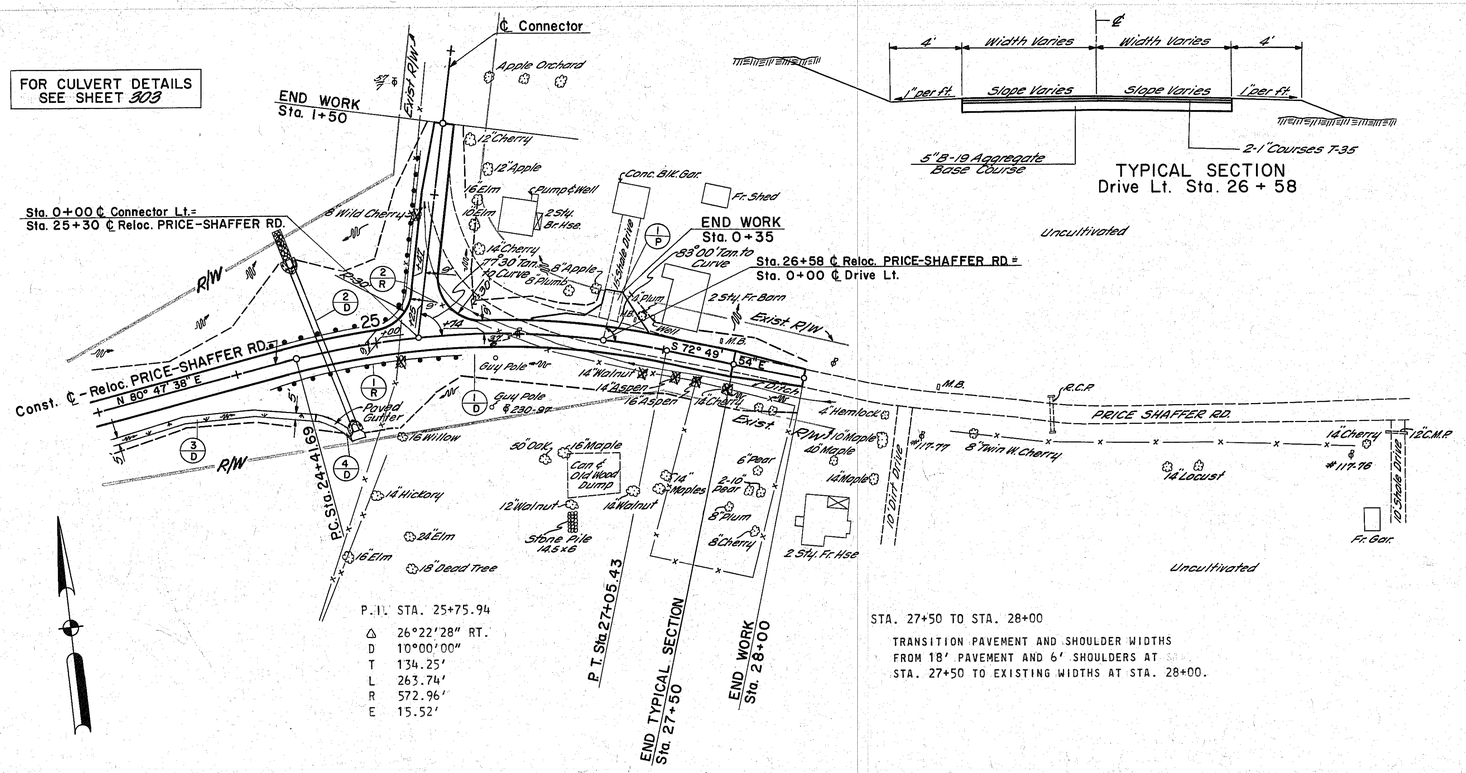
Reloc. PRICE-SHAFFER RD. Sta. 5+20.49 to Sta. 15+00



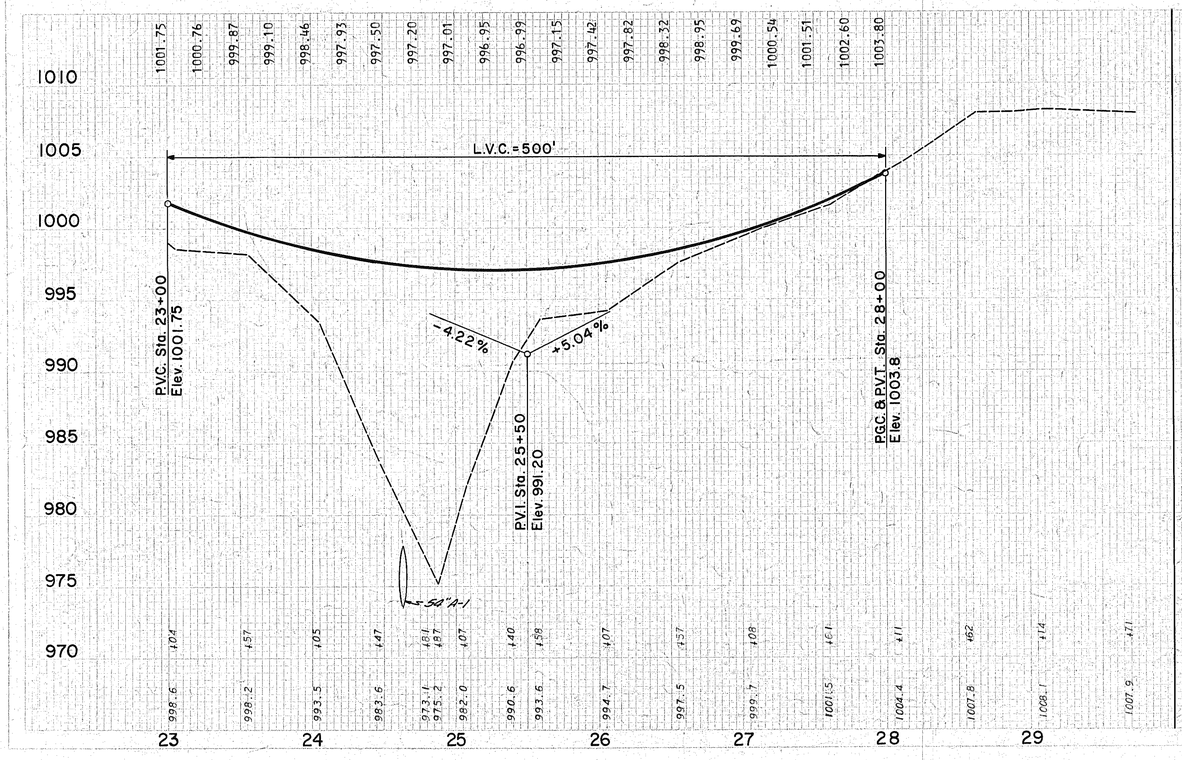
REF. NO.	STATION TO STATION	B-19 Agg. Base Crse. 6" Depth CU. YD.	I-1 CL. A-1 Conc. M-6.6(b) or M-6.8(b) 24" L.F.	I-2 Masonry CU. YD.	I-7 Reinforced Concrete Approach U-Drain Slab SQ. YD.	I-9 Stone L.F.	I-10 Dumped Rock Channel Protection CU. YD.	I-15 Guard Rail L.F.	I-10 Sodding SQ. YD.	SEE SHEET NO.
1-D	16+00 to 23+00	RW&LL ℄	110	.92		264	139		5	
2-D	18+46 to 17+37	RT					145.0		144	
3-D	15+37 to 17+80	LT							60	
4-D	15+87 to 17+80	LT								
5-D	21+93 to 23+00	RT								
1-R	15+68 to 17+55.5	RT						1875		
2-R	15+68 to 18+68.0	LT						300.0		
1-P	15+55 to 15+80	℄			75					
2-P	20+16 (Driveway)	LT	11.3							
3-P	20+22 (Driveway)	RT	13.4							
		25	110	.8	75	264	157	2175	209	

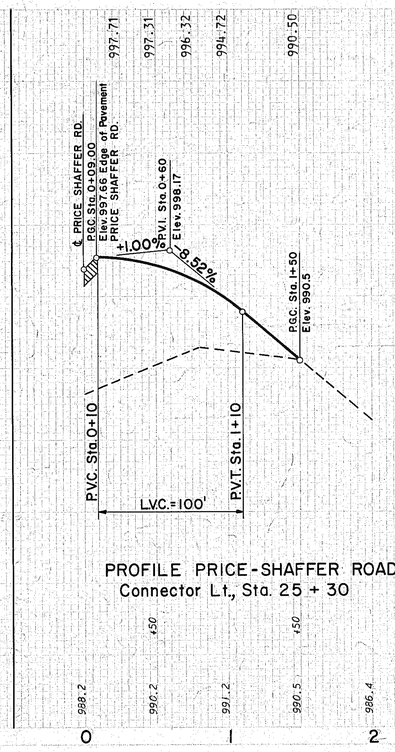
ESTIMATED QUANTITIES

Reloc. PRICE-SHAFFER RD. Sta. 15+00 to 23+00



TYPICAL SECTION
Drive Lt. Sta. 26 + 58





PROFILE PRICE-SHAFFER ROAD
Connector Lt., Sta. 25 + 30

	T-35 Asphaltic Concrete Surface Course CU. YD.	L-10 Sodding SQ. YD.	I-15 Guard Rail L.F.	I-14 Paved Gutter Type-1 L.F.	SEE SHEET NO.
	7				
		70			89.0
		82.0			
			125.0		337.5
			212.5		
		33		33	33

	I-9 Stone U-Drain No. 2 L.F.	I-10 Riprap 6" Reinf. Concrete SQ.YD.	I-10 Dumped Rock Channel Protection CU. YD.
	228	5	11.1
			5
			11
	228		
			1.9
	17		

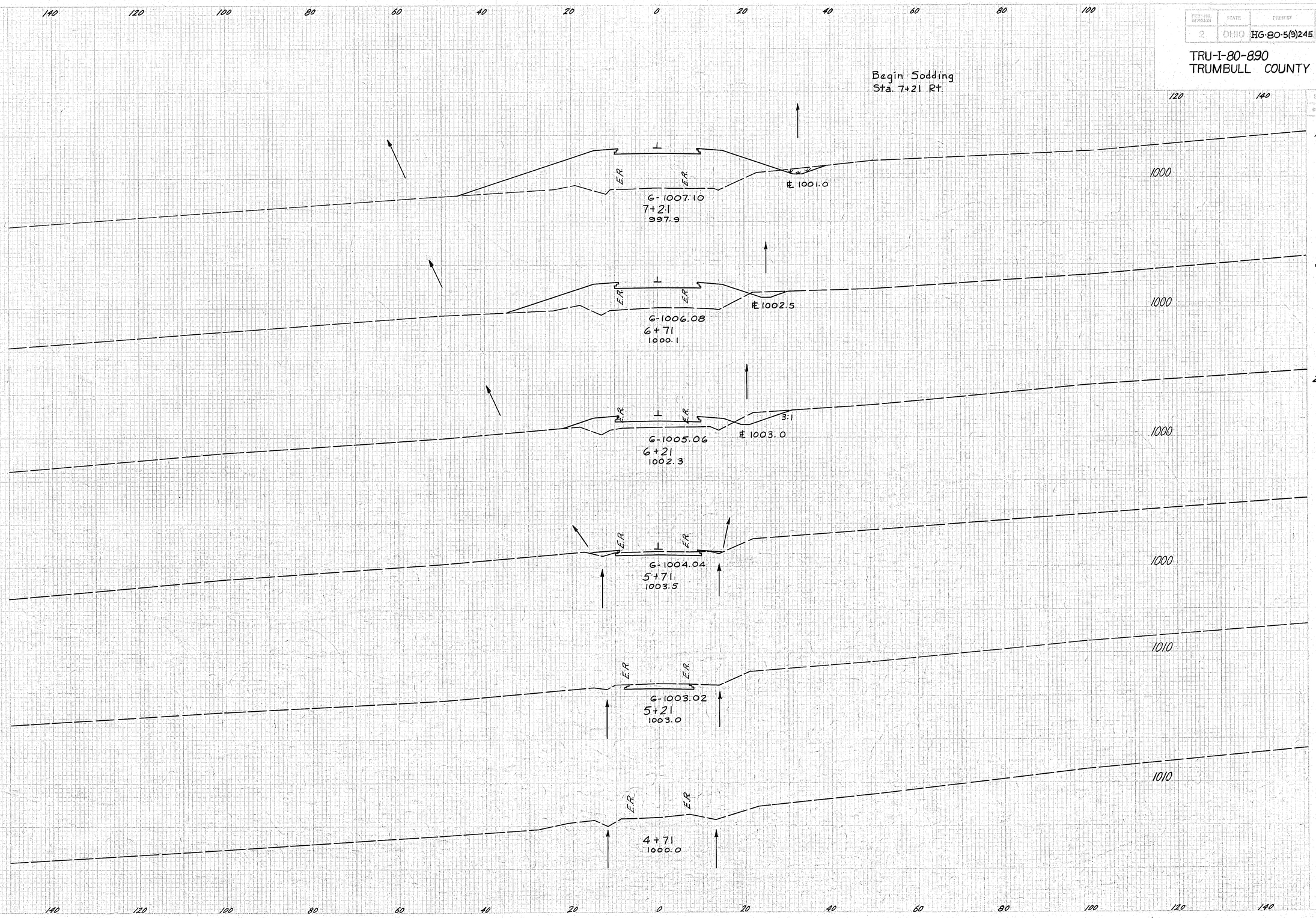
	B-19 Aggr. Base Course CU. YD.	I-1 CL. A-1 M6.4(d) Masonry 54" L.F.	I-2 CU. YD.	
1-0 23+25 to 27+50		℄		
2-0 24+63		Rt.		
3-0 23+00 to 24+47		Rt.		
4-0 24+47 to 24+80		Rt.		
		128	1.92	
1-R 24+25 to 25+50		Rt.		
2-R 24+25 to 1+25 Price Shaffer Conn		Lt.		
1-P 26+58		Lt.	17.2	
	17	128	1.9	

Reloc. PRICE-SHAFFER RD. Sta. 23+00 to Sta. 28+00

FED. RD. DIVISION	STATE	FOLDER	
2	OHIO	HG-80-5(9)245	

237
401

TRU-I-80-890
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
10	446	17	641
8	246	26	307
20	86	0	0

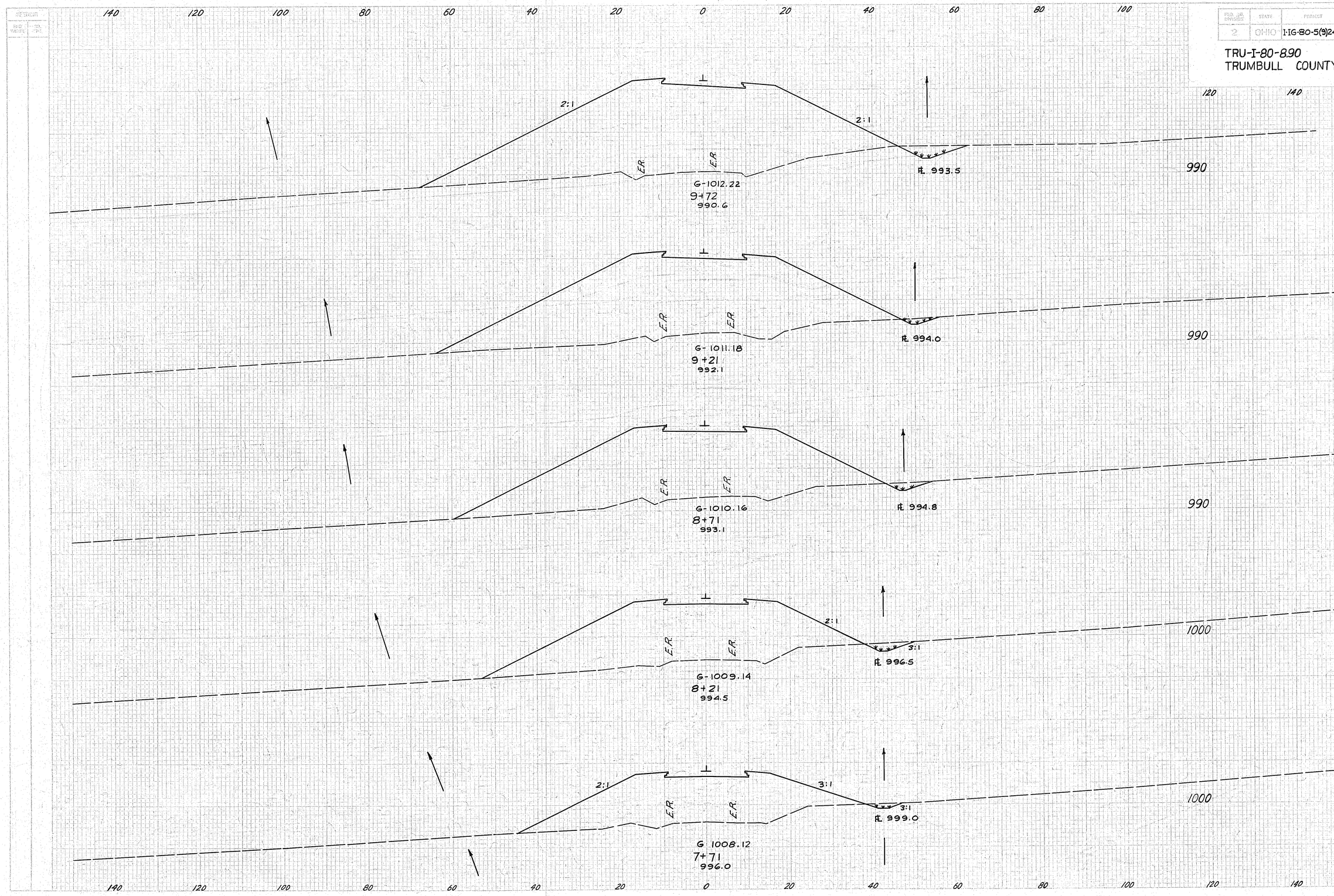
RELOC. PRICE SHAFFER RD.

Sta 4+71 to Sta 7+21

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

238
401

TRU-I-80-8.90
TRUMBULL COUNTY



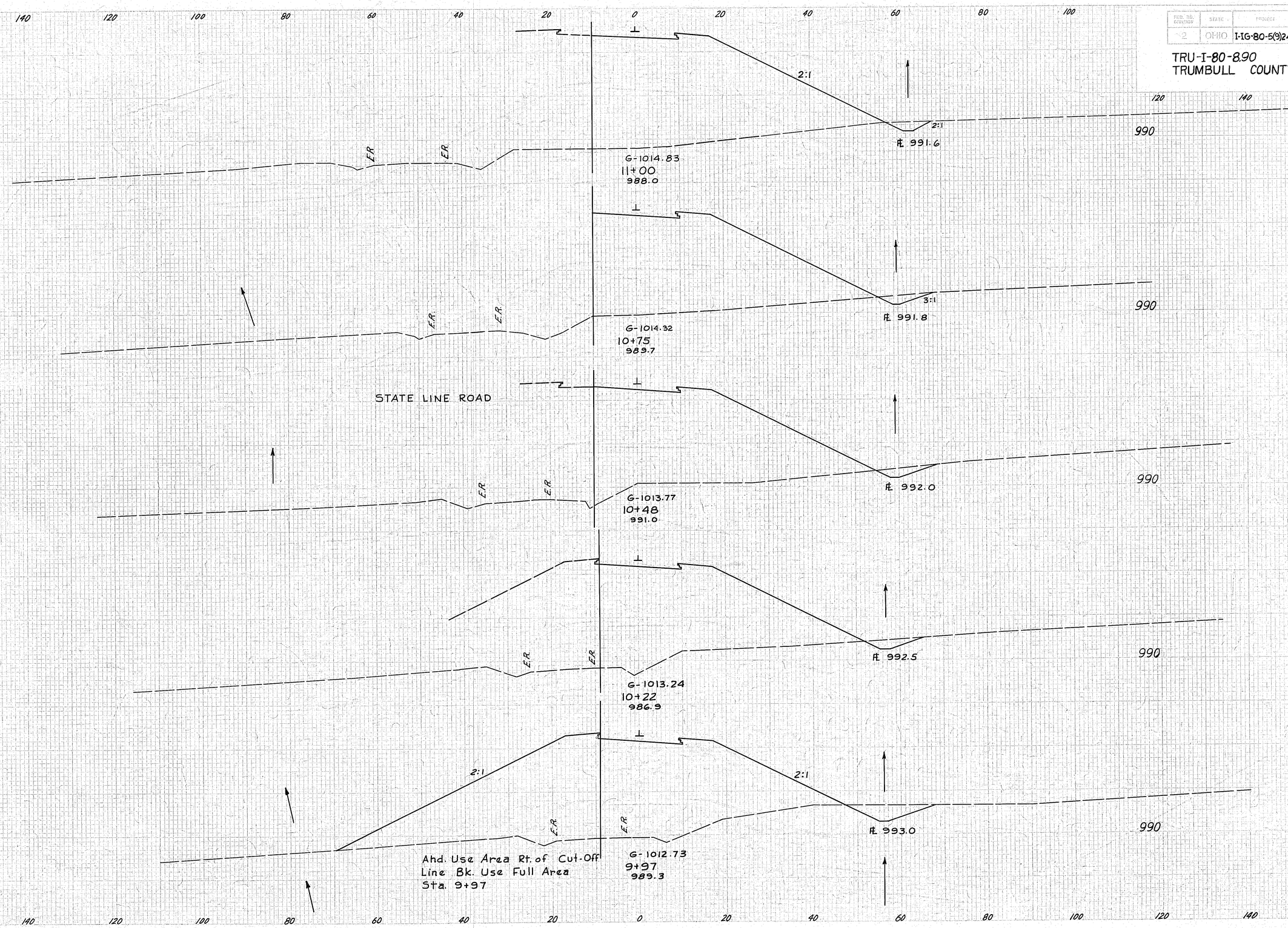
END AREA		VOLUME	
CUT	FILL	CUT	FILL
33	1540	40	2754
9	1376	21	2330
14	1140	27	1870
15	880	20	1418
7	652	16	1017

RELOC PRICE SHAFFER RD Sta 7+71 to Sta 9+72

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

239
401

TRU-I-80-8.90
TRUMBULL COUNTY



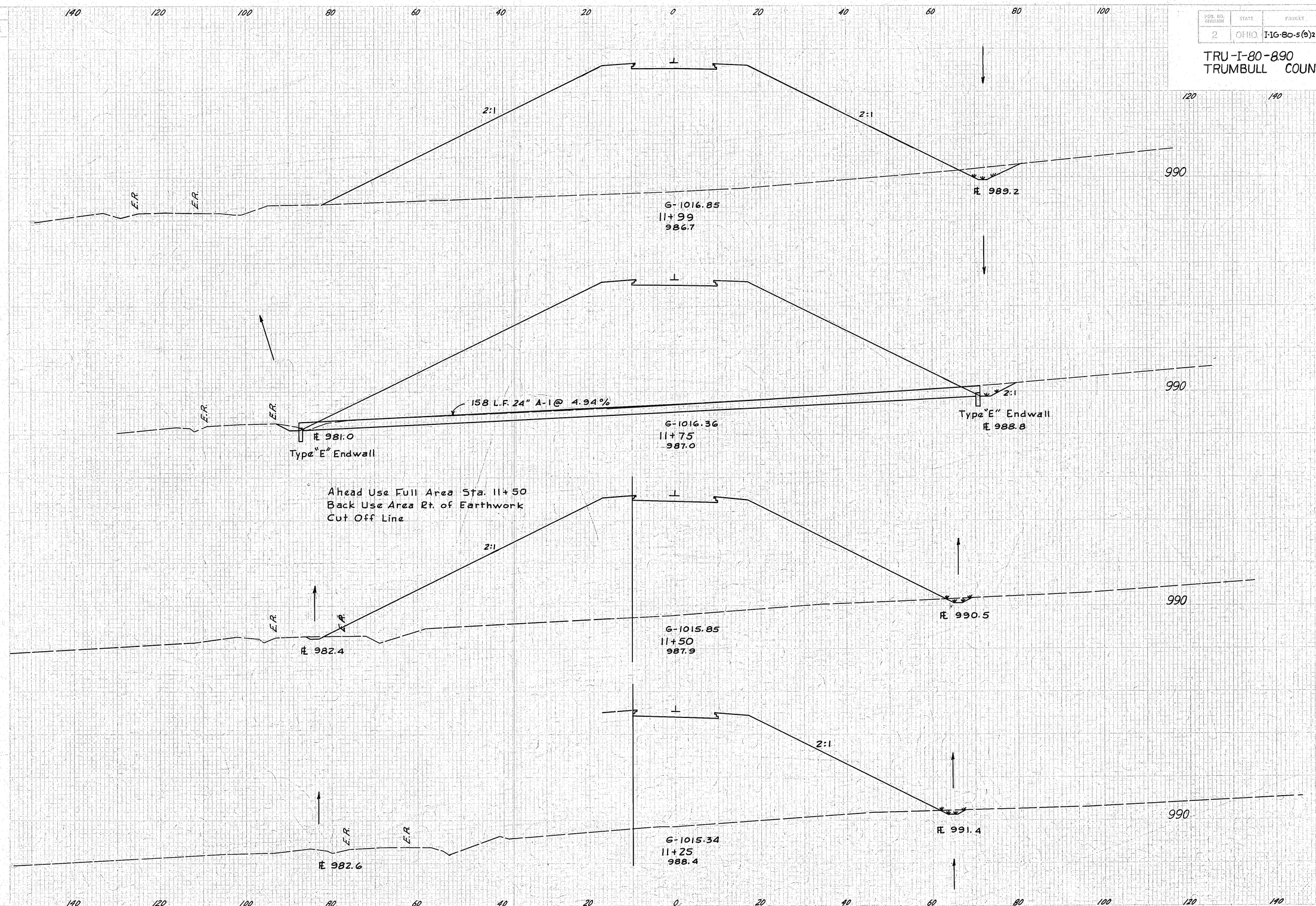
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
17	1168	16	1022
17	1040	19	1034
21	1028	20	942
20	928	33	815
51	Ahead 833 Back 1636	39	1470

RELOC PRICE SHAFFER RD Sta 9+97 to Sta 11+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

240
401

TRU-I-80-8.90
TRUMBULL COUNTY



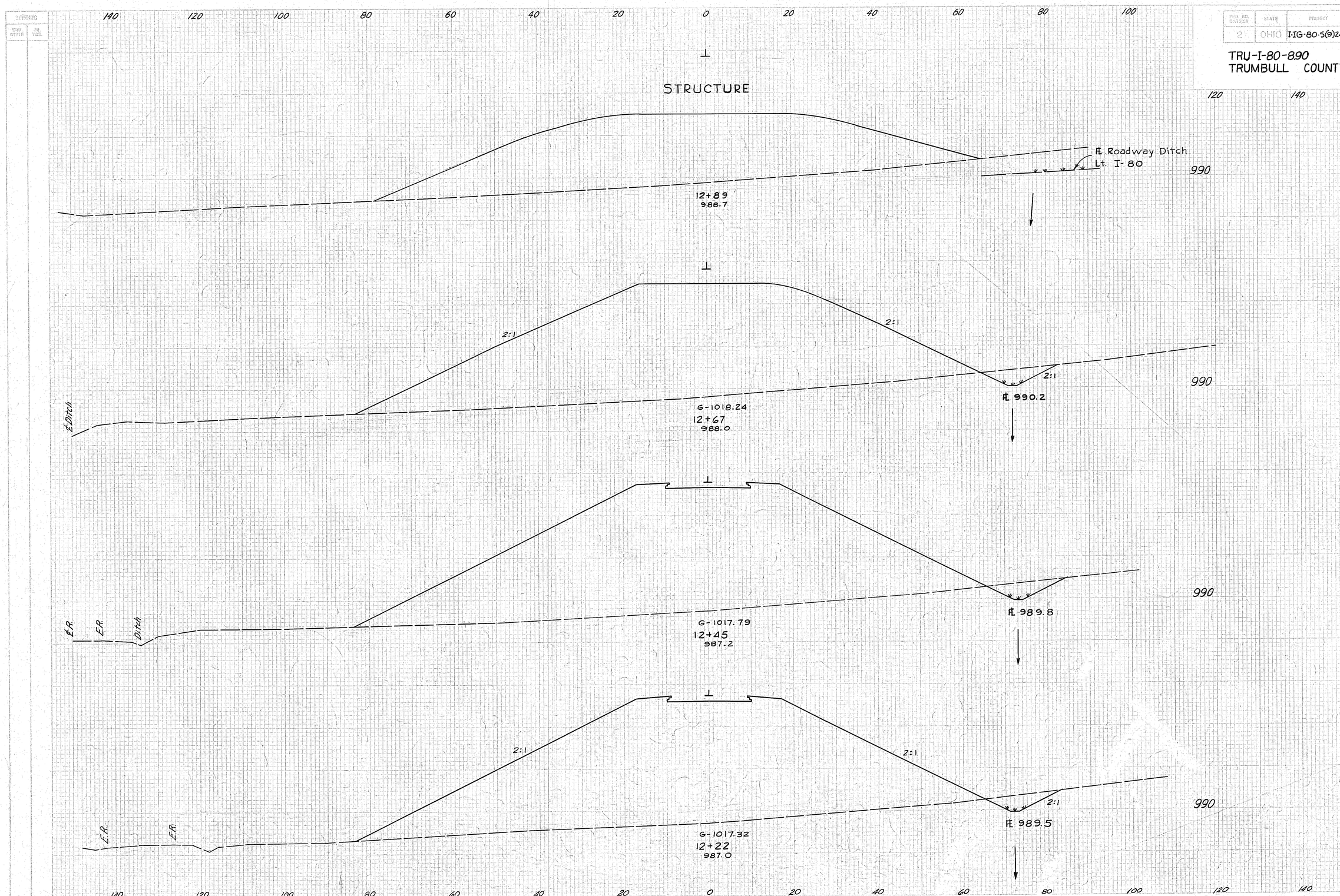
FED. AREA		VOLUME	
CUT	FILL	CUT	FILL
0	2668	5	2352
12	2624	9	2339
8	Ahead 2428 Back 1300	6	1168
5	1224	10	1107

RELOC. PRICE SHAFFER RD.
Sta. 11+25 to Sta. 11+99

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(8)245	

241
401

TRU-I-80-8.90
TRUMBULL COUNTY



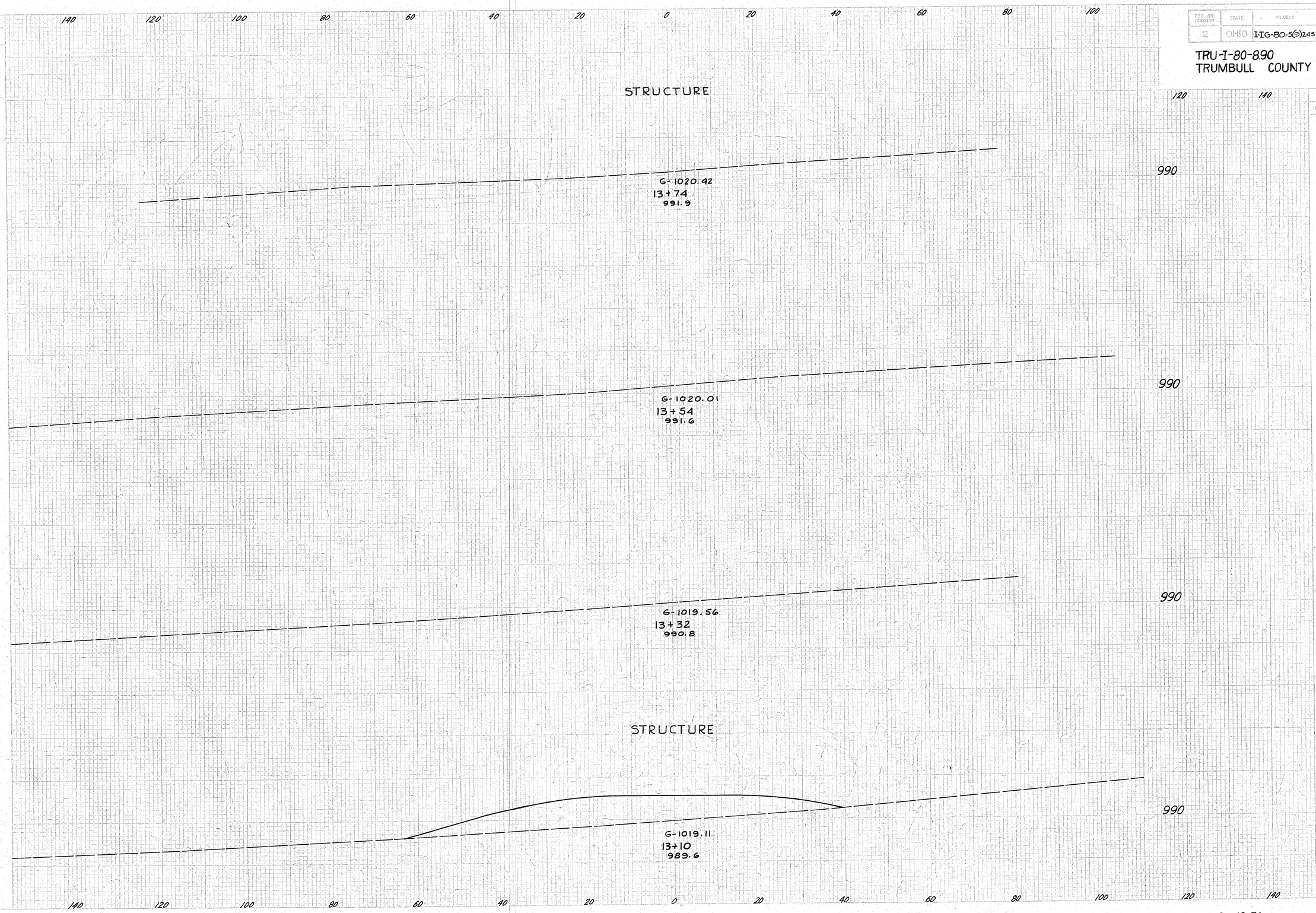
END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	1614	0	1671
0	2488	3	2132
8	2744	7	2304
8	2666	3	2272

RELOC PRICE SHAFEER RD. Sta. 12+22 to 12+89

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

242
401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0	0	190
0	466	0	809

RELOC PRICE SHAFFER RD Sta 13+10 to Sta 13+74

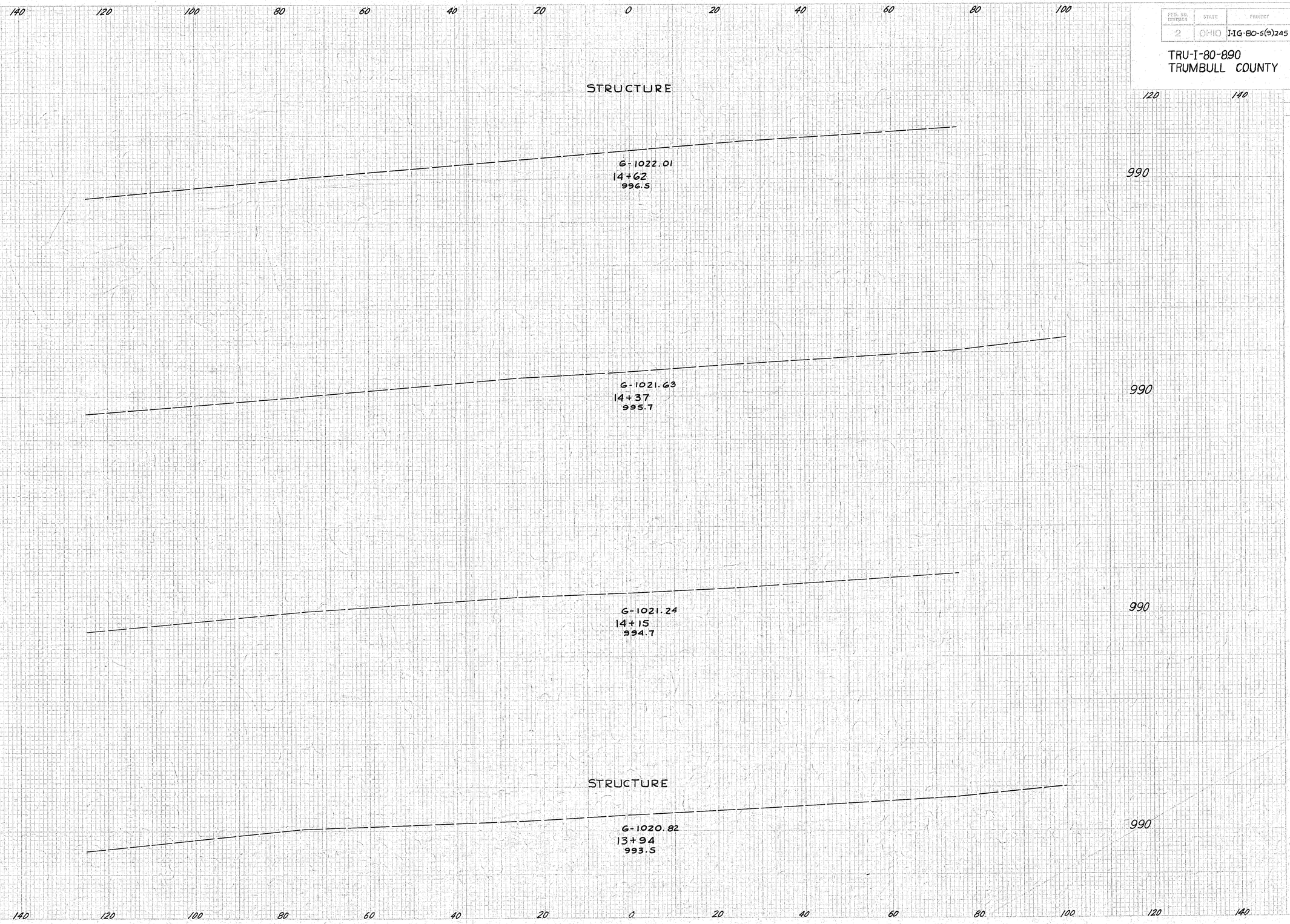
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(3)245	

243
401

TRU-I-80-890
TRUMBULL COUNTY

SCREENING	
END VARIES	NO. YES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

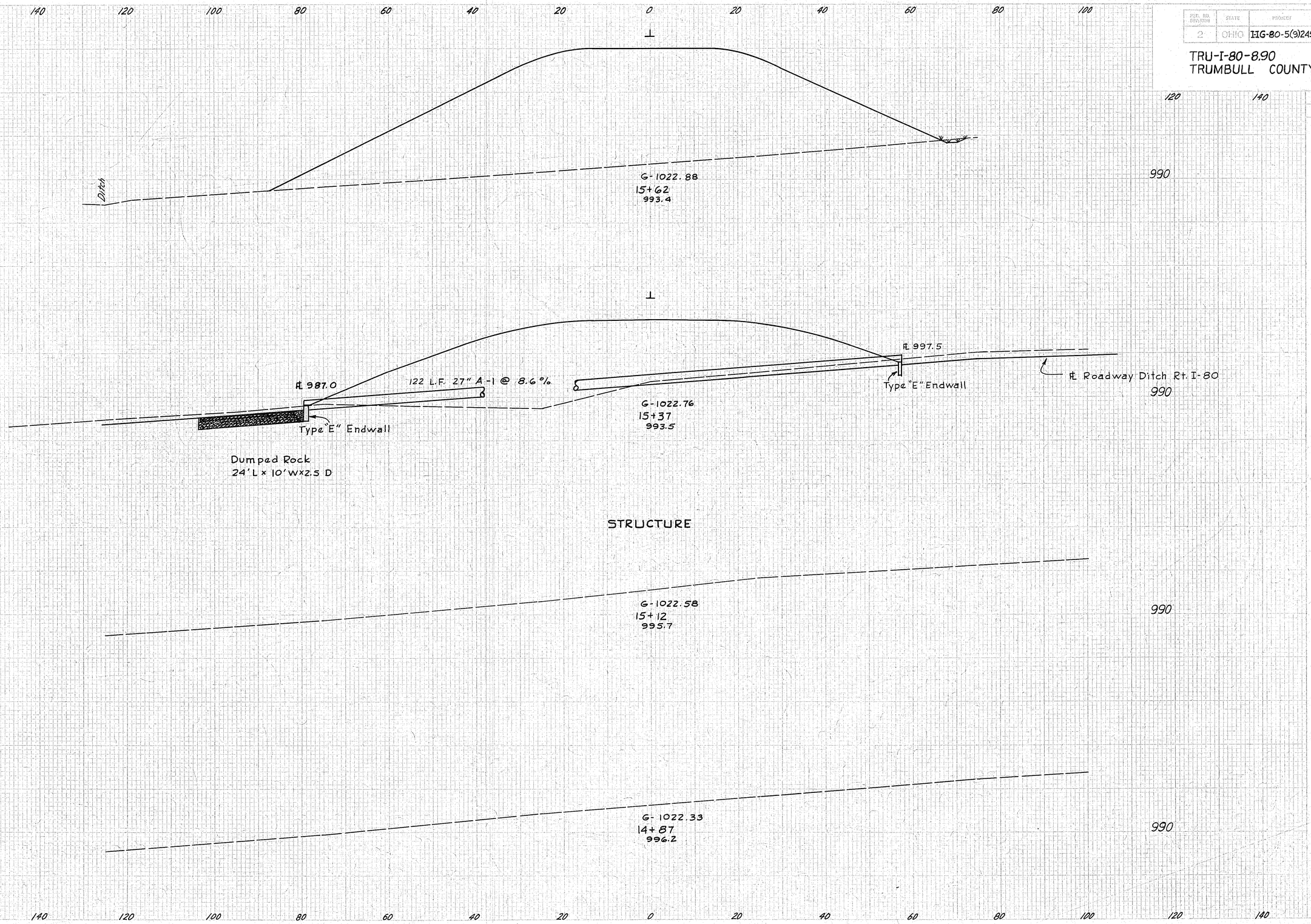


RELOC PRICE SHAFFER RD Sta 13+94 to Sta 14+62

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	HG-80-5(9)245	

244
401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	2610	0	974
0	1494	0	692

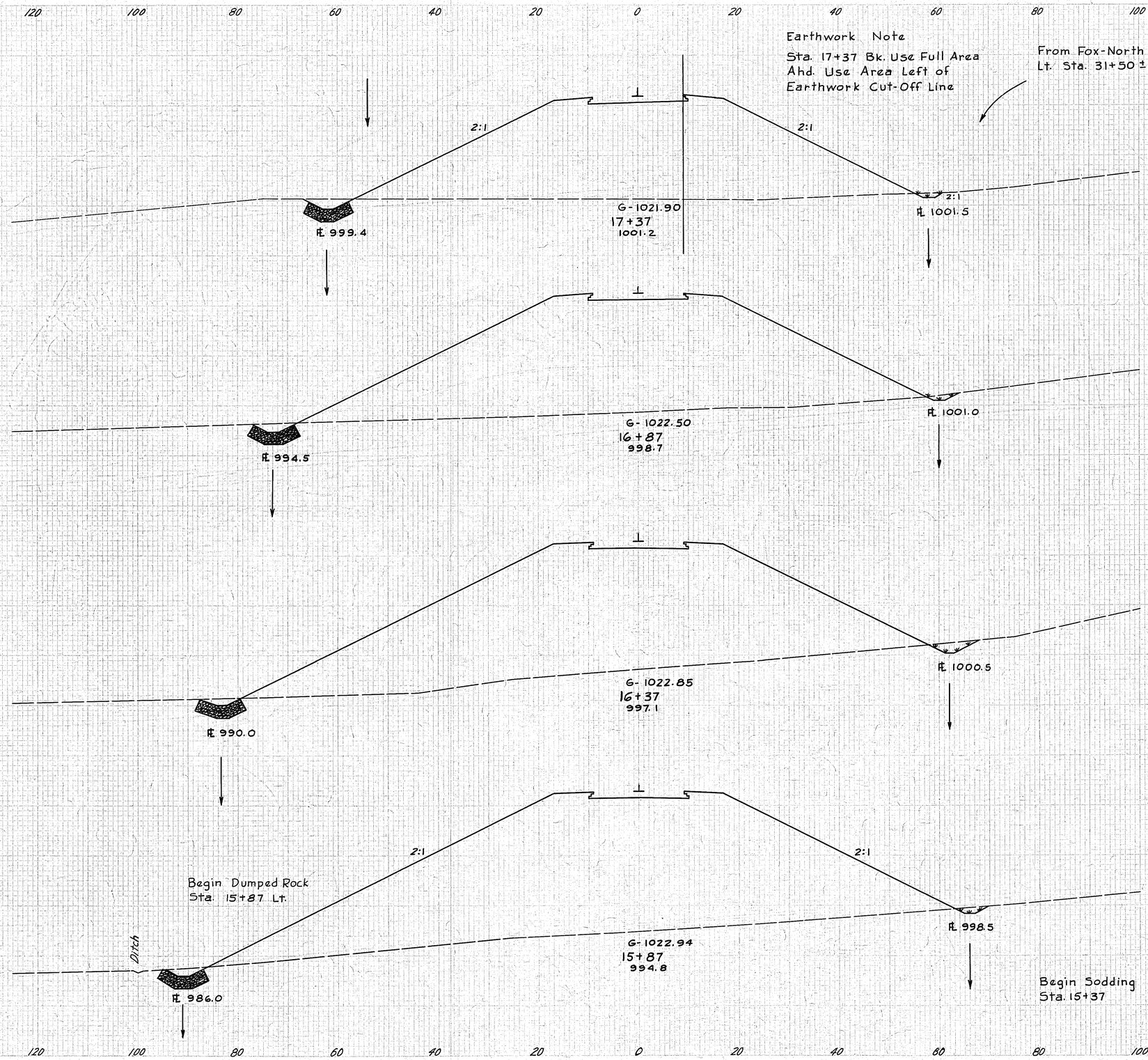
RELOC. PRICE SHAFFER RD.

Sta. 14+87 to Sta. 15+62

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

245
401

TRU-I-80-8.90
TRUMBULL COUNTY



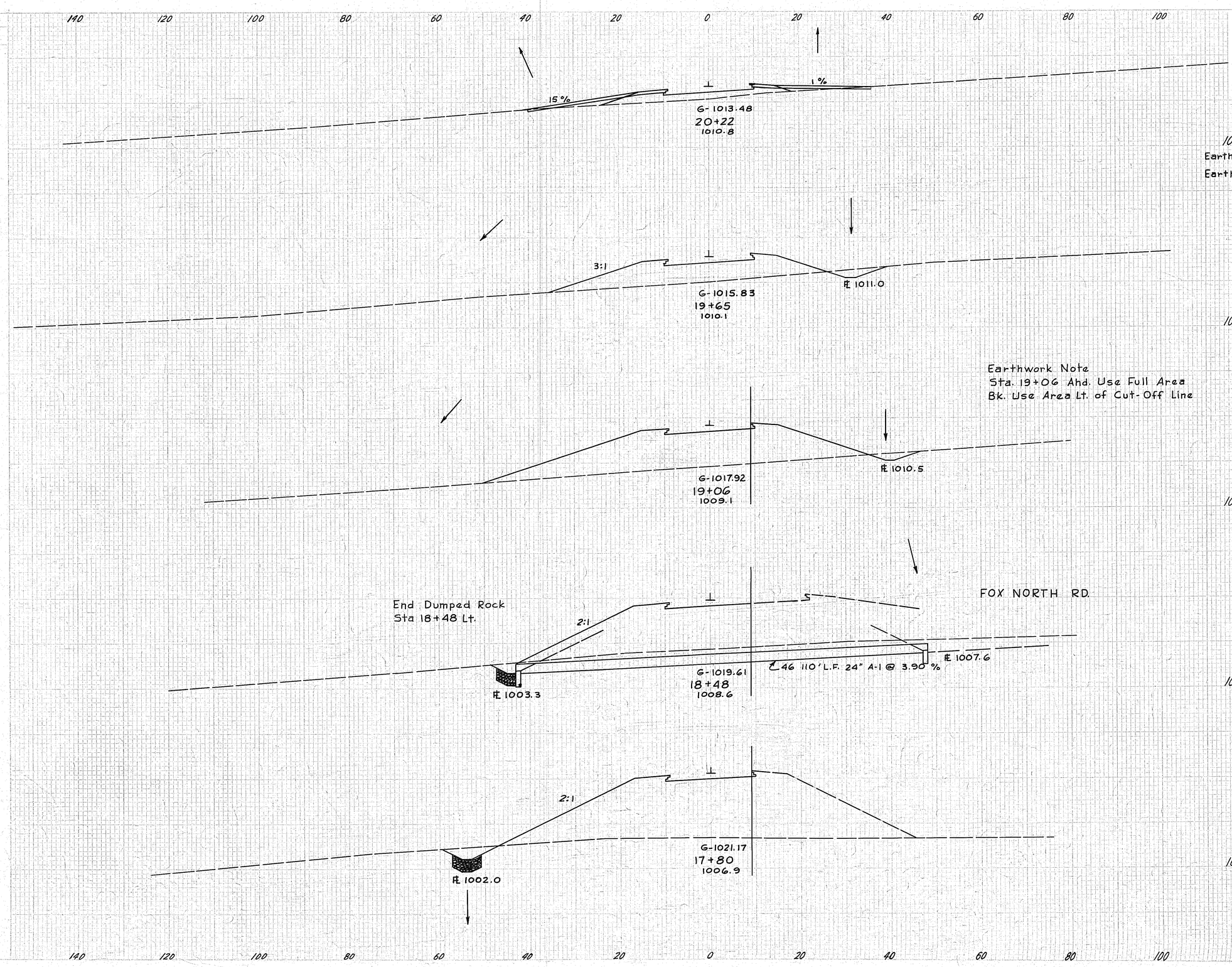
	AREA		VOLUME	
	CUT	FILL	CUT	FILL
21	Ahead 550 Back 1454		36	2037
18	1650	38	3557	
23	2192	37	4356	
17	2512	8	2371	

RELOC. PRICE-SHAFFER RD.
Sta. 15+87 to Sta. 17+37

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

246
401

TRU-I-80-8.90
TRUMBULL COUNTY



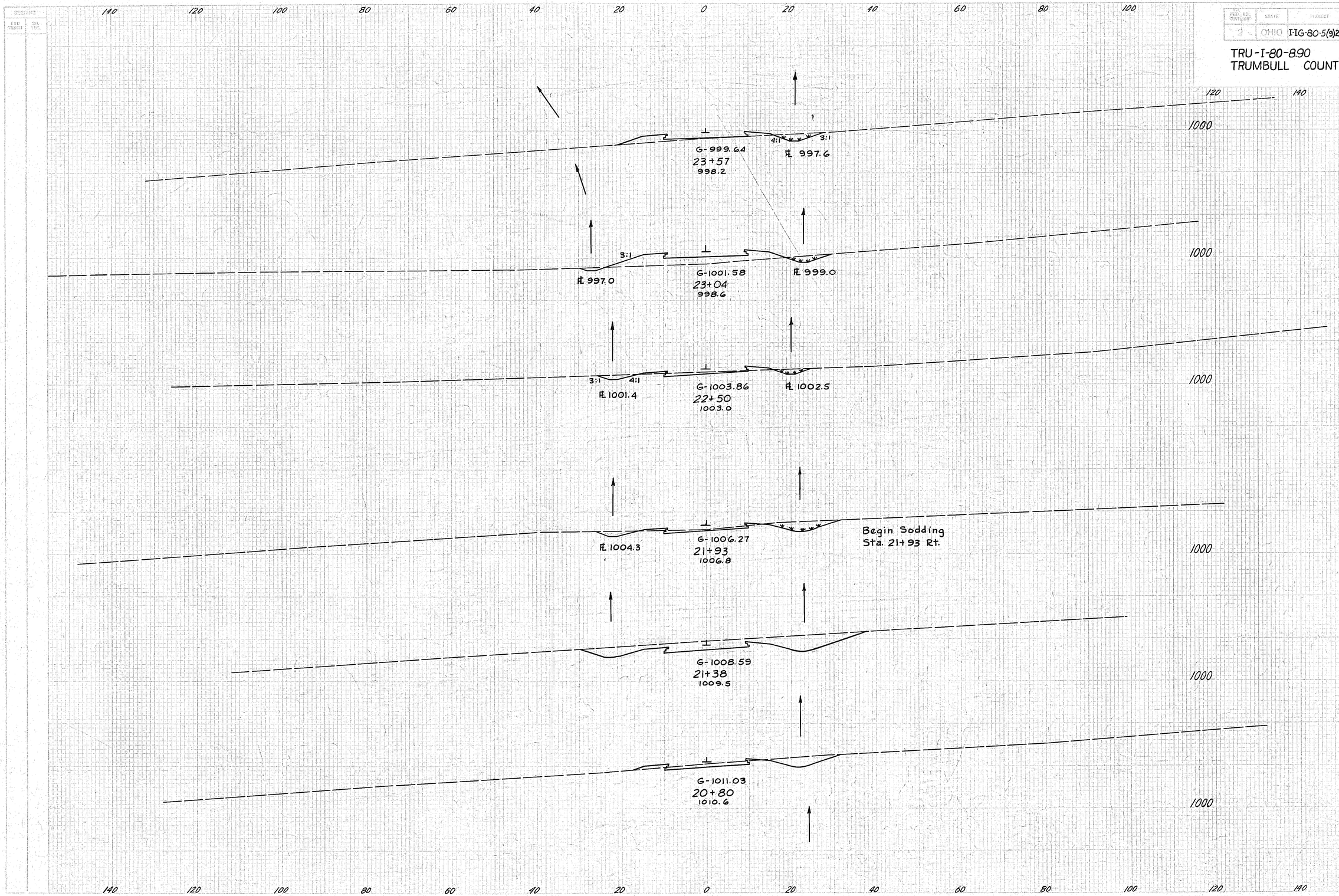
	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	14	70	48	317
Earthwork for Driveway Sta. 20+16 Lt.			1	4
Earthwork for Driveway Sta 20+22 Rt.			1	3
	32	230	42	630
	6	Ahead 484 Back 347	18	939
	11	390	44	1174
	24	542	36	1589

PELOC PRICE SHAFFER RD.

FED. RD. DIV. & ABBR.	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

247
401

TRU-I-80-890
TRUMBULL COUNTY



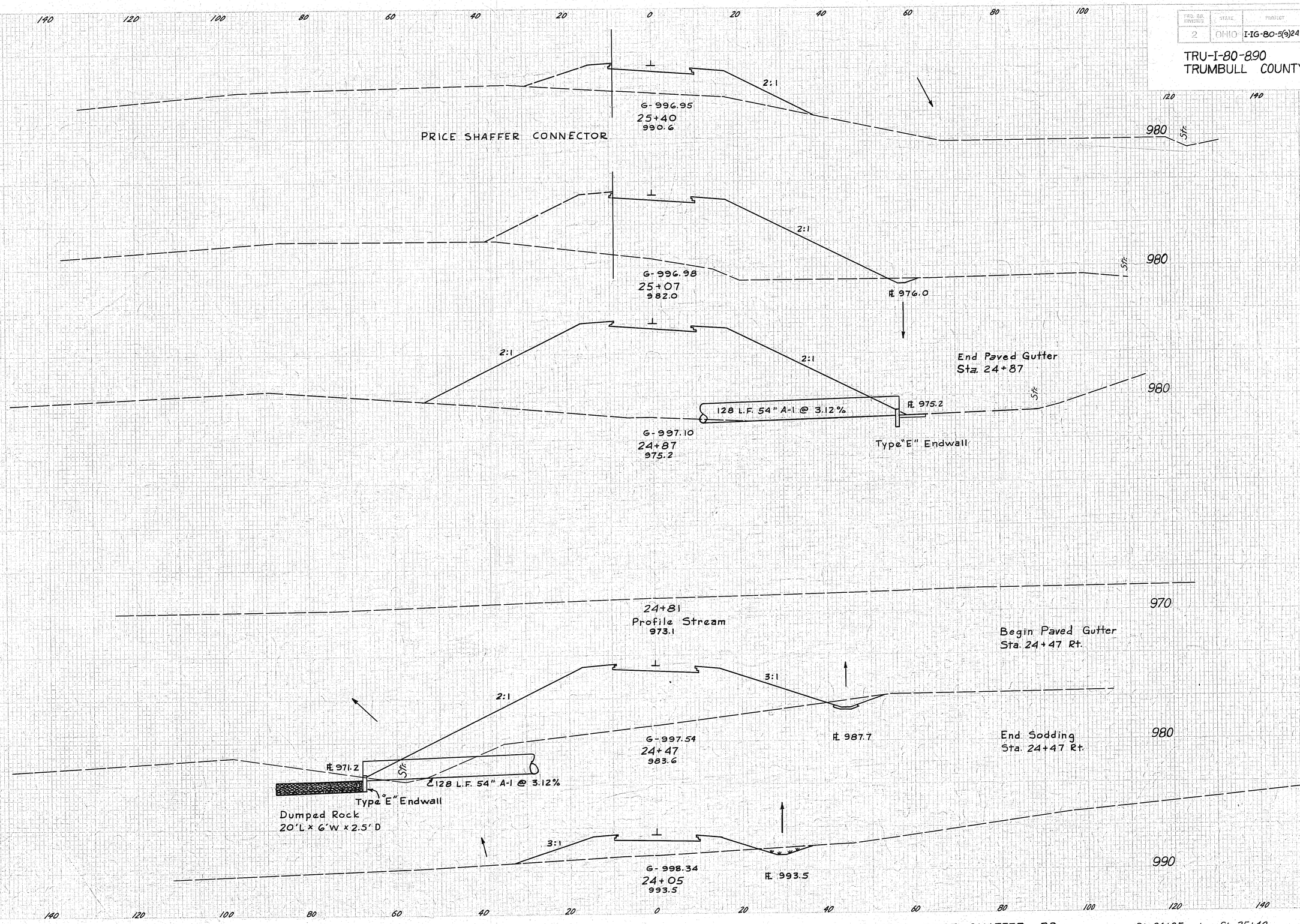
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	14	26	29	106
	16	82	43	90
	27	8	78	12
	50	4	190	4
	130	0	182	8
	40	7	58	83

REIOC PRICE SHAFFER RD Sta 20+80 to Sta 23+57

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

248
401

TRU-I-80-890
TRUMBULL COUNTY



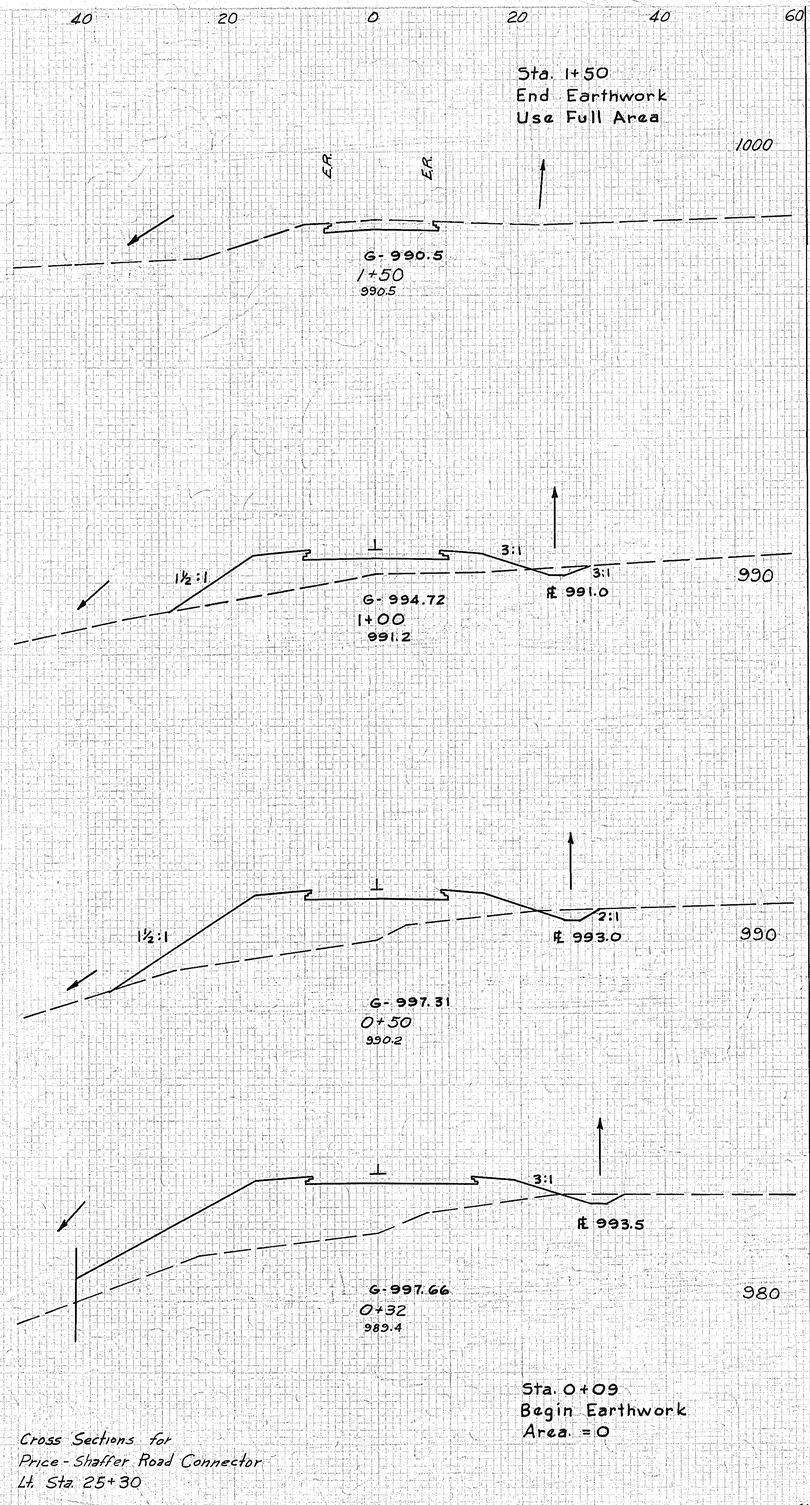
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	200	4	441
7	721	2	694
0	1154	12	1584
17	984	25	908
15	184	26	187

RELOC. PRICE SHAFFER RD. Sta 24+05 to Sta 25+40

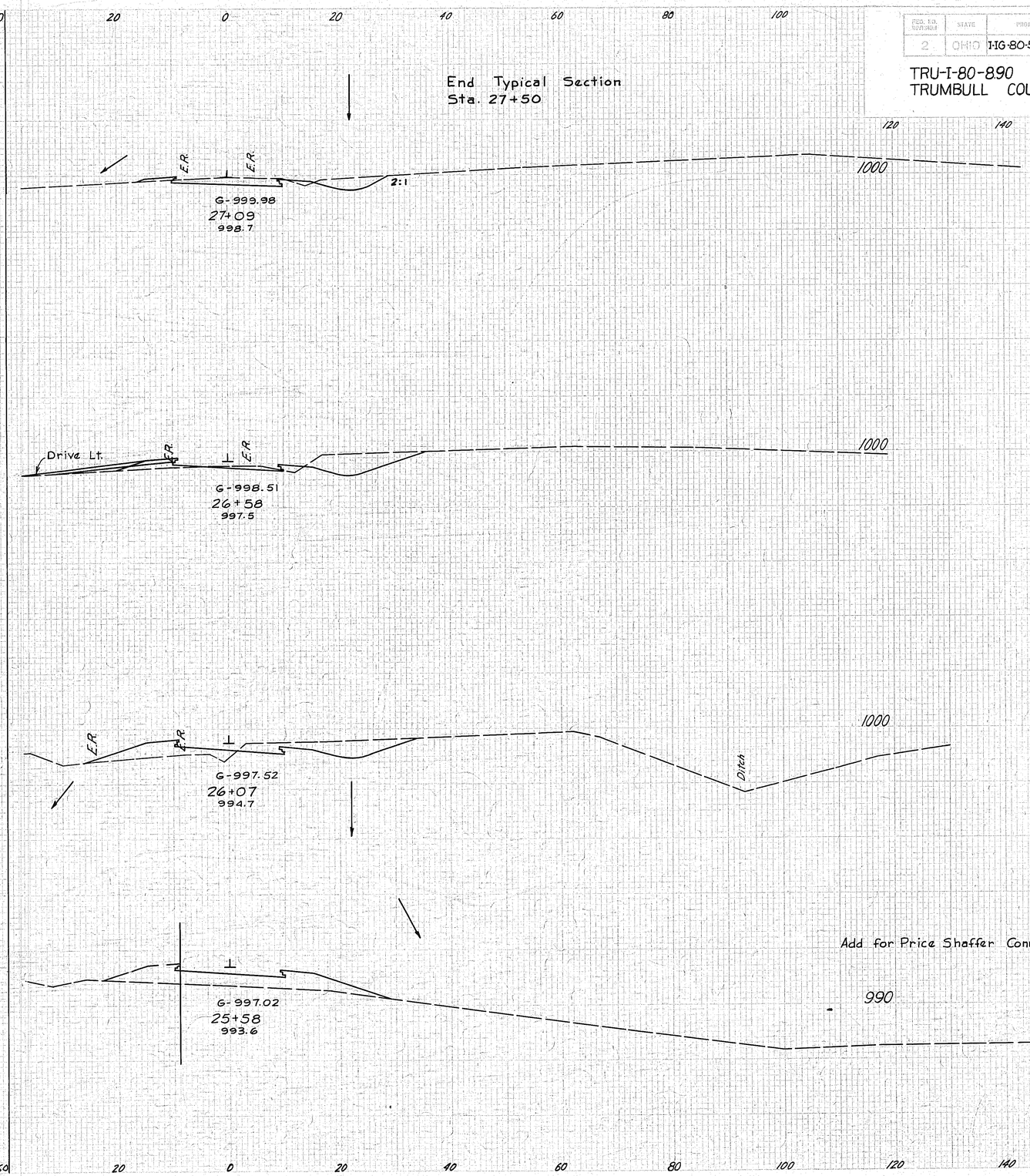
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

249
401

TRU-I-80-890
TRUMBULL COUNTY



Cross Sections for
Price-Shaffer Road Connector
Lt. Sta. 25+30



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
51	6	111	27
67	23	122	61
62	42	56	112
Add for Price Shaffer Connector		52	897
0	82	0	94

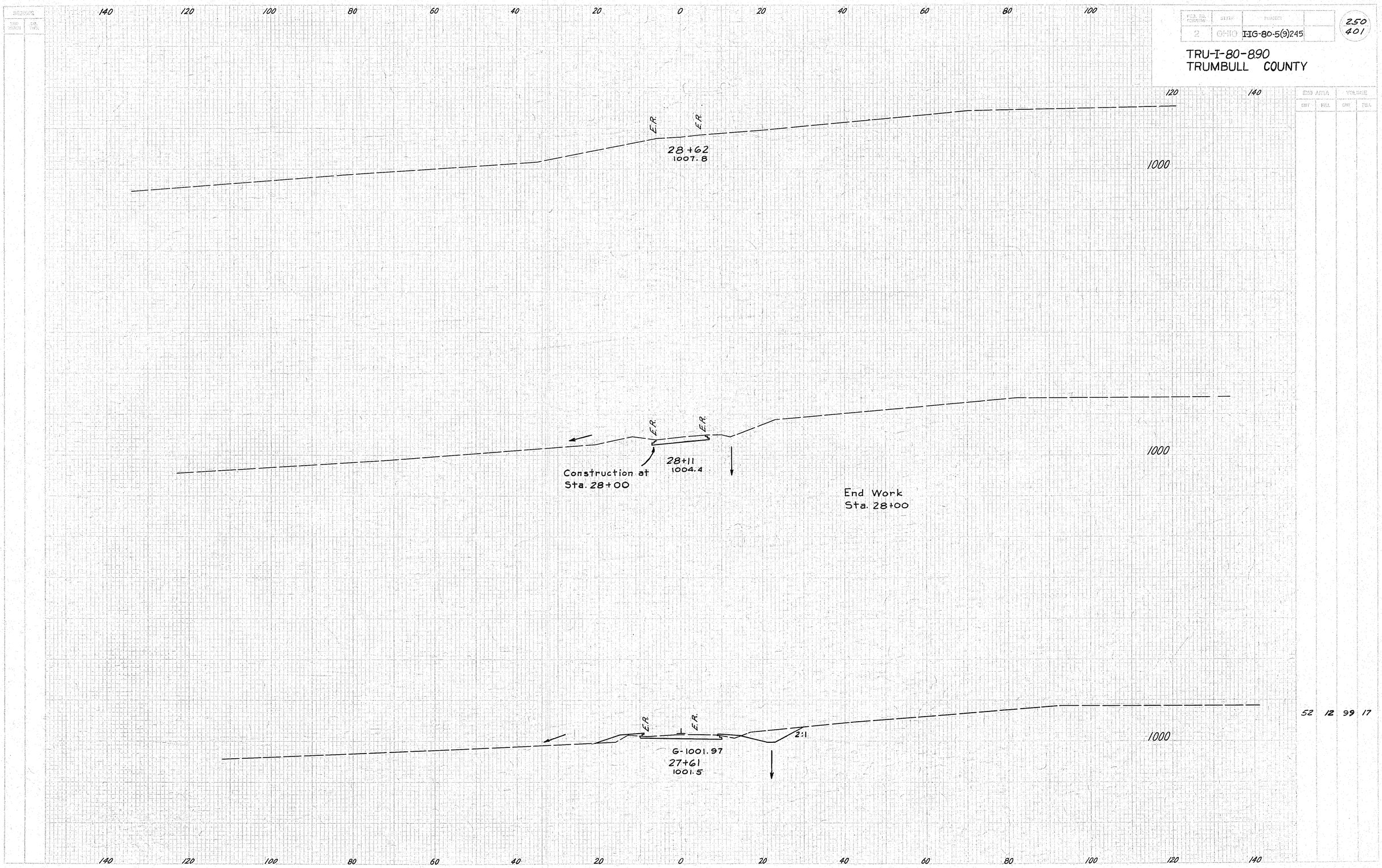
RELOC PRICE SHAFFER RD Sta 25+58 to Sta 27+09

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	HG-80-5(9)245	

250
401

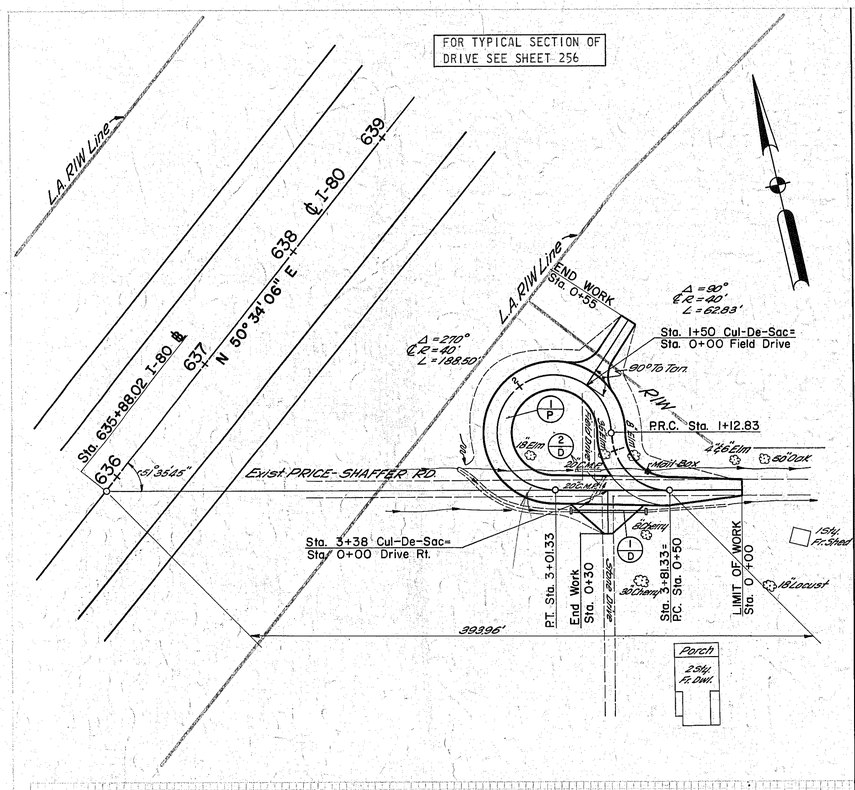
TRU-I-80-8.90
TRUMBULL COUNTY

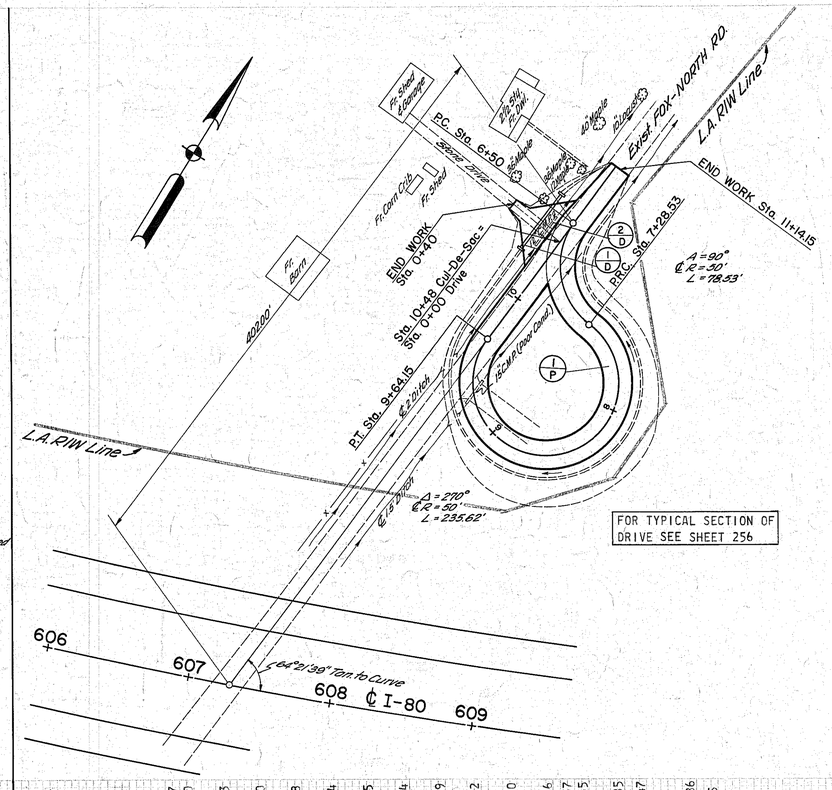
END AREA		VOLUME	
CUT	FILL	CUT	FILL

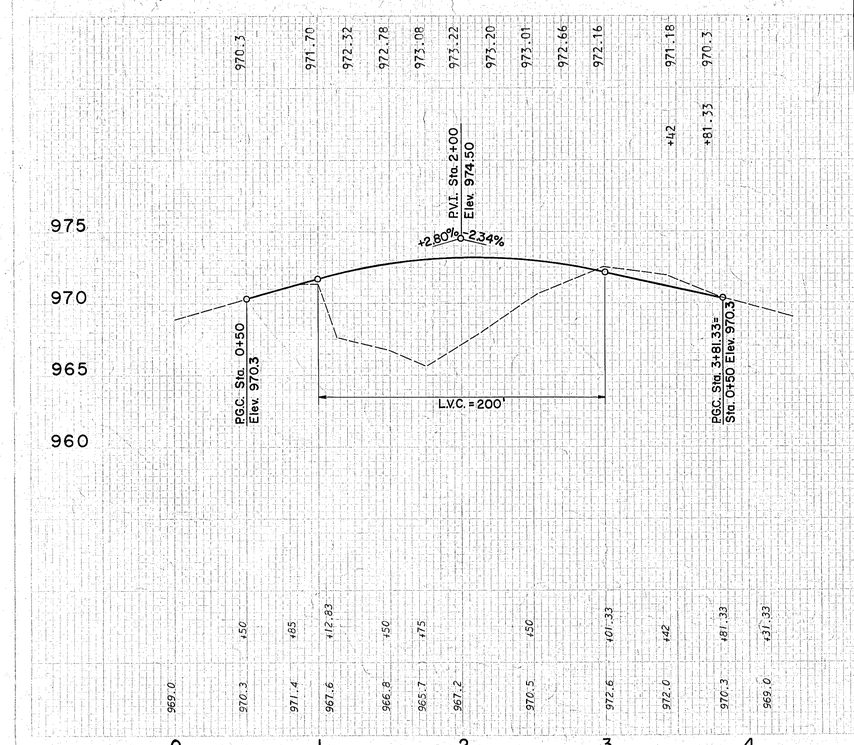


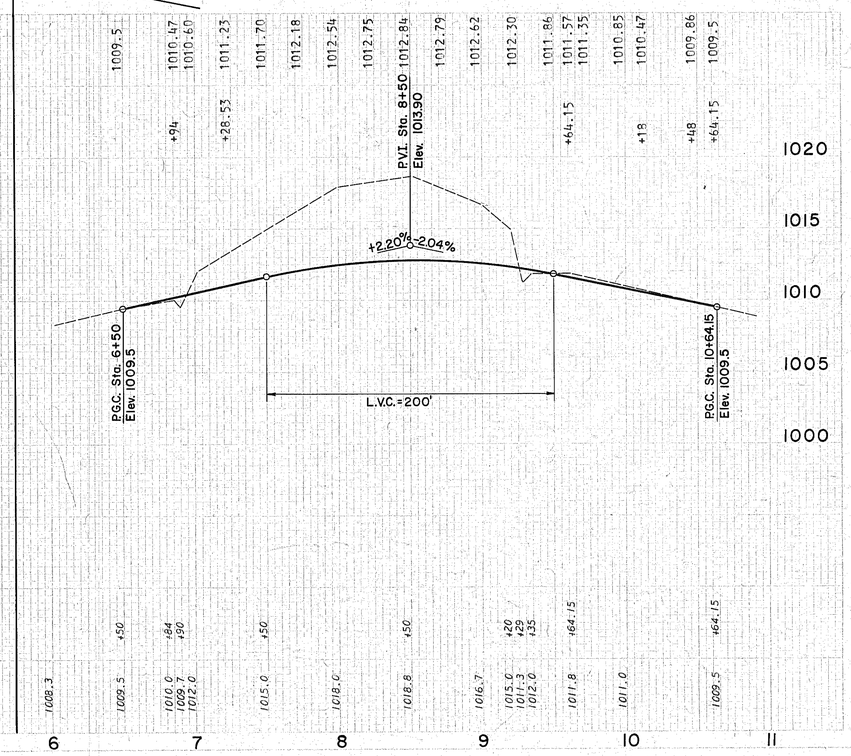
52 12 99 17

RELOC. PRICE SHAEFFER RD. Sta 27+61 to Sta 28+62









ITEM	E-12 Pipe Removal (Under 15")	SPECIAL Furnishing & Mixing Calcium Chloride With Aggregate	I-1 CL. F-4
	L.F.	CU. YD.	12" L.F.
Price Shaffer Cul-de-Sac			
1-D 3+12 to 3+66	41		
2-D 3+25			
1-P 0+50 to 3+81.33		202	54
Fox North Cul-de-Sac			
1-D	25		
2-D			
1-P 6+50 to 11+14.15		227	
TOTALS	66	429	108

ESTIMATED QUANTITIES

ITEM	Masonry CU. YD.
1-2	.46
TOTALS	.9

PRICE SHAFFER Cul-De-Sac Sta. 0+00 To 4+31.33

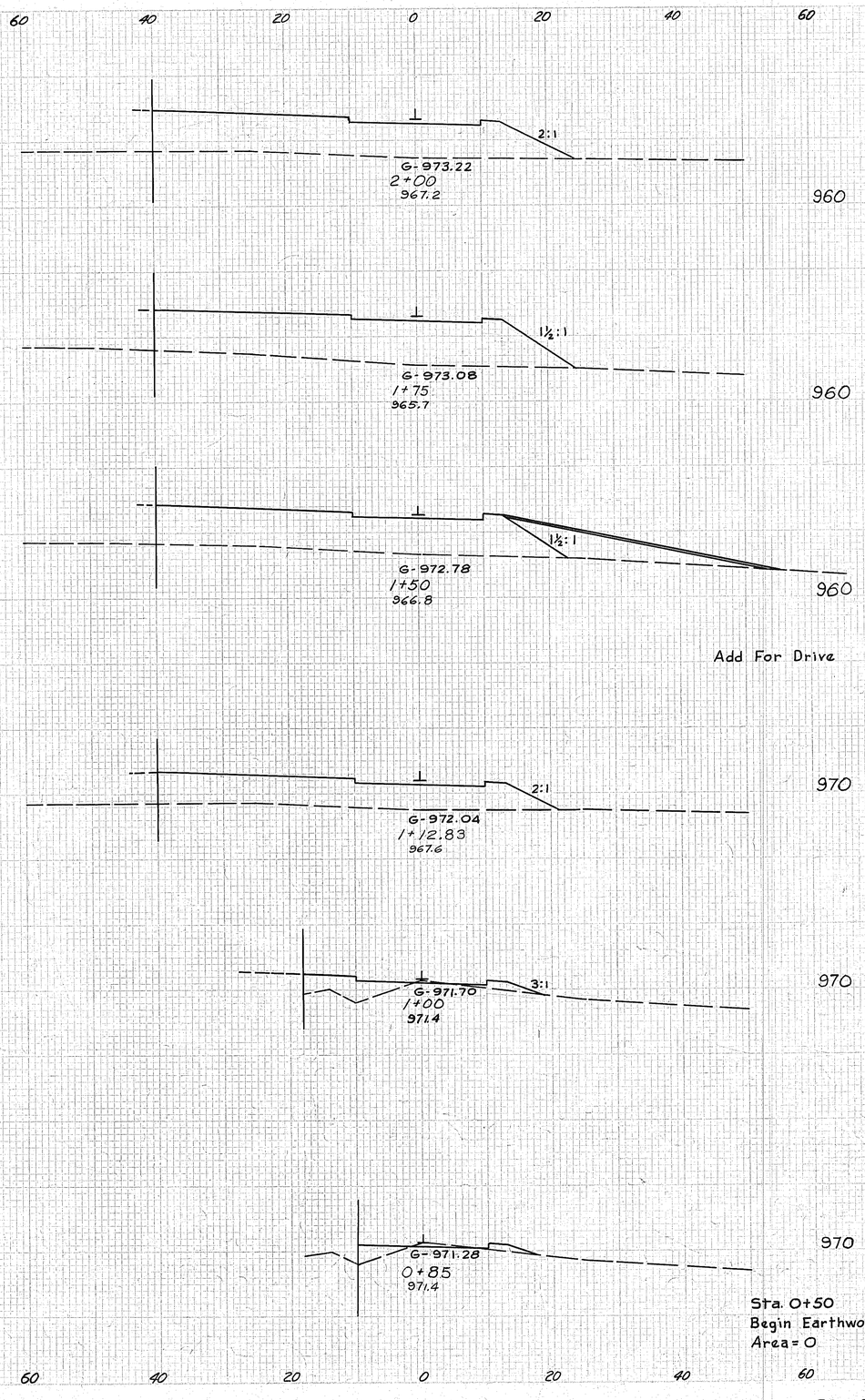
FOX-NORTH ROAD Cul-De-Sac Sta. 6+50 To 11+14.15

CUL-DE-SACS

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-80-5(9)245

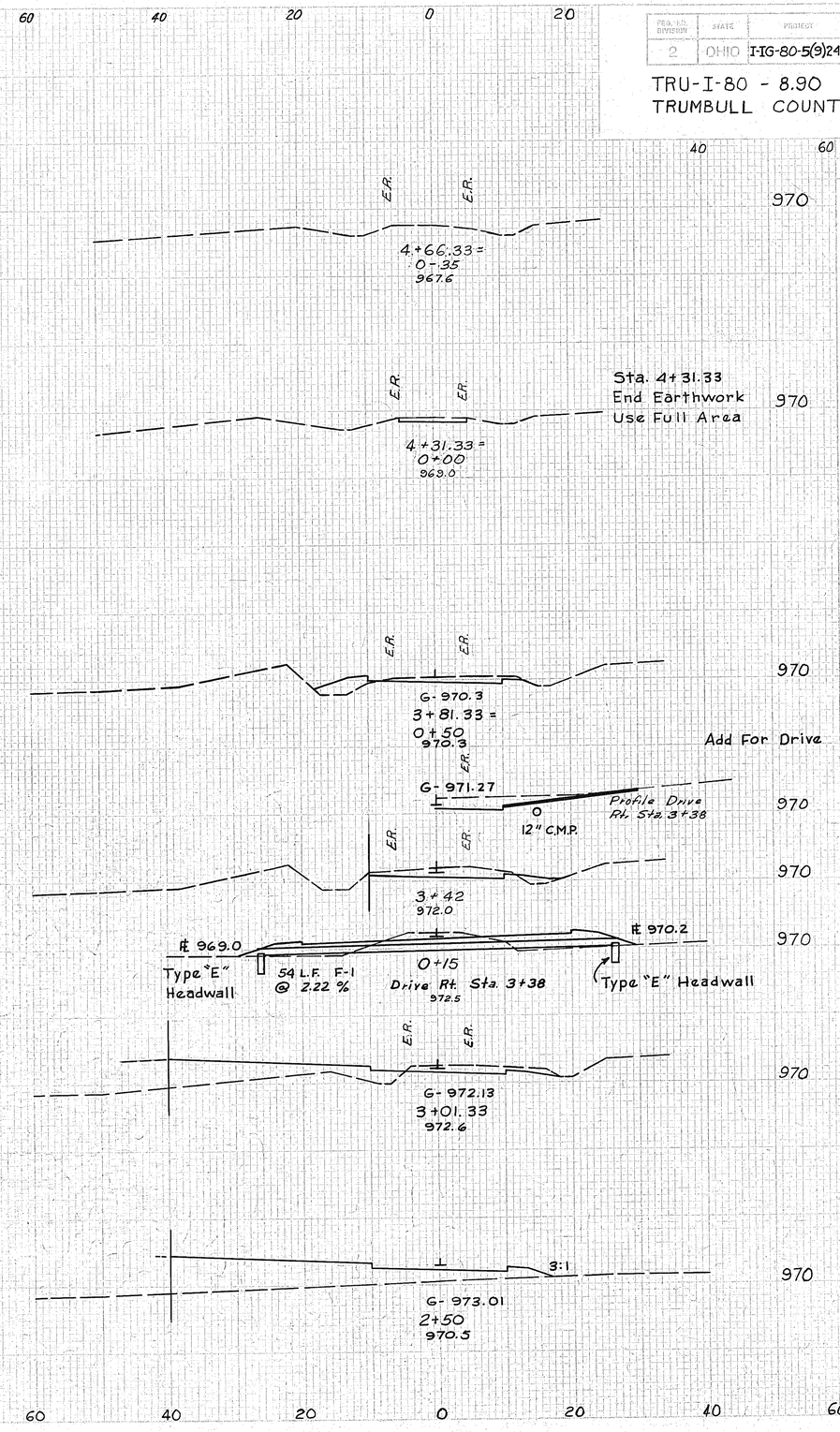
252
401

TRU-I-80 - 8.90
TRUMBULL COUNTY



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	0	328	0	332
	0	390		331
	0	326	0	390
Add For Drive			0	72
	0	240	1	70
	1	57	1	22
	4	22	2	14
Sta. 0+50 Begin Earthwork Area = 0	0	0	0	0

SEEDING END WIDTH	SEEDING SQ. YDS.



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Sta. 4+31.33 End Earthwork Use Full Area	9	0	24	61
	17	17	29	58
Add For Drive			2	0
	23	6	30	62
	17	76	16	234
	0	170	0	461

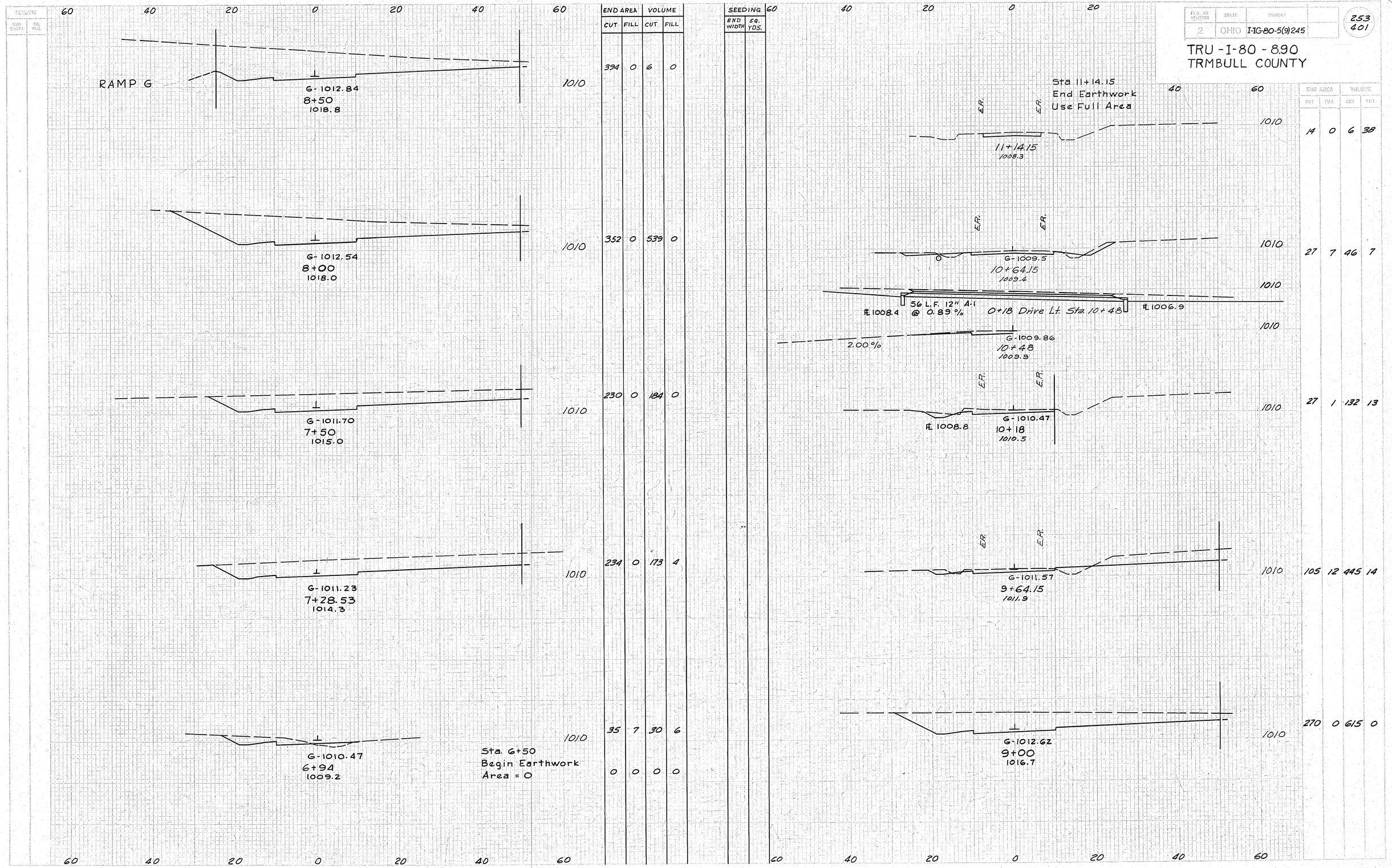
SEEDING END WIDTH	SEEDING SQ. YDS.

PRICE - SHAFFER RD. CUL-DE-SAC

Sta. 0+00 - 4+66.33

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	253 401

TRU - I-80 - 8.90
TRUMBULL COUNTY



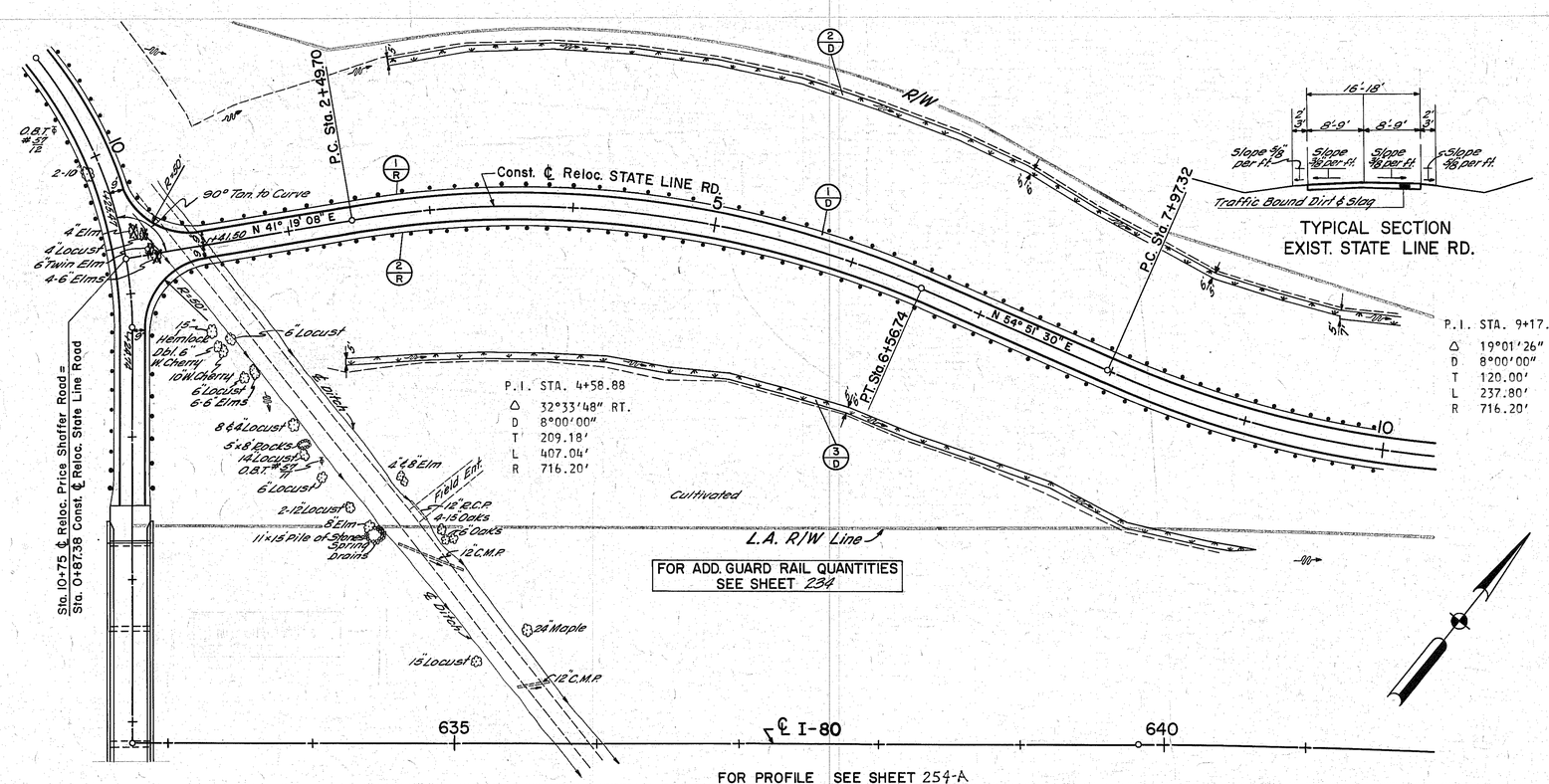
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	394	0	6	0
	352	0	539	0
	230	0	184	0
	234	0	173	4
	35	7	30	6
	0	0	0	0

SEEDING END WIDTH	SEEDING SQ. YDS.

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
14	0	6	38
27	7	46	7
27	1	132	13
105	12	445	14
270	0	615	0

FOX - NORTH ROAD CUL-DE-SAC

STA. 6+94 to STA. 11+14.15



TYPICAL SECTION
EXIST. STATE LINE RD.

PAY ITEM	DESCRIPTION	UNIT	QUANTITY	SEE SHEET NO.
L-10	Sodding	SQ. YD.	436.0	
			440.0	
				876.0
I-15	Guard Rail	L.F.	900.0	
			937.5	
				1837.5
I-9	Stone U-Drain	L.F.	360	
				360

ESTIMATED QUANTITIES

PAY ITEM NO.	STATION TO STATION	SIDE
1-D	1+25 to 10+00	Lt.
2-D	2+81 to 10+00	Lt.
3-D	2+27 to 9+48	Rt.
1-R	10+00 Price Shaffer Rd.	
to	10+00 State Line Rd.	Lt.
2-R	11+42.5 Price Shaffer Rd.	
to	10+00 State Line Rd.	Rt.

TOTALS

Reloc. STATE LINE RD. Sta. 0+87.38 to Sta. 10+00–Plan

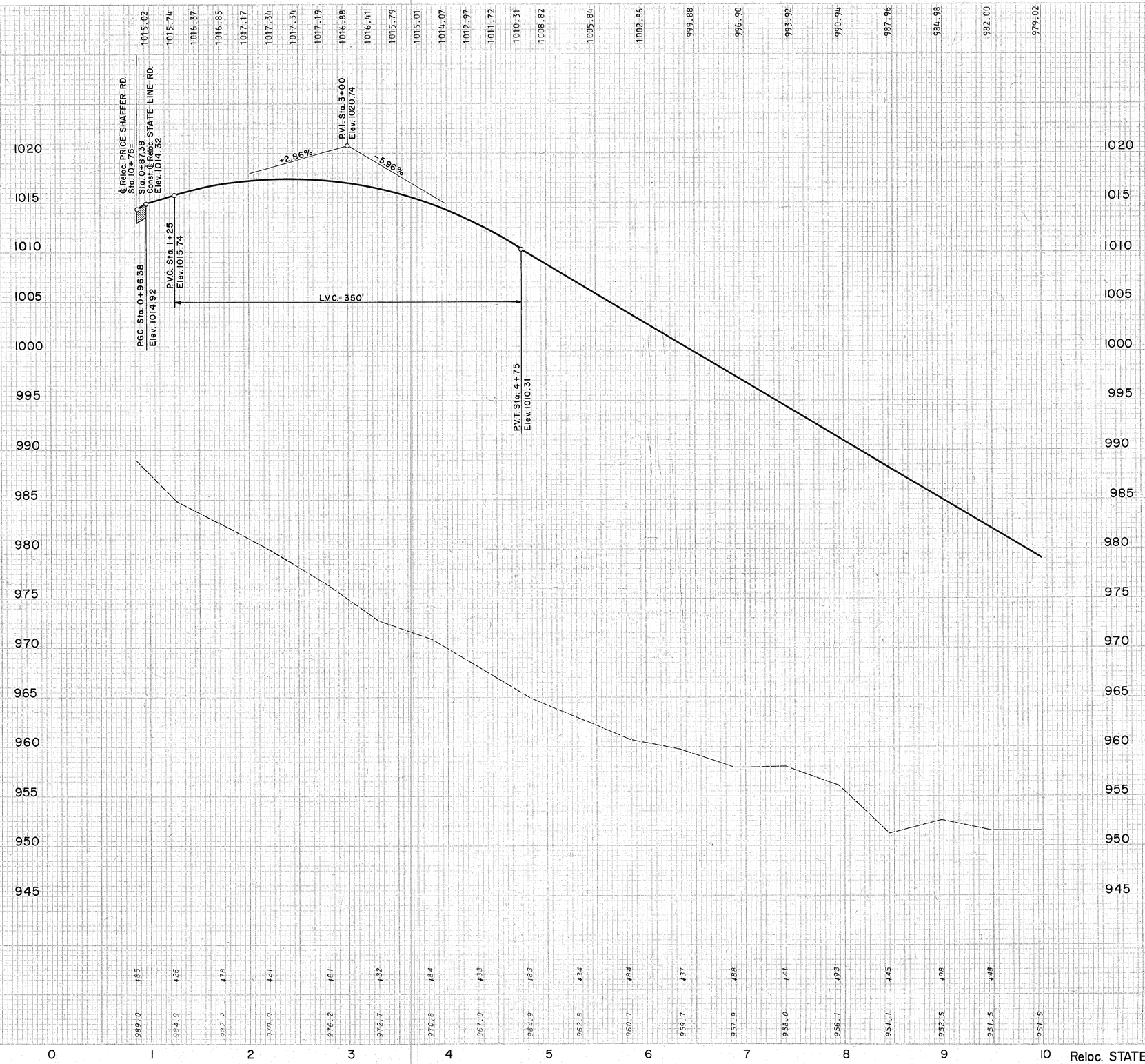
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

254-A
401

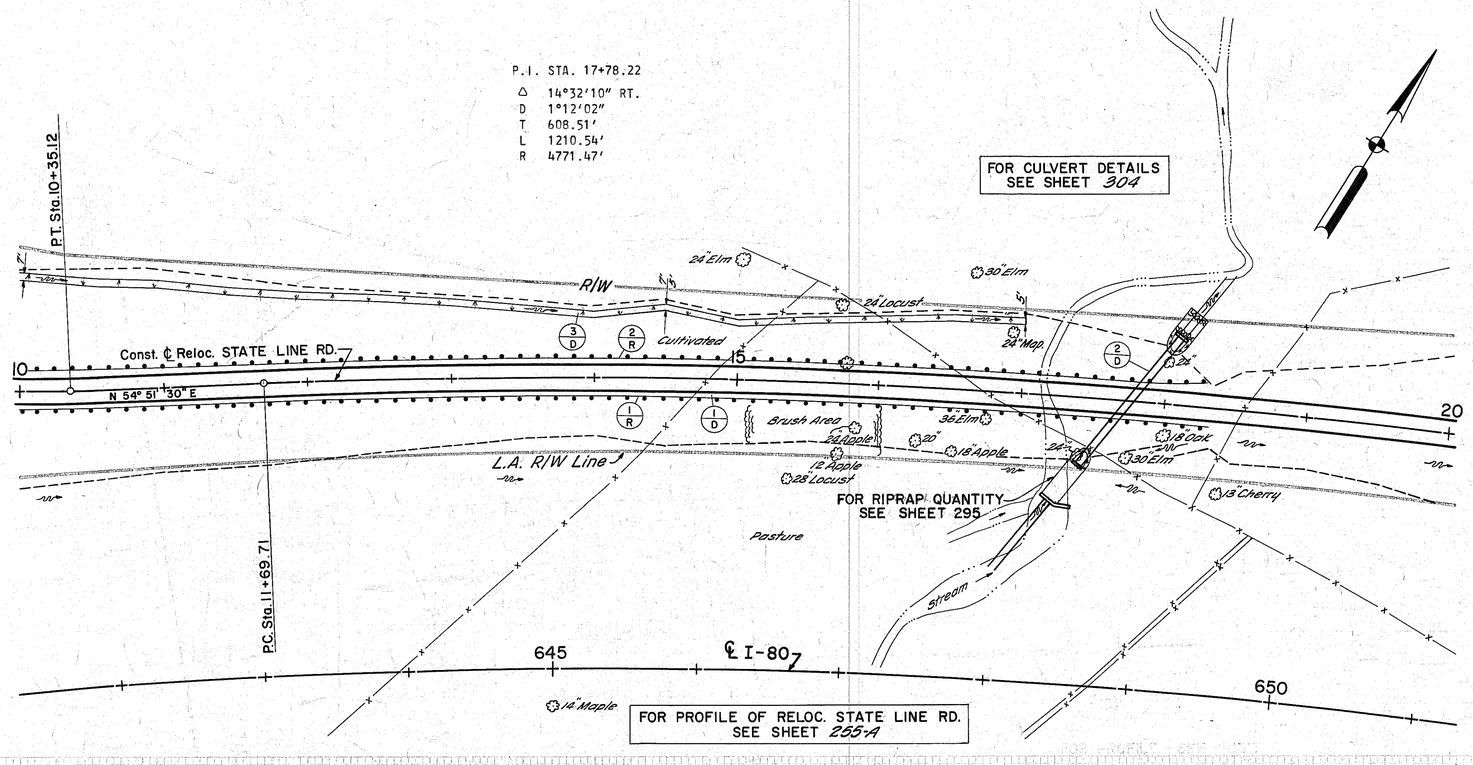
TRUMBULL COUNTY TRU-I-80-8.90

SEEDING	
END CUTOR	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL



Reloc. STATE LINE RD. Sta. 0+87.38 to Sta. 10+00 – Prof



ESTIMATED QUANTITIES

SEE SHEET NO.	I-10 Sodding	I-15 Guard Rail	I-10 Dumped Rock Channel Protection	I-9 Stone U-Drain	I-2 Masonry	I-1 Cl. A-1 M6.4(g) 10-10 ga. 60"	E-3 Channel Excavation	STATION TO STATION	SIDE
	SQ. YD.	L.F.	CU. YD.	L.F.	CU. YD.	L.F.	CU. YD.		
1-D	10.0		27.8					10+25 to 20+00	Rt. & Lt.
2-D	289.0				4.84	116	27	17+74 to 17+00	
3-D								10+00 to 17+00	
1-R		825.0						10+00 to 18+25	Rt.
2-R		825.0						10+00 to 18+25	Lt.
TOTALS	299.0	1650.0	28	400	4.8	116	27		

SEEDING	
END WIDTH	SQ. YDS.

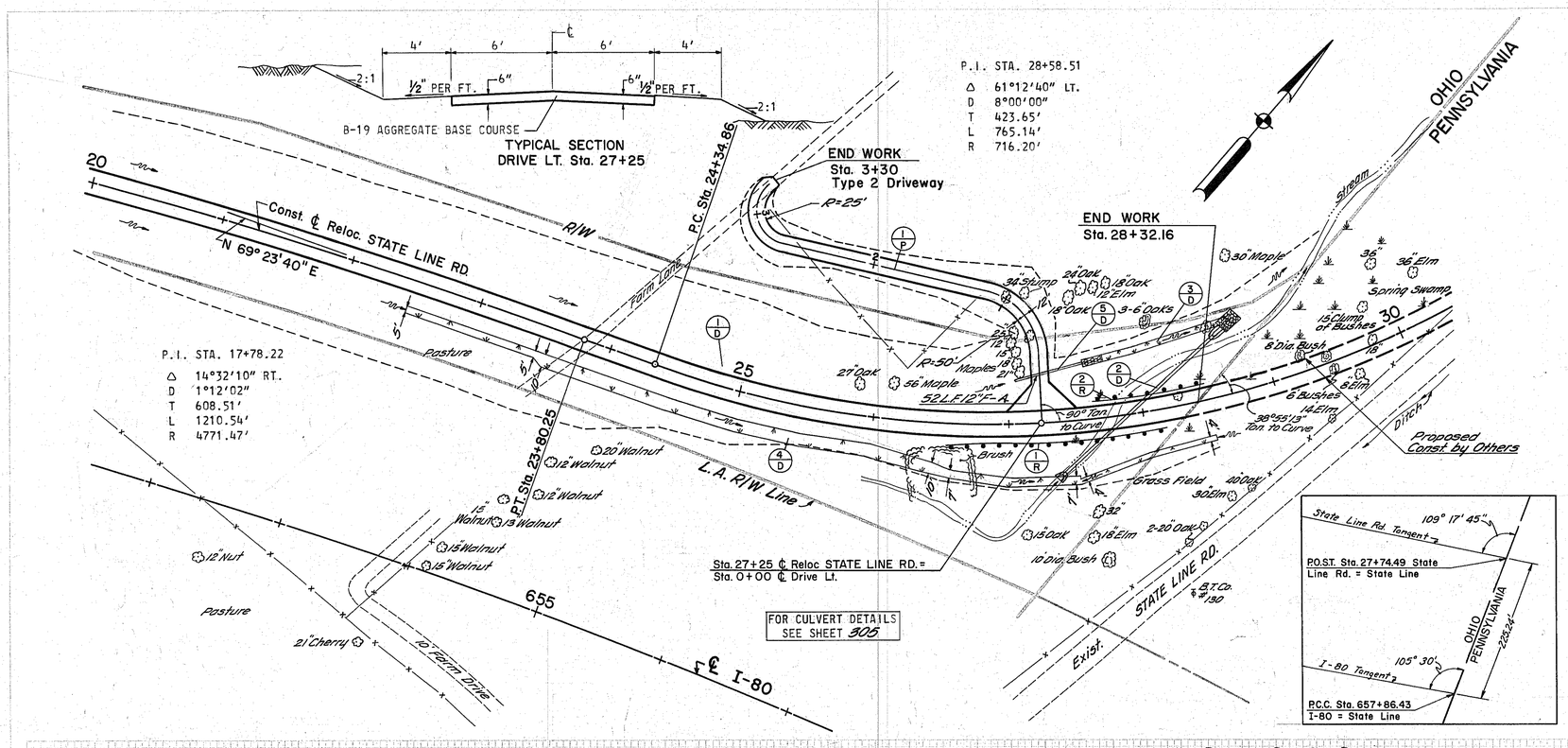
FED. RD. REGION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

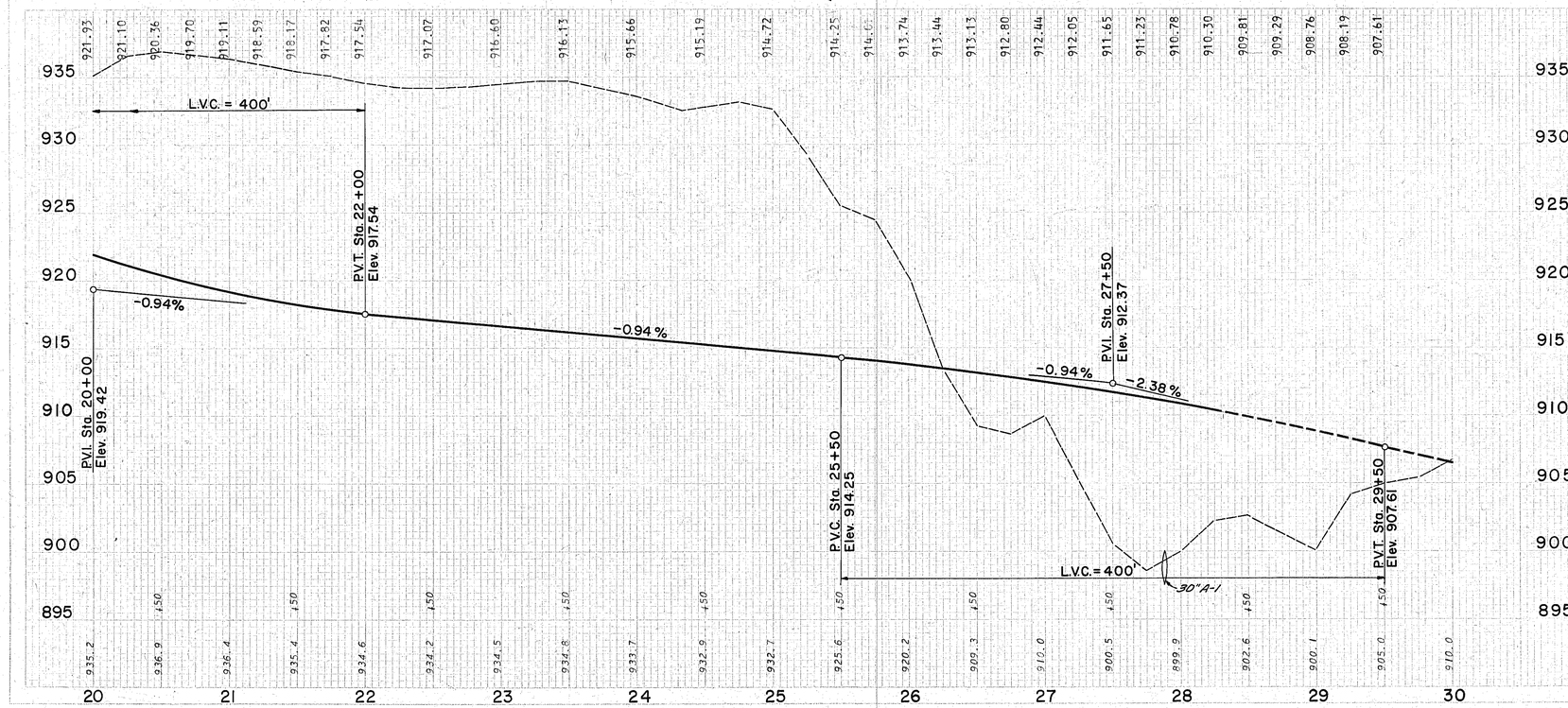
255A
401

TRUMBULL COUNTY TRU-I-80-8.90

END AREA		VOLUME	
CUT	FILL	CUT	FILL

Reloc. STATE LINE RD. Sta. 10+00 to Sta. 20+00 - Pro





REF. NO.	STATION TO STATION	SIDE	B-19 Aggr. Base Crse CU. YD.	E-3 Channel Excavation CU. YD.	I-1 Cl. A-1 M-6.4(d) 30" L.F.	I-1 Cl.-F-4 12" L.F.	I-2 Masonry CU. YD.	I-9 Stone U-Drain L.F.	I-15 Guard Rail L.F.	I-10 Dumped Rock Channel Protection CU. YD.	I-10 Sodding SQ. YD.
1-D	20+25 to 30+00	Lt.&Rt.	4								
2-D	27+88	Lt.		233							
3-D	27+71 to 29+00	Lt.			164		1.02				
4-D	22+50 to 27+96	Rt.				52					
5-D	27+05 to 27+71	Lt.									
1-R	26+50 to 28+12.5	Rt.							162.5		
2-R	27+25 to 28+37.5	Lt.							112.5		
1-P	24+13 to 27+25	Lt.	78.7							12.5	7.3
										6.9	7.2
											52.1
TOTALS			79.0	233	164	52	1.0	400	275.0	19.4	60.0

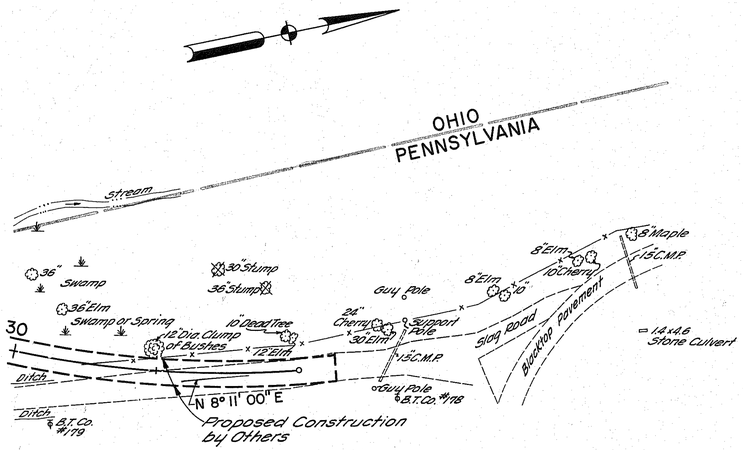
ESTIMATED QUANTITIES

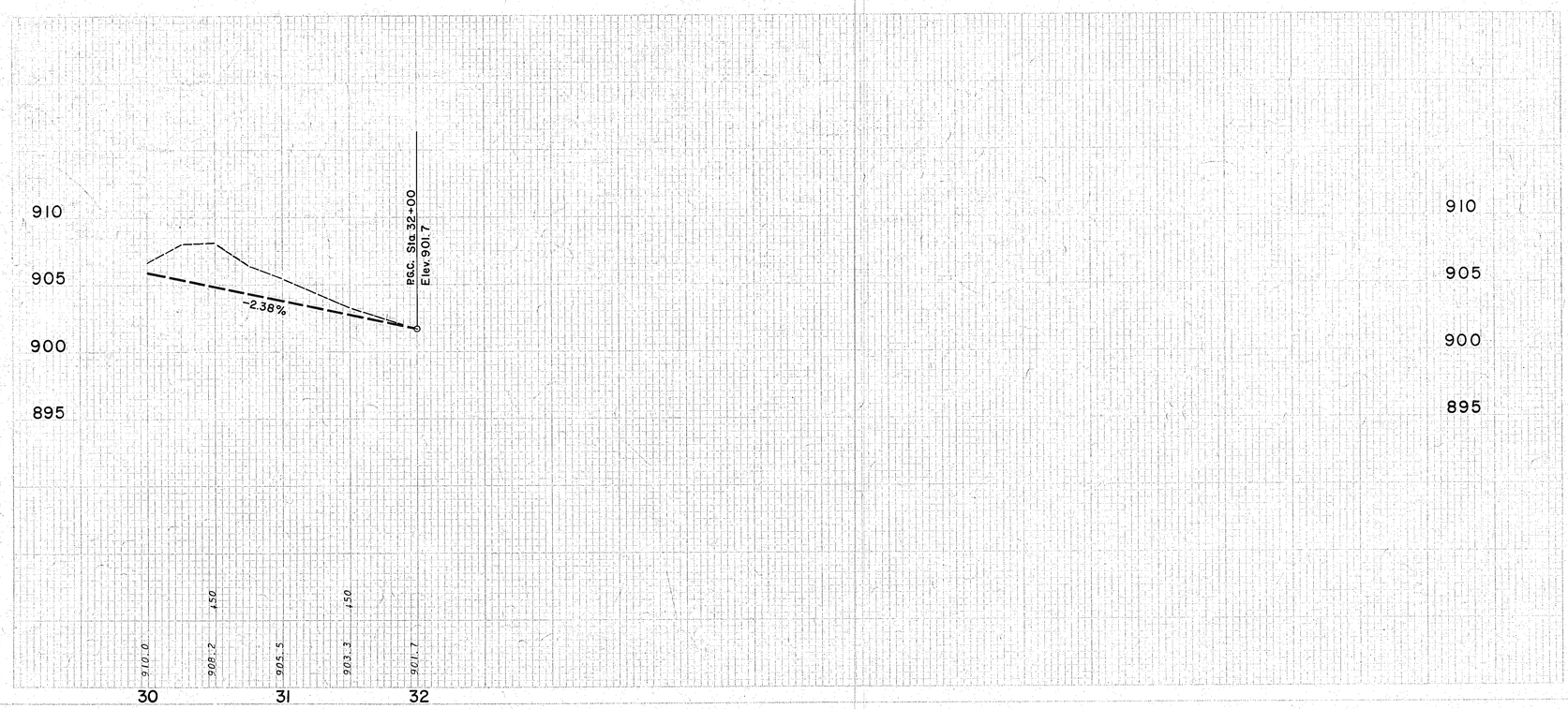
Reloc. STATE LINE RD. Sta. 20+00 to Sta. 30+00

FED. RD. DIV. SYM.	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

256A
401

TRUMBULL COUNTY TRU-I-80-8.90





ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE
TOTALS		

Reloc. STATE LINE RD. Sta. 30+00 to Sta. 32+00

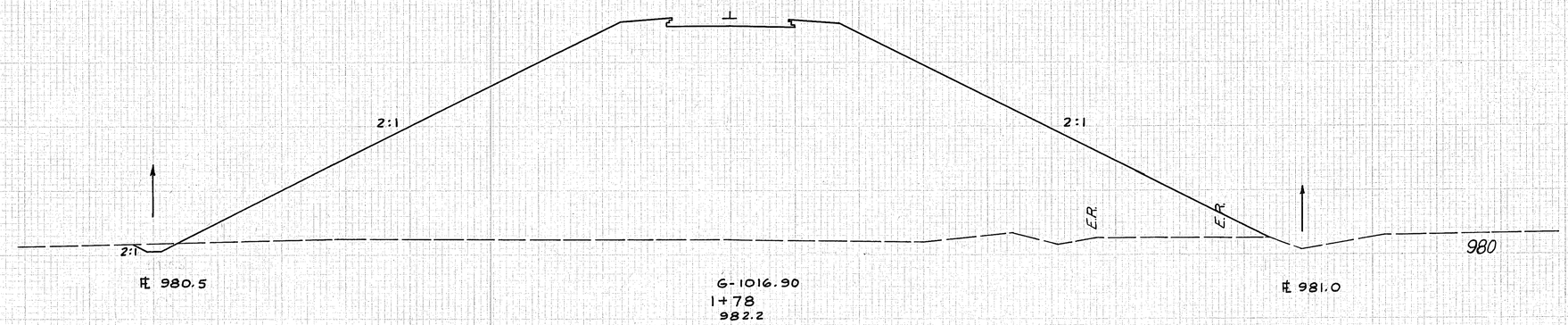
SEEDING	
END WIDTH	LA. TOS.

FED. RD. REGION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

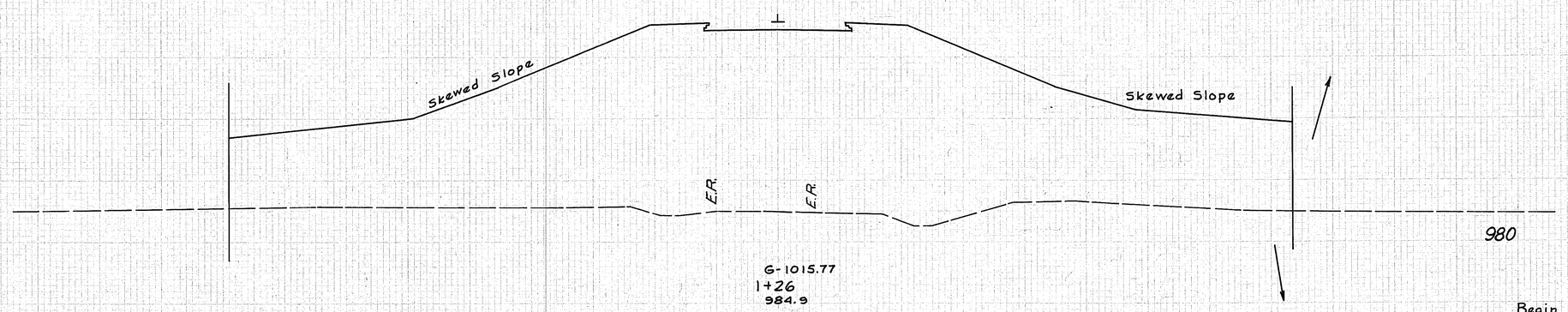
257
401

TRU-I-80-890
TRUMBULL COUNTY

2ND AREA		VOLUME	
CUT	FILL	CUT	FILL



B 3426 B 6855



0 3693 0 1983

Begin Earthwork
Sta. 0 +97 Area

0 0 0 0

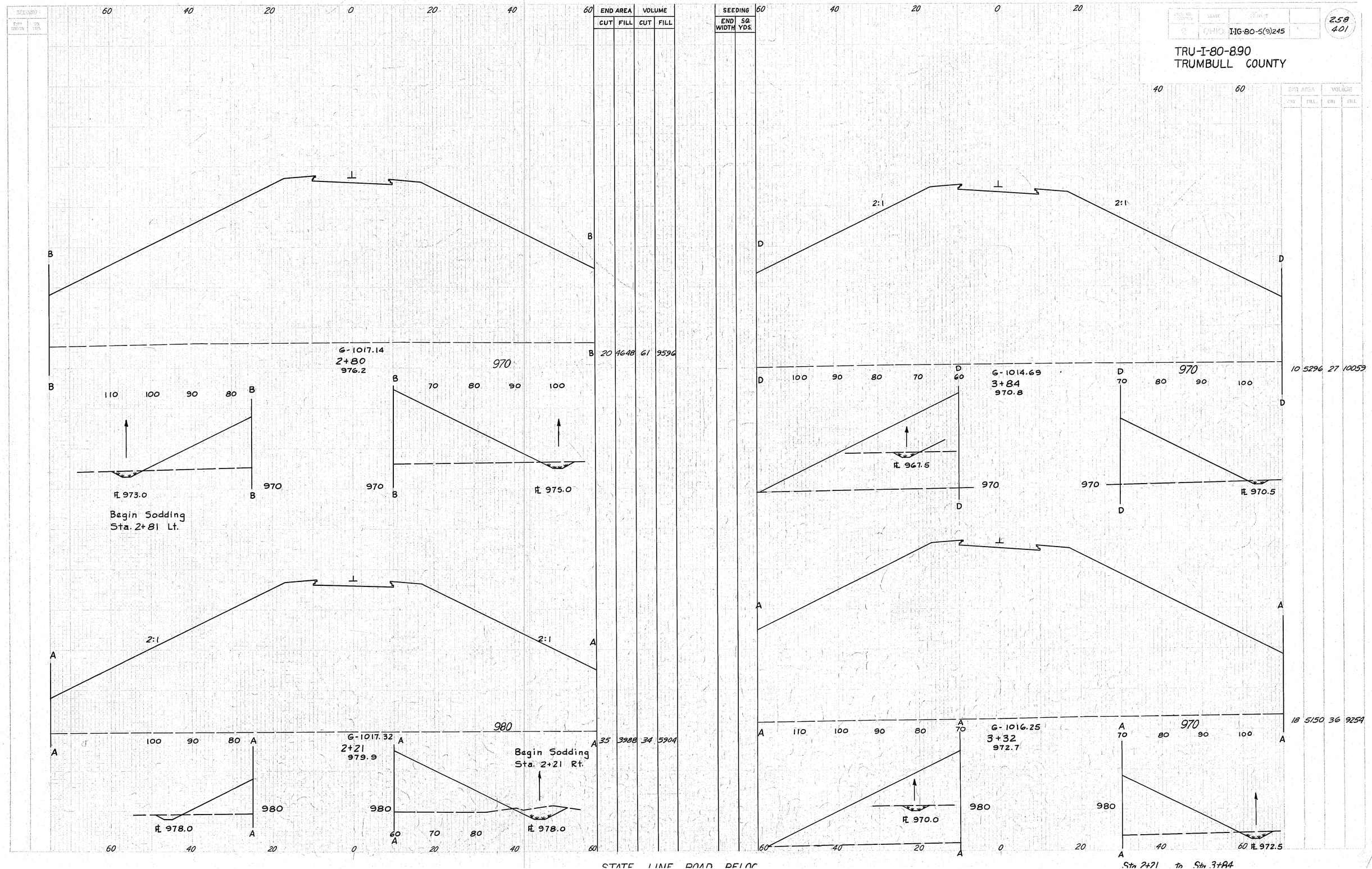
STATE LINE ROAD RELOC

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		20	4648	61	9596
		35	3988	34	5904
		10	5296	27	10059
		18	5150	36	9254

STATE		FEDERAL AID PROJECT	
OHIO		I-IG-80-5(9)245	

258
401

TRU-I-80-8.90
TRUMBULL COUNTY



STATE LINE ROAD RELOC

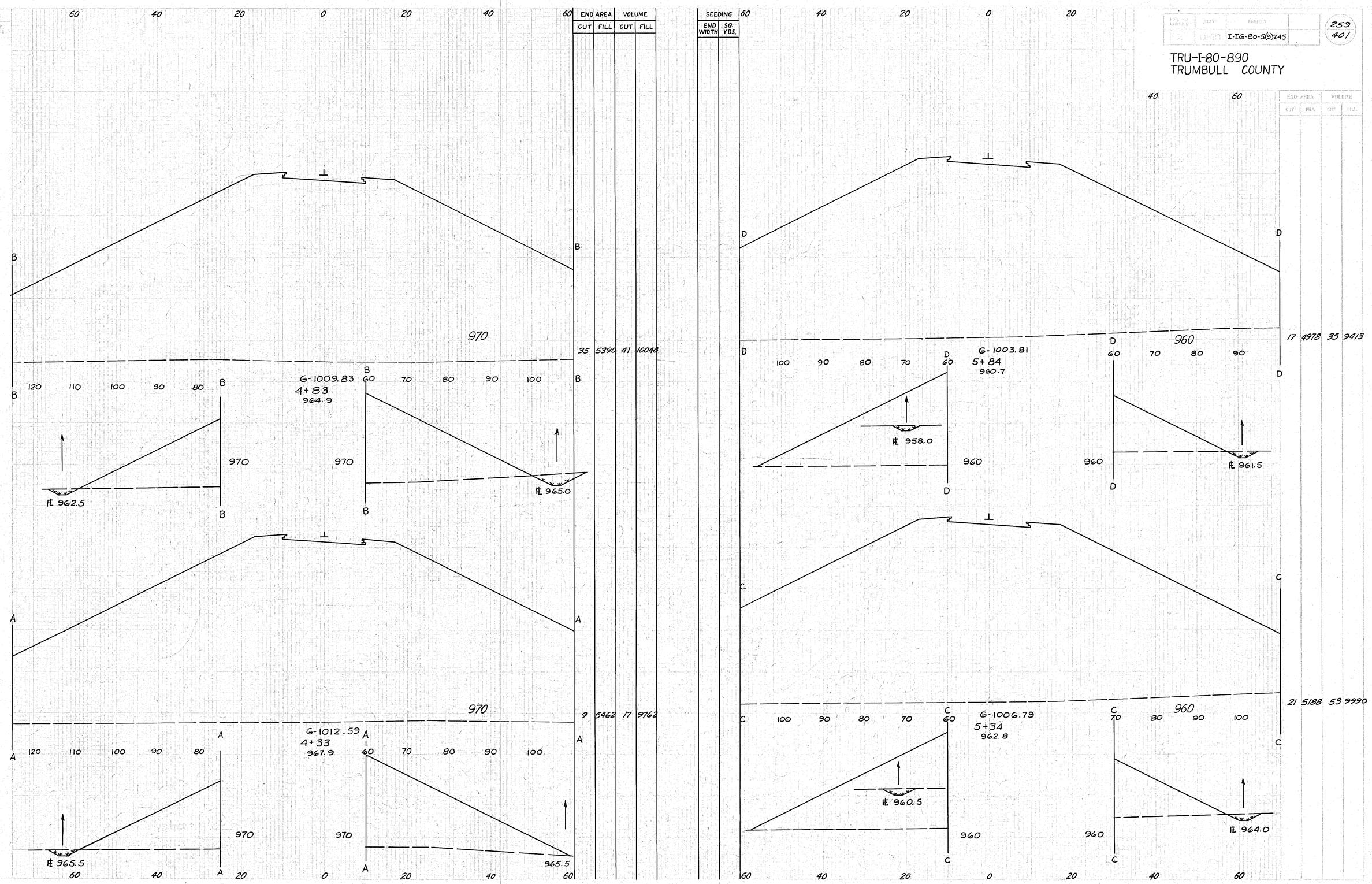
Sta 2+21 to Sta 3+84

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO	I-IG-80-5(6)245	

259
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		35	5390	41	10048
		9	5462	17	9762
		17	4978	35	9413
		21	5188	53	9990



STATE LINE ROAD RELOC

St. 4+23 to St. 5+84

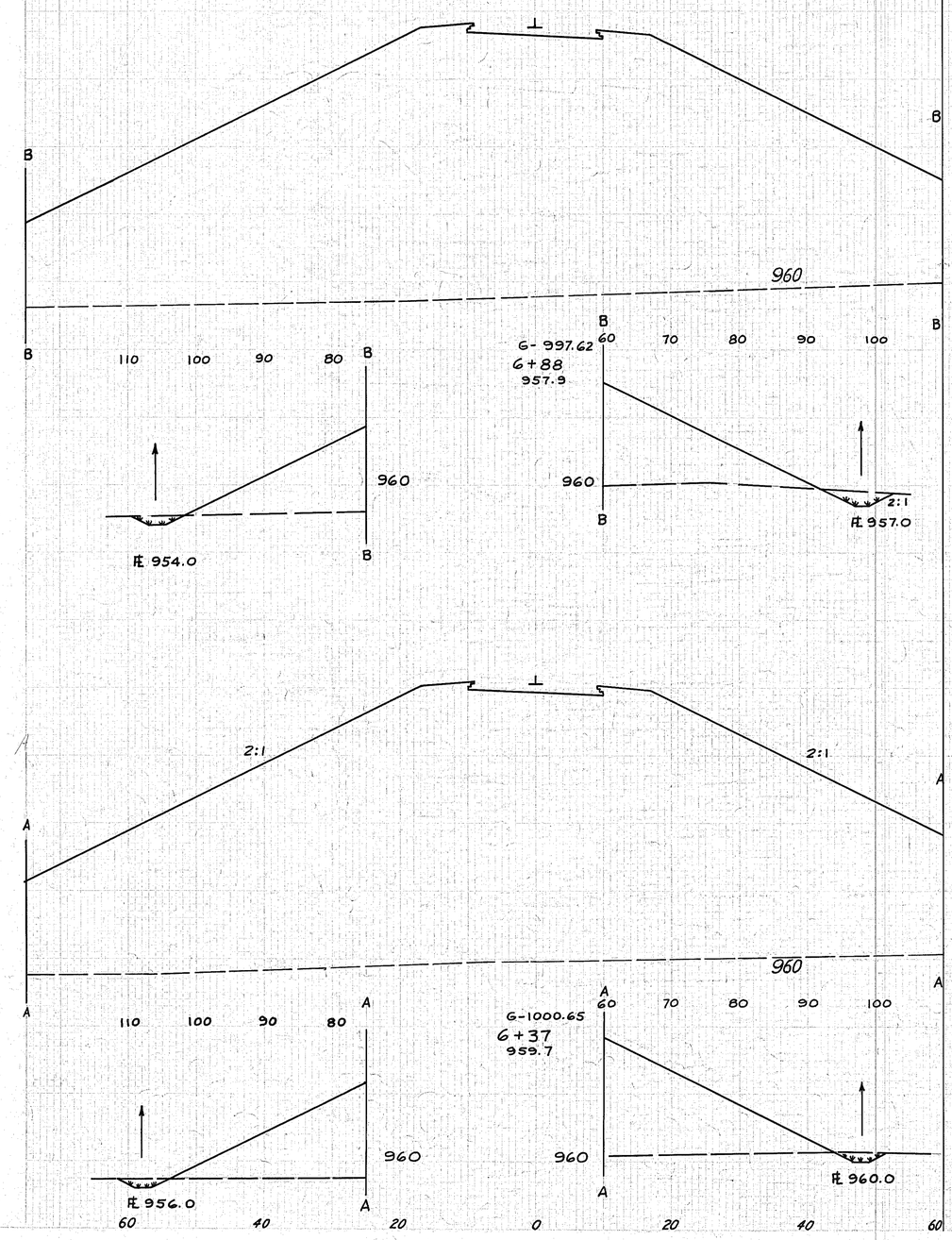
SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

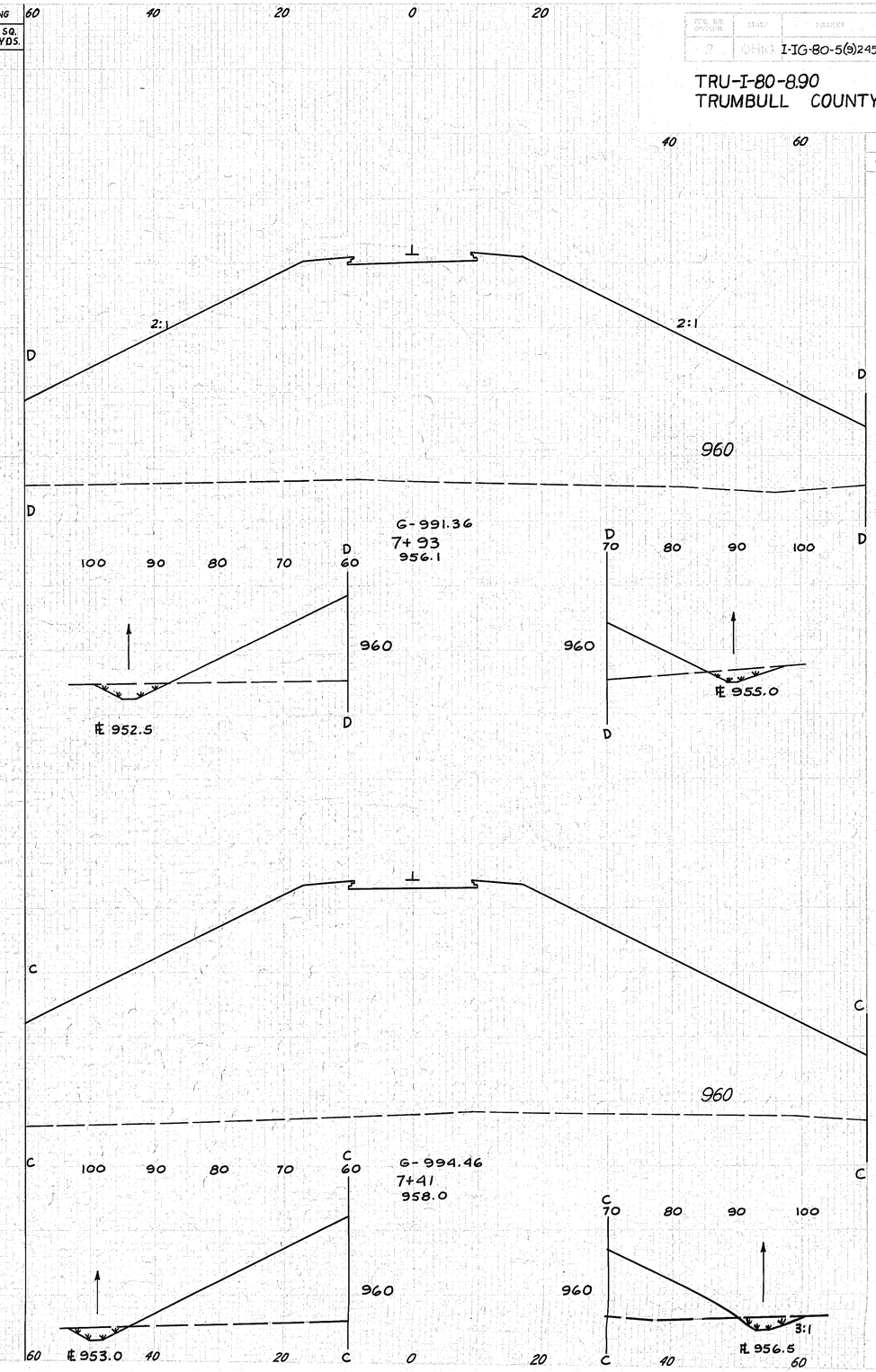
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-80-5(9)245

260
401

TRU-I-80-8.90
TRUMBULL COUNTY



	CUT	FILL	CUT	FILL
B	26	4408	41	8623
A	18	4722	34	9520



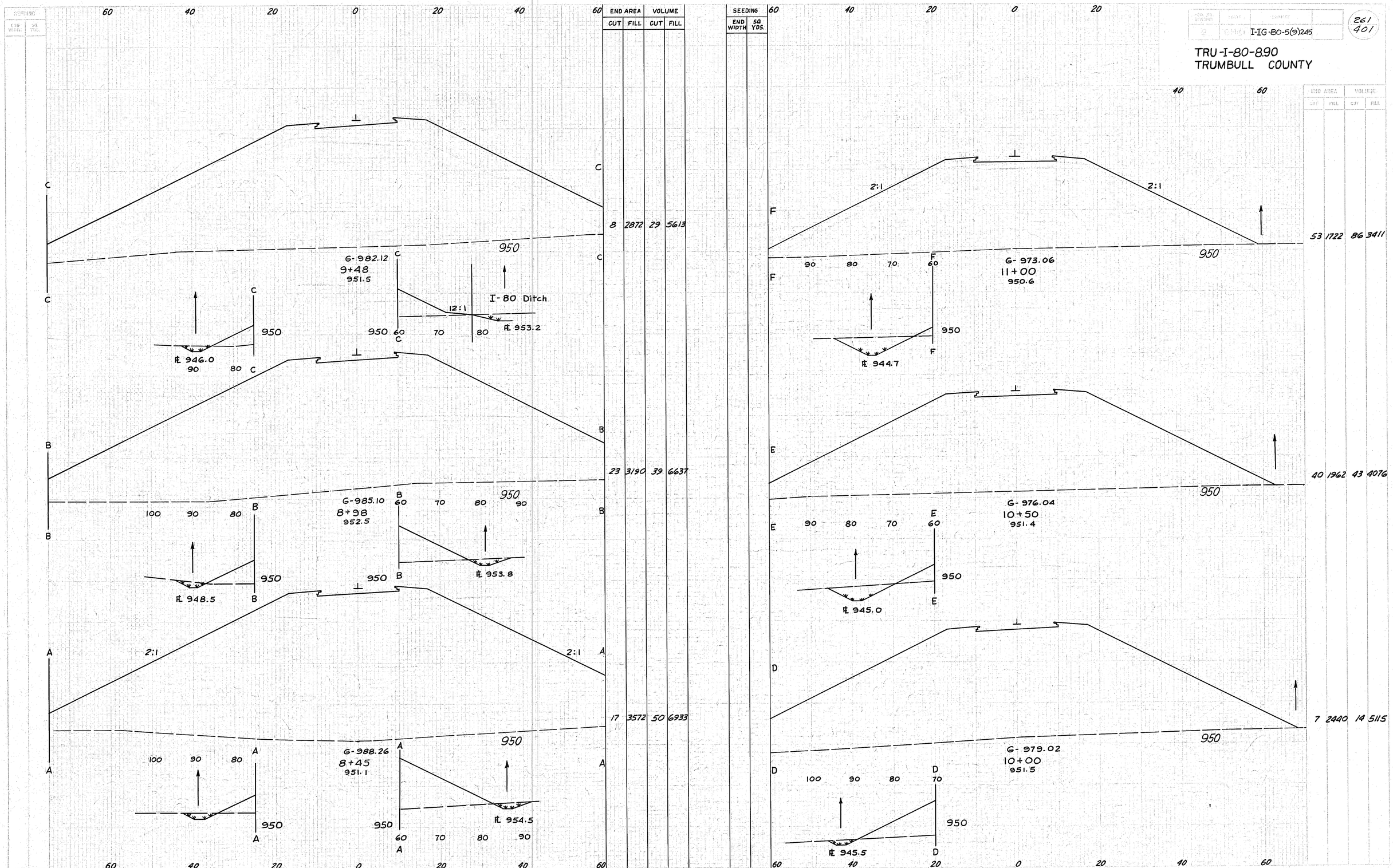
	CUT	FILL	CUT	FILL
D	35	3628	59	7245
C	26	3896	51	8052

STATE LINE ROAD RELOC

SHEET NO.	STATE	DISTRICT	
2	OHIO	I-IG-80-5(9)245	

261
401

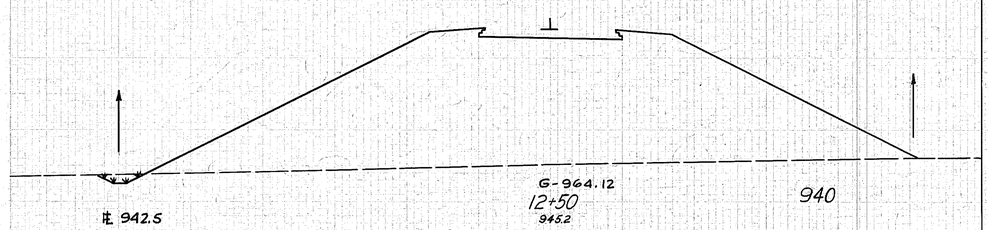
TRU-I-80-8.90
TRUMBULL COUNTY

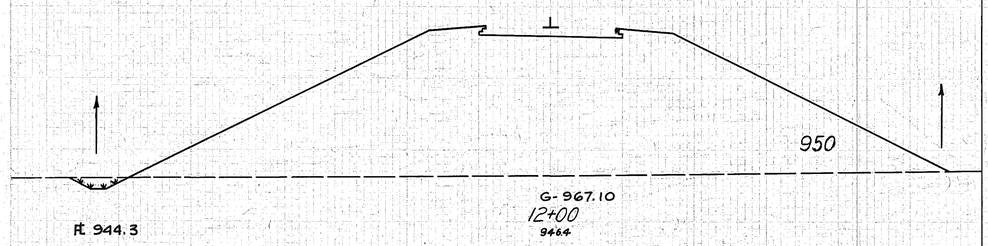


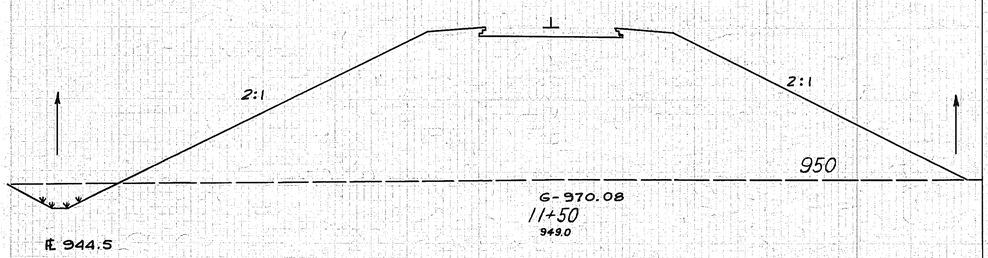
STATE LINE ROAD RELOC

Sta 8+45 to Sta 11+00

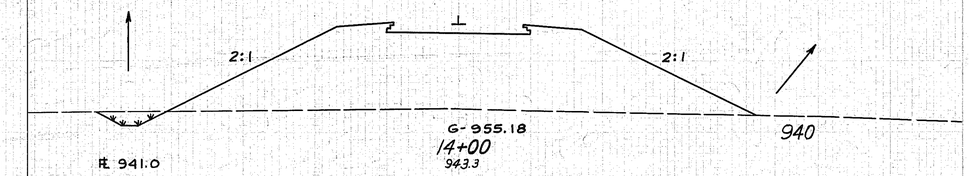
SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		6	1282	16	2556
		11	1478	45	2713
		38	1452	84	2939

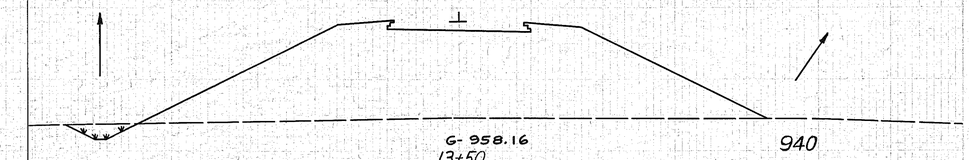


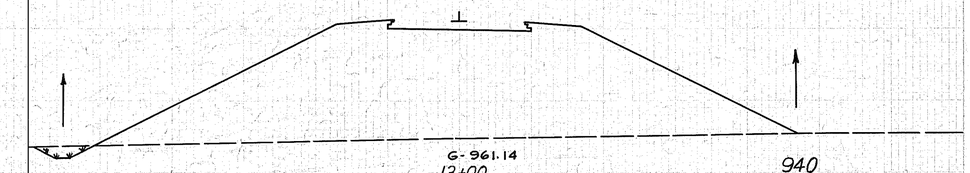




SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		14	658	42	1328
		31	776	39	1678
		11	1036	16	2146







PROJECT			
		I-IG-80-5(9)245	

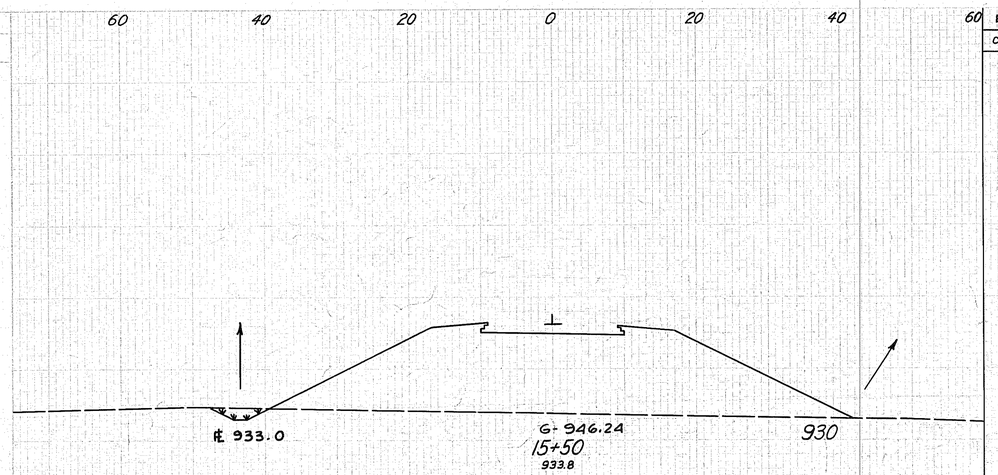
262

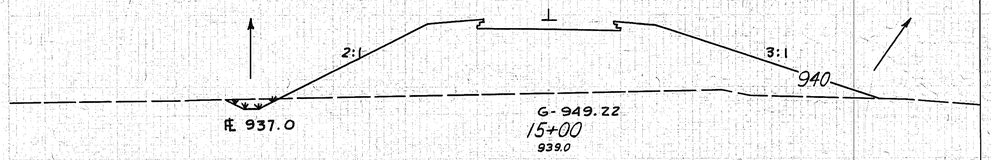
TRU-I-80-8.90
TRUMBULL COUNTY

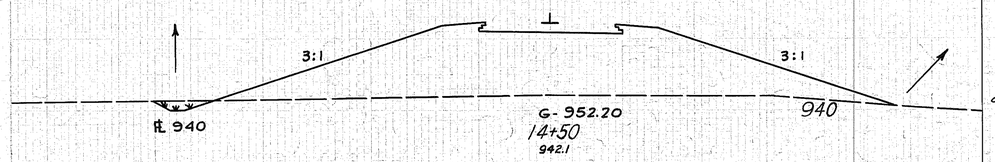
STATE LINE ROAD RELOC

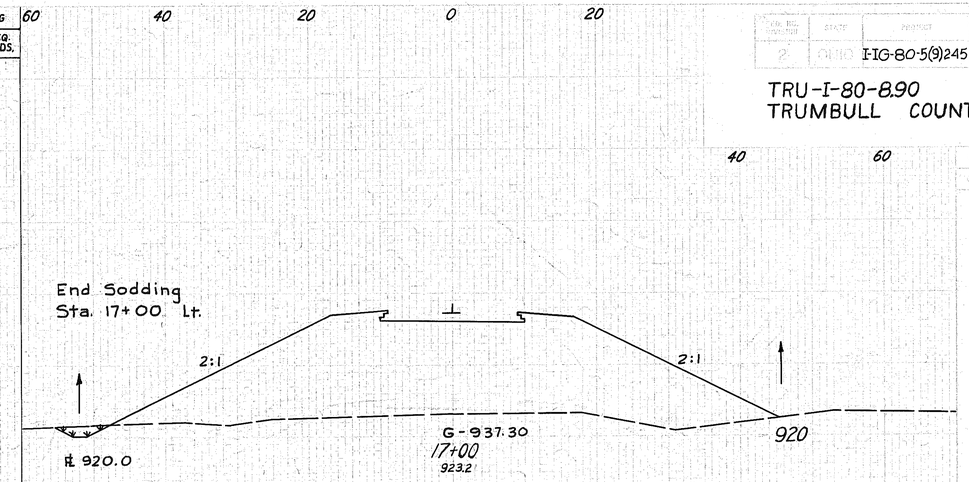
Sta. 11+50 to Sta. 14+00

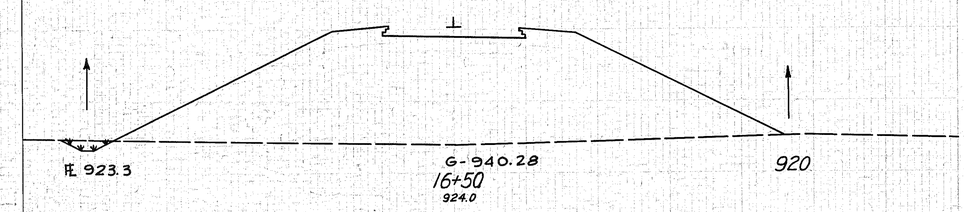
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		9	674	15	1120
		7	536	14	1031
		8	578	20	1144
		7	892	13	1724
		7	970	11	1650
		5	812	13	1376

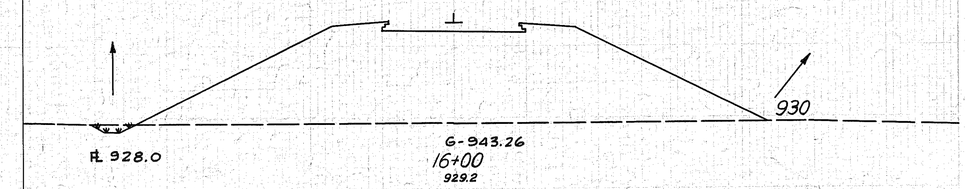












COUNTY DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

263
401

TRU-I-80-8.90
TRUMBULL COUNTY

STATE LINE ROAD RELOC

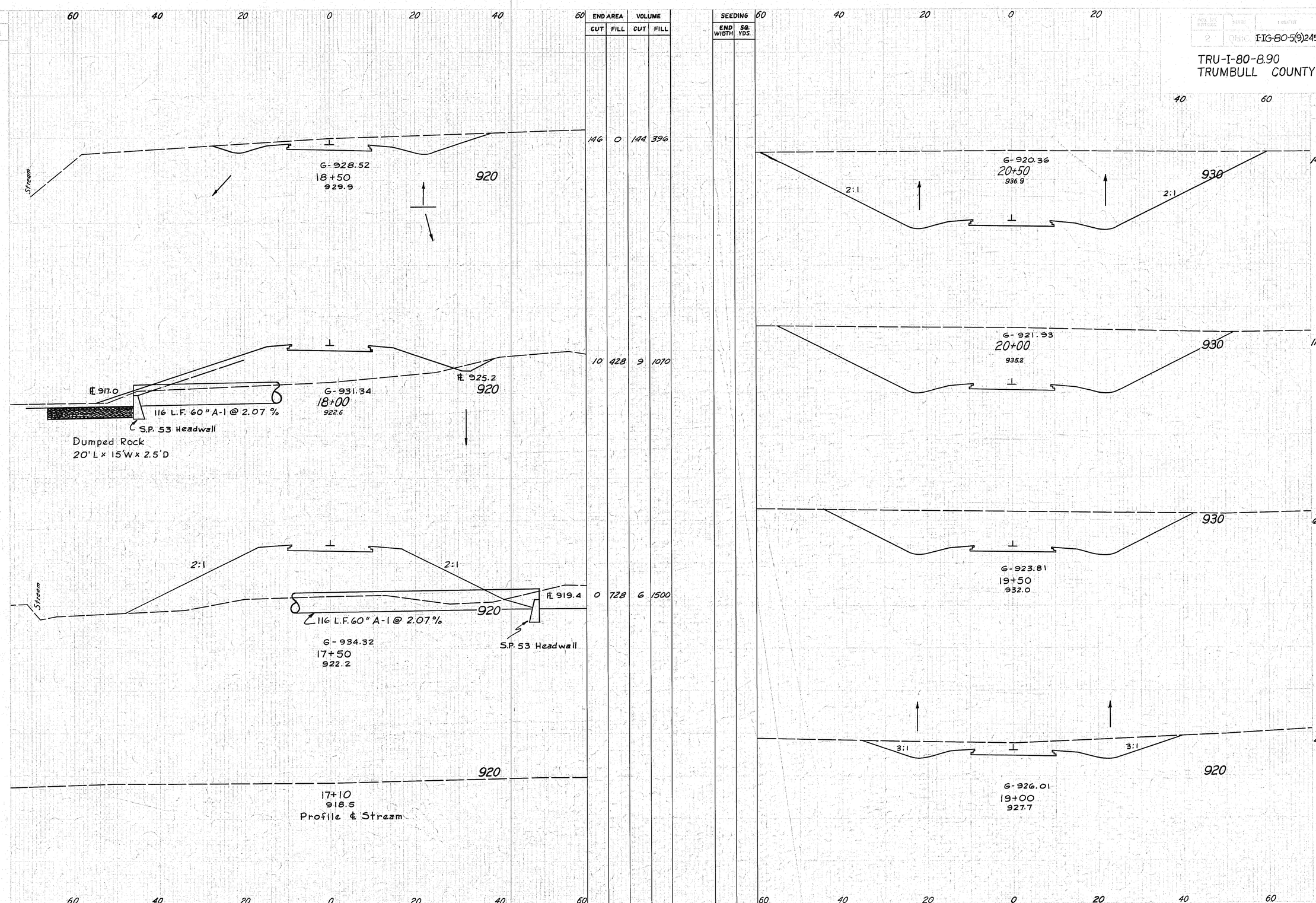
Sta 14+50 to Sta 17+00

PROJ. NO.	STATE	COUNTY	
2	OHIO	FIG-80-5(9)245	

264
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING END AREA	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		146	0	144	396
		10	428	9	1070
		0	728	6	1500
		1488	0	2424	0
		1130	0	1635	0
		636	0	778	0
		204	0	324	0

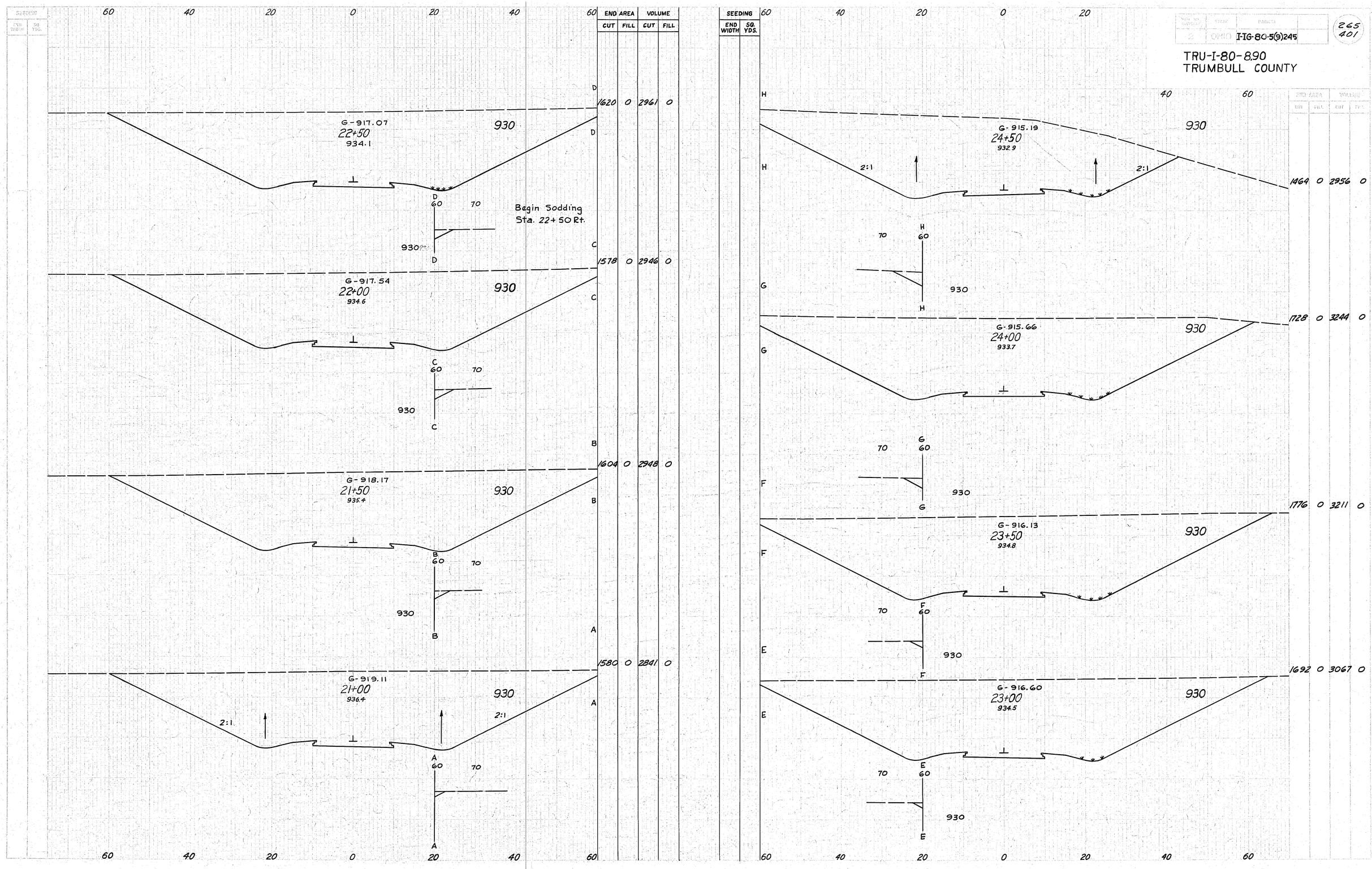


STATE LINE ROAD RELOC

Sta 17+10 to Sta 20+50

VOL. NO.	STATE	PROJECT
2	OHIO	I-IG-80-5(9)245

TRU-I-80-8.90
TRUMBULL COUNTY

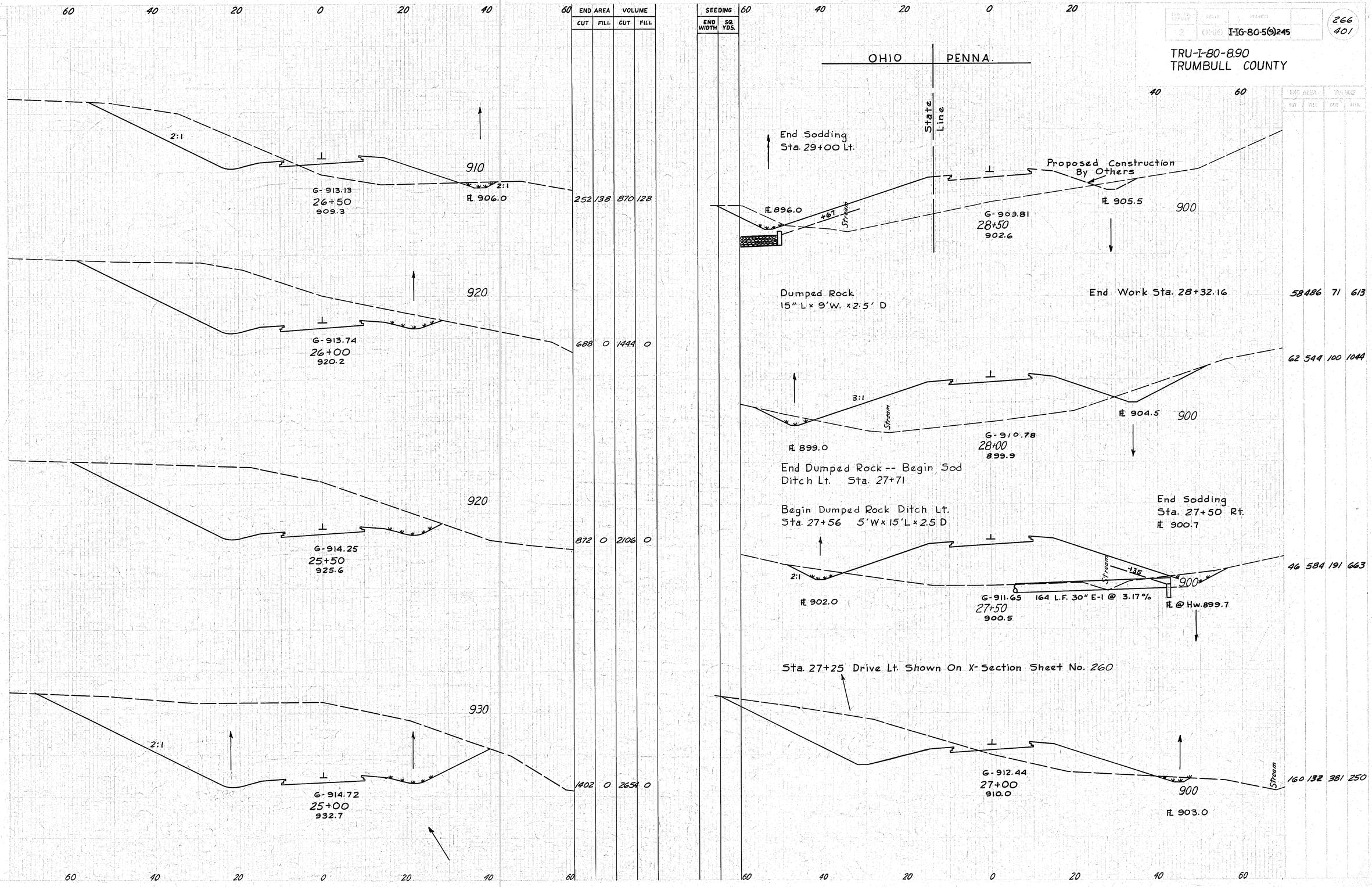


STATE LINE ROAD RELOC.

Sta 21+00 to Sta 24+50

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		252	138	870	128
		688	0	1444	0
		872	0	2106	0
		1402	0	2654	0
		58	486	71	613
		62	544	100	1044
		46	584	191	663
		160	132	381	250

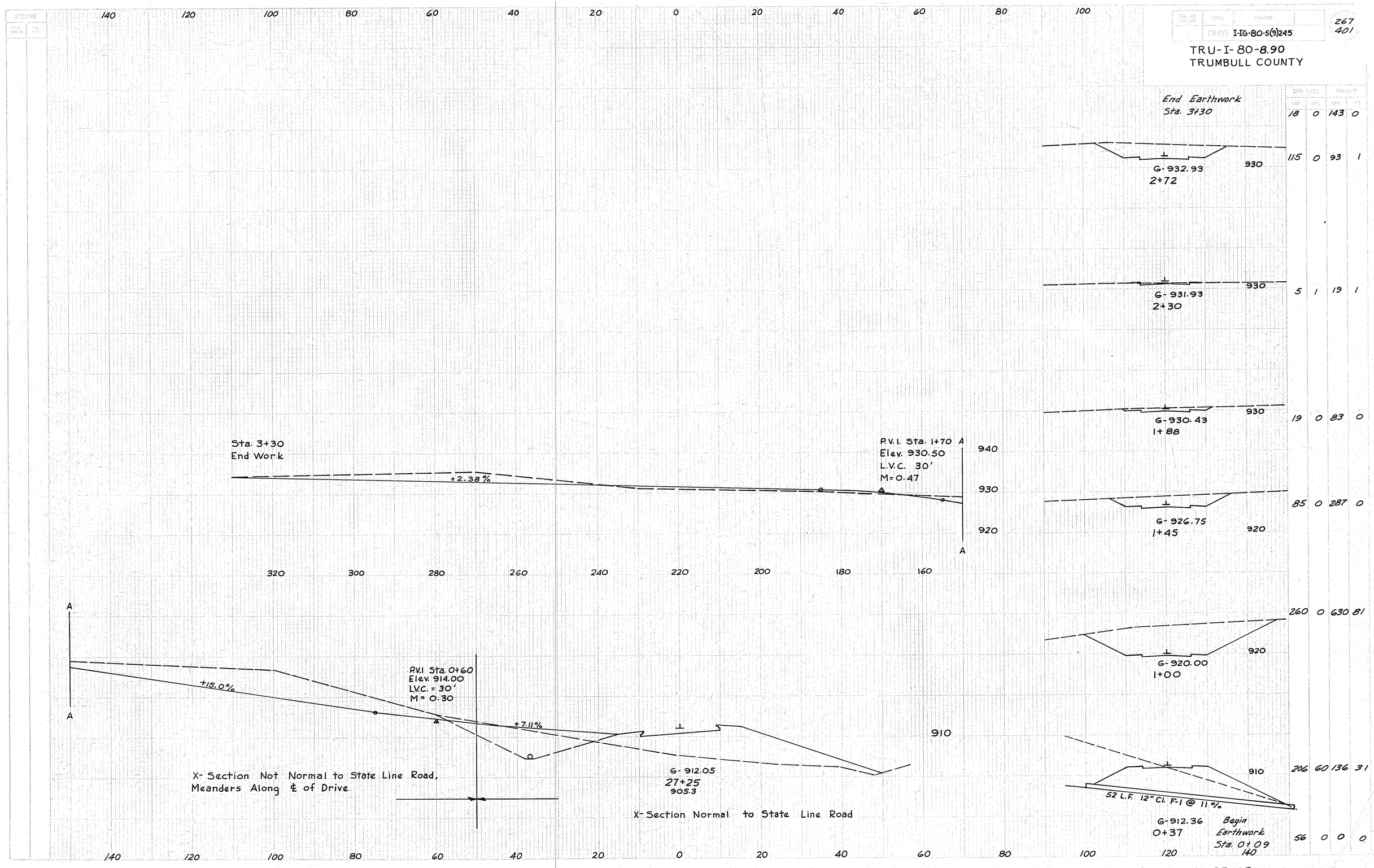


STATE LINE ROAD RELOC

Sta. 25+00 to Sta. 29+50

OHIO I-IG-80-5(9)245

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
18	0	143	0
115	0	93	1
5	1	19	1
19	0	83	0
85	0	287	0
260	0	630	81
206	60	136	31
56	0	0	0

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

268
401

TRUMBULL COUNTY TRU-I-80-8.90

SPECIAL BERM & SLOPE PROTECTION

PRIOR TO PLACEMENT OF SOD IN THE BERM AND SLOPE, GALVANIZED POULTRY FENCE SHALL BE PLACED ON THE FINISHED GRADE IN STRANDS WHICH SHALL BE AT RIGHT ANGLES TO THE DIRECTION OF FLOW. EACH STRAND SHALL BE STAKED SECURELY ON TOP AND BOTTOM WITH STAKES SPACED AT FOUR FOOT INTERVALS AND ALTERNATED IN ROWS FOUR FEET APART.

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

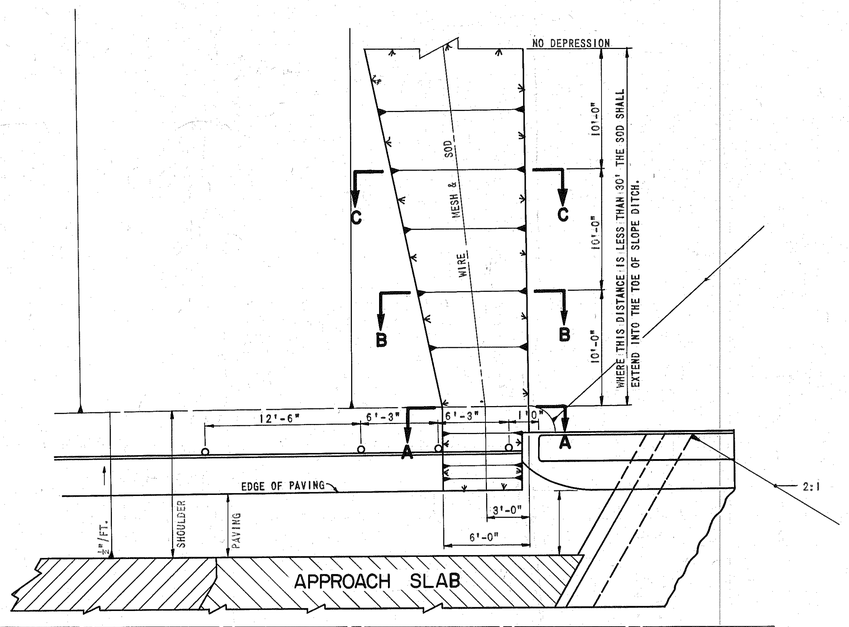
THE FENCE SHALL BE STRAIGHT LINE POULTRY FENCE OR EQUIVALENT WITH STRAND WIDTH OF FOUR FEET, HAVING A TWO INCH MESH AND ALL WIRES NO. 20 GAUGE.

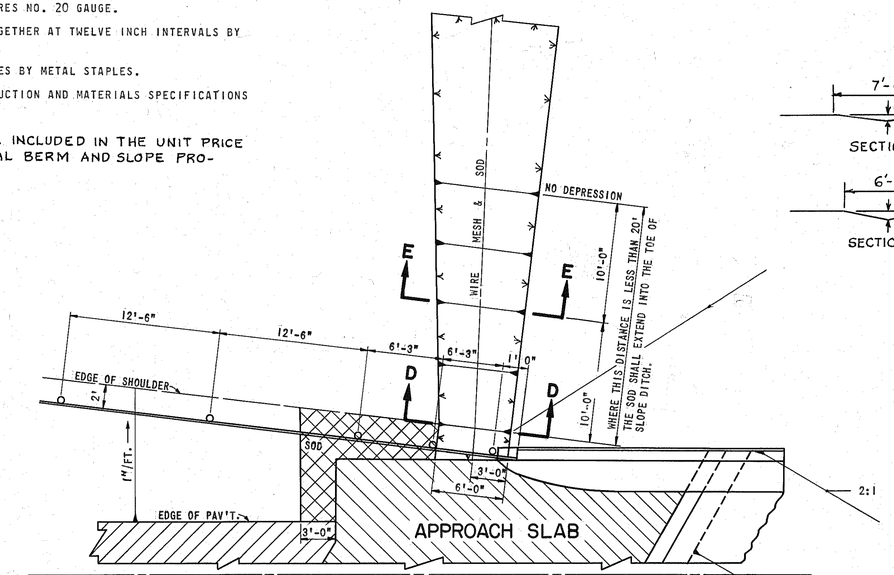
THE STRANDS OF FENCING SHALL BE FASTENED TOGETHER AT TWELVE INCH INTERVALS BY MEANS OF HOG RINGS.

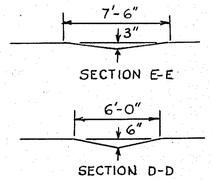
THE FENCE SHALL BE SECURED TO THE WOOD STAKES BY METAL STAPLES.

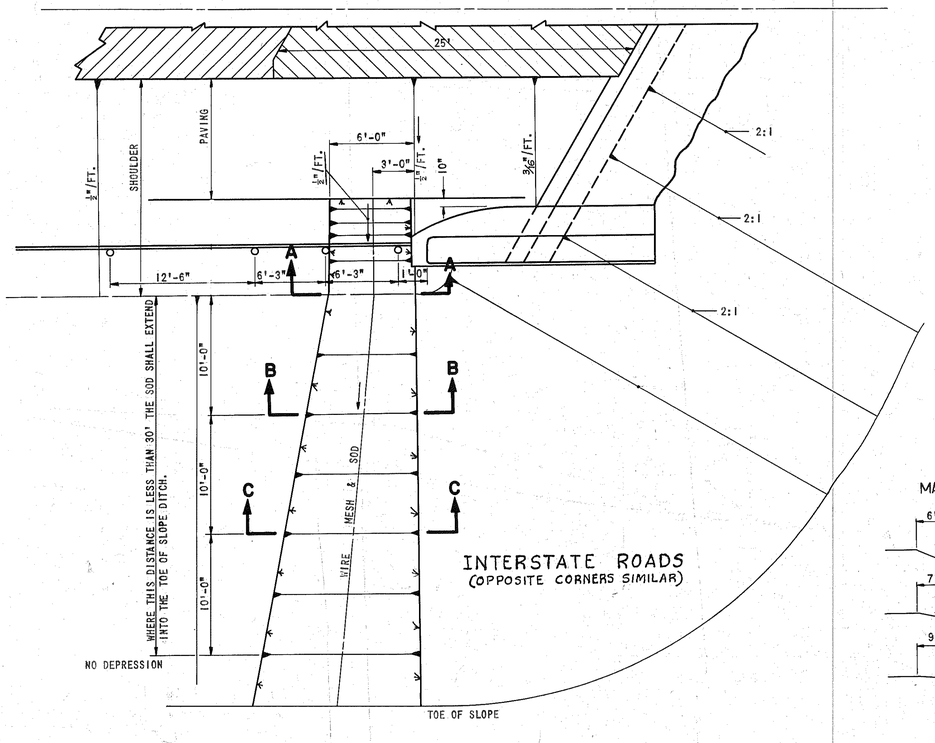
SOD SHALL BE LAID IN ACCORDANCE WITH CONSTRUCTION AND MATERIALS SPECIFICATIONS SECTION L-10.07.

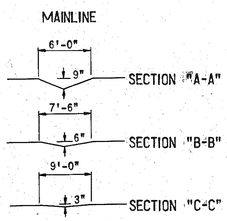
PAYMENT FOR ALL THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR "ITEM L-10 SODDING FOR SPECIAL BERM AND SLOPE PROTECTION".

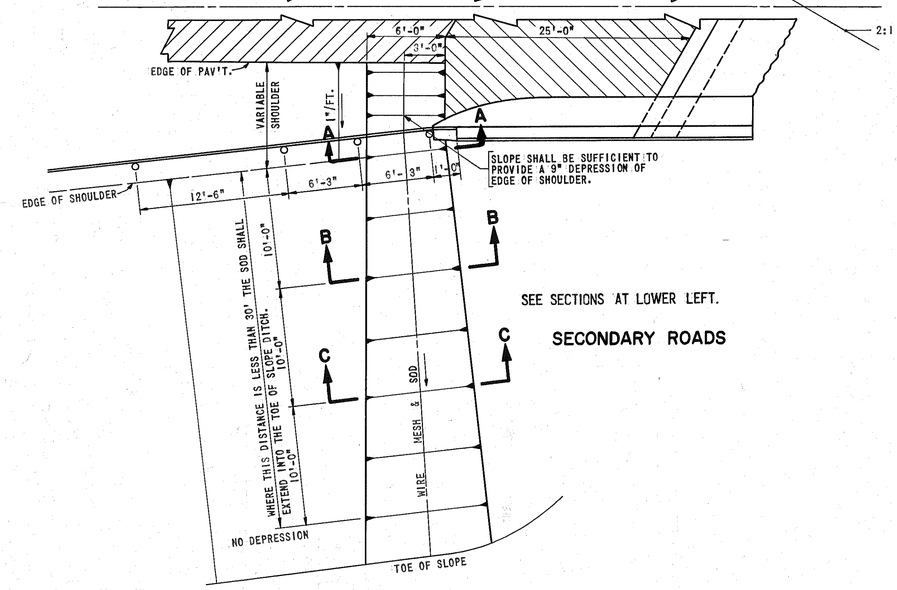












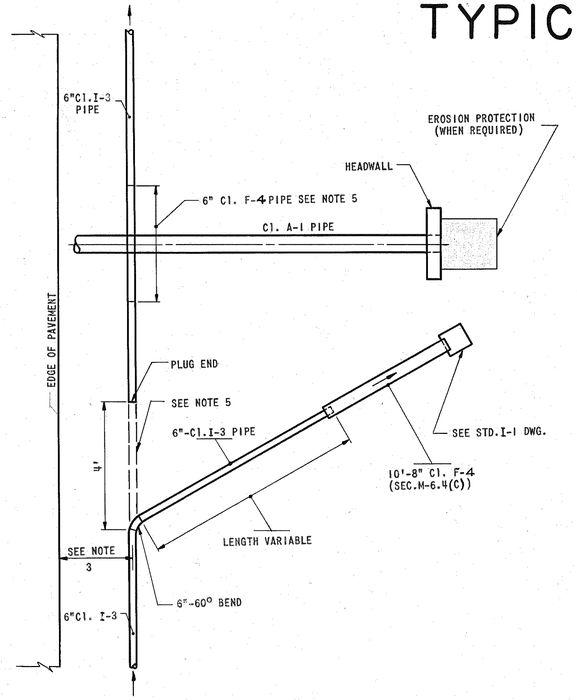
TYPICAL APPROACH SLAB EROSION CONTROL DETAIL

TYPICAL DETAILS OF UNDERDRAIN OUTLETS

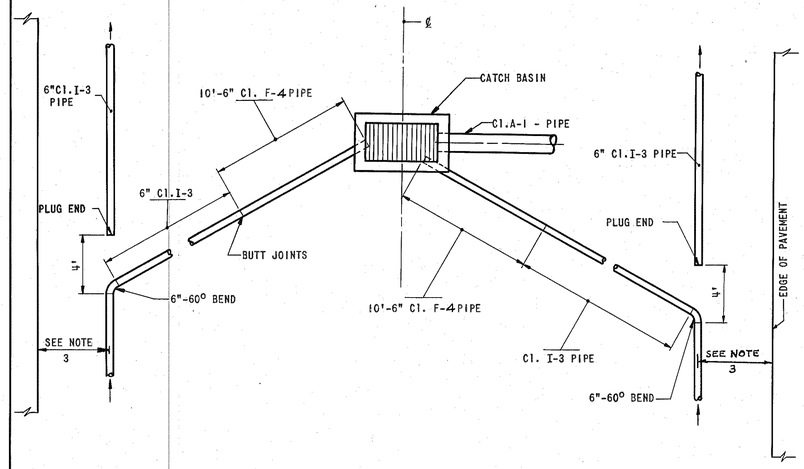
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

269
401

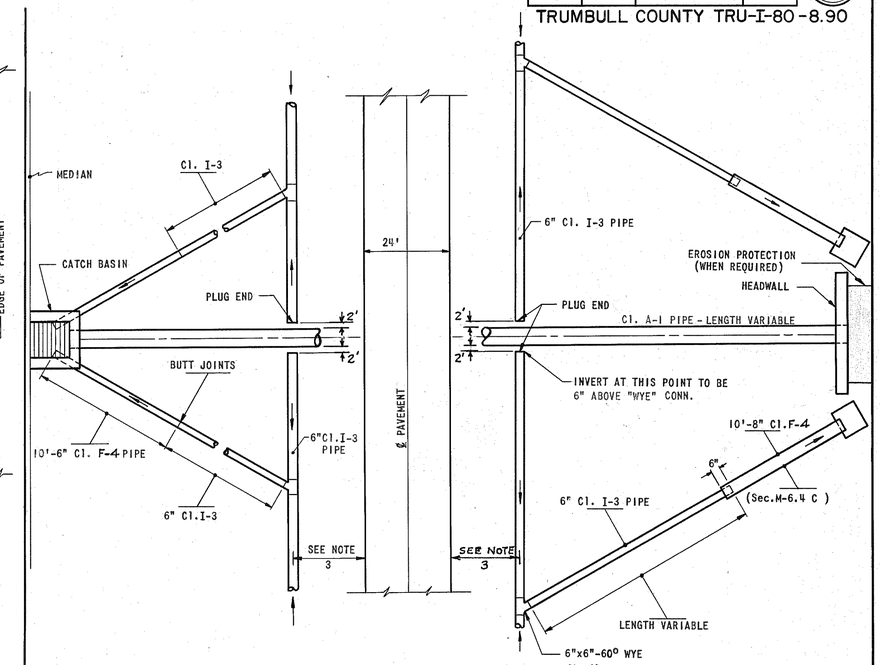
TRUMBULL COUNTY TRU-I-80-8.90



UNDERDRAIN OUTLET DETAIL "A"



UNDERDRAIN OUTLET DETAIL "B"

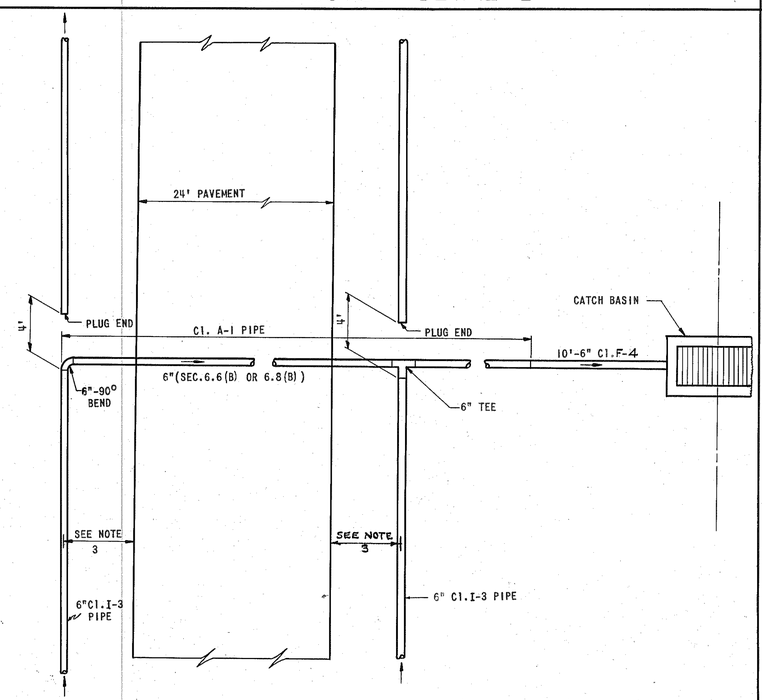


UNDERDRAIN OUTLET DETAIL "C"

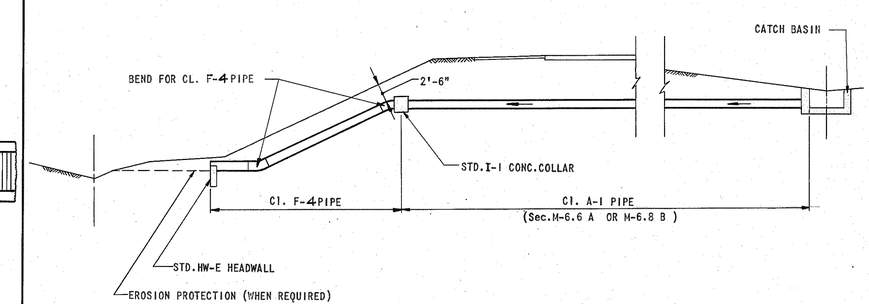
NOTES

2. WHERE 8" Cl. F-1 PIPE (SEC. M-6.4(C)) IS SHOWN IT SHAL BE FURNISHED WITH ONE ROLLED END.
3. THE DISTANCE OF UNDERDRAIN LINES FROM THE EDGE OF PAVEMENT SHALL BE TAKEN FROM THE APPROVED TYPICAL SECTION.
5. WHEN IT IS DESIRABLE TO CONTINUE THE UNDERDRAIN ACROSS A TRANSVERSE LINE SUCH AS IN DETAIL "A" & 10' LENGTH OF 6" CLASS F-4PIPE SHOULD BE USED TO SPAN THE TRENCH UNLESS SUCH CROSSING IS ABOVE THE AREA OF GRANULAR BACKFILL.

8371
201



UNDERDRAIN OUTLET DETAIL "D"

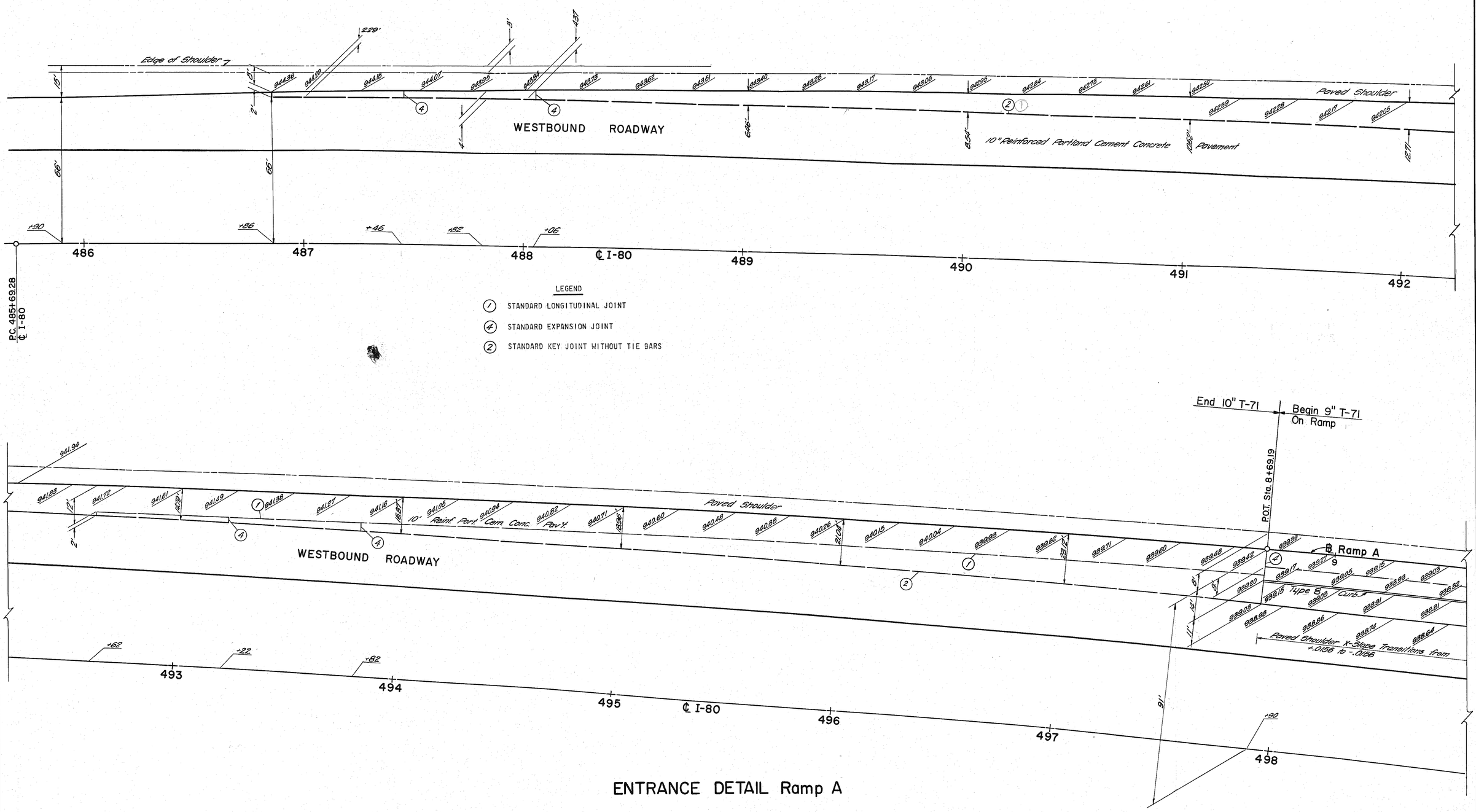


MEDIAN OUTLET DETAIL IN HIGH FILL

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

270
401

TRUMBULL COUNTY TRU-I-80-8.90

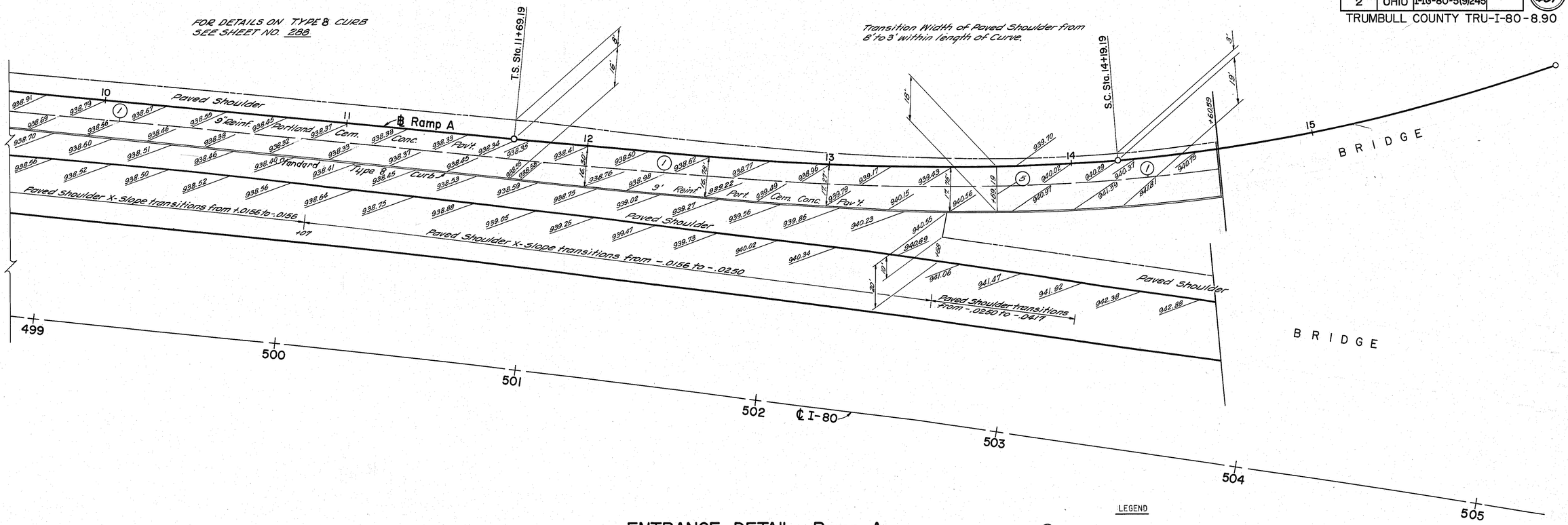


ENTRANCE DETAIL Ramp A

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

271
401

TRUMBULL COUNTY TRU-I-80-8.90



ENTRANCE DETAIL Ramp A

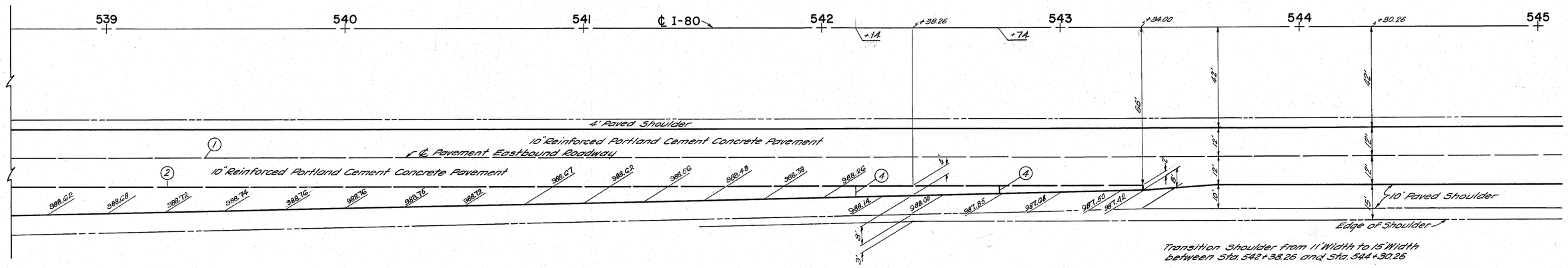
LEGEND

(1) STANDARD LONGITUDINAL JOINT

(5) STANDARD CONTRACTION JOINT

(4) STANDARD EXPANSION JOINT

(2) STANDARD KEY JOINT WITHOUT TIE BARS

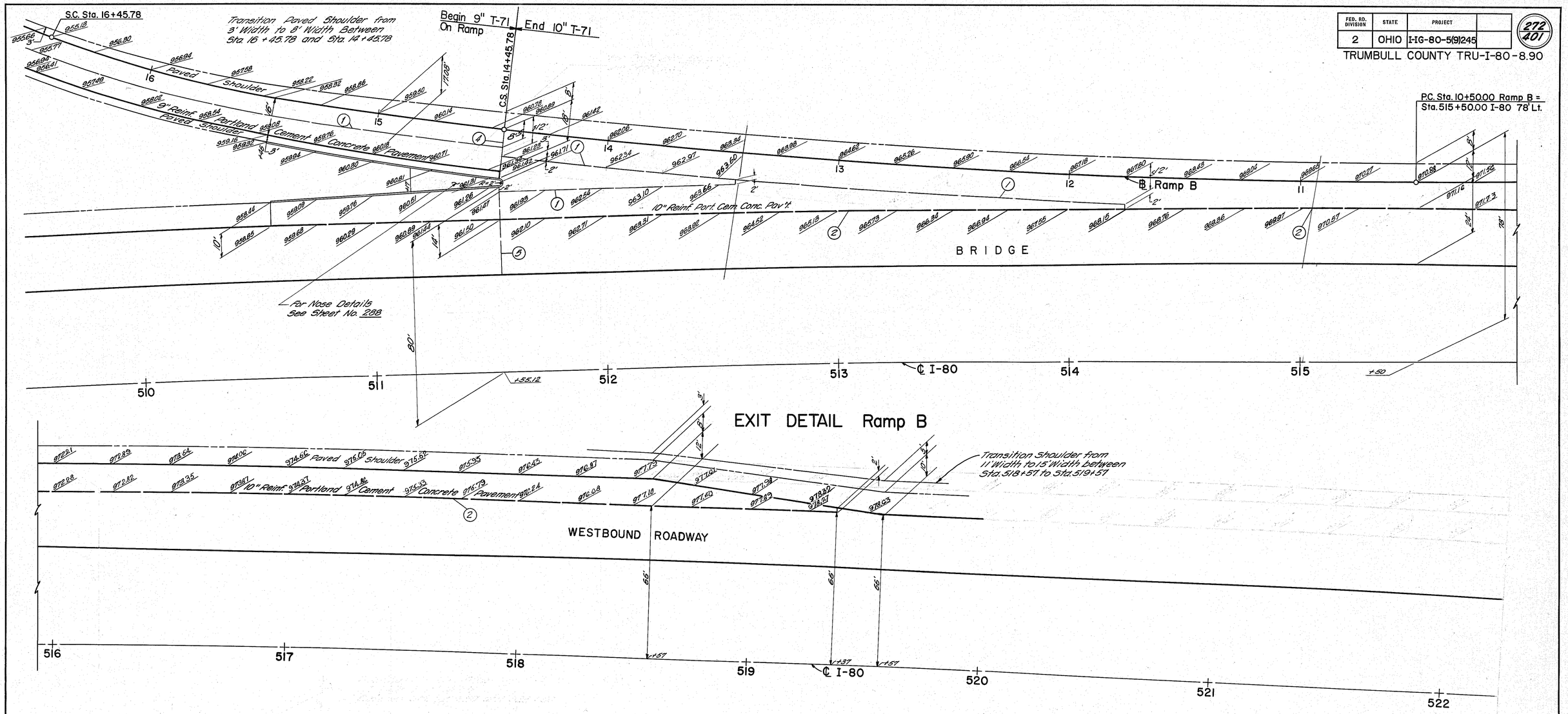


ENTRANCE DETAIL Ramp E

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

272
401

TRUMBULL COUNTY TRU-I-80-8.90



LEGEND

(1) STANDARD LONGITUDINAL JOINT

(4) STANDARD EXPANSION JOINT

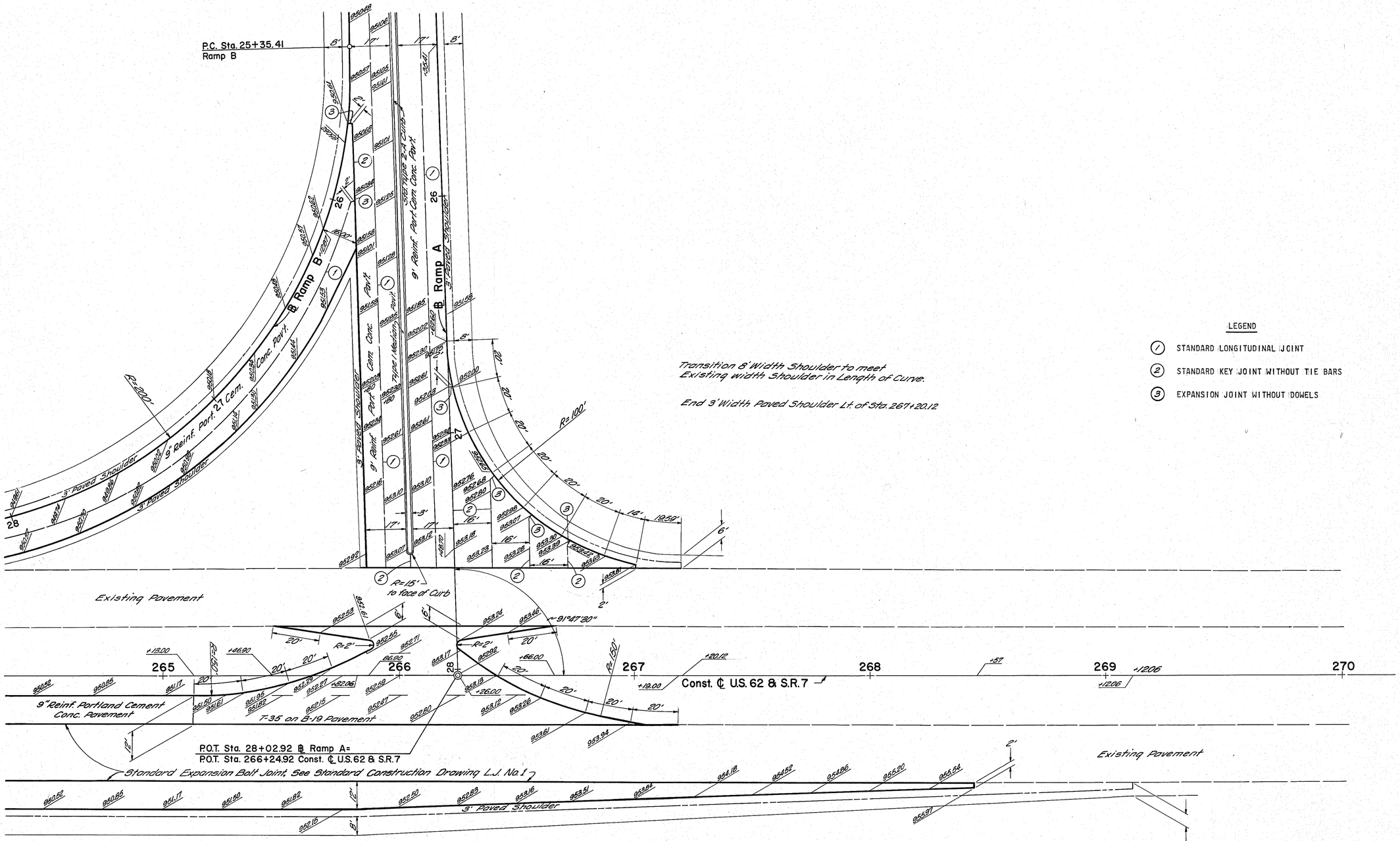
(5) STANDARD CONTRACTION JOINT

(2) STANDARD KEY JOINT WITHOUT TIE BARS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

273/401

TRUMBULL COUNTY TRU-I-80-8.90



LEGEND

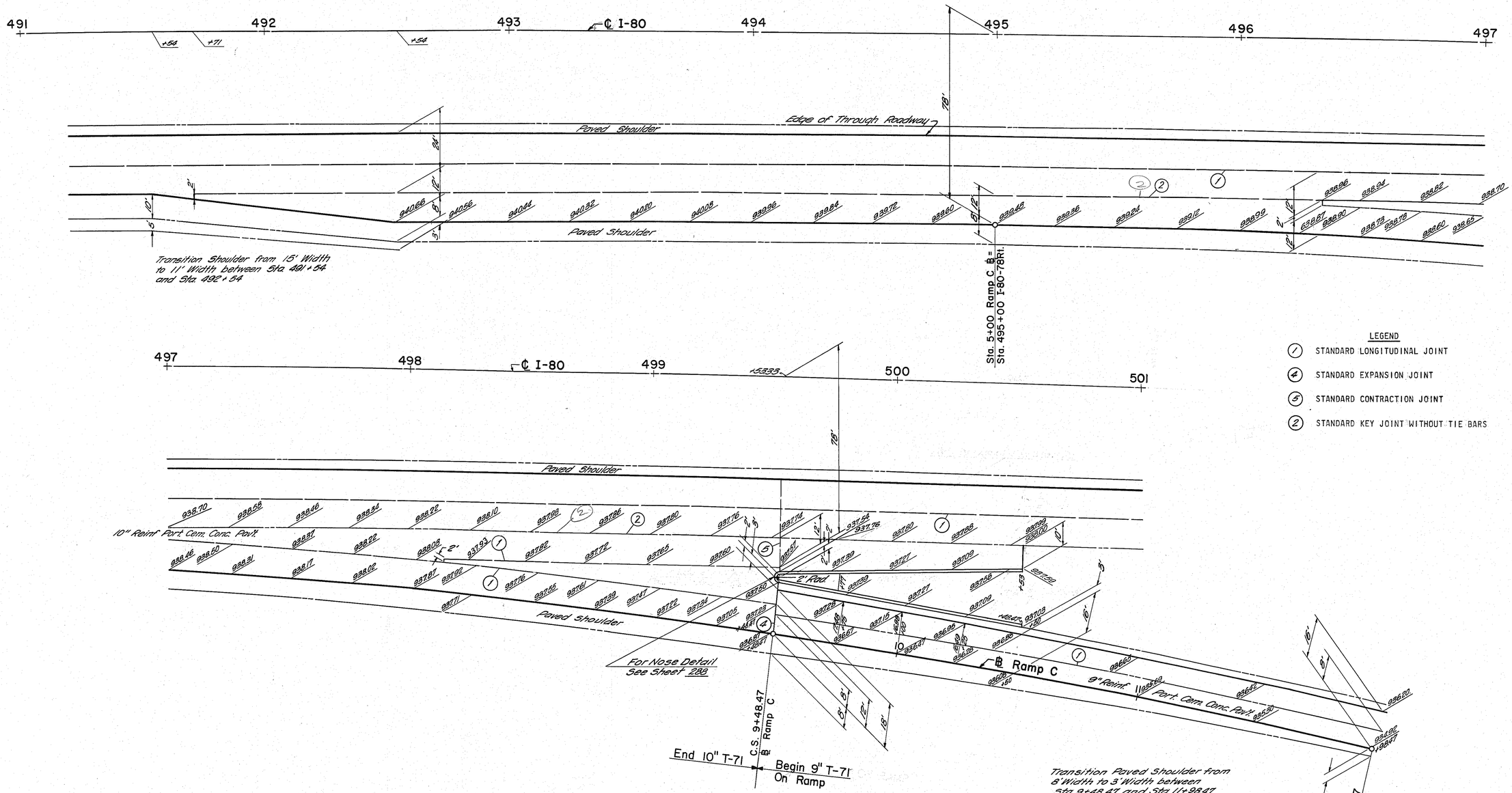
1. STANDARD LONGITUDINAL JOINT
2. STANDARD KEY JOINT WITHOUT TIE BARS
3. EXPANSION JOINT WITHOUT DOWELS

DETAIL Ramps A & B
Connection With U.S. 62 & S.R. 7

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

274
401

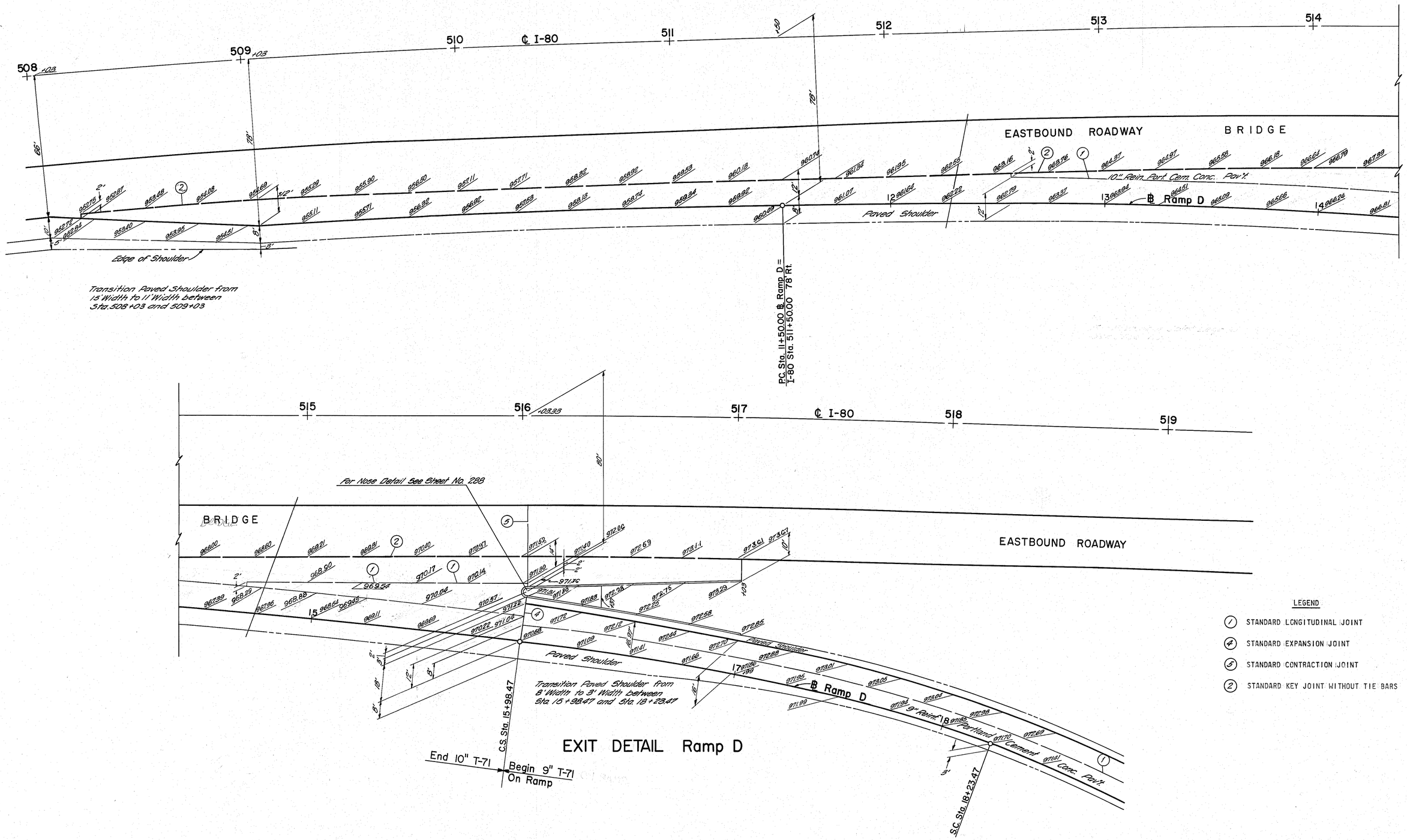
TRUMBULL COUNTY TRU-I-80-8.90


491
492
493
℄ I-80
494
495
496
497
+54
+71
+54
78'
Edge of Through Roadway
Paved Shoulder
24'
12'
10'
2'
6'
3'
94066
94056
94044
94032
94020
94008
93996
93984
93972
93960
93948
93936
93924
93912
93900
93888
93876
93864
93852
93840
93828
93816
93804
93792
93780
93770
93760
93748
93736
Paved Shoulder
Transition Shoulder from 15' Width to 11' Width between Sta. 491+54 and Sta. 492+54
Sta. 5+00 Ramp C ℄ = Sta. 495+00 I-80-78Rt.
497
498
℄ I-80
499
+5333
500
501
78'
Paved Shoulder
938.70
938.58
938.46
938.34
938.22
938.10
937.98
937.86
937.80
937.76
937.74
937.54
937.76
937.80
937.98
938.00
938.10
938.22
938.34
938.46
938.58
938.70
10" Reinf. Port. Cem. Conc. Pavt.
938.51
938.22
938.08
937.93
937.82
937.76
937.65
937.60
937.61
937.80
937.99
938.17
938.31
938.50
938.61
937.71
937.76
937.85
937.91
937.39
937.47
937.72
937.84
937.05
937.28
937.28
937.28

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

275
401

TRUMBULL COUNTY TRU-I-80-8.90

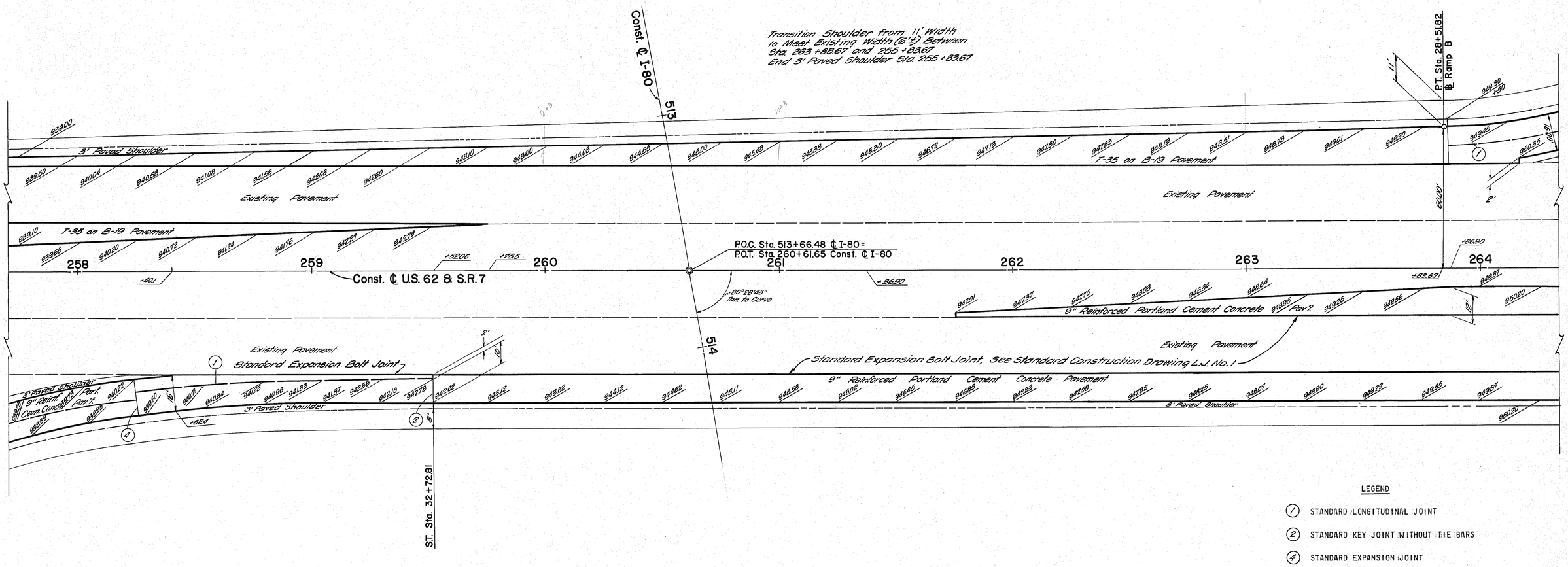


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

276
401

TRUMBULL COUNTY TRU-I-80-8.90

DETAIL Ramp B Connection TO U.S. 62 & S.R.7



LEGEND

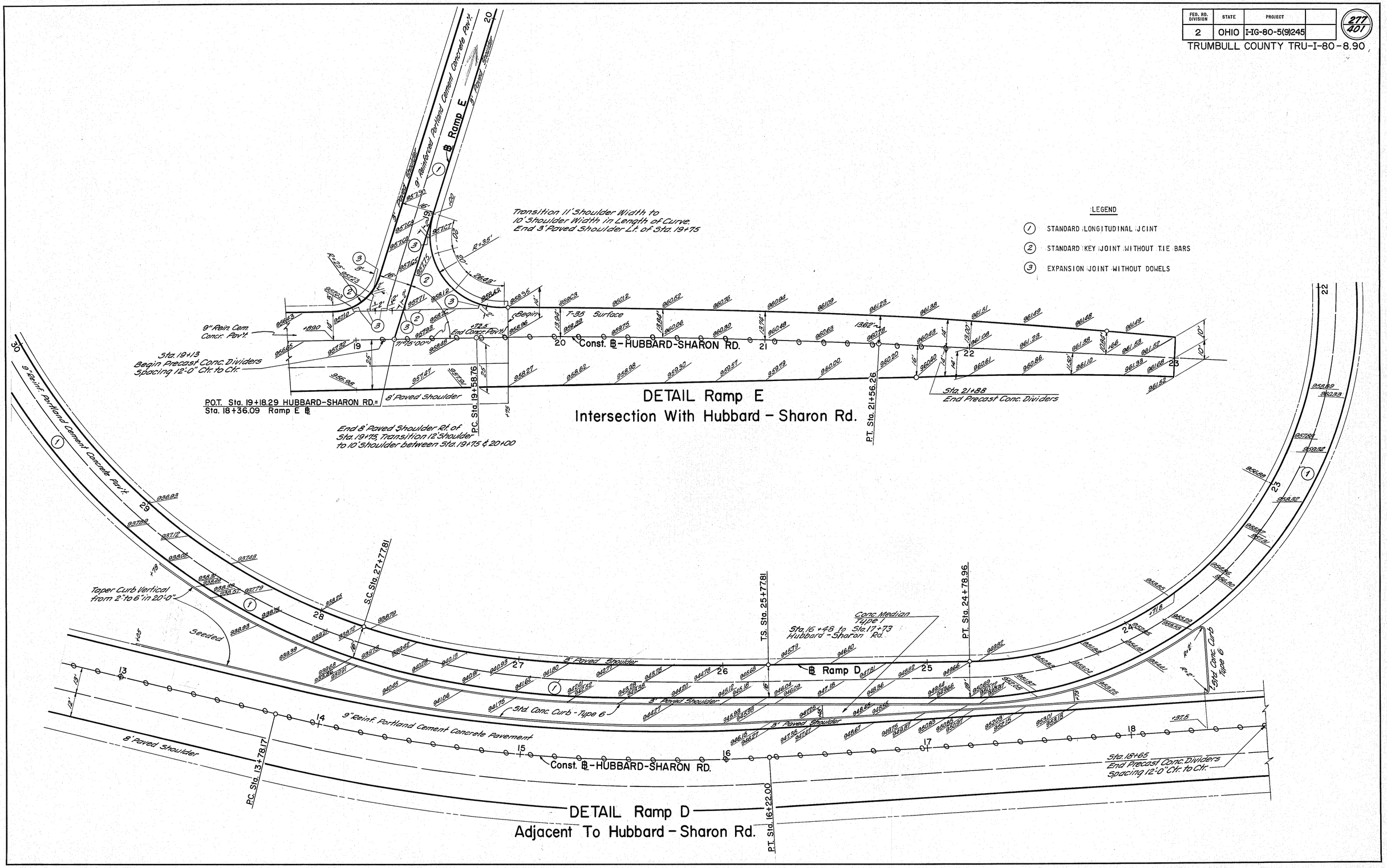
1. STANDARD LONGITUDINAL JOINT
2. STANDARD KEY JOINT WITHOUT TIE BARS
4. STANDARD EXPANSION JOINT

DETAIL Ramp D Connection TO U.S. 62 & S.R.7

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

277
401

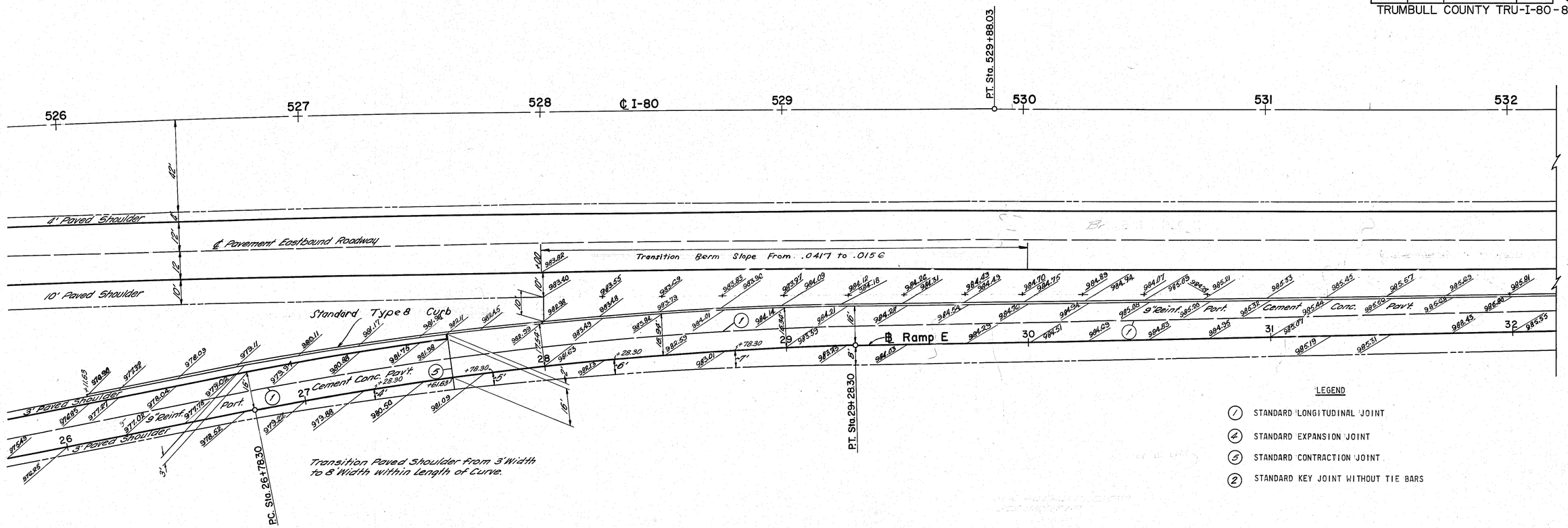
TRUMBULL COUNTY TRU-I-80-8.90



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

278
401

TRUMBULL COUNTY TRU-I-80-8.90



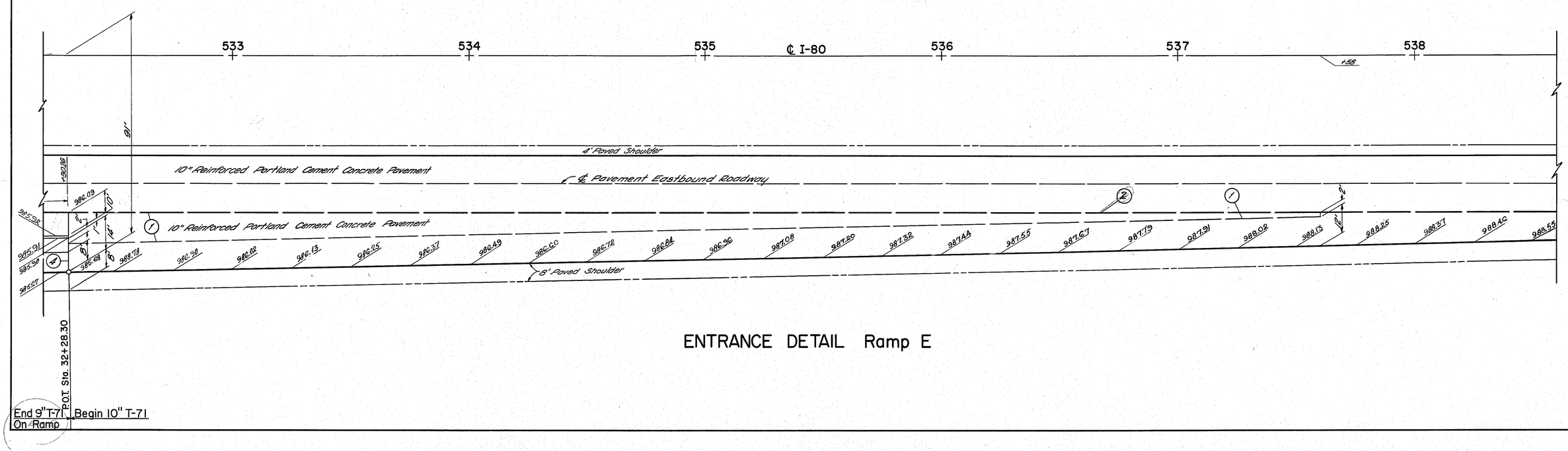
LEGEND

(1) STANDARD LONGITUDINAL JOINT

(4) STANDARD EXPANSION JOINT

(5) STANDARD CONTRACTION JOINT

(2) STANDARD KEY JOINT WITHOUT TIE BARS



ENTRANCE DETAIL Ramp E

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

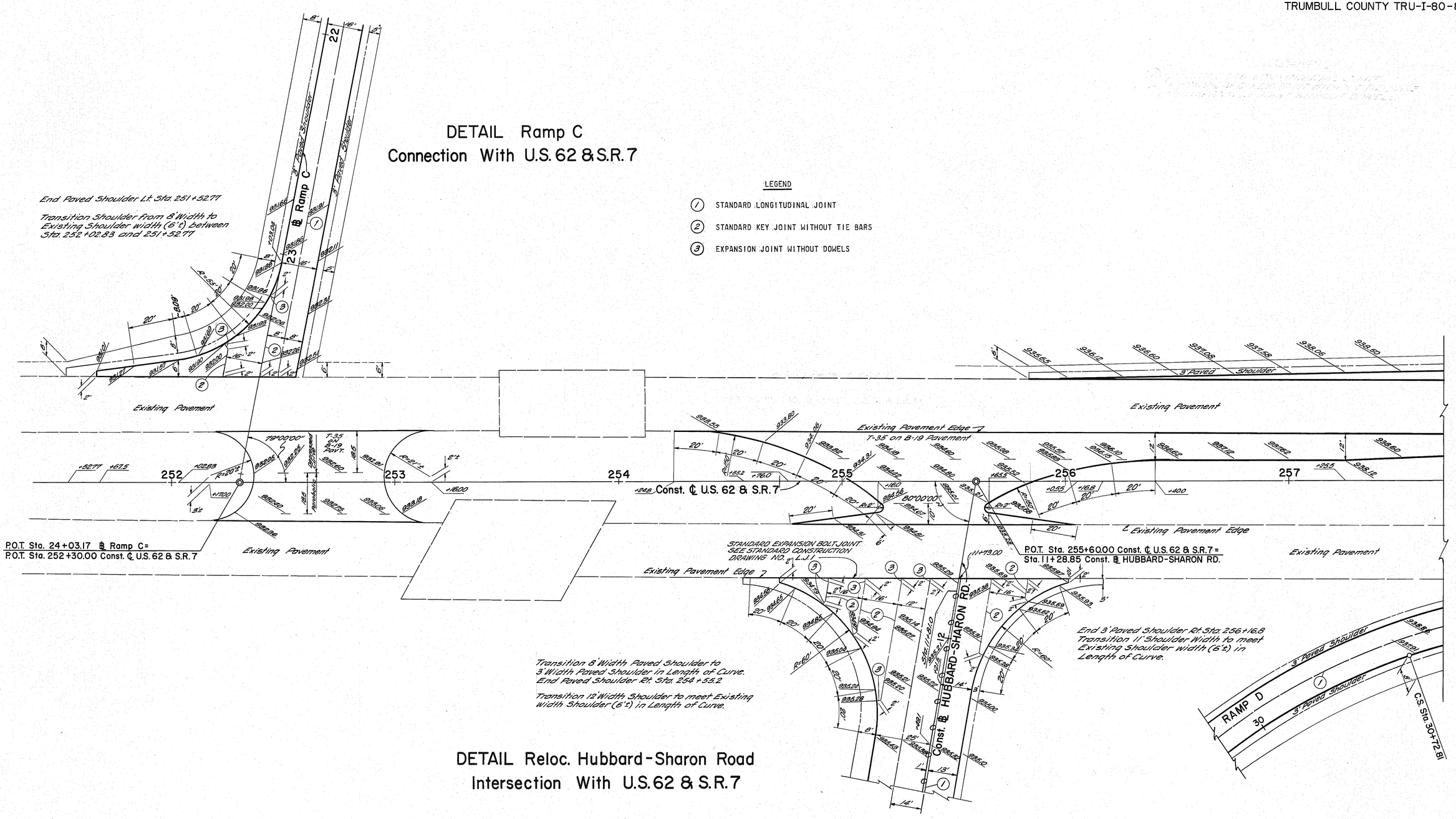
279
401

TRUMBULL COUNTY TRU-I-80-8.90

DETAIL Ramp C
Connection With U.S. 62 & S.R. 7

LEGEND

1. STANDARD LONGITUDINAL JOINT
2. STANDARD KEY JOINT WITHOUT TIE BARS
3. EXPANSION JOINT WITHOUT DOWELS

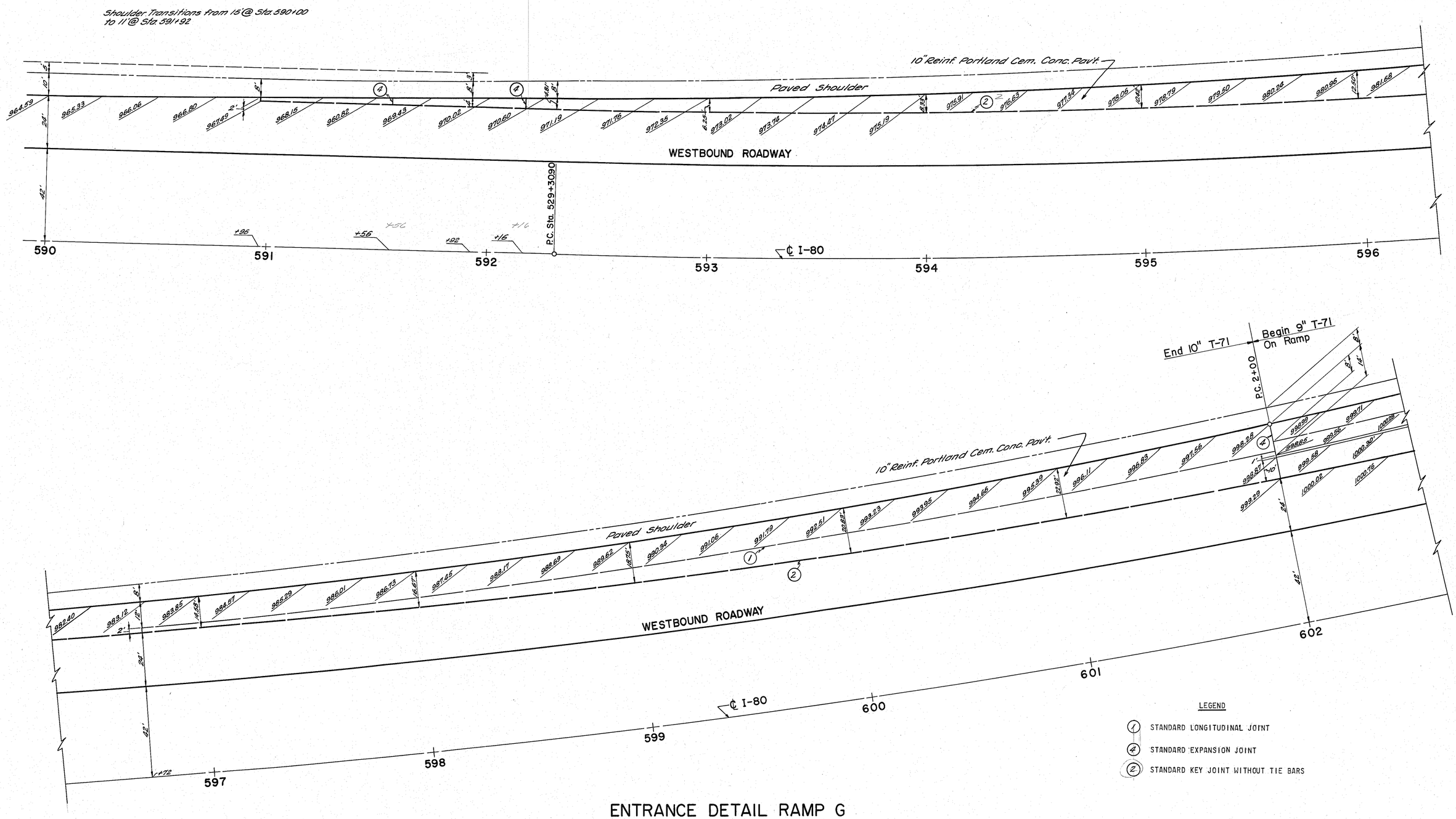


DETAIL Reloc. Hubbard-Sharon Road
Intersection With U.S. 62 & S.R. 7

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

280
401

TRUMBULL COUNTY TRU-I-80-8.90



ENTRANCE DETAIL RAMP G

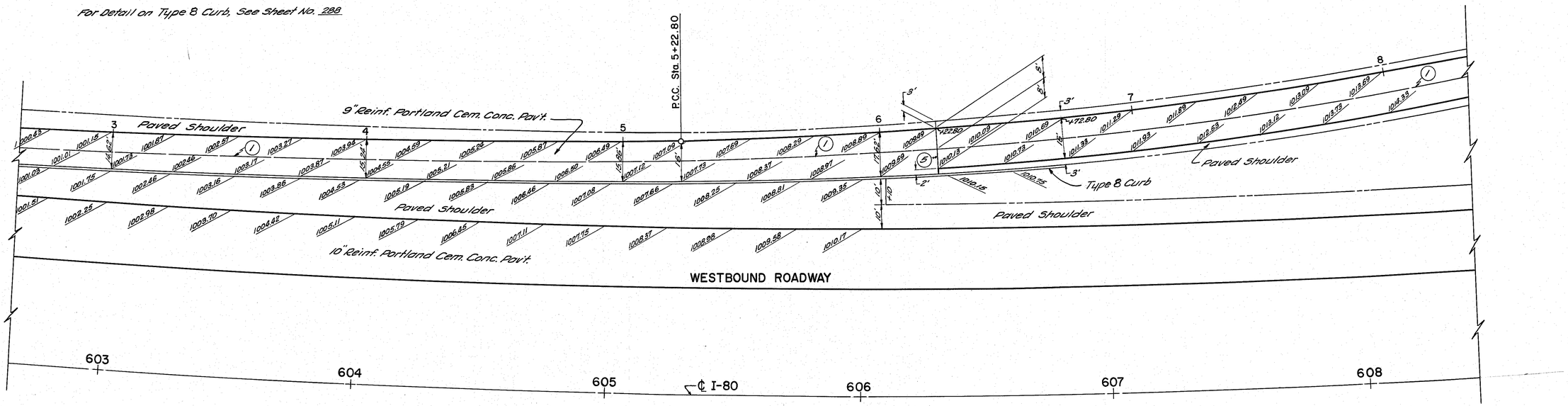
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

281
401

TRUMBULL COUNTY TRU-I-80-8.90

Transition Paved Shoulder from 8' Width to 3' Width between Sta. 2+00 and Sta. 6+22.80

For Detail on Type 8 Curb, See Sheet No. 288



ENTRANCE DETAIL RAMP G

LEGEND

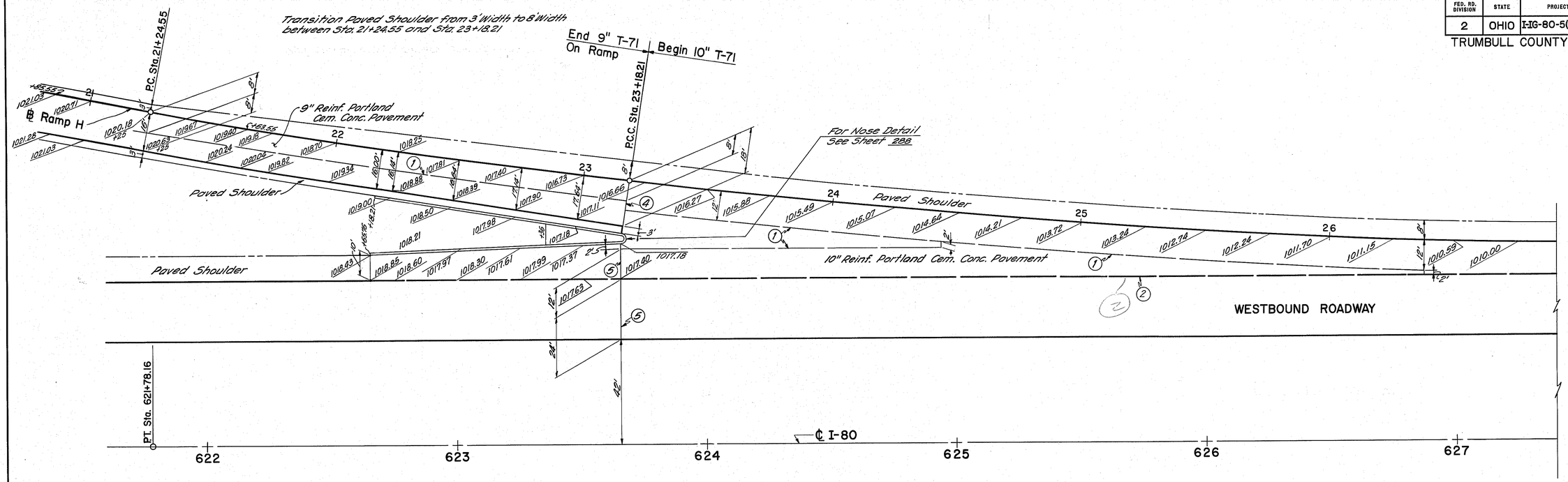
(/) STANDARD LONGITUDINAL JOINT

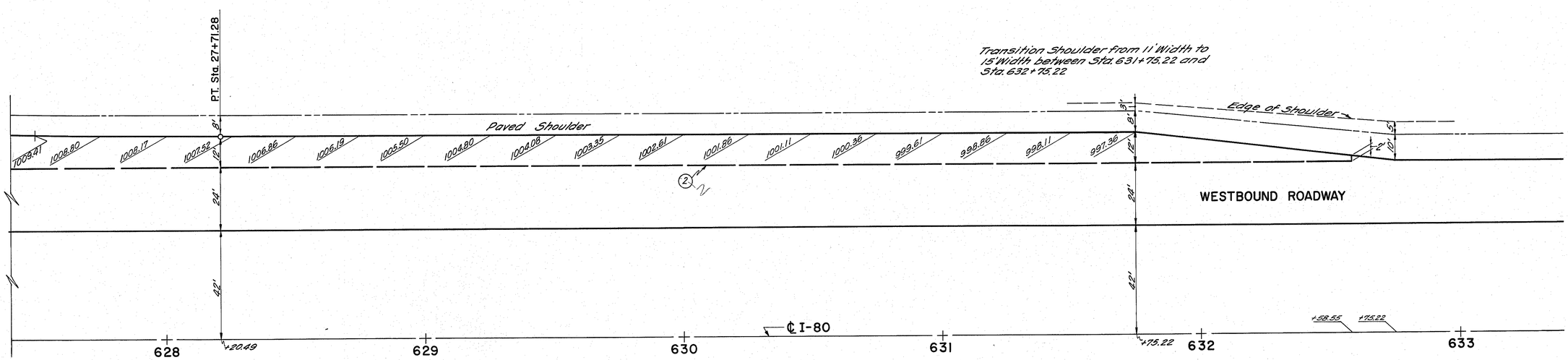
(5) STANDARD CONTRACTION JOINT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

282
401

TRUMBULL COUNTY TRU-I-80-8.90





LEGEND

(1) STANDARD LONGITUDINAL JOINT

(4) STANDARD EXPANSION JOINT

(5) STANDARD CONTRACTION JOINT

(2) STANDARD KEY JOINT WITHOUT TIE BARS

EXIT DETAIL RAMP H

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

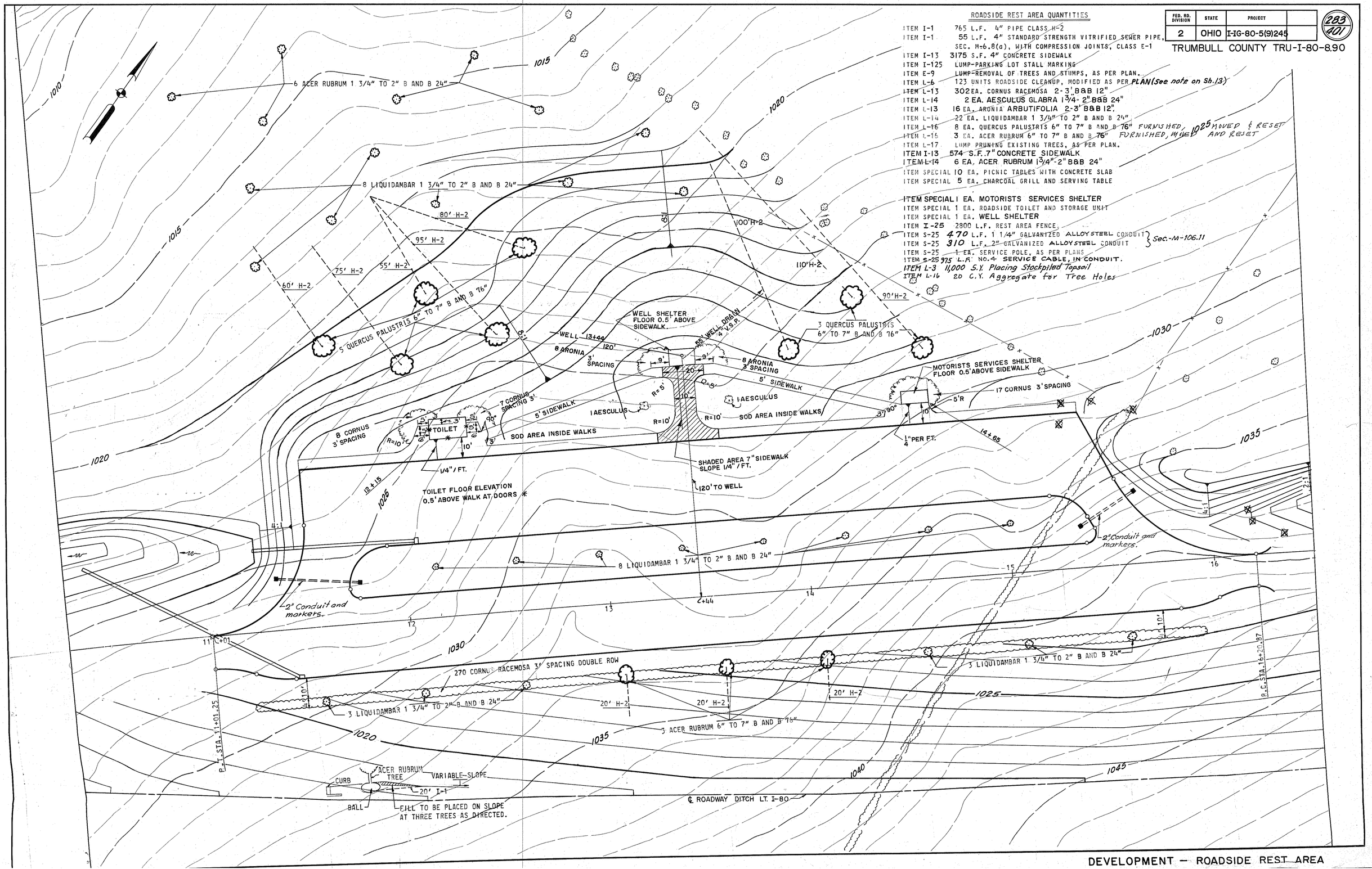
283/401

TRUMBULL COUNTY TRU-I-80-8.90

ROADSIDE REST AREA QUANTITIES

ITEM I-1 765 L.F. 4" PIPE CLASS H-2
ITEM I-1 55 L.F. 4" STANDARD STRENGTH VITRIFIED SEWER PIPE, SEC. M-6.8(a), WITH COMPRESSION JOINTS, CLASS E-1
ITEM I-13 3175 S.F. 4" CONCRETE SIDEWALK
ITEM I-125 LUMP-PARKING LOT STALL MARKING
ITEM E-9 LUMP-REMOVAL OF TREES AND STUMPS, AS PER PLAN.
ITEM L-6 123 UNITS ROADSIDE CLEANUP, MODIFIED AS PER PLAN (See note on Sh. 13)
ITEM L-13 302 EA. CORNUS RACEMOSA 2-3' B&B 12"
ITEM L-14 2 EA. AESCULUS GLABRA 1 3/4-2" B&B 24"
ITEM L-13 16 EA. ARONIA ARBUTIFOLIA 2-3' B&B 12".
ITEM L-14 22 EA. LIQUIDAMBAR 1 3/4" TO 2" B AND B 24"
ITEM L-16 8 EA. QUERCUS PALUSTRIS 6" TO 7" B AND B 76" FURNISHED, MOVED & RESET
ITEM L-16 3 EA. ACER RUBRUM 6" TO 7" B AND B 76" FURNISHED, MOVED AND RESET
ITEM L-17 LUMP PRUNING EXISTING TREES, AS PER PLAN.
ITEM I-13 574 S.F. 7" CONCRETE SIDEWALK
ITEM L-14 6 EA. ACER RUBRUM 1 3/4"-2" B&B 24"
ITEM SPECIAL 10 EA. PICNIC TABLES WITH CONCRETE SLAB
ITEM SPECIAL 5 EA. CHARCOAL GRILL AND SERVING TABLE

ITEM SPECIAL 1 EA. MOTORISTS SERVICES SHELTER
ITEM SPECIAL 1 EA. ROADSIDE TOILET AND STORAGE UNIT
ITEM SPECIAL 1 EA. WELL SHELTER
ITEM I-25 2800 L.F. REST AREA FENCE
ITEM S-25 470 L.F. 1 1/4" GALVANIZED ALLOY STEEL CONDUIT } Sec.-M-106.11
ITEM S-25 310 L.F. 2" GALVANIZED ALLOY STEEL CONDUIT
ITEM S-25 1 EA. SERVICE POLE, AS PER PLANS
ITEM S-25 975 L.F. NO. 4 SERVICE CABLE, IN CONDUIT.
ITEM L-3 11,000 S.Y. Placing Stockpiled Topsoil
ITEM L-16 20 C.Y. Aggregate for Tree Holes

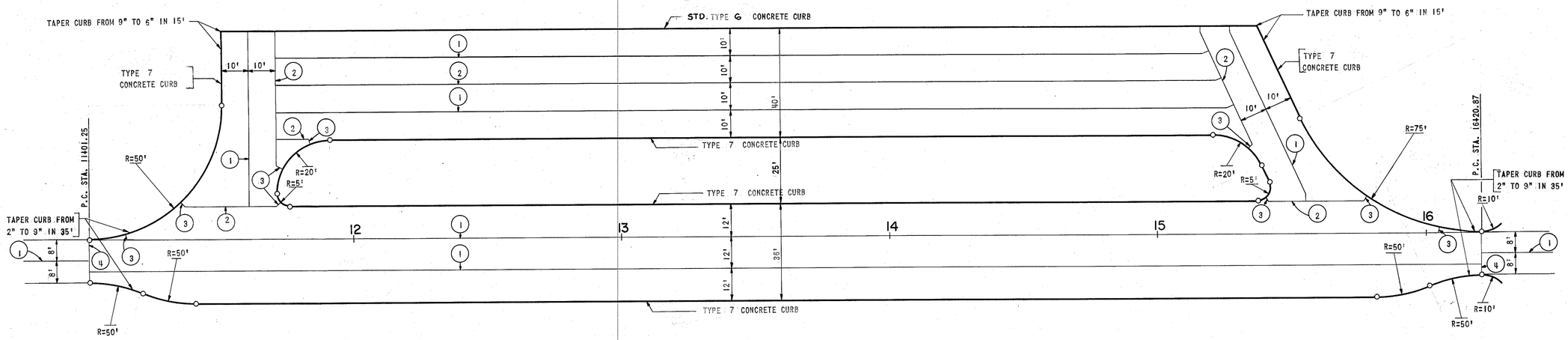


DEVELOPMENT — ROADSIDE REST AREA

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

284
401

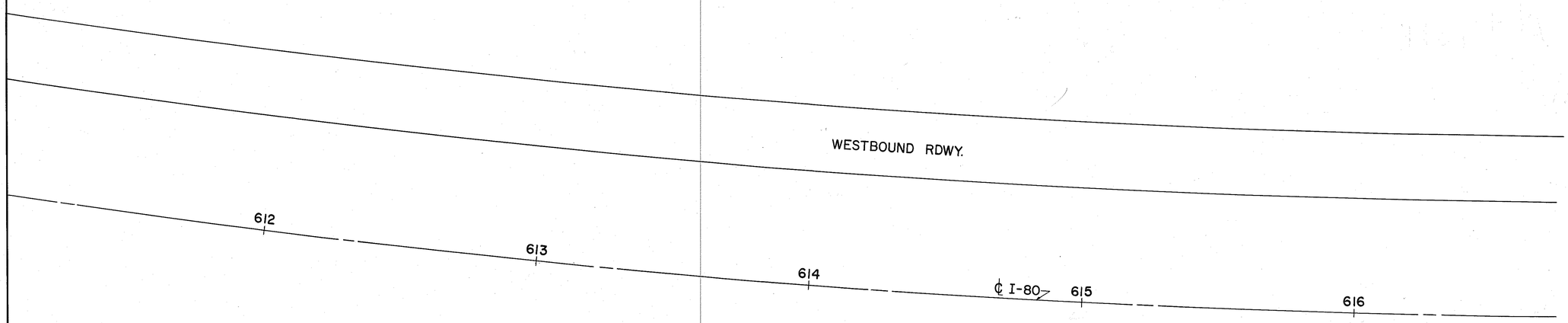
TRUMBULL COUNTY TRU-I-80-8.90



LEGEND

1. STANDARD LONGITUDINAL JOINT
2. STANDARD KEY JOINT WITHOUT TIE BARS
3. EXPANSION JOINT WITHOUT DOWELS
4. STANDARD EXPANSION JOINT

FOR TYPE 7 CURB DETAIL SEE SHEET NO. 6



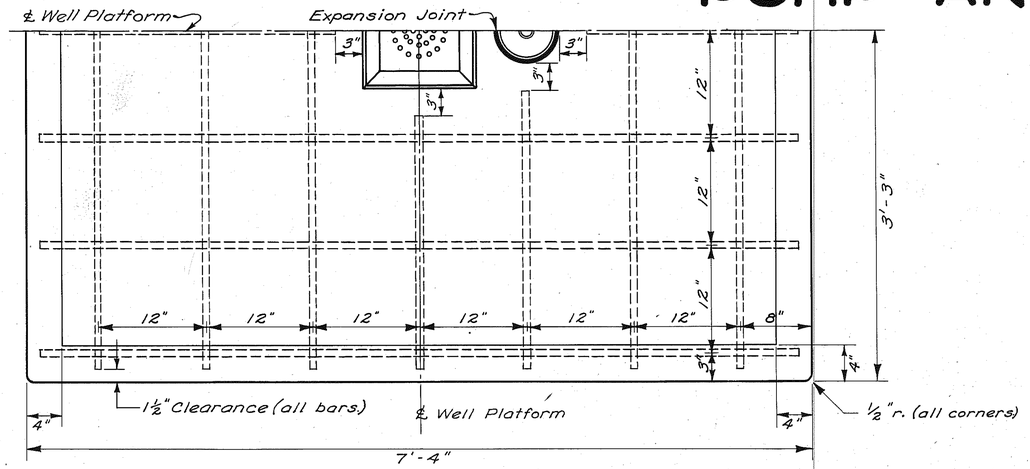
JOINT AND CURB LAYOUT
ROADSIDE REST

PUMP AND PLATFORM

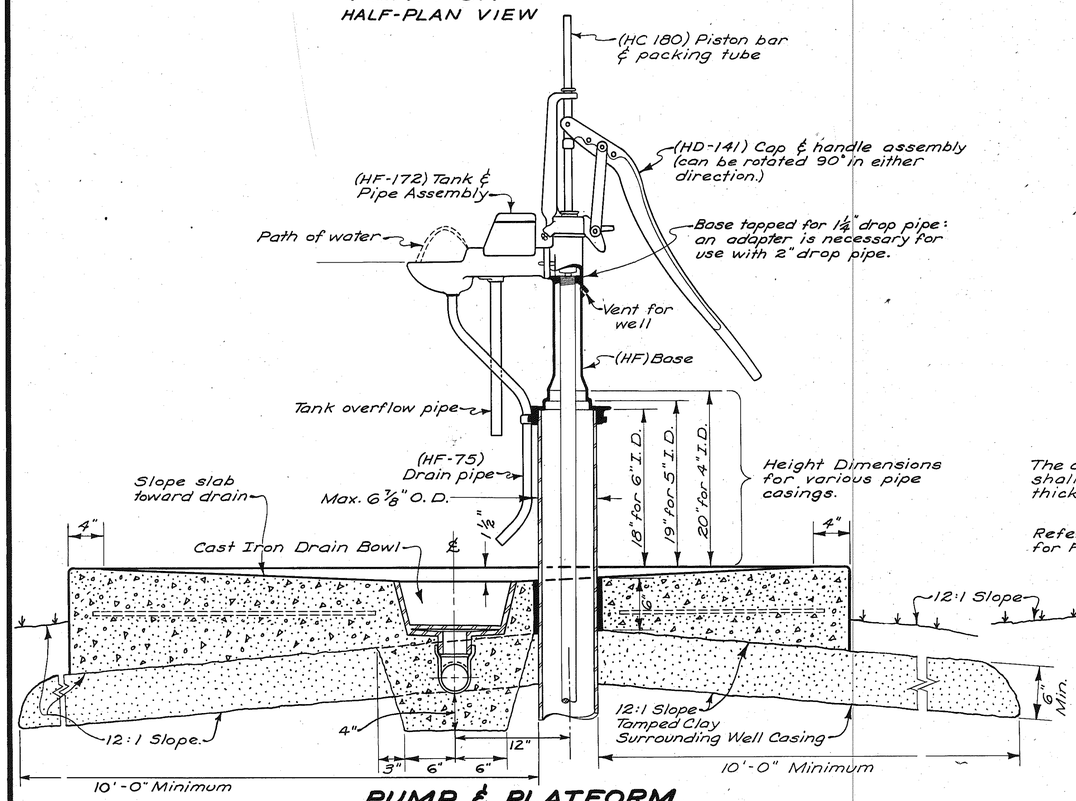
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

284-A

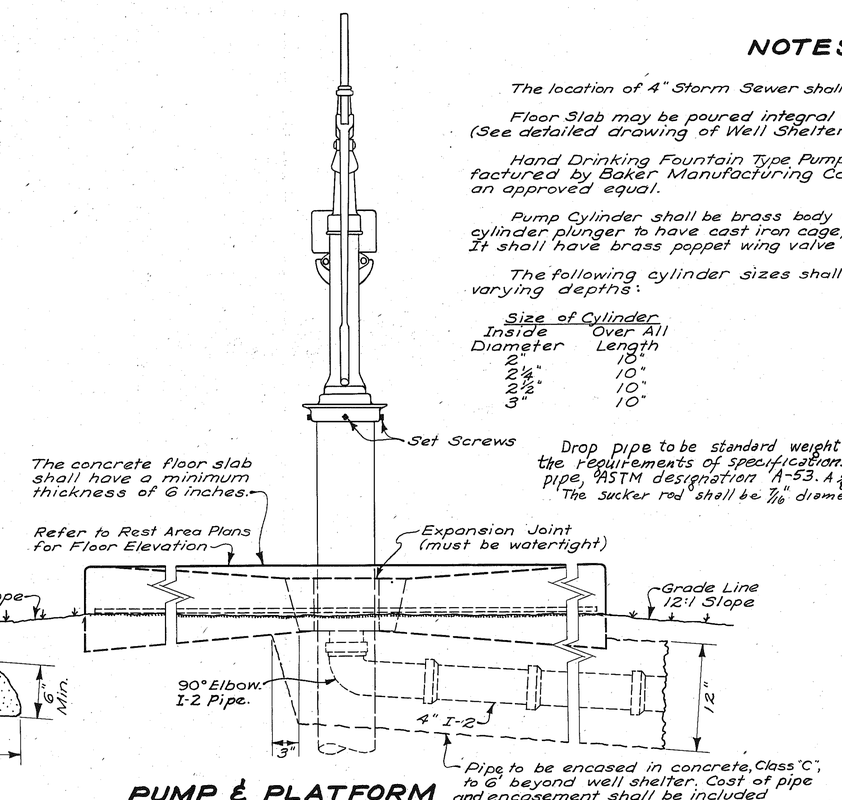
TRUMBULL COUNTY
TRU-80-8.90



PLATFORM
HALF-PLAN VIEW



PUMP & PLATFORM
SIDE ELEVATION



PUMP & PLATFORM
REAR ELEVATION

BILL OF MATERIALS*

Hand Drinking Fountain Type Pump (Including pump cylinder.)
Class "C" Concrete.
12"x12"x6" Cast Iron Drain Bowl.
4" Pipe Encased.

3/4" ϕ REINFORCING STEEL	
QUANTITY	LENGTH
1	2'-0"
1	2'-9"
2	2'-4"
2	2'-7"
5	6'-3"
6	7'-1"

* Payment included in Unit Price Bid for "Item Special Well Shelter, Pump and Platform."

NOTES

The location of 4" Storm Sewer shall be as furnished on Rest Area plan.

Floor Slab may be poured integral with the Well Shelter Footer. (See detailed drawing of Well Shelter.)

Hand Drinking Fountain Type Pump shall be Model 1-HF as manufactured by Baker Manufacturing Company, Evansville, Wisconsin, or an approved equal.

Pump Cylinder shall be brass body cylinder or brass lined. The cylinder plunger to have cast iron cage, brass follower and valve seat. It shall have brass poppet wing valve with rubber facing and steel stem.

The following cylinder sizes shall be used for wells of varying depths:

Size of Cylinder: Inside Diameter	Over All Length	Depth of Cylinder Setting
2"	10"	175' – 200'
2¼"	10"	150' – 175'
2½"	10"	75' – 150'
3"	10"	25' – 75'

Drop pipe to be standard weight 1¼" galvanized pipe and shall meet the requirements of specifications for welded and seamless steel pipe, ASTM designation A-53. A ⅛" Weep hole shall be drilled 6' below top of casing. The sucker rod shall be 7/16" diameter galvanized steel.

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TRUMBULL COUNTY
TRU-80-8.90

NOTES:

① ALL STRUCTURAL LUMBER SHALL BE NUMBER 1 SOUTHERN YELLOW PINE, STD. K.D., S4S OR CONSTRUCTION GRADE DOUGLAS FIR, STD. K.D. S4S. ALL TRIM SHALL BE "C" GRADE, S4S, STD. K.D. S.Y.P. OR D.FIR.

② SIDING SHALL BE 1"x6" PATTERN 116 "V" TYPE.

③ INTERIOR SIDING SHALL BE TEXTURE ONE-ELEVEN EXTERIOR GRADE DOUGLAS FIR PLYWOOD. 1/4-INCH GROOVES SHALL BE SPACED 4" O.C. (SEE ALSO NOTE 7.)

④ ROOF MATERIAL SHALL BE HIGH LIGHT TRANSMISSION TYPE TRANSLUCENT FIBERGLAS, .060" THICK, 2 1/2-INCH CORRUGATIONS, SMOOTH FINISH, LIGHT GREEN COLOR AS MANUFACTURED BY THE ALSYNITE COMPANY OF AMERICA. NAIL ALONG RAFTERS & BRIDGING AT APPROX. 12" O.C. WITH ALUMINUM SCREW SHANK NAILS WITH NEOPRENE WASHERS ATTACHED.

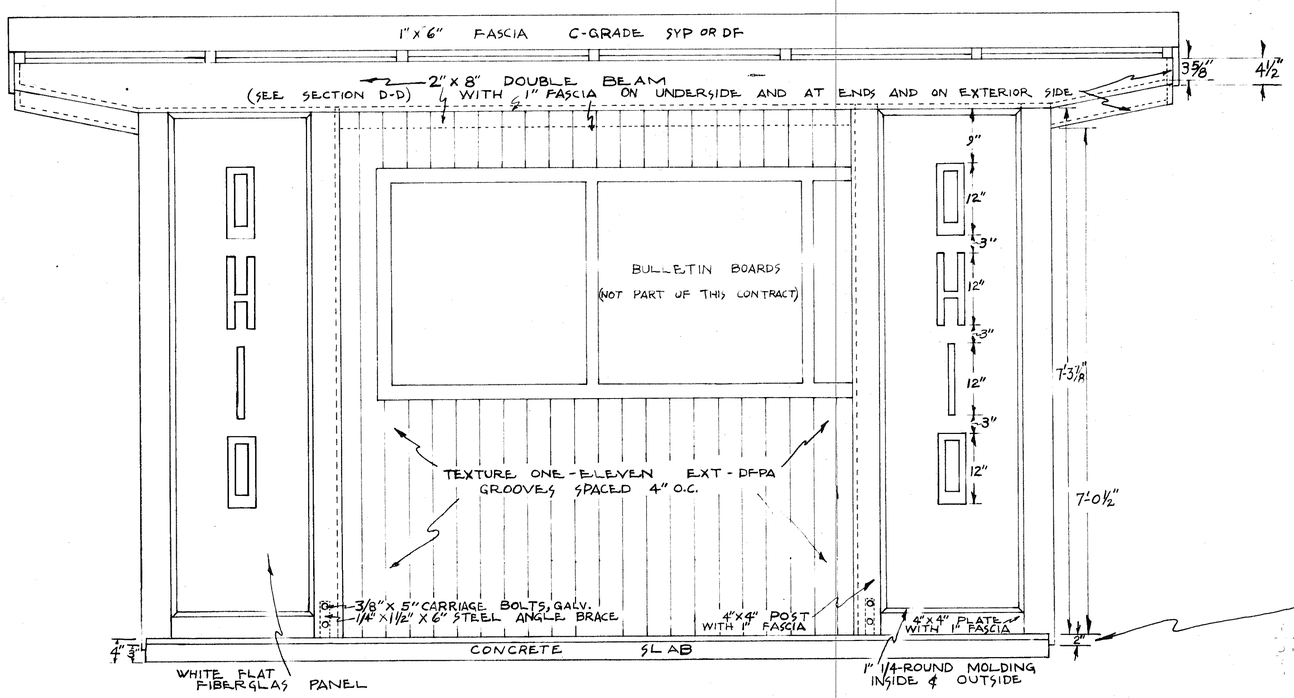
⑤ FRONT ELEVAION PANELS SHALL BE FLAT PATTERN, WHITE COLOR, SMOOTH FINISH, (SEE NO 4).

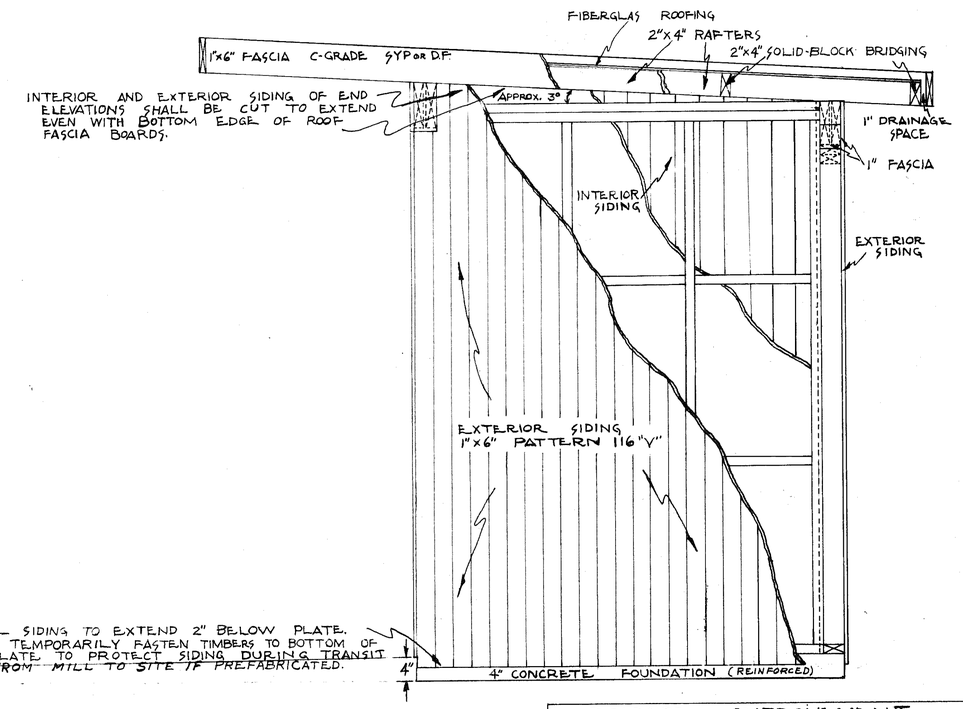
⑥ ALL NAILS WILL BE ALUMINUM OR HOT GALV. DIPPED NAILS.

⑦ INTERIOR WALL PANELS SHALL BE CUT TO SIZE AT THE MILL AND LATER INSTALLED ON THE SITE AFTER THE STRUCTURE HAS BEEN ANCHORED TO CONCRETE PAD WHEN STRUCTURE IS PREFABRICATED OFF JOB SITE.

⑧ ALL LETTERS AND SIGNS NOT A PART OF THIS CONTRACT.

⑨ ALL LUMBER SHALL BE TREATED IN ACCORDANCE WITH THE REQUIREMENT FOR PENTA-CHLOROPHENOL TREATMENT, SEC. M-8.3.





ROADSIDE IMPROVEMENT
OHIO DEPARTMENT OF HIGHWAYS

MOTORIST'S SERVICES SHELTER

Sheet 1 of 2

DATE
10-25-60
11-23-60
8-6-63

STANDARD CONSTRUCTION DRAWING

SCALE: 1" = 1'

DESIGNED: RBB

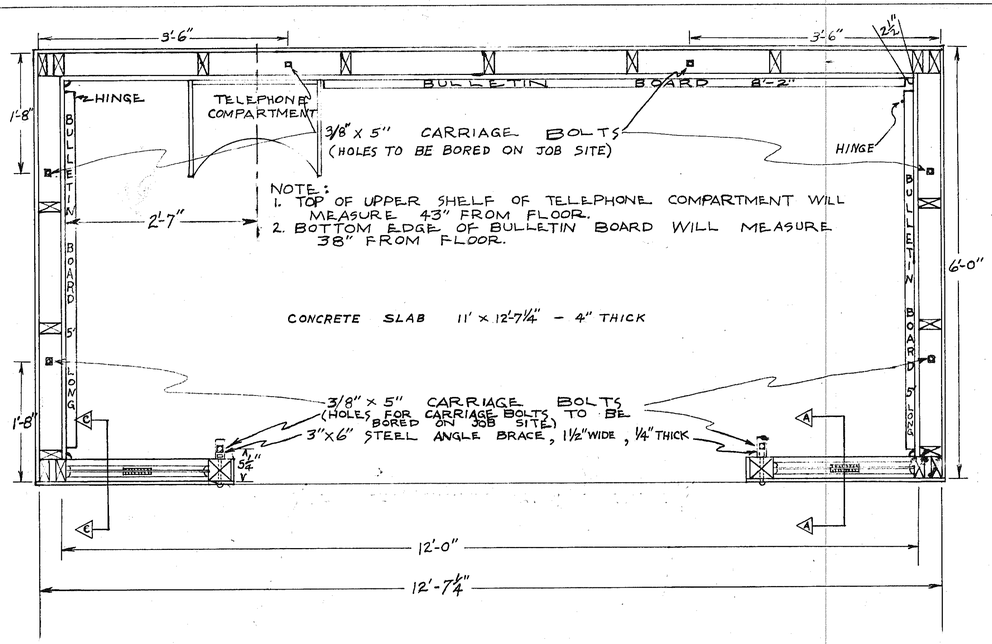
APPROVED: FAR

Mega-Flex Tracing.

TRUMBULL COUNTY
TRU-80-8.90

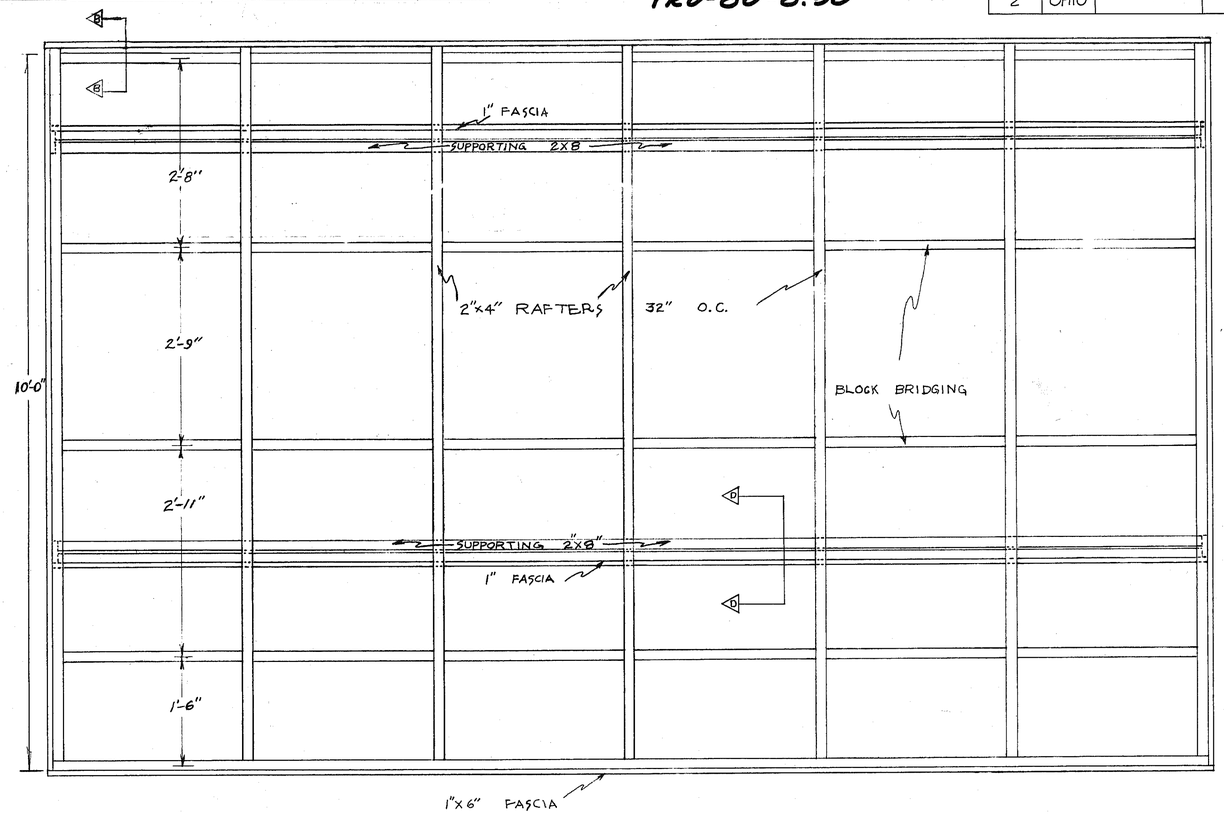
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

284-C

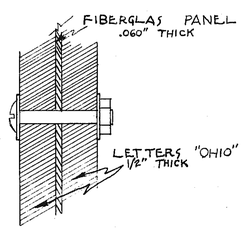


PLAN

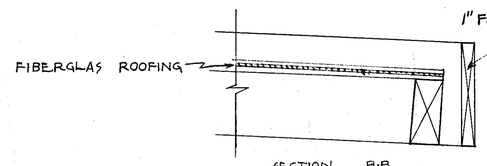
SCALE: 1" = 1'



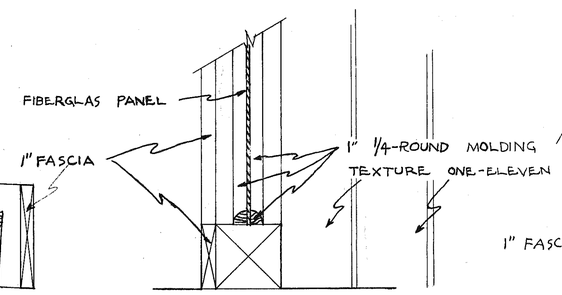
ROOF FRAMING PLAN



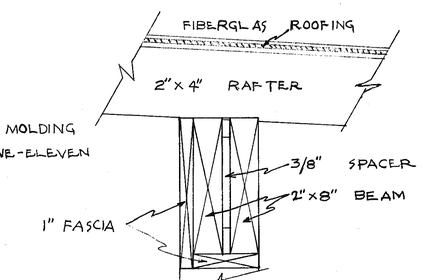
SECTION A-A
INSTALLATION OF LETTERS ON FIBERGLAS PANEL
FULL SCALE



SECTION B-B
ROOF DRAINAGE DETAIL
SCALE: 3" = 1'



SECTION C-C
FRONT PANEL DETAIL
SCALE: 3"=1'



SECTION D-D
BEAM CONSTRUCTION DETAIL
SCALE: 3" = 1'

MOTORIST'S SERVICES SHELTER

Sheet 2 of 2

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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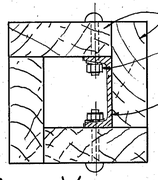
TRUMBULL COUNTY
TRU-80-8.90



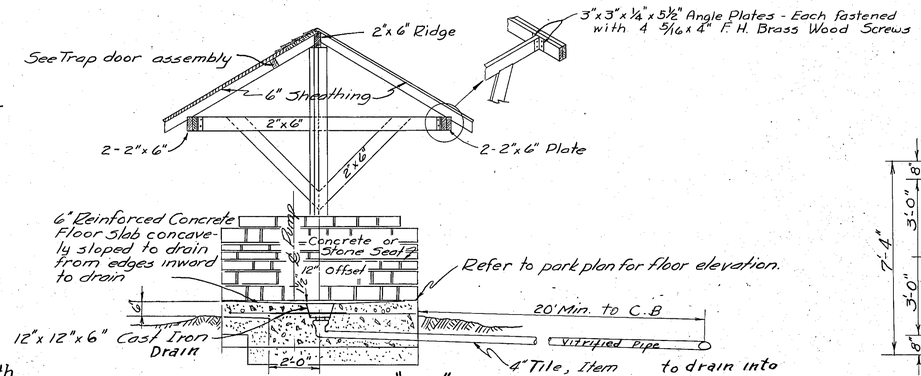
PLAN VIEW OF POST CONSTRUCTION
Scale 3"=1'-0"

ESTIMATED BILL OF MATERIALS

4 pcs.	2"x6"x10'	- Cross members for roof and angular Supports
5 "	2"x6"x14'	- Ridge & plate for roof
8 "	2"x4"x14'	- Roof rafters
4 "	2"x6"x16'	Boxing around Channel iron, for column Supports.
2 "	6"x6"x10'	- Wood posts (alternate column Supports)
2 "	5½"-7" O.D. x 11'	- Used well casing (alt. column supports)
28 "	1"x6"x14'	- Roof sheathing
2 "	1"x3"x14'	- Facia boards
10 bundles	- 16"	- Random width wood shingles, grade xxxxx cedar.
1 pc.	1"x3"x8'	- Trap door cleats
1 "	2"x4"x2'	- Trap door framing

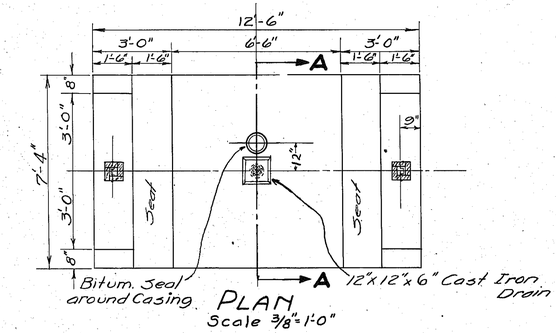
Hardware

24 each	3/8"x3"	- Carriage bolts in column supports
4 "	½"x11"	- C-Bolts, column & braces
4 "	½"x9"	- C-Bolts, column & cross-arms
4 "	½"x5"	C-Bolts, braces & cross-arms
1 "	12 x 12 x 6"	Cast Iron Drain Bowl
1 "	14'	- Copper or Aluminum Ridge Roll
2 pcs.	(11 lin. ft. each)	- Channel iron
8 ea.	3"x3"x¼x5½"	- Angle plates
46 "	5/16"x4"	- F. H. brass wood screws
2 "	2½"	- Screen door hooks - complete
4 "	½"x15" (2" spread)	- U-Bolts, alternate with used well casing posts.

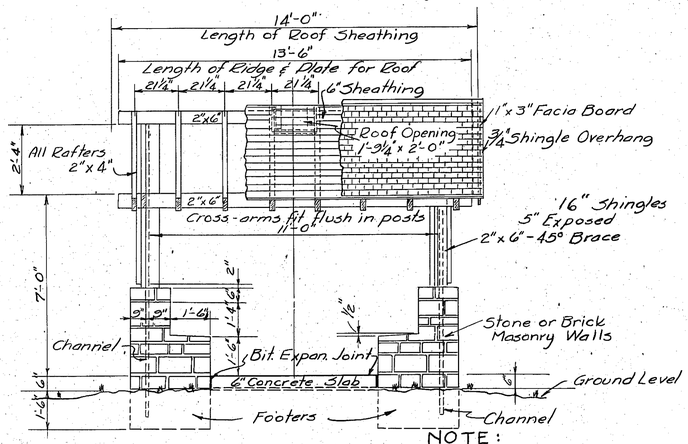


SECTION "A-A"
Scale 3/8"=1'-0"

4" Tile, Item to drain into ajacent ditch, Stream or, roadway drainage as per plan. Tile to be encased in concrete to 6' beyond well Shelter. Cost of encasement shall be included in cost of 4" Storm Sewer, Item I-2.

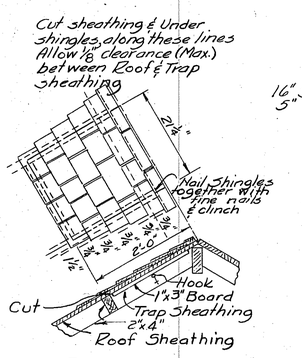


PLAN
Scale 3/8"=1'-0"

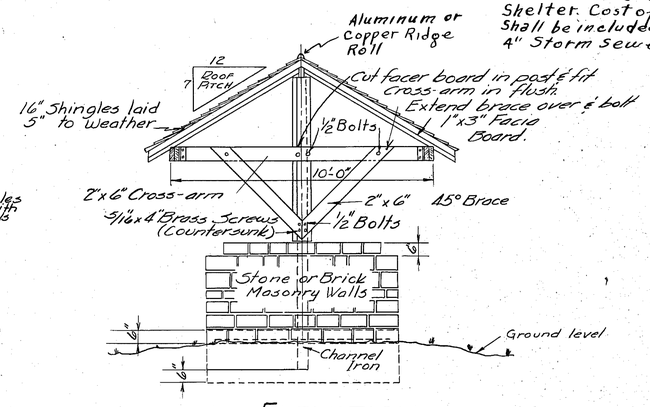


ELEVATION
Scale 3/8"=1'-0"

NOTE: Bituminous Expansion Joint will not be necessary if concrete well slab is placed integral with footers for Well Shelter.



DETAIL OF TRAP DOOR
Scale ¾"=1'-0"



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

NOTES

All outside vertical surface joints shall be raked to a depth of ¼" to ½".

All stone masonary shall comply with specification for Item S-20. No masonary, stone or brick shall be painted.

Brick shall be size number 3 or 4, made from clay and comply with specification for Item I-8.

The posts constructed from 2"x6" boards shall be fastened with suitable nails, also 5/16"x4" brass screws at 24" intervals.

All lumber shall be S4S, Std., KD, #1 common and better, Southern Yellow Pine or Douglas Fir.

All lumber and shingles be treated in accordance with the requirements for "Pentachlorophenol Treatment," Sec. M-8.3.

Concrete shall be Class "C" and constructed in accordance with the requirements of Item S-1 of the Specifications.

Reinforcing steel in 6" reinforced concrete floor slab shall be ¾" steel rods spaced 12" apart O.C. both ends. Reinforcing steel not required in footers, nor in 8" walls or 4" floor slab of compartment.

Large sized washers shall be used with all bolts, one at each end; a lock washer shall also be used at the nut end. Bolts shall be cut off ¼" beyond the nut & then hammered. All bolt holes shall be soaked with 5% Pentachlorophenol Solution, thoroughly before inserting bolts.

Bolts shall be good quality Hot Galvanized, Cadmium Plated or, Copper Bearing.

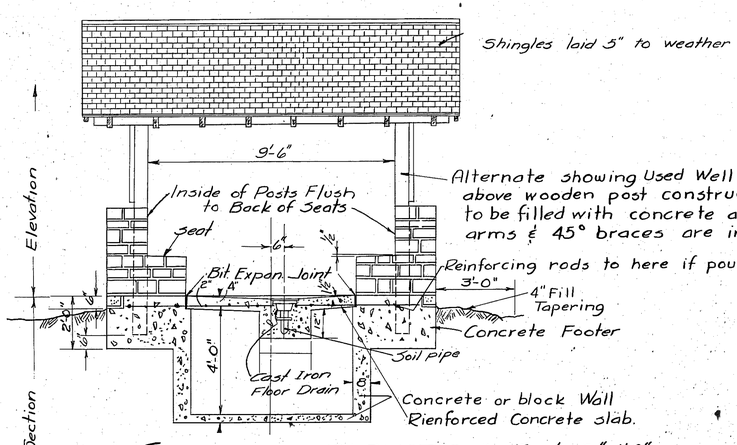
In all shelters containing a well & pump these are offset from center of 6" concrete slab, and trap door is built into roof of shelter as shown. all to allow for drawing of pump and/or casing, in the event repairs have to be made.

Should local conditions warrent, drainage of excess ground water from compartment beneath fountain; it shall be carried off either by gravity flow or sump drains as required, by topography of the individual park area affected.

Aggregate subbase for concrete slab shall meet the requirements of Item I-22 Subbase, Grading "C" or "D".

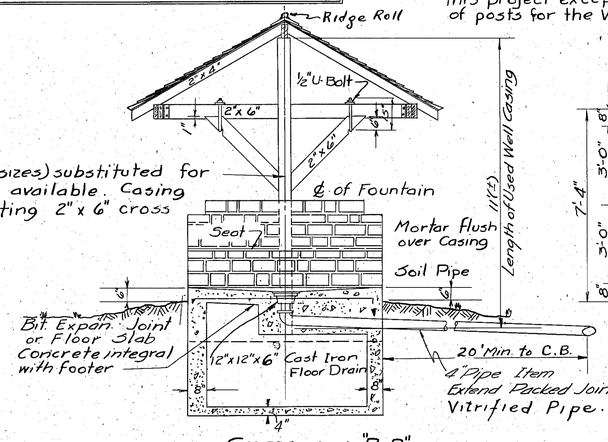
This Well Shelter Design is the TRADE MARK" of the Roadside Parks in OHIO. It will be erected as standard.

NOTE: Details below this line do not apply to this project except for alternate design of posts for the Well Shelter.

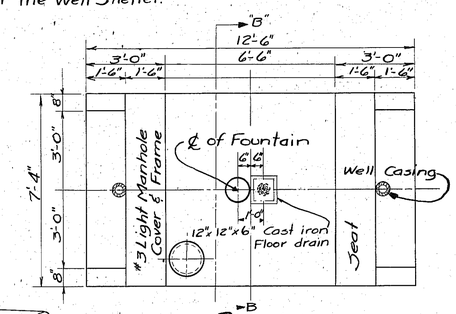


SECTION - ELEVATION
Scale 3/8"=1'-0"

Compartment Under Slab & Foundation Where City Water is Used To Allow Repairing



SECTION "B-B"
Scale=3/8"=1'-0"



PLAN
Showing Used Well Casing Posts

Scale 3/8"=1'-0"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
WELL SHELTERS
ROADSIDE PARKS

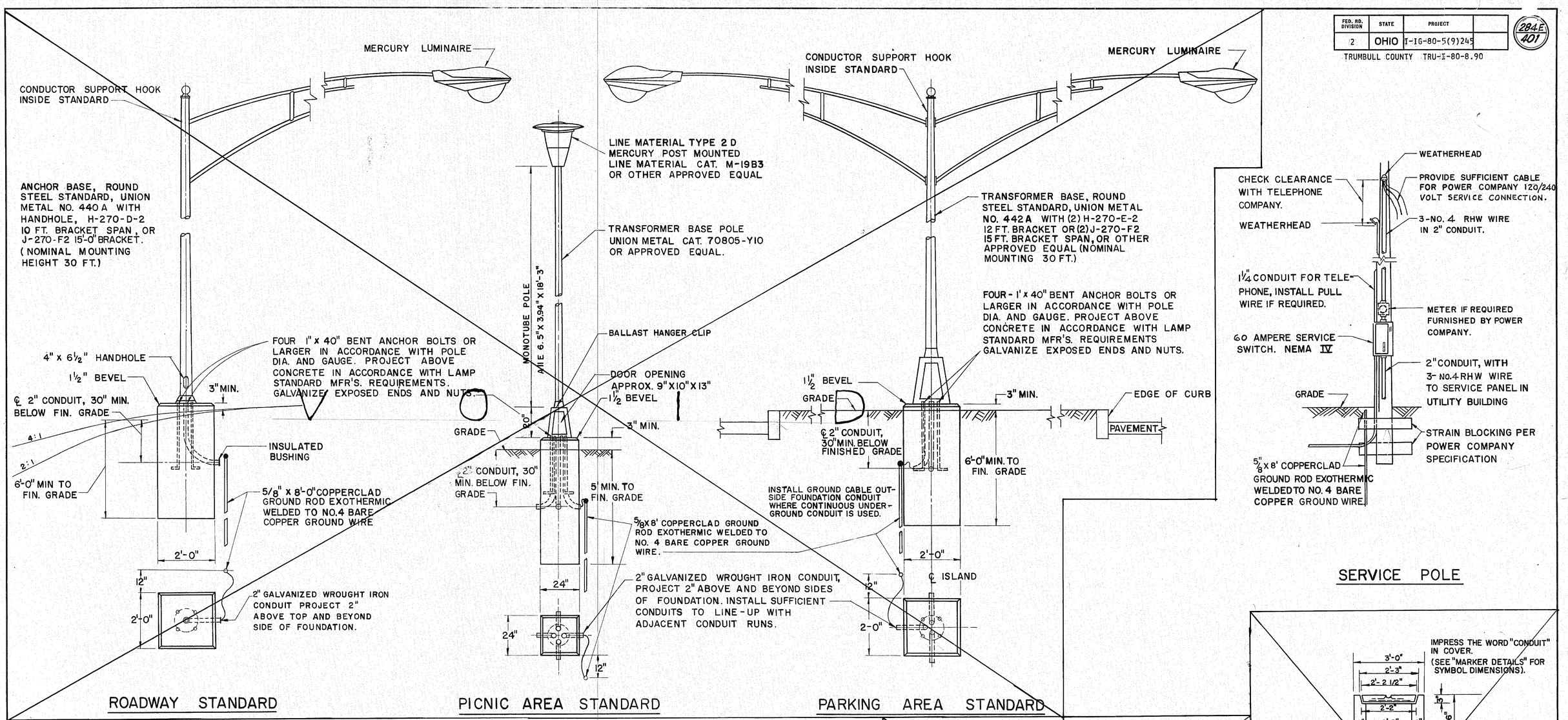
Jan. 1958

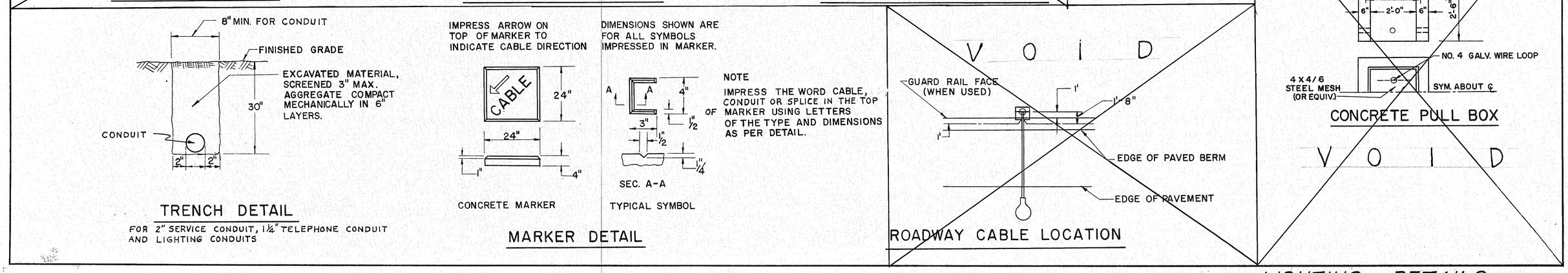
DESIGNED	TRACED	APPROVED
C.A.W.	R.C.B.	H.J.G

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

TRUMBULL COUNTY TRU-I-80-8.90

284E
401





LIGHTING DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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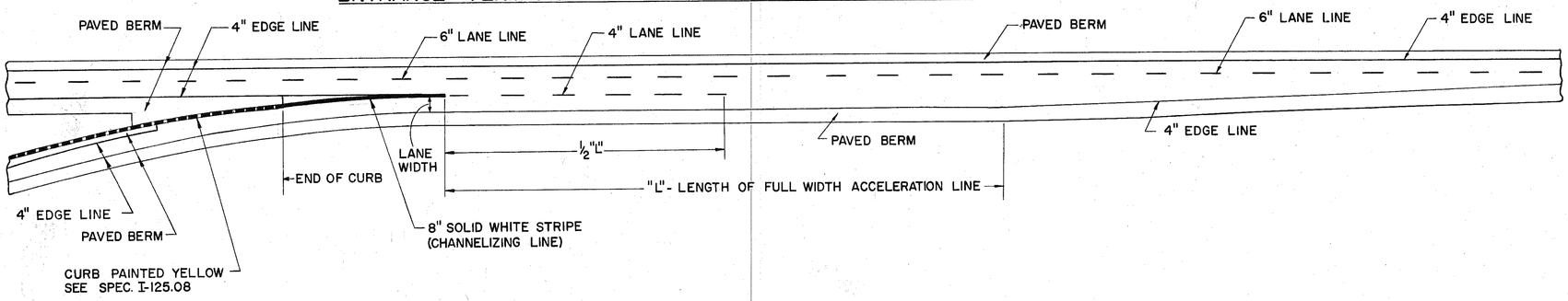
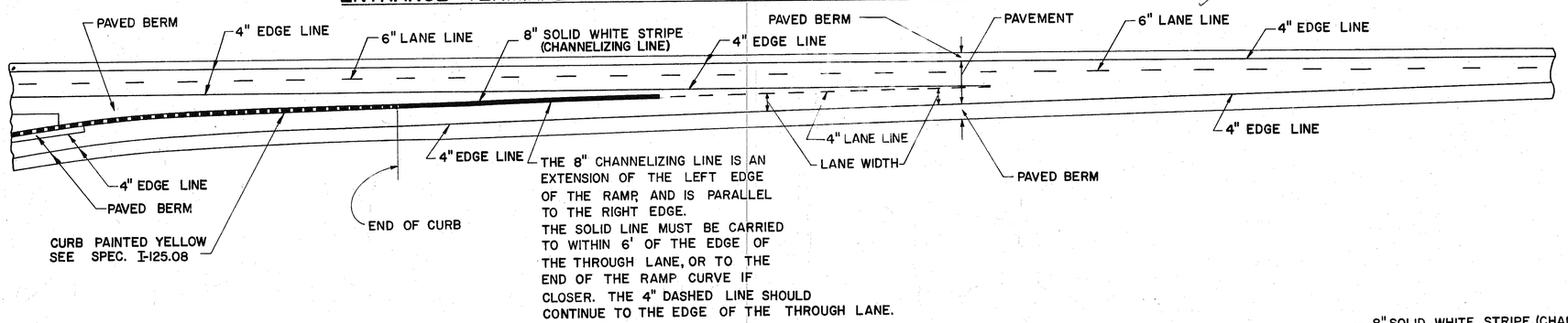
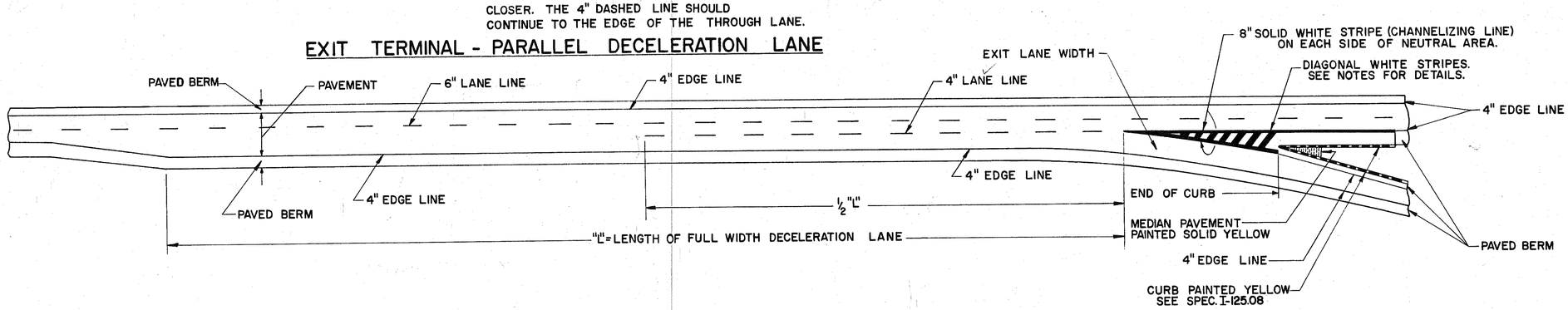
ENTRANCE TERMINAL - PARALLEL ACCELERATION LANE



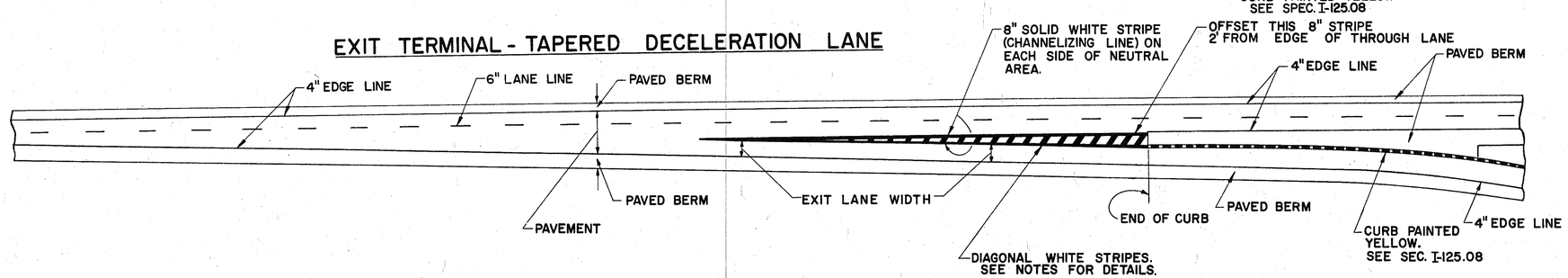
ENTRANCE TERMINAL - TAPERED ACCELERATION LANE



EXIT TERMINAL - PARALLEL DECELERATION LANE



EXIT TERMINAL - TAPERED DECELERATION LANE



NOTES

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

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

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

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 SUPPLEMENTAL SPECIFICATION No. I-125 AND DEFINED IN SECTION I-125.07 c.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

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

APPROVED Robert E. Lower
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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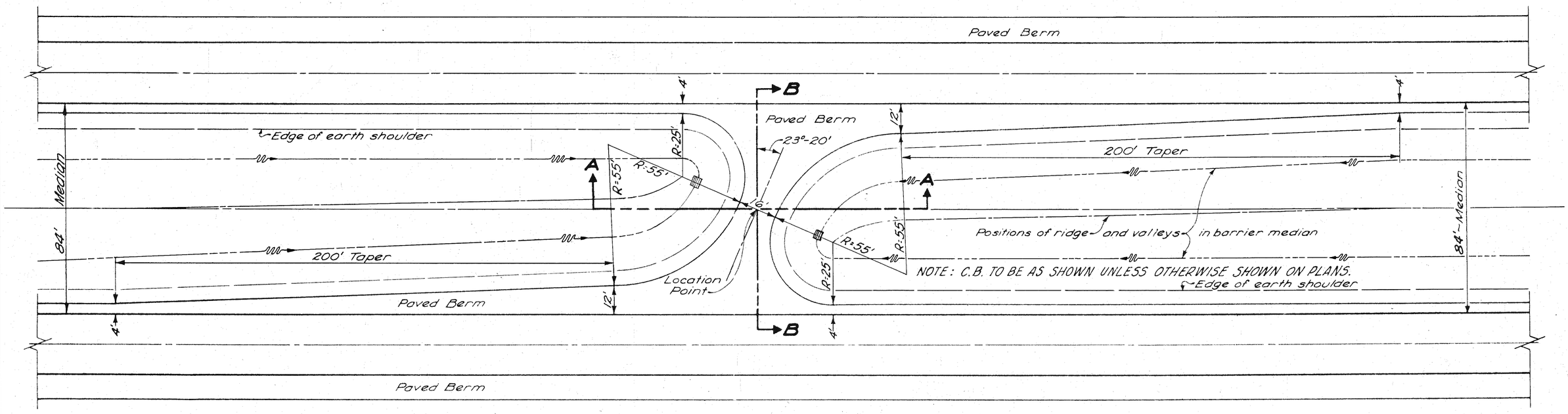
401

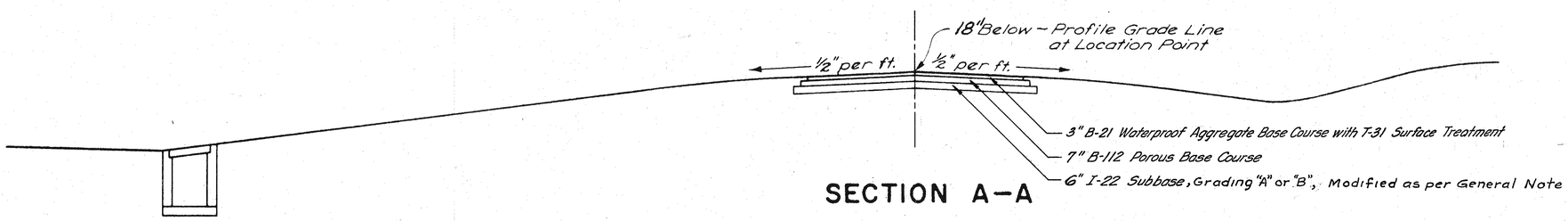
TRUMBULL COUNTY TRU-I-80-8.90

TYPICAL U-TURN MEDIAN OPENINGS

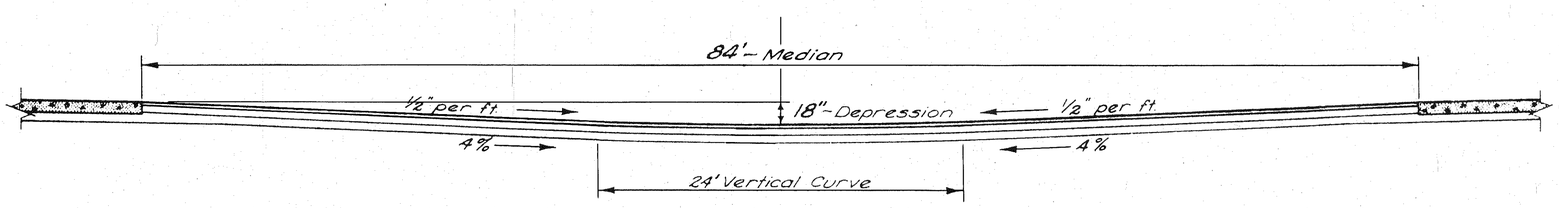


TYPICAL CROSSOVER

STA. 556 + 50
STA. 658 + 10 (PARTIAL CONSTR.)



SECTION A-A



SECTION B-B

MEDIAN CROSSOVER

MEDIAN PLANTING PLAN

SCALE: 1" = 20'

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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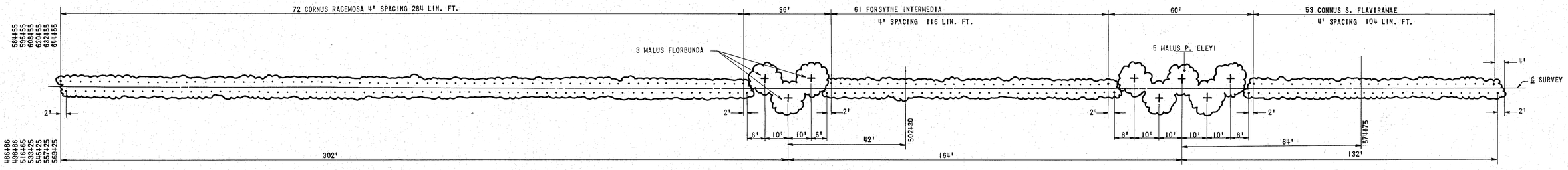
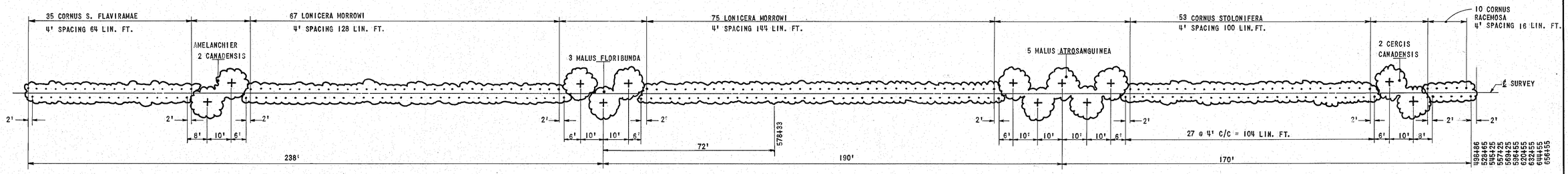
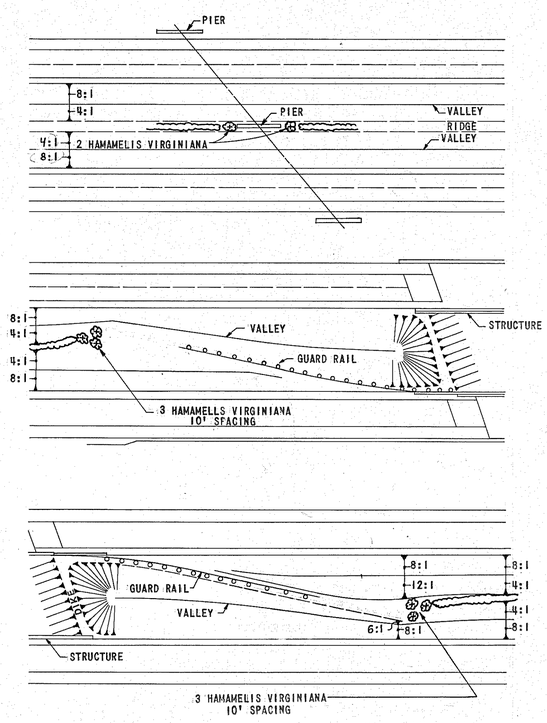
TRUMBULL COUNTY TRU-I-80-8.90



PLANTING DATES: PLANTING SHALL NOT BE DONE BETWEEN THE DATES OF MAY 1 AND OCT. 1 AND SHALL NOT BE PERFORMED WHEN THE GROUND IS FROZEN OR WHEN SOIL OR WEATHER CONDITIONS PREVENT PROPER PLANTING.

PLANTING METHODS: IN LIEU OF POCKET HOLE PREPARATION AS PER L-13., CONTINUOUS TRENCHING MAY BE DONE TO AN APPROX. DEPTH OF 12" AND WIDE ENOUGH TO ACCOMMODATE ROOT SYSTEMS.





SHRUBS AND TREES

ITEM	QUAN.	DESCRIPTION	SIZE
L-13	810/236	CORNUS RACEMOSA (GRAY DOGWOOD)	2'TO 3'
L-13	561/183	FORSYTHIA INTERMEDIA (BORDER FORSYTHIA)	2'TO 3'
L-13	851/208	CORNUS S. FLAVIRAMAE (GOLDEN TWIG DOGWOOD)	2'TO 3'
L-13	1371/284	LONICERA MORROWI (MORROW HONEYSUCKLE)	2'TO 3'
L-13	20/8	HAMAMELIS VIRGINIANA (WITCHHAZEL)	4'TO 5'
L-13	477/106	CORNUS STOLONIFERA (RED OSLER DOGWOOD)	2'TO 3'
L-14	60/15	MALUS FLORIBUNDA (JAPANESE FLOWERING CRAB APPLE)	4'TO 5'
L-14	45/15	MALUS P. ELEYI (ELEY CRAB APPLE)	4'TO 5'
L-14	20/4	AMELANCHIER CANADENSIS (DOWNY SHADBLOW)	4'TO 5'
L-14	45/10	MALUS ATROSANGUINEA (CARMINE CRAB)	4'TO 5'
L-14	18/4	CERCIS CANADENSIS (BUSH FORM JUDAS TREE)	4'TO 5'

~~PERMISSIBLE PLANTING MAY BEGIN PRIOR TO FINAL ACCEPTANCE~~ out

OPTIONAL MATERIAL IS LISTED BELOW. THE CONTRACTORS PROPOSAL FOR USE OF OPTIONAL MATERIAL SHALL BE APPROVED BY THE ENGINEER BEFORE DELIVERY TO THE PROJECT.

ITEM	QUAN.		SIZE
~~L-13~~		~~RHUS AROMATICA (FRAGRANT SUMAC)~~	~~2'TO 3'~~
~~L-13~~		~~CORNUS SANGUINEA (BLOOD TWIG DOGWOOD)~~	~~2'TO 3'~~
~~L-13~~		~~CORNUS AMOMUM (SILKY DOGWOOD)~~	~~2'TO 3'~~
~~L-13~~		~~ARONIA ARBUTIFOLIA (RED CHOKE BERRY)~~	~~2'TO 3'~~
~~L-13~~		~~CORYLUS AMERICANA (AMERICAN HAZELNUT)~~	~~2'TO 3'~~
~~L-14~~		~~MALUS (IN VARIETY)~~	~~4'TO 5'~~
~~L-14~~		~~ACERGINNALA (AUTUMN MAPLE)~~	~~4'TO 5'~~
~~L-14~~		~~KOELREUTERIA PANICULATA (GOLDEN RAIN TREE)~~	~~4'TO 5'~~
~~L-14~~		~~CHIONANTHUS VIRGINICUS (WHITE FRINGE TREE)~~	~~4'TO 5'~~

~~DELETED~~

NOTES:

THE PLANTING SHOWN SHALL BE REPEATED EVERY 1200 FT. AT THE STATIONS INDICATED ON THE PLAN. L-13 ITEMS SHALL BE PLACED IN ROWS 2 FT. LEFT AND 2 FT. RIGHT OF ℄ OF SURVEY. SPACING SHALL BE 4 FT. CENTER TO CENTER, STAGGERED AS INDICATED. L-14 ITEMS SHALL BE PLACED 4 FT. LEFT OR RIGHT OF ℄ OF SURVEY, WITH SPACING AS INDICATED.

VARIATIONS IN PLANTING WILL BE MADE ONLY AT STRUCTURES AS INDICATED ON SMALL SCALE DETAIL.

℄ SURVEY IS SHOWN AS A STRAIGHT LINE FOR CONVENIENCE. FOR CURVE DATA, SEE PLAN AND PROFILE SHEETS.

L-14 STAKING AND BRACING WILL NOT BE REQUIRED.

L-13 AND L-14 MULCHING:

MULCHING MATERIAL (GROUND CORN COBS, WOOD CHIPS, OR PEAT MOSS) SHALL BE PLACED BETWEEN AND AROUND THE PLANTS WITHIN 24 HOURS AFTER ANY PLANTING, AND SHALL BE APPLIED UNIFORMLY TO COVER THE PLANTING AREA TO A DEPTH OF 3 INCHES, LOOSE MEASUREMENT AND SHALL EXTEND 6 INCHES BEYOND THE EXCAVATION FOR PLANTING. COST OF MULCHING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS L-13 AND L-14.

SPECIFICATION FOR GROUND CORN COBS:

GROUND CORN COBS MUST PASS A ¾ INCH SIEVE. THE MOISTURE CONTENT SHALL NOT EXCEED 35 PER CENT BY WEIGHT.

SPECIFICATION FOR WOOD CHIPS:

WOOD CHIPS SHALL BE FROM BRUSH CHIPPERS COMMONLY USED IN TREE WORK. CHIPS TO BE NOT LONGER THAN 6 INCHES AND THE MAXIMUM THICKNESS NOT MORE THAN 1 INCH.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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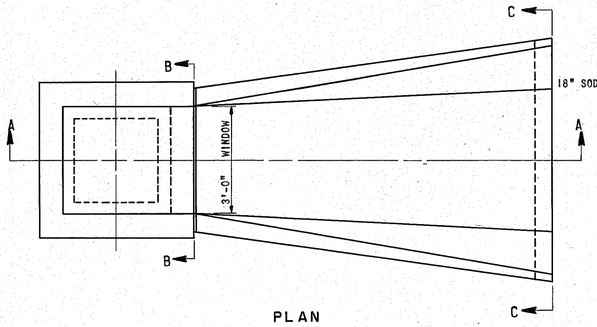
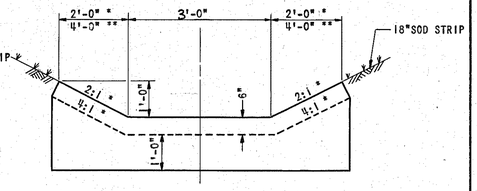
TRUMBULL COUNTY TRU-I-80-8.90

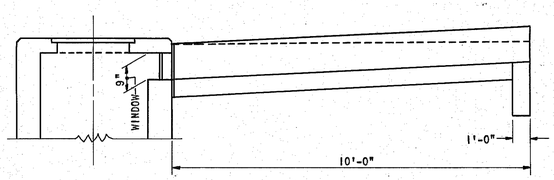


PLAN

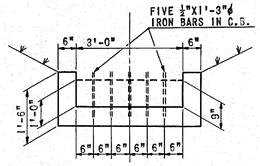


SECTION C-C

*NORMAL DITCH STA. 561+68 Bk.
**NORMAL DITCH STA. 538+00 Ahd.

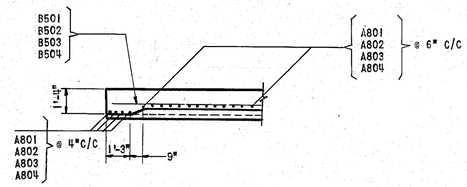


SECTION A-A

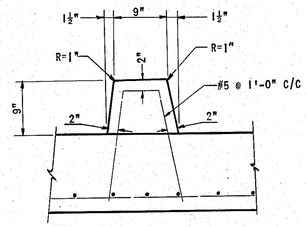


SECTION B-B

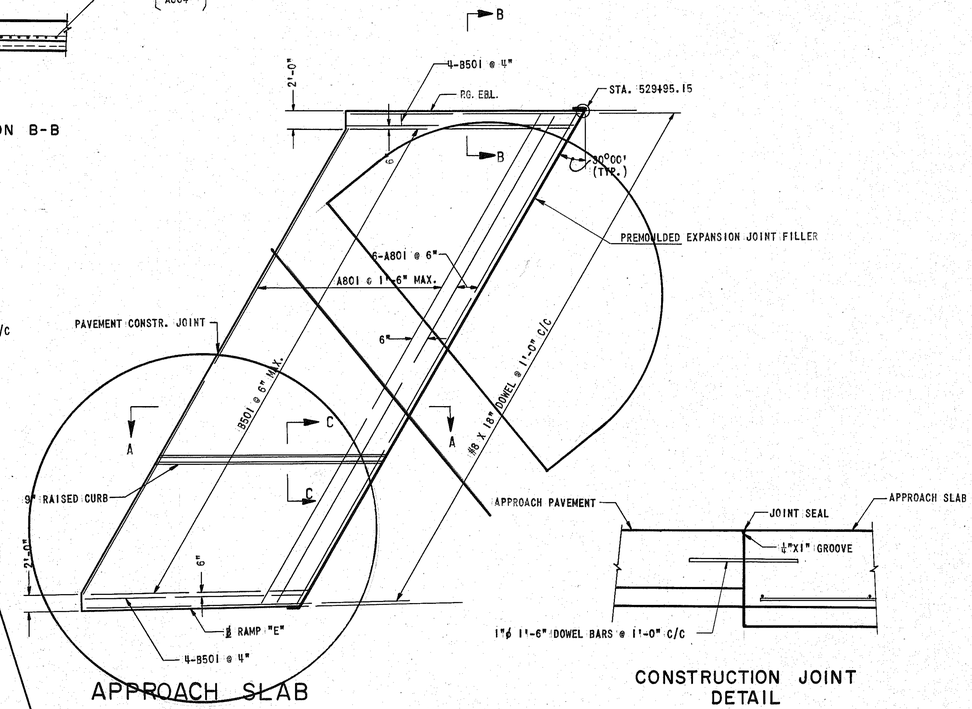
DETAIL MODIFIED TYPE I PAVED GUTTER and MODIFIED No. 2-3 CATCH BASIN, AS PER PLAN at Sta. 538+00 and Sta. 561+68



SECTION B-B



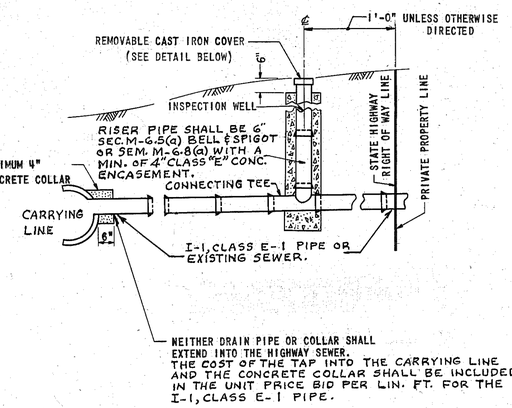
SECTION C-C

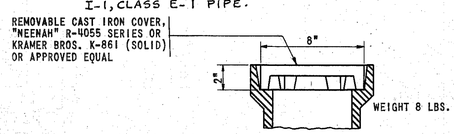


APPROACH SLAB

CONSTRUCTION JOINT DETAIL

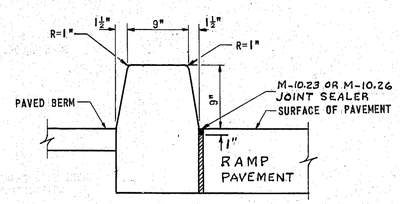
THE UNIT PRICE BID PER EACH "ITEM I-8, INSPECTION WELLS, AS PER PLAN" SHALL INCLUDE FURNISHING AND PLACING RISER PIPE, CONCRETE ENCASEMENT, CAST IRON COVER AND CONNECTING TEE (SAME TYPE AS PIPE FURNISHED FOR THE I-1, CLASS E-1 PIPE).





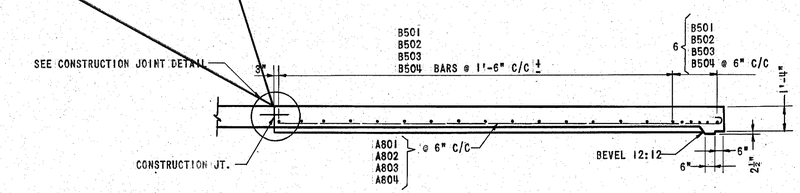
CAST IRON COVER

INSPECTION WELL FOR PRIVATE DRAINAGE TAPS

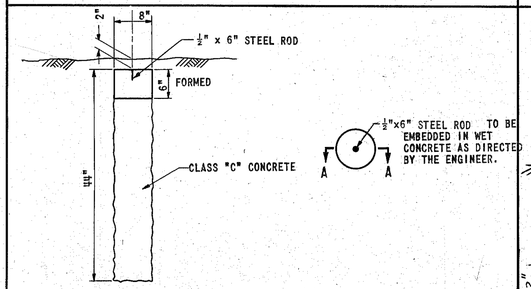


½" PREMOULDED JOINT MATERIAL M-10.02 WHERE CURB IS ADJACENT TO CONCRETE PAVEMENT.

TYPE 8 PORTLAND CEMENT CONCRETE CURB DETAIL

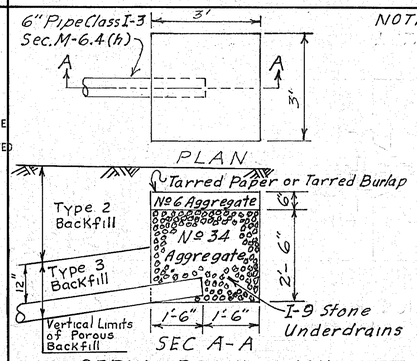


SECTION A-A



SECTION A-A

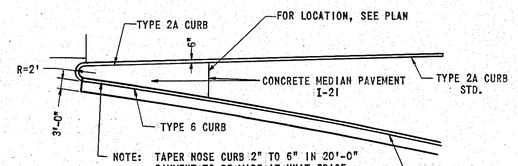
CENTERLINE REFERENCE MONUMENTS



SPRING DRAIN DETAIL

NOTE: No. 34 Aggregate shall be used with a 6" layer of No. 6 Aggregate over the top and sealed with Tarred Paper or Tarred Burlap. Aggregates, Tarred Paper or Tarred Burlap and necessary Excavation for Spring Drains shall be paid for at the Unit Price bid per Lin. Ft. of Item I-9 Stone Underdrains Nº 1, as per plan. Quantities for Class I-3 6" Pipe & Item I-9 Stone Underdrains Nº 1, as per plan are carried in the General Summary.

Spring drains are to be placed at locations designated by the Engineer. Payment shall be based on final measurement.



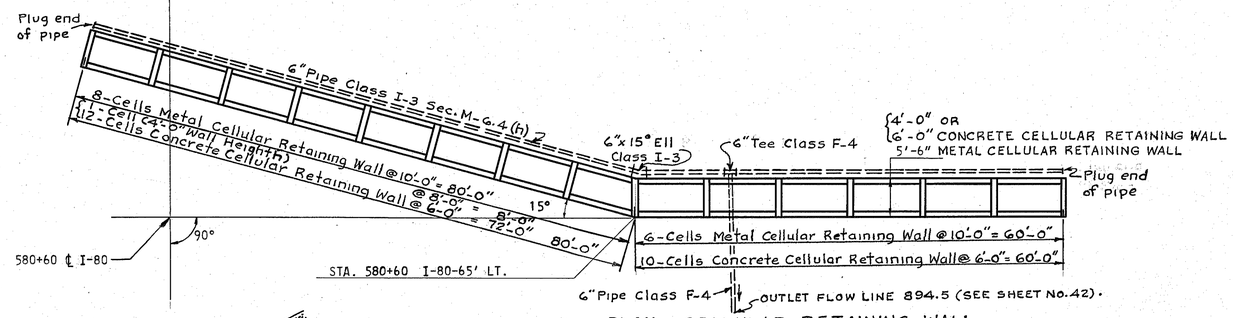
NOSE DETAIL

MISCELLANEOUS DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

289
401

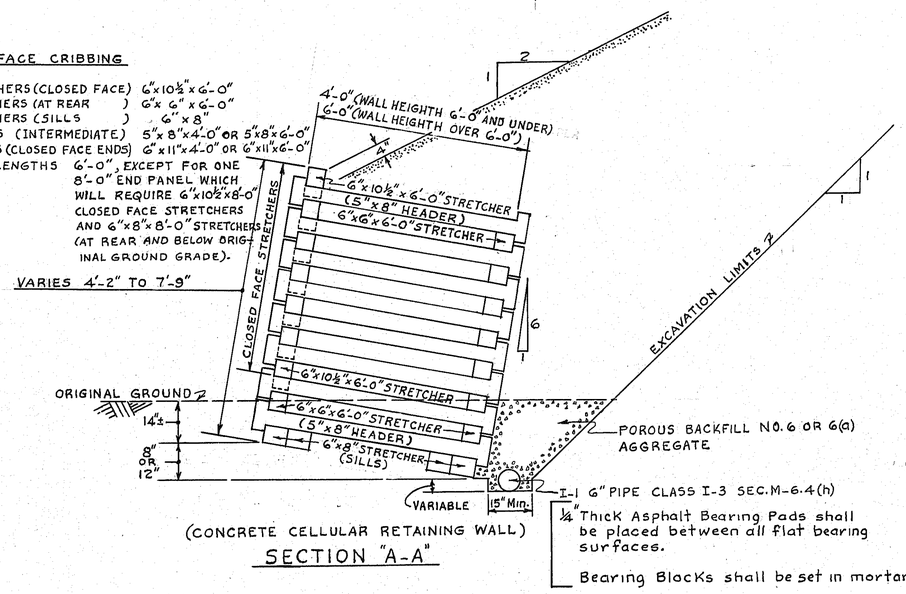
TRUMBULL COUNTY TRU-I-80-8.90



PLAN - CELLULAR RETAINING WALL

CLOSED FACE CRIBBING

STRETCHERS (CLOSED FACE)	6"x10½"x6'-0"
STRETCHERS (AT REAR)	6"x 6"x6'-0"
STRETCHERS (SILLS)	6" x 8"
HEADERS (INTERMEDIATE)	5"x 8"x4'-0" OR 5"x8"x6'-0"
HEADERS (CLOSED FACE ENDS)	6"x11"x4'-0" OR 6"x11"x6'-0"
PANEL LENGTHS	6'-0", EXCEPT FOR ONE 8'-0" END PANEL WHICH WILL REQUIRE 6"x10½"x8'-0" CLOSED FACE STRETCHERS AND 6"x8"x8'-0" STRETCHERS (AT REAR AND BELOW ORIGINAL GROUND GRADE).

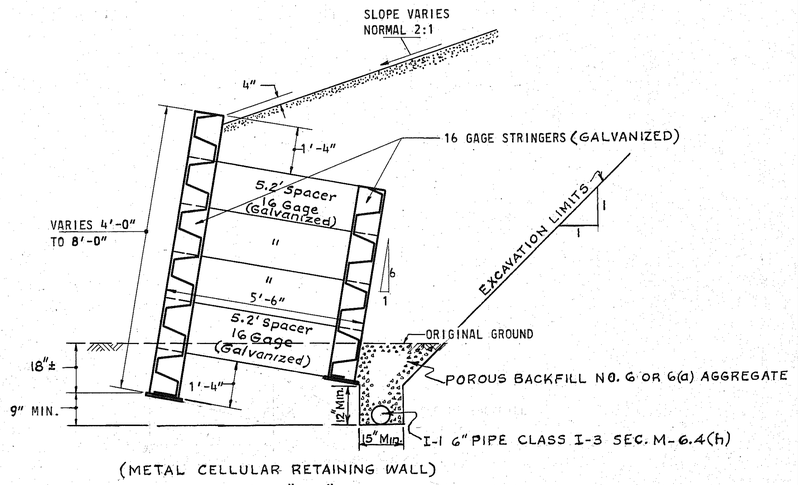


(CONCRETE CELLULAR RETAINING WALL)

SECTION "A-A"

¼" Thick Asphalt Bearing Pads shall be placed between all flat bearing surfaces.

Bearing Blocks shall be set in mortar.



(METAL CELLULAR RETAINING WALL)

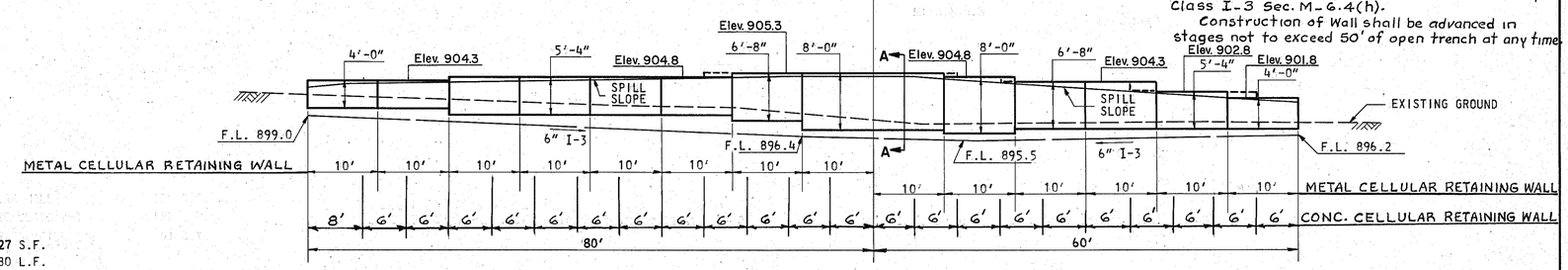
SECTION "A-A"

NOTES:

The Cellular Retaining Wall shall be sufficiently tight to retain the backfill material.

The Furnish and Placing of the No. 6(a) Porous Backfill Material shall be included in the Unit Price bid per lineal foot of I-1 Pipe Class I-3 Sec. M-6.4(h).

Construction of Wall shall be advanced in stages not to exceed 50' of open trench at any time.



FRONT ELEVATION

QUANTITIES

I-17	CELLULAR RETAINING WALL	827 S.F.
I-1	6" PIPE CLASS I-3, SEC. M-6.4(h)	180 L.F.
I-5	6" PIPE SPECIAL CLASS I-3	1 EACH
I-1	6" PIPE CLASS F-4	50 L.F.
I-5	6" PIPE SPECIAL CLASS F-4	1 EACH
E-2	COFFERDAMS, CRIBS & SHEETING	LUMP SUM

(QUANTITIES CARRIED TO SHEET NO. 42)

THE CELLULAR RETAINING WALL SHALL BE COMPOSED OF MATERIALS EQUAL IN ALL RESPECTS TO THE ITEMS AS FURNISHED BY THE ARMCO DRAINAGE AND METAL PRODUCTS, INC., AMERICAN MARIETTA COMPANY OR APPROVED EQUAL FOR THIS TYPE OF CONSTRUCTION.

CELLULAR RETAINING WALL

LT. STA. 580+60

CELLULAR RETAINING WALL DETAIL

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TRU-I-80-8.90

I-127 DELINEATORS

1 TRU-I-80-5(9)245

LOCATION & SHEET No.	STATION	TO STATION	SIDE	INTERVAL	A-1 POST	A-1 BRACKET	A-1 POST	A-1 BRACKET
IR-80 50 TO 47	657+00	635+00	R & L	200'			24	
47 TO 46	633+00	623+00	R	200'			6	
46 TO 45	621+00	609+00	R & L	200'			14	
45 TO 43	607+00	591+00	R	200'			9	
43 TO 39	589+00	545+00	R & L	200'			43	3
38 TO 37	543+00	529+00	L	200'			8	
37 TO 36	527+00	521+00	R & L	200'			8	
36	519+00	517+00	R	200'			2	
35	510+00	508+00	L	200'			2	
35 TO 34	506+00	504+00	R & L	200'			3	1
34		502+00	R	200'			1	
33	490+00	488+00	R	200'			2	
SUB — TOTALS							122	4

2 TRU-I-80-5(9)245

LOCATION	STATION	TO STATION	SIDE	INTERVAL	C-2 POST	C-2 BRACKET	C-3* POST	C-3* BRACKET
RAMP H	32+20	16+20	R	100'	17			
RAMP G	11+20	MAIN LINE 591+20	R	100'	21			
		MAIN LINE 590+00	R	100'			1	
RAMP E		544+00	R				1	
	543+00	RAMP 30+00	R	100'	14			
		29+20	R & L		2			
	28+40	25+20	L	80'	5			
174	24+80	20+20	L	40'	13			
	19+55	TRANSITION	L	70'	1			
	18+55	TRANSITION	L	100'	1			
RAMP B	519+40	515+40	R	100'	5			
	11+40	13+40	R	100'		3		
	14+40		R		1			
		15+40	R & L	100'	2			
	TRANSITION	16+10	L	70'	1			
	16+50	18+00	L	40'	5			
	18+30	23+30	L	30'	19			
	23+90	TRANSITION	L	60'	1			
	24+90	25+90	L	100'	2			
		26+90	R & L	100'	2			
NO TRANSITION	26+30	27+70	L	30'	6			
RAMP A	26+90	23+90	R	100'	4			
	23+30	TRANSITION	R	60'	1			
	23+00	20+40	R	30'	9			
	19+80	TRANSITION	R	60'	1			
		18+80	R	100'	1			
	18+10	TRANSITION	R & L	70'	2			
	17+70	16+20	L	40'	5			
	15+70	14+20	L	50'	2	2		
	13+40	TRANSITION	L	80'	1			
		12+40	R & L	100'	2			
	11+40	MAIN LINE 486+75	R	100'	13		1	
SUB — TOTALS					159	5	3	

3 TRU-I-80-5(9)245

LOCATION	STATION	TO STATION	SIDE	INTERVAL	C-2 POST	C-2 BRACKET	C-3 POST	C-3 BRACKET
RAMP D	MAIN LINE 508+00	16+00	R	100'	7	2		
		17+00	R & L	100'	2			
	17+80	TRANSITION	L	80'	1			
	18+30	19+30	L	50'	3			
	19+60	24+80	L	30'	20			
		25+10	R & L	30'	2			
	25+70	TRANSITION	R	60'	1			
		26+70	R & L	100'	2			
	27+30	TRANSITION	L	60'	1			
	27+60	30+70	L	30'	12			
RAMP C	MAIN LINE 491+00	9+00	R	100'	9			
		10+00	R & L	100'	2			
	11+00		L	100'	1			
	11+80	TRANSITION	L	80'	1			
	12+30	13+75	L	50'	4			
	14+15	14+95	L	40'	3			
	15+65	TRANSITION	R & L	70'	2			
	16+65		R	100'	1			
	17+45	TRANSITION	R	80'	1			
	17+95	20+50	R	50'	6			
	21+30	TRANSITION	R	80'	1			
	22+30	23+30	R	100'	1		1	
SUB — TOTALS					83	2	1	

4 TRU-IG-80-5(9)245 *

LOCATION & SHEET No.	STATION	TO STATION	SIDE	INTERVAL	A-1 POST	A-1 BRACKET	A-1 POST	A-1 BRACKET
41 TO 39	573+00	547+00	R & L	200'			28	
SUB — TOTALS							* 28	

I-127 DELINEATORS TOTALS

SUB — TOTALS	A-1 POST	A-1 BRACKET	C-2 POST	C-2 BRACKET	C-3 POST	C-3 BRACKET
1-2-3	122	4	242	7	4	
4 *	28					
TOTALS	#150	⦶4	#242	⊕7	#4	

TYPE A-1, C-2 AND C-3 DELINEATORS, POST MOUNTED, QUANTITIES CARRIED TO SHEET NO. 21.

⦶ TYPE A-1 DELINEATORS, BRACKET MOUNTED, QUANTITIES CARRIED TO:
3 EACH SHEET NO. 366
1 EACH SHEET NO. 313

⊕ TYPE C-2 DELINEATORS, BRACKET MOUNTED, QUANTITIES CARRIED TO:
5 EACH SHEET NO. 313
2 EACH SHEET NO. 307

I-127 DELINEATORS QUANTITIES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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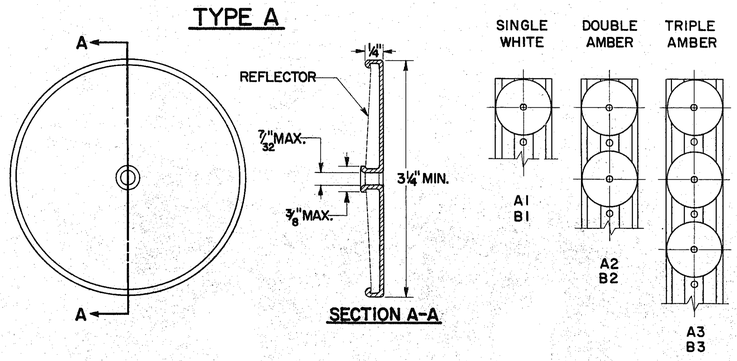
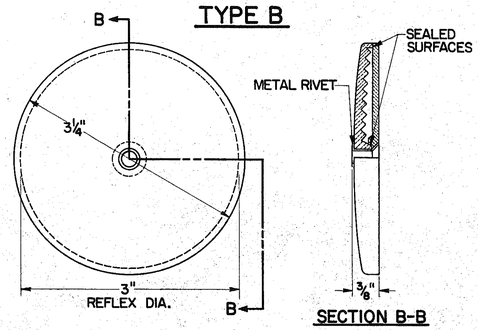
TYPE A



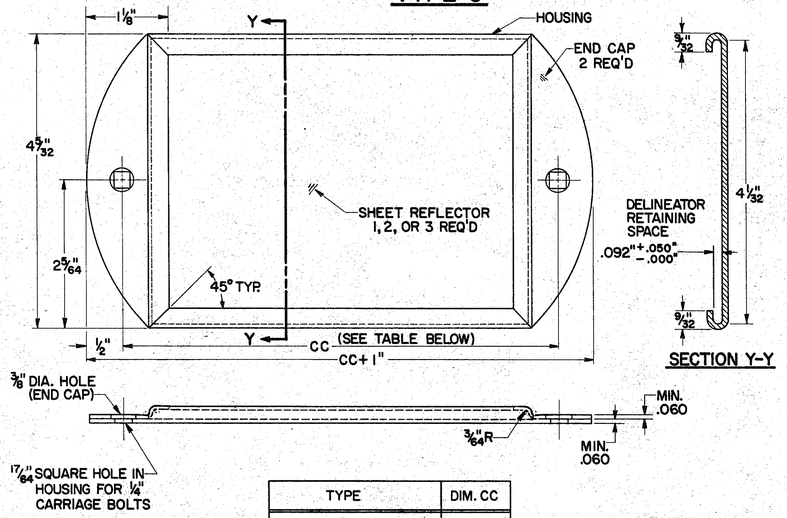
SECTION A-A

TYPE B



SECTION B-B

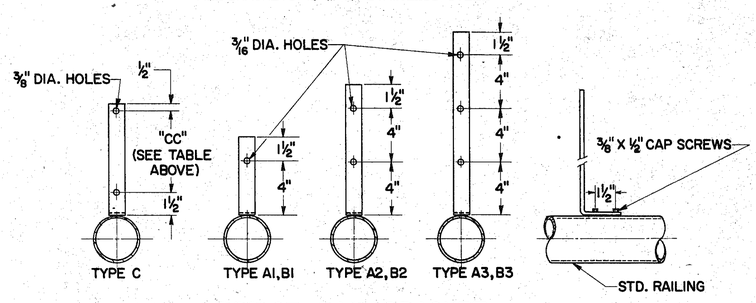
TYPE C



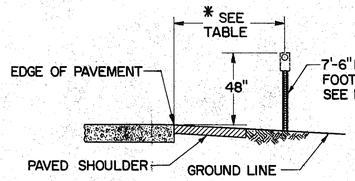
SECTION Y-Y

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

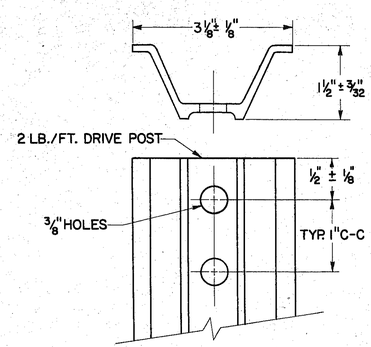


LATERAL PLACEMENT OF DELINEATORS

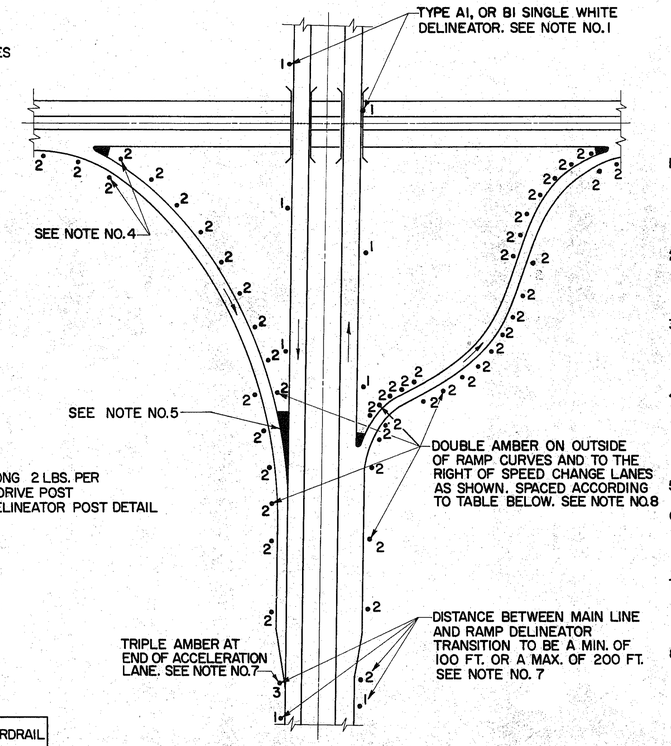
* TABLE

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. I-127, (1-15-62).
3. PAYMENT FOR SUPPORTS (DRIVEPOST OR BRACKET) SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR "ITEM I-127 DELINEATORS".
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

I-127

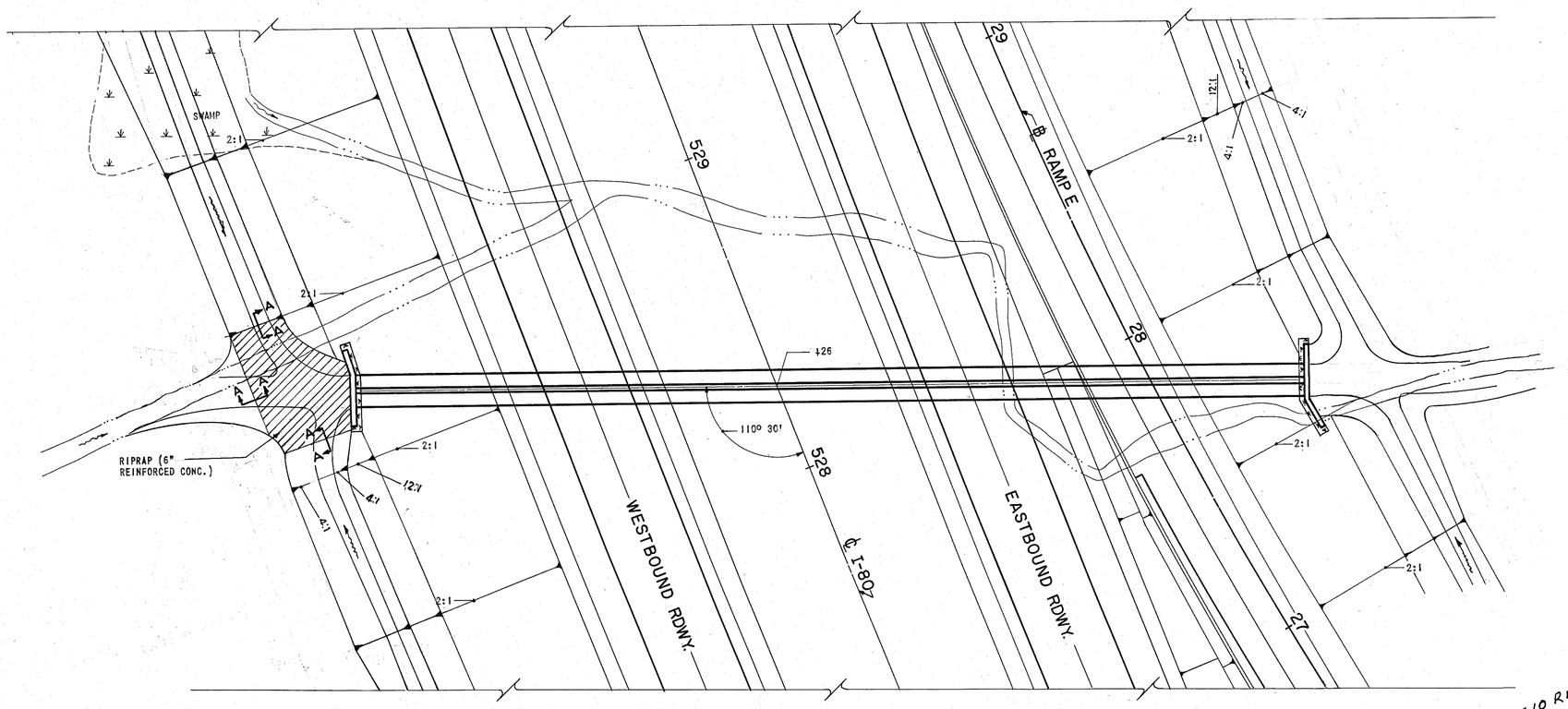
DATE 9-25-62 10-2-63

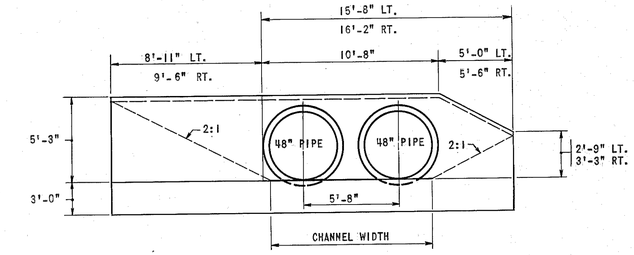
APPROVED Robert A. Lomer
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

292/401

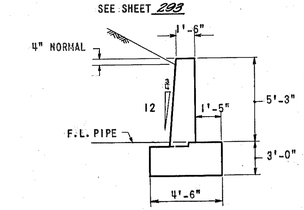
TRUMBULL COUNTY TRU-I-80-8.90

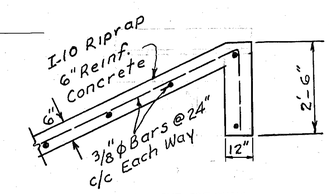




"B" HEADWALL Lt. & Rt.

FOR STEEL BAR SIZE & ARRANGEMENT SEE SHEET 203



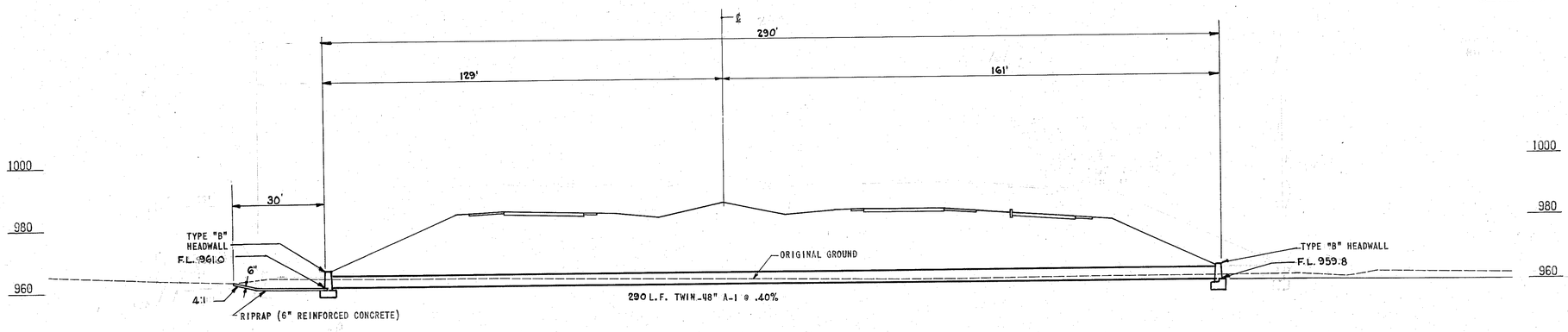


DETAIL CUT-OFF WALL SECTION A-A

ESTIMATED QUANTITIES

I-10 RIPRAP (6" REINFORCED CONCRETE)	88 S.Y.
E-3 CHANNEL EXCAVATION	67 C.Y.
I-1 48" PIPE, CLASS A-1 SEC. M-6.6 (d),	580 L.F.
I-2 MASONRY	38.43 C.Y.
L-10 SODDING	10.6 S.Y.

CONSTRUCT TWIN 48" PIPE CULVERT WITH 2 TYPE "B" HEADWALLS & EXCAVATE CHANNEL AS SHOWN. PLACE 18" SOD COLLAR AT HEADWALLS AS SHOWN. CLEAN OUT EXISTING STREAM BED ON 0.4% SLOPE TO DOWNSTREAM CULVERT UNDER SLAG ROAD. CONSTRUCT I-10 REINFORCED CONCRETE RIPRAP @ ENTRANCE, AS SHOWN.



D. A. = 259 ACRES Q_{50} = 152 C.F.S.

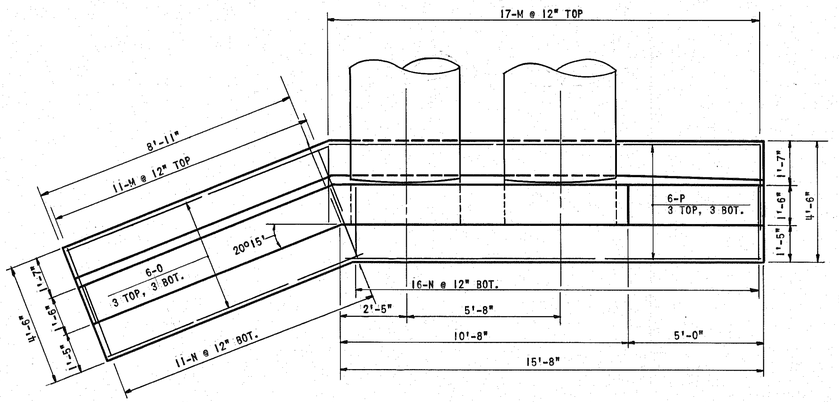
STRUCTURE NO. TRU -80-0971
Station 528+26
Skew 20° 30' Lt. FWD
Scale 1" = 20'

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

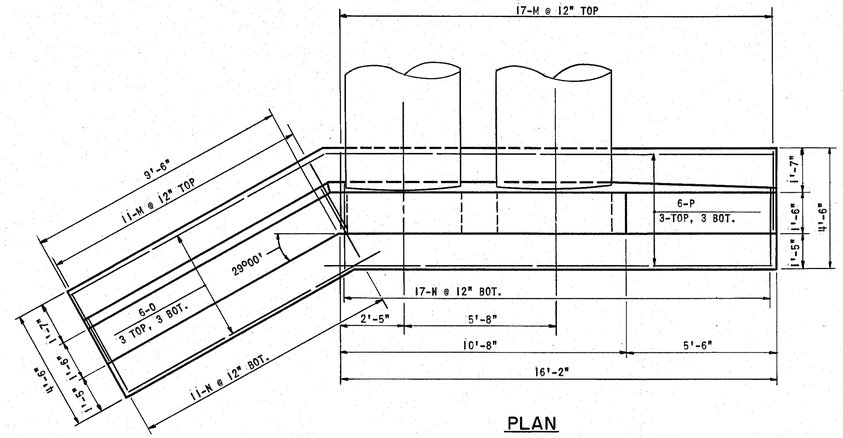
293
401

TRUMBULL COUNTY TRU-I-80-8.90

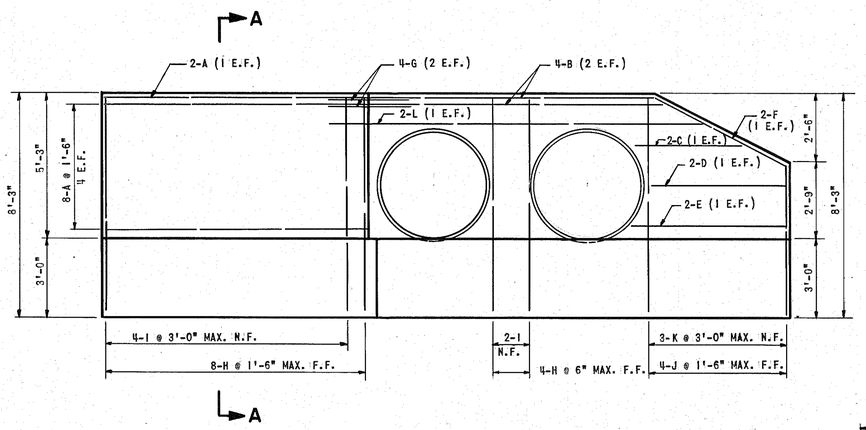
STRUCTURE @ STA. 528+26



PLAN

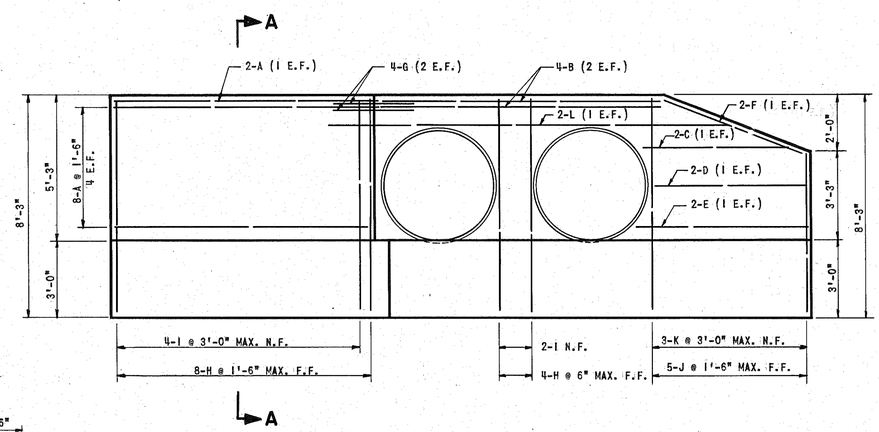


PLAN



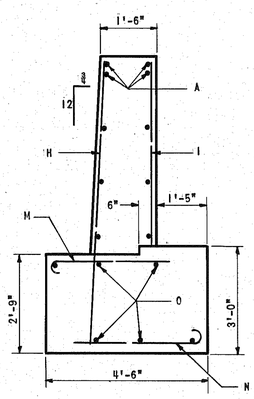
DEVELOPED ELEVATION

LEFT HEADWALL



DEVELOPED ELEVATION

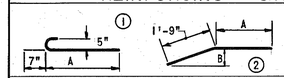
RIGHT HEADWALL



SECTION A-A

NOTES:
E.F. DENOTES EACH FACE.
N.F. DENOTES NEAR FACE.
F.F. DENOTES FAR FACE.
THE CONCRETE FOR HEADWALLS SHALL BE CLASS "C" CONCRETE.
THE MINIMUM COVER FOR BARS SHALL BE 2 INCHES UNLESS OTHERWISE SHOWN.
MAXIMUM DESIGN FOUNDATION PRESSURE = 1 TON PER SQ. FT.

REINFORCING STEEL LIST



ALL BAR DIMENSIONS ARE OUT TO OUT.

LEFT HEADWALL

MARK	NO. REQ'D	SIZE	LENGTH	TYPE	A	B	WEIGHT
A	10	5	9'-10"	STR.			
B	4	5	10'-8"	STR.			
C	2	5	4'-0"	STR.			
D	2	5	4'-9"	STR.			
E	2	5	5'-6"	STR.			
F	2	5	5'-6"	STR.			
G	4	5	3'-6"	2	1'-9"	8"	
H	12	5	7'-10"	STR.			
I	6	5	5'-1"	STR.			
J	4	5	5'-4" TO 7'-10"	1 STR.			
K	3	5	2'-7" TO 5'-1"	2 STR.			
L	2	5	13'-9"	2	12'-0"	8"	
M	28	5	3'-10"	1	3'-3"		
N	27	5	4'-1"	1	3'-6"		
O	6	5	10'-6"	STR.			
P	6	5	15'-9"	STR.			

RIGHT HEADWALL

MARK	NO. REQ'D	SIZE	LENGTH	TYPE	A	B	WEIGHT
A	10	5	9'-10"	STR.			
B	4	5	10'-8"	STR.			
C	2	5	5'-6"	STR.			
D	2	5	5'-3"	STR.			
E	2	5	6'-0"	STR.			
F	2	5	5'-6"	STR.			
G	4	5	3'-6"	2	1'-9"	8"	
H	12	5	7'-10"	STR.			
I	6	5	5'-1"	STR.			
J	5	5	5'-10" TO 7'-10"	3 STR.			
K	3	5	3'-1" TO 5'-1"	4 STR.			
L	2	5	14'-9"	2	13'-0"	8"	
M	28	5	3'-10"	1	3'-3"		
N	28	5	4'-1"	1	3'-6"		
O	6	5	10'-6"	STR.			
P	6	5	16'-3"	STR.			

1 EACH VARY IN INCREMENTS OF 10".

2 EACH VARY IN INCREMENTS OF 1'+3".

3 EACH VARY IN INCREMENTS OF 6".

4 EACH VARY IN INCREMENTS OF 1'-0".

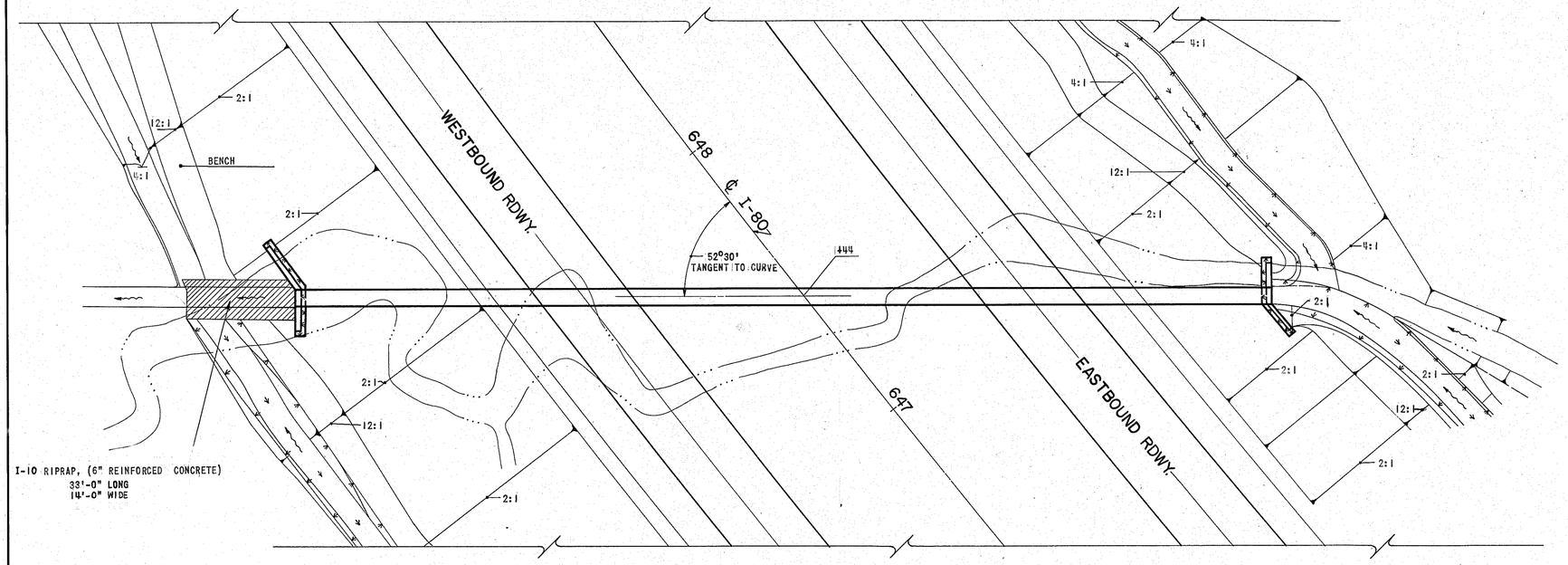
HEADWALL DETAIL

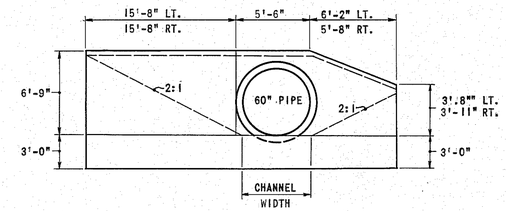
Sta. 528+26

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

295
401

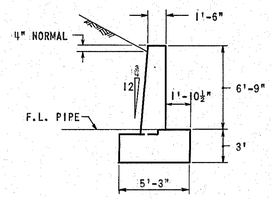
TRUMBULL COUNTY TRU-I-80-8.90





"B" HEADWALL Lt. & Rt.

FOR STEEL BAR SIZE & ARRANGEMENT
SEE SHEET 297

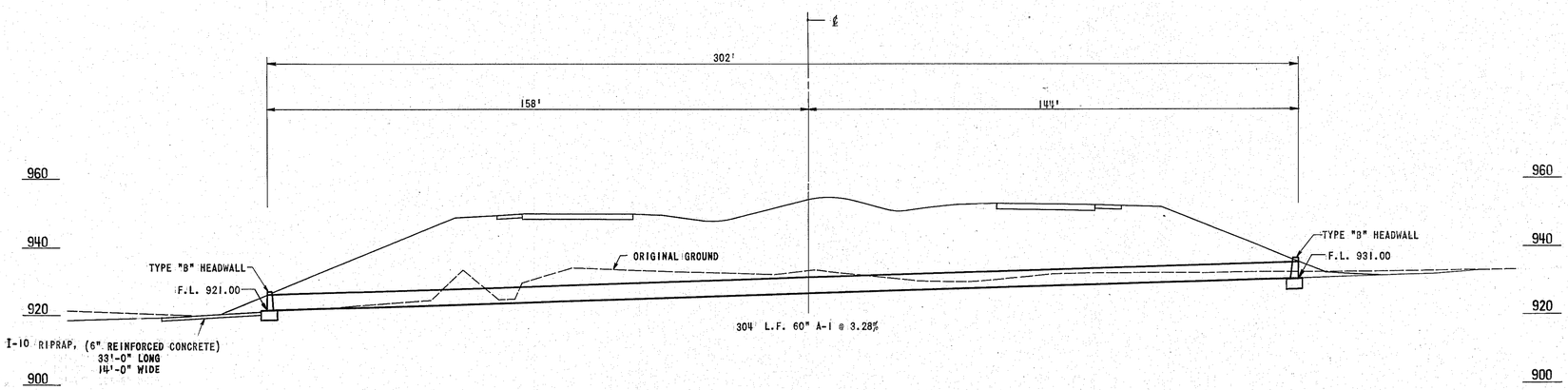


ESTIMATED QUANTITIES

I-1 60" PIPE, CLASS A-1 SEC.M-6.4(g)10-106A	302 L.F.
I-2 MASONRY	54.30 C.Y.
I-10 RIPRAP, (6" REINFORCED CONCRETE)	51 S.Y.
L-10 SODDING	11.3 S.Y.

CONSTRUCT 60" PIPE CULVERT WITH 2-TYPE B HEADWALLS & EXCAVATE CHANNEL AS SHOWN. PLACE 18" SOD COLLAR AT HEADWALLS AS SHOWN. CONSTRUCT I-10 REINFORCED CONCRETE RIPRAP LT. AS SHOWN.

D.A. = 257 ACRES Q_{50} = 203 C.F.S.

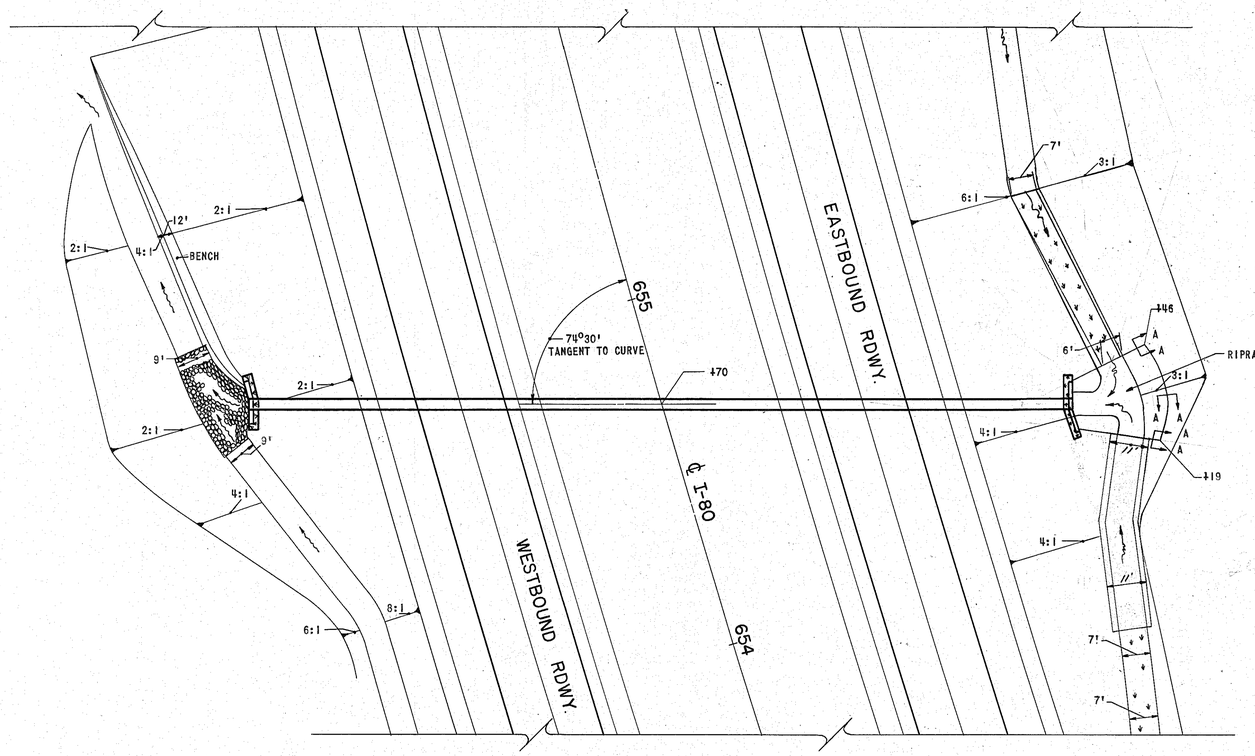


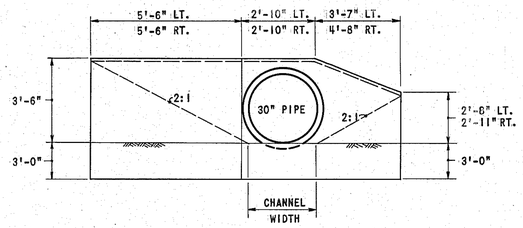
STRUCTURE NO. TRU -80-1197
Station 647+44
Skew 37° 30' L.F.
Scale 1" = 20'

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

296
401

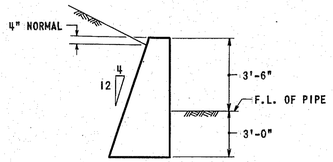
TRUMBULL COUNTY TRU-I-80-8.90

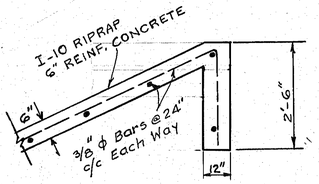




"B" HEADWALL, Lt. & Rt.

FOR STEEL BAR SIZE & ARRANGEMENT SEE SHEET 297





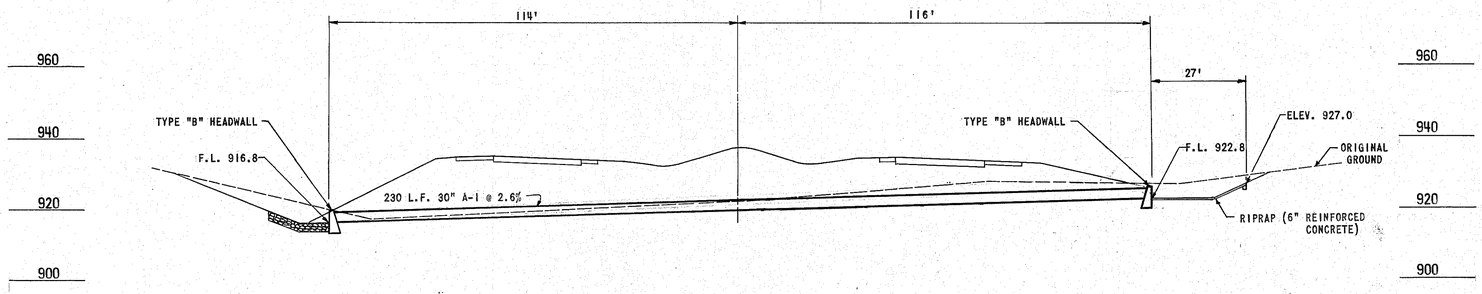
DETAIL OF CUT-OFF WALL
SECTION A-A

ESTIMATED QUANTITIES

I-10	RIPRAP (6" REINFORCED CONCRETE)	58 S.Y.
I-1	30" PIPE CLASS A-1 SEC. M-6.6(b) OR M-6.8(b)	230 L.F.
I-2	MASONRY	11.88 C.Y.
I-10	DUMPED ROCK CHANNEL PROTECTION	28.9 C.Y.
L-10	SODDING	5.9 S.Y.

CONSTRUCT 30" PIPE CULVERT WITH TYPE "B" HEADWALLS LT. & RT. PLACE 18" SOD COLLAR & DUMPED ROCK CHANNEL PROTECTION LT. AS SHOWN. CONSTRUCT I-10 REINFORCED CONCRETE RIPRAP RT., AS SHOWN.

D. A. = 26 ACRES Q_{50} = 43 C.F.S.

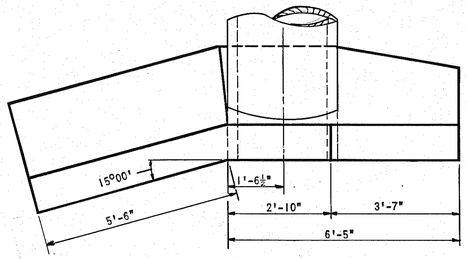


STRUCTURE NO. TRU -80-1210
Station 654+70
Skew 15°30' L.F.
Scale 1" = 20'

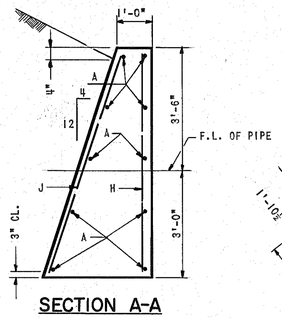
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

297/401

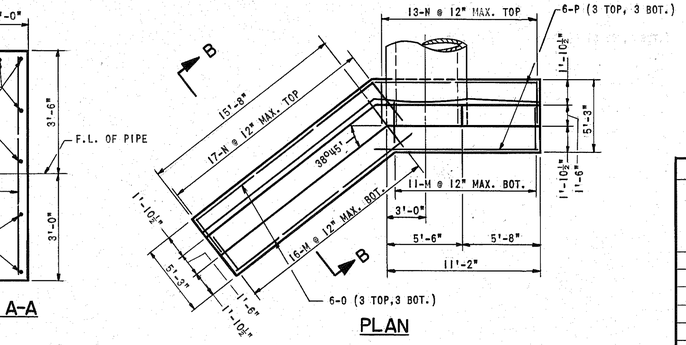
TRUMBULL COUNTY TRU-I-80-8.90



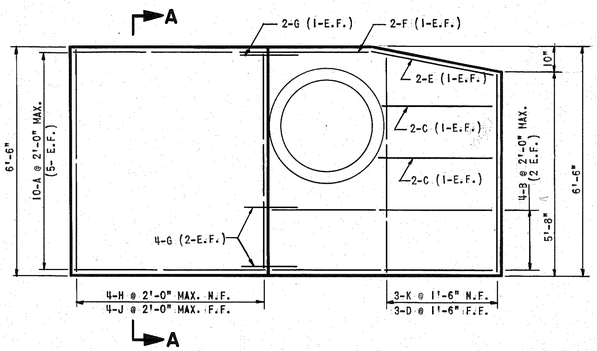
PLAN



SECTION A-A

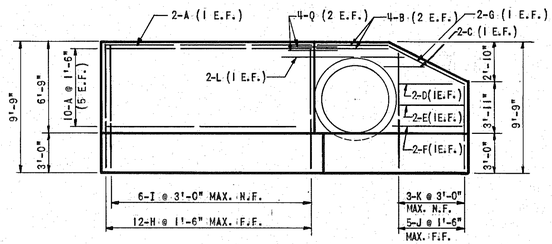


PLAN



DEVELOPED ELEVATION

LEFT HEADWALL



DEVELOPED ELEVATION

RIGHT HEADWALL

NOTE:

E.F. DENOTES EACH FACE.
N.F. DENOTES NEAR FACE.
F.F. DENOTES FAR FACE.

STRUCTURE AT STA. 654+70

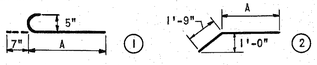
REINFORCING STEEL LIST

RIGHT HEADWALL								LEFT HEADWALL							
MARK	NO.REQ'D.	SIZE	LENGTH	TYPE	A	B	WEIGHT	MARK	NO.REQ'D.	SIZE	LENGTH	TYPE	A	B	WEIGHT
A	10	5	5'-9"	STR.				A	10	5	5'-9"	STR.			
B	4	5	7'-6"	STR.				B	4	5	6'-5"	STR.			
C	4	5	4'-6"	STR.				C	4	5	3'-3"	STR.			
D	3	5	5'-9" TO 6'-3"	(1) STR.				D	3	5	5'-6" TO 6'-4"	(2) STR.			
E	2	5	4'-8"	STR.				E	2	5	3'-7"	STR.			
F	2	5	2'-10"	STR.				F	2	5	2'-10"	STR.			
G	6	5	3'-6"	1				G	6	5	3'-6"	1			
H	4	5	6'-1"	STR.				H	4	5	6'-1"	STR.			
J	4	5	6'-5"	STR.				J	4	5	6'-5"	STR.			
K	3	5	5'-6" TO 6'-0"	(1) STR.				K	3	5	5'-3" TO 6'-1"	(2) STR.			

(1) 1 EACH VARY IN INCREMENTS OF 3".
(2) 1 EACH VARY IN INCREMENTS OF 5".

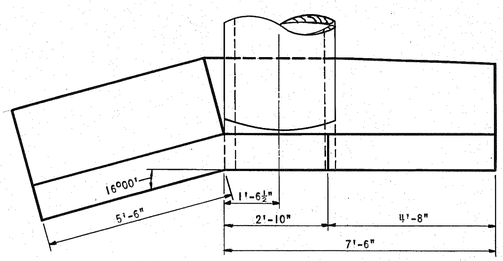
STRUCTURE AT STA. 647+44

REINFORCING STEEL LIST

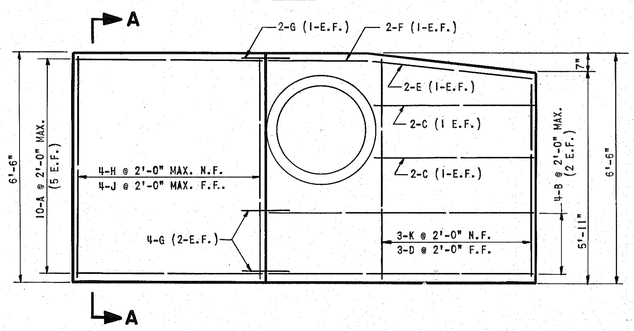


LEFT HEADWALL								RIGHT HEADWALL							
MARK	NO.REQ'D.	SIZE	LENGTH	TYPE	A	B	WEIGHT	MARK	NO.REQ'D.	SIZE	LENGTH	TYPE	A	B	WEIGHT
A	12	5	15'-4"	STR.				A	12	5	15'-4"	STR.			
B	4	5	5'-6"	STR.				B	4	5	5'-6"	STR.			
C	2	5	3'-6"	STR.				C	2	5	3'-9"	STR			
D	2	5	5'-5"	STR.				D	2	5	4'-10"	STR.			
E	2	5	5'-4"	STR.				E	2	5	4'-9"	STR.			
F	2	5	6'-1"	STR.				F	2	5	5'-6"	STR.			
G	2	5	6'-9"	STR.				G	2	5	6'-2"	STR.			
H	12	6	9'-4"	STR.				H	12	6	9'-4"	STR.			
I	6	5	6'-7"	STR.				I	6	5	6'-7"	STR.			
J	5	6	6'-3" TO 8'-11"	(3) STR.				J	5	6	6'-6" TO 8'-10"	(1) STR.			
K	3	5	3'-6" TO 6'-2"	(4) STR.				K	3	5	3'-9" TO 6'-1"	(2) STR.			
L	2	5	8'-9"	2	7'-0"			L	2	5	8'-9"	2	7'-0"		
M	29	5	4'-4"	1	3'-9"			M	27	5	4'-4"	1	3'-9"		
N	31	5	4'-2"	1	3'-7"			N	30	5	4'-2"	1	3'-7"		
O	6	5	16'-9"	STR.				O	6	5	16'-9"	STR.			
P	6	5	12'-6"	STR.				P	6	5	12'-0"	STR.			
Q	4	5	3'-6"	2	1'-9"			Q	4	5	3'-6"	2	1'-9"		

(1) 1 EACH VARY IN INCREMENTS OF 7".
(2) 1 EACH VARY IN INCREMENTS OF 1'-2".
(3) 1 EACH VARY IN INCREMENTS OF 8".
(4) 1 EACH VARY IN INCREMENTS OF 1'-4".



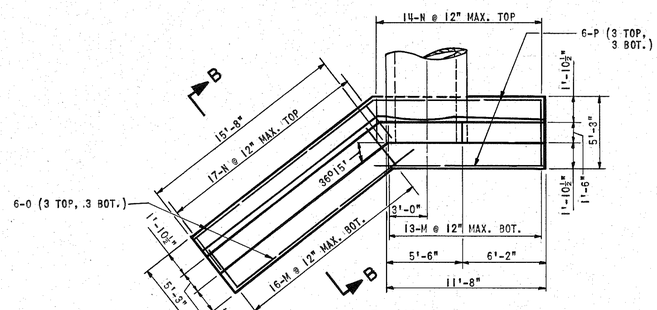
PLAN



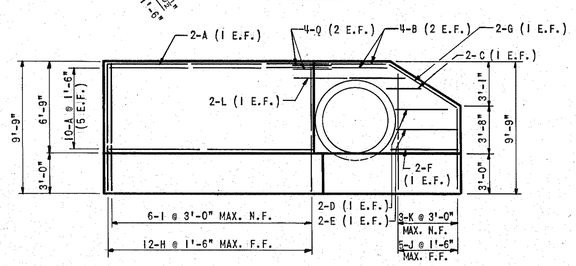
DEVELOPED ELEVATION

RIGHT HEADWALL

STRUCTURE AT STA. 654+70



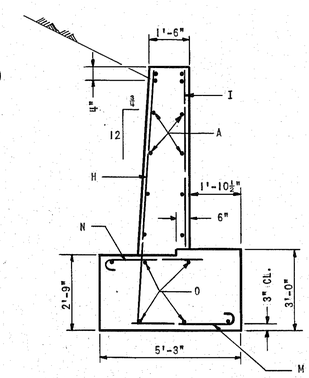
PLAN



DEVELOPED ELEVATION

LEFT HEADWALL

STRUCTURE AT STA. 647+44



SECTION B-B

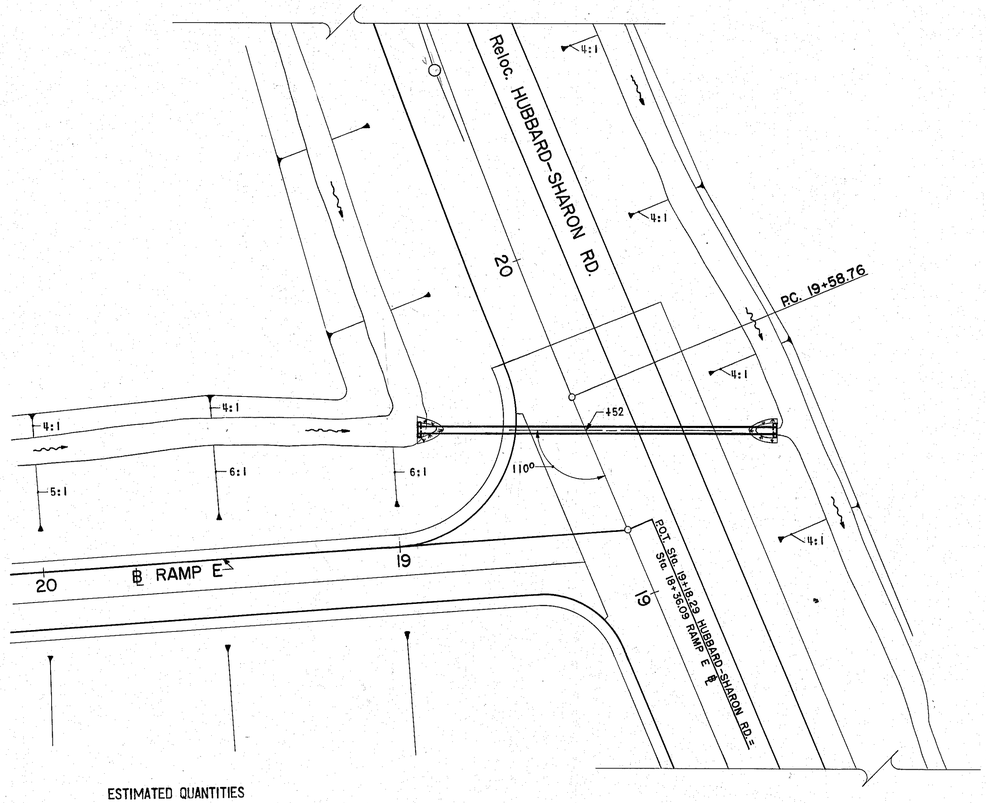
NOTES:

THE CONCRETE FOR HEADWALLS SHALL BE CLASS "C".
MINIMUM COVER FOR BARS SHALL BE 2 INCHES UNLESS OTHERWISE SHOWN.
MAXIMUM DESIGN FOUNDATION PRESSURE = 1 TON PER SQ. FT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

298
201

TRUMBULL COUNTY TRU-I-80-8.90

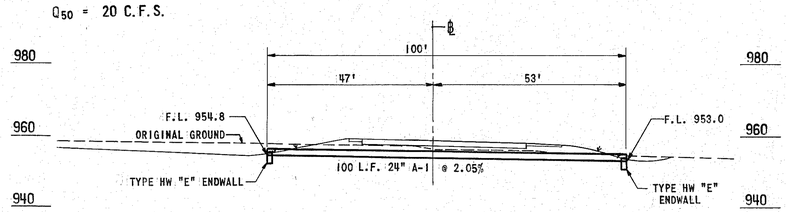


ESTIMATED QUANTITIES

I-1	24" PIPE, CLASS A-1, SEC. M-6.6(a) OR M-6.8(b)	100 L.F.
I-2	MASONRY	0.82 C.Y.
L-10	SODDING	5.0 S.Y.

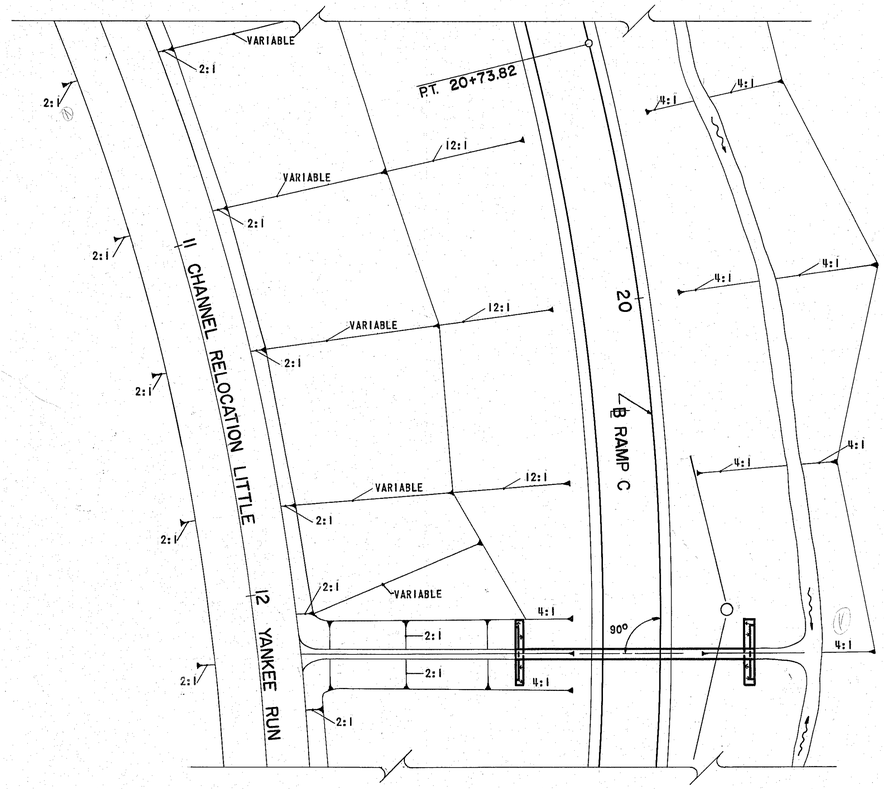
CONSTRUCT 24" PIPE CULVERT WITH 2-TYPE HW "E" ENDWALLS AS SHOWN. PLACE 18" SOD COLLAR AT ENDWALLS AS SHOWN.

D. A. = 9.3 ACRES Q_{50} = 20 C.F.S.



STRUCTURE NO.

Station 19+52 Reloc. HUBBARD-SHARON RD.
Skew 20°00' L.F.
Scale 1" = 20'

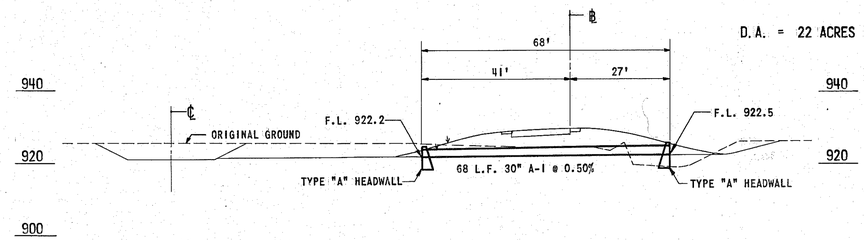


ESTIMATED QUANTITIES

E-3	CHANNEL EXCAVATION	104 C.Y.
I-1	30" PIPE, CLASS A-1 SEC. M-6.6(a) OR 6.8(b)	68 L.F.
I-2	MASONRY	14.8 C.Y.
L-10	SODDING	6.8 S.Y.

CONSTRUCT 30" PIPE CULVERT WITH TWO, TYPE "C" HEADWALLS AND EXCAVATE 5' B.W. CHANNEL LT., AS SHOWN. PLACE 18" SOD COLLAR AT HEADWALLS AS SHOWN.

D. A. = 22 ACRES Q_{50} = 41 C.F.S.



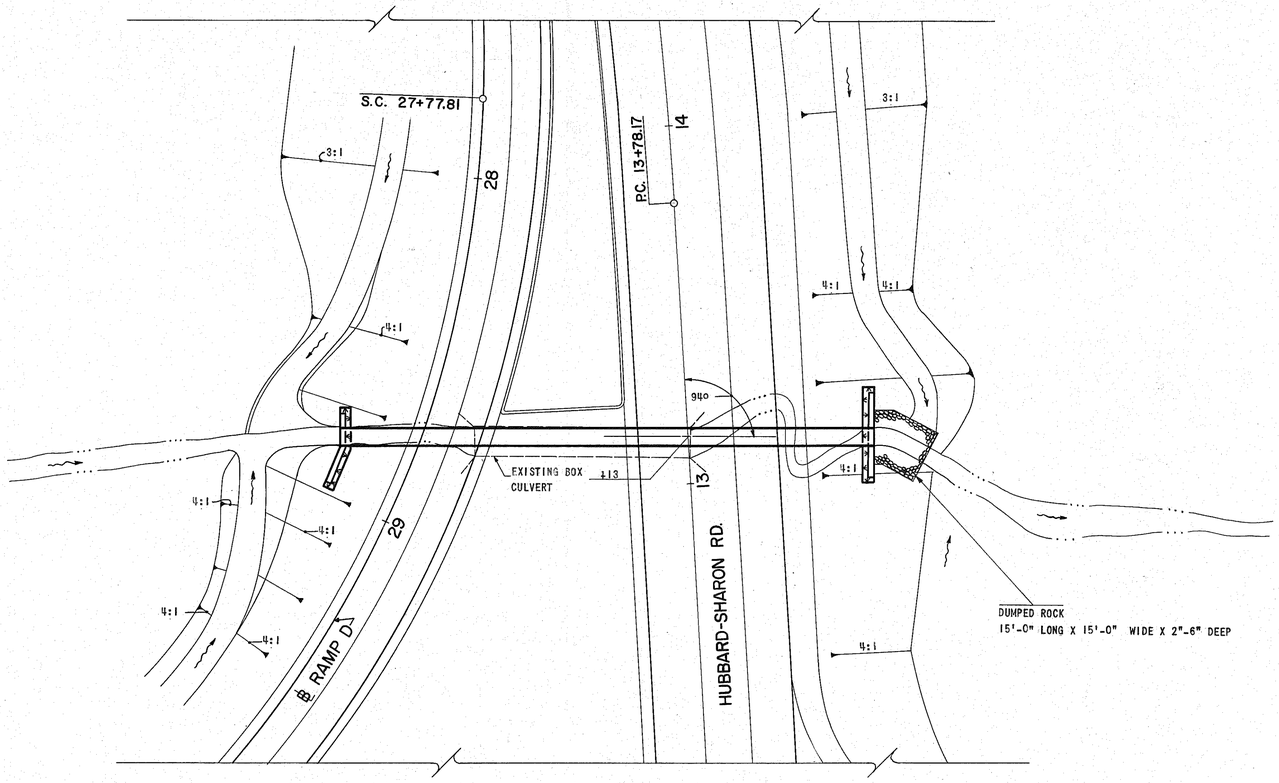
STRUCTURE NO.

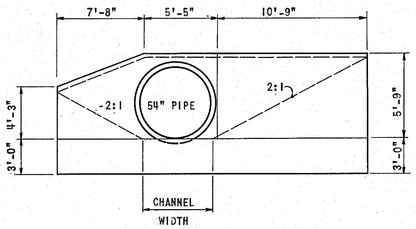
Station 19+00 Ramp C
Skew 0°
Scale 1" = 20'

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

299
401

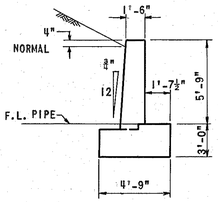
TRUMBULL COUNTY TRU-I-80-8.90





"B" HEADWALL Lt. Sta. 13+13±

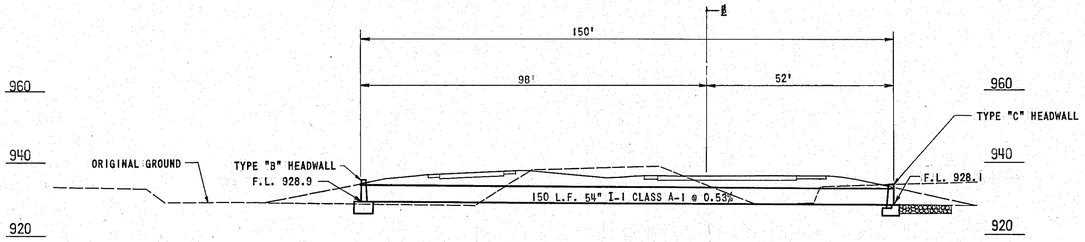
FOR STEEL BAR SIZE & ARRANGEMENT SEE SHEET 300



ESTIMATED QUANTITIES

I-1	54" PIPE, CLASS A-1, SEC. M-6.6(a)	150 L.F.
I-2	MASONRY	36.72 C.Y.
I-10	DUMPED ROCK CHANNEL PROTECTION	20.8 C.Y.
L-10	SODDING	10.3 S.Y.

CONSTRUCT 54" PIPE CULVERT WITH TYPE "B" HEADWALL LT. & TYPE "C" HEADWALL RT. PLACE 18" SOD COLLAR & DUMPED ROCK CHANNEL PROTECTION AS SHOWN.



D. A. = 176 ACRES Q_{50} = 139 C.F.S.

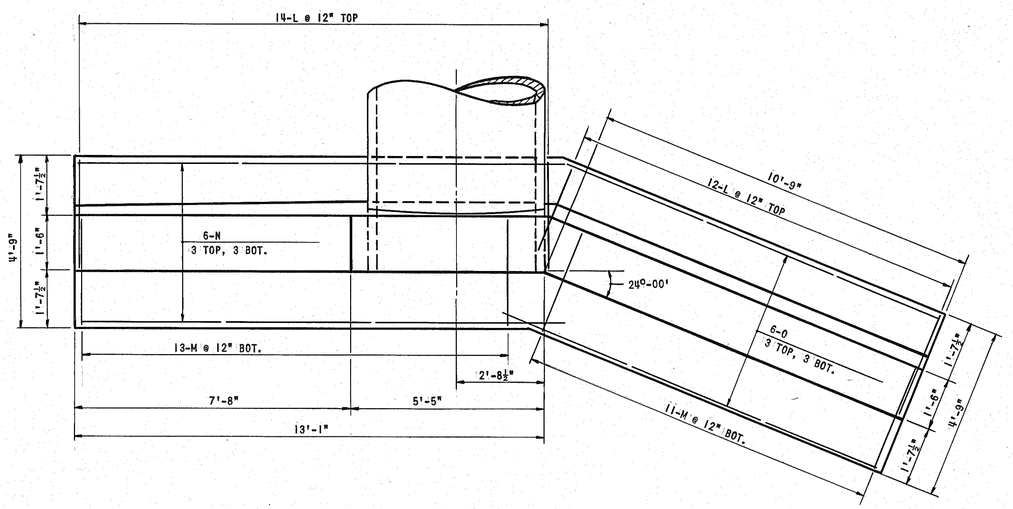
STRUCTURE NO.
Station 13+13 HUBBARD-SHARON RD.
Skew 4° L.F.
Scale 1" = 20'

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

300
401

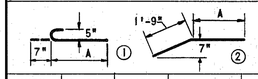
TRUMBULL COUNTY TRU-I-80-8.90

STRUCTURE @ STA. 13+13 HUBBARD-SHARON ROAD



PLAN

REINFORCING STEEL LIST

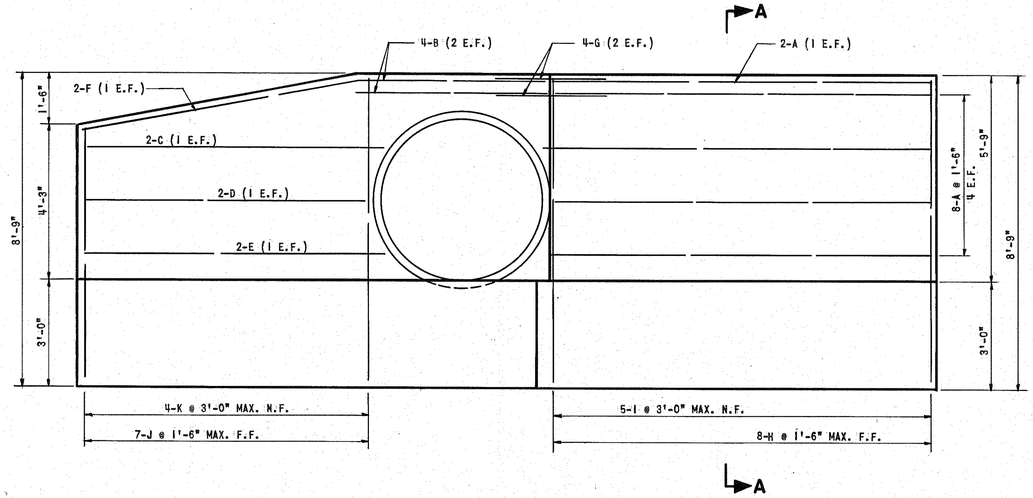


ALL BAR DIMENSIONS ARE OUT TO OUT.

MARK	NO. REQ'D	SIZE	LENGTH	TYPE	A	B	WEIGHT
A	10	5	10'-6"	STR.			
B	4	5	5'-3"	STR.			
C	2	5	8'-0"	STR.			
D	2	5	7'-6"	STR.			
E	2	5	8'-3"	STR.			
F	2	5	7'-8"	STR.			
G	4	5	3'-6"	2	1'-9"		
H	8	6	8'-4"	STR.			
I	5	5	5'-7"	STR.			
J	7	6	6'-10" TO 8'-4"	1 STR.			
K	4	5	4'-1" TO 5'-7"	2 STR.			
L	26	5	3'-10"	1	3'-3"		
M	24	5	4'-4"	1	3'-9"		
N	6	5	13'-6"	STR.			
O	6	5	11'-3"	STR.			

1 EACH WAY IN INCREMENTS OF 3".

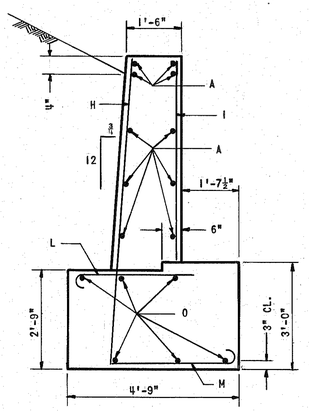
2 EACH WAY IN INCREMENTS OF 6".



DEVELOPED ELEVATION

LEFT HEADWALL

NOTE: E.F. INDICATES EACH FACE
N.F. INDICATES NEAR FACE
F.F. INDICATES FAR FACE



SECTION A-A

NOTES:

THE CONCRETE FOR HEADWALLS SHALL BE CLASS "C".
THE MINIMUM COVER FOR BARS SHALL BE 2 INCHES UNLESS OTHERWISE SHOWN.
MAXIMUM DESIGN FOUNDATION PRESSURE = 1 TON PER SQ. FT.

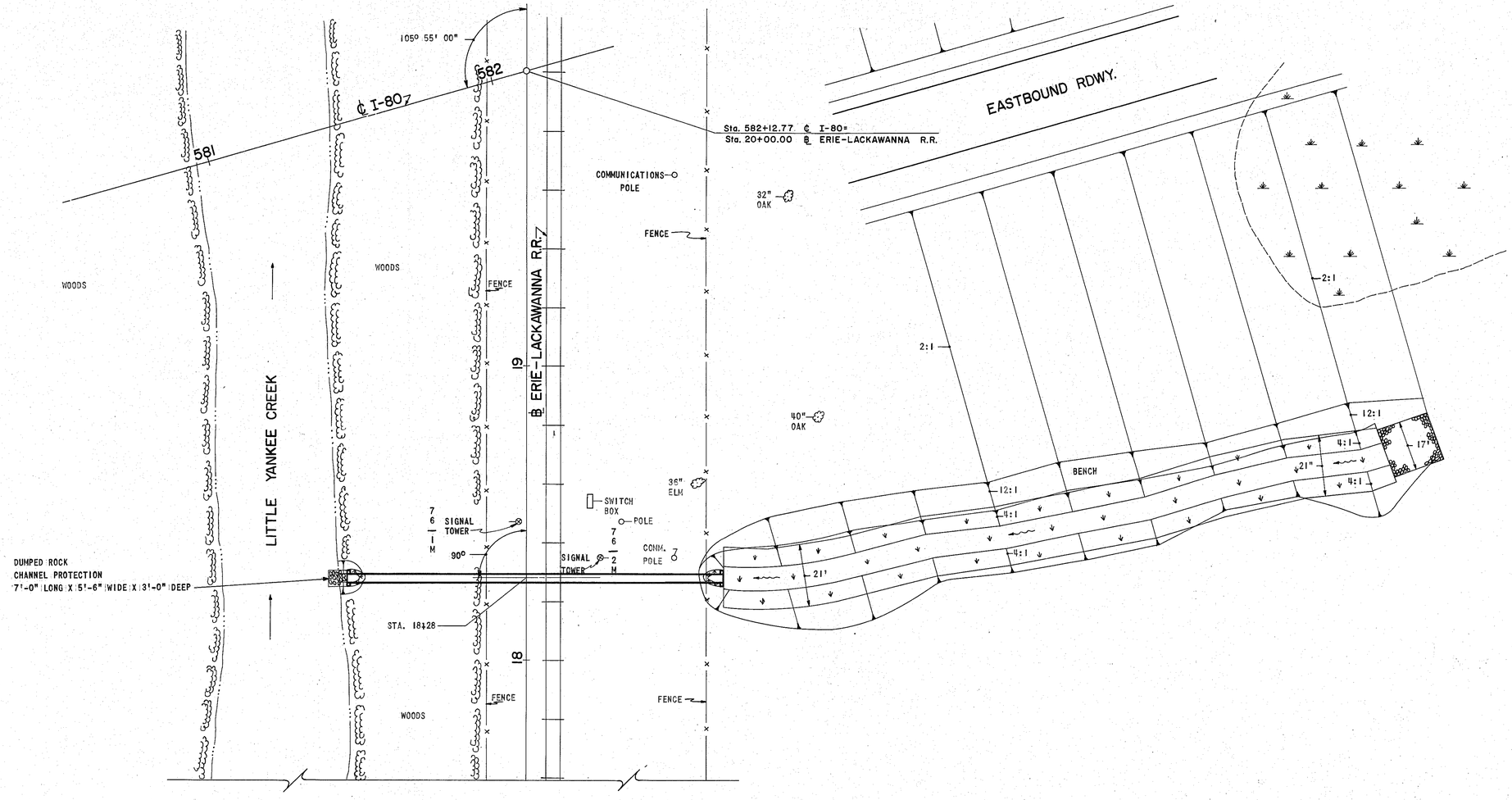
HEADWALL DETAIL

Sta. 13+13 Reloc. HUBBARD SHARON RD.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

301
401

TRUMBULL COUNTY TRU-I-80-8.90



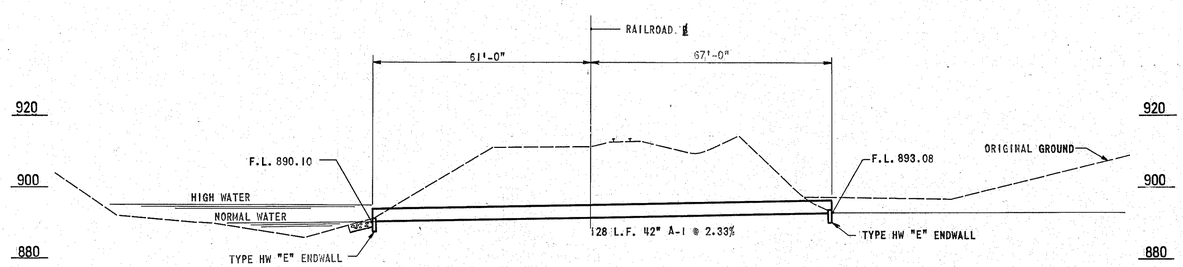
ESTIMATED QUANTITIES

I-1	42" PIPE, CLASS A-1 SEC.M-6.6(d), PIPE UNDER R.R.	128 L.F.
I-2	MASONRY	1.52 C.Y.
L-10	SODDING	4.0 S.Y.

CONSTRUCT 42" PIPE CULVERT WITH 2 TYPE HW "E" ENDWALLS AS SHOWN. PLACE 18" SOD COLLAR AT HEADWALLS, AS SHOWN. 60 L.F., PIPE UNDER RR., TO BE CONSTRUCTED BY JACKING UNDER RR. EMBANKMENT.

D. A.= 76 ACRES

Q_{25}= 96 C.F.S.



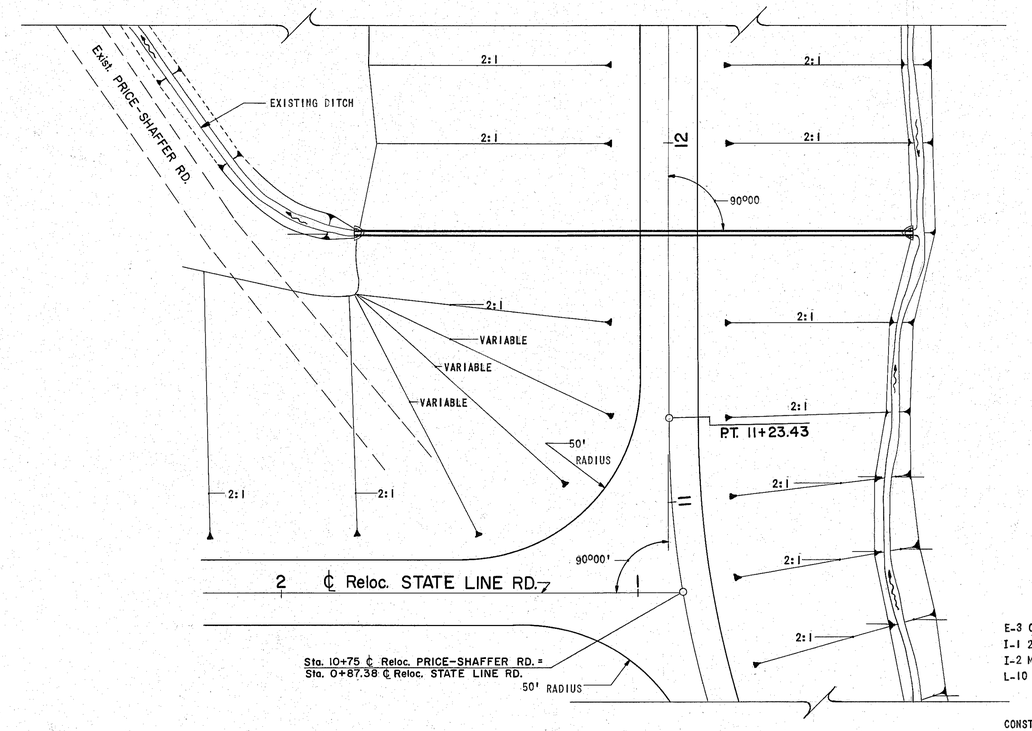
STRUCTURE NO.

Station 18+28 ERIE-LACKAWANNA RAILROAD
Skew 0°
Scale 1" = 20'

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

302
401

TRUMBULL COUNTY TRU-I-80-8.90

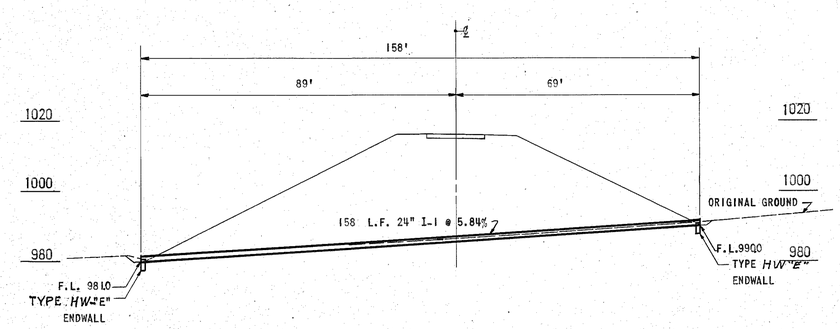


ESTIMATED QUANTITIES

E-3 CHANNEL EXCAVATION	31 C.Y.
I-1 24" PIPE, CLASS A-1, SEC. M-6.4 (d)	158 L.F.
I-2 MASONRY	72 C.Y.
L-10 SODDING	2.3 S.Y.

CONSTRUCT 24" PIPE CULVERT WITH 2 TYPE "E" ENDWALLS LT. AND RT. AND EXCAVATE CHANNEL AS SHOWN. PLACE 18" SOD COLLAR AT ENDWALL, AS SHOWN.

D.A. = 6 ACRES Q_{50} = 16 C.F.S.



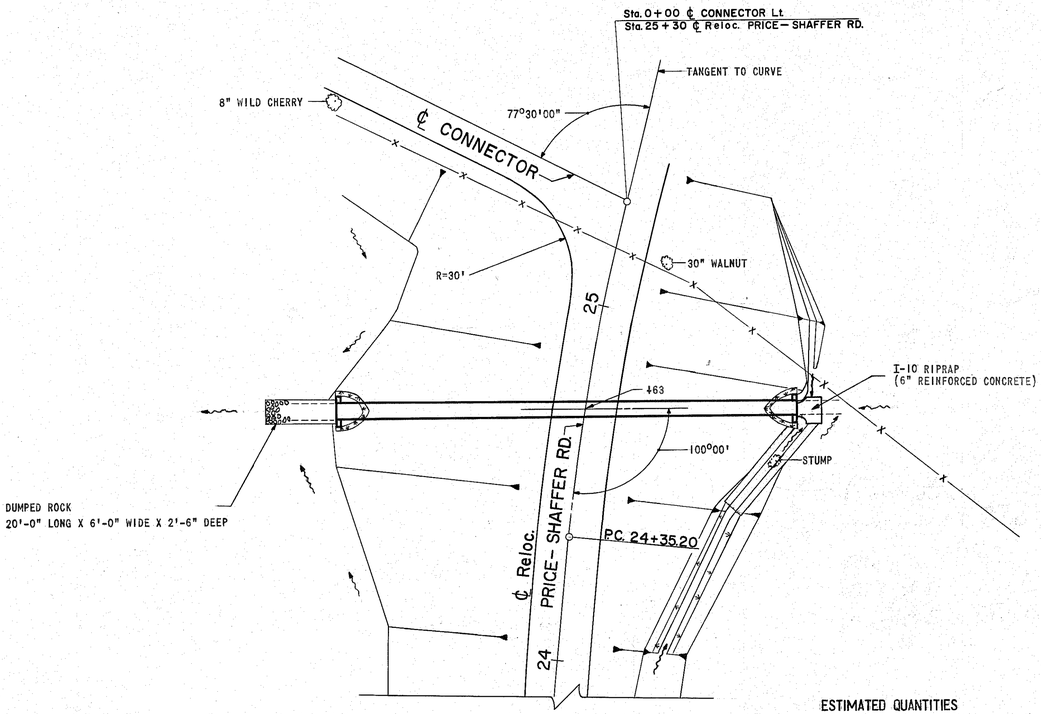
STRUCTURE NO.

Station 11+75 Reloc. PRICE-SHAFFER RD.
Skew 0°00 R.F.
Scale 1" = 20'

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

303
401

TRUMBULL COUNTY TRU-I-80-8.90

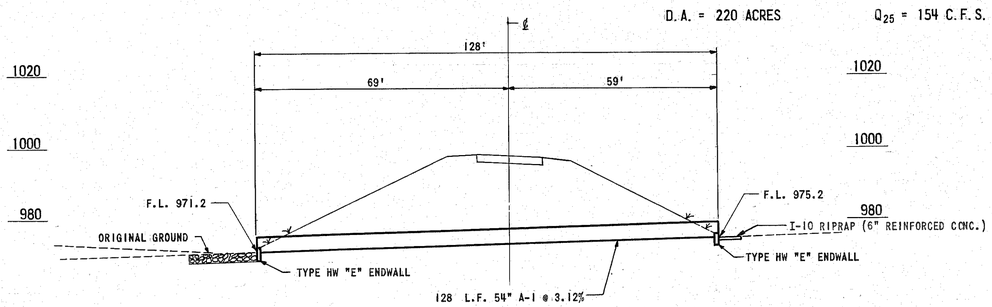


ESTIMATED QUANTITIES

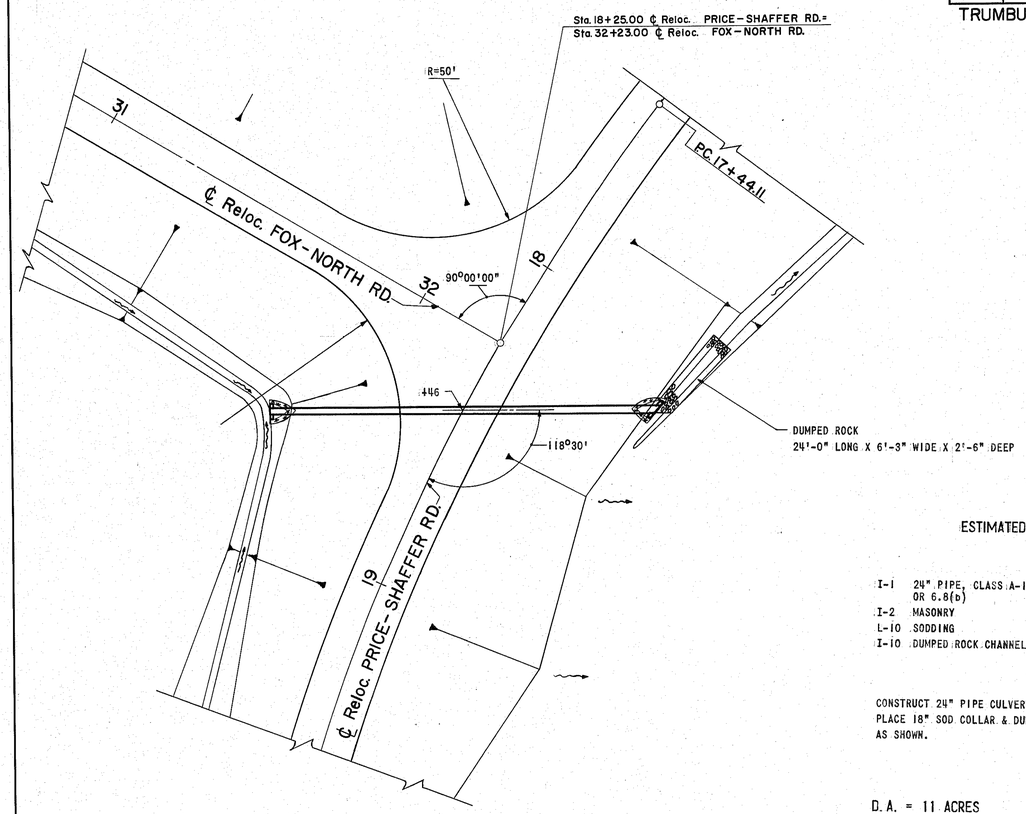
I-1	54" PIPE, CLASS A-1 SEC.M-6.4(d) 8GA.	128 L.F.
I-2	MASONRY	1.92 C.Y.
L-10	SODDING	7.0 S.Y.
I-10	DUMPED ROCK CHANNEL PROTECTION	11.1 C.Y.
I-10	RIPRAP (6" REINFORCED CONC.)	5.0 S.Y.

CONSTRUCT 54" PIPE CULVERT WITH 2-TYPE HW "E" ENDWALLS. PLACE 18" SOD COLLAR & DUMPED ROCK CHANNEL PROTECTION AS SHOWN.

D.A. = 220 ACRES Q_{25} = 154 C.F.S.



STRUCTURE NO.
Station 24+63 PRICE-SHAFFER RD.
Skew 10° 00' RF
Scale 1" = 20'

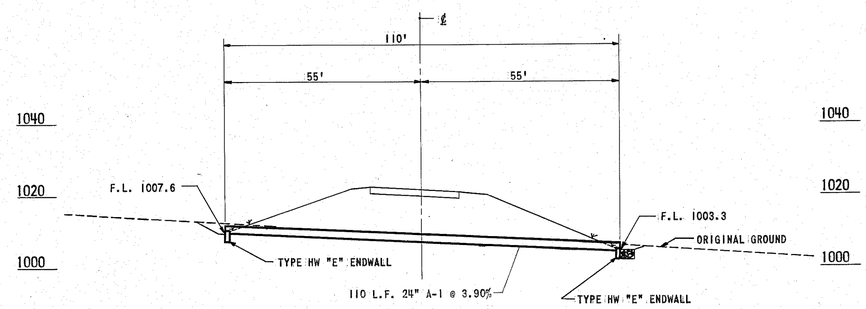


ESTIMATED QUANTITIES

I-1	24" PIPE, CLASS A-1, SEC.M-6.6(b) OR 6.8(b)	110 L.F.
I-2	MASONRY	0.82 C.Y.
L-10	SODDING	4.8 S.Y.
I-10	DUMPED ROCK CHANNEL PROTECTION	13.9 C.Y.

CONSTRUCT 24" PIPE CULVERT WITH 2-TYPE HW "E" ENDWALLS. PLACE 18" SOD COLLAR & DUMPED ROCK CHANNEL PROTECTION AS SHOWN.

D.A. = 11 ACRES Q_{25} = 27 C.F.S.

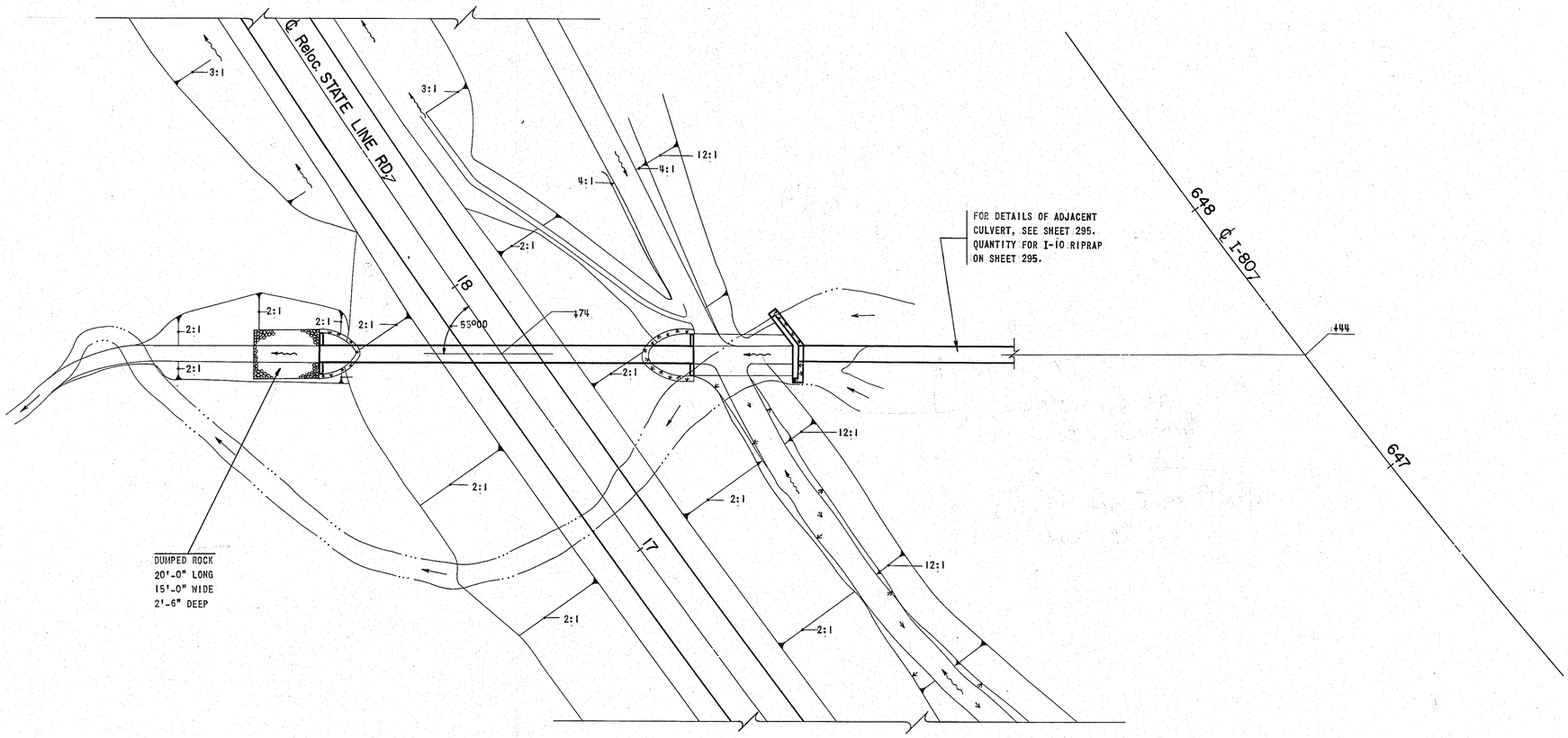


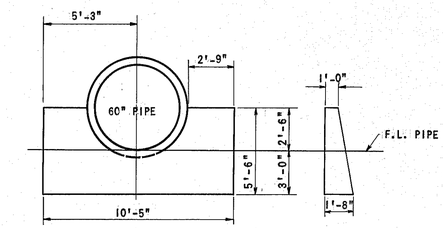
STRUCTURE NO.
Station 18+46 PRICE-SHAFFER RD.
Skew 28° 30' RF
Scale 1" = 20'

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

304
401

TRUMBULL COUNTY TRU-I-80-8.90



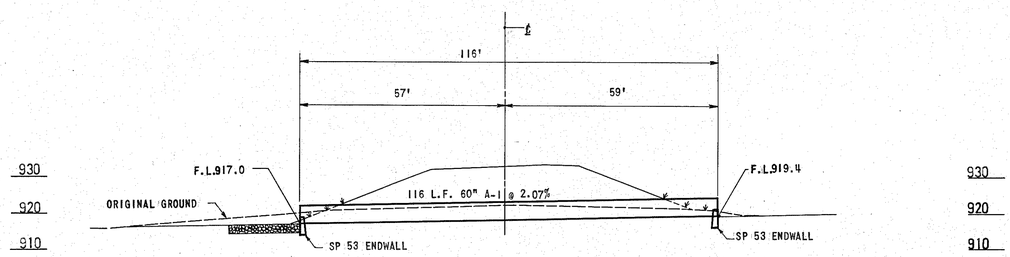


FOR DETAILS NOT SHOWN
SEE STD. DWG. SP 53

ESTIMATED QUANTITIES

E-3 CHANNEL EXCAVATION	27 CY.
I-1 60" PIPE CLASS A-1, SEC. M-6.4 (g) 10-10 GA.	116 L.F.
I-2 MASONRY	4.84 CY.
I-10 DUMPED ROCK CHANNEL PROTECTION	27.8 CY.
L-10 SODDING	10.0 SY.

CONSTRUCT 60" PIPE CULVERT WITH 2 SP 53 ENDWALLS & EXCAVATE CHANNEL AS SHOWN. PLACE 18" SOD COLLAR AT END WALLS AS SHOWN. PLACE DUMPED ROCK CHANNEL PROTECTION ON LEFT AS SHOWN.



D.A. = 270 ACRES

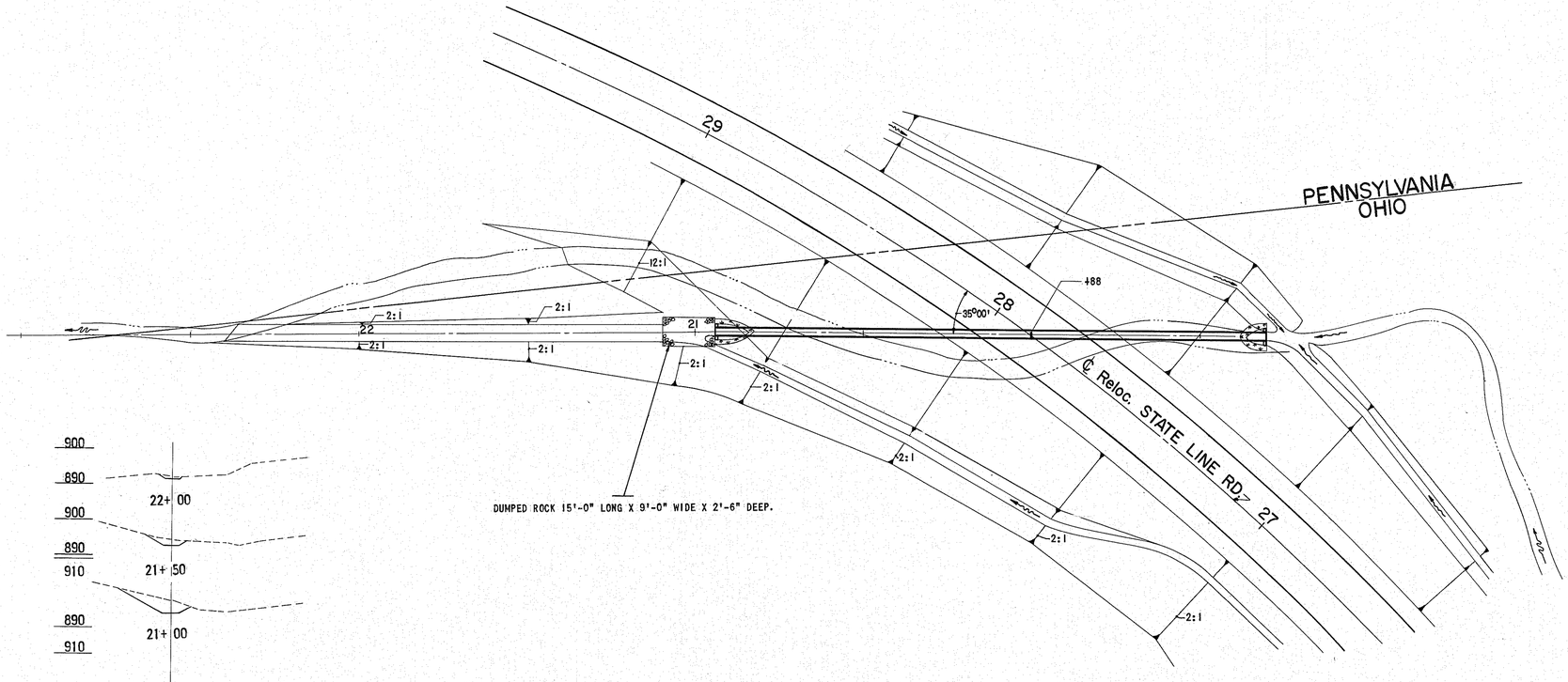
Q_{50} = 220 C.F.S.

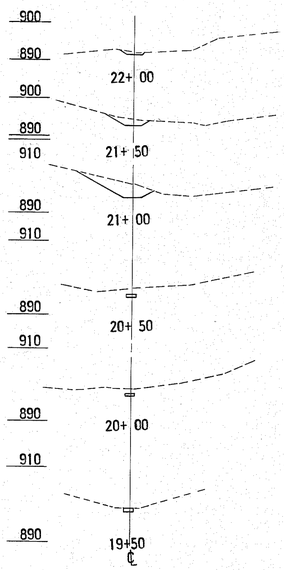
STRUCTURE NO.
Station 17+74 Reloc. STATE LINE RD.
Skew 35°00'
Scale 1" = 20'

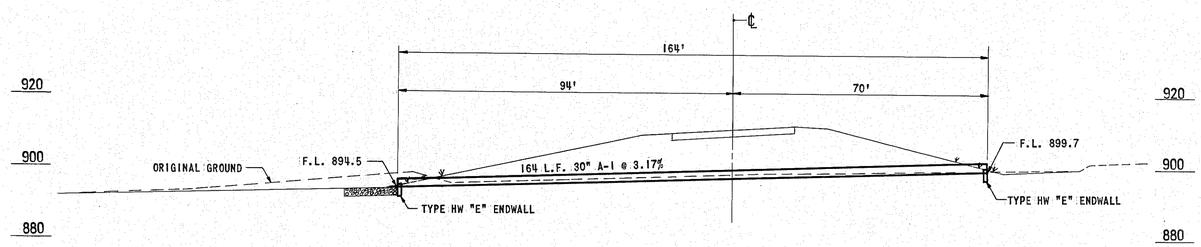
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

305
401

TRUMBULL COUNTY TRU-I-80-8.90







ESTIMATED QUANTITIES

E-3	CHANNEL EXCAVATION	233 C.Y.
I-1	30" PIPE, CLASS A-1 SEC. M-6.4(d)	164 L.F.
I-2	MASONRY	1.02 C.Y.
I-10	DUMPED ROCK CHANNEL PROTECTION	12.5 C.Y.
L-10	SODDING	7.3 S.Y

CONSTRUCT 30" PIPE CULVERT WITH 2-TYPE HW "E" ENDWALLS & EXCAVATE CHANNEL AS SHOWN. PLACE 18" SOD COLLAR AT ENDWALLS, AS SHOWN. PLACE DUMPED ROCK CHANNEL PROTECTION AS SHOWN.

D. A. = 35 ACRES Q_{25} = 46 C.F.S.

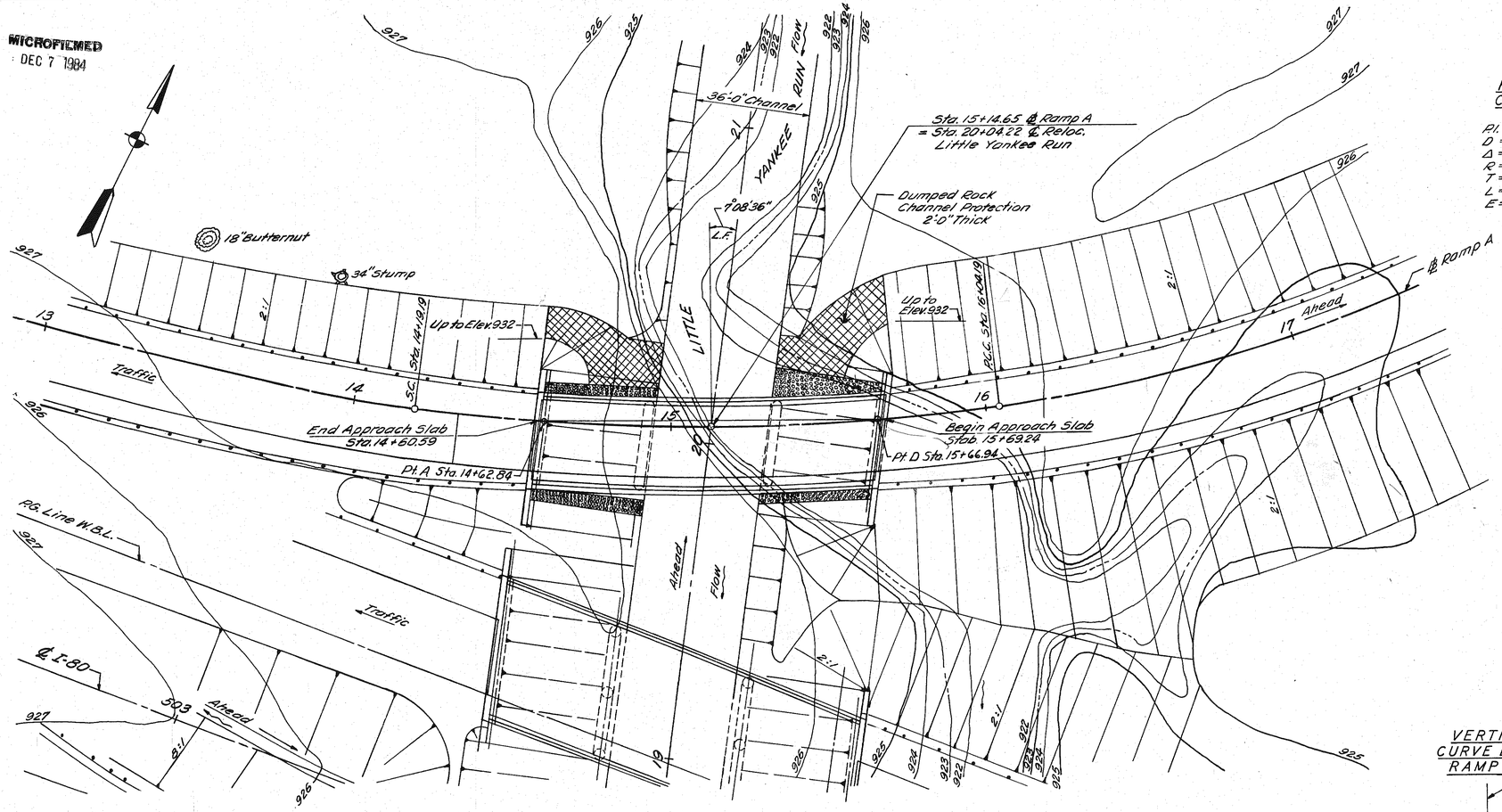
STRUCTURE NO.
Station 27+88 Reloc. STATE LINE RD.
Skew 55°00' L.F.
Scale 1" = 20'

MICROFILMED
DEC 7 1984

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5 (9) 245	

300
401

TRUMBULL COUNTY
TRU I-80-(8.90)



HORIZONTAL
CURVE DATA
RAMP A
P.I. Sta. 15+12.23
D = 8° 11' 06"
Δ = 15°08' 33" Lt.
R = 700.00'
T = 93.04'
L = 185.00'
E = 6.16'

B.M. No. 3
R.R. Spike in root of 45" Oak
150'± Right of Sta. 503+00 ±
Elevation 927.216

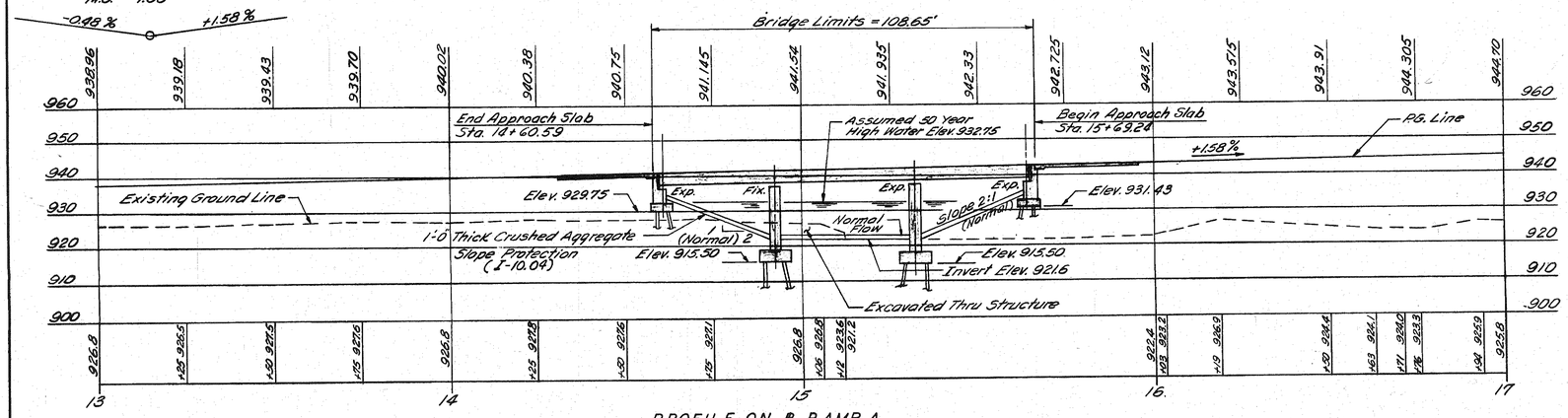
FOUNDATION SOUNDINGS: Foundation Design and foundation quantities are based on a study of rod soundings and soil-sampling soundings, made at the site. This sounding information, the accuracy of which the State does not guarantee, may be examined in the office of the Bureau of Bridges in Columbus or in the Division Office.

VERTICAL
CURVE DATA
RAMP A
P.V.I. Sta. 19+00
Elev. 947.86
L.V.C. 300'
M.O. 0.44'
+1.58% +0.40%

VERTICAL
CURVE DATA
RAMP A
P.V.I. Sta. 12+50
Elev. 937.59
L.V.C. 400'
M.O. 1.03'
-0.98% +1.58%

PROPOSED STRUCTURE

TYPE: Continuous steel beam with reinforced concrete deck and substructure.
SPANS: 32'-0, 40'-0, 32'-0" ℄ Bearings.
ROADWAY: 28'-0" ℄ parapets, 1'-2" Curbs
LOAD FREQUENCY: C.F. 2,000 (ST) Adequate for A.A.S.H.O. alternate loading.
SKEW: 7°08'36" L.F. to Chord Line
WEARING SURFACE: 1" Monolithic concrete.
APPROACH SLAB: AS-1-54 (25' Long).
ALIGNMENT: 8°11'06" Curve Lt. Ramp A.
SUPERELEVATION: 1" per foot.
DRAINAGE AREA = 19.4 Square Miles.



PROFILE ON ℄ RAMP A

All Piles 10 BP 42
Estimated Average Pay Length
Piers 20'
Abutment No. 1 - 25'
Abutment No. 2 - 30'

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

SITE PLAN
BRIDGE NO. TRU-I-80-0926 RAMP A
OVER
LITTLE YANKEE RUN
TRUMBULL COUNTY — STA. 14+60.59 TO STA. 15+69.24
SCALE-1" = 20'

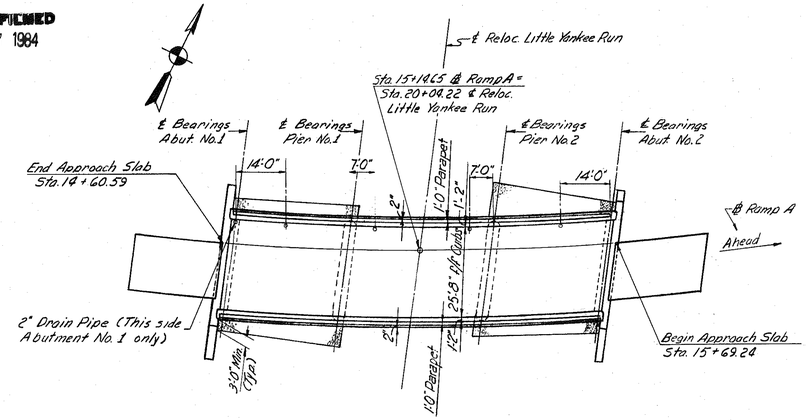
PRESENT TOPOGRAPHY		PROPOSED WORK			
Surveyed	Drawn	Designed	Drawn	Checked	Reviewed
Buchart Engr.	R.L.K.	G.M.B.	D.A.T.	G.M.B.	10-26-84

MICROFILMED
DEC 7 1984

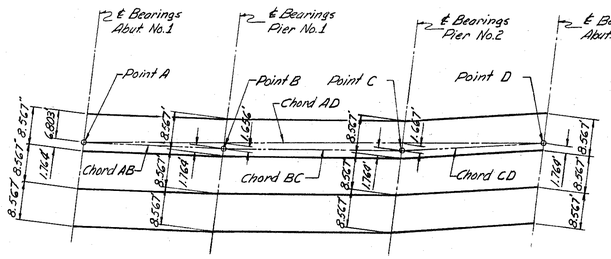
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5 (9) 245	

307
401

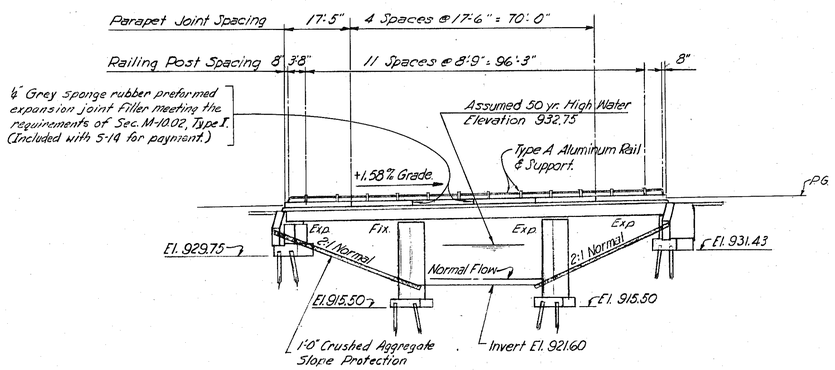
TRUMBULL COUNTY
TRU-I-80-(8.90)



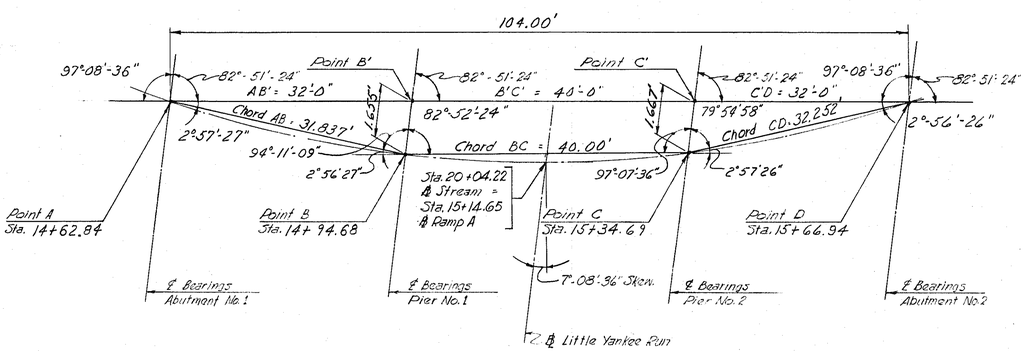
GENERAL PLAN



BEAM LAYOUT



ELEVATION



LAYOUT OF STRUCTURE

HORIZONTAL CURVE DATA

P.I. Sta. 15+12.23
D° = 8°-11'-06"
Δ = 15°-08'-33" Lt.
R = 700.00'
T = 93.04'
L = 185.00'
E = 6.16'

GENERAL NOTES

- REFERENCE shall be made to Standard Drawings CSB-2-56, Sheets 2 & 3 of 6, revised 2-2-59, FSB-1-62 dated 1-15-63 and AR-1-57 revised 4-2-62 and to Supplemental Specification S-101 dated 7-12-62.
- 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.

  EXCAVATION QUANTITY includes the removal of fill material required for construction of the abutments and Pier No. 2.

  PILES shall be driven to a minimum bearing capacity of 35 Tons per Pile for Abutments and 35 Tons per Pile for the Piers.
  FIRST TEST PILE: See note on Sheet 3/3
- WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the contractor, be made in the shop.
- SHOP PAINTING STEEL: The surface preparation of all steel requiring shop painting as per the Plans and Specifications, shall be accomplished by blast cleaning or power tool cleaning, except as noted in the Specifications regarding the use of Chromate Primers.
- CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.
- SHEET LEAD shall conform to the requirements of ASTM Designation B29 without restriction to the Common Desilverized Type.
- MACHINE FINISH: At the Contractor's option, the concrete deck may be finished by the use of a finishing machine.
- CONTINUOUS BEAM SHOP ASSEMBLY: Reference paragraph 4, Sec. S-7.12 of the Construction and Material Specifications, if rolled beams are field spliced only at supports, for the purpose of checking the fit-up of weld joint preparation, only two adjacent beams need be shop assembled at a time in their correct, unloaded positions. All beams shall be assembled and match marked.

DESIGN LOADING - CF = 2,000 (57)

CONCRETE CLASS C - basic unit stress 1,333 p.s.i.

CONCRETE CLASS E - basic unit stress 1,133 p.s.i.

STRUCTURAL STEEL - ASTM A36 - basic unit stress 20,000 p.s.i. (ASTM A7 and A373 steel not permitted)

Reinforcing Steel - ASTM A15, A16, A160, 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.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPERSTR.	ABUTS.	PIERS	GENERAL		
E-2	325	Cu.Yds.	Unclassified Excavation		120	205			
E-2	Lump	Sum	Cofferdams, Cribs and Sheeting				Lump		
S-1	112	Cu.Yds.	Class "C" Concrete, Superstructure	112					
S-1	109	Cu.Yds.	Class "C" Concrete, Piers Above Footings			109			
S-1	74	Cu.Yds.	Class "E" Concrete, Abutments Above Footings		74				
S-1	96	Cu.Yds.	Class "E" Concrete, Footings		50	46			
S-4	46,792	Lbs.	Reinforcing Steel	31,017	8,096	7,679			
S-7	63,800	Lbs.	Structural Steel	63,800					
S-8	63,800	Lbs.	Field Painting of Structural Steel	63,800					
S-14	207.17	Lin.Ft.	Railing (Aluminum Rail & Supports, Concrete Parapet)	207.17					
S-18	1,080	Lin.Ft.	Steel Piles 10BP42		440	640			
S-29	30	Cu.Yds.	Porous Backfill		30				
S-29	4	Each	Scuppers, including supports	4					
S-101	112	Each	Water Reducing, Set-Retarding Admixture	112					
I-10	307	Sq.Yds.	Crushed Aggregate Slope Protection				307		
I-10	90	Cu.Yds.	Dumped Rock Channel Protection				90		
E-27	2	Each	Delineators, Type C-2, bracket mounted	2					

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GENERAL PLAN & ELEVATION
NOTES & ESTIMATED QUANTITIES
BRIDGE NO. TRU-I-80-0926 RAMP A
OVER
LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 14+60.59 TO STA. 15+69.24

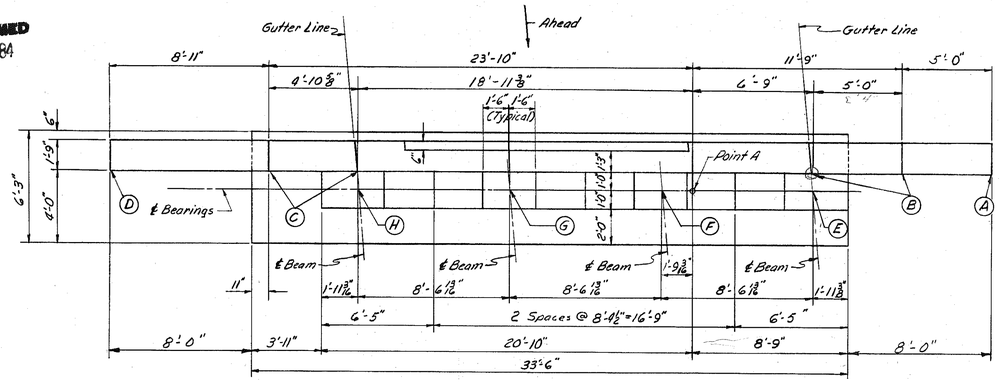
Designed	Drawn	Traced	Checked	Reviewed Date	Revised
G.M.B.	J.H.		G.M.B.	10-26-62	

MICROFILMED
DEC 7 1984

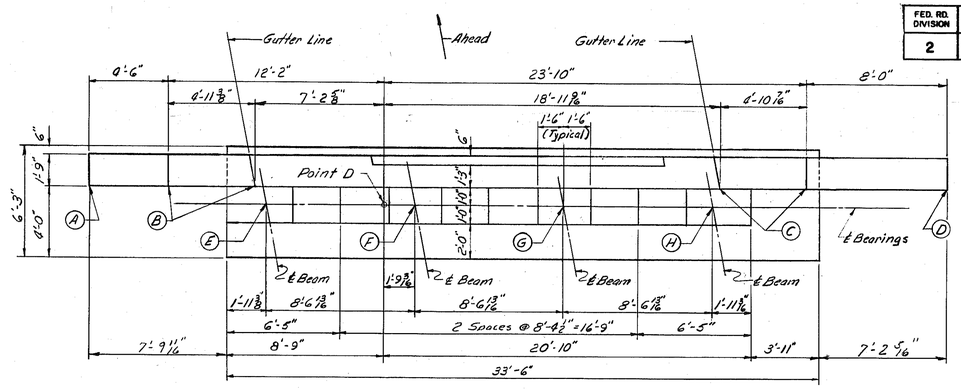
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5 (9) 245	

308
401

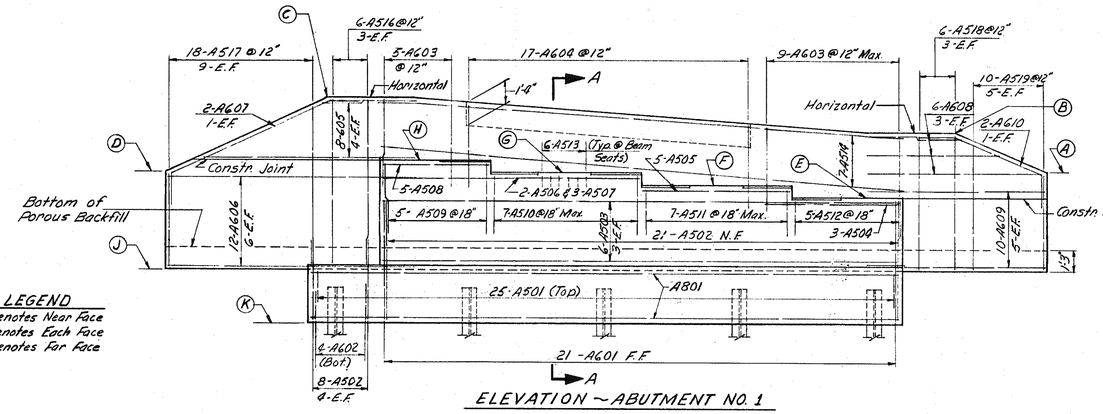
TRUMBULL COUNTY
TRU-I-80-(8.90)



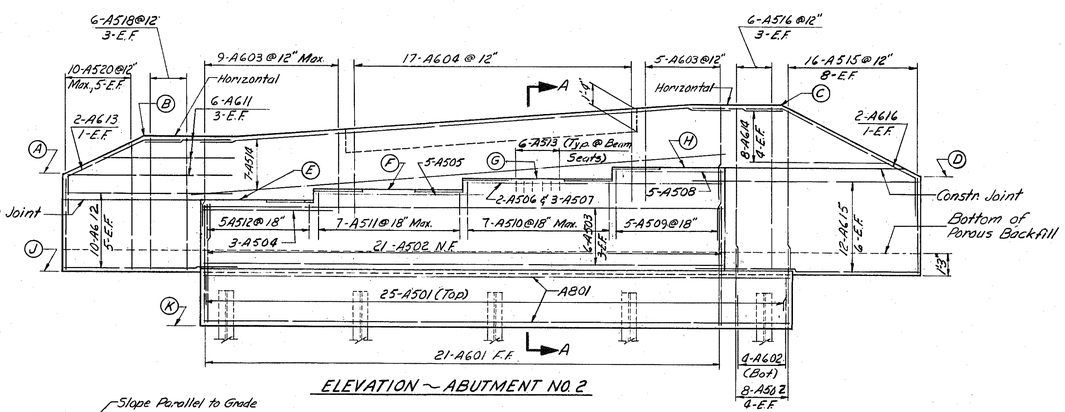
PLAN ~ ABUTMENT NO. 1



PLAN ~ ABUTMENT NO. 2



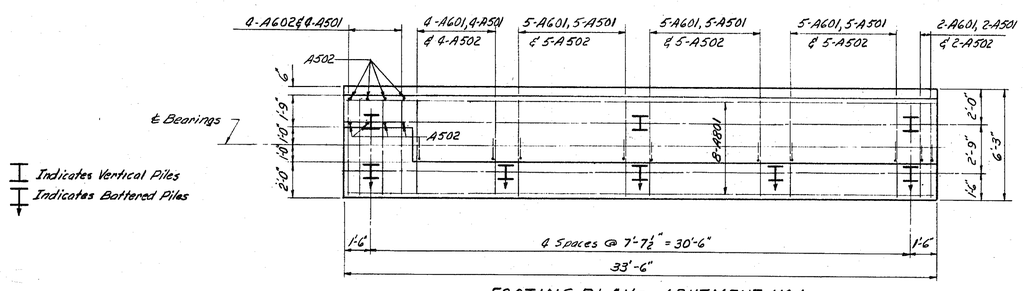
ELEVATION ~ ABUTMENT NO. 1



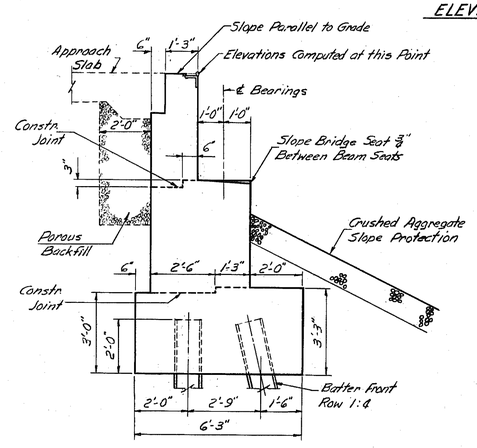
ELEVATION ~ ABUTMENT NO. 2

LEGEND

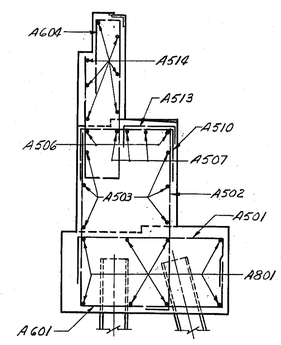
N.F. Denotes Near Face
E.F. Denotes Each Face
F.F. Denotes Far Face



FOOTING PLAN ~ ABUTMENT NO. 1
(ABUTMENT NO. 2 SIMILAR)



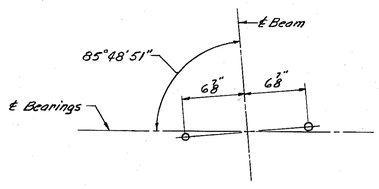
SECTION A-A



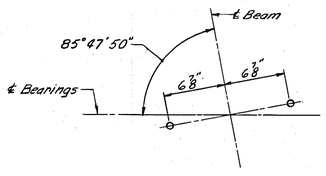
SECTION A-A
(SHOWING REINFORCEMENT)

NOTES

- PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments after which excavation shall be made for the abutments and for piers that are set in the fill area.
- POROUS BACKFILL shall extend upward to the approach slab and to the surface of the earth shoulders, and outward to the surface of the embankment slopes. Excavation therefor, in excess of that required for construction of the abutment, shall be considered as paid for in bid price per cu. yd. paid for porous backfill.
- BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes.
- Concrete above bridge seat construction joint shall not be placed until after the steel work is erected, but shall be placed before placing deck slab.
- All abutment concrete shall be Class "E."
- All Abutment Piles to be 10BP42 driven to a minimum bearing capacity of 35 Tons per Pile.



ANCHOR BOLT LAYOUT
(Abutment No. 1)



ANCHOR BOLT LAYOUT
(Abutment No. 2)

TABLE OF ELEVATIONS

LOCATION	ELEVATION									
	A	B	C	D	E	F	G	H	J	K
Abutment No. 1	938.17	940.40	942.93	938.17	936.80	937.48	938.16	938.83	932.75	929.75
Abutment No. 2	939.85	942.09	944.06	939.85	938.48	939.12	939.77	940.41	934.43	931.43

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ABUTMENTS
BRIDGE NO. TRU-I-80-0926 RAMP A
OVER
LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 14+60.59 TO STA. 15+69.24

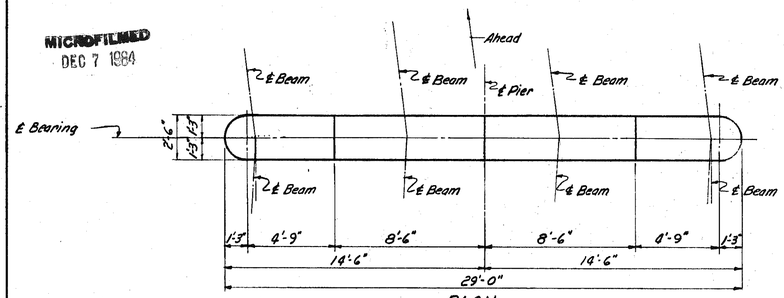
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
G.M.B.	F.J.M.		G.M.B.		10-26-62	

MICROFILMED
DEC 7 1984

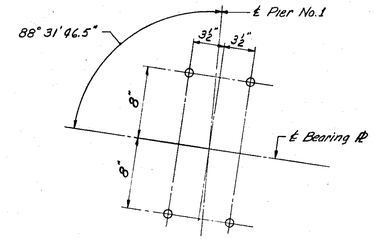
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

309
401

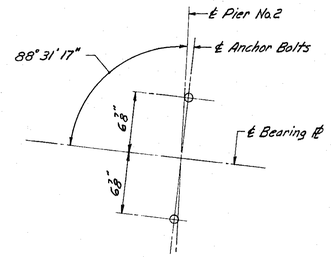
TRUMBULL COUNTY
TRU-I-80-(8.90)



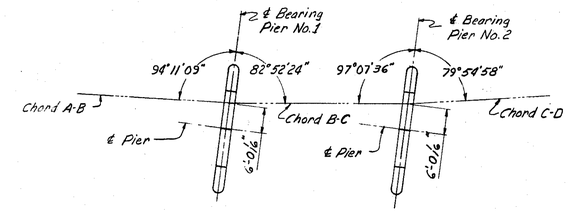
PLAN



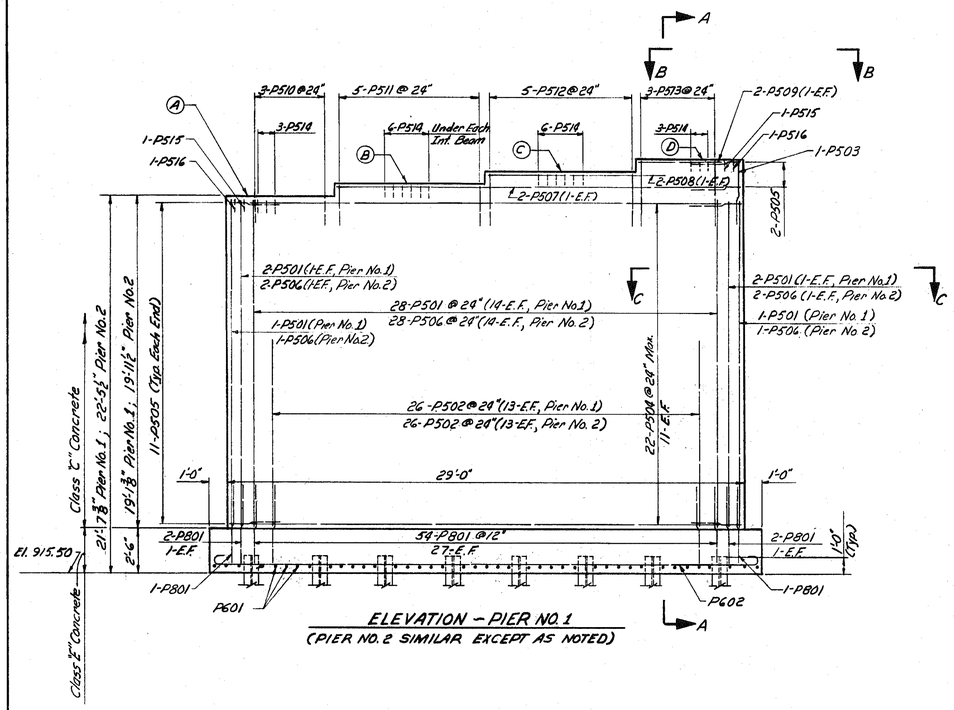
ANCHOR BOLT LAYOUT
Pier No.1 (Fixed)



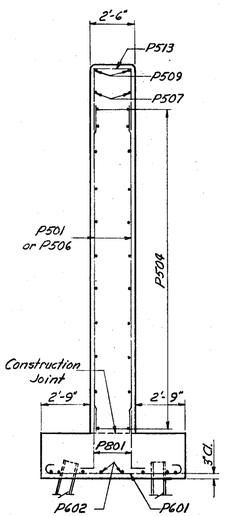
ANCHOR BOLT LAYOUT
Pier No. 2 (Exp.)



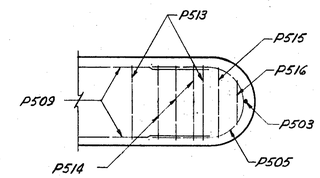
PIER GEOMETRY



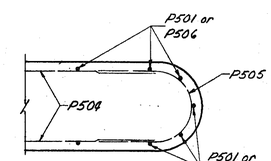
ELEVATION – PIER NO. 1
(PIER NO. 2 SIMILAR EXCEPT AS NOTED)



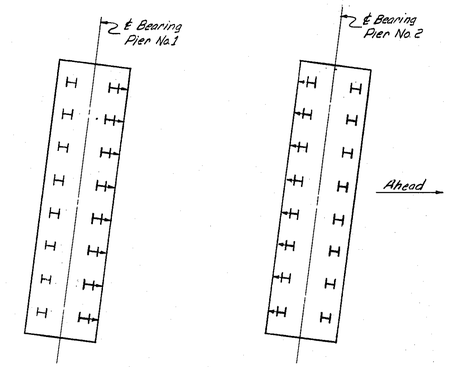
SECTION A-A



SECTION B-B



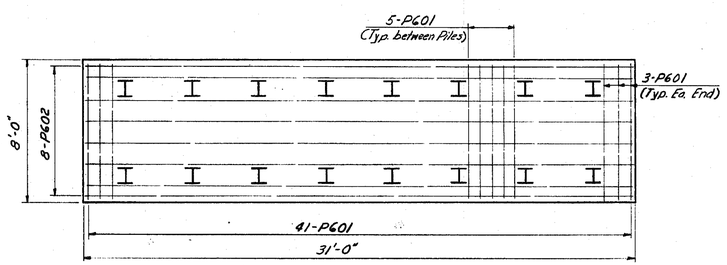
SECTION C-C



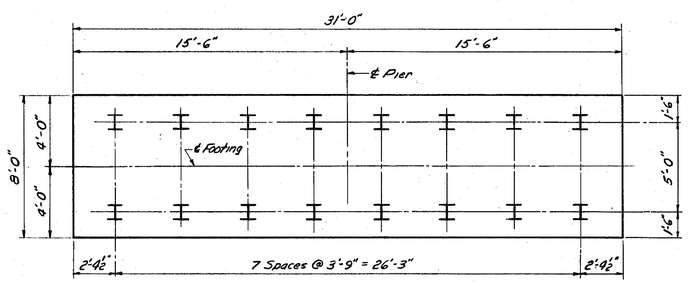
PILE LAYOUT
(SHOWING BATTER)

NOTES

- Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes.
- All Piles to be 10BP42 driven to a minimum bearing capacity of 35 Tons per Pile.
- I Indicates Vertical Piles.
- I Indicates Battered Piles. Batter 1:4 in direction of arrow.



FOOTING PLAN - PIERS NO. 1 & NO. 2



PILE LAYOUT ~ PIERS NO. 1 & NO. 2

TABLE OF ELEVATIONS				
LOCATION	A	B	C	D
Pier No.1	937.11	937.78	938.44	939.11
Pier No.2	937.96	938.61	939.27	939.93

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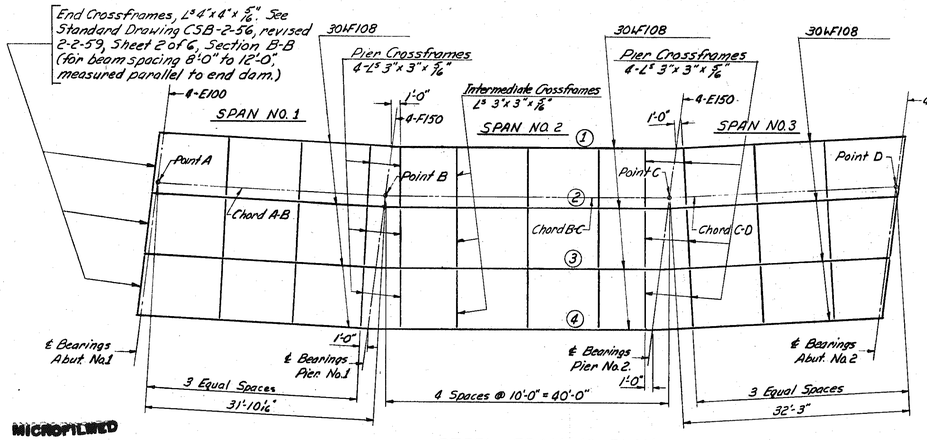
PIERS
BRIDGE NO. TRU-I-80-0926 RAMP A
OVER
LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 14+60.59 TO STA. 15+69.24

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
G.M.B.	J.H.S. F.J.M.		G.M.B.	10 26 '82		

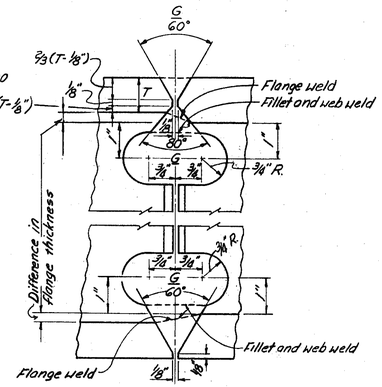
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

310/401

TRUMBULL COUNTY
TRU-I-80(8.90)

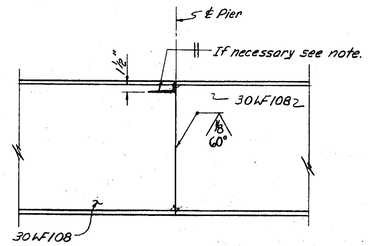


STEEL FRAMING PLAN



END PREPARATION OF ROLLED BEAMS FOR FIELD WELDING

NOTE: Any roughness from burning shall be removed by grinding.



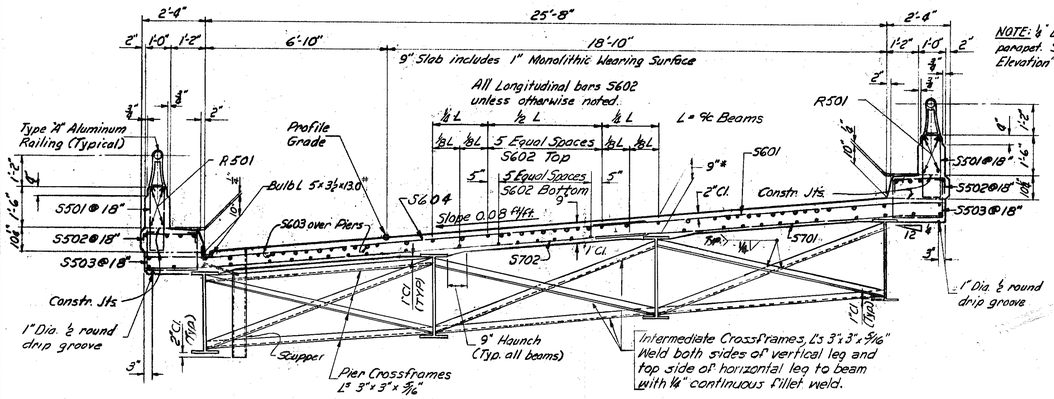
BEAM SPLICE DETAIL-ELEVATION

BEAM SPLICE WELDING PROCEDURE

Butt-weld the beam flanges and web using the following sequence: make one pass on each flange, then two on the web; repeat, using one pass at each location, until welds are completed.

DEAD LOAD DEFLECTION AND CONVEXITY						
LOCATION	BEAM NO. 1 SPAN			BEAM NO. 2 SPAN		
	1	2	3	1	2	3
Deflection due to weight of Steel	0	0	0	0	0	0
Deflection due to remaining Dead Load	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"
Total Dead Load Deflection	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"
Convexity required for Superelevation	0	0	-1/4"	-1/8"	-1/8"	-1/8"
Total Dead Load Deflection and Convexity	+1/16"	+1/16"	-3/16"	-1/16"	-1/16"	-1/16"
Required Camber	0	0	0	0	0	0
LOCATION	BEAM NO. 3 SPAN			BEAM NO. 4 SPAN		
	1	2	3	1	2	3
Deflection due to weight of Steel	0	0	0	0	0	0
Deflection due to remaining Dead Load	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"
Total Dead Load Deflection	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"
Convexity required for Superelevation	-1/8"	-1/4"	-3/8"	0	-1/4"	-1/8"
Total Dead Load Deflection and Convexity	-1/16"	-3/16"	-5/16"	+1/16"	-3/16"	-1/16"
Required Camber	0	0	0	0	0	0

NOTE: Beams shall be fabricated with any natural camber or bowed side up.



NOTE: 1/2" Expansion Joints in parapet. See General Plan & Elevation" for spacing

TYPICAL CROSS SECTION

DECK SLAB HAUNCH: The haunch in the superelevated deck slab adjacent to the top of the steel beams, which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12" on the low side and between 9" and 12" on the high side, except that on the high side, the maximum slope shall not exceed 3" per foot. Payment shall be based on the 9" width.

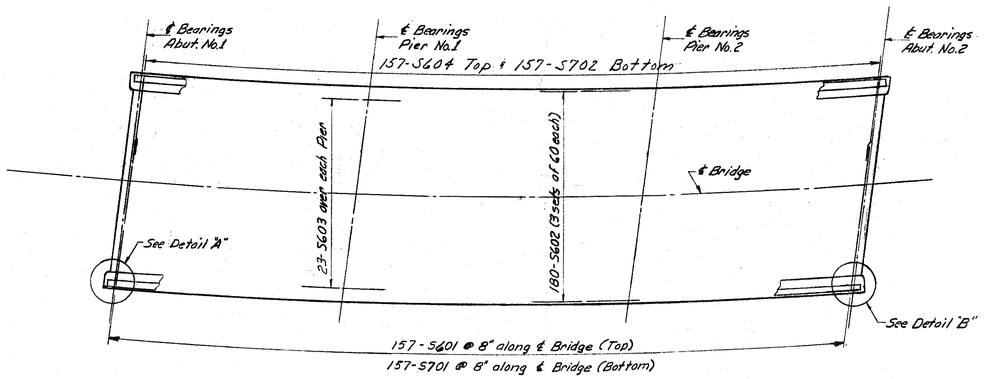
*This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

ACTUAL SLAB THICKNESS							
BEAM	ABUTMENT		PIER		℄ SPAN		
	NO. 1	NO. 2	NO. 1	NO. 2	NO. 1	NO. 2	NO. 3
NO. 1	9"	9"	9"	9"	9"	9"	8 3/8"
NO. 2	9"	9"	9"	9"	8 5/8"	8 5/8"	8 5/8"
NO. 3	9"	9"	9"	9"	8 5/8"	8 3/8"	8 5/8"
NO. 4	9"	9"	9"	9"	9"	8 3/8"	8 5/8"

NOTES

- Refer to Standard Drawing CSB-2-56, Sheet 2 of 6 for details of end dam.

  Refer to Standard Drawing CSB-2-56, Sheet 3 of 6 for gutter and scupper details.
- Refer to Standard Drawing FSB-1-62 for details of Bearings
- Concrete and reinforcing steel above parapet construction joints included with railing for payment.
- Concrete shall be Class "C".
- Continuous Beam Splice: If 30WF108 Beams at Piers have depths differing by more than 1/8", the depth of the smaller-depth beam shall be increased by splitting the web longitudinally at a distance of 1 1/2" below the bottom of the top flange and for a distance sufficient to allow the flange to be bent up at a slope of not more than 2/3" per foot, after which the split in the web shall be completely welded with full depth penetration.



DECK SLAB PLAN

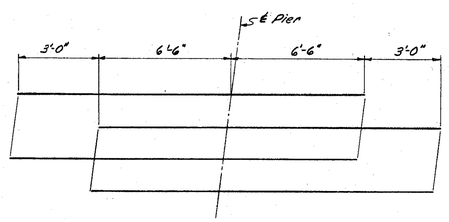
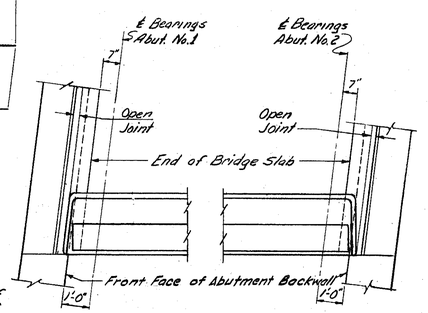


DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIERS

NOTE: Terminate 6"x6"x3/8" angle and vertical leg of 8"x4"x1" angle on line of deck fascia.



DETAIL "A"

DETAIL "B"

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SUPERSTRUCTURE
BRIDGE NO. TRU-I-80-0926 RAMP A
OVER
LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 14+60.59 TO STA. 15+69.24

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
G.M.B.	J.H.		G.M.B.	8-10-62	

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DEC 7 1984

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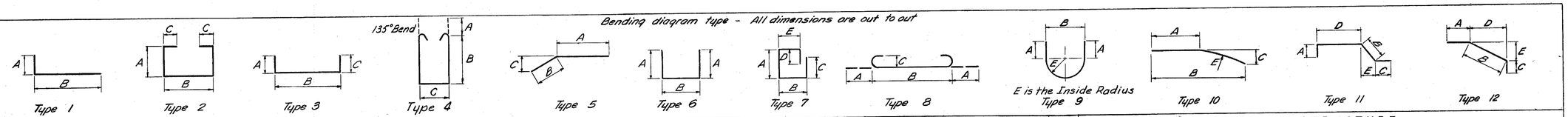
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5 (9) 245	

311
401

TRUMBULL COUNTY
TRU I-80-(8.90)

REINFORCING STEEL BAR SCHEDULE

Bending diagram type - All dimensions are out to out



PIERS

MARK	PIER #1	PIER #2	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
P801	60	60	120	5'-6"	1	11¾"	4'-9"				1,762
P601	41	41	82	9'-0"	8	8"	7'-8"	6"			1,108
P602	8	8	16	32'-0"	8	8"	30'-8"	6"			769
P501	34		34	18'-10"	Str.						668
P502	26	26	52	11'-0"	Str.						597
P503	1	1	2	3'-7"	Str.						7
P504	22	22	44	26'-6"	Str.						1,216
P505	24	24	48	6'-5"	9	1'-7"	2'-0½"			11¾"	321
P506		34	34	19'-9"	Str.						700
P507	2	2	4	21'-7"	Str.						90
P508	2	2	4	10'-0"	Str.						42
P509	2	2	4	4'-7"	Str.						19
P510	3	3	6	5'-1"	6	1'-7"	2'-2"				32
P511	5	5	10	6'-5"	6	2'-3"	2'-2"				67
P512	5	5	10	7'-9"	6	2'-11"	2'-2"				81
P513	3	3	6	9'-1"	6	3'-7"	2'-2"				57
P514	18	18	36	3'-2"	6	7⅝"	2'-2"				119
P515	2	2	4	3'-0"	6	7⅝"	2'-0"				13
P516	2	2	4	2'-7"	6	7⅝"	1'-7"				11
										Total Weight	7,679

ABUTMENTS

MARK	ABUT #1	ABUT #2	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A801	8	8	16	33'-2"	Str.						1,417
A601	21	21	42	13'-7"	3	6'-7"	5'-5"	1'-11"			857
A602	4	4	8	8'-11"	6	1'-11"	5'-5"				107
A603	14	14	28	12'-3"	6	5'-7"	1'-5"				515
A604	17	17	34	14'-8"	7	5'-7"	1'-5"	4'-3"	3'-1"	11"	749
A605	8		8	5'-0" to 11'-6" (1)	Str.						99
A606	12		12	13'-9"	Str.						248
A607	2		2	13'-6"	12	2'-0"	9'-8"	2'-0"	8'-9"	4'-1"	41
A608	6		6	5'-6" to 9'-8" (2)	Str.						66
A609	10		10	10'-0"	Str.						150
A610	2		2	9'-1"	12	2'-0"	5'-3"	2'-0"	4'-10"	2'-1"	27
A611		6	6	5'-6" to 9'-6" (3)	Str.						68
A612		10	10	9'-10"	Str.						148
A613		2	2	8'-8"	12	2'-0"	4'-10"	2'-0"	4'-4"	2'-1"	26
A614		8	8	5'-3" to 10'-9" (4)	Str.						96
A615		12	12	13'-1"	Str						236
A616			2	12'-8"	12	2'-0"	8'-10"	2'-0"	7'-10"	4'-1"	38
A501	25	25	50	9'-8"	3	1'-11"	5'-5"	2'-7"			504
A502	29	29	58	7'-1"	1	7⅝"	6'-7"				428
A503	6	6	12	29'-3"	Str.						366
A504	3	3	6	7'-6"	Str.						47
A505	5	5	10	9'-9"	Str.						102
A506	2	2	4	14'-5"	Str.						60
A507	3	3	6	9'-0"	Str.						56
A508	5	5	10	6'-1"	Str.						63
A509	5	5	10	10'-4"	6	3'-7"	3'-5"				108
A510	7	7	14	9'-0"	6	2'-11"	3'-5"				131
A511	7	7	14	7'-8"	6	2'-3"	3'-5"				112
A512	5	5	10	6'-4"	6	1'-7"	3'-5"				66
A513	24	24	48	3'-0"	6	7⅝"	2'-0"				150
A514	7	7	14	29'-6"	Str.						431
A515		16	16	5'-0" to 9'-1" (5)	Str.						118
A516	6	6	12	9'-3"	Str.						116
A517	18		18	5'-2" to 8'-10" (6)	Str.						131
A518	6	6	12	7'-4"	Str.						92
A519	10		10	5'-2" to 6'-10" (7)	Str.						63
A520		10	10	5'-2" to 7'-2" (8)	Str.						64
										Total Weight	8,096

(1) 2 Each Vary by 2'-2"
(2) 2 Each Vary by 2'-4"
(3) 2 Each Vary by 2'-0"
(4) 2 Each Vary by 1'-10"
(5) 2 Each Vary by 7"
(6) 2 Each Vary by 5½"
(7) 2 Each Vary by 5"
(8) 2 Each Vary by 6"

SUPERSTRUCTURE

MARK	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
S701	157	13'-6"	Str.						4,332
S702	157	19'-6"	Str.						6,258
S601	157	13'-4"	Str.						3,144
S602	180	36'-0"	Str.						9,733
S603	46	16'-0"	Str.						1,105
S604	157	19'-4"	Str.						4,559
S501	140	5'-7"	4	5"	2'-2"	8"			815
S502	140	2'-6"	6	7⅝"	1'-6"				365
S503	140	4'-10"	2	1'-3⅞"	1'-6"	7⅝"			706
R501	48	17'-1"	Str.	Included with Railing for Payment					
								Total Weight	31,017

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, indicate the bar size number. For example, A601 is a No. 6 size bar.

REPLACEMENT BARS

MARK	NO.	LENGTH	TYPE	WEIGHT
RE801	1	6'-6"	Str.	
RE701	1	6'-3"	Str.	
RE601	2	5'-11"	Str.	
RE501	1	5'-7"	Str.	

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REINFORCING STEEL LIST
BRIDGE NO. TRU-I-80-0926 RAMP A
OVER
LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 14+60.59 TO STA. 15+69.24

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
GMB	G.P.	T.P.G.	GMB	[illegible]	10-26-62	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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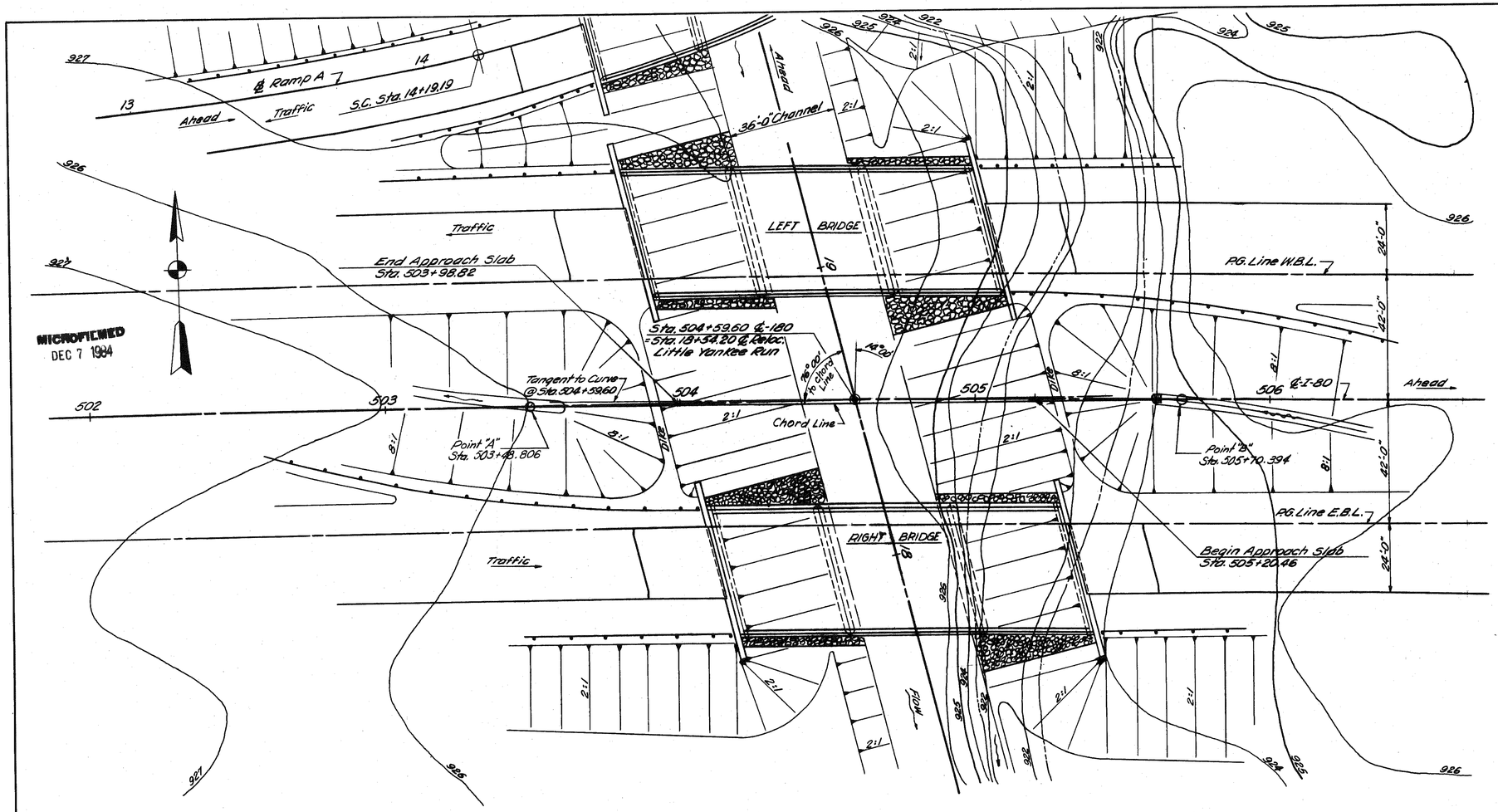
401

TRUMBULL COUNTY
TRU I-80 (8.90)

B.M. #3
R.R. Spike in root of 45" Oak
150'± Right of Sta. 503+00 ℄
Elevation 927.216



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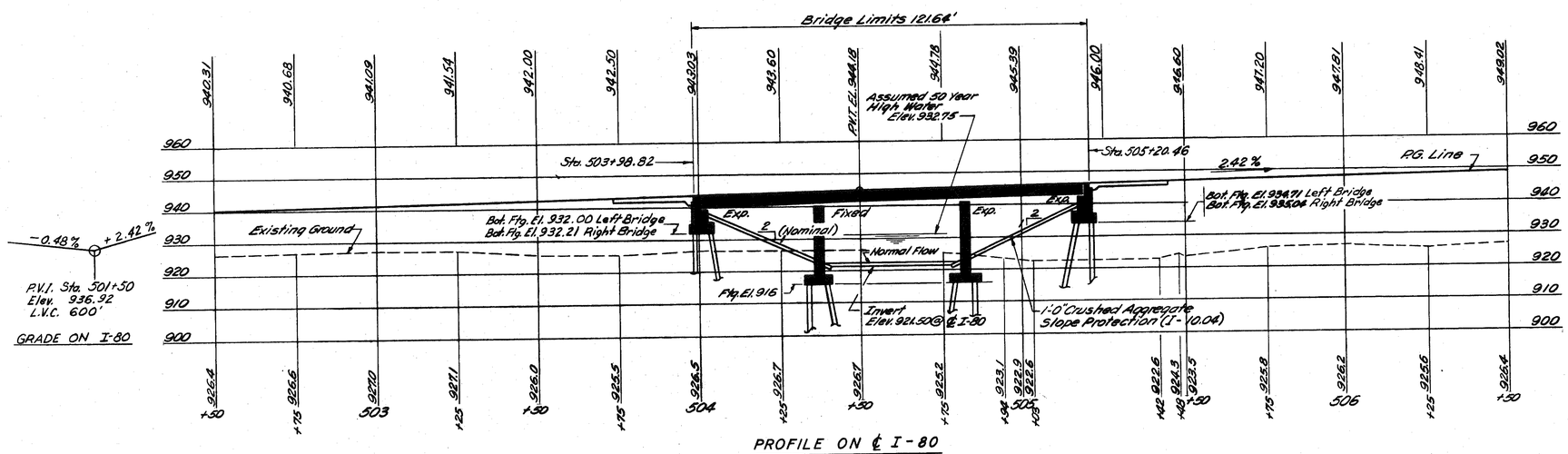
CURVE DATA

P.I. Sta. 508+02.82 ℄ I-80
Δ = 20°37'15" Rt.
D = 0°28'00"
R = 12,277.67'
T = 2,223.54'
L = 4,418.75'

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil-sampling soundings, made at the site. This sounding information, the accuracy of which the State does not guarantee, may be examined in the office of the Bureau of Bridges in Columbus or in the Division office.

PROPOSED STRUCTURES

TYPE: Continuous rolled steel beam bridges with reinforced concrete deck and substructure.
SPANS: 36'-0", 45'-0", 36'-0" ℄ Bearings.
ROADWAY: 42'-0" f/f parapet with 1'-2" curbs.
LOAD FREQUENCY: CF 2000 (57) Adequate for A.A.S.H.O. alternate loading.
SKEW: 14°00' R.F.
WEARING SURFACE: 1" Monolithic Concrete.
APPROACH SLAB: AS-1-54 (25'-0" Long)
ALIGNMENT: I-80, 0°28' Curve, Rt.
SUPERELEVATION: 3/16 per ft.
DRAINAGE AREA: 19.4 Square Miles



PROFILE ON ℄ I-80

All Piles 10-BP-42, estimated average pay length, Abuts. 35', Piers 20'.

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SITE PLAN
BRIDGE NO. TRU-I-80-0926 L/R
OVER
LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 503+98.82 TO STA. 505+20.46
SCALE: 1" = 20'

PRESENT TOPOGRAPHY		PROPOSED WORK			
Surveyed	Drawn	Designed	Drawn	Checked	Reviewed
Buchart Engr.	D.R.T.	G.M.B.	D.R.T.	G.M.B.	10-11-62

Sheet 1 of 7

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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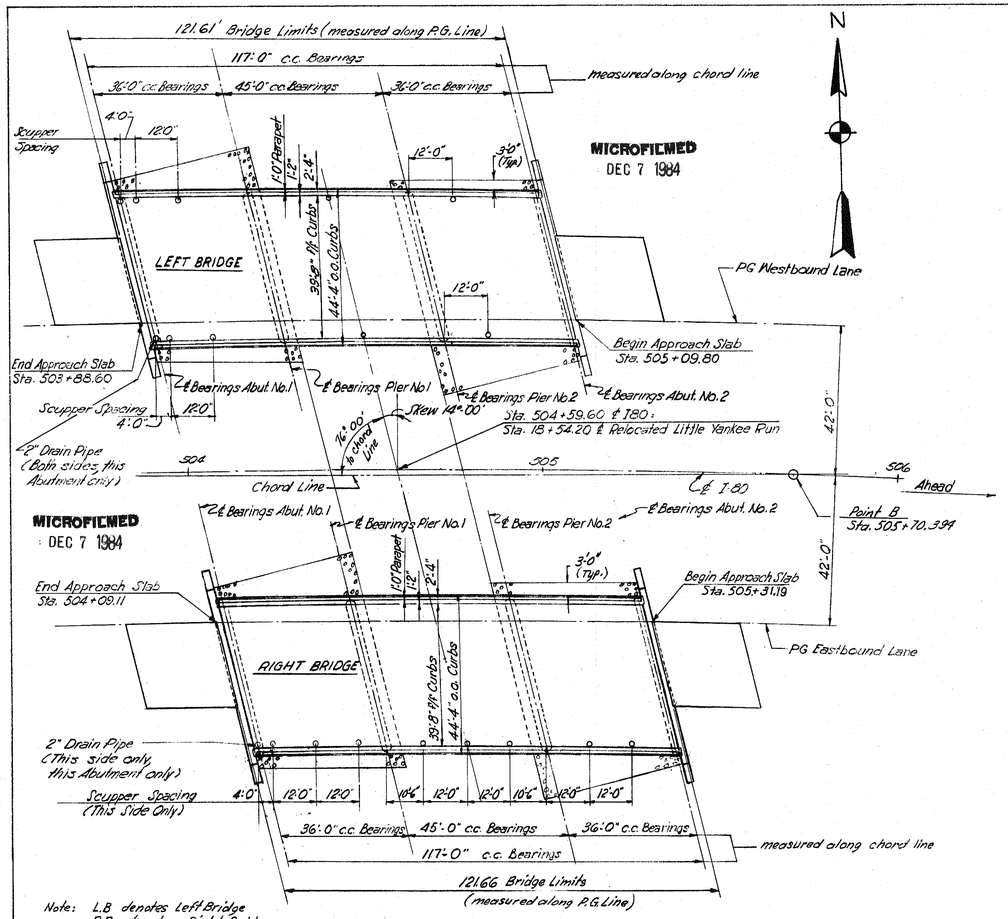
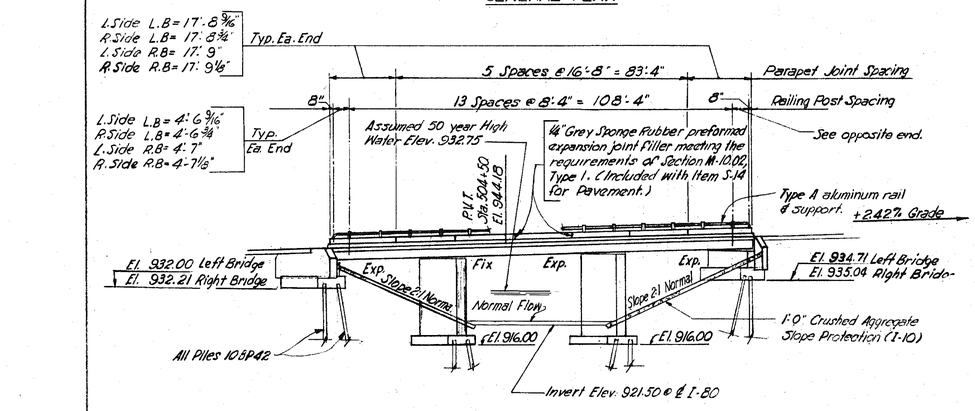
401

TRUMBULL COUNTY
TRU-I-80 (8.90)



Note: L.B. denotes Left Bridge
R.B. denotes Right Bridge

GENERAL PLAN



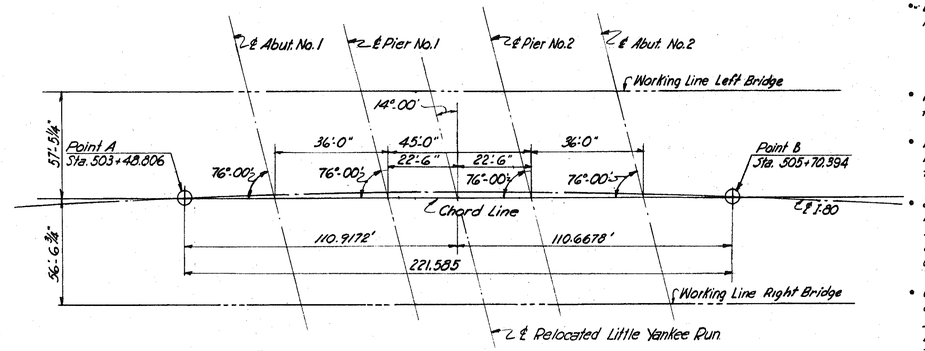
ELEVATION

CURVE DATA

V.C. : 600'
P.V.I. : Sta. 501+50
Elev. : 936.92
M.O. : 2.175'

P.I. Sta.	:	508+02.82 ℄ I-80
Δ	:	20°-37'-15" Rt
D°	:	0°-28'
R	:	12,277.67'
T	:	2,233.54'
L	:	4,418.75'

GRADE DATA



LAYOUT OF STRUCTURE

GENERAL NOTES

- REFERENCE shall be made to Standard Drawings CSB-2-56, Sheets 2 & 3 of 6, revised 2-2-59, FSB-1-62 dated 1-15-63, AR-1-57 revised 4-2-62, and to Supplemental Specification S-101 dated 7-12-62.
- 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.
- EXCAVATION QUANTITY includes the removal of fill material required for construction of the abutments and No. 2 Piers.
- PILES shall be driven to a minimum bearing capacity of 35 Tons for Abutments and Piers.
- WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop.
- SHOP PAINTING STEEL: The surface preparation of all steel requiring shop painting as per the Plans and Specifications, shall be accomplished by blast cleaning or power tool cleaning, except as noted in the Specifications regarding the use of Chromate Primers.
- CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.
- MACHINE FINISH: At the Contractor's option, the concrete deck may be finished by the use of a finishing machine.
- CONTINUOUS BEAM SHOP ASSEMBLY: Reference paragraph 4, Sec. S-7.12 of the Construction and Material Specifications, if rolled beams are field spliced only at supports, for the purpose of checking the fit-up of weld joint preparation, only two adjacent beams need be shop assembled at a time in their correct, unloaded positions. All beams shall be assembled and match marked.
- SHEET LEAD shall conform to the requirements of A.S.T.M. Designation B29 without restriction to the Common Desilverized Type.
- FIRST TEST PILE: Payment will be made for only one First Test Pile. It may be driven for either the Right or Left Bridge, or for Ramp A Bridge.

DESIGN LOADING-CF=2000 (57)

CONCRETE CLASS C-basic unit stress 1,333 p.s.i.
CONCRETE CLASS E-basic unit stress 1,133 p.s.i.

STRUCTURAL STEEL-ASTM A36-basic stress 20,000 p.s.i. (ASTM A7 and A373 steel not permitted.)
REINFORCING STEEL-ASTM A15, A16, A160, 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.

ESTIMATED QUANTITIES

				LEFT BRIDGE					RIGHT BRIDGE				
ITEM	TOTAL	UNIT	DESCRIPTION	SUPERSTR.	ABUTS.	PIERS	GENERAL	AS BUILT	SUPERSTR.	ABUTS.	PIERS	GENERAL	AS BUILT
E-2	1092	Cu. Yds.	Unclassified Excavation		210	354				210	318		
E-2	Lump	Sum	Cofferdams, Cribs and sheeting				Lump					Lump	
E-3	2,943	Cu. Yds.	Channel excavation				2,943						
S-1	338	Cu. Yds.	Class "C" Concrete, Superstructure	169					169				
S-1	356	Cu. Yds.	Class "C" Concrete, Piers above Footings			176					178		
S-1	177	Cu. Yds.	Class "E" Concrete, Abutments above Footing.		88					89			
S-1	268	Cu. Yds.	Class "E" Concrete, Footings		66	68				66	68		
S-4	142,440	Lbs.	Reinforcing Steel	47,814	10,480	12,880			47,814	10,558	12,894		
S-7	220,200	Lbs.	Structural Steel	110,100					110,100				
S-8	220,200	Lbs.	Field Painting of Structural Steel	110,100					110,100				
S-14	469.90	Lin. Ft.	Railing (Aluminum Rail & Supports, Concrete Parapet)	234.88					235.02				
T-127	5	Each	Delineator, Type C-2, bracket mounted				5						
S-16	Lump	Sum	First Test Pile				Lump						
S-18	3620	Lin. Ft.	Steel H Piles 10BP42		770	1040				770	1040		
S-29	70	Cu. Yds.	Pourous Backfill		35					35			
S-29	16	Each	Scuppers, Including supports	8					8				
S-101	338	Each	Water-Reducing, Set-Retarding Admixture	169					169				
T-127	1	Each	Delineator, Type A-1, bracket mounted	1									
T-10	1100	Sq. Yds.	Crushed Aggregate Slope Protection (T-10.04)				550					550	

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BUCHART ENGINEERING, YORK, PA.

GENERAL PLAN & ELEVATION
NOTES & ESTIMATED QUANTITIES
BRIDGE NO. TRU-I-80-0926 4/R
OVER
LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 503+98.82 TO STA. 505+20.46

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
G.M.B.	J.H.		G.M.B.	10-11-62	

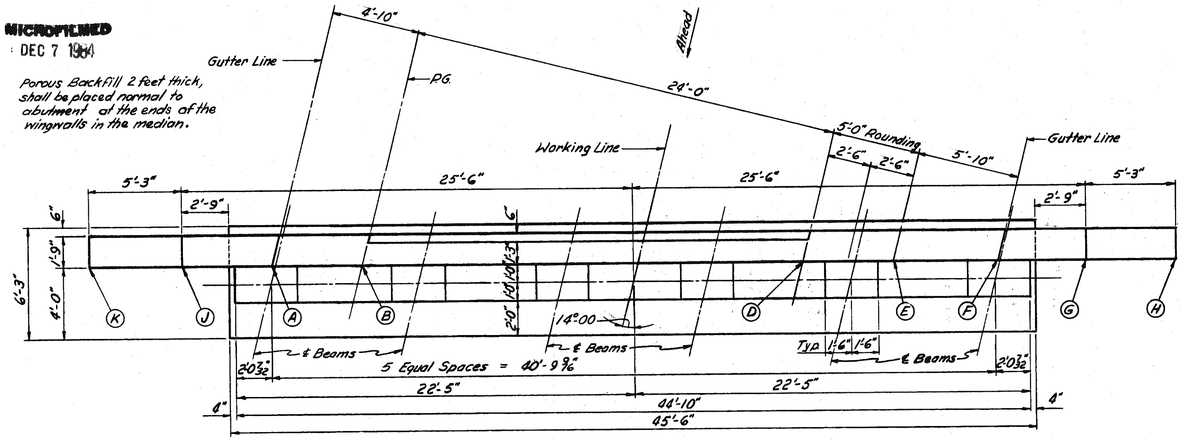
Sheet No. 2 of 7

MICROFILMED
DEC 7 1984

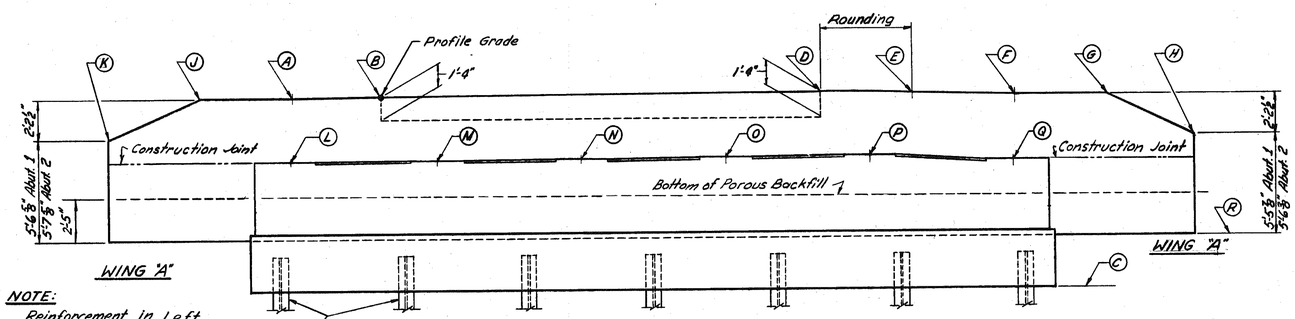
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

TRUMBULL COUNTY
TRU-I-80 (8.90)

Porous Backfill 2 feet thick, shall be placed normal to abutment at the ends of the wingwalls in the median.

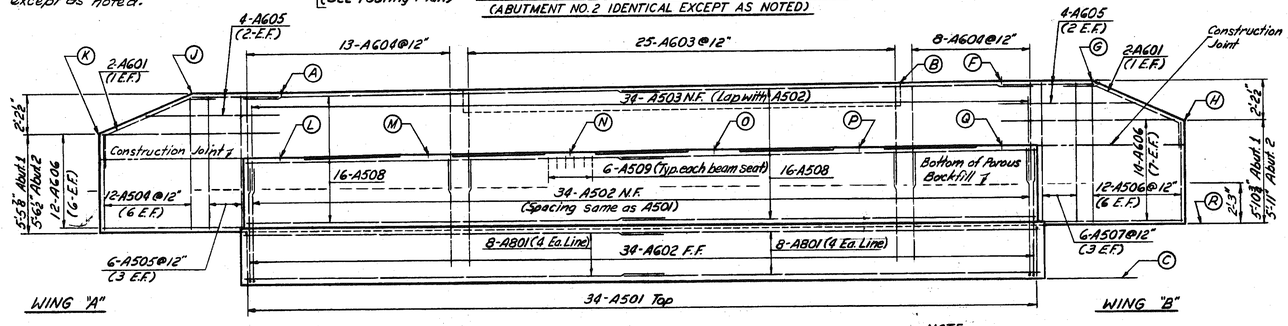


PLAN
ABUTMENT NO. 1 LEFT BRIDGE
(ABUTMENT NO. 2 IDENTICAL EXCEPT AS NOTED)



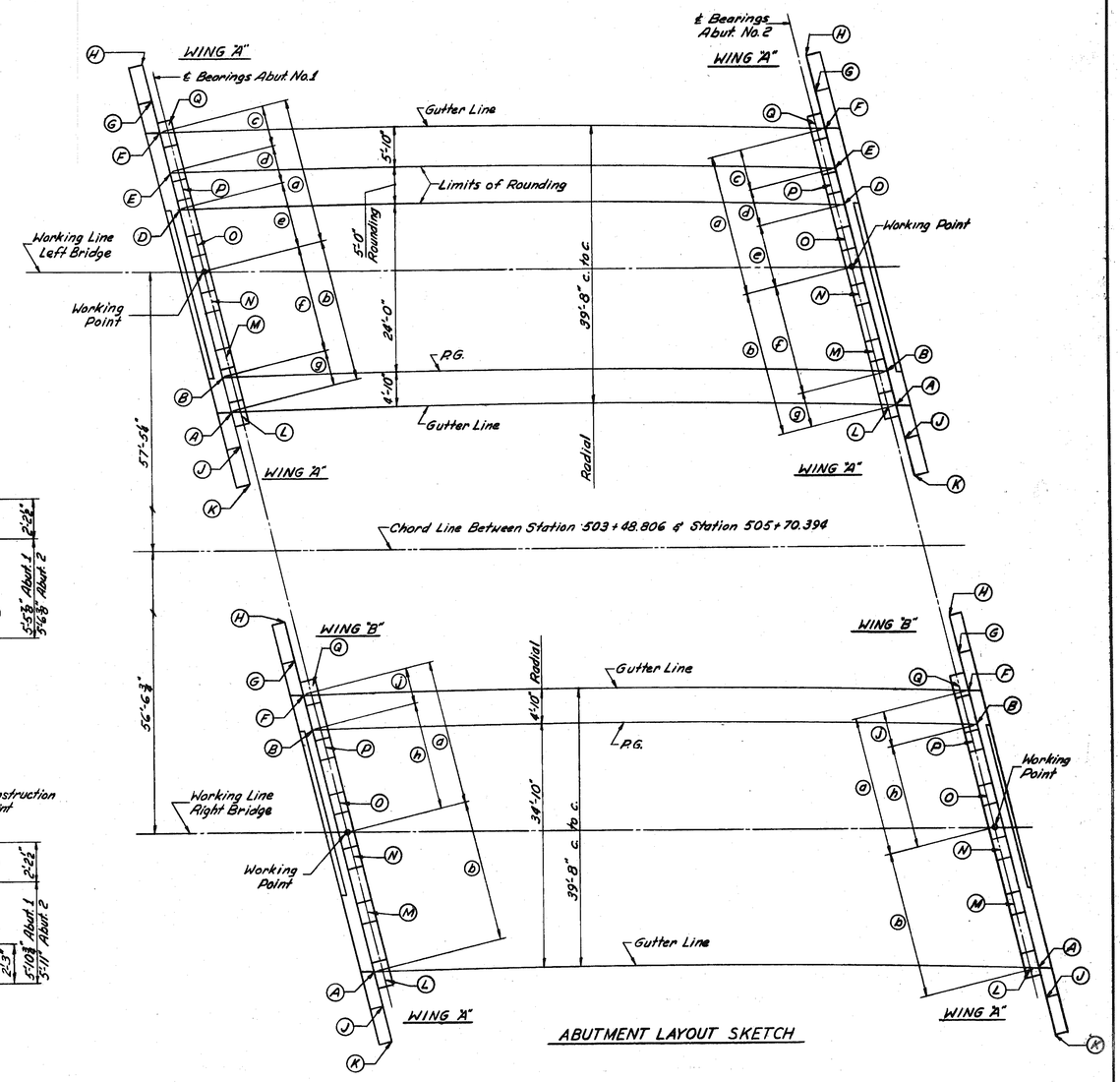
NOTE:
Reinforcement in Left Bridge Abutments Identical to Right Bridge Abutments except as noted.

ELEVATION ABUTMENT NO. 1 LEFT BRIDGE
(ABUTMENT NO. 2 IDENTICAL EXCEPT AS NOTED)



ELEVATION ABUTMENT NO. 1 RIGHT BRIDGE
(ABUTMENT NO. 2 IDENTICAL EXCEPT AS NOTED)

NOTE:
N.F. = Near Face
F.F. = Far Face
E.F. = Each Face



ABUTMENT LAYOUT SKETCH

NOTES
For Notes see Sheet No. 315

TABLE OF ELEVATIONS AND DIMENSIONS

STRUCTURE	ELEVATIONS A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R
Left Bridge Abut. No. 1	942.76	942.81	932.00	943.06	942.97	942.70	942.70	940.49	942.76	940.55	939.19	939.27	939.35	939.44	939.47	939.12	935.00
Left Bridge Abut. No. 2	945.55	945.60	934.71	945.82	945.73	945.45	945.45	943.24	945.55	943.34	941.93	942.00	942.08	942.15	942.18	941.83	937.71
Right Bridge Abut. No. 1	942.91	943.26	932.21	—	—	943.31	943.31	941.10	942.91	940.70	939.33	939.41	939.49	939.57	939.65	939.73	935.21
Right Bridge Abut. No. 2	945.79	946.11	935.04	—	—	946.16	946.16	943.95	945.79	943.58	942.16	942.24	942.31	942.39	942.46	942.53	938.01

STRUCTURE	DIMENSIONS a	b	c	d	e	f	g	h	j
Left Bridge Abut. No. 1	20'-5 13/16"	20'-3 3/8"	6'-0"	5'-1 3/8"	9'-4 3/16"	15'-4 3/16"	4'-11 11/16"	—	—
Left Bridge Abut. No. 2	20'-2 1/4"	20'-8 3/8"	6'-0 7/16"	5'-1 7/8"	9'-0 3/16"	15'-8 7/8"	4'-11 7/8"	—	—
Right Bridge Abut. No. 1	20'-7 3/8"	20'-2 3/8"	—	—	—	—	—	14'-11 11/16"	5'-8 1/16"
Right Bridge Abut. No. 2	20'-0 5/8"	20'-10 5/8"	—	—	—	—	—	14'-11 13/16"	5'-0 13/16"

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

ABUTMENT PLANS & ELEVATIONS
BRIDGE NO. TRU-I-80-0926 L/R
OVER
LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 503+98.82 TO STA. 505+20.46

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
C.S.F.	J.H.	F.J.M.	G.M.B.	[illegible]	10-11-62	

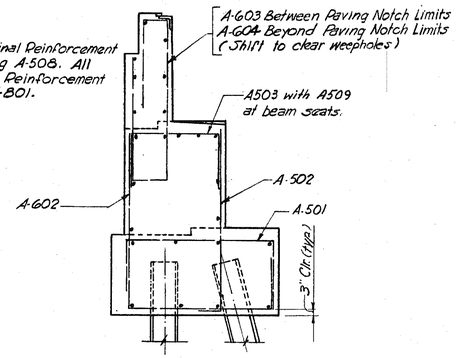
MICROFILMED
DEC 7 1984

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

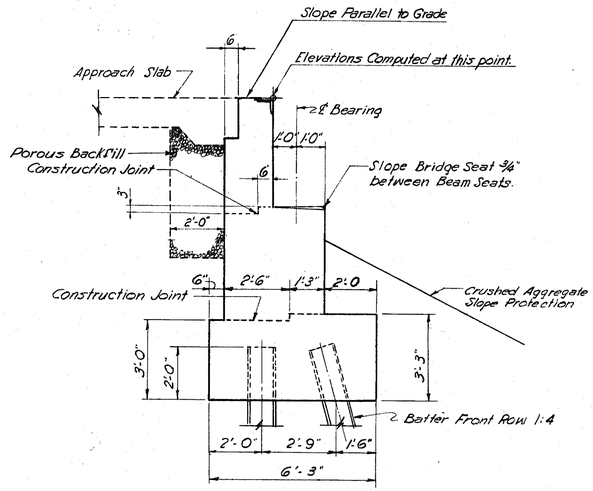
315
401

TRUMBULL COUNTY
TRU-I-80 (8.90)

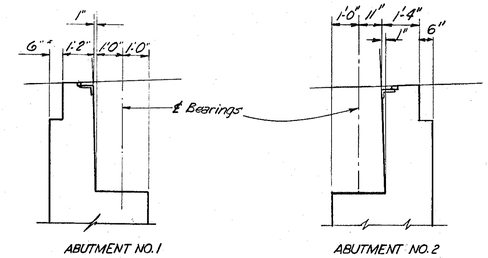
Note:
All Longitudinal Reinforcement above Footing A-508. All Longitudinal Reinforcement in Footing A-801.



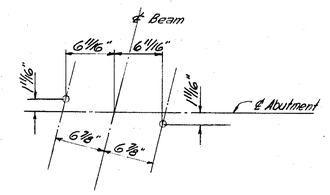
TYPICAL SECTION THROUGH ABUTMENT
SHOWING REINFORCEMENT



TYPICAL SECTION THROUGH ABUTMENT



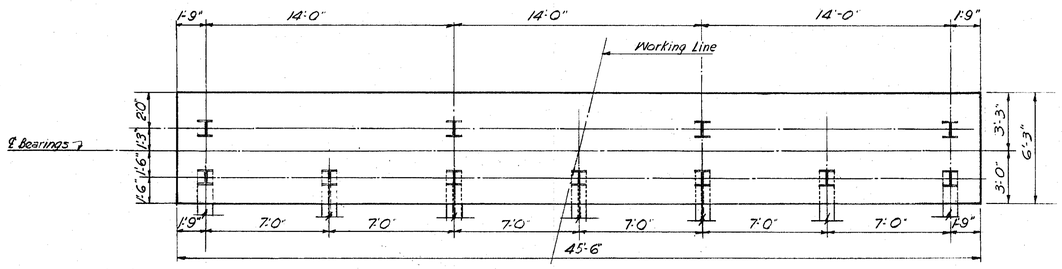
SLOPE OF BACKWALL



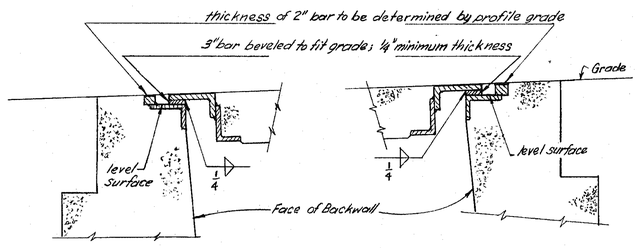
ANCHOR BOLT LAYOUT

NOTES

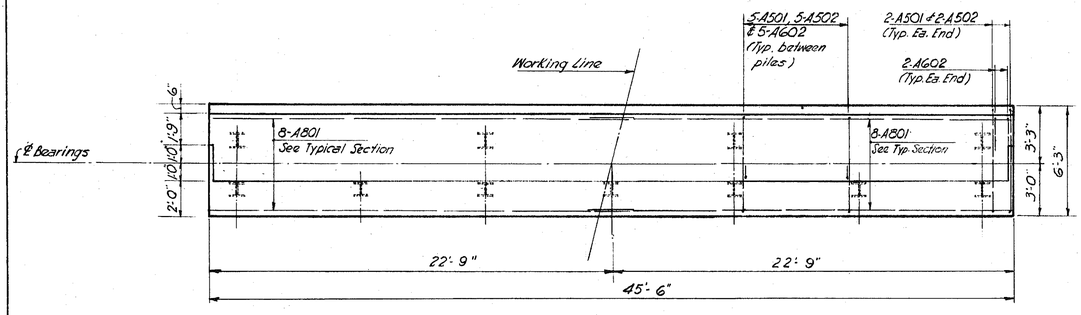
- PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments after which excavation shall be made for the abutment and for piers that are set in the fill area.
- POROUS BACKFILL shall extend upward to the approach slab and to the surface of the earth shoulders, and outward to the surface of the embankment slopes. Excavation therefor, in excess of that required for construction of the Abutment, shall be considered as paid for in bid price per. cu. Yd. paid for porous backfill.
- BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes.
- Concrete above bridge seat construction joint shall not be placed until after the steel work is erected, but shall be placed before placing deck slab.
- All abutment concrete shall be Class "E".
- Railing not shown. See "General Plan & Elevation" for railing post spacing.
- All Piles to be 10BP42 driven to a minimum bearing capacity of 35 Tons per Pile.



TYPICAL FOOTING PLAN
SHOWING PILE LAYOUT



END DAM DETAIL



TYPICAL FOOTING PLAN
SHOWING REINFORCEMENT

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

ABUTMENT SECTIONS & FOOTINGS
BRIDGE NO. TRU-I-80-0926 L/R
OVER
LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 503+98.82 TO STA. 505+20.46

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
C.S.F.	J.H.		G.M.B.	B	10-11-62	

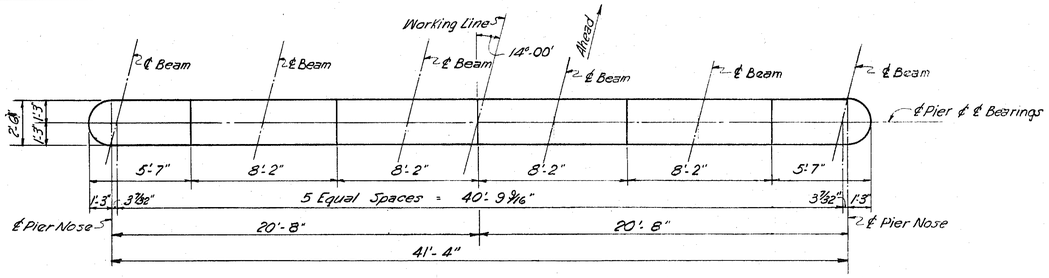
Sheet No. 4 of 7

MICROFILMED
DEC 7 1984

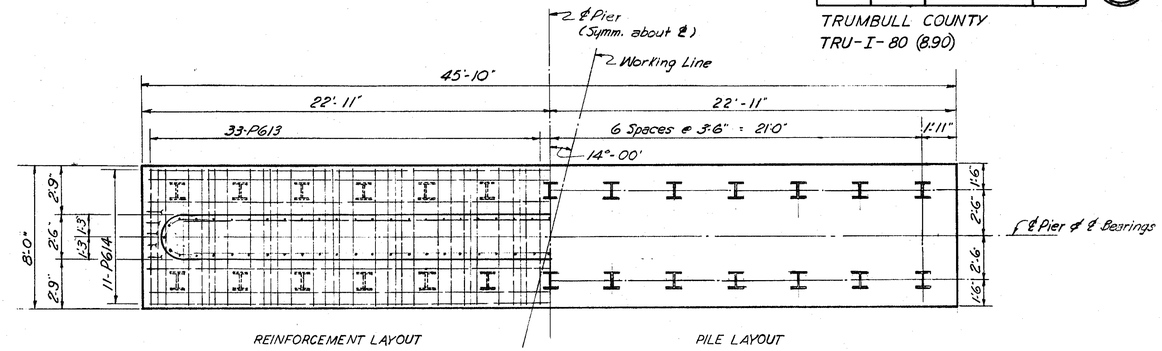
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

316
401

TRUMBULL COUNTY
TRU-I-80 (8.90)



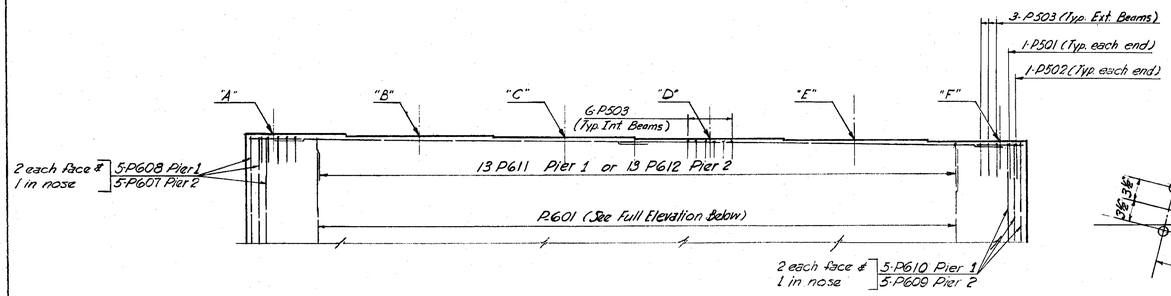
PLAN



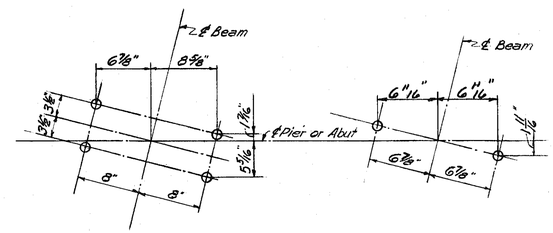
REINFORCEMENT LAYOUT

PILE LAYOUT

FOOTING PLAN



PARTIAL ELEVATION - RIGHT BRIDGE PIERS
PIER NO. 1 SHOWN, PIER NO. 2 IDENTICAL EXCEPT AS NOTED

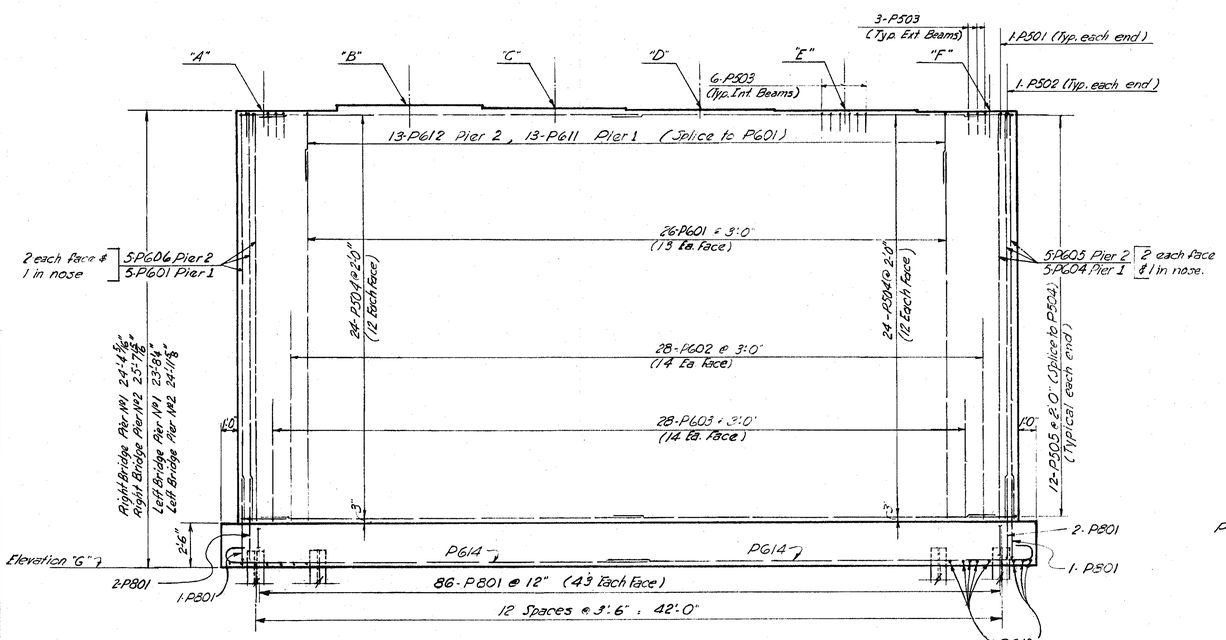


PIER NO. 1
FIXED

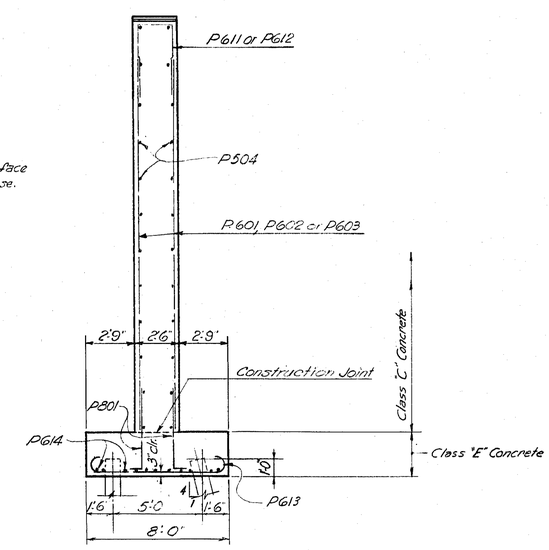
PIER NO. 2
EXPANSION

ANCHOR BOLT LAYOUT

TABLE OF ELEVATIONS				
LOCATION	RIGHT BRIDGE		LEFT BRIDGE	
	PIER 1	PIER 2	PIER 1	PIER 2
A	940.36	941.66	939.69	940.97
B	940.28	941.58	940.04	941.32
C	940.20	941.51	940.01	941.28
D	940.13	941.43	939.93	941.21
E	940.05	941.36	939.85	941.13
F	939.98	941.28	939.77	941.06
G	916.00	916.00	916.00	916.00



ELEVATION - LEFT BRIDGE PIERS
PIER NO. 2 SHOWN, PIER NO. 1 IDENTICAL EXCEPT AS NOTED



TYPICAL SECTION

NOTES

- Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of Anchor Bar holes.
- All Piles to be 10BP42 driven to a minimum bearing capacity of 35 Tons per pile.
- Piles adjacent to slope embankment shall be driven vertical and those in the row opposite the slope embankment battered 1 in 4

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

PIERS
BRIDGE NO. TRU-I-80-0926 L/R
OVER
LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 503+98.82 TO STA. 505+20.46

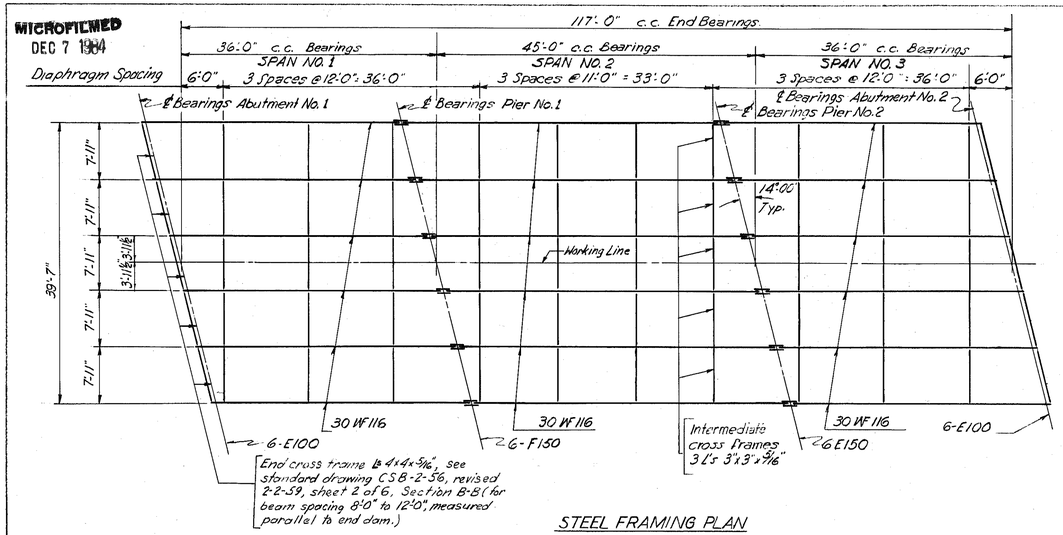
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
D.C.E.	J.H.		G.M.B.		10-11-62	

MICROFILMED
DEC 7 1984

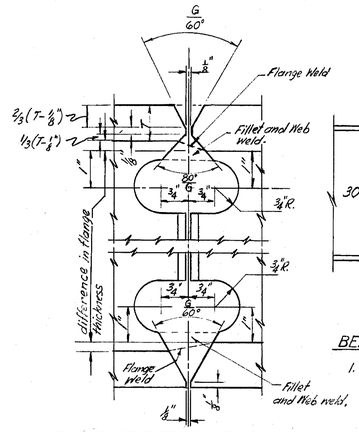
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

317
401

TRUMBULL COUNTY
TRU-I-80 (8.09)

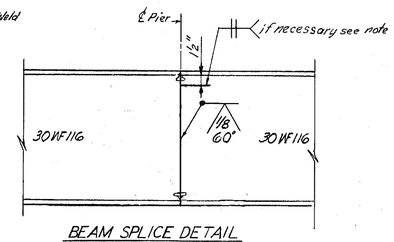


STEEL FRAMING PLAN



END PREPARATION OF ROLLED BEAMS FOR FIELD WELDING

Note: Any roughness from burning shall be removed by grinding.



BEAM SPLICE DETAIL

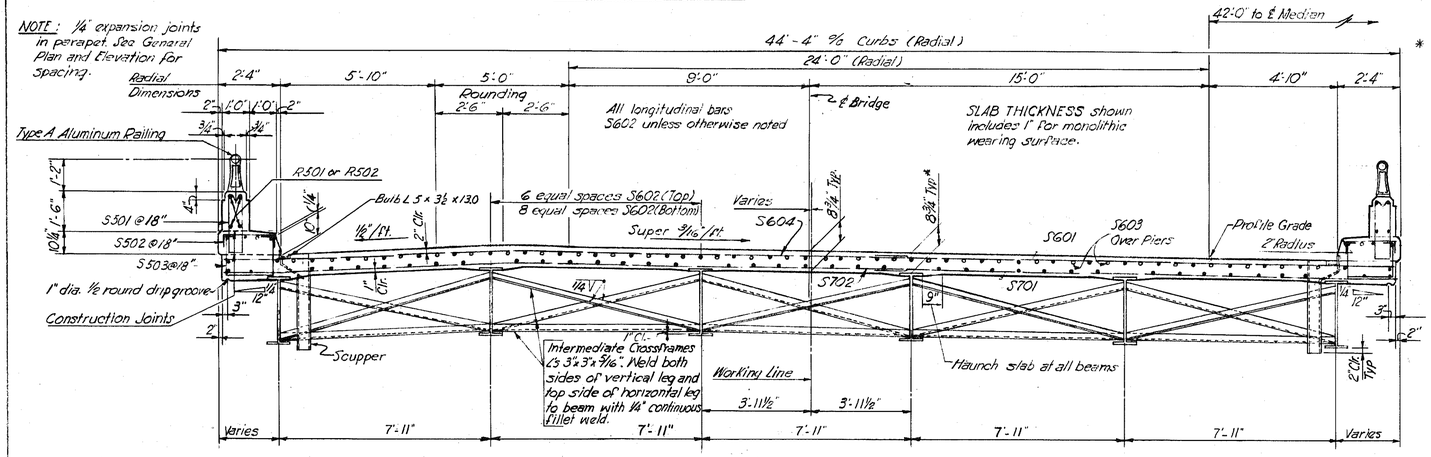
BEAM SPLICE WELDING PROCEDURE

1. Butt-weld the beam flanges and web using the following sequence: make one pass on each flange, then two on the web; repeat, using one pass at each location, until welds are completed.

DEFLECTION AND CAMBER						
LOCATION	OUTSIDE BEAMS			INSIDE BEAMS		
	SPAN			SPAN		
	1	2	3	1	2	3
Deflection due to weight of steel.	0"	0"	0"	0"	0"	0"
Deflection due to remaining dead load	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"
Total dead load deflection	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"
Convexity required for vertical curve & superelevation	0	0	0	0	0	0
Total dead load deflection and convexity	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"
Required Camber	0	0	0	0	0	0

NOTE: Where no camber is specified, beams shall be fabricated with any natural camber or bowed side up.

NOTE: ¼" expansion joints in parapet. See General Plan and Elevation for Spacing.



TYPICAL CROSS SECTION - LEFT BRIDGE

* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

Parapet and Curb dimensions and reinforcement same as opposite side.

DECK SLAB HAUNCH: The haunch in the superelevated deck slab adjacent to the top of the steel beams, which is shown as 9" wide may vary from this dimension between the limits of 6" and 12" on the low side and between 9" and 12" on the high side. Except on the high side, the maximum slope shall not exceed 3" per foot. Payment shall be based on the 9" width.

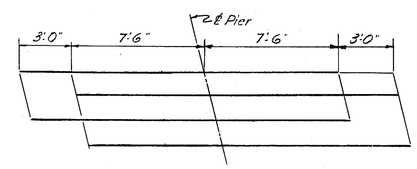
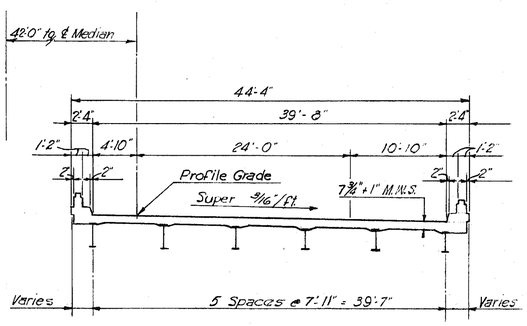


DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIERS

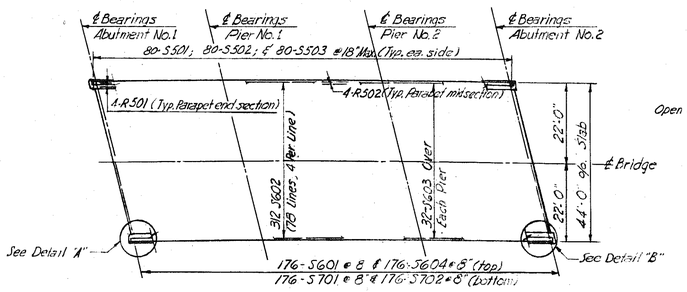
NOTES

- Refer to Standard Drawing CSB-2-56, Sheet 2 of 6 for details of end dam.
- Refer to Standard Drawing CSB-2-56, Sheet 3 of 6, for gutter and scupper details.
- Refer to Standard Drawing FSB-1-62 for details of Bearings.
- Concrete and reinforcing steel above parapet construction joints included with railing for payment.
- Concrete shall be Class "C".
- Continuous Beam Splices: If beams having depths differing by more than 1/8" are to be spliced by butt welding, the depth of the smaller-depth beam shall be increased by splitting the web longitudinally at a distance of 1½" below the bottom of the top flange and for a distance sufficient to allow the flange to be bent up at a slope of not more than 3/8" per foot, after which the split in the web shall be completely welded with full depth penetration.

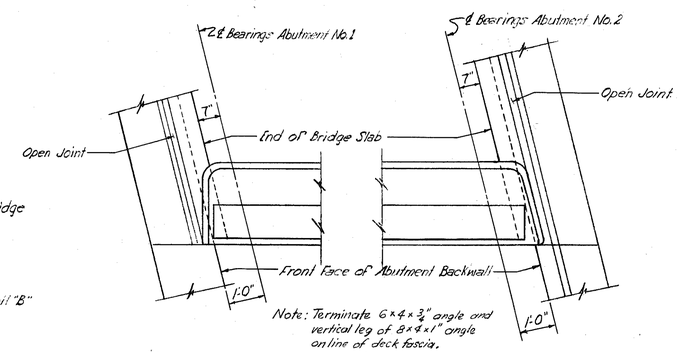


TYPICAL CROSS SECTION-RIGHT BRIDGE

NOTE:
Right Bridge section identical to Left Bridge section except as indicated above.



DECK SLAB PLAN



DETAIL "A" DETAIL "B"

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SUPERSTRUCTURE
BRIDGE NO. TRU-I-80-0926 L/R
OVER
LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 503+98.82 TO STA. 505+20.46

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
G.M.B.	J.H.		G.M.B.	RB	10-11-62	

MICROFILMED
DEC 7 1984

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

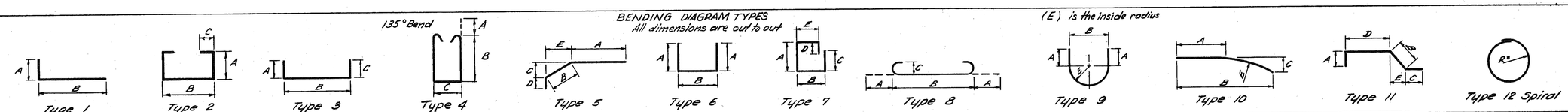
318
401

TRUMBULL COUNTY
TRU I-80 (8.90)

REINFORCING STEEL BAR SCHEDULE

BENDING DIAGRAM TYPES
All dimensions are out to out

(E) is the inside radius



PIERS

LEFT BRIDGE

MARK	PIER 1	PIER 2	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
P801	92	92	184	5'-0"	1	6"	4'-9"				2,456
P601	31	26	57	21'-0"	Str.						1,798
P602	28	28	56	11'-11"	Str.						1,002
P603	28	28	56	6'-11"	Str.						582
P604	5		5	21'-1"	Str.						158
P605		5	5	22'-4"	Str.						168
P606		5	5	22'-3"	Str.						167
P611	13		13	6'-10"	6	2'-6"	2'-2"				133
P612		13	13	9'-4"	6	3'-9"	2'-2"				182
P613	66	66	132	9'-0"	8	8"	7'-8"	6"			1,784
P614	22	22	44	24'-5"	8	8"	23'-9"	6"			1,614
P501	2	2	4	4'-11"	6	1'-7"	2'-0"				21
P502	2	2	4	4'-7"	6	1'-7"	1'-8"				19
P503	30	30	60	5'-1"	6	1'-7"	2'-2"				318
P504	48	48	96	21'-5"	Str.						2153
P505	24	24	48	6'-6"	9	1'-7"	2'-2"			11 5/8"	325
										TOTAL WEIGHT	12,880

RIGHT BRIDGE

MARK	PIER 1	PIER 2	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
P801	92	92	184	5'-0"	1	6"	4'-9"				2,456
P601	26	26	52	21'-0"	Str.						1,640
P602	28	28	56	11'-11"	Str.						1,002
P603	28	28	56	6'-11"	Str.						582
P607		5	5	22'-11"	Str.						172
P608	5		5	21'-8"	Str.						163
P609		5	5	22'-7"	Str.						170
P610	5		5	21'-3"	Str.						160
P611	13		13	6'-10"	6	2'-6"	2'-2"				133
P612		13	13	9'-4"	6	3'-9"	2'-2"				182
P613	66	66	132	9'-0"	8	8"	7'-8"	6"			1,784
P614	22	22	44	24'-5"	8	8"	23'-9"	6"			1,614
P501	2	2	4	4'-11"	6	1'-7"	2'-0"				21
P502	2	2	4	4'-7"	6	1'-7"	1'-8"				19
P503	30	30	60	5'-1"	6	1'-7"	2'-2"				318
P504	48	48	96	21'-6"	Str.						2153
P505	24	24	48	6'-6"	9	1'-7"	2'-2"			11 5/8"	325
										TOTAL WEIGHT	12,894

ABUTMENTS

LEFT BRIDGE

MARK	ABUT. 1	ABUT. 2	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A801	16	16	32	23'-10"	Str.						2,036
A601	4	4	8	9'-3"	5	1'-11"	5'-7"	2'-2 1/2"	1'-11"	5'-1"	111
A602	34	34	68	13'-8"	3	6'-8"	5'-5"	1'-11"			1,396
A603	25	25	50	14'-8"	7	5'-7"	1'-5"	4'-3"	3'-1"	11"	1,101
A604	21	21	42	12'-3"	6	5'-7"	1'-5"				773
A605	8	8	16	4'-11" to 7'-5" (1)	Str.						148
A606	24	24	48	9'-10"	Str.						709
A501	34	34	68	9'-8"	3	1'-11"	5'-5"	2'-7"			686
A502	34	34	68	6'-10"	1	6"	6'-6"				485
A503	34	34	68	7'-2"	6	2'-0"	3'-5"				508
A504	24	24	48	5'-3" to 7'-4" (2)	Str.						315
A505	12	12	24	7'-4"	Str.						184
A508	32	32	64	23'-3"	Str.						1,552
A509	36	36	72	6'-4"	6	1'-7"	3'-5"				476
										TOTAL WEIGHT	10,480

RIGHT BRIDGE

MARK	ABUT. 1	ABUT. 2	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A801	16	16	32	23'-10"	Str.						2,036
A601	4	4	8	9'-3"	5	1'-11"	5'-7"	2'-2 1/2"	1'-11"	5'-1"	111
A602	34	34	68	13'-8"	3	6'-8"	5'-5"	1'-11"			1,396
A603	25	25	50	14'-8"	7	5'-7"	1'-5"	4'-3"	3'-1"	11"	1,101
A604	21	21	42	12'-3"	6	5'-7"	1'-5"				773
A605	8	8	16	4'-11" to 7'-5" (1)	Str.						148
A606	26	26	52	9'-10"	Str.						772
A501	34	34	68	9'-8"	3	1'-11"	5'-5"	2'-7"			686
A502	34	34	68	6'-10"	1	6"	6'-6"				485
A503	34	34	68	7'-2"	6	2'-0"	3'-5"				508
A504	12	12	24	5'-3" to 7'-4" (3)	Str.						157
A505	6	6	12	7'-4"	Str.						92
A506	12	12	24	5'-8" to 7'-9" (4)	Str.						168
A507	6	6	12	7'-9"	Str.						97
A508	32	32	64	23'-3"	Str.						1,552
A509	36	36	72	6'-4"	6	1'-7"	3'-5"				476
										TOTAL WEIGHT	10,558

(1) 8-each Length
(2) 8-each, vary by 5"
(3) 4-each, vary by 5"
(4) 4-each, vary by 5"

SUPERSTRUCTURE

LEFT BRIDGE

MARK	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
S701	176	19'-6	Str.						7,015
S702	176	27'-9"	Str.						9,983
S601	176	19'-4"	Str.						5,111
S602	312	31'-0"	Str.						14,527
S603	64	18'-0"	Str.						1,730
S604	176	27'-7"	Str.						7,292
S501	160	5'-7"	4	5"	2'-2"	8"			932
S502	160	2'-6"	6	7 5/8"	1'-6"				417
S503	160	4'-10"	2	1'-3 3/8"	1'-6"	7 5/8"			807
R501	16	17'-5"	Str.	Included with Railing for Payment					—
R502	40	16'-4"	Str.						—
								TOTAL WEIGHT	47,814

RIGHT BRIDGE

MARK	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
S701	176	19'-6"	Str.						7,015
S702	176	27'-9"	Str.						9,983
S601	176	19'-4"	Str.						5,111
S602	312	31'-0"	Str.						14,527
S603	64	18'-0"	Str.						1,730
S604	176	27'-7"	Str.						7,292
S501	160	5'-7"	4	5"	2'-2"	8"			932
S502	160	2'-6"	6	7 5/8"	1'-6"				417
S503	160	4'-10"	2	1'-3 3/8"	1'-6"	7 5/8"			807
R501	16	17'-5"	Str.	Included with Railing for Payment					—
R502	40	16'-4"	Str.						—
								TOTAL WEIGHT	47,814

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, A801 is a No. 8 size bar.

REPLACEMENT BARS

MARK	No.	LENGTH	TYPE	WEIGHT
RE801	1	6'-6"	Str.	
RE701	2	6'-2"	Str.	
RE601	5	5'-11"	Str.	
RE501	1	5'-7"	Str.	

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

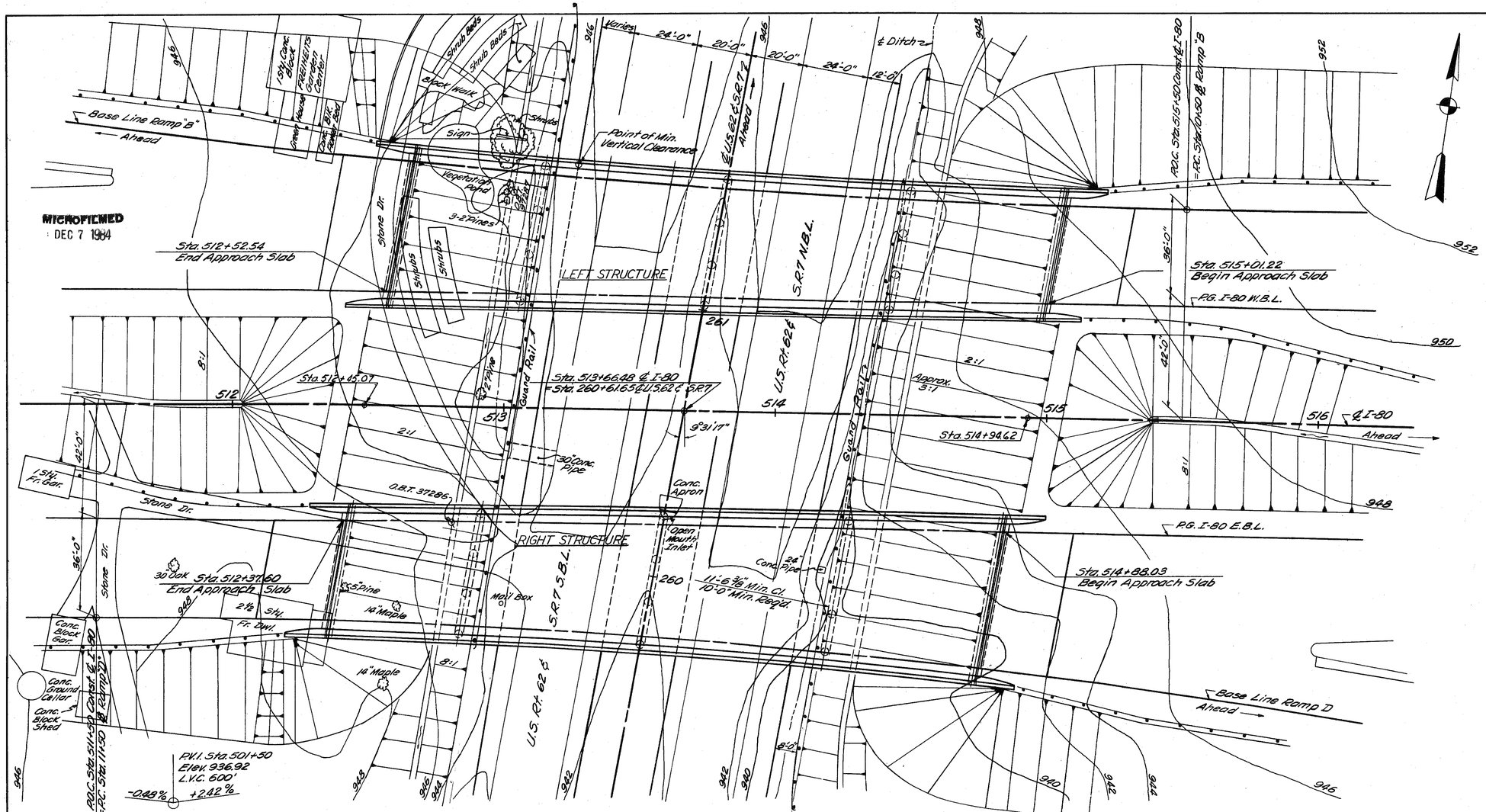
REINFORCING STEEL LIST
BRIDGE NO. TRU-I-80-0926 L/R
OVER
LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 503+98.82 TO STA. 505+20.46

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
GMB	JH	GC	GMB	10-11-62	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

319
401

TRUMBULL COUNTY
TRU-I-80 (8.90)



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B.M. #4 646'± Rt. Sta. 512+42± and along Hwy. 62 on West Side of Hwy. S. Southbound Lane a □ Chisel Mark top of West corner of Northwest Wingwall. Elev. 993.709

CURVE DATA

P.I. Sta. 508+02.82 ℄ I-80
Δ = 20°37'15" Rt.
D = 0°28'20"
R = 12,277.67'
T = 2,293.54'
L = 4,418.75'
E = 201.51'
Super 3/16" per ft.

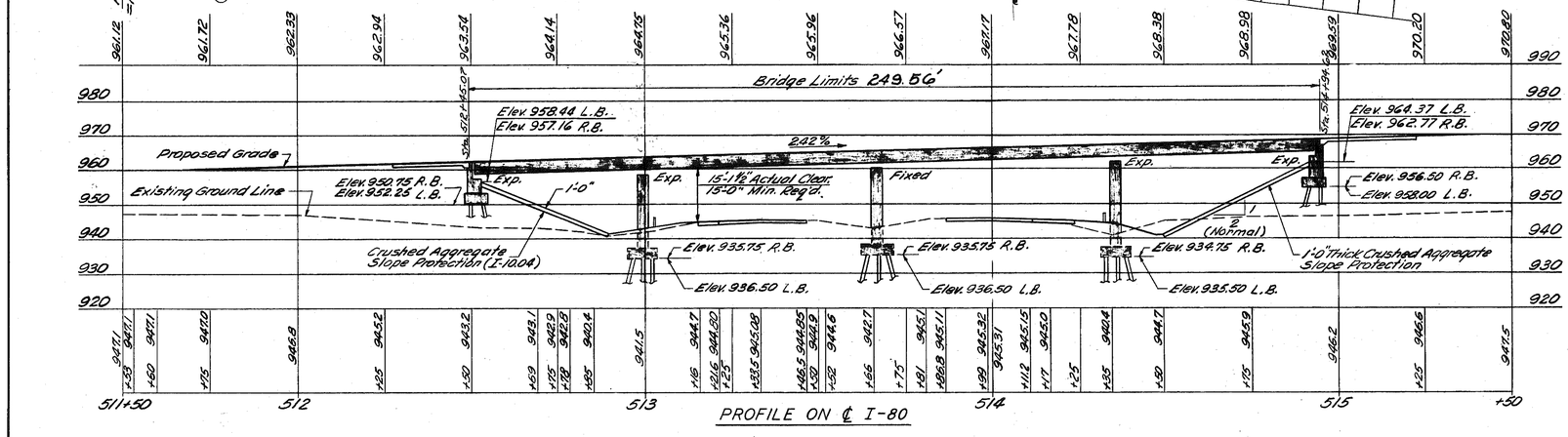
RAMP "B" CURVE DATA

P.I. Sta. 12+48.07
D = 1°30"
Δ = 5°56'12" Rt.
R = 3,819.72'
T = 198.07'
L = 395.70'
E = 5.13'

RAMP "D" CURVE DATA

P.I. Sta. 13+74.70
Δ = 3°23'10" Rt.
D = 2°00'
R = 2,864.79'
T = 224.70'
L = 484.47'
E = 8.80'

FOUNDATION SOUNDINGS: Foundation Design and Foundation quantities are based on a study of rod soundings and soil sampling soundings, made at the site. This sounding information, the accuracy of which the State does not guarantee, may be examined in the office of the Bureau of Bridges in Columbus or in the Division office.



PROPOSED STRUCTURES

TYPE: Continuous Steel Beam with Reinforced Concrete Deck & Substructure.
SPANS: 48'-0", 70'-0", 70'-0", 56'-0"
ROADWAY: Varies, 2'-3" Safety Curbs.
LOAD FREQUENCY: C.R. 2000 (S7) Adequate for A.A.S.H.O. alternate loading.
SKEW: 9°31'17" L.F.
WEARING SURFACE: 1" Monolithic Conc.
APPROACH SLAB: Special Design (25' Long)
ALIGNMENT: 0°28' Curve Right, U.S. 62 & S.R. 7 on tangent.
SUPERELEVATION: I-80 3/16 per ft., S.R. 7 None.

All Piles 10 BP 42
Estimated Average Pay Lengths
Left Structure:
Abutment No. 1 35'
Pier No. 1 25'
Pier No. 2 & No. 3 20'
Abutment No. 2 40'
Right Structure:
Abutment No. 1 30'
Pier No. 1 25'
Pier No. 2 & No. 3 20'
Abutment No. 2 35'

R.B. Denotes Right Bridge
L.B. Denotes Left Bridge

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

SITE PLAN
BRIDGE NO. TRU- -80-0941L/R
OVER
U.S. RT. 62 & SR-7
TRUMBULL COUNTY
SCALE: 1" = 20'-0" STA. 512+45.07 TO STA. 514+94.62

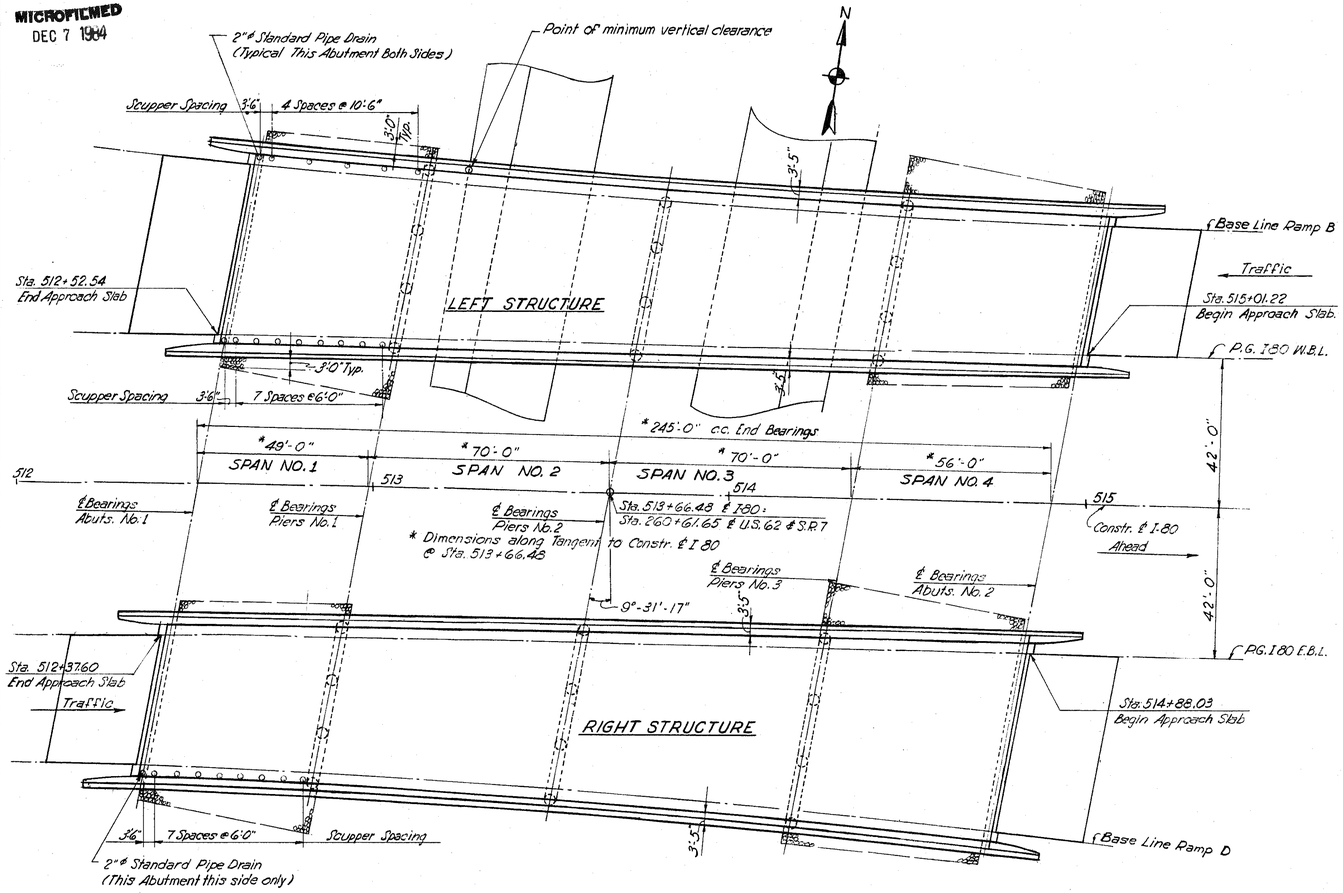
PRESENT TOPOGRAPHY		PROPOSED WORK			
Surveyed	Drawn	Designed	Drawn	Checked	Reviewed
Buchart Eng.	R.L.K.	G.M.B.	R.L.K.	G.M.B.	11-8-62

MICROFILMED
DEC 7 1984

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

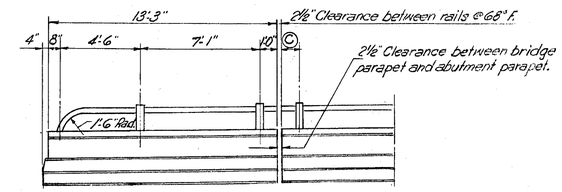
320
401

TRUMBULL COUNTY
TRU-I-80 (8.90)



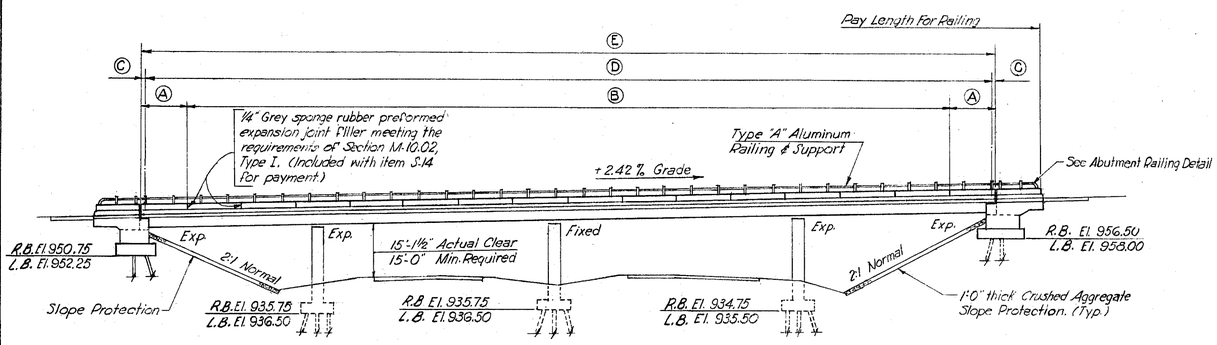
GENERAL PLAN

CONTINUOUS BEAM SHOP ASSEMBLY: Reference paragraph 4, Sec. S-7.12 of the Construction and Material Specifications, if rolled beams are field spliced only at supports, for the purpose of checking the fit-up of weld joint preparation, only two adjacent beams need be shop assembled at a time in their correct, unloaded positions. All beams shall be assembled and match marked.



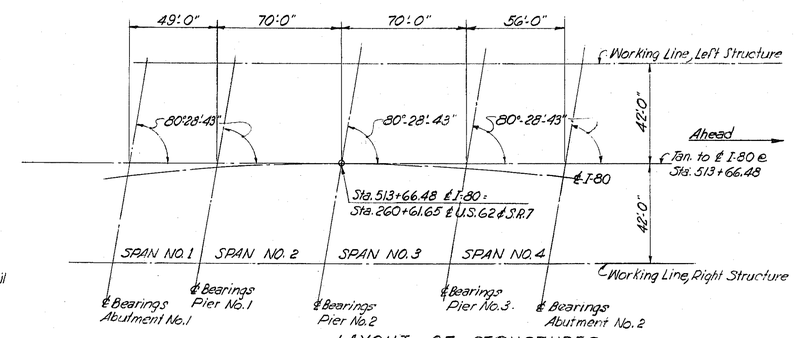
TYPICAL ABUTMENT RAILING DETAIL

Design Loading – CF = 2000 (57).
Concrete Class C – basic unit stress 1,333 p.s.i.
Concrete Class E – basic unit stress 1,133 p.s.i.
Structural Steel – ASTM A36 – basic unit stress 20,000 p.s.i. (ASTM A7 and A373 steel not permitted)
Reinforcing Steel – ASTM A15, A16, A160, 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.



ELEVATION

R.B. Denotes Right Bridge
L.B. Denotes Left Bridge



LAYOUT OF STRUCTURES

GENERAL NOTES

- REFERENCE shall be made to Standard Drawings CSB-2-56, Sheets 2 & 3 of 6, revised 2-2-63, FSB-1-62 dated 1-15-63, AR-1-57 revised 4-2-62, and to Supplemental Specification S-101 dated 7-12-62.
- 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.
- EXCAVATION QUANTITY includes the removal of fill material required for construction of the abutments.
- PILES shall be driven with a hammer of not less than 11,000 ft. lbs. per blow to firm contact with rock. If the length of penetration is approximately equal to the depth of rock according to the Bridge Foundation Investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. S-18.05 is not less than the following value for a pile hammer of the indicated energy rating:

  For the Abutment piles;
  42 tons per pile using an 11,000 ft. lb. hammer.
  38 tons per pile using a 15,000 ft. lb. hammer.

  For the Pier Piles;
  50 tons per pile using an 11,000 ft. lb. hammer
  45 tons per pile using a 15,000 ft. lb. hammer

  If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 35 Tons per pile for the abutment piles and 35 Tons per pile for the pier piles.
- WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may at the option of the contractor, be made in the shop.
- SHOP PAINTING STEEL: The surface preparation of all steel, requiring shop painting as per the Plans and Specifications, shall be accomplished by blast cleaning or power tool cleaning, except as noted in the Specifications regarding the use of Chromate Primers.
- CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.
- SURFACE FINISH OF CONCRETE: The requirements of Sec. S-1.22, Rubbed Finish, shall apply to the following exposed concrete surfaces:
  a. The entire superstructure except the top and bottom surfaces of safety curbs and roadways.
  b. The entire surface of piers and abutments except bridge seats, backwalls and the face of spill-through abutments between outside beams.
- SHEET LEAD shall conform to the requirements of ASTM Designation B29 without restriction to the Common Desilverized type.
- MACHINE FINISH: At the Contractor's option, the concrete deck may be finished by the use of a finishing machine.

TABLE OF DIMENSIONS

LOCATION	A	B	C	D	E
North Side Left Str.	12'-7 15/16"	14 Panels @ 15'-8" = 219'-4"	10 5/16"	31 Spaces @ 7'-10" = 242'-10"	244'-7 7/8"
South Side Left Str.	12'-8 9/16"	14 Panels @ 15'-9 1/8" = 221'-1"	10 5/16"	31 Spaces @ 7'-10 3/4" = 244'-9 1/4"	246'-6 7/8"
North Side Right Str.	12'-9 1/4"	14 Panels @ 15'-9 1/8" = 221'-1"	11 1/8"	31 Spaces @ 7'-10 3/4" = 244'-9 1/4"	246'-7 1/2"
South Side Right Str.	12'-9"	14 Panels @ 15'-8" = 219'-4"	1'-0"	31 Spaces @ 7'-10" = 242'-10"	244'-10"

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

GENERAL PLAN & ELEVATION
AND GENERAL NOTES
BRIDGE NO. TRU-I-80-0941 L/R
OVER
U.S. RT. 62 & S.R. 7
TRUMBULL COUNTY STA. 512 + 45.07 TO STA. 514+94.62

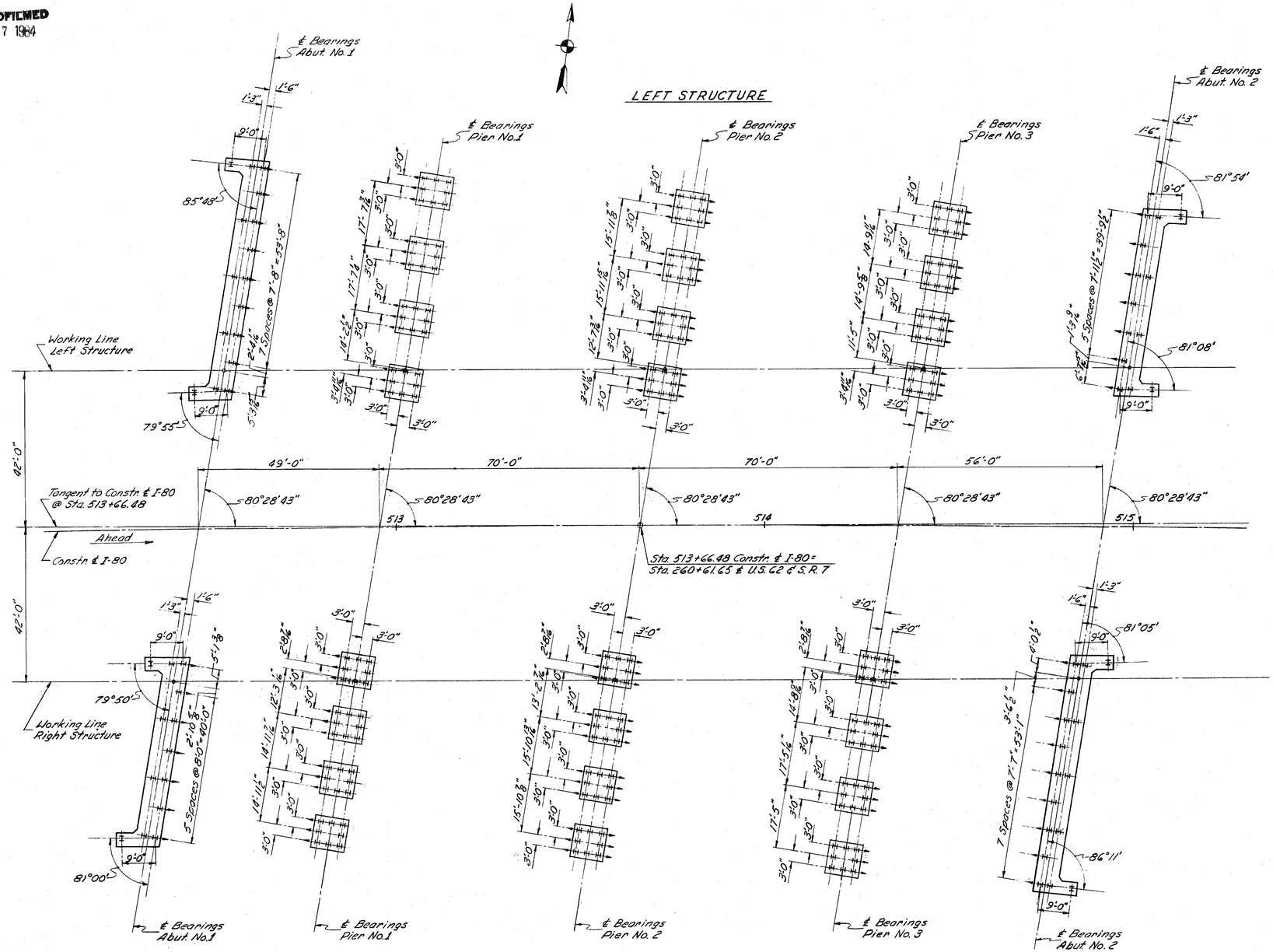
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
GMB	J.H.		GMB	JB	11-8-62	

MICROFILMED
DEC 7 1984

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5 (9)245	

321
401

TRUMBULL COUNTY
TRU-I-80 (8.90)



PLAN SHOWING PILE LAYOUT

NOTES

I Indicates Vertical Piles

I Indicates Battered Piles. Batter 1:4 in direction indicated by arrow.

All Piles to be 10BP42.

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

PILE LOCATION PLAN
BRIDGE NO. TRU-I-80-0941 L/R
OVER
U.S. RT. 62 & SR-7
TRUMBULL COUNTY. STA. 512+45.07 TO STA. 514+94.62

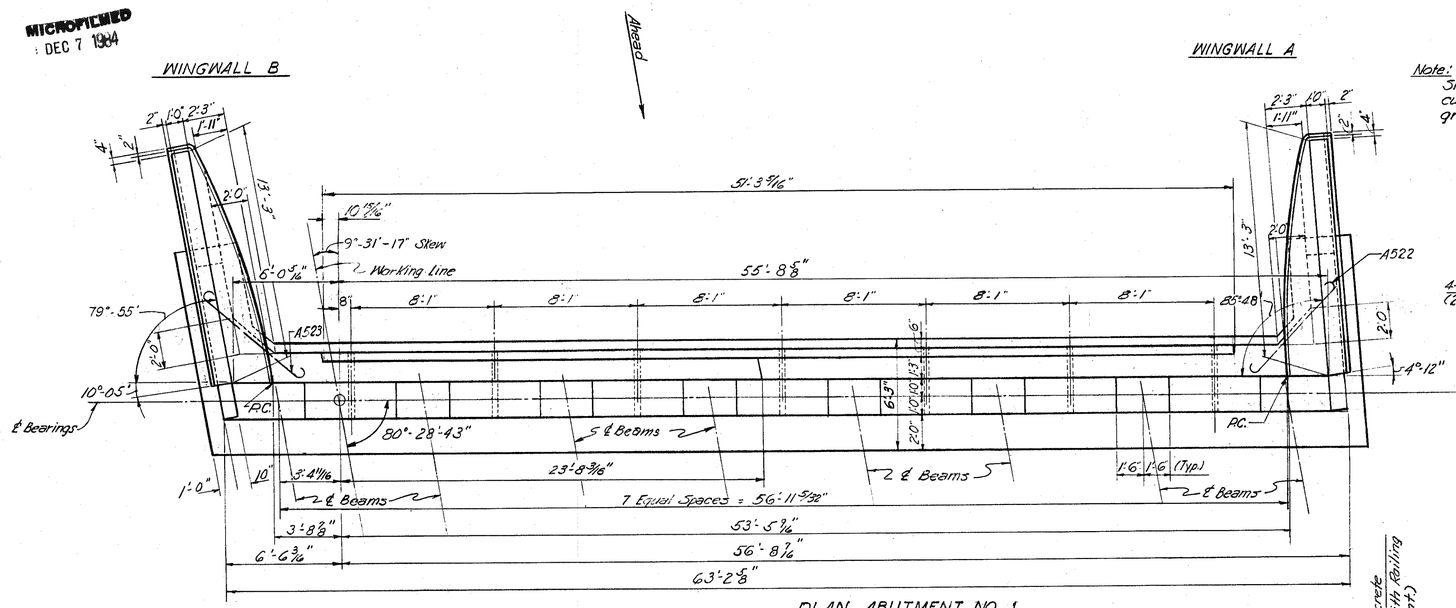
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
G.B.	F.M		G.M.B		11-8-62	

MICROFILMED
DEC 7 1984

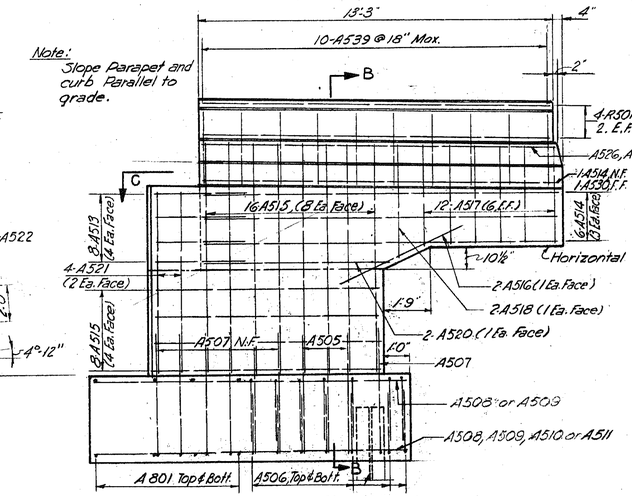
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

322
401

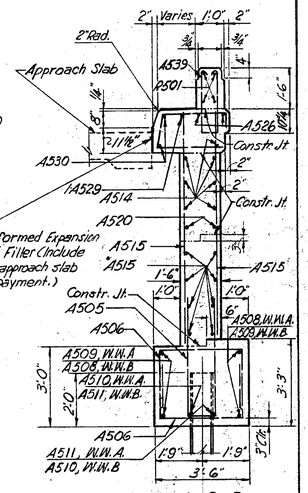
TRUMBULL COUNTY
TRU-I-80 (8.90)



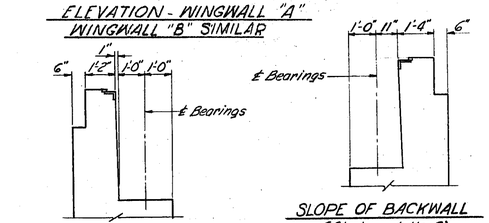
PLAN ABUTMENT NO. 1



ELEVATION - WINGWALL "A"
WINGWALL "B" SIMILAR

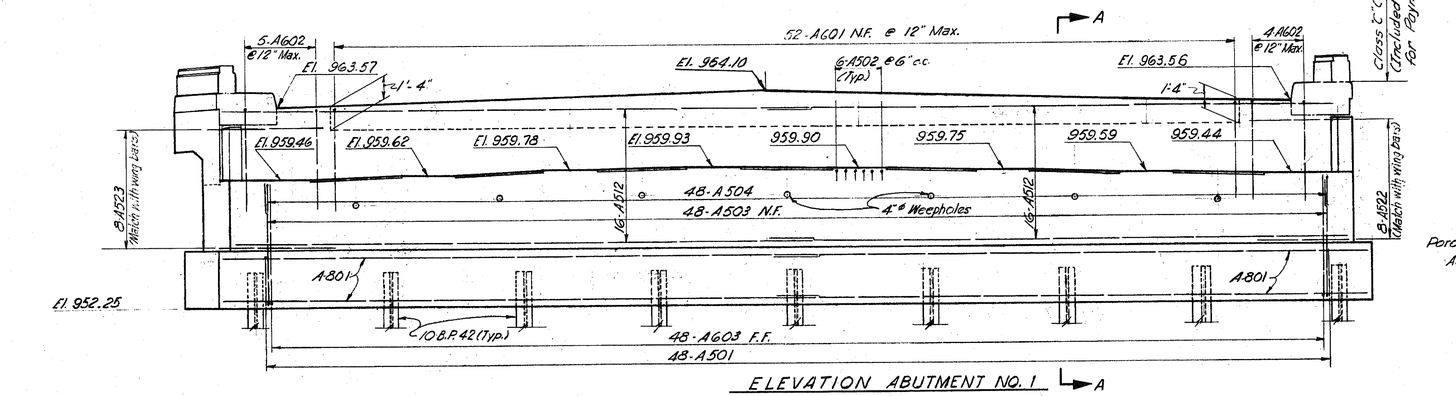


SECTION B-B



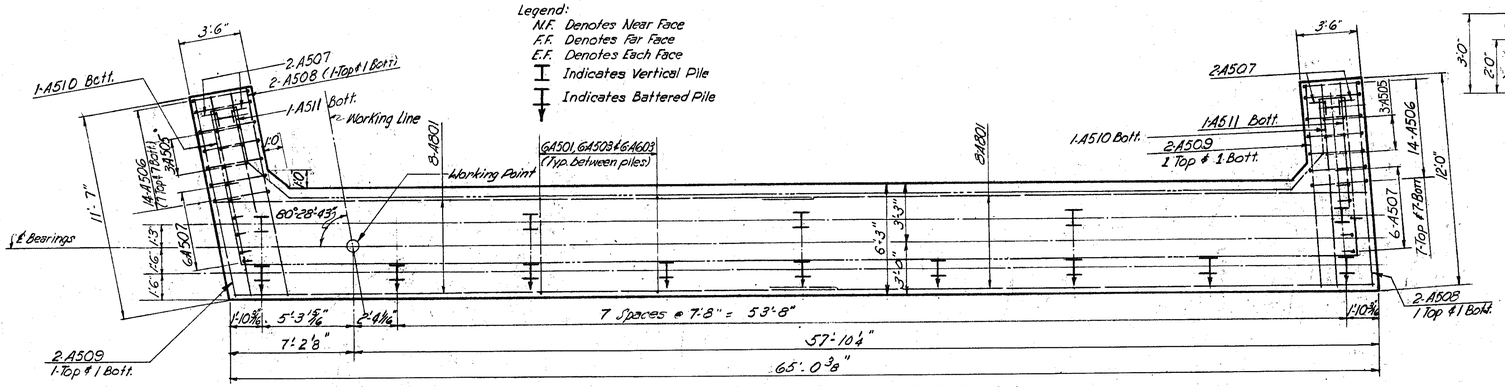
SLOPE OF BACKWALL
(Abutment No. 1)

SLOPE OF BACKWALL
(Abutment No. 2)

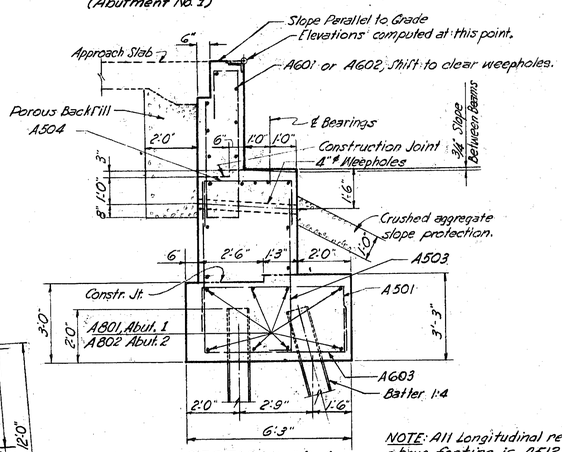


ELEVATION ABUTMENT NO. 1

Legend:
N.F. Denotes Near Face
F.F. Denotes Far Face
E.F. Denotes Each Face
Indicates Vertical Pile
Indicates Battered Pile



FOOTING PLAN ABUTMENT NO. 1

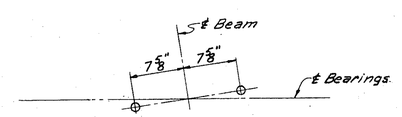


SECTION A-A

NOTE: All Longitudinal reinforcement above footing is A512 Abut. 1 or A524 Abut. 2.

NOTES

- PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments after which excavation shall be made for the abutments that are set in the fill area and the piles driven.
- POROUS BACKFILL, 2 Ft. thick, shall extend upward to the approach slab and outward to the wingwalls. Excavation therefor, in excess of that required for construction of the abutments, shall be considered as paid for in bid price per cu. yd. paid for porous backfill.
- BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes.
- Concrete above bridge seat construction joint shall not be placed until after the steelwork is erected.
- All abutment concrete shall be Class "E".
- Concrete and reinforcing steel above parapet construction joint included with railing for payment.
- Railing not shown. See "General Plan & Elevation" for railing post spacing.



ANCHOR BOLT LAYOUT

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

ABUTMENTS
LEFT STRUCTURE
BRIDGE NO. TRU-I-80-0941 L/R
OVER
U.S. RT. 62 & SR-7
TRUMBULL COUNTY STA. 512+45.07 TO STA. 514+94.62

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
L.E.	J.H		G.MB	Ø	11-8-62	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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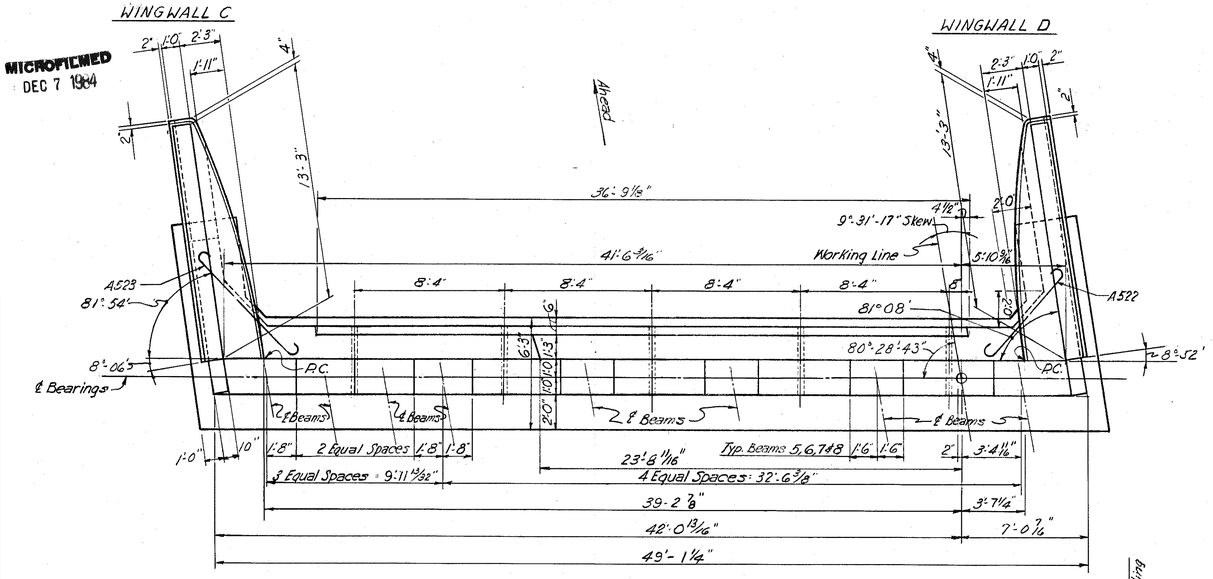
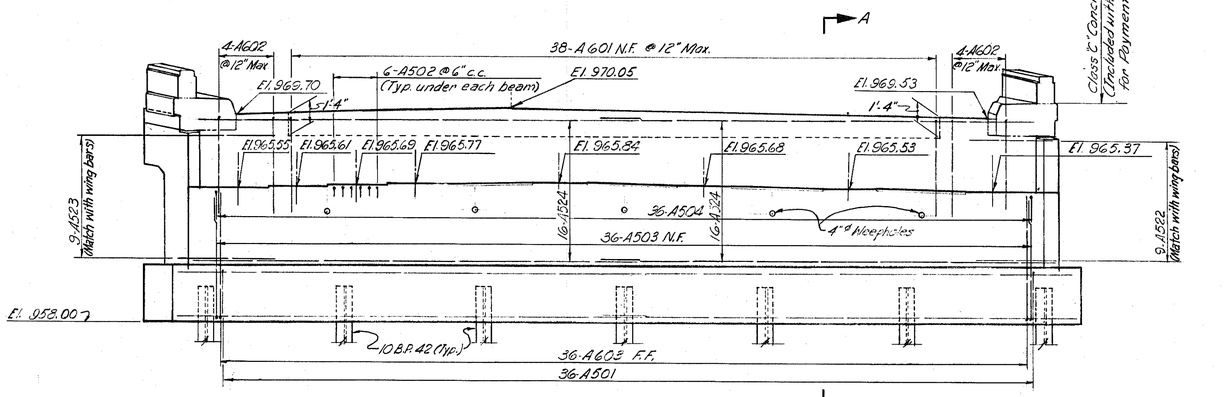
DEC 7 1984

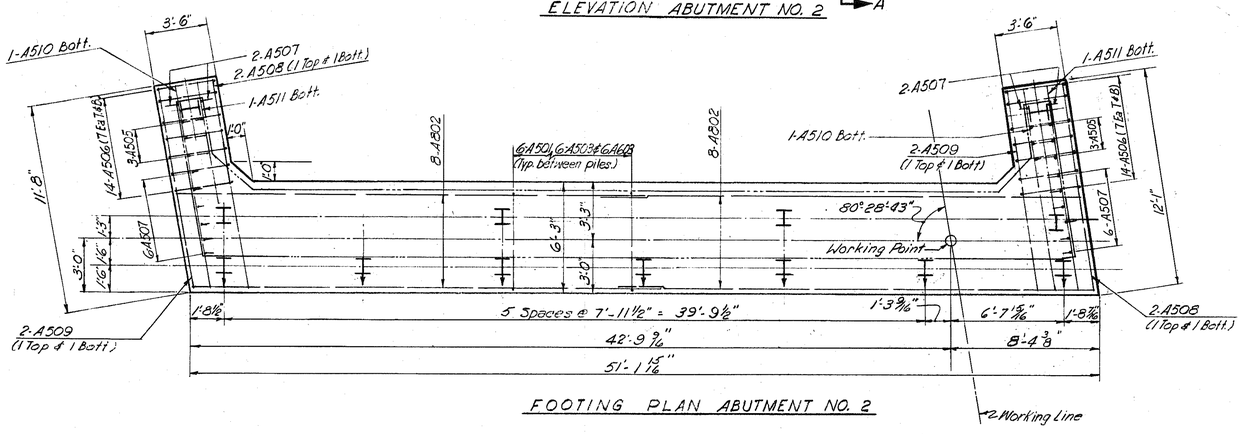
TRUMBULL COUNTY
TRU-I-80 (809)



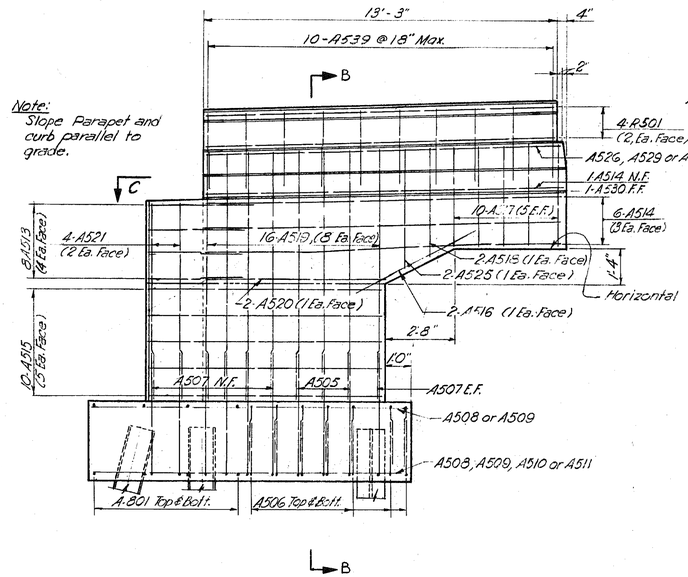
PLAN ABUTMENT NO. 2



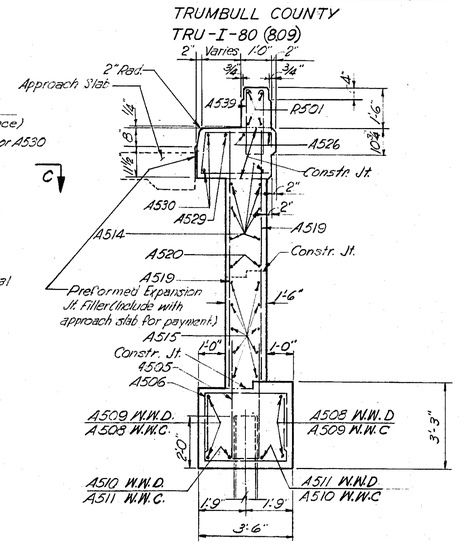
ELEVATION ABUTMENT NO. 2



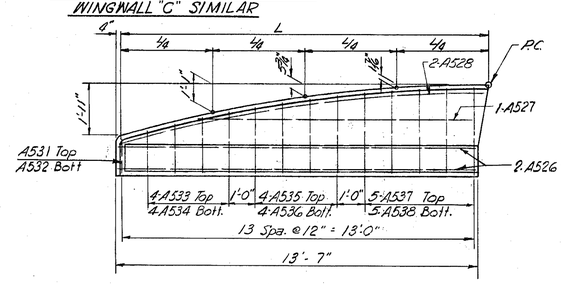
FOOTING PLAN ABUTMENT NO. 2



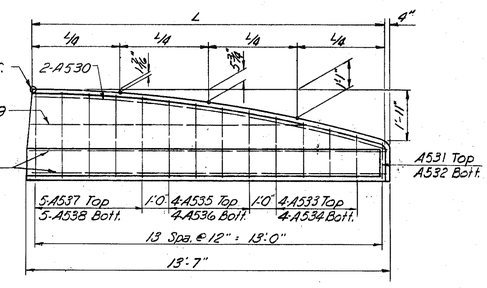
ELEVATION - WINGWALL "D"
WINGWALL "C" SIMILAR



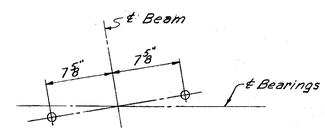
SECTION B-B



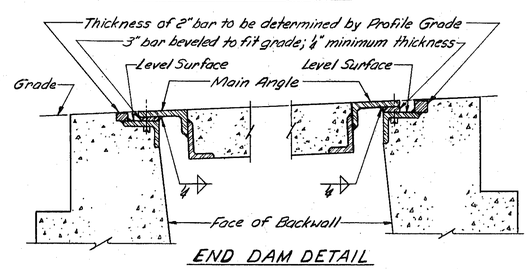
SECTION C-C
WINGWALLS B & C



SECTION C-C
WINGWALLS A & D



ANCHOR BOLT LAYOUT
ABUTMENT NO. 1 & NO. 2



END DAM DETAIL

NOTES

- For notes see sheet 321
- For Section A-A see sheet 321

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

ABUTMENTS
LEFT STRUCTURE
BRIDGE NO. TRU-I-80-0941 L/R
OVER
U.S. RT. 62 & SR-7
TRUMBULL COUNTY STA. 512+45.07 TO STA. 514+94.62

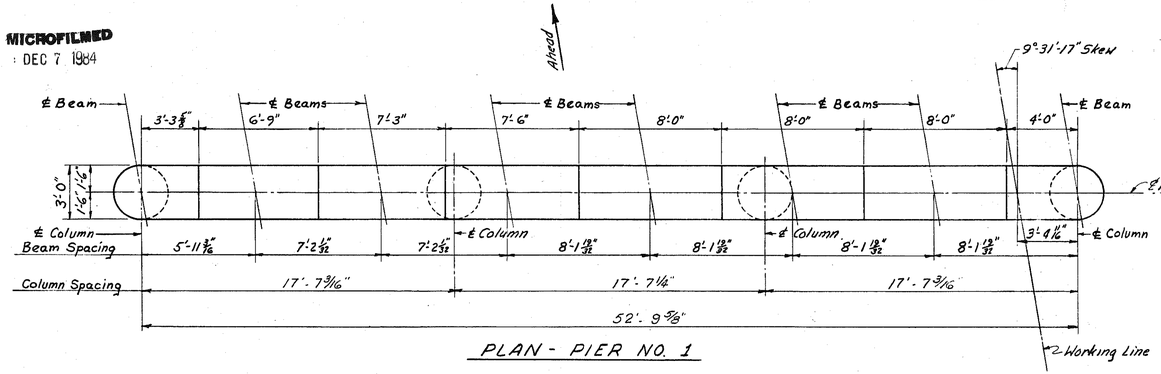
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
L.E.	J.H.		GMB		11-8-82	

MICROFILMED
DEC 7 1984

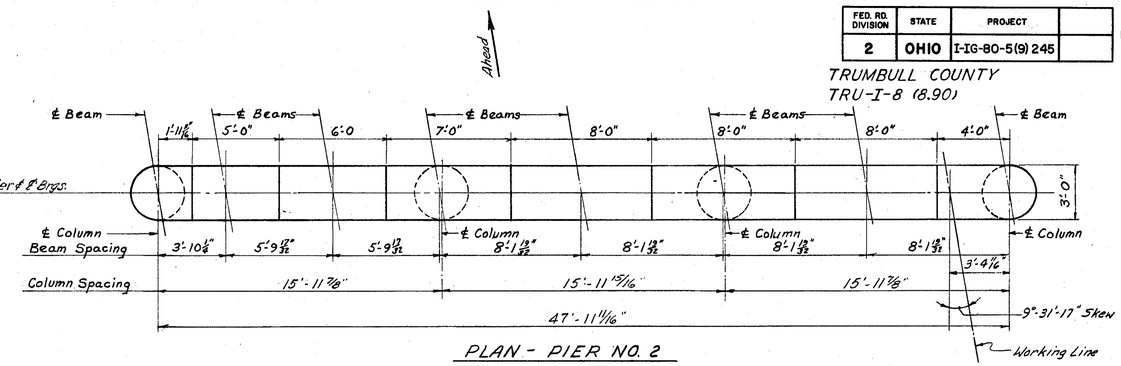
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9) 245	

324
401

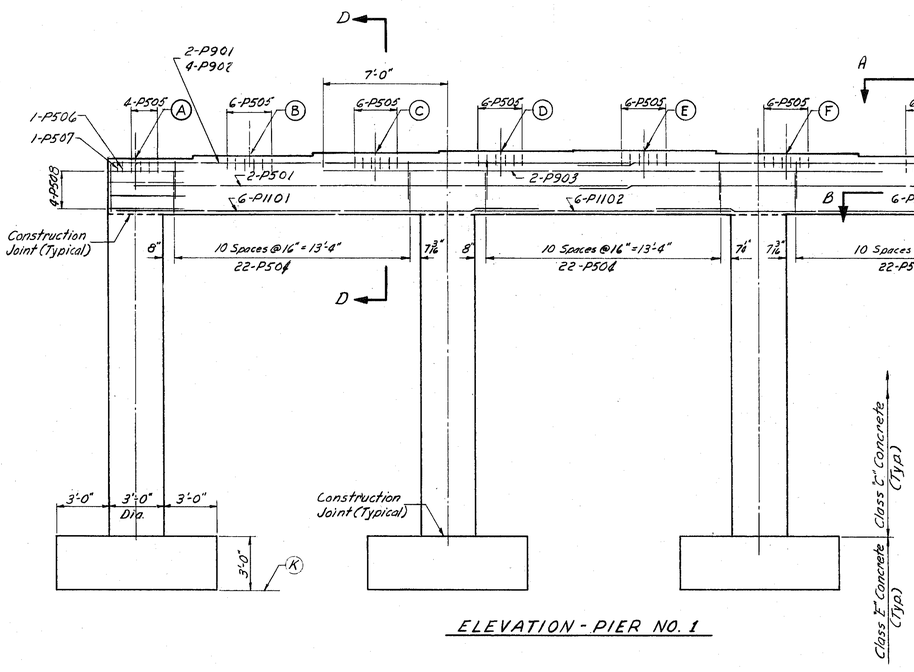
TRUMBULL COUNTY
TRU-I-8 (8.90)



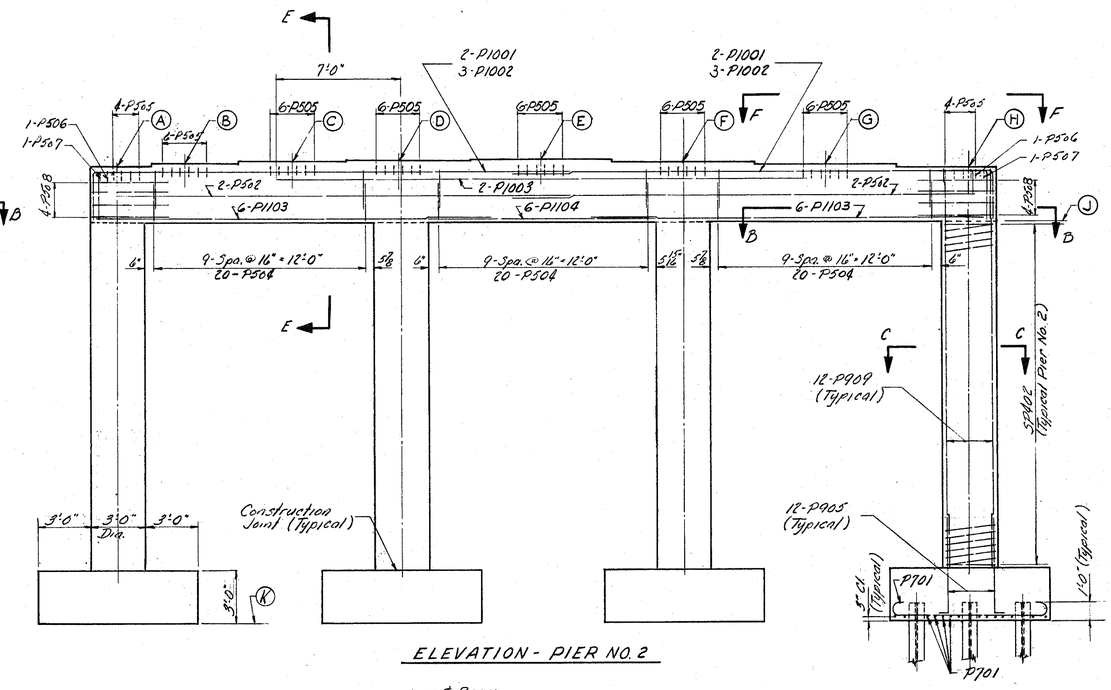
PLAN - PIER NO. 1



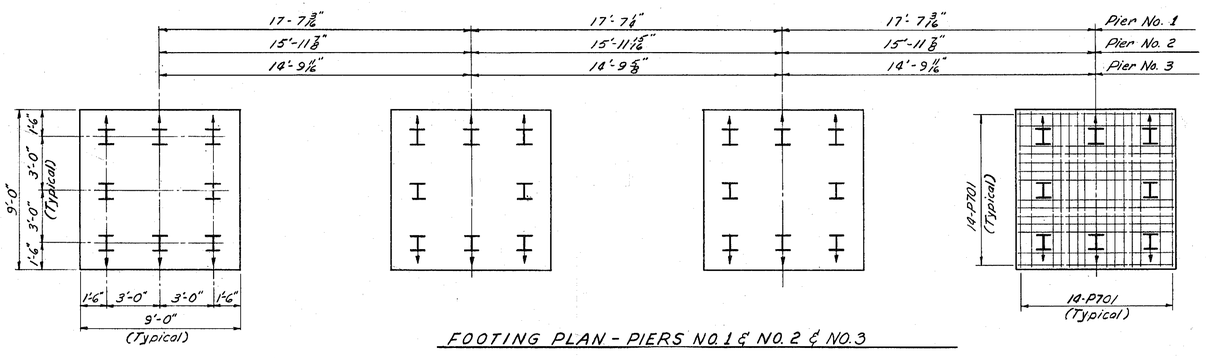
PLAN - PIER NO. 2



ELEVATION - PIER NO. 1

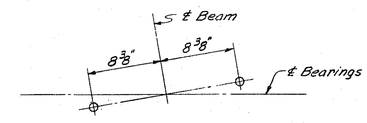


ELEVATION - PIER NO. 2

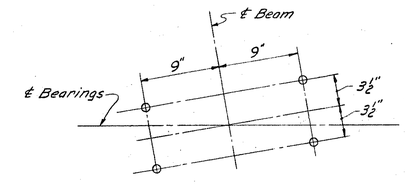


FOOTING PLAN - PIERS NO. 1 & NO. 2 & NO. 3

Denotes Battered Piles. Batter 1:9 in the direction indicated for Pier No. 2 only. For direction of battered piles in pier No. 1 and pier No. 3 see Pile Layout sheet



ANCHOR BOLT LAYOUT
PIER NO. 1



ANCHOR BOLT LAYOUT
PIER NO. 2

NOTES

- For Table of Elevations, see sheet 325
- For Sections A-A, B-B, C-C, D-D, E-E, and F-F see sheet 325
- Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes.

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

PIERS
LEFT STRUCTURE
BRIDGE NO TRU-I-80-0941 L/R
OVER
U.S. R.T. 62 & S.R.-7
TRUMBULL COUNTY STA 512+45.07 TO STA 514+94.62

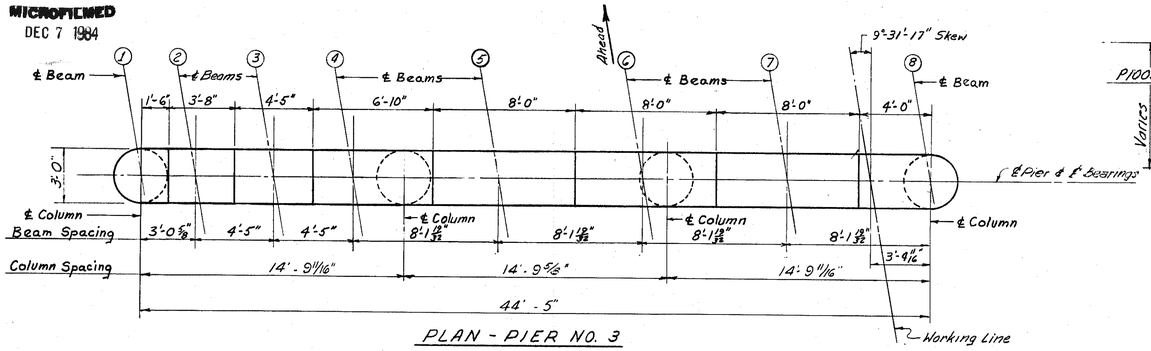
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
G.M.B.	J.H.E. R.L.K.		G.M.B.		11-8-62	

MICROFILMED
DEC 7 1984

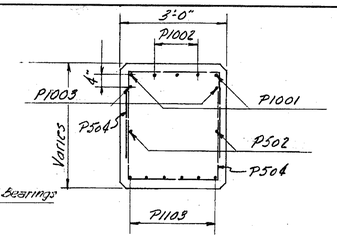
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

325
401

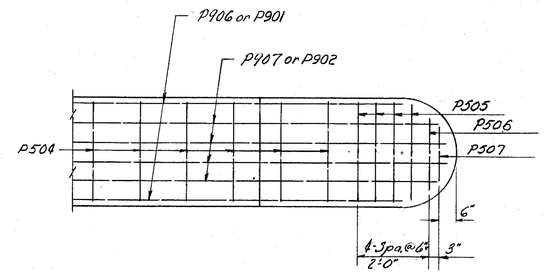
TRUMBULL COUNTY
TRU-I-8 (8.90)



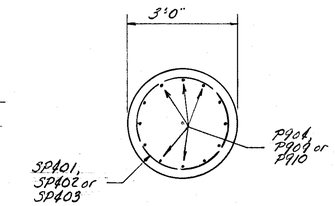
PLAN - PIER NO. 3



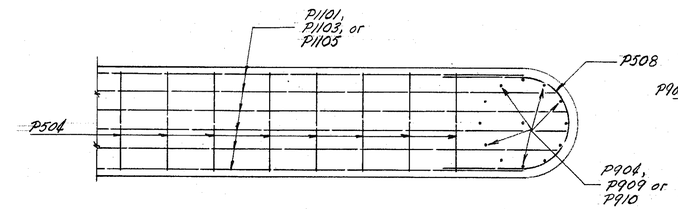
SECTION E-E



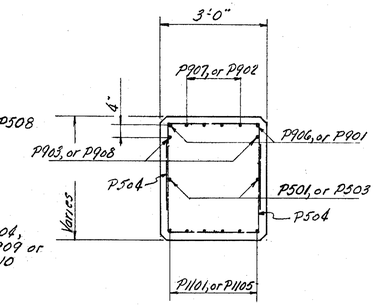
SECTION A-A



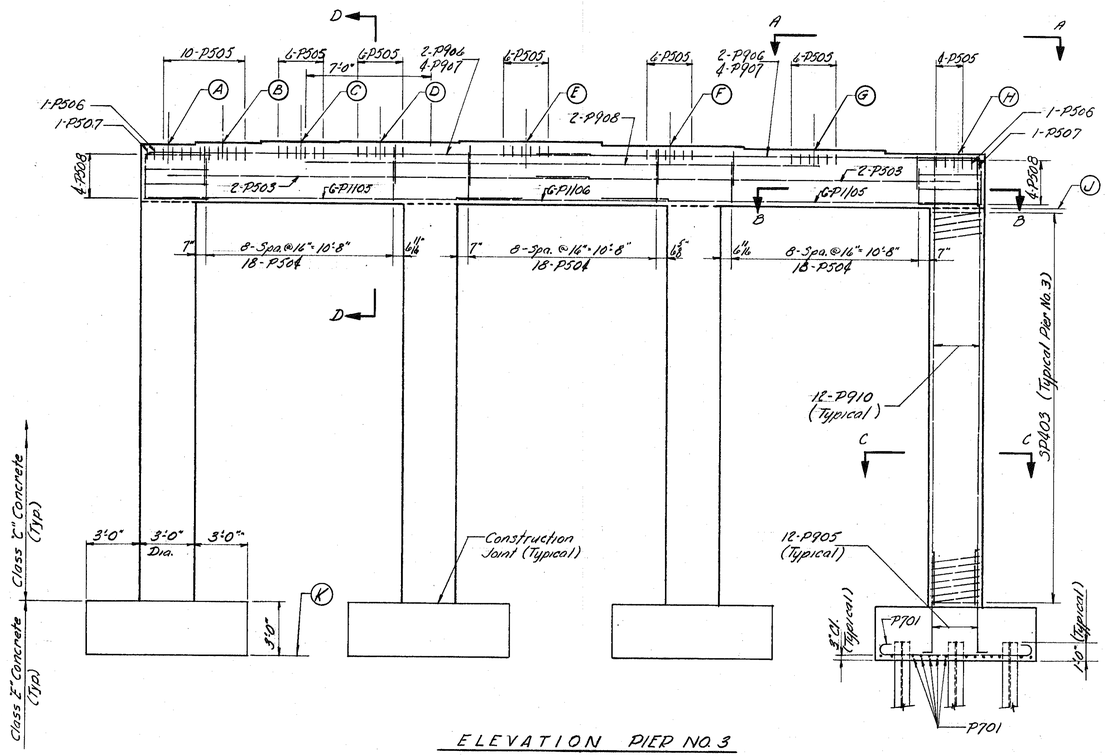
SECTION C-C



SECTION B-B



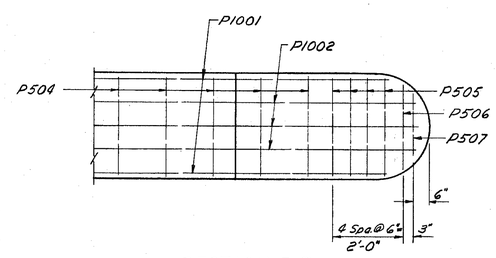
SECTION D-D



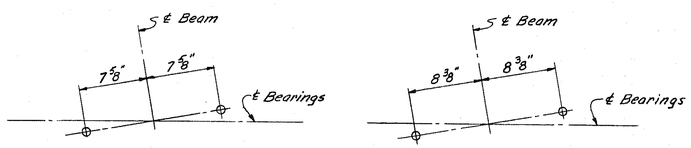
ELEVATION PIER NO. 3

LOCATION		A	B	C	D	E	F	G	H	J	K
		TABLE OF ELEVATIONS									
LEFT STRUCTURE	PIER No. 1	960.63	960.75	960.87	961.03	961.07	960.91	960.75	960.60	957.60	936.50
	PIER No. 2	962.12	962.19	962.31	962.43	962.46	962.30	962.14	961.99	958.99	936.50
	PIER No. 3	964.20	964.24	964.34	964.39	964.43	964.28	964.12	963.97	960.97	933.50

NOTE:
Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bolt holes.
For Footing Plan for Pier No. 3 see sheet 324.



SECTION F-F



BEAMS 1,2,&3 BEAMS 4,5,6,7,&8

ANCHOR BOLT LAYOUTS - PIER NO. 3

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

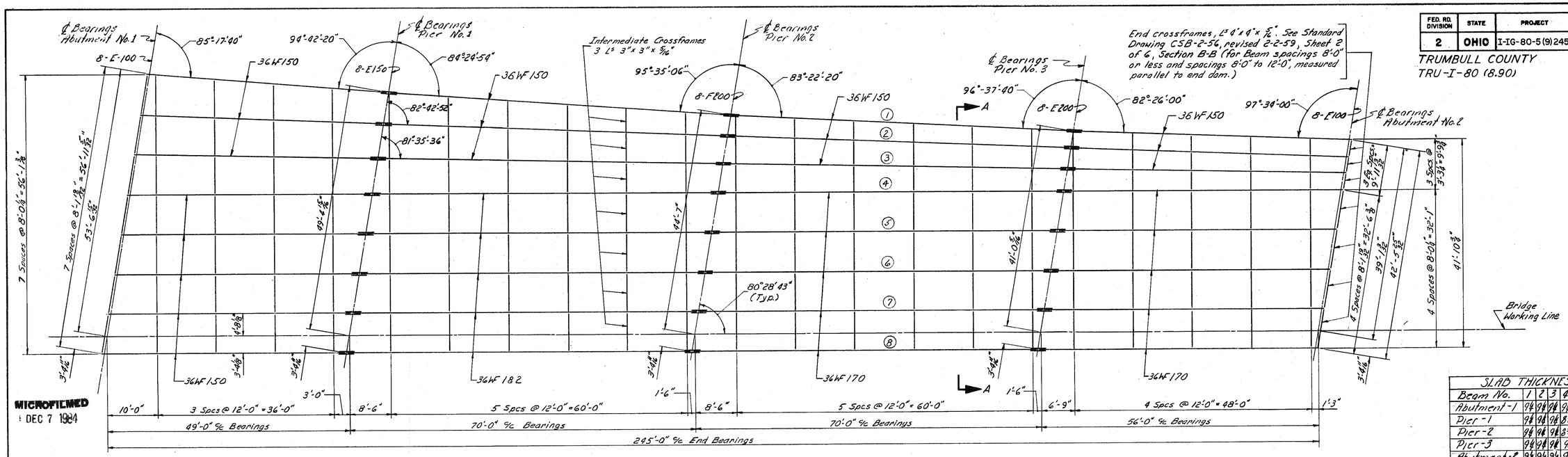
PIERS
LEFT STRUCTURE
BRIDGE NO TRU-I-80-0941 L/R
OVER
U.S. RT. 62 & SR-7
TRUMBULL COUNTY STA.512+45.07 TO STA.514+94.62

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
G.M.B.	J.H.& R.L.K.		G.M.B.	B	11-8-62	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

326
401

TRUMBULL COUNTY
TRU-I-80 (8.90)



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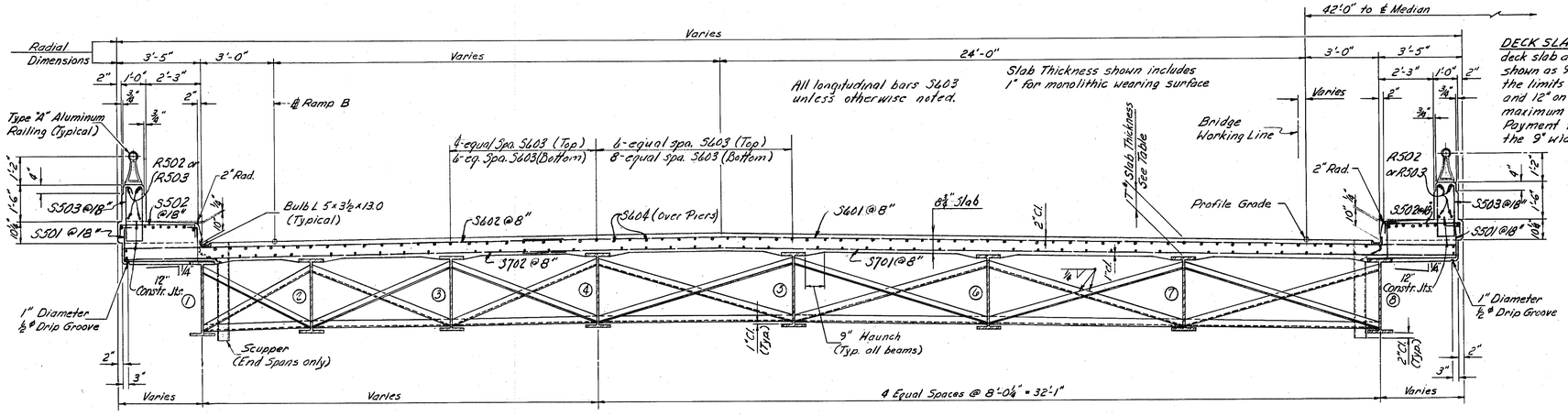
DEC 7 1984

STEEL FRAMING PLAN

SLAB THICKNESS - T*								
Beam No.	1	2	3	4	5	6	7	8
Abutment-1	9 1/2	9 1/2	9 1/2	9 1/2	9 1/2	9 1/2	9 1/2	9 1/2
Pier-1	9 1/2	9 1/2	9 1/2	8 3/4	8 3/4	8 3/4	8 3/4	8 3/4
Pier-2	9 1/2	9 1/2	9 1/2	8 3/4	8 3/4	8 3/4	8 3/4	8 3/4
Pier-3	9 1/2	9 1/2	9 1/2	9	9	9	9	9
Abutment-2	9 1/2	9 1/2	9 1/2	9	9	9	9	9

*This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.



TRANSVERSE SECTION A-A

DECK SLAB HAUNCH: The haunch in the superelevated deck slab adjacent to the top of steel beams, which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12" on the low side and between 9" and 12" on the high side. Except on the high side, the maximum slope shall not exceed 3 inches per foot. Payment for deck slab concrete shall be based on the 9" width.

NOTE: 1/2" Expansion Joint in Parapet. See "General Plan & Elevation" for spacing.

NOTES:
- Refer to Standard Drawing CSB-2-56, Sheet 2 of 6, for details of End Dam.
- Refer to Standard Drawing CSB-2-56, Sheet 3 of 6, for gutter, scupper, and curb plate details.
- Refer to Standard Drawing FSB-1-62, for details of Bearings.
- Concrete and reinforcing steel above parapet construction joint included with railing for payment.
- Concrete shall be Class "C".
- Joints in end dam: A welded butt-joint in the end dam, at the center line of roadway, will be required for that portion of the end dam attached to the superstructure. The portion attached to the backwall shall be placed in segments which shall be closely butted with one of the joints at the apex of the crown, but shall not be welded.

Cambering of beams is required in accordance with the following table.

DEFLECTION AND CAMBER	BEAM-1				BEAMS 2 & 3				BEAMS 4,5,6,7				BEAM-8			
	SPAN NO.				SPAN NO.				SPAN NO.				SPAN NO.			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Deflection due to weight of steel	0	1/16"	1/16"	0	0	1/16"	1/16"	1/16"	0	1/16"	1/16"	1/16"	0	1/16"	1/16"	1/16"
Deflection due to remaining dead load	3/16"	7/16"	13/16"	15/16"	5/8"	13/16"	15/16"	1"	11/16"	13/16"	13/16"	15/16"	5/8"	13/16"	13/16"	13/16"
Convexity required for super elevation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum of deflection and convexity	3/16"	1/2"	7/16"	15/16"	5/8"	7/16"	13/8"	5/16"	11/16"	7/16"	7/16"	1"	5/8"	9/16"	7/16"	11/16"
Camber required	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NOTE: Where no camber is specified, beams shall be fabricated with any natural camber or bowed side up.

BEAM SPLICE WELDING PROCEDURE FOR BEAMS NO. 1, 2, & 3

1. Raise end of beam at Pier No. 2 (7/16").
2. Butt-weld the beam flanges and web at Pier No. 1 using the following sequence: make one pass on each flange, then two on the web; repeat using one pass at each location, until welds are completed.
3. Weld top and bottom flange moment plates at Pier No. 1.
4. Lower end of beam at Pier No. 2.
5. Make splices at Piers No. 2 & 3 in the same manner, raising the ends of the beams 1 3/8" at Pier No. 3 and 7/8" at Abutment No. 2.

BEAM SPLICE WELDING PROCEDURE FOR BEAMS NO. 4, 5, 6, 7, & 8

1. Raise end of beam at Pier No. 2 (1 11/16").
2. Butt-weld the beam flanges and web at Pier No. 1 using the following sequence: make one pass on each flange, then two on the web; repeat using one pass at each location, until welds are completed.
3. Weld top and bottom flange moment plates at Pier No. 1.
4. Lower end of beam at Pier No. 2.
5. Make splices at Piers No. 2 & 3 in the same manner, raising the ends of the beams 1 1/2" at Pier No. 3 and 3/4" at Abutment No. 2.

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

SUPERSTRUCTURE
LEFT STRUCTURE
BRIDGE NO TRU-I-80-0941 L/R
OVER
U.S. RT 62 & S.R.-7
TRUMBULL COUNTY STA. 512+45.07 TO STA. 514+94.62

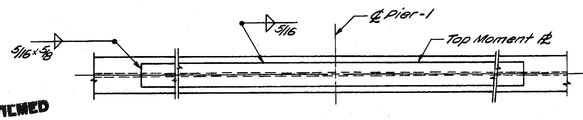
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
L.E.	J.M.G. R.L.K.		G.M.B.		11-8-62	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

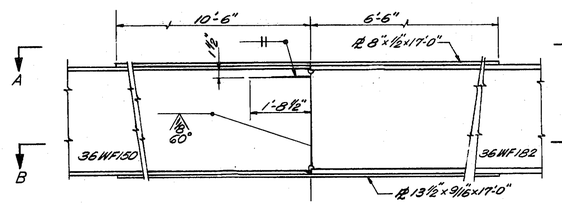
327
401

TRUMBULL COUNTY
TRU-I-80 (8.90)

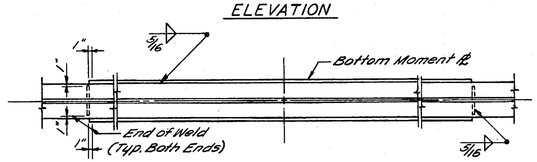
MICROFILMED
DEC 7 1984



VIEW A-A

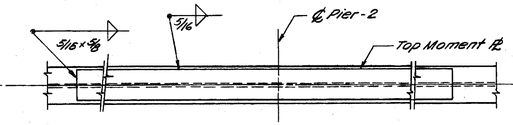


ELEVATION

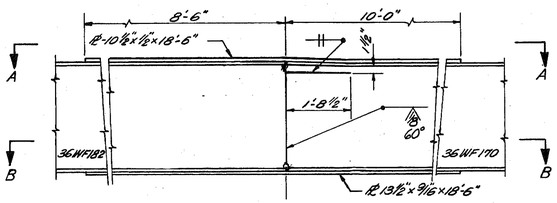


SECTION B-B

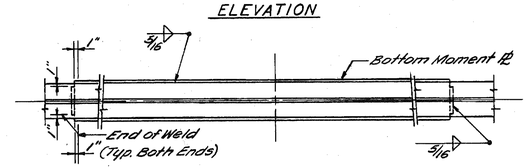
BEAM SPLICE
(Beams 4, 5, 6, 7 & 8 @ Pier-1)



VIEW A-A

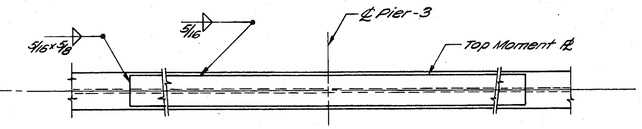


ELEVATION

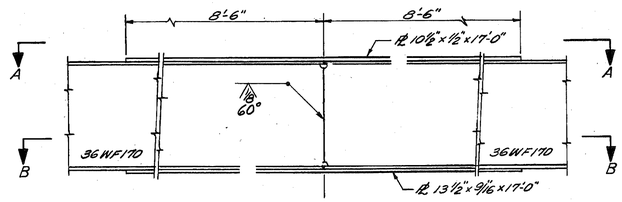


SECTION B-B

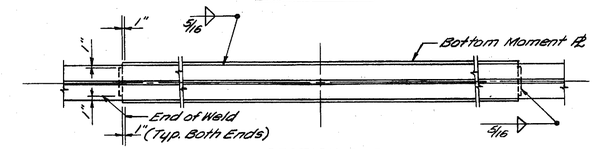
BEAM SPLICE
(Beams 4, 5, 6, 7 & 8 @ Pier-2)



VIEW A-A

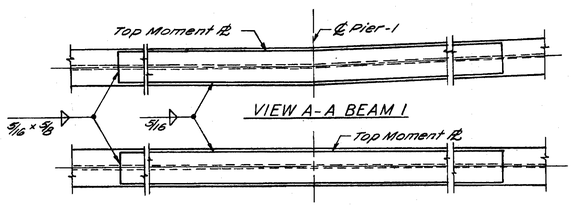


ELEVATION



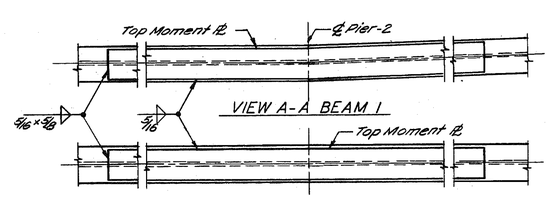
SECTION B-B

BEAM SPLICE
(Beams 4, 5, 6, 7 & 8 @ Pier-3)



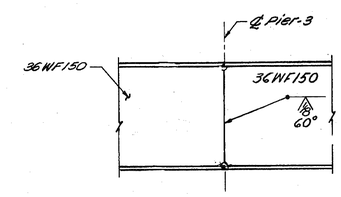
VIEW A-A BEAM 1

VIEW A-A BEAMS 2&3

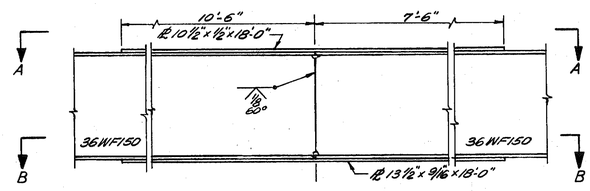


VIEW A-A BEAM 1

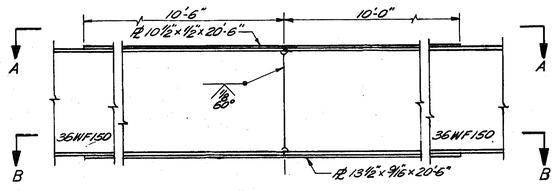
VIEW A-A BEAMS 2&3



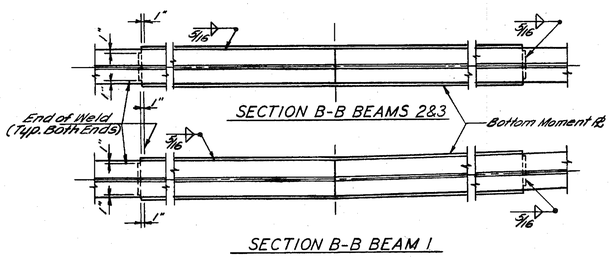
BEAM SPLICE
(Beams 1, 2 & 3 @ Pier 3 Only)



ELEVATION



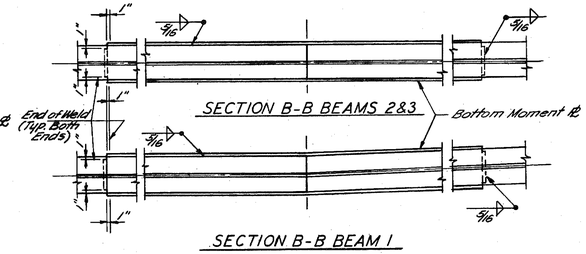
ELEVATION



SECTION B-B BEAMS 2&3

SECTION B-B BEAM 1

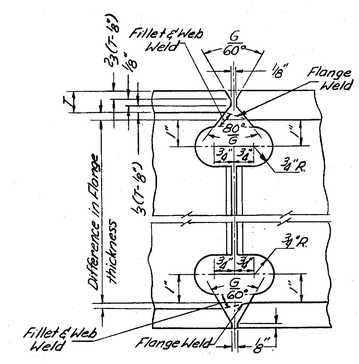
BEAM SPLICE
(Beams 1, 2 & 3 @ Pier-1)



SECTION B-B BEAMS 2&3

SECTION B-B BEAM 1

BEAM SPLICE
(Beams 1, 2 & 3 @ Pier-2)



END PREPARATION OF ROLLED BEAMS FOR FIELD WELDING

NOTE: Any roughness from burning shall be removed by grinding.

NOTES

- CONTINUOUS BEAM SPLICES: If beams having depths differing by more than ⅛" are to be spliced by butt welding, the depth of the smaller-depth beam shall be increased by splitting the web longitudinally at a distance of 1½" below the bottom of the top flange and for a distance sufficient to allow the flange to be bent up at a slope of not more than ⅜" per foot, after which the split in the web shall be completely welded with full depth penetration.
- G indicates grinding.

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

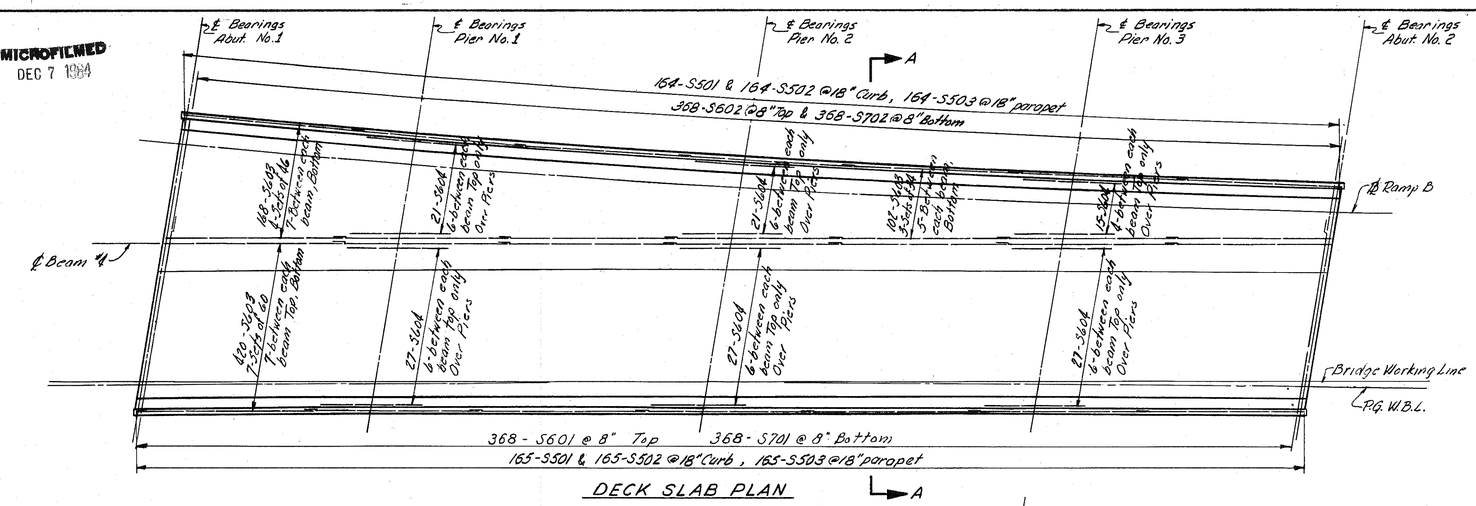
SUPERSTRUCTURE
LEFT STRUCTURE
BRIDGE NO. TRU-I-80-0941L/R
OVER
U.S. RT. 62 & SR-7
TRUMBULL COUNTY STA. 512+45.07 TO STA. 514+94.62

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
G.M.B.	R.L.K. & F.J.M.	W.G.M.	G.M.B.		11-8-62	

MICROFILMED
DEC 7 1984

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

TRUMBULL COUNTY
TRU-I-80 (8.90)



DECK SLAB PLAN

NOTE: See Sheet 7 for Transverse Section A-A

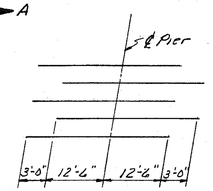
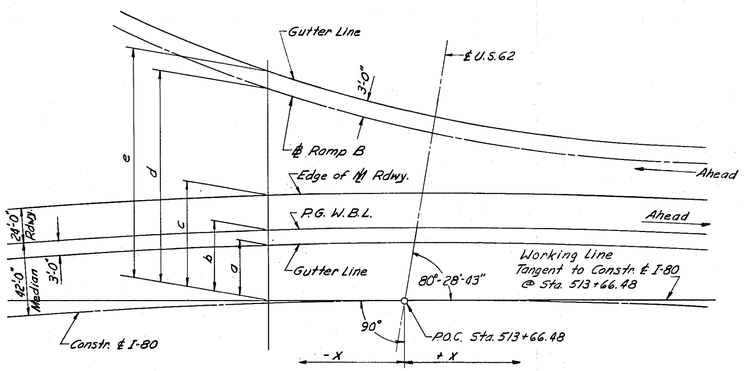


DIAGRAM SHOWING STAGGER OF S604 OVER PIERS



Dimension a = distance normal to tangent line between tangent line and gutter line.
Dimension b = distance normal to tangent line between tangent line and P.G. W.B.L.
Dimension c = distance normal to tangent line between tangent line and edge of ½ Roadway.
Dimension d = distance normal to tangent line between tangent line and ℄ Ramp B.
Dimension e = distance normal to tangent line between tangent line and gutter line.

OFFSET LOCATION PLAN

TABLE OF OFFSETS AND ELEVATIONS

X	GUTTER LINE DIM. a	GUTTER LINE ELEV.	P.G. W.B.L. DIM. b	P.G. W.B.L. ELEV.	EDGE ½ ROADWAY DIM. c	EDGE ½ ROADWAY ELEV.	RAMP B ℄ DIM. d	RAMP B ℄ ELEV.	GUTTER LINE DIM. e	GUTTER LINE ELEV.
-152	38.06	962.64	41.06	962.69	65.06	963.07	96.54	962.38	99.56	
-144	38.16	962.83	41.16	962.88	65.16	963.26	95.72	962.59	98.74	
-136	38.25	963.03	41.25	963.07	65.25	963.45	94.92	962.79	97.93	
-128	38.33	963.22	41.33	963.27	65.33	963.65	94.13	963.00	97.15	
-120	38.41	963.41	41.41	963.46	65.42	963.84	93.36	963.21	96.38	
-112	38.49	963.60	41.49	963.65	65.49	964.03	92.61	963.41	95.62	
-104	38.56	963.80	41.56	963.84	65.56	964.22	91.87	963.62	94.89	
-96	38.62	963.99	41.62	964.04	65.63	964.42	91.15	963.82	94.17	
-88	38.68	964.18	41.68	964.23	65.68	964.61	90.45	964.03	93.46	
-80	38.74	964.38	41.74	964.42	65.74	964.80	89.77	964.23	92.78	
-72	38.79	964.57	41.79	964.62	65.79	964.99	89.10	964.44	92.11	
-64	38.83	964.76	41.83	964.81	65.83	965.19	88.45	964.64	91.46	
-56	38.87	964.96	41.87	965.00	65.87	965.38	87.82	964.85	90.82	
-48	38.91	965.15	41.91	965.20	65.90	965.57	87.20	965.06	90.21	
-40	38.93	965.34	41.93	965.39	65.93	965.77	86.60	965.26	89.61	
-32	38.96	965.53	41.96	965.58	65.96	965.96	86.01	965.47	89.02	
-24	38.97	965.73	41.97	965.77	65.97	966.15	85.45	965.67	88.46	
-16	38.99	965.92	41.99	965.97	65.99	966.34	84.90	965.88	87.91	
-8	39.00	966.11	42.00	966.16	65.99	966.54	84.37	966.08	87.37	
0	39.00	966.31	42.00	966.35	66.00	966.73	83.85	966.29	86.86	

X	GUTTER LINE DIM. a	GUTTER LINE ELEV.	P.G. W.B.L. DIM. b	P.G. W.B.L. ELEV.	EDGE ½ ROADWAY DIM. c	EDGE ½ ROADWAY ELEV.	RAMP B ℄ DIM. d	RAMP B ℄ ELEV.	GUTTER LINE DIM. e	GUTTER LINE ELEV.
0	39.00	966.31	42.00	966.35	66.00	966.73	83.85	966.29	86.86	
8	39.00	966.50	42.00	966.55	65.99	966.92	83.35	966.49	86.36	
16	38.99	966.69	41.99	966.74	65.99	967.11	82.87	966.70	85.87	
24	38.97	966.88	41.97	966.93	65.97	967.31	82.40	966.90	85.41	
32	38.96	967.08	41.96	967.12	65.96	967.50	81.96	967.11	84.96	
40	38.93	967.27	41.93	967.32	65.93	967.69	81.52		84.53	
48	38.91	967.46	41.91	967.51	65.90	967.88	81.11		84.11	
56	38.87	967.66	41.87	967.70	65.87	968.08	80.71		83.71	
64	38.83	967.85	41.83	967.90	65.83	968.27	80.33		83.33	
72	38.79	968.04	41.79	968.09	65.79	968.46	79.97		82.97	
80	38.74	968.24	41.74	968.28	65.74	968.65	79.62		82.62	
88	38.68	968.43	41.68	968.48	65.68	968.85	79.29		82.29	
96	38.62	968.62	41.62	968.67	65.63	969.04	78.97		81.98	
104	38.56	968.81	41.56	968.86	65.56	969.23	78.68		81.68	
112	38.49	969.01	41.49	969.05	65.49	969.42	78.40		81.40	
120	38.41	969.20	41.41	969.25	65.42	969.62	78.13		81.13	
128	38.33	969.39	41.33	969.44	65.33	969.81	77.89		80.89	
136	38.25	969.59	41.25	969.63	65.25	970.00	77.66		80.66	
144	38.16	969.78	41.16	969.83	65.16	970.19	77.44		80.44	
152	38.06	969.97	41.06	970.02	65.06	970.39	77.25		80.25	

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

SUPERSTRUCTURE
LEFT STRUCTURE
BRIDGE NO TRU-I-80-0941 L/R
OVER
U S RT 62 & SR-7
TRUMBULL COUNTY STA.512+45.07 TO STA.514+94.62

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
G.M.B.	F.J.M. & R.L.K.		G.M.B.	B	11-8-62	

MICROFILMED
DEC 7 1984

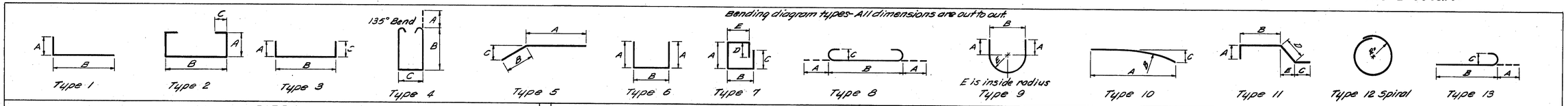
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

329
401

TRUMBULL COUNTY
TRU-I-80(8.90)

REINFORCING STEEL BAR SCHEDULE

Bending diagram types- All dimensions are out to out.



PIERS

MARK	PIER 1	PIER 2	PIER 3	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
P1101	12			12	24'-0"	Str.						1,530
P1102	6			6	14'-8"	Str.						468
P1103		12		12	22'-6"	Str.						1,435
P1104		6		6	13'-0"	Str.						414
P1105			12	12	21'-3"	Str.						1,355
P1106			6	6	11'-9"	Str.						375
P1001		4		4	27'-10"	1	2'-7"	25'-7"				479
P1002		6		6	29'-3"	1	2'-7"	27'-0"				755
P1003		2		2	30'-0"	Str.						258
P901	4			4	30'-2"	1	2'-7"	27'-10"				410
P902	8			8	31'-7"	1	2'-7"	29'-3"				859
P903	2			2	31'-7"	Str.						215
P904	48			48	20'-9"	Str.						3,386
P905	48	48	48	144	6'-7"	1	1'-3"	5'-7"				3,223
P906			4	4	26'-0"	1	2'-7"	23'-8"				354
P907			8	8	27'-5"	1	2'-7"	25'-2"				746
P908			2	2	28'-10"	Str.						196
P909		48		48	22'-2"	Str.						3,618
P910			48	48	25'-2"	Str.						4,107
P1101	112	112	112	336	10'-4"	8	10"	8'-8"	7"			7,097
P501	4			4	27'-3"	Str.						114
P502		4		4	24'-10"	Str.						104
P503			4	4	23'-0"	Str.						96
P504	66	60	54	180	7'-5"	6	2'-6"	2'-8"				1,392
P505	44	44	44	132	3'-8"	6	7 3/8"	2'-8"				505
P506	2	2	2	6	3'-2"	6	7 3/8"	2'-2"				20
P507	2	2	2	6	2'-9"	6	7 3/8"	1'-9"				17
P508	8	8	8	24	8'-2"	9	2'-3"	2'-5"			1'-3 3/8"	204

SPIRAL BARS

MARK	PIER 1	PIER 2	PIER 3	TOTAL	LENGTH	PITCH	No. of Turns	CORE DIA.	WEIGHT
SP401	4			4	18'-1 1/8"	4 1/2"	51	32"	1,341
SP402		4		4	19'-5 7/8"	4 1/2"	55	32"	1,445
SP403			4	4	25'-5 7/8"	4 1/2"	71	32"	1,868
								TOTAL WEIGHT	38,386

SPIRAL REINFORCING BARS

The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "No. of Turns" shown is the Length divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number.
Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item S-4. 1 1/2 closed coils shall be provided at the ends of each spiral unit.
Four Steel Channel, Tee or Angle Spacers, weighing approximately 0.68 lb. per Lin. Ft. of Spacer, shall be provided for each Spiral Unit.
They shall be equally spaced along the periphery of the Coil. The number of pounds of these spacers, based on 0.68 lb. per Lin. Ft., will be paid for as reinforcing steel and is included in the tabulated quantities of Spiral Bars.

REPLACEMENT BARS

MARK	No.	LENGTH	TYPE	WEIGHT
RE1101	1	7'-7"	Str.	
RE1001	1	7'-3"	Str.	
RE 901	1	6'-10"	Str.	
RE 801	1	6'-6"	Str.	
RE 701	3	6'-3"	Str.	
RE 601	5	5'-11"	Str.	
RE 501	1	5'-7"	Str.	
RE 401	1	5'-3"	12	

ABUTMENTS

MARK	ABUT. 1	ABUT. 2	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A801	16		16	34'-1"	Str.						1,456
A802		16	16	26'-8"	Str.						1,139
A601	52	38	90	15'-3"	7	6'-6"	1'-5"	4'-2"	3'-1"	11"	2,061
A602	9	8	17	14'-1"	6	6'-6"	1'-5"				360
A603	48	36	84	14'-2"	3	6'-10"	5'-5"	2'-3"			1,787
A501	48	36	84	9'-2"	6	2'-0"	5'-5"				803
A502	48	48	96	3'-0"	6	7 3/8"	2'-0"				300
A503	48	36	84	7'-5"	1	7 3/8"	6'-11"				650
A504	48	36	84	7'-8"	6	2'-3"	3'-5"				672
A505	6	6	12	10'-7"	6	4'-10"	1'-2"				132
A506	28	28	56	7'-1"	6	2'-1"	3'-2"				414
A507	16	16	32	5'-4"	1	7 3/8"	4'-10"				178
A508	4	4	8	11'-8"	Str.						97
A509	4	4	8	11'-3"	Str.						94
A510	2	2	4	11'-5"	Str.						48
A511	2	2	4	6'-11"	Str.						29
A512	32		32	32'-4"	Str.						1,079
A513	16	16	32	3'-6"	Str.						117
A514	14	14	28	13'-3"	Str.						387
A515	48	20	68	8'-6"	Str.						603
A516	4	4	8	5'-4"	Str.						44
A517	24	20	44	3'-7"	Str.						164
A518	4	4	8	4'-1"	Str.						34
A519		32	32	9'-2"	Str.						306
A520	4	4	8	6'-6"	Str.						54
A521	8	8	16	7'-0"	Str.						117
A522	8	9	17	7'-2"	8	7"	6'-0"	5			127
A523	8	9	17	8'-2"	8	7"	7'-0"	5			145
A524		32	32	25'-3"	Str.						843
A525		4	4	4'-7"	Str.						19
A526	4	4	8	13'-1"	Str.						109
A527	1	1	2	9'-7"	Str.						20
A528	2	2	4	13'-7"	10	13'-4"	50'-0"	2'-4"			57
A529	1	1	2	9'-4"	Str.						19
A530	2	2	4	13'-0"	10	12'-9"	45'-0"	2'-4"			54
A531	2	2	4	2'-6"	11	7 3/8"	1'-3"	0	10"	3"	10
A532	2	2	4	1'-5"	1	7 3/8"	11"				6
A533	8	8	16	2'-11" to 3'-8" (1)	11	7 3/8"	1'-3" to 2'-0" (1)	0	1'-3"	3"	55
A534	8	8	16	1'-10" to 2'-9" (1)	1	7 3/8"	1'-4" to 2'-1" (1)				37
A535	8	8	16	3'-10" to 4'-4" (2)	11	7 3/8"	2'-2" to 2'-8" (2)	0	1'-3"	3"	68
A536	8	8	16	2'-9" to 3'-3" (2)	1	7 3/8"	2'-3" to 2'-9" (2)				50
A537	10	10	20	4'-3" to 4'-5" (3)	11	7 3/8"	2'-7" to 2'-9" (3)	0	1'-3"	3"	90
A538	10	10	20	3'-2" to 3'-4" (3)	1	7 3/8"	2'-8" to 2'-10" (3)				68
A539	20	20	40	5'-7"	4	5"	2'-2"	8"			233
R501	8	8	16	12'-11"	Str.	Included with Railing for Payment.					
										TOTAL WEIGHT	15,135

(1) 4 each vary in increments of 3"
(2) 4 each vary in increments of 1"
(3) 4 each vary in increments of 1 1/2"

SUPERSTRUCTURE

MARK	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
S7101	368	39'-6"	Str.						29,712
S7102	368	13'-0" to 26'-9" (1)	Str.						14,950
S601	368	39'-6"	Str.						21,833
S602	368	13'-0" to 26'-9" (1)	Str.						10,986
S603	690	36'-9"	Str.						38,087
S604	138	28'-0"	Str.						5,804
S501	329	5'-11"	2	1'-3 5/8"	2'-7"	7 5/8"			2,030
S502	329	3'-7"	6	7 5/8"	2'-7"				1,230
S503	329	5'-7"	4	5"	2'-2"	8"			1,916
R502	16	12'-3"	Str.	Included with Railing for Payment					—
R503	112	15'-4"	Str.						—
								TOTAL WEIGHT	126,548

(1) 23 each vary in increments of 1" (16 groups)

ESTIMATED QUANTITIES (Left Bridge)

ITEM	TOTAL	UNIT	DESCRIPTION	SUPERSTR.	ABUTS.	PIERS	GENERAL	
E-2	615	Cu.Yds.	Unclassified Excavation		220	395		
S-1	437	Cu.Yds.	Class "C" Concrete, Superstructure	437				
S-1	118	Cu.Yds.	Class "C" Concrete, Pier Caps and Columns			118		
S-1	118	Cu.Yds.	Class "E" Concrete, Abutments above Footing		118			
S-1	200	Cu.Yds.	Class "E" Concrete, Footings		92	108		
S-4	180,069	Lbs.	Reinforcing Steel	126,548	15,135	38,386		
S-7	386,290	Lbs.	Structural Steel	386,290				
S-8	386,290	Lbs.	Field Painting of Structural Steel	386,290				
S-14	544.23	Lin.Ft.	Railing (Aluminum Rail & Supports, Concrete Parapet)	491.23	53.00			
S-16	Lump	Sum	First Test Pile				Lump	
S-18	3,160	Lin.Ft.	Steel Piles 10BP42		1,080	2,080		
S-29	54	Cu.Yds.	Porous Backfill		54			
S-29	13	Each	Scuppers, including supports	13				
S-101	437	Each	Water-reducing, set-retarding Admixture	437				
T-10	690	Sq.Yds.	Crushed Aggregate Slope Protection				690	

See sht. 337 for Quantites of TRU-80-0941R

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 A801 is a No.8 size bar and P1101 is a No.11 size bar.

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

REINFORCING STEEL LIST &
ESTIMATED QUANTITIES-LEFT STRUCTURE
BRIDGE NO. TRU -80-0941 L/R
OVER
U.S. R.T. 62 & SR-7
TRUMBULL COUNTY STA. 512+45.07 TO STA. 514+94.62

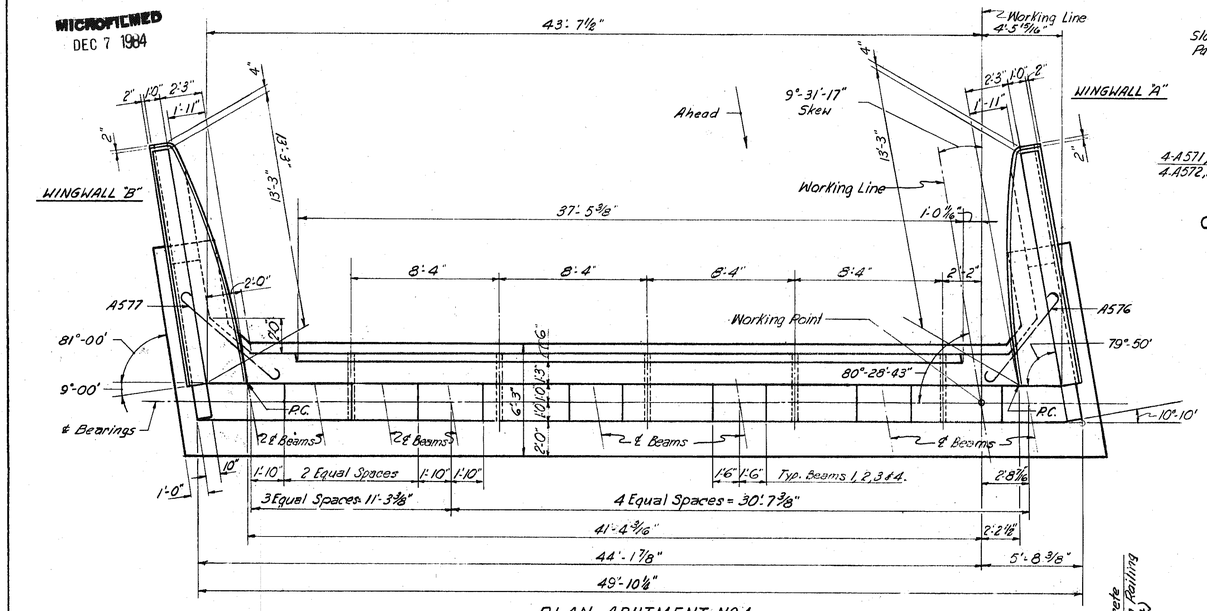
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
	G.P.	GC	G.M.B.	R	11-8-62	

MICROFILMED
DEC 7 1984

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9) 245	

330
401

TRUMBULL COUNTY
TRU-I-80 (890)



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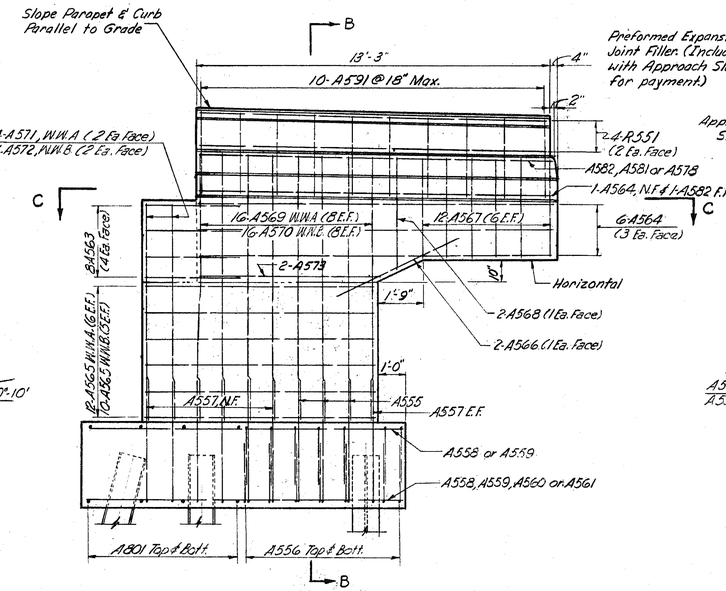
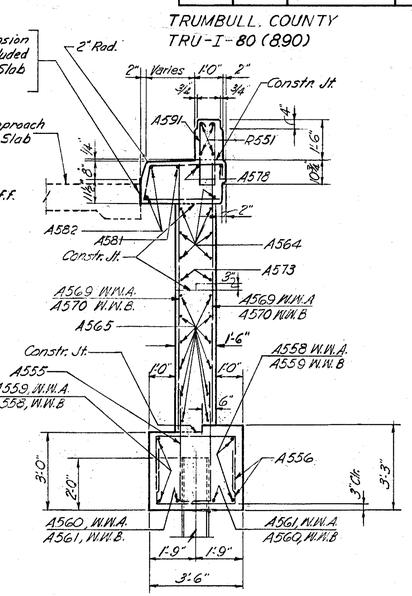
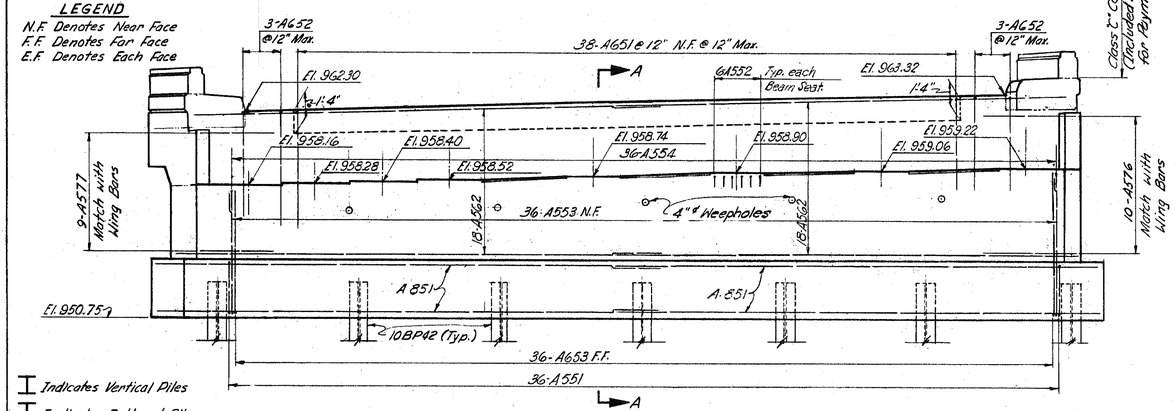


ELEVATION WINGWALL "A"
WINGWALL "B" SIMILAR



SECTION B-B



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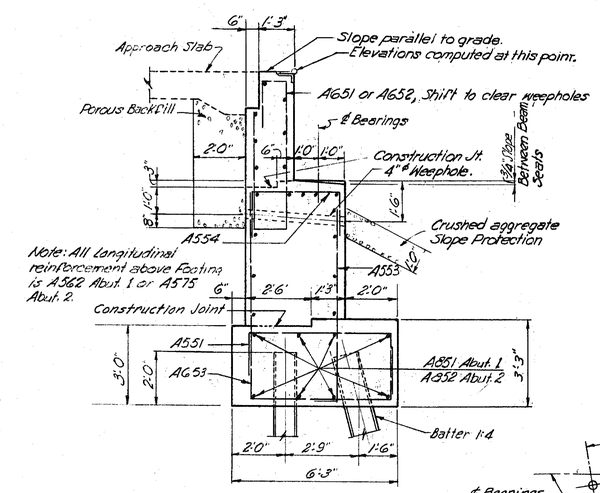
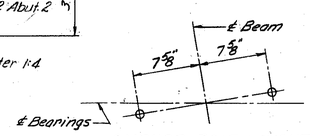
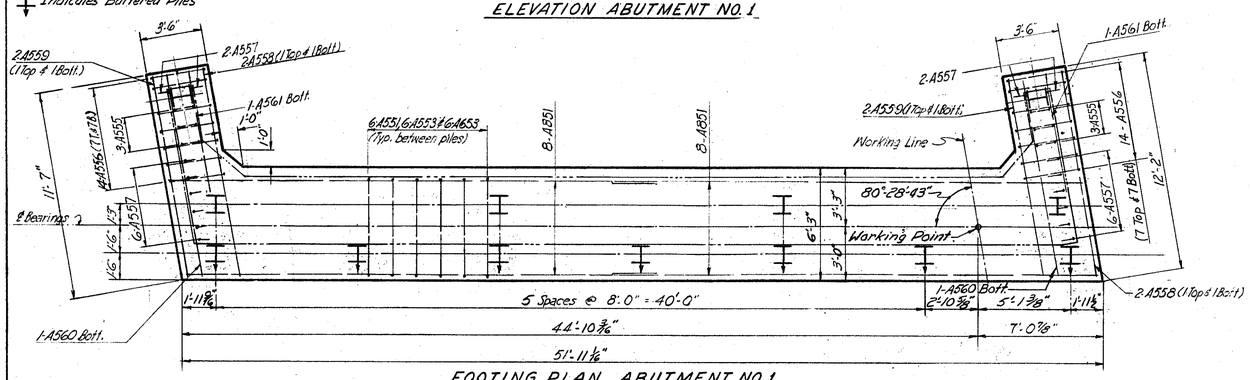


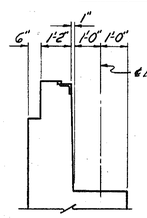
SECTION A-A



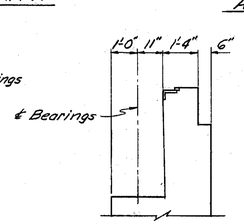
ANCHOR BOLT LAYOUT



FOOTING PLAN ABUTMENT NO. 1



SLOPE OF BACKWALL
(Abutment No. 1)



SLOPE OF BACKWALL
(Abutment No. 2)

NOTES

- PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments after which excavation shall be made for the abutments that are set in the fill area and the piles driven.
- POROUS BACKFILL, 2 ft thick, shall extend upward to the approach slab and outward to the wingwalls. Excavation therefor, in excess of that required for construction of the abutments, shall be considered as paid for in bid price per cu. yd. paid for porous backfill.
- BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes.
- Concrete above bridge seat construction joint shall not be placed until after the steelwork is erected.
- All abutment concrete shall be Class "E".
- Concrete and reinforcing steel above parapet construction joint included with railing for payment.
- Railing not shown. See "General Plan & Elevation" for railing post spacing.

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

ABUTMENTS
RIGHT STRUCTURE
BRIDGE NO TRU-I-80-0941 L/R
OVER
U S RT 62 & S R-7
TRUMBULL COUNTY STA.512+45.07 TO STA.514+94.62

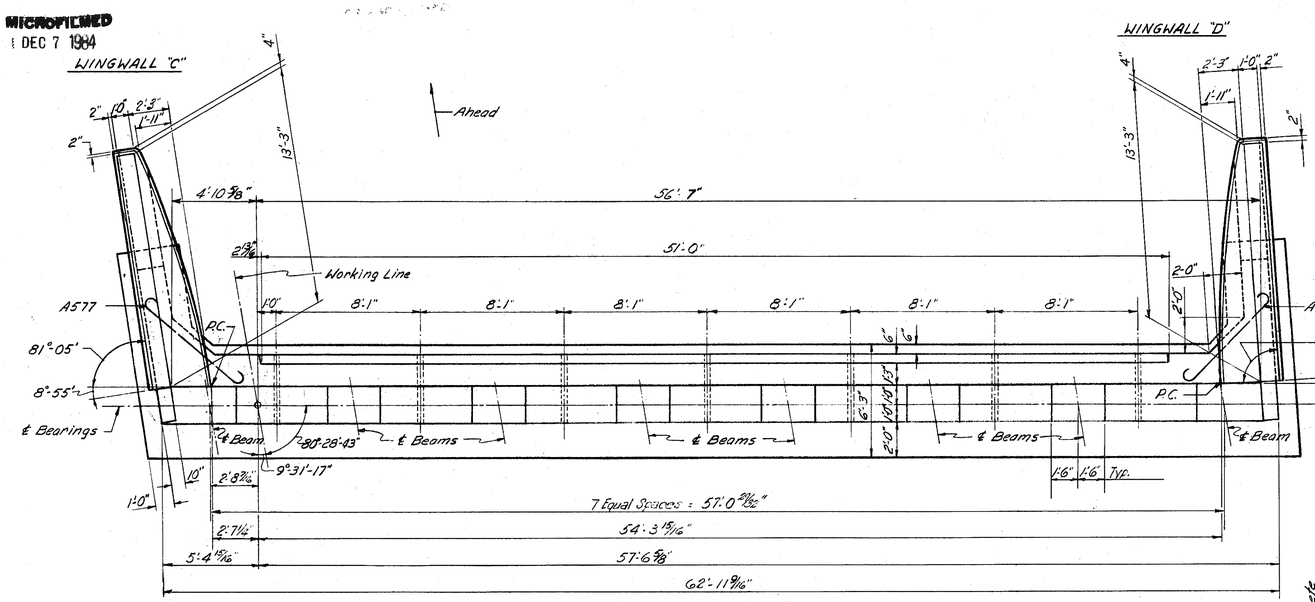
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
L.E.	J.H.		G.M.B.		11-8-62	

MICROFILMED
DEC 7 1984

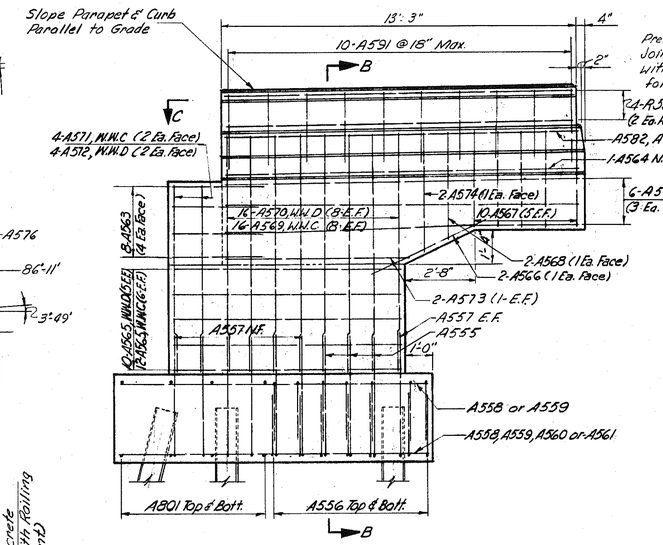
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5 (9) 245	

331
401

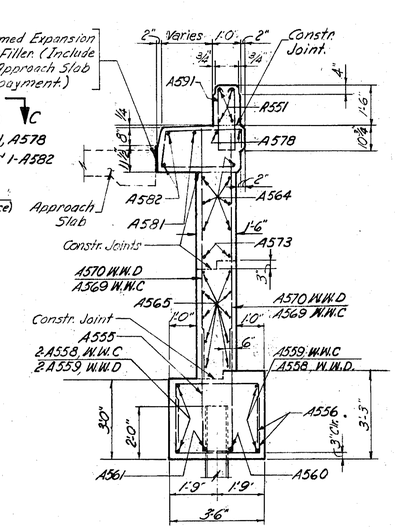
TRUMBULL COUNTY
TRU-I-80 (8.90)



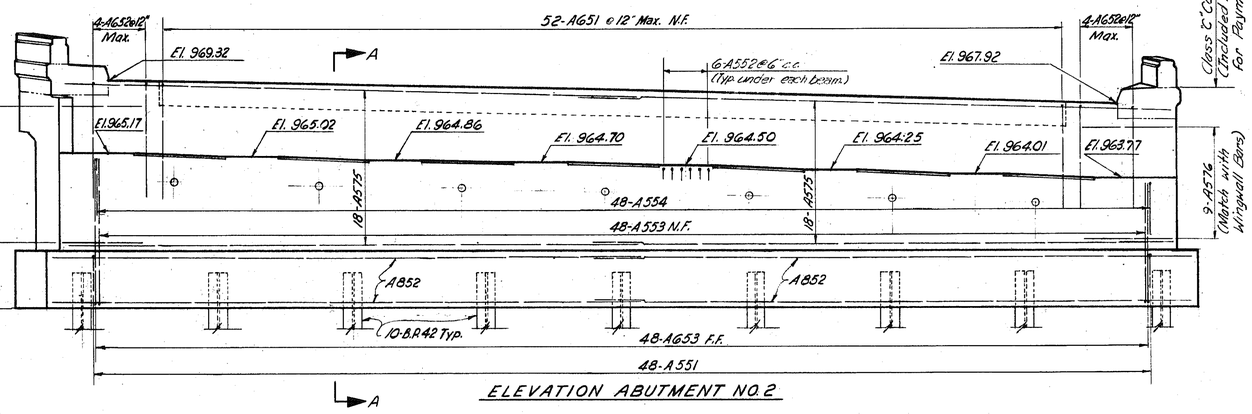
PLAN ABUTMENT NO. 2



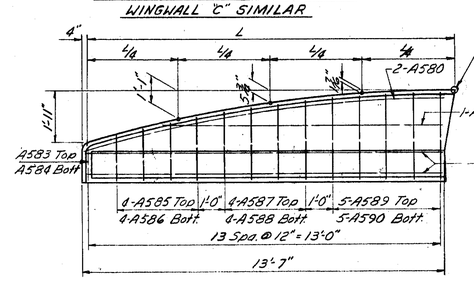
ELEVATION - WINGWALL "D"
WINGWALL "C" SIMILAR



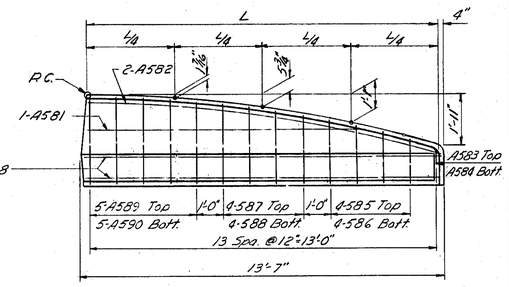
SECTION B-B



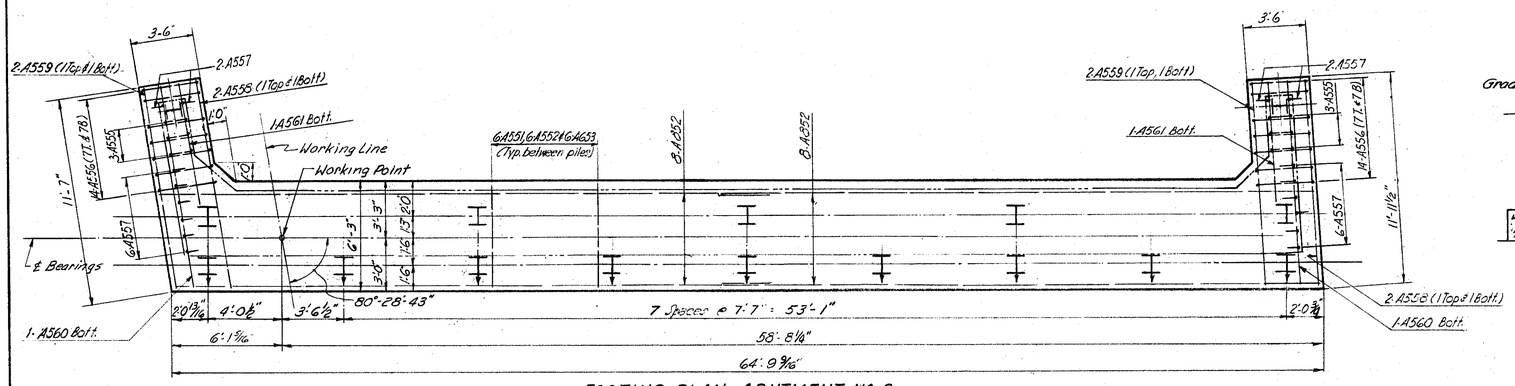
ELEVATION ABUTMENT NO. 2



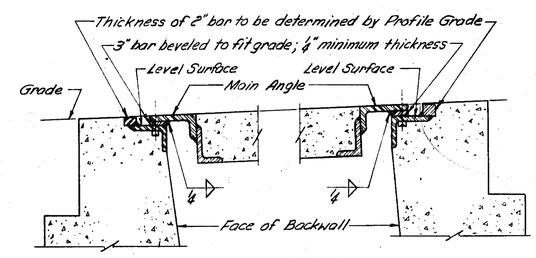
SECTION C-C
WINGWALLS B & C



SECTION C-C
WINGWALLS A & D



FOOTING PLAN ABUTMENT NO. 2



END DAM DETAIL

NOTES

- For Notes see sheet 330
- For Section A-A see sheet 330

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ABUTMENTS
RIGHT STRUCTURE
BRIDGE NO TRU-I-80-0941 L/R
OVER
US RT 62 & SR-7
TRUMBULL COUNTY STA. 512+45.07 TO STA. 514+94.62

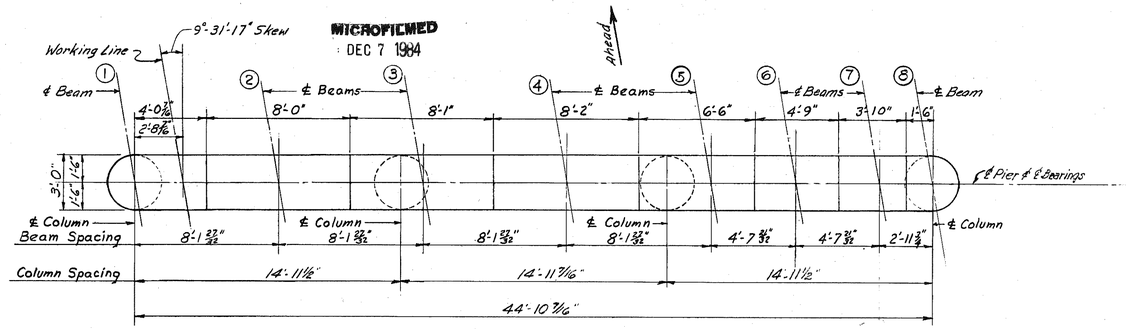
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
L.E.	J.H.		G.M.B.		11-8-62	

MICROFILMED
DEC 7 1984

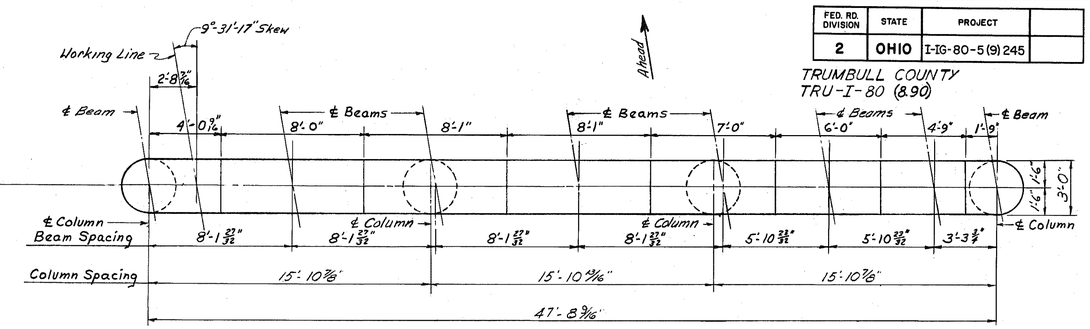
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

332
401

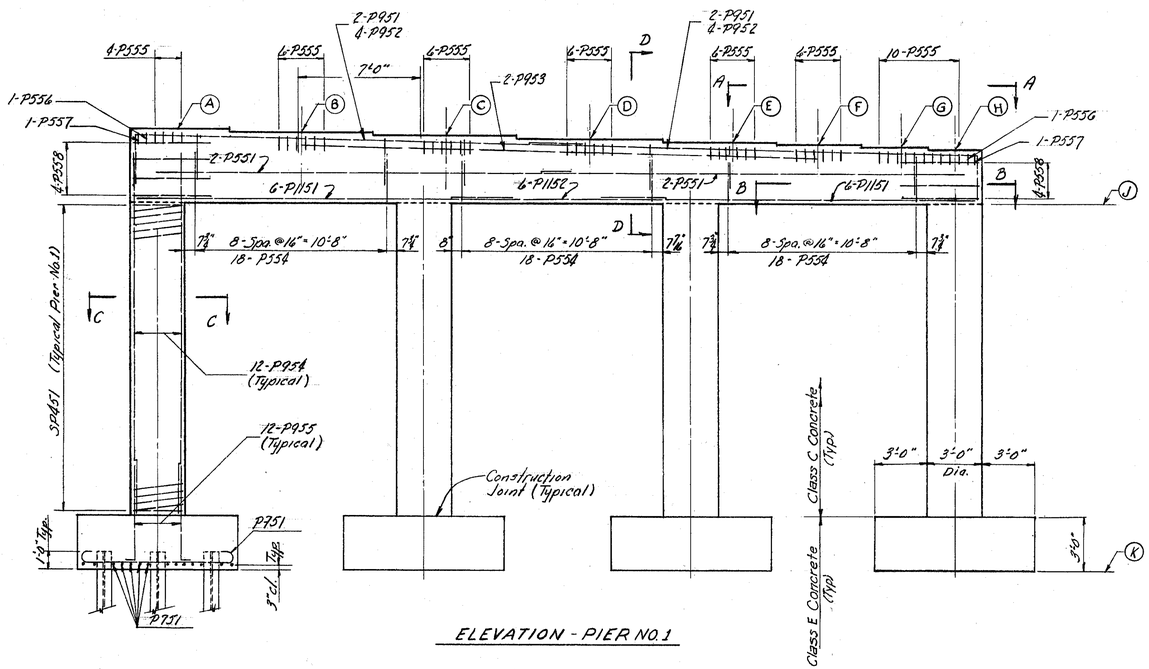
TRUMBULL COUNTY
TRU-I-80 (8.90)



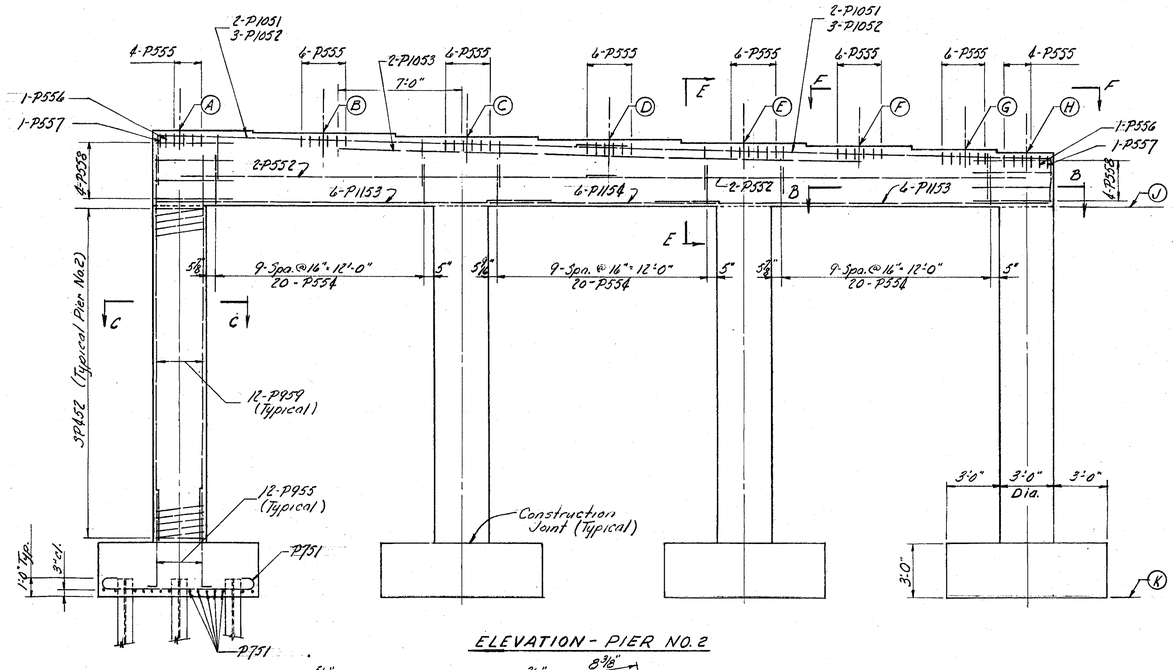
PLAN – PIER NO. 1



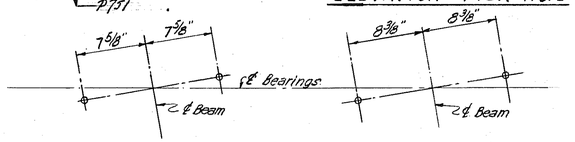
PLAN - PIER NO. 2



ELEVATION - PIER NO. 1



ELEVATION - PIER NO. 2



14'-11 1/2"	14'-11 7/16"	14'-11 1/2"	Pier No. 1
15'-10 7/8"	15'-10 13/16"	15'-10 7/8"	Pier No. 2
17'-5"	17'-5 1/16"	17'-5"	Pier No. 3

NOTES

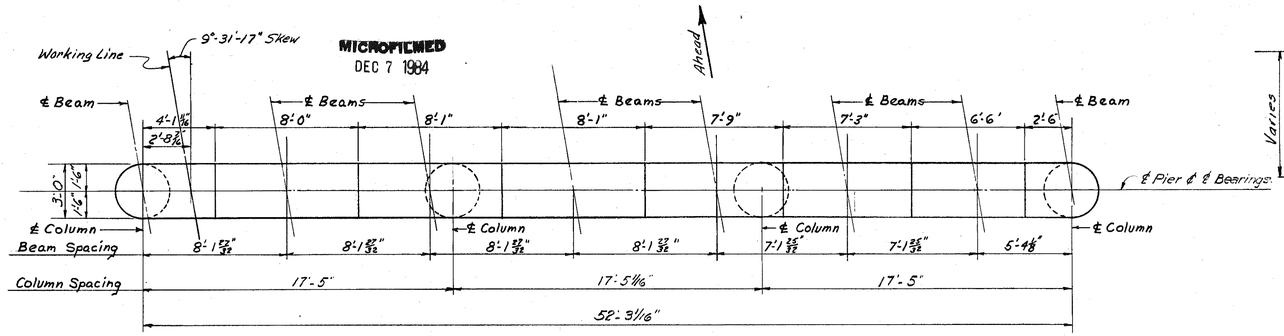
- For Table of Elevations see sheet 333
- For Sections A-A, B-B, C-C, D-D, E-E, & F-F see SHEET 333.
- Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9) 245	

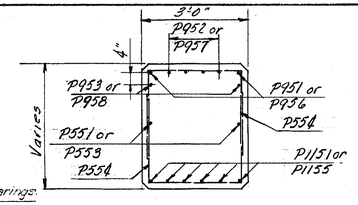
333
401

TRUMBULL COUNTY
TRU-I-80-(8.90)

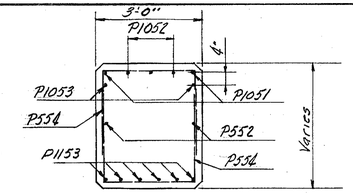
MICROFILMED
DEC 7 1984



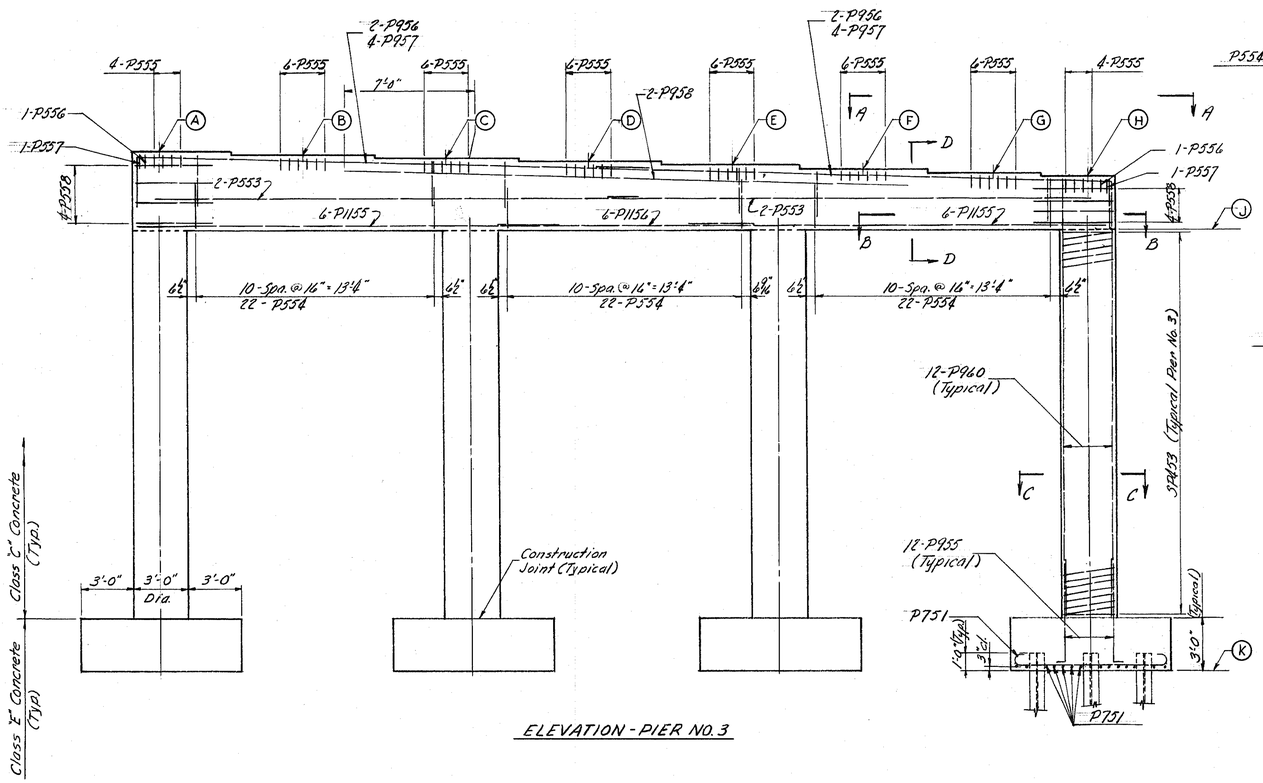
PLAN - PIER NO. 3



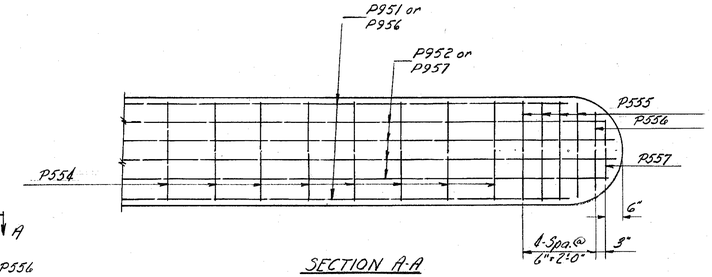
SECTION D-D



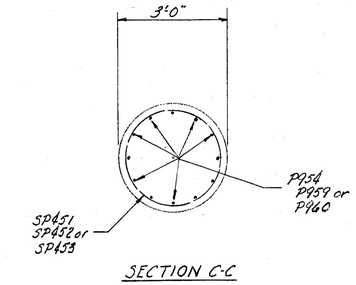
SECTION E-E



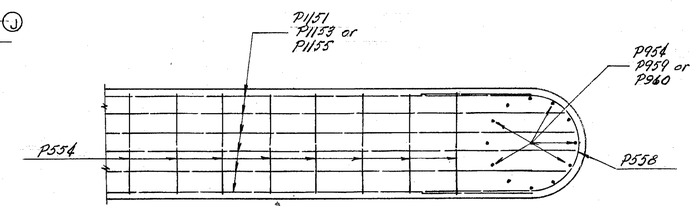
ELEVATION - PIER NO. 3



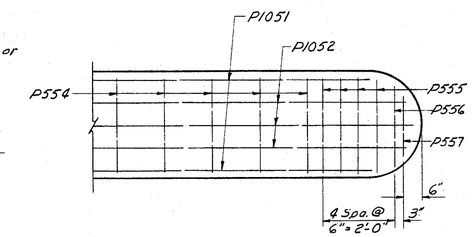
SECTION A-A



SECTION C-C



SECTION B-B

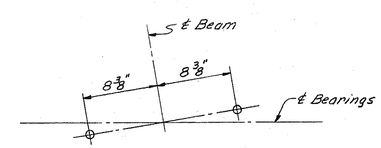


SECTION F-F

TABLE OF ELEVATIONS											
LOCATION		A	B	C	D	E	F	G	H	J	K
RIGHT STRUCTURE	PIER-1	960.37	960.21	960.05	959.89	959.65	959.54	959.39	959.29	956.29	935.75
	PIER-2	961.77	961.61	961.45	961.29	961.06	960.86	960.66	960.55	957.55	935.75
	PIER-3	963.76	963.60	963.44	963.28	963.06	962.83	962.59	962.43	959.43	934.75

NOTE:
Special care shall be taken in placing Reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bolt holes.

For Footing Plan for Pier No. 3 see sheet 332.



ANCHOR BOLT LAYOUT
PIER NO. 3

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PIERS
RIGHT STRUCTURE
BRIDGE NO TRU-I-80-0941L/R
OVER
US RT 62 & S R 7
TRUMBULL COUNTY STA. 512+45.07 TO STA 514+94.62

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
G.M.B.	J.H. & F.J.M.		G.M.B.	11-8-62		

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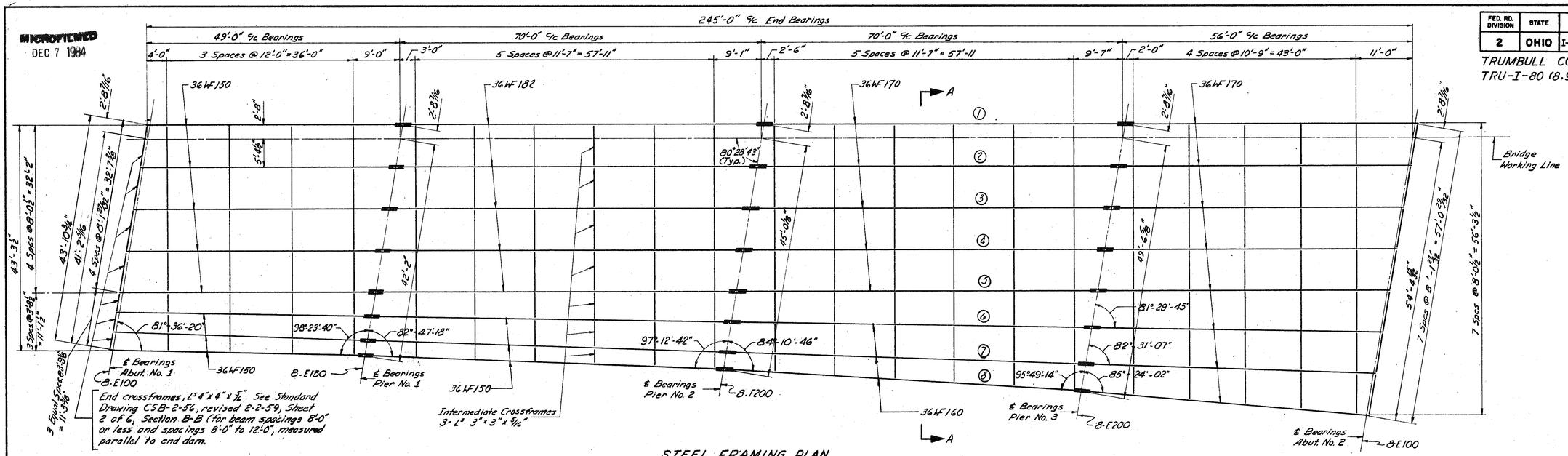
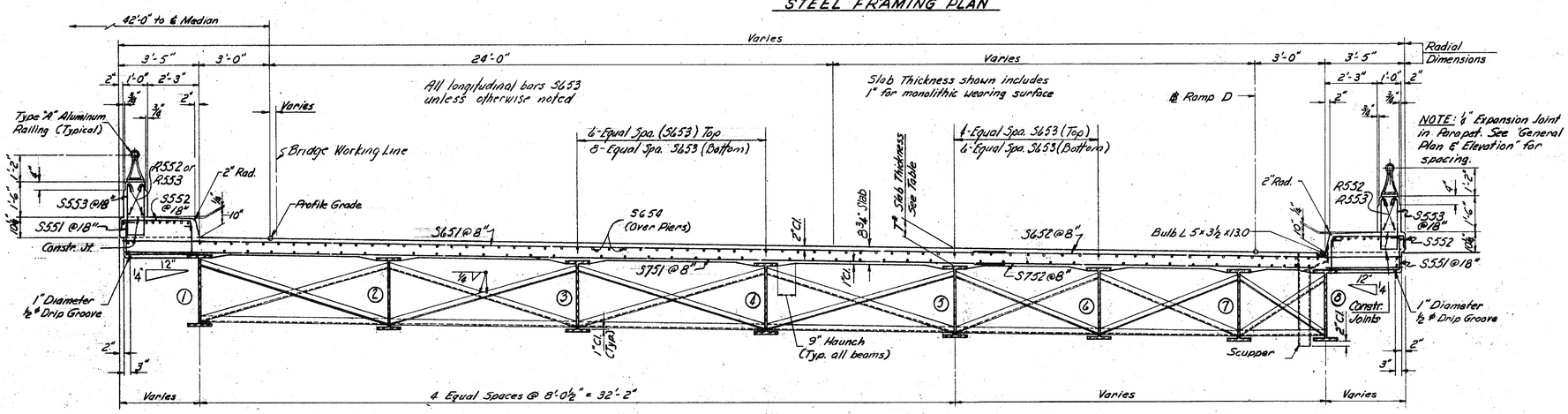
DEC 7 1984

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

TRUMBULL COUNTY
TRU-I-80 (8.90)



STEEL FRAMING PLAN



TRANSVERSE SECTION A-A

SLAB THICKNESS – T*								
BEAM NO.	1	2	3	4	5	6	7	8
Abutment No. 1	9¼	9¼	9¼	9¼	9¼	9¼	9¼	9¼
Pier No. 1	8¾	8¾	8¾	8¾	8¾	9¼	9¼	9¼
Pier No. 2	8¾	8¾	8¾	8¾	8¾	9⅛	9⅛	9⅛
Pier No. 3	9	9	9	9	9	9	9	9
Abutment No. 2	9	9	9	9	9	9	9	9

* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

NOTES

- Refer to Standard Drawing CSB-2-56, Sheet 2 of 6, for details of End Dam.
- Refer to Standard Drawing CSB-2-56, Sheet 3 of 6, for gutter, scupper, and curb plate details.
- Refer to Standard Drawing FSB-1-62 for details of Bearings.
- Concrete and reinforcing steel above parapet construction joint included with railing for payment.
- Concrete shall be Class "C."
- Joints in End Dam: A welded butt-joint in the end dam, at the center line of roadway, will be required for that portion of the end dam attached to the superstructure. The portion attached to the backwall shall be placed in segments which shall be closely butted, but shall not be welded.

DECK SLAB HAUNCH: The haunch in the superelevated deck slab adjacent to the top of steel beams, which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12" on the low side and between 9" and 12" on the high side. Except on the high side, the maximum slope shall not exceed 3 inches per foot. Payment for deck slab concrete shall be based on the 9" width.

Cambering of beam: is required in accordance with the following table:

DEFLECTION AND CAMBER	BEAM NO. 1				BEAMS NO. 2,3,4 & 5				BEAMS NO. 6 & 7				BEAM NO. 8			
	SPAN NO.				SPAN NO.				SPAN NO.				SPAN NO.			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Deflection due to weight of Steel	0	1/16	1/16	1/16	0	1/16	1/16	1/16	0	1/16	1/16	1/16	0	1/16	1/16	1/16
Deflection due to remaining dead load	3/16	7/16	3/8	5/16	1/8	3/8	5/16	1/4	1/16	3/8	3/8	3/16	1/8	1/2	3/8	3/8
Convexity required for superelevation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum of deflection and convexity	3/16	1/2	7/16	3/8	1/8	7/16	3/8	5/16	1/16	7/16	7/16	1/4	1/8	9/16	7/16	7/16
Camber required	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NOTE: Where no camber is specified, beams shall be fabricated with any natural camber or bowed side up.

BEAM SPLICE WELDING PROCEDURE FOR BEAMS NO. 1, 2, 3, 4 & 5

1. Raise end of beam at Pier No. 2 (1 1/16")
2. Butt-weld the beam flanges and web at Pier No. 1 using the following sequence: make one pass on each flange, then two on the web; repeat, using one pass of each location, until welds are completed.
3. Weld top and bottom flange moment plates at Pier No. 1.
4. Lower end of beam at Pier No. 2.
5. Make splices at Piers No. 2 & 3 in the same manner, raising the ends of the beams 1/2" at Pier No. 3 and 3/4" at Abutment No. 2.

BEAM SPLICE WELDING PROCEDURE FOR BEAMS NO. 6, 7 & 8

1. Raise end of beam at Pier No. 2 (7/8")
2. Butt-weld the beam flanges and web at Pier No. 1 using the following sequence: make one pass on each flange, then two on the web; repeat using one pass at each location, until welds are completed.
3. Lower end of beam at Pier No. 2.
4. Raise end of beam at Pier No. 3 (1 1/2")
5. Butt-weld the beam flanges and web at Pier No. 2 using the same sequence outlined in Step 2.
6. Weld top and bottom flange moment plates at Pier No. 2.
7. Lower end of beam at Pier No. 3.
8. Make splice at Pier No. 3 in the same manner outlined in Steps 4, 5 and 6, raising the end of the beam 1/16" @ Abutment No. 2.

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SUPERSTRUCTURE
RIGHT STRUCTURE
BRIDGE NO TRU-I-80-0941L/R
OVER
US RT 62 & S R 7
TRUMBULL COUNTY STA. 512+45.07 TO STA. 514+94.62

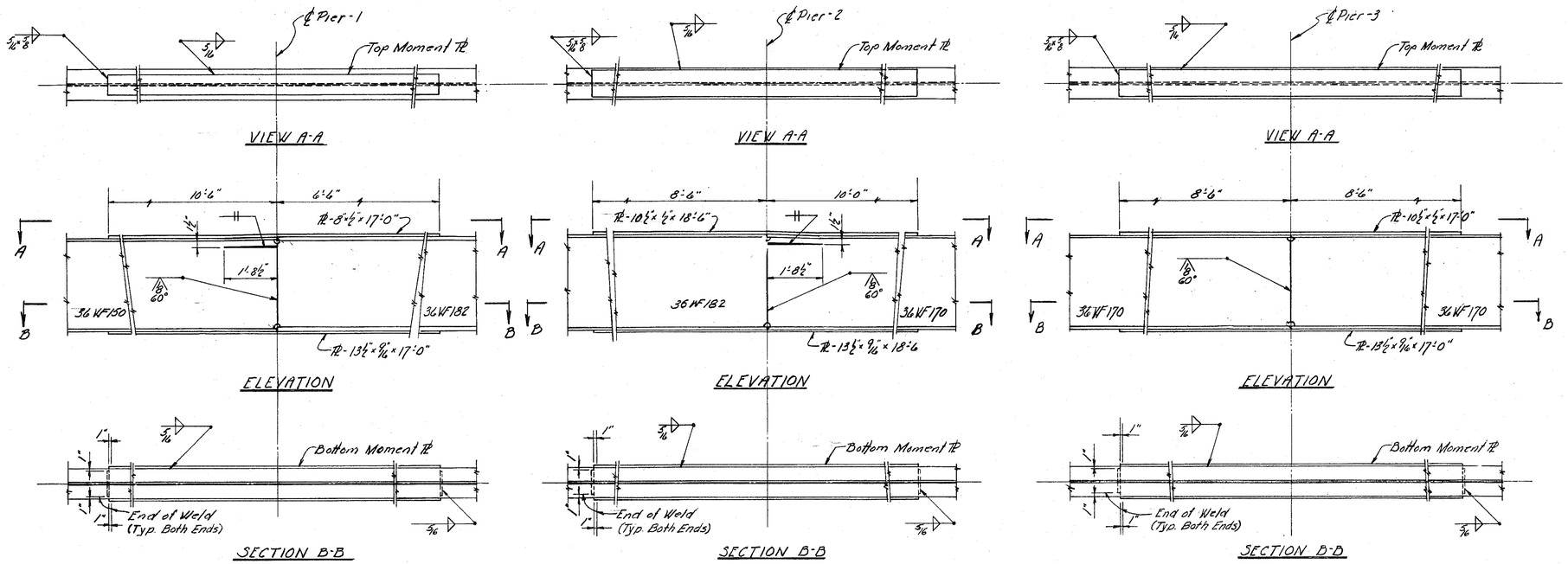
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
L.E.	F.J.M.		C.S.F.		11-8-62	

MICROFILMED
DEC 7 1984

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

335
401

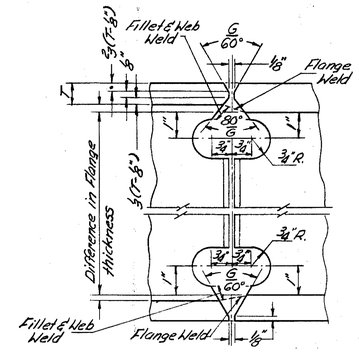
TRUMBULL COUNTY
TRU-I-80 (890)



BEAM SPLICE
(Beams 1, 2, 3, 4 & 5 @ Pier 1)

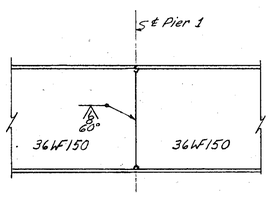
BEAM SPLICE
(Beams 1, 2, 3, 4 & 5 @ Pier 2)

BEAM SPLICE
(Beams 1, 2, 3, 4 & 5 @ Pier 3)

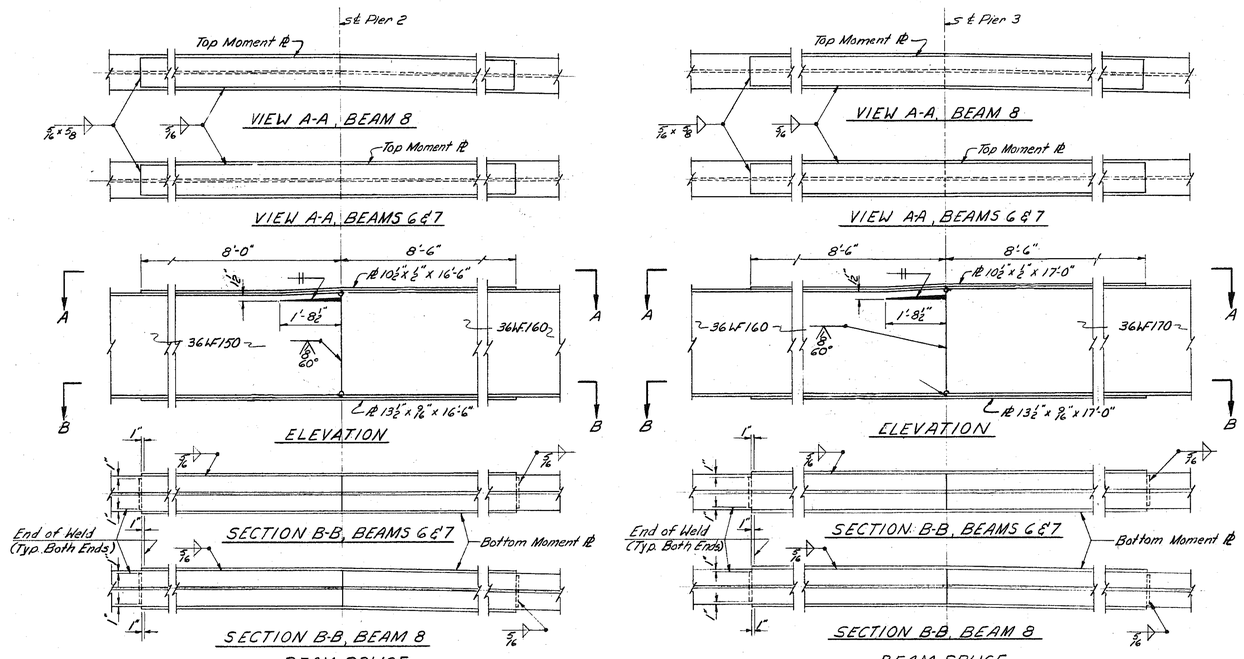


END PREPARATION OF ROLLED BEAMS FOR FIELD WELDING

NOTE: Any roughness from burning shall be removed by grinding.



BEAM SPLICE
(Beams 6, 7 & 8 @ Pier 1 only)



BEAM SPLICE
(Beams 6, 7 & 8 @ Pier 2)

BEAM SPLICE
(Beams 6, 7 & 8 @ Pier 3)

NOTES

- CONTINUOUS BEAM SPLICES: If beams having depths differing by more than ⅛" are to be spliced by butt welding, the depth of the smaller-depth beam shall be increased by splitting the web longitudinally at a distance of 1½" below the bottom of the top flange and for a distance sufficient to allow the flange to be bent up at a slope of not more than 3/8" per foot, after which the split in the web shall be completely welded with full depth penetration.
- G indicates grinding

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SUPERSTRUCTURE
RIGHT STRUCTURE
BRIDGE NO TRU-I-80-0941 L/R
OVER
US RT 62 & SR 7
TRUMBULL COUNTY STA. 512+45.07 TO STA. 514+94.62

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
J.E.	R.J.K. & F.J.M		C.S.F.		11-8-62	

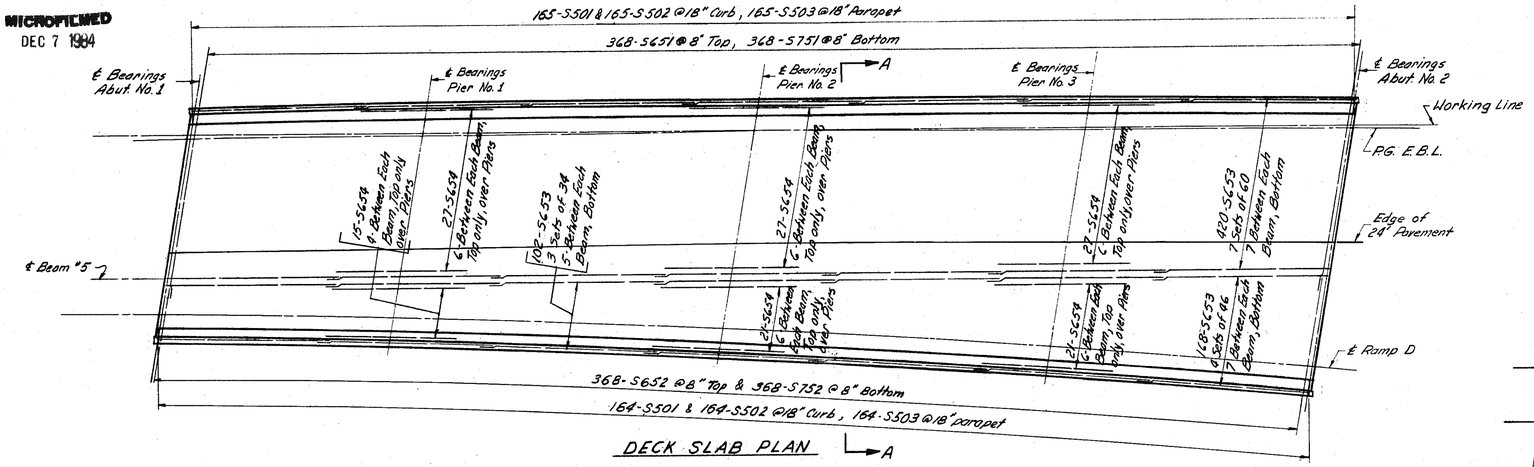
S-S

MICROFILMED
DEC 7 1984

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

336
401

TRUMBULL COUNTY
TRU-I-80 (8.90)



DECK SLAB PLAN

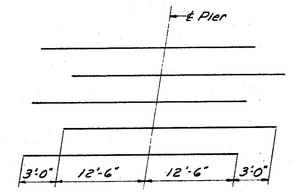
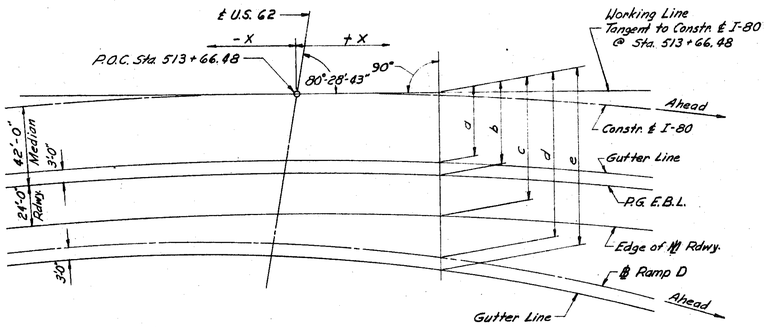


DIAGRAM SHOWING STAGGER OF 5654 OVER PIERS

Note: See sheet 33A for Transverse Section - A-A.



Dimension a = distance normal to tangent line between tangent line and gutter line.
Dimension b = distance normal to tangent line between tangent line and P.G. E.B.L.
Dimension c = distance normal to tangent line between tangent line and edge of ℄ Roadway.
Dimension d = distance normal to tangent line between tangent line and ℄ Ramp D.
Dimension e = distance normal to tangent line between tangent line and gutter line.

OFFSET LOCATION PLAN

TABLE OF OFFSETS AND ELEVATIONS

X	GUTTER LINE DIM. a	GUTTER LINE ELEV.	P.G. E.B.L. DIM. b	P.G. E.B.L. ELEV.	EDGE ℄ ROADWAY DIM. c	EDGE ℄ ROADWAY ELEV.	RAMP D ℄ DIM. d	RAMP D ℄ ELEV.	GUTTER LINE DIM. e	GUTTER LINE ELEV.
-152	39.94	962.71	42.94	962.66	66.94	962.28	79.48	961.94	82.48	
-144	39.84	962.90	42.85	962.86	66.85	962.48	79.52	962.13	82.52	
-136	39.75	963.10	42.75	963.05	66.75	962.67	79.59	962.31	82.59	
-128	39.67	963.29	42.67	963.25	66.67	962.86	79.68	962.49	82.68	
-120	39.59	963.49	42.59	963.44	66.59	963.06	79.80	962.68	82.80	
-112	39.51	963.68	42.51	963.63	66.51	963.25	79.93	962.86	82.93	
-104	39.44	963.88	42.44	963.83	66.44	963.45	80.09	963.05	83.09	
-96	39.37	964.07	42.38	964.02	66.38	963.64	80.27	963.23	83.27	
-88	39.31	964.26	42.31	964.22	66.31	963.84	80.47	963.41	83.47	
-80	39.26	964.46	42.26	964.41	66.26	964.03	80.70	963.60	83.70	
-72	39.21	964.65	42.21	964.61	66.21	964.23	80.95	963.78	83.95	
-64	39.17	964.85	42.17	964.80	66.17	964.42	81.22	963.97	84.22	
-56	39.13	965.04	42.13	964.99	66.13	964.62	81.51	964.15	84.51	
-48	39.09	965.23	42.09	965.19	66.09	964.81	81.82	964.33	84.83	
-40	39.06	965.43	42.06	965.38	66.06	965.01	82.16	964.52	85.16	
-32	39.04	965.62	42.04	965.58	66.04	965.20	82.52	964.70	85.52	
-24	39.02	965.82	42.02	965.77	66.02	965.39	82.90	964.89	85.91	
-16	39.01	966.01	42.01	965.97	66.01	965.59	83.31	965.07	86.31	
-8	39.00	966.21	42.00	966.16	66.00	965.78	83.73	965.25	86.74	
0	39.00	966.40	42.00	966.35	66.00	965.98	84.18	965.44	87.19	

X	GUTTER LINE DIM. a	GUTTER LINE ELEV.	P.G. E.B.L. DIM. b	P.G. E.B.L. ELEV.	EDGE ℄ ROADWAY DIM. c	EDGE ℄ ROADWAY ELEV.	RAMP D ℄ DIM. d	RAMP D ℄ ELEV.	GUTTER LINE DIM. e	GUTTER LINE ELEV.
0	39.00	966.40	42.00	966.35	66.00	965.98	84.18	965.44	87.19	
8	39.00	966.59	42.00	966.55	66.00	966.17	84.65	965.62	87.66	
16	39.01	966.79	42.01	966.74	66.01	966.37	85.15	965.81	88.15	
24	39.02	966.98	42.02	966.94	66.02	966.56	85.66	965.99	88.67	
32	39.04	967.18	42.04	967.13	66.04	966.76	86.20	966.18	89.21	
40	39.06	967.37	42.06	967.33	66.06	966.95	86.76	966.36	89.77	
48	39.09	967.56	42.09	967.52	66.09	967.15	87.35	966.55	90.36	
56	39.13	967.76	42.13	967.71	66.13	967.34	87.95	966.73	90.96	
64	39.17	967.95	42.17	967.91	66.17	967.54	88.58	966.91	91.59	
72	39.21	968.15	42.21	968.10	66.21	967.73	89.24	967.10	92.25	
80	39.26	968.34	42.26	968.30	66.26	967.93	89.91	967.28	92.92	
88	39.31	968.54	42.32	968.49	66.31	968.12	90.61	967.47	93.62	
96	39.37	968.73	42.38	968.68	66.38	968.31	91.33	967.65	94.34	
104	39.44	968.93	42.44	968.88	66.44	968.51	92.07	967.84	95.08	
112	39.51	969.12	42.51	969.07	66.51	968.70	92.83	968.02	95.85	
120	39.59	969.31	42.59	969.27	66.59	968.90	93.62	968.21	96.64	
128	39.67	969.51	42.67	969.46	66.67	969.09	94.43	968.39	97.45	
136	39.75	969.70	42.76	969.66	66.75	969.29	95.26	968.58	98.28	
144	39.84	969.90	42.85	969.85	66.85	969.48	96.12	968.76	99.14	
152	39.94	970.09	42.94	970.04	66.94	969.68	97.00	968.95	100.01	

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

SUPERSTRUCTURE
RIGHT STRUCTURE
BRIDGE NO. TRU-I-80-0941 L/R
OVER
U.S. RT. 62 & SR-7
TRUMBULL COUNTY STA. 512+45.07 TO STA. 514+94.62

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
L.E.	F.J.M.		C.S.F.		11-8-62	

MICROFILMED
DEC 7 1984

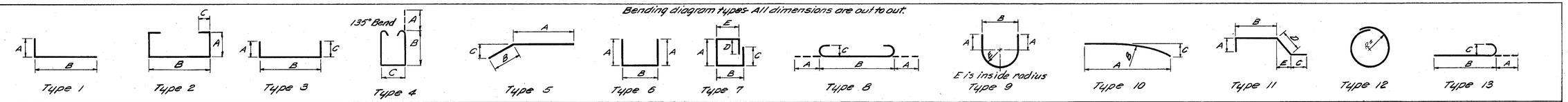
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9) 245	

337/401

TRUMBULL COUNTY
TRU-I-80 (8.90)

REINFORCING STEEL BAR SCHEDULE

Bending diagram types. All dimensions are out to out.



PIERS

MARK	PIER 1	PIER 2	PIER 3	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
P1151	12	—	—	12	21'-4"	Str.						1,360
P1152	6	—	—	6	12'-0"	Str.						383
P1153	—	12	—	12	22'-3"	Str.						1,419
P1154	—	6	—	6	13'-0"	Str.						414
P1155	—	—	12	12	23'-10"	Str.						1,519
P1156	—	—	6	6	14'-6"	Str.						462
P1051	—	4	—	4	27'-9"	1	2'-7"	25'-6"				478
P1052	—	6	—	6	29'-1"	1	2'-7"	26'-10"				751
P1053	—	2	—	2	30'-0"	Str.						258
P951	4	—	—	4	26'-2"	1	2'-7"	23'-10"				356
P952	8	—	—	8	27'-6"	1	2'-7"	25'-2"				748
P953	2	—	—	2	29'-0"	Str.						197
P954	48	—	—	48	20'-2"	Str.						3,291
P955	48	48	48	144	6'-7"	1	1'-3"	5'-7"				3,223
P956	—	—	4	4	29'-10"	1	2'-7"	27'-6"				406
P957	—	—	8	8	31'-2"	1	2'-7"	28'-10"				848
P958	—	—	2	2	31'-6"	Str.						214
P959	—	48	—	48	21'-0"	Str.						3,427
P960	—	—	48	48	24'-4"	Str.						3,971
P751	112	112	112	336	10'-4"	8	10"	8'-8"	7"			7,097
P551	4	—	—	4	23'-3"	Str.						97
P552	—	4	—	4	24'-8"	Str.						103
P553	—	—	4	4	27'-0"	Str.						113
P554	54	60	66	180	7'-5"	6	2'-6"	2'-8"				1,392
P555	44	44	44	132	3'-8"	6	7 3/8"	2'-8"				505
P556	2	2	2	6	3'-2"	6	7 3/8"	2'-2"				20
P557	2	2	2	6	2'-9"	6	7 3/8"	1'-9"				17
P558	8	8	8	24	8'-2"	9	2'-3"	2'-5"			1'-3 3/8"	205

SPIRAL BARS

MARK	PIER 1	PIER 2	PIER 3	TOTAL	LENGTH	PITCH	NO. OF TURNS	CORE DIA.	WEIGHT
SP451	4	—	—	4	17'-6 1/2"	4 1/2"	50	32"	1,311
SP452	—	4	—	4	18'-9 3/8"	4 1/2"	53	32"	1,392
SP453	—	—	4	4	21'-8 1/8"	4 1/2"	61	32"	1,602
								TOTAL WEIGHT	37,579

ABUTMENTS

MARK	ABUT. 1	ABUT. 2	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A851	16		16	27'-0"	Str.						1,153
A852		16	16	33'-8"	Str.						1,438
A651	38	52	90	15'-3"	7	6'-6"	1'-5"	4'-2"	3'-1"	11"	2,061
A652	6	8	14	14'-1"	6	6'-6"	1'-5"				296
A653	36	48	84	13'-11"	3	6'-7"	5'-5"	2'-3"			1,756
A551	36	48	84	9'-2"	6	2'-0"	5'-5"				803
A552	48	48	96	3'-0"	6	7 3/8"	2'-0"				300
A553	36	48	84	7'-4"	1	7 3/8"	6'-10"				642
A554	36	48	84	9'-2"	6	3'-0"	3'-5"				803
A555	6	6	12	10'-7"	6	4'-10"	1'-2"				132
A556	28	28	56	7'-1"	6	2'-1"	3'-2"				414
A557	16	16	32	5'-4"	1	7 3/8"	4'-10"				178
A558	4	4	8	11'-8"	Str.						97
A559	4	4	8	11'-3"	Str.						94
A560	2	2	4	11'-5"	Str.						48
A561	2	2	4	6'-11"	Str.						29
A562	36		36	25'-8"	Str.						964
A563	16	16	32	3'-6"	Str.						117
A564	14	14	28	13'-3"	Str.						387
A565	22	22	44	8'-6"	Str.						390
A566	4	4	8	5'-4"	Str.						44
A567	24	20	44	3'-7"	Str.						164
A568	4	4	8	4'-1"	Str.						34
A569	16	16	32	10'-0"	Str.						334
A570	16	16	32	9'-0"	Str.						300
A571	4	4	8	8'-1"	Str.						67
A572	4	4	8	7'-1"	Str.						59
A573	4	4	8	6'-6"	Str.						54
A574	—	4	4	4'-7"	Str.						19
A575	—	36	36	32'-1"	Str.						1,205
A576	10	9	19	7'-2"	8	7"	6'-0"	5"			142
A577	9	10	19	8'-2"	8	7"	7'-0"	5"			162
A578	4	4	8	13'-1"	Str.						109
A579	1	1	2	9'-7"	Str.						20
A580	2	2	4	13'-7"	10	13'-4"	50'-0"	2'-4"			57
A581	1	1	2	9'-4"	Str.						19
A582	2	2	4	13'-0"	10	12'-9"	45'-0"	2'-4"			54
A583	2	2	4	2'-6"	11	7 5/8"	1'-3"	0	10"	3"	10
A584	2	2	4	1'-5"	1	7 5/8"	11"				6
A585	8	8	16	2'-11" to 3'-8" (1)	11	7 5/8"	1'-3" to 2'-0" (1)	0	1'-3"	3"	55
A586	8	8	16	1'-10" to 2'-7" (1)	1	7 5/8"	1'-4" to 2'-1" (1)				37
A587	8	8	16	3'-10" to 4'-4" (2)	11	7 5/8"	2'-2" to 2'-8" (2)	0	1'-3"	3"	68
A588	8	8	16	2'-9" to 3'-3" (2)	1	7 5/8"	2'-3" to 2'-9" (2)				50
A589	10	10	20	4'-3" to 4'-5" (3)	11	7 5/8"	2'-7" to 2'-9" (3)	0	1'-3"	3"	90
A590	10	10	20	3'-2" to 3'-4" (3)	1	7 5/8"	2'-8" to 2'-10" (3)				68
A591	20	20	40	5'-7"	4	5"	2'-2"	8"			233
R551	8	8	16	12'-11"	Str.	Included with Railing for Payment					
										TOTAL WEIGHT	15,562

(1) 4 each vary in increments of 3"
(2) 4 each vary in increments of 1"
(3) 4 each vary in increments of 1/2"

SUPERSTRUCTURE

MARK	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
S751	368	39'-6"	Str.						29,712
S752	368	12'-7" to 25'-1" (1)	Str.						14,166
S651	368	39'-6"	Str.						21,833
S652	368	12'-7" to 25'-1" (1)	Str.						10,410
S653	690	36'-9"	Str.						38,087
S654	138	28'-0"	Str.						5,804
S551	329	5'-11"	2	1'-3 3/8"	2'-7"	7 5/8"			2,030
S552	329	3'-7"	6	7 3/8"	2'-7"				1,230
S553	329	5'-7"	4	5"	2'-2"	8"			1,916
R552	16	12'-5"	Str.	Included with railing for Payment					—
R553	112	15'-4"	Str.						—
								TOTAL WEIGHT	125,188

(1) 23 each vary in increments of 10" (16 groups)

ESTIMATED QUANTITIES (Right Bridge)

ITEM	TOTAL	UNIT	DESCRIPTION	SUPERSTR.	ABUTS.	PIERS	GENERAL	
E-2	600	Cu.Yds.	Unclassified Excavation		235	365		
S-1	440	Cu.Yds.	Class "C" Concrete, Superstructure	440				
S-1	122	Cu.Yds.	Class "C" Concrete, Pier Cap & Columns			122		
S-1	126	Cu.Yds.	Class "E" Concrete, Abutments above Footing		126			
S-1	202	Cu.Yds.	Class "E" Concrete, Footings		94	108		
S-4	178,329	Lbs.	Reinforcing Steel	125,188	15,562	37,579		
S-7	391,030	Lbs.	Structural Steel	391,030				
S-8	391,030	Lbs.	Field Painting of Structural Steel	391,030				
S-14	544.46	Lin.Ft.	Railing (Aluminum Rail & Supports, Concrete Parapet)	491.46	53.00			
S-18	3,030	Lin.Ft.	Steel Piles 10BP42		950	2,080		
S-29	54	Cu.Yds.	Porous Backfill		54			
S-29	8	Each	Scuppers, including supports	8				
S-101	440	Each	Water-reducing, set-retarding Admixture	440				
I-10	690	Sq.Yds.	Crushed Aggregate Slope Protection				690	

See Sht. 329 for Quantities of 0941L

SPIRAL REINFORCING BARS

The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap.
The "No. of Turns" shown is the Length divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number.
Spiral reinforcing bars shall not have deformations, but shall in other respects conform to Item S-4.
1 1/2 closed coils shall be provided at the ends of each spiral unit.
Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per Lin. Ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per Lin. Ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

REPLACEMENT BARS

MARK	NO.	LENGTH	TYPE	WEIGHT
RE1101	1	7'-7"	Str.	
RE1001	1	7'-3"	Str.	
RE901	1	6'-10"	Str.	
RE801	1	6'-6"	Str.	
RE701	3	6'-3"	Str.	
RE601	5	5'-11"	Str.	
RE501	1	5'-7"	Str.	
RE401	1	5'-3"	12	

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, A851 is a No. 8 size bar, and P1151 is a No. 11 size bar.

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

REINFORCING STEEL LIST & ESTIMATED QUANTITIES-RIGHT STRUCTURE
BRIDGE NO. TRU -80-0941 L/R
OVER
U.S. RT. 62 & SR-7
TRUMBULL COUNTY STA. 512+45.07 TO STA. 514+94.62

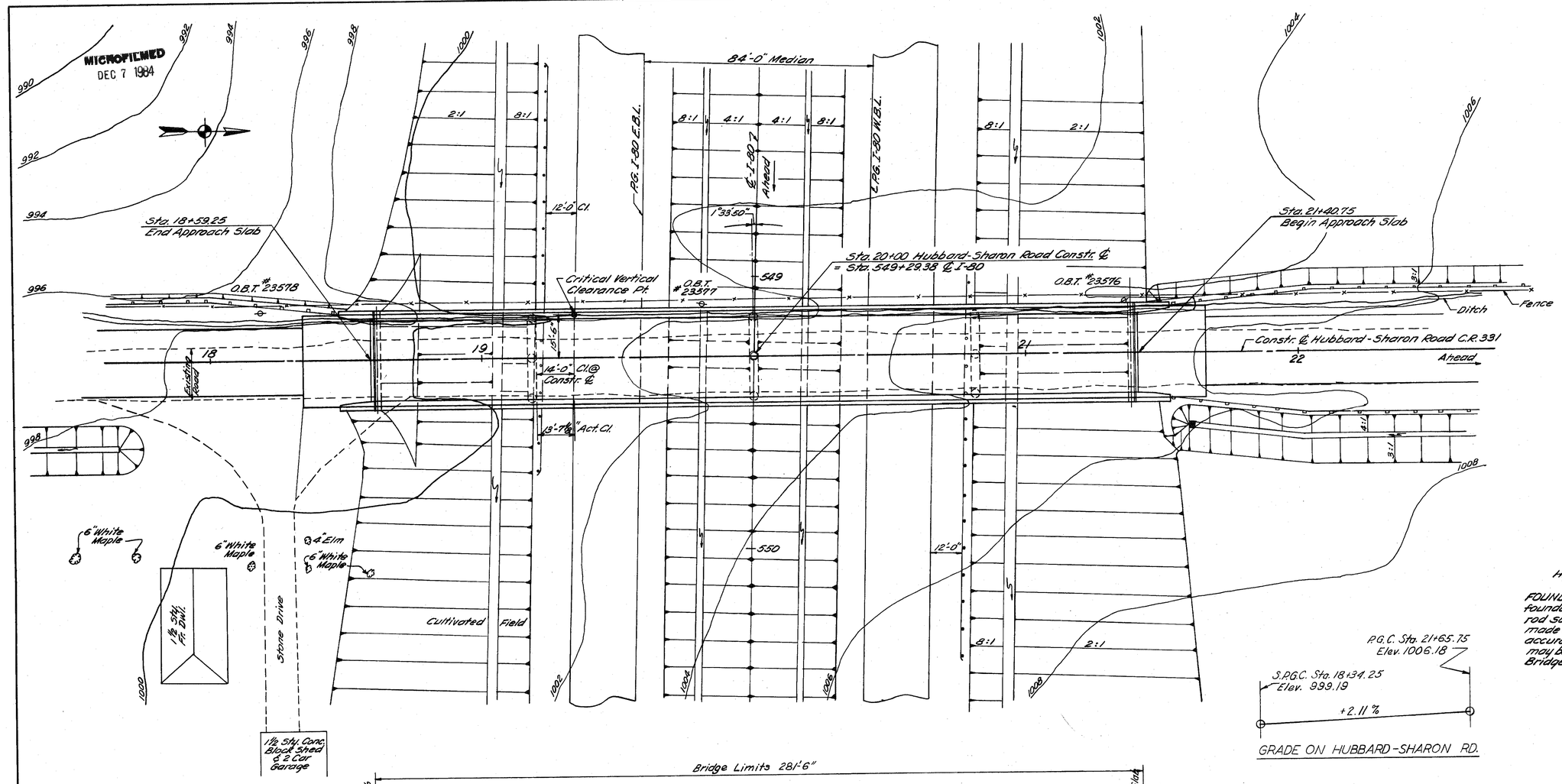
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
	G.P.	GC	GMB		11-8-62	

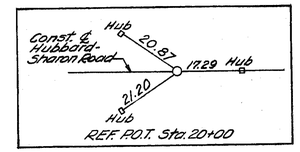
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

338/401

TRUMBULL COUNTY
TRU I-80 (8.90)

MICROFILMED
DEC 7 1984



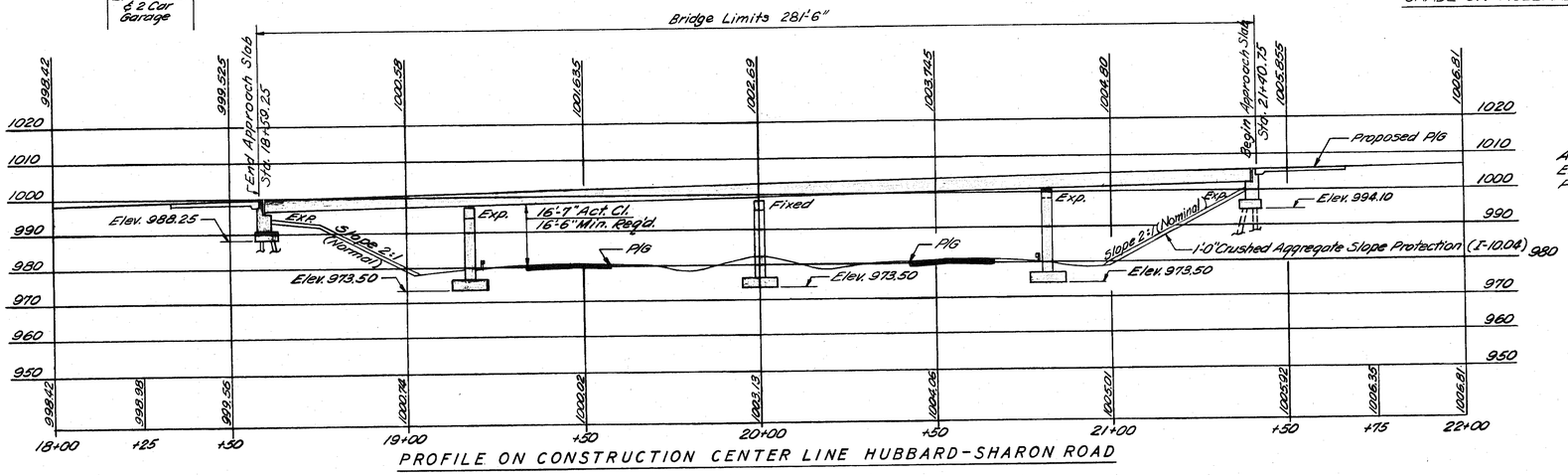


B.M. #8 Elev. 996.593
305' Rt. Sta. 550+50
R.R. Spike in root 38" White Oak

Hubbard-Sharon Road Design A.D.T. 1183

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings, made at the site. This sounding information, the accuracy of which the State does not guarantee, may be examined in the office of the Bureau of Bridges in Columbus or in the Division Office.

GRADE ON HUBBARD-SHARON RD.



PROFILE ON CONSTRUCTION CENTER LINE HUBBARD-SHARON ROAD

All Piles 10BP42
Estimated Average
Pay Lengths:
Abutment No. 1 12'
Abutment No. 2 15'

PROPOSED STRUCTURE

TYPE: Continuous Steel Beam with Reinforced Concrete Deck & Substructure.
SPANS: 57'-0, 81'-6, 81'-6, 57'-0" c/c Bearings
ROADWAY: 30' ft, 2'-3" Safety Curbs
LOAD FREQUENCY: C.F. = 1.30 (57)
SKEW: 0°-00"
WEARING SURFACE: ¾" Monolithic Concrete
APPROACH SLAB: Special-Design (25' Long)
ALIGNMENT: Tangent
SUPERELEVATION: None

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

SITE PLAN
BRIDGE NO. TRU 80-1010
UNDER
HUBBARD-SHARON ROAD
TRUMBULL COUNTY STA. 549 + 29.38
SCALE: 1" = 20'-0"

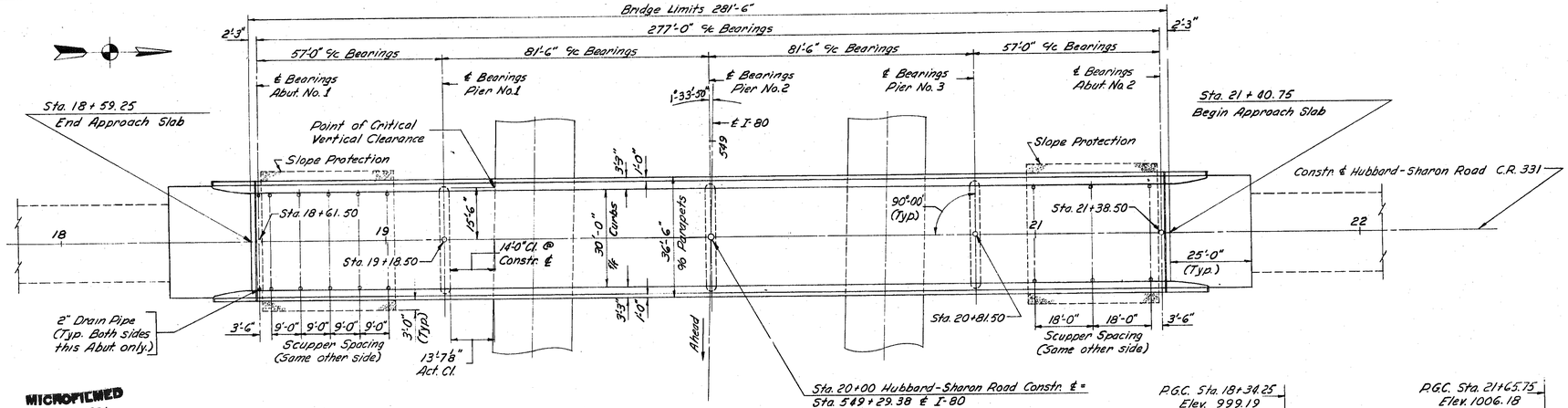
PRESENT TOPOGRAPHY		PROPOSED WORK			
Surveyed Buchart Eng.	Drawn G.P.	Designed G.M.B.	Drawn G.P.	Checked G.M.B.	Reviewed 8-10-1962

Sheet 1 of 6

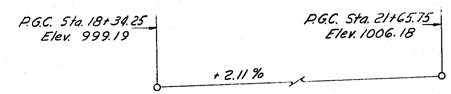
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

335
40.1

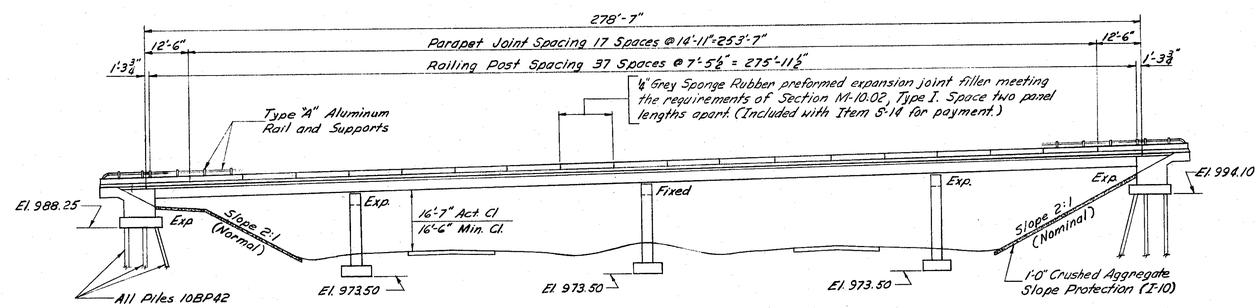
TRUMBULL COUNTY
TRU-I-8 (8.90)



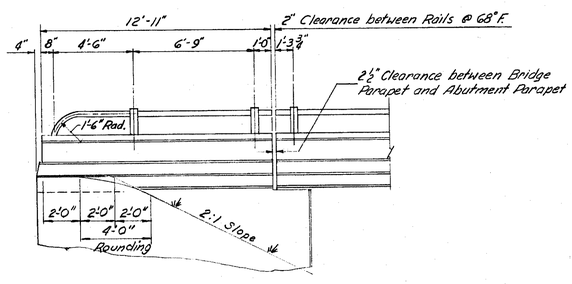
GENERAL PLAN



GRADE ON HUBBARD-SHARON ROAD



ELEVATION



TYPICAL ABUTMENT RAILING DETAIL

Design Loading – CF=130 (57)

Concrete Class C – Basic unit stress 1,333 p.s.i.
Concrete Class E – Basic unit stress 1,133 p.s.i.
Structural Steel – ASTM A36 – basic unit stress 20,000 p.s.i. (ASTM A7 and A373 steel not permitted).

Reinforcing Steel – ASTM A15, A16, A160, 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.

GENERAL NOTES

- REFERENCE shall be made to Standard Drawings CSB-2-56, Sheets 2 & 3 of 6, revised 2-2-59, FSB-1-62 dated 1-15-63, AR-1-57 revised 4-2-62, and to Supplemental Specification S-101 dated 7-12-62.
- 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.
- EXCAVATION QUANTITY for both abutments, in addition to that outlined in Sec. E-2.09, includes the removal of material bounded by the proposed bench, by the front vertical plane described in Sec. E-2.09 and by the finished slope of the cut.
- PILES shall be driven to a minimum bearing capacity of 30 Tons for the abutments.
- FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 4.0 Tons per sq. Ft.
- WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop.
- SHOP PAINTING STEEL: The surface preparation of all steel, requiring shop painting as per the Plans and Specifications, shall be accomplished by blast cleaning or power tool cleaning, except as noted in the Specifications regarding the use of Chromate Primers.
- CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.
- SURFACE FINISH OF CONCRETE: The requirements of Sec. S-1.22, Rubbed Finish, shall apply to the following exposed concrete surfaces:
  a. The entire superstructure except the top and bottom surfaces of safety curbs and roadways.
  b. The entire surface of piers and abutments except bridge seats, backwalls and the face of spill-through abutments between outside beams.
- MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine.
- SHEET LEAD shall conform to the requirements of ASTM Designation B29 without restriction to the Common Desilverized type.
- CONTINUOUS BEAM SHOP ASSEMBLY: Reference paragraph 4, Sec. S-7.12 of the Construction and Material Specifications, if rolled beams are field spliced only at supports, for the purpose of checking the fit-up of weld joint preparation, only two adjacent beams need be shop assembled at a time in their correct, unloaded positions. All beams shall be assembled and match marked.
- UTILITY LINES: All expense involved in relocating (installing) the affected utility lines will be borne by the owner(s). The Contractor and owner(s) are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPERSTR	ABUTS.	PIERS	GENERAL		
E-2	619	Cu. Yds.	Unclassified Excavation		318	301			
S-1	296	Cu. Yds.	Class "C" Concrete, Superstructure	296					
S-1	79	Cu. Yds.	Class "C" Concrete, Pier Caps and Columns			79			
S-1	87	Cu. Yds.	Class "E" Concrete, Abutments above Footing		87				
S-1	143	Cu. Yds.	Class "E" Concrete, Footings		65	78			
S-4	123,399	Lbs.	Reinforcing Steel	77,836	10,628	34,935			
S-7	271,435	Lbs.	Structural Steel	271,435					
S-8	271,435	Lbs.	Field Painting of Structural Steel	271,435					
S-14	606.17	Lin. Ft.	Railing (Aluminum Rail & Supports, Concrete Parapet)	557.17	49.00				
S-16	Lump	Sum	First Test Pile				Lump		
S-18	324	Lin. Ft.	Steel Piles 10BP42		324				
S-29	20	Cu. Yds.	Porous Backfill		20				
S-29	16	Each	Scuppers, Including Supports	16					
S-101	2.96	Each	Water-Reducing, Set-Retarding Admixture	2.96					
I-10	436	Sq. Yds.	Crushed Aggregate Slope Protection				436		

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GENERAL PLAN & ELEVATION
NOTES & ESTIMATED QUANTITIES
BRIDGE NO. 30-1010
UNDER
HUBBARD-SHARON ROAD

TRUMBULL COUNTY — STA. 540+29.83

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
G.M.B.	F.J.M.		G.M.B.		10-11-62	

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DEC 7 1984

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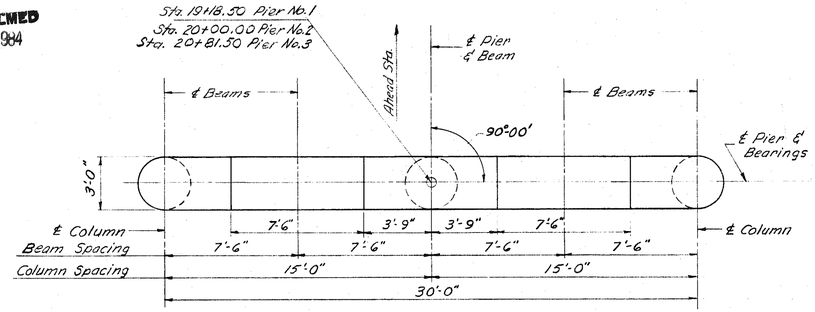
DEC 7 1984

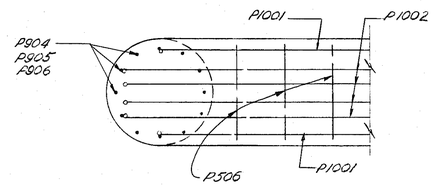
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5 (9) 245	

341/401

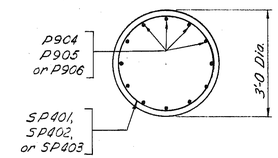
TRUMBULL COUNTY
TRU-I-80 (8.90)



PLAN



SECTION A-A



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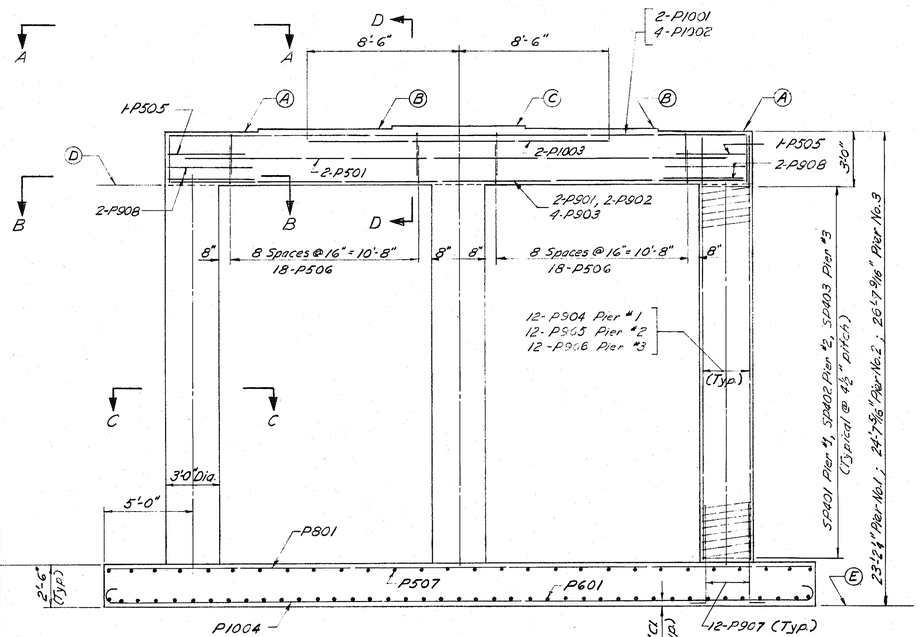
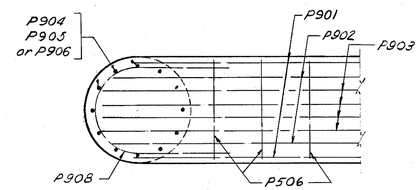
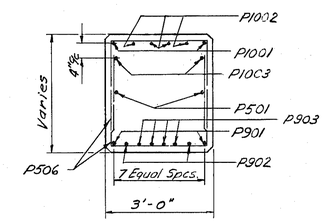


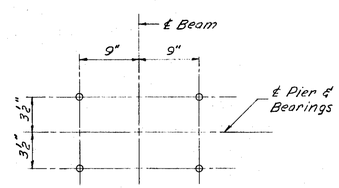
ELEVATION



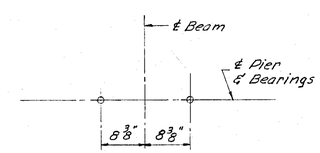
SECTION B-B



SECTION D-D

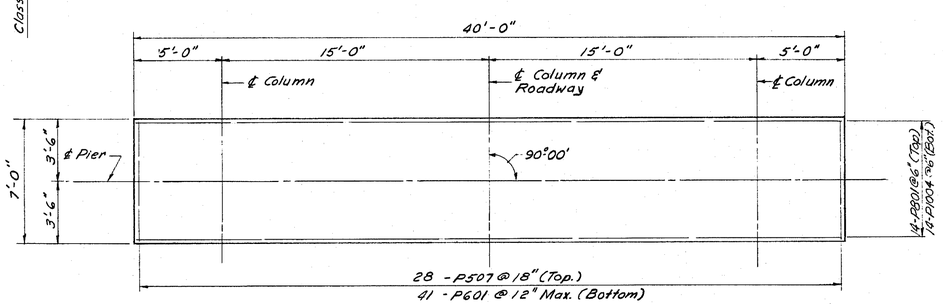


TYPICAL ANCHOR BOLT LAYOUT
(For Pier No. 2 Only)



TYPICAL ANCHOR BOLT LAYOUT
(For Pier No. 1 & Pier No. 3)

NOTE:
Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes.



FOOTING PLAN

TABLE OF ELEVATIONS

LOCATION	A	B	C	D	E
Pier No. 1	996.69	996.81	996.93	993.69	973.50
Pier No. 2	998.11	998.23	998.35	995.11	973.50
Pier No. 3	1000.13	1000.25	1000.37	997.13	973.50

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PIERS
BRIDGE NO TRU-I-80-1010
UNDER
HUBBARD-SHARON ROAD

TRUMBULL COUNTY — STA 540+29.38

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
C.S.F.	F.J.M.		G.M.B.		10-11-62	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5 (9) 245	

342
401

TRUMBULL COUNTY
TRU-I-80(8.90)

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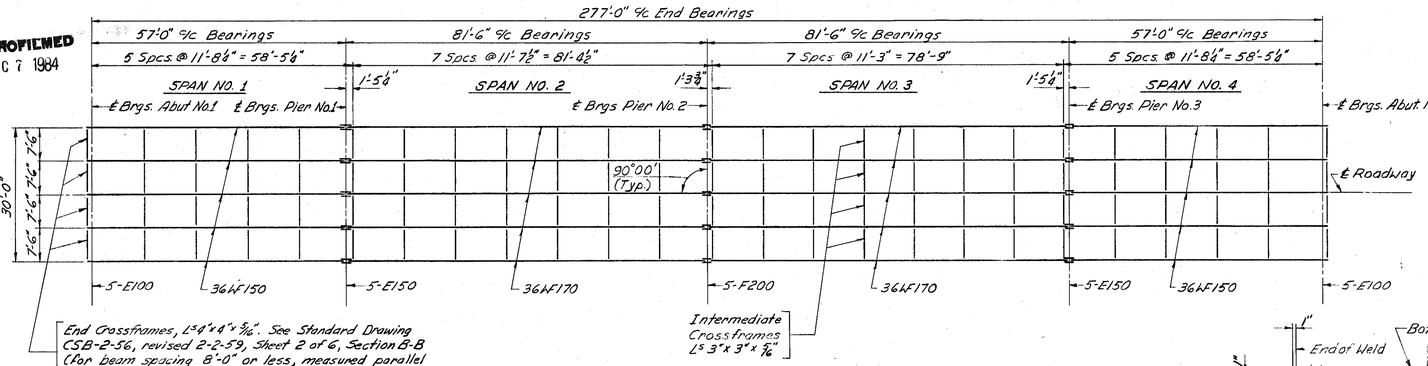


STEEL FRAMING PLAN

BEAM SPLICE WELDING PROCEDURE

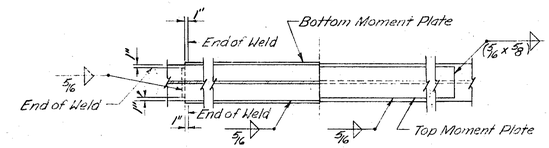
1. Raise end of beam at Pier No. 2 (1¾").
2. Butt-weld the beam flanges and web at Pier No. 1 using the following sequence: make one pass on each flange, then two on the web; repeat, using one pass at each location, until welds are completed.
3. Weld top and bottom flange moment plates at Pier No. 1.
4. Lower end of beam at Pier No. 2.
5. Make splices at Piers No. 2 and 3 in the same manner, raising the ends of the beams 2⅜" at Pier No. 3 and ⅝" at Abutment No. 2.

Cambering of beams is required in accordance with the following table:

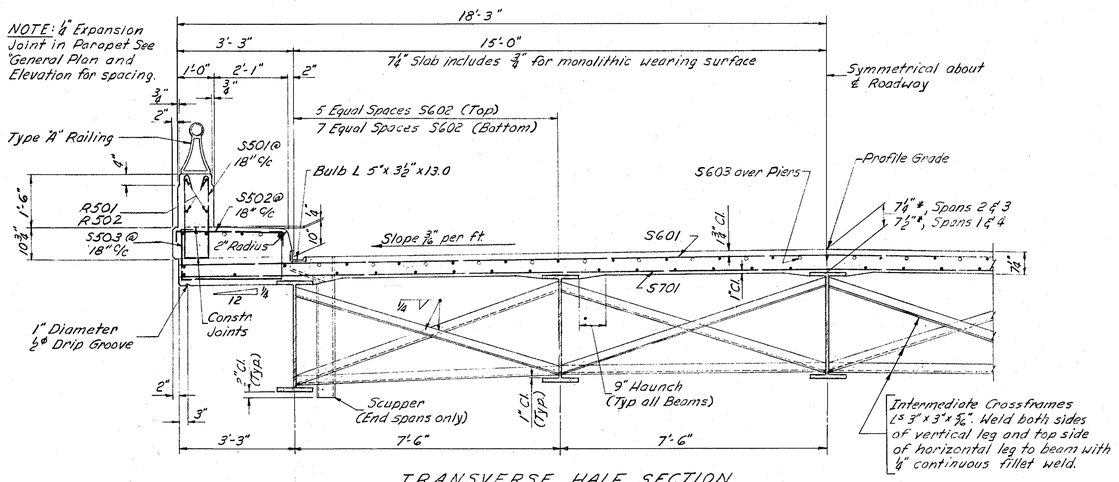
DEFLECTION AND CAMBER

LOCATION	OUTSIDE BEAMS SPANS 1 and 4	OUTSIDE BEAMS SPANS 2 and 3	INSIDE BEAMS SPANS 1 and 4	INSIDE BEAMS SPANS 2 and 3
Deflection due to weight of Steel	1/16"	1/8"	1/16"	1/8"
Deflection due to remaining Dead Load	1/4"	11/16"	3/16"	1/2"
Sum of Deflections	5/16"	13/16"	1/4"	5/8"
Required Camber	0	13/16"	0	13/16"

NOTE: Where no camber is specified beams shall be fabricated with any natural camber or bowed side up.

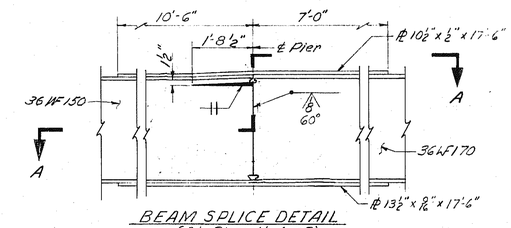


SECTION A-A

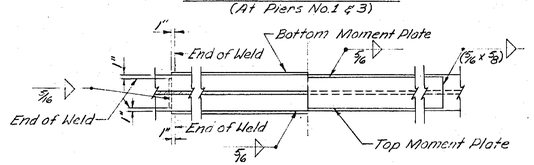


TRANSVERSE HALF SECTION

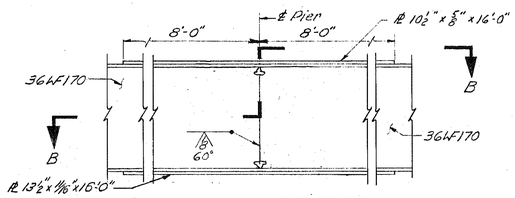
*This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.



BEAM SPLICE DETAIL
(At Piers No.1 & 3)



SECTION B-B



BEAM SPLICE DETAIL
(At Pier No. 2)

NOTES

- Refer to Standard Drawing CSB-2-56, Sheet 2 of 6, for details of end dam.
- Refer to Standard Drawing CSB-2-56, Sheet 3 of 6, for gutter, scuppers, and curb plate details.
- Refer to Standard Drawing FSB-1-62 for details of Bearings.
- Concrete and reinforcing steel above parapet construction joints included with railing for payment.
- Concrete shall be Class "C".
- Joints in End Dam: A welded butt joint in the end dam, at the center line of roadway, will be required for that portion of the end dam attached to the Superstructure. The portion attached to the backwall shall be placed in segments which shall be closely butted with one of the joints at the apex of the crown, but shall not be welded.
- Continuous Beam Splice: If 36WF170 beams at Pier No.2 have depths differing by more than ⅛", the depth of the smaller depth beam shall be increased by splitting the web as shown in Beam Splice Detail at Pier No. 1 and No. 3. The slope of the bent up flange shall not exceed ⅜" per foot.

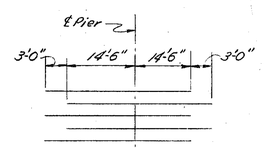
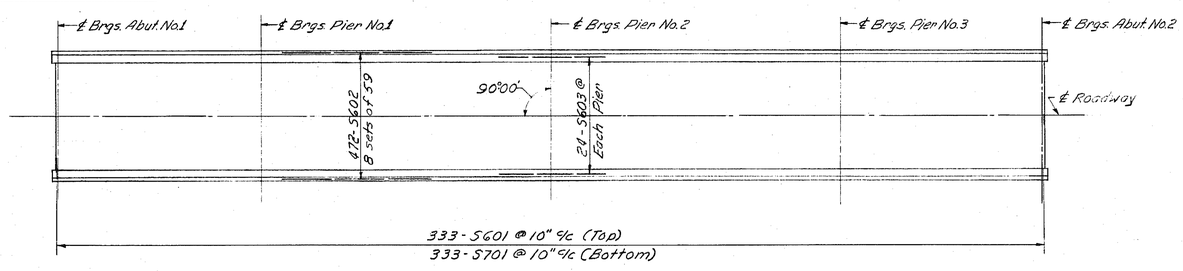
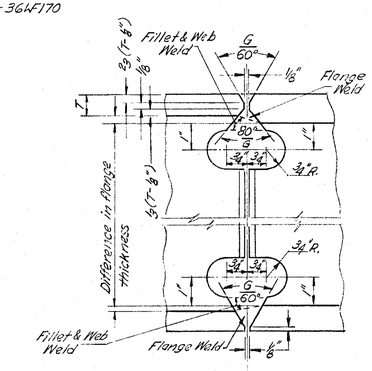


DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIERS

DECK SLAB HAUNCH: The haunch in the deck slab adjacent to the top of steel beams, which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12", except that the maximum slope shall not exceed 3 inches per foot. Payment for deck slab concrete shall be based on the 9" width.



DECK SLAB PLAN



END PREPARATION OF ROLLED BEAMS FOR FIELD WELDING

Note: Any roughness from burning shall be removed by grinding.

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SUPERSTRUCTURE
BRIDGE NO TRU-I-80-1010
UNDER
HUBBARD-SHARON ROAD

TRUMBULL COUNTY — STA 549+29.38

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
G.M.B.	F.J.M.		G.M.B.	R.R.	10-11-62	

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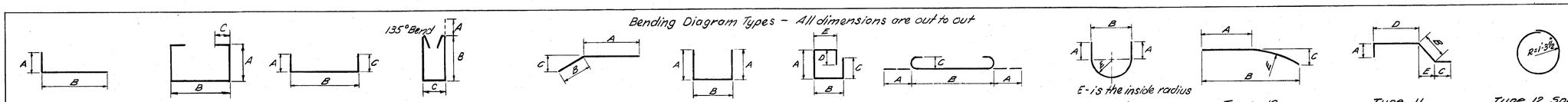
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

TRUMBULL COUNTY
TRU-I-80 (8.90)

REINFORCING STEEL BAR SCHEDULE

Bending Diagram Types - All dimensions are out to out



Type 1 Type 2 Type 3 Type 4 Type 5 Type 6 Type 7 Type 8 Type 9 Type 10 Type 11 Type 12 Spiral

PIERS

MARK	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
P1001	6	35'-1"	6	2'-10"	30'-0"				906
P1002	12	37'-2"	6	2'-10"	32'-1"				1,979
P1003	6	17'-0"	Str.						439
P1004	42	42'-4"	8	1'-5"	39'-6"	1'-0½"			7,650
P901	6	30'-0"	Str.						612
P902	6	31'-3"	Str.						638
P903	12	32'-6"	Str.						1,326
P904	36	20'-6"	Str.						2,509
P905	36	21'-11"	Str.						2,683
P906	36	23'-11"	Str.						2,927
P907	108	6'-1"	1	1'-3¼"	5'-1"				2,234
P908	12	9'-3"	9	2'-10"	2'-5¾"			1'-1¾"	377
P801	42	39'-6"	Str.						4,430
P601	123	7'-10"	8	8"	6'-6"	6"			1,447
P501	6	30'-0"	Str.						188
P505	6	7'-0"	9	1'-8"	2'-5¾"			1'-2⅛"	44
P506	108	6'-11"	6	2'-3"	2'-8"				779
P507	84	6'-6"	Str.						569

SPIRAL BARS

MARK	TOTAL	LENGTH	PITCH	NO. OF TURNS	CORE DIA.	WEIGHT
S401	3	17'-8"	4½"	50	32"	981
S402	3	19'-1"	4½"	54	32"	1,059
S403	3	21'-1"	4½"	59	32"	1,158
					TOTAL WEIGHT	34,935

ABUTMENTS

MARK	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A601	64	15'-0"	7	5'-11"	1'-5"	4'-7"	2'-9"	11"	1,442
A602	48	13'-11"	3	6'-7"	5'-5"	2'-3"			1,004
A501	28	7'-2"	8	7"	6'-0"	5¼			209
A502	48	7'-8"	1	1'-0"	6'-10"				384
A503	60	3'-0"	6	1'-5⅝"	2'-0"				188
A504	34	35'-10"	Str.						1271
A505	48	6'-4"	6	1'-7"	3'-5"				317
A506	56	7'-1"	6	2'-1"	3'-2"				414
A507	24	11'-5"	Str.						286
A508	24	10'-7"	6	4'-10"	1'-2"				265
A509	24	5'-4"	1	1'-3⅝"	4'-10"				133
A510	48	9'-2"	6	2'-0"	5'-5"				459
A511	16	7'-2"	Str.						120
A512	56	8'-9"	Str.						511
A513	8	3'-10"	Str.						32
A514	48	3'-6"	Str.						175
A515	28	12'-11"	Str.						377
A516	40	8'-5"	Str.						351
A517	32	4'-0"	Str.						134
A518	8	9'-1"	5	6'-5"	2'-8"	1'-4"			76
A519	8	12'-9"	Str.						106
A520	8	13'-0"	10	2'-5"	12'-9"	1'-11"		29'-9"	108
A521	4	10'-2"	Str.						42
A522	20	4'-3"	11	6"	1'-2"	0	2'-9"	3"	89
A523	20	3'-8"	1	6"	2'-11"				70
A524	8	4'-0"	11	6"	1'-2"	0	2'-6"	3"	33
A525	8	3'-1"	1	6"	2'-8"				26
A526	24	2'-8" to 4'-0"	11	6"	1'-2"	0	1'-2" to 2'-5"⊛	3"	83
A527	24	1'-9" to 3'-1"	1	6"	B⊛ 1'-5" to 2'-8"				60
A528	4	2'-3"	11	6"	1'-2"	0	9"	3"	9
A529	4	1'-3"	1	6"	11"				5
A530	40	5'-7"	4	5"	2'-2"	8"			233
R503	16	12'-7"	Str.	Included with Railing for Payment					
A801	16	37'-10"	Str.						1,616
								TOTAL WEIGHT	10,628

⊛ 4-each vary in increments of 3"

SUPERSTRUCTURE

MARK	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
S701	333	36'-2"	Str.						24,617
S601	333	36'-2"	Str.						18,089
S602	472	36'-5"	Str.						25,817
S603	72	32'-0"	Str.						3,461
S501	372	5'-7"	4	5"	2'-2"	8"			2,166
S502	372	3'-7"	6	7⅜"	2'-7"				1,390
S503	372	5'-11"	2	1'-3⅝"	2'-7"	7⅝"			2,296
R501	136	14'-7"	Str.	Included with Railing for Payment					
R502	16	12'-2"	Str.						

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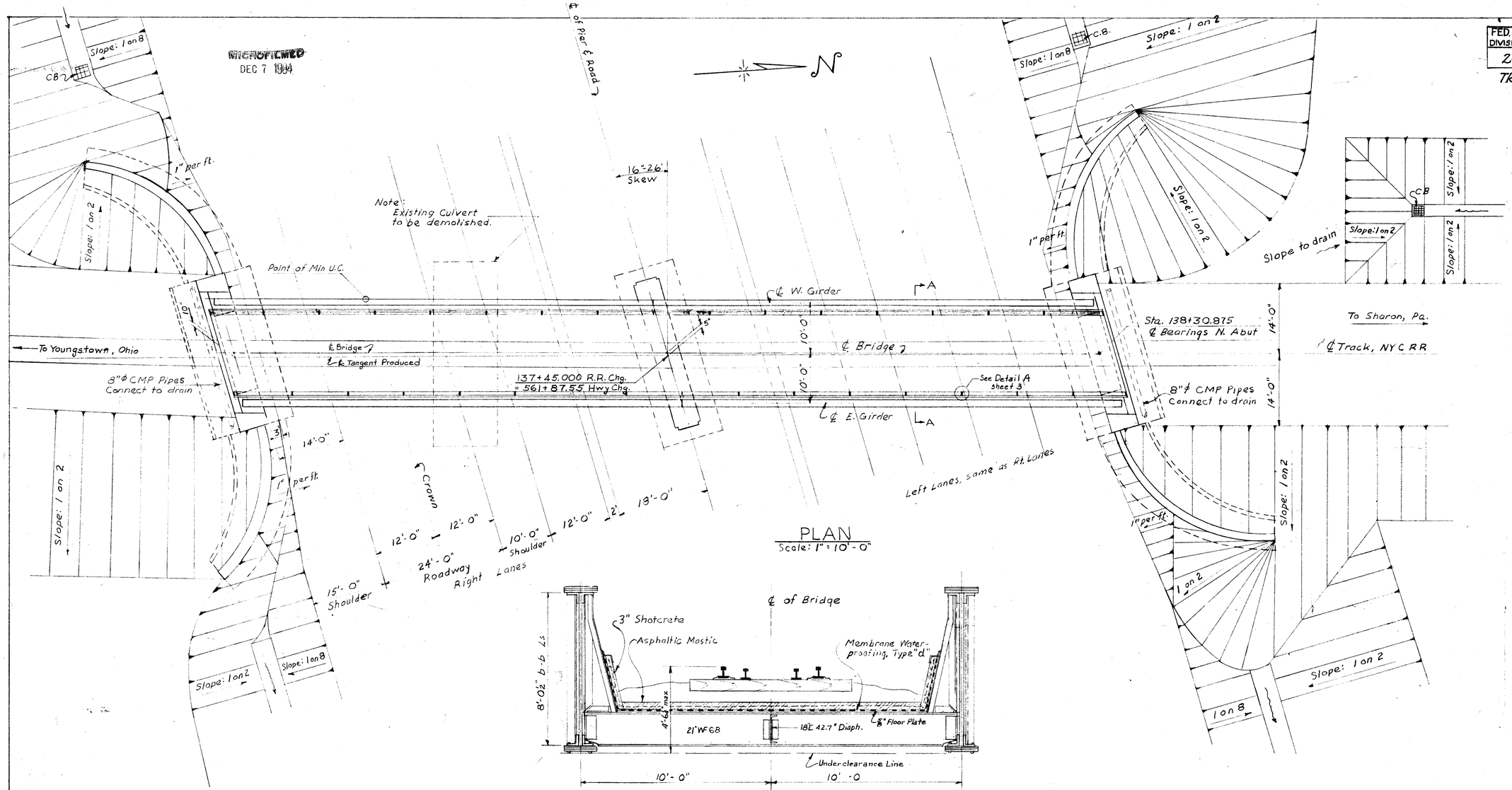
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

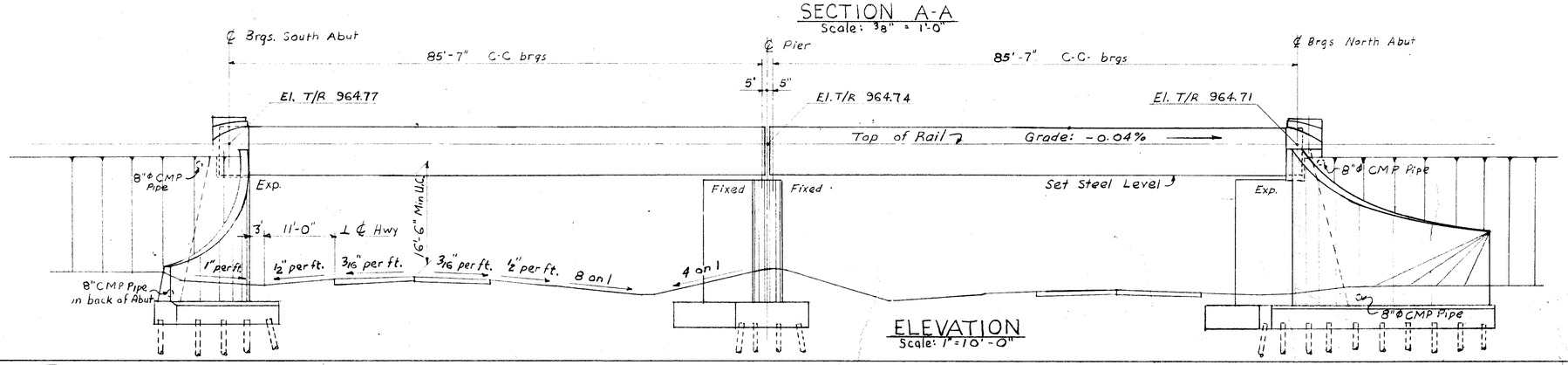
344
401

TRU-I-80-8.90



PLAN
Scale: 1" = 10'-0"

SECTION A-A
Scale: ⅜" = 1'-0"



ELEVATION
Scale: 1" = 10'-0"

GENERAL NOTES - SUPERSTRUCTURE

SPECIFICATIONS

Design and workmanship to be in accordance with the A.R.E.A. for steel railway bridges, 1961, and current revisions State of Ohio, Department of Highways, Construction and Material Specifications, January, 1961 and revisions thereof.

Supplementary Specifications No. S-103 and No. S-107 both revised February 16, 1955

RIVETS & OPEN HOLES

Rivets 7/8" ϕ. Open Holes 15/16" ϕ unless noted.

High stength steel bolts, ASTM Designation A-325 may be used for field connections.

ANCHOR BOLTS

Anchor bolts to be set in masonry before steel is erected.

WELDING

All welding shall be Class "A" in accordance with the Ohio State Specifications Section S-7.22.

PAINTING

All painting shall be in accordance with the Ohio State Specifications, Section S-8.04 Shop Painting and Section S-8.05 Field Painting. Shop Paint shall be red lead in accordance with Section M-99.

MEMBRANE WATERPROOFING

Type "d" waterproofing consists of four (4) layers of asphalt treated felt, One (1) layer of asphalt treated cotton fabric, and six (6) mopmings of asphalt, in accordance with supplemental specifications S-103.

WELDED WIRE FABRIC

To be lapped a minimum of six (6) inches and to be continuous through joint between mastic asphalt and shot crete protection.

ALIGNMENT

Steel - Tangent
Tracks- as shown

GRADE

Steel - level
Tracks- Grade - 0.04% to the North

For Substructure General Notes, See Sheet 5 of 12

Datum: Bench Mark No 9, El 963.516
180'± Rt. Sta 560+15±
RR spike in base of 24"ϕ
Wild Cherry Tree.

HWY. BR. No TRU-IR-80-1034

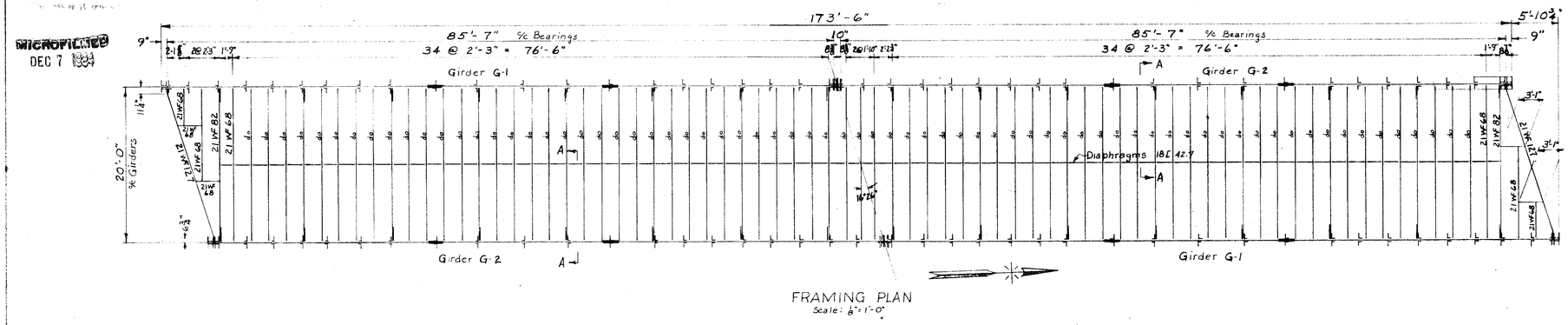
NEW YORK CENTRAL SYSTEM	DATE
BRIDGE #19½, SHARON BRANCH 1.3 MILES EAST OF HUBBARD, OHIO	JULY 12, 1962
OVER HWY. TRU-I-80 (8.90)	SCALE: As Noted
GENERAL PLAN	DRAWN BY: S.R.G.
ENGINEERING DEPT. NEW YORK, N.Y.	CHECKED BY: R.C. W.S.D.
ENGINEER OF STRUCTURES	DRAWING NO. 93546
APPROVED CHIEF ENGINEER	SHEET NO. 1 of 12

MICROFILMED
DEC 7 1984

FED.RD. DIVISION	STATE	PROJECT	
2	OHIO		

345
461

TRU-I-80-8.90

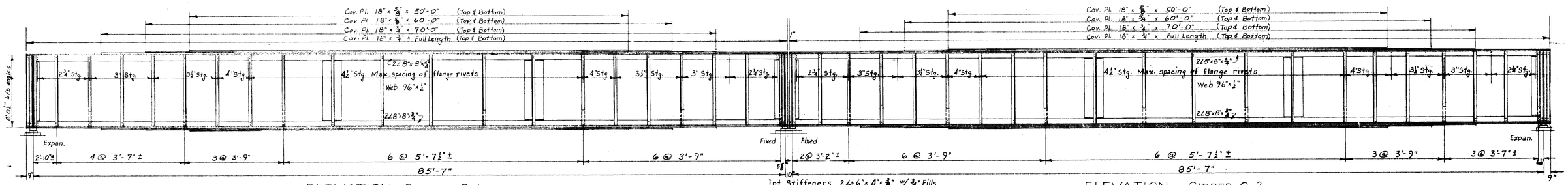


FRAMING PLAN
Scale: 1/8" = 1'-0"

ESTIMATED QUANTITIES - SUPERSTRUCTURE		
ITEM	DESCRIPTION	TOTAL-NET
S-4	Welded Wire Fabric	4020 S.F.
S-6	Pneumatically placed mortar (Shotcrete)	1050 S.F.
S-8	Field painting - Structural Steel	502,000 lbs.
S-9	Lead flashing, 9" wide, 7½#/lf	15 L.F.
S-9	½" Premoulded Joint Material	20 S.F.
S-9	1" Premoulded Joint Material	15 S.F.
S-103	Membrane Waterproofing, Type 'd'	430 S.Y.
* Special	Asphalt Mastic Deck Cover	35 C.Y.
S-107	Structural Steel	502,000 lbs

For Estimated Substructure Quantities, see Sheet No. 5

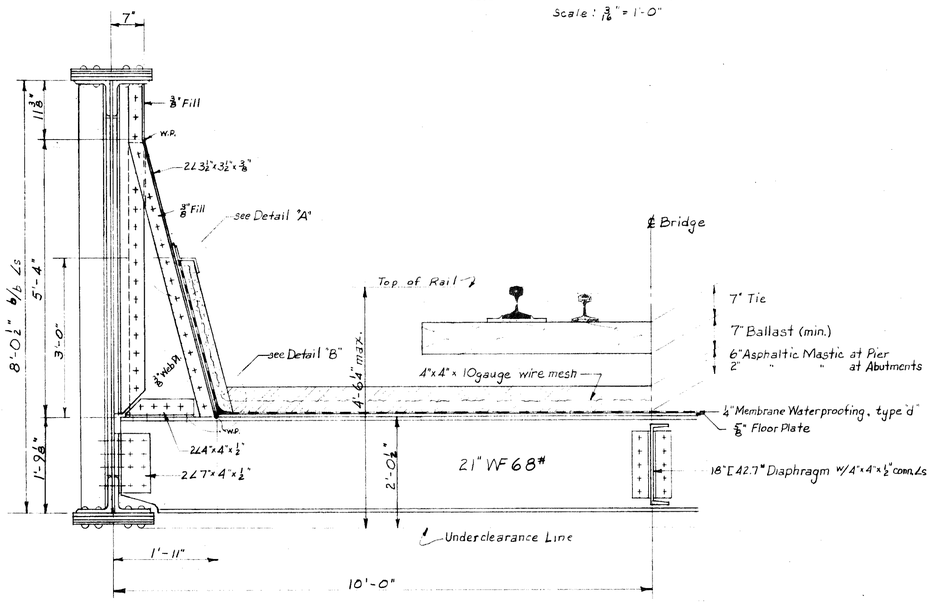
* Materials and construction as per current A.R.E.A Specifications (Part 2 - Membrane Waterproofing) for Asphalt Mastic



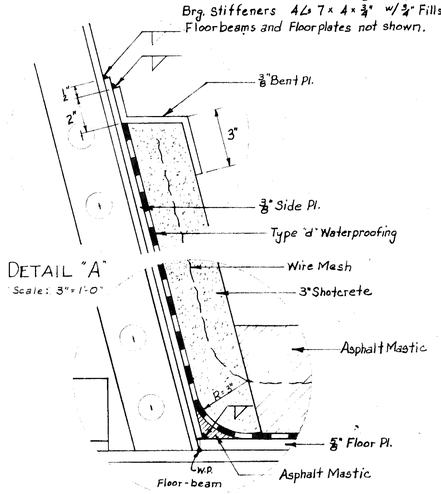
ELEVATION - GIRDER G-1
Scale: 3/16" = 1'-0"

Int. Stiffeners 2L 6" x 4" x 3/8" w/ 3/4" Fills
Brg. Stiffeners 4L 7" x 4" x 3/8" w/ 3/4" Fills
Floorbeams and Floorplates not shown.

ELEVATION - GIRDER G-2
Scale: 3/16" = 1'-0"

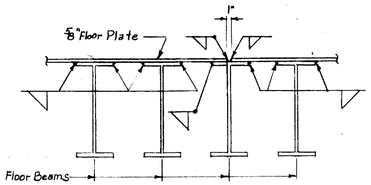


SECTION A-A
Scale: 3/4" = 1'-0"



DETAIL "A"
Scale: 3" = 1'-0"

DETAIL "B"
Scale: 3" = 1'-0"



Floor Beams to be shop welded to 5/8" Floor Plate in groups of 3 beams
All welds to be 5/16" fillet unless noted.

FLOOR PLATE CONNECTION
Scale: 3/4" = 1'-0"

COMPUTATION

Design: In accordance with A.R.E.A. 1961
Live Load - Cooper's E-72. Diesel Impact

Intermediate Floorbeam - Span 20'-0"

	Moments	Shears
D.L.	30.0 'k	5.6 ^k
L.L.	138.0	19.2
I	61.0	8.4
Total	229.0 'k	33.2 ^k

Section: 21" WF 68# & 27" x 5/8" deck Pl.
Gross I = 2560 in⁴ Net I = 2375 in⁴
Gross S.M. = 415 in³ Net S.M. = 153 in³

Stresses	Actual	Allowable
Compression	6,750 psi	18,000 psi
Tension	18,000 psi	18,000 psi

End Floorbeam - Design Span

	Moments	Shears
D.L.	50.5 'k	8.0 ^k
L.L.	265.5	33.5
I	117.0	14.8
Total	433.0 'k	56.3 ^k

Section 21" WF 127# & 21" x 5/8" deck Pl.
Gross I = 4178 in⁴ Net I = 3965 in⁴
Gross SM = 497 in³ Net SM = 295 in³

Stresses	Actual	Allowable
Compression	10,500 psi	18,000 psi
Tension	17,600 psi	18,000 psi

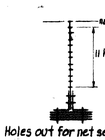
Girder 8'-0½" b-b Ls Span = 85'-7"

	Moments	Shears
D.L.	3200 'k	146 ^k
L.L.	4608	249
I	1465	79
Total	9273 'k	474 ^k

Section
1 Web 96" x ½"
4 Ls 8" x 8" x 3/4"
4 Cov. Pl. 18" x 5/8"
4 Cov. Pl. 18" x 5/8"

Gross I = 377,700 Net I = 322,400
Gross SM = 7390 Net SM = 6320

Stresses	Actual	Allowable
Compression	15,100 psi	17,700 psi
Tension	17,600 psi	18,000 psi
Shear in web	9,900 psi	11,000 psi



Holes out for net section

NOTE:
All welds to be 5/16" fillet unless noted.

HIGH STRENGTH STEEL BOLTS
High strength bolts that are used as fitting-up bolts may be used in the final assembly if, after all bolts are placed and tightened, the fitting-up bolts are subsequently loosened and retightened by the turn-of-nut method.

HWY. BR. No. TRU-R-80-1034

NEW YORK CENTRAL SYSTEM	DATE
BRIDGE #19½, SHARON BRANCH 1.3 MILES EAST OF HUBBARD, OHIO	7/12/62
	SCALE: as noted
OVER HWY. TRU-I-80 (8.90)	DRAWN BY: OJD
SUPERSTRUCTURE - PLAN	CHECKED BY: W.S.D.
ENGINEERING DEPT. NEW YORK, N.Y.	DRAWING NO. 93546
John L. Buckel ENGINEER OF STRUCTURES	SHEET NO. 2 OF 12
APPROVED E. Schendorf CHIEF ENGINEER	

93240

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DEC 7 1964

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TRU-I-80-8.90

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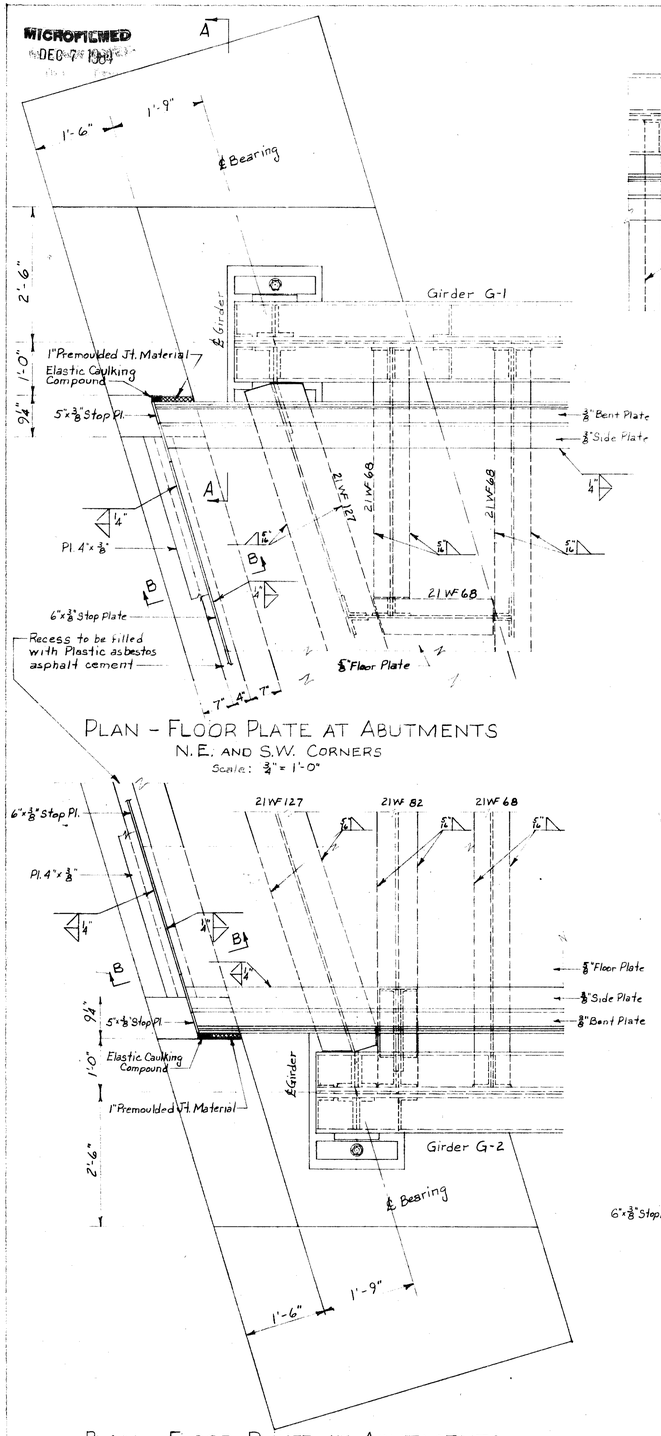
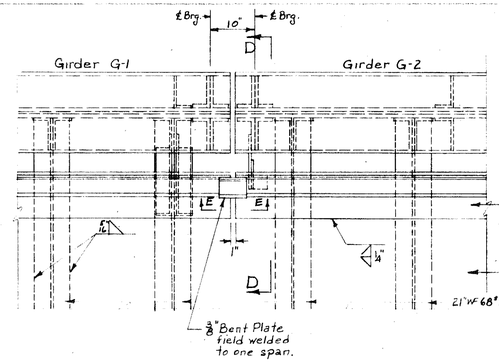
401

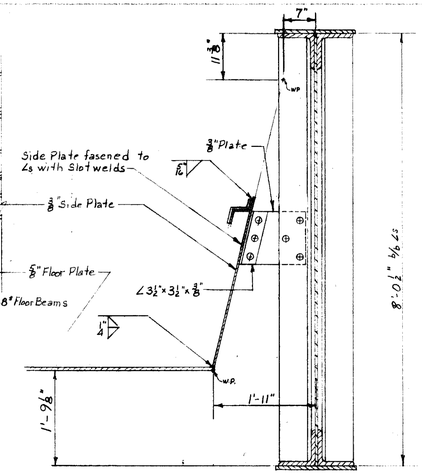
03240



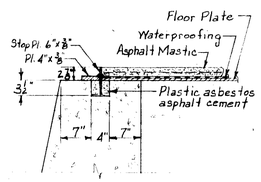
PLAN - FLOOR PLATE AT ABUTMENTS
N.E. AND S.W. CORNERS
Scale: ¾" = 1'-0"



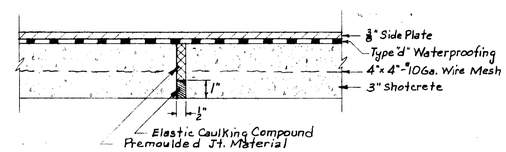
PLAN - FLOOR PLATE AT PIER
Scale: ¾" = 1'-0"



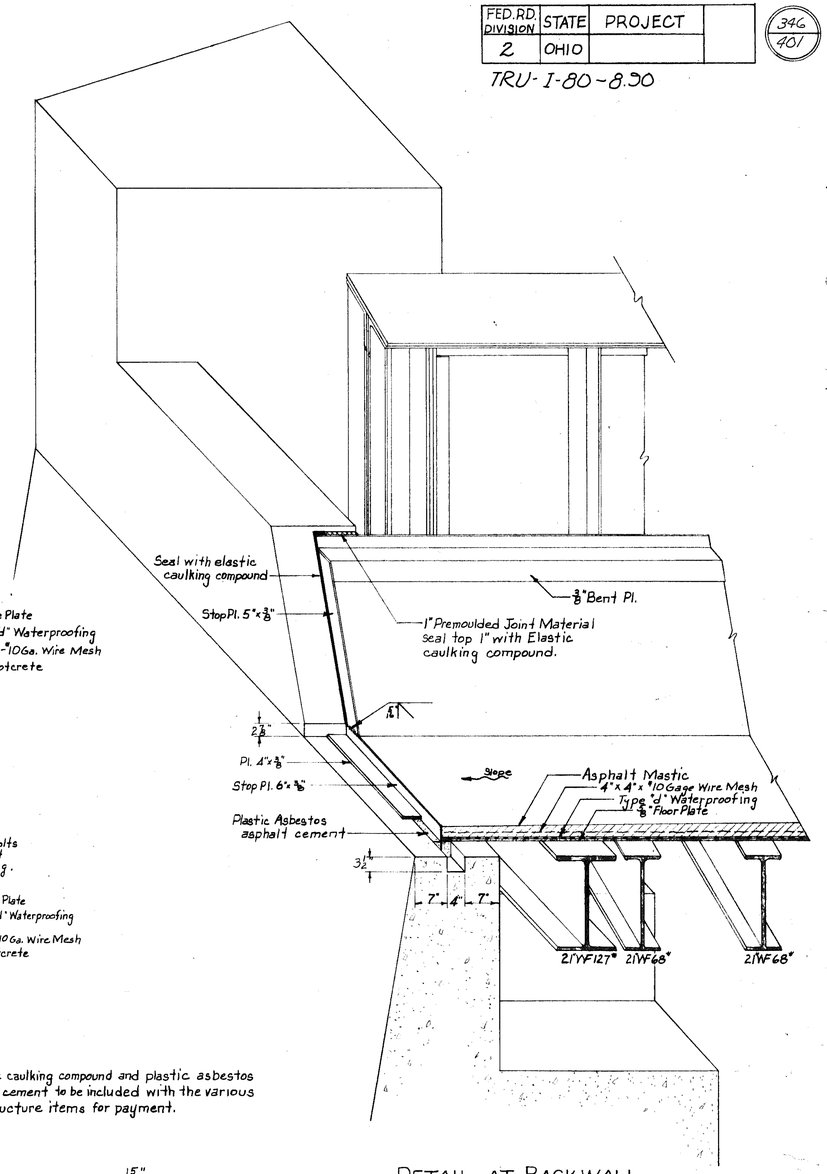
SECTION D-D
Scale: ¾" = 1'-0"



SECTION B-B
Scale: ¾" = 1'-0"

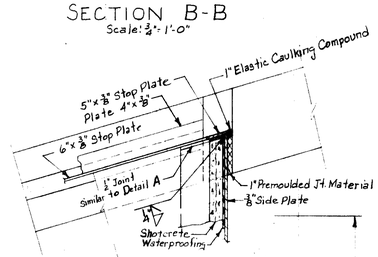


DETAIL A
For location, see sheet 1
Scale: 3" = 1'-0"

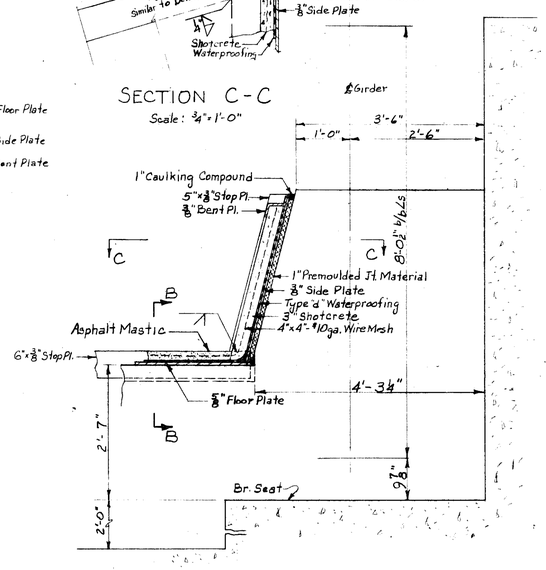


DETAIL AT BACKWALL
ISOMETRIC VIEW
Scale: ¾" = 1'-0"
HWY. BR. Nº TRU-IR-80-1034

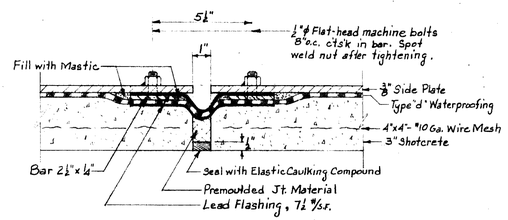
PLAN - FLOOR PLATE AT ABUTMENTS
N.W. AND S.E. CORNERS
Scale: ¾" = 1'-0"



SECTION C-C
Scale: ¾" = 1'-0"

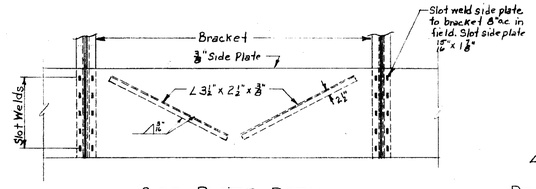


SECTION A-A
Scale: ¾" = 1'-0"

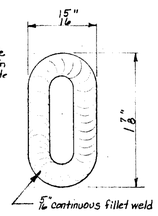


SECTION E-E
Scale: 3" = 1'-0"

NOTE:
Elastic caulking compound and plastic asbestos asphalt cement to be included with the various superstructure items for payment.



SIDE PLATE DETAIL
Scale: ⅜" = 1'-0"



DETAIL - SLOTWELD
Full Scale

NEW YORK CENTRAL SYSTEM	DATE
BRIDGE #19½, SHARON BRANCH 1.3 MILES EAST OF HUBBARD, OHIO	7/12/62
	SCALE
	as noted
OVER HWY TRU-I-80 (8.90)	DRAWN BY
SUPERSTRUCTURE - DETAILS	OJD
	CHECKED BY
ENGINEERING DEPT. NEW YORK, N.Y.	W.S.D.
John L. Bachel ENGINEER OF STRUCTURES	DRAWING NO.
APPROVED E. Lefebvre CHIEF ENGINEER	93546
	SHEET NO.
	3 OF 12

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DEC 7 1984

FED. RD DIVISION	STATE	PROJECT	
2	OHIO		

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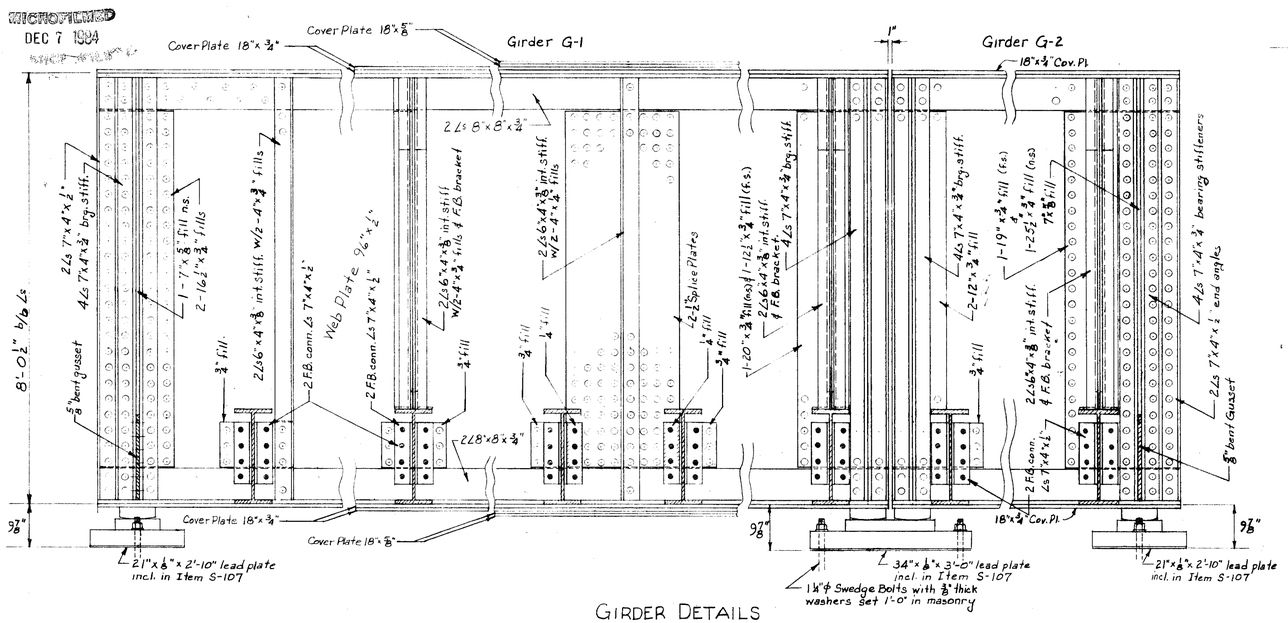
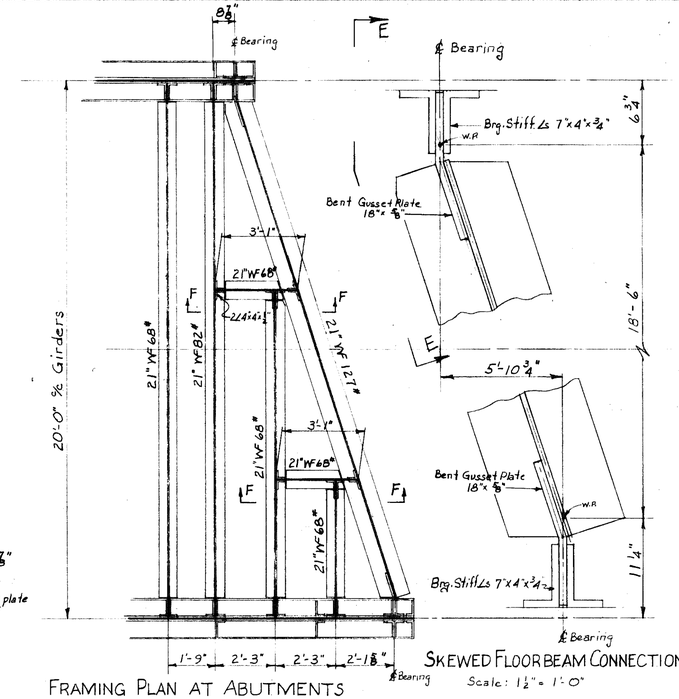
TRU-I-80-8.90

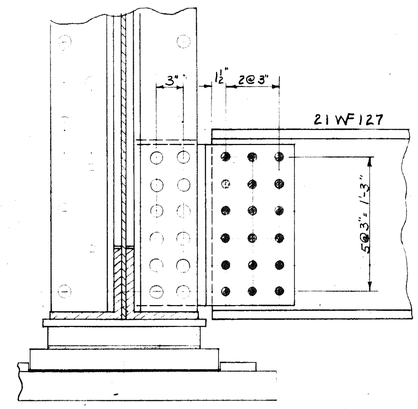


GIRDER DETAILS
Scale: 3/4" = 1'-0"

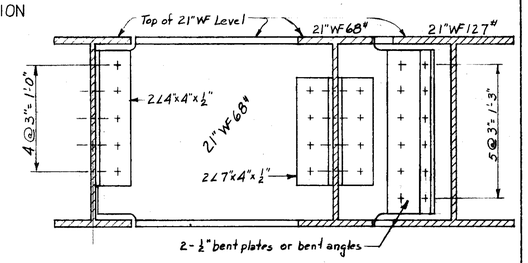


FRAMING PLAN AT ABUTMENTS
Scale: 3/8" = 1'-0"

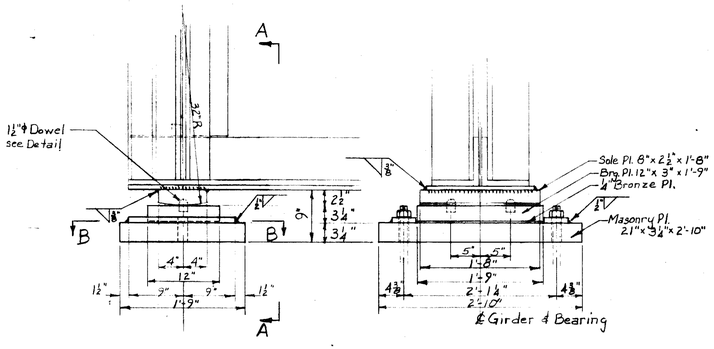
SKEWED FLOORBEAM CONNECTION
Scale: 1 1/2" = 1'-0"



SECTION E-E
Scale: 1 1/2" = 1'-0"

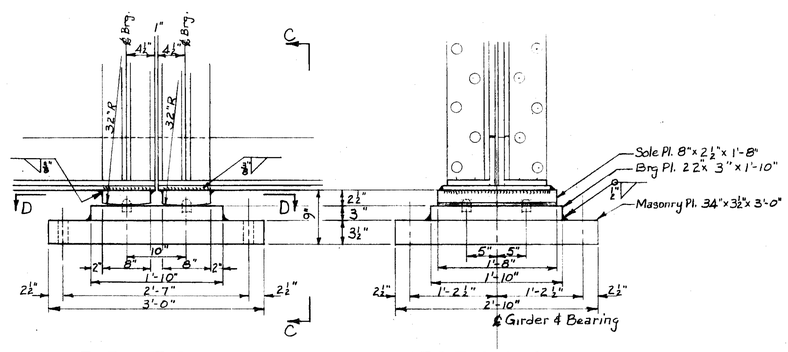


SECTION F-F
Scale: 1 1/2" = 1'-0"



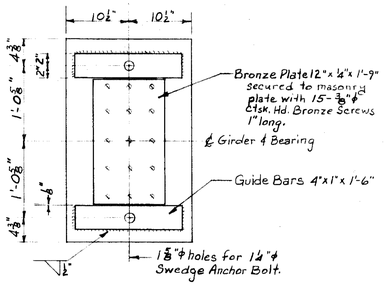
ELEVATION

SECTION A-A



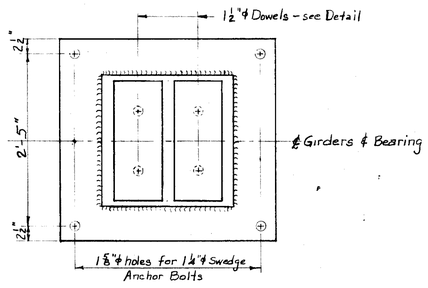
ELEVATION

SECTION C-C

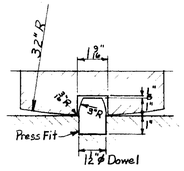


SECTION B-B

DETAILS — EXPANSION BEARING
Scale: 1" = 1'-0"



SECTION D-D



DOWEL DETAIL
Scale: 3" = 1'-0"

DETAIL - FIXED BEARINGS
Scale: 1" = 1'-0"

For General Notes see Sheet 1.

HWY. BR. No. TRU-IR-80-1034

NEW YORK CENTRAL SYSTEM	DATE
BRIDGE #19 1/2, SHARON BRANCH 1.3 MILES EAST OF HUBBARD, OHIO	7/12/62
	SCALE
	as noted
OVER HWY. TRU-I-80 (8.90)	DRAWN BY
SUPERSTRUCTURE - DETAILS	OJD
	CHECKED BY
ENGINEERING DEPT. NEW YORK, N.Y.	W.S.D.
John L. Beckel, ENGINEER OF STRUCTURES	DRAWING NO.
APPROVED E. Ackerman, CHIEF ENGINEER	93546
	SHEET NO.
	4 OF 12

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DEC 7 1984

FED.RD DIVISION	STATE	PROJECT	
2	OHIO		

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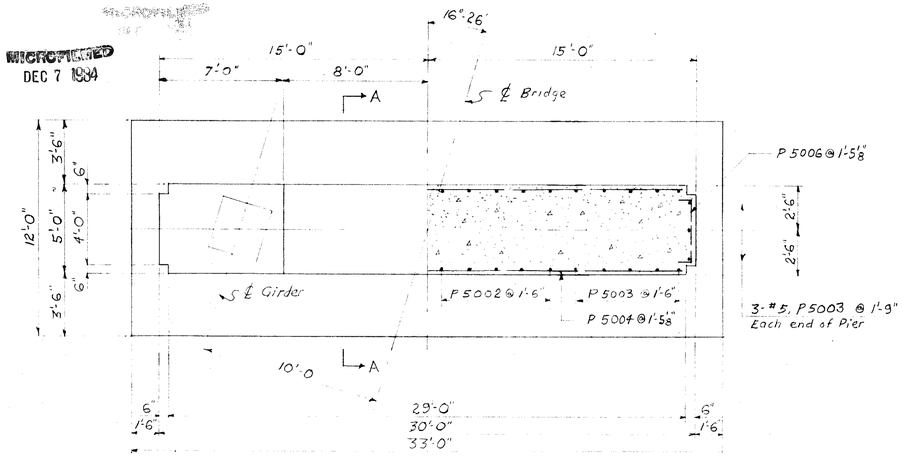
401

TRU-I-80-8.90



HALF PLAN
Scale: ¼" = 1'-0"

HALF SECTIONAL PLAN
Scale: ¼" = 1'-0"

Note:
Area of bridge seat to be poured ½" high and bush hammered to El. 959.71

NET QUANTITY ESTIMATE FOR SUBSTRUCTURE

ITEM	DESCRIPTION	UNIT	SOUTH ABUT.	SO. EAST WING WALL	SO. WEST WING WALL	NORTH ABUT	NO. EAST WING WALL	NO. WEST WING WALL	PIER	TOTAL
E-2	Cofferdams, Cribs, & Sheeting	LS								
E-2	Unclassified Excavation	CY	93	103	124	123	174	140	38	795
S-1	Class "E" Concrete, Footings	CY	56	33	44	58	49	44	51	341
S-1	Class "E" Conc., Above Ftgs, Abuts & W. Wall	CY	182	63	80	200	104	80	—	709
S-1	Class "E" Conc., Above Ftgs, Pier	CY	—	—	—	—	—	—	94	94
S-3	Waterproofing, Type "A"	SY	76	48	59	81	71	55	—	390
S-4	Reinforcing Steel	LB	4210	2310	2480	5090	2880	2550	4040	23560
S-9	1" Premoulded Exp. Joint Filler, (Cork)	SF	186	—	—	206	—	—	—	392
S-9	8" Lead Waterstop, 7½ lbs/SF	LF	46	—	—	46	—	—	—	92
S-9	15" Lead Waterstop 7½ lbs/SF	LF	43	—	—	46	—	—	—	89
S-18	12"ϕ C.I.P. Reinforced Concrete Piles	LF	990	510	600	1530	990	900	1760	7280
S-29	Porous Backfill	CY	38	24	29	40	36	28	—	195
S-29	8"ϕ Perf. Bit. Coated Corr. Metal Pipe *	LF	64	23	30	64	30	31	—	242
S-29	8"ϕ Bitum. Coated Corr. Metal Pipe*	LF	33	20	—	36	30	—	—	119
S-16	First Test Pile	LS								

* Including Specials

Note:
For estimate of Superstructure quantities, see Sh. 2 of 12.

GENERAL NOTES - SUBSTRUCTURE

SPECIFICATIONS

STATE OF OHIO, DEPARTMENT OF HIGHWAYS. "CONSTRUCTION AND MATERIAL SPECIFICATIONS," JANUARY 1, 1965, AND REVISIONS THEREOF.

CONCRETE

ALL CONCRETE TO BE CLASS "A" EXCEPT FOR CONCRETE IN THE CAST IN PLACE PILES. IF ADDITIONAL JOINTS ARE APPROVED BY THE ENGINEER, THEY SHALL BE KEYED AND SHALL BE PROTECTED BY LEAD WATER STOPS IN THE SAME MANNER AS SHOWN FOR EXPANSION JOINTS. ALL EXPOSED HORIZONTAL SURFACES OF EXPANSION JOINTS SHALL BE SEALED WITH SELF HEALING BRIDGE CEMENT.

REINFORCING STEEL

ALL REINFORCING BARS TO BE INTERMEDIATE GRADE BILLET STEEL, OF A DEFORMED TYPE, AND SHALL MEET THE REQUIREMENTS OF THE A.S.T.M. DESIGNATION A-305.

SURFACE FINISH OF CONCRETE

FORM LINER SHALL BE USED ON ALL EXPOSED SURFACES OF ABUTMENTS, WINGWALLS, PILES, AND THE PIER. THESE SURFACES SHALL BE GROUT CLEANED ACCORDING TO ITEM S 1.22. THE RUBBING OF ANY CONCRETE SURFACE WILL NOT BE PERMITTED.

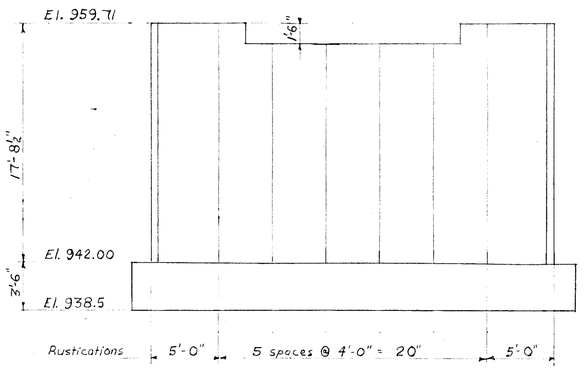
DAMPPROOFING

DAMPPROOFING TO BE TYPE "A" WATERPROOFING, AND TO BE APPLIED TO THE BACKS OF ABUTMENTS AND WINGWALLS ABOVE FOOTINGS.

PILES

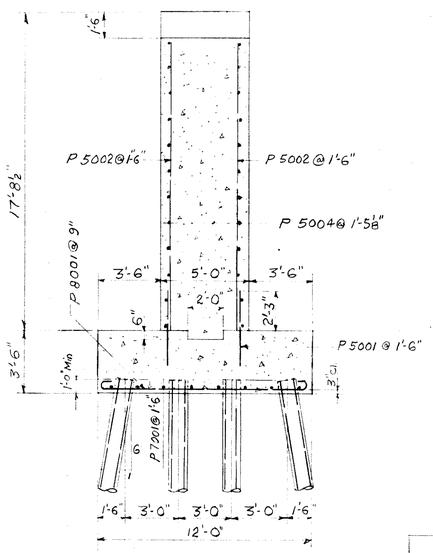
PILES TO BE OF THE CAST IN PLACE TYPE, WITH STEEL REINFORCING. PILES SHALL BE DRIVEN TO MINIMUM BEARING CAPACITY OF 40 TONS AT THE PIER AND ABUTMENTS. DESIGN AND DRIVING TO BE IN ACCORDANCE WITH THE STANDARDS OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS.

For Superstructure notes, see Sh. 1 of 12.

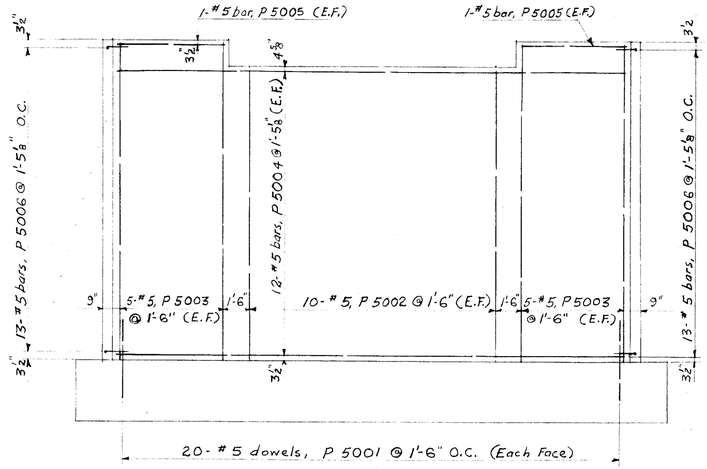


ELEVATION
Scale: 3/16" = 1'-0"

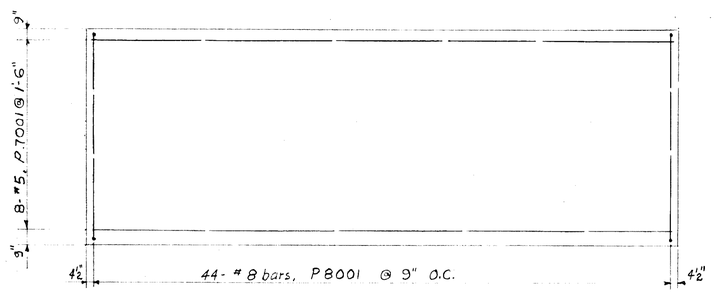
Note:
For Rustication detail, see Sh. 6 of 12



SECTION A-A
Scale: ¼" = 1'-0"



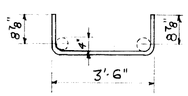
REINFORCING BAR DIAGRAM
Scale: ¼" = 1'-0"



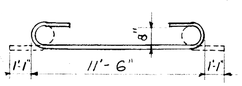
PLAN- REINFORCEMENT IN FOOTING
Scale: ¼" = 1'-0"

BAR SCHEDULE - PIER

QUANTITY	MK	SIZE	LENGTH	REMARKS		
44	P8001	#8	13'-8"	Bent	Footing	Trans.
8	P7001	#7	32'-6"	Straight	do	Long.
40	P5001	#5	4'-11"	do	Stem	dowels
20	P5002	↑	16'-0"	do	do	Vert.
26	P5003		17'-6"	do	do	do
24	P5004		28'-8"	do	do	Horiz.
4	P5005	↓	6'-2"	do	do	do
26	P5006	#5	5'-6"	Bent	do	do



BAR P5006



BAR P 8001

HWY. BR. No TRU. 80-1034

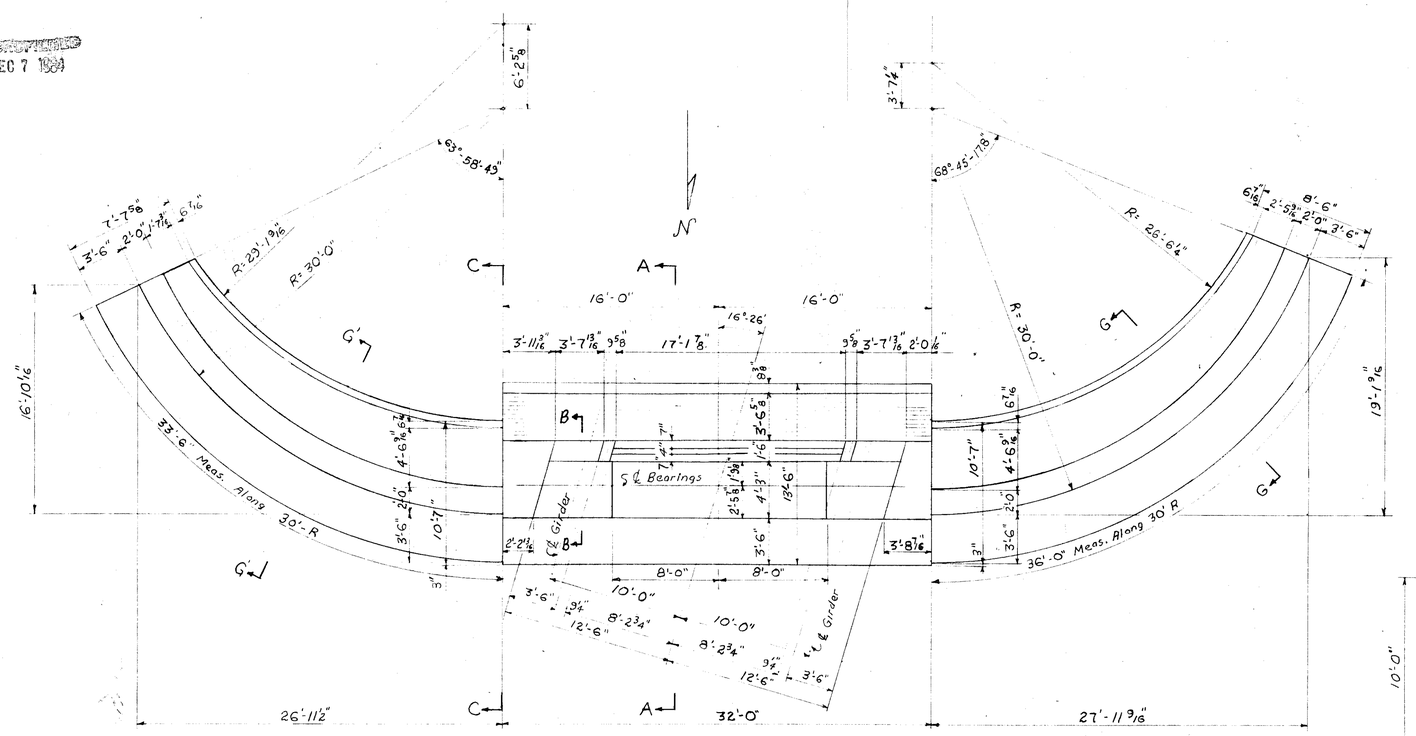
NEW YORK CENTRAL SYSTEM	DATE
BRIDGE #19½, SHARON BRANCH 1.3 MILES EAST OF HUBBARD OHIO	7/12/62
	SCALE: As Noted
OVER TRU-I-80 (8.90) MASONRY PLAN PIER	DRAWN BY: SRG
	CHECKED BY: R.C.
ENGINEERING DEPT. NEW YORK, N.Y.	DRAWING NO. 93546
ENGINEER OF STRUCTURES / APPROVED CHIEF ENGINEER	SHEET NO. 5 of 12

MICROFILMED
DEC 7 1994

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TRU-I-80-8.90

349/401

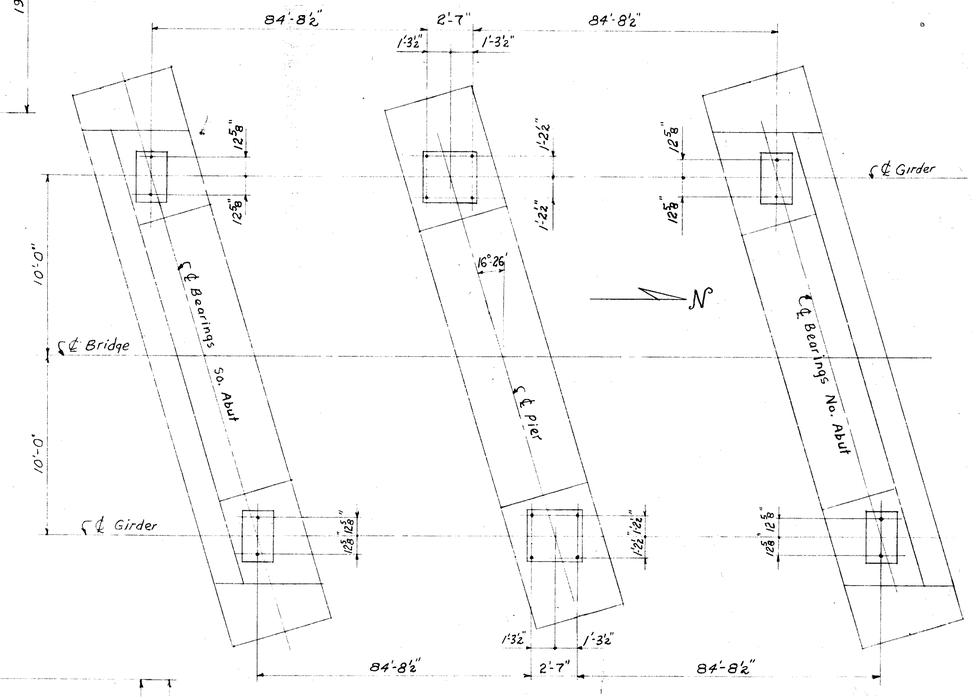


PLAN
Scale: 3/16" = 1'-0"

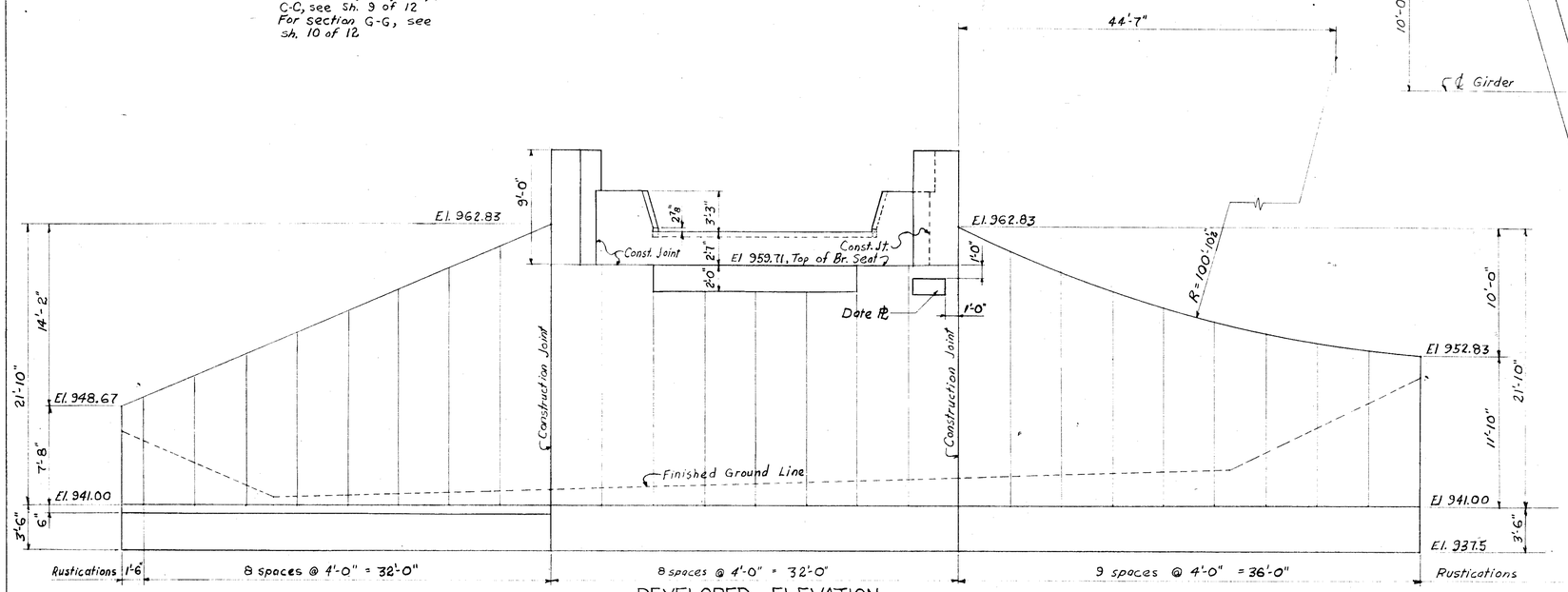
Notes

Area of bridge seat to be poured 1/2" high and bush hammered to El. 959.71

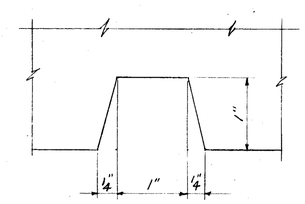
For sections, A-A, B-B, & C-C, see Sh. 9 of 12
For section G-G, see sh. 10 of 12



ANCHOR BOLT PLAN
Scale: 1/4" = 1'-0"



DEVELOPED ELEVATION
Scale: 3/16" = 1'-0"



RUSTICATION DETAIL
Scale: Full Size

HWY. BR. Nº TRU-IR-80-1034

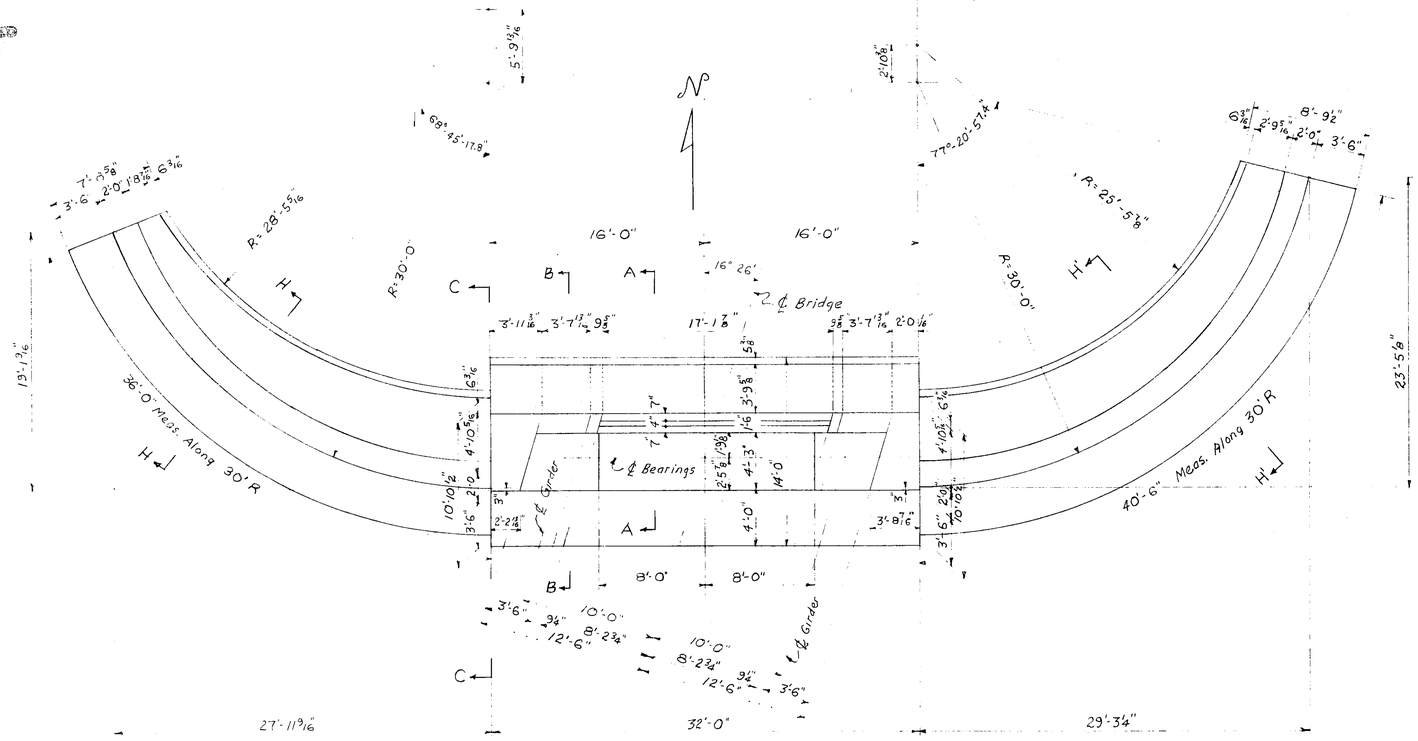
NEW YORK CENTRAL SYSTEM	DATE 7/12/62
BRIDGE #19 1/2, SHARON BRANCH 1.3 MILES EAST OF HUBBARD OHIO	SCALE As Shown
OVER TRU-I-80 (8.90) MASONRY PLAN SOUTH ABUTMENT	DRAWN BY SRG
ENGINEERING DEPT. NEW YORK, N.Y.	CHECKED BY R.C
ENGINEER OF STRUCTURES	DRAWING NO. 93546
APPROVED CHIEF ENGINEER	SHEET NO. 6 of 12

MICROFILMED
DEC 7 1984

FED.RD. DIVISION	STATE	PROJECT	
2	OHIO		

350
401

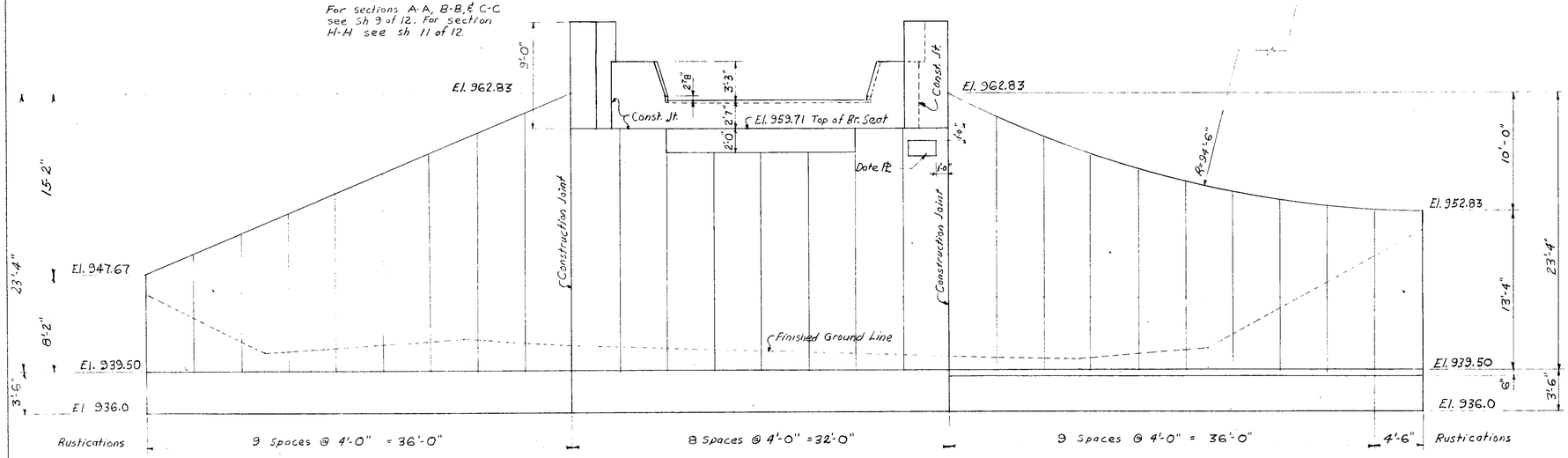
TRU-I-80-8.90



PLAN
Scale: 3/16"=1'-0"

Note:
Area of bridge seat to be poured 2" high and bush hammered to El. 959.71

For sections A-A, B-B, & C-C see Sh 9 of 12. For section H-H see sh 11 of 12.



DEVELOPED ELEVATION
Scale: 3/16"=1'-0"

Note:
For Rustication detail, see sh 6 of 12.

HWY. BR. No TRU-1R-80-1034

NEW YORK CENTRAL SYSTEM	DATE
BRIDGE #19½, SHARON BRANCH 1.3 MILES EAST OF HUBBARD, OHIO	7/12/62
	SCALE: As Noted
OVER TRU-I-80 (8.90) MASONRY PLAN NORTH ABUTMENT	DRAWN BY: SRG
	CHECKED BY: R.C.
ENGINEERING DEPT. NEW YORK, N.Y.	DRAWING NO. 93546
ENGINEER OF STRUCTURES	SHEET NO. 7 of 12
APPROVED CHIEF ENGINEER	

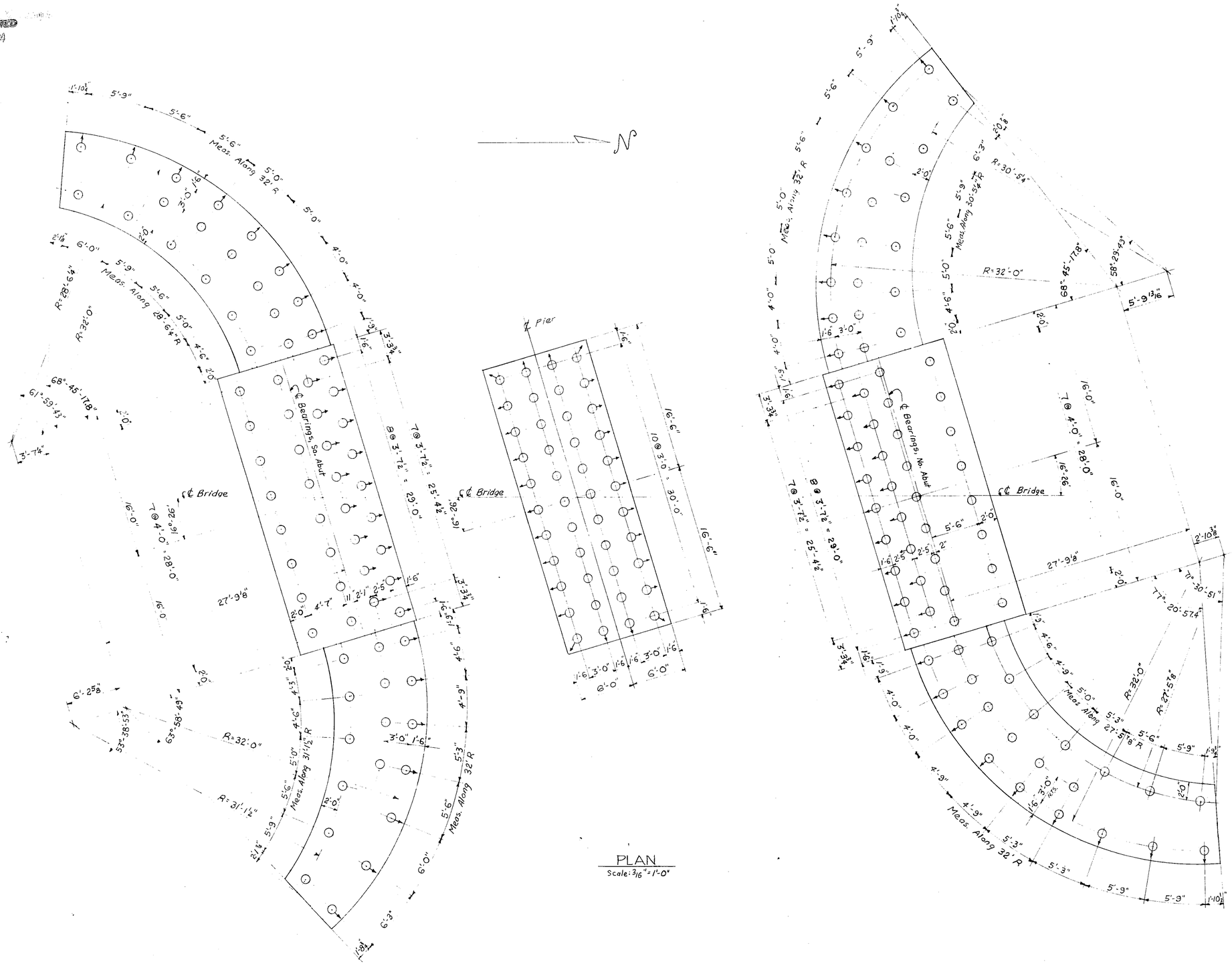
Mega-Flex Tracing

MICROFILMED
DEC 7 1964

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TRU-I-80-8.90

351/401



PLAN
Scale: 3/16" = 1'-0"

PILING NOTES

Type of Piles:
All piles to be 12"ϕ C.I.P. Reinforced Concrete Piles.
Design Capacity:
40 Tons
Estimated Average Length:
South Abutment - 30'
Pier - 40'
North Abutment - 45'
Battered Piles:
○ Indicates battered pile in indicated direction
↑ to be battered 1 on 4

HWY. BR. Nº TRU-IR-80-1034

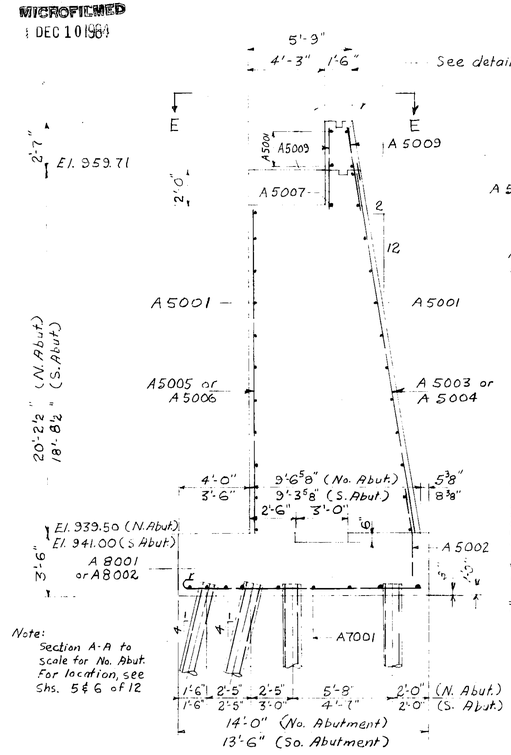
NEW YORK CENTRAL SYSTEM	DATE 7/12/62
BRIDGE #19½, SHARON BRANCH 1.3 MILES EAST OF HUBBARD, OHIO	SCALE As Shown
OVER TRU-I-80 (8.90) PILING PLAN	DRAWN BY SRG
ENGINEERING DEPT. NEW YORK, N.Y.	CHECKED BY R.C.
John L. Backes, ENGINEER OF STRUCTURES	DRAWING NO. 93546
APPROVED C. E. Schendor, CHIEF ENGINEER	SHEET NO. 8 of 12

MICROFILMED
DEC 10 1964

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

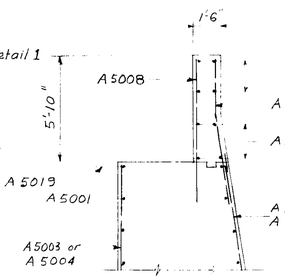
TRU-I-80-8.90

352
401



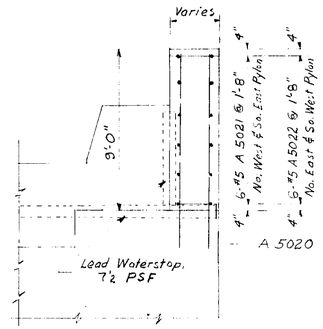
SECTION A-A
Scale: ¼" = 1'-0"

Note:
Section A-A to scale for No. Abut. For location, see Shs. 5 & 6 of 12

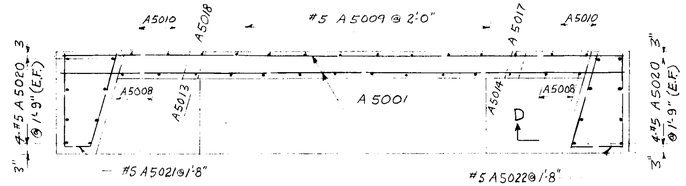


SECTION B-B
Scale: ¼" = 1'-0"

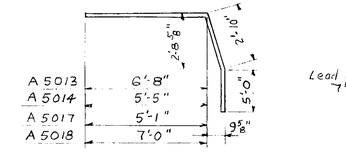
Note:
For location of section B-B see Shs. 5 & 6 of 12.



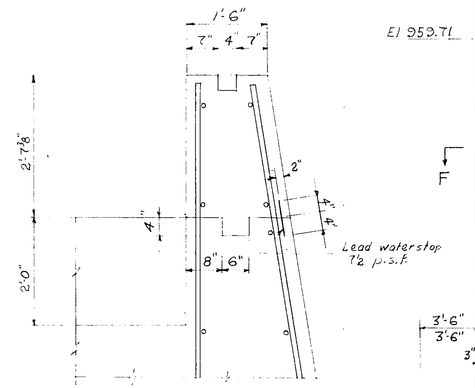
SECTION D-D
Scale: ¼" = 1'-0"



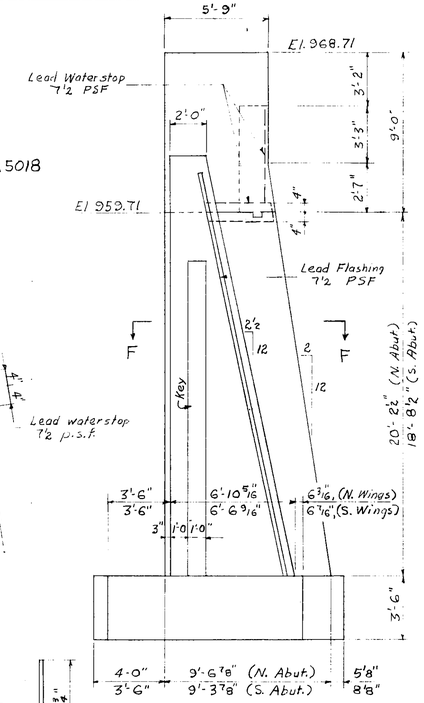
SECTION E-E
Scale: ¼" = 1'-0"



BARS- A5013, A5014, A5017, & A5018



DETAIL 1
Scale: ¾" = 1'-0"

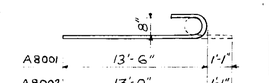


SECTION C-C
Scale: ¼" = 1'-0"

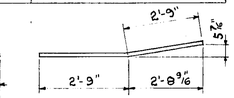
Note
For location of Section C-C, see Shs 5 & 6 of 12.

QUANTITY N. ABUT	QUANTITY S. ABUT	QUANTITY TOTAL	MK	SIZE	LENGTH	DESCRIPTION		
55		55	A8001	#8	14-7	bent,	Footing	Transv.
	35	35	A8002	#8	14-1	do	do	do
10	10	20	A7001	#7	31-6	Straight.	Footing,	Long.
27	25	52	A5001	#5	31-6	do	Stem, backwall,	horiz.
17	17	34	A5002		5'-6"	bent	Stem	dowels
27		27	A5003		20-0	Straight	Stem	Vert
	27	27	A5004		18-6	do	do	do
8		8	A5005		18-0	do	do	do
	8	8	A5006		16-6	do	do	do
1	1	2	A5007		16-0	do	do	horiz.
4	4	8	A5008		7-9	do	backwall	Vert.
16	16	32	A5009		4-6	do	do	do
4	4	8	A5010		8-0	bent	do	do
1	1	2	A5011		7-0	Straight	do	horiz
1	1	2	A5012		5-9	do	do	do
1	1	2	A5013		14-6	bent	do	do
1	1	2	A5014		13-3	do	do	do
1	1	2	A5015		5-6	straight	do	do
1	1	2	A5016		7-6	do	do	do
1	1	2	A5017		12-11	bent	do	do
1	1	2	A5018		14-10	do	do	do
2	2	4	A5019		7-6	Straight	Stem	horiz.
16	16	32	A5020		10-9	do	Pylon	Vert.
6	6	12	A5021		12-10	bent	do	horiz
6	6	12	A5022	#5	14-4	do	do	do

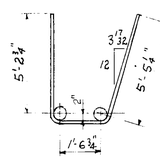
BAR SCHEDULE - ABUTMENTS



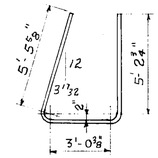
BARS- A 8001 & A8002



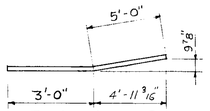
BAR- A5002



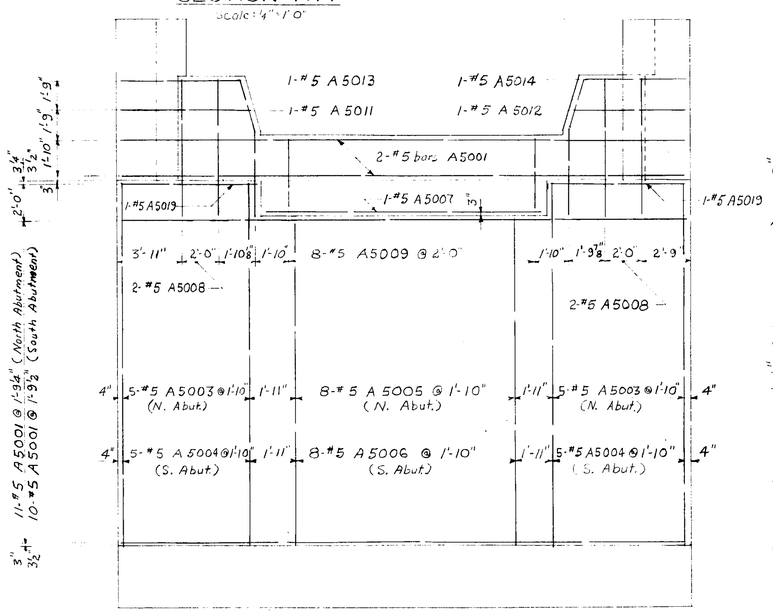
BAR- A5021



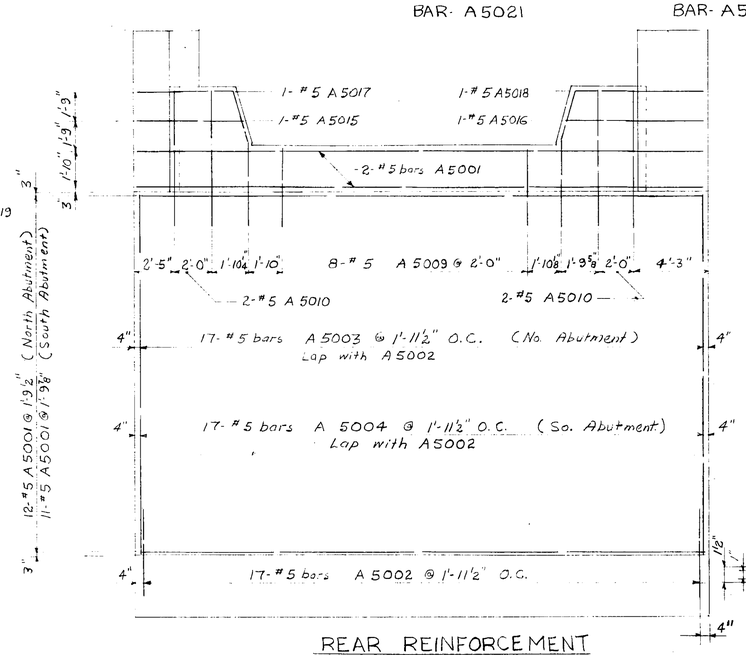
BAR- A5022



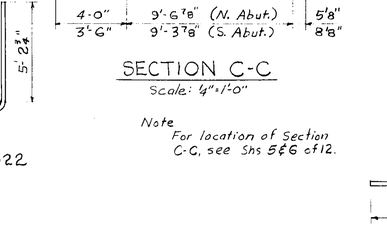
BAR- A5010



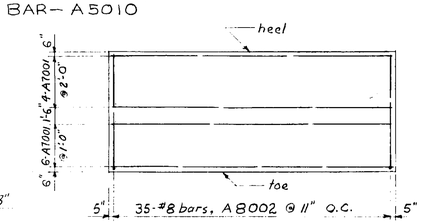
FACE REINFORCEMENT
Scale: ¼" = 1'-0"



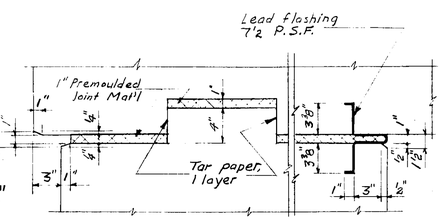
REAR REINFORCEMENT
Scale: ¼" = 1'-0"



PLAN- NO. ABUTMENT FTG.
Scale: ⅛" = 1'-0"



PLAN- SO. ABUTMENT FTG.
Scale: ⅛" = 1'-0"



SECTION F-F
Scale: 1½" = 1'-0"

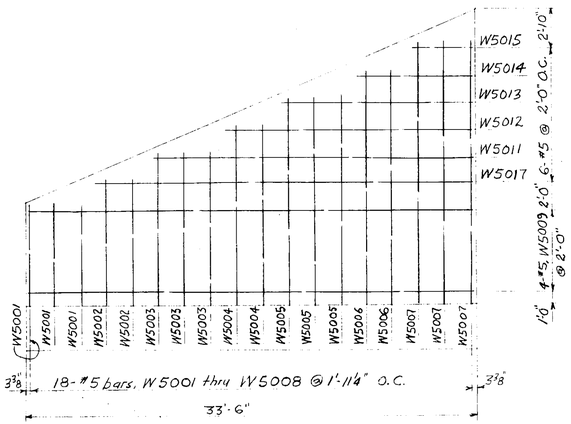
HWY. BR. No TRU-IR-80-1034

NEW YORK CENTRAL SYSTEM	DATE
BRIDGE #19½, SHARON BRANCH 1.3 MILES EAST OF HUBBARD, OHIO	7/12/62
	SCALE: As Shown
OVER HWY. No TRU-I-80 (8.90) REINFORCING BARS - ABUTMENTS	DRAWN BY: SRG
	CHECKED BY: R.C
ENGINEERING DEPT. NEW YORK, N.Y.	DRAWING NO. 93546
ENGINEER OF STRUCTURES / APPROVED CHIEF ENGINEER	SHEET NO. 9 of 12

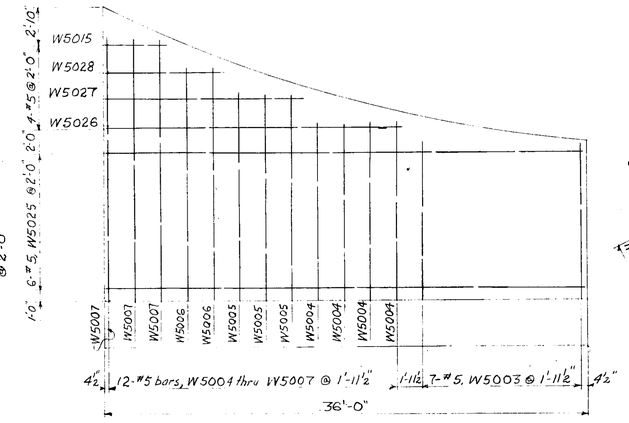
MICROFILMED
DEC 10 1984

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TRU-I-80-8.90



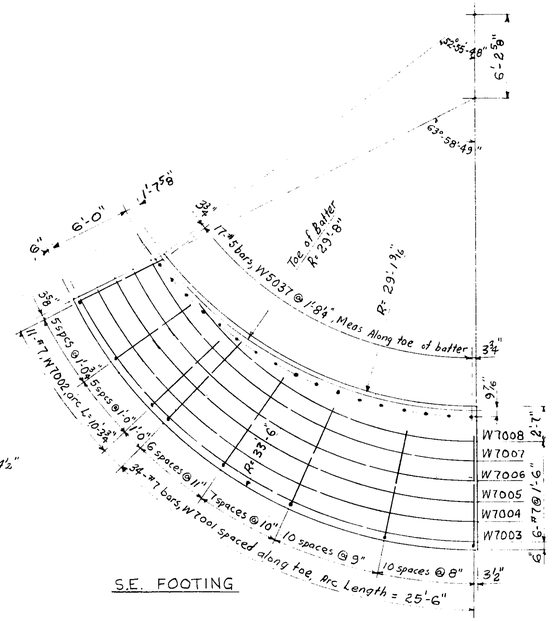
SE. WING WALL



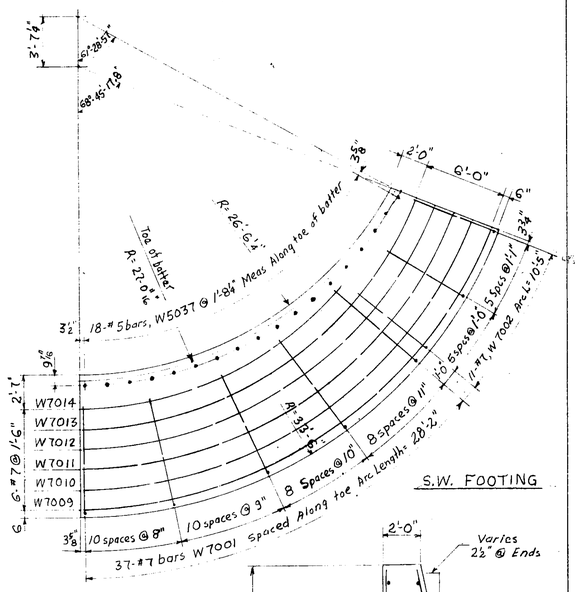
S.W. WING WALL

DEVELOPED ELEVATION
FACE REINFORCING
Scale: 3/16" = 1'-0"

REPLACEMENT BAR SCHEDULE				
Nº	MK	SIZE	LENGTH	REMARKS
1	R8001	#8	6'-7"	See Note
1	R7001	#7	6-3	do do
1	R5001	#5	5-7	do do

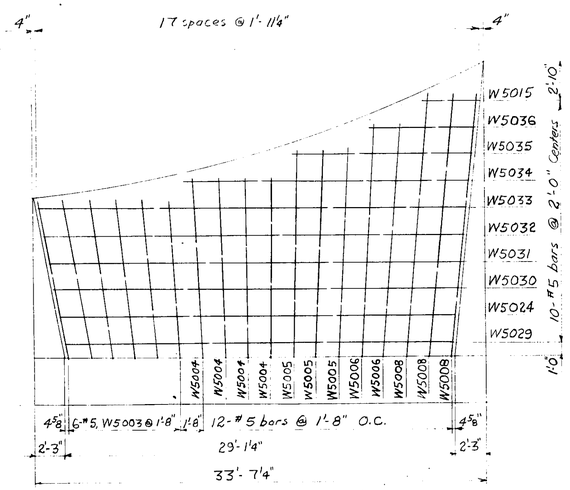


S.E. FOOTING

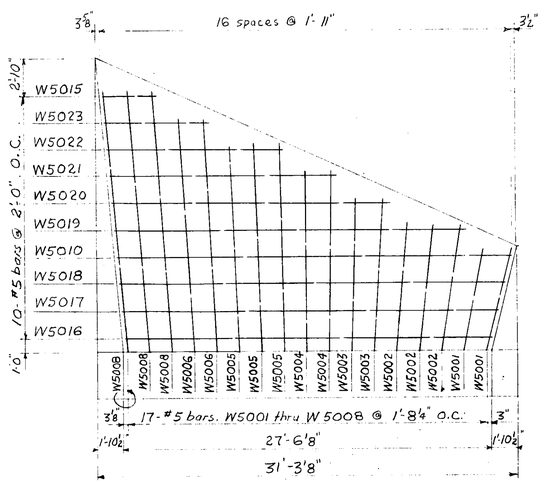


S.W. FOOTING

PLAN- FOOTING REINFORCING
Scale: 3/16" = 1'-0"



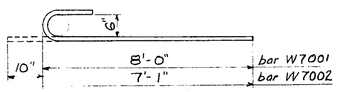
S.W. WING WALL



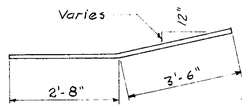
S.E. WING WALL

DEVELOPED ELEVATION
REAR REINFORCING
Scale: 3/16" = 1'-0"

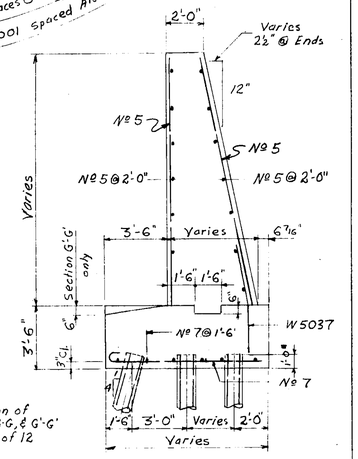
REINFORCING BAR SCHEDULE- SOUTH WING WALLS									
NO.	MK	SIZE	LENGTH	DESCRIPTION	NO.	MK	SIZE	LENGTH	DESCRIPTION
71	W7001	#7	8'-10"	bent, 34 E Ftg 37 W Ftg, transv	1	W5013	#5	14-0	Curved, Stem, Horiz.
22	W7002		7-11	do 11 E Ftg 11 W Ftg, do	1	W5014		8-6	do do do
1	W7003		36-6	Curved E. Ftg. Long.	4	W5015		4-9	do do do
1	W7004		34-10	do do do	1	W5016		27-9	do do do
1	W7005		33-2	do do do	2	W5017		28-6	do do do
1	W7006		31-6	do do do	1	W5018		29-1	do do do
1	W7007		29-10	do do do	1	W5019		26-6	do do do
1	W7008		20-0	do do do	1	W5020		21-0	do do do
1	W7009		39-3	do W. Ftg. do	1	W5021		17-0	do do do
1	W7010		37-5	do do do	1	W5022		13-6	do do do
1	W7011		35-7	do do do	1	W5023		8-0	do do do
1	W7012		33-9	do do do	1	W5024		29-11	do do do
1	W7013		32-0	do do do	6	W5025		35-5	do do do
1	W7014	#7	22-0	do do do	1	W5026		22-0	do do do
5	W5001	#5	7-6	Straight, Stem, Vert	1	W5027		14-6	do do do
5	W5002		9-6	do do do	1	W5028		8-6	do do do
18	W5003		11-6	do do do	1	W5029		29-4	do do do
12	W5004		13-9	do do do	1	W5030		30-7	do do do
12	W5005		15-7	do do do	1	W5031		31-1	do do do
8	W5006		17-9	do do do	1	W5032		31-8	do do do
6	W5007		19-6	do do do	1	W5033		32-5	do do do
6	W5008		20-0	do do do	1	W5034		21-6	do do do
4	W5009		32-11	Curved, Stem, Horiz.	1	W5035		14-0	do do do
1	W5010		29-3	do do do	1	W5036		8-6	do do do
1	W5011		24-0	do do do	3.5	W5037	#5	6-2	bent, dowels, 17 E Wall 16 W Wall
1	W5012	#5	19-0	do do do					



BARS W7001 & W7002



BAR 5037



Note:
For location of sections G-G & G'-G' see Sh. 6 of 12

SECTION G-G
SECTION G'-G' SIMILAR
Scale: 1" = 1'-0"

HWY. BR. Nº TRU-IR-80-1034

NEW YORK CENTRAL SYSTEM	DATE 7/12/62
BRIDGE #19¼, SHARON BRANCH 1.3 MILES EAST OF HUBBARD OHIO	SCALE As Noted
OVER HWY. TRU-I-80 (8.90) REINFORCING BARS SOUTH WING WALLS	DRAWN BY SRG
ENGINEERING DEPT. NEW YORK, N.Y.	CHECKED BY R.C.
ENGINEER OF STRUCTURES	DRAWING NO. 93546
APPROVED CHIEF ENGINEER	SHEET NO. 10 of 12

MICROFILMED
DEC 10 1984

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

TRU-I-80-8.90

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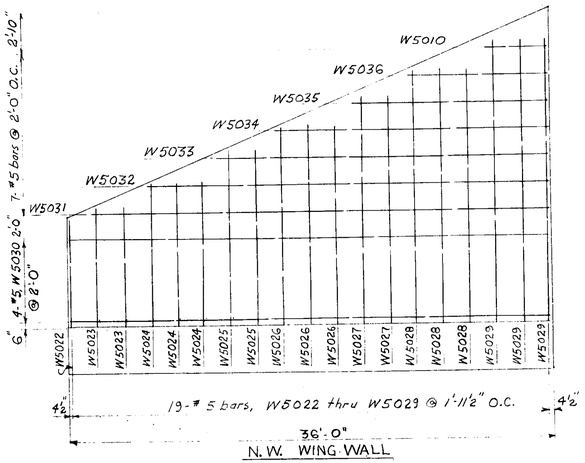
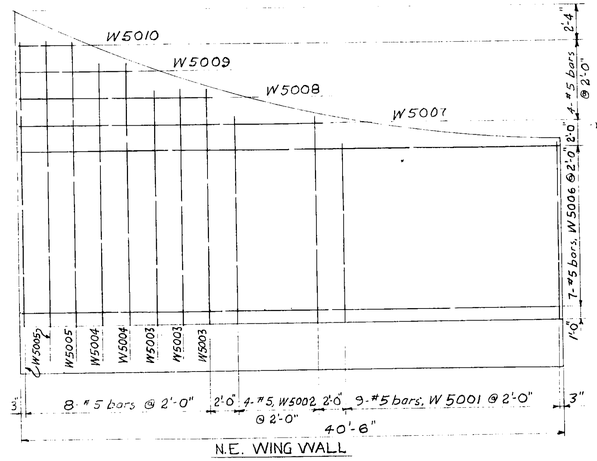
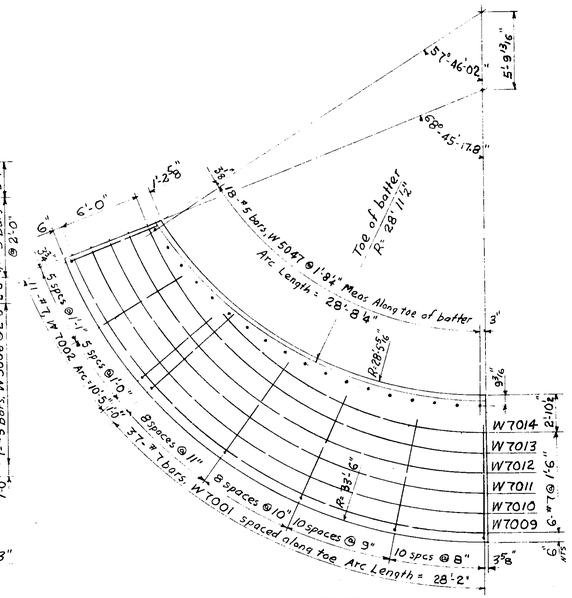


N.W. WING WALL

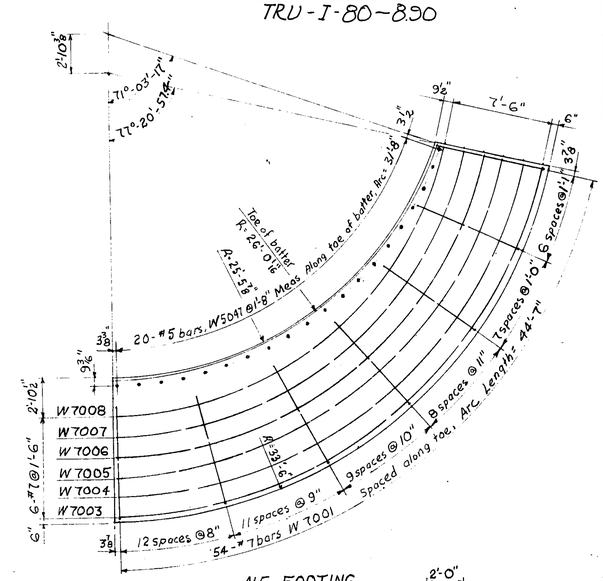


N.E. WING WALL

DEVELOPED ELEVATION
FACE REINFORCING
3/16" = 1'-0"

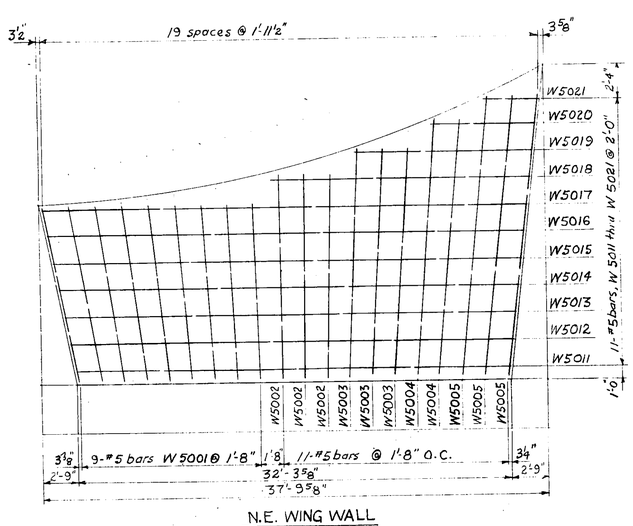


N.W. FOOTING

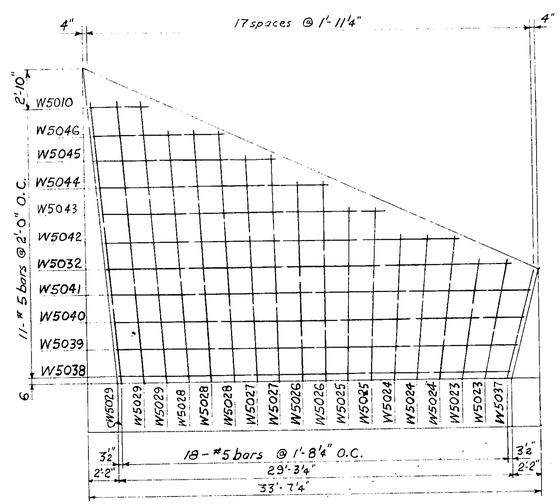


N.E. FOOTING

PLAN - FOOTING REINFORCING
3/16" = 1'-0"



N.E. WING WALL

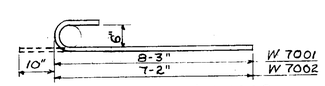


N.W. WING WALL

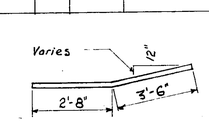
DEVELOPED ELEVATION
REAR REINFORCING
3/16" = 1'-0"

REINFORCING BAR SCHEDULE - NORTH WING WALLS

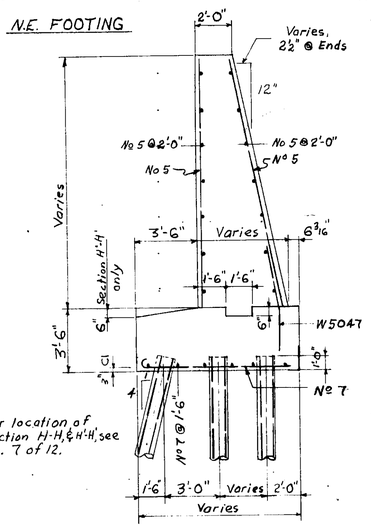
NO.	MK	SIZE	LENGTH	DESCRCRIPTION			NO.	MK.	SIZE	LENGTH	DESCRIPTION		
91	W7001	#7	9'-1"	Bent	54 E Ftg 34 W. Ftg	Transv	1	W5018	#5	19-6	Curved, Stem, Horiz		
11	W7002	↑	8'-0	do	W. Ftg.	do	1	W5019	↑	13-6	do	do	do
1	W7003		44-0	Curved, E. Ftg.		Long.	1	W5020		8-0	do	do	do
1	W7004		42-0	do	do	do	1	W5021		4-0	do	do	do
1	W7005		40-0	do	do	do	1	W5022		8-0	Straight, Stem, Vert		
1	W7006		38-0	do	do	do	4	W5023		8-11	do	do	do
1	W7007		36-0	do	do	do	6	W5024		10-8	do	do	do
1	W7008		34-0	do	do	do	4	W5025		13-0	do	do	do
1	W7009		39-3	do	W Ftg	do	5	W5026		14-9	do	do	do
1	W7010		37-5	do	do	do	4	W5027		17-0	do	do	do
1	W7011		35-7	do	do	do	6	W5028		18-9	do	do	do
1	W7012		33-9	do	do	do	6	W5029		21-0	do	do	do
1	W7013	↓	32-0	do	do	do	4	W5030		35-5	Curved, Stem, Horiz		
1	W7014	#7	22-0	do	do	do	1	W5031		33-9	do	do	do
18	W5001	#5	13-2	Straight, Stem, Vert.			2	W5032		30-0	do	do	do
7	W5002	↑	15-2	do	do	do	1	W5033		24-0	do	do	do
6	W5003		17-2	do	do	do	1	W5034		20-0	do	do	do
4	W5004		19-3	do	do	do	1	W5035		14-3	do	do	do
6	W5005		21-2	do	do	do	1	W5036		10-3	do	do	do
7	W5006		39-9	Curved, Stem, Horiz.			1	W5037		8-2	Straight, Stem, Vert.		
1	W5007		22-9	do	do	do	1	W5038		29-3	Curved, Stem, Horiz		
1	W5008		15-0	do	do	do	1	W5039		29-11	do	do	do
1	W5009		9-0	do	do	do	1	W5040		30-7	do	do	do
3	W5010		4-6	do	do	do	1	W5041		31-3	do	do	do
1	W5011		32-9	do	do	do	1	W5042		26-6	do	do	do
1	W5012		33-4	do	do	do	1	W5043		20-9	do	do	do
1	W5013		34-0	do	do	do	1	W5044		17-0	do	do	do
1	W5014		34-8	do	do	do	1	W5045		13-6	do	do	do
1	W5015		35-3	do	do	do	1	W5046	↓	9-9	do	do	do
1	W5016	↓	35-11	do	do	do	38	W5047	#5	6-2	Bent, dowels, 50 E Wall 18 W Wall		Vert
1	W5017	#5	36-7	do	do	do							



BARS W7001 & W7002



BAR - W5047



Note:
For location of section H-H & H'-H', see sh. 7 of 12.

SECTION H-H

SECTION H'-H' SIMILAR
¼" = 1'-0"

HWY. BR. No TRU-IR-80-1034

NEW YORK CENTRAL SYSTEM	DATE 7/12/62
BRIDGE # 19½, SHARON BRANCH 1.3 MILES EAST OF HUBBARD OHIO	SCALE As Note
OVER HWY. TRU - I - 80 (8.90) REINFORCING BARS NORTH WING WALLS	DRAWN BY SRG
ENGINEERING DEPT. NEW YORK, N.Y.	CHECKED BY R.C.
John L. Beckel ENGINEER OF STRUCTURES	DRAWING No 935546
APPROVED C. E. Lefundry CHIEF ENGINEER	SHEET No 11 of 12

MICROFILMED
DEC 10 1964

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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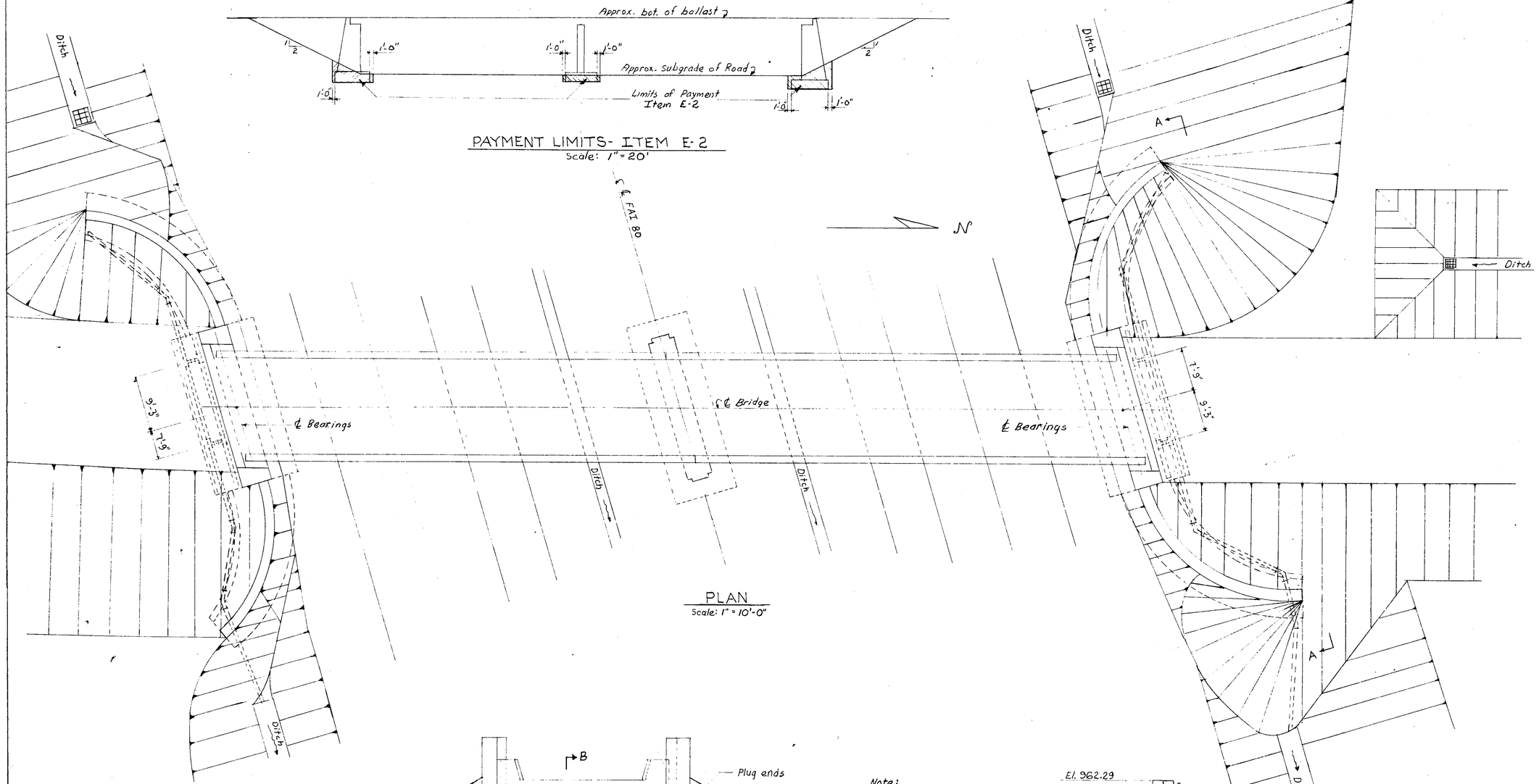
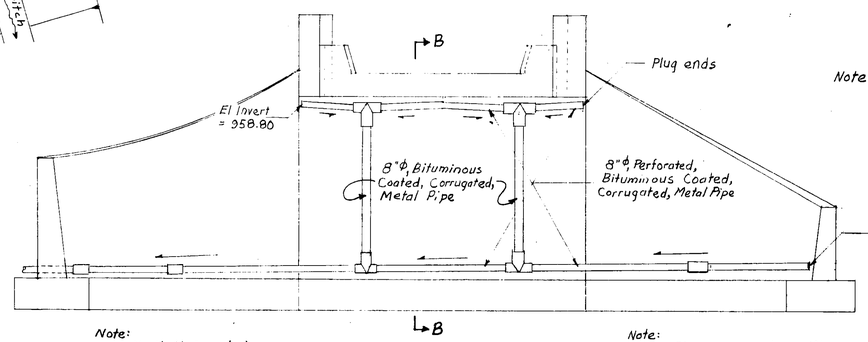
TRU-I-80-8.90



PAYMENT LIMITS- ITEM E-2
Scale: 1" = 20'

PLAN
Scale: 1" = 10'-0"

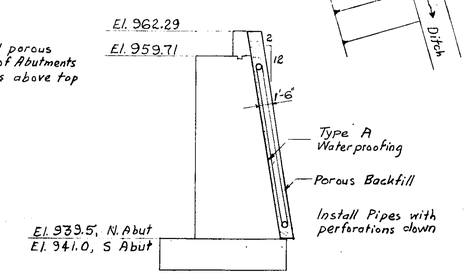


Note:
North Abutment shown
South Abutment Similar

SECTION A-A
Scale: ⅛" = 1'-0"

Note:
Slope pipes down 1% in direction of arrows.

Note:
Damproofing and porous backfill at rear of Abutments and all wingwalls above top of footings.



SECTION B-B
Scale: ⅛" = 1'-0"

HWY. BR. Nº ~~TRU-IR-80-1034~~

NEW YORK CENTRAL SYSTEM	DATE 7/12/62
BRIDGE #19½, SHARON BRANCH 1.3 MILES EAST OF HUBBARD, OHIO	SCALE As Noted
OVER HWY TRU-I-80 (8.90)	DRAWN BY SRG
SUBSTRUCTURE DRAINAGE PLAN	CHECKED BY R.C.
ENGINEERING DEPT. NEW YORK, N.Y.	DRAWING NO. 93546
ENGINEER OF STRUCTURES John L. Beckel	SHEET NO. 12 of 12
APPROVED CHIEF ENGINEER	

MICROFILMED
DEC 10 1984

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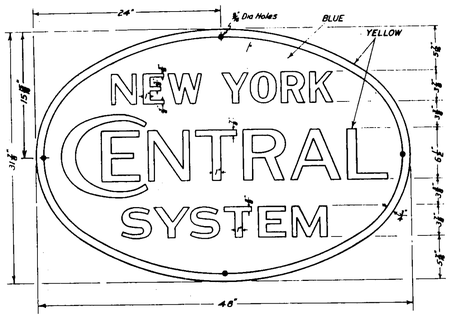
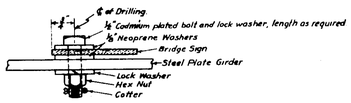
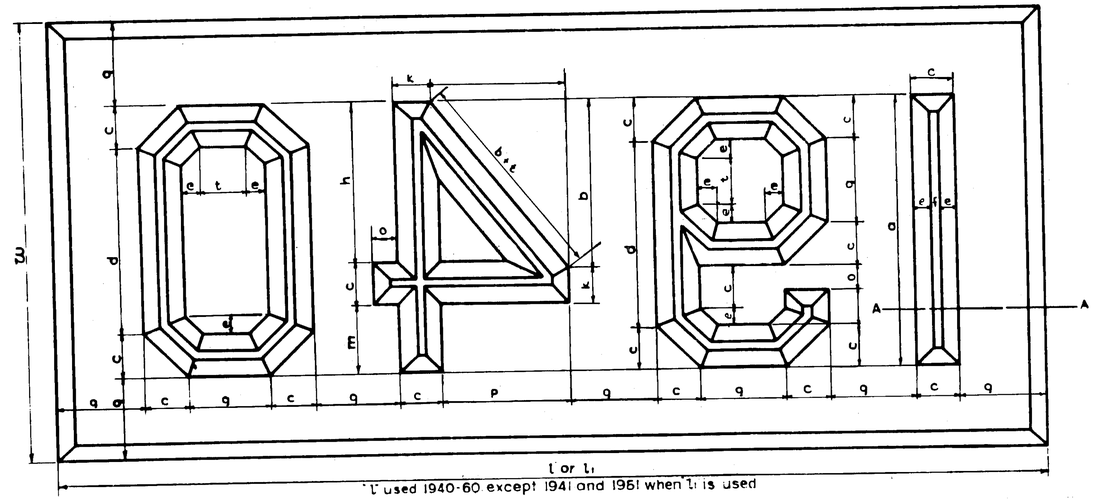
TRU-I-80-8.90

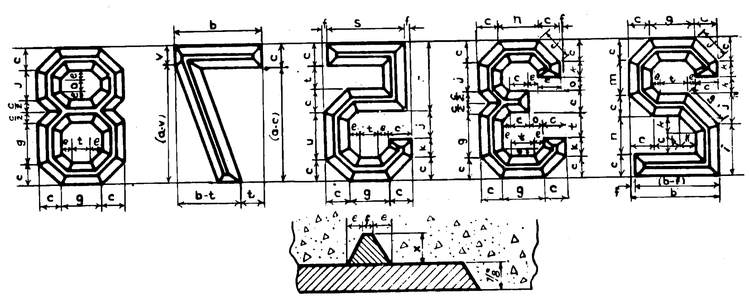


RAILROAD BRIDGE OVAL SIGN
(Drill 4 - 3/16" holes from face side of sign as shown)



TYPICAL SECTION





SECTION A-A

General Notes:

The New York Central Railroad will furnish f.o.b job site - signs and bolt assemblies.

Sign Construction - The sign shall be made of .081"-6061-T6 aluminum sheet. The background of the sign shall be covered with Nº 2275 wide angle flat-top, Blue Scotchlite. The letters and border shall be Nº 2271 wide angle flat-top, Yellow Scotchlite. Additional details of the oval and letters are shown on Engineer M. of W System plan Nº 535-L

Sign Installation - Typical installation detail shown for plate girder bridge. If girder stiffeners interfere with placing of sign as shown, provide structural steel brackets for bolt connections. Bridges on a skew with highway should have brackets so that sign will be at right angles to highway.

DIMENSIONS FOR VARIOUS SIZES OF LETTERS

a	b	c	d	e	f	g	h	i	j	k	m	n	o	p	r	s	t	u	v	x	l	l1	w
8"	5"	1 1/16	5 1/2	1/2	1/4	2 1/2	4 3/4	3"	1 3/4	1"	2"	2 1/4	3/4	3 1/4	4"	4 1/8	1 1/8	2 3/4	7/8	7/8	20 3/4	25"	15"

STANDARD DATE PLATE FORM
For locations of date plates see plans

FINAL REPORT ON MASONRY AS BUILT.

Station and Plus at center of Bridge.
A.F.E. No. Built by
Work started. Work completed.

ACTUAL QUANTITIES

DESCRIPTION	EAST ABUT.	WEST ABUT.	PIER.			TOTAL QUANTITIES
Grading, Cu. Yards						
Dry Earth Excavated, Cu. Yd.						
Wet Earth Excavated, Cu. Yd.						
Dry Rock Excavated, Cu. Yd.						
Wet Rock Excavated, Cu. Yd.						
Foundation Piling, Lin. Ft.						
Cofferdam Timber, F.B.M.						
Steel Sheet Piling, left in, Tons						
" " " removed, Tons						
Puddle Dam Material, Cu. Yd.						
Reinforcing Bars, Lbs.						
Class "A" Concrete, Cu. Yd.						
" "B" " Cu. Yd.						
" "D" " Cu. Yd.						
Cu. Yd.						
Cu. Yd.						
Waterproofing S.F.						
Source, Size, kind, Stone						
" " " Sand						
Brand of Cement						
Elevation Top of Tie						
" " " Coping						
" " " Footing						
" Bott. " "						
Character of Foundation						

Bench mark used in Constr; Location. Elevation. Sea Level Datum
Bench mark established on Struct. Elevation Sea Level Datum
Remarks

I hereby certify that the above information is correct, and that on this print ALL deviations from the plan are correctly shown.
Title
Place Date
The above information and the changes shown on this print have been recorded on the original drawing this date.
Checked by Draftsman

Highway Bridge No. TRU-I-80-1034

N.Y.C. SYSTEM	OFFICE OF CHIEF ENGINEER	CHICAGO, ILL.

NEW YORK CENTRAL
SIGN AND DATE PLATE PLAN

		PLAN Nº 7430
SCALE: As shown	VAL. SEC.	FILE Nº 121-264

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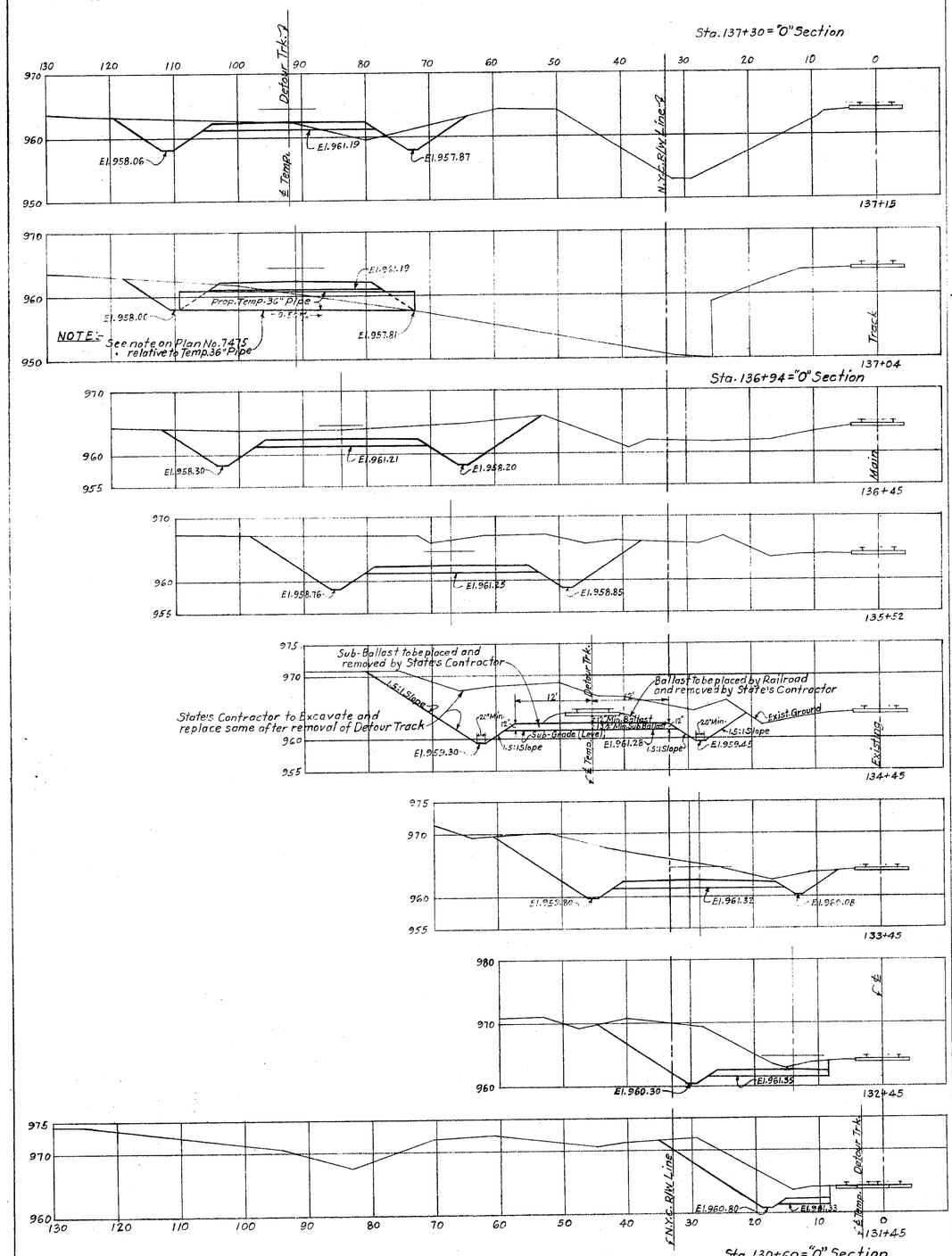
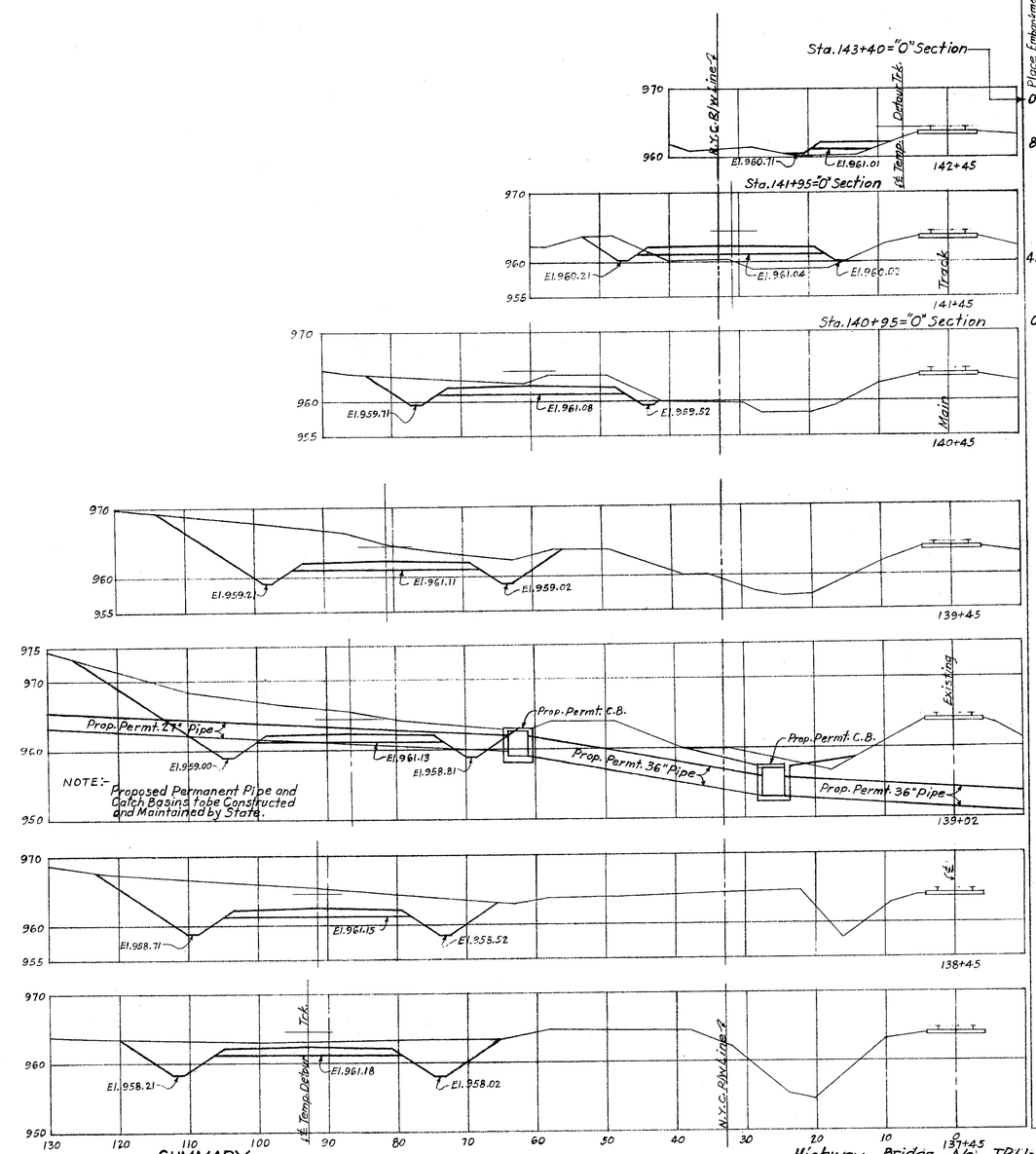
TRU-I-80-8.90



Grading Quantities for Temporary Detour Track Area - Sq. Ft.		
Place Embankment	Place Sub-Ballast	Excavation
0		
9	29	94
34	29	47
0		
	29	197
	29	325
29	316	
29	223	
19	165	
8	96	
0	0	



Grading Quantities for Temporary Detour Track Area - Sq. Ft.		
Place Embankment	Place Sub-Ballast	Excavation
0	0	
8	12	
		0
43	29	21
0		
	29	93
	29	237
29	270	
29	238	
29	136	

SUMMARY

Grading Quantities for Temporary Detour Track

Place Embankment	170 C.Y.
Plus 20% for Shrinkage	30 C.Y.
Total Embankment Placed	200 C.Y.
Place Sub-Ballast (Gravel)	1,110 C.Y.
Plus 12% for Shrinkage	130 C.Y.
Total Sub-Ballast Placed	1,240 C.Y.
Excavation	7,420 C.Y.
Remove Embankment	170 C.Y.
Remove Sub-Ballast	1,110 C.Y.
Remove Ballast Placed by Railroad (600 N.T.)	480 C.Y.
Total Removed	1,760 C.Y.
Replace Excavation	7,420 C.Y.

Total Excavation Item E-1 9,180 C.Y. to Sheet 19

Drawn:- S.W.R. | Checked:- E.F.S.

REVISIONS

Date	By	Description

Highway: Bridge No. TRU-I-80-1034

N. Y. C. SYSTEM | OFFICE OF CHIEF ENGINEER | CHICAGO, ILL.

Bridge No. 1914 | Sta. 137+45.00

PROPOSED UNDERPASS GRADE SEPARATION
INTERSTATE ROUTE Nº 80
1.3 Miles East of
HUBBARD, OHIO

ROADBED SECTIONS FOR TEMPORARY DETOUR TRACK

WESTERN District	LAKE DIVISION, ERIE SUB-DIVISION	PLAN Nº 7504
SCALE:- 1" = 10'	APRIL 4, 1963	VAL. SEC. 224	FILE Nº 121-296

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DEC 10 1994

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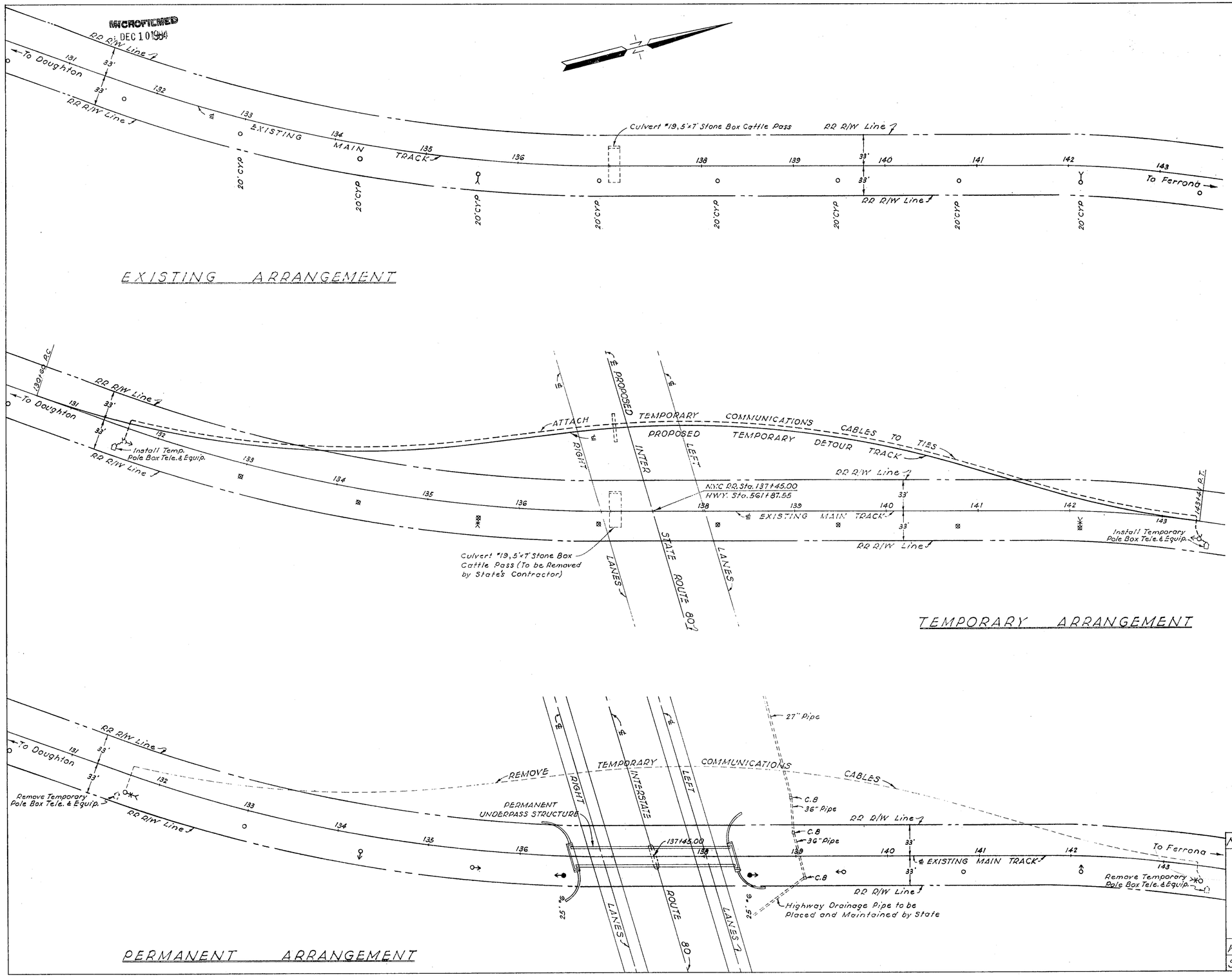
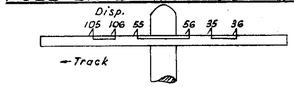
TRU-I-80-8.30



POLE LINE ARRANGEMENT



TEMPORARY AND PERMANENT
No Scale

LEGEND

- ○ EXISTING POLE
- ● NEW POLE
- ⊠ EXISTING POLE TO BE REMOVED (of the 8 poles to be removed 6 are to be stored and reused in Permanent Arrangement)
- —< EXISTING GUY AND ANCHOR
- —> GUY AND ANCHOR TO BE INSTALLED
- ⊠< GUY AND ANCHOR TO BE REMOVED

NOTE

ALL LABOR AND THE FURNISHING OF ALL MATERIAL IN CONNECTION WITH CHANGES AS SHOWN ON THIS SHEET AND CALLED FOR IN THE ESTIMATE WILL BE PERFORMED BY THE NEW YORK CENTRAL RAILROAD EXCEPT AS NOTED

Highway Bridge No. TRU-I-80-1034

N.Y.C SYSTEM	OFFICE OF CHIEF ENGINEER	CHICAGO, ILL.

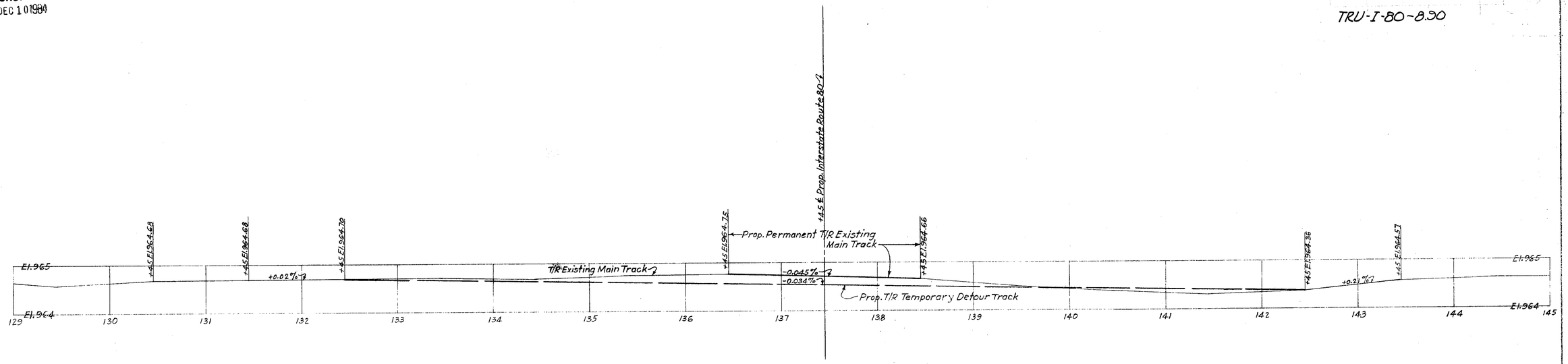
PROPOSED UNDERPASS GRADE SEPARATION
INTERSTATE ROUTE 80
1.3 Miles East of
HUBBARD, OHIO

PROPOSED COMMUNICATIONS LINE CHANGES

WESTERN DISTRICT-LAKE DIV.-ERIE SUB DIV.			PLAN Nº 7512
SCALE: 1"=50'	JUNE 7, 1963	VAL. SEC. 224	FILE Nº 121-302

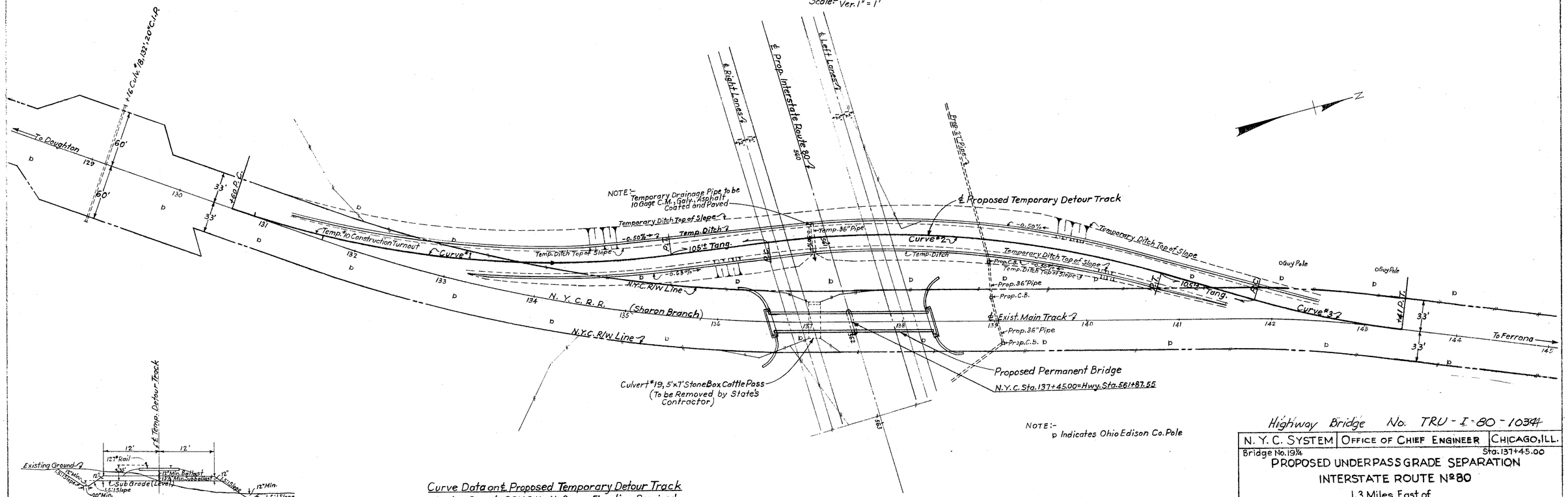
MICROFILMED
DEC 10 1984

TRU-I-80-8.90

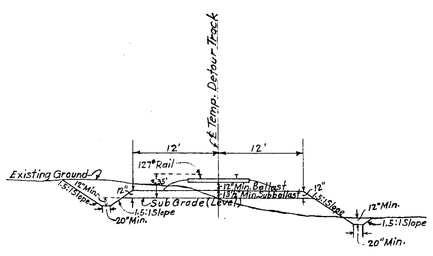


TRACK PROFILE

Scale:- Hor. 1" = 50'
Ver. 1" = 1'



NOTE:-
p Indicates Ohio Edison Co. Pole



TYPICAL SECTION
TEMPORARY DETOUR TRACK
Scale:- 1" = 10'

Curve Data on ℄ Proposed Temporary Detour Track
Design Speed = 20 M.P.H. - No Super-Elevation Required

Curve #1	Curve #2	Curve #3
D = 5°-30'	D = 5°-30'	D = 5°-30'
R = 1042.14'	R = 1042.14'	R = 1042.14'
Δ = 26°-28'	Δ = 23°-35'	Δ = 9°-00'
T = 245.07'	T = 217.56'	T = 82.02'

PLAN
Scale:- 1" = 50'

Drawn:- S.W.R.		Checked:- K.F.W.
REVISIONS		
Date	By	Description

Highway Bridge No. TRU-I-80-10344

N. Y. C. SYSTEM	OFFICE OF CHIEF ENGINEER	CHICAGO, ILL.

Bridge No. 1914 — Sta. 137+45.00

PROPOSED UNDERPASS GRADE SEPARATION
INTERSTATE ROUTE Nº 80
1.3 Miles East of
HUBBARD, OHIO
Temporary and Permanent Track Plan and Profile

WESTERN District	LAKE DIVISION / ERIE SUB-DIVISION	PLAN Nº 7475
SCALE:- AS SHOWN	APRIL 4, 1963 — VAL. SEC. 224	FILE Nº 121-292

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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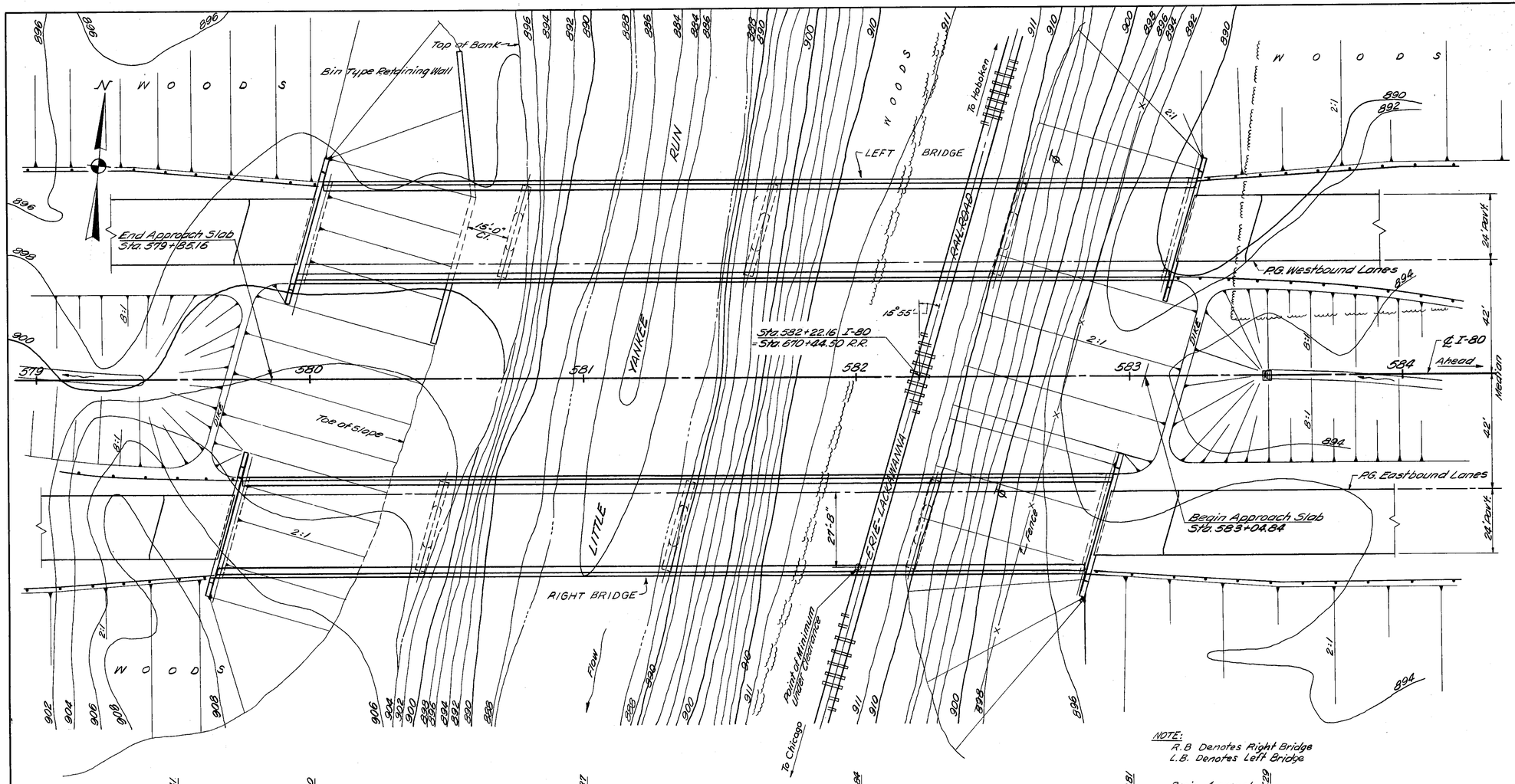
TRUMBULL COUNTY
TRU I-80 (8.90)

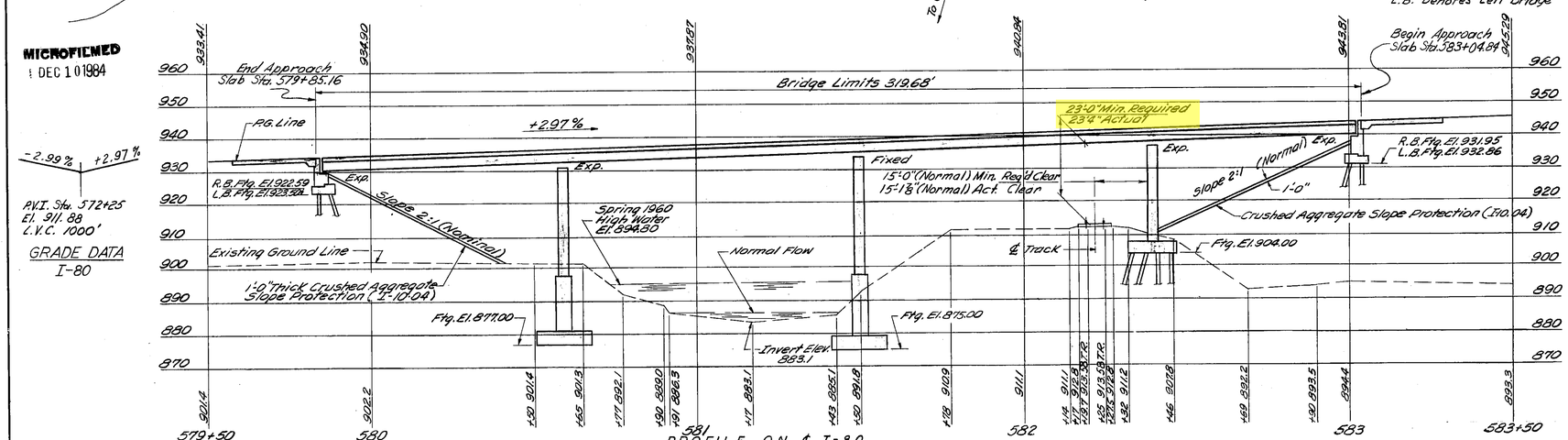


B.M. #11 Elev. 897.428 R.R. Spike in 32" Maple 170' Rt. of Sta. 582+70±

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil-sampling soundings made at the site. This sounding information, the accuracy of which the State does not guarantee, may be examined in the office of the Bureau of Bridges in Columbus or in the Division office.

NOTE:
R.B. Denotes Right Bridge
L.B. Denotes Left Bridge

MICROFILMED
DEC 10 1984



P.V.I. Sta. 572+25
El. 911.88
L.V.C. 1000'

GRADE DATA
I-80

All Piles shall be 10BP42
Estimated Average pay Length
Abutment No. 1 30'
Abutment No. 2 50'
Pier No. 3 30'

PROPOSED STRUCTURES
TYPE: 4 Span continuous steel rolled beam with concrete deck and substructure.
SPANS: 72'-0", 90'-0", 90'-0", 63'-0" c/c Bearings
ROADWAY: 30'-0" f/f curbs - 2'-3" Safety Curbs.
LOAD FREQUENCY: CF2000 (57) Adequate for A.A.S.H.O. alternate loading.
SKEW: 15° 55'-00" L.F.
WEARING SURFACE: 1" Monolithic Concrete.
APPROACH SLAB: AS-1-54 (25'-0" Long)
ALIGNMENT: Tangent.
SUPERELEVATION: None.
DRAINAGE AREA: 37 Sq. Miles.
TRACKS: One.

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

SITE PLAN
BRIDGE NO. TRU-I-80-1069 L/R
OVER ERIE-LACKAWANNA RAILROAD
& LITTLE YANKEE RUN
TRUMBULL COUNTY — STA. 579+85.16 TO STA. 583+04.84
SCALE: 1" = 20'-0"

PRESENT TOPOGRAPHY		PROPOSED WORK			
Surveyed	Drawn	Designed	Drawn	Checked	Reviewed
Buchart Erig	R.L.K.	G.M.B.	A.R.T.	G.M.B.	3-15-62

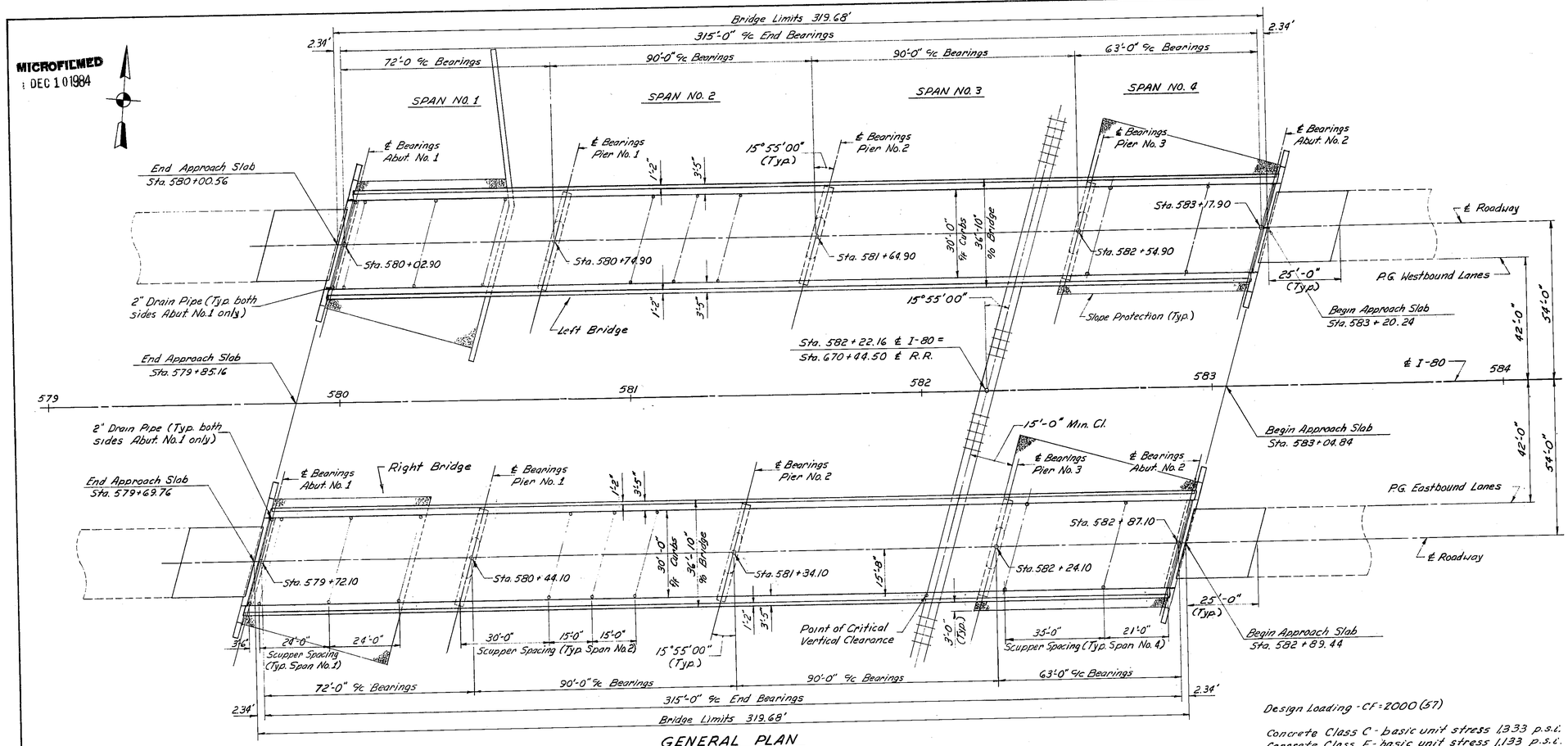
Sheet 1 of 7

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

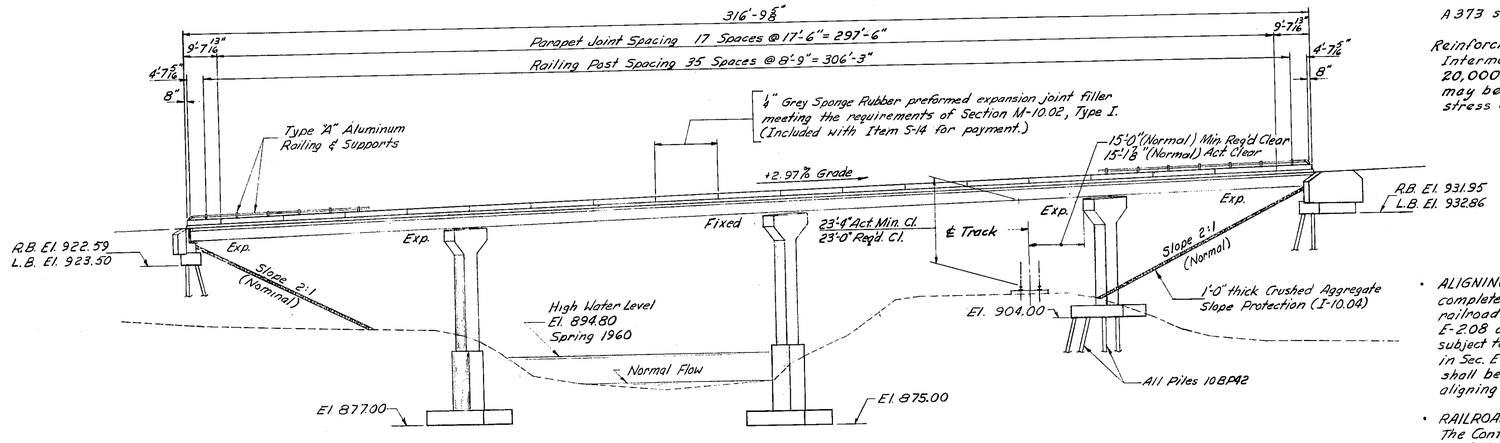
361/401

TRUMBULL COUNTY
TRU-I-80 (8.90)

MICROFILMED
DEC 10 1984



GENERAL PLAN



ELEVATION

GENERAL NOTES

- REFERENCE shall be made to Standard Drawings CSB-2-56, Sheets 2 & 3 of 6, revised 2-2-59, FSB-1-62 dated 1-15-63., AR-1-57 revised 4-2-62, and to Supplemental Specifications S-101 dated 7-12-62.
- 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.
- EXCAVATION QUANTITY includes the removal of fill material required for construction of the abutments.
- PILES shall be driven to a minimum bearing capacity of 35 Tons for the Abutments and for Pier No. 3.
- FOUNDATION BEARING PRESSURE: Footings for Pier No. 1 and Pier No. 2 are designed for a maximum bearing pressure of 4.0 Tons per sq. ft.
- WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop.
- SHOP PAINTING STEEL: The surface preparation of all steel requiring shop painting as per the Plans and Specifications, shall be accomplished by blast cleaning or power tool cleaning, except as noted in the Specifications regarding the use of Chromate Primers.
- CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.
- MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine.
- SHEET LEAD shall conform to the requirements of ASTM Designation B29 without restriction to the Common Desilverized type.
- CONTINUOUS BEAM SHOP ASSEMBLY: Reference paragraph 4, Sec. S-7.12 of the Construction and Material Specifications, if rolled beams are field spliced only at supports, for the purpose of checking the fit-up of weld joint preparation, only two adjacent beams need be shop assembled at a time in their correct, unloaded positions. All beams shall be assembled and match marked.
- CONSTRUCTION CLEARANCE of 20'-0" vertically above the top of the railroad rails and 8'-0" horizontally from the center of tracks shall be maintained at all times.
- FIRST TEST PILE: Payment will be made for only one first test pile. It may be driven for either the Right or Left Bridge.
- THE EAST BANK of the stream shall remain as near undisturbed as is possible and consistent with usual clearance requirements.
- SHEETING AND BRACING: Before construction is started, eight sets of prints showing details of the sheeting and bracing to be used for excavation adjacent to the railroad tracks shall be submitted to the Director for approval by the Department of Highways and by the Railroad Company.

Design Loading - CF=2000 (57)

Concrete Class C - basic unit stress 1,333 p.s.i.
Concrete Class E - basic unit stress 1,133 p.s.i.

Structural Steel - ASTM A36 - basic unit stress 20,000 p.s.i. (ASTM A7 and A373 steel not permitted)

Reinforcing steel - ASTM A15, A16, A160, 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.

- ALIGNING RAILROAD TRACKS: After the Contractor has completed all excavation and backfill adjacent to the railroad tracks in compliance with Sec. E-2.04 and E-2.08 of the Construction and Material Specifications, subject to the supervision of the Railroad Company, nothing in Sec. E-2.04, E-2.08 or G-8.07 of the Specifications shall be construed to hold the Contractor liable for aligning and resurfacing the railroad tracks.
- RAILROAD AERIAL LINES will be relocated by the railroad. The Contractor shall use all precautions necessary to see that the lines are not disturbed during the construction stage and shall cooperate with the railroad in the relocation of these lines. The cost of the relocation shall be included in the railroad force account work.

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

GENERAL PLAN & ELEVATION
AND GENERAL NOTES
BRIDGE NO. TRU-I-80-1069 LIR
OVER ERIE-LACKAWANNA RAILROAD
& LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 579+85.16 TO STA. 583+04.84

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
G.M.B.	F.J.M.		G.M.B.	10-25-62	

MICROFILMED
DEC 10 1984

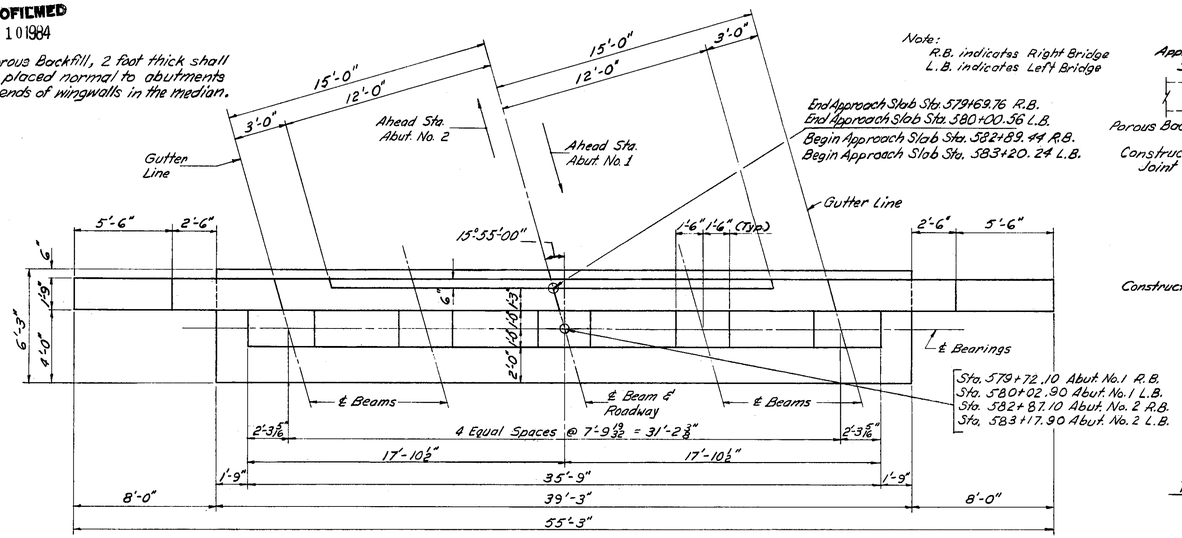
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

362
401

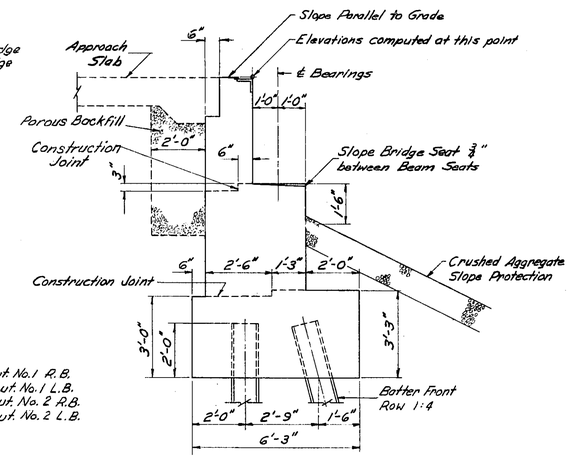
TRUMBULL COUNTY
TRU-I-80 (8.90)

Porous Backfill, 2 foot thick shall be placed normal to abutments at ends of wingwalls in the median.

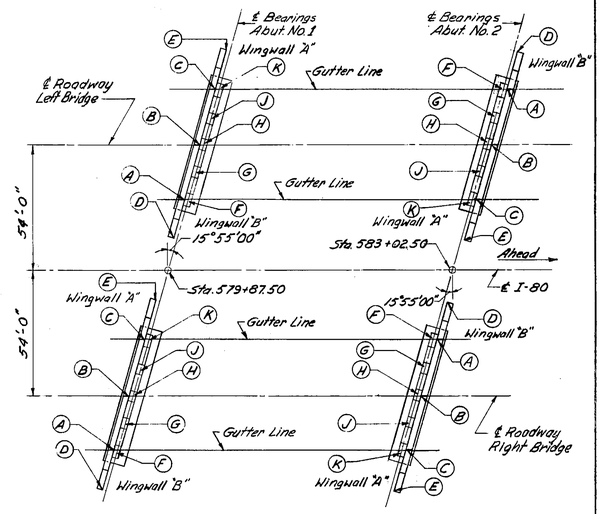
Note:
R.B. indicates Right Bridge
L.B. indicates Left Bridge



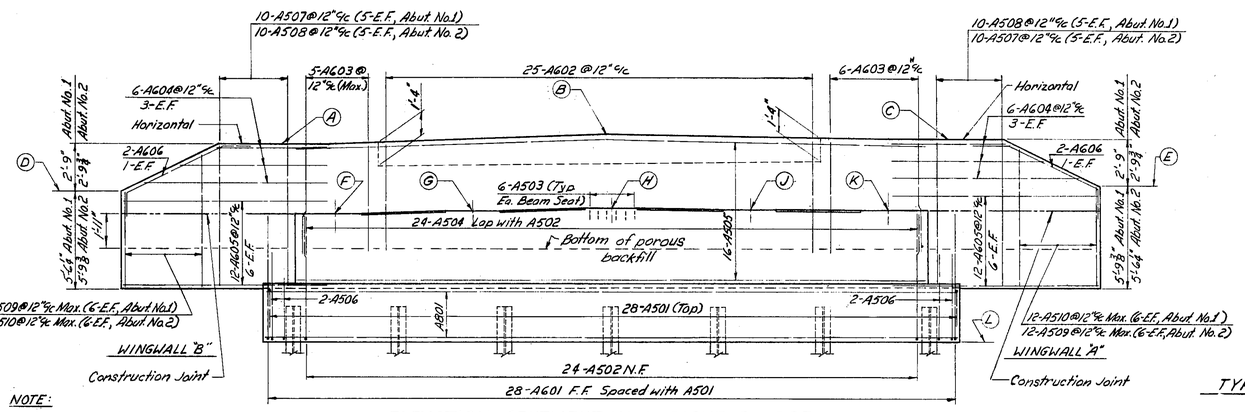
PLAN



TYPICAL SECTION THROUGH ABUTMENT

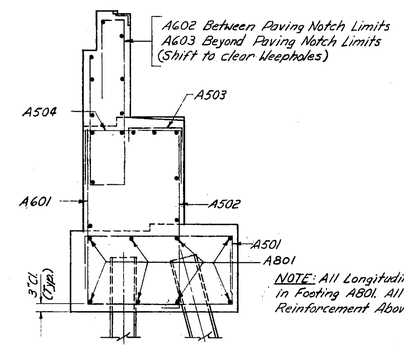


GEOMETRY LAYOUT



ELEVATION-ABUTMENT NO. 1, RIGHT BRIDGE
(ALL OTHER ABUTMENTS SIMILAR EXCEPT AS NOTED)

NOTE:
E.F. Denotes Each Face.
N.F. Denotes Near Face.
F.F. Denotes Far Face



NOTE: All Longitudinal Reinforcement in Footing A801. All Longitudinal Reinforcement Above Footing A505.

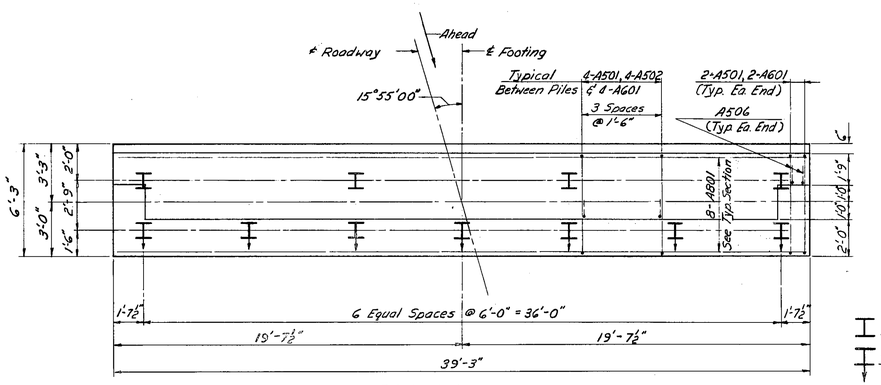
TYPICAL SECTION THROUGH ABUTMENT
(Showing Reinforcement)

TABLE OF ELEVATIONS

LOCATION	LEFT BRIDGE										
	A	B	C	D	E	F	G	H	J	K	L
Abut. No. 1	934.78	935.14	935.03	932.03	932.28	930.66	930.84	931.02	930.97	930.92	923.50
Abut. No. 2	944.45	944.56	944.20	941.64	941.39	940.27	940.33	940.38	940.20	940.02	932.86
LOCATION	RIGHT BRIDGE										
	A	B	C	D	E	F	G	H	J	K	L
Abut. No. 1	933.86	934.22	934.12	931.11	931.37	929.75	929.93	930.11	930.06	930.00	922.59
Abut. No. 2	943.54	943.64	943.28	940.73	940.47	939.36	939.41	939.47	939.29	939.11	931.95

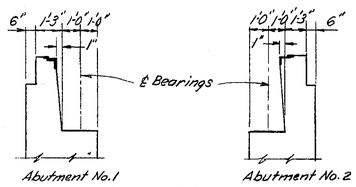
NOTES

- PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments, after which excavation shall be made for the abutments and for piers that are set in the filled area.
- POROUS BACKFILL shall extend upward to the approach slab and to the surface of the earth shoulders, and outward to the surface of the embankment slopes. Excavation therefor, in excess of that required for construction of the abutment, shall be considered as paid for in bid price per cu yd. paid for porous backfill.
- BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes.
- Concrete above bridge seat construction joint shall not be placed until after the steel work is erected, but shall be placed before placing deck slab.
- All abutment concrete shall be Class "E."
- Railing not shown. See "General Plan & Elevation" for railing post spacing.
- All Abutment Piles to be 10BP42 driven to a minimum bearing capacity of 35 Tons per Pile.

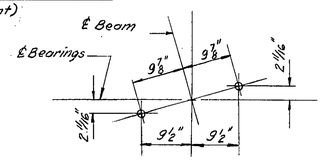


FOOTING PLAN

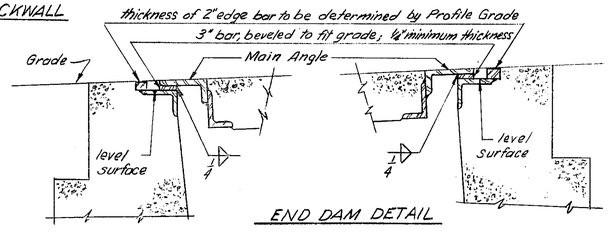
Indicates vertical pile
Indicates battered pile



SLOPE OF BACKWALL



ANCHOR BOLT LAYOUT



END DAM DETAIL

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

ABUTMENTS
BRIDGE NO. TRU-I-80-1069 L/R
OVER ERIE-LACKAWANNA RAILROAD
& LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 579+85.16 TO STA. 583+04.84

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
C.S.F.	F.J.M.		G.M.B.		10-25-82	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5 (9) 245	

363
401

TRUMBULL COUNTY
TRU-I-80 (8.90)

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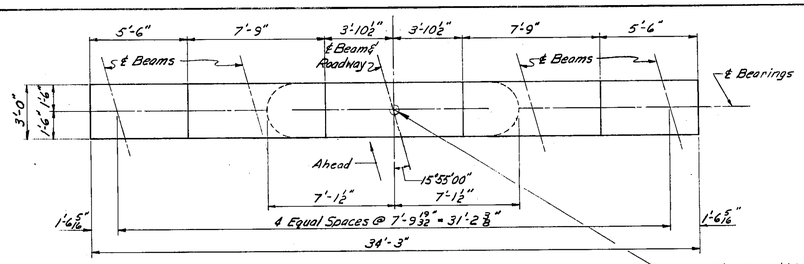
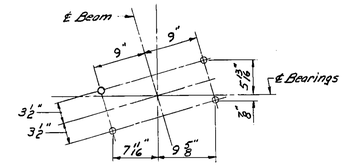
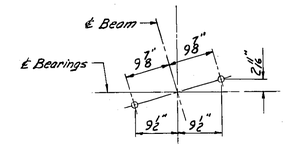


CAP PLAN

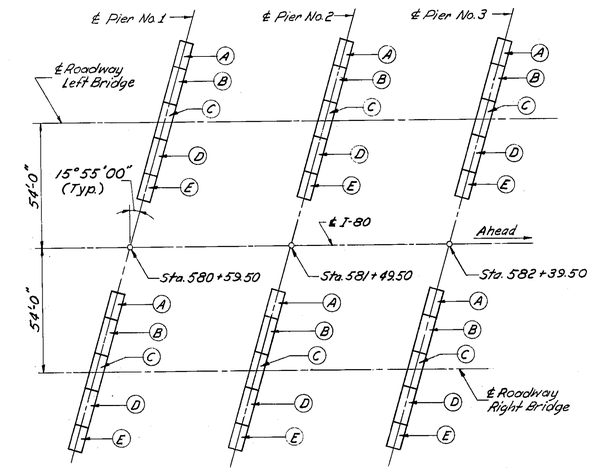
Sta. 580+44.10 Pier No.1 Right Bridge
Sta. 580+74.90 Pier No.1 Left Bridge
Sta. 581+34.10 Pier No. 2 Right Bridge
Sta. 581+64.90 Pier No. 2 Left Bridge



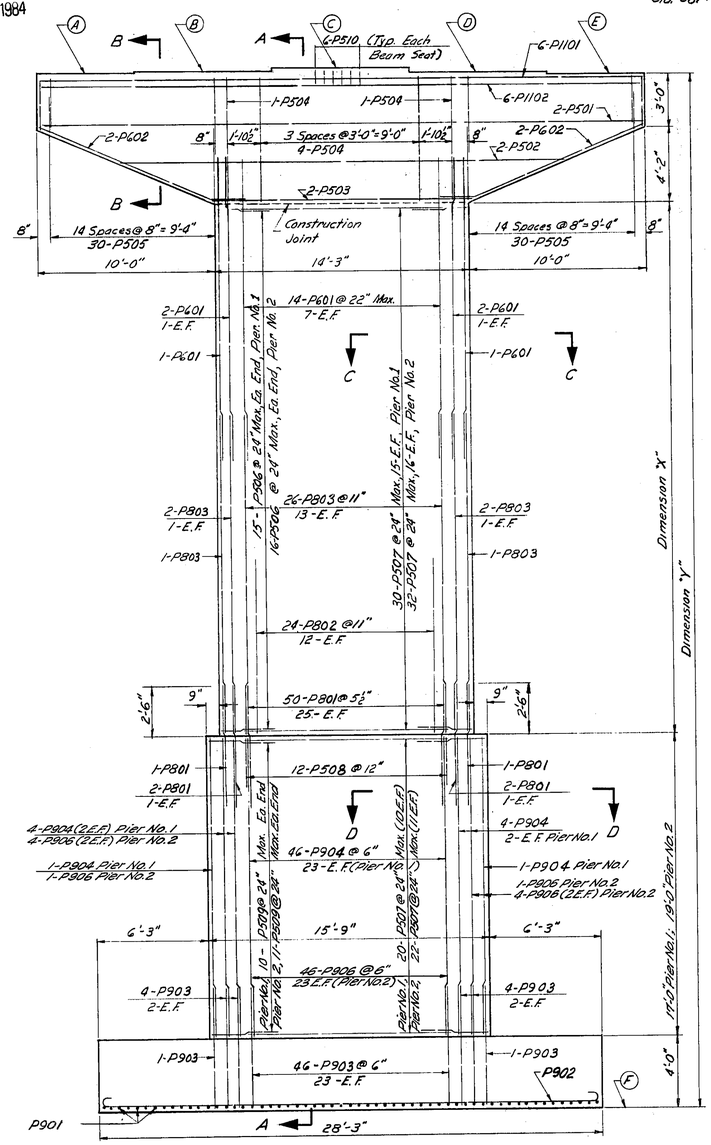
TYPICAL ANCHOR BOLT LAYOUT
(Pier No. 2)



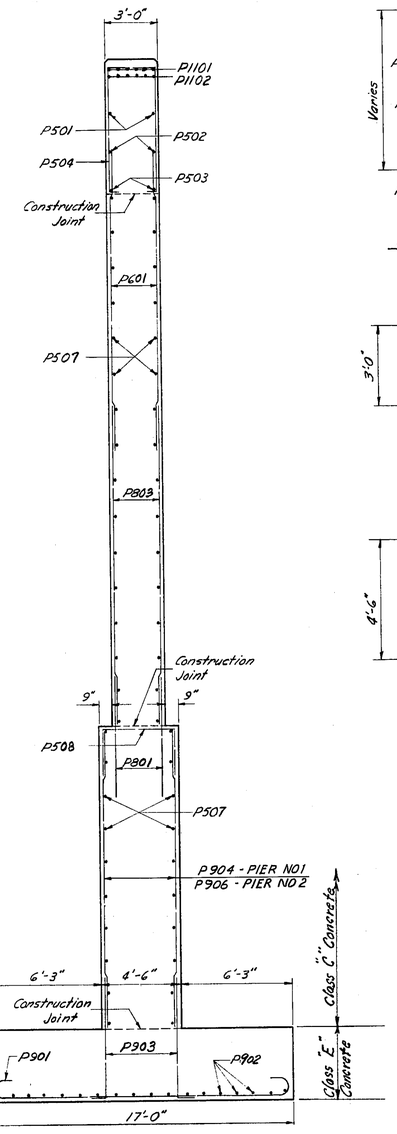
TYPICAL ANCHOR BOLT LAYOUT
(Pier No. 1 & No. 3)



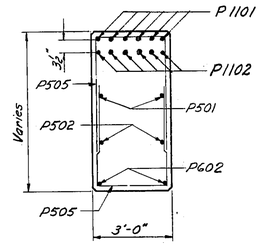
GEOMETRY LAYOUT



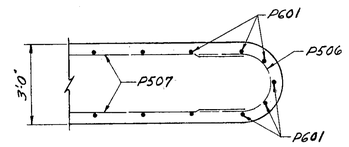
ELEVATION PIER NO.1 & NO. 2



SECTION A-A



SECTION B-B



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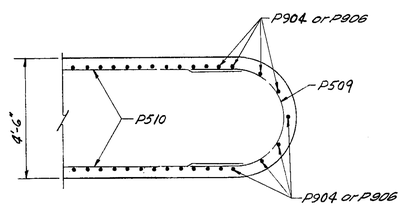

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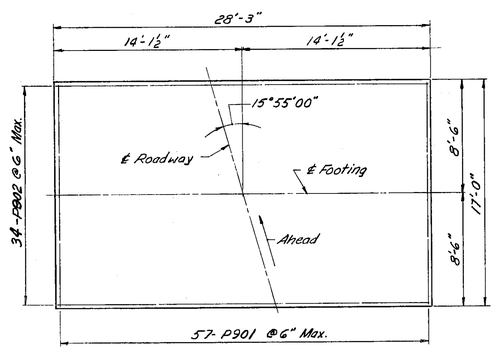


FOOTING PLAN PIER NO.1 & NO. 2

TABLE OF ELEVATIONS

LOCATION	LEFT BRIDGE							
	A	B	C	D	E	F	Dim. "X"	Dim. "Y"
Pier No. 1	933.00	933.06	933.11	932.93	932.75	877.00	27'-7"	55'-9"
Pier No. 2	935.38	935.44	935.49	935.31	935.13	875.00	29'-11 3/8"	60'-1 3/8"
Pier No. 3	938.34	938.39	938.44	938.26	938.08	904.00	23'-5"	34'-1"

LOCATION	RIGHT BRIDGE							
	A	B	C	D	E	F	Dim. "X"	Dim. "Y"
Pier No. 1	932.09	932.14	932.20	932.01	931.83	877.00	26'-8"	54'-10"
Pier No. 2	934.47	934.52	934.58	934.40	934.22	875.00	29'-0 5/8"	59'-2 5/8"
Pier No. 3	937.42	937.48	937.53	937.35	937.17	904.00	22'-6"	33'-2"

NOTES

- Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes.
- Footings for Piers No. 1 and No. 2 are designed for a maximum bearing pressure of 4.0 Tons per sq. ft.

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

PIER NO.1 & NO. 2
BRIDGE NO. TRU-I-80-1069 L/R
OVER ERIE-LACKAWANNA RAILROAD
& LITTLE YANKEE RUN
TRUMBULL COUNTY STA 579+85.16 TO STA. 583+04.84

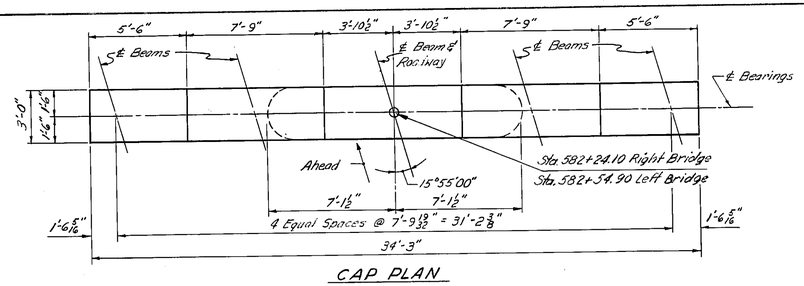
Designed	Drawn	Traced	Checked	Reviewed Date	Revised
D.C.E.	F.J.M.		G.M.B.	10-25-62	

MICROFILMED
DEC 10 1984

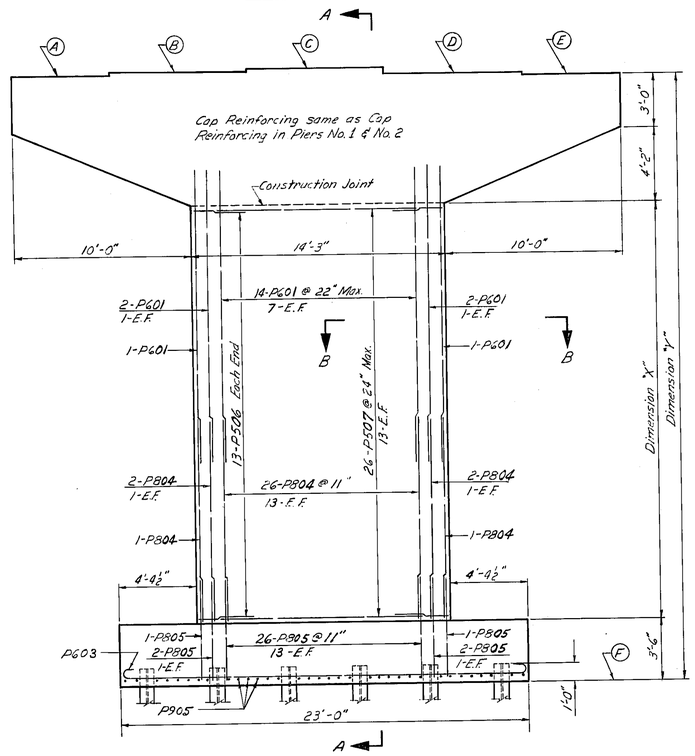
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5 (9) 245	

364
401

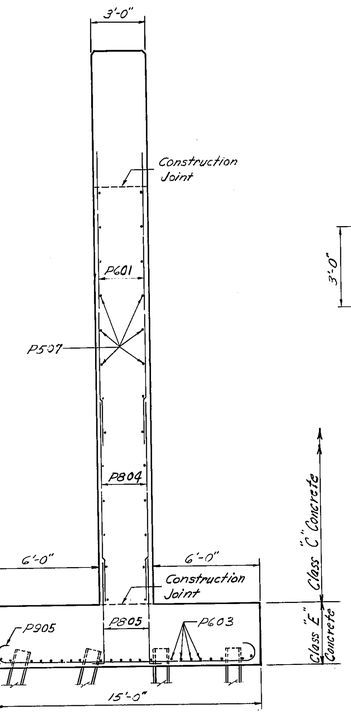
TRUMBULL COUNTY
TRU-I-80 (8.90)



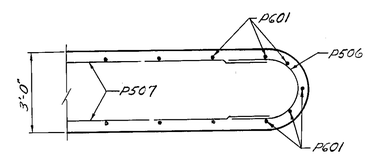
CAP PLAN



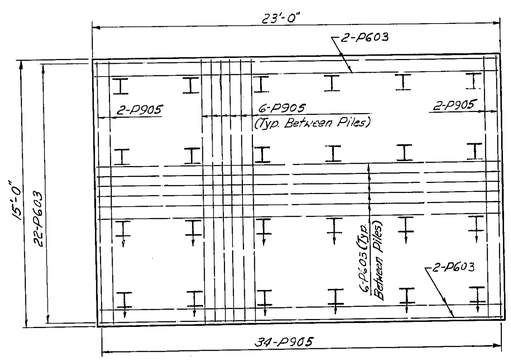
ELEVATION – PIER NO. 3



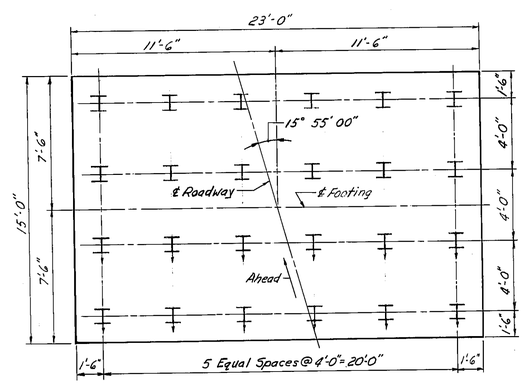
SECTION A-A



SECTION B-B



FOOTING PLAN - PIER NO. 3
(SHOWING REINFORCEMENT)



PILE LAYOUT — PIER NO. 3
(SHOWING PILE LOCATION)

Indicates Vertical Piles

Indicates Battered Piles. Batter 1:4 in direction of arrow.

NOTES

- Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes.
- All Piles for Pier No. 3 to be 10BP42 driven to a minimum bearing capacity of 35 Tons per Pile.
- See Piers No. 1 and No. 2 sheet for dimensions and elevations.

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

PIER NO 3
BRIDGE NO TRU-I-80-1069 L/R
OVER ERIE-LACKAWANNA RAILROAD
& LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 579+85.16 TO STA. 583+04.84

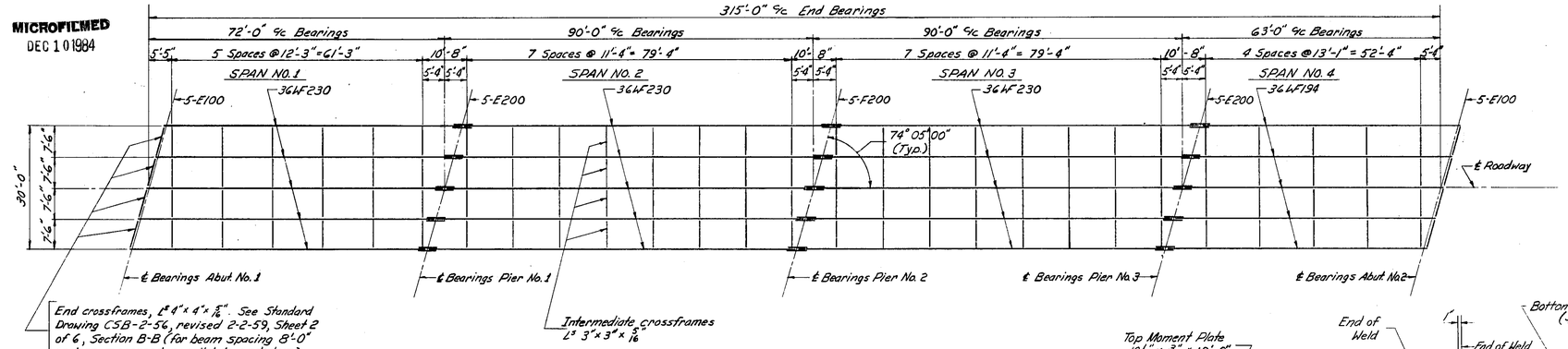
Designed	Drawn	Traced	Checked	Reviewed Date	Revised
D.C.E.	F.J.M.		G.M.B.	8-15-25-62	

MICROFILMED
DEC 10 1984

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5 (9) 245	

365
401

TRUMBULL COUNTY
TRU-I-80 (8.90)



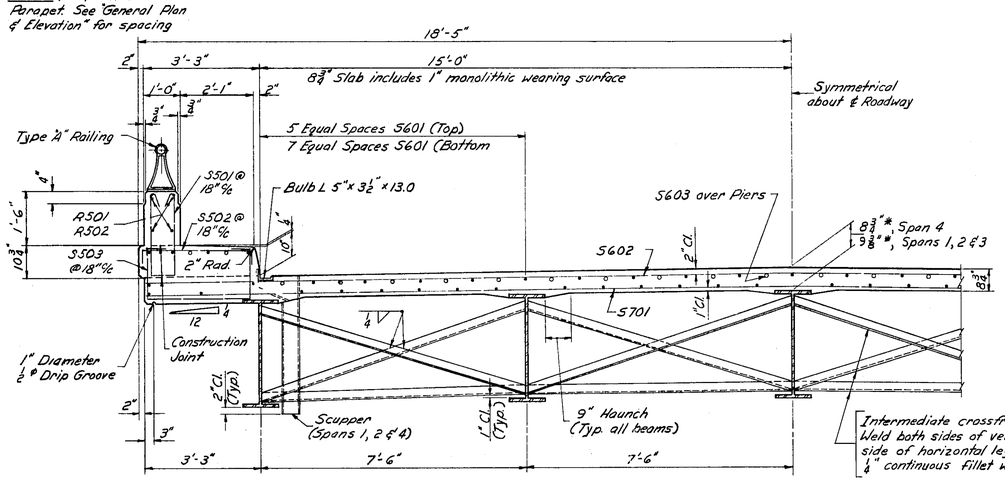
STEEL FRAMING PLAN

Cambering of beams is required in accordance with the following table:

DEFLECTION AND CAMBER								
LOCATION	OUTSIDE BEAMS				INSIDE BEAMS			
	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 1	SPAN 2	SPAN 3	SPAN 4
Deflection due to weight of Steel	5/8"	3/16"	3/16"	1/16"	5/8"	3/16"	3/16"	1/16"
Deflection due to remaining Dead Load	9/16"	3/8"	7/8"	5/16"	7/16"	9/16"	11/16"	1/4"
Sum of Deflections	11/16"	15/16"	1 1/16"	3/8"	9/16"	3/8"	7/8"	5/16"
Required Camber	11/16"	15/16"	1 1/16"	0	9/16"	3/8"	7/8"	0

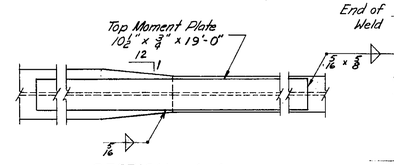
NOTE: Where no camber is specified, beams shall be fabricated with any natural camber or bowed side up.

NOTE: 1/4" Expansion Joint in Parapet. See "General Plan & Elevation" for spacing

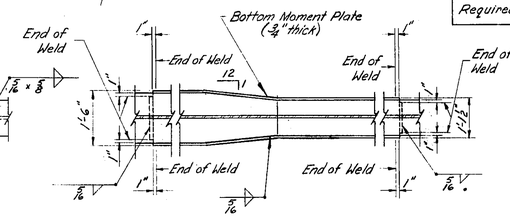


TRANSVERSE HALF SECTION

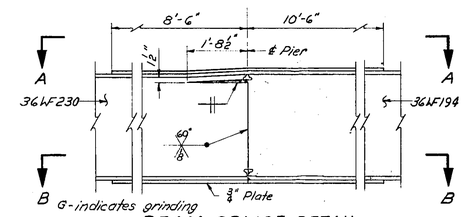
* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.



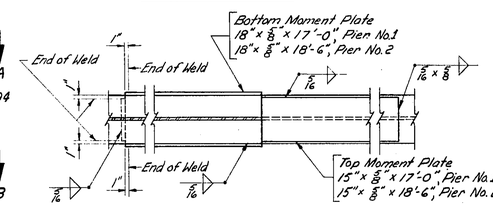
SECTION A-A



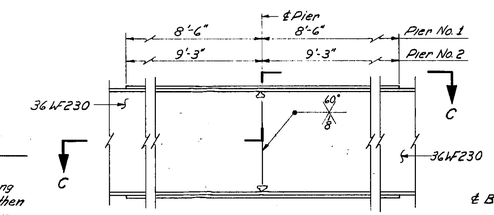
SECTION B-B



BEAM SPLICE DETAIL
(At Pier No. 3)



SECTION C-C



BEAM SPLICE DETAIL
(At Piers No. 1 & No. 2)

NOTES

- Refer to Standard Drawing CSB-2-56, Sheet 2 of 6, for details of end dam.
- Refer to Standard Drawing CSB-2-56, Sheet 3 of 6, for gutter, scupper and curb plate details.
- Refer to Standard Drawing FSB-1-62 for details of Bearings.
- Concrete and reinforcing steel above parapet construction joints included with railing for payment.
- Concrete shall be Class "C".
- Joints in End Dam: A welded butt-joint in the end dam at the center line of roadway, will be required for that portion of the end dam attached to the Superstructure. The portion attached to the backwall shall be placed in segments which shall be closely butted with one of the joints at the apex of the crown, but shall not be welded.
- Continuous Beam Splices: If 36WF230 beams at Pier No. 1 or Pier No. 2 have depths differing by more than 1/8", the depth of the smaller depth beam shall be increased by splitting the web as shown in Beam Splice Detail at Pier No. 3. The slope of the bent up flange shall not exceed 3/8" per foot.

BEAM SPLICE WELDING PROCEDURE

1. Raise end of beam at Pier No. 2 (3 1/8").
2. Butt-weld the beam flanges and web at Pier No. 1 using the following sequence: make one pass on each flange, then two on the web; repeat, using one pass at each location, until welds are completed.
3. Weld top and bottom flange moment plates at Pier No. 1.
4. Lower end of beam at Pier No. 2.
5. Make splices at Piers No. 2 and No. 3 in the same manner, raising the ends of the beams 3 1/8" at Pier No. 3, and 1 1/8" at Abutment No. 2.

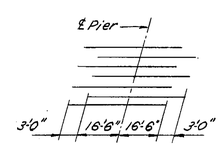
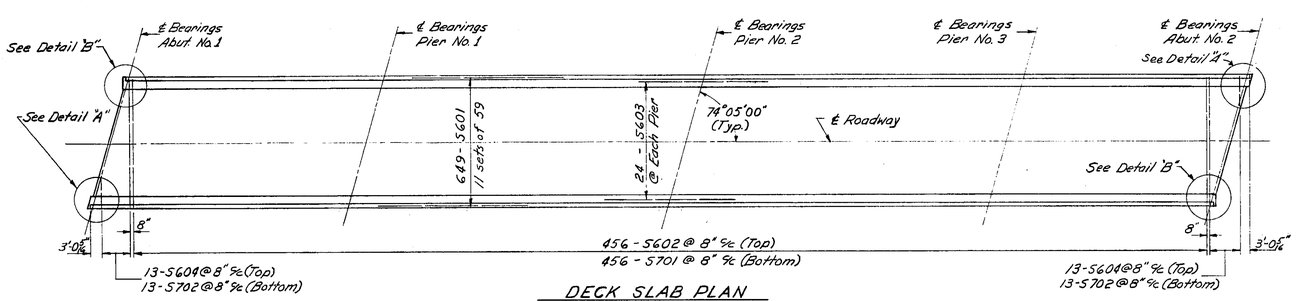
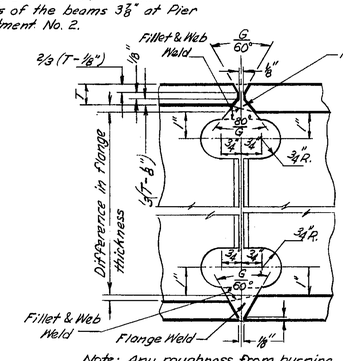


DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIERS

DECK SLAB HAUNCH: The haunch in the deck slab adjacent to the top of steel beams, which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12", except that the maximum slope shall not exceed 3 inches per foot. Payment for deck slab concrete shall be based on the 9" width.

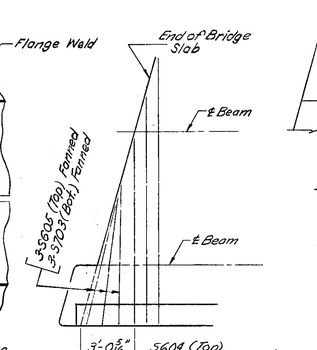


DECK SLAB PLAN

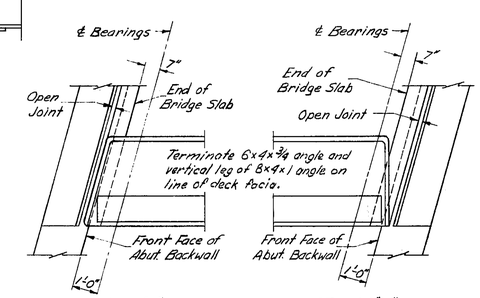


Note: Any roughness from burning shall be removed by grinding

END PREPARATION OF ROLLED BEAMS FOR FIELD WELDING



DETAIL "A"
(Showing Reinforcement)



DETAIL "A" DETAIL "B"

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

SUPERSTRUCTURE
BRIDGE NO. TRU-I-80-1069 L/R
OVER ERIE-LACKAWANNA RAILROAD
& LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 579+85.16 TO STA 583+04.84

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
L.E.	F. J.M.		G.M.B.		10-25-62	

MICROFILMED
DEC 10 1984

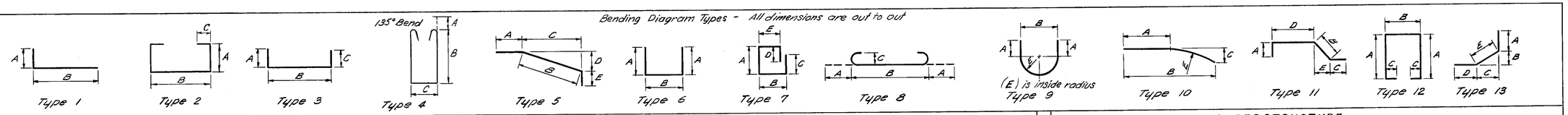
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

366
401

TRUMBULL COUNTY
TRU-I-80 (8.90)

REINFORCING STEEL BAR SCHEDULE

Bending Diagram Types - All dimensions are out to out



PIERS

	RIGHT BRIDGE			LEFT BRIDGE											
MARK	PIER1	PIER2	PIER3	PIER1	PIER2	PIER3	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
P1101	6	6	6	6	6	6	36	35'-7"	6	1'-2"	33'-11"				6,806
P1102	6	6	6	6	6	6	36	33'-9"	Str.						6,456
P901	57	57	-	57	57	-	228	19'-2"	8	1'-3"	16'-8"	11¼"			14,858
P902	34	34	-	34	34	-	136	30'-5"	8	1'-3"	27'-11"	11¼"			14,065
P903	56	56	-	56	56	-	224	7'-3"	1	11"	6'-7"				5,522
P904	56	-	-	56	-	-	112	16'-9"	Str.						6,379
P905	-	-	34	-	-	34	68	17'-2"	8	1'-3"	14'-8"	11¼"			3,969
P906		56			56		112	18'-9"	Str.						7,140
P801	56	56	-	56	56	-	224	6'-6"	Str.						3,887
P802	24	24	-	24	24	-	96	10'-0"	Str.						2,563
P803	32	32	-	32	32	-	128	18'-0"	Str.						6,152
P804	-	-	32	-	-	32	64	12'-0"	Str.						2,051
P805	-	-	32	-	-	32	64	6'-6"	1	11"	5'-9"				1,111
P601	20	20	20	20	20	20	120	16'-6"	Str.						2,974
P602	4	4	4	4	4	4	24	15'-2"	13	2'-8"	4'-2"	9'-10"	2'-0"	10'-8"	547
P603	-	-	22	-	-	22	44	24'-0"	8	8"	22'-8"	6"			1,586
P501	2	2	2	2	2	2	12	33'-11"	Str.						425
P502	2	2	2	2	2	2	12	25'-0"	Str.						313
P503	2	2	2	2	2	2	12	14'-9"	Str.						185
P504	6	6	6	6	6	6	36	16'-10"	12	6'-10"	2'-8"	6"			632
P505	60	60	60	60	60	60	360	6'-11" to 11'-7"	6	① 2'-3" to 4'-7"	2'-8"				3,473
P506	30	32	26	30	32	26	176	6'-10"	9	1'-6"	2'-6"			1'-2⅝"	1,254
P507	50	54	26	50	54	26	260	11'-3"	Str.						3,051
P508	12	12	-	12	12	-	48	6'-11"	6	1'-6"	4'-2"				346
P509	20	22	-	20	22	-	84	8'-3"	9	1'-6"	4'-0"			1'-11½"	723
P510	30	30	30	30	30	30	180	3'-8"	6	7⅝"	2'-8"				688
														Total Weight	97,156

① - 24 each vary in increments of 2"

ABUTMENTS

MARK	R.B.	L.B.	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A801	16	16	32	38'-11"	Str.						3,325
A601	56	56	112	13'-11"	3	6'-6"	5'-5"	2'-3"			2,341
A602	50	50	100	15'-6"	7	6'-4"	1'-5"	4'-9"	2'-9"	11"	2,328
A603	22	22	44	16'-4"	7	6'-4"	1'-5"	6'-4"	2'-0"	11"	1,079
A604	24	24	48	① 6'-6" to 10'-6"	Str.						613
A605	48	48	96	12'-0"	Str.						1,730
A606	8	8	16	9'-8"	5	2'-0"	6'-0"	5'-4"	2'-9"	2'-0"	232
A501	56	56	112	9'-2"	6	2'-0"	5'-5"				1,071
A502	48	48	96	7'-4"	1	1'-0"	6'-6"				734
A503	60	60	120	3'-0"	6	7⅜"	2'-0"				375
A504	48	48	96	6'-4"	6	1'-7"	3'-5"				634
A505	32	32	64	35'-5"	Str.						2,364
A506	8	8	16	5'-11"	1	1'-0"	5'-0"				99
A507	20	20	40	8'-0"	Str.						334
A508	20	20	40	8'-3"	Str.						344
A509	24	24	48	② 5'-2" to 7'-8"							321
A510	24	24	48	② 5'-5" to 7'-11"							334
										Total Weight	18,258

① - 16 each vary in increments of 2'-0"
② - 8 each vary in increments of 6"

SUPERSTRUCTURE

MARK	R.B.	L.B.	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
S701	456	456	912	36'-2"	Str.						67,419
S702	26	26	52	① 8'-2" to 36'-2"	Str.						2,356
S703	6	6	12	② 5'-0" to 8'-0"	Str.						159
S601	649	649	1298	30'-4"	Str.						59,138
S602	456	456	912	36'-2"	Str.						49,542
S603	72	72	144	36'-0"	Str.						7,786
S604	26	26	52	① 8'-2" to 36'-2"	Str.						1,731
S605	6	6	12	② 5'-0" to 8'-0"	Str.						117
S501	422	422	844	5'-7"	4	5"	2'-2"	8"			4,915
S502	422	422	844	3'-7"	6	7⅝"	2'-7"				3,154
S503	422	422	844	5'-11"	2	1'-3⅜"	2'-7"	7⅝"			5,209
R501	136	136	272	17'-2"	Str.	Included with railing for Payment					—
R502	16	16	32	9'-3"	Str.						—
										Total Weight	201,526

① - 4 each vary in increments of 2'-4"
② - 4 each vary in increments of 1'-6"

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	LEFT BRIDGE SUPERSTR.	LEFT BRIDGE ABUTS.	LEFT BRIDGE PIERS	LEFT BRIDGE GENERAL	LEFT BRIDGE AS BUILT	RIGHT BRIDGE SUPERSTR.	RIGHT BRIDGE ABUTS.	RIGHT BRIDGE PIERS	RIGHT BRIDGE GENERAL	RIGHT BRIDGE AS BUILT
E-2	2,110	Cu.Yds.	Unclassified Excavation		140	880				140	950		
E-2	Lump	Sum	Cofferdams, Cribs and Sheeting				Lump Sum					Lump Sum	
S-1	800	Cu.Yds.	Class "C" Concrete, Superstructure	400					400				
S-1	550	Cu.Yds.	Class "C" Concrete, Piers Above Footings			277					273		
S-1	160	Cu.Yds.	Class "E" Concrete, Abutments above Footing		80					80			
S-1	488	Cu.Yds.	Class "E" Concrete, Footings		57	187				57	187		
S-4	316,940	Lbs.	Reinforcing Steel	100,763	9,129	48,578			100,763	9,129	48,578		
S-7	817,500	Lbs.	Structural Steel	408,750					408,750				
S-8	817,500	Lbs.	Field Painting of Structural Steel	408,750					408,750				
S-14	1261.88	Lin.Ft.	Railing (Aluminum Rail & Support, Concrete Parapet)	630.94					630.94				
S-16	Lump	Sum	First Test Pile				Lump Sum						
S-18	3,200	Lin.Ft.	Steel Piles 10 BP 42		880	720				880	720		
S-29	32	Each	Scuppers, including supports	16					16				
S-29	64	Cu.Yds.	Porous Backfill		32					32			
S-101	800	Each	Water-Reducing, Set-Retarding Admixture	400					400				
I-127	3	Each	Delineators, Type A-1, bracket mounted	2					1				
I-10	1,440	Sq.Yds.	Crushed Aggregate Slope Protection				720					720	

REPLACEMENT BARS

MARK	NO.	LENGTH	TYPE	WEIGHT
RE1101	1	7'-6"	Str.	
RE901	3	6'-10"	Str.	
RE801	1	6'-6"	Str.	
RE701	4	6'-3"	Str.	
RE601	7	5'-11"	Str.	
RE501	2	5'-7"	Str.	

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, A801 is a No. 8 Size Bar and P1101 is a No. 11 Size Bar.

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

REINFORCING STEEL LIST
& ESTIMATED QUANTITIES
BRIDGE NO. TRU-I-80-1069L/R
OVER ERIE-LACKAWANNA RAILROAD
& LITTLE YANKEE RUN
TRUMBULL COUNTY STA.579+85.16 TO STA.583+04.84

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
G.M.B.	C.S.F.	GC	G.M.B.		10-25-62	

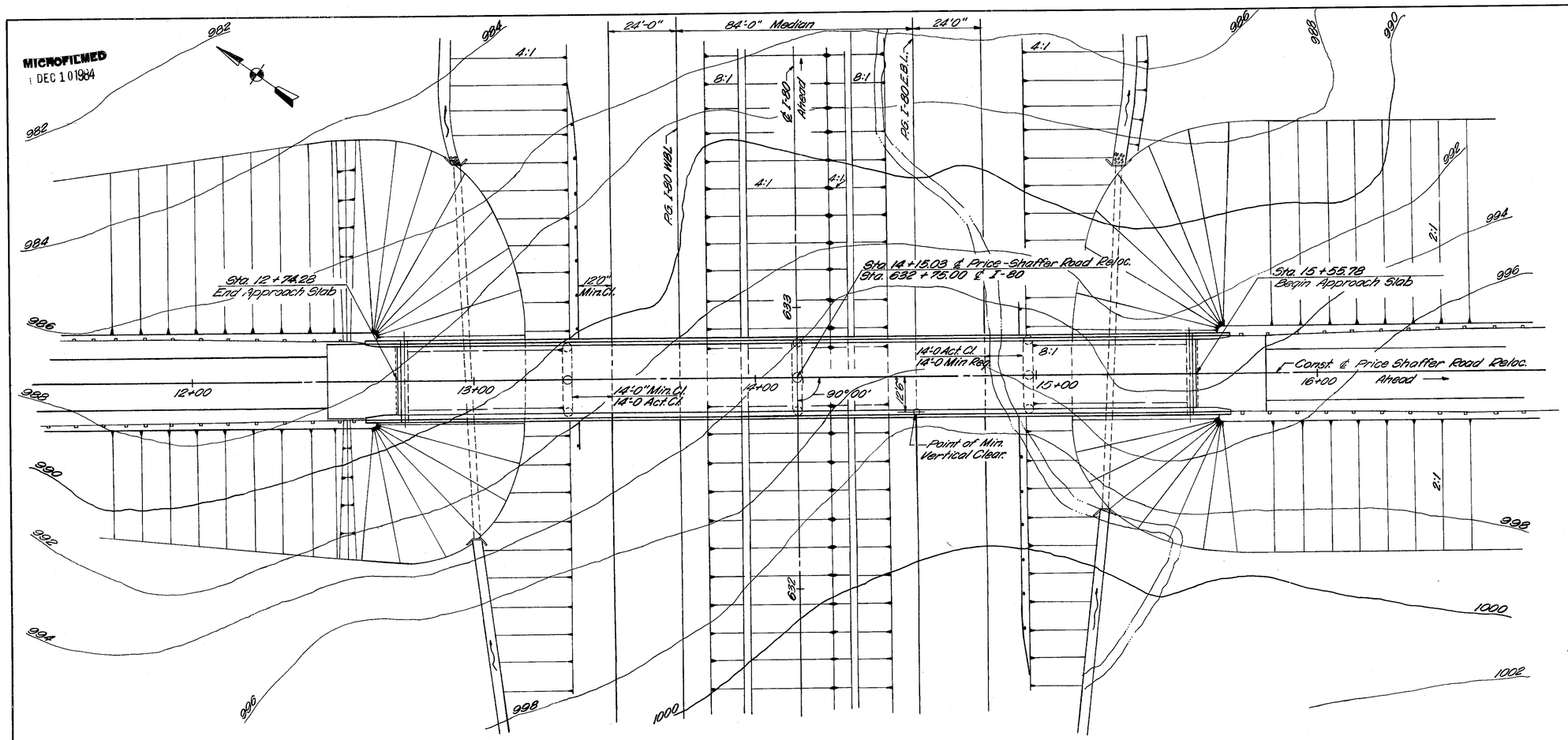
MICROFILMED
DEC 10 1984

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

367/401

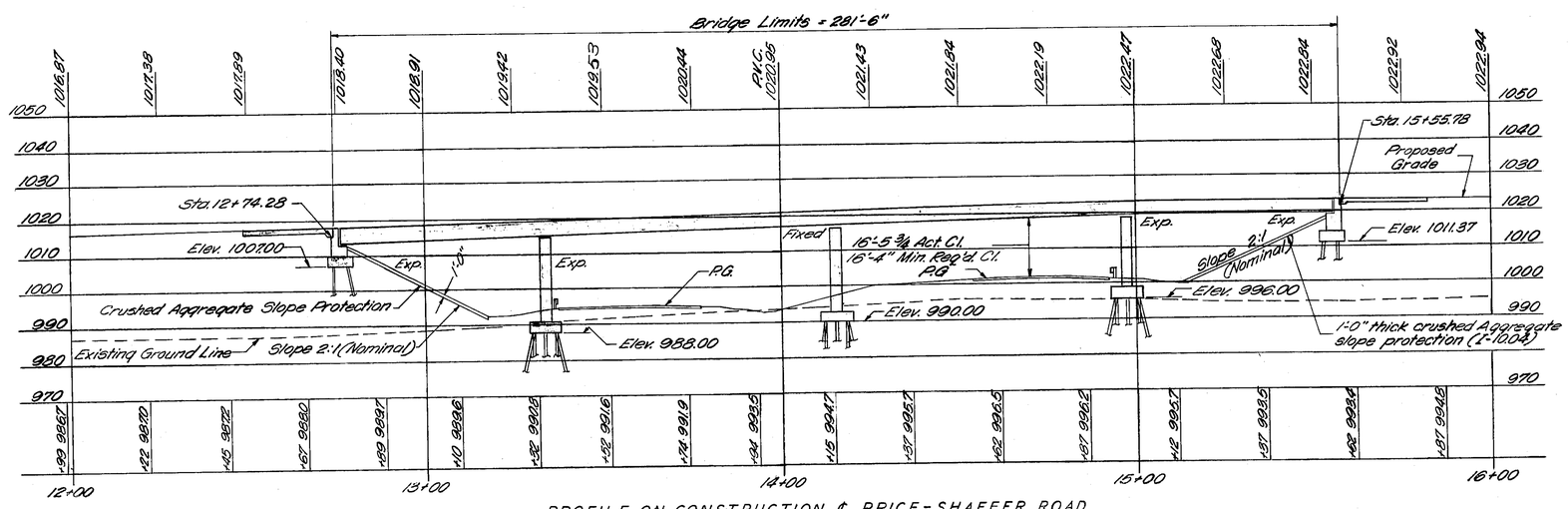
TRUMBULL COUNTY
TRU I-80 (8.90)

B.M. #16 Elev. 983.704
R.R. Spike 12" Wild Cherry
185' Lt. Sta. 634.00

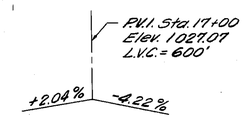


PRICE-SHAFFER ROAD DESIGN A.D.T. 468

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil-samplings soundings, made at the site. This sounding information, the accuracy of which the State does not guarantee, may be examined in the office of the Bureau of Bridges in Columbus or in the Division office.



PROFILE ON CONSTRUCTION ℄ PRICE-SHAFFER ROAD



GRADE ON PRICE-SHAFFER ROAD

All Piles 10BP42
Estimated Avg. Pay Lengths:
Abutment No. 1 25'
Abutment No. 2 30'
Piers 10'

PROPOSED STRUCTURE
TYPE: Continuous Steel Beam with Reinforced Concrete Deck & Substructure.
SPANS: 57'-0", 81'-6", 81'-6", 57'-0"
ROADWAY: 24' ff, 2'-3" Safety Curbs
LOAD FREQUENCY: C.F. = 190 (37)
SKEW: 0°00'
WEARING SURFACE: 3/4 Monolithic Conc.
APPROACH SLAB: Special Design
ALIGNMENT: Tangent
SUPERELEVATION: None

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

SITE PLAN
BRIDGE NO. TRU-I-80-1170
UNDER
PRICE-SHAFFER ROAD
TRUMBULL COUNTY STA. 632 + 75.00
SCALE: 1"=20'-0"

PRESENT TOPOGRAPHY		PROPOSED WORK			
Surveyed	Drawn	Designed	Drawn	Checked	Reviewed
BUCHART ENGR.	G.M.B.	J.M.B.	R.L.K.	G.M.B.	10-11-62

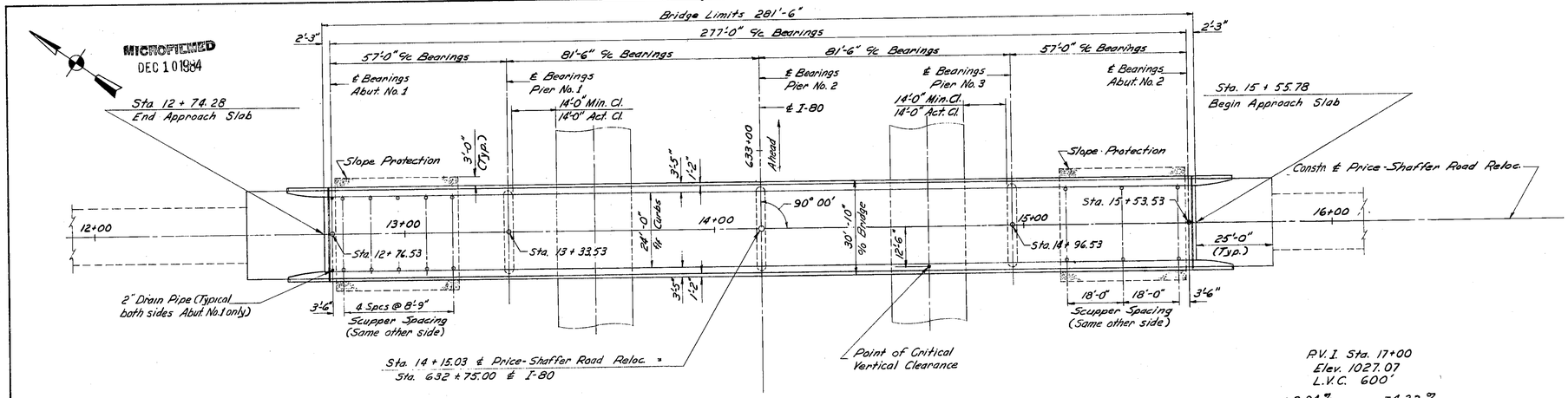
Sheet 1 of 6

FED. RD. DIVISION	STATE	PROJECT	
	OHIO	I-IG-80-5 (9) 245	

368
401

TRUMBULL COUNTY
TRU-I-80 (8.90)

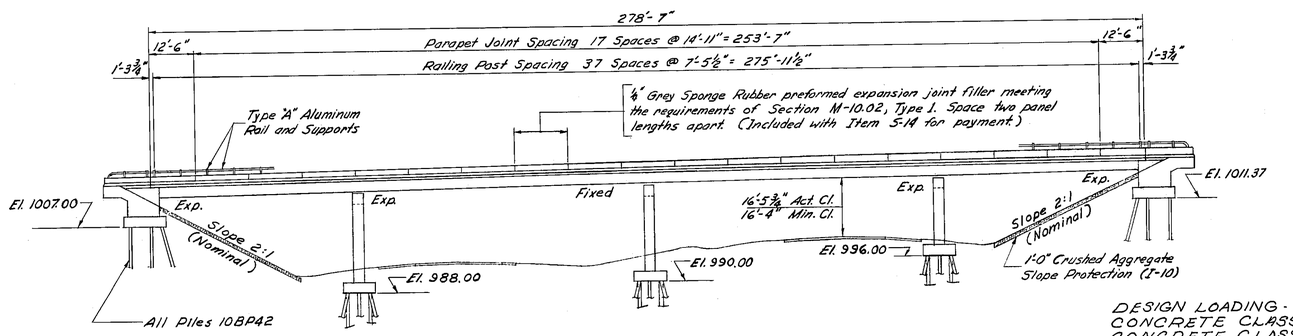
MICROFILMED
DEC 10 1984



GENERAL PLAN

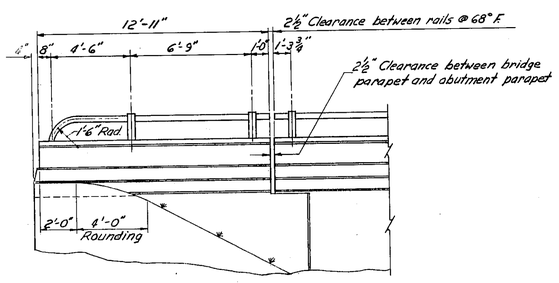
P.V.I. Sta. 17+00
Elev. 1027.07
L.V.C. 600'
+2.04 % -4.22 %

GRADE ON PRICE-SHAFFER ROAD



ELEVATION

DESIGN LOADING - CF = 130 (57)
CONCRETE CLASS C - basic unit stress 1,333 p.s.i.
CONCRETE CLASS E - basic unit stress 1,133 p.s.i.
STRUCTURAL STEEL - ASTM A36 - basic unit stress 20,000 p.s.i. (ASTM A7 and A373 steel not permitted)
REINFORCING STEEL - ASTM A15, A16, A160, 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.



TYPICAL ABUTMENT RAILING DETAIL

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPERSTR.	ABUTS.	PIERS	GENERAL		
E-2	342	Cu. Yds.	Unclassified Excavation		242	100			
S-1	272	Cu. Yds.	Class "C" Concrete, Superstructure	272					
S-1	73	Cu. Yds.	Class "C" Concrete, Pier Caps and Columns			73			
S-1	76	Cu. Yds.	Class "E" Concrete, Abutments above Footing		76				
S-1	137	Cu. Yds.	Class "E" Concrete, Footings		56	81			
S-4	99,276	Lbs.	Reinforcing Steel	67,808	9,478	21,990			
S-7	226,700	Lbs.	Structral Steel	226,700					
S-8	226,700	Lbs.	Field Painting of Structural Steel	226,700					
S-14	608.84	Lin. Ft.	Railing (Aluminum Rail & Supports, Concrete Parapet)	557.17	51.67				
S-16	Lump	Sum	First Test Pile				Lump		
S-18	1,270	Lin. Ft.	Steel Piles 10BP42		550	720			
S-29	16	Cu. Yds.	Porous Backfill						
S-29	16	Each	Scuppers, including supports	16					
S-101	272	Each	Water-Reducing Set-Retarding Admixture	272					
I-10	370	Sq. Yds.	Crushed Aggregate Slope Protection				370		

GENERAL NOTES

- REFERENCE shall be made to Standard Drawings CSB-2-56, Sheets 2 & 3 of 6, revised 2-2-59, FSB-1-62 dated 1-15-63 and AR-1-57 revised 4-2-62, and to Supplemental Specification S-101 dated 7-12-62.
- 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.
- EXCAVATION QUANTITY includes the removal of fill material required for construction of the abutments.
- PILES shall be driven with a hammer of not less than 7,000 ft. lbs. per blow to firm contact with rock. If the length of penetration is approximately equal to the depth of rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. S-18.05 is not less than the following value for a pile hammer of the indicated energy rating:
  For the abutment piles;
  50 tons per pile using a 7,000 ft. lb hammer
  45 tons per pile using an 11,000 ft. lb. hammer
  40 tons per pile using a 15,000 ft. lb. or greater hammer
  For the pier piles;
  45 tons per pile using a 7,000 ft. lb. hammer
  40 tons per pile using an 11,000 ft. lb. hammer
  35 tons per pile using a 15,000 ft. lb. or greater hammer
  If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 35 tons per pile for the abutment piles and 30 tons per pile for the pier piles.
- WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop.
- SHOP PAINTING STEEL: The surface preparation of all steel, requiring shop painting as per the Plans and Specifications, shall be accomplished by blast cleaning or power tool cleaning, except as noted in the Specifications regarding the use of Chromate Primers.
- CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.
- SURFACE FINISH OF CONCRETE: The requirements of Sec. S-1.22, Rubbed Finish, shall apply to the following exposed concrete surfaces:
  a. The entire superstructure except the top and bottom surfaces of safety curbs and roadways.
  b. The entire surface of piers and abutments except bridge seats, backwalls and the face of spill-through abutments between outside beams.
- MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine.
- SHEET LEAD shall conform to the requirements of ASTM Designation B-29 without restriction to the Common Desilverized type.
  CONTINUOUS BEAM SHOP ASSEMBLY: Ref. Paragraph 4, Sec. S-7.12 of the Construction & Material Specs.; if rolled beams are field spliced only at supports, for the purpose of checking the fit-up of weld joint prep., only two adjacent beams need to be shop assembled at a time in their correct, unloaded position. All beams shall be assembled and match marked.

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BUCHART ENGINEERING, YORK, PA.

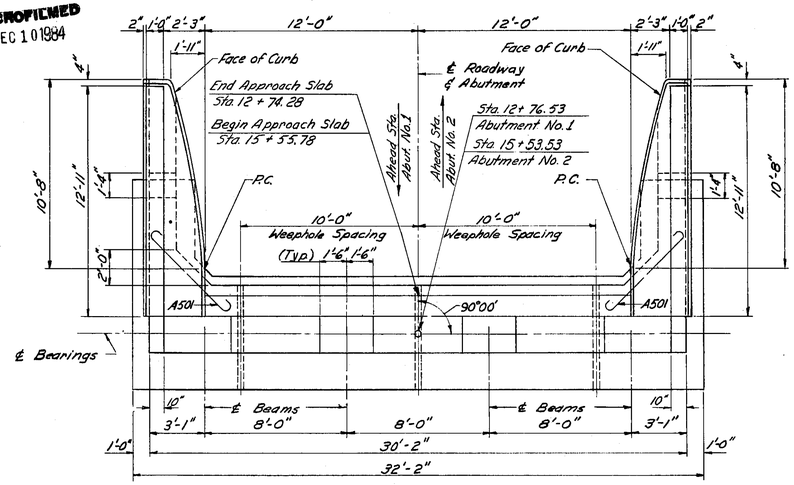
GENERAL PLAN & ELEVATION
NOTES & ESTIMATED QUANTITIES
BRIDGE NO. TRU- -80-1170
UNDER
PRICE-SHAFFER ROAD
TRUMBULL COUNTY STA. 632+75.00

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
G.M.B.	F.J.M.		G.M.B.	10-11-62	

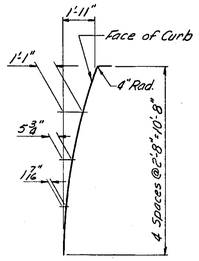
MICROFILMED
DEC 10 1984

FED. RD. DIVISION	STATE	PROJECT	
	OHIO	I-IG-80-5(9)245	

TRUMBULL COUNTY
TRU-I-80 (8.90)

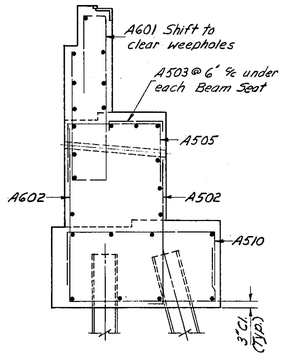


PLAN

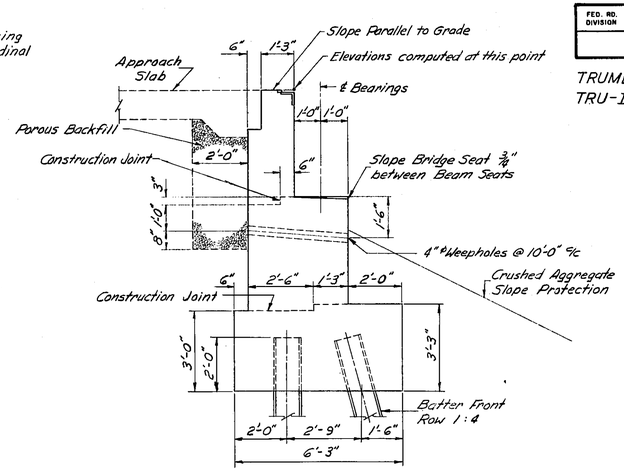


OFFSETS FOR FACE OF CURB

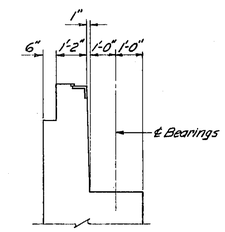
NOTE: All Longitudinal Reinforcing above Footing A504, All Longitudinal Reinforcing in Footing A801.



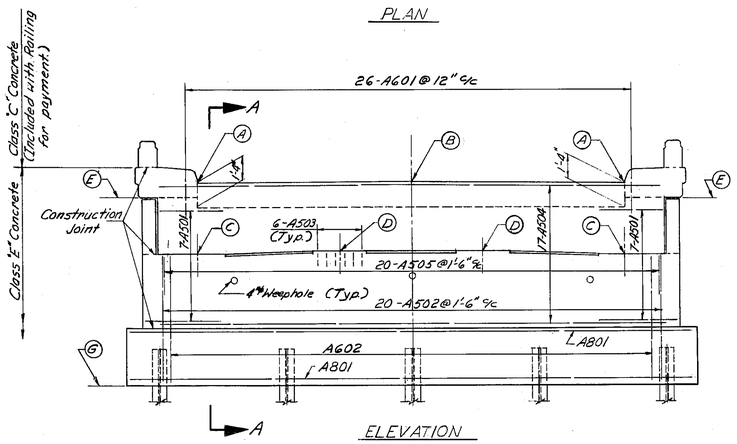
SECTION-A-A
SHOWING REINFORCEMENT



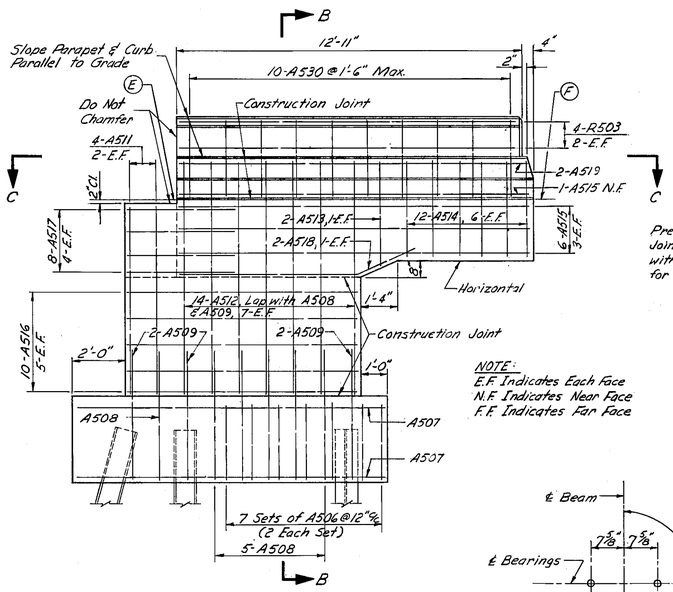
SECTION-A-A



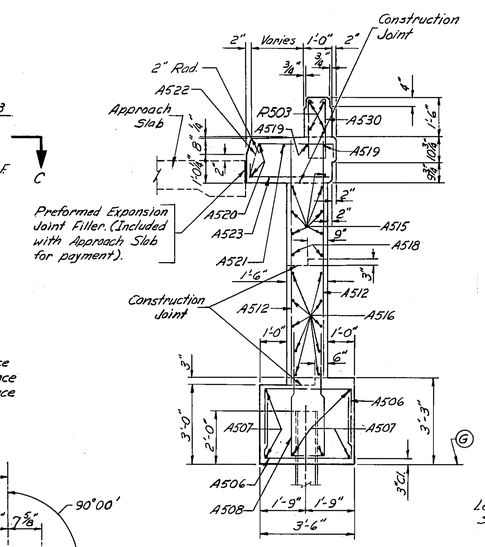
SLOPE OF BACKWALL
ABUTMENT NO. 1



ELEVATION



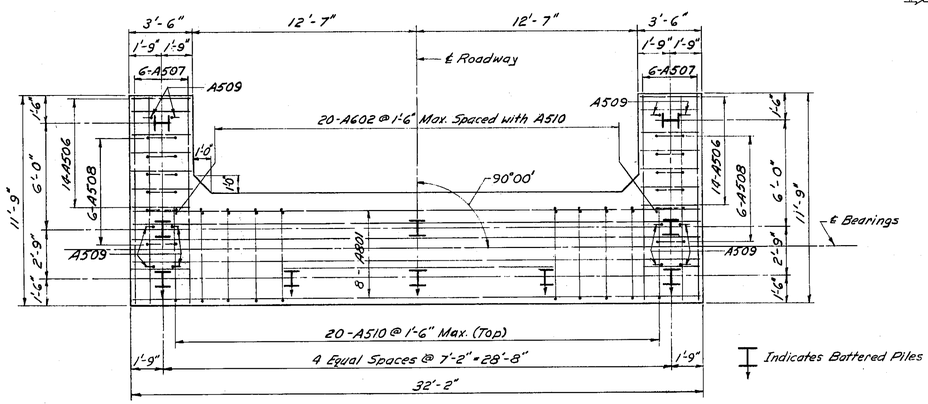
WINGWALL ELEVATION



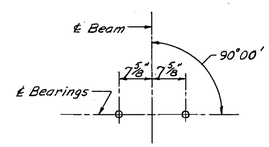
SECTION-B-B

NOTES

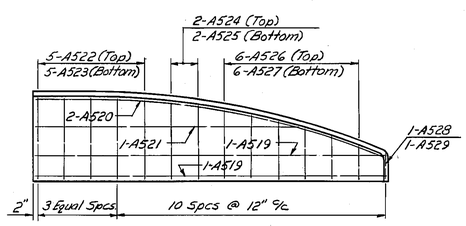
- POROUS BACKFILL 2 ft. thick, shall extend upward to the approach slab and outward to the wingwalls. Excavation therefor, in excess of that required for construction of the abutment, shall be considered as paid for in the bid price per cu. yd. paid for porous backfill.
- BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes.
- Concrete above bridge seat construction joint shall not be placed until after the steel work is erected, but shall be placed before placing deck slab.
- All abutment concrete shall be Class "E".
- Concrete and reinforcing steel above parapet construction joint included with railing for payment.
- Railing not shown. See "General Plan and Elevation" for railing post spacing.
- The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments, after which excavation shall be made for the abutments and the piles driven.



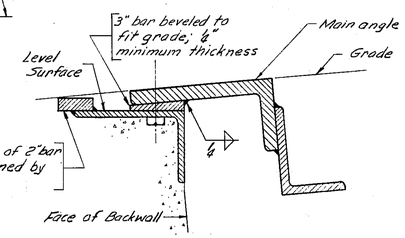
FOOTING PLAN



TYPICAL ANCHOR BOLT LAYOUT
ABUTMENT NO. 1 & 2



SECTION-C-C



END DAM DETAIL
ABUTMENT NO. 1 ONLY

TABLE OF ELEVATIONS

LOCATION	A	B	C	D
Abutment No. 1	1018.22	1018.41	1014.20	1014.32
Abutment No. 2	1022.67	1022.86	1018.57	1018.67
LOCATION	E	F	G	
Abutment No. 1	1017.37	1017.11	1007.00	
Abutment No. 2	1021.82	1021.87	1011.37	

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ABUTMENTS
BRIDGE NO. TRU-I-80-1170
UNDER
PRICE-SHAFFER ROAD
TRUMBULL COUNTY — STA. 632+75.00

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
D.C.E.	F.J.M.		G.M.B.		10-11-62	

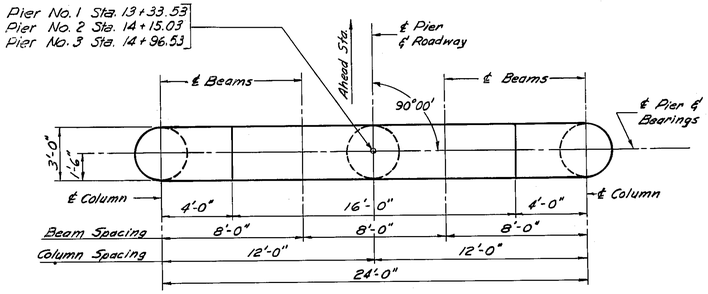
MICROFILMED
DEC 10 1984

FED. RD. DIVISION	STATE	PROJECT	
	OHIO	I-IG-80-5 (9) 245	

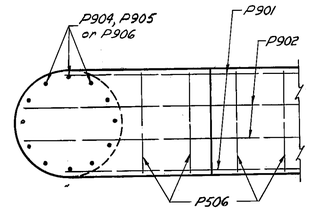
370
401

TRUMBULL COUNTY
TRU-I-80 (8.90)

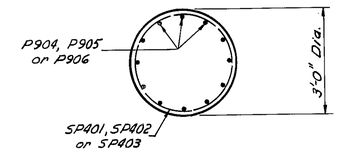
Pier No. 1 Sta. 13+33.53
Pier No. 2 Sta. 14+15.03
Pier No. 3 Sta. 14+96.53



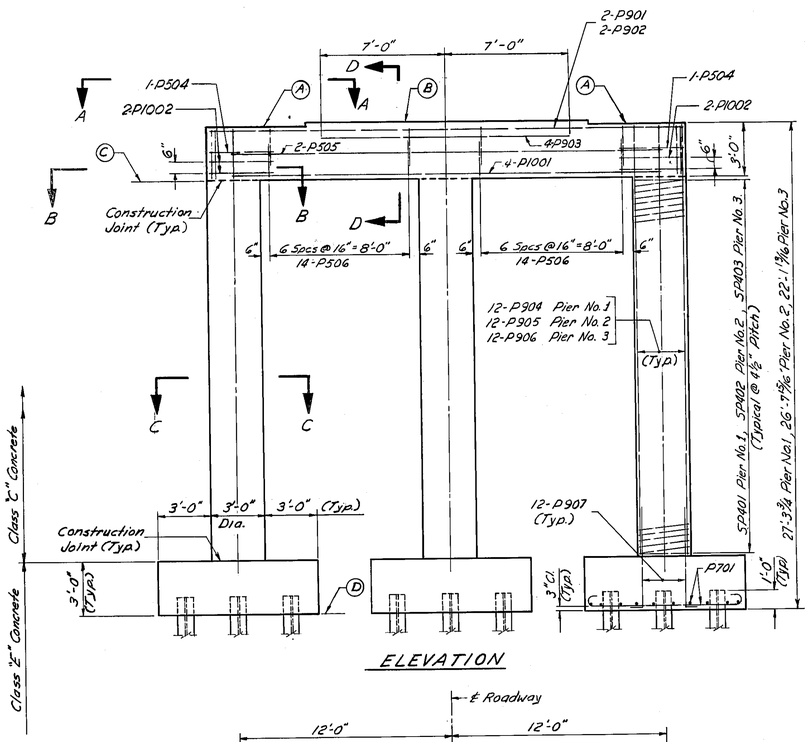
PLAN



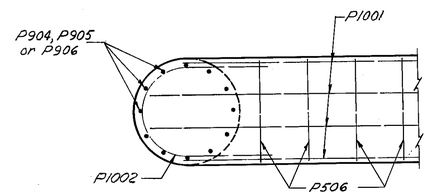
SECTION A-A



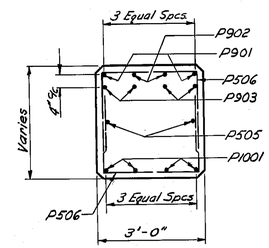
SECTION C-C



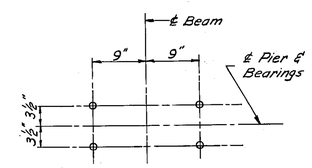
ELEVATION



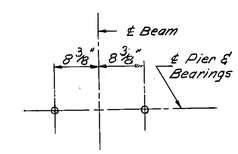
SECTION B-B



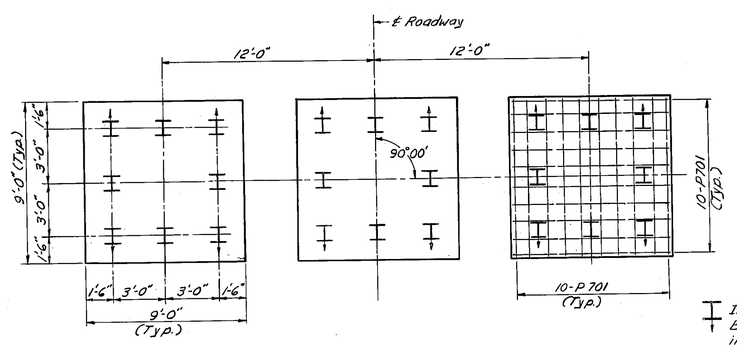
SECTION D-D



TYPICAL ANCHOR BOLT LAYOUT
(For Pier No. 2 Only)



TYPICAL ANCHOR BOLT LAYOUT
(For Pier No. 1 and Pier No. 3)



FOOTING PLAN

Indicates Battered Piles. Batter 1:4 in the direction indicated

NOTE

- Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes.

TABLE OF ELEVATIONS

LOCATION	A	B	C	D
Pier No. 1	1015.31	1015.43	1012.31	988.00
Pier No. 2	1016.66	1016.78	1013.66	990.00
Pier No. 3	1018.15	1018.27	1015.15	996.00

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

PIERS
BRIDGE NO. TRU-I-80-1170
UNDER
PRICE-SHAFFER ROAD
TRUMBULL COUNTY STA. 632+75.00

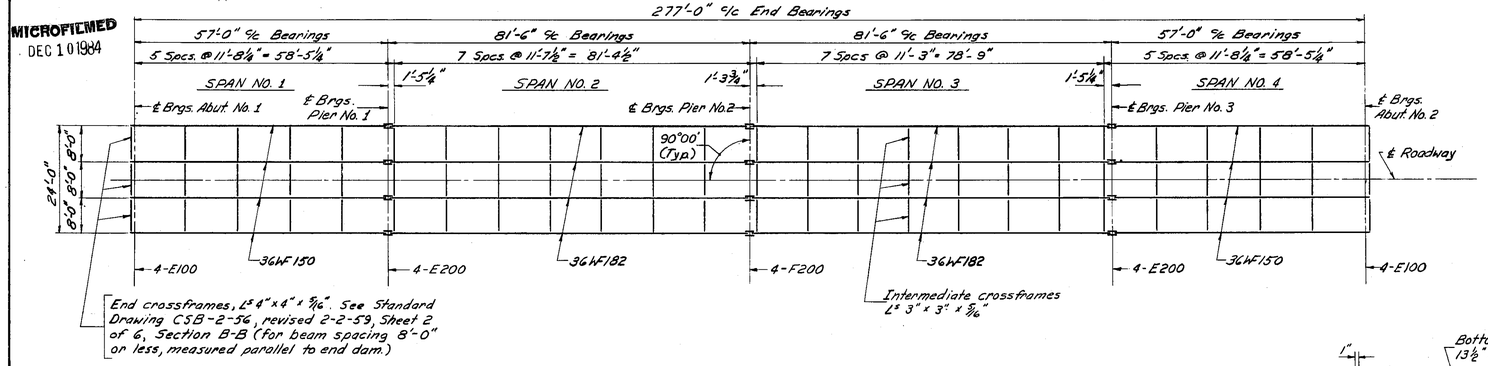
Designed	Drawn	Traced	Checked	Reviewed Date	Revised
D.C.E.	F.J.M.		G.M.B.	10-11-82	

MICROFILMED
DEC 10 1984

FED. RD. DIVISION	STATE	PROJECT	
	OHIO	I-IG-80-5(9)245	

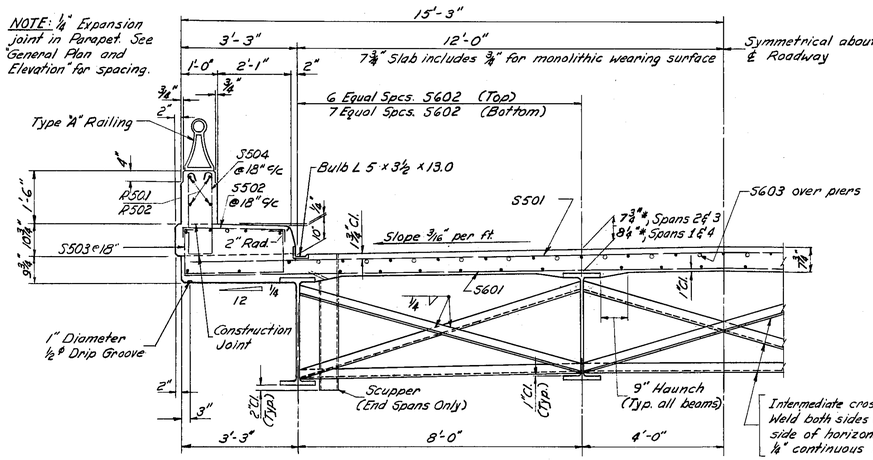
371/401

TRUMBULL COUNTY
TRU-I-80 (8.90)



STEEL FRAMING PLAN

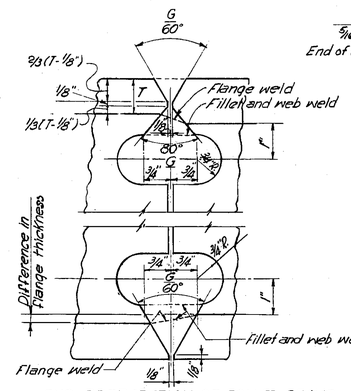
NOTE: ¼" Expansion joint in Parapet. See "General Plan and Elevation" for spacing.



TRANSVERSE HALF SECTION

* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

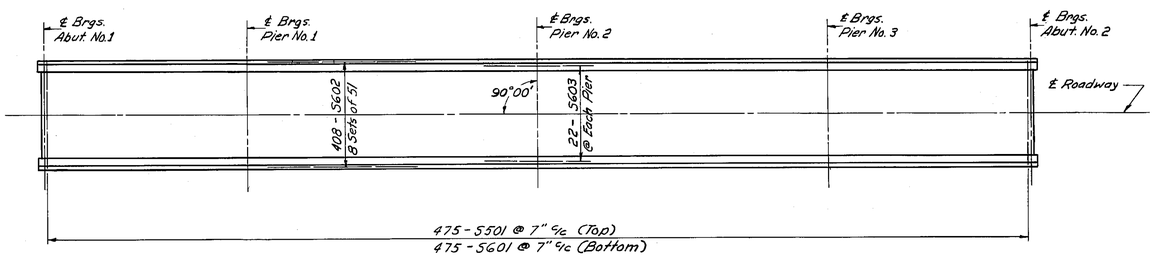
DECK SLAB HAUNCH: The haunch in the deck slab adjacent to the top of steel beams, which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12", except that the maximum slope shall not exceed 3 inches per foot. Payment for deck slab concrete shall be based on the 9" width.



END PREPARATION OF ROLLED BEAMS FOR FIELD WELDING

Note: Any roughness from burning shall be removed by grinding.

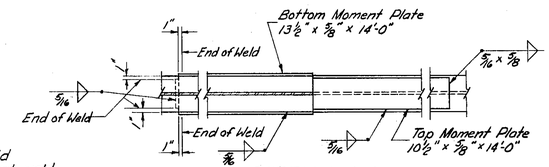
Intermediate crossframes, L's 3" x 3" x 5/16". Weld both sides of vertical leg and top side of horizontal leg to beam with ¼" continuous fillet weld.



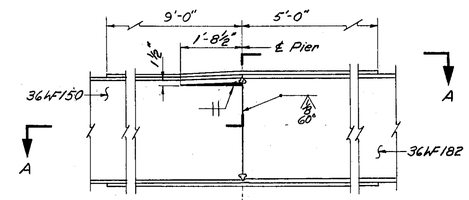
DECK SLAB PLAN

BEAM SPLICE WELDING PROCEDURE

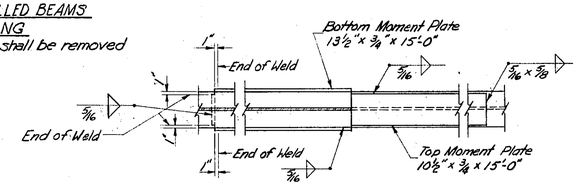
1. Raise end of beam at Pier No. 2 (2")
2. Butt-weld the beam flanges and web at Pier No. 1 using the following sequence: make one pass on each flange, then two on the web; repeat, using one pass at each location, until welds are completed.
3. Weld top and bottom flange moment plates at Pier No. 1.
4. Lower end of beam at Pier No. 2.
5. Make splices at Piers No. 2 and 3 in the same manner, raising the ends of the beams 3⅛" at Pier No. 3, and ⅞" at Abutment No. 2.



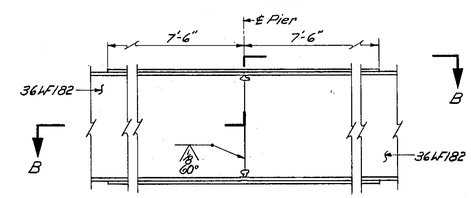
SECTION A-A



BEAM SPLICE DETAIL
(At Pier No. 1 & 3)



SECTION B-B



BEAM SPLICE DETAIL
(At Pier No. 2)

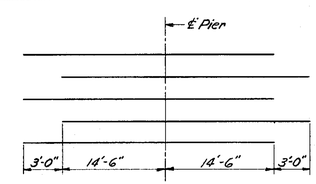


DIAGRAM SHOWING STAGGER OF S603 OVER PIERS

Cambering of beams is required in accordance with the following table:

DEFLECTION AND CAMBER

LOCATION	INSIDE BEAMS SPAN NO. 1	2	3	4	OUTSIDE BEAMS SPAN NO. 1	2	3	4
Deflection due to weight of Steel	1/16"	1/8"	1/8"	1/16"	1/16"	1/8"	1/8"	1/16"
Deflection due to remaining Dead Load	3/16"	9/16"	9/16"	3/16"	1/4"	11/16"	11/16"	1/4"
Convexity required for Vertical Curve	0	0	1/8"	1/2"	0	0	1/8"	1/2"
Sum of Deflection and Convexity	1/4"	11/16"	1 13/16"	3/4"	5/16"	13/16"	1 15/16"	13/16"
Camber Required	0	11/16"	1 13/16"	3/4"	0	13/16"	1 15/16"	13/16"

NOTE: Where no camber is specified, beams shall be fabricated with any natural camber or bowed side up.

NOTES

- Refer to Standard Drawing CSB-2-56, Sheet 2 of 6, for details of End Dam.
- Refer to Standard Drawing CSB-2-56, Sheet 3 of 6, for gutter, scupper and curb plate details.
- Refer to Standard Drawing FSB-1-62 for details of Bearings.
- Concrete and reinforcing steel above parapet construction joint included with railing for payment.
- Concrete shall be Class "C".
- Joints in End Dam: A welded butt-joint in the end dam, at the center line of roadway, will be required for that portion of the end dam attached to the Superstructure. The portion attached to the backwall shall be placed in segments which shall be closely butted with one of the joints at the apex of the crown, but shall not be welded.
- Continuous Beam Splices: If 36WF182 beams at Pier No. 2 have depths differing by more than ⅛", the depth of the smaller depth beam shall be increased by splitting the web as shown in Beam Splice Detail at Piers No. 1 and No. 3. The slope of the bent up flange shall not exceed ⅜" per foot.

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

SUPERSTRUCTURE
BRIDGE NO. TRU-I-80-1170
UNDER
PRICE-SHAFFER ROAD
TRUMBULL COUNTY — STA. 632+ 75.00

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
L.E.	F.J.M.		G.M.B.		10-11-62	

MICROFILMED
DEC 10 1984

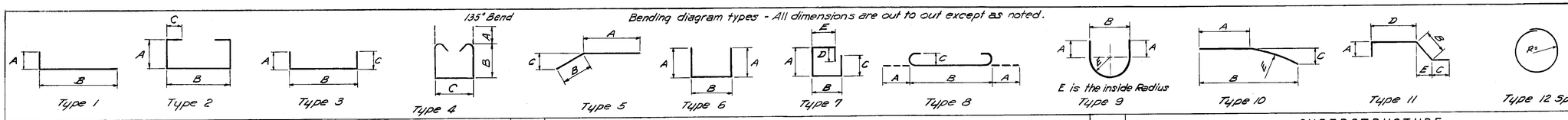
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

372
401

TRUMBULL COUNTY
TRU-I-80 (8.90)

REINFORCING STEEL BAR SCHEDULE

Bending diagram types - All dimensions are out to out except as noted.



PIERS

MARK	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
P1001	12	24'-0" & 26'-0" ①	Str.						1,291
P1002	12	10'-4"	9	3'-4"	2'-5 1/4"			1'-1 1/8"	534
P901	6	29'-2"	6	2'-10"	24'-0"				595
P902	6	30'-7"	6	2'-5 1/4"	26'-3"				624
P903	12	14'-0"	Str.						571
P904	36	24'-1"	Str.						2,948
P905	36	23'-6"	Str.						2,876
P906	36	18'-11"	Str.						2,315
P907	108	6'-7"	1	1'-3 1/4"	5'-7"				2,417
P701	180	10'-4"	8	10"	8'-8"	7"			3,802
P504	6	8'-4"	9	2'-4"	2'-5 1/4"			1'-1 3/4"	52
P505	6	24'-0"	Str.						150
P506	84	6'-8"	6	2'-2"	2'-8"				584

SPIRAL BARS

MARK	TOTAL	LENGTH	PITCH	No. OF TURNS	CORE DIA.	WEIGHT
SP401	3	21'-3 3/4"	4 1/2"	60	32"	1,182
SP402	3	20'-8"	4 1/2"	58	32"	1,143
SP403	3	16'-1 3/4"	4 1/2"	46	32"	906
					TOTAL WEIGHT	21,990

① 6 Each Length

ABUTMENTS

MARK	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A801	16	31'-10"	Str.						1,360
A601	52	15'-0"	7	5'-11"	1'-5"	4'-7"	2'-9"	11"	1,172
A602	40	14'-1"	3	6'-9"	5'-5"	2'-3"			846
A501	28	7'-2"	8	7"	6'-0"	5 1/4"			209
A502	40	7'-8"	1	1'-0"	6 10"				320
A503	48	3'-0"	6	7 5/8"	2'-0"				150
A504	34	29'-10"	Str.						1,058
A505	40	6'-4"	6	1'-7"	3'-5"				264
A506	56	7'-1"	6	2'-1"	3'-2"				414
A507	24	11'-5"	Str.						286
A508	24	10'-7"	6	4'-10"	1'-2"				265
A509	24	5'-4"	1	7 5/8"	4'-10"				133
A510	40	9'-2"	6	2'-0"	5'-5"				382
A511	16	6'-10"	Str.						114
A512	56	8'-8"	Str.						506
A513	8	3'-10"	Str.						32
A514	48	3'-7"	Str.						179
A515	28	12'-11"	Str.						377
A516	40	8'-5"	Str.						351
A517	32	3'-7"	Str.						120
A518	8	9'-1"	5	6'-5"	2'-8"	1'-4"			76
A519	8	12'-9"	Str.						106
A520	8	13'-0"	10	2'-5"	12'-9"	1'-11"		29'-9 3/8"	108
A521	4	10'-2"	Str.						42
A522	20	4'-3"	11	6"	1'-2*	0	2'-9"	3"	89
A523	20	3'-4"	1	6"	3'-0"				70
A524	8	4'-0"	11	6"	1'-2"	0	2'-6"	3"	33
A525	8	3'-1"	1	6"	2'-8"				26
A526	24	2'-8" to 4'-0"*	11	6"	1'-2"	0	1'-2" to 2'-5"*	3"	83
A527	24	1'-9" to 3'-1"*	1	6"	B*1'-5" to 2'-8"				60
A528	4	2'-3"	11	6"	1'-2"	0	9"	3"	9
A529	4	1'-3"	1	6"	11"				5
A530	40	5'-7"	4	5"	2'-2"	8"			233
									—
P503	16	12'-7"	Str.	Included with Railing for Payment					—
								TOTAL WEIGHT	9,478

* 4 Each, vary in increments of 3"

SUPERSTRUCTURE

MARK	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
S601	475	30'-2"	Str.						21,522
S602	408	36'-5"	Str.						22,317
S603	66	32'-0"	Str.						3,172
S501	475	30'-2"	Str.						14,945
S502	372	3'-7"	6	7 5/8"	2'-7"				1,390
S503	372	5'-11"	2	1'-3 5/8"	2'-7"	7 5/8"			2,296
S504	372	5'-7"	4	5"	2'-2"	8"			2,166
R501	136	14'-7"	Str.	Included with railing for Payment					—
R502	16	12'-2"	Str.						—

FED. RD. DIVISION	STATE	PROJECT	
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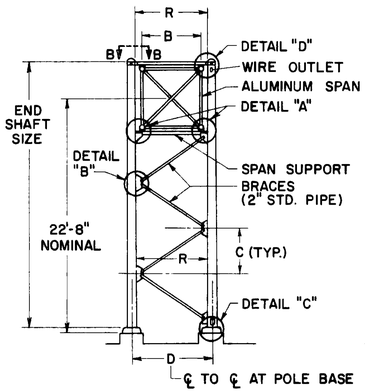
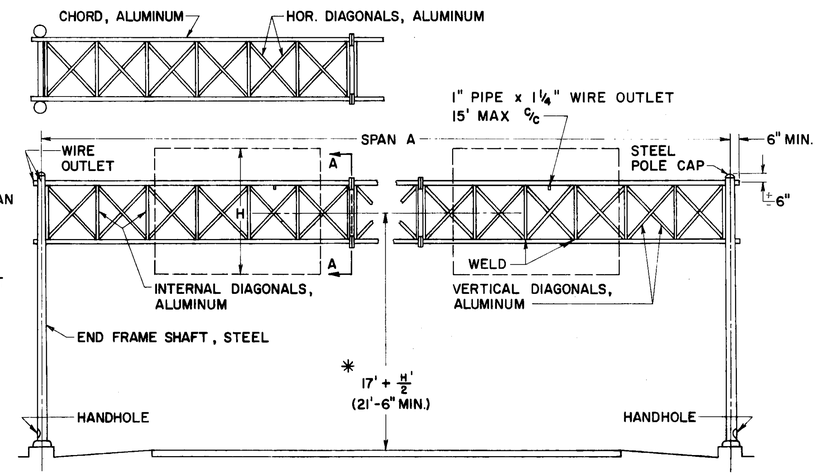
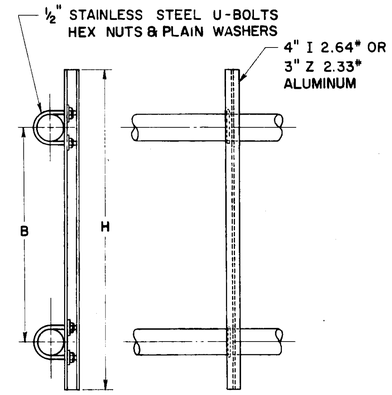
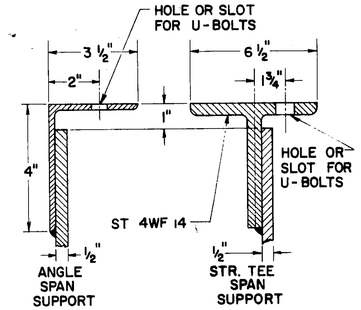


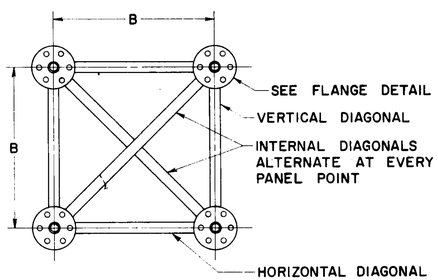




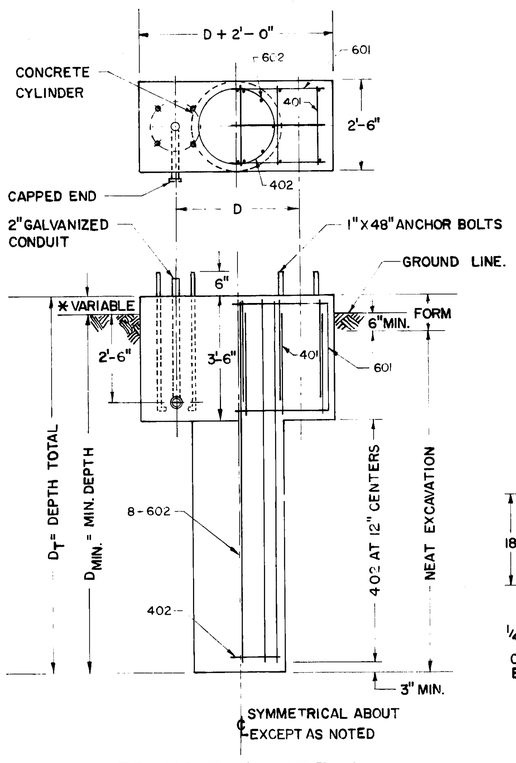
SIGN ATTACHMENT



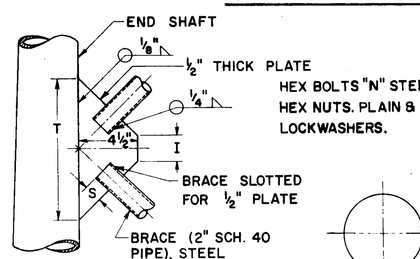
SECTION D-D



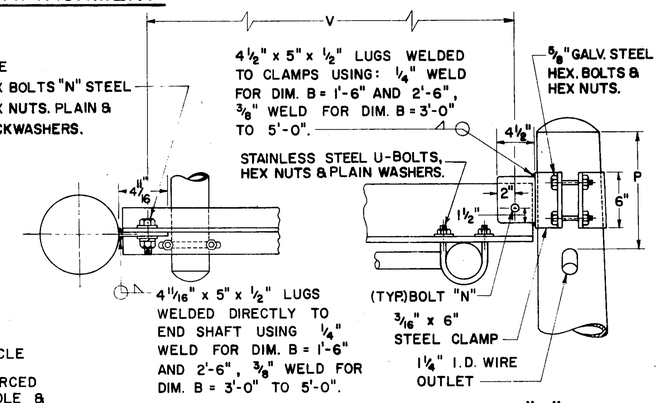
SECTION A-A



FOUNDATION DETAIL
(RIGHT HAND SHOWN — LEFT HAND OPPOSITE)



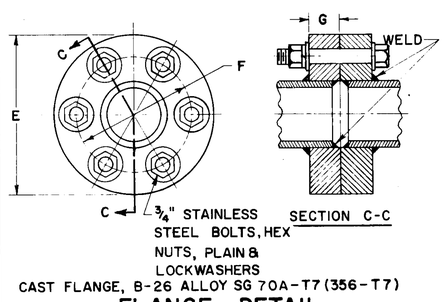
DETAIL "B"



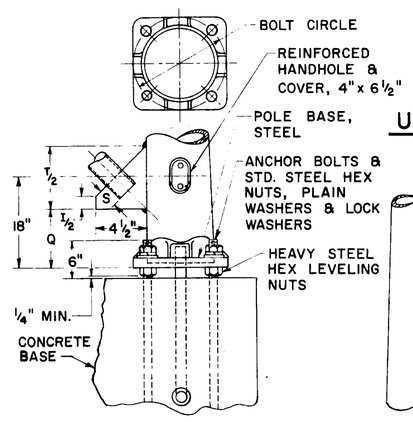
VIEW B-B

DETAIL "D"

UPPER SPAN SUPPORT (ALTERNATE METHODS)

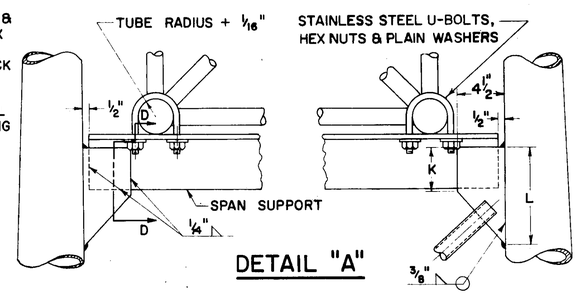


FLANGE DETAIL



DETAIL "C"

POLE BASE DETAIL



DETAIL "A"

LOWER SPAN SUPPORT

NOTES

MATERIALS

THE OVERHEAD SPAN TRUSS SHALL BE ALUMINUM AND THE END FRAMES SHALL BE STEEL.

SPAN TRUSS AND END FRAMES, INCLUDING HARDWARE, SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION I-129 UNLESS OTHERWISE NOTED.

STEEL POLE BASES AND GUSSETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A-373.

AFTER FABRICATION THE TAPERED POLES SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

FABRICATION

THE ENTIRE STEEL END FRAME SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH SEC. M-7.4(d).

MAXIMUM LENGTH OF SPAN SECTIONS IS 30 FT.

ERECTION

USE A MINIMUM OF 1" CAMBER IN SPAN TRUSS MEMBER FOR A 50' SPAN; ADD ¼" OF CAMBER FOR EACH 5' OF INCREASE IN SPAN OVER 50'.

PAYMENT

PAYMENT FOR THE GALVANIZED CONDUIT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS.

SOILS

THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY).

FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

REINFORCING STEEL

COST OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM I-129 CONCRETE FOR SIGN SUPPORT FOUNDATIONS.

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.

*** FOUNDATION ELEVATION**

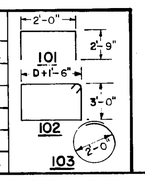
ELEVATION OF TOPS OF FOUNDATIONS SHALL BE BUILT UP SO THAT 17' CLEARANCE IS MAINTAINED OVER ENTIRE WIDTH OF THE PAVEMENT AND SHOULDERS.

DESIGN

THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

DESIGN NO.	SPAN A	B	C	D	D-MIN.	END SHAFT	BRACE LENGTH	E	F	G	I	K	L	N	P	Q	R	S	T	U BOLTS	V	BOLT CIRCLE	SPAN SUPPORT SECTION D-D	CHORDS	VERTICAL, INTERNAL & HORIZONTAL DIAGONALS
1	50' Thru 70'	2'-6"	5'-1"	3'-10"	9'-0"	7"x 3.54"x 24'-9", 7 GA	5'-7 13/16"	7"	5½"	1¼"	3½"	4¾"	7¼"	⅝"	12"	5¼"	3'-3"	1½"	9"	⅝"	2'-9⅝"	10"	⅜" ANGLE x 3'-2"	3½" x .188"	1.660" x .140"
2	75' Thru 85'	3'-0"	4'-11¾"	4'-5"	9'-0"	8"x 4.5"x 25'-0", 3 GA	5'-10 13/16"	7"	5½"	1¼"	3½"	4¾"	8"	1"	12"	6⅝"	3'-9"	1½"	10"	⅝"	3'-3⅝"	11"	SPLIT TEE 3'-8"	3½" x .188"	1.660" x .140"
3	90' Thru 105'	4'-0"	4'-10¼"	5'-6"	9'-0"	7"x 5.18"x 26'-0" 3 GA	6'-7⅛"	9¼"	7 7/16"	1⅜"	⅝"	4⅜"	7¾"	1"	18"	6¼"	4'-11"	1½"	9½"	⅝"	4'-5⅝"	10"	SPLIT TEE 4'-10"	4¾" x .188"	1.900" x .145"

REINFORCEMENT SCHEDULE			
MARK	NO.	LENGTH	TYPE
401	12"C/C	7'-6"	101
402	12"C/C	7'-6"	103
601	6	2D + 9'-6"	102
602	16	D_T − 6"	STR.



BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD SIGN SUPPORTS

I-129 No. 7.2

DATE 7-25-62

APPROVED _____ ENGINEER OF TRAFFIC

200 SQ. FT. SIGN AREA

OVERHEAD SIGN SUPPORT, I-129 NO. 7.2

Mega-Flex Tracing.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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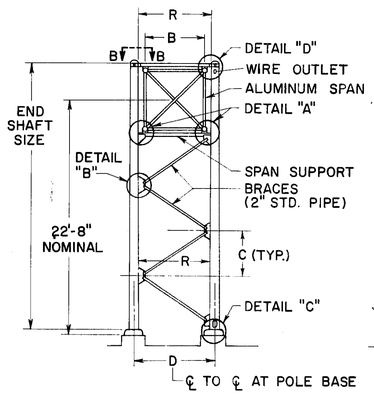
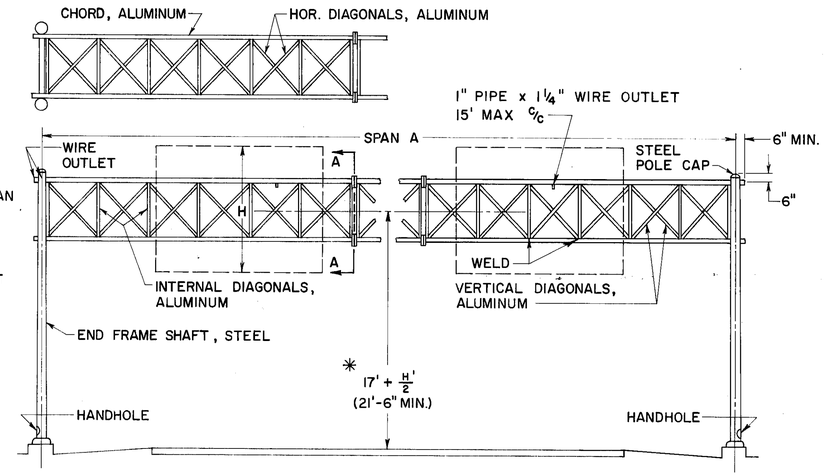
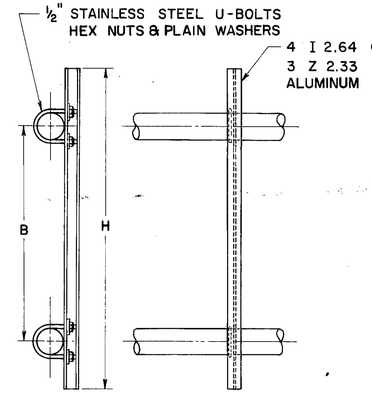
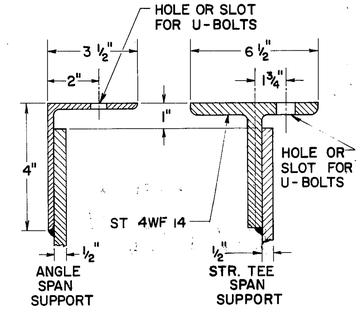
TRUMBULL COUNTY
TRU-I-80-8.90



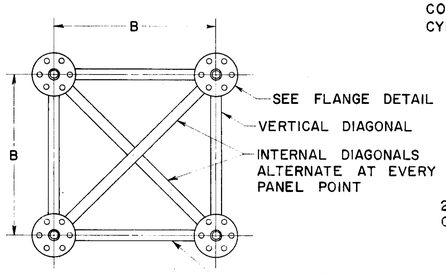




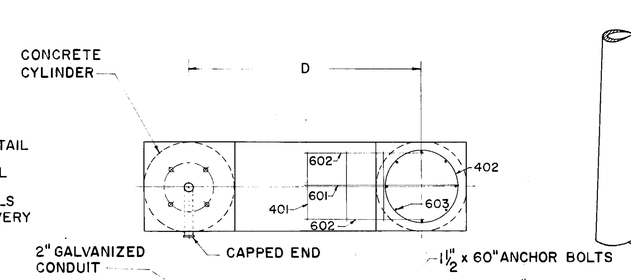
SIGN ATTACHMENT

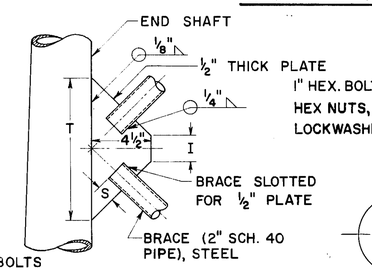


SECTION D-D

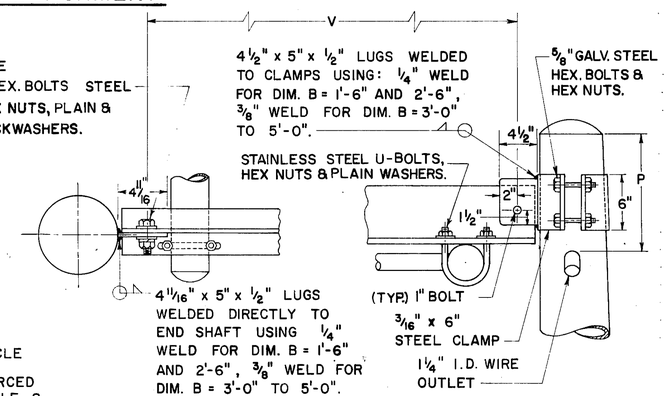


SECTION A-A





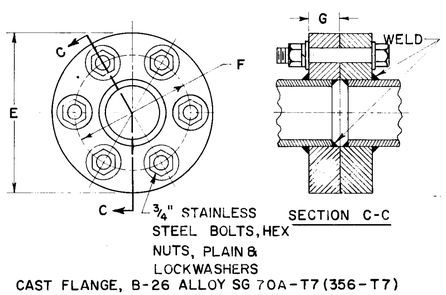
DETAIL "B"



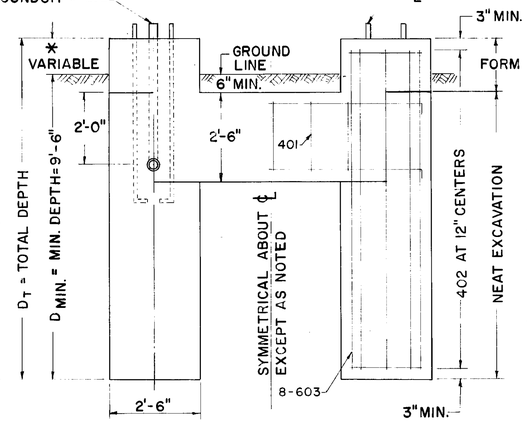
VIEW B-B

DETAIL "D"

UPPER SPAN SUPPORT (ALTERNATE METHODS)

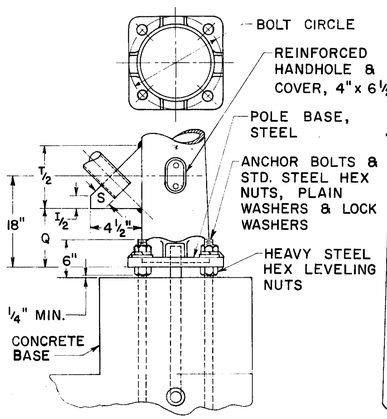


FLANGE DETAIL



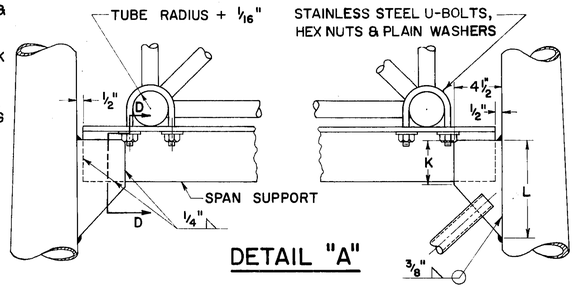
FOUNDATION DETAIL

(RIGHT HAND SHOWN — LEFT HAND OPPOSITE)



DETAIL "C"

POLE BASE DETAIL



DETAIL "A"

LOWER SPAN SUPPORT

NOTES

MATERIALS

THE OVERHEAD SPAN TRUSS SHALL BE ALUMINUM AND THE END FRAMES SHALL BE STEEL.

SPAN TRUSS AND END FRAMES, INCLUDING HARDWARE, SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION I-129 UNLESS OTHERWISE NOTED.

STEEL POLE BASES AND GUSSETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A-373.

AFTER FABRICATION THE TAPERED POLES SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

FABRICATION

THE ENTIRE STEEL END FRAME SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH SEC. M-7.4(d).

MAXIMUM LENGTH OF SPAN SECTIONS IS 30 FT.

ERECTION

USE A MINIMUM OF 1" CAMBER IN SPAN TRUSS MEMBER FOR A 50' SPAN; ADD ¼" OF CAMBER FOR EACH 5' OF INCREASE IN SPAN OVER 50'.

PAYMENT

PAYMENT FOR THE GALVANIZED CONDUIT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS.

SOILS

THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY).

FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

REINFORCING STEEL

COST OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM I-129 CONCRETE FOR SIGN SUPPORT FOUNDATIONS. 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.

*FOUNDATION ELEVATION

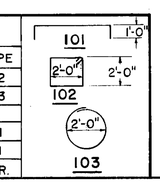
ELEVATION OF TOPS OF FOUNDATIONS SHALL BE BUILT UP SO THAT 17' CLEARANCE IS MAINTAINED OVER THE ENTIRE WIDTH OF THE PAVEMENT AND SHOULDERS.

DESIGN

THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

DESIGN NO.	SPAN A	B	C	D	E	END SHAFT	BRACE LENGTH	F	G	I	K	L	P	Q	R	S	T	U BOLTS	V	BOLT CIRCLE	SPAN SUPPORT SECTION D-D	CHORDS	HORIZONTAL AND INTERNAL DIAGONAL	VERTICAL DIAGONAL
1	50' thru 75'	3'-0"	4'-11¾"	4'-5"	9¼"	8" x 4.5" x 25'-0", 3 GA.	5'-10 13/16"	7 7/16"	1⅜"	3½"	4¾"	8"	12"	6⅝"	3'-9"	1½"	10"	⅝"	3'-5⅝"	11"	SPLIT TEE 3'-8"	4¾" x .188"	1.900" x .145"	1.660" x .140"
2	80' thru 85'	4'-0"	4'-10¼"	5'-6"	9¼"	7" x 5.18" x 26'-0", 3 GA.	6'-7⅛"	7 7/16"	1⅜"	⅝"	4⅜"	7¾"	18"	6¼"	4'-11"	1½"	9½"	⅝"	4'-5⅝"	10"	SPLIT TEE 4'-10"	4¾" x .188"	2" x .188"	1.900" x .145"
3	90'	4'-0"	4'-10¼"	5'-6"	11"	7" x 5.18" x 26'-0", 3 GA.	6'-7⅛"	8½"	1½"	⅝"	4⅜"	7¾"	18"	6¼"	4'-11"	1½"	9½"	⅝"	4'-5⅝"	10"	SPLIT TEE 4'-10"	5½" x .250"	2" x .188"	1.900" x .145"
4	95' thru 110'	5'-0"	4'-8½"	6'-6"	11"	7" x 5.18" x 26'-0", 3 GA.	7'-3¼"	8½"	1½"	—	3½"	7¾"	12"	7¼"	5'-11"	1¾"	11¼"	¾"	5'-5⅝"	10"	SPLIT TEE 5'-10"	5½" x .250"	2½" x .188"	2½" x .188"

REINFORCEMENT SCHEDULE			
MARK	NO.	LENGTH	TYPE
401	12" C/C	8'-6"	102
402	12" C/C	7'-6"	103
601	4	D+ 4'-0"	101
602	8	D+ 2'-0"	101
603	32	DT - 6"	STR.



BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD SIGN SUPPORTS

I-129 No. 7.4

DATE 5-2-62 7-25-62

APPROVED Robert E. Comer
ENGINEER OF TRAFFIC

400 SQ. FT. SIGN AREA

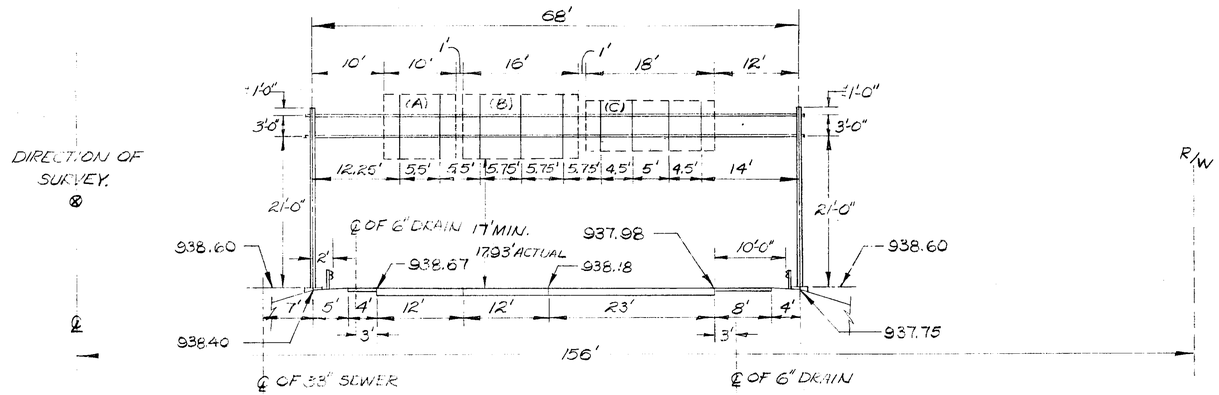
OVERHEAD SIGN SUPPORT, I-129 NO. 7.4

Mega-Flex Tracing.

FED. RD DIVISION	STATE	PROJECT	
2	OHIO		

375

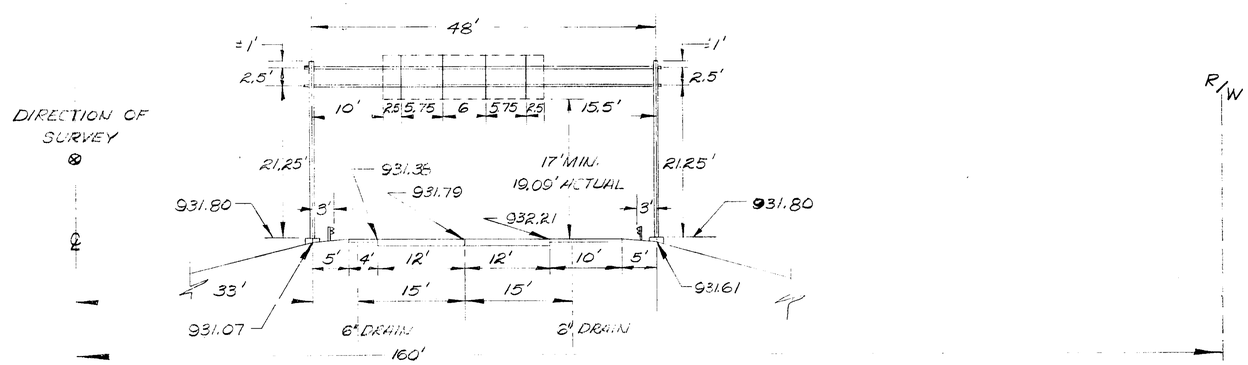
TRUMBULL COUNTY
TRU-I-80-8.90



STATION 497+85
I-129 NO. 7.4 DESIGN 1, 68' SPAN, SIGN AREA 360□', 5-9' HIGH BRACKETS, 4-7' HIGH BRACKETS
SIGN SIZES - (A) 10'X9' (B) 16'X9 (C) 18'X7'

SUMMARY				
I-129				I-15
TYPE	DESIGN	SPAN	CONCRETE	GUARD RAIL
7.4	1	68 FT.	9.3 CU. YDS	50 FT.
7.2	1	48 FT.	4.2 CU. YDS.	100 FT.
TOTAL			13.5 CU. YDS	150 FT.

QUANTITIES CARRIED TO SHEET NO. 21



STATION 656+30 W.
I-129 NO. 7.2 DESIGN 1, 48' SPAN, SIGN AREA 135□',
4-6'-0" HIGH BRACKETS, SIGN SIZE - 22.5'X6'

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

TRUMBULL
I.R. 80-8.90
OVERHEAD SUPPORTS

DATE 10-4-63

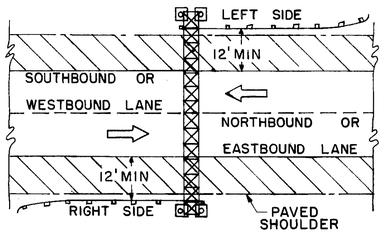
APPROVED _____
ENGINEER OF TRAFFIC

Mega-Flex Tracing

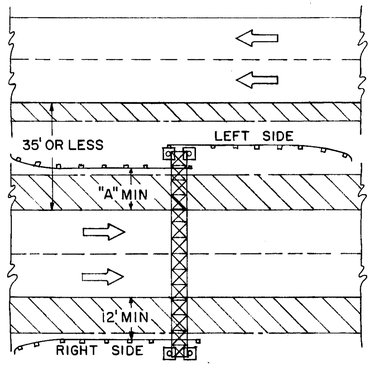
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

376

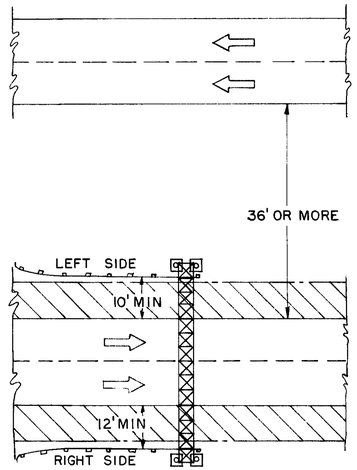
TRUMBULL COUNTY
TRU-I-80-8.90



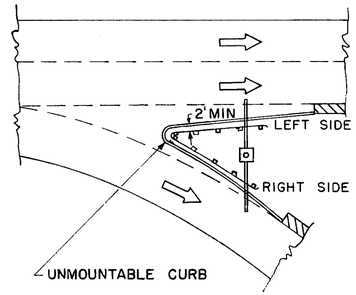
MULTIPLE LANE UNDIVIDED



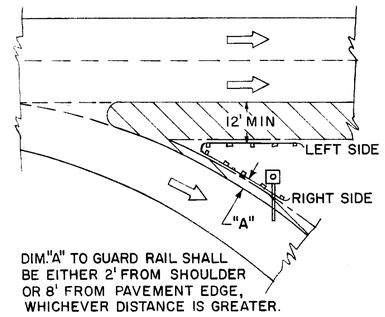
DIM. "A" TO GUARD RAIL SHALL BE EITHER 10' MIN. FROM EDGE OF PAVEMENT OR 2' MIN. FROM THE FACE OF CURB.



FOUR LANE DIVIDED



(CURB SECTION)



DIM."A" TO GUARD RAIL SHALL BE EITHER 2' FROM SHOULDER OR 8' FROM PAVEMENT EDGE, WHICHEVER DISTANCE IS GREATER.

(SHOULDER SECTION)

BIFURCATION

NOTES

GENERAL

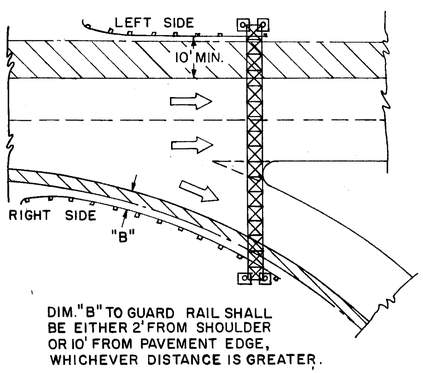
PROTECTIVE GUARD RAIL FOR OVERHEAD SIGN STRUCTURES SHALL CONFORM TO SEC. I-15, FOR STEEL BEAM TYPE (DEEP).

AT LOCATIONS WHERE GUARD RAIL IS IN PLACE, THE SIGN SUPPORT FOUNDATIONS SHALL BE ERECTED BEHIND EXISTING GUARD RAIL.

A MINIMUM OF SIX GUARD RAIL POSTS IS REQUIRED IN ADVANCE OF THE SIGN SUPPORT.

THE LENGTH OF GUARD RAIL DEPENDS ON THE POST SPACING. (EXAMPLE: FOR A SINGLE LINE OF GUARD RAIL IN ADVANCE OF A SIGN SUPPORT, THE MINIMUM LENGTH IS 50 FT. FOR A. POST SPACING OF 6'-3", 100 FT. FOR A POST SPACING OF 12'-6".)

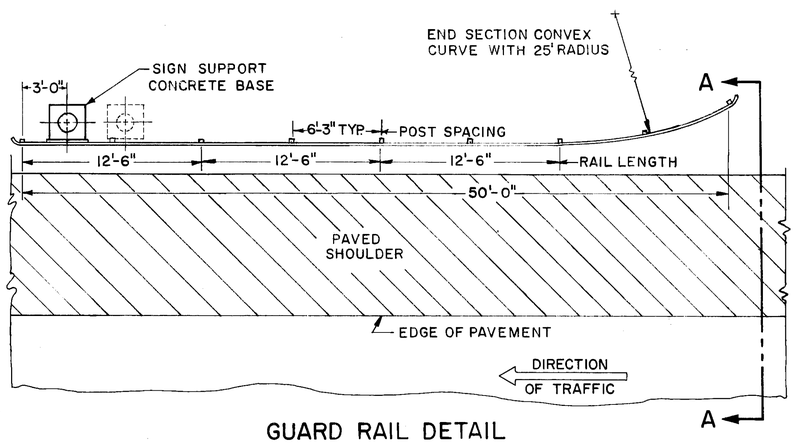
WHERE PROPOSED GUARD RAIL FLARES ARE CONSTRUCTED OF RAIL ELEMENTS WHICH HAVE NOT BEEN FABRICATED EXACTLY TO FIT THE CURVATURE SHOWN ON THE PLANS. THE TWO END POSTS OF EACH FLARED SECTION SHALL BE ENCASED IN A MINIMUM 4" THICKNESS OF CLASS "E" CONCRETE FOR THE FULL DEPTH OF THE POST BELOW THE GROUND LINE. PAYMENT FOR ENCASEMENT, IF REQUIRED, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE GUARD RAIL.



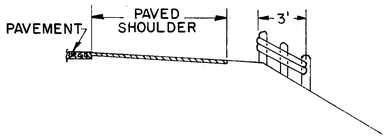
DIM."B" TO GUARD RAIL SHALL BE EITHER 2' FROM SHOULDER OR 10' FROM PAVEMENT EDGE, WHICHEVER DISTANCE IS GREATER.

(ROADWAY SPAN)

BIFURCATION



GUARD RAIL DETAIL



SECTION A-A

DESIGN

THE DESIGN OF GUARD RAIL PROTECTION FOR OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

GUARD RAIL

I-129
I-15

DATE
4-8-60
6-20-60
1-2-62
4-18-62

APPROVED Robert E. Comer
ENGINEER OF TRAFFIC

GUARD RAIL FOR OVERHEAD SIGN SUPPORTS

680 A
4 of 4

CENTERLINE SURVEY PLAT

INTERSTATE ROUTE 80 SECTION(8.90)
TRUMBULL COUNTY, OHIO
HUBBARD TWP., R-1-W, T-3-N

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-8.90	

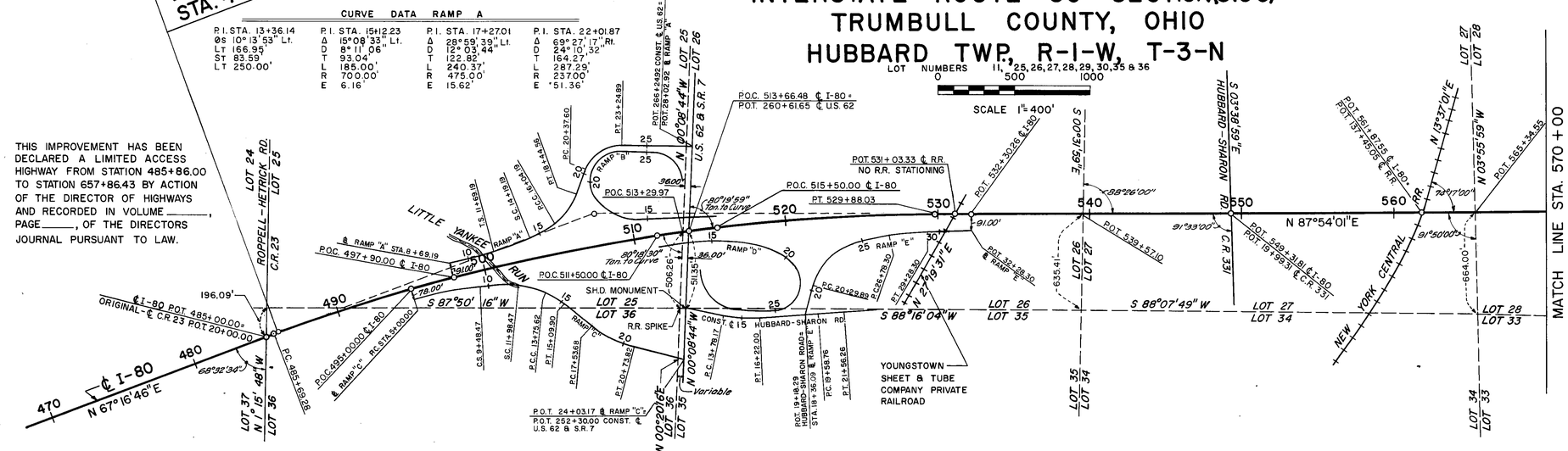
378/401

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 1 of 24

LOT NUMBERS 0, 11, 25, 26, 27, 28, 29, 30, 35 & 36
SCALE 1" = 400'

BEGIN PROJECT STA. 485+86.00

THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY FROM STATION 485+86.00 TO STATION 657+86.43 BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME _____, PAGE _____, OF THE DIRECTORS JOURNAL PURSUANT TO LAW.



CURVE DATA RAMP A

P.I. STA. 13+36.14	P.I. STA. 15+12.23	P.I. STA. 17+27.01	P.I. STA. 22+01.87
Θs 10° 13' 53" Lt.	Δ 15° 08' 33" Lt.	Δ 28° 59' 39" Lt.	Δ 69° 27' 17" Rt.
LT 166.95'	D 8° 11' 06"	D 12° 03' 44"	D 24° 10' 32"
ST 83.59'	T 93.04'	T 122.82'	T 164.27'
LT 250.00'	L 185.00'	L 240.37'	L 287.29'
	R 700.00'	R 475.00'	R 237.00'
	E 6.16'	E 15.62'	E 51.36'

I-80 CURVE DATA

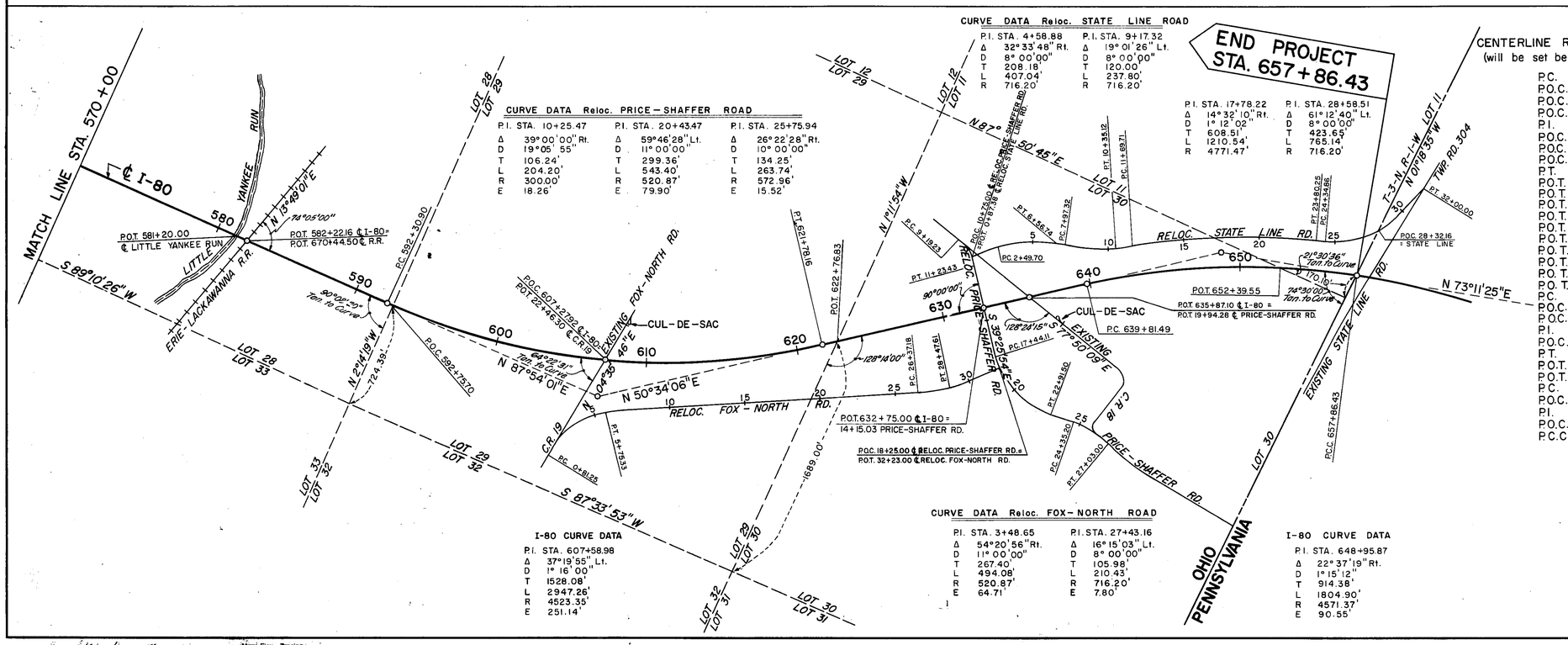
P.I. STA. 508+02.82	
Δ	20° 37' 15" Rt.
D	0° 28' 00"
T	2233.54'
L	4418.75'
R	12277.67'
E	201.51'

CURVE DATA RAMP C

P.I. STA. 7+24.70	P.I. STA. 10+99.32	P.I. STA. 12+87.52	P.I. STA. 14+43.40	P.I. STA. 19+16.60
Δ 8° 58' 10" Rt.	Θs 12° 43' 53" Rt.	Δ 14° 30' Rt.	Δ 19° 14' 04" Rt.	Δ 26° 12' 13" Lt.
D 2° 00' 00"	LT 150.85'	T 89.05'	T 67.78'	T 162.92'
T 224.70'	ST 100.18'	L 177.15'	L 134.28'	L 320.14'
L 448.47'	Ls 250.00'	R 700.00'	R 400.00'	R 700.00'
R 2864.79'		E 5.64'	E 5.70'	E 18.71'
E 8.80'		D 8° 11' 00"	D 14° 20' 05"	D 8° 11' 00"

RECEIVED March 8, 1963 @ 1:30 P.M.
RECORDED March 7, 1963
PLAT BOOK 21 PAGE 43
Marguerite McElrath
COUNTY RECORDER
$7.40 T.W.

SIGNED Peter H. Hunsell
DIVISION DEPUTY DIRECTOR-REG. SURVEYOR 2684
DATE Mar 6 1963



CURVE DATA Reloc. STATE LINE ROAD

P.I. STA. 4+58.88	P.I. STA. 9+17.32
Δ 32° 33' 48" Rt.	Δ 19° 01' 26" Lt.
D 8° 00' 00"	D 8° 00' 00"
T 208.18'	T 120.00'
L 407.04'	L 237.80'
R 716.20'	R 716.20'

P.I. STA. 17+78.22	P.I. STA. 28+58.51
Δ 14° 32' 10" Rt.	Δ 61° 12' 40" Lt.
D 1° 12' 02"	D 8° 00' 00"
T 608.51'	T 423.65'
L 1210.54'	L 765.14'
R 4771.47'	R 716.20'

CURVE DATA Reloc. PRICE-SHAFFER ROAD

P.I. STA. 10+25.47	P.I. STA. 20+43.47	P.I. STA. 25+75.94
Δ 39° 00' 00" Rt.	Δ 59° 46' 28" Lt.	Δ 26° 22' 28" Rt.
D 19° 05' 55"	D 11° 00' 00"	D 10° 00' 00"
T 106.24'	T 299.36'	T 134.25'
L 204.20'	L 543.40'	L 263.74'
R 300.00'	R 520.87'	R 572.96'
E 18.26'	E 79.90'	E 15.52'

END PROJECT STA. 657+86.43

CENTERLINE REFERENCE MONUMENTS
(will be set before or after construction)

P.C.	485+69.28
P.O.C.	492+00.00
P.O.C.	498+00.00
P.O.C.	504+00.00
P.I.	508+02.82
P.O.C.	513+66.48
P.O.C.	519+00.00
P.O.C.	525+00.00
P.T.	529+88.03
P.O.T.	536+00.00
P.O.T.	542+00.00
P.O.T.	548+50.00
P.O.T.	554+00.00
P.O.T.	560+00.00
P.O.T.	566+00.00
P.O.T.	572+50.00
P.O.T.	578+00.00
P.O.T.	584+00.00
P.O.T.	590+00.00
P.C.	592+30.90
P.O.C.	598+00.00
P.O.C.	604+00.00
P.I.	607+58.98
P.O.C.	614+50.00
P.T.	621+78.16
P.O.T.	630+00.00
P.O.T.	635+87.10
P.C.	639+81.49
P.O.C.	646+00.00
P.I.	648+95.87
P.O.T.	654+00.00
P.C.C.	657+86.43

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS IN 1962
BY Gene H. Strausbaugh
DATE Aug. 31, 1962

STATE OF OHIO
GENE H. STRAUSBAUGH
4610
SURVEYOR

Prepared By
BUCHART ENGINEERING
Consulting Engineers
York Pennsylvania

I-80 CURVE DATA

P.I. STA. 607+58.98	
Δ	37° 19' 55" Lt.
D	1° 16' 00"
T	1528.08'
L	2947.26'
R	4523.35'
E	251.14'

CURVE DATA Reloc. FOX-NORTH ROAD

P.I. STA. 3+48.65	P.I. STA. 27+43.16
Δ 54° 20' 56" Rt.	Δ 16° 15' 03" Lt.
D 11° 00' 00"	D 8° 00' 00"
T 267.40'	T 105.98'
L 494.08'	L 210.43'
R 520.87'	R 716.20'
E 64.71'	E 7.80'

I-80 CURVE DATA

P.I. STA. 648+95.87	
Δ	22° 37' 19" Rt.
D	1° 15' 12"
T	914.38'
L	1804.90'
R	4571.37'
E	90.55'

Ohio Dept. of Highways

Mead-Flax Tracing

RIGHT OF WAY CENTERLINE SURVEY PLAT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-890	

379/401

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 2 of 24

SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

PARCEL NO.	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA ACRES	TO BE ACQUIRED LAND ACRES	TO BE ACQUIRED BLDGS.	RESIDUE ACRES LEFT	RESIDUE ACRES RIGHT	SHEET NO.	REMARKS
88 WL	ROBERT P. LIVINGSTON	747	231	27.50	6.62	NO	7.72	13.14	7-A	
89 WL	JOHN MALINER & MARIE MALINER	502	308	26.75	4.37	NO		21.96	9	
90 WL	MARVEL E. HIBLER	532	100	1.646	1.47	YES			9	Entire Taking U.S. #62 & S.R. #7
		534	187	0.12		YES				Contiguous Parcel
		589	344	0.047						
91 WL	HAROLD R. FREIHEIT	745	279	33.73	22.85	YES	7.95	0.94(L.L)	7, 8, 9	Ramps A, B, & C
91 X	HAROLD R. FREIHEIT	745	279	33.73	0.52				8 & 7A	Channel Inlet
91 T	HAROLD R. FREIHEIT	745	279		0.08				7, 9	Channel Fill
92 WL	EDWARD WALKER &	537	245	0.334	0.26	YES			8	Entire Taking
	MARY ELIZABETH WALKER									
93 WL	FRANK KARCHER	626	302	0.40	0.61	NO			8	Entire Taking
		666	34	0.367						Contiguous Parcel
94 WL	LOUIS STORTI & EDITH STORTI	541	130	NONE	0.04	NO	0.42		8	
95 WL	ESTATE OF IDA M. HIBLER, DECEASED	Will Book 113	300	NONE	1.11	YES	0.75		8	
96 WL	THE RAD TANK AND WELDING	752	83	4.00	0.02	NO		3.22	10	Reloc. HUBBARD-SHARON ROAD
96	COMPANY OF HUBBARD, OHIO	752	83	4.00	0.58				10	Reloc. HUBBARD-SHARON ROAD
97 WL	J.W. BLACKWELL	787	962	17.95	0.00	NO		16.99	10	Reloc. HUBBARD-SHARON ROAD
97	J.W. BLACKWELL	787	962	17.95	0.57				10	Reloc. HUBBARD-SHARON ROAD
98 WL										NOT USED
99 WL	NELLIE McFARLAND	582	57	NONE	0.41	YES			8	Lot Nos. 12 & 13
100.	OMIT PARCEL				NONE				8	NO R/W REQUIRED
101 WL	LOIS REALTY COMPANY	771	378	47.00	16.27	NO		3.44	10, 11	
101	LOIS REALTY COMPANY	771	378		0.06				10	Reloc. HUBBARD-SHARON ROAD
101 AWL	LOIS REALTY COMPANY	771	380		4.17	NO		0.85	11	Parcel Between R.R. R/Ws
102 WL	CLARISSA J. MINGLIN	390	40	40.00	0.00	NO		4.31	10	Reloc. HUBBARD-SHARON ROAD
102	CLARISSA J. MINGLIN	390	40		0.27				10	Reloc. HUBBARD-SHARON ROAD
102 AWL	CLARISSA J. MINGLIN	390	40		0.01				10	Reloc. HUBBARD-SHARON ROAD
102-A	CLARISSA J. MINGLIN	390	40		0.02				10	Reloc. HUBBARD-SHARON ROAD
103 WL	LOIS REALTY COMPANY	771	378	47.00	0.25	NO		11.62	11, 12	A Separate Property
		771	380							
		756	781							
104 WL	YOUNGSTOWN SHEET AND TUBE COMPANY	261	45	1.01	0.45				11	Private Railroad
104-A WL	YOUNGSTOWN SHEET AND TUBE COMPANY	261	45	2.16	0.43	NO			11	Old R.R. R/W
105 WL	BERTHA RYSER	533	520	121.68	0.37	NO	0.17(L.L)	7.94	12	
		413	247							
106 WL	JOSEPH L. RYSER & CATHERINE E. RYSER	675	518	14.00	6.36	NO	4.20	3.23	12	
107 WL	ALBERTA E. COXSON	675	528	10.00	5.50	NO	4.30		12	
		764	663							
108 WL	STOJAN JANJANIN & BESSIE JANJANIN	494	500	9.79	0.64	YES		9.14	12	
108 WA	STOJAN JANJANIN & BESSIE JANJANIN	494	500		0.01					Drive Way
		778	337							
109 WL	ROBERT L. TRACY	464	61	45.21	3.59	NO	35.29	3.51(L.L)	12	
		586	203	2.20						Contiguous Parcel
110	NEW YORK CENTRAL RAILROAD COMPANY				0.60	NO			12	
111	ROBERT L. TRACY	464	61	50.43	0.87	NO			14	
111 X	ROBERT L. TRACY	464	61	50.43	1.73				13	Channel Outlet
111 WL	ROBERT L. TRACY	464	61	50.43	15.46	NO	23.18	22.12	12, 14	A Separate Property
		536	517	1.39						Contiguous Parcels
111 AERIAL	ROBERT L. TRACY	536	517	1.39	0.30"				14	Access to Residue, Rt.
112 WL	ERIE-LACKAWANNA RAILROAD COMPANY	173	565	7.72	0.423	NO	3.30		14	
112 AERIAL	ERIE-LACKAWANNA RAILROAD COMPANY				0.631				14	

SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

PARCEL NO.	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA ACRES	TO BE ACQUIRED LAND ACRES	TO BE ACQUIRED BLDGS.	RESIDUE ACRES LEFT	RESIDUE ACRES RIGHT	SHEET NO.	REMARKS
113 WL	ESTHER KOSKO	626	482	19.55	6.26	NO		13.29(L.L)	14	
		387	569							
114 WL	JOSEPH BALZIC & SOPHIA BALZIC	460	387	115.74	2.25	NO	113.49		14	
115 WL	ANASTASIA LACKWASKY	431	A-19	98.38	21.41	NO	19.97	34.83	14, 15, 16, 20	
115	ANASTASIA LACKWASKY	431	A-19		1.35				16	Reloc. FOX NORTH ROAD
115 A	ANASTASIA LACKWASKY	431	A-19		0.40				16, 20	CUL-DE-SAC FOX NORTH ROAD
116 WL	THOMAS FEDORCHAK & ANNA FEDORCHAK	432	5	20.00	0.07	NO	2.64	15.47	15, 20	
116	THOMAS FEDORCHAK & ANNA FEDORCHAK	432	5	0.07	1.54				15, 20	Reloc. FOX NORTH ROAD
116 WA	THOMAS FEDORCHAK & ANNA FEDORCHAK	432	5		0.01				20	Drive Way
117 WL	VERNON DOUGLAS & OPAL G. DOUGLAS	726	616	12.20	5.07	NO	12.11	0.02(L.L)	16	
118 WL	JOSEPH NEMTH	456	264	37.60	0.03	NO	25.37		16	
119 WL	ANNA YOBE	654	177	123.30	9.26	NO	6.50	76.61	16, 17, 18	
119	ANNA YOBE	654	174		5.19				16, 17, 21	Reloc. FOX NORTH & PRICE SHAFFER ROAD
119 A	ANNA YOBE	654	171		1.06				17, 18	Reloc. PRICE SHAFFER & STATE LINE ROAD
		654	182							
120	MARY F. ALEXANDER	636	152	20.25	0.19	NO		20.46	21	Reloc. PRICE SHAFFER ROAD
	ANNA YOBE, HELEN KOVAL, DOROTHY KOVAL & MARGARETTA KOVAL, JTS. ESTATE									
121	RONALD YOBE & JOSEPH YOBE, JR.	654	171	4.00	0.08	NO	3.90		21	Reloc. PRICE SHAFFER ROAD
	REMAINDERMEN									
122 WL	JOHN KOVAL	654	184	30.00	8.82	NO	7.69	4.84	18	
122	JOHN KOVAL	654	184		7.51				17, 18	
122 A	JOHN KOVAL	654	184		0.25				18	
122 WA	JOHN KOVAL	654	184		0.03				21	
123	ANDREW FAY BLAIR & NANCY BLAIR								21	No Acreage Required
124 WL	MARY YEREB	576	526	11.65	2.73	NO		8.92	18, 19	
		503	374							
125 WL	EDWARD W. CORLL & LOUIS R. CORLL	438-481	359-250	40.00	3.69	NO	32.66		18, 19	
125	EDWARD W. CORLL & LOUIS R. CORLL	438-481	359-250		3.49				18, 19	Reloc. STATE LINE ROAD
125 X	EDWARD W. CORLL & LOUIS R. CORLL	438-481	359-250		0.10				18	Channel Inlet
125 WA	EDWARD W. CORLL & LOUIS R. CORLL	438-481	359-250		0.06				18	Channel Fill
125 A X	EDWARD W. CORLL & LOUIS R. CORLL	438-481	359-250		0.08				19	Channel Inlet
85.	WILLIAM H. OAKLEY & HELEN B. OAKLEY	607	547	1.38	0.015			1.365	7-A	Driveway
86 WL	MICHAEL N. BUTCH & MARTHA V. BUTCH	549	300	46.90	1.81	NO		0.45	7-A	
86	MICHAEL N. BUTCH & MARTHA V. BUTCH	549	300		0.03				7-A	Reloc. ROPPELL-HETRICK ROAD
86 WA	MICHAEL N. BUTCH & MARTHA V. BUTCH	549	300		0.01				7-A	Driveway
87 WL	ROBERT T. LARSON & PHYLLIS J. LARSON	637	409	1.03	0.19	NO	0.80		7-A	
87-T	ROBERT T. LARSON & PHYLLIS J. LARSON	637	409		0.05				7-A	Reloc. ROPPELL-HETRICK ROAD
88	ROBERT P. LIVINGSTON	747	231	27.50	0.08		7.78	13.06	7-A	Reloc. ROPPELL-HETRICK ROAD
126 WL	OHIO EDISON COMPANY	429	1	NONE	0.01	NO		0.24	10	Reloc. HUBBARD-SHARON ROAD
126	OHIO EDISON COMPANY	429	1	NONE	0.12				10	Reloc. HUBBARD-SHARON ROAD

NOTE:
SHEET 22 HAS BEEN
DELETED FROM THIS PLAN

SUMMARY OF R/W FENCE REQUIRED

R/W SHEET NO.	STATION TO STATION	FENCE TYPE D LIN. FT.
7	488+16.78 to 502+00.00	3320
8	502+00.00 to 513+66.48 Lt.	1485
9	502+00.00 to 513+66.48 Rt.	1080
10	513+66.48 to 524+00.00 Rt.	370
11	513+66.48 to 524+00.00 Lt.	916
11	524+00.00 to 538+00.00	2814
12	538+00.00 to 566+00.00	5,695
14	566+00.00 to 594+00.00	5429
15	594+00.00 to 609+00.00	3067
16	609+00.00 to 625+00.00	3591
17	625+00.00 to 634+50.00	1821
18	634+50.00 to 650+00.00	3097
19	650+00.00 to 657+86.43	1564
TOTAL TO GENERAL SUMMARY		34,249

REV. 11-1-63 GENERAL REVISIONS
REV. 10/22/63 DELETED PCL. 100-WL
Rev. 8/1/63
Pcl's 101 AWL, 103 WL, 104 WL, 102 AWL Deleted
Pcl's 101 AWA, 103 X, 104 WA
Rev. 8/15/63
Pcl. 111 Added
Pcl. 111 WL & 111 Aerial Revised

Rev. 5/21/63
Pcl's 102 WL & 102 Revised
Pcl's 102 AWL, 102 A, 126 WL, 126 Added
Rev. 9/16/63 Changed Name Pcl 120

Property Data as of AUGUST 15, 1961
Date of Completion 8/31/62
Rev. 10/12/62
Pcl's 90 WL, 91 WL, 99 WL, 100 WL, 114 WL, 116 WL Revised
Pcl's 86 WL, 87 WL, 95 WL, 96 WL, 97 WL, 101 AWL, 104 AWL, 111 Aerial, 116 WA, 125 AX Added
Rev. 11/7/62
Pcl's 101 AWA, 103 WA, 111 X, Added
Pcl's 95 WL, 96 WL, 97 WL, 101 WL, 119 WL, 96, 97, 101, 119, 121 Revised
Summary of R/W Fence Revised
Index Numbers Revised
Rev. 12/7/62
Pcl's 85 WA, 86, 86 WA, 87, 87 WA, 88 & 88 WA Added

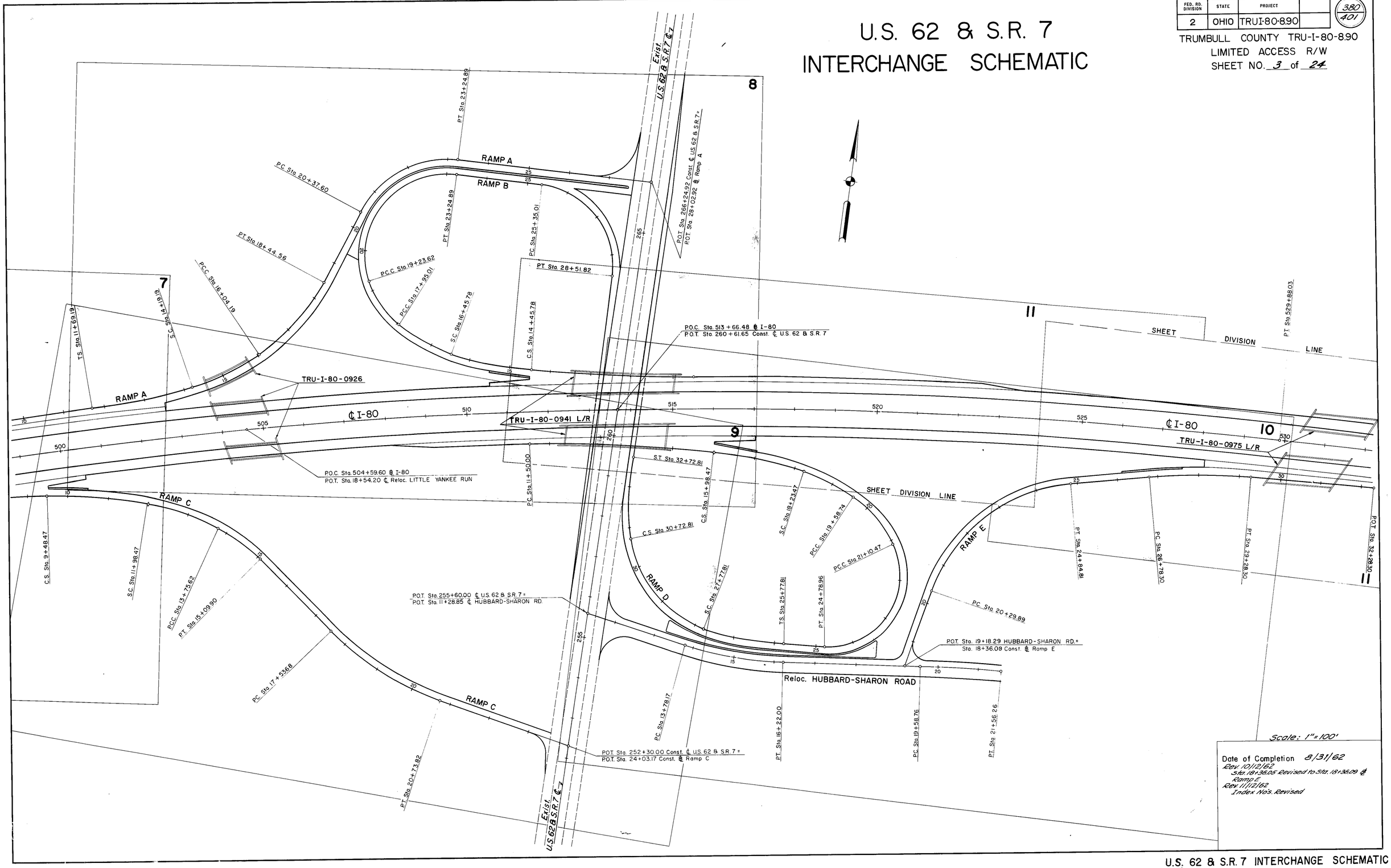
121

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-8.90	

380/401

U.S. 62 & S.R. 7
INTERCHANGE SCHEMATIC

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 3 of 24



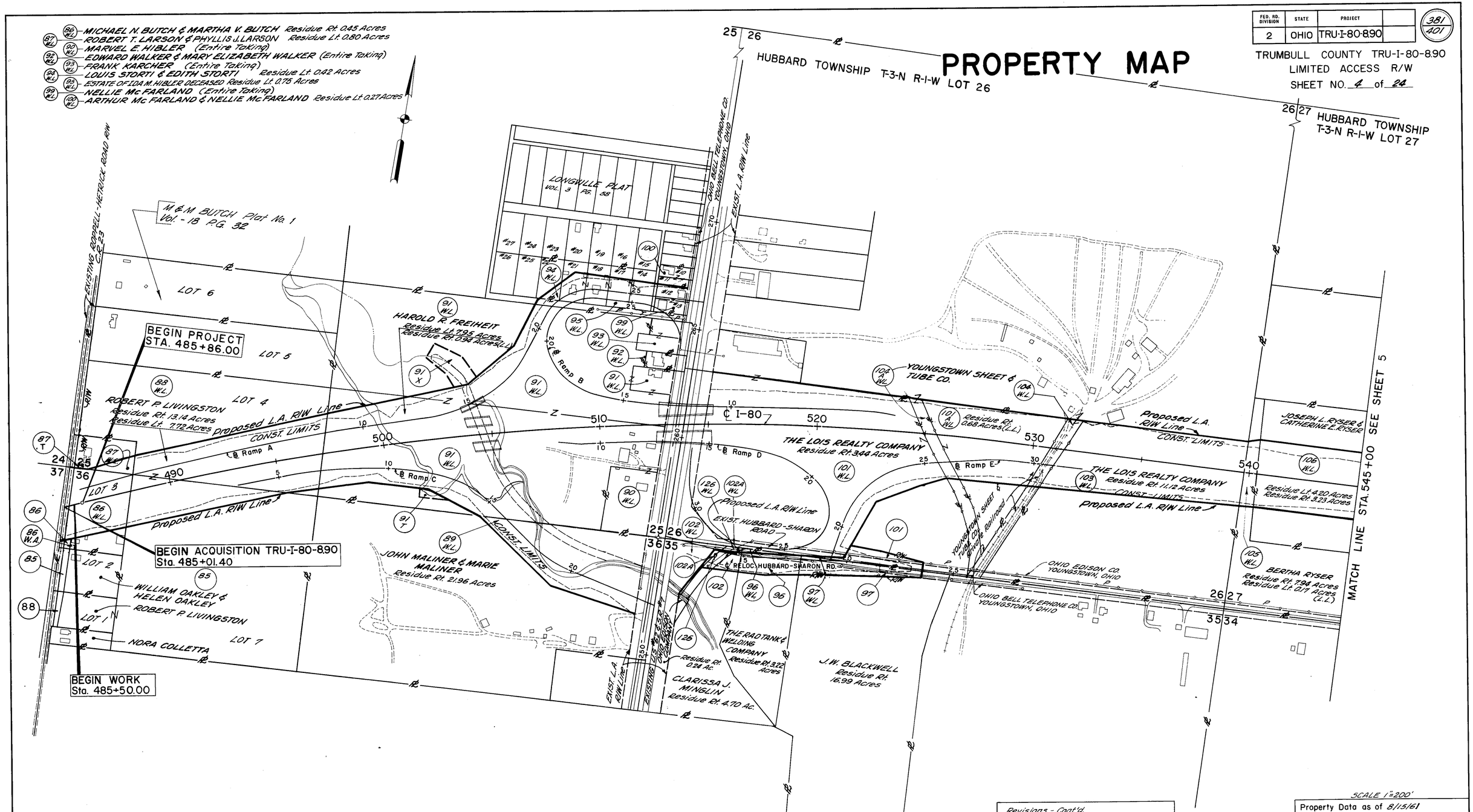
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-8.90	

381
401

PROPERTY MAP

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 4 of 24

(86 W.L.) MICHAEL N. BUTCH & MARTHA V. BUTCH Residue Rt. 0.45 Acres
(87 W.L.) ROBERT T. LARSON & PHYLLIS J. LARSON Residue Lt. 0.80 Acres
(90 W.L.) MARVEL E. HIBLER (Entire Taking)
(92 W.L.) EDWARD WALKER & MARY ELIZABETH WALKER (Entire Taking)
(93 W.L.) FRANK KARCHER (Entire Taking)
(94 W.L.) LOUIS STORTI & EDITH STORTI Residue Lt. 0.42 Acres
(98 W.L.) ESTATE OF IDA M. HIBLER DECEASED Residue Lt. 0.75 Acres
(99 W.L.) NELLIE Mc FARLAND (Entire Taking)
(100 W.L.) ARTHUR Mc FARLAND & NELLIE Mc FARLAND Residue Lt. 0.27 Acres



Revisions - Cont'd.
Rev. 12/7/62
Pcl's. 85 W.A., 86, 86 W.A., 87, 87 W.A., 88 and 88 W.A. Added.
Rev. 5/20/63
Pcl's. 102 W.L. & 102 Revised
Pcl's. 102 A W.L., 102 A, 126 W.L., 126 Added
Rev. 7/19/63
See Sheet No. 11 of 24 R/W.
REV. 11-1-63
GENERAL REV.

SCALE 1"=200'
Property Data as of 8/15/61
Date of Completion 8/31/62
Rev. 10/12/62
Begin Acquisition Station Revised 488+16.78 to 485+00
Pcl's 96 W.L., 97 W.L., 101 A W.L. & 104 A W.L. Added
Pcl's 96, 97, 99 & 100 Revised
Revised L.A. Line Sta. 13+11.29 to 21+56.26
Reloc. HUBBARD-SHARON RD.
Rev. 11/12/62
Begin Project Sta. 485+50.00, Revised to 485+86.00
Begin Work Sta. 485+50.00 Added
Revised L.A. Line Lt. 13+60.25 to Sta. 19+82.70
Reloc. HUBBARD-SHARON RD.
Index No's. Revised

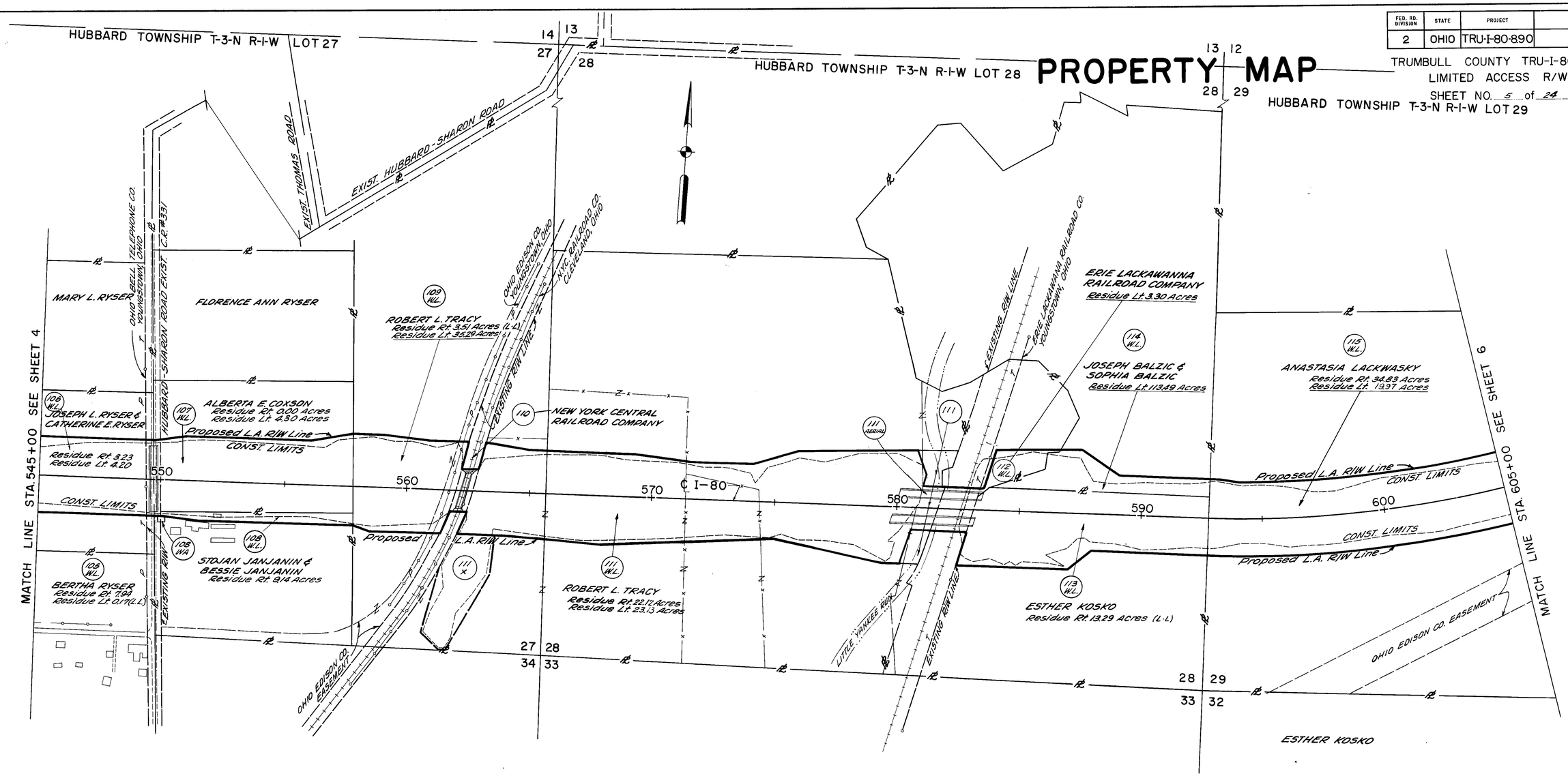
PROPERTY MAP STA. 485 +00 TO STA. 545 +00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-8.90	

382
401

PROPERTY MAP

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 5 of 24



SCALE 1" = 200'

Property Data as of 8/15/61
Date of Completion 8/31/62
Rev. 10/12/62
Pcl. 108WA & 111 Aerial added
Rev. 11/12/62
Pcl. 111-X added
Index No's revised
Rev. 8/15/63
Pcl. 111 Added
Pcl. 111 WL & 111 Aerial Revised

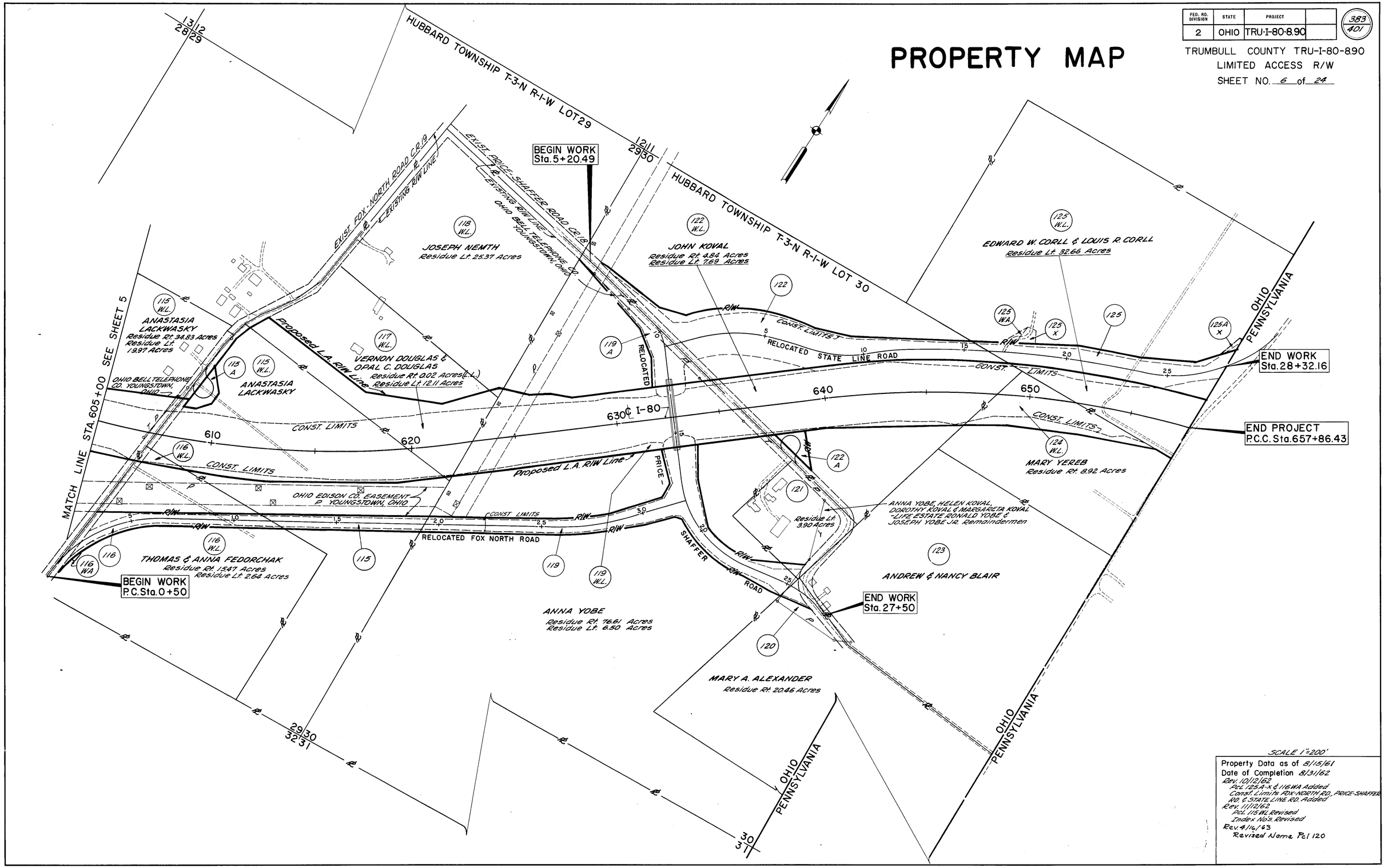
PROPERTY MAP STA. 545 + 00 TO STA. 605 + 00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-8.90	

383/401

PROPERTY MAP

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 6 of 24



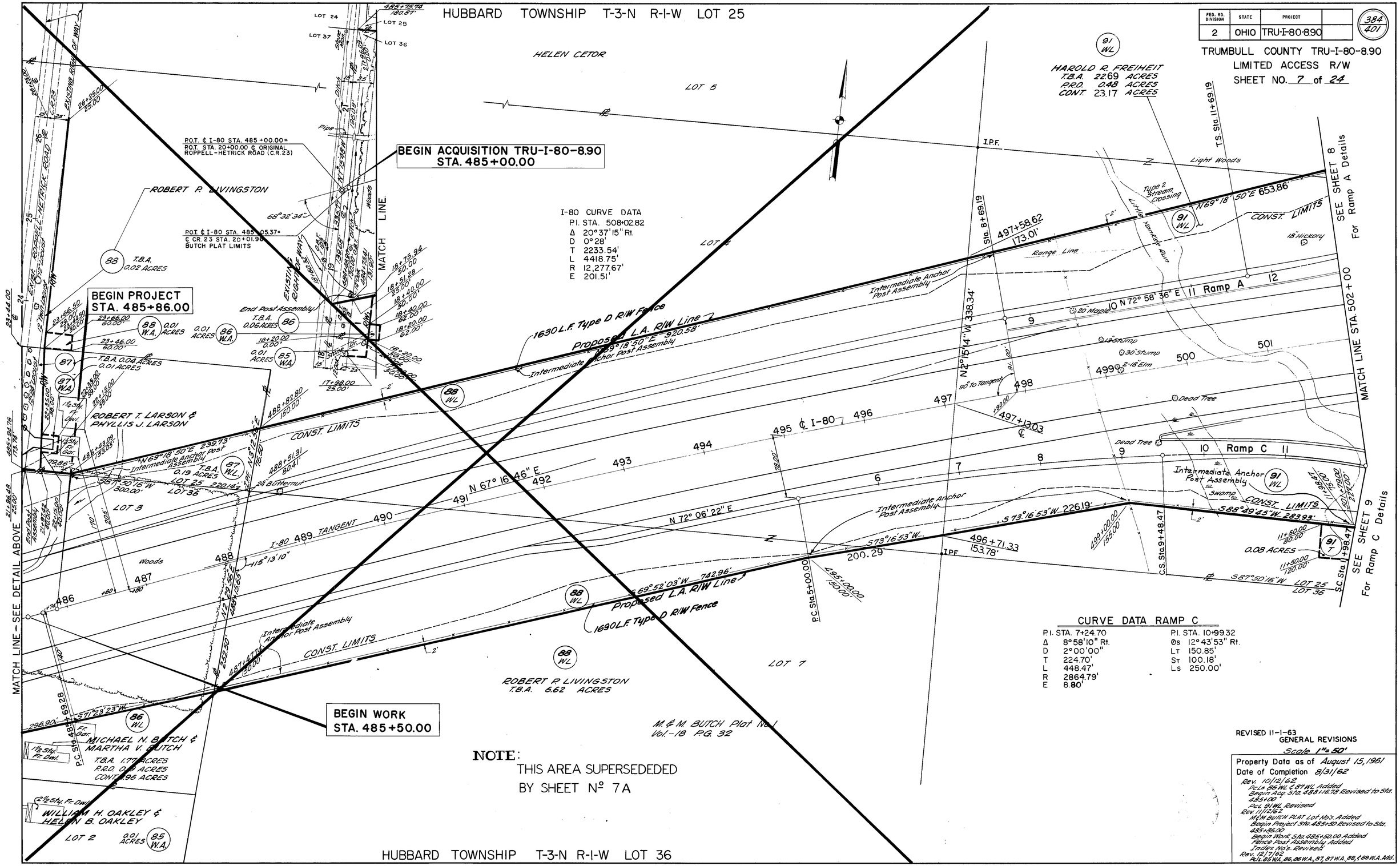
Property Data as of 8/15/61
Date of Completion 8/31/62
Rev. 10/12/62
Pcl. 125-A-X & 116-WA Added
Const. Limits-R/W-NORTH RD., PRICE-SHAFFER RD. & STATE LINE RD. Added
Rev. 11/12/62
Pcl. 115-WL Revised
Index No's. Revised
Rev. 4/16/63
Revised Name Pcl 120

PROPERTY MAP STA. 605 + 00 TO END OF PROJECT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-8.90	

384/401

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 7 of 24



NOTE:
THIS AREA SUPERSEDEDED
BY SHEET Nº 7A

CURVE DATA RAMP C

P.I. STA.	7+24.70	P.I. STA.	10+99.32
Δ	8°58'10" Rt.	Øs	12°43'53" Rt.
D	2°00'00"	LT	150.85'
T	224.70'	ST	100.18'
L	448.47'	Ls	250.00'
R	2864.79'		
E	8.80'		

REVISED 11-1-63
GENERAL REVISIONS
Scale 1" = 50'

Property Data as of August 15, 1961
Date of Completion 8/31/62
Rev. 10/12/62
P.O.L's #86 W.L. & 87 W.L. Added
Begin Acq. Sta. 488+16.78 Revised to Sta. 485+00
P.O.L. 91 W.L. Revised
Rev. 11/1/62
M & M BUTCH PLAT Lot No's. Added
Begin Project Sta. 485+50 Revised to Sta. 485+86.00
Begin Work Sta. 485+50.00 Added
Fence Post Assembly Added
Index No's. Revised
Rev. 12/7/62
P.O.L. 85 W.A., 86, 86 W.A., 87, 87 W.A., 88, & 88 W.A. Add.

RIGHT OF WAY STA. 488 + 16.78 TO STA. 502 + 00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-8.90	

384A
401

HUBBARD TOWNSHIP T-3-N R-1-W LOT 25

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 7-A of 24

BEGIN ACQUISITION TRU-I-80-8.90
STA. 485+01.40

P.O.T. ℄ I-80 STA. 485+01.40 =
P.O.T. STA 19+98.81 ℄ ORIGINAL
ROPPELL-HETRICK ROAD (C.R. 23)

C.R. 23 ROPPELL-HETRICK RD.

MATCH LINE 23+50

END WORK
STA. 24+65

HELEN CETOR

LOT 4

LOT 5

I-80 CURVE DATA
P.I. STA. 508+02.82
Δ 20°37'15" Rt.
D 0°28'
T 2233.54'
L 4418.75'
R 12,277.67'
E 201.51'

ROBERT T. LAWSON &
PHYLLIS J. LAWSON
0.05 ACRES

1630 L.F. Type D. R/W Fence

Proposed L.A. R/W Line

CONST. LIMITS

I-80 489 TANGENT

N 67° 16' 46" E

℄ I-80

MICHAEL N. BUTCH
MARTHA V. BUTCH
T.B.A. 1.81 ACRES
P.R.O. 0.19 ACRES
CONT. 2.00 ACRES

T.B.A. = 0.03 ACRES
P.R.O. = 0.03 ACRES
CONT. = 0.06 ACRES

1690 L.F. Type D R/W Fence

ROBERT P. LIVINGSTON
T.B.A. 6.28 ACRES

WILLIAM H. OAKLEY &
HELEN B. OAKLEY
T.B.A. 0.115 ACRES
P.R.O. 0.115 ACRES
CONT. 0.230 ACRES

ROBERT P. LIVINGSTON
T.B.A. = 0.08 ACRES
P.R.O. = 0.09 ACRES
CONT. = 0.17 ACRES

HAROLD R. FREIHEIT
T.B.A. 22.69 ACRES
P.R.O. 0.48 ACRES
CONT. 23.17 ACRES

LOT 7

"M. & M. BUTCH PLAT No. 1"
(VOL. - 18, PGE 38)

WEST ALLOTMENT LINE "M.&M. BUTCH PLAT #1"

EAST ALLOTMENT LINE - "M.&M. BUTCH PLAT No. 1"

SOUTH ALLOTMENT LINE - "M.&M. BUTCH PLAT #1"

BEGIN WORK
STA. 14+00

NORA COLLETTA

NOTE: THIS SHEET SUPERSEDES
X-ED AREA SHEET 7

Scale: 1" = 50'

Property Data as of
Date of Completion 10-22-63

REVISED 11-1-63
GENERAL REVISIONS

RECEIVED R/W
NOV 7 1963
State Highway Dept.
Div. No. 4

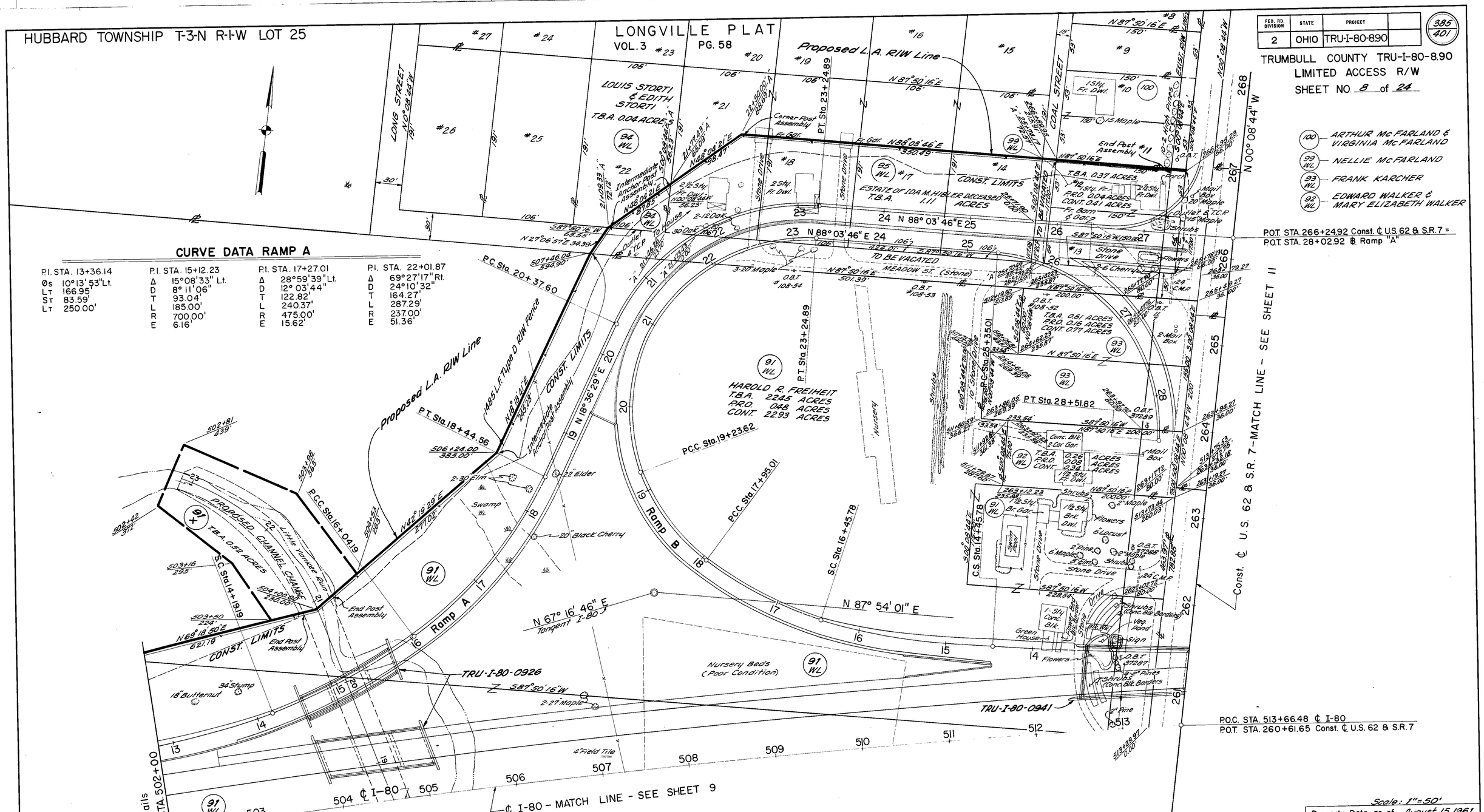
HUBBARD TOWNSHIP T-3-N R-1-W LOT 36

RIGHT OF WAY STA 485+01.40 TO STA. 498+00.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-890	

385/401

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 8 of 24



CURVE DATA RAMP A

	P.I. STA. 13+36.14	P.I. STA. 15+12.23	P.I. STA. 17+27.01	P.I. STA. 22+01.87
Δ		15°08'33" Lt.	28°59'39" Lt.	69°27'17" Rt.
D		8° 11'06"	12° 03'44"	24°10'32"
T		93.04'	122.82'	164.27'
L		185.00'	240.37'	287.29'
R		700.00'	475.00'	237.00'
E		6.16'	15.62'	51.36'
Øs	10°13'53" Lt.			
Lt	166.95'			
St	83.59'			
Lt	250.00'			

CURVE DATA RAMP B

	P.I. STA. 12+48.07	P.I. STA. 18+61.12	P.I. STA. 15+72.68	P.I. STA. 17+21.08	P.I. STA. 22+37.28	P.I. STA. 27+37.68
Δ	5°56'12" Rt.	32° 45'00" Rt.	$\Delta_1 + \Delta_2$ 14° 13'57" Rt.	19°00'00" Rt.	114° 57'15" Rt.	90° 38'45" Rt.
D	1° 30'	25° 27'53"	T_1 126.90'	12°43'57"	28°38'52"	28° 38'52"
T	198.07'	66.11'	T_2 74.14'	75.30'	313.66'	202.27'
L	395.78'	128.61'	Ls 200.00'	149.23'	401.27'	316.41'
R	3819.72'	225.00'		450.00'	200.00'	200.00'
E	5.13'	9.51'		6.26'	172.00'	84.45'

CURVE DATA I-80

P.I. STA.	508+02.82
Δ	20°37'15" Rt.
D	0° 28'
T	2233.54'
L	4418.75'
R	12277.67'
E	201.51'

Scale: 1" = 50'

Property Data as of August 15, 1961
Date of Completion 8/31/62
Rev. 10/10/62
LONGVILLE PLAT No's. Added
Pcl. 91 WL, 99 WL, & 100 WL Revised
Rev. 11/12/62
LONGVILLE PLAT Revised to LONGVILLE PLAT
Fence Post Assembly Added
Index No's. Revised
Revised 10/21/63
Parcel 100-WL Deleted

HUBBARD TOWNSHIP T-3-N R-1-W LOT 25

RIGHT OF WAY STA. 502 + 00 TO STA. 513 + 66.48

HUBBARD TOWNSHIP T-3-N R-1-W LOT 25

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-8.90	

386/401

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 9 of 24

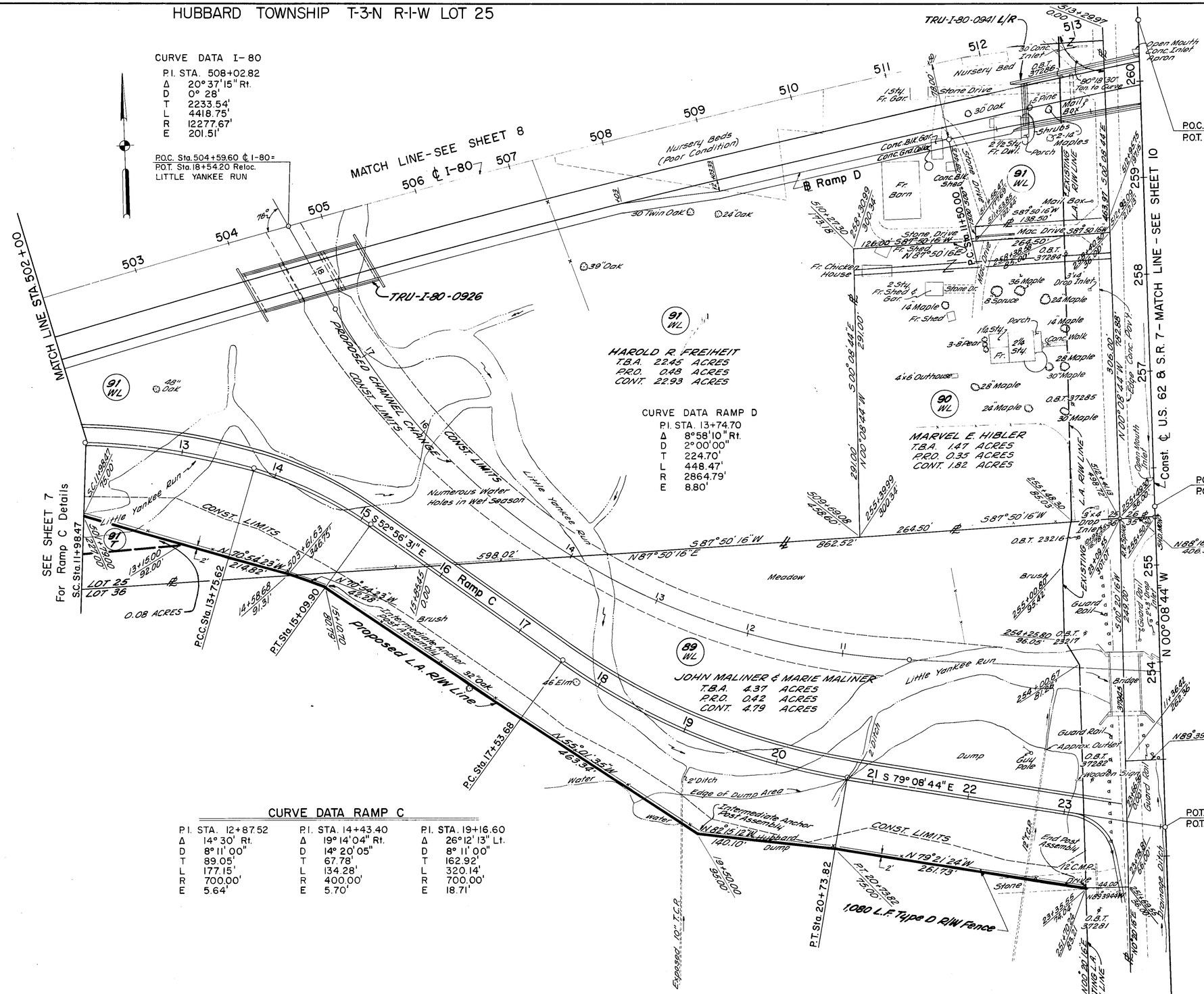
CURVE DATA I-80
P.I. STA. 508+02.82
Δ 20° 37' 15" Rt.
D 0° 28'
T 2233.54'
L 4418.75'
R 12277.67'
E 201.51'

P.O.C. Sta. 504+59.60 ℄ I-80 =
P.O.T. Sta. 18+54.20 Reloc.
LITTLE YANKEE RUN

P.O.C. STA. 513+66.48 ℄ I-80
P.O.T. STA. 260+61.65 Const. ℄ U.S. 62 & S.R.7

P.O.T. STA. 255+60.00 Const. ℄ U.S. 62 & S.R.7
P.O.T. STA. 11+28.85 Reloc. ℄ HUBBARD-SHARON RD.

P.O.T. STA. 252+30.00 Const. ℄ U.S. 62 & S.R.7
P.O.T. STA. 24+03.17 Const. ℄ Ramp "C"



CURVE DATA RAMP D
P.I. STA. 13+74.70
Δ 8° 58' 10" Rt.
D 2° 00' 00"
T 224.70'
L 448.47'
R 2864.79'
E 8.80'

CURVE DATA RAMP C

P.I. STA. 12+87.52	P.I. STA. 14+43.40	P.I. STA. 19+16.60
Δ 14° 30' Rt.	Δ 19° 14' 04" Rt.	Δ 26° 12' 13" Lt.
D 8° 11' 00"	D 14° 20' 05"	D 8° 11' 00"
T 89.05'	T 67.78'	T 162.92'
L 177.15'	L 134.28'	L 320.14'
R 700.00'	R 400.00'	R 700.00'
E 5.64'	E 5.70'	E 18.71'

Scale 1" = 50'

Property Data as of August 15, 1961
Date of Completion 8/31/62
Rev. 10/10/62
Pcl. 90 WL & 91 WL Revised
Rev. 11/12/62
Fence Post Assembly Added
Index No's. Revised

HUBBARD TOWNSHIP T-3-N R-1-W LOT 36

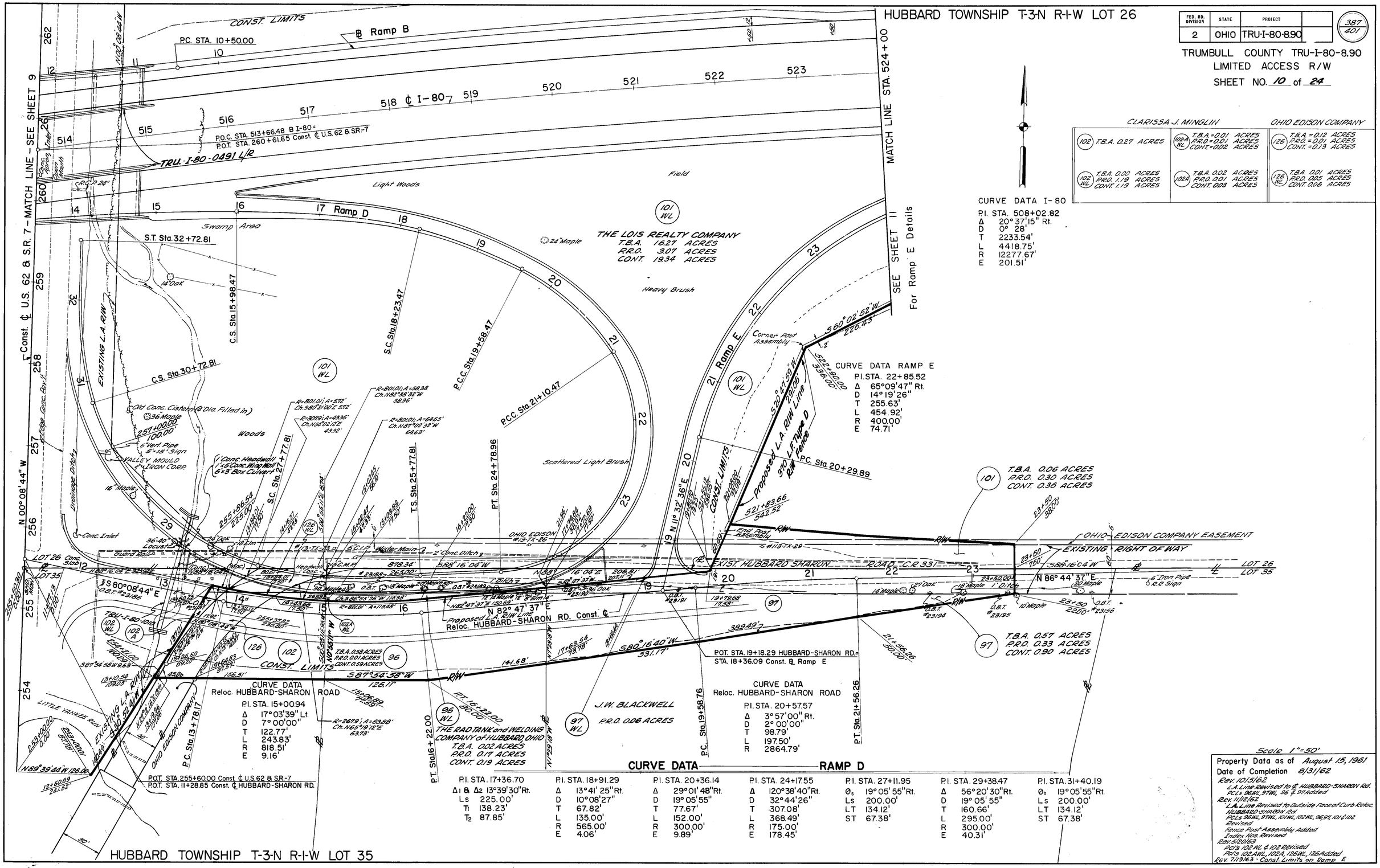
RIGHT OF WAY STA. 502+00 TO STA. 513+66.48

HUBBARD TOWNSHIP T-3-N R-1-W LOT 26

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-8.90	

387/401

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 10 of 24



CURVE DATA I-80

P.I. STA. 508+02.82
Δ 20°37'15" Rt.
D 0° 28'
T 2233.54'
L 4418.75'
R 12277.67'
E 201.51'

CURVE DATA RAMP E

P.I. STA. 22+85.52
Δ 65°09'47" Rt.
D 14°19'26"
T 255.63'
L 454.92'
R 400.00'
E 74.71'

CURVE DATA
Reloc. HUBBARD-SHARON ROAD

P.I. STA. 15+00.94
Δ 17°03'39" Lt.
D 7°00'00"
T 122.77'
L 243.83'
R 818.51'
E 9.16'

CURVE DATA
Reloc. HUBBARD-SHARON ROAD

P.I. STA. 20+57.57
Δ 3°57'00" Rt.
D 2°00'00"
T 98.79'
L 197.50'
R 2864.79'

CURVE DATA — RAMP D

P.I. STA. 17+36.70	P.I. STA. 18+91.29	P.I. STA. 20+36.14	P.I. STA. 24+17.55	P.I. STA. 27+11.95	P.I. STA. 29+38.47	P.I. STA. 31+40.19
Δ1 & Δ2 13°39'30" Rt.	Δ 13°41' 25" Rt.	Δ 29°01' 48" Rt.	Δ 120°38'40" Rt.	Θs 19°05'55" Rt.	Δ 56°20'30" Rt.	Θs 19°05'55" Rt.
Ls 225.00'	D 10°08'27"	D 19°05'55"	D 32°44'26"	Ls 200.00'	D 19°05'55"	Ls 200.00'
T1 138.23'	T 67.82'	T 77.67'	T 307.08'	LT 134.12'	T 160.66'	LT 134.12'
T2 87.85'	L 135.00'	L 152.00'	L 368.49'	ST 67.38'	L 295.00'	ST 67.38'
	R 565.00'	R 300.00'	R 175.00'		R 300.00'	
	E 4.06'	E 9.89'	E 178.45'		E 40.31'	

CLARISSA J. MINGLIN		OHIO EDISON COMPANY
102 T.B.A. 0.27 ACRES	102-A WL P.R.O. = 0.01 ACRES CONT. = 0.02 ACRES	126 T.B.A. = 0.12 ACRES P.R.O. = 0.01 ACRES CONT. = 0.13 ACRES
102 WL T.B.A. 0.00 ACRES P.R.O. 1.19 ACRES CONT. 1.19 ACRES	102A T.B.A. 0.02 ACRES P.R.O. 0.01 ACRES CONT. 0.03 ACRES	126 WL T.B.A. 0.01 ACRES P.R.O. 0.05 ACRES CONT. 0.06 ACRES

Scale 1" = 50'

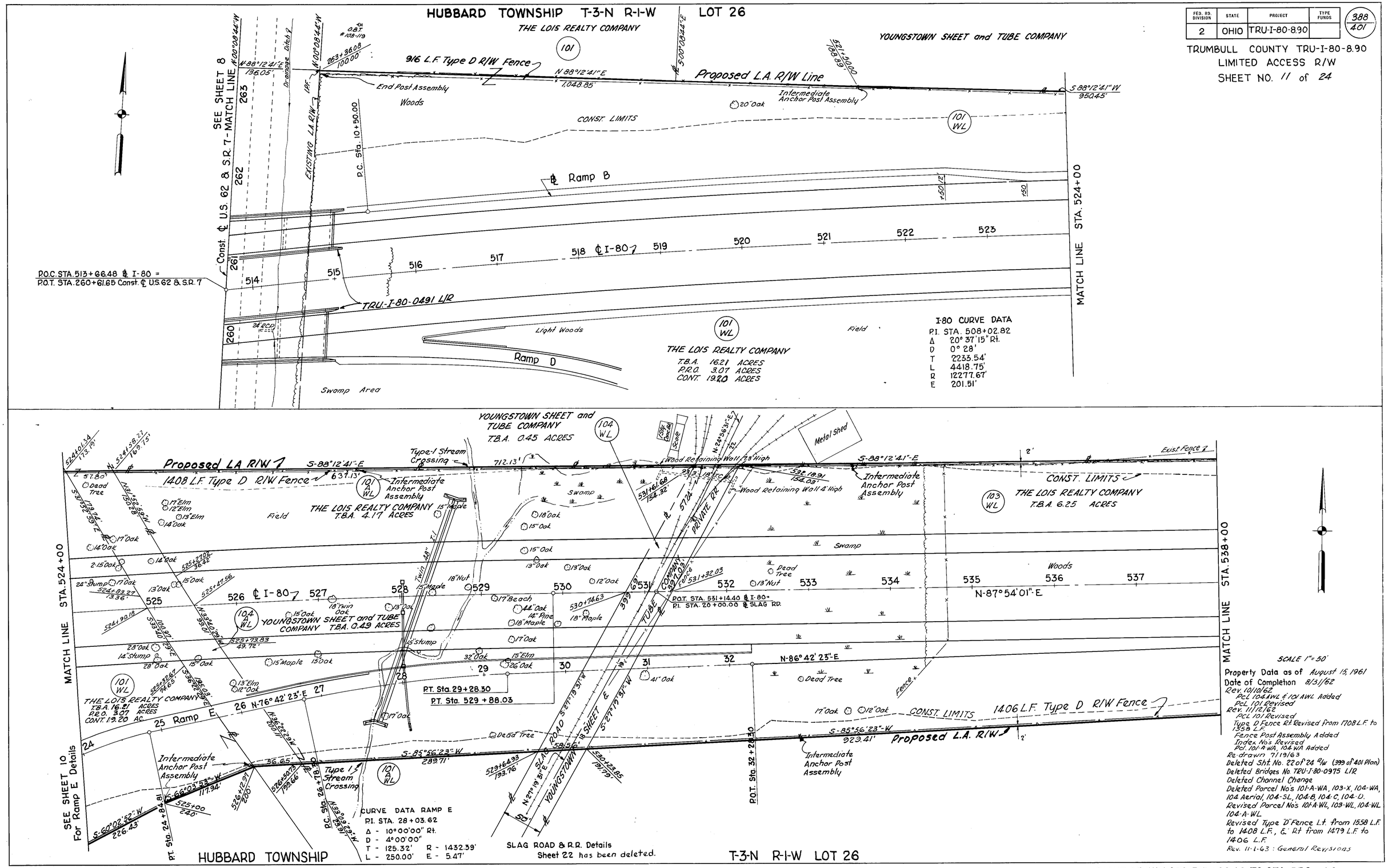
Property Data as of August 15, 1961
Date of Completion 8/31/62
Rev. 10/15/62
L.A. Line Revised to ℄ HUBBARD-SHARON Rd.
P.C.'s 96WL, 97WL, 96 & 97 added
Rev. 11/12/62
L.A. Line Revised to Outside Face of Curb Reloc. HUBBARD-SHARON Rd.
P.C.'s 96WL, 97WL, 101WL, 102WL, 96, 97, 101 & 102 Revised
Fence Post Assembly Added
Index Nos. Revised
Rev. 5/20/63
P.O.'s 102 WL & 102 Revised
P.O.'s 102 AWL, 102A, 126WL, 126A Added
Rev. 7/19/63 - Const. Limits on Ramp E

RIGHT OF WAY STA. 513 + 66.48 TO STA. 524 + 00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	TRU-I-80-8.90	

388/401

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 11 of 24



SCALE 1" = 50'

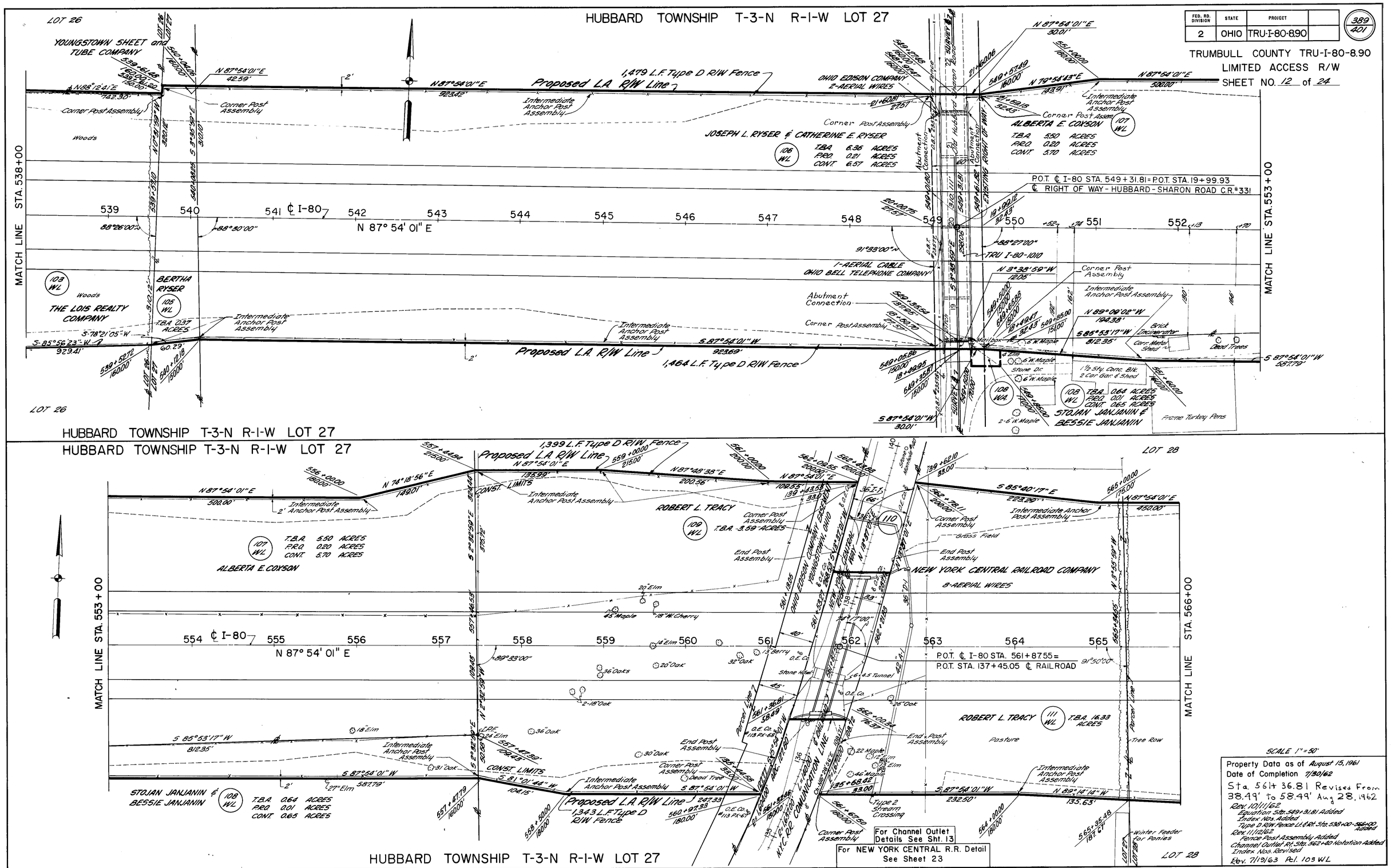
Property Data as of August 15, 1961
Date of Completion 8/31/62
Rev. 10/10/62
PCL 104 AWL & 101 AWL Added
PCL 101 Revised
Rev. 11/12/62
PCL 101 Revised
Type D Fence Rt Revised from 1708 L.F. to 1558 L.F.
Fence Post Assembly Added
Index Nos Revised
Pcl. 101-A WA, 104 WA Added
Re-drawn 7/19/63
Deleted Sht. No. 22 of 24 R/W (399 of 401 Plan)
Deleted Bridges No. TRU-I-80-0975 L/R
Deleted Channel Change
Deleted Parcel No's 101-A-WA, 103-X, 104-WA, 104 Aerial, 104-SL, 104-B, 104-C, 104-D.
Revised Parcel No's 101-A-WL, 103-WL, 104-WL 104-A-WL.
Revised Type D Fence L.t. from 1558 L.F. to 1408 L.F., & Rt from 1479 L.F. to 1406 L.F.
Rev. 11-1-63 : General Revisions

RIGHT OF WAY STA. 513+66.48 TO STA. 538+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-8.90	

389/401

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 12 of 24



SCALE 1" = 50'

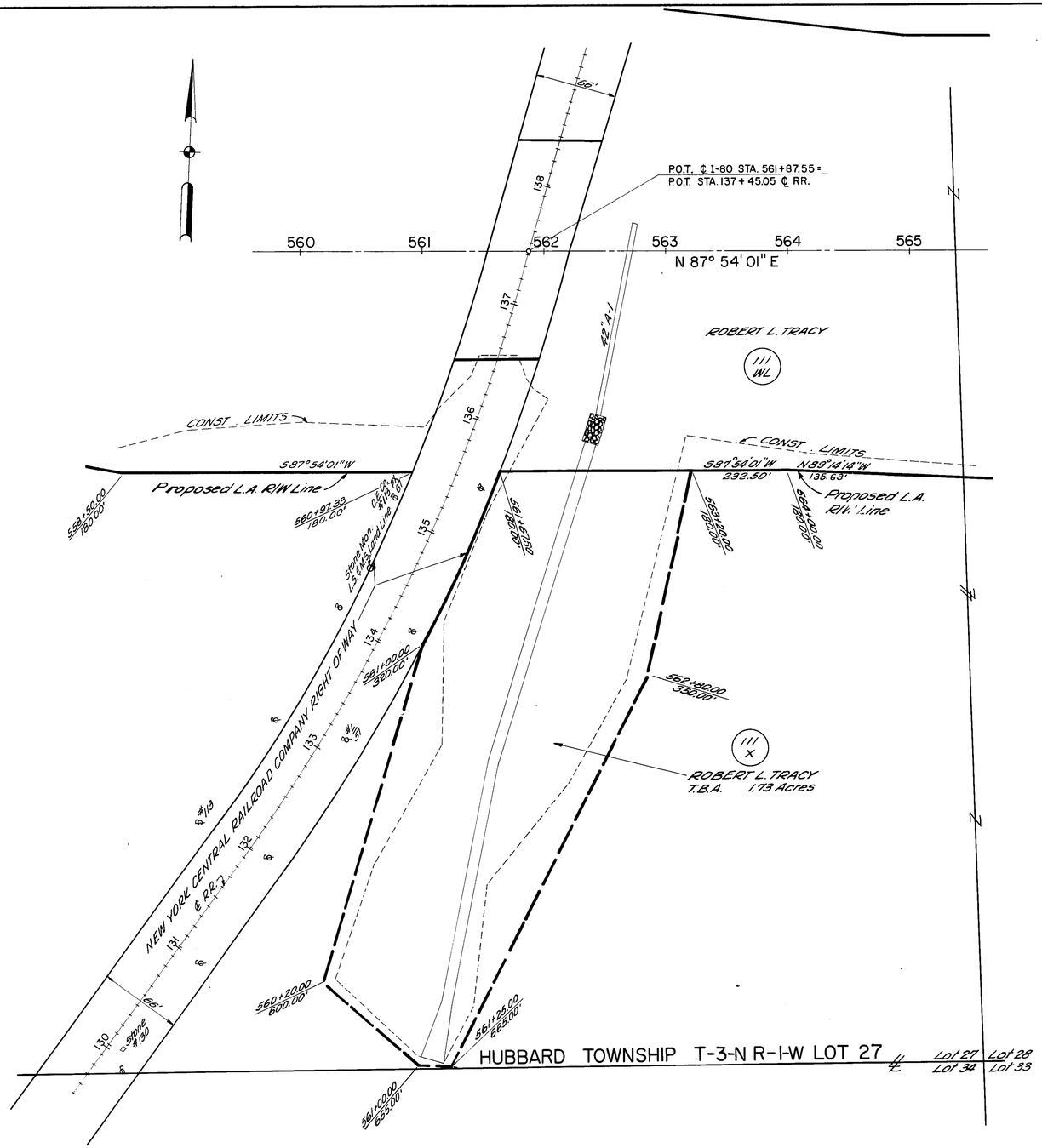
Property Data as of August 15, 1961
Date of Completion 7/30/62
Sta. 561+36.81 Revised From 38.49' to 58.49' Aug 28, 1962
Rev. 10/11/62
Equation Sta. 549+31.81 Added
Index Nos. Added
Type D R/W Fence Lt. & Rt. Sta. 538+00-566+00 Added
Rev. 11/12/62
Fence Post Assembly Added
Channel Outlet Rt. Sta. 562+40 Notation Added
Index Nos. Revised
Rev. 7/19/63 Pcl. 109 WL

RIGHT OF WAY STA. 538+00 TO STA. 566+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-890	

390
401

TRUMBULL COUNTY TRU-I-80-890
LIMITED ACCESS R/W
SHEET NO. 13 of 24



Scale 1" = 50'

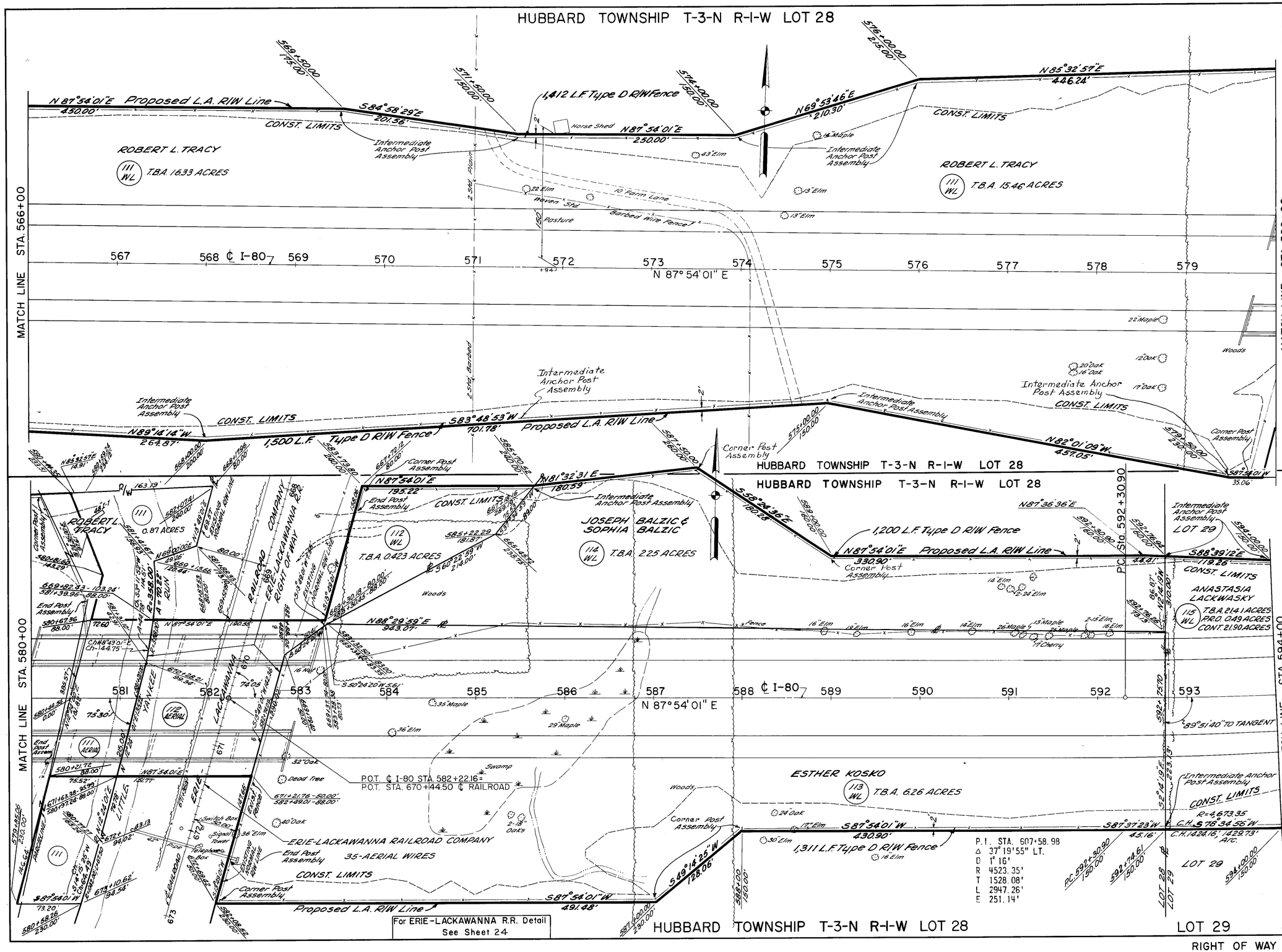
Property Data as of 8/15/61
Date of Completion 11/12/62

CHANNEL OUTLET RIGHT STA. 560+20 TO STA. 563+20

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-8.90	

391/401

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 14 of 24



Property Data as of August 15, 1961
Date of Completion 8/9/62
Rev. 10/11/62
Pcl. III Aerial Added
Type D R/W Fence Added Lt. & Rt.
Index Nos. Added
Rev. 11/12/62
Fence Post Assembly Added
Index Nos. Revised
Rev. 8/15/63
Pcl. III Added
Pcl. III WL & III Aerial Revised

RIGHT OF WAY STA. 566+00 TO STA. 594+00

HUBBARD TOWNSHIP T-3-N R-I-W LOT 29

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-8.90	

392/401

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 15 of 24

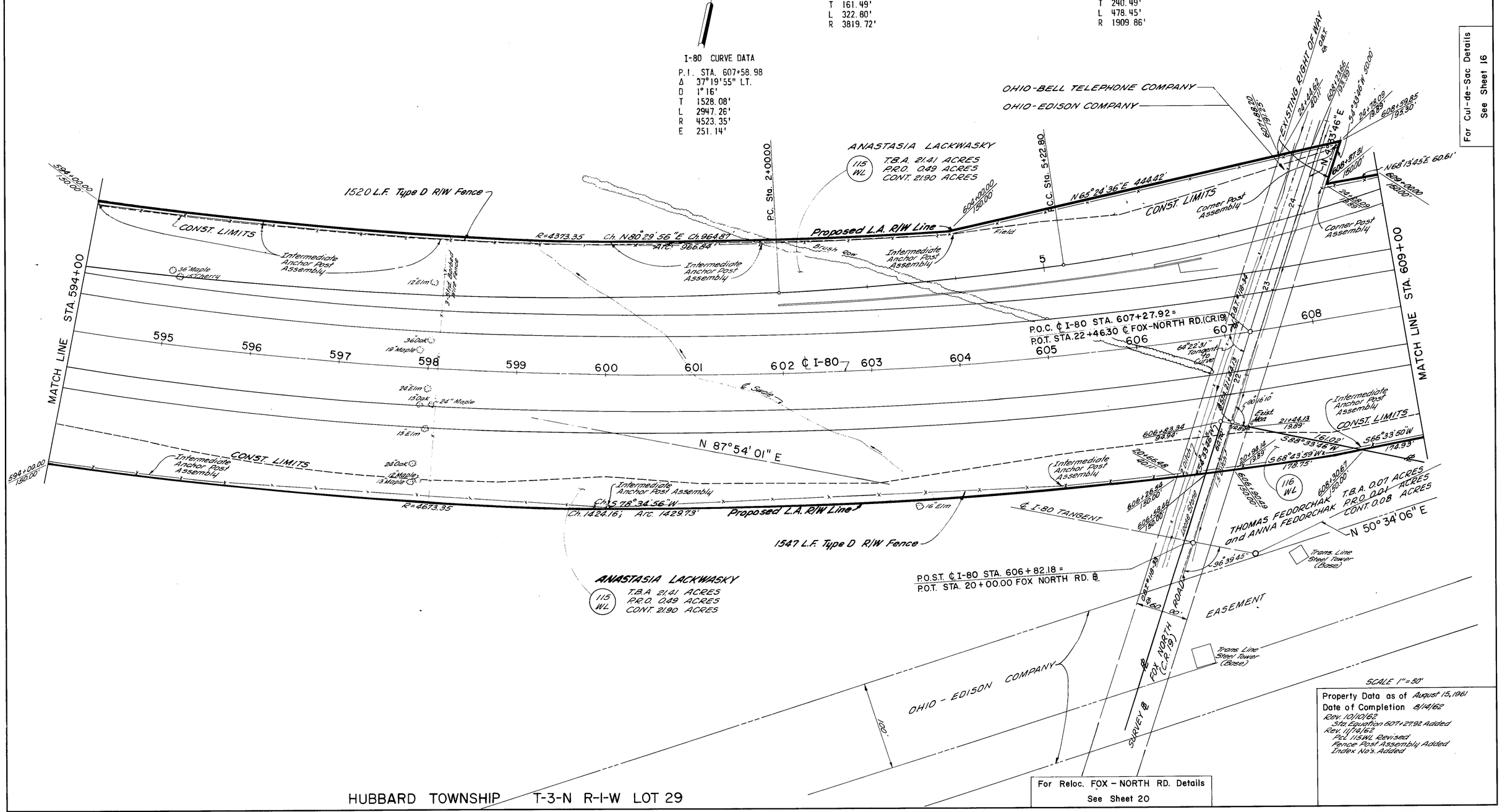
ROADSIDE REST CURVE DATA

P.I. STA. 3+61.49
Δ 4°51'31" LT.
D 1°30'
T 161.49'
L 322.80'
R 3819.72'

P.I. STA. 7+63.29
Δ 14°21'13" LT.
D 3°00'
T 240.49'
L 478.45'
R 1909.86'

I-80 CURVE DATA

P.I. STA. 607+58.98
Δ 37°19'55" LT.
D 1°16'
T 1528.08'
L 2947.26'
R 4523.35'
E 251.14'



Property Data as of August 15, 1961
Date of Completion 8/14/62
Rev. 10/10/62
Sta. Equation 607+27.92 Added
Rev. 11/19/62
Pcl. 115WL Revised
Fence Post Assembly Added
Index No's. Added

For Cul-de-Sac Details See Sheet 16

For Reloc. FOX - NORTH RD. Details See Sheet 20

HUBBARD TOWNSHIP T-3-N R-I-W LOT 29

RIGHT OF WAY STA. 594 + 00 TO STA. 609 + 00

DIV. 4 R/W RECORD SECTION

HUBBARD TOWNSHIP T-3-N R-1-W LOT 29

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-8.90	

393/401

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 16 of 24

SCALE 1" = 50'

Property Data as of AUGUST 15, 1961
Date of Completion 8/17/62
Rev. 10/8/62
Pcl. 1.91 T.B.A. Revised from 5.15 Acres to 5.19 Acres
Pcl. 118 W.L. Nemeth Revised to Nemth
Rev. 11/12/62
Const. Limits Lt. Revised from Sta. 609+00 to Sta. 625+00
Fence Post Assembly Added
Index No's. Revised

CURVE DATA
SURVEY ℄ EXISTING FOX - NORTH ROAD
P.I. STA. 29+32.08
Δ 31° 24' RT.
D 13° 00' 00"
T 123.89'
L 241.53'
R 440.74'

ROADSIDE REST CURVE DATA

P.I.	P.I.	P.I.
STA. 10+51.25	STA. 17+32.85	STA. 22+21.46
Δ 1°30' RT.	Δ 6°42'40" RT.	Δ 5°48'35" LT.
D 1°30'	D 3°00'	D 3°00'
R 3819.72'	R 1909.86'	R 1909.86'
T 50.003'	T 111.98'	T 98.91'
L 100.00'	L 223.70'	L 193.66'

END WORK Sta. 11+00
BEGIN WORK P.C. Sta. 6+50
C.R. 19 EXIST. FOX NORTH RD.
1941 L.F. Type D R/W Fence
Proposed L.A. R/W Line
P.C. Sta. 28+08.19 Survey ℄
P.C. Sta. 11+01.25
P.C. Sta. 16+20.87
P.T. Sta. 18+44.57
P.C. Sta. 21+24.55
P.T. Sta. 21+78.16
P.C.C. Sta. 23+18.21
P.R.C. Sta. 10+01.25
CONST. LIMITS
N 62°43'37" E
N 50°34'06" E
N 58°30'17" E
N 54°52'20" E
MATCH LINE STA. 609+00
MATCH LINE STA. 625+00
MATCH LINE STA. 8+00
MATCH LINE STA. 24+00
℄ I-80
Garden
Field
Orchard
Woods
Wood Clump
Pines 2"-6"
Fr. Pump House
Conc. Slab & Well
Former House 2 Car Gar.
Private Pole
Tree Row
Corner Post Assembly
Intermediate Anchor Post Assembly
Intermediate Post Assembly
O.E. Tower
O.E. TOWER
#777 70 Tower
#777 71 Tower
Stone Pile
Wooded Area
Start Brush Area
End Brush Area
Const. ℄ Reloc. FOX-NORTH ROAD
End of Cultivated Field
1650 L.F. Type D R/W Fence
OHIO-EDISON COMPANY EASEMENT
JOSEPH NEMTH T.B.A. 0.03 ACRES (118 W.L.)
VERNON DOUGLAS & OPAL DOUGLAS T.B.A. 5.07 ACRES (117 W.L.)
ANASTASIA LACKWASKY (115 W.L.) T.B.A. 2.41 ACRES, P.R.O. 0.49 ACRES, CONT. 2.190 ACRES
THOMAS FEDORCHAK & ANNA FEDORCHAK (116) T.B.A. 1.54 ACRES, P.R.O. 0.27 ACRES, CONT. 1.77 ACRES
ANNA YOBE (119) T.B.A. 9.26 ACRES, P.R.O. 0.26 ACRES, CONT. 9.52 ACRES
115 A T.B.A. 0.40
115 T.B.A. 1.35 ACRES
T.B.A. 5.19 ACRES
For Reloc. FOX-NORTH RD. Details See Sheet 20
For Reloc. FOX-NORTH RD. Details See Sheet 17
HUBBARD TOWNSHIP T-3-N R-1-W LOT 29
LOT 30

RIGHT OF WAY STA. 609+00 TO STA. 625+00 & Reloc. FOX-NORTH RD.

DIV. 4 R/W RECORD SECTION AUG 1962

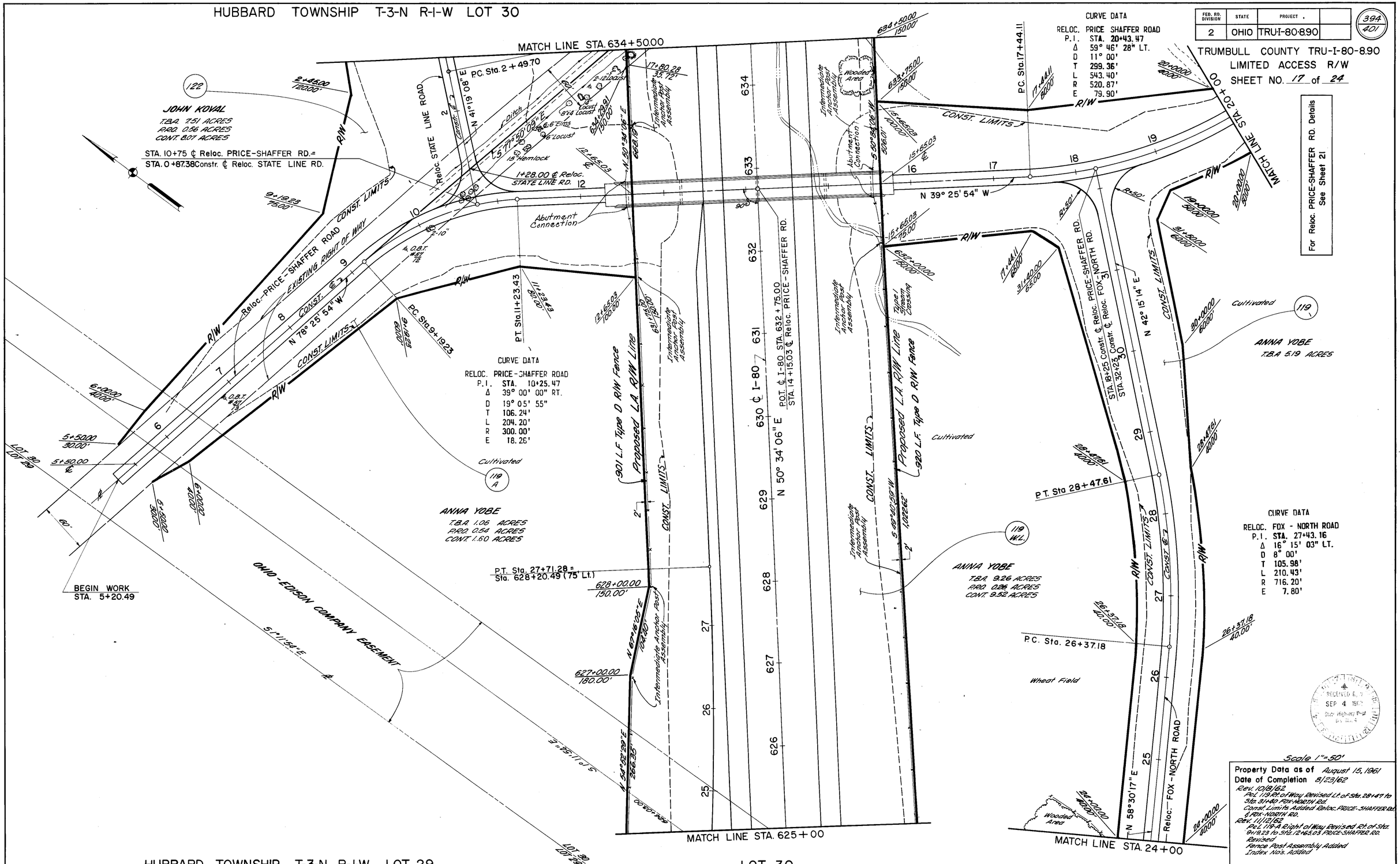
HUBBARD TOWNSHIP T-3-N R-1-W LOT 30

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-8.90	

394/401

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 17 of 24

For Reloc. PRICE-SHAFFER RD. Details See Sheet 21



Scale 1" = 50'

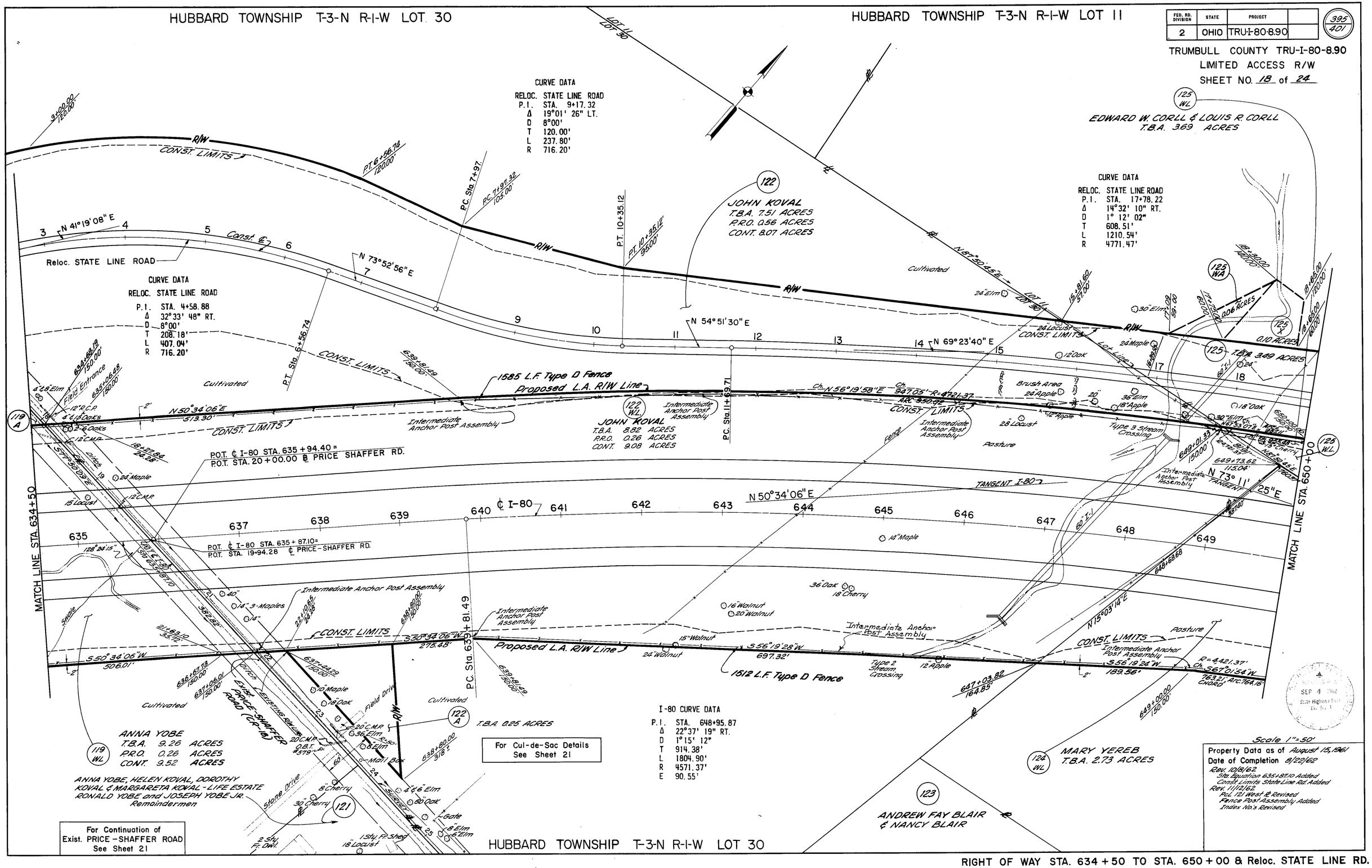
Property Data as of August 15, 1961
Date of Completion 8/23/62
Rev. 10/18/62
Rd. 119 Rt. of Way Revised Lt. of Sta. 28+47.61 to Sta. 31+40 Fox-Northern Rd.
Const. Limits Added Reloc. PRICE-SHAFFER Rd. & FOX-NORTH RD.
Rev. 11/12/64
Rd. L 118-A Right of Way Revised Rt. of Sta. 9+19.23 to Sta. 12+65.03 PRICE-SHAFFER RD.
Revised
Fence Post Assembly Added
Index Nos. Added

RIGHT OF WAY STA. 625+00 TO STA. 634+50
& Reloc. PRICE-SHAFFER ROAD & Reloc. FOX-NORTH ROAD

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-8.90	

395/401

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 18 of 24

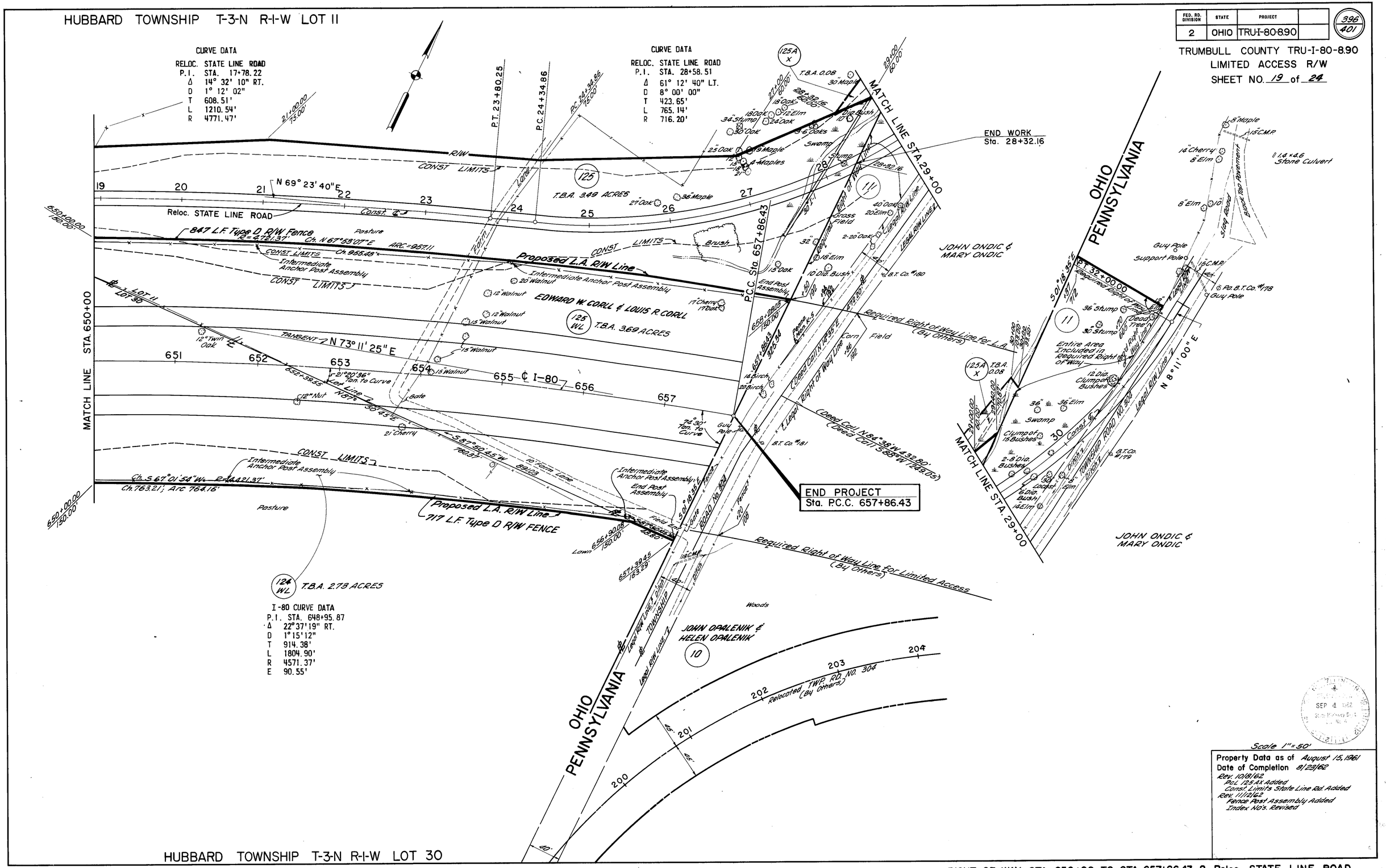


RIGHT OF WAY STA. 634 + 50 TO STA. 650 + 00 & Reloc. STATE LINE RD.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-8.90	

396/401

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 19 of 24

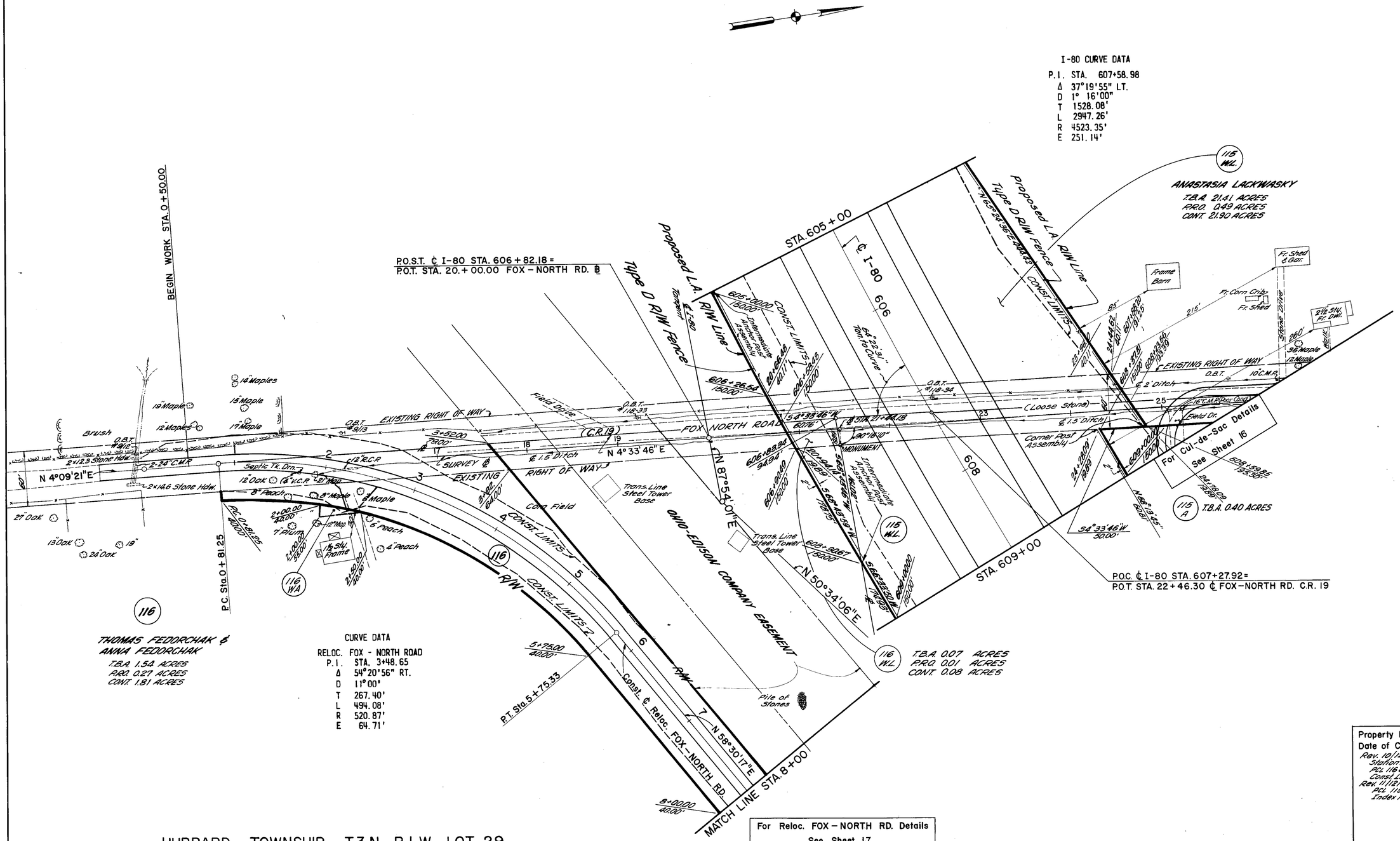


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-8.90	

397
401

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 20 of 24

DIV. 4 R/W
RECORD SECTION
AUG 23 1967
RECD ..... FRWD .....



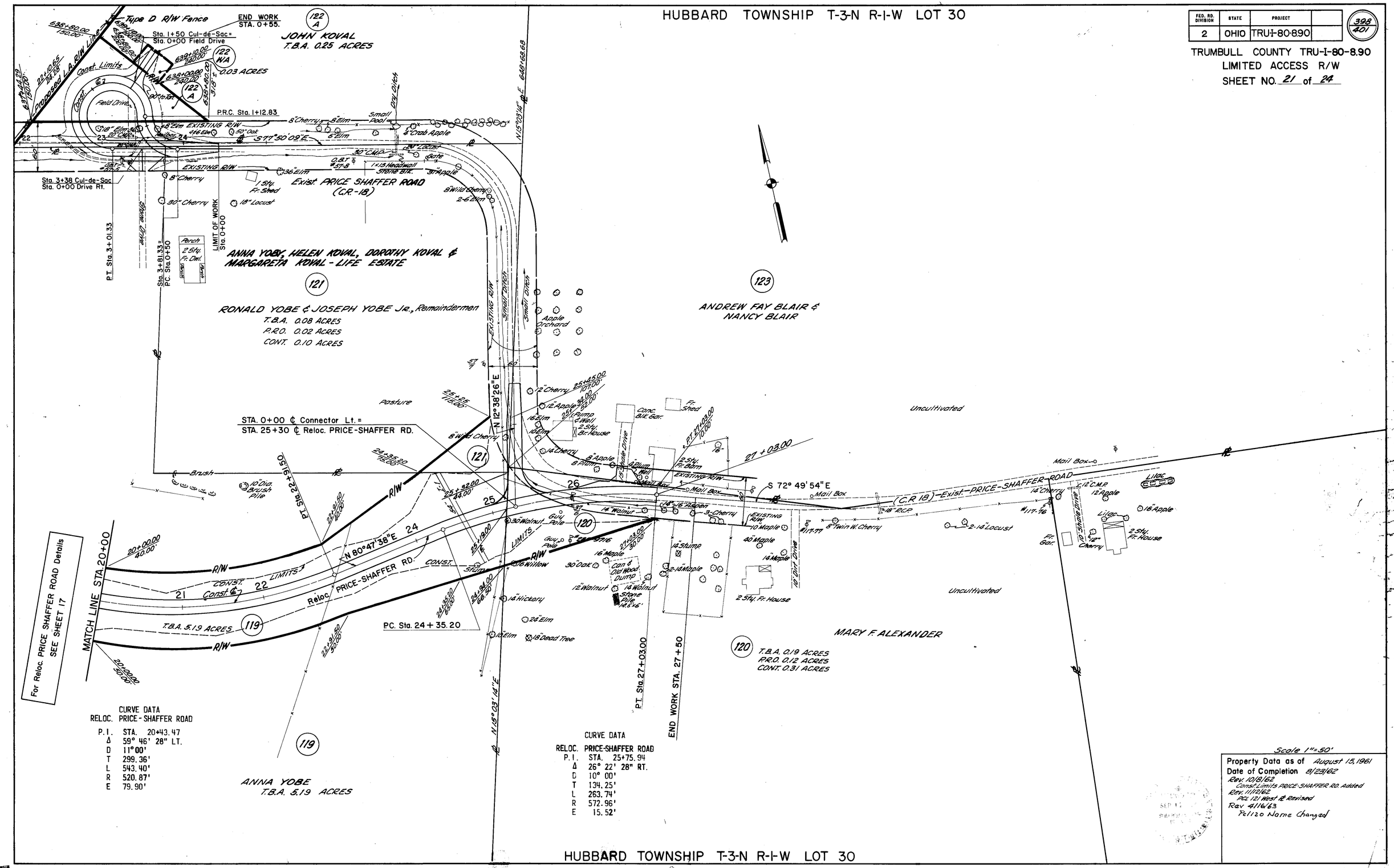
RIGHT OF WAY Reloc. FOX-NORTH RD.

HUBBARD TOWNSHIP T-3-N R-1-W LOT 30

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-8.90	

398/401

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 21 of 24



CURVE DATA
RELOC. PRICE-SHAFFER ROAD

P.I.	STA. 20+43.47
Δ	59° 46' 28" LT.
D	11° 00'
T	299.36'
L	543.40'
R	520.87'
E	79.90'

CURVE DATA
RELOC. PRICE-SHAFFER ROAD

P.I.	STA. 25+75.94
Δ	26° 22' 28" RT.
D	10° 00'
T	134.25'
L	263.74'
R	572.96'
E	15.52'

HUBBARD TOWNSHIP T-3-N R-1-W LOT 30

RIGHT OF WAY Reloc. PRICE-SHAFFER RD.

HUBBARD TOWNSHIP T-3N R-1W LOT 27

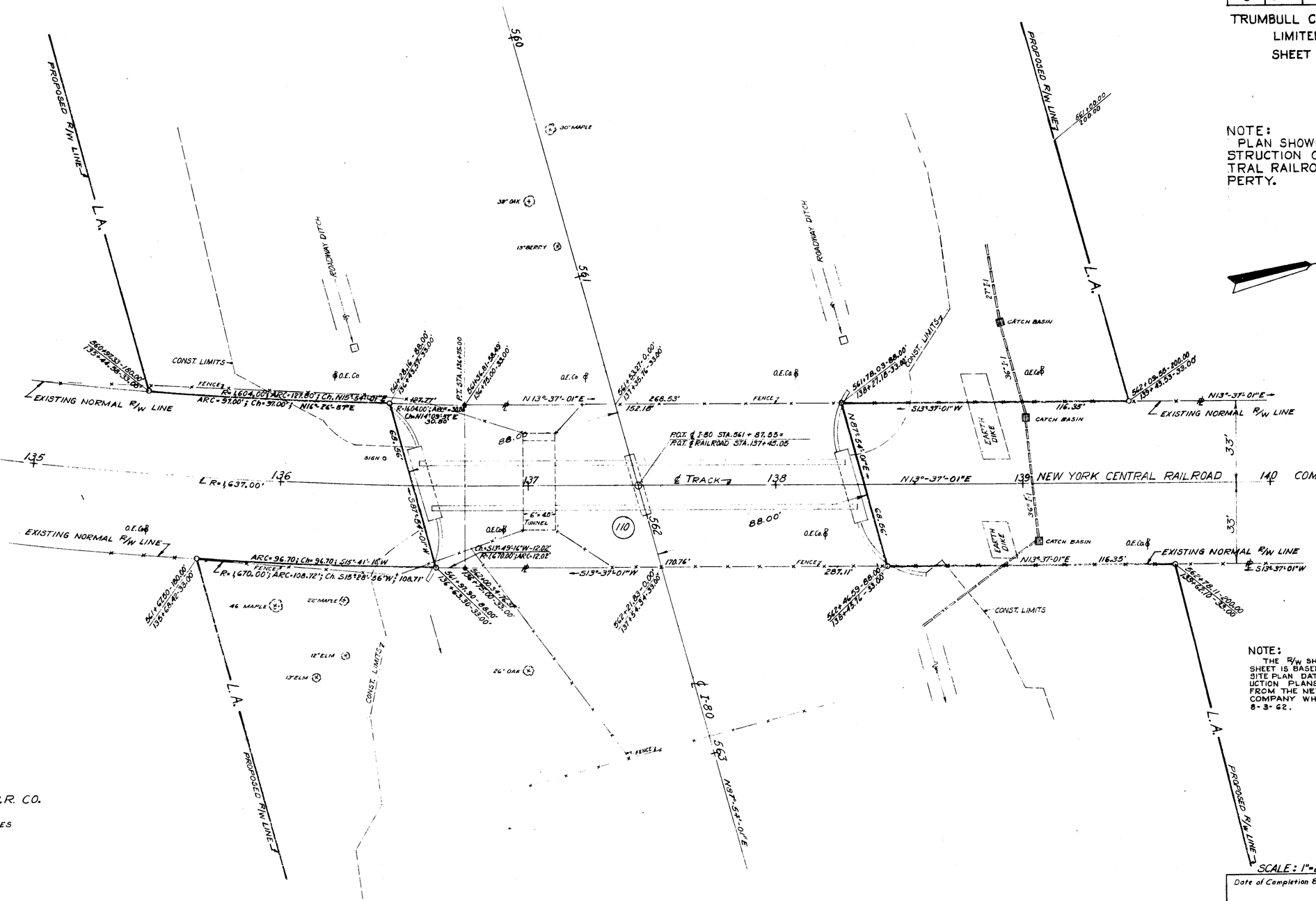
FED. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-8.90	

400 / 401

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 23 of 24

DIV. 4 R/W
RECORD SECTION
AUG 9 1963
REC'D..... FRW'D.....

NOTE:
PLAN SHOWING HIGHWAY CONSTRUCTION ON NEW YORK CENTRAL RAILROAD COMPANY PROPERTY.



NOTE:
THE R/W SHOWN TO BE ACQUIRED ON THIS SHEET IS BASED ON A PRELIMINARY DESIGN SITE PLAN DATED 6-4-62. BRIDGE CONSTRUCTION PLANS HAVE NOT BEEN RECEIVED FROM THE NEW YORK CENTRAL RAILROAD COMPANY WHO ARE THE DESIGNERS. 8-3-62.

NEW YORK CENTRAL R.R. CO.

(110) CONTAINING 0.277 ACRES

SCALE: 1"=20'

Date of Completion 8-3-62

VALUATIONS SURVEY STATIONS SHOWN ARE REFERRED TO THOSE SHOWN ON RAILROAD COMPANY R/W TRACT MAP (V22A / 2)

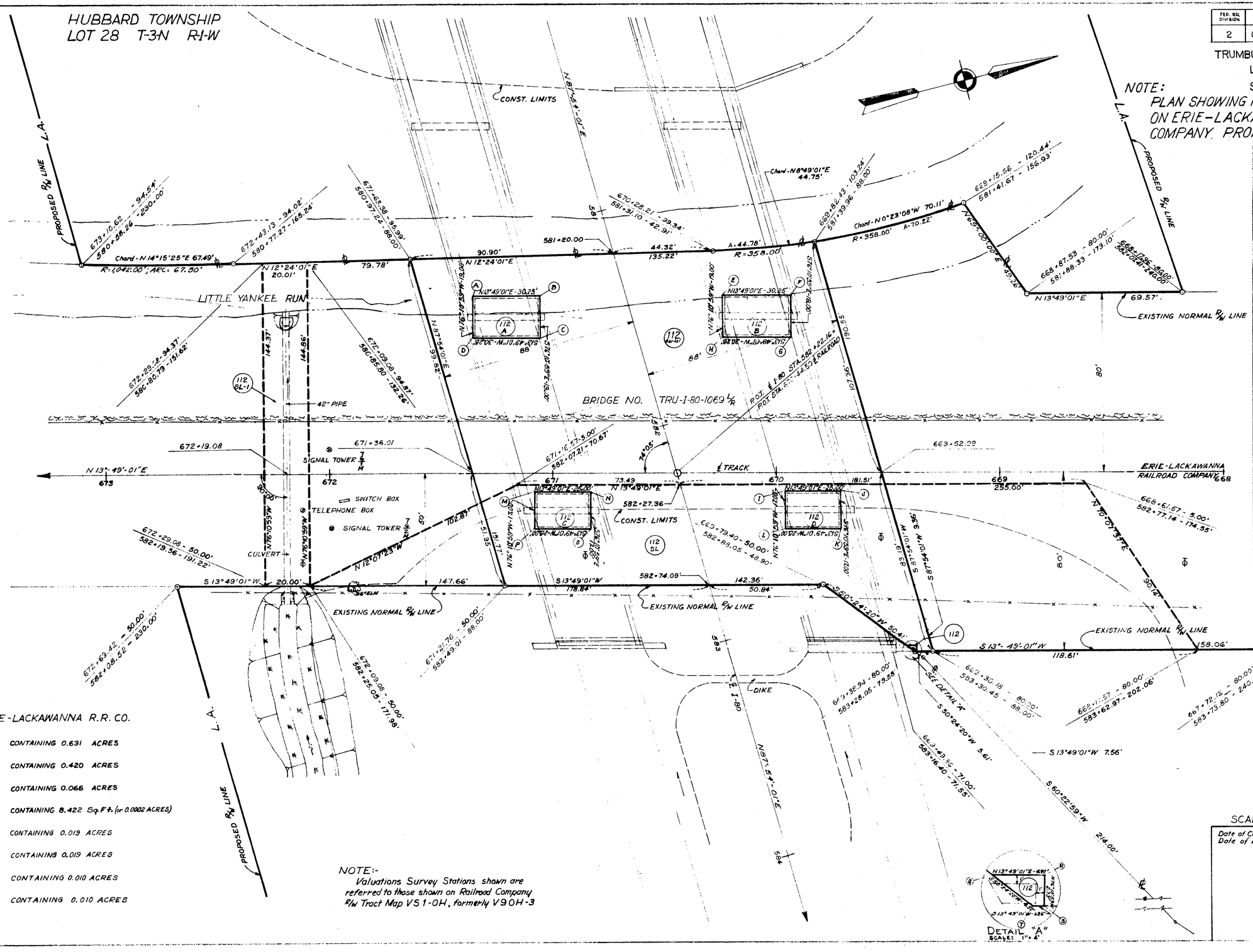
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-8.90	

401
401

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO 24 of 24

NOTE:
PLAN SHOWING HIGHWAY CONSTRUCTION ON ERIE-LACKAWANNA RAILROAD COMPANY PROPERTY

DIV. 4 R/W
RECORD SECTION
AUG 9 1963
REC'D FWD



	℄ I-80 STATION OFFSET	℄ RAILROAD STATION OFFSET
A	581+20.81 65.94'	671+35.71 79.37'
B	581+29.11 36.85'	671+05.46 79.37'
C	581+47.38 42.27'	671+05.46 60.37'
D	581+39.08 71.36'	671+35.71 60.37'
E	581+51.62 42.27'	670+23.40 79.37'
F	581+59.92 71.36'	669+93.15 79.37'
G	581+78.19 65.94'	669+93.15 60.37'
H	581+69.89 36.85'	670+23.40 60.37'
I	582+43.30 44.27'	669+96.10 8.25'
J	582+50.16 68.31'	669+71.10 8.25'
K	582+66.51 63.69'	669+71.10 25.25'
L	582+59.65 39.69'	669+96.10 25.25'
M	582+12.50 63.69'	671+08.40 8.25'
N	582+19.36 39.69'	670+83.40 8.25'
O	582+35.71 44.27'	670+83.40 25.25'
P	582+28.85 68.31'	671+08.40 25.25'
Q	583+24.42 76.80'	669+42.61 77.27'
R	583+25.76 81.53'	669+37.69 77.27'
S	583+28.38 80.78'	669+37.69 80.00'
T	583+28.05 79.58'	669+38.94 80.00'

ERIE-LACKAWANNA R.R. CO.

- (112 Aerial) CONTAINING 0.631 ACRES
- (112 SL) CONTAINING 0.420 ACRES
- (112 SL-1) CONTAINING 0.066 ACRES
- (112) CONTAINING 8.422 Sq. Ft. (or 0.0002 ACRES)
- (112 A) CONTAINING 0.019 ACRES
- (112 B) CONTAINING 0.019 ACRES
- (112 C) CONTAINING 0.010 ACRES
- (112 D) CONTAINING 0.010 ACRES

NOTE:-
Valuations Survey Stations shown are referred to those shown on Railroad Company R/W Tract Map VS1-OH, formerly V90H-3

Date of Completion 7-23-62
Date of Revision 11-1-62

Mega-Flex Tracing