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

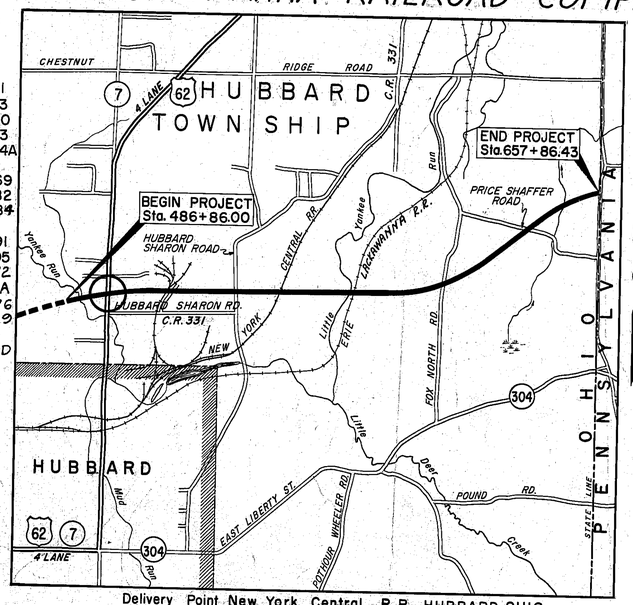
CONVENTIONAL SIGNS

STATE LINE
COUNTY LINE
TOWNSHIP LINE
SECTION LINE
CENTER LINE
CORPORATION LINE
FENCE LINE
GUARD RAIL (EXISTING)
GUARD RAIL (PROPOSED)
STEAM RAILROAD
POWER POLES
TELEPHONE POLES
TREES (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

INDEX OF SHEETS

SHEETS Nº 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

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

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.

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. Moorhead
Date Oct 28 1963 Division Deputy Director

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

Approved E. 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	R.R.A. No. 5	11-3-58
B-T-70-71	11-15-60	SP-53	6-30-61	I-8 M.H. NO.1	2-1-63	L-2	4-1-50
B-T-71 R	3-2-53	HW-E	2-1-63	I-8 M.H. NO.1-A	2-1-63	L-3	4-1-50
DR-1	1-33-55	I-1	11-15-60	F-2	2-1-63	L-3-A	4-1-50
CSB-2-56 Shts. 2&3	2-2-59	I-8 C.B.2-2A&B	2-1-63	F-3	2-1-63	L.J. NO.1	7-1-55
AE-1-57	4-2-62	I-8 C.B.2-3 & 2-4	2-1-63	I-12	2-1-63	RI-1	7-15-58
FAC1-1	3-8-63	I-8 C.B. NO.5	2-1-63	I-15 NO.1	11-15-60	RRA.NO. 1	2-1-63
FAC1-2	3-8-63	I-8 C.B. NO.6	2-1-63	I-15 NO.2 A	8-17-60	RRA.NO. 2	1-20-58
G-7.07	6-1-56	ESB-1-62	1-15-63	I-15 NO.5 A	2-1-63	T-J	9-12-60
HW-A & B	7-15-57	I-8 C.B. NO.8	2-1-63	I-15 NO.6	2-1-63	L-1	4-1-50
HW-C	7-15-57	AS-1-54	7-5-62	I-21-23	8-1-56	I-14G	1-22-52
T-36	1-2-64						

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-2.12	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-129	R-4-5-61

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

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

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	

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TRUMBULL COUNTY TRU-I-80-8.90

WORK LENGTHS

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

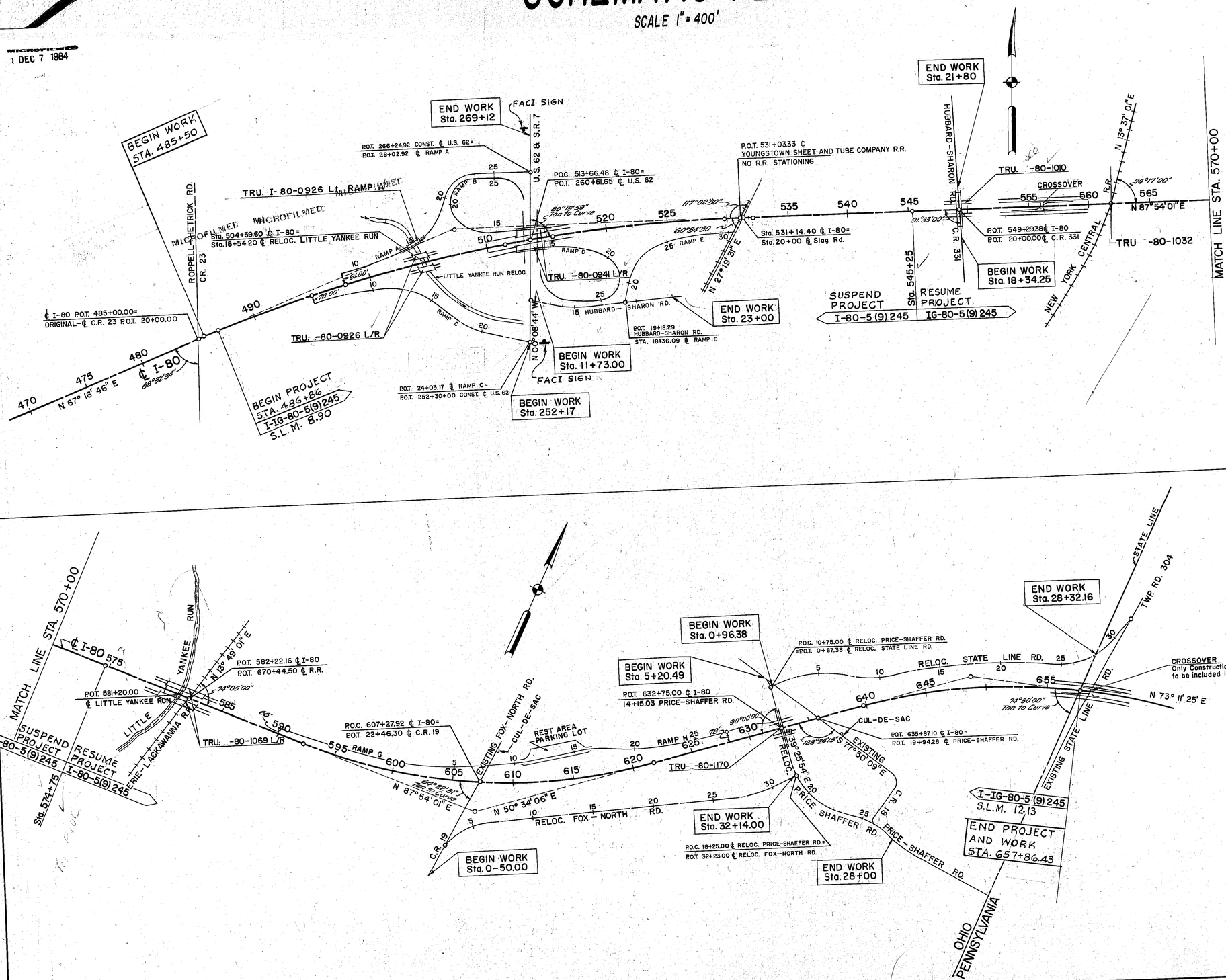
U.S.R. 62 & S.R. 7
Begin Work Sta. 252+17.00
End Work Sta. 269+12.00
Length 1,695.00 Lin. Ft.

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.



SCHEMATIC PLAN

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

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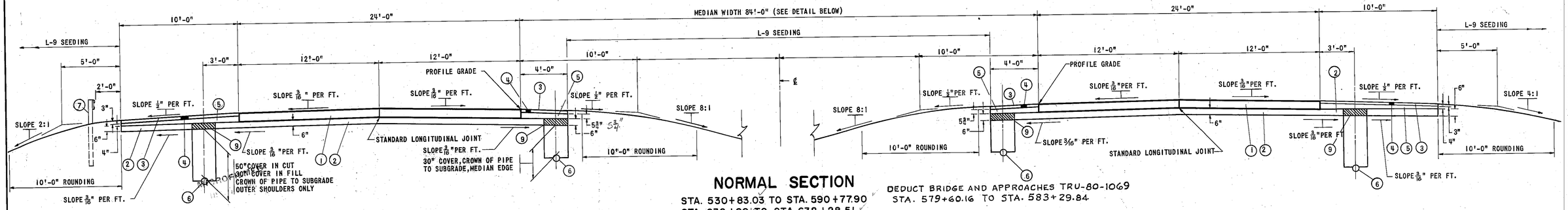
TRUMBULL COUNTY TRU-I-80-8.90

TYPICAL SECTIONS

TYPE T-71

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

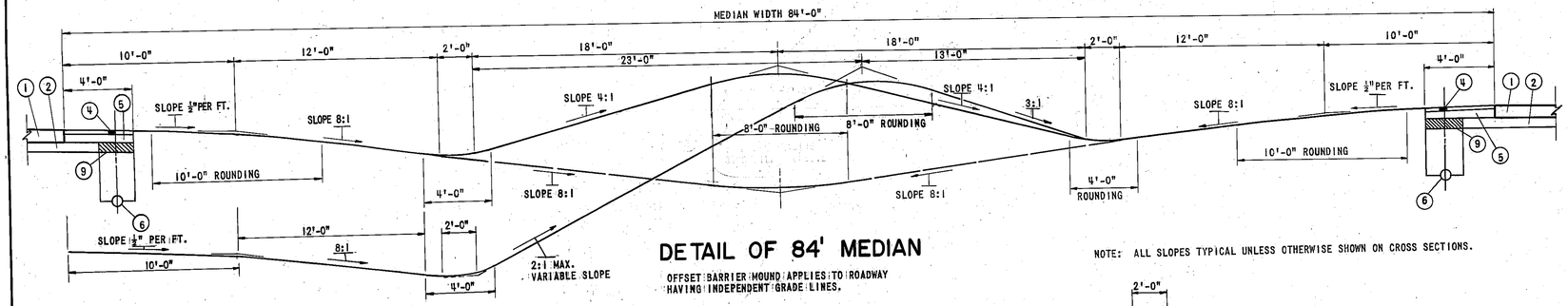
STA. 530+83.03 TO STA. 590+77.90
STA. 630+00 TO STA. 638+28.51

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

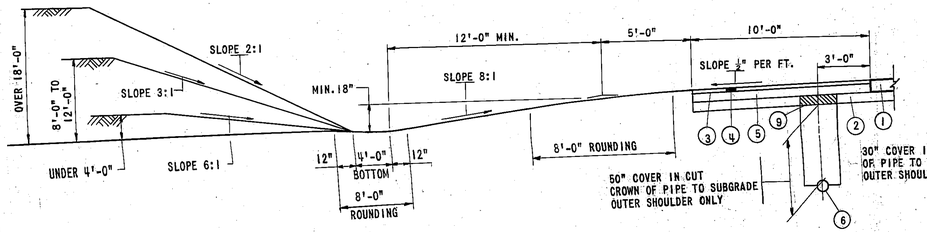
DEDUCT BRIDGE AND APPROACHES
TRU-80-0926 STA. 503+73.82 TO STA. 505+45.46
TRU-80-0941 STA. 512+20.07 TO STA. 515+19.62



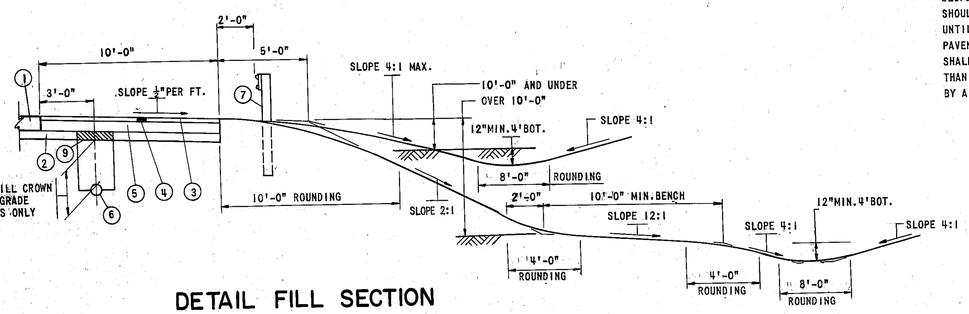
DETAIL OF 84' MEDIAN

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 1/4" 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 1/4" PER FOOT, THE PAVEMENT SLOPE & 1/4" SHOULDER SLOPE SHALL BE JOINED BY A GENTLE ROUNDING.

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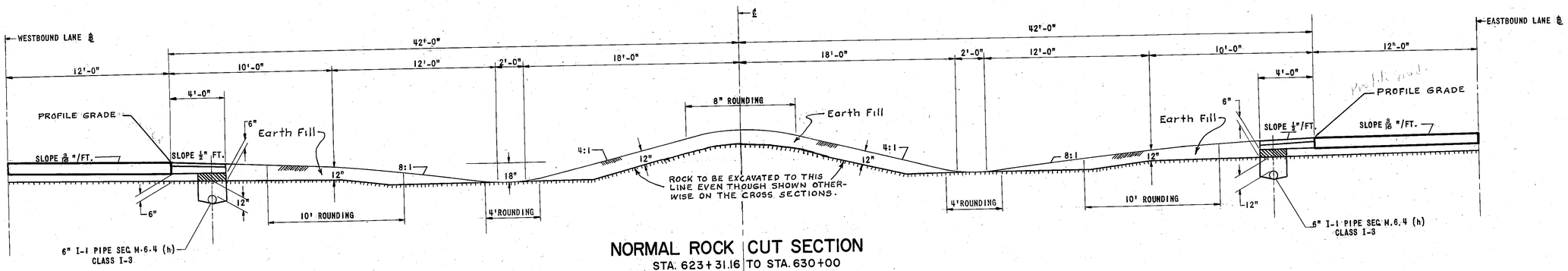
TRUMBULL COUNTY TRU-I-80-8.90

TYPICAL SECTIONS

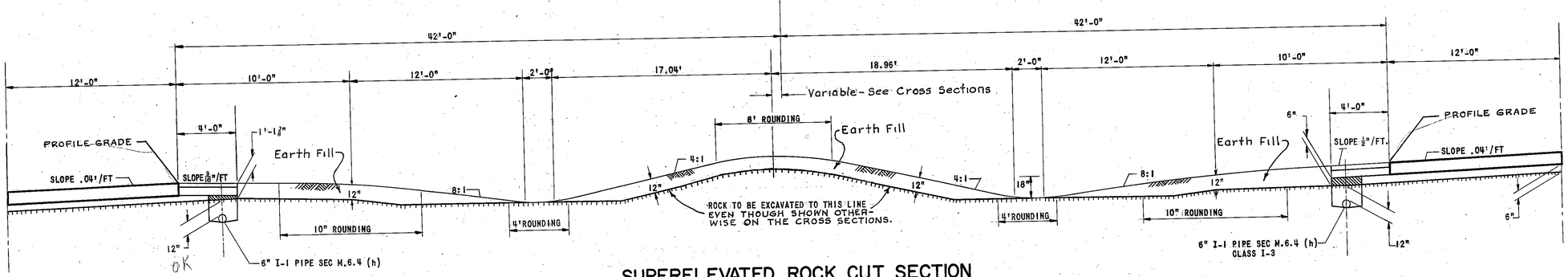
TYPE T-71

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



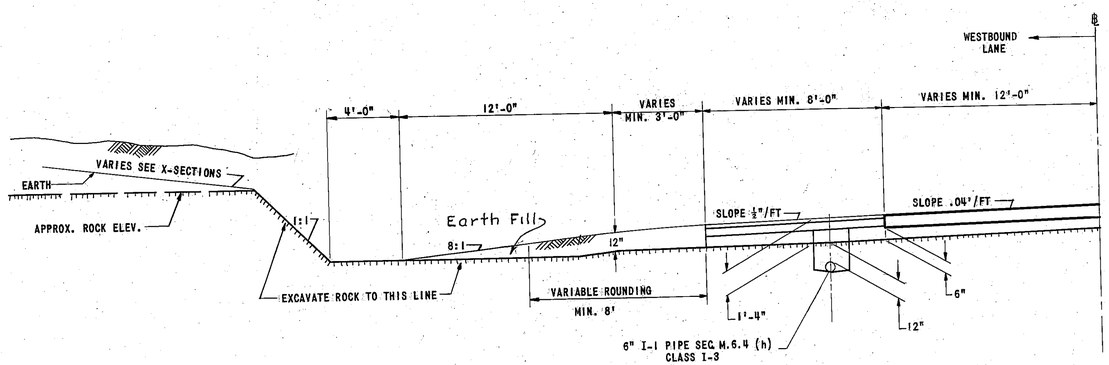
NORMAL ROCK CUT SECTION

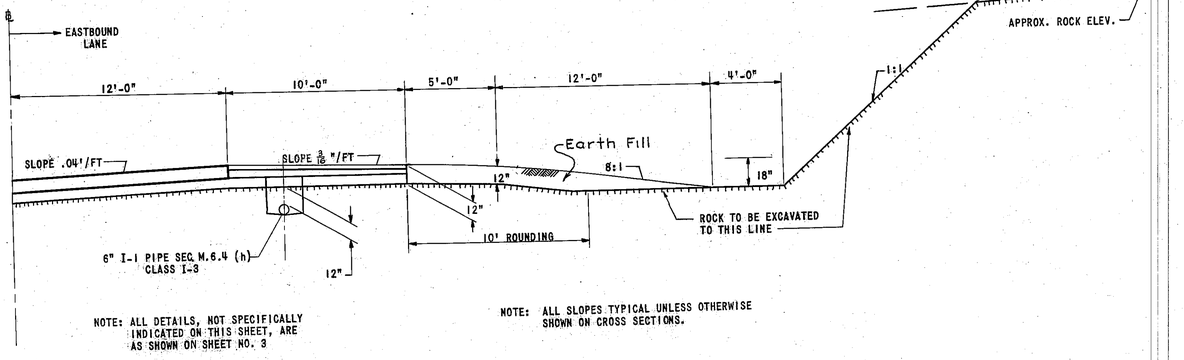
STA. 623+31.16 TO STA. 630+00



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	
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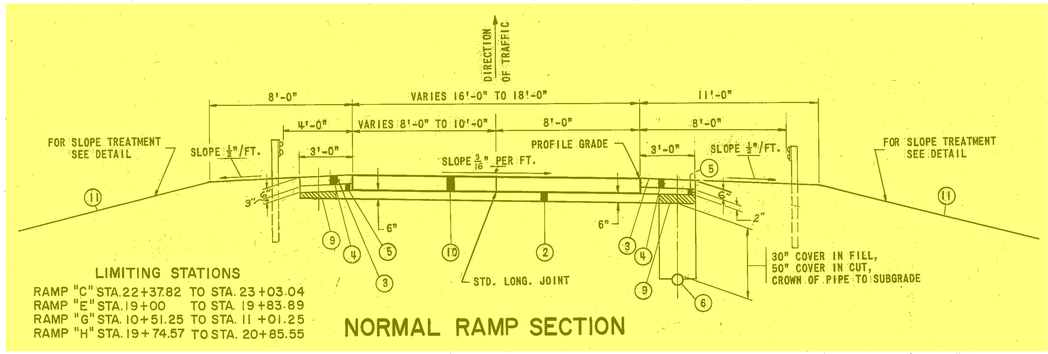
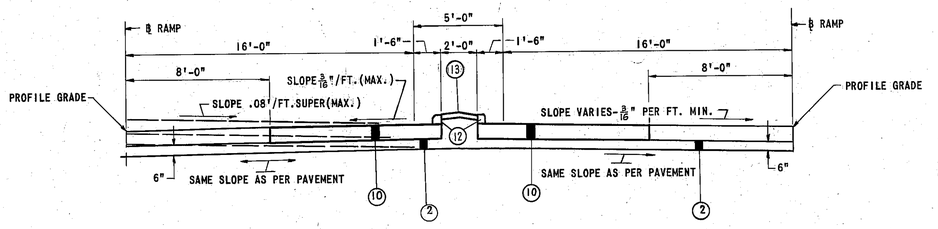
TRUMBULL COUNTY TRU-I-80-8.90

TYPICAL SECTIONS

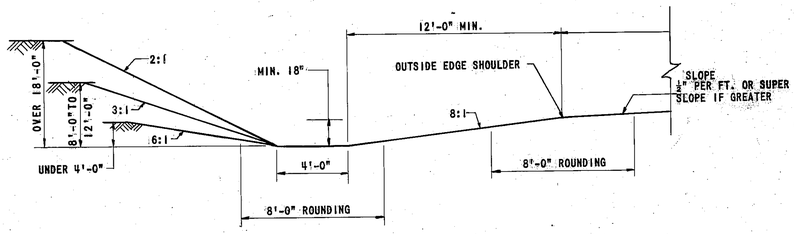
TYPE T-71

SCALE 1/4" = 1'-0"



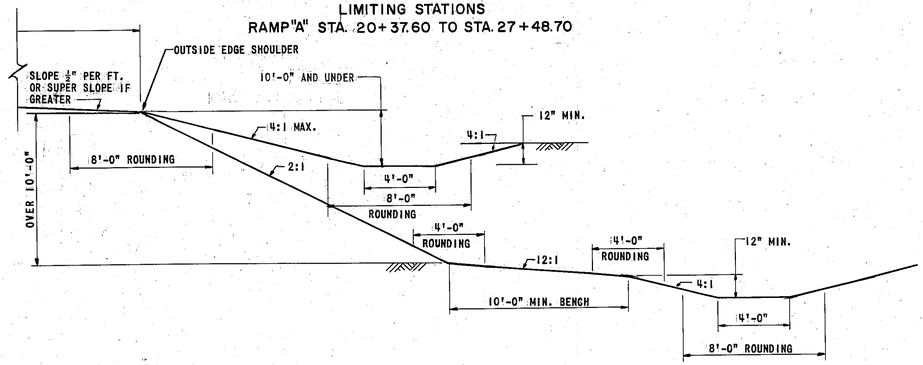


SECTION THROUGH DOUBLE RAMP SHOWING PAVED DIVIDER

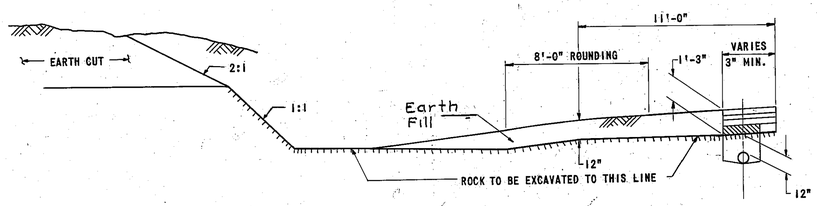


DETAIL CUT SECTION

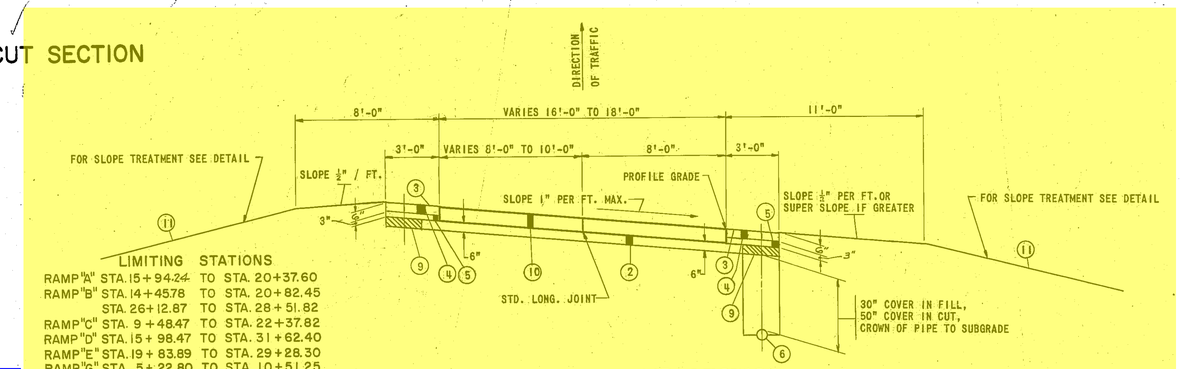
LIMITING STATIONS
RAMP "A" STA. 20+37.60 TO STA. 27+48.70



DETAIL FILL SECTION



DETAIL ROCK CUT SECTION



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	
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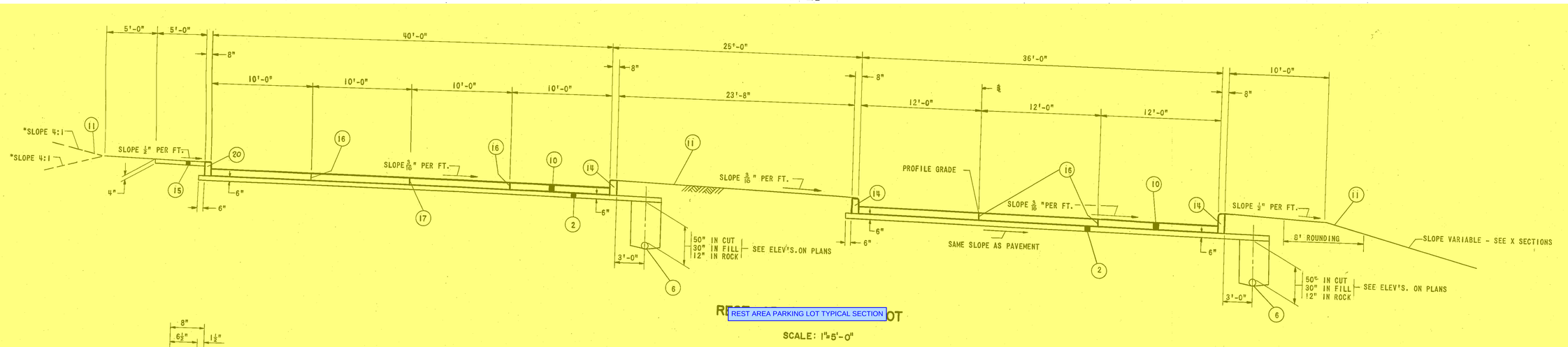
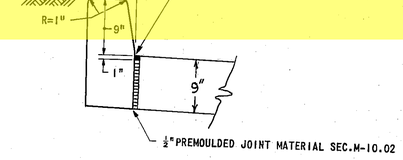
TRUMBULL COUNTY TRU-I-80-8.90



REST AREA PARKING LOT TYPICAL SECTION

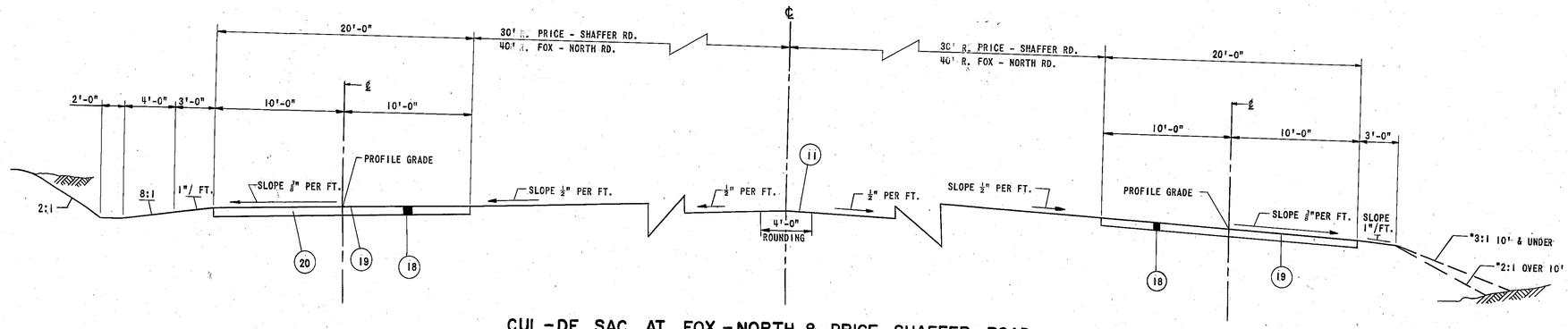
SCALE: 1"=5'-0"

LIMITING STATIONS
STA. 11+51.25 TO STA. 15+37.25



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. 9+00.00 TO STA. 11+51.25

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.

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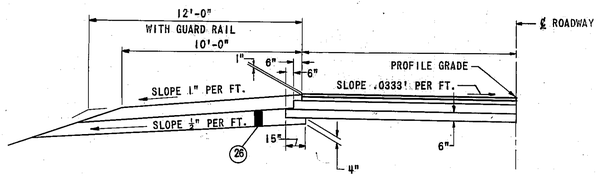
TYPICAL SECTIONS

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

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

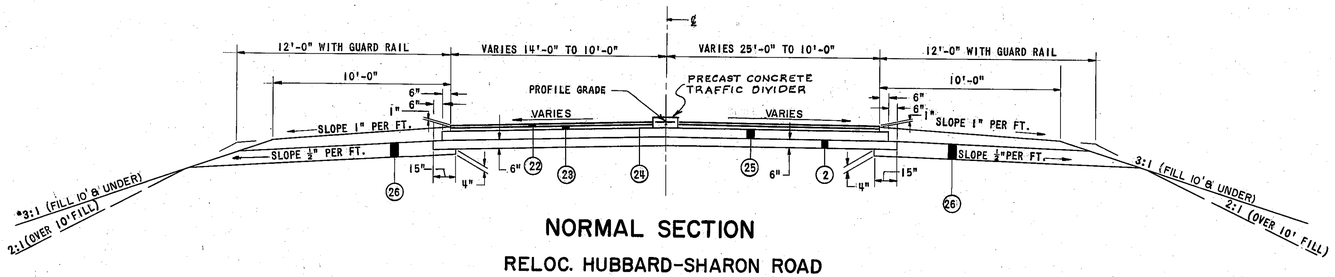


SUPERELEVATED SECTION

RELOC. HUBBARD-SHARON ROAD

LIMITING STATIONS

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



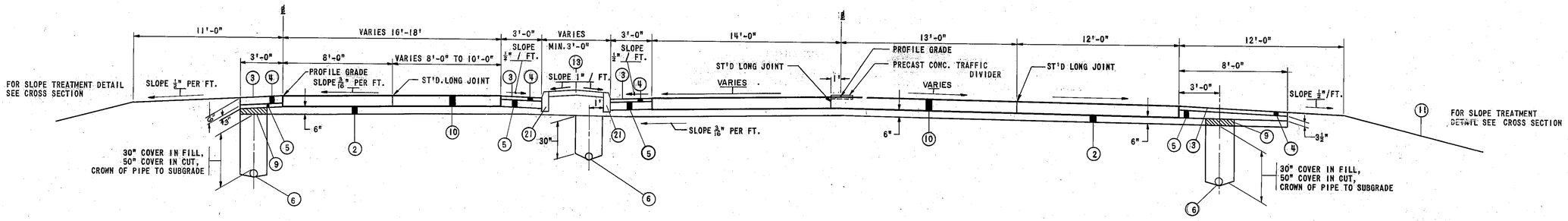
NORMAL SECTION

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

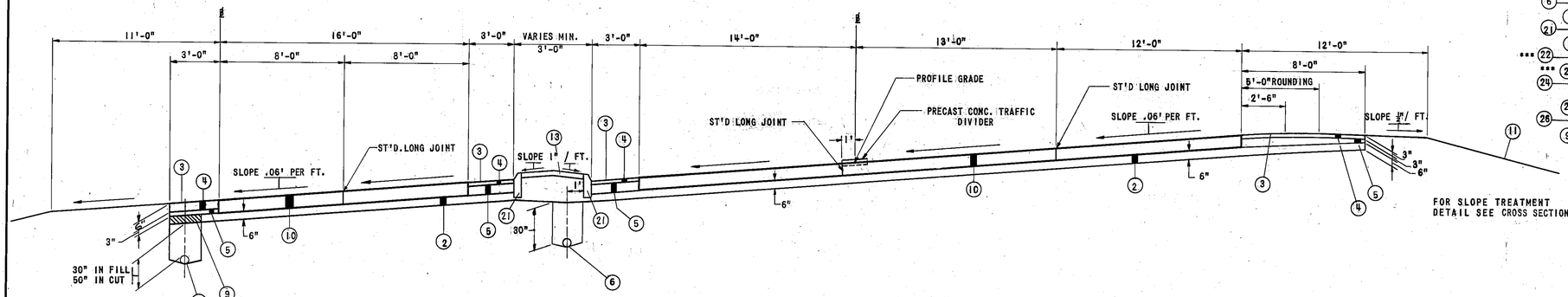
NORMAL SECTION

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 (5), (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 RI-1.

NOTE

ALL SLOPES TYPICAL UNLESS OTHERWISE SHOWN ON CROSS-SECTIONS.

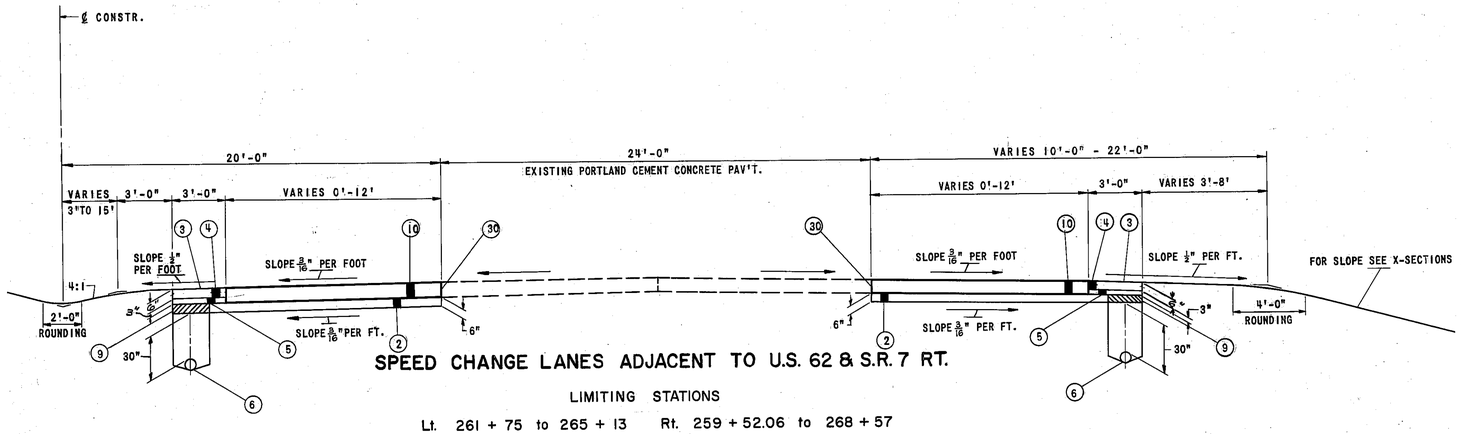
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

TRUMBULL COUNTY TRU-I-80-8.90

TYPICAL SECTIONS

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

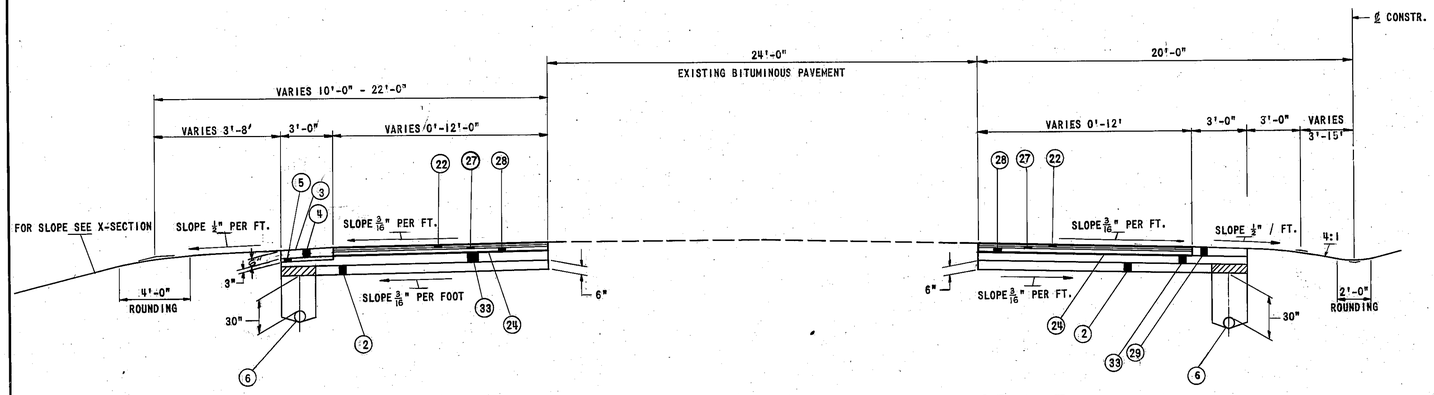
SCALE: 1/4" = 1'-0"



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

	BOLTS
EAST SIDE	
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	

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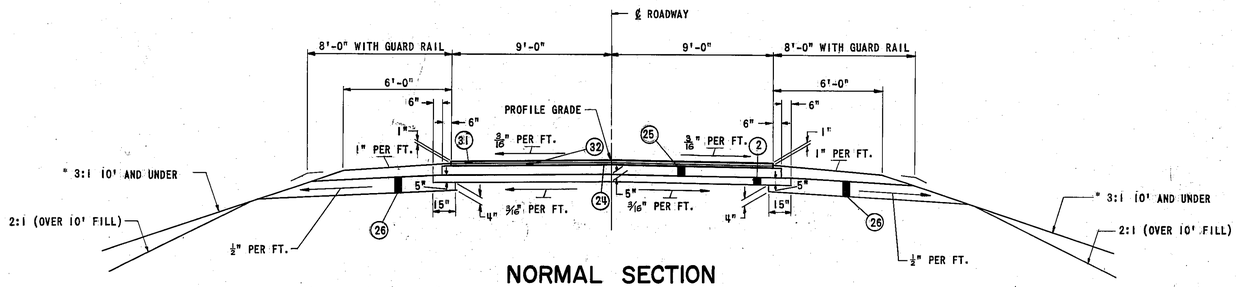
401

TRUMBULL COUNTY TRU-I-80-8.90

TYPICAL SECTIONS

TYPE T-35 on B-19

SCALE 1/4"=1'-0"

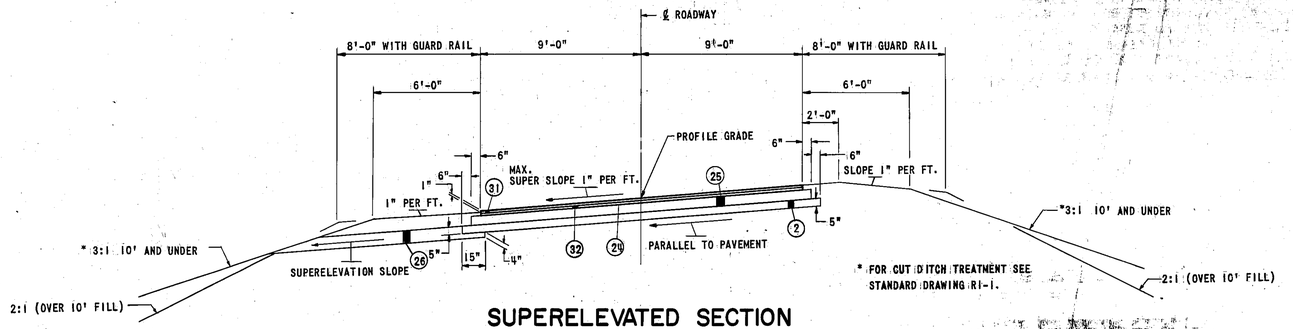


NORMAL SECTION

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



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

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

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.

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

TRUMBULL COUNTY TRU-I-80-8.90

10/401

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 RR-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 ¾"×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. 7-8.

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 BE SUBJECT TO THE REQUIREMENTS OF ITEM L-6 OF THE SCOPE OF WORK AND SHALL INCLUDE ALL LEVELING AND FINISHING OF AREAS INCLUDED IN THE YANKEE CREEK CHANNEL RELOCATION, AND THE [illegible] THAT MAY WELL BE IN AND ALL [illegible] SHALL BE INCLUDED.

THE ITEM UNIT PRICE BID FOR ITEM L-6, ROADSIDE CLEANUP, AS PER PLAN, RESULTED IN ACCORDANCE WITH THE SPECIFICATIONS SHALL CONSTITUTE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED IN ADDITION TO THE REQUIREMENTS OF ITEM L-6, THE [illegible] AS NOTED ABOVE. ALL AREAS SHALL BE SEEDED UNDER ITEM E-9 SEEDING AND 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 № 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 № 1 AS PER PLAN = 12 L. F.

SEE SHEET № 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 IN THE COMPLETION OF THIS PROJECT. FULL CO-OPERATION SHALL BE GIVEN BY THE CONTRACTORS IN THOSE AREAS WHERE NEEDED TO MAINTAIN TRAFFIC LINES, PAVEMENTS, GUARD RAILS, ETC., IS REQUIRED. IN ADDITION TO THE ABOVE, CO-OPERATION WILL BE NECESSARY WITH THE [illegible] OF THE STATE OF PA. IN THEIR WORK OF [illegible] STRUCTION BETWEEN RELOCATED STATE [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.

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 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

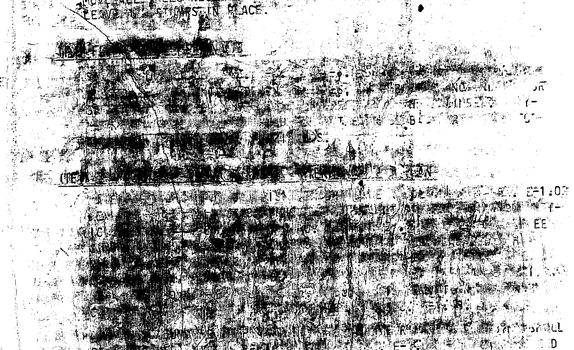
ALL AREAS TO BE SEEDED UNDER ITEM L-9 OR SODDED UNDER ITEM L-10 SHALL HAVE COMMERCIAL FERTILIZER (12-12-12) APPLIED AT THE RATE OF TWENTY (20) POUNDS PER 1,000 SQUARE FEET.

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 ALL STUMPS IN PLACE.



REJECTING PIPE

THE UNKNOWN ENDS OF ALL PIPE OR TILE LINES INTERCEPTED BY EARTHWORK OPERATIONS SHALL, WHERE INDICATED, THE ENDS OF PIPE LINES TO BE ABANDONED IN PLACE, SHALL BE EFFECTIVELY BLOCKED AND COVERED. BROKEN TILES OR PORTIONS OF PIPE OR TILE SHALL BE REMOVED UNTIL A WHOLE UNDAMAGED LENGTH IS ENCOUNTERED. THIS PIPE SHALL THEN BE BLOCKED WITH CONCRETE, FLAT STONE OR BRICK LAID IN MORTAR, OR A PRECAST CLAY OR CONCRETE STOPPAGE. PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM I-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 LOCATIONS 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 I-120

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 PIPE-OPEN 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."

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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, AT THE ENGINEER AT THE TIME OF CONSTRUCTION TO ACCOMMODATE PANEL STANDARD PANEL LENGTHS FURNISHED.

ITEM SPECIAL, DRILL IN WELL AND ABANDON

THE CONCRETE JACKET, THE STONE SLOT, WELL CASING AND PUMPING EQUIPMENT SHALL BE REMOVED AND DISPOSED OF.

THE CASING SHALL BE CUT OFF AT LEAST TWO FEET BELOW THE PROPOSED FINISHED GRADE OR UNDER PROPOSED PAVEMENT AREAS AT LEAST TWO FEET BELOW SUBGRADE ELEVATION. THE PROPOSED PAVEMENT AREA SHALL BE BACKFILLED WITH CLASS "A" CONCRETE OR AS STANDARD CHECKED TYPE [illegible]

THE UNIT PRICE BID FOR EACH "DRILLED IN WELL ABANDONED" SHALL INCLUDE [illegible] LABOR, TOOLS, MATERIALS, AND INCIDENTALS NECESSARY FOR THE [illegible] OF 7 EA.

[illegible] LIMITS [illegible]

THE [illegible] MATERIALS SHALL BE DISPOSED OF [illegible] ADDITIONAL [illegible] THE AREA [illegible] BACKFILLED IF NECESSARY, [illegible] ON THE SITE [illegible] BY THE CONTRACTOR. [illegible] UNDER [illegible]

[illegible] ITEM

[illegible] TYPE OF FENCING

SPACING [illegible] LINE A.

VAULT TYPE TOILET

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

(1) THE [illegible] SHALL BE CONSTRUCTED WITH CONCRETE EXCEPT AT [illegible] WHERE [illegible] SHALL BE AS SHOWN ON [illegible] AND AS PER DRAWING [illegible] NO. 4-B.

(2) THE [illegible] FLOOR FUNCTION IS TO BE IS TO BE FINISHED SMOOTH AS SHOWN AT SOME SHAPE WITH A RADIUS OF 3". THE REAR [illegible] SHALL BE FINISHED THE SAME AS THE FLOOR.

(3) ADD A DRAIN FLOOR LOCATED 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.

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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 C-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 PERFORMANCE 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 THIN TREE TRUNKS REPAIRED. BOULDERS SHALL BE REMOVED AND DISPOSED OF OR BURIED TO A MINIMUM DEPTH OF 2 FEET. STONE PILES SHALL BE REMOVED AND DISPOSED OF OR BURIED TO A MINIMUM DEPTH OF 2 FEET.
THE 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 B-15.

- 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

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CARPENTRY AND MISCELLANEOUS (CONTINUED)

4. INSULATION

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

5. INSULATION VENTS

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

6. TOILET PARTITIONS

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

7. TOILET ROOM ACCESSORIES

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

8. GLAZING

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

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

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

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

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

9. CAULKING

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

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

10. FINISH HARDWARE

A. SEE "DOOR HARDWARE SCHEDULE" ON PLANS.

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

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

D. FINISH FOR LOCKSETS SHALL BE AS SHOWN.

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

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

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 MOTORISTS 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. C420G016, "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 % 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

7-17-62

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

TRUMBULL COUNTY TRU-I-80-8.90

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ELECTRICAL WORK - LIGHTING

DESCRIPTION

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

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

THE CONTRACTOR SHALL ALSO COMPLY WITH THE NATIONAL ELECTRIC CODE OF THE NATIONAL BUREAU OF FIRE 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 GALVANIZED, 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, RESTORTION, 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 TYPES SHOWN ON THE PLANS.

WIRE AND CABLE INSTALLED IN CONDUIT SHALL MEET FEDERAL AVIATION AGENCY SPECIFICATION NO. L-824 TYPE A, SHALL BE STRANDED SINGLE CONDUCTOR NO. 4 AWG COPPER CABLE G.E. No. 51 58089, OR APPROVED EQUAL.

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

THE CONTRACTOR SHALL FURNISH ALL NECESSARY EQUIPMT AND DEMONSTRATE TO THE SATISFACTION OF THE ENGINEER TH 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 & 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 AND GRADED BACKFILL, AND FOR ALL PREPARATION, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK. DISPOSAL OF SURPLUS MATERIAL,

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, Nº H-270-D2. ON SPEED CHANGE LANES LIGHT POLES SHALL HAVE 15'-0" ARMS AS PER NO. J-270-F2.

LIGHTING STANDARDS ON ISLANDS SHALL BE THE SAME AS FOR RAMPS EXCEPT THEY SHALL HAVE DOUBLE 12'-0" BRACKET ARMS, Nº 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 COMPANIES SERVING THE AREA AND VERIFY JOINT POLE REQUIREMENTS.

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

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

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

SERVICE SWITCH

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. S704G009.

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 LM1983

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

LIGHTING NOTES

COMPUTATIONS

PAVEMENT & BASE

13,309.01 = [illegible] S.Y. = 110,984.2 S.Y.

[illegible] = 1,[illegible] S.Y.

[illegible] = 82.2 S.Y.
[illegible] = 39.7 S.Y.
[illegible] = 198.3 C.Y.

[illegible] = 1,[illegible] S.Y.

[illegible] = 1,[illegible] S.Y.

[illegible] = 1,[illegible] S.Y.

[illegible] = 1,[illegible] S.Y.

[illegible] = 1,[illegible] C.Y.

[illegible] = 1,[illegible] S.Y.

[illegible] = 84,206.0 S.Y.
TOTAL [illegible] = 83,269.0 S.Y.
USE

[illegible] = 10,[illegible] C.Y.
[illegible] = 12,[illegible] S.Y.

TOTAL [illegible] = 97,060 S.Y.
USE 98,996 S.Y.

[illegible] = [illegible].3 C.Y.
[illegible] = 2,[illegible].7 S.Y.

[illegible] = 9,605.5 S.Y.

[illegible] = 2,625.0 S.Y.

[illegible] = 3,[illegible].0 S.Y.

[illegible] = 2,358.1 S.Y.

[illegible] = 11,[illegible].7 S.Y.

[illegible] = 3,[illegible].0 C.Y.

[illegible] = 1,[illegible].5 S.Y.

[illegible] = 1,[illegible].7 S.Y.

[illegible] = 2,[illegible].6 S.Y.
[illegible] = 26,535.9 S.Y.
TOTAL [illegible] = 26,536 S.Y.

4,823.6 C.Y.
[illegible] C.Y.
[illegible] C.Y.

[illegible] C.Y.
[illegible] C.Y.

[illegible] C.Y.
[illegible] C.Y.

[illegible] C.Y.
[illegible] C.Y.

5701.9 C.Y.

804.1 C.Y.

988.0 C.Y.

354.9 C.Y.

[illegible] C.Y.
[illegible] C.Y.

961.0 C.Y.

[illegible] C.Y.
[illegible] C.Y.
[illegible] C.Y.

[illegible] C.Y.
[illegible] C.Y.

743.1 C.Y.
119.6 C.Y.
TOTAL [illegible] = 29,394.7 C.Y.

[illegible] = 4,[illegible].0 C.Y.
[illegible] = 4,192.6 C.Y.
TOTAL [illegible] = 33,547 C.Y.

40,293 S.Y. × [illegible] = 10,073 GAL.
40,293 S.Y. × [illegible] = 322 C.Y.

[illegible] = 251 GAL.
[illegible] = 8 C.Y.

[illegible] = 242 GAL.
[illegible] = 8 C.Y.

[illegible] = 360 GAL.
[illegible] = 12 C.Y.

[illegible] = 335 GAL.
[illegible] = 11 C.Y.

1021.3 S.Y. × [illegible] = 1,255 GAL.
1021.3 S.Y. × [illegible] = 8 C.Y.

[illegible] = 176 GAL.
[illegible] = 6 C.Y.

665.0 S.Y. × [illegible] = 2491 GAL.
925.0 S.Y. × [illegible] = 18 C.Y.

[illegible] = 133 GAL.
[illegible] = 4 C.Y.

267.0 S.Y. × [illegible] = 167 GAL.
[illegible] = 4 C.Y.

TOTAL [illegible] = 4,183 GAL.
385 C.Y.

I-IG-80-5(9)245

[illegible] = 2,295 GAL.
[illegible] = 7½ C.Y.

[illegible] = 2,295 GAL.
[illegible] = 7½ C.Y.

TOTAL [illegible] = 4,478 GAL.
459 C.Y.

40,293 S.Y. × [illegible] = 3,358.0 C.Y.
ADD [illegible] = 334.1 C.Y.
ADD TO SPEED CHANGE LANES, [illegible] = 302.1 C.Y.

[illegible] = 57.6 C.Y.
[illegible] = 41.1 C.Y.

[illegible] = 80.7 C.Y.
[illegible] = 58.7 C.Y.

[illegible] = 155.4 C.Y.
[illegible] = 110.9 C.Y.

[illegible] = 111.6 C.Y.
[illegible] = 79.7 C.Y.

1021 S.Y. × [illegible] = 85.0 C.Y.
ADD FOR 6" DEPTH 506.8 × [illegible] = 42.2 C.Y.

U.S. 46 AND S.R. 7 SPEED CHANGE LANES

[illegible] = 98.6 C.Y.
ADD FOR 6" DEPTH 598.9 × [illegible] = 69.4 C.Y.

RELOC. HUBBARD-DIVISION ROAD

[illegible] = 69.4 C.Y.
ADD FOR 6" DEPTH 348.9 × [illegible] = 49.7 C.Y.

RAMP "A"

[illegible] = 111.4 C.Y.
ADD FOR 6" DEPTH 795.2 × [illegible] = 92.7 C.Y.

RAMP "B"

[illegible] = 94.8 C.Y.
[illegible] = 67.4 C.Y.
[illegible] = 5,463.1 C.Y.

I-IG-80-5(9)245

TOTAL [illegible] = 5,228 C.Y.

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		~~311,671~~ 99,322		
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	131,512	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		359,179		
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.

~~TOTAL I-80-5(9)245~~ 163,645 S.Y.
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

VOLUME × 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.

1,591,923 × 5 / 1,000 = 7,960 M-GAL.

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

E-11 WATER

VOLUME × 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.

14,505 × 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.	
TOTAL SEEDING AREA		708,749 S.Y.
DEDUCT IG-80-5(9)245		- 123,111 S.Y.
NET SEEDING AREA I-80-5(9)245		585,638 S.Y.

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.
TOTAL SEEDING AREA = - 28,473 S.Y.
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.

603,837×9×20 / 2000 × 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.

97,586×9×20 / 2000 × 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.

603,837×9×100 / 2000 × 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.

97,586×9×100 / 2000 × 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 (I-125)

I-80-5(9)245

	4" LINES	6" LINES
SEE NOTE 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)	563'	
TOTAL I-80-5(9)245	1947'	28,300'
PAY LENGTH	730' = 0.14 MI.	28,300' = 5.36 MI.

LANE LINES & CENTERLINES (I-125)

IG-80-5(9)245

	4" LINES	6" LINES
SEE NOTE LINES 2950 × 2 =		5900'
PAY LENGTH		5900' = 1.12 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 = 848.08
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+28.30 = 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.

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.

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	5,600	
INCL. RAMPS G & H =		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' = 2.23 MILES

TOTAL 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																	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
	18-A	18-B	33	34	35	36	37	38	39	40	41	42	43	44	45	46	357										
																											ROADWAY
	1,685,242																	1,635,104				959,179			1,635,104		
E-1	~~1,797,673~~																2,180	~~806,885~~				1,010,928	735,925	E-1	~~1,806,563~~	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(4)																		70		83		70	13	SCE 101.04	83	HRS.	COMPACTION USING HEAVY PNEUMATIC TIRED ROLLER.
I-129																		13.5		13.5		13.5		I-129	13.5	C.Y.	CONCRETE FOR SIGN SUPPORT FOUNDATIONS, AS PER PLAN
E-9																		LUMP		LUMP		LUMP		E-9	LUMP	LUMP	REMOVAL OF TREES AND STUMPS, AS PER PLAN
E-9																		LUMP		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	1200.0	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		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	649	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 1½" 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 (DOWNY 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	MOTORIST'S 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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SUB - SUMMARY

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

20/401

TRUMBULL COUNTY
TRU-I-80-8.90

ITEM	SHEET NUMBER																			100% STATE THIS SHEET	I-80-5(9) THIS SHEET	IG-80-5(9) THIS SHEET	ITEM	TOTAL THIS SHEET	UNIT	DESCRIPTION
	47	48	49	50	126	127	134	135	147	148	160	161	174	175	183	184	185	194					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	

TRUMBULL COUNTY
TRU-I-80-8.90

21/401

SUB - SUMMARY

ITEM	SHEET NUMBER																					100% STATE THIS SHEET	I-80-5(9) THIS SHEET	IG-80-5(9) THIS SHEET	ITEM	TOTAL THIS SHEET	UNIT	DESCRIPTION
	375	290	200	201	212	213	214	215	234	235	236	251	254	255	256	283	287	378	379	10	11	12				TYPE CODE 7221			ROADWAY
CE-101(4)																				83				70	13	SSCE 101(4)	83	HOURS	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
I-4																		32			4			4		I-4	4	TONS	CALCIUM CHLORIDE FOR DUST CONTROL
I-8																574								27	5	I-8	32	EACH	CENTERLINE REFERENCE MONUMENTS, AS PER PLAN
I-13																3175							574			I-13	574	S.F.	7" Concrete Sidewalk
I-13																							3175			I-13	3175	S.F.	4" Concrete Sidewalk
I-15	150							400.0	900.0	487.5	337.5		1887.5	1650.0	275.0									6087.5		I-15	6087.5	L.F.	GUARD RAIL, STEEL BEAM, STANDARD TYPE (DEEP)
I-125																LUMP	-							LUMP		I-125	LUMP	LUMP	PARKING LOT STALL MARKING
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
L-3																11,000								11,000		L-3	11,000	S.Y.	PLACING STOCKPILED TOPSOIL
L-6																123	-							123		L-6	123	UNITS	ROADSIDE CLEANUP, MODIFIED AS PER PLAN
L-16																20								20		L-16	20	C.Y.	AGGREGATE FOR TREE HOLES
L-14																6								6		L-14	6	Each	Acer Rubrum 1¾"-2" B&B 24"
L-10			1016	2	617	644	106	679	321	209	89		876	499	600									5658		L-10	5658	S.Y.	SODDING
L-10									58															58		L-10	58	S.Y.	SODDING FOR SPECIAL BERM AND SLOPE PROTECTION, AS PER PLAN
L-13																302	1046							1095	236	L-13	1348	EACH	CORNUS RACEMOSA (GRAY DOGWOOD) 2' TO 3' B&B 12"
L-13																	744							561	183	L-13	744	EACH	FORSYTHIS INTERMEDIA (BORDER FORSYTHIS) 2'TO 3'
L-13																	1059							851	208	L-13	1059	EACH	CORNUS S. FLAVIROMAE (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	HOMAMELIS VIRGINIANA (WITCH HAZEL) 4' TO 5'
L-13																	583							477	106	L-13	583	EACH	CORNUS STOLONIFERA (RED OSLER DOGWOOD) 2' TO 3'
L-13																2	-									L-14	2	EACH	Aesculus Glabra 1¾"-2" B&B 24"
L-14																16	-									L-13	16	EACH	ARONIA Arbutifolin 2'-3' B&B 12"
L-13																22	-									L-14	22	EACH	LIQUIDAMBAR 1½" TO 2" B & B 24"
L-14																8	-									L-16	8	EACH	QUERCUS PALUSTRIS 6" TO 7" B & B 76" Furnished, Moved and Reset
L-14																3	-									L-16	3	EACH	ACER RUBRUM 6" TO 7" B & B 76" Furnished, Moved and Reset
L-14																	75									L-14	75	EACH	MALUS FLORIBUNDA (JAPANESE FLOWERING CRAB APPLE) 4' TO 5
L-14																	60									L-14	60	EACH	MALUS P. ELEYI (ELEY CRAB APPLE) 4' TO 5'
L-14																	24									L-14	24	EACH	AMELANCHIER CANADENSIS (DOWNY SHADBLOW) 4' TO 5'
L-14																	55									L-14	55	EACH	MALUS ATRO SANQUINEA (CARMINE CRAB) 4' TO 5'
L-14																	22									L-14	22	EACH	CERCIS CANADENSIS (BUSH FORM JUDAS TREE) 4' TO 5'
L-14																LUMP	-									L-17	LUMP	LUMP	PRUNING EXISTING TREES
L-17																					200					T-10	200	C.Y.	TRAFFIC COMPACTED SURFACE COURSE
T-10												1911														SPECIAL	1911	S.Y.	FURNISHING AND MIXING CALCIUM CHLORIDE WITH AGGREGATE
Special																													
I-129	1																-									I-129	1	EACH	OVERHEAD SIGN SUPPORT, No. 7.2 DESIGN 1, 48' SPAN,
I-129	1																-									I-129	1	EACH	OVERHEAD SIGN SUPPORT, No. 7.4 DESIGN 1, 68' SPAN
I-25																2800	-									I-25	34,249	L.F.	FENCE, TYPE 47
I-25																										I-25	2800	L.F.	REST AREA FENCE,
SPECIAL																										SPECIAL	7	EACH	DRILLED WELLS ABANDONED
SPECIAL																										SPECIAL	1	EACH	Motorist's Services Shelter
Special																1										Special	1	Each	Well Shelter
S-25																1										S-25	975	L.F.	No.4 Service Cable in Conduit
SPECIAL																975										SPECIAL	1	EACH	ROADSIDE TOILET AND STORAGE UNIT
SPECIAL																1	-									SPECIAL	5	EACH	CHARCOAL GRILL AND SERVING TABLE
SPECIAL																5	-									SPECIAL	10	EACH	PICNIC TABLES WITH CONCRETE SLAB
SPECIAL																10	-									S-25	470	L.F.	1½" GALVANIZED Alloy Steel CONDUIT Sec. M-106.11
S-25																470	-									S-25	310	L.F.	2" GALVANIZED Alloy Steel CONDUIT Sec. M-106.11
S-25																310	-									S-25	1	EACH	SERVICE POLE, AS PER PLAN.
S-25																1	-												

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
					1-14-64 1-16-67

GENERAL SUMMARY

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

TRUMBULL COUNTY
TRU-I-80-8.90

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401

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	TOTAL QUAN.	UNIT	DESCRIPTION
																								TYPE CODE 7221			
																											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	7642	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	2360	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																				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

SUB - SUMMARY

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

ITEM	SHEET NUMBER																		I-80 -5(9) THIS SHEET	IG-80-5(9) THIS SHEET	ITEM	TOTAL THIS SHEET	UNIT	DESCRIPTION
	47	48	49	50	126	127	134	135	147	148	160	161	174	175	183	184	185	194			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																								
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																					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

SUB - SUMMARY

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

24
401

TRUMBULL COUNTY
TRU-I-80-8.90

ITEM	SHEET NUMBER																			100% State	I-80 -5(9) THIS SHEET	IG-80-5(9) THIS SHEET	ITEM	TOTAL THIS SHEET	UNIT	DESCRIPTION
	200	201	202	212	213	214	215	234	235	236	251	254	255	256	283	159							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																										
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																										
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																							I-1		L.F.	30" PIPE CLASS A-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
F-1														164							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																										
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(d) 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																										
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		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																								
F-1	10																				4		I-1	4	L.F.	6" PIPE CLASS F-4
F-1											108			52							10		I-1	10	L.F.	8" PIPE CLASS F-4, Sec. M-6.4 (c)
F-1																					160		I-1	160	L.F.	12" PIPE CLASS F-4
																							I-1		L.F.	15" PIPE CLASS F-4
F-1																										
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 (8" PIPE CLASS G-1, Sec. M-6.4(j)(c)
F-1																					765		I-1	765	L.F.	4" PIPE CLASS H-2
																							I-1		L.F.	6" PIPE CLASS H-2
F-8																										
F-1	716	492																					I-8		EA.	INSPECTION WELLS, AS PER PLAN
F-1		724	972																		1208		I-1	1208	L.F.	6" PIPE CLASS I-3
																					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																										
F-5	1	3	2																		6		I-5	6	EA.	15" PIPE SPECIALS CLASS F-4
F-6																							I-5		EA.	6" PIPE SPECIALS, AS PER PLAN
F-6																							I-6		L.F.	RELAYING PIPE 24" TYPE 4 BACKFILL
F-8																							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
																							I-8		EA.	NO. 2-3 CATCH BASIN MODIFIED AS PER PLAN
F-8																										
F-8	1	2																					I-8		EA.	STANDARD NO. 5 CATCH BASIN
F-8																					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 I, MODIFIED AS PER PLAN
F-14																							I-14		L.F.	PAVED GUTTER, STANDARD TYPE 2
F-14										33											33		I-14	33	L.F.	PAVED GUTTER, TYPE I
F-16																							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																	TOTAL THIS SHEET		TOTAL SHEET 26	100% STATE	I-80 -5(9)	IG-80 -5(9)	ITEM	TOTAL QUAN.	UNIT	DESCRIPTION
	18	18A	18B		34	35	36	37	38	39	40	42	46	49	50	126	127							TYPE CODE 7221			
																											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																		100 % STATE	I-80 -5(9) THIS SHEET	IG-80-5(9) THIS SHEET	ITEM TYPE CODE 7221	TOTAL THIS SHEET	UNIT	DESCRIPTION
		134	135	147	160	161	174	175	194	200	201	202	212	214	234	235	236	256	283							
																										PAVEMENT
B-19													32	12		125	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						542		385	100									889		I-12	889	L.F.	STANDARD TYPE 2-A CURB
I-12		100		100	100	531															1858		I-12	1858	L.F.	STANDARD TYPE 6 CURB
I-12							88	528		475											1091		I-12	1091	L.F.	STANDARD TYPE 8 PORTLAND CEMENT CONCRETE CURB
I-12											1512										1512		I-12	1512	L.F.	TYPE 7 PORTLAND CEMENT CONCRETE CURB,
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

2	OHIO I-80-5(245)	37

TRUMBULL COUNTY TRU-I-80-8.90

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	945.38	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
505+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	981.82	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
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
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	990.68	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
+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	

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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	978.35	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

SUPERELEVATION CHART

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

TRUMBULL COUNTY TRU-I-80-8.90

30
401

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

31/401

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

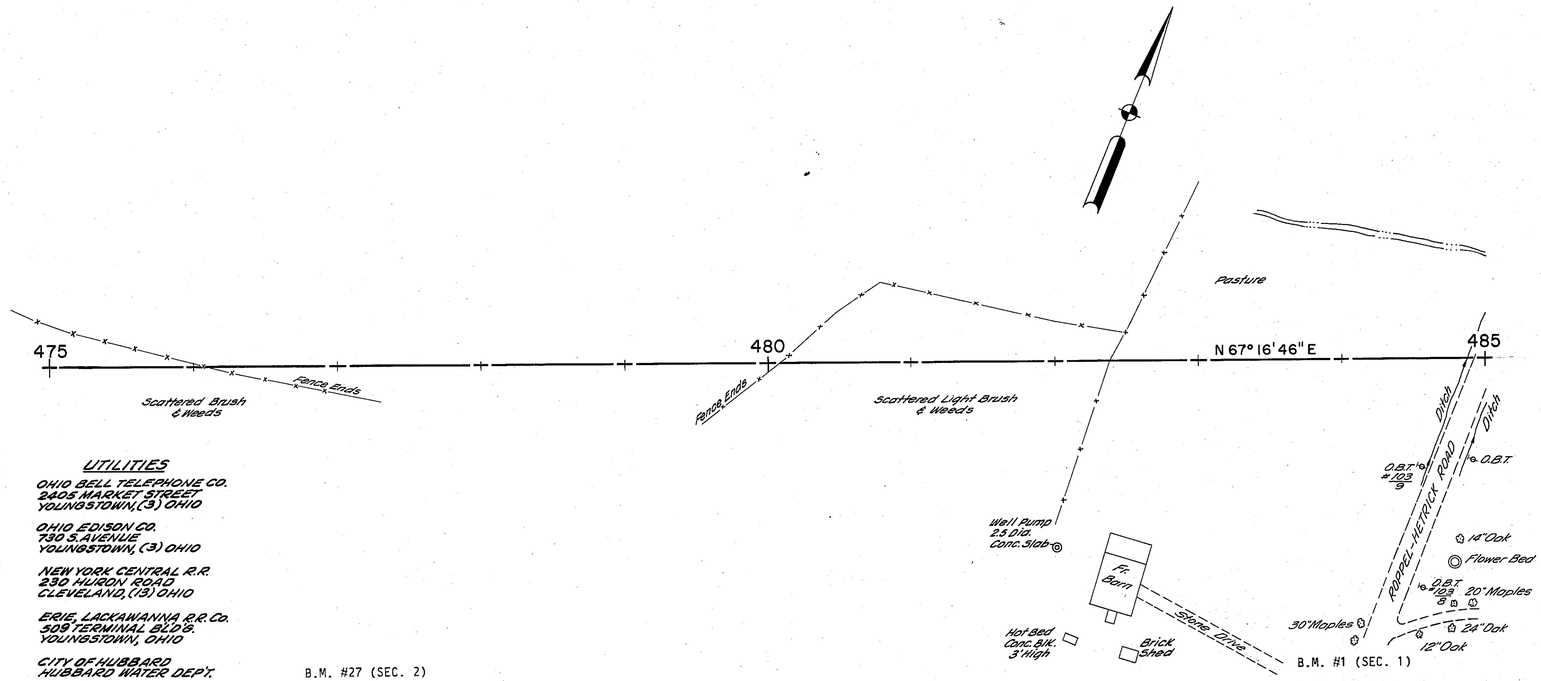
Reloc. STATE LINE RD. (Cont'd)

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

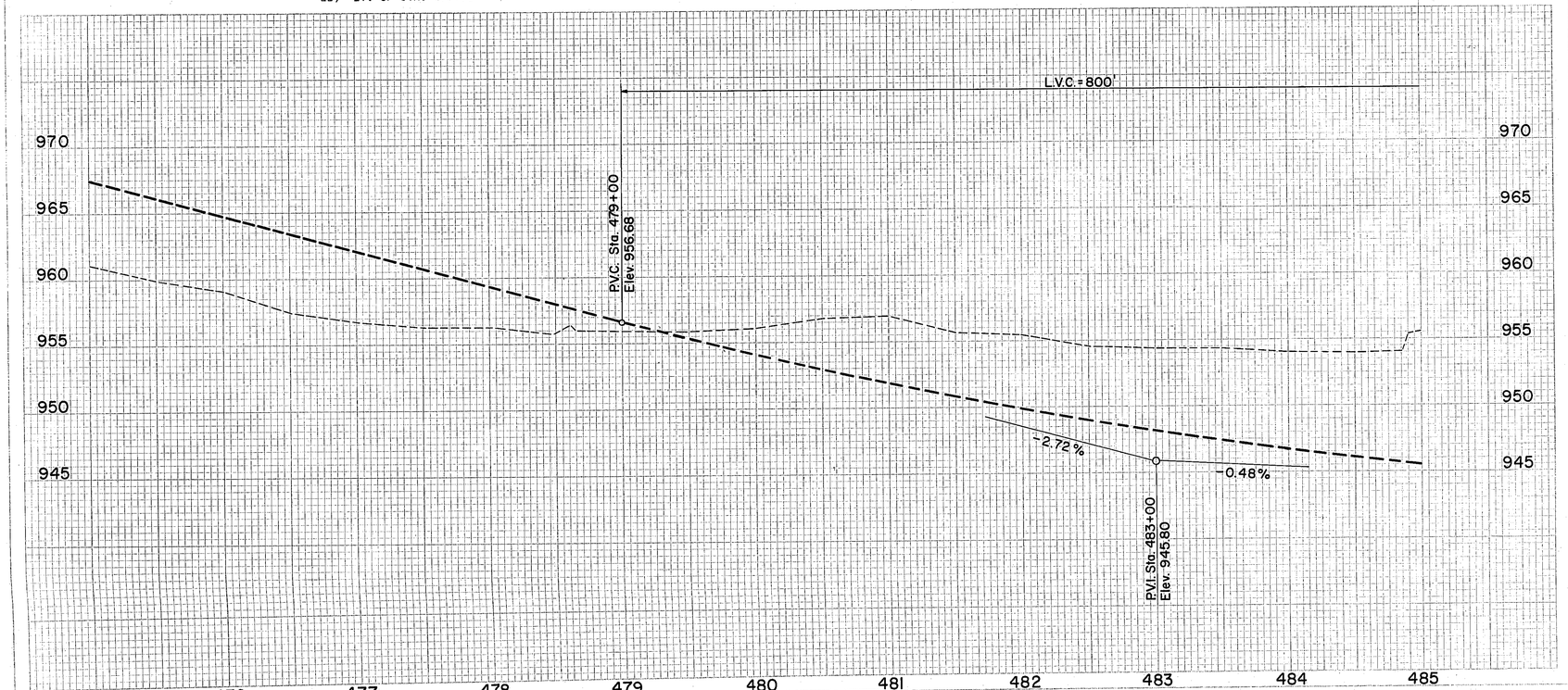
NEW YORK CENTRAL R.R.
230 HURON ROAD
CLEVELAND, (13) OHIO

ERIE, LACKAWANNA R.R. Co.
309 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

B.M. #1 (SEC. 1)
ELEV. 959.516
R.R. SPIKE IN ROOT OF 24" MAPLE
200' RT. OF STA. 484+07



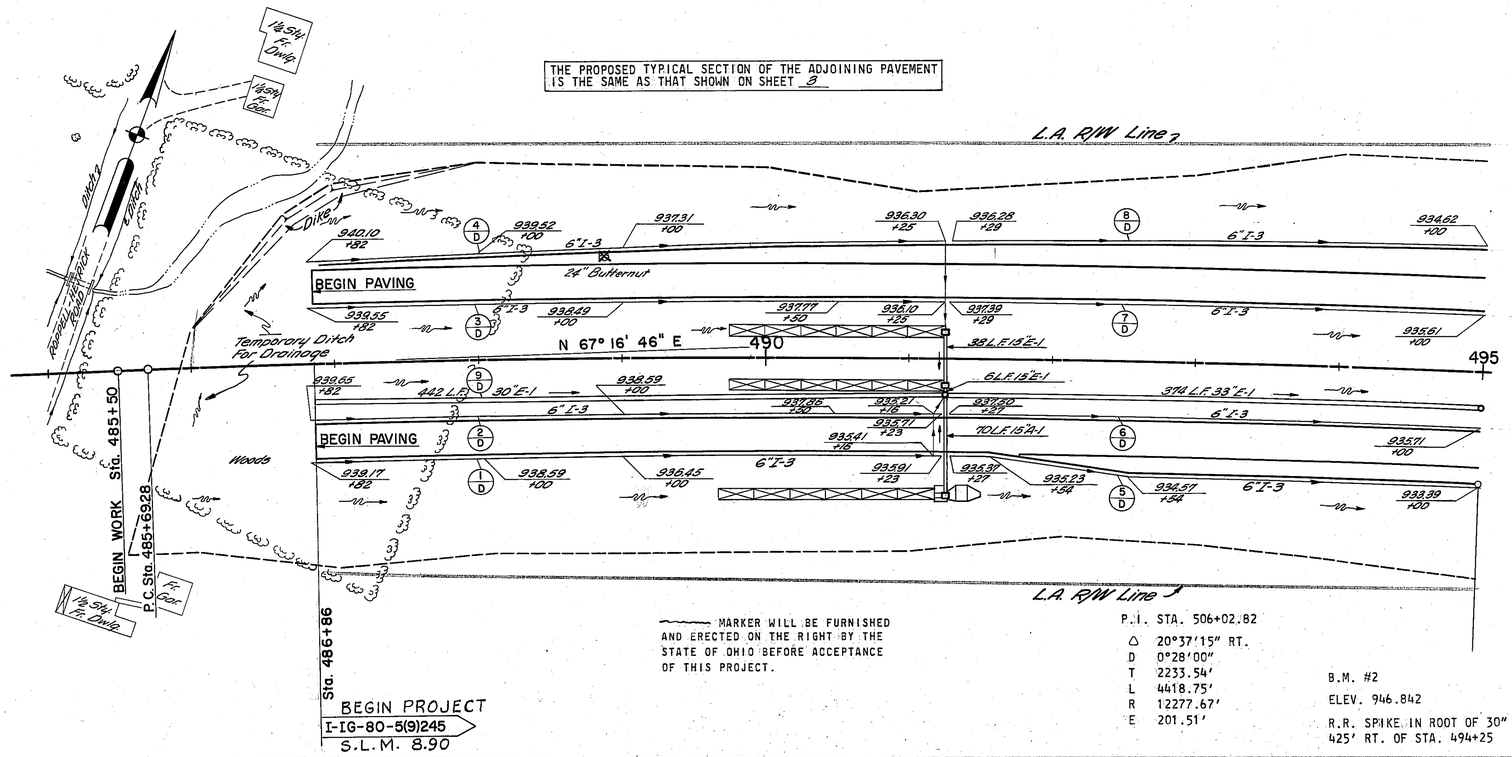
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE

TOTALS

Sta. 475+00 to Sta. 485+00

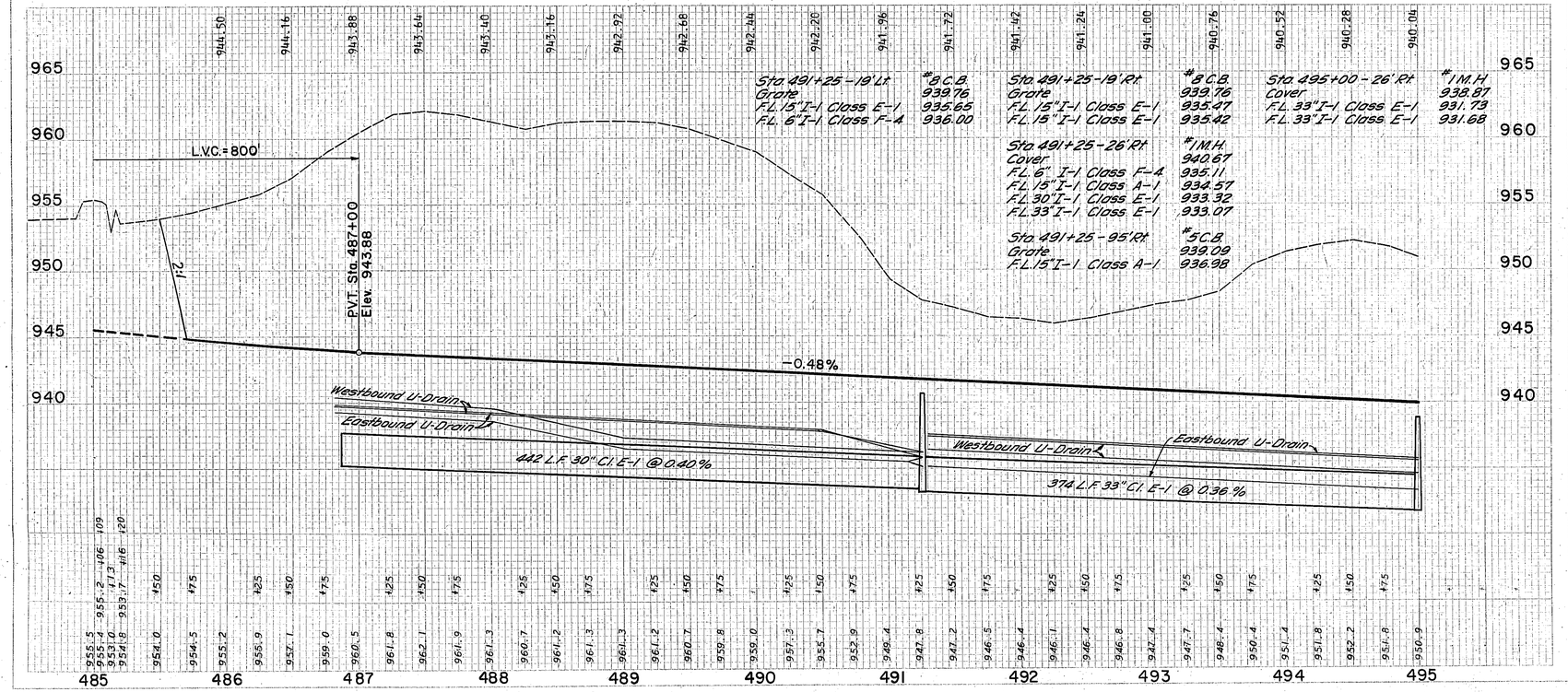
THE PROPOSED TYPICAL SECTION OF THE ADJOINING PAVEMENT IS THE SAME AS THAT SHOWN ON SHEET 8



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



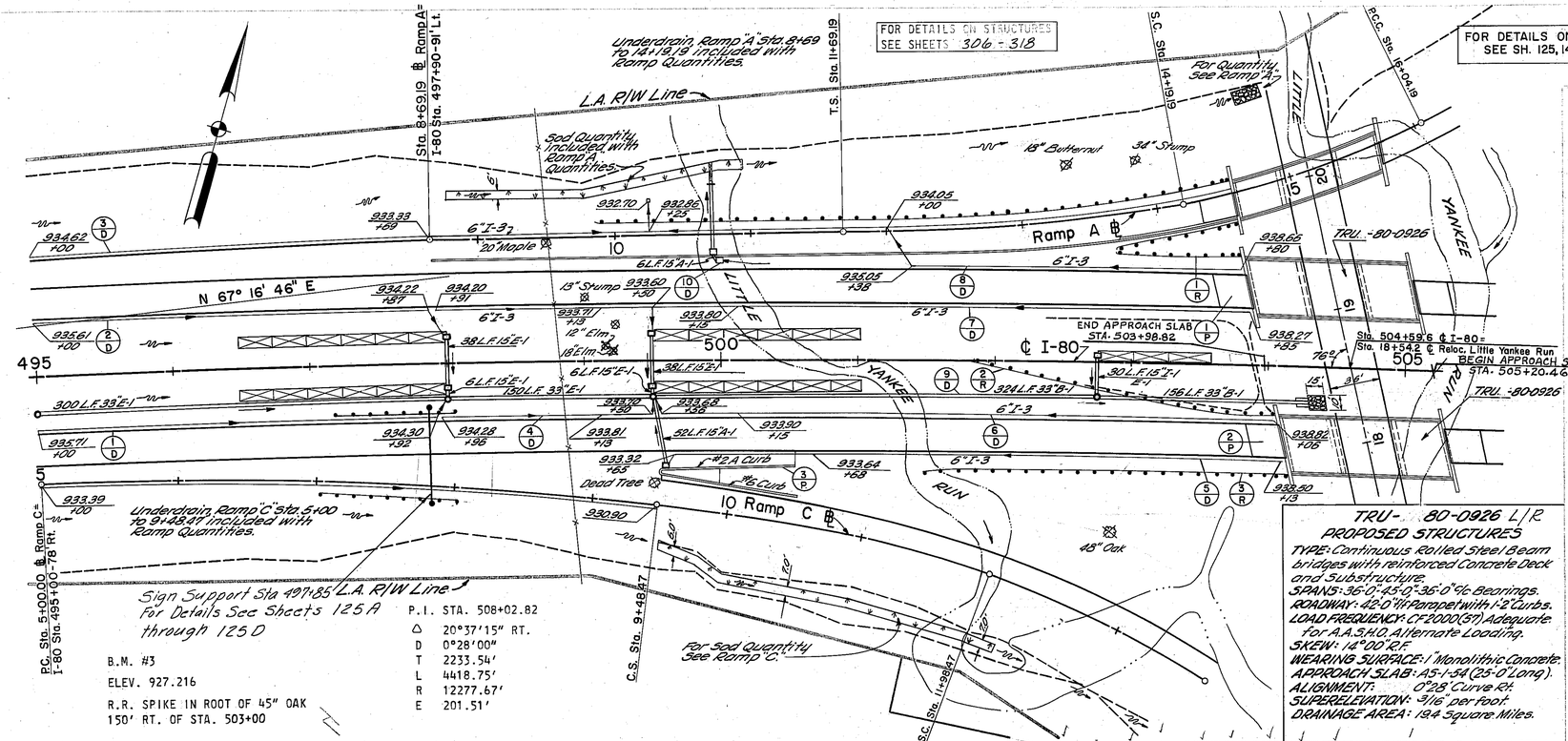
ESTIMATED QUANTITIES for Sec. M-4(5)

PIPE NO.	STATION TO STATION	SIDE	I-1 CL. E-1 33" L.F.	I-1 CL. E-1 CL. A-1 M=6.6(b) or 6.8(b) ≠ 6" L.F.	I-1 CL. E-1 CL. E-1 15" L.F.	I-1 CL. E-1 30" L.F.	I-1 CL. E-1 33" 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-8 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.													384
2-D	486+82 to 491+23	Lt.													
3-D	486+82 to 491+25	Lt.													
4-D	486+82 to 491+25	Rt.		42				1	1		1				
5-D	491+27 to 493+00	Rt.													
6-D	491+27 to 493+00	Lt.													
7-D	491+29 to 493+00	Lt.													
8-D	491+29 to 493+00	Rt.													
9-D	486+82 to 495+00	Rt.	374	442	70	44	374	1	1	1	2	1	2	2	384
TOTALS			374	442	70	44	374	1	1	1	2	1	2	2	384
			72	70	44	442	374	1	1	1	2	1	2	2	384
															2076 / 90
															20

Sta. 485 + 00 to Sta. 495 + 00

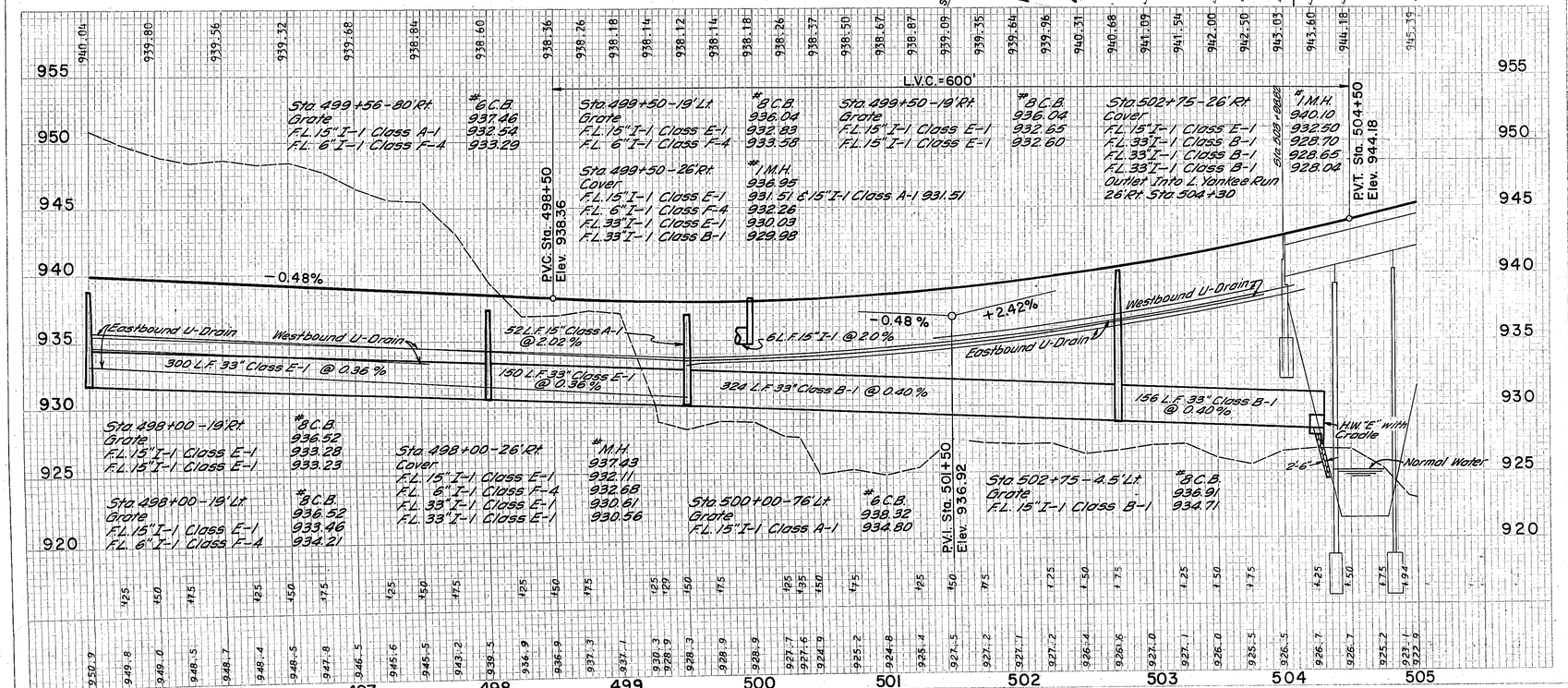
FOR DETAILS ON STRUCTURES SEE SHEETS 306 - 318

FOR DETAILS ON YANKEE RUN SEE SH. 125, 148, 157, 159



TRU-80-0926 L/R
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" ft. Parapet with 1'-2" Curbs.
LOAD FREQUENCY: CF2000(5ft) Adequate for A.A.S.H.O. Alternate Loading.
SKEW: 14°00" R.F.
WEARING SURFACE: 1" Monolithic Concrete.
APPROACH SLAB: A5-1-54 (25'-0" Long).
ALIGNMENT: 0°28' Curve Rt.
SUPERELEVATION: 3/16" per foot.
DRAINAGE AREA: 19.4 Square Miles.



Sta. 495+00 to Sta. 505+00

ESTIMATED QUANTITIES

ITEM NO.	STATION TO STATION	SIDE	I-1 CL. B-1 M-6.6(b) 33" L.F.	CL. E-1 CL. A-1 M-6.6(a) 6.8(b) #15" L.F.	CL. E-1 CL. A-1 M-6.6(b)or 6.8(b) #6" L.F.	CL. F-4 6" U-Drain L.F.	CL. I-3 for 6" 60° BEND	CL. I-3 for 6" 90° BEND	CL. I-3 TEE	I-5 Conc. Apron 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.	I-120 Jute Matting SQ. YD.
			I-2 Masonry I-12 Std. Type 2-A Curb CU.YD.	CL. A-1 M-6.6(b)or 6.8(b) #6" L.F.											
1-D	495+00 to 497+92	Rt.				10	158		/						580
2-D	495+00 to 497+87	Lt.				10	354		/						
3-D	497+00 to 498+50	Rt.				10	454		/						
4-D	497+88 to 499+12	Rt.				10	604		/						
5-D	499+63 to 501+05	Lt.				10	242		/						
6-D	499+96 to 501+05	Rt.													
7-D	497+91 to 503+67	Lt.													
8-D	501+38 to 503+90	Rt.													
9-D	493+00 to 504+30	Lt.	1417	52											
10-D	500+00			6											
1-D	502+90.5 to 503+78	Lt.													
2-D	501+80 to 504+05	Lt.													
3-D	501+52.5 to 504+15	Rt.													
1-D	503+60 to 503+85	Lt.													
2-D	503+86 to 504+11	Rt.			106										
3-D	499+53 to 500+59	Rt.													

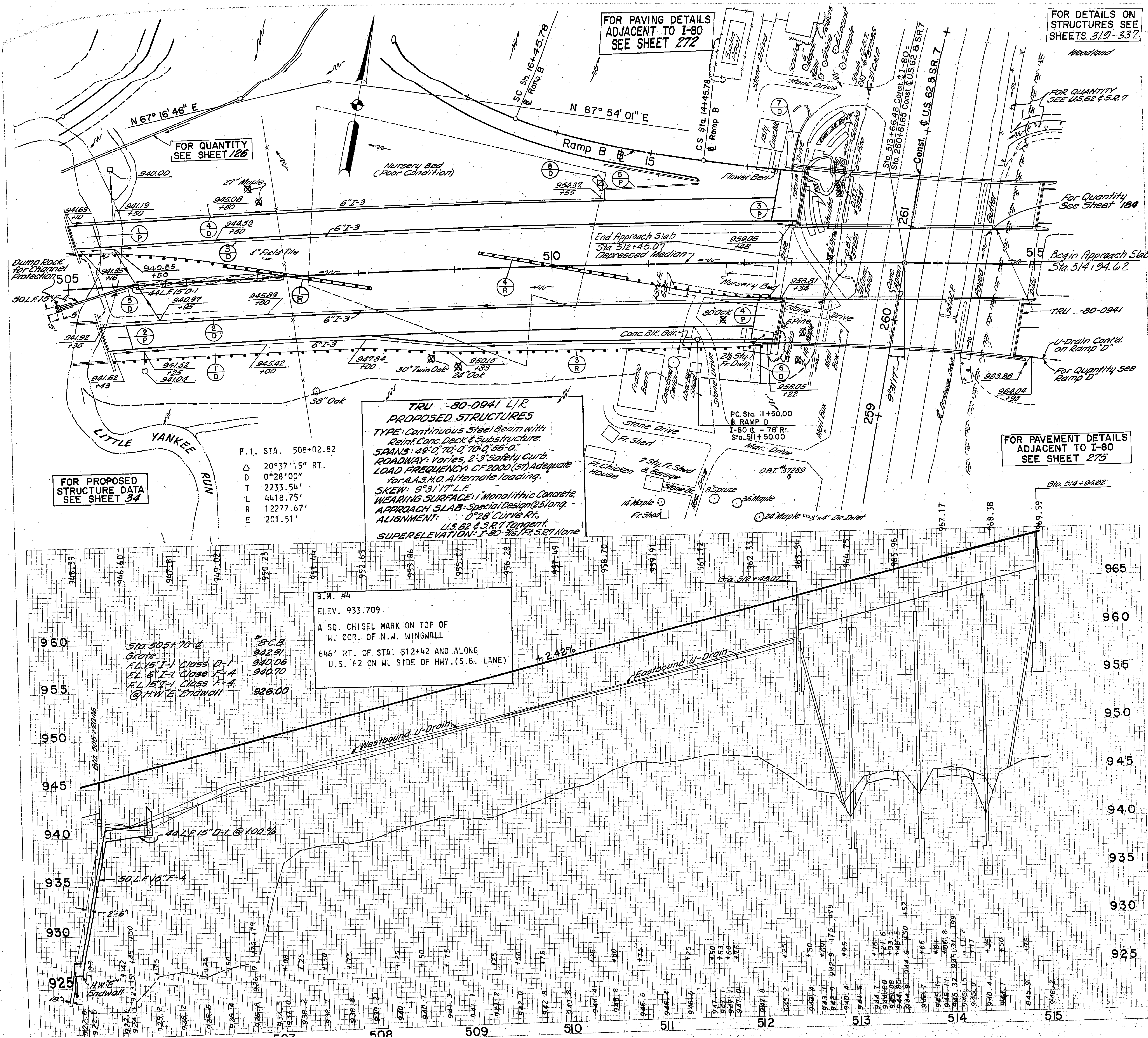
For M-6.5(b)

TOTALS

			1417	58	106	124	1.5	106	124	58	480	118	480	60	2412	290	5	1	/	133	6.7	6.7	87.5	228.0	262.5	580	5750	14	3	5	5	9	14	2	1	/	/

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

TRUMBULL COUNTY TRU-I-80-8.90



TRU -80-0941 L/R
PROPOSED STRUCTURES
TYPE: Continuous Steel Beam with Reinf. Conc. Deck & Substructure.
SPANS: 49'-0", 70'-0", 70'-0", 56'-0".
ROADWAY: Varies, 2'-3" Safety Curb.
LOAD FREQUENCY: CF 2000 (57) Adequate for A.A.S.H.O. Alternate loading.
SKEW: 9°31'17" L.F.
WEARING SURFACE: 1" Monolithic Concrete.
APPROACH SLAB: Special Design (25' long.
ALIGNMENT: 0°28' Curve Rt., U.S. 62 & S.R.7 Tangent.
SUPERELEVATION: I-80-3/16"/Ft. S.R.7 None

B.M. #4
ELEV. 933.709
A SQ. CHISEL MARK ON TOP OF W. COR. OF N.W. WINGWALL
646' RT. OF STA. 512+42 AND ALONG U.S. 62 ON W. SIDE OF HWY. (S.B. LANE)

Sta. 505+70 ℄	#8 C.B.
Grate	942.91
F.L. 15" I-1 Class D-1	940.06
F.L. 6" I-1 Class F-4	940.70
F.L. 15" I-1 Class F-4 @ H.W. "E" Endwall	926.00

ESTIMATED QUANTITIES

REF. 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 6" U-Drain 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-12 Std. Type 2-A Curb L.F.	L-10 Sodding For Spec. Berm/Slope Protection SQ. YD.	L-120 Jute Matting SQ. YD.	SEE SHEET NO.	I-15 Guard Rail Barrier L.F.
1-D	505+43 to 512+22	Rt.			10		688			1										
2-D	505+36 to 512+34	Rt.		10			726				1									
3-D	505+13 to 512+48	Lt.		10			764		1		1									
4-D	505+10 to 510+55	Lt.			10		578			1								128		
5-D	505+20 to 505+70	Rt.	44			50		.68					1	1.5			29			
6-D	512+10	Rt.															29			
7-D	512+30	Lt.																14		
8-D	510+50	Lt.																		
1-R	505+14 to 508+14	Lt.													150					150
3-R	505+46 to 512+16	Rt.													675					
4-R	509+25 to 512+25	Rt.													150					150
1-P	505+07 to 505+32	Lt.										66.7								
2-P	505+34 to 505+59	Rt.										66.7								
3-P	512+31 to 512+56	Lt.										144.5								
4-P	512+10 to 512+35	Rt.										100.0								
5-P	510+56 to 511+56	Lt.														106				
			44	20	20	50	2756	.7	1	2	2	378	1	2	975	106	58	142		300

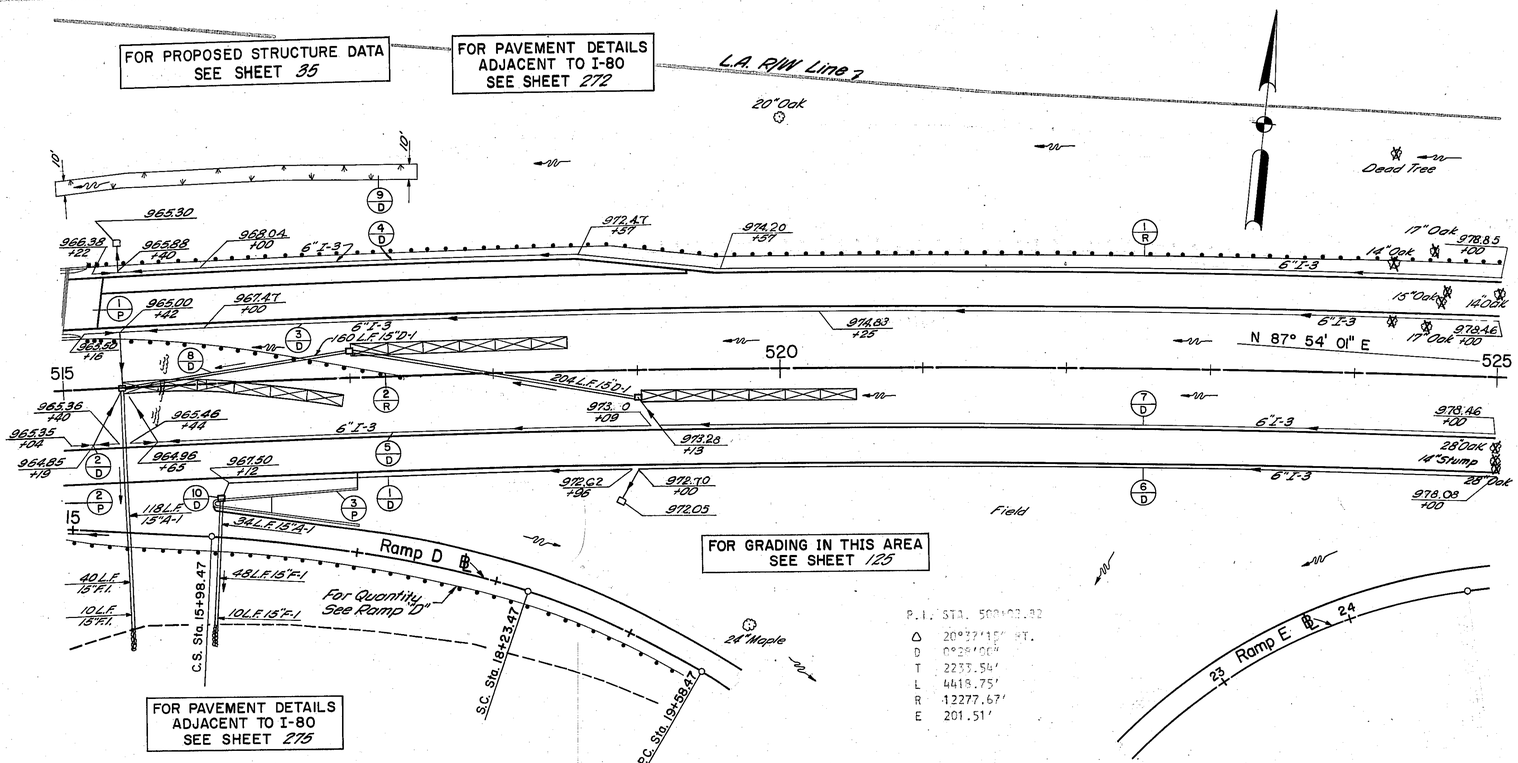
Sta. 505+00 to Sta. 515+00

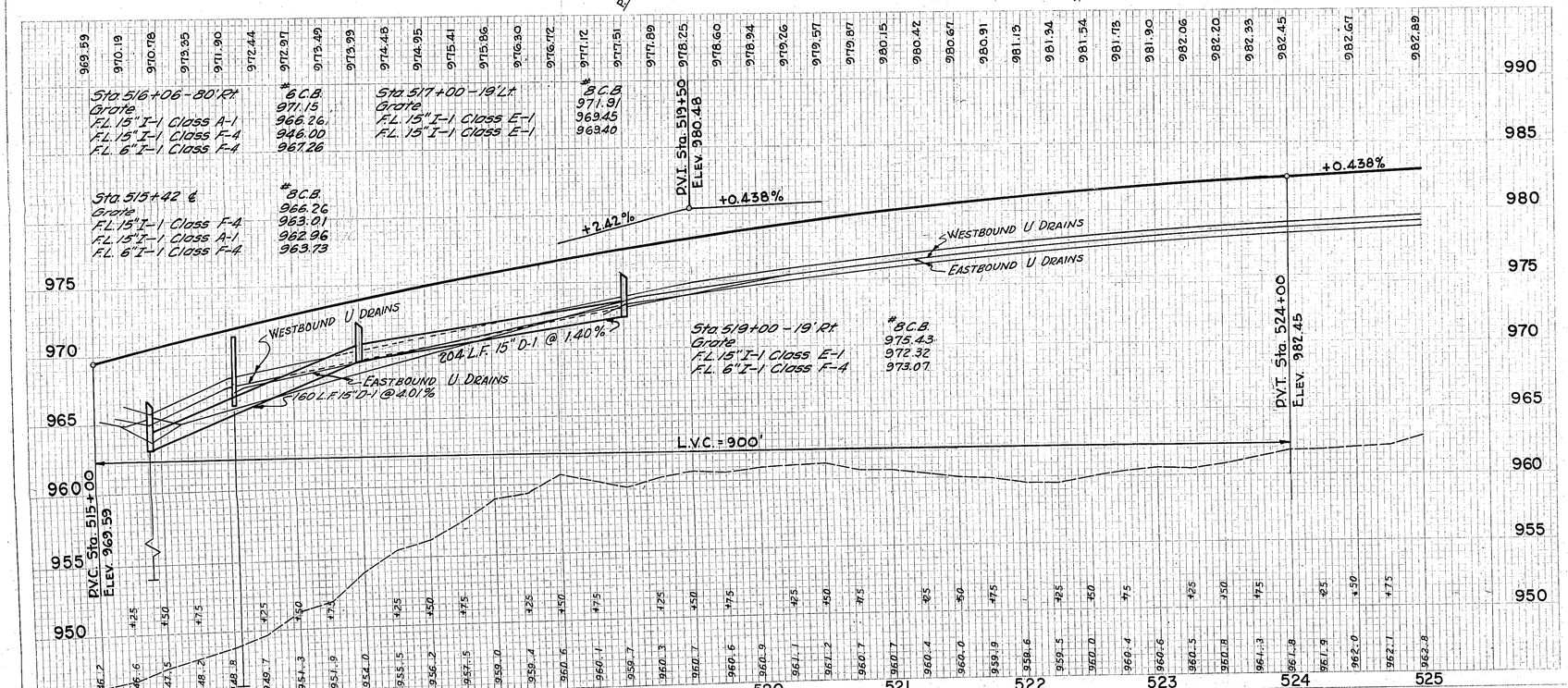
FOR PROPOSED STRUCTURE DATA SEE SHEET 35

FOR PAVEMENT DETAILS ADJACENT TO I-80 SEE SHEET 272

FOR PAVEMENT DETAILS ADJACENT TO I-80 SEE SHEET 275

FOR GRADING IN THIS AREA SEE SHEET 125





ESTIMATED QUANTITIES

ITEM NO.	SYSTEM NO.	SIDE	I-5 CL F-4 For 6" U-Drain	I-5 For CL F-4 15" U-Drain	I-5 Reinforced Concrete Approach Slab	I-7 Catch Basin No.6	I-8 Catch Basin No.8	I-10 Dumped Rock Channel Protection	I-12 Std. Type 2-A Curb	I-15 Guard Rail	L-10 Sodding	L-120 Jute Matting
			MASONRY 60°WYE Bend	TEE	CU. YD.	EACH	EACH	CU. YD.	L.F.	L.F.	SQ. YD.	SQ. YD.
1-D	517+08 to 518+96	Rt.										
2-D	513+24 to 515+40	Rt.										
3-D	513+16 to 523+00	Lt.										
4-D	516+22 to 522+00	Lt.										
5-D	518+44 to 519+09	Rt.										
6-D	518+88 to 523+00	Rt.										
7-D	519+00 to 523+00	℄										
8-D	515+42 to 519+00	℄										
9-D	515+00 to 517+50	Lt.										
10-D	516+06	Rt.										
1-P	515+02 to 523+27	Lt.										
2-P	514+87 to 523+12	Rt.										
3-P	516+09 to 517+03	℄										

	I-1 CL A-1 M-6.01(a) & M-6.01(b) 6"	I-1 CL A-1 M-6.01(a) & M-6.01(b) 15"	I-1 CL E-1 6"	I-1 CL E-1 8"	I-1 CL E-1 15"	I-1 CL F-4 6"	I-1 CL F-4 8"	I-1 CL F-4 15"	I-2 CL I-3 (U-Drain) SHALLOW	I-2 MASONRY 60°WYE Bend	I-2 TEE
	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	CU.YD.	EACH
1-D	90		10						194		1
2-D			10						72		
3-D			10						1012		
4-D			10				10		988		
5-D			10				10		100		1
6-D			10				10		614		
7-D			10				10		620		
8-D					364			118		26	
9-D										50	
1-P											
2-P											
3-P											
TOTALS	90		90		364		30	118	3880	102	2

For M-6.5(6)

Sta. 515 + 00 to Sta. 525 + 00

FED. AID DIVISION	STATE	PROJECT	SHEET NUMBER
2	OHIO	HG-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

L.A. R/W LINE

Metal Shed
Conc Platform
Conc Apron
Drive
Weigh Hse
Scale
Conc #113-31
Wood Retaining Wall 4' High
Metal Shed
Wood Retaining Wall 7.5' High
Slag Road
Field
Swamp
Woods
Dead Tree
Fence
Metal Shed
Nail 10" Maple Cor. Woods
Nail 20" Stump 20' High
REF. P.T. Sta. 529+88.03

525 N-87° 54' 01"-E 530 535

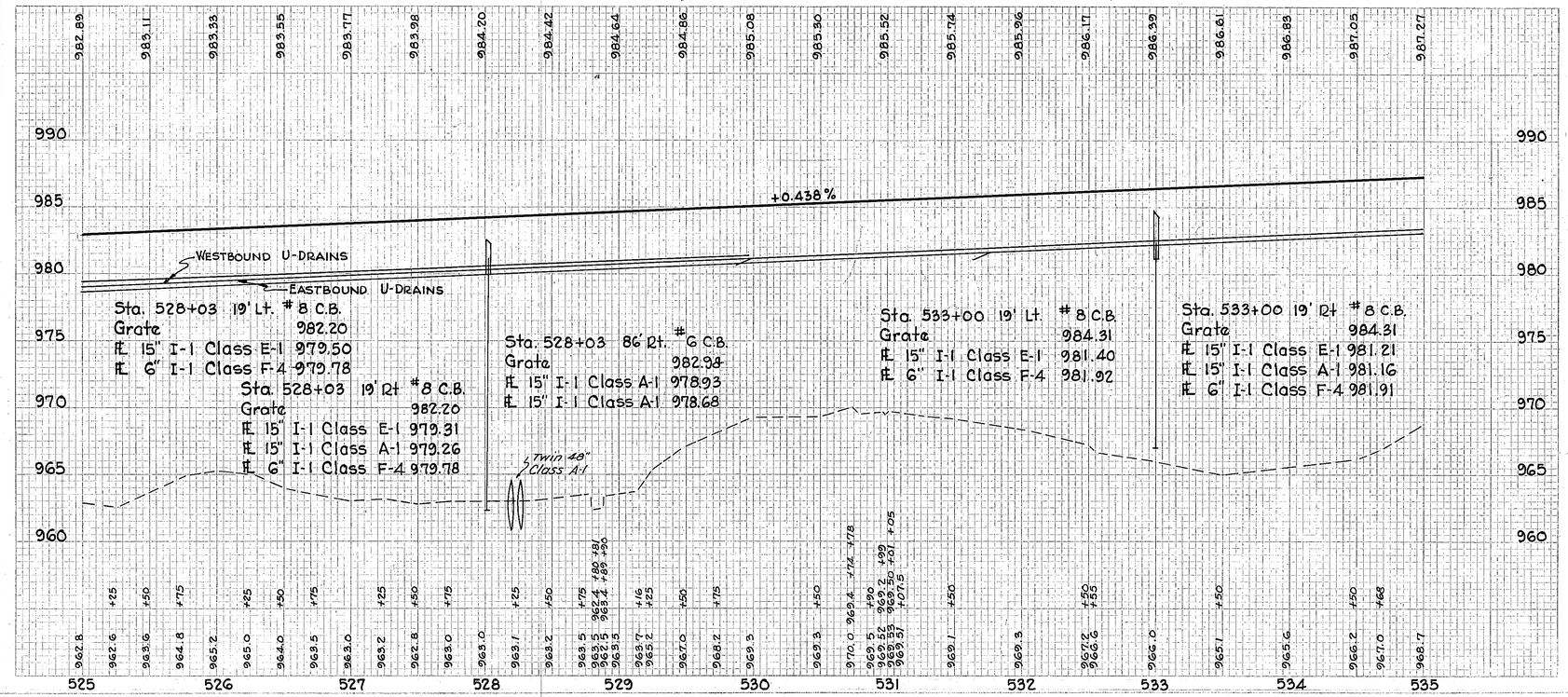
Sta. 531+14.40 ℄ I-80 = Sta. 20+00 ℄ Slag Rd.

25 Ramp E

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

FOR RAMP E QUANTITIES SEE SHEETS - 174 & 175

P.T. Sta. 24+84.81 ℄ RAMP E
P.C. Sta. 26+78.30 ℄ RAMP E
P.T. Sta. 29+28.30 ℄ RAMP E
P.T. Sta. 529+88.03
YOUNGSTOWN-SALEM ELECTRIC TUBE
POT Sta. 32+28.30 ℄ RAMP E = I-80 ℄ Sta. 532+30.26 - 91' Rt.



ESTIMATED QUANTITIES

For M-45(6)

SHEET NO.	STATION TO STATION	SIDE	I-2 MASON CU. YD.	I-3 Sec. M-6.6 (b) 6" BEND L.F.	F-4 Sec. M-6.6 (b) 15" BEND EA.	I-8 Catch Basin EA.	I-10 Dumped Rip Rap Rock Channel Protection CU. YD.	I-10 Rip Rap Grout Filled Concrete S.Y.D.	I-15 Guard Rail L.F.	L-10 Sodding SQ. YD.	L-120 Jute Matting SQ. YD.
1-0	525+00 to 532+26	Rt.									
2-0	525+00 to 528+11	Rt.									
3-0	525+00 to 528+36	Lt.									
4-0	525+00 to 535+00	Rt.									
5-0	531+65 to 533+03	Rt.									
6-0	528+04 to 533+03	Lt.									
7-0	528+04 to 535+00	Lt.									
8-0	529+87 to 535+00	Rt.									
9-0	533+00 to 535+00	Rt.									
10-0	533+00 to 535+00	Lt.									
11-0	528+04 to 529+87	℄	26		2	2	2.1	2.5		10.6	2.56
12-0	528+26	℄	38.43		2	2	2	2.5		10.6	2.56
13-0	533+00 to 534+52	℄	.26		2					194.4	
14-0	533+15 to 535+00	Lt.							1000 775		
1-R	524+97 to 534+97										
2-R	528+25 to 535+00										

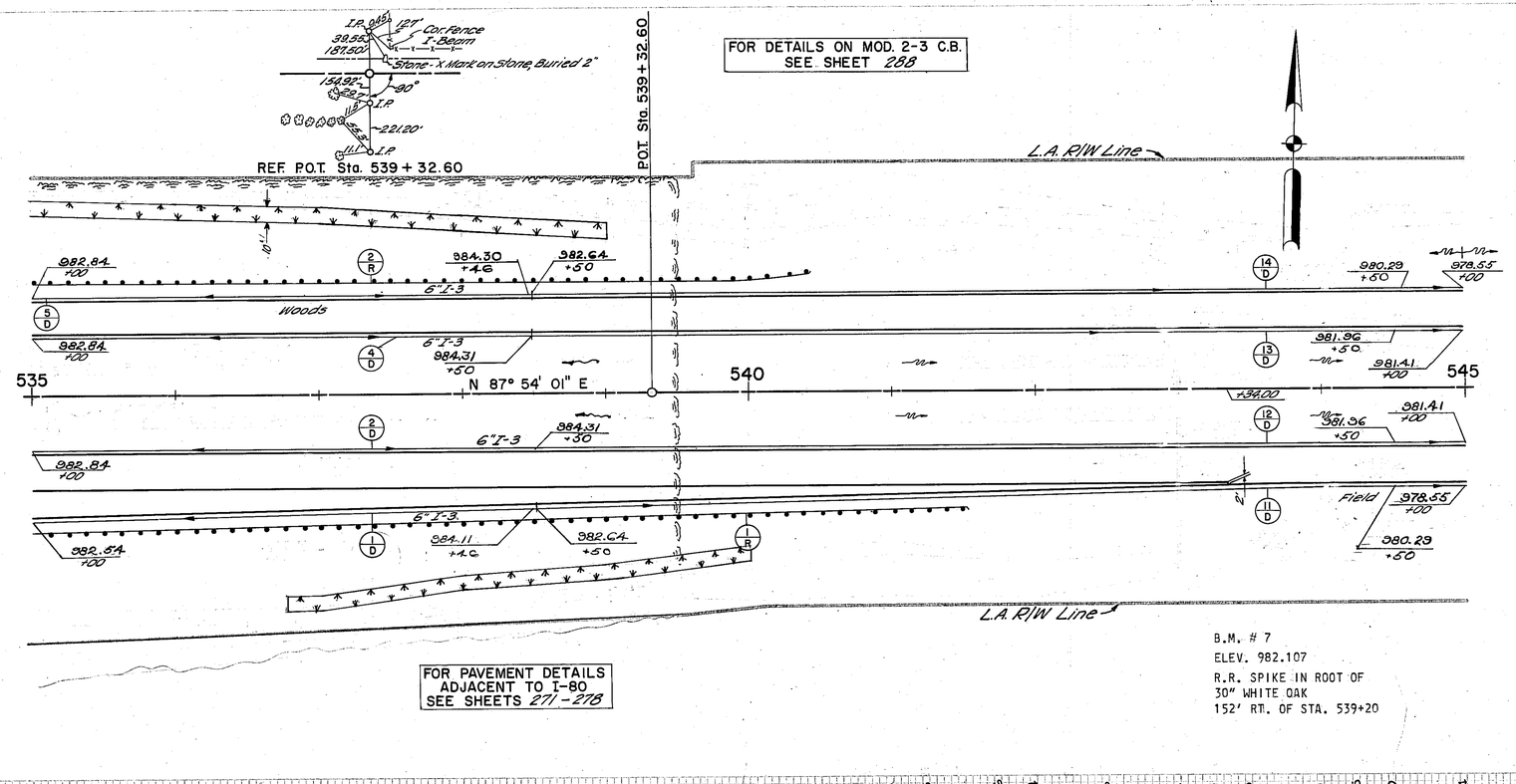
SHEET NO.	STATION TO STATION	SIDE	I-1 Channel Exc. CU. YD.	CL. A-1 M-6.6 (b) #15" L.F.	CL. E-1 Sec. M-6.6 (b) 48" L.F.	CL. E-1 15" L.F.	CL. F-4 6" L.F.	CL. F-4 8" L.F.	CL. F-4 15" L.F.	CL. I-3 & I-4 SHAUM L.F.
1-0	525+00 to 532+26	Rt.								726
2-0	525+00 to 528+11	Rt.								311
3-0	525+00 to 528+36	Lt.								496
4-0	525+00 to 535+00	Rt.								339
5-0	531+65 to 533+03	Rt.						10		696
6-0	528+04 to 533+03	Lt.					10			314
7-0	528+04 to 535+00	Lt.					10		10	197
8-0	529+87 to 535+00	Rt.					10			197
9-0	533+00 to 535+00	Rt.					10			
10-0	533+00 to 535+00	Lt.					10			46
11-0	528+04 to 529+87	℄	90			38				
12-0	528+26	℄	67		580					40
13-0	533+00 to 534+52	℄	84			38				
14-0	533+15 to 535+00	Lt.								
1-R	524+97 to 534+97									
2-R	528+25 to 535+00									

Sta. 525+00 to Sta. 535+00

GENERAL

GT 174 580 TG 40 20 BC 4481

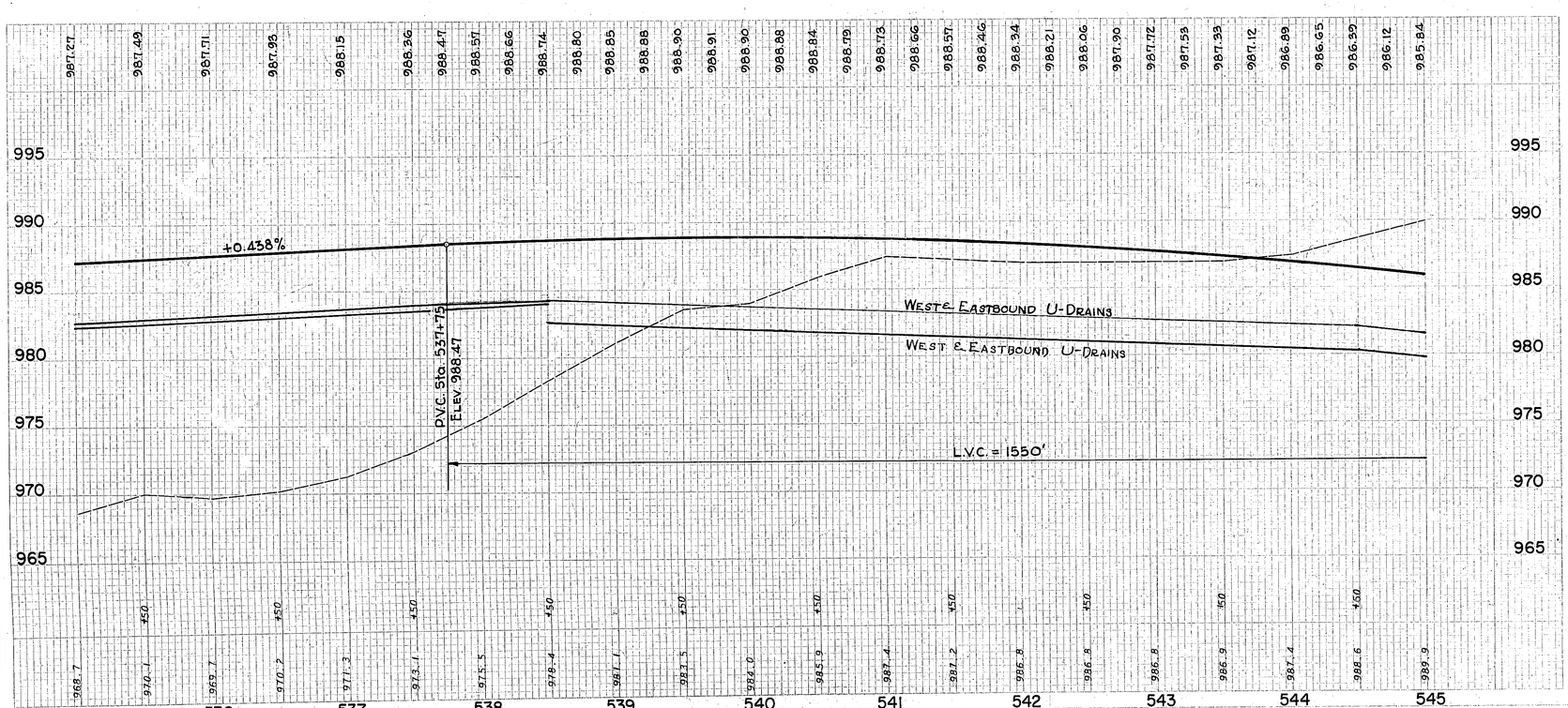
3835 C A 4 1 5.0 88 1775 205 512



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

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

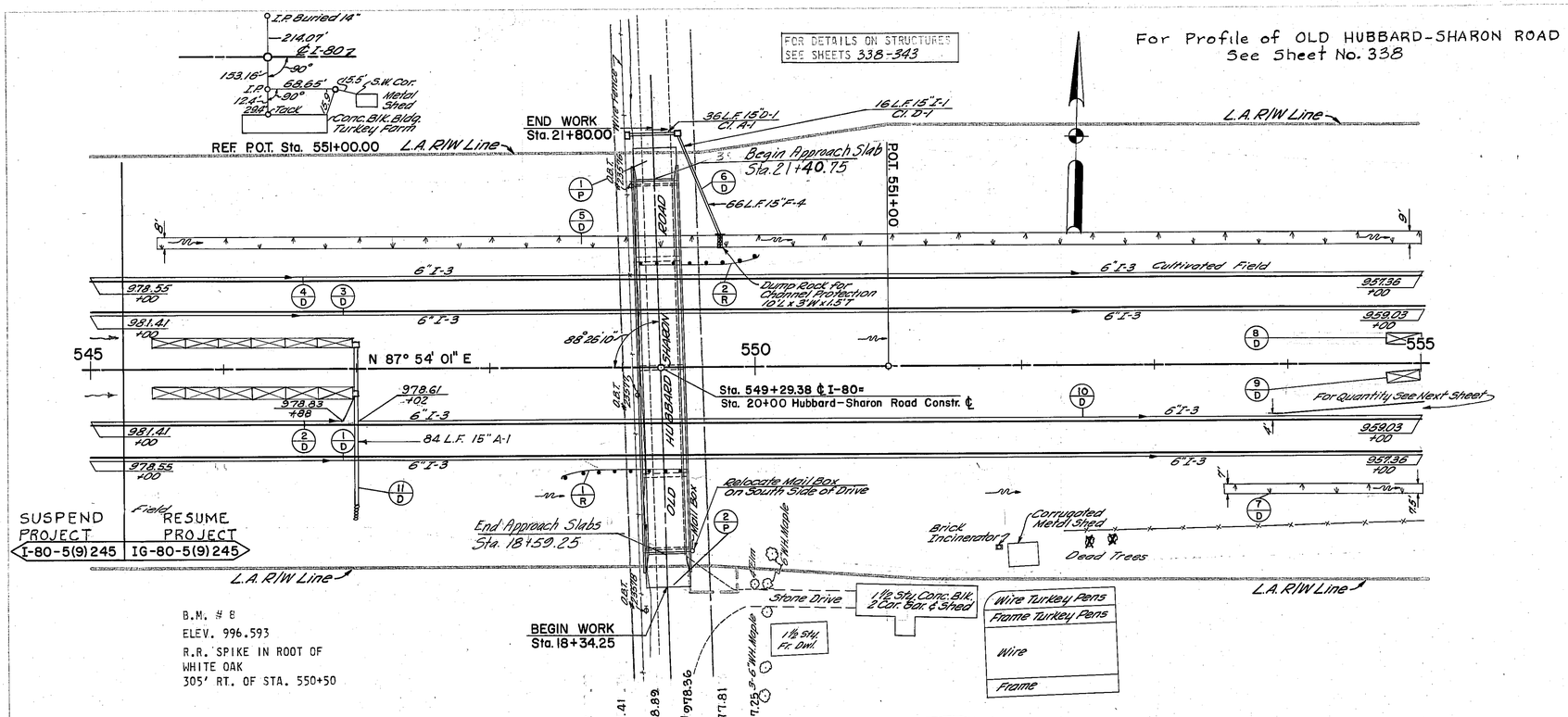
B.M. # 7
ELEV. 982.107
R.R. SPIKE IN ROOT OF
30" WHITE OAK
152' RT. OF STA. 539+20

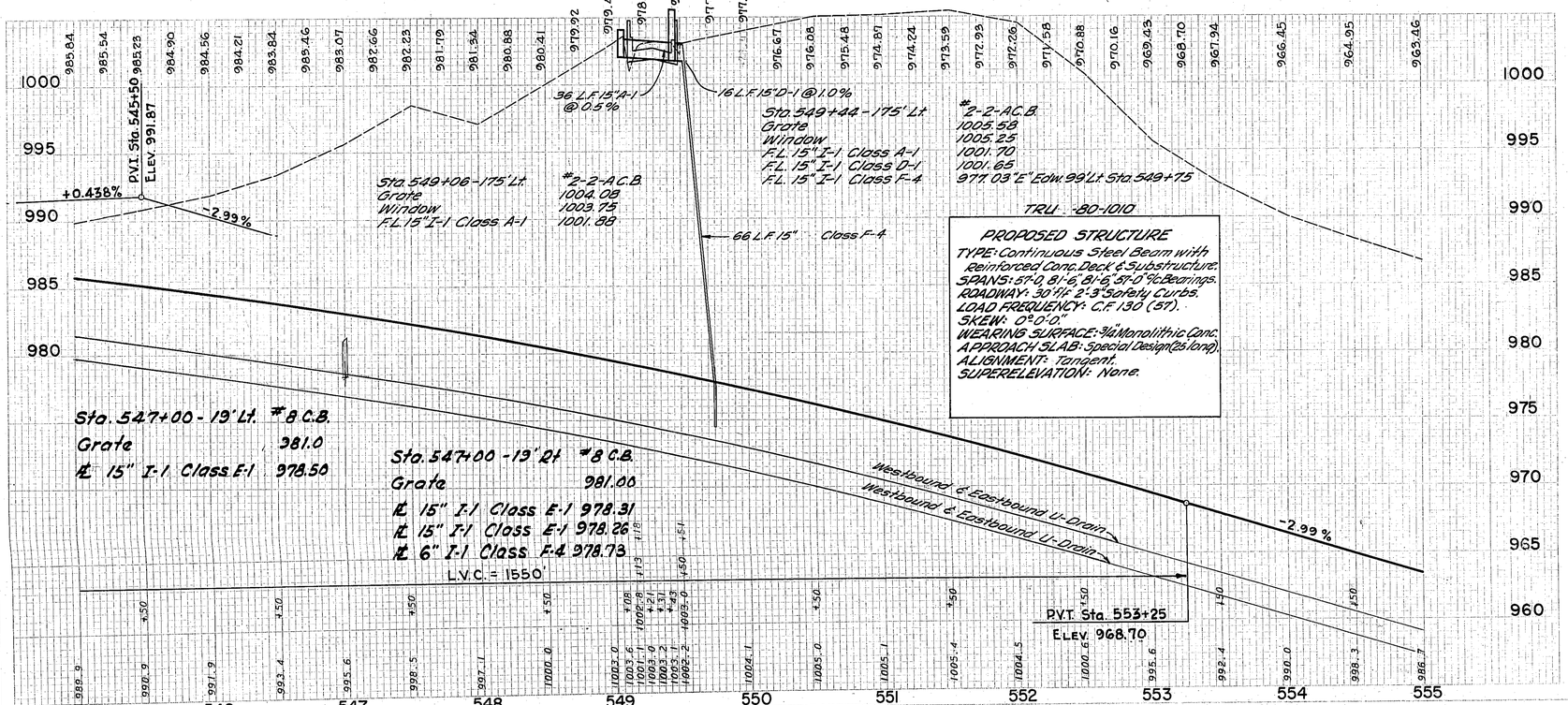


ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 CL. I-3 6" U-DRAIN SHALLOW L.F.	I-1 CL. I-3 6" U-DRAIN DEEP L.F.	I-15 Guard Rail L.F.	L-10 Sodding SQ. YD.
1-D	535+00 to 538+46	Rt.	346			
2-D	535+00 to 545+00	Rt.	1000			
3-D	535+00 to 538+46	Lt.	1000			
4-D	535+00 to 538+46	Lt.	346			
5-D	538+50 to 544+00	Rt.		650		
6-D	538+50 to 538+00	Lt.		650		
7-D	535+00 to 539+00	Lt.				
8-D	536+75 to 540+00	Rt.				
						444.4
						361.1
1-R	535+00 to 539+00	Rt.			400	
2-R	534+97 to 538+97	Lt.			400	
TOTALS			2692	1300	800	805.5

Sta. 535 + 00 to Sta. 545 + 00





IG-80-5(9)245

TRUMBULL COUNTY TRU-I-80-8.90

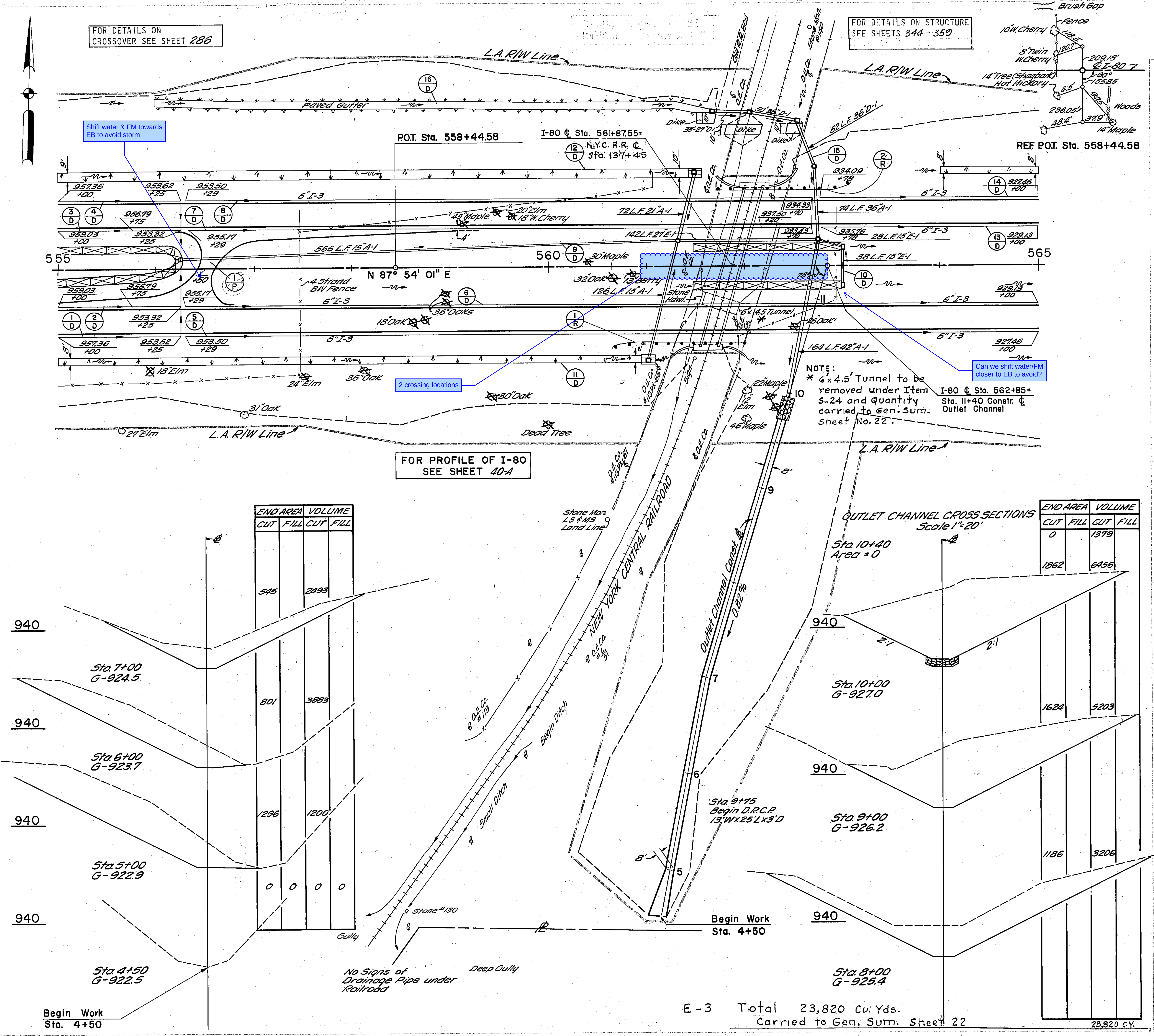
For Profile of OLD HUBBARD-SHARON ROAD
See Sheet No. 338

FOR DETAILS ON STRUCTURES
SEE SHEETS 338-343

#or M-6.5(b) ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION 546+88	SIDE	B-19 Aggregate Base Course CU. YD.	B-35 Asph. Conc. Level Course CU. YD.	T-35 Asph. Conc. Surf. Course CU. YD.	I-1 CL F-4 6" L.F.	I-1 CL A-1 M-6.6(a) or 6.8(b) #15" L.F.	I-1 CL D-1 15" L.F.	I-1 CL F-4 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-2 Masonry CU. YD.	For I-3 25° Bend 6" EACH	I-5 For F-4 25° Bend 15" EACH	I-1 CL E-1 15" L.F.	I-8 #8 C.B. EACH	I-7 Reinforced Concrete Approach Slab	I-8 Catch Basin No. 2-2-A 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	545+00 to 555+00	Rt.									1000												
2-D	545+00 to 546+88	Rt.				10				198			1										
3-D	545+00 to 555+00	Lt.								1000													
4-D	545+00 to 555+00	Lt.									1000												
5-D	545+50 to 555+00	Lt.																			897.2		
6-D	549+75	Lt.					36	16	66			.26		2				2	1.5		1.0		
7-D	553+50 to 555+00	Rt.																			120.8		
8-D	554+75 to 555+00	Lt.																				24	
9-D	554+75 to 555+00	Rt.																				24	
10-D	~~547+02 to 555+00~~	~~Rt.~~								798													
11-D	~~547+00~~	~~℄~~					84								38	2			1.5			254	
1-R	548+50 to 549+50	Rt.																		100.0			
2-R	549+10 to 550+10	Lt.																		100.0			
1-P	142' Lt. to 167' Lt.	Lt.	2	0.5	0.2												94.4						
2-P	140' Rt. to 165' Rt.	Rt.	2	0.5	0.2												94.4						
			I-80-5(9)245	I-80-5(9)245	I-80-5(9)245		I-80-5(9)245	I-80-5(9)245	I-80-5(9)245	IG-80-5(9)245 1946 L.F. I-80-5(9)245 50 L.F.	IG-80-5(9)245 1950 L.F. I-80-5(9)245 50 L.F.	I-80-5(9)245		I-80-5(9)245			I-80-5(9)245	I-80-5(9)245	I-80-5(9)245	IG-80-5(9)245	IG-80-5(9)245 1018 S.Y. I-80-5(9)245 1 S.Y.	IG-80-5(9)245	
TOTALS			4	1.0	1.0	10	120	16	66	1996	2000	.3	1	2	38	2	189	2	3	200.0	1019.0	302	

Sta. 545+00 to Sta. 555+00



FOR DETAILS ON CROSSOVER SEE SHEET 286

FOR DETAILS ON STRUCTURE SEE SHEETS 344 - 359

FOR PROFILE OF I-80 SEE SHEET 40-A

NOTE:
* 6'x4.5' Tunnel to be removed under Item S-24 and Quantity carried to Gen. Sum. Sheet No. 22.

Shift water & FM towards EB to avoid storm

2 crossing locations

Can we shift water/FM closer to EB to avoid?

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
545		2493	
801		3883	
1296		1200	
0	0	0	0

OUTLET CHANNEL CROSS SECTIONS
Scale 1"=20'

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0		1379	
1862		6456	
1624		5203	
1186		3206	
		23,820 C.Y.	

E-3 Total 23,820 Cu. Yds.
Carried to Gen. Sum. Sheet 22

ESTIMATED QUANTITIES

≠ or M-6.5(b) ✯ M-6.4(c)

Ref. No.	Station to Station	Side	B-21 Water-Proof Aggr. Bse. Crse. CU. YD.	I-1 CL. A-1 ≠6" L.F.	I-1 CL. A-1 SEC. M-6.6(d) or M-6.8(b) ≠15" L.F.	21" L.F.	36" L.F.	42" L.F.	CL.D-1 ✯ 27" L.F.	CL.F-4 36" L.F.	CL. E-1 15" L.F.	CL. E-1 18" L.F.	CL. E-1 27" 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-2 MAS. CU.YD.	I-5 FOR 6" I-3 30° Bend EA.	90° Bend EA.	TEE EA.	C.B. MOD. 2-3 EA.	I-8 C.B. NO. 2-3 EA.	C.B. NO. 5 EA.	C.B. NO. 8 EA.	M.H. NO. 1 EA.	I-1 CL.D-1 M-6.6(d) 36" L.F.	I-10 Dumped Rock Channel Protection CU. YD.	I-14 Paved Gutter Type I Mod. L.F.	I-15 Guard Rail L.F.	I-22 Subbase C.Y.	I-18 Stabilized Cr. Aggr. Shldrs. & App. CU. YD.	L-10 Sodding S.Y.	L-120 Jute Matting S.Y.	T-31 Aggr. No. 6 C.Y.	T-31 Bit. Mat'l GAL.	See Sheet No.
1-D	555+00 to 556+25	Rt		30												126			1																	
2-D	555+00 to 556+25	Rt												10	164					1																
3-D	555+00 to 556+25	Lt												10	144					1																
4-D	555+00 to 556+25	Lt		30												126			1																	
5-D	556+29 to 565+00	Rt												20		870																				
6-D	556+29 to 565+00	Rt												20	848																					
7-D	556+29 to 562+70	Lt												20	632			1		1																
8-D	556+29 to 562+70	Lt		30										10		628			1																	
9-D	556+25 to 562+75	Lt&Rt			692	72		164					142				.76						2	1	2		36						239			
10-D	563+00	Lt&Rt									66													2									256			
11-D	555+00 to 560+94	Rt																														528				
12-D	555+00 to 561+43	Lt																														680				
13-D	562+78 to 565+00	Lt													222																					
14-D	562+78 to 565+00	Lt														222																				
15-D	562+75	Lt					74		38	52											1	2			1	50										
16-D	556+00 to 561+68	Lt																										568				189				
17-D	564+00 to 565+00	Lt																														89				
1-R	560+62 to 562+00																												137.5							
2-R	561+70 to 563+08																												137.5							
1-P	556+50	℄	51																											113	90			5	153	
TOTALS			51	90	692	72	74	164	38	52	66		142	90	2010	2032	.8	1	3	3	1	2	2	3	3	50	36	568	275	113	90	1486	495	5	153	

Pipe Under Railroad

Sta. 555+00 to Sta. 565+00 – Plan

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

40-A
401

TRUMBULL COUNTY TRU-I-80-8.90

FED. AID #		VOLUME	
CUT	FILL	CUT	FILL

SECTIONS
CUM WIDTH | SQ. YDS.

967.46 961.96 960.47 958.97 957.48 955.98 954.49 952.99 951.50 950.00 948.51 947.01 945.52 944.02 942.53 941.03 939.54 938.04 936.55 935.05 933.56

990
985
980
975
970
965
960
955
950
945
940
935
930
925

Sta. 561+32 - 26' Lt. — #1 M.H.
Cover — 943.39
F.L. 15" I-1 Class A-1 — 936.95
F.L. 21" I-1 Class A-1 — 936.45
F.L. 27" I-1 Class E-1 — 935.95

Sta. 561+68 - 158' Lt. Std. — #2-3 C.B. Mod.
Grate — 963.4
Window — 962.2
F.L. 27" I-1 Class D-1 — 959.75

Sta. 562+06 - 158' Lt. — Std. #2-3 C.B.
Grate — 957.50
Window — 956.30
F.L. 27" I-1 Class D-1 — 953.75
F.L. 36" I-1 Class D-1 — 953.00

Sta. 562+75 - 26' Lt. — #1 M.H.
Cover — 939.11
F.L. 15" I-1 Class E-1 — 932.75
F.L. 27" I-1 Class A-1 — 931.75
F.L. 36" I-1 Class B-1 — 931.00
F.L. 42" I-1 Class A-1 — 930.50
F.L. 42" I-1 Class A-1 @ HW-E Edw. 164' Rt. — 927.00
F.L. 6" I-1 Class F-4 — 933.13

Sta. 562+54 - 148' Lt. — Std. #2-3 C.B.
Grate — 955.00
Window — 953.80
F.L. 36" I-1 Class D-1 — 950.00
F.L. 36" I-1 Class D-1 — 949.95

Sta. 562+72 - 100' Lt. — #1 M.H.
Cover — 939.85
F.L. 36" I-1 Class D-1 — 933.52
F.L. 36" I-1 Class A-1 — 933.47

Westbound & Eastbound U-Drain

38 L.F. 27" D-1 @ 15.8%

50 L.F. 36" D-1 @ 6.00%

Pipe Under Railroad
See Sheet 40
For Location

52 L.F. 36" D-1 @ 31.6%

-2.99%

℄ Westbound & Eastbound U-Drain

℄ Westbound & Eastbound U-Drain

566 L.F. 15" E-1 @ 2.67%

126 L.F. 15" A-1 @ 3.2%

W.B. U-Drain

72 L.F. 21" I-1 @ 3.5%

142 L.F. 27" I-1 @ 2.99%

28 L.F. 15" E-1 @ 3.10%

℄ Westbound & Eastbound U-Drain

14 L.F. 36" A-1 @ 3.3%

℄ Westbound & Eastbound U-Drain

Sta. 556+25 - 10' Lt. — #8 C.B.
Grate — 956.35
F.L. 15" I-1 Class A-1 — 952.07
F.L. 6" I-1 Class F-4 — 952.82

Sta. 561+50 - 95' Lt. — #5 C.B.
Grate — 941.64
F.L. 21" I-1 Class A-1 — 938.94

Sta. 561+00 - 95' Rt. — #5 C.B.
Grate — 943.14
F.L. 15" I-1 Class A-1 — 940.94

Sta. 563+00 - 19' Rt. — #8 C.B.
Grate — 937.46
F.L. 15" I-1 Class E-1 — 935.26

Sta. 563+00 - 19' Lt. — #8 C.B.
Grate — 937.46
F.L. 15" I-1 Class E-1 — 935.07
F.L. 15" I-1 Class E-1 — 935.02

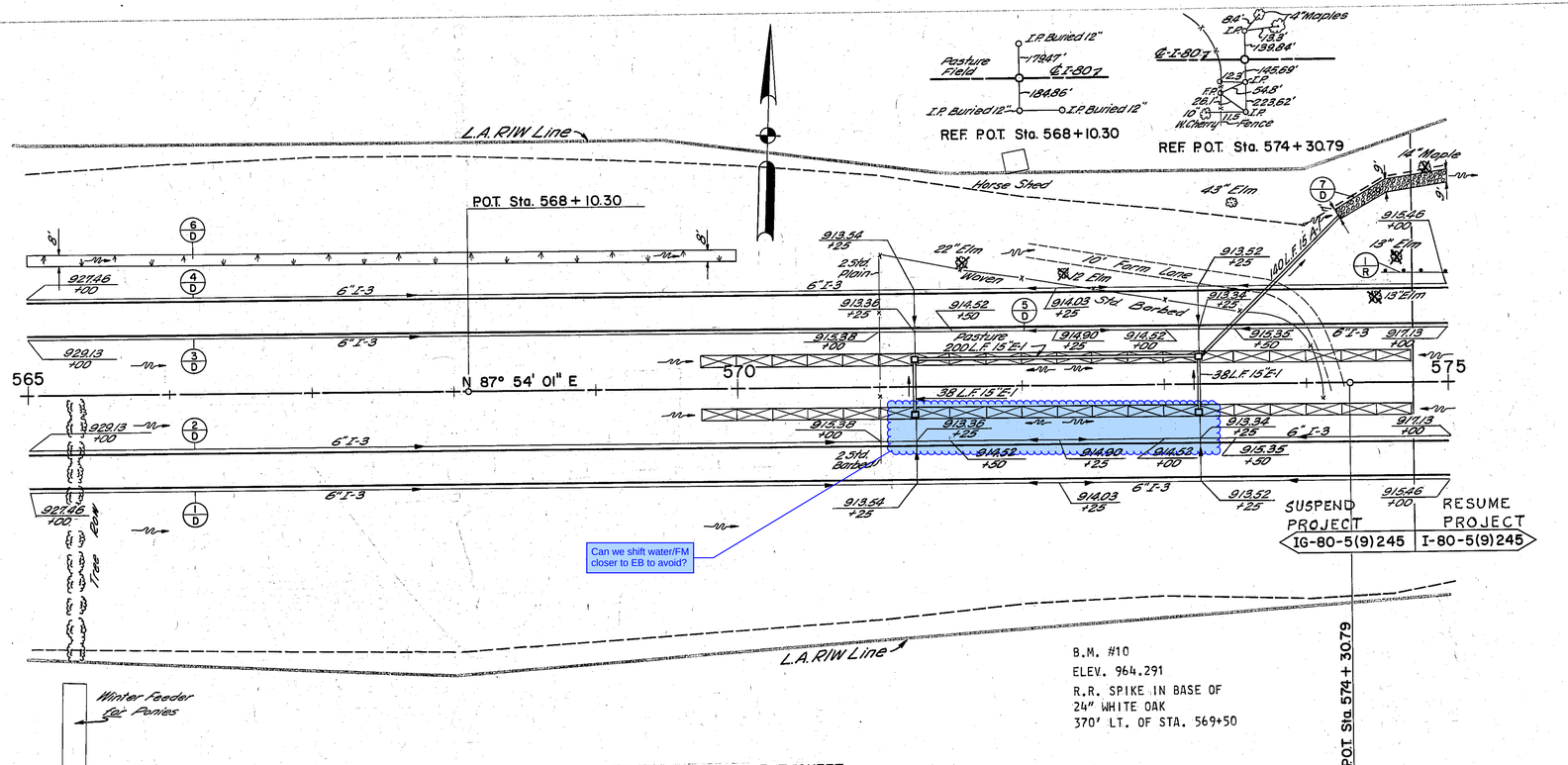
555 556 557 558 559 560 561 562 563 564 565

Sta. 555+00 to Sta. 565+00 — Profile

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

TRUMBULL COUNTY TRU-I-80-8.90

41
401



FOR PROFILE SEE NEXT SHEET

ESTIMATED QUANTITIES

ITEM NO.	STATION TO STATION	SIDE	I-1 CL A-1 M-66(a) M-68(a) #5	I-1 CL A-1 M-66(b) M-68(b) #5	I-1 CL E-1 15" L.F.	I-1 CL F-4 6" L.F.	I-2 CL I-3 6" U-Drain Shallow L.F.	I-2 Masonry Cu. YD.	I-5 For 6" I-3 DBL. TEE	I-5 For 6" I-3 TEE	L-120 Jute Matting SQ. YD.	L-10 Sodding SQ. YD.	I-15 Guard Rail L.F.	I-10 Dumped Rock Channel Protection CU. YD.	I-8 Catch Basin No. 8 EACH	
10	565+00 to 575+00	RT.	60				1000			2						IG-80-5(9)245
20	565+00 to 575+00	RT.				20	1016			2						IG-80-5(9)245
30	565+00 to 575+00	LT.		60		20	1016			2						IG-80-5(9)245
40	565+00 to 575+00	LT.					1000									IG-80-5(9)245
50	571+25 to 574+25	LT.			276			26								IG-80-5(9)245
60	565+00 to 570+00	LT.		140												IG-80-5(9)245
70	574+25 to 575+00	LT.														IG-80-5(9)245
I-10	574+54 to 575+04	LT.														IG-80-5(9)245

for M-4.5(6)

SEE SHEET NO.

L-120	Jute Matting	SQ. YD.	852	IG-80-5(9)245 852
L-10	Sodding	SQ. YD.	444	IG-80-5(9)245 444
I-15	Guard Rail	L.F.	50.0	IG-80-5(9)245 21 L.F. I-80-5(9)245 29 L.F. 50.0
I-10	Dumped Rock Channel Protection	CU. YD.	66	IG-80-5(9)245 44 C.Y. I-80-5(9)245 22 C.Y. 66
I-8	Catch Basin No. 8	EACH	4	IG-80-5(9)245 4
I-5	For 6" I-3	DBL. TEE	2	IG-80-5(9)245 4
		TEE	2	IG-80-5(9)245 4
I-2		Cu. YD.	3	IG-80-5(9)245 3
I-1	CL I-3 6" U-Drain	Shallow L.F.	1000	IG-80-5(9)245 3932 L.F. I-80-5(9)245 100 L.F. 4032
	CL F-4	6" L.F.	20	IG-80-5(9)245 40
	CL E-1	15" L.F.	276	IG-80-5(9)245 276
	CL A-1 M-66(a) M-68(a) #5	L.F.	140	IG-80-5(9)245 140
	CL A-1 M-66(b) M-68(b) #5	L.F.	60	IG-80-5(9)245 120

Sta. 565+00 to Sta. 575+00 — Plan

55.

SECOND

END WIDTH | SQ. YDS.

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	41-A 401

TRUMBULL COUNTY TRU-I-80-8.90

END AREA | VOLUME
CUT | FILL | CUT | FILL

933.56 932.06 930.57 929.07 927.58 926.10 926.83 924.76 924.14 923.56 923.01 922.51 922.04 921.61 921.22 920.86 920.54 920.26 920.01 919.81 919.64 919.50 919.41 919.35 919.33 919.34 919.39 919.49 919.62 919.78 919.99 920.23 920.50 920.81 921.16 921.56

965 960 955 950 945 940 935 930 925

945 940 935 930 925 920 915 910 905

Sta. 573+25 - 19' Lt. — #8 C.B.
Grate — 917.54
F.L. 6" I-1 Class F-4 — 911.40
F.L. 15" I-1 Class E-1 — 910.65
F.L. 15" I-1 Class E-1 — 910.60
F.L. 15" I-1 Class A-1 @ HW-E Edw. 116' Lt. Sta. 574+25 — 907.10

Sta. 573+25 - 19' Rt. — #8 C.B.
Grate — 917.54
F.L. 6" I-1 Class F-4 — 913.22
F.L. 15" I-1 Class E-1 — 912.47

L.V.C. = 1000'

P.V.C. Sta. 567+25
Elev. 926.83

-2.99%

Westbound & Eastbound U-Drain

Westbound & Eastbound U-Drain

-2.99%

+2.97%

200 L.F. 15" E-1 @ 0.8%

140 L.F. 15" A-1 @ 2.5%

P.V.I. Sta. 572+25
Elev. 911.88

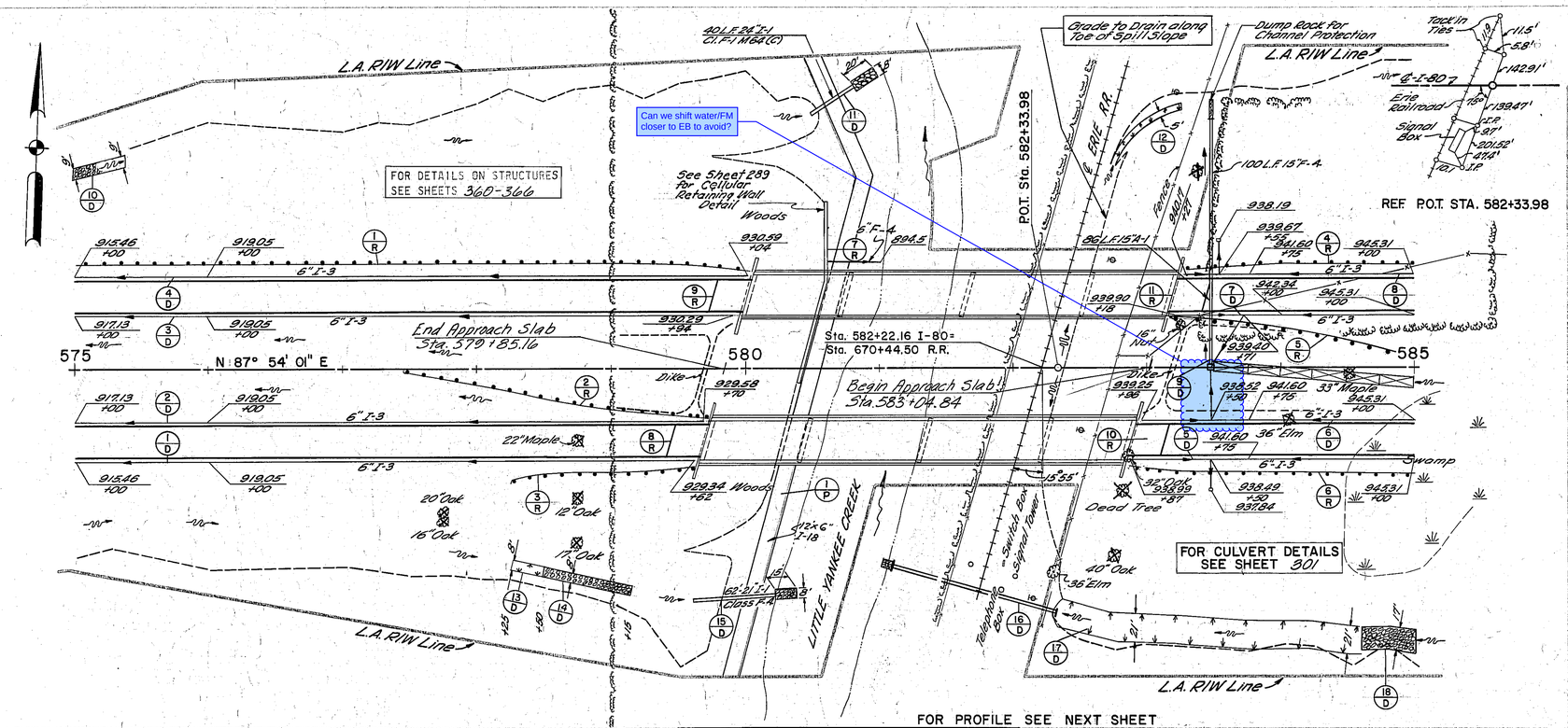
Sta. 571+25 - 19' Rt. — #8 C.B.
Grate — 917.52
F.L. 6" I-1 Class F-4 — 913.24
F.L. 15" I-1 Class E-1 — 912.49

Sta. 571+25 - 19' Lt. — #8 C.B.
Grate — 917.52
F.L. 6" I-1 Class F-4 — 913.05
F.L. 15" I-1 Class E-1 — 912.30
F.L. 15" I-1 Class E-1 — 912.25

963.6 964.2 +50 964.7 965.4 +50 966.1 965.5 +50 964.1 962.1 +50 960.2 958.0 +50 954.5 951.3 +50 949.2 946.0 +50 942.9 940.2 +50 937.5 934.5 +50 932.1 929.1 +50 926.4 +65 909.4

565 566 567 568 569 570 571 572 573 574 575

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 (51) 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	MEET	I-1 CL A-1 I-1B M-6.6(1a)or M-6.8(1b) ≠15" STABS.CRUSH AGGR. APPR. CY. L.F.	CL A-1 15" L.F.	I-1 CL F-4 24" L.F.	6" L.F.	8" L.F.	CL I-3 6" U-Drain 21" SHALLOW L.F.	I-2 MASONRY Drain L.F.	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		26
9-D	575+00 to 575+40	Lt.	96		100					
10-D	575+00 to 580+82	Lt.				40				
11-D	580+50 to 580+82	Lt.						180		
12-D	582+74 to 583+27	Rt.								
13-D	579+25 to 579+50	Rt.								
14-D	579+50 to 579+75	Rt.								
15-D	579+63 to 580+25	Rt.		128				62		152
16-D	581+09 to 582+30	Rt.								
17-D	582+30 to 584+60	Rt.								
18-D	584+60 to 585+00	Rt.								
1-P	575+04 to 580+04	Lt.								
2-P	577+45 to 579+70	Rt.								
3-P	578+23 to 579+61	Rt.								
4-P	583+29 to 584+91.5	Lt.								
5-P	583+19 to 585+44	Rt.								
6-P	582+86 to 584+98.5	Rt.								
7-P	580+50	Lt.				40		10		180
8-P	579+117	Lt.								
9-P	579+80									
10-P	583+13									
11-P	583+45									
1-P	580+50	Rt.								

#er M-6.5(b)

(Pipe under Railroad)

TOTALS			96	128	100	40	60	30	62	2794 180 1.8
			107							

Sta. 575 + 00 to Sta. 585 + 00 — Plan

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

SHD AREA		VOLUME	
CUT	FILL	CUT	FILL

921.56 922.44 923.49 924.67 926.01 927.47 928.96 930.44 931.93 933.41 934.90 936.38 937.87 939.35 940.84 942.32 943.81 945.29 946.78 948.26 949.75

940 935 930 925 920 915 910 905 900 895 890 885 880

955 950 945 940 935 930 925 920 915 910 905 900 895 890 885 880

L.V.C. = 1000'

P.V.T. Sta. 577+25
Elev. 926.73

+2.97%

Sta. 578+85.16

Sta. 585+70.0000

Westbound & Eastbound U-Drain

Westbound & Eastbound Median U-Drain

Westbound & Eastbound Outside U-Drain

Westbound U-Drain

Westbound & Eastbound U-Drain

Eastbound U-Drain

62 L.F. 21" F-4 @ 6.5%

D.R.C.P. 25'D

H.W. 894.83

40 L.F. 24" F-4 @ 2.0%

D.R.C.P. 25'D

Std. E. Edw. 185' Lt. 892.4

Sta. 583+50 ℄ Grade	# 8 C.B. 940.80
F.L. 15" I-1 Class A-1	937.44
F.L. 6" I-1 Class F-4	938.19
F.L. 15" I-1 Class F-4	892.40 Std E. Edw. Lt.

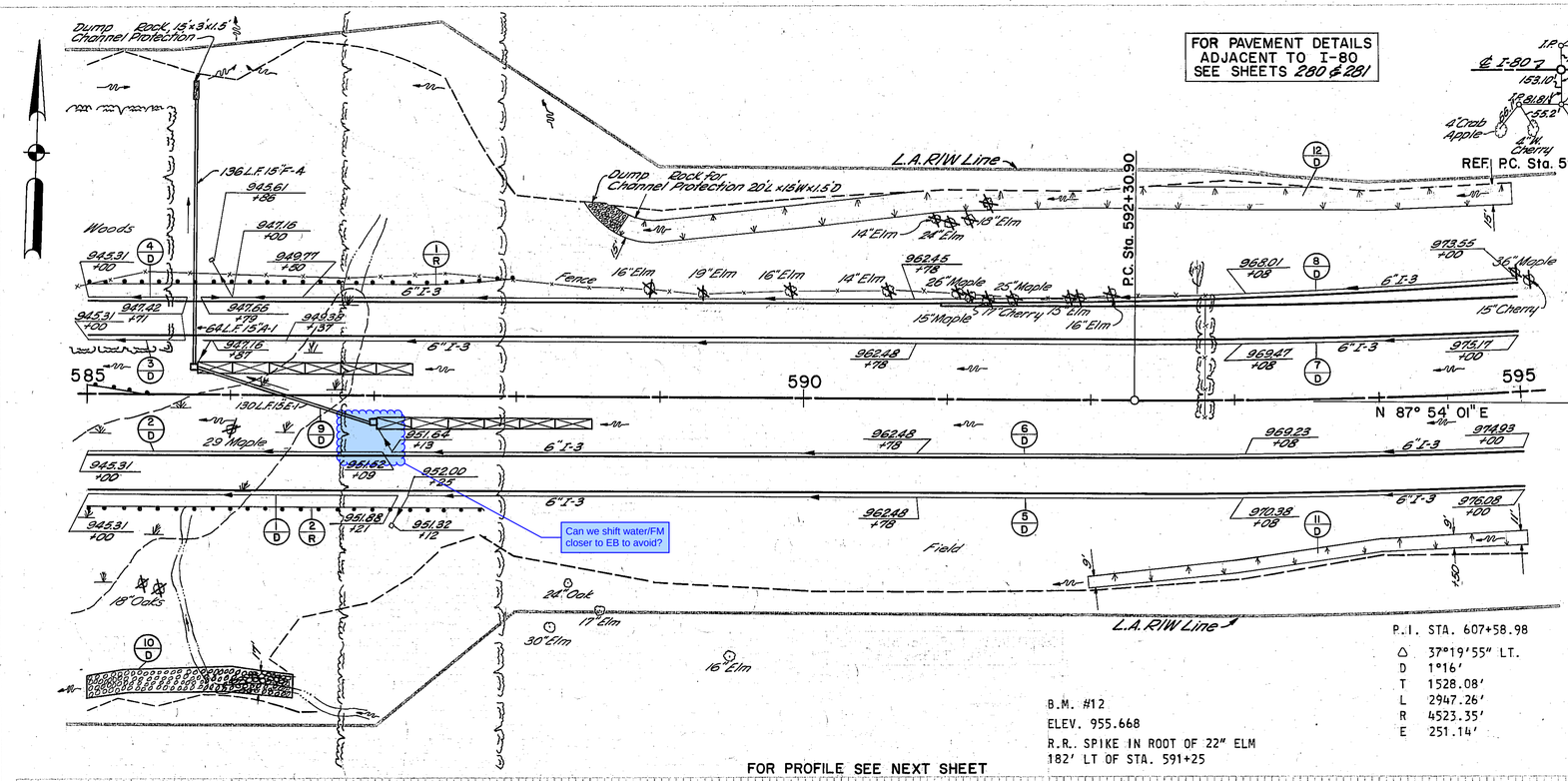
909.4 902.8 901.9 896.3 895.4 894.5 894.7 894.3 894.2 893.5 897.1 900.0 900.2 901.1 898.0 901.4 902.2 901.4 901.3 892.1 889.0 886.3 883.1 885.1 891.8 910.9 911.1 911.1 913.38 912.8 907.8 892.2 893.5 894.4 893.3 894.2 892.2 891.4 886.0 886.8 897.2 896.5

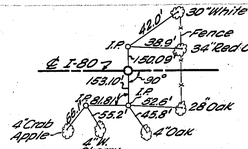
+20 +50 +85 +50 +50 +34 +50 +59 +04 +16 +50 +50 +65 +77 +90 +91 +17 +43 +50 +78 +117 +225 +222 +14 +19.2 +22.5 +46 +69 +90 +50 +84 +06 +19 +29 +50

575 576 577 578 579 580 581 582 583 584 585

Sta. 575+00 to Sta. 585+00 — Profile

FOR PAVEMENT DETAILS ADJACENT TO I-80 SEE SHEETS 280 & 281





REF. P.C. Sta. 592+30.90

P.I. STA. 607+58.98
△ 37°19'55" LT.
D 1°16'
T 1528.08'
L 2947.26'
R 4523.35'
E 251.14'

B.M. #12
ELEV. 955.668
R.R. SPIKE IN ROOT OF 22" ELM
182' LT OF STA. 591+25

FOR PROFILE SEE NEXT SHEET

I-8 Catch Basin No. 8 EACH	I-10 Dumped Rock Channel Protection CU. YD.	I-15 Guard Rail L.F.	I-10 Sodding SQ. YD.	L-10 Jute Matting SQ. YD.	I-5 For 6"I-3 60° BEND WYE EACH EACH
			256		/ /
			304		/ /
		312.5	1054		/ /
		2750			/ /
2	3				/ /
	228				/ /
	17				/ /
2	248	3875	1359	256	2 2

REF. NO.	STATION TO STATION	SIDE	CL A-1 M-6.6(a)or M-6.6(b) #57 L.F.	CL E-1 15" L.F.	CL F-4 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.
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.				10			790	
7-D	585+79 to 595+00	Lt.				10			918	
8-D	585+25 to 595+00	Lt.				10			928	
9-D	585+25 to 587+00	Lt&Rt	64	130				136		26
10-D	585+00 to 586+45	Rt.								
11-D	583+00 to 585+00	Rt.								
12-D	588+50 to 595+00	Lt.								
1-R	584+95 to 588+04	Lt.								
2-R	584+98 to 587+28	Rt.								
TOTALS			64	130	20	20	20	136	4002	26

for M-6.5(b)

Sta. 585+00 to Sta. 595+00 — Plan

949.75 951.23 952.72 954.20 955.69 957.17 958.66 960.14 961.63 963.11 964.60 966.08 967.57 969.05 970.54 972.02 973.51 974.99 976.48 977.96 979.44

Sta 585+75 – 19' Lt. — #8 C.B.
Grate — 949.89
F.L. 15"I–1 Class D-1 — 946.35
F.L. 6"I–1 Class F-4 — 947.10
F.L. 15"I–1 Class A-1 — 946.30
F.L. 15"I–1 Class F-4 — 890.70 Std. E Edw. Lt.

Sta 587+00 – 19' Rt. — #8 C.B.
Grate — 953.60
F.L. 15"I–1 Class D-1 — 950.39
F.L. 6"I–1 Class F-4 — 951.14

+2.97%

Eastbound U-Drain

Westbound U-Drain

Westbound & Eastbound U-Drain

130 L.F. 15"D-1 @ 3.11%

F.L. 15"I–1 Class F-4 (M-6.4(C)) 890.7
E-Edw. 204' Lt.

975 970 965 960 955 950 945 940 935 930 925 920 915 910 905 900 895 890 885 880

896.5 896.4 894.3 893.8 893.8 894.5 905.2 935.3 954.0 955.7 954.4 953.5 954.3 954.9 955.2 955.6 957.2 961.3 965.7 967.9 969.7 970.7 971.9 972.4 973.0 973.5 973.5 972.6 971.5

+50 +74 +50 +82 +50 +85 +50 +50 +50 +50 +50 +50 +75 +50 +75 +25 +50 +75 +25 +50 +75

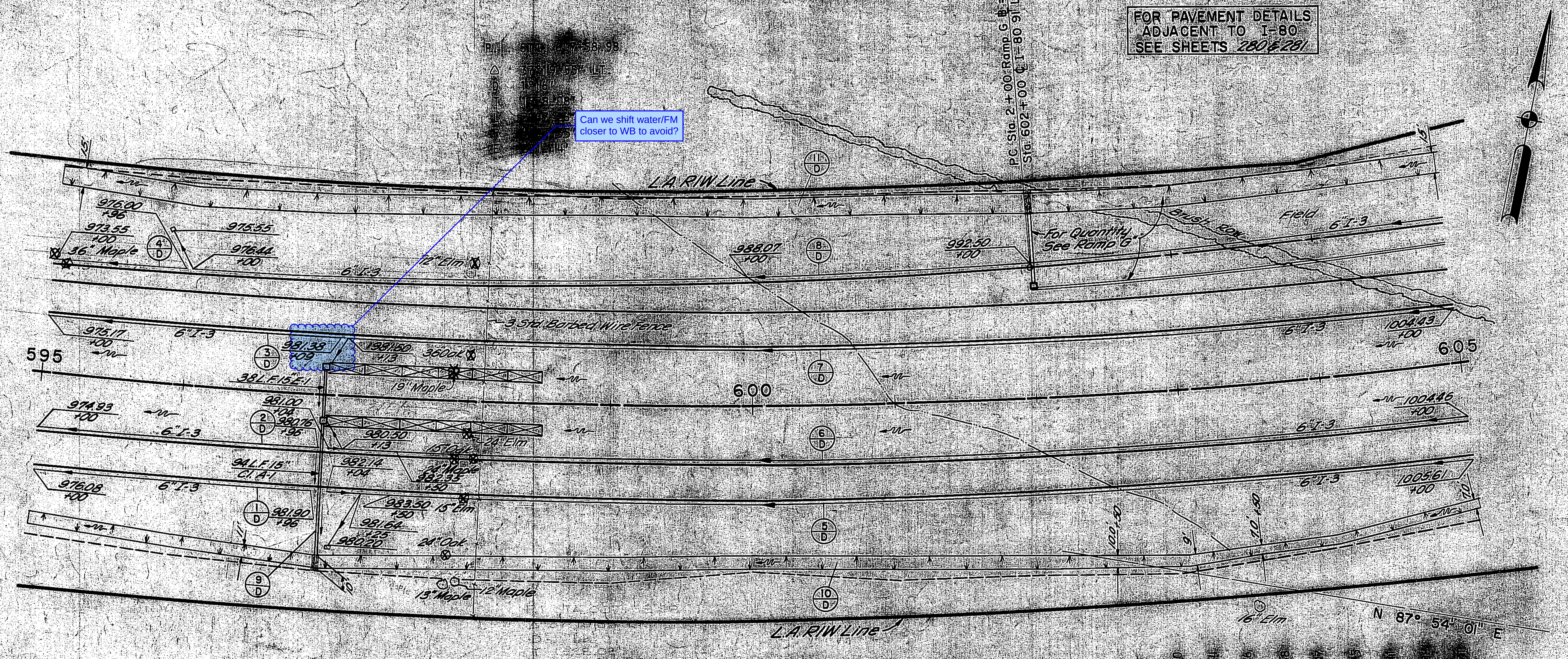
585 586 587 588 589 590 591 592 593 594 595

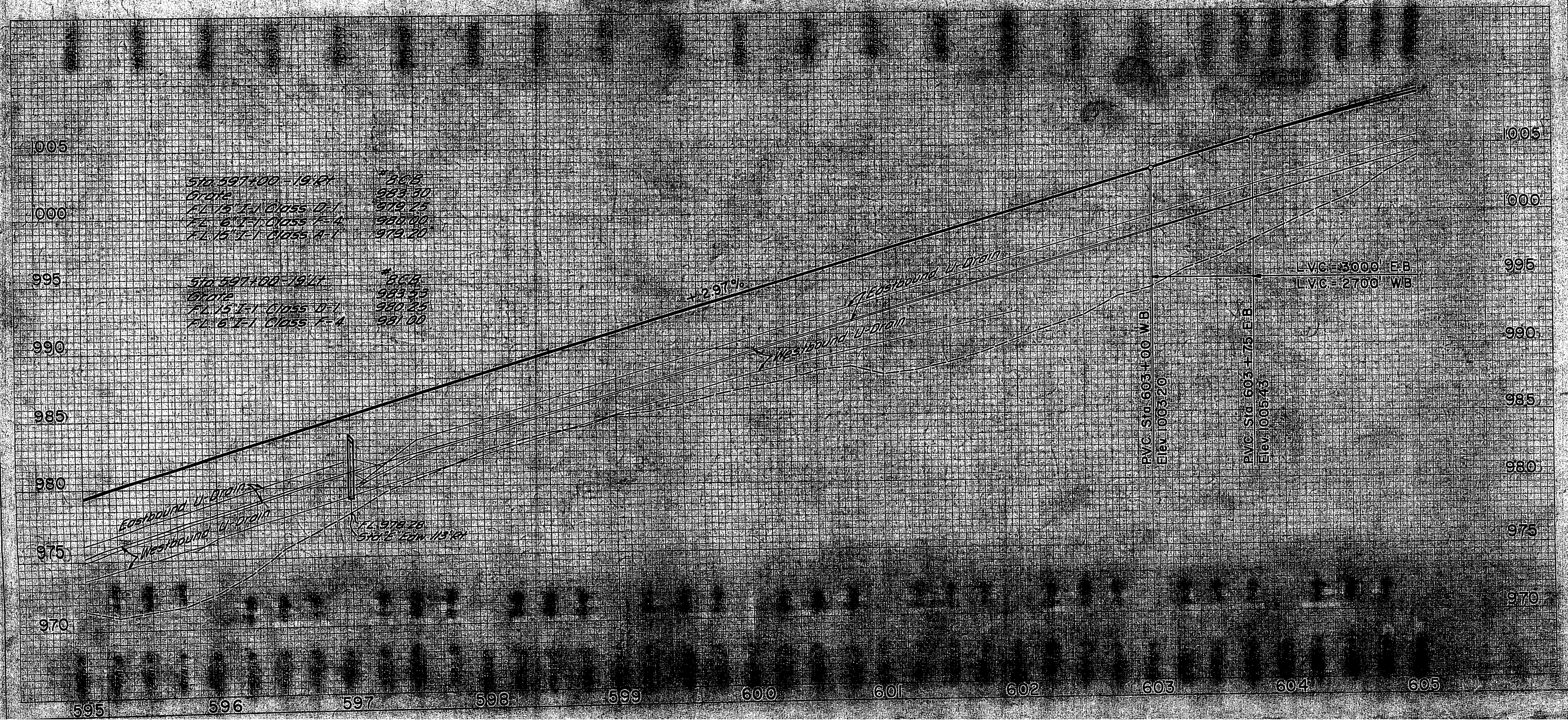
Sta. 585+00 to Sta. 595+00 – Profile

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

TRUMBULL COUNTY TRU-I-80-8.90

FOR PAVEMENT DETAILS ADJACENT TO I-80 SEE SHEETS 280 & 281





ESTIMATED QUANTITIES for M-6.5(b)

REF. NO.	STATION TO STATION	SIDE	I-10 Dumped Rock For Channel Protection CU. YD.	I-1 CL. A-1 M-6.5(a) or M-6.8(b) #15" L.F.	I-1 CL. E-1 15" L.F.	I-1 CL. F-4 6" L.F.	I-1 CL. F-4 8" L.F.	I-1 CL. I-3 6" U-DRAIN SHALLOW L.F.	I-2 Masonry CU. YD.	I-5 Pipe Spec. for 6" U-Drain 60° BEND EACH	I-5 Pipe Spec. for 6" U-Drain WYE EACH	I-8 Catch Basin No. 8 EACH	I-8 Manhole No. 1 EACH	L-10 Sodding SQ. YD.	L-120 Jute Matting SQ. YD.	SEE SHEET NO.
1-D	595+00 to 596+96	Rt.						196								
2-D	595+00 to 596+96	Rt.						196								
3-D	595+00 to 597+09	Lt.						210								
4-D	595+00 to 595+96	Lt.						96								
5-D	597+04 to 605+00	Rt.					10	830			1					
6-D	597+04 to 605+00	Rt.				10		800			1					
7-D	597+13 to 605+00	Lt.				10		800		1						
8-D	596+00 to 602+00	Lt.					10	620		1						
9-D	597+00	₵	2	94	38				26			2		1	256	
10-D	595+00 to 605+00	Rt.												1069		
11-D	595+00 to 602+00	Lt.												1167		
			2	94	38	20	20	3748	3	2	2	2		2237	256	

Sta. 595+00 to Sta. 605+00

FOR PAVEMENT DETAILS ADJACENT TO I-80 SEE SHEETS 280 & 281

FOR Cul-de-Sac DETAIL SEE SHEET 251

Twp. Rd. dirt road

I.P.I. Sta. 607+00 Elev. 1000.00

Twp. Ahd.

I.A. Base

Back 412.8 63.1 172.1 9.8

Elec. Tower

66.5

Elec. Tower

REF. P.I. Sta. 607+58.98

For Quantity See Ramp G"

L.A. R/W Line

12" Ditch

15" CMP (Poor Cond.)

15" Ditch

Field Dr.

Exist. R/W

REST AREA

6"I-3

62 L.F. 21"A-1

62 L.F. 18"A-1

38 L.F. 13"E-1

Brook

Can we shift water/FM closer to EB to avoid?

605 610 615

10 15

5

O.E. Tower

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'

12" Ditch (Loose Stone) 15" Ditch

FOX NORTH ROAD

TO BE ABANDONED

N 87°54'01" E

N 50° 34' 06" E

FOR PROFILE SEE NEXT SHEET

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

ESTIMATED QUANTITIES

PREP. NO.	STATION TO STATION	SIDE	I-1 CL A-1 M-6.6(b) or M-6.8(b) ≠ 6" L.F.	CL A-1 M-6.6(b) or M-6.8(b) ≠ 15" L.F.	CL A-1 M-6.6(b) or M-6.8(b) ≠ 18" L.F.	CL E-1 2" L.F.	CL F-4 6" L.F.	CL F-4 8" L.F.	I-2 MASONRY CU.YD.	CL F-3 6" U-Drain Shallow M6.4(b) L.F.	I-5 For 6" U-Drain Tee EACH	90° 60° Bend EACH	I-8 Catch Basin No. 8 EACH	I-10 Dumped Rock Channel Protection CU. YD.	L-10 Sodding SQ. YD.	L-120 Jute Matting SQ. YD.	SEE SHEET NO.
1-D	℄ CH 00 to 606+96	Rt.								196							4
2-D	℄ CH 00 to 606+96	Lt.								196							4
3-D	℄ CH 00 to 606+96	Rt.	30							250							20
4-D	℄ CH 00 to 615+00	Rt.					10			260			3	2	2	384	38
5-D	℄ CH 00 to 615+00	Lt.					10			251			1	1	77		62
6-D	℄ CH 18 to 615+00	Lt.				62		38		245			1	1			62
7-D	℄ CH 00								.36								30
8-D	℄ CH 00 to 606+00	Rt.															4
										1594	1	1	1	2	79	2200	

Sta. 605+00 to Sta. 615+00 – Plan

SEEDING	
END WIDTH	SQ YDS

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

45-A 401

TRUMBULL COUNTY TRU-I-80-8.90

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 1014.85 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. — #3 C.B.
Grate 1011.50
FL. 18" I-1 Class A-1 1007.20
FL. 2 18" I-1 Class A-1 1006.95
FL. 2 24" I-1 @ 4.14% E. 1006.37
FL. 6" I-1 Class F-A 1007.85

Sta. 607+00 - 19' Lt. — #3 C.B.
Grate 1011.47
FL. 15" I-1 Class D-1 1007.93
FL. 18" I-1 Class A-1 1007.68
FL. 6" I-1 Class F-A 1008.68

Sta. 607+00 - 19.01 Rt. — #3 C.B.
Grate 1011.86
FL. 15" I-1 Class D-1 1008.15
FL. 6" I-1 Class F-A 1008.90

+2.97%
E.B.
W.B.
Eastbound U-Drain
Westbound U-Drain
Eastbound U-Drain
Westbound U-Drain
L.V.C. = 3000' E.B.
L.V.C. = 2700' W.B.

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

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

+25 +50 +75 +25 +50 +75 +13 +20 +33 +41 +48 +52 +15 +25 +35 +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

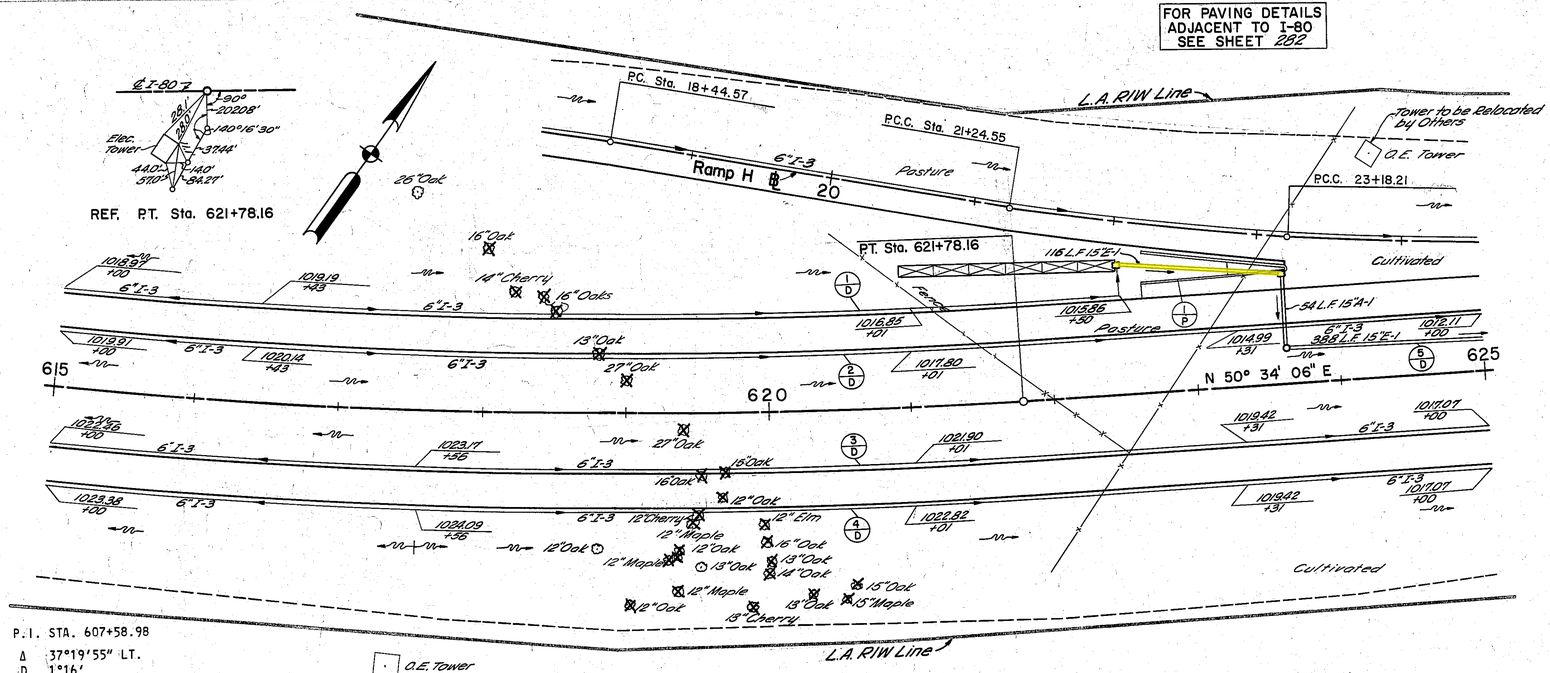
Sta. 605+00 to Sta. 615+00 — Profile

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

				I-5	I-8			I-12	L-120		
				For 6"I-3	Catch Basin No. S	Catch Basin No. 8	Manhole No. 1	Std. Type 2-A Curb	Jute Matting		
				90° Bend	EACH	EACH	EACH	L.F.	SQ.YD.		
				EACH							
1-D	615+00 to 622+50	Lt							128		
2-D	615+00 to 625+00	Lt									
3-D	615+00 to 625+00	Rt							106		
4-D	615+00 to 625+00	Rt									
5-D	622+50 to 625+00	Lt									
1-P	622+68.56 to 623+65.76	Lt									
TOTALS				54	254	10	3762				

SEE SHEET NO.

128
106
1
1
1
1
1
1

1-M-6.5(6)

CL A-1 M-6.6(dor W-beam (b) 1S	CL E-1	CL F-4	CL T-3 M-6.4(N)
	15"	6"	6"
	L.F.	L.F.	L.F.
		10	762
			1020
			1020
			1000
	54	254	

Sta. 615+00 to Sta. 625+00 — Plan

SEEDING

END WIDTH	SQ. YDS.

SHEET NO. THIS PROJ.	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

EASTBOUND

1025.24 1025.37 1025.49 1025.60 1025.69 1025.76 1025.82 1025.87 1025.92 1025.94 1025.95 1025.95 1025.93 1025.90 1025.85 1025.79 1025.72 1025.64 1025.54 1025.43 1025.31 1025.17 1025.02 1024.85 1024.67 1024.48 1024.28 1024.06 1023.83 1023.58 1023.32 1023.05 1022.77 1022.47 1022.16 1021.83 1021.49 1021.14 1020.77 1020.39 1020.00

WESTBOUND

1022.93 1023.00 1023.06 1023.11 1023.14 1023.15 1023.15 1023.14 1023.12 1023.08 1023.03 1022.96 1022.88 1022.79 1022.68 1022.56 1022.42 1022.27 1022.11 1021.93 1021.74 1021.54 1021.32 1021.09 1020.85 1020.59 1020.31 1020.03 1019.72 1019.41 1019.08 1018.74 1018.38 1018.01 1017.63 1017.23 1016.82 1016.39 1015.96 1015.50 1015.04

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

1065 1060 1055 1050 1045 1040 1035 1030 1025 1020 1015

W.B. P.V.I. Sta. 616+50
Elev. 1043.30

E.B. P.V.I. Sta. 618+75
Elev. 1049.98

+2.97% −3.00%

+2.97% −3.48%

E.B.
Eastbound U-Drain
W.B.
Westbound U-Drain

116 L.F. 15"E-I @ 1.24 %
Westbound U-Drain
389 L.F. 15"E-I @ 1.23 %

Sta. 622+50 - 89' Lt.
Grate
F.L. 15"I-I Class E-I
F.L. 6"I-I Class F-A

#8 C.B.
1017.30
1014.91
1015.66

Sta. 623+62 - 90' Lt.
Grate
F.L. 15"I-I Class A-I
F.L. 15"I-I Class E-I

Sta. 623+62 - 25' Lt.
Cover
F.L. 15"I-I Class A-I
F.L. 15"I-I Class E-I

#6 C.B.
1017.14
1013.97
1013.42

#1 M.H.
1016.14
1010.14
1010.09

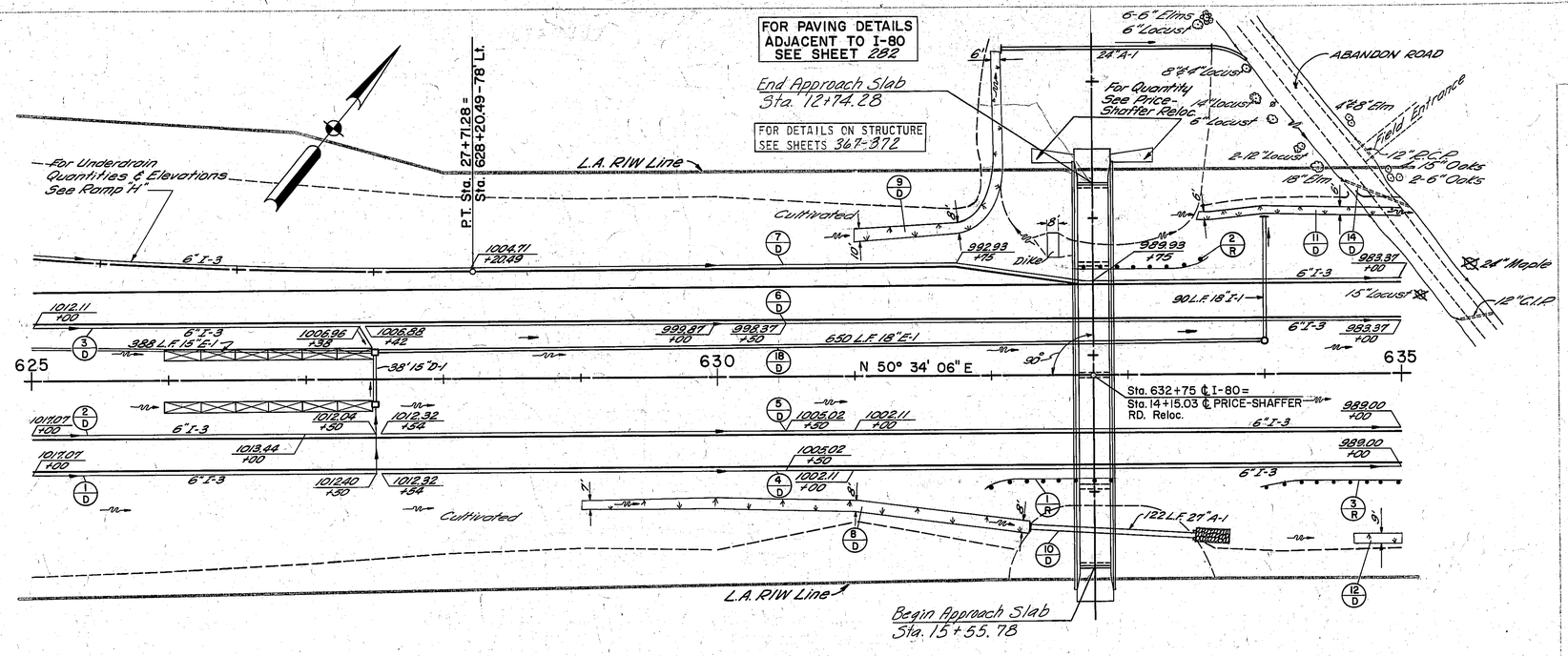
L.V.C. = 3000' E.B.
L.V.C. = 2700' W.B.

1045.5 1047.5 1048.5 1049.5 1050.2 1050.7 1051.8 1052.6 1053.5 1054.7 1056.0 1056.7 1057.3 1051.7 1057.7 1058.6 1059.7 1060.7 1064.2 1061.4 1061.0 1060.3 1060.5 1060.4 1058.9 1058.9 1057.9 1056.7 1056.3 1056.9 1059.0 1057.9 1056.9 1054.5 1052.4

+25 +50 +75 +25 +50 +75 +25 +50 +75 +25 +50 +75 +25 +50 +75 +25 +50 +75 +50 +50 +50

615 616 617 618 619 620 621 622 623 624 625

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'-1" f/f, 2'-3" Safety Curbs.
LOAD FREQUENCY: C.F. = 130 (S.F.).
SKEW: 0°00'
WEARING SURFACE: 3½" Monolithic Conc.
APPROACH SLAB: Special Design.
ALIGNMENT: Tangent.

ESTIMATED QUANTITIES — for M-6.5(b)

REF. NO.	STATION TO STATION	SIDE	E-12 Pipe Removed 15" & Under L.F.	I-1 CL. A-1 M-6.6(a) or M-6.8(b) ≠ 6" 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-6.8(d) 27" L.F.	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(b) L.F.	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.	I-10 Sodding SQ. YD.	L-10 Jute Matting SQ. YD.	L-120 SEE SHEET NO.
1-D	625+00 to 627+50	Rt.		30																	
2-D	625+00 to 627+50	Rt.									250										
3-D	625+00 to 627+38	Lt.									260										
4-D	627+54 to 635+00	Rt.								10	248										
5-D	627+54 to 635+00	Lt.								10	346										
6-D	627+42 to 635+00	Lt.									346										
7-D	628+20 to 635+00	Rt.									308										
8-D	629+00 to 632+25	Rt.									250										
9-D	631+00 to 632+00	Lt.									326										
10-D	632+25 to 633+50	Rt.					122								2	1	23		100	277	256
11-D	633+60 to 635+00	Lt.																			
12-D	634+65 to 635+00	Rt.																			
13-D	635+00 to 634+00	Rt.			90			38	250	650		1	1	1	2	1	1	100	100	118	256
14-D	634+60 to 635+07	Lt.	50																		
1-R	631+90 to 632+90	Rt.																		3	
2-R	632+60 to 633+60	Lt.																		93	
3-R	634+00 to 635+00	Rt.																		35	
TOTALS			50	30	90	122	38	250	650	20	1575	2	1	1	4	2	24	300	527	256	2114

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

SEEDING

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

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 1001.54 1002.76 1001.96 1001.15 1001.33 995.49 996.64 997.78 996.91 995.72 993.53

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

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

Sta 634+00 - 25' Lt	# I.M.H.
Cover	989.50
F.L. 18" I-1 Class E-1	982.75
F.L. 18" I-1 Class A-1	982.70
F.L. @ "E" Endwall 116' Lt	981.30

E.B.
W.B.
Eastbound U-Drain
Westbound U-Drain
388 L.F. 15" E-1 @ 1.23%
-3.00%
-3.48%
650 L.F. 18" E-1 @ 3.46%
L.V.C. = 3000' E.B.
L.V.C. = 2700' W.B.
W.B.-P.V.T. Sta. 630+00 Elev. 1002.80
E.B.-P.V.T. Sta. 633+75 Elev. 997.78

Sta. 627+50 - 19' Lt. Grate	# B.C.B.
F.L. 18" I-1 Class E-1	1007.53
F.L. 15" I-1 Class E-1	1005.08
F.L. 15" I-1 Class E-1	1005.32
F.L. 6" I-1 Class F-4	1006.07
F.L. 15" I-1 Class D-1	1005.32

Sta. 627+50 - 19' Rt. Grate	# B.C.B.
F.L. 15" I-1 Class D-1	1013.25
F.L. 6" I-1 Class F-4	1011.05
	1011.80

1055 1050 1045 1040 1035 1030 1025 1020 1015 1010 1005 1000 995 990 985 980 975

1032.4 1050.0 +50 1047.2 1044.7 +50 1040.6 1035.4 +50 1029.9 1024.2 +50 1020.8 1017.4 +50 1013.7 1009.6 +50 1006.1 1002.1 +50 999.4 996.3 +50 993.8 992.0 +50 985.6 982.0 +50 979.1

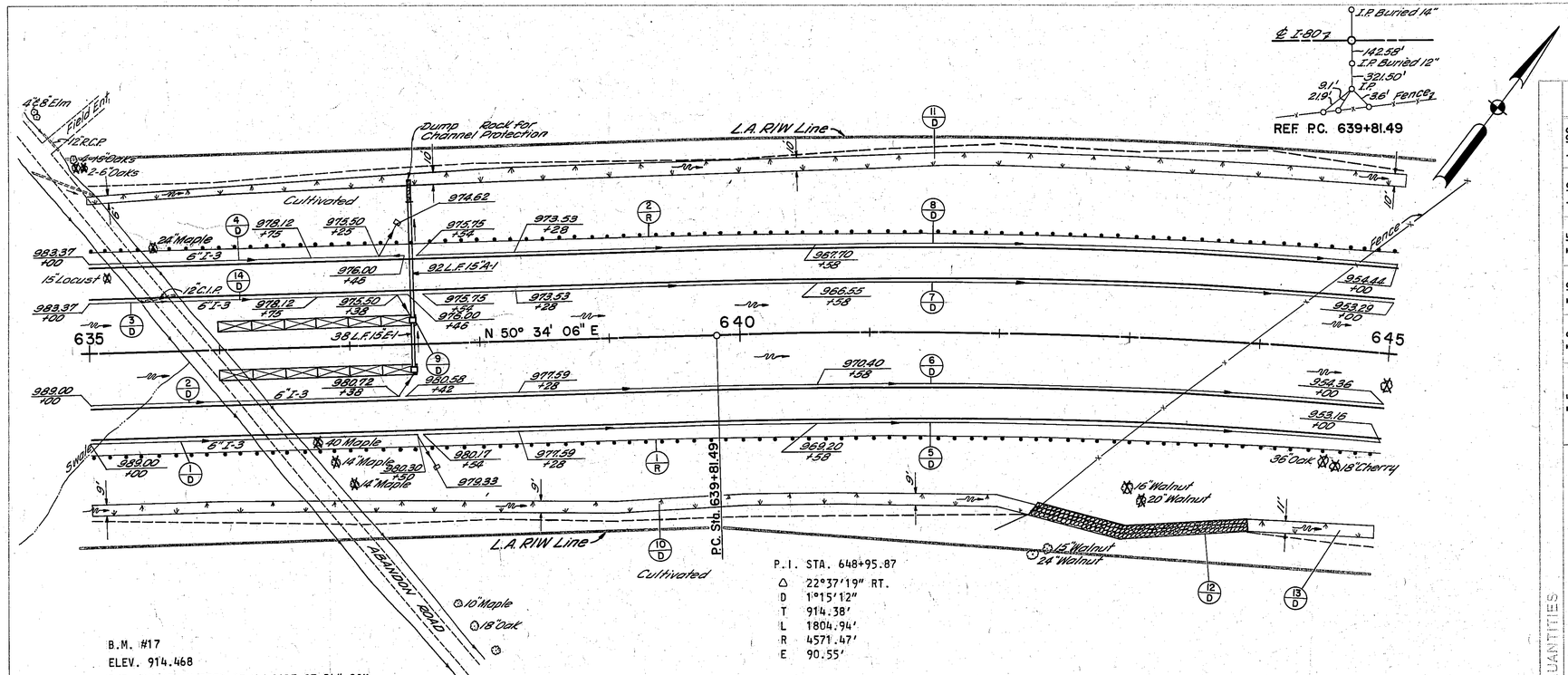
625 626 627 628 629 630 631 632 633 634 635

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



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

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

FOR PROFILE SEE NEXT SHEET

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	E-12 Pipes Removed Metal 15" & Under L.F.	CL. A-1 Class B (Cor M-6.08) 15" F L.F.	CL. E-1 15" L.F.	CL. F-4 6" L.F.	CL. I-3 6" U-Drain Shallow L.F.	I-1 8" L.F.	I-2 Masonry CU. YD.
1-D	635+00 to 637+50	Rt				10	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	Rt					266		
5-D	637+54 to 645+00	Rt					746		
6-D	637+42 to 645+00	Rt					758		
7-D	637+54 to 645+00	Lt					746		
8-D	637+50 to 645+00	Lt		92	38		746		.26
9-D	635+00 to 642+31	Rt							
10-D	635+00 to 645+00	Lt							
11-D	641+80 to 645+00	Rt							
12-D	641+00 to 635+00	Rt							
13-D	635+42 to 635+68	Lt	24						
1-R	635+00 to 645+00	Rt							
2-R	636+00 to 645+00	Lt							
TOTALS			24	92	38	20	20	40	.3

	SEE SHEET NO.
L-120 Jute Matting SQ. YD.	256
L-10 Sodding SQ. YD.	731 1100 123
I-15 Guard Rail L.F.	1000.0 1000.0
I-10 Dumped Rock Channel Protection CU. YD.	157
I-8 Catch Basin No. 8 EACH	2 3
I-5 For 6"I-3 60° WYE EACH	/ /
I-5 For 6"I-3 60° BEND. EACH	/ /

	256
	1954
	2000.0
	160
	2
	2
	2

for M.G.S(2)

Sta. 635+00 to Sta. 645+00 — Plan

SEEDING	
END WIDTH	50 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

EASTBOUND

933.43 991.69 989.95 988.21 986.47 984.73 982.99 981.25 979.51 977.77 976.03 974.29 972.55 970.81 969.07 967.33 965.59 963.85 962.11 960.37 958.63

WESTBOUND

987.80 986.30 984.80 983.30 981.80 980.30 978.80 977.30 975.80 974.30 972.80 971.30 969.80 968.30 966.80 965.30 963.80 962.30 960.80 959.30 957.80

995 990 985 980 975 970 965 960 955 950 945 940 935

E.B. U-Drain
W.B. - 3.00%
F.W.B. U-Drain
W.B. U-Drain
E.B. - 3.48%
E.B. U-Drain
F. E.B. U-Drain
F. W.B. U-Drain

B.M. # 17
ELEV. 941.468
R.R. SPIKE IN ROOT OF N. SIDE OF 24" OAK
250' LT. OF STA. 643+00

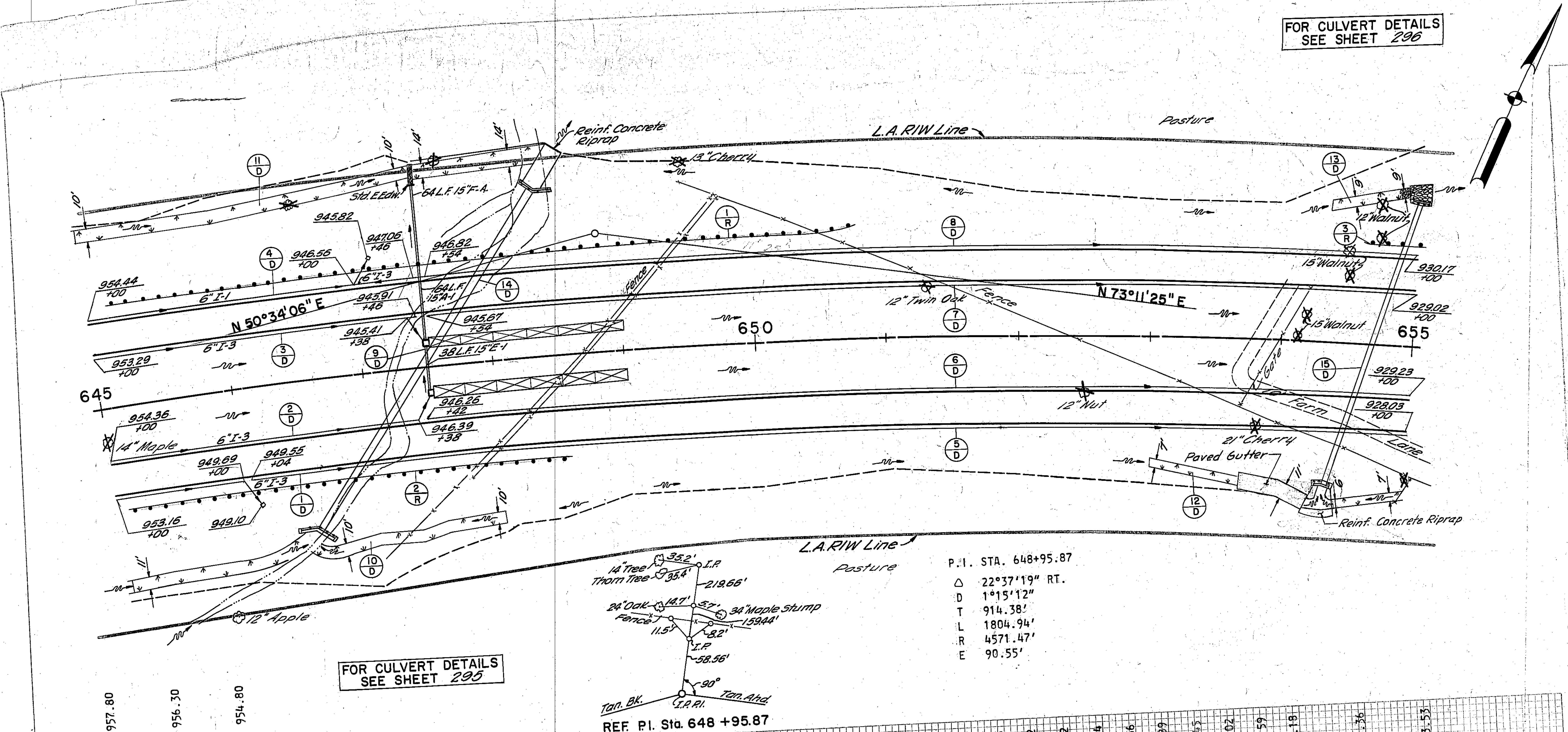
FL 15"I-I(M-6.68),(M-6.88)=964.50
Std. E Edw. 110' Lt.

Sta. 637+50-19' Lt.	#8 C.B.
Grate	972.22
FL 15" I-I Class D-I	970.24
FL 6" I-I Class F-4	970.99
FL 15" I-I Class A-I	970.19
Sta. 637+50-19' Rt.	#8 C.B.
Grate	982.66
FL 15" I-I Class D-I	979.36
FL 6" I-I Class F-4	980.11

635 636 637 638 639 640 641 642 643 644 645

Sta. 635+00 to Sta. 645+00 — Profile

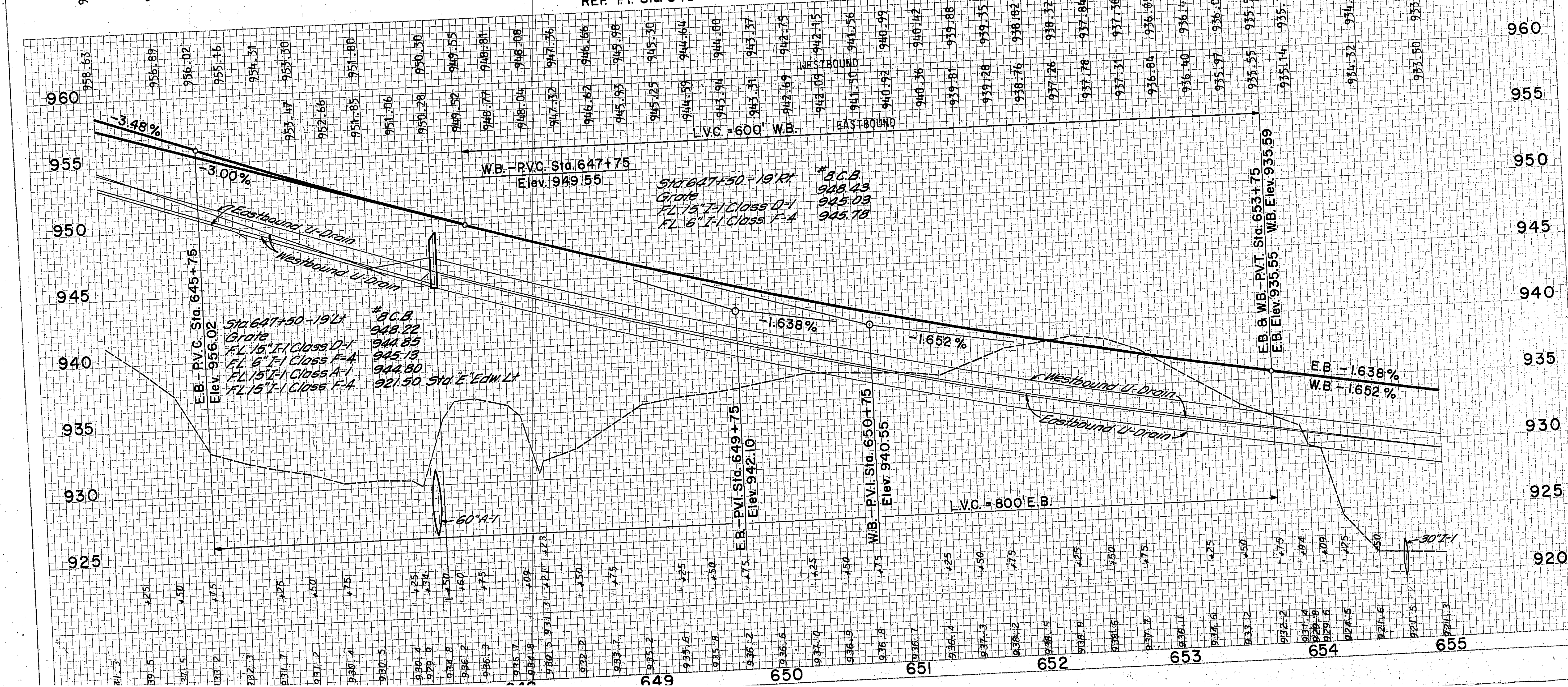
FOR CULVERT DETAILS SEE SHEET 296



REF. P.I. Sta. 648 +95.87

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'

FOR CULVERT DETAILS SEE SHEET 295



ESTIMATED QUANTITIES

For M.G.5(b)

REF. NO.	STATION TO STATION	SIDE	I-1 CL. A-1 M-6.6(a) or M-6.8(b) #15" L.F.	I-1 CL. A-1 M-6.6(b) or M-6.8(b) 30" L.F.	I-1 CL. A-1 M-6.4(g) 10-10 Ga. 60" L.F.	I-1 CL. E-1 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.	CL. I-3 6" U-Drain Shallow L.F.	I-2 Mason. CU. YD.	I-5 For 6" I-3 60° Bend EACH	I-5 For 6" I-3 WYE EACH	I-5 For F-4 25° Bend 15" EACH	I-8 C.B. NO. 8 EACH	I-10 6" Reinf. Conc. Riprap SQ. 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		112		1										
2-D	645+00 to 647+50	Rt.					10			250		1										
3-D	645+00 to 647+46	Lt.					10			258			1									
4-D	645+00 to 647+46	Lt.						10		258			1									
5-D	646+04 to 655+00	Rt.								896												
6-D	647+42 to 655+00	Rt.								758												
7-D	647+54 to 655+00	Lt.								746												
8-D	647+54 to 655+00	Lt.								746												
9-D	647+50	℄	64			38			64		.26			2	2		25			1	256	
10-D	645+00 to 648+00	Rt.																		357		
11-D	645+00 to 648+50	Lt.																		433		
12-D	653+00 to 654+50	Rt.																53		51		
13-D	654+35 to 654+90	Lt.																		50		
14-D	647+44	℄			302						54.30					51				11		
15-D	654+70	℄		230							11.88					58	29			6		
16-D	654+45 to 655+00	Rt.																		38		
1-R	645+00 to 650+75	Lt.																	575.0			
2-R	645+00 to 648+50	Rt.																	350.0			
3-R	654+62.5 to 655+00	Lt.																	37.5			
			64	230	302	38	20	20	64	4024	66.4	2	2	2	2	109	32	53	962.5	947	256	

Sta. 645+00 to Sta. 655 +00

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

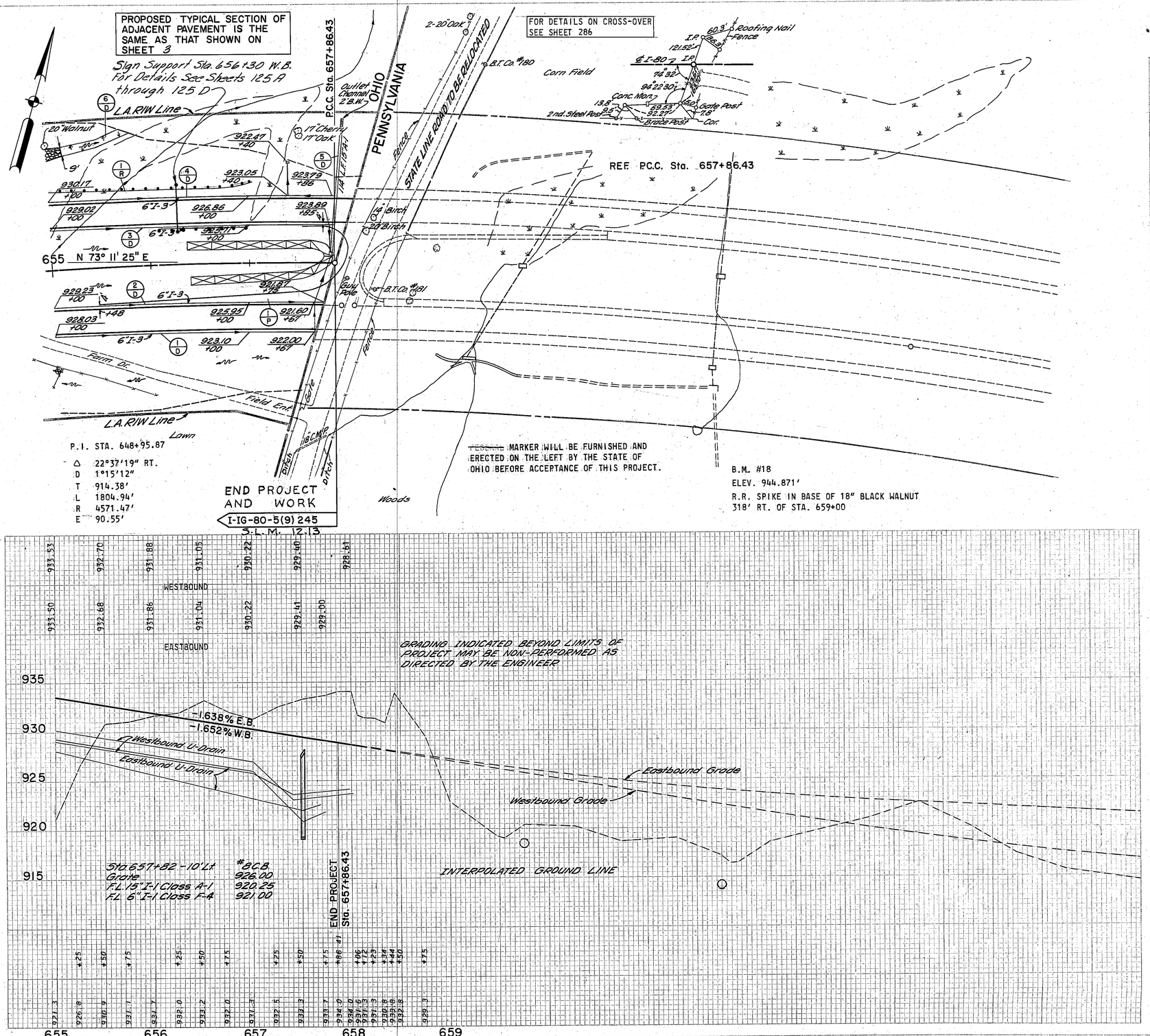
50
401

TRUMBULL COUNTY TRU-I-80-8.90

PROPOSED TYPICAL SECTION OF ADJACENT PAVEMENT IS THE SAME AS THAT SHOWN ON SHEET 3

Sign Support Sta. 656+30 W.B. For Details See Sheets 125A through 125D

FOR DETAILS ON CROSS-OVER SEE SHEET 286



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'

END PROJECT AND WORK
I-IG-80-5(9)245
S.L.M. 12.13

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

B.M. #18
ELEV. 944.871'
R.R. SPIKE IN BASE OF 18" BLACK WALNUT
318' RT. OF STA. 659+00

ESTIMATED QUANTITIES

For MAS.S(b)

REF. NO.	STATION TO STATION	SIDE	B-21 Water Proof Aggr. Base Course	I-1 CL.A-1 M-6.6(b) #6	CL.A-1 M-6.6(b) #15	CL.I-3 6" U-Drain Shallow	CL.I-3 6" U-Drain Deep	CL.F-4 6"	CL.F-4 8"	I-2 Masonry	I-5 For 6"I-3 DH. Tee	I-5 For 6"I-3 60° Bend	I-5 For 6"I-3 90° Bend
			CU.YD.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	CU.YD.	EACH	EACH	EACH
1-0	655+00 to 657+67	Rt.	30			267		10				1	1
2-0	655+00 to 657+25	Rt.				316							
3-0	655+00 to 657+85	Lt.				314		10					
4-0	655+00 to 657+86	Lt.				310		10			1		
5-0	657+82	℄			114					.26			
6-0	655+15 to 655+75	Lt.											
1-R	655+00 to 657+00	Lt.											
1-P	655+48 to 657+86.09	℄		114									

			11	30	114	1207		20	10	3		1	1

Sta. 655+00 to Sta. 657+86.43

SCREENING	
END AREA	VOLUME

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

51
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
3800	0	10022	0
1612	0	1492	0
Sta. 485+50 Area=	0	0	0	0

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

Dike
2:1
2:1
G-943.88
487+00
960.4
950
2:1

BEGIN PROJECT STA. 486+86

NOTE:
Rough Grade between Sta. 485+50 and Sta. 486+86

G-944.50
486+00
955.1
4:1
ROUGH GRADING
2:1
950

For Section I
Begin Earthwork at Sta. 485+50 Area=0

Profile ℄ Roppell-Hettrick Road

485+17.70
955.5
950

G-945.40
485+00
954.7
950

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

Sta. 485+00 to Sta. 487+00

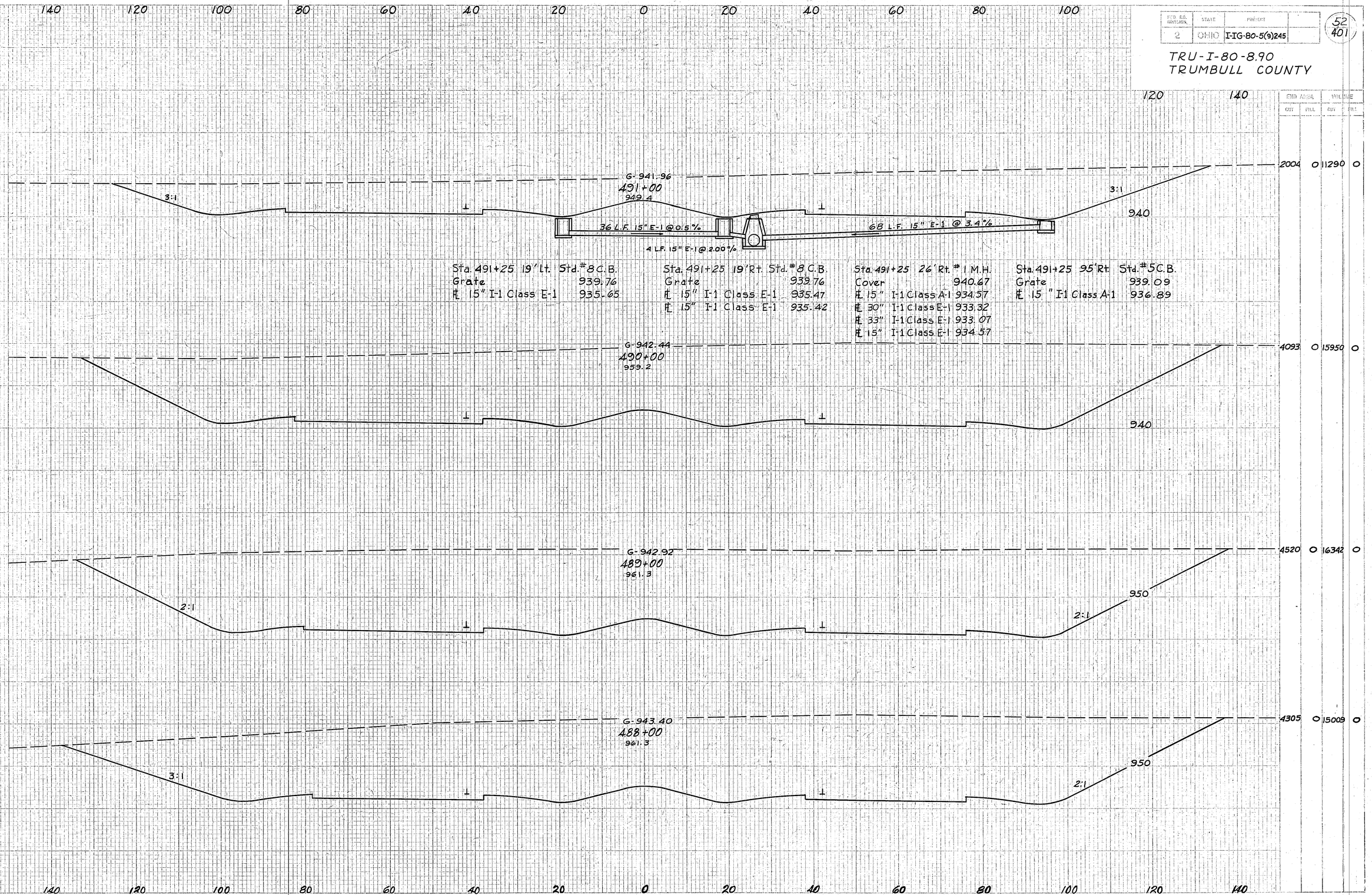
SEEDING

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

52
401

TRU-I-80-8.90
TRUMBULL COUNTY



Sta. 488+00 to Sta. 494+00

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

53
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING

PROJ. AREA	SO. PROJ.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

G-940.04
495+00
950.8

940

Ahead 2304
Back 2999

0 9674 0

Sta. 495+00 26 Rt. #1 M.H.
Cover 938.87
Ⓐ 33" I-1 Class E-1 931.73
Ⓐ 33" I-1 Class E-1 931.68

Sta. 495+00 Bk. & Ahd.
Bk.-Use Full Area
Ahd.-Use Area Lt. of
Earthwork Cut-Off Line

G-940.52
494+00
951.3

940

2920 0 8641 0

G-941.00
493+00
947.3

940

1746 0 5330 0

G-941.48
492+00
946.4

940

1132 0 5807 0

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

Sta 492+00 to Sta 495+00

PLOTTED 11-14-91 8:31 AM

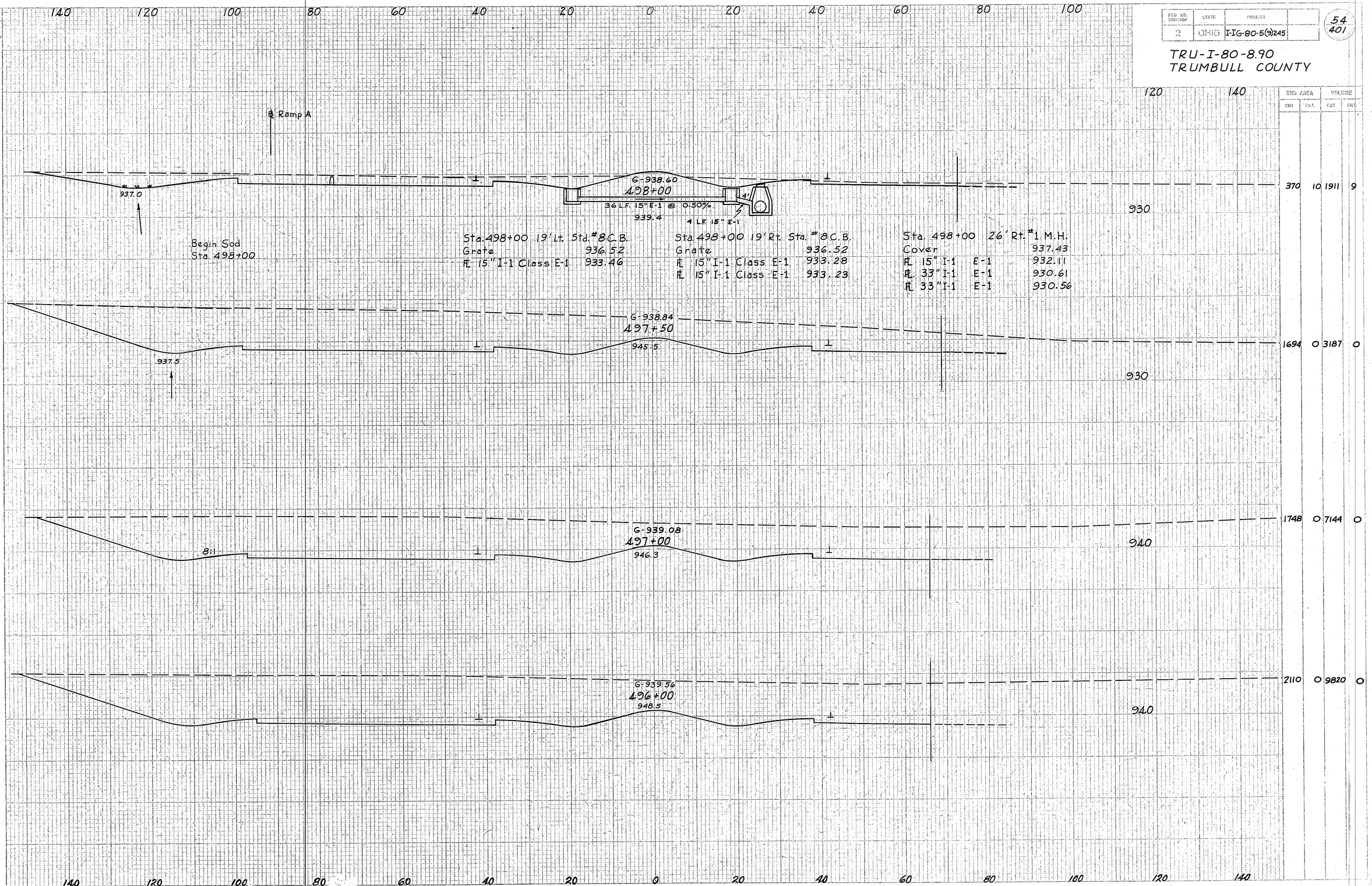
SHEDDING	
FOR 2WAY	SO. REC.

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

54
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. ROAD DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

55
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING
END AREA: SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
28.2114		473667	
23.1846		51 3248	
32 1662		77 1773	
51 253		780 487	

℄ RAMP A

924.48

Sta. 500+15
End Sodding Lt.

℄ RAMP A

2:1

℄ 926.0

50 L.F. 15" E-1 @ 17.5 %

4 L.F. 15" E-1 @ 2%

924.60

"E" Edw.

Dumped Rock
Channel Protection
15'X 3'X 1.5'

G-938.37
500+50
924.8

G-938.18
500+00
928.9

120 140

920

920

Sta. 10+75 14' Rt. N°6 C.B.
Grate 938.24
℄ 15" I-1 Class A-1 934.72
℄ 15" I-1 Class A-1 934.67

Sta. 500+00 76' Lt. Std. N°6 C.B.
Grate 938.32
℄ 15" I-1 Class A-1 934.80

Sta. 499+56 80' Rt. N°6 C.B.
Grate 937.46
℄ 15" I-1 Class A-1 932.54

℄ RAMP A

4:1

931.8

36 L.F. 15" E-1 @ 0.5%

4 L.F. 15" E-1

52 L.F. 15" CLASS A-1 @ 2.02 %

G-938.12
499+50
928.2

920

Sta. 499+50 19' Lt. Std. #8 C.B.
Grate 936.04
℄ 15" I-1 Class E-1 932.83

Sta. 499+50 19' Rt. Std. #8 C.B.
Grate 936.04
℄ 15" I-1 Class E-1 932.65
℄ 15" I-1 Class E-1 932.60

Sta. 499+50 26' Rt. #1 M.H.
Cover 936.95
℄ 15" I-1 Class E-1 931.51
℄ 15" I-1 Class A-1 932.51
℄ 33" I-1 Class E-1 930.03
℄ 33" I-1 Class B-1 929.98

℄ RAMP A

935.8

G-938.18
499+00
937.1

930

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

Sta. 499+00 to Sta. 500+50

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

56
401

TRU-I-80-8.90
TRUMBULL COUNTY

SHEILDING

END WIDTH	SQ. YDS.

BRIDGE

Ramp A Slope

℄ Channel Slope

G-945.00
504+84
925.2

Sta. 504+28
Use Area At Sta. 504+34

G-943.03
504+00
926.7

Channel Slope

RAMP A

℄ Ramp A

28 L.F. 15" E-I @ 7.90%

2:1

G-941.09
503+00
927.0

Sta. 502+75 4.5' Lt. #8 C.B.
Grate 936.91
℄ 15" I-1 Class B-1 934.71

Sta. 502+75 26' Rt. #1 M.H.
Cover 940.10
℄ 15" I-1 Class B-1 932.50
℄ 33" I-1 Class B-1 928.70
℄ 33" I-1 Class B-1 928.65
℄ 33" I-1 Class B-1 928.04 – Outlet into Little Yankee Creek @ 26' Rt. of Sta. 504+30

℄ Ramp A

G-939.09
501+50
927.4

℄ Ramp A

2:1

G-938.67
501+00
924.8

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	458	0	4458
0	2408	122	9893
66	2934	3441	4628
58	2332	1054	4459
55	2484	77	4257

Sta 501+00 to Sta 504+84

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

57
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING

END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0 4788		0 13279	
0 4647		0 7417	
0 4668		0 6930	

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

G-949.65
506+76
926.8

920

G-947.81
506+00
926.1

Sta. 505+70 ℄ #8 C.B.
Grate 942.91
15" I-1 Class D-1 940.06
15" I-1 Class F-1 926.00

Slope Variable

Outlet 15" Pipe onto Slope @ Little Yankee Creek
10' Rt. of Sta. 505+20 (Inv. 939.56)

2:1

G-946.77
505+57
924.8

920

RAMP A

Profile ℄ Stream

505+12
920.9

910

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

Sta. 505+12 to Sta. 506+76

SEEDING	
DIST. WIDTH	SQ. YDS.

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

58
401

TRU-I-80-890
TRUMBULL COUNTY

RAMP A

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0 2840	0 5109		
0 2678	0 4887		
0 2600	0 9780		
0 3268	0 4923		

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

G-955.07
509+00
941.0

2:1

930

G-953.86
508+50
940.7

930

G-952.65
508+00
939.10

2:1

930

G-950.47
507+10
936.8

920

Sta. 507+10 to Sta. 509+02

SEEDING	
LIME/ACRE	SEED LBS/ACRE

SHEET NO.	STATE	PROJECT	
2	OHIO	I-IG-80-5(6)245	

59
401

TRU-I-80-8.90
TRUMBULL COUNTY

RAMP B

G-961.12
511+50
947.2

G-959.91
511+00
946.4

G-958.70
510+50
945.8

G-957.49
510+00
943.7

G-956.28
509+50
941.8

2:1

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	

940
940
930
930
930

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

Sta. 508+50 to Sta. 511+50

SEEDING	
ENG. WIDTH	SQ. YDS.

SEQ. NO. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

60
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

BRIDGE

G-965.96
513+50
944.9

513+34
945.5

Profile West Lane-℄, Route 62 & 7

940

940

Profile ℄ West Lane Route 62 & 7

BRIDGE

Sta. 513+00
Stop Earthwork Area = 0

0 0 0 0

G-964.75
513+00
941.1

940

0 0 0 1935

RAMP D

G-963.54
512+50
943.5

940

0 2090 0 3713

G-962.33
512+00
946.8

940

0 1920 0 3842

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

Sta. 513+00
Stop Earthwork Area = 0

Bonds 4-17-84 SDW

SEEDING	
END STATION	NO. YDS.

STA. 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

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

G-968.38
514+50
945.3

930

BRIDGE

Sta 514+25
Begin Earthwork Area=0

G-967.17
514+00
945.3

940

Profile ℄ East Lane Route 62 ℄ 7

513+99
945.3

940

BRIDGE

G-966.40
513+68
942.7

940

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

Sta 513+68 to Sta 514+50

PLO. NO. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

62
401

TRU-I-80-8.90
TRUMBULL COUNTY

CUBIC YARDS	
END AREA	SO. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

Culvert

514+34
940.6

513+68
942.7

Profile ℄ Ditch

Profile ℄ Medial Strip

930

930

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

Sta 513+68 & Sta 514+34

PLOTTED 1-17-61 GDW

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

63
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING

END WIDTH	SQ. YDS.

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

END AREA		VOLUME	
CUT	FILL	CUT	FILL
29	3992	47	7524
22	4134	34	6718
15	3122	14	6558
0	3065	0	2999

952.6

G-972.97
516+50
951.3

Sta. 516+06 80' Rt. #6 C.B.
Grate 971.15
℄ 15" I-1 A-1 966.26
℄ 15" I-1 F-1 946.00

940

950.7

G-971.90
516+00
948.7

℄ Ramp B

RAMP B

RAMP D

2:1

948.8

118 LF 15" E-1 @ 2.00%

See X-Section 15+50 Ramp D for Pipe & Edw. Rt.

Ahead 4018
Back 3122

G-970.78
515+50
947.5

Sta. 515+42 ℄ #8 C.B.
Grate 966.26
℄ 15" I-1 Class D-1 963.01
℄ 15" I-1 Class A-1 962.96

940

Sta. 515+50 Bk.℄ Ahd.
Bk.- Use Area Rt. of ℳ
Ahd.- Use Full Area

G-969.59
515+00
946.0

Sta. 514+70 Lt.
Begin Sod Ditch

930

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

Sht. 515+00 to Sht. 516+00

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

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

957.8

G-977.51
519+00
959.6

Sta. 519+00 19' Rt. # 8 C.B.
Grate 975.43
15" I-1 Class E-1 972.32

950

30 3683 141 13,378

957.4

G-975.86
518+00
959.0

950

46 3541 52 6705

RAMP D

Sta. 517+50 Lt.
End Sod Ditch

957.2

G-974.95
517+50
956.2

950

10 3700 34 7003

2:1

954.5

G-973.99
517+00
954.0

Sta. 517+00 19' Lt. # 8 C.B.
Grate 971.91
15" I-1 Class E-1 969.45
15" I-1 Class E-1 969.40

940

26 3863 51 7273

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

Sta 517+00 to Sta 519+00

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

65
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING

END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

959.4

G-981.90
523+00
960.5

4:1

950

9 4555 41 17024

RAMP E

959.0

G-981.13
522+00
959.9

950

13 4638 109 16411

958.6

G-980.15
521+00
960.7

950

46 4224 183 14693

RAMP D

958.2

G-978.94
520+00
961.0

950

53 3710 154 13691

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

Sta 520+00 to Sta 523+00

Plotted 11:05, 5/14

GREDING	
END WIDTH	NO. POS.

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

66
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUMES	
CUT	FILL	CUT	FILL

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

963.1
G-983.177
527+00
963.0
950
2 3550 4 13319

965.0
G-983.33
526+00
965.0
950
0 3642 33 14359

RAMP E

960.2
G-982.89
525+00
962.7
950
18 4112 80 14800

959.8
G-982.45
524+00
961.8
950
25 3880 63 15621

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

Sta 524+00 to Sta 527+00

PLOTTED 11-20-81 8:37

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

67
401

TRU-I-80-8.90
TRUMBULL COUNTY

SCALE: HOR. 1"=50' VER. 1"=10'

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

962.5

G-984.42
528+50
963.3

Drainage Ditch

950

962.7

Sta. 528+03 19' Lt. # 8 C.B.
Grate 982.20
I.E. 15" I-1 Class E-1 979.50

G-984.20
528+00
963.0

38 L.F. 15" E-1 @ 0.50%

66 L.F. 15" A-1 @ 0.5%

Sta. 528+03 19' Rt. # 8 C.B.
Grate 982.20
I.E. 15" I-1 Class E-1 979.31
I.E. 15" I-1 Class A-1 979.26

Sta. 528+03.86' Rt. # 6 C.B.
Grate 982.98
I.E. 15" I-1 Class A-1 978.93
I.E. 15" I-1 Class A-1 978.68

RAMP E

963.10 962.9

G-983.98
527+50
962.8

Drainage Ditch

END AREA		VOLUMES	
CUT	FILL	CUT	FILL
15	3697	30	6977
17	3834	19	7223
3	3966	5	6960

Sta 527+50 to Sta 528+50

Plotted 11-20-01 SBW

SEEDING	
CHN WIDTH	SS TYS

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

68
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

Drainage Ditch

962.7

G-985.08
530+00
969.3

80 2654 98 5291

950

RAMP E

962.5

G-984.86
529+50
966.9

2G 3060 47 6032

950

Drainage Ditch

Drainage Ditch

Type "B" Headwall

L.F. Twin 48" Class A-1 @ 0.50%

6" Riprap (6" Reinf. Conc.)

G-984.64
529+00
963.6

24 3454 36 6622

950

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

Sta 529+00 to Sta 530+00

SEEDING	
END AREA	SQ. YDS.

REG. NO. 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

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

Profile West Rail Spur Going from 0+50

531+00

960

Profile West Rail Spur Going Straight North from 0+00

531+00

960

Profile West Rail

531+00
969.6

Profile West Rail

960

Profile & Slag Road

530+89
969.5

Profile & Slag Road

960

Rail

962.9

Ditch

G-985.30

530+50
969.3

Rail

Rail

960

30 2749 102 5003

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

Sta 530+50 to Sta 531+00

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

70
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

END WIDTH | TO YDS.

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 170 180 190 200 120 140

960 150

D L D L D

40 4180 139 5996

SEEDING	
END WIDTH	SQ. YDS.

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

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

140 120 100 80 60 40 20 0 20 40

960

966.4

140 150 160 170 180 190 200 120 140

D D

Edge Swamp

Swamp

Swamp

963.7

G-986.17
532+50
967.2

960

40 4180 139 5996

Rail

F.L. Pipe

Rail

Rail

2:1

2:1

963.5

G-985.96
532+00
968.3

960

Sta 532+30.26 Bk.& Ahd.
Bk-Use Area at Sta. 532+00
Ahd.-Use Area at Sta. 532+50

110 2296 224 4483

RAMP E

Rail

Rail

Rail

Rail

963.3

G-985.74
531+50
969.1

960

132 2546 248 4702

Rail

Rail

963.1

G-985.52
531+00
969.2

960

136 2532 154 4890

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

Sta. 531+00 to Sta. 532+50

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

71
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING

ENG. UNITS	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
50	4130	97	8023
54	4476	97	8256
50	4441	111	8165
70	4377	102	7923

Begin Road Ditch
Sta. 533+75

Edge Swamp
Swamp
Swamp
Swamp

965.2
G-987.05
534+50
966.4

964.3
G-986.83
534+00
965.6

964.1
G-986.61
533+50
965.1

963.9
G-986.39
533+00
965.9

970
967.1
967.1
140 150 160 170 180 190
960

970
966.9
140 150 160 170 180
960

970
966.7
140 160 170 180
960

960
966.6
140 150 160 170 180 190

38 L.F. 15" E-1 @ 0.50%
84 L.F. 15" A-1 @ 1.0%
25° Bend
Conc. Collar
40 L.F. 15" F.A.
25° Bend
0.0%
Ft. 967.0
Std. "E" Endwall
Dumped Rock for Channel Protection (15'x3'x1.5')

Sta. 533+00 19' Lt. # 8 C.B.
Grate 984.31
Ø 15" I-1 Class E-1 981.40

Sta. 533+00 19' Rt. # 8 C.B.
Grate 984.31
Ø 15" I-1 Class E-1 981.21
Ø 15" I-1 Class A-1 981.16

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

72
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING

END WIDTH	SQ. YDS.

End Sod Ditch
Sta 539+00

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

980.8 — 4:1 — G-988.85 539+00 980.1 — 4:1 — 979.0

970

974.2 — 2:1 — G-988.57 538+00 975.6 — 2:1 — 975.1

970

971.5 — G-988.15 537+00 971.3

C
970
968.0
140 150 160 170 180
C

Begin Sod Ditch Sta. 536+75

960

C

B
970
140 967.6 150 160
B

969.0 — G-987.71 536+00 969.8

960

B

A
970
140 967.3 150 160 170
A

967.4 — G-987.27 535+00 968.8

960

A

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

Sta. 536+00 to Sta. 539+00

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

SEEDING	
END WIDTH	SQ. YDS.

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

73
401

TRU-I-80-8.90
TRUMBULL COUNTY

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

G - 986.85
544+00
987.5
980

G - 987.72
543+00
986.8
984.6
980

G - 988.84
542+00
986.9
984.2
980

G - 988.78
541+00
987.2
983.8
980

G - 988.50
540+00
984.1
984.1
982.2
End Sod Ditch Sta. 540+00
970

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

Sta. 540+00 to Sta 544+00

	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 STATION	SQ. YDS.

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

74
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
5906	0	13485	0
4615	0	15046	0
3509	0	9960	0
1869	0	5498	0
1100	0	2758	28

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

G - 979.41
549+00
1003.2

990

1 | 1 | 6:1

969.9

G - 981.34
548+00
997.3

990

1 | 1 | 5:1

977.3

Sta. 547+00 19' Lt. #8 C.B.
Grate 981.00
℄ 15" I-1 Class E-1 978.50

Sta. 547+00 19' Rt. #8 C.B.
Grate 981.00
℄ 15" I-1 Class E-1 978.31
℄ 15" I-1 Class A-1 978.26

G - 983.07
547+00
995.6

38 L.F. 15" E-1 @ 0.50%

84 L.F. 15" A-1 @ 0.50%

4:1

980

2:1

977.7

Type E Headwall

Dumped Rock Channel Protection
10'x3'x1'-6"

2:1

G - 984.56
546+00
992.1

4:1

980

Begin Sod Ditch
Sta. 545+50

3:1

G - 985.84
545+00
990.1

4:1

980

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

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
8090	0	27,724	0
6880	0	23,680	0

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

B B 180 170 160 B 150 1000 B

G-974.87
551+00
1005.1

B 150 160 1000 B 990 B

A A 180 170 160 A 150 1000 A

66 L.F. 15" I-1 Class F-4

25° Bend

16 L.F. 15" E-1 @ 1.0%

10.0%

G-977.25
550+00
1004.1

990

Profile ℄ Ditch ℄ Sta. 549+75

Sta. 549+75 Type "E" Headwall

Dumped Rock for Channel Protection 10'L x 3'W x 1.5T

549+50
1002.5

990

Sta. 549+06 175' Lt. #2-2-A C.B.	
Grate	1004.08
Window	1003.75
℄ 15" I-1 Class A-1	1001.88

Sta. 549+44 175' Lt. #2-2-A C.B.	
Grate	1005.58
Window	1005.25
℄ 15" I-1 Class A-1	1001.70
℄ 15" I-1 Class D-1	1001.65

Profile ℄ Hubbard - Sharon Road

549+31.70
1003.2

990

990

Profile ℄ Ditch

549+13.50
1001.0

990

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

Sta. 549+13.50 to Sta. 551+00

SEEDING	
ENG. WORK	SQ. YDS.

FED. AID 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
8968	0	31192	0

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

D
D
180 170 160 150
990
D
G-966.45
554+00
990.2
980
Sta. 553+50
Begin Sod Ditch

C
C
170 160 150
990
C
G-969.43
553+00
995.6
990

B
B
170 160 150
1000
B
G-971.52
552+27
1002.9
2:1
B
150 160 170
990
B
990
2:1
Ground at Shed

A
A
180 170 160 150
1000
A
G-972.26
552+00
1004.5
A
150 160 170
1000
A
990

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

Sta. 552+00 to Sta. 554+00

SEEDING	
ENG. WIDTH	SQ. YDS.

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

77
401

TRU-I-80-8.90
TRUMBULL COUNTY

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

C
C-954.49
558+00
992.5
990
980
C
Elev 978.8
℄ 976.8
220 210 200 190 180 170 160 150
C

C
990
980
150 160 170
C

A
980
A

END AREA		VOLUME	
CUT	FILL	CUT	FILL
10802	0	34492	0

B
C-957.48
557+00
986.2
990
980
Elev. 982.4
2:1
2:1
℄ 980.4
2:1
200 190 180 170 160 150
B

B
970
2:1

7824 0 24589 52

A
A
C-960.47
556+00
981.7
A
990
980
8"-0"
C Elev. 9865
℄ 984.0
6"
180 170 160 150
A

970

5454 28 21059 52

Sta. 556+26 10' Lt. # 8 C.B.
Grate 956.35
℄ 15" I-1 Class A-1 952.07

C-963.46
555+00
986.9

970

5918 0 22502 0

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

Sta. 555+00 to Sta. 558+00

SEEDING

END WIDTH	SQ. YDS.

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

78
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
6288	0	13657	0
8462	0	17885	0
10854	0	20052	0

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

C
C
C
980
970
℄ 971.4
Elev. 973.47
190 180 170 160 150
G-950.00
559+50
970.5
960

B
B
B
980
970
℄ 973.2
Elev. 975.27
2:1
210 200 190 180 170 160 150
G-951.50
559+00
979.8
970
2:1

A
A
A
990
980
℄ 975.0
Elev. 977.0
210 200 190 180 170 160 150
G-952.99
558+50
989.3
A
980
970
150 160 170 180

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

Sta. 559+50 to Sta. 559+50

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

79
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING

END WIDTH	50 YDS.

END AREA		VOLUMES	
CUT	FILL	CUT	FILL
4304	0	5017	0
4772	0	19630	0
5828	0	11218	0

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

Profile ℄ Old Railroad

561+32
964.8

Drainage Ditch

Profile ℄ Old Railroad

960

C

Elev. 967.0

970

℄ 965.0

960

190 180 170 160 150

C

Sta. 561+32 26' Lt. №1 M.H
Cover 943.39
℄ 15" I-1 Class A-1 936.95
℄ 18" I-1 Class E-1 936.70
℄ 21" I-1 Class A-1 936.45
℄ 27" I-1 Class E-1 935.95

G-944.68
561+28
964.7

Drainage Ditch

960

Face of Abutment
New York Central
Railroad Bridge

B

Elev. 968.0

℄ 966.0

960

180 170 160 150

B

3.46%

3.17%

Sta. 560+95 Rt.
End Sod Ditch

G-945.52
561+00
962.1

960

2:1

2:1

122 L.F. 15" E-1 to №1 M.H.
26' Lt. Sta. 561+32

A

Sta. 561+00 95' Rt. №5 C.B.
Grate 943.14
℄ 15" I-1 Class A-1 940.94

G-948.51
560+00
966.6

960

A

980

2:1

℄ 969.6

Elev. 971.6

190 180 170 160 150

A

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

Sta. 560+00 to Sta. 561+32

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

80
401

TRU-I-80-8.90
TRUMBULL COUNTY

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

Sta. 562+06 158' Lt. Nº 2-3 C.B.
Grate 957.50
Window 956.30
℄ 27" I-1 Class D-1 953.75
℄ 36" I-1 Class D-1 953.00

Dike Elev. 963.1

Profile Ditch

180 170 160 150

960

Face of Abutment
New York Central
Railroad Bridge

Rail

Rail

Outlet Culvert

G-942.71
561+94
963.5

Face of Abutment
New York Central
Railroad Bridge

940

2907 125 6205 112

Profile East Rail

561+90.20
964.7

Profile East Rail

950

Profile ℄ Ditch

Culvert

G-943.66
561+62
954.2

No Ditch From Culvert South

950

Sta. 561+68 158 Lt. #2-3 C.B. Modified
Grate 963.4
Window 962.2
℄ 27" I-1 Class D-1 959.75

970

Dike
El. 964.0

960

964.0

180 170 160 150

G-944.02
561+50
961.6

Rail

Rail

4708 123 916 5

Face of Abutment
New York Central
Railroad Bridge

950

Nº 5 C.B. 72 L.F. 21" E-1 to Nº 1 M.H. 26' Lt. Sta. 561+32
3.46%

Sta. 561+45 Lt.
End Sod Ditch

Sta. 561+50 95' Lt. Nº 5 C.B.
Grate 941.64
℄ 21" I-1 Class A-1 938.94

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

Sta. 561+50 to Sta. 561+94

SEEDING	
SEED WIDTH	SEED LBS

PROJECT NO.	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

℄ OLD RAILROAD

23+00

T.W. Rail T.E. Rail

℄ OLD RAILROAD

22+00

ft Paved Gutter

Sta. 561+68 - 158' Lt. - #2-3 C.B.
Grate 963.4
Window 962.2
ft 27" Class D-1 959.75

38 L.F. 27" D-1 @ 15.8%

50 L.F. 36" Pipe under R.R. cl. D-1 @ 6.0%

21+50 (Interpolated)

Dike Elev. 956.0

Sta. 562+06 158' Lt. #2-3 C.B.
Grate 957.50
Window 956.30
ft 27" Class D-1 953.75
ft 36" Class D-1 953.00

Sta 562+54 148' Lt. # 2-3 C.B.
Grate 955.00
Window 953.80
ft 36" I-1 Class D-1 950.00
ft 36" I-1 Class D-1 949.95

℄ OLD RAILROAD

Dike Elev. 961.0

21+00

℄ OLD RAILROAD

20+00

T.W. Rail T.E. Rail

℄ OLD RAILROAD

19+00

See Sheet Nº 40
For Channel X-Sections

℄ OLD RAILROAD

18+00

℄ OLD RAILROAD

T.W. Rail T.E. Rail

17+00

Fence

960 960 960 960 960 950

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

NEW YORK CENTRAL RAILROAD

SEEDING	
END WIDTH	SQ. YDS.

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

82
401

TRU-I-80-8.90
TRUMBULL COUNTY

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

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

G-936.55
564+00
961.7

A
150 160 170
960
950

Sta. 564+00 Lt.
Begin Sod Ditch

Sta. 563+00 19' Lt. *8C.B.
Grate 937.46
℄ 15" I-1 Class E-1 935.07
℄ 15" I-1 Class E-1 935.02

Sta. 563+00 19' Rt. *8C.B.
Grate 937.46
℄ 15" I-1 Class E-1 935.26

G-939.54
563+00
956.2

950

2:1

38 L.F. 15" E-1 @ 0.50%

Sta. 562+75 26' Lt. Nº 1 M.H.
Cover 939.11
℄ 15" I-1 Class E-1 932.75
℄ 27" I-1 Class A-1 931.75
℄ 36" I-1 Class B-1 931.00
℄ 42" I-1 Class A-1 930.50
℄ 42" A-1 @ Hwe. Rt. 927.00

G-940.11
562+81
950.0

950

Dike Elev. 956.00

950

52 L.F. 36" D-1 @ 31.6 %

74 L.F. 36" A-1 @ 3.30 %

Sta. 562+72 100' Lt. # 1 M.H.
Cover 939.85
℄ 36" I-1 Class D-1 933.52
℄ 36" I-1 Class A-1 933.47

164 L.F. 42" A-1 @ 2.14 %

74 L.F. 36" Class A-1 @ 3.30 %

4:1

164 L.F. 42" A-1 @ 2.14 %

Face of Abutment
New York Central
Rail Road Bridge

Dumped Rock for
Channel Protection
25' x 13' x 3'

Sta. 562+54 148' Lt. Nº 2-3 C.B.
Grate 955.00
Window 953.80
℄ 36" I-1 Class D-1 950.00
℄ 36" I-1 Class D-1 949.95

G-941.87
562+22
948.6

940

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

Sta. 562+22 to Sta. 564+00

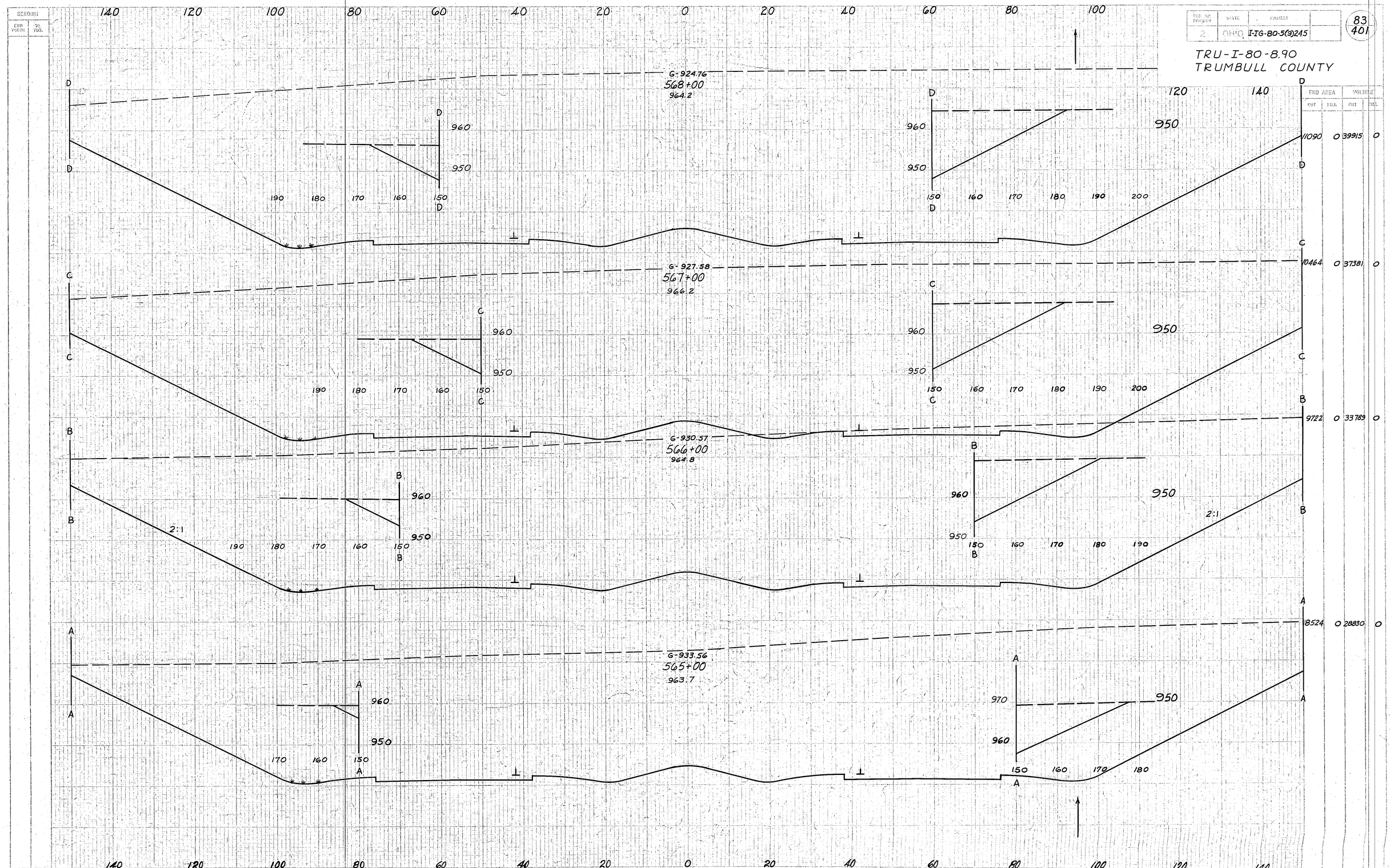
SEEDING	
END AREA	CU. YDS.

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

83
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
11090	0	39915	0
10464	0	37381	0
9722	0	33769	0
8524	0	28830	0



TRU-I-80-8.40
TRUMBULL COUNTY

SEEDING	
LND WIDTH	SD LBS.

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

6:1

915.4

4:1

900

G-920.92
574+58
927.6

2:1

897.0

7:1

915.6

3:1

920

G-920.23
574+00
932.2

Sta. 574+25
Begin Dumped Rock for Channel Protection
7' X 2.5'

℄ 916.73

6:1

8:1

915.9

2:1

920

Sta. 573+25 19' Lt. #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

G-919.49
573+00
937.7

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

℄ 916.97

2:1

916.3

2:1

930

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

Sta. 573+00 to Sta. 575+00

SEEDING

END WIDTH	SQ. YDS.

		I-IG-80-5(9)245	

86
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

2:1

190 180 170 160 150 140

890.1

890

B B B B

G-923.49
576+00
895.5

4:1 4:1

Ditch

915.12

890

273 4769.615 11590

170 160 150 140

890.3

890

A A A A

G-921.98
575+25
903.1

5:1 4:1

915.3

900

170.3576 167.3098

Sta. 575+40
End Dumped Rock
for Channel Protection
9' x 2.5'

Dumped Rock for
Channel Protection
9' x 2.5'

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

Sta. 575+25 to Sta. 576+00

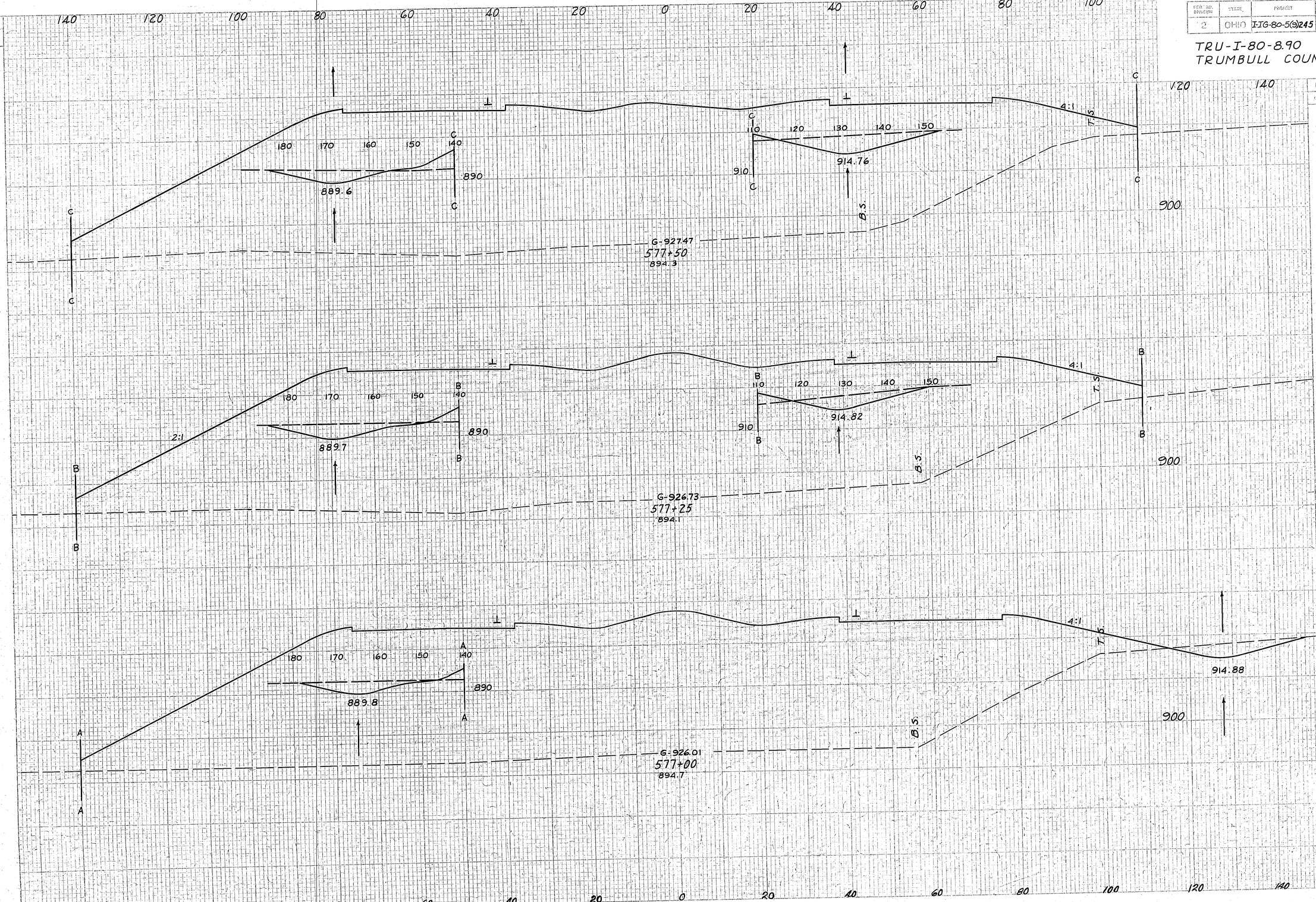
SEEDING	
SEED WIDTH	SQ. YDS

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

87
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUMES	
CUT	FILL	CUT	FILL
1766228	153 5782		
1556262	134 5711		
1346073	754 20078		



Sta. 577+00 to Sta. 577+50

SECOND

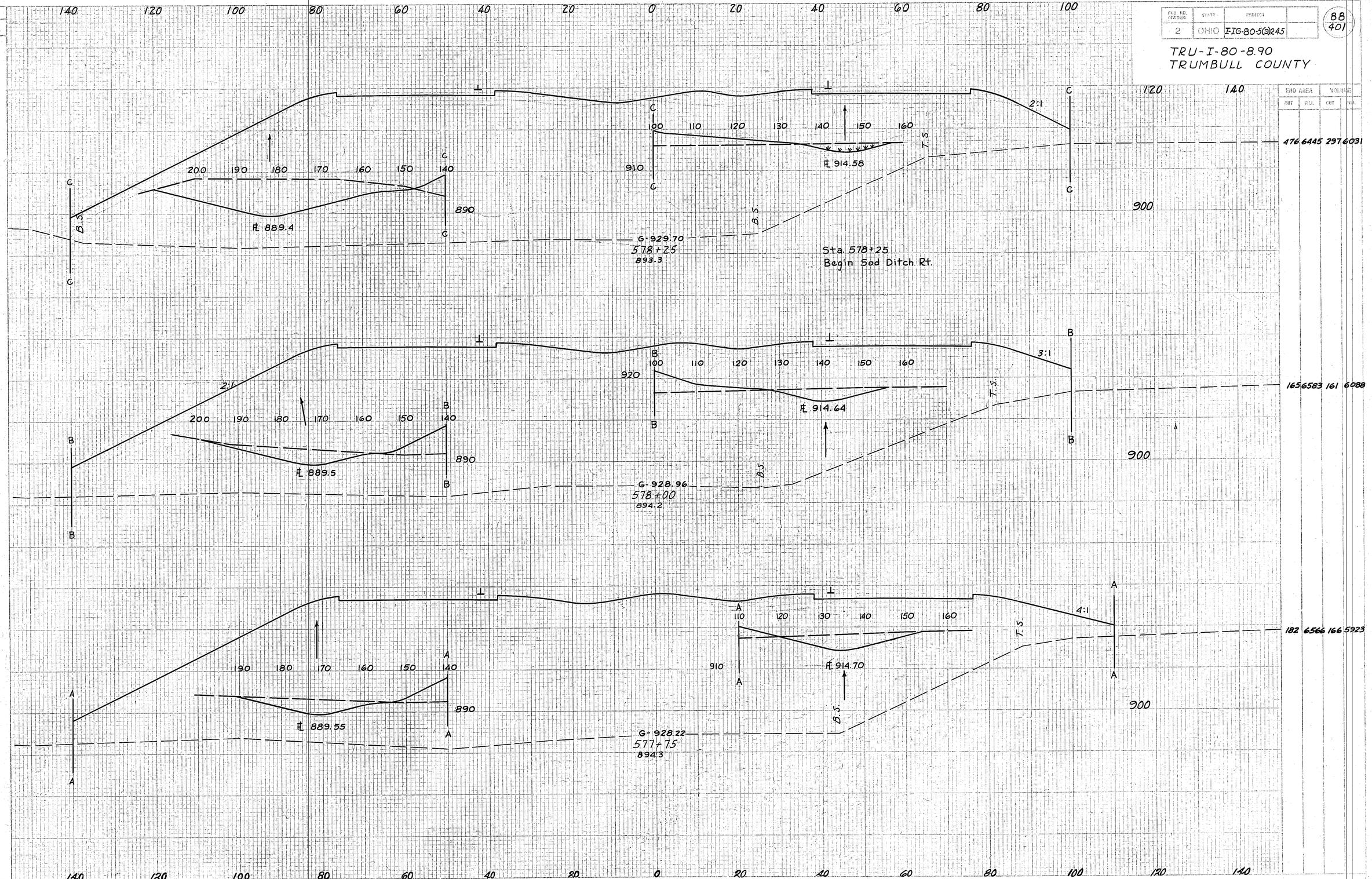
2ND. SHEETS	SQ. FEET

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

88
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
476	6445	297	6031
165	6583	161	6088
182	6566	166	5923



SEEDING	
SEED MIXTURE	LBS. PER ACRE

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

89
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

200 190 180 170 160 150 160 C 890 C
℄ 889.2
B.S.
C 130 140 150 160 170 180 900 C
℄ 900.3
C 890 C
275 6918 226 6136
G-931.93
579+00
900.2

200 190 180 170 160 150 140 B 890 B
℄ 889.25
B.S.
B 910 110 120 130 140 150 170 B
℄ 907.5
2:1
B 890 B
213 6335 178 5617
G-931.18
578+75
900.2

200 190 180 170 160 150 140 A 890 A
℄ 889.3
B.S.
A 910 105 110 120 130 140 150 160 A
℄ 912.7
A 890 A
171 5798 3005668
G-930.44
578+50
897.1

Sta. 578+50 Ditch Rt.
Begin Dumped Rock
Channel Protection
8'W X 30"D

Sta. 578+50
End Sod Ditch Rt.

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

Sta. 578+50 to Sta. 579+00

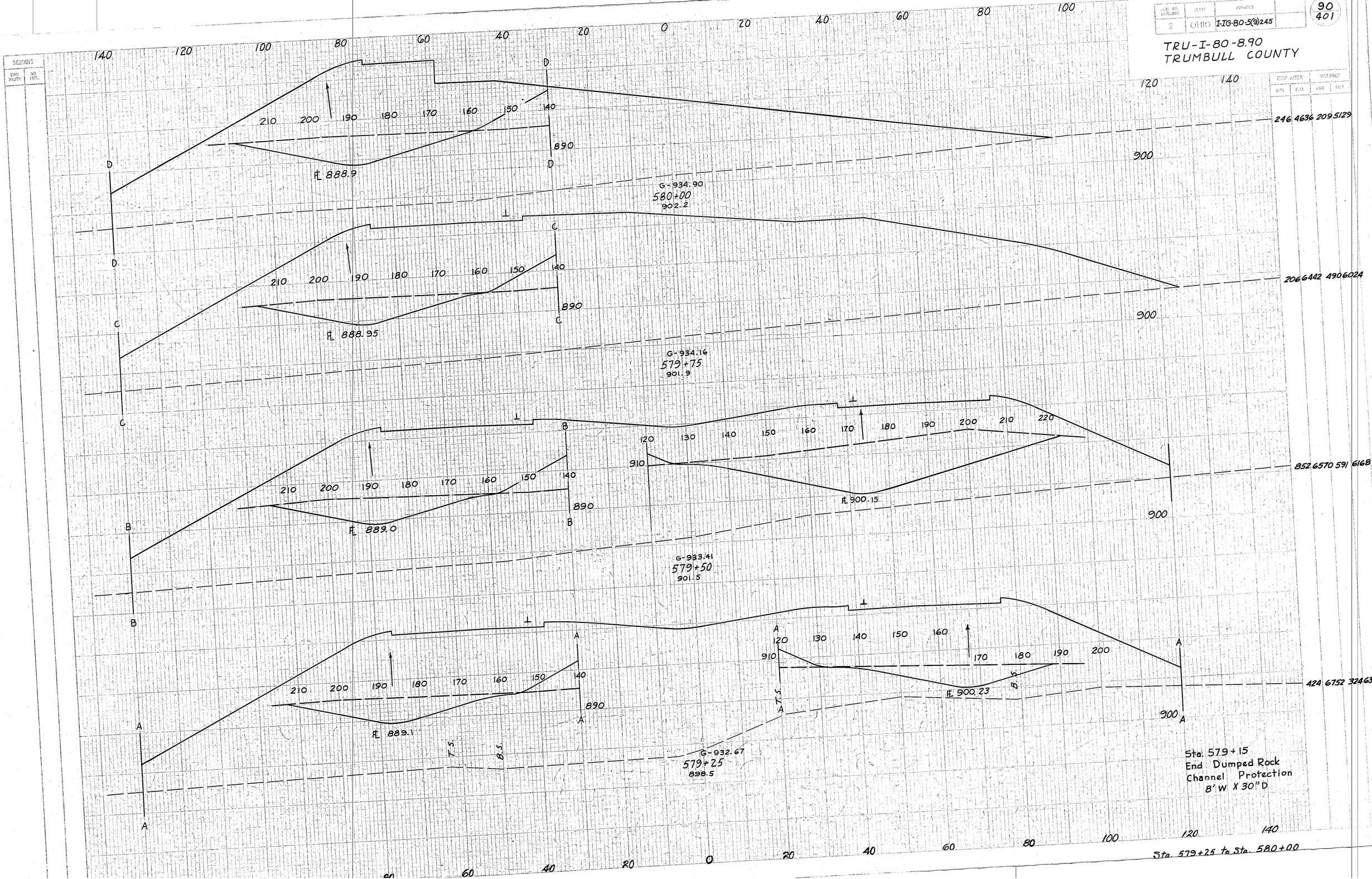
SEEDING	
ENG WIDTH	SQ YDS.

SHEET NO.	STATE	PROJECT
2	OHIO	I-TG-80-5(9)245

90
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
246.4636	209.5129		
2066442	4906024		
852.6570	591.6168		
424.6752	324.6324		



SHEETING	
ENG WIDTH	SO FTG

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

91
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

Edge of Creek

580+95
888.9

210 200 190 180 170 160 150 140

℄ 888.3

890

BRIDGE

880

Top Water
Top Creek Bank

B.S.

G-937.12
580+75
894.1

Sta. 580+60
Stop Earthwork
Area = 0

580+60 0 0 36 95

210 200 190 180 170 160 150 140

℄ 888.7

890

T.S.

B.S.

193 514 165 1087

G-936.38
580+50
901.5

890

200 190 180 170 160 150 140

℄ 888.8

890

T.S.

163 1834 189 2995

G-935.64
580+25
902.0

890

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

Sta. 580+25 to Sta. 580+95

SEEDING	
END WIDTH	SQ. YDS.

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

92
401

TRU-I-80-8.90
TRUMBULL COUNTY

FILL AREA		VOLUME	
CUT	FILL	CUT	FILL

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

BRIDGE

B.S. and Ballast

T.S. and Ballast

W. Rail

G-940.84
582+00
911.0

900

BRIDGE

G-940.15
581+77
910.5

900

890

581+50
891.8

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

Sta. to Sta. 582+00

SEEDING	
SQ. YDS. WIDTH	SQ. YDS.

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

93
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

W. Rail
E. Rail
T. Ballast
B. Ballast
T.S.
B.S.
Fence

G-942.32
582+50
905.2

190 180 170 160 150 140

910

4:1 4:1 12:1

℄ 908.0

A A

135 2600 62 1204

890

A A

150

900

℄ 893.13

Begin Sod Ditch
Sta. 582+30

BRIDGE

Sta. 582+25
Start Earthwork
Area = 0

B. Ballast
T. Ballast
W. Rail
E. Rail
T. Ballast
B. Ballast
T.S.

G-941.58
582+25
913.6

900

0 0 0 0

West Rail Erie-Lackawana R.R.

582+25
913.59

West Rail Erie-Lackawana R.R.

900

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

Sta. 582+25 to Sta. 582+50

SECTION	
END WIDTH	32

	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

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

22+00

21+00

20+00
=I-80 STA. 582+12.77

19+00

18+00

T. Rail T. Rail

E.W.

910

FOR PIPE CULVERT
LOCATION & DETAILS
SEE SHEET 301

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

ERIE - LACKAWANNA RAILROAD

SEEDING

ENG. YARDS	SQ. YDS.

PRO. 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

79 13528 78 11466

90 11238 87 8882

98 7948 108 4883

C
200 190 180 170 160 150
℄ 891.8
12:1
900
C
G-944.55
583+25
893.7
C
150 160 170 180 190
℄ 893.32
900
C
120 140
880

B
200 190 180 170 160 150
℄ 893.9
890
B
G-943.81
583+00
894.5
B
150 160 170 180 190 200 210
℄ 893.25
900
B
880

A
2:1
℄ 901.0
G-943.06
582+75
892.3
A
900
150 160 170 180 190 200 210 220
℄ 893.19
A
890

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

Sta. 582+75 to Sta. 583+25

SEEDING	
LBS/ACRE	LBS/SQ YD

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

22 14342 55 13092

96 13936 80 12556

78 13184 73 12367

G-946.78
584+00
891.9

G-946.04
583+75
893.9

G-945.29
583+50
893.3

℄ 890.3

℄ 893.51

℄ 890.8

℄ 893.45

℄ 891.2

℄ 892.4
Std. "E" Edw.

℄ 893.38

Dumped Rock for
Channel Protection
(15' x 3.0' x 1.5')

86 L.F. 15" A-1 @ 1.00 %

100 L.F. 15" F-4

Conc. Collar

25° Bend

25° Bend

Sta. 583+50 ℄ No. 8 C.B.
Grate 940.80
℄ 15" I-1 Class A-1 937.44

Sta. 583+50 to Sta. 584+00

SEEDING	
SEED WIDTH	SEED TYPE

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

97
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

Sta. 584+60 - Ditch Rt.
Begin Dumped Rock
Channel Protection
17' W x 30" D

End Sod Ditch
Sta. 584+60

52 14590 68 13356

G-949.00
584+75
897.1

96 14260 61 13294

G-948.26
584+50
897.3

36 14456 27 13332

G-947.52
584+25
896.4

℄ 890.12
℄ 890.18
℄ 890.24
℄ 893.70
℄ 893.64
℄ 893.57

4:1
12:1
2:1

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

220 210 200 190 180 170 160 150

900
880

SEEDING	
END WIDTH	SQ. YDS.

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

98
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

C C

230 220 210 200 190 180 170 160 150

2:1 12:1 4:1 4:1

℄ 889.94

900

C C

150 160 170 180 190 200 210

12:1 4:1 2:1

℄ 897.8

900

Swamp Swamp

G-951.23
585+50
896.4

890

104 14912 119 13612

B B

240 230 220 210 200 190 180 170 160 150

2:1 4:1 4:1 12:1

℄ 890.00

900

B B

150 160 170 180 190 200 210

2:1

℄ 896.4

900

Swamp Swamp

G-950.49
585+25
896.6

890

153 14490 146 13376

A A

220 210 190 180 170 160 150

2:1 2:1 4:1 4:1 12:1

℄ 890.06

900

A A

150 160 170 180 190 200 210

2:1 12:1 4:1 4:1

℄ 895.0

900

G-949.75
585+00
896.7

890

163 14402 100 13422

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

Sta 585+00 to Sta. 585+50

SEEDING	
END WIDTH	NO. LBS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

99
401

TRU-I-80-8.90
TRUMBULL COUNTY

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

240 230 220 210 200 190 180 170 160 150

C

12:1 4:1 4:1

℄ 889.7

900

C

Swamp

G-953.46

586+25
893.8

C

150 160 170 180 190 200 210 220 230 120 140

910

12:1 4:1 4:1

℄ 901.8

185/4992 104/3725

890

240 230 220 210 200 190 180 170 160 150

B

2:1

888.9

900

B

Swamp

G-952.72

586+00
893.7

25° Bend

64 L.F. 15" A-1E 1.10%

Conc. Collar

B

150 140 170 180 190 200 210 220

910

2:1

℄ 900.5

40/4654 45/3551

890

B

220 210 190 180 170 160 150

A

136 L.F. 15" C-4

4:1 4:1 12:1

25° Bend

0.0%

℄ Ditch 889.0

℄ 890.7

Dumped Rock 15'x3'x1.5'

Pad

Standard "E" Endwall

900

A

Swamp

G-951.98

585+75
895.1

Sta. 585+75 19' Lt. # 8 C.B.
Grate 949.89
℄ 15" I-1 Class E-1 946.35
℄ 15" I-1 Class A-1 946.30

A

150 160 170 180 190 200 210 220 240

900

12:1 4:1 4:1

℄ 899.1

57/4616 74/3670

890

A

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

Sta. 585+75 to Sta. 586+25

SEEDING	
END WIDTH	SQ. YDS.

FED. ROAD 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
124	12308	135	12158
167	13954	152	13129
162	14404	161	13609

130 L.F. 15" E-1 @ 3.67% δ
to Nº 8 C.B. 19 Lt. Sta. 585+75

Sta. 587+00 19 Rt. # 8 C.B.
Grate 953.60
℄ 15" I-1 Class E-1 950.39

℄ 891.8
Drainage Ditch
G-955.69
587+00
905.2
B.S.

℄ 891.1
Swamp
G-954.94
586+75
893.6
Swamp
B.S.

℄ 890.4
E. Swamp
Swamp
E. Swamp
G-954.20
586+50
893.7

Sta. 586+45
End Dumped Rock Channel Protection
17' W x 30" D

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

101
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

0 3522 3 4704

6 6638 15 7738

27/10078 7010363

Sta. 587+25 to Sta. 587+75

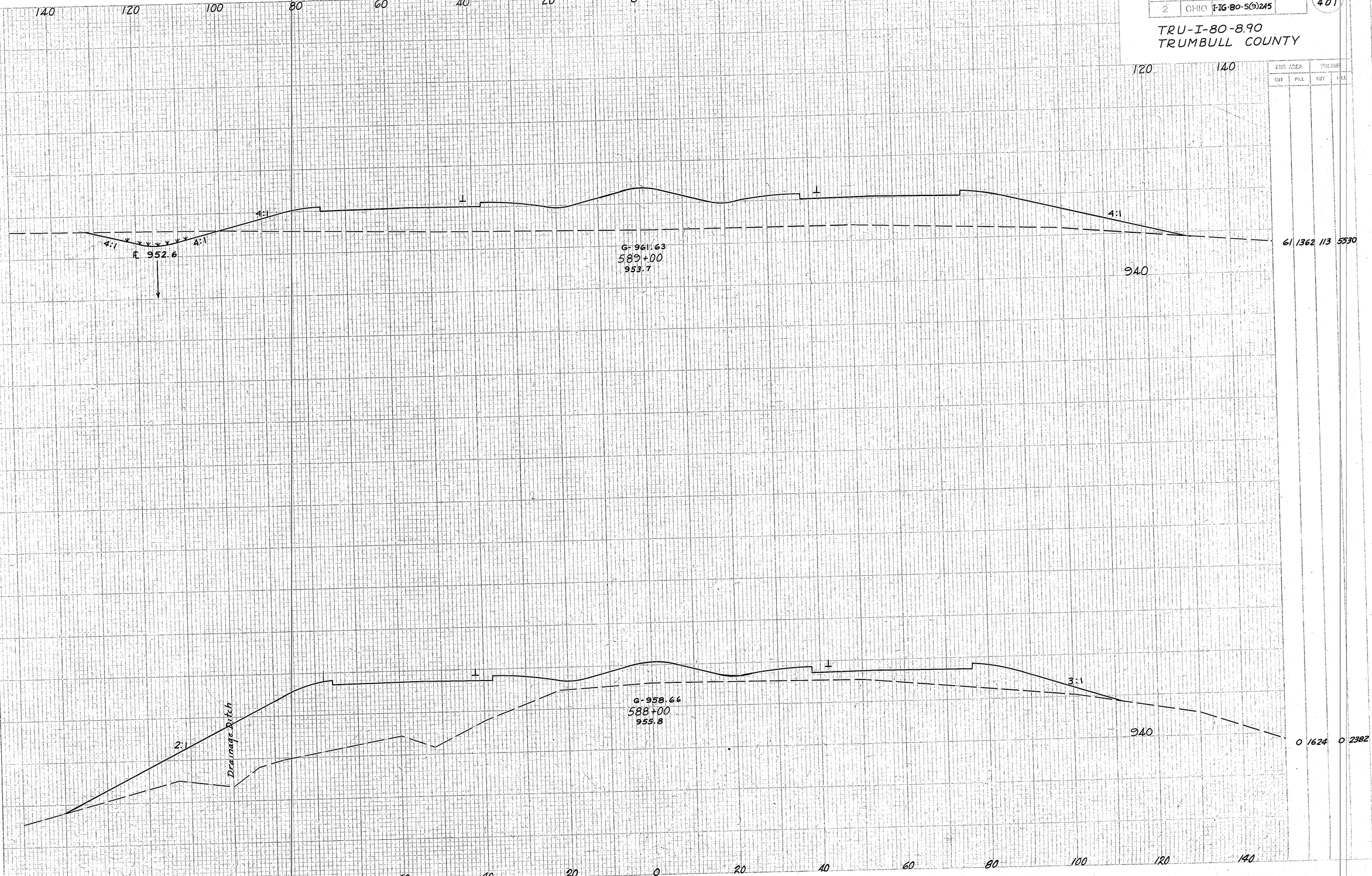
FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

102
401

TRU-I-80-8.90
TRUMBULL COUNTY

BEARING	
END AREA	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		61	1362
		113	5530
		0	1624
		0	2382



Sta. 588+00 to Sta. 589+00

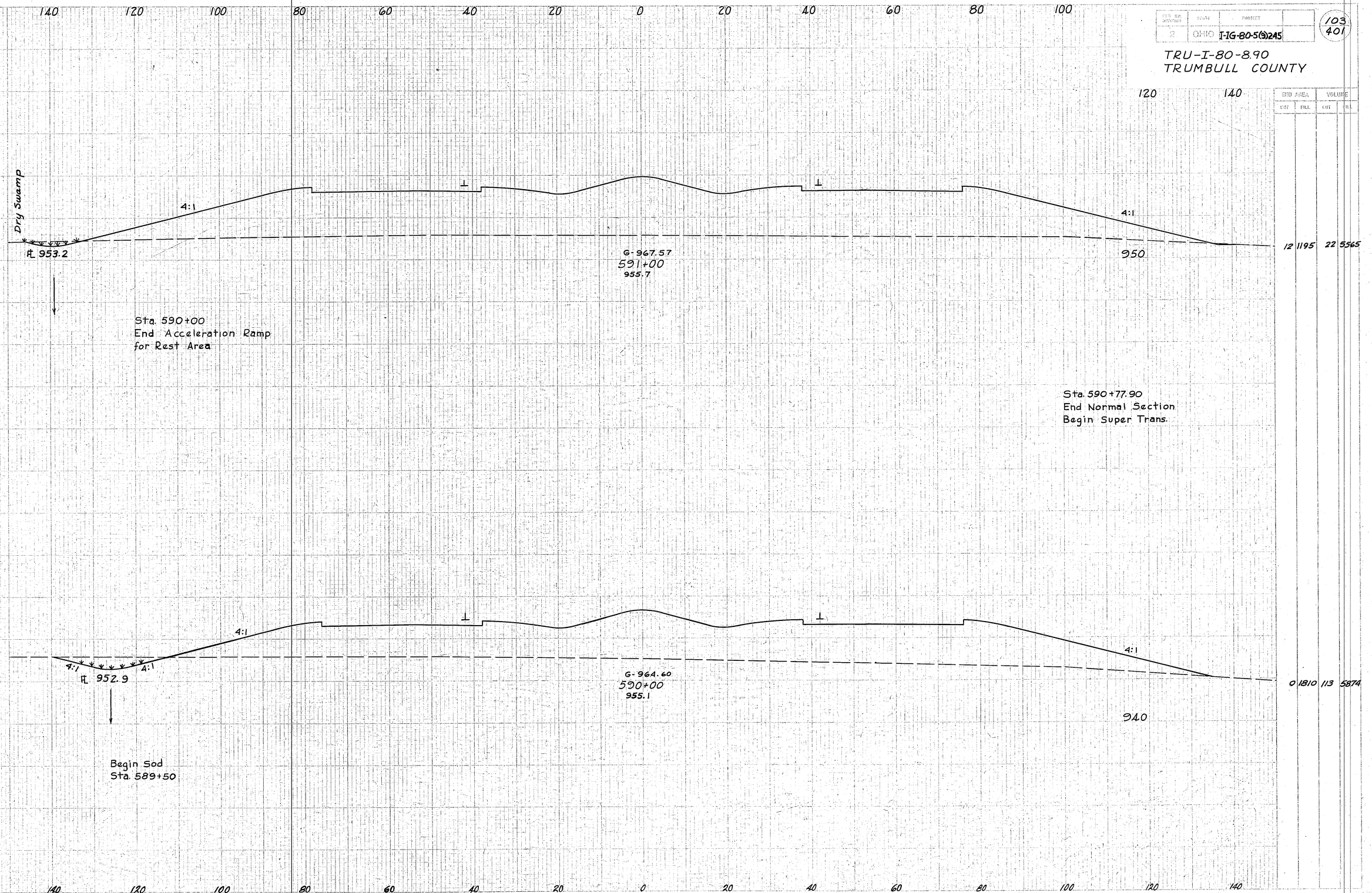
SEEDING	
END WIDTH	SQ YDS.

FED. RTE. DESIGNATION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)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



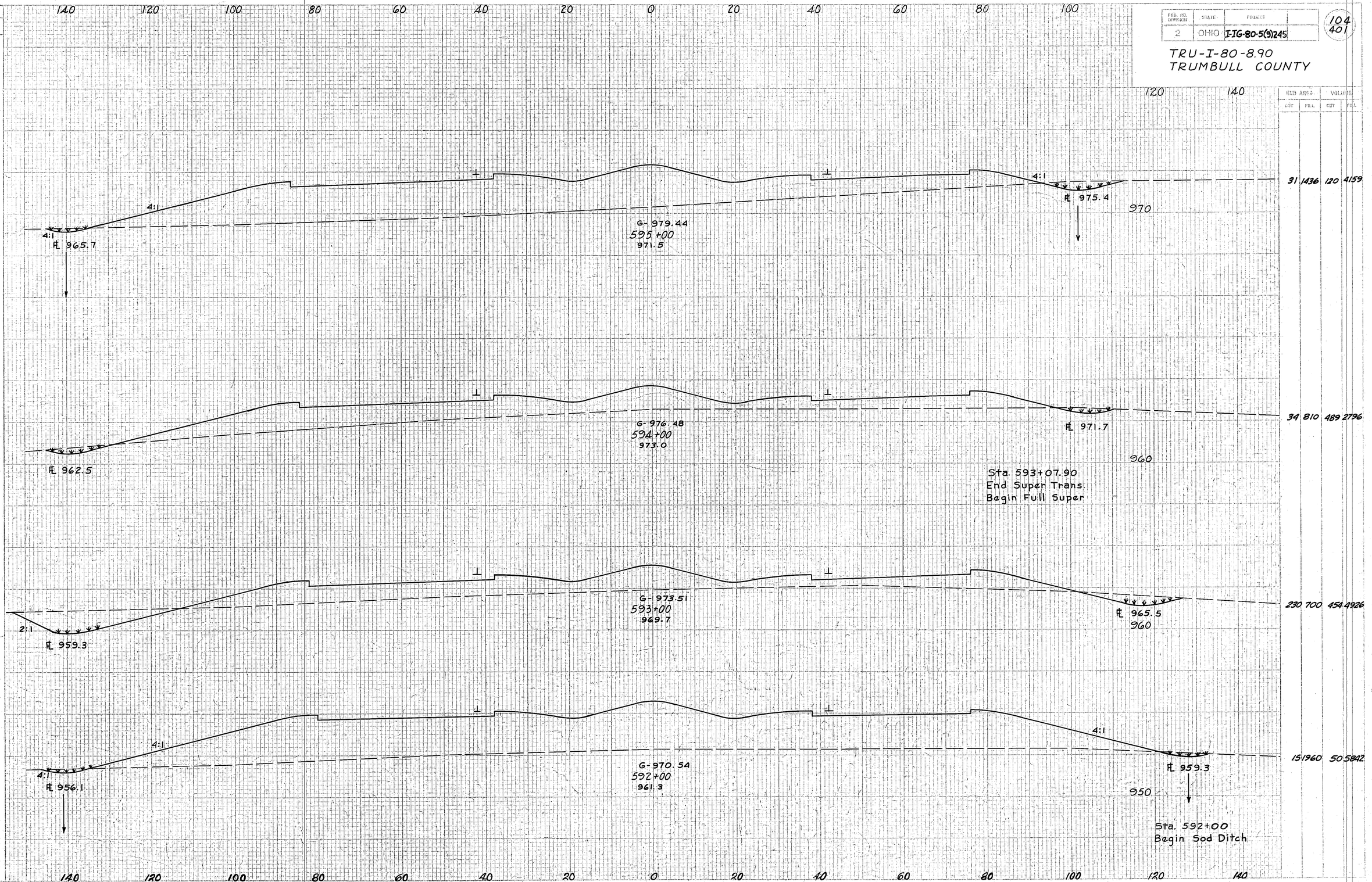
SEEDING	
EXT. WIDTH	SQ. YDS.

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

104
401

TRU-I-80-8.90
TRUMBULL COUNTY

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

SEEDING	
FTO WIDTH	SQ YDS

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

105
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

4:1
℄ 979.2
G-991.33
599+00
985.1
℄ 984.8
980
50 1258 341 4233

3:1
℄ 976.5
G-988.36
598+00
982.5
℄ 981.3
980
134 1028 418 4404

3:1
℄ 973.8
38 L.F. 15" E-1 @ 2.63 %
94 L.F. 15" A-1 @ 1.19 %
Dumped Rock
11'x30'x1'-6"
G-985.39
597+00
978.1
℄ 978.08
Std. "E" Edw.
℄ 977.8
970
92 1350 367 5248

Sta. 597+00 19' Lt. # 8 C.B.
Grate 983.53
℄ 15" I-1 Class E-1 980.25

Sta. 597+00 19' Rt. # 8 C.B.
Grate 983.30
℄ 15" I-1 Class E-1 979.25
℄ 15" I-1 Class A-1 979.20

4:1
3:1
℄ 971.0
G-982.42
596+00
972.6
℄ 976.6
970
106 1484 254 5407

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

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

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

Sta. 3+00

℄ 994.9

980

G-1003.21
603+00
℄ 994.7

20.1392 106.5304

RAMP G

Sta. 2+02

℄ 992.7

980

990.3

G-1000.24
602+00
℄ 990.7

37.1472 167.5574

4:1

℄ 990.5

980

G-997.27
601+00
987.8

53.1538 146.5537

4:1

℄ 988.3

980

℄ 986.7

G-994.30
600+00
℄ 987.2

26.1452 141.5018

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

Sta. 600+00 to Sta. 603+00

SEEDING	
END WIDTH	SQ. YDS.

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

107
401

TRU-I-80-8.90
TRUMBULL COUNTY

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

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

℄ Road

Ditch

Ditch

G-1013.32

G-1013.95

38 L.F. 15" D-1 @ 0.58 %

62 L.F. 21" A-1 @ 1.00 %

62 L.F. 18" A-1 @ 0.78 %

1010

607+00
1014.6

Sta. 607+00 81' Lt. # 8 C.B.
Grate 1011.50
℄ 18" I-1 Class A-1 1007.20
℄ 21" I-1 Class A-1 1006.95

Sta. 607+00 19' Lt. # 8 C.B.
Grate 1011.47
℄ 18" I-1 Class A-1 1007.68
℄ 15" I-1 Class E-1 1007.93

Sta. 607+00 19' Rt. # 8 C.B.
Grate 1011.86
℄ 15" I-1 Class E-1 1008.15

End Sod Ditch
Sta. 606+00

G-1011.13

G-1011.58

℄ 1010.8

1000

606+00
1009.2

RAMP G

G-1008.71

G-1008.98

℄ 1005.3

1000

605+00
1004.5

G-1006.07

G-1006.17

℄ 999.1

990

604+00
999.0

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

SEEDING	
CUBIC YARDS	SQ. YDS.

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

108
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1420	0	3574	(22)

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

℄ Road

Ditch

RAMP G

G - 1015.30

608+00
1021.09

G - 1016.12

3:1

1010

Profile ℄ Ditch

607+47
1015.43

Profile ℄ Ditch

1010

Profile ℄ Road

607+32
1017.23

Profile ℄ Road

1010

Profile ℄ Ditch

607+14.50
1015.6

Profile ℄ Ditch

1010

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

Sta 607+14.50 to Sta 608+00

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

109
401

TRU-I-80-8.90
TRUMBULL COUNTY

SECTIONS		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL

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

PARKING AREA

612+00
1038.5
G-1020.99
G-1022.62
8:1
1030
3632 12248

611+00
1033.0
G-1019.89
G-1021.32
8:1
1:1
2:1
1020
2982 9915

RAMP G

610+00
1028.4
G-1018.58
G-1019.80
8:1
1020
2372 7859

609+00
1025.4
G-1017.05
G-1018.07
8:1
2:1
1020
1872 6096

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

Sta. 609+00 to Sta. 613+00

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

110
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING

END WIDTH	SQ YDS.

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

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

616+00
1050.2
G-1023.14
G-1025.69
8:1
1040

615+00
1046.5
G-1022.93
G-1025.24
8:1
1040

Parking Area

614+00
1044.0
G-1022.50
G-1024.59
8:1
8:1
1:1
2:1
1040

613+00
1041.8
G-1021.85
G-1023.71
8:1
1040

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

Sta. 613+00 to Sta. 616+00

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

111
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
8514		30656	
8040		28648	
7430		25839	
6523		22892	

620+00
1060.7

619+00
1059.5

618+00
1057.3

617+00
1053.5

RAMP H

G-1021.74
G-1025.31
G-1022.42
G-1025.72
G-1022.88
G-1025.93
G-1023.12
G-1025.92

8:1
2:1
1:1
1050
1040
+56

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

Sta. 617+00 to Sta. 620+00

SECTIONS	
END WIDTH	SIDE SLOPE

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

112
401

TRU-I-80-8.90
TRUMBULL COUNTY

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

623+62

Sta. 623+62 80' Lt. # 6 C.B.
Grate 1017.14
Ø 15" I-1 Class A-1 1013.47

1016.95
1013.28
3.67 deep

54 L.F. 15" I-1 @ 6.18% to #1 M.H.

623+00
1059.0

8387 29661

2:1
1:1
8:1

1050

Ramp Sta. 22+51
G-1017.76

G-1018.38

G-1022.77

RAMP H

622+50

Sta. 622+50 - 89' Lt. # 8 C.B.
Grate 1017.30
Ø 15" I-1 Class E-1 1014.91

622+00
1056.2

G-1023.18

7630 29485

Ramp Sta. 21+49
G-1019.71

G-1019.72

G-1023.83

Sta. 621+01.16
End Full Super
Begin Super Trans.

621+00
1059.6

8292 31122

G-1020.85

G-1024.67

SEEDING	
END WIDTH	SQ. YDS.

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

113
401

TRU-I-80-8.90
TRUMBULL COUNTY

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

626+00
1047.2

625+00
1052.5

624+00
1056.7

RAMP H

G-1013.03
G-1018.29
G-1015.04
G-1020.00
G-1016.82
G-1021.49

2:1
1:1
8:1
1040
1050

54 L.F. 15" E-1 @ 6.18%

To #6 C.B Lt.

Sta. 623+62 - 25' Lt. # 1 M.H.
Cover 1016.14
15" I-1 Class A-1 1010.14
15" I-1 Class E-1 1010.09

Sta. 623+31.16
End Super Trans.
Begin Normal Section

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

Sta. 624+00 to Sta. 626+00

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

114
401

TRU-I-80-8.90
TRUMBULL COUNTY

SHEARING

END WIDTH	SQ. YDS

END AREA		VOLUME	
CUT	FILL	CUT	FILL
2238		14022	
3274		13841	
4200		19418	
6286		26163	

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

630+00
1013.5
G-1002.80
G-1009.32
3:1
8:1
8:1
2:1
1010

629+00
1020.8
G-1005.69
G-1011.88
2:1
1:1
8:1
1020

Begin Sod Ditch
Sta. 629+00

628+00
1028.9
G-1008.36
G-1014.24
1030

627+00
1040.6
G-1010.81
G-1016.37
2:1
1:1
8:1
8:1
2:1
1030

Sta. 627+50 19' Lt. ℄ S.C.B.
Grate 1007.53
℄ 18" I-1 Class E-1 1005.08
℄ 15" I-1 Class E-1 1005.32
℄ 15" I-1 Class D-1 1005.32

Sta. 627+50 19' Rt. ℄ S.C.B.
Grate 1013.25
℄ 15" I-1 Class D-1 1011.05

38 L.F. 15" D-1 @ 15.10%

Sta 627+00 to Sta 630+00

SEEDING	
EQUIV. WIDTH	SQ. YDS.

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

115
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
52	1443	106	3374
5	703	481	1663
255	195	2465	383
1076	12	6248	87

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

G-990.80
4:1
℄ 981.3
4:1
℄ 980.8
Type "E" Endwall
88 L.F. 18" I-1 @ 1.40%
634+00
985.9

Sta. 634+00 25' Lt. #1 M.H.
Cover 989.50
℄ 18" I-1 Class E-1 982.75
℄ 18" I-1 Class A-1 982.70

G-996.91
2:1
12:1
4:1
℄ 983.9
980
4:1

Structure
8:1
℄ 991.0
G-993.80
633+00
993.8

G-1000.33
4:1
℄
Pitch
Structure
990

2:1
Dike Elev. 994.0
+50
℄ 991.0
5:1
℄ 990.5
G-996.80
632+00
999.3

G-1003.54
6:1
℄ 998.7
1000
4:1

G-999.80
8:1
℄ 997.6
631+00
1006.0

G-1006.54
8:1
2:1
1010

Sta. 631+00 to Sta. 634+00

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

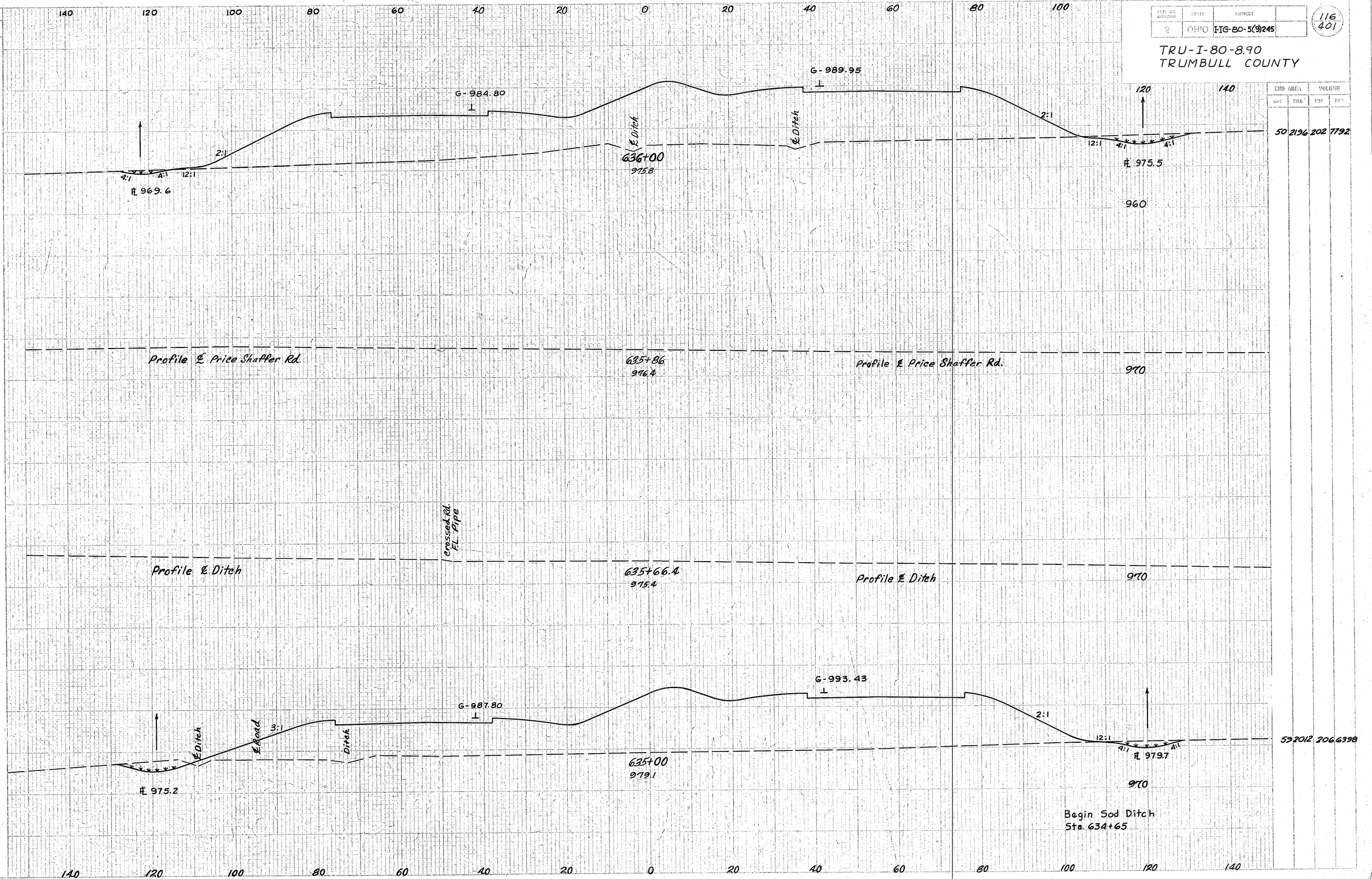
116
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING

END WIDTH	SQ. YDS.

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



Sta. 635+00 to Sta. 636+00

SEEDING	
SEED WIDTH	SQ. YDS.

FED. ROAD PROJECT	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

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

G-975.80
G-979.51
2:1
2:1
4:1 12:1
4:1 12:1
℄ 957.8
639+00
962.9
℄ 962.9
950
80.2777 235.1000
Sta. 638+28.51
End Normal Section
Begin Super Trans.

G-978.80
G-982.99
℄ 960.9
638+00
966.2
℄ 967.1
960
47.2627 217.9546

Sta. 637+50 19' Lt. *8C.B.
Grate 978.22
℄ 15" I-1 Class E-1 974.24
℄ 15" I-1 Class A-1 974.19

Sta. 637+50 19' Rt. *8C.B.
Grate 982.66
℄ 15" I-1 Class E-1 979.36

G-981.80
G-986.47
2:1
2:1
92 L.F. 15 A-1 @ 10.50 %
38 L.F. 15" D-1 @ 13.48 %
℄ Ditch
℄ Road
4:1 4:1 12:1
12:1 4:1 4:1
℄ 964.0
962.5
℄ 964.5
Std. "E" Endwall
Dumped Rock for
Channel Protection
(15 x 3 x 1.5)
℄ 971.3
960
70.2528 222.8748
637+00
969.5

℄ Pipe Crosses Road

Profile ℄ Ditch
636+02
974.5
Profile ℄ Ditch
960

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

Sta. 636+02 to Sta. 639+00

SEEDING	
END STATION	SQ. YDS.

CO. RTE. STA. NO.	STATE	PROJECT	
2	OHIO	IHG-80-5(9)245	

118
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

G-963.80 ⊥ G-965.59 ⊥

2:1 2:1

4:1 4:1 12:1

℄ 945.4

643+00
949.1

950

65 3004 285 11004

G-966.80 ⊥ G-969.07 ⊥

End Sod Ditch
Sta. 642+31

642+00
952.4

950

89 2973 326 10859

℄ 948.5 ℄ 950.3

G-969.80 ⊥ G-972.55 ⊥

641+00
955.6

950

87 2891 272 10596

℄ 951.6 ℄ 954.5

Sta. 640+58.51
End Super Trans.
Begin Full Super

G-972.80 ⊥ G-976.03 ⊥

2:1 2:1

4:1 4:1 12:1 12:1 4:1 4:1

640+00
958.8

950

60 2831 259 10385

℄ 954.7 ℄ 958.7

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

Sta. 640+00 to Sta. 643+00

SECTIONS	
END VFOOTS	SQ. YDS.

FED. HWY. DIVISION	STATE	PROJECT	
2	OHIO	HG-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

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

G-954.80
G-955.16
2:1
12:1
4:1
4:1
℄ 936.1
646+00
932.3
120
140
2:1
℄ 931.0
302'-60" A-1 @ 3.28%
930
12:1
4:1
4:1
℄ 933.1
Type "B" Headwall
Sta. 646+50

G-956.30
G-956.89
940
℄ 937.65
645+50
937.4
℄ 934.2

G-957.80
G-958.63
940
℄ 939.2
645+00
941.4
℄ 935.3

G-960.8
G-962.11
2:1
2:1
Bench
12:1
4:1
4:1
12:1
940
℄ 942.3
644+00
943.2

Begin Sod Ditch
Sta. 644+00

Sta. 642+30 to Sta. 644+00
Dumped Rock for Channel Protection
10'L x 10'W x 30" D

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

Sta 644+00 to Sta 646+00

SECTIONS

END AREA		VOLUME	
CUT	FILL	CUT	FILL
93.3788		92.2801	
156.3774		258.5210	
242.4264		546.5167	

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

120
401

TRU-I-80-8.90
TRUMBULL COUNTY

Dumped Rock for Channel Protection
(15' x 3' x 1.5')

930
920
℄ 621.5
170 160 150
2:1
12:1
0.0%
℄ 621.5
Std. "E" Endwall
℄ 923.20
920
170 160 150
℄ Drainage Ditch

64 L.F. 15" F-A
25° Bend
Conc. Collar
Sta. 647+50 19' Lt. # 8 C.B.
Grate 948.22
℄ 15" I-1 Class E-1 944.85
℄ 15" I-1 Class A-1 944.80
℄ Ditch
G-950.15
64 L.F. 15" A-1 @ 1.10 %
38 L.F. 15" E-1 @ 0.47 %
G-950.13
647+55
925.5
℄ Creek
G-950.75
G-950.74
647+35
929.8

Sta. 647+50 19' Rt. # 8 C.B.
Grate 948.43
℄ 15" I-1 Class E-1 945.03
2:1
12:1
4:1
℄ 934.9
930
End Sod Ditch
Sta. 648+00
120 140
930 ℄ 934.4

930
930.0
170 160 150
℄ 927.88
647+22
929.9
Profile ℄ Creek
G-951.80
G-951.85
647+00
930.5
℄ Creek
940
933.4

Sta. 647+00 to Sta. 647+56

SEEDING	
END WIDTH	SQ. YDS.

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

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

121
401

TRU-I-80-8.90
TRUMBULL COUNTY

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

G-945.98
G-945.93
2:1
4:1
12:1
℄ 924.9
℄ 940.0
649+00
935.1
930

G-947.36
G-947.32
4:1
℄ 937.6
648+50
932.2
930

302'-60" A-1 @ 3.28%
℄ Creek
℄ 921.00

Reinforced Concrete Riprap
31'L × 14'W × .5 D

Ditch Runs Into Creek
End of Defined Ditch
648+25
930.5
930

930
A
920
℄ 921.2
170 160 150
A

G-948.54
G-948.51
2:1
12:1
4:1
4:1
℄ 936.5
930
648+09
934.9

A
12:1
℄ Creek
A

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

Sta 648+09 to Sta 649+00

SEEDING	
END WIDTH	SQ. YDS.

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

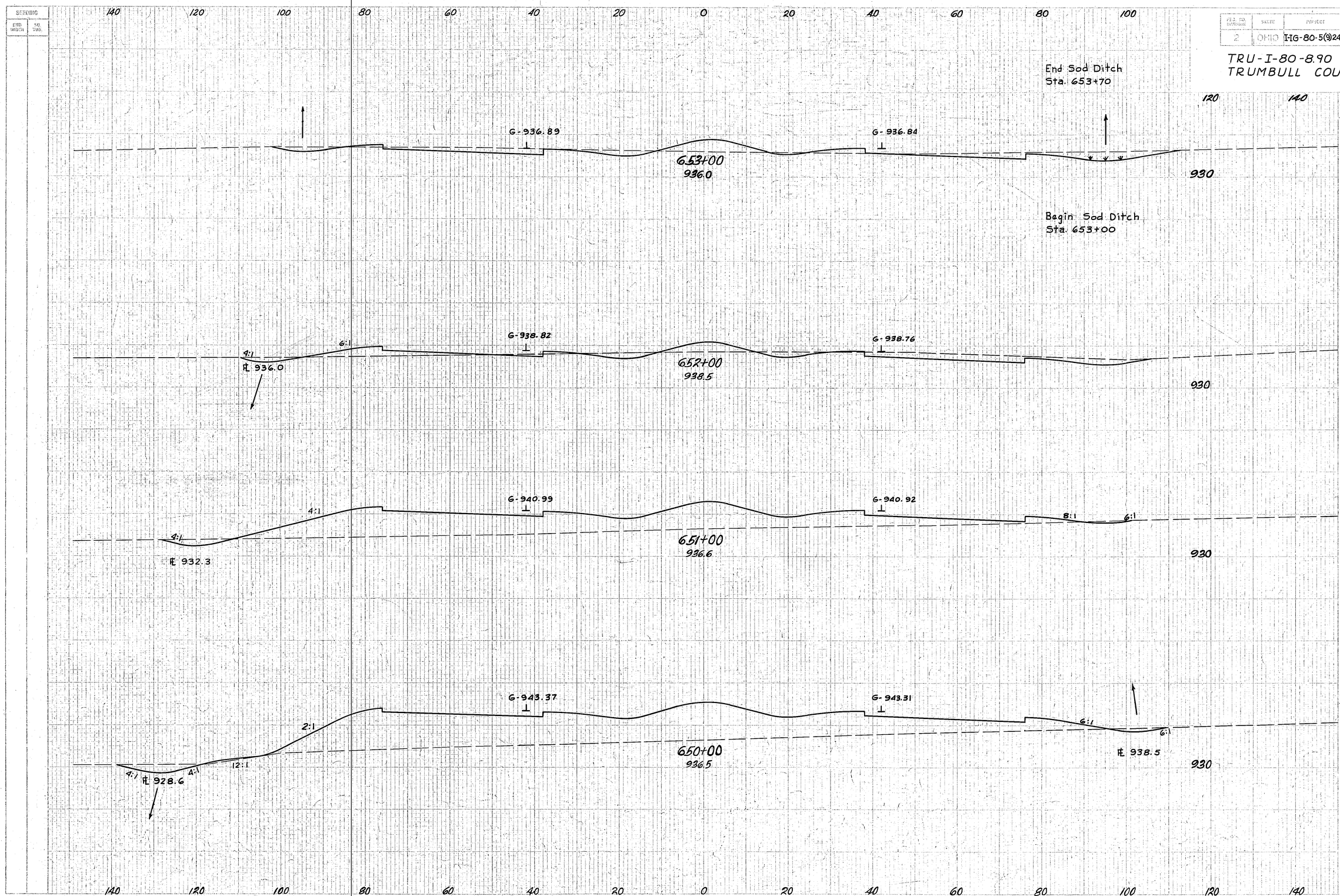
122
401

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

End Sod Ditch
Sta. 653+70

Begin Sod Ditch
Sta. 653+00



Sta. 650+00 to Sta. 653+00

SEEDING	
END WIDTH	SQ. YDS.

FED. ROAD 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
605	1248	971	3041
444	2036	632	3987
81	1276	89	1142
54	486	420	1033

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

End Sodding
Sta. 655+75

2:1

2:1 4:1 12:1

℄ 915.0

G-932.70

655+50
930.9

G-932.68

8:1

2.5:1

℄ 926.5

920

End Sodding
Sta. 655+00

Begin Sodding
Sta. 655+15

End Dumped Rock
Sta. 655+15

G-933.53

G-933.50

6:1

3:1

℄ 926.3

920

2:1

2:1

℄ 916.8

℄ 916.5

230 L.F. 30" A-1 @ 2.6%

655+00
921.3

Begin Sodding
Sta. 654+45

Begin Dumped Rock
Sta. 654+90

End Paved Gutter
Type 2
Sta. 654+50
11'W x 30"D

End Sodding
Sta. 654+90

G-934.60

G-934.57

8:1

4:1

920

℄ 922.8

230 L.F. 30" A-1 @ 2.6%

3:1

Begin Sodding
Sta. 654+35

654+35
922.7

G-935.18

G-935.14

6:1

8:1

4:1

930

℄ 926.4

654+00
929.7

Begin Paved Gutter
Type 2
Sta 653+70
11'W x 30" D

Sta 654+00 to Sta 655+50

SECTION

END WIDTH | CU YDS

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

		I-IG-80-5(9)245	

124
401

TRU-I-80-8.90
TRUMBULL COUNTY

120 140

END AREA | VOLUME
CUT | FILL | CUT | FILL

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. #B.C.B.
Grate 926.00
℄ 15" I-1 Class A-1 920.25

930

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

3:1

930

℄ 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

U.S. 62 & S.R. 7

25 RAMP "A"
25 RAMP "B"

RAMP "A"

CONSTRUCTION ℄ I-80

RAMP "D"

RAMP "E"

RAMP "C"

LITTLE MAKEE RUN CHANNEL RELOC.

L-6 Roadside Cleanup (292 UNITS)

L-6 Roadside Cleanup (208 UNITS)

℄ RELOC. HUBBARD-SHARON ROAD

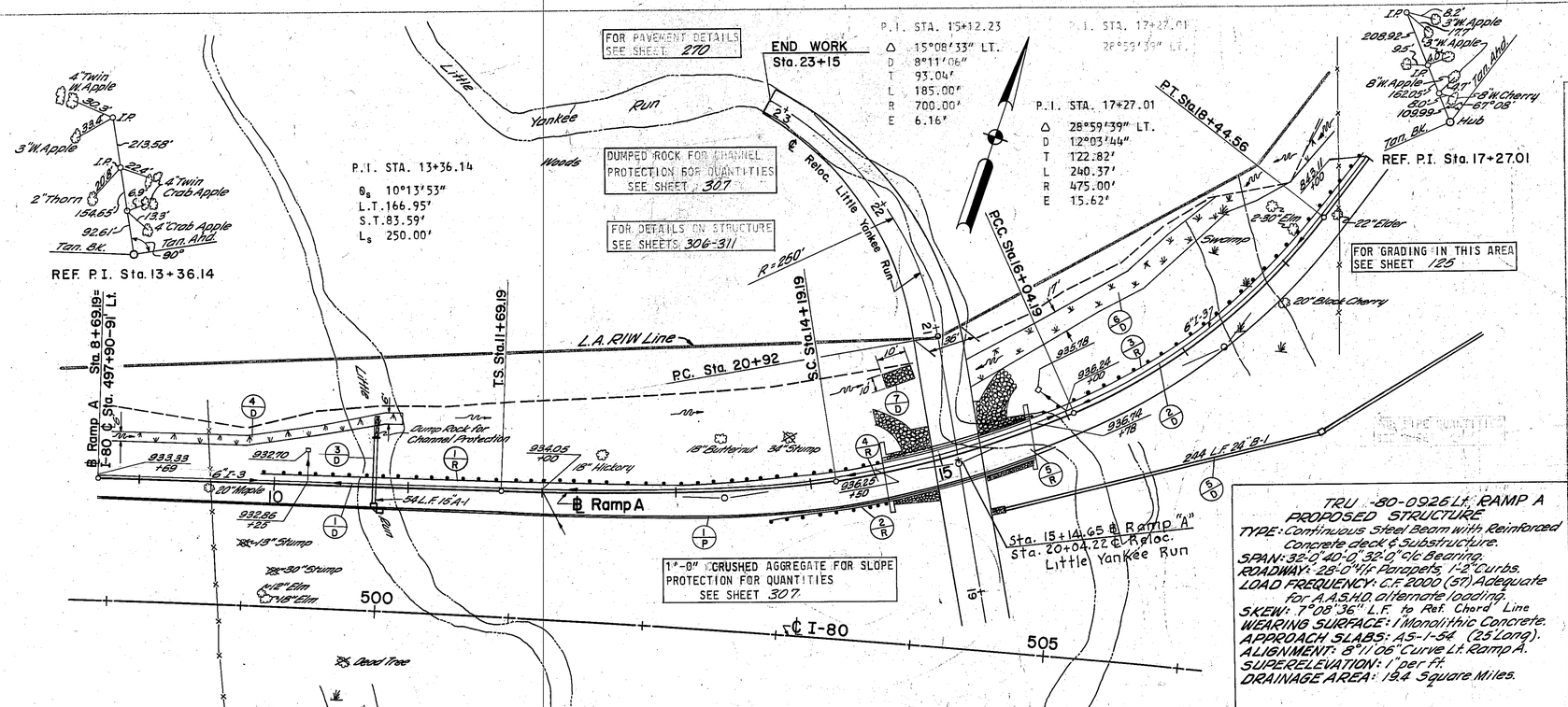
U.S. 62 & S.R. 7

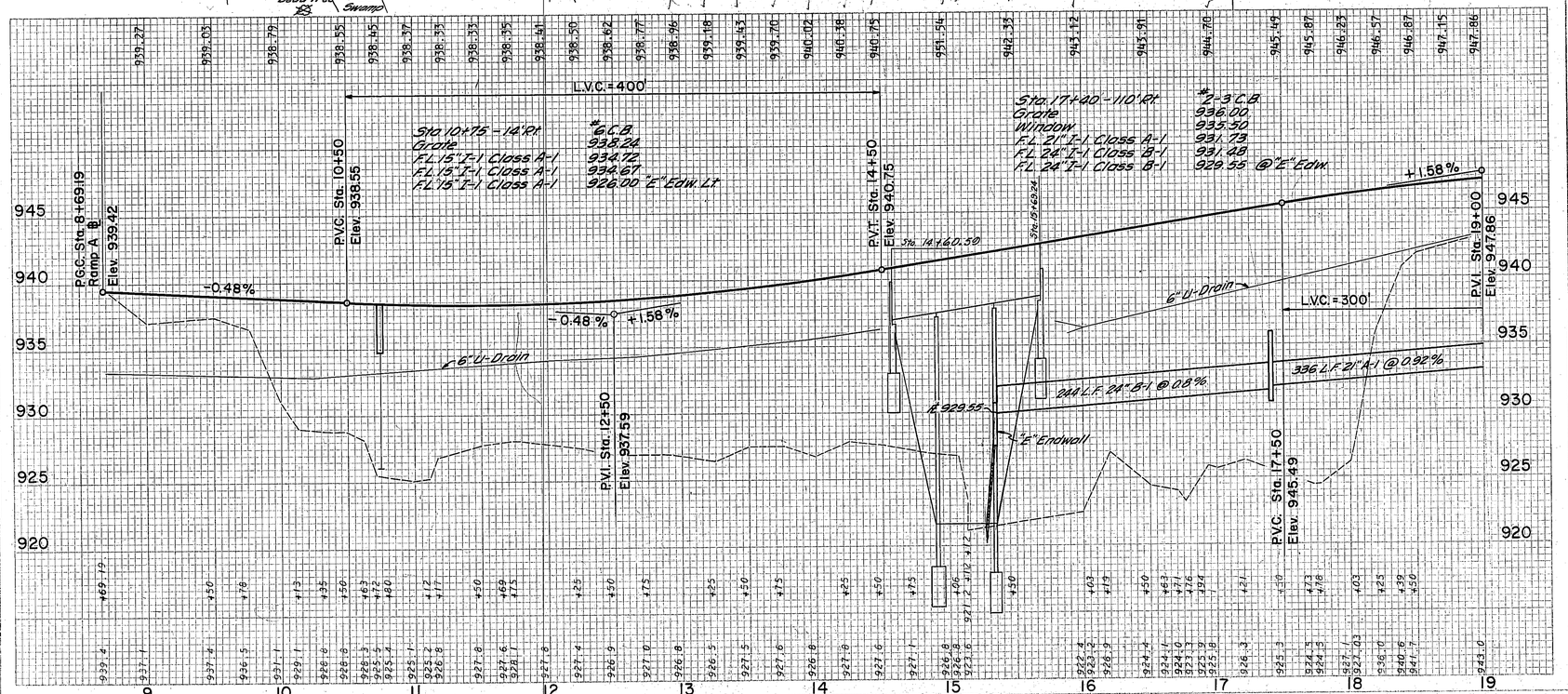
GRADING PLAN

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

126 / 401

TRUMBULL COUNTY TRU-I-80-8.90





TRU-I-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" w/ Parapets, 1'-2" Curbs.
LOAD FREQUENCY: C.F. 2000 (ST) 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(6) I-1

REF. NO.	STATION TO STATION	SIDE	I-8 Catch Basin No. 2-3 EACH	I-8 Catch Basin No. 6 EACH	CL. A-1 Rein. (60 lb) in 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-2 Masonry CU. YD.	I-5 For 6" U-Drain TEE 60° WYE	I-7 Reinforced Concrete Approach Slab SQ. YD.	I-10 Sodding SQ. YD. (SEE SHEET NO.)	I-10 Dumped Rock Channel Protection CU. YD.	I-12 Type 8 P.C.C. Curb L.F.	I-15 Guard Rail L.F.
1-D	8+69 to 14+50	Lt.			54		10	594	.26				4		
2-D	13+78 to 19+00	Rt.			54		10	334	.41				2		
3-D	10+25	Rt.		1						1					
4-D	8+80 to 10+95	Lt.				244							19		
5-D	15+34 to 17+40	Rt.				244									
6-D	15+40 to 18+50	Lt.		1											
7-D	14+96	Lt.	1												
1-P	9+19.5 to 14+54	Lt.									44.5	143			462.5
2-P	13+66 to 19+00	Rt.									44.5	2			87.5
3-P	13+25 to 19+00	Lt.										466			3250
4-P	14+32 to 18+50	Lt. & Rt.											592		
5-P	10+00 to 14+96	Lt. & Rt.													
1-P	8+69.19 to 14+60.59	Rt.													
TOTALS			1	1	54	244	20	928	1.7	1	89.0	612	592	25	8750

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

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

127
401

TRUMBULL COUNTY TRU-I-80-8.90

FOR PAVEMENT DETAILS OF INTERSECTION WITH U.S. 62 AND S.R. 7 SEE SHEET 273

REF. P.I. Sta. 22+01.87

REF. P.O.T. STA. 28+02.92 = 266+24.92 U.S.62 & S.R. 7

RAMP "A"

P.I. STA. 22+01.87

△	69°27'17"
D	24°10'32"
T	164.27'
L	287.29'
R	237.00'
E	51.36'

P.O.T. Sta. 266+24.92 Constr. ℄ U.S. 62 & S.R 7+
P.O.T. Sta. 28+02.92 ℄ Ramp A

FOR PIPE QUANTITY SEE RAMP "B" SHEET

FOR PIPE QUANTITY SEE SHEET 135

FOR GRADING IN THIS AREA SEE SHEET 125

FOR PIPE QUANTITY SEE SHEET 134

PC Sta. 20+37.60 ℄ RAMP A

PT Sta. 23+24.89 ℄ RAMP A

Sta 21+65 - 17' Rt.
Grate
F.L. 15" I-1 Class A-1
F.L. 15" I-1 Class A-1

C.B.
947.48
949.00
942.50 (Type A Edw. Rt.)

P.V.I. Sta. 19+00 Elev. 947.86
P.V.T. Sta. 20+50 Elev. 948.46
P.V.C. Sta. 25+00 Elev. 950.26
P.V.I. Sta. 26+00 Elev. 950.66
P.V.T. Sta. 27+00 Elev. 952.34
P.G.C. Sta. 27+58 Elev. 953.31
L.V.C. = 300'
L.V.C. = 200'
+0.40%
+1.68%

ESTIMATED QUANTITIES

SEE SHEET NO.							
L-10	Sodding	SQ.YD.					1641
I-21	P.C.C. Median Pav't.	SQ.YD.					112
I-12	Std. Type 2-A Curb	L.F.					789
I-8	Catch Basin No.6	EACH					1
I-5	For 6"U-Drain 60° Bend	EACH					1
I-1	CL. A-1 M-6.6 (a) or 6.8 (b) #15	L.F.	CL. I-3 6"U-Drain SHALLOW	L.F.			1
					40		40
1-D	19+00 to 19+41				50	358	50
2-D	24+36 to 26+100 (Est.)						398
3-D	27+65 to 27+00						
4-D	19+00 to 27+00						
1-P	19+34 to 24+48.70						
2-P	20+37.60 to 24+48.70						

REF. NO.	STATION TO STATION	SIDE
1-D	19+00 to 19+41	Lt.
2-D	24+36 to 26+100 (Est.)	Lt.
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.
2-P	20+37.60 to 24+48.70	Rt.

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

SECTIONS

END AREA		SQ. YDS.
CUT	FILL	

SHEET NO.	STATE	PROJECT	
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
4:1
12:1
℄ 923.3
G-943.91
16+50
924.4

930

2:1
4:1
4:1
12:1
℄ 923.0
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

930

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

Begin Earthwork
Sta. 15+00
Area = 0

140 120 100 80 60 40

SEEDING	
DIS WIDTH	DIS TYP

FED. AID PROJECT	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
		17	1354

53.2717

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

940

G-946.87
18+50
941.7

E. Swamp

Sta. 18+21 Use Full Area @ Sta. 18+00

2:1

4:1 4:1 12:1

℄ 924.0

Swamp

G-946.23
18+00
927.1

920

Profile Swamp

17+75
924.0

Sta. 17+40 110' Rt.	# 2-3 C.B
Grate	936.00
Window	935.50
℄ 21" I-1 Class A-1	931.73
℄ 24" I-1 Class E-1	931.48
℄ 24" I-1 Class E-1	929.55 @ Outlet

40 1580 863681

Swamp

4:1 4:1 12:1

℄ 923.8

G-945.49
17+50
925.3

Sta. 17+27 Use Full Area @ Sta. 17+50

920

2:1

Swamp

Swamp

532396 1453852

4:1 4:1 12:1

℄ 923.5

G-944.70
17+00
925.8

920

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

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

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING

END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
388	0	581	0
246	0	322	0
102	0	105	30
11	32	21	154
12	134	23	398
13	296	12	617

140 120 100 80 60 40 20 0

950

3:1
℄ 946.3
G-948.86
21+50
953.7

℄ 942.5
"Type A" Endwall

Sta. 21+65 17' Rt. #6 C.B
947.48
Grate
℄ 15" I-1 Class A-1 943.00

950

4:1
℄ 946.1
G-948.66
21+00
951.6

6:1
℄ 945.9
G-948.46
20+50
9488

940

℄ 944.5
G-948.21
20+00
9467

1" Per Ft.
Varies

940

℄ 942.0
G-947.86
19+50
9442

4:1
℄ 941.0
G-947.42
19+00
9430

940

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

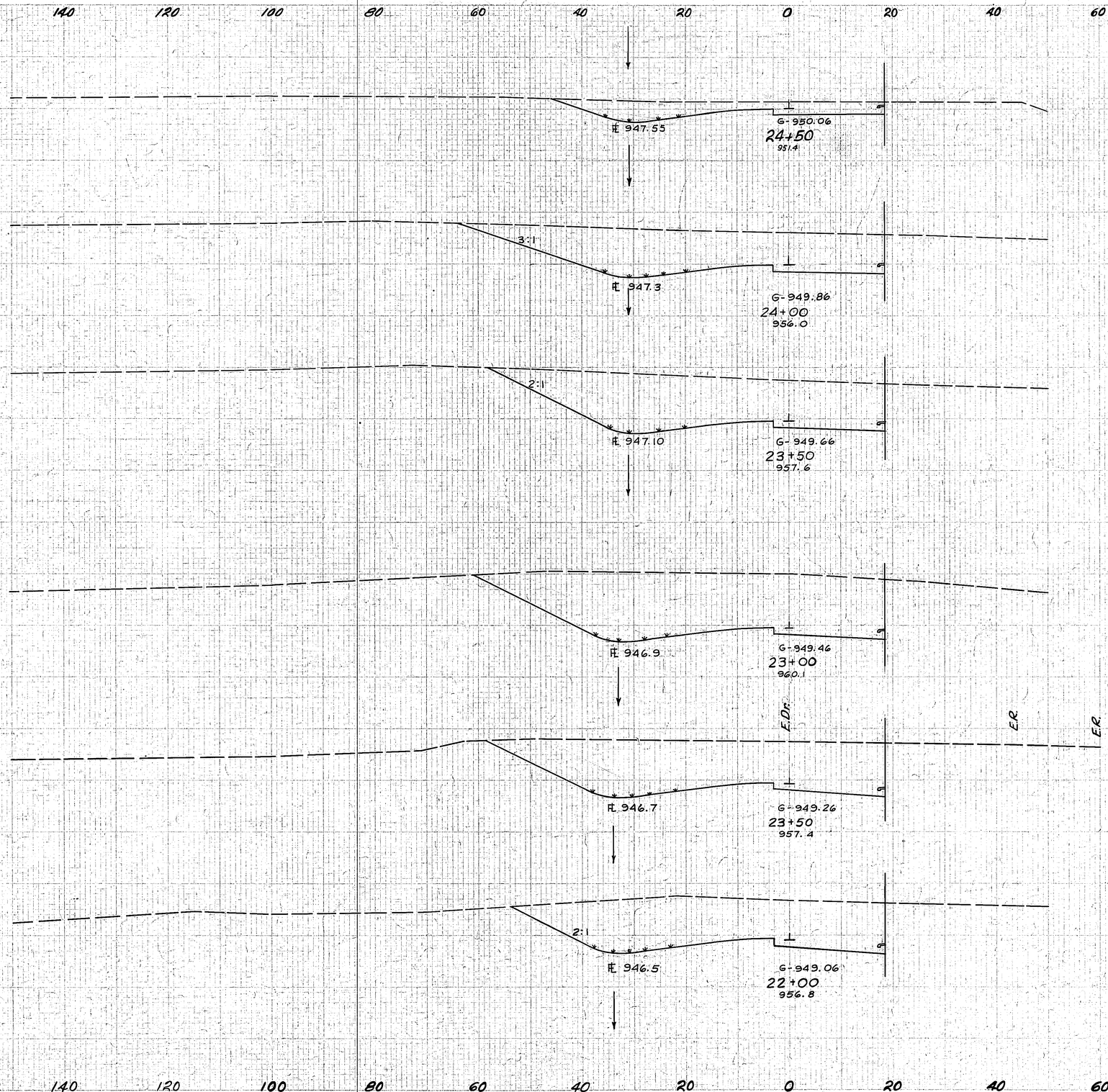
U.S. 62 Interchange Ramp A Sta 19+00 to Sta 21+50

SEEDING	
END WIDTH	SY YDS.

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

131
401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME		
CUT	FILL	CUT	FILL	
166	0	668	0	950
556	0	1122	0	950
656	0	1385	0	950
840	0	1346	0	950
614	0	1135	0	950
612	0	926	0	950

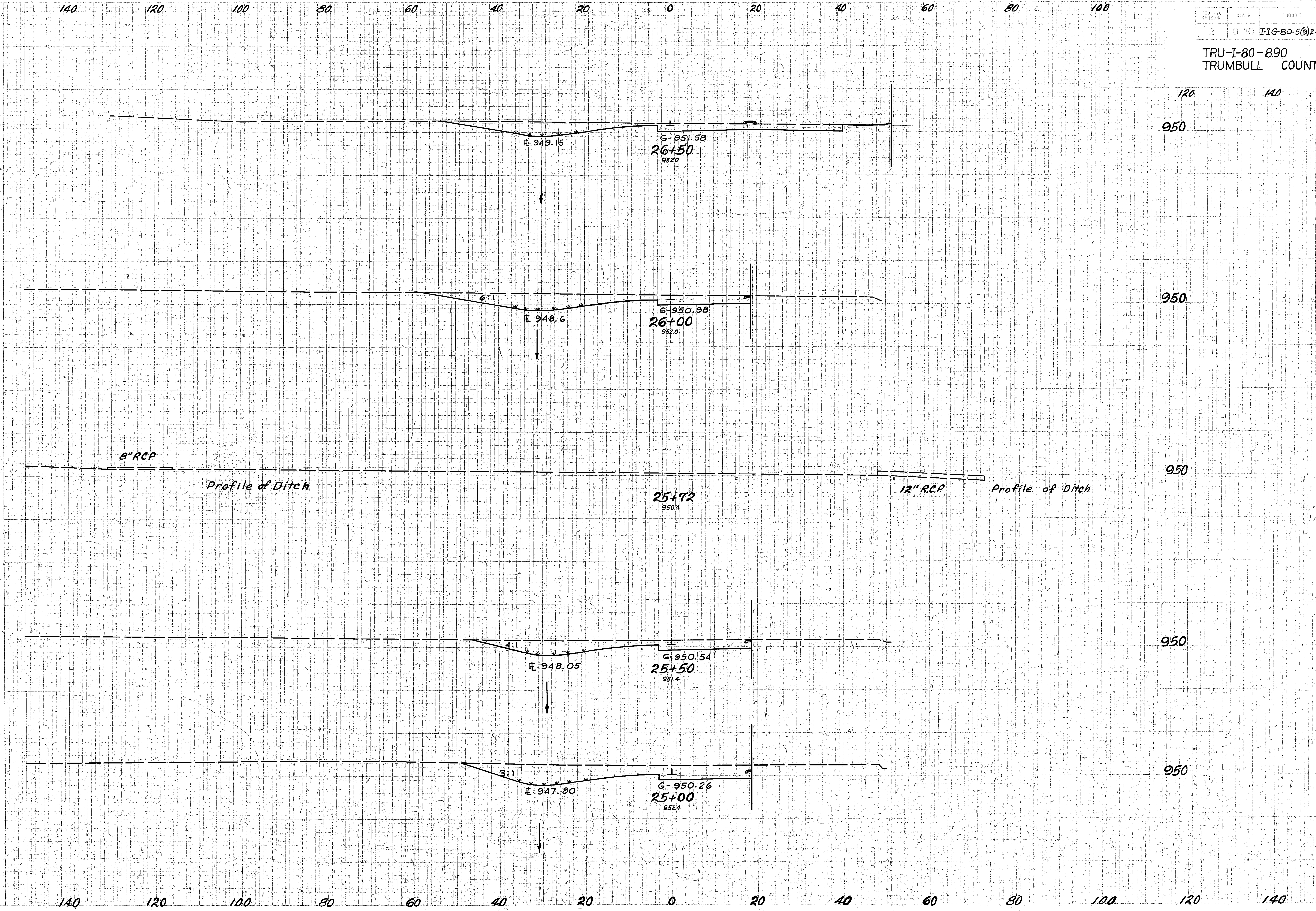
US 62 Interchange, Ramp A Sta 22+00 to Sta 24+50

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

132/401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING	
END WIDTH	SQ. YDS.
	160/954.2



END AREA		VOLUME	
CUT	FILL	CUT	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
77	18	171	22
108	6	242	6

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

950

27+70
953.5

Profile W.B.L. Edge Pavement

27+58
953.3

End Earthwork
Sta. 27+50
Use Full Area

G- 953.18
27+50
952.7

Profile Ditch

18" CMP

Profile Ditch

27+37
949.7

℄ 950.0

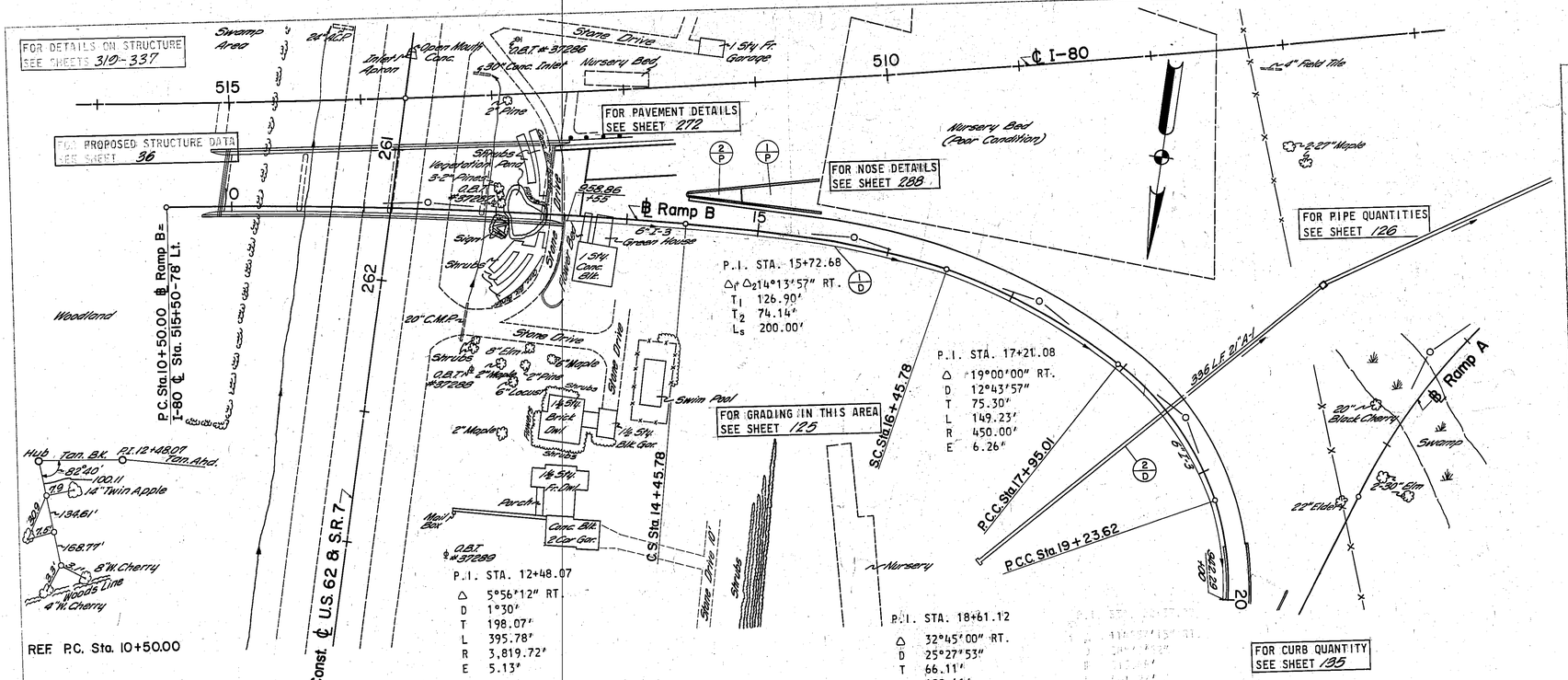
G- 952.34
27+00
951.8

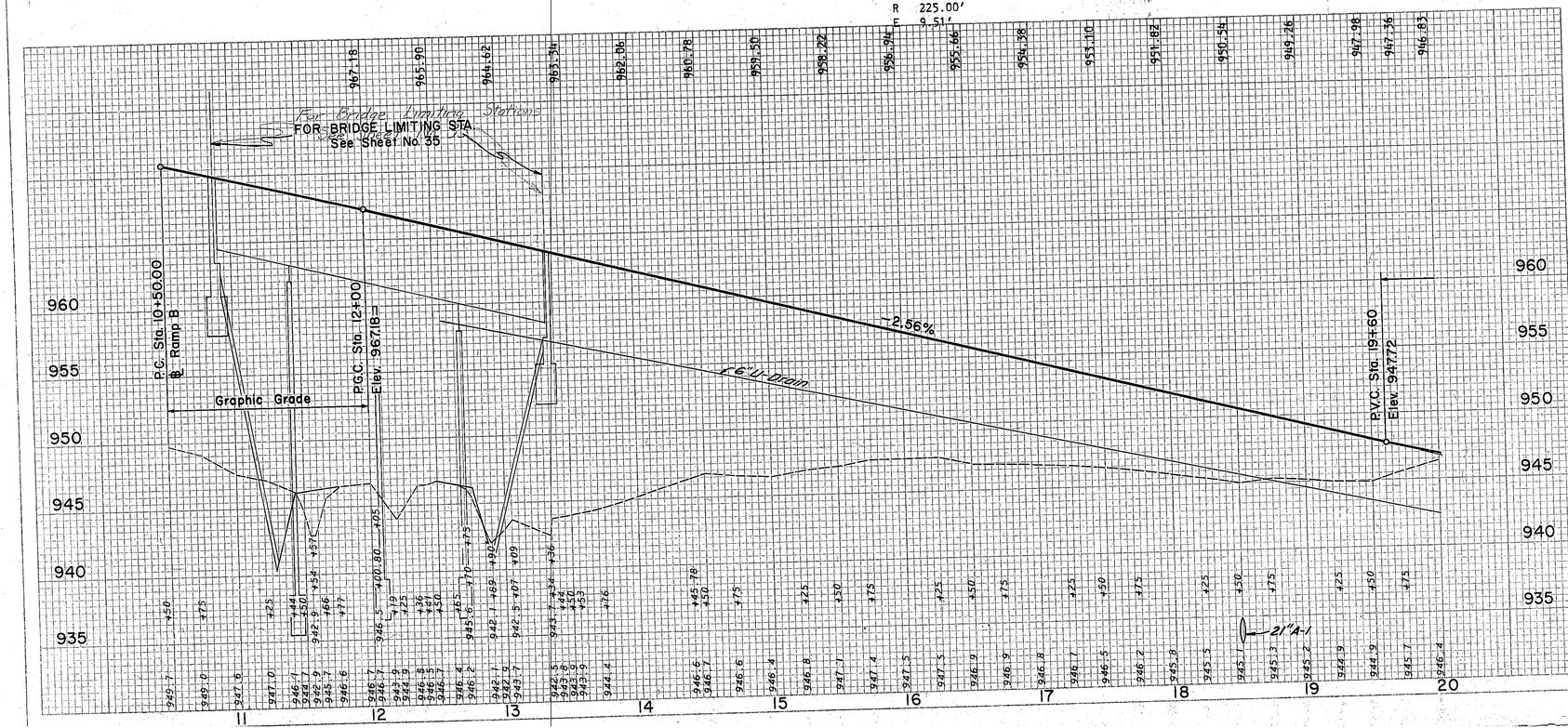
U.S. 62 Interchange Ramp A Sta 27+00 to Sta 27+70

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

134
401

TRUMBULL COUNTY TRU-I-80-8.90





ESTIMATED QUANTITIES

SEE SHEET NO.			
L-10 Sodding	SQ.YD.	/	
I-21 P.C.C. Median Pav't.	SQ.YD.	31	31

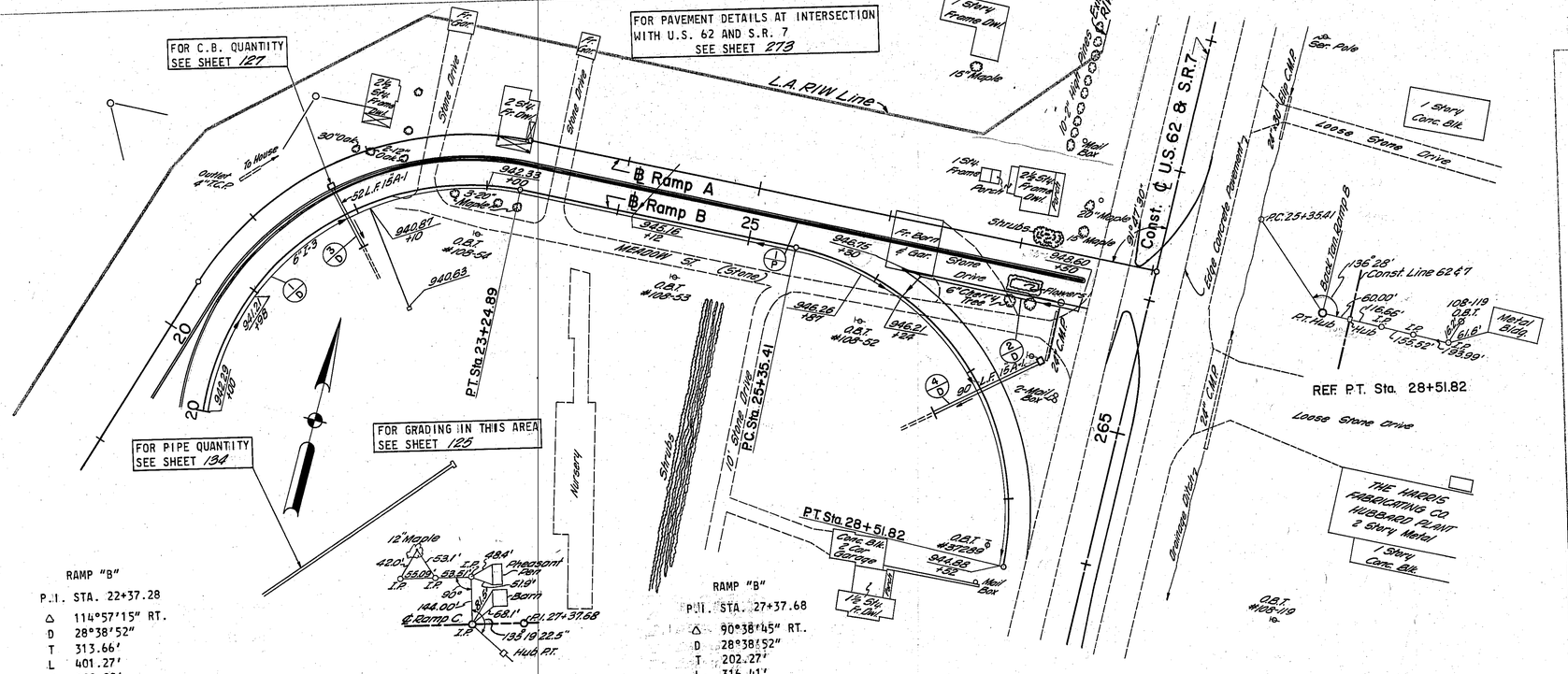
REF. NO.	STATION TO STATION	SIDE	I-1 GL-A-1 M-6.6(C) 21"	I-1 GL-1-3 6" U-Drain Shallow	I-2 Masonry	I-12 Std Type 6 Curb	
			L.F.	L.F.	CU.YD.	L.F.	
1-D	19+55 to 20+00	Rt.	8	646	.36	100	.4
2-D	18+50		336				336
1-D	14+45.78 to 15+05.78	Lt.					646
2-D	14+50	Lt.					100
						TOTALS	

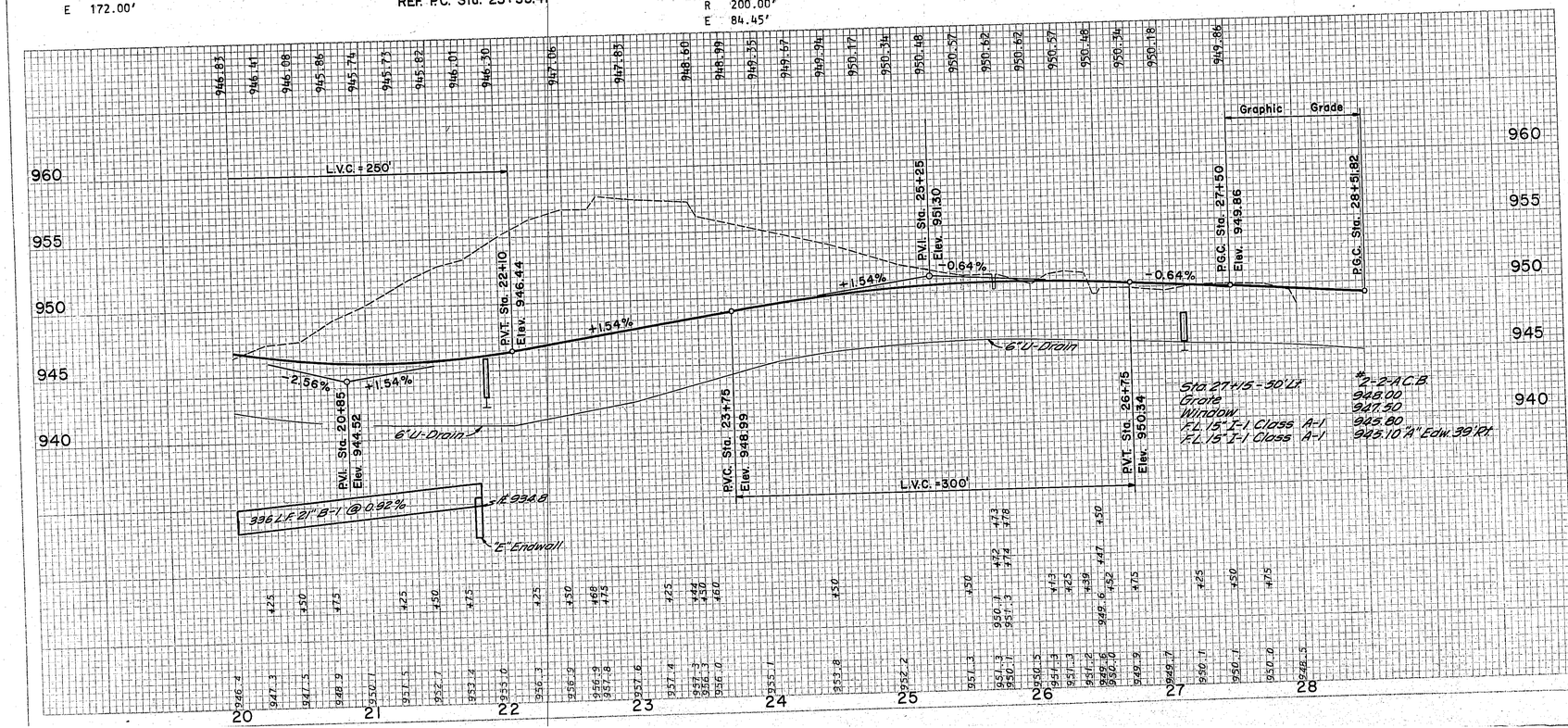
RAMP B Sta. 10+50 to Sta. 20+00

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

135 / 401

TRUMBULL COUNTY TRU-I-80-8.90





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

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 CL. A-1 M-66(b) or M-68(b) or M-6 L.F.	I-1 CL. F-4 M-66(b) or M-68(b) 15" L.F.	I-2 Masonry CU. YD.	I-2 CL. 1-3 6" U-Drain Shallow L.F.	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.	L-10 Sodding SQ. YD.	SEE SHEET NO.
1-D	20+00 to 28+52	Rt.										2	4
2-D	26+30 to 27+50	Lt.	22									2	
3-D	21+92	Lt.		52									
4-D	27+45	Rt.		90									
5-D	22+00	Rt.			3.00	120							
1-P	19+62 to 27+48.70	Lt.			3.00	922							789
TOTALS			22	142	6.0	1042	10	1	2	1	789	4	

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

136
401

TRU-I-80-8,90
TRUMBULL COUNTY

SHEET NO.

END WIDTH	SQ. YDS.

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

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

BRIDGE

960

11+50
9447

Sta. 11+40
End Earthwork
Area = 0

960

G=969.65
11+00
9476

I-80

Begin Earthwork
Sta. 10+50
Use Full Area

960

G=970.90
10+50
9497

℄ 948.8

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

SEEDING	
END WIDTH	SQ. YDS.

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

137
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

960

BRIDGE

E.R.

G-965.90
12+50
9467

960

BRIDGE

G-967.18
12+00
9467

950

11+73.4
9467

Profile Edge of Conc. U.S. 62 & 7

Profile Edge of Conc. U.S. 62 & 7

940

11+56
9427

Profile Ditch

Profile Ditch

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

RAMP B Sta 11+56 to Sta 12+50

SEEDING	
SEED YARDS	SQ. YDS.

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

138
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
196	1950	36	3542
194	1876	180	1737

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

I-80

℄

G-962.06
14+00
945.5

950

B

B

B

B

RAMP B

℄

G-963.34
13+50
943.7

E.Dr.

E.Dr.

E.Dr.

E.Dr.

950

A

A

A

A

BRIDGE

Sta. 13+00
Begin Earthwork
Area = 0

E.Dr.

E.Dr.

950

G-964.62
13+00
942.9

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

RAMP B Sta 13+00 to Sta 14+00

SEEDING	
END WIDTH	SQ. YDS.

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

TRU-I-80-8.90
TRUMBULL COUNTY

139
401

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

I-80

G-958.22
15+50
9471

950

644 960 954 2091

C C C

150 160 170 180 190 200 210 220 230

950

G-959.50
15+00
9464

950

386 1298 547 2633

B B B

150 160 170 180 190 200 210 220 230

950

RAMP H

G-960.78
14+50
9467

950

205 1546 371 3237

A A A

150 160 170 180 190 200 210 220

950

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

RAMP B Sta 14+50 to Sta 15+50

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

140
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING

END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

I - 80

G-954.38
17+00
946.8

C 150 160 170 180 190 200 210 220 230 C

950

1316 560 2330 1194

RAMP H

G-955.66
16+50
946.9

B 150 160 170 180 190 200 210 220 230 B

950

1200 730 1981 1354

G-956.94
16+00
947.5

A 150 160 170 180 190 200 210 220 230 A

950

940 732 1467 1567

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

RAMP B Sta 16+00 to Sta 17+00

SEEDING	
END WIDTH	SQ. YDS.

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

141
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

RAMP A

G-949.26
19+00
9452

D 150 160 170 180 190 200 D
950
940
D

1800 262 3248 628

G-950.54
18+50
9451

C
950
336 L.F. 21" A-1 @ 0.92%
C

1708 416 1814 764

Sta. 18+20 Use Full Area @
Sta. 18+00 Cut-Off Line B

C 150 160 170 180 190 200
2:1
934.8
940
C 336 L.F. 21" A-1 @ 0.92% Type "E" Edw. 935.0

RAMP B

Sta. 18+20 1558 960 1154 654

B A
G-951.82
18+00
9458
B A
950
B

1558 806 2942 1383

Sta. 18+00 Use Area @ Cut-Off Line A

B 150 160 170 180 190 200 210
940
B

I-80

G-953.10
17+50
9465

A
950
A

1620 688 2718 1156

A 150 160 170 180 190 200 210 220
940
A

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

RAMP B Sta 17+50 to 19+00

SEEDING	
BID WIDTH	SQ. YDS.

DES. NO.	SHEET	L
0 1 OHIO PID 80-10088		142

TRU-I-80-8.90
TRUMBULL COUNTY

BID AREA		VOLUME	
CUT	FILL	CUT	FILL

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

D
950
D
2648 0 4691 0
G-945.74
21+00
950.1
150 160 170 180 190 200
D

C
950
C
2418 0 4191 13
G-946.08
20+50
947.5
RAMP A
RAMP B
150 160 170 180 190 200
C

B
950
B
2108 14 3657 150
Slope Varies
2
G-946.83
20+00
946.83
150 160 170 180 190 200
B

A
950
A
1842 148 3372 380
G-947.98
19+50
944.9
150 160 170 180 190 200
A

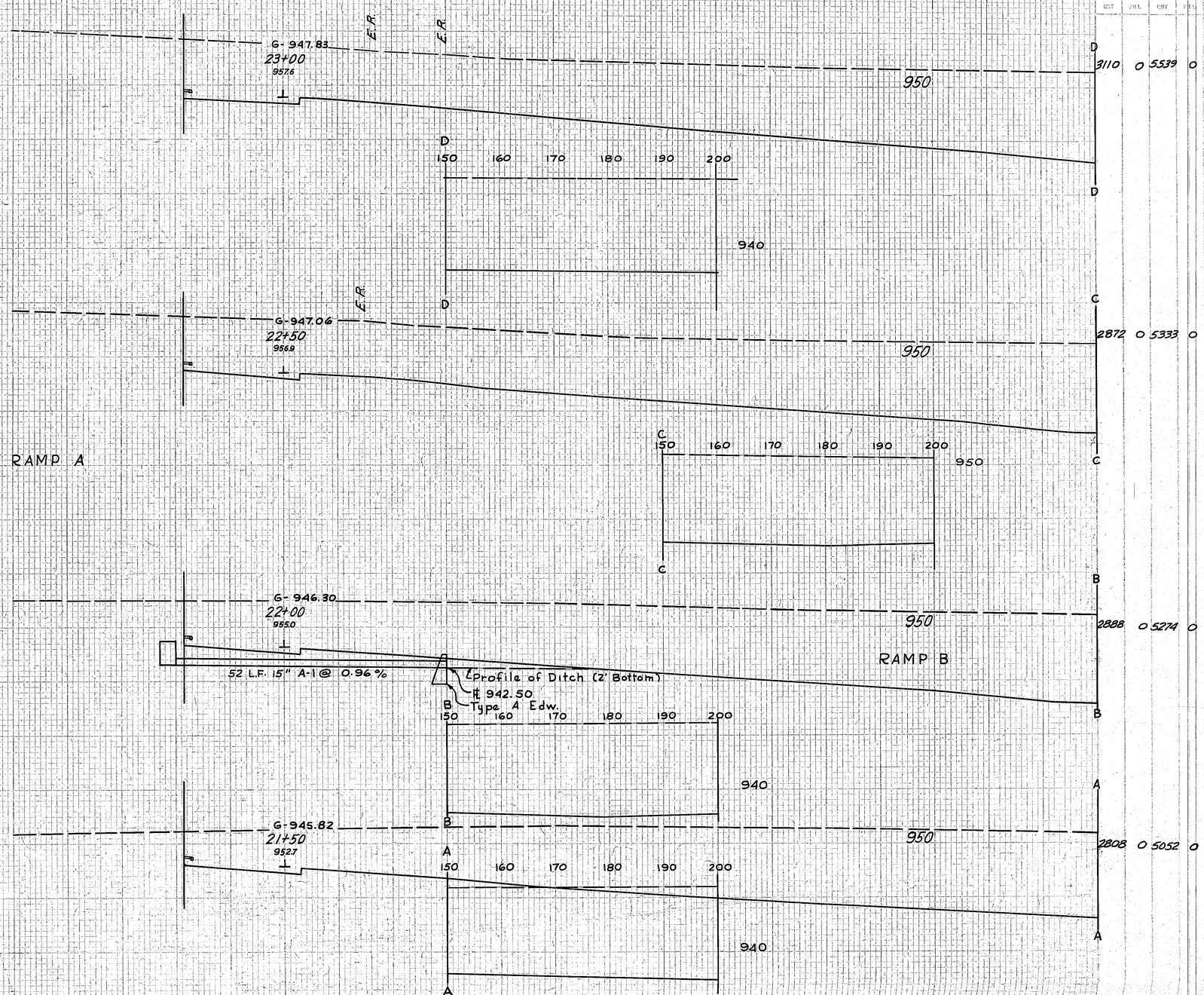
140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

RAMP B

FED. RD. DIVISION	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
2	OHIO	FIG-80-5(9)245	143	401

TRU-I-80-8.90
TRUMBULL COUNTY

STATIONS	END AREA		VOLUMES	
	CUT	FILL	CUT	FILL



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

144
401

TRU-I-80-8.90
TRUMBULL COUNTY

GREENING

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

E.R. E.R.

D 2010 0 4261 0

950

G-950.34
25+00
952.2

D 150 160 170 180 190 200 210 220

940

D

E.R. E.R.

C 2592 0 5000 0

950

RAMP A

G-949.94
24+50
953.8

C 150 160 170 180 190 200 210 220

940

RAMP B

C

E.R. E.R.

B 2808 0 5239 0

950

G-949.35
24+00
955.1

B

940

E.R. E.R.

A 2850 0 5518 0

G-948.60
23+50
956.3

B 150 160 170 180 190 200 210

A 150 160 170 180 19 200

950 950

A

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

RAMP B Sta 23+50 to Sta 25+00

SEEDING	
END MARK	NO. LBS.

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
1232	9	2272	10
1222	2	2380	2
1348	0	2544	0
1400	0	3157	0

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

90 L.F. 15" A-1 @ 0.78 %

G-950.18
27+00
949.7

℄ 945.10
Type "A" Edw.

Sta. 27+15 50 Lt. # 2-2-A C.B.
Grate 948.00
Window 947.50
℄ 15" I-1 Class A-1 945.80

E.R.

G-950.48
26+50
949.6

RAMP A

G-950.62
26+00
950.5

E.R.

E.R.

G-950.57
25+50
951.3

RAMP B

950

150 160 170 180 190 200

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

SHEETING	
LEFT WIDTH	RT. WIDTH

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

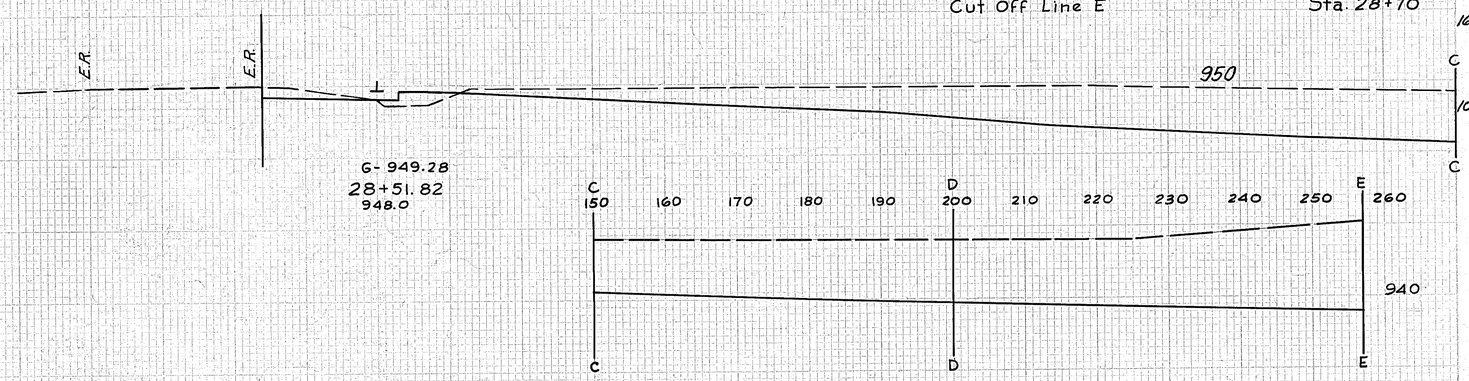
146
401

TRU-I-80-8.90
TRUMBULL COUNTY

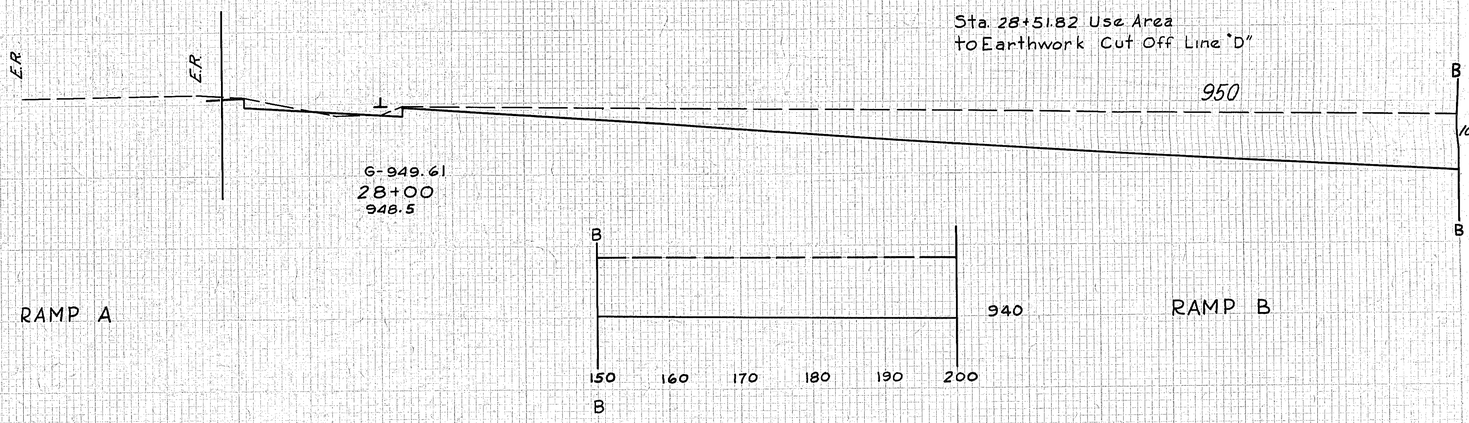
End Earthwork
Sta. 28+70
Use Full Area to Sta. 28+51
Cut Off Line E

Sta. 28+70

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1628	15	930	10
1016	15	1972	14

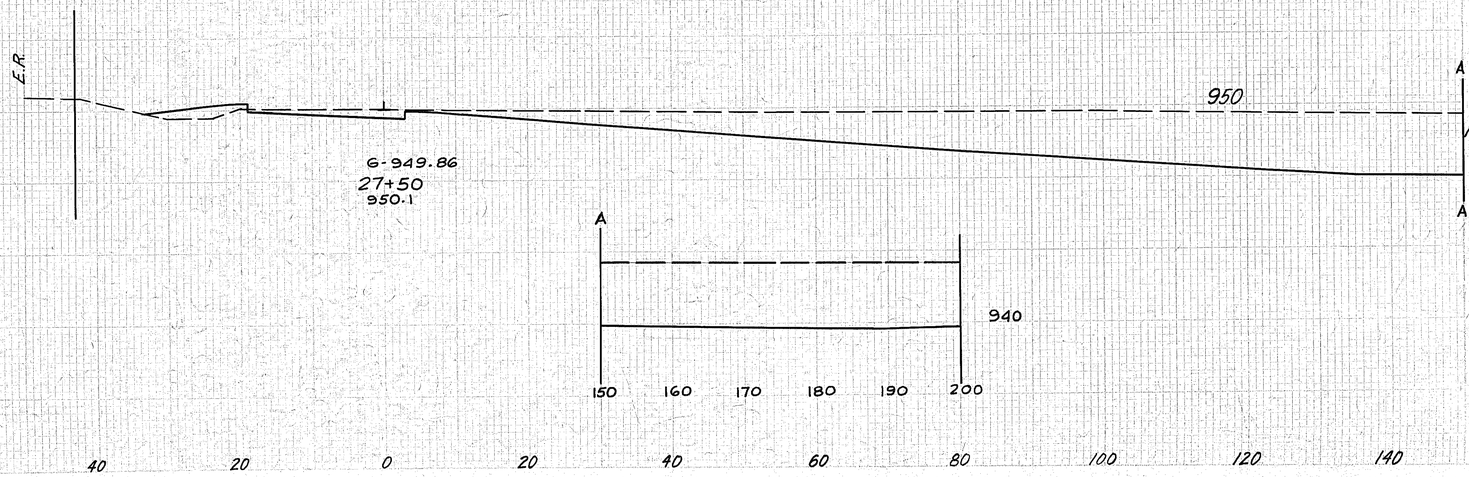


Sta. 28+51.82 Use Area
to Earthwork Cut Off Line "D"



RAMP A

RAMP B

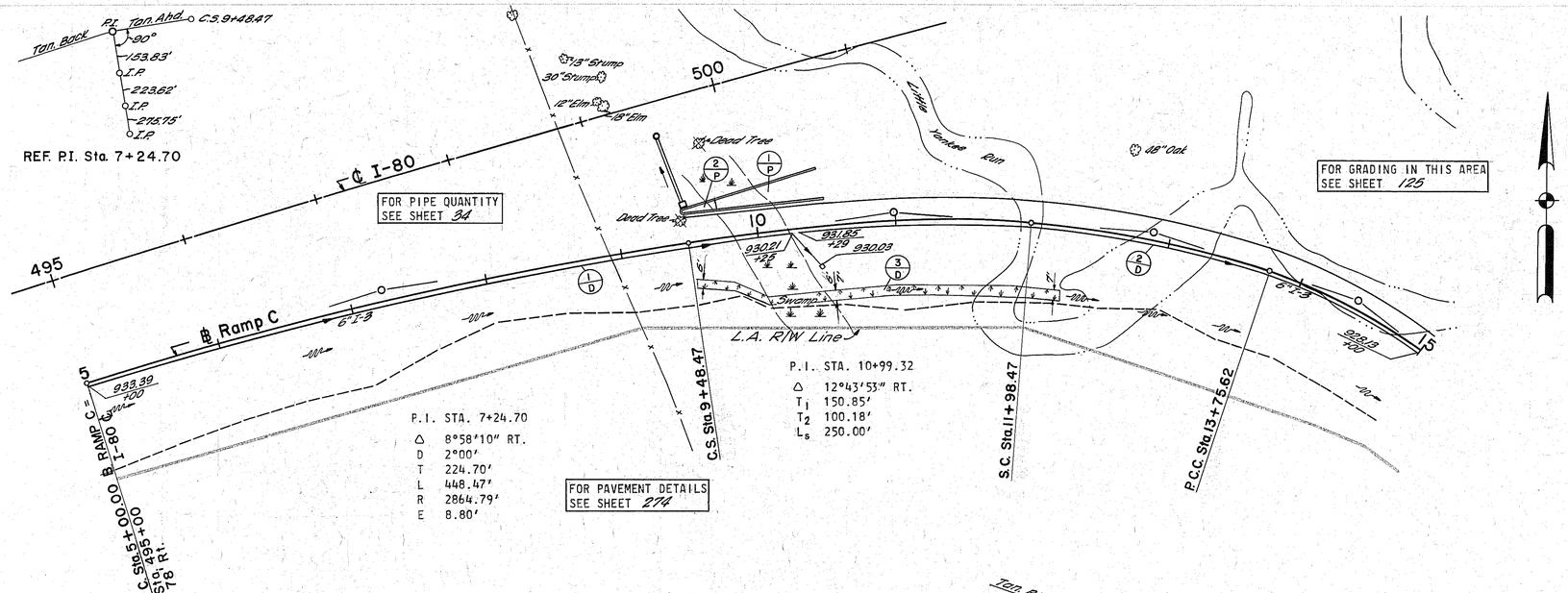


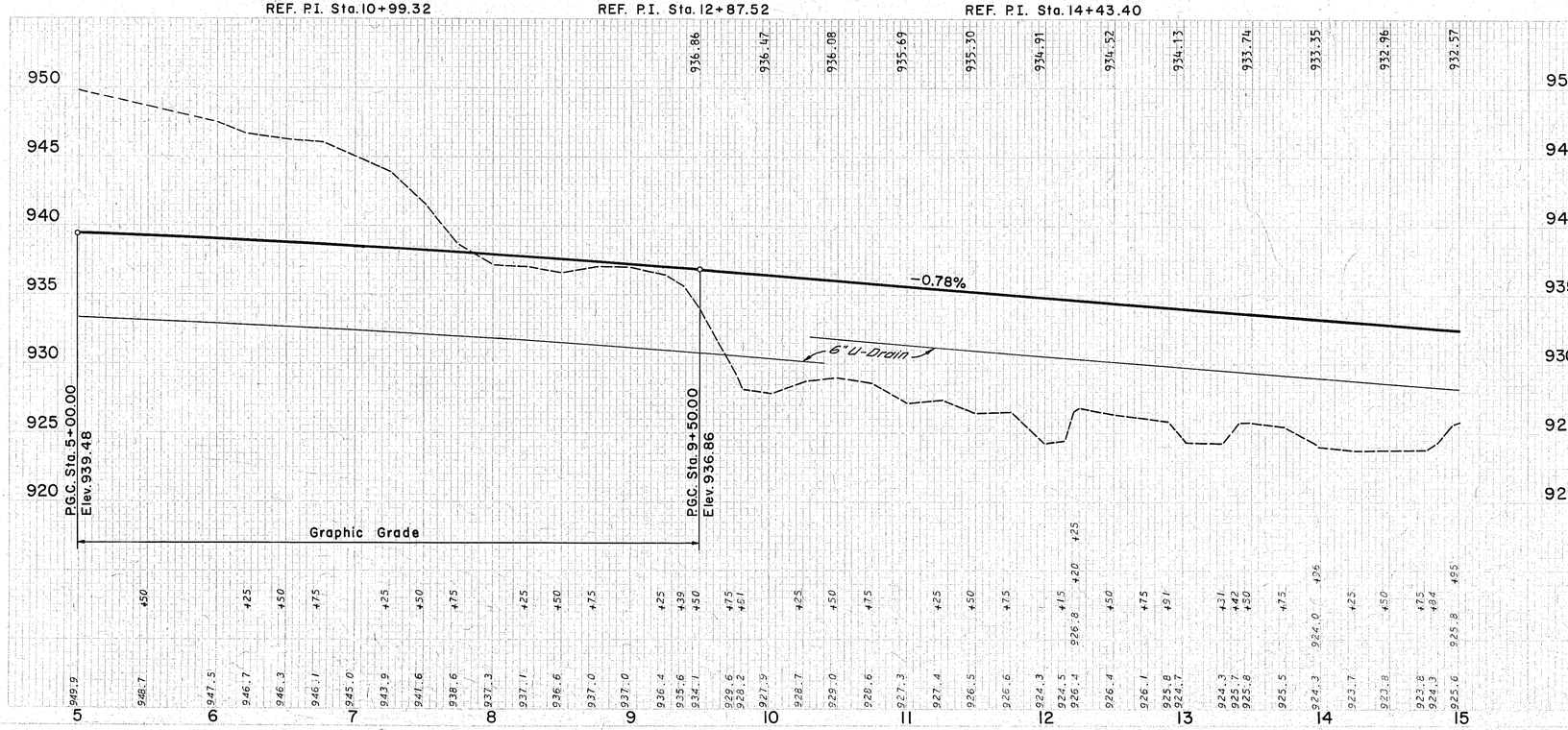
1072	0	2100	19
1196	21	2248	28

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

RAMP B Sta 27+50 to Sta 28+51.82

TRUMBULL COUNTY TRU-I-80-8.90





ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 CL. I-3 6"U-Drain	I-1 CL. F-4 8"	I-5 For 6" U-Drain WALL EACH	I-10 Sodding SQ. YD.	I-12 Std. Type 6" Curb L.F.	I-21 P.C.C. Median Pav't. SQ. YD.
1-10	5+00 to 10+40	Rt.	546	10	1	193	100	28
2-10	10+40 to 15+00	Rt.	470					
3-0	9+50 to 12+25	Rt.						
1-10	9+48.47 to 10+48.47	Lt.						
2-0	9+50	Lt.						
TOTALS			1016	10	1	193	100	28

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

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

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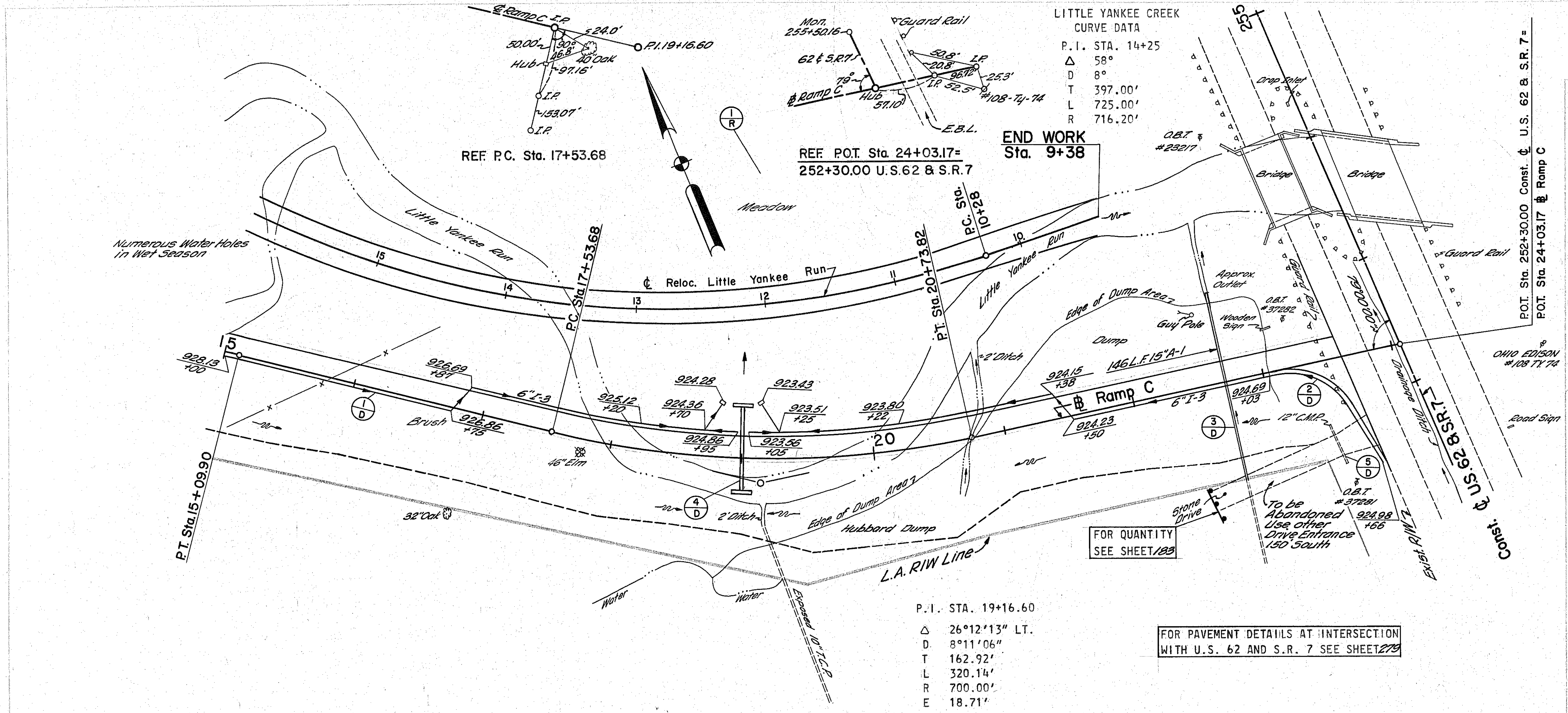
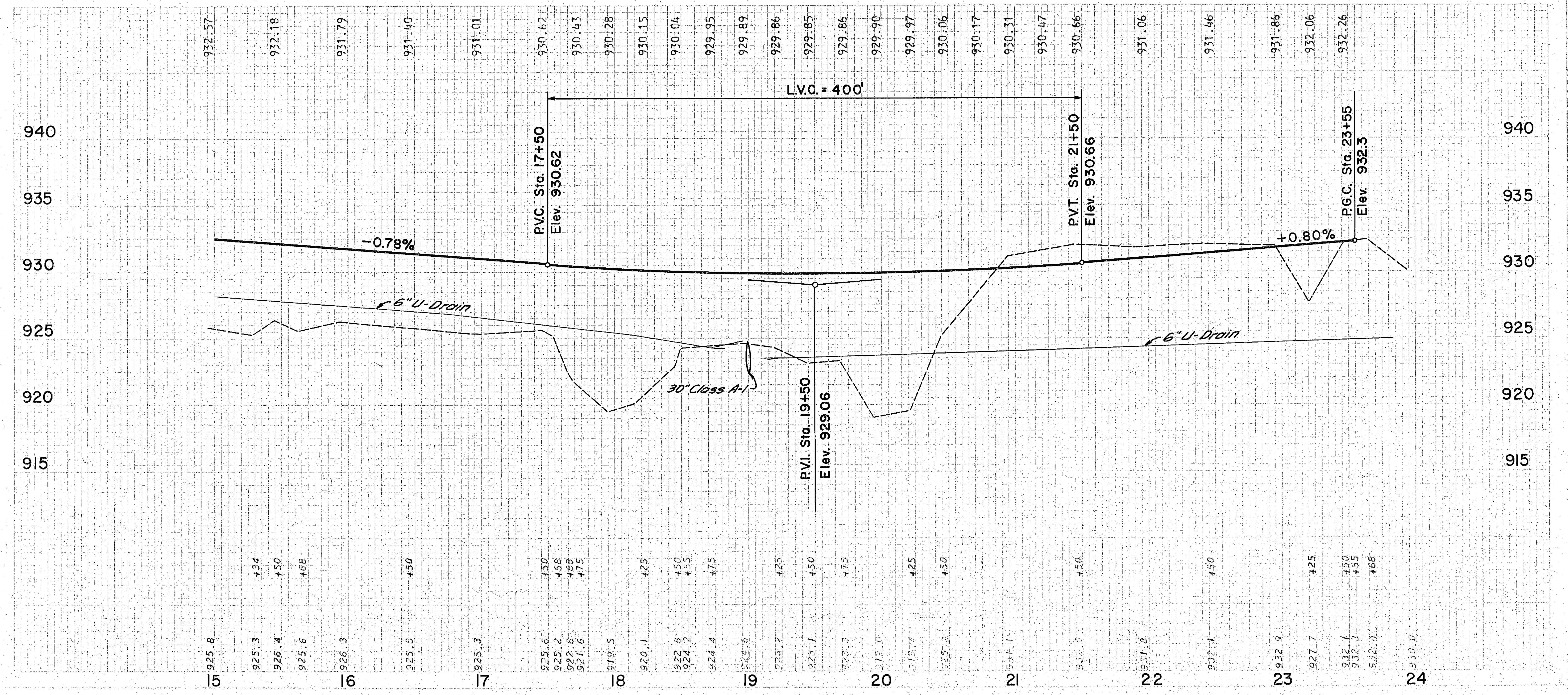
401

TRUMBULL COUNTY TRU-I-80-8.90





ESTIMATED QUANTITIES

SEE SHEET NO.	STATION TO STATION	SIDE	E-3 Channel Excavation CU. YD.	E-12 Pipe Removed (Under 15") L.F.	I-1 M-6.6(b) or 6.8(b) ≠6" (For M-6.5(b)) L.F.	I-1 CL. A-1 M-6.6(a) or M-6.8(b) 30" L.F.	I-1 ≠15" L.F.	I-1 CL. F-4 8" L.F.	I-1 CL. I-3 6" U-Drain Shallow L.F.	I-2 Masonry CU. YD.	I-5 For 6" U-Drain 60° WYE EACH	I-5 For 6" U-Drain 60° BEND EACH	L-6 Roadside Cleanup UNITS	L-10 Sodding SQ. YD.
1-D	15+00 to 18+95	Rt.&Lt.			26			10	384		1	2		
2-D	19+05 to 25+66(U.S.62)	Rt.&Lt.			26			10	494		1	2		
3-D	22+70	℄					146							
4-D	19+00	℄	104			68				14.8				7
5-D	23+45	Rt.		22										
1-R	Yankee Creek-I-80-U.S.62												292	
			104	22	52	68	146	20	878	14.8	2	4	292	7

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

Ramp C

SHEETING

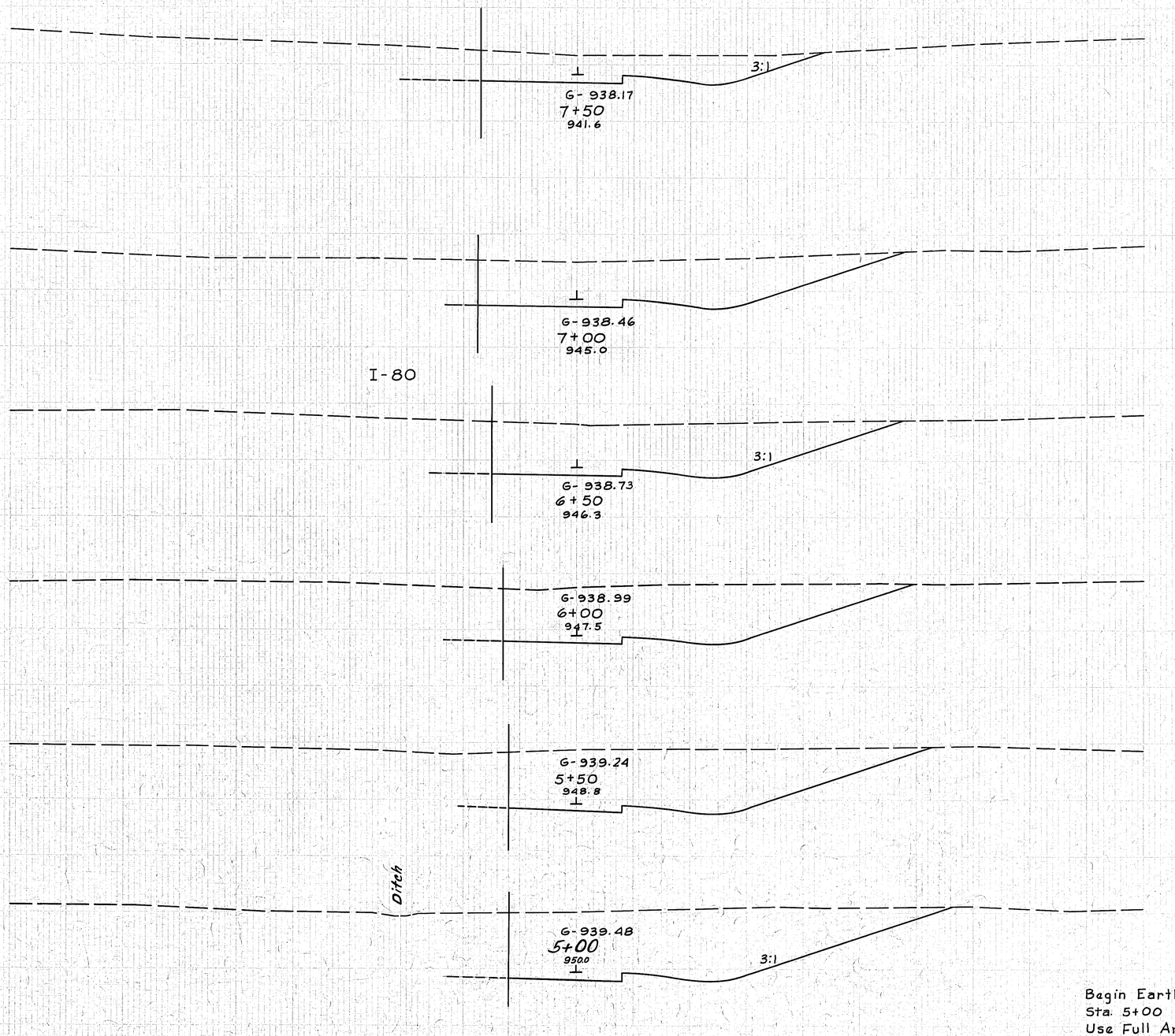
END AREA		SQ. YDS.
CUT	FILL	

PROJ. SEQUENCE	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

149
401

TRU-I-80-8.90
TRUMBULL COUNTY

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



120	140	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
940		262	0	700	0
940		494	0	956	0
940		538	0	1020	0
940		564	0	1091	0
940		614	0	1256	0
940		742	0	0	0

Begin Earthwork
Sta. 5+00
Use Full Area

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

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

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

150
401

TRU-I-80-8.90
TRUMBULL COUNTY

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

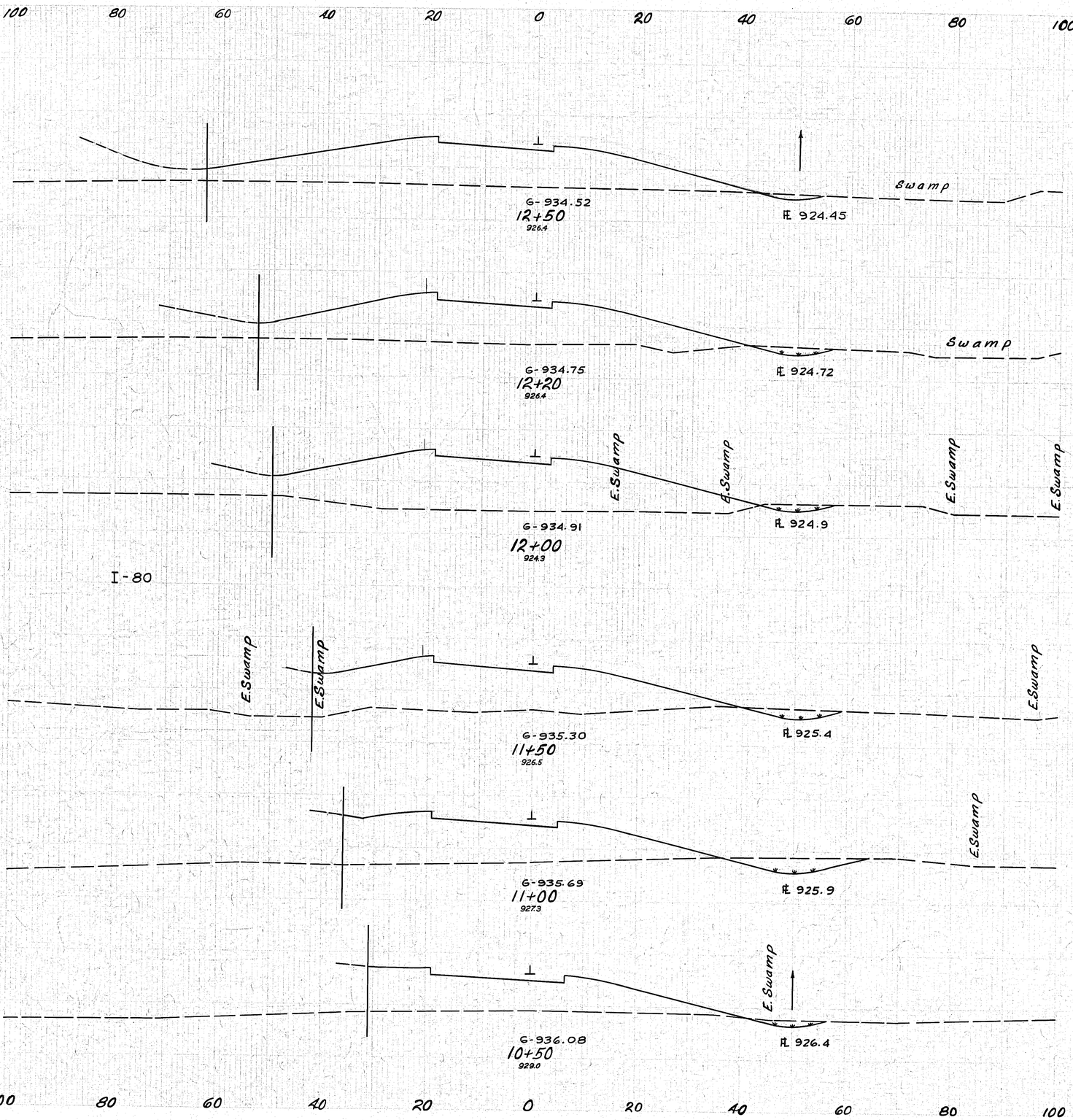
U.S. 62 Interchange Ramp C Sta 8+00 to Sta 10+00

SHEET NO.	STATE	FED. PROJECT
2	OHIO	I-IG-80-5(3)245

151
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	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



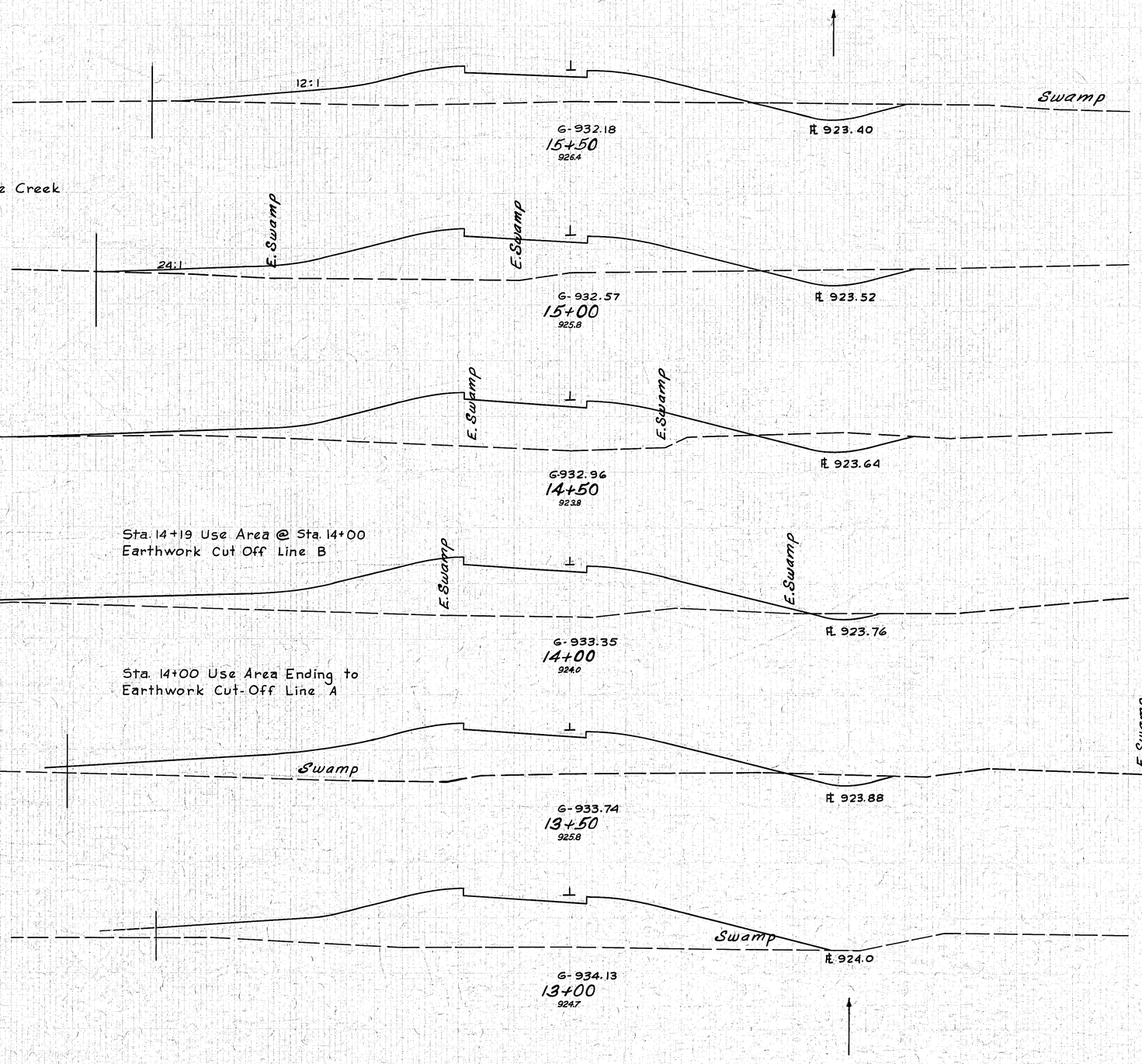
SHEETS	
END AREA	VOL.

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

152
401

TRU-I-80-8.90
TRUMBULL COUNTY

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



	AREA CUT	AREA FILL	VOLUME CUT	VOLUME FILL
930				
	47	360	86	789
930				
	46	492	96	965
930				
	58	550	38	726
Sta. 14+19	9	714	6	496
930				
	9	696	30	1263
930				
	23	668	21	1291
930				
	0	726	7	1226

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

U.S. 62 Jct. Leesburg Sta. 13+00 to Sta. 15+50

TRU-I-80-890
TRUMBULL COUNTY

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

12:1 E.Water E.Water Swamp

℄ 922.68

G-930.04
18+50
922.8

920

E.Water E.Water

℄ 922.80

G-930.28
18+00
919.5

920

E.Water E.Water 12:1

℄ 922.92

G-930.62
17+50
925.6

920

Little Yankee Creek

8:1

℄ 923.04

G-931.01
17+00
925.3

920

12:1 Bench 4:1

℄ 923.16

G-931.40
16+50
925.8

920

12:1 Bench

G-931.79
16+00
926.3

920

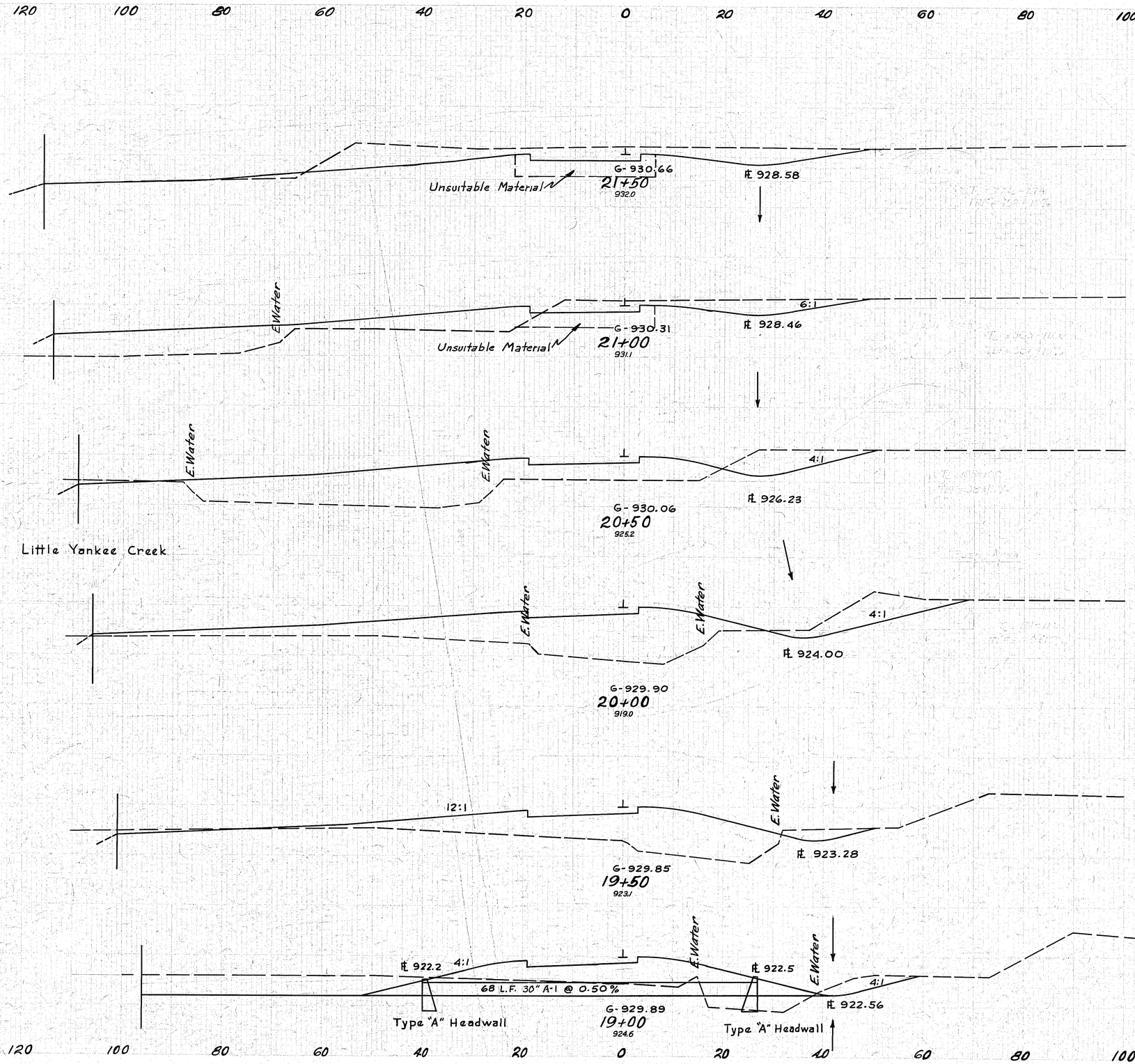
140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

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

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

154
401

TRU-I-80-8.90
TRUMBULL COUNTY



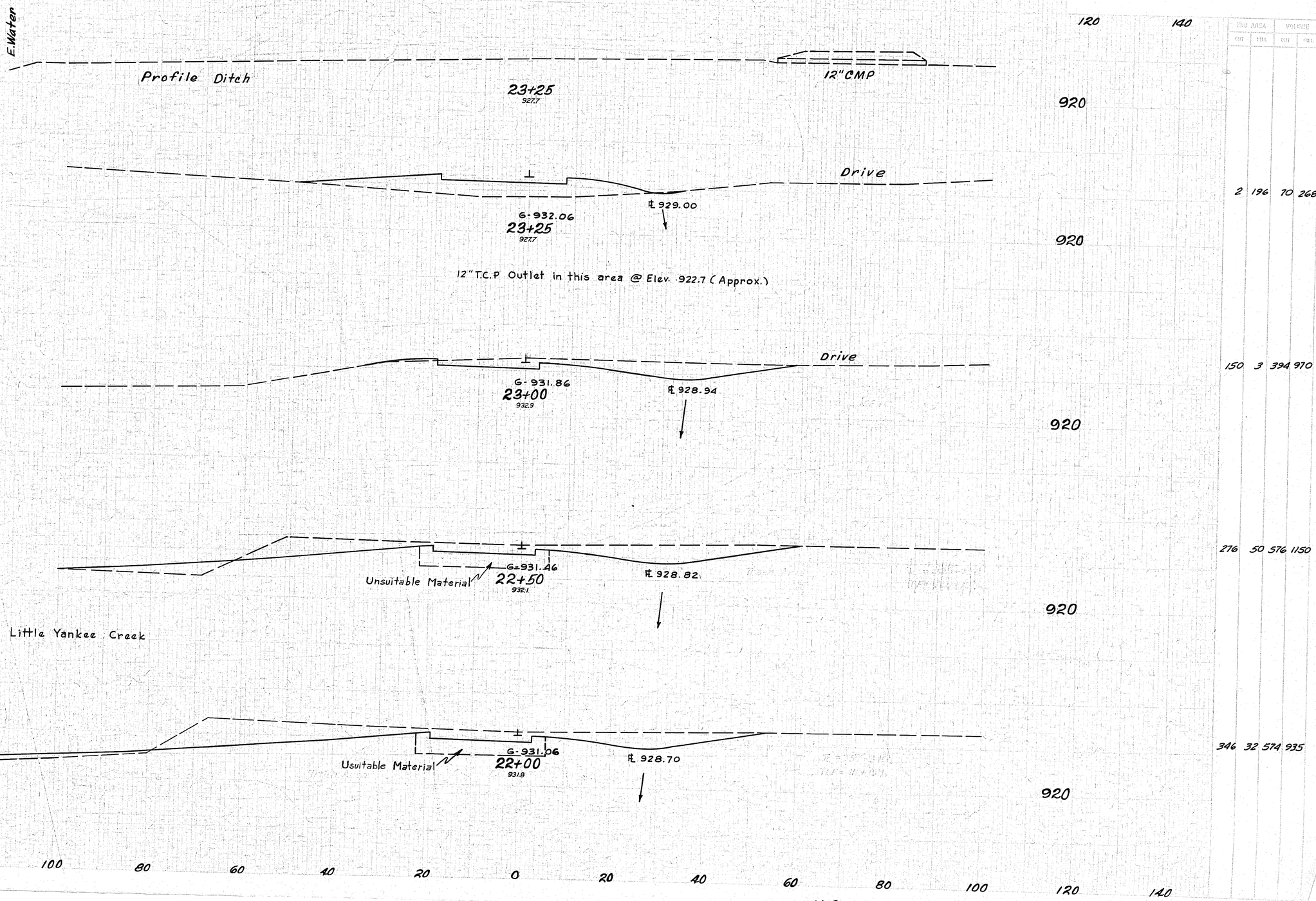
120	140	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
930		274	12	361	561
930		116	360	200	396
930		100	558	196	337
930		112	576	141	250
930		40	444	109	242
930		78	334	132	681

FED. ROAD DIST. NO.	STATE	PROJECT
2	OHIO	I-IG-80-5(3)245

155
401

TRU-I-80-8.90
TRUMBULL COUNTY

TRU AREA		VOLUME	
CUT	FILL	CUT	FILL
2	196	70	268
150	3	394	970
276	50	576	1150
346	32	574	935



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

156
401

TRU-I-80-8.90
TRUMBULL COUNTY

EARTHWORK		VOLUME	
CUT	FILL	CUT	FILL

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

Profile Drain & E Median

24+00
930.0

Profile Drain & E Median

920

24+00
930.0

920

Profile E Macadam

23+68
932.4

Profile E Macadam

920

Profile Edge Macadam

23+55
932.3

Profile Edge Macadam

920

Sta. 23+50
End Earthwork
Use Full Area

Little Yankee Creek

E.R.

Drive

G-932.26

23+50
932.1

920

56 2 27 97

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

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

157
401

TRU-I-80 - 8.90
TRUMBULL COUNTY

SEEDING	
END WIDTH	30 SQ. YDS.

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
G-921.5 10+50 925.1	92	0	73	0
G-921.5 10+26 923.5	72	0	50	0
G-921.5 10+00 920.5	32	0	30	0
G-921.5 9+50 920.5	9	0	4	0
G-921.5 9+34 920.5	4	0	0	0
G-921.5 13+00 925.5	129	0	230	0
G-921.5 12+50 925.5	120	0	215	0
G-921.5 12+00 925.5	112	0	213	0
G-921.5 11+50 925.2	118	0	194	0
G-921.5 11+00 924.5	92	0	170	0

RAMP C

RAMP C

LITTLE YANKEE RUN CHANNEL CHANGE

Sta 9+34 to Sta 13+00

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

158
401

TRU-I-80-8.90
TRUMBULL COUNTY

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		154	0	274	0
		142	0	236	0
		113	0	307	0
		219	0	221	0
		20	0	138	0

60 40 20 0 20 40 60

2:1 G-921.5 15+50 926.1 2:1 B.Gr.Bk. 920

2:1 G-921.5 15+00 926.0 2:1 B.Gr.Bk. B.Gr.Bk. 920

2:1 G-921.5 14+50 925.9 2:1 B.Gr.Bk. B.Gr.Bk. 920

RAMP C

2:1 G-921.5 14+00 924.5 B.Gr.Bk. 925.0 1.5% B.Gr.Bk. 920

3' Dumped Rock For Channel Protection

2:1 G-921.5 13+50 919.0 B.Gr.Bk. 2:1 920

3' Dumped Rock For Channel Protection

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		220	0	357	0
		166	0	269	0
		125	0	274	0
		171	0	282	0
		134	0	267	0

60 40 20 0 20 40 60

I-80 Slope 2:1 G-921.5 18+00 926.7 2:1 E.W. I-80 Slope

2:1 G-921.5 17+50 926.5 E.W. E.W. 920

RAMP C

2:1 G-921.5 17+00 926.2 E.W. E.W. 920

2:1 G-921.5 16+50 926.4 2:1 920

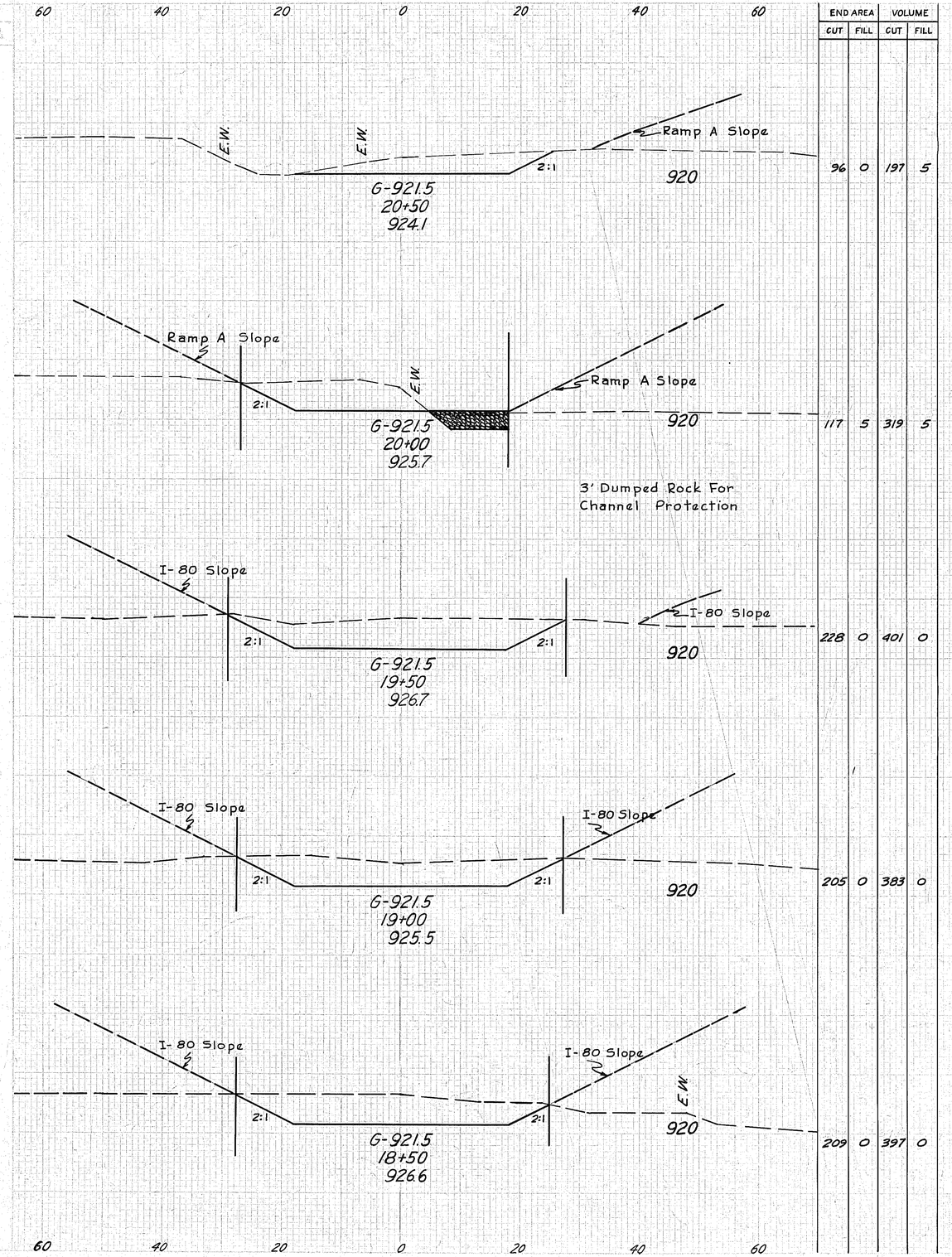
2:1 G-921.5 16+00 925.8 2:1 920

60 40 20 0 20 40 60

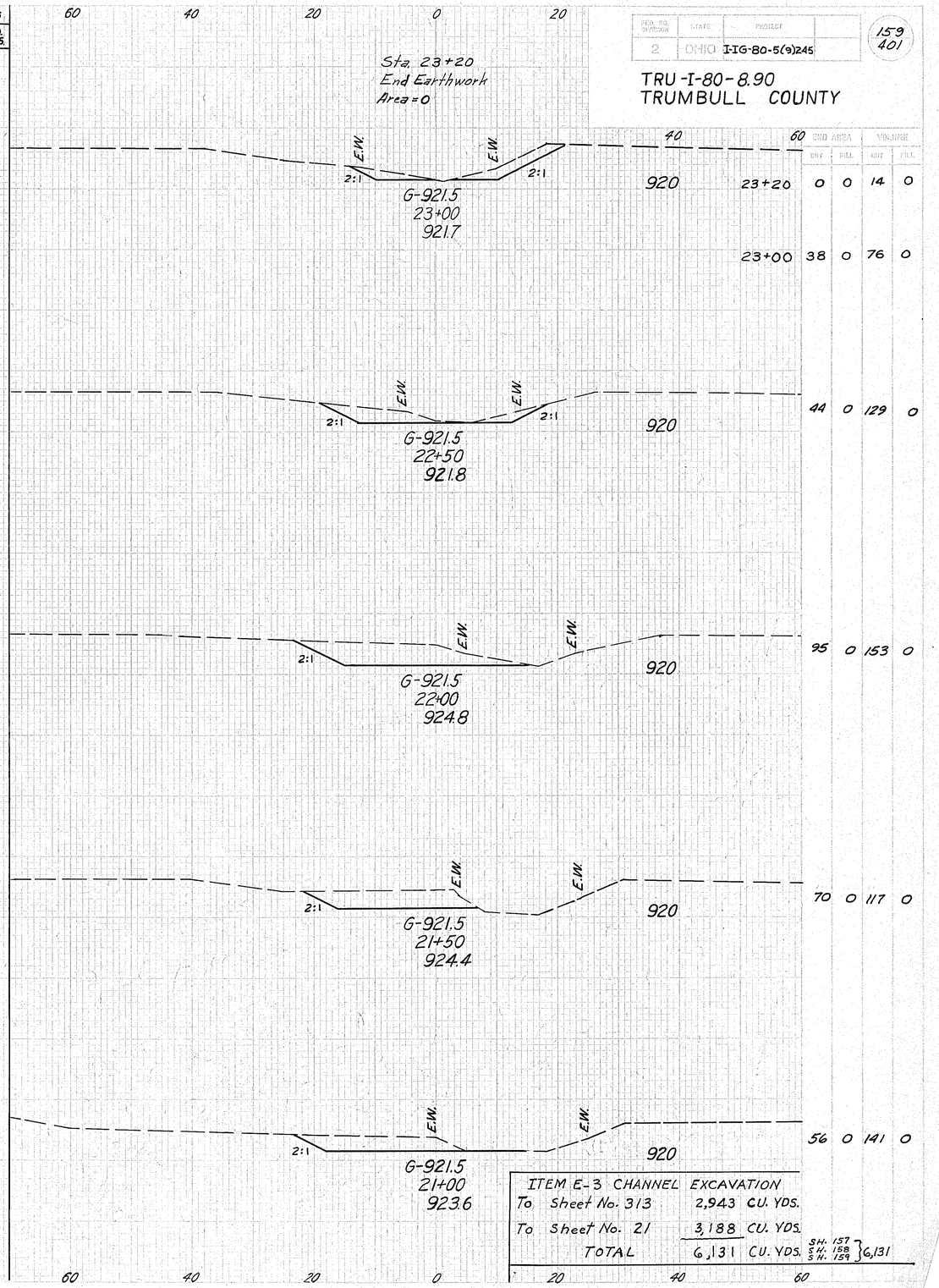
LITTLE YANKEE RUN CHANNEL CHANGE

Sta. 13+50 to Sta. 18+00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		96	0	197	5
		117	5	319	5
		228	0	401	0
		205	0	383	0
		209	0	397	0



SEEDING	
END WIDTH	SQ. YDS.



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

15-9
401

TRU-I-80-8.90
TRUMBULL COUNTY

	END AREA		VOLUME	
	CUT	FILL	CUT	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

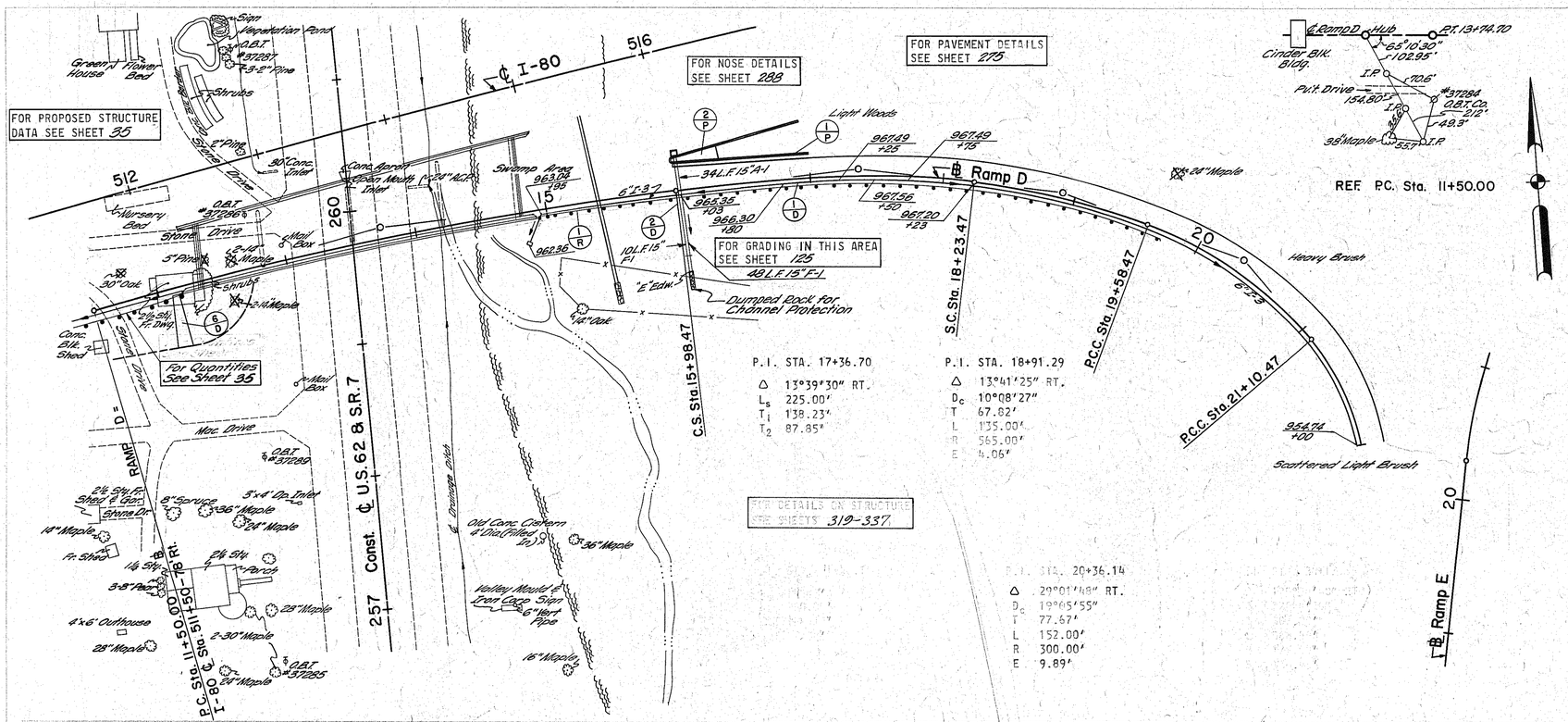
LITTLE YANKEE RUN CHANNEL CHANGE

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



ESTIMATED QUANTITIES

ITEM NO.	STATION TO STATION	SIDE	I-1 CL. A-1 M-6.6(a) or 6.8(b) or 15" L.F.	I-1 CL. F-4 For I-3 8" L.F.	I-1 CL. F-4 15" L.F.	I-3 6" U-Drain DEEP L.F.	I-3 6" U-Drain SHALLOW L.F.	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	I-10 Sodding SQ.YD.	I-10 Dumped Rock Channel Protection CU.YD.	I-12 Sta. Type 6 Curb L.F.	I-15 Guard Rail L.F.	I-21 P.C.C. Median Pav't SQ.YD.	SEE SHEET NO.
1-D	14+93 to 22+00	Rt.	34	10	58	100	618	.26	1	1	2						
2-D	16+00	Rt.										1	2.5	100	4750	28	1
1-D	14+93 to 16+69	Rt.															
2-D	Sta. 22+00																
1-D	15+98.47 to 16+98.47	Lt.															
2-D	16+00	Lt.															
TOTALS			34	10	58	100	618	.3	1	1	2		3	100	4750	28	

RAMP D Sta. 11+50 to Sta. 22+00

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

TRUMBULL COUNTY TRU-I-80-8.90

161 / 401

FOR PAVEMENT DETAILS ADJACENT TO HUBBARD-SHARON RD. SEE SHEET 277

Const. ℄ Reloc. Hubbard-Sharon Rd.

℄ Ramp D

℄ Ramp E

R/W

1' Conc. Headwall
1'x5' Conc. Wingwall
6'x5' Box Culvert C.B.T. #29286

Guard Rail

Conc. Slab

FF. HUBBARD SHARON RD.

Guard Rail
36"-40" Locust

Conc. Inlet

Conc. Ditch

Valley Mould & Iron Conc. Sign

6" Vent Pipe

Conc. Ditch

Conc. Inlet

Open Throat Inlet

Old Conc. C.B.T. & Dia. (Filled In)

Const. ℄ U.S. 62 & S.R. 7

Ditch 2

2' Conc. Ditch

OHIO EDISON #18-TX-28

#119-TX-23

Headwall Conc.

15" CMP

C.B.T. #29188

C.B.T. #29190

C.B.T. #29189

C.B.T. #29286

C.B.T. #29287

C.B.T. #29288

C.B.T. #29289

C.B.T. #29290

C.B.T. #372285

C.B.T. #372286

C.B.T. #372289

C.B.T. #372284 O.B.T. Co.

FOR GRADING IN THIS AREA SEE SHEET 125

FOR CULVERT DETAILS SEE SHEET 299

FOR ROADSIDE CLEAN UP SEE SHEET 125

FOR PAVEMENT DETAILS ADJACENT TO U.S.62 & S.R.7 SEE SHEET 276

P.T. Sta 24+78.96

T.S. Sta 25+77.81

S.C. Sta 27+77.81

C.S. Sta 30+72.81

S.T. Sta 32+72.81 Ramp D

U.S. 62 ℄ Sta. 259+52.06 = 56' Rt.

Scattered Light Brush

P.I. STA. 24+17.55	P.I. STA. 27+11.93	P.I. STA. 29+38.47	P.I. STA. 31+40.19
Δ 120°38'40" RT.	θ_s 19°05'55"	Δ 56°20'30" RT.	θ_s 19°05'55" RT.
D_c 32°44'26"	L_s 200.00'	D_c 19°05'55"	L_s 200.00'
T 307.08'	L.T.134.12'	T 160.66'	L.T.134.12'
L 368.49'	S.T.67.38'	L 295.00'	S.T.67.38'
R 175.00'		R 300.00'	
E 178.45'		E 40.31'	

Same E.P as H.S. Rd. Marked 19+25.29 Off 28.83'
270.12'
I.P.
201.50'
I.P.
142.95'
Tan. Ahd.
120°29'45"
I.P.
Tan. Bk.

REF P.I. Sta. 24+17.55

204.92'
152.65'
100.67'
153°06'
H.S. Rd. Reloc. P.I. 15+00.94
77°36'45"
52.08'
Tan. Bk.
Tan. Ahd.
Hub 27+11.93
T.S. 25+77.81

REF P.I. Sta. 27+11.93

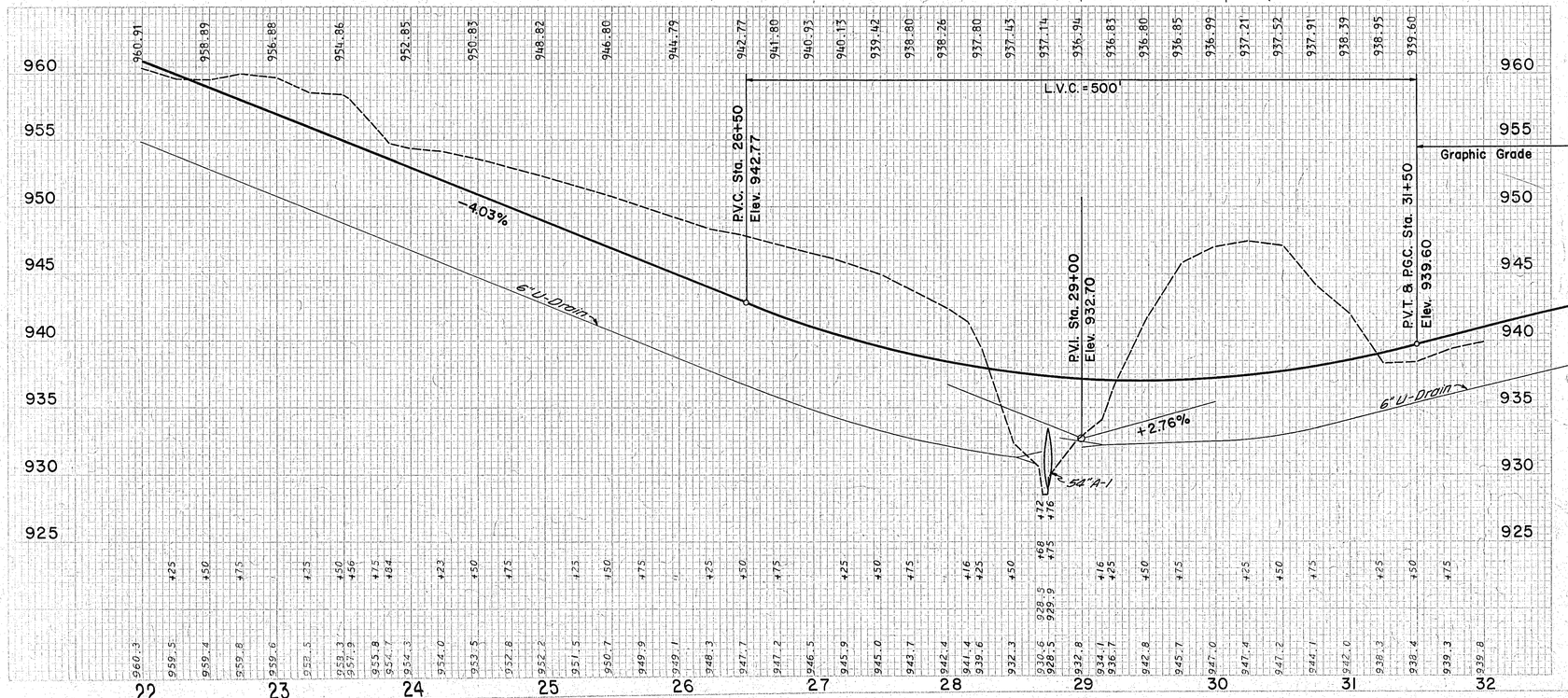
Tan. Bk.
158' Twin Willow
I.P.
Tan. Ahd.
E.B.L. U.S.62 & S.R.7
Yield R/W Sign
W.B.L. U.S.62 & S.R.7
I.P.
120.05
43°

REF P.I. Sta. 29+38.47

E.B.L. U.S.62 & S.R.7
W.B.L. U.S.62 & S.R.7
Tan. Bk.
113.86'
14" Maple
93.0'
I.P.
141.42'
I.P.
Tan. Ahd.
P.I. Hub

REF P.I. Sta. 31+40.19

24" Maple
2-30" Maple
28" Maple
4'x6' Outhouse
28" Maple
3-8" Poor
14" Maple
2½ Sty.
1½ Sty.
Fr. Shed
18" Maple
36" Maple
8" Spruce
Stone Dr.
2 Sty. Fr. Shed & Garage
Mac. Drive
Stone Drive
Mail Box
Fr. Barn
Conc. Blk. Shed
Conc. Grd Cellar
Conc. Blk. Garage
Shrubs
2-14" Maple
2½ Sty. Fr. Dwl.
30" Oak
5" Pine
Mail Box
1 Sty. Fr. Garage
Stone Drive
Nursery Bed



RAMP D Sta. 22+00 to Sta. 32+72.81

ESTIMATED QUANTITIES

ITEM NO.	STATION TO STATION	SIDE	I-1 CL. F-4 CL. I-3 6" U-Drain 8" Deep 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.
1-D	22+00 to 28+70	Rt.	10	628	1
2-D	28+93 to 32+13	Rt.	10	406	1
1-D	Inside Ramp D Loop 28+50 Lf.	Lf.			
2-D					
1-D	23+11 to 28+18	Lf.			
2-D					
TOTALS			20	1034	2

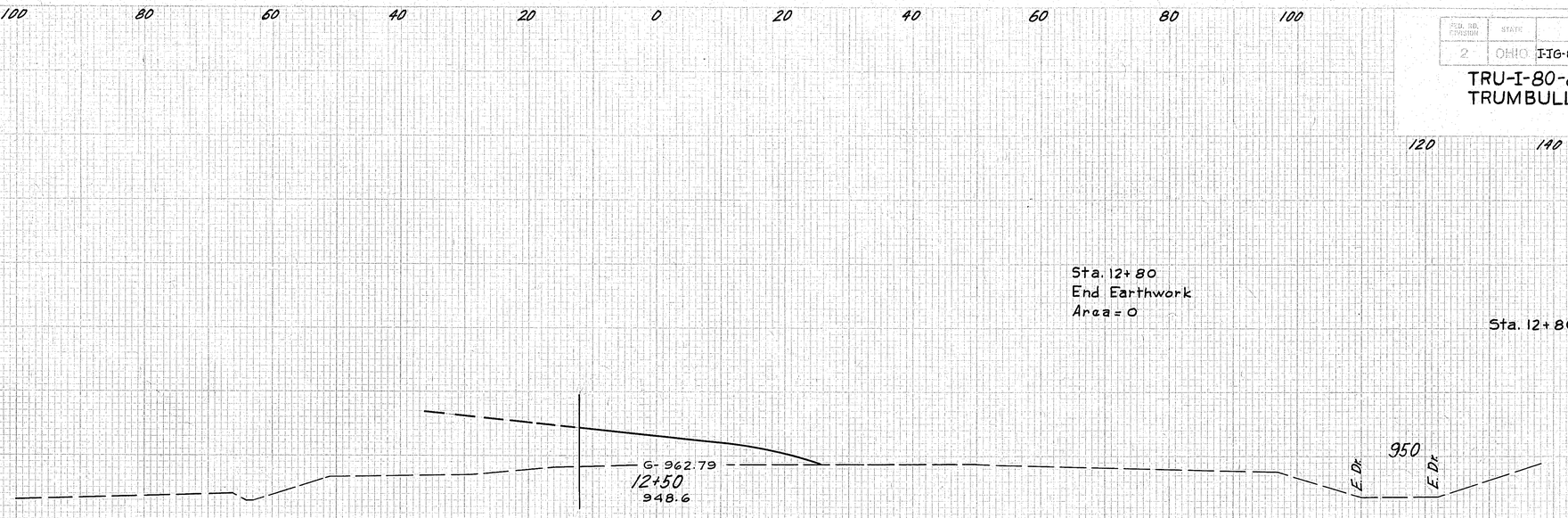
ITEM NO.	SEE SHEET NO.	S-24 Removal Exist. Struct. LUMP	L-6 Roadside Clean Up UNITS	I-12 Std. Type 6 Curb L.F.
1-D		Lump	203	531
2-D		Lump	203	531

SECTIONS	
SEQ WIDTH	SQ YDS

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

162
401

TRU-I-80-8.90
TRUMBULL COUNTY



SEQ	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

SECTIONS	
END AREA	CU. YDS.

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

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

BRIDGE

950

E.R.

14+00
943.3

950

BRIDGE

13+50
941.6

BRIDGE

950

E.R.

13+00
943.2

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

RAMP D Sta 13+00 to Sta 14+00

SEEDING

MIND WIDTH	CO. YDS.

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

164
401

TRU-I-80-8.90
TRUMBULL COUNTY

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

STR. AREA		VOLUME	
CUT	FILL	CUT	FILL

48 L.F. 15" A-1 @ 2.00 %

25° Bend

48 L.F. 15" F-2

2:1

See X-Section 515+50 ℄ for Pipe & C.B.

G-969.69
15+50
945.7

25° Bend

10 L.F. F-1 @ 0.0 %

℄ 943.5
Std. "E" Edw.

Dumped Rock for Channel Protection
15' x 3' x 1.5'

950

E. Sta.

0 1344 0 2950

I-80

2:1

950

G-968.54
15+00
939.3

E. Sta.

E. Sta.

0 1842 0 2161

950

G-967.39
14+50
939.3

E. Sta.
E. Sta.

0 492 0 182

Sta. 14+30

0 0 0 0

Sta. 14+30
Begin Earthwork
Area = 0

940

14+23
939.4

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

RAMP

SEEDING

END WIDTH	SQ. YDS.

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

165
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	1318	0	2478
0	1358	0	2521
0	1365	0	2508

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

960

2:1

G-971.85
17+00
950.6

I-80

950

2:1

G-971.41
16+50
948.7

34 L.F. 15" E-1 @ 3.0%
25° Bend

48 L.F. 15" F-4

2:1

950

25° Bend

℄ 946.00

10 L.F. 15" E-1 @ 0.0%

G-970.70
16+00
946.7

Drumped Rock for Channel Protection
15'L x 3'W x 1.5'T

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

RAMP D Sta 16+00 to Sta 17+00

BEDDING	
END TAPER	CO. TRS.

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

166
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

970

2:1

G-971.41
18+50
956.7

0 1042 0 2002

I-80

960

2:1

G-971.84
18+00
954.8

0 1086 0 2113

960

6:1

2:1

G-971.99
17+50
952.3

0 1196 0 2328

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

RAMP D - Sta 17+50 to 18+50

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

167
401

TRU-I-80-8.90
TRUMBULL COUNTY

SHEETING	
LEFT	RIGHT

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

970

4:1

G-968.39
20+00
960.1

8 620 8 1395

I-80

960

2:1

G-969.69
19+50
958.0

0 886 0 1780

960

2:1

G-970.70
19+00
956.8

0 1036 0 1924

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

RAMP D

SECTIONS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

168
401

TRU-I-80-8.90
TRUMBULL COUNTY

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

960

G-960.91
22+00
960.3

31 27 29 155

E. Swamp

960

G-962.92
21+50
960.7

0 140 24 417

RAMP E

4:1

960

G-964.94
21+00
960.8

26 310 32 662

4:1

960

959.1

G-966.81
20+50
960.5

8 405 15 949

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

RAMP D Sta 20+50 to Sta 22+00

SEEDING

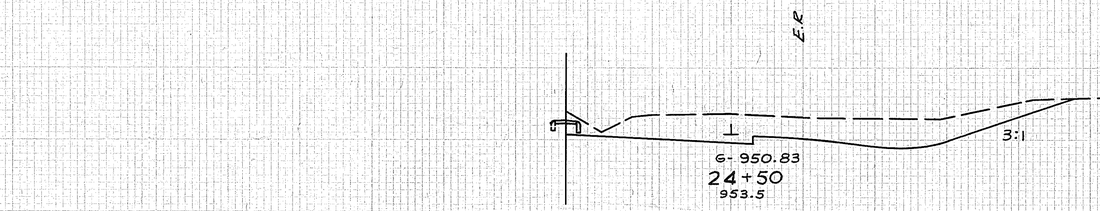
KIND OF WORK	NO. YDS.

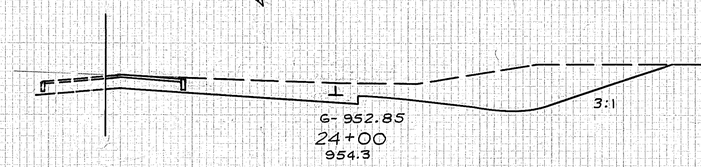
FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

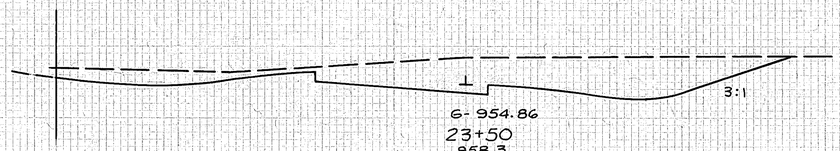
169
401

TRU-I-80-8.90
TRUMBULL COUNTY

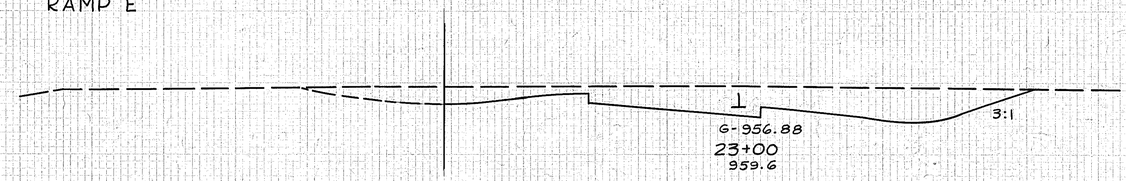
HUBBARD - SHARON ROAD

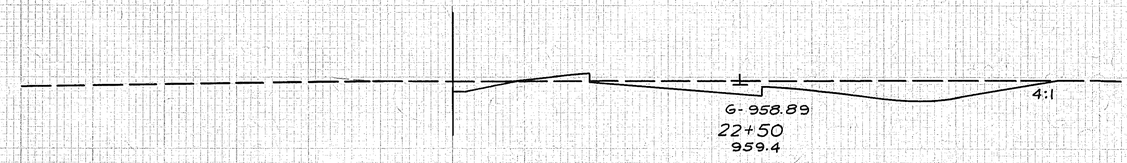






RAMP E





	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
950	202	0	374	0
960	202	0	474	0
960	310	0	500	0
960	230	0	298	5
960	98	5	107	49

RAMP D Sta 22+50 to Sta 24+50

SEEDING

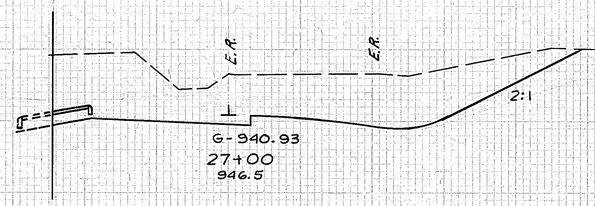
1000 LINEAR	SQ. YDS.

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

170
401

TRU-I-80-8.90
TRUMBULL COUNTY

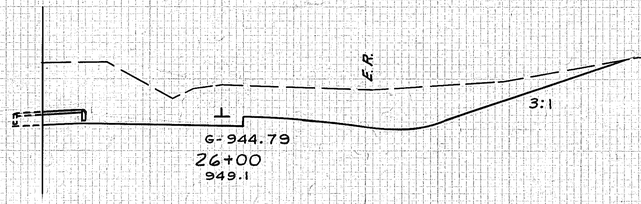
140 120 100 80 60 40 20 0 20 40 60 80 100



940

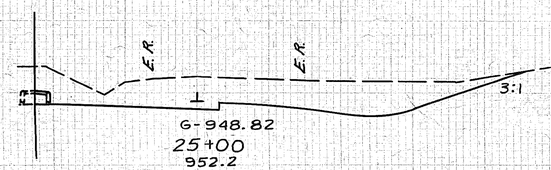
950

HUBBARD-SHARON ROAD



950

950



950

END AREA		VOLUME	
CUT	FILL	CUT	FILL
459	0	838	0
446	0	756	0
370	0	625	0
305	0	501	0
236	0	406	0

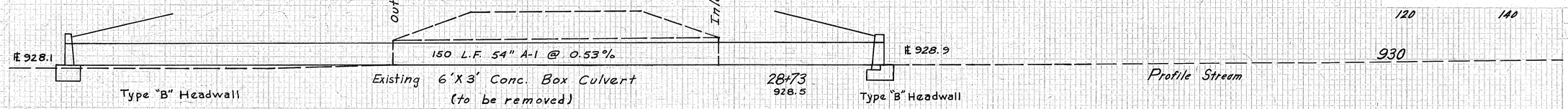
140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

RAMP D Sta. 25+00 to 27+00

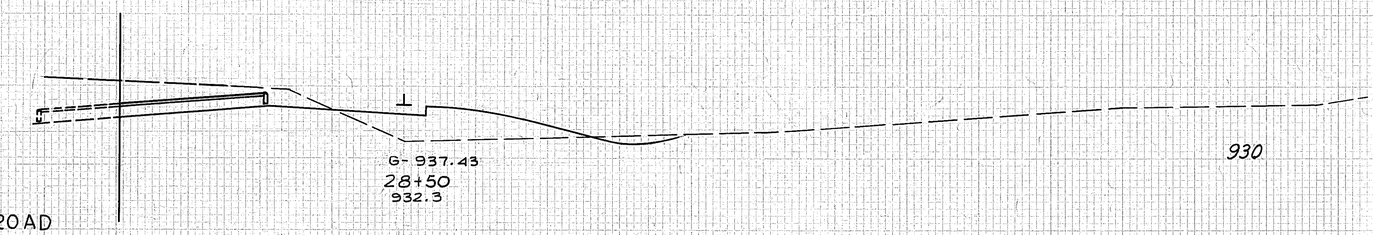
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

171
401

TRU-I-80-8.90
TRUMBULL COUNTY

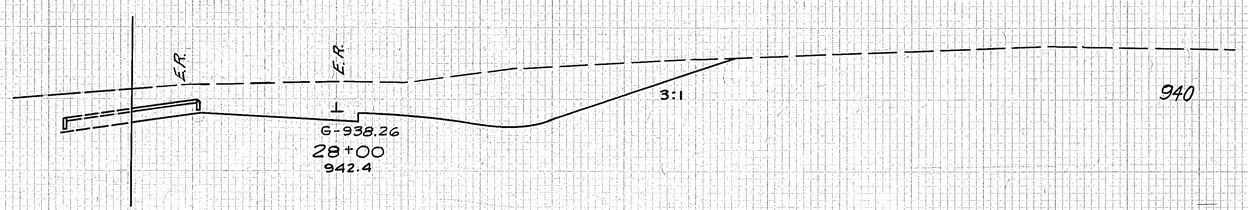


END AREA		VOLUME	
CUT	FILL	CUT	FILL

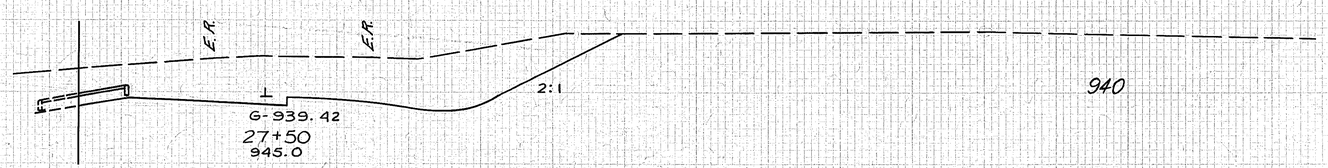


106 100 467 92

HUBBARD-SHARON ROAD



398 0 761 0



424 0 818 0

RAMP D Sta 27+50 to Sta 28+73

SEEDING

END WIDTH	NO. LBS.

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

172
401

TRU-I-80-8.90
TRUMBULL COUNTY

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

E.R.
E.R.
G-937.52
30+50
947.2
2:1
940
E. Sta.
E. Sta.

E.R.
G-936.99
30+00
947.0
3:1
940
E. Sta.
E. Sta.

U.S. 62 & S.R. 7

G-936.80
29+50
942.0
940
E. Sta.
E. Sta.

HUBBARD - SHARON ROAD

E.R.
G-936.94
29+00
932.6
4:1
E. Sta.
E. Sta.
930

END AREA		VOLUME	
CUT	FILL	CUT	FILL
490	10	1004	9
594	0	972	0
456	0	444	159
24	172	120	252

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

RAMP D Sta. 29+00 to Sta. 30+50

FED. ROAD 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

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
940	33	12	18	18
940	11	32	74	34
940	69	5	258	5
940	210	0	481	6
940	310	6	741	15

U.S. 62 & S.R. 7

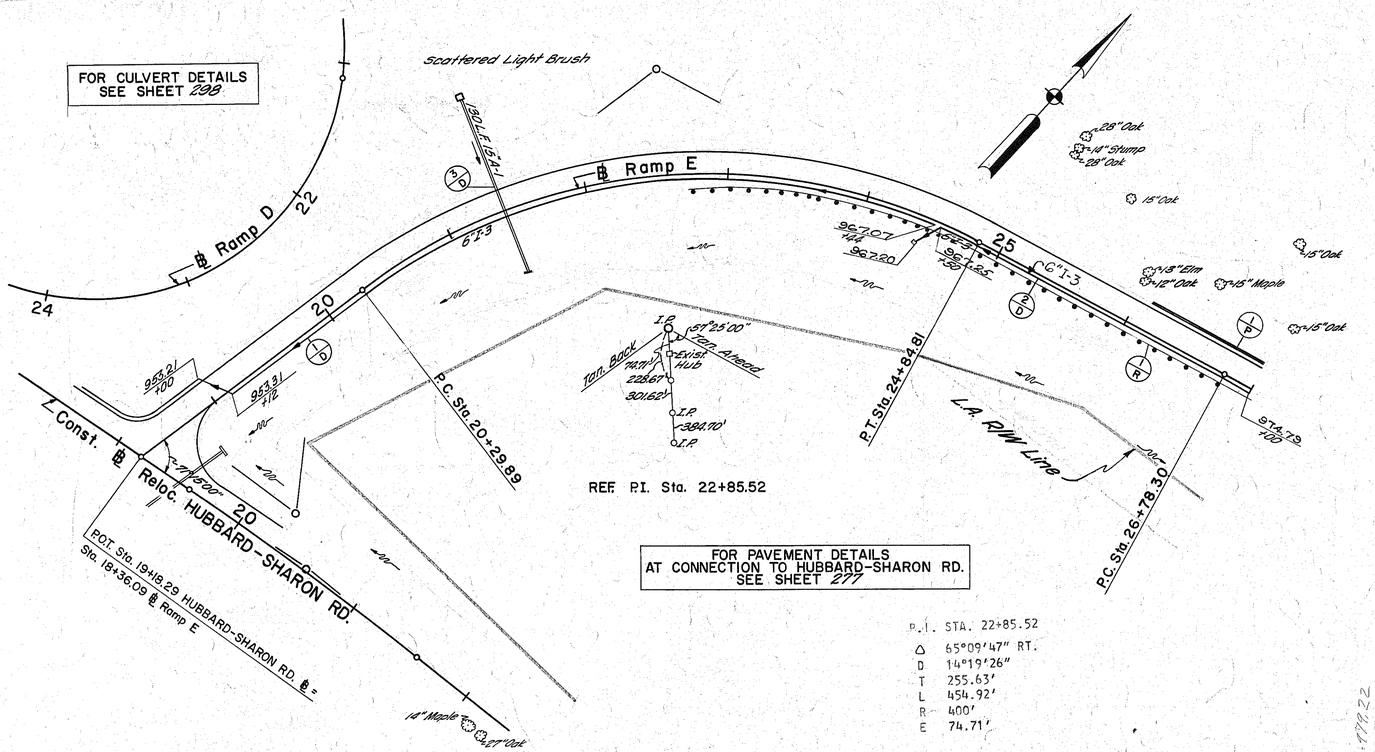
RAMP B Sta. 31+00 to Sta. 32+72.81

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

174
401

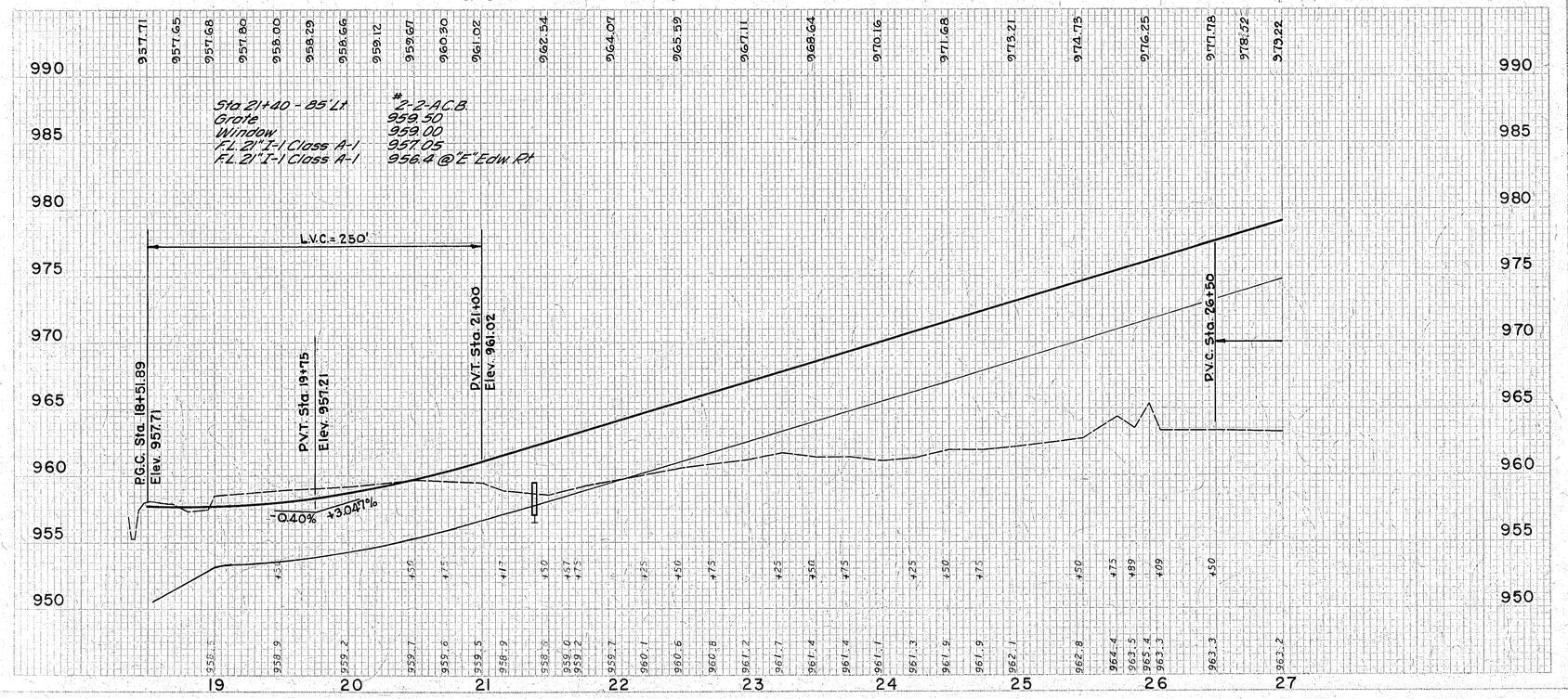
TRUMBULL COUNTY TRU-I-80-8.90

FOR CULVERT DETAILS SEE SHEET 298



FOR PAVEMENT DETAILS AT CONNECTION TO HUBBARD-SHARON RD. SEE SHEET 277

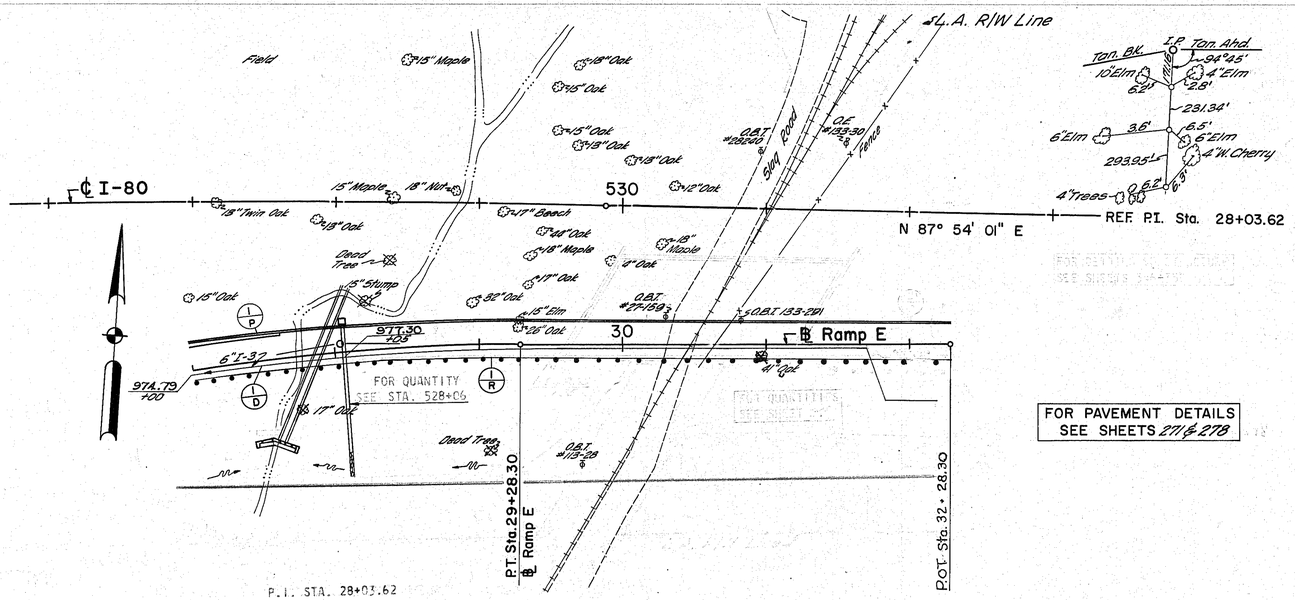
P.I. STA. 22+85.52
Δ 65°09'47" RT.
D 14°19'26"
T 255.63'
L 454.92'
R 400'
E 74.71'



ESTIMATED QUANTITIES

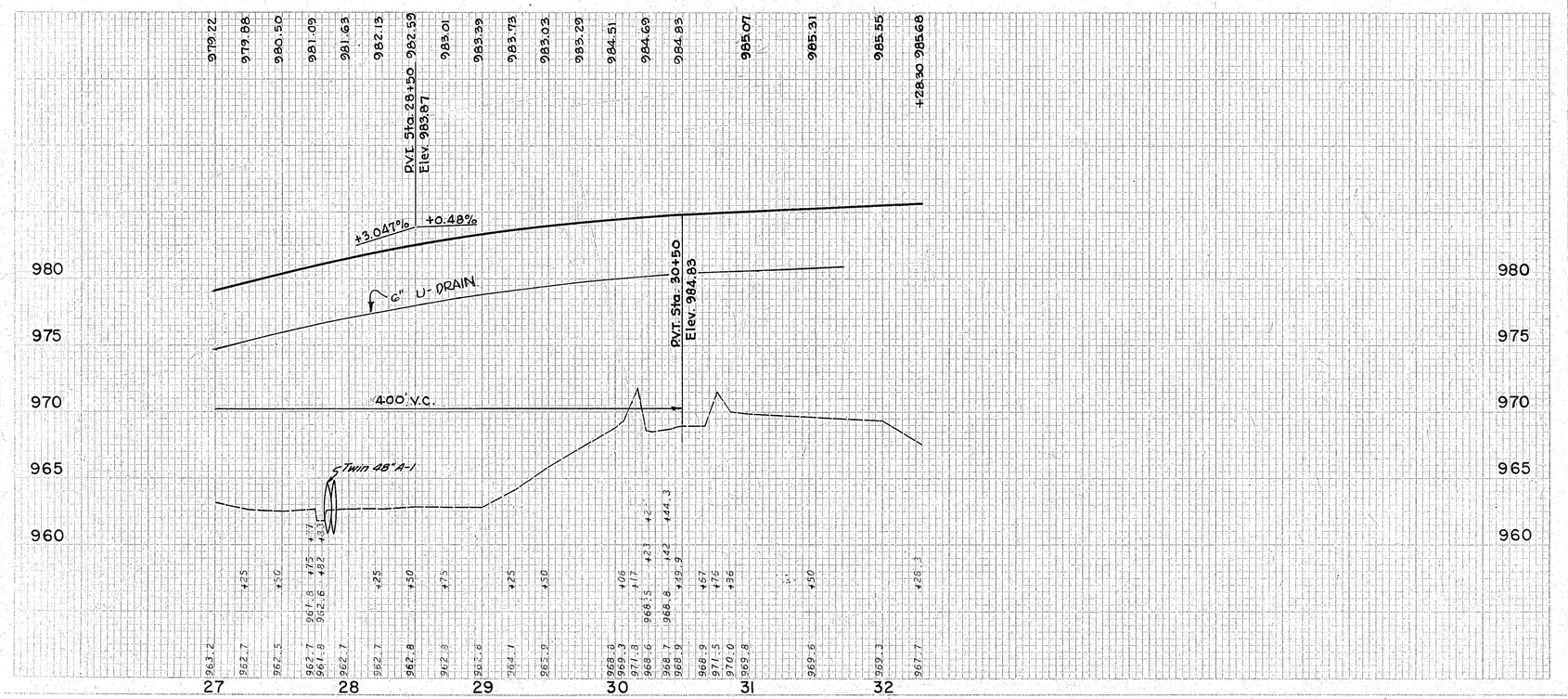
REF. NO.	STATION TO STATION	SIDE	I-1 For #6 M-6.5(b)	I-2	I-5 For 6"U-Drain 60° BEND	I-8 Catch Basin No. 2-2-A	I-12 Type B P.C.C. Curb	I-15 Guard Rail	L-10 Sodding
			CL. A-1 M=6.6(a) M=6.6(b) or 6.8(b) ± 6"	CL. F-4 CL. I-3 6"U-Drain 8" Shallow					SEE SHEET NO.
			L.F.	Masonry CU. YD.	EACH	EACH	L.F.	L.F.	SQ. YD.
1-0	19+00 to 21+44	Rt.	26						
2-0	22+40 to 27+00	Rt.		132		1	88	425.0	
3-0	21+40	℄			1				1
	27.98								
1-R	22+75 to 21+98								
1-P	26+11.63 to 27+00	Lt.		.26					
TOTALS			26	132	1	1	88	425.0	1
					2				
				10					190
									.3

RAMP E Sta. 18+51.89 to Sta. 27+00



FOR PAVEMENT DETAILS SEE SHEETS 277 & 278

P.I. STA. 28+03.62
△ 10°00'00" RT.
D 4°00'00"
T 125.32'
L 250'
R 1432.39'
E 5.47'



ESTIMATED QUANTITIES

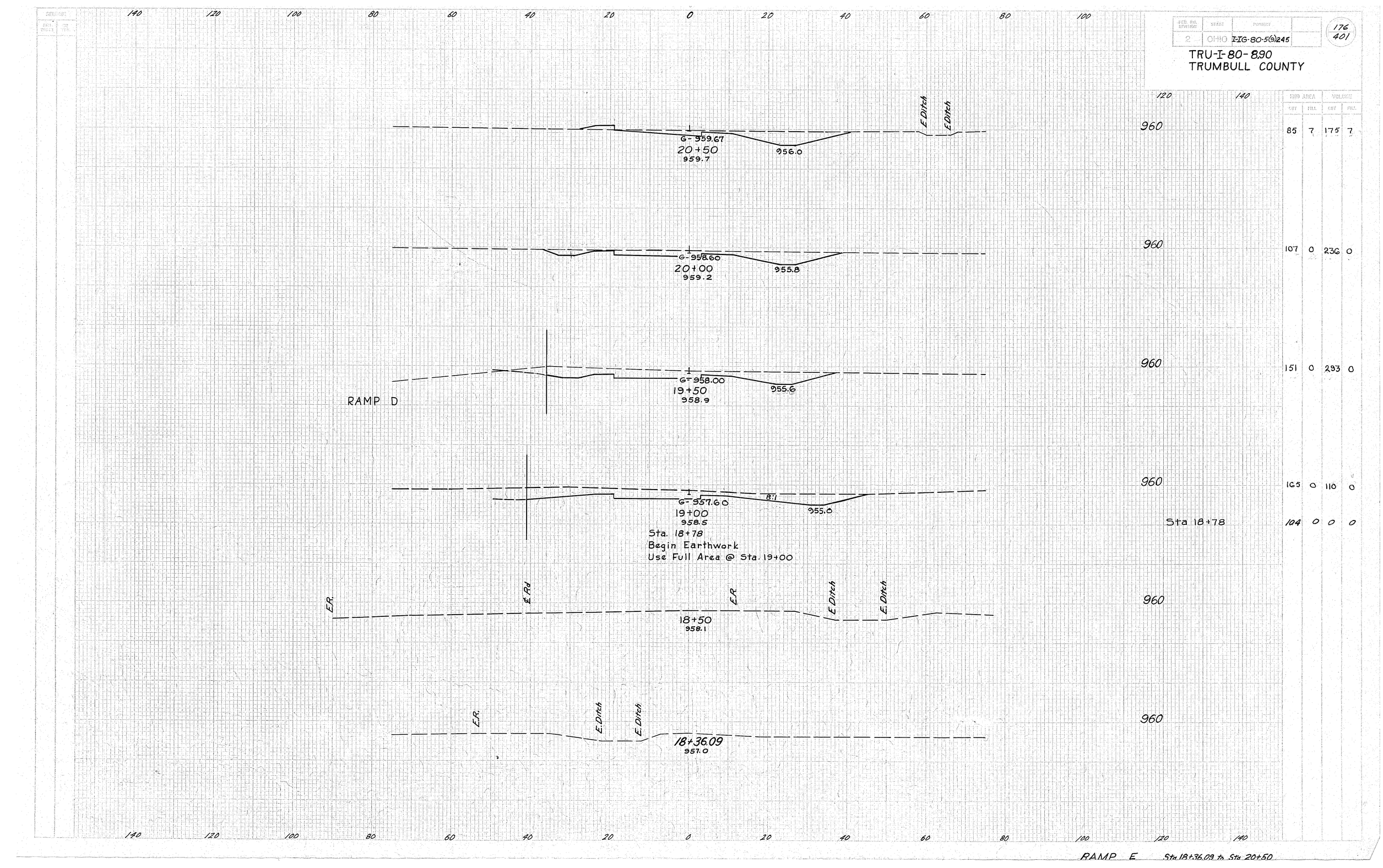
SHEET NO.	STATION TO STATION	SIDE	I-1 GL. I-3 6"U-Drain L.F.	I-15 Guard Rail L.F.	I-12 Type 8 P.C.C. Curb L.F.
I-D	27+00 to 31+70	Rt.	470		
I-D	26+38 to 32+25	Rt.		525	
I-D	27+00 to 32+28.30	Lt.			528
TOTALS			470	525	528

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



	AREA		VOLUME	
	CUT	FILL	CUT	FILL
	85	7	175	7
	107	0	236	0
	151	0	293	0
	165	0	110	0
Sta 18+78	104	0	0	0

RAMP E Sta 18+36.09 to Sta 20+50

SEEDING

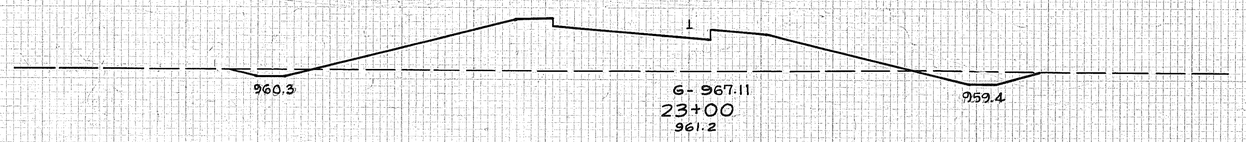
END WIDTH	SQ. YDS.

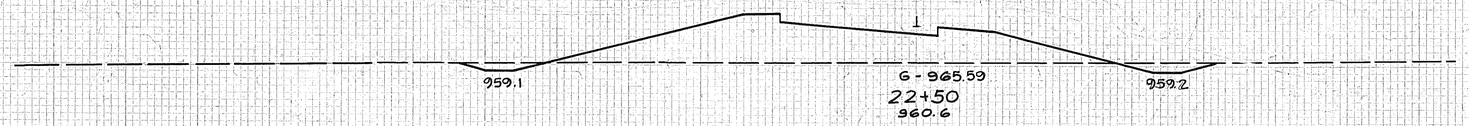
FED. RD. PROGRAM	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

177
401

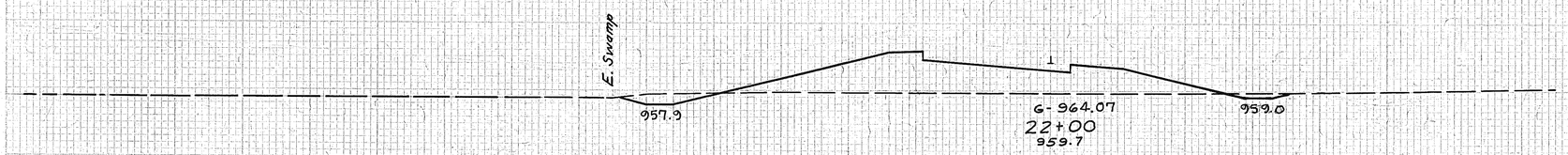
TRU-I-80-8.90
TRUMBULL COUNTY

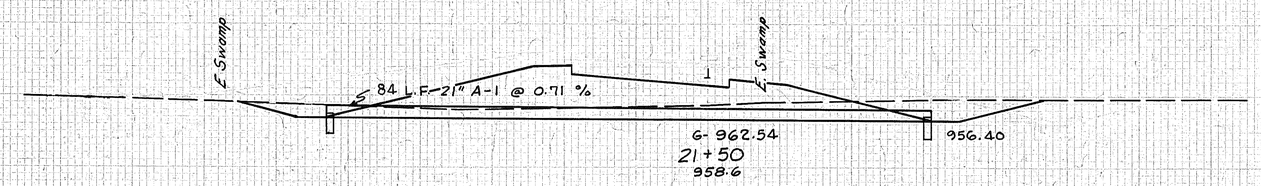
140 120 100 80 60 40 20 0 20 40 60 80 100 120 140



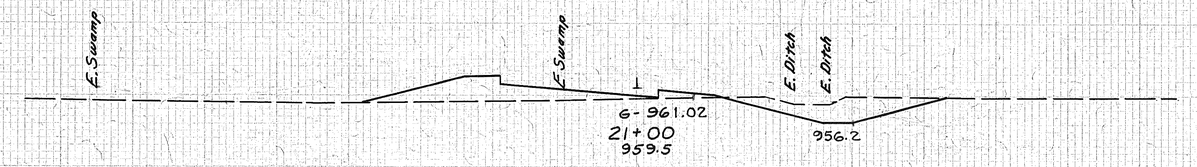


I-80





℄ 21" I-1 Class A-1 957.0



STA	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
960	27	350	41	602
960	17	300	30	516
960	10	257	80	444
960	70	222	111	280
960	50	80	125	81

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

RAMP E Sta 21+00 to Sta 23+00

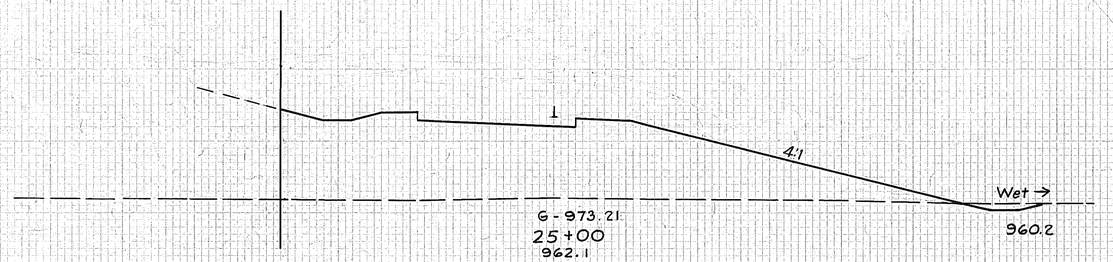
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

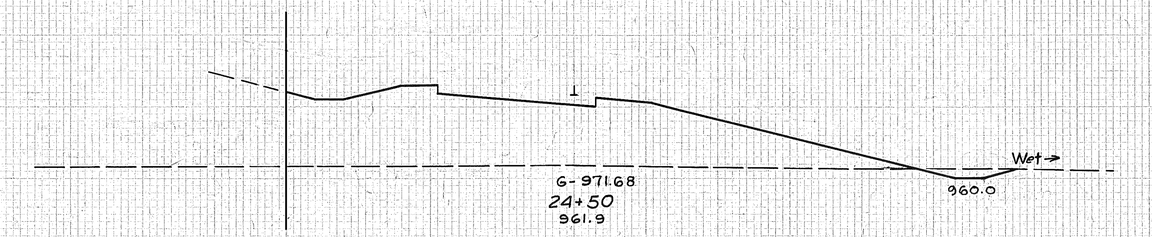
178
401

TRU-I-80-8.90
TRUMBULL COUNTY

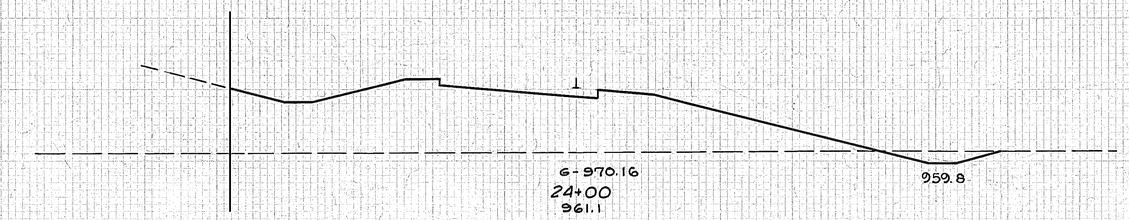
SEEDING

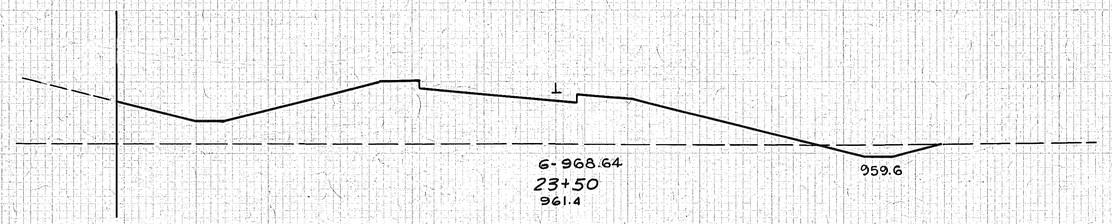
END WIDTH	SQ. YDS.





I-80





		END AREA		VOLUME	
		CUT	FILL	CUT	FILL
960		8	821	17	1373
960		10	662	25	1206
960		17	640	30	1065
960		15	510	39	797

RAMP E Sta 23+50 to Sta 25+00

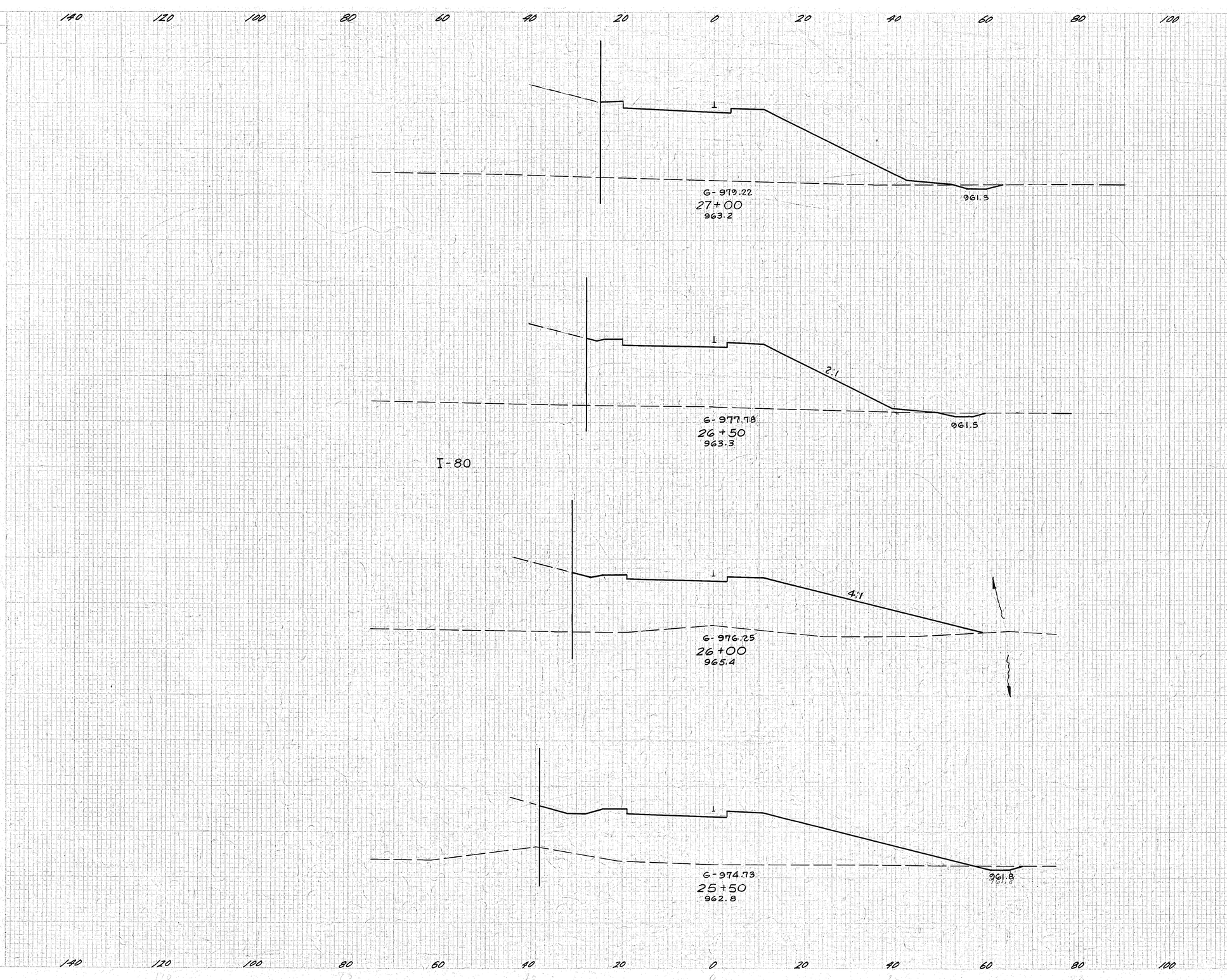
SEEDING

SQ. YDS.

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

179
401

TRU-I-80-8.90
TRUMBULL COUNTY



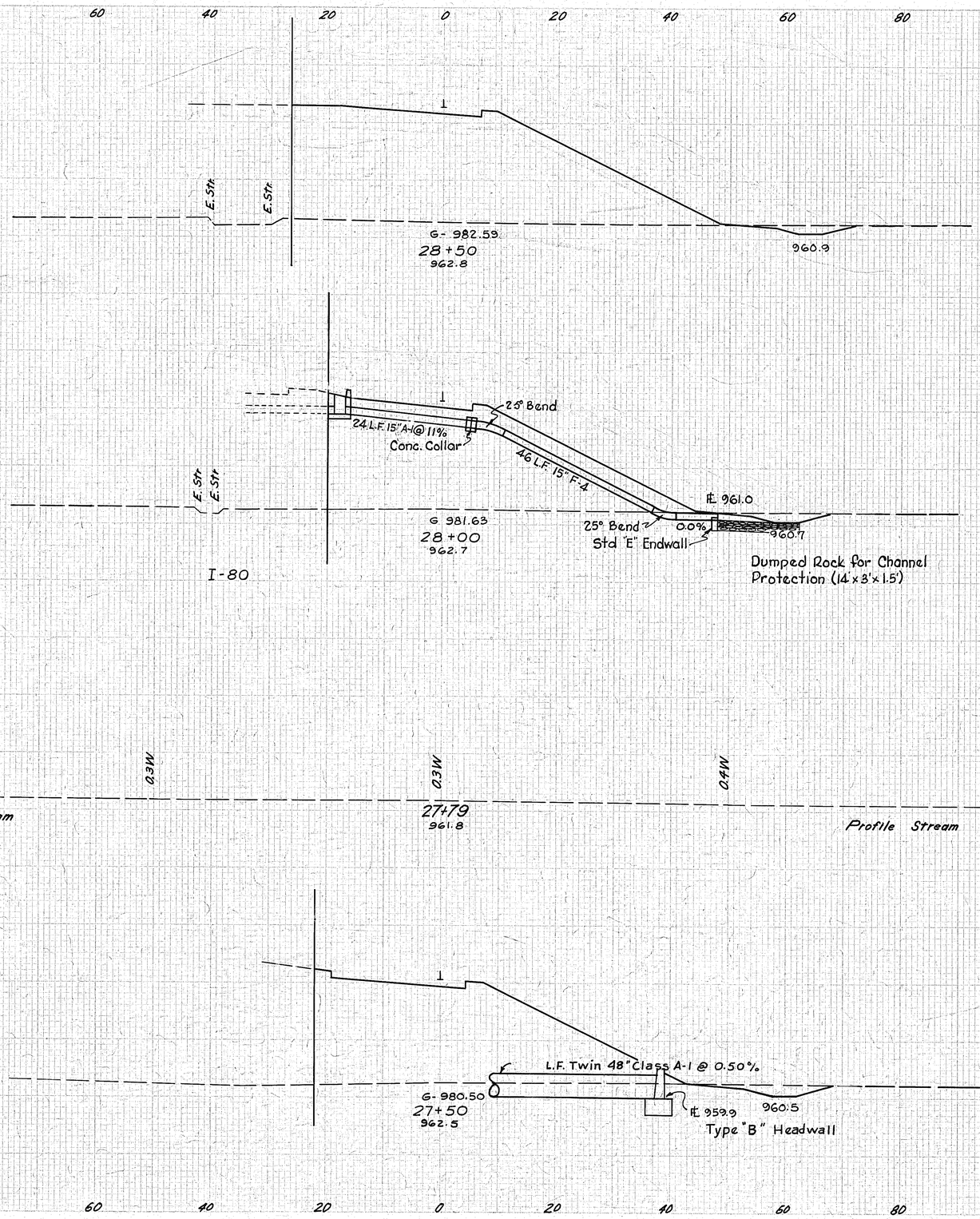
END AREA		VOLUME	
CUT	FILL	CUT	FILL
7	863	11	1503
5	760	5	1445
0	800	6	1463
6	780	13	1483

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
1C	1087	32	1804	
18	861	42	1575	
27	840	32	1577	

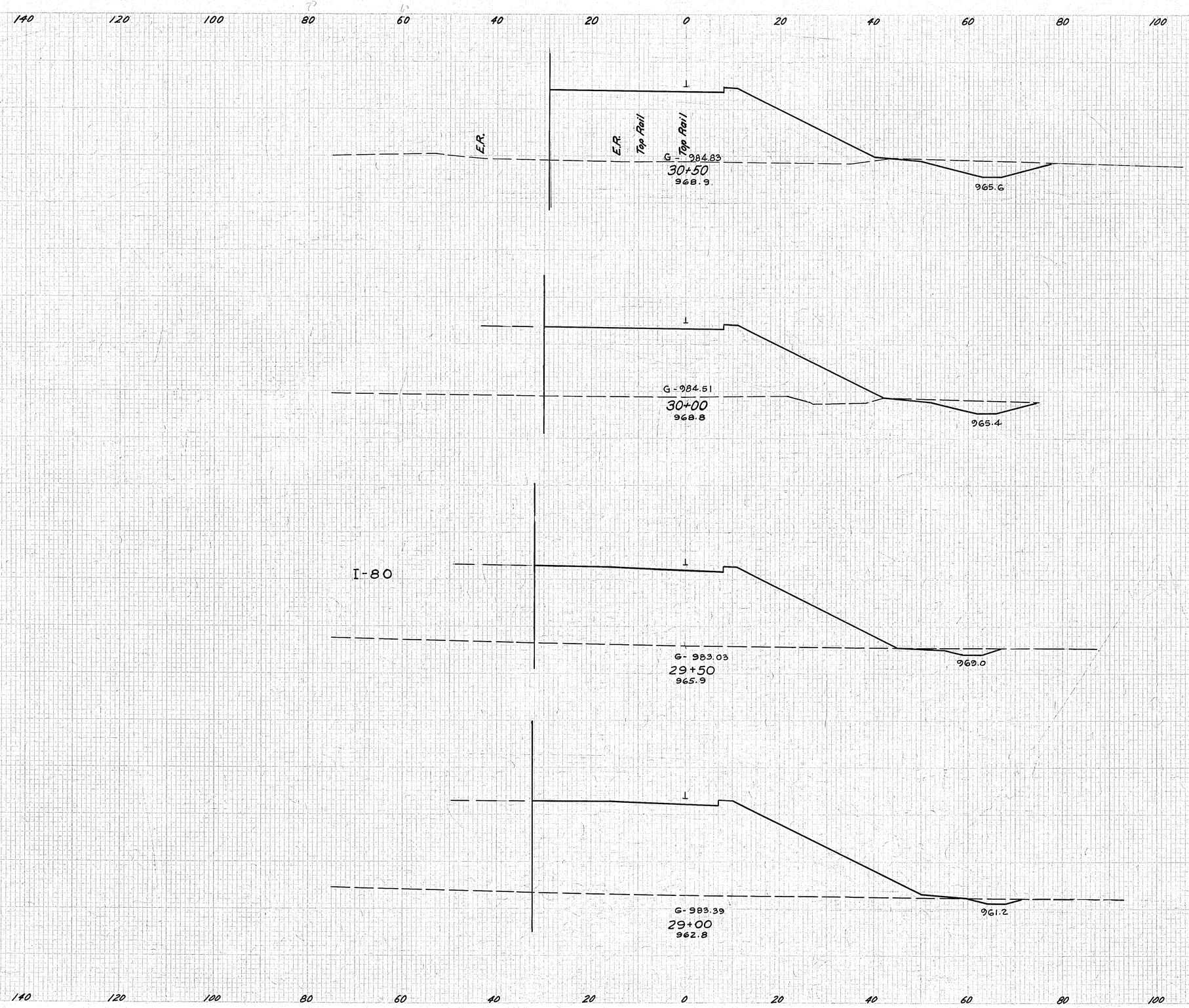
RAMP F Sta. 27+50 to Sta. 28+50

SECTION	
END AREA	SQ. YDS.

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

SLOPING

END WIDTH	SQ. YDS.

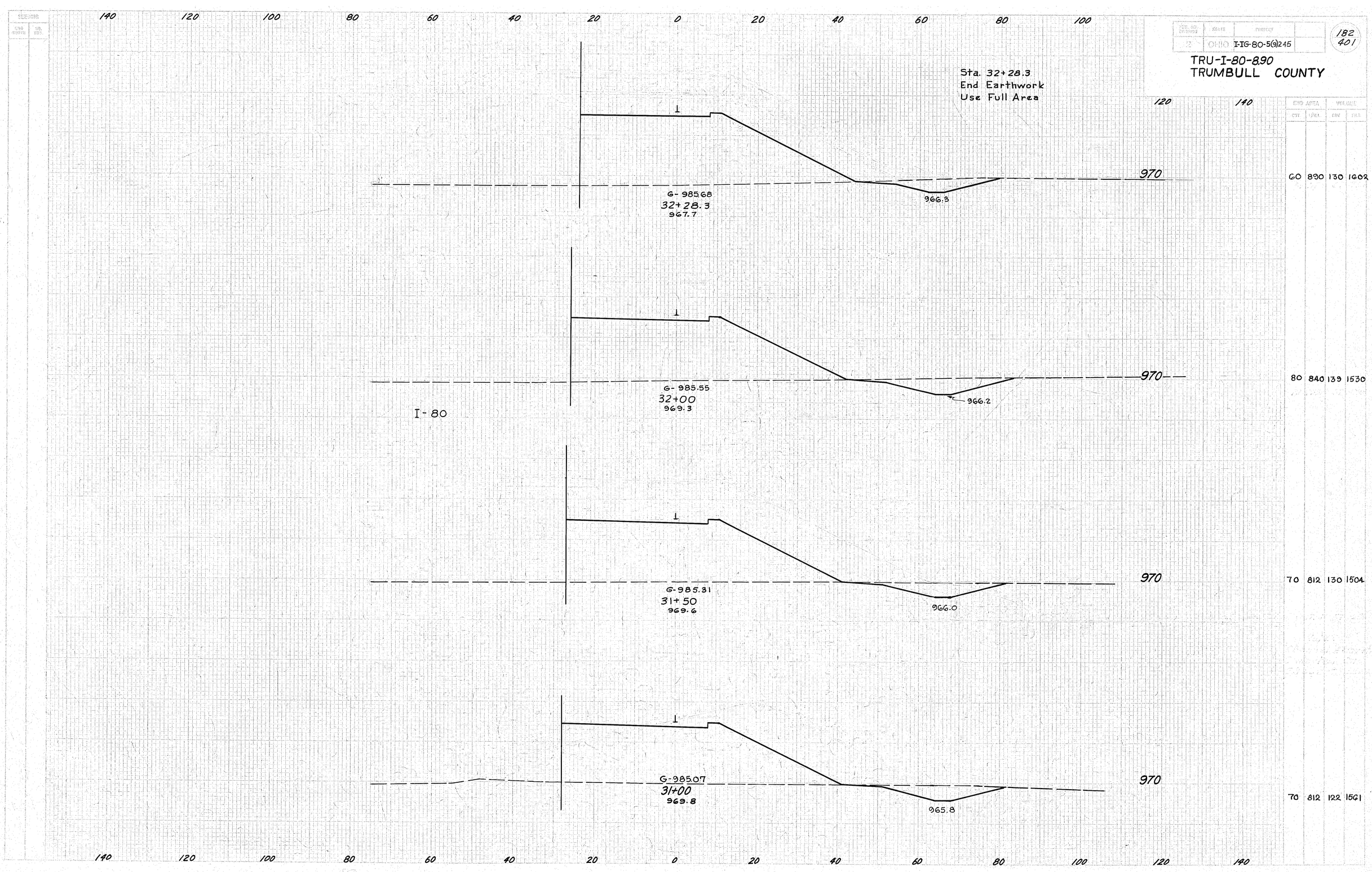
FED. AID SYSTEM	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

182
401

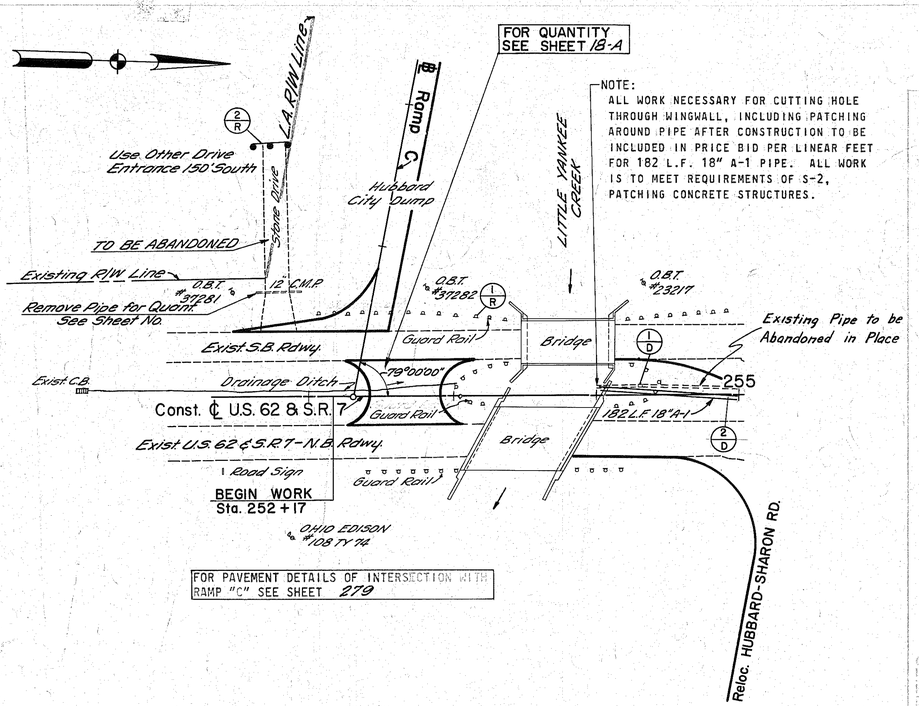
TRU-I-80-890
TRUMBULL COUNTY

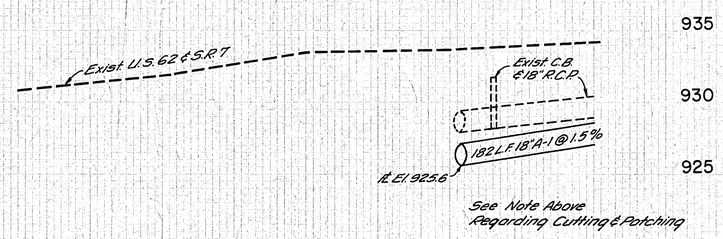
Sta. 32+28.3
End Earthwork
Use Full Area

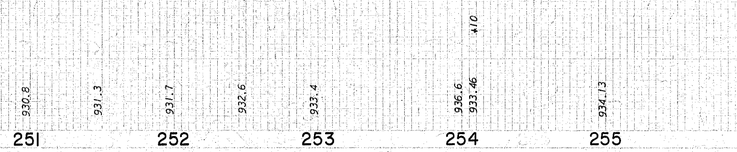
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
60	890	130	1602	
80	840	139	1530	
70	812	130	1504	
70	812	122	1561	



RAMP E Sta 31+00 to Sta 32+28.3







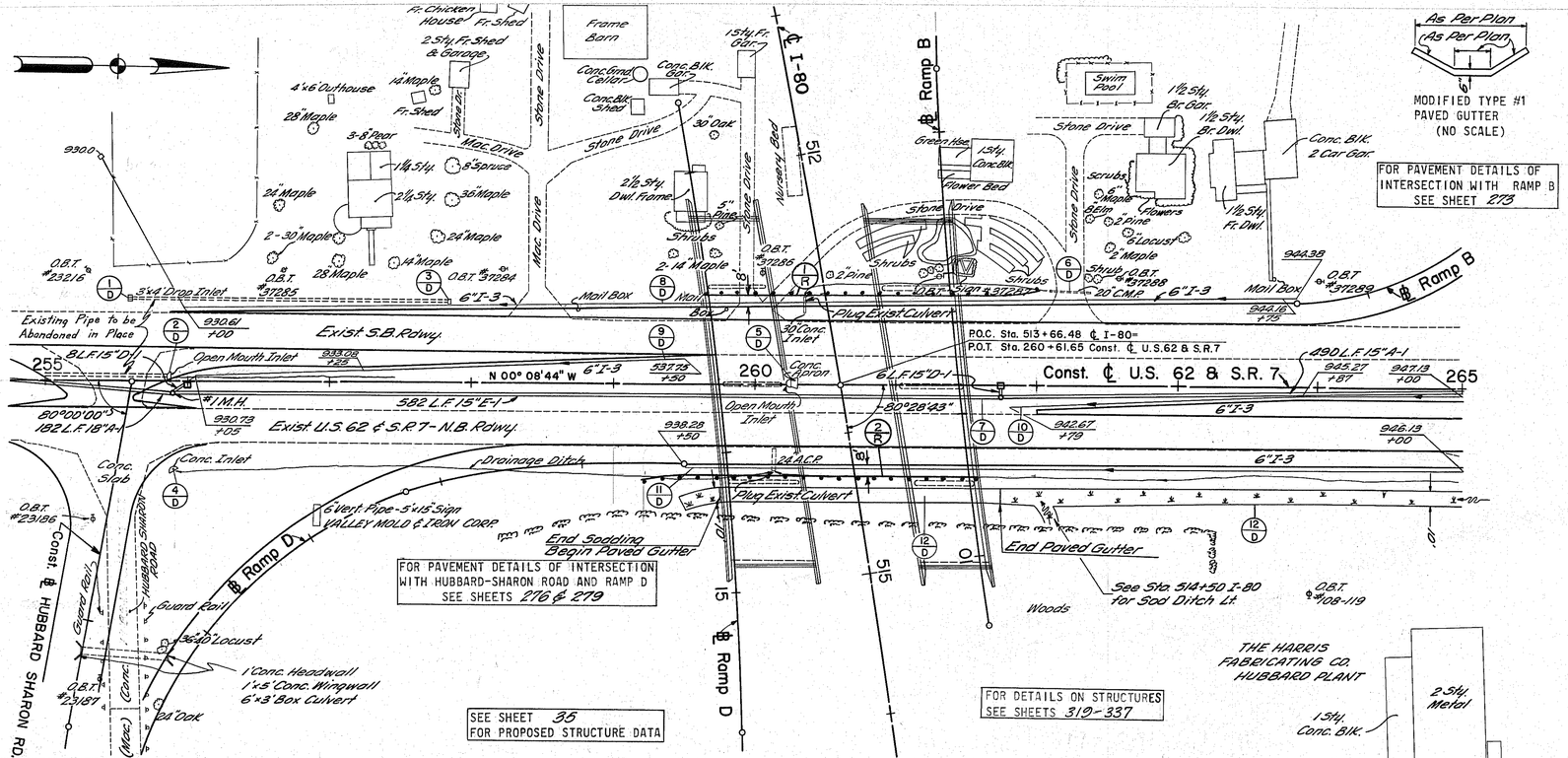
ESTIMATED QUANTITIES

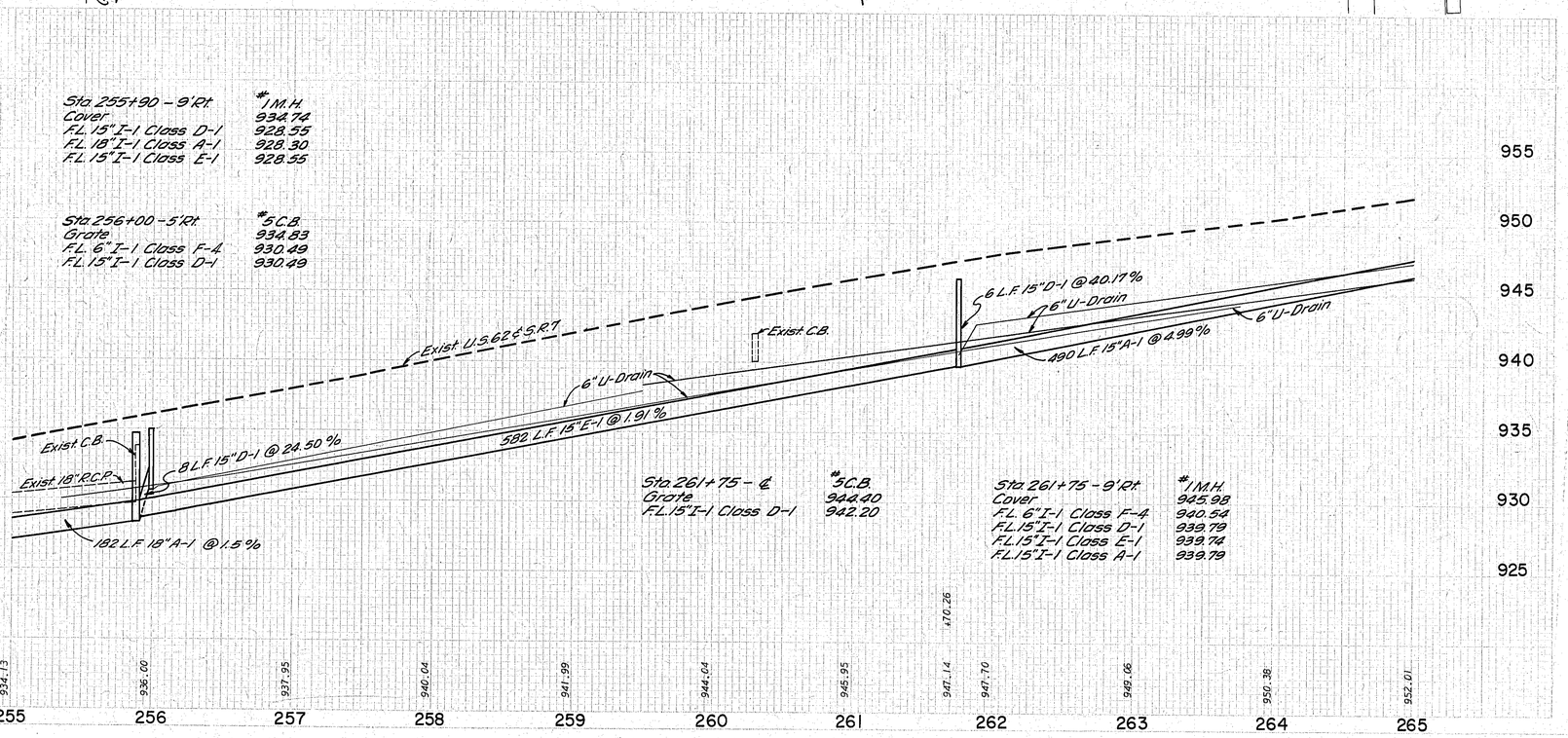
ITEM NO.	STATION TO STATION	SIDE	I-1 CL. A-1 M 88 (b) or ℄ 18" L.F.	I-15 Guard Rail Removed & Disp. L.F.	I-15 Guard Rail L.F.
1-0	254+30	Lt.			
2-0	254+06 to 255+00	Lt. & Rt.	94		
1-R	252+07 to 253+37	Lt.		130.0	25
2-R	253+95	Lt.			
TOTALS			94	130.0	25

I-16 Inlet Aband. EACH 1

℄ or M-6.5(b)

U.S.62 & S.R.7 - Sta. 251+00 to Sta. 255+00



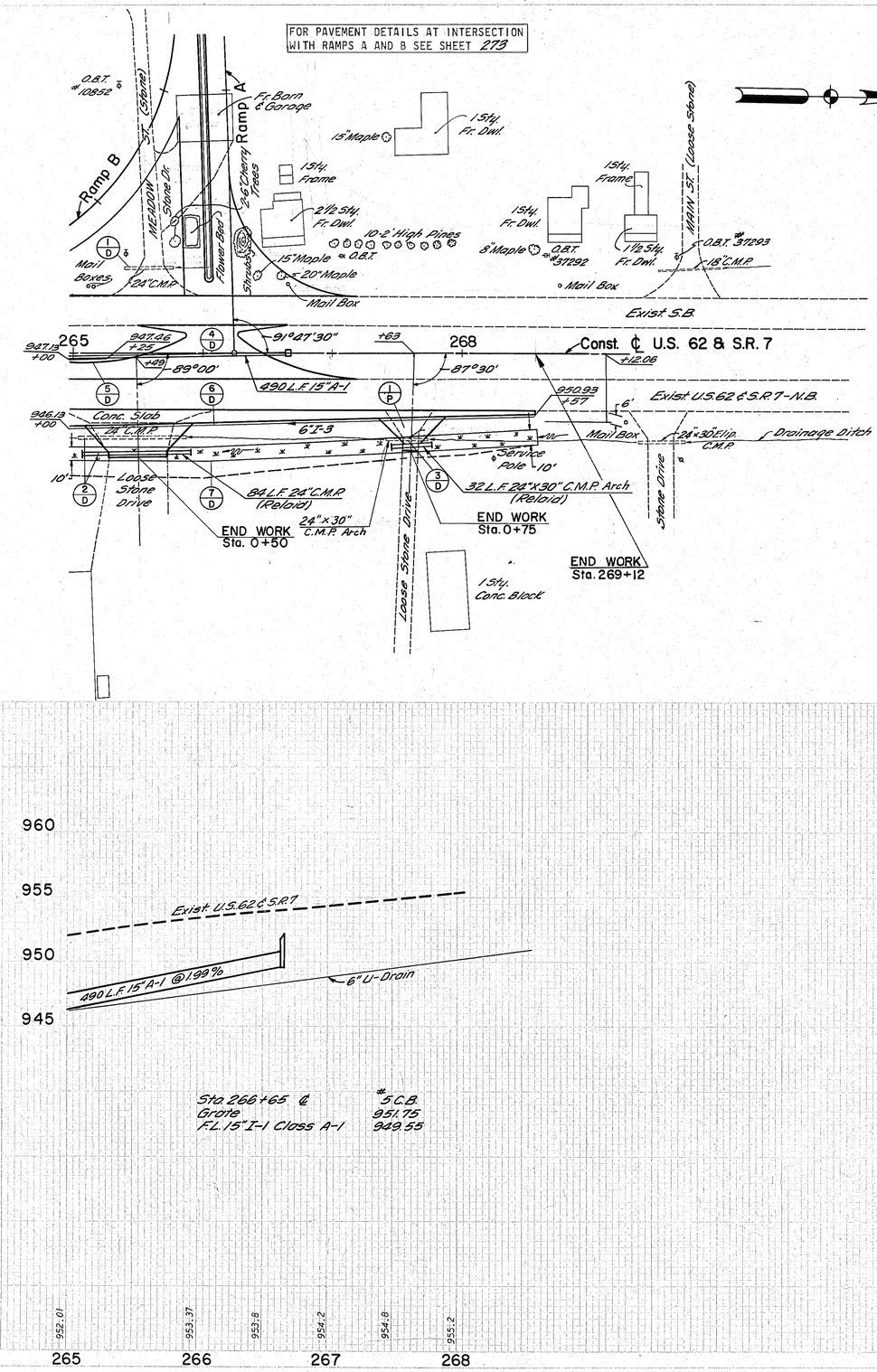


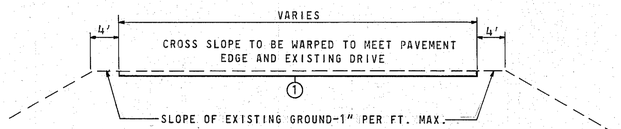
STATION TO STATION	SIDE	I-1 CL.E-1 Pipe 15" L.F.	CL.D-1 Pipe 15" L.F.	CL.A-1 M-6.6(b) or 6.8(b) #15" #18"	I-1 CL.E-1 Pipe 15" L.F.	CL.D-1 Pipe 15" L.F.	CL.F-4 Pipe 6"	CL.I-3 Pipe 6"	I-5 Pipe Special 60° BEND L.F.	I-8 Catch Basin No. 5 EACH	I-8 Manhole No. 1 EACH	I-14 Mod Paved Gutter Type I L.F.	I-16 Inlets Aband. EACH	I-10 Sodding SQ.YD.	I-12 Pipe Removed (Over 15") L.F.	I-15 Guard Rail L.F.
1-0	Lt.													489		
2-0	Lt.															
3-0	Lt.															
4-0	Rt.															
5-0	℄														30	
6-0	Lt.															
7-0	Rt.															
8-0	Lt.															
9-0	Rt.															
10-0	Rt.															
11-0	Lt.															
12-0	Rt.															
255+60 to 262+38																
255+89 to 263+00																
257+84 to 263+50																
259+90 to 264+00																
260+25 to 265+00																
262+08 to 262+38	Lt.															
262+38 to 265+00	Rt.															
263+38 to 265+00	Lt.															
263+50 to 265+00	Rt.															
264+25 to 265+00	Lt.															
264+25 to 265+00	Rt.															
1-R 259+64.5 to 262+02	Lt.						10	6		2	2	200	5	489	2	237.5
2-R 259+23 to 261+60.5	Rt.						6	6								237.5
TOTALS		582	14	326.88			320	250	30							
										2	2	200	5	489	2	475

For M-6.5(b)

U.S. 62 & S.R. 7 - Sta. 255+00 to Sta. 265+00

FOR PAVEMENT DETAILS AT INTERSECTION WITH RAMPS A AND B SEE SHEET 273





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(6)

ITEM NO.	STATION TO STATION	SIDE	E-12 Pipe Rem. Pipe Culverts Over 15" L.F.	CL. A-1 M-6.6(a) or 6.8(b) #15" L.F.	CL. I-3 Pipe 6" L.F.	I-6 Relaying Pipe Type 4 Backfill 24"x30" L.F.	I-8 Catch Basin No. 5 EACH	L-10 Sodding SQ. YD.	SPECIAL Furnishing & Mixing Calcium Chloride With Aggregate CU.YD.
			SEE SHEET 1-B	I-1	I-1		SEE SHEET 1-B		
1-D	265+40 to 265+78	Lt.	38					397	
2-D	265+03 to 265+86	Rt.	84						1
3-D	267+41 to 267+74	Rt.	84			84			
4-D	265+00 to 266+65	Both	32	164	32		1		
5-D	265+00 to 265+80	Lt. & Rt.			26				
6-D	265+00 to 268+57	Rt.			358				
7-D	265+00 to 268+57	Rt.							
1-B	267+63	Rt.					1		
			154	164	384	32	84	397	1

SEEDING

SEED W/COM	SQ. YDS.

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

186
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
70	0	85	25
22	21	0	0

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

930

E.R. E.R. E.R. E.R.

252+50
930.9

E.R. E.R. E.R. E.R.

252+00
930.5

E.R. E.R.

Profile Drive

251+75
930.3

E.R. E.R. E.R. E.R.

251+50
930.2

E.R. E.R. E.R. E.R.

251+00
930.2

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

US 62 & SR 7

SEEDING

SEED (LB/ACRE)	SOD (SQ. YDS.)

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

187
401

TRU-I-80-8.90
TRUMBULL COUNTY

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

E.R. E.R. E.R. E.R.

254+00
920.9

930

253+00
931.3

930

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		0	0
		68	65
		37	35
		99	32

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

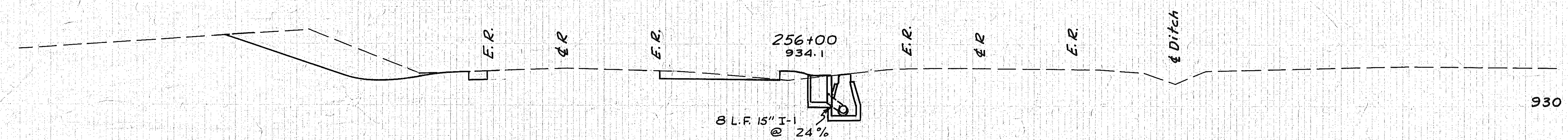
115.62 & SP 7

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

188
401

TRU-I-80-8.90
TRUMBULL COUNTY

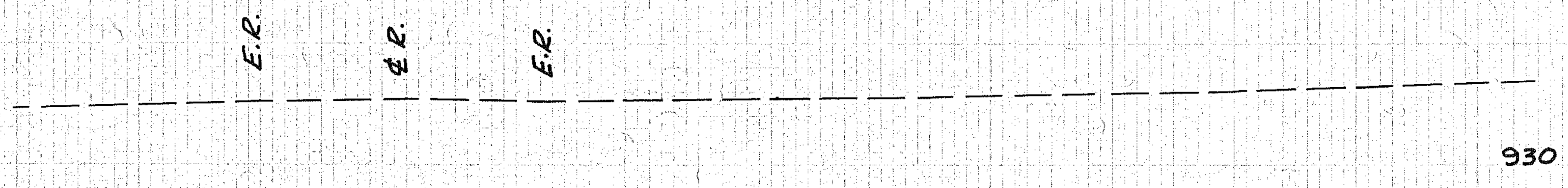
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
145	6	346	11
42	0	78	0



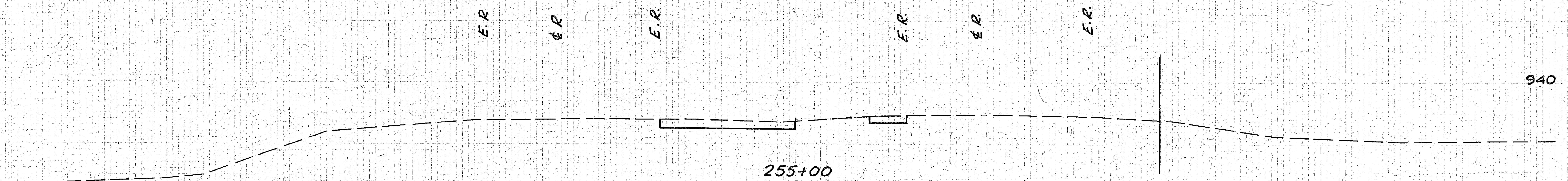
256+00
934.1

Sta. 256+00 5' Rt. #5 C.B.
Grate 934.83
FL 15" I-1 Class D-1 930.49

Sta. 255+90 9' Rt. #1 M.H
Cover 934.74
FL 15" I-1 Class D-1 928.55
FL 18" I-1 Class A-1 928.30
FL 15" I-1 Class E-1 928.55



255+51.4
934.7
℄ HUBBARD SHARON RD.



255+00
933.5

254+10
933.0
NORTH END BRIDGE

2050
380

STATE	SHEET NO.	TOTAL SHEETS	PROJECT
OHIO	2		HIG-80-5(9)245

189
401

TRU-I-80-8.90
TRUMBULL COUNTY

CROSS SECTION AREA		VOLUME	
CUT	FILL	CUT	FILL

38 53 502 111

233 7 885 65

245 28 722 63

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

940

940

940

940

940

E.R. ℄R. E.R.

259+96
941.9
℄ DRIVE

E.R. ℄R. E.R. E.R. ℄R. E.R.

Sta. 259+50 Rt.
Begin Sod Ditch

℄ Ditch

10:1

259+00
940.1

E.R. ℄R. E.R.

258+45
938.9
℄ DRIVE

E.R. ℄R. E.R. E.R. ℄R. E.R. ℄ Ditch

2:1

2:1

E.R. ℄R. E.R. 258+00 937.8 E.R. ℄R. E.R. ℄ Ditch

257+00
934.1

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

SEEDING

END AREA		VOLUME	
CUT	FILL	CUT	FILL
100	77	237	252
82	117	378	315
122	53	296	196

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

190
401

TRU-I-80-8.90
TRUMBULL COUNTY

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

℄ Drive
I-80 Slope
E.R.
℄ R.
E.R.
261+70.26
944.6
6 L.F. 15" E-1 @ 40%
℄ Ditch
Begin Sodding Sta. 261+75
Rt. End Type 1 Mod. Paved
Gutter (2' Bottom w.)
3:1
2:1
940

Sta. 261+75 ℄ Median #5 C.B
Grate 944.40
℄ 15" I-1 Class D-1 942.20

Sta. 261+75 9' Rt. #1 M.H.
Cover 945.98
℄ 15" I-1 Class D-1 939.79
℄ 15" I-1 Class E-1 939.74
℄ 15" I-1 Class A-1 939.79

Sta. 261+58
End Raised Median
6' 6'
3' Rounding
4:1 4:1

261+00
943.0

260+05
942.1
℄ DRIVE

Bridge Pier
4:1 4:1

260+00
942.0

Sta. 259+65
Begin Raised Median

Begin Type 1 Modified Paved Gutter
(2' Bottom w.)
End Sodding Sta. 259+75 Rt.

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

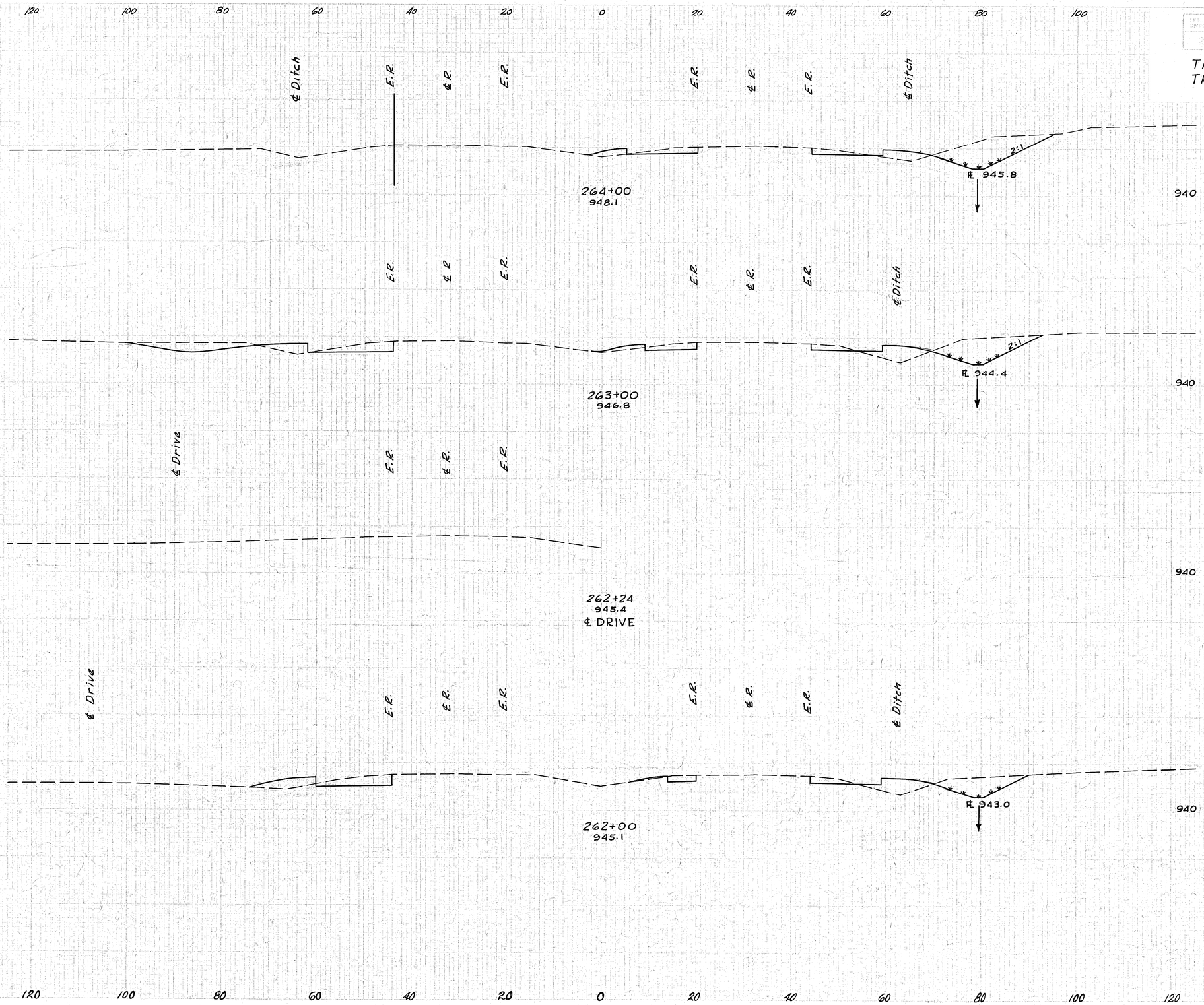
SEEDING

END SMITH	END POS.

SHEET NO.	STATE	PROJECT
2	OHIO	T-IG-80-5(9)245

191
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

SECTIONS	
END AREA	VOLUME

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

192
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

E.R. ℄ R. E.R.

950

265+70
952.4
℄ Meadow St.

E.R. ℄ R. E.R.

0+77

3:1 84 L.F. 24" C.M.P. @ 1.7% (Relaid) 3:1

℄ 948.6 ℄ 947.2

Section at Drive Rt. Sta. 265+49

+7.0 %

950

℄ 948.0

23 0 152 32

265+55
952.2
℄ DRIVE

℄ Ditch E.R. ℄ R. E.R.

E.R. ℄ R. E.R. ℄ Ditch

950

3:1 2:1

℄ 947.2

126 31 480 113

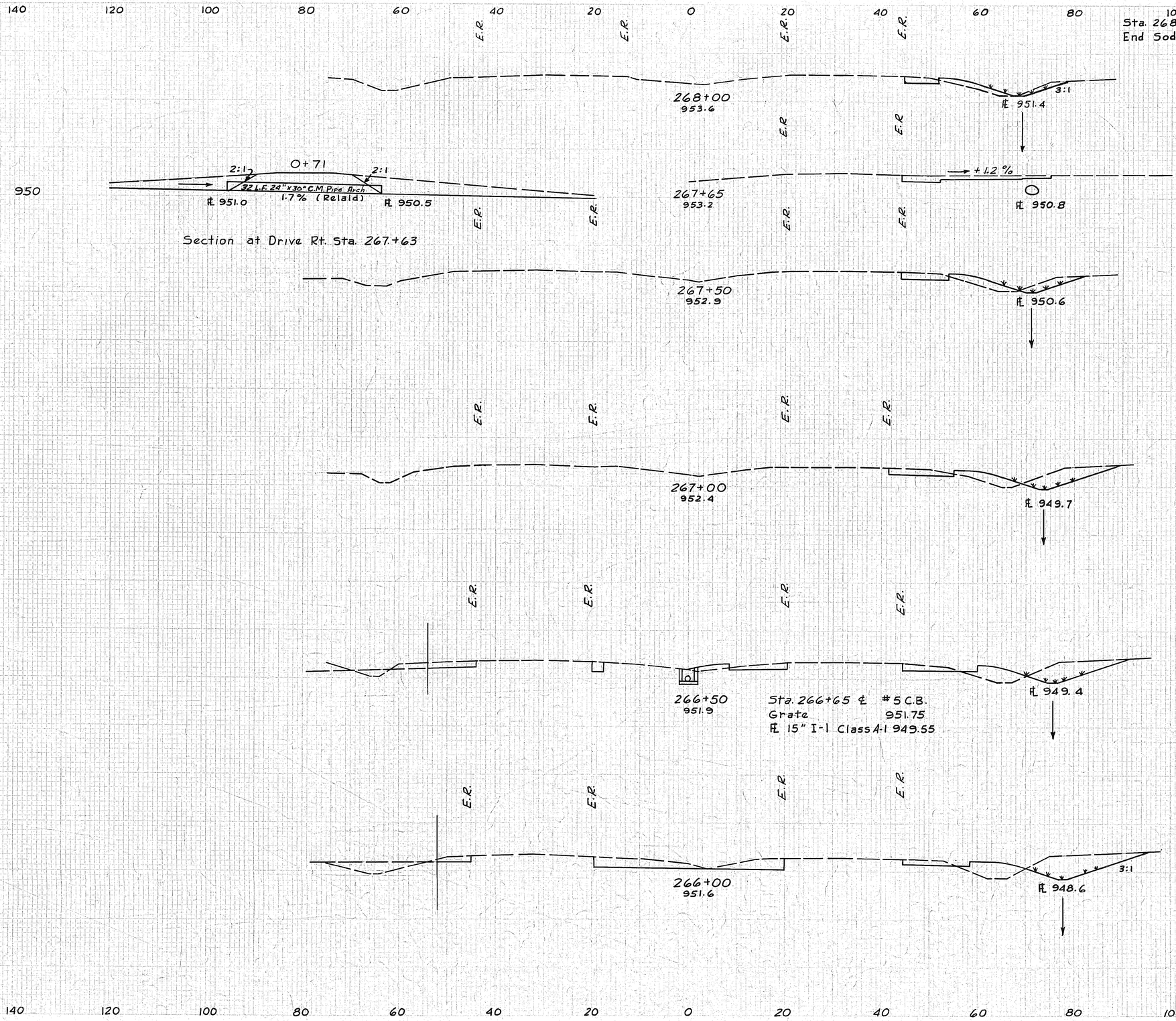
265+00
949.5

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

US 62 & SR 7

TRU-I-80-8.90
TRUMBULL COUNTY

Sta. 268+57 Rt.
End Sod Ditch

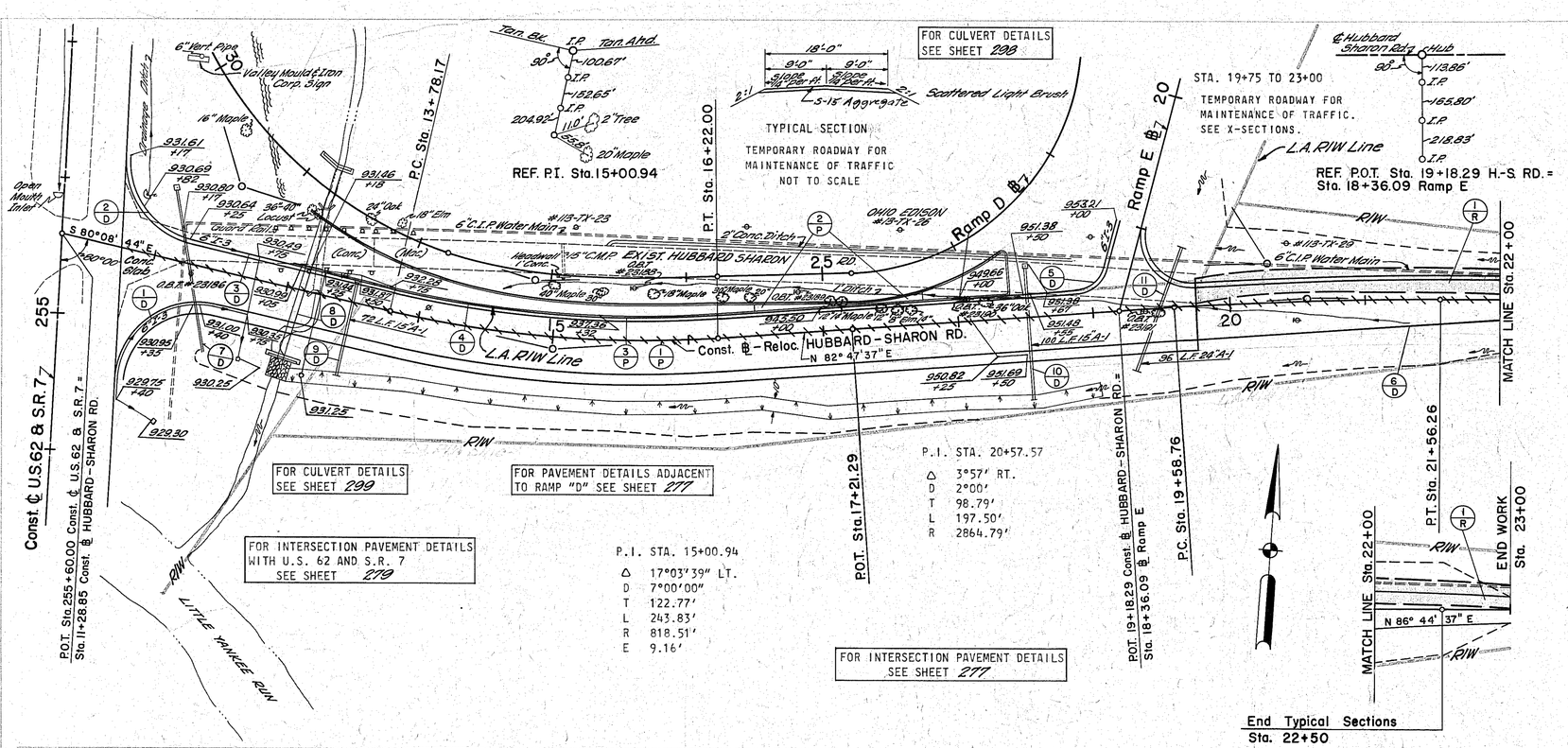


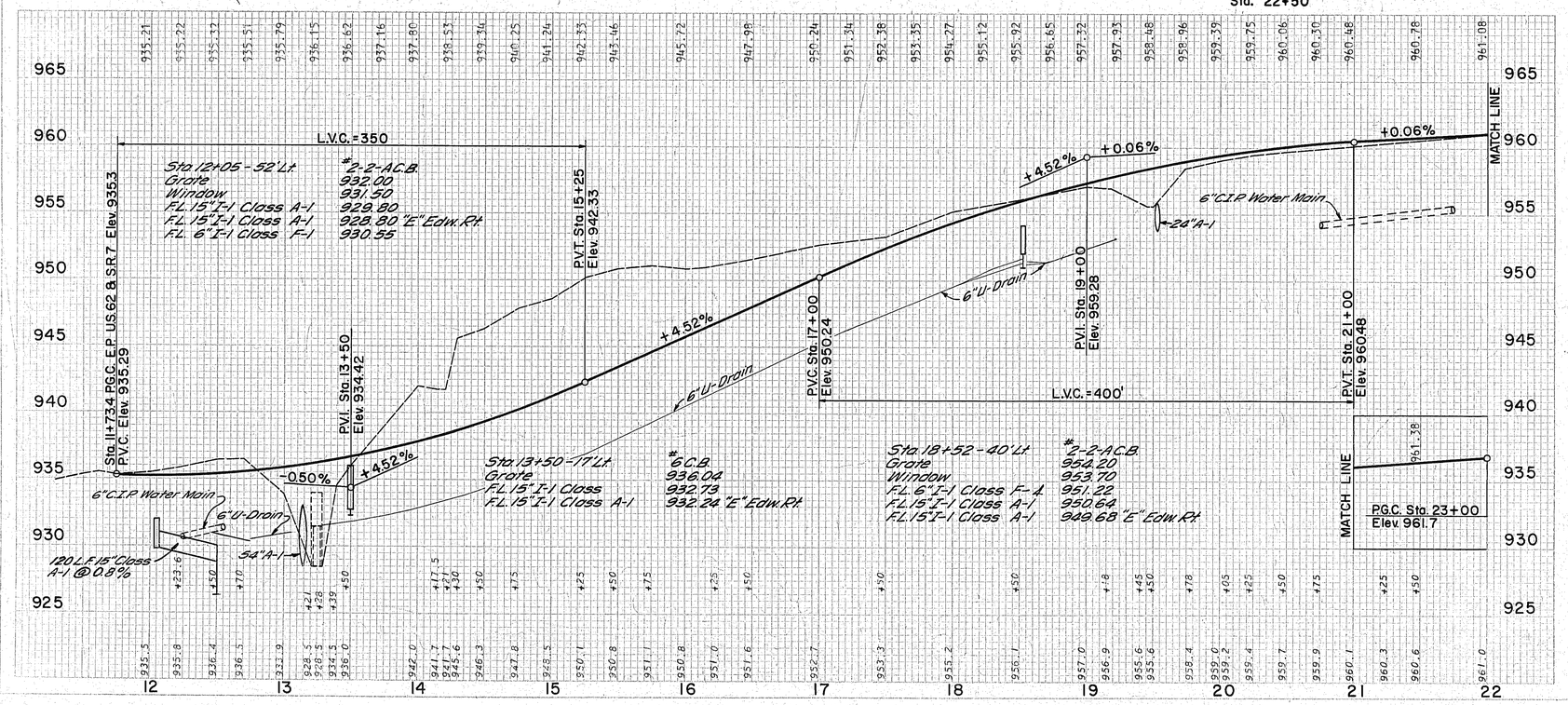
END AREA		VOLUME	
CUT	FILL	CUT	FILL
20	17	34	11
33	0	19	6
35	22	97	45
70	27	164	62
107	40	265	75
179	41	168	34

US 62 & SR 7

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	194 / 401

TRUMBULL COUNTY TRU-I-80-8.90





ESTIMATED QUANTITIES

ITEM NO.	STATION TO STATION	SIDE	I-1 CL. A-1 M-66.1(a) or M-66.1(b) or M-66.2(b) 24"	I-1 CL. F-4 M-66.1(a) or M-66.1(b) or M-66.2(b) 15"	I-1 CL. F-4 M-66.1(a) or M-66.1(b) or M-66.2(b) 6"	I-1 CL. I-3 M-66.4(a) 54"	I-1 CL. I-3 6" U-Drain Shallow	I-2 Masonry	I-5 For 6" U-Drain 60°PIPE 60°PIPE 90°BEND TEE	I-8 Catch Basin No. 2-24A No. 6	I-8 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
			L.F.	L.F.	L.F.	L.F.	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 2+75	Rt.			10		118		1									18
2-D	256+77 (US 62) to 2+17	Lt.			10		86											82
3-D	12+25 to 13+05	Lt. & Rt.	44				126											58
4-D	13+18 to 18+50	Lt. & Rt.	128				530											542
5-D	18+55 to 19+00 (Ramp E)	Lt.			10		108											
6-D	19+25 to 23+00	Lt. & Rt.																
7-D	12+36	Lt.		120				26										
8-D	13+50	Lt.						3572										
9-D	18+52	Lt.		72				96										
10-D	18+52	Lt.		100				96										
11-D	19+52	Lt.			96			82										
1-P	11+74 to 19+00	Lt. & Rt.																
2-P	16+49 to 17+13	Lt.																
3-P	19+05 to 18+35	Lt.																
1-P	18+76 to 23+00	Lt.																
TOTALS			172	292	96	150	20	968	3	3	4	1	LUMP	108	134	21.8	542	58	82	1.8

or See M-6.5(6)

Reloc. HUBBARD SHARON RD. Sta. 11+73.4 to Sta. 23+00

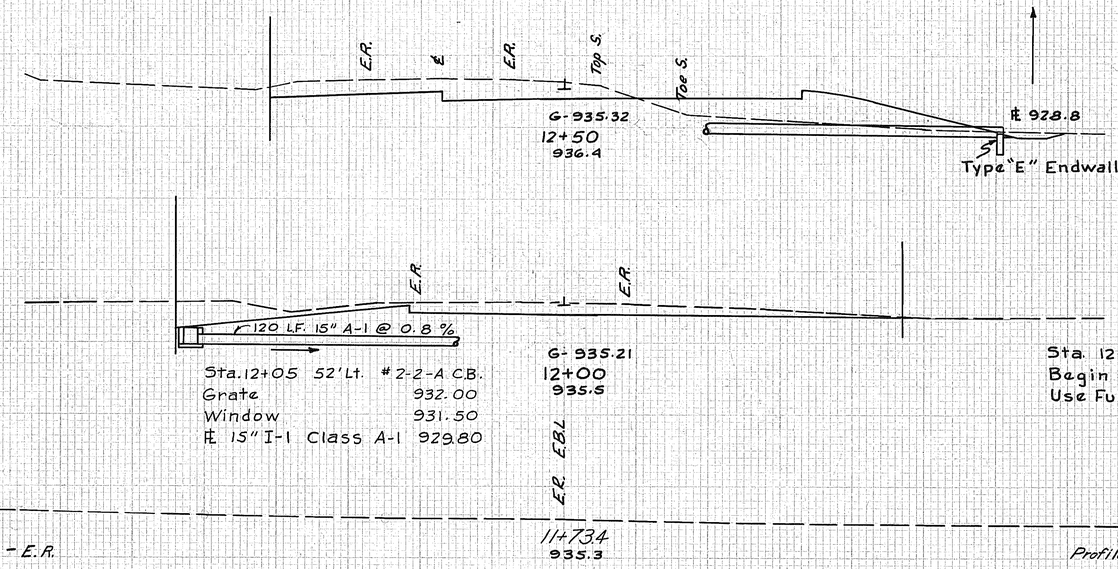
SEEDING

END WIDTH | SQ. YDS.

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

195
401

TRU-I-80-8.90
TRUMBULL COUNTY



120	140	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
940					
		112	128	246	118
940					
		154	0	0	0
940					
940					
940					
940					

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

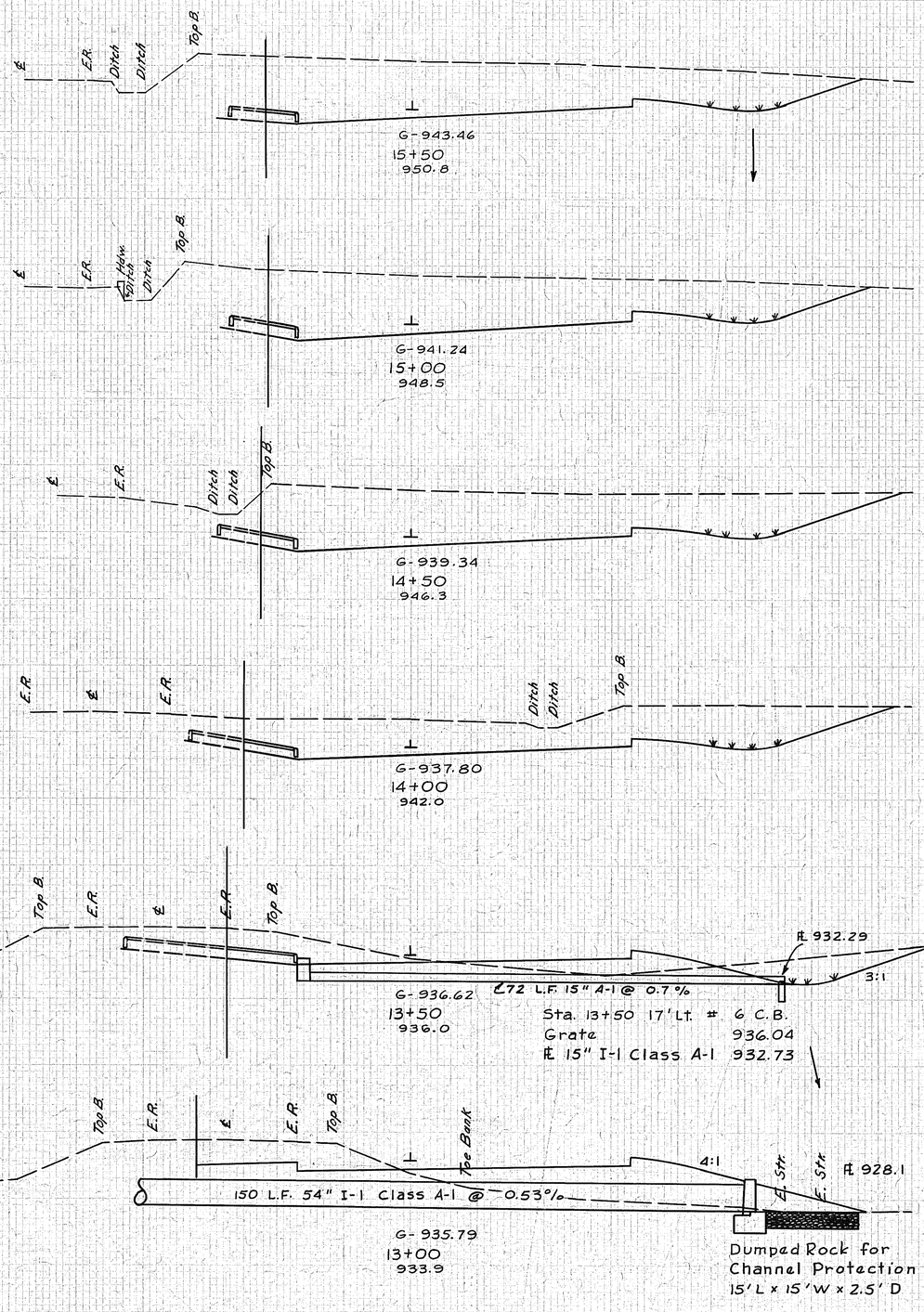
RELOC. HUBBARD-SHARON RD. Sta. 11+28.85 to Sta. 12+50

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

196
401

TRU-I-80-8.90
TRUMBULL COUNTY

SECTION		END AREA		VOLUME	
STA.		CUT	FILL	CUT	FILL
940		590	0	1106	0
940		605	0	1132	0
940		618	0	994	0
940		455	0	603	63
940		196	68	270	304
940		96	260	192	359



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

RELOC. HUBBARD-SHARON RD. Sta. 13+00 to Sta. 15+50

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

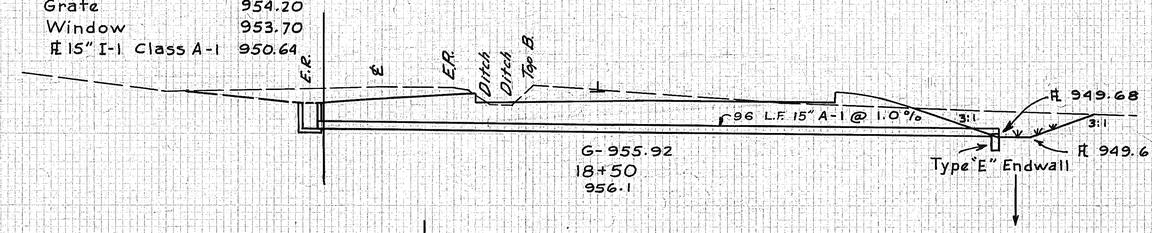
197
401

TRU-I-80-8.90
TRUMBULL COUNTY

STEERING
END WIDTH | SQ. YDS.

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

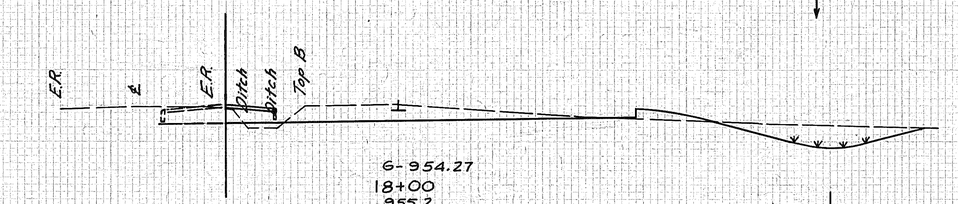
Sta. 18+52 40'Lt. # 2-2-A C.B.
Grate 954.20
Window 953.70
15" I-1 Class A-1 950.64



G-955.92
18+50
956.1

950

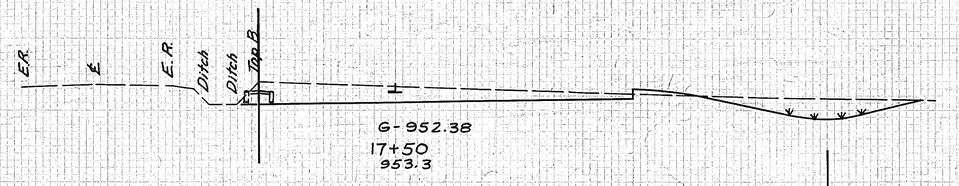
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
147	22	248	33



G-954.27
18+00
955.2

950

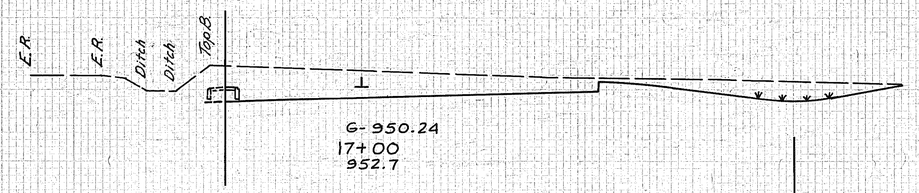
121	14	434	13



G-952.38
17+50
953.3

950

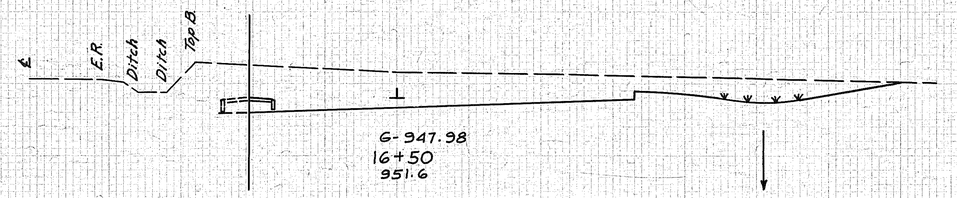
348	0	552	0



G-950.24
17+00
952.7

950

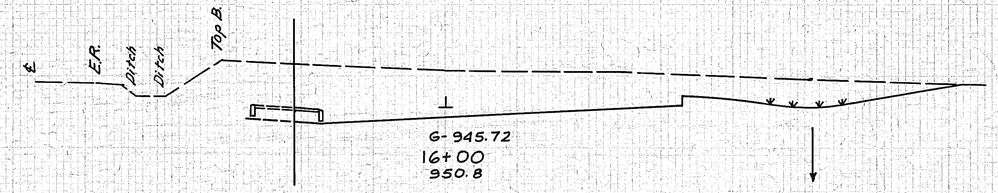
248	0	532	0



G-947.98
16+50
951.6

950

327	0	699	0



G-945.72
16+00
950.8

950

428	0	942	0

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

RELOC. HUBBARD-SHARON RD. Sta 16+00 to Sta 18+50

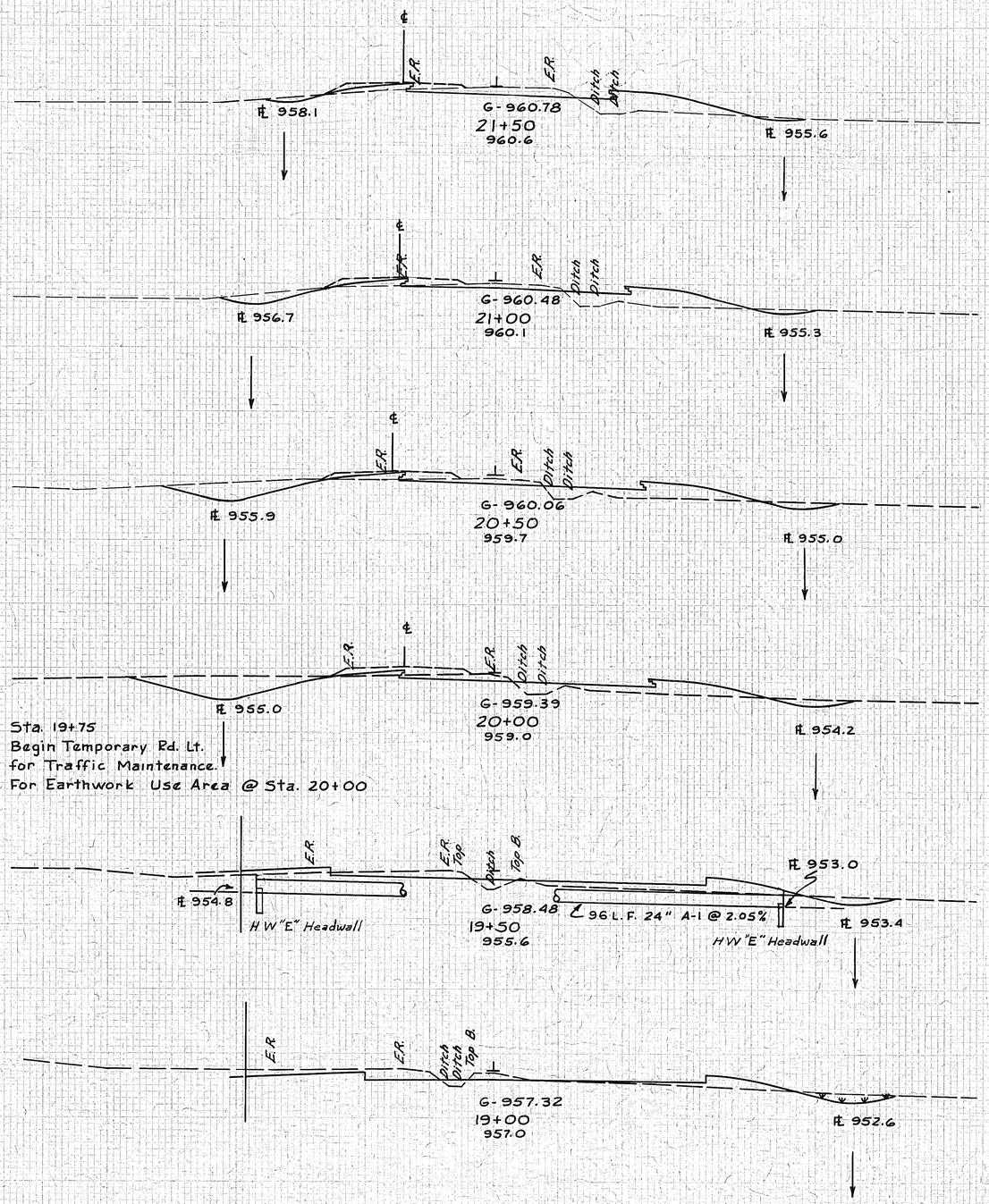
SEEDING

SQ. YDS.

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

198
401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL	
				950
40	76	78	188	
44	76	110	138	950
75	73	167	130	950
105	67	128	129	950
33	72	85	99	950
59	35	191	53	950

RELOC. HUBBARD-SHARON RD. Sta. 19+00 to Sta. 21+50

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

199
401

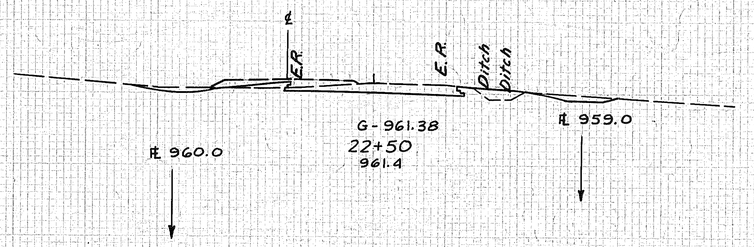
TRU-I-80-8.90
TRUMBULL COUNTY

		END AREA		VOLUME	
		CUT	FILL	CUT	FILL
Sta 23+00	25	0	66	161	
	960				
End Typical Sections Sta. 22+50		46	13	95	185
	960				
		57	38	90	168

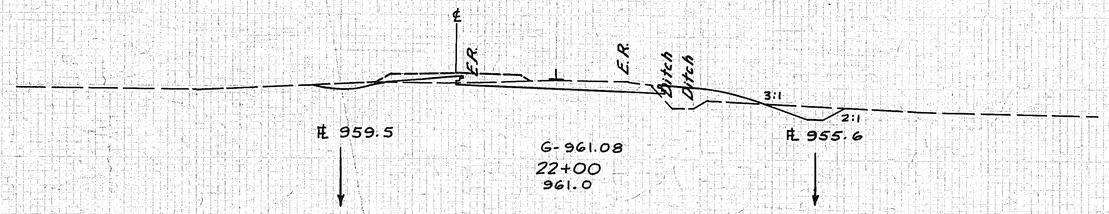
Sta. 23+00
End Temparary Rd. Lt.
for Traffic Maintenance.
For Earthwork Use Area @ Sta. 22+50

End Work Sta. 23+00

Sta. 23+00
End Earthwork
Area 25 cut



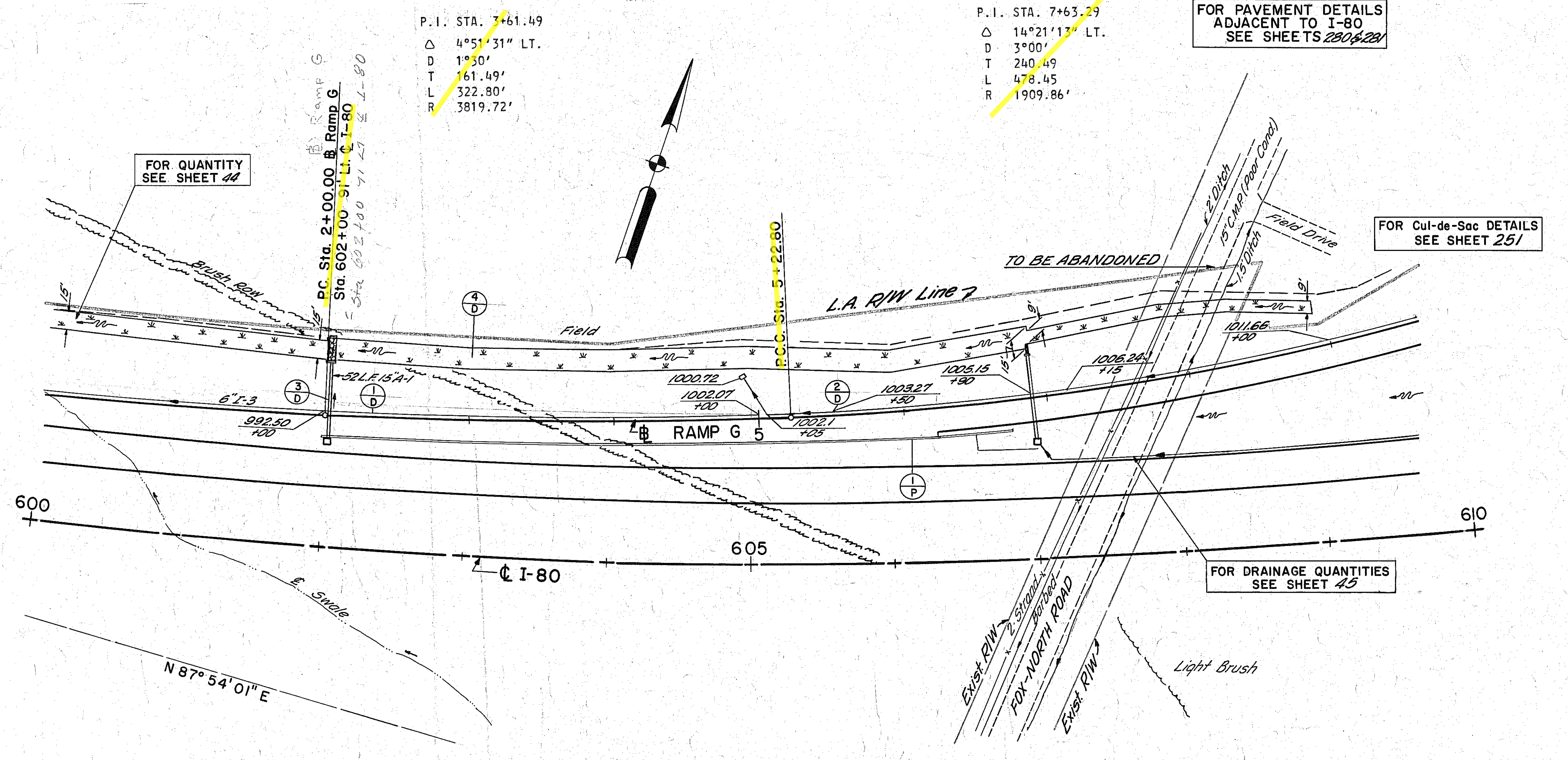
213X 250

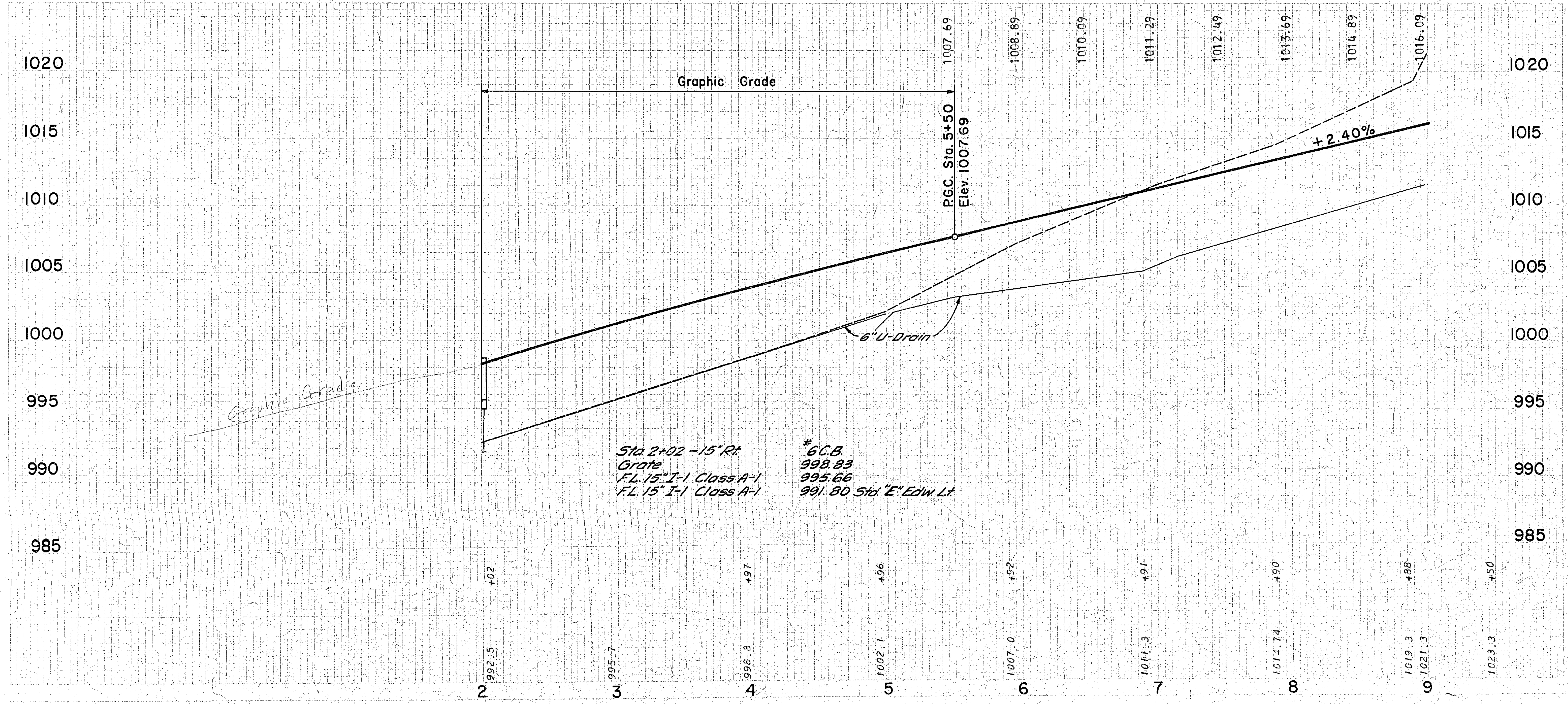


RELOC. HUBBARD-SHARON RD.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	200 401

TRUMBULL COUNTY TRU-I-80-8.90





Sta. 2+02 - 15" Rt. #6 C.B.
Grate 998.83
F.L. 15" I-1 Class A-1 995.66
F.L. 15" I-1 Class A-1 991.80 Std. "E" Edw. Lt.

ESTIMATED QUANTITIES

For M-6.5(b)

REF. NO.	STATION TO STATION	SIDE	I-1 CL. A-I M-6.6(a) or 6.8(b) #15" L.F.	I-1 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	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.	SEE SHEET NO.
1-D	2+00 to 5+00	Lt			300							
2-D	4+95 to 9+00	Lt		10	416		1					
3-D	2+02	℄	52			.26		1	2.3		1	
4-D	2+00 7+90	Lt									1015	
1-P	2+00 to 6+72.80	Rt								475		
TOTALS			52	10	716	.3	1	1	2.3	475	1016	

RAMP G ROADSIDE REST AREA

FOR REST AREA QUANTITIES, GRADING AND PLANTING SEE SHEET 283

FOR Cul-de-Sac DETAIL SEE SHEET 251

PROVIDE NEW POWER POLE FOR QUANTITY SEE SHEET 283

P.I. STA. 10+51.25
Δ 1°30' RT.
D 1°30'
T 50.003'
L 100.00'
R 3819.72'

Δ 90°
T 50'
L 78.54'
R 50'

P.R.C. Sta. 10+01.25
P.C. Sta. 11+01.25
L.A. R/W Line

Phone & Electrical Conduit for Quantity See Sheet 283

Service Conduit 2" with 3-#6 & #4 cables.

1"Lighting Conduits with 2-#6 & No 10 RHW cables

Telephone conduit, 1 1/4", with No 12 Galv. Pull Wire.

Edge of Trees

Site was reworked later. These conduits were likely abandoned.

Δ 65°05'
D_c 76°23'40"
T 47.86'
L 85.19'
R 75'

P.I. STA. 17+32.85
Δ 6°52'40"
D 3°00'
T 111.98'
L 223.70'
R 1909.86'

Garden
Pines 2'-6"
Orchard
Fr. Pump House
Conc. Slab & Well
Orchard 2" Peach

P.C. Sta. 16+20.87

FOR CONDUIT QUANTITY SEE SHEET 283
Provide 2" conduit & markers For Future lighting. Cap conduit ends.

FOR PAVEMENT DETAILS ON PARKING AREA SEE SHEET 284

FOR CONDUIT QUANTITY SEE SHEET 283
Provide 2" Conduit & Markers for Future lighting. Cap conduit ends.
(R=50' Δ=29°00'26")

14 L.F. 15"A-1

1020.70 +05
1022.60 +00
1026.76 +25
1026.12 +82
1026.30 +21
1024.09 +00
1022.09 +00
1014.19 +00
1016.19 +00
1018.91 +40
1013.72 +86
1011.66 +00

6"I-3

11+00.44 24' Rt.
15+81.68 24' Rt.

℄ Ramp G
℄ Ramp H
PARKING AREA
℄ I-80

R=50' Δ=23°00'46"

250ok
Orchard Line
150ok
14" Cherry 160ok

610
615

P.T. Sta. 11+01.25
P.C. Sta. 16+20.87

Tree 30in. Elm 24' Rt.

Sta. 11+43 - 24' Rt.
Grate
F.L. 15"I-1 Class A-1
F.L. 15"I-1 Class A-1 @"E" Endwall
#6 C.B.
1021.26
1015.26
1014.73

Sta. 12+00 - 38' Lt.
Grate
F.L. 15"I-1 Class A-1
F.L. 6"I-1 Class F-1
F.L. 15"I-1 Class A-1 @"E" Endwall
#6 C.B.
1023.40
1019.94
1020.69
1018.25

P.V.I. Sta. 11+00
Elev. 1020.89
P.V.C. Sta. 10+00
Elev. 1018.49
P.V.T. Sta. 12+00
Elev. 1022.89
L.V.C. = 200'
+2.40%
+2.00%
14 L.F. 15"A-1 @ 2.29%
6" U-Drain

P.V.I. Sta. 16+25
Elev. 1031.39
P.V.C. Sta. 14+50
Elev. 1027.89
P.V.T. Sta. 18+00
Elev. 1027.45
L.V.C. = 350'
+2.00%
-2.25%
6" U-Drain

	9	10	11	12	13	14	15	16	17	18
Ground	1021.3	1024.6	1026.2	1027.0	1027.4	1030.7	1032.5	1031.5	1032.8	1036.1
Grade	1023.3	1025.4	1026.2	1027.0	1027.4	1030.7	1032.5	1031.5	1032.8	1036.1

	1037.4	1038.0	1039.3	1039.8	1039.4	1042.2	1044.1	1045.7
Ground	1037.4	1038.0	1039.3	1039.8	1039.4	1042.2	1044.1	1045.7
Grade	1037.4	1038.0	1039.3	1039.8	1039.4	1042.2	1044.1	1045.7

ESTIMATED QUANTITIES

L-10	Sodding	SQ.YD.		2
I-12	Type 7 P.C.C. Curb Mod.	L.F.	1/ 1/	1512
I-8	Catch Basin No. 6	EACH	1/ 1/	2
I-5	For 6"U-Drain 60°BEND	EACH	2/ 1/	3
I-2	Masonry	CU. YD.	.26 .26	.5
I-12	Type-6 P.C.C. Curb	L.F.	385	385

I-1

CL. I-3 6"U-Drain

Shallow M6.4(h)	L.F.	392	724
	L.F.	340	224

CL. A-1 M-6.6(a) or 6.8(b) ≠ 6 | CL. F-4 6" | | | |
|---|---|---|---|
| M-6.6(b) or 6.8(b) ≠ 15 | L.F. | 26 | 4 |
| | L.F. | 118 | |
| | Ea. | 14 | |

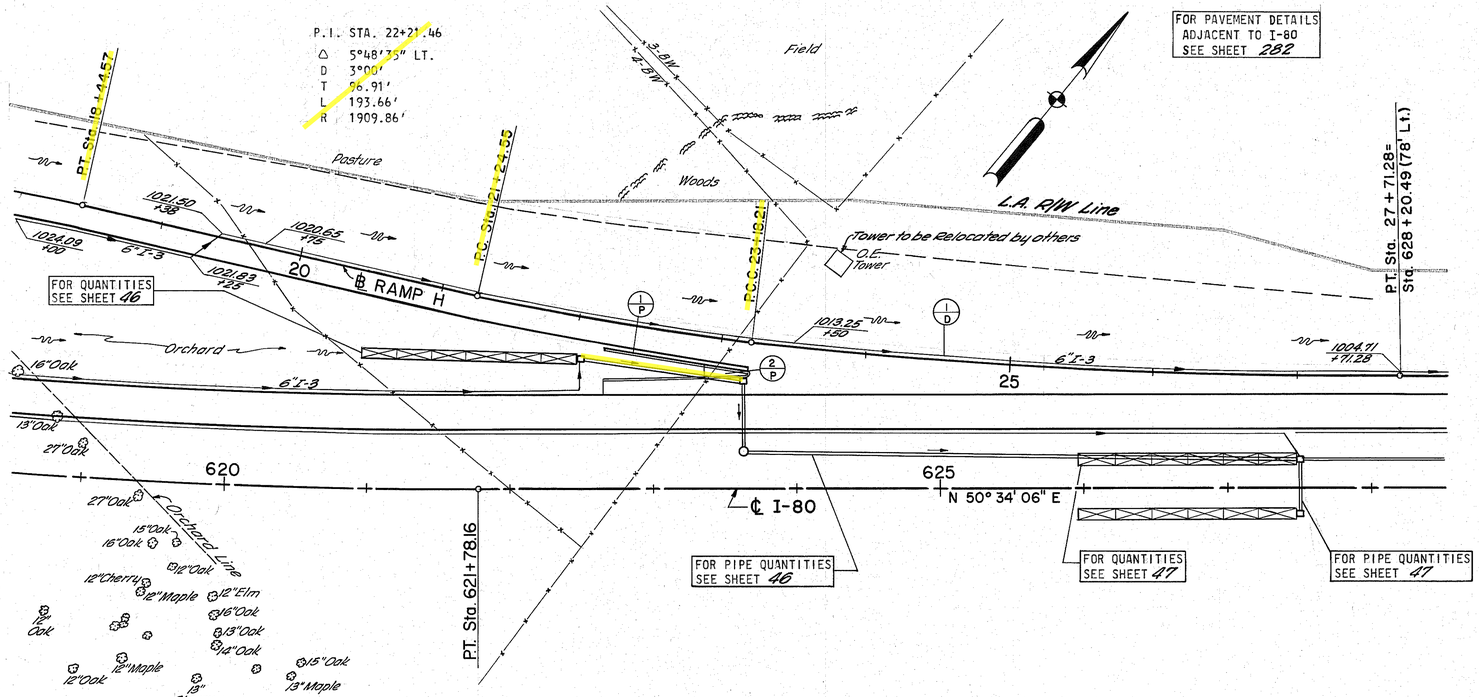
For M1-6.5(b)

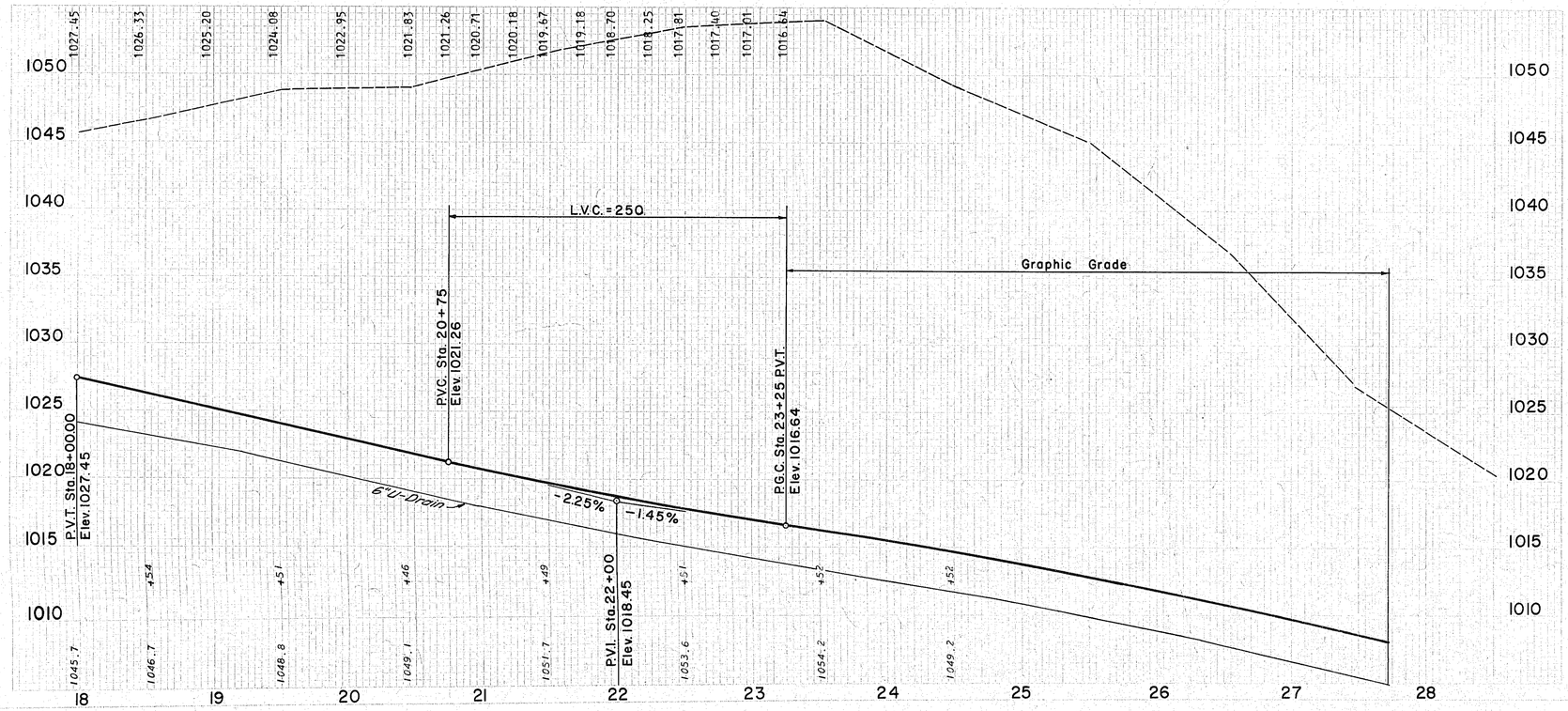
1-D	9+00	to	10+00	Rt.
2-D	12+05	to	13+25	Lt.
3-D	11+43	to	12+00	Rt.
4-D	11+25	to	12+00	Lt.

2-P 11+01 to 16+20.87 Lt. & Rt.

492 724
26 192 4

ROADSIDE REST AREA





ESTIMATED QUANTITIES

ITEM	DESCRIPTION	SIDE	STATION TO STATION	I-1 Cl. A-1 M-66(b) or 68(b) L.F.	I-1 Cl. I-3 6"U-Drain M 64 (h) L.F.	I-2 Std. Type 6" Curb L.F.	I-21 P.C.C. Median Pav't. SQ. YD.	I-5 For 6"U-Drain 60° BEND EACH
1-0			18+00 to 27+71	24	972	100	17	2
1-P		RT.	22+18.21 to 23+18.21					
2-P		RT.	23+00					
				24	972	100	17	2

RAMP H ROADSIDE REST AREA

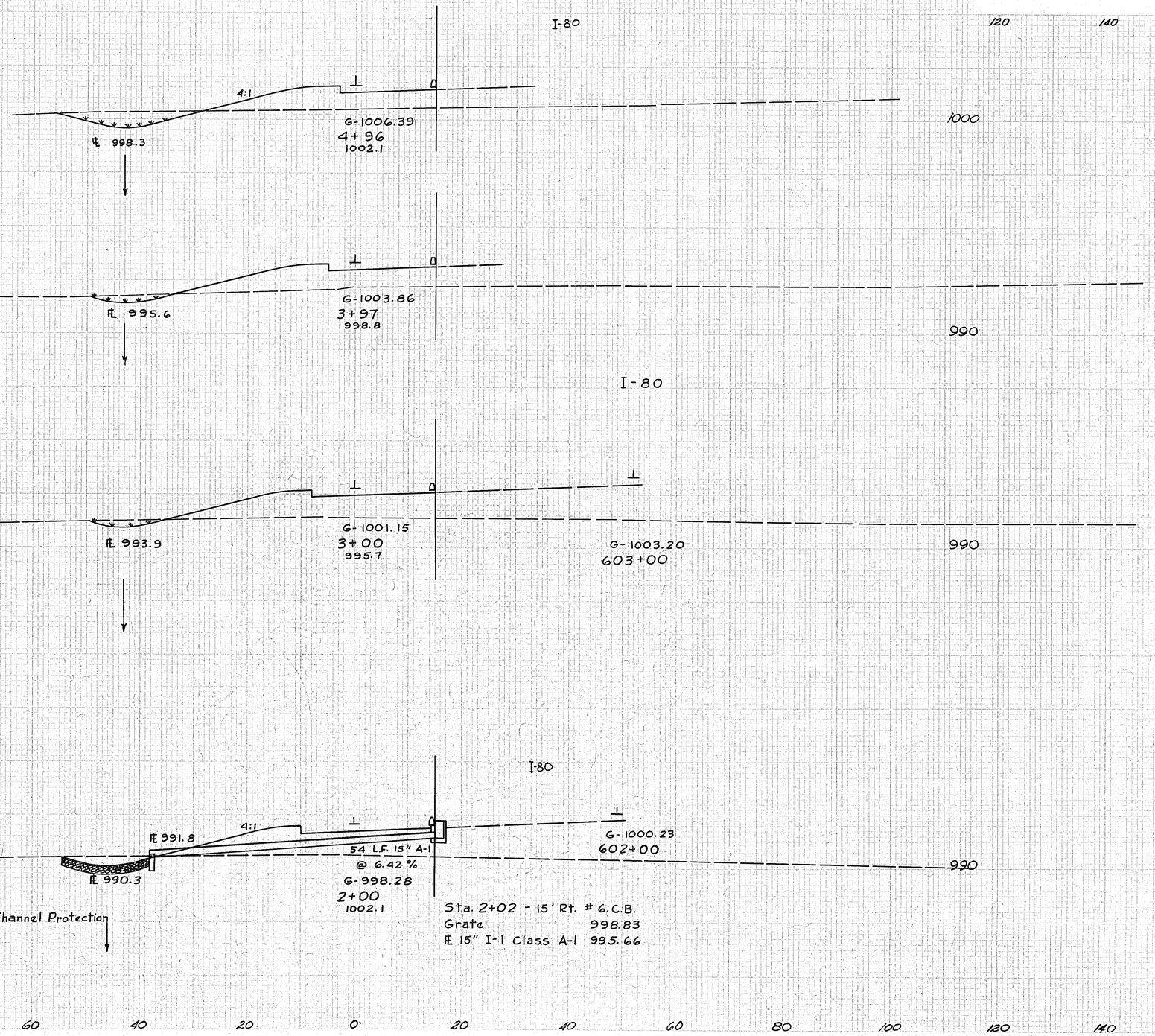
REVISIONS

END AREA	CU. YDS.

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

203
401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
57	131	136	522
17	154	57	607
15	184	72	724
24	207	0	0

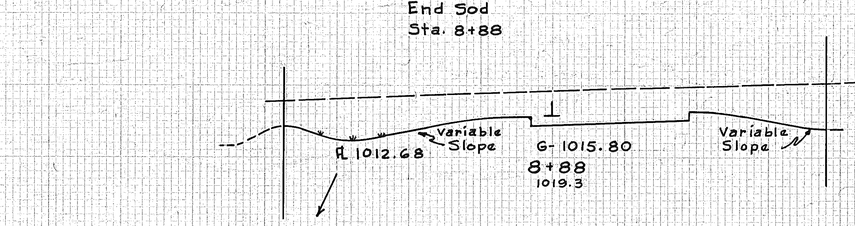
RAMP C - Sta. 0+00 to 4+96

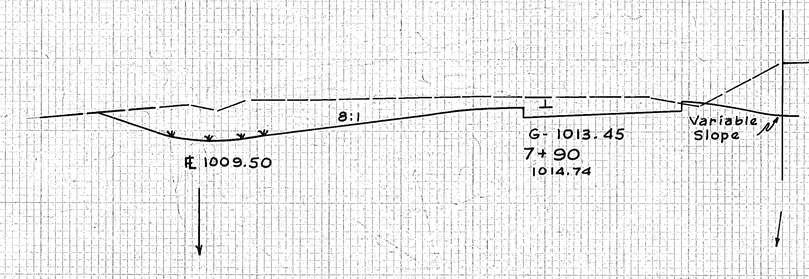
SEEDING	
EACH VARIETY	SQ. YDS.

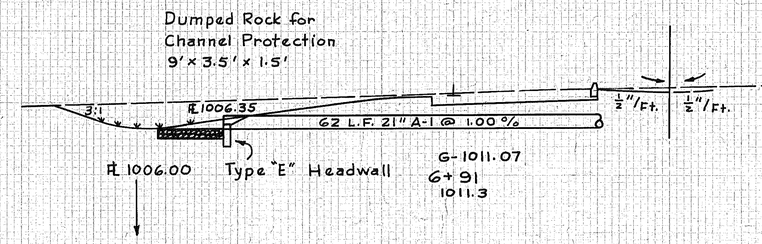
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-80-5(9)245

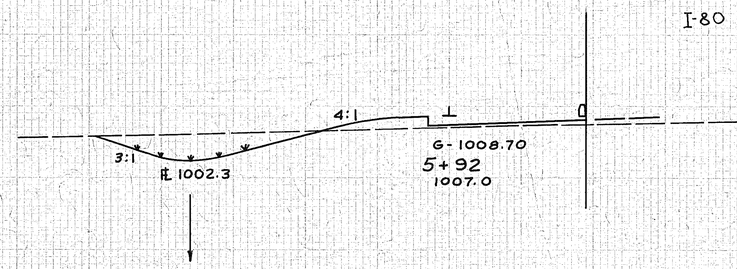
204
401

TRU-I-80-8.90
TRUMBULL COUNTY









	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1020	310	0	1209	2
1010	296	1	781	2
1010	130	0	367	59
1000	70	32	226	290

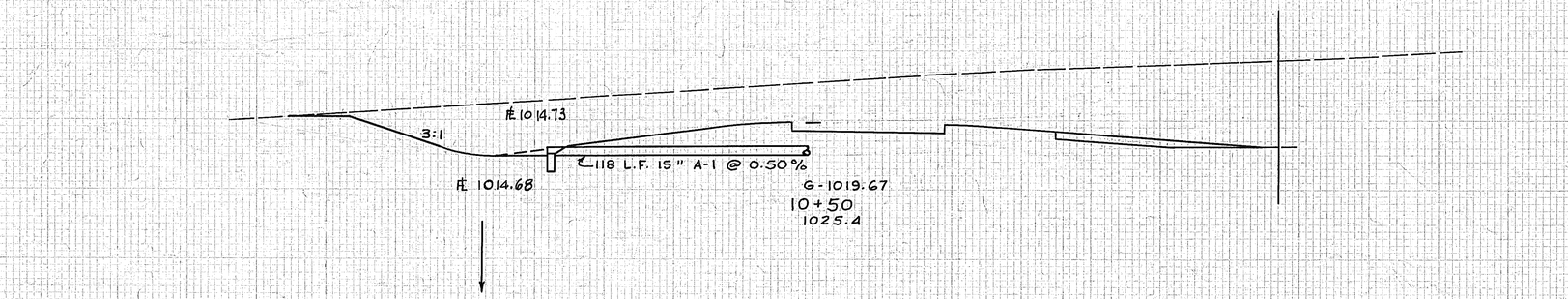
RAMP G Sta 5+92 to 8+88

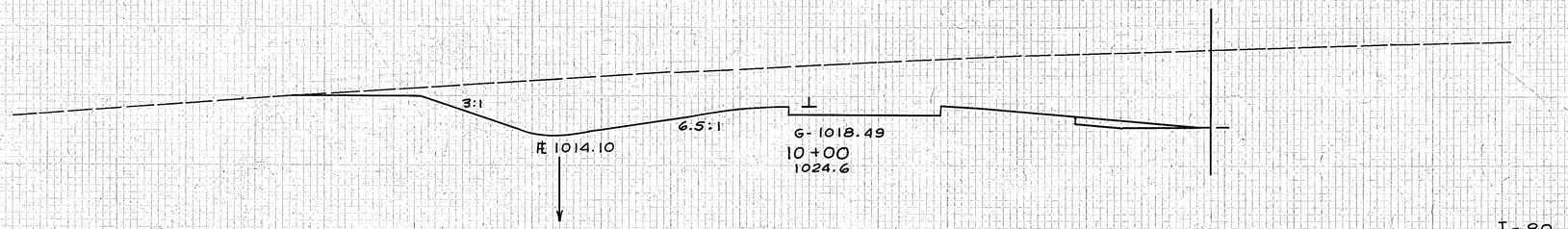
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-1G-80-5(9)245	

205
401

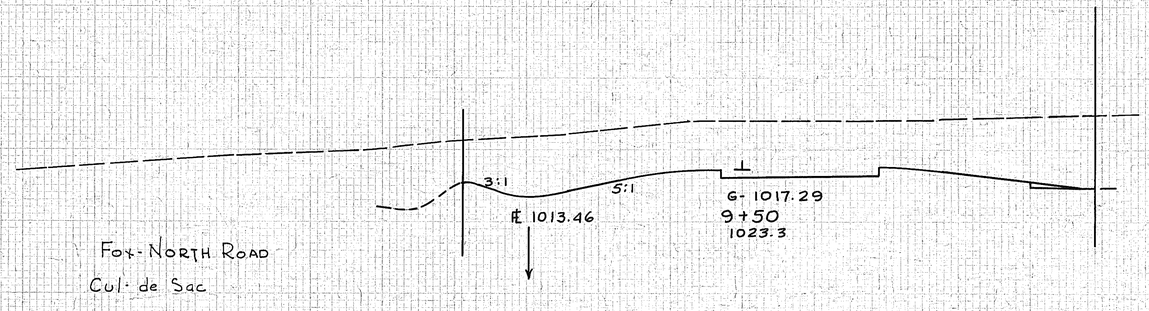
TRU-I-80-8.90
TRUMBULL COUNTY

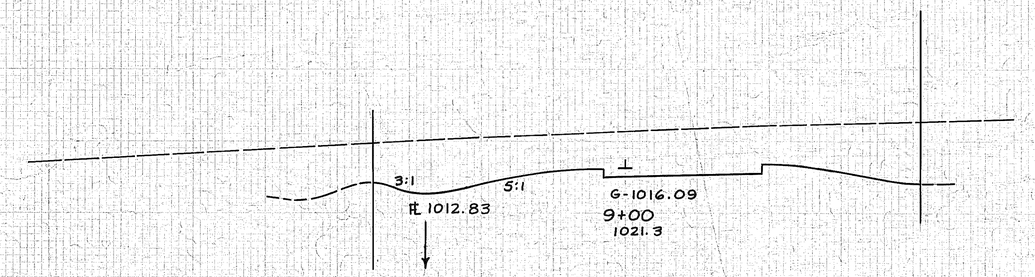
END AREA		VOLUME	
CUT	FILL	CUT	FILL
1030	1741		
850	1426		
693	0	192	
630	1095		





I-80





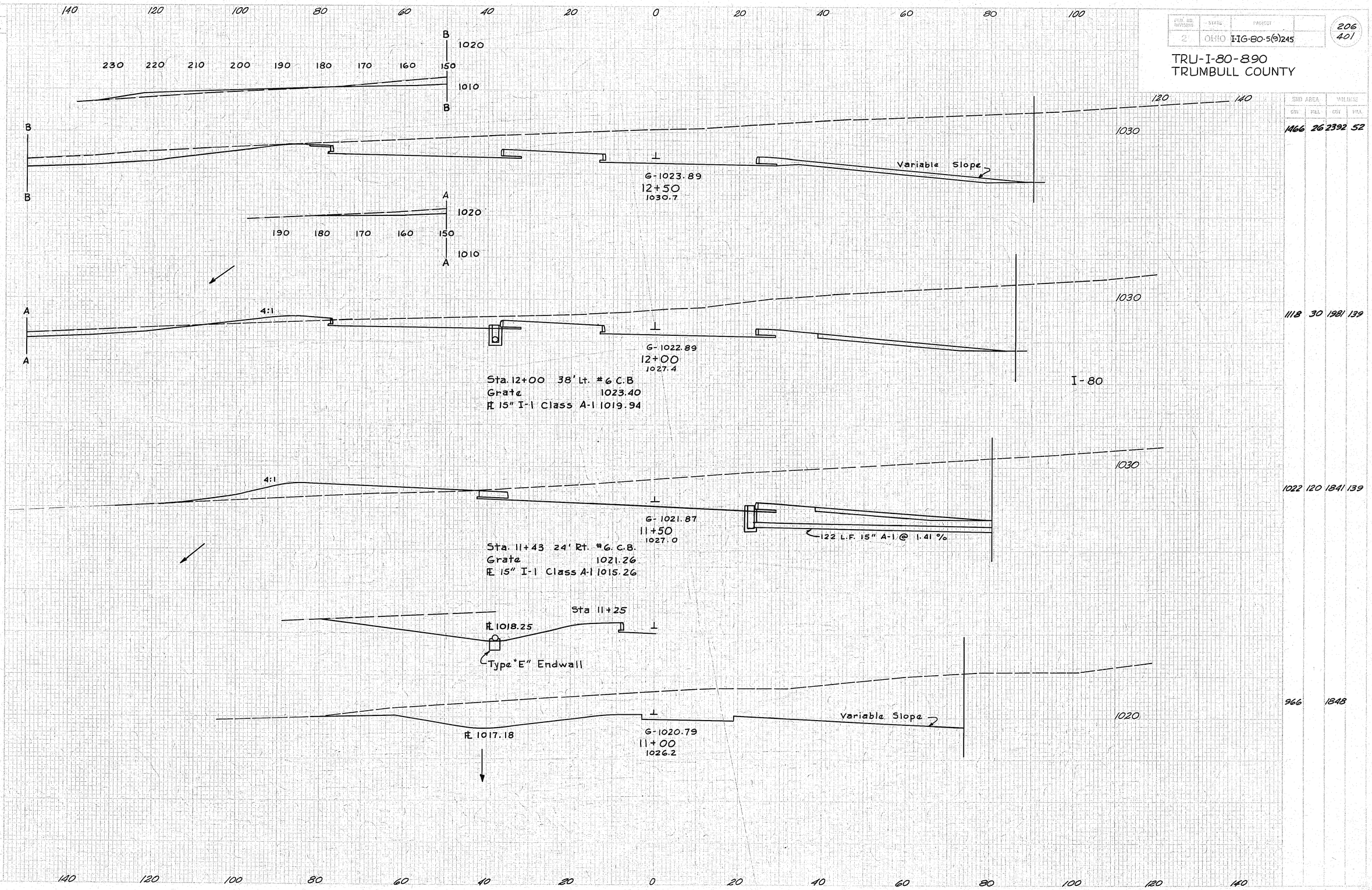
RAMP G Sta. 9+00 to 10+50

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

206
401

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 C Sta. 11+00 to 12+50

SEEDING	
SIZE WIDTH	SQ. YDS.

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

207
401

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	29	4285	3.296

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

8:1

1040

℄ Variable Slope

G- 1027.89
14+50
1036.1

8:1

1030

G- 1026.89
14+00
1032.8

I-80

B 1030

8:1

1020

220 210 200 190 180 170 160 150

B 1020

B

Bldg.

℄ Ground Line

1030

G- 1025.89
13+50
1036.5

B

A

1020

230 220 210 200 190 180 170 160 150

A 1010

A

1030

℄ Variable Slope

G- 1024.89
13+00
1032.5

A

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

RAMP G Sta 13+00 - 14+50

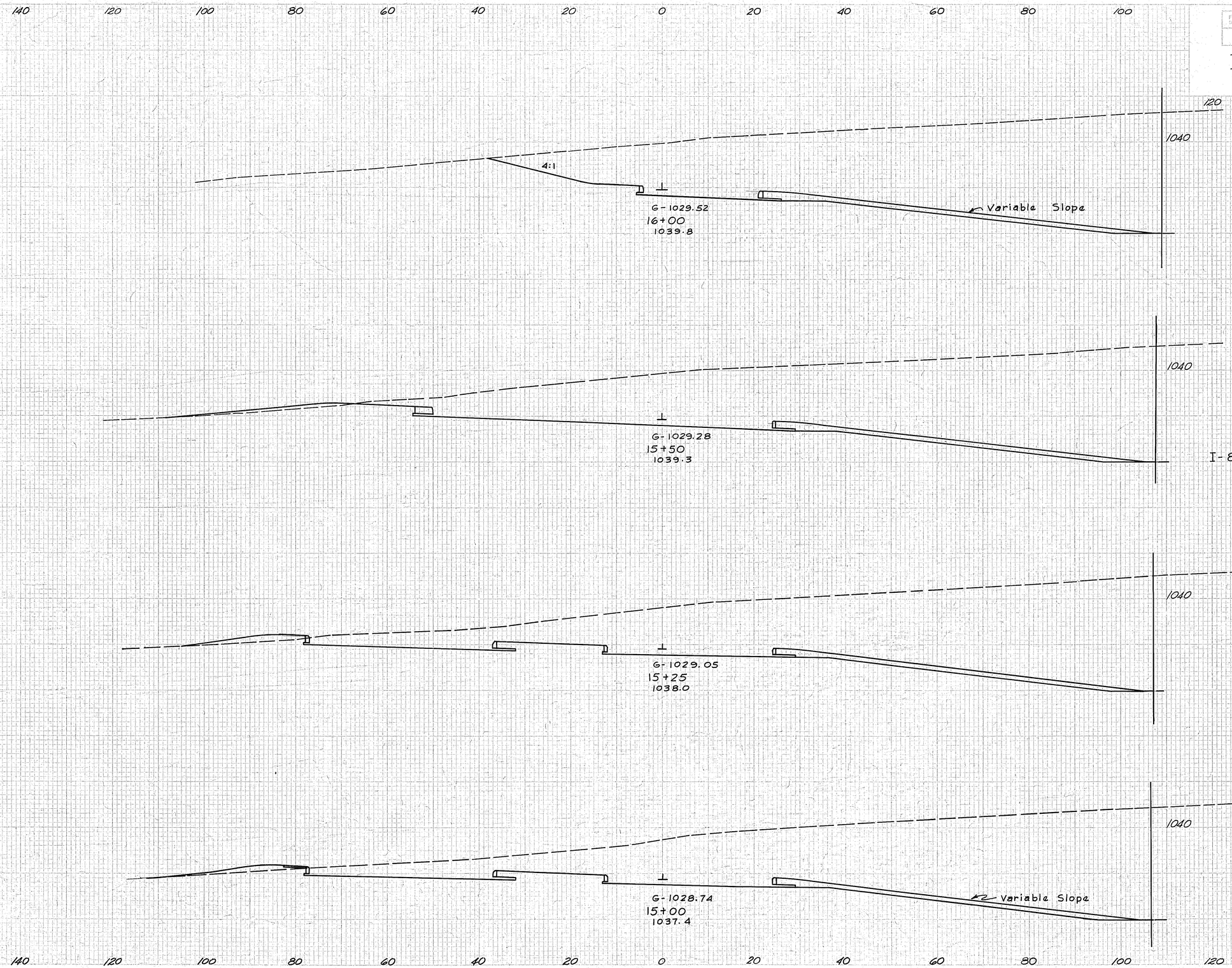
SEEDING

SHL WIDTH	SHL SLOPE

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

208
401

TRU-I-80-8.90
TRUMBULL COUNTY



STA	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	2280	4268		
+60			0	4
+60				
	2330	20	2099	50
	2203	34	2016	54
	2152	24	3880	59

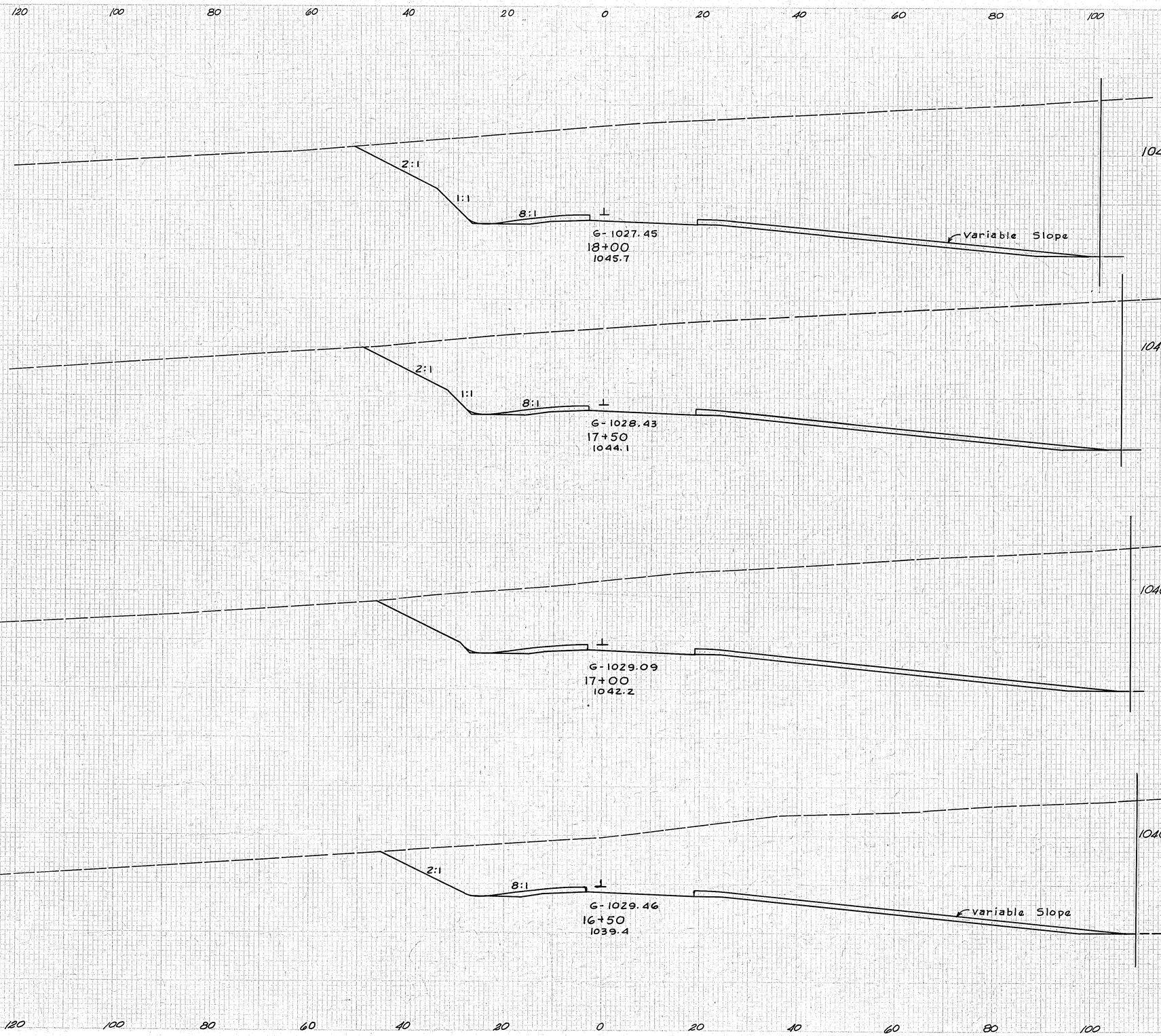
RAMP H Sta 15+00 to 16+00

SHEET NO.	
ERO WIDTH	SQ. YDS.

FED. ROAD DESIGNATION	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		
	2864	5065		
	2606	4524		

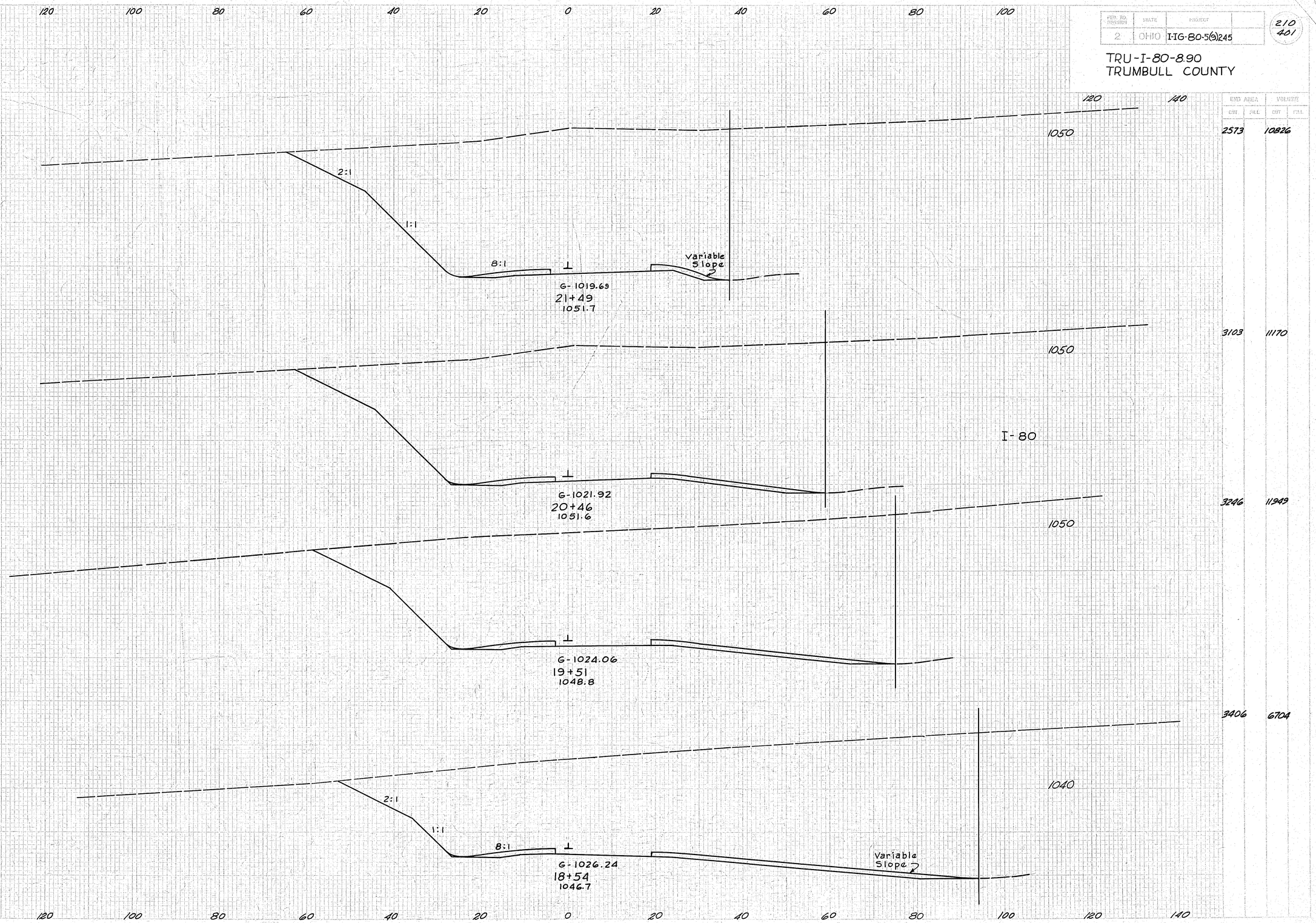
RAMP H Sta 16+50 to 18+00

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

210
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
2573		10826	
3103		11170	
3246		11949	
3406		6704	



RAMP H Sta. 18+54 to 21+49

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

211
401

TRU-I-80-8.90
TRUMBULL COUNTY

STATIONS		END AREA		VOLUME	
CUT	FILL	CUT	FILL		
		2090	8691		
		2603	9705		
		2586	9745		

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

1050

2:1

1:1

8:1

G-1014.48
24+52
1049.2

1050

2:1

1:1

8:1

G-1016.4
23+52
1054.2

I-80

1050

2:1

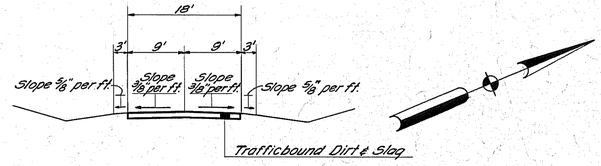
1:1

8:1

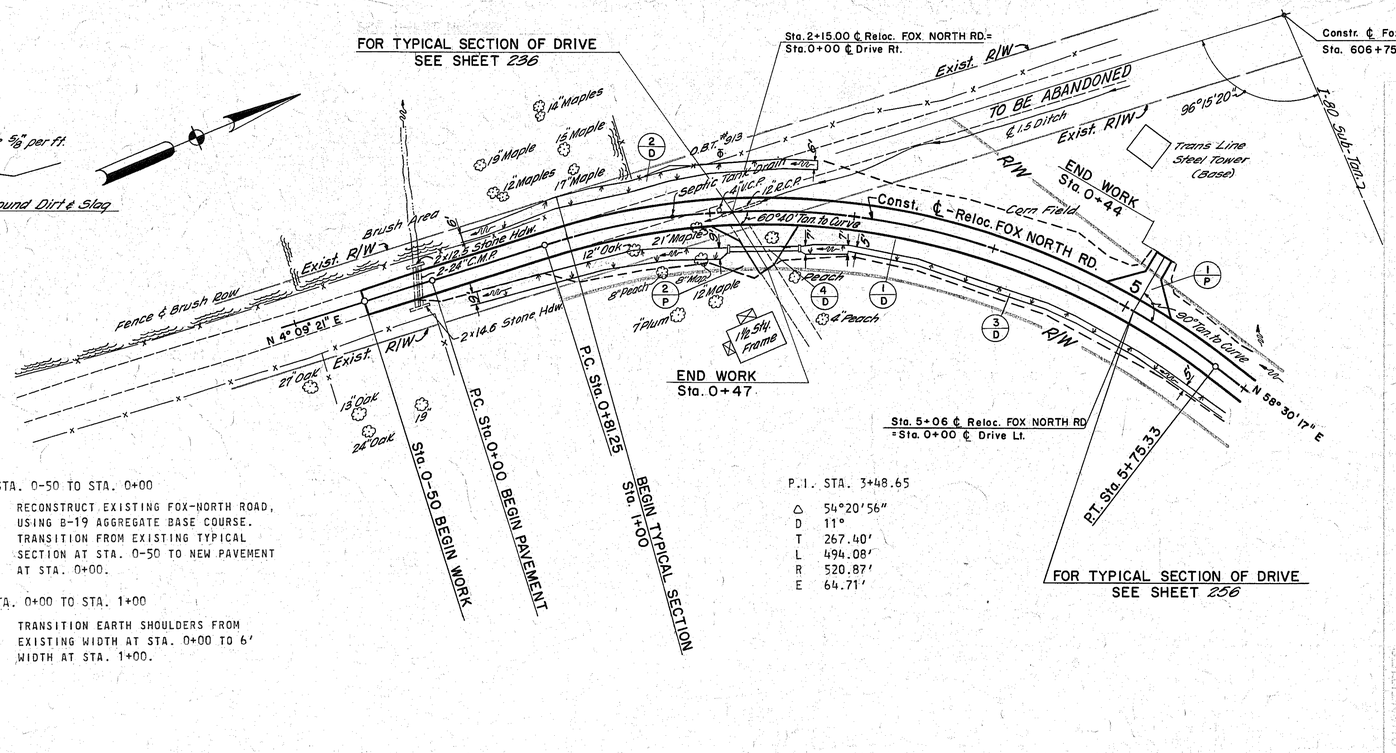
G-1017.79
22+51
1053.6

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

RAMP H Sta 22+51 to 24+52



TYPICAL SECTION
EXISTING FOX-NORTH RD.



STA. 0-50 TO STA. 0+00

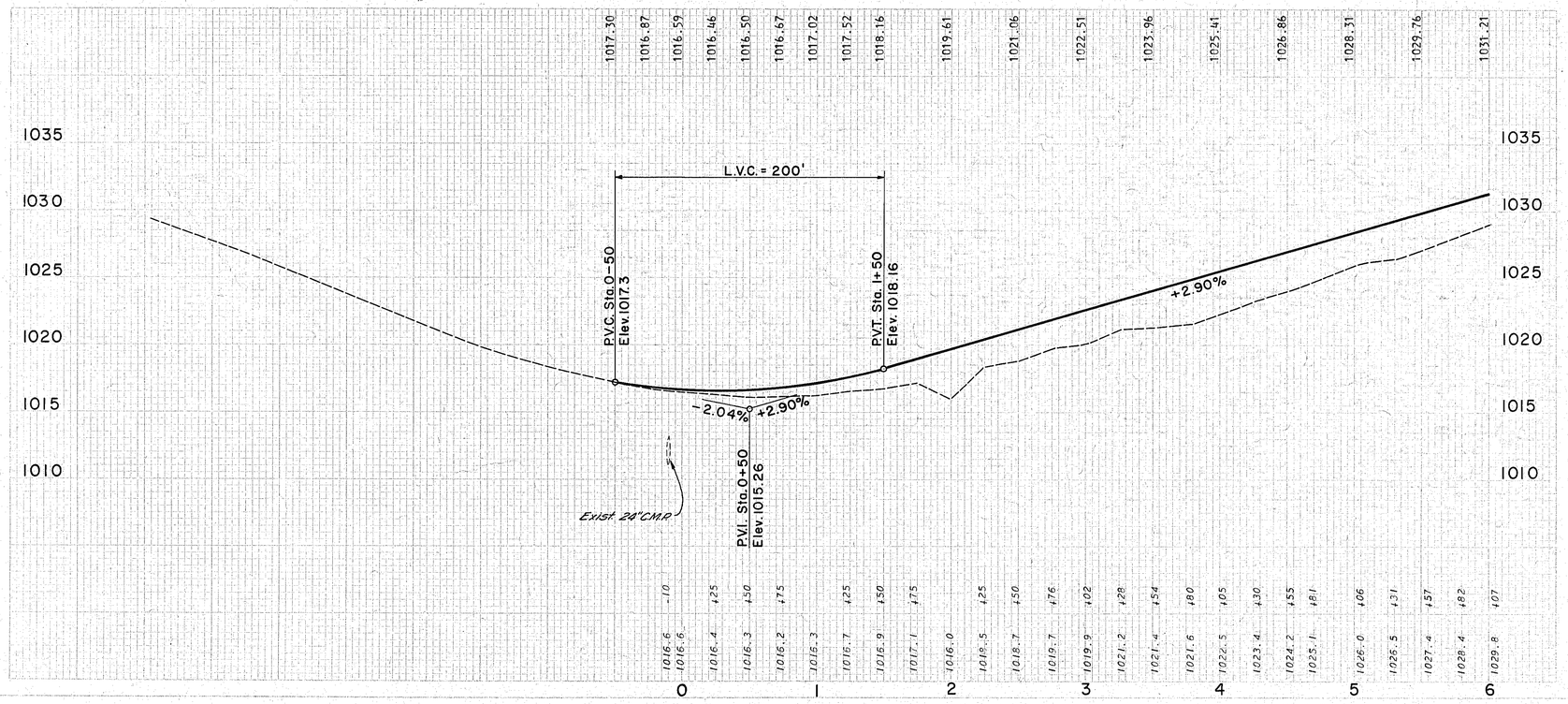
RECONSTRUCT EXISTING FOX-NORTH ROAD, USING B-19 AGGREGATE BASE COURSE. TRANSITION FROM EXISTING TYPICAL SECTION AT STA. 0-50 TO NEW PAVEMENT AT STA. 0+00.

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

△	54°20'56"
D	11°
T	267.40'
L	494.08'
R	520.87'
E	64.71'



ESTIMATED QUANTITIES

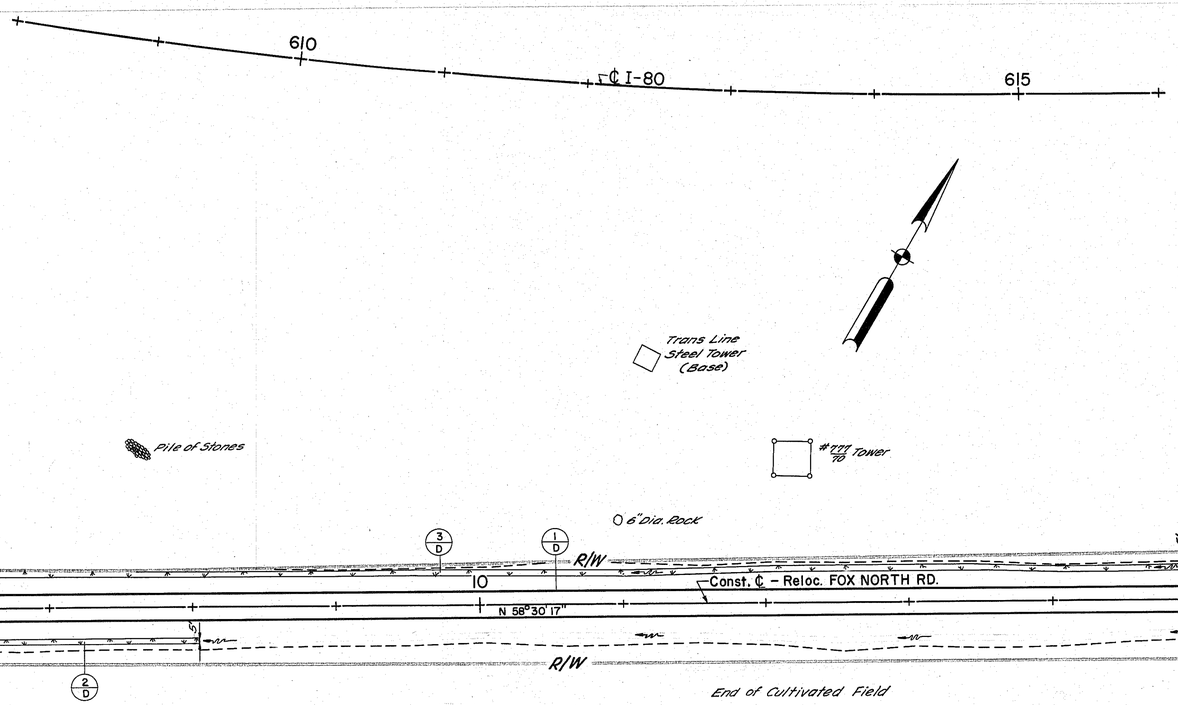
SHEET NO.	STATION TO STATION	SIDE	T-35 Asphaltic Concrete Surface Course CU. YD.	L-10 Sodding SQ. YD.	I-9 Stone U-Drain L.F.	B-19 Aggr. Base Crse. CU. YD.	I-1 CL. G-1 24"X18" M-44(13)B L.F.
1-D	0+00 TO 6+00	RWLt					
2-D	0+00 TO 2+16	Lt					
3-D	0+25 TO 6+00	Rt					
4-D	2+25	Rt					
1-P	5+00 (Driveway)	Lt				15.2	
2-P	2+15	Rt				16.8	
			7	184 433	248		50
TOTALS			7	617	248	32.0	50

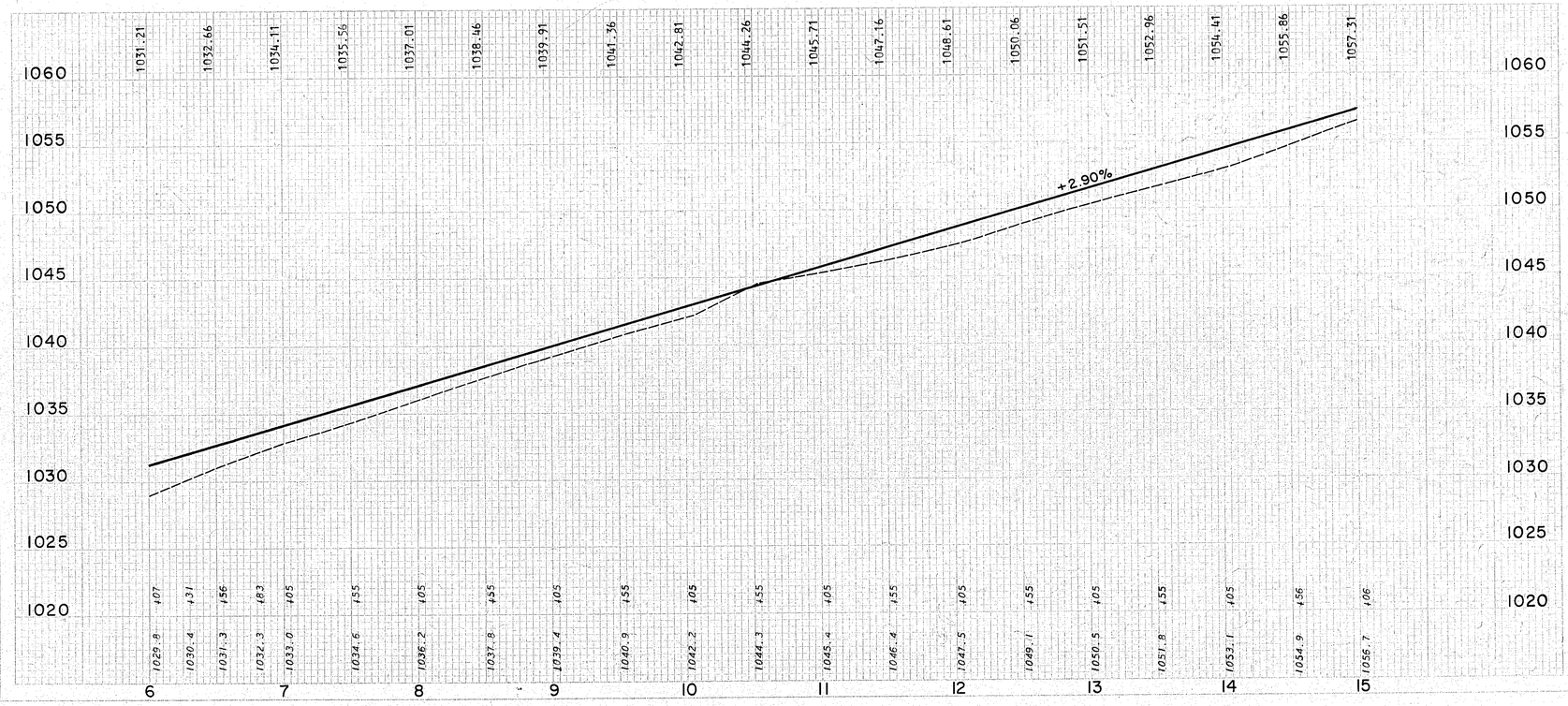
Reloc. FOX-NORTH RD. Sta. 0-50 to Sta. 6+00

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

213
401

TRUMBULL COUNTY TRU-I-80-8.90





ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	UNIT
L-10	Sodding	SQ. YD.
I-9	Stone U-Drain	L.F.

SHEET NO.	STATION TO STATION			RWLL	
1-D	6+25	TO	15+00	RT.	644
2-D	6+00	TO	8+05	RT.	342
3-D	6+00	TO	15+56	LT.	

ITEM NO.	1	2	3
L-10	114	530	
I-9		342	

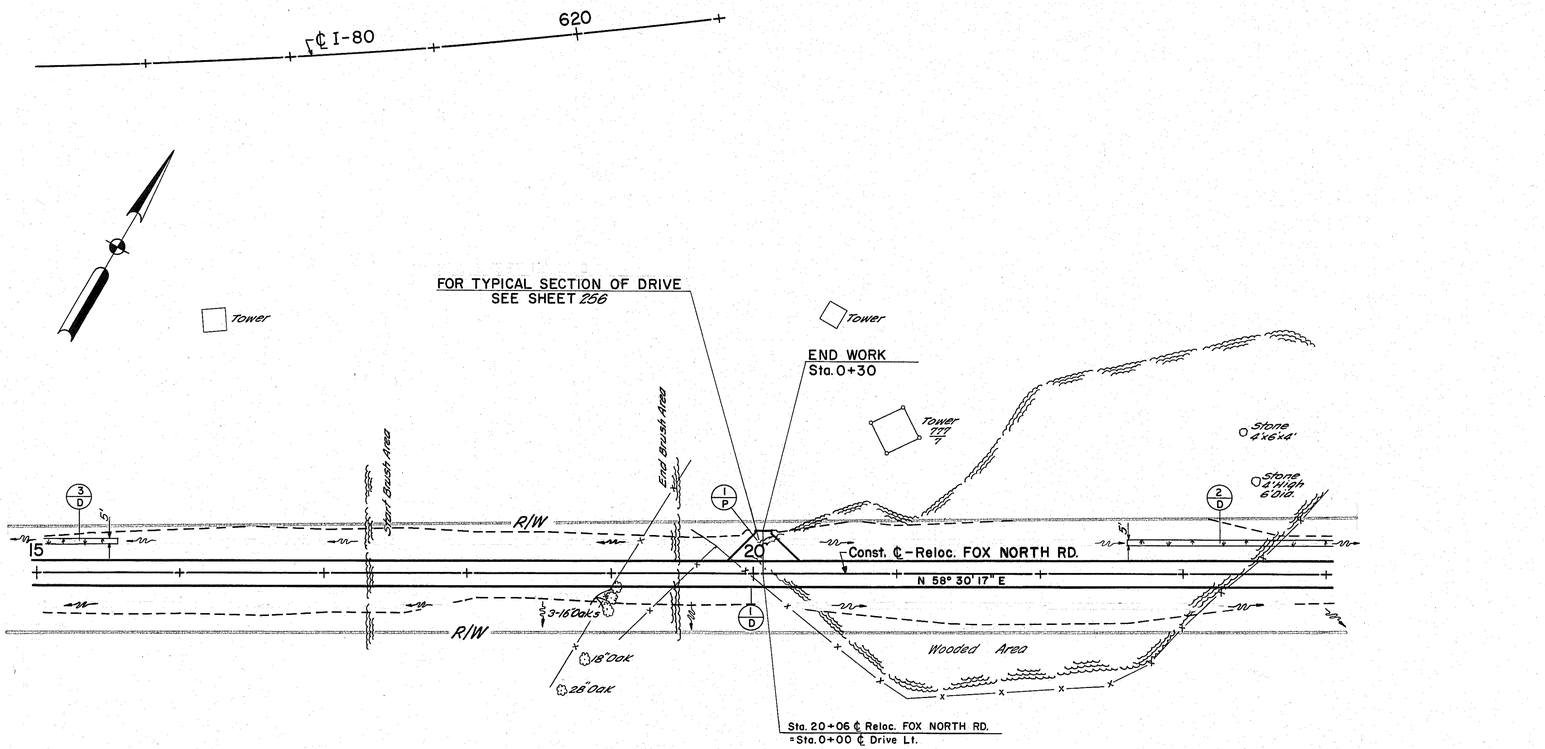
TOTALS

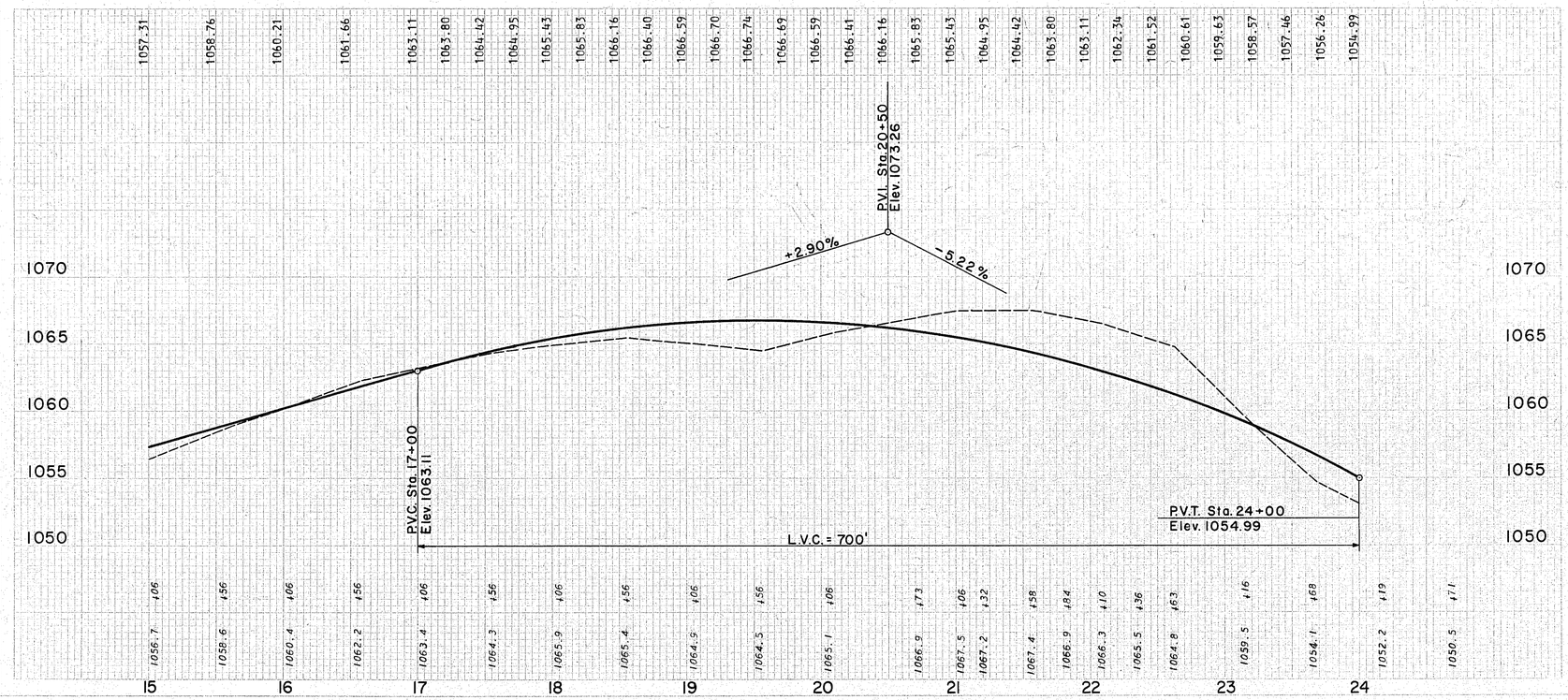
Reloc. FOX-NORTH RD. Sta. 6+00 to 15+00

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

214
401

TRUMBULL COUNTY TRU-I-80-8.90





ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	TOTALS
L-10	Sodding	Sq. YD.	106.0
		76.0	
		30.0	
I-9	Stone U-Drain	L.F.	342
		342	
B-19	Aggr. Base Crse 6" Depth	CU. YD.	12
			12

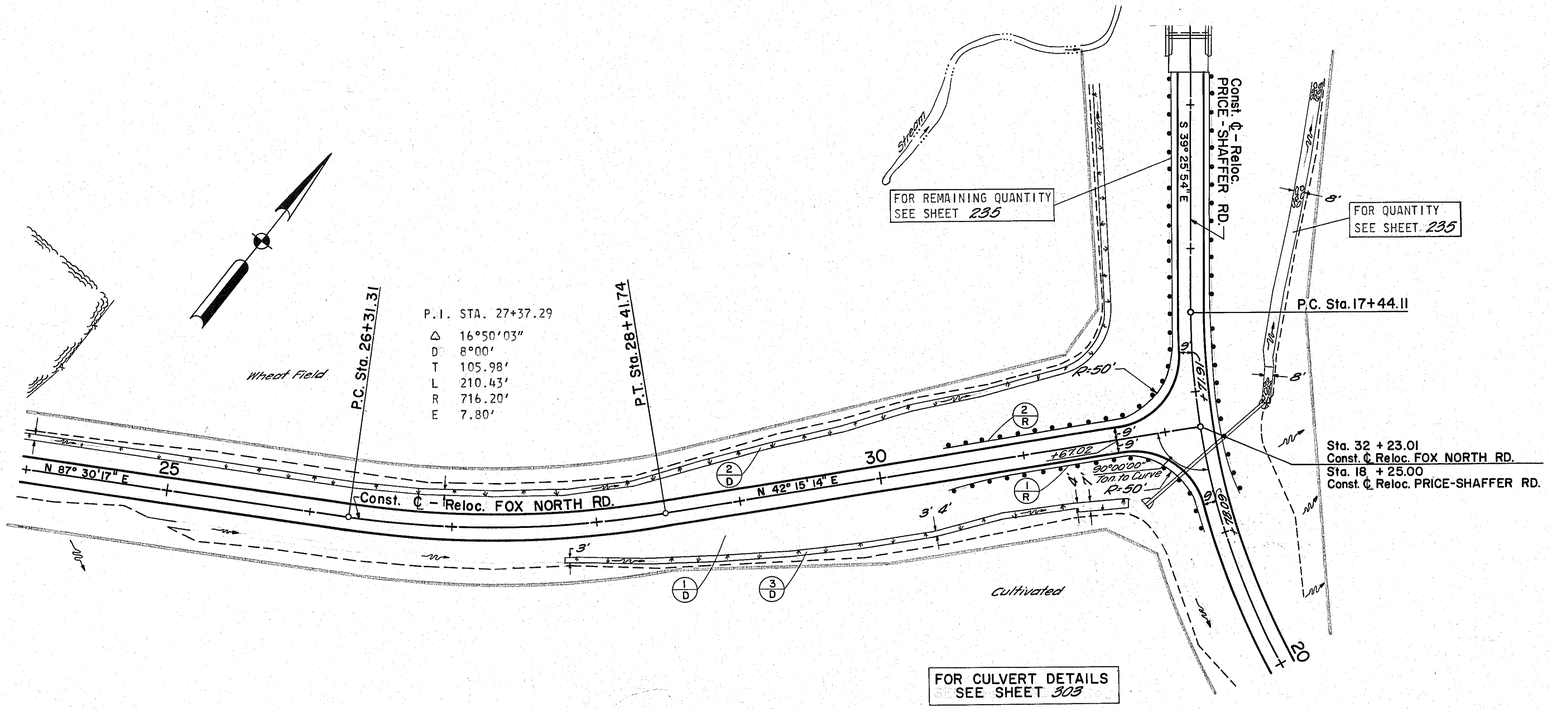
CASE NO.	STATION TO STATION	SIDE
1-D	15+25 to 24+00	RT. & LT.
2-D	22+63 to 24+00	LT.
3-D	15+00 to 15+56	LT.
1-P	20+06	LT.

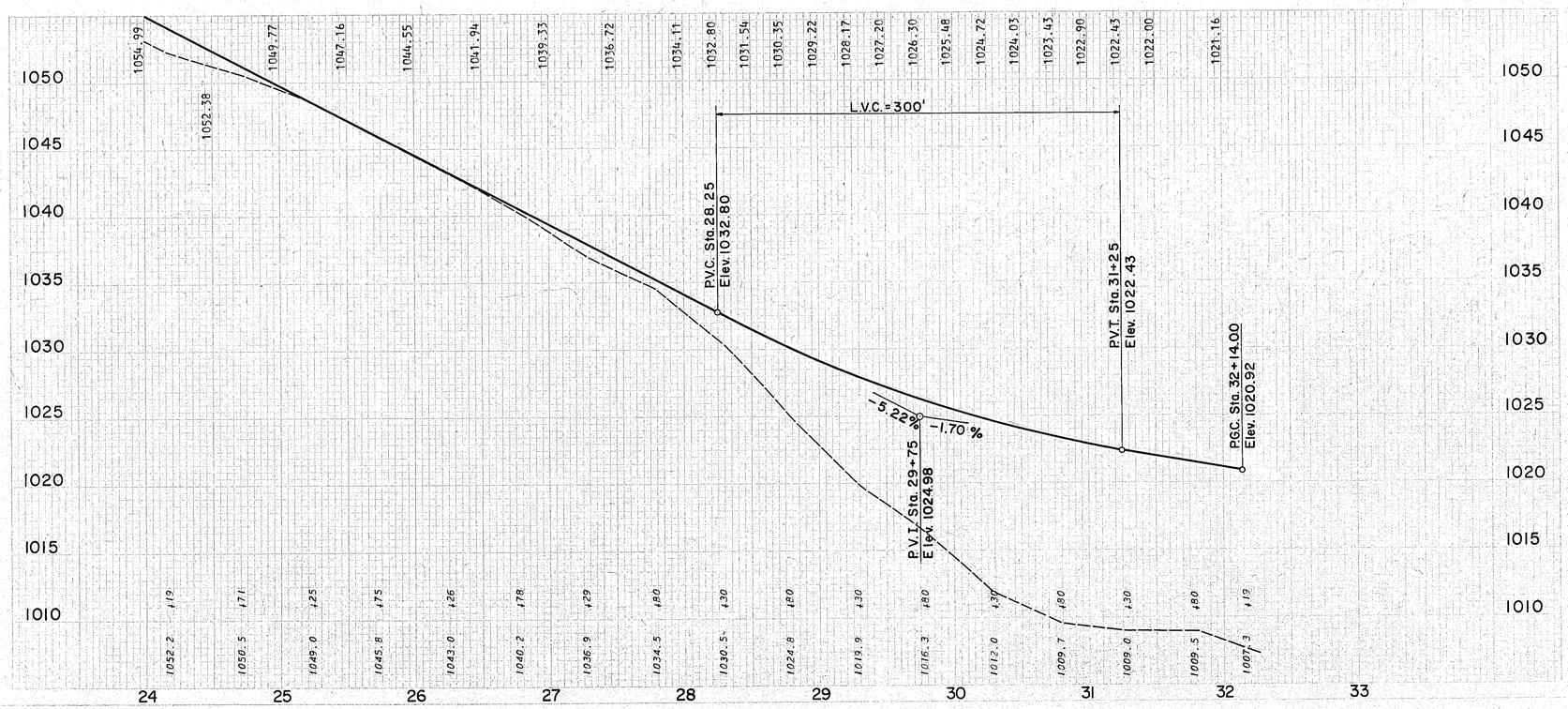
Reloc. FOX-NORTH RD. Sta. 15+00 to 24+00

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

215
401

TRUMBULL COUNTY TRU-I-80-8.90





ESTIMATED QUANTITIES

				SEE SHEET NO.
L-10	Sodding	SQ. YD.	5120 / 167	679.0
I-15	Guard Rail	L.F.	200.0 / 200.0	400.0
I-9	Stone U-Drain	L.F.	300	300

1-0	24+25 to 31+75	RT. & LT.	
2-0	24+00 to 32+29	LT.	
3-0	27+29 to 31+80	RT.	
1-R	30+50 to 31+55 Price-Shaffer Road	RT.	
2-R	30+50 to 17+55.5 Price-Shaffer Road	LT.	

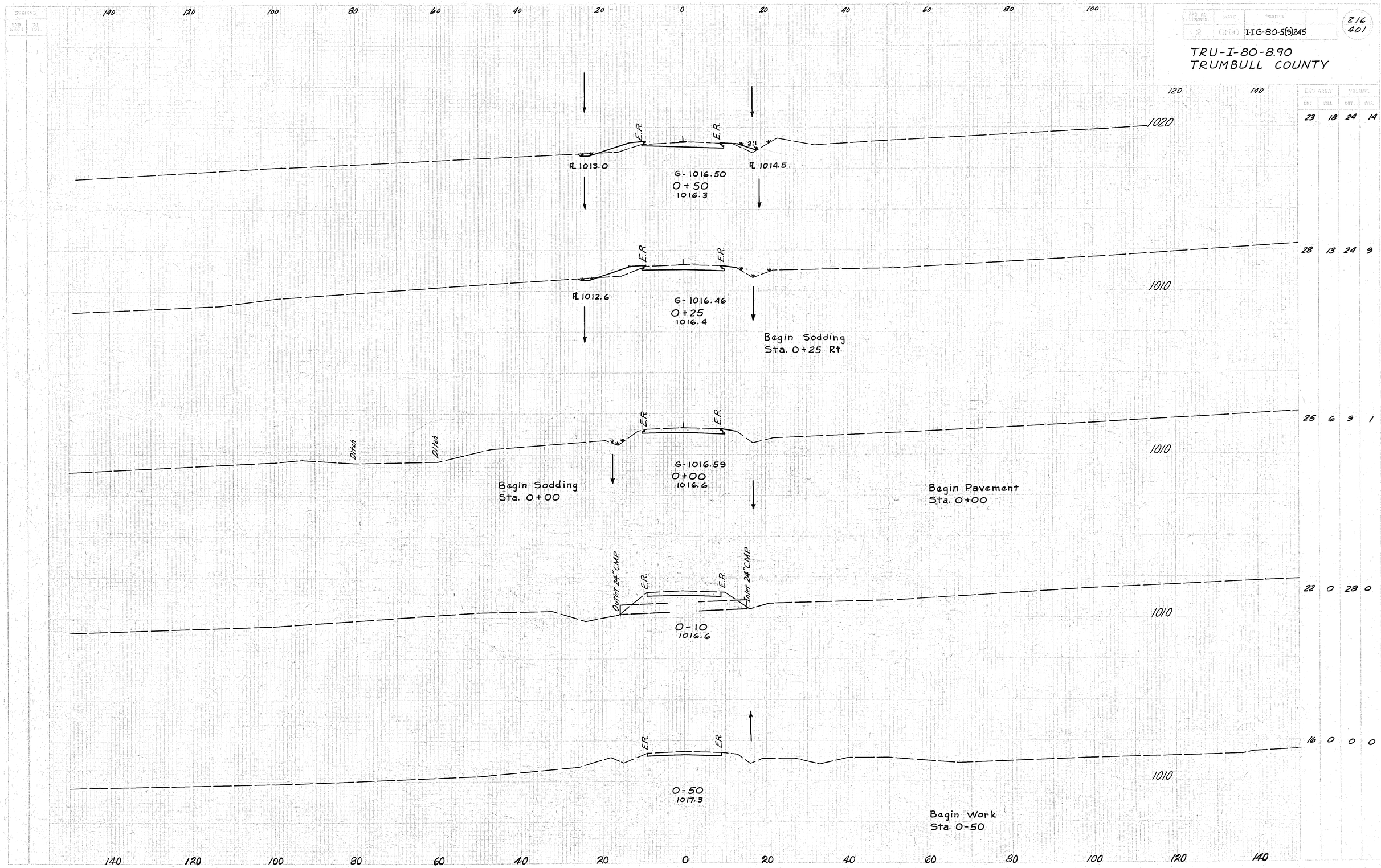
Reloc. FOX-NORTH RD. Sta. 24+00 to 32+42.16

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

216
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
23	18	24	14
28	13	24	9
25	6	9	1
22	0	28	0
16	0	0	0

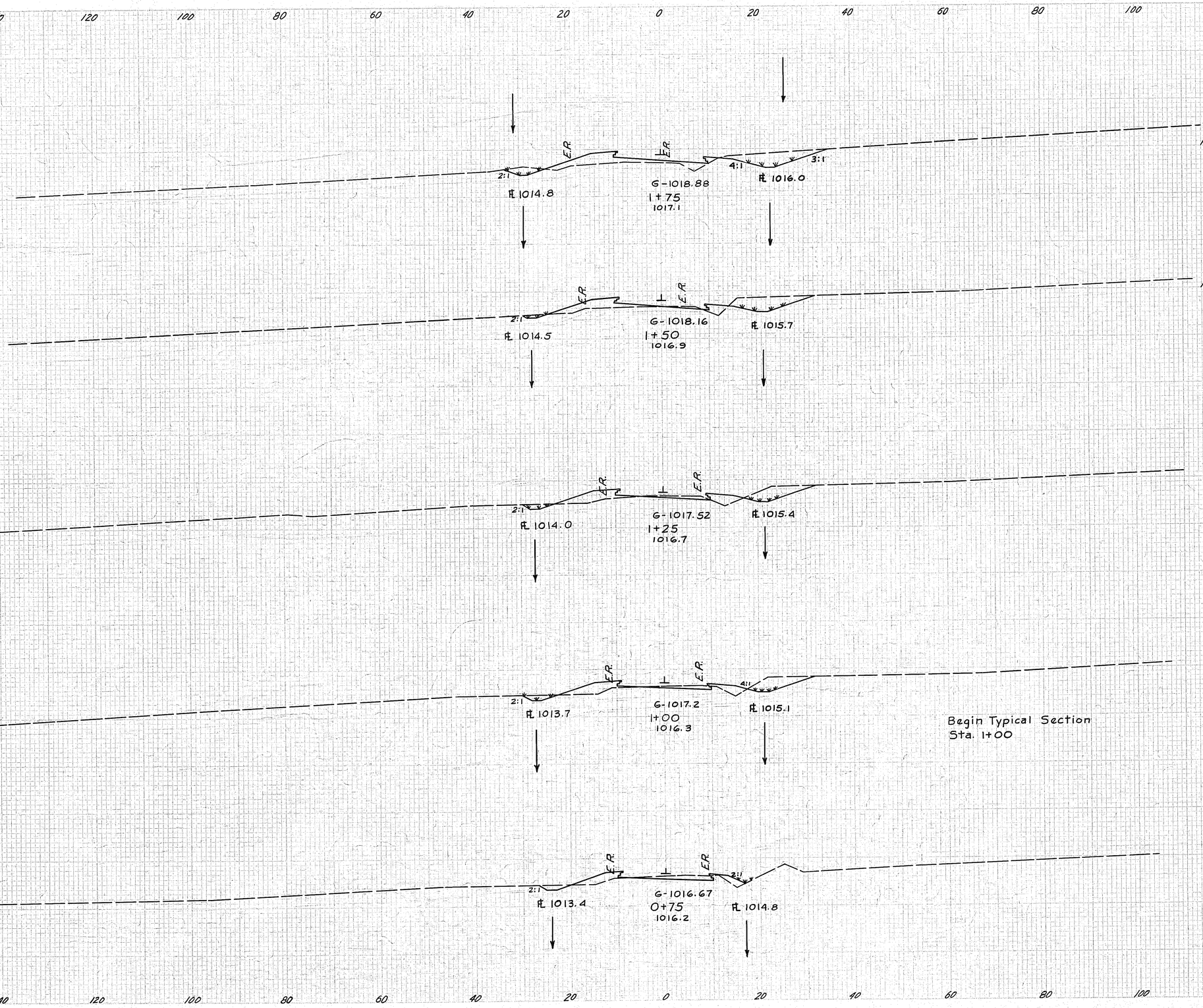


FOX NORTH ROAD RELOC. Sta. 0-50 to Sta. 0+50

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

217
401

TRU-I-80-8.90
TRUMBULL COUNTY



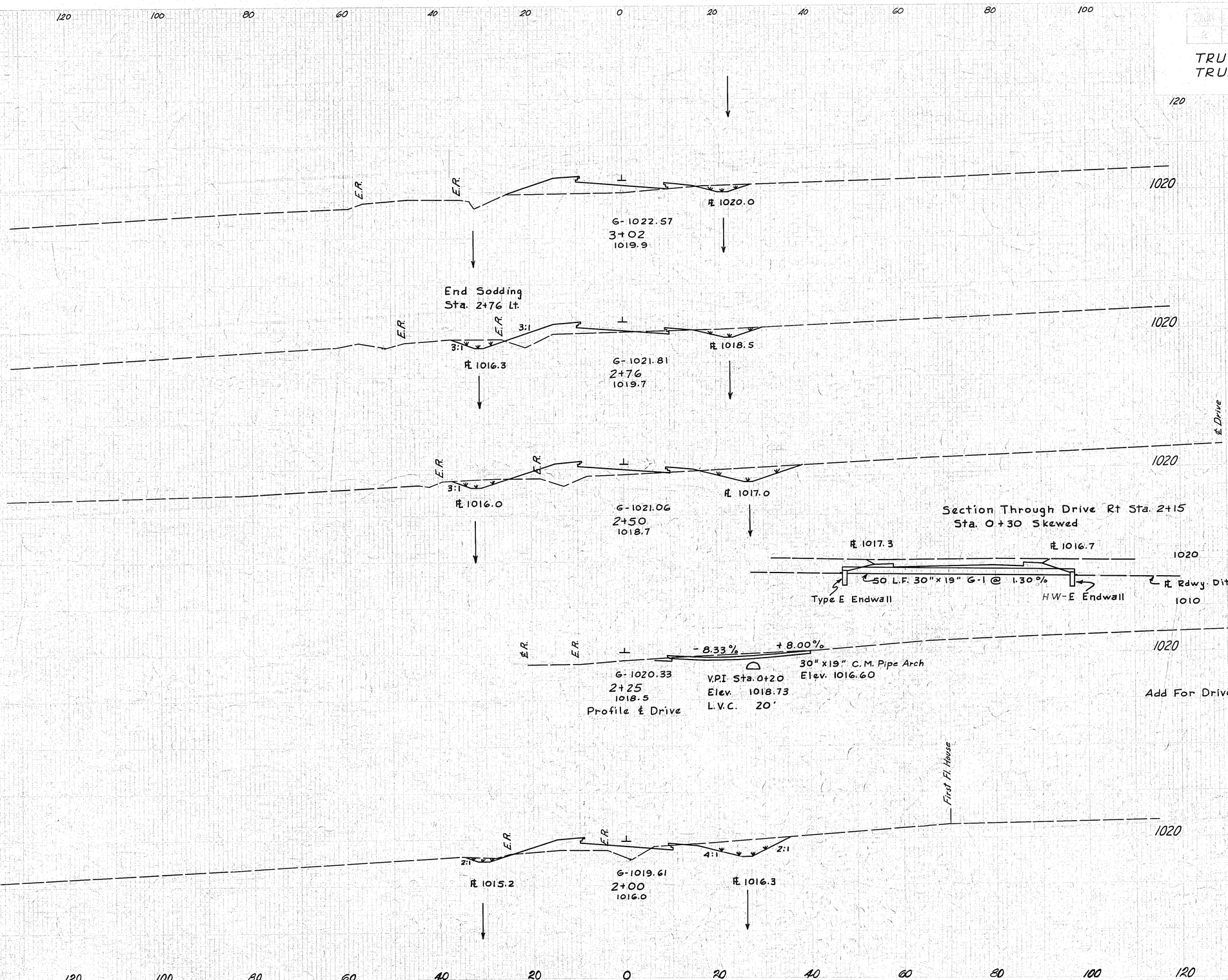
END AREA		VOLUME	
CUT	FILL	CUT	FILL
57	47	48	22
47	39	41	19
4	39	38	18
42	33	28	13
18	22	19	18

FOX NORTH ROAD RELOC. Sta. 0+75 to Sta. 1+75

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

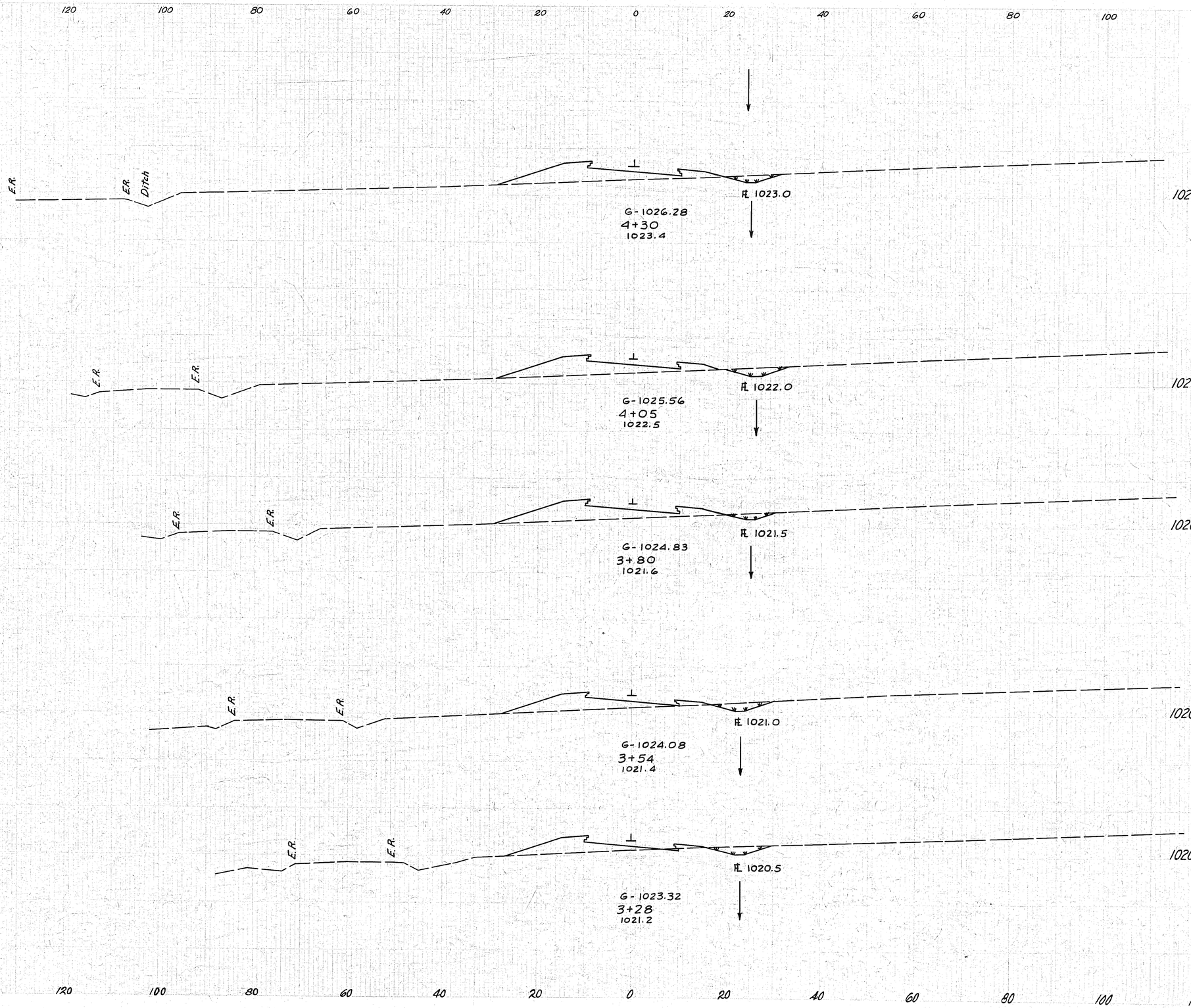
TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
13	89	24	66
37	54	33	53
32	56	82	107
57	60	53	24
5	0		



SHEET NO.	STATE	PROJECT	
	OHIO	HG-80-5(9)245	219 401

TRU-I-80-8.90
TRUMBULL COUNTY



END AREA		VOLUME	
CUT	FILL	CUT	FILL
14	104	14	98
16	108	12	98
10	104	12	93
15	89	15	76
16	70	14	74

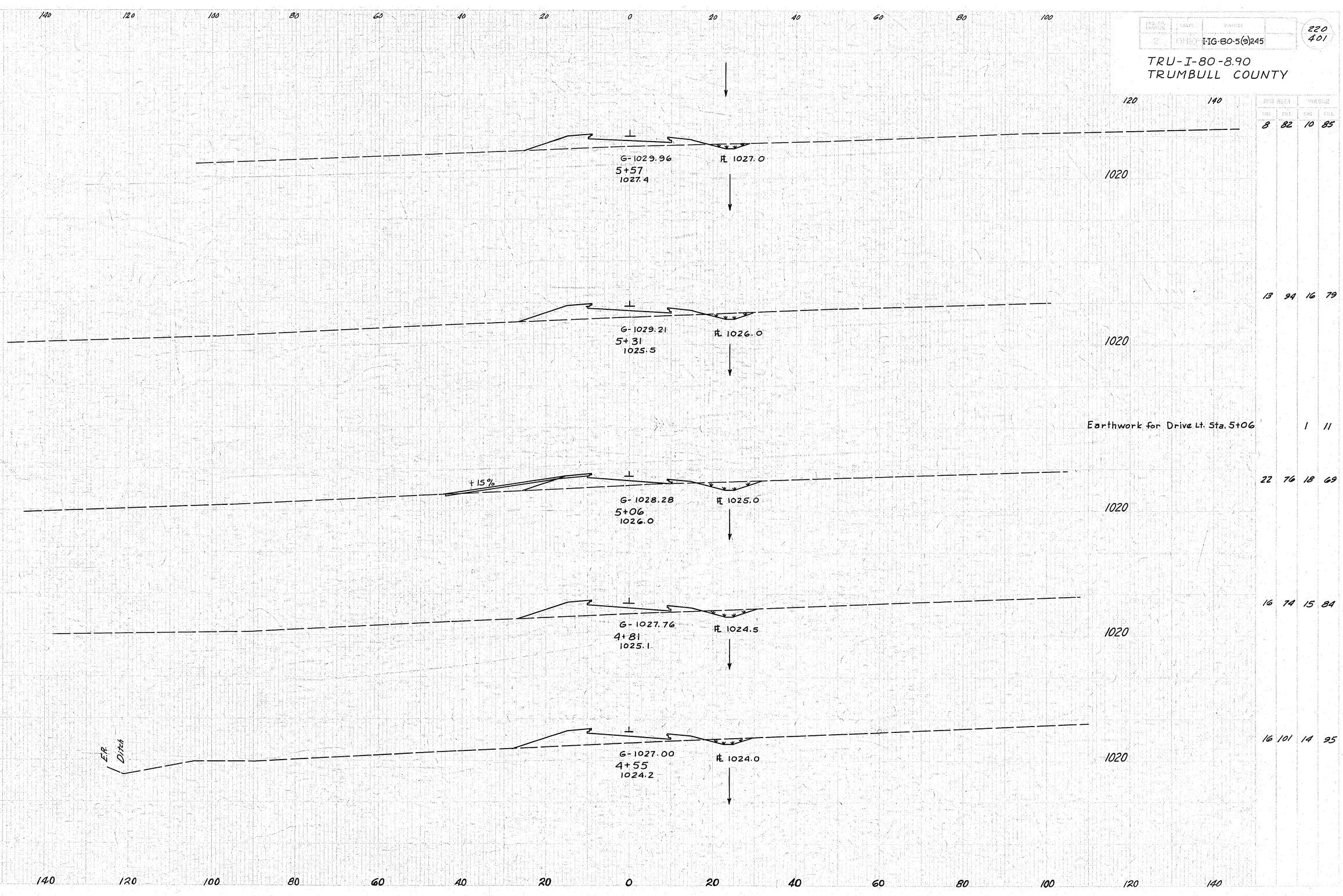
FOX NORTH ROAD RELOC

SECTION

CUT AREA	FILL AREA

PROJECT NUMBER	STATE	PROJECT	SHEET NUMBER
2	OHIO	I-IG-80-5(9)245	220 401

TRU-I-80-8.90
TRUMBULL COUNTY



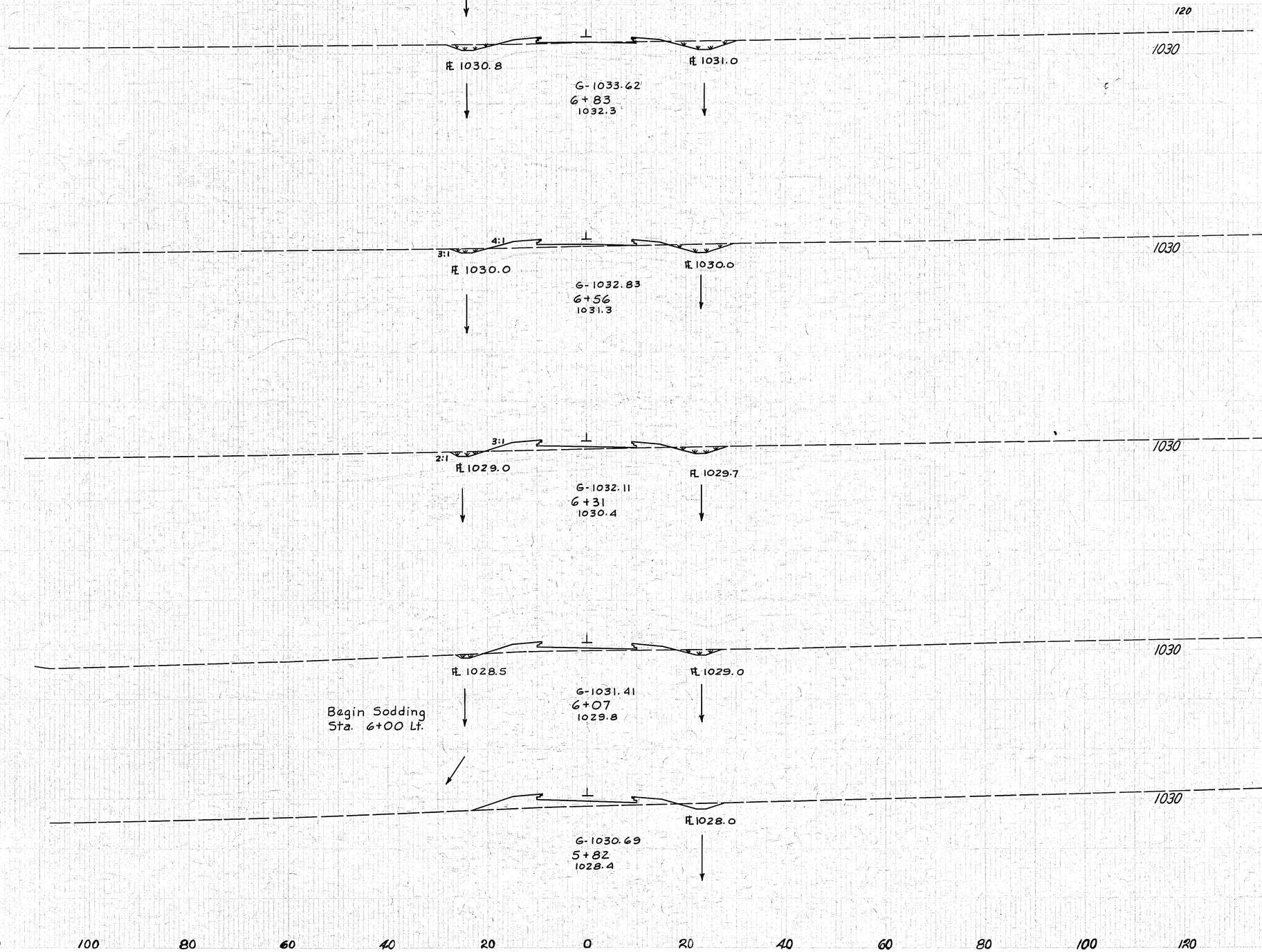
	AREA CUT	AREA FILL	VOLUME CUT	VOLUME FILL
	8	82	10	85
	13	94	16	79
Earthwork for Drive Lt. Sta. 5+06			1	11
	22	76	18	69
	16	74	15	84
	16	101	14	95

FOX NORTH ROAD RELOC — Sta 4+55 to Sta 5+57

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

22.1
401

TRU-I-80-8.90
TRUMBULL COUNTY



	EXC AREA		VOLUME	
	EXC	FILL	EXC	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+82 to Sta. 6+83

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

STATE	PROJECT		SHEET NO.	TOTAL SHEETS
OHIO	I-IG-80-5(9)245		222	401

TRU-I-80-8.90
TRUMBULL COUNTY

120 140

END AREA		CUT/FILL	
CUT	FILL	CUT	FILL
30	7	42	18

℄ 1038.3 ℄ 1038.0
G-1040.06
9+05
1039.4
1030

16	12	33	25

℄ 1037.0 ℄ 1036.5
G-1038.60
8+55
1037.8
1030

End Sodding
Sta. 8+05 Rt.

20	15	39	26

℄ 1035.0 ℄ 1035.0
G-1037.16
8+05
1036.2
1030

22	13	36	34

℄ 1033.0 ℄ 1033.5
G-1035.70
7+55
1034.6
1030

17	24	18	15

℄ 1031.8 ℄ 1032.0
G-1034.26
7+05
1033.0
1030

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

FOX NORTH ROAD RELOC. Sta. 7+05 to Sta. 9+05

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

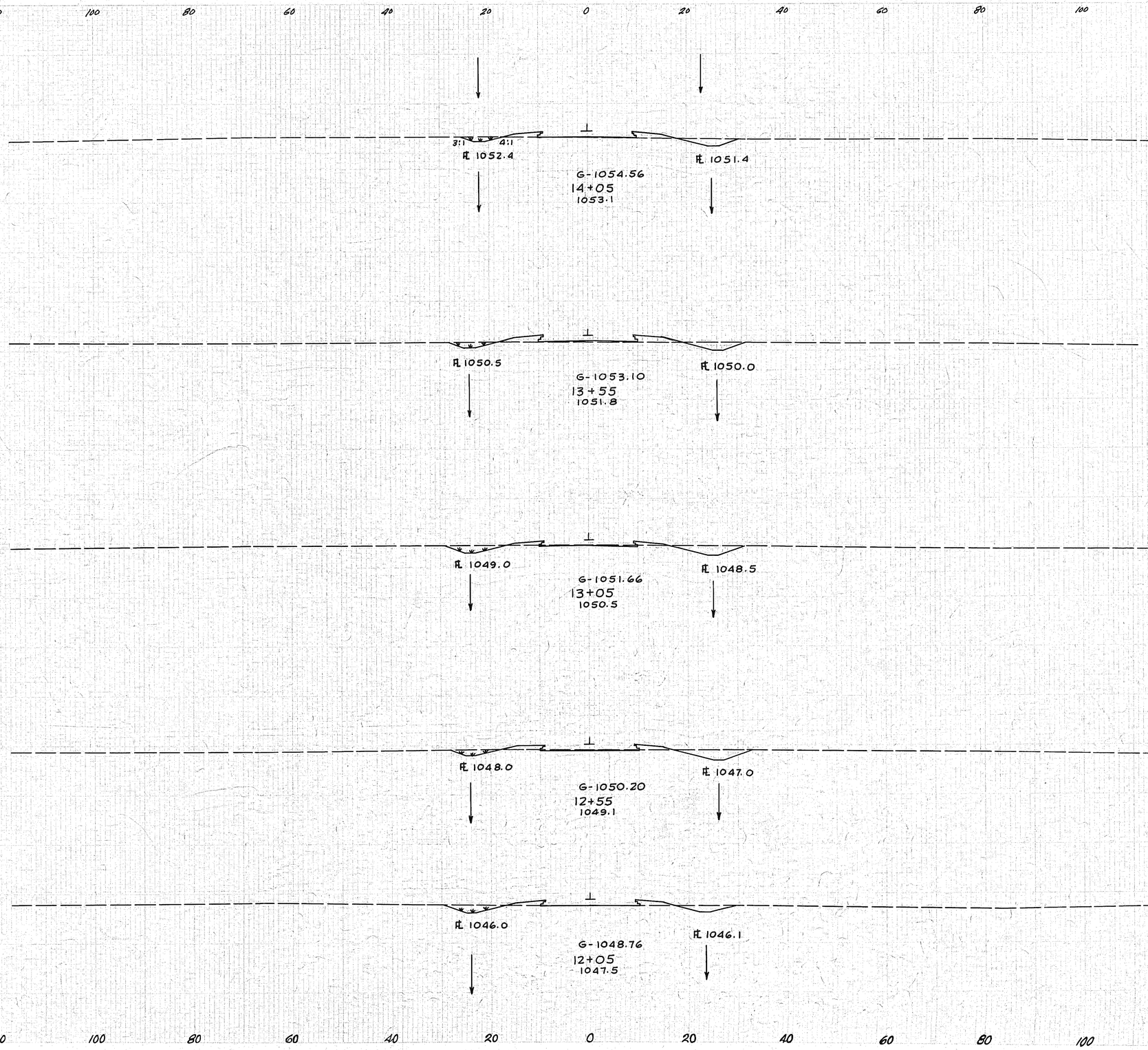
223
401

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

DESIGN DIVISION	STATE	PROJECT		SHEET
2	OHIO	I-IG-80-5(9)245		224 401

TRU-I-80-8.90
TRUMBULL COUNTY



STATION	SHRINK CUT	SHRINK FILL	SWELL CUT	SWELL FILL
140				
120				
100	19	15	40	34
80				
60				
40	24	22	57	27
20				
0	38	7	64	18
20				
40	31	13	53	24
60				
80	26	13	53	18
100				
120				
140				

FOX NORTH ROAD RELOC

SHEET NO.	STATE	NUMBER	
2	OHIO	I-IG-80-5(9)245	

225
401

TRU-I-80-8.90
TRUMBULL COUNTY

SHEET NO.	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	120	0	172	0
	66	0	121	0
	65	0	85	6
	27	7	39	18
	15	13	32	26

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

1060

G-1061.83
16+56
1062.2

1060

G-1060.38
16+06
1060.4

End Sodding
Sta. 15+56 Lt.

1060

G-1058.93
15+56
1058.6

1060

3:1 4:1 3:1

℄ 1055.8 ℄ 1055.2

G-1057.48
15+06
1056.7

1050

℄ 1053.9 ℄ 1053.8

G-1056.03
14+56
1054.9

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

FOX NORTH ROAD RELOC. Sta. 14+56 to Sta. 16+56

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

226
401

TRU-I-80-8.90
TRUMBULL COUNTY

AREAS		VOLUMES	
CUT	FILL	CUT	FILL
9	45	34	30
28	9	56	16
33	8	108	7
84	0	152	0
80	0	185	0

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

1060

G-1066.62
19+06
1064.9

1060

G-1066.23
18+56
1065.4

1060

G-1065.53
18+06
1065.9

1060

G-1064.55
17+56
1064.3

1060

G-1063.28
17+06
1063.4

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

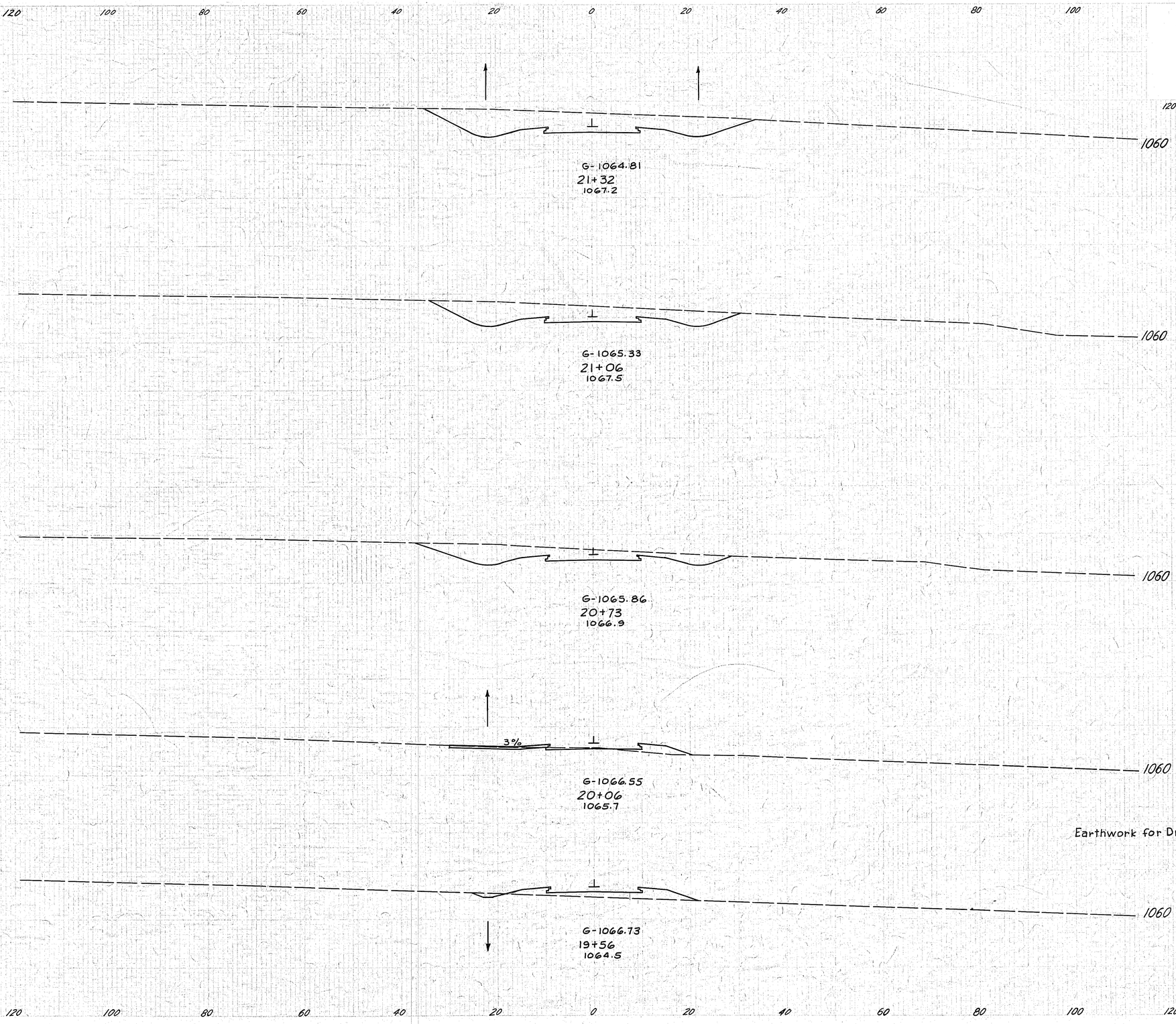
FOX NORTH ROAD RELOC. Sta 17+06 to Sta 19+06

SHEETING	
END AREA	VOLUME

SEC. NO. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

227
401

TRU-I-80-8.90
TRUMBULL COUNTY



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	254	0	267	0
	196	0	170	0
	144	0	197	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

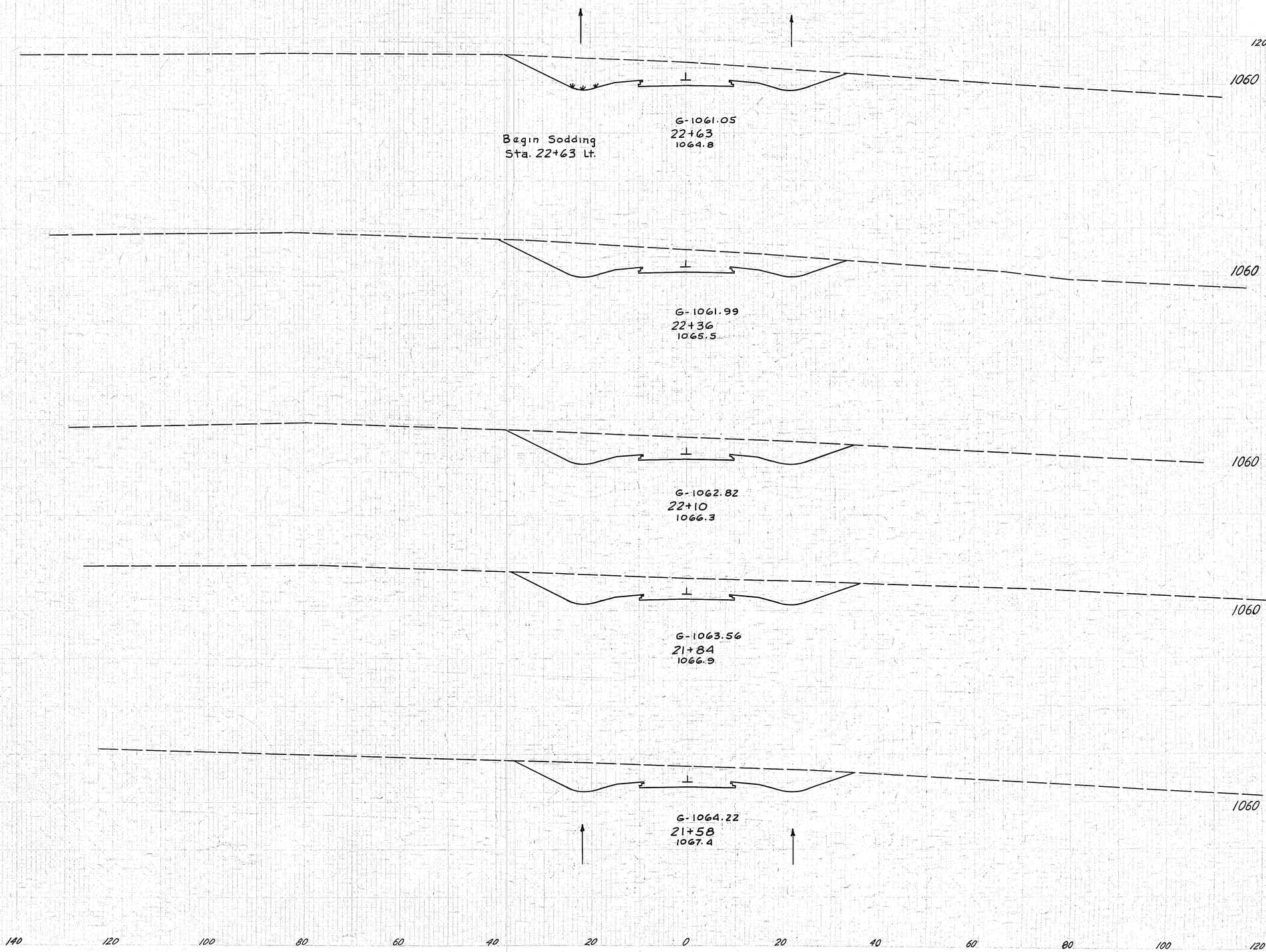
SHEET NO.	TOTAL SHEETS

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

228
401

TRU-I-80-8.90
TRUMBULL COUNTY

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



STA.	AREA CUT	AREA FILL	VOLUME CUT	VOLUME FILL
22+63	300	0	305	0
22+36	310	0	294	0
22+10	300	0	284	0
21+84	290	0	274	0
21+58	280	0	257	0

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

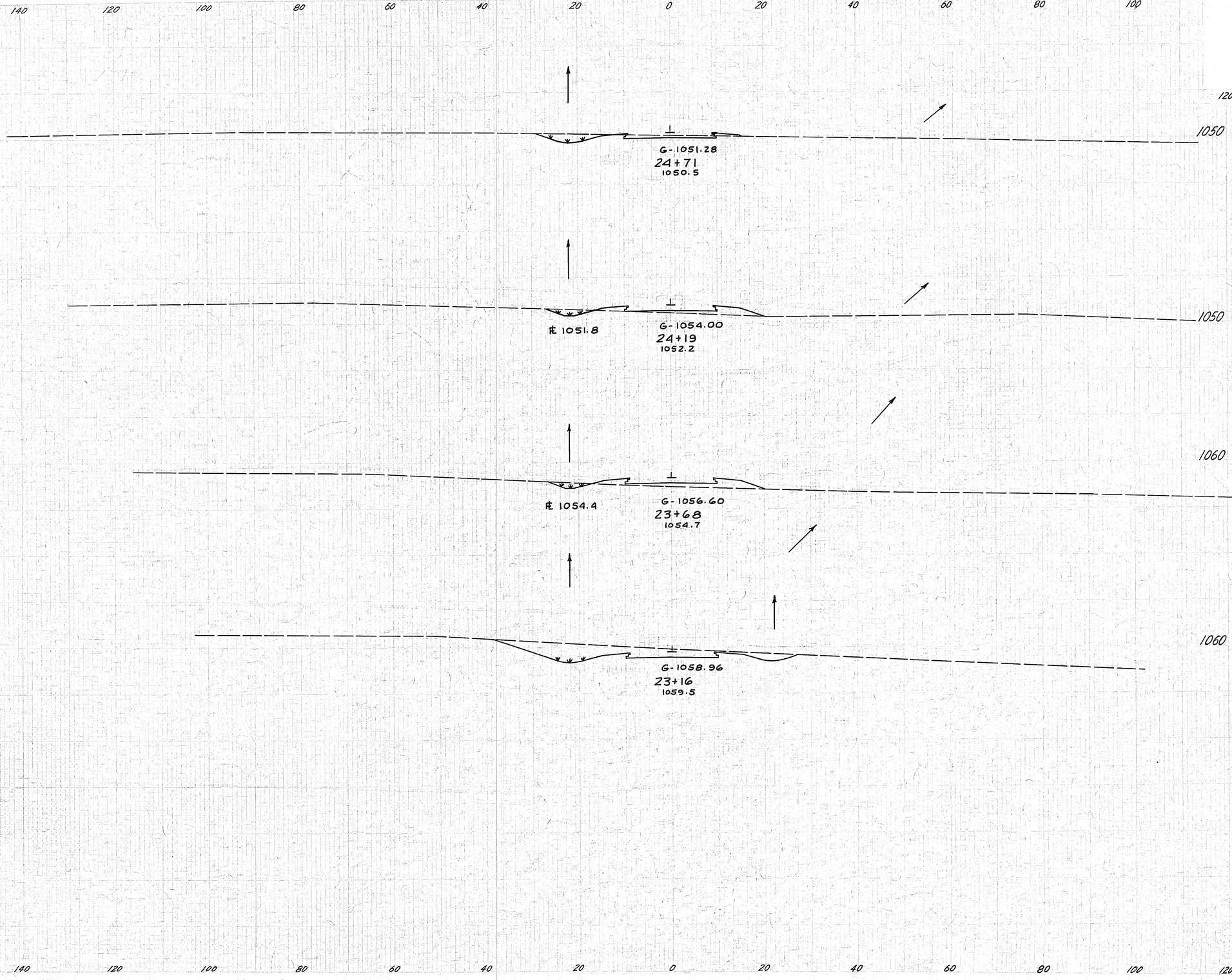
FOX NORTH 7240 DEL00

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

229
401

TRU-I-80-8.90
TRUMBULL COUNTY

SUPERELEVATION END WIDTH	SUPERELEVATION SQ. FT.



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

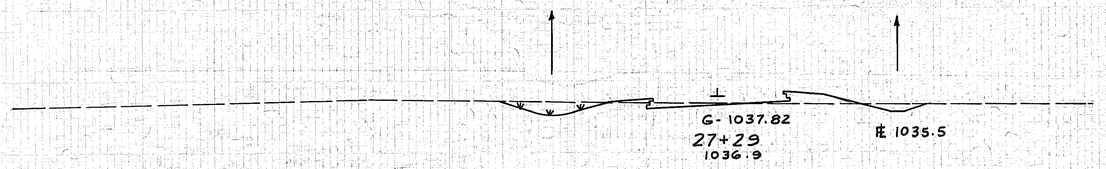
SETTING

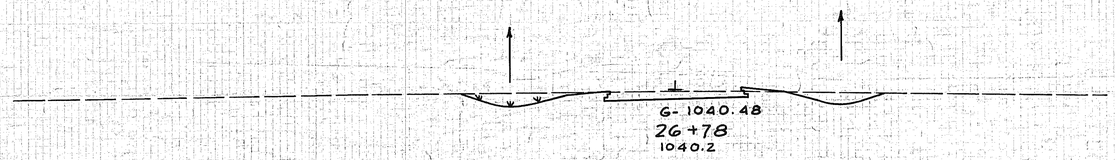
LEAD RIGHT	LEAD YOS

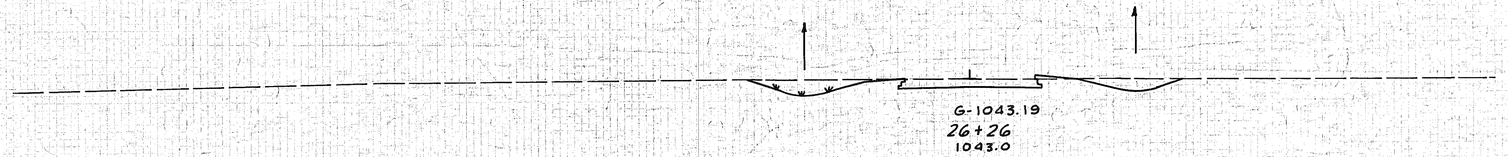
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

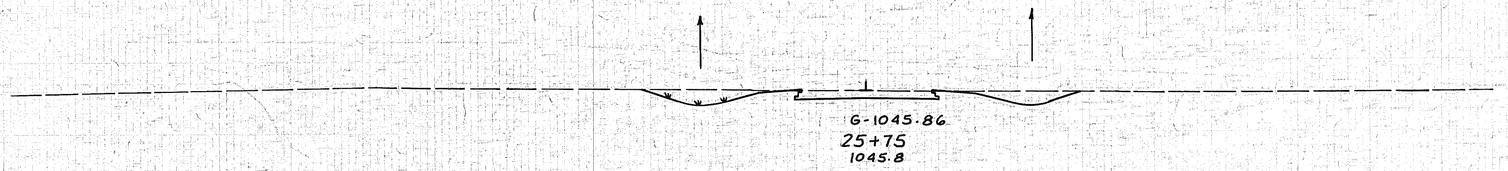
230
401

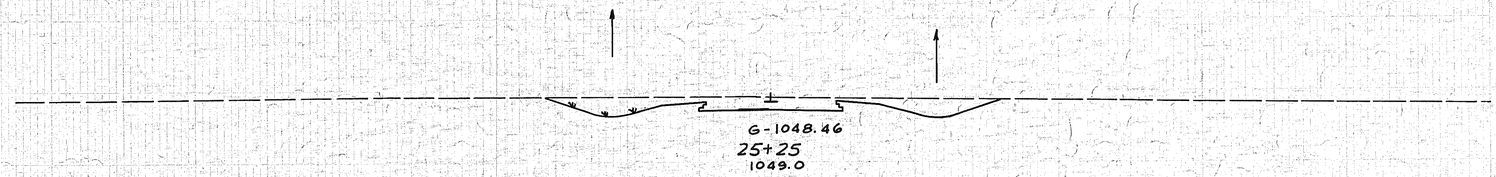
TRU-I-80-8.90
TRUMBULL COUNTY











	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

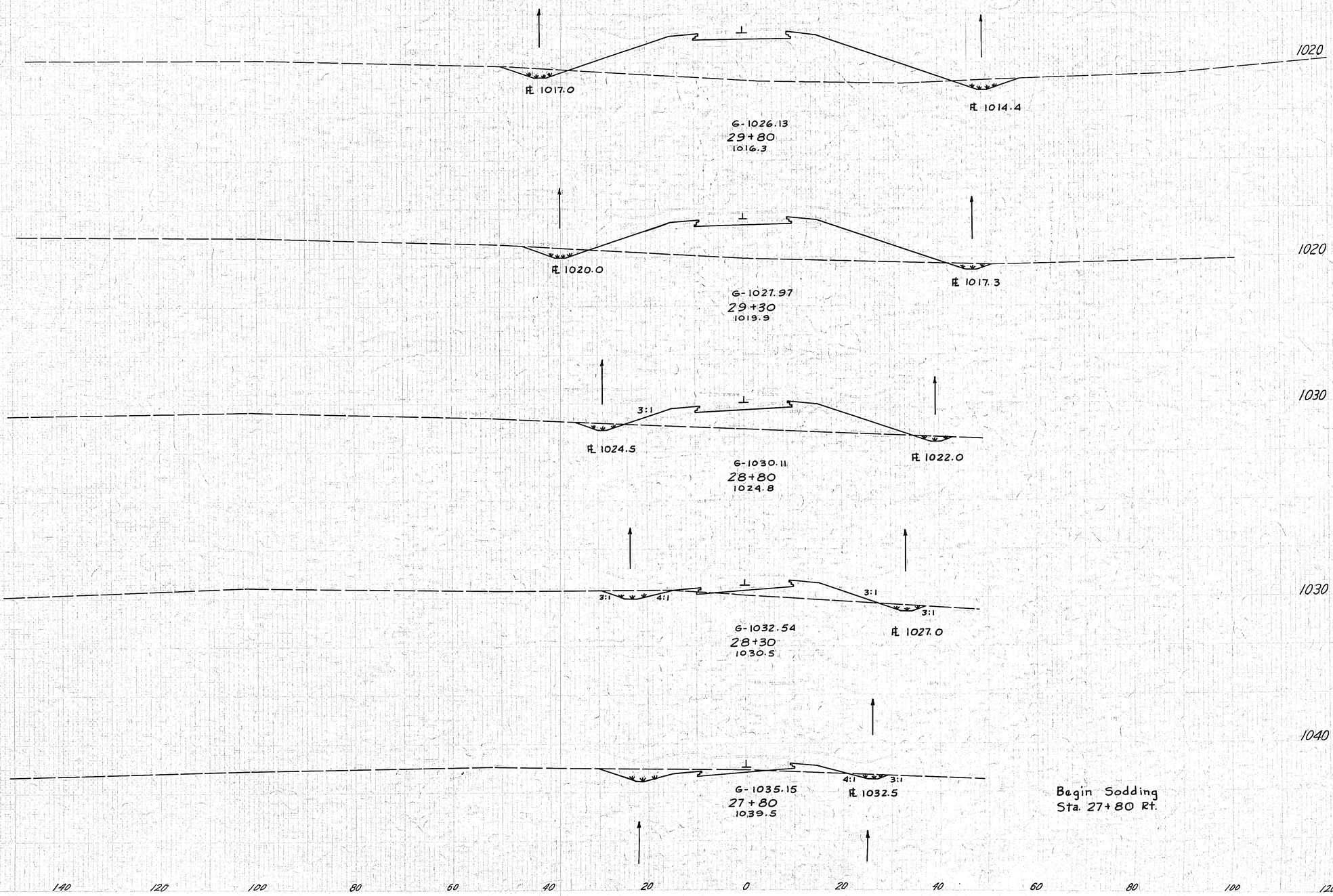
EOX NORTH ROAD RELOC
Sta 25+23 to Sta 27+29

SECTIONS	
CUT	FILL

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

SHEET NO.	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	231 401

TRU-I-80-8.90
TRUMBULL COUNTY



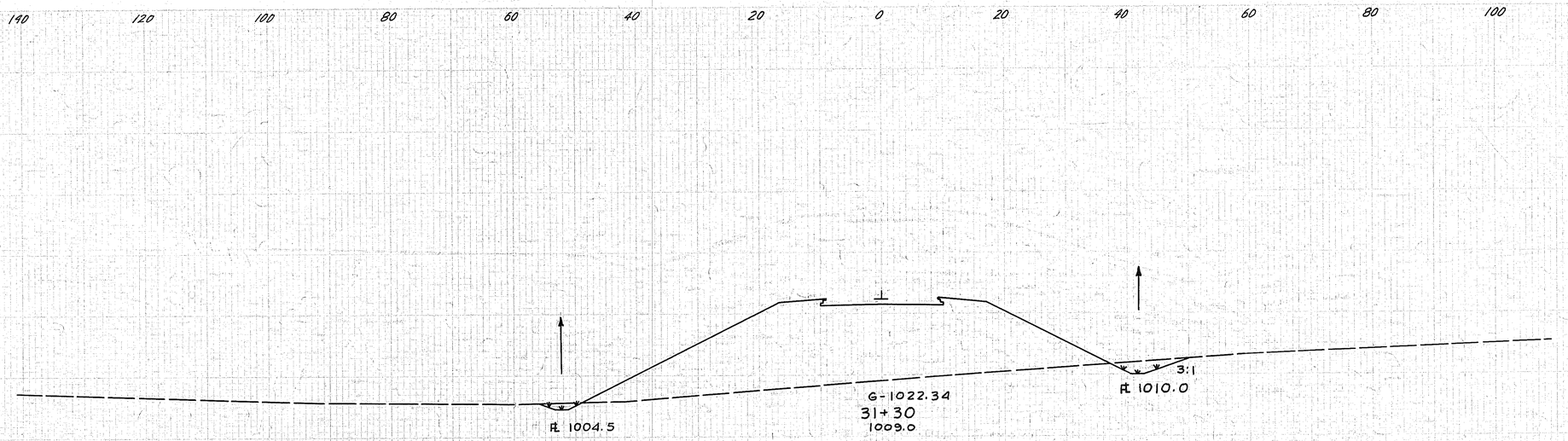
END AREA		VOLUME	
CUT	FILL	CUT	FILL
37	400	59	652
27	304	40	476
16	210	41	267
~~23~~ 28	~~78~~ 78	~~74~~ 74	~~87~~ 87
52	16	82	29

FOX NORTH ROAD RELOC

SHEET NO.	STATE	PROJECT	
2	OHIO	HG-80-5(9)245	

232
401

TRU-I-80-8.90
TRUMBULL COUNTY



STATION		ROAD AREA		VOLUME	
		CUT	FILL	CUT	FILL
120	140				
1010		23	772	52	1381
1010		33	720	60	1161
1020		32	534	64	865

FOX NORTH ROAD RELOC. Sta. 30+30 to Sta. 31+30

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

I-IG-80-5(6)245

233
401

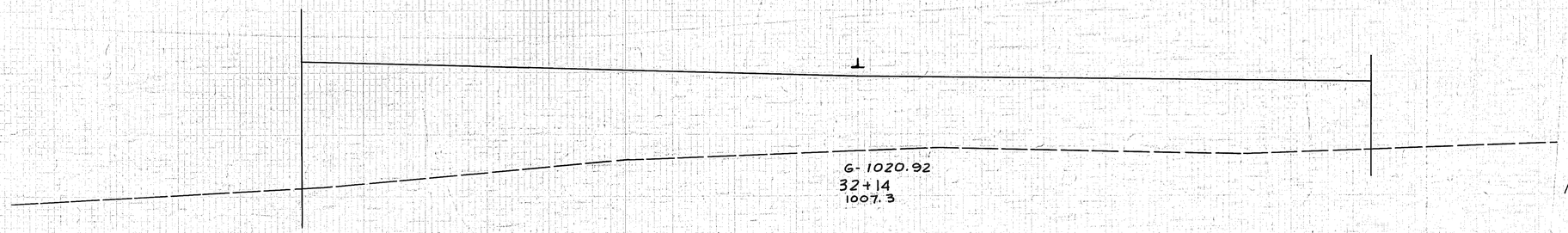
TRU-I-80-890
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

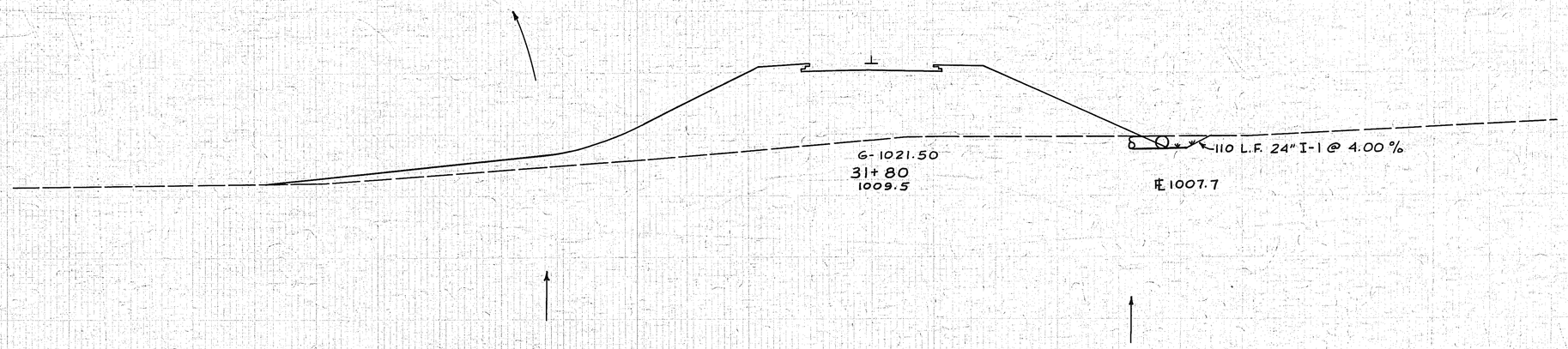
Earth Work Note:
Use Full Area

Sta. 32+23 Constr. & Reloc. Fox North Rd. =
Sta. 18+25 Constr. & Reloc. Price Shaffer Rd.

Edge of Road



0 2447 10 2095



16 880 36 1530

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

TRUMBULL COUNTY TRU-I-80-8.90

Sta. 10+75 ℄ Reloc. PRICE-SHAFFER RD.=
Sta. 0+87.38 ℄ Reloc. STATE LINE RD.

FOR ADDITIONAL GUARD RAIL QUANTITIES SEE SHEET 215

FOR DETAILS ON STRUCTURE SEE SHEETS 367-372

TYPICAL SECTION
Existing PRICE-SHAFFER RD.

Const. ℄ Reloc. PRICE-SHAFFER RD.
S 78°25'54" E

Const. ℄ Reloc. STATE LINE RD.

P.I. STA. 10+25.47
△ 39°00'00" RT.
D 19°05'55"
T 106.24'
L 204.20'
R 300.00'
E 18.26'

STA. 5+20.49 TO STA. 5+70

TRANSITION PAVEMENT AND SHOULDER FROM EXISTING WIDTHS AT STA. 5+20.49 TO 6' SHOULDER AND 18' PAVEMENT WIDTHS AT STA. 5+70.

FOR CULVERT DETAILS SEE SHEET 302

FOR PROPOSED STRUCTURE DATA SEE SHEET 47

℄ I-80

N 50°34'06" E
Sta. 14+15.03 ℄ Reloc. PRICE-SHAFFER RD.=
Sta. 632+75.00 ℄ I-80

S 39°25'54" E

End Approach Slab Sta. 12+74.28

Begin Approach Slab Sta. 15+55.78

L.A. R/W Line

Brush Area

Cultivated

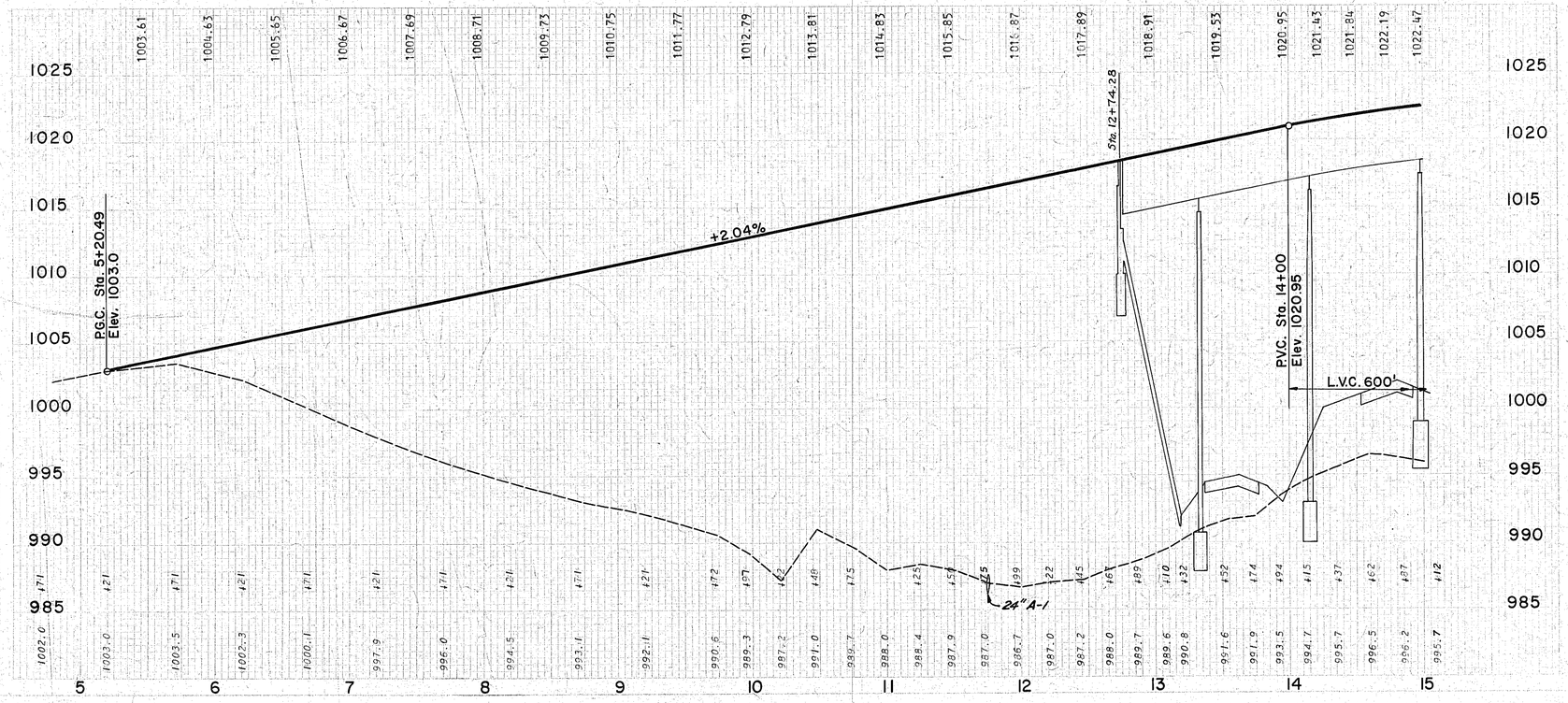
Stream

I-10	L-10	Sodding	SQ. YD	3	258 60
I-15		Guard Rail	L.F.		525.0 262.5 112.5
L-10		Sodding For Spec. Berm/Slope Protection		29 29	
I-9	Stone	U-Drain	L.F.	224	224
I-7		Reinforced Concrete Approach Slab	SQ. YD.		75.0

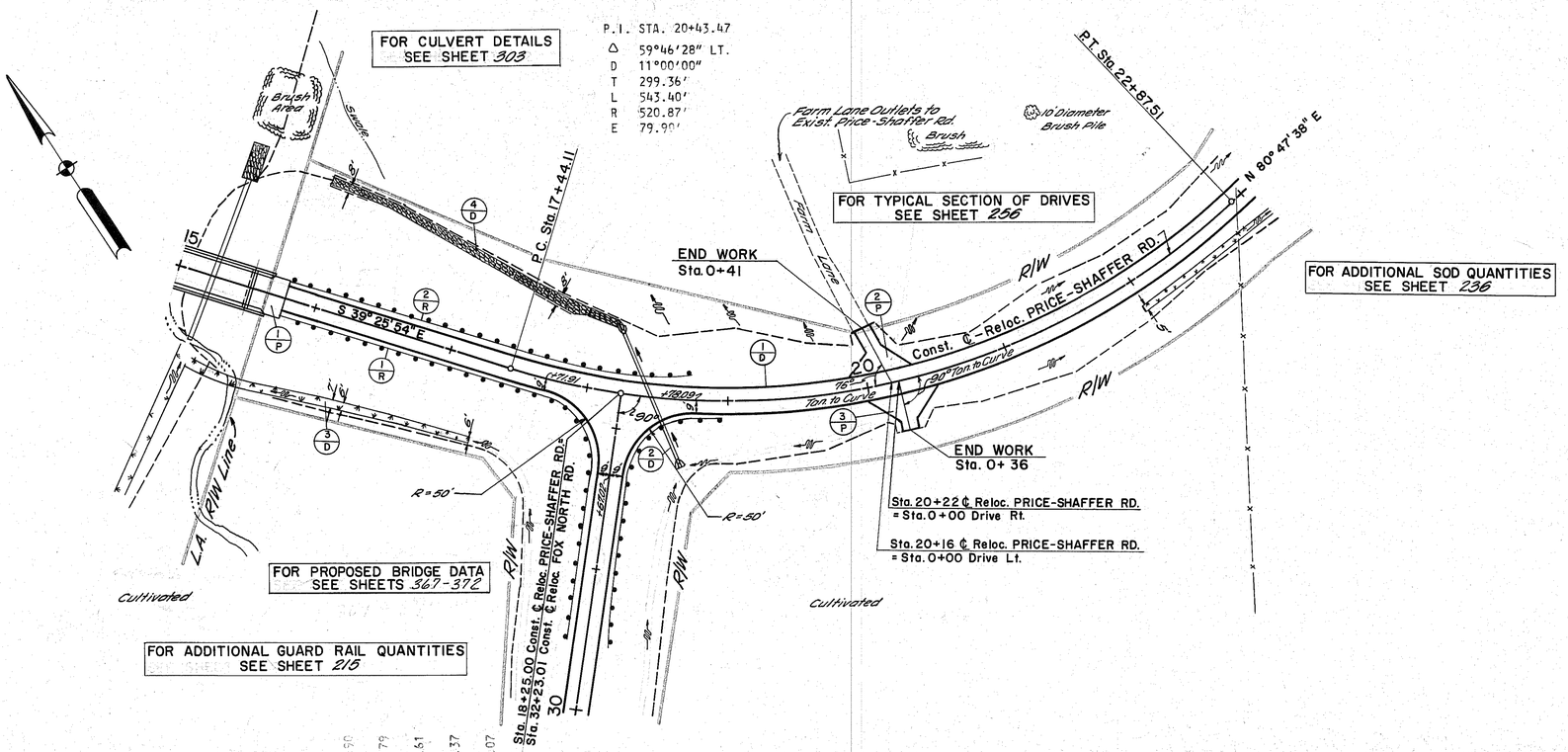
					321
					900
					58
					224
					75.0

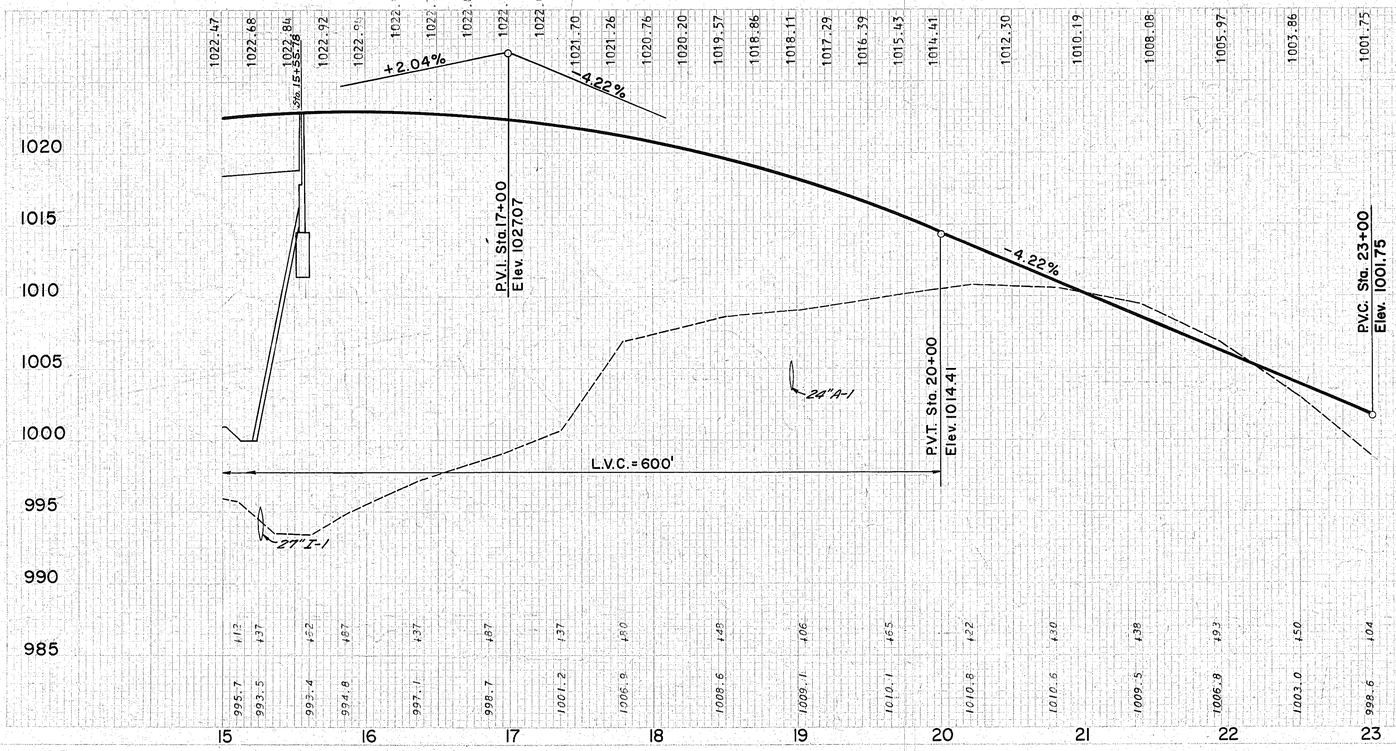
ESTIMATED QUANTITIES

E-3	Channel Exc.	CU. YD.		31	31
I-1	Cl. A-1 Sec. M-6.4(d) 24"	L.F.		158	158
I-2	Masonry	CU. YD.		.72	.7
1-0	6+50 to 12+25	Rt & Lt			
2-0	11+75	Lt			
3-0	12+55	Rt			
4-0	12+55	Rt			
5-0	7+21 to 11+75	Rt			
6-0	12+65 to 11+75	Rt			
1-2	7+30 to 12+55	Rt			
2-2	7+375 to 10+00	Lt			
3-2	11+425 to 12+55	Lt			
1-2	12+48 to 12+73	℄			



Reloc. PRICE-SHAFFER RD. Sta. 5+20.49 to Sta. 15+00





FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	235/401

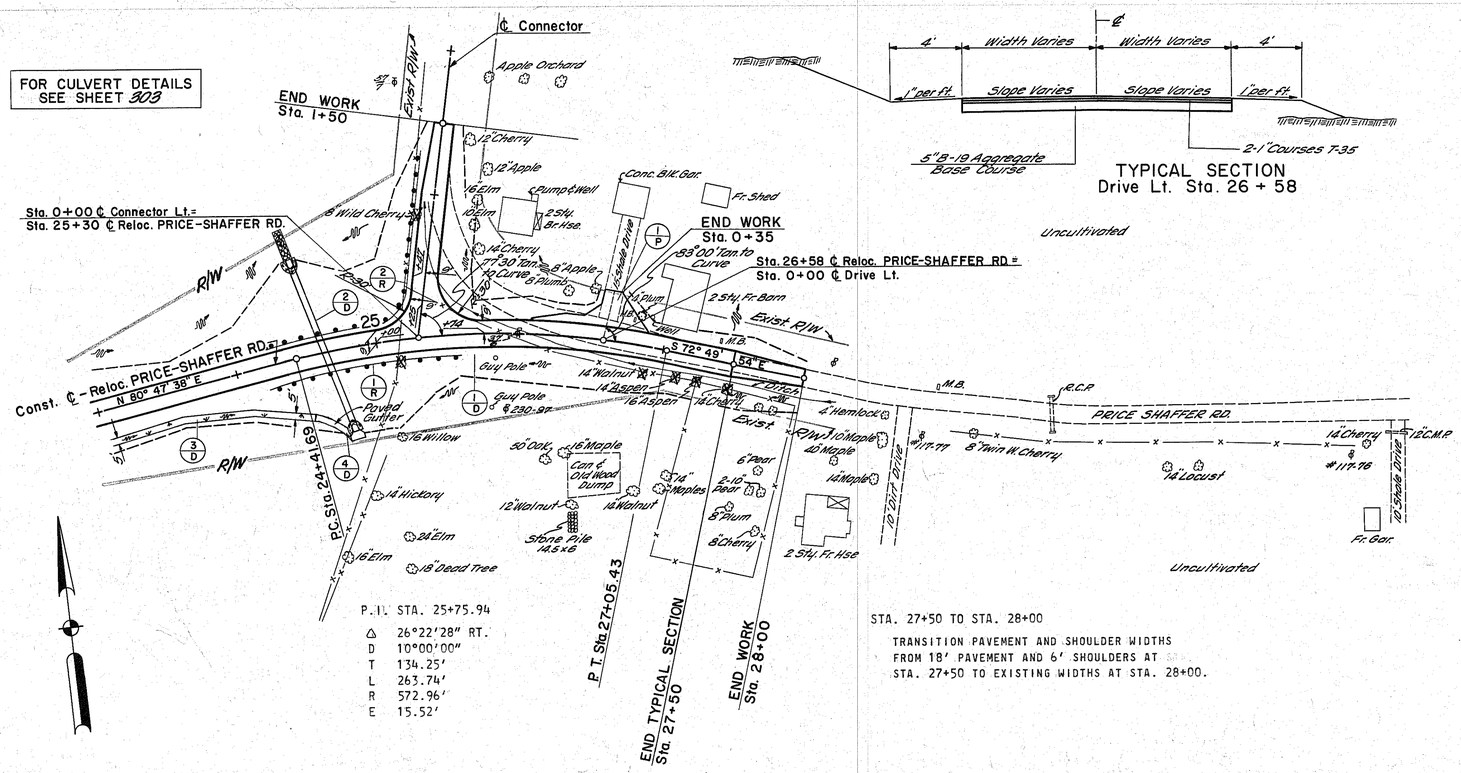
TRUMBULL COUNTY TRU-I-80-8.90

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	B-19 Aggr. Base Crse. 6" Depth CU. YD.	I-1 CL. A-1 M-6.6(b) or M-6.8(b) 24" L.F.	I-2 Masonry CU. YD.	I-7 Reinforced Concrete Approach Slab SQ. YD.	I-9 Stone U-Drain L.F.	I-10 Dumped Rock Channel Protection CU. YD.	I-15 Guard Rail L.F.	L-10 Sodding SQ. YD.	SEE SHEET NO.
1-D	16+00 to 23+00	Rt.&Lt.					284				
2-D	18+46	℄		110	.82			13.9		5	
3-D	15+37 to 17+37	Rt.								144	
4-D	15+87 to 17+80	Lt.						143.0			
5-D	21+93 to 23+00	Rt.								60	
1-R	15+68 to 17+55.5	Rt.							187.5		
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	284	157	487.5	209	

Reloc. PRICE-SHAFFER RD. Sta. 15+00 to 23+00

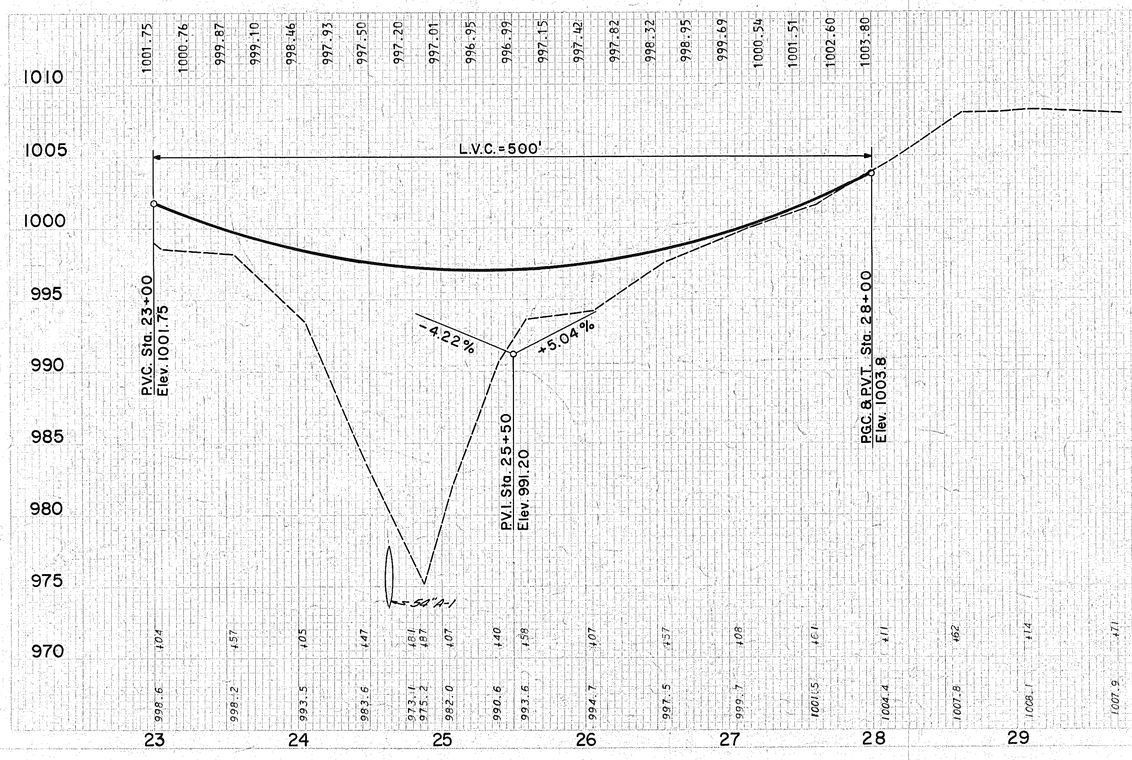
FOR CULVERT DETAILS SEE SHEET 303

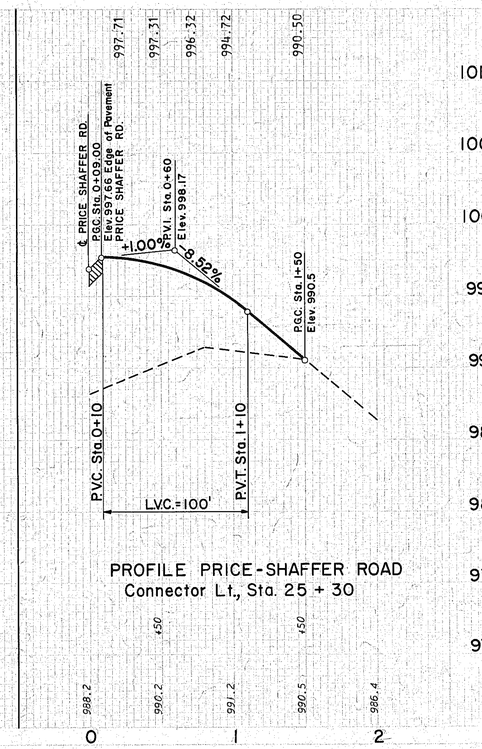


TYPICAL SECTION
Drive Lt. Sta. 26 + 58

P.I. STA. 25+75.94
Δ 26°22'28" RT.
D 10°00'00"
T 134.25'
L 263.74'
R 572.96'
E 15.52'

STA. 27+50 TO STA. 28+00
TRANSITION PAVEMENT AND SHOULDER WIDTHS FROM 18' PAVEMENT AND 6' SHOULDERS AT STA. 27+50 TO EXISTING WIDTHS AT STA. 28+00.





PROFILE PRICE-SHAFFER ROAD
Connector Lt., Sta. 25 + 30

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	B-19 Aggr. Base Course CU. YD.	# 8 gage I-1 CL. A-I M6.4(d) #54" L.F.	I-2 Masonry CU. YD.		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.	I-14 Paved Gutter Type-I L.F.		I-15 Guard Rail L.F.		L-10 Sodding SQ. YD.	T-35 Asphaltic Concrete Surface Course CU. YD.	SEE SHEET NO.
1-D	23+25 to 27+50						228							7.0		
2-D	24+63	¢		128	1.92			5	11.1					82.0		
3-D	23+00 to 24+47	Rt.								33						
4-D	24+47 to 24+80	Rt.														
1-R	24+25 to 25+50	Rt.										125.0				
2-R	24+25 to 1+25															
	Price Shaffer Conn.	Lt.										212.5				
1-P	26+58	Lt.	17.2												7	
TOTALS			17	128	1.9		228	5	11	33		337.5		89.0	7	

Reloc. PRICE-SHAFFER RD. Sta. 23+00 to Sta. 28+00

SEEDING	
ENG. WIDTH	SQ. YDS.

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

237
401

TRU-I-80-890
TRUMBULL COUNTY

Begin Sodding
Sta. 7+21 Rt.

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
10	446	17	641	
8	246	26	307	
20	86	0	0	

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

E.R. E.R. ℄ 1001.0
G-1007.10
7+21
997.9

1000

E.R. E.R. ℄ 1002.5
G-1006.08
6+71
1000.1

1000

E.R. E.R. 3:1 ℄ 1003.0
G-1005.06
6+21
1002.3

1000

E.R. E.R.
G-1004.04
5+71
1003.5

1000

1010

E.R. E.R.
G-1003.02
5+21
1003.0

1010

E.R. E.R.
4+71
1000.0

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

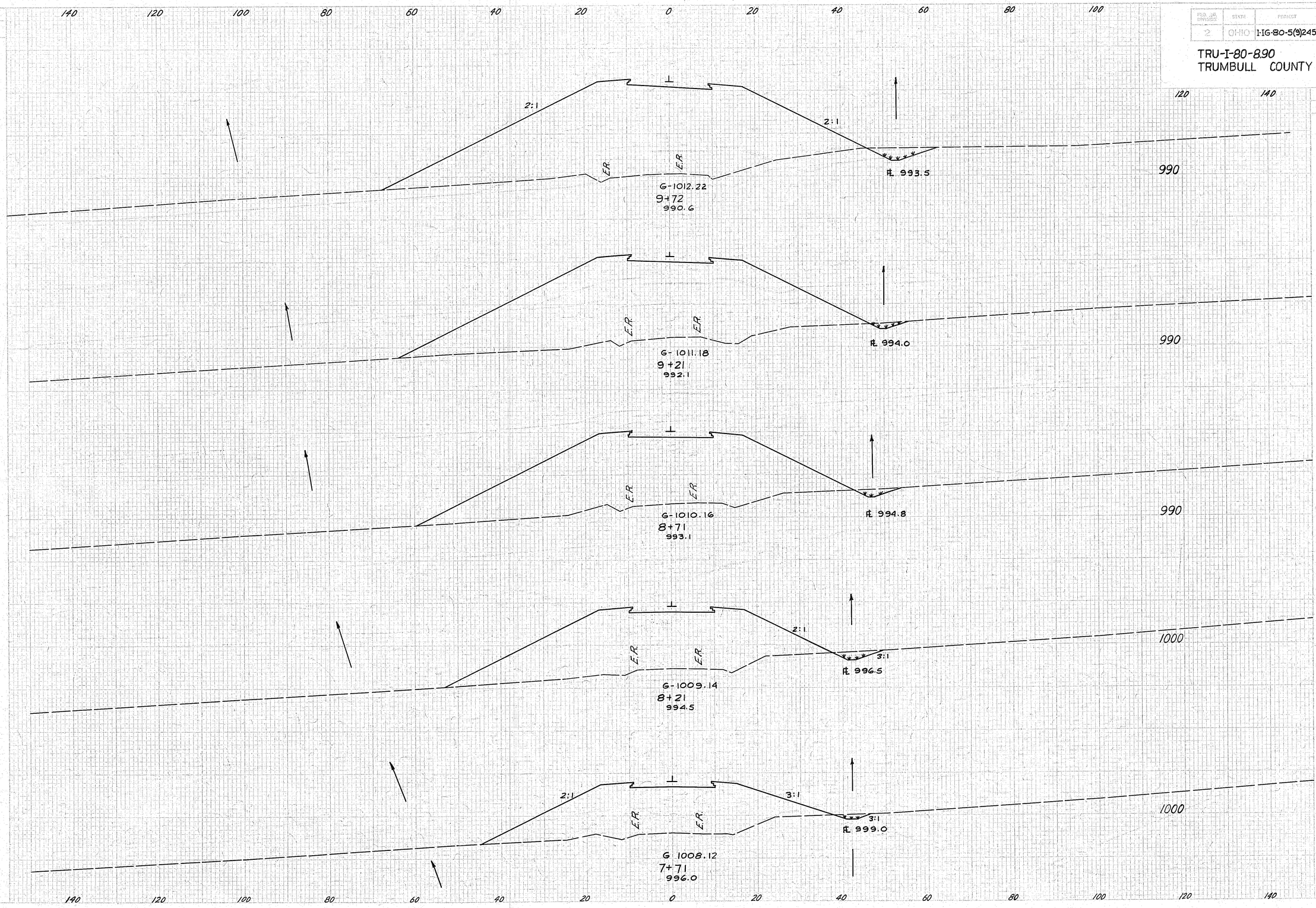
RELOC. PRICE-SHAFFER RD. Sta 4+71 to Sta 7+21

SECTION	
END AREA	VOLUME

FED. AID DIVISION	STATE	PROJECT	
2	OHIO	HG-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. NO. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

239
401

TRU-I-80-8.90
TRUMBULL COUNTY

PLEDGING

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

2:1

℄ 991.6

990

G-1014.83
11+00
988.0

E.R. E.R.

17 1168 16 1022

2:1

3:1

℄ 991.8

990

G-1014.32
10+75
989.7

E.R. E.R.

17 1040 19 1034

STATE LINE ROAD

℄ 992.0

990

G-1013.77
10+48
991.0

E.R. E.R.

21 1028 20 942

℄ 992.5

990

G-1013.24
10+22
986.9

E.R. E.R.

20 928 33 815

2:1

2:1

℄ 993.0

990

Ahd. Use Area Rt. of Cut-Off Line Bk. Use Full Area Sta. 9+97

G-1012.73
9+97
989.3

E.R. E.R.

Ahead 51 833 Back 1636 39 1470

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

RELOC PRICE SHAFFER RD Sta 9+97 to Sta 11+00

SEEDING

SEE PAPER	SEE PLANS

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

240
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	2668	5	2352
12	2624	9	2339
Ahead 2428 Back 1300		8	6 1168
5	1224	10	1107

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

2:1 2:1

E.R. E.R.

990

℄ 989.2

G-1016.85
11+99
986.7

158 L.F. 24" A-1 @ 4.94%

E.R. E.R.

℄ 981.0
Type "E" Endwall

G-1016.36
11+75
987.0

2:1

990

Type "E" Endwall
℄ 988.8

Ahead Use Full Area Sta. 11+50
Back Use Area Rt. of Earthwork
Cut Off Line

2:1

E.R. E.R.

℄ 982.4

990

℄ 990.5

G-1015.85
11+50
987.9

2:1

E.R. E.R.

℄ 982.6

990

℄ 991.4

G-1015.34
11+25
988.4

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

RELOC. PRICE-SHAFFER RD.

SETTING	
END DITCH	CL. VGS.

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

241
401

TRU-I-80-8.90
TRUMBULL COUNTY

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

STRUCTURE

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	1614	0	1671
0	2488	3	2132
8	2744	7	2304
8	2666	3	2272

Rt. Roadway Ditch
Lt. I-80

990

12+89
988.7

2:1

2:1

2:1

E Ditch

990

℄ 990.2

G-1018.24
12+67
988.0

E.R. E.R. Ditch

990

℄ 989.8

G-1017.79
12+45
987.2

2:1

2:1

2:1

E.R. E.R.

990

℄ 989.5

G-1017.32
12+22
987.0

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

RELOC PRICE SHAFFER RD. Sta. 12+22 to 12+89

SEEDING	
SQ. YARDS	SQ. YDS.

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

242
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

STRUCTURE

G-1020.42
13+74
991.9

990

G-1020.01
13+54
991.6

990

G-1019.56
13+32
990.8

990

0 0 0 190

STRUCTURE

G-1019.11
13+10
989.6

990

0 466 0 809

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

RELOC PRICE SHAFFER RD Sta 13+10 to Sta 13+74

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

243
401

TRU-I-80-890
TRUMBULL COUNTY

SOUNDING	
END AREA	VOL.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

STRUCTURE

G-1022.01
14+62
996.5

990

G-1021.63
14+37
995.7

990

G-1021.24
14+15
994.7

990

STRUCTURE

G-1020.82
13+94
993.5

990

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

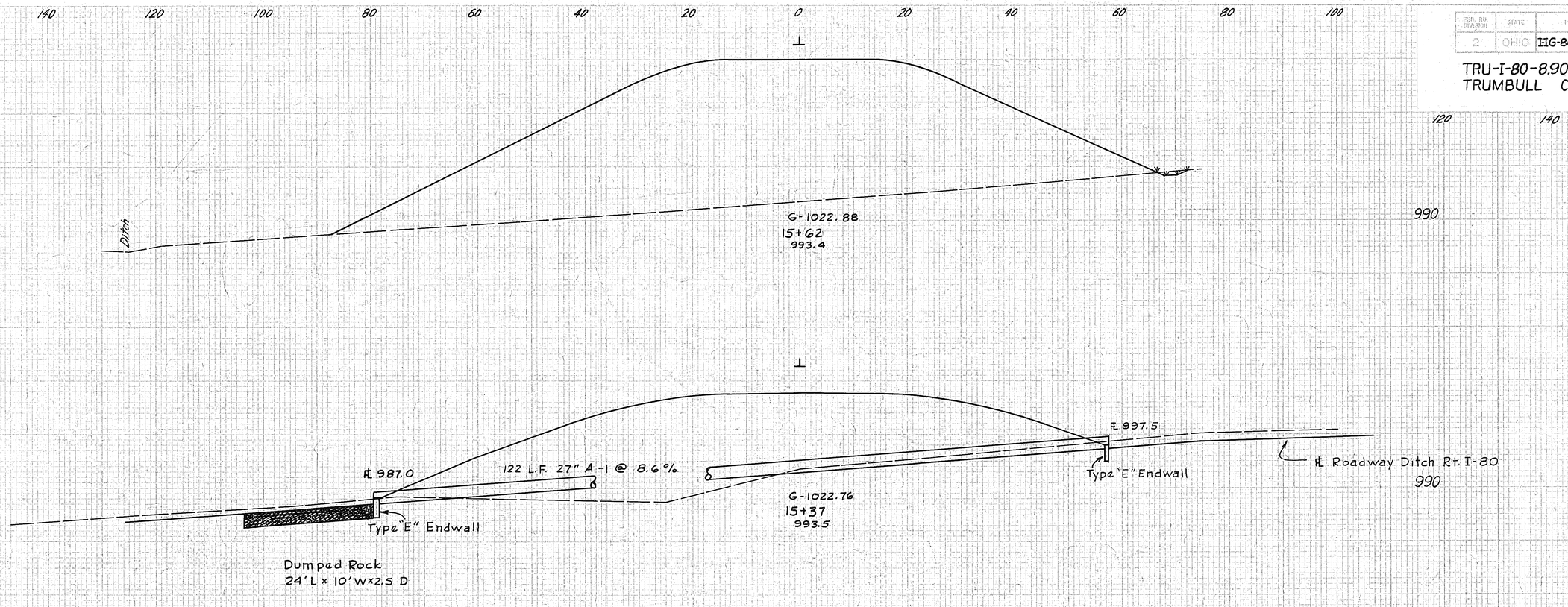
RELOC. PRICE-SHAFFER RD. Sta 13+94 to Sta 14+62

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 SHAEFER RD.

Sta 14+87 to Sta 15+62

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

245
401

TRU-I-80-8.90
TRUMBULL COUNTY

Earthwork Note
Sta. 17+37 Bk. Use Full Area
Ahd. Use Area Left of
Earthwork Cut-Off Line

From Fox-North Rd Reloc.
Lt. Sta. 31+50 ±

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
21	Ahead 550 Back 1454		36	2037
18	1650	38	3557	
23	2192	37	4356	
17	252	8	2371	

2:1
℄ 999.4
G- 1021.90
17+37
1001.2
2:1
℄ 1001.5
1000

2:1
℄ 994.5
G- 1022.50
16+87
998.7
℄ 1001.0
1000

2:1
℄ 990.0
G- 1022.85
16+37
997.1
℄ 1000.5
1000

2:1
Begin Dumped Rock
Sta. 15+87 Lt.
Ditch
℄ 986.0
G- 1022.94
15+87
994.8
2:1
℄ 998.5
990
Begin Sodding
Sta. 15+37

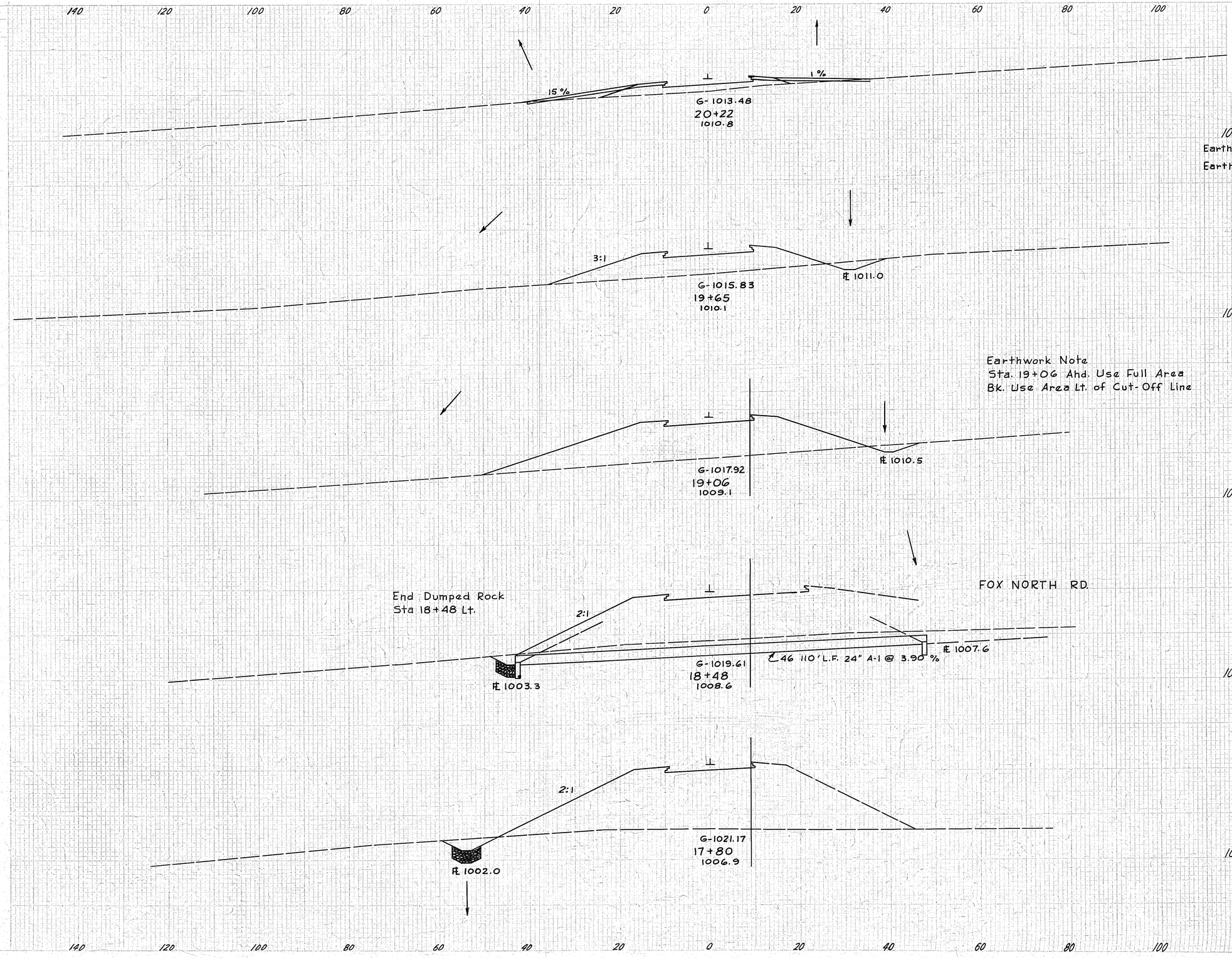
140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

RELOC. PRICE-SHAEFER RD. — Sta. 15+87 to Sta. 17+37

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

246
401

TRU-I-80-8.90
TRUMBULL COUNTY

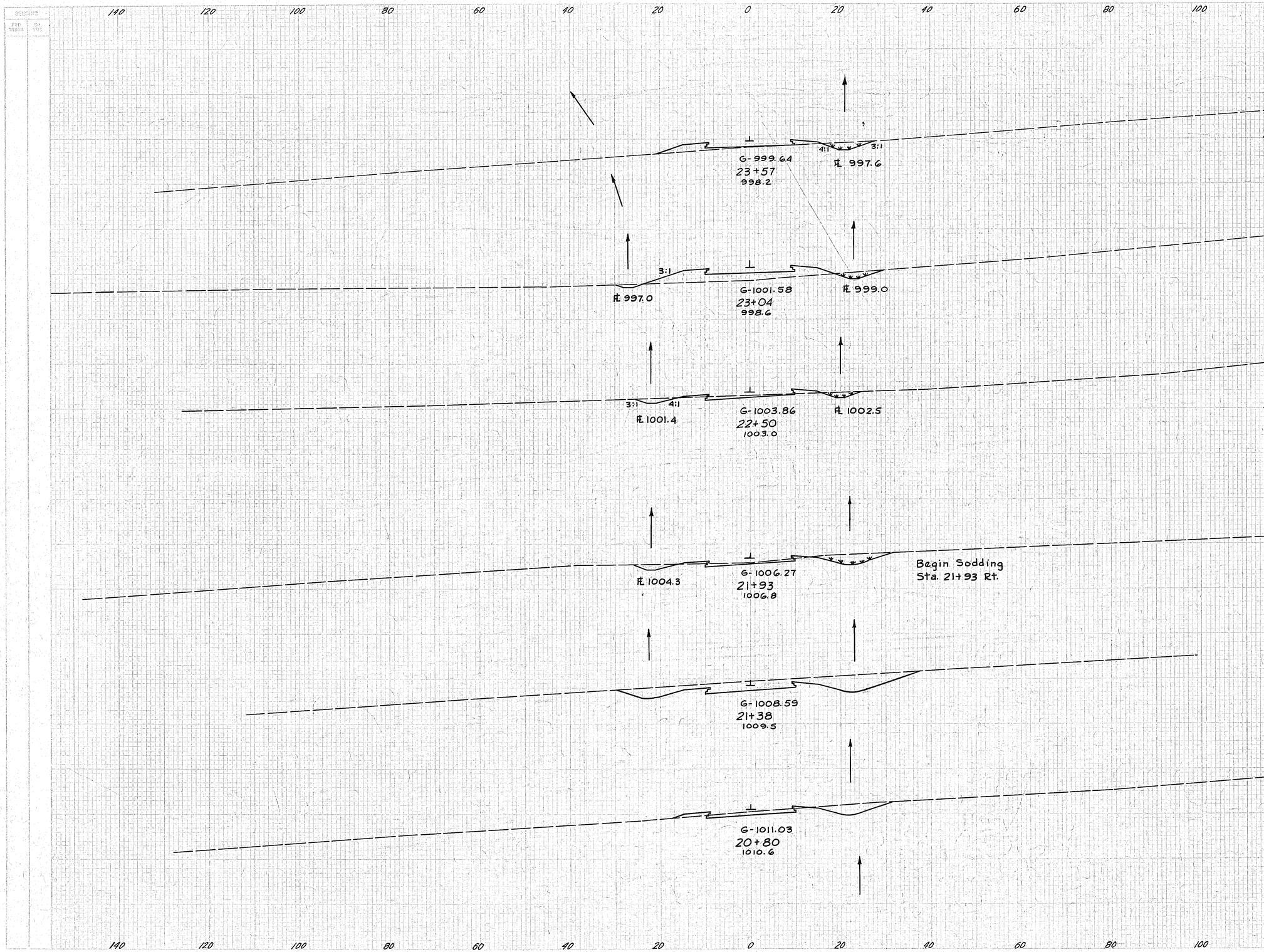


	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	14	70	48	317
Earthwork for Driveway Sta. 20+16 Lt.			1	4
Earthwork for Driveway Sta 20+22 Rt.			1	3
	32	230	42	630
	Ahead 484 Back 347		18	939
	11	390	44	1174
	24	542	36	1589

FED. ROAD DIV. NO.	STATE	PROJECT	
2	OHIO	HG-80-5(9)245	

247
401

TRU-I-80-890
TRUMBULL COUNTY



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1000	14	26	29	106
1000	16	82	43	90
1000	27	8	78	12
1000	50	4	190	4
1000	130	0	182	8
1000	40	7	58	83

REIOC PRICE SHAFFER RD — Sta 20+80 to Sta 23+57

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

248
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	200	4	441
7	721	2	694
0	1154	12	1584
17	984	25	908
15	184	26	187

PRICE SHAFFER CONNECTOR

G-996.95
25+40
990.6

2:1

980

Str.

G-996.98
25+07
982.0

2:1

℄ 976.0

980

Str.

End Paved Gutter
Sta. 24+87

2:1

2:1

128 L.F. 54" A-1 @ 3.12%

℄ 975.2

980

Str.

G-997.10
24+87
975.2

Type "E" Endwall

24+81
Profile Stream
973.1

970

Begin Paved Gutter
Sta. 24+47 Rt.

3:1

2:1

G-997.54
24+47
983.6

℄ 987.7

End Sodding
Sta. 24+47 Rt.

980

℄ 971.2

Str.

128 L.F. 54" A-1 @ 3.12%

Type "E" Endwall

Dumped Rock
20'L x 6'W x 2.5' D

3:1

3:1

G-998.34
24+05
993.5

℄ 993.5

990

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

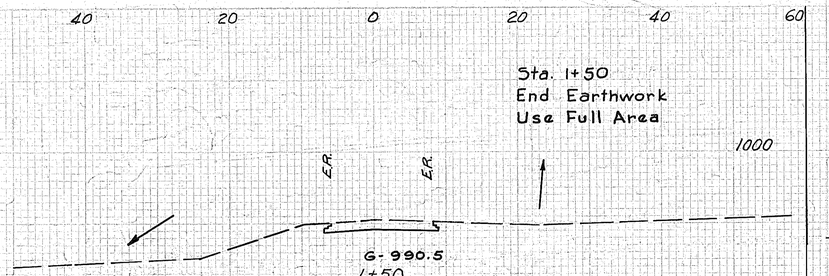
RELOC. PRICE SHAFFER RD. Sta 24+05 to Sta 25+40

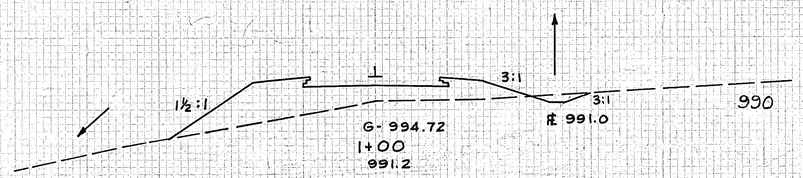
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

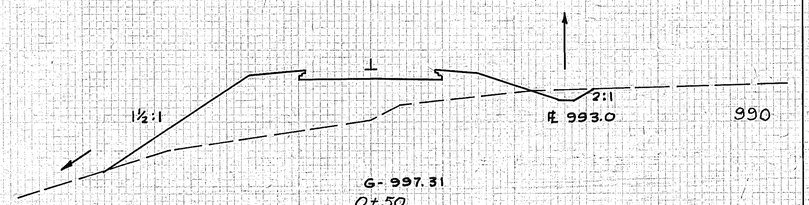
249
401

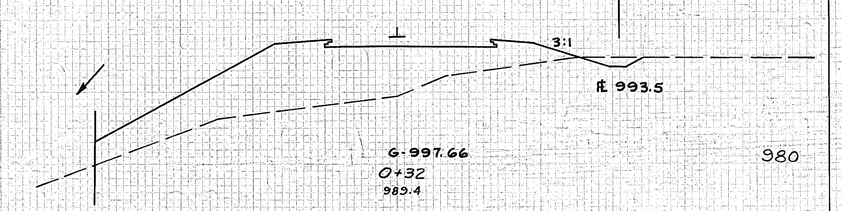
TRU-I-80-890
TRUMBULL COUNTY

Sta. 1+50
End Earthwork
Use Full Area





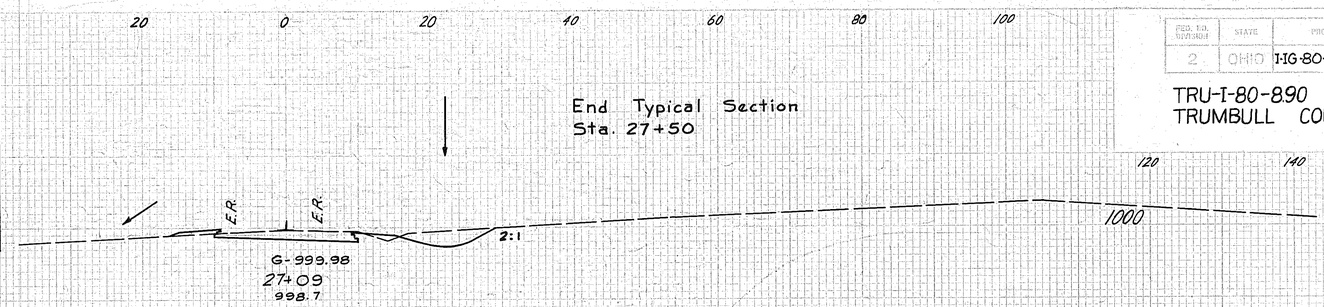


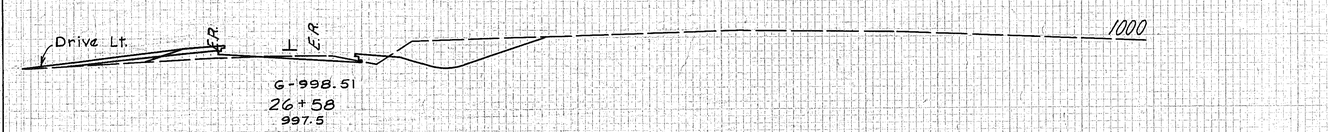


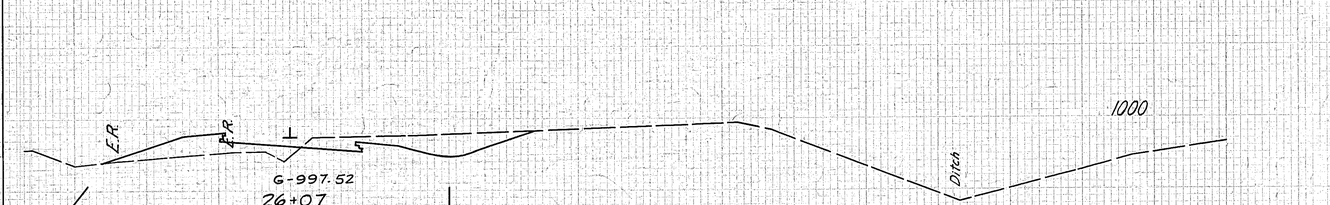
Cross Sections for
Price - Shaffer Road Connector
Lt. Sta. 25+30

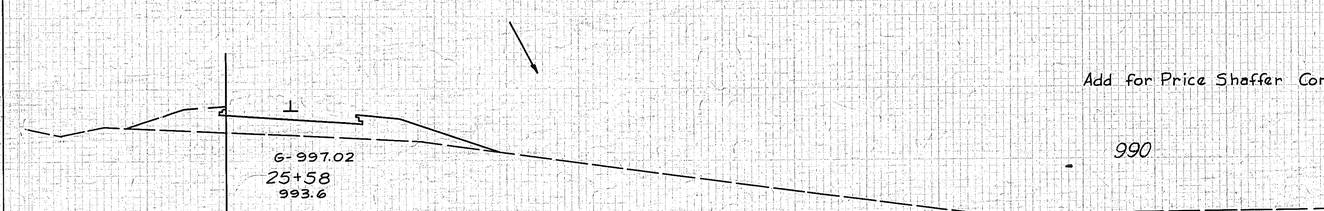
Sta. 0+09
Begin Earthwork
Area. = 0

End Typical Section
Sta. 27+50









Add for Price Shaffer Connector

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	51	6	111	27
	67	23	122	61
	62	42	56	112
	52	897		
	0	82	0	94

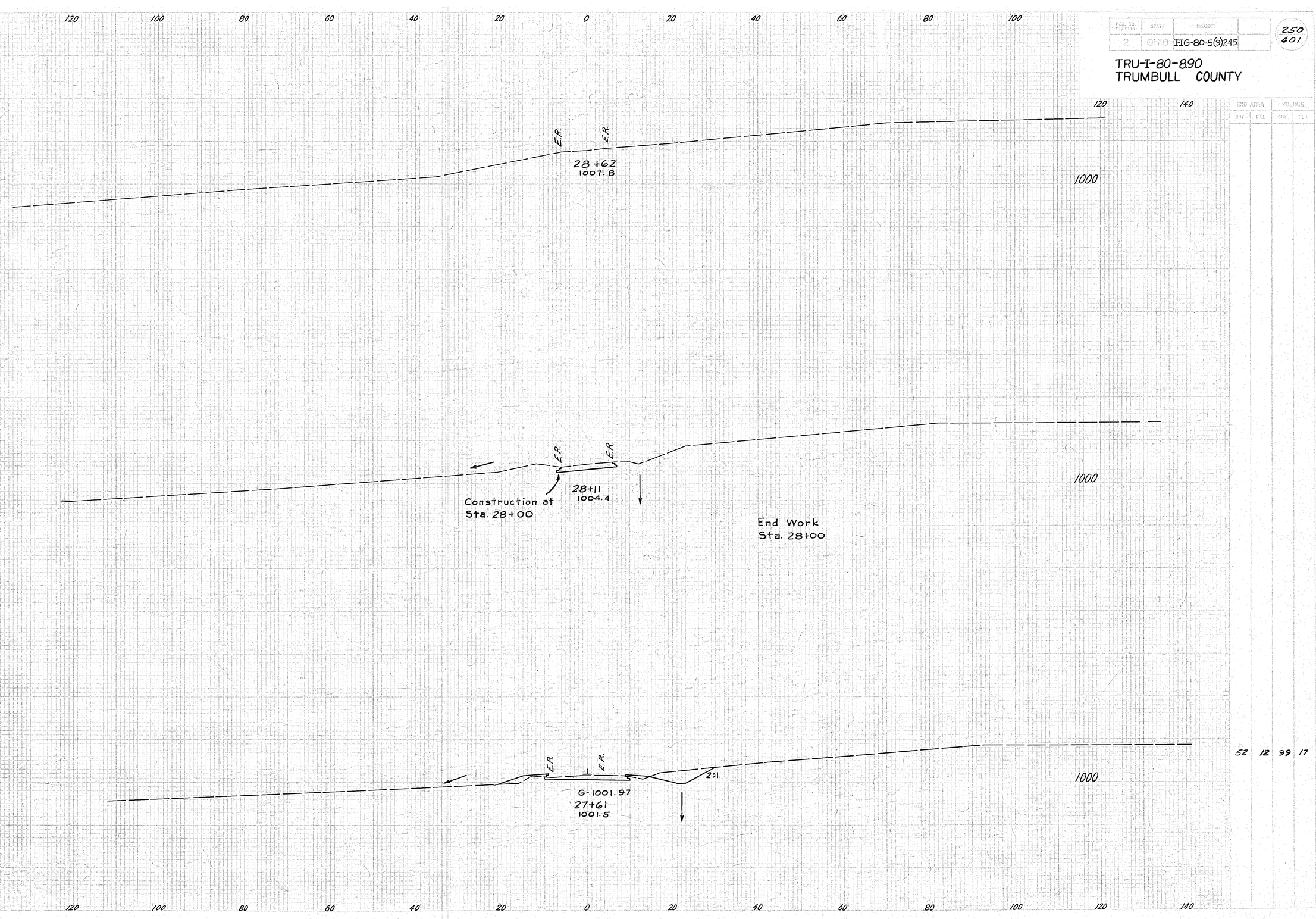
RELOC. PRICE SHAFFER RD. Sta 25+58 to Sta 27+09

FED. ROAD DESIGNATION	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

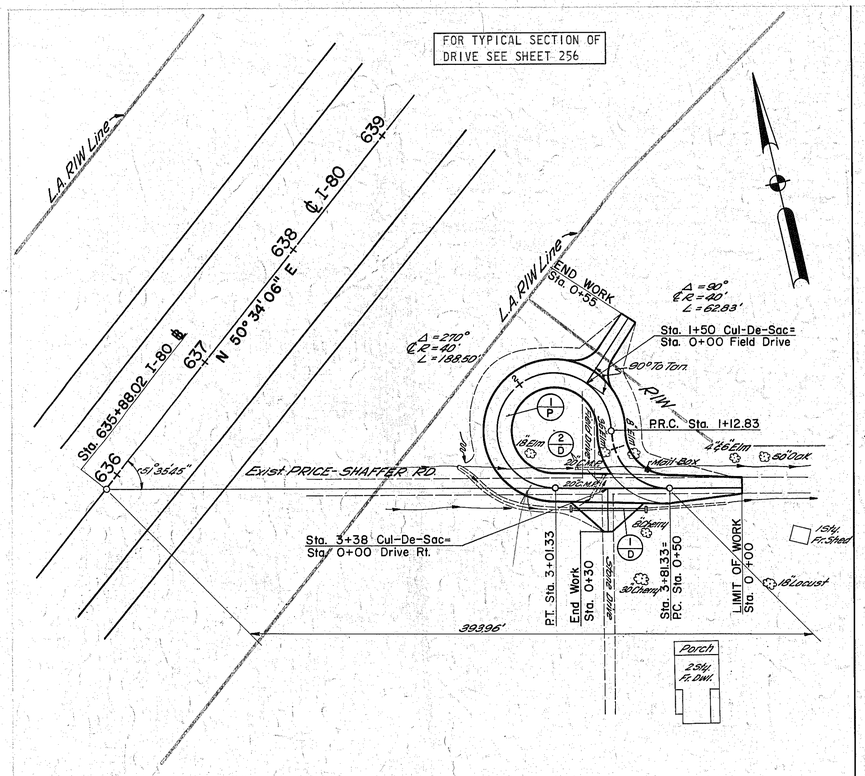


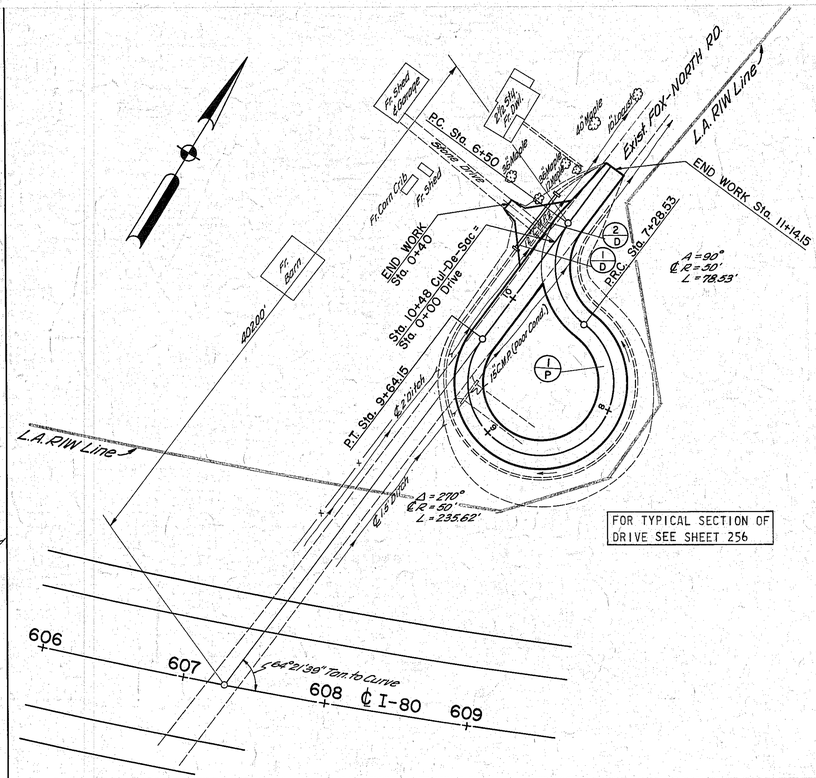
52 12 99 17

RELOC. PRICE SHAEFFER RD. Sta 27+61 to Sta 28+62

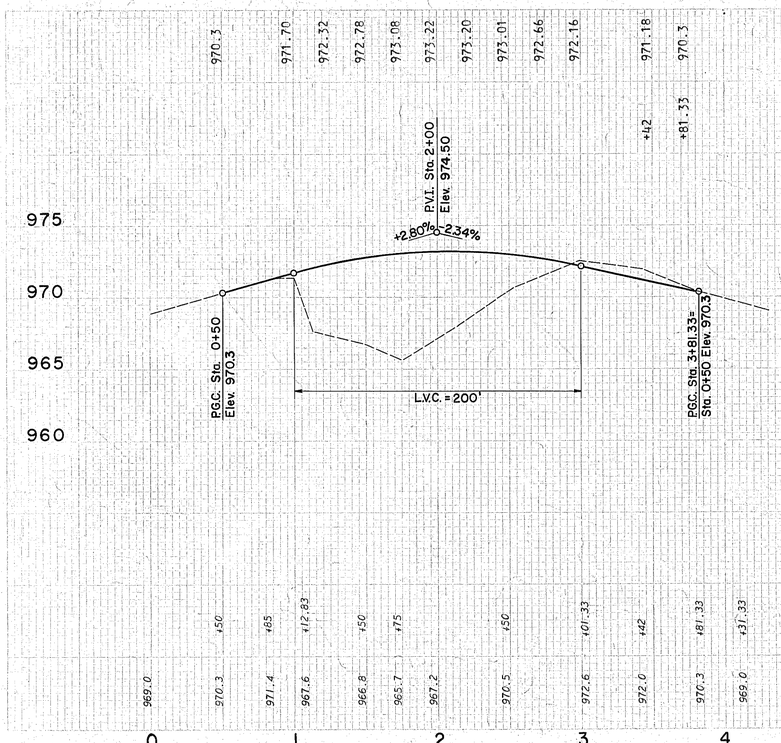
FED. AID DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	251 / 401

TRUMBULL COUNTY TRU-I-80-8.90

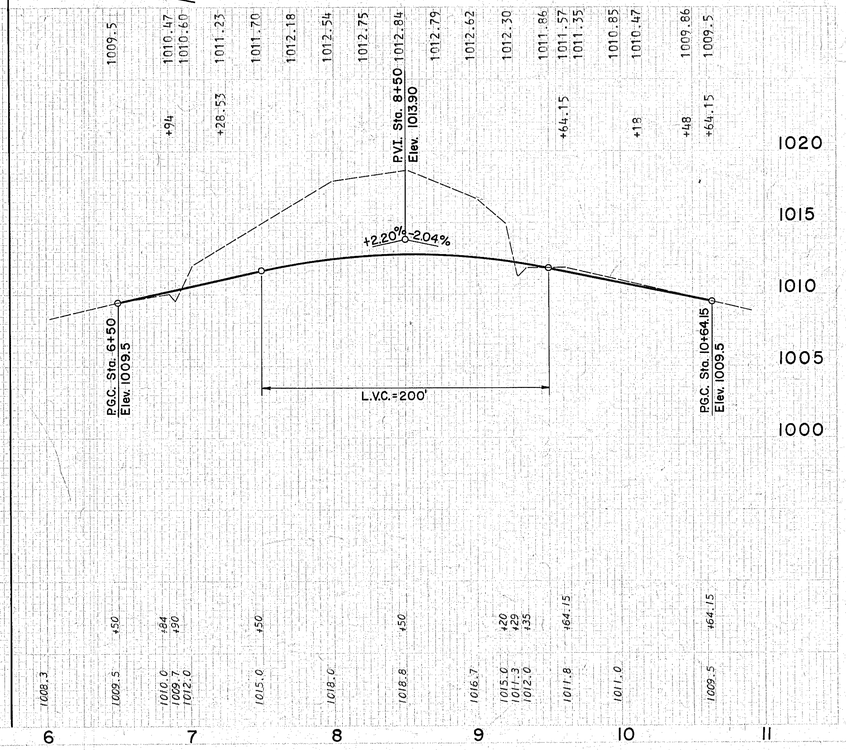




FOR TYPICAL SECTION OF DRIVE SEE SHEET 256



PRICE-SHAFFER ROAD Cul-De-Sac Sta. 0+00 To 4+31.33



FOX-NORTH ROAD Cul-De-Sac Sta. 6+50 To 11+14.15

ESTIMATED QUANTITIES

CUL-DE-SACS

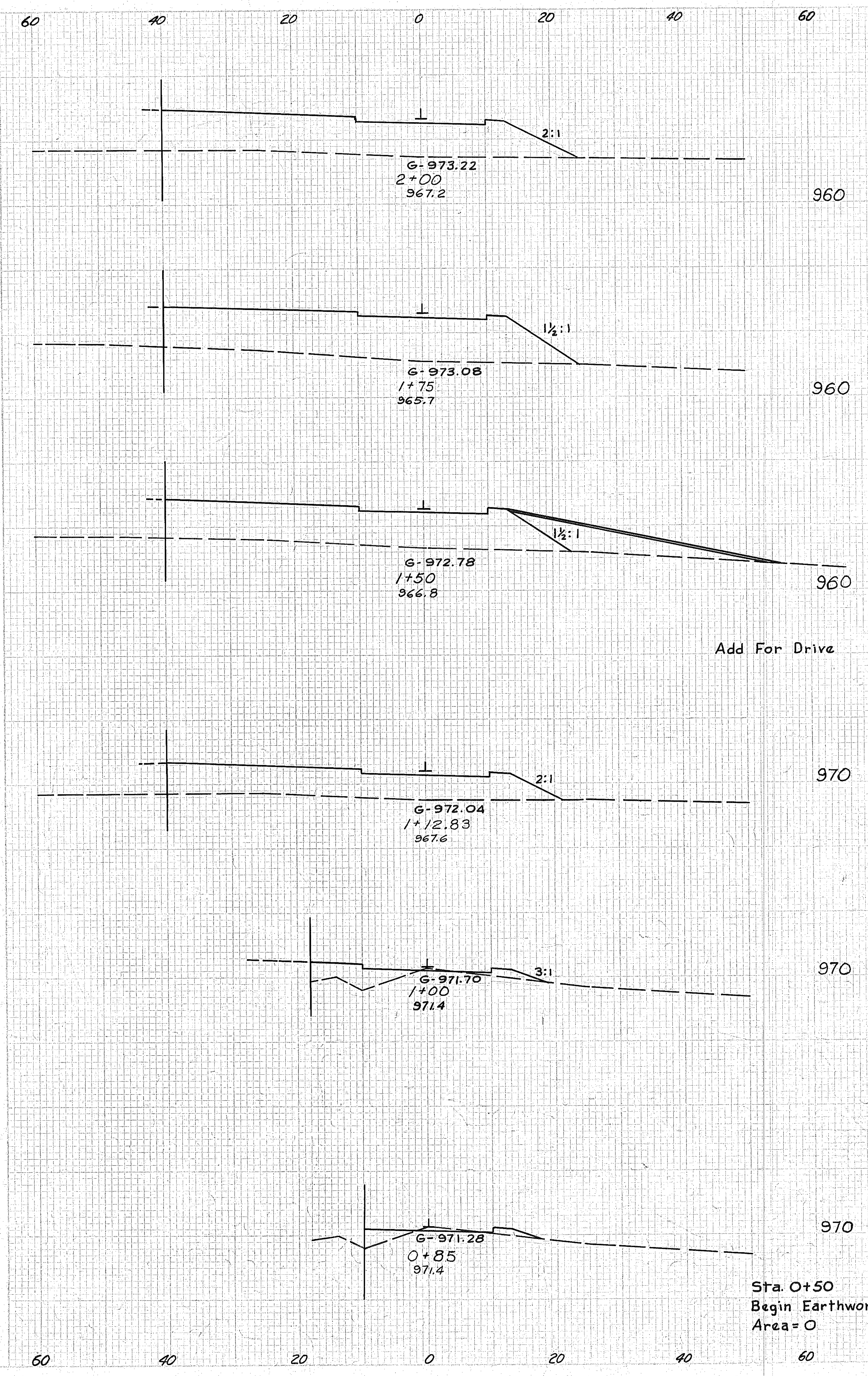
ITEM	UNIT	SPECIAL Furnishing & Mixing Calcium Chloride With Aggregate CU. YD.	E-12 Pipe Removal (Under 15") L.F.	I-1 CL. F-4 12" L.F.	
Price Shaffer Cul-de-Sac					
1-D 3+12 to 3+66			41		
2-D 3+25		202		54	
1-D 0+50 to 3+81.33 For North Cul-de-Sac					
1-D			25		
2-D				54	
1-D 6+50 to 11+14.15		227			
TOTALS		429	66	108	

1-2 Masonry CU. YD. .46 .46 .9

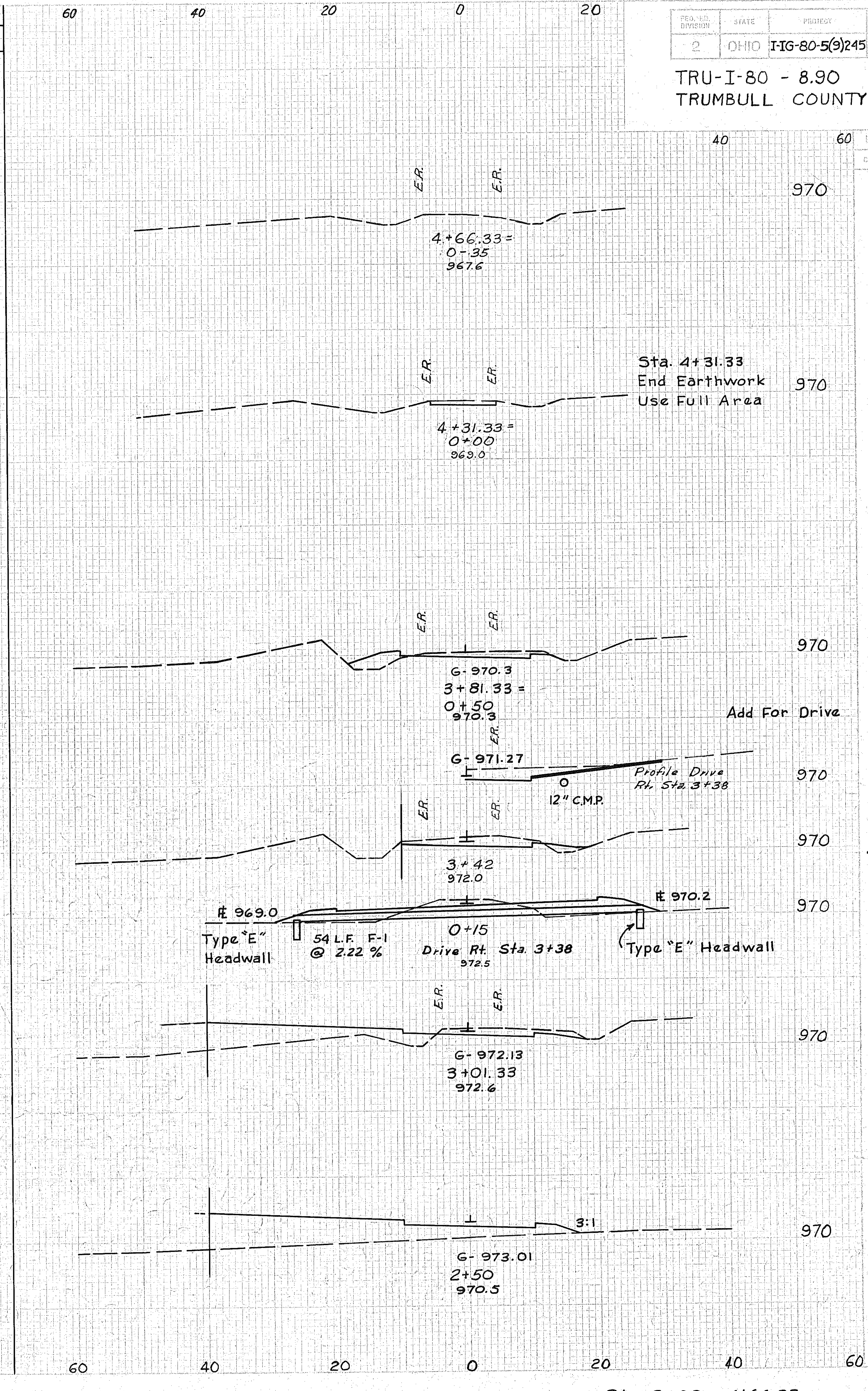
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

252
401

TRU-I-80 - 8.90
TRUMBULL COUNTY



Station	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL	SEEDING END WIDTH	SEEDING SQ. YDS.
2+00	0	328	0	332		
1+75	0	390		331		
1+50	0	326	0	390		
Add For Drive			0	72		
1+12.83	0	240	1	70		
1+00	1	57	1	22		
0+85	4	22	2	14		
Sta. 0+50 Begin Earthwork Area = 0	0	0	0	0		



Sta. 4+31.33
End Earthwork
Use Full Area

Station	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
4+31.33	9	0	24	61
3+81.33	17	17	29	58
Add For Drive			2	0
3+42	23	6	30	62
3+01.33	17	76	16	234
2+50	0	170	0	461

PRICE - SHAFFER RD. CUL-DE-SAC

Sta. 0+00 - 4+66.33

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

253
401

TRU-I-80-8.90
TRMBULL COUNTY

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1010	394	0	6	0
1010	352	0	539	0
1010	230	0	184	0
1010	234	0	173	4
1010	35	7	30	6
	0	0	0	0

SEEDING

	END WIDTH	SQ. YDS.

RAMP G

G-1012.84
8+50
1018.8

G-1012.54
8+00
1018.0

G-1011.70
7+50
1015.0

G-1011.23
7+28.53
1014.3

G-1010.47
6+94
1009.2

Sta. 6+50
Begin Earthwork
Area = 0

Sta 11+14.15
End Earthwork
Use Full Area

E.R. E.R.

11+14.15
1008.3

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1010	14	0	6	38
1010	27	7	46	7
1010	27	1	132	13
1010	105	12	445	14
1010	270	0	615	0

E.R. E.R.

G-1009.5
10+64.15
1009.4

℄ 1008.4 — 56 L.F. 12" A-1 @ 0.89% — 0+18 Drive Lt. Sta. 10+48 — ℄ 1006.9

2.00%

G-1009.86
10+48
1009.9

E.R. E.R.

℄ 1008.8

G-1010.47
10+18
1010.5

E.R. E.R.

G-1011.57
9+64.15
1011.9

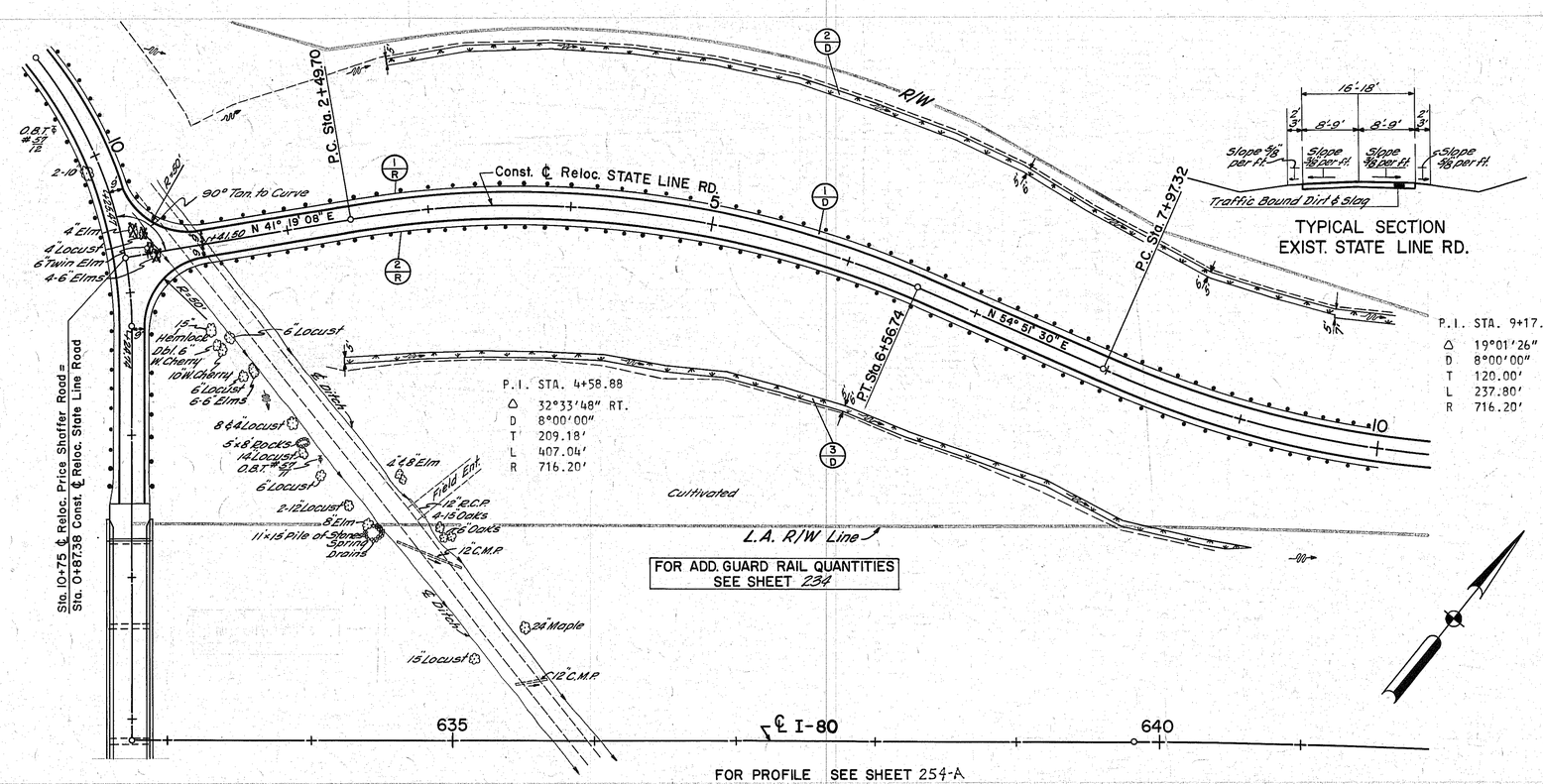
G-1012.62
9+00
1016.7

FOX - NORTH ROAD CUL-DE-SAC

STA. 6+94 to STA. 11+14.15

FED. RD. DIVISION	STATE	PROJECT	254 401
2	OHIO	I-IG-80-5(9)245	

TRUMBULL COUNTY TRU-I-80-8.90



ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	SEE SHEET NO.	TOTALS
L-10 Sodding	SQ. YD.	436.0 4400	8760
I-15 Guard Rail	L.F.	9900 937.5	1887.5
I-9 Stone U-Drain	L.F.	360	360

PEST NO.	STATION TO STATION	ASIDE	
1.0	1+25 to 10+00		Lt.
2.0	2+81 to 10+00		
3.0	2+27 to 9+48		Rt.
1.2	10+00 Price Shaffer Rd.		Lt.
1.0	10+00 State Line Rd.		
2.2	11+42.5 Price Shaffer Rd.		Rt.
1.0	10+00 State Line Rd.		

Reloc. STATE LINE RD. Sta. 0+87.38 to Sta. 10+00—Plan

SEEDING

END CENTER	CO. LINE

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

254A
401

TRUMBULL COUNTY TRU-I-80-8.90

END AREA		VOLUME	
CUT	FILL	CUT	FILL

1015.02 1015.74 1016.37 1016.85 1017.17 1017.34 1017.34 1017.19 1016.88 1016.41 1015.79 1015.01 1014.07 1012.97 1011.72 1010.31 1008.82 1005.84 1002.86 999.88 996.90 993.92 990.94 987.96 984.98 982.00 979.02

℄ Reloc. PRICE SHAFFER RD. Sta. 10+75=
Sta. 0+87.38
Const. ℄ Reloc. STATE LINE RD.
Elev. 1014.32

P.V.I. Sta. 3+00
Elev. 1020.74

+2.86%

-5.96%

P.V.C. Sta. 1+25
Elev. 1015.74

L.V.C.= 350'

PGC. Sta. 0+96.38
Elev. 1014.92

P.V.T. Sta. 4+75
Elev. 1010.31

1020 1015 1010 1005 1000 995 990 985 980 975 970 965 960 955 950 945

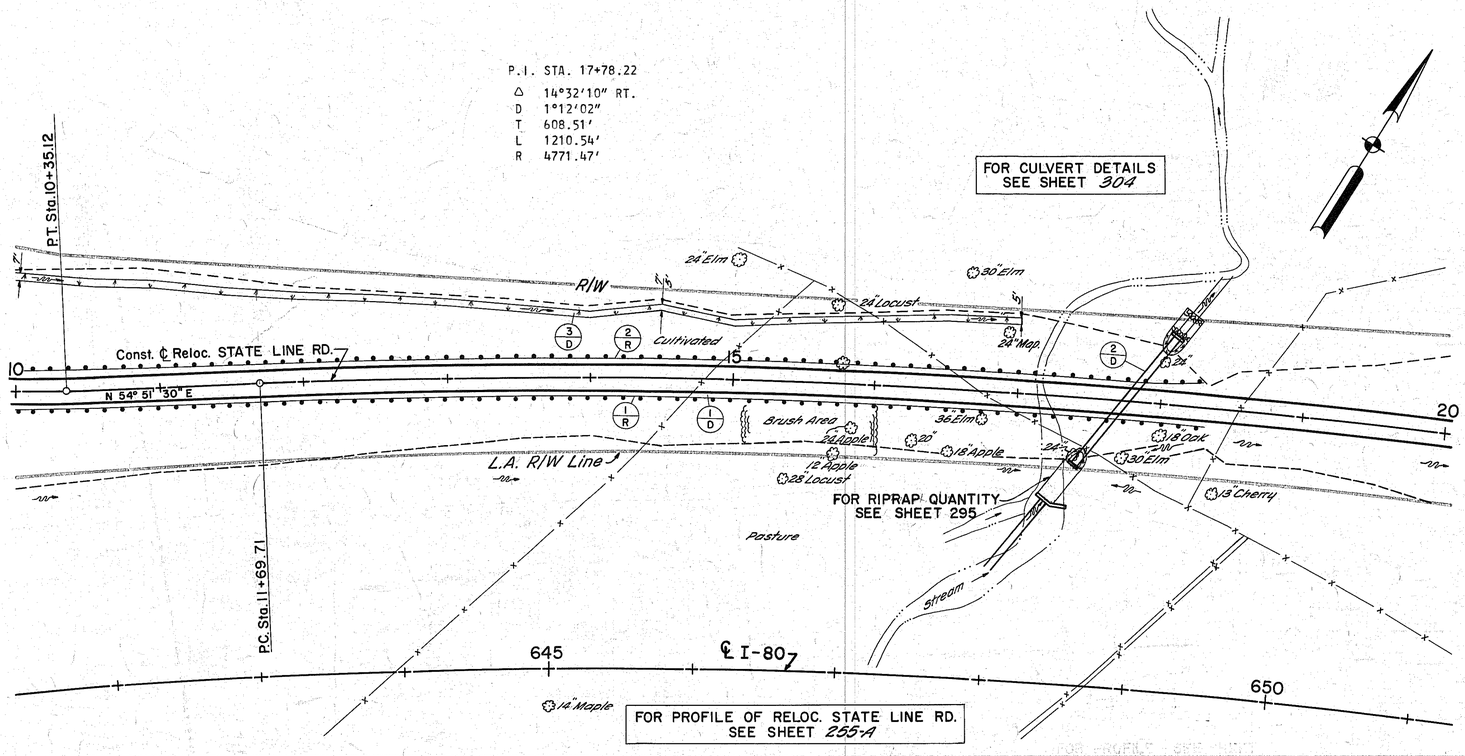
989.0 984.9 972.2 979.9 976.2 972.7 970.8 961.9 964.9 962.8 960.7 959.7 957.9 958.0 956.1 951.1 952.5 951.5 951.5

185 126 178 121 181 132 184 133 183 134 184 137 188 141 193 145 198 148

0 1 2 3 4 5 6 7 8 9 10

Reloc. STATE LINE RD. Sta. 0+87.38 to Sta. 10+00 – Prof

P.I. STA. 17+78.22
Δ 14°32'10" RT.
D 1°12'02"
T 608.51'
L 1210.54'
R 4771.47'



FOR CULVERT DETAILS SEE SHEET 304

FOR RIPRAP QUANTITY SEE SHEET 295

FOR PROFILE OF RELOC. STATE LINE RD. SEE SHEET 255-A

ESTIMATED QUANTITIES

SEE SHEET NO.	STATION TO STATION	SIDE	E-3 Channel Excavation CU. YD.	I-1 CL. A-1 M6.4(g) 10-10 Ga. 60" L.F.	I-2 Masonry CU. YD.	I-9 Stone U-Drain L.F.
1-D	10+25 to 20+00	Rt.	27	116	4.84	400
2-D	17+34 to 17+00	Lt.				
3-D	10+00 to 17+00					
1-E	10+00 to 18+25	Rt.				
2-E	10+00 to 18+25	Lt.				
TOTALS			27	116	4.8	400

SEE SHEET NO.	I-10 Sodding SQ. YD.	I-15 Guard Rail L.F.	I-10 Dumped Rock Channel Protection CU. YD.
	10.0	8250	27.8
	2890	8250	
	4990.0	1650.0	28

Reloc. STATE LINE RD., Sta. 10+00 to Sta. 30+00 - Plan

SEEDING	
END AREA	SQ. YDS.

FED. DIV. 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

979.02 976.04 973.06 970.08 967.10 964.12 961.14 958.16 955.18 952.20 949.22 946.24 943.26 940.28 937.30 934.32 931.34 929.89 928.52 927.22 926.01 924.87 923.81 921.93

960 955 950 945 940 935 930 925 920 915

-5.96%

L.V.C.=400'

P.V.C. Sta. 18+00
Elev. 931.34

-5.96%

60"A-1

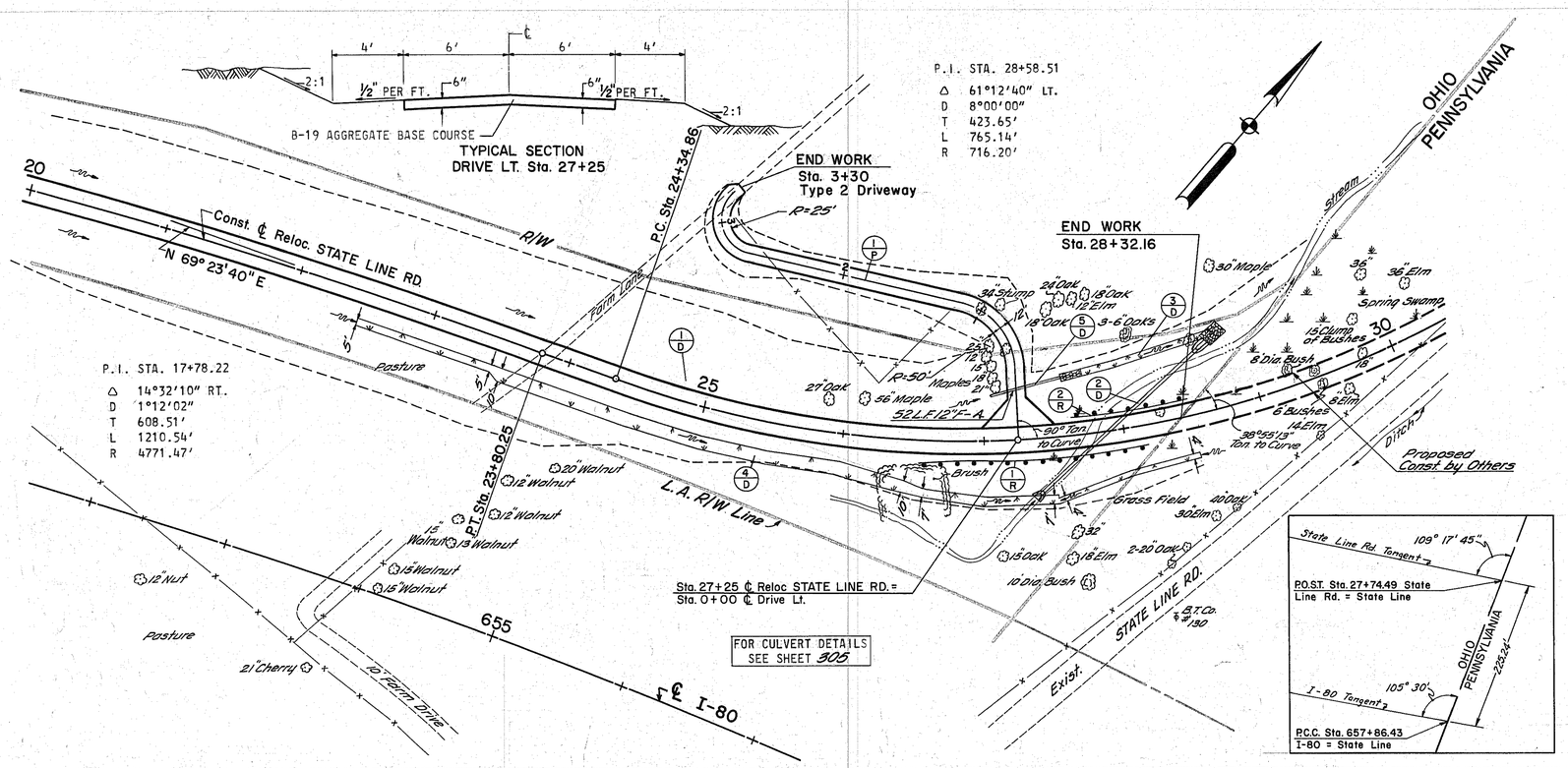
P.V.I. Sta. 20+00
Elev. 919.42

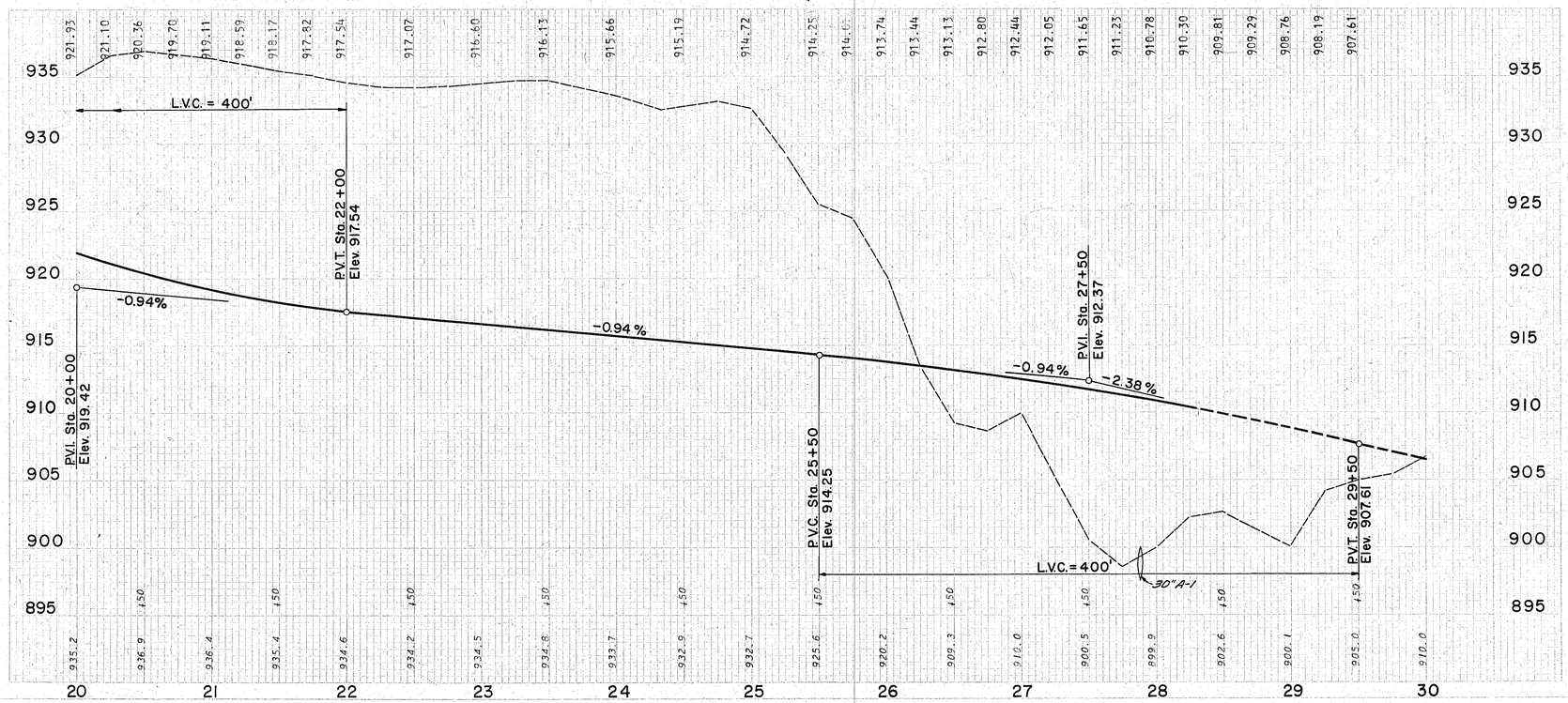
951.5 951.4 950.6 949.0 946.4 945.2 944.9 944.8 943.3 942.1 939.0 933.8 929.2 924.0 923.2 918.5 922.2 922.6 929.9 927.7 932.0 935.2

150 150 150 150 150 150 150 410 150 150 150

10 11 12 13 14 15 16 17 18 19 20

Reloc. STATE LINE RD. Sta. 10+00 to Sta. 20+00- Pro





REF. NO.	SECTION TO SECTION	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.
1-D	20+25 to 30+00	Lt&Rt	6	233	164		102
2-D	27+88 to 29+00	Lt.					
3-D	27+11 to 27+96	Rt.					
4-D	22+30 to 27+11	Rt.					52
5-D	27+05 to 27+71	Lt.					
TOTALS			6	233	164	52	154

REF. NO.	SECTION TO SECTION	SIDE	I-9 Stone U-Drain L.F.
1-E	26+50 to 28+12.5	Rt.	400
2-E	27+25 to 28+37.5	Lt.	
TOTALS			400

REF. NO.	SECTION TO SECTION	SIDE	TOTALS
1-D	24+13 to 27+25	Lt.	78.7

REF. NO.	ITEM	UNIT	TOTALS
I-10	Sodding	SQ. YD.	73 72 521
I-15	Guard Rail	L.F.	162.5 112.5
I-10	Dumped Rock Channel Protection	CU. YD.	12.5 6.9

REF. NO.	ITEM	UNIT	TOTALS
L-10	Sodding	SQ. YD.	600
I-15	Guard Rail	L.F.	275.0
I-10	Dumped Rock Channel Protection	CU. YD.	19.4

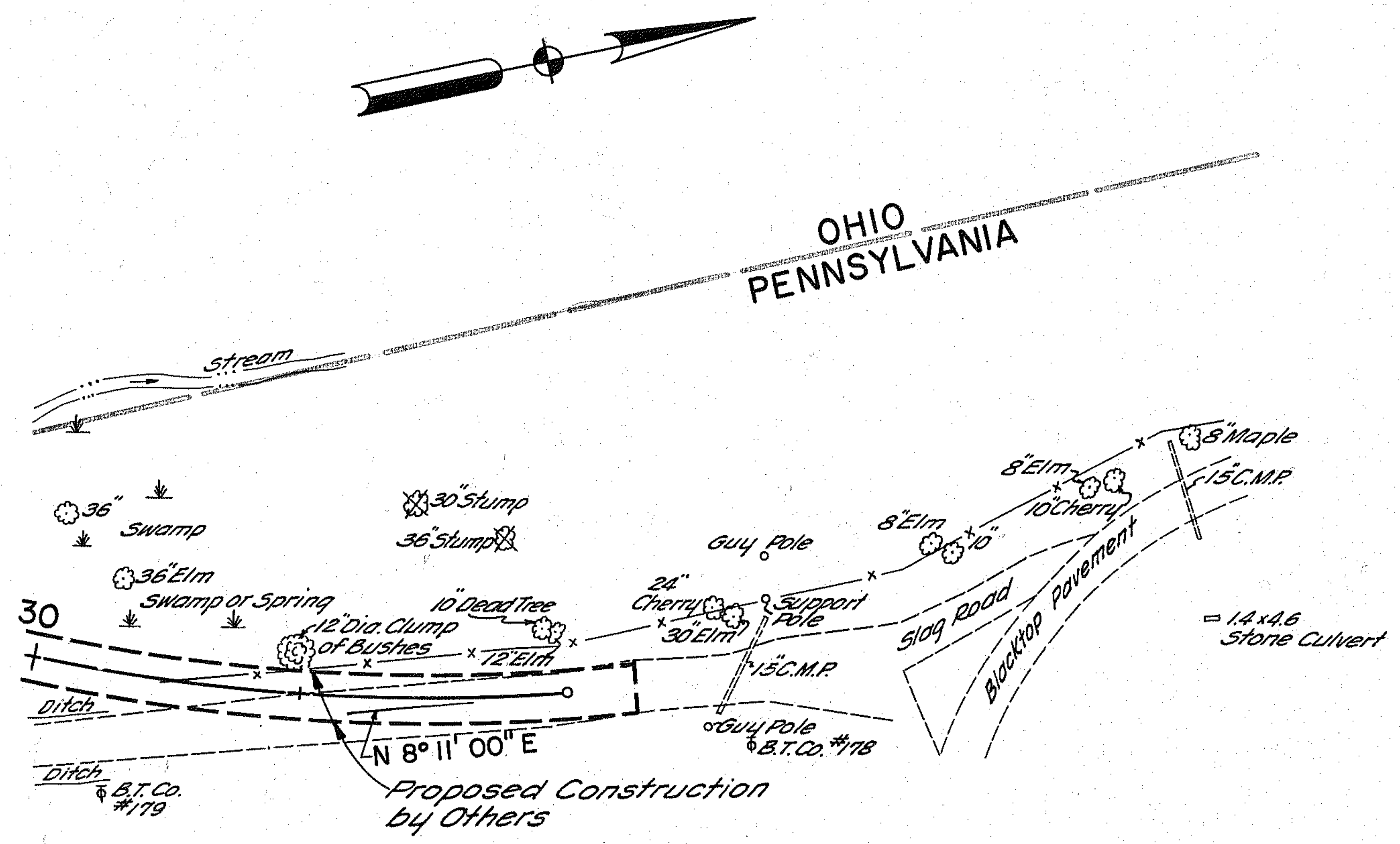
Reloc. STATE LINE RD. Sta. 20+00 to Sta. 30+00

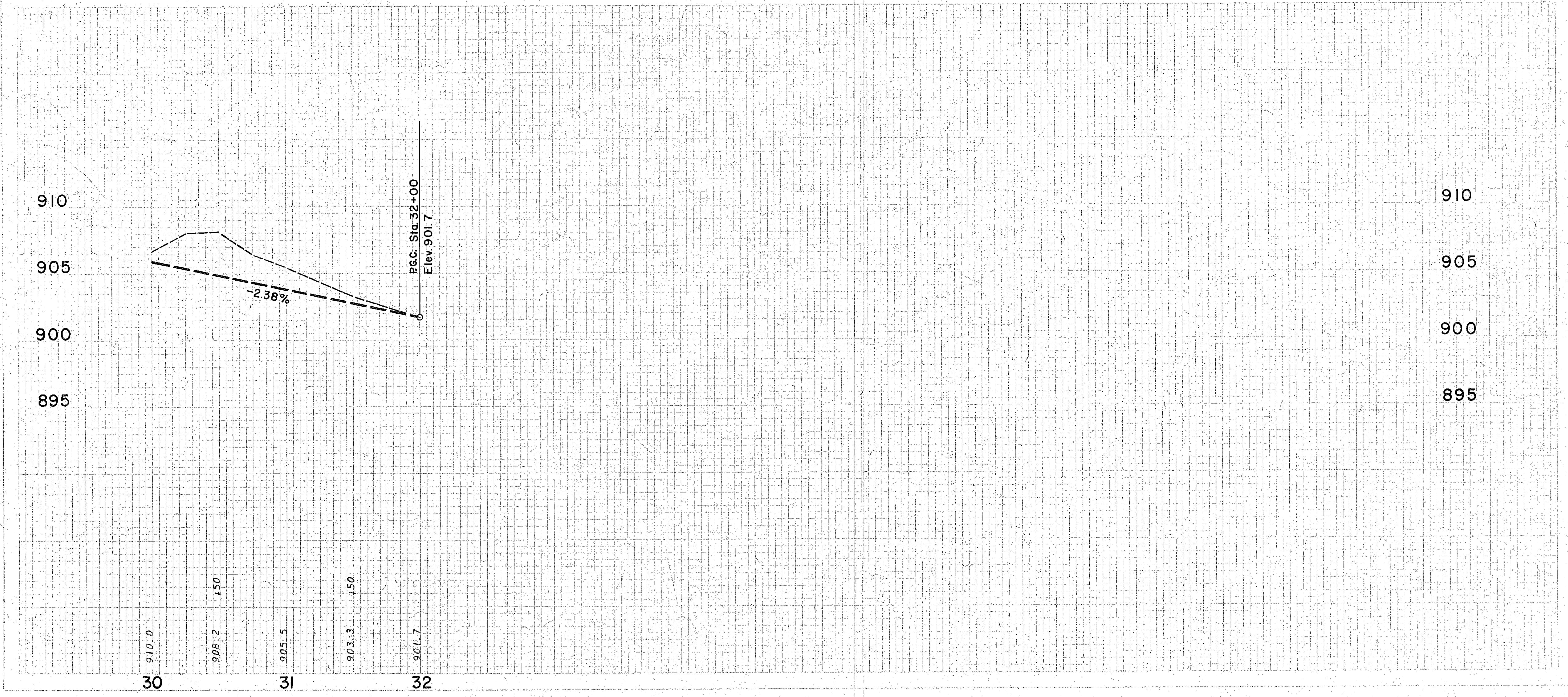
Sheet 79

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

256-A
401

TRUMBULL COUNTY TRU-I-80-8.90





ESTIMATED QUANTITIES

REF. SHEET NO.

SIDE

STATION TO STATION

REF. NO.

TOTALS

Reloc. STATE LINE RD. Sta. 30+00 to Sta. 32+00

SEEDING

END WIDTH	CA. YDS.

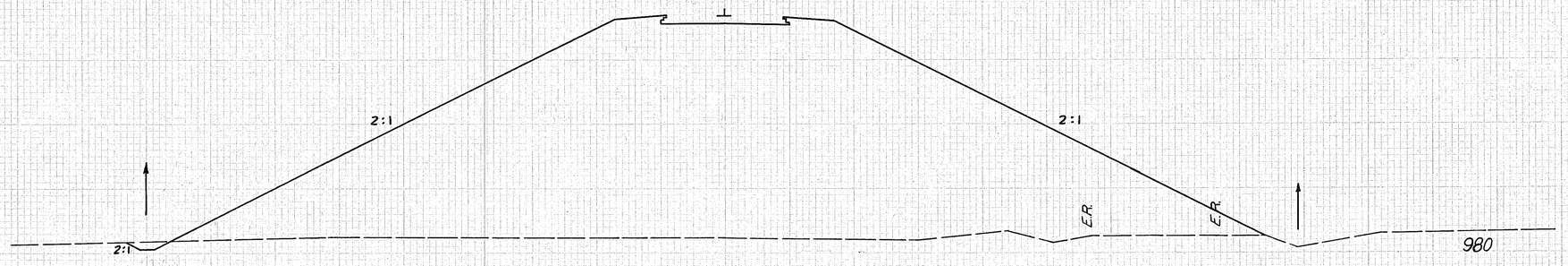
140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

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

257
401

TRU-I-80-8.90
TRUMBULL COUNTY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

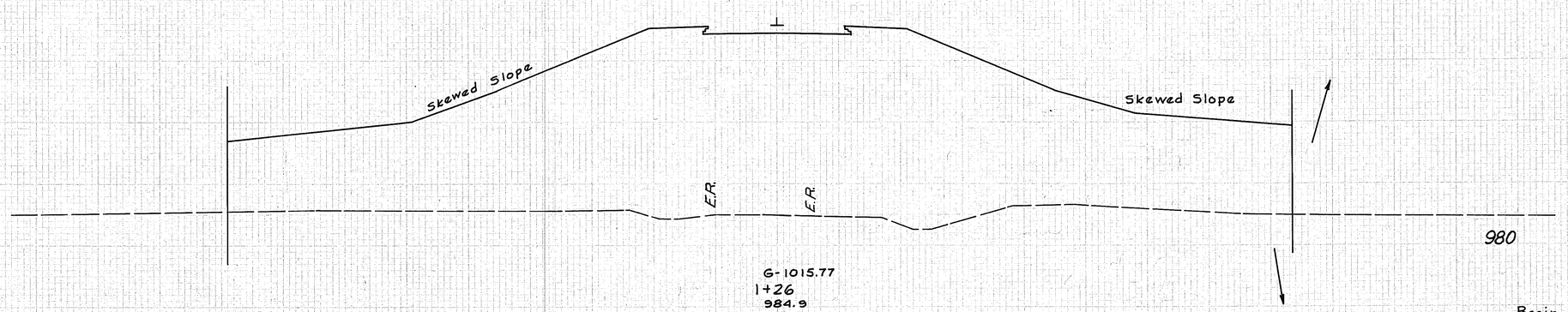


℄ 980.5

G-1016.90
1+78
982.2

℄ 981.0

B 3426 B 6855



G-1015.77
1+26
984.9

0 3693 0 1983

Begin Earthwork
Sta. 0+97 Area

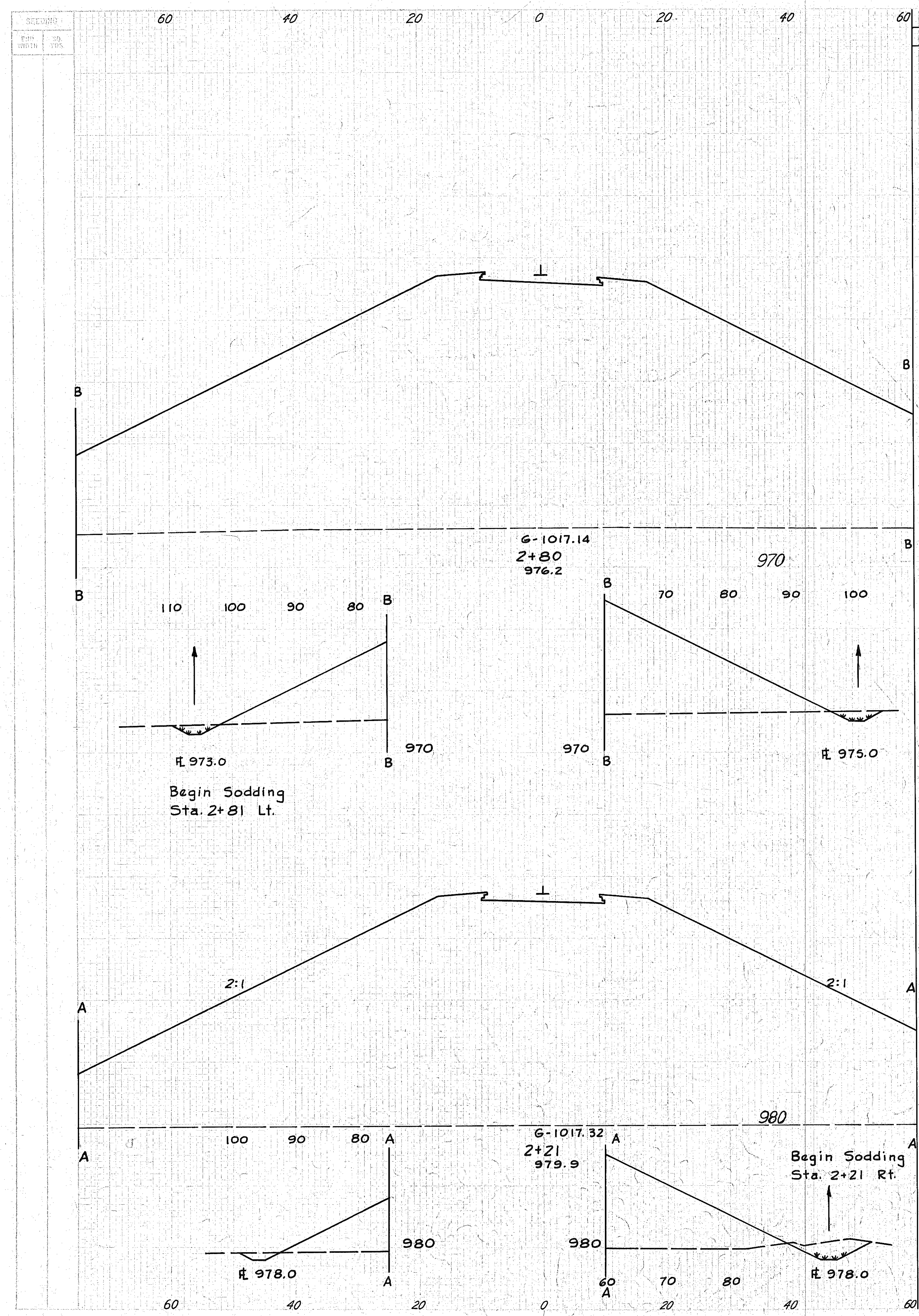
0 0 0 0

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

STATE LINE ROAD RELOC

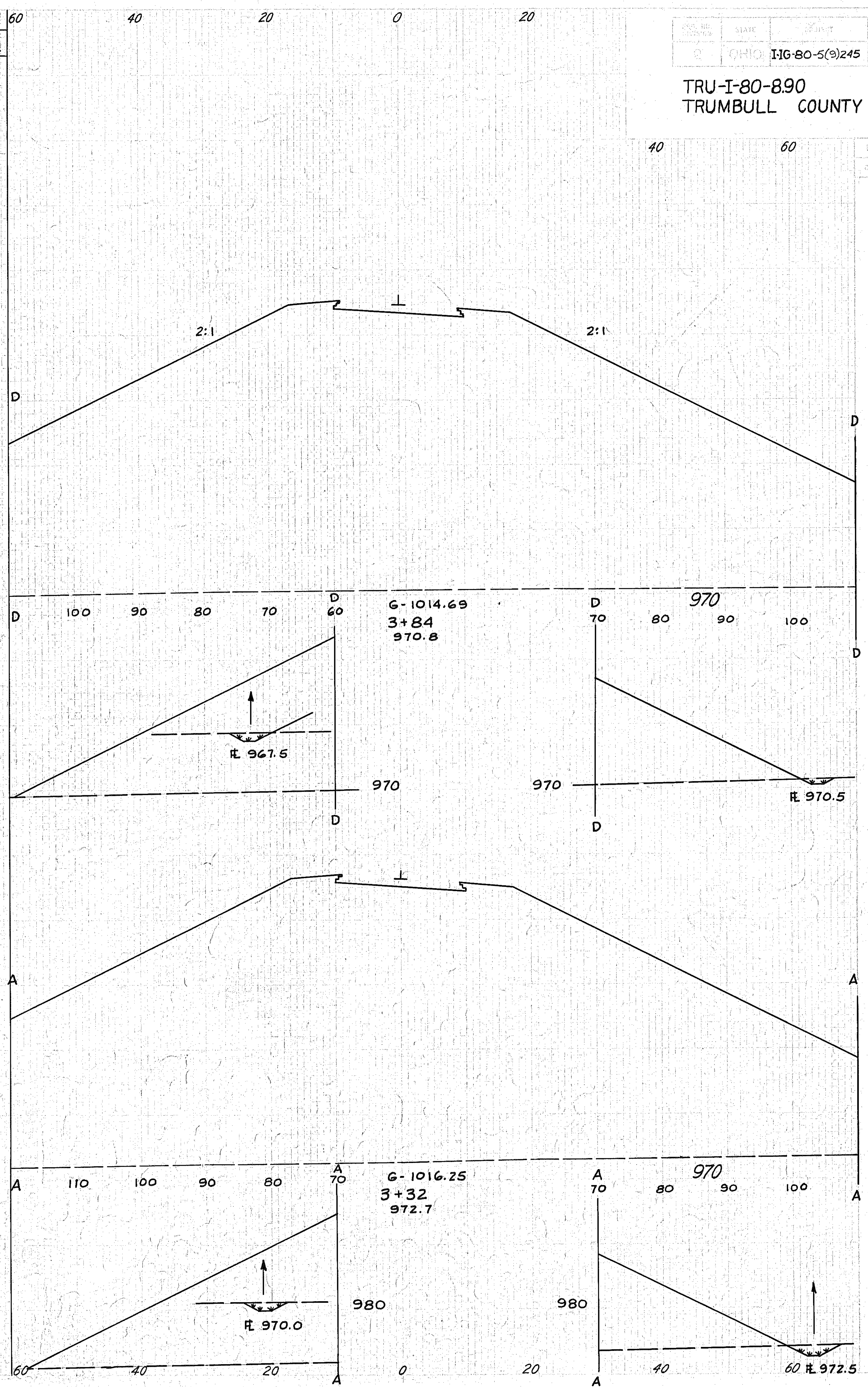
2	OHIO	I-IG-80-5(9)245	258/401

TRU-I-80-8.90
TRUMBULL COUNTY



STA.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2+80 (B)	20	4648	61	9596
2+21 (A)	35	3988	34	5904

SEEDING END WIDTH	SEEDING SQ. YDS.



STA.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
3+84 (D)	10	5296	27	10059
3+32 (A)	18	5150	36	9254

STATE LINE ROAD RELOC.

Sta. 2+21 to Sta. 3+84

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
35	5390	41	10048
9	5462	17	9762

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
17	4978	35	9413
21	5188	53	9990

STATE	PROJECT	
OHIO	I-IG-80-5(6)245	

253
401

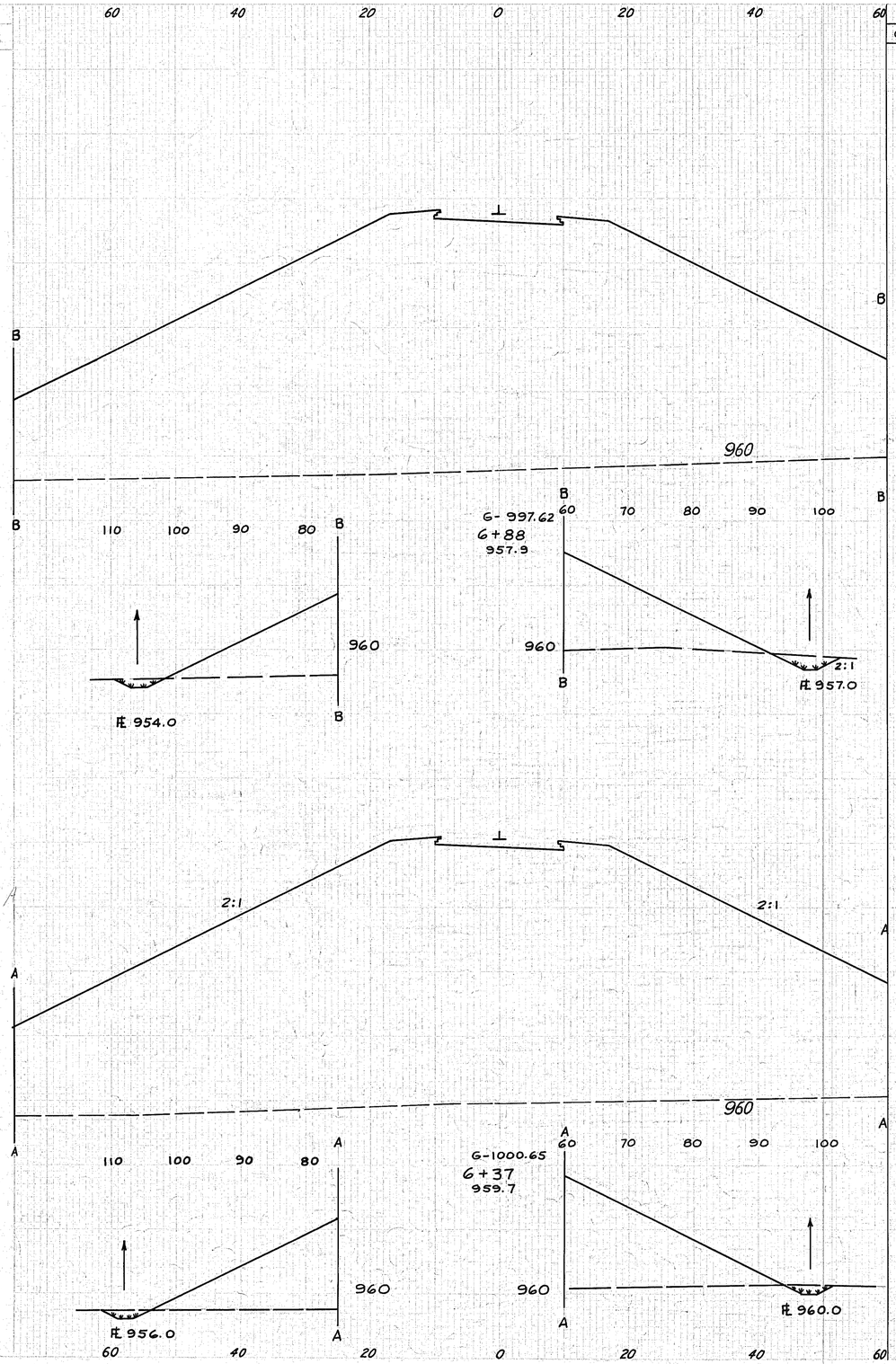
TRU-I-80-8.90
TRUMBULL COUNTY

STATE LINE ROAD RELOC.

St. 4+33 to St. 5+84

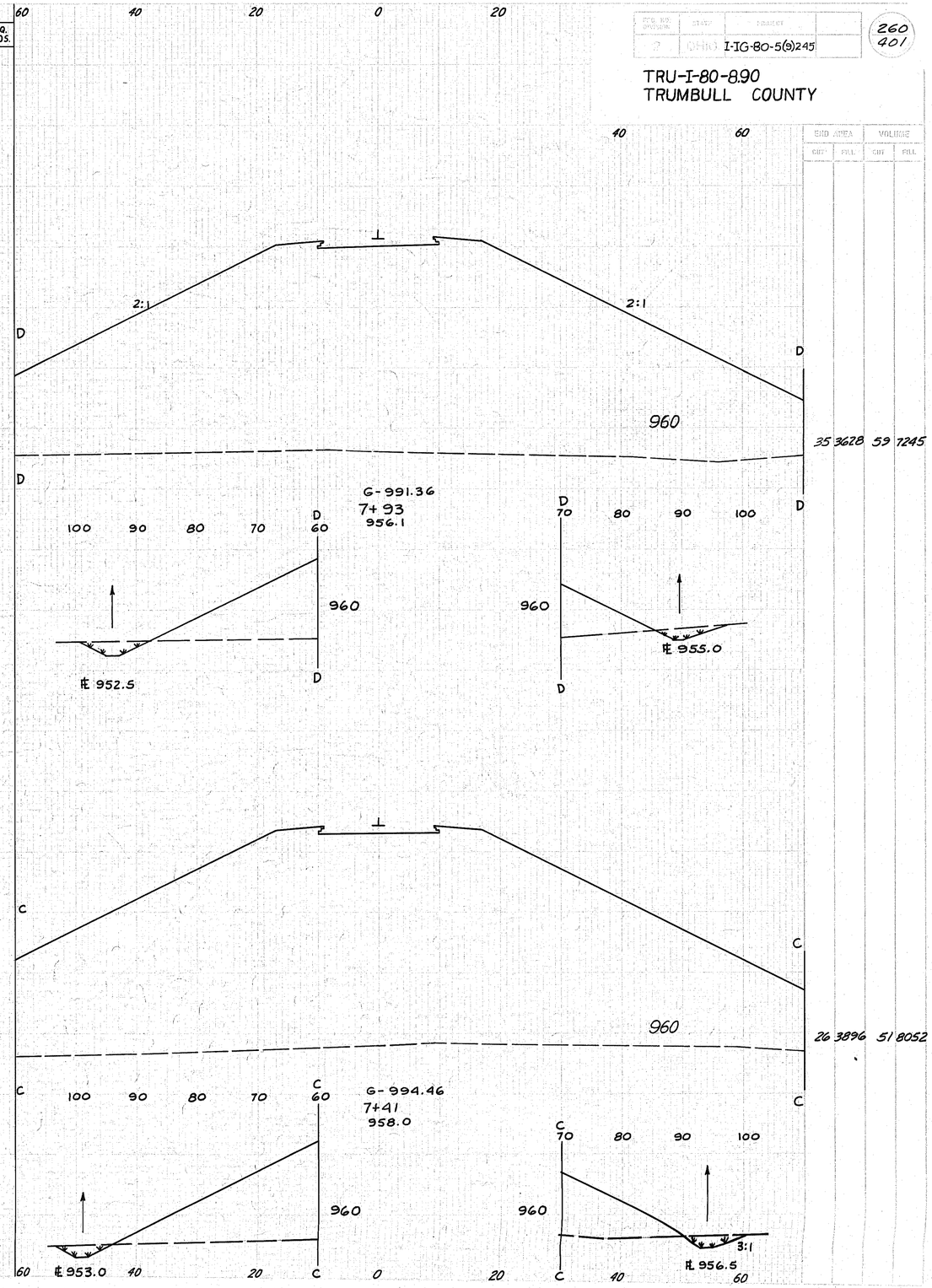
SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
26	4408	41	8623
18	4722	34	9520



SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
35	3628	59	7245
26	3896	51	8052



FED. ROAD DIV.NO.	STATE	PROJECT	
5	OHIO	I-IG-80-5(9)245	

260
401

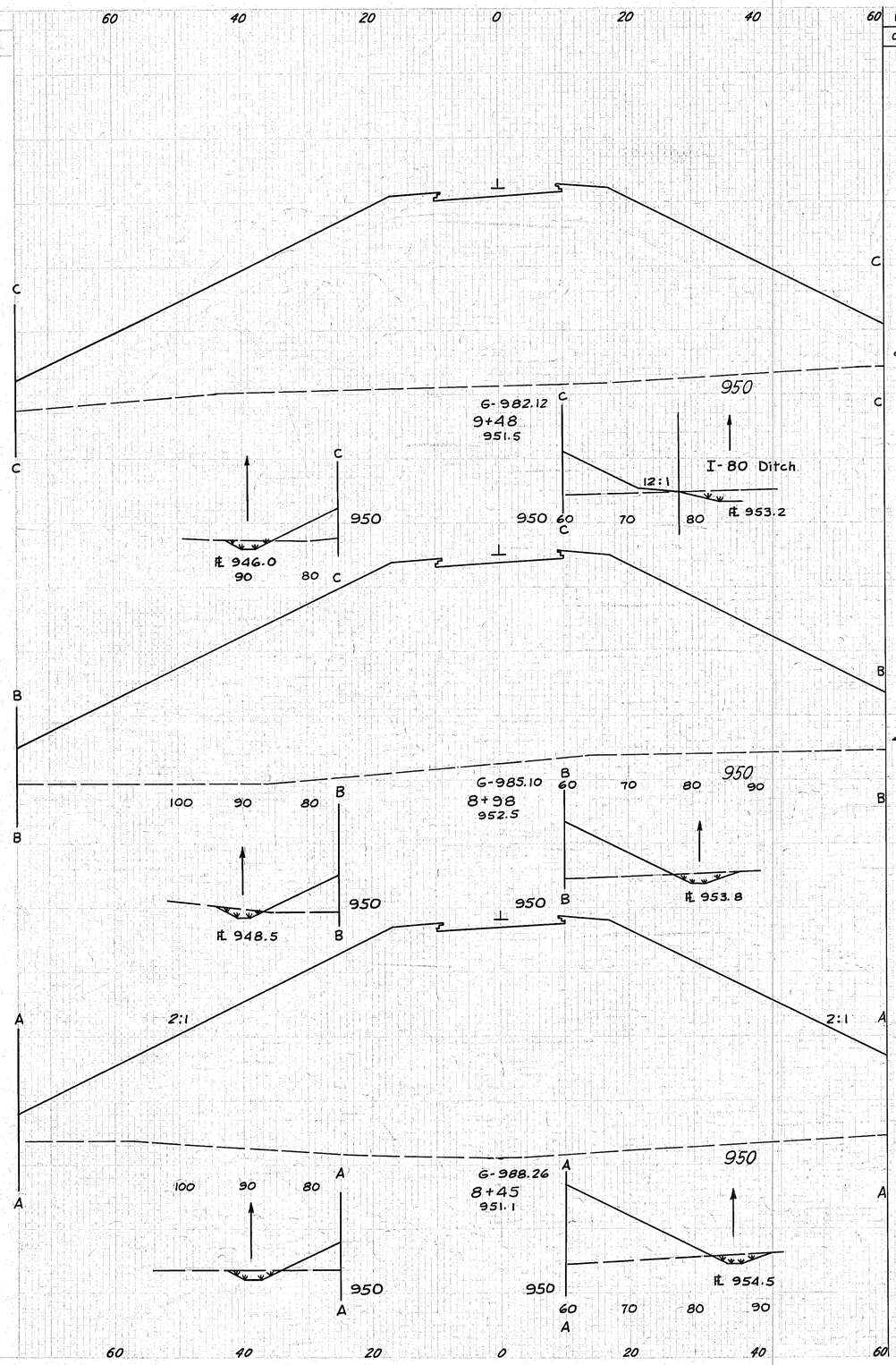
TRU-I-80-8.90
TRUMBULL COUNTY

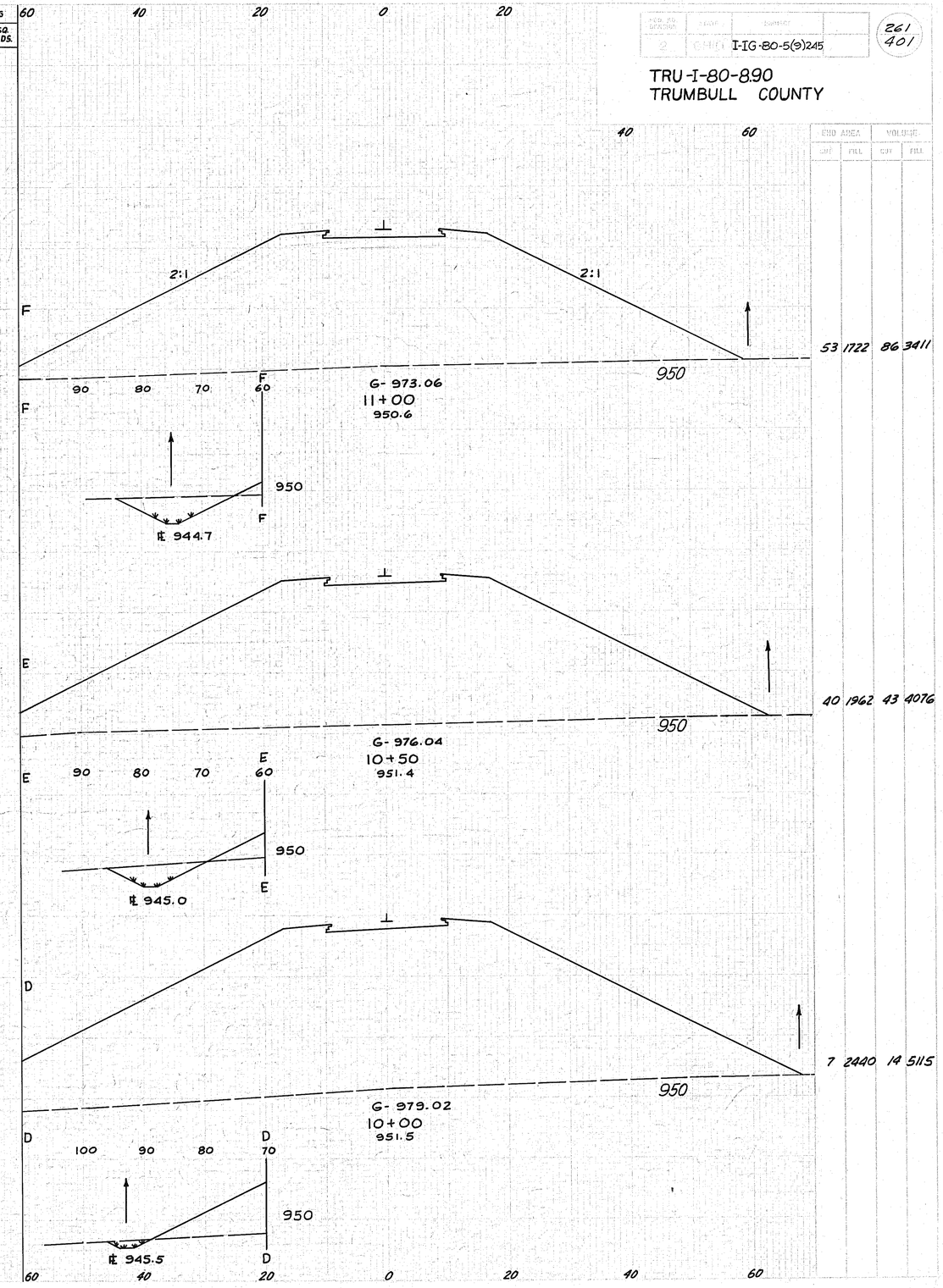
STATE LINE ROAD RELOC

Sta 6+37 to Sta 7+93

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
8	2872	29	5613
23	3190	39	6637
17	3572	50	6933
53	1722	86	3411
40	1962	43	4076
7	2440	14	5115





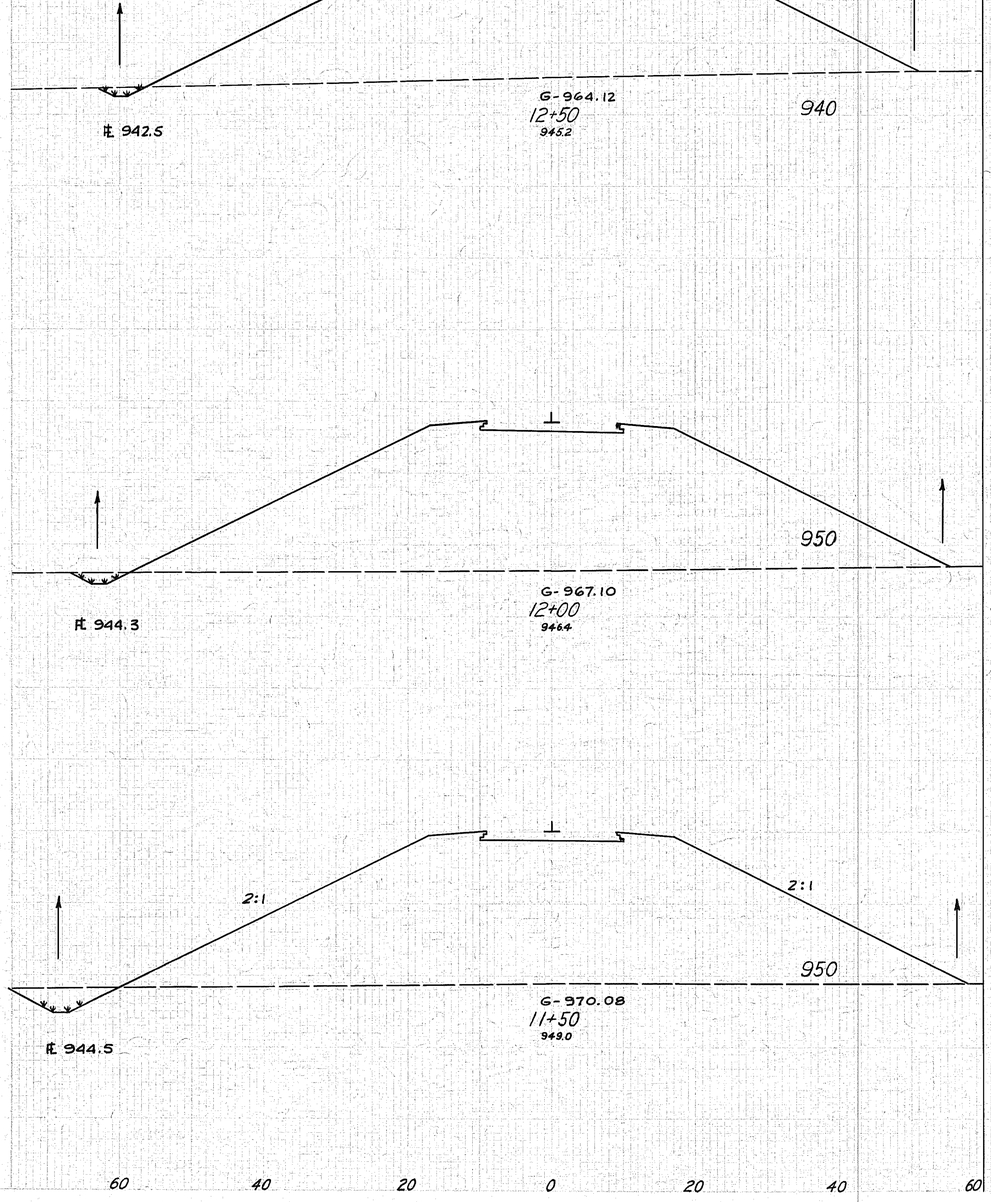
		I-IG-80-5(9)245	261 401

TRU-I-80-8.90
TRUMBULL COUNTY

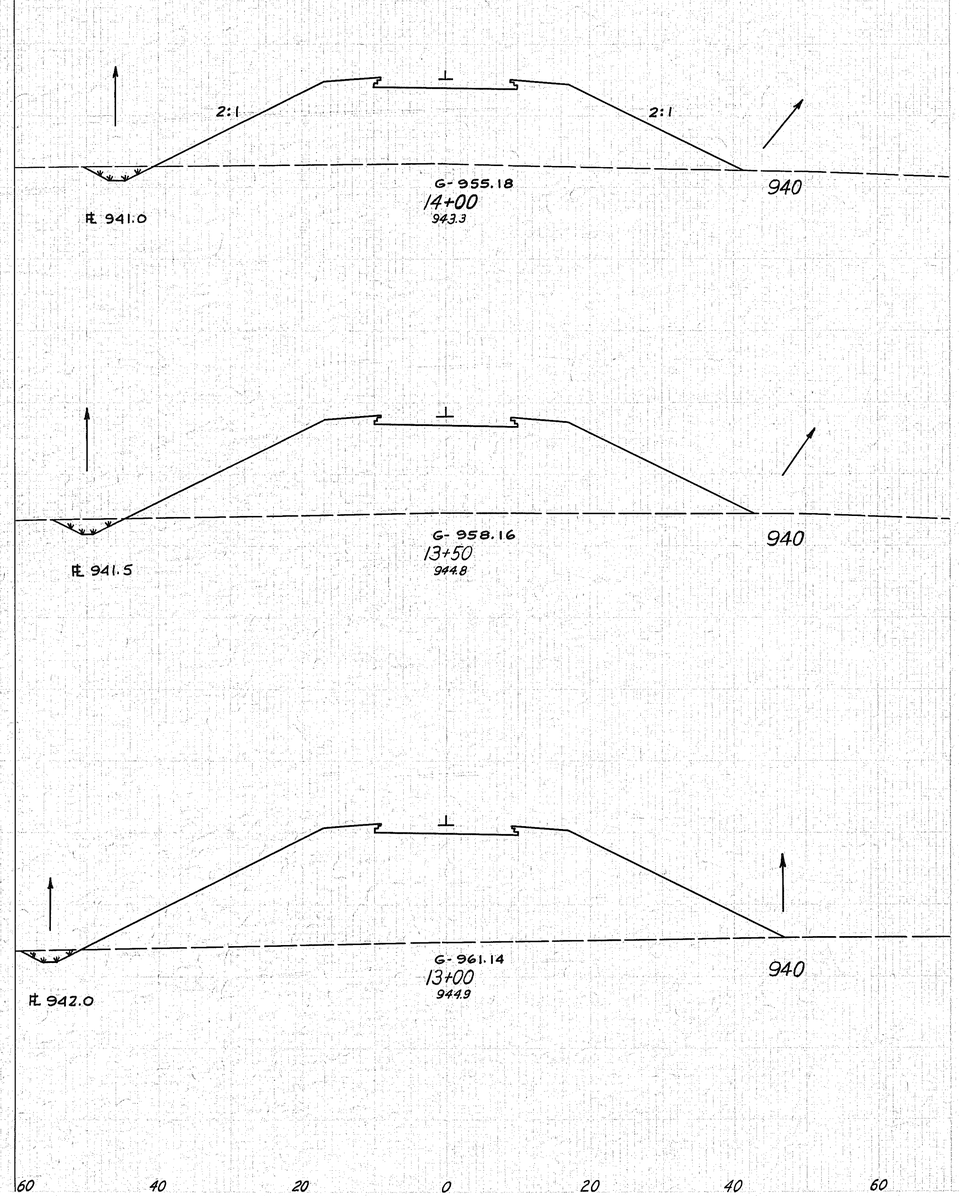
STATE LINE ROAD RELOC

Sta 8+45 to Sta 11+00

SEEDING				END AREA		VOLUME	
	END WIDTH	SQ. YDS.		CUT	FILL	CUT	FILL
60 40 20 0 20 40 60							
				6	1282	16	2556
				11	1478	45	2713
				38	1452	84	2939
60 40 20 0 20 40 60							



SEEDING			END AREA		VOLUME	
	END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
60 40 20 0 20						
			14	658	42	1328
			31	776	39	1678
			11	1036	16	2146
60 40 20 0 20 40 60						



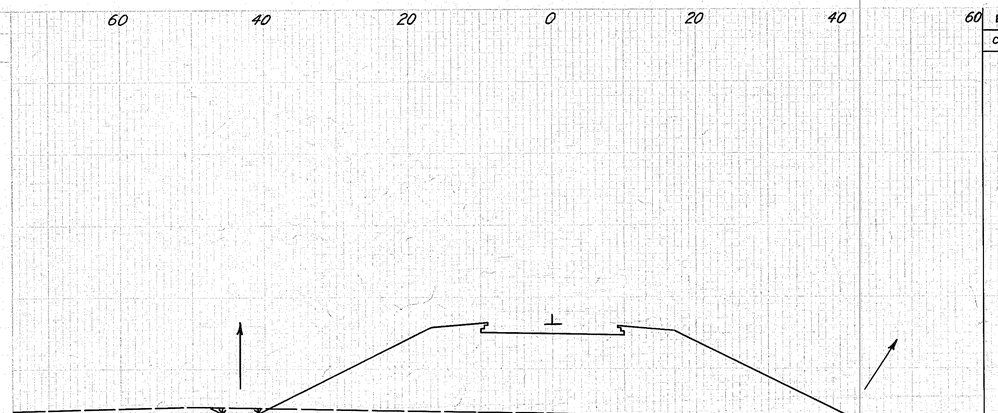
TRU-I-80-8.90
TRUMBULL COUNTY

STATE LINE ROAD RELOC

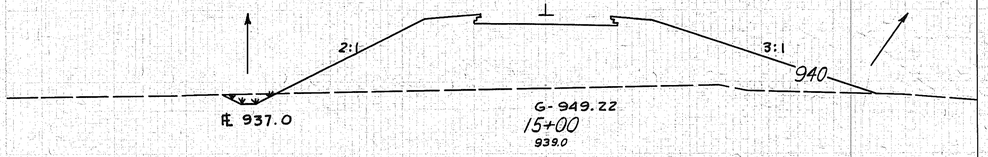
Sta. 11+50 to Sta. 14+00

SEEDING	
END WIDTH	SQ. YDS.

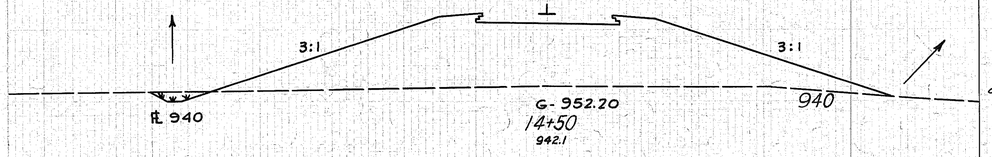
END AREA		VOLUME	
CUT	FILL	CUT	FILL



9 674 15 1120



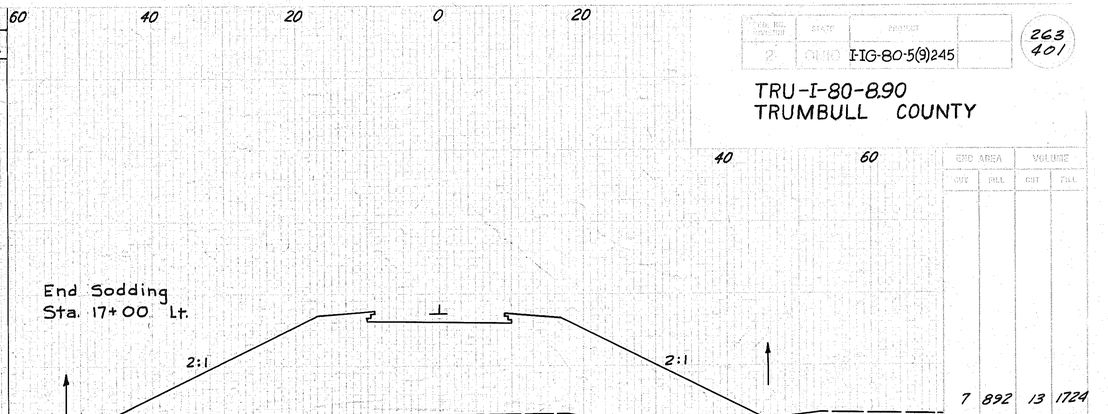
7 536 14 1031



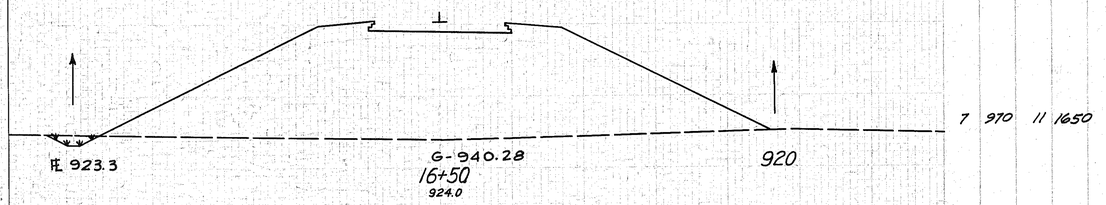
8 578 20 1144

STATE LINE ROAD RELOC

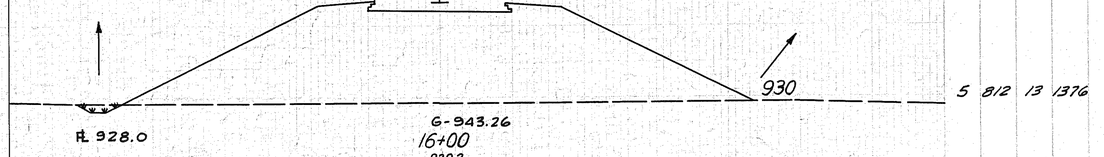
SEEDING	
END WIDTH	SQ. YDS.



7 892 13 1724



7 970 11 1650



5 812 13 1376

Sta 14+50 to Sta 17+00

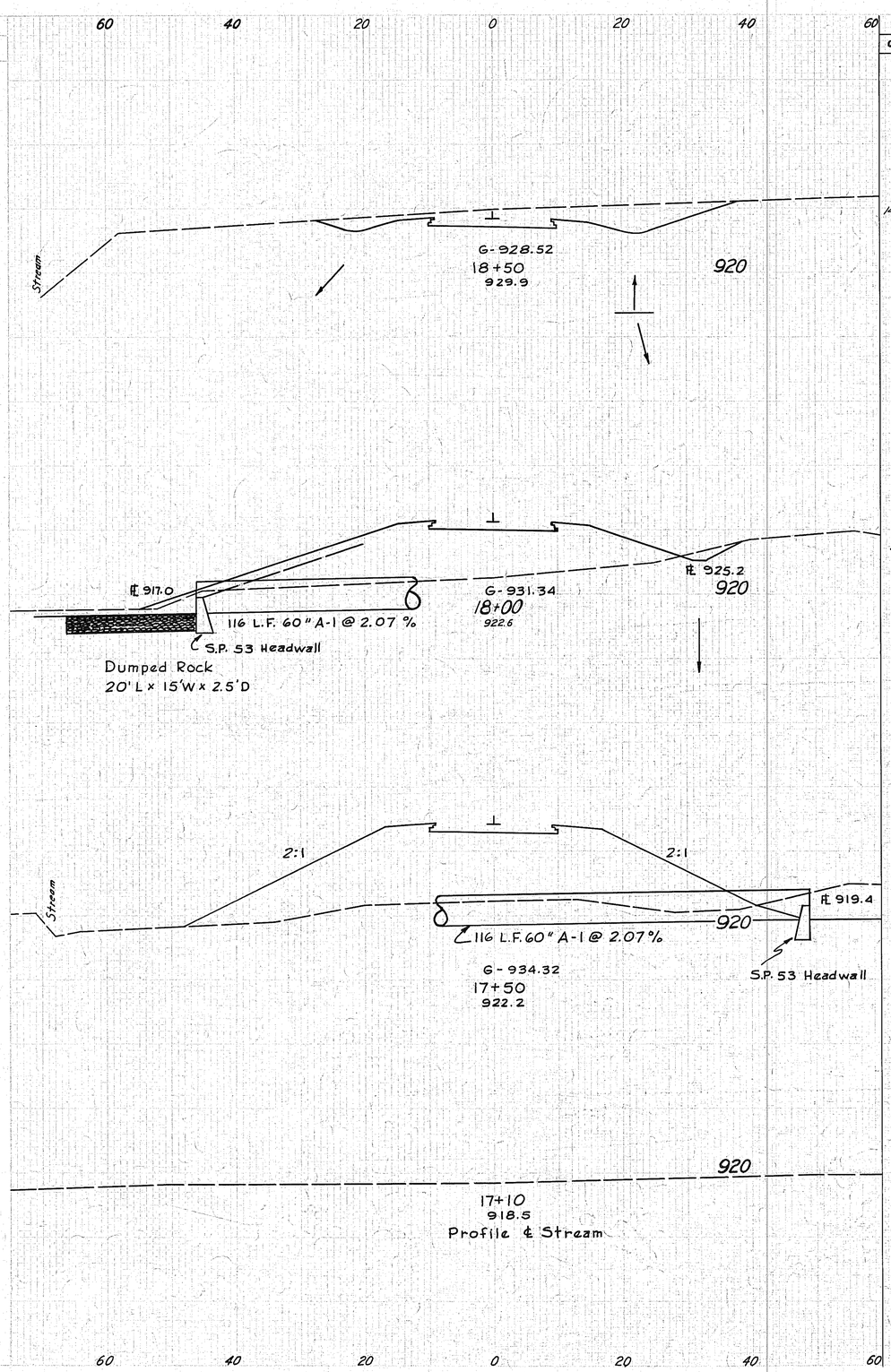
	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

263
401

TRU-I-80-8.90
TRUMBULL COUNTY

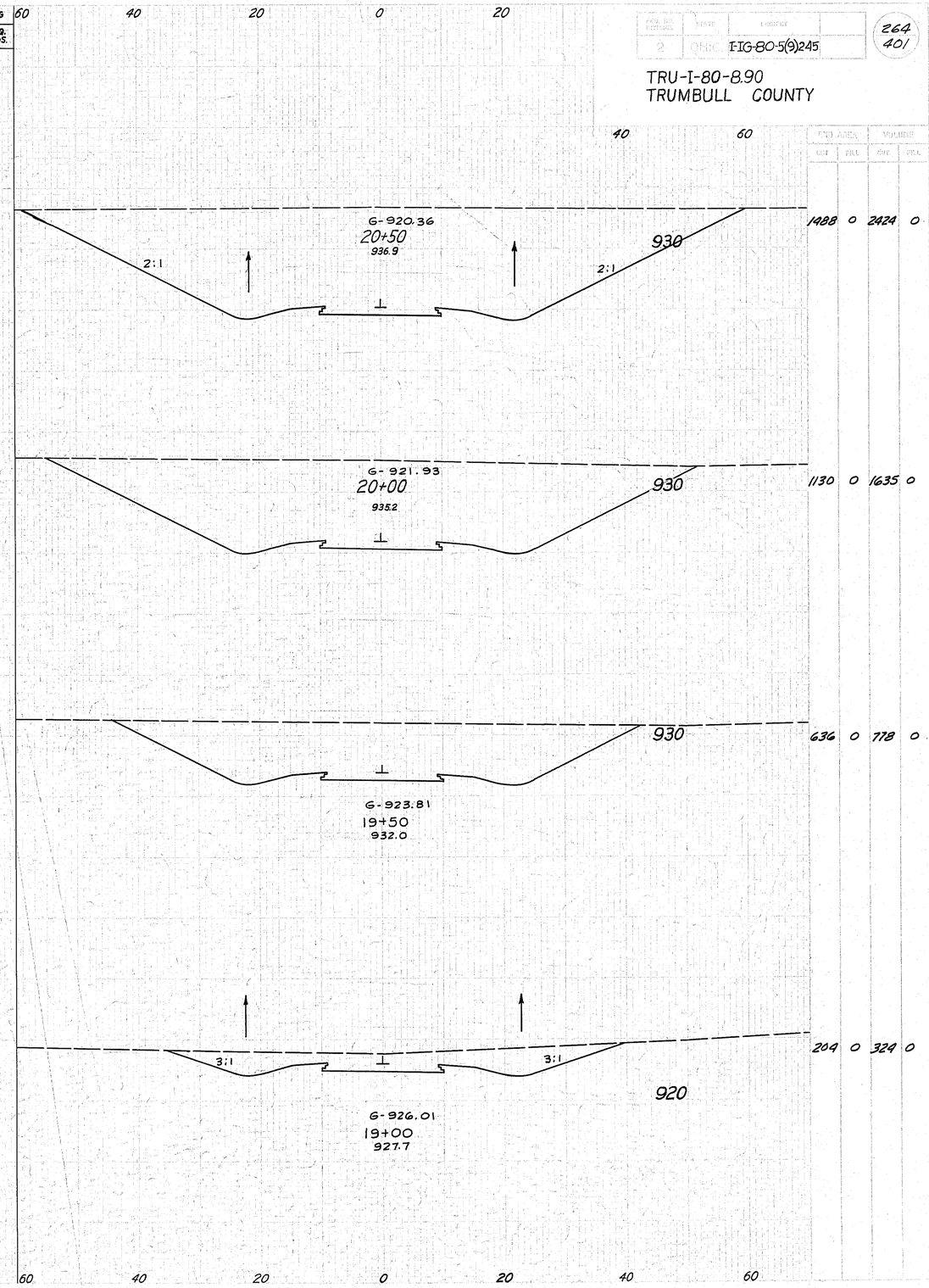
SEEDING END AREA	SEEDING SQ. YDS.

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
146	0	144	396
10	428	9	1070
0	728	6	1500



SEEDING END WIDTH	SEEDING SQ. YDS.

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1488	0	2424	0
1130	0	1635	0
636	0	778	0
204	0	324	0



FED. AID PROJECT NO. 2 — STATE — PROJECT NO. FIG-80-5(9)245

264
401

TRU-I-80-8.90
TRUMBULL COUNTY

STATE LINE ROAD RELOC

Sta 17+10 to Sta 20+50

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1620	0	2961	0
1578	0	2946	0
1604	0	2948	0
1580	0	2841	0
1464	0	2956	0
1728	0	3244	0
1776	0	3211	0
1692	0	3067	0

60 40 20 0 20 40 60

G-917.07
22+50
934.1
930
D
60 70
930
D
C

Begin Sodding
Sta. 22+50 Rt.

G-917.54
22+00
934.6
930
C
60 70
930
C
B

G-918.17
21+50
935.4
930
B
60 70
930
B
A

G-919.11
21+00
936.4
930
2:1
2:1
A
60 70
A

60 40 20 0 20 40 60

STATE LINE ROAD RELOC

60 40 20 0 20

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

265
401

TRU-I-80-8.90
TRUMBULL COUNTY

60 40 60

G-915.19
24+50
932.9
930
H
2:1
2:1
70
H
60
930
H
G

G-915.66
24+00
933.7
930
G
70
G
60
930
G
F

G-916.13
23+50
934.8
930
F
70
F
60
930
F
E

G-916.60
23+00
934.5
930
E
70
E
60
930
E

60 40 20 0 20 40 60

Sta 21+00 to Sta 24+50

SHEET NO.	SHEET	PROJECT		266 401
2	OHIO	I-IG-80-5(9)245		

TRU-I-80-8.90
TRUMBULL COUNTY

SECTIONS END WIDTH	SECTIONS 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
				58486	71 613
				62 544	100 1044
				46 584	191 663
				160 132	381 250

60 40 20 0 20 40 60

2:1
910
G-913.13
26+50
909.3
℄ 906.0
2:1

920
G-913.74
26+00
920.2

920
G-914.25
25+50
925.6

930
2:1
G-914.72
25+00
932.7

OHIO PENNA.
State Line

End Sodding
Sta. 29+00 Lt.

℄ 896.0
+67
Stream
G-909.81
28+50
902.6
Proposed Construction By Others
℄ 905.5
900

Dumped Rock
15" L x 9'W. x 2.5' D

End Work Sta. 28+32.16

3:1
Stream
℄ 899.0
G-910.78
28+00
899.9
℄ 904.5
900

End Dumped Rock -- Begin Sod Ditch Lt. Sta. 27+71

Begin Dumped Rock Ditch Lt.
Sta. 27+56 5'W x 15'L x 2.5 D

End Sodding
Sta. 27+50 Rt.
℄ 900.7

2:1
Stream
+35
900
℄ 902.0
G-911.65 164 L.F. 30" E-1 @ 3.17%
27+50
900.5
℄ @ Hw. 899.7

Sta. 27+25 Drive Lt. Shown On X-Section Sheet No. 260

G-912.44
27+00
910.0
900
Stream
℄ 903.0

STATE LINE ROAD RELOC
Sta. 25+00 to Sta. 28+50

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

267
401

TRU-I-80-8.90
TRUMBULL COUNTY

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
End Earthwork Sta. 3+30	18	0	143	0
G-932.93 930 2+72	115	0	93	1
G-931.93 930 2+30	5	1	19	1
G-930.43 930 1+88	19	0	83	0
G-926.75 920 1+45	85	0	287	0
G-920.00 920 1+00	260	0	630	81
G-912.36 910 0+37 Begin Earthwork Sta. 0+09	206	60	136	31
	56	0	0	0

Sta. 3+30
End Work

+2.38%

P.V.I. Sta. 1+70 A
Elev. 930.50
L.V.C. 30'
M = 0.47

940
930
920
A

320 300 280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

A
A

+15.0%

P.V.I Sta. 0+60
Elev. 914.00
L.V.C. = 30'
M = 0.30

+7.11%

910

G-912.05
27+25
905.3

X-Section Not Normal to State Line Road,
Meanders Along ℄ of Drive

X-Section Normal to State Line Road

52 L.F. 12" Cl. F-1 @ 11%

STATE LINE ROAD RELOC.

DRIVE Lt. STA. 27+25

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.

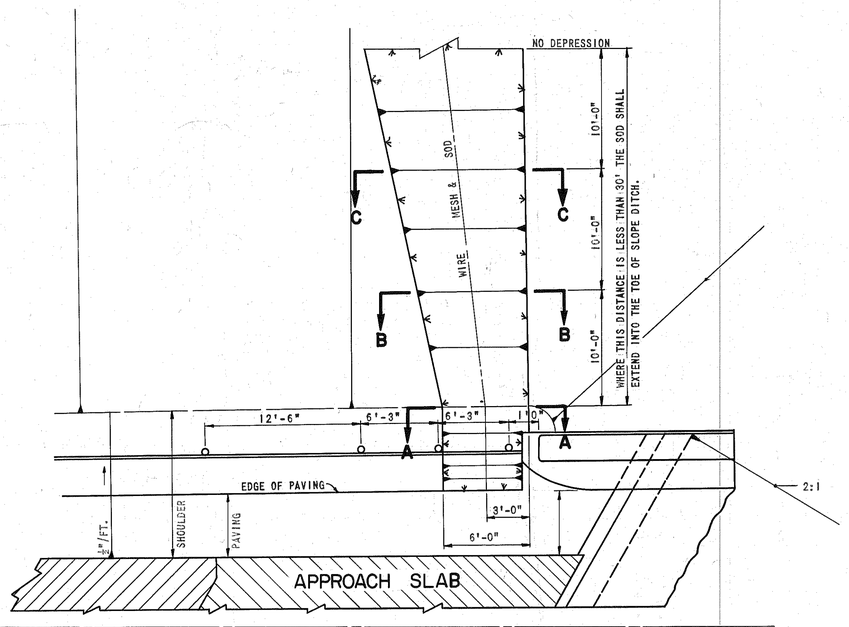
THE FENCE SHALL BE STRAIGHT LINE POULTRY FENCE OR EQUIVALENT WITH STRAND WIDTH OF FOUR FEET, HAVING A TWO INCH MESH AND ALL WIRES NO. 20 GAUGE.

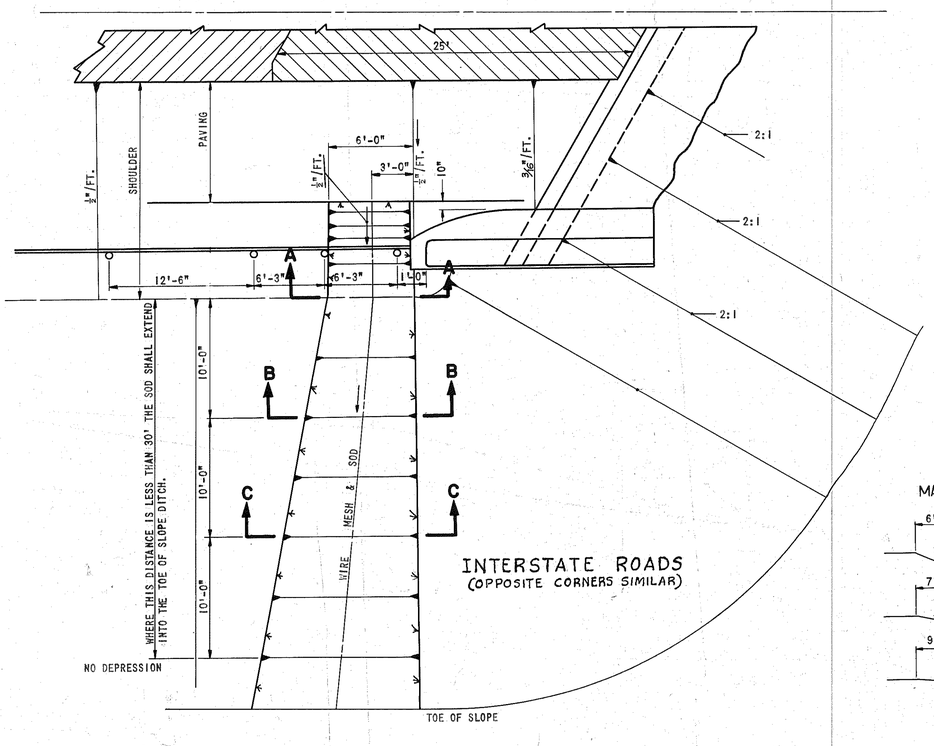
THE STRANDS OF FENCING SHALL BE FASTENED TOGETHER AT TWELVE INCH INTERVALS BY MEANS OF HOG RINGS.

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

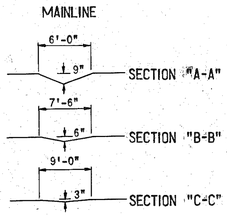
SOD SHALL BE LAID IN ACCORDANCE WITH CONSTRUCTION AND MATERIALS SPECIFICATIONS SECTION L-10.07.

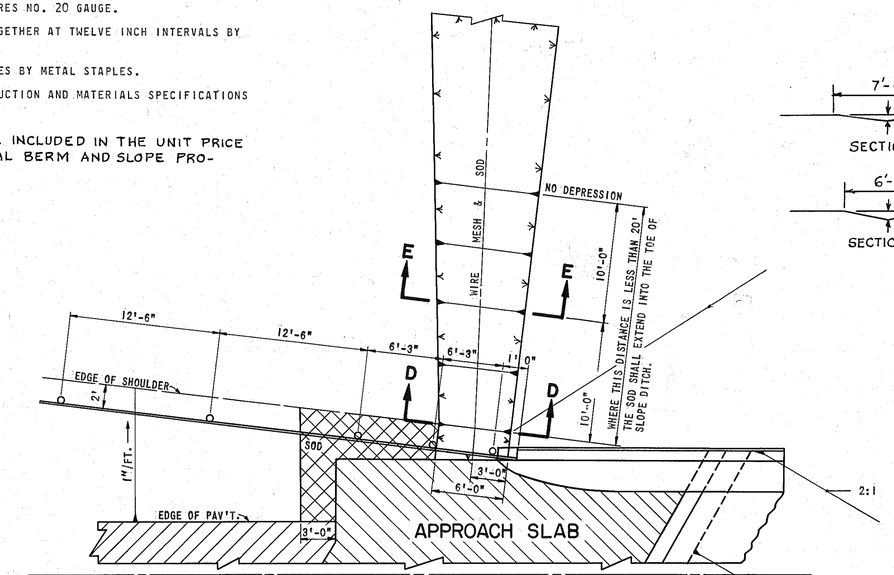
PAYMENT FOR ALL THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR "ITEM L-10 SODDING FOR SPECIAL BERM AND SLOPE PROTECTION".

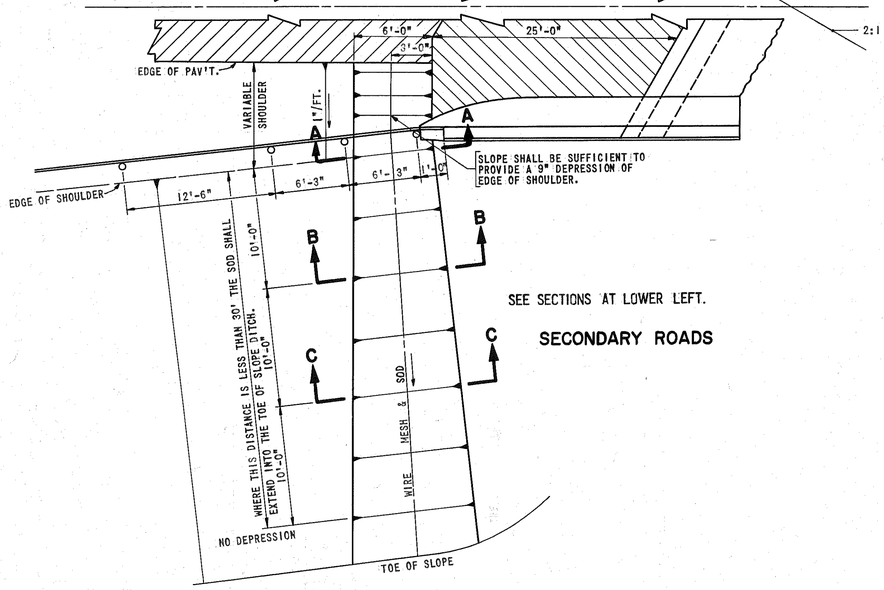




MAINLINE

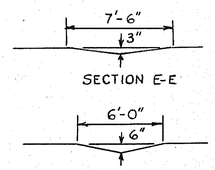






SEE SECTIONS AT LOWER LEFT.

SECONDARY ROADS



TYPICAL APPROACH SLAB EROSION CONTROL DETAIL

TYPICAL DETAILS OF UNDERDRAIN OUTLETS

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

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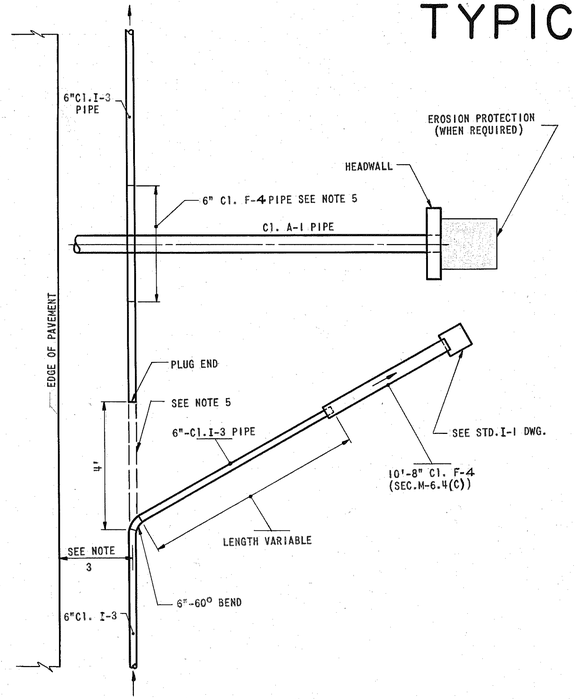
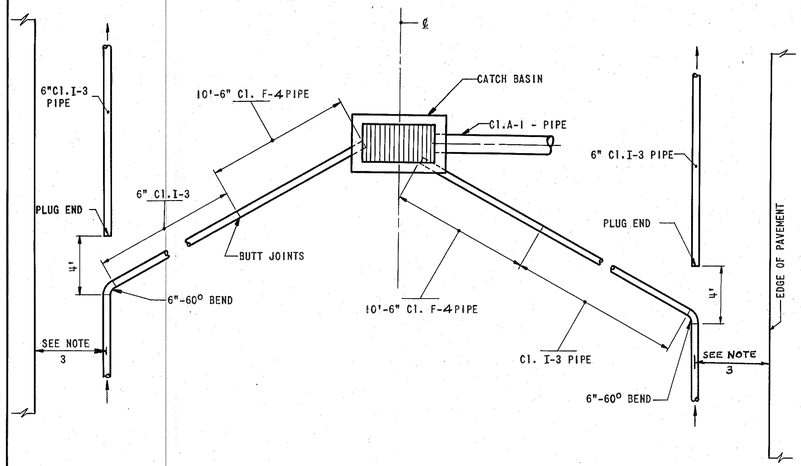
401

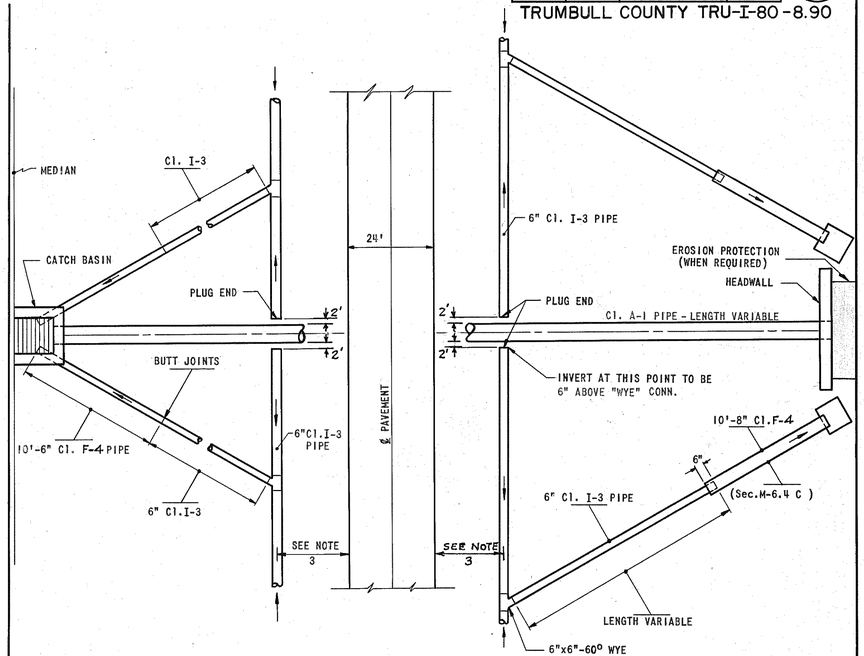
TRUMBULL COUNTY TRU-I-80-8.90



UNDERDRAIN OUTLET DETAIL "A"



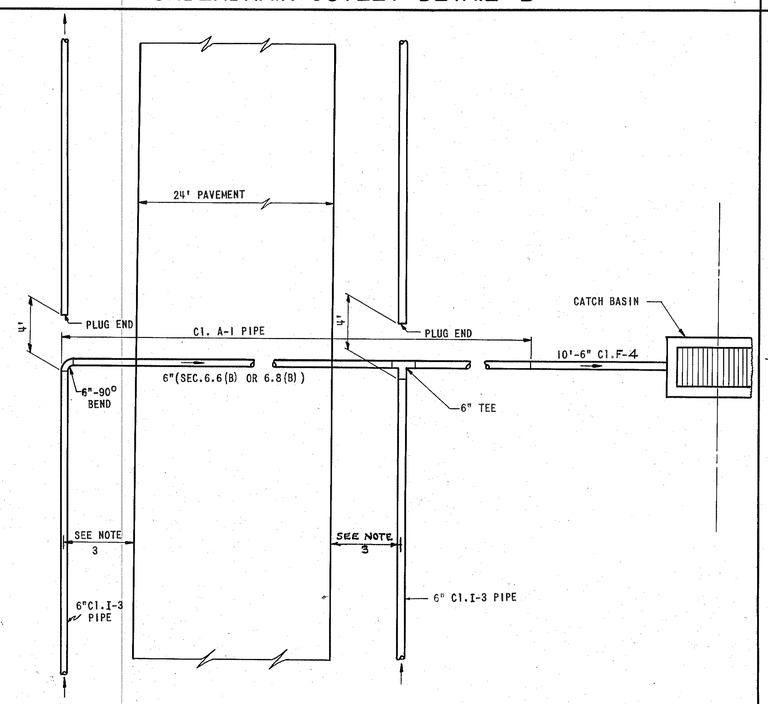
UNDERDRAIN OUTLET DETAIL "B"



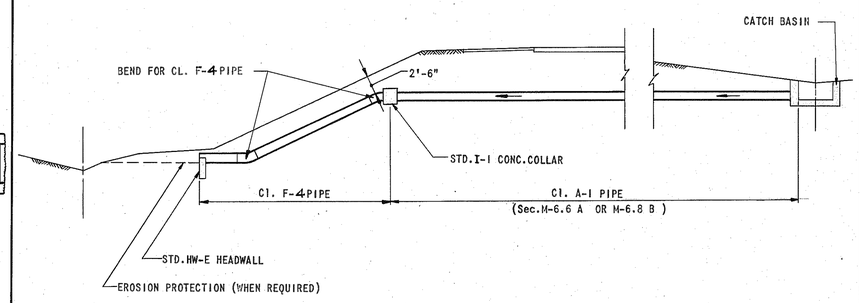
UNDERDRAIN OUTLET DETAIL "C"

NOTES

2. WHERE 8" Cl. F-I 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.



UNDERDRAIN OUTLET DETAIL "D"



MEDIAN OUTLET DETAIL IN HIGH FILL

TYPICAL DETAILS OF UNDERDRAIN OUTLETS

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

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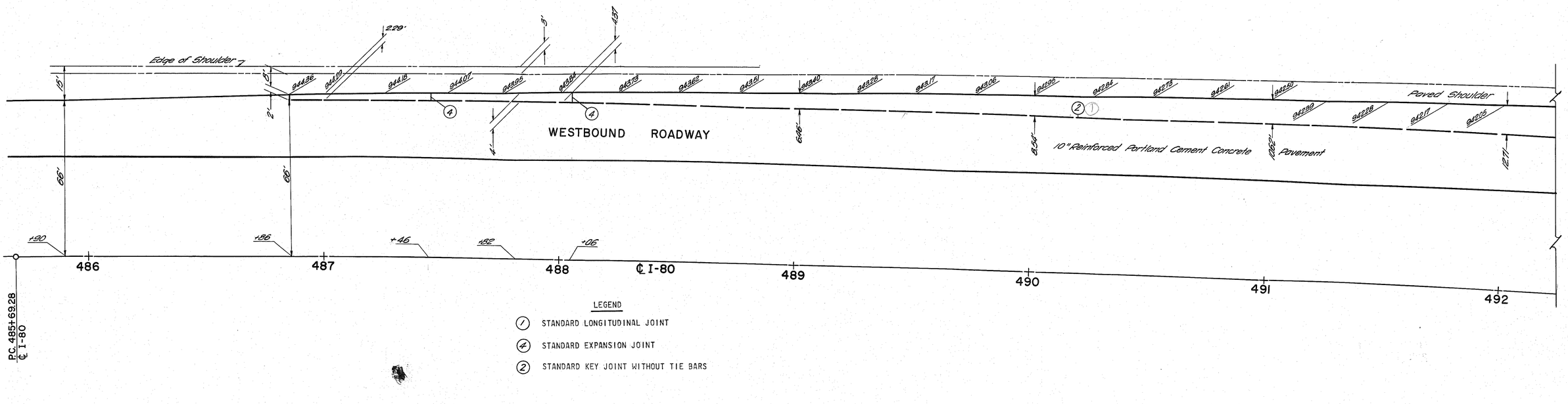
401

TRUMBULL COUNTY TRU-I-80-8.90

Transition Shoulder from 15' Width to 11' Width between Sta. 485+90℄ Sta. 487+82

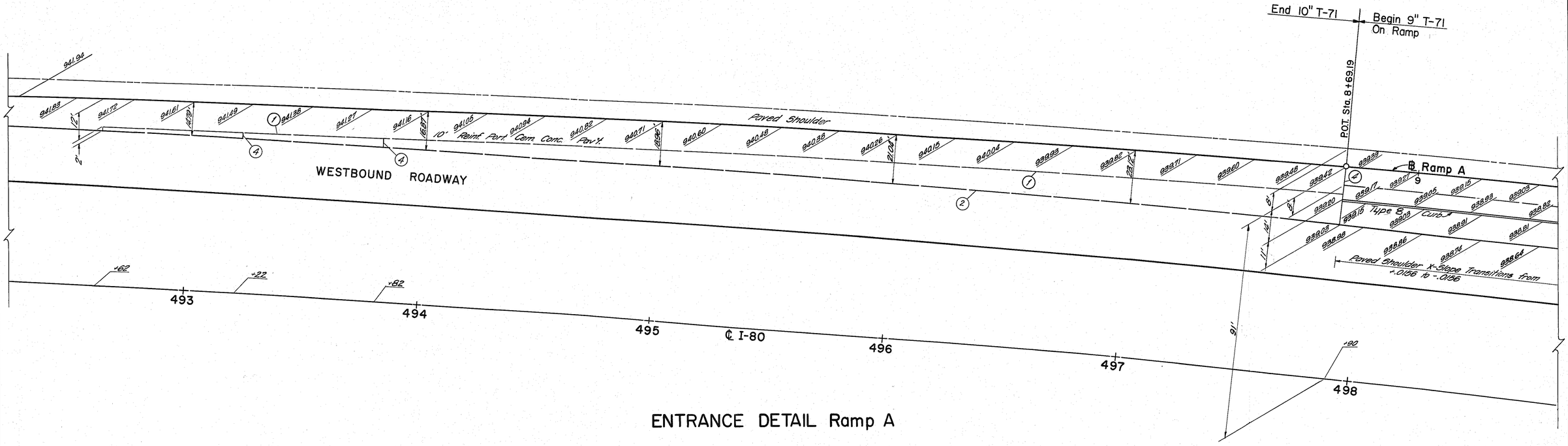


LEGEND

(1) STANDARD LONGITUDINAL JOINT

(4) STANDARD EXPANSION JOINT

(2) STANDARD KEY JOINT WITHOUT TIE BARS



ENTRANCE DETAIL Ramp A

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

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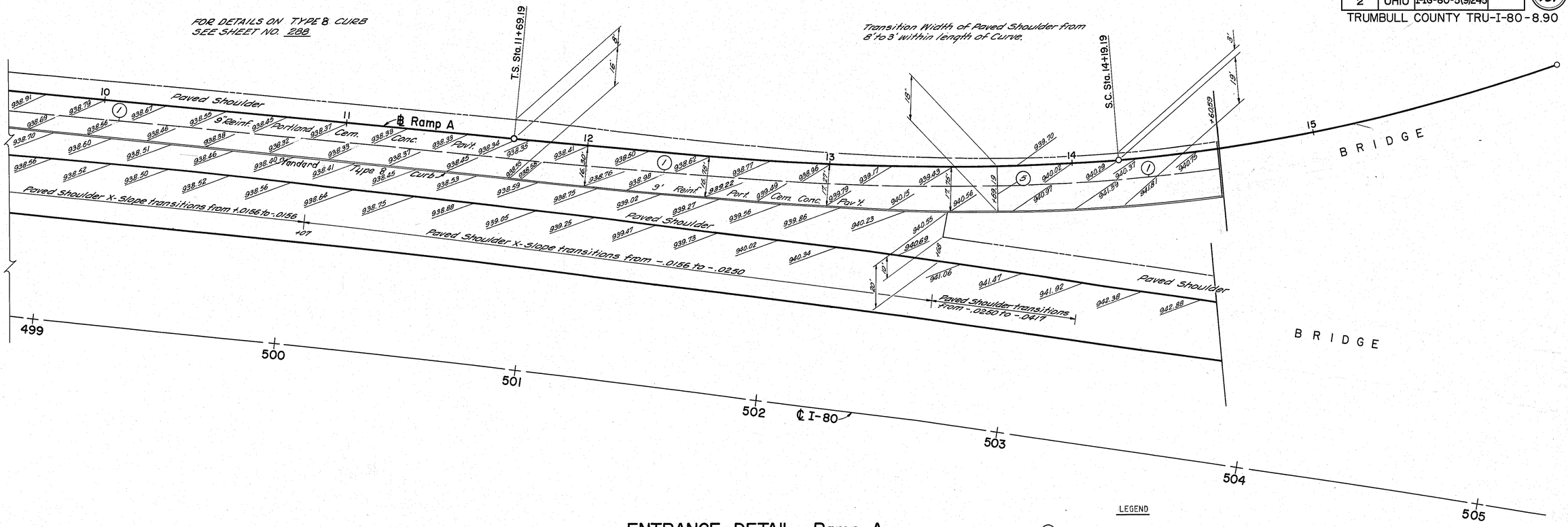
401

TRUMBULL COUNTY TRU-I-80-8.90

FOR DETAILS ON TYPE B CURB
SEE SHEET NO. 288

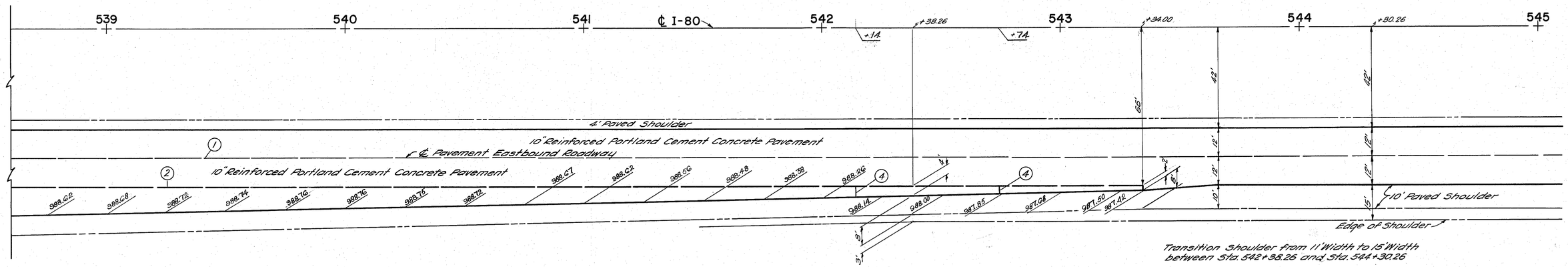
Transition Width of Paved Shoulder from
8' to 3' within length of Curve.



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	

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401

TRUMBULL COUNTY TRU-I-80-8.90

S.C. Sta. 16+45.78

Transition Paved Shoulder from 3' Width to 8' Width Between Sta. 16+45.78 and Sta. 14+45.78

Begin 9" T-71 On Ramp

End 10" T-71

C.S. Sta. 14+45.78

9" Reinf. Portland Cement Concrete Pavement

Paved Shoulder

10" Reinf. Port. Cem. Conc. Pav't.

PC. Sta. 10+50.00 Ramp B = Sta. 515+50.00 I-80 78' Lt.

℄ Ramp B

BRIDGE

For Nose Details See Sheet No. 288

510 511 512 513 ℄ I-80 514 515

EXIT DETAIL Ramp B

Transition Shoulder from 11' Width to 15 Width Between Sta. 518+57 to Sta. 519+57

Paved Shoulder

10" Reinf. Portland Cement Concrete Pavement

WESTBOUND ROADWAY

516 517 518 519 ℄ I-80 520 521 522

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	

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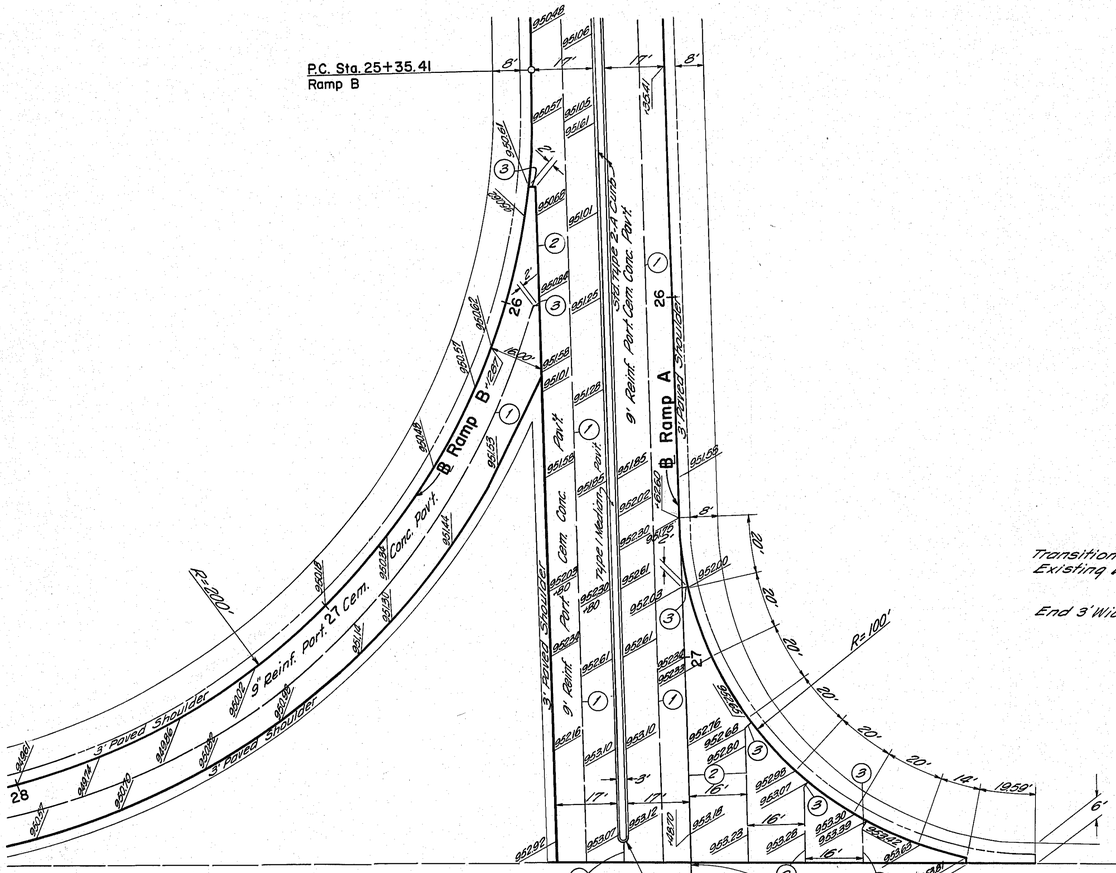
401

TRUMBULL COUNTY TRU-I-80-8.90



Transition 8' Width Shoulder to meet Existing width Shoulder in Length of Curve.

End 3' Width Paved Shoulder Lt. of Sta. 267+20.12

LEGEND

1. STANDARD LONGITUDINAL JOINT
2. STANDARD KEY JOINT WITHOUT TIE BARS
3. EXPANSION JOINT WITHOUT DOWELS

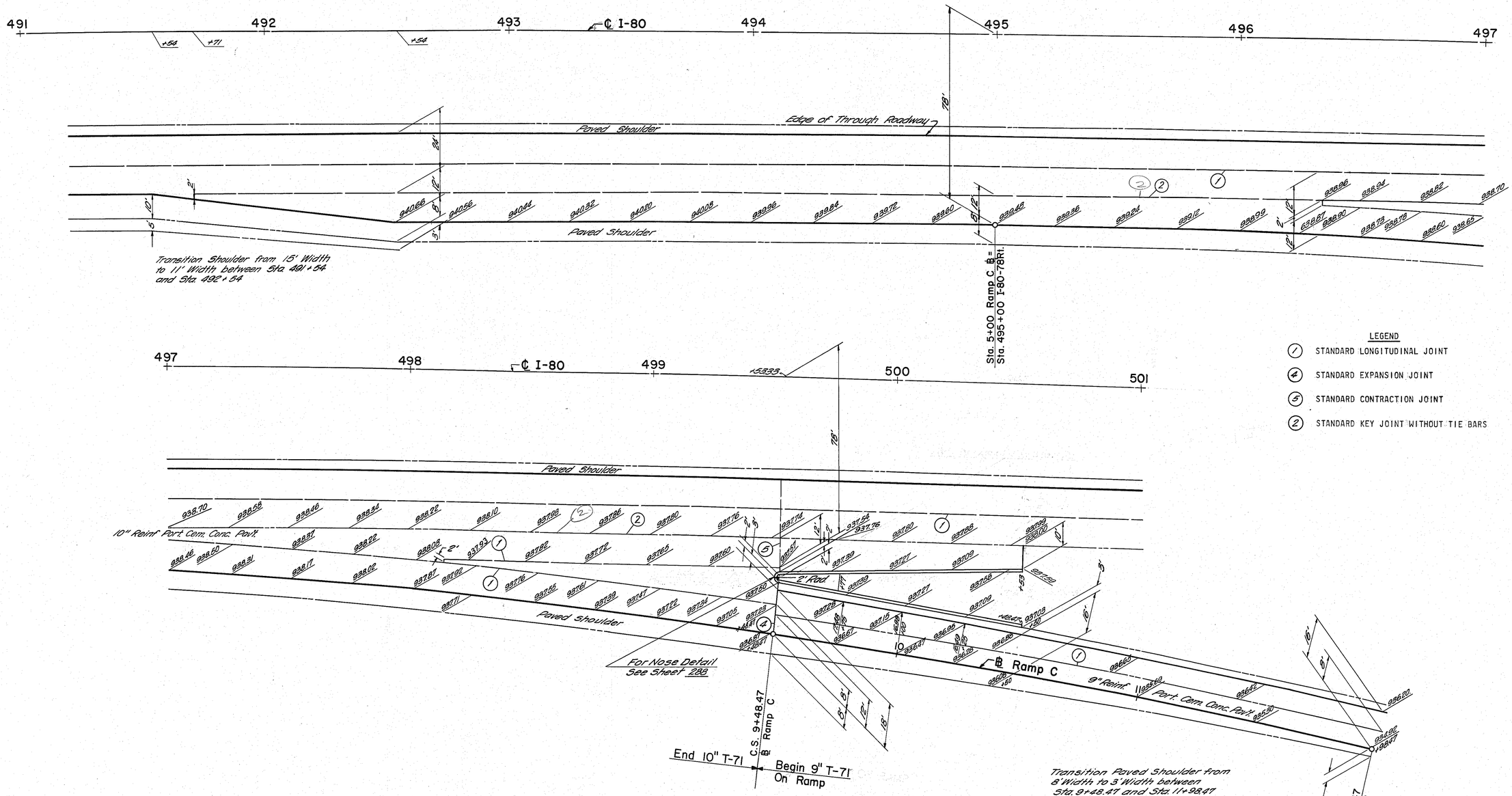
End 3' Paved Shoulder Rt. of Sta. 269+12.06
Transition Shoulder from 8' Width to meet existing width (6') between Sta. 265+82.06 & 269+12.06.

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

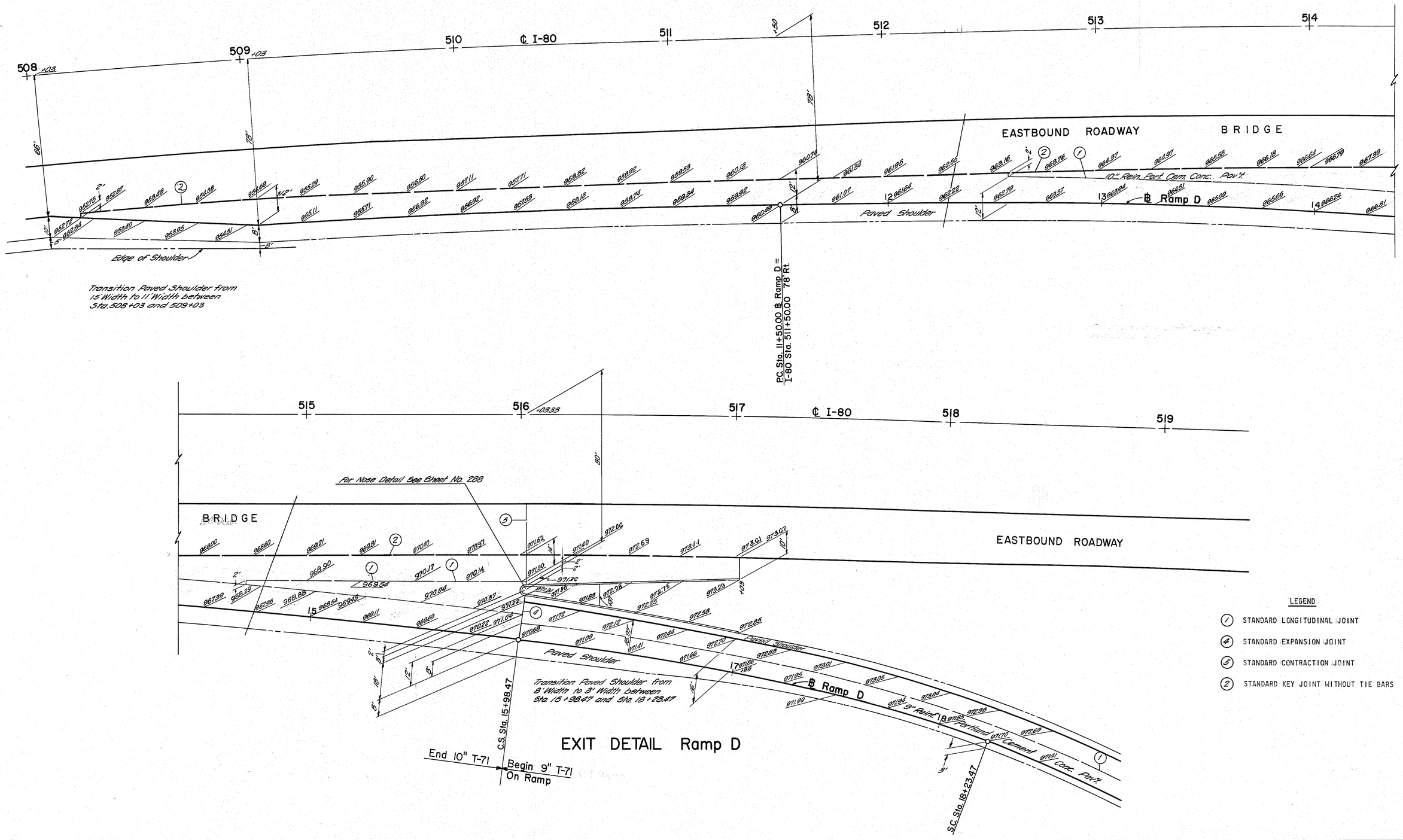


EXIT DETAIL Ramp C

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

275
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	

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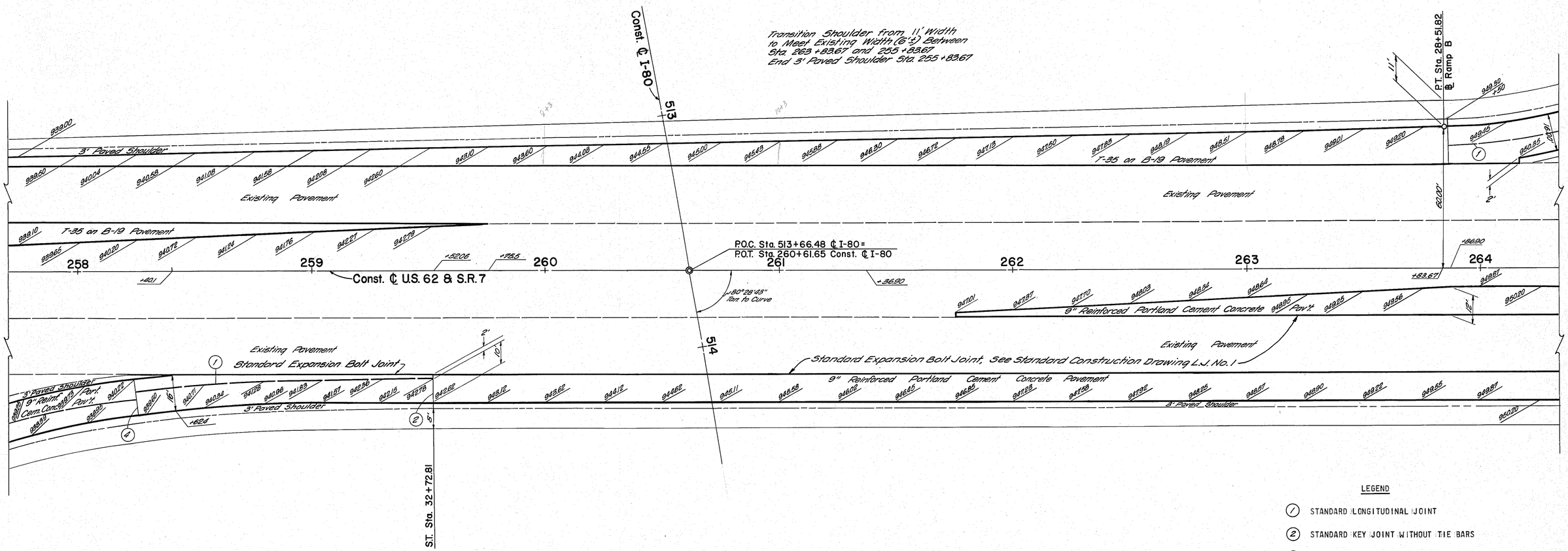
401

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	

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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

Transition 11' Shoulder Width to 10' Shoulder Width in Length of Curve. End 3' Paved Shoulder Lt. of Sta. 19+75

9" Reinforced Portland Cement Concrete Pav't.

3' Paved Shoulder

℄ Ramp E

9" Rein. Cem. Concr. Pav't.

Sta. 19+13 Begin Precast Conc. Dividers Spacing 12'-0" Ctr. to Ctr.

P.O.T. Sta. 19+18.29 HUBBARD-SHARON RD.= Sta. 18+36.09 Ramp E ℄

8' Paved Shoulder

End 8' Paved Shoulder Rt. of Sta. 19+75. Transition 12' Shoulder to 10' Shoulder between Sta. 19+75 & 20+00

P.C. Sta. 19+58.76

Begin T-35 Surface

End Concr. Pav't

Const. ℄ - HUBBARD-SHARON RD.

P.T. Sta. 21+56.28

Sta. 21+88 End Precast Conc. Dividers

DETAIL Ramp E
Intersection With Hubbard - Sharon Rd.

9" Reinf. Portland Cement Concrete Pavement

Taper Curb Vertical From 2" to 6" in 20'-0"

Seeded

P.C. Sta. 13+78.17

8' Paved Shoulder

S.C. Sta. 27+77.81

3' Paved Shoulder

Std. Conc. Curb - Type 6

Const. ℄ - HUBBARD-SHARON RD.

T.S. Sta. 25+77.81

Conc. Median Type I Sta. 16+48 to Sta. 17+73 Hubbard - Sharon Rd.

℄ Ramp D

P.T. Sta. 24+78.96

Std. Conc. Curb Type 6

Sta. 13+65 End Precast Conc. Dividers Spacing 12'-0" Ctr. to Ctr.

P.T. Sta. 16+22.00

DETAIL Ramp D
Adjacent To Hubbard - Sharon Rd.

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

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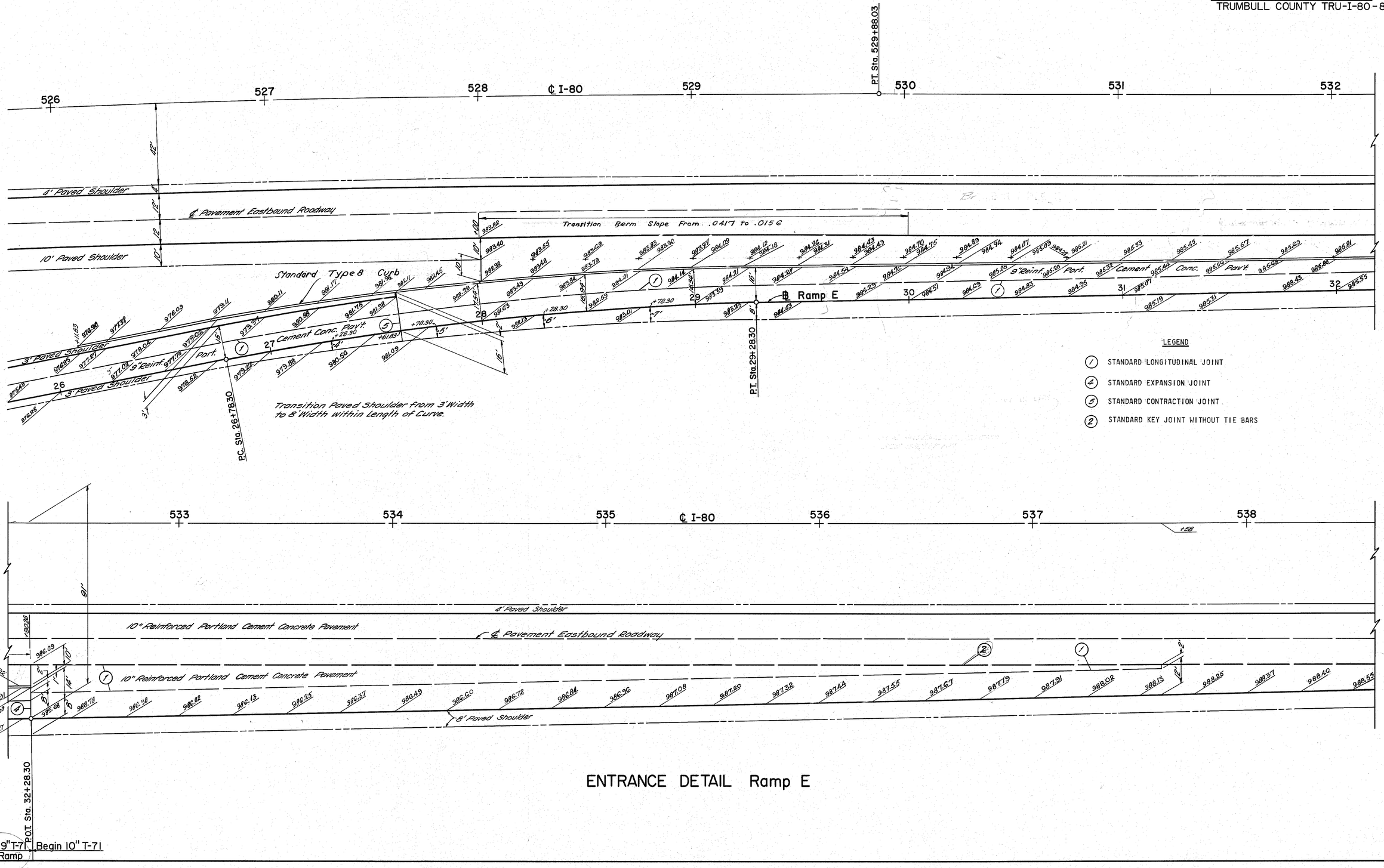
401

TRUMBULL COUNTY TRU-I-80-8.90



ENTRANCE DETAIL Ramp E

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

DETAIL Ramp C
Connection With U.S. 62 & S.R. 7

LEGEND

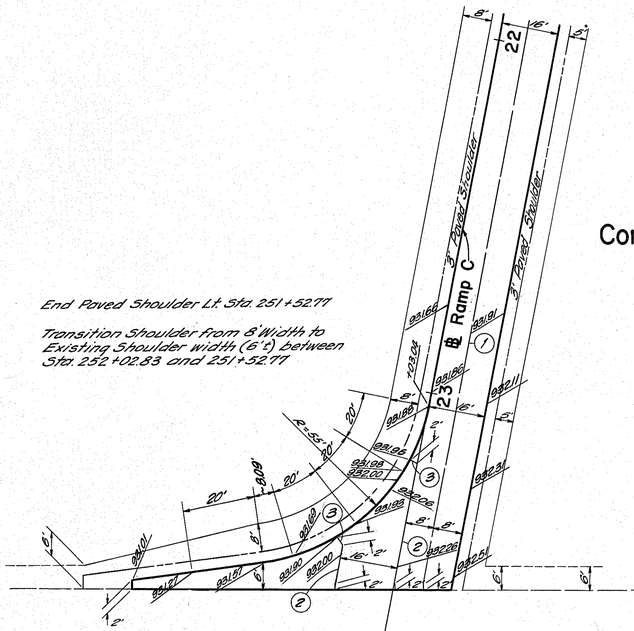
(1) STANDARD LONGITUDINAL JOINT

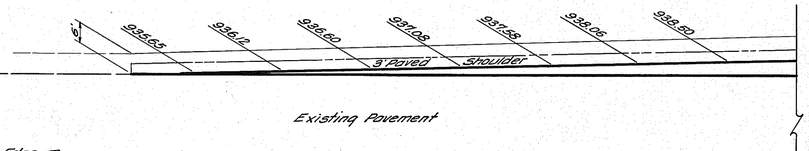
(2) STANDARD KEY JOINT WITHOUT TIE BARS

(3) EXPANSION JOINT WITHOUT DOWELS

End Paved Shoulder Lt. Sta. 251+52.77

Transition Shoulder from 8' Width to Existing Shoulder width (6'±) between Sta. 252+02.83 and 251+52.77

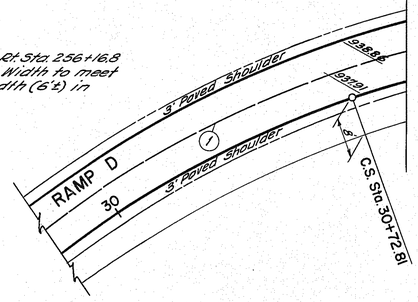




Transition 8' Width Paved Shoulder to 3' Width Paved Shoulder in Length of Curve. End Paved Shoulder Rt. Sta. 254+55.2

Transition 12' Width Shoulder to meet Existing width Shoulder (6'±) in Length of Curve.

End 3' Paved Shoulder Rt. Sta. 256+16.8 Transition 11' Shoulder Width to meet Existing Shoulder width (6'±) in Length of Curve.



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	

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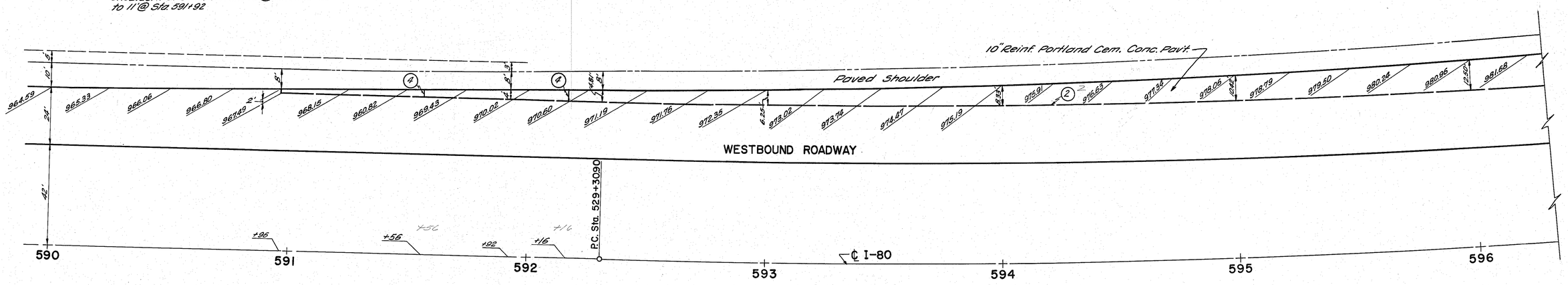
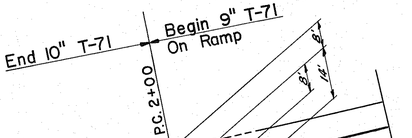
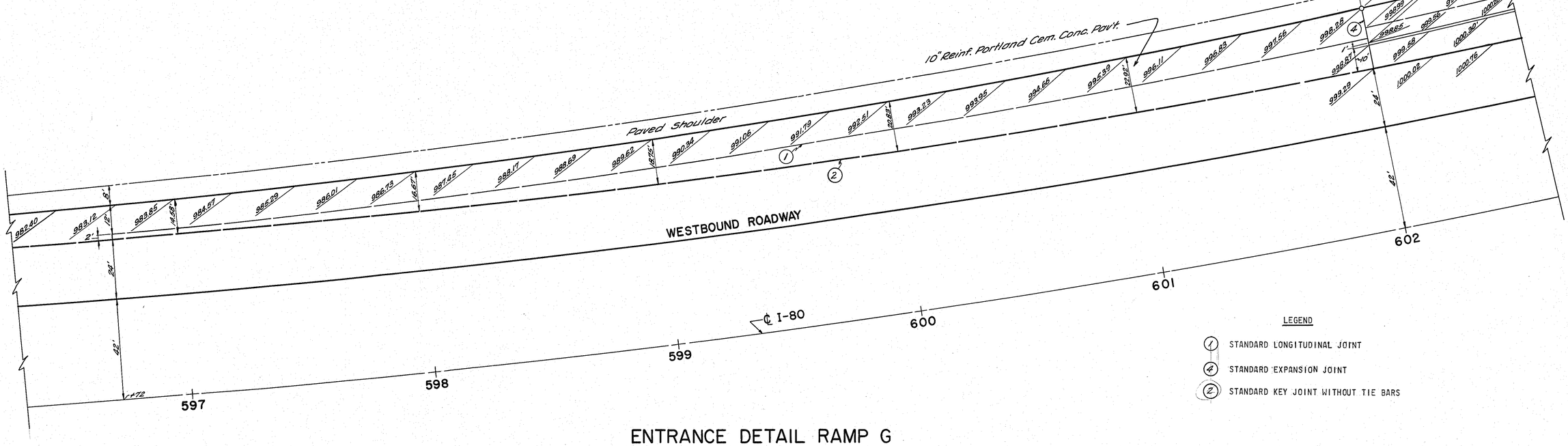
TRUMBULL COUNTY TRU-I-80-8.90

Shoulder Transitions from 15' @ Sta. 590+00 to 11' @ Sta. 591+92







LEGEND

1. STANDARD LONGITUDINAL JOINT
4. STANDARD EXPANSION JOINT
2. STANDARD KEY JOINT WITHOUT TIE BARS

ENTRANCE DETAIL RAMP G

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

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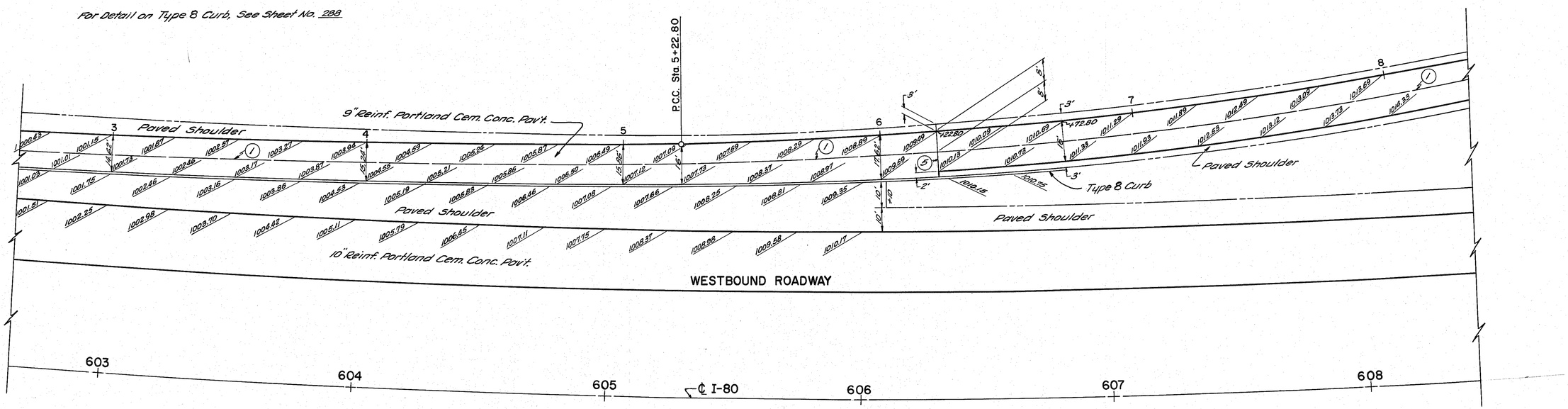
TRUMBULL COUNTY TRU-I-80-8.90

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



LEGEND

- ⑦ STANDARD LONGITUDINAL JOINT
- ⑤ STANDARD CONTRACTION JOINT

ENTRANCE DETAIL RAMP G

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

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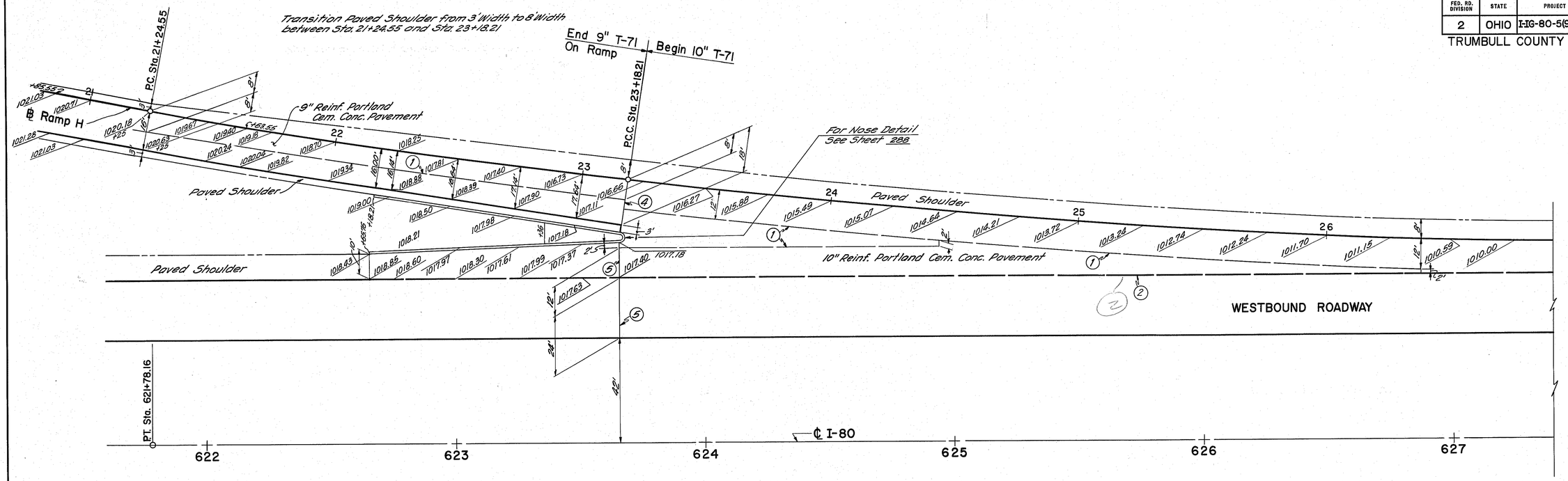
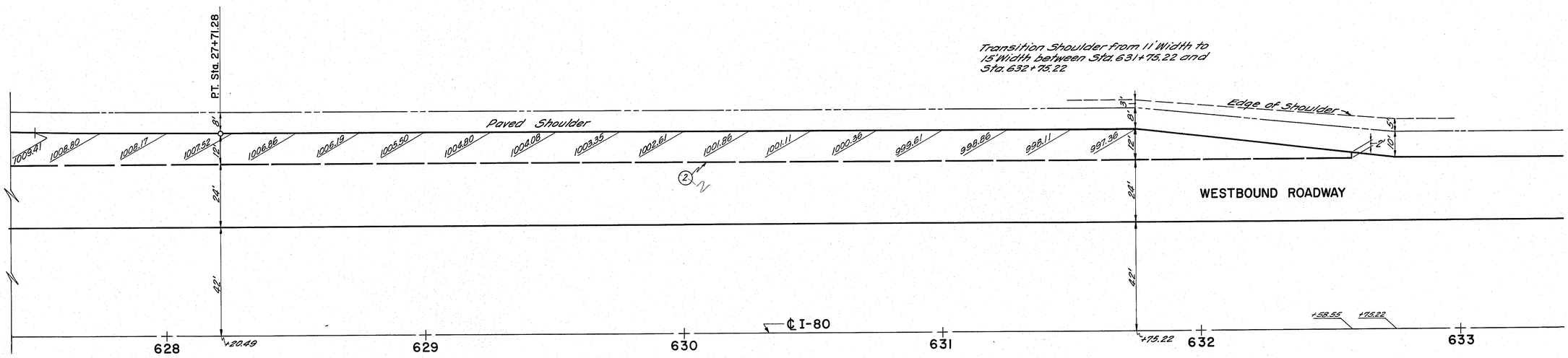
TRUMBULL COUNTY TRU-I-80-8.90





EXIT DETAIL RAMP H

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	

TRUMBULL COUNTY TRU-I-80-8.90

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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-15 3 EA. ACER RUBRUM 6" TO 7" B AND B 76" FURNISHED, MOVED & 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 ALLOYSTEEL CONDUIT } Sec. M-106.11
ITEM S-25 310 L.F. 2" GALVANIZED ALLOYSTEEL 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

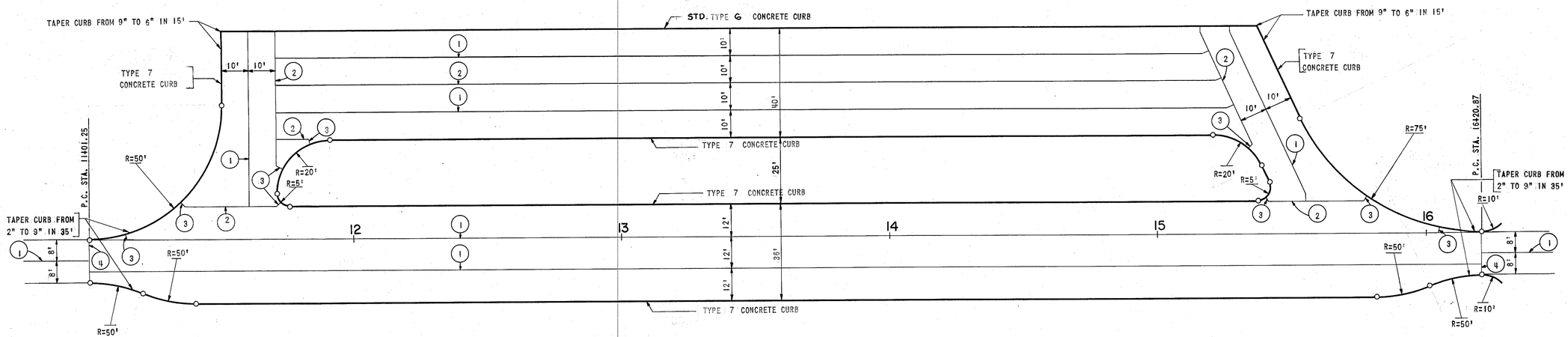
6 ACER RUBRUM 1 3/4" TO 2" B AND B 24"
8 LIQUIDAMBAR 1 3/4" TO 2" B AND B 24"
5 QUERCUS PALUSTRIS 6" TO 7" B AND B 76"
3 QUERCUS PALUSTRIS 6" TO 7" B AND B 76"
80' H-2
95' H-2
75' H-2
55' H-2
60' H-2
100' H-2
110' H-2
90' H-2
WELL SHELTER FLOOR 0.5' ABOVE SIDEWALK
WELL 13+44
120'
8 ARONIA 3' SPACING
55' WELL DRAIN 4" V.S.P.
8 ARONIA 3' SPACING
5' SIDEWALK
MOTORISTS SERVICES SHELTER FLOOR 0.5' ABOVE SIDEWALK
17 CORNUS 3' SPACING
8 CORNUS 3' SPACING
7 CORNUS SPACING 3'
5' SIDEWALK
AESCULUS
R=10'
SOD AREA INSIDE WALKS
TOILET
1/4" / FT.
TOILET FLOOR ELEVATION 0.5' ABOVE WALK AT DOORS
SHADED AREA 7" SIDEWALK SLOPE 1/4" / FT.
1/4" PER FT.
12+15
14+65
120' TO WELL
2" Conduit and markers.
8 LIQUIDAMBAR 1 3/4" TO 2" B AND B 24"
270 CORNUS RACEMOSA 3' SPACING DOUBLE ROW
3 LIQUIDAMBAR 1 3/4" TO 2" B AND B 24"
3 LIQUIDAMBAR 1 3/4" TO 2" B AND B 24"
20' H-2
3 ACER RUBRUM 6" TO 7" B AND B 76"
P.T. STA. 11+01.25
P.C. STA. 16+20.87
ACER RUBRUM TREE
VARIABLE SLOPE
CURB
20' I-1
BALL
FILL TO BE PLACED ON SLOPE AT THREE TREES AS DIRECTED.
℄ ROADWAY DITCH LT. I-80

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

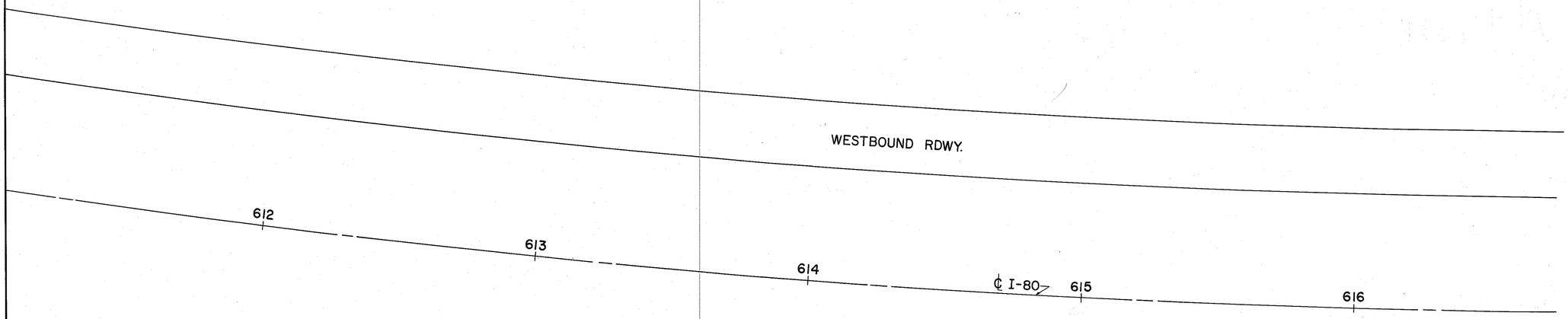
(1) STANDARD LONGITUDINAL JOINT

(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



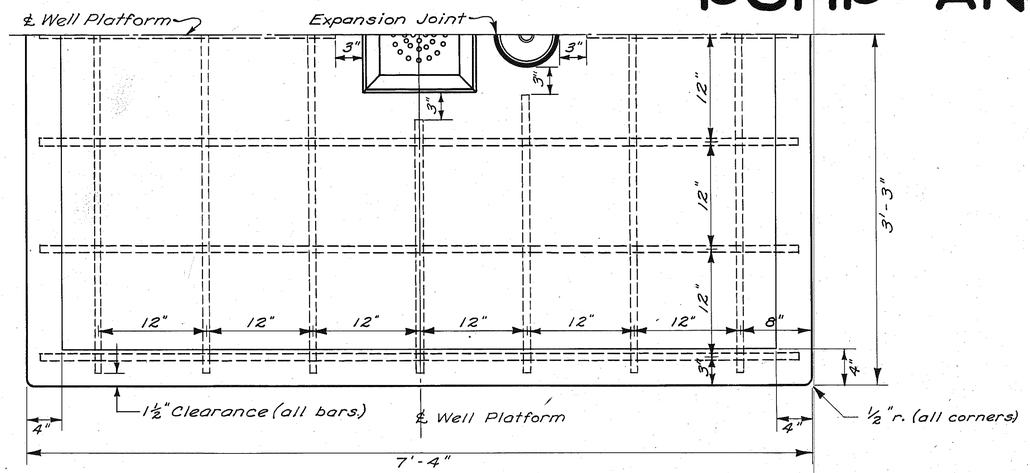
JOINT AND CURB LAYOUT
ROADSIDE REST

PUMP AND PLATFORM

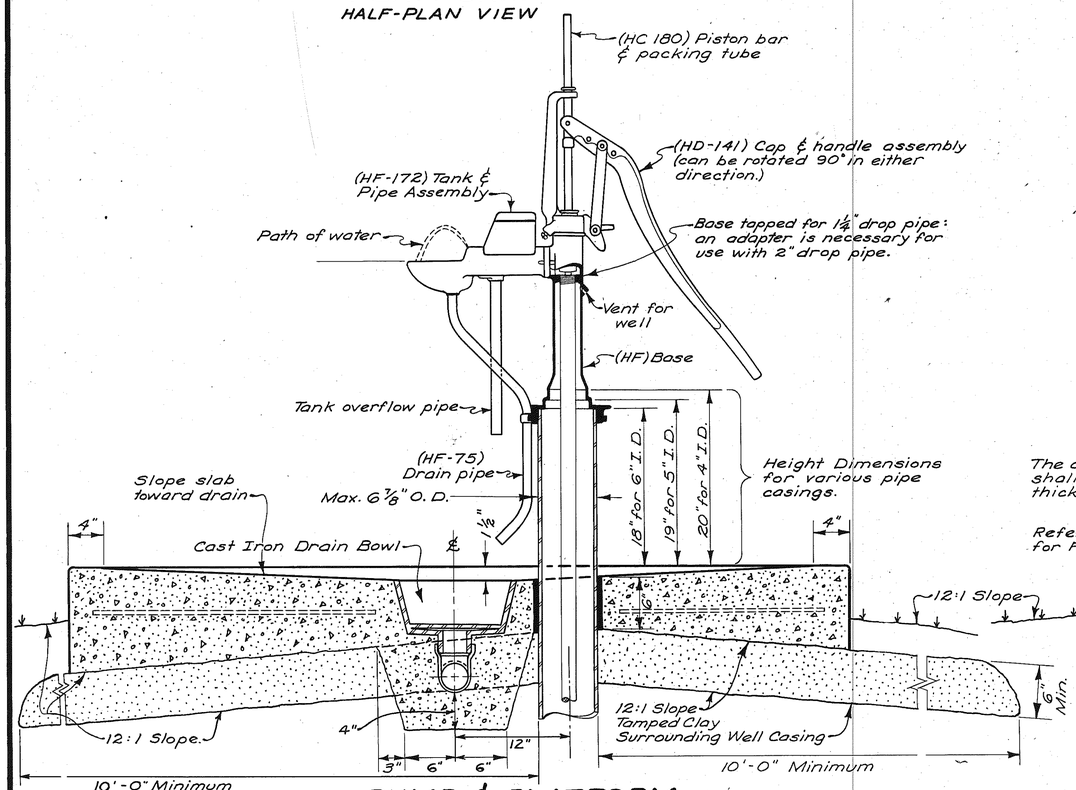
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

284-A

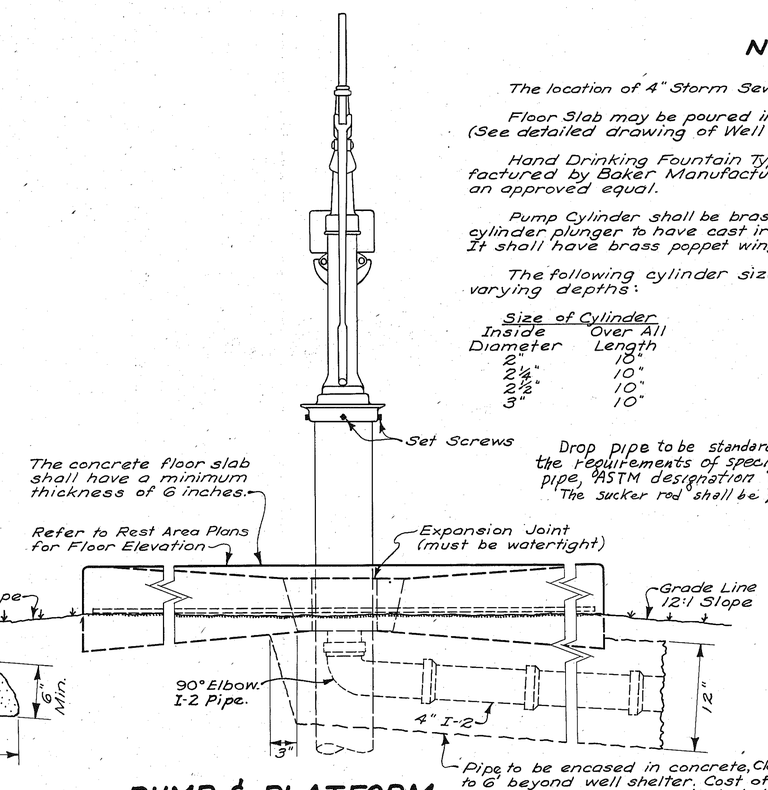
TRUMBULL COUNTY
TRU-80-8.90



PLATFORM
HALF-PLAN VIEW



PUMP & PLATFORM
SIDE ELEVATION



PUMP & PLATFORM
REAR ELEVATION

Pipe to be encased in concrete, Class "C", to 6' beyond well shelter. Cost of pipe and encasement shall be included in cost of "Well Shelter, Pump and Platform."

BILL OF MATERIALS*

Hand Drinking Fountain Type Pump (Including pump cylinder.)
Class "C" Concrete.
12"x12"x6" Cast Iron Drain Bowl.
4" Pipe Encased.

¾" 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'

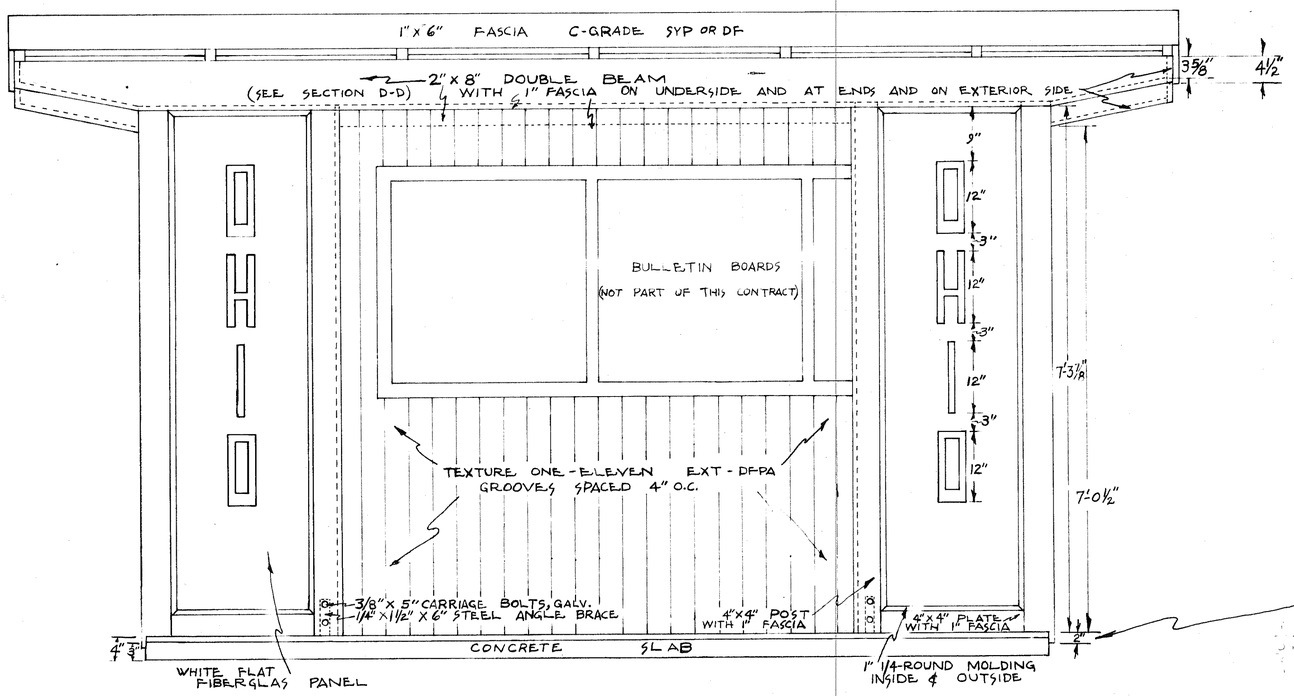
Drop pipe to be standard weight 1¼" galvanized pipe and shall meet the requirements of specifications for welded and seamless steel pipe, ASTM designation A-53. A ⅛" Weep hole shall be drilled 6' below top of casing. The sucker rod shall be ⅞" diameter galvanized steel.

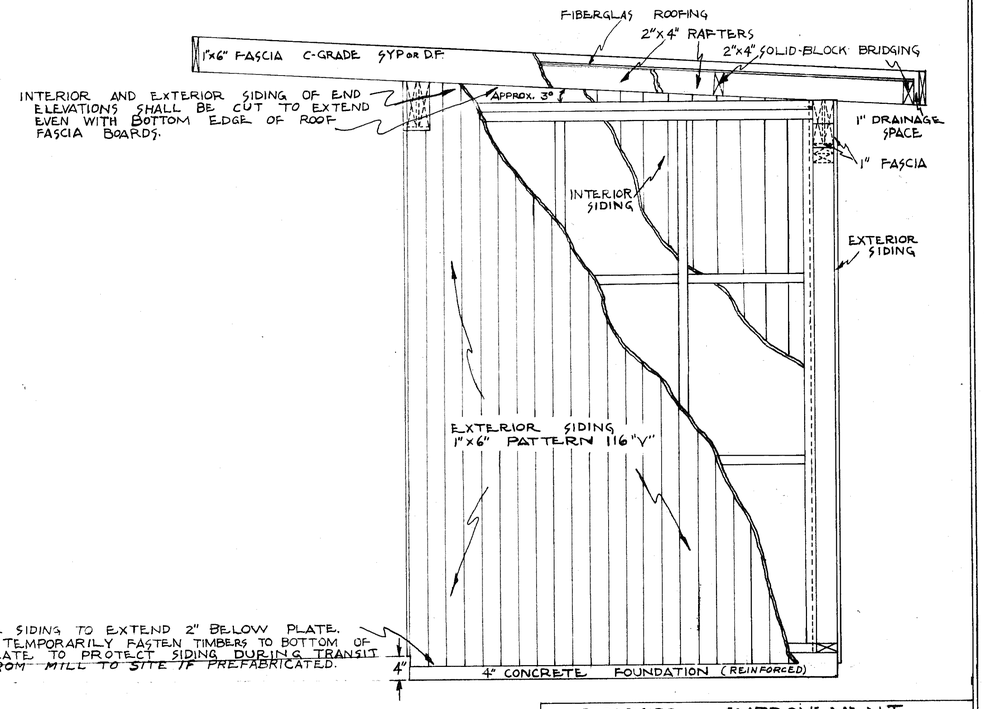
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

284-B

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. ⅛-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, 2½-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'

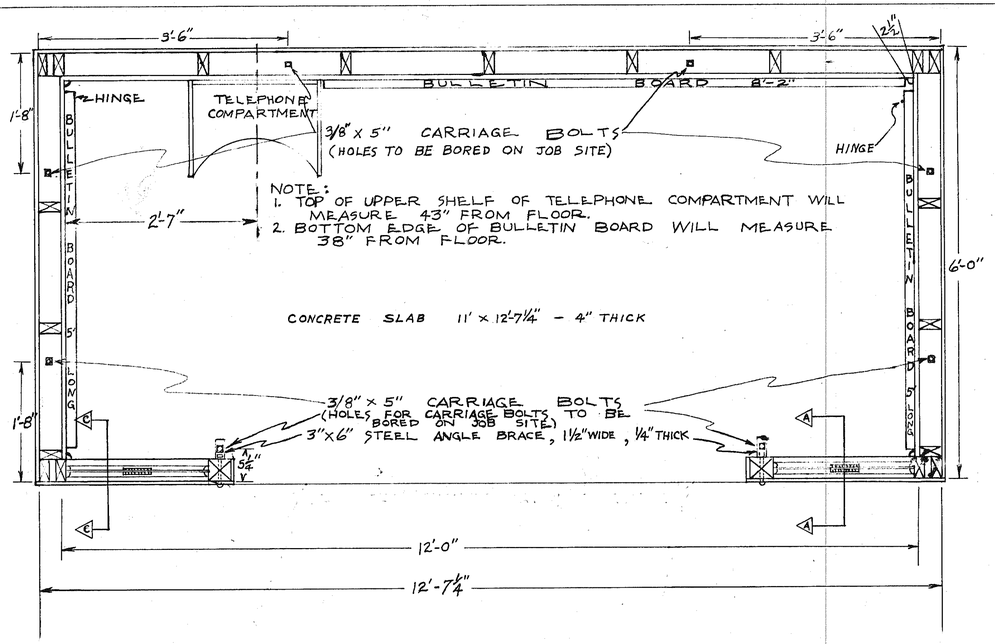
DESIGNED: RBB

APPROVED: [illegible]

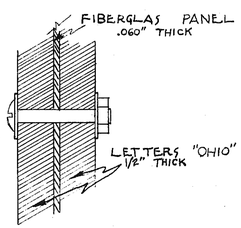
TRUMBULL COUNTY
TRU-80-8.90

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

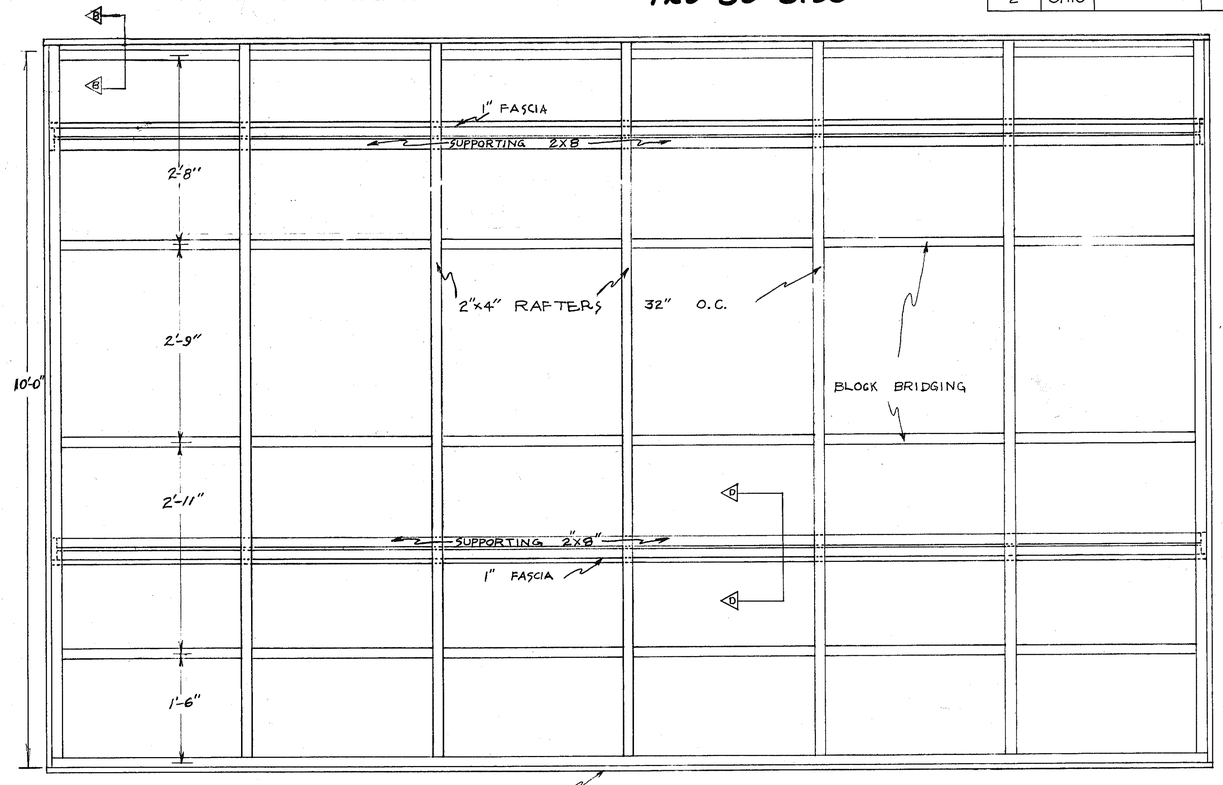
284-C



PLAN

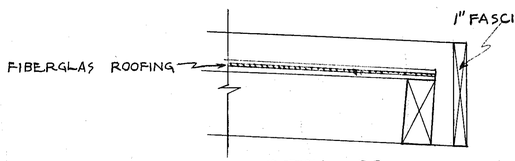


SECTION A-A
INSTALLATION OF LETTERS ON FIBERGLAS PANEL
FULL SCALE

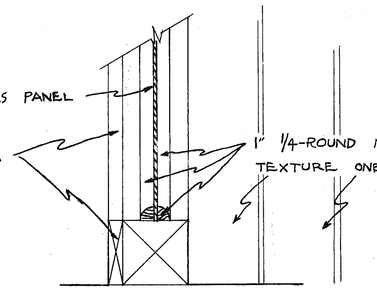


SCALE: 1" = 1'

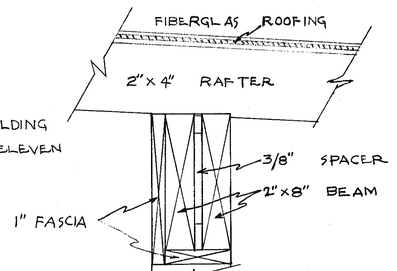
ROOF FRAMING PLAN



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'

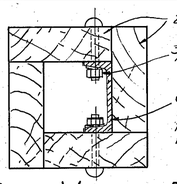
MOTORIST'S SERVICES SHELTER

Sheet 2 of 2

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

284-D

TRUMBULL COUNTY
TRU-80-8.90



PLAN VIEW OF POST CONSTRUCTION
Scale 3"=1'-0"

ESTIMATED BILL OF MATERIALS

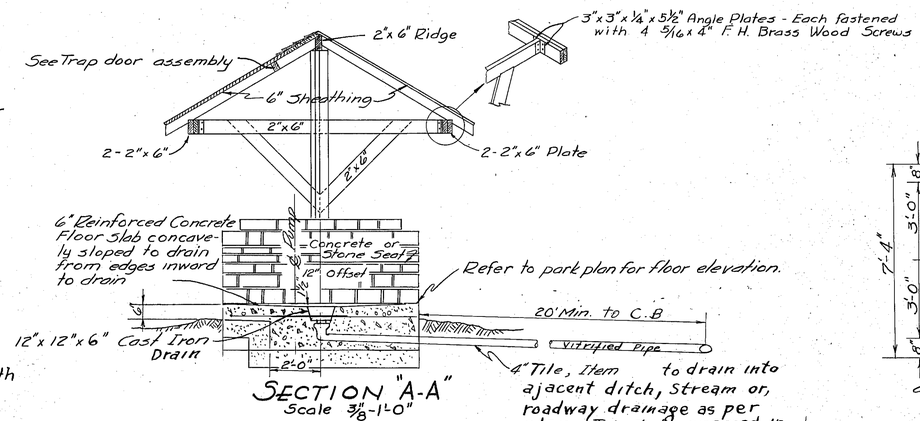
4 pcs.	2"x6"x10'	Cross members for roof and angular Supports
5 "	2"x6"x14'	Ridge & plate for roof
8 "	2"x4"x14'	Roof rafters
4 "	2"x6"x16'	Boxing around Channel iron, for column Supports.
2 "	6"x6"x10'	Wood posts (alternate column Supports)
2 "	5½"-7"O.D.x11'	Used well casing (alt. column supports)
28 "	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

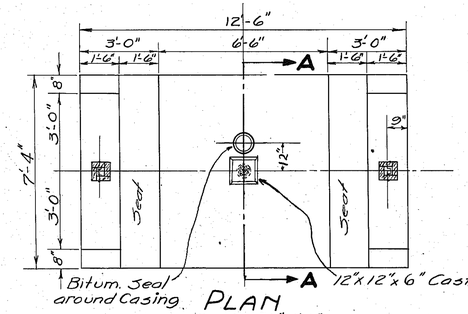
24 each	3/8"x3"	Carriage bolts in column supports
4 "	½"x11"	C-Bolts, column & braces
4 "	½"x9"	C-Bolts, column & cross-arms
4 "	½"x5"	C-Bolts, braces & cross-arms
1 "	12 x 12 x 6"	Cast Iron Drain Bowl
1 "	14'	— Copper or Aluminum Ridge Roll

2 pcs. (11 lin.ft. each) - Channel iron
8 ea. 3"x3"x¼"x5½" - 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"

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, "I 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.

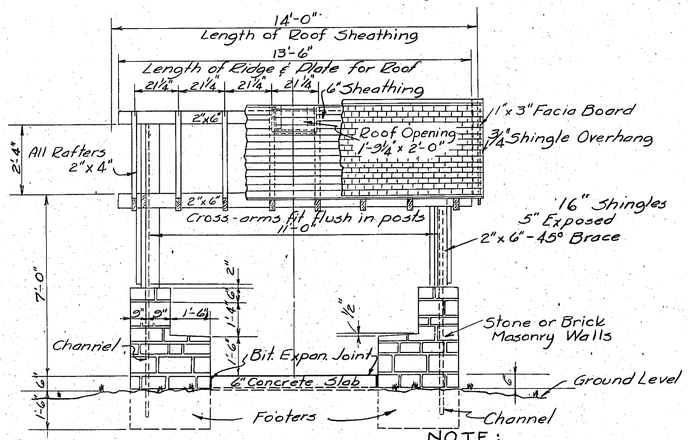
Large sized washers shall be used with all bolts, one at each end; a lock washer shall also be used at the nut end. Bolts shall be cut off ¼" beyond the nut & then hammered. All bolt holes shall be soaked with 5% Pentachlorophenol Solution, thoroughly before inserting bolts.

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.

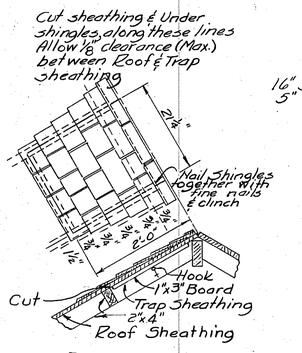
Should local conditions warrent, drainage of excess ground water from compartment beneath fountain; it shall be carried off either by gravity flow or sump drains as required, by topography of the individual park area affected.

Aggregate subbase for concrete slab shall meet the requirements of Item I-22 Subbase, Grading "C" or "D"

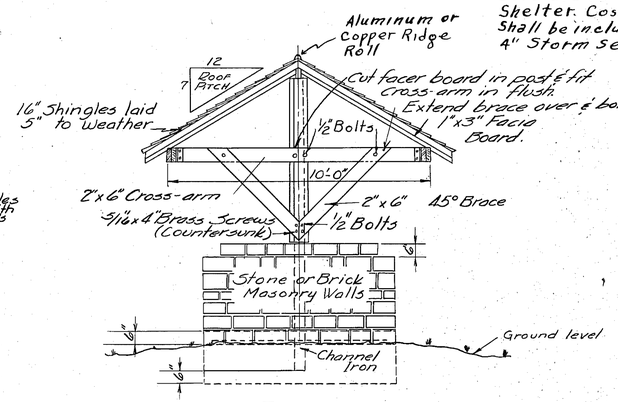


ELEVATION
Scale 3/8"=1'-0"

NOTE: Bituminous Expansion Joint will not be necessary if concrete well slab is placed integral with footers for Well Shelter.



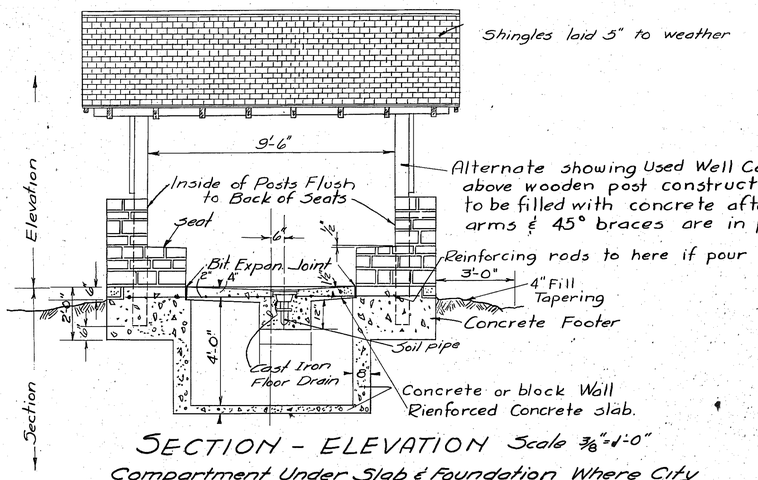
DETAIL OF TRAP DOOR
Scale ¾"=1'-0"



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

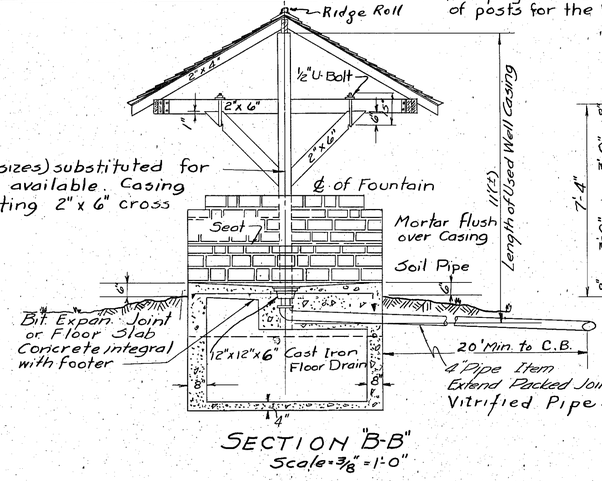
This Well Shelter Design is the "TRADE MARK" of the Roadside Parks in Ohio. It will be erected as standard.

NOTE: Details below this line do not apply to this project except for alternate design of posts for the Well Shelter.

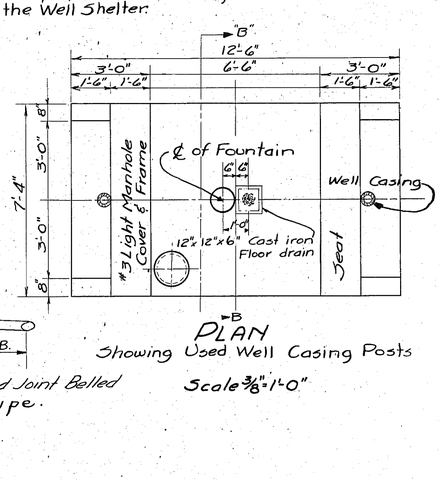


Alternate showing Used Well Casing (5½"-7" O.D. sizes) substituted for above wooden post construction where readily available. Casing to be filled with concrete after ½" bolts supporting 2"x6" cross arms & 45° braces are in place.

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.	M.J.G

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

TRUMBULL COUNTY TRU-I-80-8.90

284E 401

MERCURY LUMINAIRE

CONDUCTOR SUPPORT HOOK INSIDE STANDARD

ANCHOR BASE, ROUND STEEL STANDARD, UNION METAL NO. 440 A WITH HANDHOLE, H-270-D-2 10 FT. BRACKET SPAN, OR J-270-F2 15'-0" BRACKET. (NOMINAL MOUNTING HEIGHT 30 FT.)

4" x 6½" HANDHOLE

1½" BEVEL

℄ 2" CONDUIT, 30" MIN. BELOW FIN. GRADE

3" MIN.

FOUR 1" x 40" BENT ANCHOR BOLTS OR LARGER IN ACCORDANCE WITH POLE DIA. AND GAUGE. PROJECT ABOVE CONCRETE IN ACCORDANCE WITH LAMP STANDARD MFR'S. REQUIREMENTS. GALVANIZE EXPOSED ENDS AND NUTS.

4:1

2:1

INSULATED BUSHING

6'-0" MIN TO FIN. GRADE

5/8" x 8'-0" COPPERCLAD GROUND ROD EXOTHERMIC WELDED TO NO.4 BARE COPPER GROUND WIRE

2'-0"

12"

2'-0"

2" GALVANIZED WROUGHT IRON CONDUIT PROJECT 2" ABOVE TOP AND BEYOND SIDE OF FOUNDATION.

ROADWAY STANDARD

LINE MATERIAL TYPE 2 D MERCURY POST MOUNTED LINE MATERIAL CAT. M-1983 OR OTHER APPROVED EQUAL

TRANSFORMER BASE POLE UNION METAL CAT. 70805-Y10 OR APPROVED EQUAL.

MONOTUBE POLE M/E 6.5" X 3.94" X 18'-3"

BALLAST HANGER CLIP

DOOR OPENING APPROX. 9" X 10" X 13"

1½" BEVEL

3" MIN.

GRADE

20"

℄ 2" CONDUIT, 30" MIN. BELOW FIN. GRADE

5' MIN. TO FIN. GRADE

5/8 X 8' COPPERCLAD GROUND ROD EXOTHERMIC WELDED TO NO. 4 BARE COPPER GROUND WIRE.

2" GALVANIZED WROUGHT IRON CONDUIT, PROJECT 2" ABOVE AND BEYOND SIDES OF FOUNDATION. INSTALL SUFFICIENT CONDUITS TO LINE-UP WITH ADJACENT CONDUIT RUNS.

24"

24"

12"

PICNIC AREA STANDARD

CONDUCTOR SUPPORT HOOK INSIDE STANDARD

MERCURY LUMINAIRE

TRANSFORMER BASE, ROUND STEEL STANDARD, UNION METAL NO. 442A WITH (2) H-270-E-2 12 FT. BRACKET OR (2) J-270-F2 15 FT. BRACKET SPAN, OR OTHER APPROVED EQUAL (NOMINAL MOUNTING 30 FT.)

FOUR - 1' x 40" BENT ANCHOR BOLTS OR LARGER IN ACCORDANCE WITH POLE DIA. AND GAUGE. PROJECT ABOVE CONCRETE IN ACCORDANCE WITH LAMP STANDARD MFR'S. REQUIREMENTS GALVANIZE EXPOSED ENDS AND NUTS.

1½" BEVEL

GRADE

3" MIN.

EDGE OF CURB

PAVEMENT

℄ 2" CONDUIT, 30" MIN. BELOW FINISHED GRADE

6'-0" MIN. TO FIN. GRADE

INSTALL GROUND CABLE OUTSIDE FOUNDATION CONDUIT WHERE CONTINUOUS UNDERGROUND CONDUIT IS USED.

2'-0"

℄ ISLAND

12"

2'-0"

PARKING AREA STANDARD

WEATHERHEAD

CHECK CLEARANCE WITH TELEPHONE COMPANY.

PROVIDE SUFFICIENT CABLE FOR POWER COMPANY 120/240 VOLT SERVICE CONNECTION.

WEATHERHEAD

3-NO. 4 RHW WIRE IN 2" CONDUIT.

1¼" CONDUIT FOR TELEPHONE, INSTALL PULL WIRE IF REQUIRED.

METER IF REQUIRED FURNISHED BY POWER COMPANY.

60 AMPERE SERVICE SWITCH. NEMA IV

2" CONDUIT, WITH 3-NO.4 RHW WIRE TO SERVICE PANEL IN UTILITY BUILDING

GRADE

STRAIN BLOCKING PER POWER COMPANY SPECIFICATION

5/8" x 8' COPPERCLAD GROUND ROD EXOTHERMIC WELDED TO NO. 4 BARE COPPER GROUND WIRE.

SERVICE POLE

8" MIN. FOR CONDUIT

FINISHED GRADE

EXCAVATED MATERIAL, SCREENED 3" MAX. AGGREGATE COMPACT MECHANICALLY IN 6" LAYERS.

30"

CONDUIT

2" 2"

TRENCH DETAIL

FOR 2" SERVICE CONDUIT, 1¼" TELEPHONE CONDUIT AND LIGHTING CONDUITS

IMPRESS ARROW ON TOP OF MARKER TO INDICATE CABLE DIRECTION

CABLE

24"

24"

1"

4"

CONCRETE MARKER

DIMENSIONS SHOWN ARE FOR ALL SYMBOLS IMPRESSED IN MARKER.

A A

4"

3"

½"

1½"

1¼"

SEC. A-A

TYPICAL SYMBOL

NOTE

IMPRESS THE WORD CABLE, CONDUIT OR SPLICE IN THE TOP OF MARKER USING LETTERS OF THE TYPE AND DIMENSIONS AS PER DETAIL.

MARKER DETAIL

V O I D

GUARD RAIL FACE (WHEN USED)

1'

1'

1'-8"

EDGE OF PAVED BERM

EDGE OF PAVEMENT

ROADWAY CABLE LOCATION

IMPRESS THE WORD "CONDUIT" IN COVER. (SEE "MARKER DETAILS" FOR SYMBOL DIMENSIONS).

3'-0"

2'-3"

2'-2 1/2"

2'-2"

6"

2'-0"

6"

1'-6"

NO. 4 GALV. WIRE LOOP

4 X 4/6 STEEL MESH (OR EQUIV.)

SYM. ABOUT ℄

CONCRETE PULL BOX

V O I D

LIGHTING DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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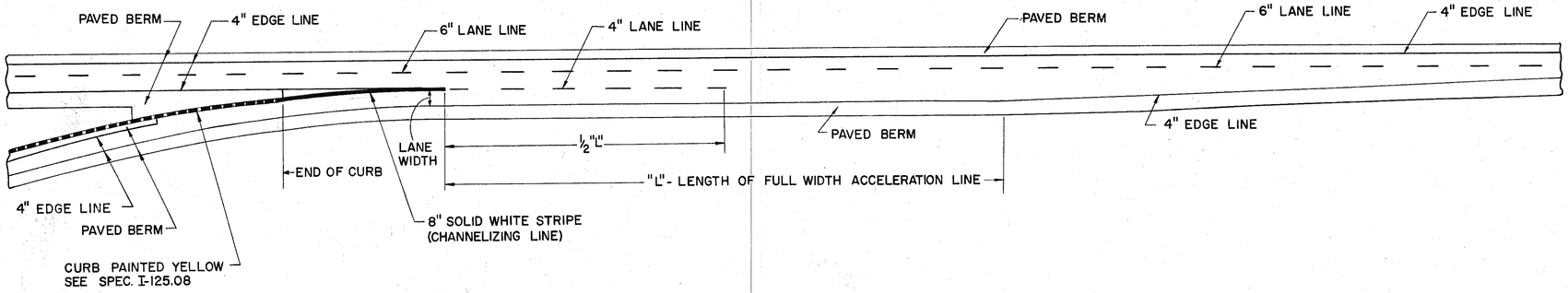
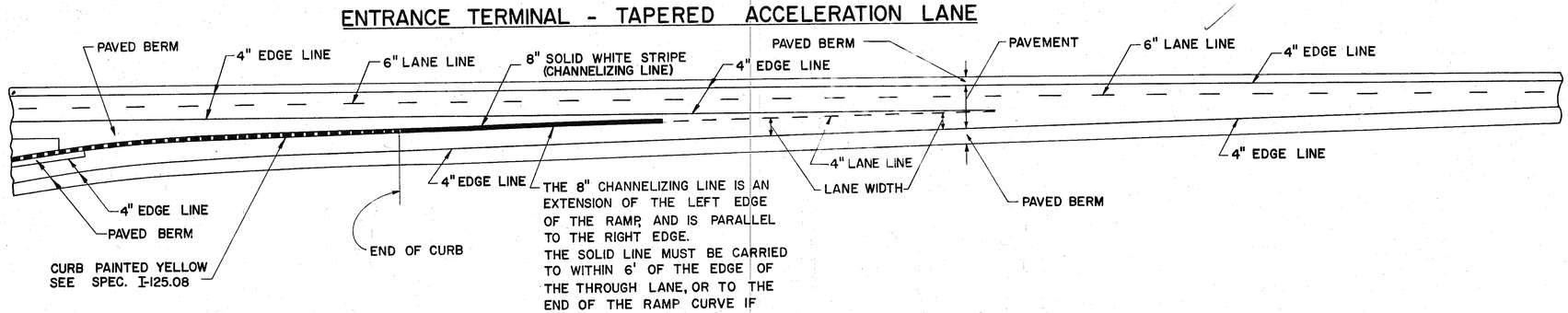
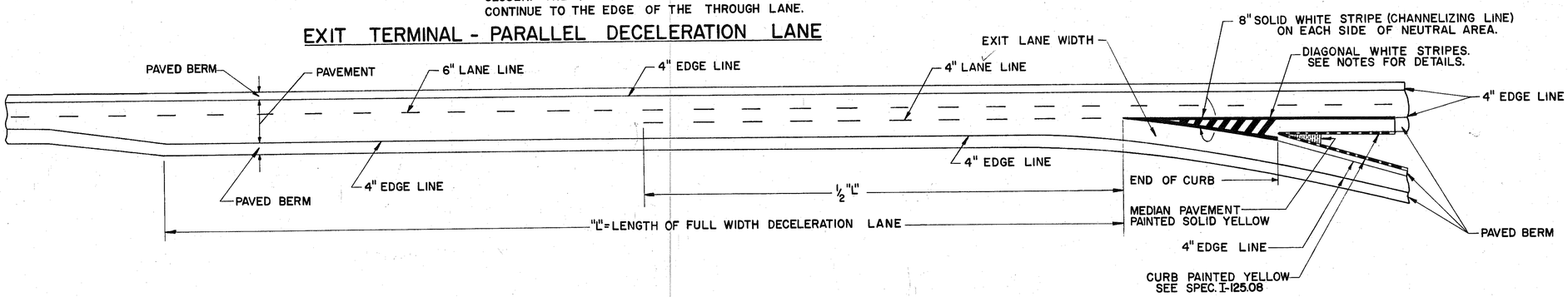
ENTRANCE TERMINAL - PARALLEL ACCELERATION LANE



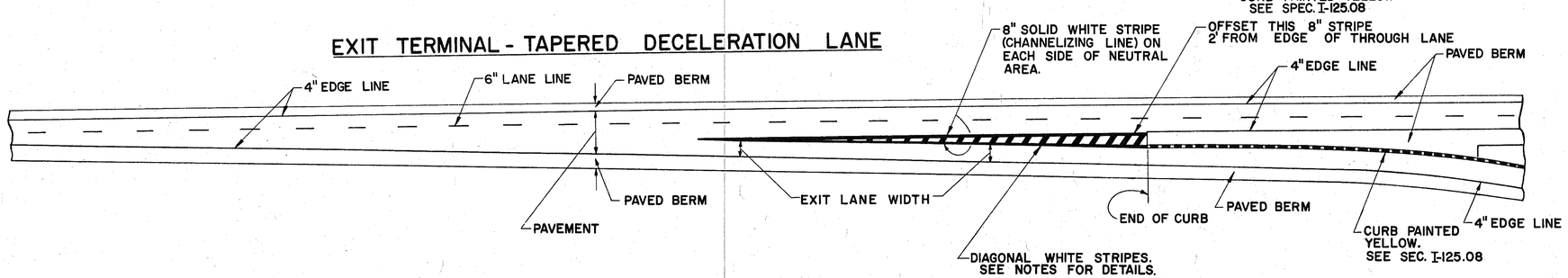
ENTRANCE TERMINAL - TAPERED ACCELERATION LANE



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	

TRUMBULL COUNTY TRU-I-80-8.90

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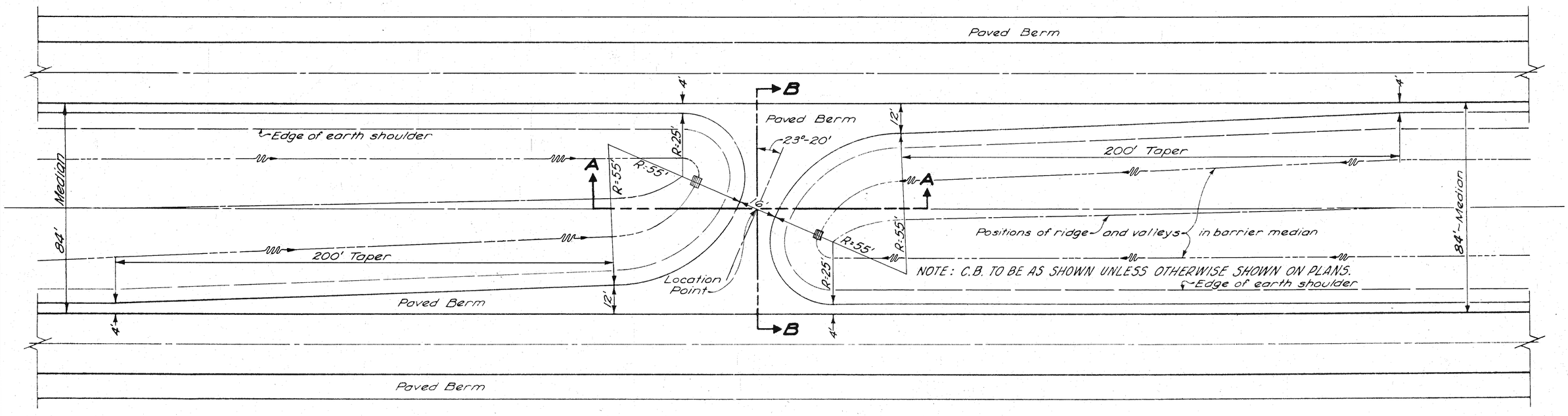
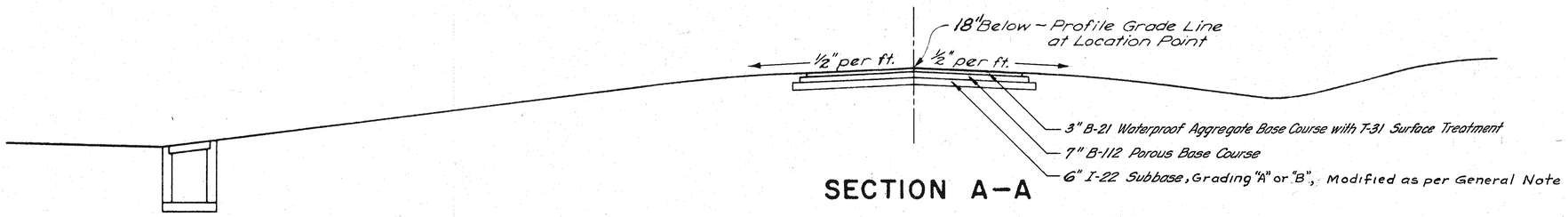
TYPICAL U-TURN MEDIAN OPENINGS

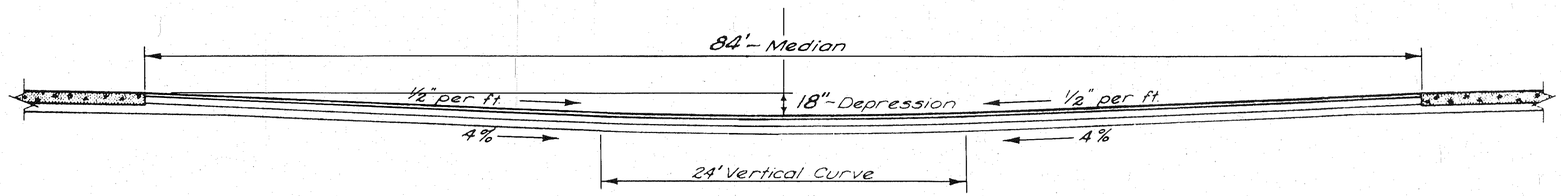


TYPICAL CROSSOVER

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	
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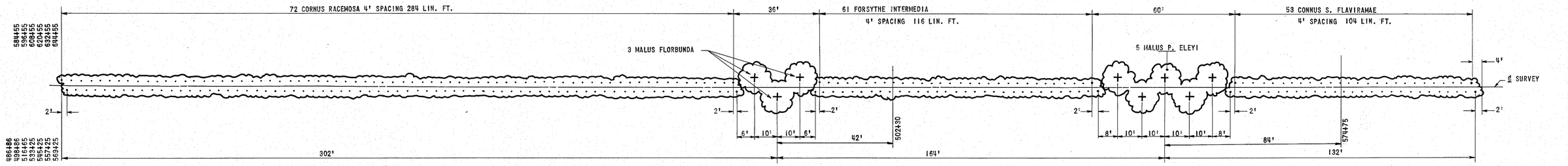
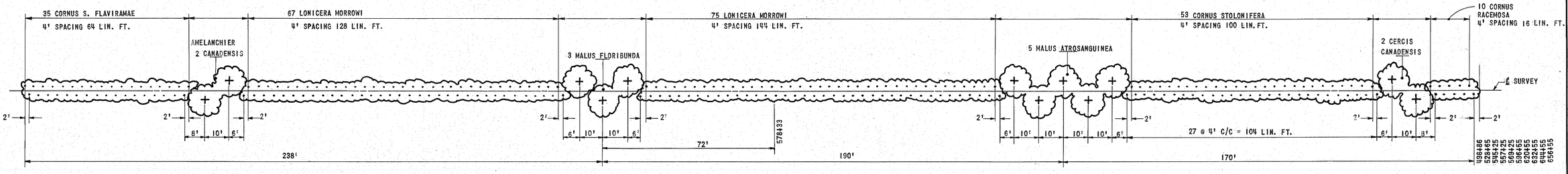
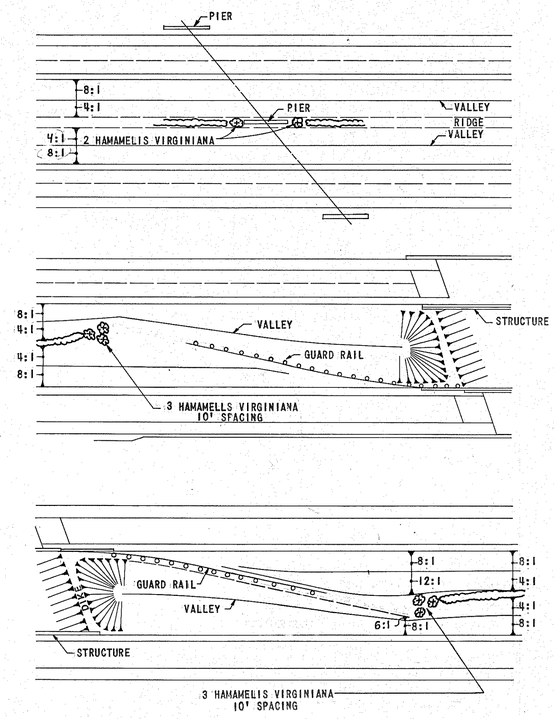


PLANTING DATES: PLANTING SHALL NOT BE DONE BETWEEN THE DATES OF MAY 1 AND OCT. 1 AND SHALL NOT BE PERFORMED WHEN THE GROUND IS FROZEN OR WHEN SOIL OR WEATHER CONDITIONS PREVENT PROPER PLANTING.

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'

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 FILBERT)	2'TO 3'
L-14		MALUS (IN VARIETY)	4'TO 5'
L-14		ACERGINNALA (AMUR MAPLE)	4'TO 5'
L-14		KOELREUTERIA PANICULATA (GOLDEN RAIN TREE)	4'TO 5'
L-14		CHIONANTHUS VIRGINICUS (WHITE FRINGE TREE)	4'TO 5'

VOID

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 ⅜ 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.

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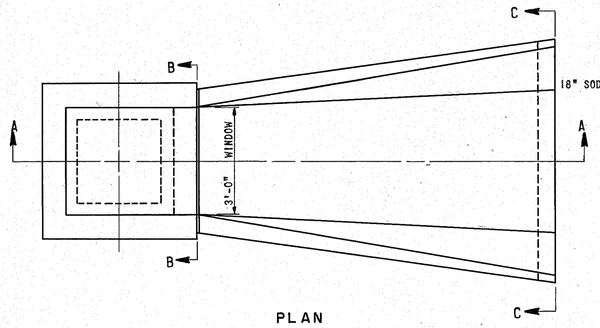
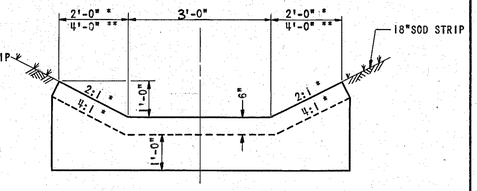
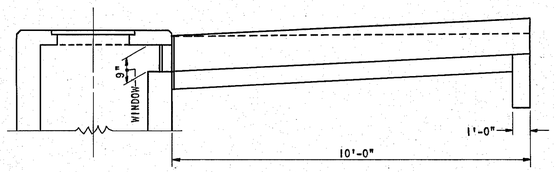
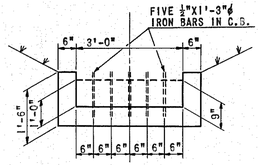
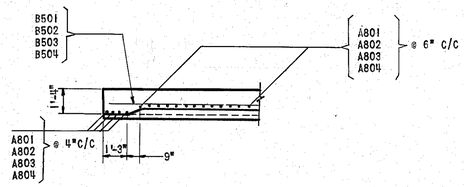


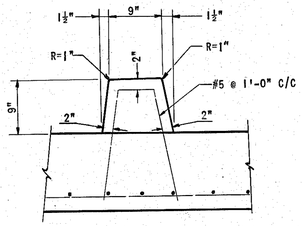


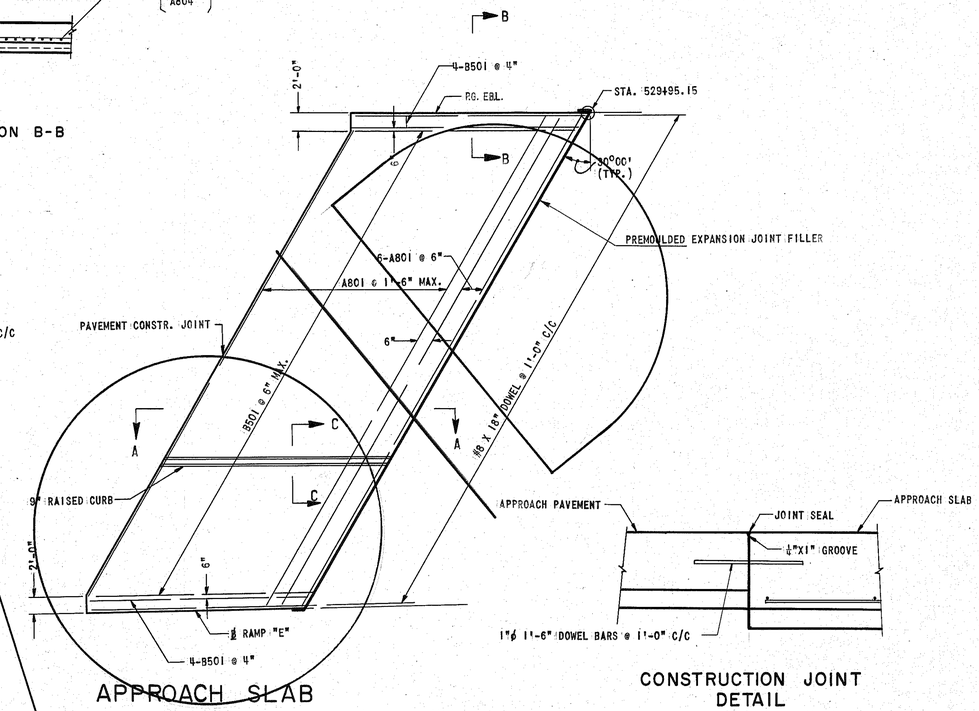


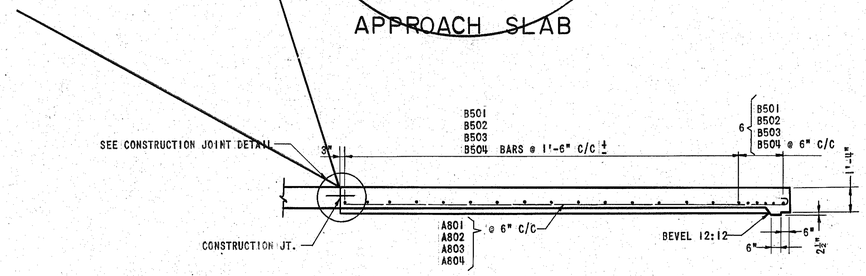


DETAIL MODIFIED TYPE I PAVED GUTTER and MODIFIED No. 2-3 CATCH BASIN, AS PER PLAN at Sta. 538+00 and Sta. 561+68

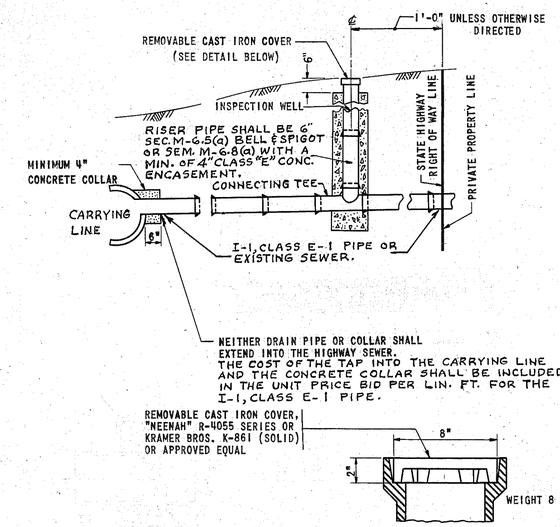




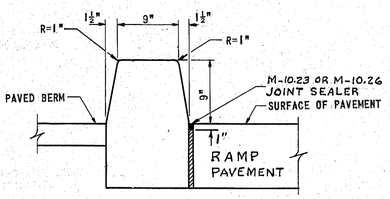




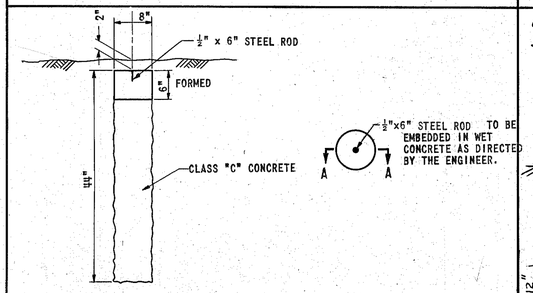
THE UNIT PRICE BID PER EACH "ITEM I-8, INSPECTION WELLS, AS PER PLAN" SHALL INCLUDE FURNISHING AND PLACING RISER PIPE, CONCRETE ENCASEMENT, CAST IRON COVER AND CONNECTING TEE (SAME TYPE AS PIPE FURNISHED FOR THE I-1, CLASS E-1 PIPE).



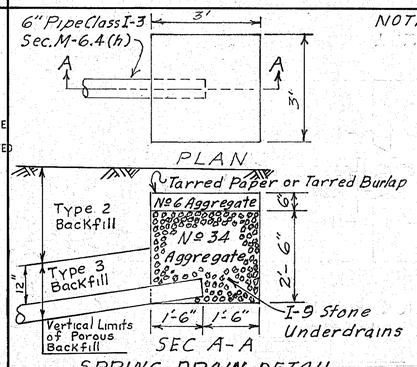
INSPECTION WELL FOR PRIVATE DRAINAGE TAPS



TYPE 8 PORTLAND CEMENT CONCRETE CURB DETAIL

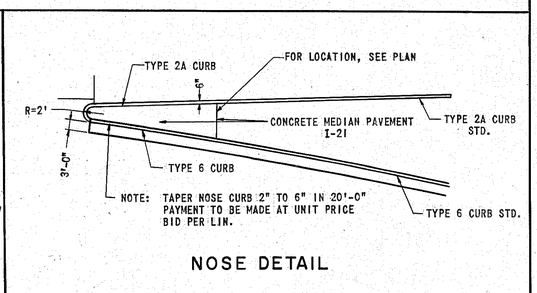


CENTERLINE REFERENCE MONUMENTS



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.

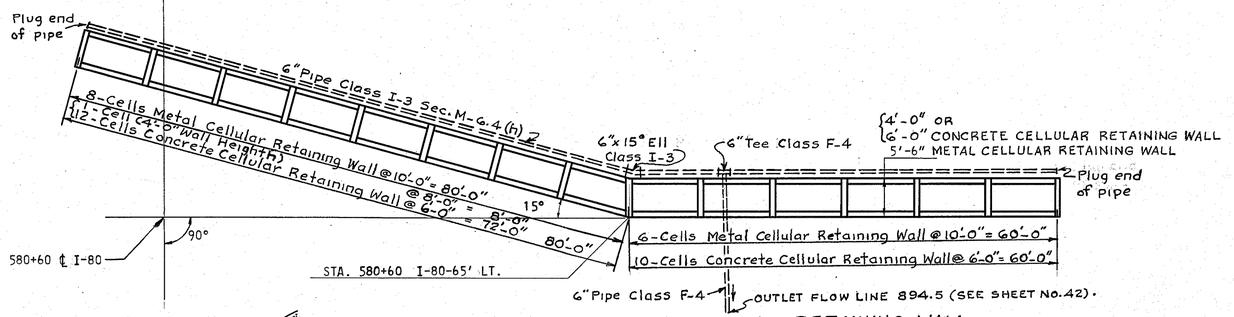
Spring drains are to be placed at locations designated by the Engineer. Payment shall be based on final measurement.



MISCELLANEOUS DETAILS

FED. RD. DIVISION	STATE	PROJECT		289 401
2	OHIO	I-IG-80-5(9)245		

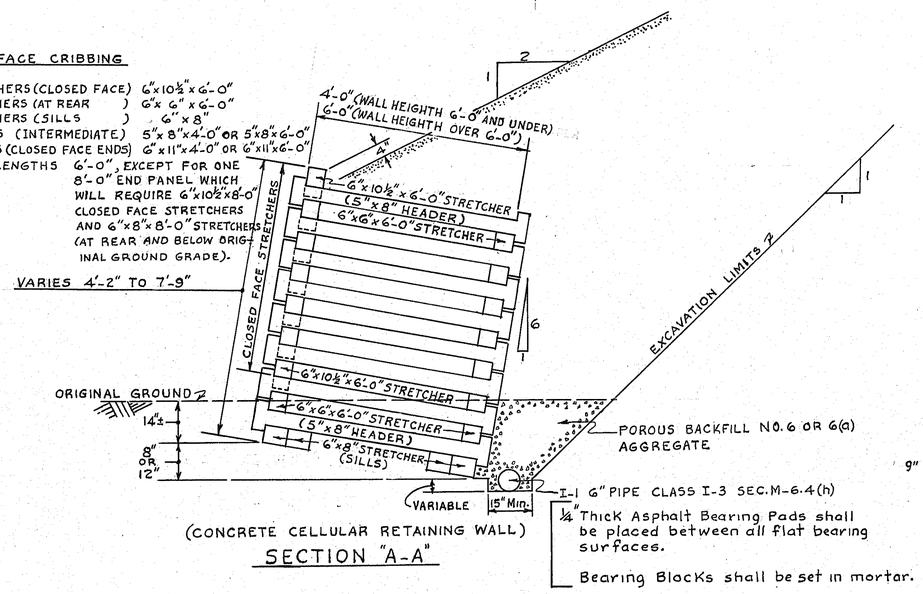
TRUMBULL COUNTY TRU-I-80-8.90



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).

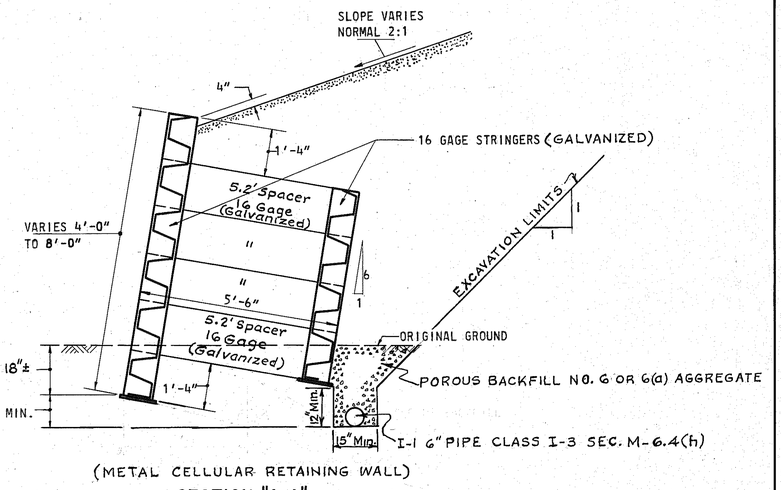


(CONCRETE CELLULAR RETAINING WALL)

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)

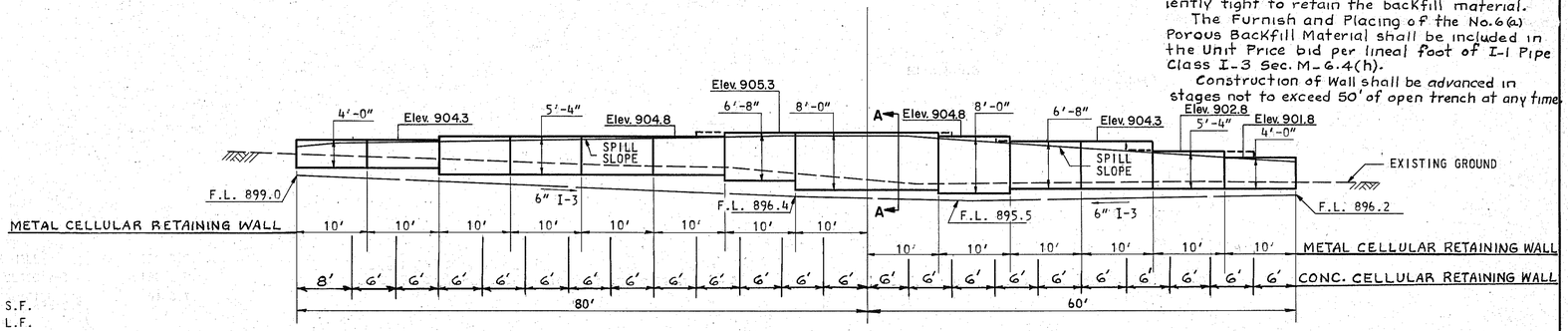
SECTION "A-A"

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

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I-127 DELINEATORS

1 TRU-I-80-5(9)245

LOCATION & SHEET No.	STATION	TO STATION	SIDE	INTERVAL	A-1		A-1	
					POST	BRACKET	POST	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

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LOCATION	STATION	TO STATION	SIDE	INTERVAL	C-2		C-3	
					POST	BRACKET	POST	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 TRANSITIONING	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	

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LOCATION	STATION	TO STATION	SIDE	INTERVAL	C-2		C-3	
					POST	BRACKET	POST	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		A-1	
					POST	BRACKET	POST	BRACKET
41 TO 39	573+00	547+00	R & L	200'			28	
SUB — TOTALS							* 28	

I-127 DELINEATORS TOTALS

	A-1		C-2		C-3	
SUB — TOTALS	POST	BRACKET	POST	BRACKET	POST	BRACKET
1-2-3	122	4	242	7	4	
4 *	28					
TOTALS	≠ 150	① 4	≠ 242	⊕ 7	≠ 4	

≠ TYPE A-1, C-2 AND C-3 DELINEATORS, POST MOUNTED, QUANTITIES CARRIED TO SHEET NO. 21.

① 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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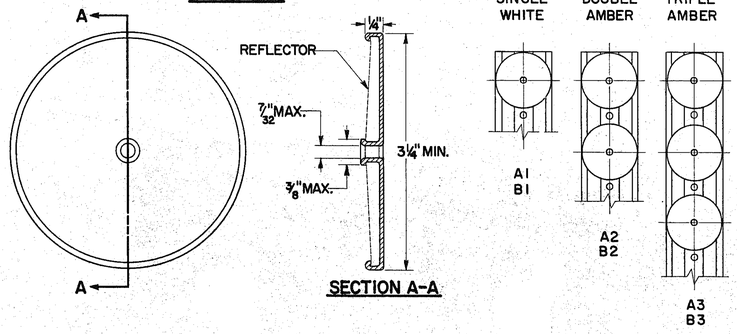
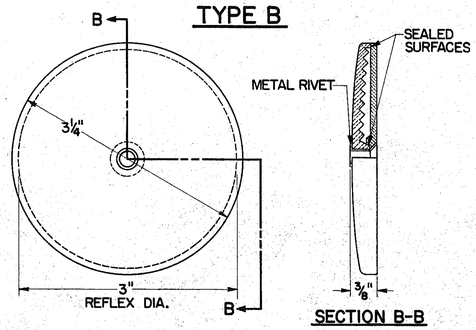
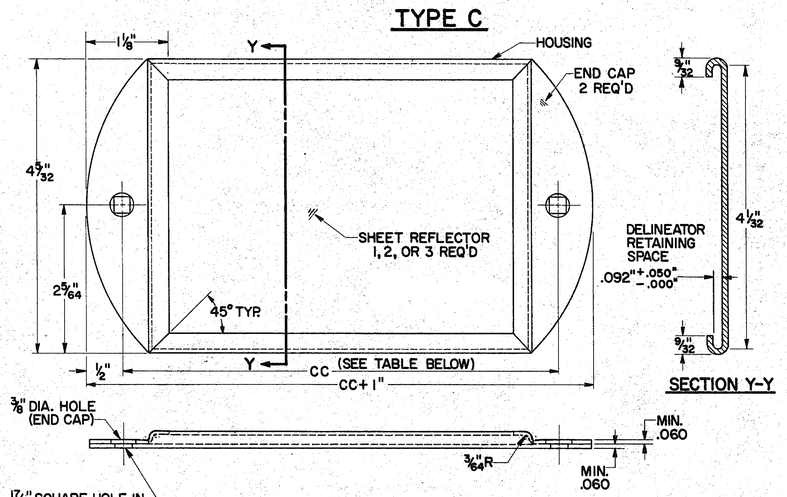
TYPE A



TYPE B

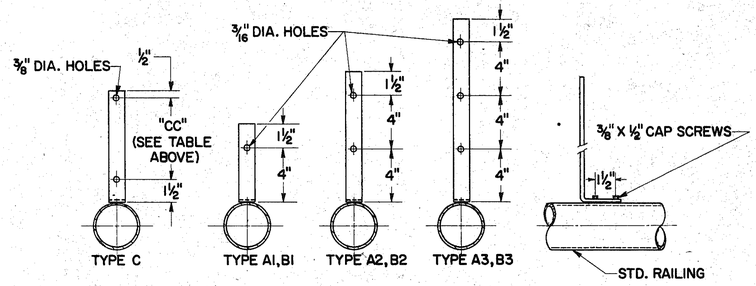


TYPE C

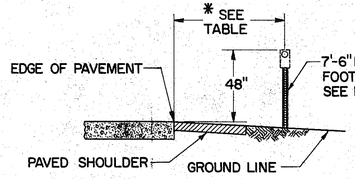


TYPE	DIM. CC
C1- SINGLE WHITE	6"
C2- DOUBLE AMBER	11"
C3- TRIPLE AMBER	16"

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



BRIDGE RAIL BRACKET

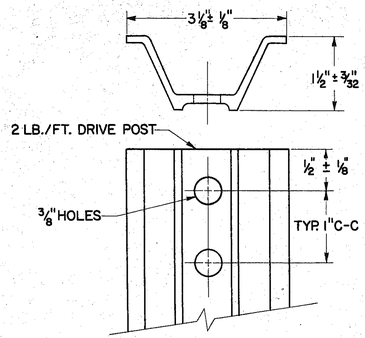


LATERAL PLACEMENT OF DELINEATORS

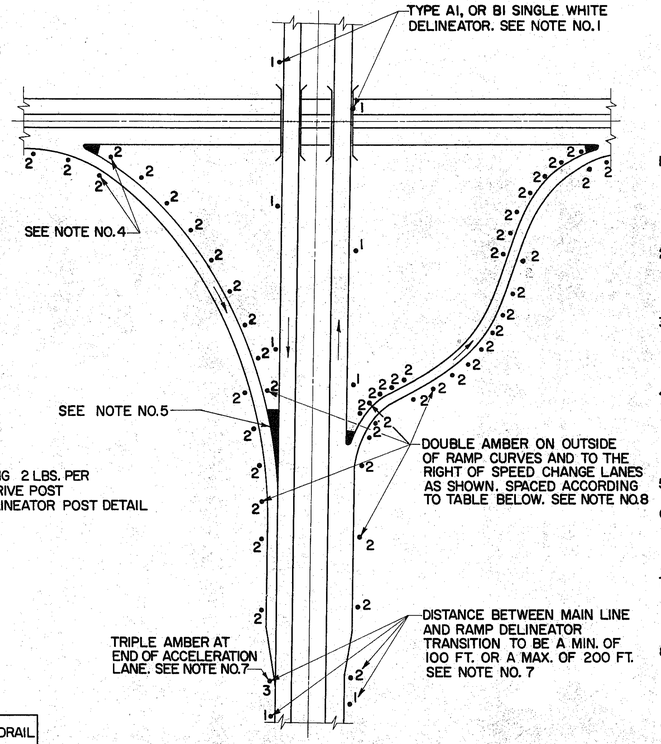
* TABLE

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

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.

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.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

DELINEATOR DETAILS

I-127

DATE 9-25-62 10-2-63

APPROVED Robert L. Lamer
ENGINEER OF TRAFFIC

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

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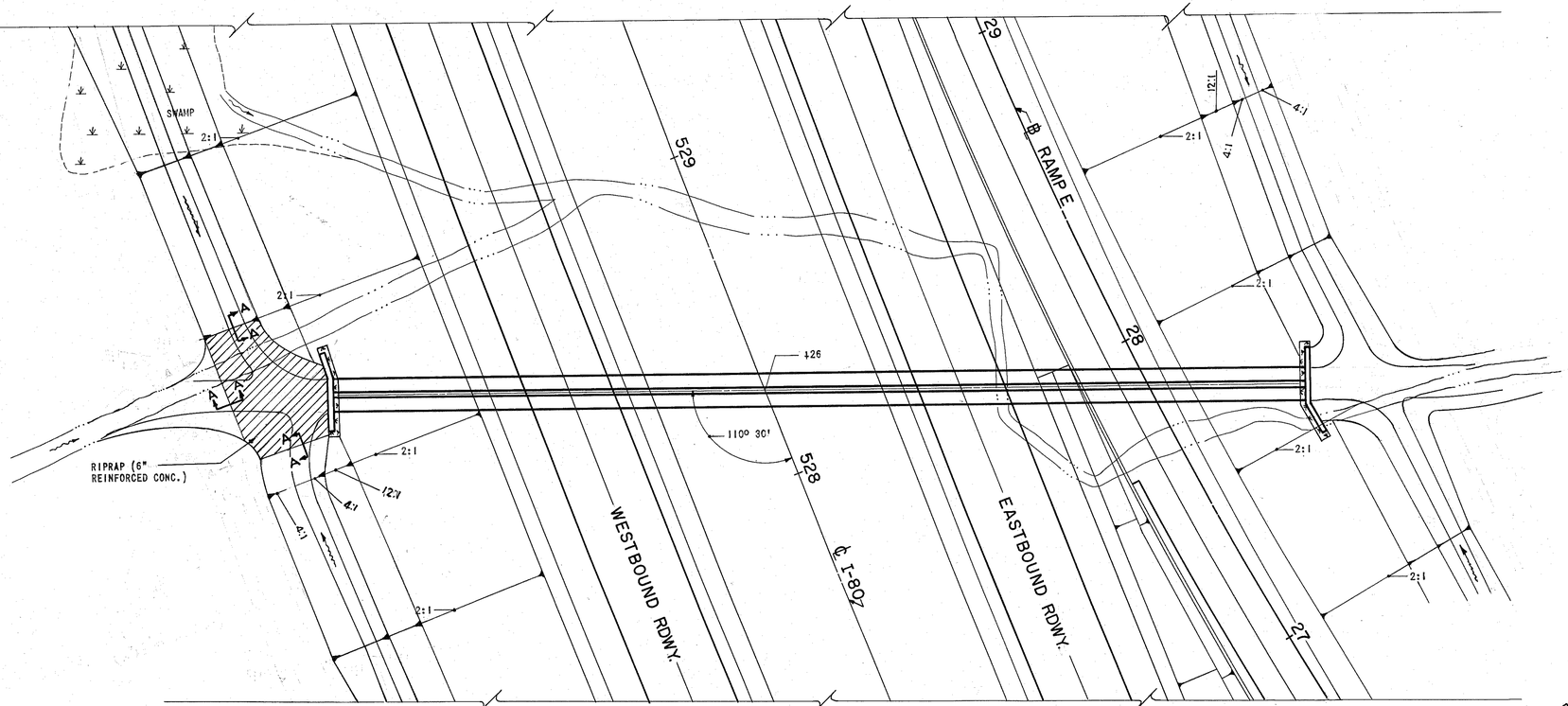
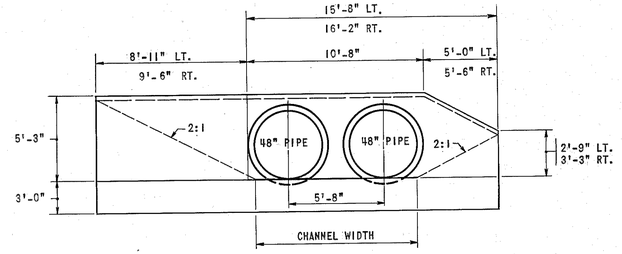
401

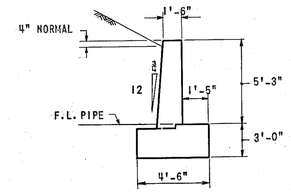
TRUMBULL COUNTY TRU-I-80-8.90

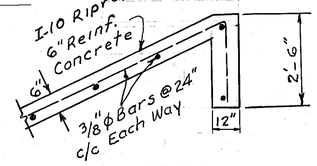




"B" HEADWALL Lt. & Rt.

FOR STEEL BAR SIZE & ARRANGEMENT
SEE SHEET 293



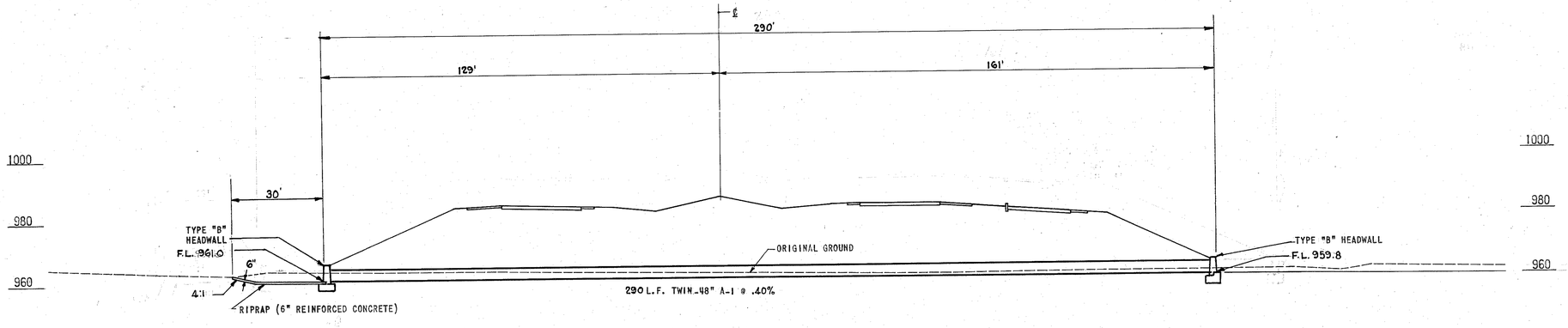


DETAIL CUT-OFF WALL
SECTION A-A

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	

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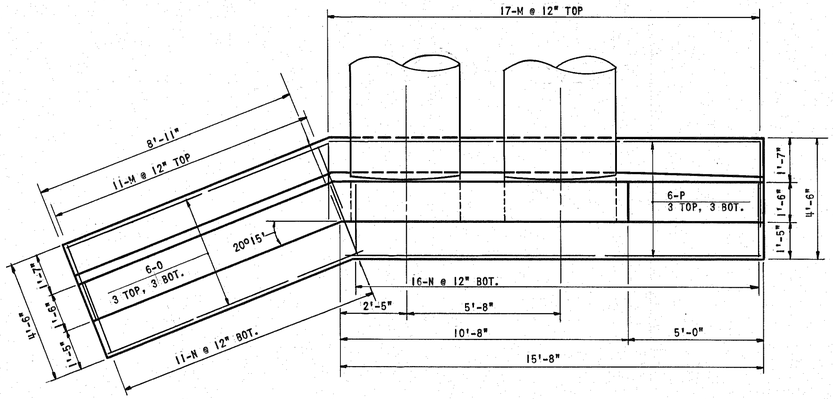
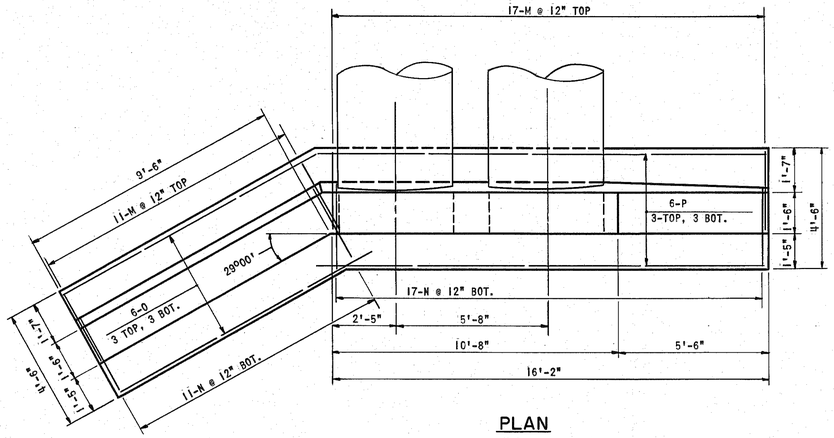
401

TRUMBULL COUNTY TRU-I-80-8.90

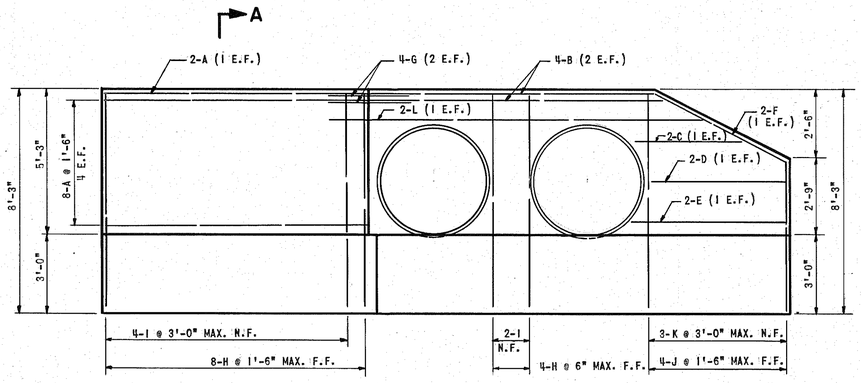
STRUCTURE @ STA. 528+26



PLAN

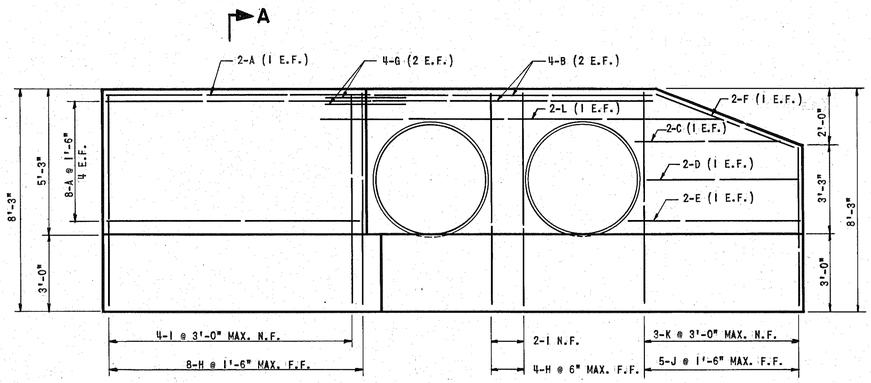


PLAN



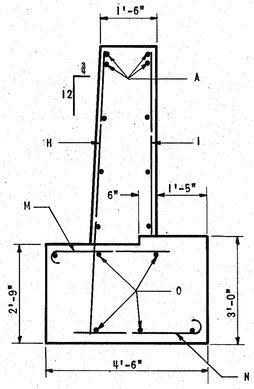
DEVELOPED ELEVATION

LEFT HEADWALL



DEVELOPED ELEVATION

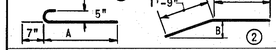
RIGHT HEADWALL



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 I EACH VARY IN INCREMENTS OF 10".

② I EACH VARY IN INCREMENTS OF 1'-3".

③ I EACH VARY IN INCREMENTS OF 6".

④ I 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	

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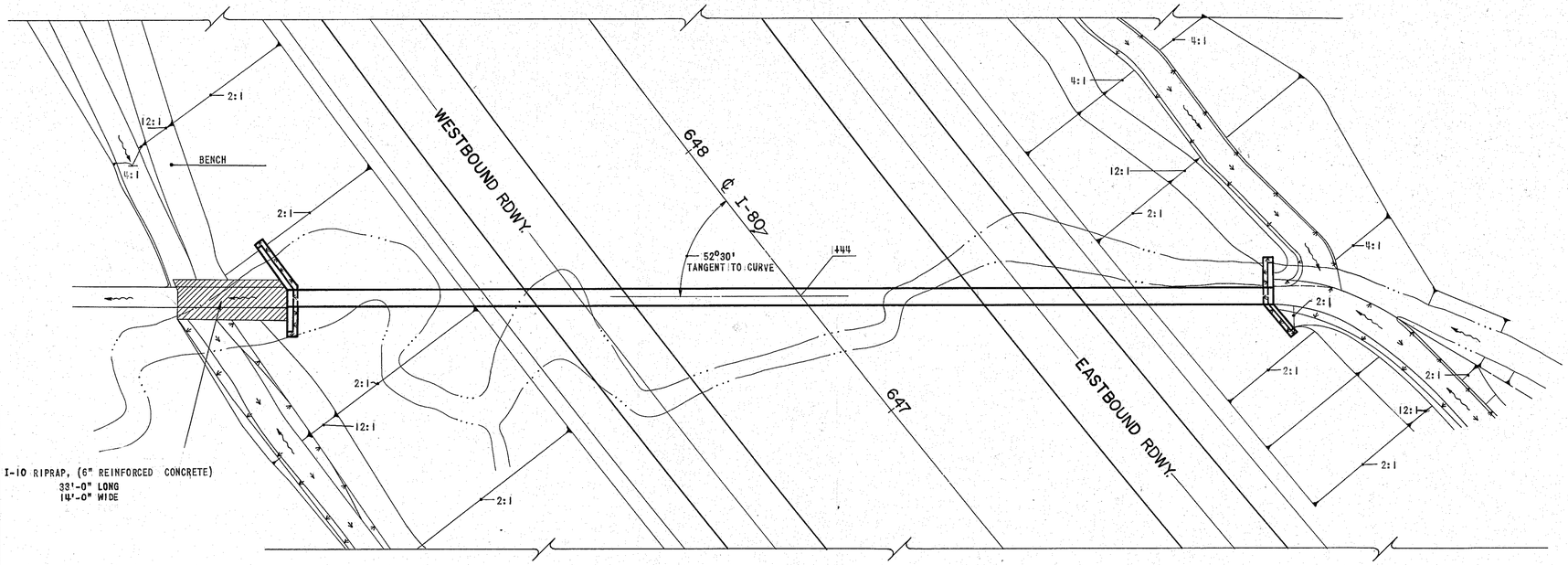
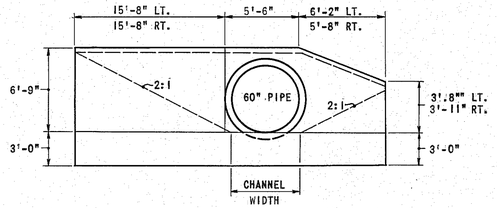
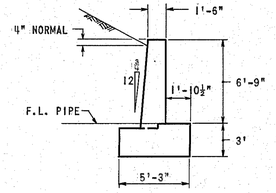
TRUMBULL COUNTY TRU-I-80-8.90

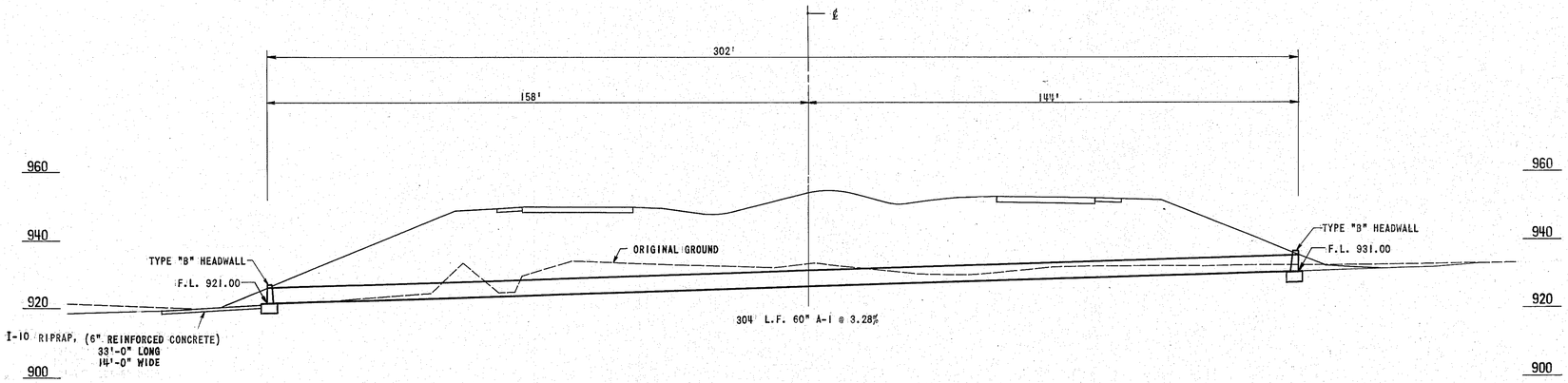




"B" HEADWALL Lt. & Rt.

FOR STEEL BAR SIZE & ARRANGEMENT
SEE SHEET 297





ESTIMATED QUANTITIES

I-i 60" PIPE, CLASS A-i 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	

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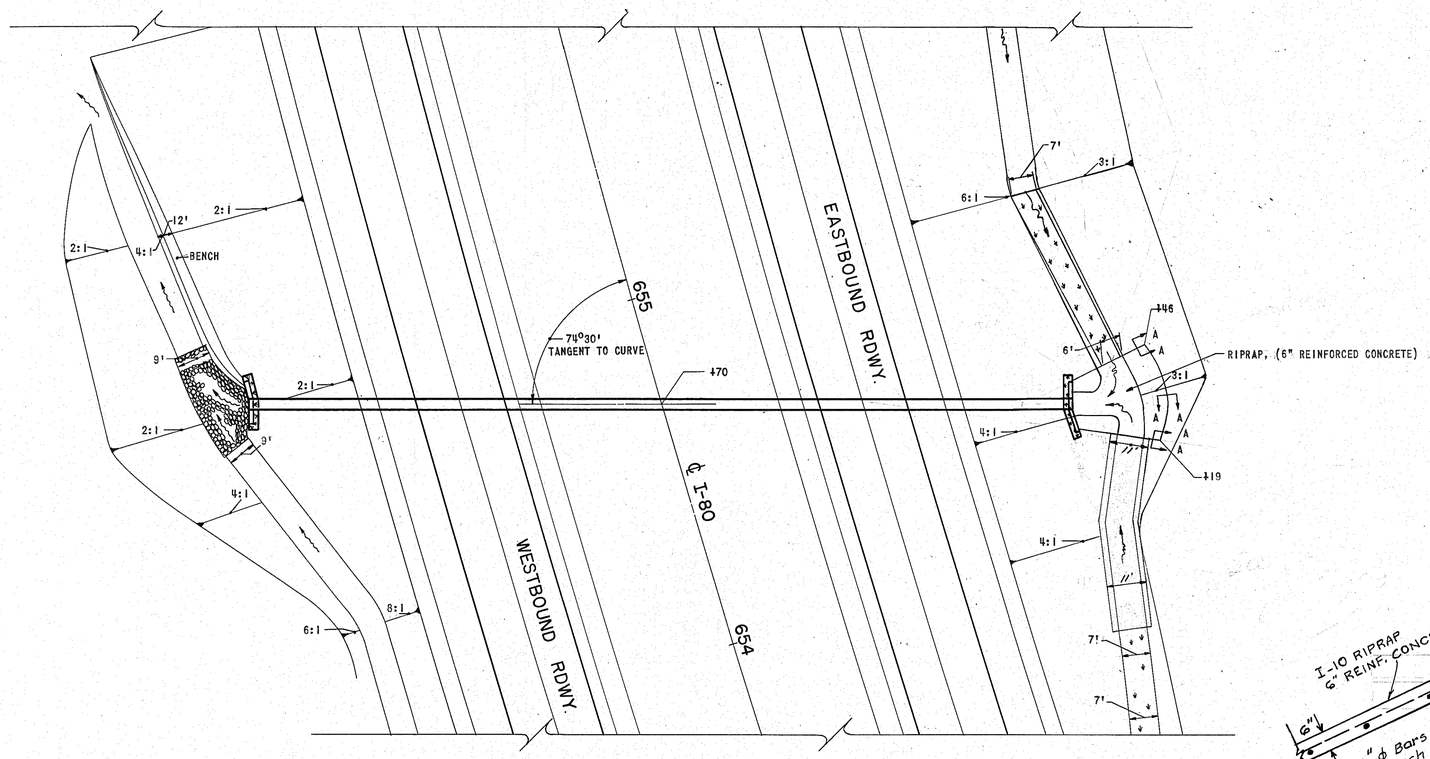
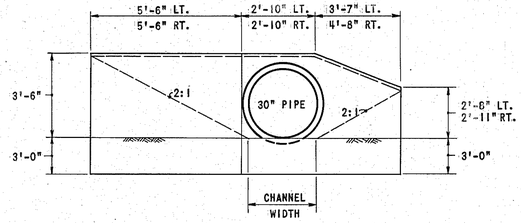
401

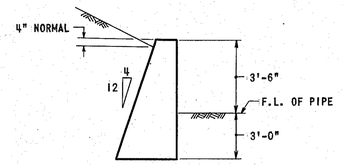
TRUMBULL COUNTY TRU-I-80-8.90

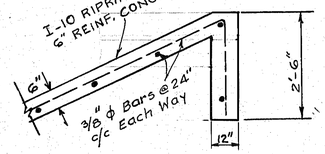




"B" HEADWALL, Lt. & Rt.

FOR STEEL BAR SIZE & ARRANGEMENT SEE SHEET 297





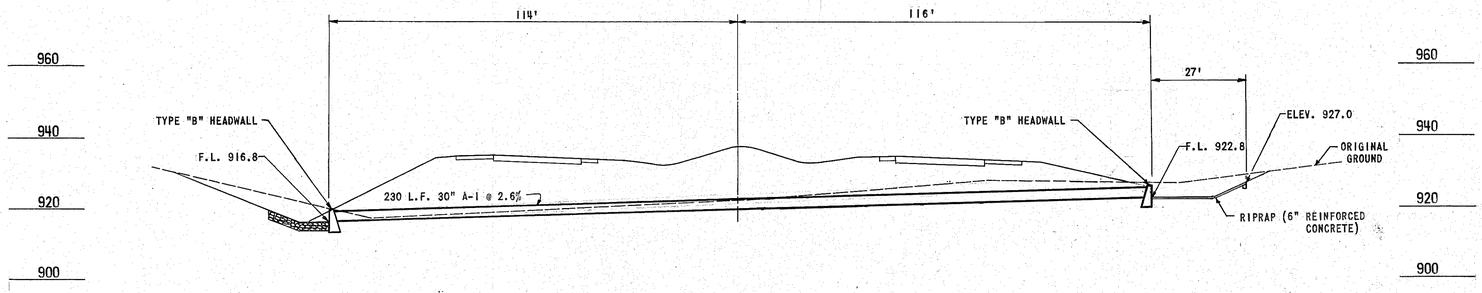
DETAIL OF CUT-OFF WALL SECTION A-A

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	

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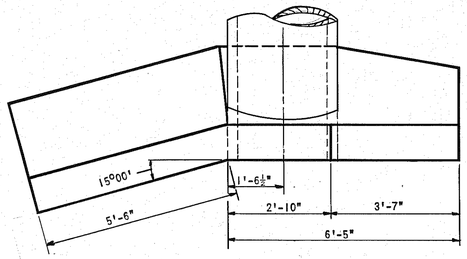
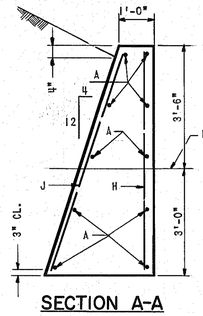
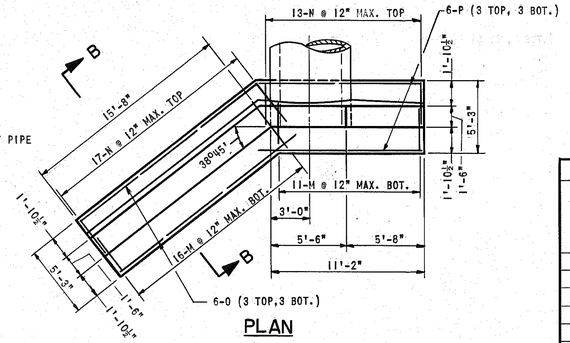
TRUMBULL COUNTY TRU-I-80-8.90



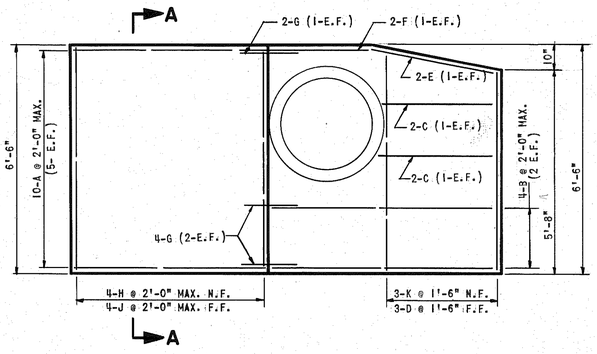
PLAN



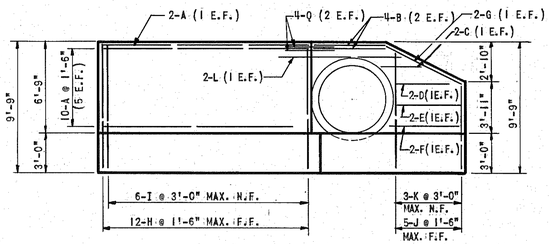
SECTION A-A



PLAN



DEVELOPED ELEVATION
LEFT HEADWALL



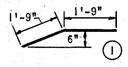
DEVELOPED ELEVATION
RIGHT HEADWALL

NOTE:

E.F. DENOTES EACH FACE.
N.F. DENOTES NEAR FACE.
F.F. DENOTES FAR FACE.

STRUCTURE AT STA. 654+70

REINFORCING STEEL LIST

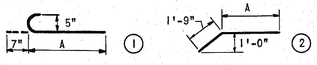


RIGHT HEADWALL								LEFT HEADWALL							
MARK	NO. REQ'D.	SIZE	LENGTH	TYPE	A	B	WEIGHT	MARK	NO. REQ'D.	SIZE	LENGTH	TYPE	A	B	WEIGHT
A	10	5	5'-9"	STR.				A	10	5	5'-9"	STR.			
B	4	5	7'-6"	STR.				B	4	5	6'-5"	STR.			
C	4	5	4'-6"	STR.				C	4	5	3'-3"	STR.			
D	3	5	5'-9" TO 6'-3" (1)	STR.				D	3	5	5'-6" TO 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"	I				G	6	5	3'-6"	I			
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) I EACH VARY IN INCREMENTS OF 3".
(2) I EACH VARY IN INCREMENTS OF 5".

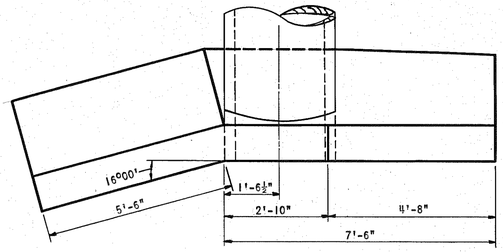
STRUCTURE AT STA. 647+44

REINFORCING STEEL LIST

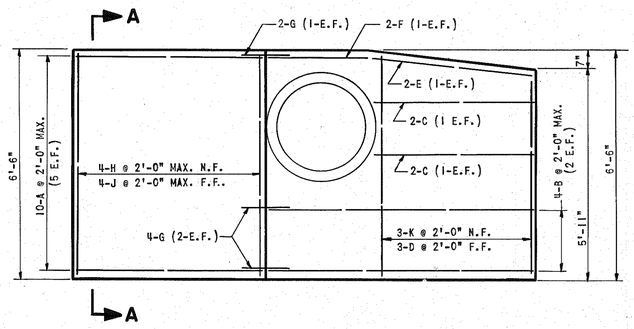


LEFT HEADWALL								RIGHT HEADWALL							
MARK	NO. REQ'D.	SIZE	LENGTH	TYPE	A	B	WEIGHT	MARK	NO. REQ'D.	SIZE	LENGTH	TYPE	A	B	WEIGHT
A	12	5	15'-4"	STR.				A	12	5	15'-4"	STR.			
B	4	5	5'-6"	STR.				B	4	5	5'-6"	STR.			
C	2	5	3'-6"	STR.				C	2	5	3'-9"	STR			
D	2	5	5'-5"	STR.				D	2	5	4'-10"	STR.			
E	2	5	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"	I	3'-9"			M	27	5	4'-4"	I	3'-9"		
N	31	5	4'-2"	I	3'-7"			N	30	5	4'-2"	I	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) I EACH VARY IN INCREMENTS OF 7".
(2) I EACH VARY IN INCREMENTS OF 1'-2".
(3) I EACH VARY IN INCREMENTS OF 8".
(4) I EACH VARY IN INCREMENTS OF 1'-4".

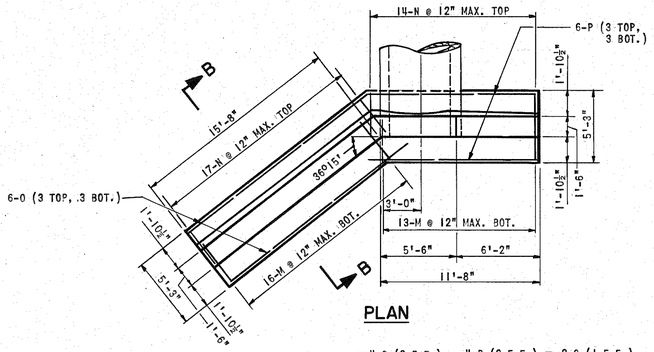


PLAN

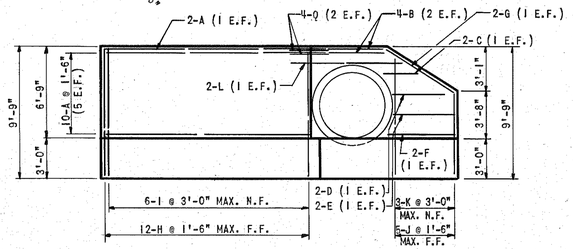


DEVELOPED ELEVATION
RIGHT HEADWALL

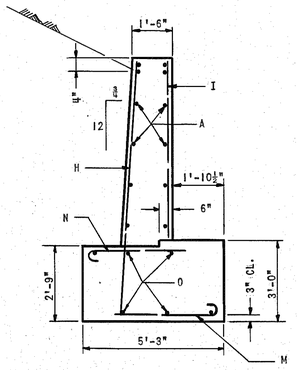
STRUCTURE AT STA. 654+70



PLAN



DEVELOPED ELEVATION
LEFT HEADWALL



SECTION B-B

NOTES:

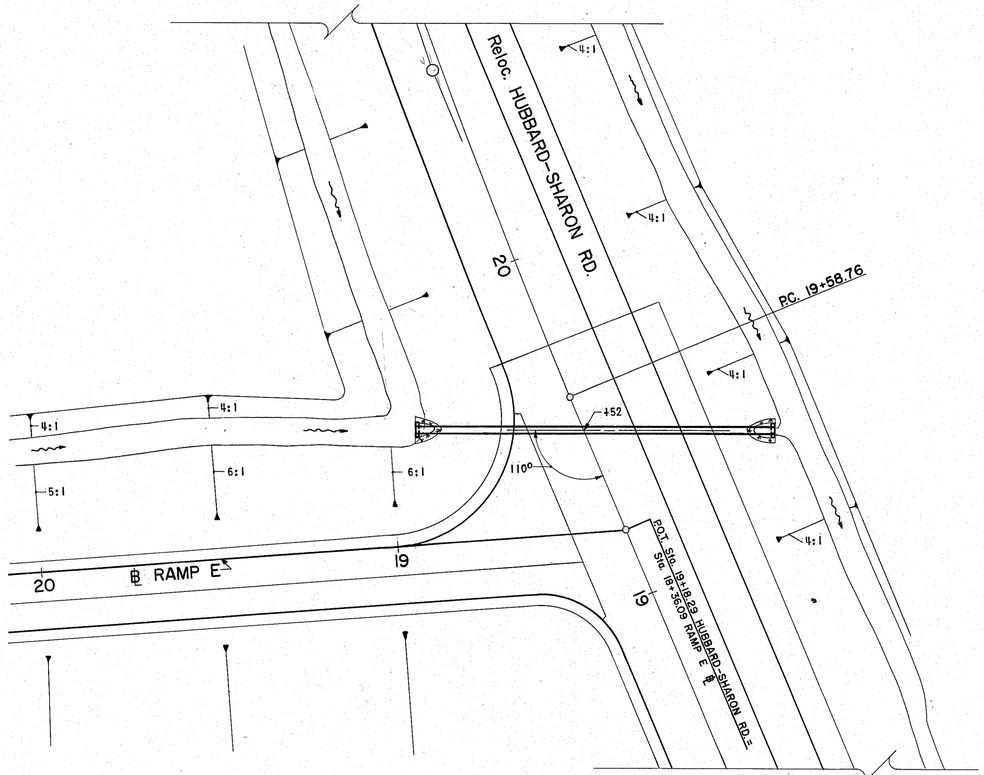
THE CONCRETE FOR HEADWALLS SHALL BE CLASS "C".
MINIMUM COVER FOR BARS SHALL BE 2 INCHES UNLESS OTHERWISE SHOWN.
MAXIMUM DESIGN FOUNDATION PRESSURE = 1 TON PER SQ. FT.

STRUCTURE AT STA. 647+44

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

298
201

TRUMBULL COUNTY TRU-I-80-8.90

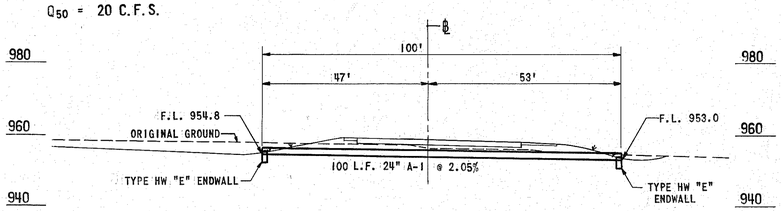


ESTIMATED QUANTITIES

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.

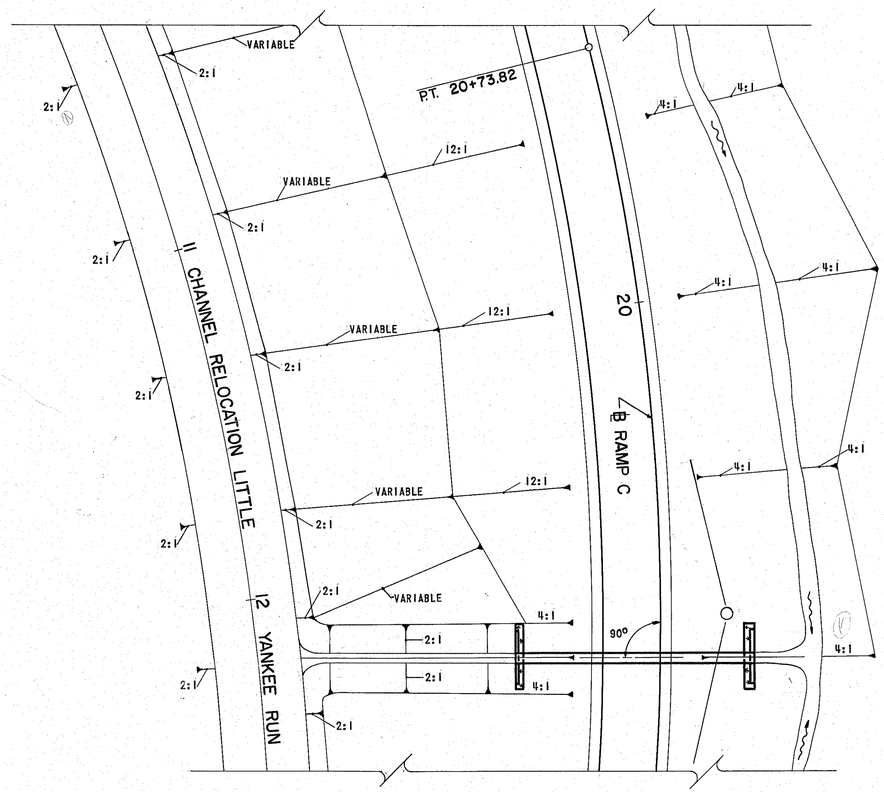
CONSTRUCT 24" PIPE CULVERT WITH 2-TYPE HW "E" ENDWALLS AS SHOWN. PLACE 18" SOD COLLAR AT ENDWALLS AS SHOWN.

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'

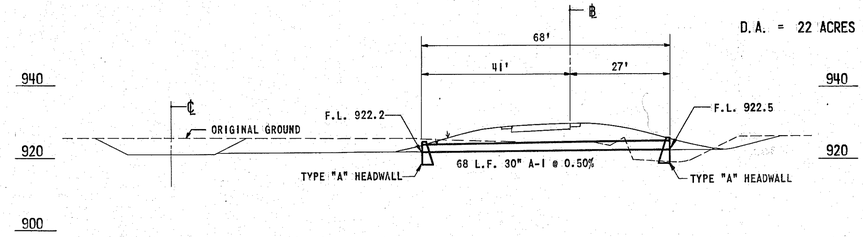


ESTIMATED QUANTITIES

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.



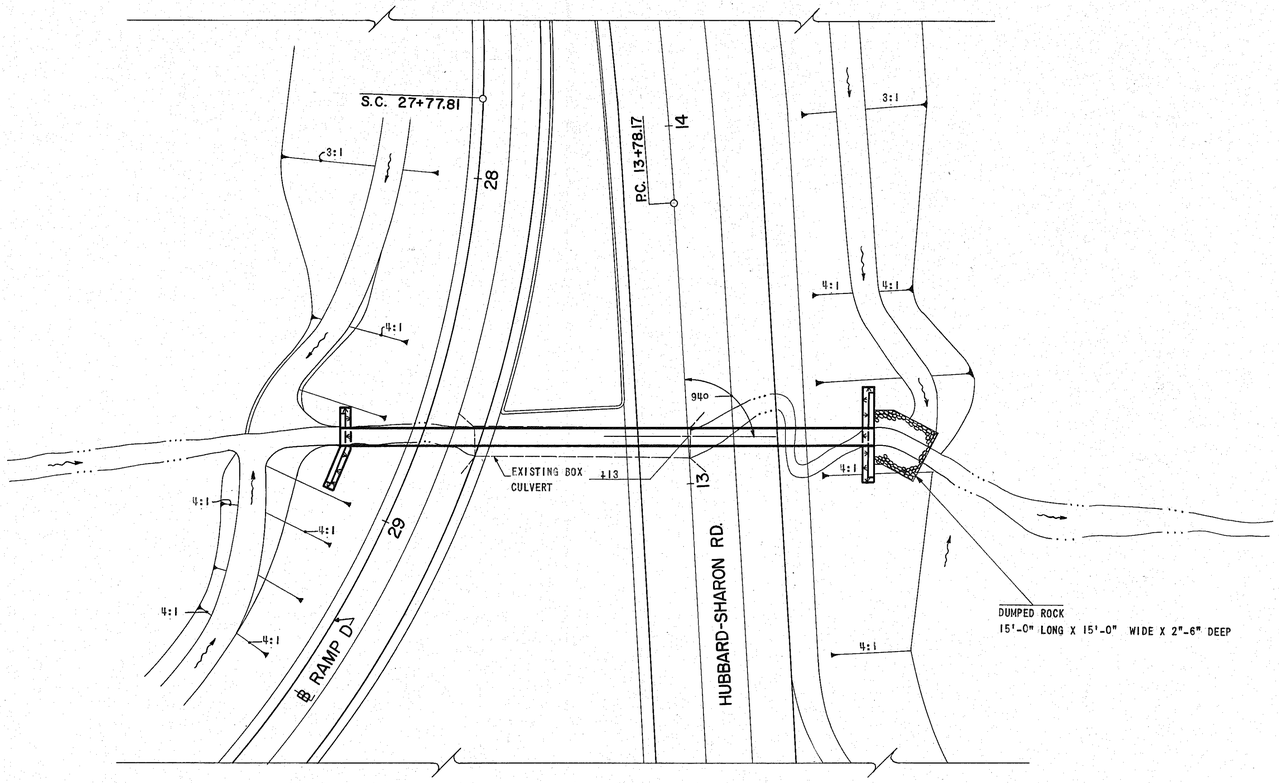
STRUCTURE NO.

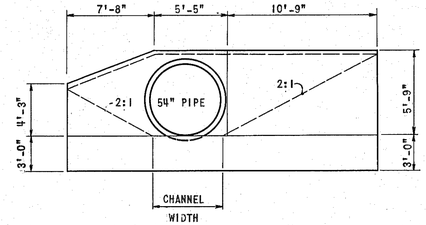
Station 19+00 Ramp C
Skew 0°
Scale 1" = 20'

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

299
401

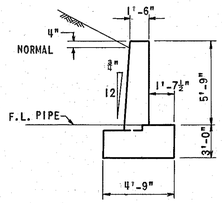
TRUMBULL COUNTY TRU-I-80-8.90

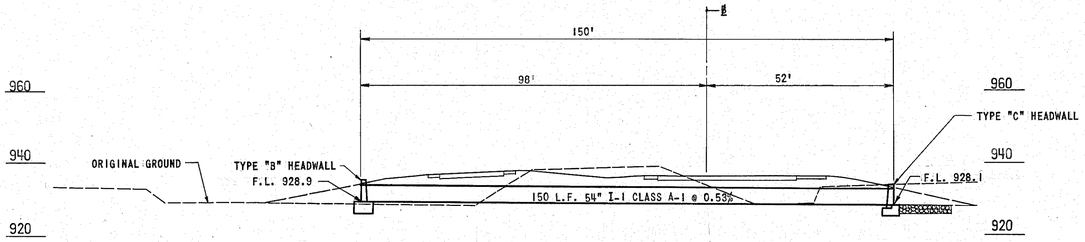




"B" HEADWALL Lt. Sta. 13+13±

FOR STEEL BAR SIZE & ARRANGEMENT SEE SHEET 300





ESTIMATED QUANTITIES

I-1	54" PIPE, CLASS A-1, SEC. M-6.6(d)	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.

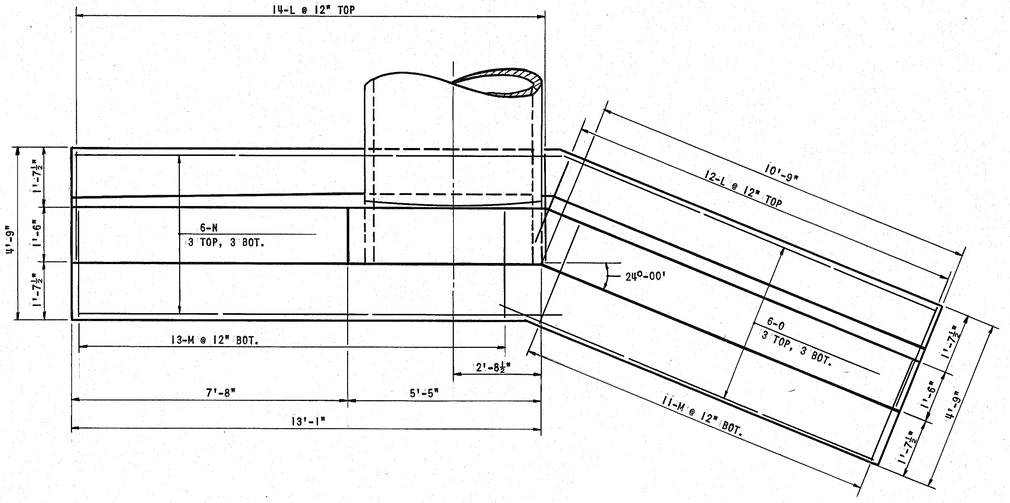
Station 13+13 HUBBARD-SHARON RD.
Skew 4° L.F.
Scale 1"=20'

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

300
401

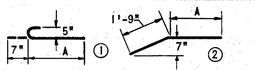
TRUMBULL COUNTY TRU-I-80-8.90

STRUCTURE @ STA. 13+13 HUBBARD-SHARON ROAD



PLAN

REINFORCING STEEL LIST

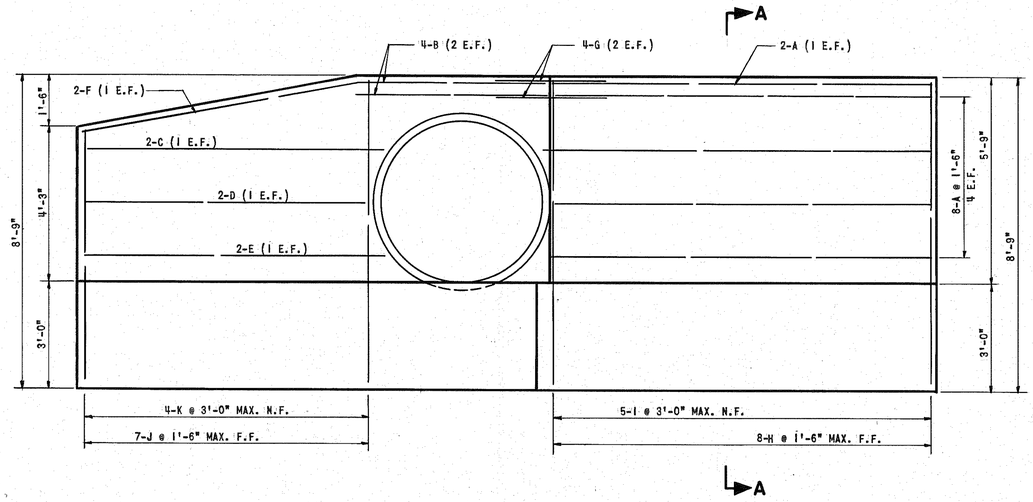


ALL BAR DIMENSIONS ARE OUT TO OUT.

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.			

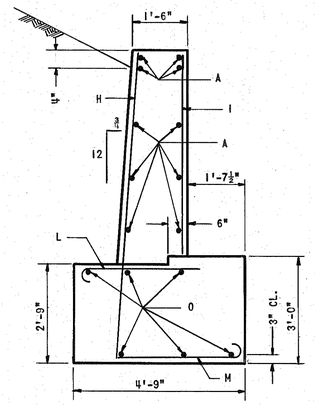
① 1 EACH WAY IN INCREMENTS OF 3".

② 1 EACH WAY IN INCREMENTS OF 6".



DEVELOPED ELEVATION

LEFT HEADWALL



SECTION A-A

NOTE: E.F. INDICATES EACH FACE
N.F. INDICATES NEAR FACE
F.F. INDICATES FAR FACE

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.

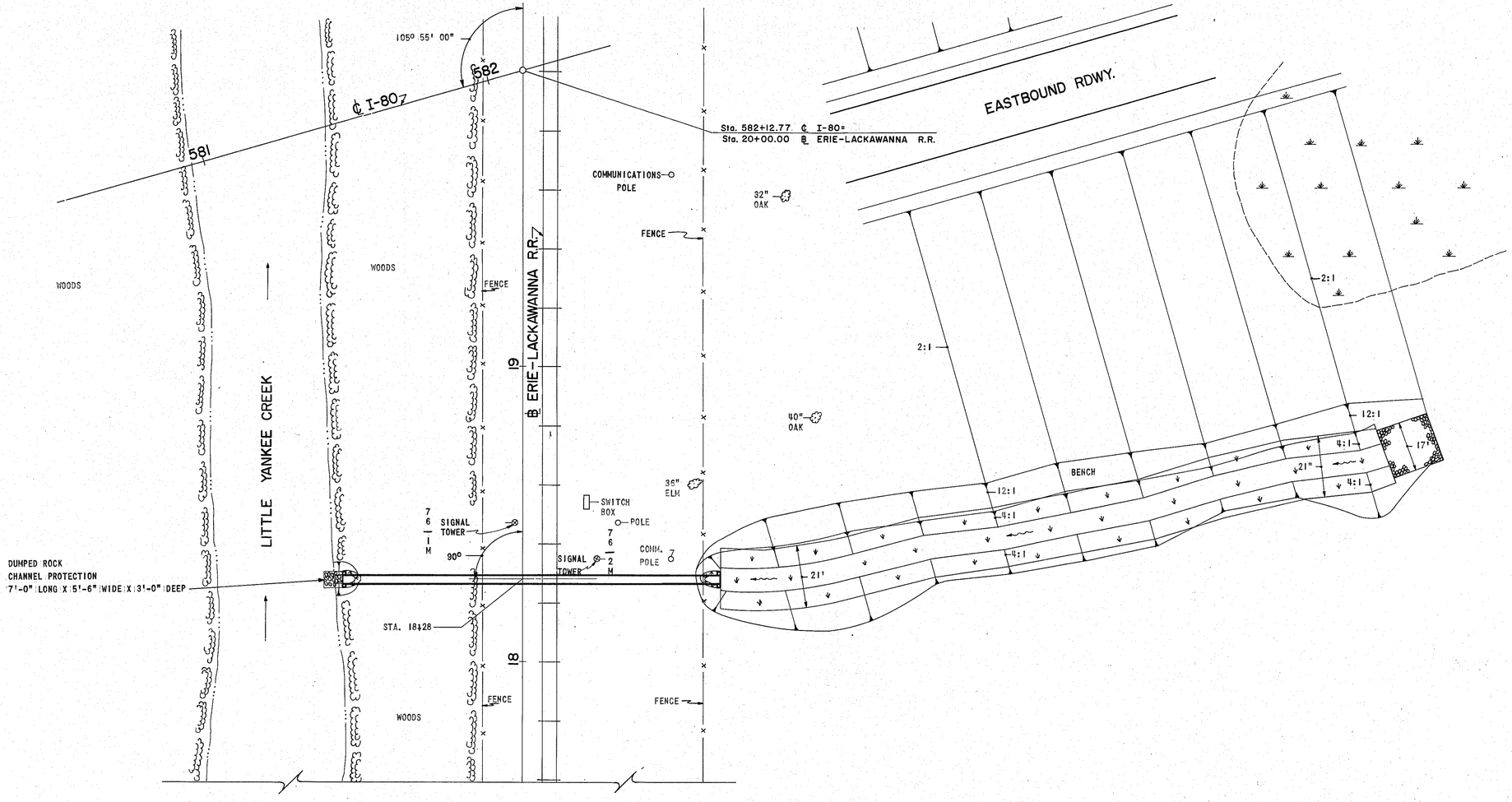
HEADWALL DETAIL

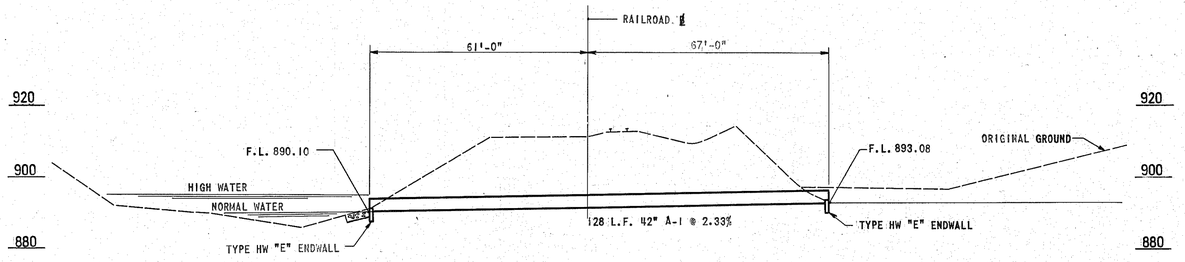
Sta. 13+13 Reloc. HUBBARD SHARON RD.

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.

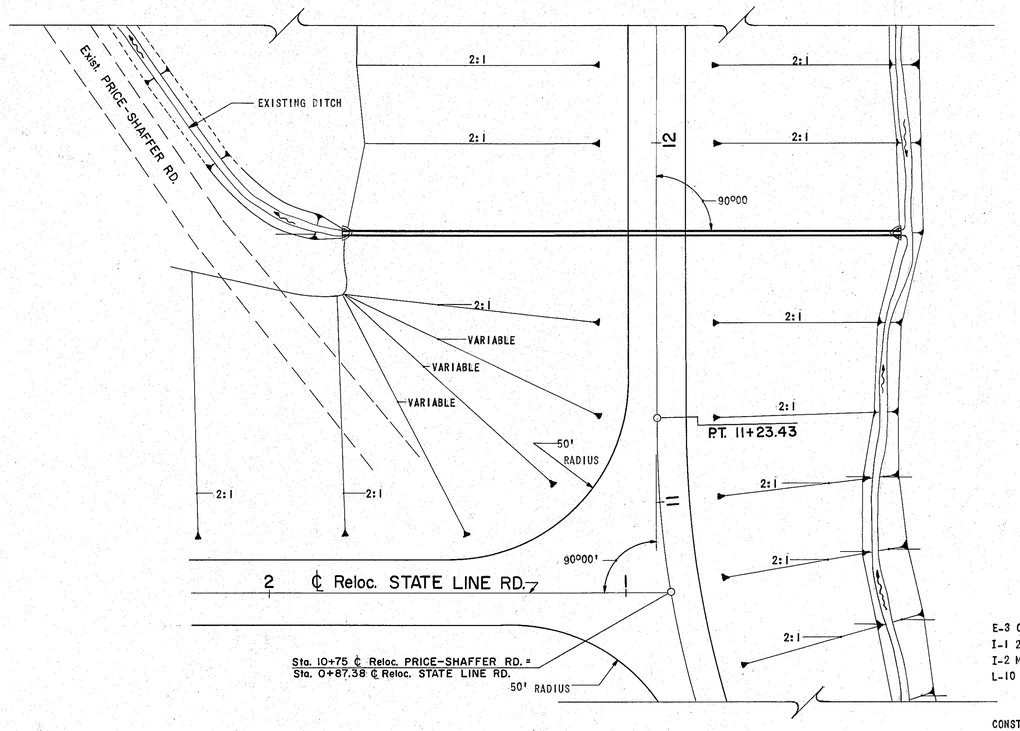
STRUCTURE NO.

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

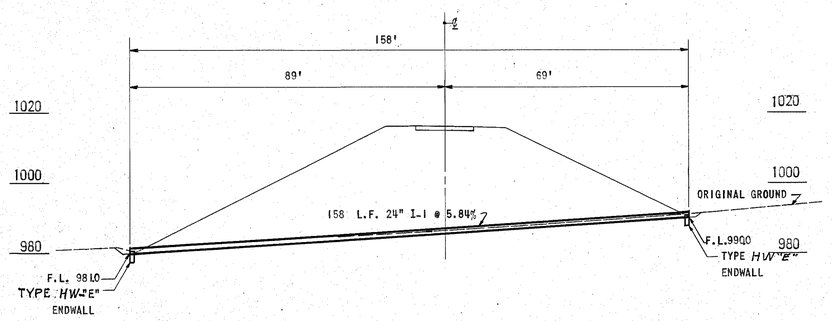


ESTIMATED QUANTITIES

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.



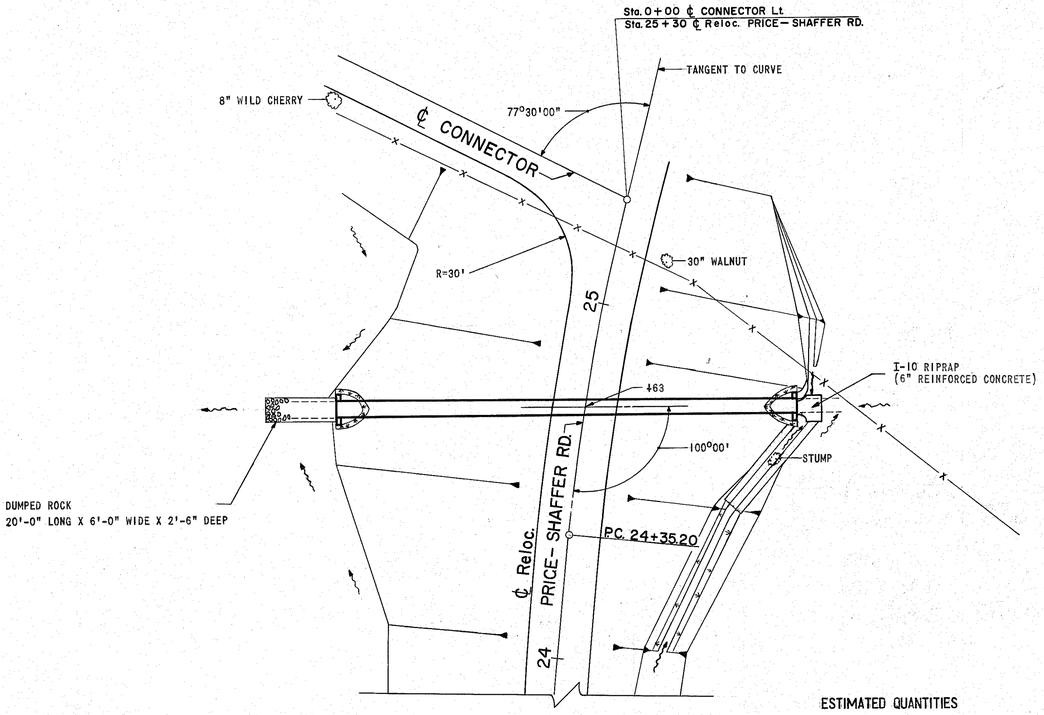
STRUCTURE NO.

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

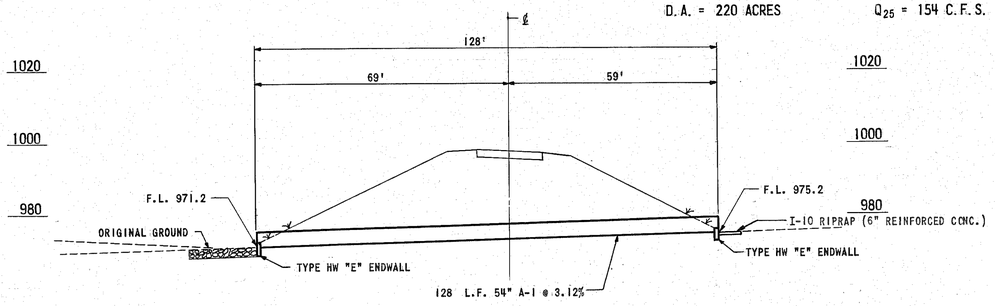


ESTIMATED QUANTITIES

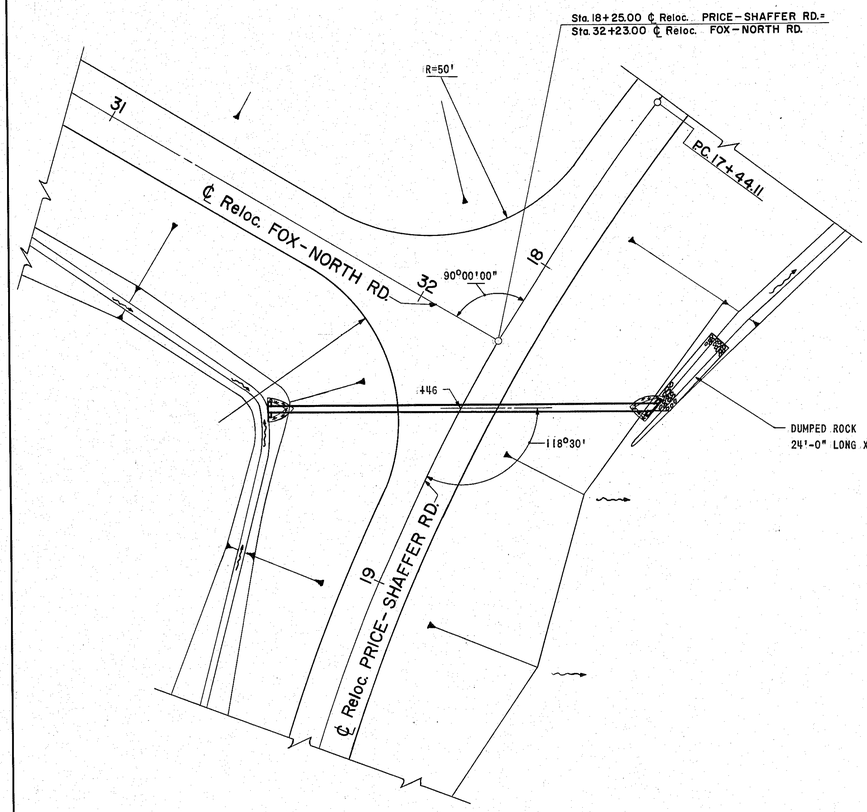
I-1	54" PIPE, CLASS A-1 SEC.M-6.4(d)8GA.	128 L.F.
I-2	MASONRY	1.92 C.Y.
L-10	SODDING	7.0 S.Y.
I-10	DUMPED ROCK CHANNEL PROTECTION	11.1 C.Y.
I-10	RIPRAP (6" REINFORCED CONC.)	5.0 S.Y.

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'

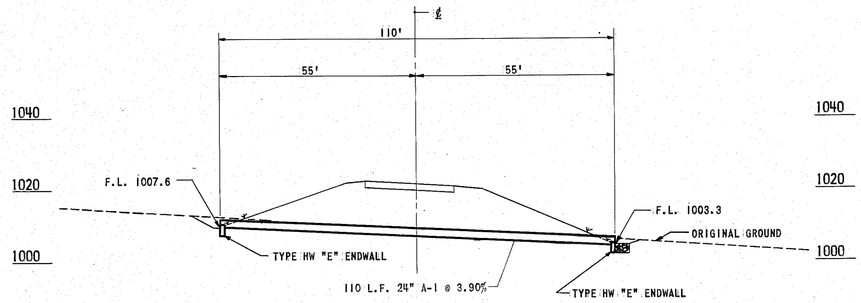


ESTIMATED QUANTITIES

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.

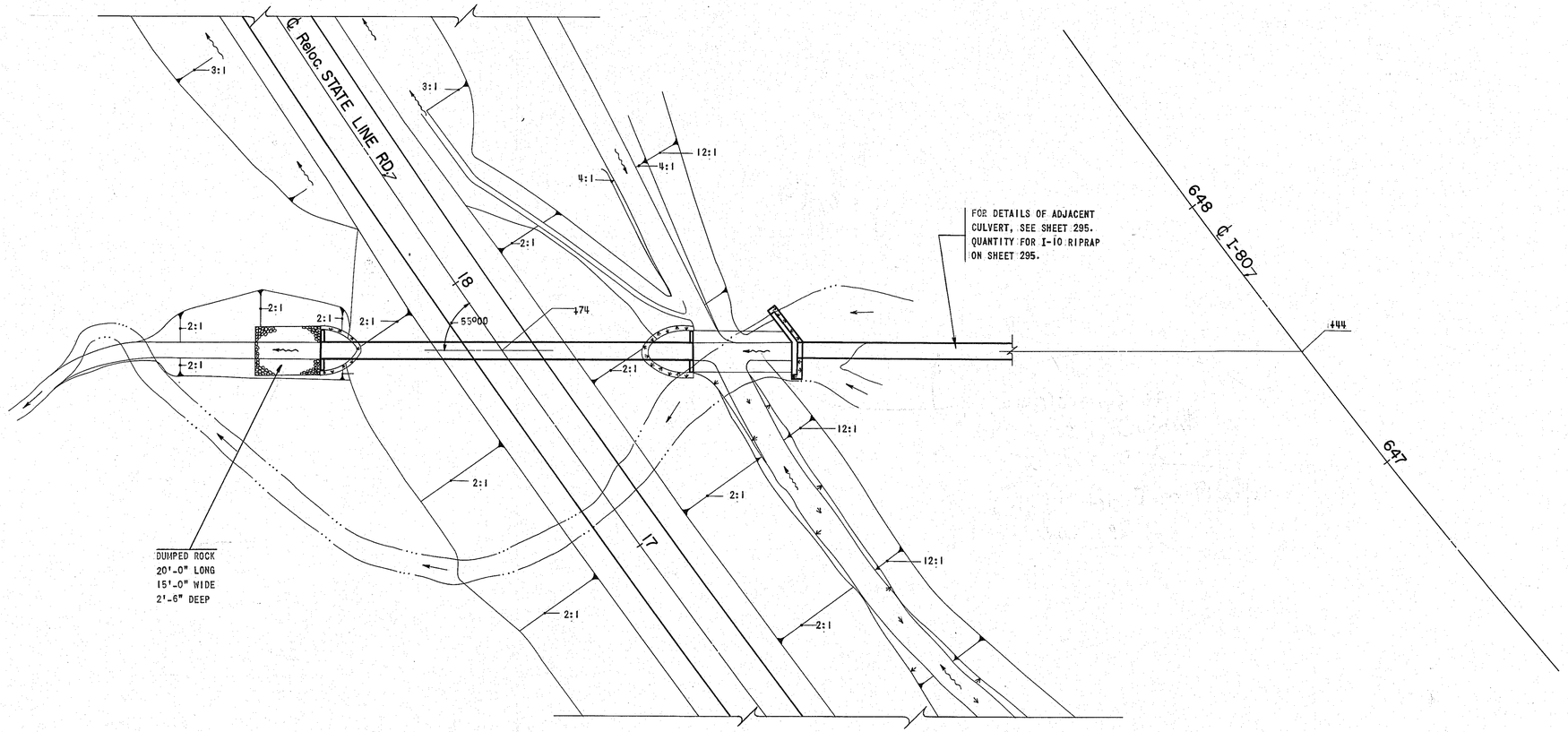


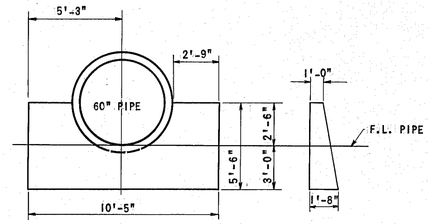
STRUCTURE NO.
Station 18+46 PRICE-SHAFFER RD.
Skew 28° 30' RF
Scale 1" = 20'

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

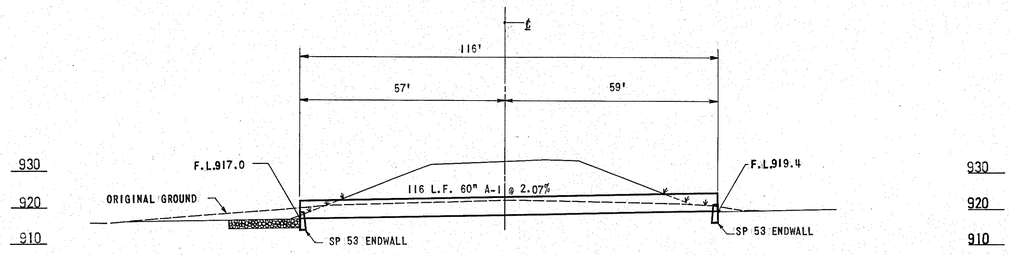
304
401

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.

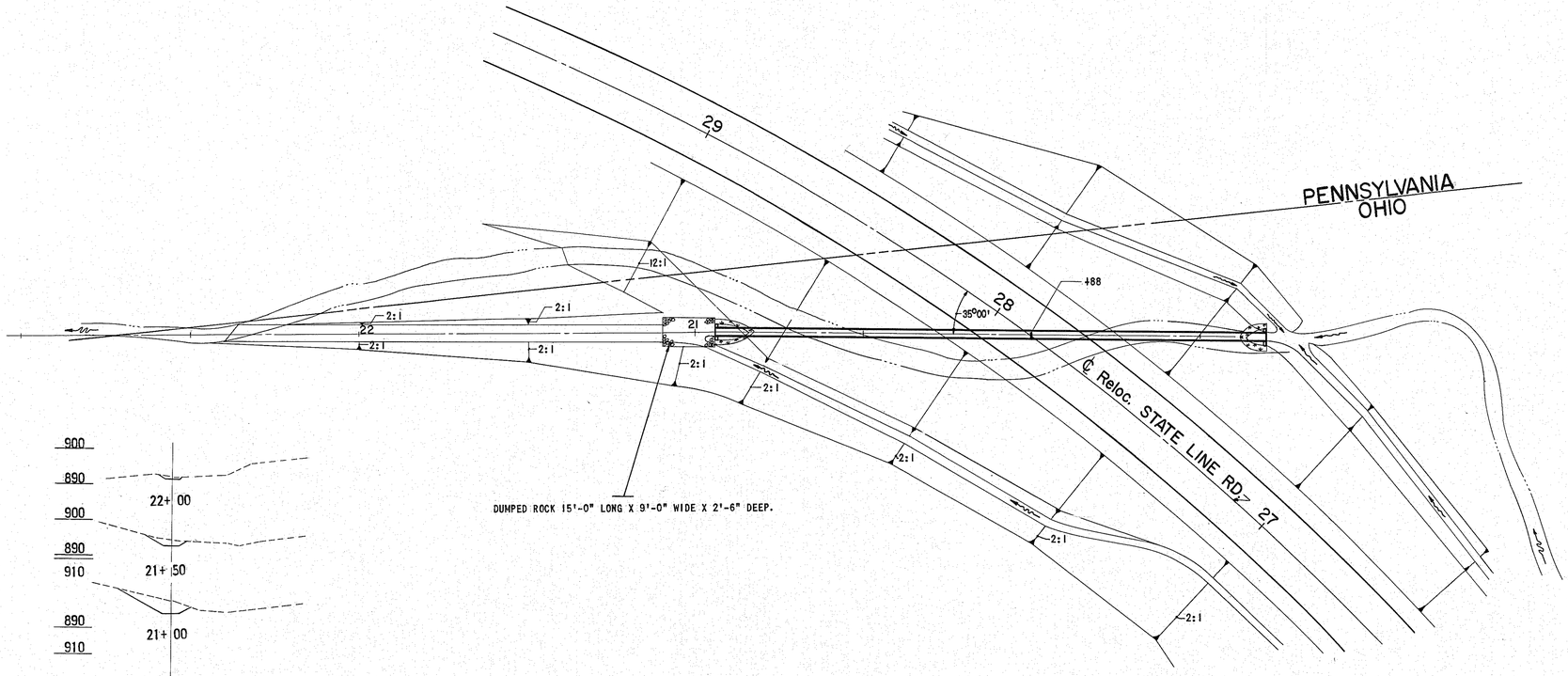
D.A. = 270 ACRES Q_{50} = 220 C.F.S.

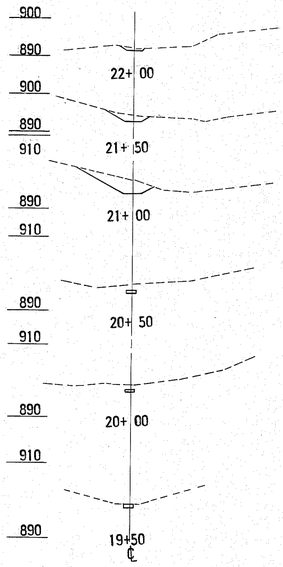
STRUCTURE NO.
Station 17+74 Reloc. STATE LINE RD.
Skew 35°00'
Scale 1" = 20'

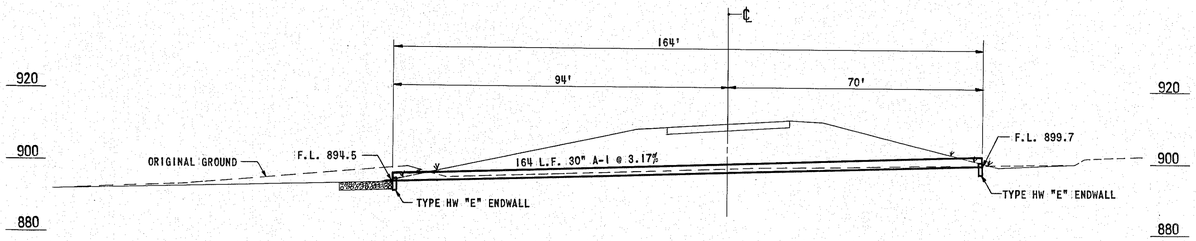
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

305
401

TRUMBULL COUNTY TRU-I-80-8.90







ESTIMATED QUANTITIES

E-3	CHANNEL EXCAVATION	233 C.Y.
I-1	30" PIPE, CLASS A-I 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.

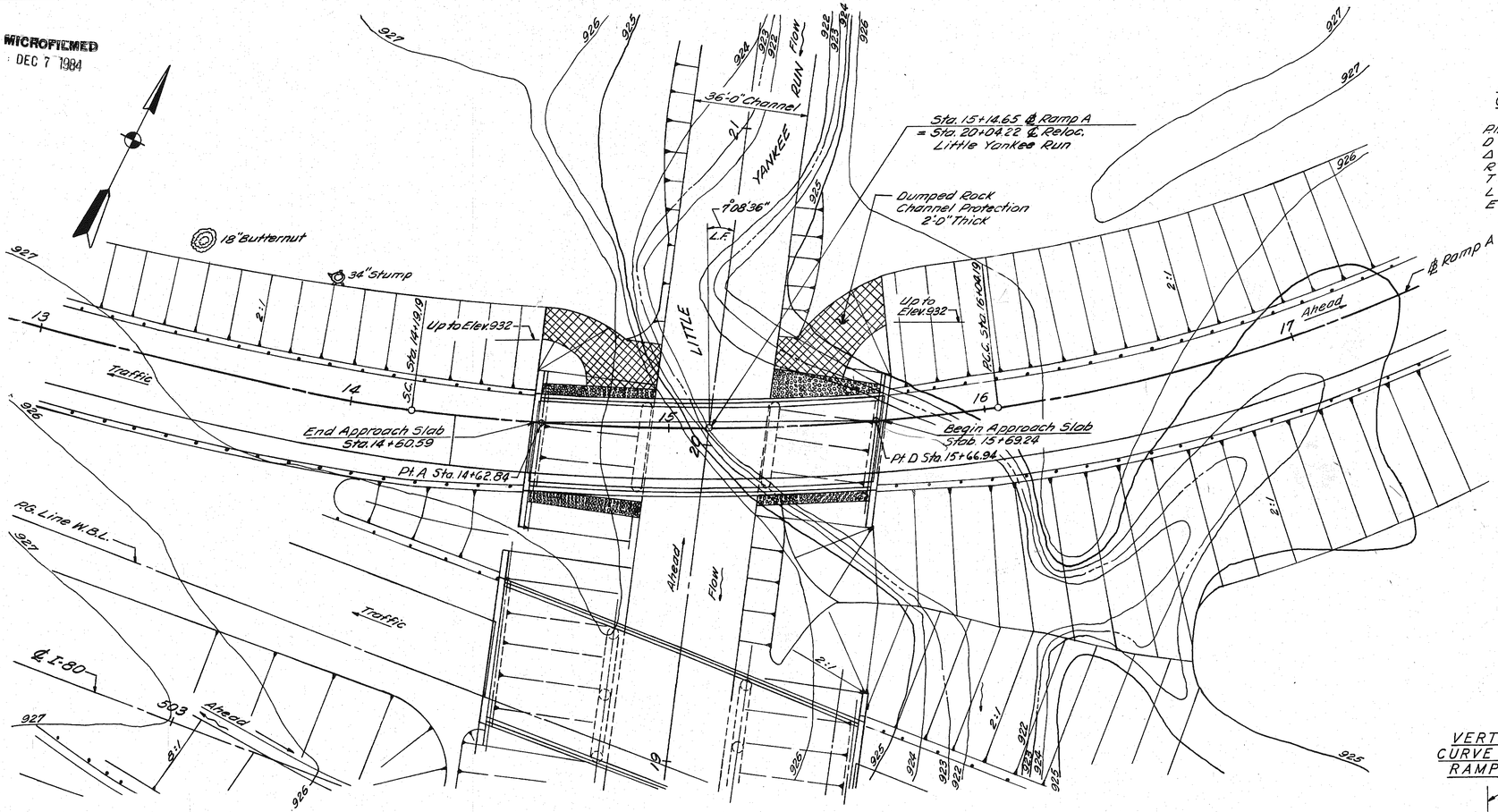
Station 27+88 Reloc. STATE LINE RD.
Skew 55°00' L.F.
Scale 1" = 20'

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

306
401

TRUMBULL COUNTY
TRU I-80-(8.90)

B.M. No. 3
R.R. Spike in root of 45" Oak
150'± Right of Sta. 503+00 ±
Elevation 927.216

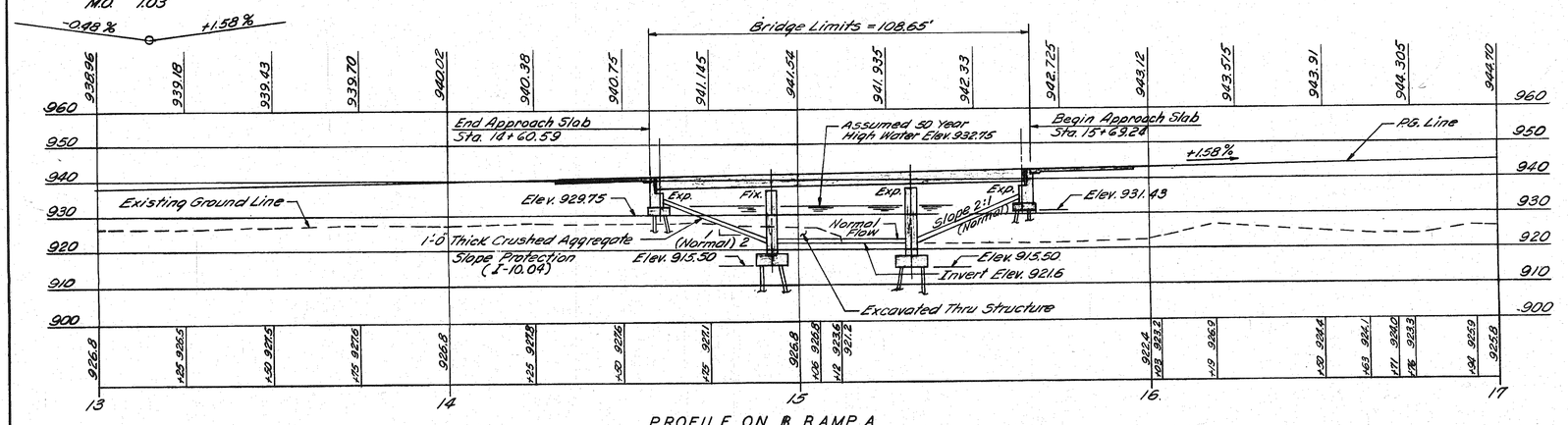


HORIZONTAL CURVE DATA RAMP A

P.I. Sta. 15+12.23
D = 5°11'06"
Δ = 15°08'33" Lt.
R = 700.00'
T = 93.04'
L = 185.00'
E = 6.16'

VERTICAL CURVE DATA RAMP A

P.V.I. Sta. 12+50
Elev. 937.59
L.V.C. 400'
M.O. 1.03'



PROFILE ON ℄ RAMP A

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%

PROPOSED STRUCTURE

TYPE: Continuous steel beam with reinforced concrete deck and substructure.
SPANS: 32'-0, 40'-0, 32'-0" ℄ Bearings.
ROADWAY: 28'-0" ft. parapets, 1'-2" Curbs
LOAD FREQUENCY: C.F. 2.000 (57) 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.

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.

All Piles 10 BP 42
Estimated Average Pay Length
Piers 20'
Abutment No. 1 -25'
Abutment No. 2 -30'

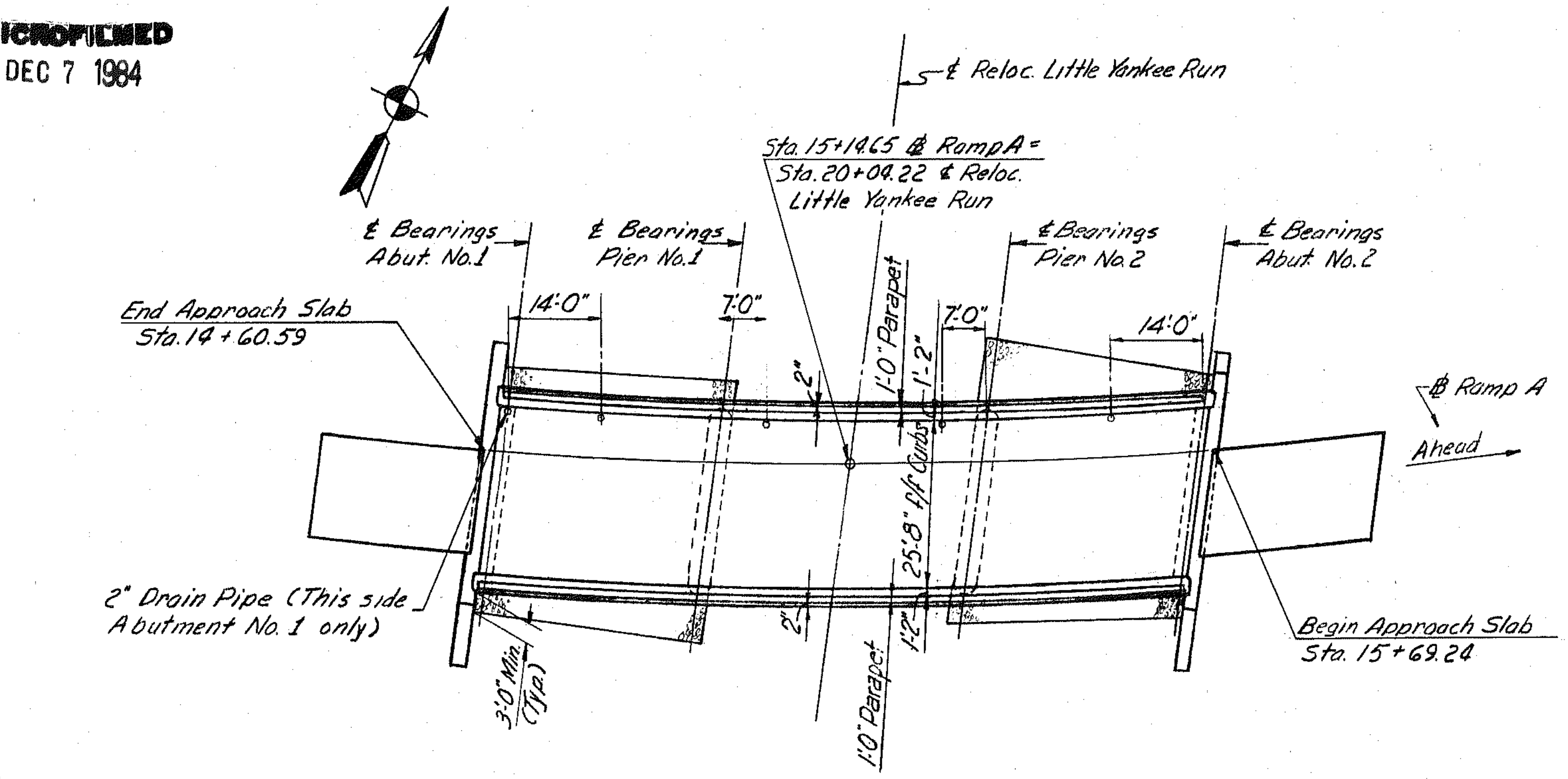
PREPARED BY
BUCHART ENGINEERING, YORK, PA.

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'

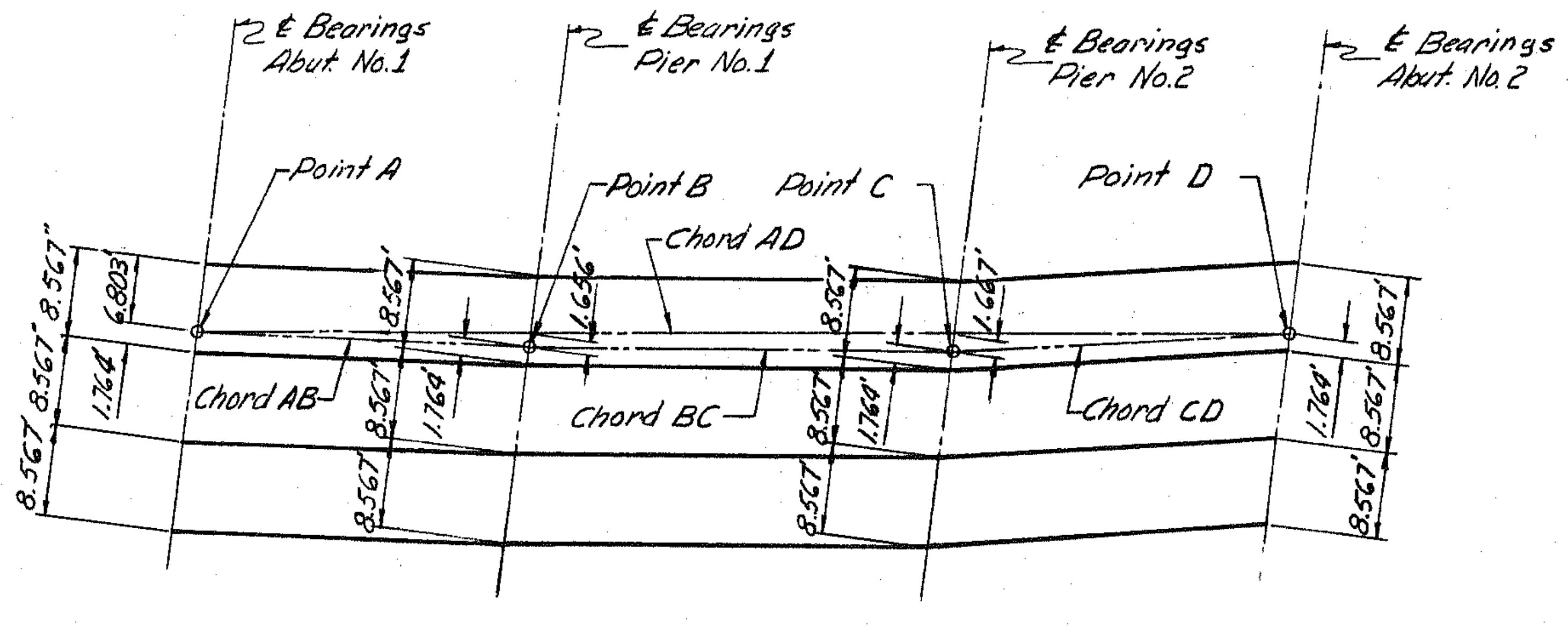
PRESENT TOPOGRAPHY		PROPOSED WORK			
Surveyed	Drawn	Designed	Drawn	Checked	Reviewed
Buchart Engr.	R.L.K.	G.M.B.	D.A.T.	G.M.B.	3-10-64

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

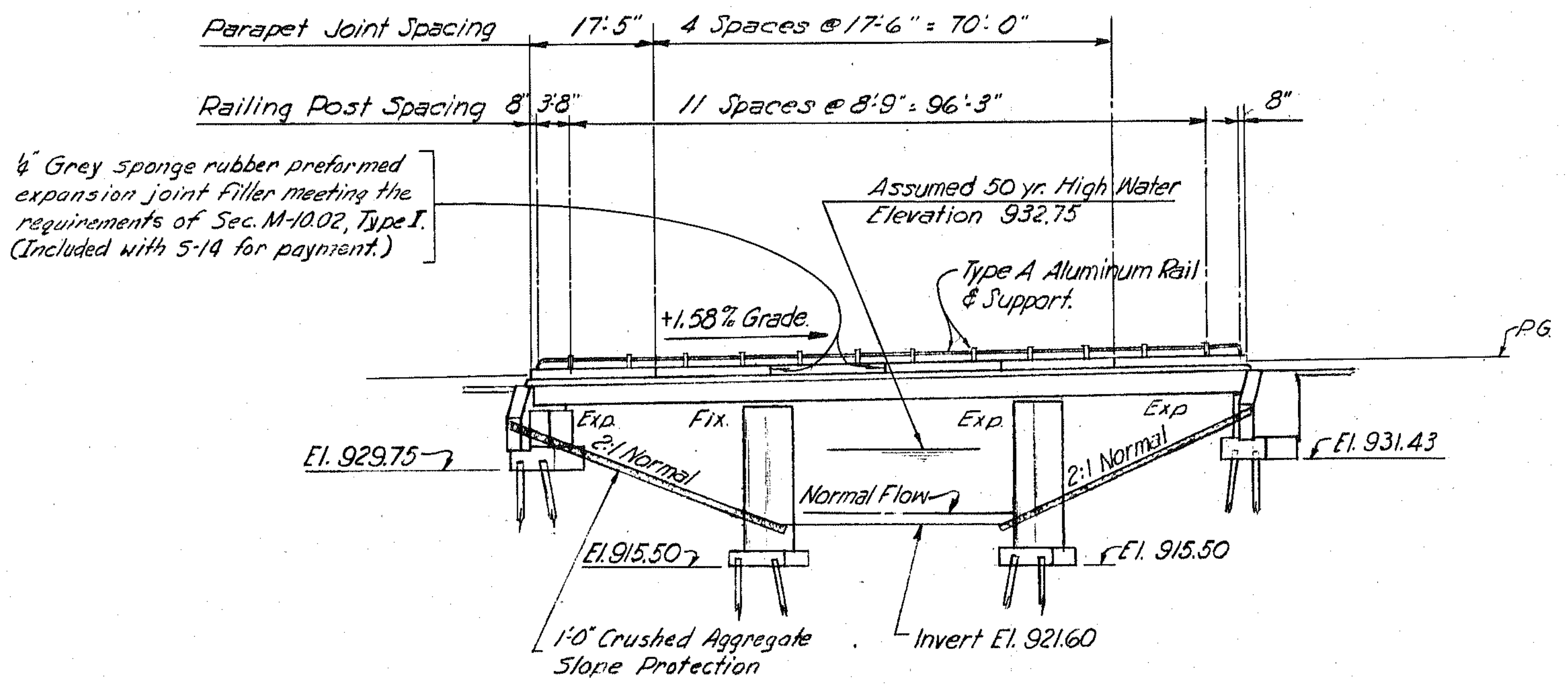
TRUMBULL COUNTY
TRU-I-80-(8.90)



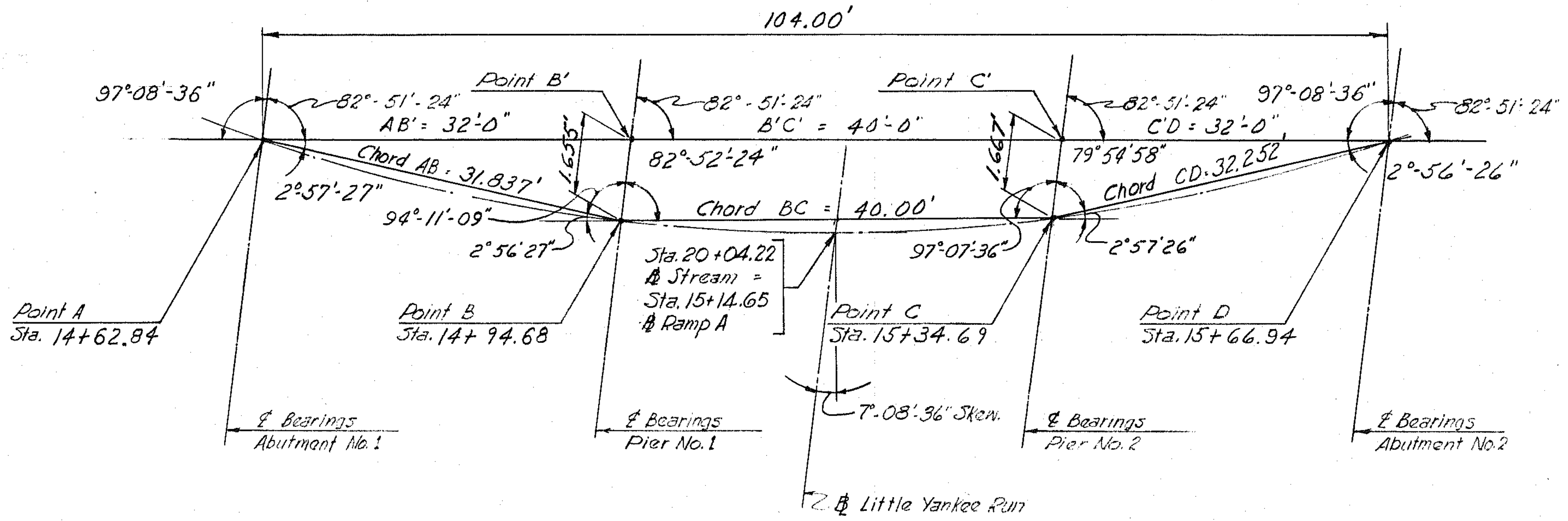
GENERAL PLAN



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 313

- 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		
I-127	2	Each	Delineators, Type C-2, bracket mounted	2					

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

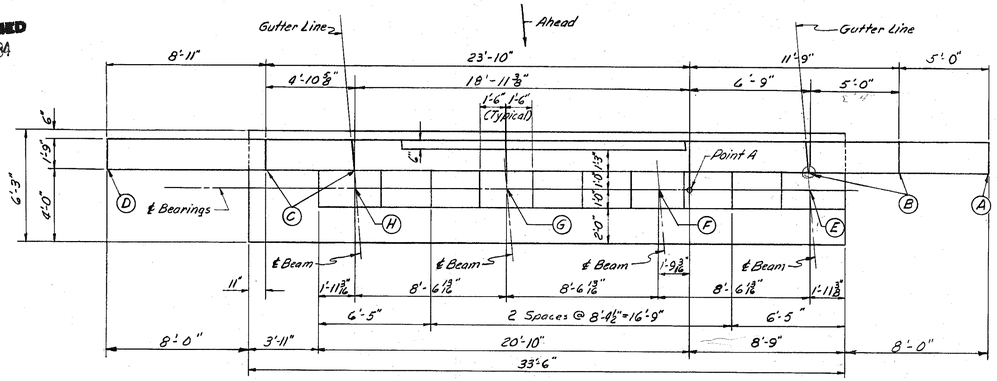
GENERAL PLAN & ELEVATION
NOTES & ESTIMATED QUANTITIES
BRIDGE NO. TRU-I-80-0926 RAMP A
OVER
LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 14+60.59 TO STA. 15+69.24

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
G.M.B.	J. H.		G.M.B.	10-26-62	

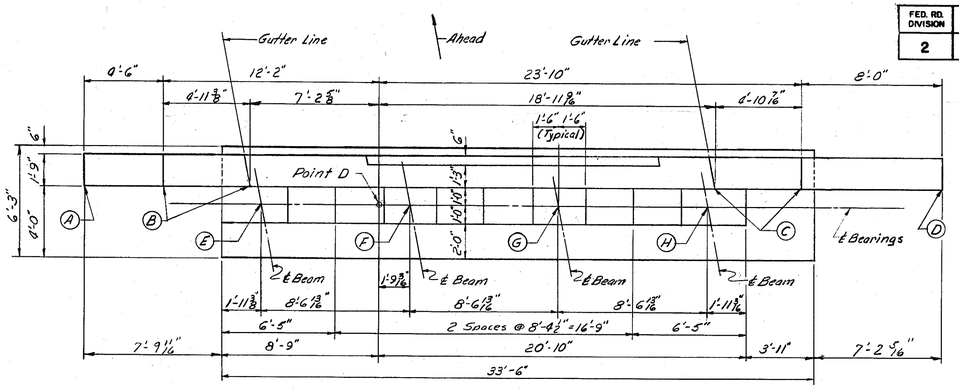
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5 (9) 245	

308
401

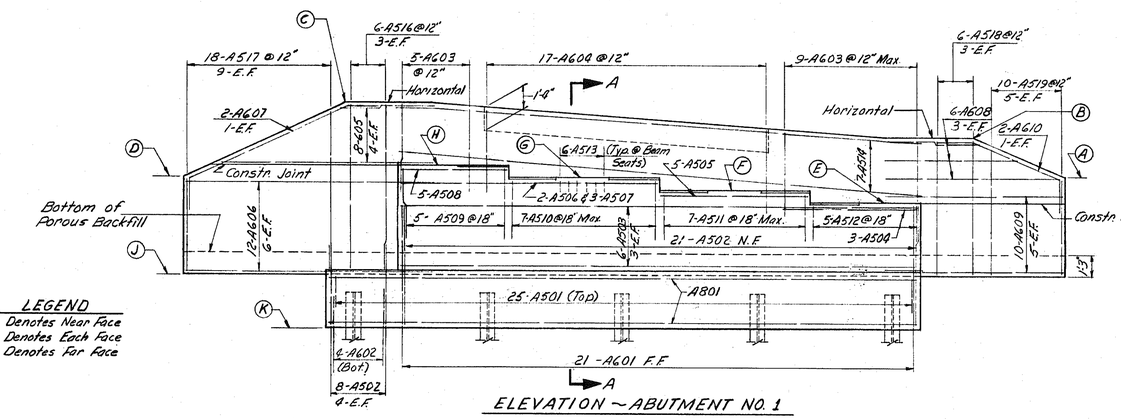
TRUMBULL COUNTY
TRU-I-80-(8.90)



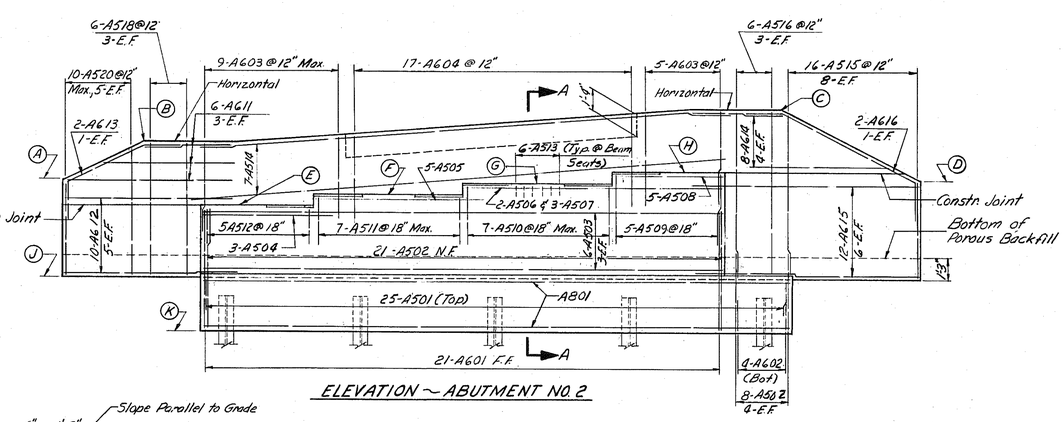
PLAN ~ ABUTMENT NO. 1



PLAN ~ ABUTMENT NO. 2

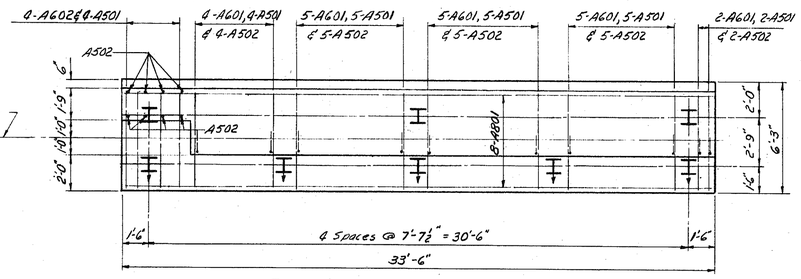


ELEVATION ~ ABUTMENT NO. 1

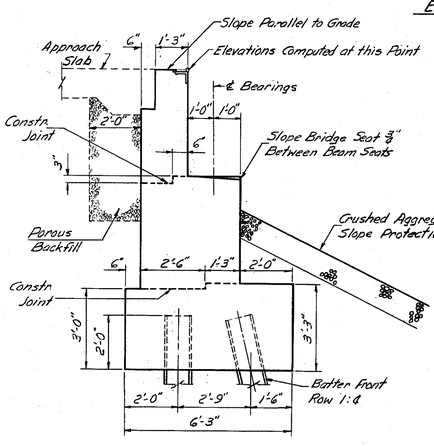


ELEVATION ~ ABUTMENT NO. 2

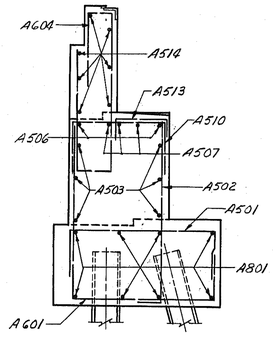
LEGEND
N.F. Denotes Near Face
E.F. Denotes Each Face
F.F. Denotes Far Face



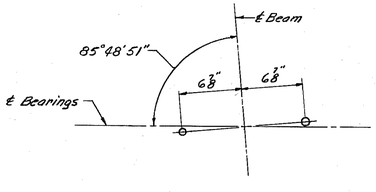
FOOTING PLAN ~ ABUTMENT NO. 1
(ABUTMENT NO. 2 SIMILAR)



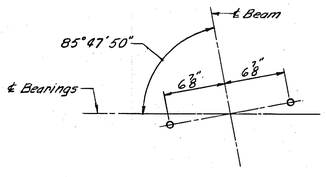
SECTION A-A



SECTION A-A
(SHOWING REINFORCEMENT)



ANCHOR BOLT LAYOUT
(Abutment No. 1)



ANCHOR BOLT LAYOUT
(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 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.

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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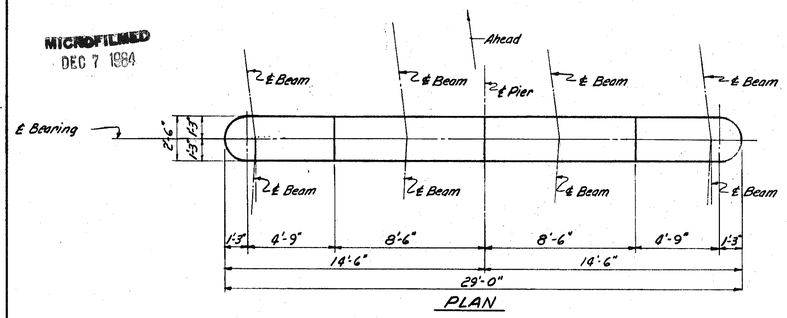
ABUTMENTS
BRIDGE NO. TRU-I-80-0926 RAMP A
OVER
LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 14+60.59 TO STA. 15+69.24

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
G.M.B.	F.J.M.		G.M.B.	[illegible]	10-26-62	

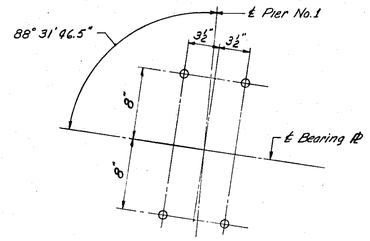
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

309
401

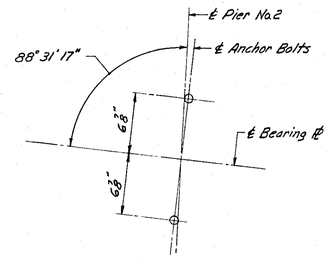
TRUMBULL COUNTY
TRU-I-80-(8.90)



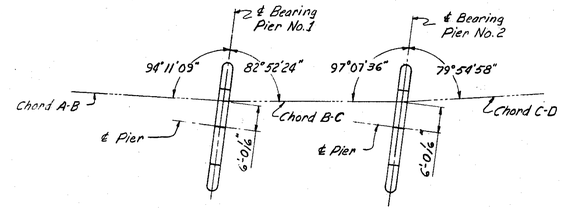
PLAN



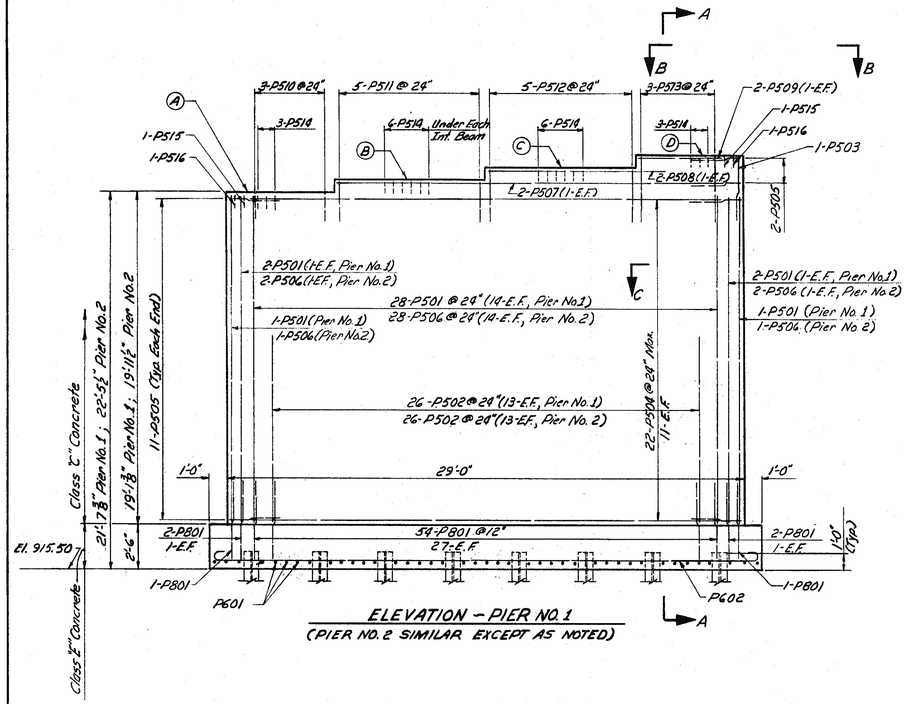
ANCHOR BOLT LAYOUT
Pier No.1 (Fixed)



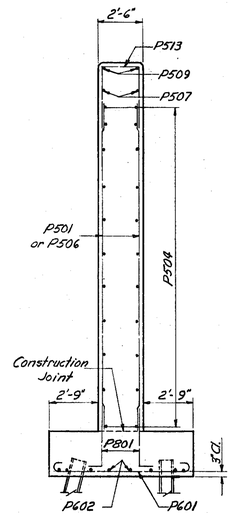
ANCHOR BOLT LAYOUT
Pier No. 2 (Exp.)



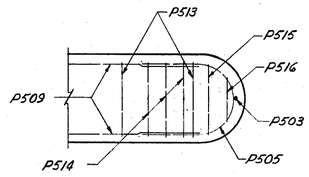
PIER GEOMETRY



ELEVATION - PIER NO.1
(PIER NO.2 SIMILAR EXCEPT AS NOTED)



SECTION A-A



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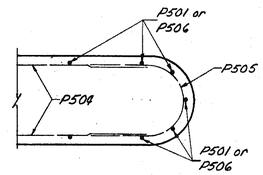
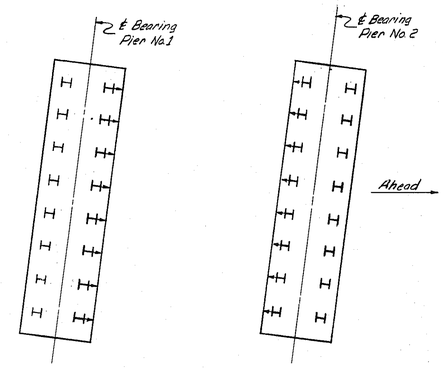
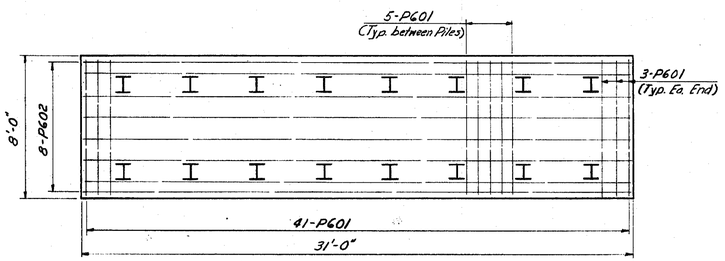


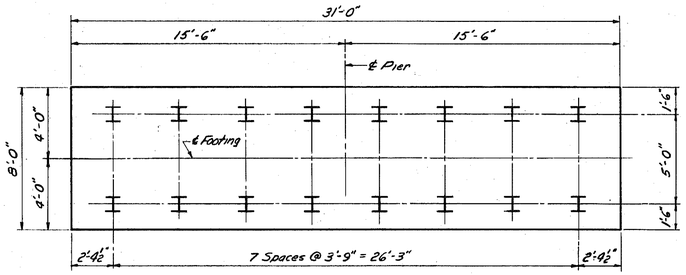
SECTION C-C



PILE LAYOUT
(SHOWING BATTER)



FOOTING PLAN - PIERS NO.1 & NO.2



PILE LAYOUT ~ PIERS NO.1 & NO.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.
- 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.

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

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

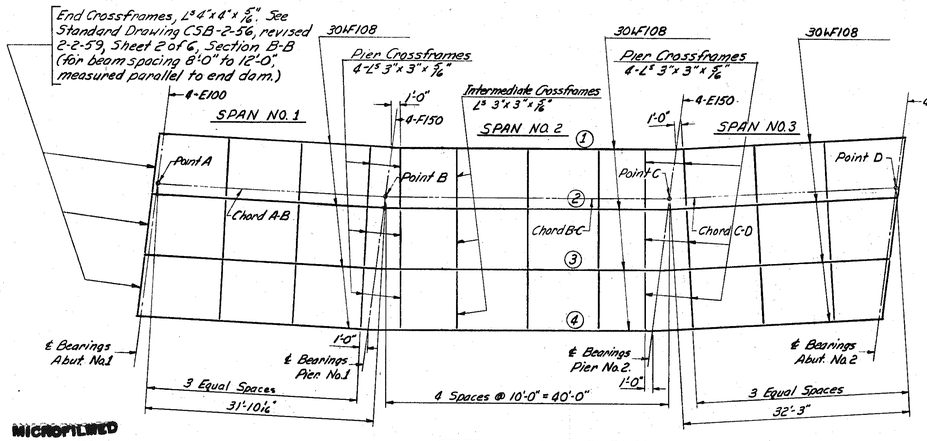
PIERS
BRIDGE NO. TRU-I-80-0926 RAMP A
OVER
LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 14+60.59 TO STA. 15+69.24

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
G.M.B.	J.H.Y. F.J.M.		G.M.B.	~~P~~	10-26-82	

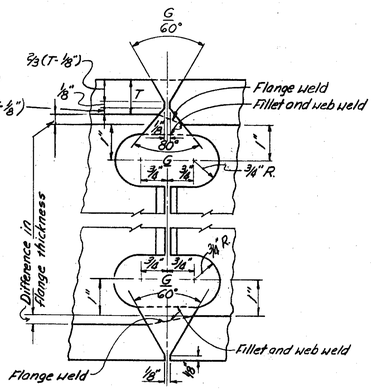
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

310
401

TRUMBULL COUNTY
TRU-I-80(8.90)

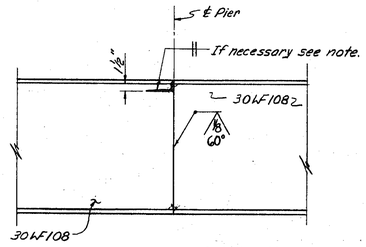


STEEL FRAMING PLAN



END PREPARATION OF ROLLED BEAMS FOR FIELD WELDING

NOTE: Any roughness from burning shall be removed by grinding.



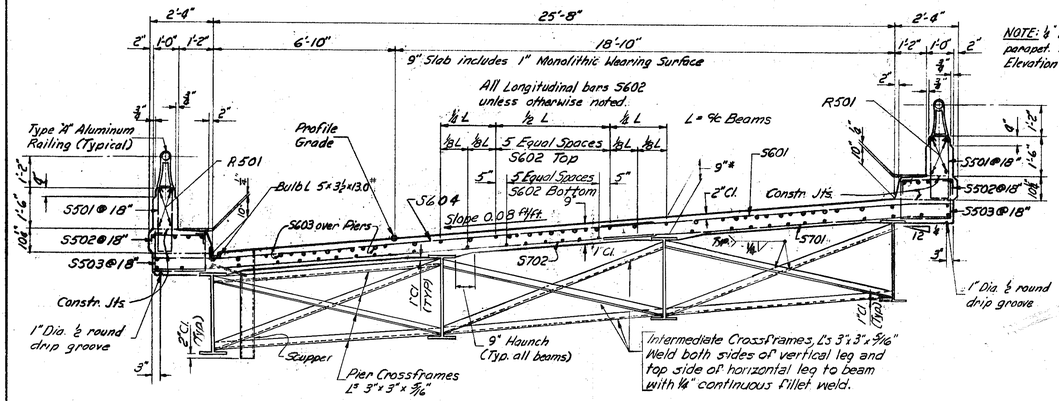
BEAM SPLICE DETAIL-ELEVATION

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			BEAM NO.2		
	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	1/16"	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	-1/8"	-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			BEAM NO. 4		
	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	1/16"	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"	-1/8"	-3/8"	0	-1/8"	-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.

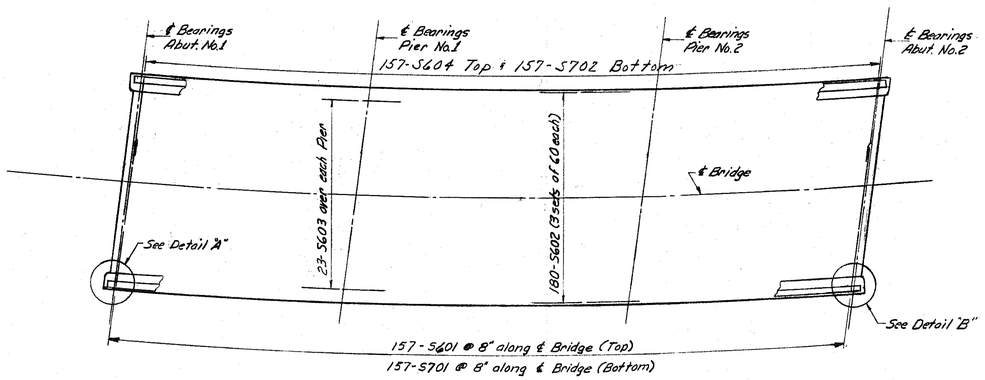


TYPICAL CROSS SECTION

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 3/8"	8 3/8"
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 3/8"



DECK SLAB PLAN

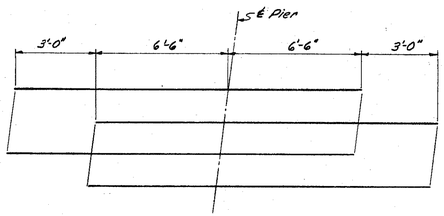
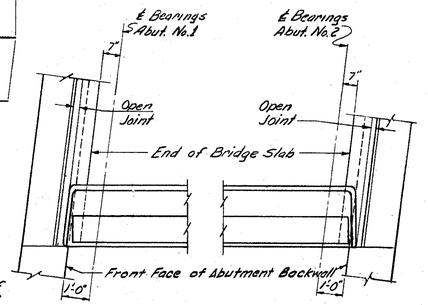


DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIERS

NOTE: Terminate 6"x4"x 3/8" angle and ventical leg of 8"x4"x1" angle on line of deck fascia.



DETAIL 'A'

DETAIL 'B'

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 ⅛", the depth of the smaller-depth beam shall be increased by splitting the web longitudinally at a distance of 12" 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.

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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.		8-26-62	

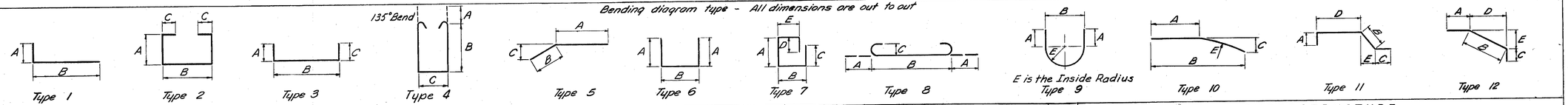
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5 (9) 245	

311
401

TRUMBULL COUNTY
TRU I-80-(8.90)

REINFORCING STEEL BAR SCHEDULE

Bending diagram type - All dimensions are out to out



Type 1 · Type 2 · Type 3 · Type 4 · Type 5 · Type 6 · Type 7 · Type 8 · Type 9 · Type 10 · Type 11 · Type 12

PIERS

MARK	PIER#1	PIER#2	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
P801	60	60	120	5'-6"	1	11 3/4"	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'-0 1/2"			11 3/4"	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	7 5/8"	2'-2"				119
P515	2	2	4	3'-0"	6	7 5/8"	2'-0"				13
P516	2	2	4	2'-7"	6	7 5/8"	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	7 5/8"	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	7 5/8"	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 5 1/2"
(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	7 5/8"	1'-6"				365
S503	140	4'-10"	2	1'-3 7/8"	1'-6"	7 5/8"			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

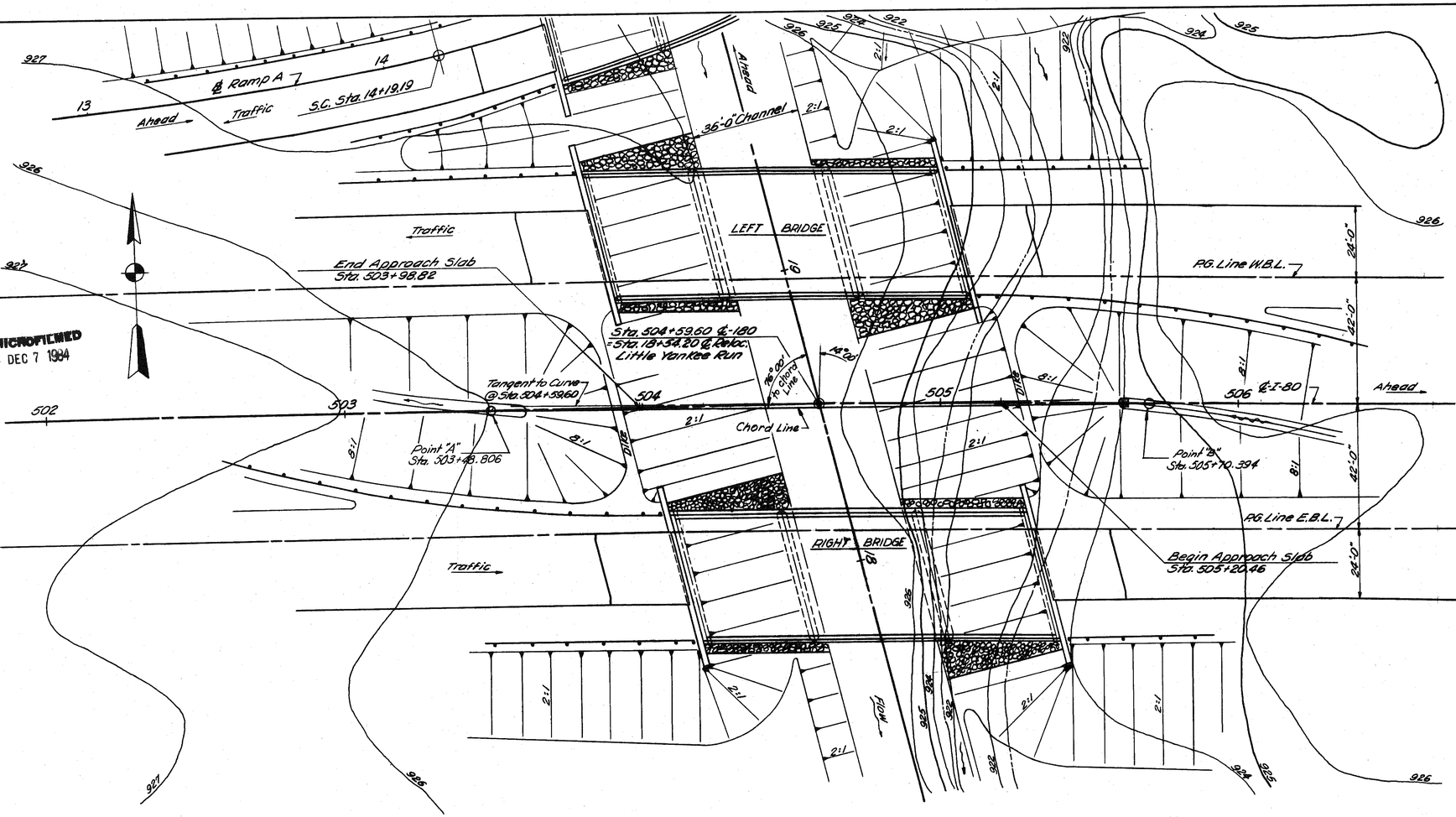
Designed	Drawn	Traced	Checked	Reviewed Date	Revised
GMB	GP	T.P.G.	GMB	10-26-62	

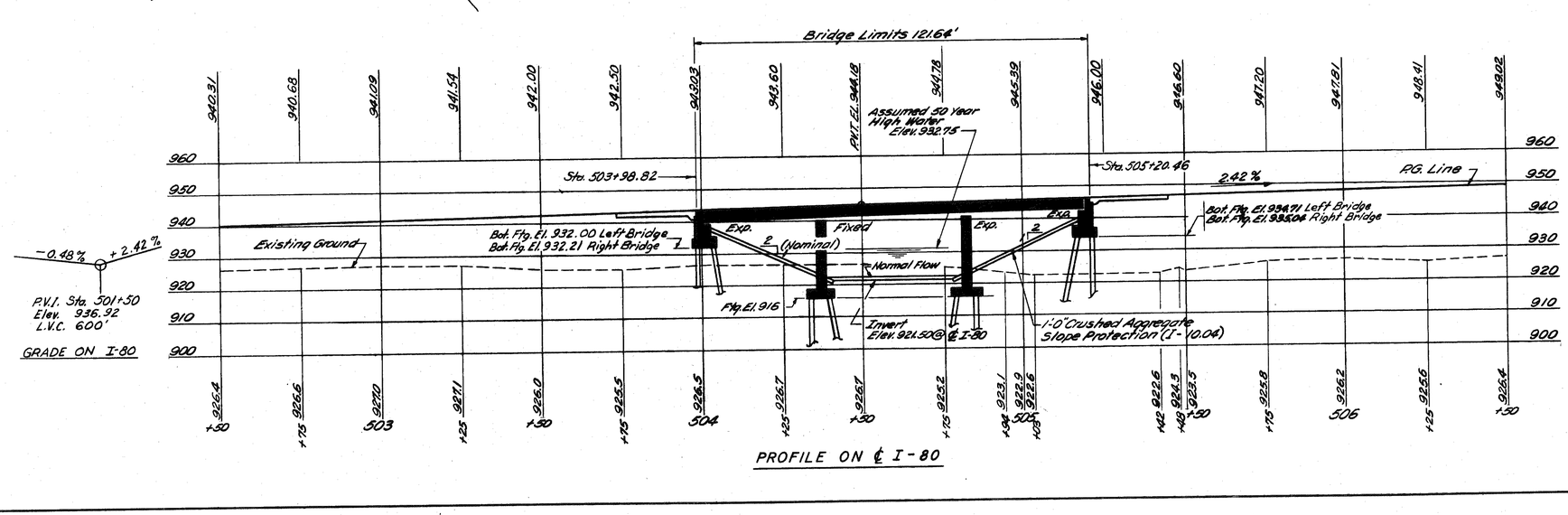
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

312
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





PROFILE ON ℄ I-80

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'-6" curbs.
LOAD FREQUENCY: CF 3000 (ST) 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: 19.6 Square Miles

All Piles 10-BP-42, estimated average pay length, Abuts. 35, Piers 20.

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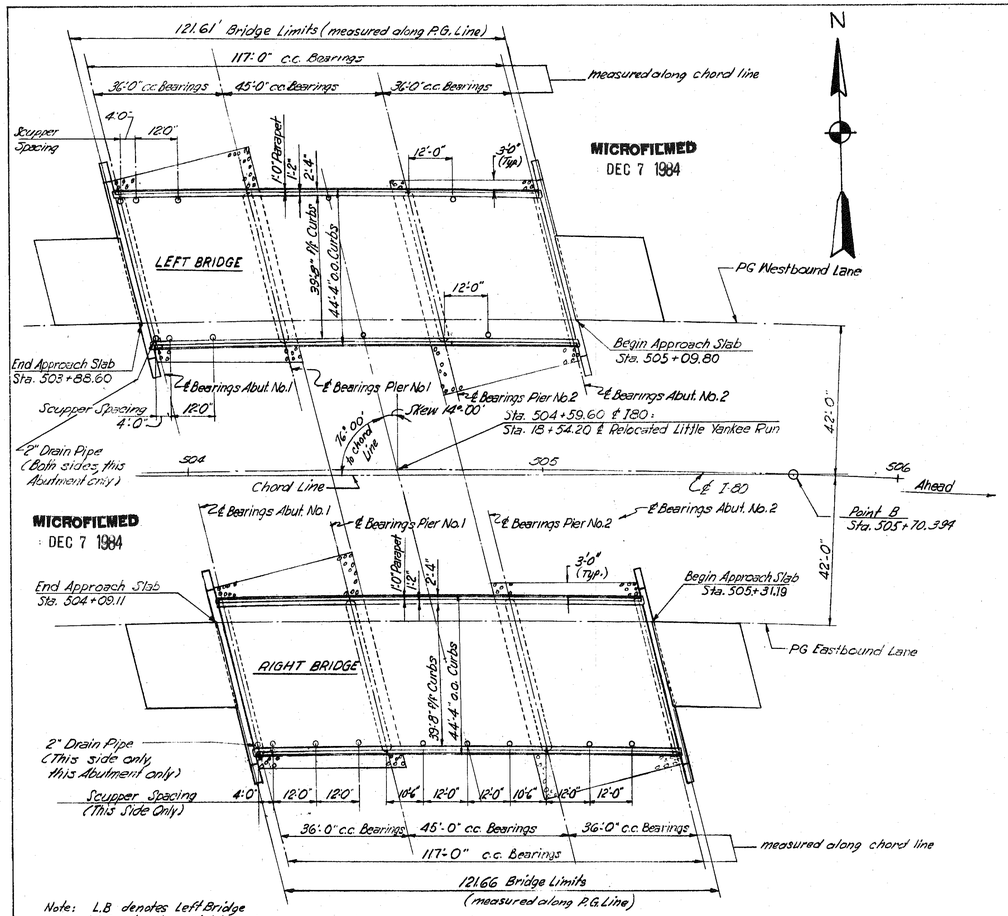
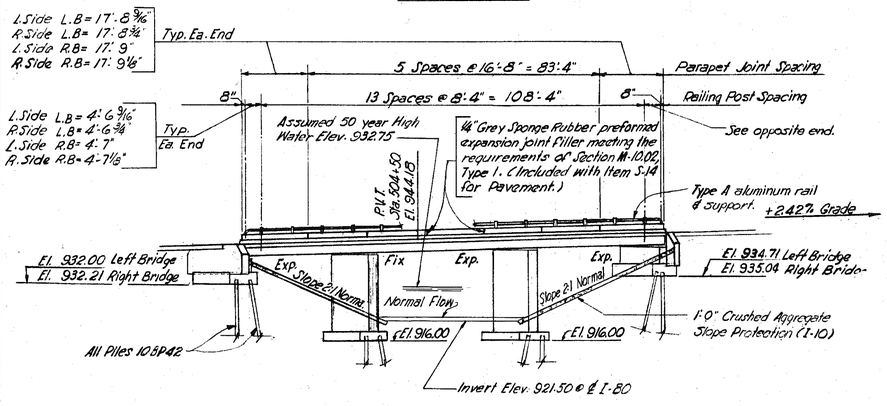
SITE PLAN
BRIDGE NO. TRU-I-80-0926 L/R
OVER
LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 503+98.82 TO STA. 505+20.46
SCALE: 1"=20'

PRESENT TOPOGRAPHY		PROPOSED WORK			
Surveyed	Drawn	Designed	Drawn	Checked	Reviewed
Buchart Engr.	D.R.T.	G.M.B.	D.R.T.	G.M.B.	10-11-82



Note: L.B. denotes Left Bridge
R.B. denotes Right Bridge

GENERAL PLAN



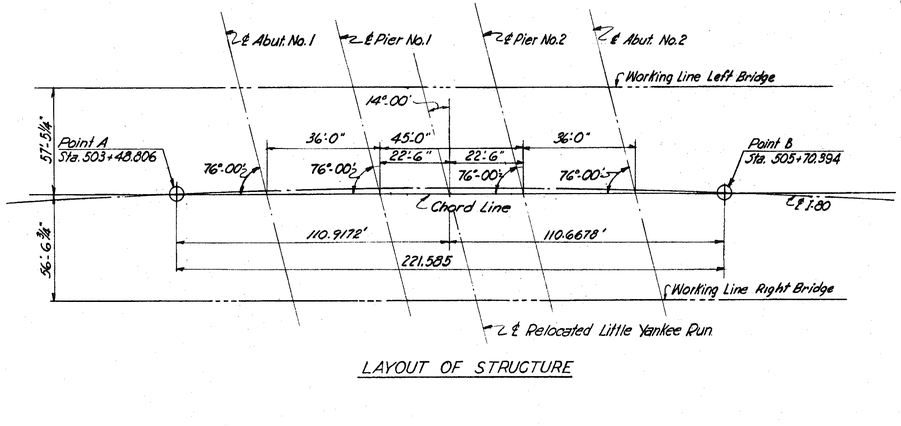
ELEVATION

V.C. = 600'
P.V.I. : Sta. 501+50
Elev. : 936.92
M.O. = 2.175'

GRADE DATA

CURVE DATA

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'



LAYOUT OF STRUCTURE

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

313/401

TRUMBULL COUNTY
TRU-I-80 (8.90)

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				
I-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				
I-127	1	Each	Delineator, Type A-1, bracket mounted	1									
I-10	1100	Sq. Yds.	Crushed Aggregate Slope Protection (I-10.01)				550					550	

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

GENERAL PLAN & ELEVATION
NOTES & ESTIMATED QUANTITIES
BRIDGE NO. TRU-I-80-0926 4R
OVER
LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 503+98.82 TO STA. 505+20.86

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
G.M.B.	J.H.		G.M.B.	10-11-62	

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

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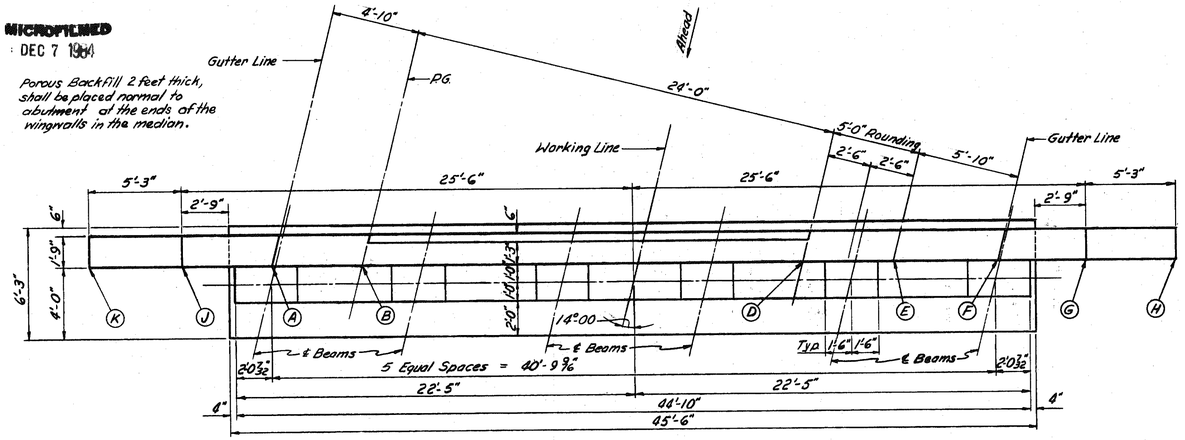
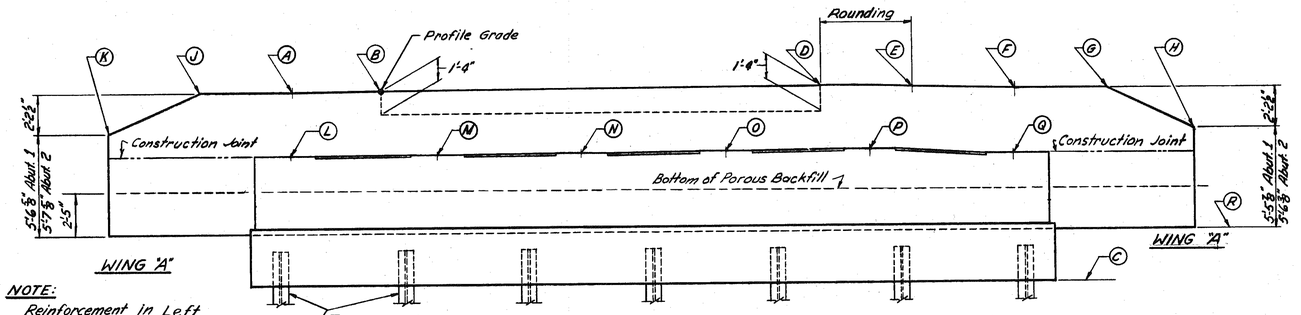
401

TRUMBULL COUNTY
TRU-I-80 (8.90)

Porous Backfill 2 feet thick, shall be placed normal to abutment at the ends of the wingwalls in the median.

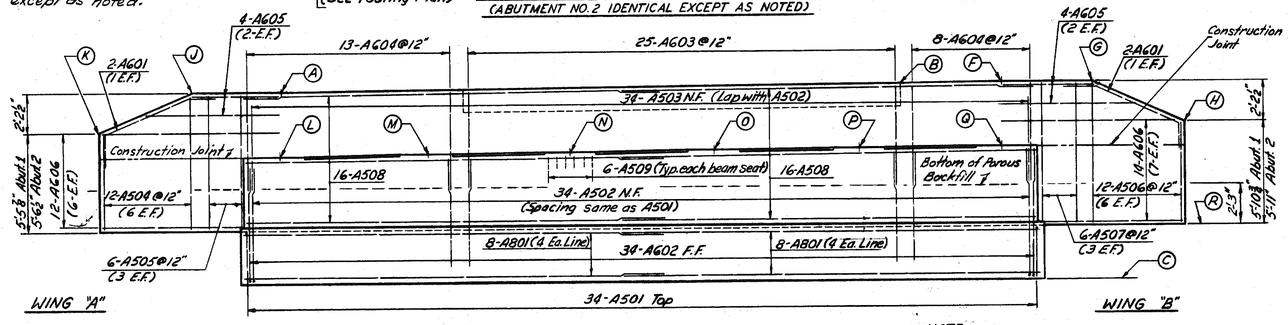


PLAN
ABUTMENT NO. 1 LEFT BRIDGE
(ABUTMENT NO. 2 IDENTICAL EXCEPT AS NOTED)



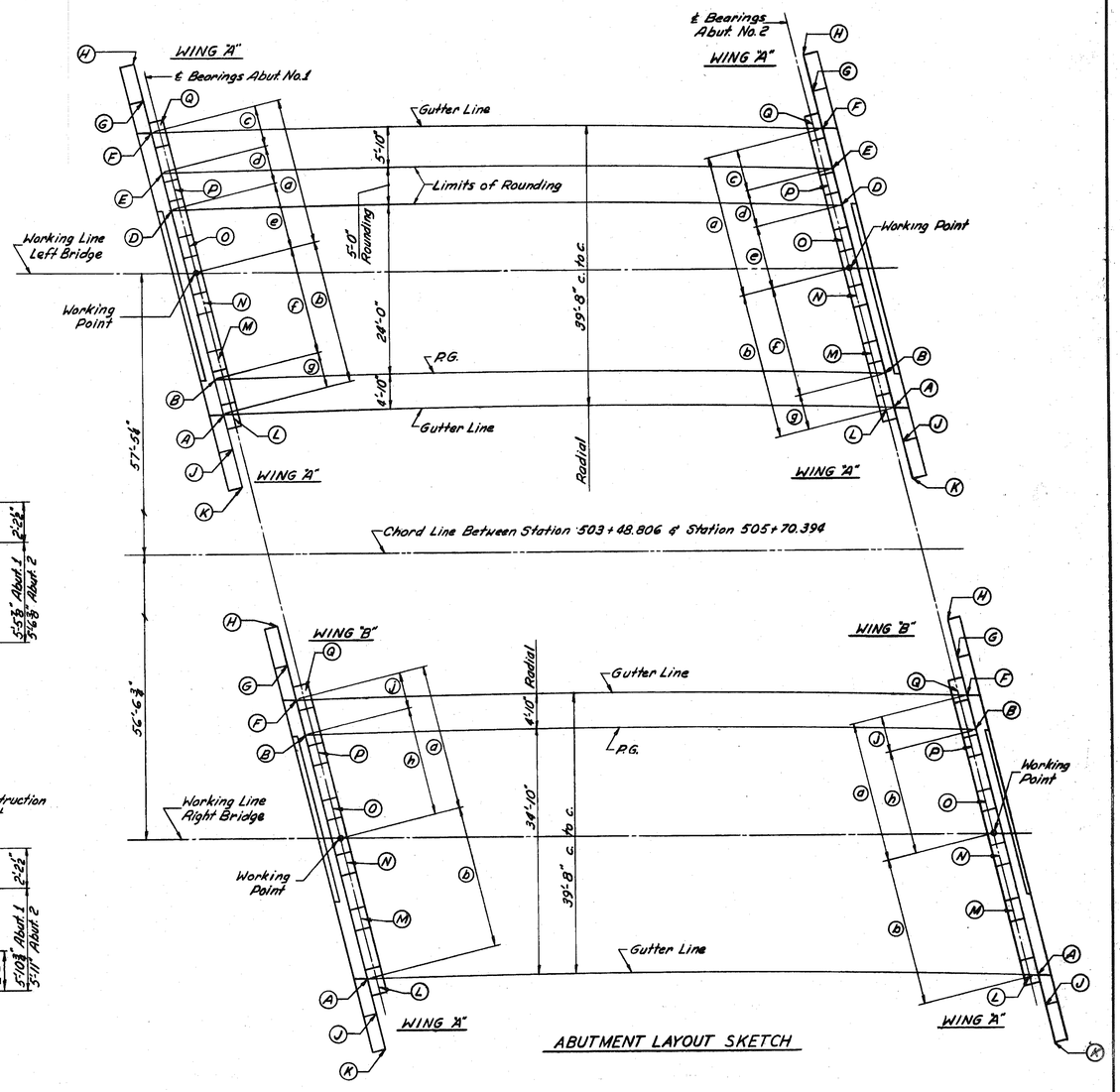
NOTE:
Reinforcement in Left Bridge Abutments identical to Right Bridge Abutments except as noted.

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. = Fan Face
E.F. = Each Face



ABUTMENT LAYOUT SKETCH

NOTES
For Notes see Sheet No. 315

TABLE OF ELEVATIONS AND DIMENSIONS

STRUCTURE	ELEVATIONS																	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	a	b	c	d	e	f	g	h	j	
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	20'-5 15/16"	20'-3 3/8"	6'-0"	5'-1 3/8"	9'-0 3/16"	15'-4 3/16"	4'-11 1/16"	—	—	
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	20'-2 1/4"	20'-8 3/8"	6'-0 7/16"	5'-1 7/8"	9'-0 3/16"	15'-8 3/8"	4'-11 5/8"	—	—	
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	20'-7 3/4"	20'-2 3/8"	—	—	—	—	—	18'-11 1/16"	5'-8 1/16"	
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	20'-0 5/8"	20'-10 5/8"	—	—	—	—	—	18'-11 13/16"	5'-0 13/16"	

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

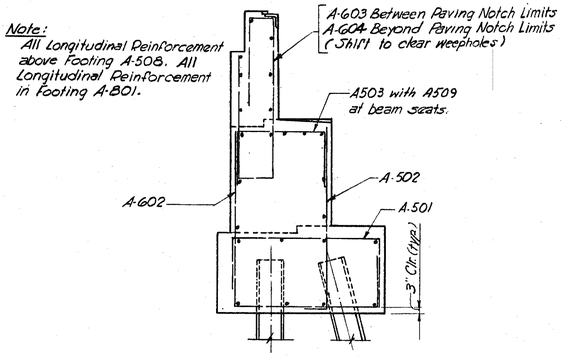
ABUTMENT PLANS & ELEVATIONS
BRIDGE NO. TRU-I-80-0926 L/R
OVER
LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 503+98.82 TO STA. 505+20.46

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
C.S.F.	J.H.	F.J.M.	G.M.B.		10-11-62	

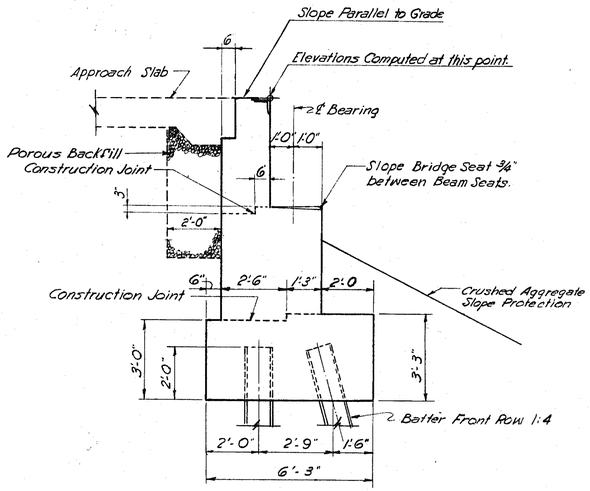
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

315
401

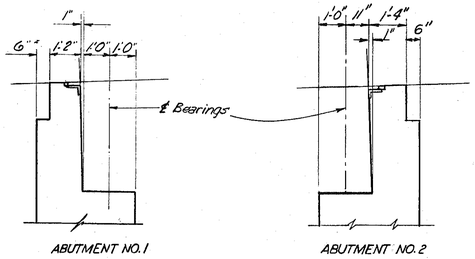
TRUMBULL COUNTY
TRU-I-80 (8.90)



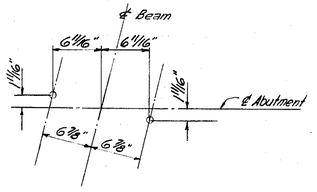
TYPICAL SECTION THROUGH ABUTMENT
SHOWING REINFORCEMENT



TYPICAL SECTION THROUGH ABUTMENT



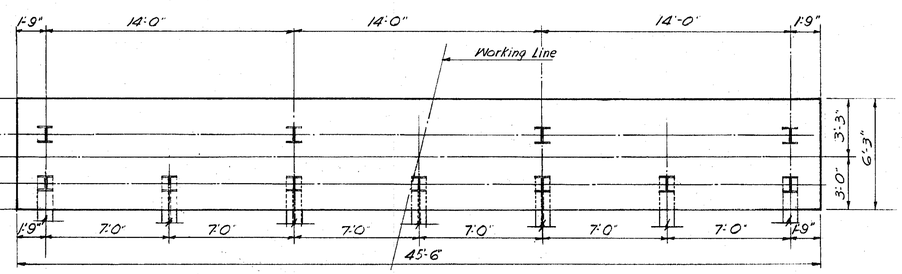
SLOPE OF BACKWALL



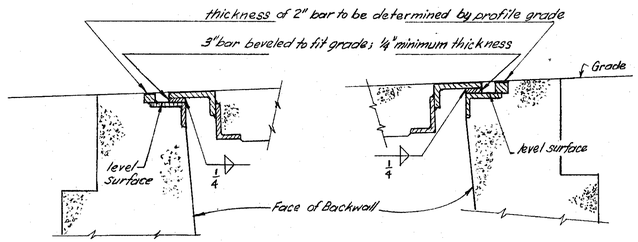
ANCHOR BOLT LAYOUT

NOTES

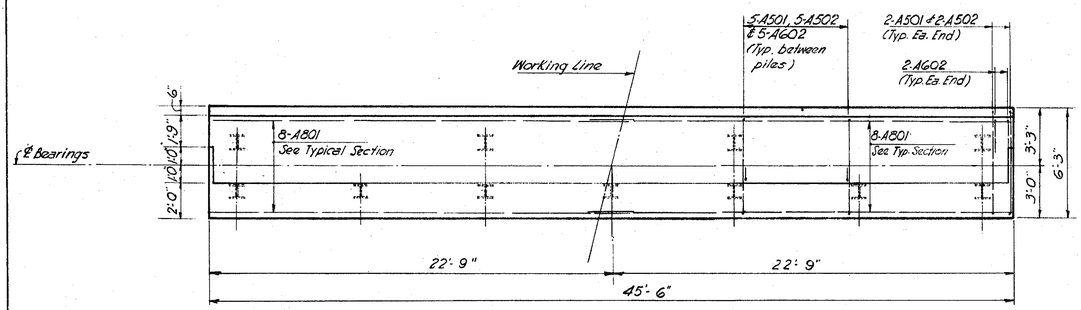
- PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments after which excavation shall be made for the abutment and for piers that are set in the fill area.
- POPOUS BACKFILL shall extend 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.

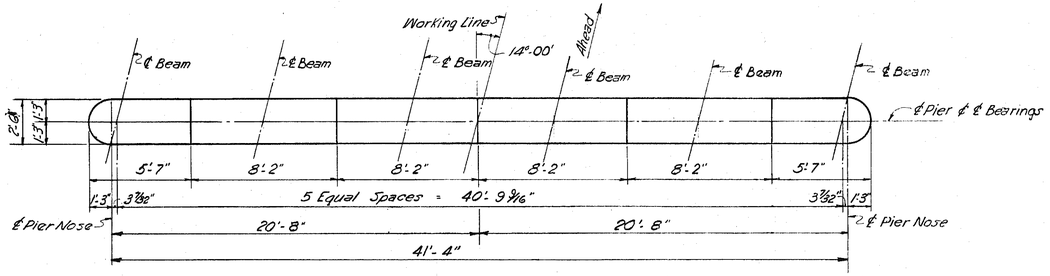
ABUTMENT SECTIONS & FOOTINGS
BRIDGE NO. TRU-I-80-0926 L/R
OVER
LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 503+98.82 TO STA. 505+20.46

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
C.S.F.	J.H.		G.M.B.	10-11-62	

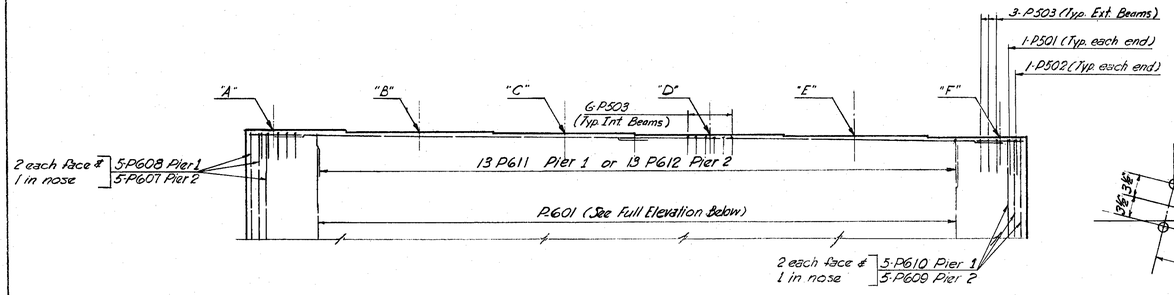
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

316
401

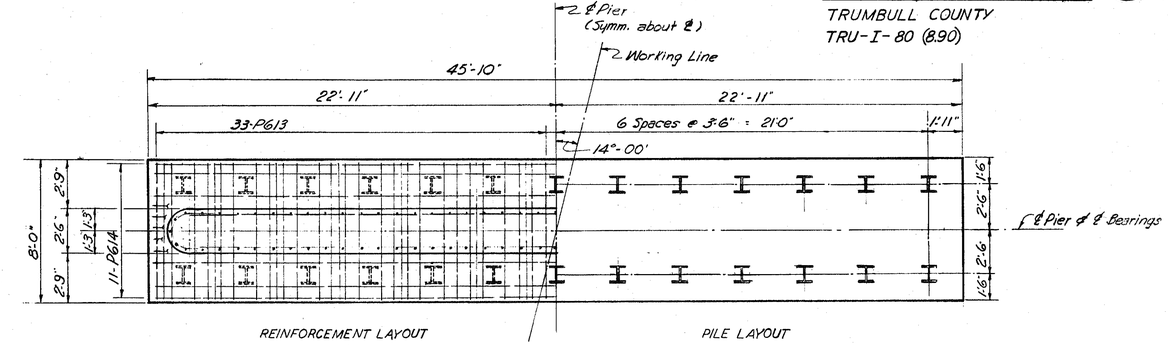
TRUMBULL COUNTY
TRU-I-80 (8.90)



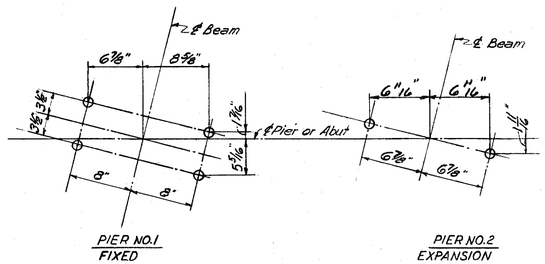
PLAN



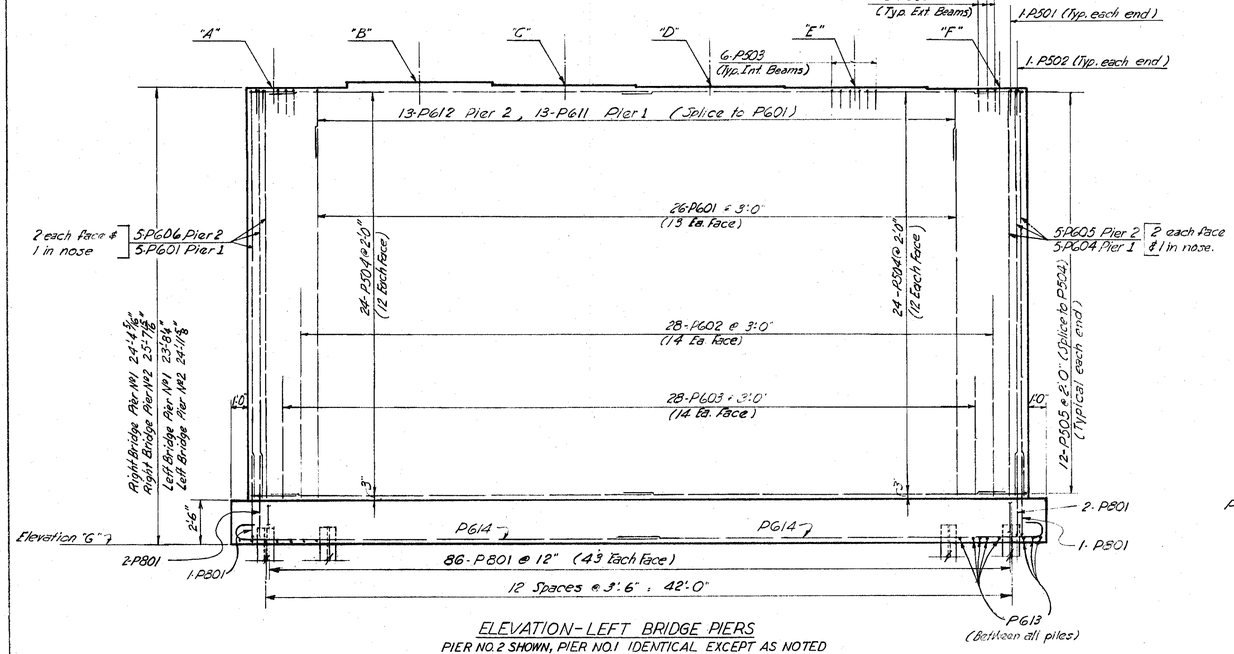
PARTIAL ELEVATION - RIGHT BRIDGE PIERS
PIER NO.1 SHOWN, PIER NO.2 IDENTICAL EXCEPT AS NOTED



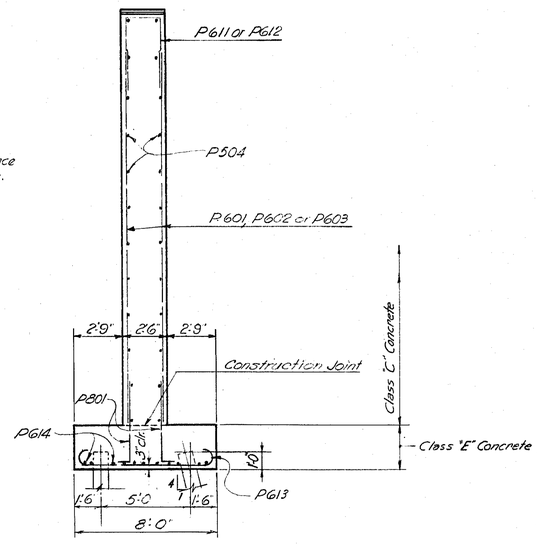
FOOTING PLAN



ANCHOR BOLT LAYOUT



ELEVATION - LEFT BRIDGE PIERS
PIER NO.2 SHOWN, PIER NO.1 IDENTICAL EXCEPT AS NOTED



TYPICAL SECTION

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

NOTES

- Special care shall be taken in placing reinforcing steal 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
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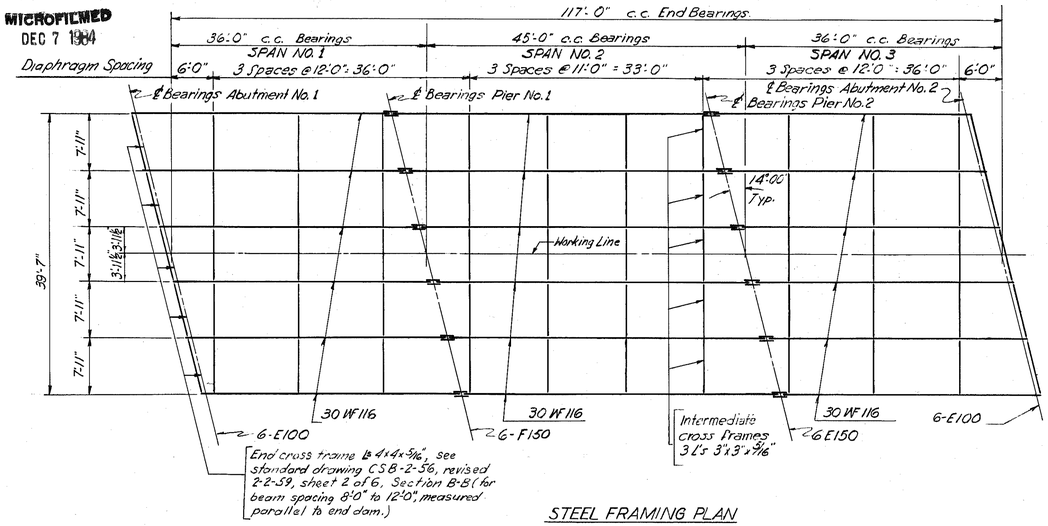
PIERS
BRIDGE NO. TRU-I-80-0926 L/R
OVER
LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 503+98.82 TO STA. 505+20.46

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
D.C.E.	J.H.		G.M.B.		10-11-62	

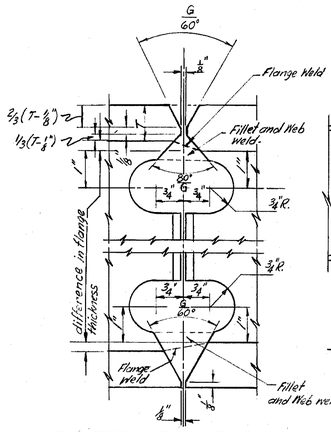
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

317
401

TRUMBULL COUNTY
TRU-I-80 (8.09)

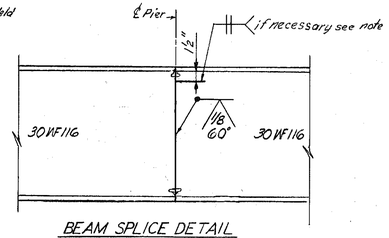


STEEL FRAMING PLAN



END PREPARATION OF ROLLED BEAMS FOR FIELD WELDING

Note: Any roughness from burning shall be removed by grinding.



BEAM SPLICE DETAIL

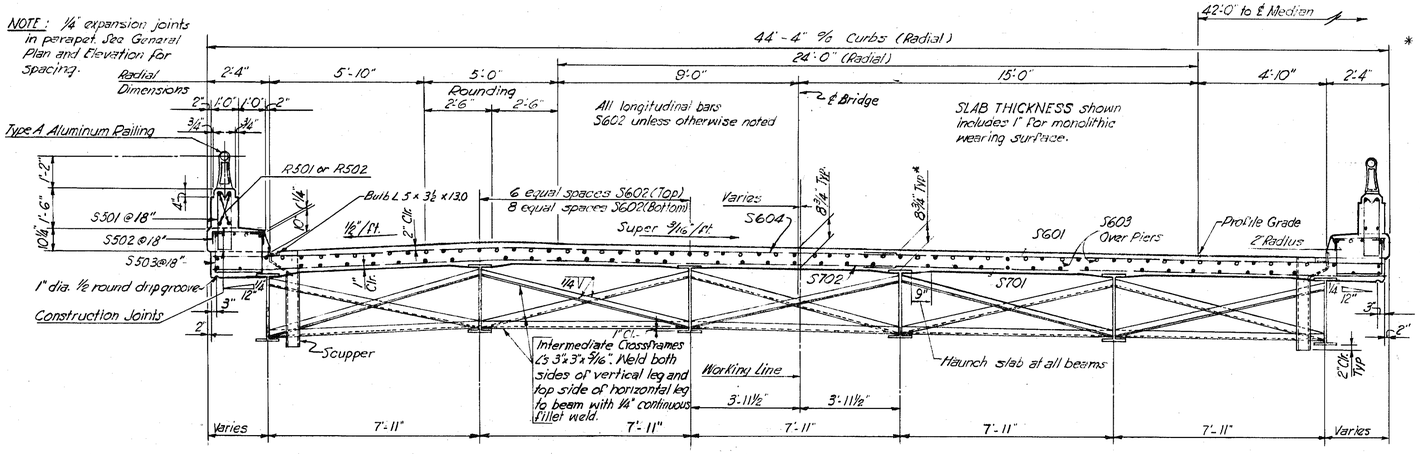
BEAM SPLICE WELDING PROCEDURE

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 SPAN 1	OUTSIDE BEAMS SPAN 2	OUTSIDE BEAMS SPAN 3	INSIDE BEAMS SPAN 1	INSIDE BEAMS SPAN 2	INSIDE BEAMS SPAN 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.



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.

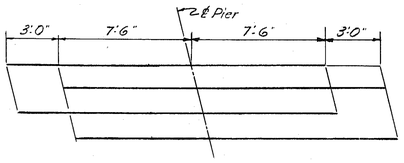
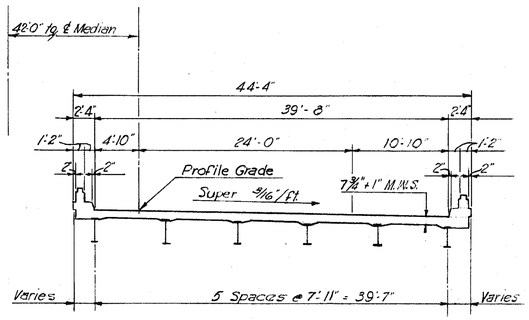


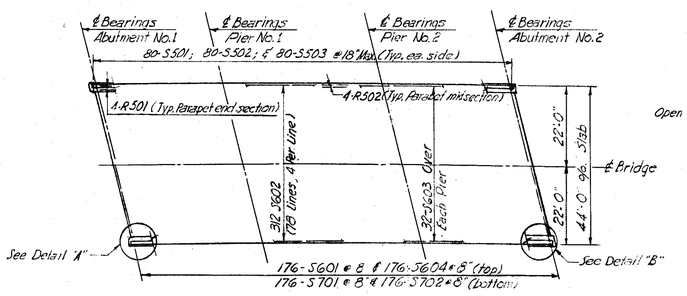
DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIERS

NOTES

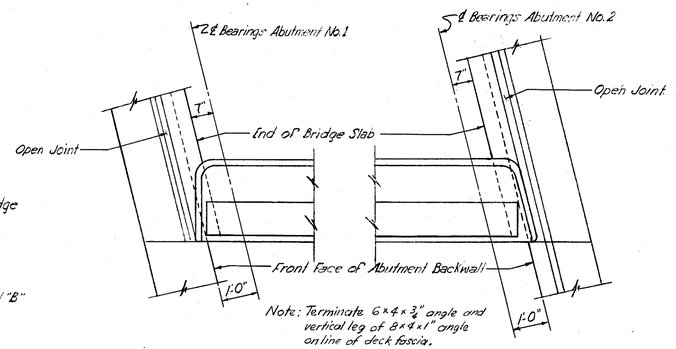
- Refer to Standard Drawing CSB-2-56, Sheet 2 of 6 for details of end dam.
- Refer to Standard Drawing CSB-2-56, Sheet 3 of 6, for gutter and scupper details.
- Refer to Standard Drawing FSB-1-62 for details of Bearings.
- Concrete and reinforcing steel above parapet construction joints included with railing for payment.
- Concrete shall be Class "C".
- Continuous Beam Splices: If beams having depths differing by more than ½" 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 ⅔" per foot, after which the split in the web shall be completely welded with full depth penetration.



TYPICAL CROSS SECTION - RIGHT BRIDGE



DECK SLAB PLAN



DETAIL "A" DETAIL "B"

NOTE:
Right Bridge section identical to Left Bridge section except as indicated above.

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BUCHART ENGINEERING, YORK, PA.

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.	10-11-62	

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

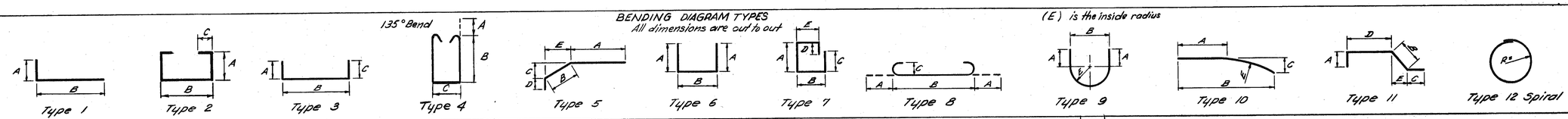
318
401

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
PB01	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
PB01	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
AB01	16	16	32	23'-10"	Str.						2,036
A601	4	4	8	9'-3"	5	1'-11"	5'-7"	2'-2½"	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
AB01	16	16	32	23'-10"	Str.						2,036
A601	4	4	8	9'-3"	5	1'-11"	5'-7"	2'-2½"	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, A501 is a No.8 size bar.

REPLACEMENT BARS

MARK	No.	LENGTH	TYPE	WEIGHT
REB01	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)

MICROFICHED
DEC 7 1984

CURVE DATA

P.I. Sta. 508+02.82 ℄ I-80
Δ = 20°37'15" Rt.
D = 0°28'00"
R = 12,277.67'
T = 2,293.54'
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°28'10" Rt.
D = 2°00'
R = 2,864.79'
T = 224.70'
L = 444.24'
E = 8.80'

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. 933.709

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: 88'-0", 110'-0", 110'-0", 56'-0"
ROADWAY: Varies, 2'-3" Safety Curbs.
LOAD FREQUENCY: C.F. 2.000 (57) 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.

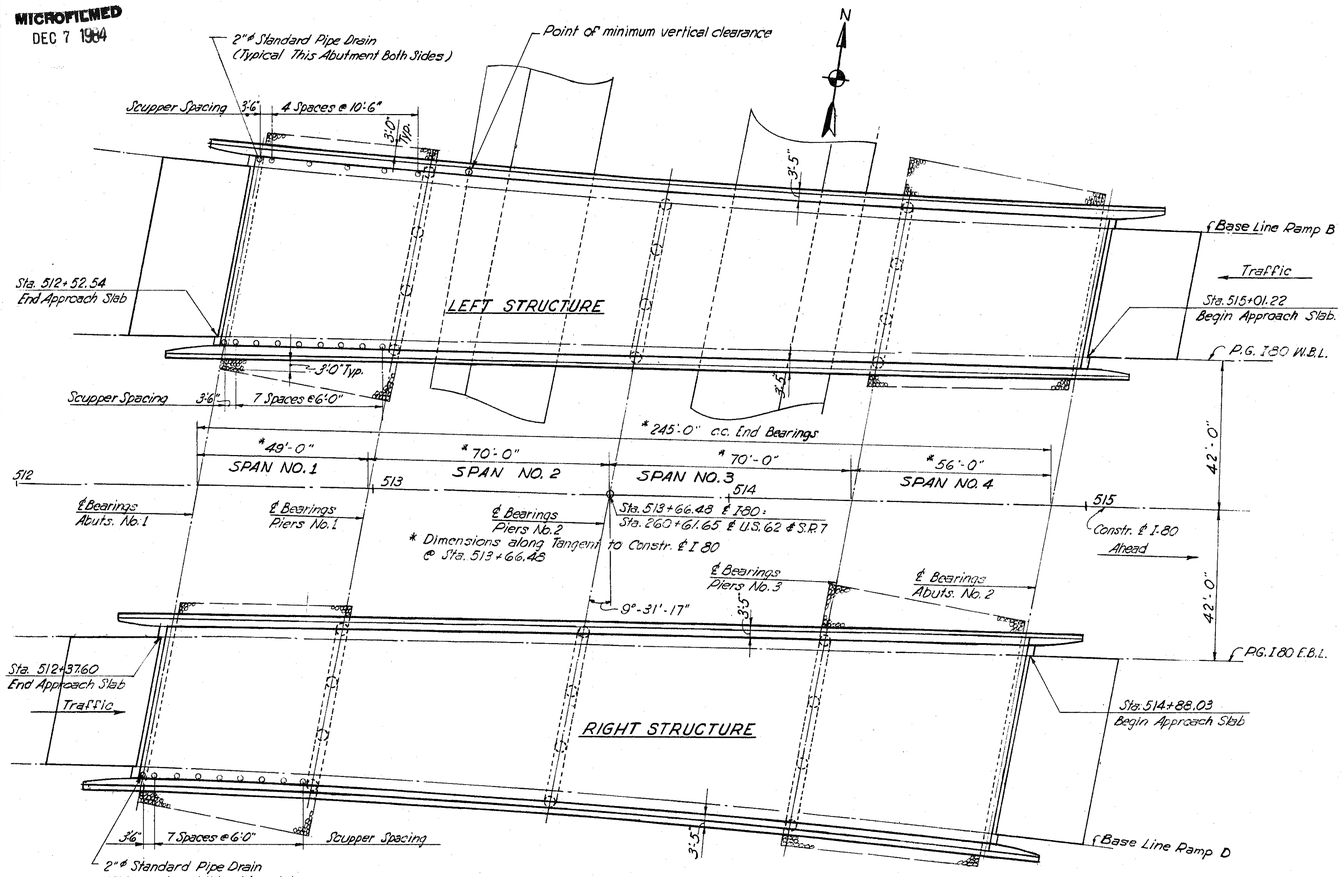
SITE PLAN
BRIDGE NO. TRU- -80-0941L/R
OVER
U.S. RT. 62 & SR-7
TRUMBULL COUNTY
SCALE: 1"=20'-0" STA. 512+45.07 TO STA. 514+94.62

PRESENT TOPOGRAPHY		PROPOSED WORK			
Surveyed	Drawn	Designed	Drawn	Checked	Reviewed
Buchart Eng.	R.L.K.	G.M.B.	R.L.K.	G.M.B.	11-8-82

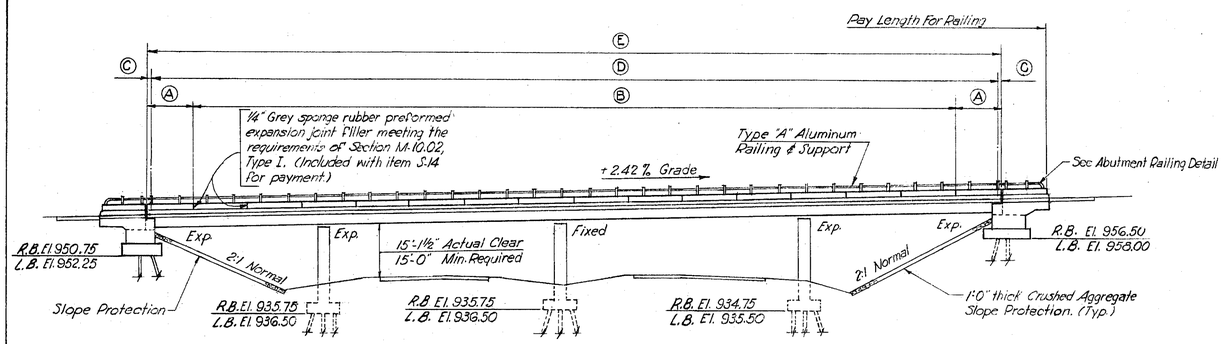
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

320
401

TRUMBULL COUNTY
TRU-I-80 (8.90)



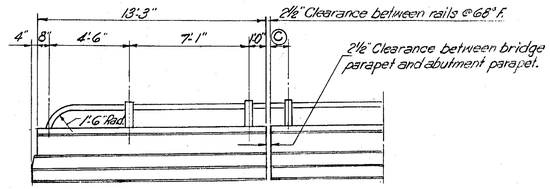
GENERAL PLAN



ELEVATION

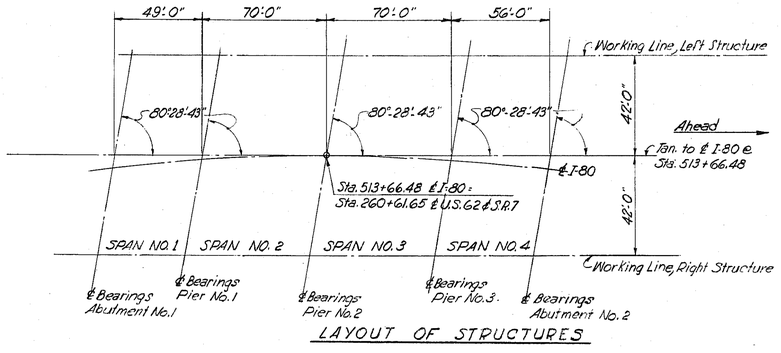
R.B. Denotes Right Bridge
L.B. Denotes Left Bridge

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.



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 preperation 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 7/16"
South Side Left Str.	12'-8 9/16"	14 Panels @ 15'-9 1/16" = 221'-1"	10 5/16"	31 Spaces @ 7'-10 3/4" = 244'-9 1/4"	246'-6 7/16"
North Side Right Str.	12'-9 1/4"	14 Panels @ 15'-9 1/16" = 221'-1"	11 1/16"	31 Spaces @ 7'-10 3/4" = 244'-9 1/4"	246'-7 1/16"
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.

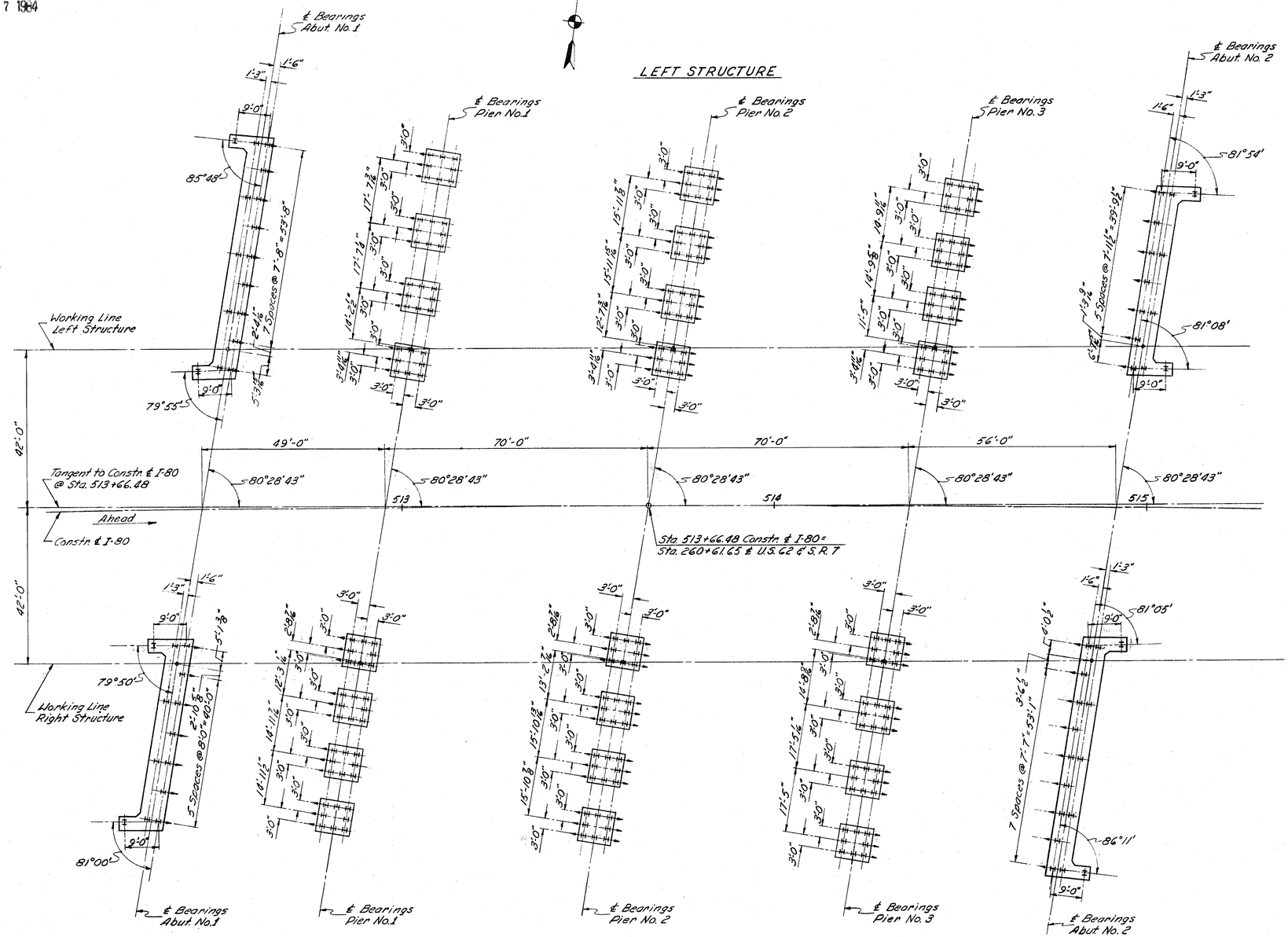
GENERAL PLAN & ELEVATION
AND GENERAL NOTES
BRIDGE NO. TRU-I-80-0941 L/R
OVER
U.S. RT. 62 & S.R. 7
TRUMBULL COUNTY STA. 512+45.07 TO STA. 514+94.62

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
G.M.B.	J.H.		G.M.B.	11-8-62	

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
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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		GMB	11-8-62	

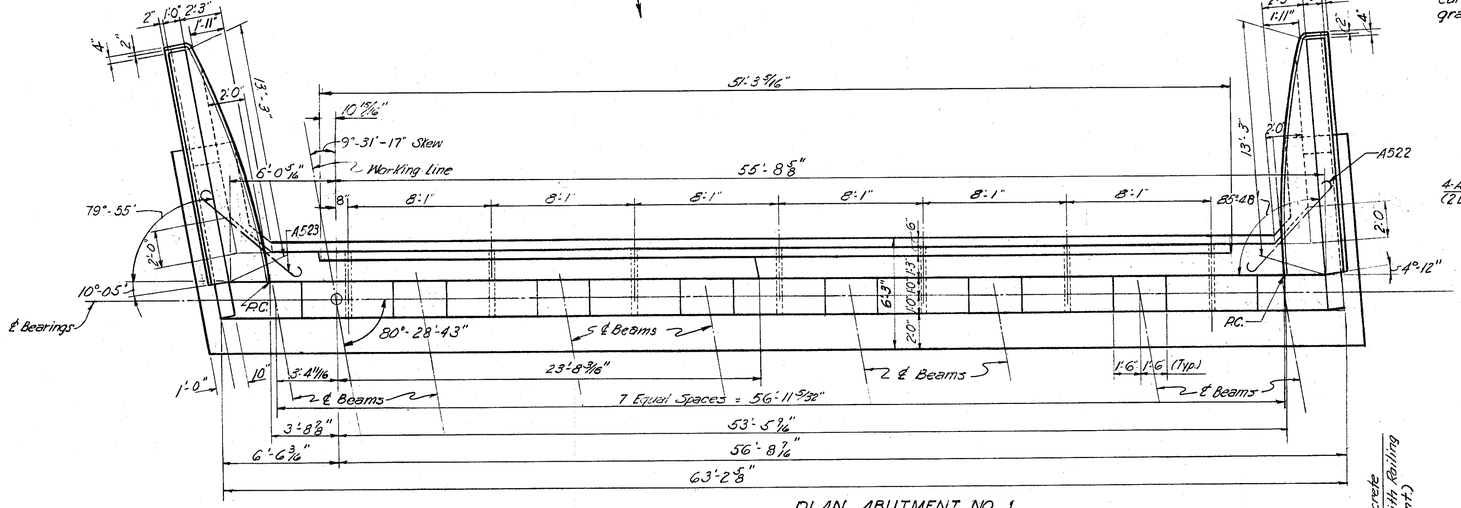
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

322
401

TRUMBULL COUNTY
TRU-I-80 (8.90)

Ahead

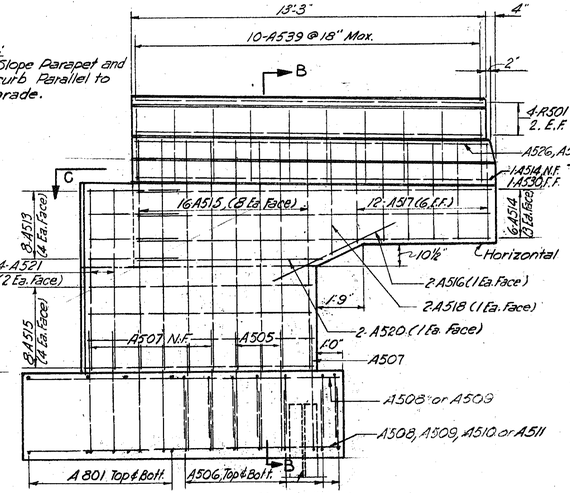
WINGWALL B



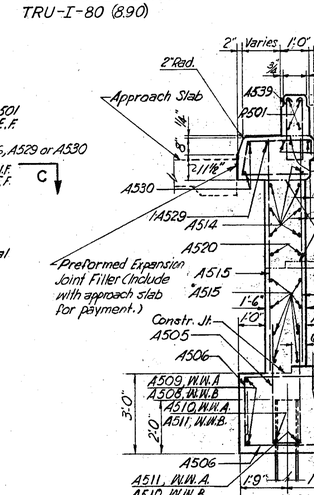
PLAN ABUTMENT NO. 1

WINGWALL A

Note:
Slope Parapet and curb Parallel to grade.



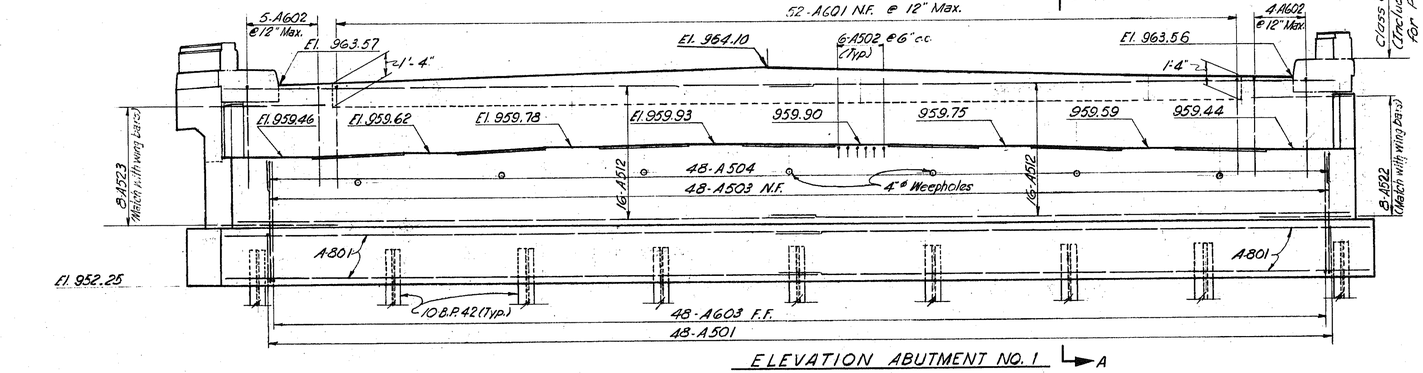
ELEVATION - WINGWALL "A"
WINGWALL "B" SIMILAR



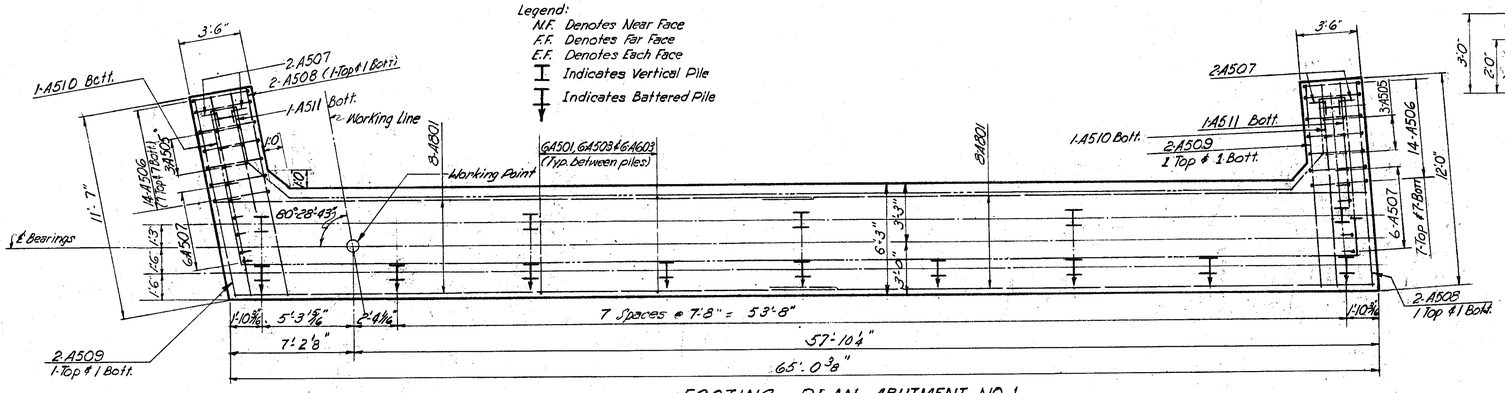
SECTION B-B

NOTES

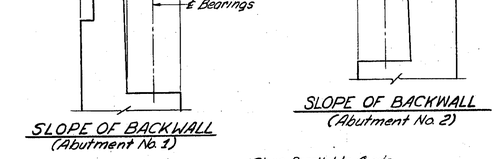
- PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments after which excavation shall be made for the abutments that are set in the fill area and the piles driven.
- POROUS BACKFILL, 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.



ELEVATION ABUTMENT NO. 1

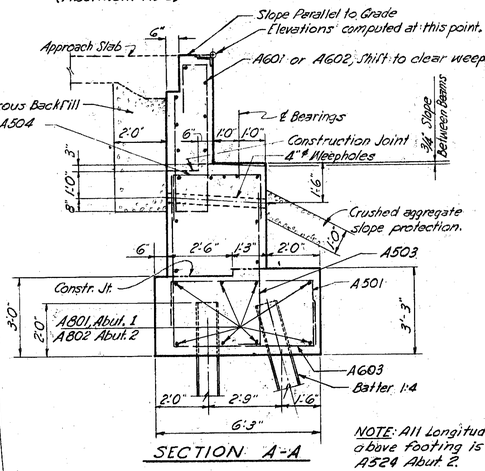


FOOTING PLAN ABUTMENT NO. 1



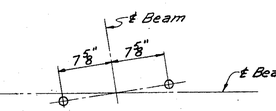
SLOPE OF BACKWALL
(Abutment No. 1)

SLOPE OF BACKWALL
(Abutment No. 2)



SECTION A-A

NOTE: All Longitudinal reinforcement above footing is A512 Abut. 1 or A524 Abut. 2.



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.M.B	11-8-62	

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

323
401

WINGWALL C

WINGWALL D

Ahead

36'-9⅛"

41'-6⁹⁄₁₆"

9°-31'-17" Skew

Working Line

A523

A522

81°-54'

81°-08'

80°-28'-43"

8°-06'

8°-32'

P.C.

℄ Bearings

℄ Beams

8'-4"

6'-3"

2'-0"

1'-0"

1'-8"

2 Equal Spaces 1'-8"

3 Equal Spaces = 9'-11 ⁵⁄₃₂"

23'-8 ¹¹⁄₁₆"

Typ. Beams 5,6,7 & 8

1'-6"

2"

3'-4 ¹¹⁄₁₆"

4 Equal Spaces = 32'-6 ⅜"

39'-2 ⅞"

3'-7 ¼"

42'-0 ¹³⁄₁₆"

7'-0 ⅞"

49'-1 ¼"

PLAN ABUTMENT NO. 2

13'-3"

2'-3"

1'-0"

2"

1'-11"

4"

2'-0"

4 ½"

13'-3"

10-A539 @ 18" Max.

Note:
Slope Parapet and curb parallel to grade.

4-R501 (2 Ea. Face)

A526, A529 or A530

1-A514 N.F.
1-A530 F.F.

10-A517 (5 F.F.)

6-A514 (3 Ea. Face)

8-A513 (4 Ea. Face)

4-A521 (2 Ea. Face)

16-A513, (8 Ea. Face)

2-A518 (1 Ea. Face)

2-A525 (1 Ea. Face)

2-A516 (1 Ea. Face)

Horizontal

1'-4"

2-A520 (1 Ea. Face)

10-A515 (5 Ea. Face)

2'-8"

10"

A507 N.F.

A505

A507 F.F.

A508 or A509

A508, A509, A510 or A511

A501 Top & Bott.

A506 Top & Bott.

ELEVATION - WINGWALL "D"
WINGWALL "C" SIMILAR

TRUMBULL COUNTY
TRU-I-80 (809)

2" Varies 1'-0" 2"

¾"

¾"

2" Rad.

Approach Slab

A539

R501

A526

Constn Jt.

A530

A529

A519

A514

A520

Constr. Jt.

A519
Pref'ormed Expansion Jt. Filler (Include with approach slab for payment.)

A515

1'-0"

Constr. Jt.

A505

A506

A509 W.W.D.
A508 W.W.C.

A508 W.W.D.
A509 W.W.C.

3'-3"

A510 W.W.D.
A511 W.W.C.

A511 W.W.D.
A510 W.W.C.

1'-9"

1'-9"

3'-6"

SECTION B-B

B

C

4-A602 @12" Max.

38-A601 N.F. @ 12" Max.

6-A502 @ 6" c.c. (Typ. under each beam)

El. 970.05

El. 969.70

El. 969.53

1'-4"

El. 965.55

El. 965.61

El. 965.69

El. 965.77

El. 965.84

El. 965.68

El. 965.53

El. 965.37

9-A523 (Match with wing bars)

9-A522 (Match with wing bars)

16-A524

36-A504

36-A503 N.F.

4" ø Weepholes

El. 958.00

10 BR 42 (Typ.)

36-A603 F.F.

36-A501

Class "C" Concrete (Included with Railing For Payment.)

ELEVATION ABUTMENT NO. 2

A

L

0"

¼

P.C.

2-A528

1-A527

2-A526

A531 Top
A532 Bott

4-A533 Top
4-A534 Bott.

1'-0"

4-A535 Top
4-A536 Bott.

5-A537 Top
5-A538 Bott.

13 Spa. @ 12" = 13'-0"

13'-7"

SECTION C-C
WINGWALLS B & C

4"

2-A530

1-A529

A531 Top
A532 Bott.

5-A537 Top
5-A538 Bott.

4-A535 Top
4-A536 Bott.

4-A533 Top
4-A534 Bott.

SECTION C-C
WINGWALLS A & D

3'-6"

1-A510 Bott.

2-A507

2-A508 (1 Top & 1 Bott.)

1-A511 Bott.

11'-8"

14-A506 (7 Ea. T48)

3-A505

1'-0"

8-A502

6-A501, 6-A503 & 6-A608 (Typ. between piles.)

6-A507

3'-0"

1'-6"

1'-3"

6'-3"

3'-3"

80°-28'-43"

Working Point

1'-8½"

5 Spaces @ 7'-11½" = 39'-9½"

1'-3 ⁹⁄₁₆"

6'-7 ¹⁵⁄₁₆"

1'-8 ⅝"

42'-9 ¾"

51'-1 ¹⁵⁄₁₆"

8'-4 ⅜"

2-A509 (1 Top & 1 Bott.)

2-A508 (1 Top & 1 Bott.)

℄ Working Line

FOOTING PLAN ABUTMENT NO. 2

℄ Beam

7⅞"

7⅞"

℄ Bearings

ANCHOR BOLT LAYOUT
ABUTMENT NO. 1 & NO. 2

Thickness of 2" bar to be determined by Profile Grade

3" bar beveled to fit grade; ¼" minimum thickness

Level Surface

Level Surface

Main Angle

Grade

¼

¼

Face of Backwall

END DAM DETAIL

NOTES

- For notes see sheet 321
- For Section A-A see sheet 321

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

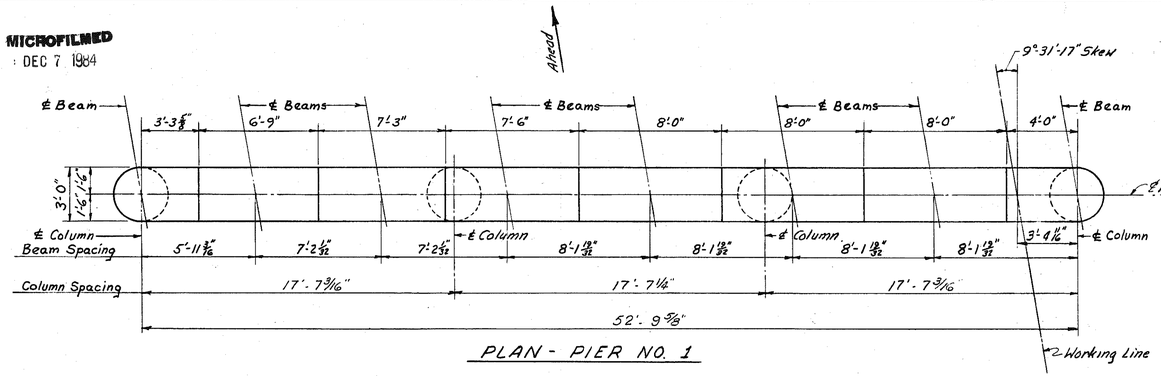
ABUTMENTS
LEFT STRUCTURE
BRIDGE NO. TRU-I-80-0941 L/R
OVER
U.S. RT. 62 & SR-7
TRUMBULL COUNTY STA. 512+45.07 TO STA. 514+94.62

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
L.E.	J.H.		G.M.B.	11-8-82	

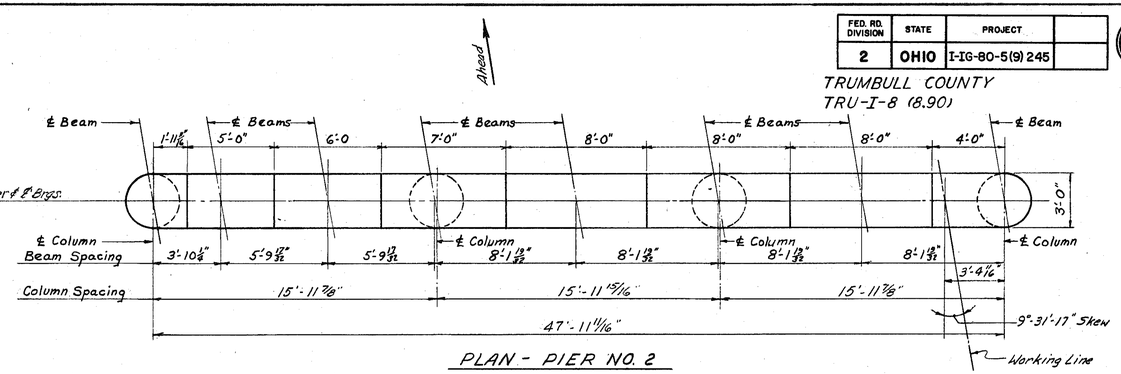
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9) 245	

324
401

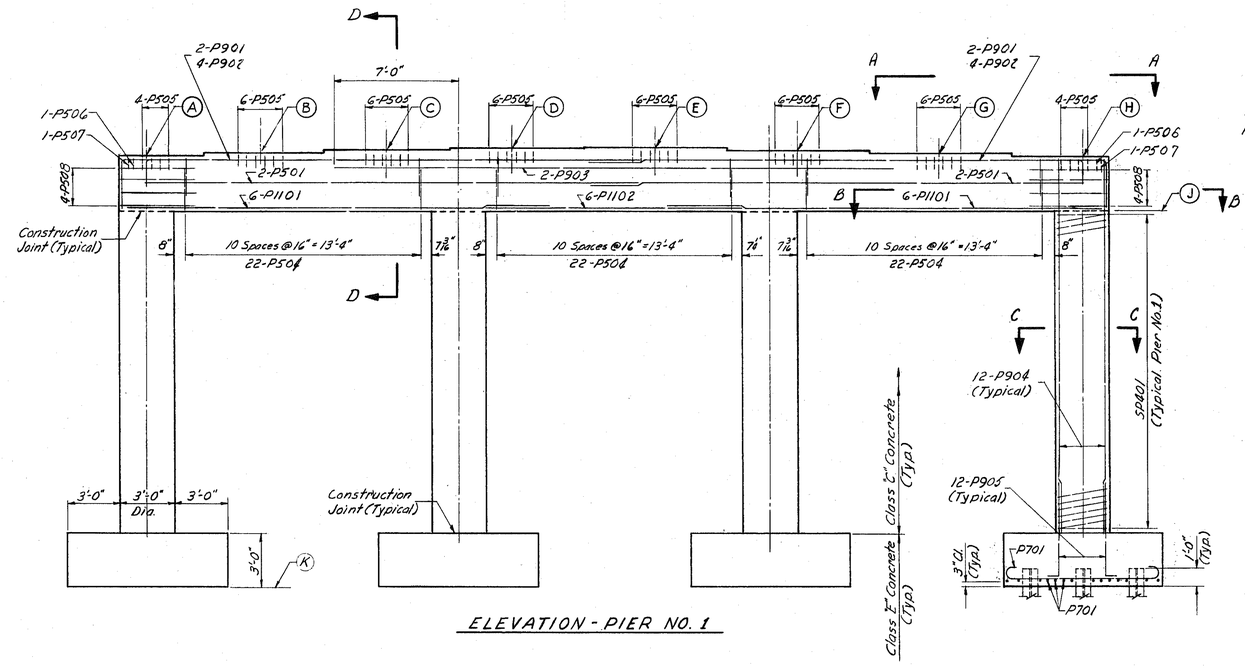
TRUMBULL COUNTY
TRU-I-8 (8.90)



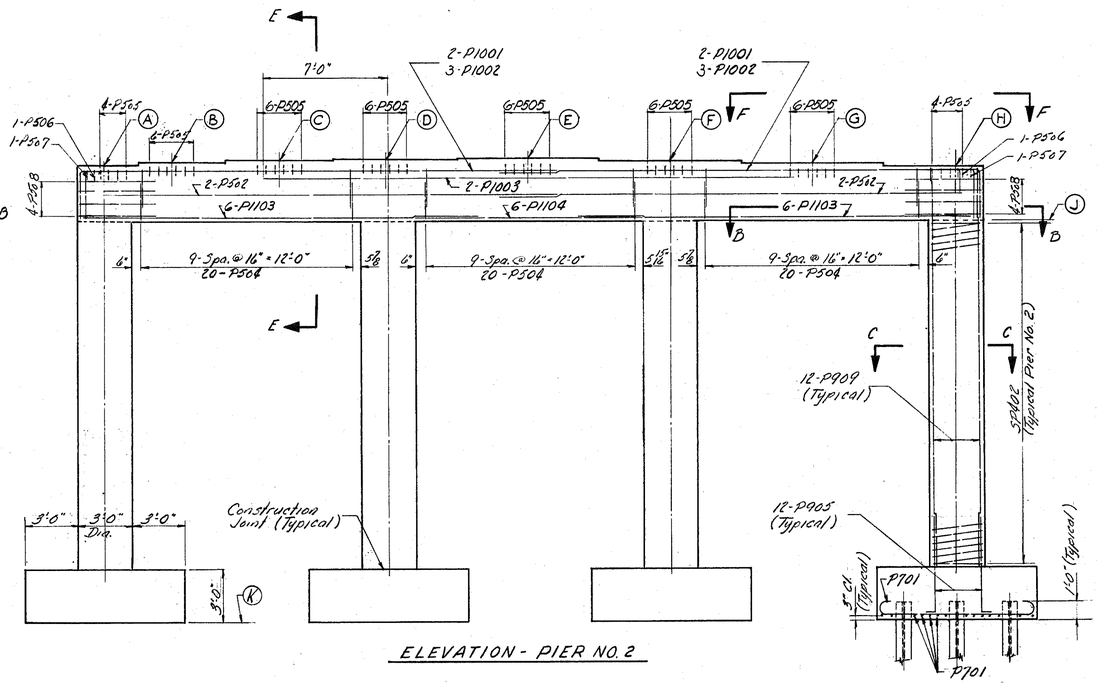
PLAN - PIER NO. 1



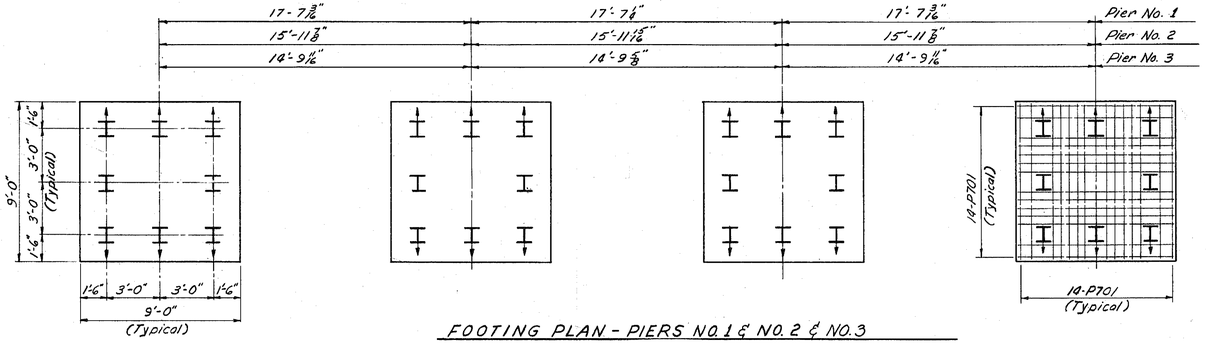
PLAN - PIER NO. 2



ELEVATION - PIER NO. 1

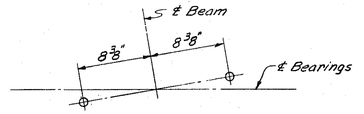


ELEVATION - PIER NO. 2

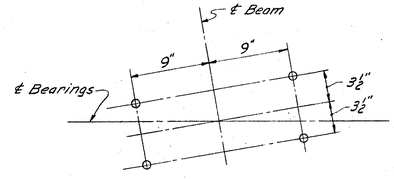


FOOTING PLAN - PIERS NO. 1 & NO. 2 & NO. 3

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.

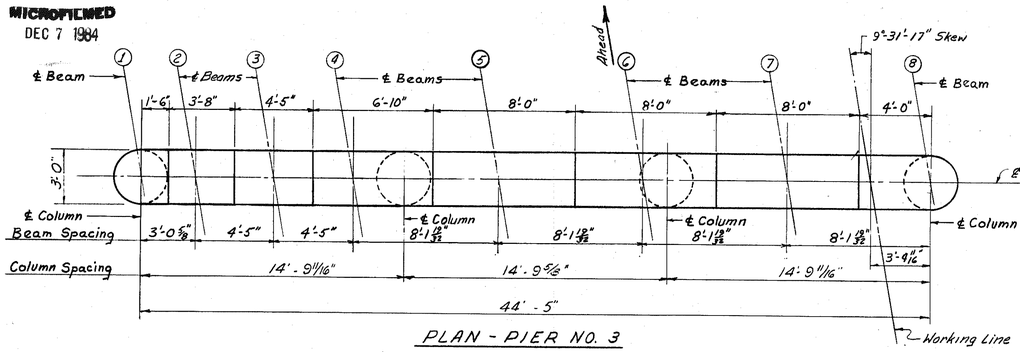
PIERS
LEFT STRUCTURE
BRIDGE NO TRU-I-80-0941 L/R
OVER
U.S.R.T. 62 & S.R.-7
TRUMBULL COUNTY STA 512+45.07 TO STA 514+94.62

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
G.M.B.	J.H.E. R.L.K.		G.M.B.	11-8-62	

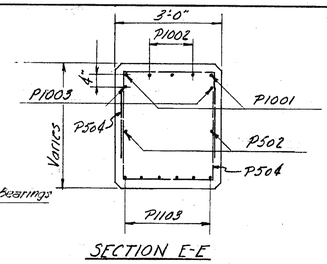
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

325
401

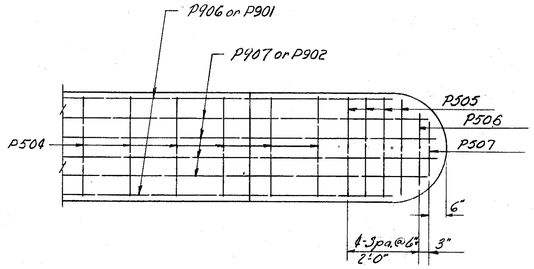
TRUMBULL COUNTY
TRU-I-8 (8.90)



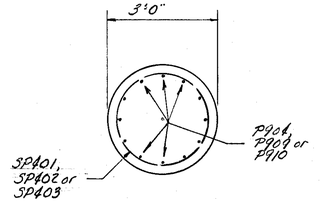
PLAN - PIER NO. 3



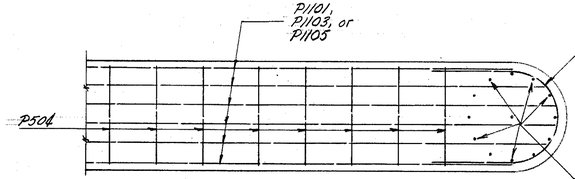
SECTION E-E



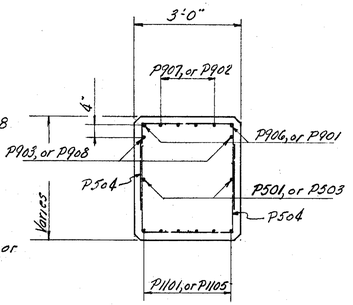
SECTION A-A



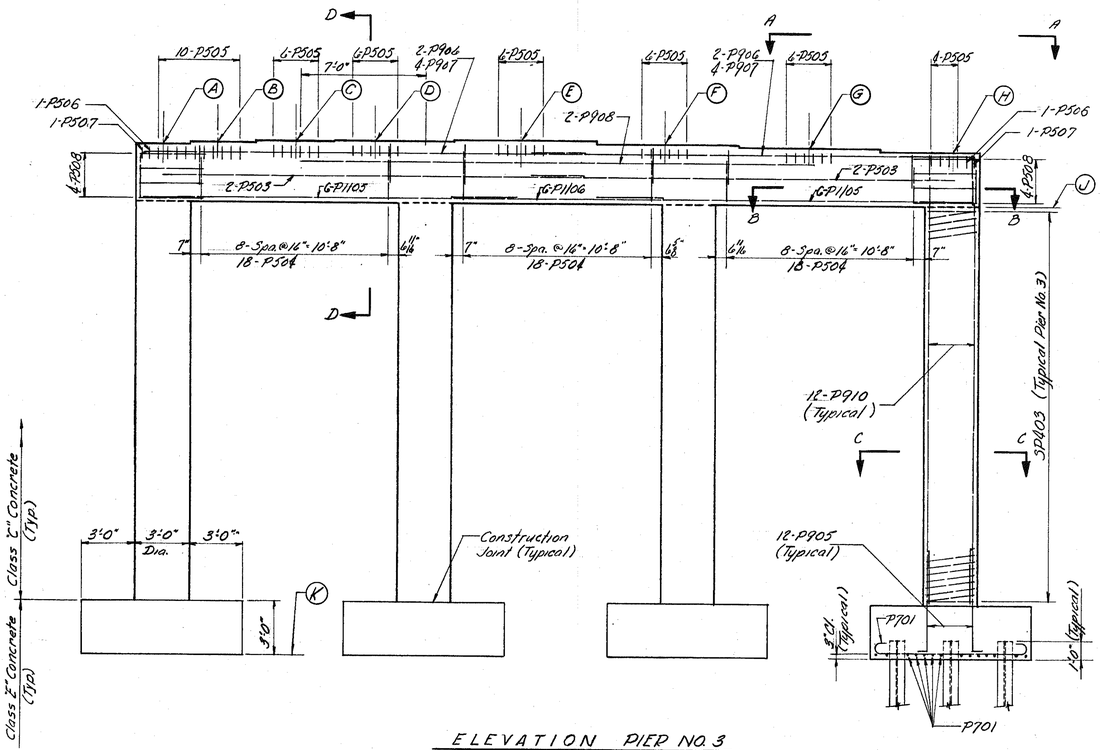
SECTION C-C



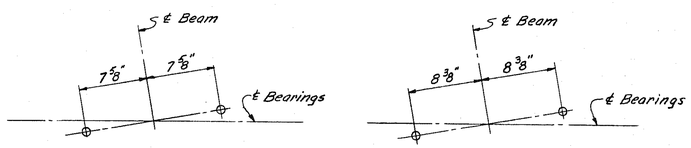
SECTION B-B



SECTION D-D



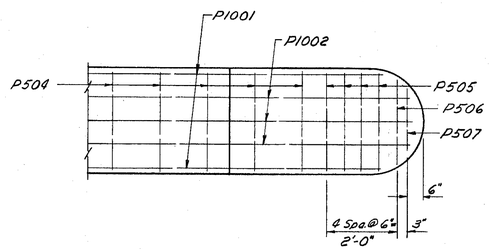
ELEVATION PIER NO. 3



BEAMS 1,2,& 3 BEAMS 4,5,6,7,& 8

ANCHOR BOLT LAYOUTS - PIER NO. 3

TABLE OF ELEVATIONS										
LOCATION		A	B	C	D	E	F	G	H	J	K
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



SECTION F-F

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.

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

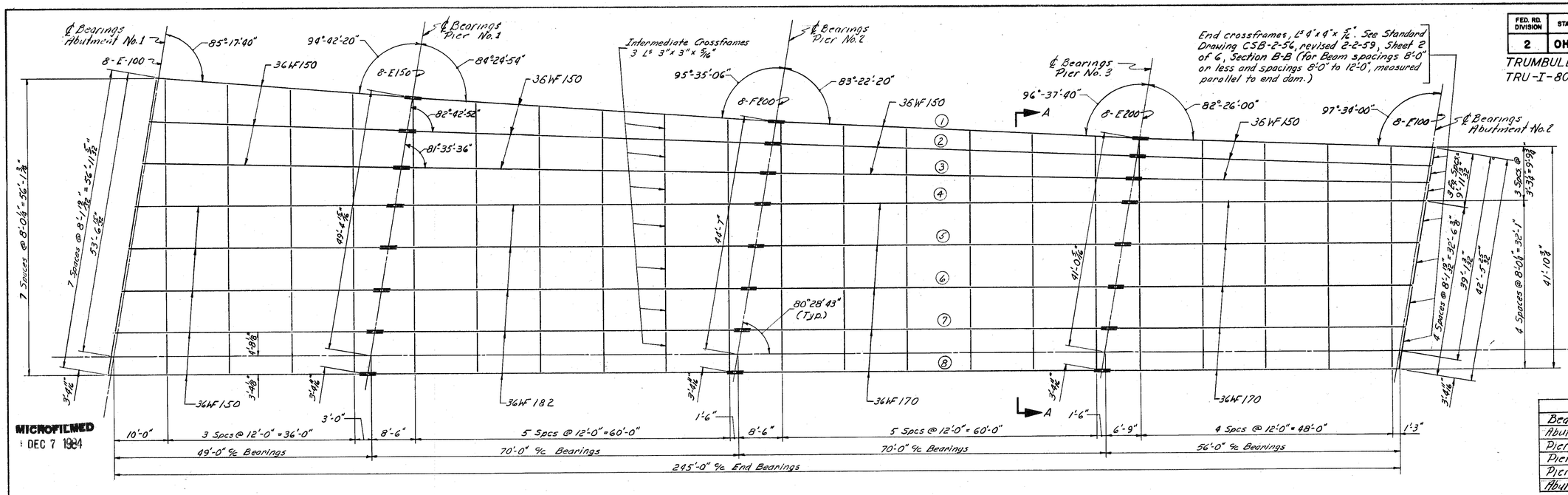
PIERS
LEFT STRUCTURE
BRIDGE NO TRU-I-80-0941 L/R
OVER
U.S. RT. 62 & SR-7
TRUMBULL COUNTY STA 512+45.07 TO STA 514+94.62

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
G.M.B.	J.H.S. R.L.K.		G.M.B.	8/1/62	

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

326
401

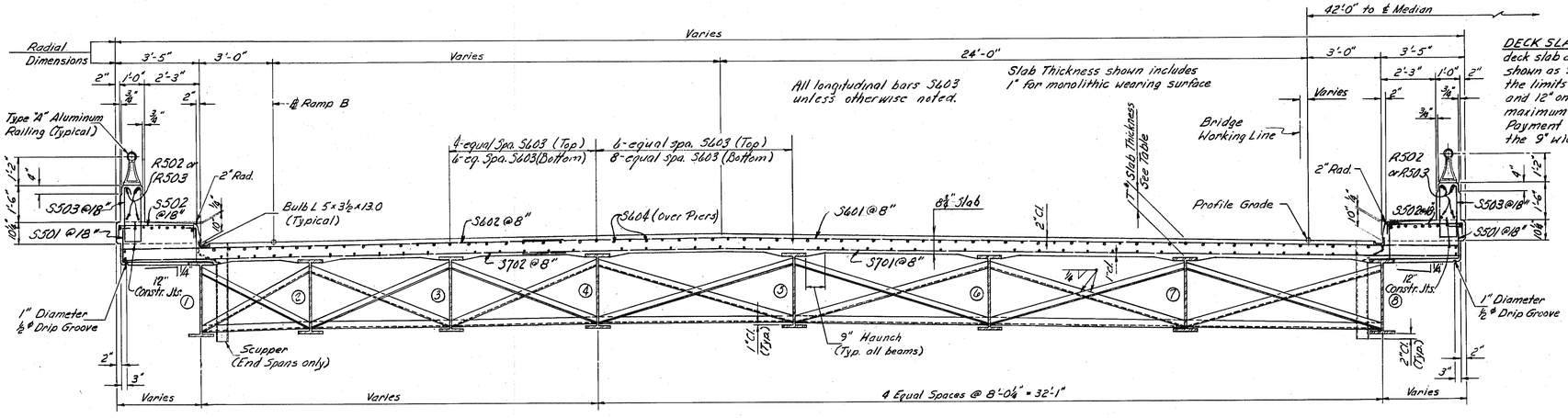
TRUMBULL COUNTY
TRU-I-80 (8.90)



STEEL FRAMING PLAN

SLAB THICKNESS - T*								
Beam No.	1	2	3	4	5	6	7	8
Abutment-1	9¼	9¼	9¼	9¼	9¼	9¼	9¼	9¼
Pier-1	9¼	9¼	9¼	8¾	8¾	8¾	8¾	8¾
Pier-2	9¼	9¼	9¼	8¾	8¾	8¾	8¾	8¾
Pier-3	9¼	9¼	9¼	9	9	9	9	9
Abutment-2	9¼	9¼	9¼	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: ½" 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 C.S.B-2-56, Sheet 3 of 6, for gutter, scupper, and curb plate details.
- Refer to Standard Drawing F.S.B.-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	1/4"	1/4"	0	0	1/4"	1/4"	1/4"	0	1/4"	1/4"	1/4"	0	1/4"	1/4"	1/4"
Deflection due to remaining dead load	3/16"	1/16"	3/16"	3/16"	5/16"	3/16"	1/16"	5/16"	1/16"	3/16"	3/16"	1/16"	5/16"	1/16"	3/16"	3/16"
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"	1/16"	7/16"	3/16"	5/16"	1/16"	3/8"	5/16"	1/16"	7/16"	7/16"	1/4"	5/16"	9/16"	7/16"	1/16"
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 (7/8").
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 & 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 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 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.

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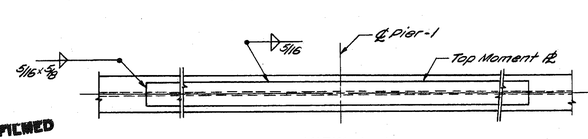
SUPERSTRUCTURE
LEFT STRUCTURE
BRIDGE NO TRU-I-80-0941 L/R
OVER
US RT 62 & SR-7
TRUMBULL COUNTY STA. 512+45.07 TO STA. 514+94.62

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
L.E.	F.J.M. & R.L.K.		G.M.B.	8-8-62	

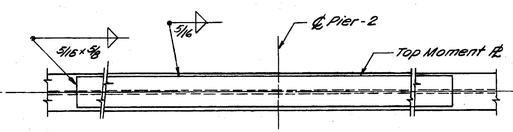
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

327
401

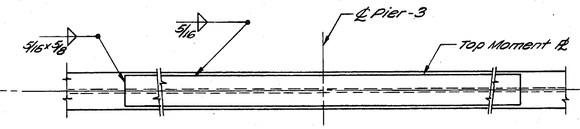
TRUMBULL COUNTY
TRU-I-80 (8.90)



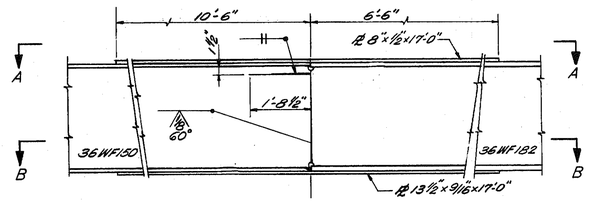
VIEW A-A



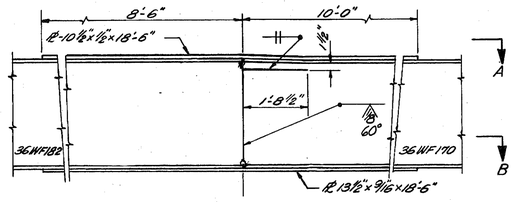
VIEW A-A



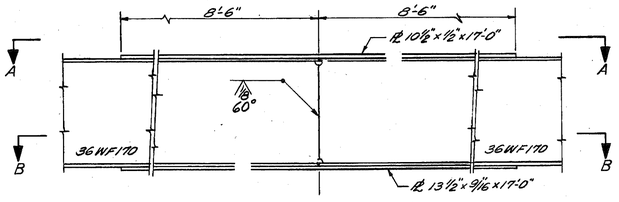
VIEW A-A



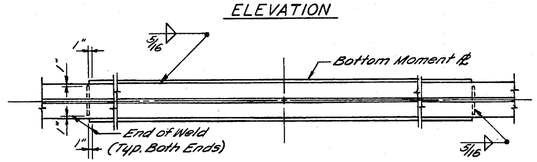
ELEVATION



ELEVATION

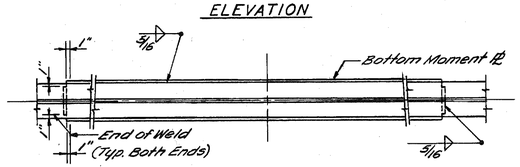


ELEVATION



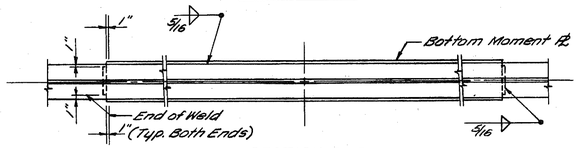
SECTION B-B

BEAM SPLICE
(Beams 4, 5, 6, 7 & 8 @ Pier-1)



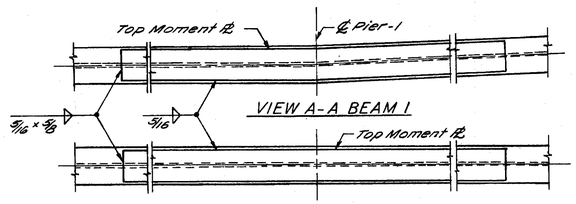
SECTION B-B

BEAM SPLICE
(Beams 4, 5, 6, 7 & 8 @ Pier-2)



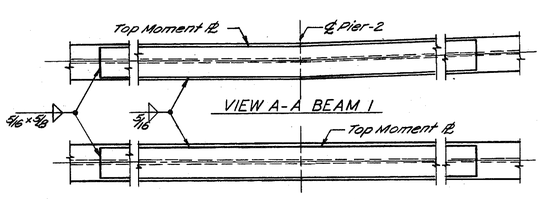
SECTION B-B

BEAM SPLICE
(Beams 4, 5, 6, 7 & 8 @ Pier-3)



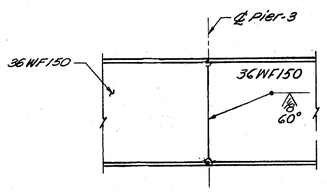
VIEW A-A BEAM 1

VIEW A-A BEAMS 2&3

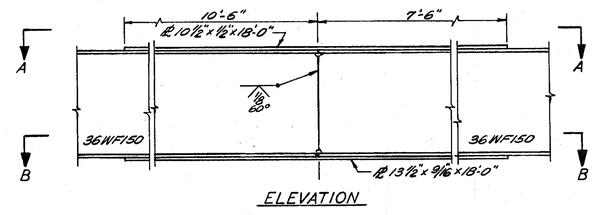


VIEW A-A BEAM 1

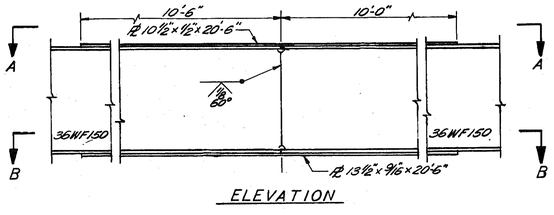
VIEW A-A BEAMS 2&3



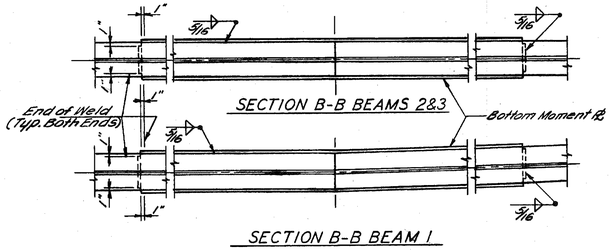
BEAM SPLICE
(Beams 1, 2 & 3 @ Pier 3 Only)



ELEVATION

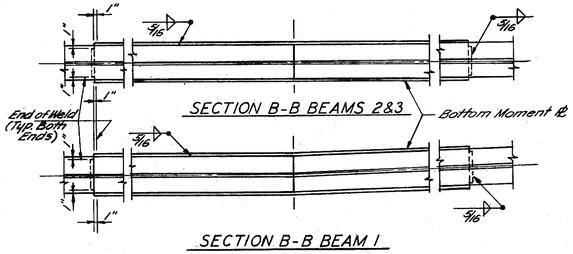


ELEVATION



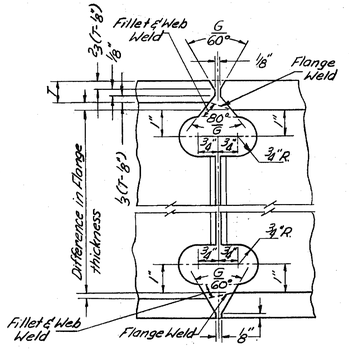
SECTION B-B BEAM 1

BEAM SPLICE
(Beams 1, 2 & 3 @ Pier-1)



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 3/8" 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.

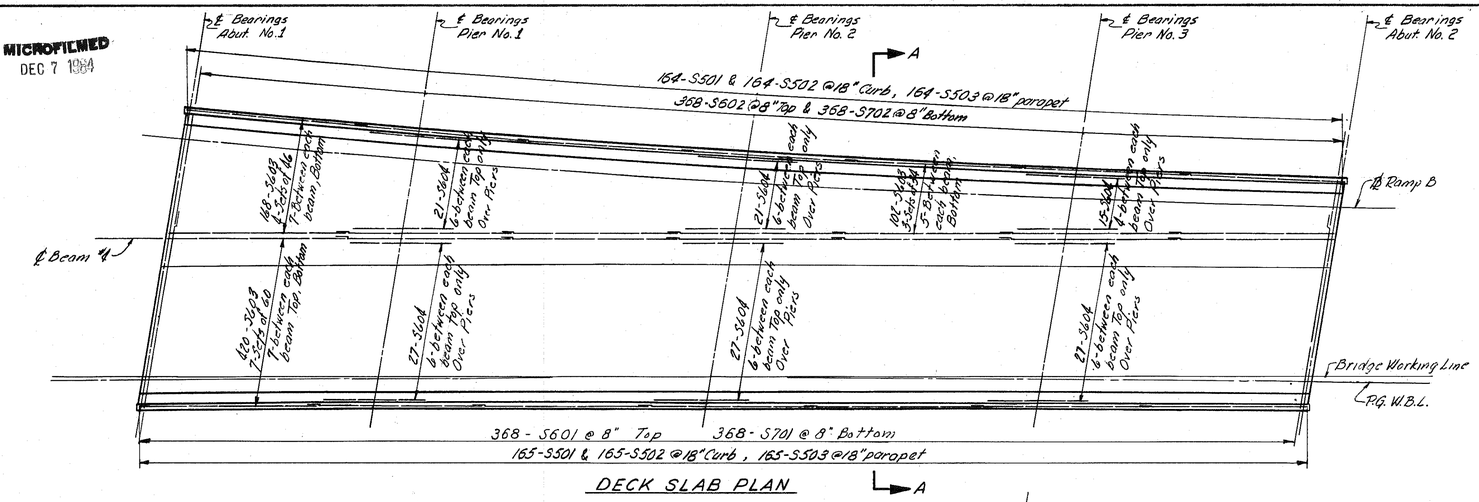
SUPERSTRUCTURE
LEFT STRUCTURE
BRIDGE NO. TRU-I-80-0941L/R
OVER
U.S.RT. 62 & SR-7
TRUMBULL COUNTY STA. 512+45.07 TO STA. 514+94.62

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	

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

328
401

TRUMBULL COUNTY
TRU-I-80 (8.90)



DECK SLAB PLAN

Note: See Sheet 7 for Transverse Section A-A

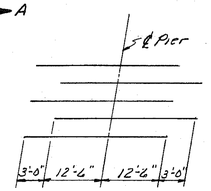
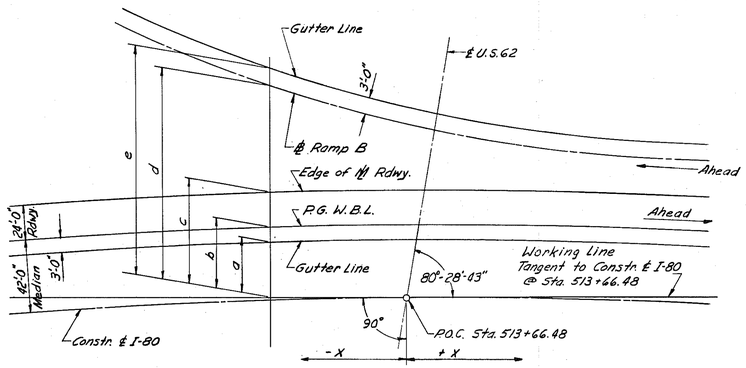


DIAGRAM SHOWING STAGGER OF S604 OVER PIERS



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 N 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		P.G. W.B.L.		EDGE N ROADWAY		RAMP B ℄		GUTTER LINE	
	DIM. a	ELEV.	DIM. b	ELEV.	DIM. c	ELEV.	DIM. d	ELEV.	DIM. e	ELEV.
-152	38.06	962.64	41.06	962.69	65.06	963.07	96.59	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		P.G. W.B.L.		EDGE N ROADWAY		RAMP B ℄		GUTTER LINE	
	DIM. a	ELEV.	DIM. b	ELEV.	DIM. c	ELEV.	DIM. d	ELEV.	DIM. e	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

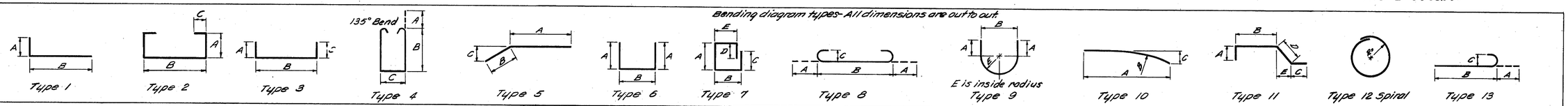
Designed	Drawn	Traced	Checked	Reviewed Date	Revised
G.M.B.	F.J.M. & R.L.K.		G.M.B.	8-11-62	

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.



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
P2901	4			4	30'-2"	1	2'-7"	27'-10"				410
P2902	8			8	31'-7"	1	2'-7"	29'-3"				859
P2903	2			2	31'-7"	Str.						215
P2904	48			48	20'-9"	Str.						3,386
P2905	48	48	48	144	6'-7"	1	1'-3"	5'-7"				3,223
P2906			4	4	26'-0"	1	2'-7"	23'-8"				354
P2907			8	8	27'-5"	1	2'-7"	25'-2"				746
P2908			2	2	28'-10"	Str.						196
P2909		48		48	22'-2"	Str.						3,618
P2910			48	48	25'-2"	Str.						4,107
P7101	112	112	112	336	10'-4"	8	10"	8'-8"	7"			7,097
P2501	4			4	27'-3"	Str.						114
P2502		4		4	24'-10"	Str.						104
P2503			4	4	23'-0"	Str.						96
P2504	66	60	54	180	7'-5"	6	2'-6"	2'-8"				1,392
P2505	44	44	44	132	3'-8"	6	7⅝"	2'-8"				505
P2506	2	2	2	6	3'-2"	6	7⅝"	2'-2"				20
P2507	2	2	2	6	2'-9"	6	7⅝"	1'-9"				17
P2508	8	8	8	24	8'-2"	9	2'-3"	2'-5"			1'-3⅜"	204

SPIRAL BARS

MARK	PIER 1	PIER 2	PIER 3	TOTAL	LENGTH	PITCH	No. of Turns	CORE DIA.	WEIGHT
SP401	4			4	18'-1⅛"	4½"	51	32"	1,341
SP402		4		4	19'-5⅛"	4½"	55	32"	1,445
SP403			4	4	25'-5⅛"	4½"	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 544. 1½ closed coils shall be provided at the ends of each spiral unit.
Four Steel Channel, Tee or Angle Spacers, weighing approximately 0.68 lb. per Lin. Ft. of Spacer, shall be provided for each Spiral Unit.
They shall be equally spaced along the periphery of the Coil. The number of pounds of these spacers, based on 0.68 lb. per Lin. Ft., will be paid for as reinforcing steel and is included in the tabulated quantities of Spiral Bars.

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	

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	7⅝"	2'-0"				300
A503	48	36	84	7'-5"	1	7⅝"	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	7⅝"	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	7⅝"	1'-3"	0	10"	3"	10
A532	2	2	4	1'-5"	1	7⅝"	11"				6
A533	8	8	16	2'-11" to 3'-8" ①	11	7⅝"	1'-3" to 2'-0" ①	0	1'-3"	3"	55
A534	8	8	16	1'-10" to 2'-9" ①	1	7⅝"	1'-4" to 2'-1" ①				37
A535	8	8	16	3'-10" to 4'-8" ②	11	7⅝"	2'-2" to 2'-8" ②	0	1'-3"	3"	68
A536	8	8	16	2'-9" to 3'-5" ②	1	7⅝"	2'-3" to 2'-9" ②				50
A537	10	10	20	4'-3" to 4'-5" ③	11	7⅝"	2'-7" to 2'-9" ③	0	1'-3"	3"	90
A538	10	10	20	3'-2" to 3'-4" ③	1	7⅝"	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.					
											15,135

TOTAL WEIGHT

① 4 each vary in increments of 3"
② 4 each vary in increments of 1"
③ 4 each vary in increments of ½"

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
S6101	368	39'-6"	Str.						21,833
S6102	368	13'-0" to 26'-9" ①	Str.						10,986
S6103	690	36'-9"	Str.						38,087
S6104	138	28'-0"	Str.						5,804
S5101	329	5'-11"	2	1'-3⅜"	2'-7"	7⅝"			2,030
S5102	329	3'-7"	6	7⅝"	2'-7"				1,230
S5103	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.						—

① 23 each vary in increments of 1" (16 groups)

TOTAL WEIGHT 126,548

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	2080		
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				
S-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.

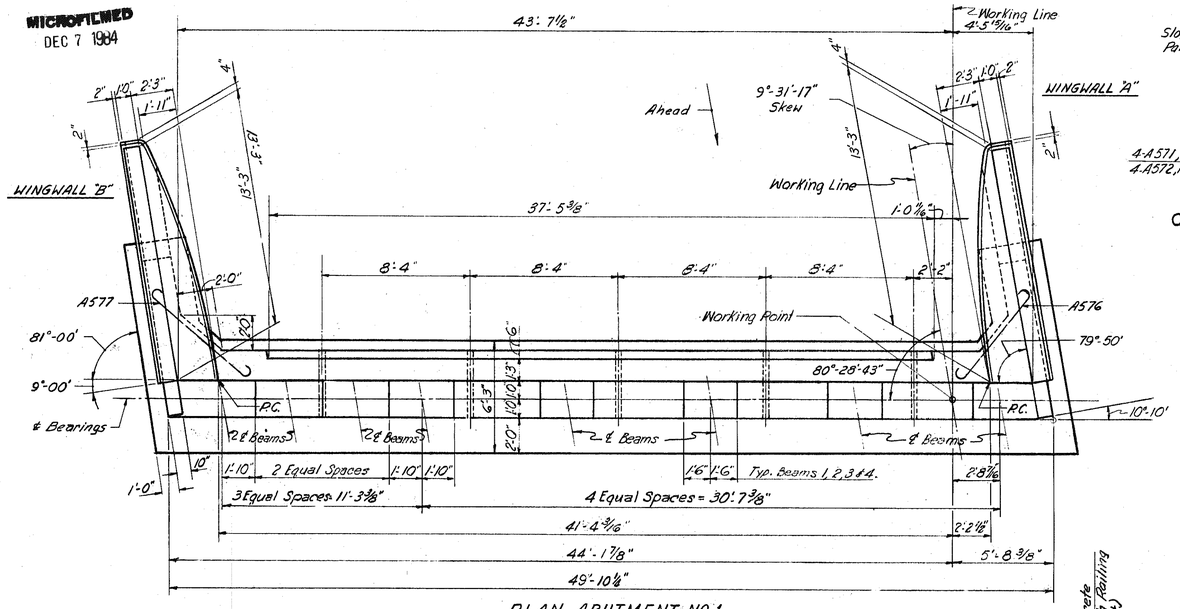
REINFORCING STEEL LIST &
ESTIMATED QUANTITIES-LEFT STRUCTURE
BRIDGE NO. TRU -80-0941 L/R
OVER
U.S. RT. 62 & SR-7
TRUMBULL COUNTY STA. 512+45.07 TO STA. 514+94.62

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
-	G.P.	GC	G.M.B.	B	11-8-62	

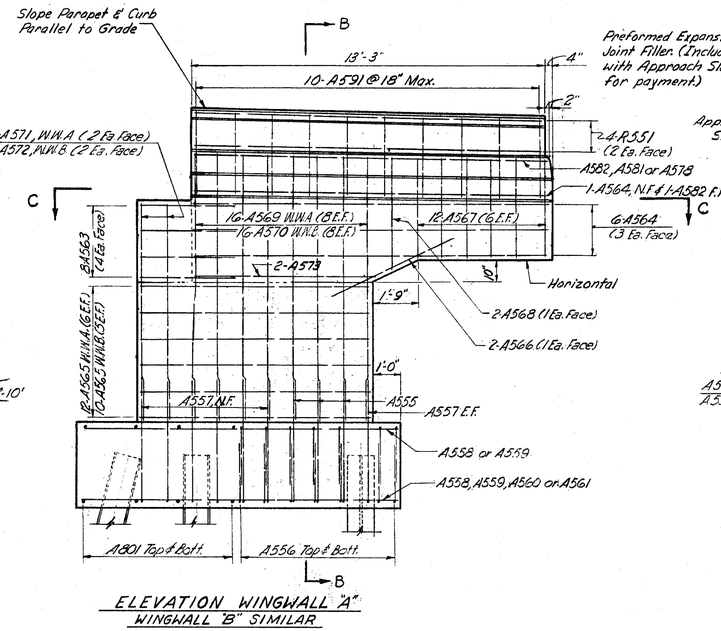
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

330
401

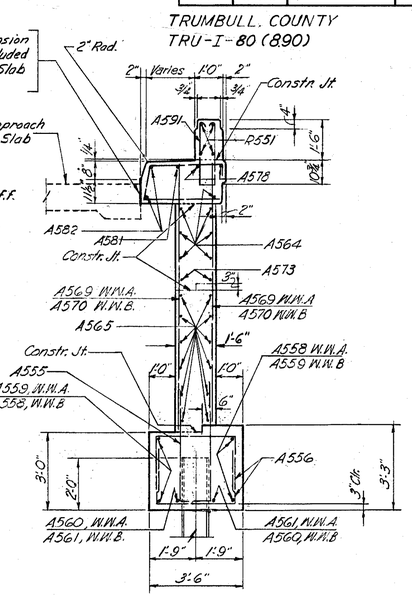
TRUMBULL COUNTY
TRU-I-80 (890)



PLAN ABUTMENT NO.1

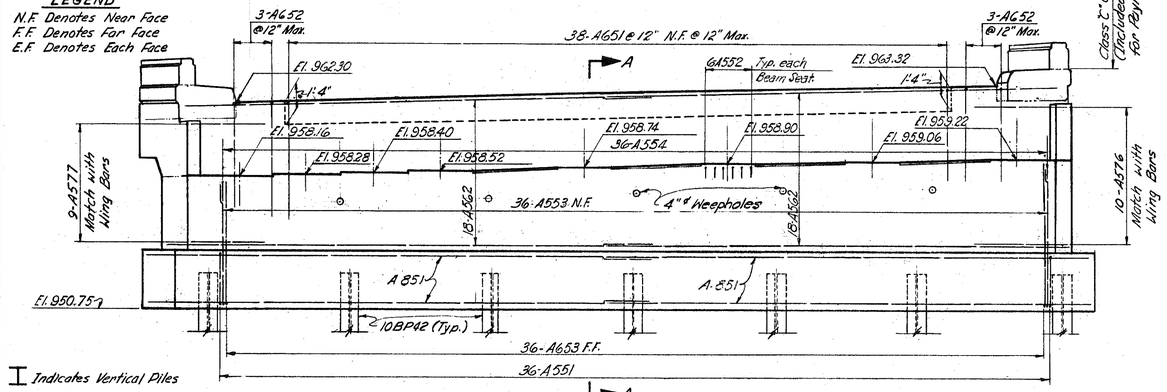


ELEVATION WINGWALL "A"
WINGWALL "B" SIMILAR



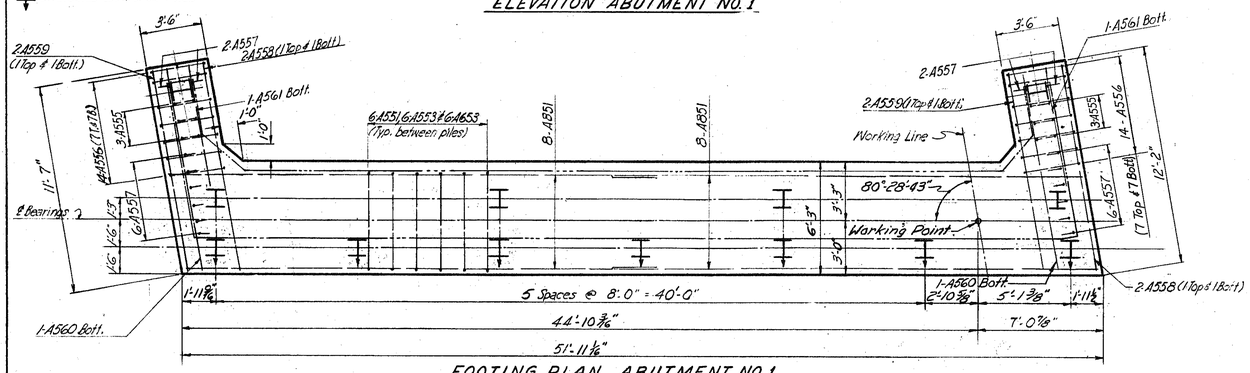
SECTION B-B

LEGEND
N.F. Denotes Near Face
F.F. Denotes Far Face
E.F. Denotes Each Face

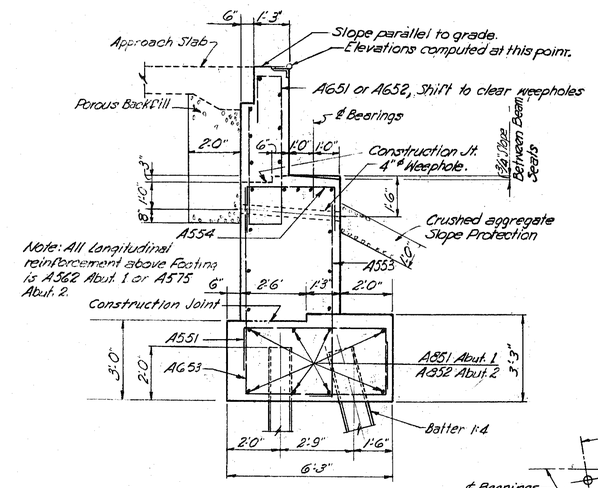


Indicates Vertical Piles
Indicates Battered Piles

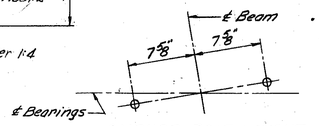
ELEVATION ABUTMENT NO. 1



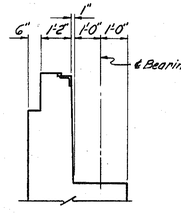
FOOTING PLAN ABUTMENT NO. 1



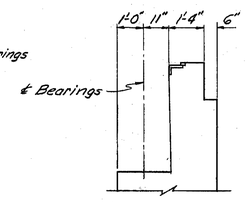
SECTION A-A



ANCHOR BOLT LAYOUT



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 enected.
- 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

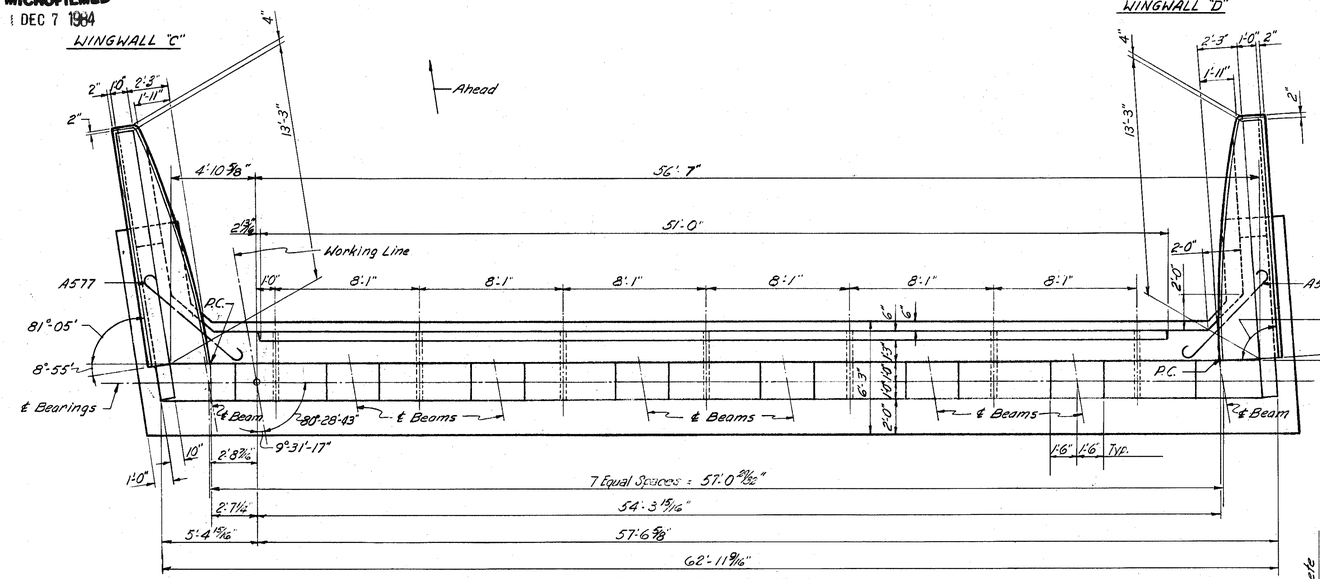
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
L.E.	J.H.		G.M.B.		11-86	

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

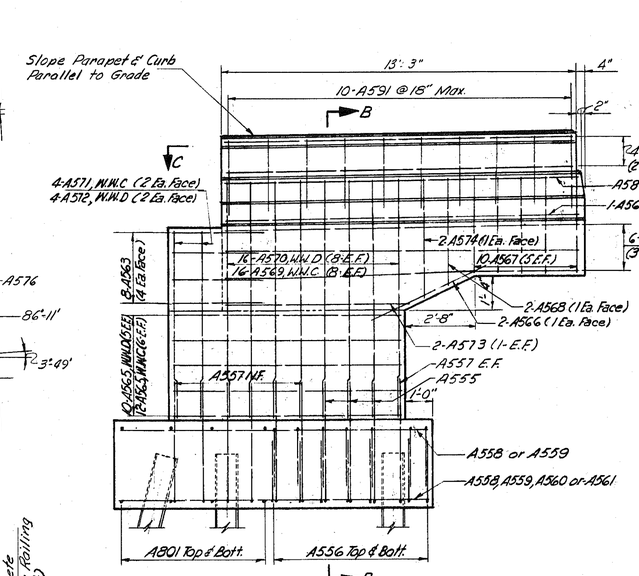
331
401

TRUMBULL COUNTY
TRU-I-80 (8.90)

WINGWALL "C"

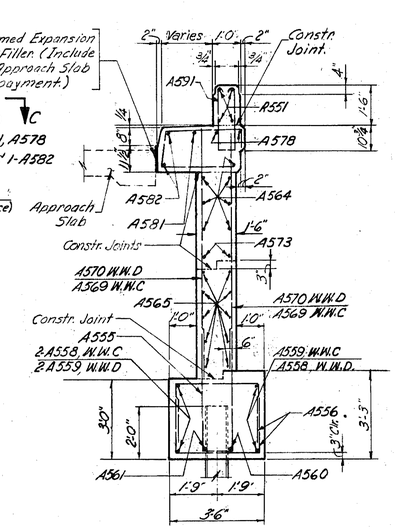


WINGWALL "D"

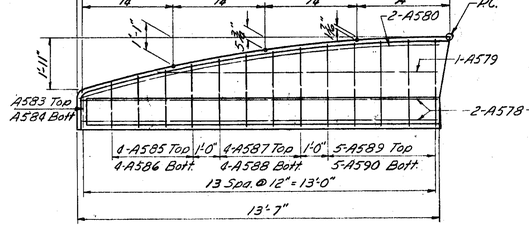


PLAN ABUTMENT NO. 2

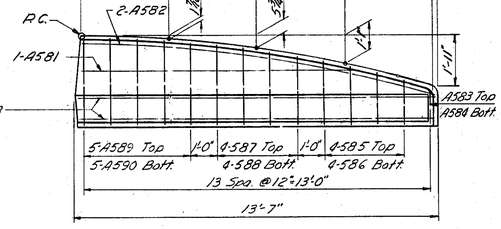
ELEVATION - WINGWALL "D"
WINGWALL "C" SIMILAR



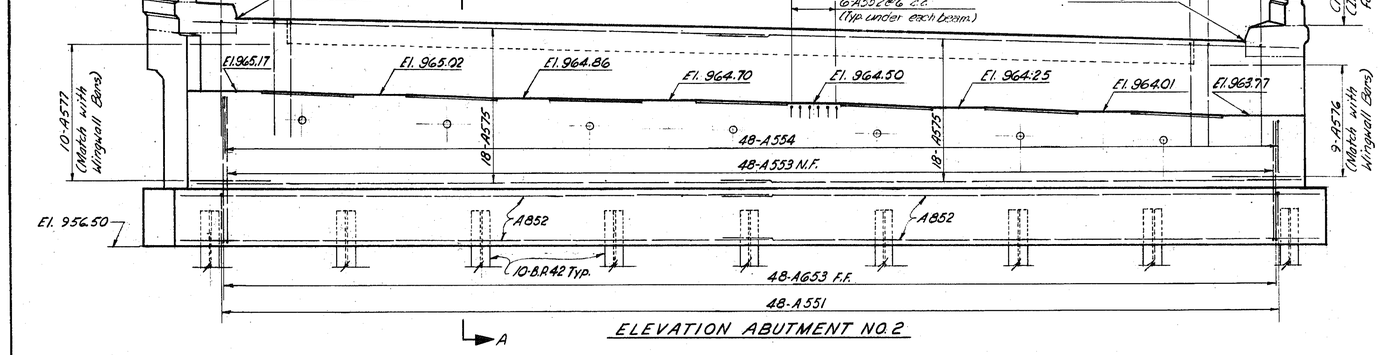
SECTION B-B



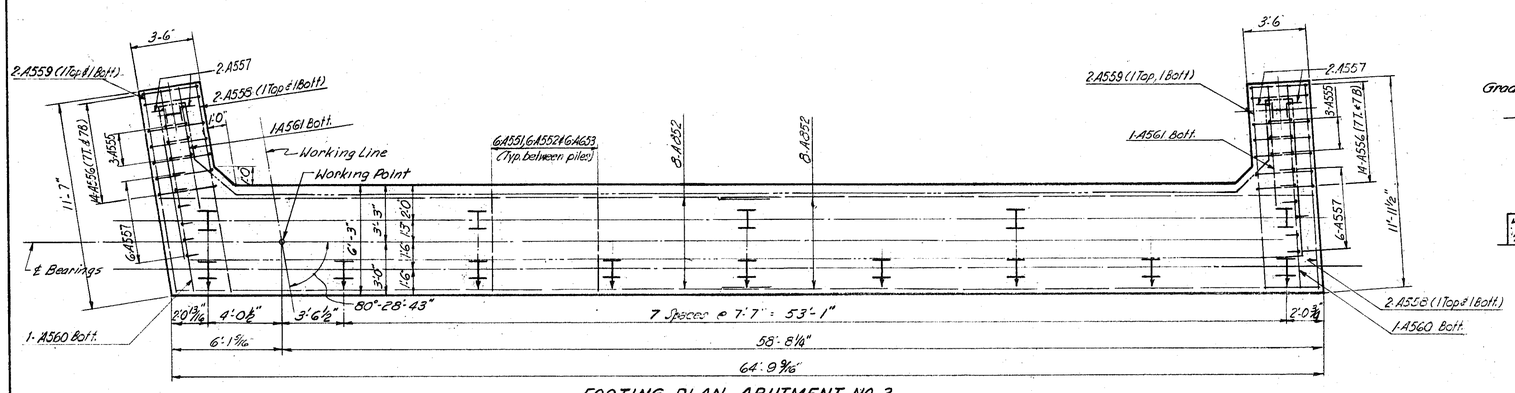
SECTION C-C
WINGWALLS B & C



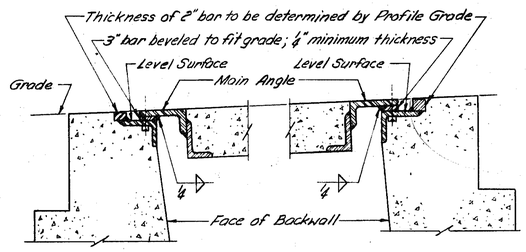
SECTION C-C
WINGWALLS A & D



ELEVATION ABUTMENT NO. 2



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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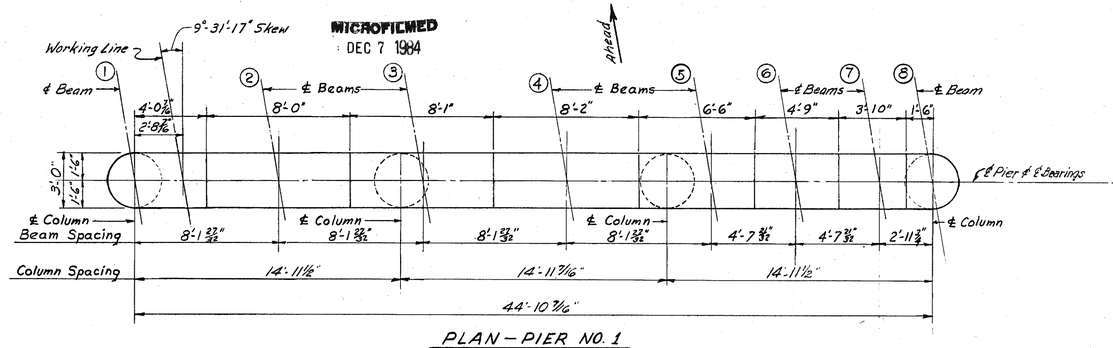
ABUTMENTS
RIGHT STRUCTURE
BRIDGE NO TRU-I-80-0941 L/R
OVER
US RT 62 & SR-7
TRUMBULL COUNTY STA. 512+45.07 TO STA. 514+94.62

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
L.E.	J.H.		G.M.B.	11-8-62	

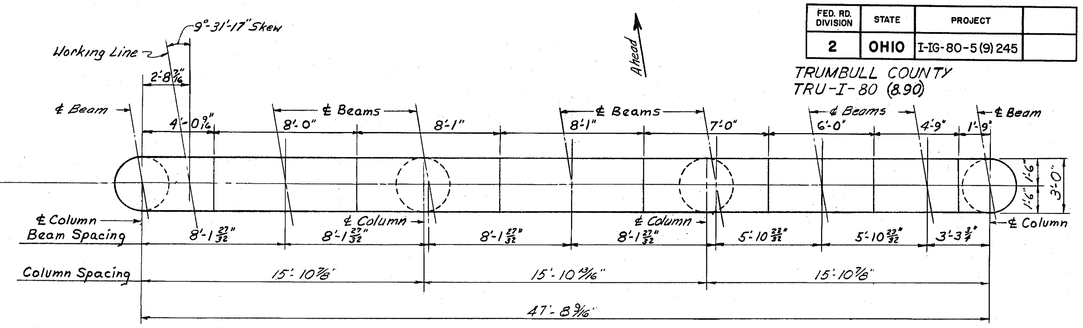
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

332
401

TRUMBULL COUNTY
TRU-I-80 (8.90)



PLAN — PIER NO. 1



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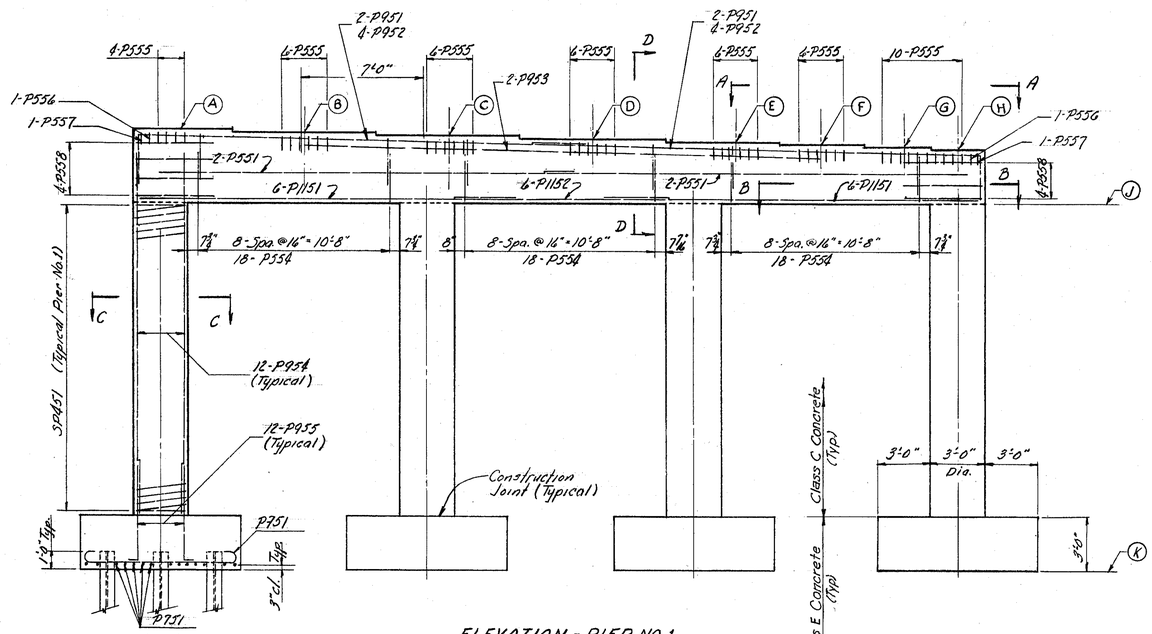
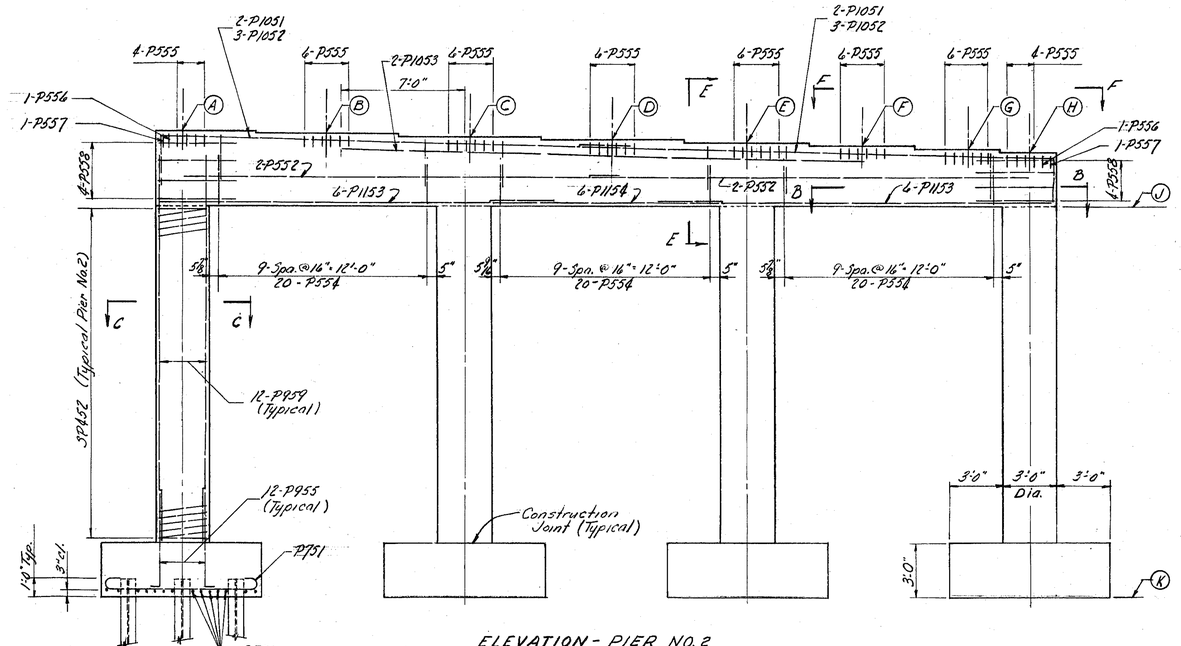
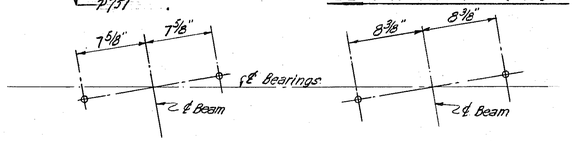


ELEVATION - PIER NO. 1



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 15/16"	15'-10 7/8"	Pier No. 2
17'-5"	17'-5 1/16"	17'-5"	Pier No. 3

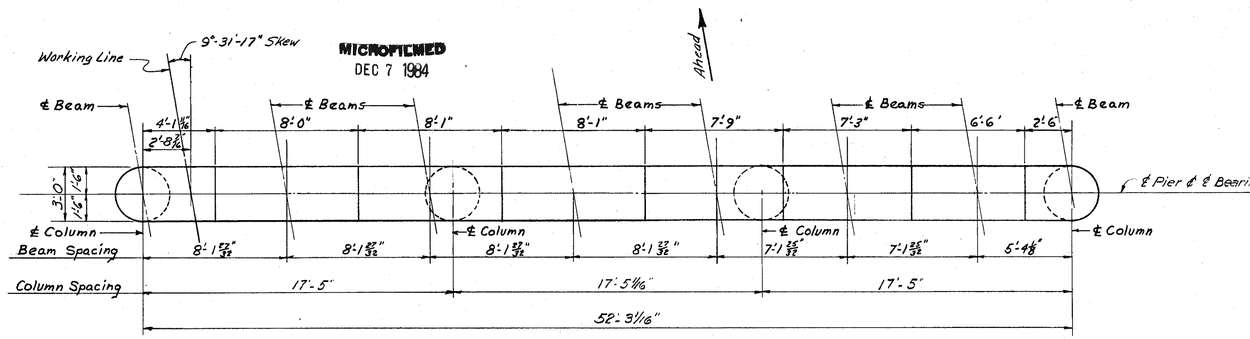
NOTES

- 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.

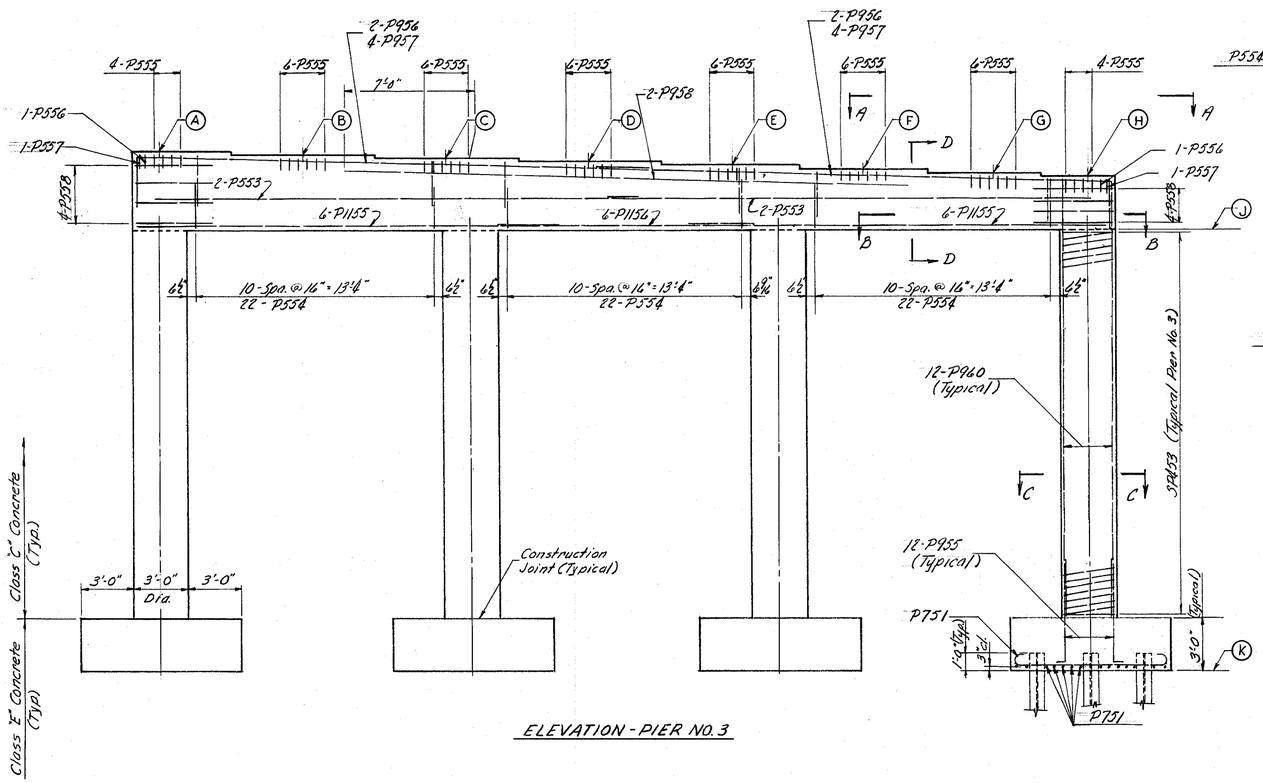
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9) 245	

333
401

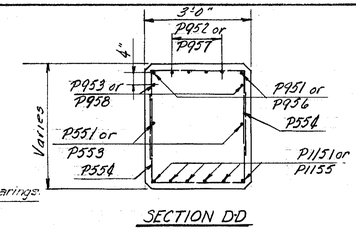
TRUMBULL COUNTY
TRU-I-80-(8.90)



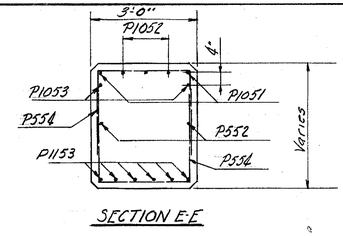
PLAN - PIER NO. 3



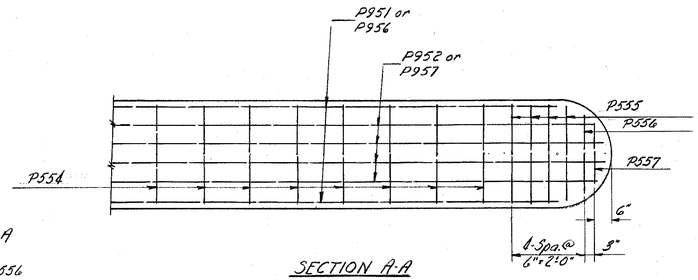
ELEVATION - PIER NO. 3



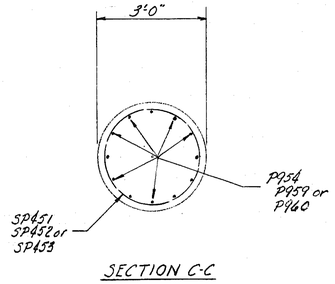
SECTION D-D



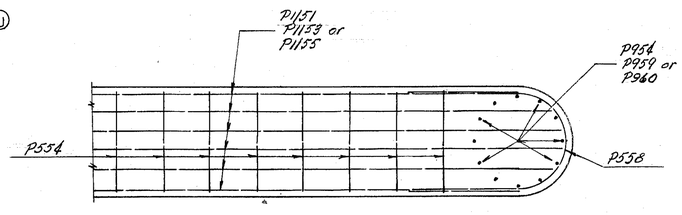
SECTION E-E



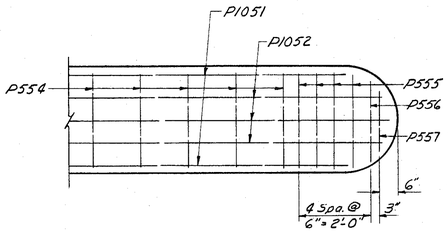
SECTION A-A



SECTION C-C



SECTION B-B



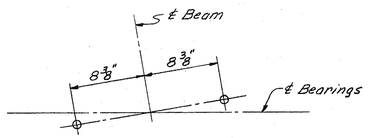
SECTION F-F

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	961.04	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

PREPARED BY
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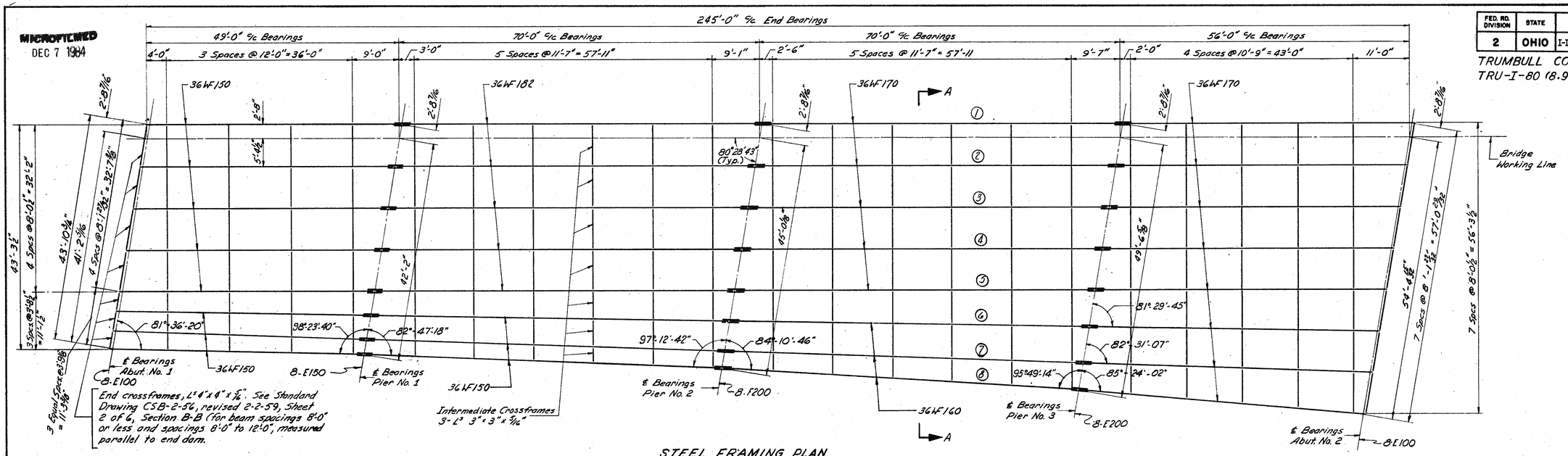
PIERS
RIGHT STRUCTURE
BRIDGE NO TRU-I-80-0941L/R
OVER
US RT 62 & SR 7
TRUMBULL COUNTY STA. 512+45.07 TO STA 514+94.62

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
G.M.B.	J.H. & F.J.M.		G.M.B.	11-8-62	

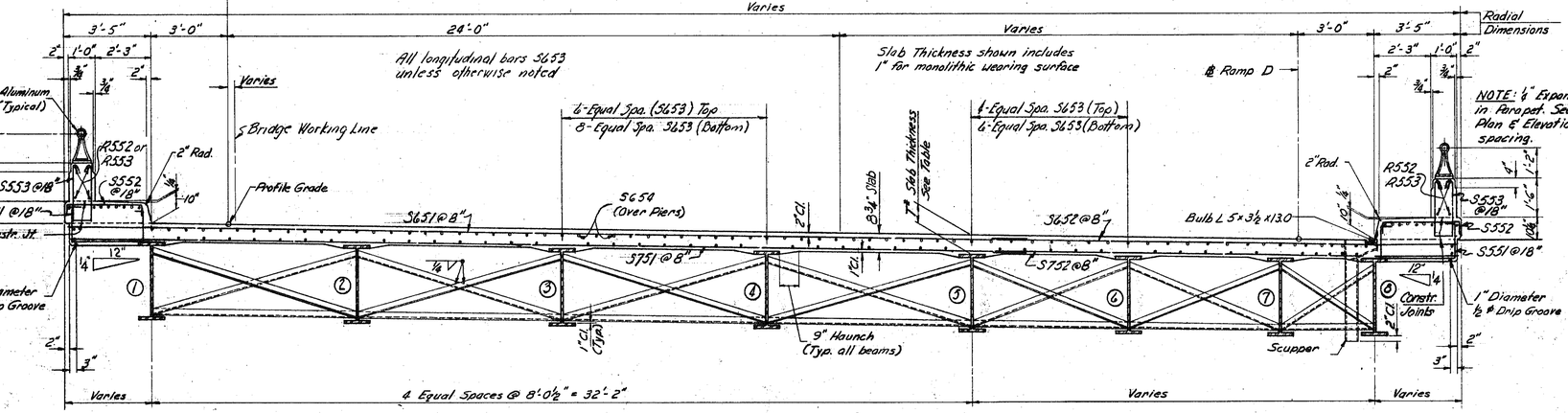
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

334
401

TRUMBULL COUNTY
TRU-I-80 (8.90)



STEEL FRAMING PLAN



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.

SLAB THICKNESS — T*

BEAM NO.	1	2	3	4	5	6	7	8
Abutment No.1	9 1/4	9 1/4	9 1/4	9 1/4	9 1/4	9 1/4	9 1/4	9 1/4
Pier No.1	8 3/4	8 3/4	8 3/4	8 3/4	8 3/4	9 1/4	9 1/4	9 1/4
Pier No.2	8 3/4	8 3/4	8 3/4	8 3/4	8 3/4	9 1/4	9 1/4	9 1/4
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.

Cambering of beams is required in accordance with the following table:

DEFLECTION AND CAMBER

	BEAM NO.1				BEAMS NO.2,3,&4				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	1/4	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	5/16	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 ("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 5/8")
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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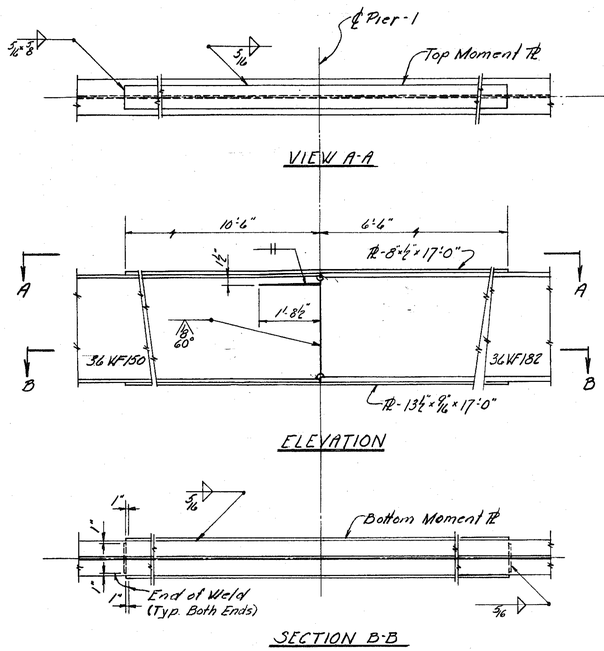
SUPERSTRUCTURE
RIGHT STRUCTURE
BRIDGE NO TRU-I-80-0941L/R
OVER
US RT 62 & SR 7
TRUMBULL COUNTY STA. 512+45.07 TO STA. 514+94.62

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
L.E.	F.J.M.		C.S.F.		11-8-62	

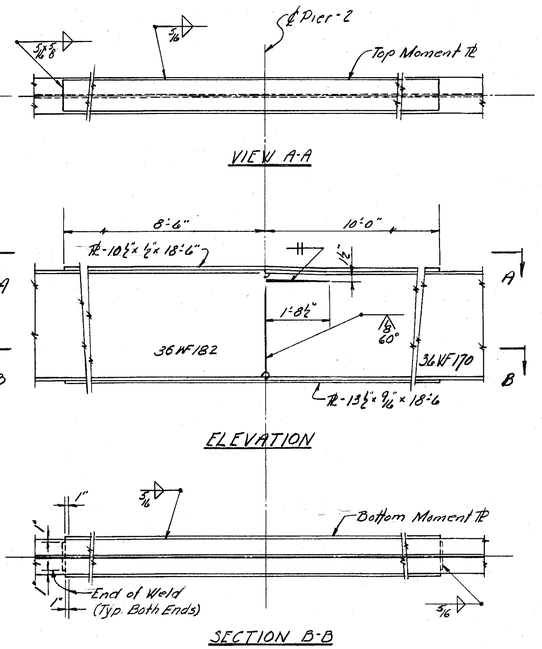
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

335
401

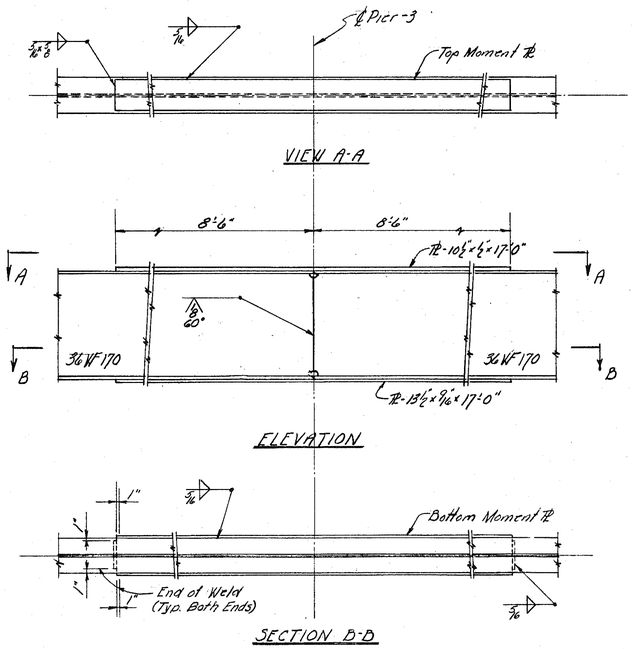
TRUMBULL COUNTY
TRU-I-80 (890)



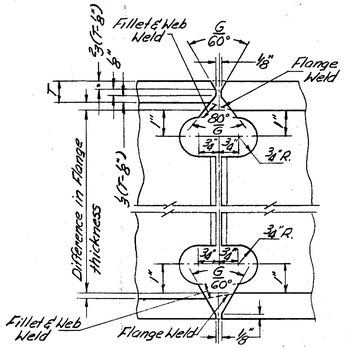
BEAM SPLICE
(Beams 1, 2, 3, 4&5 @ Pier 1)



BEAM SPLICE
(Beams 1,2,3,4&5 @ Pier 2)

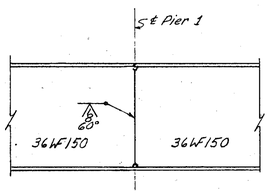


BEAM SPLICE
(Beams 1,2,3,4&5 @ Pier 3)

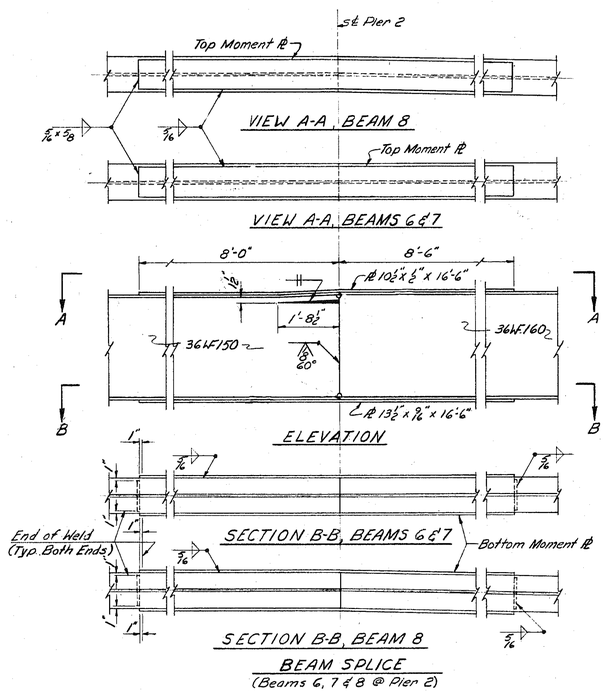


END PREPARATION OF ROLLED BEAMS FOR FIELD WELDING

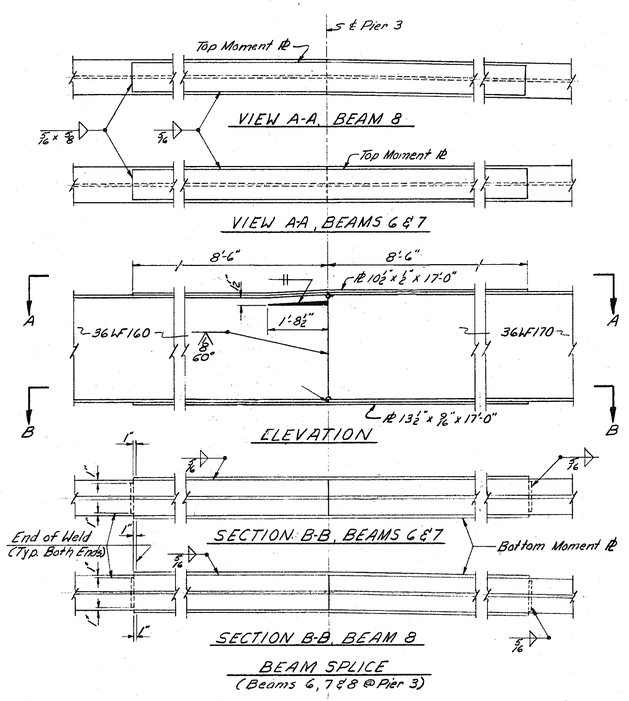
NOTE: Any roughness from burning shall be removed by grinding.



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 6" 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

PREPARED BY
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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

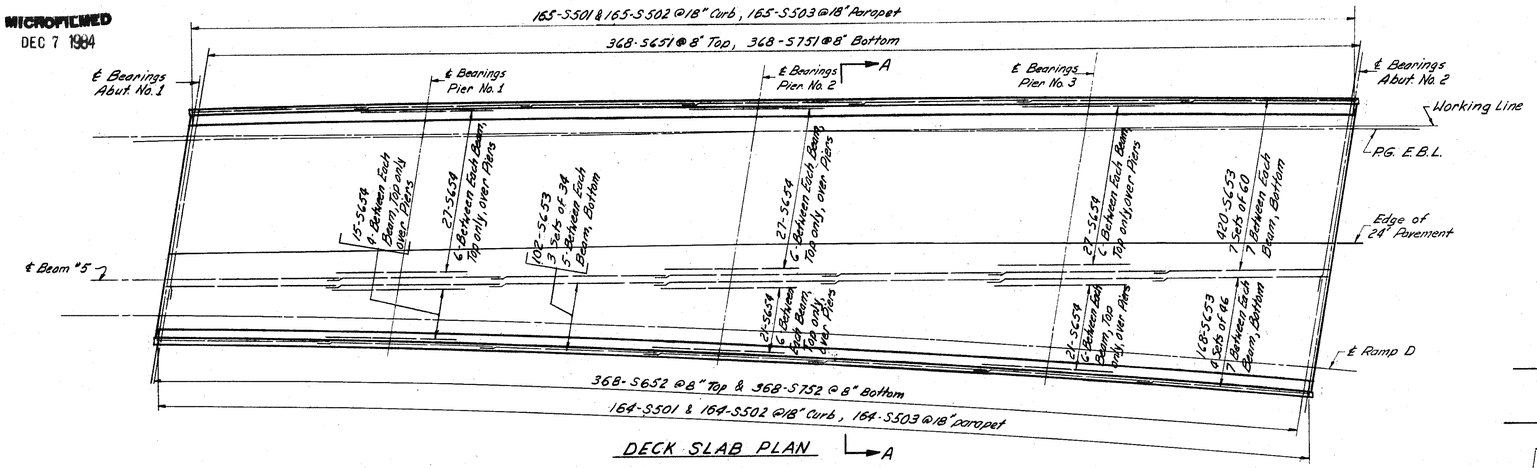
Designed	Drawn	Traced	Checked	Reviewed Date	Revised
J.E.	R.L.K. & F.J.M		C.S.F.	11-8-82	

S-S

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

Note: See sheet 33A for Transverse Section - A-A.

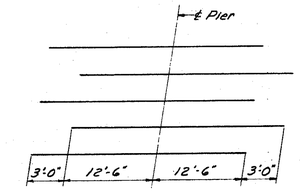
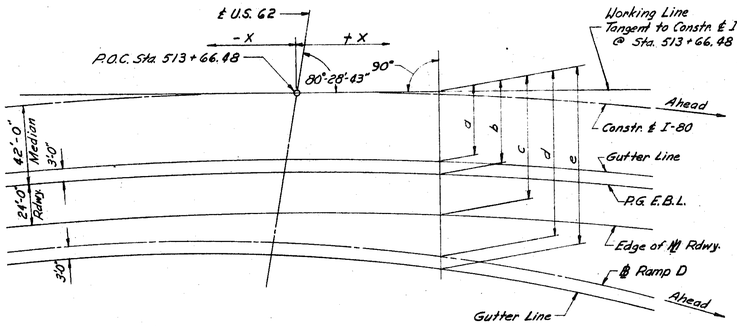


DIAGRAM SHOWING STAGGER OF S654 OVER PIERS



OFFSET LOCATION PLAN

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 B.
Dimension e = distance normal to tangent line between tangent line and gutter line.

TABLE OF OFFSETS AND ELEVATIONS

X	GUTTER LINE		P.G. E.B.L.		EDGE ℄ ROADWAY		RAMP D ℄		GUTTER LINE	
	DIM. a	ELEV.	DIM. b	ELEV.	DIM. c	ELEV.	DIM. d	ELEV.	DIM. e	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		P.G. E.B.L.		EDGE ℄ ROADWAY		RAMP D ℄		GUTTER LINE	
	DIM. a	ELEV.	DIM. b	ELEV.	DIM. c	ELEV.	DIM. d	ELEV.	DIM. e	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	

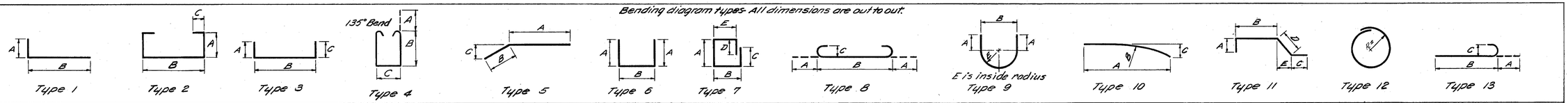
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9) 245	

337
401

TRUMBULL COUNTY
TRU-I-80(8.90)

REINFORCING STEEL BAR SCHEDULE

Bending diagram types. All dimensions are out to out.



PIERS

MARK	PIER1	PIER2	PIER3	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	7⅝"	2'-8"				505
P556	2	2	2	6	3'-2"	6	7⅝"	2'-2"				20
P557	2	2	2	6	2'-9"	6	7⅝"	1'-9"				17
P558	8	8	8	24	8'-2"	9	2'-3"	2'-5"			1'-3⅜"	205

SPIRAL BARS

MARK	PIER1	PIER2	PIER3	TOTAL	LENGTH	PITCH	NO. OF TURNS	CORE DIA.	WEIGHT
SP451	4	—	—	4	17'-6⅛"	4½"	50	32"	1,311
SP452	—	4	—	4	18'-9⅜"	4½"	53	32"	1,392
SP453	—	—	4	4	21'-8⅛"	4½"	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	7⅝"	2'-0"				300
A553	36	48	84	7'-4"	1	7⅝"	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	7⅝"	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
A869	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	7⅝"	1'-3"	0	10"	3"	10
A584	2	2	4	1'-5"	1	7⅝"	11"				6
A585	8	8	16	2'-11" to 3'-8" ①	11	7⅝"	1'-3" to 2'-0" ①	0	1'-3"	3"	55
A586	8	8	16	1'-10" to 2'-7" ①	1	7⅝"	1'-4" to 2'-1" ①				37
A587	8	8	16	3'-10" to 4'-4" ②	11	7⅝"	2'-2" to 2'-8" ②	0	1'-3"	3"	68
A588	8	8	16	2'-9" to 3'-3" ②	1	7⅝"	2'-3" to 2'-9" ②				50
A589	10	10	20	4'-3" to 4'-5" ③	11	7⅝"	2'-7" to 2'-9" ③	0	1'-3"	3"	90
A590	10	10	20	3'-2" to 3'-4" ③	1	7⅝"	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 ½"

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'-3⅜"	2'-7"	7⅝"			2,030
S552	329	3'-7"	6	7⅝"	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				
F-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.
1½ closed coils shall be provided at the ends of each spiral unit.
Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per Lin. Ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per Lin. Ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

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.

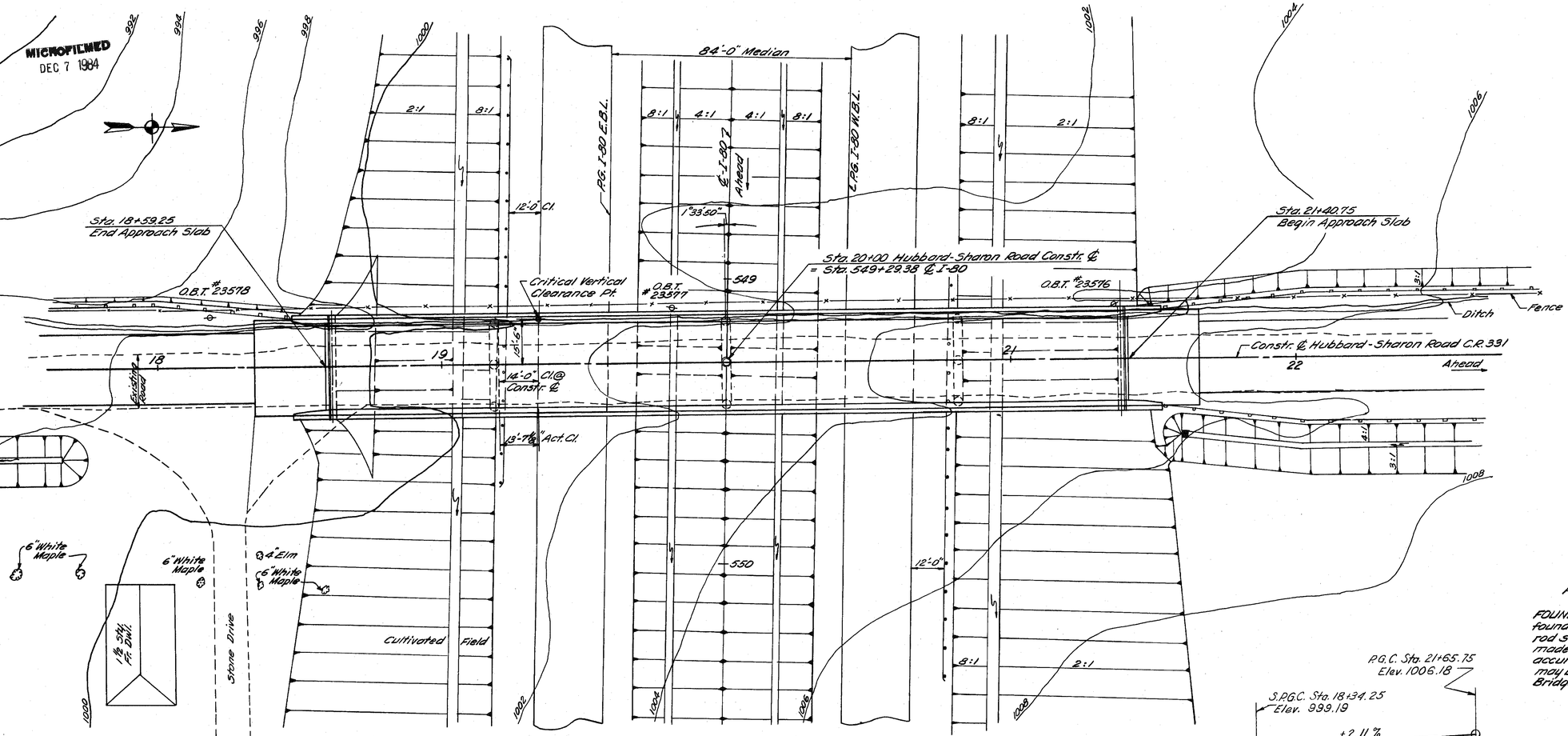
REINFORCING STEEL LIST & ESTIMATED QUANTITIES-RIGHT STRUCTURE
BRIDGE NO. TRU -80-0941 L/R
OVER
U.S. RT. 62 & SR-7
TRUMBULL COUNTY STA. 512+45.07 TO STA. 514+94.62

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
	G.P.	GC	G.M.B.	11-8-62	

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

338
401

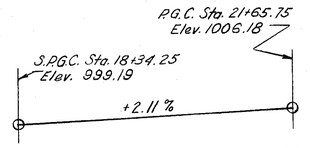
TRUMBULL COUNTY
TRU I-80 (8.90)



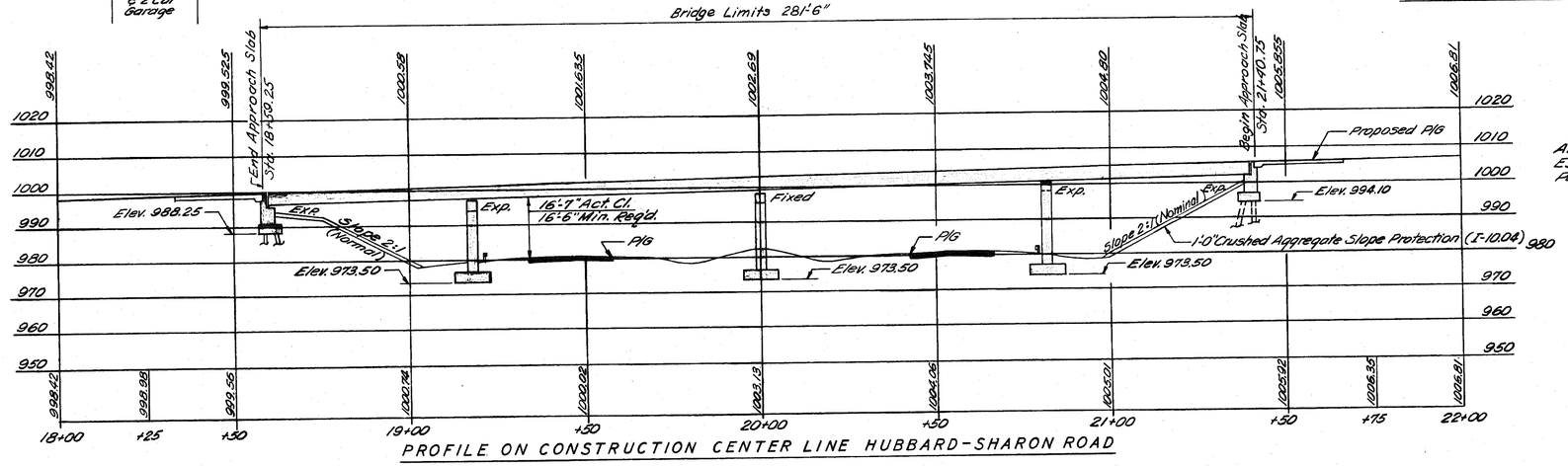
B.M. #8 Elev. 996.593
305' Rt. Sta. 550+50
R.R. Spike in root 38" White Oak

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" ℄ to 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.

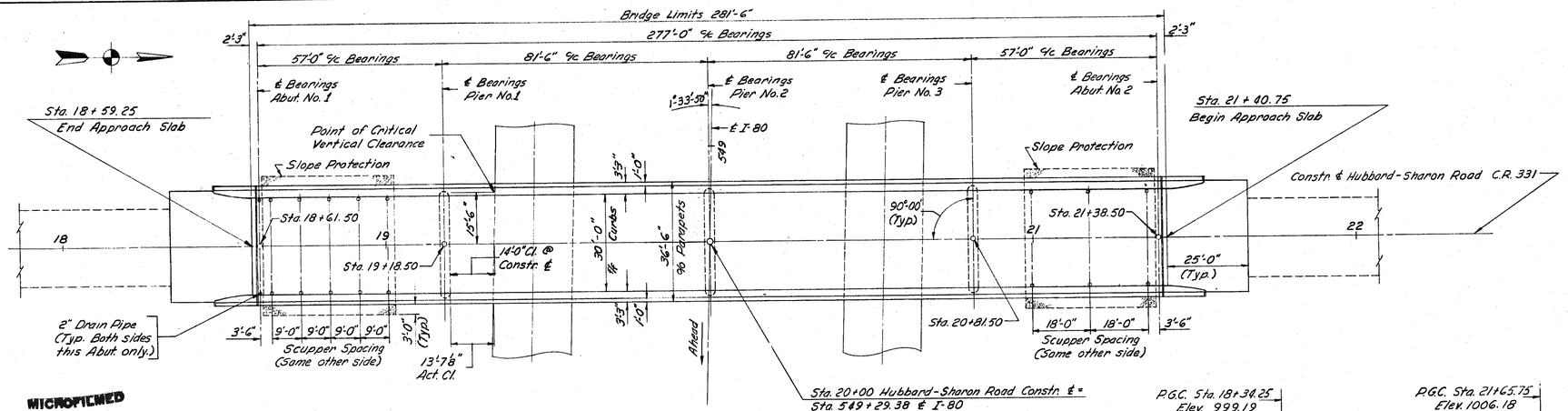
SITE PLAN
BRIDGE NO. TRU 80-1010
UNDER
HUBBARD-SHARON ROAD
TRUMBULL COUNTY STA. 549 + 29.38
SCALE: 1"=20'-0"

PRESENT TOPOGRAPHY		PROPOSED WORK			
Surveyed	Drawn	Designed	Drawn	Checked	Reviewed
Buchart Eng.	G.P.	G.M.B.	G.P.	G.M.B.	8-10-82

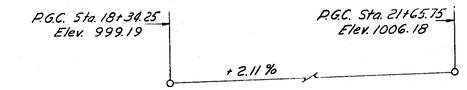
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

339
40.1

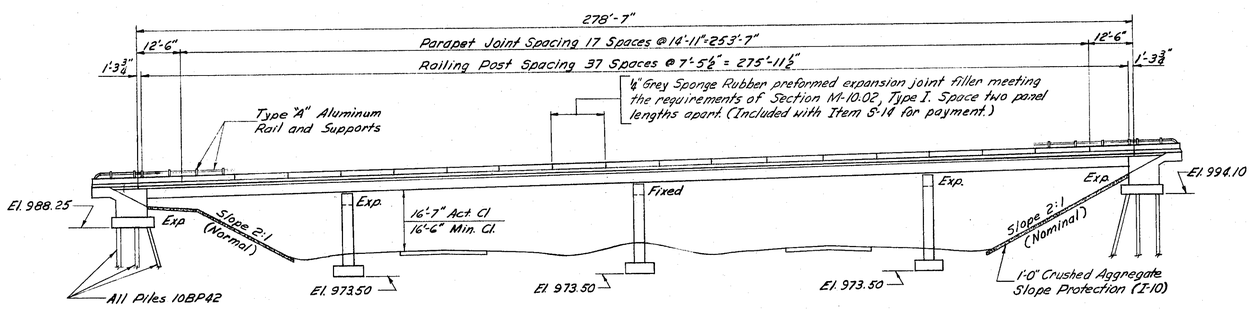
TRUMBULL COUNTY
TRU-I-8 (8.90)



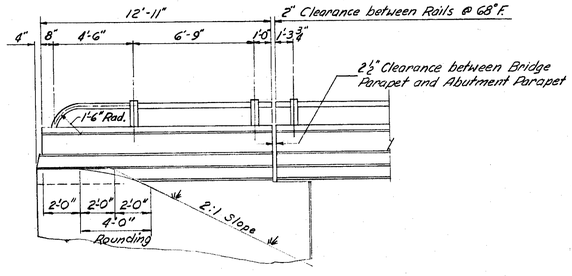
GENERAL PLAN



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

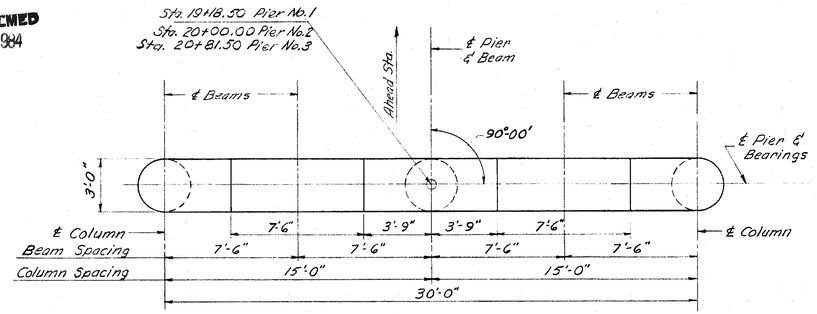
TRUMBULL COUNTY — STA. 540+29.83

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
G.M.B.	F.J.M.		G.M.B.	G.M.B.	10-11-62	

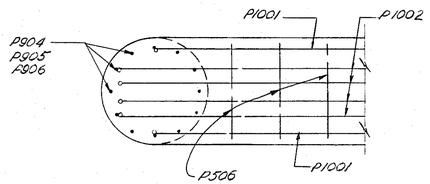
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

34/401

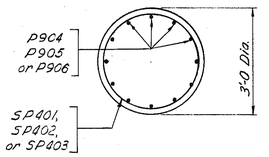
TRUMBULL COUNTY
TRU-I-80 (8.90)



PLAN



SECTION A-A



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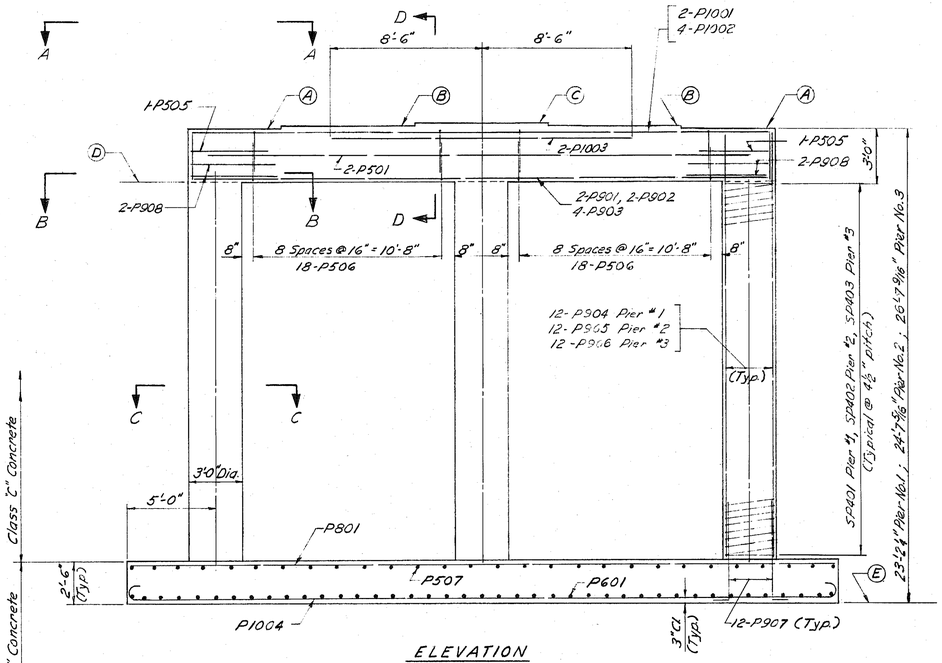
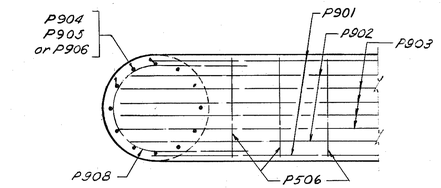


ELEVATION



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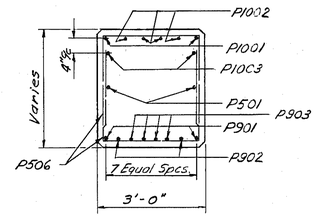
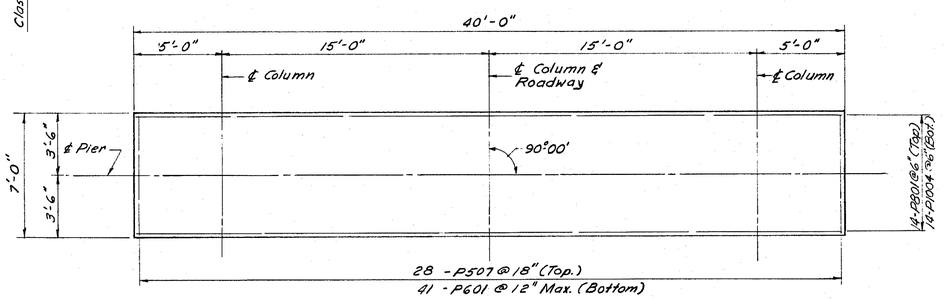
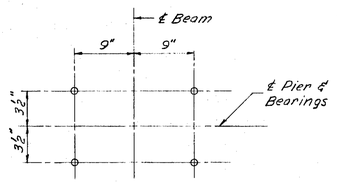


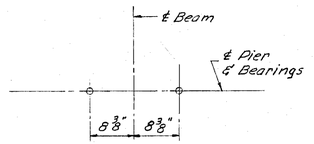
SECTION D-D



FOOTING PLAN



TYPICAL ANCHOR BOLT LAYOUT
(For Pier No. 2 Only)



TYPICAL ANCHOR BOLT LAYOUT
(For Pier No. 1 & Pier No. 3)

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

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.

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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	

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401

TRUMBULL COUNTY
TRU-I-80(8.90)

277'-0" ℄ End Bearings
57'-0" ℄ Bearings | 81'-6" ℄ Bearings | 81'-6" ℄ Bearings | 57'-0" ℄ Bearings
5 Spcs. @ 11'-8¼" = 58'-5½" | 7 Spcs. @ 11'-7½" = 81'-4½" | 7 Spcs. @ 11'-3" = 78'-9" | 5 Spcs. @ 11'-8¼" = 58'-5½"
SPAN NO. 1 | 1'-5½" | SPAN NO. 2 | 1'-3⅜" | SPAN NO. 3 | 1'-5½" | SPAN NO. 4
℄ Brgs. Abut No.1 | ℄ Brgs. Pier No.1 | ℄ Brgs Pier No. 2 | ℄ Brgs. Pier No.3 | ℄ Brgs. Abut No. 2
30'-0"
7'-6" | 7'-6" | 7'-6" | 7'-6"
90°00' (Typ.)
℄ Roadway
5-E100 | 36WF150 | 5-E150 | 36WF170 | 5-F200 | 36WF170 | 5-E150 | 36WF150 | 5-E100
End Crossframes, L=3"x3"x⅜". See Standard Drawing CSB-2-56, revised 2-2-59, Sheet 2 of 6, Section B-B (for beam spacing 8'-0" or less, measured parallel to end dam.)
Intermediate Crossframes Ls 3"x3"x⅜"

STEEL FRAMING PLAN

BEAM SPLICE WELDING PROCEDURE

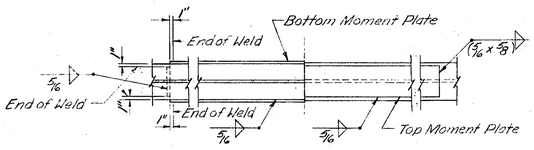
1. Raise end of beam at Pier No. 2 (1¾").
2. Butt-weld the beam flanges and web at Pier No. 1 using the following sequence: make one pass on each flange, then two on the web; repeat, using one pass at each location, until welds are completed.
3. Weld top and bottom flange moment plates at Pier No. 1.
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 2⅝" at Pier No. 3 and ⅝" at Abutment No. 2.

Cambering of beams is required in accordance with the following table:

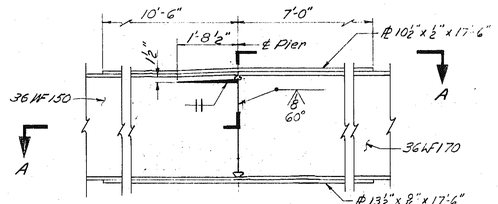
DEFLECTION AND CAMBER

LOCATION	OUTSIDE BEAMS		INSIDE BEAMS	
	SPANS 1 and 4	SPANS 2 and 3	SPANS 1 and 4	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"

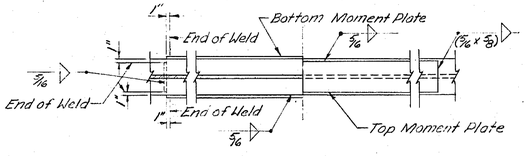
NOTE: Where no camber is specified beams shall be fabricated with any natural camber or bowed side up.



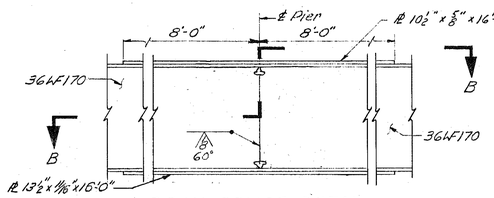
SECTION A-A



BEAM SPLICE DETAIL
(At Piers No.1 & 3)



SECTION B-B

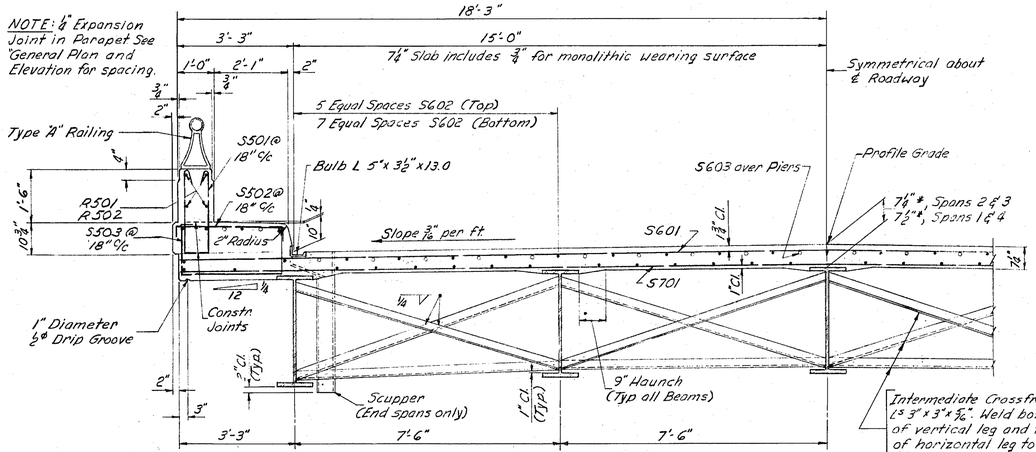


BEAM SPLICE DETAIL
(At Pier No. 2)

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 ½", 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.

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.

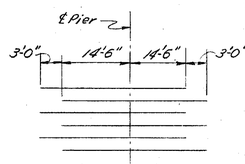
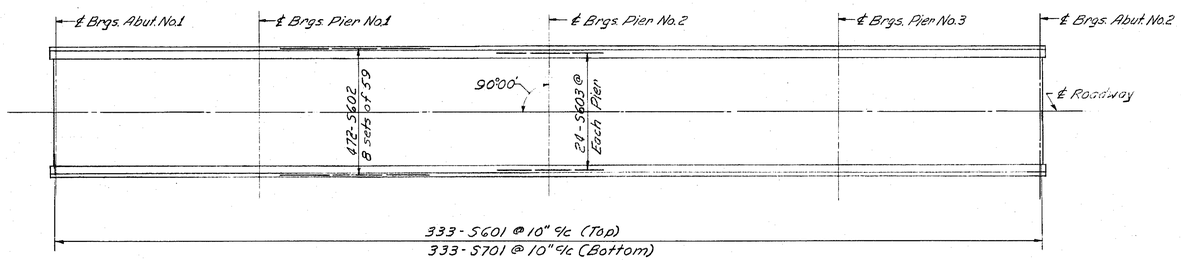
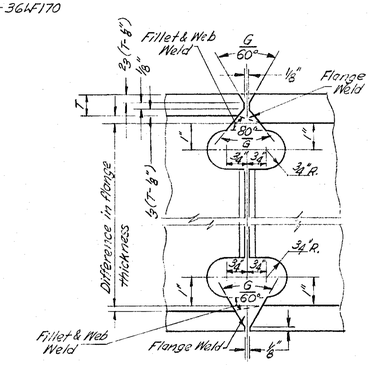


DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIERS

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.	[illegible]	10-11-62	

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

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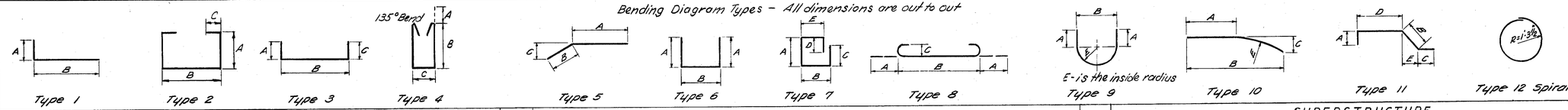
401

TRUMBULL COUNTY
TRU-I-80 (8.90)

REINFORCING STEEL BAR SCHEDULE

Bending Diagram Types - All dimensions are out to out



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'-3⅛"	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	7⅝"	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	7⅜"	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

⊛ 4-each vary in increments of 3"

TOTAL WEIGHT 10,628

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	7⅝"	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.						

Total Weight 77,836

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 5-4.

1½ closed coils shall be provided at the ends of each spiral unit.

Four Steel Channel, Tee or Angle Spacers, weighing approximately 0.68 lb. per Lin. Ft. of Spacer, shall be provided for each Spiral Unit.

They shall be equally spaced along the periphery of the coil. The number of pounds of these Spacers, based on 0.68 lb. per Lin. Ft., will be paid for as reinforcing steel and is included in the tabulated quantity of Spiral Bars.

REPLACEMENT BARS

MARK	NO.	LENGTH	TYPE	WEIGHT
RE1001	1	7'-3"	Str.	
RE902	1	6'-10"	Str.	
RE803	1	6'-6"	Str.	
RE704	2	6'-3"	Str.	
RE605	3	5'-11"	Str.	
RE506	1	5'-7"	Str.	
RE407	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, A 601 is a No. 6 size Bar and P1001 is a No. 10 size Bar.

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

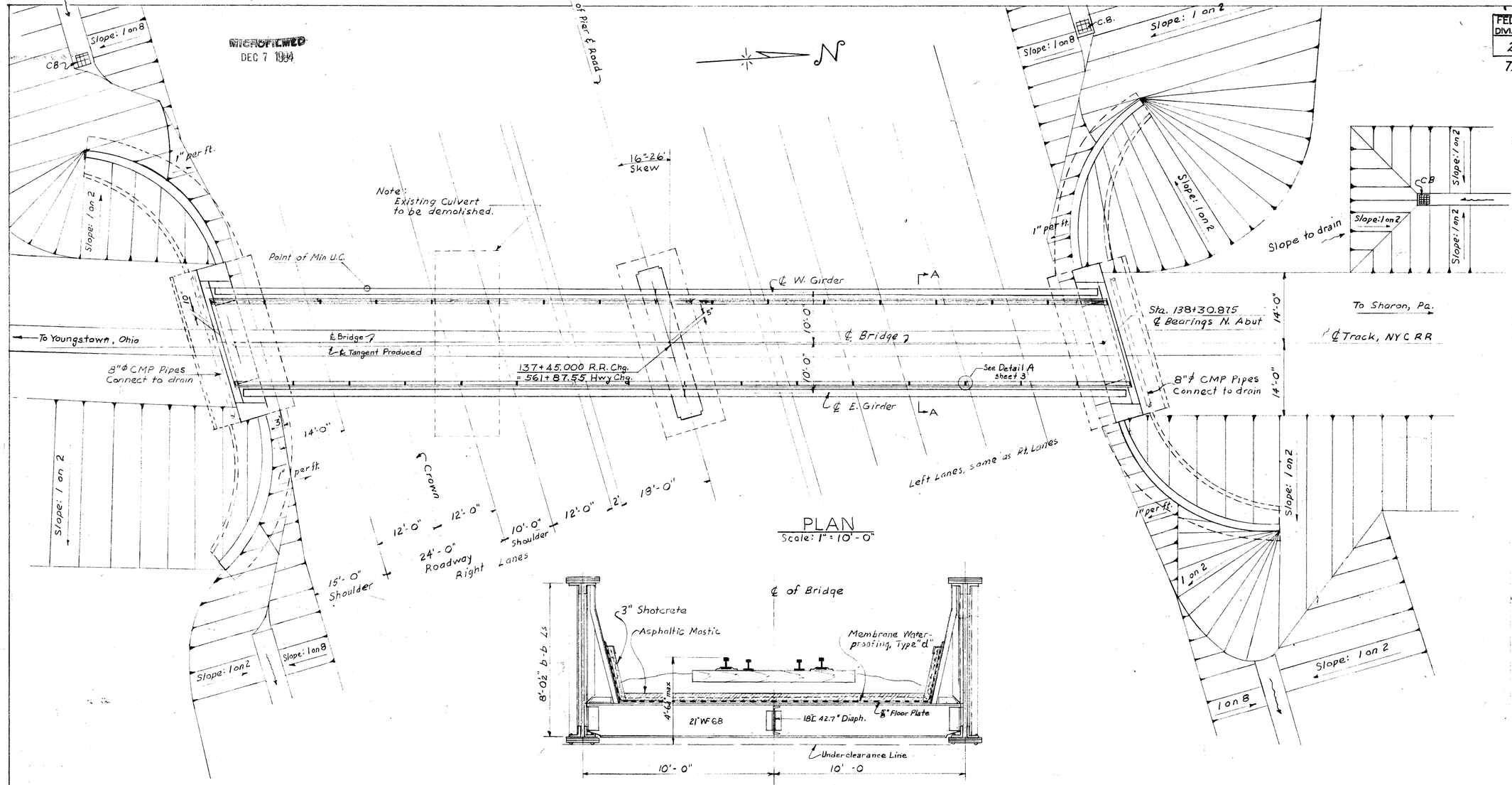
REINFORCING STEEL LIST
BRIDGE NO. TRU-I-80-1010
UNDER
HUBBARD-SHARON ROAD
TRUMBULL COUNTY STA. 549+29.38

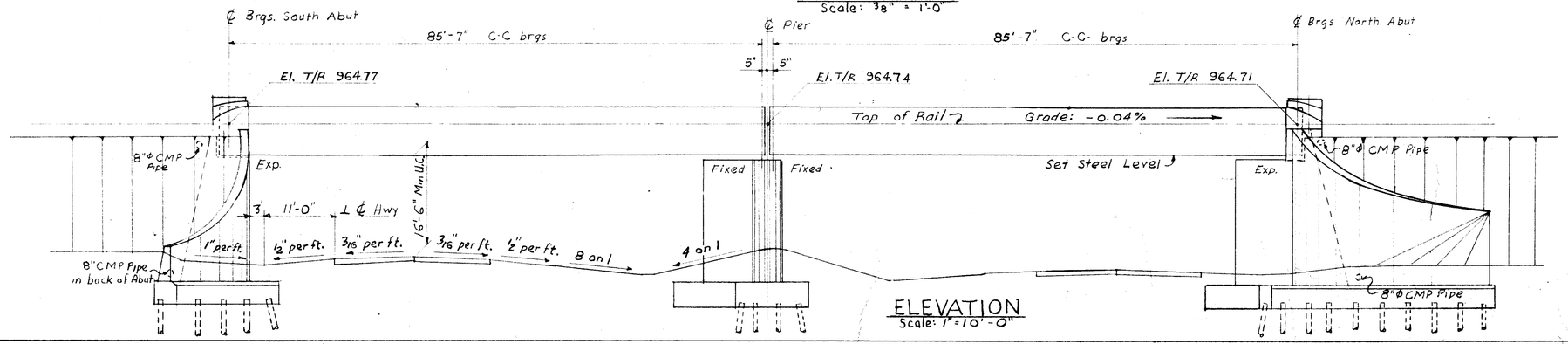
Designed	Drawn	Traced	Checked	Reviewed Date	Revised
G.M.B.	G.P.	T.P.G.	G.M.B.	10-11-62	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

344
401

TRU-I-80-8.90





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) moppings 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

BRIDGE "19½", SHARON BRANCH
1.3 MILES EAST OF
HUBBARD, OHIO
OVER HWY. TRU-I-80 (8.90)
GENERAL PLAN

ENGINEERING DEPT. NEW YORK, N.Y.

John F. Barker
ENGINEER OF STRUCTURES

APPROVED E. Elfendahl
CHIEF ENGINEER

DATE	JULY 12, 1963
SCALE	As Noted
DRAWN BY	S.R.G.
CHECKED BY	B.C. W.S.D.
DRAWING NO.	93546
SHEET NO.	1 of 12

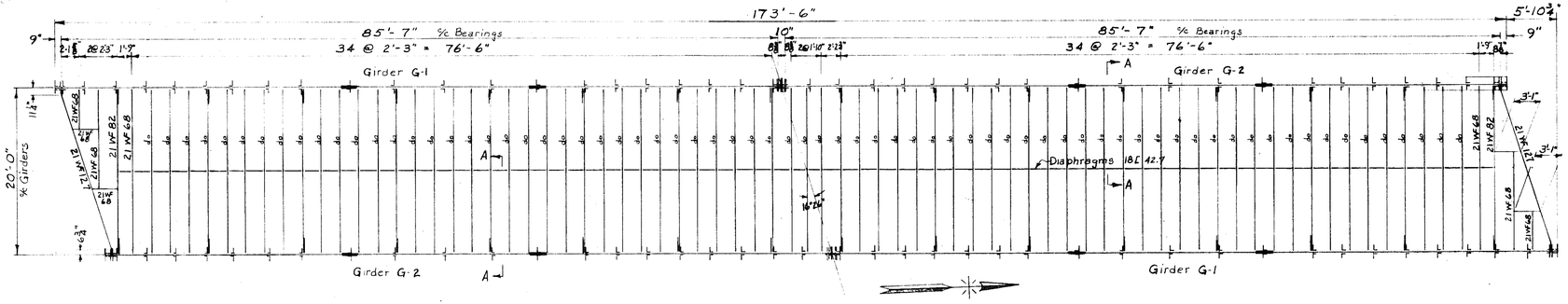
93240

FED.RD. DIVISION	STATE	PROJECT	
2	OHIO		

345 461

93240

TRU-I-80-8.90

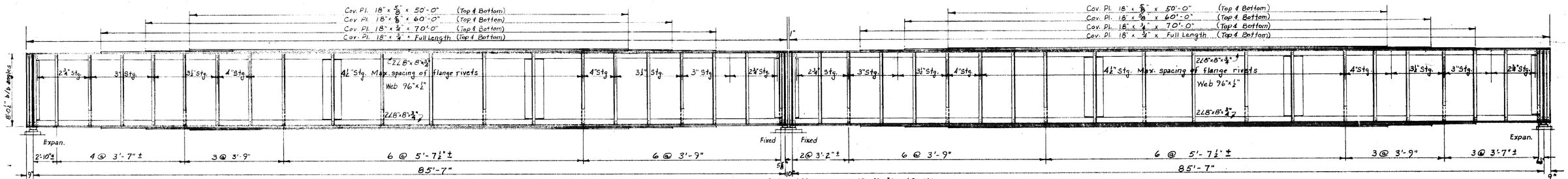


FRAMING PLAN
Scale: 1/16" = 1'-0"

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 #/ft	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

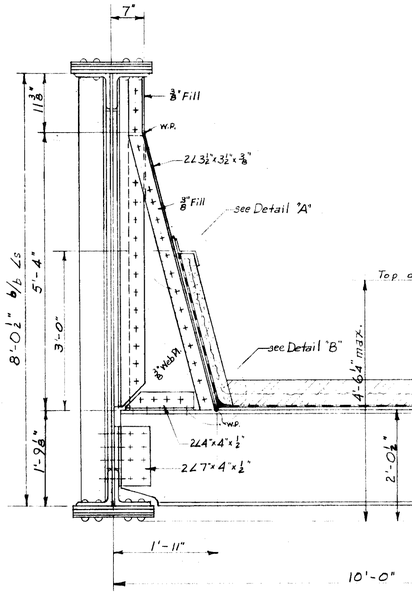
* Materials and construction as per current A.R.E.A Specifications (Part 2 - Membrane Waterproofing) for Asphalt Mastic



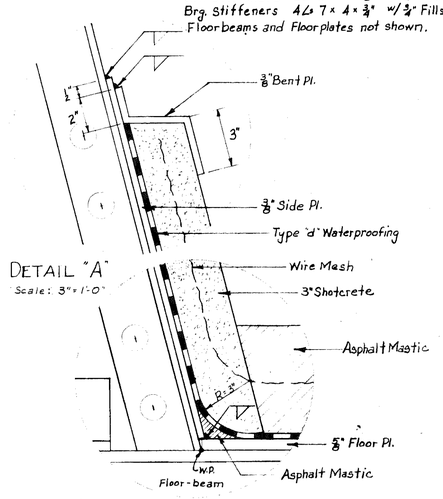
ELEVATION - GIRDER G-1
Scale: 1/16" = 1'-0"

Int. Stiffeners 2L 6"x 4"x ⅜" w/ ¾" Fills
Brg. Stiffeners 4L 7"x 4"x ¾" w/ ½" Fills
Floorbeams and Floorplates not shown.

ELEVATION - GIRDER G-2
Scale: 3/16" = 1'-0"

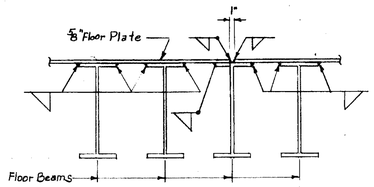


SECTION A-A
Scale: ¾" = 1'-0"



DETAIL "A"
Scale: 3" = 1'-0"

DETAIL "B"
Scale: 3" = 1'-0"



Floor Beams to be shop welded to ⅝" Floor Plate in groups of 3 beams
All welds to be ⅝" fillet unless noted.

FLOOR PLATE CONNECTION
Scale: ¾" = 1'-0"

NOTE:
All welds to be ⅝" 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.

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 IK	5.6 K
L.L.	38.0	19.2
I	61.0	8.4
Total	229.0 IK	33.2 K

Section: 21" WF 68# & 27"x ⅝" 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.	50.1 IK	8.0 K
L.L.	265.5	33.5
I	117.0	14.8
Total	433.0 IK	56.3 K

Section 21" WF 127# & 21"x ⅝" 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

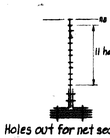
Girder 8'-0½" b-b Ls Span = 85'-7"

	Moments	Shears
D.L.	3200 IK	146 K
L.L.	4608	249
I	1465	79
Total	9273 IK	474 K

Section
1 Web 96"x ½"
4 Ls 8"x 8"x ¾"
4 Cov. Pl. 18"x ¾"
4 Cov. Pl. 18"x ⅝"

Gross I = 371,700 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

HWY. BR. NO. TRU-R-80-1034

NEW YORK CENTRAL SYSTEM
BRIDGE #19½, SHARON BRANCH
1.3 MILES EAST OF
HUBBARD, OHIO
OVER HWY. TRU-I-80 (8.90)
SUPERSTRUCTURE - PLAN

ENGINEERING DEPT. NEW YORK, N.Y.

John L. Buckel
ENGINEER OF STRUCTURES

APPROVED
CHIEF ENGINEER

DATE	7/12/62
SCALE	as noted
DRAWN BY	OJD
CHECKED BY	W.S.D.
DRAWING NO.	93546
SHEET NO.	2 OF 12

FED.RD. DIVISION	STATE	PROJECT	
2	OHIO		

TRU-I-80-8.90

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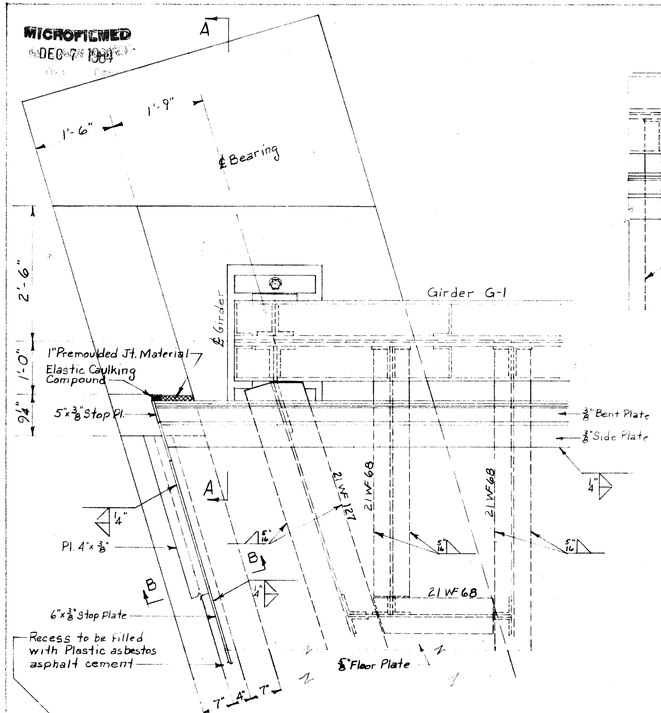
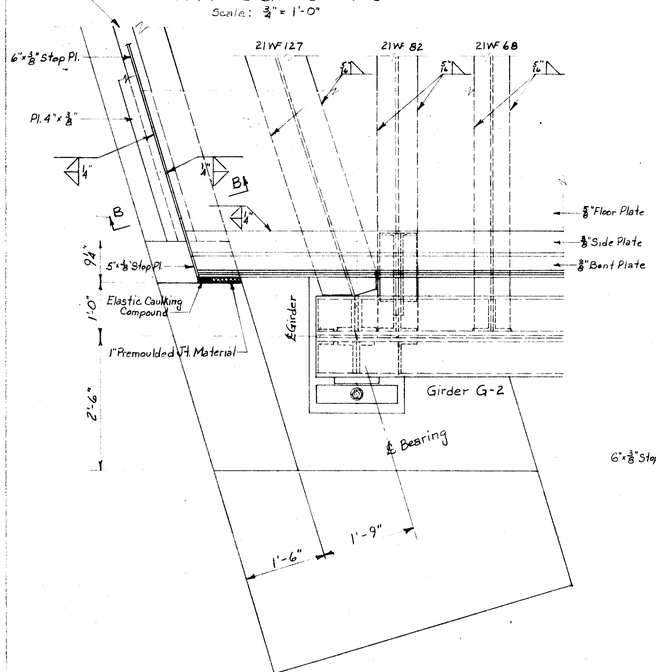
401

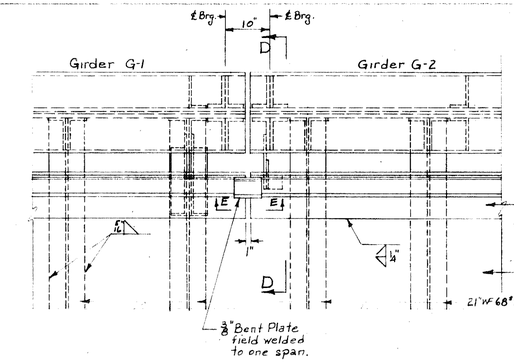
93546



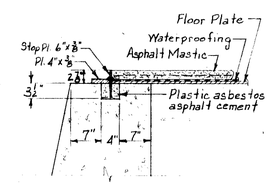
PLAN - FLOOR PLATE AT ABUTMENTS
N.E. AND S.W. CORNERS
Scale: ¾" = 1'-0"



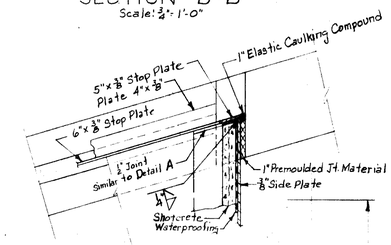
PLAN - FLOOR PLATE AT ABUTMENTS
N.W. AND S.E. CORNERS
Scale: ¾" = 1'-0"



PLAN - FLOOR PLATE AT PIER
Scale: ¾" = 1'-0"



SECTION B-B
Scale: ¾" = 1'-0"



SECTION C-C
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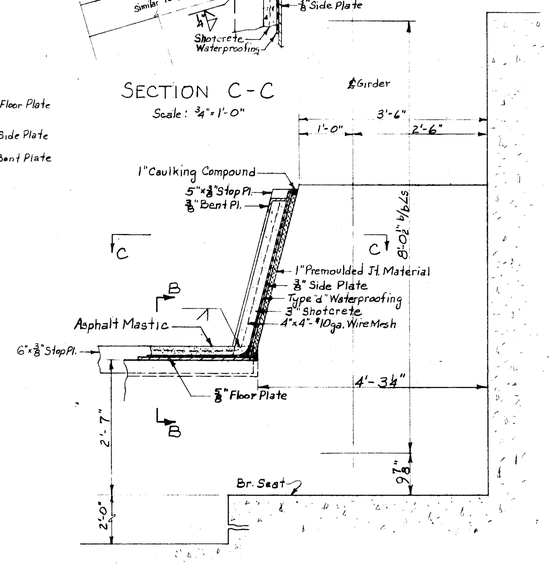

SECTION A-A
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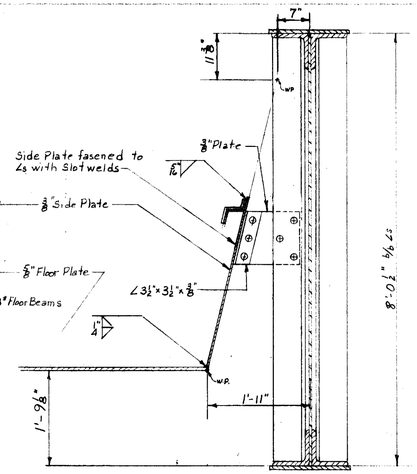

SECTION D-D
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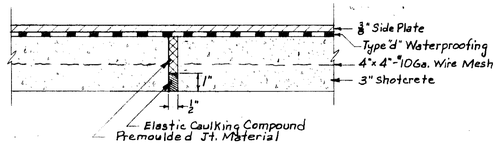
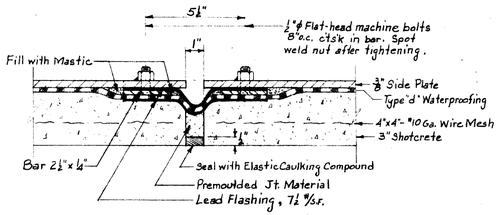
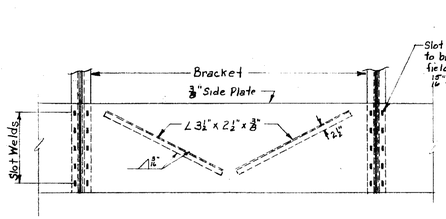


DETAIL A
For location, see sheet 1
Scale: 3" = 1'-0"

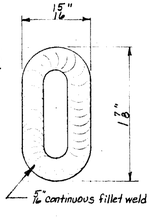


SECTION E-E
Scale: 3" = 1'-0"

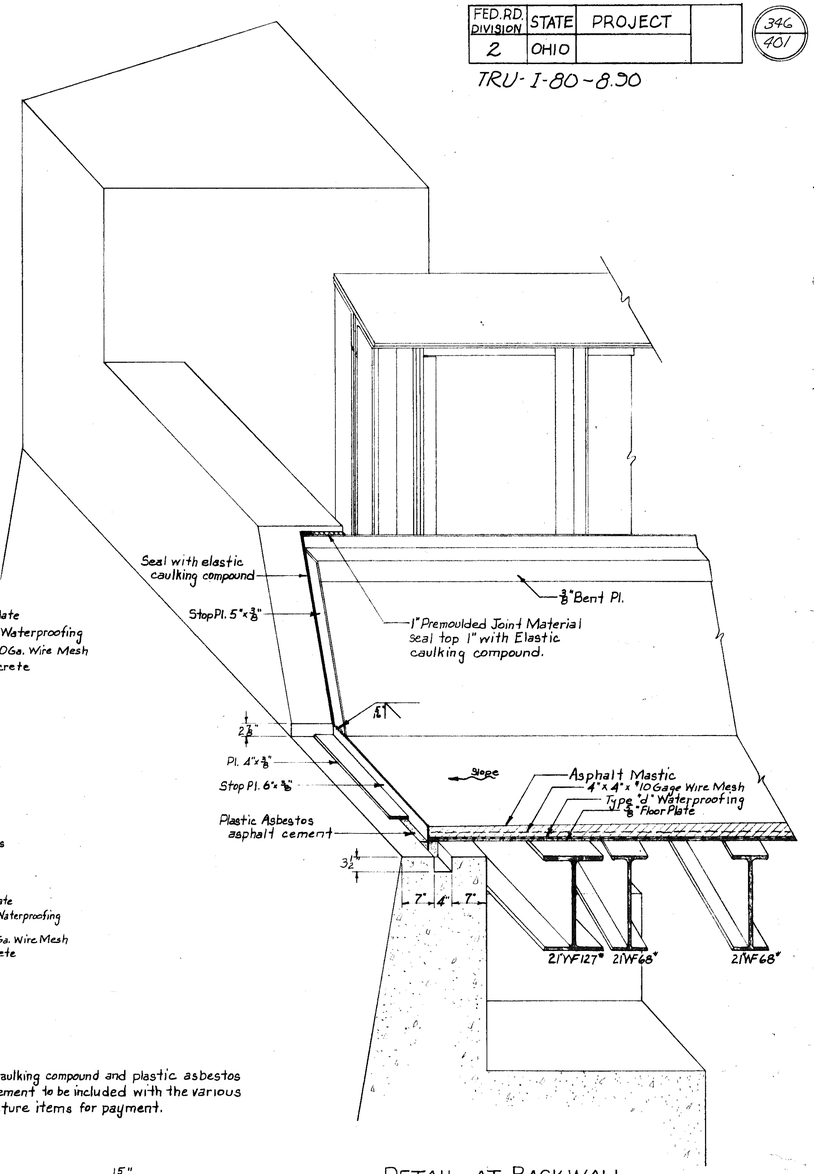
NOTE:
Elastic caulking compound and plastic asbestos asphalt cement to be included with the various superstructure items for payment.



SIDE PLATE DETAIL
Scale: ⅜" = 1'-0"



DETAIL - SLOTWELD
Full Scale



DETAIL AT BACKWALL
ISOMETRIC VIEW
Scale: ¾" = 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 OVER HWY TRU-I-80 (8.90)	SCALE as noted
SUPERSTRUCTURE - DETAILS	DRAWN BY OJD
ENGINEERING DEPT. NEW YORK, N.Y.	CHECKED BY W.S.D.
John L. Bachel ENGINEER OF STRUCTURES	DRAWING NO. 93546
APPROVED E. Lefkowitz CHIEF ENGINEER	SHEET NO. 3 OF 12

FED.RD DIVISION	STATE	PROJECT	
2	OHIO		

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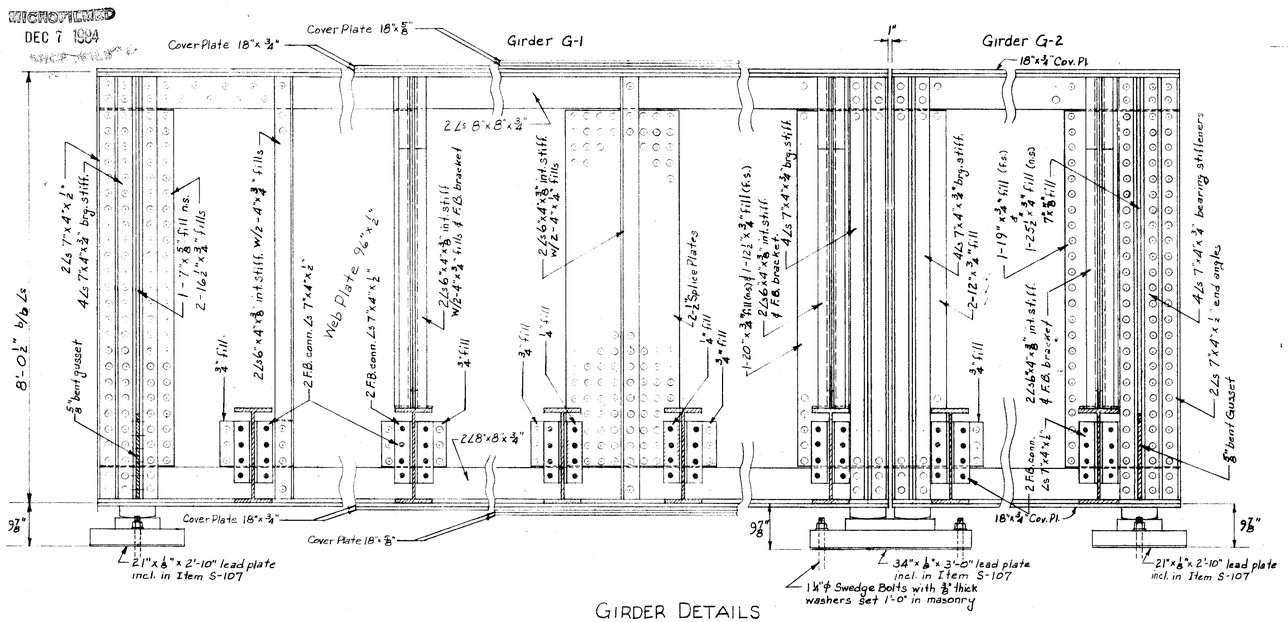
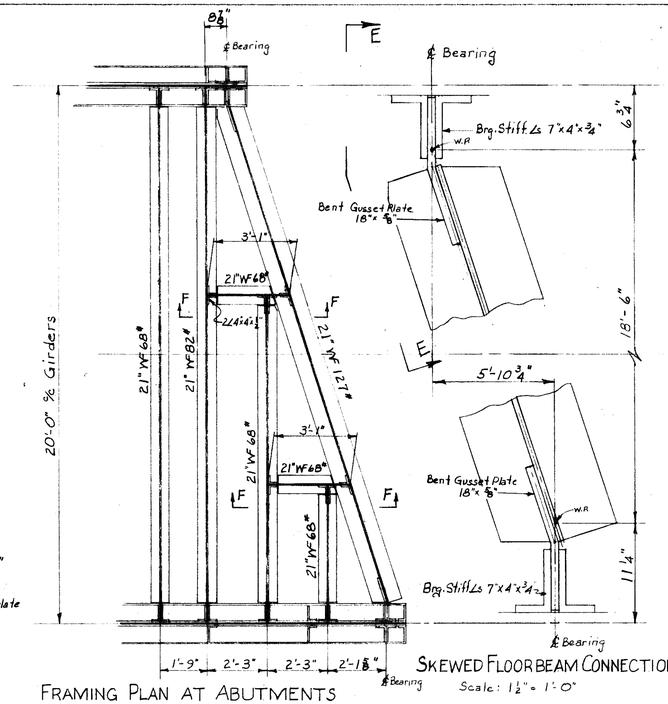
401

TRU-I-80-8.90

93240

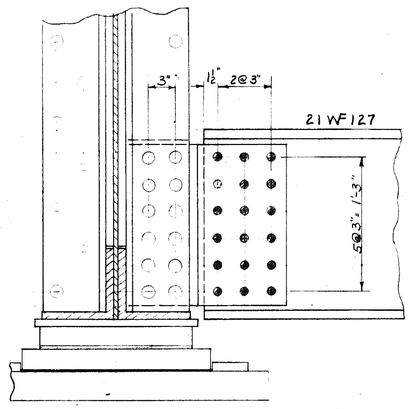


GIRDER DETAILS
Scale: 3/4" = 1'-0"

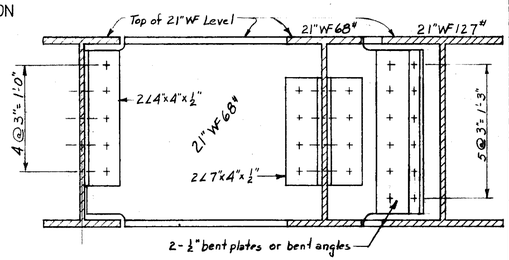


FRAMING PLAN AT ABUTMENTS
Scale: 3/8" = 1'-0"

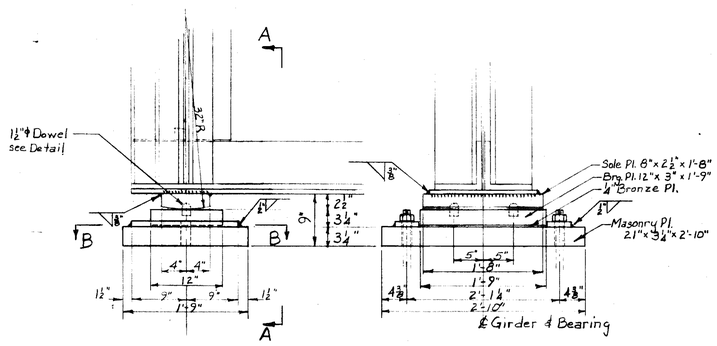
SKEWED FLOOR BEAM CONNECTION
Scale: 1 1/2" = 1'-0"



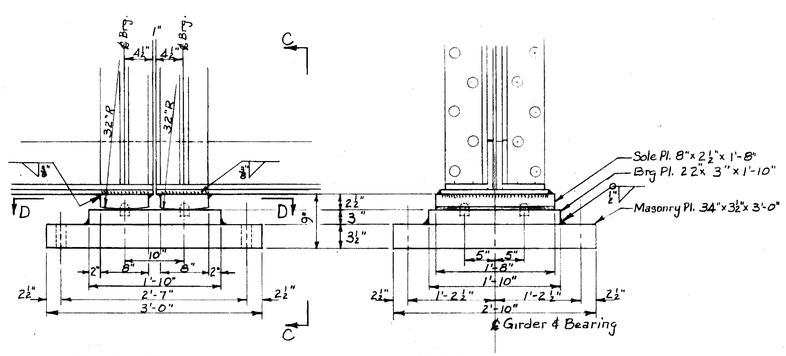
SECTION E-E
Scale: 1 1/2" = 1'-0"



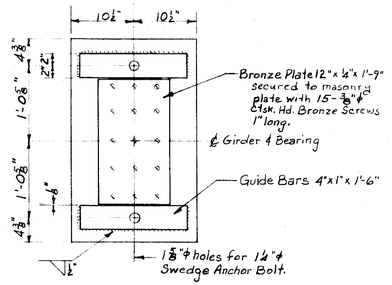
SECTION F-F
Scale: 1 1/2" = 1'-0"



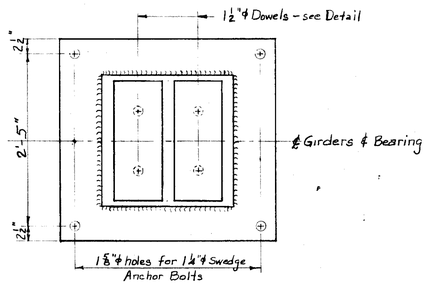
ELEVATION SECTION A-A



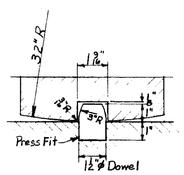
ELEVATION SECTION C-C



SECTION B-B



SECTION D-D



DOWEL DETAIL
Scale: 3" = 1'-0"

DETAILS - EXPANSION BEARING
Scale: 1" = 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 7/12/62
BRIDGE 19 1/2, SHARON BRANCH 1.3 MILES EAST OF HUBBARD, OHIO	SCALE as noted
OVER HWY. TRU-I-80 (8.90)	DRAWN BY OJD
SUPERSTRUCTURE - DETAILS	CHECKED BY W.S.D.
ENGINEERING DEPT. NEW YORK, N.Y.	DRAWING NO. 93546
John L. Beadel ENGINEER OF STRUCTURES	SHEET NO. 4 OF 12
APPROVED E. Ackerson CHIEF ENGINEER	

Ozalid Flex Tracing

FED'L DIVISION	STATE	PROJECT	
2	OHIO		

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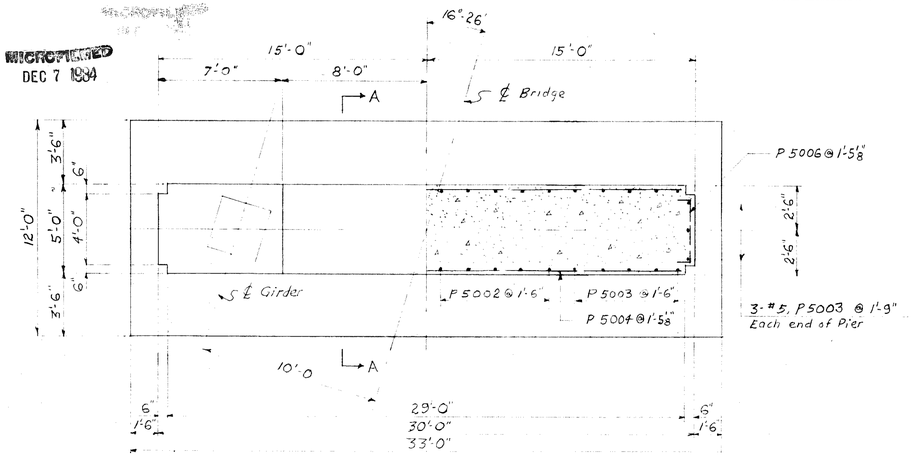
TRU-I-80-8.90



HALF PLAN
Scale: ¼"=1'-0"

HALF SECTIONAL PLAN
Scale: ¼"=1'-0"

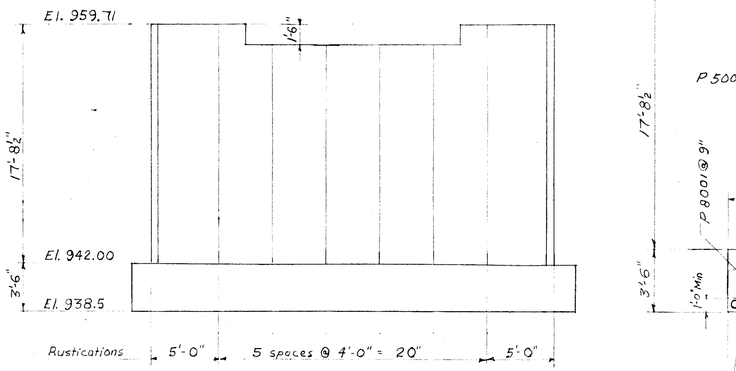
Note:
Area of bridge seat to be poured ½" high and bush hammered to El. 959.71

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								

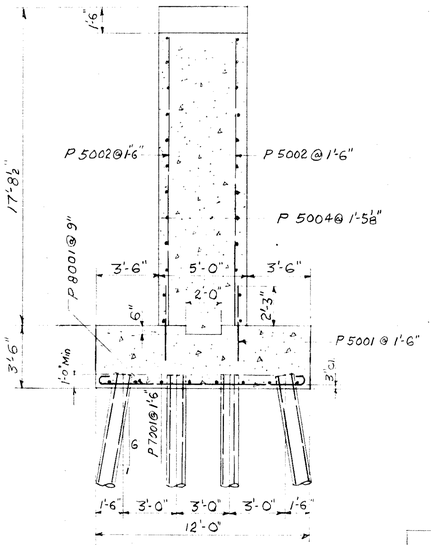
* Including Specials

Note:
For estimate of Superstructure quantities, see Sh. 2 of 12.

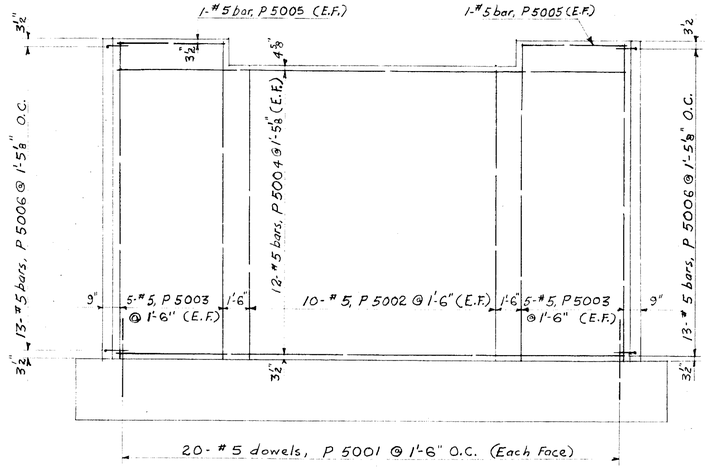


ELEVATION
Scale: 3/16"=1'-0"

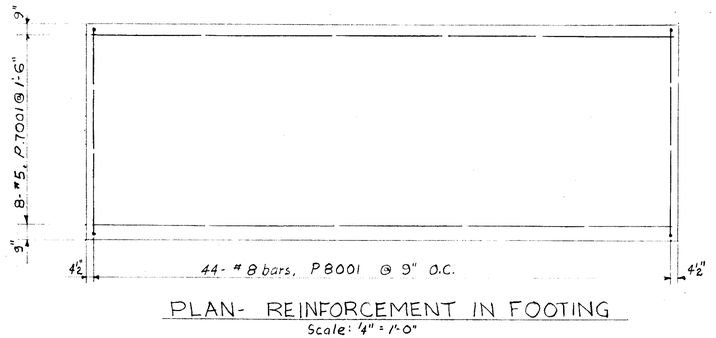
Note:
For Rustication detail, see Sh. 6 of 12



SECTION A-A
Scale: ¼"=1'-0"



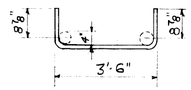
REINFORCING BAR DIAGRAM
Scale: ¼"=1'-0"



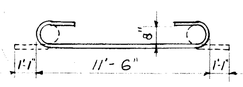
PLAN- REINFORCEMENT IN FOOTING
Scale: ¼"=1'-0"

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 P8001

GENERAL NOTES - SUBSTRUCTURE

SPECIFICATIONS

STATE OF OHIO, DEPARTMENT OF HIGHWAYS, "CONSTRUCTION AND MATERIAL SPECIFICATIONS," JANUARY 1, 1963, AND REVISIONS THEREOF.

CONCRETE

ALL CONCRETE TO BE CLASS "E" 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, PILONS, 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.

HWY. BR. Nº TRU. 80-1034

NEW YORK CENTRAL SYSTEM

BRIDGE #19½., SHARON BRANCH
1.3 MILES EAST OF
HUBBARD OHIO

OVER TRU-I-80 (8.90)
MASONRY PLAN
PIER

ENGINEERING DEPT. NEW YORK, N.Y.

John L. Bredtschneider
ENGINEER OF STRUCTURES

APPROVED C E Schroeder
CHIEF ENGINEER

DATE	7/12/62
SCALE	As Noted
DRAWN BY	SRG
CHECKED BY	R.C.
DRAWING NO.	93546
SHEET NO.	5 of 12.

RECEIVED
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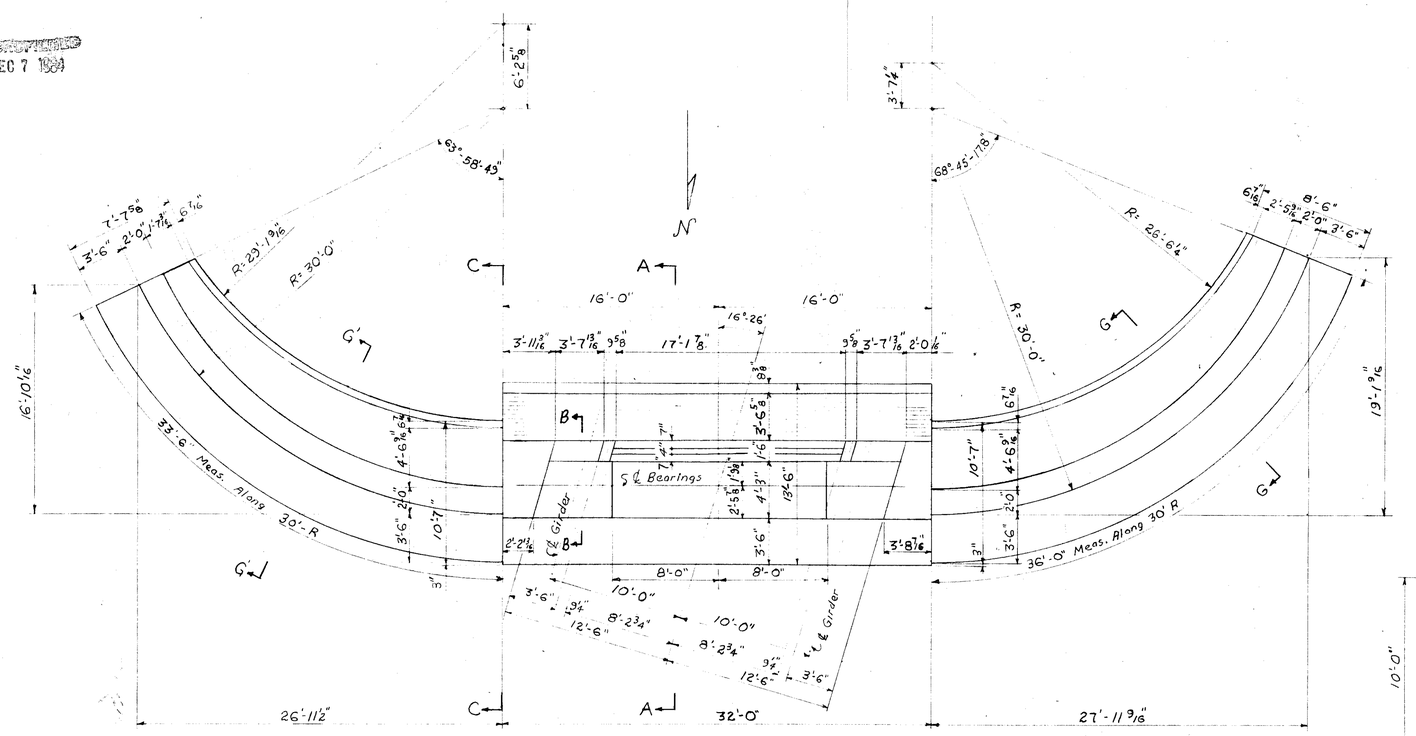
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TRU-I-80-8.90

349/401

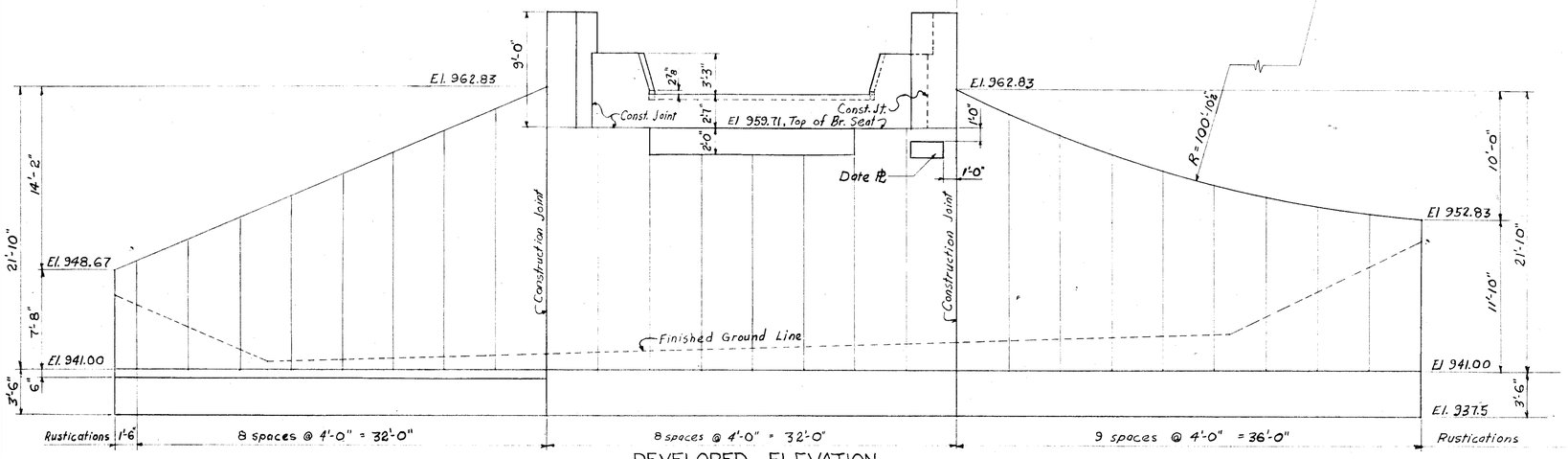


PLAN
Scale: 3/16" = 1'-0"

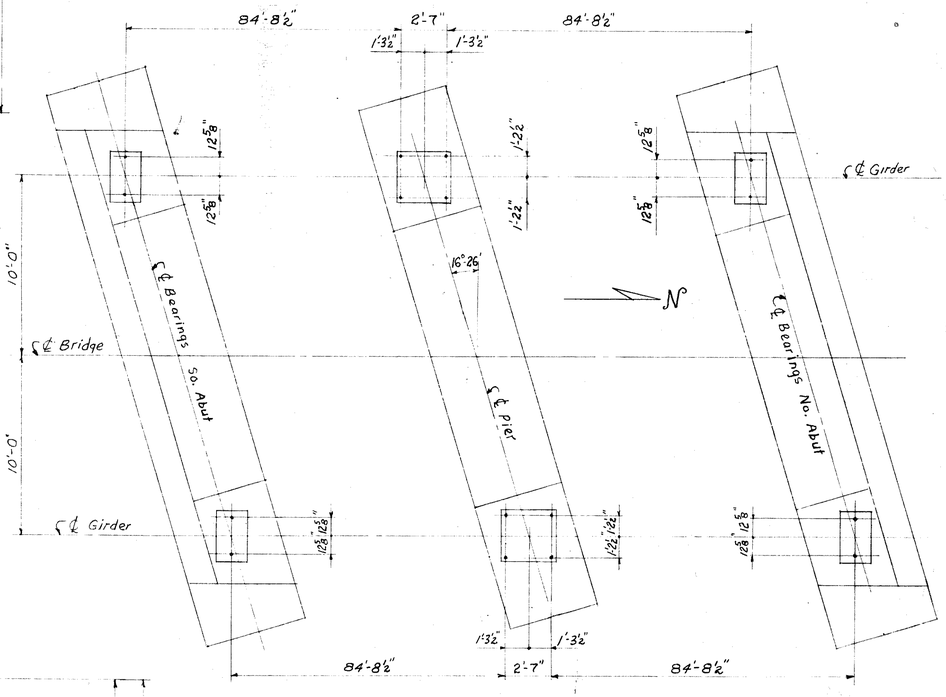
Notes

Area of bridge seat to be poured 2" high and bush hammered to El. 959.71

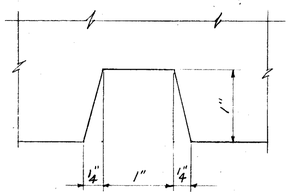
For sections, A-A, B-B, & C-C, see Sh. 9 of 12
For section G-G, see sh. 10 of 12



DEVELOPED ELEVATION
Scale: 3/16" = 1'-0"



ANCHOR BOLT PLAN
Scale: 1/4" = 1'-0"



RUSTICATION DETAIL
Scale: Full Size

HWY. BR. Nº TRU-IR-80-1034

NEW YORK CENTRAL SYSTEM

BRIDGE #19½, SHARON BRANCH
1.3 MILES EAST OF
HUBBARD OHIO
OVER TRU-I-80 (8.90)
MASONRY PLAN
SOUTH ABUTMENT

ENGINEERING DEPT. NEW YORK, N.Y.

John L. Beckel
ENGINEER OF STRUCTURES

APPROVED C. E. Sperry
CHIEF ENGINEER

DATE	7/12/62
SCALE	As Shown
DRAWN BY	SRG
CHECKED BY	R.C
DRAWING NO.	93546
SHEET NO.	6 of 12

FED.RD. DIVISION	STATE	PROJECT	
2	OHIO		

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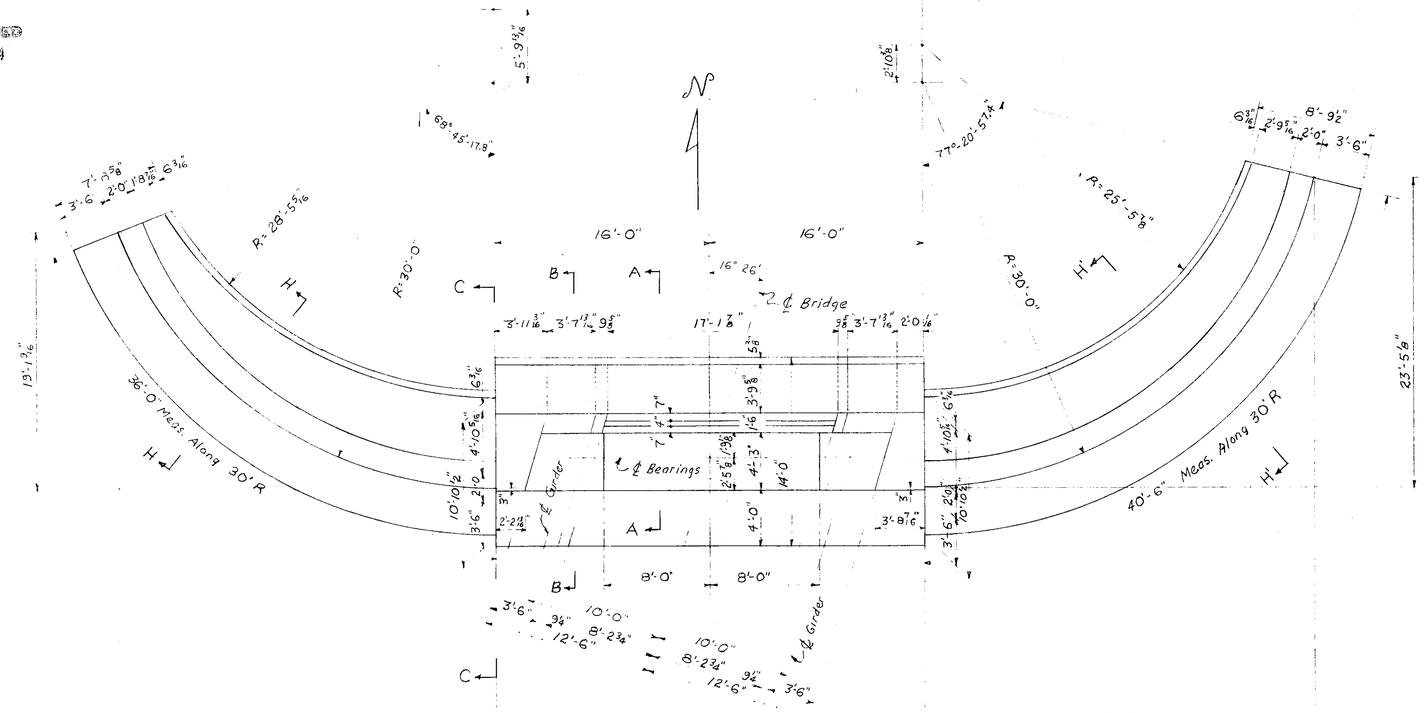
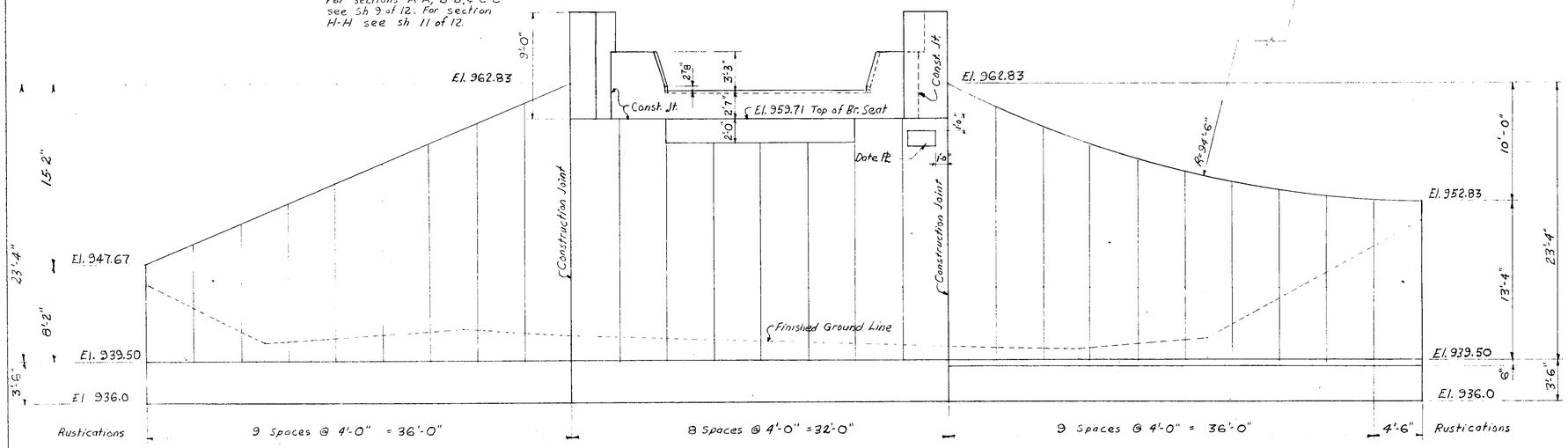
TRU-I-80-8.90



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 # 19 1/2, SHARON BRANCH 1.3 MILES EAST OF HUBBARD, OHIO	7/12/62
OVER TRU-I-80 (8.90) MASONRY PLAN NORTH ABUTMENT	SCALE: As Noted
ENGINEERING DEPT. NEW YORK, N.Y.	DRAWN BY: SRG
John L. Bristol ENGINEER OF STRUCTURES	CHECKED BY: R.C.
APPROVED C. E. Gyulay CHIEF ENGINEER	DRAWING NO.: 93546
	SHEET NO.: 7 of 12

FED. RD DIVISION	STATE	PROJECT	
2	OHIO		

TRU-I-80-8.90

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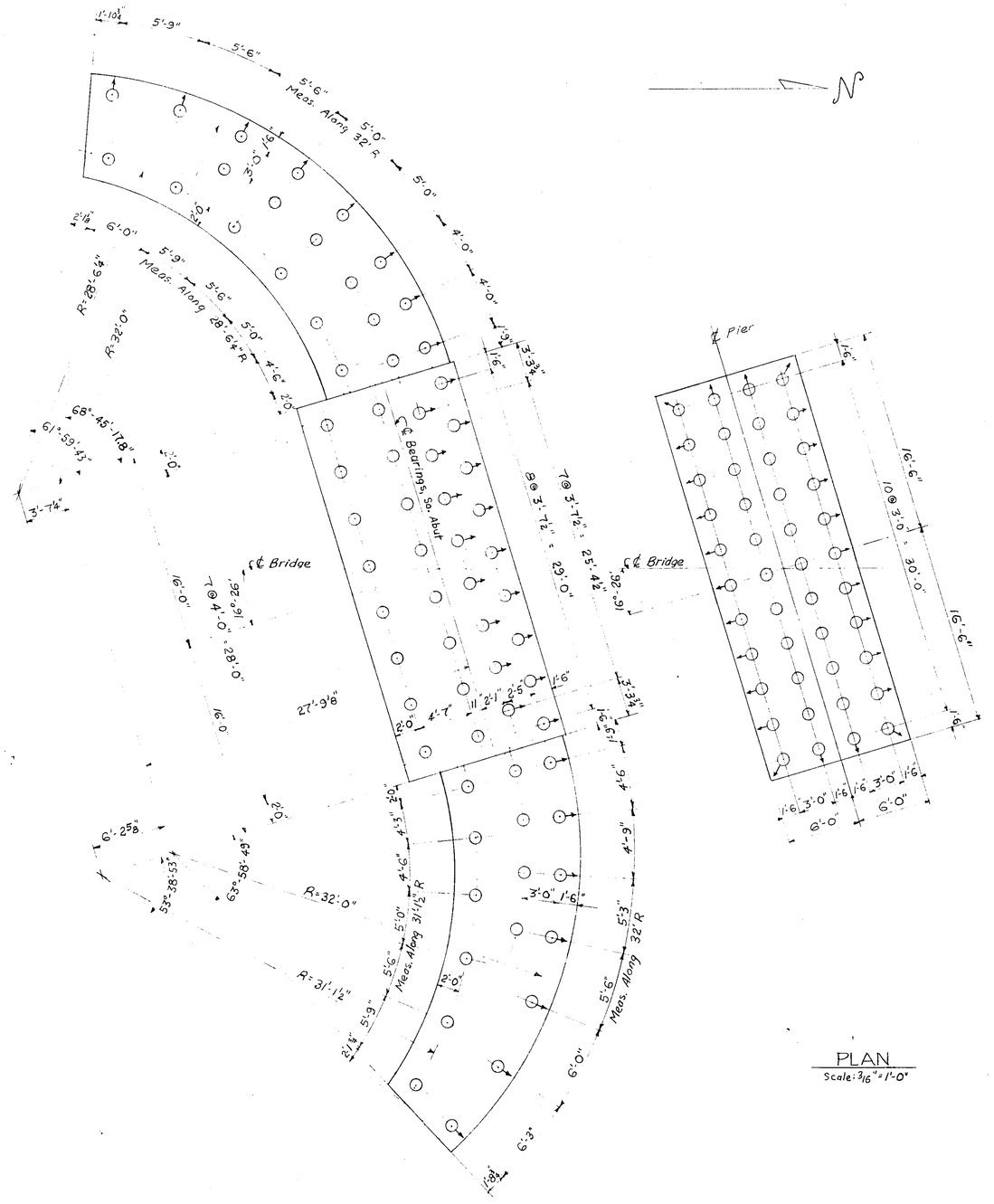
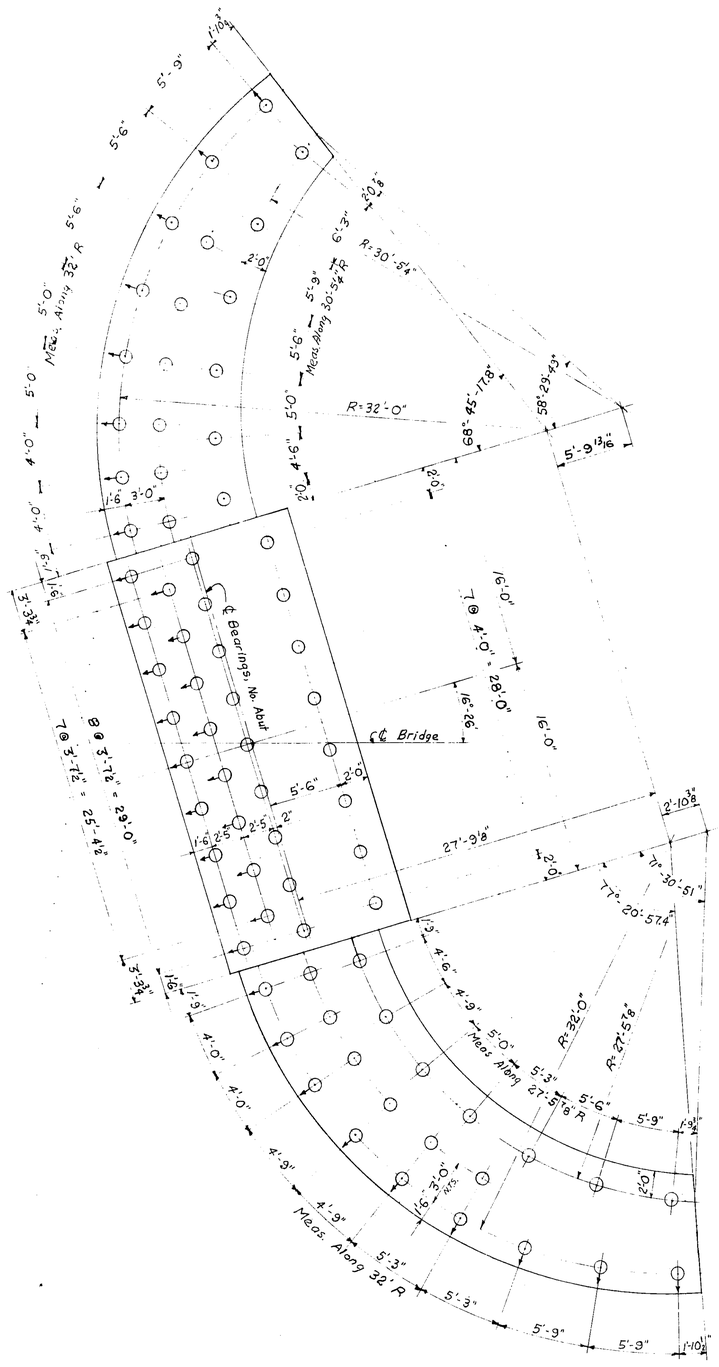


PLAN
Scale: 3/16" = 1'-0"



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 #19 ½, 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. Beckett ENGINEER OF STRUCTURES	DRAWING NO. 93546
APPROVED E. Erlendson CHIEF ENGINEER	SHEET NO. 8 of 12

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	TRU-I-80-8.90

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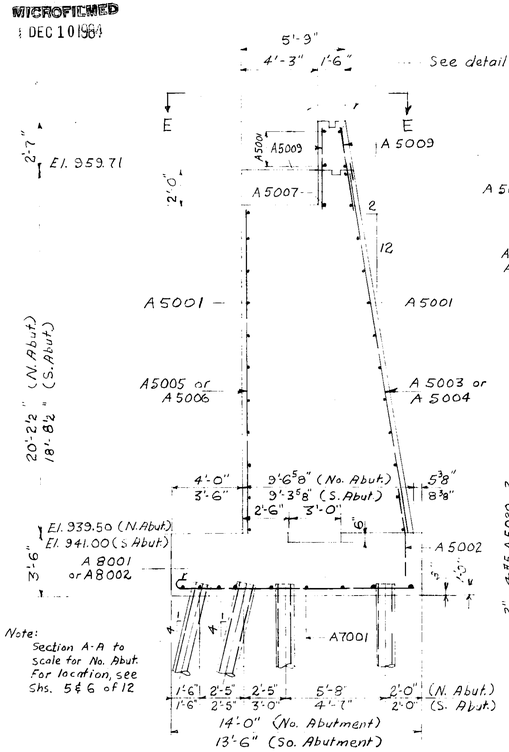
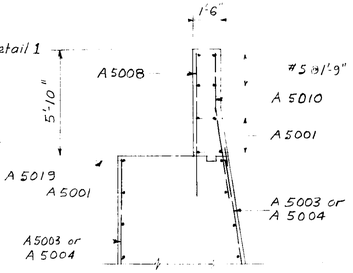
BAR SCHEDULE - ABUTMENTS

QUANTITY N. ABUT	QUANTITY S. ABUT	QUANTITY TOTAL	MK	SIZE	LENGTH	DESCRIPTION
55		55	A 8001	# 8	14-7	bent, Footing Transv.
	35	35	A 8002	# 8	14-1	do do do
10	10	20	A 7001	# 7	31-6	Straight. Footing, Long.
27	25	52	A 5001	# 5	31-6	do Stem, backwall, horiz.
17	17	34	A 5002		5'6"	bent Stem dowels
27		27	A 5003		20-0	Straight Stem Vert
	27	27	A 5004		18-6	do do do
8		8	A 5005		18-0	do do do
	8	8	A 5006		16-6	do do do
1	1	2	A 5007		16-0	do do horiz.
4	4	8	A 5008		7-9	do backwall Vert.
16	16	32	A 5009		4-6	do do do
4	4	8	A 5010		8-0	bent do do
1	1	2	A 5011		7-0	Straight do horiz
1	1	2	A 5012		5-9	do do do
1	1	2	A 5013		14-6	bent do do
1	1	2	A 5014		13-3	do do do
1	1	2	A 5015		5-6	straight do do
1	1	2	A 5016		7-6	do do do
1	1	2	A 5017		12-11	bent do do
1	1	2	A 5018		14-10	do do do
2	2	4	A 5019		7-6	Straight Stem horiz.
16	16	32	A 5020		10-9	do Pylon Vert.
6	6	12	A 5021		12-10	bent do horiz
6	6	12	A 5022	# 5	14-4	do do do



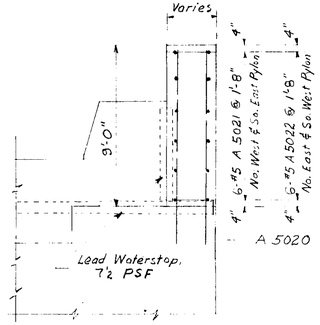
Note:
Section A-A to scale for No. Abut. For location, see Shs. 5 & 6 of 12.

SECTION A-A
Scale: ¼" = 1'-0"

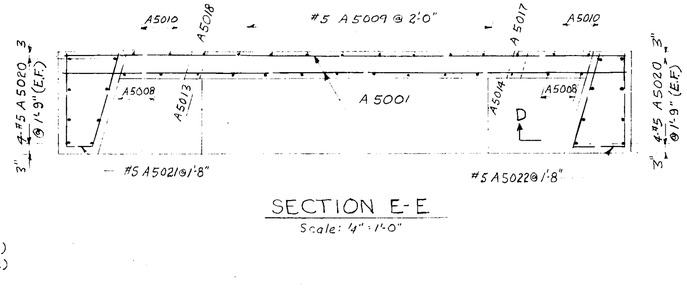


SECTION B-B
Scale: ¼" = 1'-0"

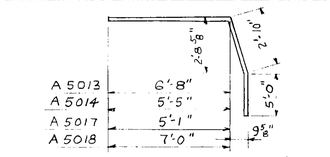
Note:
For location of section B-B see Shs. 5 & 6 of 12.



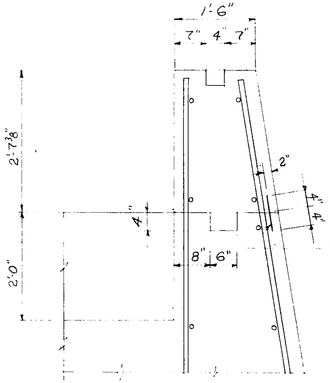
SECTION D-D
Scale: ¼" = 1'-0"



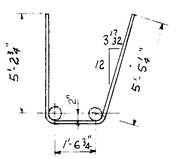
SECTION E-E
Scale: 4" = 1'-0"



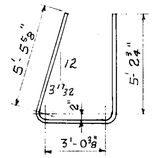
BARS- A5013, A5014, A5017, & A5018



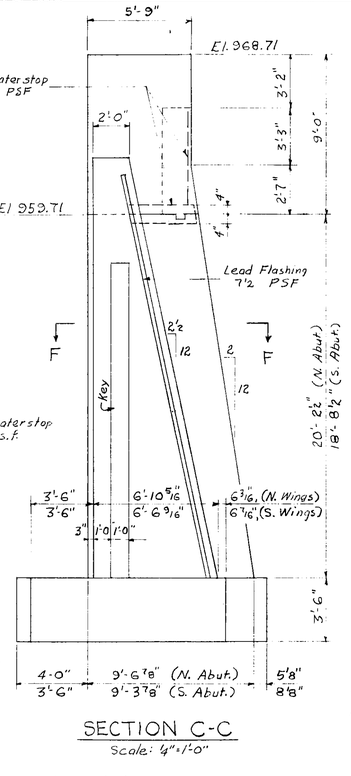
DETAIL 1
Scale: ¾" = 1'-0"



BAR- A5021

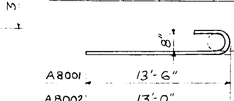


BAR- A5022

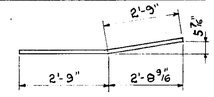


SECTION C-C
Scale: ¼" = 1'-0"

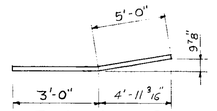
Note
For location of Section C-C, see Shs 5 & 6 of 12.



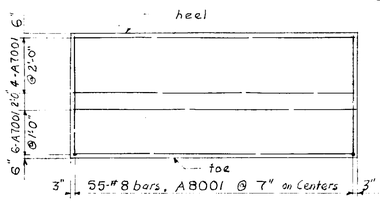
BARS- A 8001 & A 8002



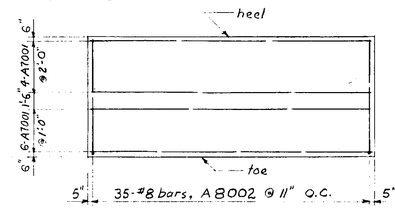
BAR- A5002



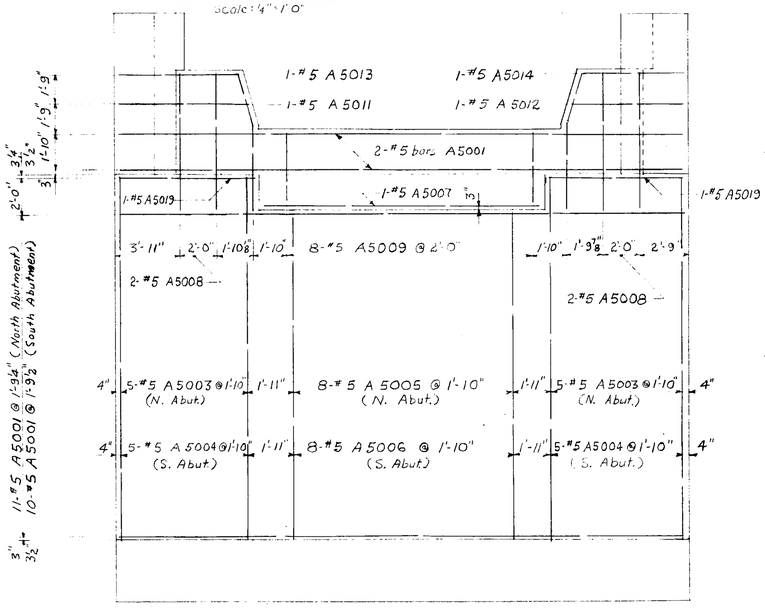
BAR- A5010



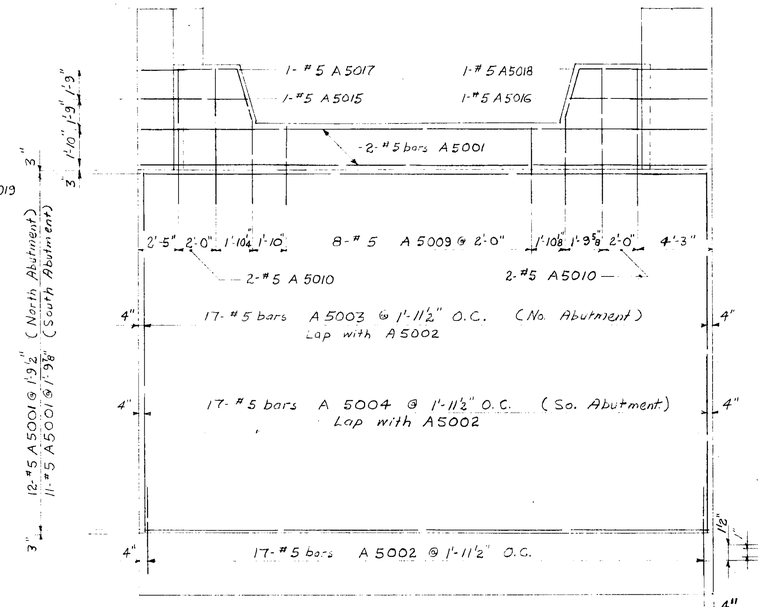
PLAN- NO. ABUTMENT FTG.
Scale: ⅛" = 1'-0"



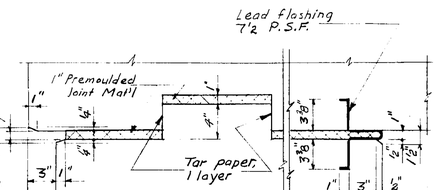
PLAN- SO. ABUTMENT FTG.
Scale: ⅛" = 1'-0"



FACE REINFORCEMENT
Scale: ¼" = 1'-0"



REAR REINFORCEMENT
Scale: ¼" = 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
John L. Beckel ENGINEER OF STRUCTURES	SHEET NO. 9 of 12
APPROVED C. E. Gyldenfeldt CHIEF ENGINEER	

Mugu-Blue Tracing

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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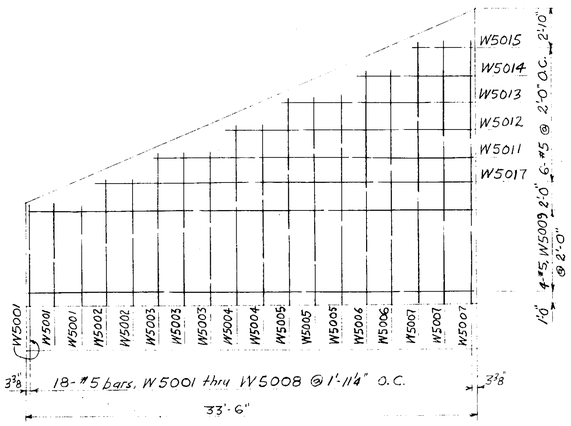
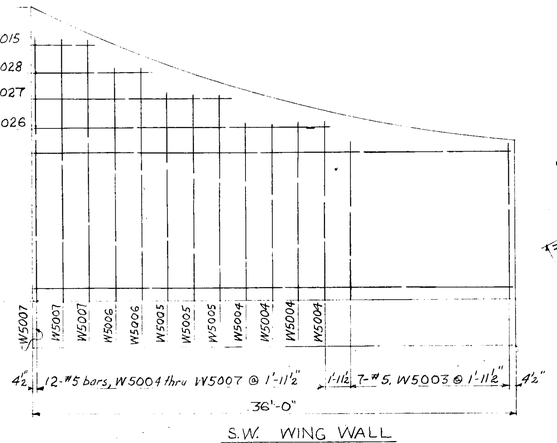
TRU-I-80-8.90



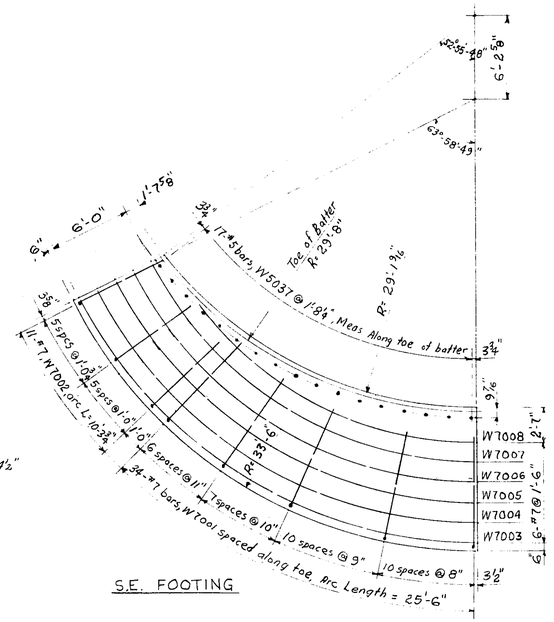
SE. WING WALL



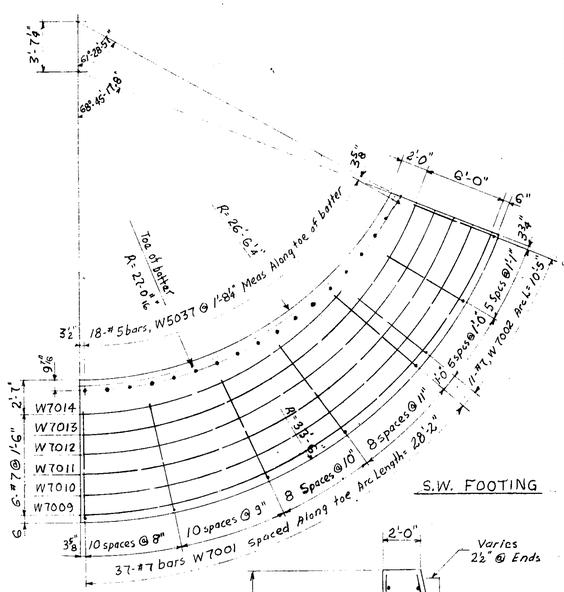
S.W. WING WALL

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



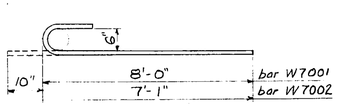
S.E. FOOTING



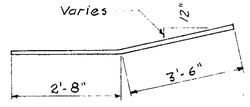
S.W. FOOTING

PLAN- FOOTING REINFORCING
Scale: 3/16" = 1'-0"

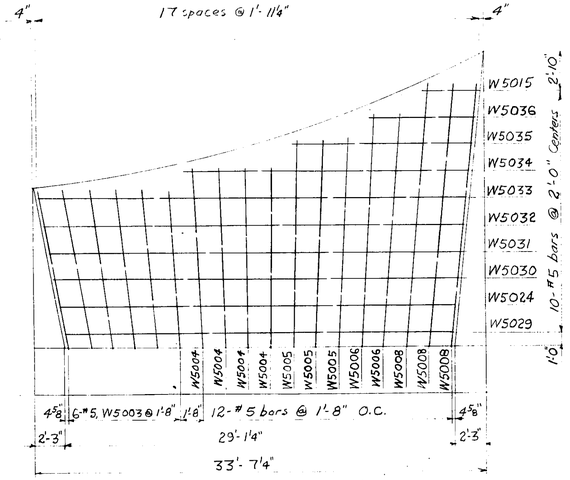
REINFORCING BAR SCHEDULE- SOUTH WING WALLS									
NO.	MK	SIZE	LENGTH	DESCRIPTION	NO.	MK	SIZE	LENGTH	DESCRIPTION
71	W7001	#7	8'-10	bent, 34 E Ftg 37 W Ftg, transv	1	W5013	#5	14-0	Curved, Stem, Horiz.
22	W7002	"	7-11	do 11 E Ftg 11 W Ftg, do	1	W5014	"	8-6	do do do
1	W7003		36-6	Curved E. Ftg. Long.	4	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	35	W5037	#5	6-2	bent, dowels, 17E Wall 18 W Wall
1	W5012	#5	19-0	do do do					



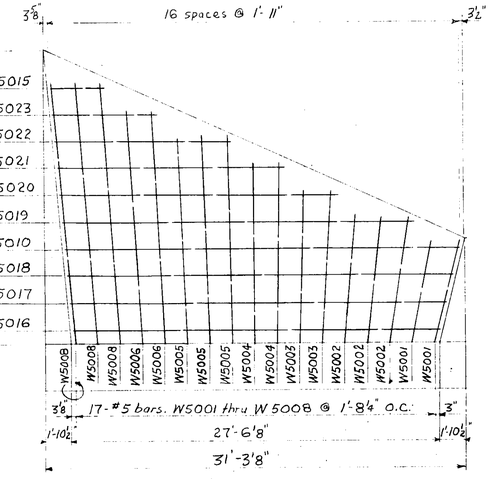
BARS W7001 & W7002



BAR 5037

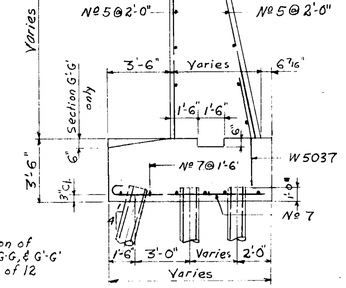


S.W. WING WALL



S.E. WING WALL

DEVELOPED ELEVATION
REAR REINFORCING
Scale: 3/16" = 1'-0"



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-80-7034

NEW YORK CENTRAL SYSTEM	DATE
BRIDGE *19¼, SHARON BRANCH 1.3 MILES EAST OF HUBBARD OHIO	7/12/62
OVER HWY. TRU-I-80 (8.90) REINFORCING BARS SOUTH WING WALLS	SCALE: As Noted
ENGINEERING DEPT. NEW YORK, N.Y.	DRAWN BY: SRG
John L. Beckel ENGINEER OF STRUCTURES	CHECKED BY: R.C.
APPROVED C.E. Lefendorf CHIEF ENGINEER	DRAWING NO. 93546
	SHEET NO. 10 of 12

Mead-Plan Tracing

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TRU-I-80-8.90

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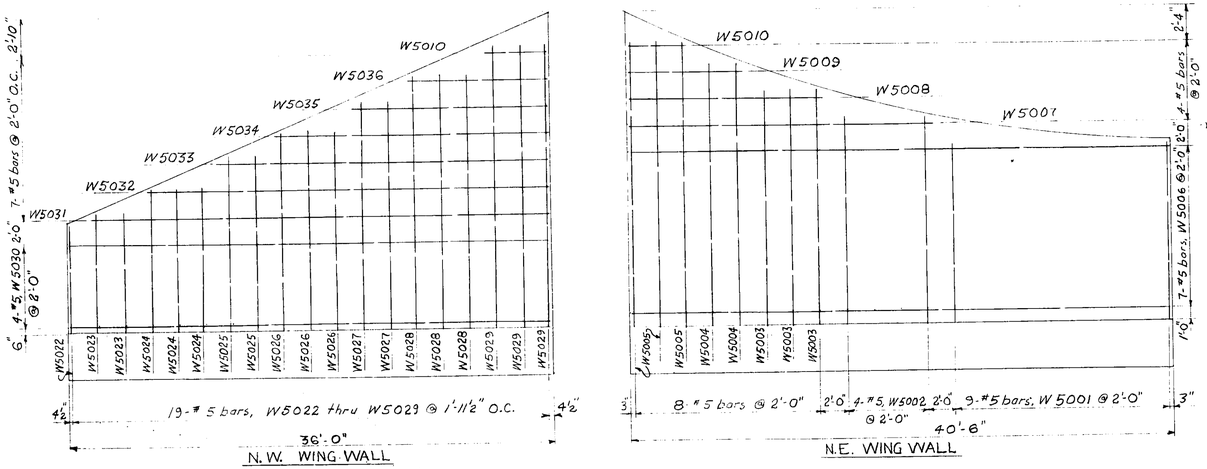
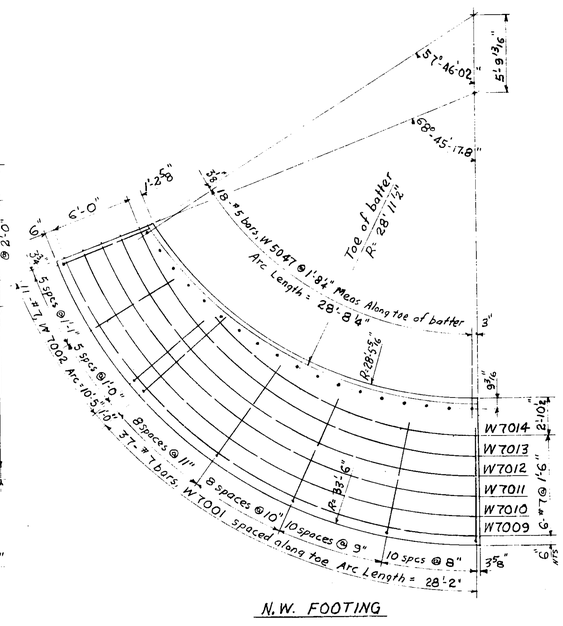
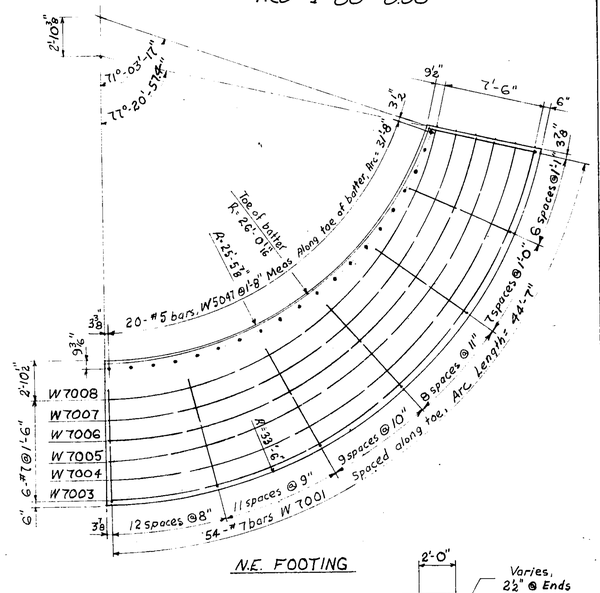


DEVELOPED ELEVATION
FACE REINFORCING
3/16" = 1'-0"

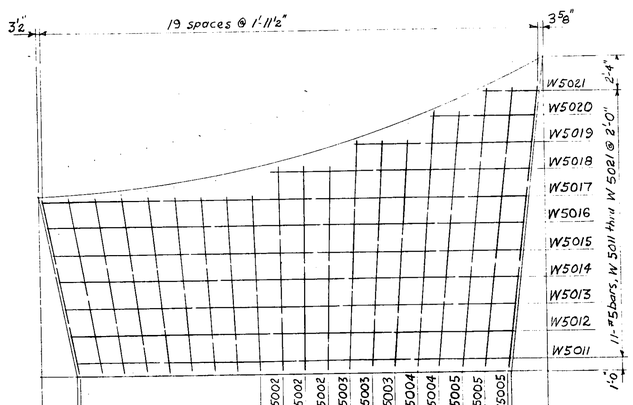


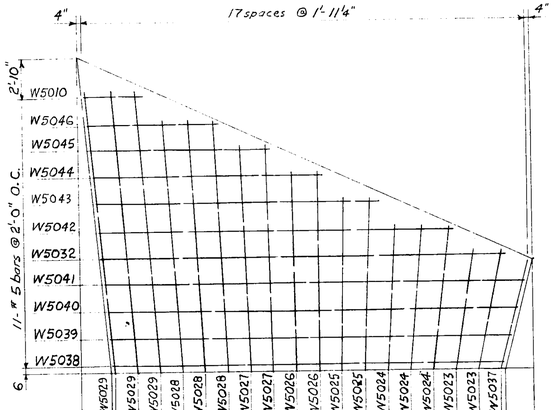


PLAN - FOOTING REINFORCING
3/16" = 1'-0"

REINFORCING BAR SCHEDULE - NORTH WING WALLS

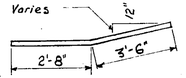
NO.	MK.	SIZE	LENGTH	DESCRCRIPTION	NO.	MK.	SIZE	LENGTH	DESCRIPTION
91	W7001	#7	9'-1"	Bent 54" E.Ftg. 31" W.Ftg. Transv	1	W5018	#5	19-6	Curved, Stem, Horiz
11	W7002		8'-0	do W. Ftg. do	1	W5019		13-6	do do do
1	W7003		44-0	Curved, E. Ftg. Long.	1	W5020		8-0	do do do
1	W7004		42-0	do do do	1	W5021		4-0	do 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, 2.0 E Wall 1.8 W Wall Vert
1	W5017	#5	36-7	do do do					



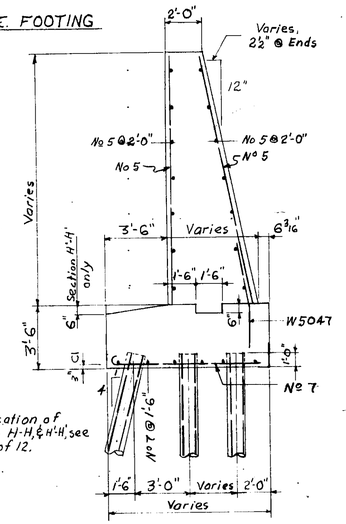


DEVELOPED ELEVATION
REAR REINFORCING
3/16" = 1'-0"

BARS W7001 & W7002



BAR-W5047



SECTION H-H

SECTION H'-H' SIMILAR
4" = 1'-0"

Note:
For location of section H-H, & H'-H', see Sh. 7 of 12.

HWY. BR Nº TRU-IR-80-1034

NEW YORK CENTRAL SYSTEM

BRIDGE # 19½, SHARON BRANCH
1.3 MILES EAST OF
HUBBARD OHIO

OVER HWY. TRU - I - 80 (8.90)
REINFORCING BARS
NORTH WING WALLS

ENGINEERING DEPT. NEW YORK, N.Y.

John L. Beckel
ENGINEER OF STRUCTURES

APPROVED
CHIEF ENGINEER

DATE	7/12/62
SCALE	As Noted
DRAWN BY	SRG
CHECKED BY	R.C.
DRAWING NO.	93546
SHEET NO.	11 of 12

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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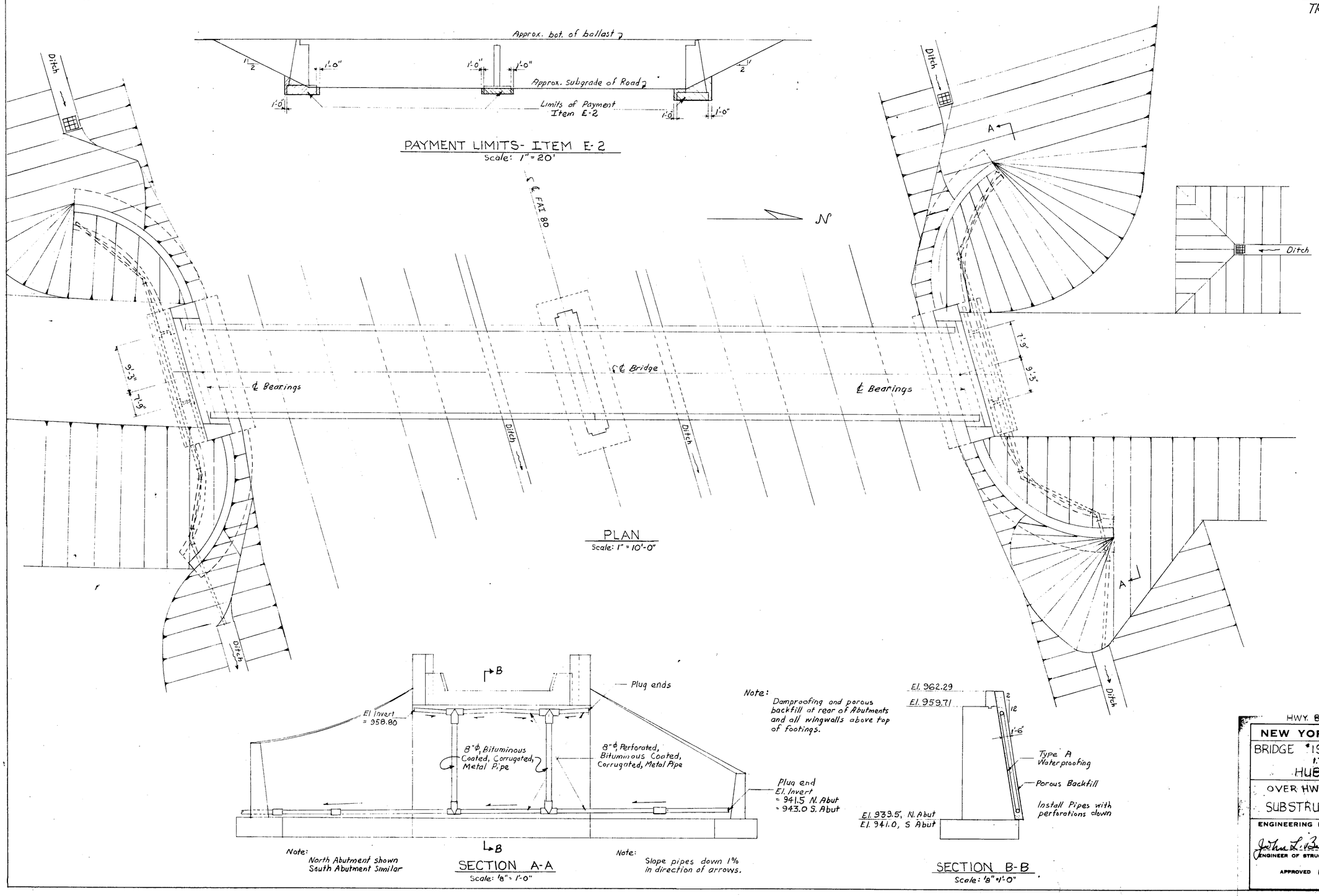
TRU-I-80-8.90

PAYMENT LIMITS- ITEM E-2
Scale: 1" = 20'



PLAN
Scale: 1" = 10'-0"

Note:
North Abutment shown
South Abutment Similar

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

Note:
Slope pipes down 1% in direction of arrows.

Note:
Dampproofing and porous backfill at rear of Abutments and all wingwalls above top of footings.

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

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 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
John L. Beckel 13 ENGINEER OF STRUCTURES	SHEET NO. 12 of 12
APPROVED C. E. Lindau CHIEF ENGINEER	

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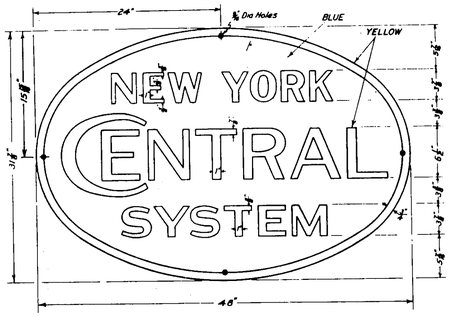
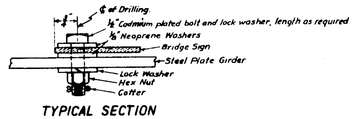
TRU-I-80-8.90



RAILROAD BRIDGE OVAL SIGN
(Drill 4 - ⅝" holes from face side of sign as shown)



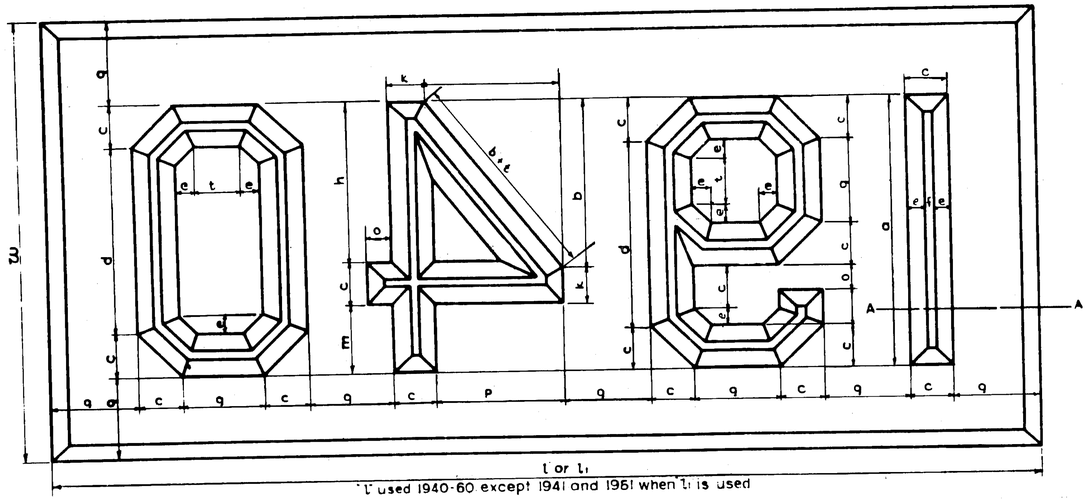
TYPICAL SECTION

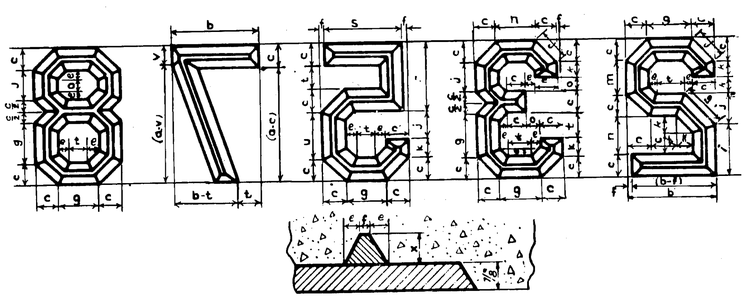
General Notes:

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 N°2275 wide angle flat-top, Blue Scotchlite. The letters and border shall be N°2271 wide angle flat-top, Yellow Scotchlite. Additional details of the oval and letters are shown on Engineer M. of W System plan N° 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.





SECTION A-A

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	l_1	w
8"	5"	1/16	5/32	1/2	1/4	2 1/2	4 3/4	3"	1 5/8	1"	2"	2 1/4	3/4	3 1/2	4"	6 1/8	1 1/8	2 3/8	1/16	1/8	20 3/4	25"	13"

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 N° 7430
SCALE: As shown		VAL. SEC.	FILE N° 121-264

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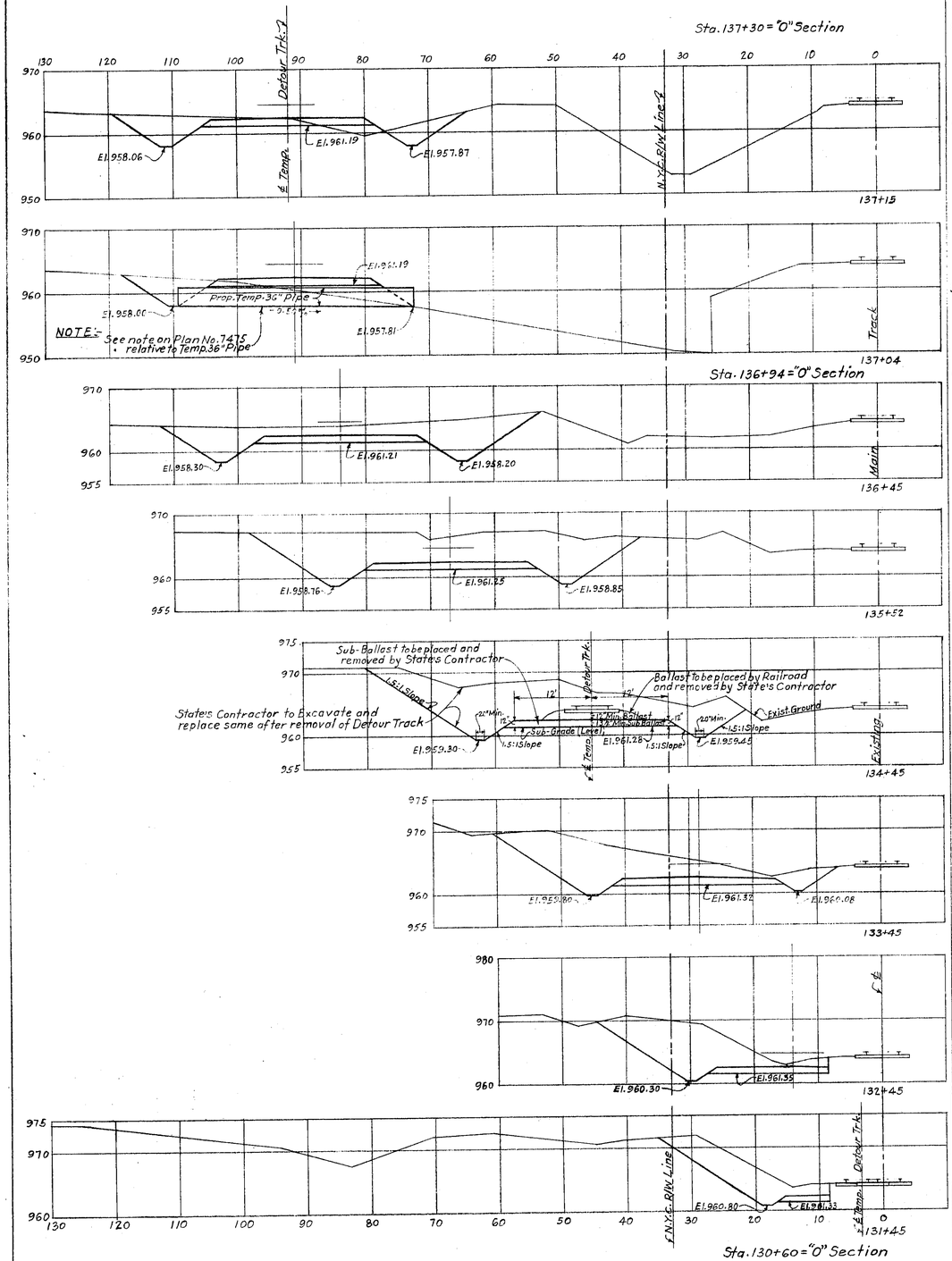
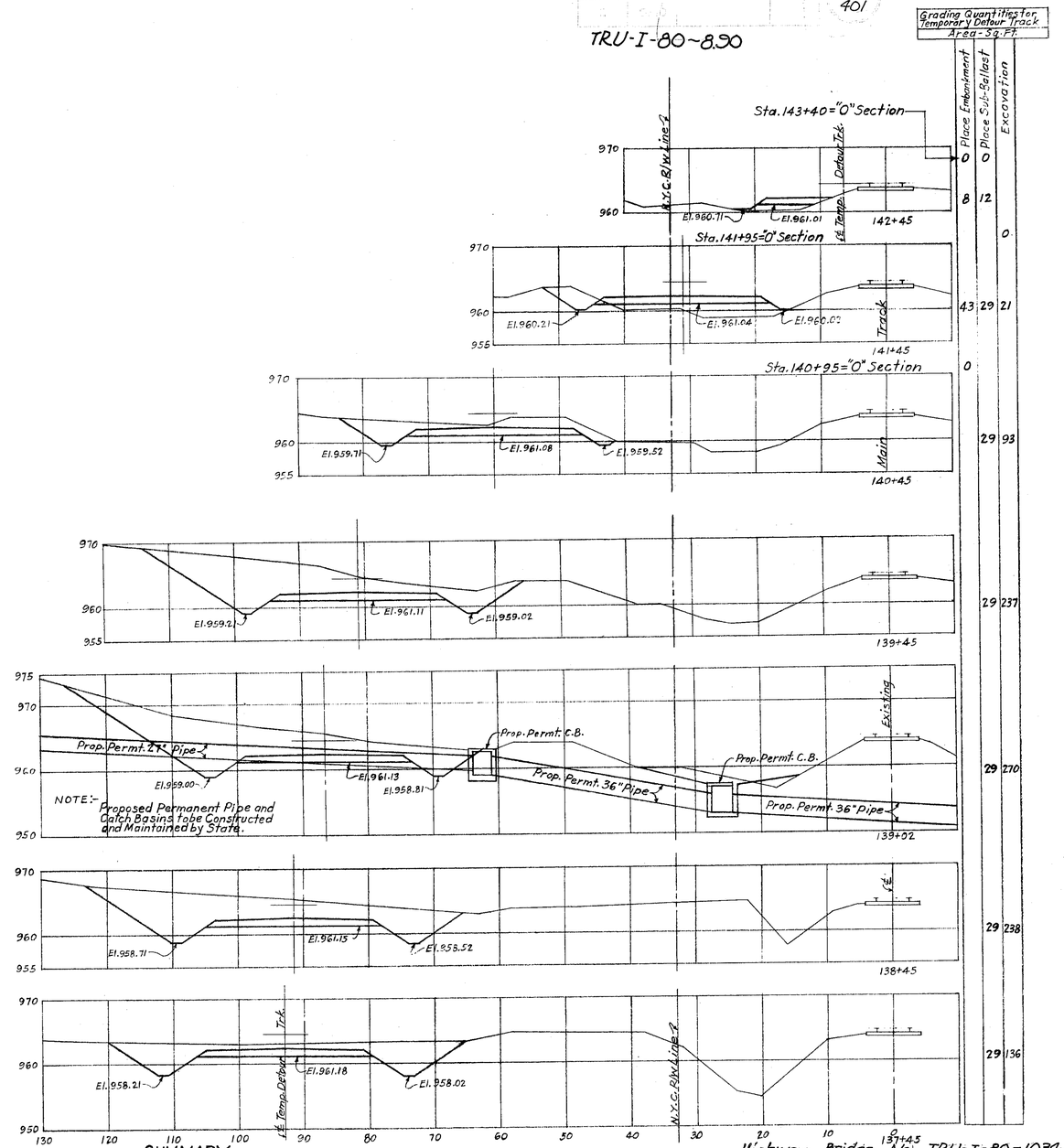
TRU-I-80-8.90

Grading Quantities for Temporary Detour Track
Area - Sq. Ft.

	Place Embankment	Place Sub-Ballast	Excavation
Sta. 143+40 = "0" Section	0	0	
	8	12	
142+45			0
Sta. 141+95 = "0" Section	43	29	21
141+45			
Sta. 140+95 = "0" Section	0		
140+45		29	93
139+45		29	237
139+02		29	270
138+45		29	238
137+45		29	136
Sta. 137+30 = "0" Section	0		
137+15	9	29	94
137+04	34	29	47
136+45	0		
		29	197
135+52		29	325
134+45		29	316
133+45		29	223
132+45		19	165
131+45		8	96
Sta. 130+60 = "0" Section	0	0	





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.

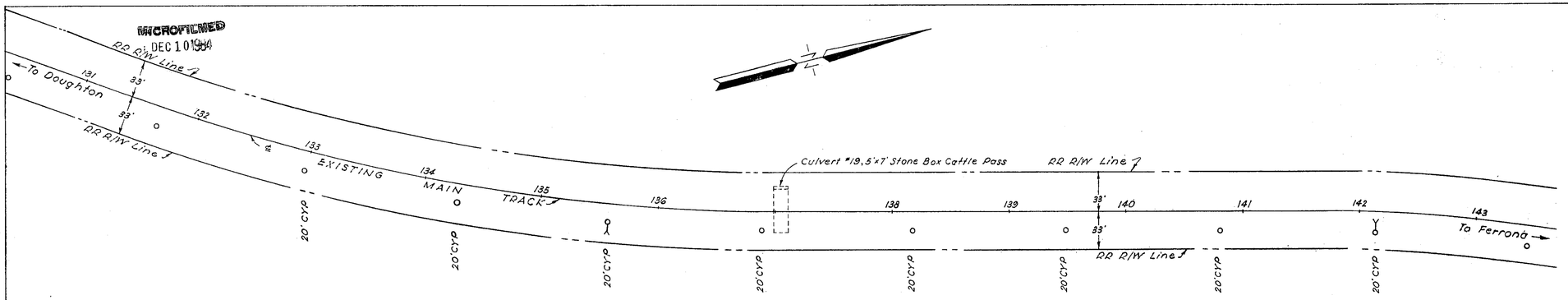
Bridge No. 1914 | Sta. 137+45.00

PROPOSED UNDERPASS GRADE SEPARATION
INTERSTATE ROUTE Nº 80
1.3 Miles East of
HUBBARD, OHIO

ROADBED SECTIONS FOR TEMPORARY DETOUR TRACK

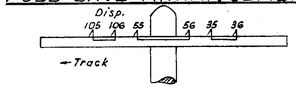
Western District	Lake Division / Erie Sub-Division		Plan Nº 7504
Scale:- 1" = 10'	April 4, 1963	Val. Sec. 224	File Nº 121-296

TRU-I-80-8.30

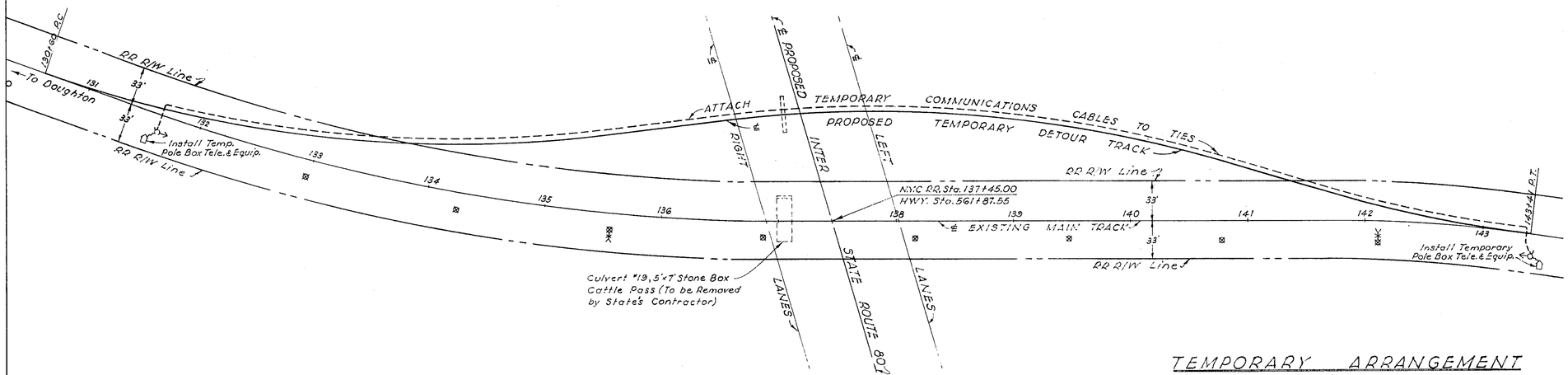


EXISTING ARRANGEMENT

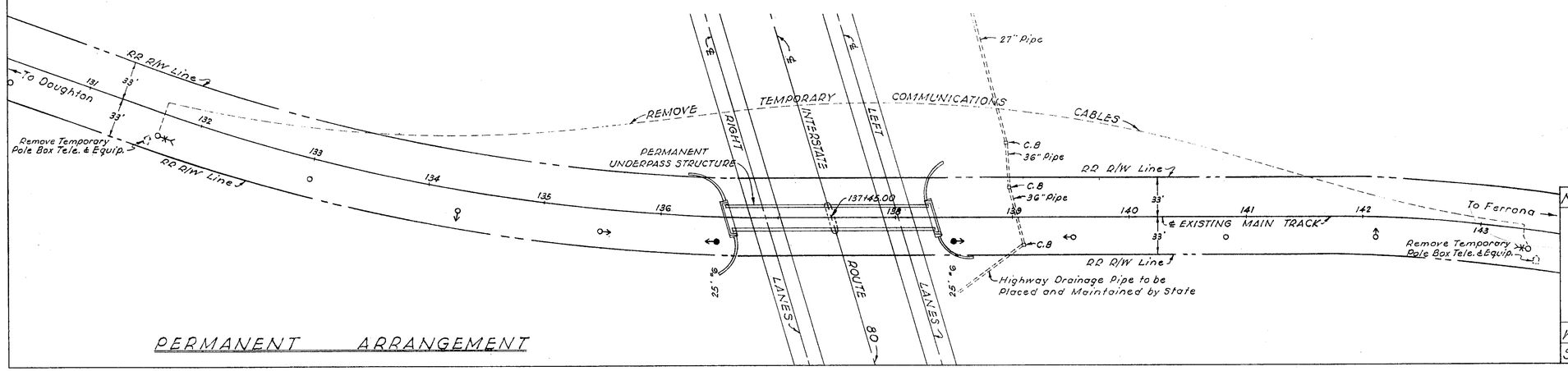
POLE LINE ARRANGEMENT



TEMPORARY AND PERMANENT
No Scale



TEMPORARY ARRANGEMENT



PERMANENT ARRANGEMENT

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

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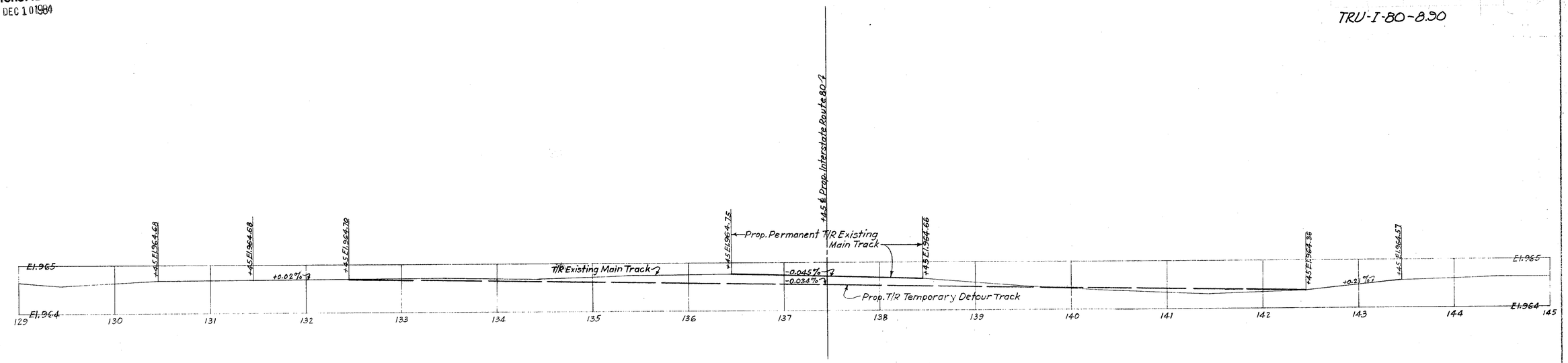
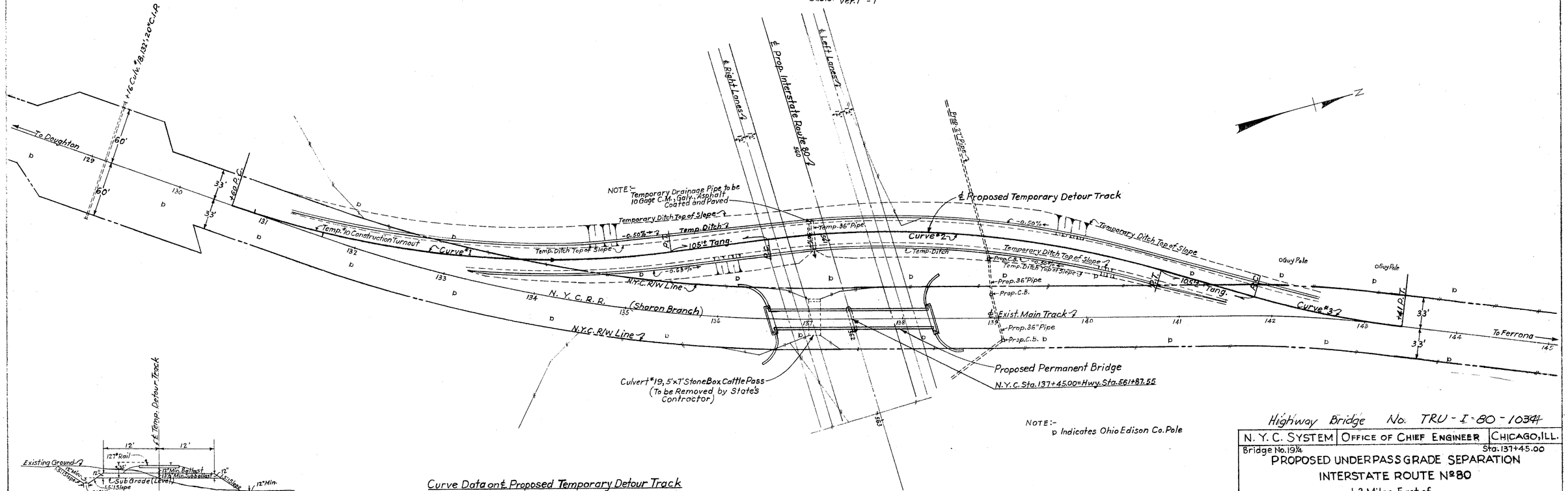
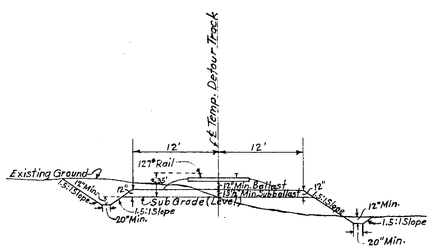
TRU-I-80-8.90



TRACK PROFILE

Scale: Hor. 1" = 50'
Ver. 1" = 1'





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'

NOTE:- p Indicates Ohio Edison Co. Pole

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. 897.28 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

-2.99 % +2.97 %
P.V.I. Sta. 572+25
El. 911.88
L.V.C. 1000'

GRADE DATA
I-80

PROFILE ON ℄ I-80

PROPOSED STRUCTURES

TYPE: 4 Span continuous steel rolled beam with concrete deck and substructure.
SPANS: 72'-0", 90'-0", 90'-0", 63'-0" ℄ Bearings
ROADWAY: 30'-0" ft curbs - 2'-3" Safety Curbs.
LOAD FREQUENCY: CF 2000 (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.

All Piles shall be 10 BP 42
Estimated Average pay Length
Abutment No. 1 30'
Abutment No. 2 50'
Pier No. 3 30'

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

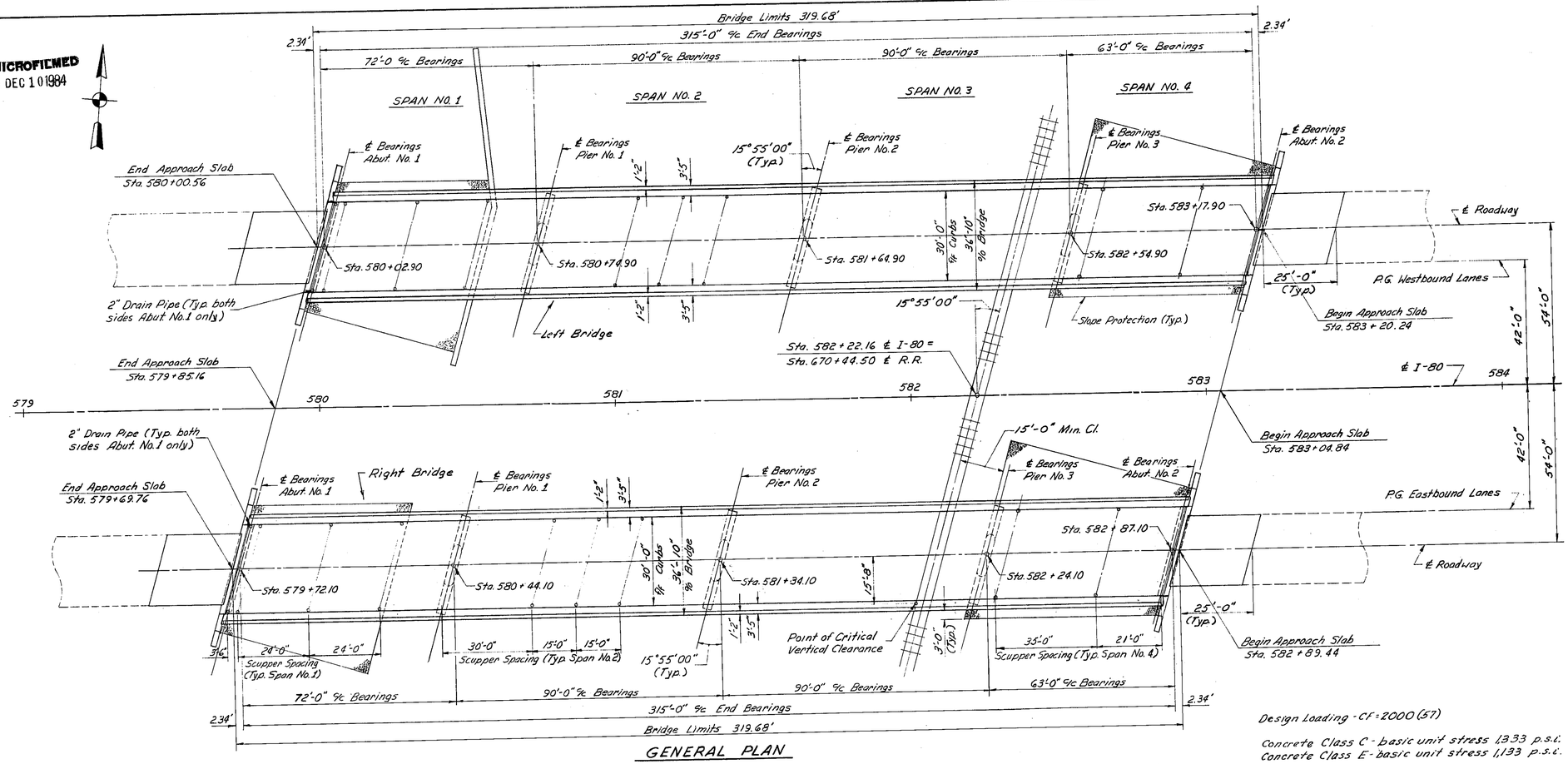
SITE PLAN
BRIDGE NO. TRU-I-80-1069 L/R
OVER ERIE-LACKAWANNA RAILROAD
& LITTLE YANKEE RUN
TRUMBULL COUNTY
SCALE: 1"=20'-0"
STA. 579+85.16 TO
STA. 583+04.84

PRESENT TOPOGRAPHY		PROPOSED WORK			
Surveyed	Drawn	Designed	Drawn	Checked	Reviewed
Buchart Eng.	R.L.K.	G.M.B.	D.R.T.	G.M.B.	3-15-82

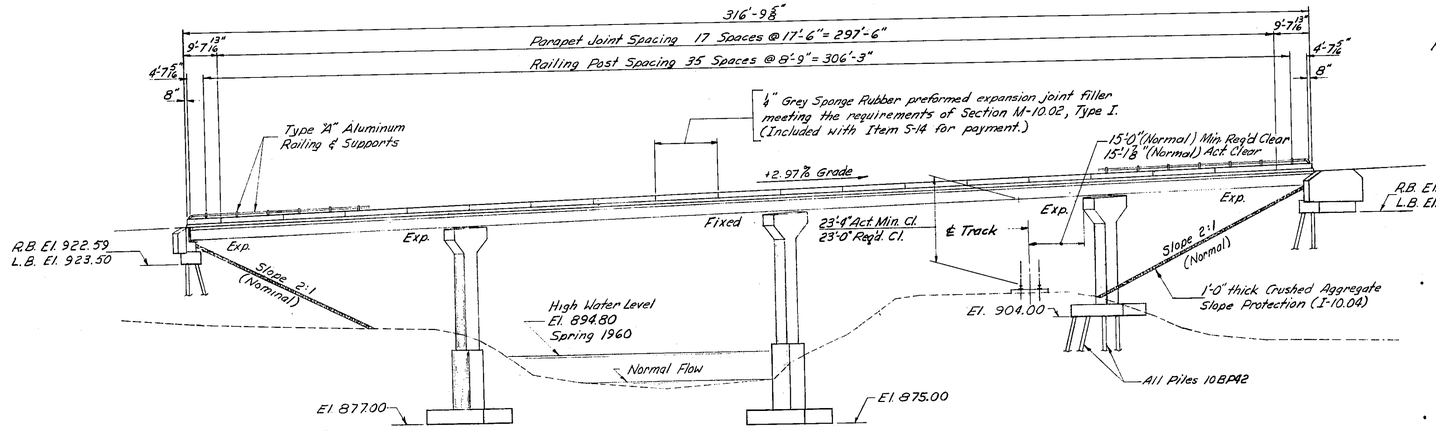
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

361
401

TRUMBULL COUNTY
TRU-I-80 (8.90)



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, Spec. 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 connect, 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-2.09 and E-2.08 of the Construction and Material Specifications, subject to the supervision of the Railroad Company, nothing in Sec. E-2.09, 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	

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

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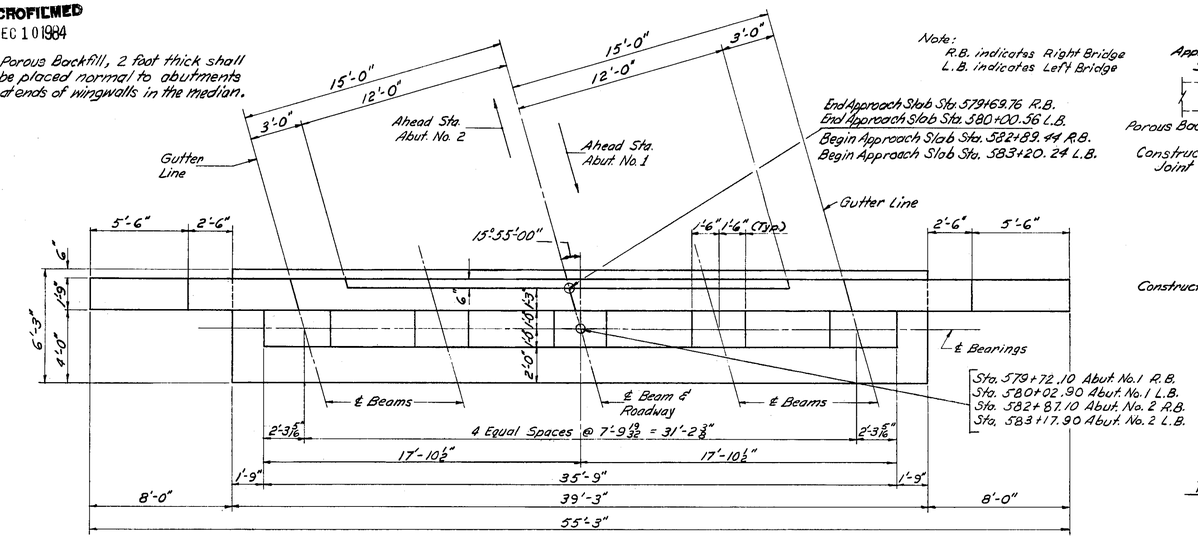
401

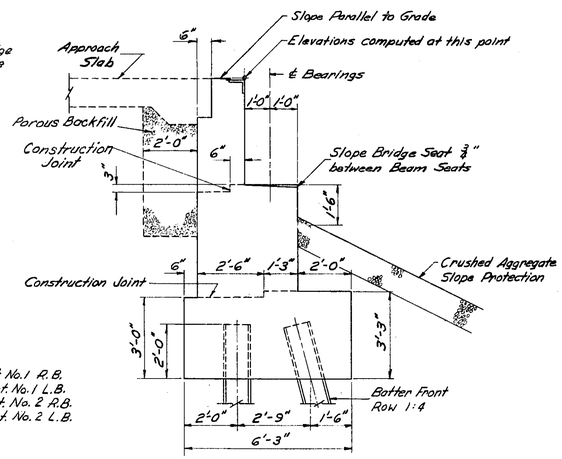
TRUMBULL COUNTY
TRU-I-80 (8.90)

Porous Backfill, 2 foot thick shall be placed normal to abutments at ends of wingwalls in the median.

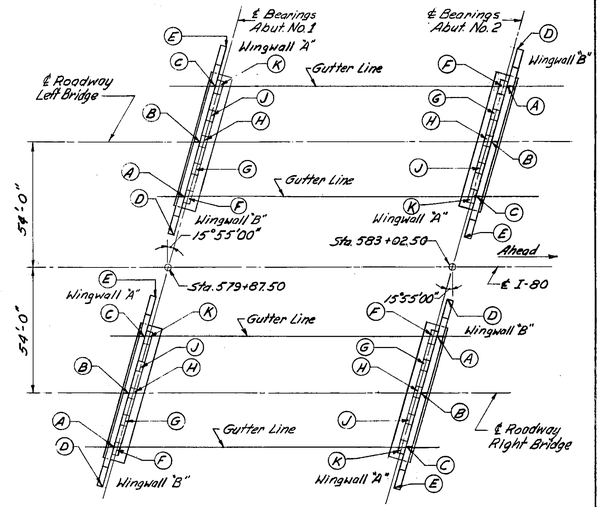
Note:
R.B. indicates Right Bridge
L.B. indicates Left Bridge



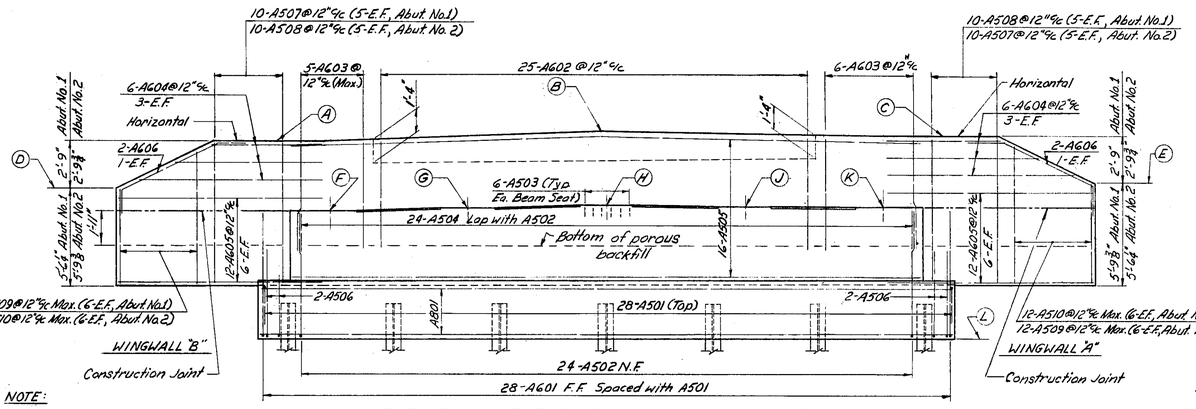
PLAN



TYPICAL SECTION THROUGH ABUTMENT

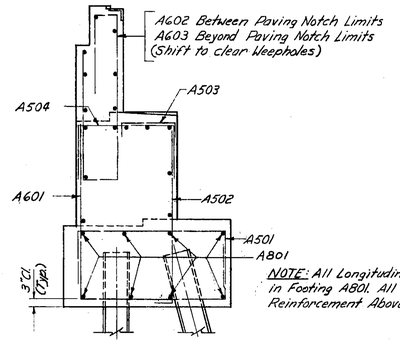


GEOMETRY LAYOUT



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.

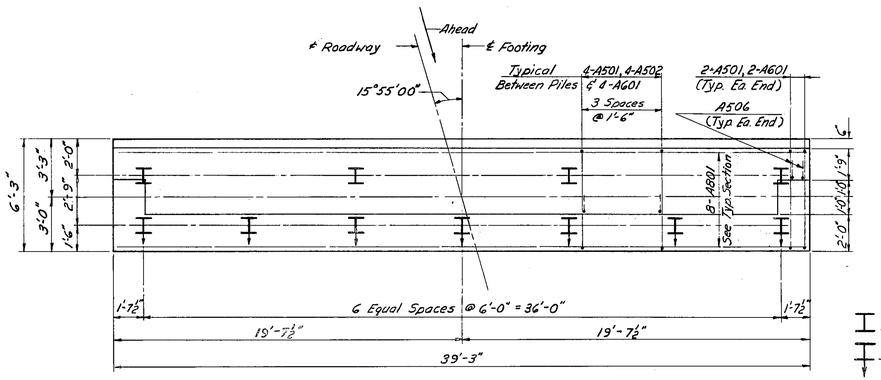
TYPICAL SECTION THROUGH ABUTMENT
(Showing Reinforcement)

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

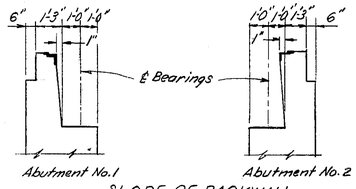
NOTES

- 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."

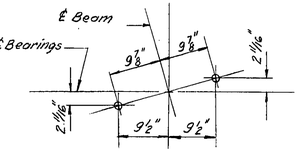


FOOTING PLAN

Indicates vertical pile
Indicates batterad pile

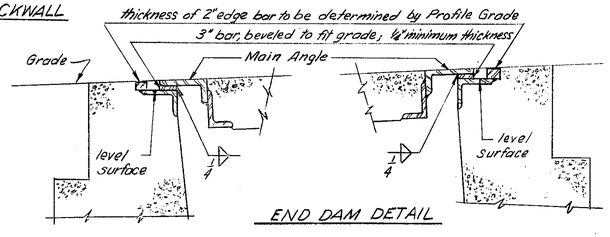


SLOPE OF BACKWALL



ANCHOR BOLT LAYOUT

- 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.



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	

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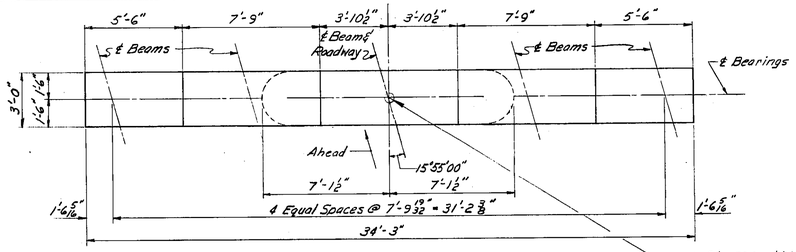
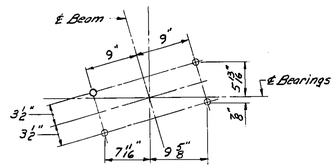
401

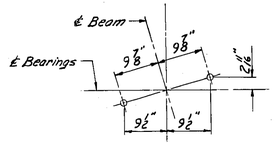
TRUMBULL COUNTY
TRU-I-80 (8.90)



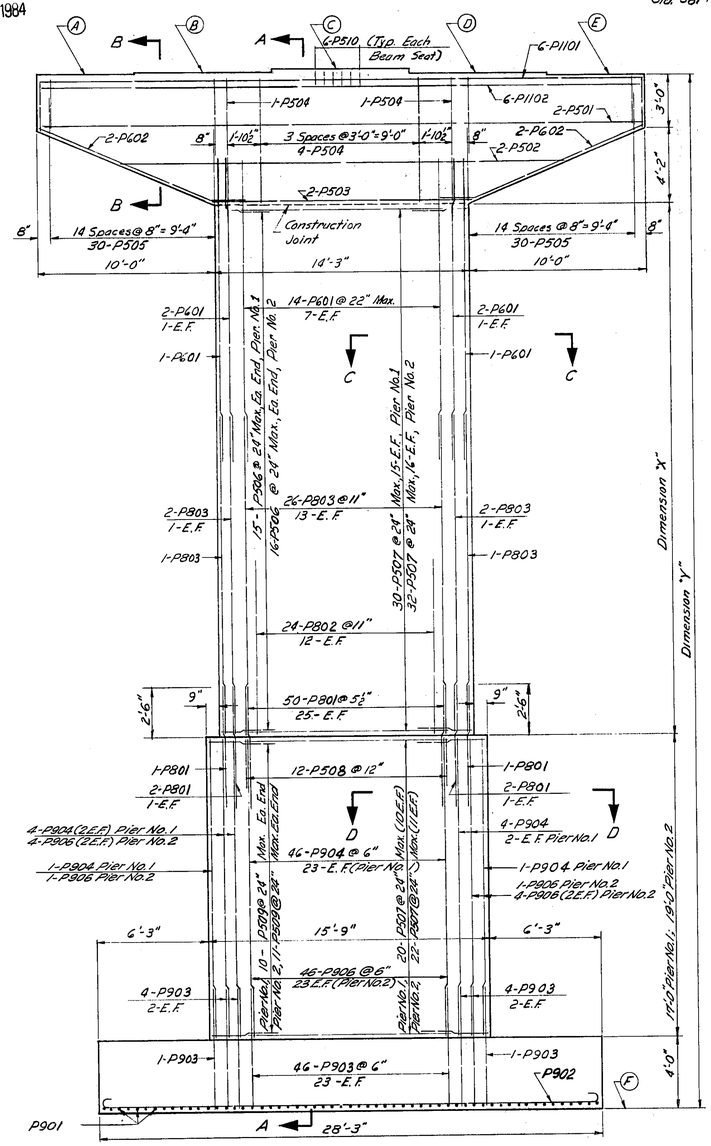
CAP PLAN



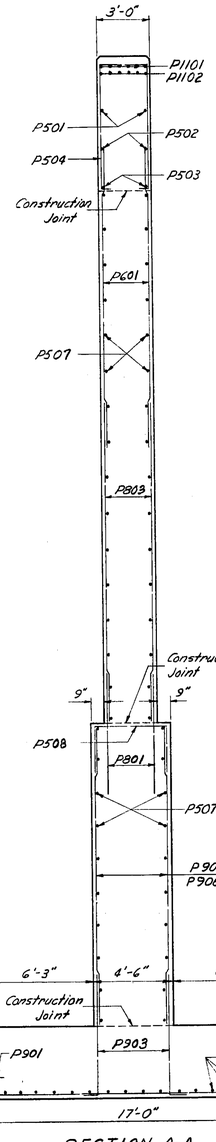
TYPICAL ANCHOR BOLT LAYOUT
(Pier No. 2)



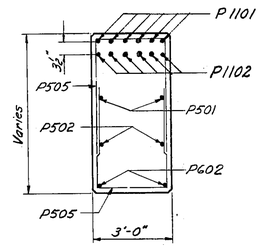
TYPICAL ANCHOR BOLT LAYOUT
(Pier No. 1 ℄ No. 3)



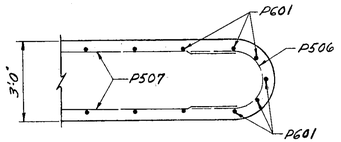
ELEVATION PIER NO.1 ℄ NO. 2



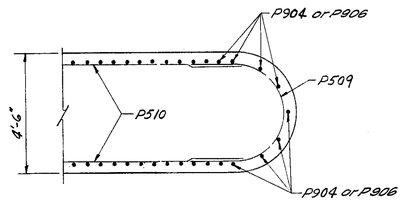
SECTION A-A



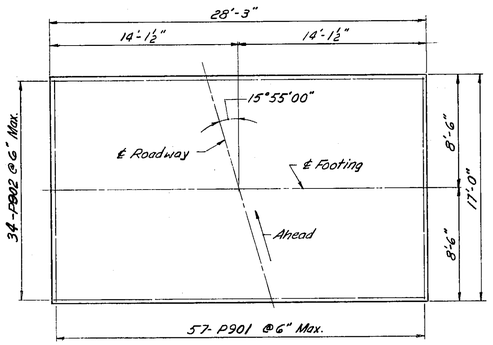
SECTION B-B



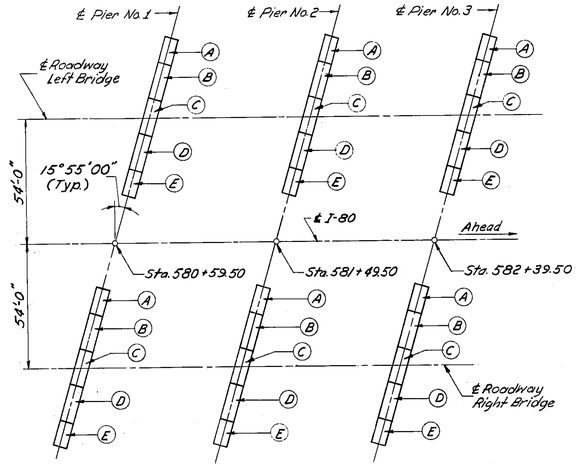
SECTION C-C



SECTION D-D



FOOTING PLAN PIER NO.1 ℄ NO. 2



GEOMETRY LAYOUT

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'-11⅜"	60'-1⅜"
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'-0⅜"	59'-2⅜"
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.

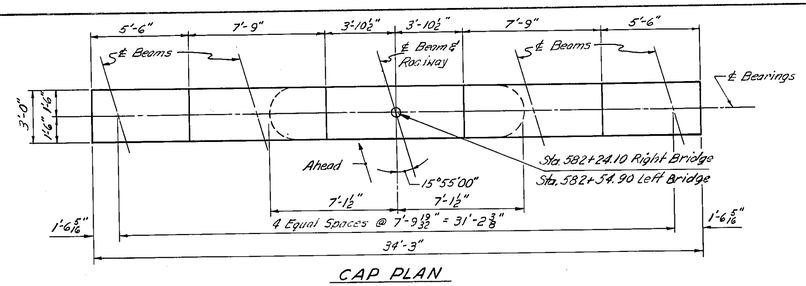
PIER NO.1 & NO. 2
BRIDGE NO. TRU-I-80-1069 L/R
OVER ERIE-LACKAWANNA RAILROAD
& LITTLE YANKEE RUN
TRUMBULL COUNTY STA 579+85.16 TO STA. 583+04.84

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
D.C.E.	F.J.M.		G.M.B.		10-25-62	

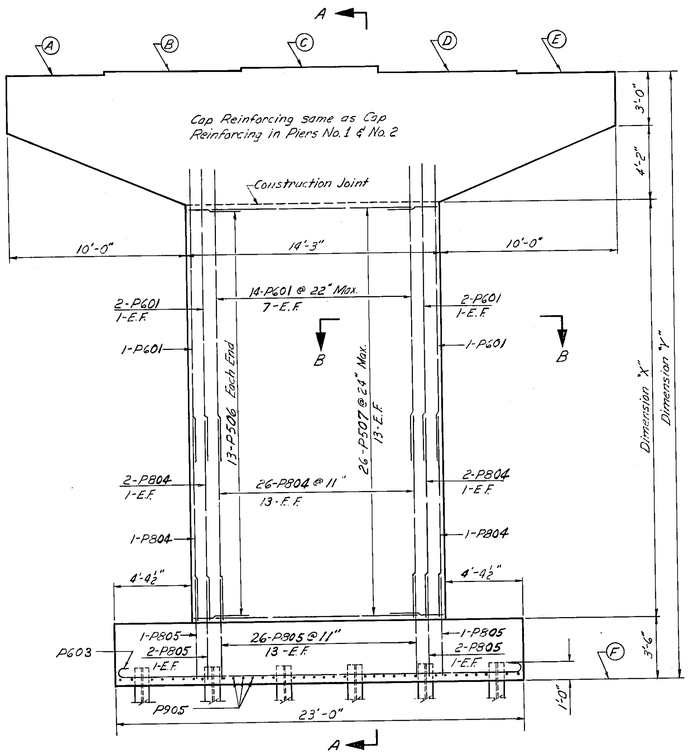
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

364
401

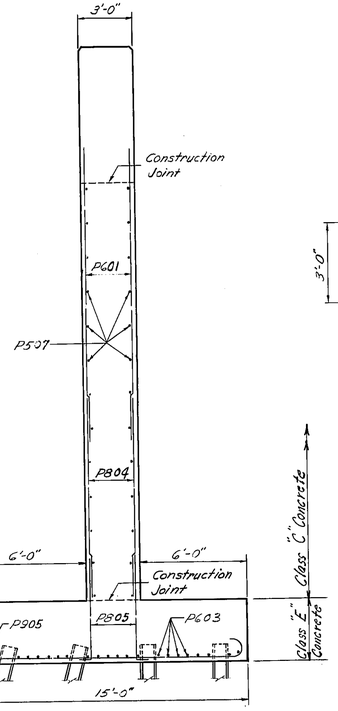
TRUMBULL COUNTY
TRU-I-80 (8.90)



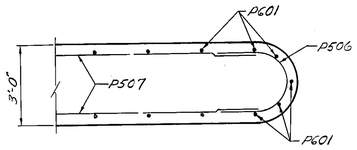
CAP PLAN



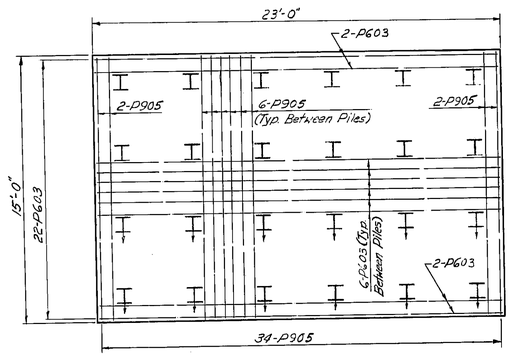
ELEVATION – PIER NO. 3



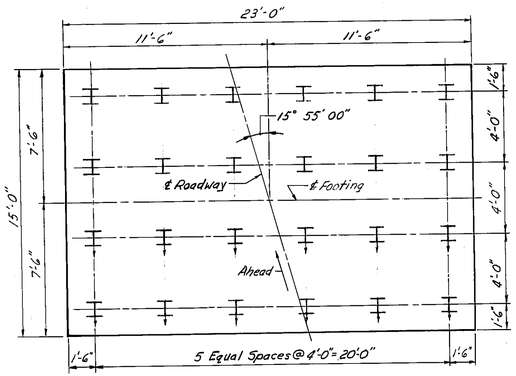
SECTION A-A



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.

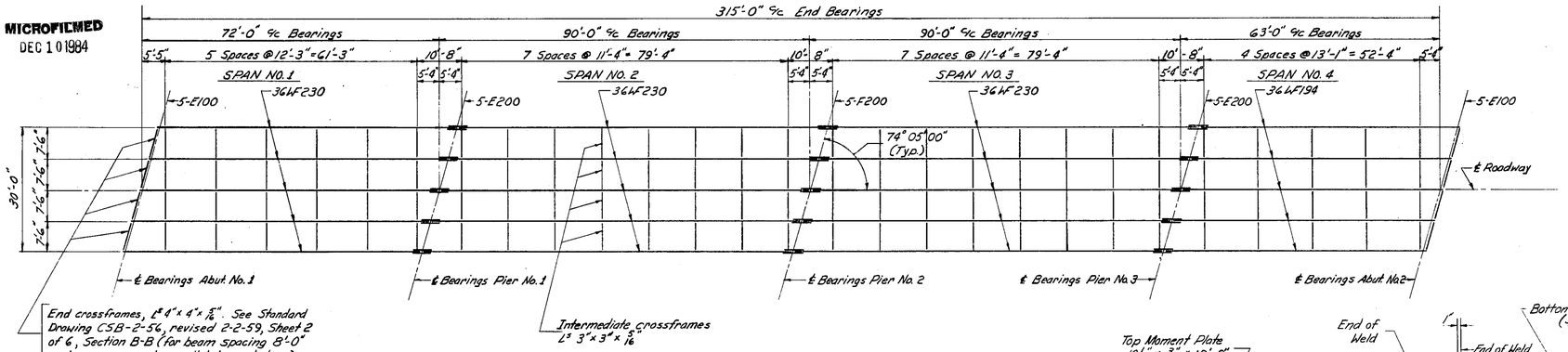
PIER NO 3
BRIDGE NO TRU-I-80-1069 L/R
OVER ERIE-LACKAWANNA RAILROAD
& LITTLE YANKEE RUN
TRUMBULL COUNTY STA. 579+85.16 TO STA 583+04.84

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
D.C.E.	F.J.M.		G.M.B.	5-25-62	

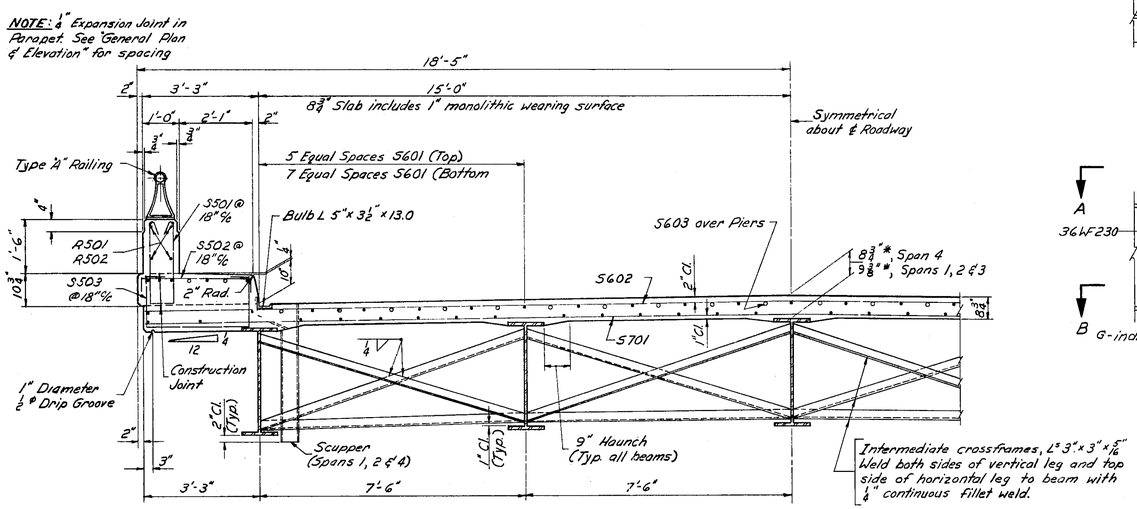
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

365
401

TRUMBULL COUNTY
TRU-I-80 (8.90)



STEEL FRAMING PLAN



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.

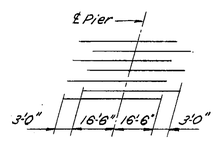
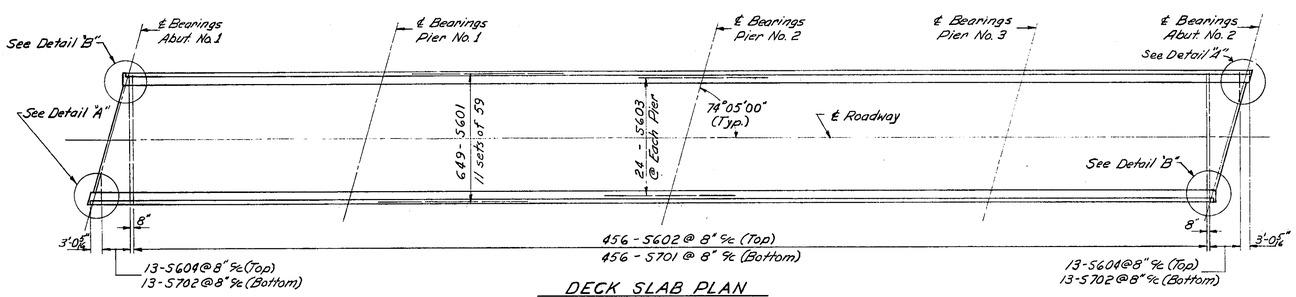


DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIERS

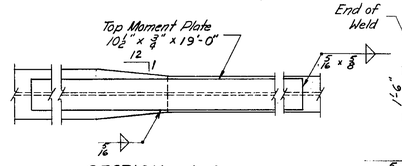
DECK SLAB HAUNCH: The haunch in the deck slab adjacent to the top of steel beams, which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12", except that the maximum slope shall not exceed 3 inches per foot. Payment for deck slab concrete shall be based on the 9" width.



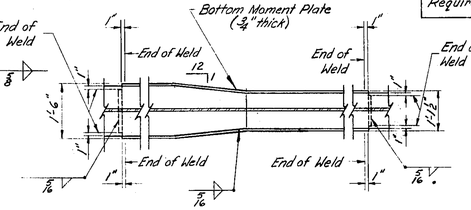
DECK SLAB PLAN

BEAM SPLICE WELDING PROCEDURE

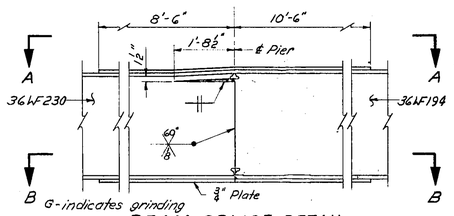
1. Raise end of beam at Pier No. 2 (3 1/8").
2. Butt-weld the beam flanges and web at Pier No. 1 using the following sequence: make one pass on each flange, then two on the web; repeat, using one pass at each location, until welds are completed.
3. Weld top and bottom flange mament plates at Pier No. 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.



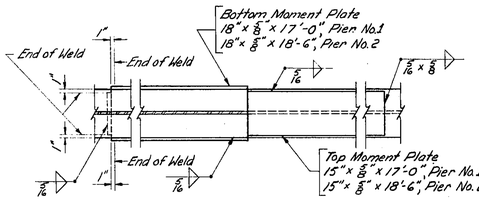
SECTION A-A



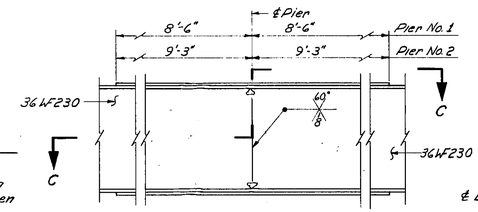
SECTION B-B



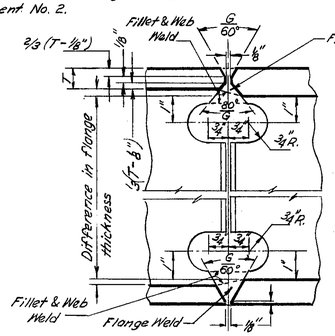
BEAM SPLICE DETAIL
(At Pier No. 3)



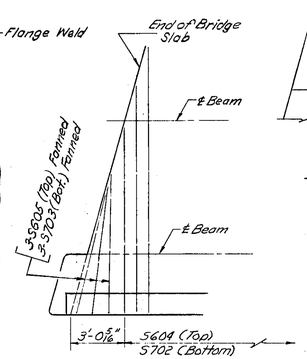
SECTION C-C



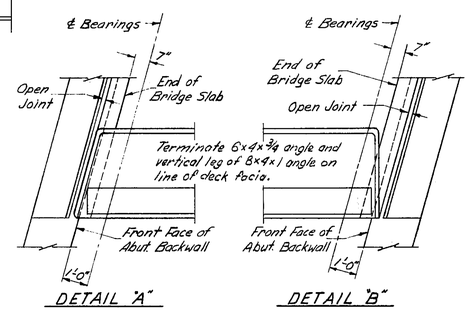
BEAM SPLICE DETAIL
(At Piers No. 1 & No. 2)



END PREPARATION OF ROLLED BEAMS FOR FIELD WELDING



DETAIL "A"
(Showing Reinforcement)



DETAIL "A"

DETAIL "B"

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	3/16"	3/8"	3/8"	5/16"	7/16"	9/16"	11/16"	1/4"
Sum of Deflections	11/16"	15/16"	1 1/16"	3/8"	9/16"	3/4"	7/8"	5/16"
Required Camber	11/16"	15/16"	1 1/16"	0	9/16"	3/4"	7/8"	0

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 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.

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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	

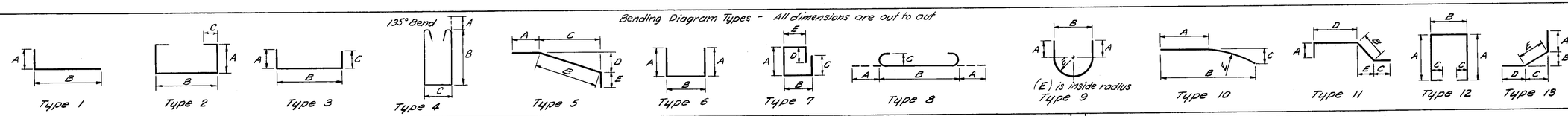
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

366
401

TRUMBULL COUNTY
TRU-I-80 (8.90)

REINFORCING STEEL BAR SCHEDULE

Bending Diagram Types - All dimensions are out to out



PIERS

MARK	RIGHT BRIDGE PIER1	PIER2	PIER3	LEFT BRIDGE 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"	11 1/4"			14,858
P902	34	34	-	34	34	-	136	30'-5"	8	1'-3"	27'-11"	11 1/4"			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"	11 1/4"			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'-2 5/8"	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'-11 1/2"	723
P510	30	30	30	30	30	30	180	3'-8"	6	7 5/8"	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	①6'-6 1/2" 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	7 7/8"	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	②5'-2" to 7'-8"							321
A510	24	24	48	②5'-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	①8'-2" to 36'-2"	Str.						2,356
S703	6	6	12	②5'-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	①8'-2" to 36'-2"	Str.						1,731
S605	6	6	12	②5'-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	7 5/8"	2'-7"				3,154
S503	422	422	844	5'-11"	2	1-3 3/8"	2'-7"	7 5/8"			5,209
R501	136	136	272	17'-2"	Str.	Included with rolling 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.	ABUTS.	PIERS	GENERAL	AS BUILT	RIGHT BRIDGE SUPERSTR.	ABUTS.	PIERS	GENERAL	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.

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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	

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

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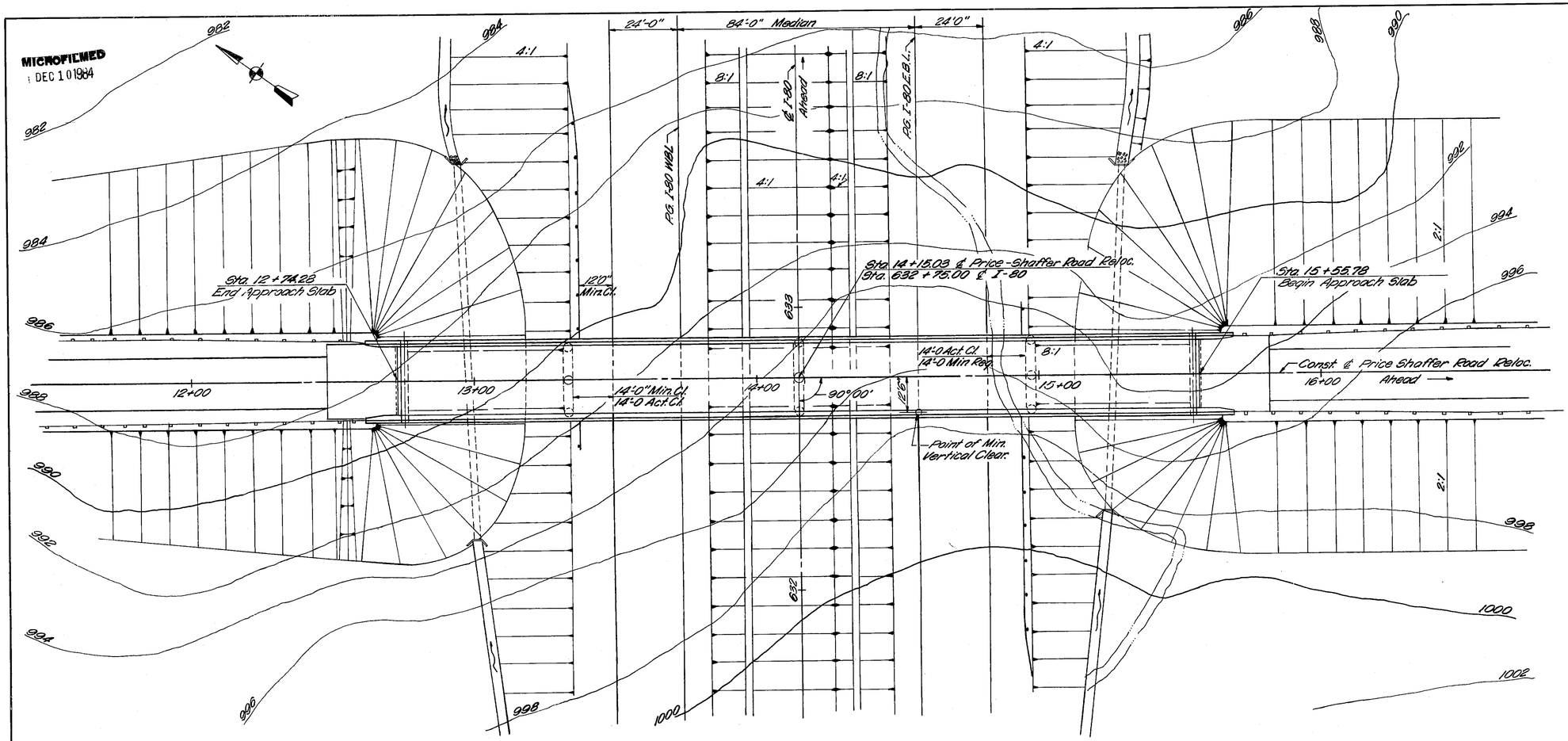
401

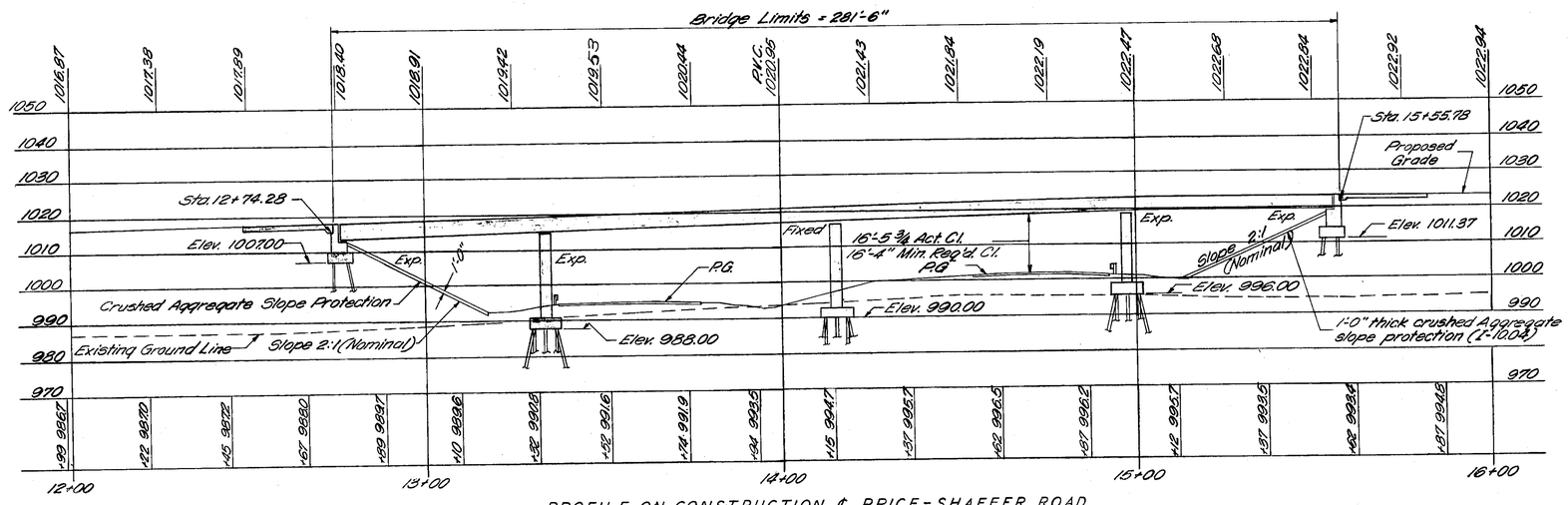
TRUMBULL COUNTY
TRU I-80 (8.90)

B.M. #16 Elev. 983.704
R.R. Spike 12" Wild Cherry
185' Lt. Sta. 634.00

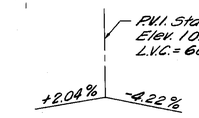


PRICE-SHAFFER ROAD DESIGN A.D.T. 468

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'-0" f/f 2'-3" Safety Curbs
LOAD FREQUENCY: C.F. = 1.30 (37)
SKEW: 0°00'
WEARING SURFACE: 3/4 Monolithic Conc.
APPROACH SLAB: Special Design
ALIGNMENT: Tangent
SUPERELEVATION: None

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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

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

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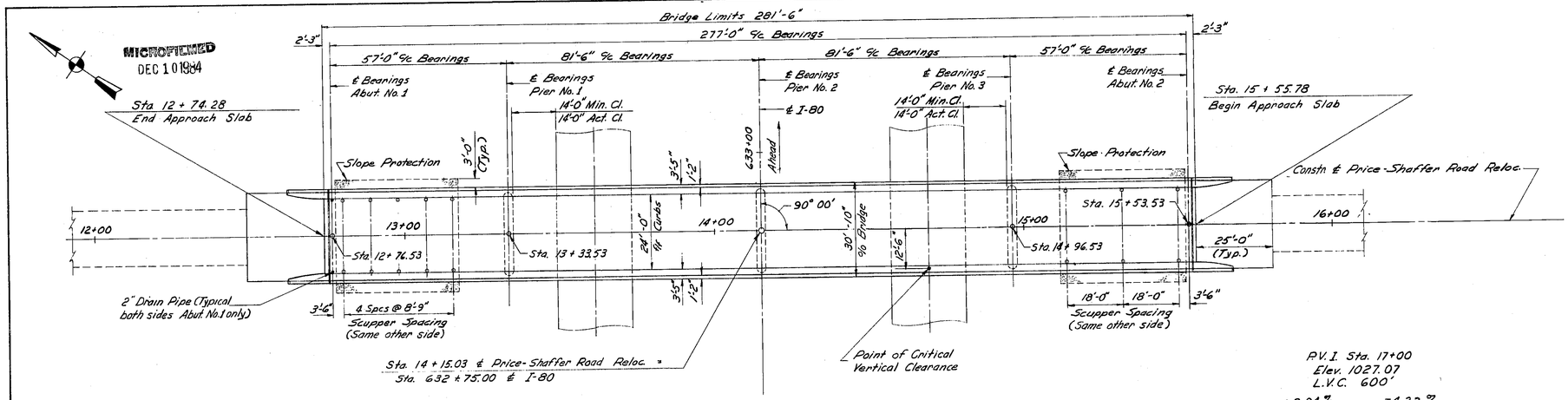
401

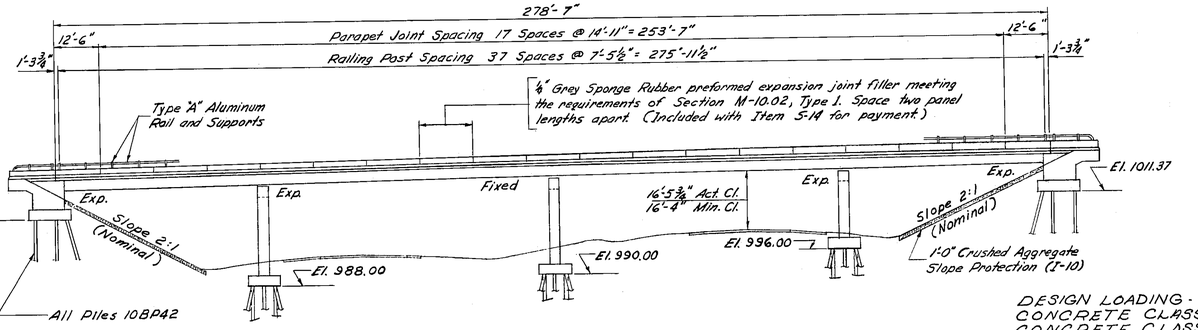
TRUMBULL COUNTY
TRU-I-80 (8.90)



GENERAL PLAN

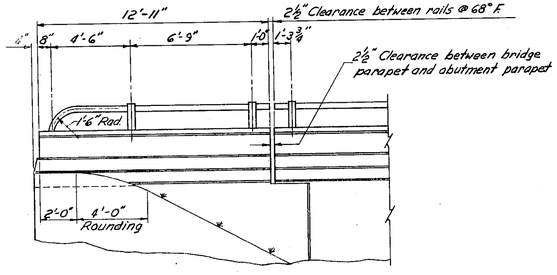
P.V.I. Sta. 17+00
Elev. 1027.07
L.V.C. 600'
+2.04 % -4.22 %

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.

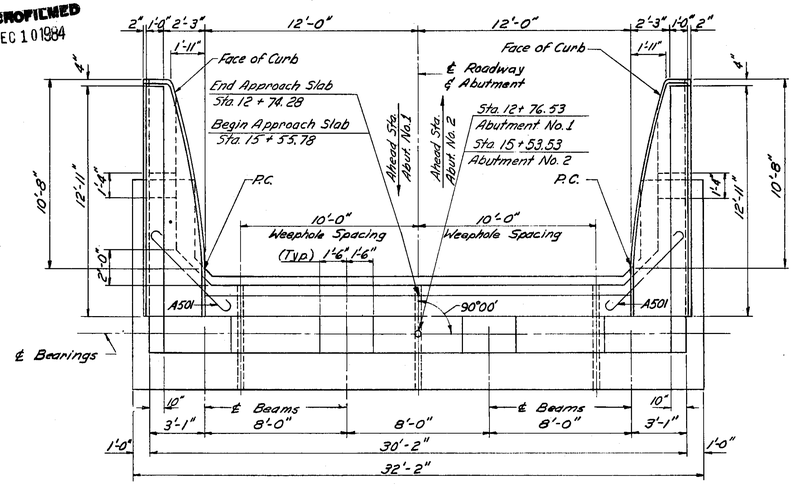
PREPARED BY
BUCHART ENGINEERING, YORK, PA.

GENERAL PLAN & ELEVATION
NOTES & ESTIMATED QUANTITIES
BRIDGE NO. TRU- -80-1170
UNDER
PRICE-SHAFFER ROAD
TRUMBULL COUNTY STA. 632+75.00

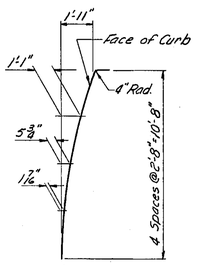
Designed	Drawn	Traced	Checked	Reviewed Date	Revised
G.M.B.	F.J.M.		G.M.B.	10-11-62	

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

TRUMBULL COUNTY
TRU-I-80 (8.90)

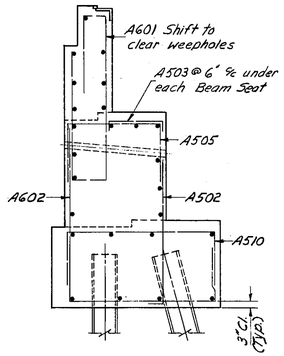


PLAN

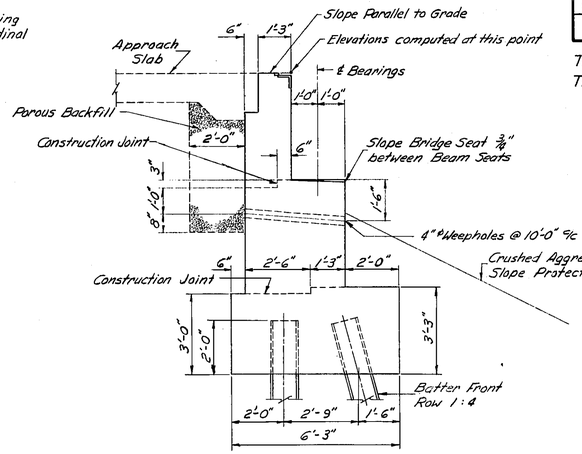


OFFSETS FOR FACE OF CURB

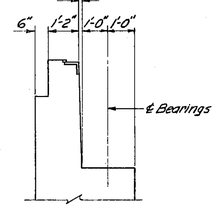
NOTE: All Longitudinal Reinforcing above Footing A504 All Longitudinal Reinforcing in Footing A801.



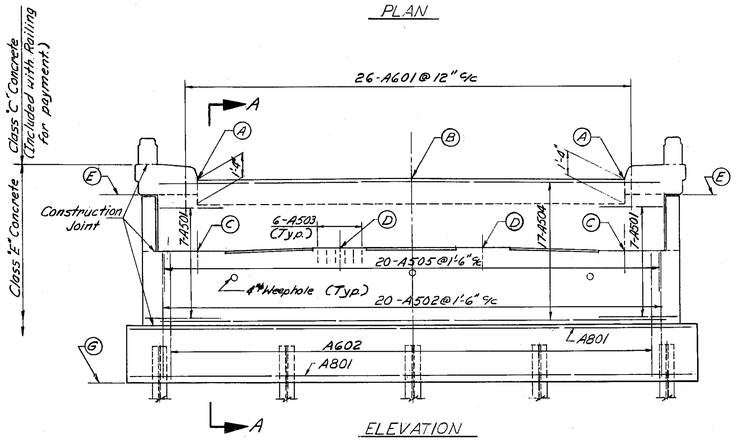
SECTION-A-A
SHOWING REINFORCEMENT

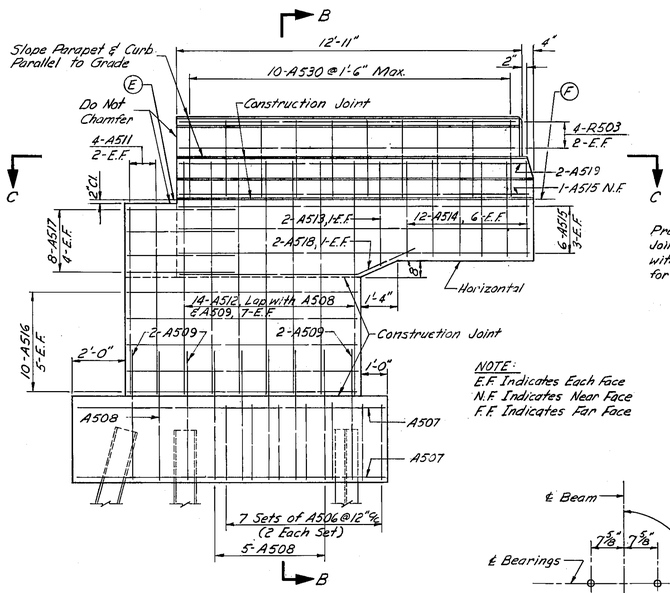


SECTION-A-A



SLOPE OF BACKWALL
ABUTMENT NO. 1

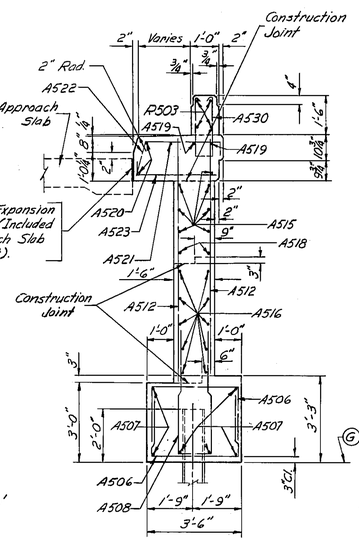




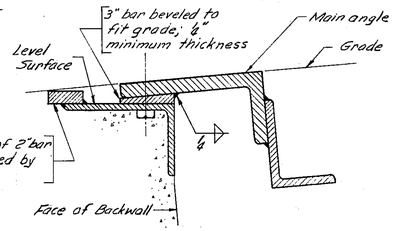
WINGWALL ELEVATION

NOTE:
E.F. Indicates Each Face
N.F. Indicates Near Face
F.F. Indicates Far Face

TYPICAL ANCHOR BOLT LAYOUT
ABUTMENT NO. 1&2



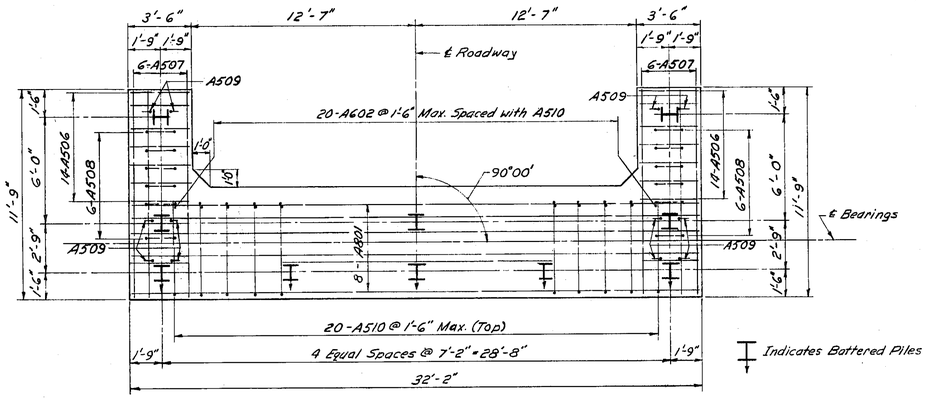
SECTION-B-B



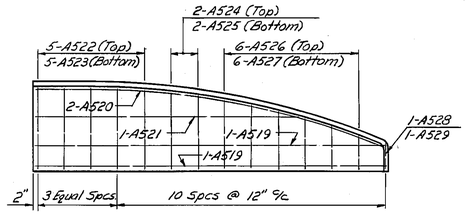
END DAM DETAIL
ABUTMENT NO. 1 ONLY

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



SECTION-C-C

TABLE OF ELEVATIONS				
LOCATION	A	B	C	D
Abutment No. 1	1018.22	1018.41	1019.20	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

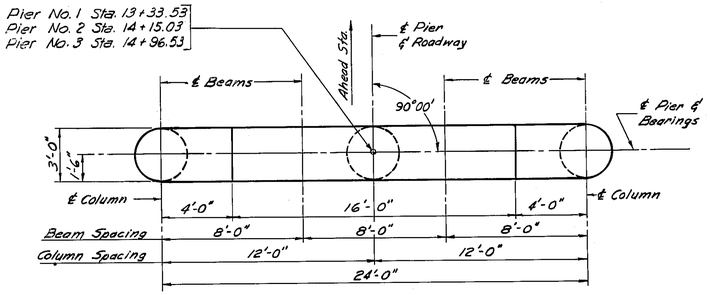
Designed	Drawn	Traced	Checked	Reviewed Date	Revised
D.C.E.	F.J.M.		G.M.B.	10-11-62	

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

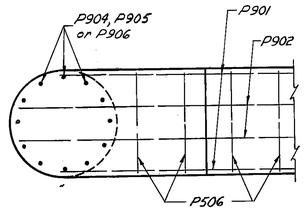
370
401

TRUMBULL COUNTY
TRU-I-80 (8.90)

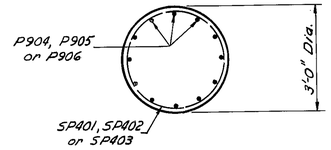
Pier No. 1 Sta. 13+33.53
Pier No. 2 Sta. 14+15.03
Pier No. 3 Sta. 14+96.53



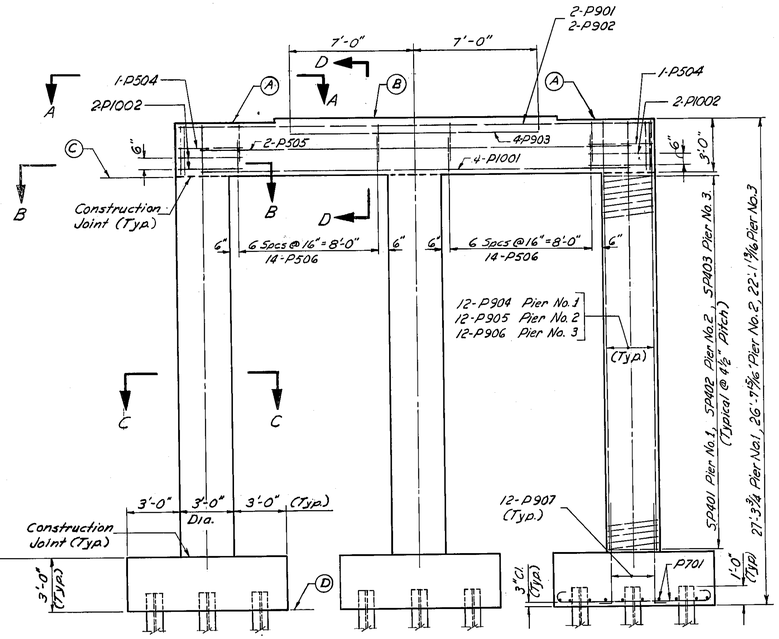
PLAN



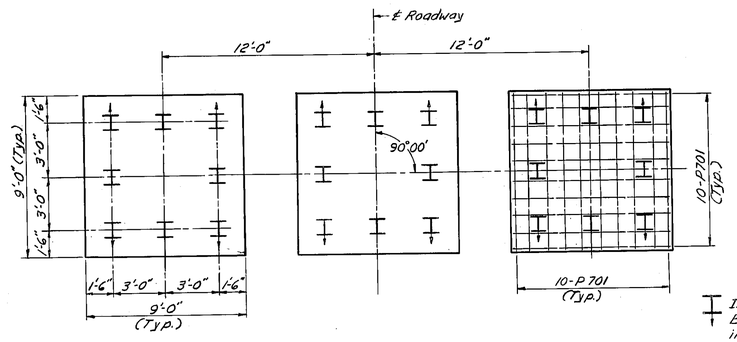
SECTION A-A



SECTION C-C

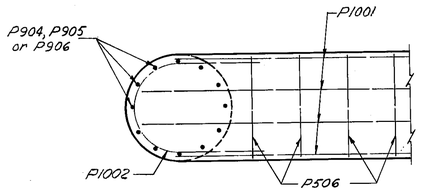


ELEVATION

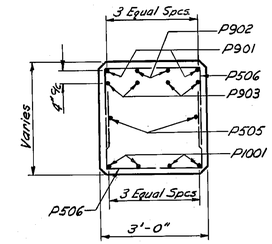


Indicates Battered Piles. Batter 1:4 in the direction indicated

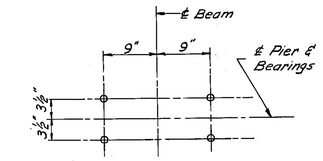
FOOTING PLAN



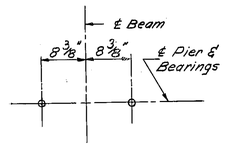
SECTION B-B



SECTION D-D



TYPICAL ANCHOR BOLT LAYOUT
(For Pier No. 2 Only)



TYPICAL ANCHOR BOLT LAYOUT
(For Pier No. 1 and Pier No. 3)

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

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PIERS
BRIDGE NO. TRU-I-80-1170
UNDER
PRICE-SHAFFER ROAD
TRUMBULL COUNTY STA. 632+75.00

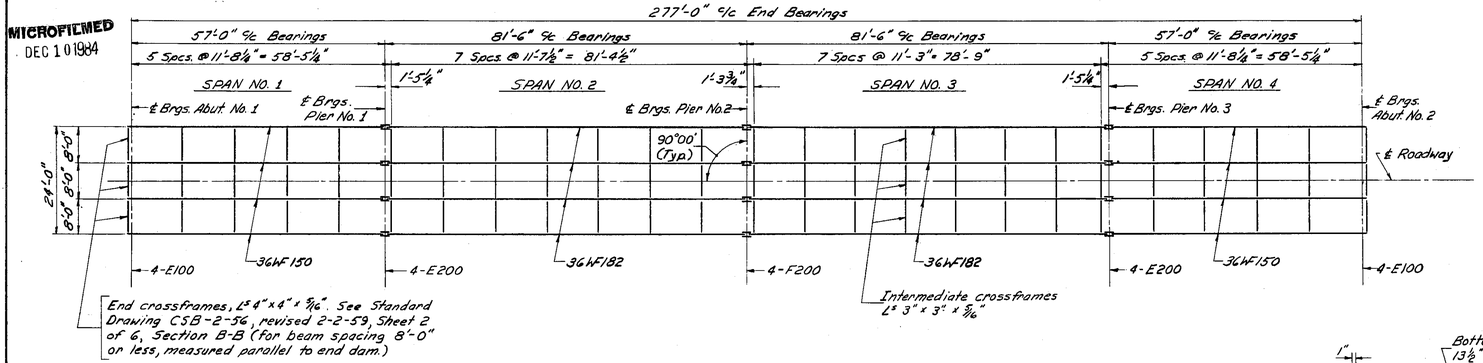
Designed	Drawn	Traced	Checked	Reviewed Date	Revised
D.C.E.	F.J.M.		G.M.B.	10-11-62	

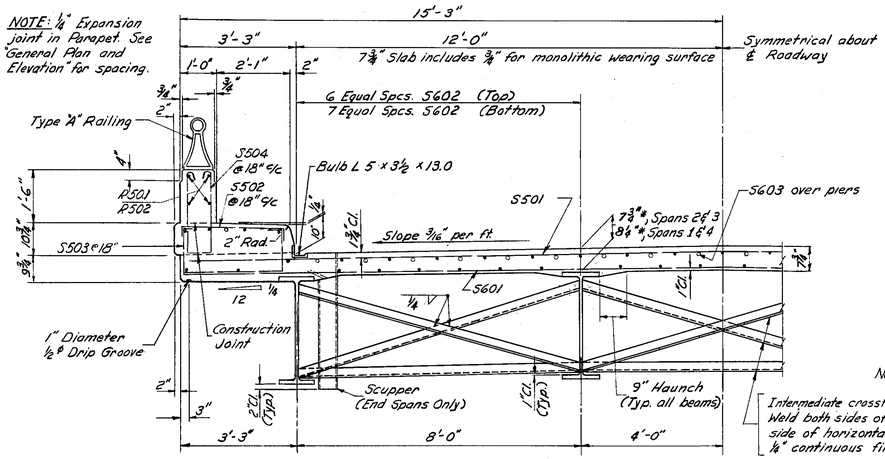
FED. RD. DIVISION	STATE	PROJECT	
	OHIO	I-IG-80-5(9)245	

371
401

TRUMBULL COUNTY
TRU-I-80 (8.90)

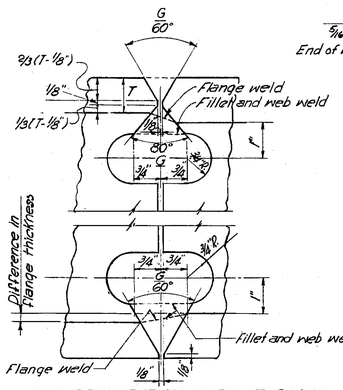
STEEL FRAMING PLAN





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.

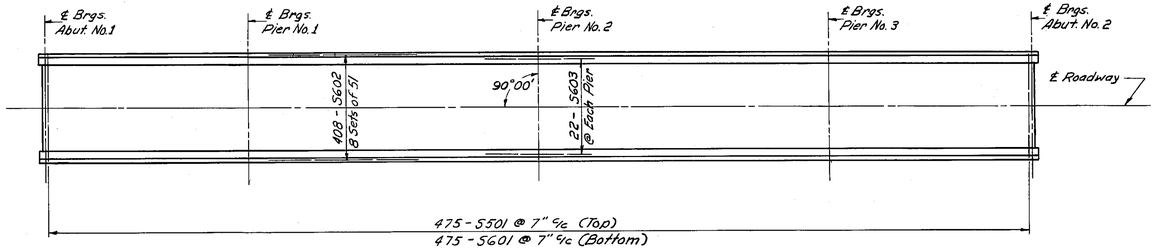


END PREPARATION OF ROLLED BEAMS FOR FIELD WELDING

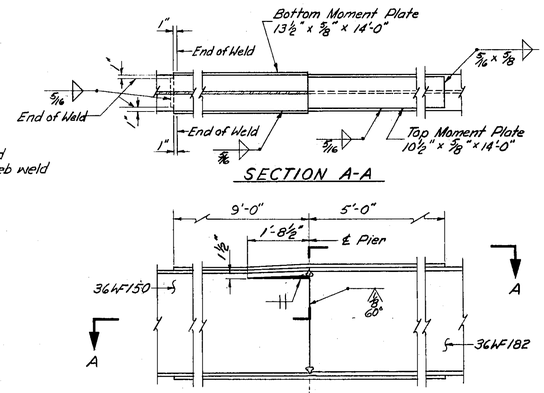
Note: Any roughness from burning shall be removed by grinding.

Intermediate crossframes, L 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 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.

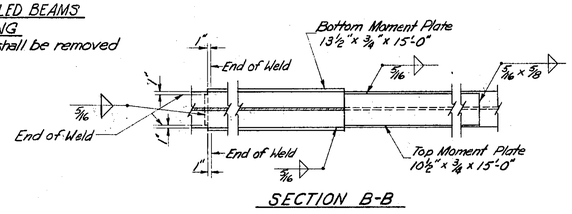


DECK SLAB PLAN

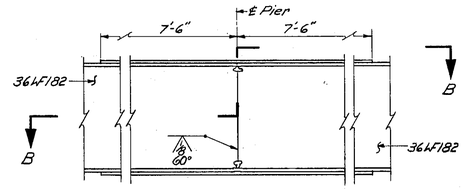


SECTION A-A

BEAM SPLICE DETAIL
(At Pier No. 1 & 3)



SECTION B-B



BEAM SPLICE DETAIL
(At Pier No. 2)

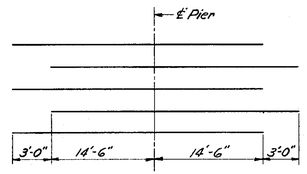


DIAGRAM SHOWING STAGGER OF S603 OVER PIERS

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 ⅝" at Abutment No. 2.

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"	5/16"	5/16"	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 5/16"	13/16"
Camber Required	0	11/16"	1 13/16"	3/4"	0	13/16"	1 5/16"	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 1/8", 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.

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SUPERSTRUCTURE
BRIDGE NO. TRU-I-80-1170
UNDER
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Designed	Drawn	Traced	Checked	Reviewed Date	Revised
L.E.	F.J.M.		G.M.B.	8/10-11-62	

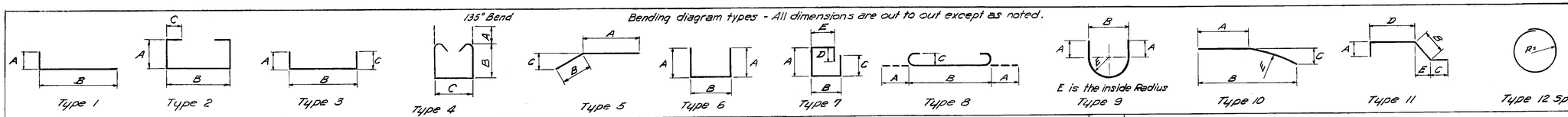
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-80-5(9)245	

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 11/16"			1'-1 1/8"	534
P901	6	29'-2"	6	2'-10"	24'-0"				595
P902	6	30'-7"	6	2'-5 11/16"	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 11/16"			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	32	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	5"	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	5"	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					—
								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"			2166
R501	136	14'-7"	Str.	Included with railing for Payment					——
R502	16	12'-2"	Str.						——
								TOTAL WEIGHT	67,808

REPLACEMENT BARS

MARK	No.	LENGTH	TYPE	WEIGHT
RE 1001	1	7'-3"	Str.	
RE 902	1	6'-10"	Str.	
RE 803	1	6'-6"	Str.	
RE 704	1	6'-3"	Str.	
RE 605	3	5'-11"	Str.	
RE 506	2	5'-7"	Str.	
RE 407	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, A601 is a No.6 size bar and P1001 is a No.10 size bar.

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 5-4.

1½" closed coils shall be provided at ends of each spiral unit.

Four steel channel, tee or Angle Spacers, weighing approximately 0.68 lbs. 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 lbs. per Lin. ft. will be paid for as reinforcing steel and is included in the tabulated quantity of Spiral Bars.

PREPARED BY
BUCHART ENGINEERING, YORK, PA.

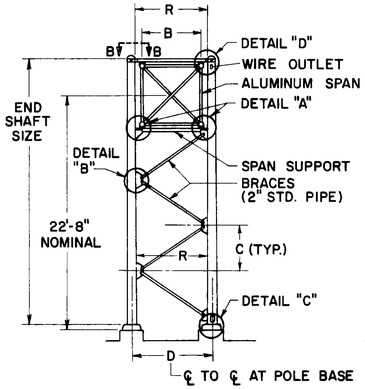
REINFORCING STEEL LIST
BRIDGE NO. TRU-I-80-1170
UNDER
PRICE - SHAFFER ROAD
TRUMBULL COUNTY STA. 632+75.00

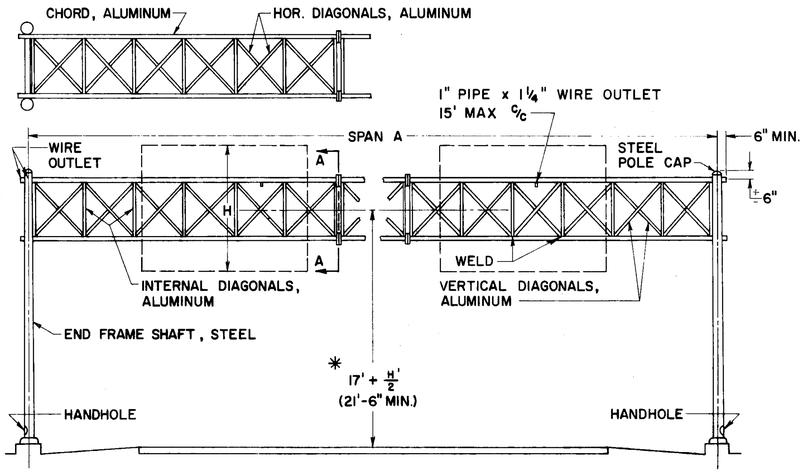
Designed	Drawn	Traced	Checked	Reviewed Date	Revised
G.M.B.	G.P.	T.P.G.	G.M.B.	10-11-62	

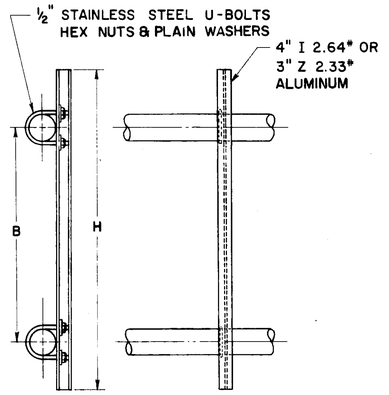
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

373

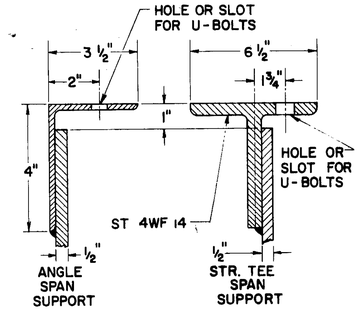
TRUMBULL COUNTY
TRU-I-80-8.90







SIGN ATTACHMENT



SECTION D-D

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.

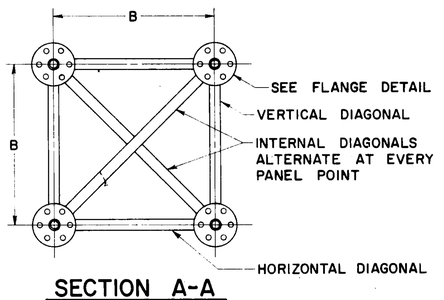
BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER.

*FOUNDATION ELEVATION

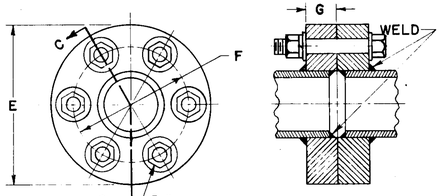
ELEVATION OF TOPS OF FOUNDATIONS SHALL BE BUILT UP SO THAT 17' CLEARANCE IS MAINTAINED OVER ENTIRE WIDTH OF THE PAVEMENT AND SHOULDERS.

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.

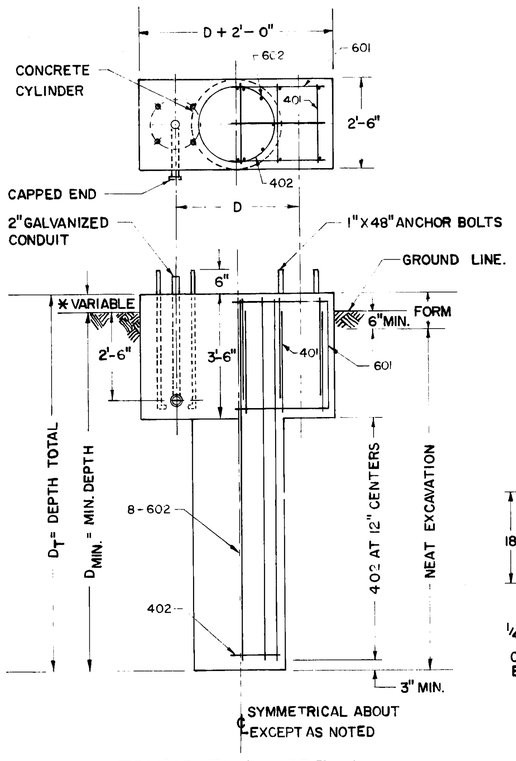


SECTION A-A



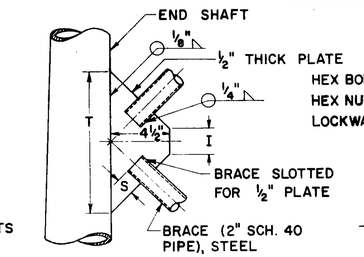
CAST FLANGE, B-26 ALLOY SG 70A-T7 (356-T7)

FLANGE DETAIL

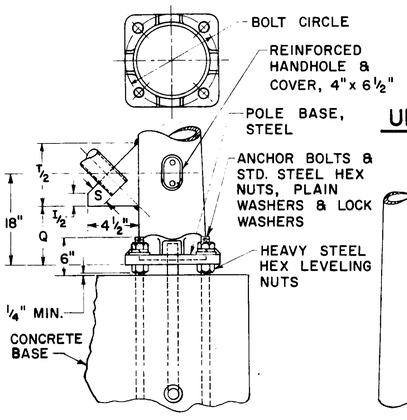


FOUNDATION DETAIL

(RIGHT HAND SHOWN — LEFT HAND OPPOSITE)

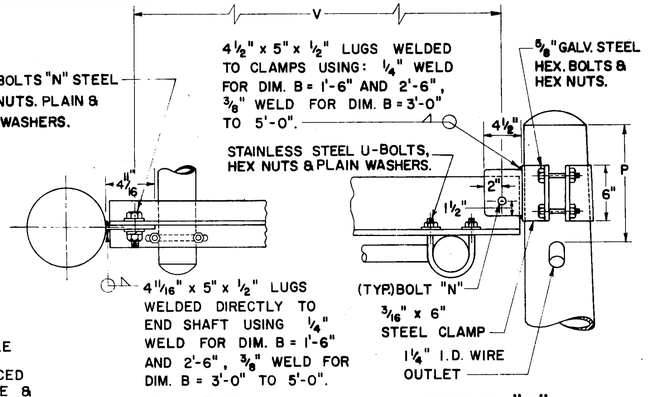


DETAIL "B"



DETAIL "C"

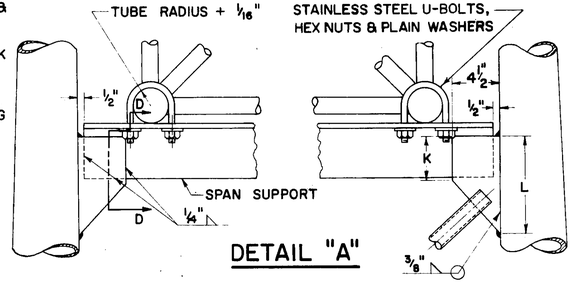
POLE BASE DETAIL



VIEW B-B

DETAIL "D"

UPPER SPAN SUPPORT (ALTERNATE METHODS)

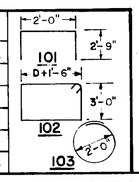


DETAIL "A"

LOWER SPAN SUPPORT

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" 7GA	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" 3GA	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" 3GA	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

Mega-Flex Tracing.

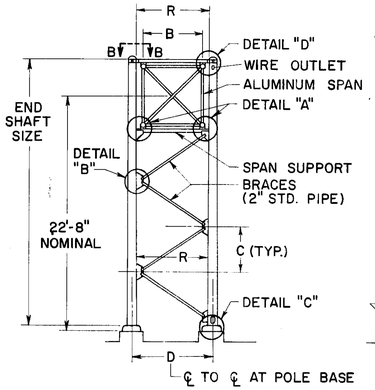
200 SQ. FT. SIGN AREA

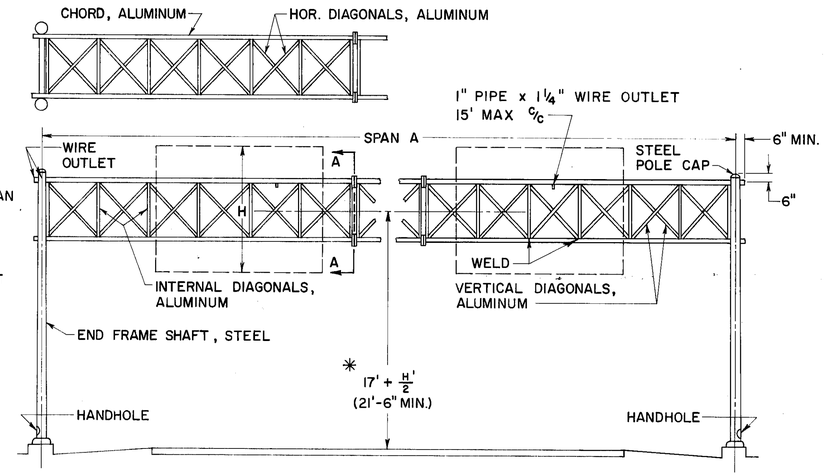
OVERHEAD SIGN SUPPORT, I-129 NO. 7.2

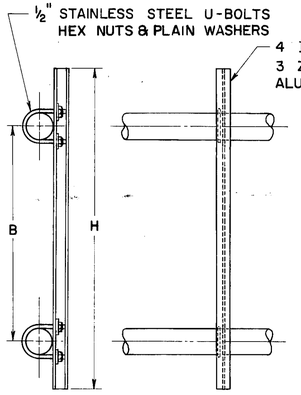
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

374

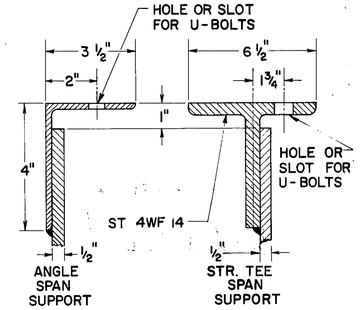
TRUMBULL COUNTY
TRU-I-80-8.90







SIGN ATTACHMENT



SECTION D-D

NOTES

MATERIALS

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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

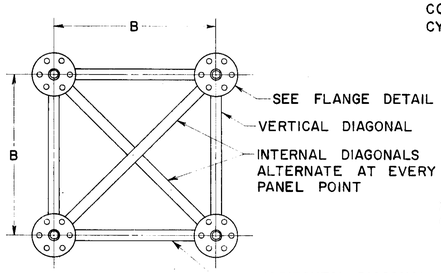
COST OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM I-129 CONCRETE FOR SIGN SUPPORT FOUNDATIONS. BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER.

*FOUNDATION ELEVATION

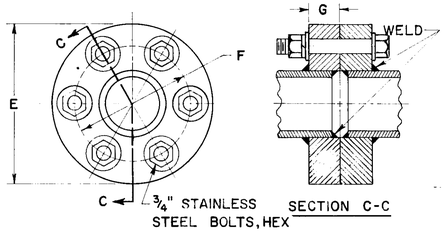
ELEVATION OF TOPS OF FOUNDATIONS SHALL BE BUILT UP SO THAT 17' CLEARANCE IS MAINTAINED OVER THE ENTIRE WIDTH OF THE PAVEMENT AND SHOULDERS.

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.

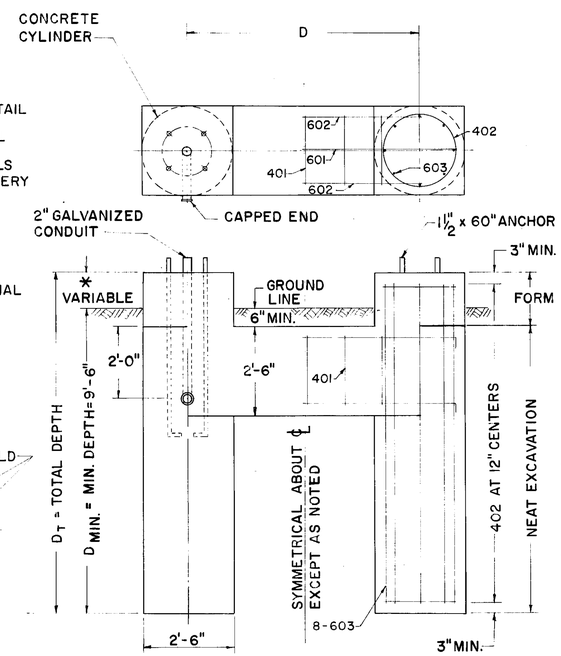


SECTION A-A



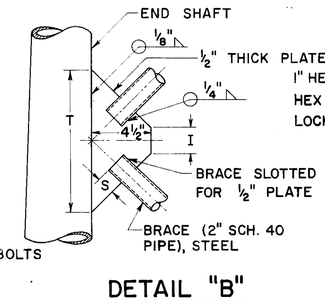
CAST FLANGE, B-26 ALLOY SG 70A-T7 (356-T7)

FLANGE DETAIL

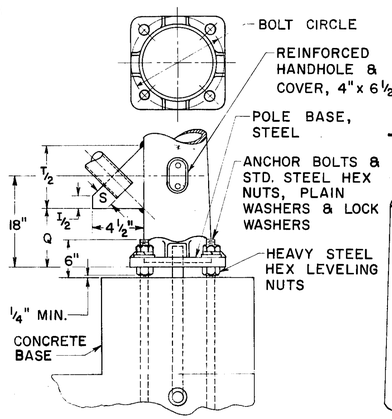


FOUNDATION DETAIL

(RIGHT HAND SHOWN — LEFT HAND OPPOSITE)

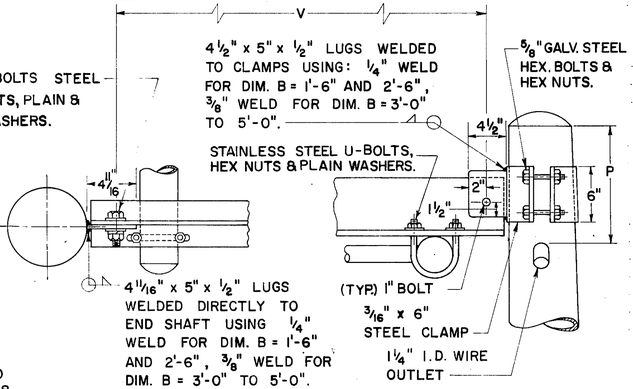


DETAIL "B"



DETAIL "C"

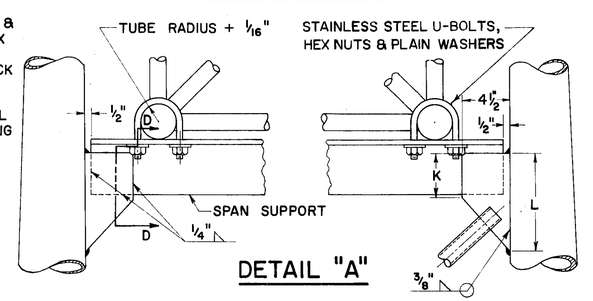
POLE BASE DETAIL



VIEW B-B

DETAIL "D"

UPPER SPAN SUPPORT (ALTERNATE METHODS)

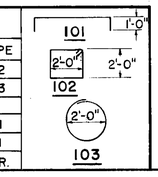


DETAIL "A"

LOWER SPAN SUPPORT

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"x4.5"x25'-0", 3 GA.	5'-10 13/16"	7 7/16"	1⅜"	3½"	4¾"	8"	12"	6⅝"	3'-9"	1½"	10"	⅝"	3'-3⅝"	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"x5.18"x26'-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"	1.900" x .145"	
3	90'	4'-0"	4'-10¼"	5'-6"	11"	7"x5.18"x26'-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"x5.18"x26'-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	D_T - 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

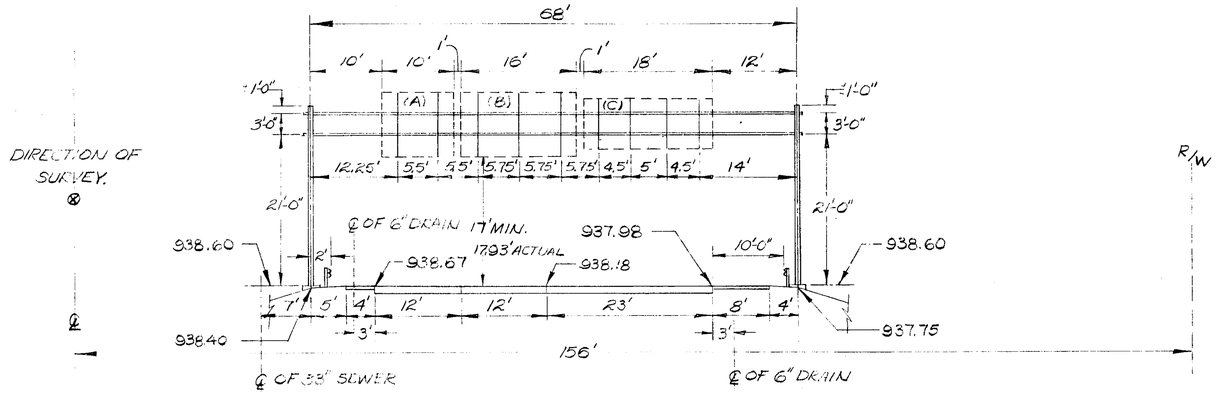
OVERHEAD SIGN SUPPORT, I-129 NO.7.4

Mega-Flex Tracing.

FED. RD DIVISION	STATE	PROJECT	
2	OHIO		

375

TRUMBULL COUNTY
TRU-I-80-8.90

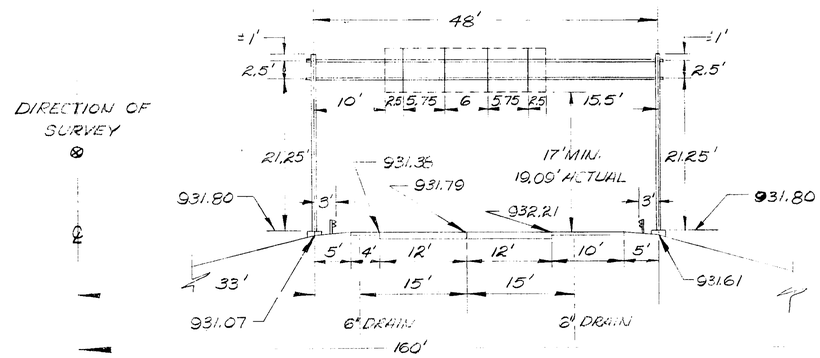


STATION 497+85

I-129 NO. 7.4 DESIGN 1, 68' SPAN, SIGN AREA 360 SQ. FT., 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 SQ. FT.,
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

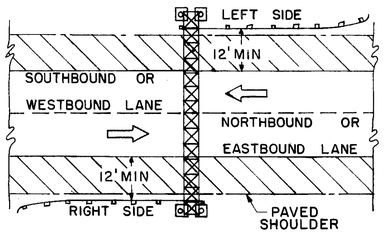
DATE 10-4-63

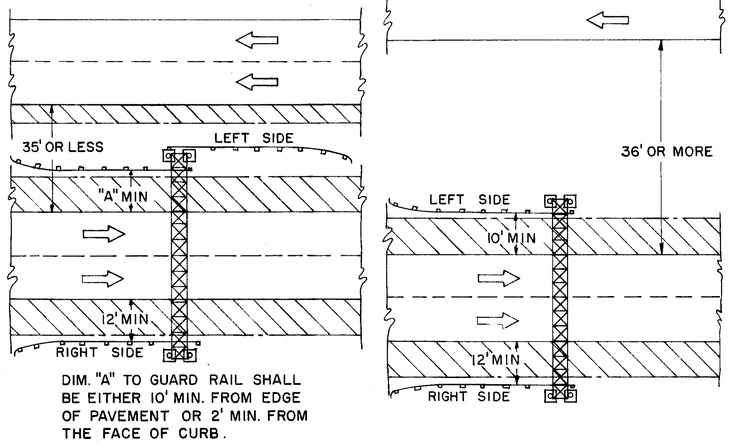
APPROVED _____
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

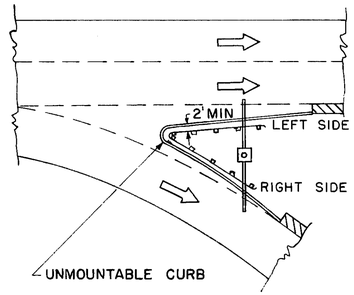
376

TRUMBULL COUNTY
TRU-I-80-8.90

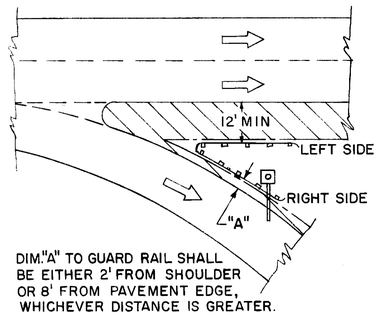




DIM. "A" TO GUARD RAIL SHALL BE EITHER 10' MIN. FROM EDGE OF PAVEMENT OR 2' MIN. FROM THE FACE OF CURB.



(CURB SECTION)



DIM."A" TO GUARD RAIL SHALL BE EITHER 2' FROM SHOULDER OR 8' FROM PAVEMENT EDGE, WHICHEVER DISTANCE IS GREATER.

(SHOULDER SECTION)

NOTES

GENERAL

PROTECTIVE GUARD RAIL FOR OVERHEAD SIGN STRUCTURES SHALL CONFORM TO SEC. I-15, FOR STEEL BEAM TYPE (DEEP).

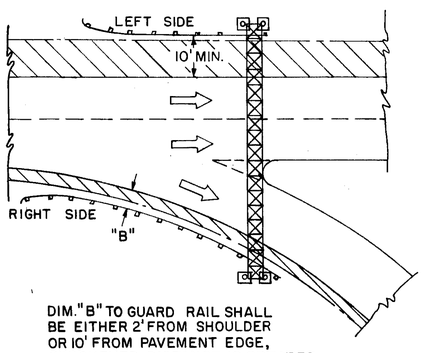
AT LOCATIONS WHERE GUARD RAIL IS IN PLACE, THE SIGN SUPPORT FOUNDATIONS SHALL BE ERECTED BEHIND EXISTING GUARD RAIL.

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.

MULTIPLE LANE UNDIVIDED

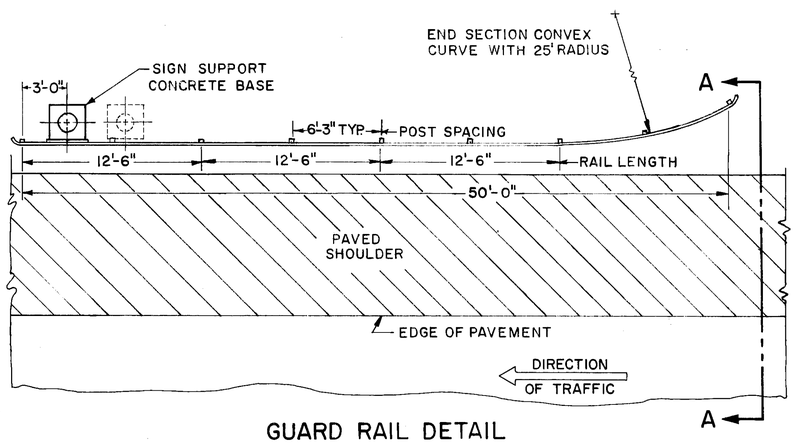


DIM."B" TO GUARD RAIL SHALL BE EITHER 2' FROM SHOULDER OR 10' FROM PAVEMENT EDGE, WHICHEVER DISTANCE IS GREATER.

(ROADWAY SPAN)

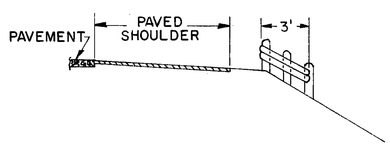
BIFURCATION

FOUR LANE DIVIDED



GUARD RAIL DETAIL

BIFURCATION



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-I-W, T-3-N

LOT NUMBERS 11, 25, 26, 27, 28, 29, 30, 35 & 36

SCALE 1" = 400'

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

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'

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"

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 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'

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'

P.I. STA. 17+78.22
Δ 14° 32' 10" Rt.
D 1° 12' 02"
T 608.51'
L 1210.54'
R 4771.47'

P.I. STA. 28+58.51
Δ 61° 12' 40" Lt.
D 8° 00' 00"
T 423.65'
L 765.14'
R 716.20'

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.C.	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 Glenn H. Strausbaugh
DATE Aug. 31, 1962

STATE OF OHIO
GENE H. STRAUSBAUGH
4610
SURVEYOR

Prepared By
BUCHART ENGINEERING
Consulting Engineers
York Pennsylvania

@ 1:30 P.M.
RECEIVED March 8, 19 63
RECORDED March 9, 19 63
PLAT BOOK 21 PAGE 43
Margherite McElrath
COUNTY RECORDER
$7.40 T. W.
SIGNED Otto K. Hunsaker
DIVISION DEPUTY DIRECTOR-REG. SURVEYOR 2684
DATE Mar 6 1963

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'

RIGHT OF WAY CENTERLINE SURVEY PLAT

Ohio Dept. of Highways

Mega-Flex Tracing

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(LL)	7, 8, 9	Ramps A, B, & C
91 X	HAROLD R. FREIHEIT	745	279	33.73	0.52				8 & 7-A	Channel Inlet
91 T	HAROLD R. FREIHEIT	745	279		0.08				7, 9	Channel Fill
92 WL	EDWARD WALKER & MARY ELIZABETH WALKER	537	245	0.334	0.26	YES			8	Entire Taking
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 78	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 Mc FARLAND	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	0.49	NO			11	Old R.R. R/W
105 WL	BERTHA RYSER	533	320	12.168	0.37	NO	0.17(LL)	7.24	12	
		418	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	937							
109 WL	ROBERT L. TRACY	464	61	45.21	3.59	NO	35.29	3.51(LL)	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	28.18	22.12	12, 14	A Separate Property
		536	517	1.39						Contiguous Parcels
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(LL)	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(LL)	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 C. ALEXANDER	636	152	20.25	0.19	NO		20.06	21	Reloc. PRICE SHAFFER ROAD
	ANNA YOBE, HELEN KOVAL, DOROTHY KOVAL & MARGARETH KOVAL, LIFE ESTATE									
121	RONALD YOBE & JOSEPH YOBE JR. REMAINDERMEN	654	171	4.00	0.08	NO	3.90		21	Reloc. PRICE SHAFFER ROAD
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	498+16.78 to 502+00.00	332.0
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	5695
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, 104 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 82 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. 11/1/62
Pcl's 104 WA, 103 WA, 111 X, Added
Pcl's 83 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 83 WA, 86, 86 WA, 87, 87 WA, 88 & 88 WA Added

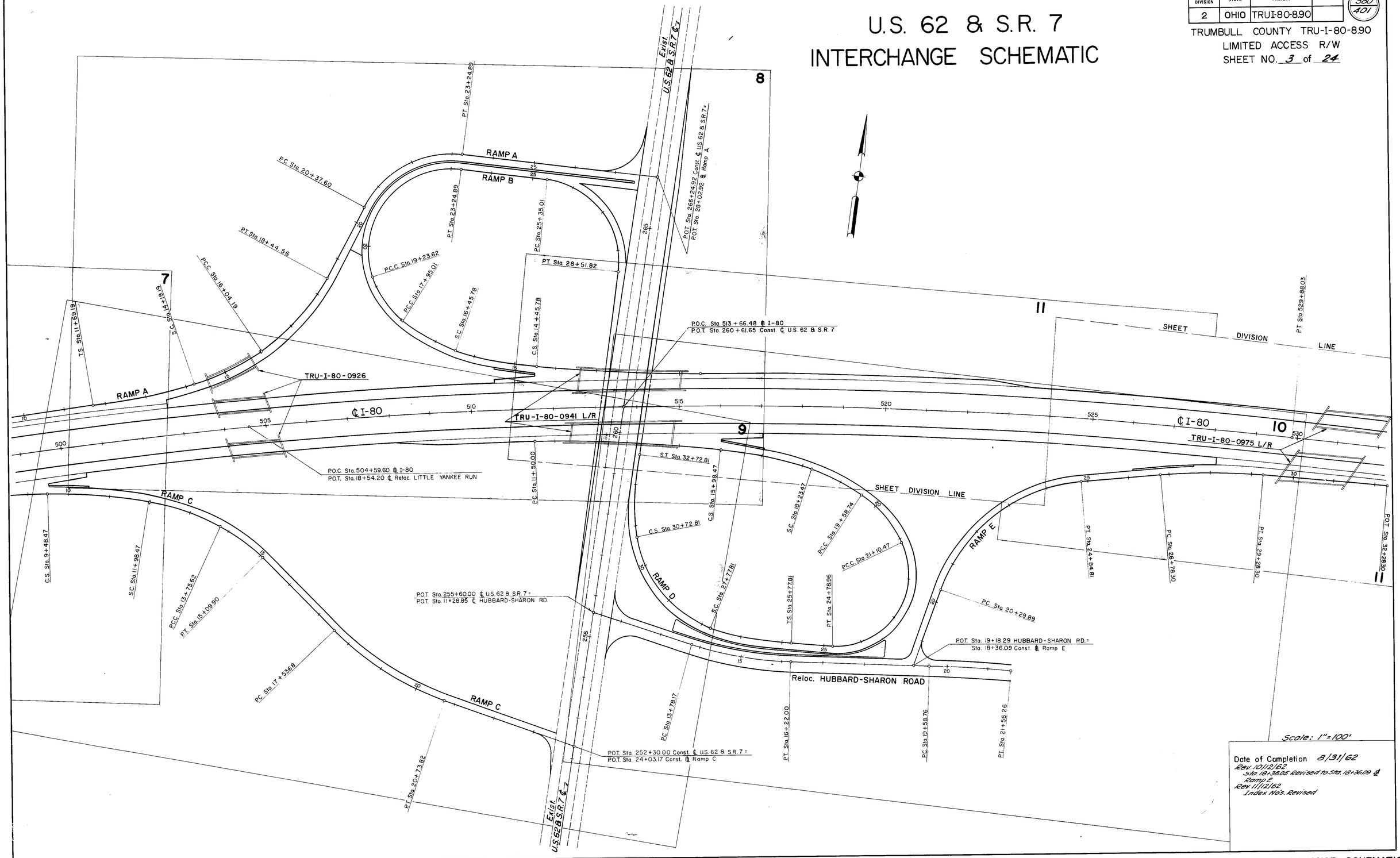
121

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRUI-80-8.90	

380/401

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 3 of 24

U.S. 62 & S.R. 7
INTERCHANGE SCHEMATIC



Date of Completion 8/31/62
Rev. 10/12/62
Sta. 18+36.05 Revised to Sta. 18+36.09 ℄ Ramp E
Rev. 11/12/62
Index Nos. Revised

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

HUBBARD TOWNSHIP T-3-N R-I-W LOT 26

HUBBARD TOWNSHIP T-3-N R-I-W LOT 27

(96 WL) MICHAEL N. BUTCH & MARTHA V. BUTCH Residue Rt. 0.45 Acres
(87 WL) ROBERT T. LARSON & PHYLLIS J. LARSON Residue Lt. 0.80 Acres
(90 WL) MARVEL E. HIBLER (Entire Taking)
(92 WL) EDWARD WALKER & MARY ELIZABETH WALKER (Entire Taking)
(93 WL) FRANK KARCHER (Entire Taking)
(94 WL) LOUIS STORTI & EDITH STORTI Residue Lt. 0.42 Acres
(95 WL) ESTATE OF IDA M. HIBLER DECEASED Residue Lt. 0.75 Acres
(99 WL) NELLIE Mc FARLAND (Entire Taking)
(100 WL) ARTHUR Mc FARLAND & NELLIE Mc FARLAND Residue Lt. 0.27 Acres

EXISTING RODDELL-HETRICK ROAD R/W
C.R. 23
M & M BUTCH Plat No. 1 Vol. - 18 PG. 32
LONGVILLE PLAT Vol. 3 PG. 58
OHIO BELL TELEPHONE CO YOUNGSTOWN, OHIO
EXIST. L.A. R/W Line
LOT 6
LOT 5
LOT 4
LOT 3
LOT 2
LOT 1 N
LOT 7
BEGIN PROJECT STA. 485+86.00
HAROLD R. FREIHEIT Residue Lt. 7.85 Acres, Residue Rt. 0.38 Acres (L.L.)
ROBERT P. LIVINGSTON Residue Rt. 13.14 Acres Residue Lt. 7.72 Acres
Proposed L.A. R/W Line
CONST. LIMITS
Ramp A
Ramp B
Ramp C
Ramp D
Ramp E
℄ I-80
YOUNGSTOWN SHEET & TUBE CO.
Residue Rt. 9.68 Acres (L.L.)
THE LOIS REALTY COMPANY Residue Rt. 3.44 Acres
THE LOIS REALTY COMPANY Residue Rt. 11.12 Acres
JOSEPH L. RYSER & CATHERINE E. RYSER
Residue Lt. 4.20 Acres Residue Rt. 3.23 Acres
BEGIN ACQUISITION TRU-I-80-8.90 Sta. 485+01.40
WILLIAM OAKLEY & HELEN OAKLEY
ROBERT P. LIVINGSTON
NORA COLLETTA
BEGIN WORK Sta. 485+50.00
JOHN MALINER & MARIE MALINER Residue Rt. 21.96 Acres
EXIST. HUBBARD-SHARON ROAD
RELOC. HUBBARD-SHARON RD.
EXISTING 138 KV O.E.C.O. TRANSMISSION LINE
EXIST. L.A. R/W Line
THE RAD TANK & WELDING COMPANY Residue Rt. 3.22 Acres
Residue Rt. 0.24 Ac.
CLARISSA J. MINGLIN Residue Rt. 4.70 Ac.
J. W. BLACKWELL Residue Rt. 16.99 Acres
OHIO EDISON CO. YOUNGSTOWN, OHIO
OHIO BELL TELEPHONE CO YOUNGSTOWN, OHIO
BERTHA RYSER Residue Rt. 7.94 Acres Residue Lt. 0.17 Acres (L.L.)
MATCH LINE STA. 545+00 SEE SHEET 5

Revisions - Cont'd.
Rev. 12/7/62
Pcls. 85 W.A., 86, 86 W.A., 87, 87 W.A., 88 and 88 W.A. Added.
Rev. 5/20/63
Pcls. 102 WL & 102 Revised
Pcls. 102 AWL, 102 A, 126 WL, 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 485+16.78 to 485+00
Pcls. 96 WL, 97 WL, 101 AWL, & 104 AWL, Added
Pcls. 96, 97, 99 & 100 Revised
Revised L.A. Line 516+13.41 to 29+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

HUBBARD TOWNSHIP T-3-N R-I-W LOT 27

HUBBARD TOWNSHIP T-3-N R-I-W LOT 28

HUBBARD TOWNSHIP T-3-N R-I-W LOT 29

EXIST. THOMAS ROAD

EXIST. HUBBARD-SHARON ROAD

OHIO BELL TELEPHONE CO. YOUNGSTOWN, OHIO

HUBBARD-SHARON ROAD EXIST. C.R. #331

MARY L. RYSER

FLORENCE ANN RYSER

OHIO EDISON CO. YOUNGSTOWN, OHIO

N.Y.C. RAILROAD CO. CLEVELAND, OHIO

ROBERT L. TRACY
Residue Rt. 3.51 Acres (L.L.)
Residue Lt. 35.29 Acres

EXISTING R/W LINE

ERIE LACKAWANNA RAILROAD CO. YOUNGSTOWN, OHIO

ERIE LACKAWANNA RAILROAD COMPANY
Residue Lt. 3.30 Acres

JOSEPH BALZIC & SOPHIA BALZIC
Residue Lt. 113.49 Acres

ANASTASIA LACKWASKY
Residue Rt. 34.83 Acres
Residue Lt. 19.97 Acres

106 WL — JOSEPH L. RYSER & CATHERINE E. RYSER
Residue Rt. 3.23
Residue Lt. 4.20

107 WL — ALBERTA E. COXSON
Residue Rt. 0.90 Acres
Residue Lt. 4.30 Acres

109 WL

110 — NEW YORK CENTRAL RAILROAD COMPANY

111 AERIAL

111

112 WL

114 WL

115 WL

MATCH LINE STA. 545+00 SEE SHEET 4

MATCH LINE STA. 605+00 SEE SHEET 6

Proposed L.A. R/W Line

CONST. LIMITS

550 560 570 ℄ I-80 580 590 600

108 WL

108 WA — STOJAN JANJANIN & BESSIE JANJANIN
Residue Rt. 9.14 Acres

105 WL — BERTHA RYSER
Residue Rt. 7.98
Residue Lt. 0.17 (L.L.)

EXISTING R/W

111 ×

111 WL — ROBERT L. TRACY
Residue Rt. 22.12 Acres
Residue Lt. 23.13 Acres

OHIO EDISON CO. EASEMENT

LITTLE YANKEE RUN

EXISTING R/W LINE

113 WL — ESTHER KOSKO
Residue Rt. 13.29 Acres (L.L.)

OHIO EDISON CO. EASEMENT

ESTHER KOSKO

27 28 / 34 33

28 29 / 33 32

SCALE 1"=200'

Property Data as of 8/15/61
Date of Completion 8/31/62
Rev. 10/12/62
Pcl. 108WA & 111AERIAL 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	

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PROPERTY MAP

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 6 of 24

HUBBARD TOWNSHIP T-3-N R-I-W LOT 29

HUBBARD TOWNSHIP T-3-N R-I-W LOT 30

13/12 28/29

12/11 29/30

BEGIN WORK Sta. 5+20.49

EXIST. PRICE-SHAFFER ROAD CR. 18

EXISTING R/W LINE

OHIO BELL TELEPHONE CO. YOUNGSTOWN, OHIO

EXIST. FOX-NORTH ROAD CR. 19

EXISTING R/W LINE

118 W.L.
JOSEPH NEMTH
Residue Lt. 25.37 Acres

122 W.L.
JOHN KOVAL
Residue Rt. 4.84 Acres
Residue Lt. 7.69 Acres

122

125 W.L.
EDWARD W. CORLL & LOUIS R. CORLL
Residue Lt. 32.66 Acres

125 WA

125 X

125

125A X

OHIO
PENNSYLVANIA

END WORK Sta. 28+32.16

END PROJECT P.C.C. Sta. 657+86.43

SEE SHEET 5

MATCH LINE STA. 605+00

115 W.L.
ANASTASIA LACKWASKY
Residue Rt. 34.83 Acres
Residue Lt. 19.97 Acres

115 A

115 W.L.
ANASTASIA LACKWASKY

OHIO BELL TELEPHONE CO. YOUNGSTOWN, OHIO

Proposed L.A. R/W Line

117 W.L.
VERNON DOUGLAS & OPAL C. DOUGLAS
Residue Rt. 0.02 Acres(L.L.)
Residue Lt. 12.11 Acres

119 A

RELOCATED

RELOCATED STATE LINE ROAD

CONST. LIMITS

630℄ I-80

640

650

610

620

CONST. LIMITS

CONST. LIMITS

Proposed L.A. R/W Line

PRICE-

OHIO EDISON CO. EASEMENT P. YOUNGSTOWN, OHIO

CONST. LIMITS

R/W

R/W

R/W

R/W

RELOCATED FOX NORTH ROAD

SHAFFER

R/W

ROAD

116 W.L.

116

116 WA

BEGIN WORK P.C. Sta. 0+50

THOMAS & ANNA FEDORCHAK
Residue Rt. 1.547 Acres
Residue Lt. 2.64 Acres

115

119

119 W.L.

ANNA YOBE
Residue Rt. 76.61 Acres
Residue Lt. 6.50 Acres

120

MARY A. ALEXANDER
Residue Rt. 20.46 Acres

122 A

121

Residue Lt. 3.90 Acres

ANNA YOBE, HELEN KOVAL, DOROTHY KOVAL & MARGARETA KOVAL -LIFE ESTATE RONALD YOBE & JOSEPH YOBE JR. Remaindermen

124 W.L.
MARY YEREB
Residue Rt. 8.92 Acres

123
ANDREW & NANCY BLAIR

END WORK Sta. 27+50

29/30 32/31

30 31

OHIO
PENNSYLVANIA

OHIO
PENNSYLVANIA

SCALE 1"=200'

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	

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401

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 7 of 24

HUBBARD TOWNSHIP T-3-N R-I-W LOT 25

HELEN CETOR

LOT 24 | LOT 25 | LOT 37 | LOT 36 | LOT 5 | LOT 6 | LOT 7

ROBERT P. LIVINGSTON

HAROLD R. FREIHEIT
T.B.A. 22.69 ACRES
PRO. 0.48 ACRES
CONT. 23.17 ACRES

BEGIN ACQUISITION TRU-I-80-8.90
STA. 485+00.00

P.O.T. ℄ I-80 STA. 485+00.00 =
P.O.T. STA. 20+00.00 ℄ ORIGINAL ROPPELL-HETRICK ROAD (C.R. 23)

P.O.T. ℄ I-80 STA. 485+05.37 =
℄ CR. 23 STA. 20+01.96
BUTCH PLAT LIMITS

BEGIN PROJECT
STA. 485+86.00

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'

1630 L.F. Type D R/W Fence
Proposed L.A. R/W Line
Intermediate Anchor Post Assembly
End Post Assembly
MATCH LINE
CONST. LIMITS
Range Line
Light Woods
Type 2 Stream Crossing
Yankee Run
Swamp
Woods
Pipe
Ditch
Stone
Dwl.
Fr. Gar.
Fr. Dwl.
Barn
Dead Tree
20" Maple
18" Hickory
12" Stump
30" Stump
2-18" Elm
Intermediate Anchor Post Assembly

EXISTING EIGHT RODS
EXISTING ROPPELL-HETRICK ROAD (C.R. 23)

ROBERT T. LARSON & PHYLLIS J. LARSON
T.B.A. 0.19 ACRES

MICHAEL N. BUTCH & MARTHA V. BUTCH
T.B.A. 1.77 ACRES
P.R.O. 0.80 ACRES
CONT. 0.96 ACRES

WILLIAM H. OAKLEY & HELEN B. OAKLEY
LOT 2 0.01 ACRES (85 W.A.)

ROBERT P. LIVINGSTON
T.B.A. 6.62 ACRES

M. & M. BUTCH Plat No. 1
Vol. - 18 P.G. 32

BEGIN WORK
STA. 485+50.00

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'	

SEE SHEET 8
For Ramp A Details

SEE SHEET 9
For Ramp C Details

MATCH LINE – SEE DETAIL ABOVE

MATCH LINE STA. 502+00

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
Pcls 86 WL & 87 WL Added
Begin Acq. Sta. 488+16.78 Revised to Sta. 485+00
Pcl. 91 WL Revised
Rev. 11/16/62
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
Pcls. 85 WA, 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

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 7-A of 24

HUBBARD TOWNSHIP T-3-N R-1-W LOT 25

LOT 4

LOT 5

LOT 7

HUBBARD TOWNSHIP T-3-N R-1-W LOT 36

"M. & M. BUTCH PLAT No. 1"
(VOL. - 18, Pge 38)

BEGIN ACQUISITION TRU-I-80-8.90
STA. 485+01.40

POT ℄ I-80 STA. 485+01.40 =
POT. STA 19+98.81 ℄ ORIGINAL
ROPPELL-HETRICK ROAD (C.R. 23)

CR 23 ROPPELL-HETRICK RD.

MATCH LINE 23+50

END WORK STA. 24+65

MATCH LINE 23+50

HELEN CETOF ℄

Robert T. Lawson & Phyllis J. Lawson
91 0.05 ACRES

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'

1630 L.F. Type D R/W Fence

I.A.P.A.

Proposed L.A. R/W Line 7
N69°18'50"E 887.91

CONST. LIMITS

N69°18'50"E 234.10'

T.B.A. 0.15 ACRES
87 W.L.

I-80 489 TANGENT

N 67° 16' 46" E

℄ I-80

CONST. LIMITS

Michael N. Butch & Martha V. Butch
86 W.L.
T.B.A. = 0.03 ACRES
F.R.O. = 0.03 ACRES
CONT. = 0.06 ACRES

T.B.A. 1.81 ACRES
F.R.O. 0.19 ACRES
CONT. 2.00 ACRES

William H. Oakley & Helen B. Oakley
85
T.B.A. 0.115 ACRE
F.R.O. 0.115 ACRES
CONT. 0.230 ACRES

Robert P. Livingston
88
T.B.A. = 0.08 ACRES
F.R.O. = 0.09 ACRES
CONT. = 0.17 ACRES

Robert P. Livingston
88 W.L.
T.B.A. 6.28 ACRES

1690 L.F. Type D R/W Fence

Proposed L.A. R/W Line

S69°55'03"W 723.47'

S79°16'58"W 168.86'

S73°16'53"W 226.19'

Harold R. Freiheit
91 W.L.
T.B.A. 22.69 ACRES
F.R.O. 0.48 ACRES
CONT. 23.17 ACRES

EAST ALLOTMENT LINE - "M. & M. BUTCH PLAT No. 1"

WEST ALLOTMENT LINE "M. & M. BUTCH PLAT No. 1"

Nora Colletta

SOUTH ALLOTMENT LINE - "M. & M. BUTCH PLAT No. 1"

EXISTING RIGHT of WAY

BEGIN WORK STA 14+00

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

RIGHT OF WAY STA 485+01.40 TO STA 498+00.00

HUBBARD TOWNSHIP T-3-N R-1-W LOT 25

LONGVILLE PLAT
VOL. 3 PG. 58

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

(100) — ARTHUR Mc FARLAND & VIRGINIA Mc FARLAND
(99 WL) — NELLIE Mc FARLAND
(93 WL) — FRANK KARCHER
(92 WL) — EDWARD WALKER & MARY ELIZABETH WALKER

P.O.T. STA. 266+24.92 Const. ℄ U.S. 62 & S.R. 7 =
P.O.T. STA. 28+02.92 ℄ Ramp "A"

P.O.C. STA. 513+66.48 ℄ I-80
P.O.T. STA. 260+61.65 Const. ℄ U.S. 62 & S.R. 7

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	
Øs	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'

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.	Δ	32° 45'00"Rt.	$\Delta_1+\Delta_2$	14°13'57"Rt.	Δ	19°00'00"Rt.	Δ	114°57'15" Rt.	Δ	90° 38'45"Rt.
D	1° 30'	D	25° 27'53"	T_1	126.90'	D	12°43'57"	D	28°38'52"	D	28° 38'52"
T	198.07'	T	66. 11'	T_2	74.14'	T	75.30'	T	313.66'	T	202.27'
L	395.78'	L	128.61'	Ls	200.00'	L	149.23'	L	401.27'	L	316.41'
R	3819.72'	R	225.00'			R	450.00'	R	200.00'	R	200.00'
E	5.13'	E	9.51'			E	6.26'	E	172.00'	E	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'

SEE SHEET 7
For Ramp A Details
MATCH LINE STA. 502+00

℄ I-80 — MATCH LINE — SEE SHEET 9

℄ U.S. 62 & S.R. 7 — MATCH LINE — SEE SHEET 11

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 10c-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-I-W LOT 25

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-8.90	

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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

MATCH LINE - SEE SHEET 8

MATCH LINE STA. 502+00 - SEE SHEET 7 For Ramp C Details

Const. ℄ U.S. 62 & S.R. 7 - MATCH LINE - SEE SHEET 10

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"

TRU-I-80-0926

TRU-I-80-0941 L/R

Ramp D

Ramp C

Proposed L.A. R/W Line

1,080 L.F. Type D R/W Fence

Existing L.A. R/W Line

Proposed Channel Change

Const. Limits

Numerous Water Holes in Wet Season

Little Yankee Run

Nursery Beds (Poor Condition)

Meadow

Dump

Brush

Water

Edge of Dump Area

Fr. Barn

Fr. Chicken House

Fr. Sheds

Stone Drive

Mac. Drive

Concrete Walk

Guard Rail

Bridge

Open Mouth Conc. Inlet Apron

Intermediate Anchor Post Assembly

End Post Assembly

HAROLD R. FREIHEIT
T.B.A. 22.45 ACRES
P.R.O. 0.48 ACRES
CONT. 22.93 ACRES

MARVEL E. HIBLER
T.B.A. 1.47 ACRES
P.R.O. 0.35 ACRES
CONT. 1.82 ACRES

JOHN MALINER & MARIE MALINER
T.B.A. 4.37 ACRES
P.R.O. 0.42 ACRES
CONT. 4.79 ACRES

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-I-W LOT 36

RIGHT OF WAY STA. 502+00 TO STA. 513+66.48

HUBBARD TOWNSHIP T-3-N R-I-W LOT 26

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	TRU-I-80-8.90	

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TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 10 of 24

CLARISSA J. MINGLIN

(102) T.B.A. 0.27 ACRES	(102A NL) T.B.A.=0.01 ACRES P.R.O.=0.01 ACRES CONT.=0.02 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	

OHIO EDISON COMPANY

(126) T.B.A.=0.12 ACRES P.R.O.=0.01 ACRES CONT.=0.13 ACRES		
(126 NL) T.B.A. 0.01 ACRES P.R.O. 0.05 ACRES CONT. 0.06 ACRES		

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 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'
Ti 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'	

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'

Scale 1"=50'

Property Data as of August 15, 1961
Date of Completion 8/31/62
Rev. 10/5/62
L.A. Line Revised to ℄ HUBBARD-SHARON Rd.
P.I.'s 96-W, 97-W, 36 & 97 added
Rev. 11/12/62
L.A. Line Revised to outside face of Curb Reloc. HUBBARD-SHARON Rd.
P.I.'s 96-W, 97-W, 101-W, 102-W, 96, 97, 101 & 102 Revised
Fence Post Assembly Added
Index Nos. Revised
Rev. 5/20/63
P.I.'s 102-W, L & 102 Revised
P.I.'s 102A-W, 102A, 126-W, 126 Added
Rev. 7/19/63 - Const. Limits on Ramp E

RIGHT OF WAY STA. 513 + 66.48 TO STA. 524 + 00

HUBBARD TOWNSHIP T-3-N R-I-W LOT 35

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

HUBBARD TOWNSHIP T-3-N R-1-W LOT 26

THE LOIS REALTY COMPANY

YOUNGSTOWN SHEET and TUBE COMPANY

SEE SHEET 8
Const. ℄ U.S. 62 & S.R. 7 - MATCH LINE N 00°08'44"W
N 88°12'41"E 136.05'
263+36.08
100.00'
O.B.T. #108-119
Drainage Ditch
EXISTING L.A. R/W
916 L.F. Type D R/W Fence
End Post Assembly
Woods
N 88°12'41"E 1,048.85'
S 00°08'44"E
321.50
169.39
Proposed L.A. R/W Line
Intermediate Anchor Post Assembly
20" Oak
S 88°12'41"W 950.45'
CONST. LIMITS
101 WL
P.C. Sta. 10+50.00
℄ Ramp B
+50.12'
-50
MATCH LINE STA. 524+00
℄ I-80
TRU-I-80-0491 L/R
24" RCP
Light Woods
Ramp D
Swamp Area
Field
101 WL
THE LOIS REALTY COMPANY
T.B.A. 16.21 ACRES
P.R.O. 3.07 ACRES
CONT. 19.20 ACRES

P.O.C. STA. 513+66.48 ℄ I-80 =
P.O.T. STA. 260+61.65 Const. ℄ U.S. 62 & S.R. 7

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 12277.67'
E 201.51'

YOUNGSTOWN SHEET and TUBE COMPANY T.B.A. 0.45 ACRES
104 WL
Type-1 Stream Crossing
712.13'
Proposed LA R/W 7
S-88°12'41"-E
1408 L.F. Type D R/W Fence
637.13'
101 A WL
Intermediate Anchor Post Assembly
THE LOIS REALTY COMPANY T.B.A. 4.17 ACRES
Field
Swamp
Metal Shed
15% Grade
Wood Retaining Wall 13' High
Wood Retaining Wall 4' High
Intermediate Anchor Post Assembly
CONST. LIMITS
THE LOIS REALTY COMPANY T.B.A. 6.25 ACRES
103 WL
Exist Fence 7
MATCH LINE STA. 524+00
MATCH LINE STA. 538+00
℄ I-80
℄ SLAG RD.
P.O.T. STA. 531+14.40 ℄ I-80=
P.I. STA. 20+00.00 ℄ SLAG RD.
N-87°54'01"-E
N-86°42'23"-E
YOUNGSTOWN SHEET and TUBE COMPANY T.B.A. 0.49 ACRES
104 A WL
THE LOIS REALTY COMPANY T.B.A. 16.21 ACRES P.R.O. 3.07 ACRES CONT. 19.20 AC.
101 WL
P.T. Sta. 29+28.30
P.T. Sta. 529 + 88.03
Ramp E
N-76°42'23"-E
Intermediate Anchor Post Assembly
S-85°56'23"-W 289.71'
Type 1 Stream Crossing
101 A WL
SLAG ROAD & R.R.
S-27°19'31"-W
Dead Tree
CONST. LIMITS
1406 L.F. Type D R/W Fence
S-85°56'23"-W 923.41'
Proposed L.A. R/W 7
Intermediate Anchor Post Assembly
P.O.T. Sta. 32 + 28.30
SEE SHEET 10 For Ramp E Details
P.T. Sta. 24 + 84.81
S-60°02'52"-W 226.43'
P.C. Sta. 26+78.78
CURVE DATA RAMP E
P.I. STA. 28+03.62
Δ - 10°00'00" Rt.
D - 4°00'00"
T - 125.32' R - 1432.39'
L - 250.00' E - 5.47'
SLAG ROAD & R.R. Details
Sheet 22 has been deleted.

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 1358 L.F.
Fence Post Assembly Added
Index No's Revised
Pcl. 101-A WA, 104 WA Added
Re-drawn 7/19/63
Deleted Sht No. 22 of 24 ℔/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.f. from 1558 L.F. to 1408 L.F., & Rt from 1479 L.F. to 1406 L.F.
Rev. 11-1-63 : General Revisions

HUBBARD TOWNSHIP T-3-N R-1-W LOT 26

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

For Channel Outlet Details See Sht. 13

For NEW YORK CENTRAL R.R. Detail See Sheet 23

SCALE 1" = 50'

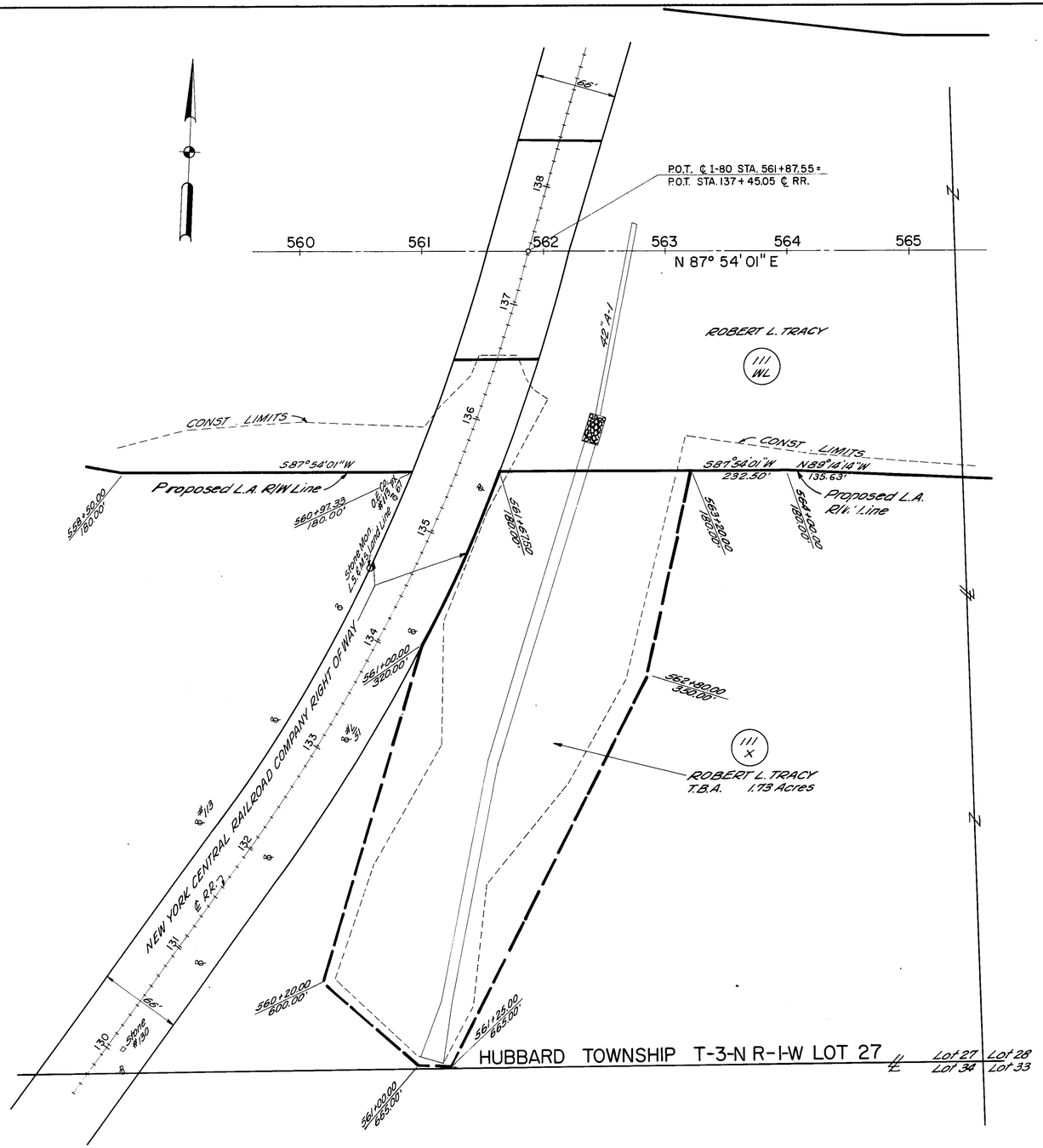
Property Data as of *August 15, 1961*
Date of Completion *7/30/62*
Sta. 561+36.81 Revised From 38.49' to 58.49' Aug 28, 1962
Rev. 10/11/62
Equation Sta. 549+31.81 Added
Index Nos. Added
Type D R/W Fence Lt. & Rt. Sta. 538+00-566+00 Added
Rev. 11/12/62
Fence Post Assembly Added
Channel Outlet Rt. Sta. 562+40 Notation Added
Index Nos. Revised
Rev. 7/19/63 Pcl. 103 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-80-8.90
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

HUBBARD TOWNSHIP T-3-N R-I-W LOT 28

MATCH LINE STA. 566+00

MATCH LINE STA. 580+00

MATCH LINE STA. 580+00

MATCH LINE STA. 594+00

N 87°54'01"E Proposed L.A. R/W Line 450.00'

569+50.00 175.00'

S 84°58'29"E 201.36'

571+50.00 150.00'

1,412 L.F. Type D R/W Fence

574+00.00 150.00'

576+00.00 215.00'

N 69°53'46"E 210.30'

N 85°32'59"E 446.24'

CONST. LIMITS

Intermediate Anchor Post Assembly

Horse Shed

N 87°54'01"E 250.00'

14" Maple

43" Elm

13" Elm

22" Elm

Haven Std.

10' Farm Lane

Barbed Wire Fence

Posture

150'

2 Std. Plain

2 Std. Barbed

ROBERT L. TRACY

III WL T.B.A. 16.33 ACRES

ROBERT L. TRACY

III WL T.B.A. 15.46 ACRES

567 568 ℄ I-80 569 570 571 572 573 574 575 576 577 578 579

N 87° 54' 01" E

+94

22" Maple

Woods

20" Oak

16" Oak

12" Oak

17" Oak

Intermediate Anchor Post Assembly

CONST. LIMITS

Intermediate Anchor Post Assembly

Intermediate Anchor Post Assembly

Intermediate Anchor Post Assembly

N 89°18'14"W 264.87'

CONST. LIMITS

583°48'53"W 701.78'

Proposed L.A. R/W Line

1,500 L.F. Type D R/W Fence

587+50.00 200.00'

5751+00.00 150.00'

N 82°01'09"W 457.05'

579+50.00 230.00'

Corner Post Assembly

Corner Post Assembly

35.06

S 49°54'01"W

HUBBARD TOWNSHIP T-3-N R-I-W LOT 28

HUBBARD TOWNSHIP T-3-N R-I-W LOT 28

N 87°54'01"E 195.22

N 81°32'31"E 180.59

S 58°26'36"E 180.28

End Post Assembly

CONST. LIMITS

Intermediate Anchor Post Assembly

JOSEPH BALZIC & SOPHIA BALZIC

114 WL T.B.A. 2.25 ACRES

112 WL T.B.A. 0.423 ACRES

ROBERT L. TRACY

III 0.87 ACRES

1,200 L.F. Type D R/W Fence

N 87°36'36"E

589+00.00 150.00'

592+30.90

592+26.84 150.00'

Intermediate Anchor Post Assembly

LOT 29

594+00.00 150.00'

N 87°54'01"E Proposed L.A. R/W Line

330.90'

Corner Post Assembly

PC Sta 592+30.90

44.01'

S 88°39'12"E 119.26'

CONST. LIMITS

ANASTASIA LACKWASKY

115 WL T.B.A. 21.41 ACRES
PRO. 0.49 ACRES
CONT. 21.90 ACRES

14" Elm

24" Elm

16" Elm 18" Elm 16" Elm 14" Elm 26" Maple 13" Maple 8" Maple 2-15" Elm 16" Elm

19" Cherry

Woods

Fence

581 582 583 584 585 586 587 588 ℄ I-80 589 590 591 592 593

N 87°54'01" E

35" Maple

29" Maple

36" Elm

89°51'40" TO TANGENT

Swamp

Dead Tree

32" Oak

P.O.T. ℄ I-80 STA. 582+22.16 =
P.O.T. STA. 670+44.50 ℄ RAILROAD

ESTHER KOSKO

113 WL T.B.A. 6.26 ACRES

Woods

Corner Post Assembly

24" Oak

17" Elm

30" Elm

16" Elm

2-18" Oaks

40" Oak

Switch Box

Signal Tower

36" Elm

Telephone Box

ERIE-LACKAWANNA RAILROAD COMPANY

35-AERIAL WIRES

End Post Assembly

CONST. LIMITS

Corner Post Assembly

S 87°54'01"W 430.90'

S 87°37'23"W 45.16'

1,311 L.F. Type D R/W Fence

S 49°14'25"W 128.06'

S 87°54'01"W 491.48'

Proposed L.A. R/W Line

P.I. STA. 607+58.98
Δ 37°19'55" LT.
D 1°16'
R 4523.35'
T 1528.08'
L 2947.26'
E 251.14'

Intermediate Anchor Post Assembly

CONST. LIMITS

R=4673.35'

C.H. S 78°34'56"W C.H. 1428.18', 1429.73' Arc.

LOT 29

LOT 28

LOT 29

For ERIE-LACKAWANNA R.R. Detail See Sheet 24

HUBBARD TOWNSHIP T-3-N R-I-W LOT 28

LOT 29

SCALE 1" = 50'

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 No's. Added
Rev. 11/19/62
Fence Post Assembly Added
Index No's. 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-80-890	

392/401

TRUMBULL COUNTY TRU-I-80-8.90
LIMITED ACCESS R/W
SHEET NO. 15 of 24

For Cul-de-Sac Details See Sheet 16

DIV. 4 R/W RECORD SECTION
A/G ... RECD ... R/W

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'

ROADSIDE REST CURVE DATA

P.I. STA. 3+61.49	P.I. STA. 7+63.29
Δ 4°51'31" LT.	Δ 14°21'13" LT.
D 1°30'	D 3°00'
T 161.49'	T 240.49'
L 322.80'	L 478.45'
R 3819.72'	R 1909.86'

OHIO-BELL TELEPHONE COMPANY
OHIO-EDISON COMPANY
EXISTING RIGHT OF WAY
ANASTASIA LACKWASKY
115 WL
T.B.A. 21.41 ACRES
P.R.O. 0.49 ACRES
CONT. 21.90 ACRES
1520 L.F. Type D R/W Fence
CONST. LIMITS
Intermediate Anchor Post Assembly
Proposed L.A. R/W Line
R=4373.35 Ch. N80°29'56"E Ch. 964.87' Arc. 966.84'
P.C. Sta. 2+00.00
P.C.C. Sta. 5+22.80
N65°24'36"E 444.42'
Corner Post Assembly
Brush Row
Field
Fence
3-Wire Barbed Wire Fence
36" Maple
12" Elm
Archery
MATCH LINE STA. 594+00
MATCH LINE STA. 609+00
595 596 597 598 599 600 601 602 ℄ I-80 603 604 605 606 607 608
P.O.C. ℄ I-80 STA. 607+27.92 =
P.O.T. STA. 22+46.30 ℄ FOX-NORTH RD.(CR.19)
64°22'31" Tangent to Curve
Existing Right of Way
Intermediate Anchor Post Assembly
CONST. LIMITS
N 87°54'01" E
S 66°33'50" W
S 88°33'45" W
S 68°43'59" W
N 50°34'06" E
THOMAS FEDORCHAK and ANNA FEDORCHAK
T.B.A. 0.07 ACRES
P.R.O. 0.01 ACRES
CONT. 0.08 ACRES
116 WL
℄ I-80 TANGENT
Trans. Line Steel Tower (Base)
P.O.S.T. ℄ I-80 STA. 606+82.18 =
P.O.T. STA. 20+00.00 FOX NORTH RD. ℄
60.00' ROAD ℄
FOX NORTH (C.R. 19)
EASEMENT
OHIO - EDISON COMPANY
100'
SURVEY ℄
Ch. S 78°34'56" W Ch. 1424.16'; Arc. 1429.73'
R=4673.35
1547 L.F. Type D R/W Fence
Proposed L.A. R/W Line
ANASTASIA LACKWASKY
115 WL
T.B.A. 21.41 ACRES
P.R.O. 0.49 ACRES
CONT. 21.90 ACRES

SCALE 1" = 50'

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 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

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
Par. 1/9 T.B.A. Revised from 5.15 Acres to 5.19 Acres
Par. 1 & 11 W. 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

DN.-4 R/W RECORD SECTION AUG 1962

C.R. 19 EXIST. FOX-NORTH RD.
END WORK Sta. 11+00
BEGIN WORK P.C. Sta. 6+50
EXISTING R/W LINE
Existing R/W
Proposed L.A. R/W Line 7
1941 L.F. Type D R/W Fence
Corner Post Assembly
Intermediate Anchor Post Assembly
P.C. Sta. 28+08.19 Survey ℄
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'
P.C. Sta. 11+01.25
P.R.C. Sta. 10+01.25
P.C. Sta. 16+20.87
P.T. Sta. 18+44.57
P.C. Sta. 21+24.55
P.T. Sta. 621+78.16
P.C.C. Sta. 23+18.21
CONST. LIMITS
Const. ℄ Reloc. FOX-NORTH ROAD
Tree Row
Orchard
Garden
Well
Conc. Slab
Private Pole
Frame House 2 Car Gar.
Fr. Pump House
Conc. Slab & Well
Field
Wood Clump
Pines 2"-6"
Woods
Stone Pile
Wooded Area
Start Brush Area
End Brush Area
O.E. Tower
#777 70 Tower
#777 71 Tower
Intermediate Post Assembly
Corner Post Assembly
Intermediate Anchor Post Assembly
1650 L.F. Type D R/W Fence
Proposed L.A. R/W Line
OHIO-EDISON COMPANY EASEMENT
MATCH LINE STA. 609+00
MATCH LINE STA. 625+00
MATCH LINE STA. 8+00
MATCH LINE STA. 24+00
For Reloc. FOX-NORTH RD. Details See Sheet 20
For Reloc. FOX-NORTH RD. Details See Sheet 17

ROADSIDE REST CURVE DATA

P.I. STA. 10+51.25	P.I. STA. 17+32.85	P.I. 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'

115 W.L. — T.B.A. 0.40 Acres
116 W.L. — THOMAS FEDORCHAK & ANNA FEDORCHAK — T.B.A. 1.54 ACRES, PRO. 0.27 ACRES, CONT. 1.77 ACRES
115 W.L. — ANASTASIA LACKWASKY — T.B.A. 2.41 ACRES, PRO. 0.49 ACRES, CONT. 2.190 ACRES
115 W.L. — T.B.A. 1.35 ACRES
117 W.L. — VERNON DOUGLAS & OPAL DOUGLAS — T.B.A. 5.07 ACRES
118 W.L. — JOSEPH NEMTH — T.B.A. 0.03 ACRES
119 W.L. — ANNA YOBE — T.B.A. 9.26 ACRES, PRO. 0.26 ACRES, CONT. 9.52 ACRES
119 W.L. — T.B.A. 5.19 ACRES

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.

HUBBARD TOWNSHIP T-3-N R-I-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

MATCH LINE STA. 634+50.00

JOHN KOVAL
T.B.A. 7.51 ACRES
P.R.O. 0.56 ACRES
CONT. 8.07 ACRES

STA. 10+75 ℄ Reloc. PRICE-SHAFFER RD.=
STA. 0+87.38 Constr. ℄ Reloc. STATE LINE RD.

Reloc. STATE LINE ROAD

Reloc.-PRICE-SHAFFER ROAD CONST. LIMITS
EXISTING RIGHT OF WAY
CONST. ℄

N 78° 25' 54" W

P.C. Sta 2+49.70
N 41° 19' 08.8" E
1+28.00 ℄ Reloc. STATE LINE RD.
Abutment Connection
Ditch
Fence
Locust
Elms
Hemlock
Wooded Area
Intermediate Anchor Post Assembly
N 80° 34' 06" E 668.19'
S 5° 40' 52" W 506.01'
N 39° 25' 54" W
P.C. Sta. 17+44.11
MATCH LINE STA. 20+00.00
CONST. LIMITS
R/W
P.T. Sta. 11+23.43
P.C. Sta 9+19.23
N 78° 25' 54" W
CONST. LIMITS
Cultivated
119
ANNA YOBE
T.B.A. 6.19 ACRES
Type I Stream Crossing
STA. 18+25 Constr. ℄ Reloc. PRICE-SHAFFER RD.
STA. 32+23 Constr. ℄ Reloc. FOX-NORTH RD.
N 42° 15' 14" E
CONST. LIMITS
MATCH LINE STA. 20+00.00

CURVE DATA
RELOC. PRICE-SHAFFER ROAD
P.I. STA. 10+25.47
Δ 39° 00' 00" RT.
D 19° 05' 55"
T 106.24'
L 204.20'
R 300.00'
E 18.26'

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'

Proposed L.A. R/W Line
901 L.F. Type D R/W Fence
920 L.F. Type D R/W Fence
CONST. LIMITS
POT. ℄ I-80 STA 632+75.00
STA. 14+15.03 ℄ Reloc. PRICE-SHAFFER RD.
℄ I-80
630
631
632
633
634
N 50° 34' 06" E
S 5° 40' 52" W
Intermediate Anchor Post Assembly
Abutment Connection
Wooded Area
Cultivated
119 A
ANNA YOBE
T.B.A. 1.06 ACRES
P.R.O. 0.54 ACRES
CONT. 1.60 ACRES
119 W.L.
ANNA YOBE
T.B.A. 9.26 ACRES
P.R.O. 0.26 ACRES
CONT. 9.52 ACRES
P.T. Sta. 27+71.28 = Sta. 628+20.49 (75' Lt.)
628+00.00 150.00'
627+00.00 180.00'
N 62° 46' 05" E 104.80'
N 34° 32' 29" E 266.35'
MATCH LINE STA. 625+00
25
26
27
628
629
626
627

P.C. Sta. 26+37.18
P.T. Sta 28+47.61
CONST. LIMITS
Wheat Field
Wooded Area
Reloc. FOX - NORTH ROAD
N 58° 30' 17" E
CONST. ℄
R/W
MATCH LINE STA. 24+00

CURVE DATA
RELOC. FOX - NORTH ROAD
P.I. STA. 27+43.16
Δ 16° 15' 03" LT.
D 8° 00'
T 105.98'
L 210.43'
R 716.20'
E 7.80'

BEGIN WORK
STA. 5+20.49
OHIO-EDISON COMPANY EASEMENT
S 1° 11' 54" E
LOT 30
LOT 29

HUBBARD TOWNSHIP T-3-N R-I-W LOT 29

LOT 30

RECEIVED
SEP 4 1962
State Highway Dept.

Scale 1"=50'

Property Data as of August 15, 1961
Date of Completion 8/25/62

Rev. 10/18/62
Rev. 1/19 Rt. of Way Revised Lt. of Sta. 28+49 to Sta. 31+40 Fox-North Rd.
Const. Limits Added Reloc. PRICE-SHAFFER Rd. & FOX-NORTH RD.
Rev. 11/12/62
Rev. 1/19 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

HUBBARD TOWNSHIP T-3-N R-I-W LOT 30

HUBBARD TOWNSHIP T-3-N R-I-W LOT 11

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

CURVE DATA
RELOC. STATE LINE ROAD
P.I. STA. 9+17.32
Δ 19°01' 26" LT.
D 8°00'
T 120.00'
L 237.80'
R 716.20'

CURVE DATA
RELOC. STATE LINE ROAD
P.I. STA. 4+58.88
Δ 32°33' 48" RT.
D 8°00'
T 208.18'
L 407.04'
R 716.20'

CURVE DATA
RELOC. STATE LINE ROAD
P.I. STA. 17+78.22
Δ 14°32' 10" RT.
D 1° 12' 02"
T 608.51'
L 1210.54'
R 4771.47'

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'

EDWARD W. CORLL & LOUIS R CORLL
T.B.A. 369 ACRES

JOHN KOVAL
T.B.A. 7.51 ACRES
P.R.O. 0.56 ACRES
CONT. 8.07 ACRES

JOHN KOVAL
T.B.A. 8.82 ACRES
P.R.O. 0.26 ACRES
CONT. 9.08 ACRES

ANNA YOBE
T.B.A. 9.26 ACRES
P.R.O. 0.26 ACRES
CONT. 9.52 ACRES

ANNA YOBE, HELEN KOVAL, DOROTHY KOVAL & MARGARETA KOVAL - LIFE ESTATE
RONALD YOBE and JOSEPH YOBE JR.
Remaindermen

T.B.A. 0.25 ACRES

T.B.A. 0.10 ACRES

MARY YEREB
T.B.A. 2.73 ACRES

ANDREW FAY BLAIR
& NANCY BLAIR

Reloc. STATE LINE ROAD
CONST. LIMITS
R/W
Const. ℄
Proposed L.A. R/W Line
Existing R/W
Existing PRICE-SHAFFER ROAD (CR-19)
Intermediate Anchor Post Assembly
1585 L.F. Type D Fence
1512 L.F. Type D Fence
Cultivated
Pasture
Field Drive
Stone Drive
Ditch
Fence
Type 2 Stream Crossing
Type 3 Stream Crossing
Brush Area
Gate
Mail Box
1 Sty. Fr. Shed
2 Sty. Fr. Dwl.

N 41°19'08" E
N 73°52'56" E
N 54°51'30" E
N 69°23'40" E
N 50°34'06" E
S 50°34'06" W
S 56°19'28" W
N 15°03'14" E
N 73°11' 25" E TANGENT
TANGENT I-80
N 87°30'45" E
Ch. N 56°19'58" E 947.05' R=4721.37' ARC 950.42'
Ch. S 67°01'54" W 763.21' R=4421.37' ARC 764.16' CHORD

P.T. 6+56.74 120.00'
P.C. Sta. 7+97.
P.C. 7+97.32 105.00'
P.T. 10+35.12
P.T. 10+35.12 95.00'
P.T. Sta. 6+56.74
P.C. Sta. 11+69.71
P.C. Sta. 639+81.49
P.O.T. ℄ I-80 STA. 635+94.40 = P.O.T. STA. 20+00.00 ℄ PRICE SHAFFER RD.
P.O.T. ℄ I-80 STA. 635+87.10 = P.O.T. STA. 19+94.28 ℄ PRICE-SHAFFER RD.
MATCH LINE STA. 634+50
MATCH LINE STA. 650+00
Ch. 1-80 STA. 640+00
Ch. 1-80 STA. 641+00
Ch. 1-80 STA. 642+00
Ch. 1-80 STA. 643+00
Ch. 1-80 STA. 644+00
Ch. 1-80 STA. 645+00
Ch. 1-80 STA. 646+00
Ch. 1-80 STA. 647+00
Ch. 1-80 STA. 648+00
Ch. 1-80 STA. 649+00

For Cul-de-Sac Details See Sheet 21

For Continuation of Exist. PRICE-SHAFFER ROAD See Sheet 21

Scale 1"=50'

Property Data as of August 15, 1961
Date of Completion 8/22/62
Rev. 10/8/62
Sta. Equation 635+87.10 Added
Const. Limits State Line Rd Added
Rev. 11/2/62
Rt. 121 West & Revised
Fence Post Assembly Added
Index No.'s Revised

SEP 4 1962
State Highway Engr.
Div. No. 2

HUBBARD TOWNSHIP T-3-N R-I-W LOT 30

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

HUBBARD TOWNSHIP T-3-N R-I-W LOT 11

CURVE DATA
RELOC. STATE LINE ROAD
P.I. STA. 17+78.22
Δ 14° 32' 10" RT.
D 1° 12' 02"
T 608.51'
L 1210.54'
R 4771.47'

CURVE DATA
RELOC. STATE LINE ROAD
P.I. STA. 28+58.51
Δ 61° 12' 40" LT.
D 8° 00' 00"
T 423.65'
L 765.14'
R 716.20'

P.T. 23+80.25
P.C. 24+34.86
P.C.C. Sta. 657+86.43
MATCH LINE STA. 650+00
MATCH LINE STA. 29+00
END WORK Sta. 28+32.16
END PROJECT Sta. P.C.C. 657+86.43
Reloc. STATE LINE ROAD
847 L.F. Type D R/W Fence
717 L.F. Type D R/W FENCE
Proposed L.A. R/W Line
CONST LIMITS
Intermediate Anchor Post Assembly
End Post Assembly
Required Right of Way Line for L.A. (84 Others)
Required Right of Way Line for Limited Access (84 Others)
Legal R/W Line
Legal Right of Way Line
(Deed Call) N 84°38' W 432.80'
(Deed Call) S 88°W 1249.03'
N 69° 23' 40" E
N 73° 11' 25" E
S 87° 50' 45" W 880.03'
S 01° 18' 35" E
N 8° 11' 00" E
T.B.A. 3.49 ACRES
T.B.A. 3.69 ACRES
T.B.A. 2.73 ACRES
T.B.A. 0.08
EDWARD W. CORLL & LOUIS R. CORLL
JOHN ONDIC & MARY ONDIC
JOHN OPALENIK & HELEN OPALENIK
OHIO
PENNSYLVANIA
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'
Relocated TWP. RD. NO. 304 (84 Others)
TOWNSHIP ROAD NO. 304
Entire Area Included in Required Right of Way
Pasture
Woods
Swamp
Field
Brush
Fence
Guy Pole
Stone Culvert
Scale 1"=50'

Property Data as of August 15, 1961
Date of Completion 8/23/62
Rev. 10/8/62
Pcl. 125AX Added
Const. Limits State Line Rd. Added
Rev. 11/2/62
Fence Post Assembly Added
Index No's. Revised

SEP 4 1962

HUBBARD TOWNSHIP T-3-N R-I-W LOT 30

RIGHT OF WAY STA. 650+00 TO STA. 657+86.43 & Reloc. STATE LINE ROAD

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

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'

BEGIN WORK STA. 0+50.00

P.O.S.T. ℄ I-80 STA. 606+82.18 =
P.O.T. STA. 20.+00.00 FOX – NORTH RD. ℄

Type D R/W Fence
Proposed L.A. R/W Line
℄ I-80
STA. 605+00
605.0000 / 18000 Intermediate Anchorage Assembly
CONST. LIMITS 5
606+26.64 / 150.00'
606+83.34 / 94.94'
606+40.19 / 150.00'
606+39.22 / 150.00'
℄ 22°23'31" Tan. to Curve
Type D R/W Fence
N 65°24'38"E 244.12'
Proposed L.A. R/W Line
CONST. LIMITS 4
608+29.67 / 150.00'
608+30.67 / 150.00'
608+40.10 / 150.00'
N 87°54'01"E
N 50°34'06"E
STA. 609+00
608

115 WL.
ANASTASIA LACKWASKY
T.B.A. 21.41 ACRES
PRO. 0.49 ACRES
CONT. 21.90 ACRES

Fr. Shed ℄ Gar.
Frame Barn
Fr. Corn Crib
Fr. Shed
2½ Stry Fr. Dwl.
Stone Drive
Fence
36" Maple
12" Maple
℄ EXISTING RIGHT OF WAY
O.B.T. #11.19-34
10" C.M.P.
℄ 2' Ditch
(Loose Stone)
16" C.M.P. (Post Cond.)
Field Dr.
℄ 1.5' Ditch
Corner Post Assembly
Intermediate Anchorage Assembly
MONUMENT
For Cul-de-Sac Details See Sheet 16
115 A
T.B.A. 0.40 ACRES
54°33'46"W 50.00'
N 88°13'45" 50.01'

P.O.C. ℄ I-80 STA. 607+27.92 =
P.O.T. STA. 22+46.30 ℄ FOX – NORTH RD. C.R. 19

Brush
O.B.T. #9.12
2-24" C.M.P.
2-12.3 Stone Hdw.
N 4°09'21"E
2-14.6 Stone Hdw.
14" Maples
18" Maple
15" Maple
12" Maples
17" Maple
O.B.T. #9.13
EXISTING RIGHT OF WAY
3+52.00 / 78.00'
℄ SURVEY ℄
℄ 1.5' Ditch
FOX NORTH ROAD (C.R. 19)
N 4°33'46"E
O.B.T. #18.39
Field Drive
Septic Tk. Dis.
12" R.C.P.
12" Oak
4" W.C.P.
2" Map.
3" Peach
8" Maple
6" Maple
6" Peach
4" Peach
27" Oak
13" Oak
19"
24" Oak
P.C. Sta. 0+81.25
2+00.00 / 40.00'
1-12" Pvmt.
2+40.00 / 40.00'
2+80.00 / 40.00'
13-12" Map.
1½ Stry Frame
Trans. Line Steel Tower Base
Corn Field
CONST. LIMITS 3
OHIO-EDISON COMPANY EASEMENT
Trans. Line Steel Tower Base
608+20.67 / 150.00'
N 58°38'58"W 117.93'
S 66°38'58"W 117.93'
608+40.10 / 150.00'
N 50°34'06"E
116
116 WA
116 WL.
T.B.A. 0.07 ACRES
PRO. 0.01 ACRES
CONT. 0.08 ACRES
Pile of Stones
CONST. LIMITS 2
R/W
5+75.00 / 40.00'
P.T. Sta. 5+75.33
Const. ℄ Reloc. FOX-NORTH RD.
N 58°30'17"E
8+00.00 / 40.00'
MATCH LINE STA. 8+00
For Reloc. FOX – NORTH RD. Details See Sheet 17

116
THOMAS FEDORCHAK & ANNA FEDORCHAK
T.B.A. 1.54 ACRES
PRO. 0.27 ACRES
CONT. 1.81 ACRES

CURVE DATA
RELOC. FOX - NORTH ROAD
P.I. STA. 3+48.65
Δ 54°20'56" RT.
D 11°00'
T 267.40'
L 494.08'
R 520.87'
E 64.71'

SCALE 1"=50'

Property Data as of August 15, 1961
Date of Completion 8/22/62
Rev. 10/12/62
Station Equation 607+27.92 Added
PCL 116 WA Added
Const. Limits FOX-NORTH RD. Added
Rev. 11/12/62
PCL 115 WL Revised
Index No's. Revised

RIGHT OF WAY Reloc. FOX – NORTH RD.

HUBBARD TOWNSHIP T-3-N R-I-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

Type D R/W Fence
END WORK STA. 0+55.
Sta. 1+50 Cul-de-Sac =
Sta. 0+00 Field Drive
122 A
JOHN KOVAL
T.B.A. 0.25 ACRES
122 NA
0.03 ACRES
Const. Limits
Proposed L.A. R/W Line
Field Drive
P.R.C. Sta. 1+12.83
8.5'm EXISTING R/W
Dry Ditch
Small Pool
8" Cherry
8" Elm
4" Crab Apple
50" Oak
S 77° 50' 09" E
6" Elm
16" Elm
20" Cherry
Mailbox
30" CMP
Gate
Q.R.T. #57-8
1-13 Headwall
Stone Blk.
3" Apple
EXISTING R/W
36" Elm
Sta. 3+38 Cul-de-Sac
Sta. 0+00 Drive Rt.
1 Sty. Fr. Shed
8" Cherry
30" Cherry
18" Locust
8" Wild Cherry
2-6" Elm
EXIST. PRICE SHAFFER ROAD
(CR.-18)
N 13° 03' 14" E 648.68
P.T. Sta. 3+01.33
Shade Line
Sta. 3+81.33 =
P.C. Sta. 0+50
Porch
2 Sty.
Fr. Dwl.
LIMIT OF WORK
Sta. 0+00
ANNA YOBE, HELEN KOVAL, DOROTHY KOVAL & MARGARETA KOVAL - LIFE ESTATE
121
RONALD YOBE & JOSEPH YOBE Jr., Remaindermen
T.B.A. 0.08 ACRES
P.R.O. 0.02 ACRES
CONT. 0.10 ACRES
EXISTING R/W
Small Ditch
Apple Orchard
Pasture
N 12° 38' 26" E
25+45.00
101.00
12" Cherry
12" Apple
16.8'm
10.8'm
Pump
2 Wall
2 Sty. Fr. House
Conc. Blk. Gar.
Fr. Shed
Gravel Drive
PT 27+03.00
10.00
16"
27+03.00
2 Sty. Fr. Dwl.
Alum. Mail Box
Mail Box
EXISTING R/W
14" Cherry
8" Apple
8" Plum
25+32.00
44.00
14" Walnut
30" Walnut
Guy Pole
5/16 Willow
Brush
10" Dia. Brush Pile
STA. 0+00 ℄ Connector Lt. =
STA. 25+30 ℄ Reloc. PRICE-SHAFFER RD.
8" Wild Cherry
24+35.20
15.00
P.T. Sta. 22+19.50
22+89.50
40.00
R/W
CONST. LIMITS
22
Const. ℄
21
Reloc. PRICE-SHAFFER RD.
N 80° 47' 38" E 24
T.B.A. 5.19 ACRES
119
MATCH LINE STA. 20+00
20+00.00
40.00
For Reloc. PRICE SHAFFER ROAD Details SEE SHEET 17
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'
ANNA YOBE
T.B.A. 5.19 ACRES
P.C. Sta. 24+35.20
24+94.00
60.00
22+39.50
50.00
25+19.00
Stump
LIMITS
Guy Pole
5/16
27+03.00
30.00
14" Stump
14" Maple
2-14" Maple
40" Maple
10" Maple
14" Maple
Can & Old Wood Dump
14" Walnut
Shade 12'x8' 145.6'
12" Walnut
14" Hickory
24" Elm
18" Elm
18" Dead Tree
P.T. Sta. 27+03.00
END WORK STA. 27+50
N 18° 03' 14" E
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'
123
ANDREW FAY BLAIR & NANCY BLAIR
Uncultivated
27 + 03.00
S 72° 49' 54" E
Mail Box
(C.R 18) - Exist. - PRICE - SHAFFER - ROAD
18" R.C.P.
#117-76
8" Twin W. Cherry
#117-77
2-14" Locust
14" Cherry
12" C.M.P.
12" Apple
16" Apple
Lilac
12" Shade Drive
1/2" Cherry
2 Sty. Fr. House
Fr. Gar.
10' Dirt Drive
2 Sty. Fr. House
Uncultivated
120
T.B.A. 0.19 ACRES
P.R.O. 0.12 ACRES
CONT. 0.31 ACRES
MARY F. ALEXANDER

HUBBARD TOWNSHIP T-3-N R-I-W LOT 30

Scale 1"=50'

Property Data as of August 15, 1961
Date of Completion 8/23/62
Rev. 10/18/62
Const. Limits PRICE-SHAFFER RD. Added
Rev. 11/23/62
PCL 121 West & Revised
Rev 4/16/63
Pcl 120 Name Changed

RIGHT OF WAY Reloc. PRICE - SHAFFER RD.

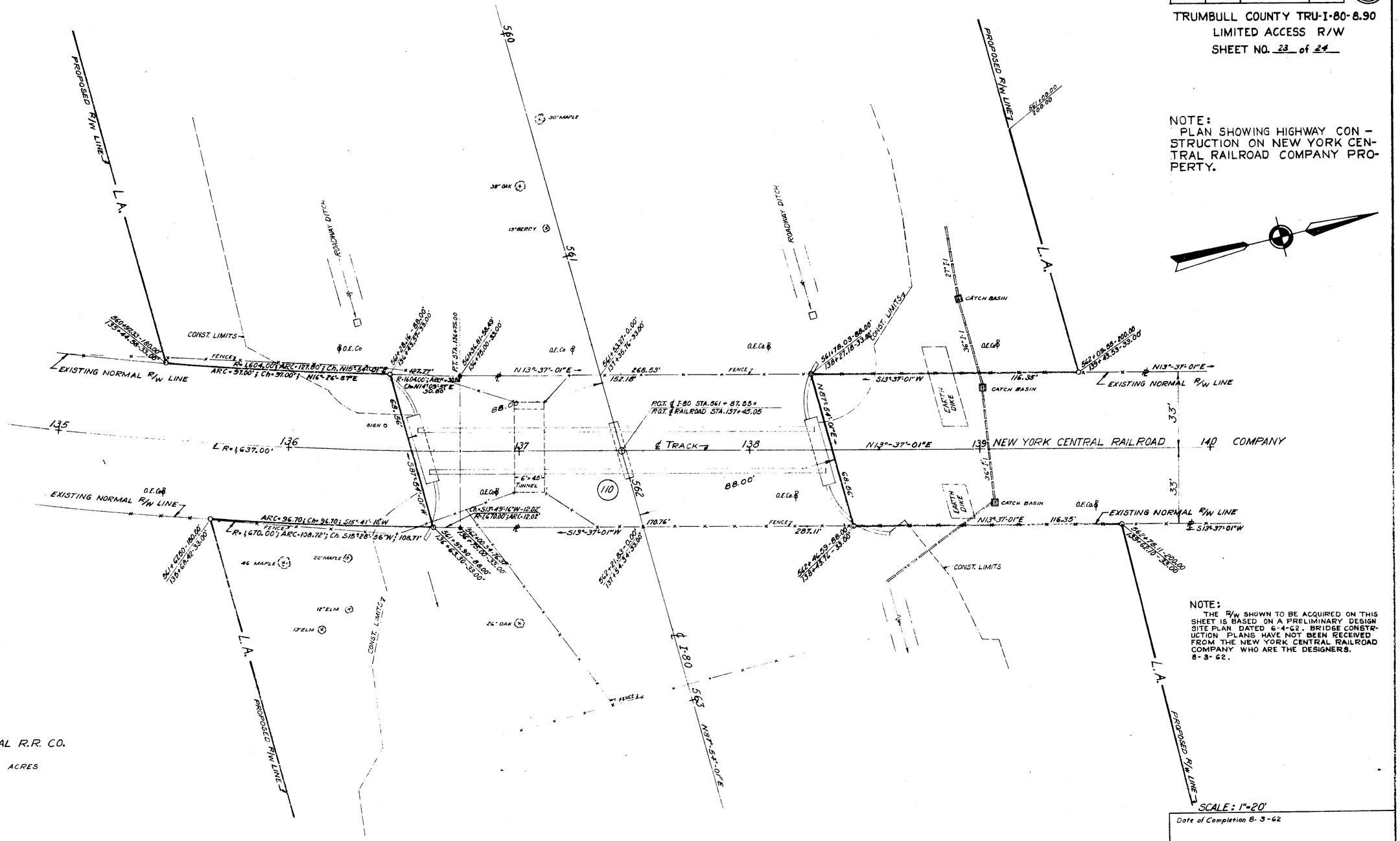
HUBBARD TOWNSHIP T-3N R-1W LOT 27

FED.ED. 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

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 6-1-62. BRIDGE CONSTRUCTION PLANS HAVE NOT BEEN RECEIVED FROM THE NEW YORK CENTRAL RAILROAD COMPANY WHO ARE THE DESIGNERS.
8-3-62.

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 V224 2

DIV. 4 R/W
RECORD SECTION
AUG 9 1963
RECD. FWD

HUBBARD TOWNSHIP
LOT 28 T-3-N R-1-W

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

	℄ 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+47.98 42.27'	671+05.46 60.37'
D	581+35.08 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+93.18 79.37'
G	581+78.19 65.94'	669+93.18 60.37'
H	581+69.69 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 39.65'	669+96.10 25.25'
M	582+12.50 63.69'	671+08.40 8.25'
N	582+19.36 39.65'	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 79.56'	669+38.94 80.00'

ERIE-LACKAWANNA R.R. CO.

(112 Aerial) CONTAINING 0.631 ACRES
(112 SL) CONTAINING 0.420 ACRES
(112 GL-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 VS 1-0H, formerly V90H-3

SCALE: 1" = 20'

Date of Completion 7-23-62
Date of Revision 11-1-62

Mega-Flex Tracing