FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-70-7(12)193	

1/485

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
GUE - 40 - 23.88
BEL - 40 - 0.00
OXFORD & KIRKWOOD TOWNSHIPS
VILLAGE OF FAIRVIEW
GUERNSEY COUNTY
BELMONT COUNTY

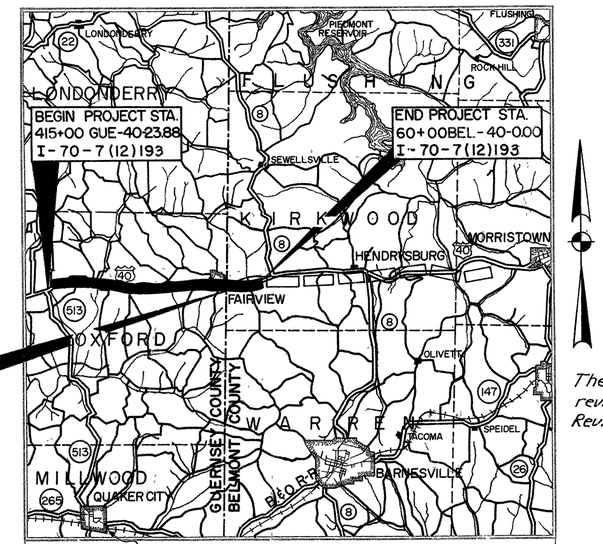
GUERNSEY COUNTY & BELMONT COUNTY
GUE - 40 - 23.88
BEL - 40 - 0.00

I - 70 - 7 (12) 193
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.

CONVENTIONAL SIGNS

County Line	
Existing Right of Way	R/W
Existing Limited Access	LA
Limited Access Only	LA
Right of Way Only	R/W
Limited Access and Right of Way	LA / R/W
Township Line	
Section Line	
Center Line	
Corporation Line	
Fence Line	
Guard Rail (existing)	
Guard Rail (proposed)	
Railroads	
Power Poles	
Telephone Poles	
Trees or Stumps (existing)	
Trees or Stumps (to be removed)	
Delineators	



Delivery Point: Quaker City, Ohio B.&O. Railroad
Average haul from siding: 9 Miles

The following sheets were revised: 1, 13, 14, 15, 16 & 407Q
Rev. 11-4-64 C.E.H.

LOCATION MAP
SCALE OF MILES
0 1 2 3 4 5 6

Portion to be improved
State Roads
Construction under other Contracts
Other Roads

SCALE

Plan	0'	50'	100'
Profile-Horizontal	0'	50'	100'
Profile-Vertical	0'	10'	20'
Cross Sections	0'	5' 10'	20'

INDEX OF SHEETS

Title Sheet	1	Main Line Cross Sections	72 - 272
Schematic Layout Plan	2 - 3	Co. Highway No. 114 (N) Cross Sections	273 - 275
Typical Sections	4 - 9	Co. Highway No. 27 Plan & Profile	276 - 286
General Notes	10 - 12	Co. Highway No. 27 Cross Sections	287 - 318
Summary of Quantities	13 - 16	Twp. Road No. 213 Cross Sections	319 - 320
Calculation Sheets	17 - 18	Co. Highway No. 286	321 - 323
Superelevation Charts	19 - 22	Co. Highway No. 202 Cross Sections	324 - 336
Plan & Profile	23 - 61	Cemetery Road Plan & Profile	337
Interchange Grading Plans	62 - 63	Cemetery Road Cross Sections	338 - 339
Ramp Profiles	64 - 66	Co. Highway No. 114 Plan & Profile	340 - 343
Pavement Details	67 - 71	Co. Highway No 114 Cross Sections	344 - 361
		Service Road No. 4 & Reloc. C.H. 254	362 - 407 & 407 - 407Q
		Structures Span 20' & Under	408 - 439
		Miscellaneous Details	431 - 440
		Structures - Over 20' Span	441 - 453
		Right of Way See R/W Engrs. File	454 - 485

LINE DATA

Begin Project Station 415+00
Equation 657+41.53 BK = 9+99.42 AH.
End Project Station 60+00
Net Length for Project 29,242.11 Lin. Ft. or 5.538 Miles
Add for Side Roads 25,944.18 Lin. Ft.
(See Sheet 12)
Add for West Approach 370.00 Lin. Ft.
Sta. 411+32 to Sta. 415+00

Net Length of Work 55,556.29 Lin. Ft. or 10.522 Miles

File No.	GUERNSEY COUNTY	I.R. 70	GUE 40-23.88
	BELMONT COUNTY	I.R. 70	BEL 40 - 0.00
	Date of Letting		196
	Contract No.		

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

Approved James T. Hoo
Date 10-7-63 Division 5 Deputy Director

Approved D. K. Overman
Date 4-24-64 Engineer of Bridges

Approved R.M. Rickett
Date 4-30-64 Engineer of Location & Design

Approved R.E. Shultz
Date 4-30-64 Deputy Director of Design & Construction

Approved T.H. Boyard
Date 4-16-64 Deputy Director of Right of Way

Approved J.W. Wilson
Date 5-15-64 Deputy Director of Planning & Programming

Approved _____
Date _____ First Assistant Director

Approved P.E. Poole
Date 5-15-64 Director of Highways

PLANS PREPARED BY
RACKOFF ASSOCIATES
ENGINEERS
COLUMBUS, OHIO
Melvin Rackoff MELVIN RACKOFF

STATE OF OHIO * MELVIN RACKOFF * 21116 * REGISTERED PROFESSIONAL ENGINEER

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION ENGINEER DATE

Rev 11-4-64 C.E.H.
Rev. 5-15-64

Supplemental Prints of Standard Construction Drawings											
B-T-70-71	11-15-60	HW-A&B	7-15-57	I-8 C.B. NO.5	2-1-63					CS-2-54 5/16 & 2-2-59	
B-T-71R.	3-2-53	HW-C	7-15-57	I-8 C.B. NO.8	2-1-63	I-15 NO.1	11-15-60	L.J. NO.1	7-1-55	AR-1-57	4-2-62
DR-1	1-3-55	HW-E	2-1-63	I-8 C.B NO.6	2-1-63	I-15 NO.2-A	8-17-60	RI-1	7-15-58	L-1	4-1-50
		I-1	11-15-60					T-35	1-2-56	L-3	4-1-50
				I-8 M.H. NO.1	2-1-63			T-J	9-12-60		
FAC I-1	2-25-64	I-8 C.B. 2-3&2-4	2-1-63	I-8 M.H. NO.1-A	2-1-63	I-15 NO. 5A	2-1-63	AS-1-54	7-5-62		
FAC I-2	2-25-64	I-8 C.B. 25&26	2-1-63	I-8 M.H. NO.2	2-1-63	I-21-23	8-1-56	L-3 A	4-1-50		
G-7.07	4-1-64	I-8 C.B. NO.4	2-1-63	I-12	2-1-63			S. P-53	6-30-61		

Supplemental Specifications			
		I-125	REV. 6-26-61
		I-127	REV. 1-15-62
CE 101.04	5-22-56	S-101-	7-12-62
L-120	REV. 1-2-62	T-335	10-26-63
M-107.18	REV. 4-3-61		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

2/485

SCHEMATIC LAYOUT PLAN

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00

SCALE IN FEET

0 400 800 1200 1600

NOTE
FOR ADDITIONAL WORK ON C.R. 286, C.R. 25, TR 81, & C.R. 254, SEE SHEETS #407A THRU 407Q

MAINLINE CURVE DATA
P.I. Sta. 443+75.60
Δ = 45°45'15" Rt.
D = 01°51'00"
R = 3097.07'
L = 2473.20'
T = 1306.79'
E = 264.41'

MAINLINE CURVE DATA
P.I. Sta. 490+56.12
Δ = 16°34'33" Lt.
D = 00°23'58"
R = 14343.87'
L = 4149.72'
T = 2089.45'
E = 151.38

BEGIN WORK C.H. 27
STA. 114+18

TWP. 35

POT. STA. 114+10.00 & RELOC. C.H. 27 =
POC. STA. 62+11.50 & RELOC. TWP. RD. 35

TWP. RD. 35 RELOC. (BY OTHERS)

BEGIN PROJECT
GUE. 40-23.88
BEL. 40-00.00
STA. 415+00.00

RELOC. C.H. 27

C-1 C-2 C-3 C-4 C-5 C-6 C-7 C-8 C-9 C-10

N. 62° 09' 06" E.

℄ SURVEY STA. 418+70
℄ CROSSOVER

HOLD U.S. 40

CODE 9766

BEGIN WORK
STA. 411+30

℄ SURVEY STA. 416+82
℄ TEMPORARY CROSSOVER

I-70-7(10)187 I-70-7(12)193

P.C. STA. 455+42.01

P.I. STA. 455+14.30 (488)

TWP. 288

P.C. STA. 0+00 C.H. 286 CONN. =
P.O.C. STA. 174+00 RELOC. C.H. 27

C.H. 286 BEGIN WORK
STA. 0+08.06

RELOC. C.H. 27

C.R. 286

℄ C.H. 286 CONN.

P.C. STA. 469+66.67

TWP. 213

S. 72° 35' 09" E.

CURVE DATA
C.H. 286 CONN.
P.I. STA. 0+88.86
Δ = 24°30'00" Lt.
D = 14°00'00"
R = 409.26'
L = 175'
T = 88.86'
E = 9.54'

END WORK
STA. 3+00

P.T. STA. 178+10.20 & C.H. 27 BK. =
P.O.T. STA. 10+33.11 & C.H. 27 AH.

BEGIN WORK TWP 213
STA. 0+08.5

BRIDGE Nos.
GUE. 40-25 27 Lt & Rt.

P.T. STA. 511+16.38

Dead End

END WORK
STA. 35+80

SEC. 26 SEC. 20
SEC. 25 SEC. 19
SEC. 20 SEC. 14
SEC. 19 SEC. 13

CURVE DATA FOR C.H. 27 RELOCATION

CURVE NO. 6	CURVE NO. 7	CURVE NO. 8	CURVE NO. 9
CURVE DATA	CURVE DATA	CURVE DATA	CURVE DATA
P.I. STA. 120+36.18	P.I. Sta. 17+21.79	P.I. Sta 24+32.39	P.I. Sta. 30+04.70
Δ = 13°59'30" Lt.	Δ = 17°20'00" Lt.	Δ = 80°00'00" Rt.	Δ = 28°42'00" Lt.
D = 4°00'00"	D = 7°00'00"	D = 14°00'00"	D = 14°00'00"
T = 175.77'	T = 124.76'	R = 409.26'	R = 409.26'
L = 349.79'	L = 247.62'	T = 343.41'	L = 205.00'
E = 10.74'	R = 818.50'	L = 571.43'	T = 104.70'
R = 1432.39'	E = 9.45'	E = 124.99'	E = 13.18'

CURVE NO. 10	CURVE NO. 1	CURVE NO. 2	CURVE NO. 3
CURVE DATA	CURVE DATA	CURVE DATA	CURVE DATA
P.I. Sta. 34+08.34	P.I. STA. 119+82.82	P.I. STA. 134+46.12	P.I. STA. 141+75.79
Δ = 41°11'30" RT.	Δ = 34°42'15" LT.	Δ = 5°47'45" RT.	Δ = 12°27'25" RT.
D = 15°00'00	D = 10°00'00"	D = 2°30'00"	D = 2°30'00"
R = 381.97'	T = 129.39'	T = 118.02'	T = 250.13'
L = 274.61'	L = 247.71'	L = 231.83'	L = 498.28'
T = 143.54'	R = 572.96'	R = 2291.83'	R = 2291.83'
E = 26.08'	E = 27.43'	E = 2.93'	E = 13.21'

CURVE NO. 4
CURVE DATA
P.I. STA. 153+17.25
Δ = 27°10'50" RT.
D = 2°00'00"
T = 692.59'
L = 1359.11'
R = 2864.79'
E = 82.53'

CURVE NO. 5
CURVE DATA
P.I. STA. 172+34.75
Δ = 9°23'22" RT.
D = 4°00'00"
T = 117.63'
L = 234.74'
R = 1432.39'
E = 4.82'

CURVE DATA FOR C.H. 254

CURVE NO. 1	CURVE NO. 2	CURVE NO. 3
P.I. STA. 10+66.86	P.I. STA. 13+44.08	P.I. STA. 39+79.95
Δ = 86°16'06" Lt.	Δ = 17°07'30" Rt.	Δ = 21°00'00" Lt.
D = 31°07'54"	D = 5°00'00"	D = 1°30'00"
R = 184.04'	R = 1,145.92'	R = 3,819.72'
T = 172.43'	T = 172.54'	T = 707.95'
L = 277.11'	L = 342.50'	L = 1400.0'
E = 68.16'	E = 12.92'	E = 65.05'

UTILIZE EXISTING PAVEMENT

SEE NOTE ABOVE

C.H. 254

CURVE DATA
P.I. Sta. 550+48.95
Δ = 22° 44'06" Lt
D = 01° 29'29"
R = 3841.77'
L = 1524.42'
T = 772.37'
E = 76.87'

P.T. STA. 511+16.38

BEGIN NEW PAVEMENT LT.
POT. STA. 518+00.00

P.C. STA. 542+76.58

P.T. STA. 558+01.00

END NEW PAVEMENT LT.
POC. STA. 570+50.00

Bk 94.43 Ahead
= 206+12.20 Back

BEGIN NEW PAVEMENT LT.
POC. STA. 584+30.00

RELOC. C.H. 254

P.C. STA. 598+96.84

P.T. STA. 612+49.44

P.C. STA. 622+43.90

℄ SURVEY STA. 523+25
℄ CROSSOVER

N. 68° 35' 42" E.

S. 88° 40' 12" E.

S. 79° 33' 36" E.

N. 80° 36' 07" E.

OLD U.S. 40

Dead End

TWP. 480

TWP. 296

CODE 9766

CODE 7221

P.C. STA. 566+96.06

CURVE DATA
P.I. Sta. 577+74.54
Δ = 31° 50' 42" Rt.
D = 01° 30' 31"
R = 3797.92'
L = 2110.88'
T = 1083.48'
E = 151.53'

P.T. STA. 588+42.94

CURVE DATA
P.I. Sta. 605+79.98
Δ = 19° 50' 17" Lt
D = 01° 28' 00"
R = 3906.53'
L = 1352.60'
T = 683.14'
E = 59.26

END WORK STA. 1+70.00

BEGIN WORK
STA. 0+00.00

SERVICE RD. NO. 4

C.H. 202

WINTERS RD.

SEC. 14 SEC. 8
SEC. 13 SEC. 7
SEC. 8 SEC. 2
SEC. 7 SEC. 1

Rev 5-19-64

SCHEMATIC LAYOUT PLAN

SCHEMATIC LAYOUT PLAN

FED. RD. DIVISION	STATE	PROJEC
2	OHIO	

GUERNSEY COUNTY – BE
GUE – 40 – 23.88

SCALE IN FEET
0' 400' 800' 1200' 1600'

UTILIZE EXISTING PAVEMENT

TWP 78

END NEW PAVEMENT P.O.C. STA. 623+00.00 Lt.

P.C.C. STA. 627+49.26

FAIRVIEW CORP. LINE STA. 629+49.26

END WORK C.H. 254 RELOC. STATION 66+00

P.C.C. STA. 34+41.21

TWP 257

P.I. STA. 42+00.00

P.O.C. STA. 40+00.00 C.H. 40-A = P.O.T. STA. 6+67.00 C.H. 114 (NORTH)

P.C. STA. 649+53.15

GUERNSEY CO. OXFORD TWP. T10 E7
BELMONT CO. KIRKWOOD TWP. T9 E6

P.I. STA. 4+97.89

CO. HWY. 202 BACK ↑ CO. AHEAD ↓

Sta 657+41.53 GUE. CO. BACK
Sta 9+99.42 BEL. CO. AHEAD

FAIRVIEW CORP. LINE

STA. 1144.36

C.H. 114 NORTH

BEGIN NEW PAVEMENT P.O.C. STA. 181+50.00 Lt.

P.I. STA. 3+96.22

C.H. 114

CH. #114 NORTH

CURVE DATA
P.I. Sta. 8+09.85
Δ = 25° 40' 00" RT.
D = 10° 00' 00"
R = 572.96'
T = 130.52'
L = 256.67'
E 14.68'

C.H. 40-A
BEGIN WORK STA. 8+55
END WORK STA 11+25
C.H. 114 NORTH SUSPEND
WORK STA. 6+53

I-70-7(12)193

I-70-8(6)202

SLM 0.06

END PROJECT & END WORK-
GUE-40-23.88
BEL-40-00.00
STA. 60+00.00

S.R. 8

CH 40-A

S 63° 58' 33" E

℄ SURVEY STA. 45+00 ℄ CROSSOVER

℄ SURVEY STA. 58+00 ℄ TEMPORARY CROSSOVER

P.T. STA. 774+89.57

CURVE DATA
P.I. Sta. 65+75.66
Δ = 30° 06' 17" RT.
D = 01° 12' 38" ±
R = 4732.65'
L = 2486.66'
T = 1272.75'
E = 168.15'

P.C. STA. 53+02.91

N. 65° 55' 10" E.

CODE 9766

CODE 7221

Dead End

RELOC. C.H. 254

C-4

Dead End

625 630 635 640 645 650 655

BEGIN WORK STA. 25+00

CH 202

5-2 5-3 5-4 5-5

CEMETERY RD. RELOCATION

END WORK STA. 12+24.13

CO. HWY. 202 RELOC.

S 69° 59' 24" E

RAMP "A" RAMP "B" RAMP "C" RAMP "D"

BEGIN WORK STA. 6+25.00

END WORK 61+41.51 C.H. 202 RELOC.
BEGIN WORK 61+41.51 C.H. 114 RELOC. =
P.O.T. STA. 12+97.91 C.H. 114 (NORTH)

A-1

C.H. "114 RELOCATION

BRIDGE Nos. BEL. 40-00.05 Lt. & Rt.

END WORK STA. 93+86

A-2

SEC. 32 SEC. 28
SEC. 31 SEC. 25

SEC. 2
SEC. 1

CEMETERY RD. RELOCATION

P.C. STA. 627+43.90

P.C. STA. 63+80.74

℄ SURVEY STA. 627+43.90 = ℄ CROSSOVER

P.T. STA. 64+93.25

P.C. STA. 53+17.31

P.C.C. STA. 61+41.51

P.C. STA. 89+78.87

P.T. STA. 93+56.35

CURVE C-4
RELOC. C.H. 254

CURVE DATA
P.I. STA. 63+48.37
Δ = 23° 03' 00" Lt.
D = 8° 00' 00"
R = 716.20'
T = 186.22'
L = 364.375'
E = 23.81'

CURVE DATA
P.I. Sta. 632+40.55
Δ = 29° 24' 29" Rt.
D = 01° 30' 31"
R = 3797.92'
L = 1949.35'
T = 996.65'
E = 128.60'

CURVE DATA
P.I. = STA. 11+44.00
Δ = 59° 40' 40" LT.
D = 38° 11' 50"
R = 150.00'
T = 156.24'
L = 86.04'
E = 22.93'

CURVE DATA
P.I. Sta. 665+08.86 Back = Sta. 17+66.61 Ahead
Δ = 44° 05' 26" Lt
D = 01° 29' 29"
R = 3841.77'
L = 2956.34'
T = 1555.71'
E = 303.03'

CO. HWY. 202 & CO. HWY. 114 RELOCATION CURVE DATA

5-2	5-3	5-4	5-5	A-1	A-2
CURVE DATA	CURVE DATA	CURVE DATA	CURVE DATA	CURVE DATA	CURVE DATA
P.I. Sta. 25+89.85	P.I. Sta. 31+18.01	P.I. Sta. 38+21.80	P.I. Sta 37+30.95	P.I. Sta. 63+19.99	P.I. Sta 91+83.39
Δ = 24° 11' 16" RT.	Δ = 19° 35' 07" RT.	Δ = 11° 07' 44" RT.	Δ = 12° 05' 18" LT.	Δ = 07° 57' 45" LT.	Δ = 54° 44' 00" RT.
D = 06° 00' 00"	D = 03° 00' 00"	D = 01° 28' 00"	D = 01° 28' 00"	D = 2° 14' 03"	Dc = 14° 30' 00"
R = 954.93'	R = 1909.86'	R = 3906.53'	R = 3906.53'	R = 2564.38'	R = 395.14'
T = 204.61'	T = 329.64'	T = 380.59'	T = 413.64'	T = 178.48'	T = 204.52'
L = 403.13'	L = 652.84'	L = 758.79'	L = 824.20'	L = 356.38'	L = 377.48'
E = 21.68'	E 28.24'	E = 18.50'	E = 21.84'	E = 6.20'	E = 49.67'

SCHEMATIC LAYOUT PLA

TYPICAL SECTIONS

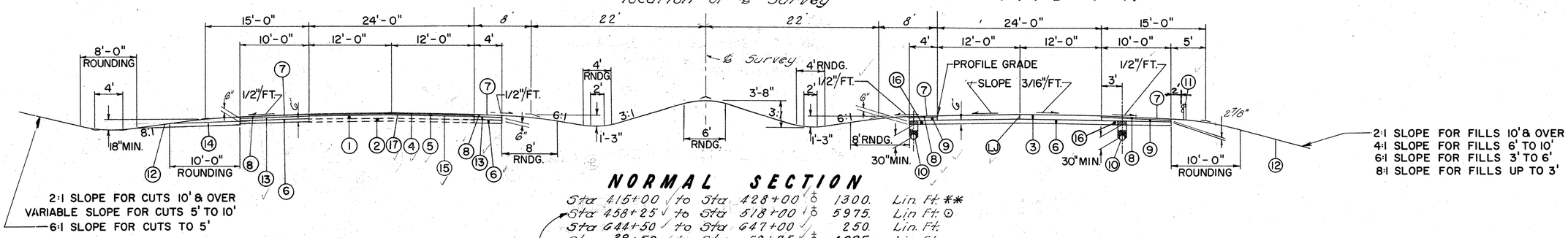
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

4/485

GUERNSEY COUNTY
BELMONT COUNTY
GUE.-40-23.88
BEL.-40- 0.00

TYPE T-35

Sta. 415+00 to Sta. 458+00 See Sheet 9 for location of ℄ Survey



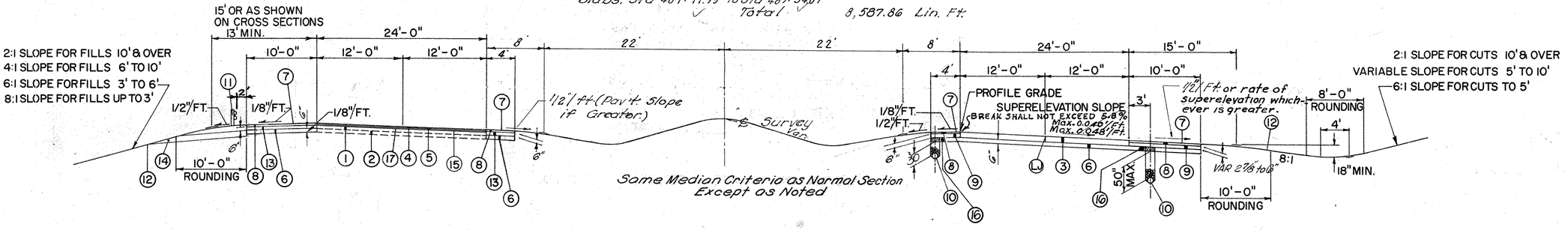
2:1 SLOPE FOR CUTS 10' & OVER
VARIABLE SLOPE FOR CUTS 5' TO 10'
6:1 SLOPE FOR CUTS TO 5'

TYPE T-71

2:1 SLOPE FOR FILLS 10' & OVER
4:1 SLOPE FOR FILLS 6' TO 10'
6:1 SLOPE FOR FILLS 3' TO 6'
8:1 SLOPE FOR FILLS UP TO 3'

NORMAL SECTION

Sta 415+00 ✓ to Sta 428+00 ✓ ♁	1300.	Lin. Ft.	**
Sta 458+25 ✓ to Sta 518+00 ✓ ♁	5975.	Lin. Ft.	⊙
Sta 644+50 ✓ to Sta 647+00 ✓	250.	Lin. Ft.	
Sta 38+50 ✓ to Sta 50+75 ✓ ♁	1,225	Lin. Ft.	
Subtotal	8,750	Lin. Ft.	
Deduct for Bridge & Approach Slabs. Sta 481+71.93 to Sta 489+34.07 ✓	−162.14	Lin. Ft.	
Total ✓	8,587.86	Lin. Ft.	



2:1 SLOPE FOR FILLS 10' & OVER
4:1 SLOPE FOR FILLS 6' TO 10'
6:1 SLOPE FOR FILLS 3' TO 6'
8:1 SLOPE FOR FILLS UP TO 3'

2:1 SLOPE FOR CUTS 10' & OVER
VARIABLE SLOPE FOR CUTS 5' TO 10'
6:1 SLOPE FOR CUTS TO 5'

Some Median Criterio as Normal Section Except as Noted

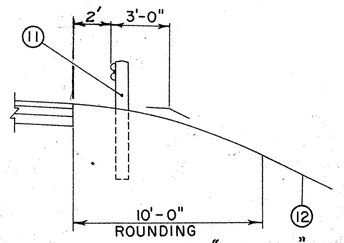
SUPERELEVATION SECTION

Sta. 428+00 ✓	To	Sta. 429+50 ✓ ♁	=	150	Lin. Ft. **
Sta. 456+75 ✓	To	Sta. 458+25 ✓ ♁	=	150	" " **
Sta 570+50 ✓	To	Sta 584+50 ✓ ♁	=	1,450.	" "
Sta 623+00 ✓	To	Sta 644+50 ✓ ♁	=	2,150.	" "
Sta 647+00 ✓	To	Sta 657+41.53(BK) ✓ ♁	=	1041.53	" "
Sta 9+99.42 (Ahd)	To	Sta 18+50 ✓	=	850.58	" "
Sta 50+75 ✓	To	Sta 60+00 ✓	=	925.	" "
Subtotal			=	6,717.11	" "
Deduct Bridge & Approach Slab Sta 12+43.25 ✓	To	Sta 14+06.75 ✓	=	−163.50	" "
Total			=	6,553.61	Lin. Ft.

** For Median Detail See Sheet 9

⊙ Existing Pavement (Left Lanes) shall be replaced by 9" B-71 on 6" I-22 from Sta. 487+06 to 490+07, excluding bridge and approach slabs.

GUARD RAIL DETAIL



⊙ THICKNESSES SHOWN ARE "DESIGNED" THICKNESSES AS DESCRIBED IN SECTIONS T-35.01, B-35.01 AND B-21.01.

♁ FOR SECTIONS IN ROCK CUT SEE SHEET NO. 5

(1) EXISTING 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT

(2) EXISTING CLASSIFIED *SUBBASE* MATERIAL

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

(4) T-35 1¼" ASPHALTIC CONCRETE SURFACE COURSE TYPE C(70-85) ⊙

(5) B-35 1¼" ASPHALTIC CONCRETE LEVELING COURSE (70-85) ⊙

(6) I-22 *Subbase (6" Thickness or as noted) Grading "A" or "B" Modified as per General Note.*

(7) T-31 BITUMINOUS SURFACE TREATMENT USING 0.008 CU. YDS. NO. 6 AGGREGATE PER SQ. YD. AND 0.25 GAL. BITUMINOUS MATERIAL PER SQ. YD. (SEE NOTE IN PROPOSAL).

(8) B-21 3" WATERPROOFED AGGREGATE BASE COURSE (TYPE "A" T-35 OR T-335 MAY BE USED IN CONSTRUCTION OF THIS COURSE - SEE NOTE IN PROPOSAL)

(9) B-19 AGGREGATE BASE COURSE

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

(11) I-15 GUARD RAIL, STEEL BEAM STANDARD TYPE (DEEP)

(12) L-9 SEEDING AND PROTECTING

(13) I-18 STABILIZED CRUSHED AGGREGATE SHOULDERS AND APPROACHES

(14) I-9 STONE UNDERDRAIN NO.2 *(LOCATE AT EXISTING JOINTS)* *SEE GENERAL NOTES*

(15) T-30 BITUMINOUS TACK COAT SEC M-5.5, MS-2 OR RS-1, OR SEC M-5.2, RC-1 OR RC-2, AS PER SEC T-30.02; APPLIED AT THE RATE OF 0.10 GALS. PER SQ. YD.

(LJ) *Standard Longitudinal Joint*

(16) *Shaded Area:*

Remove Subbase for width of Item I-1 Trench and replace with Type 3 Backfill material immediately prior to placing the Item B-19 Aggregate Base Course. Cost shall be included in the unit price bid for Item I-1. See note on Sheet No. 10 Sequence of Construction Operations.

(17) *B-35 0" Minimum Thickness Asphaltic Concrete Pre-leveling Course (70-85). (See Note in Proposal)*

TYPICAL SECTIONS

TYPE T-71

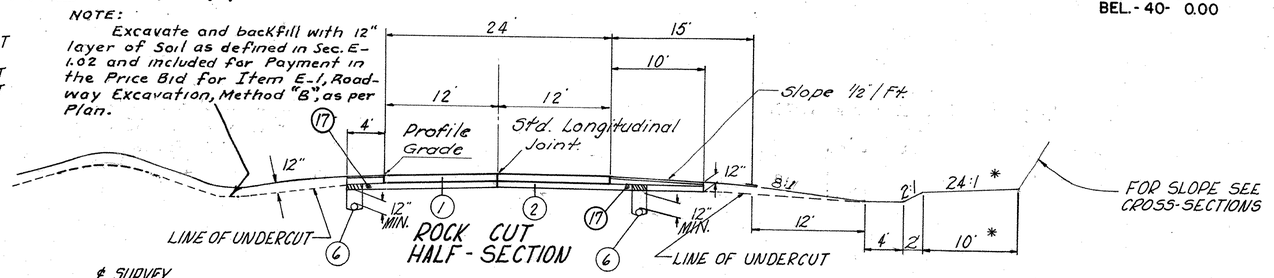
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

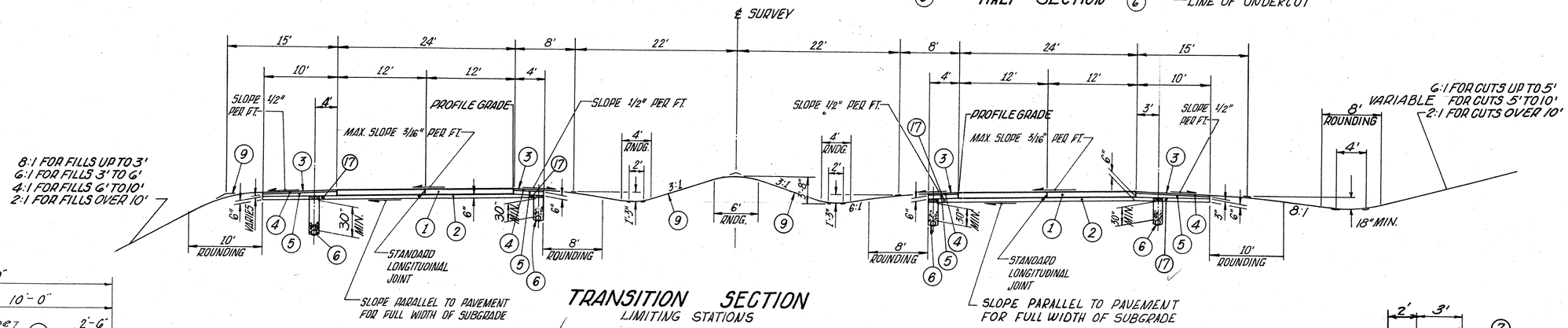
GUERNSEY COUNTY
BELMONT COUNTY
GUE.-40-23.88
BEL.-40-0.00

LIMITING STATIONS FOR ROCK CUT

419+00 RT	-	431+50 RT	558+50	-	565+00 LT
450+00 RT	-	457+00 RT	572+00 RT	-	583+00 RT
462+00 RT	-	468+00 RT	596+00 RT&LT	-	608+50 RT&LT
514+00 RT	-	518+00 RT	615+80 LT	-	620+00 LT
527+00 RT&LT	-	530+00 RT&LT	630+50 RT	-	639+13 RT
530+00 LT	-	532+50 LT	649+00 RT	-	652+65 RT
532+50 RT&LT	-	535+50 RT&LT	18+95 RT	-	25+95 RT
535+50 LT	-	536+80 LT	47+96 RT	-	50+96 RT
554+00 RT&LT	-	558+50 RT&LT	60+96 RT	-	72+97 RT

NOTE:
Excavate and backfill with 12" layer of Soil as defined in Sec. E-1.02 and included for Payment in the Price Bid for Item E-1, Roadway Excavation, Method "B", as per Plan.

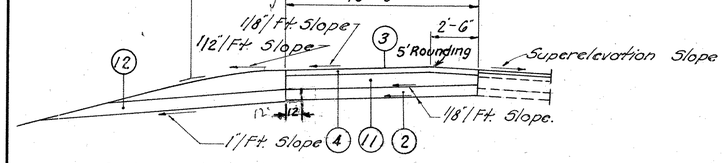




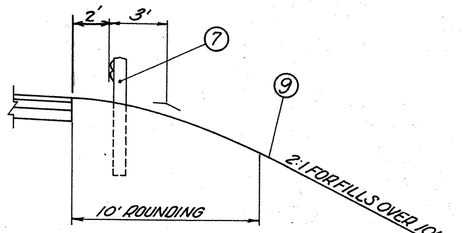
TRANSITION SECTION

LIMITING STATIONS

Sta 540+25	to	Sta 541+75	= 150	Lin. Ft.
Sta 559+00	to	Sta 560+50	= 150	Lin. Ft.
Sta 564+50	to	Sta 566+00	= 150	Lin. Ft.
Sta 589+00	to	Sta 590+50	= 150	Lin. Ft.
Sta 596+50	to	Sta 598+00	= 150	Lin. Ft.
Sta 613+50	to	Sta 615+00	= 150	Lin. Ft.
Sta 620+00	to	Sta 621+50	= 150	Lin. Ft.
Sta 32+75	to	Sta 34+25	= 150	Lin. Ft.
		Total	= 1,200	Lin. Ft.



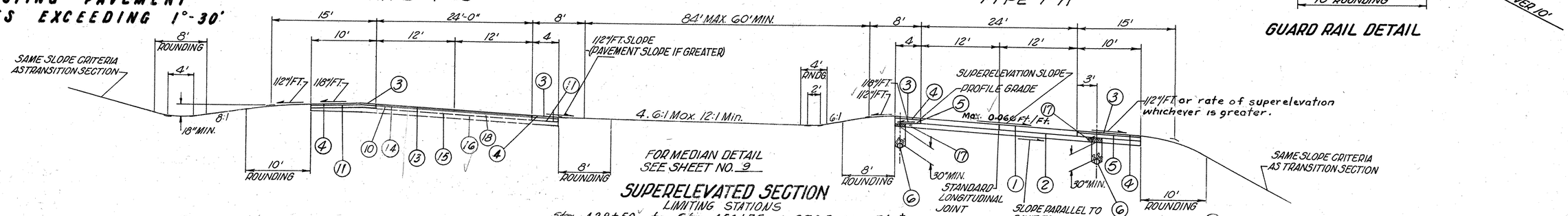
SHOULDER TREATMENT FOR EXISTING PAVEMENT CURVES EXCEEDING 1°-30'



GUARD RAIL DETAIL

TYPE T-35

TYPE T-71



FOR MEDIAN DETAIL SEE SHEET NO. 9

SUPERELEVATED SECTION

LIMITING STATIONS

Sta. 429+50 to Sta 456+75 = 2725 Lin Ft ♁

① T-71 9" Reinforced Portland Cement Concrete Pavement

② I-22 Subbase (6" Thickness or as noted), Grading "A" or "B", Modified as per General Note.

③ T-31 BITUMINOUS SURFACE TREATMENT USING 0.008 CU. YDS. 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 OR T-335 MAY BE USED IN CONSTRUCTION OF THIS COURSE. SEE NOTE IN PROPOSAL)

⑤ B-19 AGGREGATE BASE COURSE

⑥ I-1 6" PIPE, CLASS I-3

⑦ I-15 GUARD RAIL, STEEL BEAM STANDARD TYPE (DEEP)

⑨ L-9 Seeding and Protecting

⑩ B-35 0" Minimum Thickness Asphaltic Concrete Pre-leveling Course (70-85). (See Note in Proposal)

⑪ I-18 STABILIZED CRUSHED AGGREGATE SHOULDERS AND APPROACHES

⑫ I-9 Stone Underdrains No. 2

⑬ T-35 1 1/4" Asphaltic Concrete Surface Course Type C (70-85) Δ

⑭ B-35 1 1/4" Asphaltic Concrete Leveling Course (70-85) Δ

⑮ Existing 9" Reinforced Portland Cement Concrete Pavement

⑯ Existing Material Classified Subbase

⑰ See Sheet No. 4 Item ⑯

⑱ Bituminous Tack Coat, Sec. M-5.5, M5.2 or RS-1, or Sec. M5.2, RC-1 or RC-2, as per Sec. T-30.02; Applied at the rate of 0.10 gals. per sq. yd.

1. IN FILL SECTION ALL UNDERDRAINS TO BE 30"
2. IN ROCK CUT SECTIONS UNDERDRAINS TO BE 12"

Δ THICKNESSES SHOWN ARE "DESIGNED" THICKNESSES AS DESCRIBED IN SECTIONS T-35.01, B-35.01 AND B-21.01.

* OR AS SHOWN IN THE PLANS

♁ FOR SECTIONS IN ROCK CUT SEE THIS SHEET

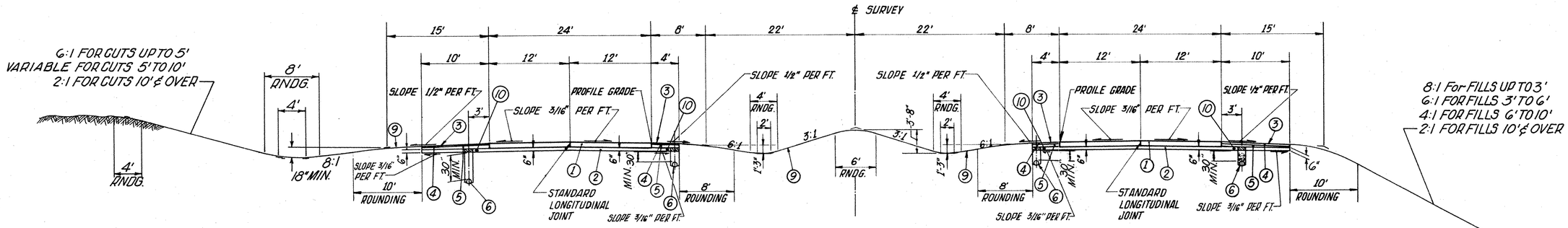
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

GUERNSEY COUNTY
BELMONT COUNTY
GUE.-40-23.88
BEL.-40- 0.00

G 485

TYPICAL SECTIONS

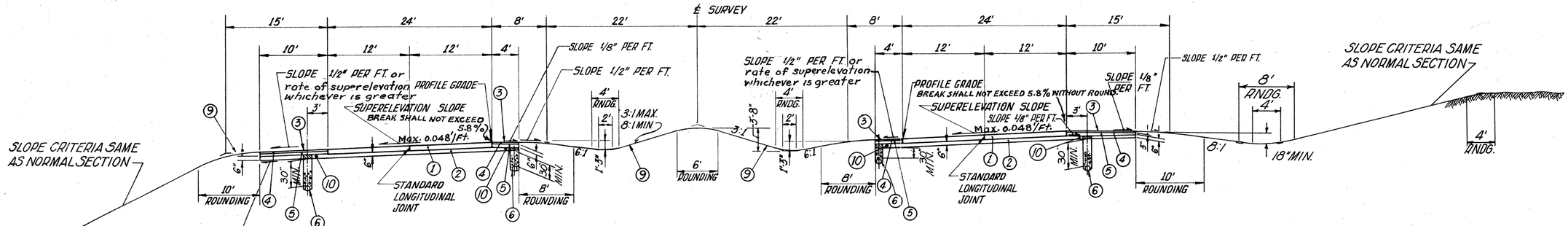
TYPE T-71



NORMAL SECTION

LIMITING STATIONS

Sta	518+00 ✓ to	Sta	540+25 ✓	= 2,225	Lin. Ft
Sta	560+50 ✓ to	Sta	564+50 ✓	= 400	Lin. Ft
Sta	590+50 ✓ to	Sta	596+50 ✓	= 600	Lin. Ft
Sta	615+00 ✓ to	Sta	620+00 ✓	= 500	Lin. Ft
Sta.	34+25 ✓ to	Sta	38+50 ✓	= 425	Lin. Ft.
			Total	= 4,150	Lin. Ft



SUPERELEVATED SECTION

LIMITING STATIONS

Sta	541+75 To	Sta	559+00 ✓	= 1725	Lin. Ft.
Sta	566+00 To	Sta	570+50	= 450	Lin. Ft.
Sta	584+50 To	Sta	589+00 ✓	= 450	Lin. Ft.
Sta	598+00 To	Sta	613+50 ✓	= 1,550	Lin Ft.
Sta	621+50 To	Sta	623+00 ✓	= 150	Lin. Ft.
Sta	18+50 To	Sta	32+75	= 1425	Lin. Ft.
			Total	= 5,750	Lin. Ft.

NOTE:

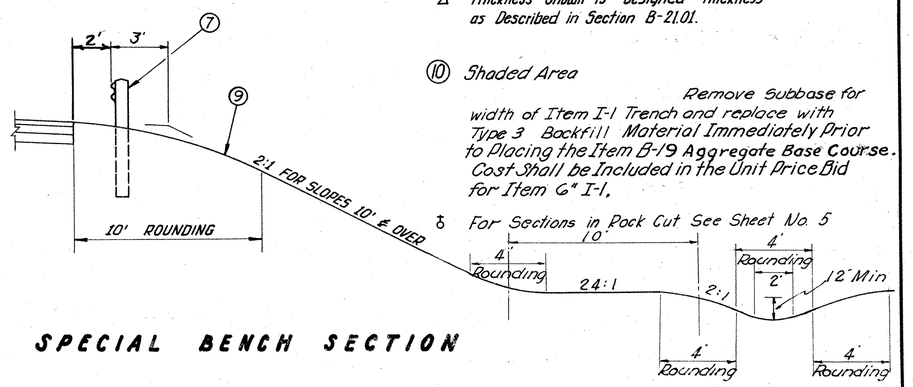
1. In Fill Sections All Underdrains to be 30"
2. In Rock Cut Sections Underdrains to be 12"

Δ Thickness Shown is "Designed" Thickness as Described in Section B-21.01.

⑩ Shaded Area

Remove Subbase for width of Item I-1 Trench and replace with Type 3 Backfill Material Immediately Prior to Placing the Item B-19 Aggregate Base Course. Cost Shall be Included in the Unit Price Bid for Item 6" I-1,

† For Sections in Rock Cut See Sheet No. 5



SPECIAL BENCH SECTION

ITEM		DESCRIPTION
①	T-71	9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT.
②	I-22	Subbase (6" Thickness or as noted) Grading "A" or "B" Modified as per General Note.
③	T-31	BITUMINOUS SURFACE TREATMENT USING 0.008 CU. YDS. NO. 6 AGGREGATE PER SQ. YD. AND 0.25 GAL. BITUMINOUS MATERIAL PER SQ. YD. (SEE NOTE IN PROPOSAL)
④	ΔB-21	3" WATERPROOFED AGGREGATE BASE COURSE. (TYPE "A" T-35 OR T-335 MAY BE USED IN CONSTRUCTION OF THIS COURSE - SEE NOTE IN PROPOSAL)
⑤	B-19	AGGREGATE BASE COURSE
⑥	I-1	6" PIPE, CLASS I-3.
⑦	I-15	GUARD RAIL, STEEL BEAM STANDARD TYPE (DEEP).
⑨	L-9	SEEDING AND PROTECTING.

TYPICAL SECTIONS

TYPE T-71

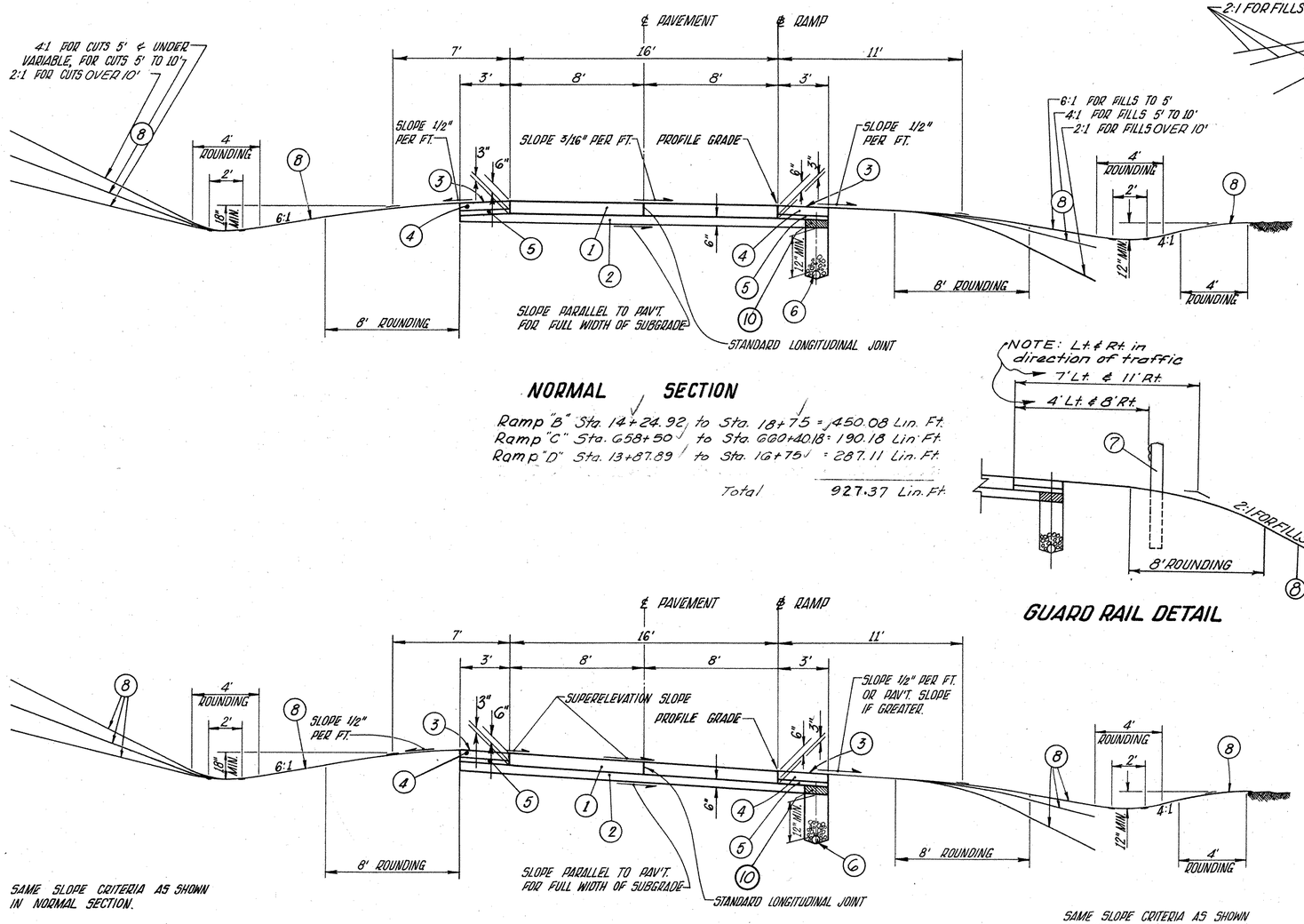
SCALE: 1/4" = 1'

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

7
485

GUERNSEY COUNTY
BELMONT COUNTY
GUE.-40-23.88
BEL.-40- 0.00

ONE-WAY RAMP
DIRECTIONAL ROADWAY



NORMAL SECTION

Ramp "B" Sta. 14+24.92 to Sta. 18+75 = 450.08 Lin. Ft.
Ramp "C" Sta. G58+50 to Sta. G60+40.18 = 190.18 Lin. Ft.
Ramp "D" Sta. 13+87.89 to Sta. 16+75 = 287.11 Lin. Ft.

Total 927.37 Lin. Ft.

GUARD RAIL DETAIL

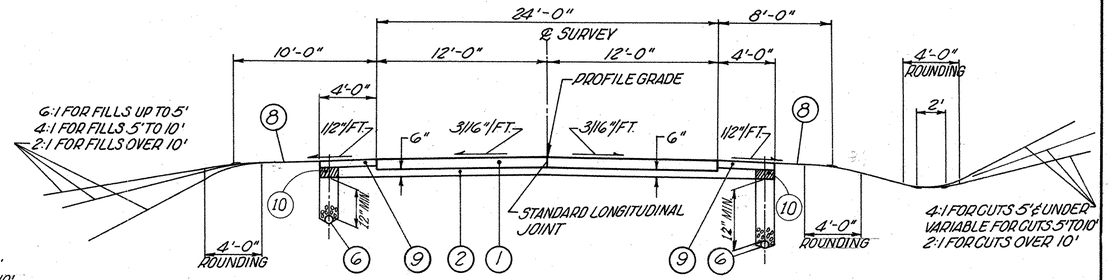
SAME SLOPE CRITERIA AS SHOWN IN NORMAL SECTION.

SAME SLOPE CRITERIA AS SHOWN IN NORMAL SECTION.

SUPERELEVATED SECTION

Ramp A	Sta. G55+52.42	to Sta. G59+27.16	= 374.74 Lin. Ft.
Ramp B	Sta. 18+75	to Sta. 22+62.52	= 387.52 Lin. Ft.
Ramp C	Sta. G52+52.82	to Sta. G58+50	= 597.18 Lin. Ft.
Ramp D	Sta. 16+75	to Sta. 21+50	= 475.00 Lin. Ft.
		Totals	1,834.44 Lin. Ft.

CH-114 (NORTH)



Sta. 7+27.88 to Sta. 12+24.80 = 496.92 Lin. Ft.

ITEM		DESCRIPTION
(1)	T-71	9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT.
(2)	I-22	Subbase (6" Thickness or as noted) Grading "A" or "B" Modified as per General Note.
(3)	T-31	BITUMINOUS SURFACE TREATMENT USING 0.008 CU. YDS. NO. 6 AGGREGATE PER SQ. YD. AND 0.25 GAL. BITUMINOUS MATERIAL PER SQ. YD. (SEE NOTE IN PROPOSAL)
(4)	△B-21	6" WATERPROOFED AGGREGATE BASE COURSE (TYPE "A" T-35 OR T-335 MAY BE USED IN CONSTRUCTION OF THIS COURSE - SEE NOTE IN PROPOSAL) 2-3" Courses
(5)	B-19	AGGREGATE BASE COURSE
(6)	I-1	6" PIPE, CLASS I-3.
(7)	I-15	GUARD RAIL, STEEL BEAM STANDARD TYPE (DEEP).
(8)	L-9	SEEDING AND PROTECTING.
(9)	I-18	6" CRUSHED AGGREGATE SHOULDERS AND APPROACHES WITH CALCIUM CHLORIDE INCORPORATED IN THE UPPER 3" (SEE NOTE IN PROPOSAL)
(10)		SEE SHEET NO. 4 ITEM (16)

NOTE:

1. FOR TOE OF FILL DITCHES SEE CROSS-SECTIONS.
2. IN FILL SECTIONS ALL UNDERDRAINS TO BE SHALLOW.
3. IN CUT SECTIONS OUTSIDE UNDERDRAINS TO BE DEEP.

△ THICKNESS SHOWN IS "DESIGNED" THICKNESS AS DESCRIBED IN SECTION B-21.01.

* AS SHOWN IN THE PLANS.

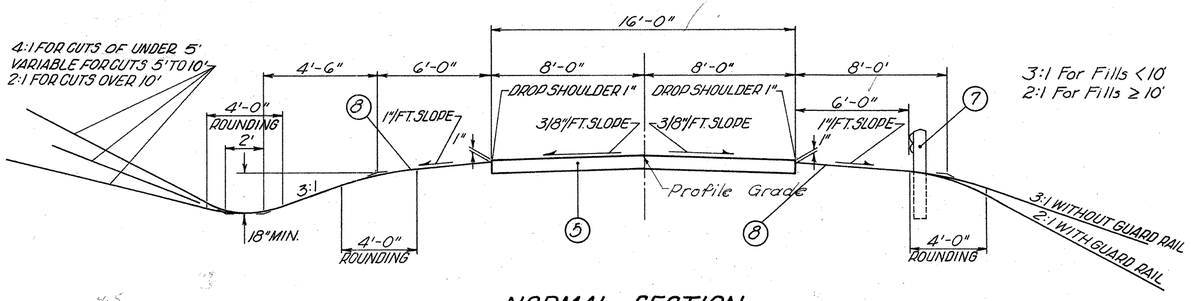
TYPICAL SECTIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

8
485

GUERNSEY COUNTY
BELMONT COUNTY
GUE.-40-23.88
BEL.-40- 0.00

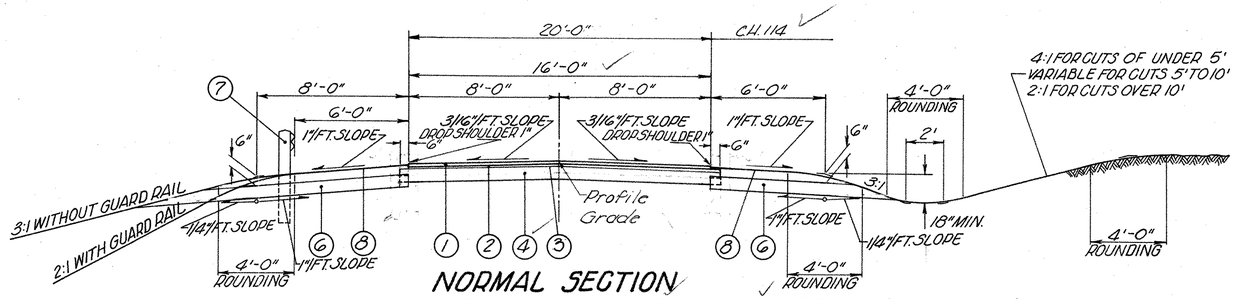
TWP. RD. 213
CEMETERY ROAD
TYPE B-19



NORMAL SECTION

6+50 9+75
Cemetery Rd. Sta. 6+50 to Sta. 9+75 = 325 Lin. Ft.
Twp. Road 213 Sta. 0+56 to Sta. 2+50 = 194 Lin. Ft.
TOTAL 519 Lin. Ft.

C.H. 254 RELOCATION
C.H. 286 CONNECTION
C.H. 114-202 & 27 RELOCATIONS
TYPE T-35 ON B-19



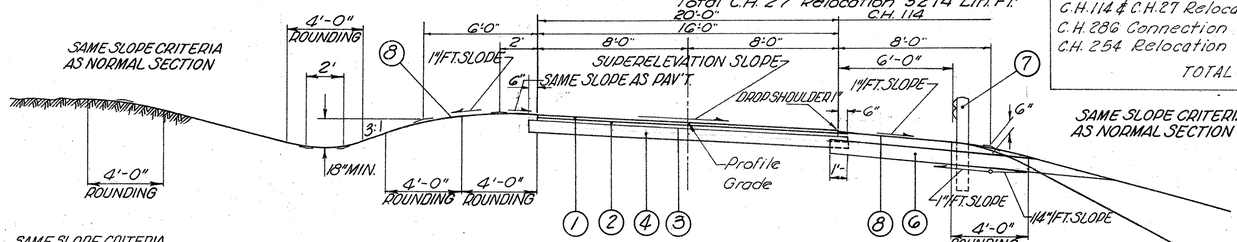
NORMAL SECTION

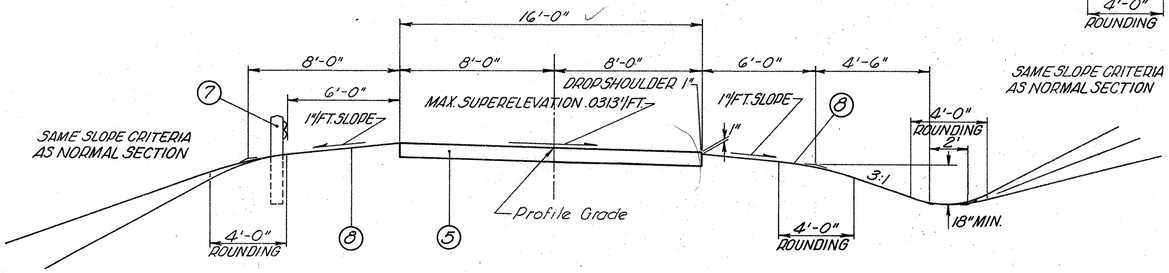
C.H. 202 Relocation Sta. 42+75 to 52+25	950 Lin. Ft.
C.H. 114 Relocation Sta. 65+50 to 89+25	2375 Lin. Ft.
C.H. 27 Relocation Sta. 114+59 to 117+16	257 Lin. Ft.
C.H. 27 Relocation Sta. 122+38 to 132+89	1051 Lin. Ft.
C.H. 27 Relocation Sta. 136+03 to 138+85	282 Lin. Ft.
C.H. 27 Relocation Sta. 144+65 to 145+87	122 Lin. Ft.
C.H. 27 Relocation Sta. 160+23 to 171+31	1108 Lin. Ft.
C.H. 27 Relocation Sta. 10+81 to 14+75	394 Lin. Ft.
Total C.H. 27 Relocation	3214 Lin. Ft.

C.H. 286 Connection
STA. 0+57 TO STA. 6+50 = 593 Lin. Ft.

C.H. 254 Relocation
Sta. 16+25 to 41+50 = 2525 Lin. Ft.
Sta. 47+25 to 60+00 = 1275 Lin. Ft.
Total C.H. 254 Reloc. = 3800 Lin. Ft.

TOTALS	
C.H. 114 & C.H. 27 Relocations	3214 Lin. Ft.
C.H. 286 Connection	593 " "
C.H. 254 Relocation	3800 " "
TOTAL	7607 Lin. Ft.





SUPERELEVATED SECTION

SUPERELEVATED SECTION

C.H. 202 Relocation Sta. 23+50 to Sta. 42+75	1925 Lin. Ft.
C.H. 202 Relocation Sta. 52+25 to Sta. 58+25	600 Lin. Ft.
C.H. 202 Relocation Sta. 58+25 to Sta. 59+25	100 Lin. Ft. *
C.H. 202 Relocation Sta. 59+25 to Sta. 60+59.88	134.88 Lin. Ft. **
Total C.H. 202 Relocation	2759.88 Lin. Ft.
C.H. 114 Relocation Sta. 62+11.77 to Sta. 65+50 =	338.23 Lin. Ft.
C.H. 114 Relocation Sta. 89+25 to Sta. 93+56.35 =	431.35 Lin. Ft.
Total C.H. 114 Relocation =	769.58 Lin. Ft.
C.H. 27 Relocation Sta. 117+16 to 122+38	522 Lin. Ft.
C.H. 27 Relocation Sta. 132+89 to 136+03	314 Lin. Ft.
C.H. 27 Relocation Sta. 138+85 to 144+65	580 Lin. Ft.
C.H. 27 Relocation Sta. 145+87 to 160+23	1436 Lin. Ft.
C.H. 27 Relocation Sta. 171+31 to 10+81	627 Lin. Ft.
C.H. 27 Relocation Sta. 14+75 to 35+50	2075 Lin. Ft.
Total C.H. 27 Relocation	5554 Lin. Ft.
C.H. 254 Relocation Sta. 8+94 to 16+25	731.00 Lin. Ft.
C.H. 254 Relocation Sta. 41+50 to 47+25	575.00 Lin. Ft.
C.H. 254 Relocation Sta. 60+00 to 65+26.52	526.52 Lin. Ft.
Total C.H. 254 Relocation	1832.52 Lin. Ft.

TOTALS	
C.H. 202 Relocation	2759.88 Lin. Ft.
C.H. 114 Relocation	769.58 " "
C.H. 27 Relocation	5554.00 " "
C.H. 254 Relocation	1832.52 " "
Total	10,915.98 Lin. Ft.

Cemetery Rd. Sta. 9+75 to Sta. 11+68.60 = 193.60 Lin. Ft.
Total = 193.60 Lin. Ft.

① T-35 1 1/4" ASPHALTIC CONCRETE SURFACE COURSE TYPE "C" (85-100) Δ
② B-35 1 3/4" ASPHALTIC CONCRETE LEVELING COURSE (85-100) Δ
③ T-30 BITUMINOUS PRIME COAT SEC. M-5.7, RT-2 or RT-3 APPLIED AT THE RATE OF 0.4 GAL. PER SQ. YD.
④ B-19 8" AGGREGATE BASE COURSE
⑤ B-19 8" AGGREGATE BASE COURSE WITH CALCIUM CHLORIDE INCORPORATED IN UPPER 3" (See note in proposal)
⑥ I-9 STONE UNDERDRAINS (No 2)
⑦ I-15 GUARD RAIL, STEEL BEAM STANDARD TYPE (DEED)
⑧ L-9 SEEDING AND PROTECTING

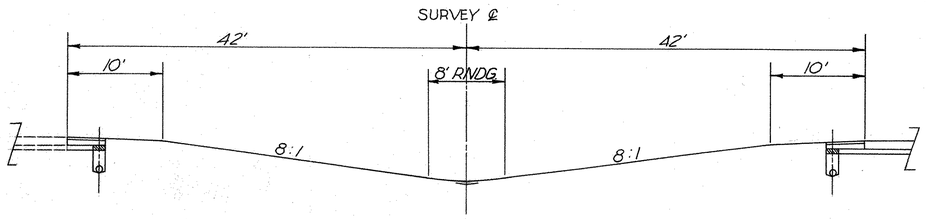
* 100' Transition from 16' to 20' width
** C.H. 202 in Belmont County 20' wide
*** C.H. 254 Sta. 8+50 to 8+94.43, Transition from 12' to 16'
*** C.H. 254 Sta. 65+26.52 to 66+00, Transition from 16' to 12'

Δ Thickness shown are "designed" thicknesses as described in Sections T-35.01 & B-35.01

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

9
485

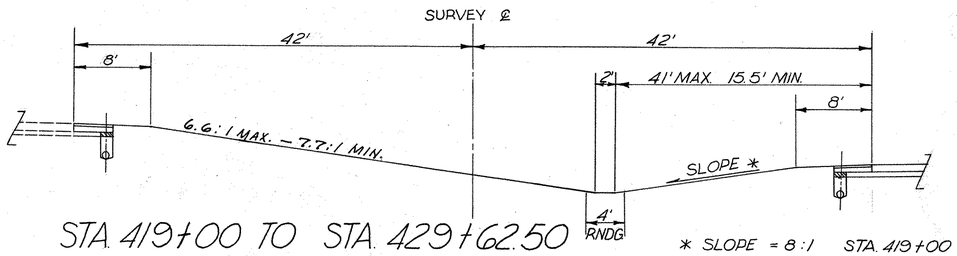
GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



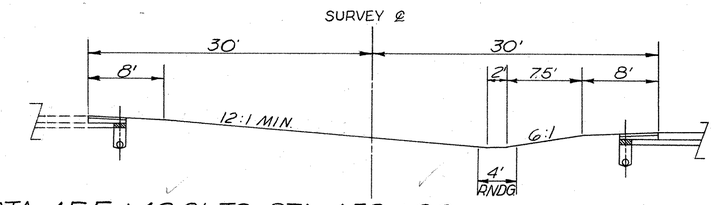
ADJACENT PROJECT

STA. 415+00 TO STA. 419+00

STA. 429+62.50 TO STA. 455+42.01



STA. 419+00 TO STA. 429+62.50



STA. 455+42.01 TO STA. 458+00

* SLOPE = 8:1 STA. 419+00 TO STA. 428+58.23
SLOPE = VAR. 8:1 TO 6:1 STA. 428+58.23 TO STA. 429+62.50

MEDIAN DETAIL

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

10
485

GUERNSEY COUNTY
BELMONT COUNTY
GUE 40-2.88
BEL 40-0.00

GENERAL NOTES

DESIGN SPEED

THE GEOMETRICS FOR THIS PROJECT HAVE BEEN PLANNED FOR A DESIGN SPEED AS FOLLOWS: 70 M.P.H.

ELEVATION DATUM

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

CONSTRUCTION LAYOUT STAKES

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

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 PAVEMENT, UNLESS OTHERWISE INDICATED ON THESE PLANS, SHALL BE MEASURED AND PAID FOR AS ITEM E-1, ROADWAY EXCAVATION.

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS

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

FIELD OFFICE

THE CONTRACTOR SHALL, IN ACCORDANCE WITH SEC. S-0.01 (B), PROVIDE FOR THE EXCLUSIVE USE OF THE STATE'S EMPLOYEES, A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 500 SQ. FT. OF FLOOR SPACE. THE FIELD OFFICE SHALL BE CONSTRUCTED WITHIN TEN(10) WORKING DAYS AFTER THE CONTRACTOR STARTS WORK. 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!

CONTRACTION AND EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN EXPANSION AND CONTRACTION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF 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.

SPECIAL DITCH ELEVATIONS

FOR ELEVATIONS OF SPECIAL DITCHES SEE CROSS SECTIONS.

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.

EXISTING STRUCTURE AT STATION 37+50

WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC THE EXISTING STRUCTURE SHALL BE REMOVED, THE STEEL BEAMS AND BEARING PLATES SHALL BE CAREFULLY REMOVED AND STORED ON THE R.O.W. FOR DISPOSAL BY THE STATE FORCES.

TEMPORARY PAVEMENT

TEMPORARY PAVEMENT SHALL BE PAID FOR AS ITEM T-70 BUT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF ITEM S-15. REMOVAL OF THE TEMPORARY PAVEMENT WHEN NO LONGER NEEDED FOR MAINTAINING TRAFFIC SHALL BE MEASURED AND PAID FOR UNDER ITEM E-8.

FENCE WORK TYPE 47

THE QUANTITIES OF ITEM I-25 WOVEN WIRE FENCE WHICH ARE TABULATED ON SHEET NO. 480 WILL NOT BE PERFORMED UNDER THIS CONTRACT.

SEEDING

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 OF SLOPE EASEMENT. QUANTITIES FOR SEEDING ON SIDEROADS ARE CALCULATED FOR THE SOIL AREAS BETWEEN THE WORK LIMITS.

SEEDING FORMULA AS PER PLAN.

THE FOLLOWING SEED MIXTURE SHALL, IN LIEU OF THE MIXTURE LISTED IN SECTION L-9.11, BE USED THROUGHOUT THE LIMITS OF THIS PROJECT:

10% CREEPING RED FESCUE
65% KENTUCKY 31 FESCUE
20% KENTUCKY BLUEGRASS
5% ALSIKE CLOVER

L-9 COMMERCIAL FERTILIZER

ALL AREAS TO BE SEEDED OR SODDED SHALL HAVE COMMERCIAL FERTILIZER (12-12-12 MIX), APPLIED AT THE RATE OF 20 POUNDS PER 1000 SQ. FT.

OLD MINE ENTRY

THIS AREA IN THE VICINITY OF THE CAVED IN MINE ENTRY RIGHT OF STATION 530+75 SHALL BE EXCAVATED DOWN TO THE FLOOR OF THE ENTRY AND SHALL BE REPLACED WITH EMBANKMENT MATERIAL. EMBANKMENT CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 1-1.08. THE COST OF THIS ITEM SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM E-1 ROADWAY EXCAVATION.

SCARIFICATION OF EXISTING FLEXIBLE PAVEMENT

WITHIN THE LIMITS OF CONSTRUCTION WHERE THE EXISTING FLEXIBLE PAVEMENT WILL HAVE LESS THAN SIX (6) INCHES OF FILL PLACED UPON IT, THE PAVEMENT SHALL BE THOROUGHLY SCARIFIED FOR ITS FULL DEPTH, MIXED WITH SUFFICIENT SOIL AND PROPERLY RECOMPACTED TO INSURE THE ELIMINATION OF ANY PLANES OF SEPARATION BETWEEN IT AND THE EMBANKMENT PLACED THEREON. PAYMENT FOR SCARIFICATION AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM E-1, ROADWAY EXCAVATION.

REMOVAL OF TREES AND STUMPS

ALL TREES AND STUMPS 12" AND OVER 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	TREES	STUMPS
12" to 18"	747	65
18" to 24"	236	28
24" to 30"	84	5
30" to 36"	36	
36" to 42"	14	
42" to 48"	1	
48" & Over	2	1

THE ABOVE ESTIMATE IS APPROXIMATE AND THE STATE OF OHIO RESERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES OR STUMPS OUTSIDE 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.

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 PAVEMENT REMOVAL, ITEM E-8 AS PER PLAN. SEEDING SHALL BE MEASURED AND PAID FOR IN ACCORDANCE WITH ITEM L-9.

CENTERLINE REFERENCE MONUMENTS, AS PER PLAN

MONUMENTS SHALL BE CONSTRUCTED OF CLASS C CONCRETE, CAST-IN-PLACE IN A CIRCULAR HOLE, EIGHT INCHES IN DIAMETER AND FORTY-FOUR INCHES IN DEPTH. TOP OF CONCRETE SHALL BE FINISHED AT A DEPTH OF TWO INCHES BELOW GROUND LEVEL AND THE UPPER SIX INCH PORTION OF THE CONCRETE SHALL BE FORMED. A ¾ INCH STEEL ROD SHALL BE IMBEDDED IN THE WET CONCRETE AS DIRECTED BY THE ENGINEER TO MARK CENTERLINE AND STATION. (SEE SHEET NO. 437 FOR DETAIL).

SEQUENCE OF CONSTRUCTION OPERATIONS

UNDERDRAINS SHALL BE INSTALLED AND BACKFILLED TO SUBGRADE ELEVATION IMMEDIATELY PRIOR TO CONSTRUCTION OF THE SUBBASE, EXCEPT THAT, WHERE SUBSURFACE CONDITIONS ARE SUCH THAT IMPROVEMENT OF AN UNSTABLE SUBGRADE CAN BE ACCOMPLISHED THROUGH THE DRYING ACTION OF DEEP UNDERDRAINS, THE PROJECT ENGINEER MAY AUTHORIZE OR REQUIRE THE CONTRACTOR TO DELAY THE CONSTRUCTION OF THE SUBBASE AS NECESSARY.

THE SUBBASE SHALL THEN BE CONSTRUCTED UNDER THE CONCRETE PAVEMENT AREA AND EXTENDED OUT TO COVER THE POROUS BACKFILL FOR THE UNDERDRAIN.

PAVEMENT SHALL THEN BE CONSTRUCTED

AFTER THE SUBBASE IN THE SHOULDER AREAS IS IN PLACE AND COMPACTED AS SPECIFIED, AND IMMEDIATELY PRIOR TO PLACING THE [illegible] AGGREGATE 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 E-19 AGGREGATE BASE COURSE AT THE EXPENSE OF THE CONTRACTOR.

AGGREGATE 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.

BASE FAILURE OF EXISTING PAVEMENT

THE LOCATIONS OF OBVIOUS BASE FAILURE OF THE EXISTING PAVEMENT OF U.S. ROUTE 40 HAVE BEEN SHOWN ON THE PLANS AND QUANTITIES HAVE BEEN CALCULATED FOR REPLACEMENT OF THESE AREAS. HAND FINISHING OF B-71 REPLACEMENT WILL BE PERMITTED.

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 CLASS I-3 UNDERDRAINS HAVE BEEN PROVIDED. ALONG EXISTING RIGID PAVEMENT, THE UNDERDRAINS SHALL BE SPACED AT THE EXISTING JOINTS.

CONNECTIONS TO EXISTING PIPE

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

MAINTENANCE OF SEWER FLOWS

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO AS TO MAINTAIN AT ALL TIMES SEWER FLOWS THROUGH EXISTING FACILITIES TO REMAIN IN PLACE AND THROUGH EXISTING FACILITIES TO BE REPLACED UNTIL NEW FACILITIES ARE COMPLETED AND PLACED INTO USE.

PAYMENT FOR ANY ADDITIONAL COSTS INVOLVED IN MAINTAINING THESE FLOWS BY PUMPING OR BY ANY OTHER MEANS APPROVED BY THE ENGINEER SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE RESPECTIVE PIPE ITEMS.

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

MATERIAL FOR THIS ITEM SHALL MEET THE REQUIREMENTS OF GRADING "A" OR "B" OF SECTION I-22.02 EXCEPT THAT FOR EITHER GRADING, NO MORE THAN 10% OF THE MATERIAL SHALL PASS A NO. 200 SIEVE AFTER ALL OPERATIONS OF PLACING AND COMPACTING HAVE BEEN COMPLETED.

ITEM I-4 DUST CONTROL

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED FOR DUST CONTROL, FOR USE AS DIRECTED BY THE ENGINEER.

ITEM I-4 "WATER FOR DUST CONTROL" 50 M. GALS.
ITEM I-4 CALCIUM CHLORIDE FOR DUST CONTROL 10 TONS

RAISED MEDIAN

This Line shall be considered Void and disregarded wherever it appears throughout the Plans.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

GUERNSEY COUNTY
BELMONT COUNTY
GUE. 40 - 23.88
BEL. 40 - 0.00

GENERAL NOTES

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY DILIGENT FIELD CHECKS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE STATE OF OHIO MAKES NO GUARANTEES AS TO THEIR ACCURACY OR COMPLETENESS.

UTILITIES

THE CONTRACTOR SHALL NOTIFY, AT LEAST TWO (2) WORKING DAYS BEFORE BREAKING GROUND, ALL PUBLIC SERVICE CORPORATIONS HAVING WIRE, POLES, PIPE, CONDUITS, MANHOLES OR OTHER STRUCTURES WHICH MAY BE AFFECTED BY THIS OPERATION, INCLUDING ALL STRUCTURES WHICH ARE AFFECTED AND NOT SHOWN ON THESE PLANS. HE SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER AS TO AVOID DAMAGES TO ANY AND ALL UTILITIES, 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.

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.

REMOVAL OF EXISTING PIPE

THE REMOVAL OF ALL EXISTING PIPES, HEADWALLS AND/OR APPURTENANCES 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 BY THE PLANS.

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.

ITEM I-1, CLASS I-3 PIPE, AS PER PLAN
SEC. M-6.4 (h)

THE CLASS I-3 PIPE (FOR SPRING DRAINAGE) SHALL BE COVERED WITH TYPE 3 POROUS BACKFILL MATERIAL TO A HEIGHT OF ONE (1) FOOT ABOVE THE TOP OF THE PIPE. THE REMAINDER OF THE BACKFILL FOR THIS ITEM SHALL MEET THE SPECIFICATION REQUIREMENTS FOR TYPE 2 BACKFILL.

PLUGGING PIPE

THE UPSTREAM ENDS OF ALL PIPE OR TILE LINES INTERCEPTED BY EARTHWORK OPERATIONS AND, WHERE INDICATED, THE ENDS OF PIPE LINES TO BE ABANDONED IN PLACE SHALL BE EFFECTIVELY BLOCKED AND COVERED. BROKEN PIECES AND PORTIONS OF PIPE OR TILE SHALL BE REMOVED UNTIL A WHOLE LENGTH IS ENCOUNTERED WHICH SHALL BE BLOCKED WITH CONCRETE, FLAT STONE OR BRICK LAID IN MORTAR, OR A PRECAST CLAY OR CONCRETE STOPPER. PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM E-1, ROADWAY EXCAVATION.

EROSION CONTROL

ITEMS I-10 , L-10 & L-120 ARE PROVIDED IN THESE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE WILL NOT BE REMOVED IN ORDER TO PLACE ANY OF THESE ITEMS. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES FOR THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

SODDING

AN 18" WIDTH OF SOD SHALL BE PLACED AROUND THE BACK AND BOTH SIDES OF ALL HEADWALLS, AND ALONG THE EDGES OF ALL PAVED GUTTERS, (AND RIPRAP WHERE SHOWN ON THE PLANS). THE COST OF THE SODDING SHALL BE PAID FOR AT THE UNIT PRICE BID PER SQUARE YARD FOR ITEM L-10 SODDING.

PRIVATE SEWER TAPS

THIS PLAN MAKES NO PROVISION FOR CONNECTING, NOR SHALL THE ENGINEER OR CONTRACTOR CONNECT, ANY EXISTING OR NEW PRIVATE DRAINAGE TO THE NEW HIGHWAY DRAINAGE SYSTEM WHEN SUCH PRIVATE DRAINS CARRY EFFLUENT OR DRAINAGE FROM LEACHING BED OUTLETS, CELLAR DRAINS, OR SINK DRAINS, OR POLLUTED WATER OF ANY KIND. CONNECTIONS MAY BE MADE TO THE EXISTING OR NEW HIGHWAY DRAINAGE SYSTEM WHEN THE WATER CARRIED TO THE PROJECT DRAINAGE SYSTEM DOES NOT COME WITHIN THE CATEGORY OUTLINED ABOVE. ACCEPTABLE WATER INCLUDES FLOW FROM ROOF DRAINS, FIELD DRAINS, AND ENCLOSED NATURAL DRAINAGE SOURCE WHICH WOULD REACH THE ROAD THROUGH NATURAL CHANNELS IF SUCH WATER WAS NOT CONDUCTED ARTIFICIALLY. EXISTING SEWER TAPS WHICH DO NOT CARRY ACCEPTABLE WATER AS DEFINED ABOVE SHALL BE PLUGGED AT THE RIGHT-OF-WAY LINE. PLUGGING SPECIFIED SHALL BE BY MEANS OF CLASS "E" CONCRETE AND PAYMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM E-1, ROADWAY EXCAVATION.

GUARD RAIL FLARES

WHERE PROPOSED GUARD RAIL FLARES ARE CONSTRUCTED OR 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.

REPLACEMENT

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

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND PRESERVATION OF CORNERSTONES AND MONUMENTS WITHIN THE CONSTRUCTION AREA AS REQUIRED BY SECTION G-7.09. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM E-1.

REINFORCED ENDS ON CORRUGATED METAL PIPE

REINFORCED ENDS WILL BE REQUIRED ON ALL CORRUGATED METAL CLASS F-4, SEC. M-6.4 (C) PIPE FOR DRIVEWAYS AND UNDERDRAIN OUTLETS IF THE PIPE ENDS ARE UNPROTECTED BY HEADWALLS, CATCH BASINS, OR MANHOLES.

HOT LONGITUDINAL JOINT

SEE NOTE IN PROPOSAL FOR PLACING ASPHALTIC CONCRETE SURFACE AND LEVELING COURSES ON MAIN LINE WESTBOUND LANES.

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:

RIGHT OF STATION 415+00
LEFT OF STATION 60+00

SIGN DETAILS SHALL BE AS SPECIFIED ON STANDARD DRAWING FACI-1, "CODE N-55(2)-120(2), AND THE SIGNS SHALL BE ERECTED IN ACCORDANCE WITH STANDARD DRAWING FACI-2. ADDITIONAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH NOTES IN THE PROPOSAL.

DRAINAGE BASE MATERIAL

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

ITEM B-35 0" MINIMUM THICKNESS ASPHALTIC CONCRETE PRE-LEVELING COURSE (70-85)

ON THIS PROJECT, AN ADDITIONAL QUANTITY OF 330 CUBIC YARDS HAS BEEN CALCULATED TO BE USED AT THE DIRECTION OF THE ENGINEER TO CORRECT ALL IRREGULARITIES IN AREAS WHERE RESURFACING OF THE EXISTING PAVEMENT OCCURS.

LIMITING STATION:

415+00 - 518+00	=	10300
570+50 - 584+50	=	1400
623+00 - 657+41.53	=	3441.53
9+99.42 - 18+50	=	850.58
38+50 - 60+00	=	2200
		18192.11
Deduct on Bridges & Approaches	=	325.64
Total	=	17866.47 LIN.FT.
17866.47 x 24 x 0.0208/27	=	330 CU. YDS.

REMOVAL OF EXISTING RIGID PAVEMENT

EXISTING RIGID TYPE PAVEMENTS SHALL BE REMOVED UNDER ITEM E-8 WHEN THEY ARE LOCATED LESS THAN THREE (3) FEET BELOW THE PROPOSED PAVEMENT SUBGRADE IN PROPOSED PAVEMENT AREAS OR LESS THAN THREE (3) FEET BELOW THE PROPOSED FINISHED SURFACE IN AREAS OUTSIDE THE PROPOSED PAVEMENT.

WHEN EXISTING RIGID TYPE PAVEMENTS LIE BELOW THE ABOVE LIMITS, THEY SHALL NOT BE REMOVED. IN LIEU THEREOF, THEY SHALL BE BROKEN UP IN PLACE INTO PORTIONS NOT TO EXCEED ONE SQUARE FOOT IN AREA PRIOR TO PLACEMENT OF PROPOSED EMBANKMENT. PAYMENT FOR THIS OPERATION SHALL BE INCLUDED IN THE UNIT PRICE BID ROADWAY EXCAVATION, ITEM E-1.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS SECTIONS ON THIS PLAN INDICATE SPECIFIC WIDTHS AND DEPTHS OF PROPOSED BENCHING OF THE EMBANKMENT FOUNDATION IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED AND ALL OTHER SLOPED FOUNDATION AREAS SHALL BE BENCHED AS SET FORTH IN SECTION E-1.04. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED BY THE PROVISIONS OF SECTION E-1.04.

ITEM T-10, MODIFIED, AS PER PLAN

ALL PROVISIONS OF "ITEM T-10, TRAFFIC COMPACTED SURFACE COURSE" SHALL BE MET EXCEPT THAT NO. 3 OR NO. 34 AGGREGATE SHALL BE USED.

THE WEIGHTS TO BE USED IN CALCULATING THE YARDAGE OF NO. 3 OR NO. 34 AGGREGATE TO BE PAID FOR UNDER THIS ITEM SHALL BE THE SAME AS THOSE INDICATED IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS FOR CRUSHER RUN OR BANK RUN MATERIALS.

ITEM I-10 RIPRAP, AS PER PLAN

PAYMENT FOR CUT-OFF WALLS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM I-10 RIPRAP, USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN. (SEE DETAIL-SHEET NO. 438)

ITEM I-15 GUARD RAIL, REMOVED AND REBUILT

GUARD RAIL REMOVED UNDER THIS ITEM SHALL BE RE-ERECTED AT LOCATIONS SPECIFIED BY THE ENGINEER. THE QUANTITY OF GUARD RAIL REMOVED SHALL BE RE-ERECTED AT SIDEROAD LOCATIONS AS FAR AS POSSIBLE. ONLY AFTER ALL SIDEROAD LOCATIONS ARE COMPLIED WITH SHALL REBUILT RAIL BE USED ON THE MAINLINE.

ITEM SPECIAL, DRILLED WELLS ABANDONED

THE EXISTING CONCRETE OR STONE SLAB WELL COVER AND PUMPING EQUIPMENT SHALL BE REMOVED AND DISPOSED OF. THE CASINGS SHALL BE CUT OFF AT LEAST TWO FEET BELOW THE PROPOSED FINISHED GRADE OUTSIDE PROPOSED PAVEMENT AREAS OR AT LEAST TWO FEET BELOW THE PROPOSED SUBGRADE ELEVATION INSIDE PROPOSED PAVEMENT AREAS AND CAPPED WITH CLASS "E" CONCRETE OR A STANDARD THREADED PIPE CAP.

THE UNIT PRICE BID FOR EACH "DRILLED WELL ABANDONED" SHALL INCLUDE PAVEMENT FOR ALL LABOR, TOOLS, MATERIAL AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

AGRICULTURAL LIMING MATERIAL AS PER PLAN

THE LOCATION AND NEED FOR AGRICULTURAL LIMING MATERIAL WILL BE DETERMINED BY LABORATORY TEST AFTER ROUGH GRADING HAS BEEN PERFORMED. QUANTITIES OF AGRICULTURAL LIMING MATERIAL AS SHOWN ON THE PLANS ARE SUFFICIENT FOR THE ENTIRE PROJECT, BUT WILL BE NON-PERFORMED FOR AREAS WHERE THE TESTS SHOW THAT LIMING MATERIAL IS NOT NEEDED.

DRIVE LOCATION

THE LOCATION OF DRIVES ON THIS PROJECT MAY BE VARIED AT THE DIRECTION OF THE ENGINEER, PROVIDING THERE IS NO ADDITIONAL COST TO THE STATE AND PROVIDING THE DRIVES ARE IN AREAS NOT DESIGNATED FOR LIMITED ACCESS.

CONSTRUCTION AT BEGINNING OF PROJECT

IN ORDER TO FACILITATE CONSTRUCTION BETWEEN THIS PROJECT AND THE ADJOINING SECTION TO THE WEST, THE CULVERT AT STATION 415+47 AND THE FILL BETWEEN STATION 415+00 AND STATION 419+00 SHALL BE CONSTRUCTED FIRST.

EXTRA DEPTH CATCH BASINS

STANDARD MANHOLE STEPS SHALL BE PROVIDED AT ANY CATCH BASIN DEEPER THAN SIX (6) FEET. COST OF STEPS TO BE INCLUDED IN THE PRICE BID FOR ITEM I-8 CATCH BASINS. SEE DETAIL-SHEET NO. 437.

TEMPORARY PAVEMENT (CONTINUED FROM 3RD COLUMN)

(1) ITEM T-70 9"PORTLAND CEMENT CONCRETE PAVEMENT, AS PER PLAN, SHALL BE BUILT IN ACCORDANCE WITH REQUIREMENTS OF SECTION S-15.06.

GUARD RAIL REMOVED AND REBUILT

IF THE GUARD RAIL STEEL BEAM STANDARD TYPE (DEEP) RAIL ELEMENTS WHEN NO LONGER NEEDED ON THE TEMPORARY PAVEMENT LANES (STA. 599+00 TO STA. 607+00) IS IN THE OPINION OF THE ENGINEER SUITABLE FOR USE AS PERMANENT GUARD RAIL ON THE PROJECT, THE CONTRACTOR SHALL USE ALL OR PART OF THE SAME IN PLACE OF A LIKE AMOUNT OF NEW GUARD RAIL OF THE SAME TYPE AS CALLED FOR IN THE PLANS. THE COST OF REMOVING, REBUILDING AND RE-INSTALLING THE RAIL SHALL BE PAID FOR UNDER ITEM I-15, "GUARD RAIL REMOVED AND REBUILT."

LIGHTS AND SIGNS AT ADJACENT ROAD INTERSECTIONS

THE CONTRACTOR SHALL, IN ADDITION TO THE GENERAL REQUIREMENTS OF ITEM I-3 ON THIS PROJECT PERFORM THE FOLLOWING:

PROVIDE, ERECT, AND MAINTAIN STANDARD 40" x 24" SIZE "ROAD CLOSED" SIGNS, SIGN SUPPORTS, AND LIGHTS FOR ALL ROADS CLOSED TO TRAFFIC DURING CONSTRUCTION. 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 LIGHTS, SIGNS, AND SIGN SUPPORTS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM I-3 MAINTAINING TRAFFIC.

ALTERNATE METHODS

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

TEMPORARY ROADWAYS

TEMPORARY ROADWAYS SHALL BE SURFACED WITH ITEM T-10 AGGREGATE AND STABILIZED WITH ITEM I-4 CALCIUM CHLORIDE. ITEMS I-4 AND T-10 SHALL BE APPLIED WHERE DIRECTED AND IN AMOUNTS REQUESTED BY THE ENGINEER.

(SEE SHEET NO. 17) ITEM T-10 562 C.Y. TRAFFIC COMPACTED SURFACE COURSE
ITEM I-4 12 TONS CALCIUM CHLORIDE MAINT. TRAFFIC

TRAFFIC MAINTENANCE

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES BY USE OF EITHER THE EXISTING PAVEMENT, THE PROPOSED PAVEMENT, OR TEMPORARY ROADWAYS SURFACED WITH T-10 AGGREGATE AND STABILIZED WITH ITEM I-4 CALCIUM CHLORIDE.

USE OF TEMPORARY PAVEMENT

THE LIMITS AND DURATION OF USE OF TEMPORARY ROADWAYS SHALL BE HELD TO AN ABSOLUTE MINIMUM, AND SHALL BE IN ALL CASES SUBJECT TO THE APPROVAL OF THE ENGINEER.

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 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 OF THE ENGINEER.

COOPERATION WITH OTHER CONTRACTORS

IN ADDITION TO THE PROVISIONS AS SET FORTH IN SEC. G-5.05 OF THE SPECIFICATIONS, THE CONTRACTOR SHALL COOPERATE WITH THE CONTRACTOR OR CONTRACTORS, AS THE CASE MAY BE, ENGAGED IN CONSTRUCTION OF ANY ADJOINING SECTION OF THIS PROJECT.

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 COURSE . THIS SHALL BE ACCOMPLISHED BY BUILDING THE B-19 COURSE , PLACED WITH THE FIRST PORTION OF THE PAVEMENT BUILT, AT LEAST EIGHTEEN (18) INCHES BEYOND THE CENTERLINE AND BY SURFACING NO CLOSER THAN EIGHTEEN (18) INCHES TO THIS EDGE OF THE ABOVE COURSE . WHEN THE SECOND PORTION OF THE PAVEMENT IS BUILT, AT LEAST TWELVE (12) INCHES OF THESE PROJECTING COURSE SHALL BE BROKEN DOWN AND THOROUGHLY KEYED IN WITH THE NEWLY PLACED CORRESPONDING COURSE 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.

MAINLINE TRAFFIC

TWO WAY TRAFFIC WILL BE MAINTAINED ON EXISTING U.S. ROUTE 40 WHILE THE PROPOSED I.R. 70 EASTBOUND LANES ARE BEING CONSTRUCTED. TRAFFIC WILL THEN BE ROUTED ONTO THE NEWLY CONSTRUCTED EASTBOUND LANES WHILE CONSTRUCTION IS BEING DONE ON THE WESTBOUND LANES BY MEANS OF TEMPORARY CROSSOVERS AT EACH END OF PROJECT. TEMPORARY CROSSOVERS AS PER PLAN WILL BE MAINTAINED DURING THE CONSTRUCTION OF THE REMAINDER OF THE PROJECT.

GENERAL NOTES TRAFFIC

MAINTAINING TRAFFIC ON LOCAL ROADS

ATTENTION IS CALLED TO SECTION G4-05 OF THE SPECIFICATIONS REGARDING MAINTAINING INGRESS AND EGRESS OF LOCAL ROADS.

COUNTY HIGHWAY 27

TRAFFIC SHALL BE MAINTAINED ON EXISTING COUNTY HIGHWAY 27 DURING CONSTRUCTION OF RELOCATED COUNTY HIGHWAY 27. ONE LANE TRAFFIC AND HALF WIDTH CONSTRUCTION WILL BE USED WHEN CONNECTING THE RELOCATED ROAD TO THE EXISTING ROAD.

COUNTY HIGHWAY 114

TRAFFIC WILL BE MAINTAINED ON EXISTING COUNTY HIGHWAY 114 DURING CONSTRUCTION OF COUNTY HIGHWAY 114 NORTH AND RELOCATED COUNTY HIGHWAY 114. ONE LANE TRAFFIC AND HALF WIDTH CONSTRUCTION WILL BE USED WHEN CONNECTING THE RELOCATED ROAD TO THE EXISTING ROAD.

COUNTY HIGHWAY 202

TRAFFIC WILL BE MAINTAINED ON EXISTING COUNTY HIGHWAY 202 DURING CONSTRUCTION OF THE SERVICE ROAD FROM EXISTING COUNTY HIGHWAY 202 TO COUNTY HIGHWAY 114 NORTH. THIS PHASE OF CONSTRUCTION SHOULD FOLLOW OR BE CORRELATED WITH THE COUNTY HIGHWAY 114 NORTH CONSTRUCTION. ONE LANE TRAFFIC AND HALF WIDTH CONSTRUCTION WILL BE USED WHEN CONNECTING THE SERVICE ROAD TO THE EXISTING COUNTY HIGHWAY 202.

CEMETERY ROAD

TRAFFIC WILL BE MAINTAINED ON EXISTING CEMETERY ROAD DURING CONSTRUCTION OF THE SERVICE ROAD AND RELOCATED CEMETERY ROAD. ONE WAY TRAFFIC AND HALF WIDTH CONSTRUCTION WILL BE UTILIZED WHEN CONNECTING THE RELOCATED ROAD TO THE EXISTING ROAD AND THE PROPOSED SERVICE ROAD.

TOWNSHIP ROAD 295

TRAFFIC WILL BE MAINTAINED ON EXISTING TOWNSHIP ROAD 295 DURING CONSTRUCTION OF THE SERVICE ROAD. ONE LANE TRAFFIC AND HALF WIDTH CONSTRUCTION WILL BE USED WHEN CONNECTING THE TOWNSHIP ROAD 295 APPROACH TO THE PROPOSED SERVICE ROAD.

COUNTY HIGHWAY 254

TRAFFIC WILL BE MAINTAINED ON EXISTING COUNTY HIGHWAY 254 DURING CONSTRUCTION OF COUNTY HIGHWAY 254 RELOCATED. ONE WAY TRAFFIC AND HALF WIDTH CONSTRUCTION WILL BE UTILIZED WHEN CONNECTING THE RELOCATED ROAD TO THE EXISTING ROAD.

COUNTY HIGHWAY 40-A

TRAFFIC WILL BE MAINTAINED ON EXISTING COUNTY HIGHWAY 40-A DURING CONSTRUCTION OF COUNTY HIGHWAY 254 RELOCATED. ONE WAY TRAFFIC AND HALF WIDTH CONSTRUCTION WILL BE UTILIZED WHEN CONNECTING RELOCATED COUNTY HIGHWAY 254 TO THE EXISTING COUNTY HIGHWAY 40-A.

FOR QUANTITIES FOR ITEM I-4 & T-10 FOR MAINTAINING TRAFFIC, SEE SHEET NO. 17.

LENGTH OF WORK SIDEROADS

RELOCATED C.H. 27
STATION 27+42 to STATION 35+80 838.00 LIN. FT.

C.H. 286, CR 25, TR 81, & CR 254
Sta. 0+08.06 to 117+14.00 11,705.94 LIN. FT.
EQUA. 94+45.65 BK = 33+95.65 Ahead +50.00 Lin. Ft.
Sta. 117+20.49 to 206+12.20 8,891.71 Lin. Ft.

CH 114 North — STATION 6+72 to STATION 12+87.91 615.91 LIN. FT.

C.H. 114 RELOCATION
STATION 61+41.51 TO STATION 93+85 3243.49 LIN. FT.

CEMETERY ROAD
STATION 6+25 to STATION 12+24.13 599.13 LIN. FT.

TOTAL LENGTH OF WORK - SIDEROADS 5963.47 LIN. FT.

PLACEMENT OF ASPHALTIC CONCRETE

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT 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.

TEMPORARY PAVEMENT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

12 / 185

GUERNSEY COUNTY
BELMONT COUNTY
GUE. 40 - 23.88
BEL. 40 - 0.00

THE FOLLOWING QUANTITIES TO BE USED AS DIRECTED BY THE ENGINEER HAVE BEEN PROVIDED FOR TEMPORY TRAFFIC LANES WHICH MAY BE REQUIRED ALONG THE NORTH SIDE OF THE EXISTING PAVEMENT BETWEEN STATION 599+00 AND STATION 607+00 WITH APPROPRIATE TRANSITION TAPERS CONNECTING AT EACH END. TEMPORARY GUARD RAIL SHALL BE PROVIDED ALONG THE SOUTH SIDE OF THE EXISTING PAVEMENT IN ACCORDANCE WITH SECTION S-15.05.

(1) ITEM T-70 9"PORTLAND CEMENT CONC. PAVEMENT, AS PER PLAN 650 S.Y.
(2) ITEM E-8 REMOVAL AND DISPOSAL OF EXIST. PAVEMENT 650 S.Y.
(3) ITEM I-15 TEMP. GUARD RAIL STEEL BEAM STANDARD TYPE (DEEP), AS PER PLAN 1,200 LIN. FT.

(NOTES CONTINUED 1ST COLUMN)

ITEM E-8 RIGID PAVEMENT AND SUBBASE REMOVAL, AS PER PLAN

DEFINITE BASE FAILURE HAS OCCURRED IN THE EXISTING U.S. ROUTE 40 PAVEMENT (PROPOSED WEST BOUND LANES). THE FULL DEPTH OF CONCRETE AND SUBBASE SHALL BE REMOVED AND REPLACED WITH 9" B-71 AND 6" I-22.

BOTH LANES	LIN. FT.	SINGLE LANES	LIN. FT.
STA. 426+17 TO STA. 426+48 =	30	STA. 440+16 TO STA. 440+46 E.B.L. =	30
STA. 434+09 TO STA. 435+42 =	133	STA. 443+00 TO STA. 443+45 E.B.L. =	45
STA. 451+60 TO STA. 452+10 =	50	STA. 444+90 TO STA. 445+22 W.B.L. =	32
STA. 494+94 TO STA. 495+27 =	33	STA. 464+81 TO STA. 465+19 E.B.L. =	38
STA. 581+26 TO STA. 582+88 =	162	STA. 466+82 TO STA. 467+15 W.B.L. =	33
STA. 623+00 TO STA. 628+69 =	569	STA. 478+76 TO STA. 479+07 E.B.L. =	31
		STA. 480+68 TO STA. 481+08 W.L.B. =	40
		STA. 633+66 TO STA. 633+97 E.B.L. =	31
		STA. 633+97 TO STA. 634+40 W.B.L. =	43
TOTAL LIN. FT.	977	TOTAL LIN. FT.	323

$\frac{977 \times 24}{9}$ = 2605 S.Y. B-71 $\frac{323 \times 12}{9}$ = 431 S.Y. B-71

$\frac{977 \times 24 \times 0.5}{27}$ = 434 C.Y. I-22 $\frac{323 \times 12 \times 0.5}{27}$ = 72 C.Y. I-22

$384 \times 24 \div 9 = 2304$ S.Y. E-1 COMPACTED SUBGRADE

THE ESTIMATED QUANTITY OF 3036 S.Y. of B-71 AND E-8 PAVEMENT REMOVAL & 2304 S.Y. E-1 COMPACTED SUBGRADE SHEET 18, 506 C.Y. OF I-22 IS CARRIED TO SHEETS 13 & 16 ALTHOUGH THIS LIST IS MEANT TO BE COMPLETE THE CONTRACTOR MAY BE DIRECTED TO ADD TO, OR NON-PERFORM ANY PART THEREOF BY THE ENGINEER.

FOR DETAILS OF PAVEMENT REPLACEMENT IN AREAS OF FAILURES SEE SHEET NO. 438.

SPRING DRAINS

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED FOR SPRING DRAINS TO BE USED AS DIRECTED BY THE ENGINEER (SEE DETAIL ON SHEET NO. 438).

ITEM I-1 PIPE, 6" CLASS I-3 SEC. M-6.4(h), AS PER PLAN	350 LIN. FT.
ITEM I-1 PIPE, 6" CLASS F-4	25 LIN. FT.
ITEM I-1 PIPE, 8" CLASS F-4 SEC. M-6.4(c)	50 LIN. FT.
ITEM I-9 STONE UNDERDRAIN NO. 1, AS PER PLAN	50 LIN. FT.

REMOVAL & STORAGE OF EXISTING CUMBERLAND MILESTONES

THE CUMBERLAND MILESTONES SHALL BE CAREFULLY REMOVED AND STORED NEAR THE RIGHT-OF-WAY LINE. PAYMENT FOR THIS OPERATION SHALL BE AT THE UNIT PRICE BID FOR ITEM E-8 REMOVAL AND STORAGE OF EXISTING CUMBERLAND MILESTONES.

THE 6 EXISTING LOCATIONS ARE STA. 474+45, 67' LT; 526+54, 79' LT; 576+65, 82' LT; 622+18, 68' LT -- STA 25+50, 75' LT; and STA. 418+87, 87' LT.

ITEM S.S. CE-101.04 COMPACTION USING HEAVY PNEUMATIC TIRED ROLLER

AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR USE IN PROOF ROLLING OF SUBGRADE ON THE MAINLINE 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 CE-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 WITH THE LIMITS PROVIDED IN SUPPLEMENTAL SPECIFICATION NO. CE 101.04.

ITEM I-15 TEMPORARY GUARD RAIL

STEEL 55 GAL. DRUMS SHALL BE USED IN LIEU OF POSTS FOR THIS ITEM. THE DRUMS SHALL BE PAINTED YELLOW AND SHALL BE HALF FILLED WITH SAND IN ORDER TO HOLD THEM IN POSITION. THE RAIL ELEMENTS SHALL BE STEEL BEAM TYPE MEETING THE REQUIREMENTS OF EITHER SECTION I-15.11 (DEEP) OR SECTION I-15.12 (SHALLOW), EXCEPT THAT IN LIEU OF FURNISHING NEW RAIL, USED RAIL WHICH IS IN GOOD CONDITION AND APPROVED BY THE ENGINEER MAY BE FURNISHED. THE RAIL SHALL BE SECURELY BOLTED TO THE TRAFFIC SIDE OF THE DRUMS IN A MANNER SATISFACTORY TO THE ENGINEER AND THE CENTER OF THE RAIL ELEMENT SHALL BE APPROXIMATELY 2 FEET ABOVE THE SURFACE OF THE PAVEMENT OR GROUND.

AN ESTIMATED QUANTITY OF 600 LIN. FT. HAS BEEN PROVIDED FOR THIS ITEM TO BE USED AS DIRECTED BY THE ENGINEER.

PROTECTION OF TRAFFIC

THE CONTRACTOR SHALL SAFEGUARD THE TRAVELING PUBLIC ON C.H. 27 (RELOCATED) AND C.H. 114 NORTH BY PROVIDING PLATFORMS, NETS, OR OTHER SUITABLE PROTECTION ABOVE THE TRAVELED LANES. PAYMENT FOR THIS PROTECTION SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM I-3, MAINTAINING TRAFFIC.

Rev 5-18-64

GENERAL SUMMARY

CODE 7221 & CODE 9766

& See Sheet No. 18

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

13/485

GUERNSEY COUNTY — BELMONT COUNTY

GUE-40-23.66 BEL-40-0.00

| UNIT | SHEET NUMBER | | |

GENERAL SUMMARY

CODE 7221 &
CODE 9766

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MUSKINGUM COUNTY – BELMONT COUNTY
GUE-40-23.83 BEL-40-0.00

UNIT	SHEET NUMBER	ITEM	TOTALS FROM SHEET 407Q 100% STATE	TOTALS NORMAL PARTICIP.	GRAND TOTAL	UNIT	DESCRIPTION
							DRAINAGE
E-3	228 ✓	E-3	6	228	234	Cu.Yds.	Channel Excavation
I-1	50 20 10 20 10 10 10 10 40 10 20 10 10 30 10 40 40 10 10 10 20 10	I-1		410	410	Lin.Ft.	8" Pipe, Class F-4, Sec. M-6.4(c)
I-1	309 ✓ 18 ✓	I-1	94	327	421	Lin.Ft.	15" Pipe, Class A-1, Sec. M-6.4(d)
I-1	167 ✓	I-1	138	167	305	Lin.Ft.	18" Pipe, Class A-1, Sec. M-6.4(d)
I-1	328 ✓	I-1	40	328	368	Lin.Ft.	24" Pipe, Class A-1, Sec. M-6.4(d)
I-1	287 ✓	I-1		287	287	Lin.Ft.	30" Pipe, Class A-1, Sec. M-6.4(d)
I-1	18 ✓	I-1		18	18	Lin.Ft.	42" Pipe, Class A-1,
I-1	576 ✓	I-1		576	576	Lin.Ft.	42" Pipe, Class A-1, 8 Ga. M-6.4(d) Shop elongated As per plan.
I-1	278 ✓	I-1		278	278	Lin.Ft.	30" Pipe, Class A-1, 10-Gage, Sec. M-6.4(d)
I-1	86 ✓	I-1		86	86	Lin.Ft.	36" Pipe, Class A-1, 10-Gage, Sec. M-6.4(d)
I-1	174 / 198 ✓	I-1		372	372	Lin.Ft.	24" Pipe, Class A-1, 12 Gage, Sec. M-6.4(d)
I-1	582 ✓	I-1		582	582	Lin.Ft.	30" Pipe, Class A-1, 12-Gage, Sec. M-6.4(d)
I-1	396 ✓	I-1		396	396	Lin.Ft.	15" Pipe, Class A-1, 14-Gage, Sec. M-6.4(d).
I-1	194 ✓	I-1		194	194	Lin.Ft.	60" Pipe, Class A-1, Sec. M-6.4(g), 8-7 Gage
I-1	218 ✓	I-1		218	218	Lin.Ft.	60" Pipe, Class A-1, Sec. M-6.4(g), 10-8-Gage
I-1	110 ✓ 117 ✓	I-1		227	227	Lin.Ft.	15" Pipe, Class A-1, Sec. M-6.6(c)
I-1	106 ✓	I-1		106	106	Lin.Ft.	24" Pipe, Class J-1, Sec. M-6.6(d)
I-1	174 ✓	I-1		174	174	Lin.Ft.	42" Pipe, Class A-1, Sec. M-6.4(d) 8 Ga. Shop Strutted as per plan.
I-1	111 93 126 80 58 98 74 71 122 78 76 54 80 135 74 155 441 ✓ 118 58 56	I-1		2197	2197	Lin.Ft.	15" Pipe, Class B-1,
	39 ✓						
I-1	432 ✓	I-1		492	492	Lin.Ft.	24" Pipe, Class J-1
	60 ✓						
I-1	30 30 178 60 30 111 30 59 67	I-1		595	595	Lin.Ft.	6" Pipe, Class B-1,
I-1	55 ✓	I-1		55	55	Lin.Ft.	21" Pipe, Class A-1, Sec. M 6.6(a) or Sec. M-6.8(b)
I-1	61 ✓	I-1		61	61	Lin.Ft.	21" Pipe, Class A-1, Sec. M-6.6(b) or Sec. M-6.8(b)
I-1	59 ✓	I-1		59	59	Lin.Ft.	36" Pipe, Class A-1, Sec. M-6.6(a) or Sec. M-6.8(b)
I-1	27 27 27 56 130 27 27 115 27 27 27 27 129 379 177 81 192 ✓ 27 88 27	I-1		1644	1644	Lin.Ft.	12" Pipe, Class E-1
I-1	18 208 27 ✓ 160 ✓	I-1		413	413	Lin.Ft.	15" Pipe, Class E-1
I-1	62 /	I-1		62	62	Lin.Ft.	18" Pipe, Class B-1
I-1	96 ✓	I-1		96	96	Lin.Ft.	24" Pipe, Class E-1
I-1	46 ✓	I-1		46	46	Lin.Ft.	15" Pipe, Class E-1, Sec. M-6.6 (b) or Sec. M 6.8(b)
I-1	25 10 10 20 20 10 10 40 10 10 60 20 20 20 10 30 60 20 90 316 ✓ 20 20 10	I-1		861	861	Lin.Ft.	6" Pipe, Class F-4
I-1	66 ✓	I-1		66	66	Lin.Ft.	12" Pipe, Class C-1
I-1	45 96 35 78 32 63 256 ✓ 66 86 205 ✓	I-1		962	962	Lin.Ft.	15" Pipe, Class F-4
I-1	100 /	I-1		100	100	Lin.Ft.	18" Pipe, Class F-4 Sec. M-6.4(c) 14 Ga.

Rev. 11-4-64 C.E.H.
Rev. 5-14-64

GENERAL SUMMARY

CODE 7221
CODE 9766

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

15
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

| UNIT | SHEET NUMBER | | |

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

16
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE-40-28.83 BEL-40-0.00

GENERAL SUMMARY

CODE 7221
CODE 9766

| UNIT | SHEET NUMBER | | |

QUANTITIES & SUBSUMMARIES

FED. RD. DIVISION	STATE	PROJECT		17 / 485
2	OHIO			

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL.–40–0.00

PAVEMENT - GUE. 40 - 23.88 BEL. 40 - 0.00 - MAINLINE

Sta.	to Sta.	Length	T-71 9" P.C.C. Pavt.	T-35 Asph. Conc Surface (85-100)(70-85)	T-31 #6 Aggregate	T-31 Bit. Material	T-30 Prime Coat	T-30 Tack Coat	B-35 Asph. Conc Lev. Course 70-85	B-35 85-100	B-21 Waterproofed Aggr. Base Course	B-19 Aggregate Base Course	B-19 Aggregate Base Course	I-7 Rein. Conc. Appr. Slab T-13"	I-9 Stone Underdrain No. 2	I-12 Concrete Curb Type 2-A	I-12 Concrete Curb Type 6	I-12 Concrete Curb Type- 7	I-12 Concrete Curb Type- 8	I-18 Stabilized Crushed Aggr. Shlds	I-21 Conc. Med. Pavement Type 1	I-22 Subbase	T-10 Traff. Comp Surface Course	I-4 Calcium Chlor. Maint. Traffic	NOTES
		Lin. Ft.	Sq. Yds.	Cu. Yds.	Cu. Yds.	Gals.	Gals.	Gals.	Cu. Yds.		Cu. Yds.	Cu. Yds.	Cu. Yds.	Sq. Yds.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.		Cu. Yds.	Sq. Yds.	Cu. Yds.	Cu. Yds.	Tons	
415+00	428+25	1325.00	3,534		123	38	1,190		354	123		398		269		689				371		1,382			Normal - Utilizing Exist. Pav't.
428+25	458+00	2975.00	7,934		275	74	2,312		793	275		774		833		1,547				625		2,802			Super " " "
458+00	487+71.93	2971.93	7,926		275	74	2,312		793	275		773		603		1,545				654		2,862			Normal - " " "
487+71.93	489+34.07					1	39					13		10	267					11		70			Structure No. Gue. 40 - 2527 L & R
489+34.07	518+00	2865.93	7,643		265	71	2,229		764	265		745		582		1,490				631		2,759			Normal - Utilizing Exist. Pav't.
518+00	540+50	2250.00	11,999			62	1,895					620		879						86		3,241			Normal & U-Turn Median Opening
540+50	542+00	150.00	800			4	117					39		67								209			Transition
542+00	558+75	1675.00	8,933			42	1303					436		811								2318			Super
558+75	560+25	150.00	800			4	117					39		67								209			Transition
560+25	564+75	450.00	2,400			11	350					117		183								634			Normal
564+75	566+25	150.00	800			4	117					39		67								209			Transition
566+25	570+50	425.00	2,267			11	331					111		206								588			Super
570+50	584+50	1400.00	3,734		130	35	1,089		373	130		364		364		728				308		1,325			Super - Utilizing Exist. Pav't.
584+50	588+75	425.00	2,267			11	331					111		206								588			Super.
588+75	590+50	175.00	933			4	136					46		78								245			Transition
590+50	596+75	625.00	3,333			16	486					163		254								881			Normal
596+75	598+25	150.00	800			4	117					39		67								209			Transition
598+25	613+25	1,500.00	8,000			37	1,167					390		726								2,076			Super
613+25	615+00	175.00	933			4	136					46		78								245			Transition
615+00	620+25	525.00	2,800			13	408					137		213								740			Normal
620+25	621+75	150.00	800			4	117					39		67								209			Transition
621+75	623+00	175.00	933			4	136					46		86								243			Super
623+00	643+50	2050.00	5,755		189	61	1,716		546	189		579		578		806				459		2083			Ramp "A" Taper. Super - Util. Exist. Pav't.
643+50	647+75	425.00	2,334		38	9	286		113	38		95		121						27		578			Ramp "A" & "B" Tapers, Nor. " " "
647+75	649+75	200.00	1,439		18	4	133		54	18		44		62						13		329			Ramp "A" & "B" Tapers Trans. " " "
649+75	657+41.53	766.53	2,873		69	18	555		205	69		185		203		104				155		839			Ramp "A" & "B" Tapers. Super " " "
9+99.42	12+44	244.58	652		23	6	190		65	23		64		63		127				54		232			Super - Utilizing Exist. Pav't.
12+44	14+06					1	39					13		22	267							71			Structure No. Bel. 40 - 0.05 L & R
14+06	18+50	444.00	1,184		41	11	345		118	41		115		115		231						420			Super - Utilizing Exist. Pav't.
18+50	31+50	1300.00	9,740			30	912					304		569								2,223			Super & Tapers Ramps "B" & "D"
31+50	32+50	100.00	672			2	72					24		45								160			Transition & Taper Ramp "D"
32+50	38+50	600.00	3,550			15	439					146		275								884			Normal & Taper Ramp "D"
38+50	50+75	1225.00	3,267		113	40	1,102		327	113		369		248		637				356		1,284			Normal & U-Turn Med. Open. Util. Exist. Pav't.
50+75	52+25	150.00	400		14	4	117		41	14		39		35		78				33		145			Transition - Utilizing Exist. Pav't.
52+25	60+00	775.00	2,067		72	19	603		207	72		202		202		403				171		733			Super - Utilizing Exist. Pav't.
Subtotal			113,302		1645	748	22,944		4,753	1645		7,664		9,254	534	8,385				3,954		34,025			

PAVEMENT - GUE. 40 - 23.88 BEL. 40 - 0.00 - RAMPS

50+52.42	57+23	670.58	1,183			5	162					64		91				100	490			301			Ramp "A"
57+23	59+27.16	204.16	363			1	34					22		11								83			Ramp "A"
14+24.92	23+62.52	937.60	1,811			5	164					181		62			106	100		19	36	423			Ramp "B"
51+52.82	57+86	633.18	1,270			4	113					97		61			106	100			36	299			Ramp "C" & 100' Safety Lane
57+86	60+40.18	254.18	452			1	42					28		14								103			Ramp "C"
13+87.89	26+00	1,212.11	2,133			9	220					122		91					224 226			504			Ramp "D"
Subtotal			7,212			25	735					464		330			212	200	324 716	19	72	1,713			

PAVEMENT - GUE. 40 - 23.88 BEL. 40 - 0.00 SIDEROADS

8+50	66+00	5750.00		354				4,078			496		2,266			2,310									C.H. 254 Relocation
114+20	35+80	8937.09		555				6,389			775		3,756			4,209									C.H. 27 Relocation
0+19	1+70	151.00											61												Service R.D. #4
6+25	11+68.60	543.60											215												Cemetery Road Relocation
6+71.48	12+24.80	553.32	2528			2	65					24		31						106		465	112	257	C.H. - 114 (North) incl. Aprons to all Ramps
23+00	60+59.88	3759.88		281				2918			2		977			1579						828	375	750	C.H. 202 to Radius Rets @ Int.
60+59.88	93+00	3240.12		316				3035			403		1163			1,371							75	150	C.H. - 114 Reloc. - incl. Apron to C.H. 202 Apron to C.H. 114 (North)
Subtotal			2,528	1506	1645	2	65	16,213		1645	1676	24	8438	31		9,469				106		1293	562	~~11.57~~	
Grand total			123,242	1506	1645	775	23,744	16,213	4,753	1645	1676	8,152	8438	9,615	534	17,854	212	200	324 716	4,079	72	37.031	562	~~11.57~~ Use 12 Tons	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

18/485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

QUANTITIES & SUB-SUMMARY

SHEET NO	ITEM I-15 GUARD RAIL STD. TYPE DEEP LIN. FT.	ITEM I-15 GUARD RAIL REM. & REBUILT LIN. FT.	ITEM E-1 EARTHWORK STATION TO STATION		EXCAVATION (C.Y.)	EMBANKMENT (C.Y.)	ITEM L-9 SEEDING SQ. YDS.
			MAINLINE				
24	275	388	410+00	420+00	2,688	45,079	15,721
25			420+00	430+00	135,142	591	33,440
26	862.5	725	430+00	440+00	52,743	129,180	40,676
27	825	GG2.5	440+00	450+00	17,154	36,289	34,210
28	300	262.5	450+00	460+00	195,429	1,704	25,572
29	673	693	460+00	470+00	56,922	7,311	26,860
30	1000	975	470+00	480+00	21,573	172,493	32,823
31	1811	1251	480+00	490+00	12,500	94,462	26,227
32	1128.5	712.5	490+00	500+00	22,875	13,175	25,014
33	750	GG2.5	500+00	510+00	15,246	58,949	31,700
34	437.5	215	510+00	520+00	78,373	27,420	30,850
35	1100	1125	520+00	530+00	41,018	60,307	32,005
36	525		530+00	540+00	81,500	9705 ✓	30,653
37	1050	104	540+00	550+00	17,606	55,412	31,720
38	400	162.5	550+00	560+00	52,627	11,279	34,560
39	950	875	560+00	570+00	25,738	74,134	32,147
40			570+00	580+00	113,636	512	21,626
41	1300	1512.5	580+00	590+00	33,755	56,135 ✓	31,845
42	900	925	590+00	600+00	70,120	33,187	25,390
43	150	150	600+00	610+00	130,971	2,083	23,415
			610+00	625+00	34,712	139,919	53,554
54	3150	2665 ✓	625+00	640+00	236,662	16,938	47,875
55	4987.5 ✓	705 ✓	640+00	655+00	65,451	208,399	48,067
56	825 ✓	957.5 ✓	655+00	20+00	211,309	135,759	37,846
57	150		20+00	30+00	131,001	2,016	26,529
58	1700	1525	30+00	40+00	5,922	96,259	30,450
59	1075	1050	40+00	50+00	20,179	56,556	30,787
60	1325	1125	50+00	60+00	8131	76,903	28,653
			Add'l Exc. for Undercut in Rock		12,680	23,655 *	
	28,100	19,428.5	SUB TOTAL		1,903,663	1,627,811	890,215
			C. H. 27 RELOCATION				
277			114+10	120+00	20,649	0	5,774
278	50		120+00	130+00	37,226	15	8,929
279	800		130+00	140+00	7,390	706	5,675
280	550		140+00	150+00	36,364	578	10,233
281	775		150+00	160+00	14,259	334	8,249
282	1525		160+00	170+00	12,194	80169	15,209
283	200		170+00	178+10.20	45,773	4943	15,609
284	450		10+33.11	20+00	1813	13,565	6,992
285	575		20+00	27+00	7,519	20,564	7,537
286			27+00	38+00	32,651	90	7,006
362			Service Rd. "A"		1,040	312	1,083
							92,896
			C. H. 202 RELOCATION				
324			23+50	25+00	266	486	829
325			25+00	30+50	18,982	633	3,166
336			49+00	61+00	31,705	217,839	21,159
							25,154
			CEMETERY ROAD RELOCATION				
339			6+25	12+00	26,697	0	4,754
			C. H. 114 NORTH				
275			6+71	12+55.91	14,402	2,771	3,838
			C.H. 114 RELOC., TWP. RD. 213, C.H. 286 CONN.				
340	250		61+00	70+00	71,432	4.564	14,412
341	800		70+00	80+00	37,710	18,318	15,510
342	800		80+00	90+00	6,565	22,944	13,593
343			90+00	93+85	1,821	378	2,594
320			TWP. RD. 213 - 0+65 ~ 3+00		156	1,142	1,664
323			C.H. 286 CONN. -1+00 ~ 6+75		34,492	9	6,409
			Add for Temp. Pvt. 413+22 ~ 417+18		82	286	64,182
	34,875	19,428.5	SUB TOTAL		2,364,851	2,038,757	1,070,439 ✓

ITEM E-1 COMPACTED SUBGRADE

	LOCATION		SQ. YDS.	
≠	Mainline	T-71	115,555	
≠		T-31	110,470	
≠		I-7	534	
		B-71	3838	
		Sub-total	230,397	
≠	Ramps	T-71	7,212	
≠		T-31	3,380	
		Sub-total	10,592	
≠	Add For Ex. Pvt. Replacement, Mainline - Subtotal		2304	(See Sht. #12)
	Sideroads:	T-35		
	C.H. 202 Relocation		8,017	
	C.H. 114 Relocation & C.H. 114 North		11,363	
	C.H. 27 Reloc. & C.H. 286 & Twp. Rd. 213		20,538	
	C.H. 254 Reloc.		12,140	
	Sub total		295,351 ✓	
	Deduct for Sections in Rock Cut		64,200	
	Total		231,151.0	

≠ ITEM S.S. C.E. 101.04 239,455 SQ. YDS. / 2,000 SQ. YDS. Per Hour = 120 HOURS

ITEM E-4 BORROW

ITEMS	CU. YDS.
Embankment	2,286,485
12 % Shrinkage	274,378
Total	2,560,893
Less Excavation	2,539,910
Total Borrow	20,953

* Embankment for Rockcut and Median Barrier

VOLUME OF MEDIAN HUMP EMBANKMENT

* Average Half End Area:
Rocksection = 34 Sq. Ft.
Earthsection = 8.86 Sq. Ft.

Length:
Rocksection (See sheet No. 5) = 10077
Earthsection (See sheets Nos. 4, 5 & 6

Total Volume:
[(34 x 10077) + (39509.59 x 8.86)] / 27 = 25,655 Cu. Yds.

SHEET NO	I-15 GUARD RAIL STD TYPE DEEP LIN FT	I-15 GUARD RAIL REM & REBUILT LIN FT	ITEM E-1 EARTHWORK STATION TO STATION		EXCAVATION C.Y.	EMBANKMENT C.Y.	ITEM L-9 SEEDING SQ. YDS.
✓	34,875	19,428.5 ✓	SUB TOTAL		2,364,851	2,038,757	1,070,439
			C.H. 254 RELOC.				
363	25		8+50	12+00	14,806	0	3,831
364	850		12+00	22+00	22,451	12,507	11,971
365	1200		22+00	32+00	13,323	29,206	11,322
366	200		32+00	42+00	73,653	1,642	13,570
367	1300		42+00	52+00	22,651	118,616	18,458
368	950		52+00	62+00	27,631	72,018	17,384
369	500		62+00	66+00	544	13,739	4,987
	5,025		Sub total		175,059	247,728	81,523
✓	39,900	19,428.5	Total		2,539,910	2,286,485	1,151,962 °

° 1,151,962 S.Y. Minus 11,050 S.Y. Sod. = 1,140,912 S.Y. To Be Seeded

I-125 PAVEMENT MARKING

See Sheet No. 439

ITEM L-9 COMMERCIAL FERTILIZER

*1,160,490 S.Y. @ 20 lbs. / 1000 ° ÷ 2,000 = 104.44 Tons

ITEM L-9 AGRICULTURAL LIMING MATERIAL

*1,160,490 S.Y. @ 100 lbs. / 1000 ° ÷ 2,000 = 522.22 Tons

*1,140,912 Seeding
10,342 Sodding
216 Spec. Sod.
8,420 Jute Mat.
1,160,490 S.Y. Total

ITEM E-11 WATER

LOCATION	GAL / CU. YD.	M GALS.
Embankment	5	11,432
Compacted Subgrade	5	375
B-19	5	46
I-18	5	20
I-22	5	186
Total		12,059

ITEM SPECIAL - FURNISHING AND MIXING CALCIUM CHLORIDE WITH AGGREGATE

LOCATION		SQ. YDS.
Twp. Rd. 213		533
C.H. 114 (North)	I-18	611
Turnarounds	B-19	773
Cemetery Road	B-19	965
Total		2882

ITEM I-15 GUARDRAIL, STEEL BEAM, STANDARD TYPE (DEEP)

GUARDRAIL REQUIRED	REMOVED & REBUILT
39,900 L.F.	19,428.5 L.F. ✓
Deduct for Removed & Rebuilt 19,428.5 L.F. ✓	
Total 20,471.5 L.F. ✓	

I-127 DELINEATORS

STA.	TO STA.	TYPE A-1	TYPE C-2	TYPE C-3
415+00	60+00	267		
Ramp A			25	1
Ramp B			21	
Ramp C			19	
Ramp D			24	1
Total		267 ✓	89 ✓	2 ✓

FED RD DIVISION	STATE	PROJECT	
2	OHIO		

19
485

SUPERELEVATION CHARTS

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

LT. LANES		STATION	PROFILE GRADE	RT. LANES	
LT. E.P.	CTR.			CTR.	RT. E.P.
		P.I. STA. 443+75.60			
DC=1°51'			MAX. S.E.= 0.060 FT./FT.		
		428+00	1015.21	1015.39	1015.21
		428+25	1016.08	1016.25	1016.07
		428+50	1016.96	1017.07	1016.88
		428+75	1017.83	1017.88	1017.70
		429+00	1018.71	1018.70	1018.51
		429+25	1019.58	1019.51	1019.33
		429+50	1020.46	1020.32	1020.13
		429+75	1021.33	1021.13	1020.93
		430+00	1022.21	1021.95	1021.69
		430+25	1023.08	1022.75	1022.42
		430+50	1023.96	1023.57	1023.18
		430+75	1024.83	1024.38	1023.93
		431+00	1025.71	1025.19	1024.67
		431+25	1026.58	1026.00	1025.42
		431+50	1027.46	1026.82	1026.18
		431+75	1028.33	1027.63	1026.93
		432+00	1029.21	1028.49	1027.77
		432+25	1030.08	1029.36	1028.64
		432+50	1030.96	1030.24	1029.52
		432+75	1031.83	1031.11	1030.39
		433+00	1032.71	1031.99	1031.27
		433+25	1033.58	1032.86	1032.14
		433+50	1034.46	1033.74	1033.02
		433+75	1035.33	1034.61	1033.89
		434+00	1036.21	1035.49	1034.77
		434+25	1037.08	1036.36	1035.64
		434+50	1037.96	1037.24	1036.52
		434+75	1038.83	1038.11	1037.39
		435+00	1039.71	1038.99	1038.27
		435+25	1040.58	1039.86	1039.14
		435+50	1041.46	1040.74	1040.02
		435+75	1042.33	1041.61	1040.69
		436+00	1043.21	1042.49	1041.77
		436+25	1044.08	1043.36	1042.64
		436+50	1044.96	1044.24	1043.52
		436+75	1045.83	1045.11	1044.39
		437+00	1046.71	1045.99	1045.27
		437+25	1047.58	1046.86	1046.14
		437+50	1048.46	1047.74	1047.02
		437+75	1049.33	1048.61	1047.89
		438+00	1050.21	1049.49	1048.77
		438+25	1051.08	1050.36	1049.64
		438+50	1051.96	1051.24	1050.52
		438+75	1052.83	1052.11	1051.39
		439+00	1053.71	1052.99	1052.27
		439+25	1054.58	1053.86	1053.14

LT. LANES		STATION	PROFILE GRADE	RT. LANES	
LT. E.P.	CTR.			CTR.	RT. E.P.
		439+50	1055.46	1054.74	1054.02
		439+75	1056.33	1055.61	1054.89
		440+00	1057.21	1056.49	1055.77
		440+25	1058.08	1057.36	1056.64
		440+50	1058.96	1058.24	1057.52
		440+75	1059.83	1059.11	1058.39
		441+00	1060.71	1059.99	1059.27
		441+25	1061.58	1060.86	1060.14
		441+50	1062.46	1061.74	1061.02
		441+75	1063.33	1062.61	1061.89
		442+00	1064.21	1063.49	1062.77
		442+25	1065.08	1064.36	1063.64
		442+50	1065.96	1065.24	1064.52
		442+75	1066.83	1066.11	1065.39
		443+00	1067.71	1066.99	1066.27
		443+25	1068.58	1067.86	1067.14
		443+50	1069.46	1068.74	1068.02
		443+75	1070.33	1069.61	1068.89
		444+00	1071.21	1070.49	1069.77
		444+25	1072.08	1071.36	1070.64
		444+50	1072.96	1072.24	1071.52
		444+75	1073.83	1073.11	1072.39
		445+00	1074.71	1073.99	1073.27
		445+25	1075.58	1074.86	1074.14
		445+50	1076.46	1075.74	1075.02
		445+75	1077.33	1076.61	1075.89
		446+00	1078.21	1077.49	1076.77
		446+25	1079.08	1078.36	1077.64
		446+50	1079.96	1079.24	1078.52
		446+75	1080.83	1080.11	1079.39
		447+00	1081.71	1080.99	1080.27
		447+25	1082.58	1081.86	1081.14
		447+50	1083.46	1082.74	1082.02
		447+75	1084.33	1083.61	1082.89
		448+00	1085.21	1084.49	1083.77
		448+25	1086.08	1085.36	1084.64
		448+50	1086.96	1086.24	1085.52
		448+75	1087.83	1087.11	1086.39
		449+00	1088.71	1087.99	1087.27
		449+25	1089.58	1088.86	1088.14
		449+50	1090.46	1089.74	1089.02
		449+75	1091.33	1090.61	1089.89
		450+00	1092.21	1091.49	1090.77
		450+25	1093.08	1092.36	1091.64
		450+50	1093.96	1093.24	1092.52
		450+75	1094.83	1094.11	1093.39
		451+00	1095.71	1094.99	1094.27
		451+25	1096.58	1095.86	1095.14

LT. LANES		STATION	PROFILE GRADE	RT. LANES	
LT. E.P.	CTR.			CTR.	RT. E.P.
		451+50	1097.46	1096.74	1096.02
		451+75	1098.33	1096.61	1096.89
		452+00	1099.21	1098.49	1097.77
		452+25	1100.08	1099.36	1098.64
		452+50	1100.96	1100.24	1099.52
		452+75	1101.83	1101.11	1100.39
		453+00	1102.71	1101.99	1101.27
		453+25	1103.59	1102.87	1102.15
		453+50	1104.46	1103.74	1103.02
		453+75	1105.34	1104.62	1103.90
		454+00	1106.21	1105.49	1104.77
		454+25	1107.09	1106.37	1105.65
		454+50	1107.96	1107.26	1106.56
		454+75	1108.84	1108.20	1107.56
		455+00	1109.71	1109.13	1108.55
		455+25	1110.59	1110.07	1109.55
		455+50	1111.46	1111.01	1110.56
		455+75	1112.34	1111.95	1111.56
		456+00	1113.21	1112.88	1112.55
		456+25	1114.09	1113.83	1113.57
		456+50	1114.96	1114.76	1114.56
		456+75	1115.84	1115.70	1115.51
		457+00	1116.71	1116.64	1116.46
		457+25	1117.59	1117.58	1117.39
		457+50	1118.46	1118.51	1118.33
		457+75	1119.34	1119.45	1119.26
		458+00	1120.21	1120.38	1120.20
		458+25	1121.09	1121.27	1121.09

LT. LANES		STATION	PROFILE GRADE	RT. LANES	
LT. E.P.	CTR.			CTR.	RT. E.P.
		P.I. STA. 550+48.95			
DC=1°29'29"			MAX. S.E.= 0.048 FT./FT.		
1157.83	1158.02	540+25	1157.83	1158.02	1157.83
1157.91	1158.10	540+50	1157.92	1158.11	1157.94
1157.95	1158.14	540+75	1158.01	1158.20	1158.08
1157.97	1158.16	541+00	1158.10	1158.29	1158.24
1158.00	1158.19	541+25	1158.19	1158.38	1158.39
1158.03	1158.22	541+50	1158.28	1158.47	1158.54
1158.06	1158.25	541+75	1158.37	1158.56	1158.69
1158.07	1158.27	542+00	1158.46	1158.66	1158.86
1158.04	1158.30	542+25	1158.55	1158.81	1159.07

LT. LANES		STATION	PROFILE GRADE	RT. LANES	
LT. E.P.	CTR.			CTR.	RT. E.P.
1158.01	1158.33	542+50	1158.64	1158.96	1159.28
1157.98	1158.36	542+75	1158.73	1159.11	1159.49
1157.93	1158.38	543+00	1158.82	1159.27	1159.72
1157.89	1158.40	543+25	1158.91	1159.42	1159.93
1157.89	1158.45	543+50	1159.00	1159.56	1160.12
1157.94	1158.52	543+75	1159.09	1159.67	1160.25
1158.03	1158.61	544+00	1159.18	1159.76	1160.34
1158.12	1158.70	544+25	1159.27	1159.85	1160.43
1158.21	1158.79	544+50	1159.36	1159.94	1160.52
1158.30	1158.88	544+75	1159.45	1160.03	1160.61
1158.39	1158.97	545+00	1159.54	1160.12	1160.70
1158.48	1159.06	545+25	1159.63	1160.21	1160.79
1158.57	1159.15	545+50	1159.72	1160.30	1160.88
1158.66	1159.24	545+75	1159.81	1160.39	1160.97
1158.75	1159.33	546+00	1159.90	1160.48	1161.06
1158.84	1159.42	546+25	1159.99	1160.57	1161.15
1158.93	1159.51	546+50	1160.08	1160.66	1161.24
1159.02	1159.60	546+75	1160.17	1160.75	1161.33
1159.11	1159.69	547+00	1160.26	1160.84	1161.42
1159.20	1159.78	547+25	1160.35	1160.93	1161.51
1159.29	1159.87	547+50	1160.44	1161.02	1161.60
1159.38	1159.96	547+75	1160.53	1161.11	1161.69
1159.47	1160.05	548+00	1160.62	1161.20	1161.78
1159.56	1160.14	548+25	1160.71	1161.29	1161.87
1159.65	1160.23	548+50	1160.80	1161.38	1161.96
1159.74	1160.32	548+75	1160.89	1161.47	1162.05
1159.83	1160.41	549+00	1160.98	1161.56	1162.14
1159.92	1160.50	549+25	1161.07	1161.65	1162.23
1160.01	1160.59	549+50	1161.16	1161.74	1162.32
1160.10	1160.68	549+75	1161.25	1161.83	1162.41
1160.19	1160.77	550+00	1161.34	1161.92	1162.50
1160.28	1160.86	550+25	1161.43	1162.01	1162.59
1160.37	1160.95	550+50	1161.52	1162.10	1162.68
1160.46	1161.04	550+75	1161.61	1162.19	1162.77
1160.55	1161.13	551+00	1161.70	1162.28	1162.86
1160.64	1161.22	551+25	1161.79	1162.37	1162.95
1160.73	1161.31	551+50	1161.88	1162.46	1163.04
1160.82	1161.40	551+75	1161.97	1162.55	1163.13
1160.91	1161.49	552+00	1162.06	1162.64	1163.22
1161.00	1161.58	552+25	1162.15	1162.73	1163.31
1161.09	1161.67	552+50	1162.24	1162.82	1163.40
1161.18	1161.76	552+75	1162.33	1162.91	1163.49
1161.27	1161.85	553+00	1162.42	1163.00	1163.58
1161.36	1161.94	553+25	1162.51	1163.09	1163.67
1161.45	1162.03	553+50	1162.60	1163.18	1163.76
1161.54	1162.12	553+75	1162.69	1163.27	1163.85

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

20
485

SUPERELEVATION CHARTS

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

LT. LANES		STATION	PROFILE GRADE	RT. LANES	
LT. E.P.	CTR.			CTR.	RT. E.P.
1161.63	1162.21	554+00	1162.78	1163.36	1163.94
1161.72	1162.30	554+25	1162.87	1163.45	1164.03
1161.81	1162.38	554+50	1162.96	1163.54	1164.12
1161.89	1162.47	554+75	1163.04	1163.62	1164.20
1161.96	1162.54	555+00	1162.11	1163.69	1164.27
1162.02	1162.60	555+25	1163.17	1163.75	1164.33
1162.06	1162.64	555+50	1163.21	1163.79	1164.37
1162.09	1162.67	555+75	1163.25	1163.83	1164.41
1162.11	1162.69	556+00	1163.26	1163.84	1164.42
1162.11	1162.69	556+25	1163.27	1163.85	1164.43
1162.11	1162.68	556+50	1163.26	1163.84	1164.42
1162.08	1162.66	556+75	1163.24	1163.82	1164.40
1162.05	1162.63	557+00	1163.20	1163.78	1164.36
1162.05	1162.61	557+25	1163.16	1163.72	1164.28
1162.07	1162.58	557+50	1163.09	1163.61	1164.12
1162.13	1162.58	557+75	1163.02	1163.47	1163.92
1162.18	1162.56	558+00	1162.93	1163.31	1163.70
1162.20	1162.52	558+25	1162.83	1163.15	1163.47
1162.21	1162.47	558+50	1162.72	1162.98	1163.24
1162.20	1162.40	558+75	1162.59	1162.79	1163.00
1162.14	1162.33	559+00 ✓	1162.45	1162.64	1162.77
1162.05	1162.24	559+25	1162.30	1162.49	1162.56
1161.94	1162.13	559+50	1162.13	1162.32	1162.33
1161.82	1162.01	559+75	1161.96	1162.14	1162.09
1161.70	1161.89	560+00	1161.76	1161.95	1161.83
1161.55	1161.73	560+25	1161.56	1161.75	1161.58
1161.34	1161.53	560+50	1161.34	1161.53	1161.34

LT. LANES		STATION	PROFILE GRADE	RT. LANES	
LT. E.P.	CTR.			CTR.	RT. E.P.
P.I. STA. 577+74.54					
DC = 1°-30'-31"			MAX. S.E. 0.048 FT./FT.		
1156.06	1156.25	564+50	1156.06	1156.25	1156.06
1155.64	1155.81	564+75	1155.62	1155.79	1155.60
1155.23	1155.35	565+00	1155.16	1155.29	1155.10
1154.84	1154.89	565+25	1154.70	1154.75	1154.56
1154.42	1154.41	565+50	1154.22	1154.21	1154.02
1153.98	1153.91	565+75	1153.72	1153.65	1153.47
1153.53	1153.40	566+00 ✓	1153.21	1153.09	1152.90
1153.10	1152.90	566+25	1152.69	1152.49	1152.29
1152.68	1152.42	566+50	1152.16	1151.90	1151.64

LT. LANES		STATION	PROFILE GRADE	RT. LANES	
LT. E.P.	CTR.			CTR.	RT. E.P.
1152.25	1151.93	566+75	1151.61	1151.29	1150.98
1151.81	1151.43	567+00	1151.05	1150.67	1150.29
1151.38	1150.93	567+25	1150.48	1150.03	1149.58
1150.92	1150.41	567+50	1149.90	1149.39	1148.88
1150.41	1149.85	567+75	1149.30	1148.74	1148.18
1149.85	1149.27	568+00	1148.68	1148.11	1147.53
1149.22	1148.64	568+25	1148.06	1147.48	1146.90
1148.58	1148.00	568+50	1147.42	1146.84	1146.26
1147.93	1147.35	568+75	1146.77	1146.19	1145.61
1147.27	1146.69	569+00	1146.10	1145.53	1144.95
1146.59	1146.01	569+25	1145.43	1144.85	1144.27
1145.90	1145.32	569+50	1144.74	1144.16	1143.58
1145.19	1144.61	569+75	1144.03	1143.45	1142.87
1144.48	1143.90	570+00 ✓	1143.31	1142.74	1142.16
1143.74	1143.16	570+25	1142.58	1142.00	1141.43
		570+50 ✓	1141.84	1141.26	1140.68
		570+75	1141.09	1140.51	1139.93
		571+00	1140.34	1139.76	1139.18
		571+25	1139.59	1139.01	1138.43
		571+50	1138.84	1138.26	1137.68
		571+75	1138.09	1137.51	1136.93
		572+00	1137.34	1136.76	1136.18
		572+25	1136.59	1136.01	1135.43
		572+50	1135.84	1135.26	1134.68
		572+75	1135.09	1134.51	1133.93
		573+00	1134.34	1133.76	1133.18
		573+25	1133.59	1133.01	1132.43
		573+50	1132.84	1132.26	1131.68
		573+75	1132.09	1131.51	1130.93
		574+00	1131.34	1130.76	1130.18
		574+25	1130.59	1130.01	1129.43
		574+50	1129.84	1129.26	1128.68
		574+75	1129.09	1128.51	1127.93
		575+00	1128.34	1127.76	1127.18
		575+25	1127.59	1127.01	1126.43
		575+50	1126.84	1126.26	1125.68
		575+75	1126.09	1125.51	1124.93
		576+00	1125.34	1124.76	1124.18
		576+25	1124.59	1124.01	1123.43
		576+50	1123.84	1123.26	1122.68
		576+75	1123.09	1122.51	1121.93
		577+00	1122.34	1121.76	1121.18
		577+25	1121.59	1121.01	1120.43
		577+50	1120.84	1120.26	1119.68
		577+75	1120.09	1119.51	1118.93
		578+00	1119.34	1118.76	1118.18
		578+25	1118.59	1118.01	1117.43

LT. LANES		STATION	PROFILE GRADE	RT. LANES	
LT. E.P.	CTR.			CTR.	RT. E.P.
		578+50	1117.84	1117.26	1116.68
		578+75	1117.09	1116.51	1115.93
		579+00	1116.34	1115.76	1115.18
		579+25	1115.59	1115.01	1114.43
		579+50	1114.84	1114.26	1113.68
		579+75	1114.09	1113.51	1112.93
		580+00	1113.34 ✓	1112.76	1112.18
		580+25	1112.59	1112.01	1111.43
		580+50	1111.84	1111.26	1110.68
		580+75	1111.09	1110.51	1109.93
		581+00	1110.34	1109.76	1109.18
		581+25	1109.59	1109.01	1108.43
		581+50	1108.84	1108.26	1107.68
		581+75	1108.09	1107.51	1106.93
		582+00	1107.34	1106.76	1106.18
		582+25	1106.59	1106.01	1105.43
		582+50	1105.84	1105.26	1104.68
		582+75	1105.09	1104.51	1103.93
		583+00	1104.34	1103.76	1103.18
		583+25	1103.59	1103.01	1102.43
		583+50	1102.84	1102.26	1101.68
		583+75	1102.09	1101.51	1100.93
		584+00	1101.34	1100.76	1100.18
		584+25	1100.59	1100.01	1099.43
		584+50 ✓	1099.84	1099.26	1098.68
1110.27	1099.69	584+75	1099.11	1098.53	1097.95
1099.57	1098.99	585+00	1098.41	1097.83	1097.25
1098.91	1098.33	585+25	1097.75	1097.17	1096.59
1098.29	1097.71	585+50	1097.13	1096.55	1095.97
1097.70	1097.12	585+75	1096.54	1095.96	1095.38
1097.15	1096.57	586+00	1095.98	1095.41	1094.83
1096.63	1096.05	586+25	1095.47	1094.89	1094.31
1096.15	1095.57	586+50	1094.99	1094.41	1093.83
1095.70	1095.12	586+75	1094.54	1093.96	1093.38
1095.29	1094.71	587+00	1094.13	1093.55	1092.97
1094.87	1094.31	587+25	1093.76	1093.20	1092.64
1094.45	1093.94	587+50	1093.42	1092.91	1092.40
1094.02	1093.57	587+75	1093.12	1092.67	1092.22
1093.61	1093.23	588+00	1092.85	1092.47	1092.09
1093.26	1092.94	588+25	1092.62	1092.30	1091.91
1092.94	1092.68	588+50	1092.43	1092.17	1091.91
1092.67	1092.47	588+75	1092.27	1092.07	1091.87
1092.47	1092.34	589+00 ✓	1092.15	1092.02	1091.83
1092.32	1092.25	589+25	1092.06	1091.99	1091.80
1092.21	1092.20	589+50	1092.01	1092.00	1091.81
1092.13	1092.18	589+75	1091.99	1092.04	1091.86

LT. LANES		STATION	PROFILE GRADE	RT. LANES	
LT. E.P.	CTR.			CTR.	RT. E.P.
1092.08	1092.20	590+00	1092.01	1092.13	1091.95
1092.09	1092.26	590+25	1092.07	1092.24	1092.05
1092.16	1092.35	590+50	1092.16	1092.35	1092.16

LT. LANES		STATION	PROFILE GRADE	RT. LANES	
LT. E.P.	CTR.			CTR.	RT. E.P.
P.I. STA. 605+79.98					
DC 1°-28'			MAX. S.E. 0.048 FT./FT.		
1094.81	1094.99	596+50	1094.80	1094.99	1094.80
1094.90	1095.09	596+75	1094.91	1095.10	1094.93
1094.96	1095.15	597+00	1095.02	1095.21	1095.09
1095.00	1095.19	597+25	1095.13	1095.32	1095.27
1095.05	1095.24	597+50	1095.24	1095.43	1095.44
1095.10	1095.29	597+75	1095.35	1095.54	1095.61
1095.15	1095.34	598+00 ✓	1095.46	1095.65	1095.78
1095.17	1095.37	598+25	1095.57	1095.77	1095.97
1095.17	1095.43	598+50	1095.68	1095.94	1096.20
1095.16	1095.48	598+75	1095.79	1096.11	1096.43
1095.15	1095.53	599+00	1095.90	1096.28	1096.66
1095.12	1095.57	599+25	1096.01	1096.46	1096.91
1095.10	1095.61	599+50	1096.12	1096.63	1097.14
1095.12	1095.68	599+75	1096.23	1096.79	1097.35
1095.19	1095.77	600+00	1096.34	1096.92	1097.50
1095.30	1095.88	600+25	1096.45	1097.03	1097.61
1095.41	1095.99	600+50	1096.56	1097.14	1097.72
1095.52	1096.10	600+75	1096.67	1097.25	1097.83
1095.63	1096.21	601+00	1096.78	1097.36	1097.94
1095.74	1096.32	601+25	1096.89	1097.47	1098.05
1095.85	1096.43	601+50	1097.00	1097.58	1098.16
1095.96	1095.54	601+75	1097.11	1097.69	1098.27
1096.07	1096.65	602+00	1097.22	1097.80	1098.38
1096.18	1096.76	602+25	1097.33	1097.91	1098.49
1096.29	1096.87	602+50	1097.44	1098.02	1098.60
1096.40	1096.98	602+75	1097.55	1098.13	1098.71
1096.51	1097.09	603+00	1097.66	1098.24	1098.82
1096.62	1097.20	603+25	1097.77	1098.35	1098.93
1096.73	1097.31	603+50	1097.88	1098.46	1099.04
1096.84	1097.42	603+75	1097.99	1098.57	1099.15
1096.95	1097.53	604+00	1098.10	1098.68	1099.26
1097.06	1097.64	604+25	1098.21	1098.79	1099.37
1097.17	1097.75	604+50	1098.32	1098.90	1099.48
1097.28	1097.86	604+75	1098.43	1099.01	1099.59

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

21
485

SUPERELEVATION CHARTS

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

LT. LANES		STATION	PROFILE GRADE	RT. LANES	
LT. E.P.	CTR.			CTR.	RT. E.P.
1097.39	1097.97	605+00	1098.54	1099.12	1099.70
1097.50	1098.08	605+25	1098.65	1099.23	1099.81
1097.61	1098.19	605+50	1098.76	1099.34	1099.92
1097.72	1098.30	605+75	1098.87	1099.45	1100.03
1097.83	1098.41	606+00	1098.98	1099.56	1100.14
1097.94	1098.52	606+25	1099.09	1099.67	1100.25
1098.05	1098.63	606+50	1099.20	1099.78	1100.36
1098.16	1098.74	606+75	1099.31	1099.89	1100.47
1098.27	1098.85	607+00	1099.42	1100.00	1100.58
1098.38	1098.96	607+25	1099.53	1100.11	1100.69
1098.49	1099.07	607+50	1099.64	1100.22	1100.80
1098.60	1099.18	607+75	1099.75	1100.33	1100.91
1098.71	1099.29	608+00	1099.86	1100.44	1101.02
1098.82	1099.40	608+25	1099.97	1100.55	1101.13
1098.93	1099.51	608+50	1100.08	1100.66	1101.24
1099.04	1099.62	608+75	1100.19	1100.77	1101.35
1099.15	1099.73	609+00	1100.30	1100.88	1101.46
1099.26	1099.84	609+25	1100.41	1100.99	1101.57
1099.37	1099.95	609+50	1100.52	1101.10	1101.68
1099.48	1100.06	609+75	1100.63	1101.21	1101.79
1099.59	1100.17	610+00	1100.74	1101.32	1101.90
1099.70	1100.28	610+25	1100.85	1101.43	1102.01
1099.81	1100.39	610+50	1100.96	1101.54	1102.12
1099.92	1100.50	610+75	1101.07	1101.65	1102.23
1100.03	1100.61	611+00	1101.18	1101.76	1102.34
1100.14	1100.72	611+25	1101.29	1101.87	1102.45
1100.25	1100.83	611+50	1101.40	1101.98	1102.56
1100.40	1100.96	611+75	1101.51	1102.07	1102.63
1100.60	1101.11	612+00	1101.62	1102.13	1102.64
1100.84	1101.29	612+25	1101.73	1102.18	1102.63
1101.09	1101.47	612+50	1101.84	1102.22	1102.60
1101.32	1101.64	612+75	1101.95	1102.27	1102.59
1101.55	1101.81	613+00	1102.06	1102.32	1102.58
1101.77	1101.97	613+25	1102.17	1102.37	1102.57
1101.97	1102.16	613+50 ✓	1102.28	1102.47	1102.60
1102.15	1102.34	613+75	1102.40	1102.59	1102.66
1102.36	1102.55	614+00	1102.55	1102.74	1102.75
1102.60	1102.78	614+25	1102.73	1102.92	1102.87
1102.87	1103.06	614+50	1102.93	1103.12	1103.00
1103.15	1103.36	614+75	1103.16	1103.35	1103.18
1103.42	1103.61	615+00	1103.42	1103.61	1102.42

P.I. STA. 632+40.05
DC = 1°-30'-31" MAX. S.E. 0.048 FT./FT.

LT. LANES		STATION	PROFILE GRADE	RT. LANES	
LT. E.P.	CTR.			CTR.	RT. E.P.
1140.10	1114.29	620+00	1114.10	1114.29	1114.10
1114.87	1115.04	620+25	1114.85	1115.02	1114.84
1115.67	1115.79	620+50	1115.60	1115.72	1115.54
1116.49	1116.54	620+75	1116.35	1116.40	1116.22
1117.30	1117.29	621+00	1117.10	1117.09	1116.91
1118.11	1118.04	621+25	1117.85	1117.78	1117.60
1118.92	1118.79	621+50 ✓	1118.60	1118.47	1118.29
1119.76	1119.56	621+75	1119.35	1119.15	1118.95
1120.62	1120.36	622+00	1120.10	1119.84	1119.58
1121.49	1121.17	622+25	1120.85	1120.53	1120.21
1122.36	1121.98	622+50	1121.60	1121.22	1120.84
1123.25	1120.80	622+75	1122.35	1121.90	1121.45
		623+00 ✓	1123.10	1122.59	1122.08
		623+25	1123.85	1123.29	1122.73
		623+50	1124.60	1124.02	1123.44
		623+75	1125.35	1124.77	1124.19
		624+00	1126.10	1125.52	1124.94
		624+25	1126.85	1126.27	1125.69
		624+50	1127.60	1127.02	1126.44
		624+75	1128.35	1127.77	1127.19
		625+00	1129.10	1128.52	1127.94
		625+25	1129.85	1129.27	1128.69
		625+50	1130.60	1130.02	1129.44
		625+75	1131.35	1130.77	1130.19
		626+00	1132.10	1131.52	1130.94
		626+25	1132.85	1132.27	1131.69
		626+50	1133.60	1133.02	1132.44
		626+75	1134.35	1133.77	1133.19
		627+00	1135.10	1134.52	1133.94
		627+25	1135.85	1135.27	1134.69
		627+50	1136.60	1136.02	1135.44
		627+75	1137.35	1136.77	1136.19
		628+00	1138.10	1137.52	1136.94
		628+25	1138.85	1138.27	1137.69
		628+50	1139.60	1139.02	1138.44
		628+75	1140.35	1139.77	1139.19
		629+00	1141.10	1140.52	1139.94
		629+25	1141.85	1141.27	1140.69
		629+50	1142.60	1142.02	1141.44
		629+75	1143.35	1142.77	1142.19
		630+00	1144.10	1143.52	1142.94
		630+25	1144.85	1144.27	1143.69
		630+50	1145.60	1145.02	1144.44
		630+75	1146.35	1145.77	1145.19
		631+00	1147.10	1146.52	1145.94
		631+25	1147.85	1147.27	1146.69

LT. LANES		STATION	PROFILE GRADE	RT. LANES	
LT. E.P.	CTR.			CTR.	RT. E.P.
		631+50	1148.60	1148.02	1147.44
		631+75	1149.35	1148.77	1148.19
		632+00	1150.10	1149.52	1148.94
		632+25	1150.85	1150.27	1149.69
		632+50	1151.60	1161.02	1150.44
		632+75	1152.35	1151.77	1151.19
		633+00	1153.10	1152.52	1151.94
		633+25	1153.85	1153.27	1152.69
		633+50	1154.60	1154.02	1153.44
		633+75	1155.35	1154.77	1154.19
		634+00	1156.10	1155.52	1154.94
		634+25	1156.85	1156.27	1155.69
		634+50	1157.60	1157.02	1156.44
		634+75	1158.35	1157.77	1157.19
		635+00	1159.10	1158.52	1157.94
		635+25	1159.85	1159.27	1158.69
		635+50	1160.60	1160.02	1159.44
		635+75	1161.35	1160.77	1160.19
		636+00	1162.10	1161.52	1160.94
		636+25	1162.85	1162.27	1161.69
		636+50	1163.60	1163.02	1162.44
		636+75	1164.35	1163.77	1163.19
		637+00	1165.10	1164.52	1163.94
		637+25	1165.85	1165.27	1164.69
		637+50	1166.60	1166.02	1165.44
		637+75	1167.35	1166.77	1166.19
		638+00	1168.10	1167.52	1166.94
		638+25	1168.85	1168.27	1167.69
		638+50	1169.60	1169.02	1168.44
		638+75	1170.35	1169.77	1169.19
		639+00	1171.10	1170.52	1169.94
		639+25	1171.85	1171.27	1170.69
		639+50	1172.60	1172.02	1171.44
		639+75	1173.35	1172.77	1172.19
		640+00	1174.10	1173.52	1172.94
		640+25	1174.85	1174.27	1173.69
		640+50	1175.60	1175.02	1174.44
		640+75	1176.35	1175.77	1175.19
		641+00	1177.10	1176.52	1175.94
		641+25	1177.85	1177.29	1176.73
		641+50	1178.60	1178.09	1177.68
		641+75	1179.35	1178.90	1178.45
		642+00	1180.10	1179.72	1179.34
		642+25	1180.85	1180.53	1180.21
		642+50	1181.60	1181.34	1181.08
		642+75	1182.34	1182.14	1181.94
		643+00	1183.07	1182.94	1182.75
		643+25	1183.77	1183.71	1183.52

LT. LANES		STATION	PROFILE GRADE	RT. LANES	
LT. E.P.	CTR.			CTR.	RT. E.P.
		643+50	1184.47	1184.46	1184.27
		643+75	1185.14	1185.19	1185.01
		644+00	1185.80	1185.92	1185.73
		644+25	1186.44	1186.61	1186.43
	✓	644+50	1187.07	1187.25	1187.07

P.I. STA. 665+08.68
DC = 1°-29'-29" MAX. S.E. 0.048 FT./FT

LT. LANES		STATION	PROFILE GRADE	RT. LANES	
LT. E.P.	CTR.			CTR.	RT. E.P.
		647+00 ✓	1192.40	1192.99	1192.40
		647+25	1192.84	1193.03	1192.86
		647+50	1193.27	1193.45	1193.33
		647+75	1193.68	1193.86	1193.81
		648+00	1194.07	1194.25	1194.26
		648+25	1194.44	1194.63	1194.70
		648+50	1194.80	1194.99	1195.12
		648+75	1195.15	1195.35	1195.55
		649+00	1195.50	1195.76	1196.02
		649+25	1195.85	1196.17	1196.49
		649+50	1196.20	1196.58	1196.96
		649+75	1196.55	1197.00	1197.45
		650+00	1196.90	1197.41	1197.92
		650+25	1197.25	1197.81	1198.37
		650+50	1197.60	1198.18	1198.76
		650+75	1197.95	1198.53	1199.11
		651+00	1198.30	1198.88	1199.46
		651+25	1198.65	1199.23	1199.81
		651+50	1199.00	1199.58	1200.16
		651+75	1199.35	1199.93	1200.51
		652+00	1199.70	1200.28	1200.86
		652+25	1200.05	1200.63	1201.21
		652+50	1200.40	1200.98	1201.56
		652+75	1200.75	1201.33	1201.91
		653+00	1201.10	1201.68	1202.26
		653+25	1201.45	1202.03	1202.61
		653+50	1201.80	1202.68	1202.96
		653+75	1202.15	1202.73	1203.31
		654+00	1202.50	1203.08	1203.66
		654+25	1202.85	1203.43	1204.01
		654+50	1203.20	1203.78	1204.36
		654+75	1203.55	1204.13	1204.71
		655+00	1203.90	1204.48	1205.06

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

22
185

SUPERELEVATION CHARTS

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

LT. LANES		STATION	PROFILE GRADE	RT. LANES	
LT. E.P.	CTR.			CTR.	RT. E.P.
		655+25	1204.25	1204.83	1205.41
		655+50	1204.60	1205.18	1205.76
		655+75	1204.95	1205.53	1206.11
		656+00	1205.30	1205.88	1206.46
		656+25	1205.65	1206.23	1206.81
		656+50	1206.00	1206.58	1207.16
		656+75	1206.35	1206.93	1207.51
		657+00	1206.70	1207.28	1207.86
		657+25	1207.05	1207.63	1208.21
		657+41.53 ✓	1207.28	1207.86	1208.44
		9+99.42	1207.28	1207.86	1208.44
		10+00	1207.28	1207.86	1208.44
		10+25	1207.63	1208.21	1208.79
		10+50	1207.98	1208.56	1209.14
		10+75	1208.33	1208.91	1209.49
		11+00	1208.68	1209.26	1209.84
		11+25	1209.04	1209.62	1210.20
		11+50	1209.41	1209.99	1210.57
		11+75	1209.80	1210.38	1210.96
		12+00	1210.21	1210.79	1211.37
		12+25	1210.64	1211.22	1211.80
		12+50	1211.08	1211.66	1212.24
		12+75	1211.54	1212.12	1212.70
		13+00	1212.01	1212.59	1213.17
		13+25	1212.50	1213.08	1213.66
		13+50	1213.01	1213.59	1214.17
		13+75	1213.54	1214.12	1214.70
		14+00	1214.08	1214.66	1215.24
		14+25	1214.64	1215.22	1215.80
		14+50	1215.21	1215.79	1216.37
		14+75	1215.80	1216.38	1216.96
		15+00	1216.41	1216.99	1217.57
		15+25	1217.04	1217.62	1218.20
		15+50	1217.68	1218.26	1218.84
		15+75	1218.34	1218.92	1219.50
		16+00	1219.01	1219.59	1220.17
		16+25	1219.70	1220.28	1220.86
		16+50	1220.41	1220.99	1221.57
		16+75	1221.14	1221.72	1222.30
		17+00	1221.88	1222.46	1223.04
		17+25	1222.63	1223.21	1223.79
		17+50	1223.38	1223.96	1224.54
		17+75	1224.13	1224.71	1225.29
		18+00	1224.88	1225.46	1226.04
		18+25	1225.63	1226.21	1226.79
1225.63	1226.21	18+50	1226.38	1226.96	1227.54
1226.26	1226.84	18+75	1227.12	1227.70	1228.28
1226.89	1227.47	19+00	1227.85	1228.43	1229.01

LT. LANES		STATION	PROFILE GRADE	RT. LANES	
LT. E.P.	CTR.			CTR.	RT. E.P.
1227.51	1228.09	19+25	1228.57	1229.15	1229.73
1228.11	1228.69	19+50	1229.27	1229.85	1230.43
1228.80	1229.38	19+75	1229.96	1230.54	1231.12
1229.40	1230.06	20+00	1230.64	1231.22	1231.80
1230.14	1230.72	20+25	1231.30	1231.88	1232.46
1230.79	1231.37	20+50	1231.95	1232.53	1233.11
1231.43	1232.01	20+75	1232.59	1233.17	1233.75
1232.06	1232.64	21+00	1233.22	1233.80	1234.38
1232.67	1233.25	21+25	1233.83	1234.41	1234.99
1233.26	1233.84	21+50	1234.42	1235.00	1235.58
1233.85	1234.43	21+75	1235.01	1235.59	1236.17
1234.42	1235.00	22+00	1235.58	1236.16	1236.74
1234.97	1235.55	22+25	1236.13	1236.71	1237.29
1235.52	1236.10	22+50	1236.68	1237.26	1237.84
1236.05	1236.63	22+75	1237.21	1237.79	1238.37
1236.57	1237.15	23+00	1237.73	1238.31	1238.89
1237.12	1237.70	23+25	1238.23	1238.81	1239.39
1237.56	1238.14	23+50	1238.72	1239.30	1239.88
1238.04	1238.62	23+75	1239.20	1239.78	1240.36
1238.50	1239.08	24+00	1239.66	1240.24	1240.82
1238.95	1239.53	24+25	1240.11	1240.69	1241.27
1239.39	1239.97	24+50	1240.55	1241.13	1241.71
1239.82	1240.40	24+75	1240.98	1241.56	1242.14
1240.23	1240.81	25+00	1241.39	1241.97	1242.55
1240.63	1241.21	25+25	1241.79	1242.37	1242.95
1241.01	1241.59	25+50	1242.17	1242.75	1243.33
1241.38	1241.96	25+75	1242.54	1243.12	1243.70
1241.74	1242.32	26+00	1242.90	1243.48	1244.06
1242.08	1242.66	26+25	1243.24	1243.82	1244.40
1242.42	1243.00	26+50	1243.58	1244.16	1244.74
1242.73	1243.31	26+75	1243.89	1244.47	1245.05
1243.04	1243.62	27+00	1244.20	1244.78	1245.36
1243.33	1243.91	27+25	1244.49	1245.07	1245.65
1243.61	1244.79	27+50	1244.77	1245.35	1245.93
1243.87	1244.45	27+75	1245.03	1245.61	1246.19
1244.13	1244.71	28+00	1245.28	1245.86	1246.44
1244.36	1244.94	28+25	1245.52	1246.10	1246.68
1244.59	1245.17	28+50	1245.75	1246.33	1246.91
1244.80	1245.38	28+75	1245.96	1246.54	1247.12
1245.00	1245.58	29+00	1246.16	1246.74	1247.32
1245.18	1245.76	29+25	1246.34	1246.92	1247.50
1245.36	1245.94	29+50	1246.52	1247.10	1247.68
1245.51	1246.09	29+75	1246.67	1247.25	1247.83
1245.66	1246.24	30+00	1246.82	1247.40	1247.98
1245.79	1246.37	30+25	1246.95	1247.53	1248.11
1245.91	1246.49	30+50	1247.07	1247.65	1248.23
1246.02	1246.60	30+75	1247.18	1247.76	1248.34
1246.15	1246.71	31+00	1247.27	1247.83	1248.39

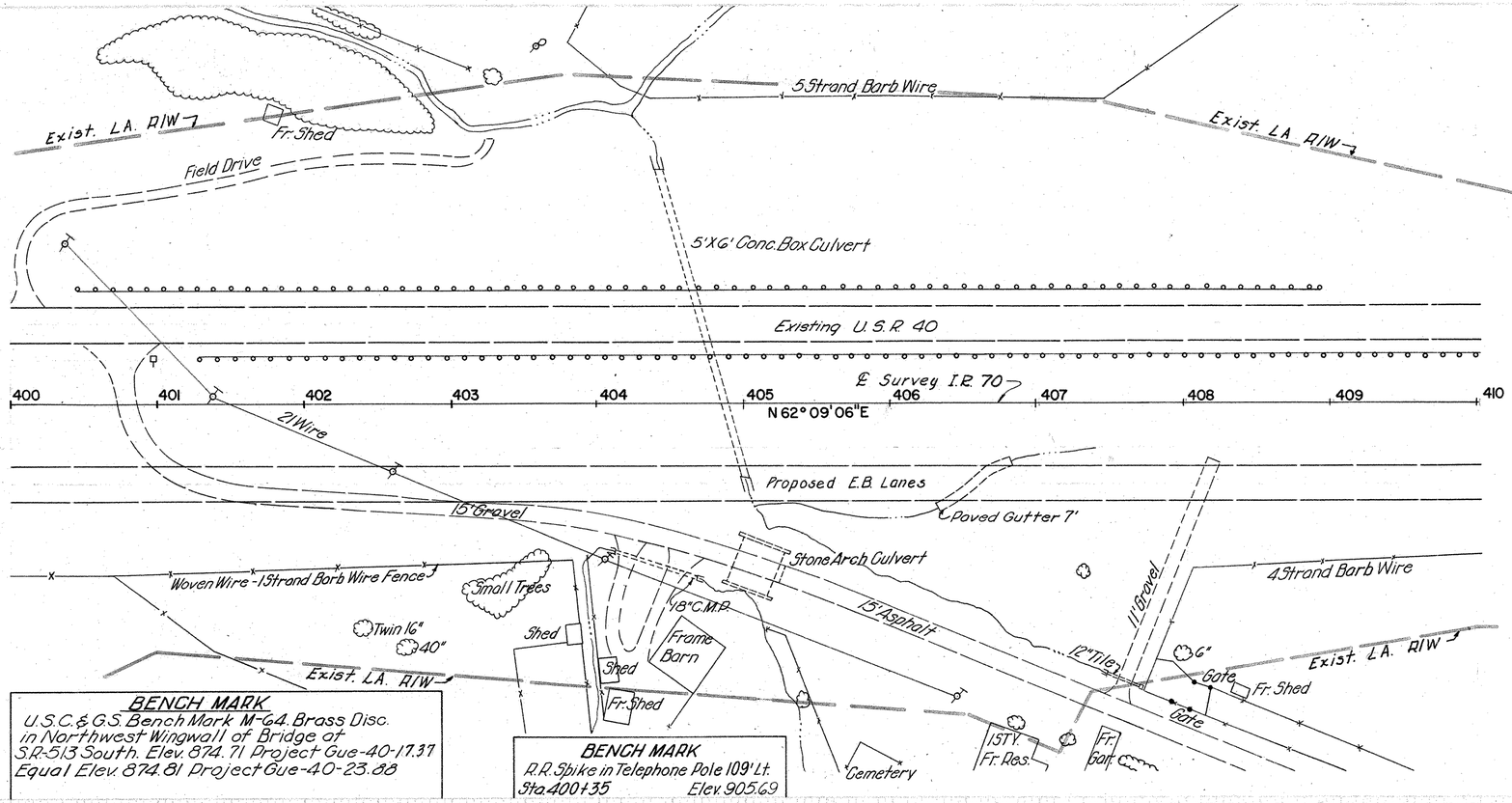
LT. LANES		STATION	PROFILE GRADE	RT. LANES	
LT. E.P.	CTR.			CTR.	RT. E.P.
1246.33	1246.84	31+25	1247.35	1247.86	1248.37
1246.51	1246.96	31+50	1247.41	1247.86	1248.32
1246.70	1247.08	31+75	1247.46	1247.85	1248.23
1246.86	1247.18	32+00	1247.50	1247.82	1248.14
1247.01	1247.27	32+25	1247.53	1247.79	1248.05
		32+50	1247.54	1247.74	1247.94
1247.22	1247.41	32+75 ✓	1247.54	1247.73	1247.86
1247.27	1247.47	33+00	1247.53	1247.71	1247.78
1247.31	1247.50	33+25	1247.50	1247.69	1247.70
1247.33	1247.52	33+50	1247.46	1247.65	1247.60
1247.33	1247.52	33+75	1247.40	1247.99	1247.47
1247.32	1247.51	34+00	1247.34	1247.53	1247.36
1247.26	1247.45	34+25	1247.26	1247.44	1247.27

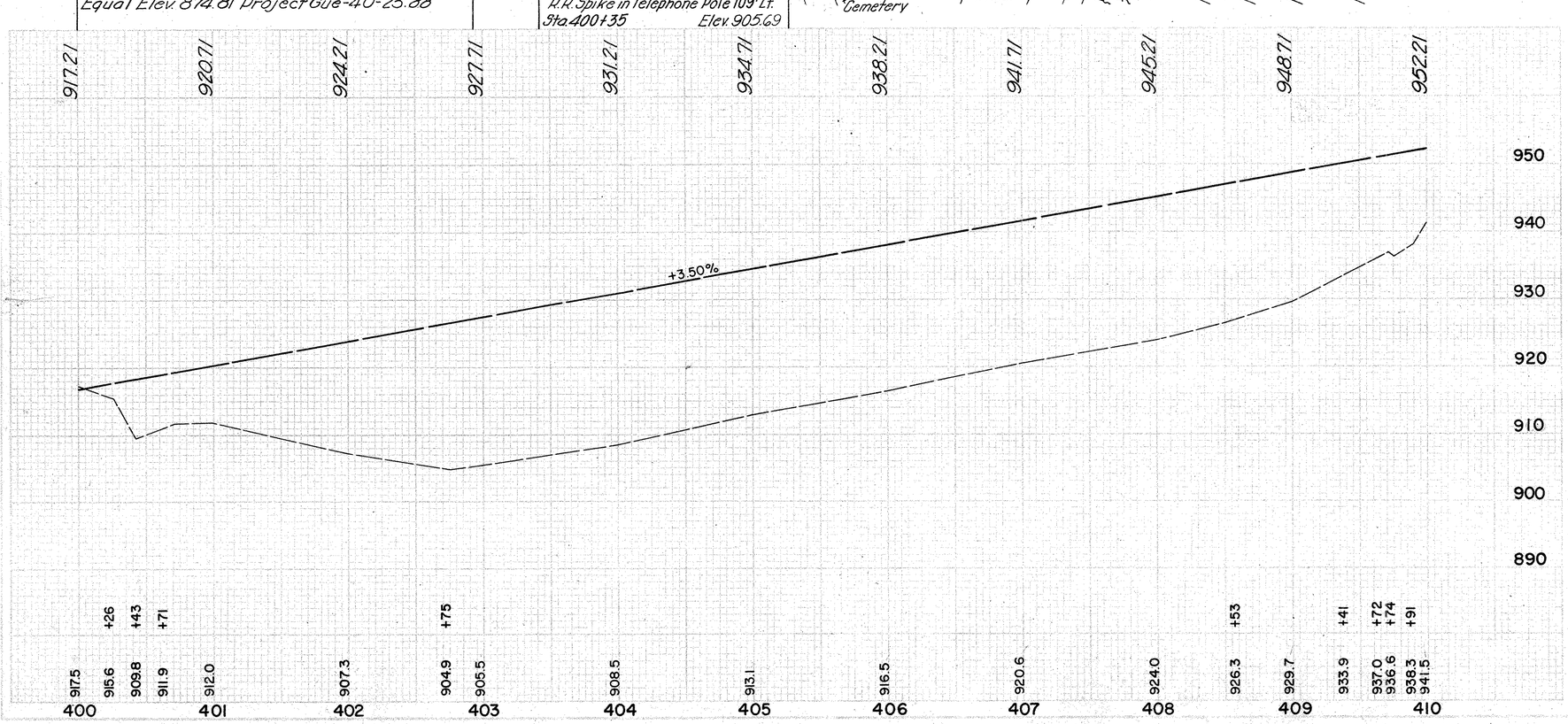
LT. LANES		STATION	PROFILE GRADE	RT. LANES	
LT. E.P.	CTR.			CTR.	RT. E.P.
		P.I. STA. 65+75.66			
		DC = 1°-12'-38"		MAX. S.E. 0.040 FT./FT.	
		50+75 ✓	1247.46	1247.65	1247.46
		51+00	1248.22	1248.39	1248.20
		51+25	1248.97	1249.09	1248.90
		51+50	1249.73	1249.79	1249.60
		51+75	1250.48	1250.47	1250.28
		52+00	1251.24	1251.17	1250.98
		52+25	1251.99	1251.86	1251.67
		52+50	1252.75	1252.56	1252.35
		52+75	1253.50	1253.24	1252.99
		53+00	1254.26	1253.94	1253.63
		53+25	1255.01	1254.63	1254.25
		53+50	1255.77	1255.33	1254.89
		53+75	1256.52	1256.04	1255.57
		54+00	1257.28	1256.80	1256.32
		54+25	1258.03	1257.55	1257.07
		54+50	1258.79	1258.31	1257.83
		54+75	1259.54	1259.06	1258.58
		55+00	1260.30	1259.82	1259.34
		55+25	1261.05	1260.57	1260.09
		55+50	1261.81	1261.33	1260.85
		55+75	1262.56	1262.08	1261.60
		56+00	1263.32	1262.84	1262.36
		56+25	1264.07	1263.59	1263.11
		56+50	1264.83	1264.35	1263.87

LT. LANES		STATION	PROFILE GRADE	RT. LANES	
LT. E.P.	CTR.			CTR.	RT. E.P.
		56+75	1265.58	1265.10	1264.62
		57+00	1266.34	1265.86	1265.38
		57+25	1267.09	1266.61	1266.13
		57+50	1267.85	1263.37	1266.89
		57+75	1268.59	1268.11	1267.63
		58+00	1269.33	1268.85	1268.37
		58+25	1270.05	1269.57	1269.09
		58+50	1270.76	1270.28	1269.80
		58+75	1271.44	1270.96	1270.48
		59+00	1272.12	1271.64	1271.16
		59+25	1272.78	1272.30	1271.82
		59+50	1273.43	1272.95	1272.47
		59+75	1274.06	1273.58	1273.10
1275.53	1275.41	60+00 ✓	1274.69	1274.21	1273.73

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		





STA. 400+00 TO STA. 410+00

UTILITY OWNERSHIP
Guernsey-Muskingum Elec. Co.
New Concord, Ohio
The Home Telephone Co.
Fairview, Ohio
Ohio Power Co.
Steubenville, Ohio

NOTES: Typical section for adjoining section will be the same as on this project (see Sh. No. 4).
All elevations are based on U.S.G.S. Datum.

Jute Matting

BEGIN PROJECT STA. 415+00

℄ Survey I.P. 707
Ø 95 ¼
1702
5725
Hub
Aerial Marker 3
Hub

REF. P.O.T. STA. 411+75.29

RELOC. CH. 27

5 Strand Wire

TWP. RD. - 35

Existing U.S. 40 Typical Section
12' 12' 9" T-71

Existing U.S. 40

Exist. L.A. R/W

Gate

S.L.M. 23.88

⊗ Delineators
The Typical Section for the Temp. Pavement will be 24' of 9" T-70 with 4' Earth Shoulders.

Construction Limits
Sod 9' Wide
Mileage Marker
15" CMP (Plug & Abandon) ⊗

℄ SURVEY STA. 418+70
℄ CROSSOVER
200' Taper
7' Paved Gutter
7.5' wide

℄ Survey I.P. 707
N 62° 09' 06" E
R = 400'
P.C. +22
BEGIN CURVE +93
36"
22"
Plug & Abandon
P.T. +18
200' Taper

2 Wire
Proposed E.B. Lanes

FACI SIGN *
Gate

BEGIN WORK STA. 411+30

Exist. L.A. R/W

For Reloc. C.H. 27 See Sheet Nos. 277-283.

Culvert No. Gue 40-2389
Sta. 415+47
Skew 0°-00'
24"x30" C1A-1 Sec M 41 (c) 1392
See Sheet No. 409

*Note: Cl. I-3 Outlets to be non-performed if adjoining section is completed and existing I-3 outlets utilized.

For details of under drain outlets see Sheet No. 436.
For details of Delineators See Sheet No. 440.

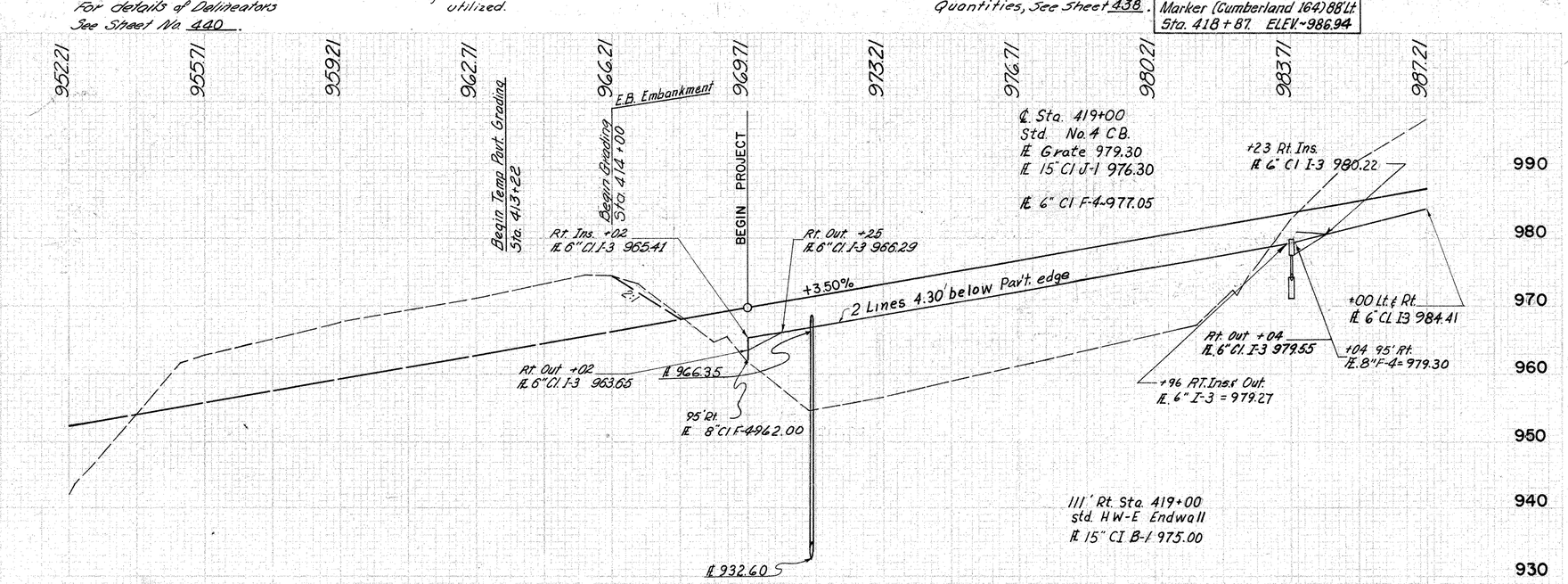
I-70-7(10)-187 I-70-7(12)193

Note: For Pavement Marking Quantities, See Sheet 438.

1' Wide Dumped Rock Cip Prot.
Limits of construction
Sod 6' Wide

NOTE: For U-Turn Median Opening at Sta. 418+70.00 See Sheet No. 435 Quan. on Sh. #17

BENCH MARK
□ Chiseled in Top Stone Mileage Marker (Cumberland 164) 88' Lt. Sta. 418+87. ELEV. - 986.94



ITEM NO.	STATION TO STATION	SIDE	DESCRIPTION	UNIT	I-15 GUARD RAIL STD. TYPE	I-15 GUARD RAIL REMOVED	I-10 SODDING REMOVAL DISPOSAL EXIST.	E-8 REMOVAL DISPOSAL EXIST. GUTTER	T-70 Portland Cement Pav't.	T-71 9" REINF. CONC. PAVT.	C.I. B-1 15"	C.I. B-1	C.I. F-4 6"	C.I. F-4 8"	C.I. I-3 6"	C.I. I-3 8"	C.I. I-3 (DEEP)	L-120 JUTE MATTING	S-24 REMOVAL EXIST. STRUCTURE	I-2 MASONRY STD. NO. 4 C.B.	I-8 DUMPED ROCK 18"	I-10 Chan. PROTECTION	I-5 PIPE SPECIALS 6"x90°x60" BEND WYE	8"x90°x60" BEND TEE	C1 I-3 C1 B-1 B-1	C1 I-3 C1 B-1	REBUILT	SUBBASE	LUMP	CU. YDS.	EA.	CU. YD.	EA.	EA.	EA.	EA.	LIN. FT.	LIN. FT.	LIN. FT.	SQ. YD.	LIN. FT.	SQ. YD.	SY.	SQ. YDS.	LIN. FT.	LIN. FT.	LIN. FT.
1G	415+00 ~ 417+75																																												
2G	415+00 ~ 417+75																																												
1UD	415+02 ~ 418+96																																												
2UD	415+02 ~ 418+96																																												
3UD	419+04 ~ 420+00																																												
4UD	419+04 ~ 420+00																																												
1SS	419+00																																												
1D	415+79 ~ 419+00																																												
3D	419+07 ~ 420+00																																												
4D	415+80 ~ 419+02																																												
5D	419+00 ~ 420+00																																												
10R	416+25 ~ 418+55																																												
20R	418+55 ~ 419+00																																												
1R	413+63 ~ 417+18																																												
1P	415+32 ~ 415+62																																												
2P	413+63 ~ 417+18																																												

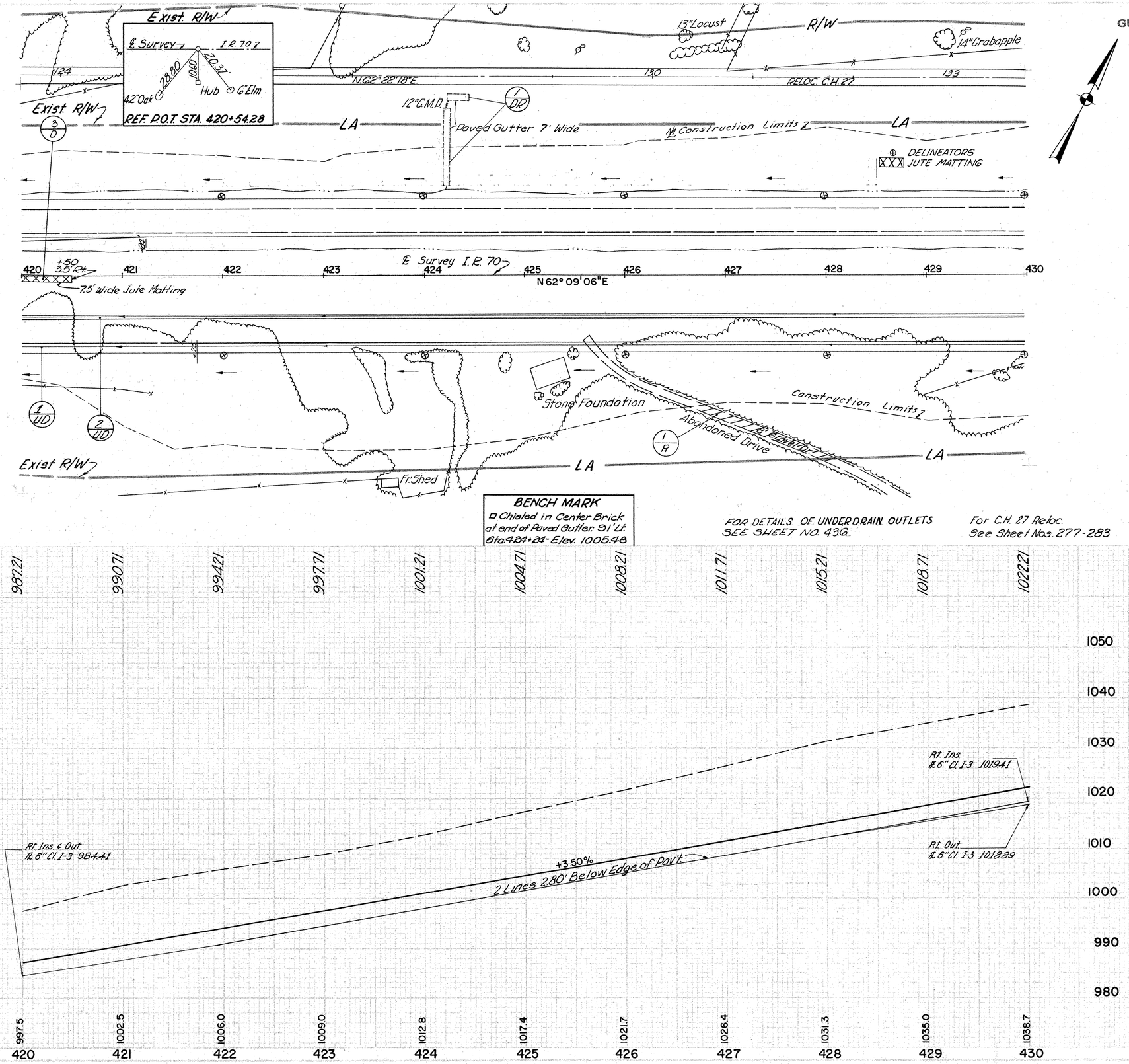
*TOTAL TO SHEET 18

STA. 410+00 TO STA. 420+00

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

25
485



ESTIMATED QUANTITIES

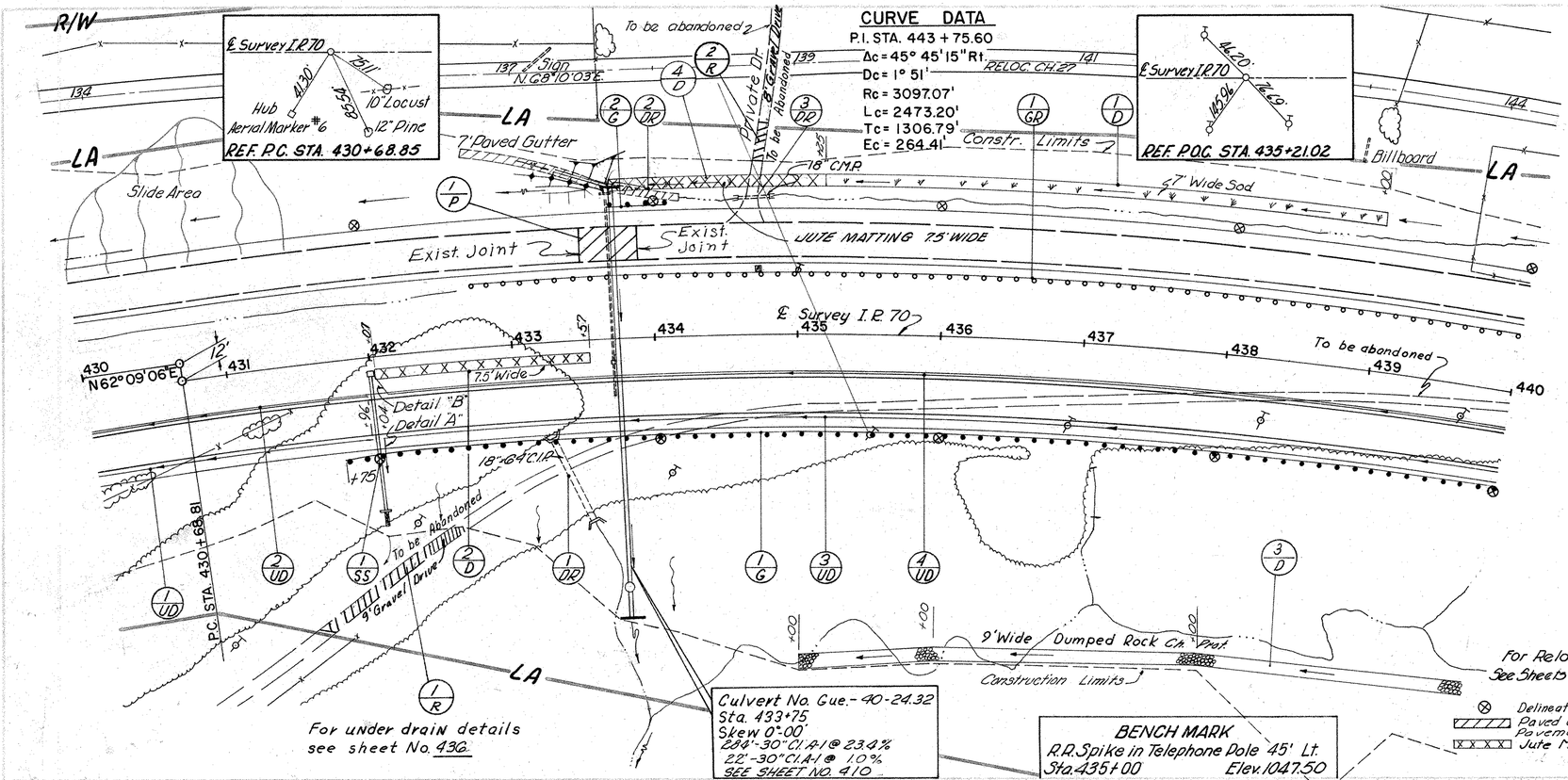
REF. NO.	STATION TO STATION	SIDE	E-8 REMOVAL OF PAVED GUTTER	E-12 PIPE REMOVAL 15" & UNDER	E-8 Removal & Disposal of Pav't. As Per Plan	L-120 JUTE MATTING	SEE SHEET NO.
			LIN. FT.	LIN. FT.	Sq. Yds.	SQ. YDS.	
1UD	420+00 ~ 430+00	RT.					
2UD	420+00 ~ 430+00	RT.					
3D	420+00 ~ 420+57	Lt.				50	
1R	427+00 ~ 428+00	RT.			125		
1DR	424+15	Lt.	100	10			

REF. NO.	STATION TO STATION	SIDE	I-1 CL. I-3	M-6.4	6"	LIN. FT.	1000	1000	2000	50
1UD	420+00 ~ 430+00	RT.								
2UD	420+00 ~ 430+00	RT.								
3D	420+00 ~ 420+57	Lt.								
1R	427+00 ~ 428+00	RT.								
1DR	424+15	Lt.								

STA. 420+00 TO STA. 430+00

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–9.00

FEDERAL DIVISION	STATE	PROJECT		SHEET NO.
2	OHIO			26 485



ESTIMATED QUANTITIES

| SEE SHEET NO. | | |

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

SHEET NO.	STATE	PROJECT	
2	OHIO		

27
485

R/W
Delineators
Jute matting
Paved Gutter Removal and Pav't Removal
N 80° 37' 28" E 146
℄ SURVEY I.R 70
REF. P.O.C. STA. 441+47.43
34.15
20.42
Hub
Ø 18"
Ø 2.06
149
152
154
CURVE DATA
P.I. STA. 443+75.60
Δc = 45°45'15" Rt.
Dc = 1° 51'
Rc = 3097.07'
Lc = 2473.20'
Tc = 1306.79'
Ec = 264.41'
RELOC. C.H. 27
2.5 Sty. Fr. Res.
Fr. Barn
Cistern
2 Wires
L.A
R/W
Construction Limit
10' Wide Sod
Paved Gutter 7' wide
Exist Pav't Joint
Exist Pav't Joint
15" C.M.P.
Concrete
Private Drive
14' Gravel
To Be Removed Under F-1
14' Bit Surface
10' Wide Sod
℄ Survey I.R. 70
18" Conc. Pipe (Plug & Abandon)
24" C.M.P.
Concrete
75' wide
Detail "B"
Detail "A"
8' WIDE DUMPED ROCK
9' Wide Sod
Construction Limits
Fr. Barn
To Be Abandoned
Culvert No. Gue-24.48
Sta. 440+86, Skew 11° L.F.
298 x 30" Cl. A-1 @ 23.7 %
19' x 30" Cl. A-1 @ 1.0 %
See Sheet No. 411
For Reloc. C.H 27
See Sheets 277-283
Ex. 24" C.M.P. to remain & function
236' Rt. Sta. 449+53
12" Gravel Invert
Ex. 5' Paved Gutter
Remove under Prop. Pipe
Constr. Limits.
8' Wide Dumped Rock
BENCH MARK
R.R. Spike in G.R. Post. 37.5' Lt. Sta. 442.81 Elev. 1075.98
BENCH MARK
R.R. Spike in Tree 154' Lt. Sta. 447+06 Elev. 1100.74
For Details of Underdrain Outlets See Sheet No. 436

Rt. Ins. IE 6" Cl. I-3 1052.91
Rt. Out IE 6" Cl. I-3 1051.47
IE 1062.42
+3.50%
1 Line 4.30' Below Pavement Edge
RT. OUT.
RT. INS.
191' x 30" Cl. A-1 @ 23.7%
IE 990.98
135' Rt. Sta. 442+00 Std. No. 8 C.B. IE Grate 1062.93 IE 15" Cl. J-1 1060.00 IE 6" Cl. F-4 1060.00
442+08 RT. INS. IE 6" I-3 = 1060.19
442+04 RT. OUT. IE 6" I-3 = 1058.61
+00 Rt. Ins. IE 6" Cl. I-3 1063.41
Rt. Out IE 6" Cl. I-3 1061.97
79' Rt. +04 IE 8" Cl. F-4 1057.00
110' Rt. Sta. 442+00 Std. HW-E Endwall IE 15" Cl. F-4 1041.75
+3.50%
1 Line 4.30' Under Pavement Edge
RT. INS.
RT. OUT.
Rt. Ins. IE 6" Cl. I-3 1063.41
Rt. Out IE 6" Cl. I-3 1061.97
13.5' Rt. Sta. 448+00 Std. No. 8 C.B. IE Grate 1083.83
IE 15" Cl. J-1 1080.83
IE 6" Cl. F-4 1081.68
+00 RT. INS. IE 6" I-3 = 1082.41
+00 RT. OUT. IE 6" I-3 1080.97
Rt. Ins. IE 6" Cl. I-3 1089.41
Rt. Out IE 6" Cl. I-3 1087.97
100' x 12" Cl. E-1 @ 3.00%
RT. OUT.
RT. INS.
1 Line 2.80' below Pavement edge
448+50 Rt. Ins. IE 6" Cl. I-3 1084.16
84' Rt. +00 IE 8" Cl. F-4 1079.00
87' Rt. Sta. 448+00 Std. HW-E Endwall IE 15" Cl. B-1 1078.00

| | | |

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

28
485

CURVE DATA

P.I. STA. 443 + 75.60
Δc = 45° 45' 15" Rt.
Dc = 1° 51'
Rc = 3097.07'
Lc = 2473.20'
Tc = 1306.79'
Ec = 264.41'

℄ SURVEY I.R. 70
54.00
42.95
24.00
Hub
Iron Pin Wedged in Rock
REF. P.O.C. STA. 450+89.45

Hub Hub Hub
98.51'
88.44'
94.00
℄ SURVEY I.R. 70 Iron Rod
REF. P.T. STA. 455+42.01

5 Strand Barbed Wire
L/A
Fr. Shed
8' Gravel Drive
2 Wires
Const. Limits
℄ Survey I.R. 70
7" Paved Gutter
18" R.C.P.
S 72° 05' 39" E
7.5' Wide
Detail B
To be abandoned
Detail C
12" CMP
24" Elm
Note: Connect Prop 18" through Exist. C.B.
P.T. STA. 455+42.01
Culvert No. Gue 40-2401
Sta. 458+99
Skew: 1°26' Left Ford
7'x18" C.I. A-1 @ 22.8%
6'1"x21" C.I. A-1 @ 14.2%
See Sheet No. 412
Jute Matting
BENCH MARK
R.R. Spike in 24" Elm Tree
77' Rt. Sta. 459+90.
Elev. ~ 1133.06
FOR RELOC. C.H. 27 SEE SHEET NO. 277-283
FOR DETAILS OF UNDERDRAIN OUTLETS SEE SHEET NO. 436.
⊗ Delineator
WITH PAVED GUTTER REMOVAL

1092.21 1095.71 1099.21 1102.71 1106.21 1109.71 1113.21 1116.71 1120.21 1123.71 1125.46 1126.33 1127.18

459+00 Rt. Out
F.L. 6" C.I. I-3 1121.73
Rt. Ins.
℄ 6" C.I. I-3 1122.88
+03' Rt. Ins.
℄ 6" C.I. I-3 1119.52
+11 Rt. Out
℄ 6" C.I. I-3 1121.23
20' x 15" C.I. E-1 @ 10%
+3.50%
+00 Rt. Ins. Out
℄ 6" C.I. I-3 1117.41
Rt. Ins.
℄ 6" C.I. I-3 1099.41
Rt. Ins.
Rt. Out
1 Line 2.80 below pav't edge
Rt. Out
℄ 6" C.I. I-3 1097.97
Sta. 459+15
13.5 Lt. Std. No. 8 C.B.
℄ Grate 1124.10
℄ 12" C.I. E-1 1121.10
Sta. 459+15
13.5 Rt. Std. No. 8 C.B.
℄ Grate 1122.49
℄ 12" C.I. E-1 1119.76
℄ 15" C.I. E-1 1119.49
℄ 6" C.I. F-4 1119.89
STA. 459+50
400' V.C.
600' S.D.
Sta. 458+99 Rt.
No. 2 M.H., F.L. 6" C.I. I-3 1119.02
Sta. 458+96
83' Rt. Std. No. 5 C.B. Existing
℄ Grate 1121.42
℄ 21" C.I. A-1 1117.60
℄ 6" C.I. F-4 1119.00

1130 1120 1110 1100 1090 1080 1070

1108.7 1112.8 1115.2 1116.0 1118.5 1116.6 1115.5 1115.8 1117.6 1117.7 1116.2 1117.8 1118.3 1118.6 1117.5 1117.1 1116.8 1118.6 1119.2 1120.0 1118.3 1118.4 1119.0 1119.9 1121.4 1122.1 1121.5 1120.9 1122.7 1125.0 1125.4 1126.7 1126.4 1126.5 1123.98 1121.94 1121.74 1120.6 1119.21 1117.76 1118.13 1118.4 1119.3 1121.4

+81 +86 +12 +29 +40 +45 +08 +10 +31 +33 +30 +34 +64 +66 +32 +46 +52 +79 +84 +20 +53 +62 +73 +08 +19 +33 1175+16 1176.6+32

450 451 452 453 454 455 456 457 458 459 460

ESTIMATED QUANTITIES

| REF. SHEET NO. | ITEM | STATION TO STATION | SIDE | | |

FOR RELOC. C.H. 27
See Sheets Nos 277-283.

RELOC. C.H. 27

Hub 82.91 Guard Rail Post
℄ SURVEY I.R. 70
30" Tree
Nail & Shiner in Root
18" Tree
42.25
10.55

Guard Rail Post
℄ SURVEY
20.90'
Hub
30" Tree
Nail & Shiner in Root
133.45'
118.83'
12" Stump
REF. P.C. STA. 469+66.73
REF. P.O.T. STA. 468+18.77

CURVE DATA
P.I. STA. 490 + 56.12
Δc = 16° 34' 33" Lt.
Dc = 0° 23' 58"
Rc = 14,343.87'
Lc = 4,149.72'
Tc = 2,089.45'
Ec = 151.38'

Conc. Blk. Chicken House
Sheds
Fr. Shed
2 Story Fr. Res.
Gravel
Dirt
Fr. Shed
Dirt Field Drive
Fr. Barn
Gue. Co. Rd. # 286
20"x12" CMP
45"x12" Pipe
16"x12" CMP
3 Sty. Blk. Stone & Ser. Sta.
Pump
Veland
2-1000 gal Tanks
12"x12" CMP
Hedge
3 Wire
Guy Wire
8' Wide Sod
Exist Paved Gutters
P.C. STA 469+66.67
G.R.
RW
Construction Limits
Single Rail
7.5' wide
Gravel
C.M.P.
TO BE ABANDONED 12' Gravel Dr.
To be abandoned
℄ Survey I.R. 70
S 72° 05' 39" E
460 461 462 463 464 465 466 467 468 469 470
DETAIL "A"
DETAIL "B"
8' Gravel Drive
8' Gravel Drives
DUMPED ROCK CHAN. ROOT 6' WIDE
Brush & Trees
Construction Limits
LA
Delineators
PAV'T REMOVAL AND PAVED GUTTER REMOVAL
JUTE MATTING

BENCH MARK
R.R. Spike in G.R.
Post. 20' Lt. Sta. 469+01. Elev. 1151.48

FOR DETAILS OF UNDERDRAIN OUTLETS SEE SHEET NO. 436.

| ESTIMATED QUANTITIES | SEE SHEET NO. | | |

GUERNSEY COUNTY – BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00

FED. ROAD DIVISION	STATE	PROJECT		SHEET NO.	TOTAL SHEETS
2	OHIO			30	485

Note: For C.H. 27 See Sheet Nos. 277 & 283

CURVE DATA
P.I. STA. 490 + 56.12
Δc = 16°34'33" Lt.
Dc = 0° 23'58"
Rc = 14,343.87'
Lc = 4,149.72'
Tc = 2,089.45'
Ec = 151.38'

PAVEMENT REMOVAL.
JUTE MATTING
⊗ Delineators

R/W 12'x12" C.M.P. Dirt Field Drive Fr. Shed Twp. Rd. 213 Gravel No Outlet
5 Strand Barbed Wire Shed R/W
℄ C.H. 27 RELOCATION
Guernsey County Road 286 15 Asphalt Surface
Gravel C.H. 286 LA 1'R 1'L
1'D L/A
House Trlr. Sheds Construction Limit Shed Pole w. Trans.
2 wire fence
1'G 2'R 2'G 1'DR Stop
12'x12" C.M.P. Apron Ditch
202'-1.5" 75' Wide
⊗ B.M. #7 Cumberland 163 Mile Marker
4'G 2'D 5'G
℄ Survey I.R. 70
470 471 472 473 474 475 476 477 478 479 480
75' wide
SLIDE AREA
+46 185' Detail "B" Detail "A"
3'UD 4'UD 1'UD 3'G 2'UD 1'SS

Guard Rail Post
105' 98.24' 36.41' Iron Pins
℄ SURVEY I.R. 70
REF. P.O.C. STA. 474+45.77
+00 185'

CULVERT NO. GUE-40-2525
STA. 473 + 52, SKEW 6° L.F.
146'-15" CL. A-1 @ 19 %
SEE SHEET NO. 413

3'D Construction Limits
DUMPED ROCK C.H. PROT. 6' WIDE
CONSTRUCTION LIMITS
Brush
LA L/A

BENCH MARK
R.R. Spike in P.P. #2047/38
1.5' Rt. Sta. 479.29
Elev. 1168.35

FOR DETAILS OF UNDERDRAIN OUTLETS SEE SHEET NO. 436.

BENCH MARK
#7 □ Chisled in top Stone Mileage Marker (Cumberland 163) 67' Lt. 474+45 Elev. 1166.38

13.5' LT. STA. 478+50
STD. NO. 8 C.B.
I.E. GRATE ~ 1170.10
I.E. 12" CL. E-1 ~ 1167.10

13.5' RT. STA. 478+50
STD. NO. 8 C.B.
I.E. GRATE ~ 1170.83
I.E. 12" CL. E-1 ~ 1166.83
I.E. 15" CL. B-1 ~ 1166.58
I.E. 6" CL. F-4 ~ 1167.33

+00 RT. INS. & OUTS. I.E. 6" CL. I-3 ~ 1171.52
6" CL. I-3 (2 LINES) 4.30' BELOW PAV'T EDGE
+57 RT. INS. I.E. 6" CL. I-3 ~ 1168.43
+55 RT. OUTS. I.E. 6" CL. I-3 ~ 1168.39
+55 ~ 77' RT. I.E. 8" CL. F-4 ~ 1168.19
+48 RT. INS. & OUTS. I.E. 6" CL. I-3 ~ 1168.24
+2.16%
6" CL. I-3 (2 LINES) 4.30' BELOW PAV'T EDGE
I.E. 1146.72
118' Lt. Sta. 473+68 Std. No. 5 C.B. I.E. Grate ~ 1157.80 I.E. Exist. 15" ~ 1146.72
+00 RT. INS. & OUTS. I.E. 6" CL. I-3 ~ 1149.72
PVI STA. 470+00 ELEV. 1154.22
STA. 472+00
400' V.C. 600' S.D.
160' RT. STA. 478+50 STD. TYPE HW-E ENDWALL I.E. 15" CL. F-4 ~ 1126.80
I.E. 1076.52 Not drawn to proper elevation

1154.02 1154.61 1155.19 1155.76 1156.33 1156.89 1157.45 1158.00 1158.54 1160.70 1162.86 1165.02 1167.18 1169.34 1171.50 1173.66 1175.82
1145.4 1147.5 1148.5 1150.1 1150.8 1151.1 1152.5 1153.7 1155.3 1154.0 1153.5 1150.8 1154.1 1145.7 1146.2 1148.7 1148.2 1147.0 1151.8 1155.8 1157.6 1157.7 1158.8 1160.2 1161.1 1160.7 1163.0 1170.3 1170.3 1169.5 1167.5 1166.0 1167.4
+99 +11 +26 +45.77 +61 +72 +81 +95 +15 +27 +29 +37 +65
470 471 472 473 474 475 476 477 478 479 480
1180 1170 1160 1150 1140 1130 1120

ESTIMATED QUANTITIES

| ITEM | | UNIT | 470+00 – 480+00 | | |

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

STATE	STATE	PROJECT	
2	OHIO		

CURVE DATA

P.I. STA. 490+56.12
Δc = 16° 34' 33" Lt.
Dc = 0° 23' 58"
Rc = 14,343.87'
Lc = 4,149.72'
Tc = 2,089.45'
Ec = 151.38'

℄ C.H. 27 RELOCATION — Guernsey County Road 286

Private Gravel Drive — Shed — 2 Story Frame Res. — Gravel Surface — 42%16"W.S.P. — 18" — 15" C.M.P. — R/W — SLIDE AREA — SLIDE — Construction Limits — 72" C.M.P. — 8" C.M.P. — P.W. Trans. — CONST. LIMITS — 15" C.M.P. — Concrete — Existing Joint Concrete — ℄ Survey I.R. 70 — ℄ Stop — STA. 487+76.93 — 114°30'00" TANGENT TO CURVE — STA. 489+05.09 — Detail "C" — 10"-6" Cl. F-4 — Detail "A" — To Be Abandoned — Bit. Surface — 15"x44" V.S.P. — Small Trees & Brush — Construction Limits — LA — Brush — Trees & Brush — For Continuation of Storm Sewer see Sheet No. 280

STA. 488+53.00 ℳ = P.O.T. STA. 27+42.00 C.H. 27 RELOC.

For Reloc. C.H. 27 See Sheet No. 277-283

Culvert Gue 40-2544
Sta. 481+87 Skew 3°30' L.F.
250'-15" Cl. A-1 @ 2.2 %
78'-18" Cl. A-1 @ 3%
See Sheet No. 414

For details of underdrain outlets see Sh. No. 436

⊗ Delineators
XXX Jute Matting
Removal Pav't

480 481 482 483 484 485 486 487 488 489 490

1175.82 1177.98 1180.14 1181.76 1182.29 1182.81 1183.32 1183.82 1184.31 1184.78 1185.25 1185.71 1186.16 1186.59 1187.02 1187.44 1187.84 1188.24 1188.62 1189.00 1189.36 1189.72 1190.06 1190.39 1190.72 1191.03 1191.33 1191.62 1191.90 1192.17 1192.43 1192.68 1192.92

+2.16%
6" Cl. I-3 (2 Lines) 430' below Pavt Edge
6" Cl. I-3 (2 Lines) 430' below Pavt Edge
+00 Pt Ins & Out IE 6" Cl I-3 1171.52
STA. 482+65
2800' V.C. 600' SD.
+96.93 End Approach Slab
+71.93 Begin Approach Slab
+44 Pt Ins. IE 6" Cl. I-3 1188.07
+34.07 End Approach Slab
+09.07 Begin Approach Slab
+08 Pt Ins. IE 6" Cl. I-3 1186.56
+21 Pt Out IE 6" Cl. I-3 1186.73
Bridge Limits 112.14'
+22 Pt Ins. IE 6" Cl. I-3 1188.57
+37 Pt Out IE 6" Cl. I-3 1190.27
-0.3%
106'-12" Cl E-1 @ 2.17%
98'-15" Cl. J-1 @ 0.25%
83' Rt Sta. 490+00 Std. No. 5 C.B. IE Grate 1190.55 IE 15" Cl. B-1 1185.92 IE 15" Cl. E-1-1185.82 IE 6" Cl. F-4-1186.67
℄ Sta. 489+44 Std. No. 8 C.B. IE Grate 1189.42 IE 12" Cl. E-1 1186.42 IE 15" Cl. B-1 1186.17 IE 6" Cl. F-4 1186.92
+00 Pt Ins & Out IE 6" Cl. I-3 1190.12

1190 1180 1170 1160 1150

PROPOSED STRUCTURE
BRIDGE NO. GUE-40-2527 L & R

Type: Continuous reinforced concrete slab with reinforced concrete piers & capped pile abutments
Spans: 34'0", 42'6", 34'0" ℄ of bearings
Roadway: Two at 42'0" face to face parapets with 1'2" safety curbs
Load Frequency: CF 2000(57) adequate for AASHO alternate Loading
Wearing Surface: 1" monolithic concrete
Skew: 24°30'00" R.F.
Approach Slabs: AS-1-54 (25' Long)
Alignment: 0°23'58" Curve Lt
Superelevation: None

ESTIMATED QUANTITIES

REF NO	STATION TO STATION	SIDE												SEE SHEET NO.

GUERNSEY COUNTY – BELMONT COUNTY

GUE-40-23.88 BEL-40-0.00

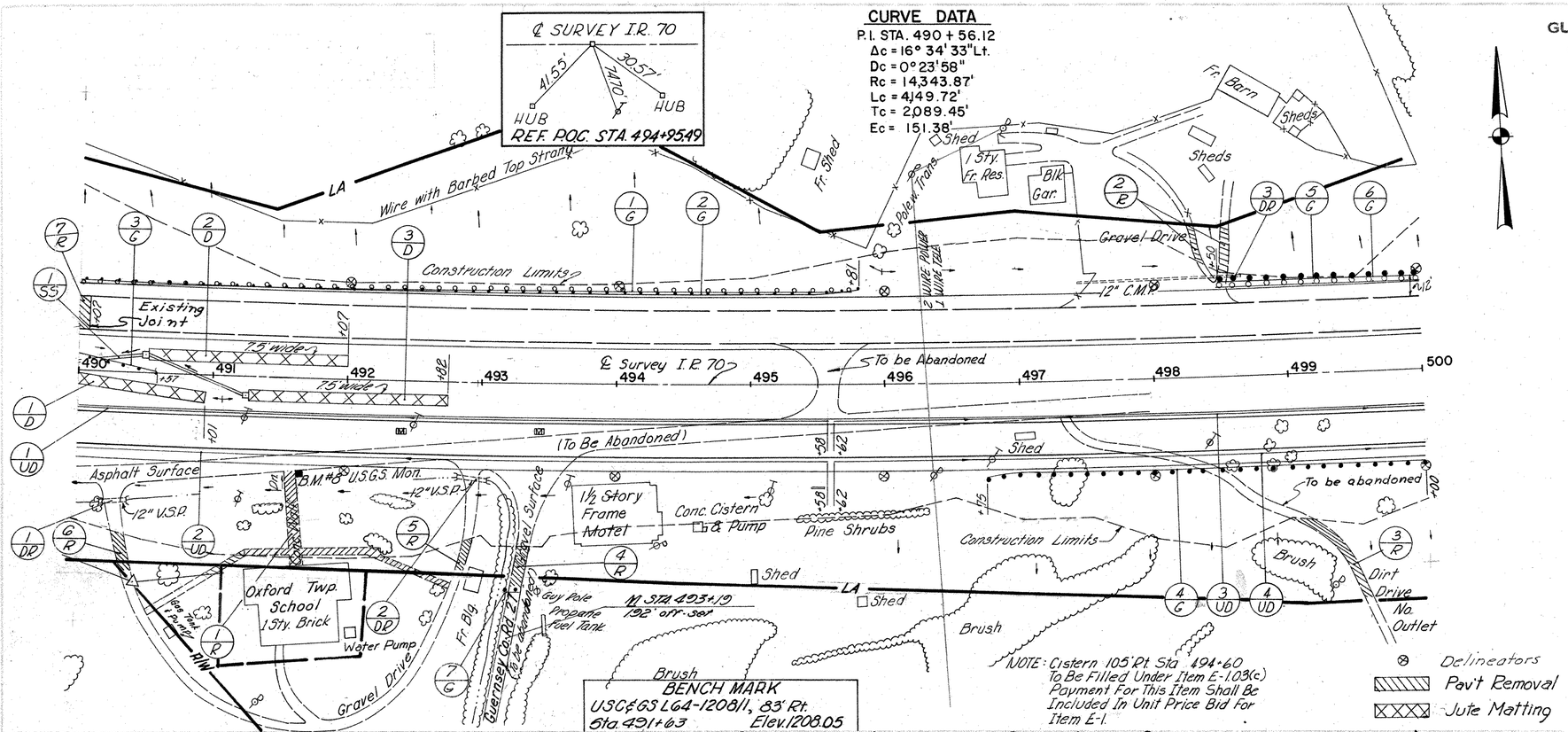
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

32
485

℄ SURVEY I.R. 70

4155'
3057'
4270'
HUB
HUB
REF. POC. STA. 494+9549

CURVE DATA
P.I. STA. 490 + 56.12
Δc = 16° 34' 33" Lt.
Dc = 0° 23' 58"
Rc = 14,343.87'
Lc = 4,149.72'
Tc = 2,089.45'
Ec = 151.38'



NOTE: Cistern 105' Rt Sta 494+60 To Be Filled Under Item E-103(c) Payment For This Item Shall Be Included In Unit Price Bid For Item E-1.

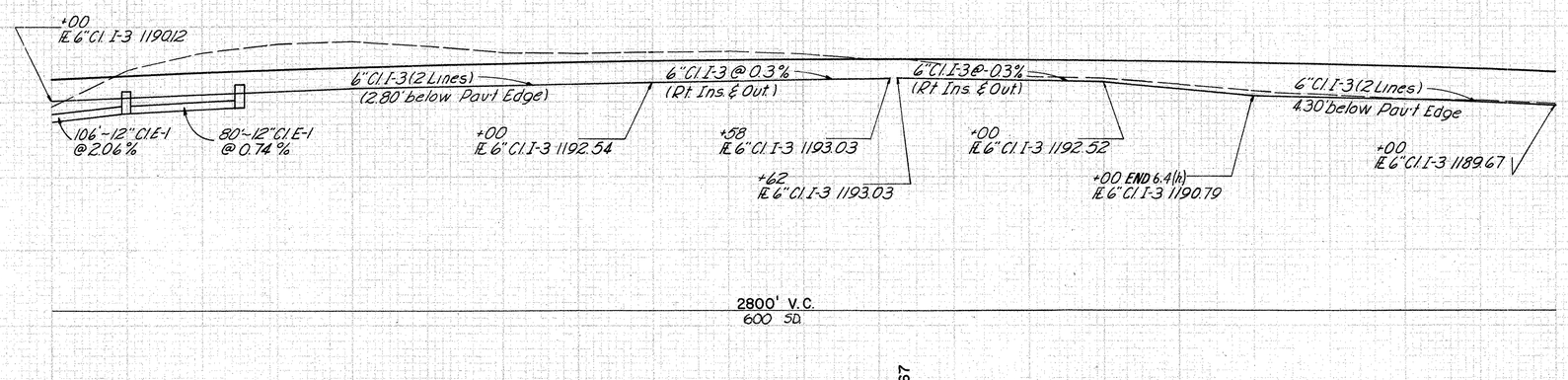
BENCH MARK
USC&GS L64-1208/1, 83' Rt.
Sta. 491+63
Elev. 1208.05

1192.92 1193.15 1193.37 1193.58 1193.77 1193.96 1194.14 1194.30 1194.46 1194.61 1194.74 1194.87 1194.98 1195.09 1195.18 1195.26 1195.34 1195.40 1195.45 1195.49 1195.52 1195.54 1195.55 1195.55 1195.54 1195.52 1195.49 1195.45 1195.40 1195.34 1195.27 1195.18 1195.09 1194.98 1194.87 1194.75 1194.61 1194.47 1194.31 1194.14 1193.97

13.5' Lt Sta 490+50
Std No 8 C.B.
I.E. Grate 1191.62
I.E. 12" C.I.E-1 1188.62

13.5' Rt Sta 491+25
Std. No. 8 C.B.
I.E. Grate 1192.21
I.E. 12" C.I.E-1 1189.21

PVI. STA. 496.+65
ELEV. 1211.78
+2.16%
-2.50%



1189.4 1194.2 1196.3 1197.7 1198.0 1197.3 1196.6 1196.3 1196.4 1196.7 1196.2 1195.6 1195.6 +67 1194.8 1193.1 1193.0 1192.3 1191.4 1190.9 1190.2 1190.1 1189.8

490 491 492 493 494 495 496 497 498 499 500

ESTIMATED QUANTITIES

ITEM NO	STATION TO STATION	SIDE	I-1 CL E-1 CL I-3	I-1 W16 x (n)	I-15 RAIL REMOVED & REBUILT	I-15 GUARD REMOVAL OF EXIST. STD. TYPE DEEP	E-8 REMOVAL OF EXIST PAV'T	E-8 REMOVAL PIPE & DISPOSAL OF EXIST SIDEWALK	E-12 DISPOSAL OF ASTERPAV	SEE SHEET NO.
			12"	6"	LF	LF	Sq Yds.	LF	Sq Ft. Sq Yds.	
1UD	490+00									
2UD	490+00									
3UD	495+62									
4UD	500+62									
1SS	490+00									
1P	491+60									
2P	498+50									
1G	490+00									
2G	490+00									
3G	490+00									
4G	496+75									
5G	498+30									
6G	498+42.5									
7G	493+25									
1DP	490+25									
2DP	493+90									
3DP	497+45									
1D	490+00									
2D	490+57									
3D	491+32									
3R	499+00 ~ 499+50	RT								
4R	499+40	RT								
5R	498+80	RT								
6R	498+25	RT								
7R	490+00 ~ 490+07	LT								

ITEM NO	STATION TO STATION	SIDE	I-1 CL E-1 CL I-3	I-1 W16 x (n)	I-15 RAIL REMOVED & REBUILT	I-15 GUARD REMOVAL OF EXIST. STD. TYPE DEEP	E-8 REMOVAL OF EXIST PAV'T	E-8 REMOVAL PIPE & DISPOSAL OF EXIST SIDEWALK	E-12 DISPOSAL OF ASTERPAV	SEE SHEET NO.
			12"	6"	LF	LF	Sq Yds.	LF	Sq Ft. Sq Yds.	
1UD	490+00	RT								
2UD	490+00	RT								
3UD	495+62	RT								
4UD	500+62	RT								
1SS	490+00	LT&RT						130		
1P	491+60	RT					1440			
2P	498+50	LT								
1G	490+00	LT								
2G	490+00	LT								
3G	490+00	LT&RT								
4G	496+75	RT								
5G	498+30	LT								
6G	498+42.5	LT								
7G	493+25	RT								
1DP	490+25	RT								
2DP	493+90	RT								
3DP	497+45	LT								
1D	490+00	RT								
2D	490+57	LT								
3D	491+32	RT								
3R	499+00 ~ 499+50	RT								
4R	499+40	RT								
5R	498+80	RT								
6R	498+25	RT								
7R	490+00 ~ 490+07	LT								

ITEM NO	STATION TO STATION	SIDE	I-1 CL E-1 CL I-3	I-1 W16 x (n)	I-15 RAIL REMOVED & REBUILT	I-15 GUARD REMOVAL OF EXIST. STD. TYPE DEEP	E-8 REMOVAL OF EXIST PAV'T	E-8 REMOVAL PIPE & DISPOSAL OF EXIST SIDEWALK	E-12 DISPOSAL OF ASTERPAV	SEE SHEET NO.
			12"	6"	LF	LF	Sq Yds.	LF	Sq Ft. Sq Yds.	
1UD	490+00	RT		558						
2UD	490+00	RT		558						
3UD	495+62	RT		300	138					
4UD	500+62	RT		300	138					
1SS	490+00	LT&RT								
1P	491+60	RT								
2P	498+50	LT								
1G	490+00	LT								
2G	490+00	LT								
3G	490+00	LT&RT								
4G	496+75	RT								
5G	498+30	LT								
6G	498+42.5	LT								
7G	493+25	RT								
1DP	490+25	RT								
2DP	493+90	RT								
3DP	497+45	LT								
1D	490+00	RT								
2D	490+57	LT								
3D	491+32	RT								
3R	499+00 ~ 499+50	RT								
4R	499+40	RT								
5R	498+80	RT								
6R	498+25	RT								
7R	490+00 ~ 490+07	LT								

ITEM NO	STATION TO STATION	SIDE	I-1 CL E-1 CL I-3	I-1 W16 x (n)	I-15 RAIL REMOVED & REBUILT	I-15 GUARD REMOVAL OF EXIST. STD. TYPE DEEP	E-8 REMOVAL OF EXIST PAV'T	E-8 REMOVAL PIPE & DISPOSAL OF EXIST SIDEWALK	E-12 DISPOSAL OF ASTERPAV	SEE SHEET NO.
			12"	6"	LF	LF	Sq Yds.	LF	Sq Ft. Sq Yds.	
1UD	490+00	RT		558						
2UD	490+00	RT		558						
3UD	495+62	RT		300	138					
4UD	500+62	RT		300	138					
1SS	490+00	LT&RT						130		
1P	491+60	RT					1440			
2P	498+50	LT								
1G	490+00	LT								
2G	490+00	LT								
3G	490+00	LT&RT								
4G	496+75	RT								
5G	498+30	LT								
6G	498+42.5	LT								
7G	493+25	RT								
1DP	490+25	RT								
2DP	493+90	RT								
3DP	497+45	LT								
1D	490+00	RT								
2D	490+57	LT								
3D	491+32	RT								
3R	499+00 ~ 499+50	RT								
4R	499+40	RT								
5R	498+80	RT								
6R	498+25	RT								
7R	490+00 ~ 490+07	LT								

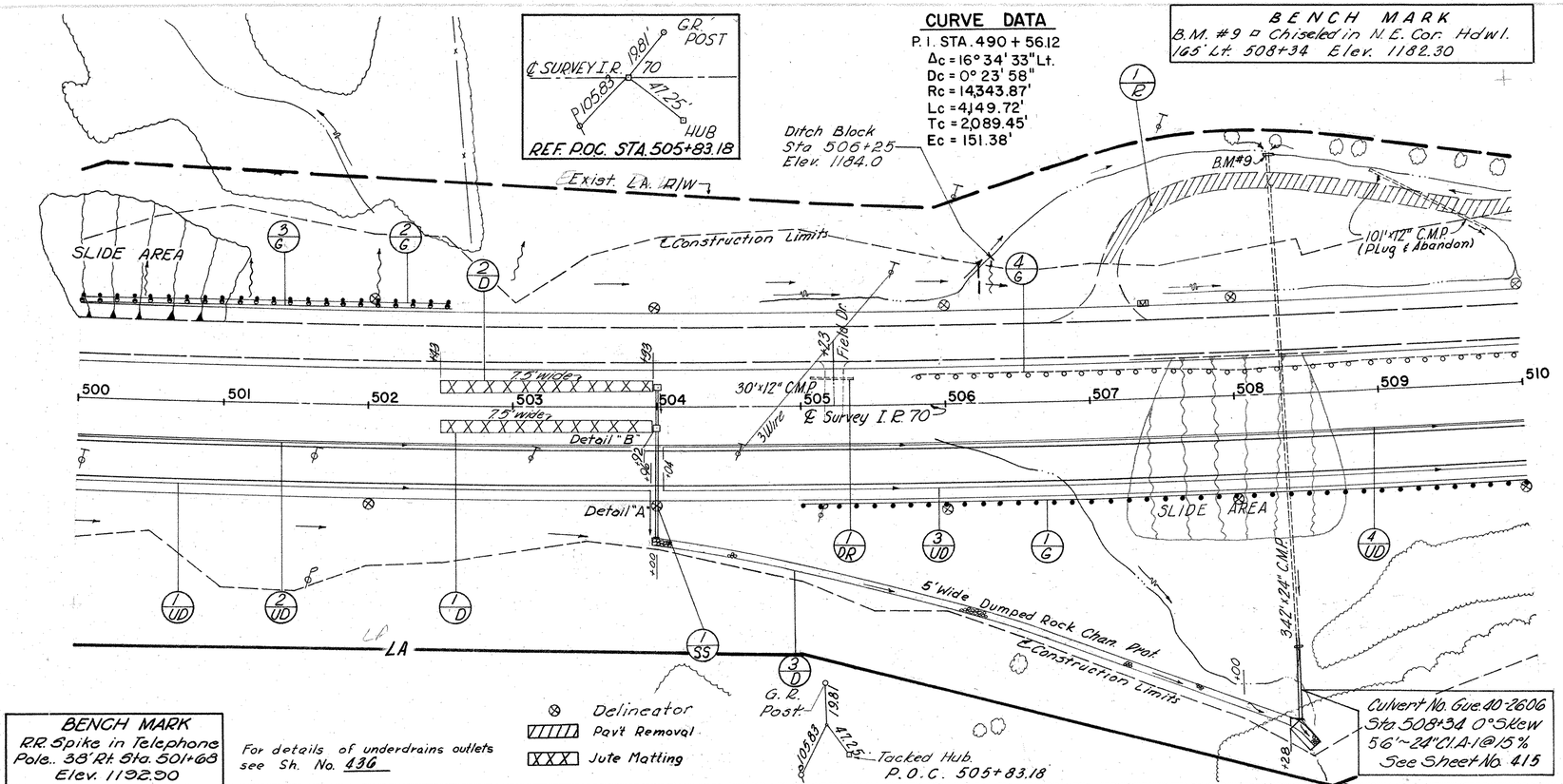
ITEM NO	STATION TO STATION	SIDE	I-1 CL E-1 CL I-3	I-1 W16 x (n)	I-15 RAIL REMOVED & REBUILT	I-15 GUARD REMOVAL OF EXIST. STD. TYPE DEEP	E-8 REMOVAL OF EXIST PAV'T	E-8 REMOVAL PIPE & DISPOSAL OF EXIST SIDEWALK	E-12 DISPOSAL OF ASTERPAV	SEE SHEET NO.
			12"	6"	LF	LF	Sq Yds.	LF	Sq Ft. Sq Yds.	
1UD	490+00	RT		558						
2UD	490+00	RT		558						
3UD	495+62	RT		300	138					
4UD	500+62	RT		300	138					
1SS	490+00	LT&RT						130		
1P	491+60	RT					1440			
2P	498+50	LT								
1G	490+00	LT								
2G	490+00	LT								
3G	490+00	LT&RT				581				
4G	496+75	RT				60				
5G	498+30	LT				325				
6G	498+42.5	LT				150				
7G	493+25	RT								
1DP	490+25	RT								
2DP	493+90	RT				125				
3DP	497+45	LT								
1D	490+00	RT								
2D	490+57	LT								
3D	491+32	RT								
3R	499+00 ~ 499+50	RT								
4R	499+40	RT								
5R	498+80	RT								
6R	498+25	RT								
7R	490+00 ~ 490+07	LT								

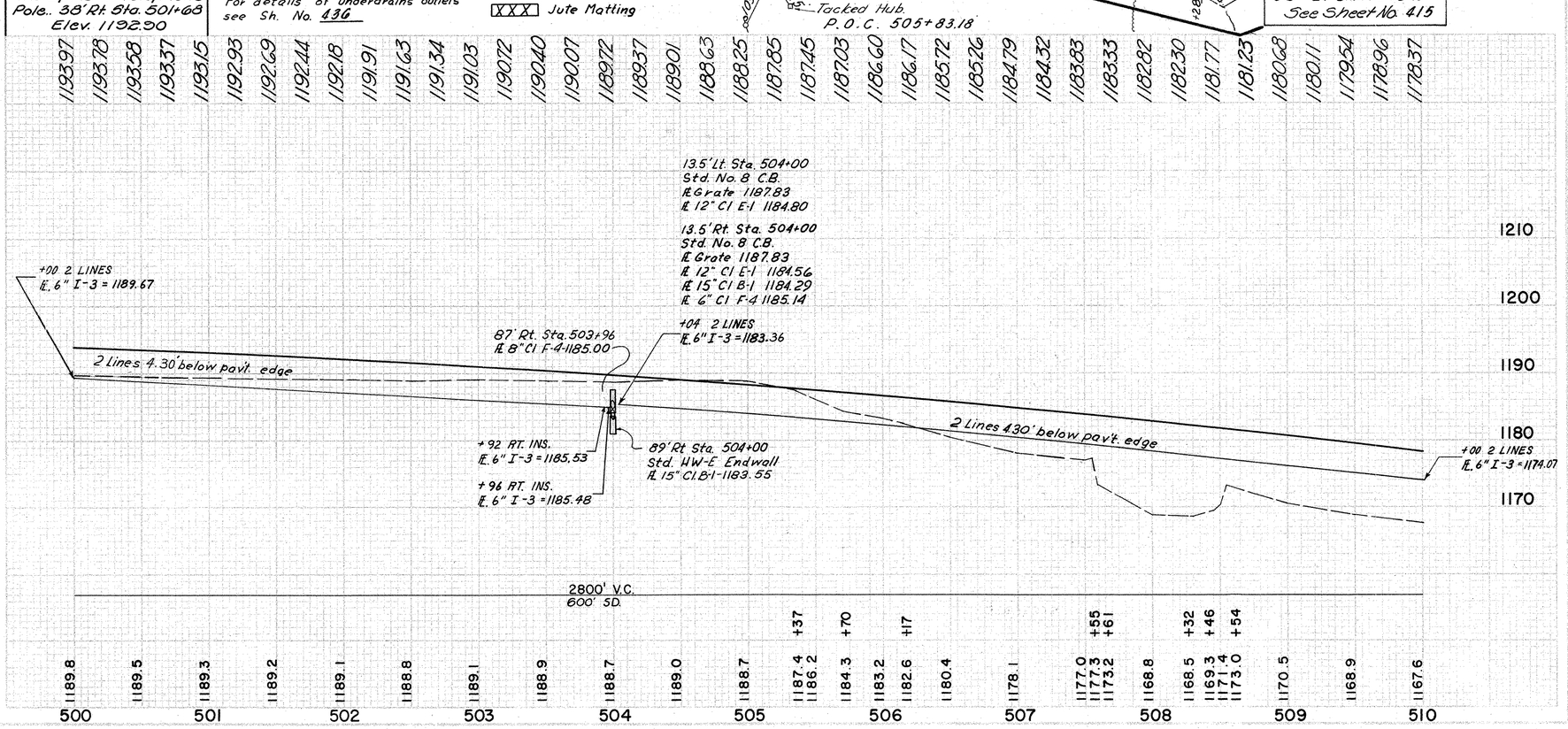
ITEM NO	STATION TO STATION	SIDE	I-1 CL E-1 CL I-3	I-1 W16 x (n)	I-15 RAIL REMOVED & REBUILT	I-15 GUARD REMOVAL OF EXIST. STD. TYPE DEEP	E-8 REMOVAL OF EXIST PAV'T	E-8 REMOVAL PIPE & DISPOSAL OF EXIST SIDEWALK	E-12 DISPOSAL OF ASTERPAV	SEE SHEET NO.
			12"	6"	LF	LF	Sq Yds.	LF	Sq Ft. Sq Yds.	
1UD	490+00	RT		558						
2UD	490+00	RT		558						
3UD	495+62	RT		300	138					
4UD	500+62	RT		300	138					
1SS	490+00	LT&RT						130		
1P	491+60	RT					1440			
2P	498+50	LT						37		
1G	490+00	LT								
2G	490+00	LT								
3G	490+00	LT&RT				581				
4G	496+75	RT				60				
5G	498+30	LT				325				
6G	498+42.5	LT				150				
7G	493+25	RT								
1DP	490+25	RT								
2DP	493+90	RT				125				
3DP	497+45	LT								
1D	490+00	RT								
2D	490+57	LT								
3D	491+32	RT								
3R	499+00 ~ 499+50	RT						56		
4R	499+40	RT						39		
5R	498+80	RT						27		
6R	498+25	RT						36

GUERNSEY COUNTY – BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00

FED. ROAD DIVISION	STATE	PROJECT	
5	OHIO		

33
485





ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 CI F-4 (Metric) 6" LF	8" LF	I-3 CI I3 6" LF	I-5 PIPE SPECIAL STD NO. C&G 6-90 BEND CI I3 EA.	I-8 STD NO. 8 C.B. EA.	I-2 MASONRY Cu Yds	I-10 SODDING SQ YD	I-120 JUTE MATTING SQ YD	I-110 DUMPED 18" THICK ROCK CHANNEL PROT. CU YD	CI F-4 12" LF	CI F-4 15" LF	E-8 REMOVAL GUARD CABLE & FENCE OF ALL TYPES AS PER PLAN Sq Yds	I-15 GUARD RAIL STD TYPE DEEP REBUILT LF	E-12 PIPE REMOVAL 15" UNDER LF
1UD	500+00 ~ 503+96	Rt.			416	1										
2UD	500+00 ~ 504+00	Rt.			398											
3UD	504+04 ~ 510+00	Rt.			596											
4UD	504+04 ~ 510+00	Rt.			596											
1SS	504+00	Rt.Ut.					2	026	4	125	128	27	74			
1D	502+43 ~ 503+33	Rt.		10		1				125						
2D	502+43 ~ 503+33	Lt.														
3D	504+00 ~ 508+28	Rt.		10		1										
1G	505+00 ~ 510+00	Rt.												500		
2G	500+00 ~ 502+50	Lt.												250		
3G	500+00 ~ 502+50	Lt.													2375	
4G	505+80 ~ 510+00	Lt.													425	
1DR	505+07 ~ 505+37	Lt.														30
1UD	507+00 ~ 510+00	Lt.												400		
1E																
			1	1	2006	2	2	0.26	4	250	128	27	74	400	425	30

* TOTALS TO SHEET 18

STA. 500+00 TO STA. 510+00

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

34
485

CURVE DATA

P.I. STA. 490+56.12
Δc = 16° 34' 33" LT.
Dc = 0° 23' 58"
Rc = 14343.87'
Lc = 4149.72'
Tc = 2089.45'
Ec = 151.38'

Jute Matting
Delineator
Pavt. Removal

Fr. Shed
Fr. Shed
Block Bldg.
1½ Sty. Fr. Res.
Fr. Barn
8' GRAVEL DRIVE
8' GRAVEL DRIVE
2 Wires
P.T. STA. 511+16.38
LA
Construction Limits
9' Wide Sod
7.5' wide
7.5' wide
℄ Survey I.R. 70
S 88° 40' 12" E
Sign
Detail "B"
Detail "A"
5 Wide Dump Rock Ch. Proj.
Construction Limits
5 Wide Dumped Rock
LA

510 511 512 513 514 515 516 517 518 519 520

BENCH MARK
Pole on Line Sta. 519+24
Elev. 1158.05

REF. P.T. STA. 511+16.38
3444 4035 2223
HUB HUB HUB

REF. P.O.T. STA. 519+34.81
1015' 1994' 1714'
HUB
P.K. Nails in poles

For details of underdrain outlets see Sh. No. 436

1178.37 1177.76 1177.15 1176.78 1175.90 1173.40 1170.90 1168.40 1165.90 1163.40 1160.90 1158.40 1157.79 1157.21 1156.66 1156.14 1155.65 1155.19 1154.76 1154.35

600' V.C.
600' S.D.

1210
1200
1190
1180
1170
1160
1150

STA. 518+00

+74 RT. OUT.
℄ 6" Cl I-3 1167.25

+74 81' RT.
℄ 8" Cl F-4 1167.18

+00 INS. & OUT.
℄ 6" Cl. I-3 1174.07

13.5' Lt Sta. 512+78
Std. No. 8 C.B.
℄ Grate 1169.67
℄ 12" Cl. E-1 1166.92

13.5' Rt Sta. 512+78
Std. No. 8 C.B.
℄ Grate 1169.67
℄ 12" Cl. E-1 1166.38
℄ 15" Cl. B-1 1166.13
℄ 6" Cl. F-4 1166.88

2 Lines 4.30' below pavement edge
STA. 510+65
+70 Rt. Ins.
℄ 6" Cl. I-3 1167.35
– 2.50%
2 Lines 2.80' below pavement edge
4 Lines 2.80' below pavement edge
+50 4 Lines END 6.4(h)
℄ 6" Cl. I-3 1152.31
+00 4 Lines
℄ 6" Cl. I-3 1150.05
2800' V.C.
600' S.D.
84' Rt. Sta. 512+78
Std. HW-E Endwall
℄ 15" Cl. B-1 1165.42

1167.6 1166.9 1167.7 1167.4 1168.1 1168.4 1168.2 1167.3 1167.7 1168.6 1170.4 1171.5 1172.2 1172.9 1175.2 1175.0 1173.0 1170.1 1168.0 1165.3 1164.7 1162.0 1158.9 1157.4 1148.55 1146.25 1145.78

+76 +78 +80 +27 +36 +71 +01 +30 +39 +51 +78 +01 +01 +01 +01 +01 +01 +53 +01 +01 +28 +77 +85 +93

510 511 512 513 514 515 516 517 518 519 520

ESTIMATED QUANTITIES

| REF. NO. | STATION TO STATION | SIDE | SEE SHEET NO. | I-15 E-8 REMOVAL OF GUARD RAIL & DISPOSAL EXIST. PAVT. | I-15 RENEWED & STD. TYPE REBUILT | | |

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

35
485

For details of median Cross over see sheet # 434
Quantities on Sh. 17

Jute Matting

Removal Paved Gutter & Removal Pav't Delineators

CULVERT No. Gue-40-2638
Sta. 522+09 Skew 11° L.F.
9'L'x24" Cl-A-1 @ 4.77%
See Sheet No. 416

BENCH MARK
B. M. #10 □ Chiseled in top Stone Milage Marker (Cumberland 162)
@ 526+54 79 Lt. Elev. 1157.24

BENCH MARK
R.R. Spike in T.P. N. edge Old 40 133' Lt.
Sta. 523+27.5 Elev. 1124.66

For Quantities See Sht. No. 36

For details of underdrain outlets see sheet # 430

Construction Limits

5' Wide Dumped Rock

To be abandoned Milage Marker

15" C.M.P.

℄ Survey Sta. 523+29 ℄ Crossover

℄ Survey I.R. 70

S 88° 40' 12" E

Concrete

Detail "C"

Detail "B"

Detail "A"

7.5' Wide

5' Paved Gutter

3' Paved Gutter

24" C.M.P.

C.B.

Wooded Area

5' Wide Dumped Rock Ch.

Connect 24" C.M.P. Thru Exist. Aband. C.B.

5' Wide Sod

4 Wires

To be abandoned TWP RD. 296

Construction Limits

Place Dumped Rock Along Toe of Slope

Fr. Shed

Fr. Shed

1½ Sty. Fr. Res.

Fr. Garage

To be abandoned

520 521 522 523 524 525 526 527 528 529 530

+00 4 Lines
I.E. 6" I-3 El. 1150.05

+50 Rt. Out
I.E. 6" Cl. I-3 1147.68

+00 Rt. Ins.
I.E. 6" Cl. I-3 1147.56

-2.50%

4 Lines 4.30' below pavement edge

+25' Lt. Out
I.E. 2-6" Cl. I-3 1147.28

80' Lt. Sta. 523+25
I.E. 8" Cl. F-4 1146.00

-0.3%

88+12" Cl. E-1 @ 1%

+0.3%

81' Rt. +72. +64
I.E. 8" Cl. F-4 1145.00

104' Rt. Sta. 523+68
Std. HW-E Endwall
I.E. 15" Cl. F-4 1133.38

+00 Lt. Ins.
I.E. 6" Cl. I-3 1148.04

+00 77' Lt.
I.E. 8" F-4 El. 1149.20

+00 Rt. Out
I.E. 6" Cl. I-3 1147.68

+0.36%

+00 4 Lines
I.E. 6" Cl. I-3 1149.90

+96 Lt Outside
I.E. 6" I-3 El. 1149.89

4 Lines 2.80' under pavement edge

+76 Rt. 2 Lines
I.E. 6" I-3 El. 1151.25

+84 Rt. Outside
I.E. 6" I-3 El. 1149.78

+88 Rt. Ins.
I.E. 6" I-3 El. 1149.80

+84 Lt. Ins.
I.E. 6" I-3 El. 1151.28

+88 Lt. Ins.
I.E. 6" I-3 El. 1151.30

+00 Lt. 2 Lines
I.E. 6" I-3 El. 1151.31

+00 Rt. 2 Lines
I.E. 6" I-3 El. 1149.84

+84 77' Rt.
I.E. 8" F-4 El. 1147.45

13.5' Lt. Sta. 522+82
Std. No. 8 C.B.
I.E. Grate 1150.20
I.E. 12" Cl. E-1 1146.70
I.E. 2-6" Cl. F-4 1147.28

13.5' Rt. Sta. 523+68
Std. No. 8 C.B.
I.E. Grate 1150.15
I.E. 12" Cl. E-1 1145.82
I.E. 15" Cl. B-1 1145.55
I.E. 2-6" Cl. F-4 1146.40

13.5' Lt. Sta. 529+80
Std. No. 8 Catch Basin
I.E. Grate El. 1152.27
I.E. 12" E-1 El. 1149.52
I.E. 6" F-4 El. 1150.02

13.5' Rt. Sta. 529+80
Std. No. 8 Catch Basin
I.E. Grate El. 1152.27
I.E. 15" B-1 El. 1148.73
I.E. 12" E-1 El. 1148.98
I.E. 6" F-4 El. 1149.48

77' Rt. Sta. 529+80
Std. HWE Headwall
I.E. 15" B-1 El. 1146.70

I.E. 24" C.M.P. 1093.16

I.E. 24" C.M.P. 1063.25

600' V.C.
600' S.D.

P.V.I. STA. 521+00
ELEV. 1150.90

1160
1150
1140
1130
1120
1110
1100
1090
1080
1070

1154.35 1153.98 1153.64 1153.33 1153.05 1152.79 1152.57 1152.38 1152.21 1152.08 1151.98 1151.90 1151.86 1151.84 1151.86 1151.90 1151.98 1152.34 1152.70 1153.06 1153.42 1153.78 1154.14

+01 +51 +73 +01 +56 +61 +01 +01 +38 +72 +01 +06 +14 +23 +30 +43 +65 +01 +22 +28 +33 +56 +01 +01 +01 +61 +01

1145.6 1141.1 1139.3 1139.2 1136.5 1137.7 1136.9 1137.7 1140.2 1147.2 1148.6 1148.61 1148.67 1148.56 1148.3 1144.1 1142.2 1143.1 1143.54 1143.87 1144.78 1151.7 1155.2 1158.1 1160.3 1160.9 1162.7 1162.6

520 521 522 523 524 525 526 527 528 529 530

ESTIMATED QUANTITIES

REF NO	STATION TO STATION	SIDE	I-16 C.B. ABANDONED	E-8 REMOVAL & DISPOSAL OF EXIST GUTTER & PAVT	I-5 SPECIALS 6"x6"x6"-90° BEND	I-5 SPECIALS 6"x6"x6"-90° BEND	I-5 SPECIALS 6" C.I.F-3 BEND	I-5 SPECIALS 15" C.I.F-3 TEE	I-1 C.I. F-3 MISAW. 6"	I-1 C.I. F-4 MISAW. 8"	I-1 C.I. F-4 MISAW. 12"	E-12 PIPE REMOVAL 15" & UNDER	E-12 PIPE REMOVAL OVER 15"	C.I. B-1	I-15 BALL GUARD	I-15 REMOVED & REBUILT DISPOSAL	I-15 STD TYPE DEEP	I-2 MISCELL. 18" Thick Dumped Rock Channel PROT.	I-8 STD NO. 8 C.B.	I-10 JUTE MATTING	I-10 SODDING OF EXIST. PAVT.	I-20 REMOVAL & DISPOSAL AS PER PLAN	
			EA.	LF	EA.	EA.	EA.	EA.	LF	LF	LF	LF	LF	LF	LF	LF	LF	CU. YD.	EA.	SQ. YD.	SQ. YD.	SQ. YD.	
1UD	520+00 - 523+64	RT.							378		10												
2UD	520+00 - 523+68	RT.							368		10												
3UD	520+00 - 522+82	LT.							282		10												
4UD	520+00 - 523+25	LT.							338		10												
5UD	523+72 - 529+76	RT.							242	376													
6UD	523+68 - 529+84	RT.							228	376													
7UD	522+82 - 529+84	LT.							316	384													
8UD	523+25 - 530+00	LT.							275	400													
9UD	529+84 - 530+00	RT.							26														
10UD	529+80 - 530+00	LT.							18														
11UD	529+80 - 530+00	RT.									35												
1S	527+84 - 529+68	Lt. & Rt.																					
2S	520+00 - 523+68	RT.																					
1D	520+00 - 521+50	RT.																					
2D	521+25 - 522+75	LT. & RT.																					
3D	523+75 - 525+25	RT. & LT.																					
4D	524+50 - 525+00	RT.																					
5D	526+00 - 526+50	LT.																					
6D	520+00 - 520+50	LT.																					
1E	520+00 - 526+18	LT. & RT.																					
2E	520+00 - 524+00	LT. & RT.																					
3E	524+25 - 526+00	LT. & RT.																					
4E	520+00 - 526+00	LT. & RT.																					
5E	524+25 - 524+75	RT.																					
6E	520+00 - 524+75	LT.																					
7G	524+15	Et. & Lt. & Rt.		212																			
1DE	520+00 - 521+85	Rt.		140																			
2DE	522+00 - 523+25	Rt.		110																			
3DE	524+30 - 525+30	Lt. & Rt.											17										
4DE	524+27 - 526+44	Lt.																					
5DE	521+90	Rt.																					
6DE	520+90	Lt.																					
1R	524+15	Lt.																					
2R	524+05 - 524+19	Rt.																					
3R	527+26 - 527+78	Rt.																					
TOTALS			1	462					2628	1554	2417	35	17	13	122	115	60	40	6	5	0.52	118.4	4	436	41.	188
									*100	*125	437.5															

41
85
82

* TOTALS TO SHEET 18

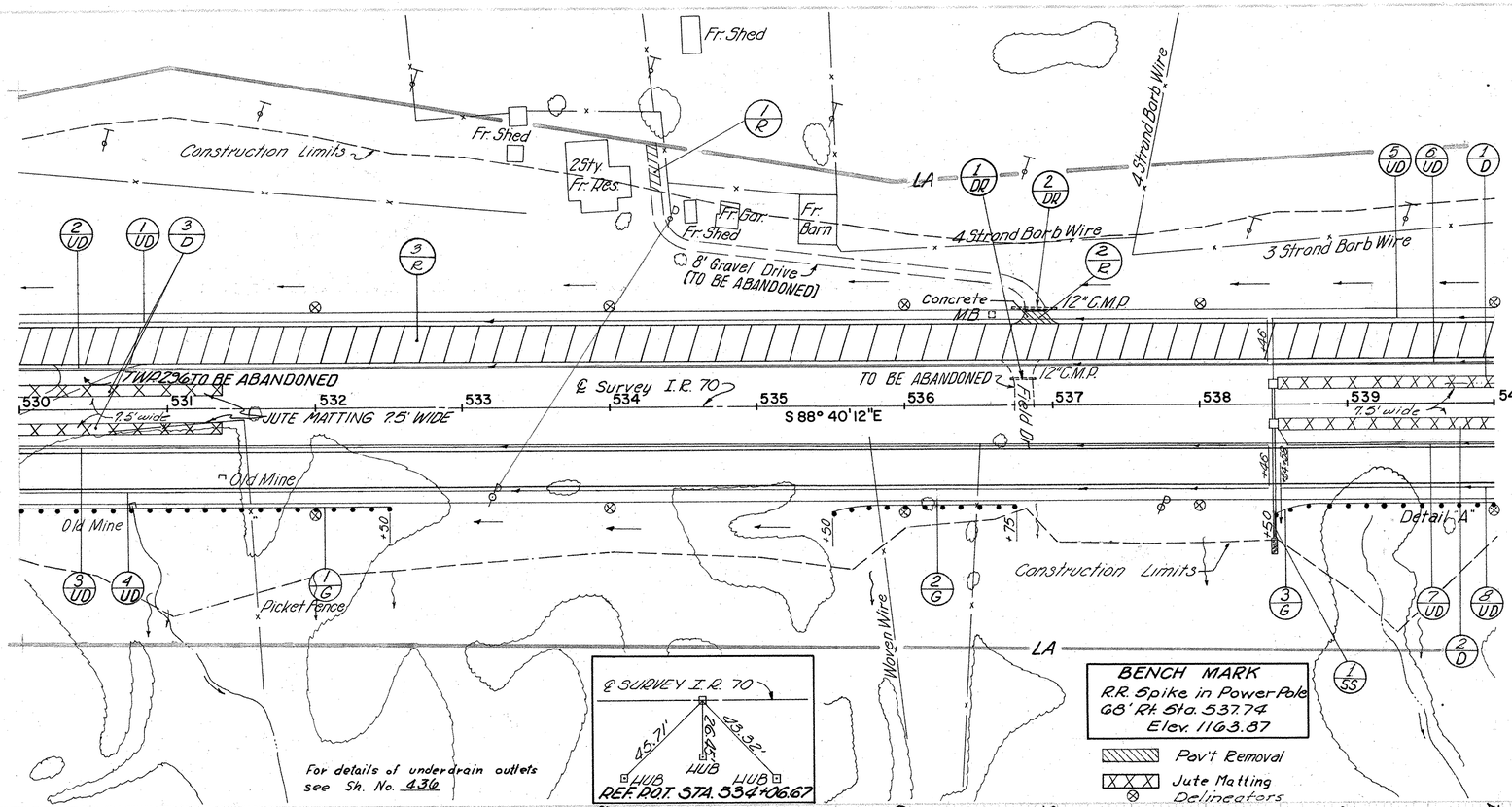
STA. 520+00 TO STA. 530+00

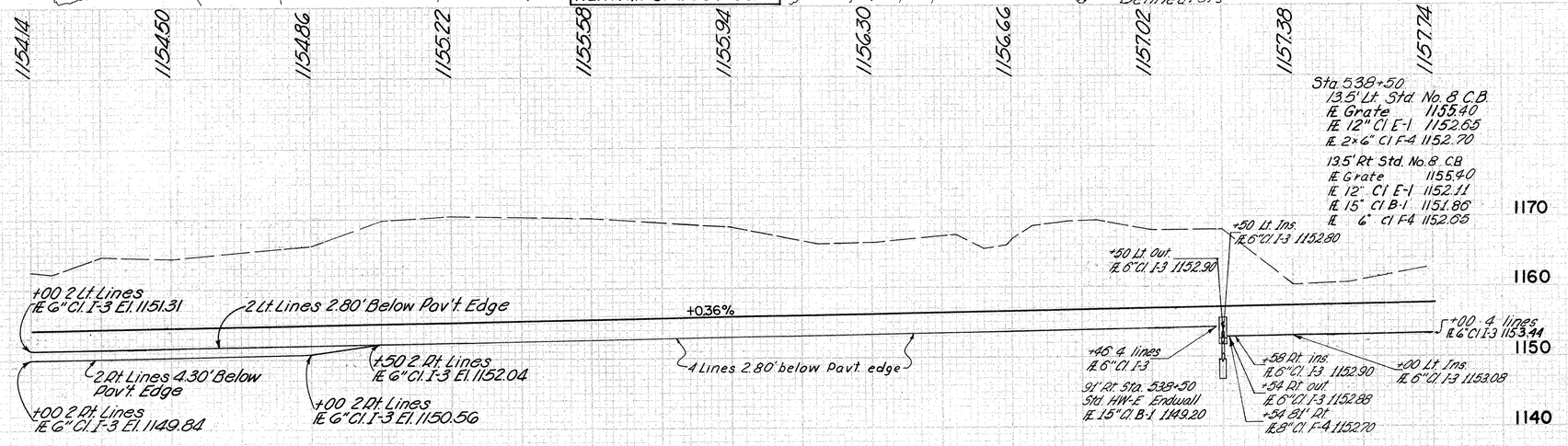
GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

36
485





ESTIMATED QUANTITIES

REF NO	STATION TO STATION	SIDE	I-1 C1 E-1 12" LF	I-1 C1 E-1 6" LF	C1 F-4 SEE PLAN 8" LF	I-5 PIPE SPECIALS 6"x6"x6"x90° C1 I-3 C1 I-3 C1 I-3 6" EA	I-5 PIPE SPECIALS 6"x6"x6"x90° C1 I-3 C1 I-3 C1 I-3 6" LF	I-5 PIPE SPECIALS 6"x6"x6"x90° C1 I-3 C1 I-3 C1 I-3 6" EA	I-5 PIPE SPECIALS 6"x6"x6"x90° C1 I-3 C1 I-3 C1 I-3 6" EA	I-5 PIPE SPECIALS 6"x6"x6"x90° C1 I-3 C1 I-3 C1 I-3 6" LF	I-10 DUMPED JUTE BOCCIE MATTING CH. DEPOT 18" THICK CU. YD	I-120 L-120 JUTE MATTING SQ. YD	I-8 STD. NO. 8 C.B. EA.	I-2 MASONRY CU. YD	I-8 E-8 REMOVAL & DISPOSAL OF EXIST. PAVT SQ. YD	I-8 E-8 REMOVAL & DISPOSAL OF EXIST. PAVT PER PAN S.Y.	C1 B-1 15" LF.	I-15 E-12 GUARD RAIL STD. TYPE DEEP LF.	I-15 E-12 PIPE REMOVED 15" & UNDER LF.	I-10 E-10 SHOULDING S.Y.
1UD	530+00 ~ 538+46	LT.					846														
2UD	530+00 ~ 538+46	LT.					846														
3UD	530+00 ~ 538+46	RT.					596														
4UD	530+00 ~ 538+46	RT.					596														
5UD	538+50 ~ 540+00	LT.					250														
6UD	538+50 ~ 540+00	LT.					250														
7UD	538+50 ~ 540+00	RT.					150														
8UD	538+54 ~ 540+00	RT.					146														
							160														
1SS	538+50	LT&R			10																
					10																
1O	538+57 ~ 540+07	LT.																			
2O	538+57 ~ 540+07	RT.																			
3O	538+87 ~ 539+87	L&R																			
1G	530+00 ~ 532+50	RT.																			
2G	535+50 ~ 536+75	RT.																			
3G	538+50 ~ 540+00	RT.																			
1UR	536+80	LT.																			
2UR	536+90	LT.																			
1R	534+40	LT.																			
2R	536+90	LT.																			
3R	538+00 ~ 540+00	LT.																			
			27	20	10	2	2	1	1	1	1112	2284	500	2	0.26	23	30	78	25	6467	4	47	*525	4

* TOTAL TO SHEET 18

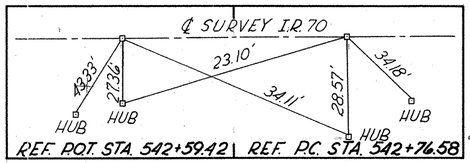
STA. 530+00 TO STA. 540+00

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

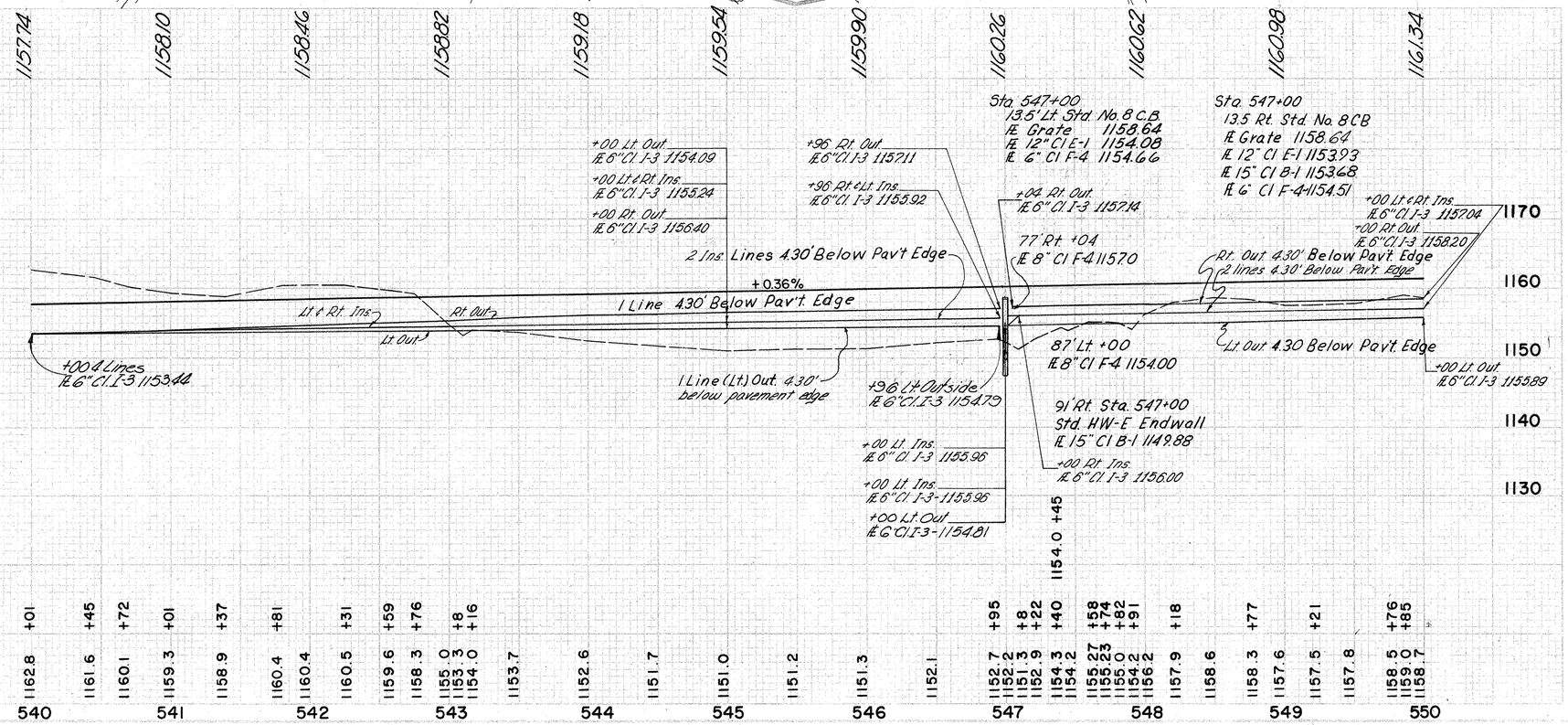
37
485



Paved Gutter Removal
Pav't Removal
Jute Matting
Delineators

BENCH MARK
B.M. #11 R.R. Spike in T 118'
Lt. 548+00 Elev. 1150.74

CURVE DATA
P.I. STA. 550+48.95
Δc = 22° 44'06" Lt.
Dc = 1° 29'29"
Rc = 3841.77'
Lc = 1524.42'
Tc = 772.37'
Ec = 76.87'



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	C1 I-3 6"	I-1 C1 F-4 8"	I-1 C1 F-4 6"	I-5 C1E3 C1F3 BEND	I-8 STD NO. 8 C.B.	I-2 MASONRY	I-10 DUMPED ROCK CHANNEL PROT.	I-120 JUTE MATTING	E-8 REMOVAL & DISPOSAL EXIST. PAV'T. AS REQ'D.	C1 E-1 12"	I-15 E-8 REMOVAL RAIL	I-15 E-8 REMOVAL GUARD	I-15 E-8 REMOVED & DISPOSAL STD. TYPE	I-15 E-8 EXISTING GUTTER	I-10 E-8 SODDING & DISPOSAL SQ. YD.	C1 E-1 12"	I-15 E-8 REMOVAL RAIL	I-15 E-8 REMOVAL GUARD	I-15 E-8 REMOVED & DISPOSAL STD. TYPE	I-15 E-8 EXISTING GUTTER	I-10 E-8 SODDING & DISPOSAL SQ. YD.	
1UD	540+00 ~ 546+96	RT.	LF. 696														SQ. YD.							
2UD	540+00 ~ 546+96	RT.	696																					
3UD	540+00 ~ 546+96	LT.	696																					
4UD	540+00 ~ 546+96	LT.	696																					
5UD	547+04 ~ 550+00	RT.	306			1																		
6UD	547+00 ~ 550+00	LT.	296			1																		
7UD	547+00 ~ 550+00	LT.	302																					
8UD	547+00 ~ 550+00	LT.	320																					
1SS	547+00	L&R		4		1	2	0.26	1.7	250														
1D	547+07 ~ 548+57	L&R							80															
2D	546+00 ~ 548+00	RT.																						
1DD	543+10 ~ 546+70	LT.									100 SQ. YD.													
1G	540+00 ~ 547+50	RT.										27	76	750				117						
2G	547+00 ~ 550+00	LT.												300				68						
3G	543+85 ~ 550+00	LT.													1.04			934						
1E	547+70	Et.														370								
2E	549+25	Et.																						
3E	547+60	LT.																						
4E	549+95	LT.																						
5E	540+00 ~ 543+80	LT.																						
			1	3	4	2	0.26	81.7	260	102		27	76	1110	*104	*1050	370	4	20	20	4008	6	1	1

STA. 540+00 TO STA. 550+00

* TOTALS TO AGREE WITH SHEET NO. 436

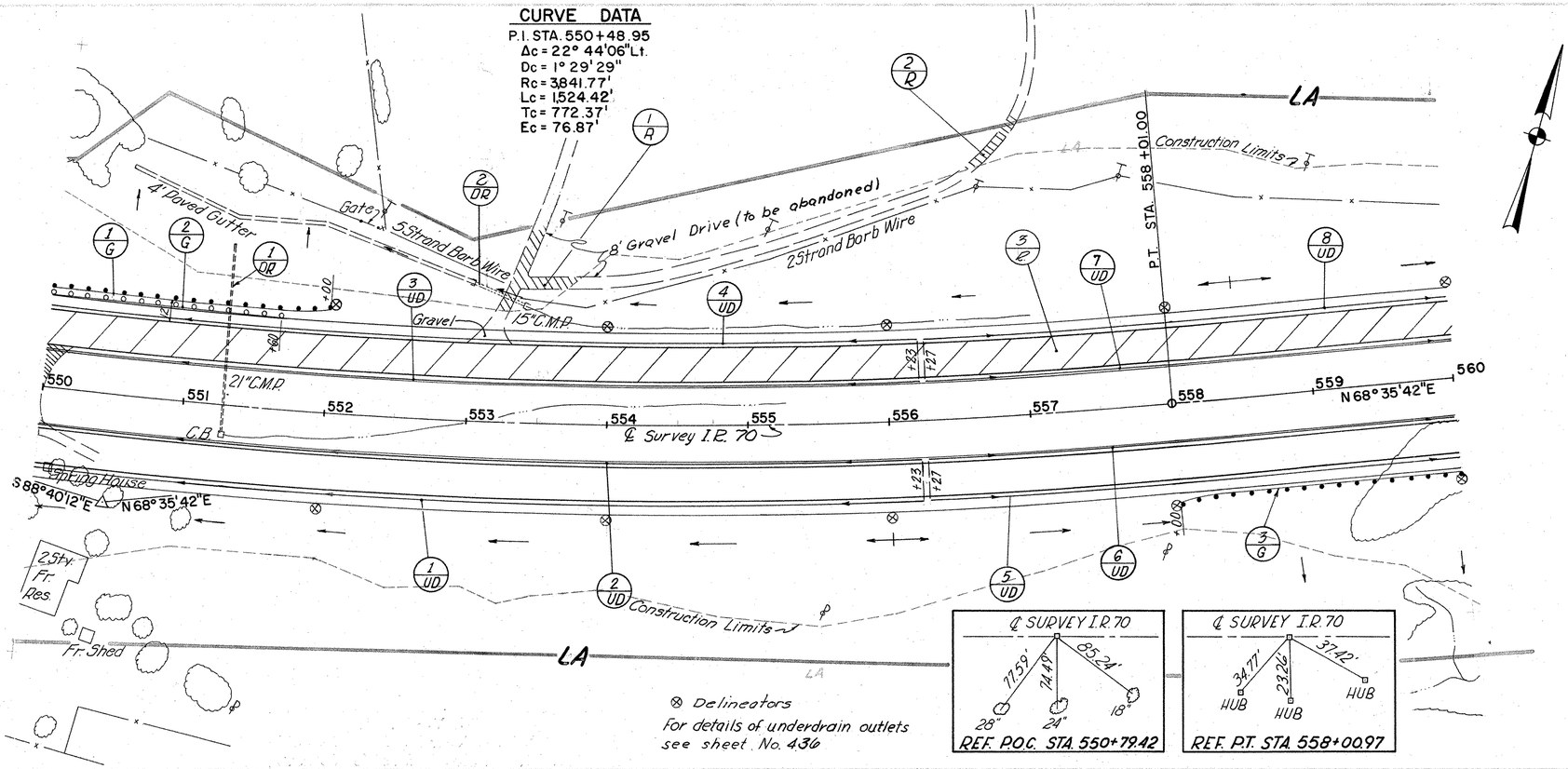
GUERNSEY COUNTY — BELMONT COUNTY
GUE—40—23.88 BEL—40—0.00

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

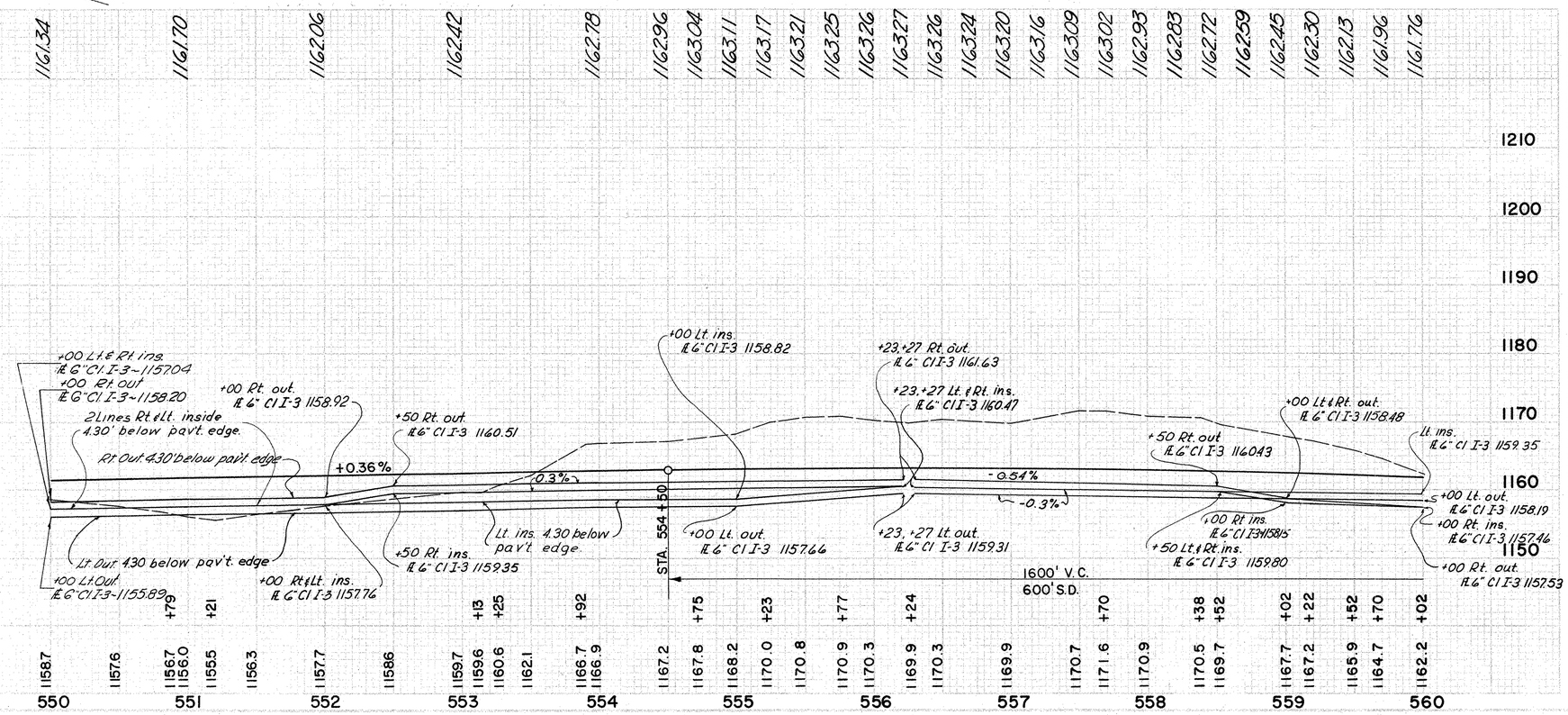
38
485

CURVE DATA

P.I. STA. 550+48.95
Δc = 22° 44'06" Lt.
Dc = 1° 29' 29"
Rc = 3841.77'
Lc = 1,524.42'
Tc = 772.37'
Ec = 76.87'

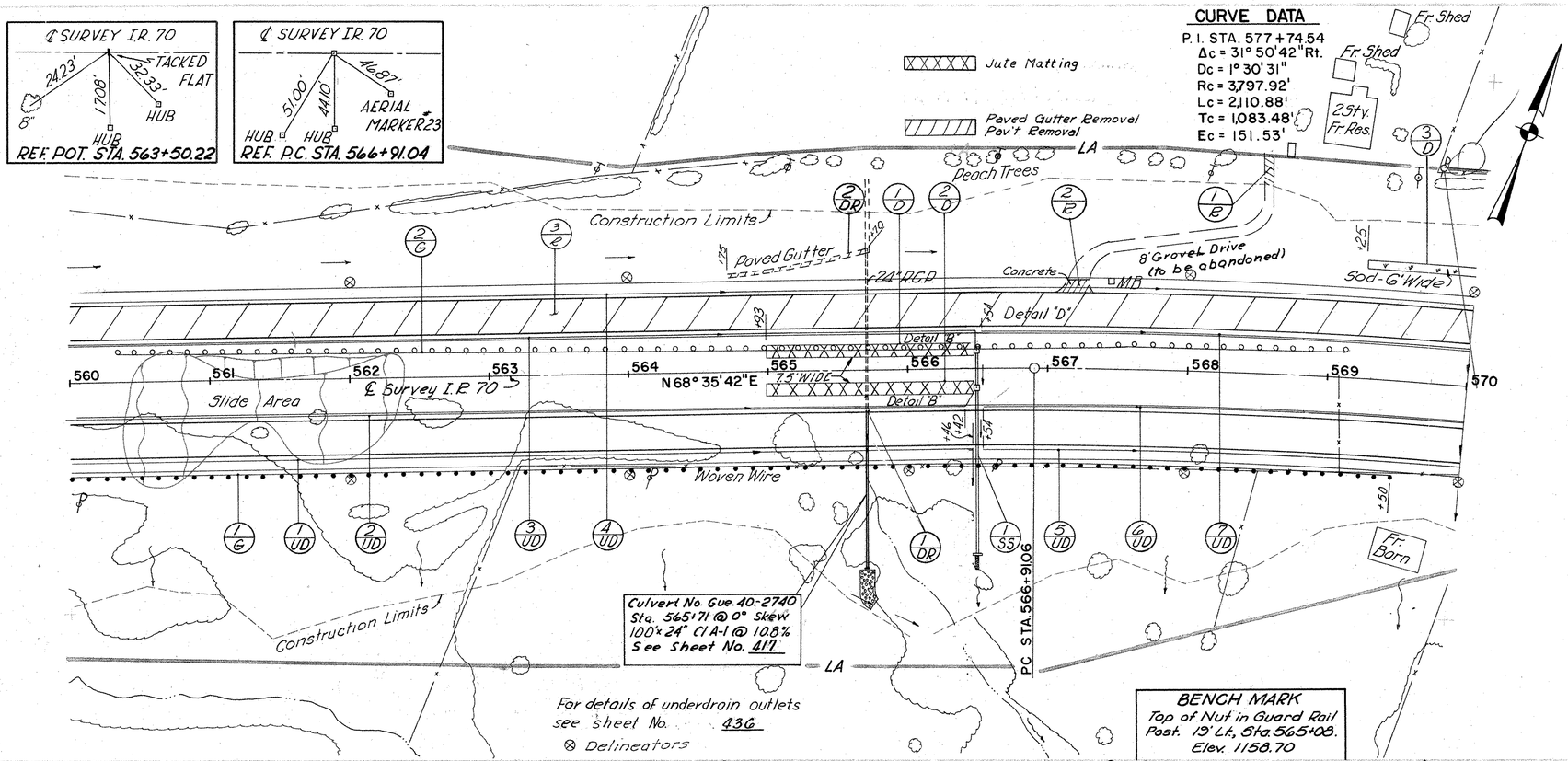


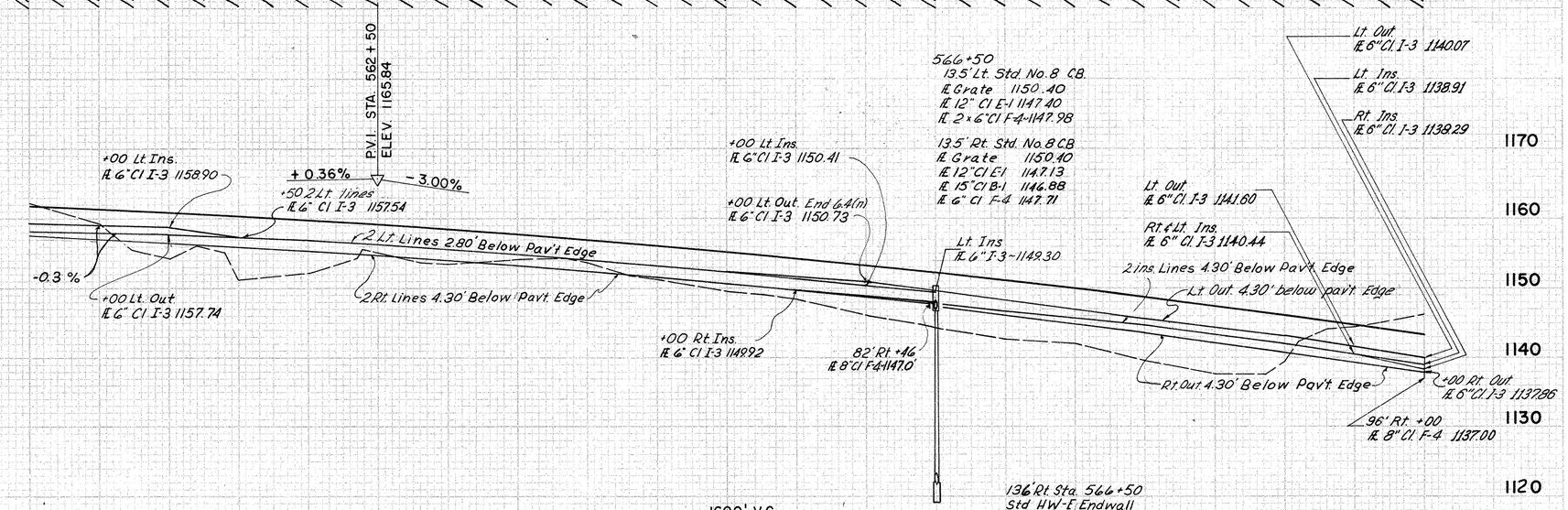
⊗ Delineators
For details of underdrain outlets see sheet No. 436



ESTIMATED QUANTITIES

| REF NO | STATION TO STATION | SIDE | | |





GUERNSEY COUNTY – BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00

REG. RD. DIVISION	STATE	PROJECT		
2	OHIO			

39
485

SEE SHEET NO.

ESTIMATED QUANTITIES

| REF NO. | STATION TO STATION | SIDE | I-10 4-120 JUTE MATTING SQ YD | I-10 DUMPED ROCK CHANNEL PROT. 18" Thick CU YD | I-8 STD NO. 8 C.B. EA. | I-2 MASONRY CU YD | I-5 SPECIALS C1 I-3 C1 I-3 6"x90°6'60" BEND BEND EA. | I-5 PIPE C1 I-3 Y=6 ALC F-4 6" BEND EA. | C1 I-3 Y=6 ALC F-4 6" LF. | C1 F-4 Y=6 ALC F-4 8" LF. | C1 F-4 Y=6 ALC F-4 12" LF. | C1 E-1 15" LF. | C1 B-1 15" EA. | F-15 GUARD RAIL STD TYPE DEEP REBUILT LF. | E-12 REMOVAL PIPE DISPOSAL OF EXIST. PAVT LF. | E-10 REMOVAL DISPOSAL OF EXIST. PAVT SQ YD. | E-8 REMOVAL, REMOVAL & DISPOSAL OF EXIST. PAVT & REMOVAL GUTTER SY. | E-8 REMOVAL, REMOVAL & DISPOSAL OF EXIST. PAVT & REMOVAL GUTTER LF. | | |

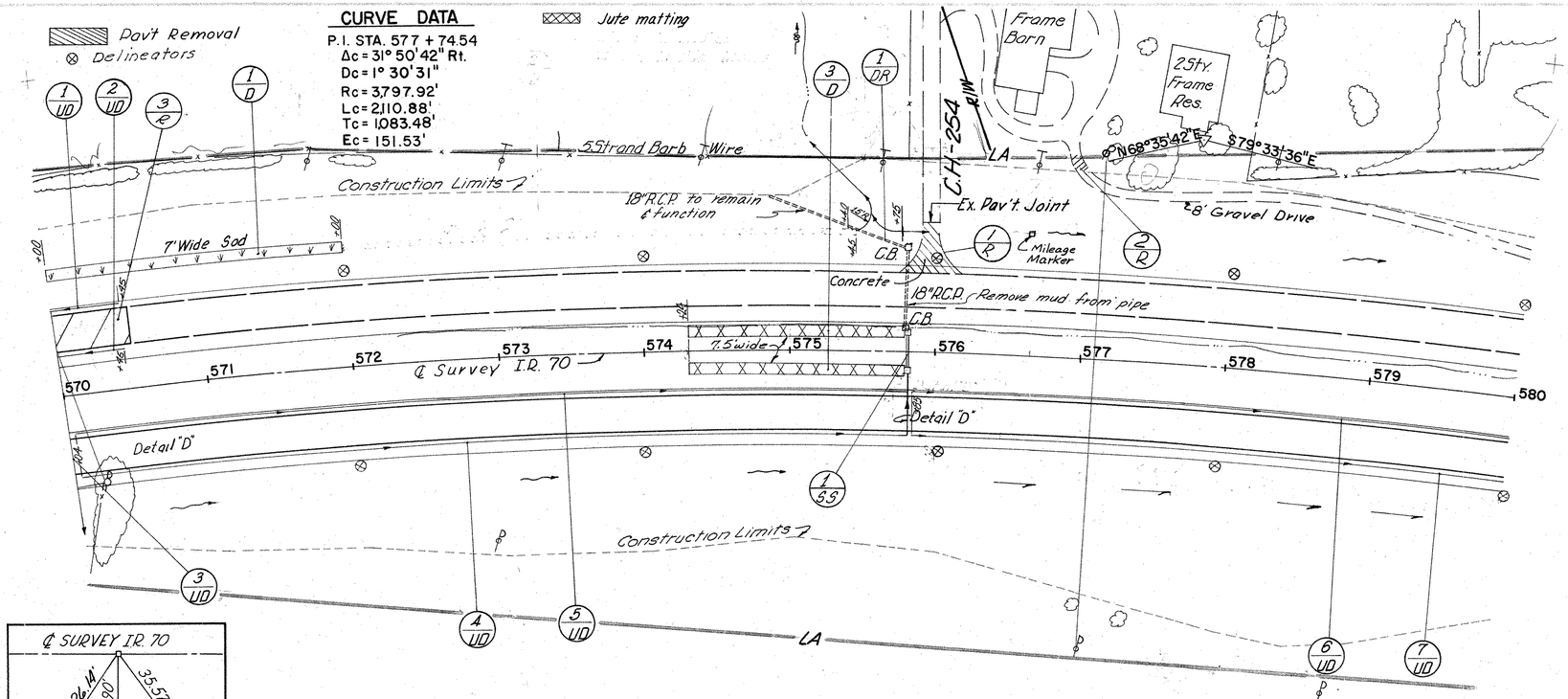
GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

FED. RD. DIV. NO.	STATE	PROJECT	
2	OHIO		

40
485

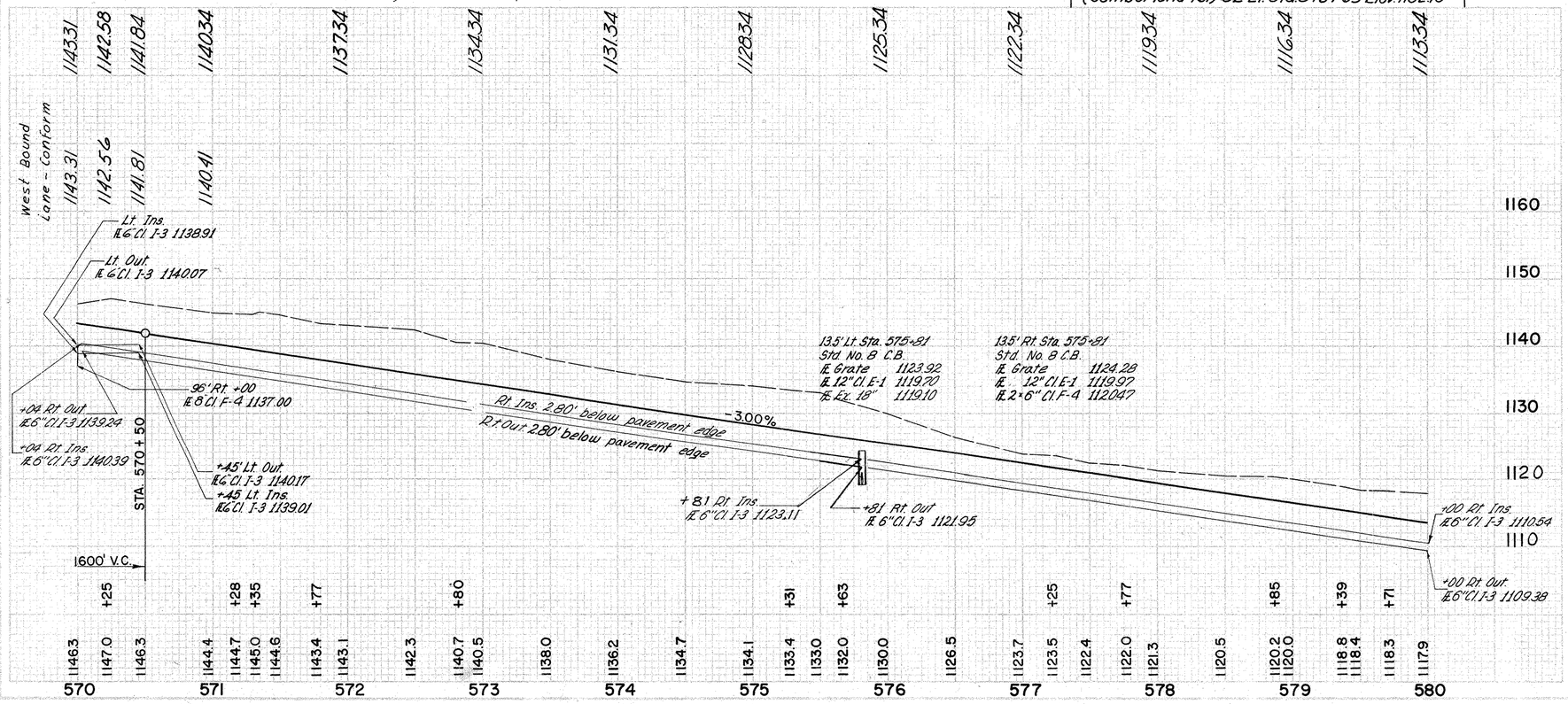
Dov't Removal
Delineators
Jute matting

CURVE DATA
P.I. STA. 577 + 74.54
Δc = 31° 50' 42" Rt.
Dc = 1° 30' 31"
Rc = 3797.92'
Lc = 2110.88'
Tc = 1083.48'
Ec = 151.53'



For details of underdrain outlets see sheet No. 430

BENCH MARK
Chiseled in Top of Stone Mileage Marker
(Cumberland 161) 82' Lt. Sta. 576+65 Elev. 1132.18



ESTIMATED QUANTITIES

| SEE SHEET NO. | ITEM | | |

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00

SHEET NO.	STATE	PROJECT	
2	OHIO		

41
485

CURVE DATA
P.I. STA. 577 + 74.54
Δc = 31° 50' 42" Rt.
Dc = 1° 30' 31"
Rc = 3,797.92'
Lc = 2,110.88'
Tc = 1,083.48'
Ec = 151.53'

Block Spring House

Jute Matting
Pav't. Removal

19 20 21 22 23 24 25

LA LA

6' Wide Dumped Rock +30
Ch. Prot.
6' Wide Dumped Rock +30
+25
+50
32 WIRE
C.H. 254 RELOCATION
+20 +30 +85
SLIDE AREA
+50
60" C.M.P.
Detail "D"
24" R.C.P. - Plug & Abandon
Asphalt Surface
+48
+50
+48
+28
C.B.
580 581 582 583 584 585 586 587 588 589 590
7.5' wide
℄ Survey I.R. 70
24" C.M.P. (Plug & Abandon)
12" C.M.P.
Detail "C"
S 79° 33' 36" E
Detail "B"
+00 +43 +00 +90 +04 +68
Woods
Detail "A"
9' Wide Sod +96
+50 +90
8' Wide Dumped Rock Ch. Prot.
Old U.S. 40
Construction Limits
Fr. Barn
R/W
P.T. STA. 588+01.94
Bridge
THE MEDIAN DITCH SHALL BE BUILT UP TO ELEV. 1091.16 AT STA. 589+75 FORMING A DIVIDE AT THIS POINT. MEDIAN DRAINAGE WILL FLOW FROM THIS DIVIDE TO CATCH BASINS AT STA. 589+25 AND STA. 590+25.

NOTE: FOR C.H. 254 RELOCATION DETAILS SEE SH. NO. 364 & 365

1/UD 2/UD 1/DE 2/DE 1/SS 3/UD 6/D 4/UD 1/R 3/G 4/G 7/D 3/UD 6/UD 8/D

℄ SURVEY I.R. 70
46.04' 39.54' 61.04'
HUB HUB AERIAL MARKER "27" HUB
REF. PT STA. 588+01.94

BENCH MARK
R.R. Spike Guard Rail Post. 19' Lt. Sta. 583+00 Elev. 1103.56

BENCH MARK
□ Chiseled on N.W. Cor. Cap Stone W. End S. Rail of Bridge 200' Rt. Sta. 589+00. Elev. = 1054.68

⊗ Delineators
For details of underdrain outlets see sheet No. 436

Culvert No. Gue 40-2717
Sta 588+74, Skew 25° R.F.
98" x 60" C.I.A-1 @ 10%
18" x 42" C.I.A-1 @ 7%
See Sheet No. 418

1117.34 1110.34 1103.34 1101.34 1099.84 1099.42 1098.79 1098.41 1097.64 1097.13 1096.54 1095.98 1095.47 1094.99 1094.54 1094.13 1093.76 1093.42 1093.12 1092.85 1092.62 1092.43 1092.27 1092.15 1092.06 1092.01 1091.99 1092.01

WEST BOUND PROFILE GRADE

E. 1050.28
Not drawn to proper elev.
600' V.C.
600' S.D.

1140 1130 1120 1110 1100 1090 1080 1070

Sta. 585+00
13.5' Lt. Std. No. 8 C.B.
IE Grate 1096.52
IE 12" C.I. E-1 1093.52

13.5' Rt. Std. No. 8 C.B.
IE Grate 1096.82
IE 12" C.I. E-1 1093.28
IE 15" C.I. B-1 1093.00
IE 6" C.I. F-4 1093.86

Sta. 589+25
13.5 Lt. Std. No. 8 C.B.
IE Grate 1090.31
IE 2-12" C.I. E-1 1087.06
IE 6" C.I. F-4 1087.50

13.5' Rt. Std. No. 8 C.B.
IE Grate 1090.31
IE 12" C.I. E-1 1087.31
IE 6" C.I. F-4 1087.50

Rt. Ins. 2.80' below pavt. edge
500' x 12" C.I. E-1 @ 3%
-3.00%
Rt. Out 2.80' below Pavt Edge
+00 Rt. Ins.
IE 6" C.I. I-3 1097.04
+50 Lt. Out
IE 6" C.I. I-3 1096.28
+50 Rt & Lt Ins.
IE 6" C.I. I-3 1095.54
+04 Rt. Ins.
IE 6" C.I. I-3 1093.89
+00 Lt. Out
IE 6" C.I. I-3 1088.17
+00 Lt & Rt Ins.
IE 6" C.I. I-3 1087.85
+50 Rt. Ins.
IE 6" C.I. I-3 1100.04
+00 Rt. Out.
IE 6" C.I. I-3 1095.88
+96 - 90° Rt.
IE 8" C.I. F-4 1092.50
+50 Rt. Out.
IE 6" C.I. I-3 110888
Lt. Out 4.30' below Pavt Edge
Lt. & Rt. Ins 4.30' below Pavt Edge
Rt. Out 4.30' below pavt. edge
+0.44%
-0.5%
-0.3%
79' Rt. +50
IE 8" C.I. F-4 1086.0
+50 Rt. Out
IE 6" C.I. F-4 1087.31
+00 & Lines
IE 6" C.I. F-3 1087.90
95' Rt. Sta. 585+00
Std. HW-E Endwall
IE 15" C.I. B-1 - 1090.60
+04 Rt. Out
IE 6" C.I. I-3 1092.83
P.V.I. STA. 587+50
ELEV. 1090.84
+50 Rt. Out
IE 6" C.I. I-3 1087.61
+25 Rt & Lt Ins.
IE 6" C.I. I-3 1087.66
L78' Lt. +25
IE 8" C.I. F-4 1086.0
+75 Lt. Out
IE 6" C.I. I-3 1087.80
100' x 12" C.I. E-1 @ 0.3%
IE 1037.94
Not drawn to proper elev.

+70 +82 +40 +75 +28 +57 +77 +92 +95 +08 +47 +32

1117.9 1117.5 1117.1 1117.3 1116.0 1114.3 1113.3 1109.3 1107.1 1104.2 1105.0 1104.7 1101.2 1100.3 1095.5 1091.7 1088.6 1086.6 1085.9 1087.6 1086.7 1085.5 1083.0 1086.6 1087.0 1086.2 1086.2 1085.6 1085.0 1084.6 1084.0 1084.6

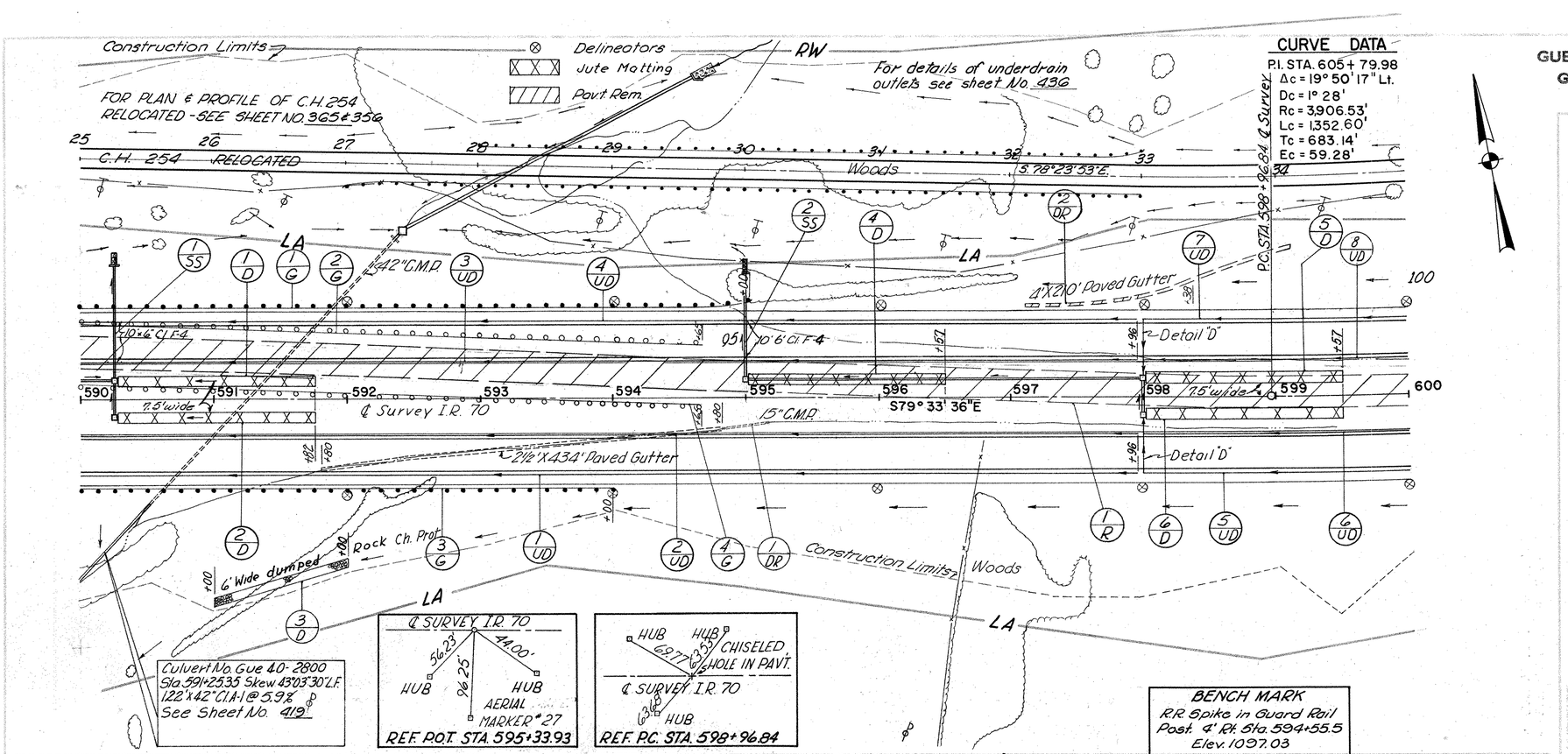
580 581 582 583 584 585 586 587 588 589 590

ESTIMATED QUANTITIES

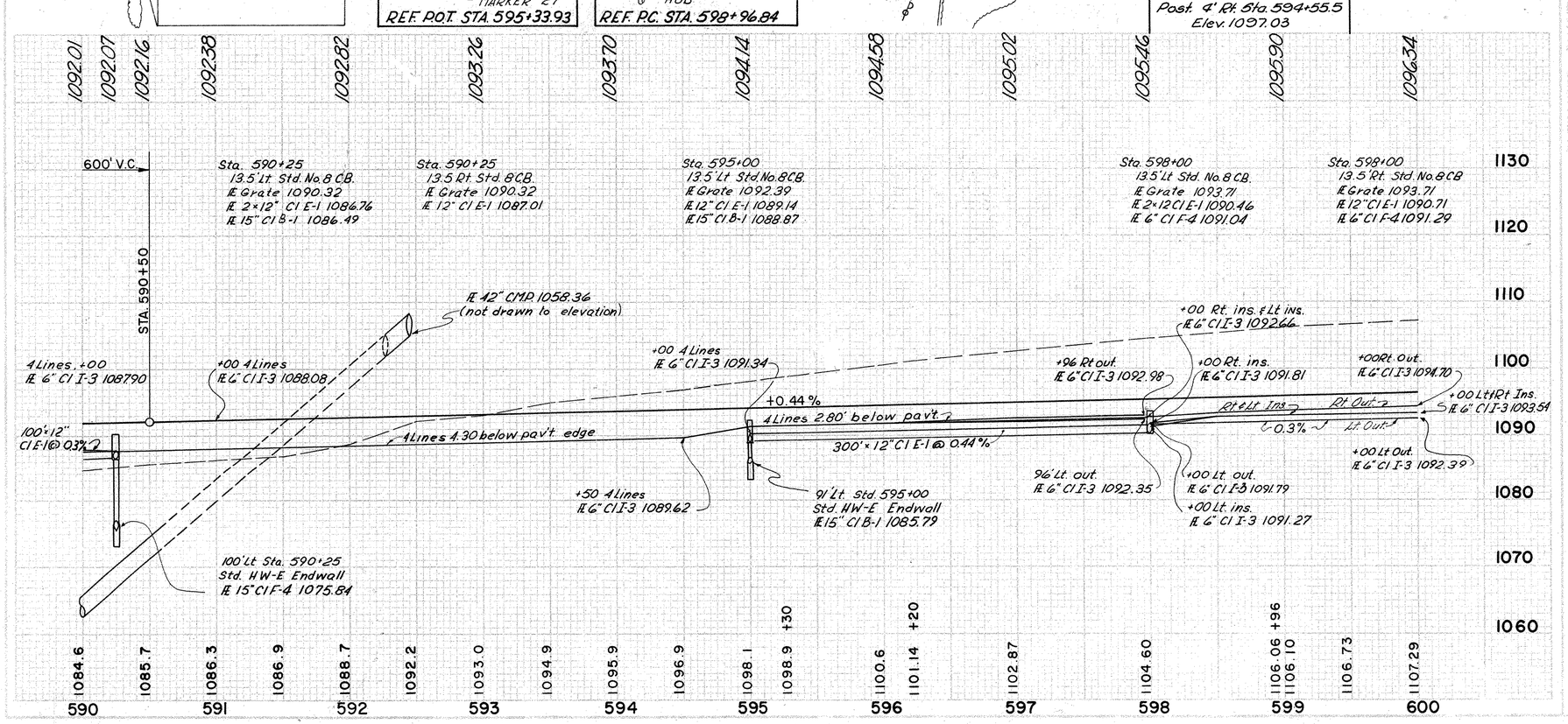
| ITEM | DESCRIPTION | UNIT | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

FED. ROAD DIVISION 2 | STATE OHIO | PROJECT | 42 / 485



CURVE DATA
P.I. STA. 605+79.98
Δc = 19° 50' 17" Lt.
Dc = 1° 28'
Rc = 3,906.53'
Lc = 1,352.60'
Tc = 683.14'
Ec = 59.28'



ESTIMATED QUANTITIES

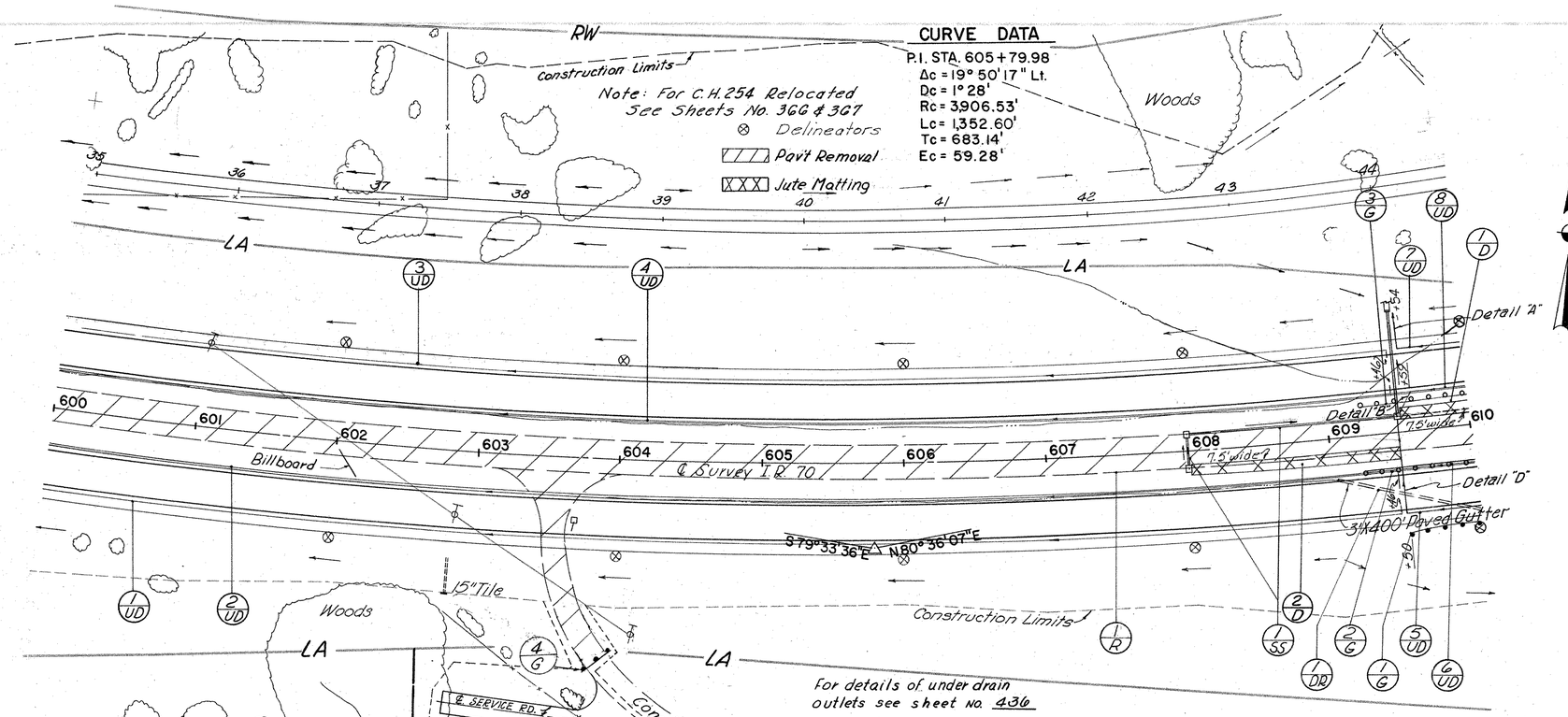
REF NO.	STATION TO STATION	SIDE	I-1 C.I.E-1 12"	I-1 C.I.F-4 15"	I-1 C.I.F-4 6"	I-1 C.I.B-1 15"	I-1 C.I.B-1 6"	E-8 REMOVAL C.I. E-1	E-8 REMOVAL EXIST. GUTTER	E-8 REMOVAL PAVT. SQ.YD	T-15 G. GUARD RAIL STD TYPE DEEP	T-15 REMOVED/DISPOSAL EXIST. REBUILT	L-10 SODDING SQ.YD.	E-12 PIPE REMOVAL 15" & UNDER	REF NO.
			L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	SQ.YD	L.F.	L.F.	SQ.YD.	L.F.	
1UD	590+00 ~ 597+96	RT			500										
2UD	590+00 ~ 597+96	LT			296										
3UD	590+00 ~ 597+96	LT			500										
4UD	590+00 ~ 597+96	RT			296										
5UD	598+00 ~ 600+00	RT			490										
6UD	598+00 ~ 600+00	LT			286										
7UD	598+00 ~ 600+00	LT			203										
8UD	598+00 ~ 600+00	LT			200										
1SS	590+25	LT&RT		32				4					4		
2SS	595+00 ~ 598+00	LT&RT													
1D	590+32 ~ 591+82	LT			20		30								
2D	590+32 ~ 591+82	RT			20										
3D	591+00 ~ 592+00	RT			10										
4D	592+00 ~ 594+57	LT					30								
5D	598+07 ~ 599+57	LT													
6D	598+07 ~ 599+57	RT			10										
1G	590+00 ~ 595+00	LT				57					500				
2G	590+00 ~ 594+65	LT				62					462.5				
3G	590+00 ~ 594+00	RT				78					400				
4G	590+00 ~ 594+65	RT				327					462.5				
1R	590+00 ~ 600+00	LT&RT							2667						
1DR	591+80 ~ 595+15	RT								300				35	
2DR	597+10 ~ 599+15	LT								210					
			32	1980.1920	6325	379.60	135.60	510.60	2667	510	*925	2667	8	*900	35
					4	2	0.52	5		38.4					

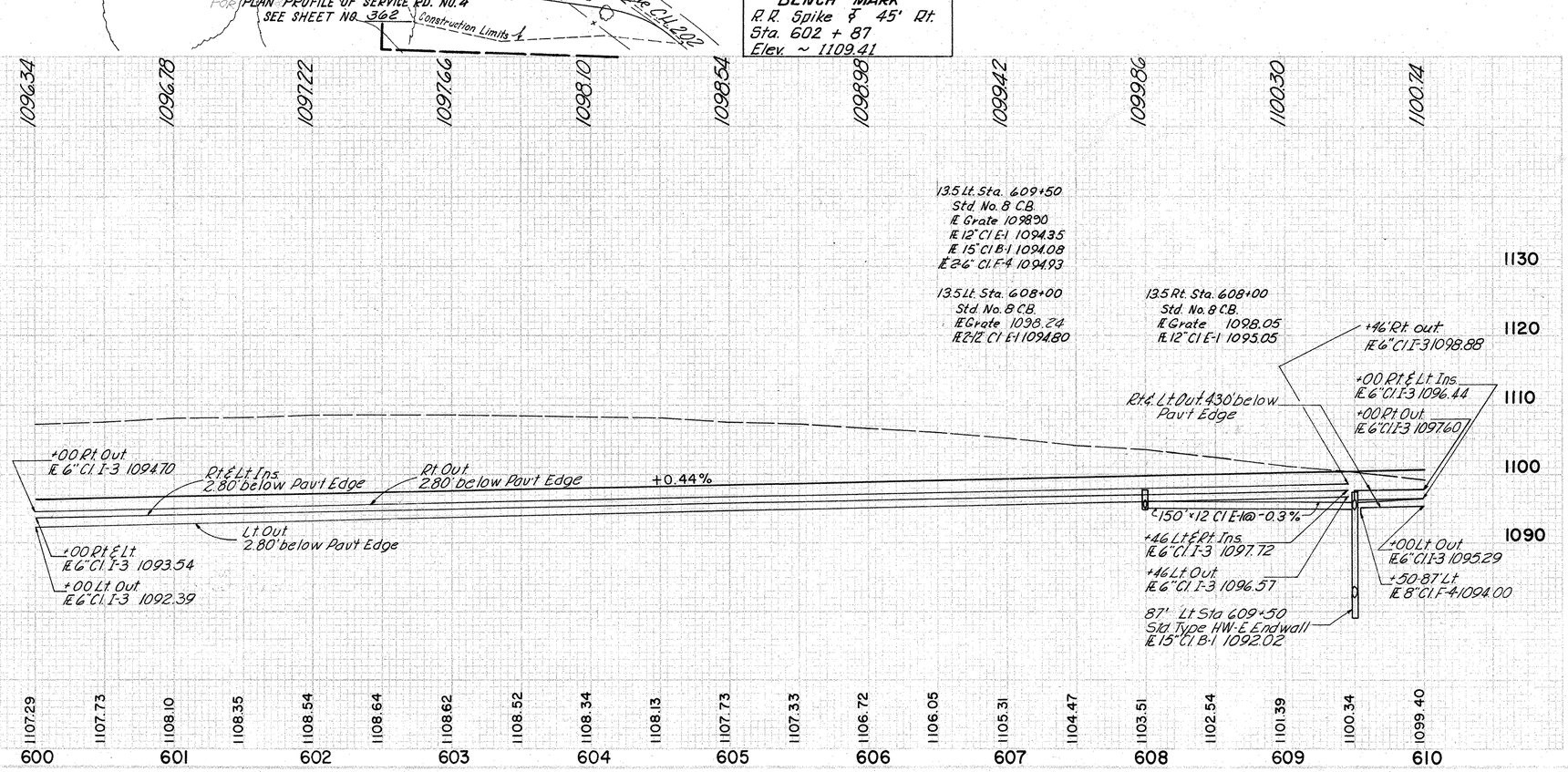
* TOTALS TO SHEET 18

STA. 590+00 TO STA. 600+00

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

FED. RD. DIVISION	STATE	PROJECT		43
2	OHIO			485





ESTIMATED QUANTITIES

REF NO	STATION TO STATION	SIDE	I-1 C1 B-1 15"	I-1 C1 E-1 12"	I-1 C1 F-4 6"	I-1 C1 F-4 8"	I-2 L-120 JUTE MATTING SQ YD	I-5 PIPE SPECIALS STD NO. 8 C.B. EA.	I-5 C1 F-3 6" MITERED C1 B-1 C1 E-3 6"-90° EA.	I-5 C1 F-3 6" TEE BEND C1 E-3 6"-90° EA.	I-5 C1 F-3 6" BEND C1 E-3 6"-60° EA.	I-5 C1 F-3 6" BEND C1 E-3 6"-90° EA.	I-8 REMOVAL DISPOSAL EXIST. PAVT. SQ YD.	I-8 REMOVAL DISPOSAL EXIST. GUTTER L.F.	I-15 GUARD RAIL REMOVED & REBUILT STD. TYPE DEEP L.F.	L-10 TOPSOIL SQ YDS
1UD	600+00 ~ 609+46	RT														
2UD	600+00 ~ 609+46	RT														
3UD	600+00 ~ 609+46	LT														
4UD	600+00 ~ 609+46	LT														
5UD	609+50 ~ 610+00	RT														
6UD	609+50 ~ 610+00	RT														
7UD	609+54 ~ 610+00	LT														
8UD	609+50 ~ 610+00	LT														
1G	609+50 ~ 610+00	RT														
2G	609+25 ~ 610+00	RT														
3G	609+25 ~ 610+00	LT														
4G	@ 631+50	RT														
1D	609+57 ~ 610+00	LT														
2D	608+07 ~ 609+57	RT														
1SS	608+00 ~ 609+50	RT														
1R	600+00 ~ 610+00	LFR														
1DR	609+00 ~ 610+00	RT														

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

44
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL. – 40 – 0.00

FOR C.H. 254 RELOC.
SEE SHT. NO. 367 & 368

CURVE DATA
℄ SURVEY
P.I. STA. 605+79.98
Δc = 19°50'17" LT.
Dc = 1°28'00"
Rc = 3,906.53'
Lc = 1,352.60'
Tc = 683.14'
Ec = 59.28'

CULVERT NO. GUE 40-28.40
Sta. 611+92 SKEW 20° R.F.
90'-60" CL. A-1 @ 5 %
SEE SHEET NO. 420

P.K. Nail in Guard Rail Posts
76.32'
56.18'
Chisled Hole in Pavt
55.79'
℄ SURVEY
P.K. Nail in Guard Rail Post
REF. P.T. STA. 612+49.44

JUTE MATTING
Pavt. Removal
Delineators

R/W

Construction Limits

FOR PAY ITEMS
SEE SHT. NO. 54

Guard Rail Posts
36.48'
74'
℄ SURVEY
83.6'
Hub
REF. P.C. STA. 622+43.90

CURVE DATA
℄ SURVEY
P.I. STA. 632+40.55
Δc = 29°24'29" RT.
Dc = 1°30'31"
Rc = 3,797.92'
Lc = 1,949.35'
Tc = 996.65'
Ec = 128.60'

P.T. STA. 612+49.44

3' Paved Gutter

L.A.

DETAIL "A"

Curve C-5

115

7.5' WIDE

Stone Mileage Marker

Def. "B"

Def. "A"

7.5' WIDE

N. 80°36'07" E.

10'-6" CI. F-4

2 Cisterns (See Note)

Plug & Abandon

Block Foundation

Spring

4" Tile

3'X400' Paved Gutter

40"

Stone Foundation (Drilled Well)

6' Gravel Road

P.C. STA. 622+43.90

3' Paved Gutter

6' WIDE DUMPED ROCK Ch. Prot.

Dug Well 28' Deep (See Note)

Construction Limits

For Spring Drain Detail See Sheet No. 357

Well

Frame Shed

Oil Pump & Well

Fr. Shed

Oil Storage Tank 12" C.M.P.

Corn Crib

Silo

Frame Barn

Dug Well 18" Tile 12' Deep

Fr. Shed

30"

Hay Stack

1½'X4' C. Box Culvert

4'X6' Stone Arch Culvert

Fr. Shed

S. 87°35'01" E.

C.H. 202

Gravel Road C.H. 202

16' to 18'

12' to 14'

Aggregate Surface Typical Section Existing C.H. 202

28"

14"

36"

2 Sty. Fr. Res.

15" Tile W/Headwalls

Gate

Gravel Drive

Fr. Barn

12" Tile

14" Tile

Wooded

Dug Well 146' Rt. of Sta. 611+50

Cistern 70' Rt. of Sta. 618+50

Dirt Work

Blacktop Surface

12" Tile

Hedge

15" Tile

5' WIDE SHOULDER CURVE ST-2

Stone Surface

Match Line Sta. 25+10

N. 56°15'14" E.

2 Sty. Fr. Res.

Dirt Drive

Fr. Sheds

Fr. Shed

Fr. Barn

Fr. Shed

P.C. STA. 23+68.24

Culvert No. Gue 40-28.78
Sta. 624+68 Skew 43° L.F.
116'-42" Cl A-1 @ 6.5 %
See Sheet No. 421

NOTE:
The dug well 146' Rt of Sta. 611+50 and the 2 cisterns 70' Rt. of Sta. 618+50 to be filled under Item E-108. Payment for this Item to be included in the unit price bid for Item E-1.

BENCH MARK
U.S.C. & G.S. Std. Disk Stamped "K-64-1934" 359' Rt. Sta. 611+62. Elev. ~ 1034.62

BENCH MARK
□ Chiseled Top Stone Mileage Marker (Cumberland 160) 68' Lt. Sta. 622+18. Elev. ~ 1124.03

Notched GR. Post
41.82'
33.64'
Notched ℄ Pole
24'
P.C.
Service Rd.
Notched M.B. Post
REF. P.C. Sta. 23+85.84 - C.H. 202

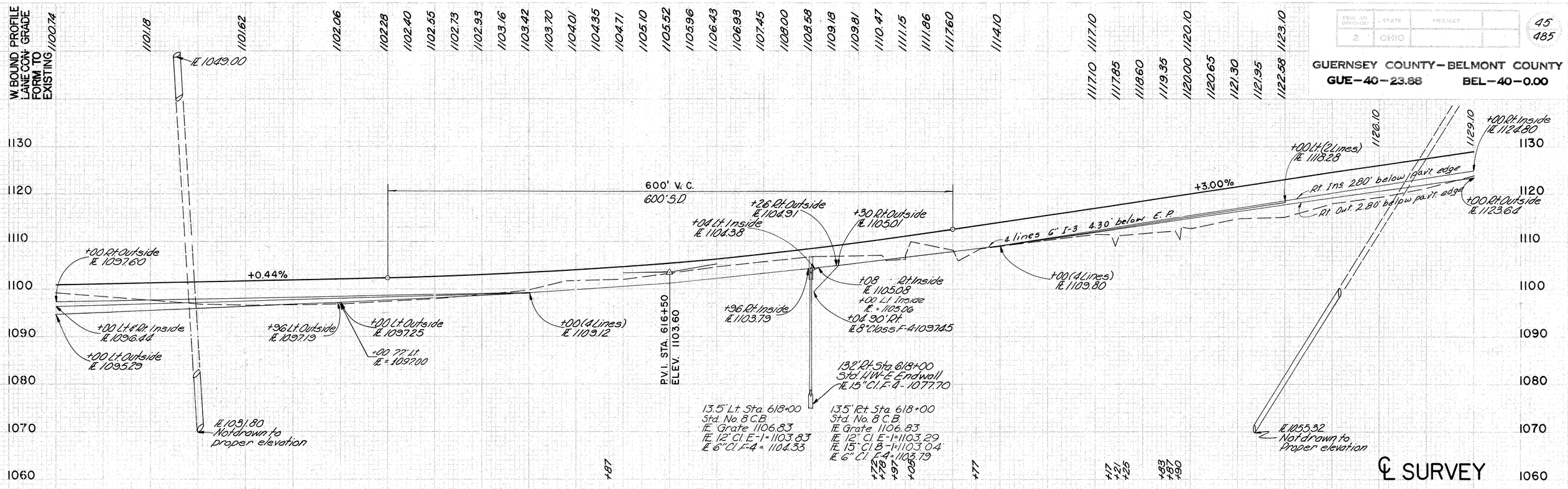
For typical section of C.H. 202 See sheet No. 8

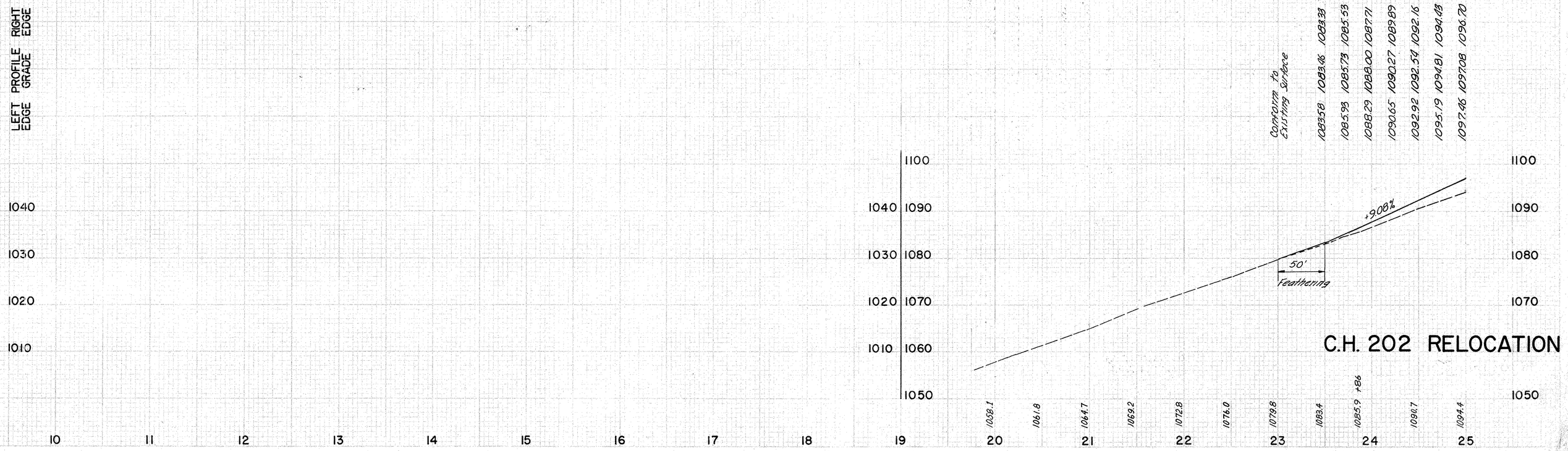
STA. 610+00 TO STA. 625+00

FED. ROAD DIVISION	STATE	PROJECT		45 485
2	OHIO			

GUERNSEY COUNTY – BELMONT COUNTY

GUE-40-23.88 BEL-40-0.00





PROFILES: ℄ SURVEY, STA. 610+00 TO STA. 625+00 AND C.H. 202 RELOC. STA. 23+00 TO STA. 25+00

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

46/485

Guard Rail Posts
311'
196'
℄ SURVEY I.R.70
200'
Aerial Marker #31
REF. P.O.C. STA. 626+92.11

Jute Matting
Pav't. Removal
Delineators

FOR PAY ITEMS SEE SHT. NO. 54 & 55

12" Asphaltic Surface Road
3' Paved Gutter
8' WIDE SOD
Construction Limits
℄ Survey Sta. 627+83.50
℄ Crossover
7.5' Wide
DETAIL "B"
Existing Three Wire Rope Guard Rail
30" RCP
3' Paved Gutter
10'-6" CL. F-4 DETAIL A
9' WIDE SOD
15" Tile
7' WIDE DUMPED ROCK Ch. Prot.
Spring
5' Wide
L.A.7
6' WIDE SOD
CURVE S-2
5' WIDE SOD
Match Line Sta. 25+70
CURVE S-3
C.H. 202 RELOCATION L.A.7
Wooded Area
P.O.C. STA. 371+25.00 ℄ CO. HWY. 202
P.O.T. STA. 12+32.13 CEMETERY RD.
CEMETERY ROAD END WORK STA. 12+24.13
N. 14°11'21" E. 90° TO TANGENT
S.68°50'39"E
CURVE S-4
L.A.7
EXISTING CEMETERY ROAD (TO BE ABANDONED)
GRAVEL SURFACE
Fr. Shed
CEMETERY RD. RELOCATION
FIELD DRIVE
N. 73°52'01" E.
EXISTING CEMETERY ROAD
GROUP OF HEADSTONES
CEMETERY
CEMETERY RD. BEGIN WORK STA. 6+25
Fairview Corporation Line
R/W
Asphalt Pav't.
Fr. Shed
Fr. Gar.
30" R.C.P.
Fr. Gar.
30" C.M.P.
15 Sty. Fr. & Brick Res.
Asphalt Pav't.
Frame School (Abandoned)
24" RCP TO REMAIN AND FUNCTION
Concrete Pav't.
10' Wide
1 Sty. Fr. Res.
11' Wide
END TAPER 638+52.42
TO REMAIN & FUNCTION
4" Paved Gutter
15" Tile
Field Dr.
N.80°36'07" E.
S.69°59'24"E.
N.80°26'30" E.
S.79°58'23"E.
N.56°15'14"E.

Culvert
Sta. 27+00 0° Skew
55' 21" Cl A-1 @ 1.82%
See Sht. No. 426
P.C.C. STA. 27+88.37

NOTE: For U-Turn Median Opening at Sta. 627+83.50 ~ See Sheet No. 434
Note: For Spring Drain Detail See Sheet No. 438

CURVE DATA
CURVE S-2
P.I. = STA. 25+89.85 = 206.23' RT.
℄ SURVEY STA. 625+12.73'
Δc = 24°11'16" RT.
Dc = 06°00'
Rc = 954.93'
Tc = 204.61'
Lc = 403.13'
Ec = 21.68'

BENCH MARK
R.R. Spike in Telephone Pole, 18.5' Rt. Sta. 627+69
Elev. 1135.16

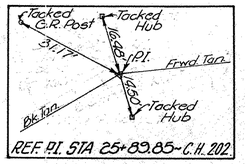
CURVE DATA
℄ SURVEY
P.I. = STA. 632+40.55
Δc = 29°24'29" RT.
Dc = 01°30'31"
Rc = 3797.92'
Lc = 1949.35'
Tc = 996.65'
Ec = 128.60'

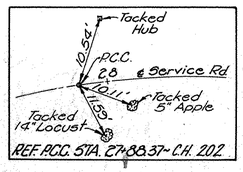
CURVE DATA
CURVE S-3
P.I. = STA. 31+18.01 = 128.07' RT.
℄ SURVEY STA. 630+66.07
Δc = 19°35'07" RT.
Dc = 03°00'
Rc = 1909.86'
Tc = 329.64'
Lc = 652.84'
Ec = 28.24'

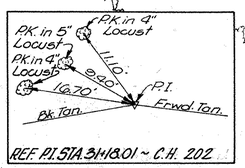
BENCH MARK
X Chiseled on Conc. @ Catch Basin (U.E. 1156/1) 193' Lt. Sta. 635+15. Elev.~1156.07

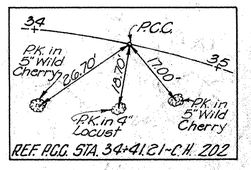
CURVE DATA
CURVE S-4
P.I. = STA. 38+21.80 = 146.21' RT.
℄ SURVEY STA. 638+03.83
Δc = 11°07'44" RT.
Dc = 01°28'
Rc = 3906.53'
Tc = 380.59'
Lc = 758.79'
Ec = 18.50'

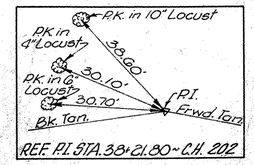
FOR PLAN & PROFILE OF CEMETERY RD. RELOCATION ~ SEE SHEET NUMBER 337





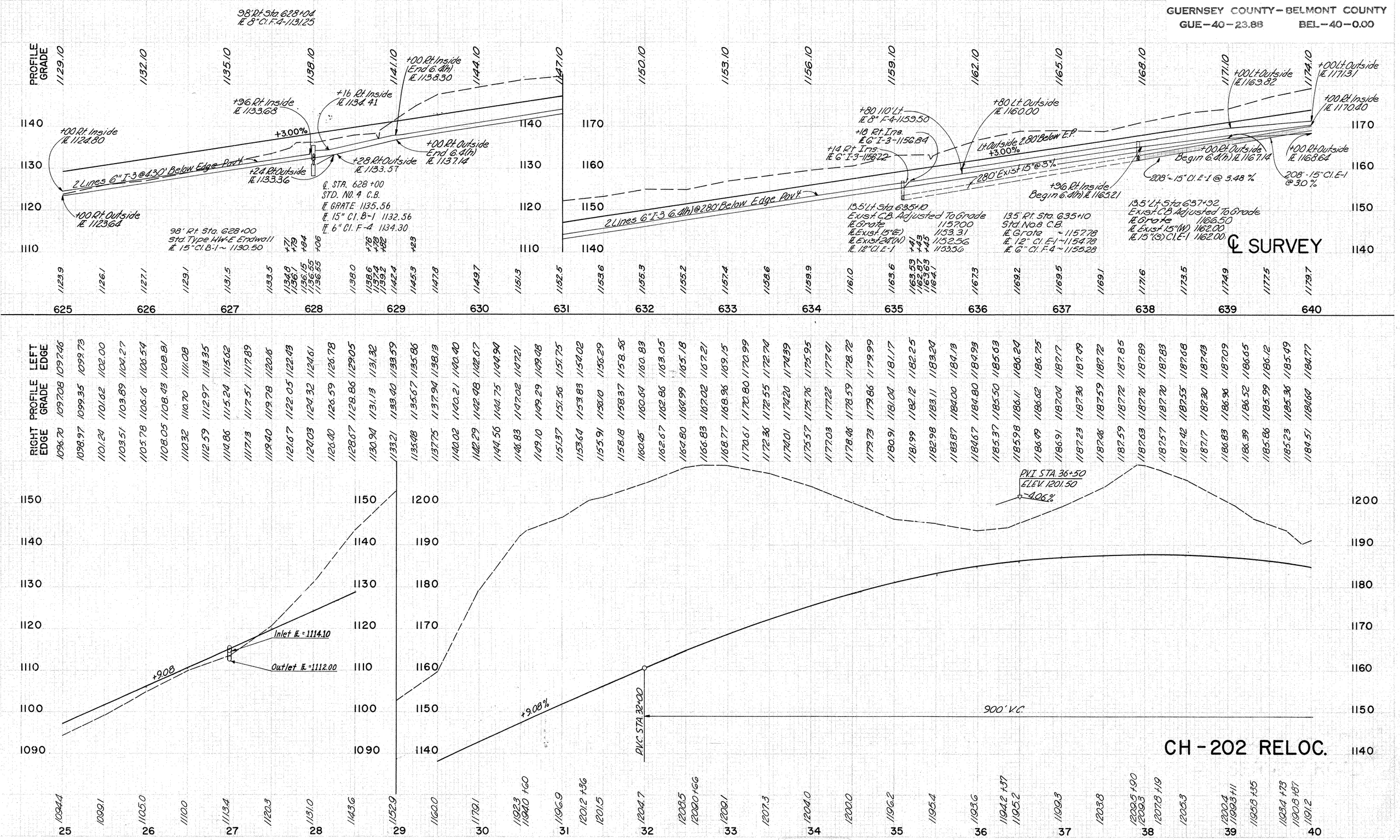






STA. 625+00 TO STA. 640+00

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



PROFILES: ℄ SURVEY, STA. 625+00 TO STA. 640+00 AND CH-202 RELOC. STA. 25+00 TO STA. 40+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

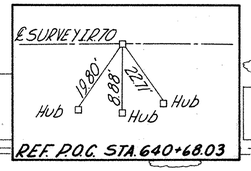
48
405

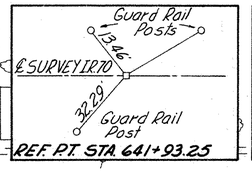
GUERNSEY COUNTY – BELMONT COUNTY

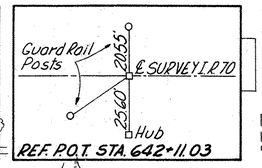
GUE–40–23.88 BEL–40–0.00

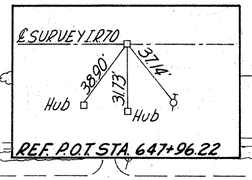
CURVE DATA

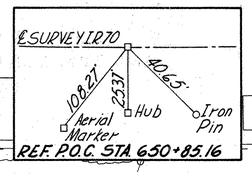
P.I. STA. 632+40.55
Δc = 29°24'29" RT.
Dc = 1°30'31"
Rc = 3,797.92'
Lc = 1,949.35'
Tc = 996.65'
Ec = 128.60'

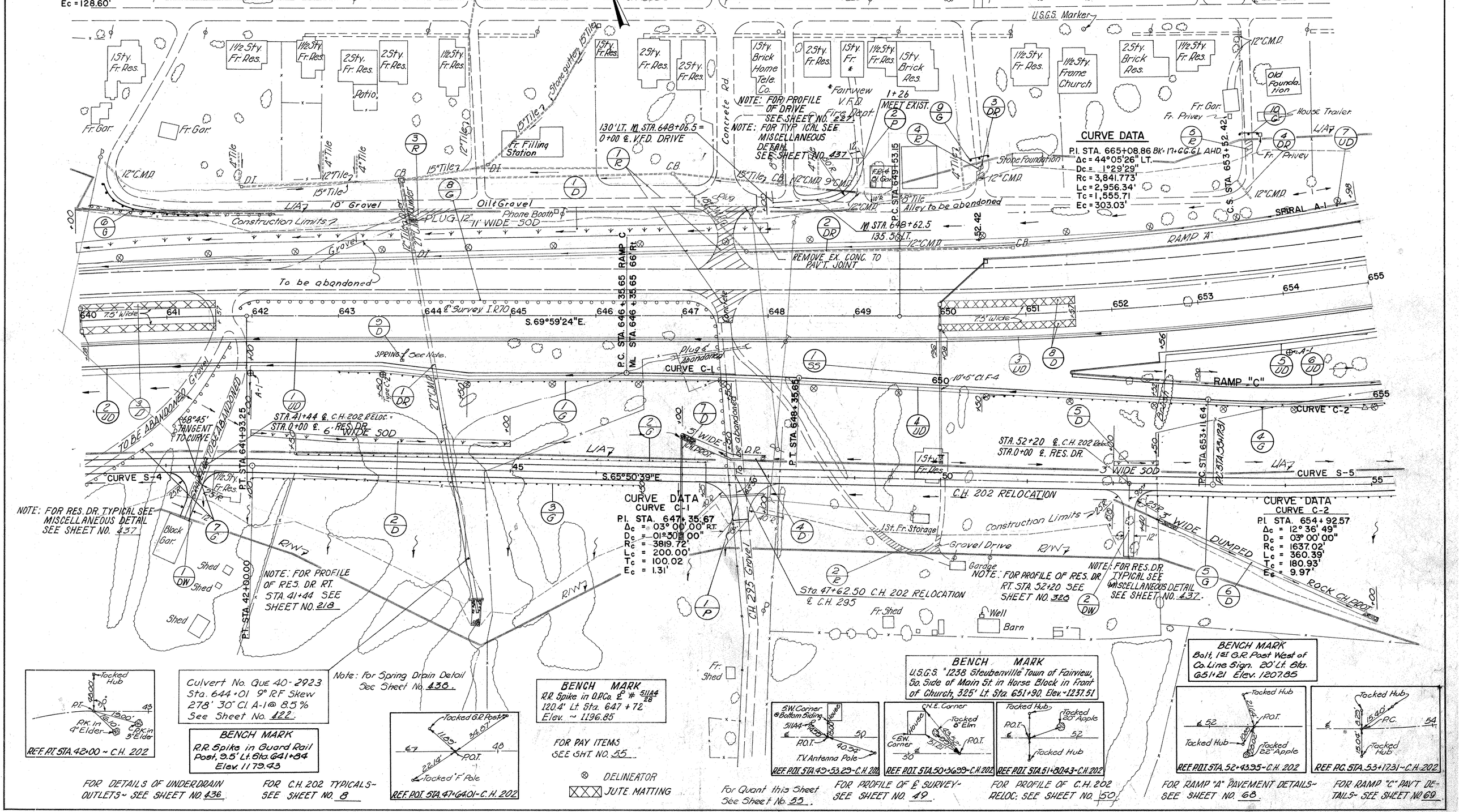












Culvert No. GUE 40-2923
Sta. 644+01 9° RF Skew
278' 30" Cl. A-1 @ 8.5%
See Sheet No. 422.

Note: For Spring Drain Detail See Sheet No. 436.

BENCH MARK
R.R. Spikes in Guard Rail Post, 9.5' Lt. Sta. 641+84
Elev. 1179.43

BENCH MARK
R.R. Spike in O.P.Co. ℄ # 511A4 28
120.4' Lt. Sta. 647+72
Elev. ~ 1196.85

BENCH MARK
U.S.G.S. "1238 Steubenville" Town of Fairview, So. Side of Main St. in Horse Block in Front of Church, 325' Lt. Sta. 651+90. Elev. ~1231.51

BENCH MARK
Bolt, 1st G.R. Post West of Co. Line Sign. 20' Lt. Sta. 651+21 Elev. 1207.85

REF. P.T. STA. 42+00 ~ C.H. 202

REF. P.O.T. STA. 47+64.01 ~ C.H. 202

REF. P.O.T. STA. 45+53.29 ~ C.H. 202

REF. P.O.T. STA. 50+36.99 ~ C.H. 202

REF. P.O.T. STA. 51+80.43 ~ C.H. 202

REF. P.O.T. STA. 52+43.95 ~ C.H. 202

REF. P.C. STA. 53+17.31 ~ C.H. 202

FOR PAY ITEMS SEE SHT. NO. 55

⊗ DELINEATOR

JUTE MATTING

For Details of Underdrain Outlets ~ See Sheet No. 436.

For C.H. 202 Typicals ~ See Sheet No. 8

For Quant this Sheet See Sheet No. 55.

For Profile of ℄ Survey ~ See Sheet No. 49.

For Profile of C.H. 202 Reloc: See Sheet No. 50.

For Ramp "A" Pavement Details ~ See Sheet No. 68.

For Ramp "C" Pav't Details ~ See Sheet No. 69.

STA. 640+00 TO STA. 655+00

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

49
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00

PROFILE GRADE

1174.10 1177.10 1180.00 1181.60 1182.34 1183.07 1183.77 1184.47 1185.14 1185.80 1186.44 1187.07 1187.67 1188.27 1188.84 1189.40 1189.94 1190.47 1190.98 1191.47 1191.94 1192.40 1192.84 1193.27 1193.68 1194.07 1194.44 1194.80 1195.50 1196.90 1198.30 1199.70 1201.10 1202.50 1203.90

Note: All 6" I-3 U.D. are 4.30' Below Pavt Edge from 640+00 to 655+00

P.V.I. STA. 645+50
ELEV. 1190.60

+00 Lt. Outside
E. 1171.31

+3.00%

+00 Rt. Outside
E. 1175.04

Rt. Inside

Rt. Outside

Rt. Outside

Rt. Inside

Lt. Outside

Lt. Outside
E. 1181.72

+35.65 Rt. Outside
E. 1186.74

+96 Rt. Inside
E. = 1192.54

+08 Rt. Inside
E. = 1192.66

6" C.I. I-3 Rt. Inside 4.30' Below Edge Pav't

6" C.I. I-3 Lt. Outside 4.30' Below Edge Pav't

+1.40%

+56 Rt. Outside
E. 1197.37

+00 Rt. Outside
E. 1200.76

+00 Rt. Inside
E. 1199.60

+52.42 Lt. Outside
E. 1191.58
Cont. from Sheet No. 65.

74' - 15" B-1 @ 1.8%

+96 Rt. Outside
E. 1174.82

+00 Rt. Outside
E. 1168.64

110' Rt. Sta. 642+00
E. 8" C.I. F-4 1173.00

+00 Rt. Inside
E. 1170.40

+04 Rt. Ins.
E. 6" I-3 = 1170.52

+08 Rt. Ins.
E. 6" I-3 = 1170.64

13.5' Rt. Sta. 640+00
Std. No. 8 C.B.
R. Grate = 1172.48
E. 12" E-1 = 1169.48
E. 6" F-4 = 1169.98
E. 15" C.I. E-1 = 1169.23

13.5' Lt. Sta. 640+00
Std. No. 8 C.B.
R. Grate = 1172.48
E. 15" E-1 = 1169.04
E. 12" E-1 = 1169.21

13.5' Rt. Sta. 650+00
Std. No. 8 C.B.
R. Grate = 1195.14
E. 15" C.I. E-1 = 1191.35
E. 15" C.I. B-1 = 1191.35
E. 6" C.I. F-4 = 1192.10

63' Lt. Sta. 650+53
Std. No. 6 C.B.
R. Grate = 1196.23
E. 15" B-1 = 1193.23

13.5' Lt. 650+00
Std. No. 8 C.B.
R. Grate = 1195.14
E. 15" E-1 = 1191.89
E. 15" C.I. B-1 = 1191.89

164' Rt. Sta. 650+00
Std. H.W.E. hdw1
R. 15" F-4 = 1173.45

600' V.C.
600' S.D.

1210 1200 1190 1180 1170 1160 1150 1140 1130 1120 1110 1100 1090 1080 1070 1060

1179.7 1180.6 1181.9 1180.9 +29 1177.2 +40 1177.7 +55 1177.8 +78 1178.2 +82 1178.3 +99 1178.3 +11 1178.1 +23 1177.0 +41 1173.5 +99 1173.5 +28 1174.6 +99 1176.2 +99 1177.0 +99 1179.5 +99 1180.2 +49 1186.0 +99 1189.6 +21 1190.53 +42 1190.64 +57 1190.2 +87 1192.0 +99 1198.7 +99 1200.8 +49 1202.0 1203.0 1203.1 1202.4 +18 1200.1 1199.0 1196.1 +43 1195.5 1191.5 1191.7 1192.6 1194.4 1195.5

640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655

℄ SURVEY

PROFILE: ℄ SURVEY, STA. 640+00 TO STA. 655+00

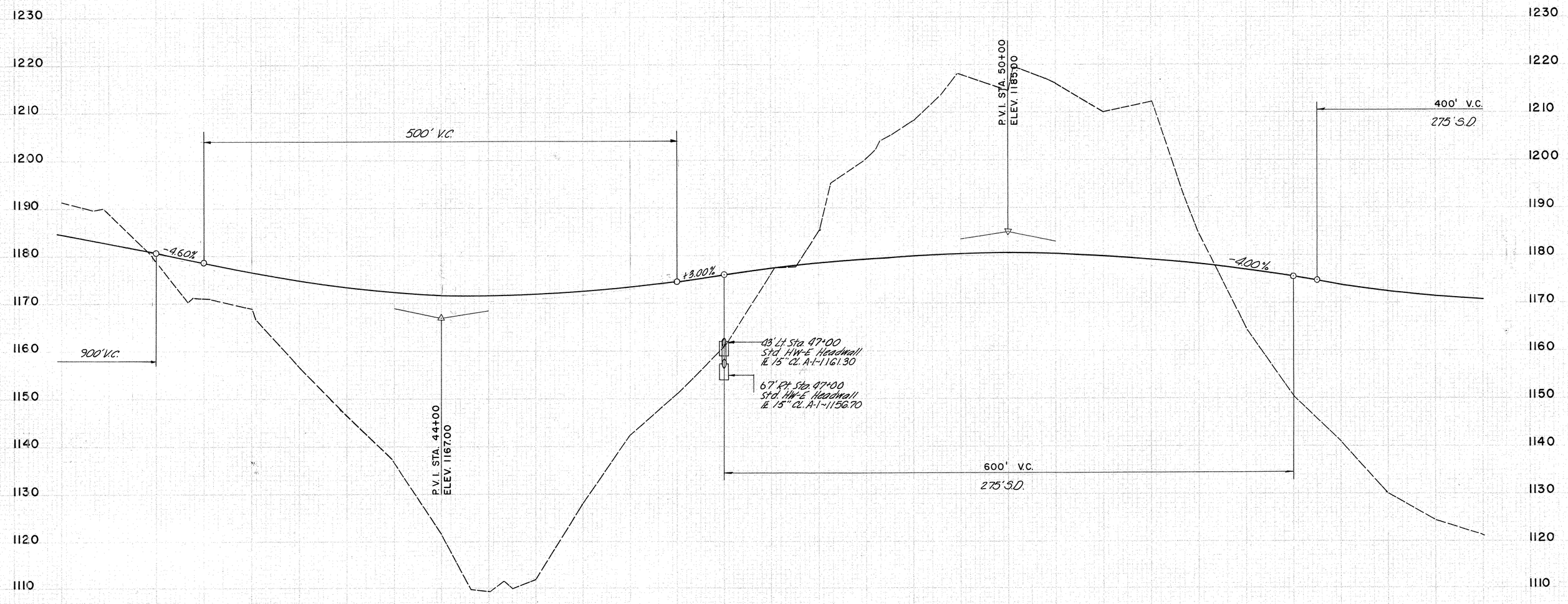
LTG. NO. CARROLL	STATE	PROJECT	
2	OHIO		

50
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

RIGHT EDGE	PROFILE GRADE	LEFT EDGE
1184.51	1184.64	1184.77
1183.69	1183.82	1183.95
1182.78	1182.91	1183.04
1181.77	1181.90	1182.03
1180.67	1180.80	1180.93
1179.52	1179.65	1179.78
1178.37	1178.50	1178.63
1177.27	1177.40	1177.53
1176.26	1176.39	1176.52
1175.35	1175.48	1175.55
1174.59	1174.66	1174.71
1173.81	1173.94	1173.87
1173.18	1173.31	1173.18
1172.65	1172.78	1172.65
1172.21	1172.34	1172.21
1171.87	1172.00	1171.87
1171.62	1171.75	1171.62
1171.47	1171.60	1171.47
1171.41	1171.54	1171.41
1171.45	1171.58	1171.45
1171.58	1171.71	1171.58
1171.81	1171.94	1171.81
1172.13	1172.26	1172.13
1172.55	1172.68	1172.55
1173.06	1173.19	1173.06

RIGHT EDGE	PROFILE GRADE	LEFT EDGE
1175.87	1176.00	1175.87
1176.59	1176.72	1176.59
1177.24	1177.37	1177.24
1177.83	1177.96	1177.83
1178.35	1178.48	1178.35
1178.81	1178.94	1178.81
1179.21	1179.34	1179.21
1179.54	1179.67	1179.54
1179.81	1179.94	1179.81
1180.01	1180.14	1180.01
1180.15	1180.28	1180.15
1180.22	1180.35	1180.22
1180.24	1180.37	1180.24
1180.17	1180.30	1180.17
1180.06	1180.19	1180.06
1179.88	1180.01	1179.88
1179.64	1179.77	1179.64
1179.52	1179.45	1179.32
1178.95	1179.08	1178.95
1178.51	1178.64	1178.51
1178.01	1178.14	1178.01
1177.43	1177.57	1177.43
1176.81	1176.94	1176.87
1176.12	1176.25	1176.25
1175.36	1175.49	1175.55
1174.36	1174.69	1174.82
1173.77	1173.90	1174.03
1172.98	1173.11	1173.24
1172.26	1172.39	1172.52
1171.66	1171.79	1171.92
1171.21	1171.34	1171.47
1170.89	1171.02	1171.15
1170.72	1170.85	1170.98



| | | |

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

51
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

| | | |

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

52
485

GUERNSEY COUNTY — BELMONT COUNTY

GUE — 40 — 23.88 BEL — 40 — 0.00

FOR DETAILS OF UNDERDRAIN OUTLETS~ SEE SHEET NO. 436
FOR DETAILS OF DELINEATORS SEE SHEET NO. 440

FOR PAVEMENT DETAILS OF CONNECTION OF CO. HWY. 114 (NORTH), CO. HWY. 40 A, & RAMPS "A" & "B"~ SEE SHEET NO. 67

FOR PROFILE OF CO. HWY. 114 (NORTH)~SEE SHEET NO. 51

FOR CO. HWY. 114 (NORTH) TYPICALS~ SEE SHEET NO. 7.

FOR RAMP TYPICALS~ SEE SHEET NO. 7

FOR PROFILE OF RAMP "A"~ SEE SHEET NO. 64.

FOR PAVEMENT DETAILS OF RAMP "A"~ SEE SHEET NO. 67 & 68.

FOR PAY ITEMS SEE SHT. NO. 55 & 56.

FOR PROFILE OF ℄ SURVEY~ SEE SHEET NO. 53.

FOR PROFILE OF RAMP "C"~ SEE SHEET NO. 64.

FOR PAVEMENT DETAILS OF RAMP "C"~ SEE SHEET NO. 69 & 71.

FOR PROFILE OF C.H. 202 RELOC. SEE SHEET NO. 51.

FOR PAVEMENT DETAILS OF CONNECTION OF CO. HWY. 114 (NORTH), C.H. 202 RELOC. & RAMPS "C" & "D"~ SEE SHEET NO. 71.

FOR TYPICAL SECTIONS FOR C.H. 202 RELOC.~ SEE SHEET NO. 8.

FOR PROFILE OF RAMP "B"~ SEE SHEET NO. 65.

FOR RAMP "B" PAVEMENT DETAILS~ SEE SHEET NO. 67 & 69.

FOR PROFILE OF RAMP "D"~ SEE SHEET NO. 66.

FOR RAMP "D" PAVEMENT DETAILS~ SEE SHEET NO. 70 & 71.

FOR BRIDGE SITE PLANS~ SEE SHEET NO. 448

FOR CO. HWY. 114 RELOCATION PLAN & PROFILE~ SEE SHEET NO. 340.

FOR GRADING PLANS SEE SHEETS 62 & 63.

CURVE DATA
SPIRAL A-1

θ_a = 4° 27' 46"
D_1 = 1° 32' 14"
D_2 = 6° 00' 00"
R_1 = 3727.00'
R_2 = 954.93'
L_s = 200.00'
T_1 = 119.89'
T_2 = 80.39'
F_a = 1.2971'

CURVE DATA
CURVE 114

P.I. STA. 8+09.85
Δc = 25°40'00" RT.
Dc = 10°00'
Rc = 572.96'
Tc = 130.52'
Lc = 256.67'
Ec = 14.68'

CURVE DATA
℄ SURVEY

P.I. STA. 665+08.86 Bk= STA. 17+66.61 Ahd.
Δc = 44°05'26" LT.
Dc = 1°29'29"
Rc = 3,841.77'
Lc = 2,956.34'
Tc = 1,555.71'
Ec = 303.03'

CURVE DATA
CURVE B

P.I. STA. 24+10.38
Δc = 26° 05' 22" LT.
Dc = 2° 30' 00"
Rc = 2291.83'
Lc = 1043.59'
Tc = 531.00'
Ec = 60.71'

CURVE DATA
CURVE D

P.I. STA. 19+85.70
Δc = 12° 42' 54" LT.
Dc = 3° 00' 00"
Rc = 1909.86'
Lc = 423.83'
Tc = 212.79'
Ec = 11.82'

For Co. HWY. 114 Relocation Typical Section See Sheet No. 8

Guard Rail Posts
℄ SURVEY I.R. TO
19.16
27.05
0.83
Hub
REF. P.O.C. STA. 10+84.78

BENCH MARK
Spike in ϕ 289' Lt.
Sta. 12 + 20
Elev. ~ 1197.45

Note: For C.H. 40A, Resurface Exist. Pvmt With: 1½" T-35 Surface Course, 1½" B-35 Leveling Course, T-30 Bituminous Tack Coat Applied at 0.1 gal. per sq. yd.

P.O.C. Sta. 10+00.00 C.H. 40A = P.O.T. STA. 61+62.00 C.H. 114 (N)

P.O.C. STA. 7+76.51 C.H. 114 (NORTH)
P.O.T. STA. 60+33.86 RAMP A

DENOTES 25' FEATHERING

DENOTES SAME TYPE PVM'T. CONSTR. AS USED ON C.H. 202 & CH.114 RELOCATION. SEE SHEET NO 67 & 71.

P.O.T. STA. 13+49.34 RAMP B
P.O.C. STA. 7+83.00 C.H. 114(NORTH)

P.O.C. STA. 13+25.00 SURVEY ℄
P.O.T. STA. 10+00.00 C.H. 114 (NORTH)

P.O.T. STA. 661+08.38 RAMP C
P.O.T. STA. 11+70.00 C.H. 114 (NORTH)

P.O.T. STA. 12+80.32 RAMP D
P.O.T. STA. 11+70.00 C.H. 114 (NORTH)

P.O.T. STA. 12+97.91 C.H. 114 (N) = P.C.C. STA. 61+41.51 C.H. 202 RELOC. BK = P.C.C. STA. 61+41.51 C.H. 114 RELOC. AHEAD

REF. P.I. STA. 57+30.95~C.H. 202.
Tacked 5" Locust, P.I., Tacked 4" Walnut, Tacked 5" Walnut, Bk. Tan, Frwd. Tan, 2.20, 14.47, 7.55

REF. P.C. STA. 6+79.33~C.H. 114 (NORTH).
Tacked 20" Pine, P.C., 33.96, 48.79, 44.15', Tacked, Tacked 24" Pine

REF. P.I. STA. 8+09.95~C.H. 114 (NORTH).
Tacked 8" Stump, Tacked 7" Plum, 8.05, 9.63, P.I., 10.65, Tacked 12" Stump

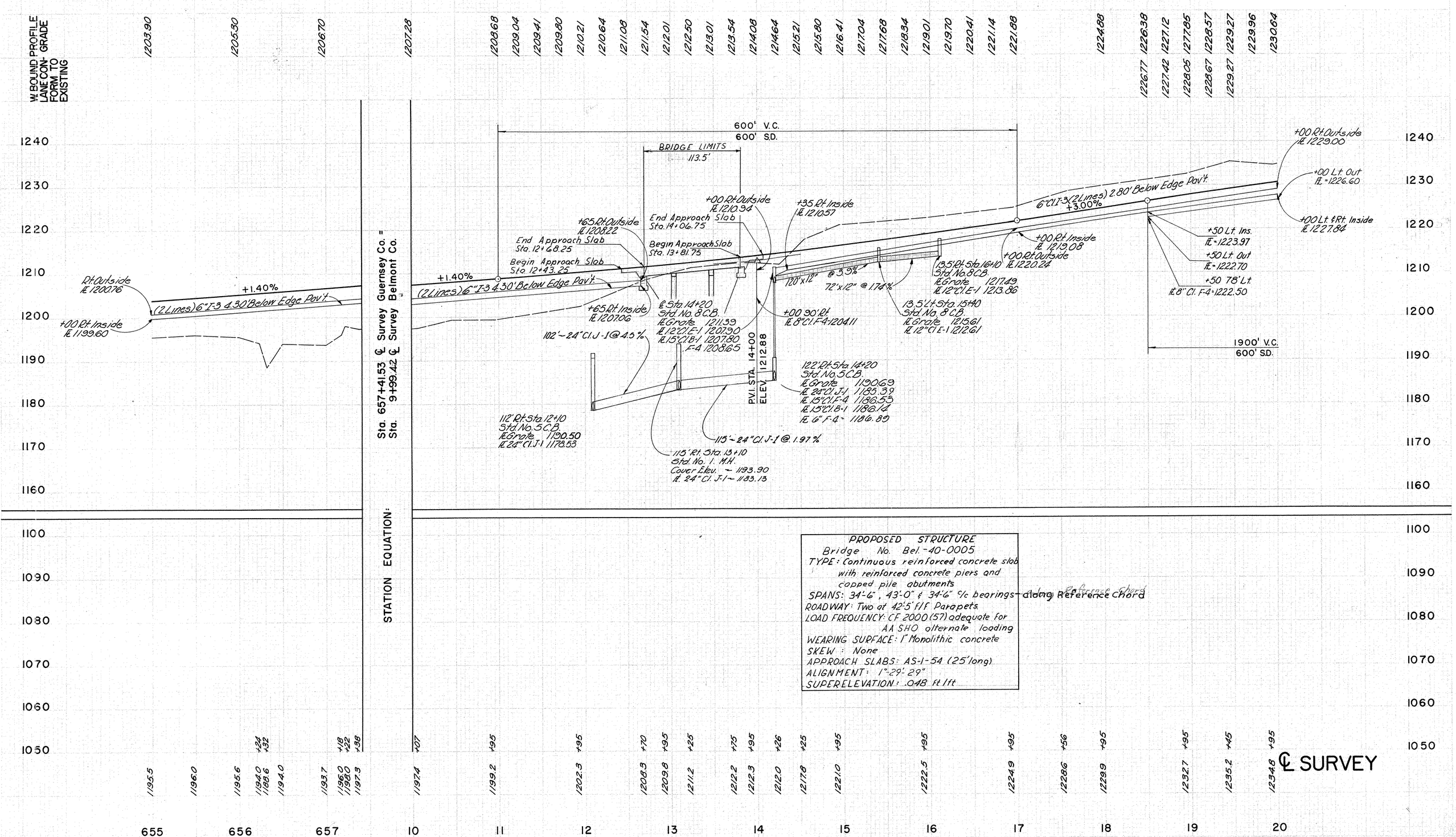
REF. P.I. STA. 9+36+00~C.H. 114 (N).
Tacked G.R. Post, Tacked G.R. Post, P.T., 12.91', 12.13', Nail in North Edge Pavement, 10.80

REF. P.O.T. STA. 12+50.05~C.H. 114 (N).
Tacked 7" Locust, Tacked 4" Elm, 15.72, 11.47, P.O.T., 16.03, 12.15, Tacked G" Ash

CO. HWY. 40A, Conc. Walk, Asphalt Surface, Box Culvert, Bk. Bldg., Garage, Privey, Penny Royal Grape, Grape Arbor, Shed, Born, 1½ Sty. Fr. Res., 1½ Sty. Fr. Barn, 2½ Sty. Fr. Res., 1 Sty. Fr. Res., BEGIN WORK Sta. 8+55, END WORK Sta. 11+25, 20" Spruce, 24" Spruce, 36" M, 10" Spruce, 12" Stone Walk, 28" Spruce, Tank, Fruit Trees, Apple Trees, Billboard, RAMP "A", RAMP "B", RAMP "C", RAMP "D", CURVE A-1, CURVE B, CURVE C-2, CURVE D, CURVE S-5, CONSTRUCTION LIMITS, 7' WIDE SOD, CONSTR. LIMITS, RW, Fairview Corporation Line, GUERNSEY COUNTY, BELMONT COUNTY, CO. HWY. 114 (NORTH), C.H. 202 RELOCATION, C.H. 114 RELOCATION, Sta. 58+25 Begin Transition, Sta. 59+25 End Transition, End Typical C.H. 114 (N.), Plug & Abandon 30" C.M.P., 260' x 30", 200' x 18", 114' x 18", 492' x 15", 712' x 12", 10'-6" F-4, 1st. Fr. Garage, Fr. Barn, Field Rd., Woods, P.C. STA. 17+72.91, P.T. STA. 6+41.51, P.T. STA. 9+36.00, P.T. STA. 656+82.61, P.T. STA. 696+74.

STA. 655+00 TO STA. 20+00

GUERNSEY COUNTY—BELMONT COUNTY
GUE—40—23.88 BEL—40—0.00



PROPOSED STRUCTURE
Bridge No. Bel.-40-0005
TYPE: Continuous reinforced concrete slab with reinforced concrete piers and capped pile abutments
SPANS: 34'-6", 43'-0" & 34'-6" c/c bearings along Reference Chord
ROADWAY: Two at 42'-5" f/f Parapets
LOAD FREQUENCY: CF 2000 (57) adequate for AASHO alternate loading
WEARING SURFACE: 1" Monolithic concrete
SKEW: None
APPROACH SLABS: AS-1-54 (25' long)
ALIGNMENT: 1°-29'-29"
SUPERELEVATION: .048 ft/ft

PROFILE: ℄ SURVEY, STA. 655+00 TO STA. 20+00

SUB — SUMMARY STA. 610 + 00 TO STA. 20 + 00

FED. RTE. DIVISION	STATE	PROJECT	
2	OHIO		

54
485

GUERNSEY COUNTY — BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00

SHEET NO.	REF.	STATION	SIDE	L-10 Sodding Sq. Yds.	L-120 Jute Matting Sq. Yds.	E-8 Removal & Disposal of Exist. Paved Gutt Lin. Ft.	E-8 Removal & Disposal of Exist. Pavmnt AS PER PLAN Sq. Yds.	E-12 Pipe Removed 15" & Under Lin. Ft.	E-12 Pipe Removed Over 15" Lin. Ft.	I-2 Masonry Cu. Yds.	I-8 Std. No. 3 Catch Basin Ea.	I-8 Std. No. 4 Catch Basin Ea.	I-8 Catch Basin Adjusted to Grade Ea.	I-9 Stone Under Drains No. 1 as per plan Lin. Ft.	I-15 Guard Rail Std. Type Deep L.F.	I-15 Rem. & Rebuilt L.F.	I-15 Rem. & Dispose of L.F.	I-1 Class B-1 15" L.F.	I-1 Class E-1 12" L.F.	I-1 Class E-1 15" L.F.	I-1 Class F-4 6&c 8" L.F.	I-1 Class F-4 6" L.F.	I-1 Class F-4 15" L.F.	I-1 Class I-3 6" L.F.	I-1 Class I-3 6&h 6" L.F.	I-5 6" Class I-3 60° Bend Ea.	I-5 6" Class I-3 90° Bend Ea.	I-5 F-4 15" Bend Ea.	SPECIAL Drilled Wells Abandoned Ea.	I-10 Dumped Rock Channel Prot. Cu. Yds.	I-16 Catch Basin Abandoned Ea.
4A1 V4	1UD	610+00~612+96	Lt.																						296					
	2UD	610+00~617+96	Lt.																						796					
	3UD	610+00~617+96	Rt.																						796					
	4UD	610+00~618+26	Rt.																			10			816					
	5UD	613+00~623+00	Lt.																		10				1010		1			
	6UD	618+00~623+00	Lt.																			10			503		1			
	7UD	618+00~625+00	Rt.																			10			697	1				
	8UD	618+04 625+00	Rt.																		10				700	1				
	1SS	618+00	Rt.	4						.26	2							57	27				63					2		2	
			Lt.																											
	2G	621+50~625+00	Lt.												350															
	3G	610+00~625+00	Rt.												1500															
	4G	610+00~614+75	Lt.													475														
	5G	610+00~614+75	Rt.													475														
	6G	618+45~625+00	Lt.													655														
	7G	621+20~625+00	Lt.													380														
	1DR	611+50~615+00	Lt.			376																								
	2DR	610+00~612+50	Rt.			270																								
	3DR	623+70~625+00	Rt.			130																								
	4DR	623+65	Rt.						8																					
	1R	624+00~625+00	Rt.				222																							
	1SP	619+90	Rt.																									1		
	2D	618+07~619+57	℄		250																								82	
	3D	622+60~625+00	Rt.																											
	5D	23+70~25+70 (C.H. 202)	Rt.	111																										
	6D	616+80	Rt.											3								20								
	7D	610+00~611+07	Lt.		89																									
4A1 4A2	2R	618+30~619+15	Rt.				60																							
	3R	610+00~623+00	L&R				3467																							
4A6 4A6	1UD	625+00~627+96	Rt.																						296					
	2UD	625+00~628+24	Rt.																			10			314					
	3UD	628+00~635+14	Rt.																			10			114	614	1			
	4UD	628+04~640+00	Rt.																		10				204	1000	1			
	5UD	635+10~640+00	Rt.																			10				488	1			
	6UD	635+80~640+00	Lt.																		10					460		1		
	1SS	635+10	Lt.		250						1		1						27											
	2SS	637+92~640+00	℄		125						2		1						27	208										
	3SS	628+00	℄	4						.26		1						98											2	
	1R	625+00~628+00	Rt.				958																							
	1DR	625+00~626+80	Rt.			180																								
	2DR	626+50~626+80	Rt.					65																					1	
	3DR	626+80~628+75	Rt.						203																				1	
	2R	635+50	Lt.				280																							
	3R	628+66~628+78	Lt.				45																							
	4DR	635+45	Lt.&Rt.			25																								
	1G	625+00~628+50	Lt.												350															
	2G	625+00~627+25	Rt.												225															
	3G	31+00~38+00 (C.H. 202)	Lt.												700															
	4G	635+50	Lt.												25															
	5G	625+00~628+80	Lt.													380														
	6G	625+00~627+70	Lt.													300														
	7G	625+00~627+70	Rt.														340													
	1D	628+45	Rt.											3								10								
	2D	628+90~629+75	Lt.	77																										
	3D	628+07~629+57	℄		228																									
	4D	625+00~628+00	Rt.																										113	
	5D	628+00~630+50	Rt.	247																										
4A6	6D	25+70~26+00 (C.H. 202)	Rt.	17																										
4A6	7D	27+00~29+00 (C.H. 202)	Lt.	111																										
TOTAL to GENERAL SUMMARY				571	942	981	4927	105	65	211	0.52	5	1	2	6	3150	2665	340	155	81	208	40	90	63	6542	2562	8	3	2	1	199	2

SUB — SUMMARY STA. 610 + 00 TO STA. 20 + 00

FED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

55 / 485

GUERNSEY COUNTY — BELMONT COUNTY

GUE-40-23.88 BEL-40-0.00

SHEET NO.	REF.	STATION	SIDE	B-19	L-10	L-120	E-8		E-12		I-2	I-8			I-9	I-15	B-35		I-30	I-1																		I-5										I-10	I-16	T-30	T-35		I-15
				B" Agg. Base Course	Sodding	Jute Matting	Removal & Disposal of Exist. Paved Gut.	Removal & Disposal of Exist. Dwmnt. AS PER PLAN	Pipe Removed 15" & Under	Pipe Removed Over 15"	Masonry	Std. No. 3 Catch Basin	Std. No. 5 Catch Basin	STD. NO. 6 CATCH BASIN	STD. No 1 M.H.	Stone under-drains No. 1	Guard Rail Std. Type Rem. & Reset		Asph. Conc. Level-ing Course	BIT. TACK COAT	Class B-1	J-1	A-1 M.6.6(1) 12G	J-1 M.6.6(1)	A-1 M.6.6(1)	C.I.B-1 Mod. to M.6.6(1)	Class E-1			Class F-1			Class I-3	6" Class B-1	6" Class I-3 60°	6" Class I-3 30°	6" C.I.B-1	F-1	Dumped Rock Channel Prot.	Catch Basin Abandoned	Bituminous Prime Coat	Asphaltic Concrete Surface Course		GUARD RAIL REMOVED & DISPOSED of
				Cu Yds.	Sq Yds.	Sq Yds.	Lin Ft.	Sq Yds.	Lin Ft.	Lin Ft.	Cu Yds.	Ea.	Ea.	Ea.	Ea.	L. F.	L.F.	L.F.	Gal.	Gal.	6"	15"	24"	24"	24"	15"	24"	24"	12"	15"	8"	6"	15"	6"	L.F.	L.F.	90° Bend Ea.	Tee Ea.	Bend Ea.	Bend Ea.	Tee Ea.	Bend Ea.			Cu. Yds.	Ea.	Gals.	Cu Yds.		L.F.
48	7UD	640+00 - 654+98	Lt.																													1498																
46	3D	27+00 - 31+00 (C.H. 202)	Rt.		328																																												
	10D	635+82 - 636+00	Lt.		33																																												
46	12D	639+00 - 640+00	Lt.		122																																												
48	1OW	41+44 (C.H. 202)	RT.	27																																												
	2OW	52+20 (C.H. 202)	RT.	29																												60																
	1P	47+50 (C.H. 202)	Rt.	32														7														52											58	5			
	2P	640+50 - 649+00	Lt.	38																												34																
	1UD	640+00 - 649+96	Rt.																												10		999		1													
	2UD	640+00 - 641+36	Rt.																														196																
	3UD	650+00 - 655+00	Rt.																												10		498		1													
	4UD	642+00 - 652+52 (Ramp C)	Rt.																												10	10	1085			1													
	5UD	652+56 - 655+00	Rt.																	22											10		287		1		1													
	6UD	651+56 - 655+00 (Ramp C)	Lt.																														346																
	1SS	650+00	℄		4							2		1							166						27			65									2		2							
	1R	647+25 - 647+50	Lt.				428																																									
	2R	49+20 - 50+04 (C.H. 202)	Rt.					89																																								
	3R	643+30 - 644+20	Lt.					49																																								
	1DR	644+05	Rt.							63																																						
	2DR	647+22 - 650+85	Lt.						310	72																																						
	4R	650+52	Lt.					18																																								
	3DR	650+40	Lt.						30																																							
	4DR	653+50	Lt.						25																																							
	1G	643+00 - 647+50															450																																
	2G	42+50 - 47+25 (C.H. 202)	Lt.														475																																
	3G	42+00 - 46+50 (C.H. 202)	Rt.														450																																
	4G	650+50 - 655+00	Rt.														450																																
	5G	52+40 - 55+00 (C.H. 202)	Rt.														260																																
	6G	640+30 - 642+30	LT.																																													215
	7G	640+00 - 641+80	Rt.																																												210
	8G	641+85 - 647+36	Lt & Rt															580																															140
	9G	650+55	LT														125																																
	10G	653+83	LT.														125																																
	1D	640+00 - 648+00	Lt.		978																																												
	2D	42+00 - 45+00 (C.H. 202)	Lt.		200																																											
	3D	640+07 - 641+57	℄			250																																											
	4D	47+00 - 48+00 (C.H. 202)	Lt.																																											29				
	5D	52+00 - 52+50 (C.H. 202)	Lt.		16																																												
	6D	52+50 - 55+00 (C.H. 202)	Rt.																																											47				
	7D	47+00 (C.H. 202)	℄								0.52																																			2				
	8D	650+07 - 651+57	℄			250																																											
	9D	643+80	Rt.													3																																	
48	3R	653+70	Lt.					18																																									
52	1UD	655+00 - 660+10 (Ramp A)	Lt.																																												
	2UD	655+00 - 12+65	Rt.																																												
	3UD	655+00 - 12+65	Rt.																																												
	4UD	655+00 - 660+50 (Ramp C)	Lt & Rt																	22											10		630	2	1													
	5UD	8+00 - 11+40 (C.H. 114 N)	Rt.																	23											20			410	1													
	6UD	14+00 - 20+15 (Ramp B)	Lt.																	22											10			805	1			1	1								
	7UD	14+20 - 20+00	Rt.																												10		280	300		1											
	8UD	14+00 - 20+00	Rt.																												10	10	334	300			1										
	9UD	13+00 - 10+85 (Ramp D)	Rt.																	22											20			722	2		2										
	10UD	8+80 - 11+25 (C.H. 114 N)	Lt.																												10			330			1										
	1P	8+55 - 11+25	Lt.																21	60																										21		
	1SS	12+10 - 16+10	℄		4						0.41	3	7		2						275	432	174	106		96	192			45									11							
	1R	11+85 - 14+07	Lt.				662																																									
	2R	11+50 - 13+00	Lt.				440																																									
	3DR	13+00 - 14+50	Lt.					150																																								
	1DR	11+35 - 20+00	Lt.						539	251																																				3				
	2DR	12+70 - 20+00	Lt & Rt						540	200																																				1				
	1G	10+08 - 12+57.3	Lt.														250																																
	2G	655+50.11 - 12+57.3	Rt.														450																																
	3G	55+00 (Ramp C) - 57+90 (C.H. 202)	Rt.														975																																
	4G	55+00 - 61+40 (C.H. 202)	Rt.														640																																
52	5G	13+92.7 - 19+94	Lt.														600	125																															
	TOTAL to GENERAL SUMMARY			126	1685	500	150	530	174	1444	586	0.93	5	7	1	2	3	4975	705	28	60	111	441	432	174	106	110	96	192	27	40	316	256	7712	2867	0	2	8	4	12	1	2	91	0	58	26		565

SUB – SUMMARY STA. 610 + 00 TO STA. 20 + 00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

56
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00

SHEET NO.	REF.	STATION	SIDE		L-10 SODDING Sq.Yds.	L-120 JUTE MATTING Sq.Yds.	E-8 REMOVAL & DISPOSAL OF EXIST. PAVEMENT Sq.Yds.		I-15 GUARD RAIL STD. TYPE Lin.Ft.	I-15 GUARD RAIL REMOVE & REBUILT Lin.Ft.		I-1 CLASS B-1 6" DEEP L.F.		I-1 CLASS F-4 M-6.4 (c) 8" L.F.	I-1 CL. I-3 M-6.4 (h) 6" L.F.	I-5 6" CL. B-1 90° Bend Ea.	I-5 Tee Ea.							L-10 SPECIAL SLOPE & BERM PROT. Sq.Yds.	I-15 GUARD RAIL REMOVED & DISPOSED Lin.Ft.
52	6G	13+92.7 ~ 18+94	RT.						500																
	7G	11+08 ~ 12+57.3	RT. & LT.						162.5	✓															
	8G	13+94 ~ 15+51	RT. & LT.						162.5	✓															
	9G	656+00 ~ 12+50	LT.							395															
	10G	655+00 ~ 13+13	LT.							5625															
	11G	9+90 ~ 11+90 C.H.-114	RT.																						200
	12G	9+80 ~ 11+18 C.H.-114	LT.																						220
52	13G	7+28 ~ 9+00 C.H.-114	RT.																						290
52	1D	657+69 ~ 659+19 RAMP-A	LT.			125																			
	2D	10+53 ~ 12+03	LT.			125																			
	3D	10+53 ~ 12+03	RT.			125																			
	4D	658+33 ~ 659+83 RAMP-C	RT.			125																			
	5D	15+00 ~ 19+00 RAMP-B	LT.		312																				
	6D	12+54	LT. & RT.																						108
	7D	14+00 ~ 15+35 RAMP-B	RT.			125																			
	8D	15+52 ~ 17+72	℄			250																			
52	9D	13+92 ~ 15+42 RAMP-D	LT.			125																			
52	3R	18+50 ~ 20+00	LT.				400																		
52	11UD	18+50 ~ 20+00	LT.									30			150	1									
52	12UD	18+50 ~ 20+00	LT.											10	161		1								
TOTAL to GENERAL SUMMARY					312 ✓	1000 ✓	400 ✓		825 ✓	957.5 ✓		30 ✓		10 ✓	311 ✓	1 / 2 ✓	1 ✓							108 ✓	710 ✓

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00

FED. NO. DIVISION	STATE	PROJECT		
2	OHIO			

57 / 485

FOR RAMP TYPICALS ~ SEE SHEET NO. 7.

FOR DETAILS OF UNDERDRAIN OUTLETS ~ SEE SHEET NO. 436

For Details of Delineators See Sheet No. 440

CURVE DATA
P.I. STA. 17+66.61 Ahd - Sta. GC5+08.86 Bk.
Δc = 44°05'26" Lt.
Dc = 1°29'29"
Rc = 3,841.77'
Lc = 2,956.34'
Tc = 1,555.71'
Ec = 303.03'

P.T. STA. 29+22.97 RAMP "B" = 66.00' LT. POC. STA. 29+22.97 & SURVEY

P.O.T. STA. 26+00 RAMP "D" = 79.00' RT. POC. STA. 26+00 & SURVEY

P.T. STA. 21+96.74

BENCH MARK
Cut on Top of Cumberland Marker (1559), 75 Lt. Sta. 25+50 Elev. 1248.49

FOR RAMP "D" PAVEMENT DETAILS ~ SEE SHEET NO. 70 & 71

FOR RAMP "B" PAVEMENT DETAILS ~ SEE SHEET NO. 67 & 69

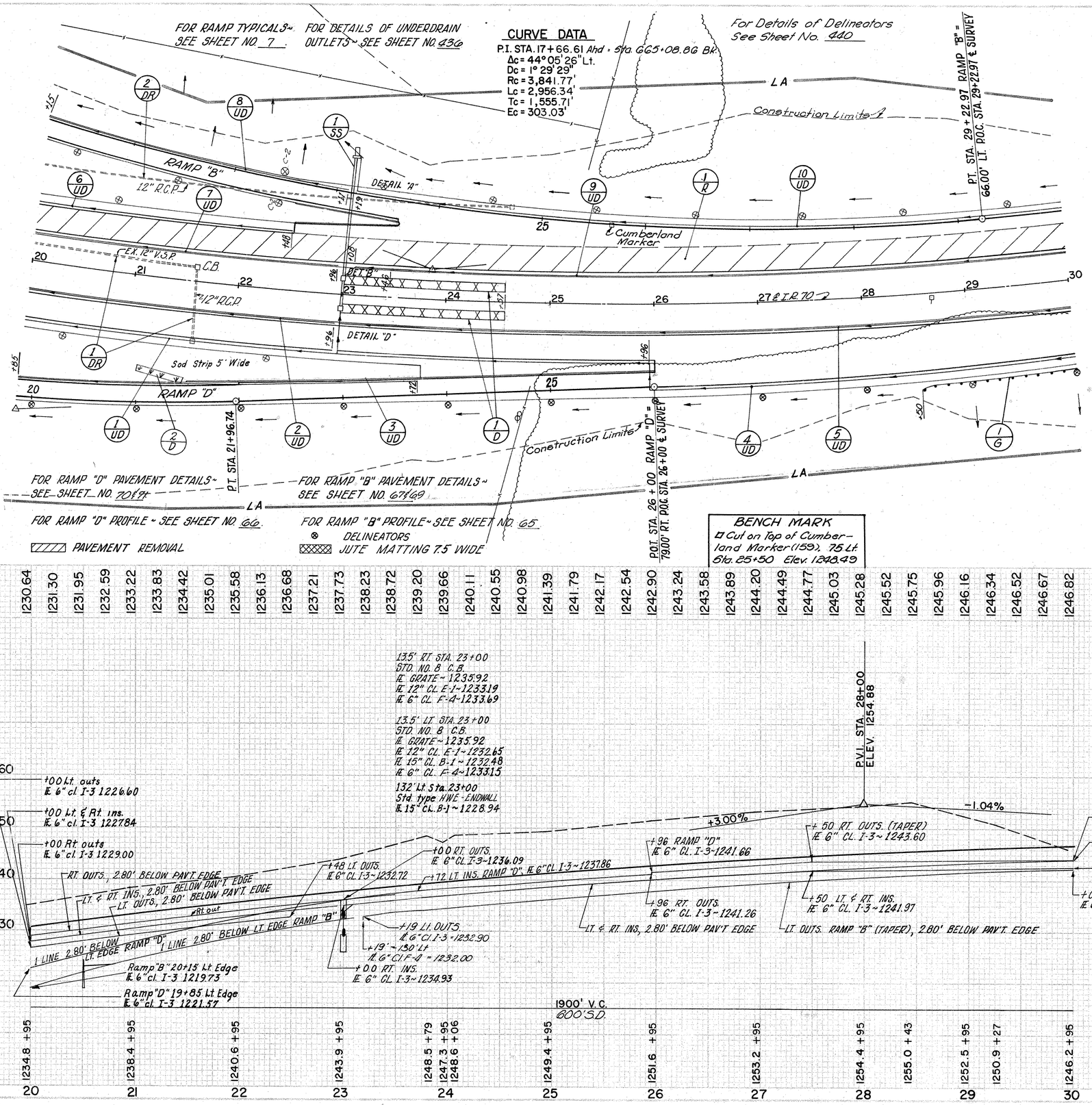
FOR RAMP "D" PROFILE ~ SEE SHEET NO. 66.

FOR RAMP "B" PROFILE ~ SEE SHEET NO. 65

PAVEMENT REMOVAL

⊗ DELINEATORS

JUTE MATTING 7.5 WIDE



1230.64 1231.30 1231.95 1232.59 1233.22 1233.83 1234.42 1235.01 1235.58 1236.13 1236.68 1237.21 1237.73 1238.23 1238.72 1239.20 1239.66 1240.11 1240.55 1240.98 1241.39 1241.79 1242.17 1242.54 1242.90 1243.24 1243.58 1243.89 1244.20 1244.49 1244.77 1245.03 1245.28 1245.52 1245.75 1245.96 1246.16 1246.34 1246.52 1246.67 1246.82

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 CL. F-4 8" M (6.4)(C) LIN. FT.	I-1 CL. F-3 6" M (6.4)(A) LIN. FT.	I-5 6" CL. B-1 6" TEE EACH	I-5 6" CL. F-3 6" 60° BEND EACH	I-5 CL. B-1 6" 90° BEND EACH	I-10 DUMPED ROCK CHANNEL PROT. C.Y.	I-2 MASONRY CATCH BASINS ABAND'D C.Y.	I-16 CATCH BASINS ABAND'D EA.	I-120 JUTE MATTING S.Y.	I-8 STD NO. 8 C.B. EACH	SEE SHEET NO.
1UD	20+00 ~ 22+96	RT		296									2
2UD	20+00 ~ 22+96	RT		296									
3UD	19+85 ~ 23+22 (Ramp D)	RT		387									
4UD	23+00 ~ 30+00	RT		700									
5UD	20+00 ~ 22+48	LT		248									
6UD	20+00 ~ 22+96	LT		296									
7UD	20+15 ~ 23+11 (Ramp B)	LT		296									
8UD	23+00 ~ 30+00	LT		700									
9UD	23+19 ~ 30+00 (Ramp B)	LT		698									
10UD				705									
1SS	23+00	LT & RT	10		1	1	3						
1O	23+07 ~ 24+57	LT & RT						1.7	2		250	2	1
2O	21+00 ~ 21+50	RT						0.26	1				
1DR	20+00 ~ 21+50	LT & RT											
2DR	20+00 ~ 24+75	LT											
1R	20+00 ~ 30+00	LT											
1G	28+50 ~ 30+00	RT	10										

REF. NO.	STATION TO STATION	SIDE	I-5 CL. E-1 12" LIN. FT.	I-5 CL. B-1 15" 12" LIN. FT.	I-5 Guard Rail Std. Type (Weep) Lin. Ft.	I-10 Coping S.Y.	E-12 Pipe Removed, 15" & Under L.F.	E-8 Removal & Disposal of Exist. Pav't. S.Y.
1UD	20+00 ~ 22+96	RT						
2UD	20+00 ~ 22+96	RT						
3UD	19+85 ~ 23+22 (Ramp D)	RT						
4UD	23+00 ~ 30+00	RT			59			
5UD	20+00 ~ 22+48	LT						
6UD	20+00 ~ 22+96	LT						
7UD	20+15 ~ 23+11 (Ramp B)	LT						
8UD	23+00 ~ 30+00	LT						
9UD	23+19 ~ 30+00 (Ramp B)	LT						
10UD								
1SS	23+00	LT & RT				4		
1O	23+07 ~ 24+57	LT & RT						
2O	21+00 ~ 21+50	RT				28		
1DR	20+00 ~ 21+50	LT & RT					230	
2DR	20+00 ~ 24+75	LT					450	
1R	20+00 ~ 30+00	LT						
1G	28+50 ~ 30+00	RT			150		2667	
							2667	680

I-15 Guard Rail Std. Type (Weep) Lin. Ft.	I-10 Coping S.Y.	E-12 Pipe Removed, 15" & Under L.F.	E-8 Removal & Disposal of Exist. Pav't. S.Y.
59			
	4		
	28		
		230	
		450	
150		2667	
*150	32	2667	680

STA. 20+00 TO STA. 30+00

* TOTAL TO SHEET 13

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

58
485

CURVE DATA

P.I. STA. 17+66.61
Δc= 44° 05' 26" Lt.
Dc= 1° 29' 29"
Rc= 3,841.77'
Lc= 2,956.34'
Tc= 1,555.71'
Ec= 303.03'

FOR DETAILS OF UNDERDRAIN OUTLETS ~ SEE SHEET NO. 436

FOR PAVEMENT DETAILS - RAMP "B" ~ SEE SHEET NO. 67-69

EXISTING STRUCTURE BEL-40-0051
TYPE: Continuous steel beams with concrete deck & substructure
SPANS: 40'-50'-40'
¾ bearings.
ROADWAY: 28' with two 1'-9" safety corbs.
LOADING: 5-20-46
SKEW: 20° left forward
SURFACE COURSE: Bituminous.
APPROACH SLABS: A.S.1-47 E.A.S.2-47

Rt. STA. 38+50
245' OFF-SET

Const. Limits

To Be Abandoned

Paved Gutter

Detail "D"

18" R.C.P. (Plug & Abandon)

Paved Gutter

N65° 55' 10" E
℄ Survey I.B. 70

Culvert No. Gue 40-056
Sta. 34+09, Skew 8° 9" R.F.
24" X 42" C.I.A-1 @ 3.74%
See Sheet No. 432

CONSTRUCTION LIMITS

CONSTRUCTION LIMITS

END ACCELERATION LANE STA. 38+00

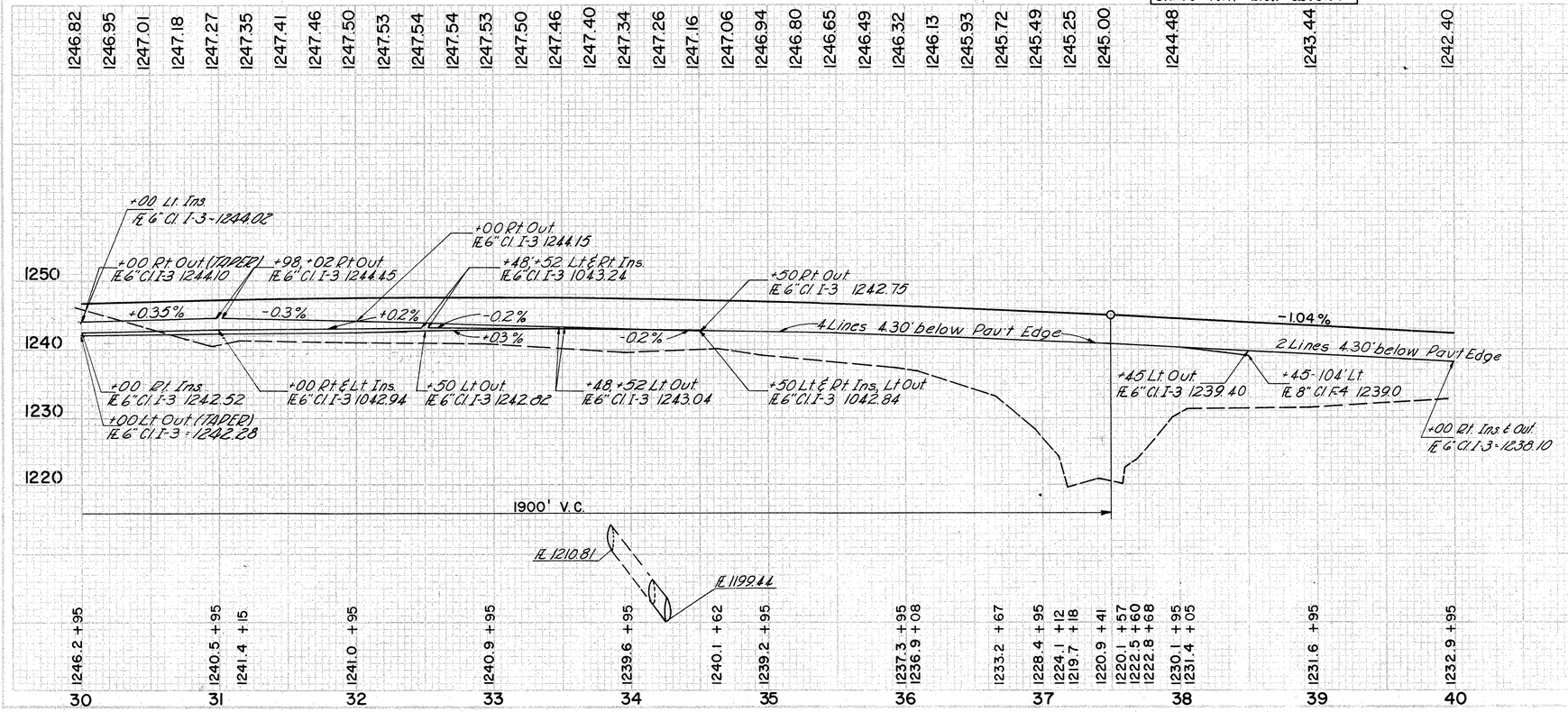
BEGIN ACCELERATION LANE STA. 31+67.24

FOR PAVEMENT DETAILS OF RAMP "D" ~ SEE SHEET NO. 70-71

FOR DETAILS OF DELINEATORS SEE SHEET NO. 440

⊗ DELINEATORS
▨ PAVEMENT REMOVAL

BENCH MARK
Chiseled "□" on S.W. Wingwall of Bridge over Co. Rd. 114 21.6' Lt.
Sta. 36+79.4. Elev. ~ 1246.04



ESTIMATED QUANTITIES

REF NO.	STATION TO STATION	SIDE
1UD	30+00 ~ 30+98	RT
2UD	31+02 ~ 40+00	RT
3UD	30+00 ~ 32+48	RT
4UD	32+52 ~ 40+00	RT
5UD	30+00 ~ 33+48	LT
6UD	30+00 ~ 32+48	LT
7UD	32+52 ~ 38+45	LT
8UD	33+52 ~ 38+45	LT
1G	30+00 ~ 40+00	RT
2G	30+25 ~ 36+75	LT
3G	30+75 ~ 34+80	LT
4G	38+15 ~ 40+00	LT
5G	38+30 ~ 39+20	LT
6G	37+00 ~	RT
7G	38+00 ~	LT
1P	30+00 ~ 36+90	LT
2P	36+75 ~ 38+20	LT
1DR	38+22.5 ~ 38+70	LT&RT
2DR	38+40 ~	LT
3E	37+10 ~ 38+50	RT
4E	38+20 ~	LT
5R	38+20 ~ 38+50	
2P	38+50 ~	LT
8G	31+50 ~ 38+00	LT

ITEM	DESCRIPTION	UNIT	1UD	2UD	3UD	4UD	5UD	6UD	7UD	8UD	1G	2G	3G	4G	5G	6G	7G	1P	2P	1DR	2DR	3E	4E	5R	2P	8G	TOTAL
202	8-19 8" AGG BASE COURSE	CU YD																									33
203	E-3 PIPE SPEC. C1.B1 6" PVC 2001 BEND 22½	EA																									1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 2
204	C1.F3 6"	LF	98	898	248	748	330	248	593	493																	3616
205	E-1 QUANTITIES																										
206	E-8 REMOVAL REMOVAL GUARD RAIL & REMOVAL OF EXIST STRUCT OF EXIST DEEP GUTTER	S.Y.																									10
207	E-8 REMOVAL GUARD RAIL & DISPOSAL STD. TYPE REMOVAL OF EXIST PAV'T	L.F.																									67
208	E-8 REMOVAL C1.B1 REMOVAL, DISPOSAL OF EXIST & REBUILT PAV'T AS NEW MIN	6"																									67
209	S.K.																										
210		LF									1000																650
211												650															612.5
212																											175
213																											87.5
214																											
215																											25
216																											25
217		LUMP	5 Y																								
218		LF																									
219		LUMP																1840									
220																			52								
221																			44								
222																											
223																											
224																											

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

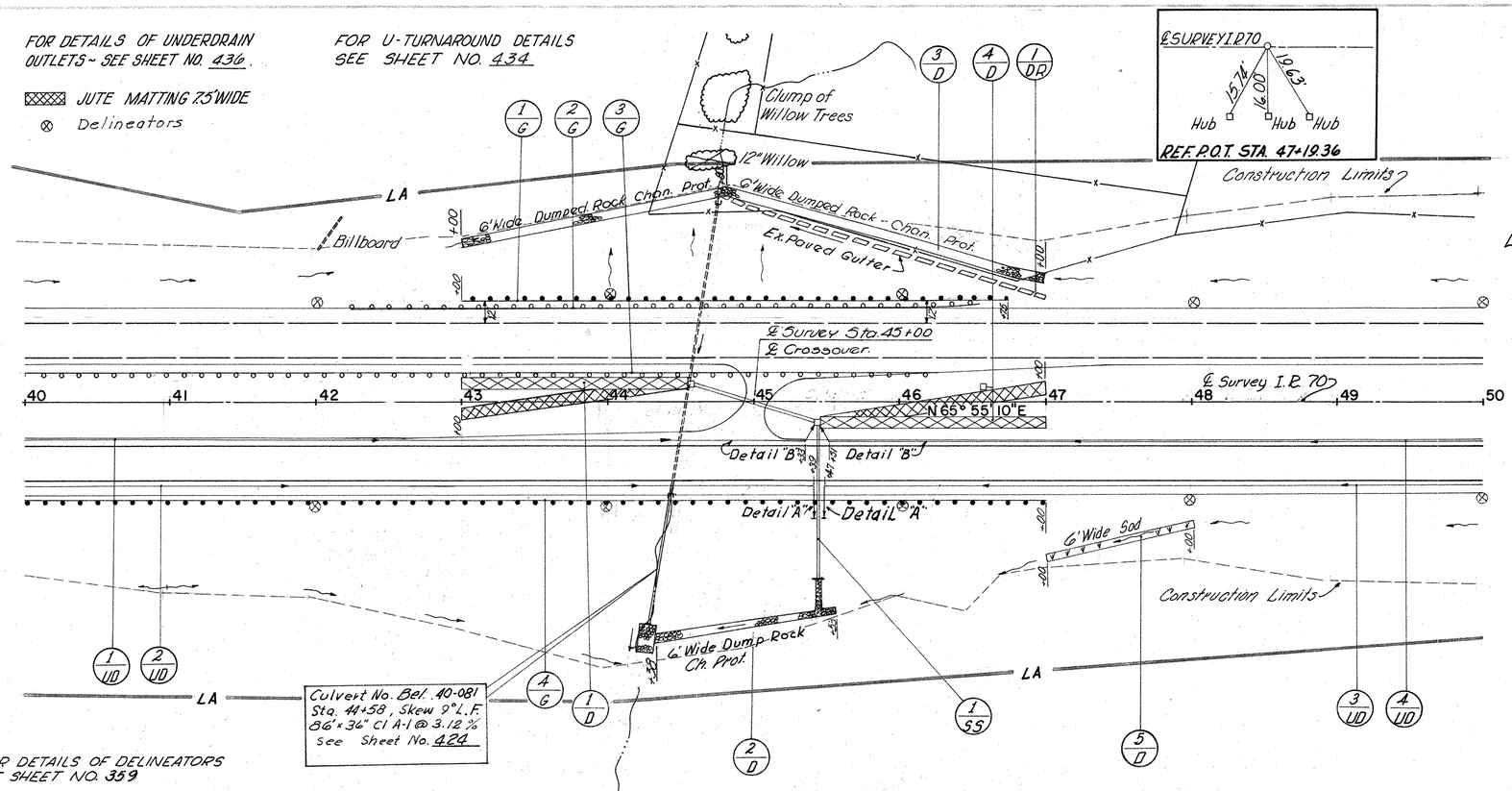
FED. RD. DIVISION	STATE	PROJECT		59
2	OHIO			485

FOR DETAILS OF UNDERDRAIN OUTLETS – SEE SHEET NO. 436.

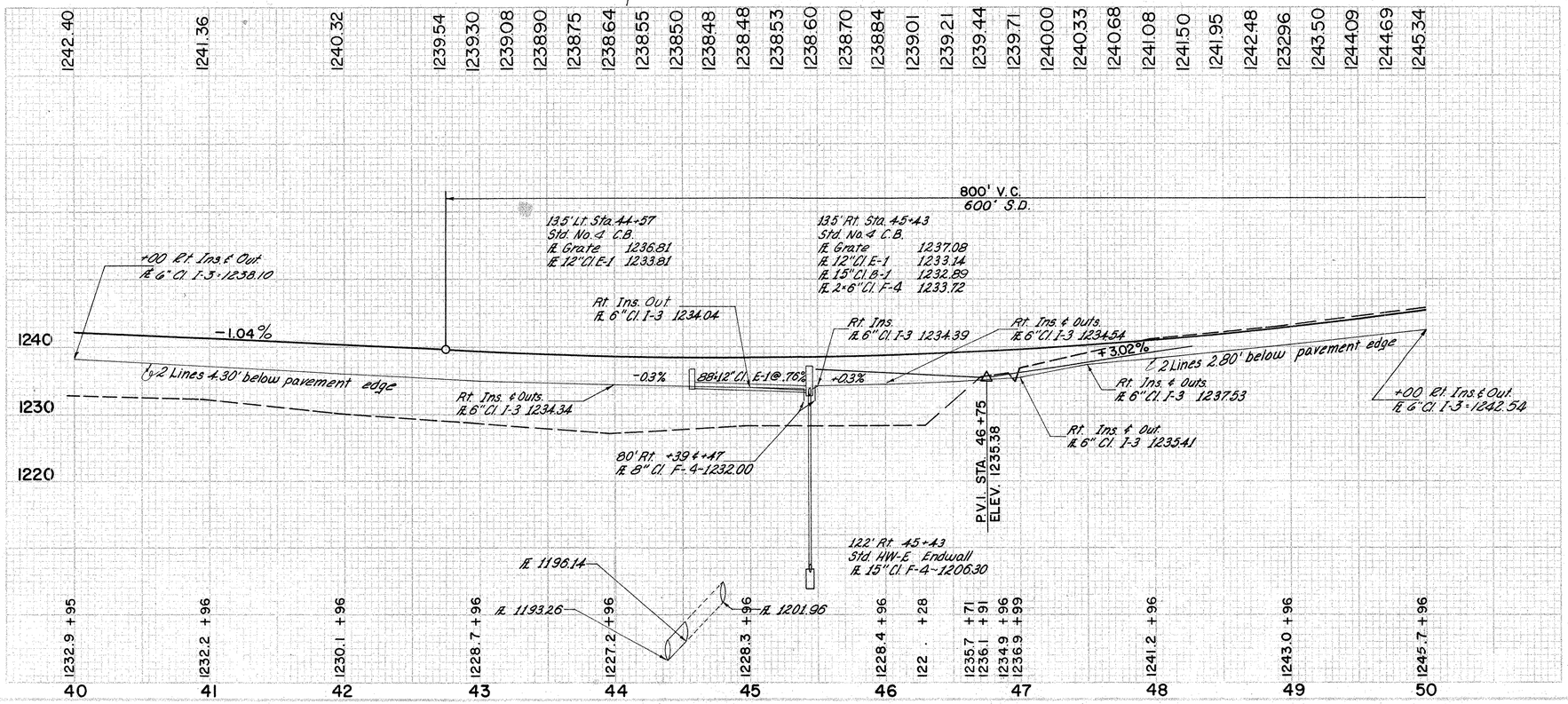
FOR U-TURNAROUND DETAILS SEE SHEET NO. 434

JUTE MATTING 7.5' WIDE

⊗ Delineators



FOR DETAILS OF DELINEATORS SEE SHEET NO. 359



ESTIMATED QUANTITIES

| REF. NO. | STATION TO STATION | SIDE | 1-1 CL F-4 (MGAW) 8" LF | 1-1 CL F-4 (MGAW) 12" LF | 1-2 MASONRY CU. YD. | 1-5 PIPE SPECIALS CL F-4 (CL I-3) CL I-3 6"x30°-90° BEND EA. | 1-5 CL I-3 6" MGAW BEND LF | 1-5 CL I-3 15" MGAW 6' BEND EA. | 1-5 GUARD RAIL STD. TYPE DEEP LF | 1-8 STD. NO. 4 C.B. EA. | 1-10 DUMPED ROCK CH. PROT. 18" THICK CU. YD. | 1-10 SODDING REMOVED & REPLACED SQ. YD. | 1-120 JUTE MATTING SQ. YD. | 2-3 REMOVAL OF PAVING GUTTER L.F. | 15" CL B-1 LF | 15" CL E-1 LF | 18" CL E-1 LF | 24" CL E-1 LF | 24" CL F-1 LF | 24" CL F-4 LF | 30" CL E-1 LF | 30" CL F-1 LF | 30" CL F-4 LF | 36" CL E-1 LF | 36" CL F-1 LF | 36" CL F-4 LF | 42" CL E-1 LF | 42" CL F-1 LF | 42" CL F-4 LF | 48" CL E-1 LF | 48" CL F-1 LF | 48" CL F-4 LF | 54" CL E-1 LF | 54" CL F-1 LF | 54" CL F-4 LF | 60" CL E-1 LF | 60" CL F-1 LF | 60" CL F-4 LF | 66" CL E-1 LF | 66" CL F-1 LF | 66" CL F-4 LF | 72" CL E-1 LF | 72" CL F-1 LF | 72" CL F-4 LF | 78" CL E-1 LF | 78" CL F-1 LF | 78" CL F-4 LF | 84" CL E-1 LF | 84" CL F-1 LF | 84" CL F-4 LF | 90" CL E-1 LF | 90" CL F-1 LF | 90" CL F-4 LF | 96" CL E-1 LF | 96" CL F-1 LF | 96" CL F-4 LF | 102" CL E-1 LF | 102" CL F-1 LF | 102" CL F-4 LF | 108" CL E-1 LF | 108" CL F-1 LF | 108" CL F-4 LF | 114" CL E-1 LF | 114" CL F-1 LF | 114" CL F-4 LF | 120" CL E-1 LF | 120" CL F-1 LF | 120" CL F-4 LF | SEE SHEET NO. |
|---|---|---|---|---

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

60 / 485

FOR DETAILS OF UNDERDRAIN OUTLETS – SEE SHEET NO. 436
⊗ Delineators
JUTE MATTING
Pavt. Removal

Hub Hub 11.4' 13.4' 42" Oak Stump-lacked
℄ SURVEY I.R. 70
REF. P.O.S.T. STA. 53+08.92

FOR DETAILS OF DELINEATORS SEE SHEET NO. 440

CURVE DATA
P.I. STA. 65+75.66
Δc = 30° 06' 17" Rt.
Dc = 1° 12' 38"
Rc = 4,732.65'
Lc = 2,486.66'
Tc = 1,272.75'
Ec = 168.15

NOTE: The Typical Section for the Temporary Cross-over is as follows: 24' wide pavement (T-70 9" thick, 3' wide earth shoulders, fill slopes 1½:1)

Construction Limits · LA · Sign · To Be Abandoned · 12" C.M.P. · Gar. · 1 Sty. Fr. Res. · Travel Lic. · 4' Paved Gutter · Chicken House · Frame Barn · Milk House · 2 Sty. Fr. Res. · I-70-7(12)-193 · I-70-8(6) 202 · 6' Sod · FACI SIGN · Ex. 13" R.C.P

60" Walnut · 60" Stump · N 65° 55' 10" E · 7.5' WIDE · ℄ I.R. 70 · Dc = 14° · "Detail B" · "Detail A" · 4' Paved Gutter · 6' Wide Dumped Rock Ch. Prot. · Sodding 9' Wide · S.L.M. 0.95 · P.C. STA. 53+02.91 · PT. STA. 60+00

TYPICAL SECTION EXISTING U.S. R. 40
12' ℄ 12' · 9" T-71

BENCH MARK
Spike in N. Side 48" Oak Tree
6.9' Lt. Sta. 52+65.2
Elev. ~ 1253.17

CULVERT NO. BEL-40-0101
STA. 55+98.50, SKEW 13°30' LF
106.24" Cl. A-1 @ 6.07 %
SEE SHEET NO. 425

NOTE: TYPICAL SECTION FOR ADJOINING PROJECT, SAME AS ON THIS PROJECT – SEE SHEET NO. 6.

END PROJECT & END WORK – BEL–40–00.00 STA. 60+00.00

1245.34 1246.01 1246.73 1247.46 1248.22 1251.24 1254.26 1257.28 1260.30 1263.32 1266.34 1267.85 1268.59 1269.33 1270.05 1270.76 1271.44 1272.12 1272.78 1273.43 1274.06 1274.69

NOTE: The time and necessity for the construction of this Cross-over shall be determined by the Engineer. The quantities for the Temporary Cross-over may be non-performed all or in part.

800' V.C. · 600' S.D. · 1500' V.C. · 600' S.D.
+3.02%
1 line – 4.30' below pavt. edge
2 lines – 2.80' below pavt. edge
Rt. ins. & out. ℄ 6" Cl I-3 1242.54
+00 Rt. outside ℄ 6" Cl I-3 1246.80
+00 Lt. inside ℄ 6" Cl I-3 1246.67
+50 Rt. outside ℄ 6" Cl I-3 1247.92
+50 Rt. inside ℄ 6" Cl I-3 1248.32
+50 Rt. inside ℄ 6" Cl I-3 1254.36
+00 72' Rt. ℄ 8" Cl F-4 1251.00
13.5' Lt. Sta. 54+00 Std. No. 8 C.B. ℄ Grate 1255.16 ℄ 12" Cl E-1 1252.16
13.5' Rt. Sta. 54+00 Std. No. 8 C.B. ℄ Grate 1255.53 ℄ 12" Cl E-1 1251.89 ℄ 15" Cl B-1 1251.64 ℄ 6" Cl. F-4 1252.69
+00 Rt. inside ℄ 6" Cl I-3 1270.39
+00 Rt. outside ℄ 6" Cl I-3 1269.43
148' Rt. Sta. 54+00 Std. HW-E Endwall ℄ 15" Cl F-4 1215.50
℄ 1226.85
℄ 1205.85

1248.7+96 1247.7+96 1248.6+56 1248.3+96 1249.8+96 1252.3+66 1250.7+96 1247.6+96 1252.8+96 1257.0+96 1260.8+96 1264.4+96 1266.4+76 1272.5+96
50 51 52 53 54 55 56 57 58 59 60

ESTIMATED QUANTITIES

SEE SHEET NO.		E-8 Removal of Disposal of Ex. part	T-70 9" JUTE MATTING P.C.C. PAV'T.	T-2 MASONRY	I-120 JUTE MATTING	I-8 STD. NO. 8 C.B.	I-10 PIPE REMOVAL SPECIAL DUMPED ROCK CH. PROT.	I-5 CI. F-3 6"	CI. F-4 6"	CI. F-4 8"	CI. F-4 12"	E-8 Removal of CI B-1	E-12 L-10 PIPE REMOVAL SODDING 15" & UNDER	E-8 REMOVAL & DISPOSAL GUTTER	I-15 GUARD RAIL STD. TYPE DEEP REBUILT	E-8 Removal Disposal Ex. 1 ft. Part Sq. Yd. (SPECIAL)	CI E-1 15"	CI E-1 12"
		SQ. YD.	SQ. YD.	CU. YD.	SQ. YD.	EA.	CU. YD.	EA.	LF.	LF.	LF.	LF.	LF.	SQ. YD.	LF.	LF.	LF.	LF.
		325	507		125 125													
507	507																	
507	507																	
250	507			0.26		2	1.7			86								
300	2							1										
1696	86						142	1										
300	2								246	246	606							
143.7	2								130	150	150							
1	1									10	10							
2	1																	
86	10																	
467	82												28	412				
*325	82												16	55				
*125	14												1.8					
56	14														525			
14	14														525			
507	56														800			
27	27																	
10	10																	
27	27																	

SEE NO.	STATION TO STATION	SIDE	
1UD	50+00 ~ 53+96	RT.	
2UD	50+00 ~ 53+96	RT.	
3UD	51+04 ~ 60+00	RT.	
4UD	54+00 ~ 60+00	RT.	
1DR	55+81 ~ 59+80	RT.	
2DR	54+20 ~ 54+30	LT.	
3DR	55+05 ~ 55+50	LT.	
1SS	54+00	RT.	
1D	54+07 ~ 55+57	LT.	
2D	54+07 ~ 55+57	RT.	
3D	55+24 ~ 59+50	RT.	
4D	59+50 ~ 60+00	RT.	
5D	59+60 ~ 60+00	LT.	
1C	54+80 ~ 59+86	LT.	
2C	54+80 ~ 59+86	LT.	
3C	54+70 ~ 59+70	RT.	
4C	53+80 ~ 59+80	LT.	
1R	54+00		L.T.
1-2	56+14 ~ 60+00		LT & RT.

TOTALS

* TOTALS TO SHEET NO. 18

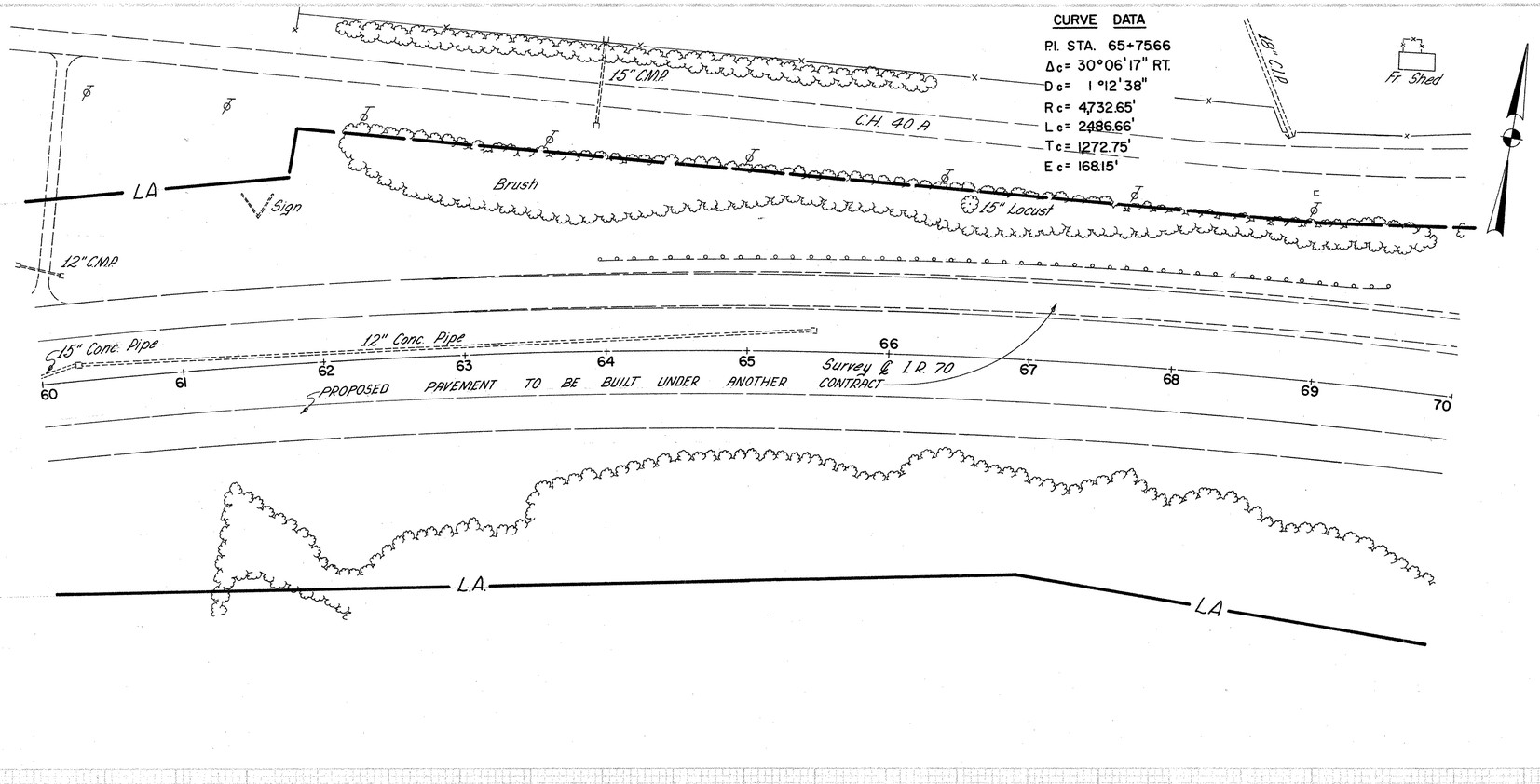
STA. 50+00 TO STA. 60+00

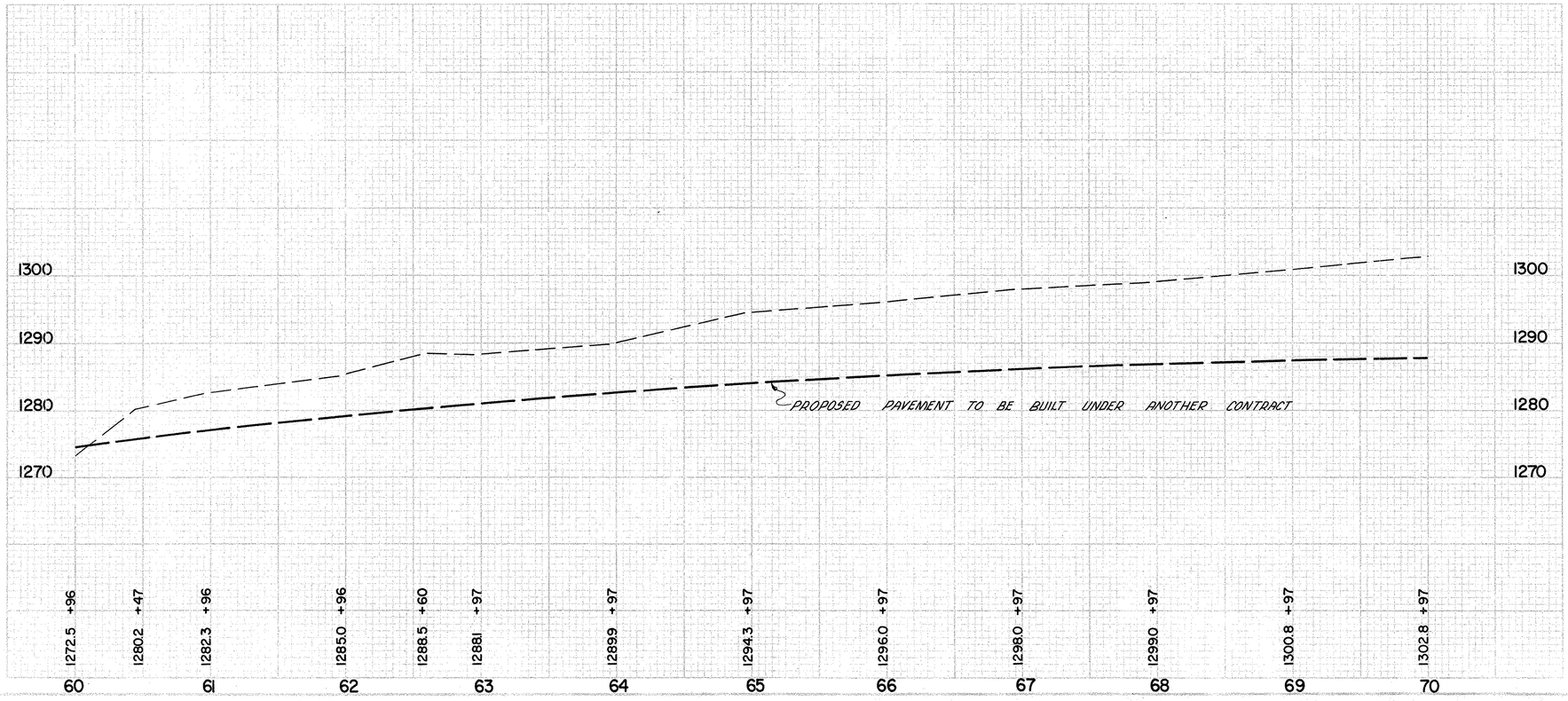
GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.68 BEL – 40 – 0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

61
485





ESTIMATED QUANTITIES

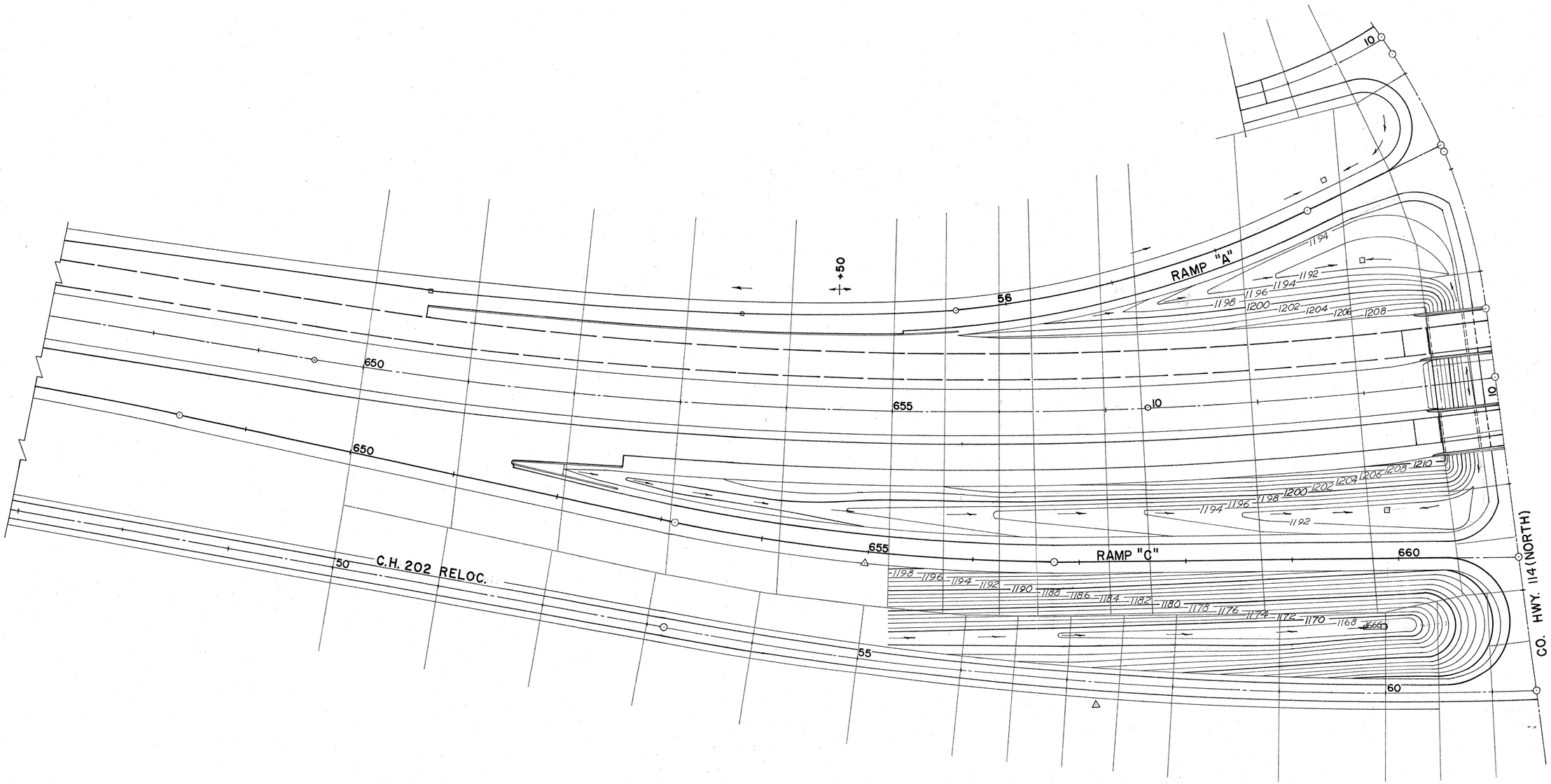
REF NO.	STATION TO STATION	SIDE

STA. 60+00 TO STA. 70+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

62
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

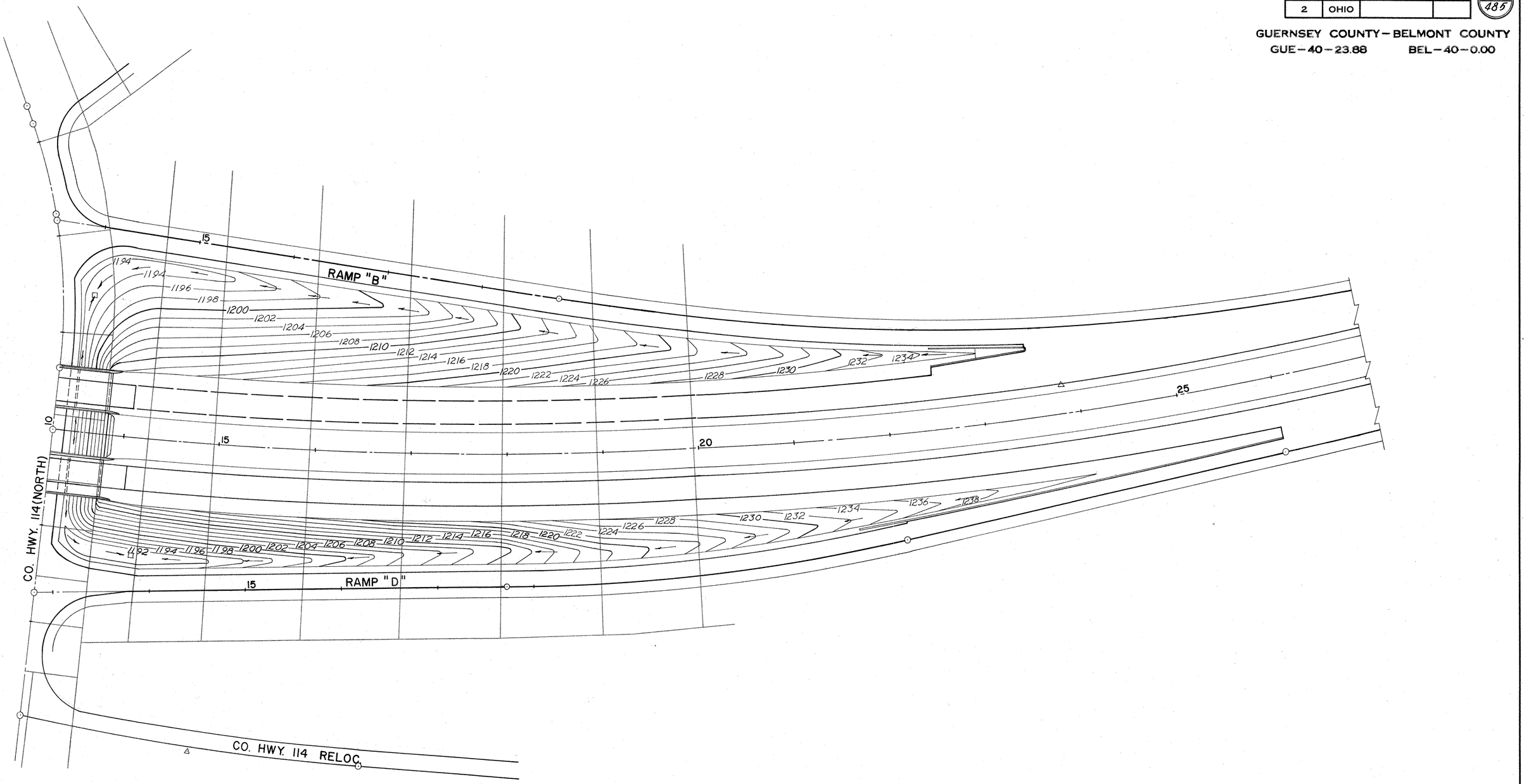


MATCHLINE DIAGRAM & GRADING PLAN RAMPS "A" & "C" AND C.H. 202 RELOC. FAIRVIEW INTERCHANGE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

63
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



MATCHLINE DIAGRAM AND GRADING PLAN RAMPS "B" & "D" AND CO. HWY. 114 RELOC. FAIRVIEW INTERCHANGE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

64
485

GUERNSEY COUNTY — BELMONT COUNTY
GUE — 40 — 23.88 BEL — 40 — 0.00

RAMP "A"

PROFILE GRADE
RIGHT EDGE

1196.23 1196.57 1196.91 1197.24 1197.59 1197.92 1198.28 1198.62 1198.96 1199.32 1199.66 1200.01 1200.35 1200.64 1200.89 1201.11 1201.30 1201.49 1201.66 1201.57 1201.52 1201.41 1201.25 1201.05 1200.80 1200.51 1200.17 1199.76 1199.33 1198.84 1198.33 1197.70 1197.09 1196.48 1195.84 1195.25 1194.92 1194.78 1194.95 SEE PAV'T DETAILS

1195.88 1196.22 1196.55 1196.88 1197.22 1197.55 1197.90 1198.24 1198.58 1198.93 1199.27 1199.61 1199.95 2000.31 2000.41 2000.48 2000.54 2000.58 2000.56 2000.51 2000.40 2000.24 2000.04 1999.79 1999.50 1999.16 1998.75 1998.32 1997.83 1997.32 1996.80 1996.29 1995.78 1995.26 1994.85 1994.68 1994.72 1995.01 1995.40 1995.54

+52.42 Rt. 1197.88

+52.42 Lt. E 1191.58 Cont. on Sheet No. 49

(1 Line 6"C1.I-3 Lt. 430' Below Edge Pav't.

GRAPHIC

+0.24%

P.V.I. STA. 656+25
ELEV. 1200.90

+00 Lt. E 1196.28

+36 Lt. E 1196.28

300' V.C.

(1 Line) 6"C1.I-3 430' Below Edge Pav't.

+16 Lt. E 1190.70

-2.05%

+35 Lt. E 1190.64

100' V.C.

P.V.I. STA. 659+50
ELEV. 1194.23

+1.56%

(1 Line) 6"C1.I-3@.3%

+10 Lt. E 1190.87

+33.86

7+27 CH 1140 Rt. Side E.=1192.70

For Plan of Ramp "A" See Sheet Nos. 48 & 52

19' Lt. Sta 659+20
Std. No. 5 C.B.
E Grate 1192.70
E 15"C1.I-1-1189.95
E 6"C1.F-4-1190.00

1200
1190
1180

650 651 652 653 654 655 656 657 658 659 660 661

1197.9 1198.8 1199.9 2001.4 2003.3 2002.9 2001.2 2000.4 2003.1 2003.5 2002.7 2001.4 1999.6 1998.9 1996.7 1993.6 1992.9 1990.4 1989.7 1988.7 1990.5 1993.2 2000.9 2001.4 2001.7 2001.3 1996.8 1999.0

+79 +73 +83 +28 +42 +54 +73 +81 +33

PROFILE GRADE
LEFT EDGE

119.04 1191.28 1191.75 1192.21 1192.67 1193.11 1193.57 1194.00 1194.45 1194.90 1195.35 1195.80 1196.25 1196.70 1197.15 1197.62 1198.09 1198.51 1198.89 1199.28 1199.66 2000.05 2000.45 2000.82 2001.14 2001.41 2001.62 2001.78 2001.88 2001.93 2001.93 2001.87 2001.76 2001.60 2001.38 2001.11 2000.78 2000.40 1999.97 1999.51 1999.05 1998.59 1998.13 1997.67 1997.21 1996.75 1996.29 1995.83 1995.37 1994.91 1993.99 1993.53 1993.14 1992.91 1992.81 1992.88 1993.13 1993.29 1993.56 1993.85 1993.99 1994.05

+35.65 Rt. Out. E 1186.74

+35.65 Rt. 1198.40

6"C1.I-3@.3% (1 Line)

+52 Rt. E 1197.13

+1.60%

GRAPHIC

(1 Line) 6"C1.I-3 Rt. 430' Below Edge Pav't.

+50 Lt. E 1196.03

+56 Lt. Double Tee E 1195.71

25' Rt. +56 E 8"C1.F-4-1193.95

+00 Lt. E 1197.24

+96 Lt. E 1197.24

400' V.C.

(1 Line) 6"C1.I-3 430' Below Edge Pav't.

-1.84%

+50 Lt. E 1192.50

+50 Rt. E 1192.45

+25 Rt. E 1188.61

P.V.I. STA. 660+00
ELEV. 1192.15

+1.70%

6"C1.I-3@.3%

150' V.C.

11+00 CH 114 (N) Lt. Side Cont from Sht. No. 50 A E.=1191.45

12+25 CH 114 N Rt. Side E. 6"I-3=1189.49

+08.38

+50 Rt. Outside E 1188.39

25' Rt. +50 E 8"C1.F-4-1185.61

+50 Lt. Side E.=1188.49

For Plan of Ramp "C" See Sheet Nos. 48 & 52

1220
1210
1200
1190
1180
1170
1160
1150
1140
1130

RAMP "C"

646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661

1153.9 1165.2 1185.6 1186.1 1185.8 1190.8 1192.9 1192.4 1201.9 1210.7 2018.0 2022.7 2022.3 2015.9 2010.2 2000.0 1984.8 1981.6 1976.0 1971.6 1964.1 1961.5 1955.6 1953.1 1949.6 1949.6 1947.2 1946.8 1944.3 1943.9 1952.3 1952.4 1949.4 1945.7 1949.6 1947.2 1942.3 1941.2 1937.4 1933.5 1936.4 1940.0 1951.5 1957.4 1958.4 1968.1 1979.4 1989.7 1995.3 1995.5 1995.5

+40 +40 +61 +65 +85 +10 +20 +23 +78 +85 +10 +18 +27 +21 +72 +82 +45 +52 +61 +36 +65 +83 +94 +10

PROFILES: RAMP "A", STA. 650+52.42 TO STA. 660+33.86 & RAMP "C", STA. 646+35.65 TO STA. 661+08.38

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

65
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00

CO. HWY. 40 A

	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
LEFT EDGE															
PROFILE GRADE						1201.48	1200.48	1199.40	1198.40	1195.10	1193.20	1190.50	1188.24	1187.23	1186.85
RIGHT EDGE						1201.48	1200.42	1199.33	1196.98	1194.38	1191.97	1189.34	1188.83	1188.03	
							+80.15								

1220
1210
1200
1190

25' Feathering

Graphic Grade

25' Feathering

Begin Work Sta 8+55

End Work Sta 11+25

	1199.1	1202.5	1205.1	+37	+58	1206.1	1210.6	PVI STA. 15+20.37 ELEV. 1192.85	1214.7	1217.4	1219.9	1222.5	1225.8	1227.2	1229.0	1230.5	1230.7	1231.2	1230.2	1229.7	+23	1228.9	1231.2	1232.9	1234.7	1237.5	1241.6	1246.1	1247.1	1246.6	1246.5	1246.1	1245.3	+64	1244.7	1245.6	1246.5	1247.2	1247.8	1248.2	+20	1248.4
	14						15			16			17			18			19			20			21			22			23			24			25			26			27			28			29	

PROFILE GRADE 1195.52 1194.73 1194.41 1194.34 1194.12 1194.12 1194.32 1194.74 1194.85 1195.57 1196.52 1197.11 1198.85 1203.63 1209.63 1214.13 1214.39 1215.63 1215.92 1217.13 1217.45 1218.63 1219.00 1220.13 1220.53 1221.63 1222.05 1222.35 1222.77 1223.12 1223.54 1224.55 1224.97 1225.90 1226.32 1227.19 1227.61 1228.40 1228.82 1229.54 1229.96 1230.61 1231.03 1231.10 1231.52 1231.61 1232.03 1232.54 1232.96 1233.39 1233.81 1234.18 1234.60 1234.69 1235.34 1235.53 1236.03 1236.10 1236.35 1236.61 1236.92 1237.10 1237.59 1238.06 1238.53 1239.00 1239.42 1239.84 1240.23 1240.67 1241.11 1241.52 1241.91 1242.27 1242.60 1242.89 1243.16 1243.38 1243.76 1244.00 1244.22 1244.42 1244.59

RIGHT EDGE 1194.34 1194.12 1194.32 1194.74 1194.85 1195.57 1196.52 1197.11 1198.85 1203.63 1209.63 1214.13 1214.39 1215.63 1215.92 1217.13 1217.45 1218.63 1219.00 1220.13 1220.53 1221.63 1222.05 1222.35 1222.77 1223.12 1223.54 1224.55 1224.97 1225.90 1226.32 1227.19 1227.61 1228.40 1228.82 1229.54 1229.96 1230.61 1231.03 1231.10 1231.52 1231.61 1232.03 1232.54 1232.96 1233.39 1233.81 1234.18 1234.60 1234.69 1235.34 1235.53 1236.03 1236.10 1236.35 1236.61 1236.92 1237.10 1237.59 1238.06 1238.53 1239.00 1239.42 1239.84 1240.23 1240.67 1241.11 1241.52 1241.91 1242.27 1242.60 1242.89 1243.16 1243.38 1243.76 1244.00 1244.22 1244.42 1244.59

+49.34 +20.37 +20.37 +20.37 +12.00 +02.00 +22.97

PVI STA. 21+87 ELEV 1232.85

+2.00%

GRAPHIC

36' Lt. Sta 8+62 C.H. 114 – 70' Rt. Sta. 14+00 Std. No. 5 C.B. E Grate 1192.40 E 15" C.I. I-1 1189.40 E 6" C.I. I-4 1189.88

200' V.C.

PVC STA. 14+20.37

PVT STA. 16+20.37

7+27 C.H. 114 (N) Lt Side E = 1192.70

+6.00%

(1 Line) 6" C.I. I-3 Lt. 2.80' Below Edge Pav't

Ramp "B" +15 Lt. Edge E 6" C.I. I-3 1219.73

For Continuation of Underdrains, See Sheet No. 57

PVC STA. 20+12

PVT STA. 23+62

350' V.C.

For Plan of Ramp "B" See Sheet Nos. 52 & 57

(1 Line) 6" C.I. I-3 @ 3%

+00 Lt. E = 1191.57

+50 Rt E = 1191.32

For Cont. See Sht No. 52

+50 Lt E = 1191.42

RAMP "B"

PROFILES: CO. HWY. 40 A, STA. 8+85 TO STA. 11+25 & RAMP "B", STA. 13+49.34 TO STA. 29+22.97

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

66
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

	+80.32	+55	+30	+05		
PROFILE GRADE	1193.97	1192.78	1192.90	1194.51	1195.79	1201.78
LEFT EDGE	1193.66	1192.56	1193.00	1193.55	1196.08	
		1192.57				

	1206.28	1207.78	1209.28	1210.78	1212.28	1213.78	1215.28	1216.78	1218.28	1219.78	1221.28	1222.78	1223.77	1225.78	1227.25	1228.65	1229.98	1231.25	1232.46	1233.60	1234.67	1235.68	1236.62	1237.50	1238.31	1239.05	1239.73	1240.35	1240.90	1241.38	1241.80	1242.22	1242.61	1243.02	1243.40	1243.78	1244.13	1244.46
	1206.53	1207.90	1209.26	1210.64	1212.02	1213.39	1214.77	1216.27	1217.77	1219.27	1220.77	1222.27	1224.28	1225.27	1226.74	1228.14	1229.47	1230.74	1231.95	1233.10	1234.24	1235.31	1236.29	1237.23	1238.05	1238.80	1239.48	1240.11	1240.66	1241.14	1241.56	1241.99	1242.38	1242.79	1243.17	1243.56	1243.91	1244.24

1290
1280
1270
1260
1250
1240
1230
1220
1210
1200
1190

PVI. STA. 22+00
ELEV. 1237.78

+1.80%

GRAPHIC

150' V. C.

20' Rt. Sta 13+82
Std. No. 5 C.B.
Rt. Grate 1189.50
Rt. 15" C.I. J-1 1186.80
Rt. 6" C.I. F-4 1186.89

11+00 C H 114 (N)
Cont from Sht. No. 57
Lt. Side
Rt. = 1191.45

+1.60%

+75 Lt
Rt. = 1190.04

+75 Rt
Rt. 1189.76

+95 Rt
Rt. 1189.77

12+25 Rt Side
C H 114 N
Rt. = 1190.73

PVI. STA. 14+30
ELEV. 1191.58

(1 Line) 6" C.I. I-3 2.80' Below Edge Pavt.

+6.00%

+00 Lt
Rt. 1205.10

+00 Rt
Rt. 1204.98

For Continuation of Underdrains, See Sheet No. 59

Ramp "D" 19+85 Lt. Edge
Rt. 6" C.I. I-3 1221.57

400' V.C.

For Plan of Ramp "D" See Sheet Nos. 52 & 57

	1195.5	1195.5	1197.6	1202.2	1210.4	1216.7	1220.2	1224.6	1229.9	1234.1	1242.0	1251.4	1257.7	1260.5	1260.9	1262.8	1274.7	1282.2	1285.7	1289.9	1290.4	1288.2	1285.7	1281.3	1281.8	1281.5	1280.6	1278.9	1275.9	1271.7	1270.2	1266.9	1263.6	1261.3
	+80	+09											+89	+95	+17		+78														+75			
	13		14			15		16		17			18			19			20		21		22		23		24		25		26			

RAMP "D"

PROFILE: RAMP "D", STA. 12+80.32 TO STA. 26+00

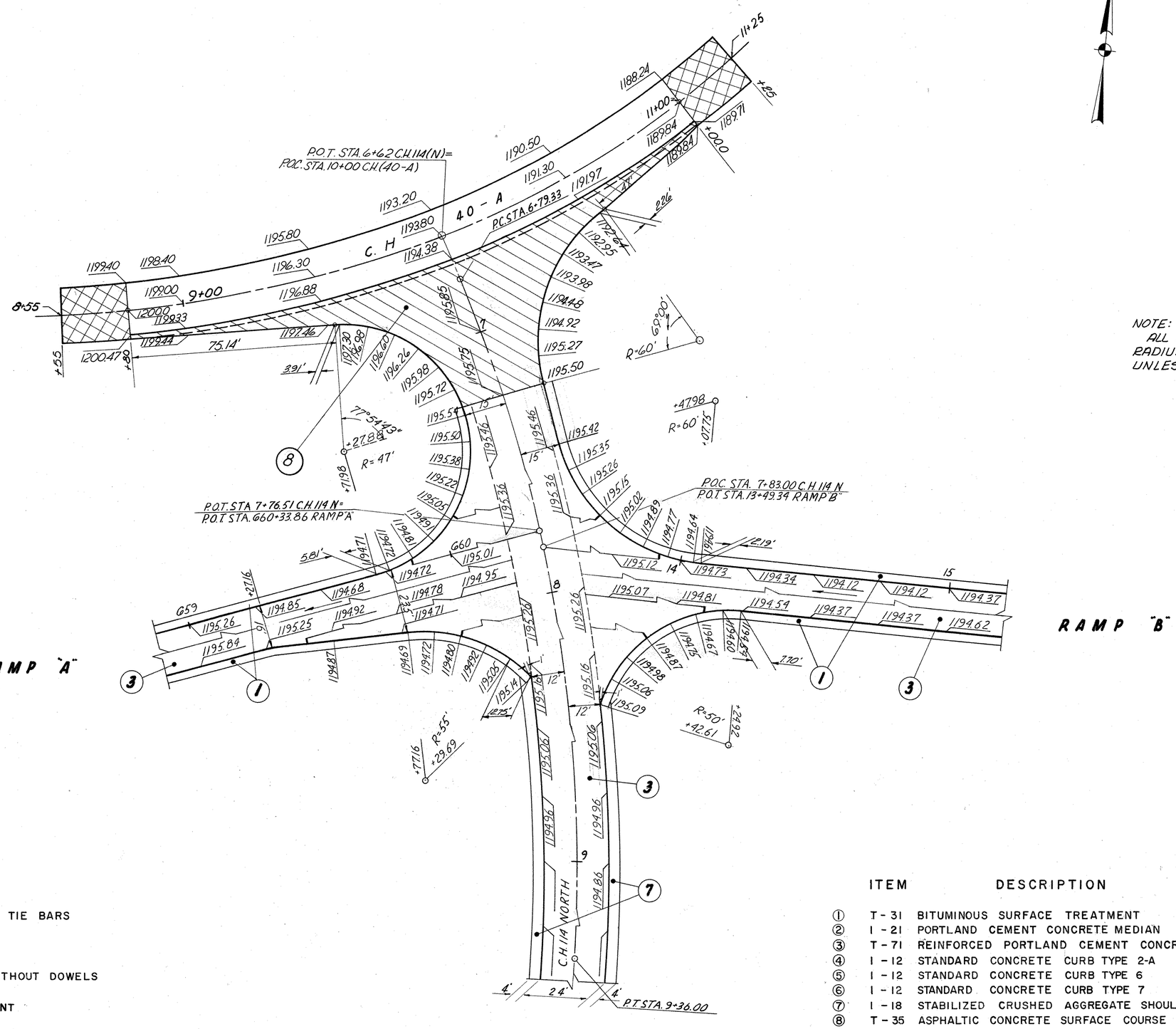
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

G7
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

Denotes Feathering

Denotes same type pav't. composition as Relocated C.H. 114 See Sheet No. 8



NOTE:
ALL PAVEMENT ELEVATIONS ON RADIUS RETURNS ARE AT 10' INTERVALS, UNLESS OTHERWISE SHOWN.

LEGEND

- STANDARD KEY JOINT WITHOUT TIE BARS
- STANDARD LONGITUDINAL JOINT
- STANDARD EXPANSION JOINT
- STANDARD KEY JOINT
- STANDARD EXPANSION JOINT WITHOUT DOWELS
- C — STANDARD CONTRACTION JOINT
- EB — STANDARD EXPANSION BOLT JOINT

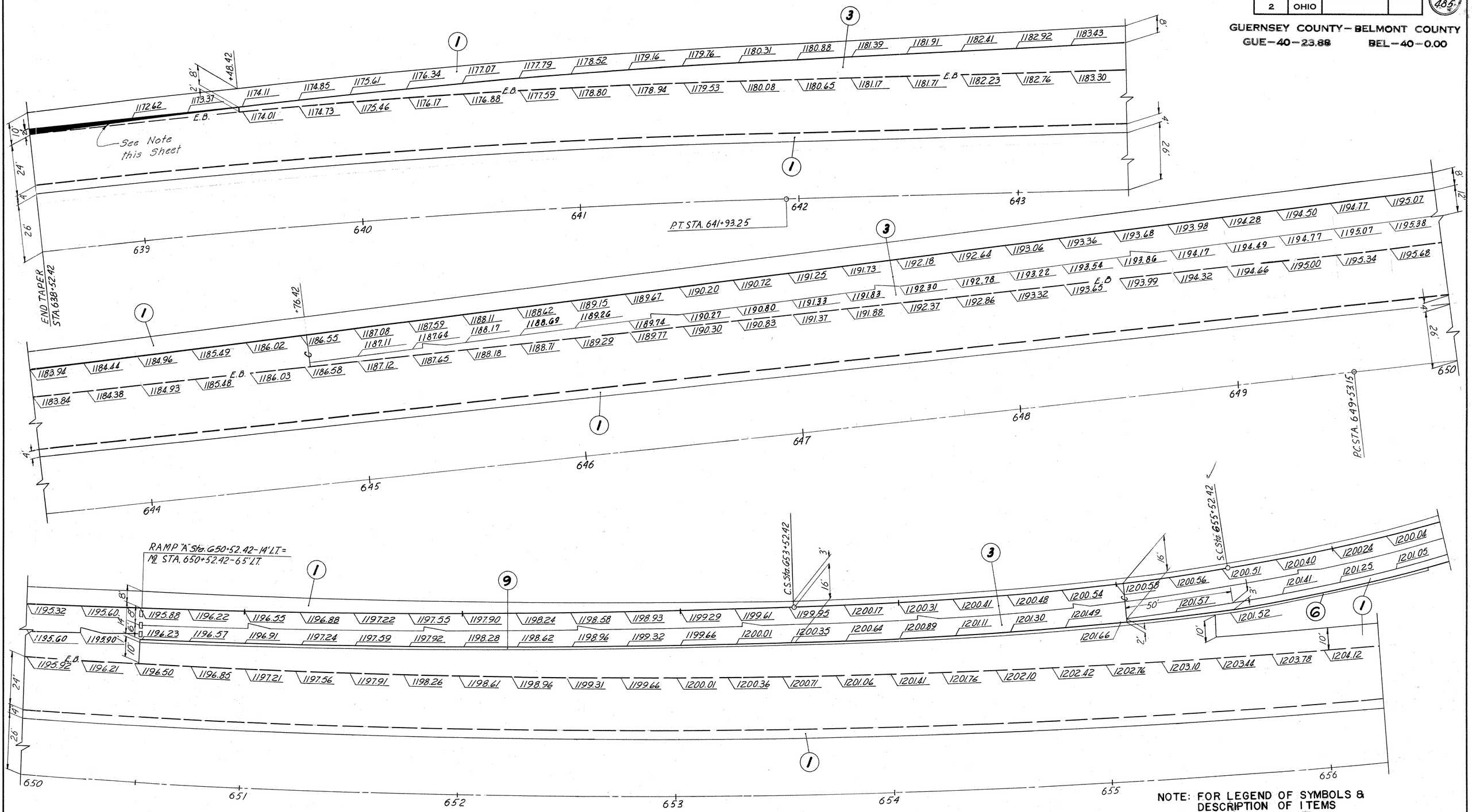
ITEM	DESCRIPTION
①	T – 31 BITUMINOUS SURFACE TREATMENT
②	I – 21 PORTLAND CEMENT CONCRETE MEDIAN
③	T – 71 REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
④	I – 12 STANDARD CONCRETE CURB TYPE 2-A
⑤	I – 12 STANDARD CONCRETE CURB TYPE 6
⑥	I – 12 STANDARD CONCRETE CURB TYPE 7
⑦	I – 18 STABILIZED CRUSHED AGGREGATE SHOULDERS
⑧	T – 35 ASPHALTIC CONCRETE SURFACE COURSE
⑨	I – 12 STANDARD CONCRETE CURB TYPE 8

PAVEMENT DETAILS RAMPS "A" & "B" FAIRVIEW INTERCHANGE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

68
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



NOTE: FOR LEGEND OF SYMBOLS & DESCRIPTION OF ITEMS SEE SHEET NO. 67

Shaded area shall be T-71 constructed to an elevation 1/2" lower than the adjacent pavement and surfaced with T-31 and No. 6 aggregate Cost of T-31 and aggregate shall be included in price bid for T-71.

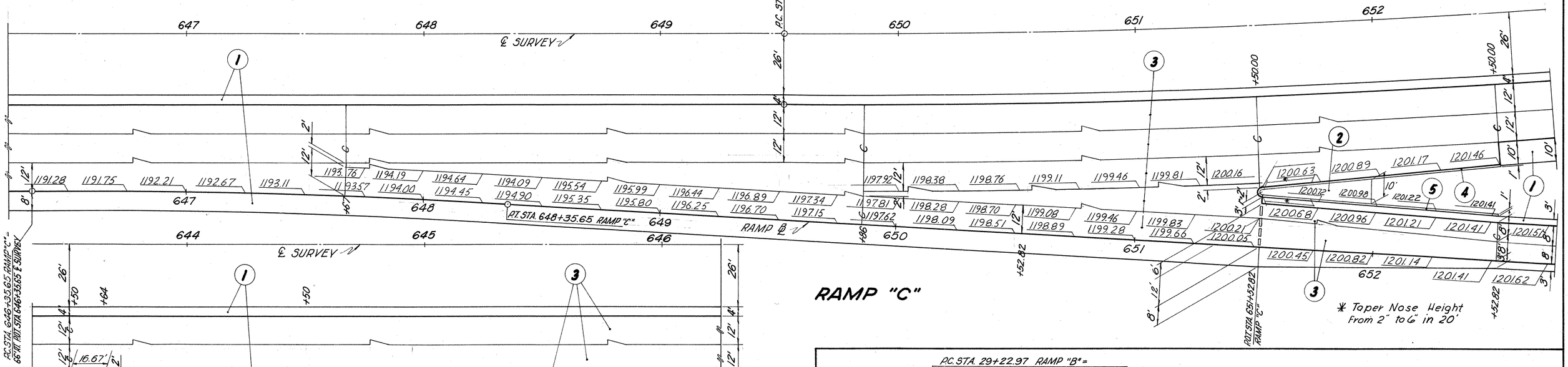
PAVEMENT DETAILS RAMP "A" FAIRVIEW INTERCHANGE

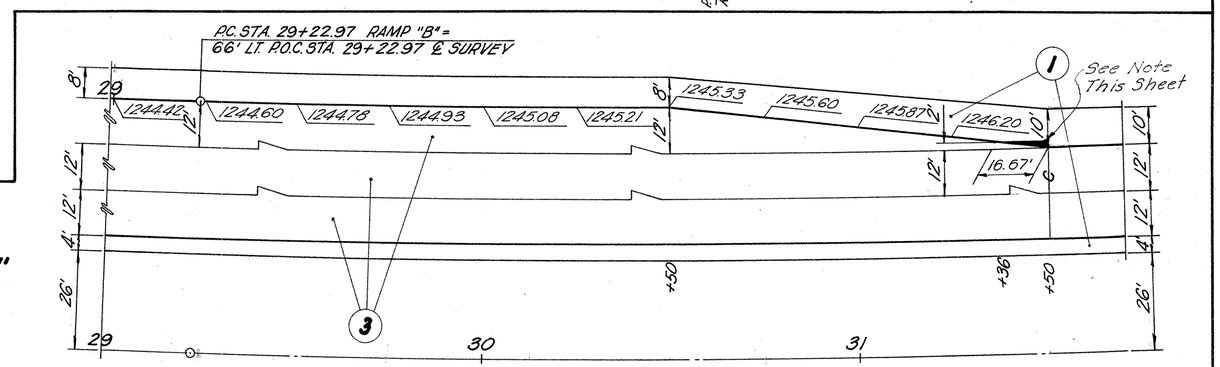
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

69
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00





NOTE: FOR LEGEND OF SYMBOLS & DESCRIPTION OF ITEMS SEE SHEET NO 67

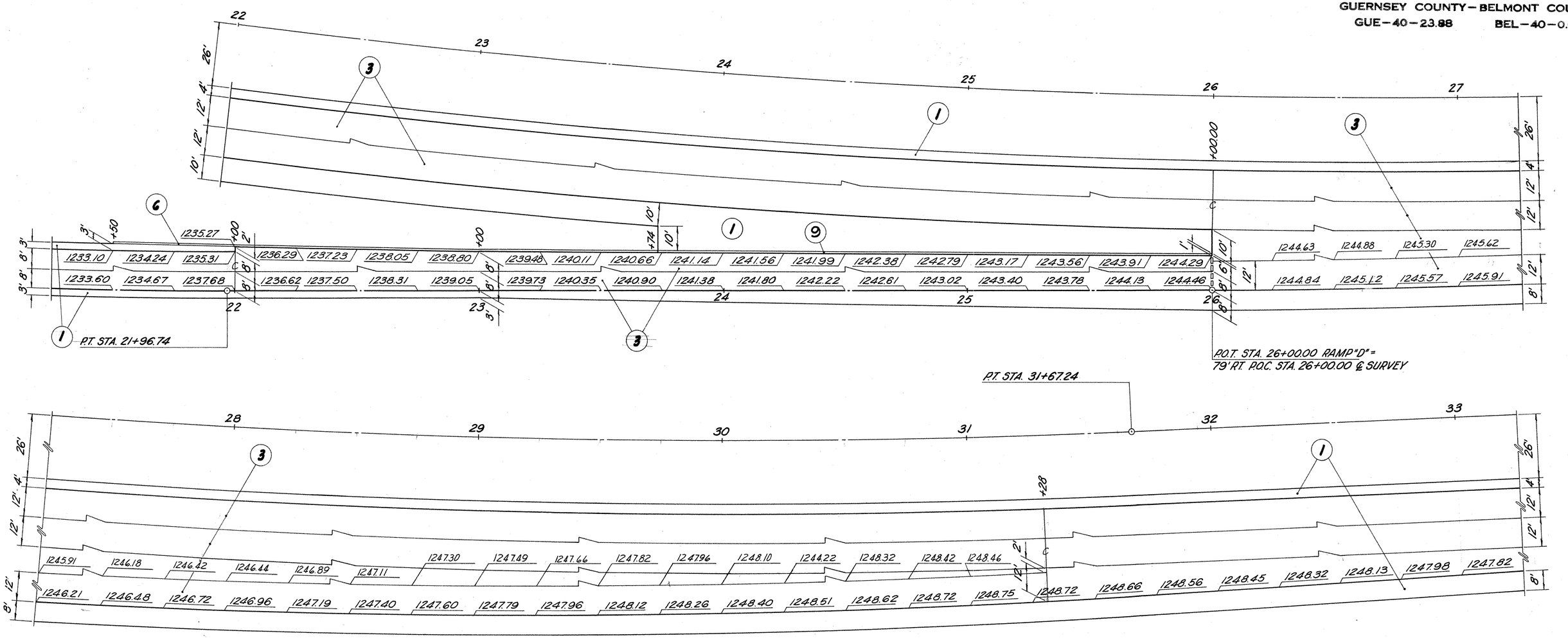
Shaded area shall be constructed to an elevation 1/2" lower than the adjacent pavement and surfaced with T-31 and No. 6 aggregate. Cost of T-31 and aggregate shall be included in price bid for T-71

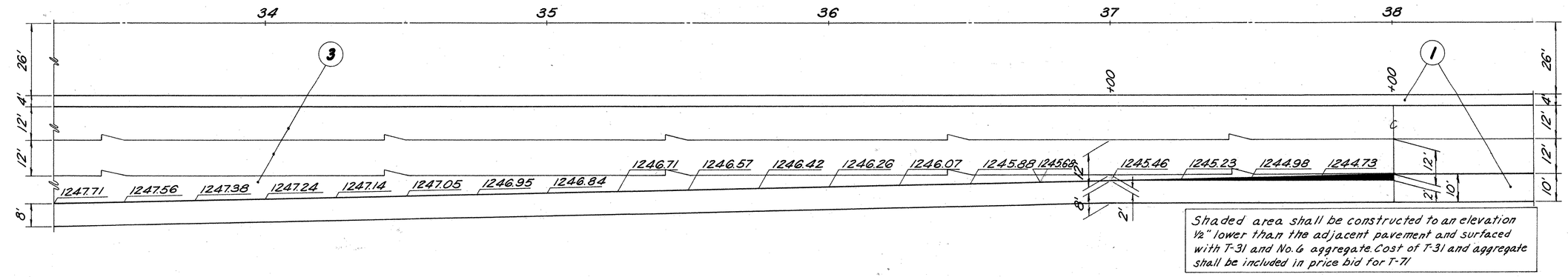
PAVEMENT DETAILS RAMPS "B" & "C" FAIRVIEW INTERCHANGE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

70
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00





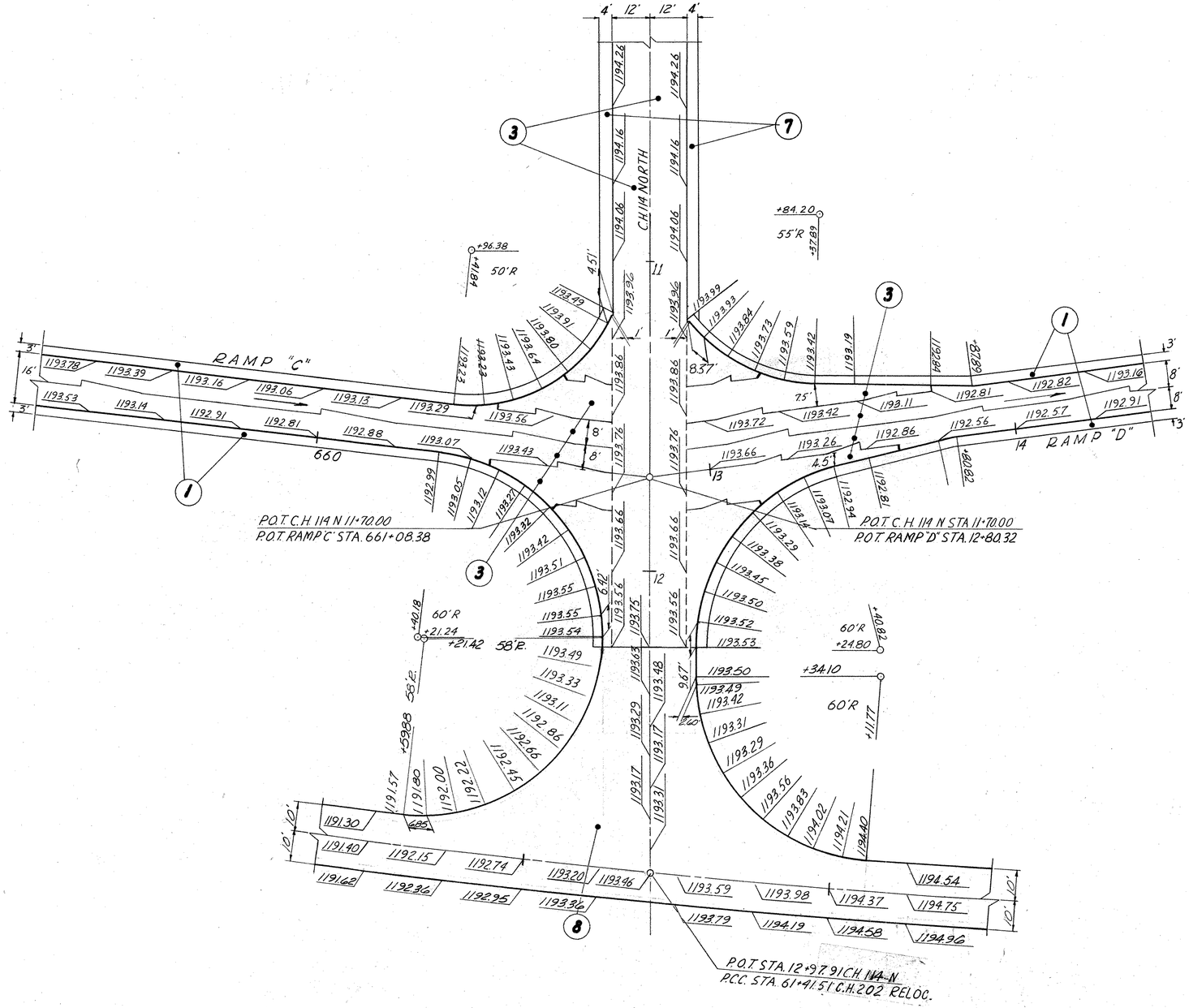
NOTE: FOR LEGEND OF SYMBOLS & DESCRIPTION OF ITEMS SEE SHEET NO. 67

PAVEMENT DETAILS RAMP "D" FAIRVIEW INTERCHANGE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

71
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



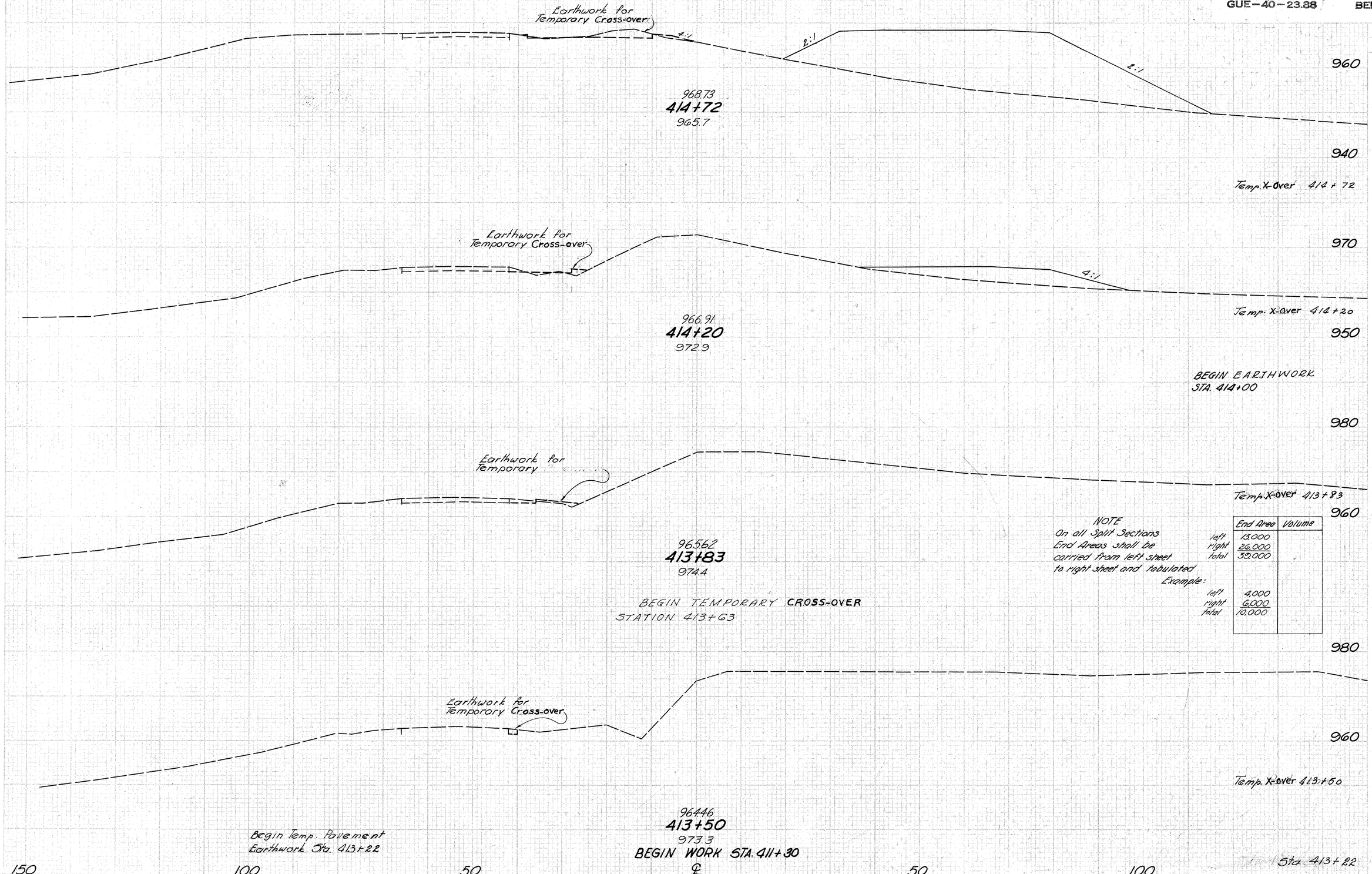
NOTE: ALL PAVEMENT ELEVATIONS ON RADIUS RETURNS ARE AT 10' INTERVALS, UNLESS OTHERWISE NOTED.

NOTE: FOR LEGEND OF SYMBOLS & DESCRIPTION OF ITEMS SEE SHEET NO. 67

PAVEMENT DETAILS RAMPS "C" & "D"; C.H. 114 N. FAIRVIEW INTERCHANGE

FED. ROAD NO.	STATE	PROJECT		72 485
2	OHIO			

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



BEGIN TEMPORARY CROSS-OVER
STATION 413+63

BEGIN WORK STA. 411+30
℄

BEGIN EARTHWORK
STA. 414+00

NOTE
On all Split Sections End Areas shall be carried from left sheet to right sheet and tabulated

Example:

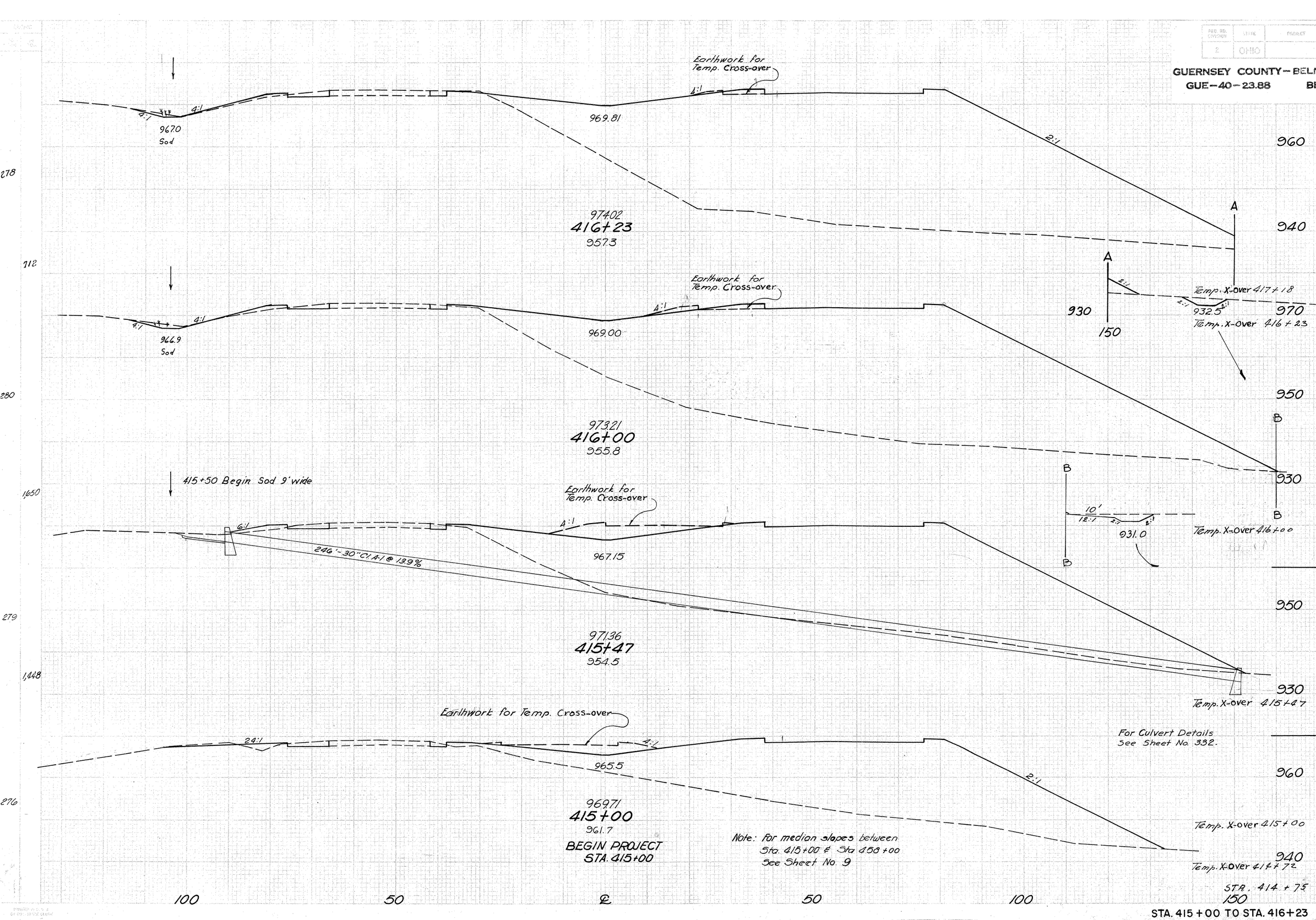
	End Area	Volume
left	13.000	
right	26.000	
total	39.000	
left	4.000	
right	6.000	
total	10.000	

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
960				
	0	884		
				0 075
940				
Temp. X-Over 414+72	21	0		
970			22	5
	0	129		
Temp. X-Over 414+20	2	5		
950			0	48
	0	0		
			4	7
980				
Temp. X-Over 413+83	4	6		
960				
			4	4
980				
960				
Temp. X-Over 413+50	2	0		
			1	0
Sta. 413+22	0	0		

STA. 413+50 TO STA. 414+72

FED. RD. DIVISION	STATE	PROJECT		73 485
5	OHIO			

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

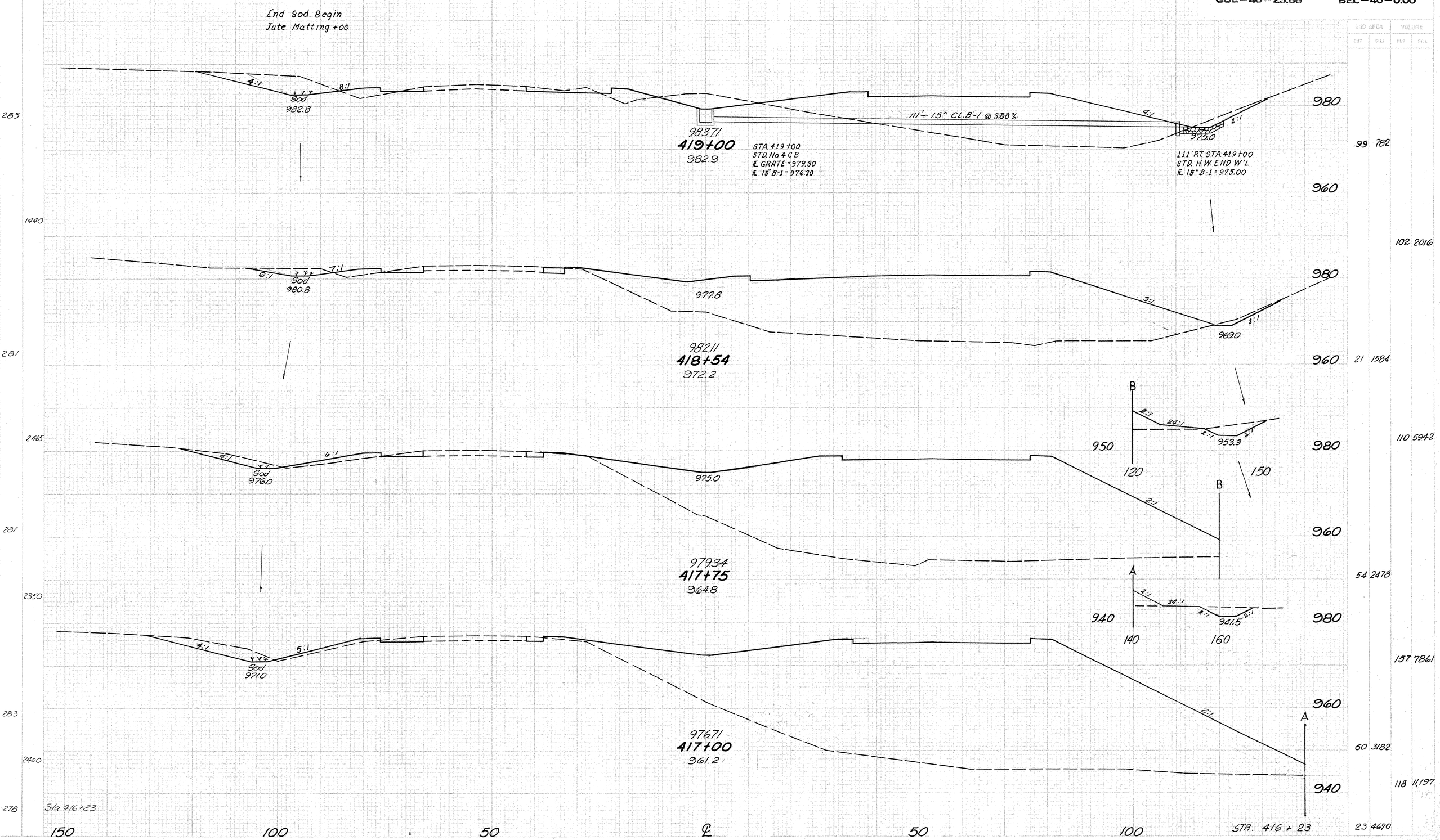


	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	23	4670		
	0	0		
			16	6
	9	3		
			18	3538
			10	5
	20	3637		
	12	9	51	6453
			12	93
	32	2938		
	0	86		
			42	4059
			0	132
	16	1725		
	0	66		
			8	1208
	21	0	11	32
	0	884		

Note: For median slopes between Sta. 415+00 & Sta. 458+00 See Sheet No. 9

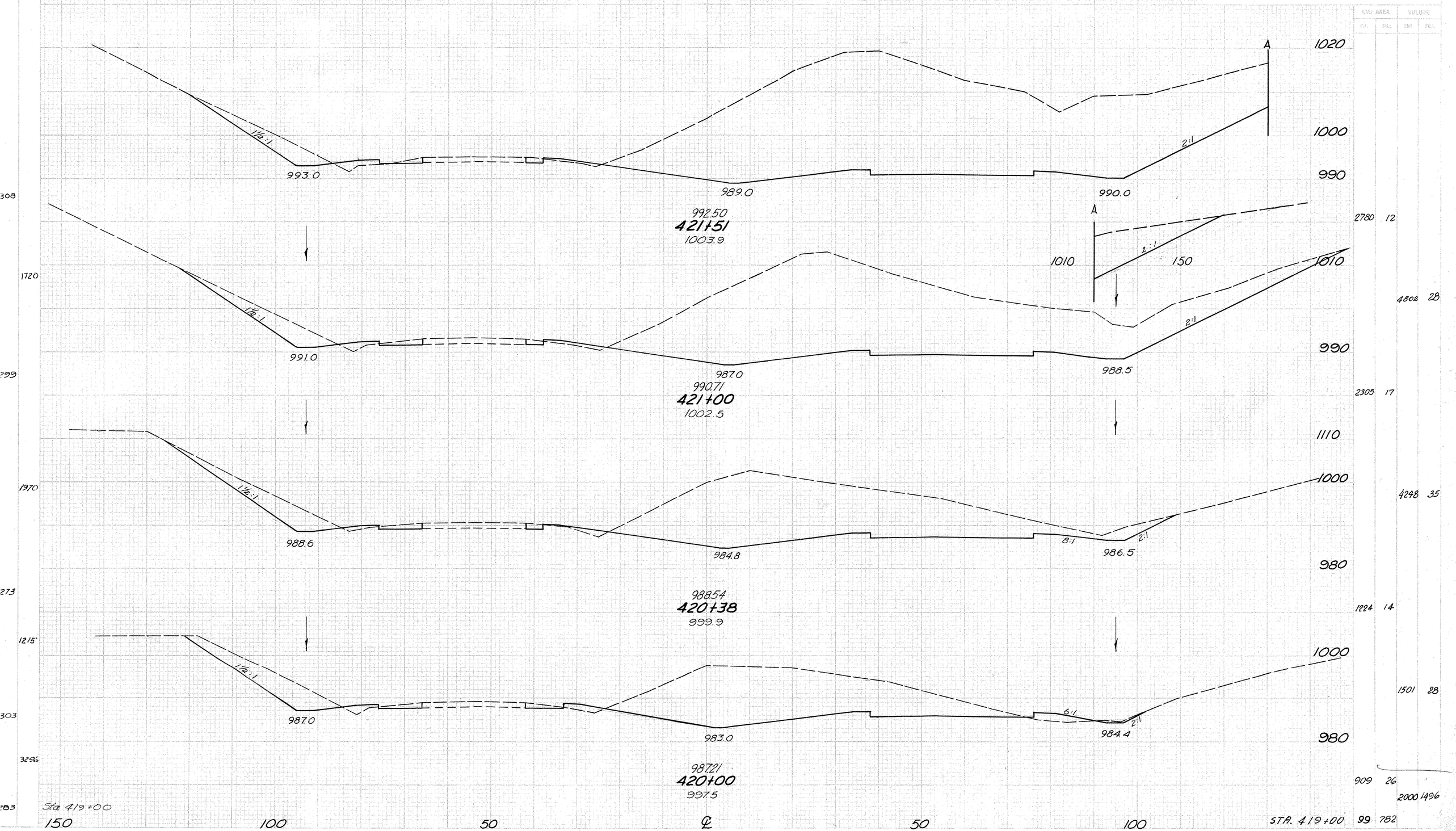
STA. 415+00 TO STA. 416+23

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



STA. 417+00 TO STA. 419+00

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2780	12		
		4802	28
2305	17		
		4248	35
1224	14		
		1501	28
909	26		
		2000	1496
99	782		

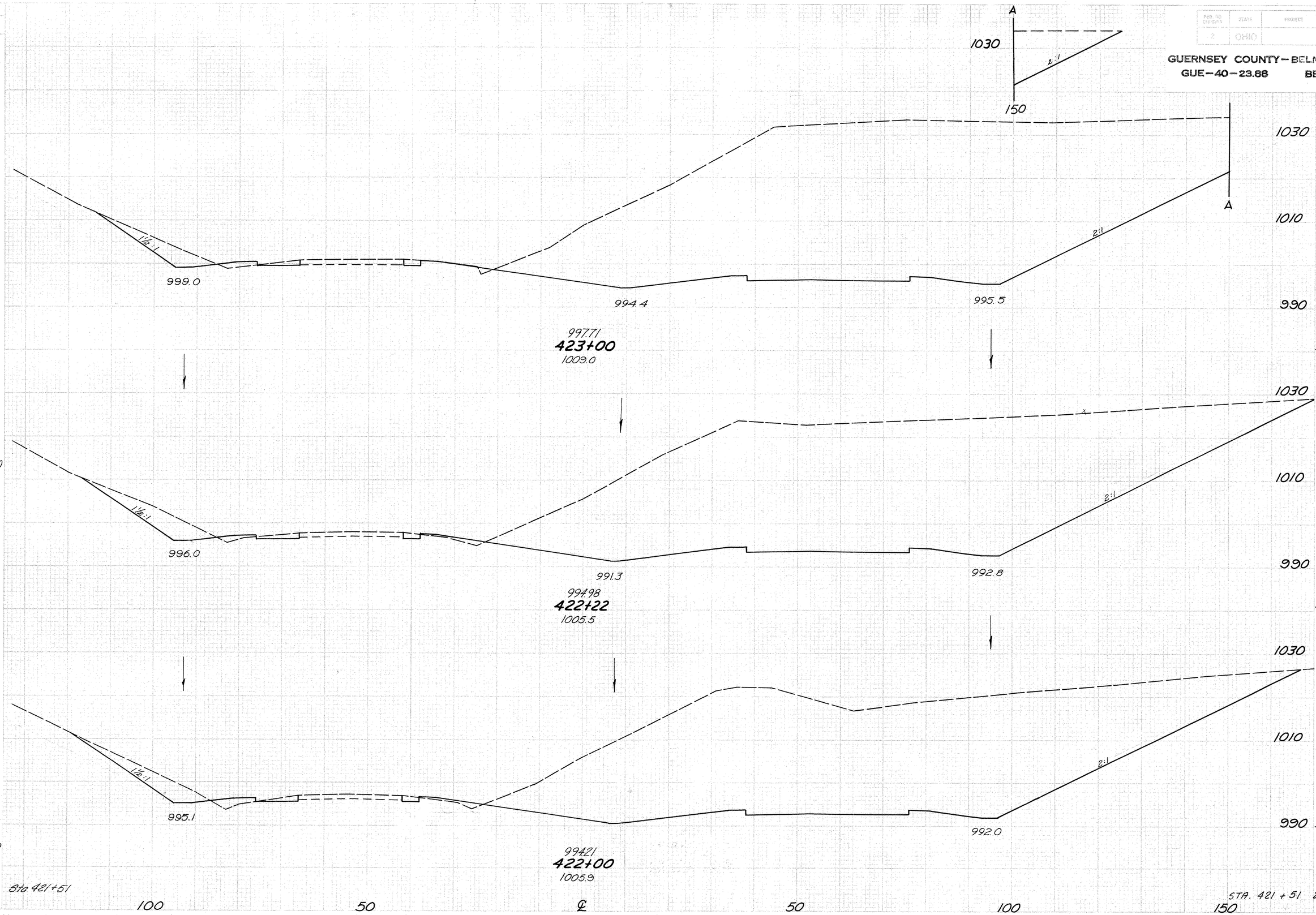
STA. 420+00 TO STA. 421+51

FED. RD. DIV. NO.	STATE	PROJECT	
2	OHIO		

76
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

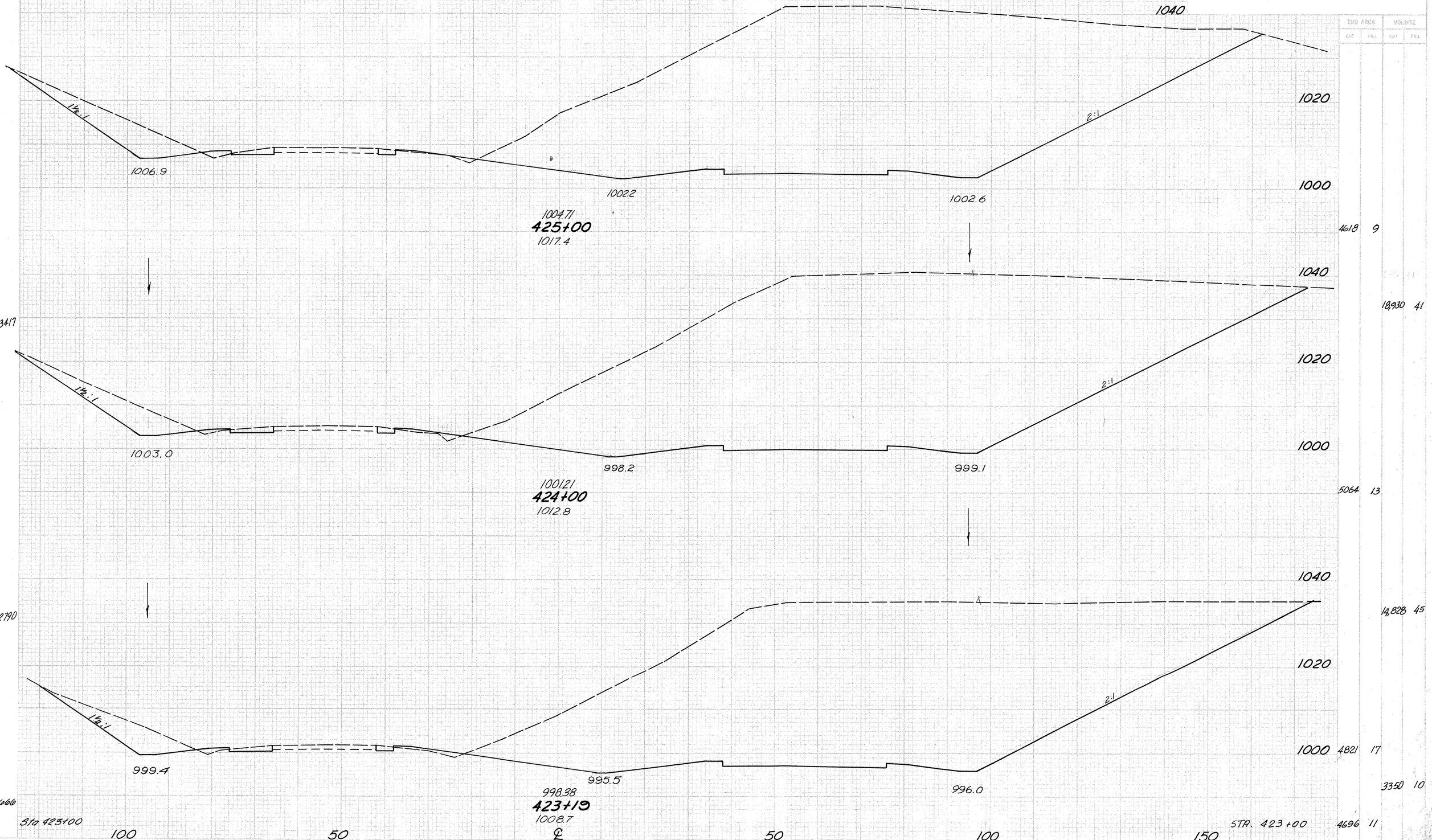
END AREA		VOLUME	
CUT	FILL	CUT	FILL



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

77
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



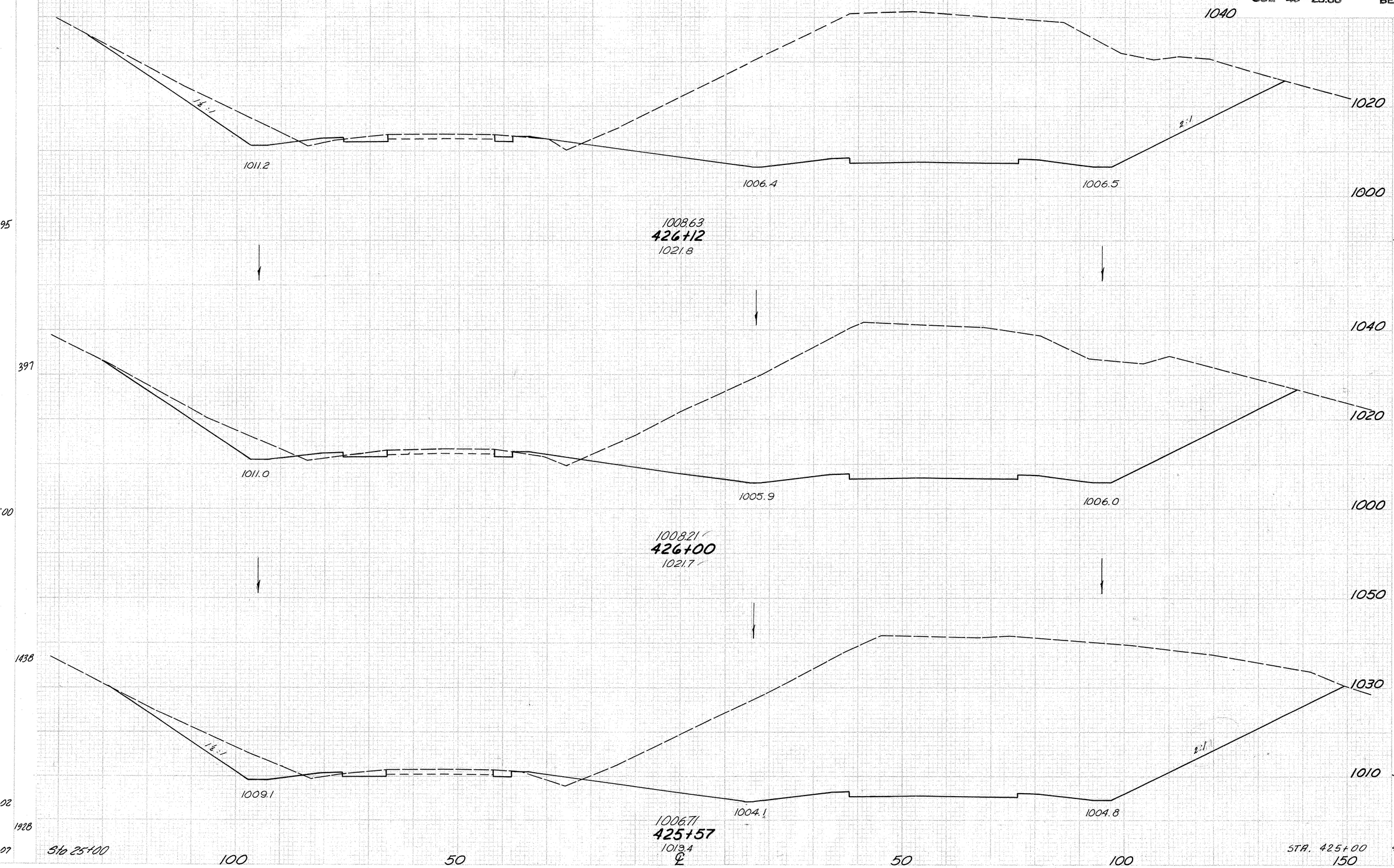
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
4618	9		
		18,930	41
5064	13		
		14,828	45
4821	17		
		3350	10
4696	11		

STA. 423+19 TO STA. 425+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

78
486

GUERNSEY COUNTY - BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00



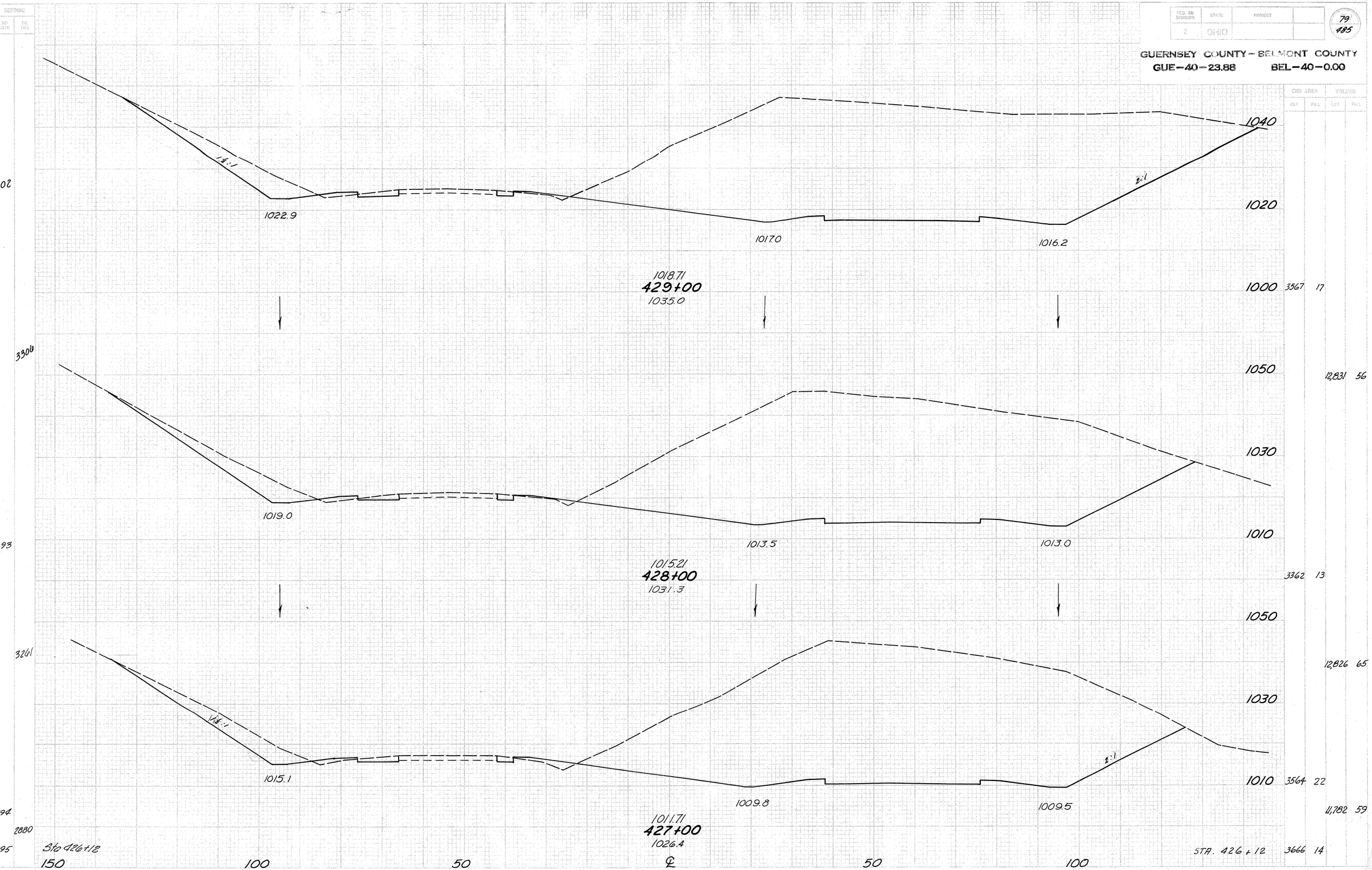
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
3666	14		
		1638	8
3703	20		
		5937	34
3752	23		
		7782	34
4618	9		

STA. 425+57 TO STA. 426+12

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

79
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



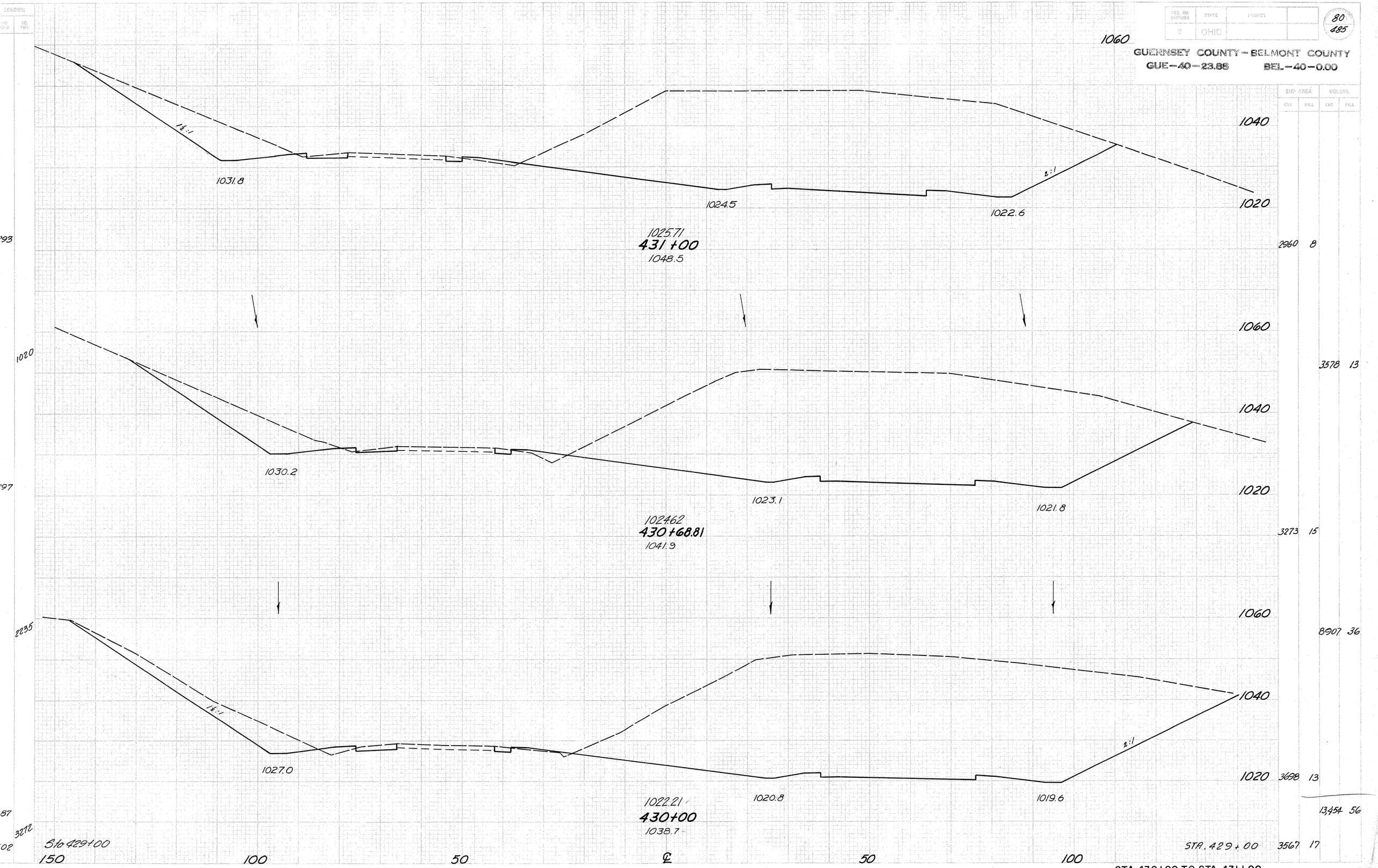
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
3567	17		
		12,831	56
3362	13		
		12,826	65
3564	22		
		11,782	59
3666	14		

STA. 427+00 TO STA. 429+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

80
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2960	8		
		3578	13
3273	15		
		8907	36
3698	13		
		13,454	56
3567	17		

STA. 430+00 TO STA. 431+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

81
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

SEEDING

CUT	FILL	CUT	FILL
		516	1355
		1421	1465
1025	227		
		2644	224
1830	15		
		4435	22
2960	8		

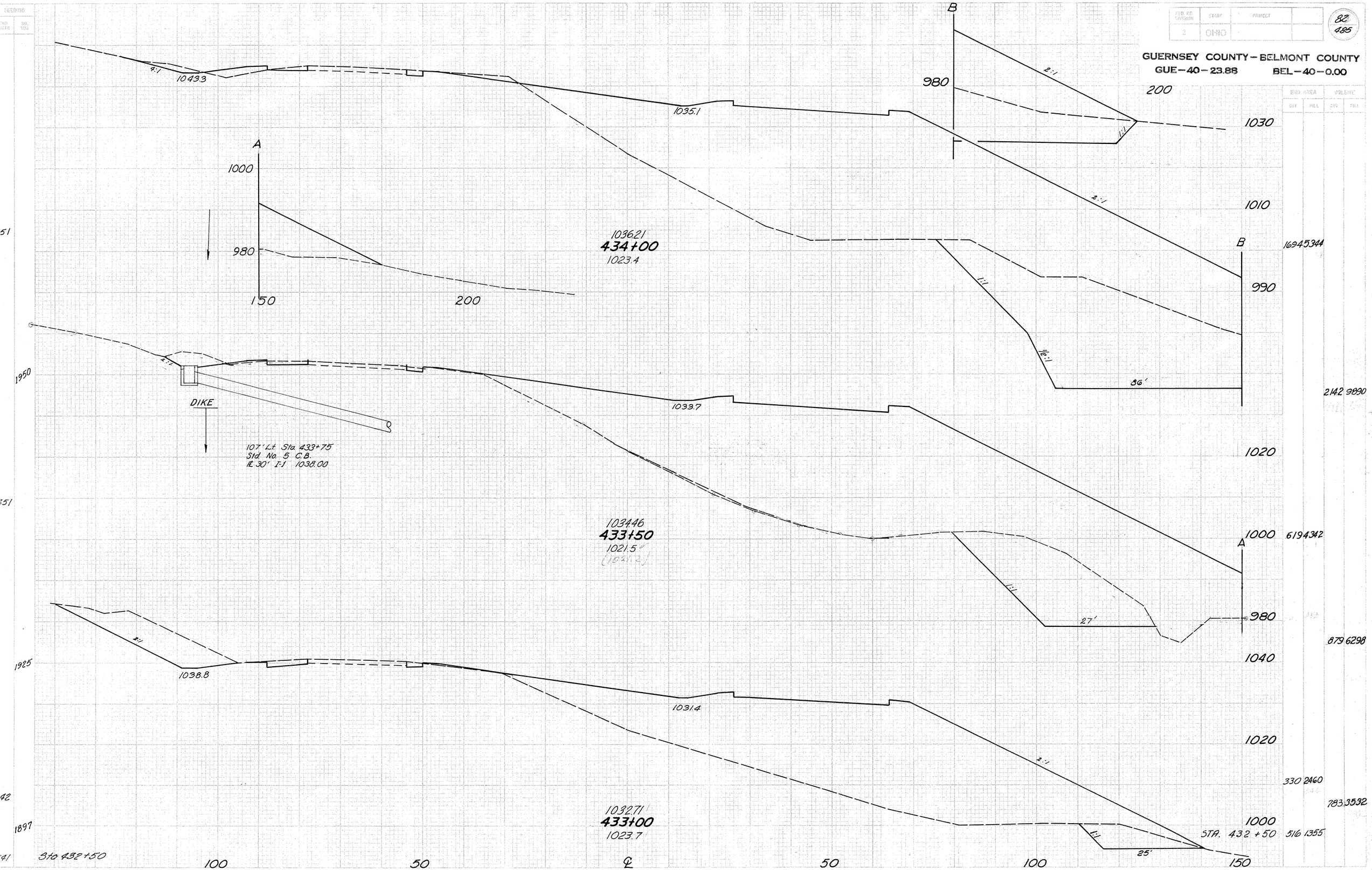
1050
1030
1010
990
1050
1030
1010
1060
1040
1020

2:1
1030.96
432+50
1031.4
1:1
25'
1875
2:1
93'-15" Cl. B-1 @ 14.01%
var.
1:1
25'
102921
432+00
1041.1
135' Rt. Sta. 432+00
Std. No. 4 C.B.
℄ Grate ≈ 1027.85
℄ 15" Cl. B-1 1025.16
108' Rt. Sta. 432+00
Std. HW-E Endwall
℄ 15" Cl. B-1 1012.14
1803
1½:1
4:1
102746
431+50
1044.3
1689
Sta 431+00
STA. 431+00
150 100 50 ℄ 50 100

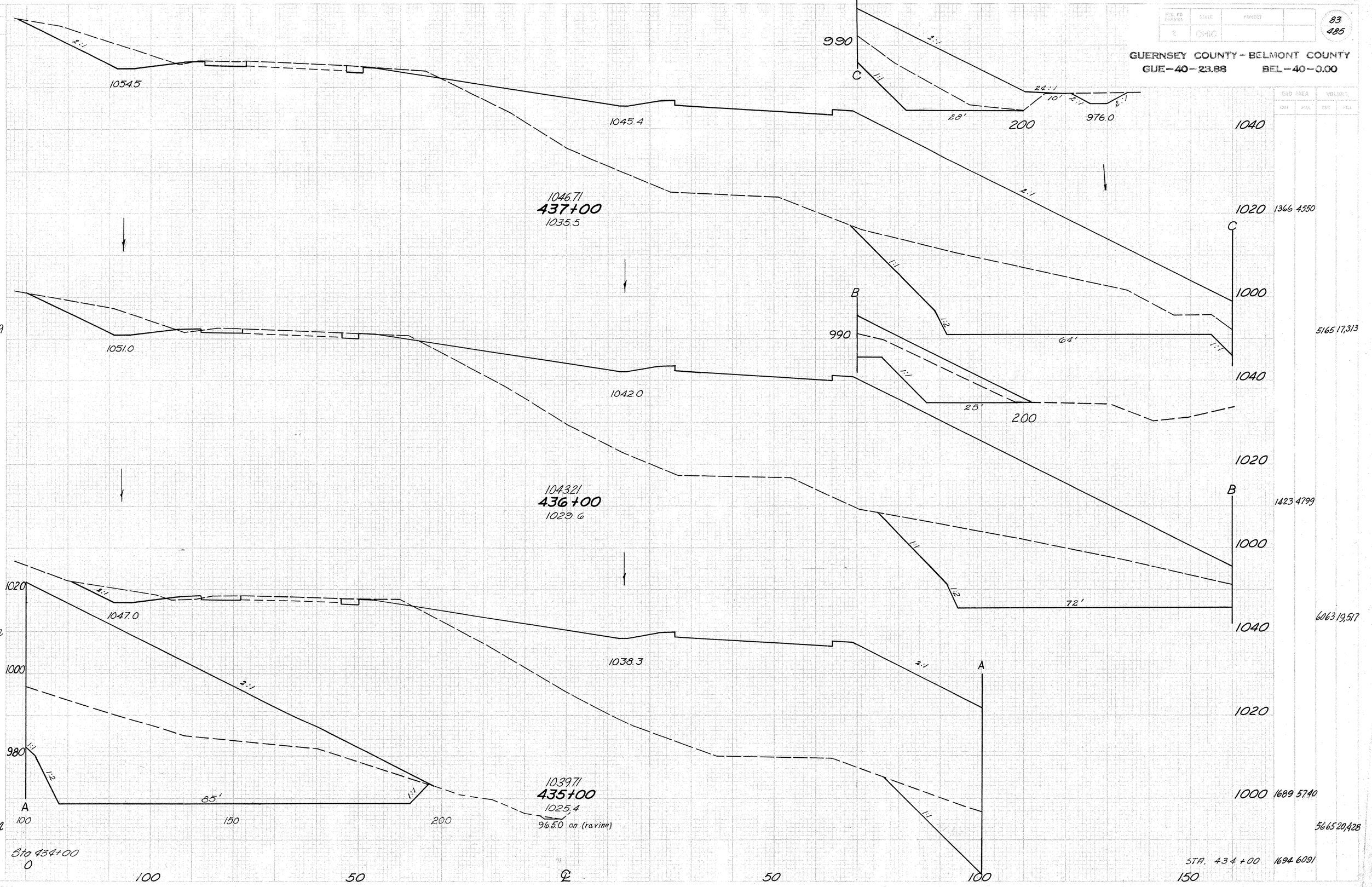
STA. 431+50 TO STA. 432+50

FED. RD. DIVISION 2 | STATE OHIO | PROJECT | 82/485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



STA. 433+00 TO STA. 434+00

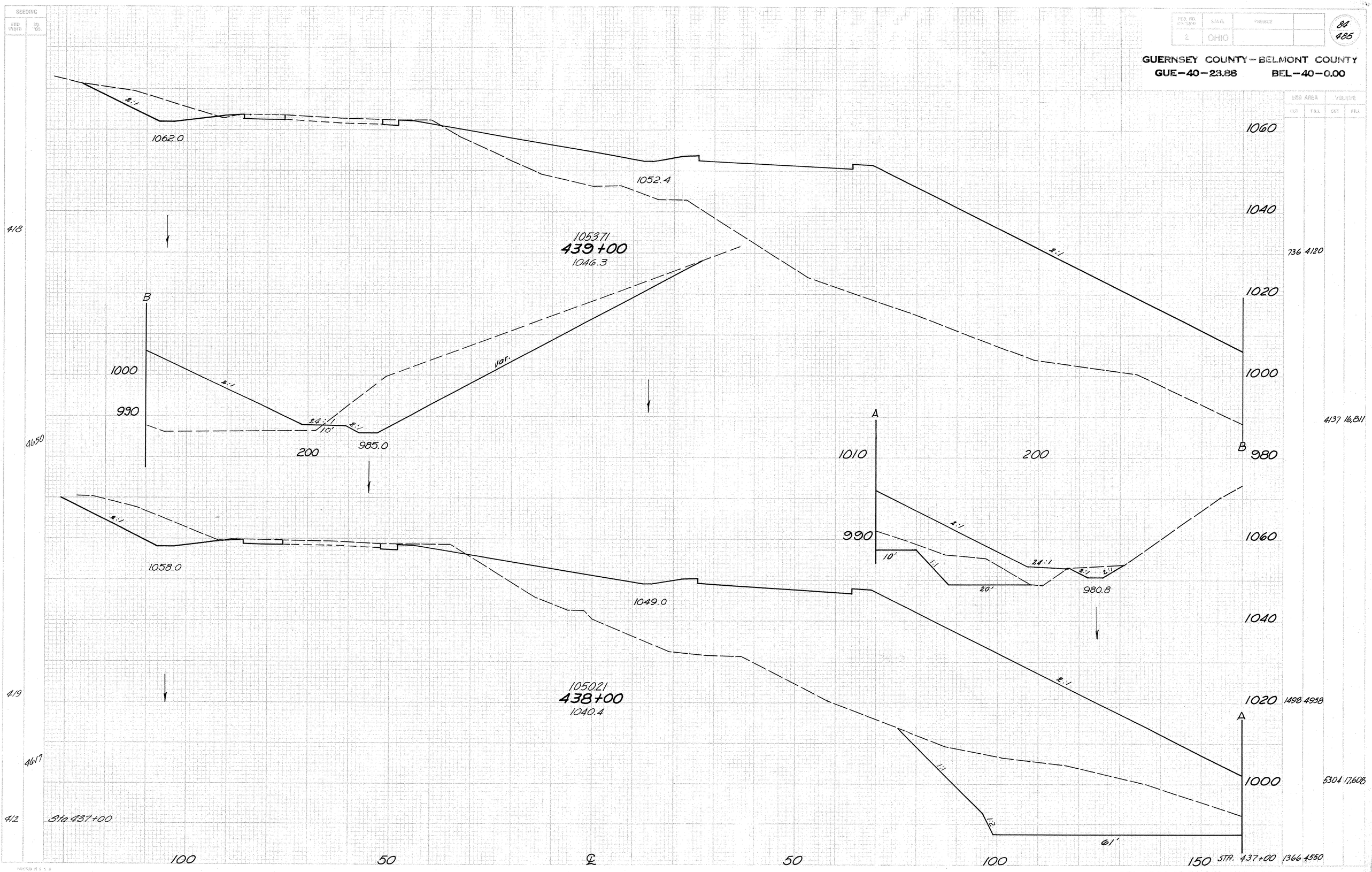


83
485
GUERNSEY COUNTY - BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00
1054.5
1045.4
1046.71
437+00
1035.5
1051.0
1042.0
1043.21
436+00
1029.6
1047.0
1038.3
1039.71
435+00
1025.4
965.0 on (ravine)
990
976.0
200
1040
1020
1000
1366 4550
5165 17,313
1423 4799
6063 19,517
1689 5740
5665 20,428
1694 6091
STA. 434+00
Sta 434+00
0
100
150
200
50
℄
STA. 435+00 TO STA. 437+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

84
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



STA. 438+00 TO STA. 439+00

FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

85
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

SEEDING	
EXC. WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

B
1010
990
2:1
24:1
10'
2:1
4:1
990.8
200
1070
1050
1030
360 4478
1064.7
2:1
6:1
1057.21
440+00
1048.0
2:1
B
1010
990
630 8152
A
1010
990
2:1
12:1
10'
2:1
4:1
990.5
200
1070
1050
1030
327 4380
A
1010
990
984 7871
STA. 439+00
736 4120
400
2241
407
889
718
1064.0
2:1
8:1
105546
439+50
1045.7
2:1
3 to 439+00
100
50
℄
50
100
150

STA. 439+50 TO STA. 440+00

PRINTED IN U. S. A.
DR. FED. HIGHWAY PROJ.

SEEDING

SHEET NO.	STATE	PROJECT	
2	OHIO		

86
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL

371

107' Lt 441+07
Std Type B, Hdw'l
IE 30" 1062.42

4:1

1059.7

1060.71
441+00
1053.2

B

1010
990

2:1 4:1 10' 2:1 2:1

996.00

200

4:1

1060
1040
1020
1000

303 2115

B

26'

1:1

353 4991

A

1010
990

2:1 4:1 4:1

990.98

195' Rt Sta. 440+49
Std. Type B, Hdw'l
IE = 990.98

200

2097

2:1 6:1

1064.2

1057.9

1060
1040

384

1058.96
440+50
1048.3

1020

120 3275

A

2178

1000

351 7268

400

316 440+00

100 50 ℄ 50 100 150

STA 440+00

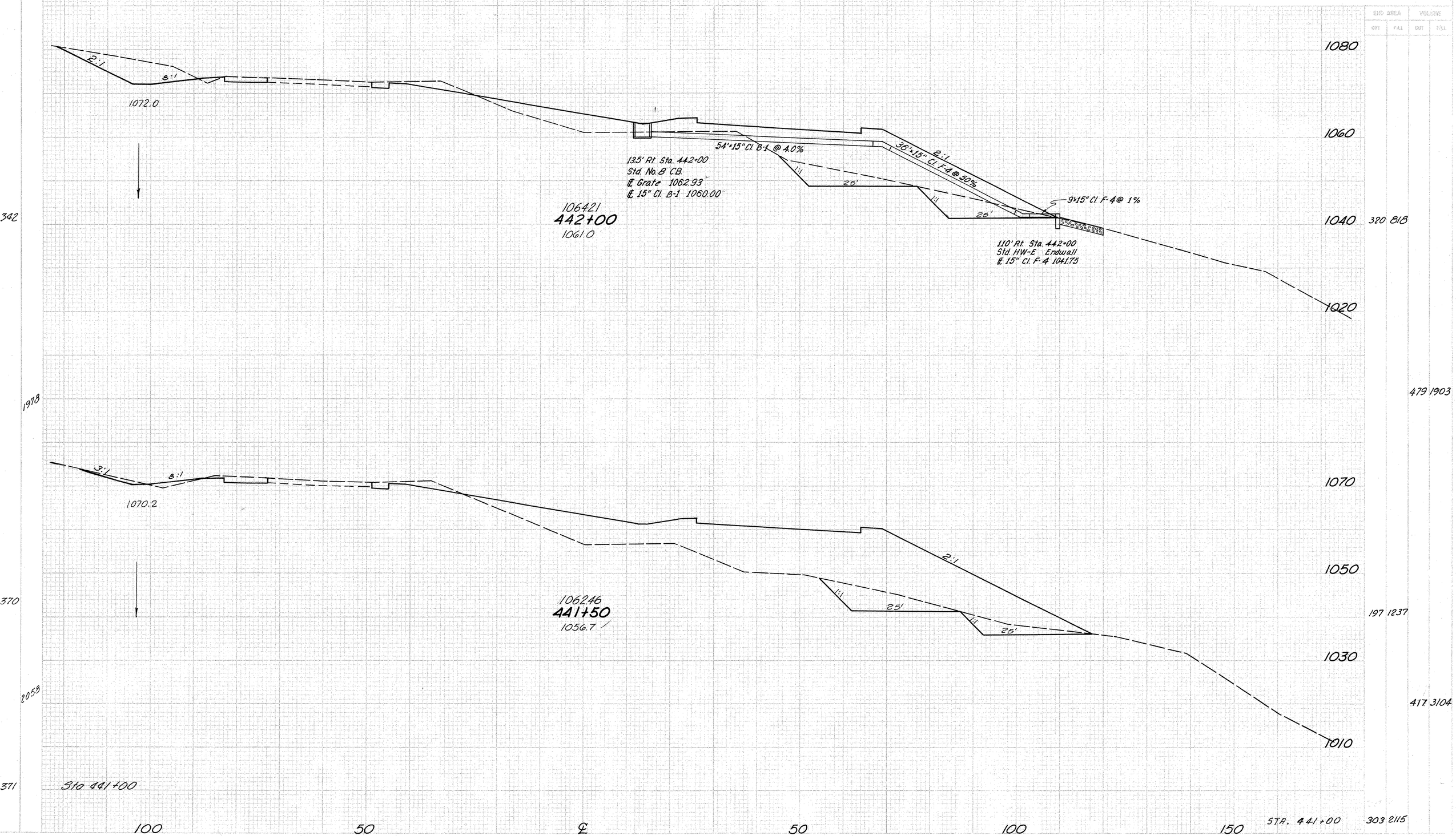
259 4575

STA. 440+50 TO STA. 441+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

87
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



STA. 441+50 TO STA. 442+00

SEEDING	
END WIDTH	SQ. YDS.
327	
1841	
336	
1883	
342	

FED. RD. DIVISION	STATE	PROJECT		88 / 485
2	OHIO			

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		541	505
		876	1057
		405	631
		671	1341
		STA. 442+00 320	818

1090
1070
1050
1030
1010
1080
1060
1040
1020

2:1
1075.2
1066.4
1:1
25'
1:1
25'
2:1
106771
443+00
1066.4

2:1
1074.0
1064.9
1:1
25'
1:1
25'
2:1
106596
442+50
1062.8

Sta 442+00

100 50 ℄ 50 100 150

STA. 442+50 TO STA. 443+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

89
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



STA. 443+50 TO STA. 444+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

90
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

SEEDING

END WIDTH	SQ. YDS

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
337		398	1514
191		506	2499
351		148	1185
191		357	1883
389		237	848

1090
1070
1050
1040
1030
1020
11.00
1080
1060
1040

24:1 4:1 1082.0 1073.4 2:1 1:1 25' 1:1 24:1 25' A A

1074.71
445+00
1071.6

150 200

8:1 1080.9 1071.9 2:1 1:1 25' 1:1 25'

1072.96
444+50
1071.0

Sta 444+00 STA. 444+00

150 100 50 ℄ 50 100

STA. 444+50 TO STA. 445+00

SEEDING

AND WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

91
485

GUERNSEY COUNTY — BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL

1090
1070
1050
1030
1100
1080
1060
1040

24:1
6:1
1085.8
1077.0
2:1
20.5'
24:1
1078.21
446+00
1075.6
297
104 1155

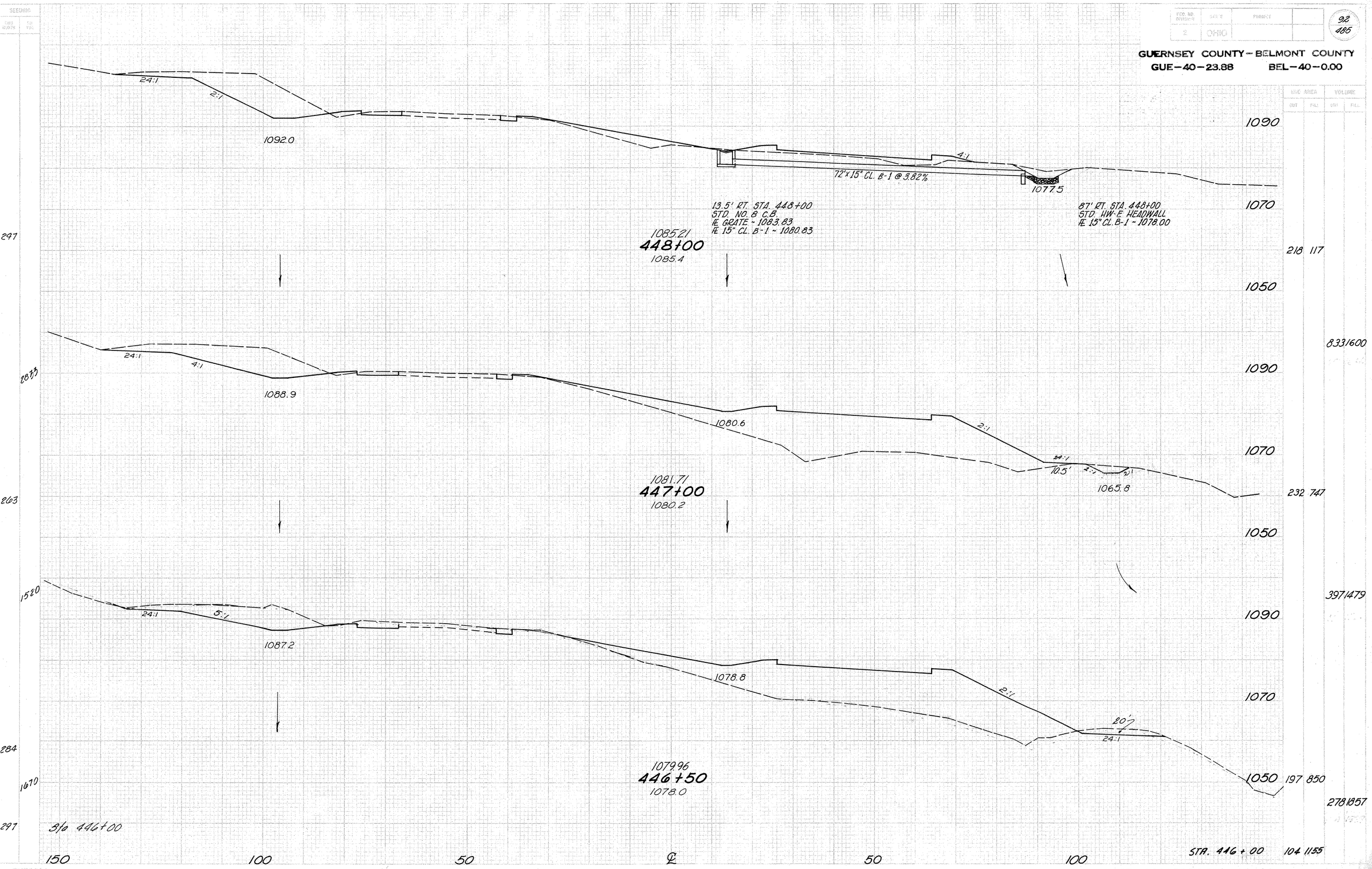
1767
171 2260
24:1
6:1
1084.0
1075.1
2:1
1076.46
445+50
1073.4
319
80 1285
17.25'
24:1
1822
443 2592
337
Sta 445+00
STA. 445+00
398 1514

150 100 50 ℄ 50 100

STA. 445+50 TO STA. 446+00

FED. RD. DIVISION 2 | STATE OHIO | PROJECT | 92/485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



STA. 446+50 TO STA. 448+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

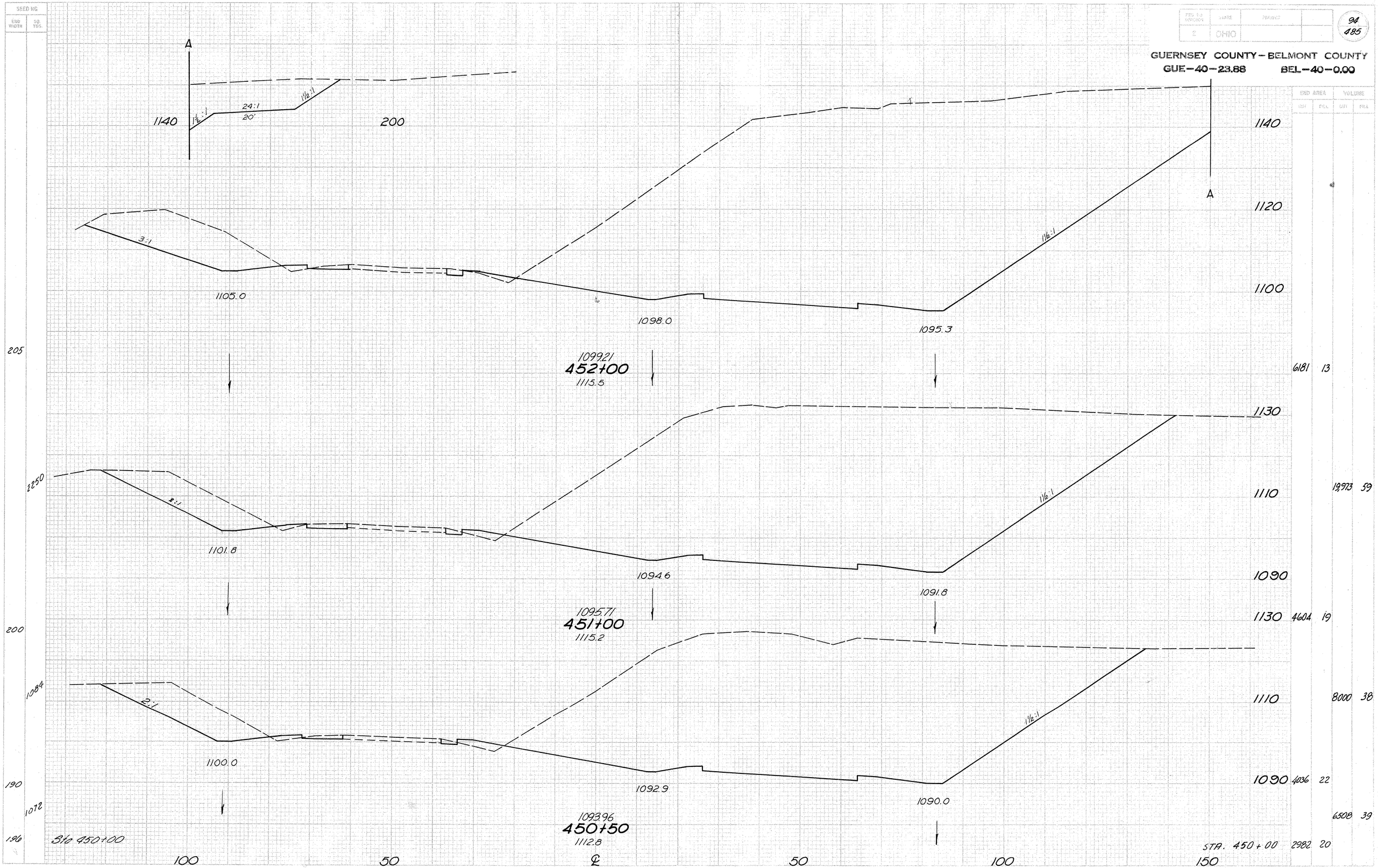
93
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

SEEDING		END AREA		VOLUME	
2ND WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL

FED. RD. DIVISION 2 | STATE OHIO | PROJECT | 94 / 485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



STA. 450+50 TO STA. 452+00

SEEDING	
END WIDTH	SQ. YDS

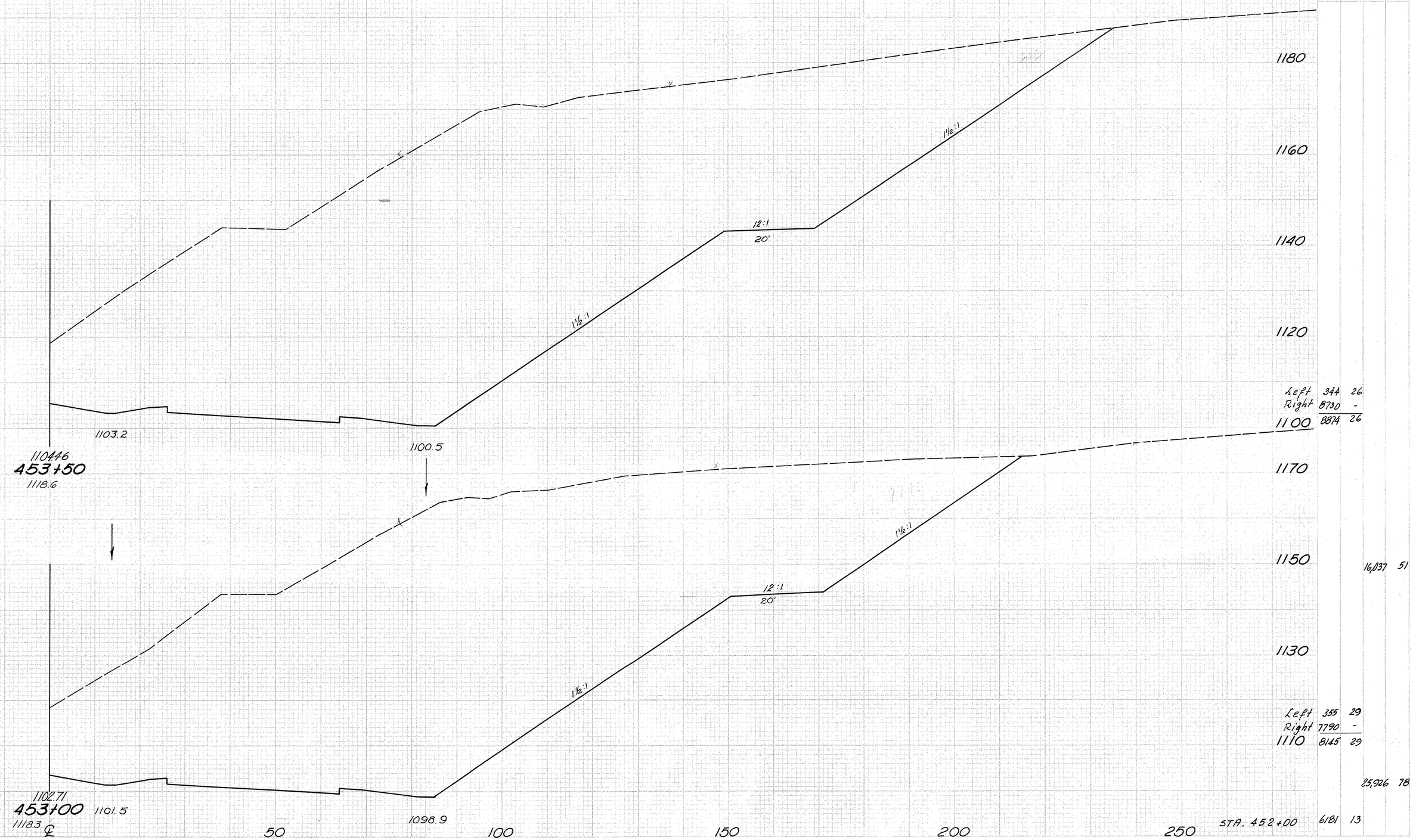
SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

96
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



Left	344	26
Right	8730	-
	8874	26
	16,037	51
Left	355	29
Right	7790	-
	8145	29
	25,926	78
STA. 452+00	6181	13

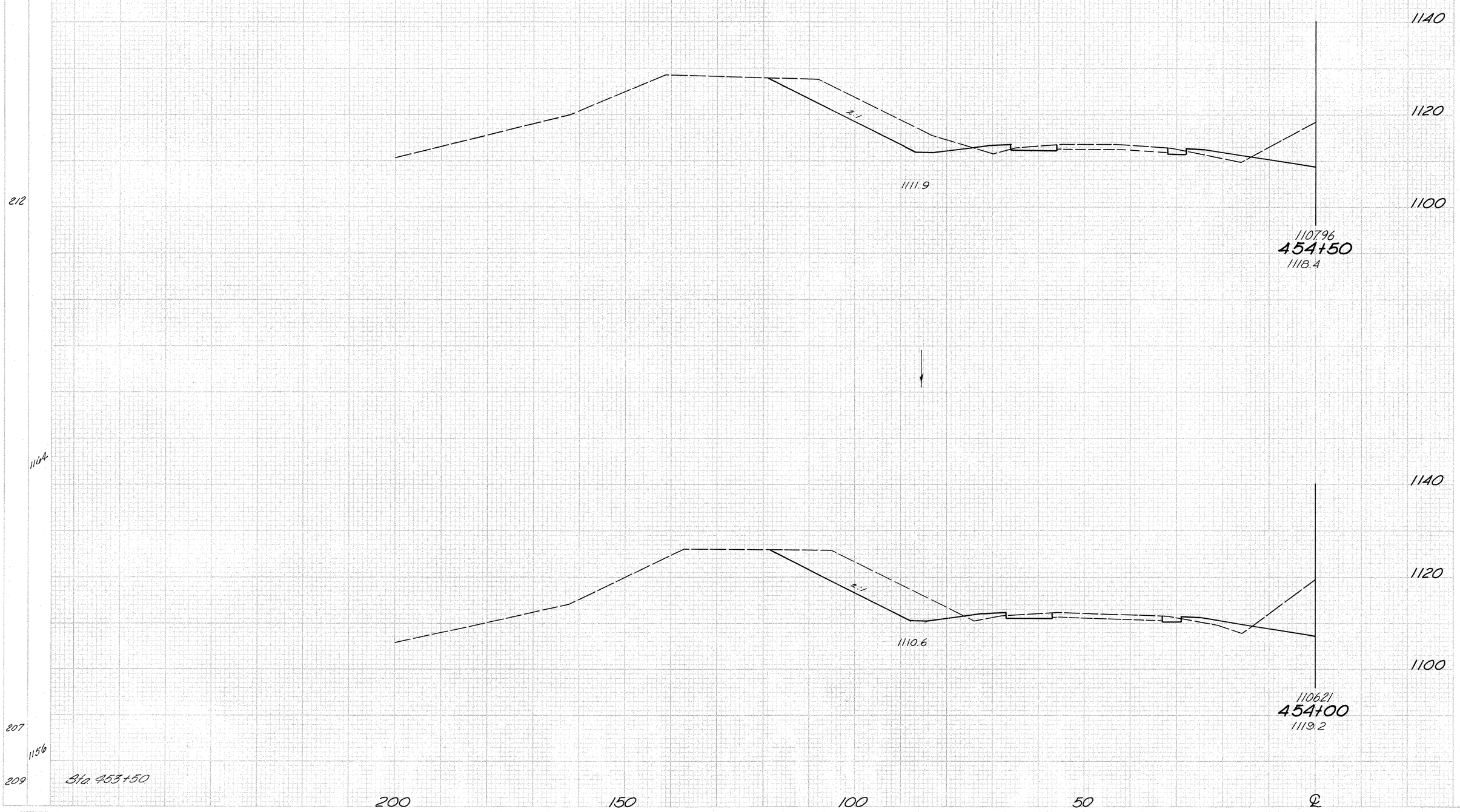
STA. 453+00 TO STA. 453+50 RIGHT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

97
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

SEEDING		END AREA		VOLUME	
END WIDTH	NO. YDS.	CUT	FILL	CUT	FILL

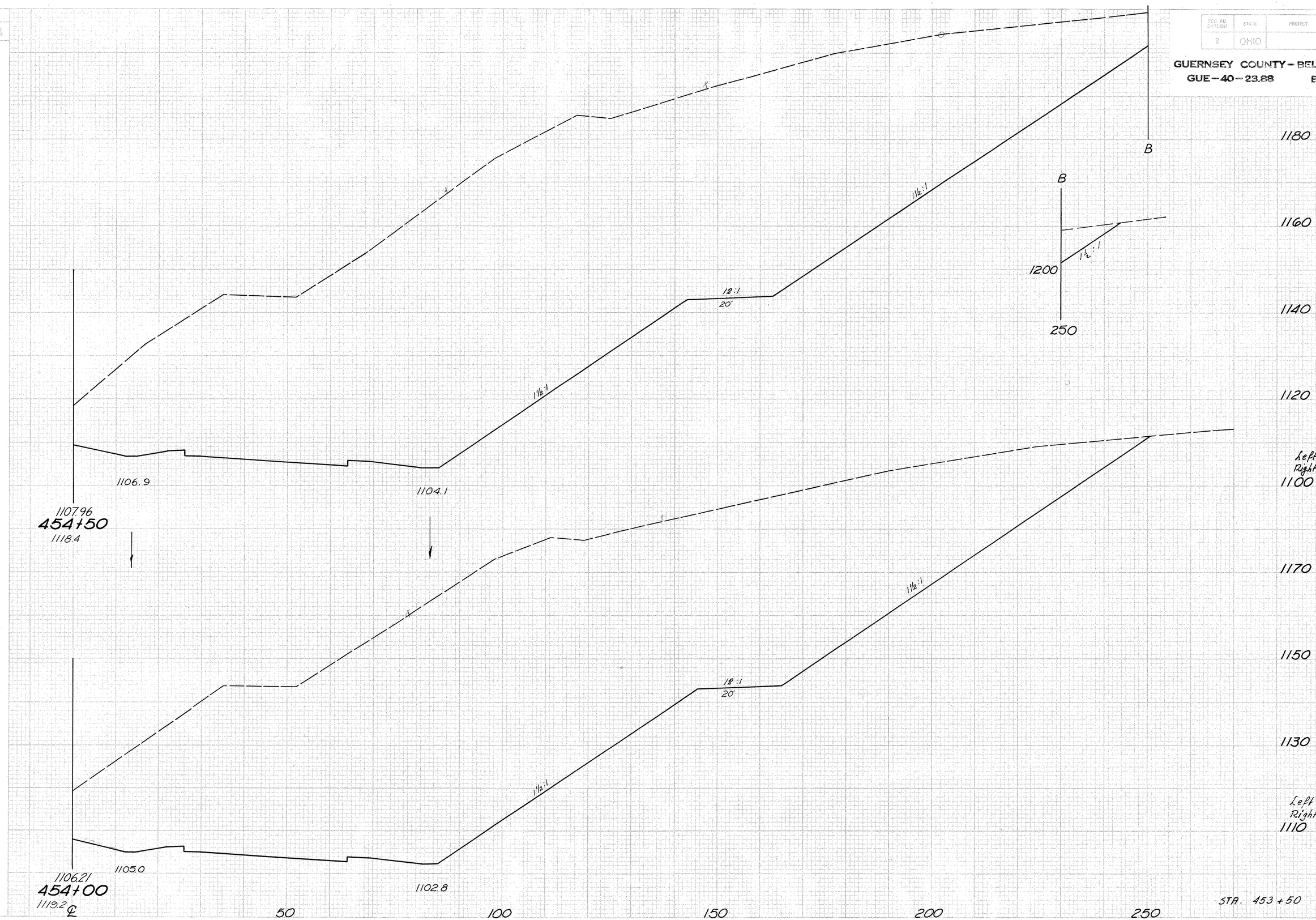


STA. 454+00 TO STA. 454+50 LEFT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

98
485

GUERNSEY COUNTY - BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Left	244	23		
Right	10230	-		
	10474	23		
			18,604	47
Left	317	27		
Right	9300	-		
	9617	27		
			17,122	49
STA. 453+50	8874	26		

STA. 454+00 TO STA. 454+50 RIGHT

SEEDING

END POINTS	SQ. YDS

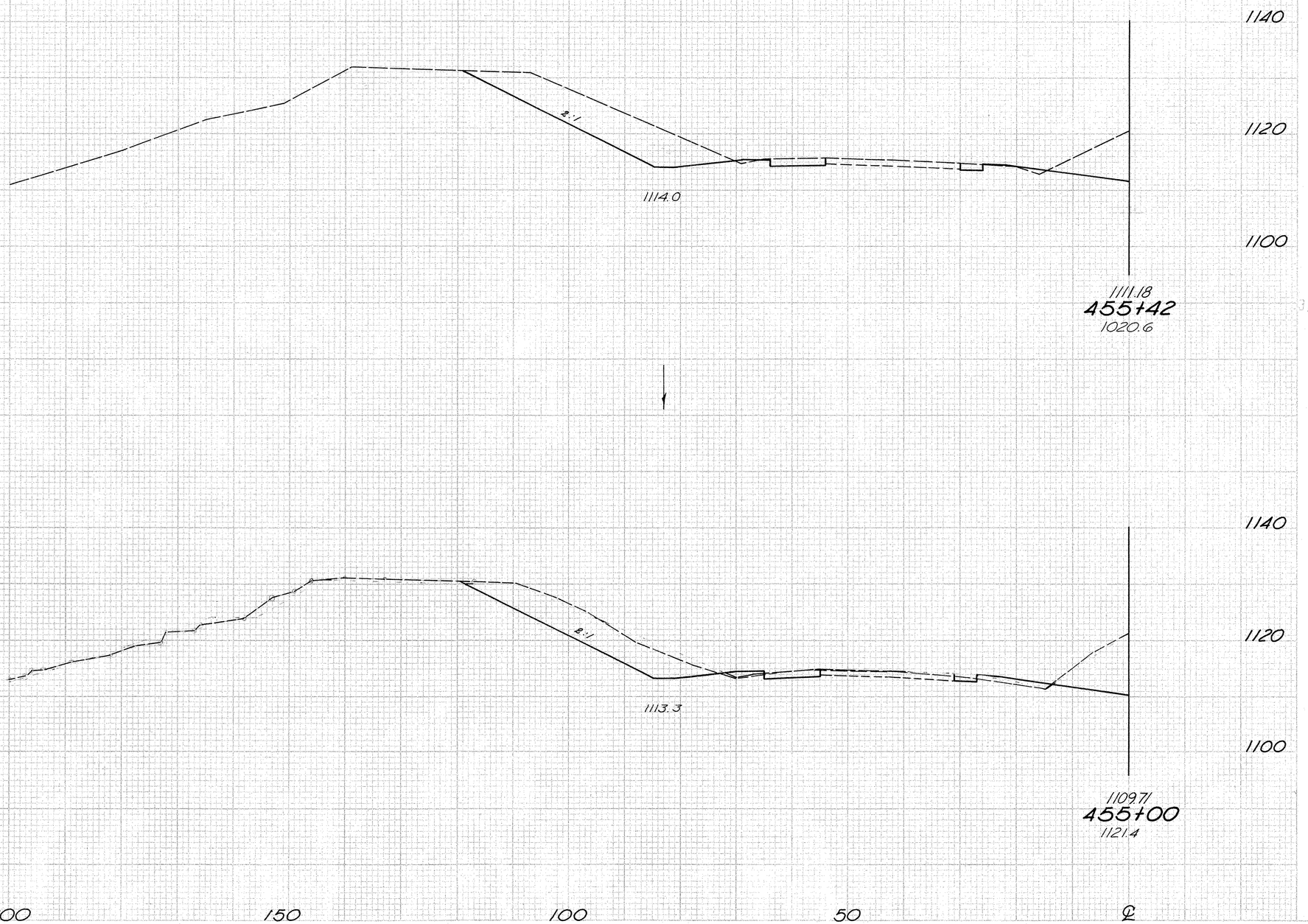
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

99
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL

248



120

233

1230

212

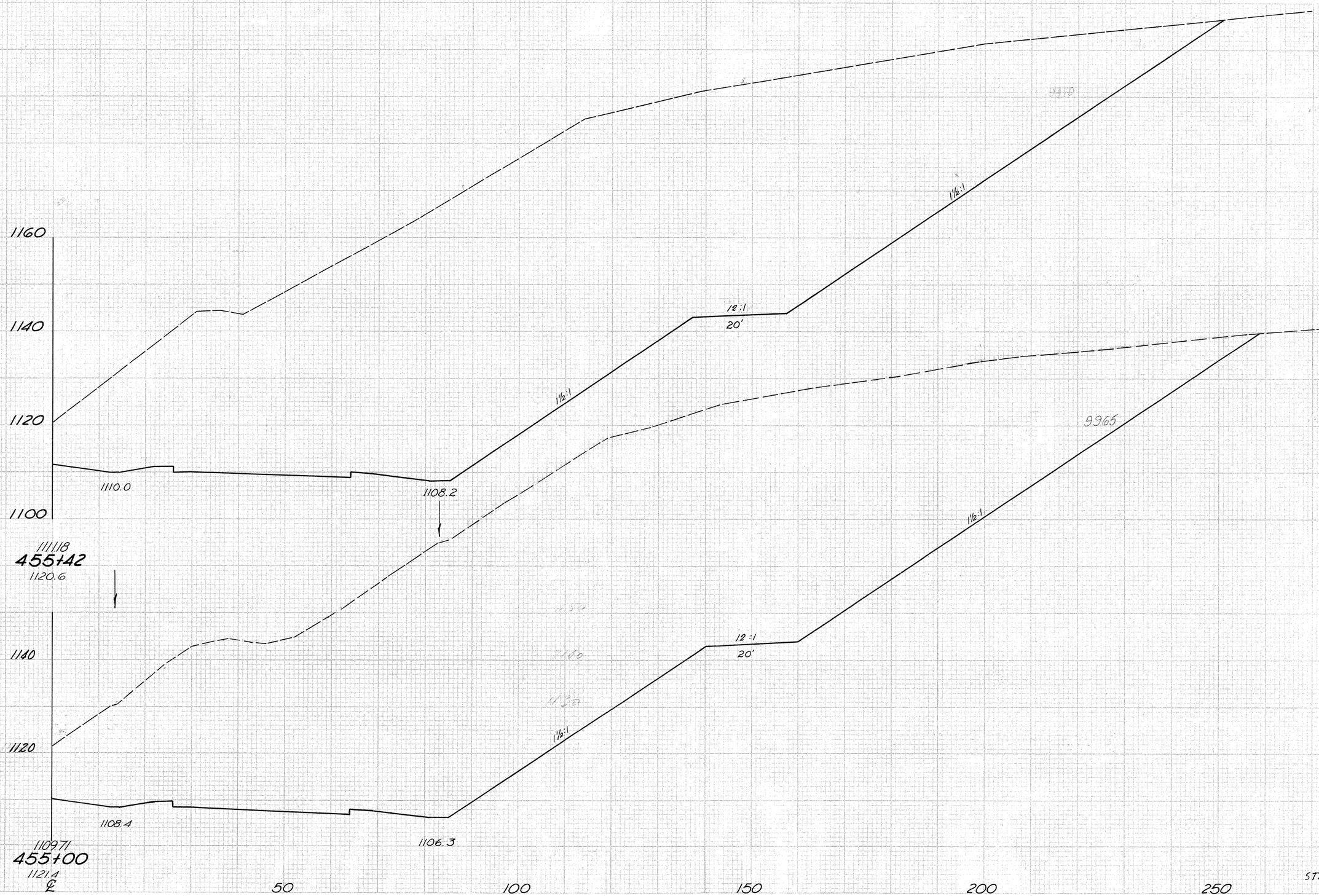
Sta. 454+50

STA. 455+00 TO STA. 455+42 LEFT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

100
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Left	316	2		
Right	9440	-		
	9756	2		
			15551	16
Left	272	19		
Right	9965	-		
	10,237	19		
			19178	48
STA. 454+50	10474	23		

STA. 455+00 TO STA. 455+42 RIGHT

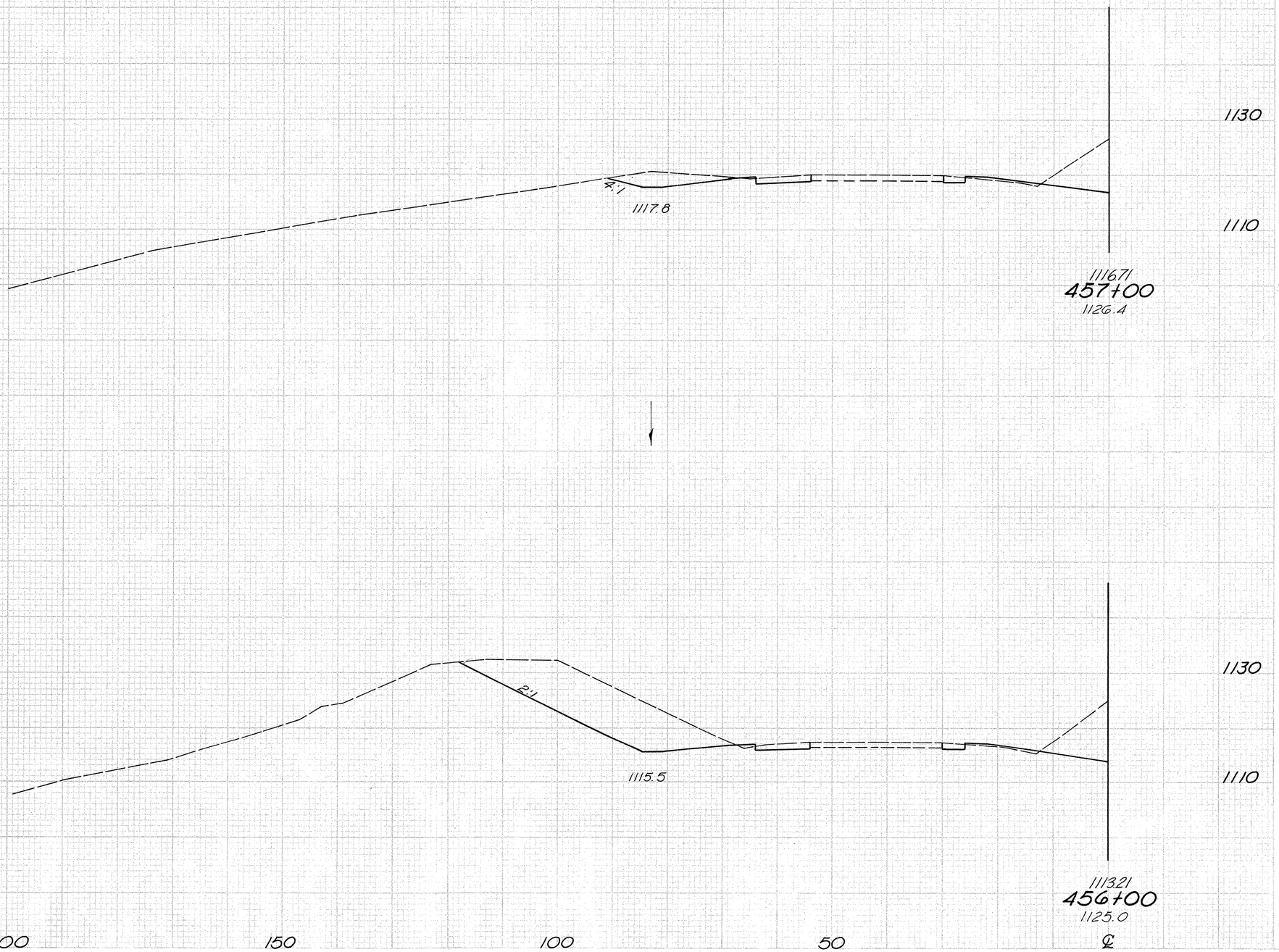
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

101
485

GUERNSEY COUNTY - BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00

SEEDING	
END WIDTH	SQ. YDS.
207	
2406	
226	
1525	
248	

END AREA		VOLUME	
CUT	FILL	CUT	FILL



Sta 455+42

STA. 456+00 TO STA. 457+00 LEFT

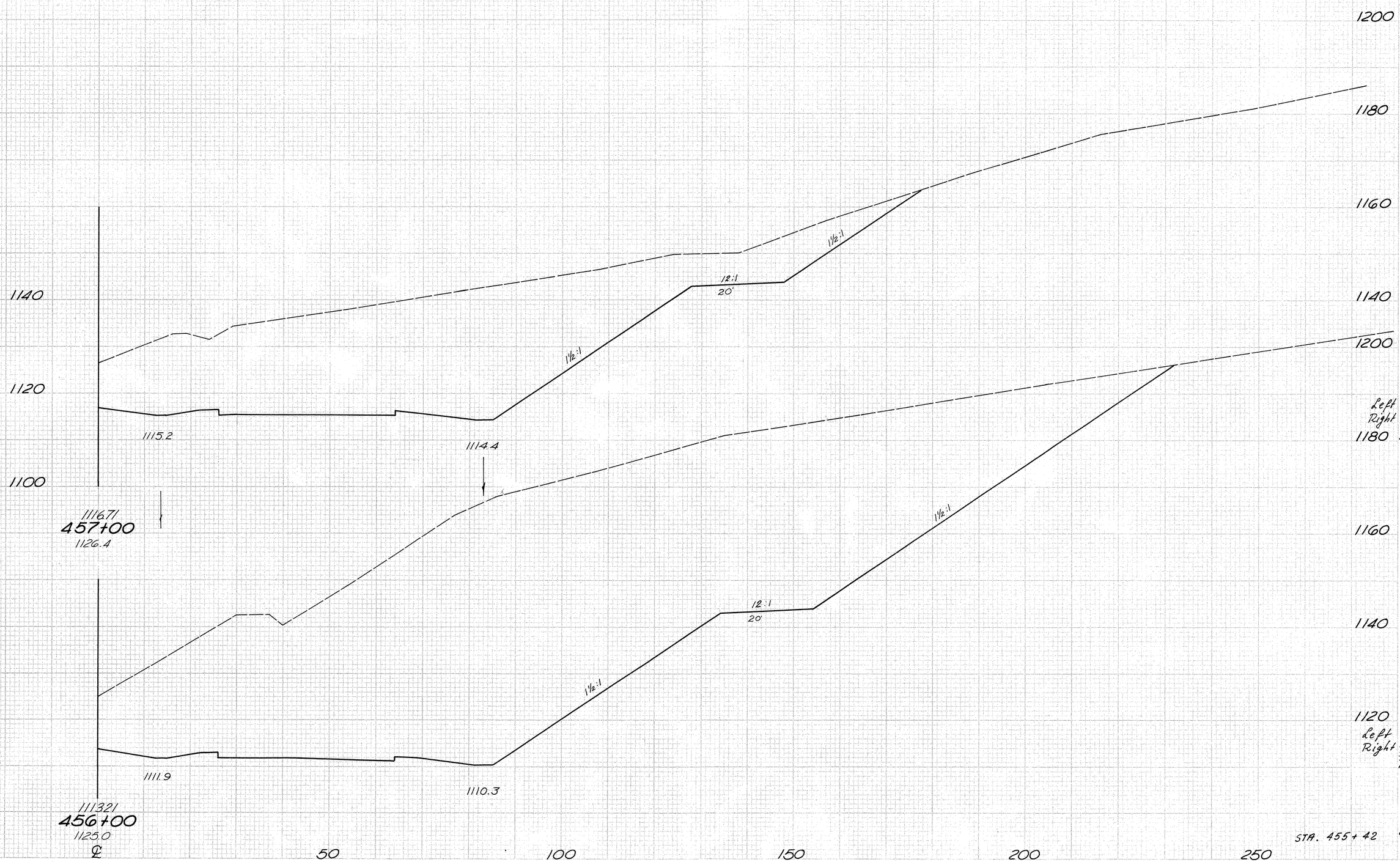
SEEDING

END WIDTH	SQ. YDS.

SHEET NO.	STATE	PROJECT	
2	OHIO		

102
485

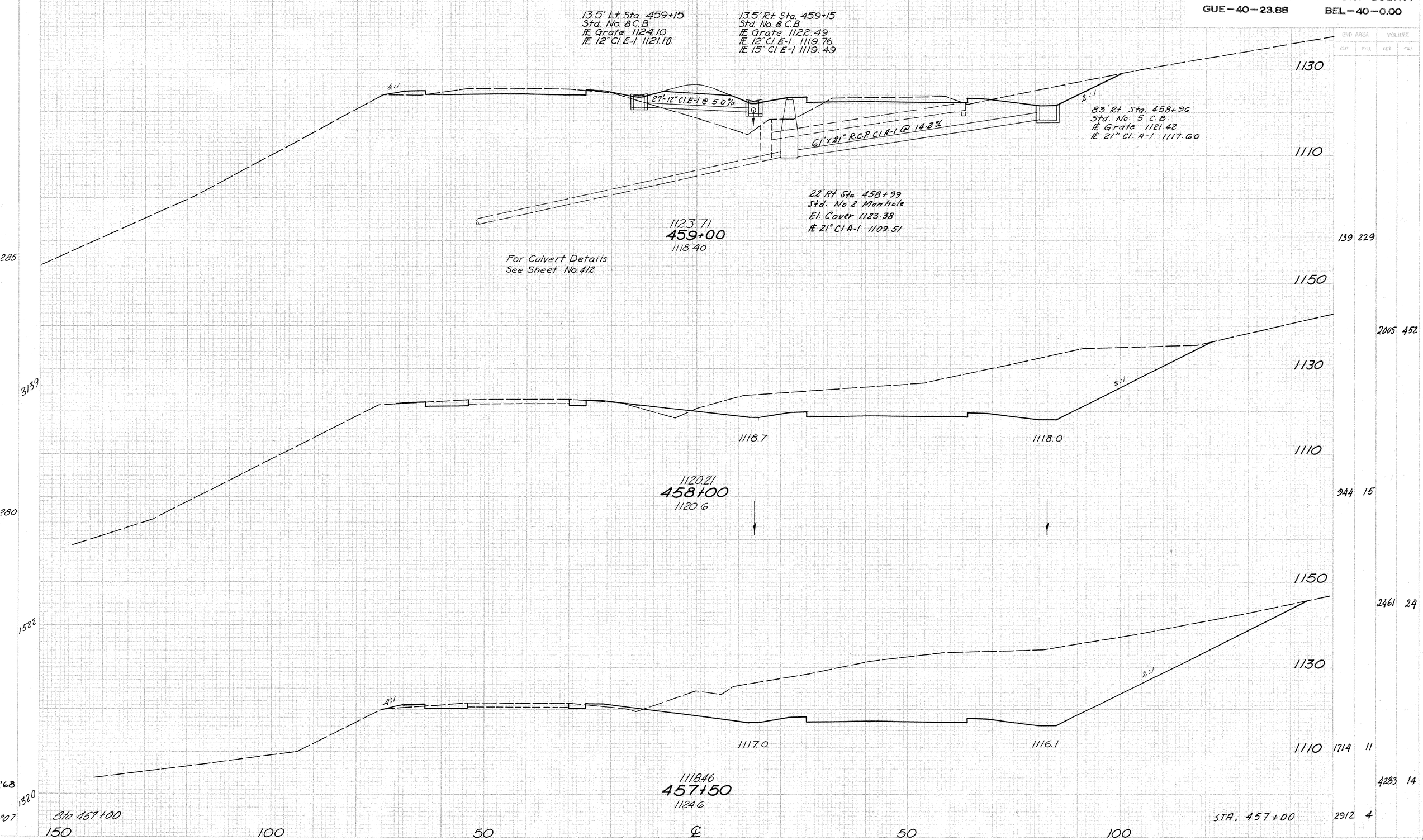
GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Left 114	4		
Right 2798	-		
2912	4		
		20,123	15
384	4		
7570	-		
7954	4		
		18,995	6
STA. 455+42	9756	2	

STA. 456+00 TO STA. 457+00 RIGHT

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



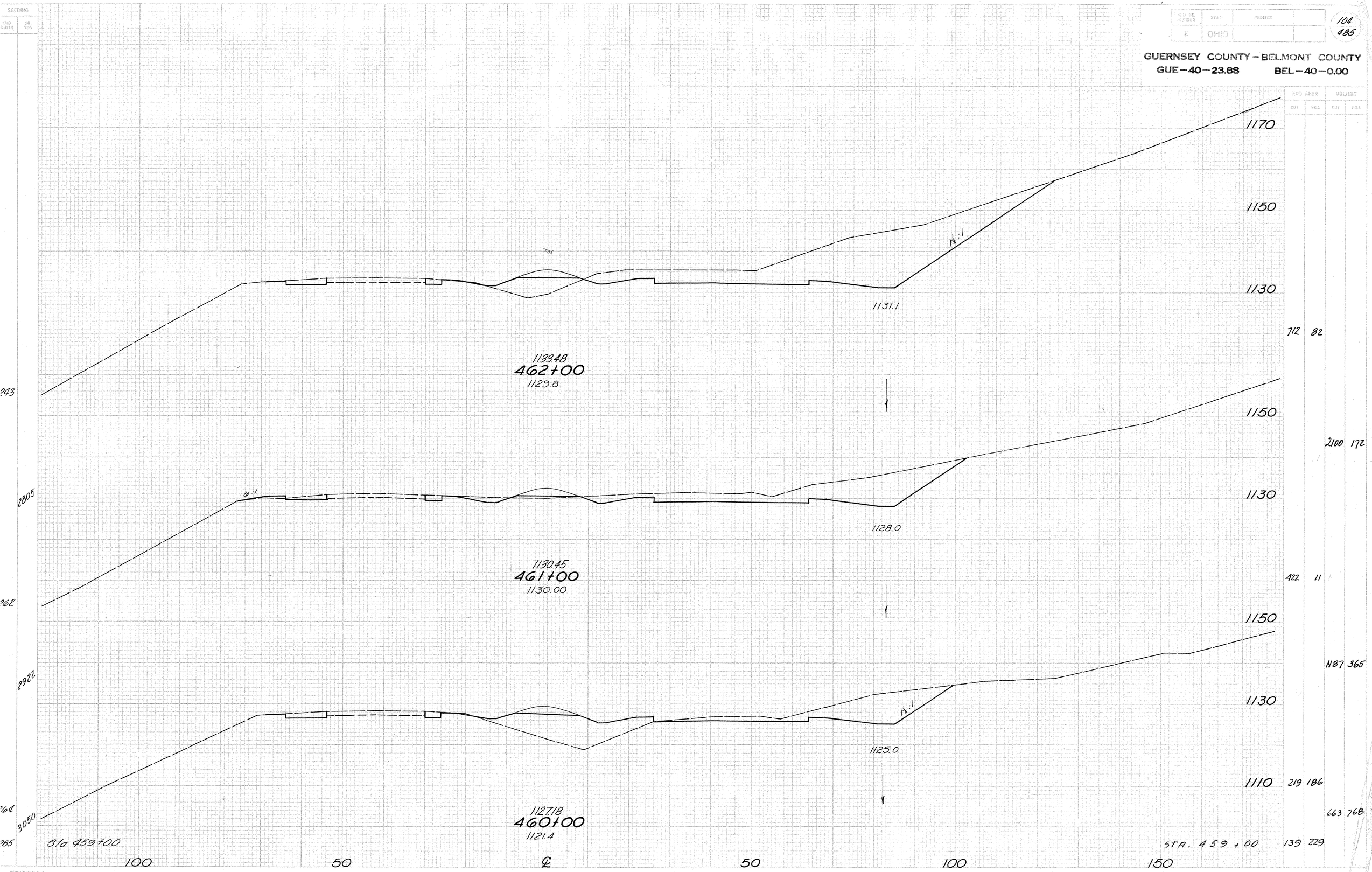
Station	Cut	Fill	Cut	Fill
1123.71	139	229		
1120.21	944	15	2005	452
1118.46	1714	11	2461	24
1124.6	2912	4	4283	14

STA. 457+50 TO STA. 459+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

104
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
712	82		
		2100	172
422	11		
		1187	365
219	186		
		663	768
139	229		

STA. 460+00 TO STA. 462+00

FED. ROY. DIVISION	STATE	PROJECT		105
2	OHIO			486

GUERNSEY COUNTY - BELMONT COUNTY

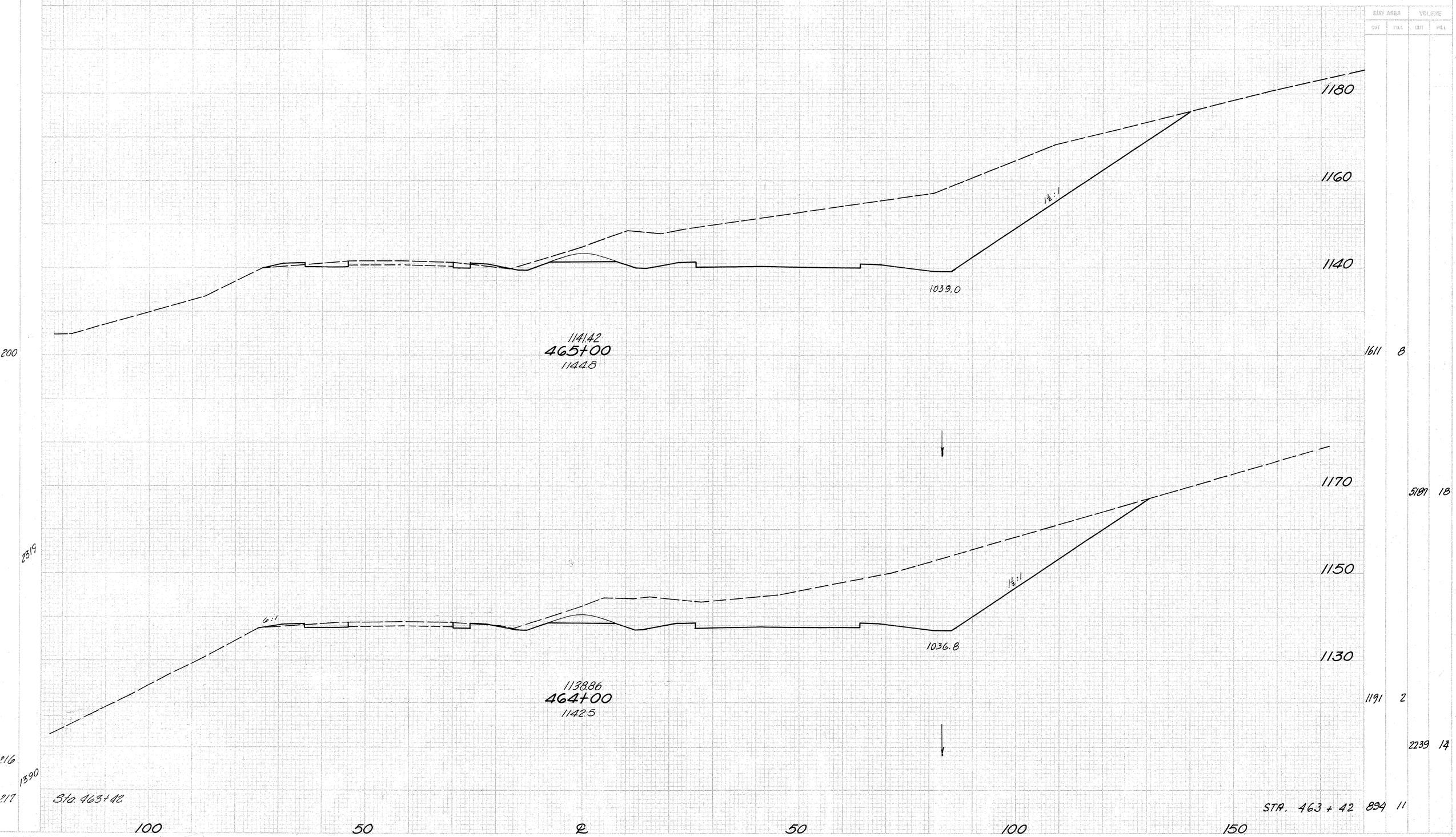
GUE-40-23.88 BEL-40-0.00

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

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

106
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



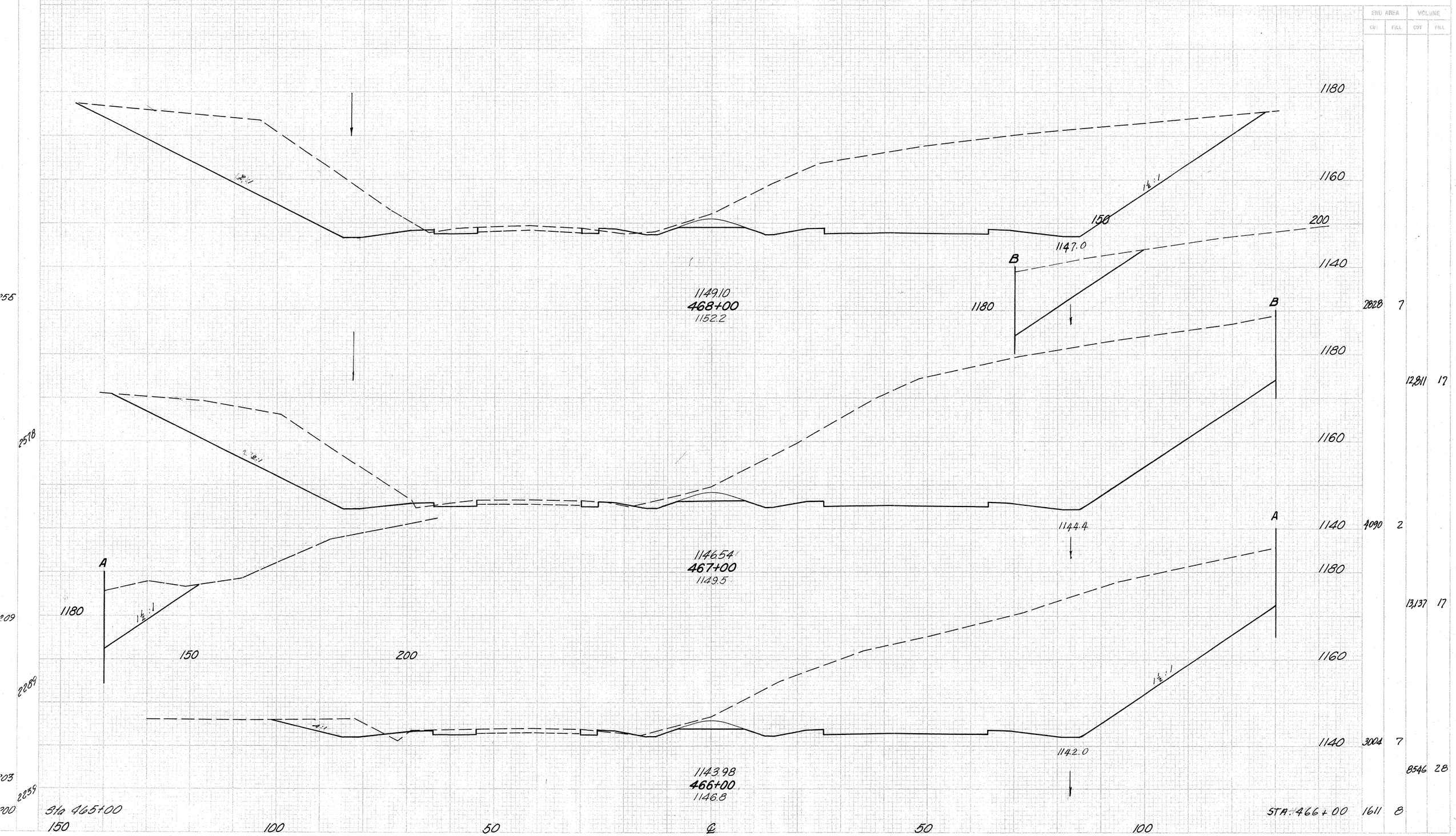
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1611	8		
		5187	18
1191	2		
		2239	14
894	11		

STA. 464+00 TO STA. 465+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

107
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

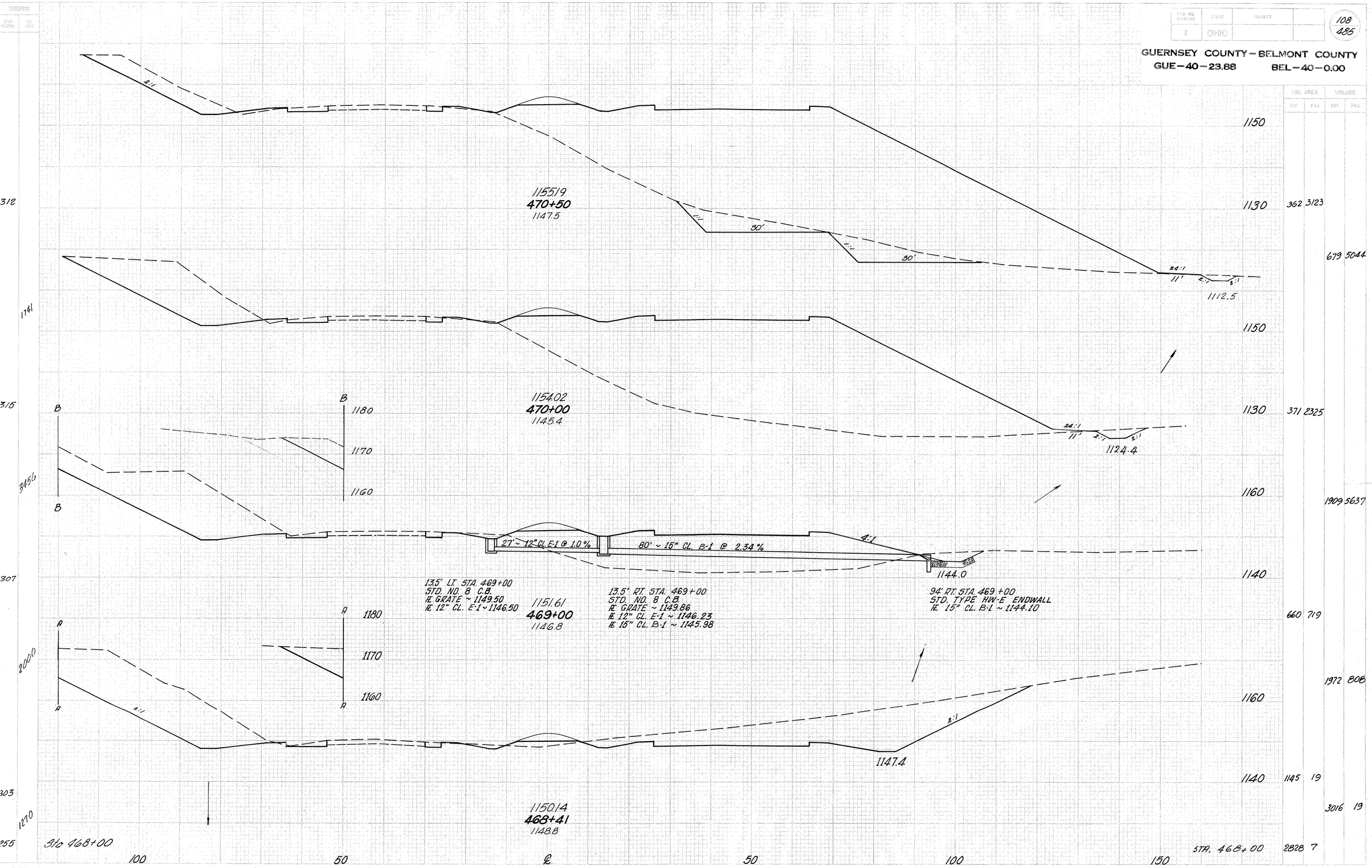


END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2828	7		
		12,811	17
4090	2		
		13,137	17
3004	7		
		8546	28
1611	8		

STA. 466+00 TO STA. 468+00

FED. RD. DIVISION 2 | STATE OHIO | PROJECT | 108 / 485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



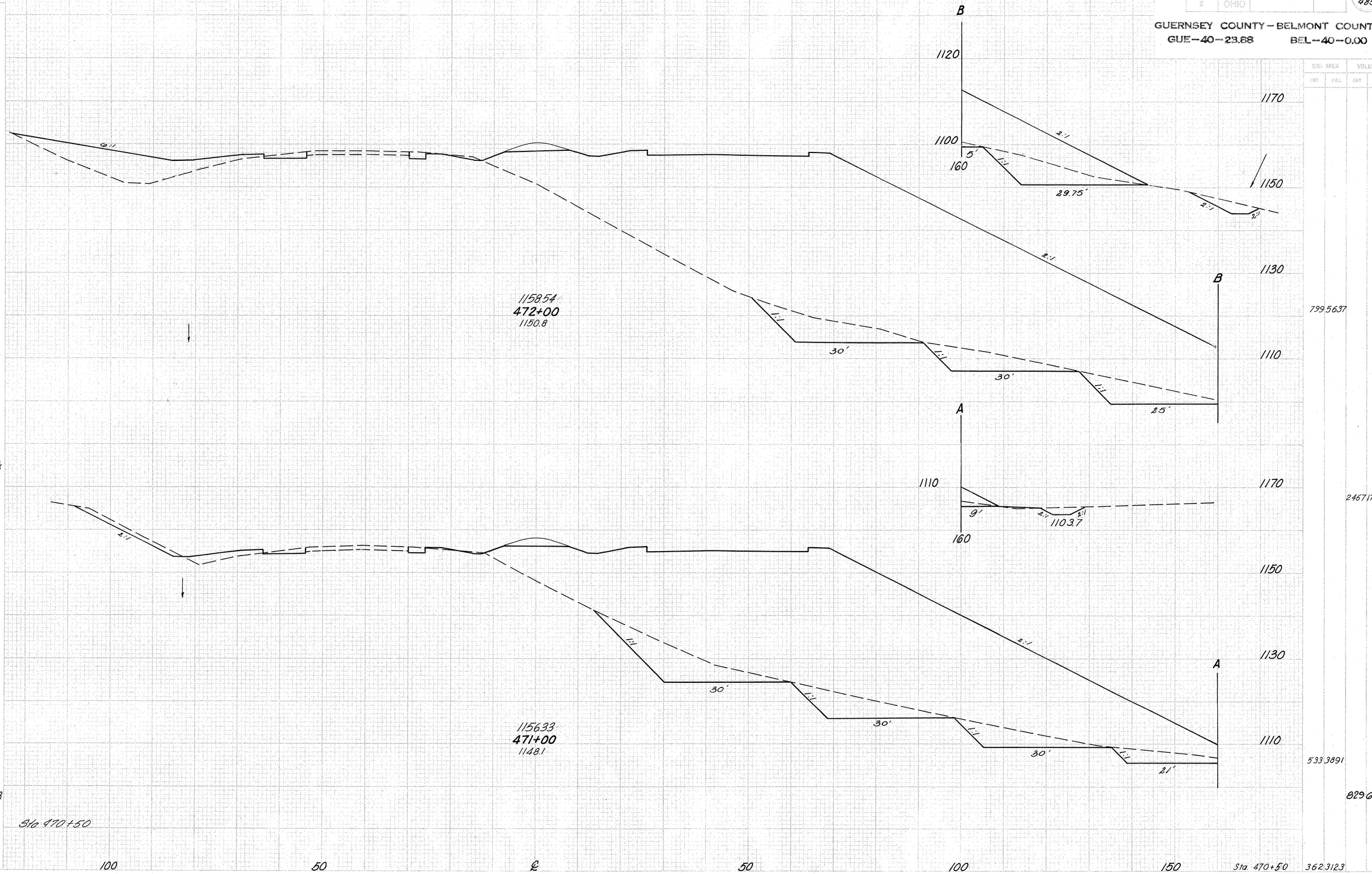
STA. 468 + 41 TO STA. 470 + 50

SECTIONS

SEC. NO. DIVISION	STATE	PROJECT		109 485
2	OHIO			

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

SEC AREA		VOLUME	
CUT	FILL	CUT	FILL



STA. 471 + 00 TO STA. 472 + 00

SEEDING

ENG WIDTH	SQ. YDS.

FED. ROAD DESIGN	STATE	PROJECT	
2	OHIO		

110
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

ENG. AREA		VOLUME	
CUT	FILL	CUT	FILL

C.H. 27 RELOC.

118' Lt Sta. 473+68
Std. No. 5 C.B
℄ Grate ~ 1157.80

1150 ~ ℄ ~ 1146.72

1140

Exist. 15" C.M.P. @ 19.0 %
@ ℄ Sta. 473 + 52
See Sheet No. 4/3

1162.86
474+00
1154.0

B
1110
160
1090
2:1
1:1
30'

1160
1140
1120
1100

499 6227

A
1110
160
1090
2:1
30'
1:1
30'
TO CULVERT
2:1
1080.0

1826 30420

Ex. 12" Pipe
Plug & Abandon

1160.70
473+00
1152.5

487 6501

2382 22479

Sta 472+00

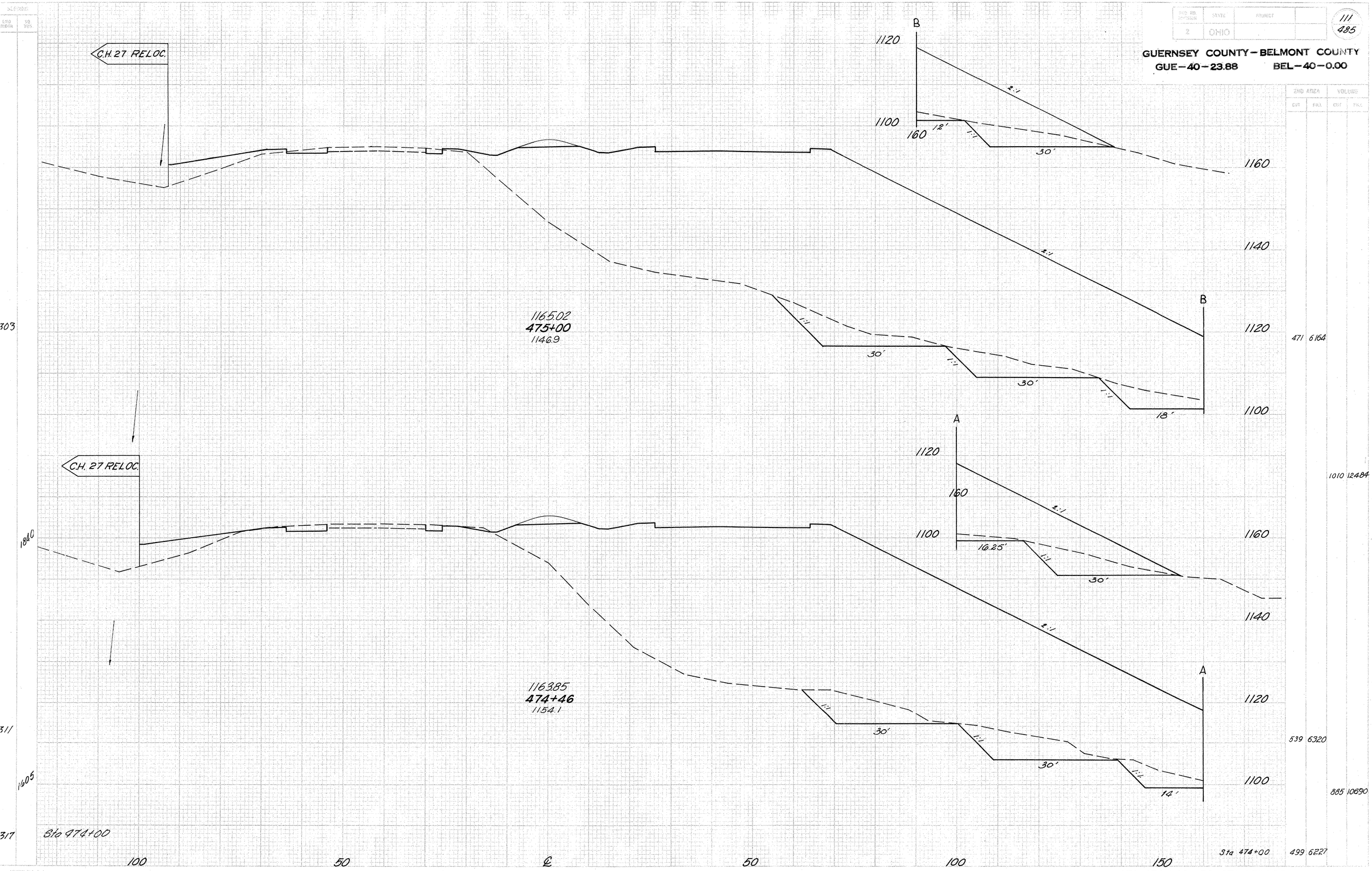
100 50 ℄ 50 100 150 Sta. 472+00 799 5637

STA 473 +00 TO STA 474 +00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

111
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

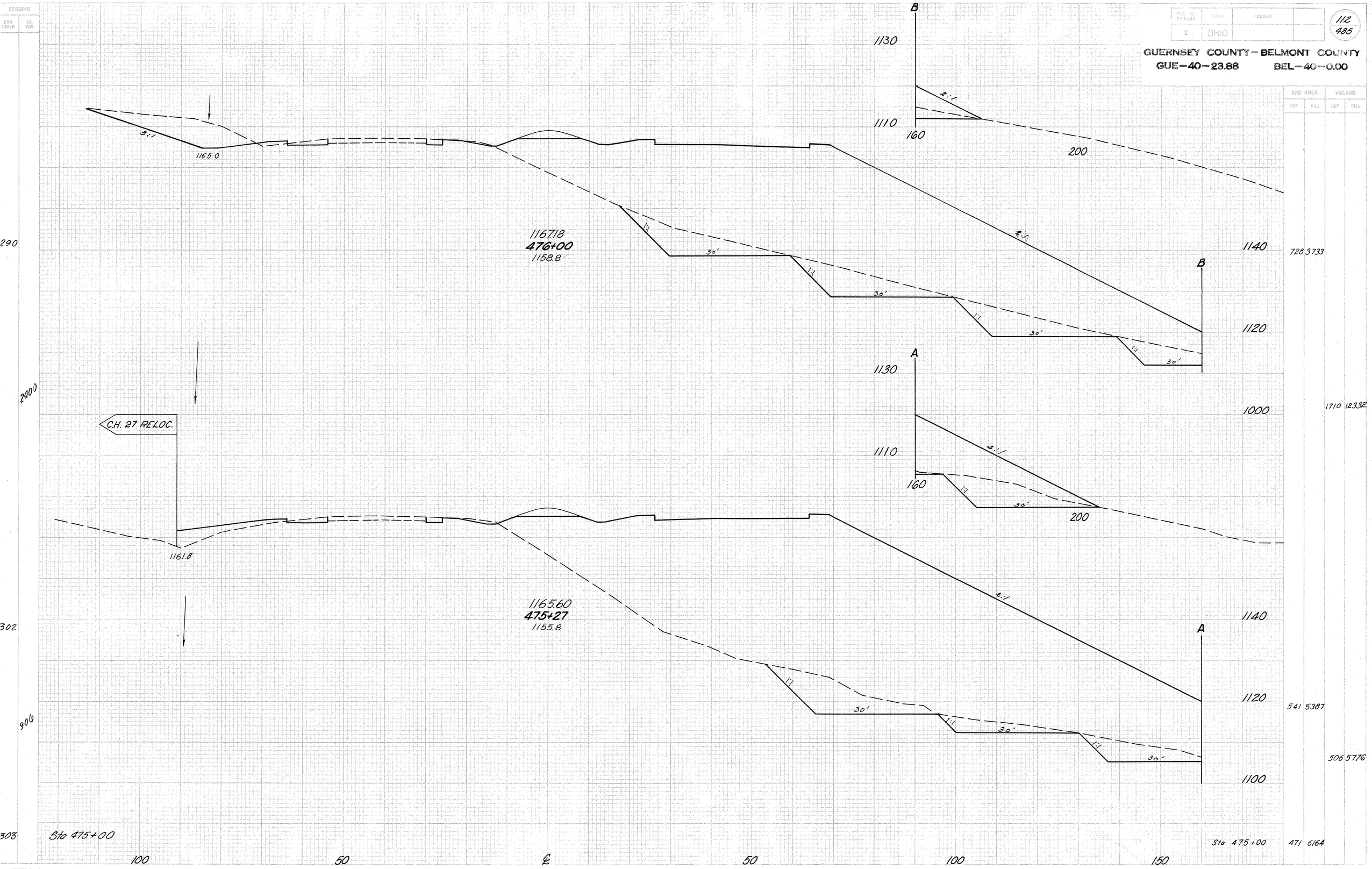


END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
471	6164		
		1010	12484
539	6320		
		885	10690
499	6227		

STA. 474 + 46 TO STA. 475 + 00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



STA. 475+27 TO STA. 476+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

113
485

GUERNSEY COUNTY - BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00



STA. 476+50 TO STA. 477+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

114
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00



STA. 477+50 TO STA. 478+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

115
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

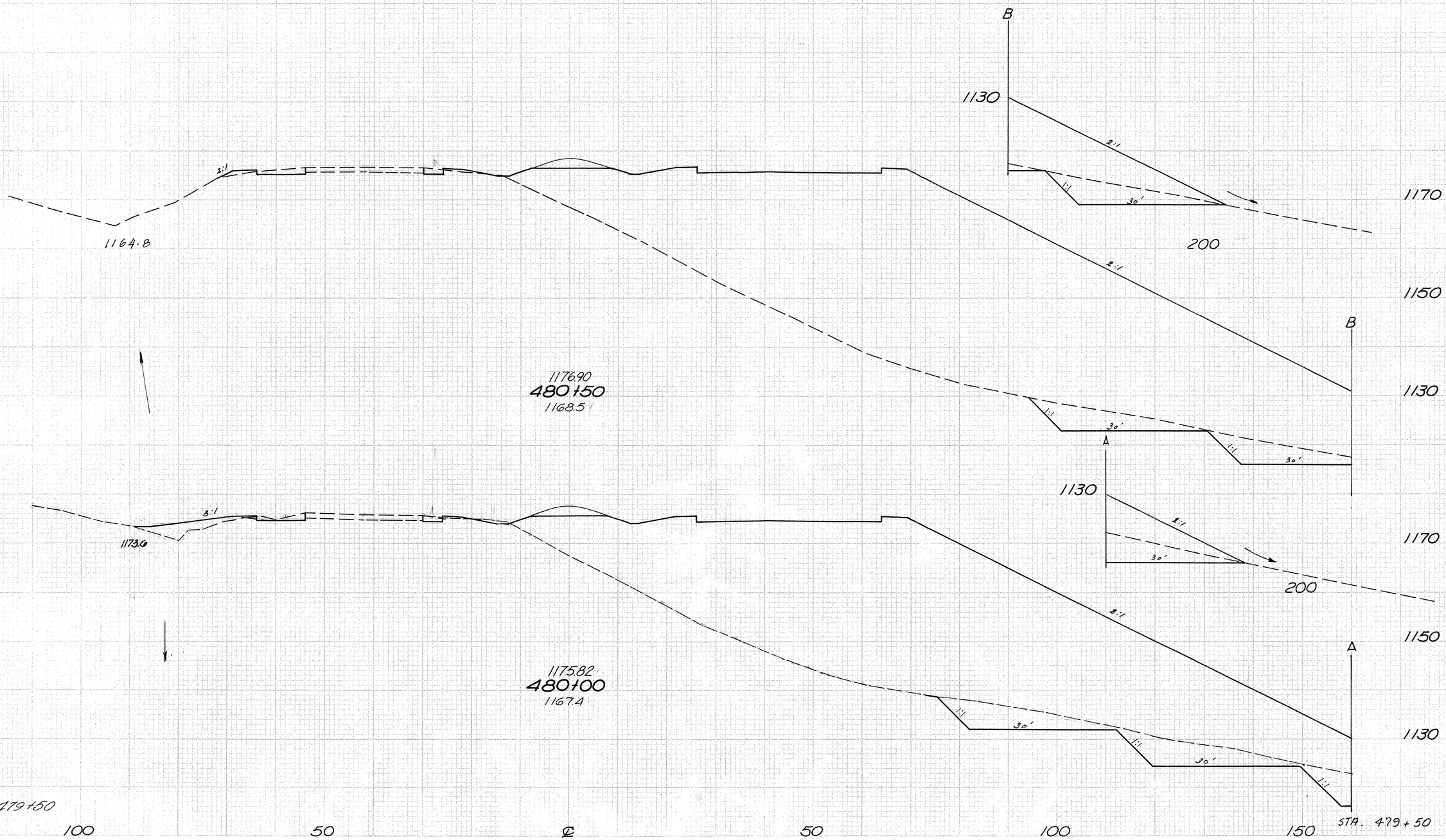
SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL

FED. RD. DIST. NO.	STATE	PROJECT	
2	OHIO		

116
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

SEEDING		AREA		VOLUME	
		CUT	FILL	CUT	FILL
SQ. YDS.	SQ. YDS.				
		330	4890		
		683	8293		
		407	4066		
		808	6958		
		465	3448		

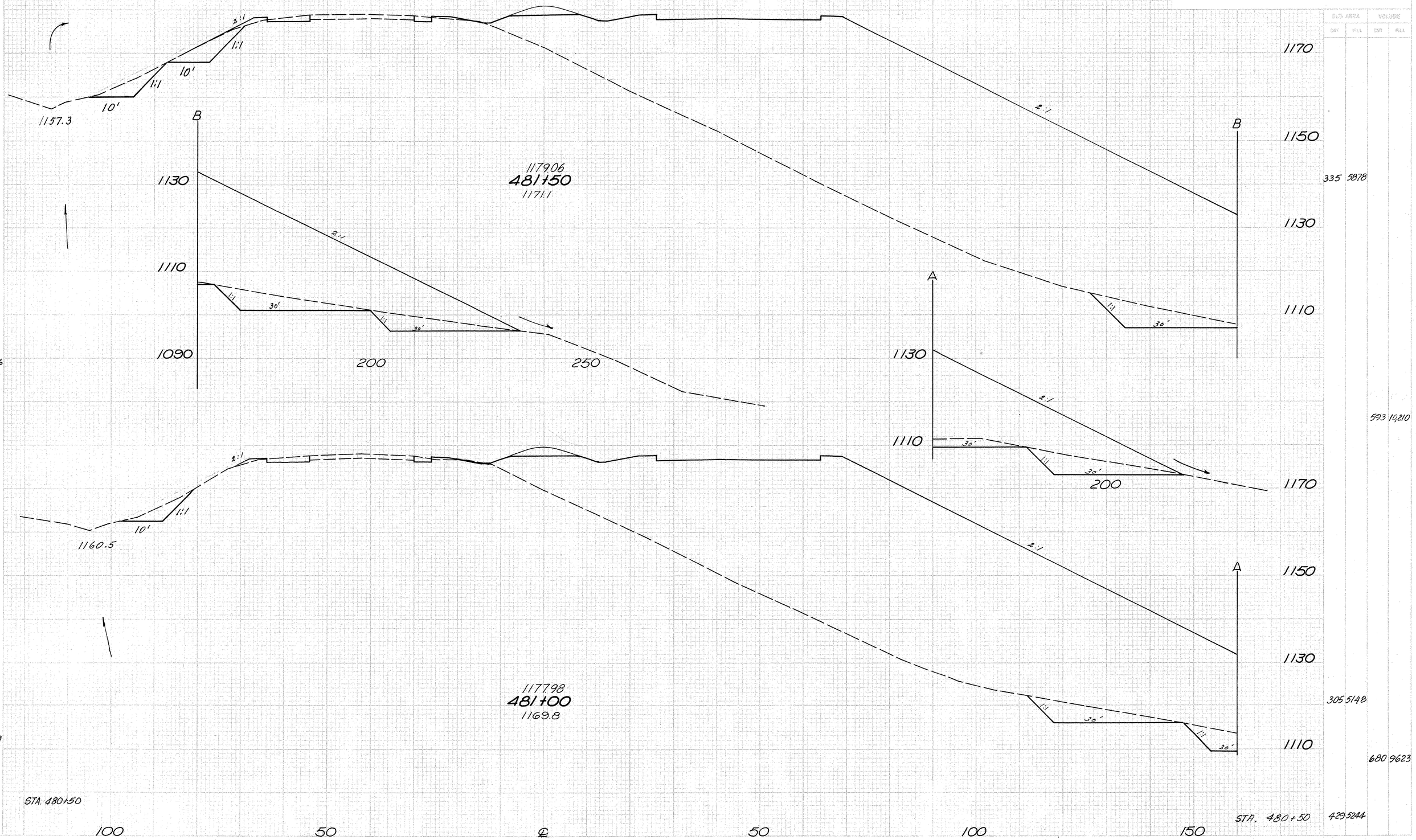


FED. RD. DIVISION	STATE	PROJECT		117
2	OHIO			485

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00

SECTIONS		END AREA		VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL
363					
		1956			
		1838			
341					
321					
				335	5878
				593	10210
				305	5148
				680	9623
				429	5244



STA. 481+00 TO STA. 481+50

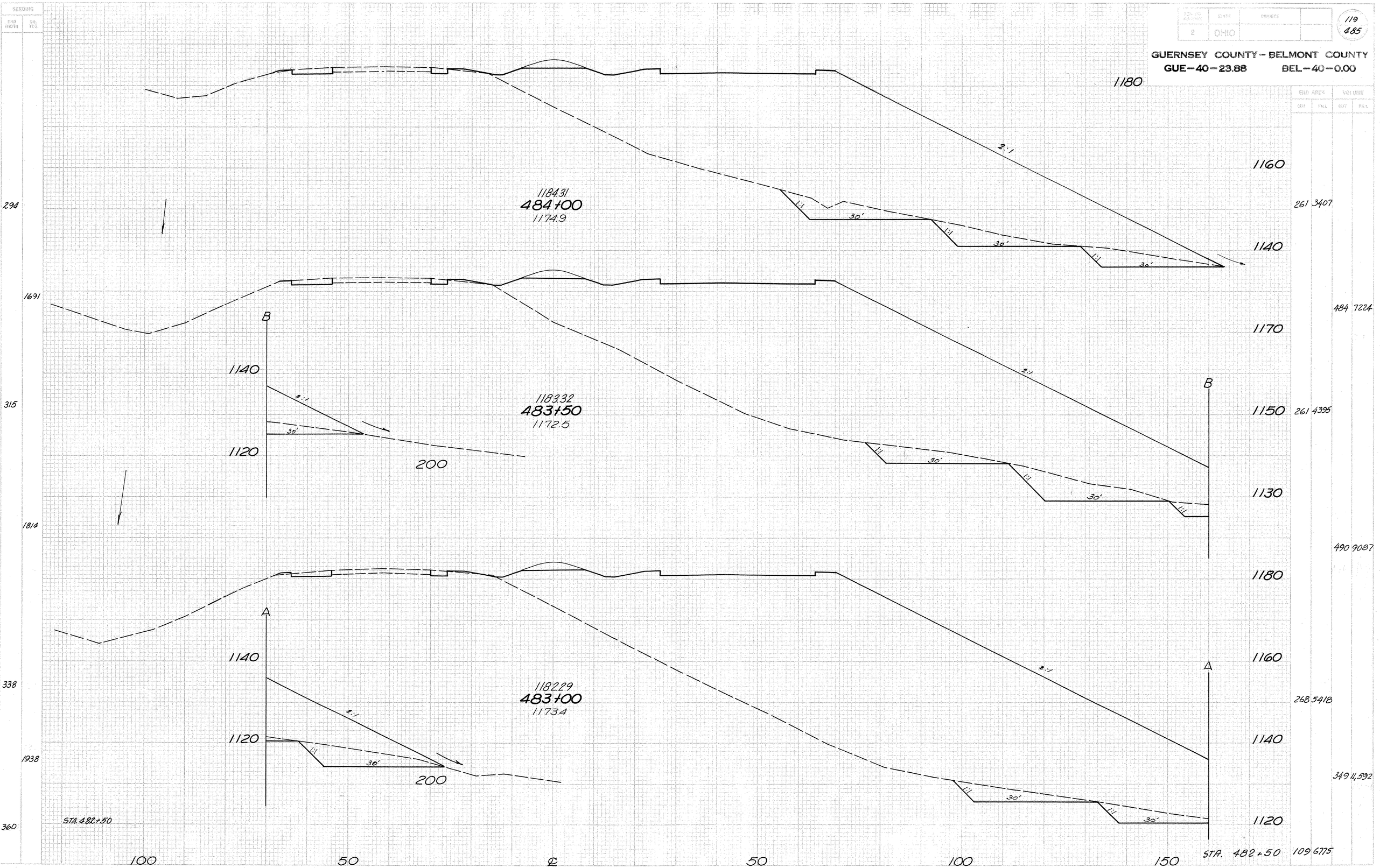
SEEDING

END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

119
485

GUERNSEY COUNTY - BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00



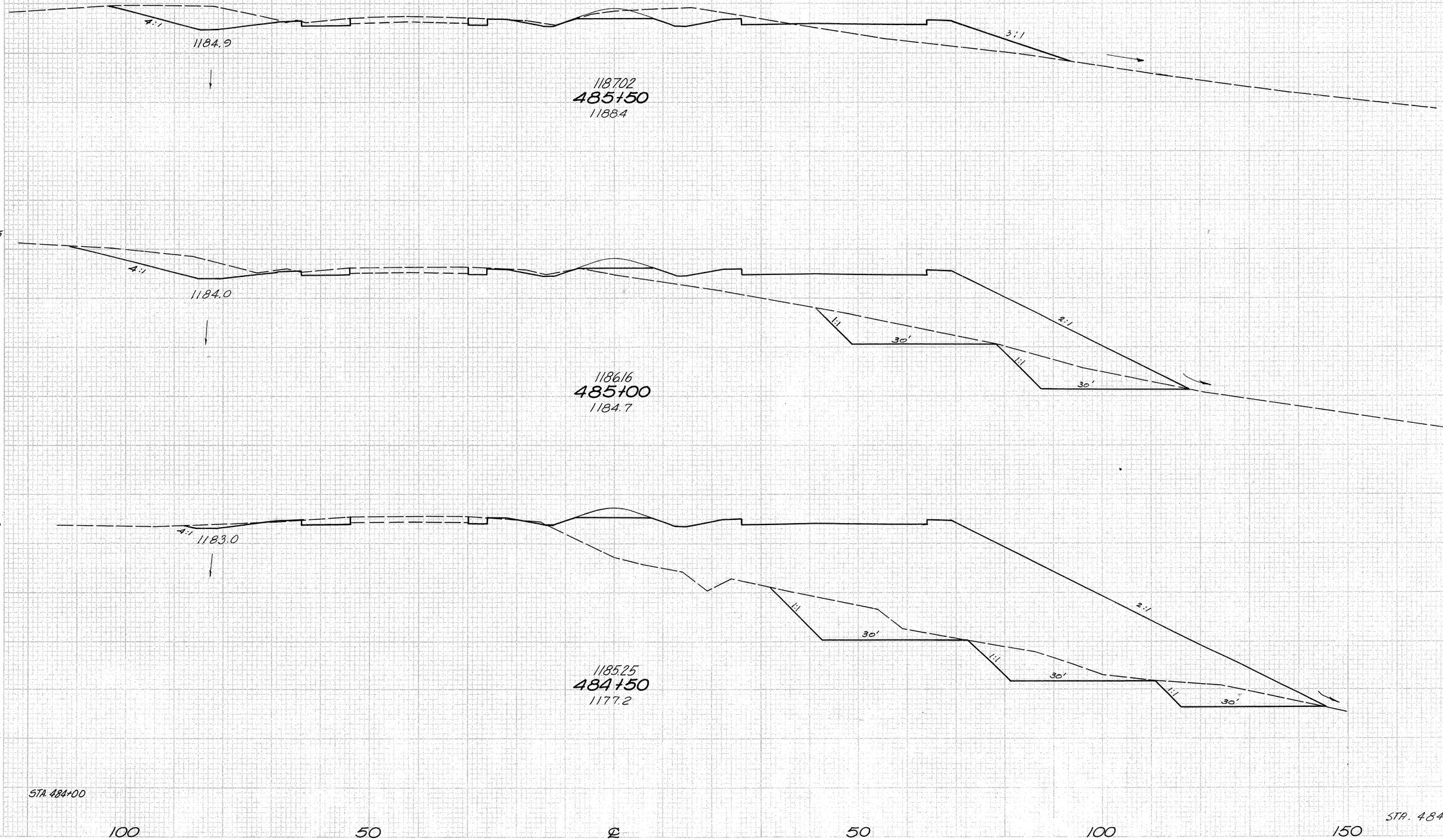
STA. 483+00 TO STA. 484+00

SEEDING	
END STATION	SQ. YDS.
283	
1335	
245	
1430	
270	
1566	
296	

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

120
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



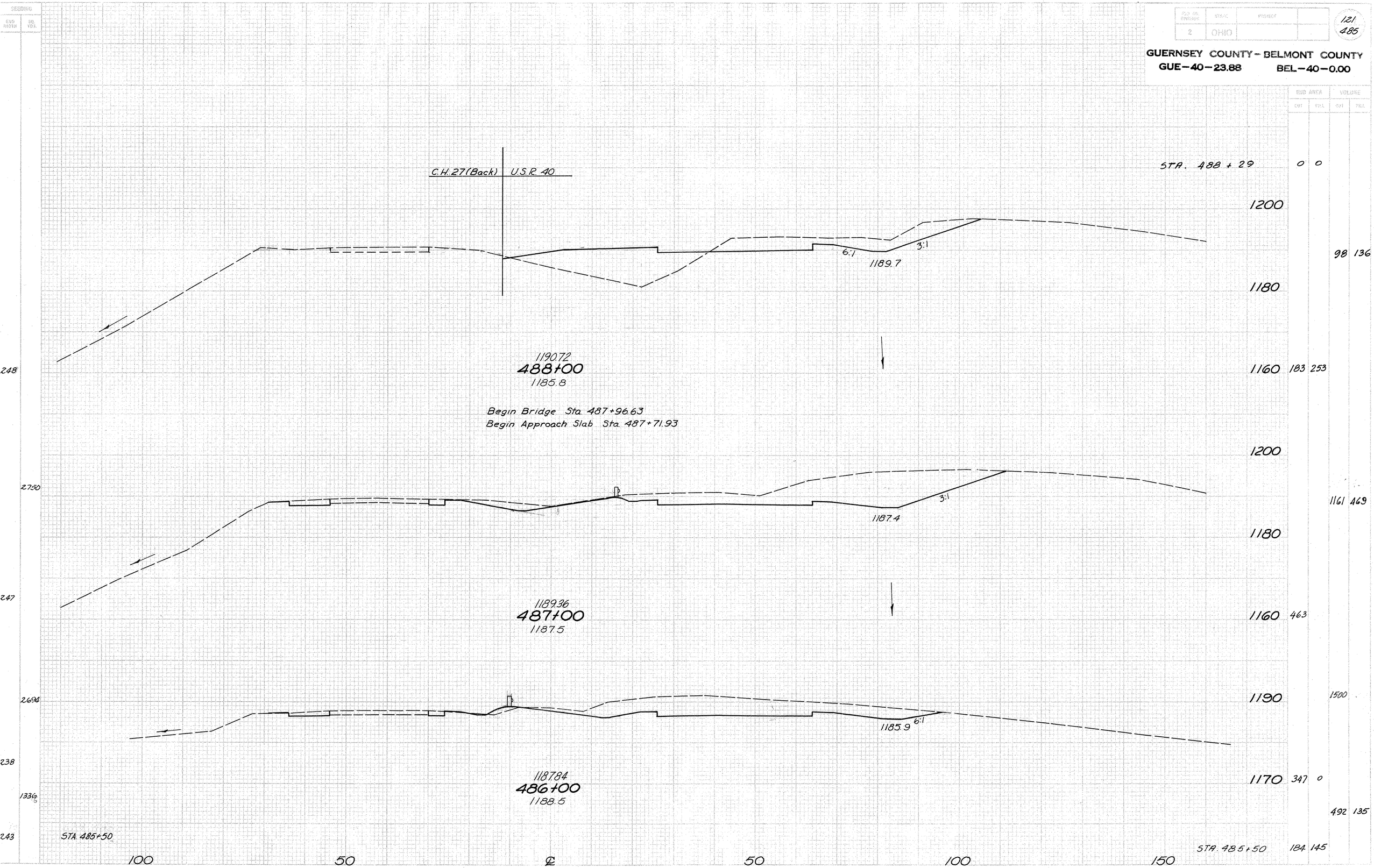
END AREA		VOLUME	
CUT	FILL	CUT	FILL
184	145		
		507	1061
363	1001		
		714	3113
408	2360		
		620	5340
261	3407		

STA. 484 + 50 TO STA. 485 + 50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

121
485

GUERNSEY COUNTY - BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00



STA. 486+00 TO STA. 488+00

SEEDING	
END WIDTH	SQ. YDS.

SEEDING	
END WIDTH	TO YDS.

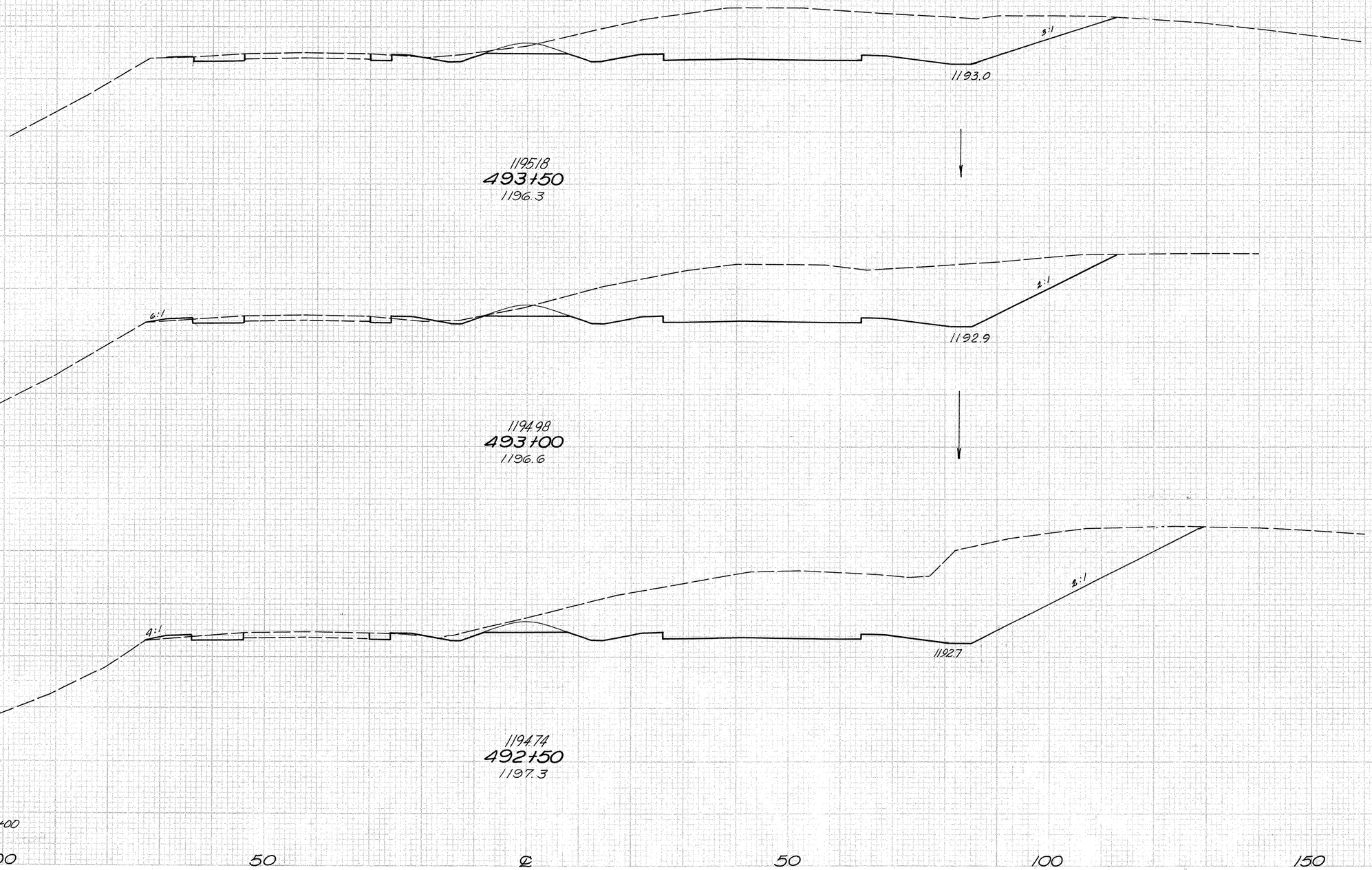
SEEDING	
END WIDTH	SQ. YDS.
283	
513	
262	
394	
240	
289	
224	

PROJ. NO. DESIGNATION	STATE	PROJECT	
2	OHIO		

124
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		808	0
		1620	8
		941	8
		2146	12
		1376	5
		2750	6
		1586	1

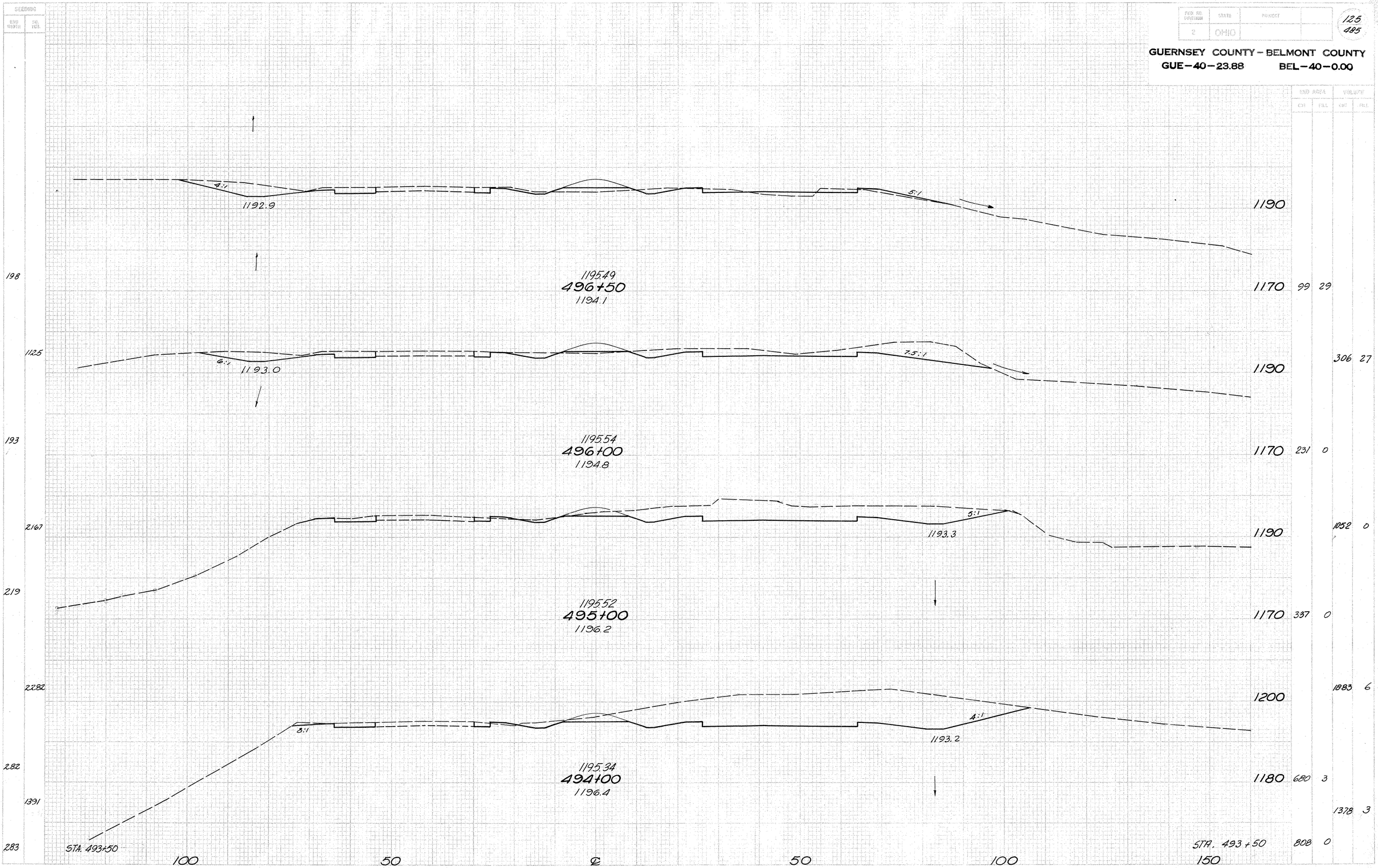


STA. 492 +50 TO STA. 493 +50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

125
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

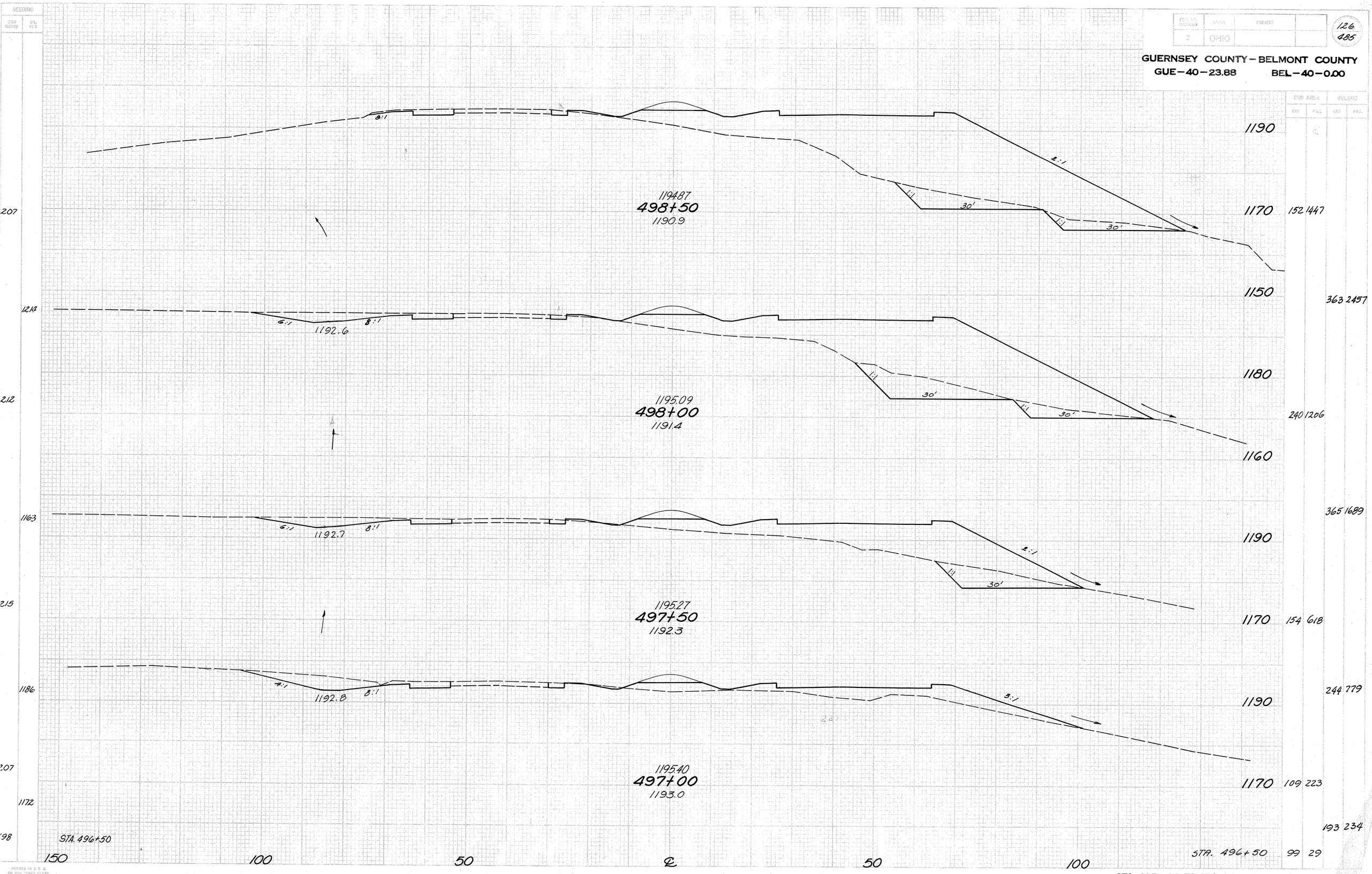


STA. 494+00 TO STA. 496+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

126
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

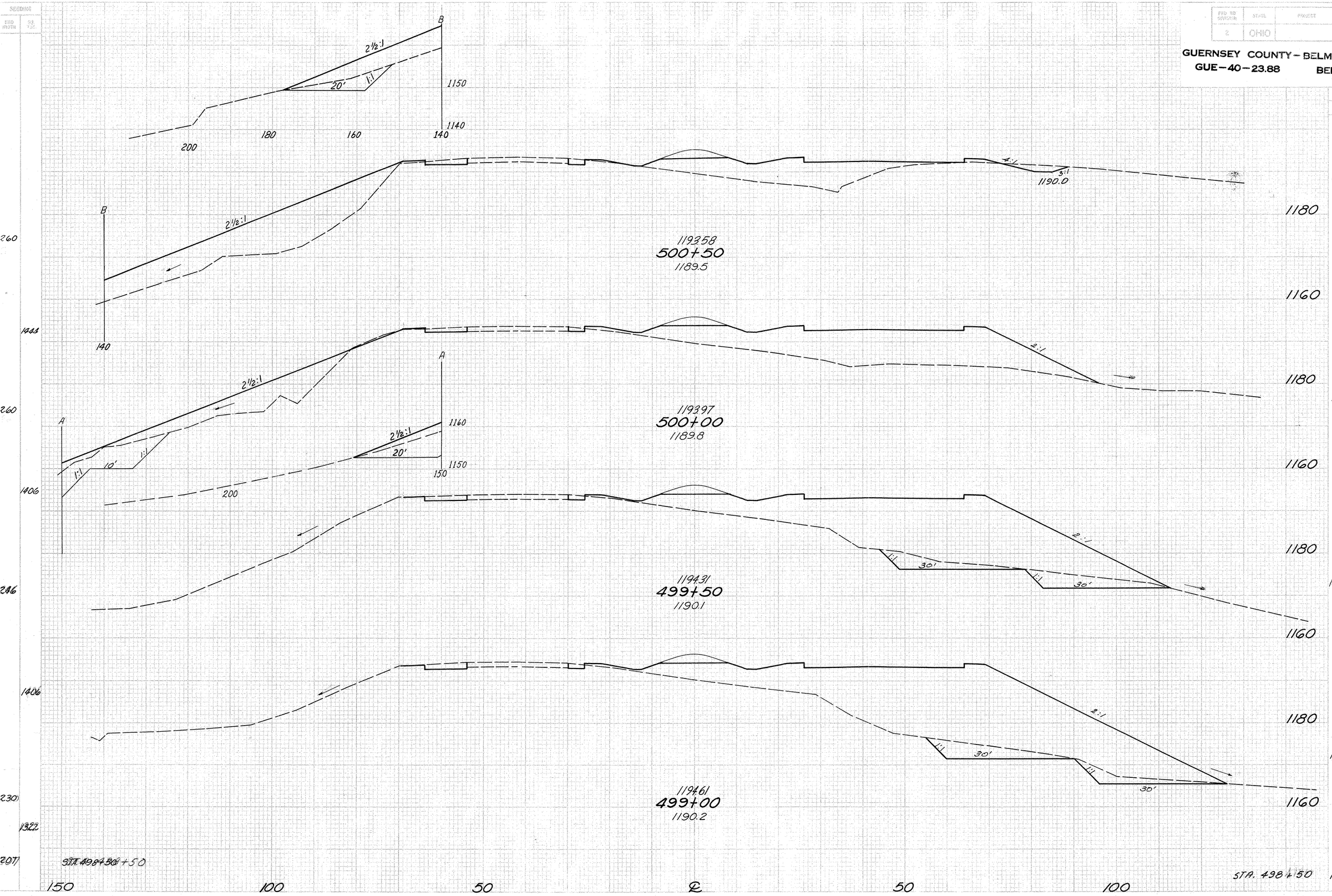


STA 497+00 TO STA 498+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

127
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
80	978		
		184	1838
118	1007		
		250	2010
152	1163		
		274	2459
144	1492		
		274	2722
152	1447		

STA. 499+00 TO STA. 500+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

128
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1190	616	82		
1170			1222	192
1190	703	125		
1170			1165	315
1180	550	215		
1180			998	1110
1180	528	983		
1160			563	1816
	80	978		

1191.63
502+50
1188.8

1192.18
502+00
1189.1

1192.69
501+50
1189.2

1193.15
501+00
1189.3

4:1
8:1
7:1
6:1
2½:1
1:1
10'
20'
200
180
160
140
1150
1140
A

STA. 500+50 100 50 ℄ 50 100 STA. 500 + 50

STA. 501+00 TO STA. 502+50

SEEDING

END WIDTH	SQ. YDS.

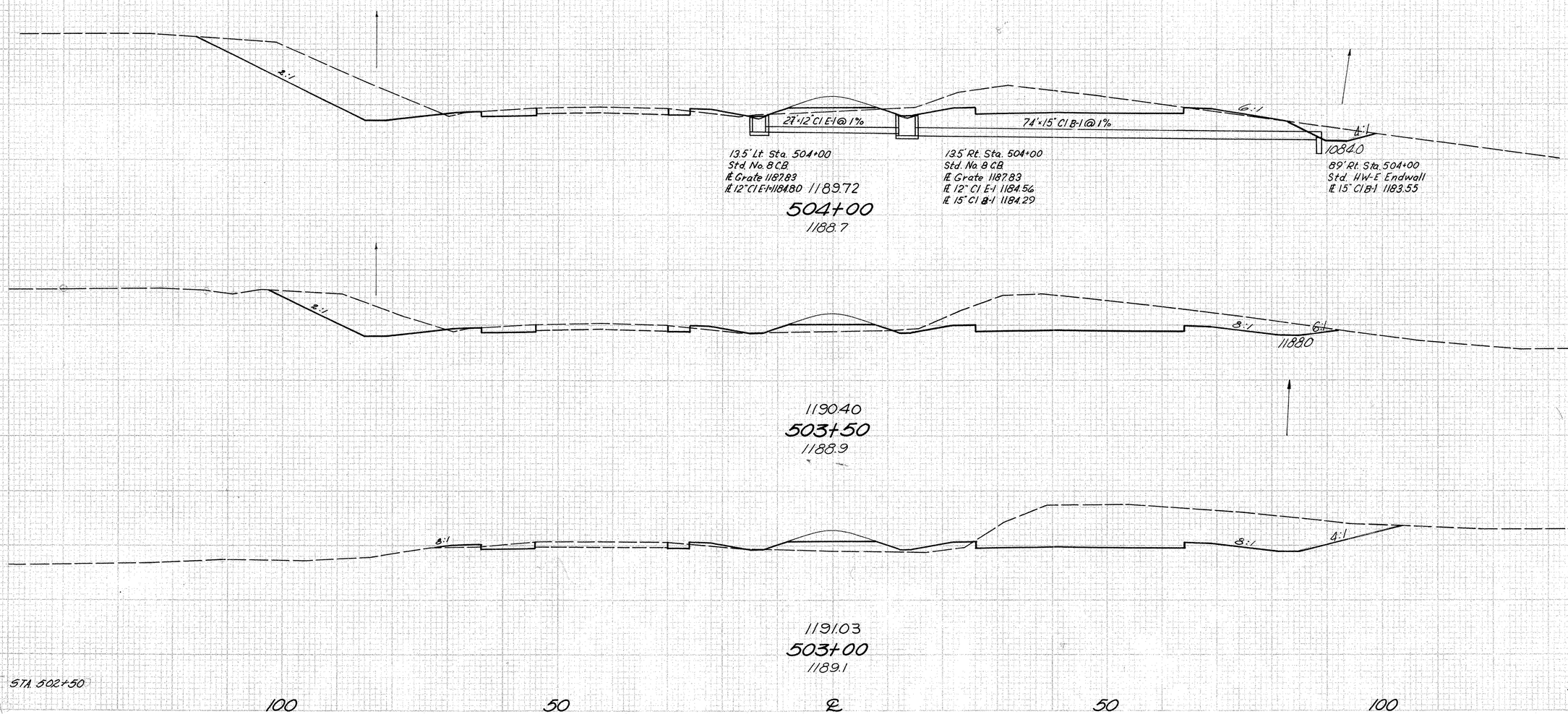
SHT. NO.	STATE	PROJECT	
2	OHIO		

129
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



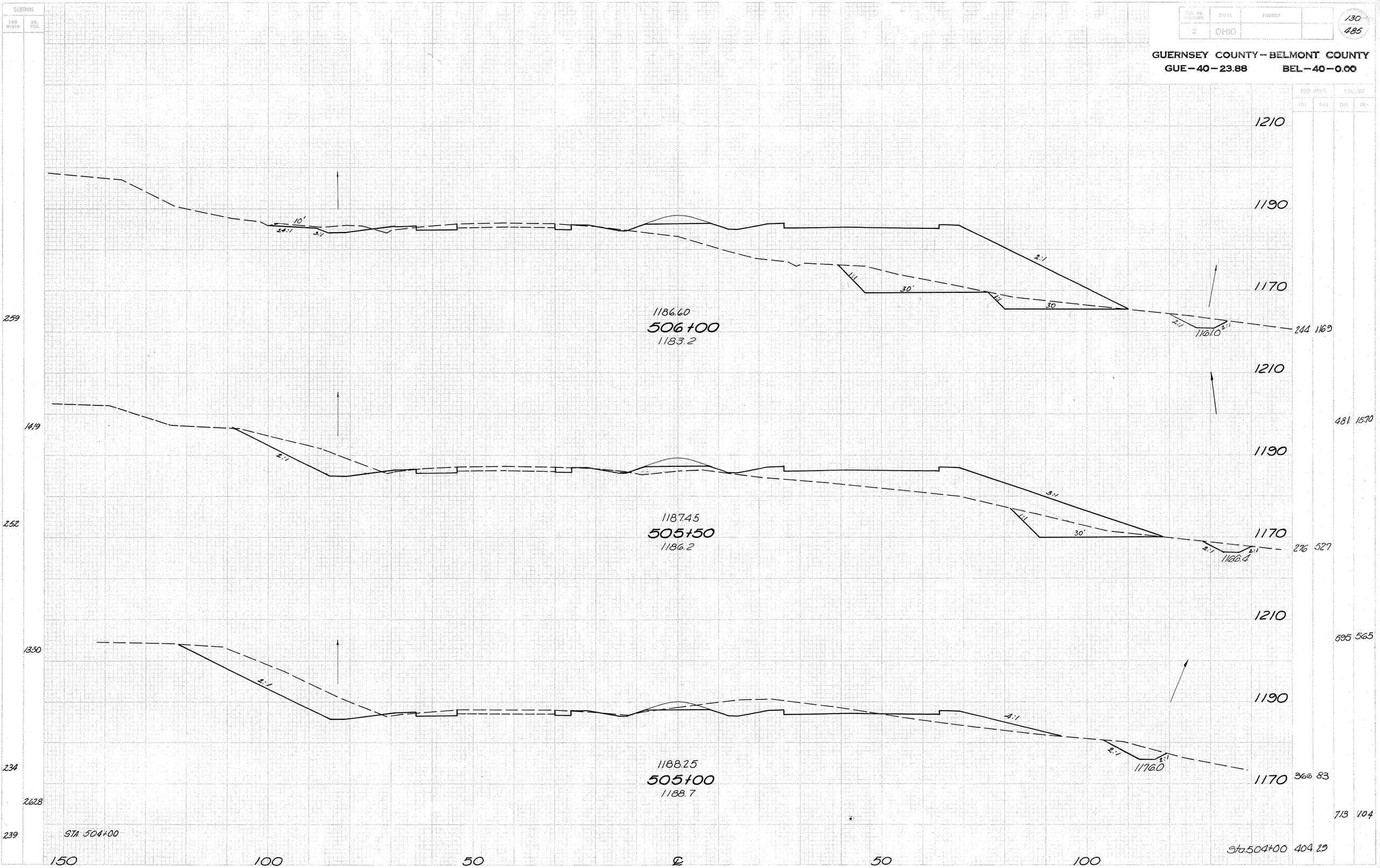
STA. 503+00 TO STA. 504+50

PRINTED IN U. S. A.
DIETZGEN TRACE CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

130
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



STA. 505+00 TO STA. 506+00

SEEDING

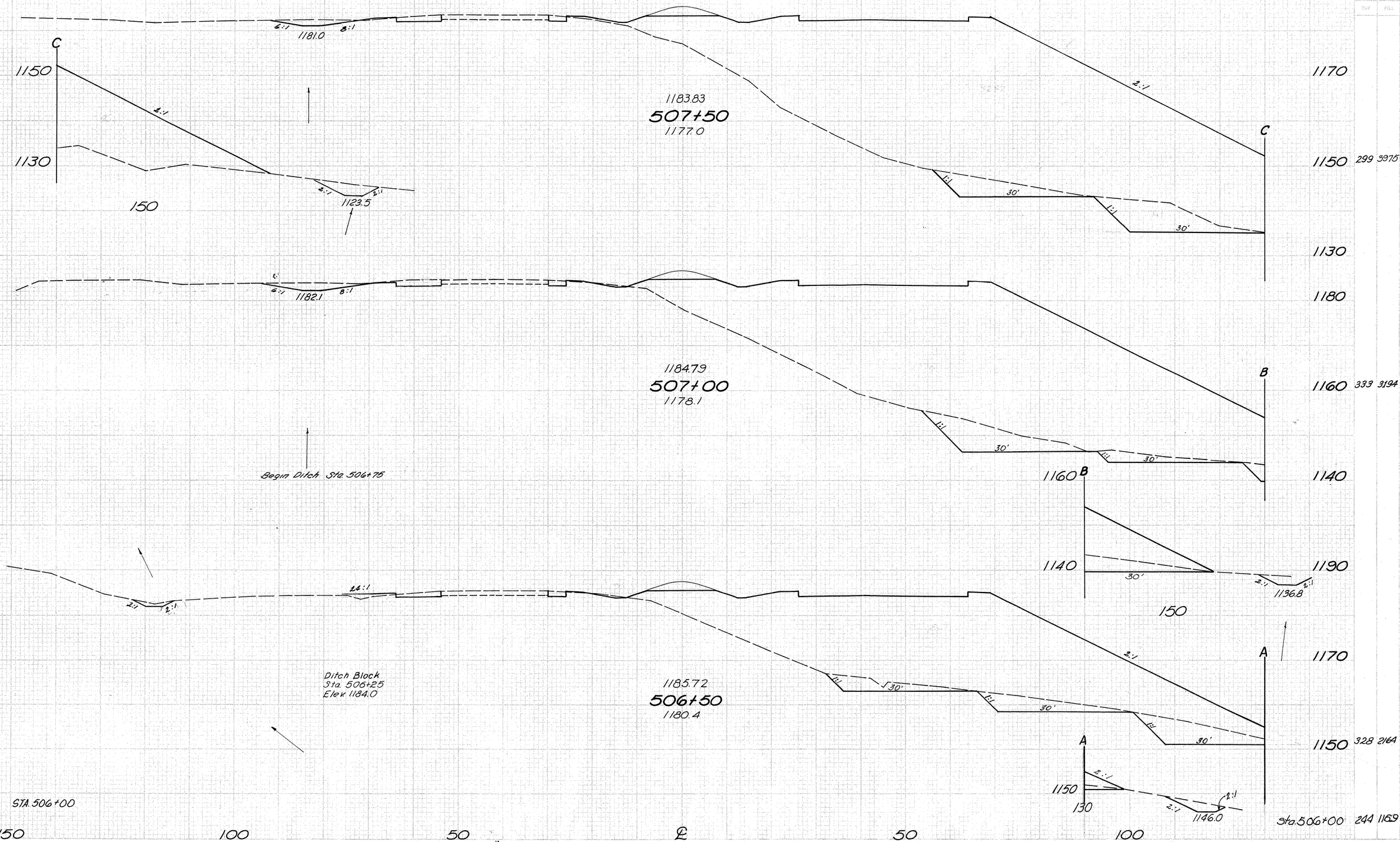
CWD AREA	SQ. YDS.
358	
1917	
1914	
331	
1780	
310	
1580	
259	

FED. AID PROJECT	STATE	PROJECT	
2	OHIO		

131
4.85

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1170				
1150	299	3975		
1130	885	6638		
1180				
1160	333	3194		
1140				
			612	4961
1190				
1170				
1150	328	2164		
			530	3086
Sta. 506+00	244	1169		



STA. 506+50 TO STA. 507+50

SEEDING

END WIDTH	NO. YDS

FED. PJ. PROJECT	STATE	PROJECT	
2	OHIO		

132
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23 88 **BEL – 40 – 0.00**

END AREA		VOLUME	
CUT	FILL	CUT	FILL

1130
1110
1160
1140
1120
1180
1160
1140
1120
1100
1090
1180
1160
1140
1120
1100

B
2:1
30'
1:1
200
24:1
2:1
1100.0
2:1
B
2:1
1:1
30'
1:1
30'
A
2:1
1:1
30'
24:1
2:1
2:1
160
200
1120.0
A
2:1
1:1
30'
1:1
30'

6:1 1178.5

1180
1170 EX. 24" C.M.P.
℄ 1178.92
24" C.M.P. – 166' Lt. Sta. 508+34
See Sheet No. 415

1181.85
508+46
1169.2

6:1 1179.4

1100
℄ 1098.19
PROPOSED 24" C.M.P.
232' Rt. Sta. 508+34
See Sheet No. 415

1182.82
508+00
1168.8

395
1980
2050
380
358

780 5745
1061 8777
466 4559
708 7902
299 3975

5870

STA. 507+50

100 50 ℄ 50 100 150

Sta. 507+50

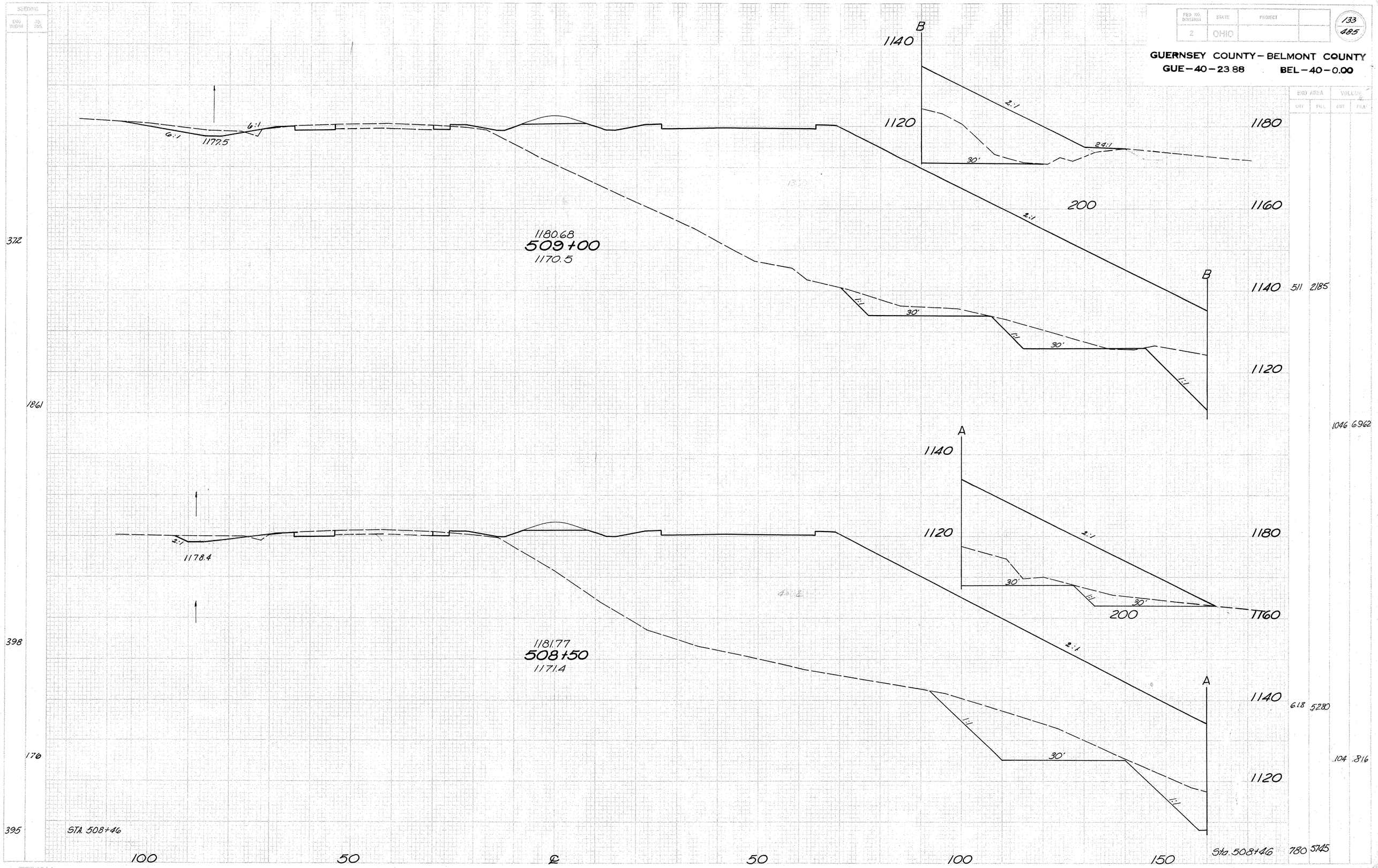
STA. 508+00 TO STA. 508+46

PRINTED IN U. S. A.
5/8 RAG LINEN TRADE CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

133
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



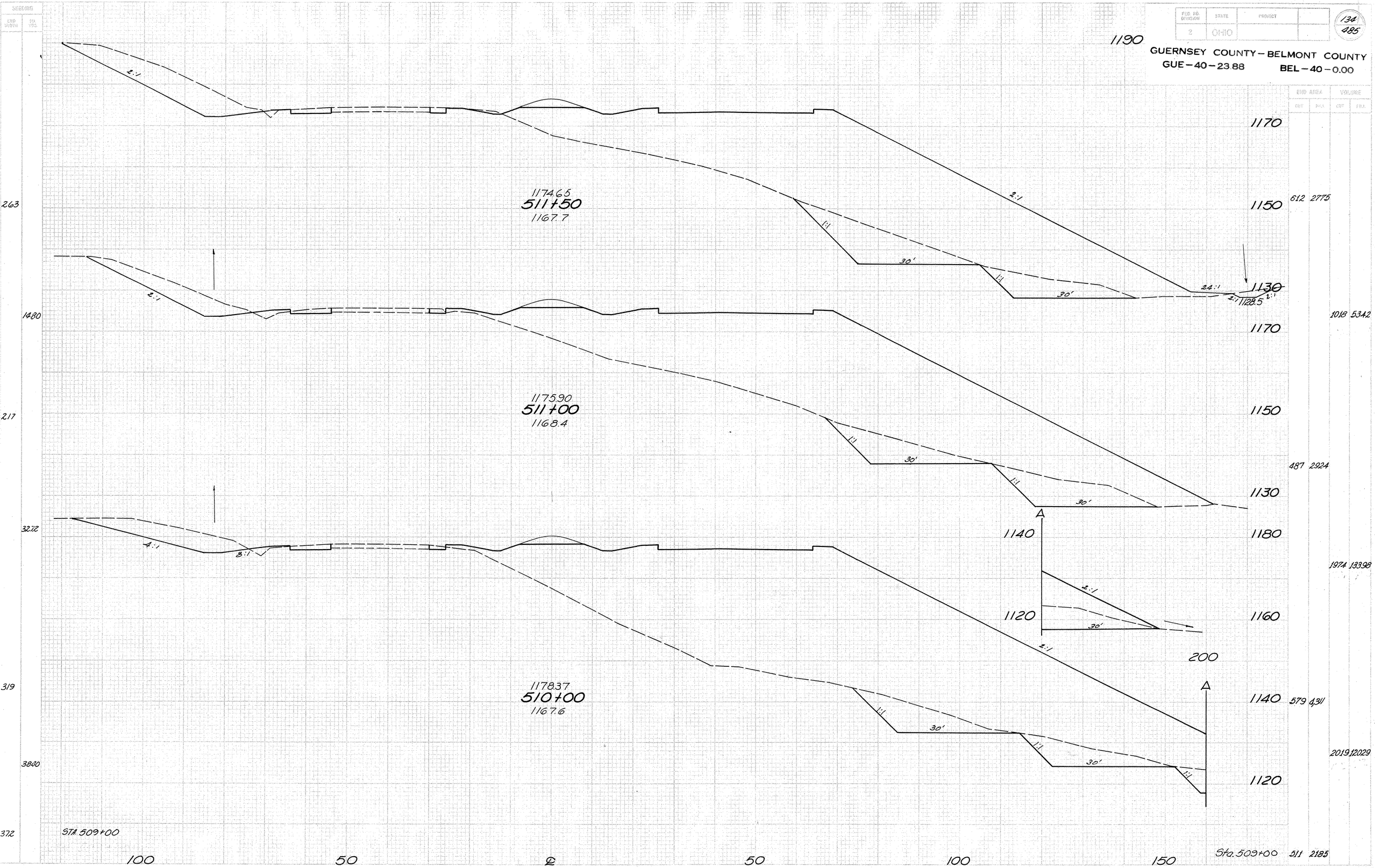
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
511	2185		
		1046	6962
618	5280		
		104	816
780	5745		

STA. 508+50 TO STA. 509+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

134
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

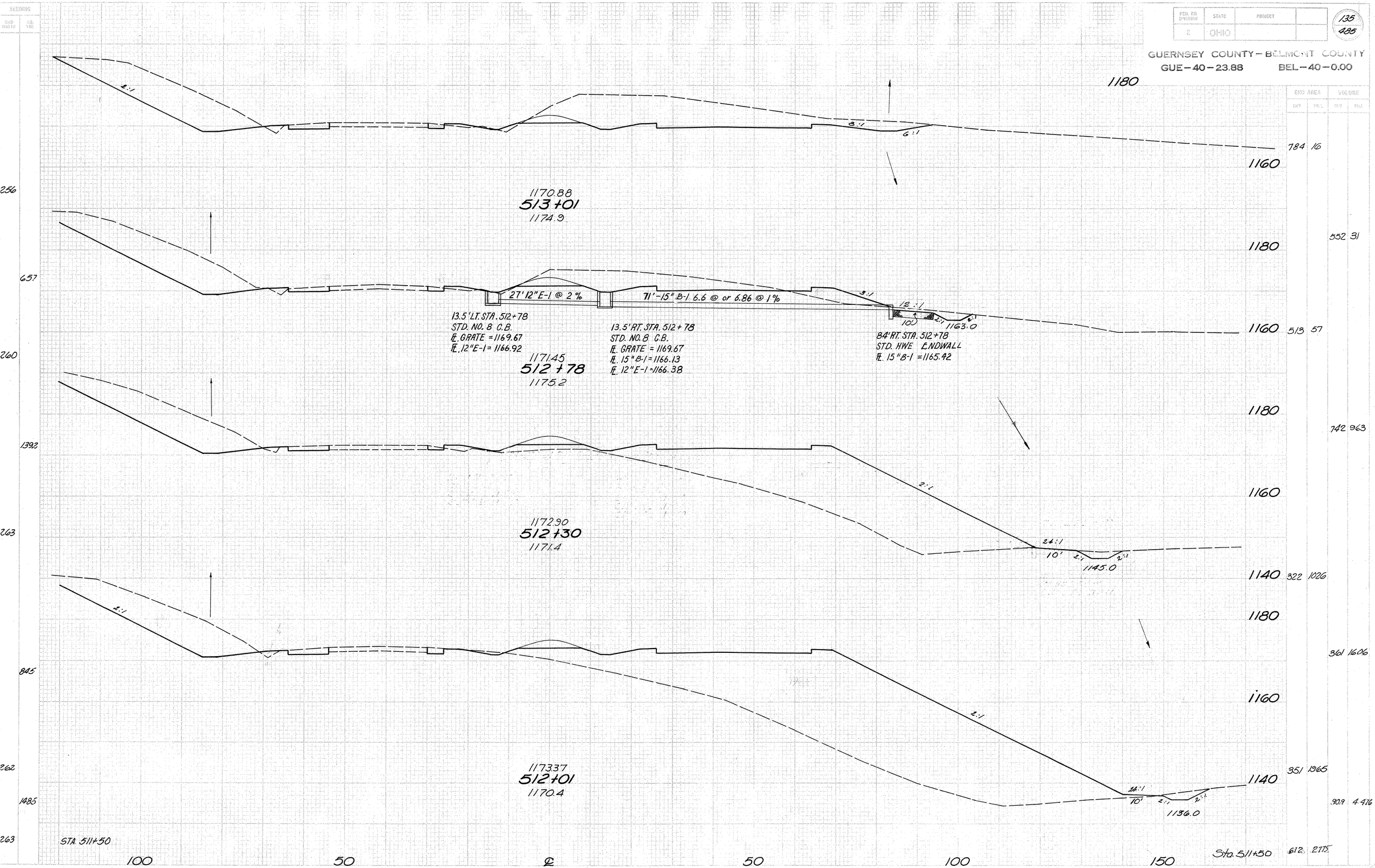


STA. 510+00 TO STA. 511+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

135
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



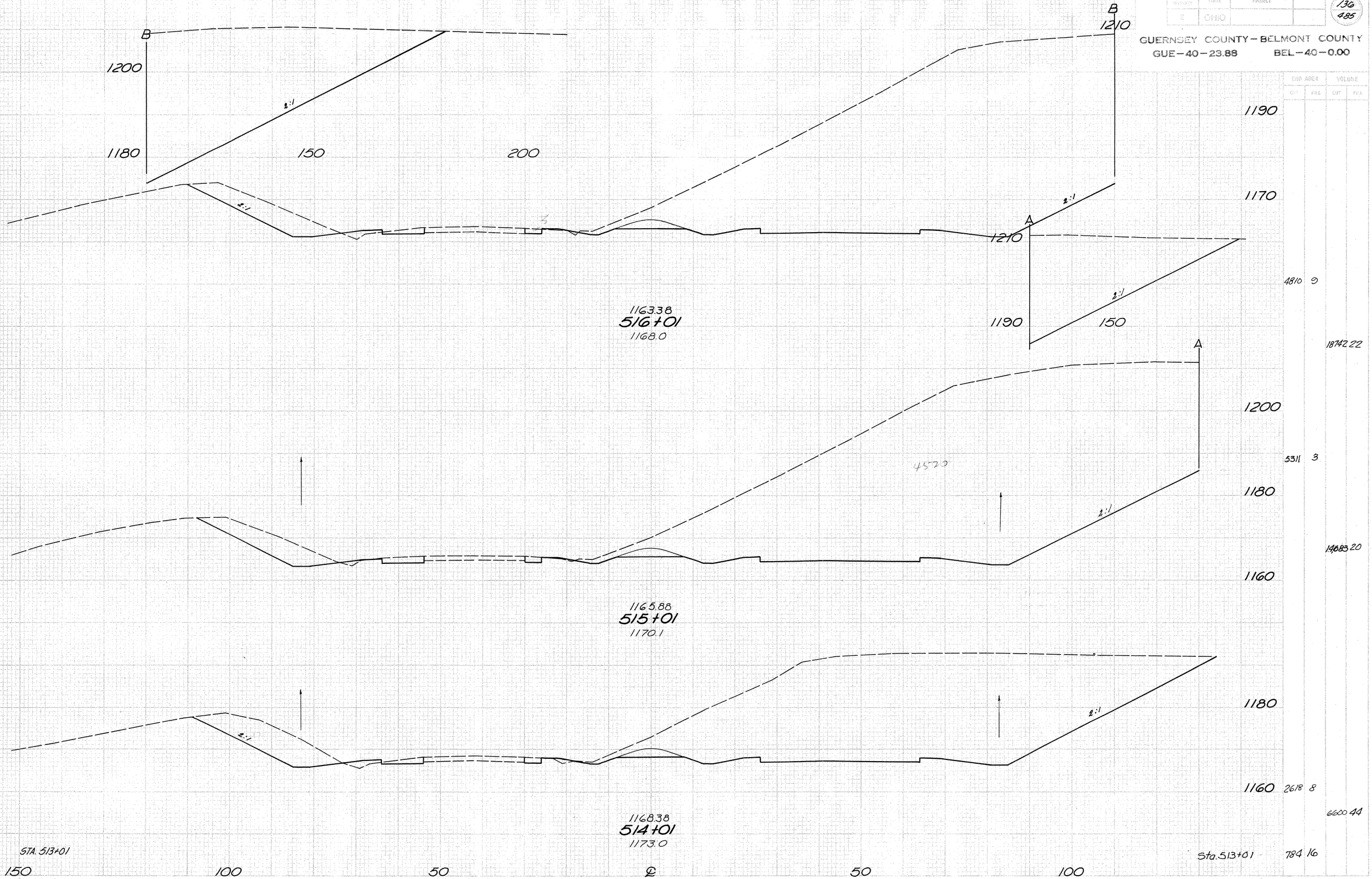
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
784	16		
		552	31
513	57		
		742	963
322	1026		
		361	1606
351	1965		
		90.9	4.476
612	2775		

STA. 512+00 TO STA. 513+01

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

136
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

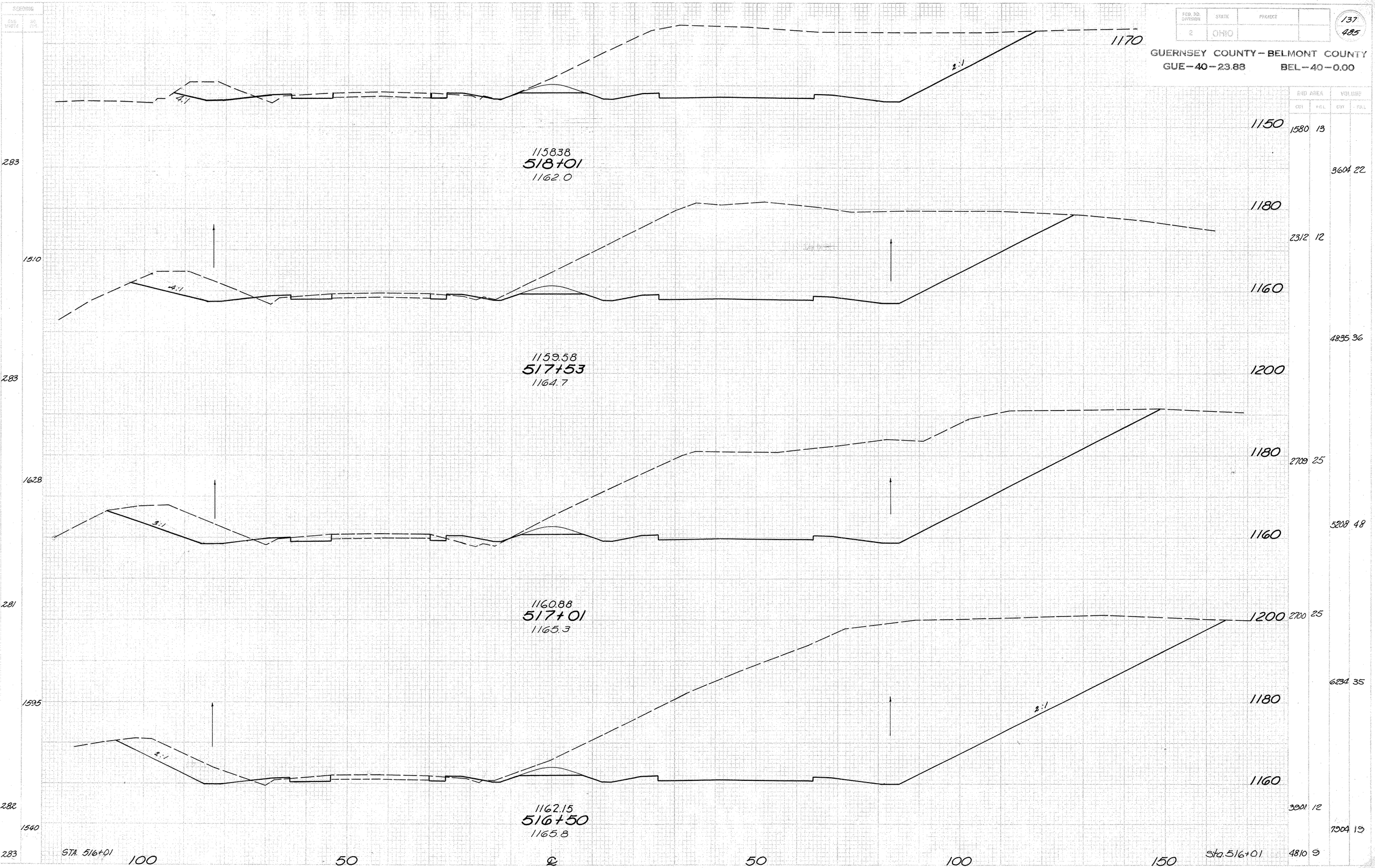


STA. 514+01 TO STA. 516+01

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

137
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1580	13		
		3604	22
2312	12		
		4835	36
2709	25		
		5208	48
2700	25		
		6234	35
3901	12		
		7904	19
4810	9		

STA 516+50 TO STA 518+01

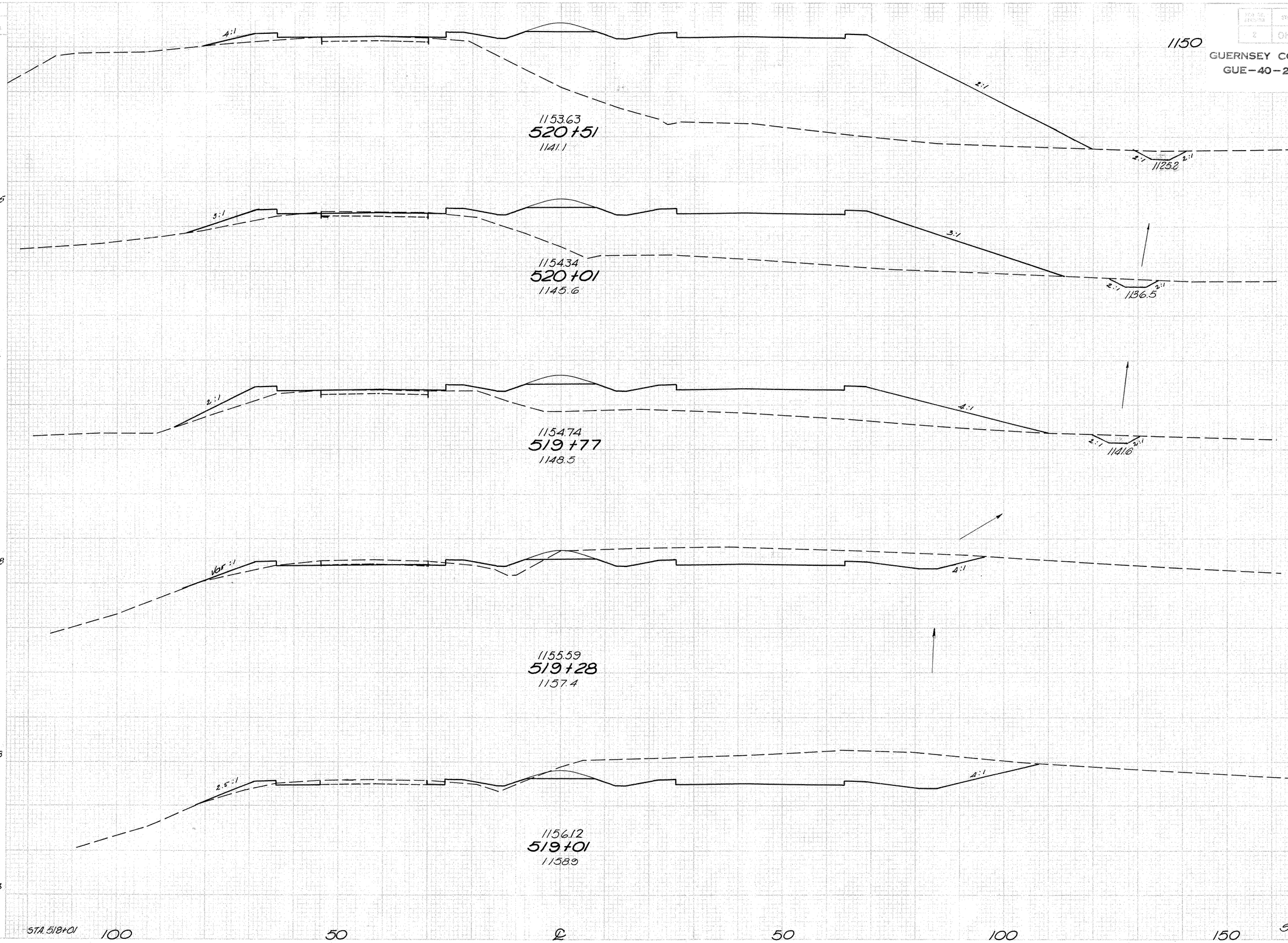
SEEDING

SQ. YDS. WIDTH	SQ. YDS.
303	
	1675
300	
	791
293	
290	
1588	
290	
	868
	3183
283	

SHEET NO.	SHEETS	PROJECT
2	OHIO	

138
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	14	2078	
	29	3172	
	17	1185	
	14	501	
	14	684	
	283	657	
	298	41	
	536	34	
	674	28	
	474	76	
	1580	13	

STA. 519+01 TO STA. 520+51

PRINTED BY U. S. BUREAU OF PUBLIC ROADS

SECTION	
CHG WIDTH	CU. YDS.

SEEDING	
END WIDTH	SQ. YDS.
348	
1512	
386	
4344	
96	
1275	
78	

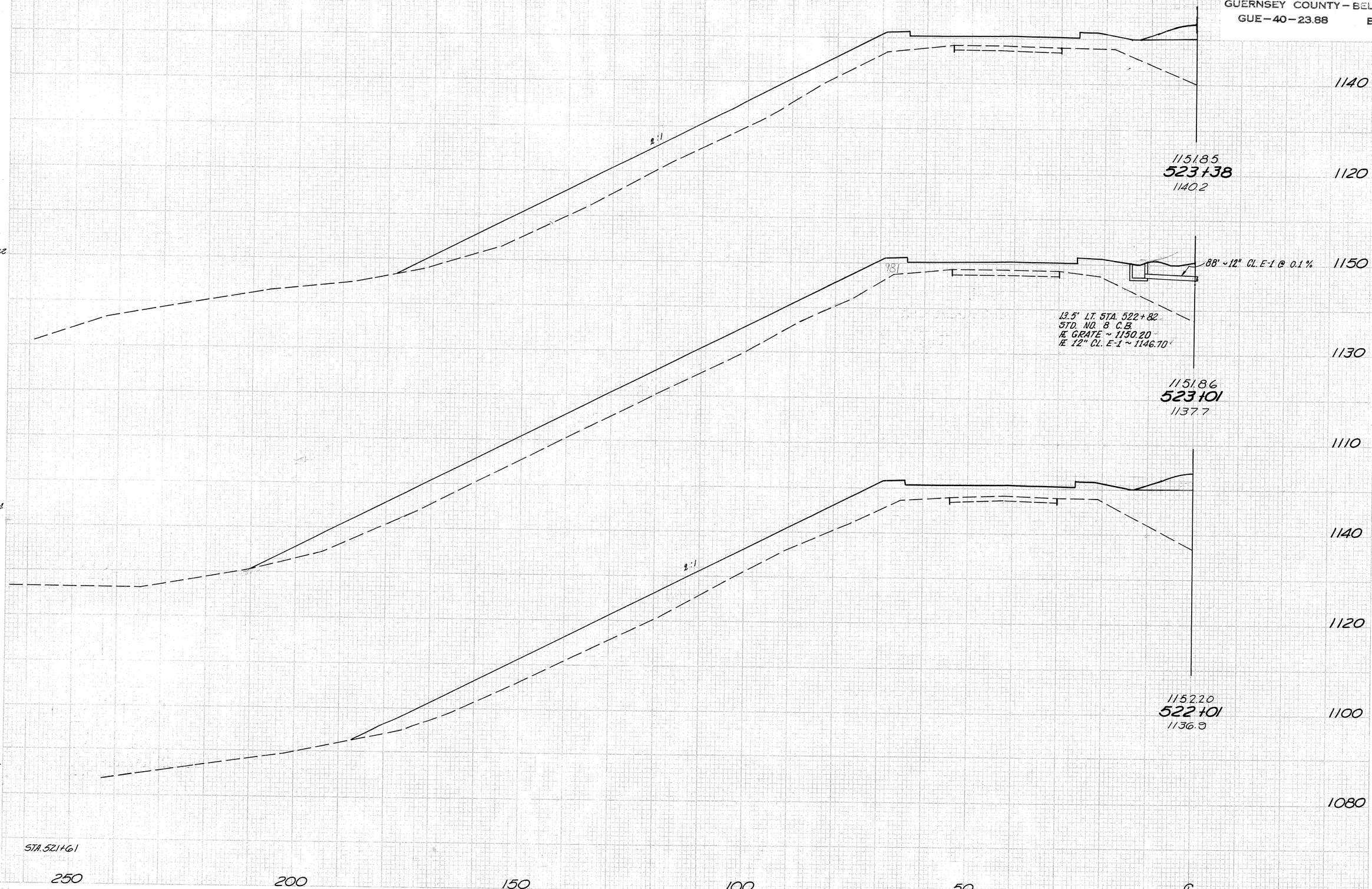
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

140
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00

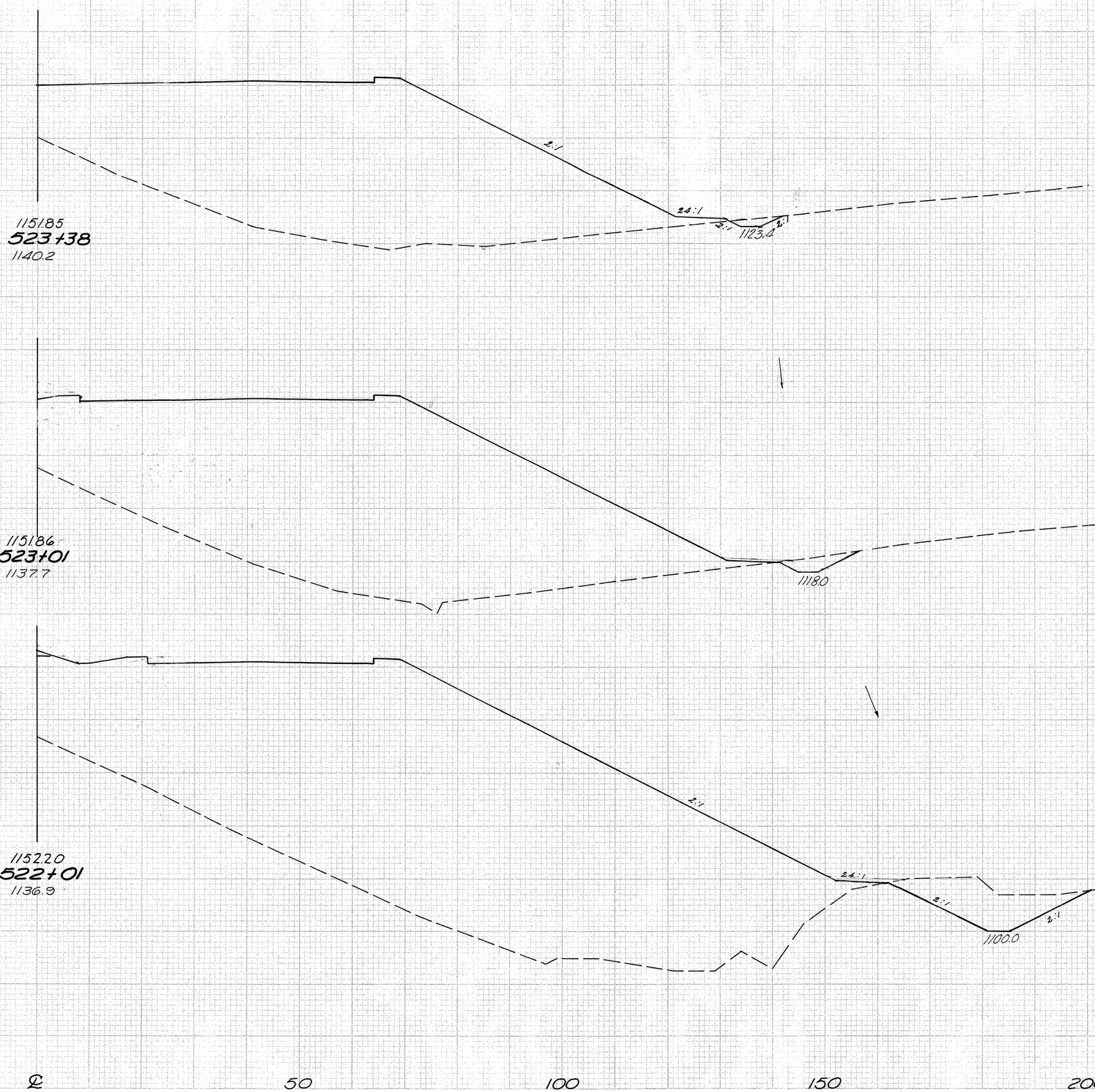
END AREAS		VOLUMES	
CUT	FILL	CUT	FILL



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

141
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



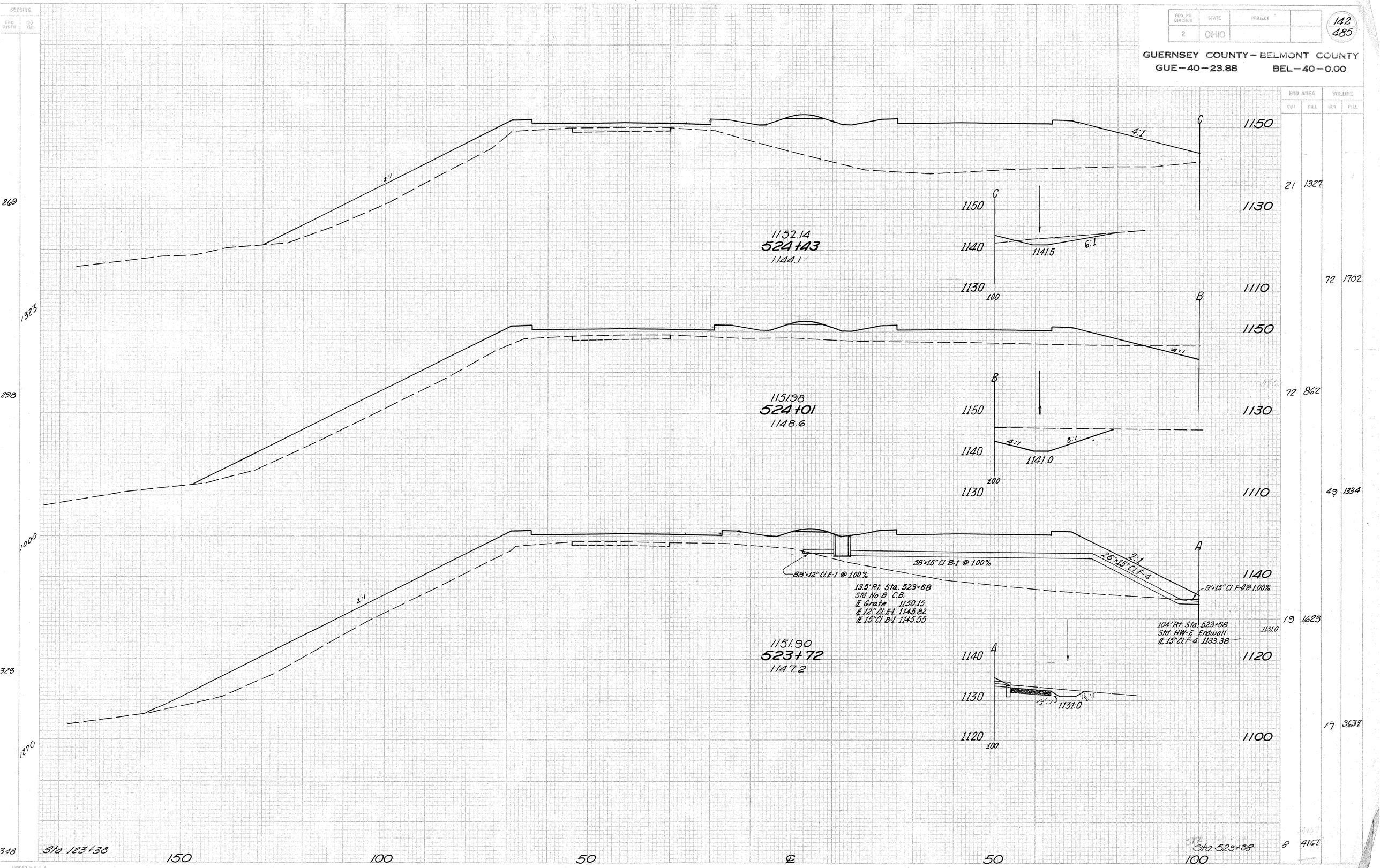
	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1140				
1120 Lt.	–	800		
Rt.	8	3357		
Tot.	8	4157		
1100				
1150			20	6395
1130				
Lt.	–	980		
Rt.	21	4196		
Tot.	21	5176		
1110				
1150				
1130			391	18,044
1110 Lt.	–	907		
Rt.	190	3661		
Tot.	190	4568		
1090			182	7768
Sta. 521+61	55	5919		

STA. 522+01 TO STA. 523+38 RIGHT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

142
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
21	1327		
		72	1702
72	862		
		49	1334
19	1623		
		17	3638
8	4167		

STA. 523+72 TO STA. 524+43

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

143
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00

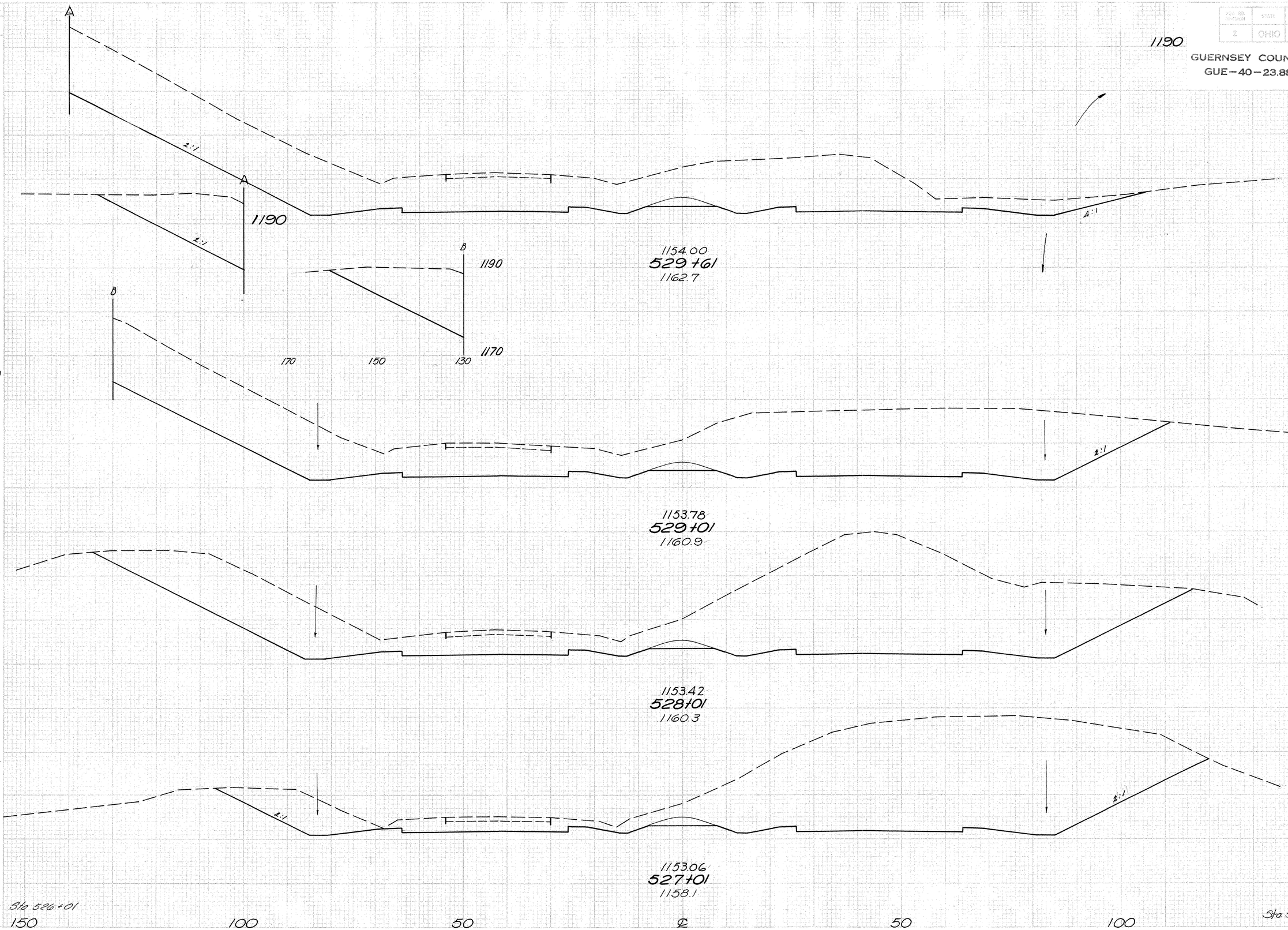
SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL

SEEDING	
END WIDTH	SQ. YDS.
298	
1960	
280	
2972	
255	
2717	
234	
2511	
218	

SHEET NO.	STATE	PROJECT	
2	OHIO		

144
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1170			
1150		2439	0
1190		4927	0
1170			0
1150		2882	0
1180		14724	0
1160		2909	0
1180		10626	0
1160		2829	0
		7772	100
		1368	54

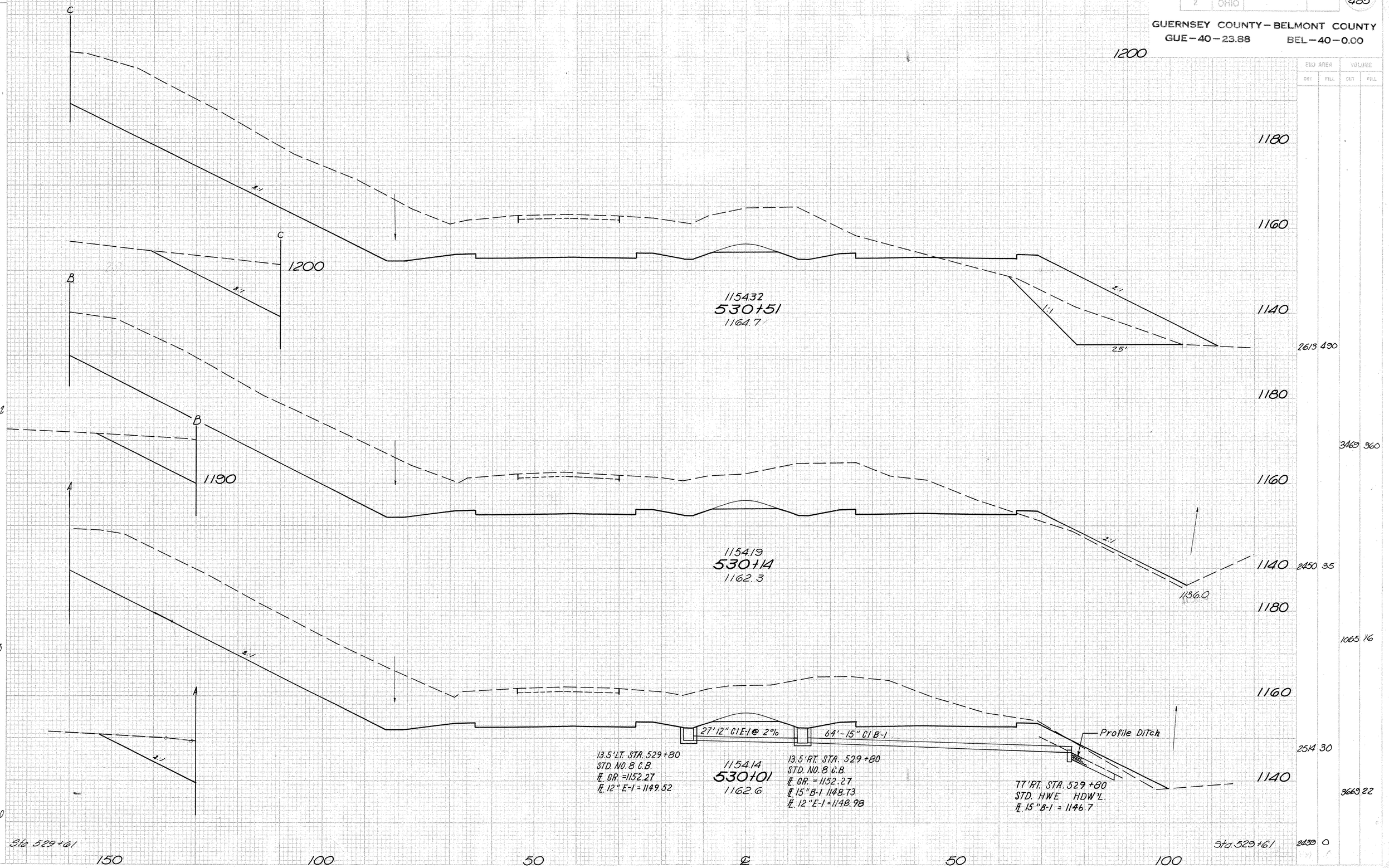
STA. 527+01 TO STA. 529+61

SEEDING	
SEND WIDTH	SQ. YDS.
	316
	1282
	308
	443
	305
	1340
	298

DISTRICT DIVISION	STATE	PROJECT	
2	OHIO		

145
435

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		2613	490
		3469	360
		2450	35
		1065	16
		2514	30
		3663	22
		2439	0

STA 530+01 TO STA 530+51

PRINTED IN U. S. A.
ON CURL-TRACE CLOTH

SEEDING	
END WIDTH	SQ. YDS.
290	
1689	
312	
3561	
329	
1799	
316	

FED. AID PROJECT	STATE	PROJECT	
2	OHIO		

146
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.83 BEL – 40 – 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		2795 0	
			4965 611
		2567 660	
		9544 2889	
		1797/2 = 899	
		2587 900	
		4237 1133	
		Sta. 530+57 2613 490	



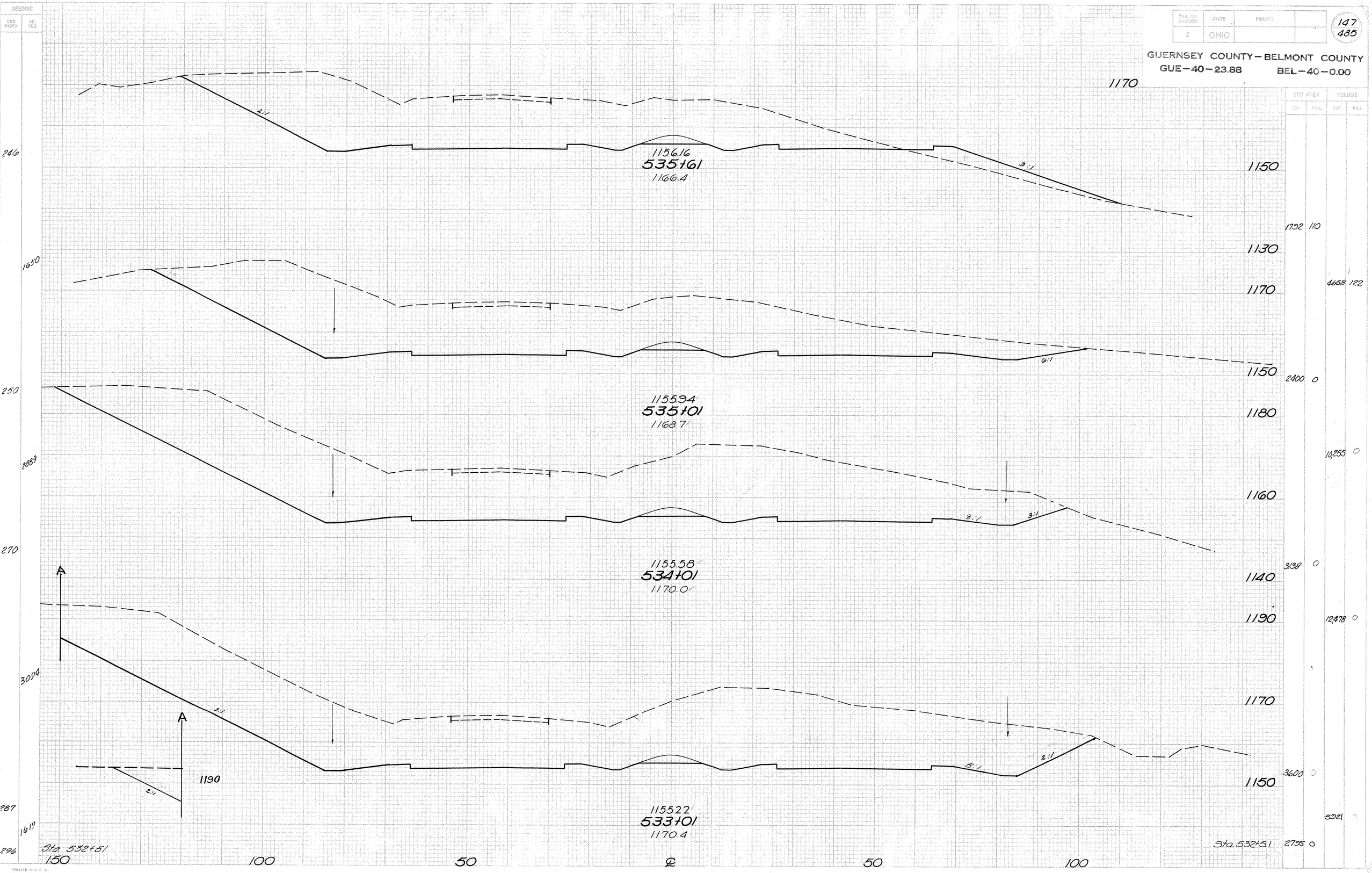
STA 531+01 TO STA 532+51

PRINTED IN U.S.A.
OX CEIL TRACE CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

147
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

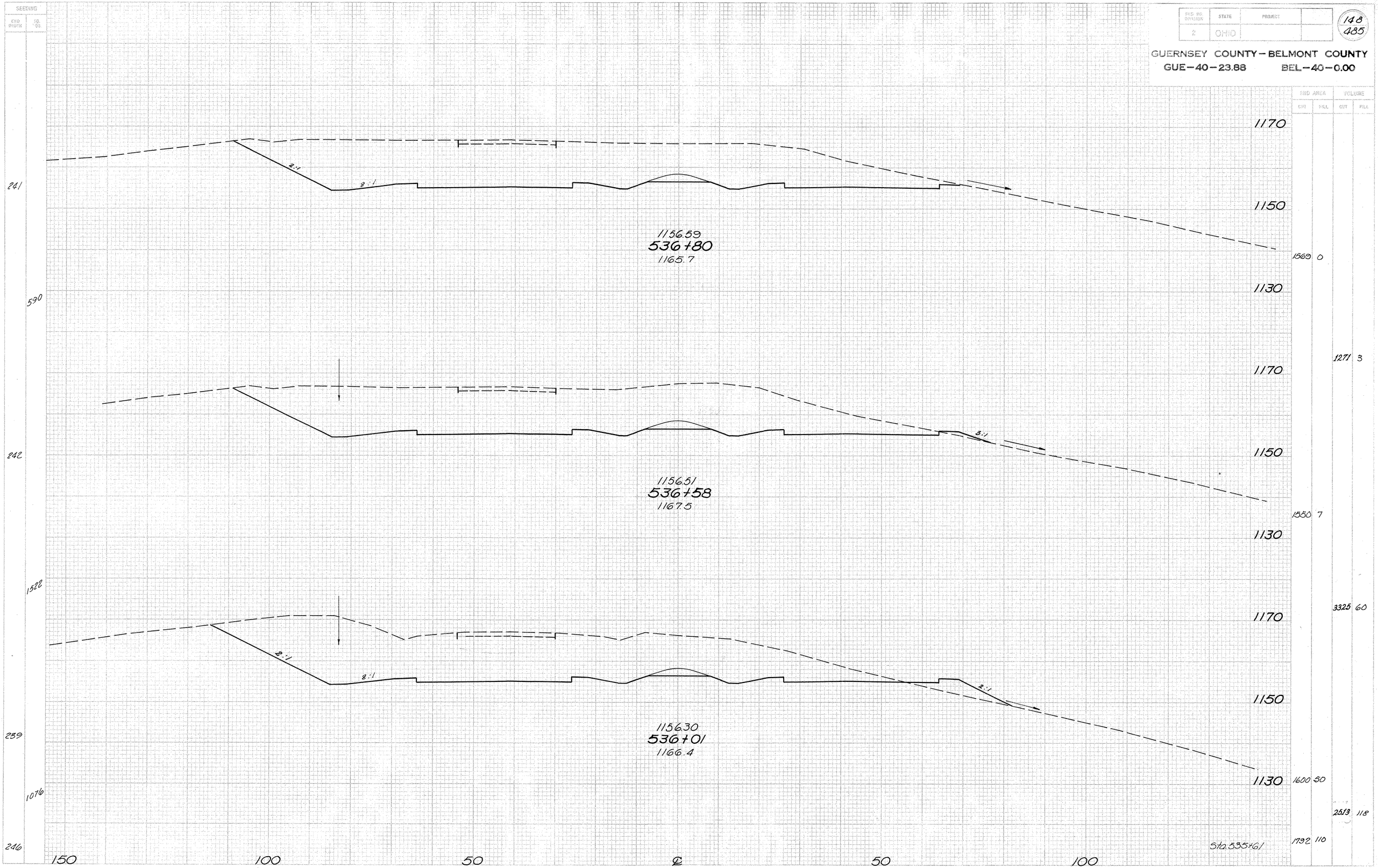


STA. 533+01 TO STA. 535+01

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

148
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

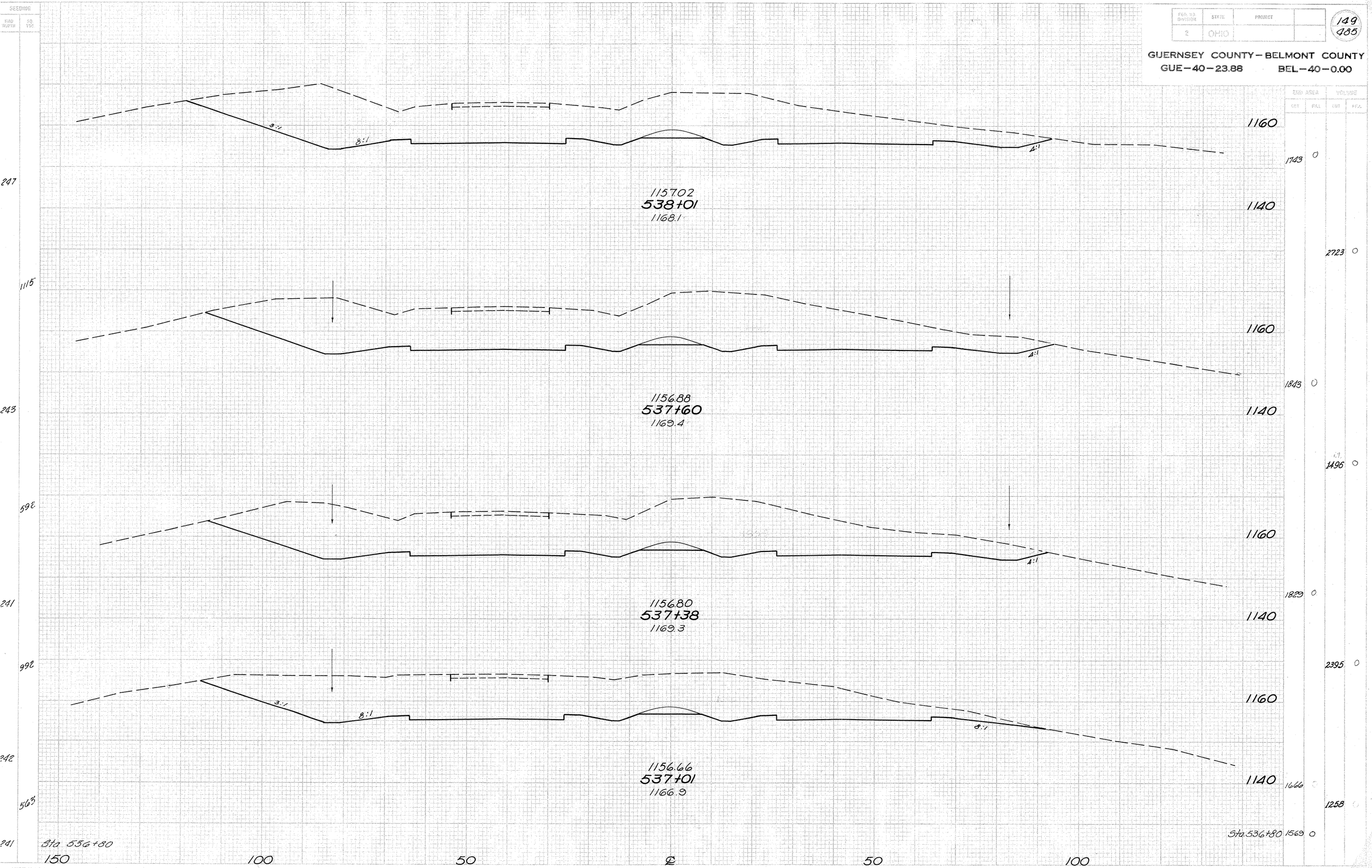


STA. 536+01 TO STA. 536+80

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

149
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

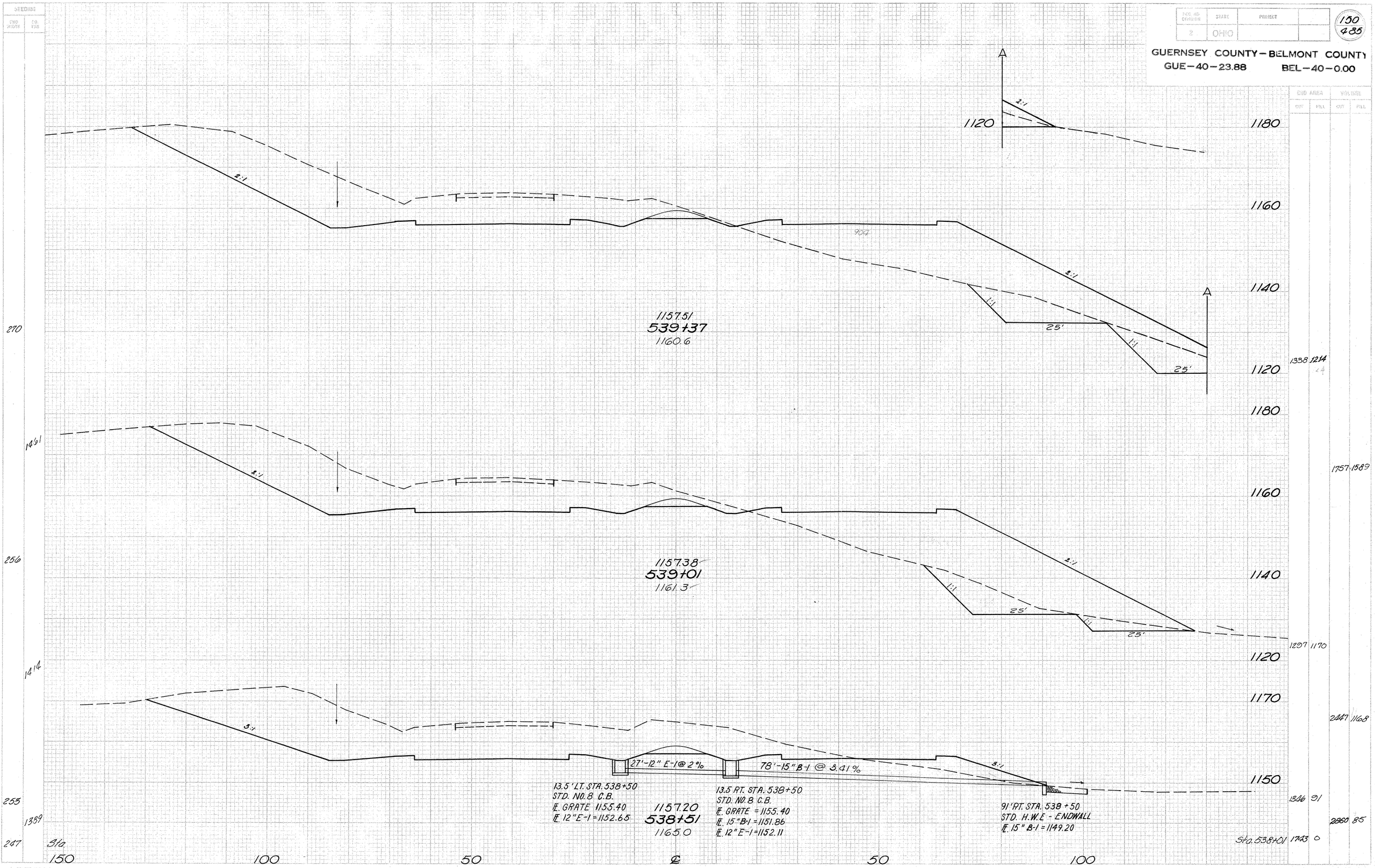


STA 537+01 TO STA 538+01

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

150
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



STA 538+51 TO STA 539+37

SEEDING

END WIDTH	SQ. YDS.
282	
902	
278	
821	
270	
1315	
268	
1915	
270	

SHEET NO.	STATE	PROJECT	
2	OHIO		

151
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

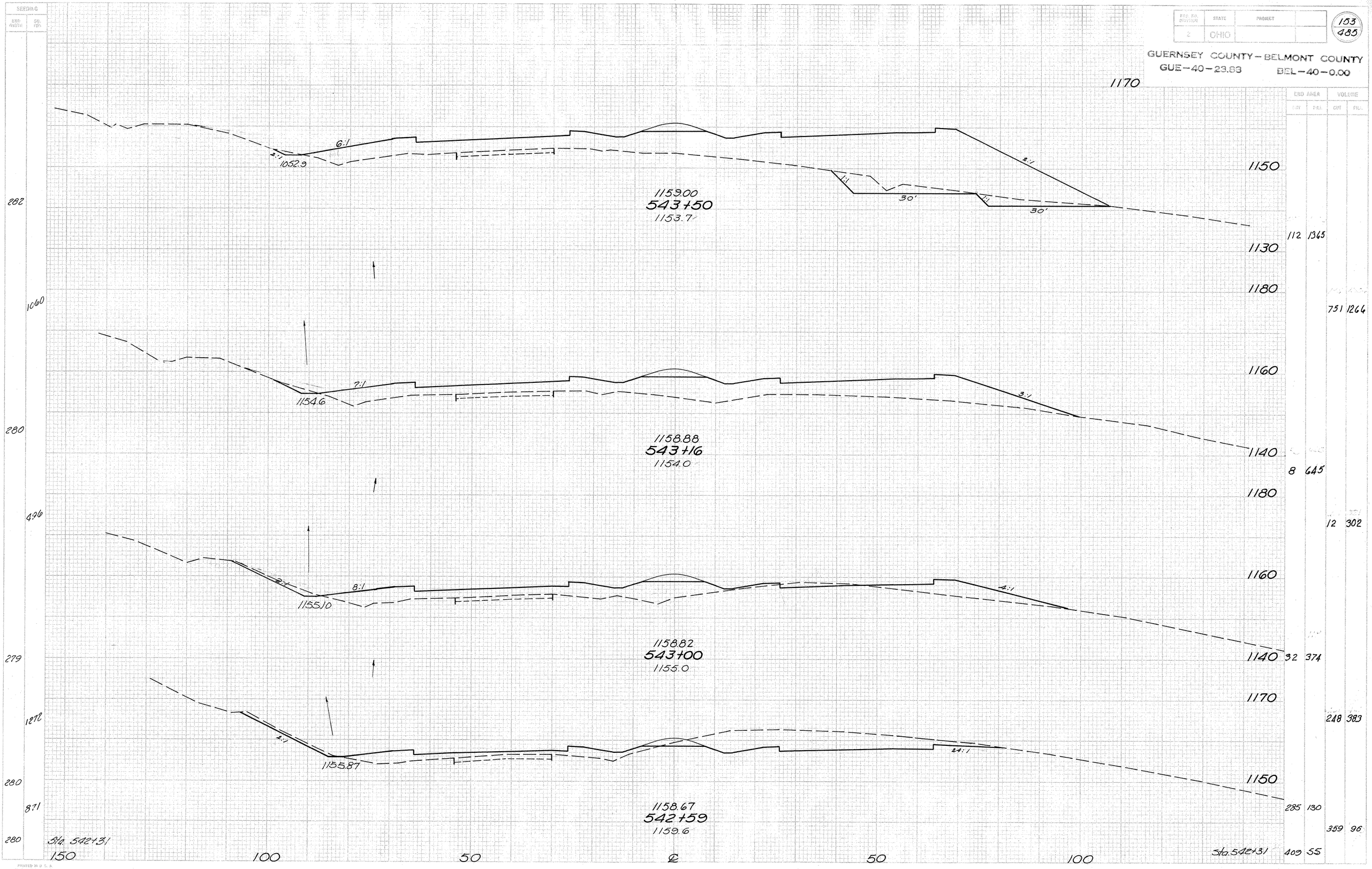
END AREA		VOLUME	
CUT	FILL	CUT	FILL

| SEEDING | | |

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

153
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.83 BEL–40–0.00

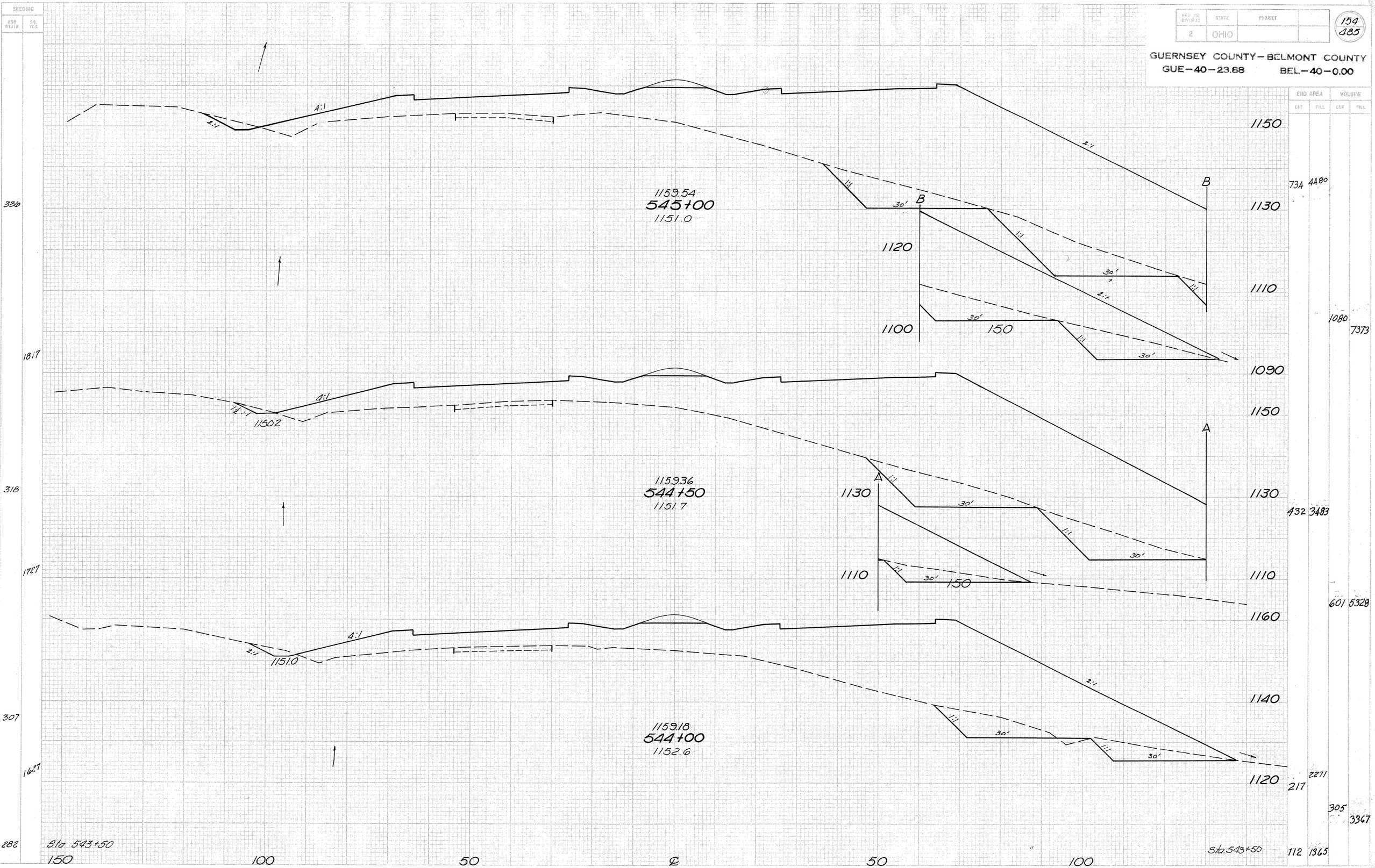


STA. 542+59 TO STA. 543+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

154
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

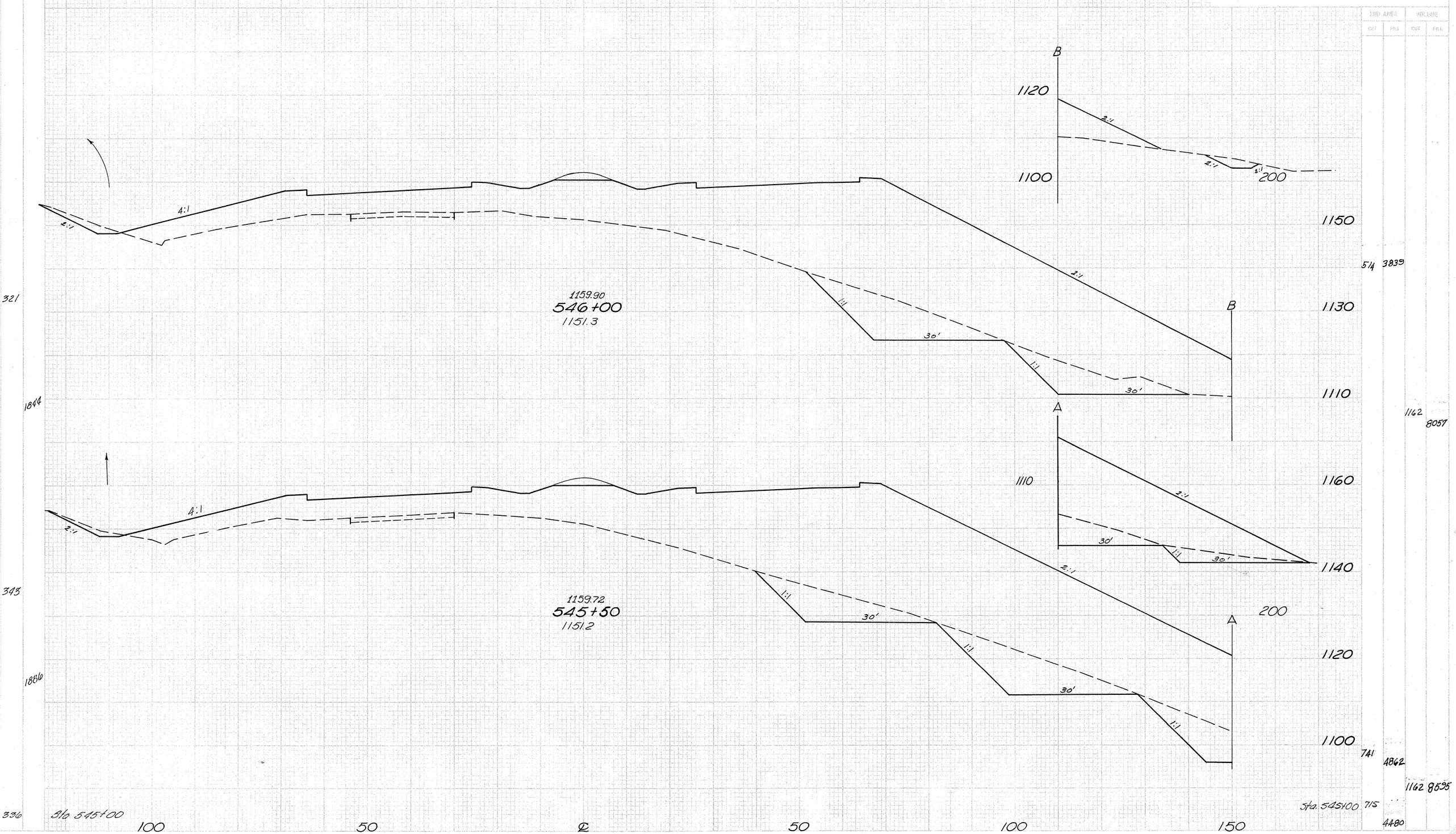


STA 544 +00 TO STA 545 +00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

155
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

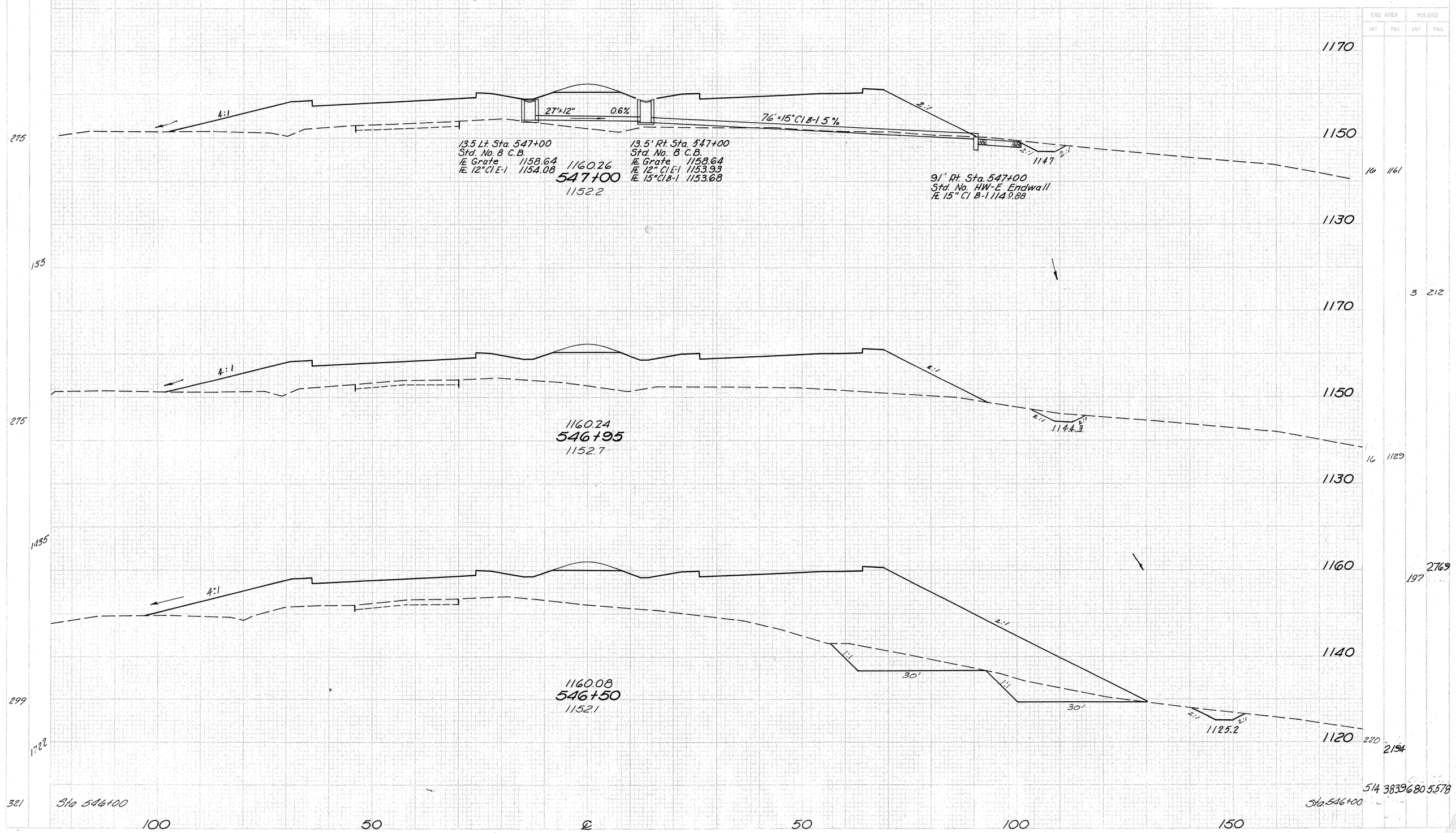


STA. 545+50 TO STA. 546+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

156
485

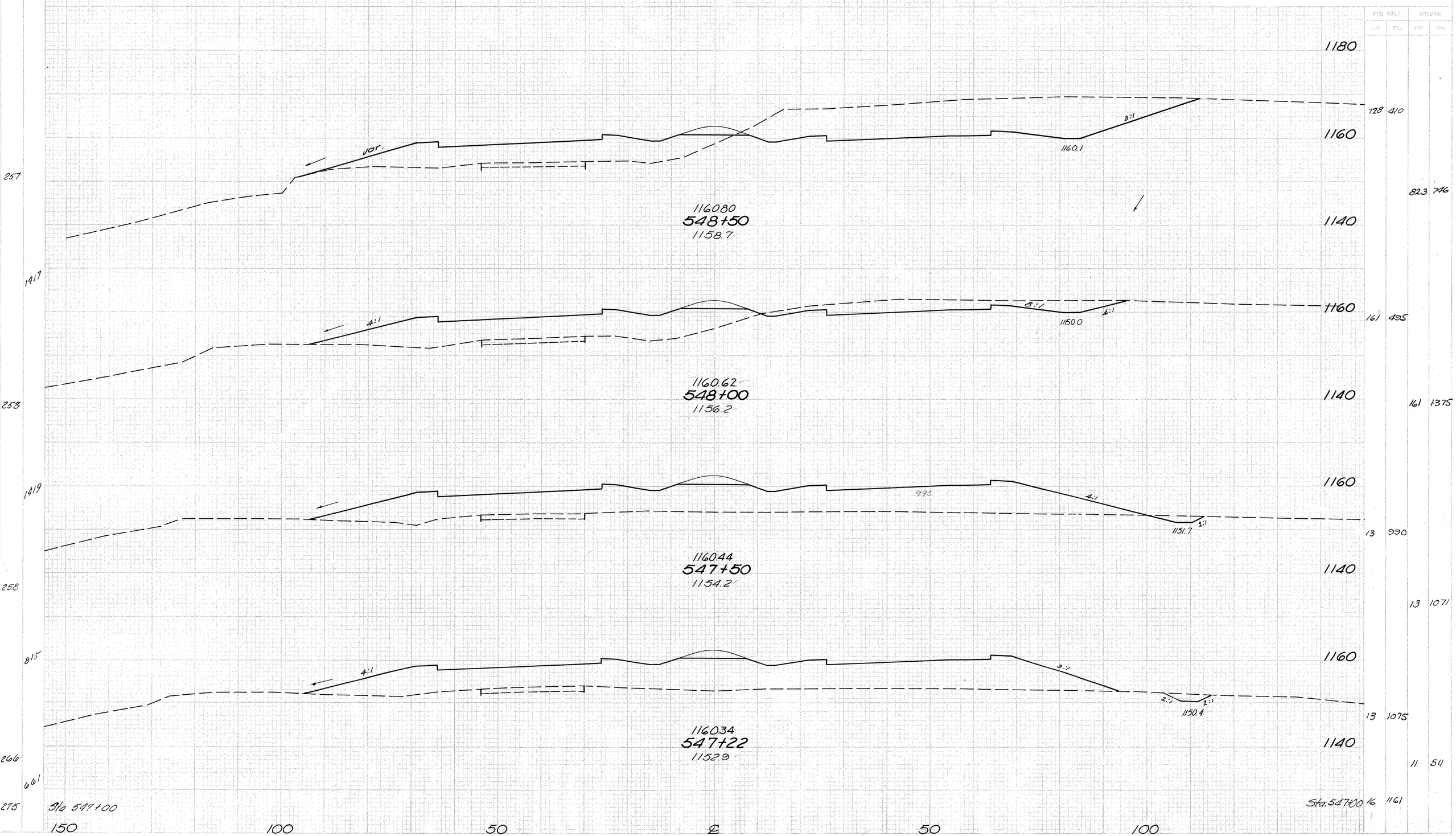
GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



STA 546+50 TO STA 547+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

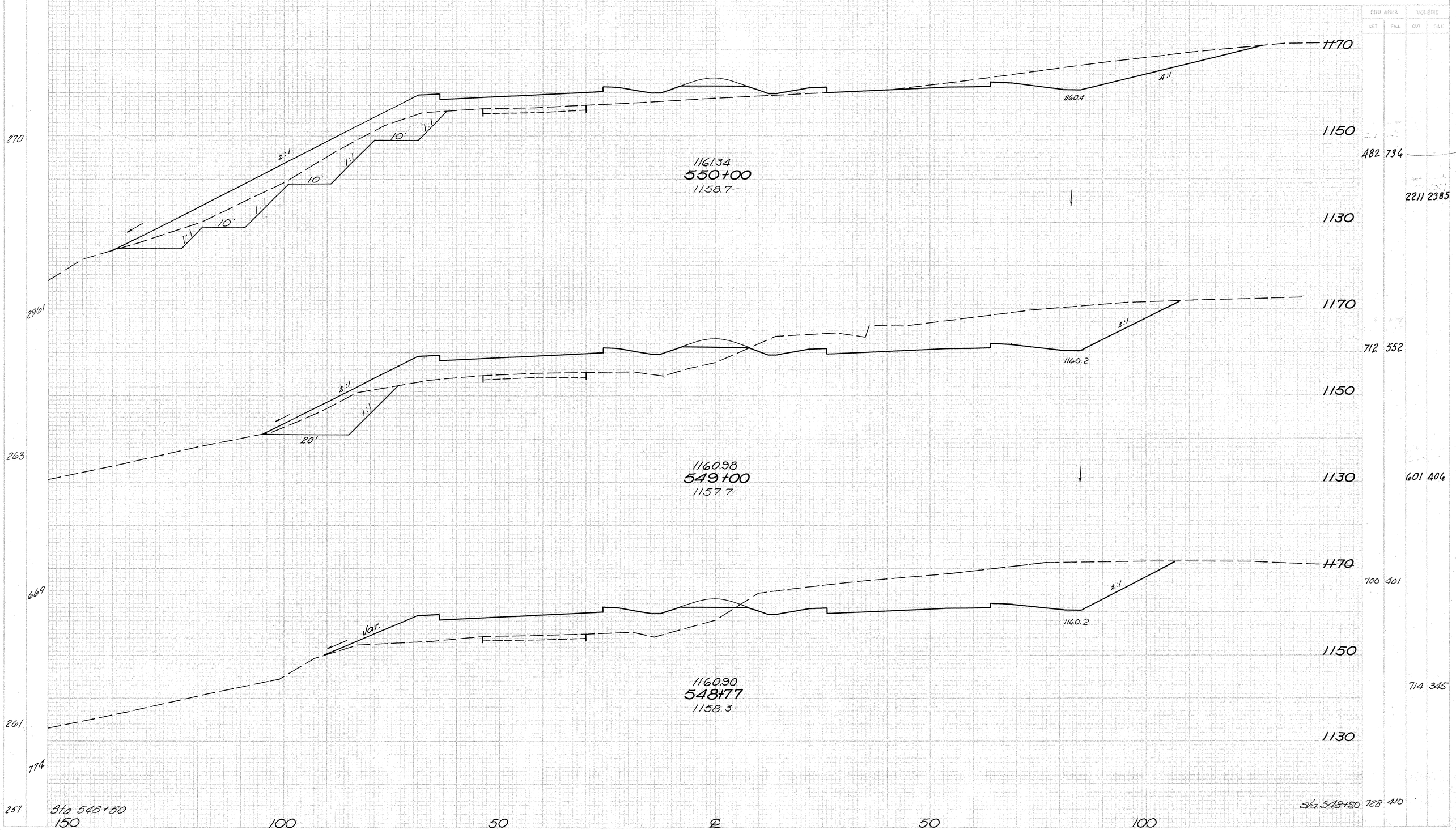


STA. 547+22 TO STA. 548+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

158
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



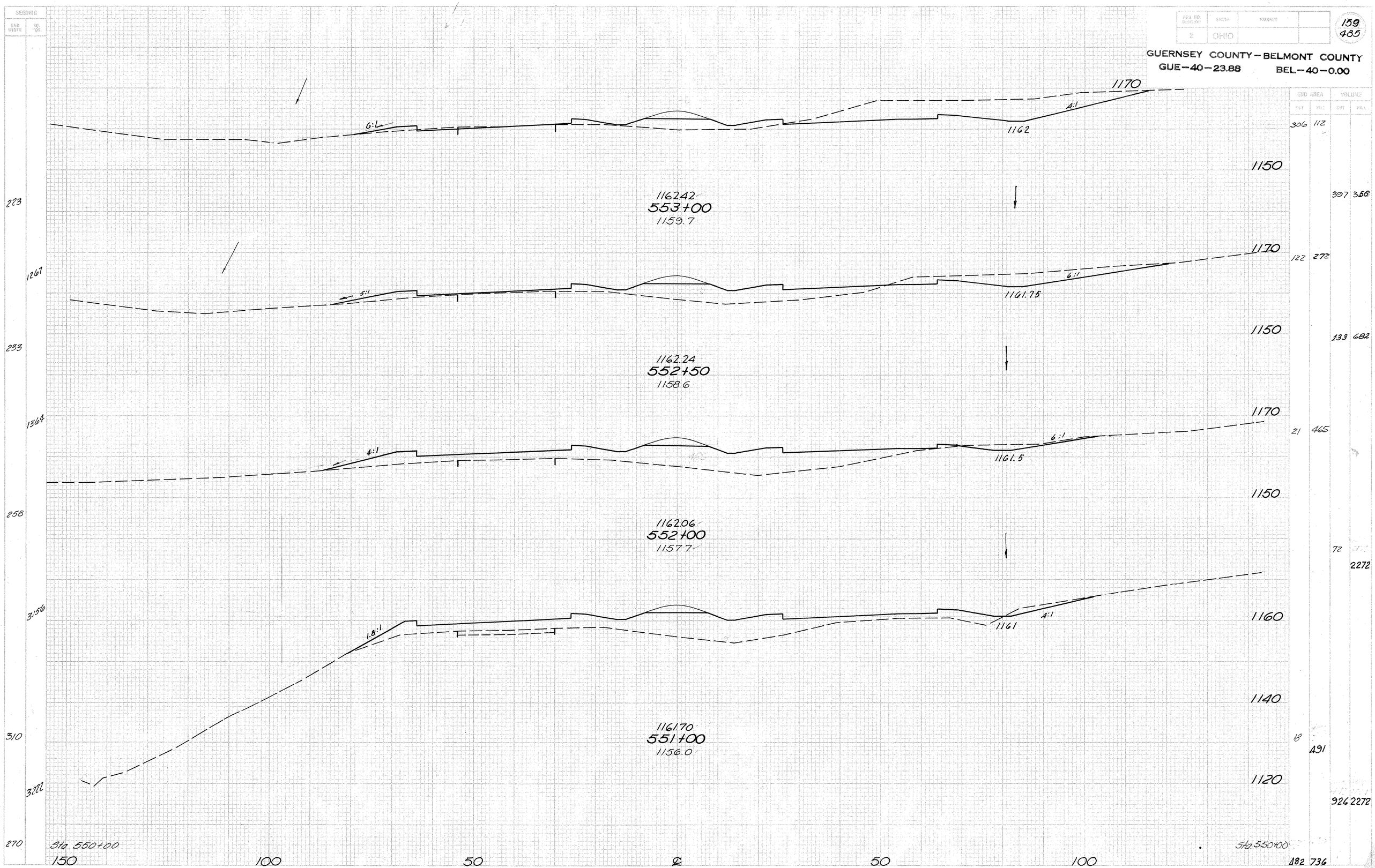
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
482	736		
		2211	2385
712	552		
		601	406
700	401		
		714	345
728	410		

STA. 548+77 TO STA. 550+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

159
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



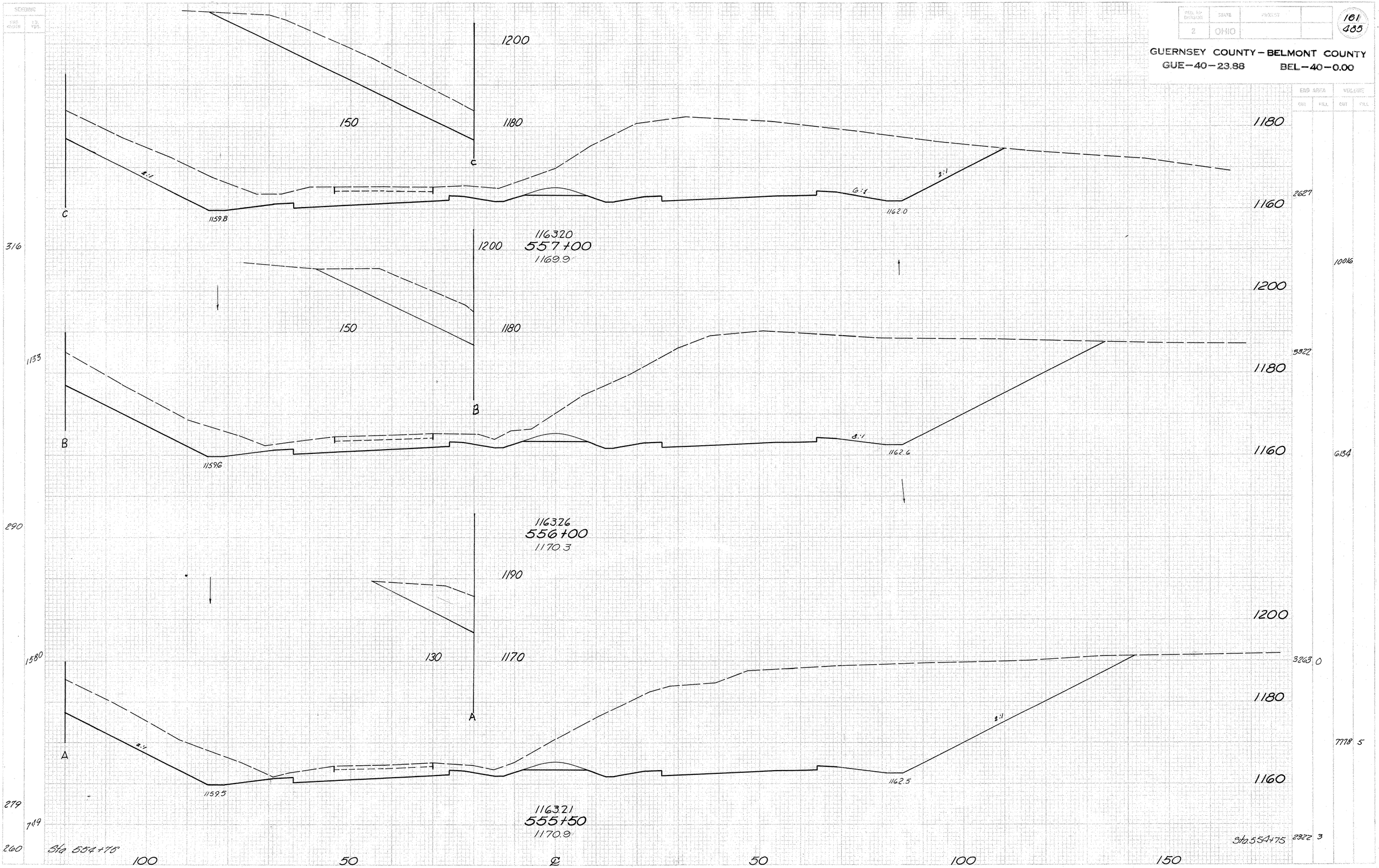
STA. 551+00 TO STA. 553+00

| SECOND END AREA | | |

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

161
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



STA.555+50 TO STA.557+00

SEEDING	
SYD YARDS	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

162
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL

1190
1170
1150
1180
1160
1140
1180
1160
1200
1180
1160

1160.0
1160.1
1160.0
1160.3
1159.9
1161.5

1162.44
559+02
1167.7

1162.71
558+52
1169.7

1162.93
558+00
1170.9

1163.09
557+50
1170.3

336
1867
336
1950
331
1847
327
1786
316

1210
1200
1210
1200

B
A

2:1
1:1
25'

1304 751
2660 1031
1458 321
3194 309
1697 0
3631
2062
4342
2627

Sta 557+00
150 100 50 ℄ 50 100

STA. 557+50 TO STA. 559+02

SEEDING

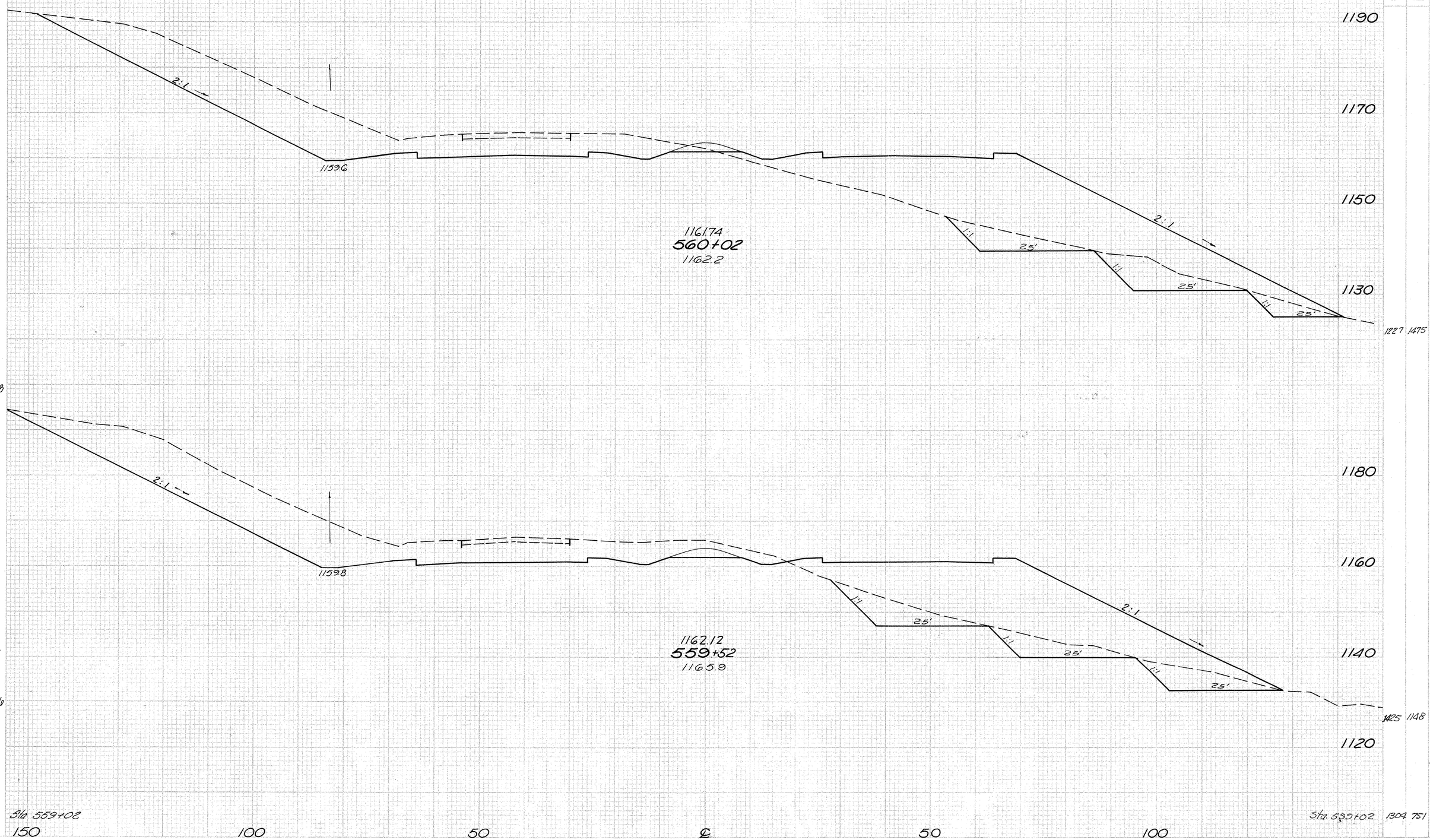
END WIDTH	SQ. YDS.

FED. ID. DIVISION	STATE	PROJECT	
2	OHIO		

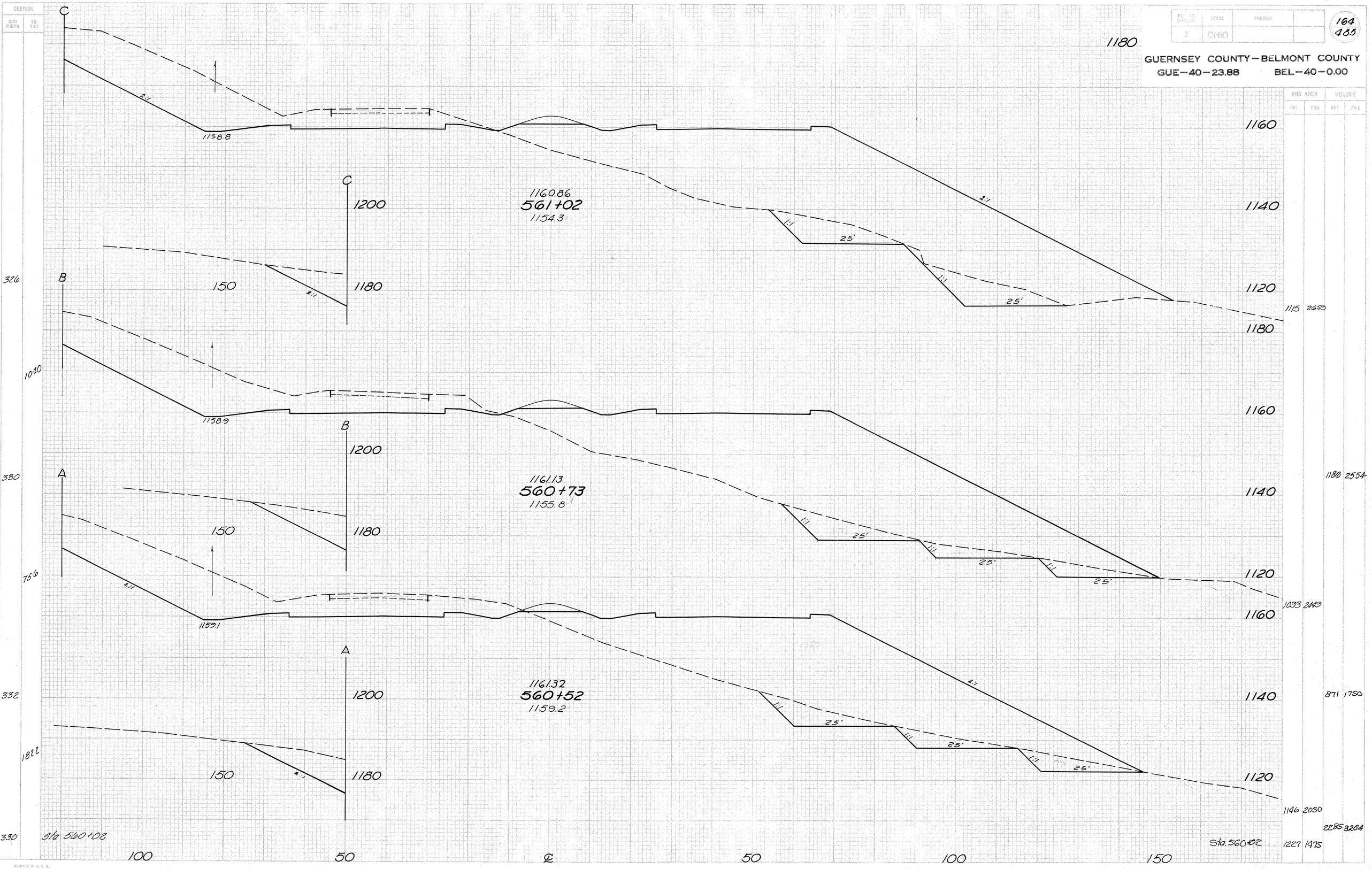
163
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.98 BEL–40–0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



STA. 559+52 TO STA. 560+02

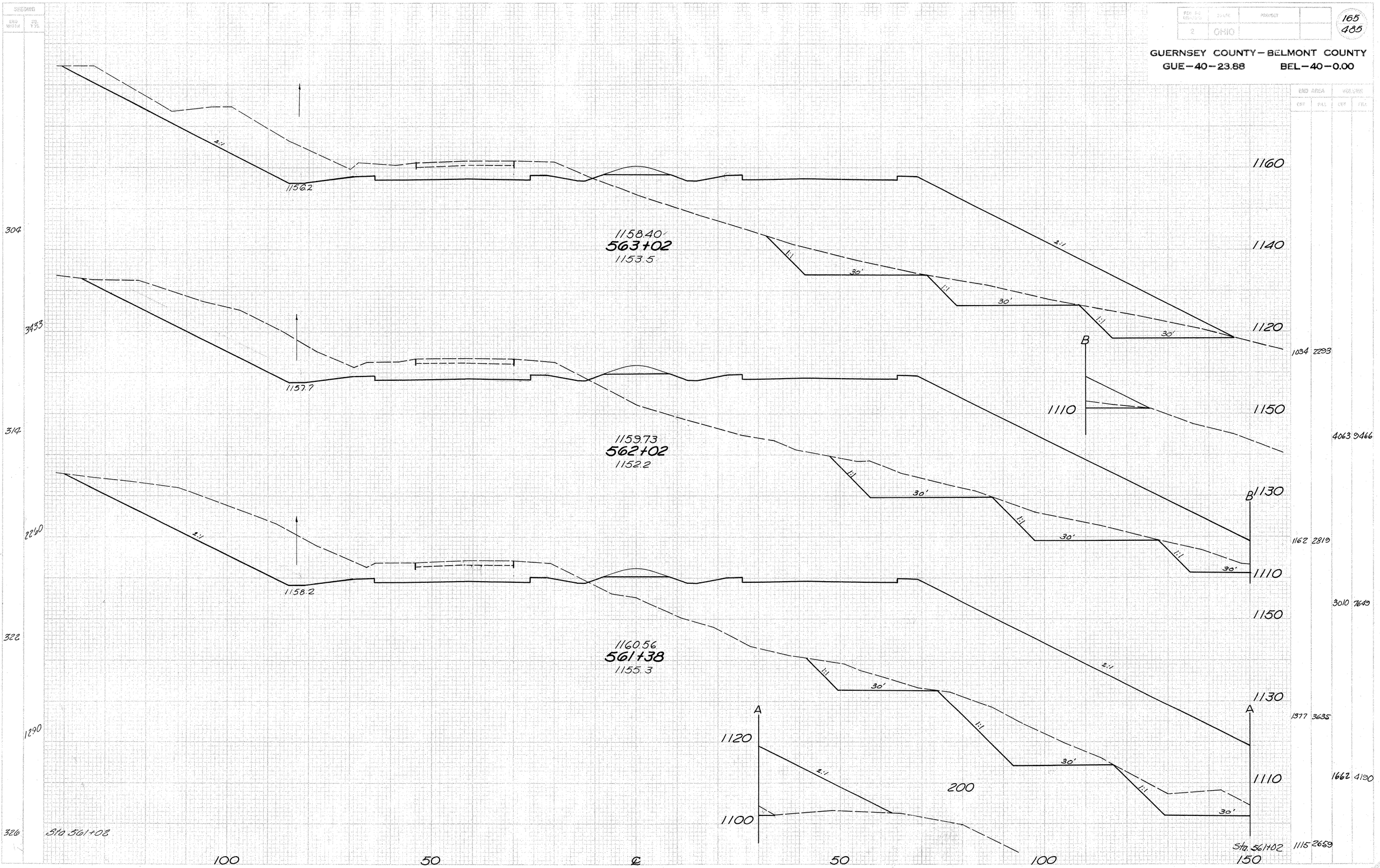


FED. RD. DIVISION 2
STATE OHIO
PROJECT
164
485
GUERNSEY COUNTY—BELMONT COUNTY
GUE—40—23.88 BEL—40—0.00
SEEDING
END AREA
VOLUME
CUT
FILL
1160.86
561+02
1154.3
1161.13
560+73
1155.8
1161.32
560+52
1159.2
1158.8
1158.9
1159.1
1115 2659
1186 2554
1093 2449
871 1750
1146 2050
2285 3264
1227 1475
Sta. 560+02
Sta. 560+02
100
50
℄
50
100
150

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

165
485

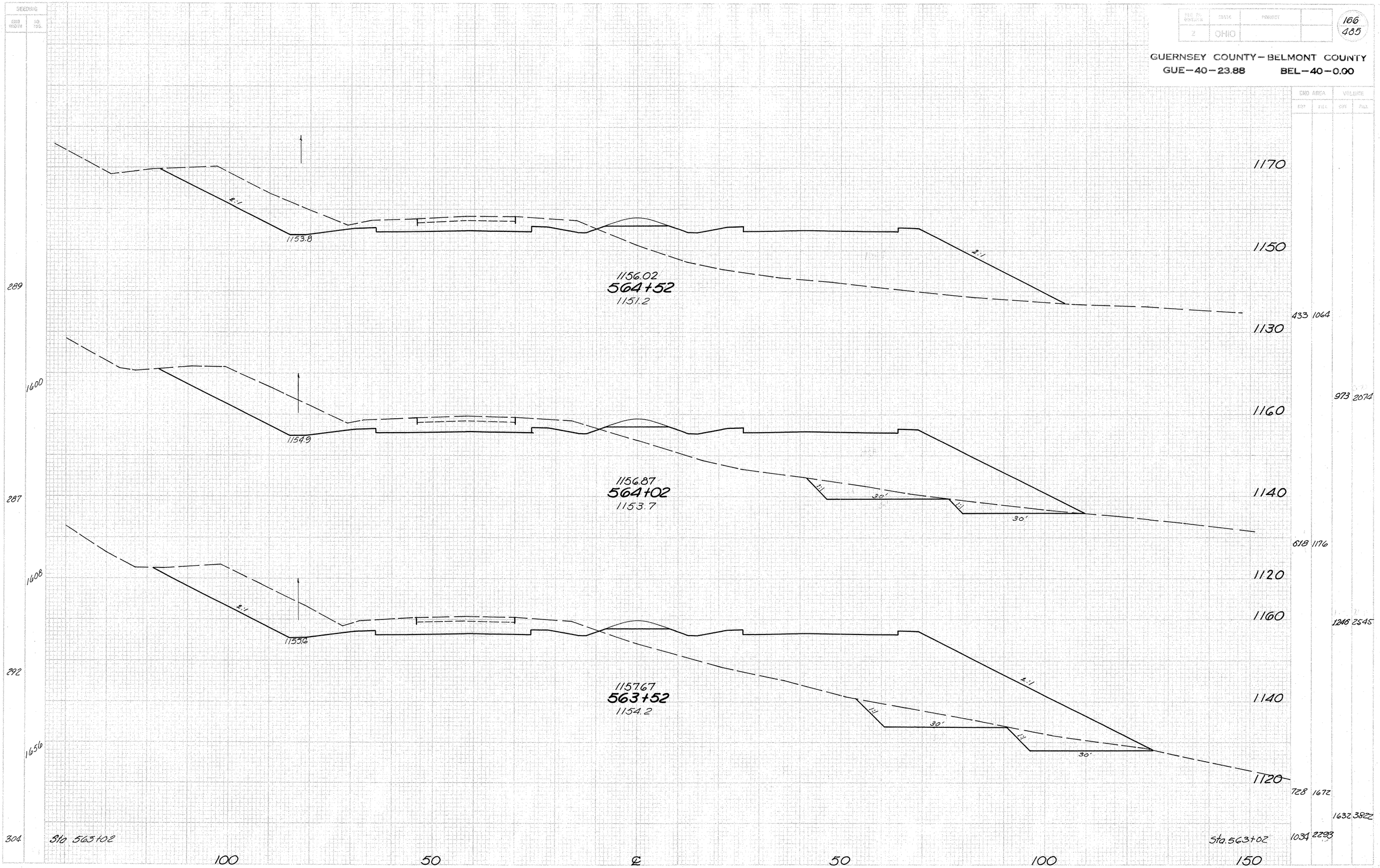
GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



STA. 561 + 38 TO STA. 563 + 02

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

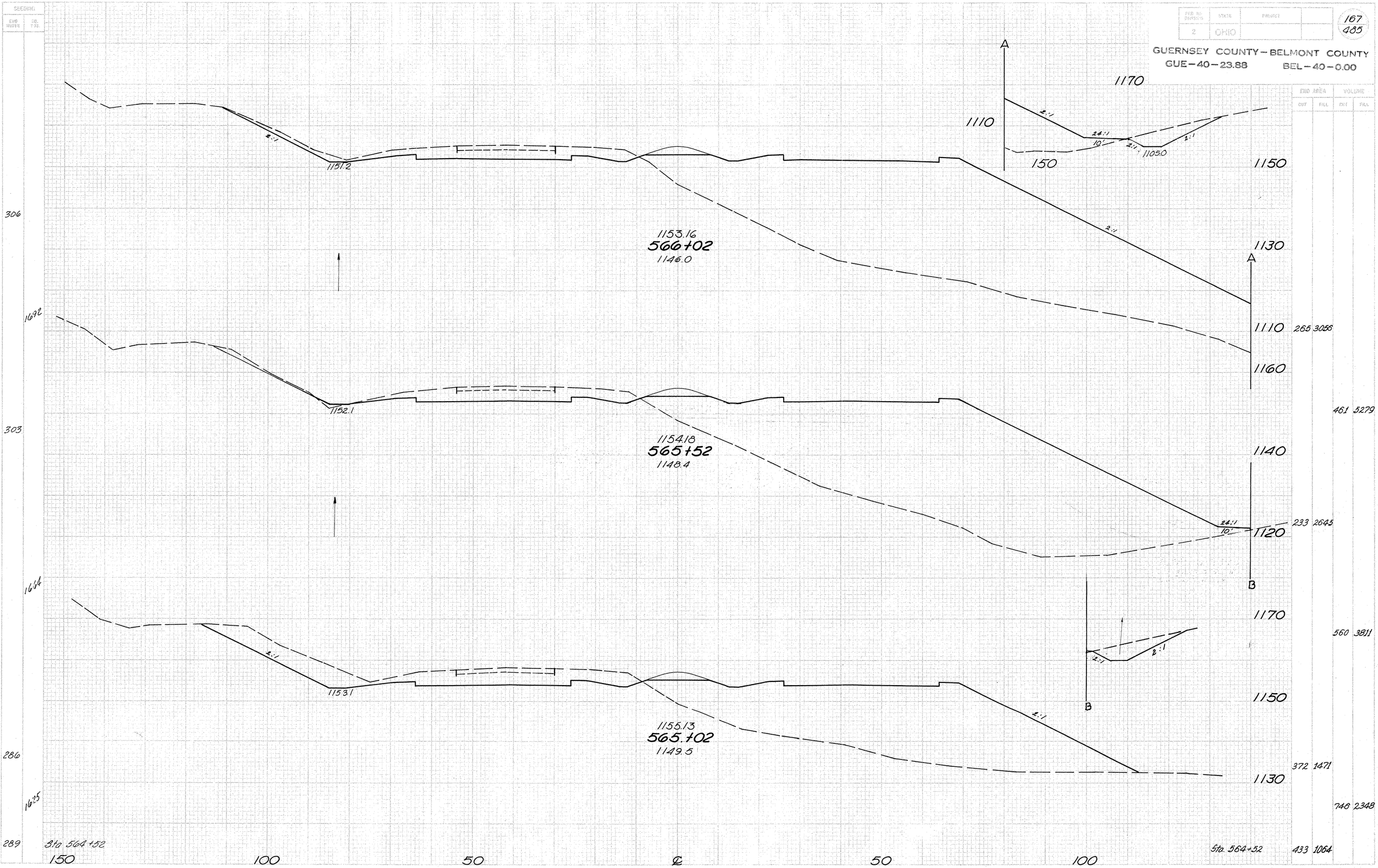


STA. 563+52 TO STA. 564+52

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

167
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



STA. 565+02 TO STA. 566+02

SEEDING	
END WIDTH	SQ. YDS.
	259
	1475
	272
15.14	
	284
16.20	
	292
32.55	
	306

FED. AID PROJECT	STATE	PROJECT	
2	OHIO		

168
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		626	2448
		1277	4675
		753	2601
		1223	4134
		568	1865
		1132	3590
		654	1850
		1668	8903
		265	3056

1150
1130
1110
1150
1130
1110
1150
1130
1110
1150
1130
1110

11468
40
1147.42
568+50
1137.7
4:1
1:1
30'
2:1

11480
1148.68
568+00
1139.5

11490
1149.90
567+50
1142.0

11500
1151.05
567+00
1142.7
27'~12" Cl. E-1 @ 10%
54'~15 Cl. B-1 @ 1.0%
68'~15" Cl. F-4
10'~15" Cl. F-4 @ 1.0%

13.5' Lt. Sta. 566+50
Std. No. 8 C.B.
Rt. Grate 1150.40
Rt. 12" Cl. E-1 ~ 1147.40

13.5' Rt. Sta. 565+50
Std. No. 8 C.B.
Rt. Grate ~ 1150.40
Rt. 12" Cl. E-1 ~ 1147.13
Rt. 15" Cl. B-1 ~ 1146.88

136.00' Rt. Sta. 566+50
Std. H.W.-E Endwall
Rt. 15" Cl. F-4 1116.20

Sta. 566+02

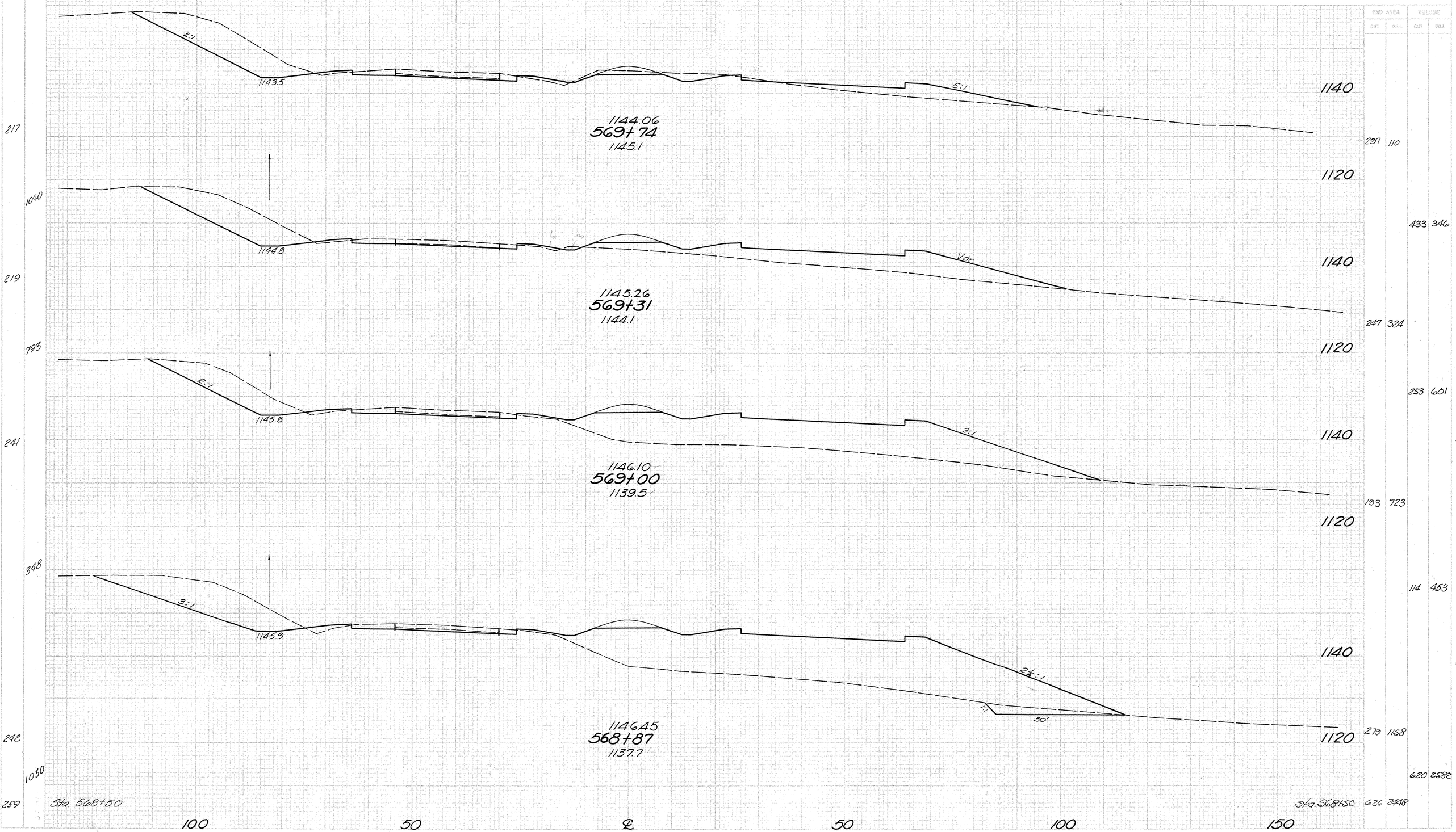
100 50 ℄ 50 100 150

STA. 567+00 TO STA. 568+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

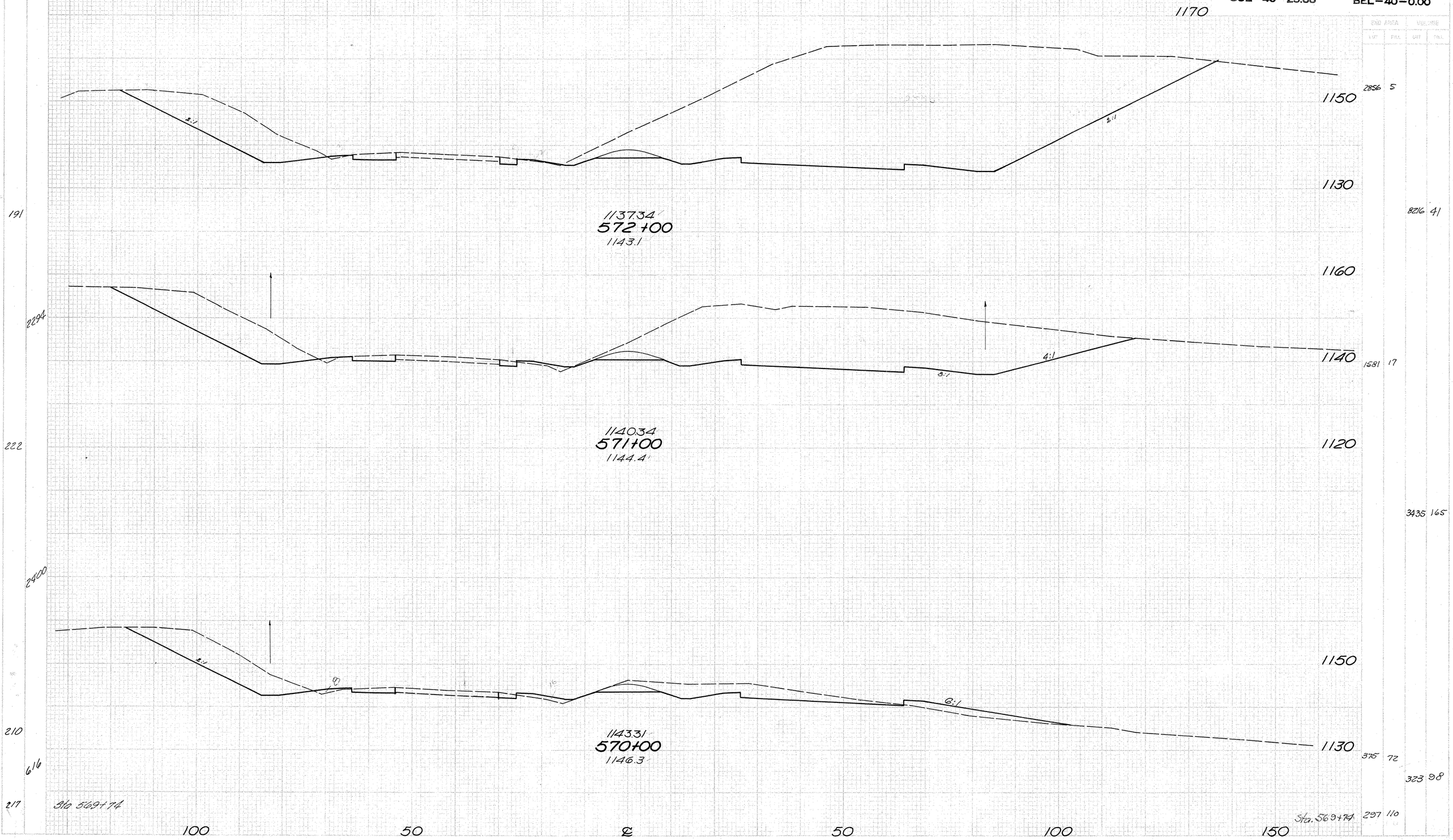
169
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



STA. 568+87 TO STA. 569+74

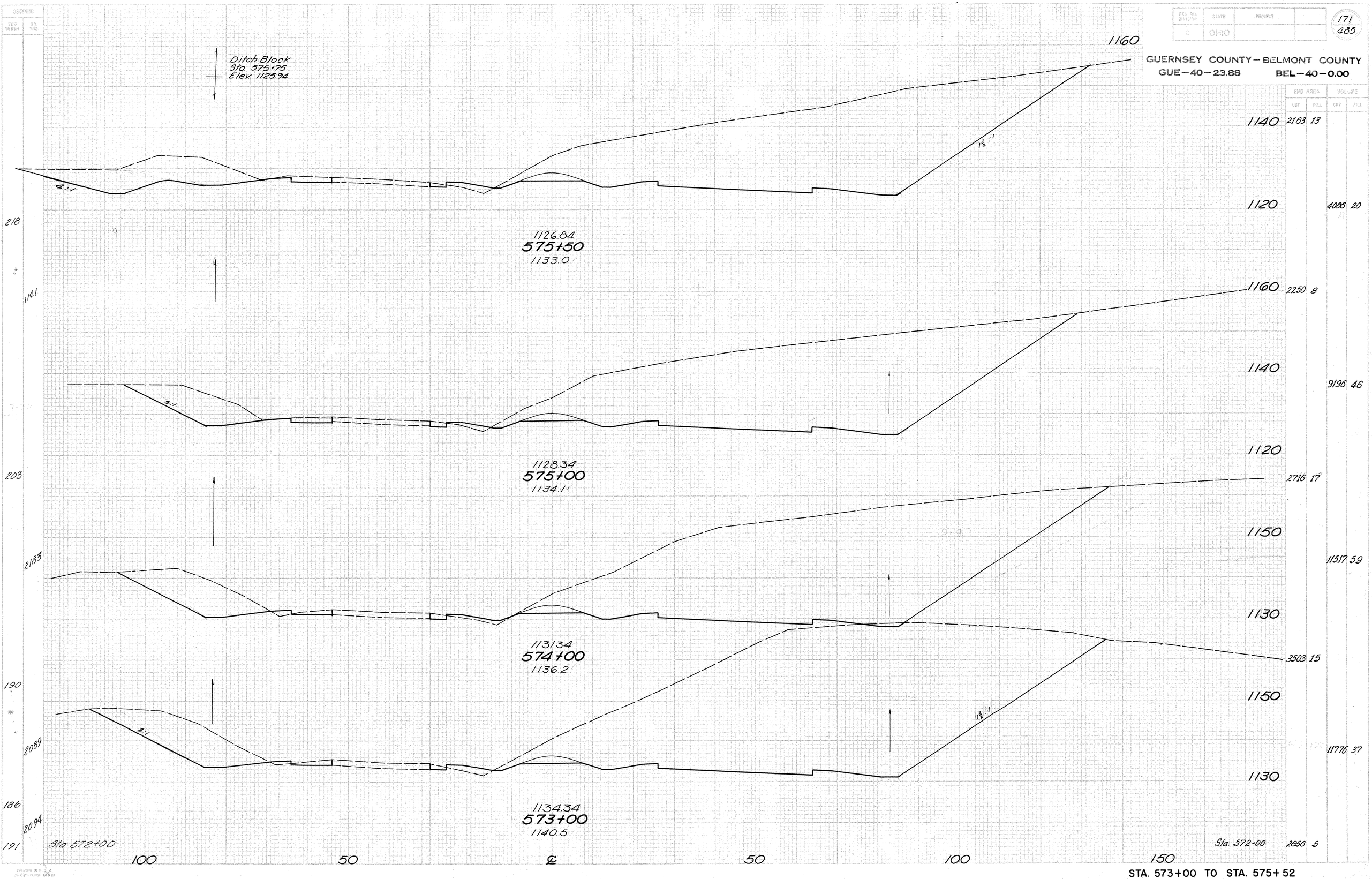
GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



STA 570+00 TO STA 572+00

FED. RD. DIVISION	STATE	PROJECT
6	OHIO	

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

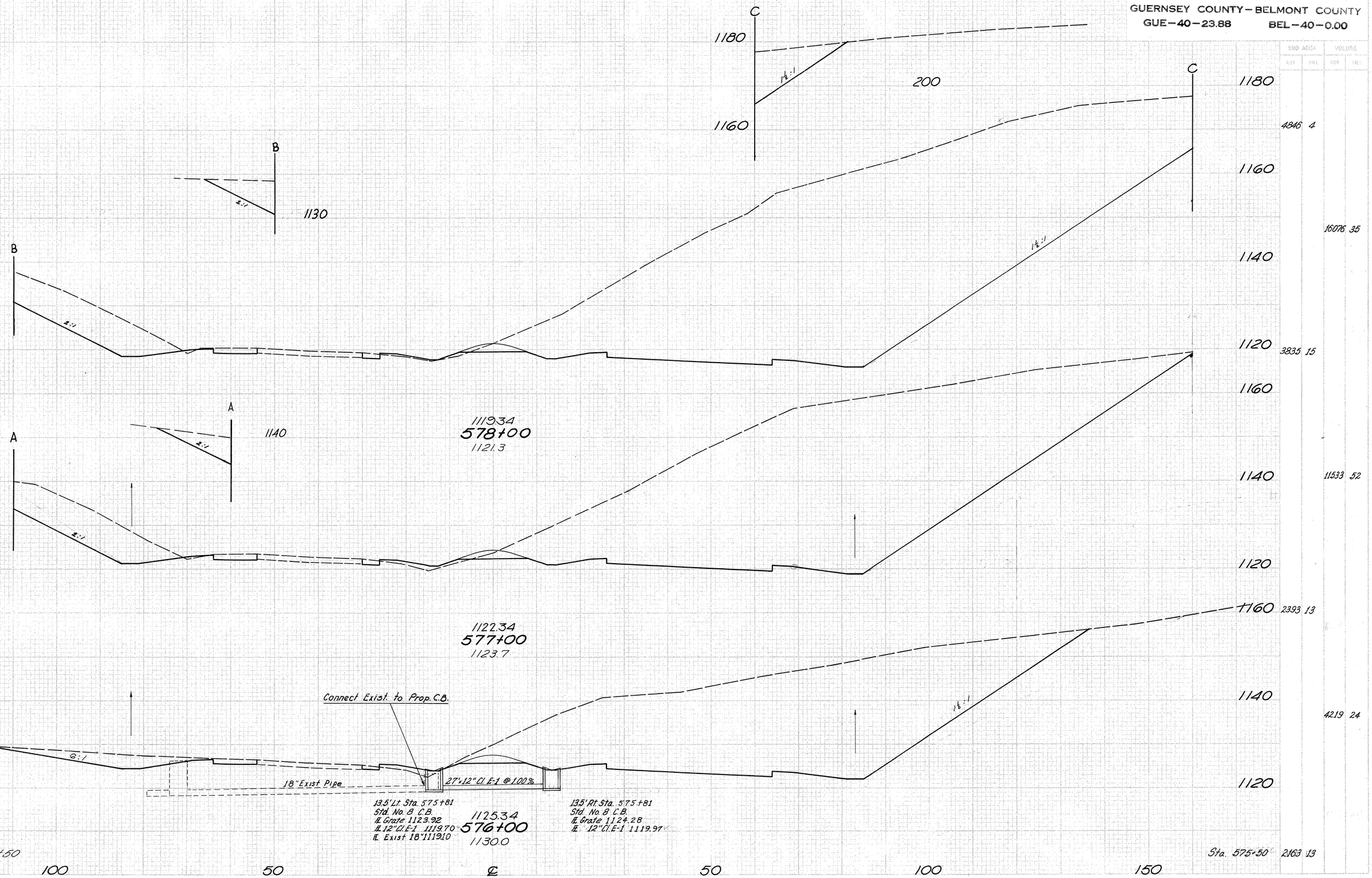


STA. 573+00 TO STA. 575+52

FED. ROAD DIVISION	STATE	PROJECT		172
5	OHIO			485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
			4846	4
			16076	35
			3835	15
			11533	52
			2393	13
			4219	24
			2163	13



STA. 576+00 TO STA. 578+00

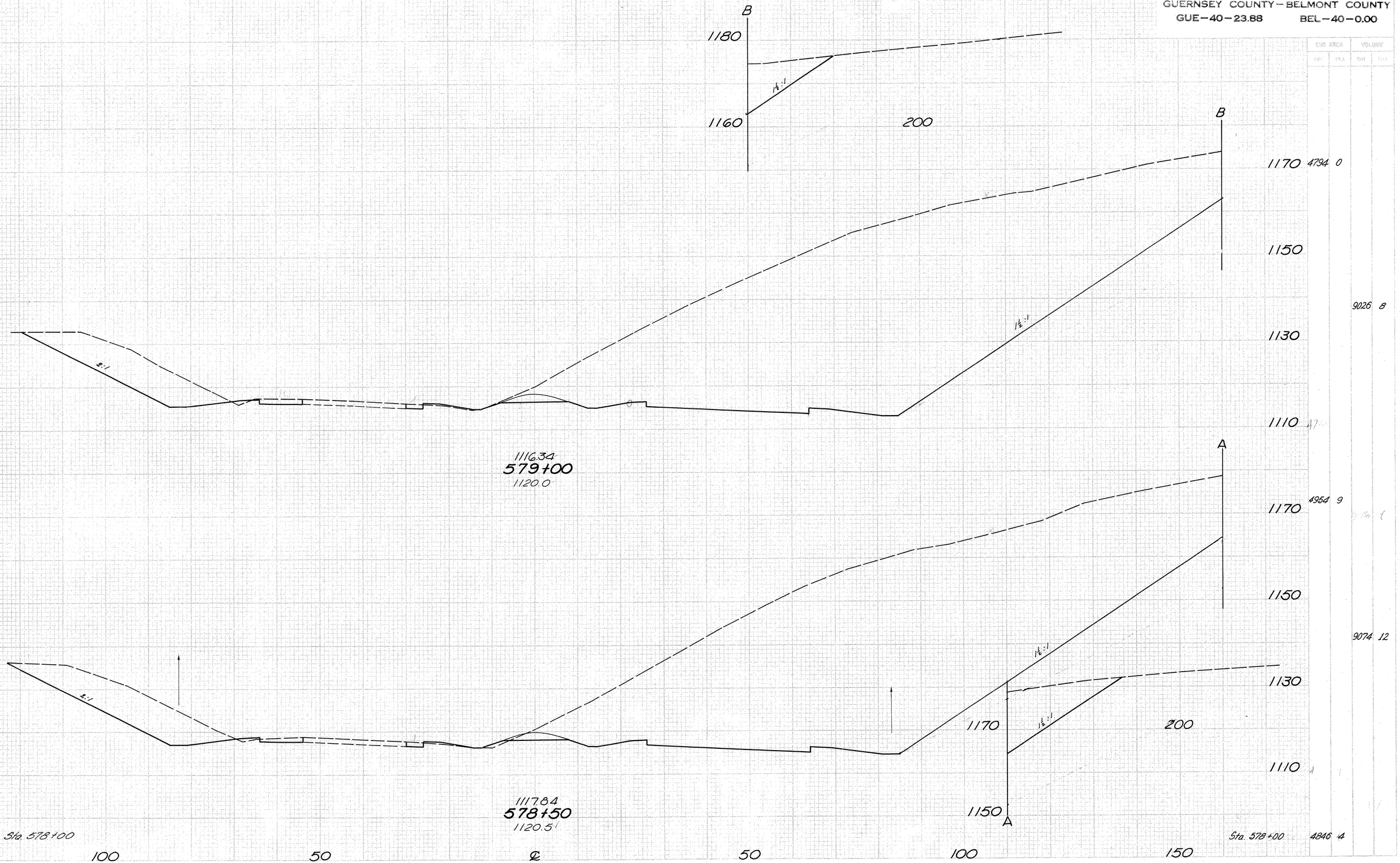
SEEDING

END AREA		VOLUME	
CUT	FILL	CUT	FILL

FED. ROAD PROJECT	STATE	PROJECT		173 / 485
2	OHIO			

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00

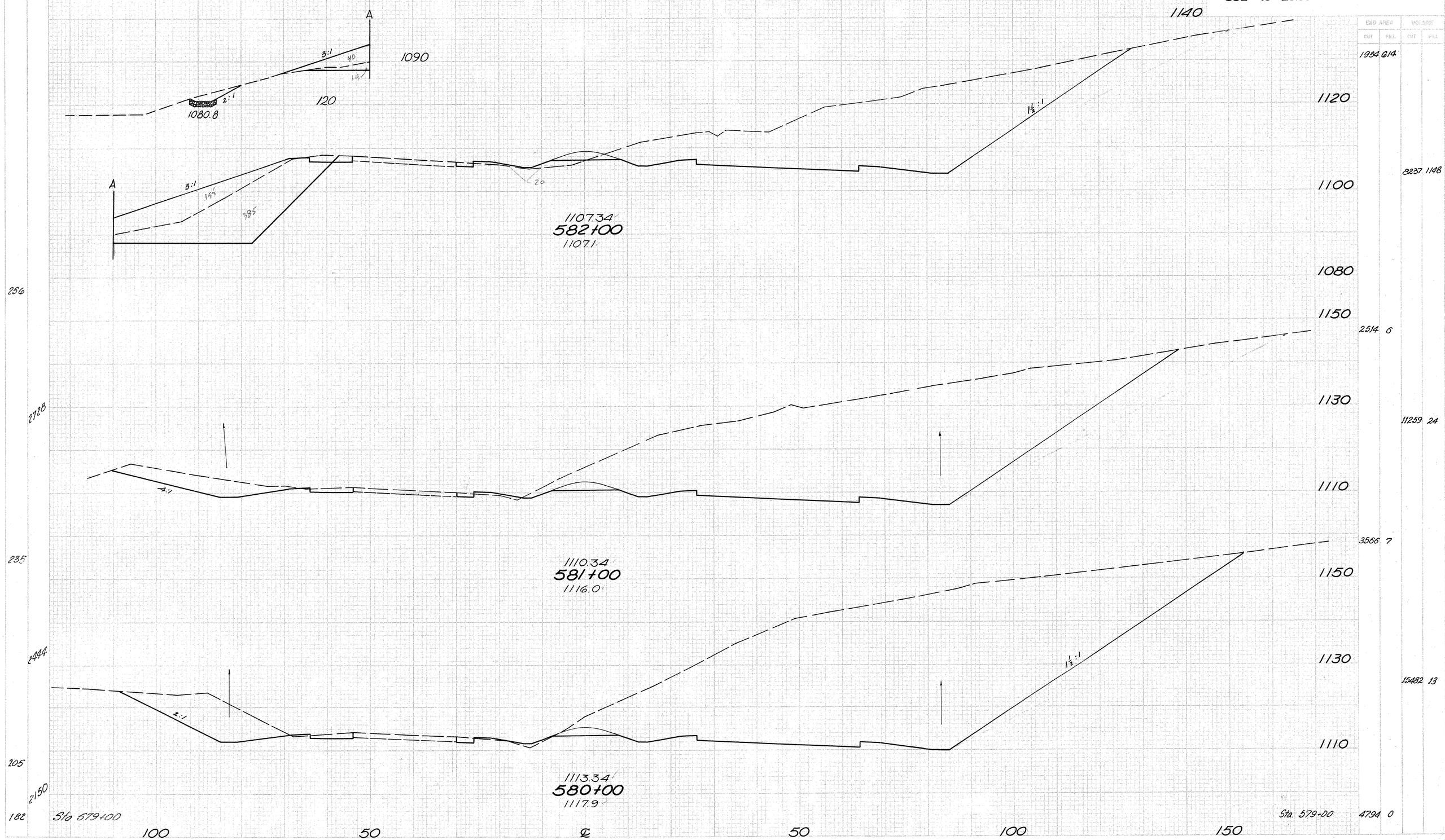


STA. 578+50 TO STA. 579+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

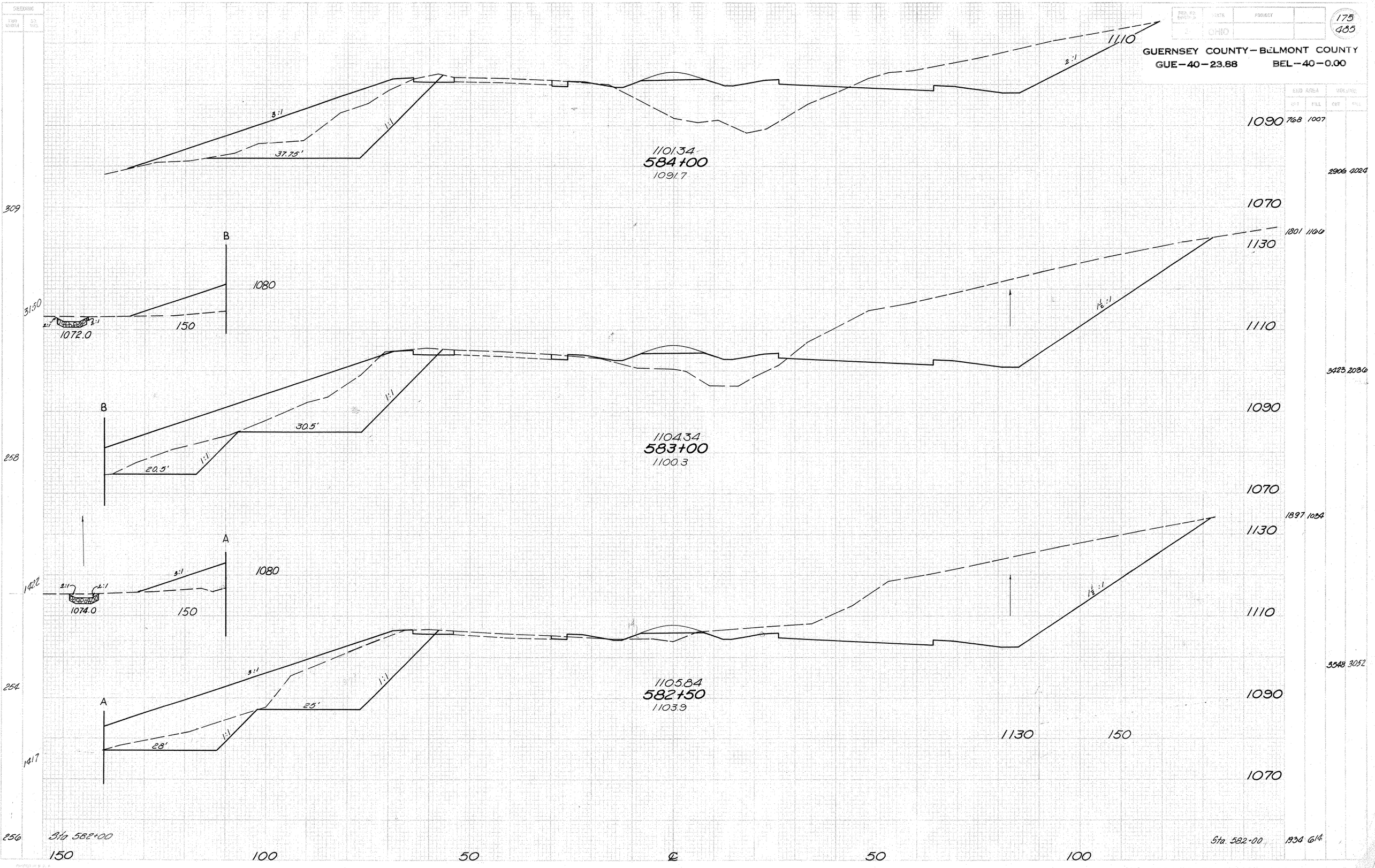
174
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1934	614		
		8237	1148
2514	6		
		11259	24
3566	7		
		15482	13
4794	0		

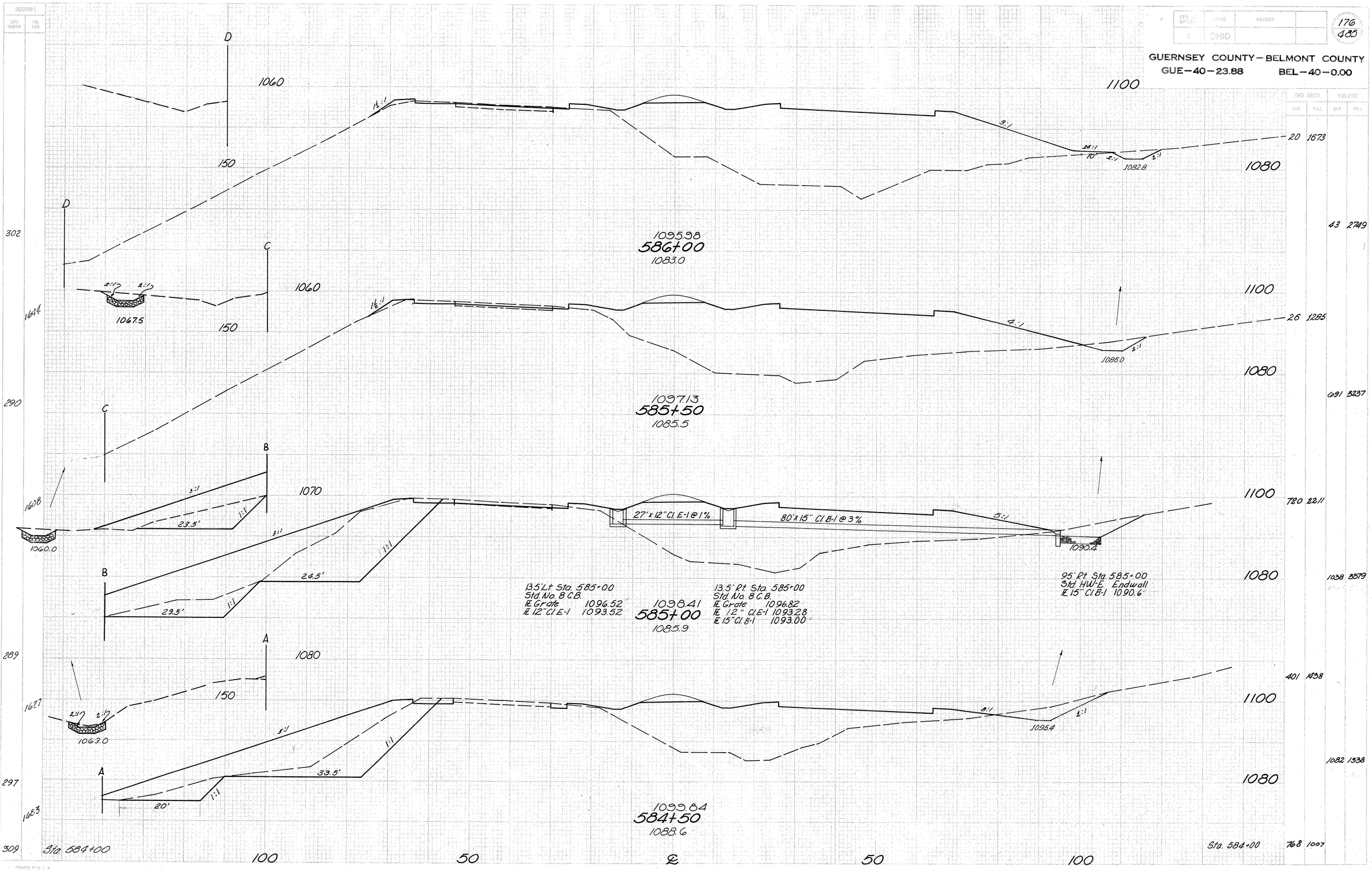
STA. 580+00 TO STA. 582+00



STA. 582+50 TO STA. 584+00

FED. RD. DIVISION 2 | STATE OHIO | PROJECT | 176 / 485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



Station	End Area Cut	End Area Fill	Volume Cut	Volume Fill
1060	20	1673		
1080			43	2749
1100	26	1285		
1080			691	3237
1100	720	2211		
1080			1038	3379
1100	401	1438		
1080			1082	1338
Sta. 584+00	768	1007		

302 1644 290 1608 289 1627 297 1683 309

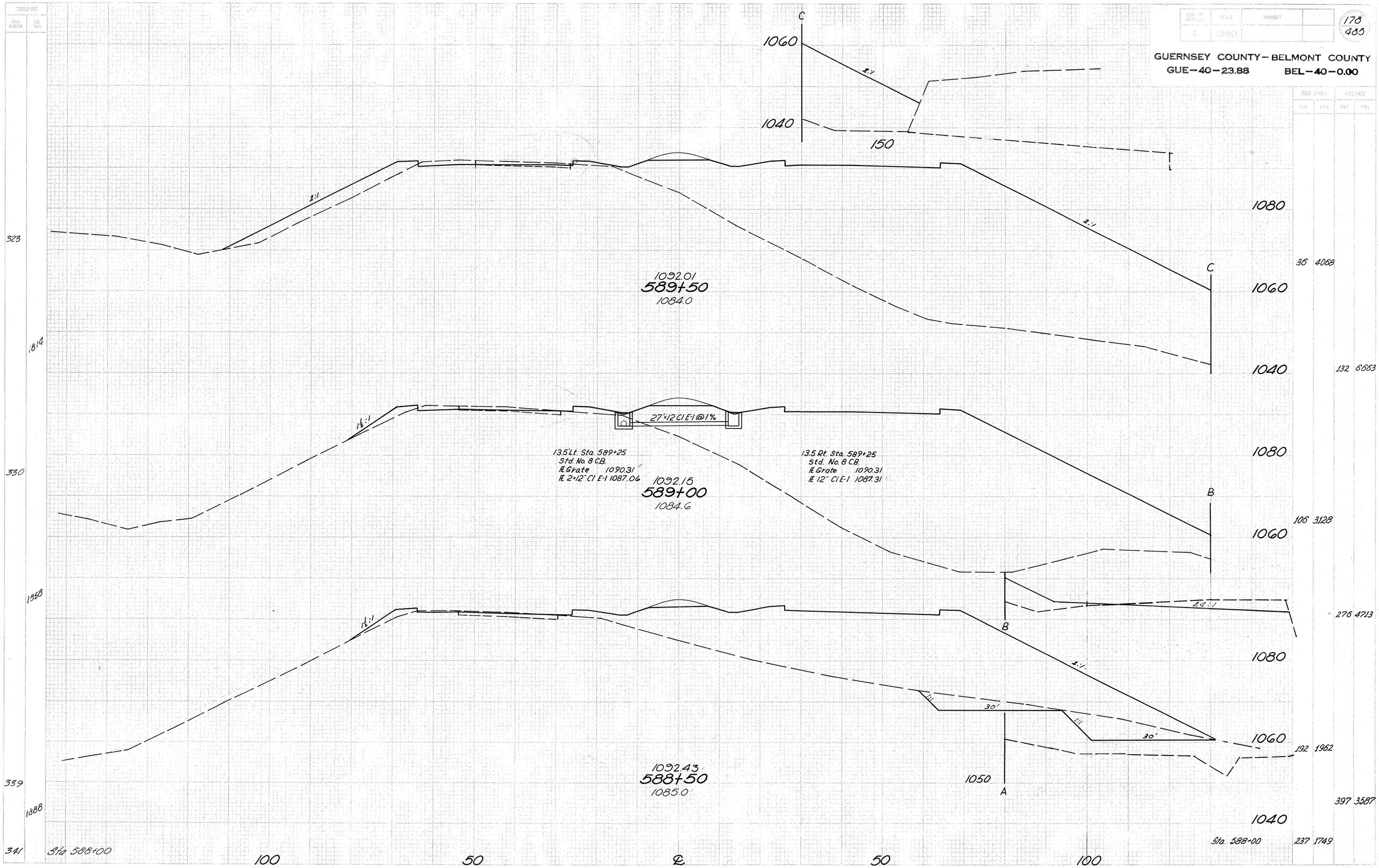
STA. 584+50 TO STA. 586+00



Station	Cut	Fill	Cut	Fill
341				
1580	237	1749		
328			377	3325
1797	170	1679		
			182	3333
317	26	1758		
			60	3139
1752	38	1570		
			54	3153
314				
1711				
302	20	1673		

STA. 586+50 TO STA. 588+00

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

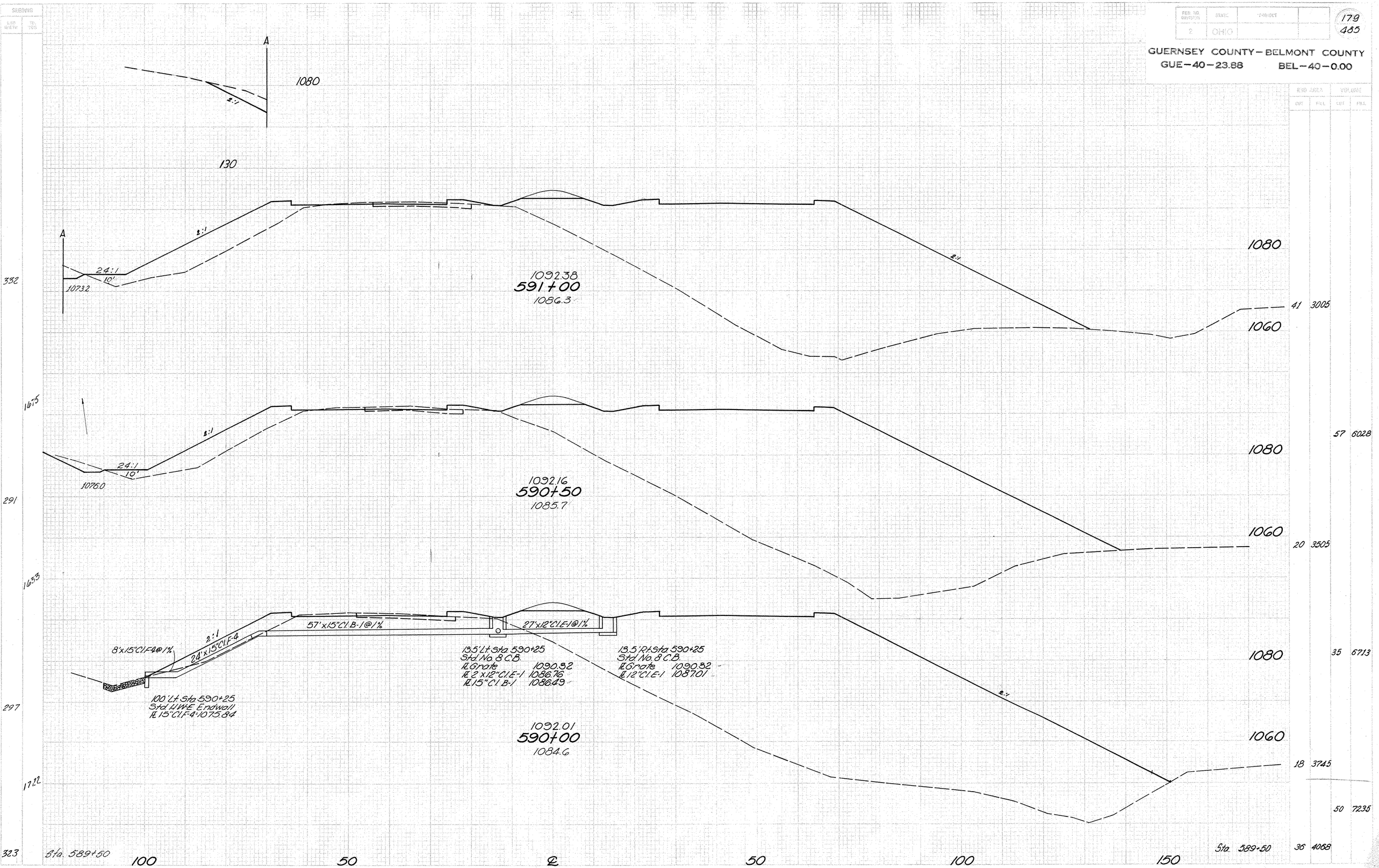


STA. 588+50 TO STA. 589+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

179
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
332				
	41	3005		
291				
	57	6028		
	20	3505		
297				
	35	6713		
	18	3745		
323				
	50	7235		
	36	4068		

STA. 590+00 TO STA. 591+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

180
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

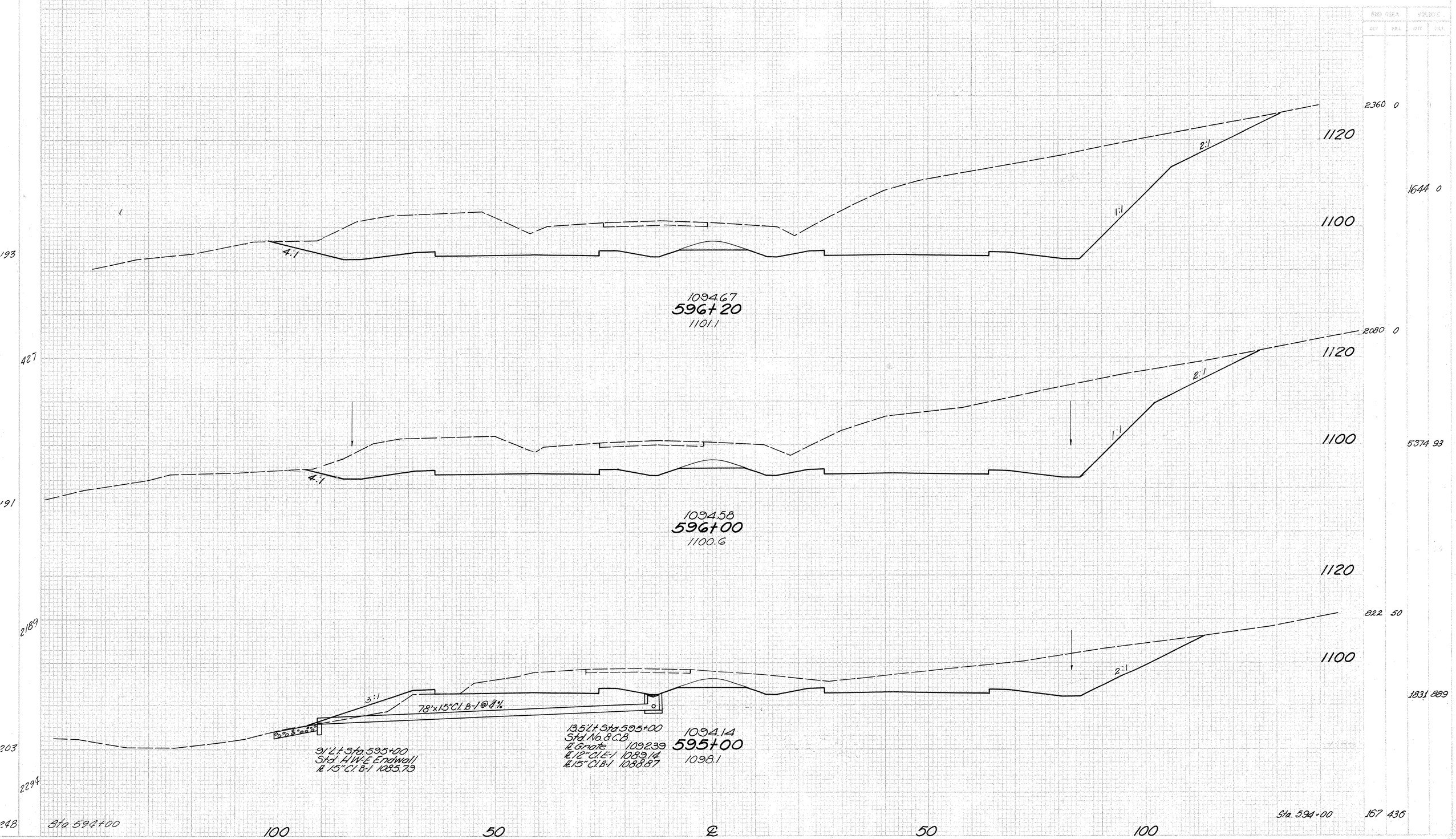


STA. 591+50 TO STA. 594+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

181
485

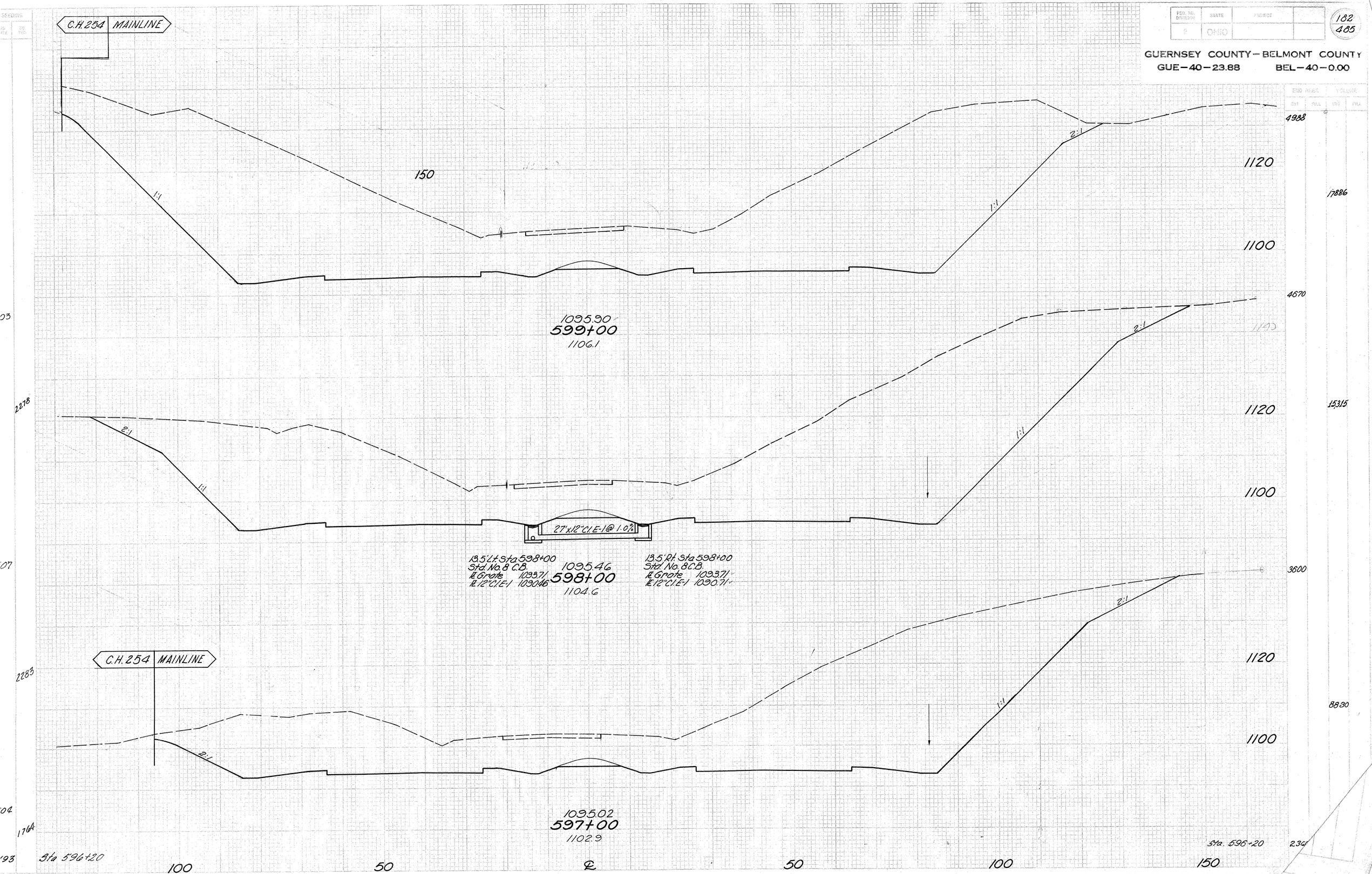
GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



STA. 595+00 TO STA. 596+20

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



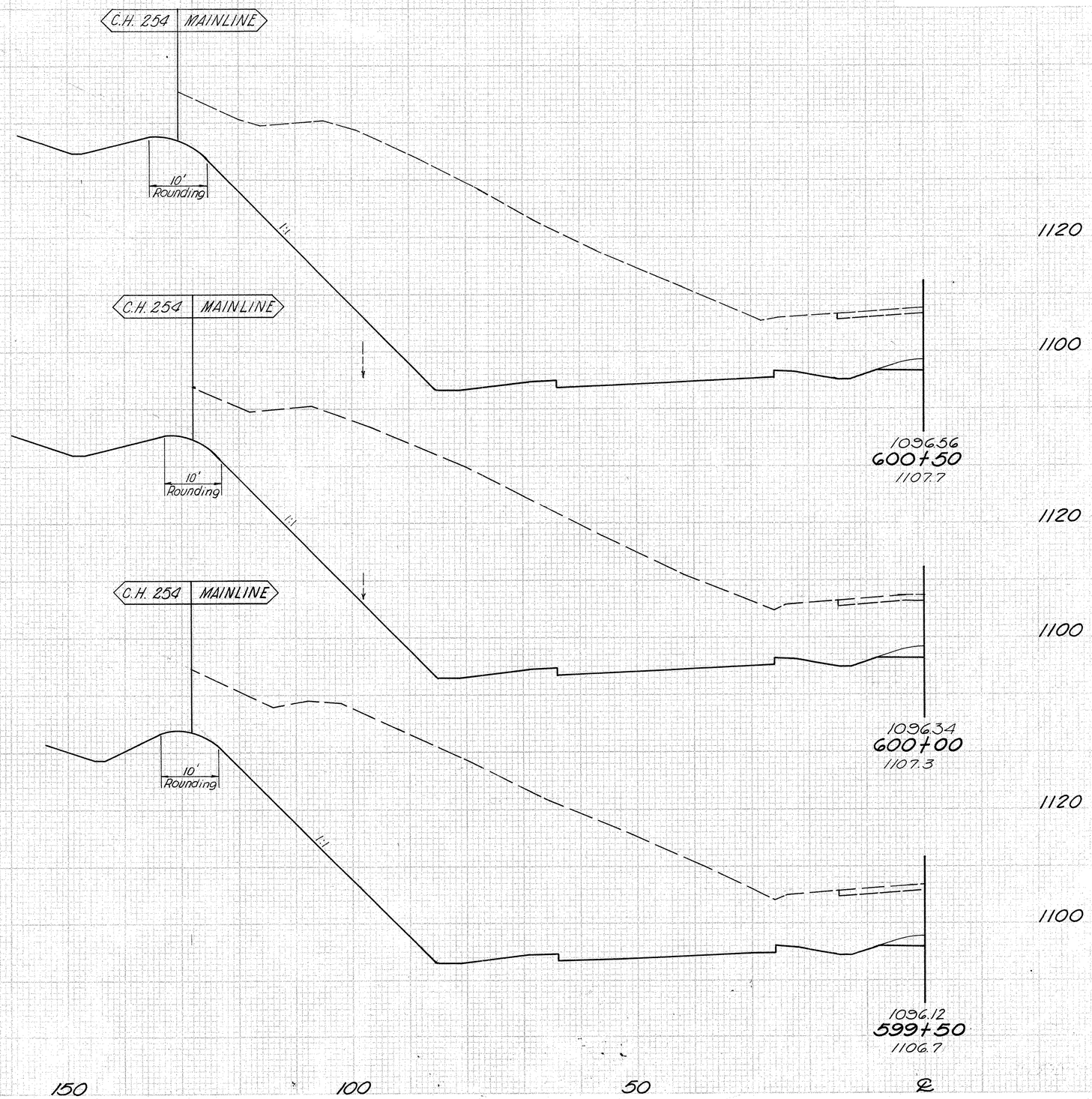
STA. 597+00 TO STA. 599+0

FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

183
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL

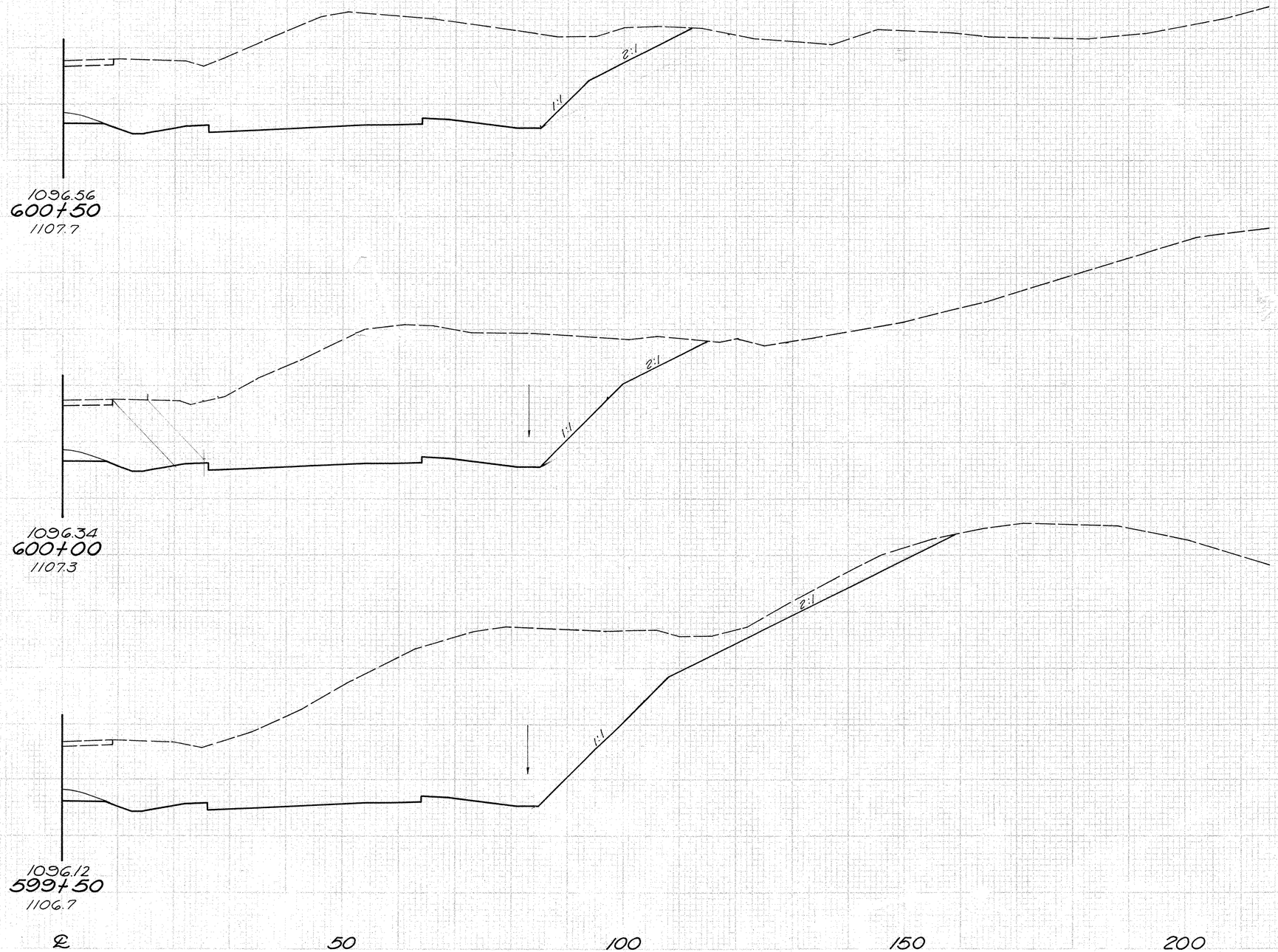


STA. 599+50 TO STA. 600+50 LEFT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

184
185

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



Lt. 2780
Rt. 1520
Tot. 4290

1120
1100

8741

Lt. 2716
Rt. 1824
Tot. 4538

1120
1100

8774

Lt. 2628
Rt. 2260
Tot. 4938

1120
1100

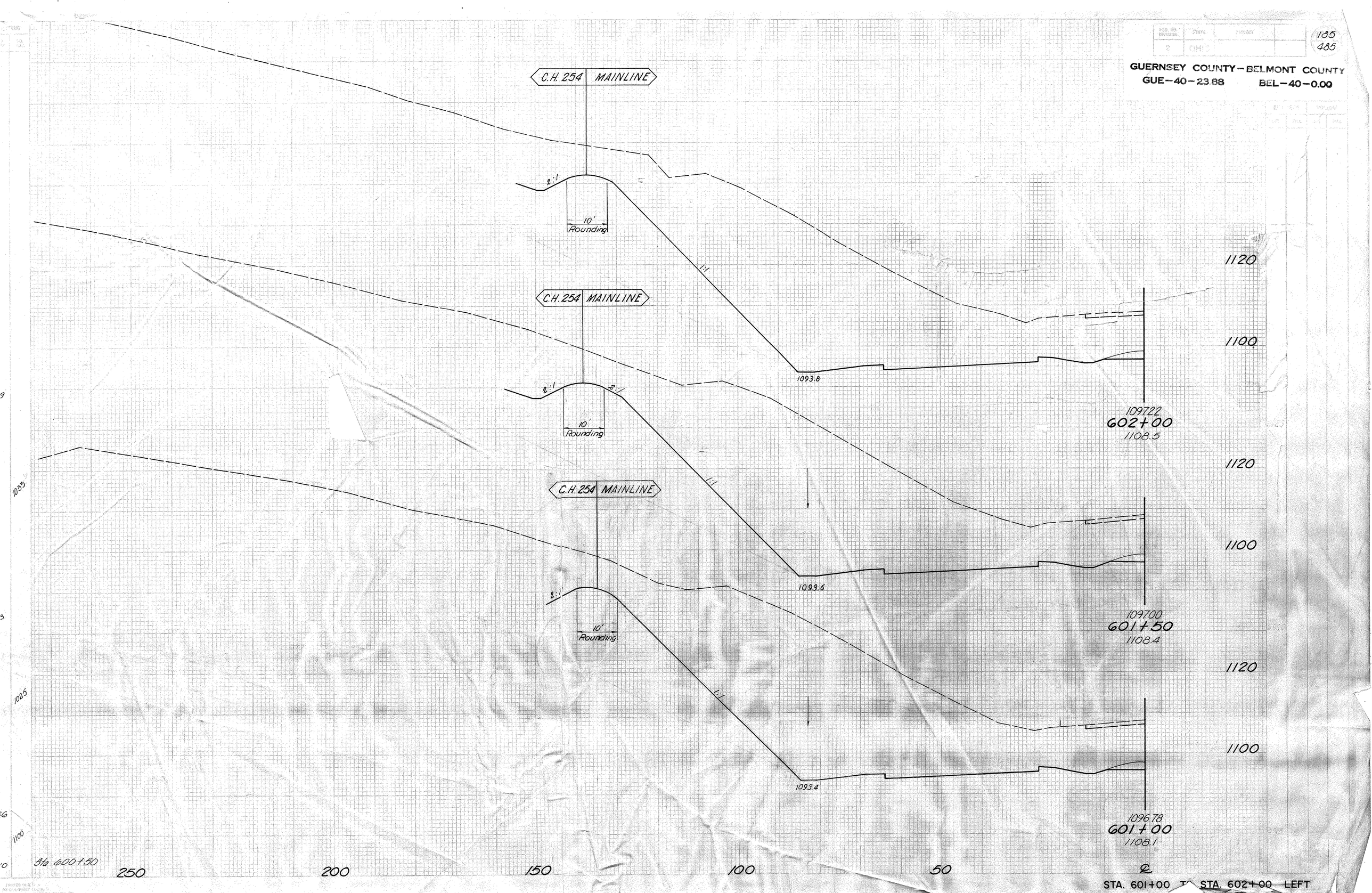
9191

Sta. 599+00

4988

℄ 50 100 150 200 250

STA. 599+50 TO STA. 600+50 RIGHT

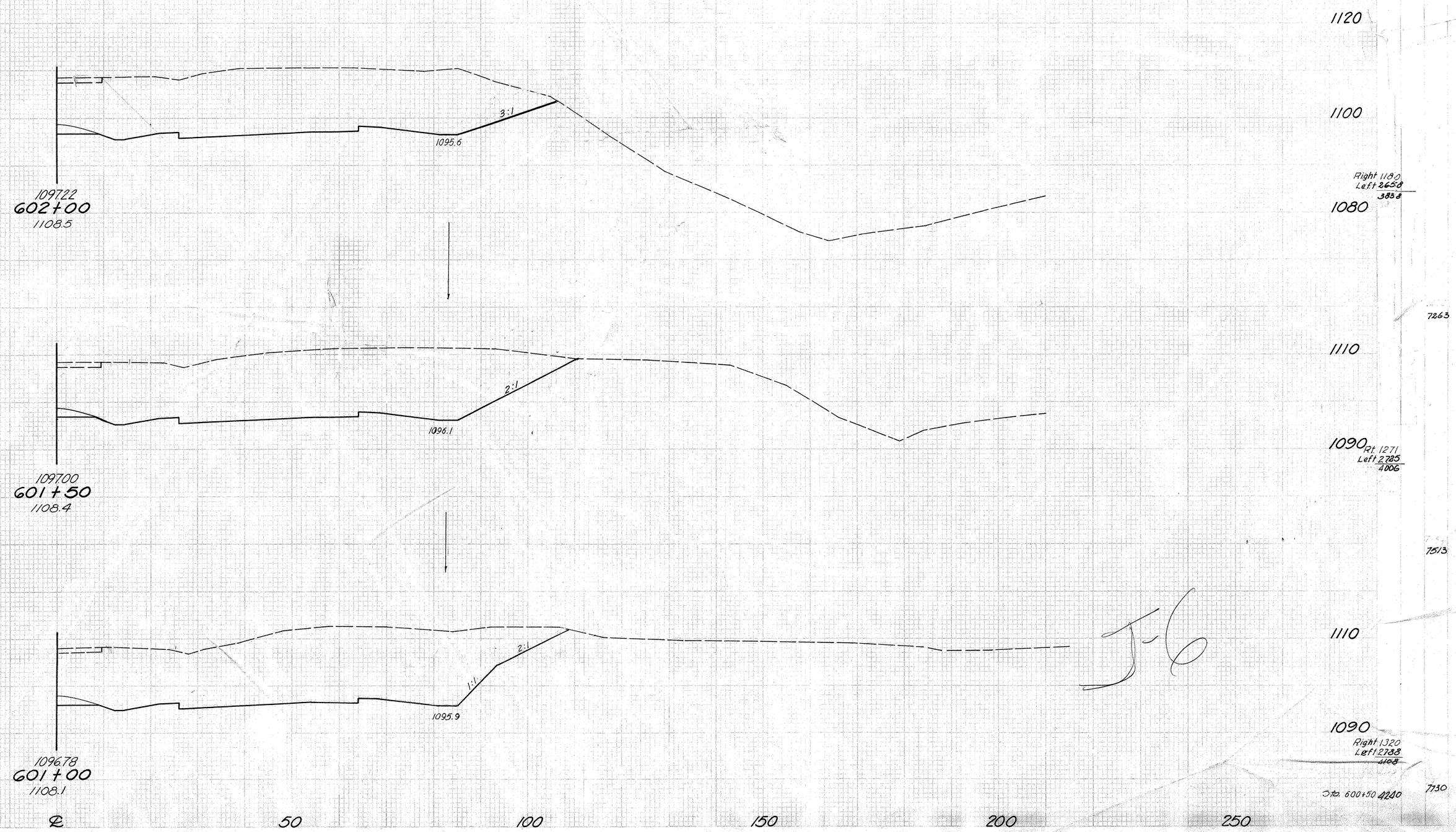


185
485
GUERNSEY COUNTY - BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00
C.H. 254 MAINLINE
2:1
10' Rounding
1:1
1093.8
1097.22
602+00
1108.5
1093.6
1097.00
601+50
1108.4
1093.4
1096.78
601+00
1108.1
1120
1100
1033
1025
1100
Sta 600+50
250
200
150
100
50
℄
STA. 601+00 TO STA. 602+00 LEFT

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

186
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



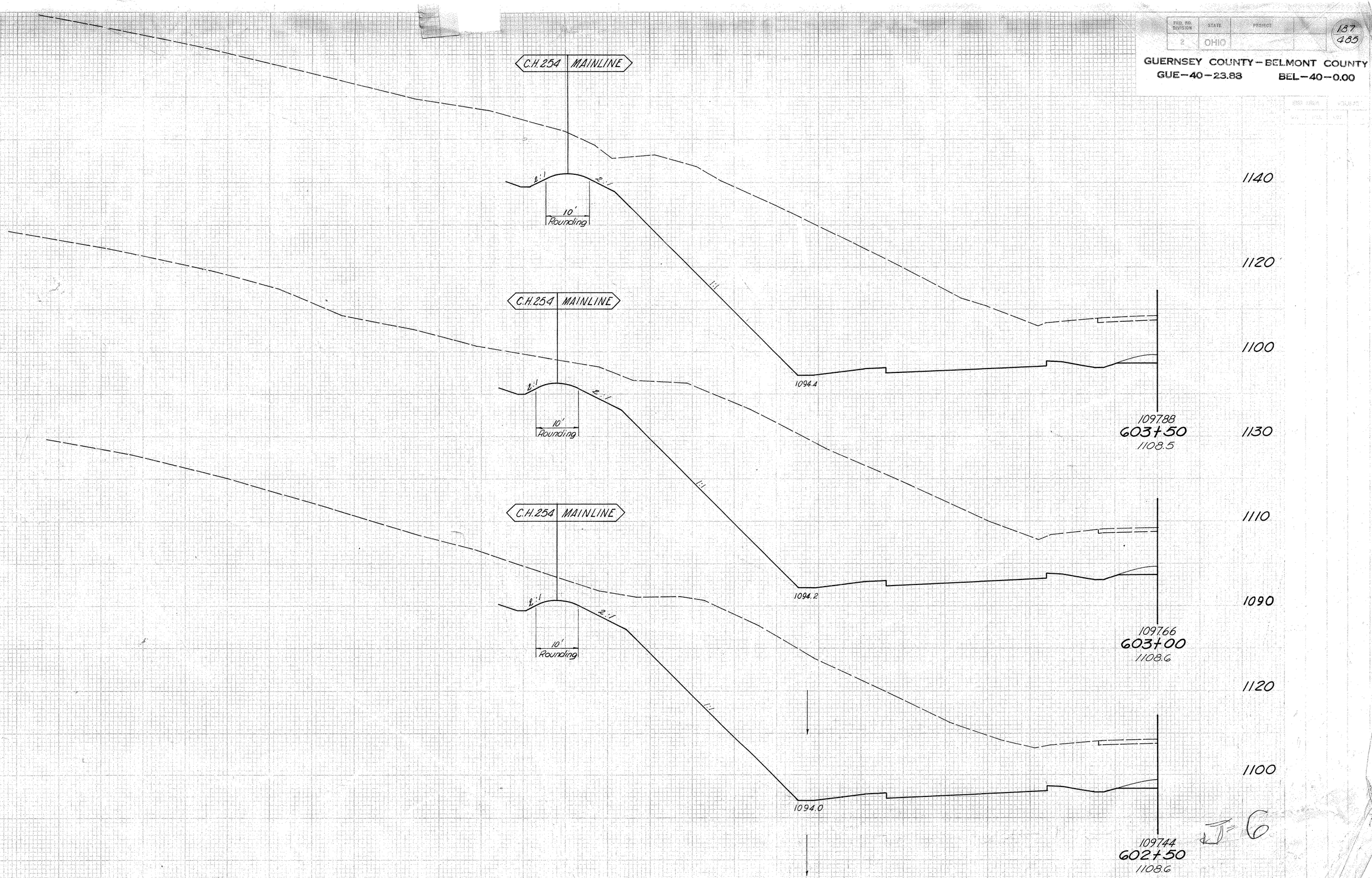
STA 601+00 TO STA 602+00 RIGHT

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

187
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

C.H. 254 | MAINLINE



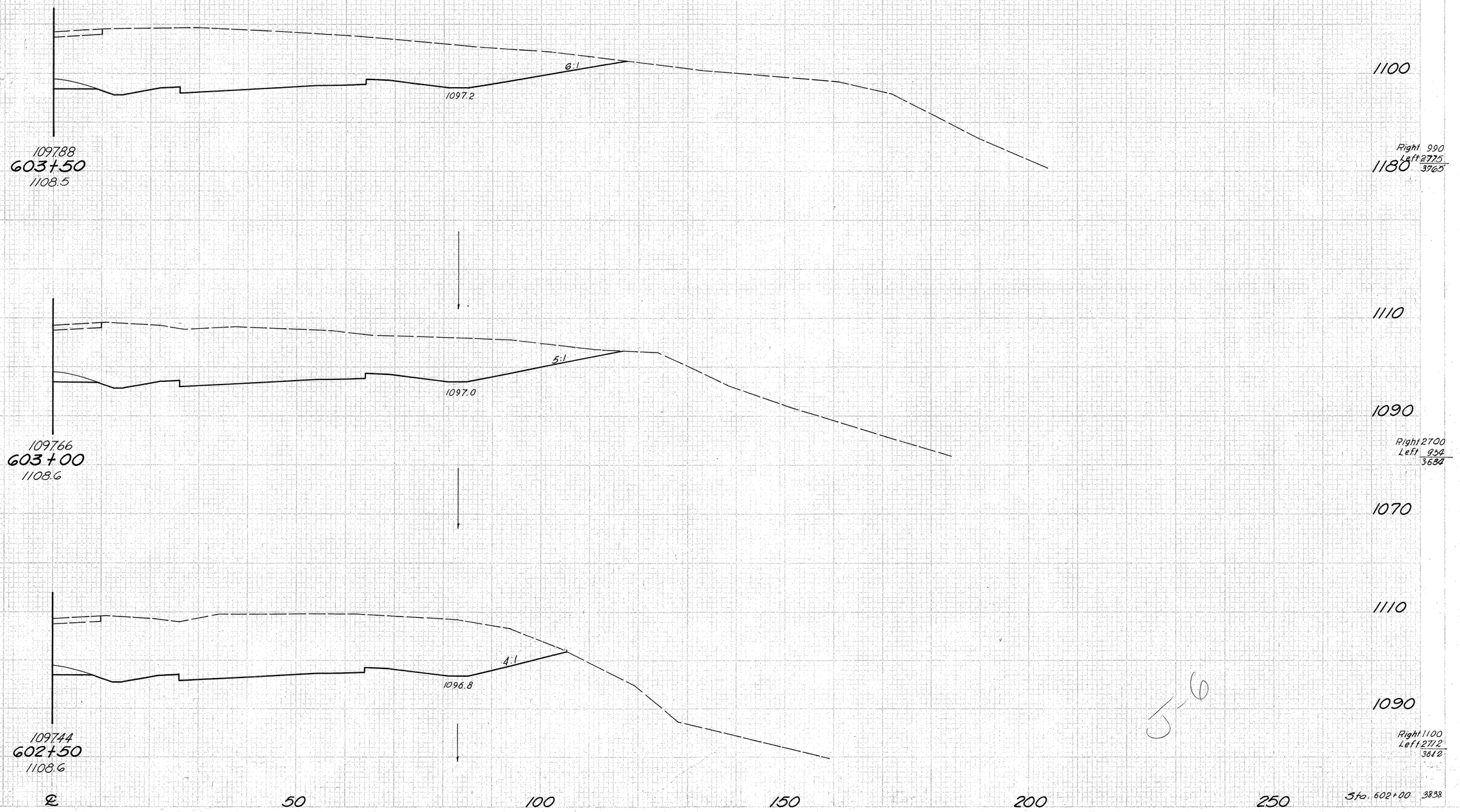
STA. 602+50 TO STA. 603+50 LE

FED. RD. DIV. NO.	STATE	PROJECT	
2	OHIO		

188
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



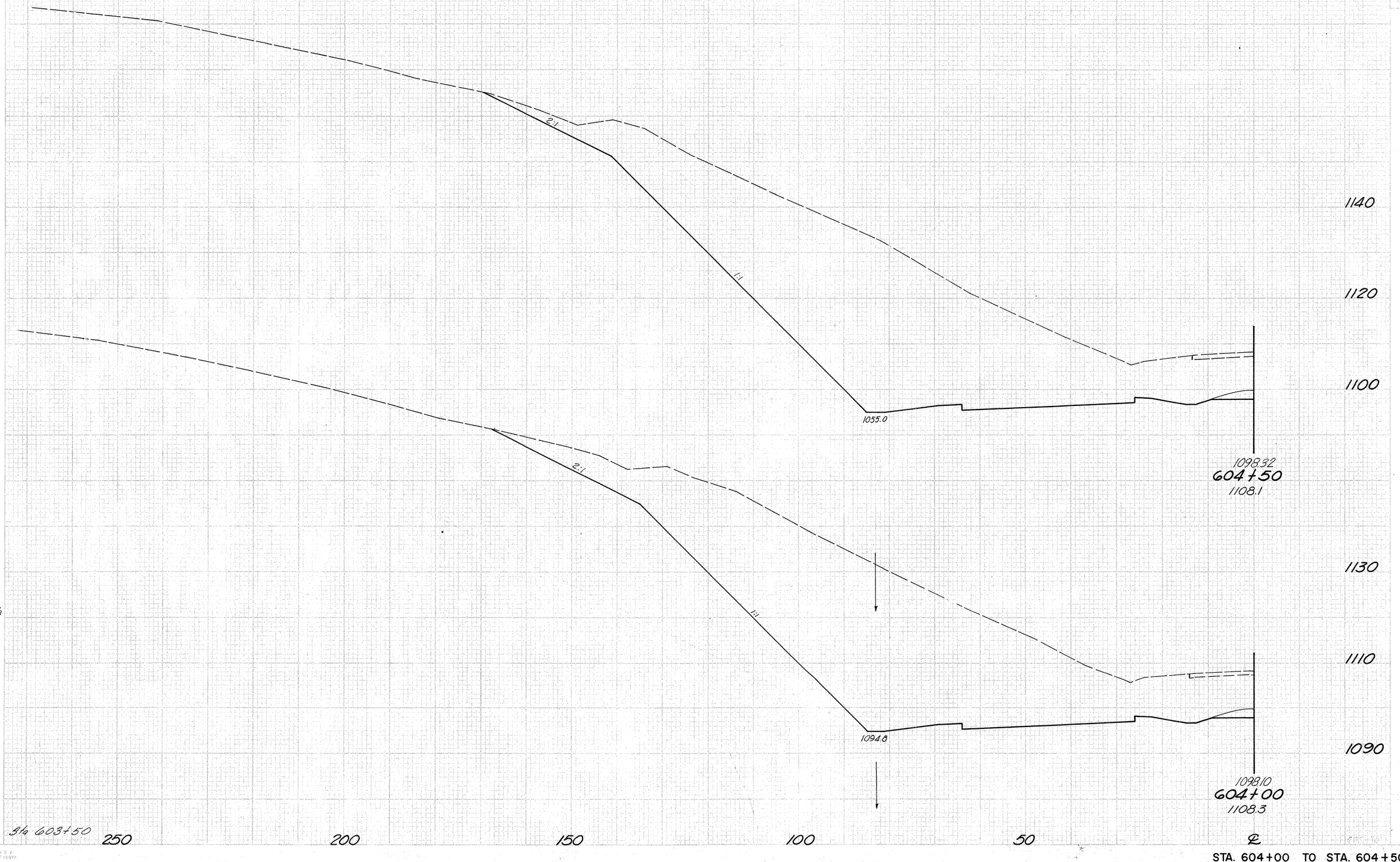
STA. 602+50 TO STA. 603+50 RIGHT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

189
485

GUERNSEY COUNTY - BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00

SUB AREA		VOLUME	
CUT	FILL	CUT	FILL

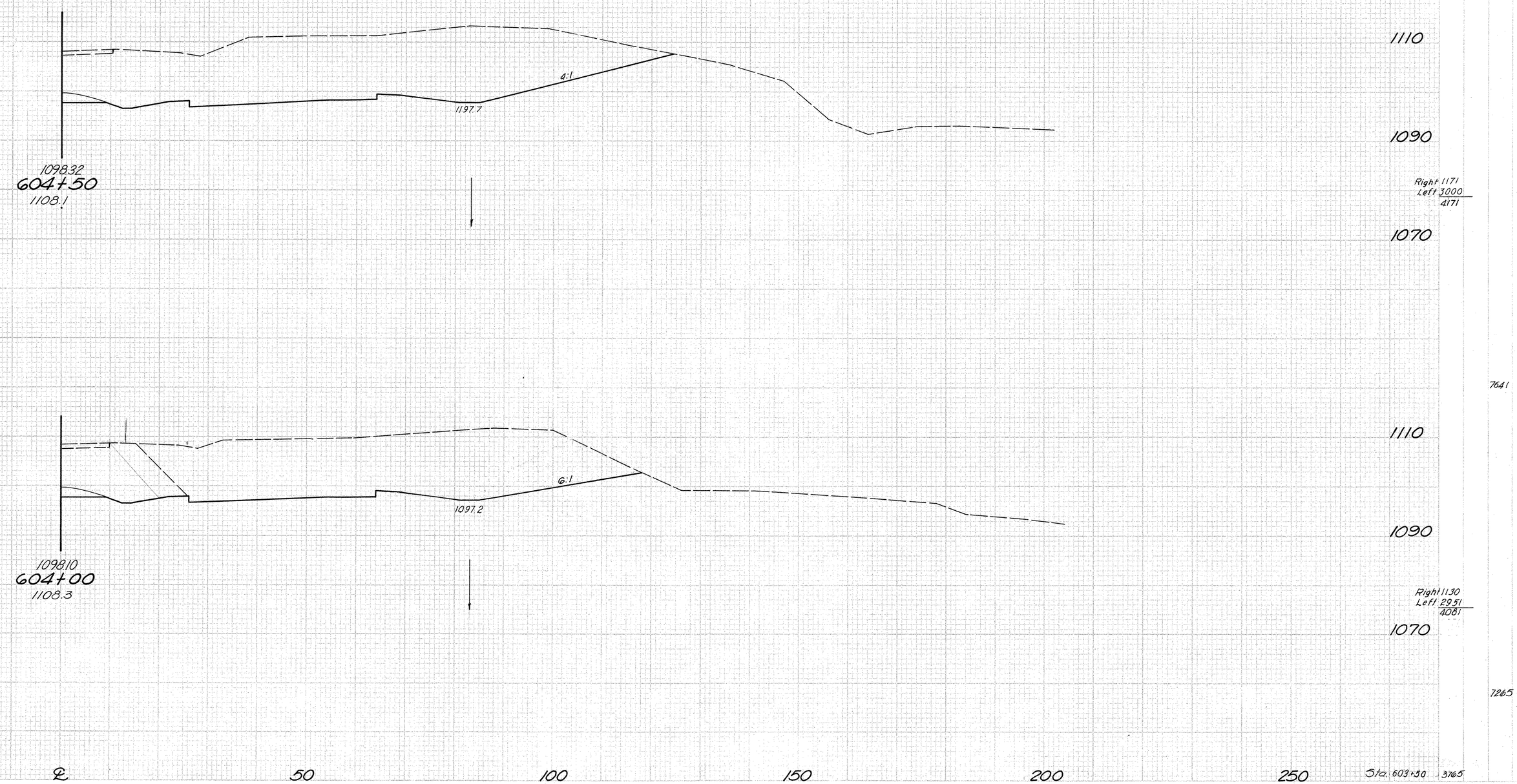


STA. 604+00 TO STA. 604+50 LEFT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

190
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



STA. 604+00 TO STA. 604+50 RIGHT

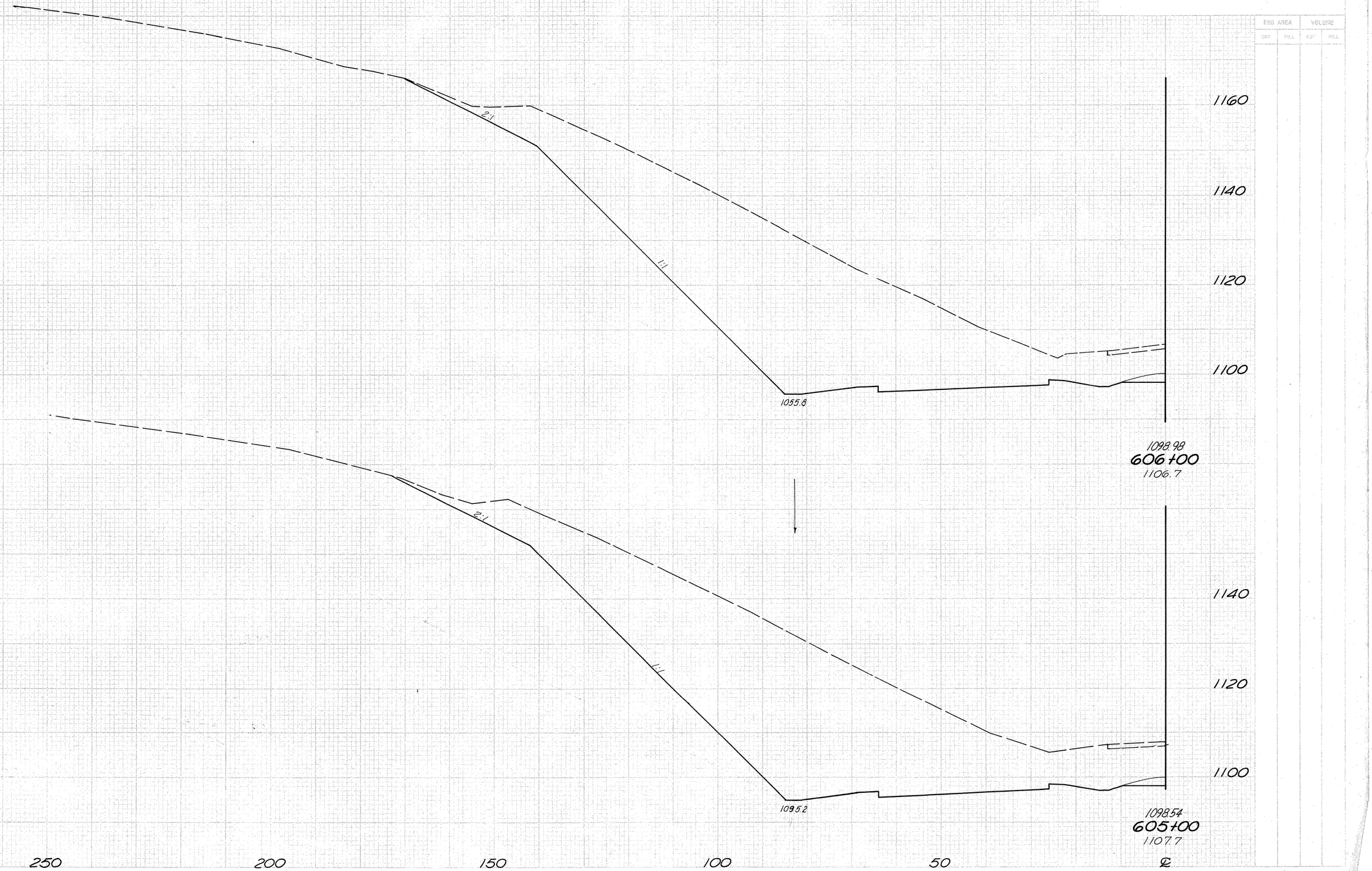
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

191
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



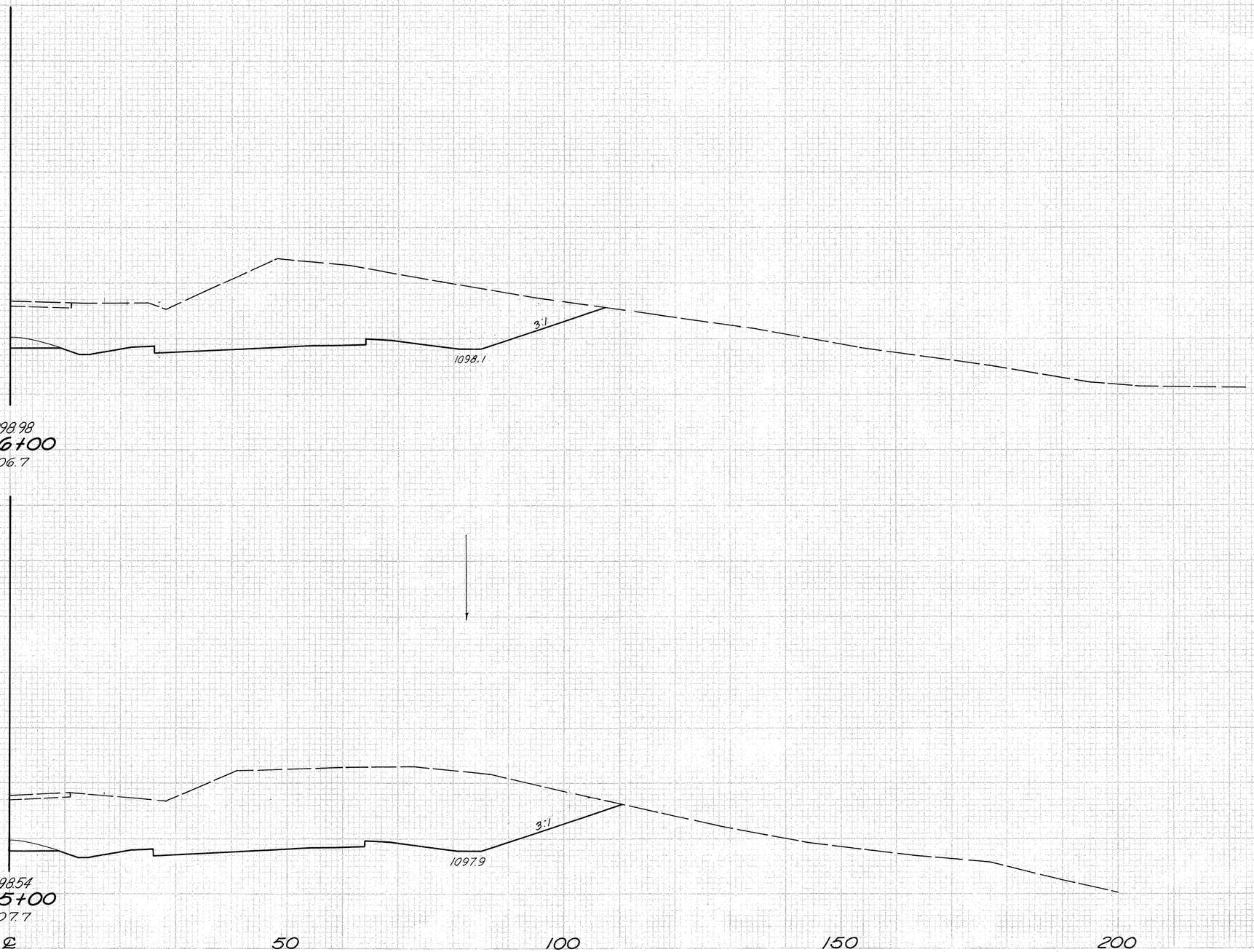
STA. 605+00 TO STA. 606+00 LEFT

FED. ROAD DESIGNATION	STATE	PROJECT	
2	OHIO		

192
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



14,750

7723

Sta. 604+50 4171

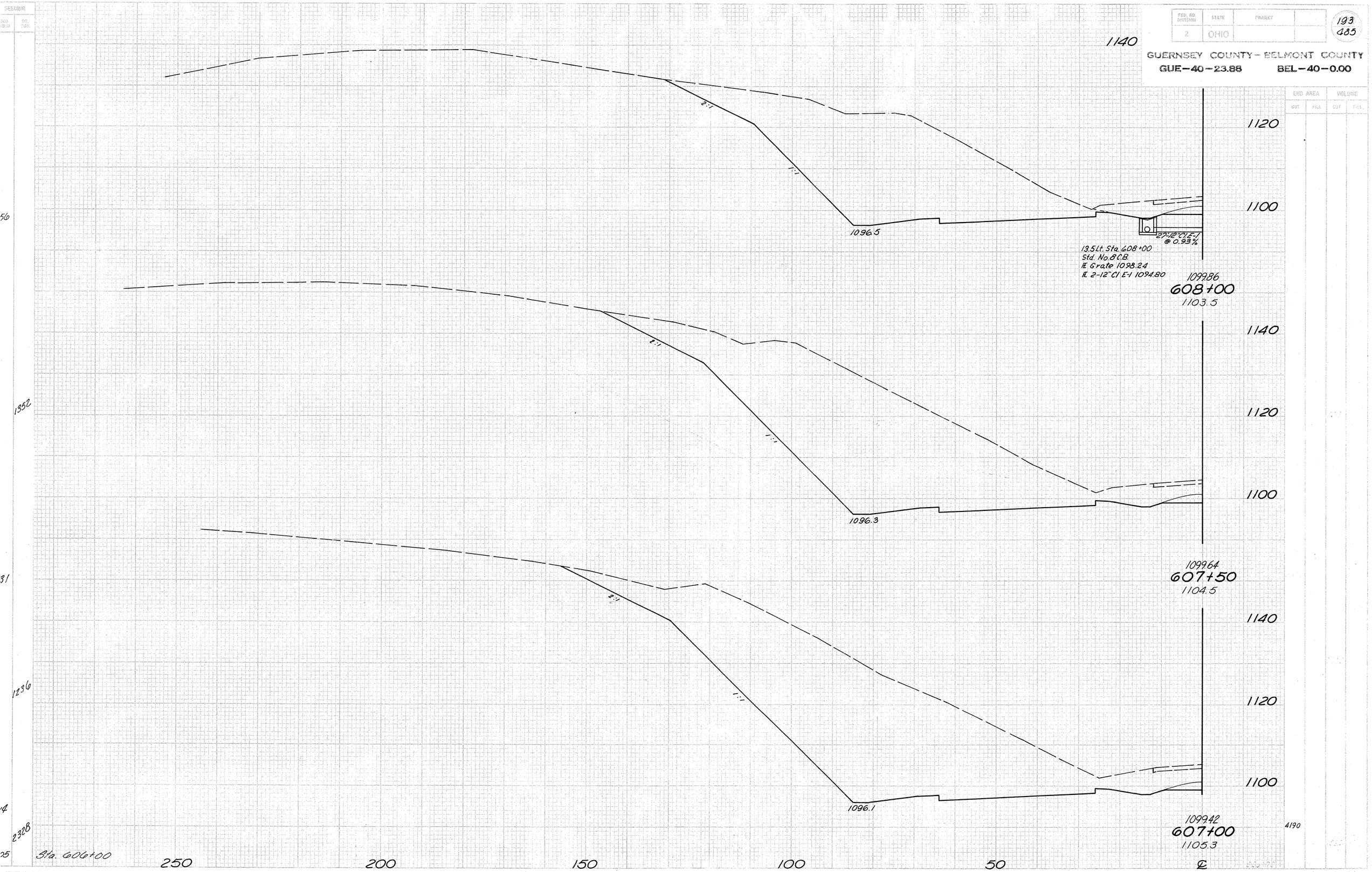
STA. 605+00 TO STA. 606+00 RIGHT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

193
485

GUERNSEY COUNTY - BELMONT COUNTY

GUE-40-23.88 BEL-40-0.00

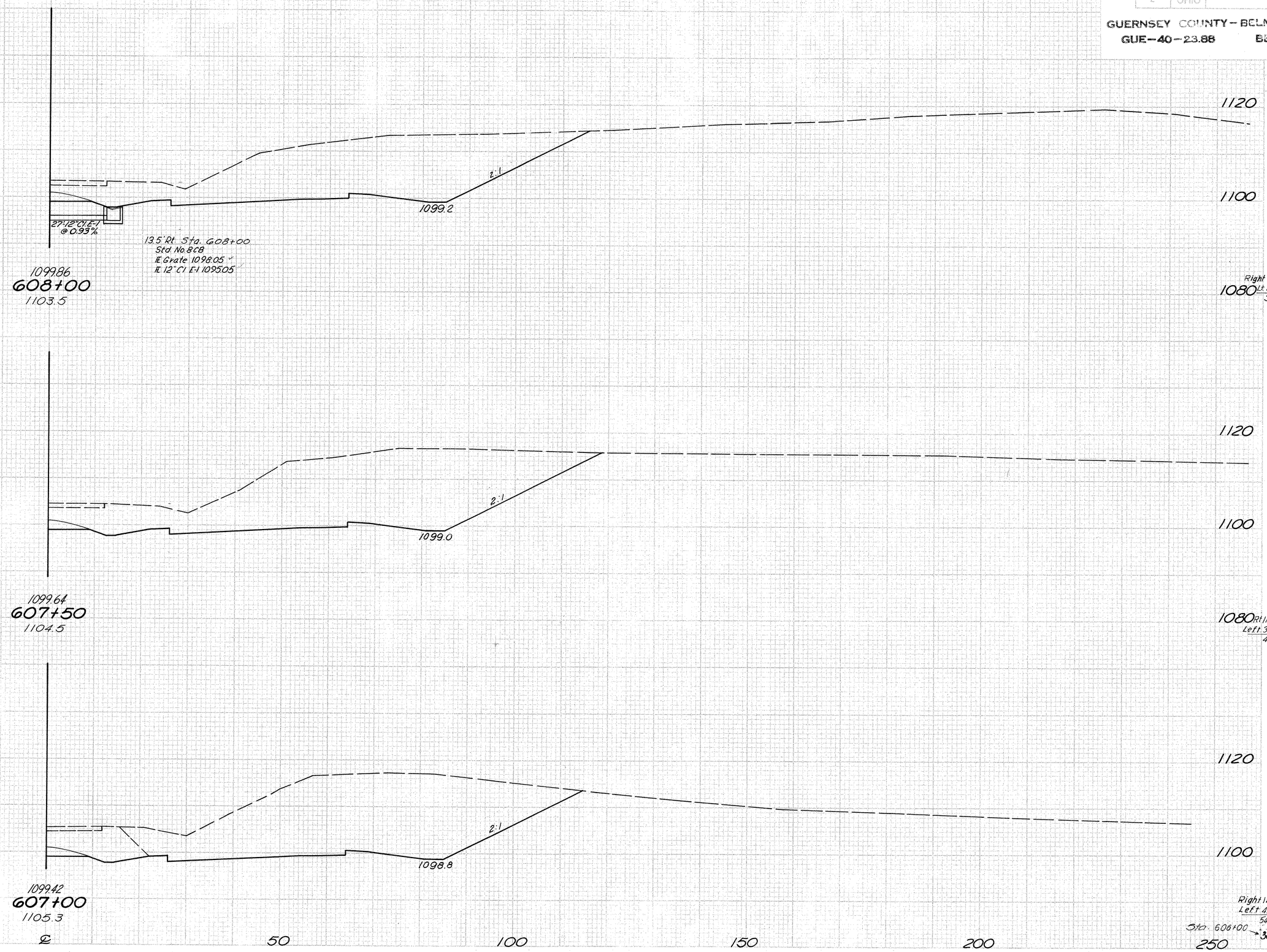


STA. 607+00 TO STA. 608+00 LEFT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

194
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		7187	
		9291	
		17119	

STA 607+00 TO STA 608+00 RIGHT

FED. RD. DIVISION	STATE	PROJECT		195 485
2	OHIO			

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

C.H. 254 | MAINLINE

1100.96
610+50
1098.6

1100
1080
2:1
24:1
10'
2:1
2:1
1074.6

C.H. 254 | MAINLINE

1100.74
610+00
1099.4

1100
1080
3:1
24:1
10'
1087.5

C.H. 254 | MAINLINE

1100.52
609+50
1100.3

1100
1080
1120
1100
1080
1120
1100
1120
1100
1080
1120
1100
1080
1120
1100
1080

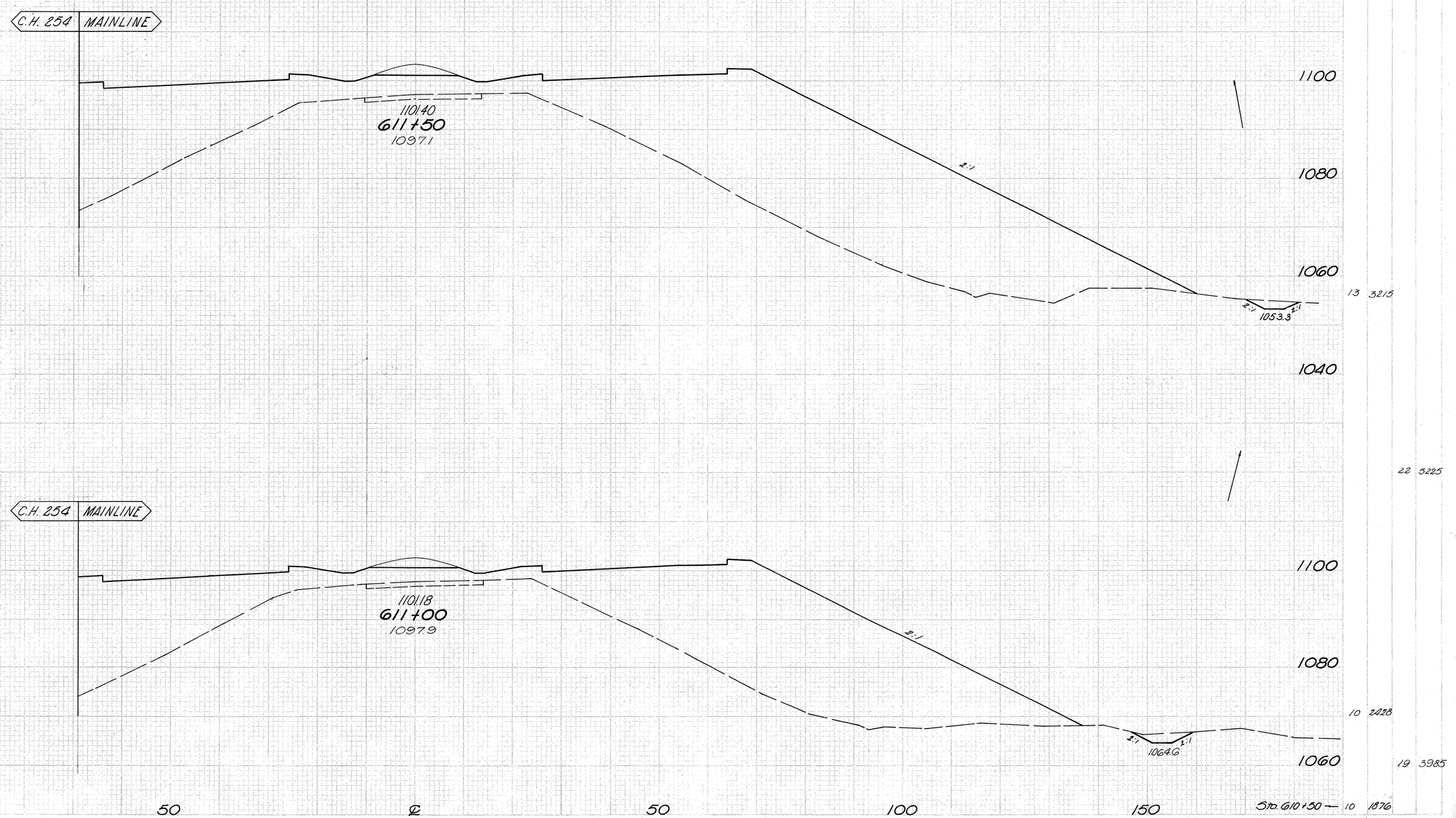
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

196
485

GUERNSEY COUNTY -- BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL

Sta. 611+90 = Culvert



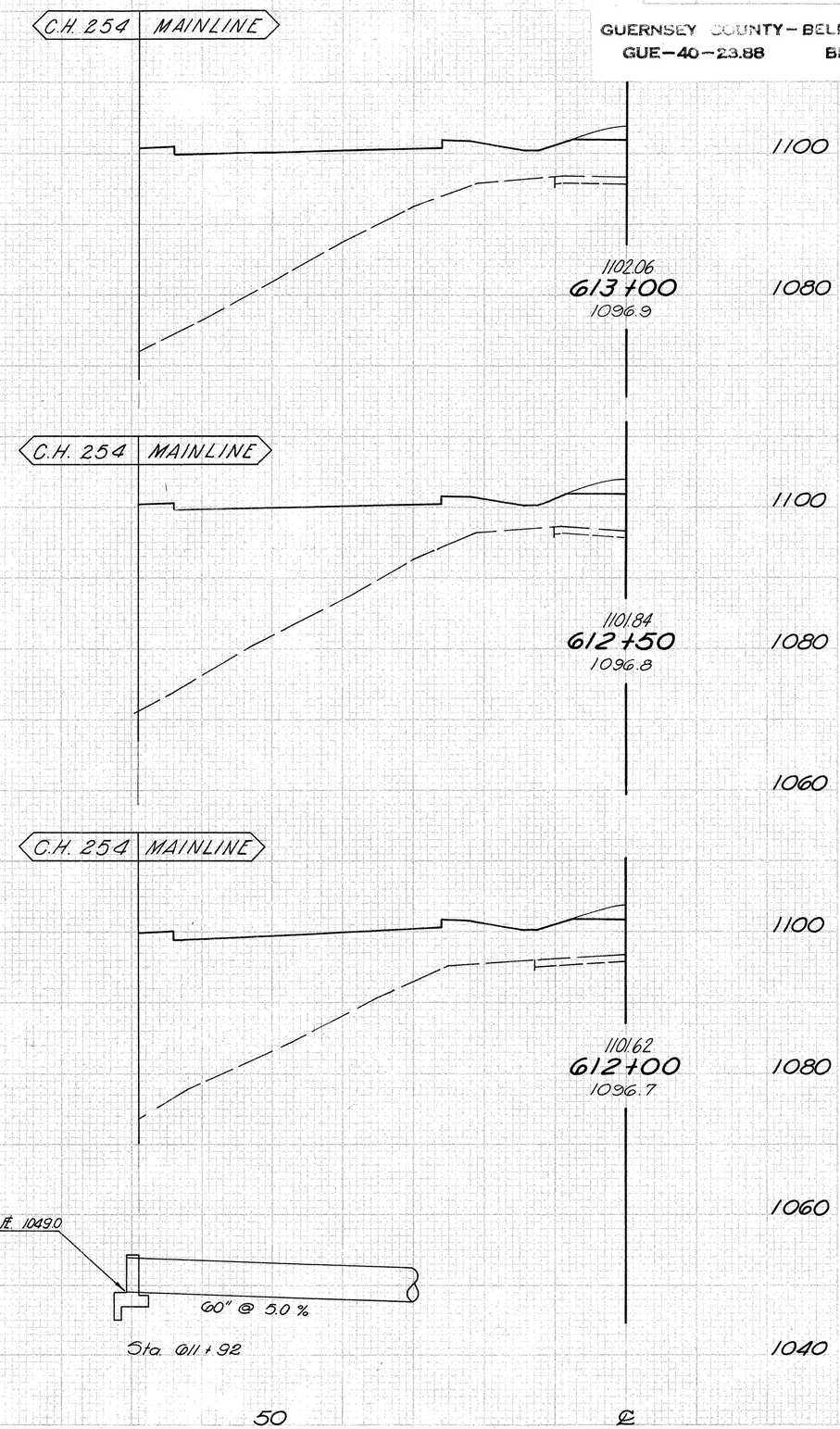
STA. 611+00 TO STA. 611+50

FED. RD. DIVISION	STATE	COUNTY		197
2	OHIO			485

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00

SHD AREA		VOLUME	
CUT	FILL	CUT	FILL



Sta. 611+50

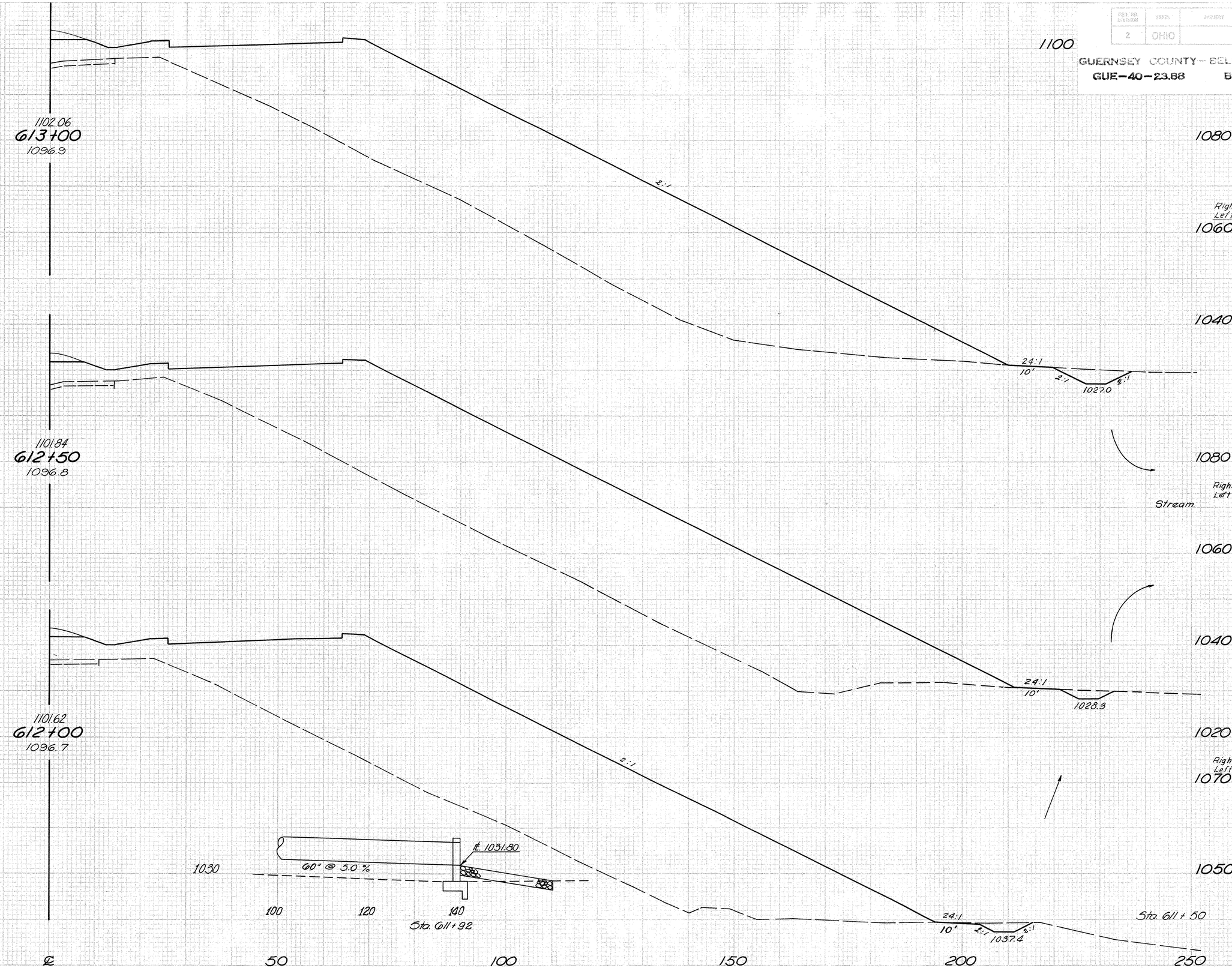
250 200 150 100 50 ℄

STA. 612+00 TO STA. 613+00 LEFT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

198
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Right	36	3488		
Left	0	868		
	36	4356		
			47	8080
Right	15	3530		
Left	0	840		
	15	4370		
			28	7962
Right	15	3435		
Left	0	794		
	15	4229		
			26	6893
	13	3215		

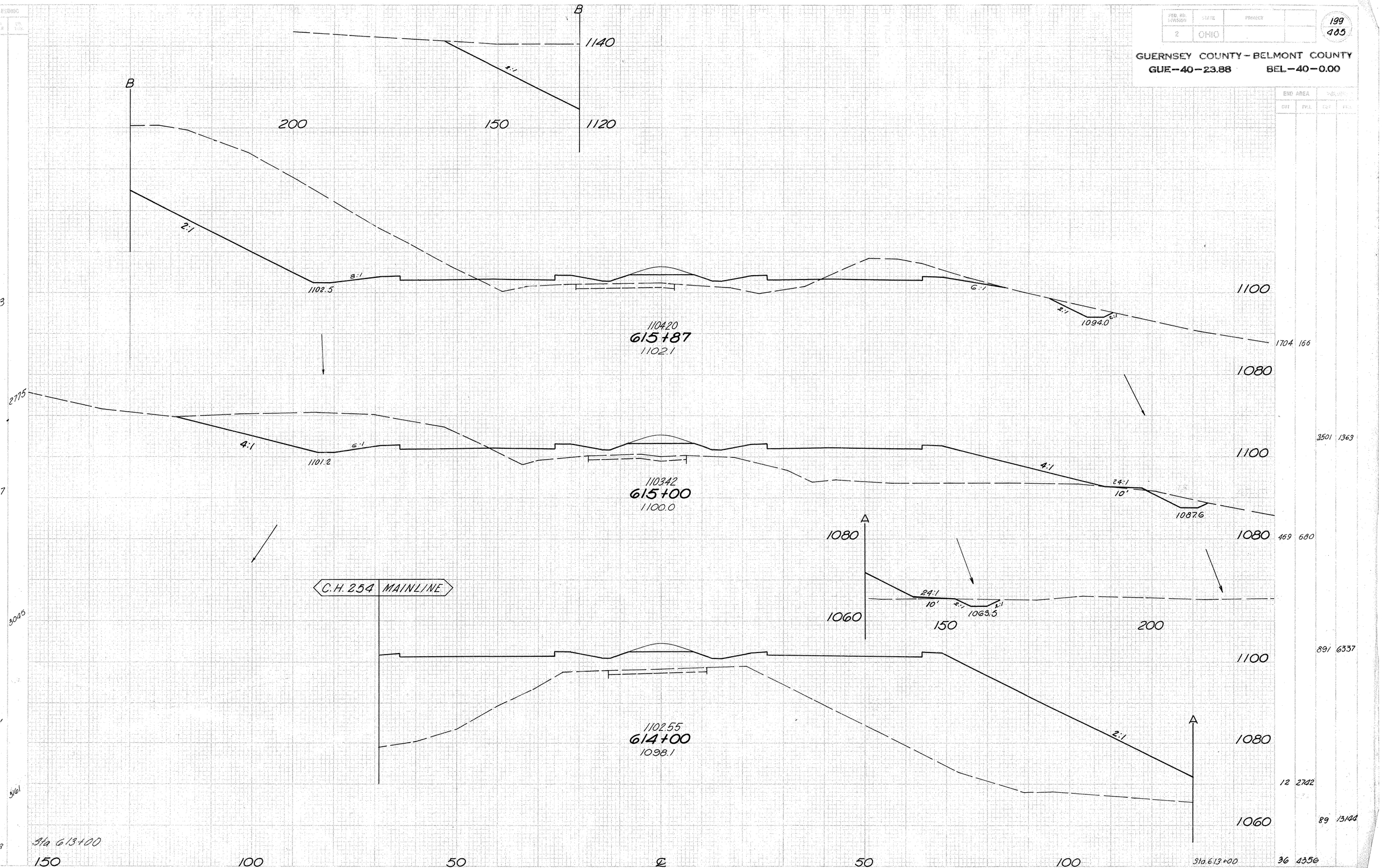
STA. 612+00 TO STA. 613+00 RIGHT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

199
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

END AREA		SQUARE	
CUT	FILL	CUT	FILL



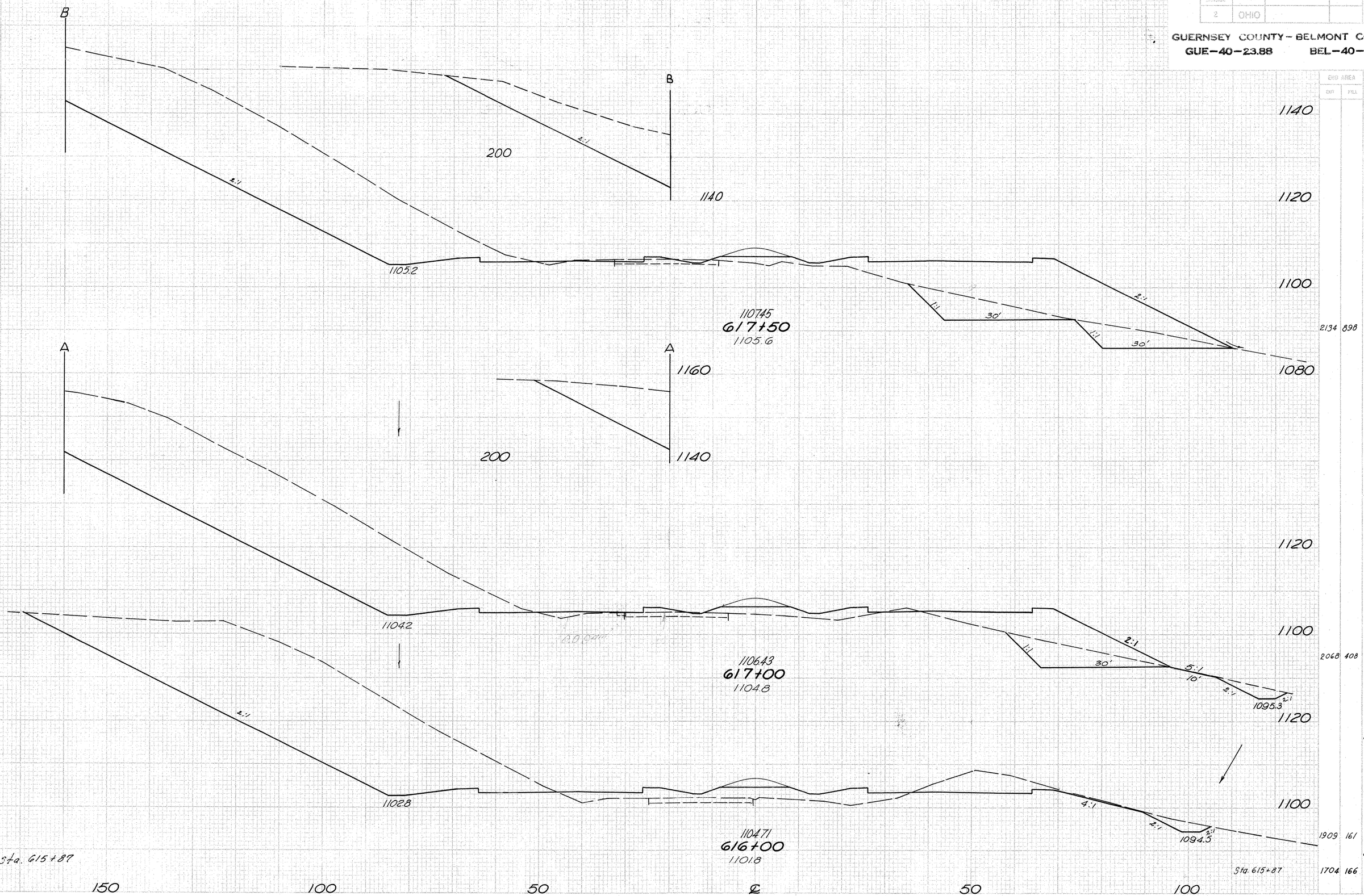
STA. 614+00 TO STA. 615+87

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

200
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL

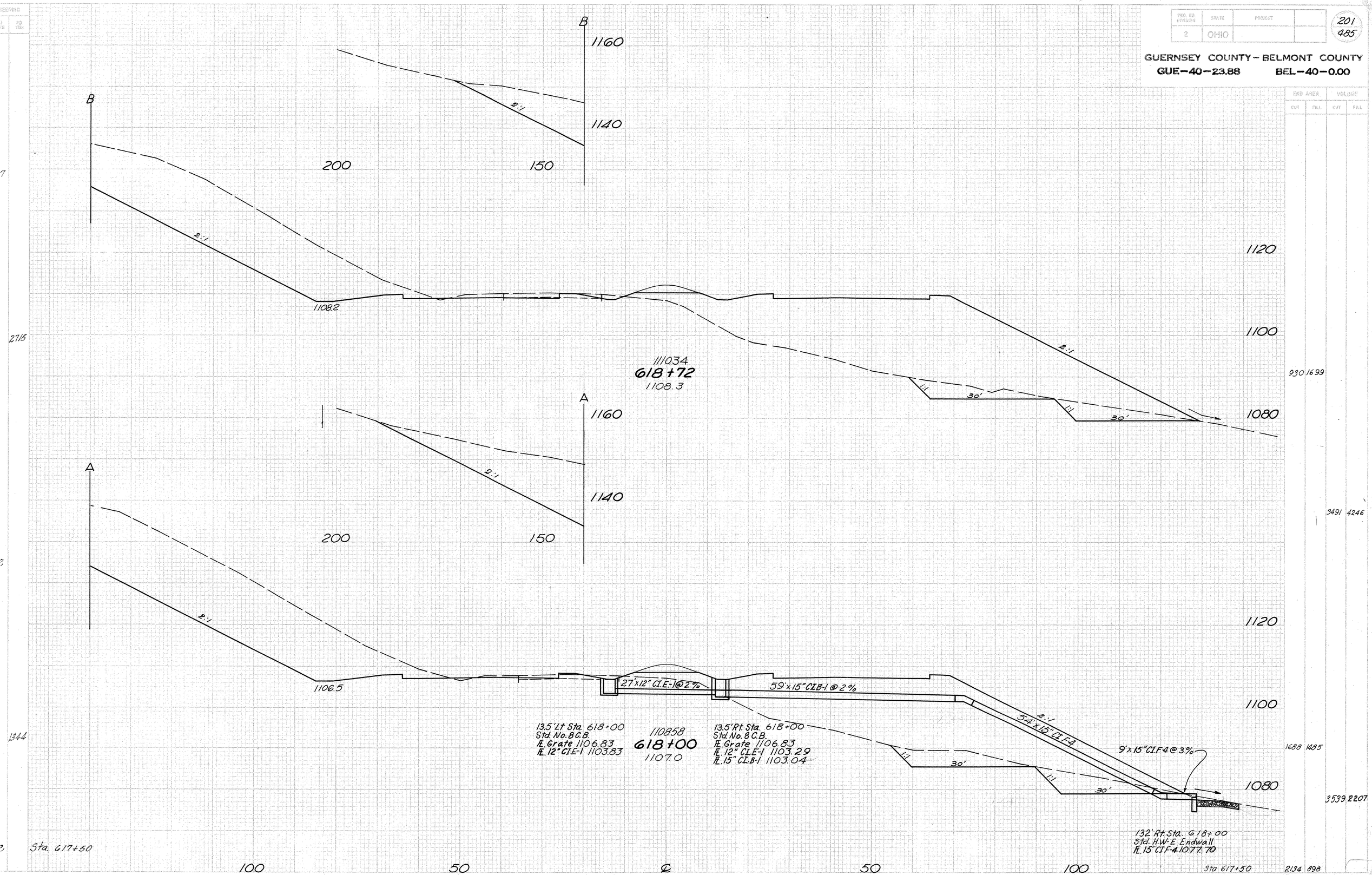


STA. 616+00 TO STA. 617+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

201
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
930	1699		
		3491	4246
1688	1485		
		3539	2207
2134	898		

STA. 618+00 TO STA. 618+72

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

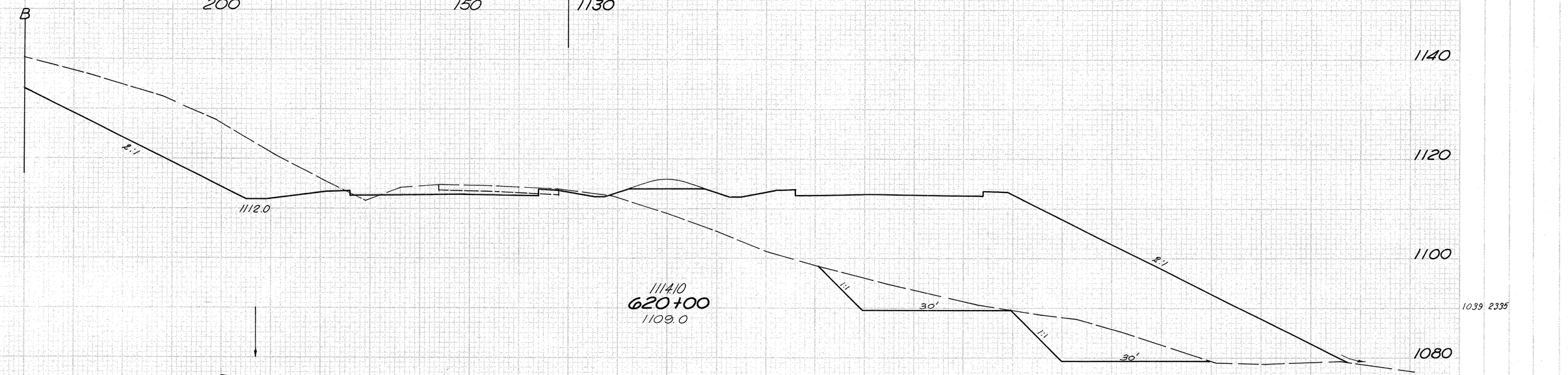
202
485

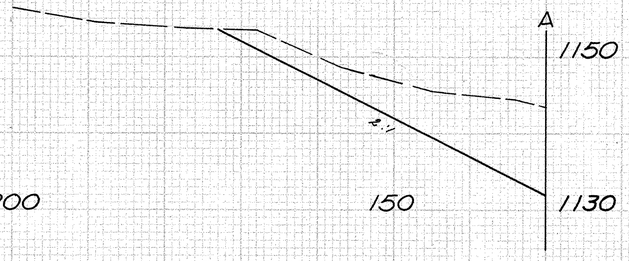
GUERNSEY COUNTY - BELMONT COUNTY

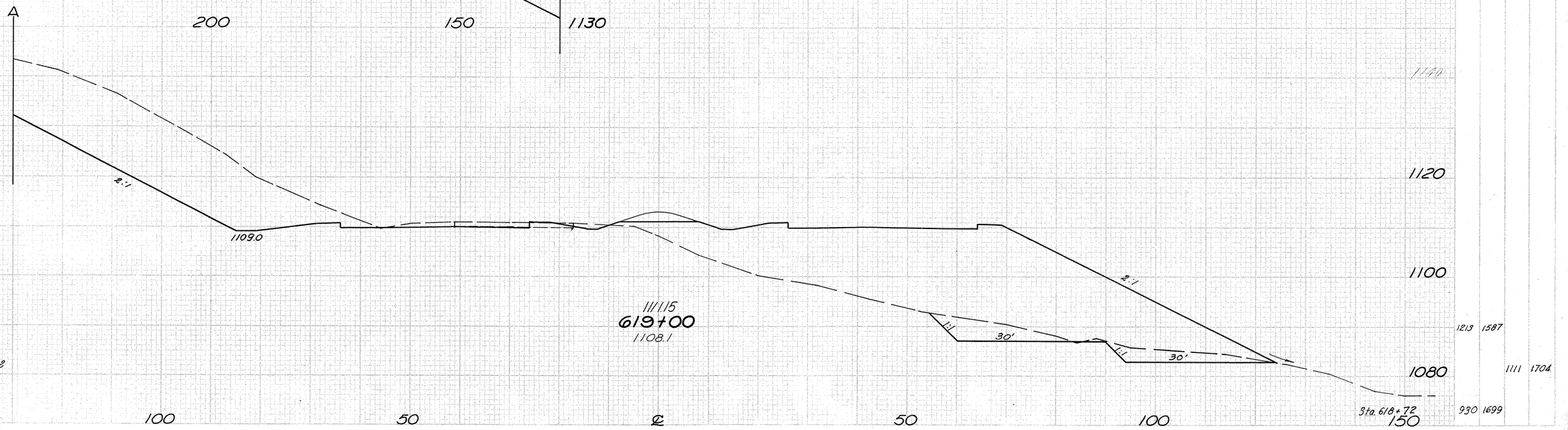
GUE-40-23.88 BEL-40-0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL









STA. 619+00 TO STA. 620+00

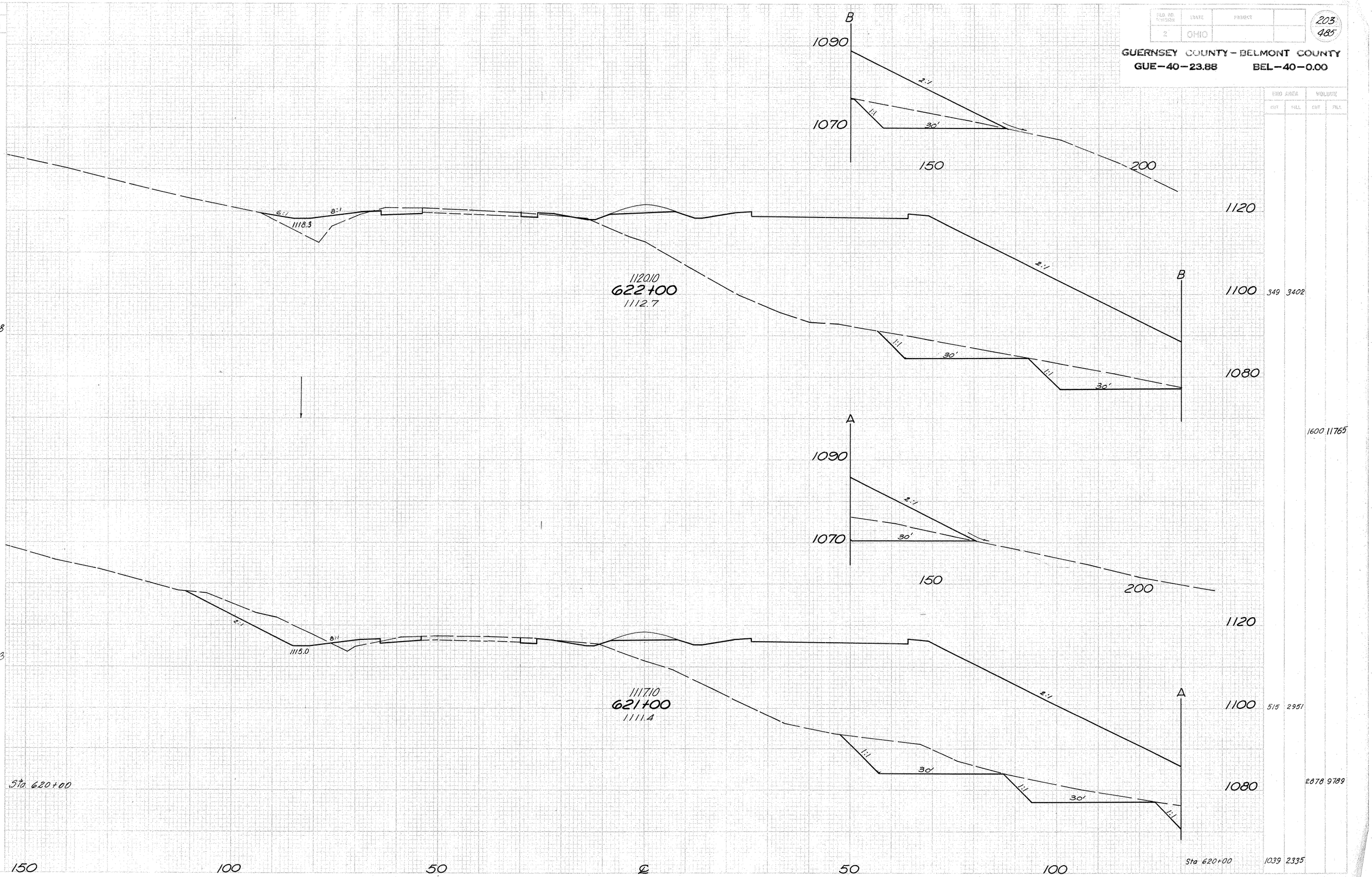
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

203
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



1600 11765

STA. 621+00 TO STA. 622+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

204
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
31	3961		
		230	16724
93	5070		
		819	15689
349	3402		

STA. 623+00 TO STA. 624+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

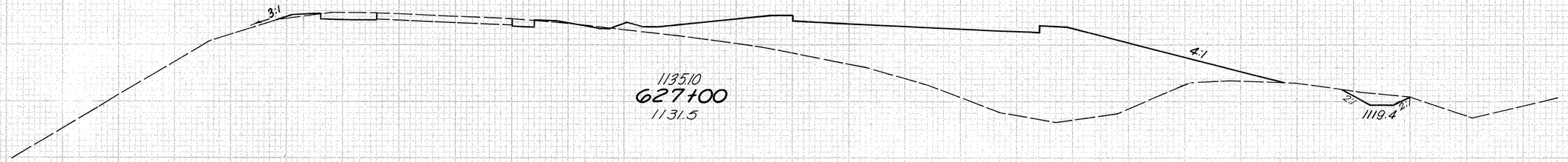
205
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

SEEDING

SQ. YDS.	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

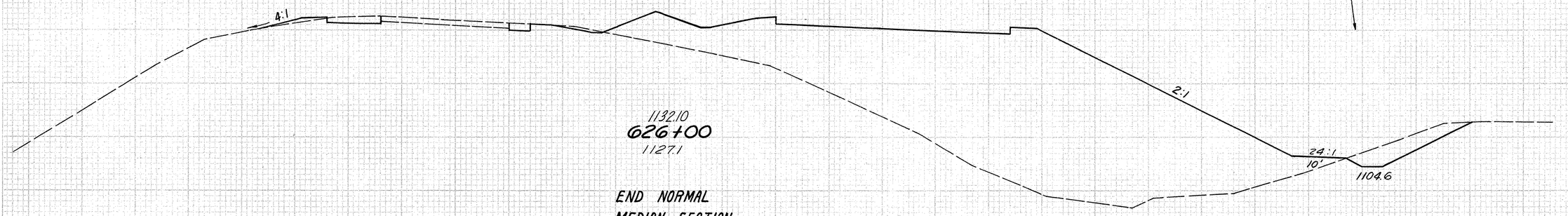


1130

28 929

1110

198 5493



1130

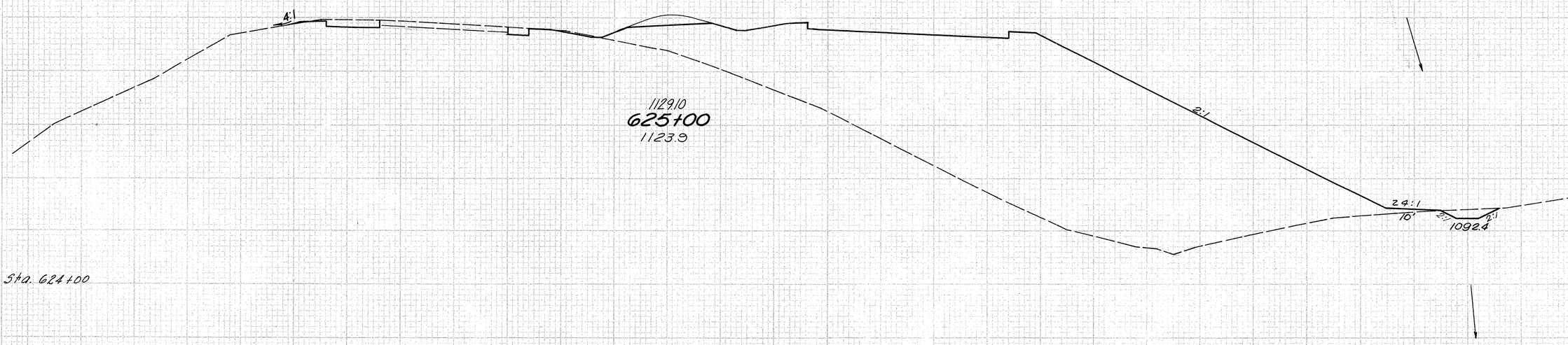
1110

79 2037

END NORMAL
MEDIAN SECTION
625+45

1090

194 8755



1120

26 2691

1100

106 12318

1080

Sta. 624+00

Sta 624+00

31 3961

3122
3344
4261

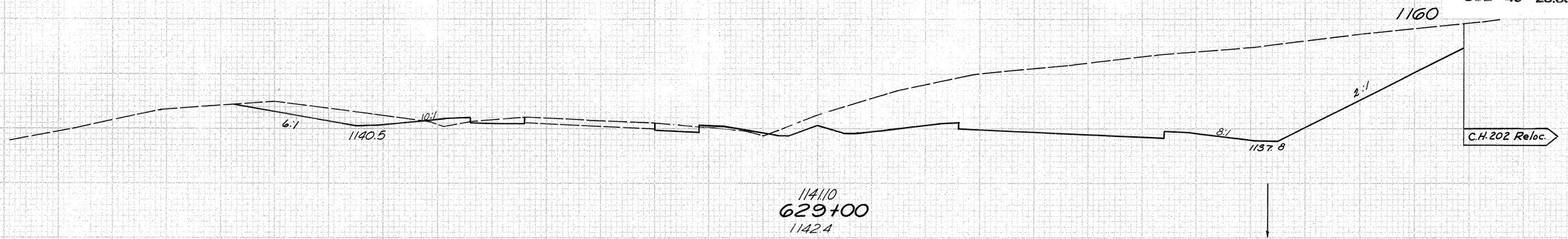
100 50 ℄ 50 100 150

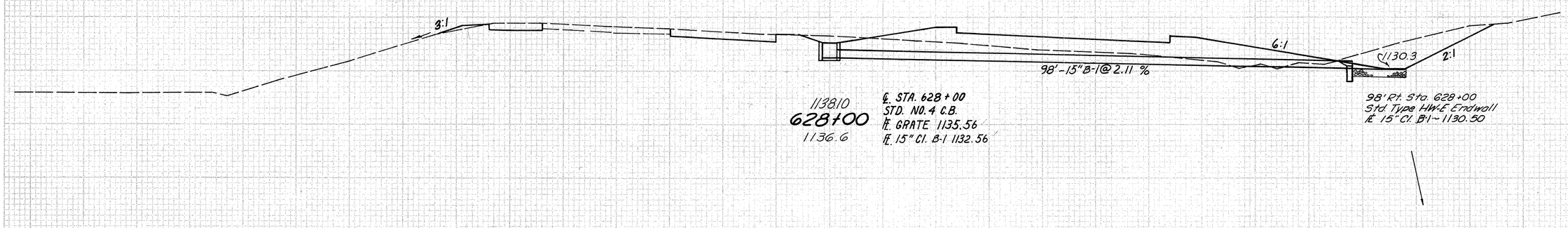
STA 625+00 TO STA 627+00

PROJ. NO. DIVISION	STATE	PROJECT	
2	OHIO		

206
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00





Sta. 627+00

150 100 50 ℄ 50 100 Sta. 627+00

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
288	1417	17		
			773	16
	902	30		
1990			1526	417
	103	245		
			122	635
1891				
	28	441		
1394			52	1269
	28	929		

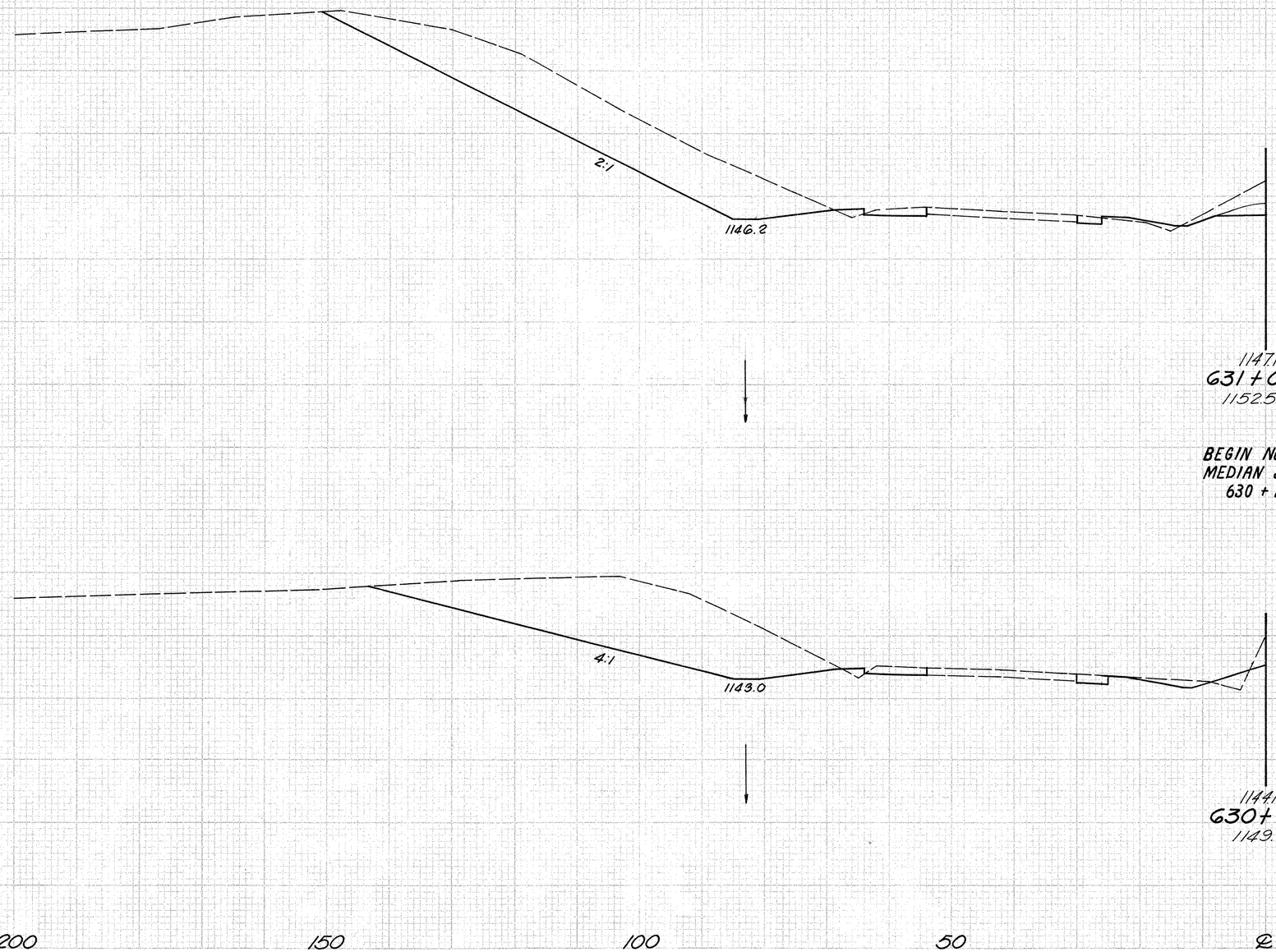
STA 627+50 TO STA. 629+00

FED. RD. DIVISION	STATE	PROJECT		207 485
2	OHIO			

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

208
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL

1220
1200
1180
1160
1140

℄ C.H. 202 RELOCATION

2:1
1:1
4.8:1
1143.9
1153.1

Right 787 7
Left 607 10
8434 10

114710
631+00
1152.5

1155.74
31+46
1201.8

30,473 41

℄ SURVEY AHEAD
℄ SUR. BK. C.H. 202 BK.

℄ C.H. 202 RELOCATION

BEGIN NORMAL
MEDIAN SECTION
630+25

2:1
1:1
2:1
2:1
3:1
1140.8
1145.4
1144.6

Right 7380
Left 591 12
7971 12

For Quantities of C.H. 202 Relc. Back
See C.H. 202 X-sections

17,386 54

144.10
630+00
1149.7

114702
30+50
1192.0

℄ 50 100 150 200 250 Sta 629+00 1417 17

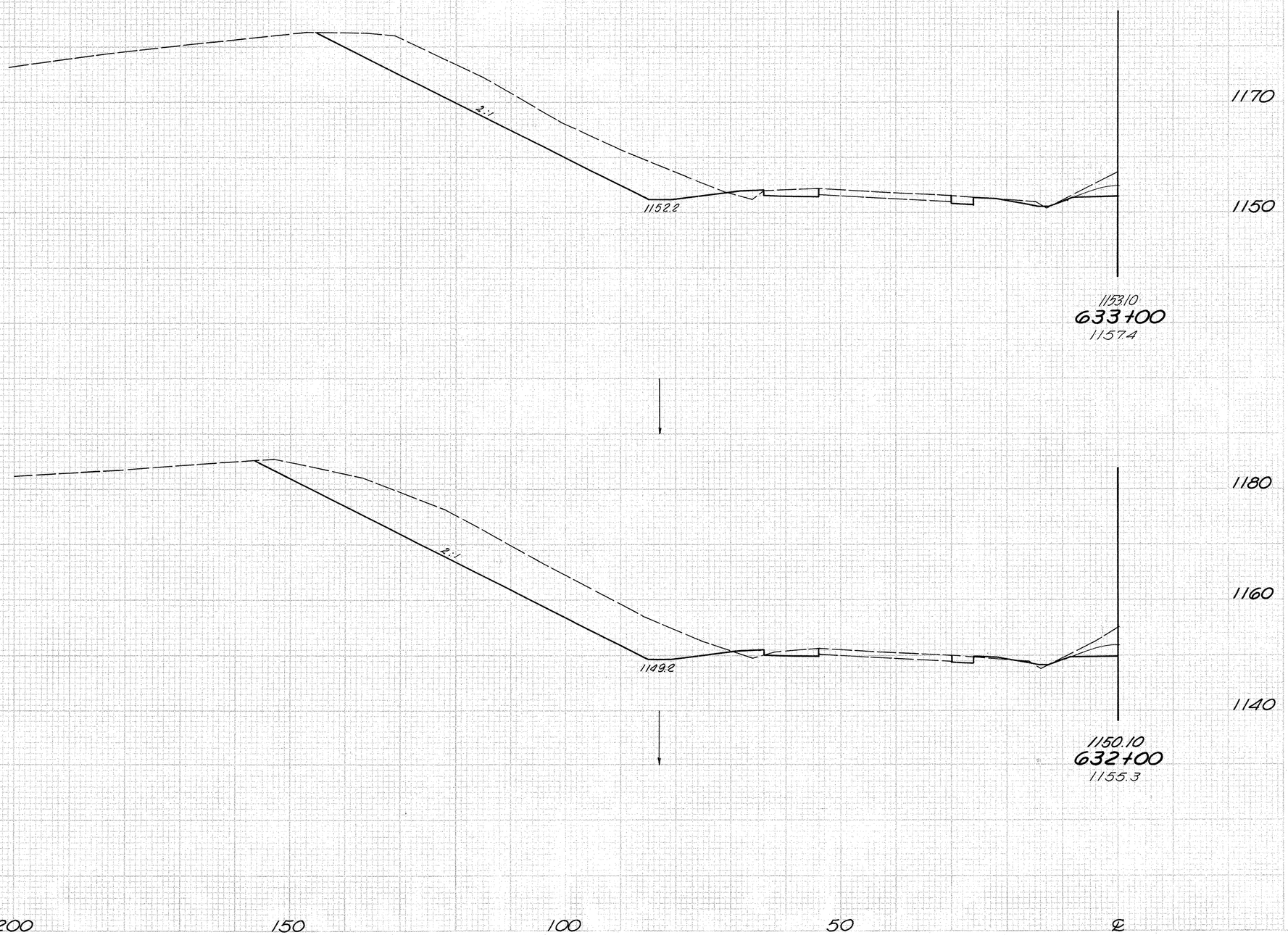
STA. 630+00 TO STA. 631+00 RIGHT

SHT. NO.	STATE	PROJECT	
2	OHIO		

209
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



STA. 632+00 TO STA. 633+00 LEFT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

210
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL

1220
1200
1180
1160
1140

℄ C.H. 202 RELOCATION

2:1
1:1
4:1
2.3:1

Right 6660
Left 456 6
7116 6

1149.7

1153.10
633+00
1157.4

1171.79
33+39
1208.2

27,854 24

℄ C.H. 202 RELOCATION

2:1
1:1
4:1
3:1

Right 7551
Left 581 7
8132 7

30,771 31

1146.8

1150.10
632+00
1155.3

1164.32
32+42
1208.9

Sta. 631+00 8484 10

℄ 50 100 150 200 250

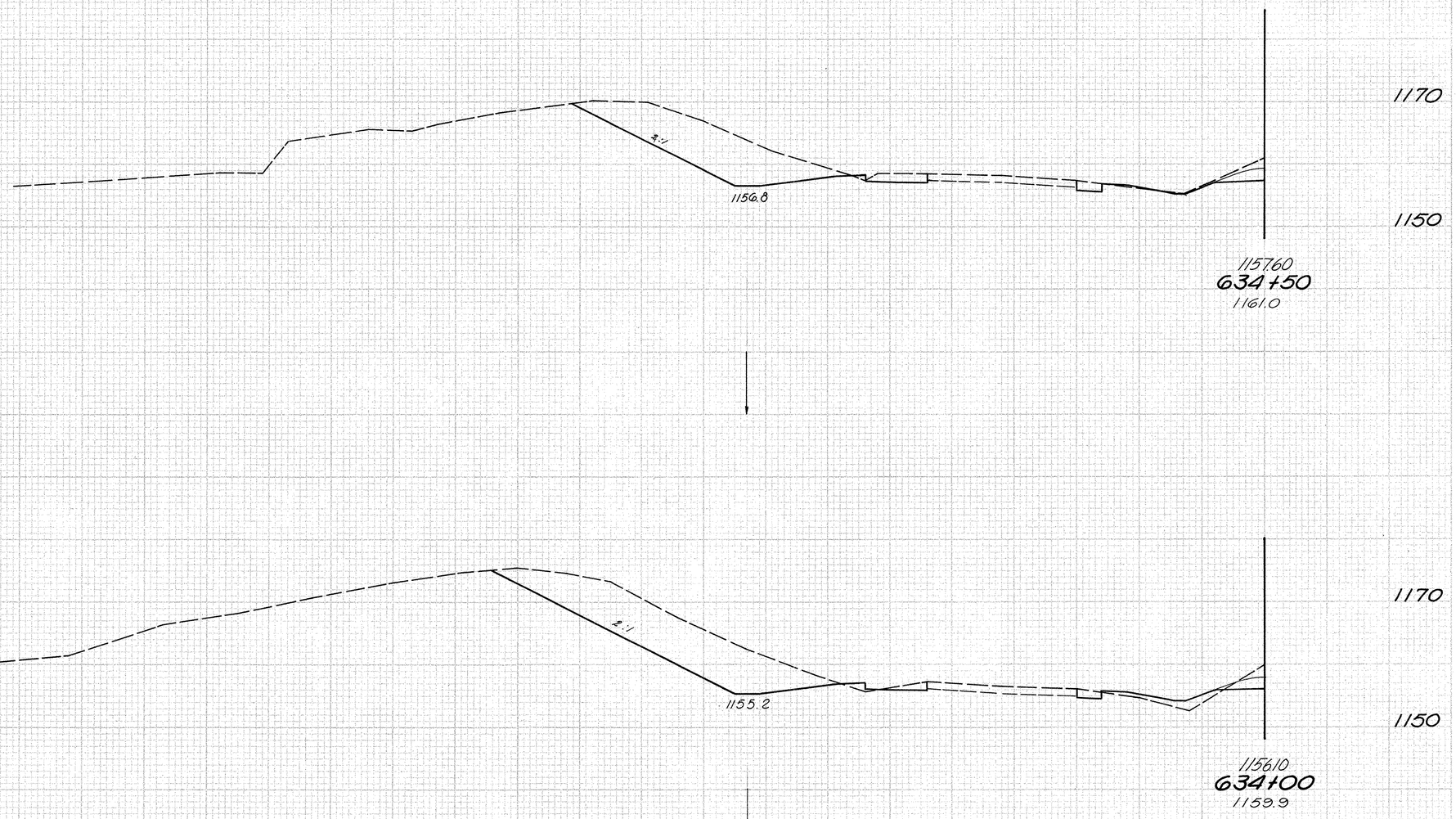
STA 632+00 TO STA 633+00 RIGHT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

211
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



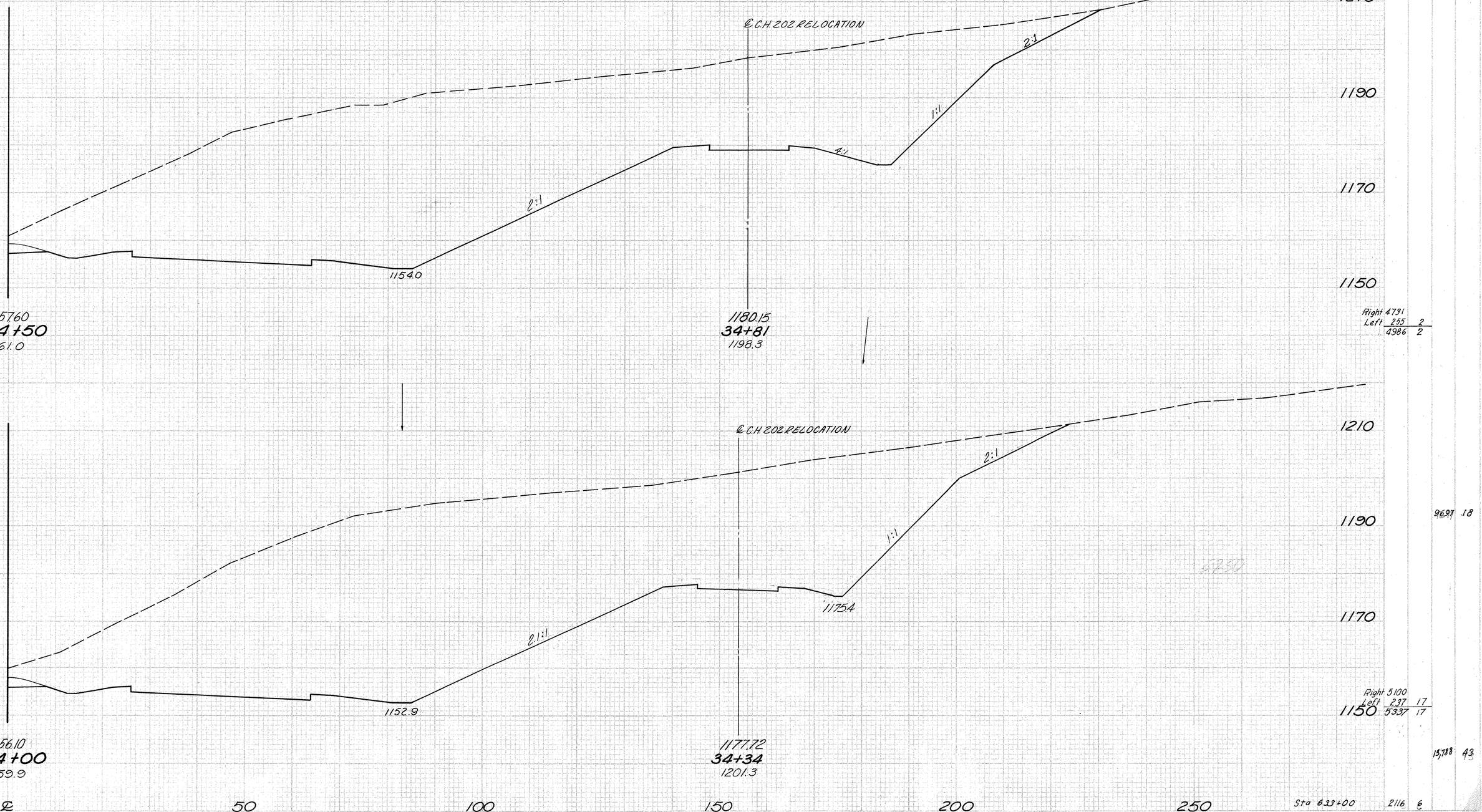
STA. 634+00 TO STA. 634+50 LEFT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

212
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



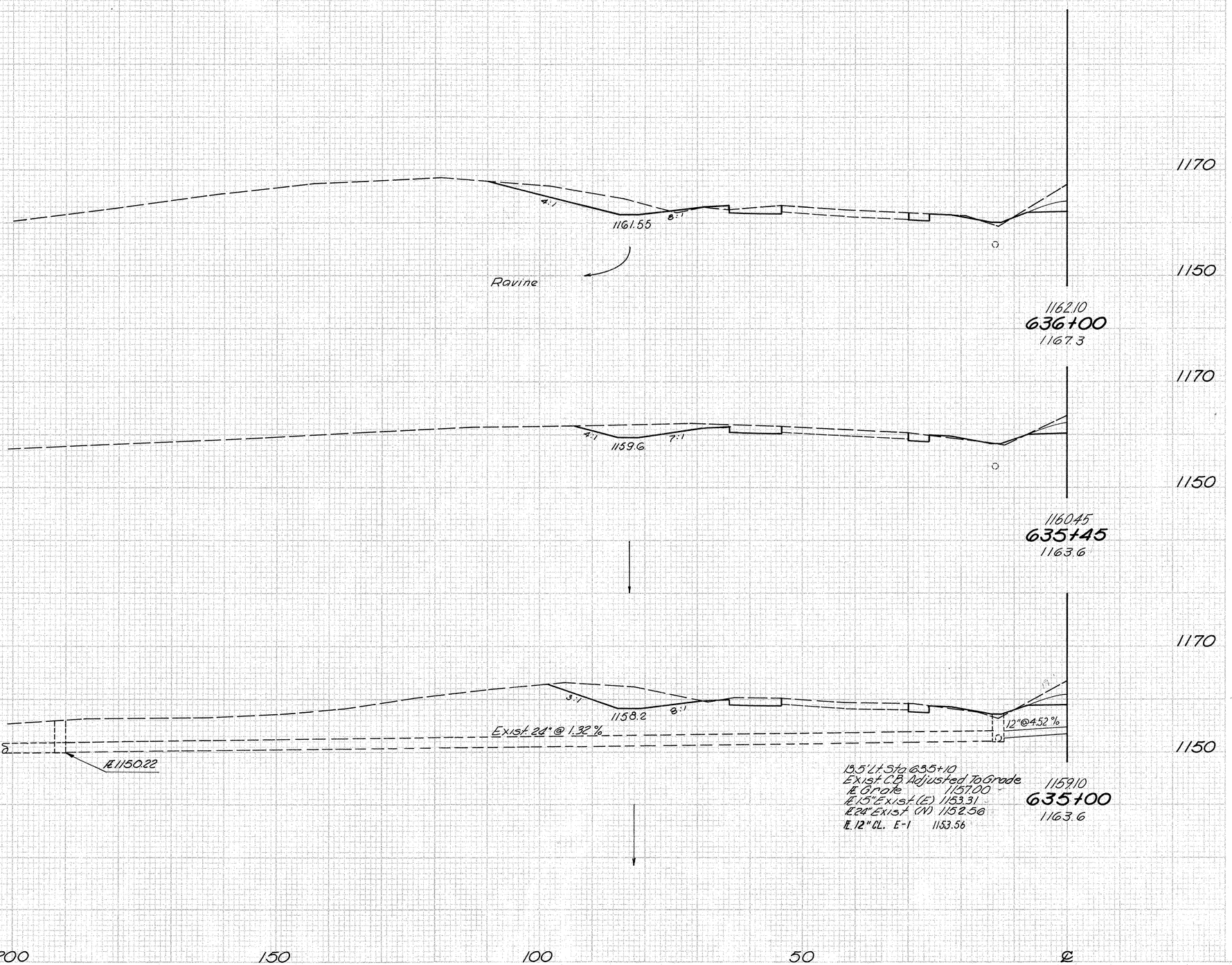
STA. 634+00 TO STA. 634+50 RIGHT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

213
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



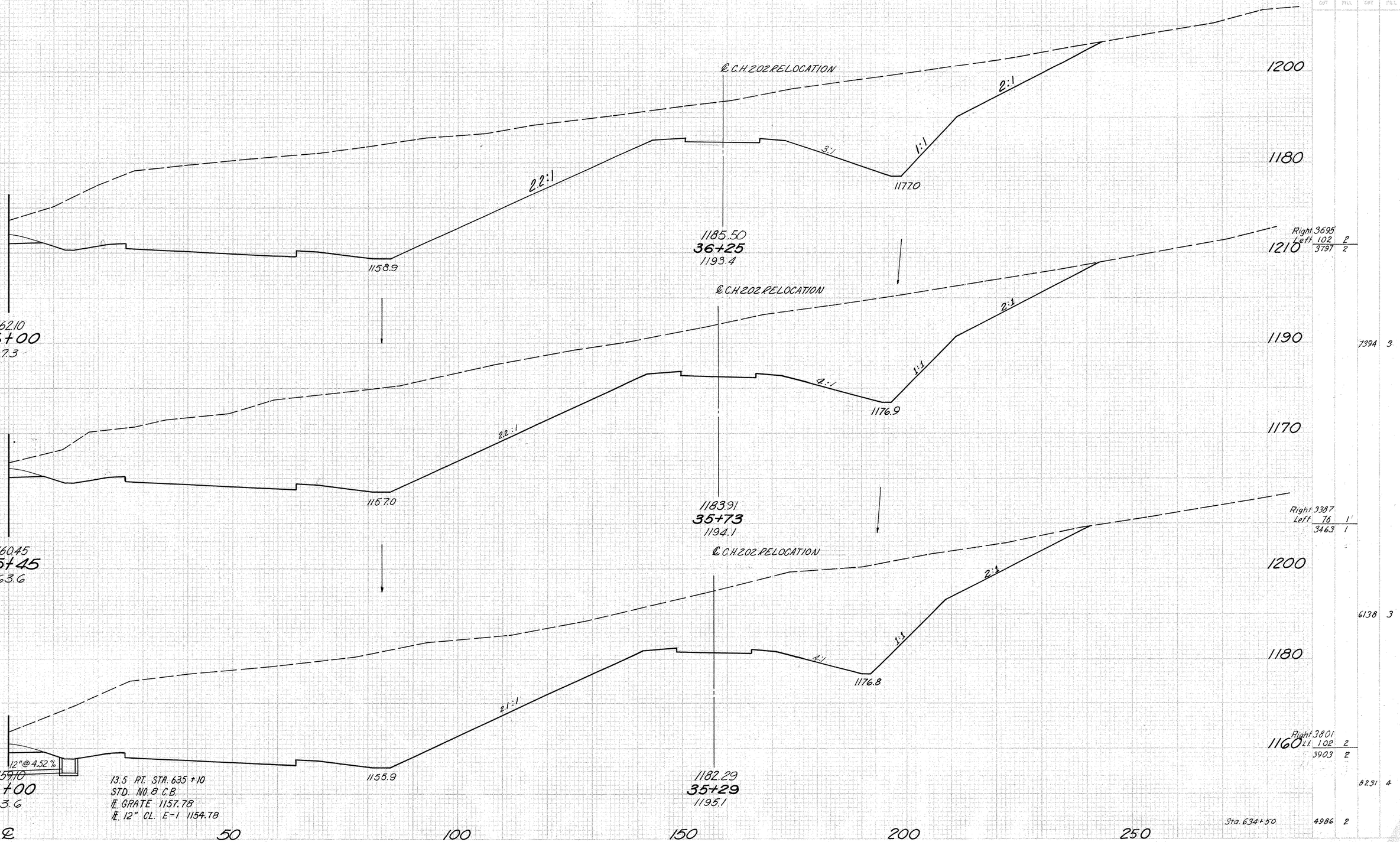
STA. 635+00 TO STA. 636+00 LEFT

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

214
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

	SHD AREA		VOLUME	
	CUT	FILL	CUT	FILL
Right 3695				
Left 102		2		
3797		2		
7394		3		
6138		3		
8231		4		
Sta. 634+50			4986	2
Right 3387				
Left 76		1		
3463		1		
Right 3801				
Lt 102		2		
3903		2		

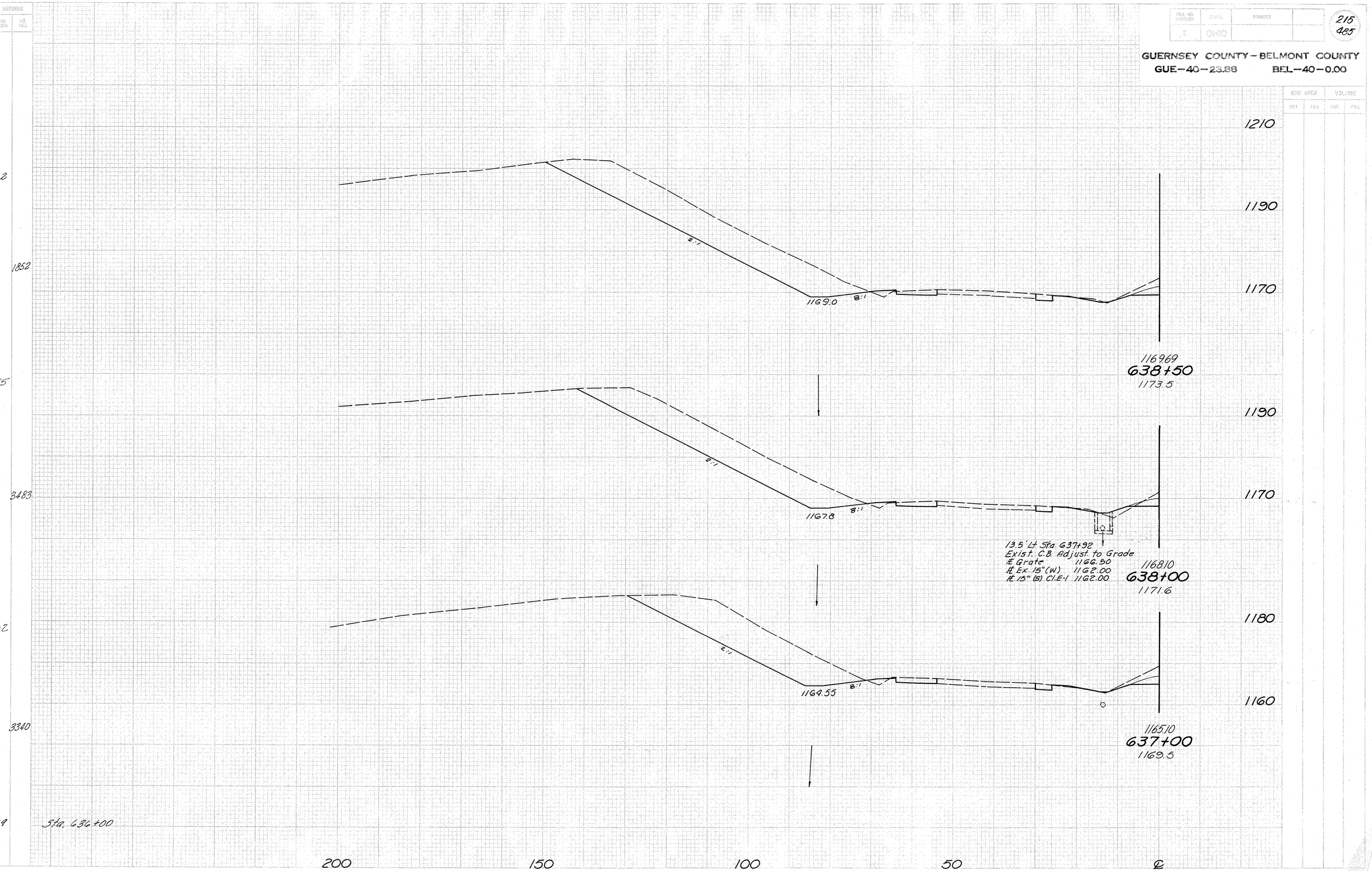


STA. 635+00 TO STA. 636+00 RIGHT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

215
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



STA. 637+00 TO STA. 638+50 LEFT

SEEDING

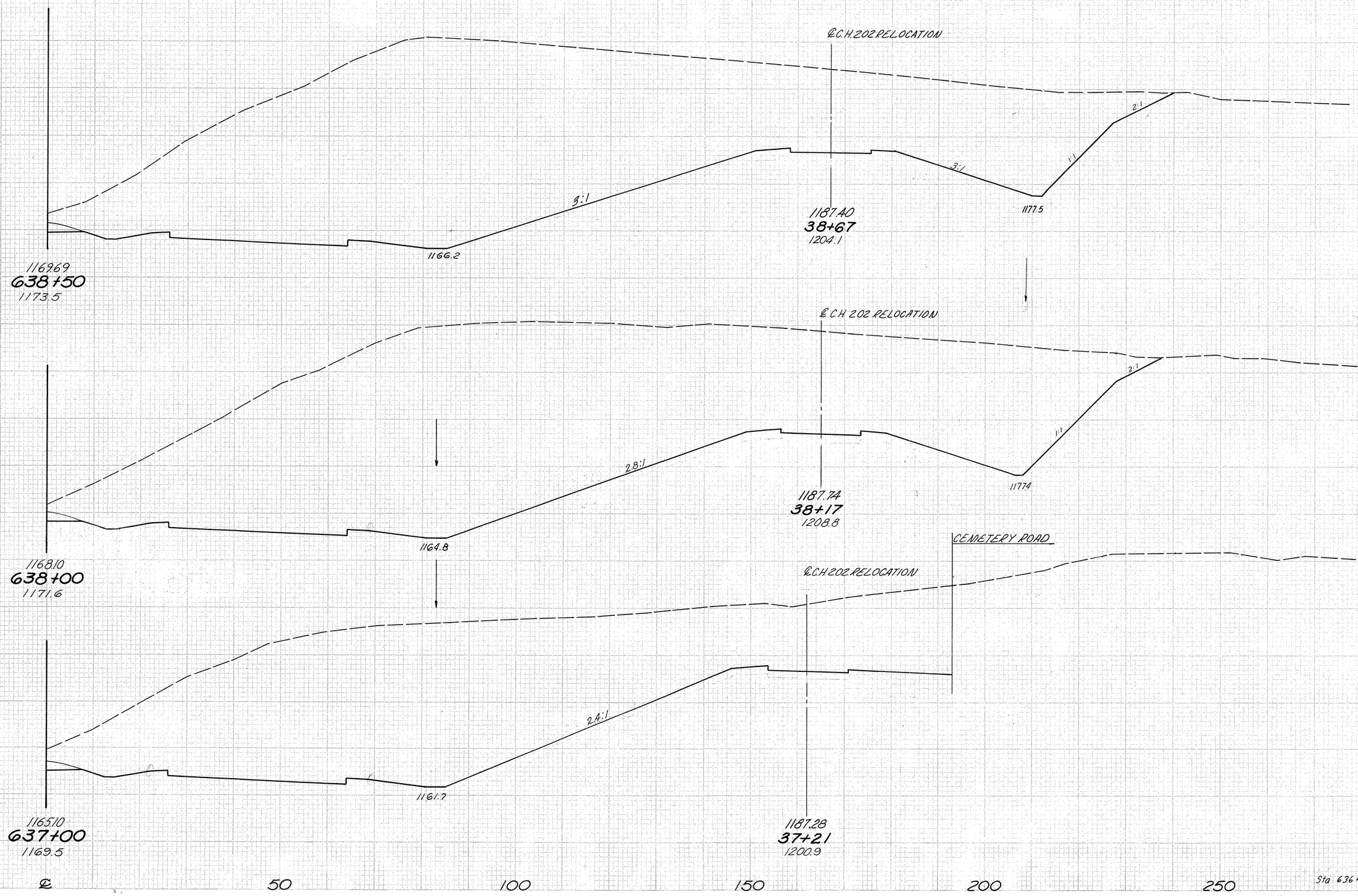
D	SQ. YDS.
10	

FED. ROAD PROJECT NO.	STATE	PROJECT	
	OHIO		

216
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL

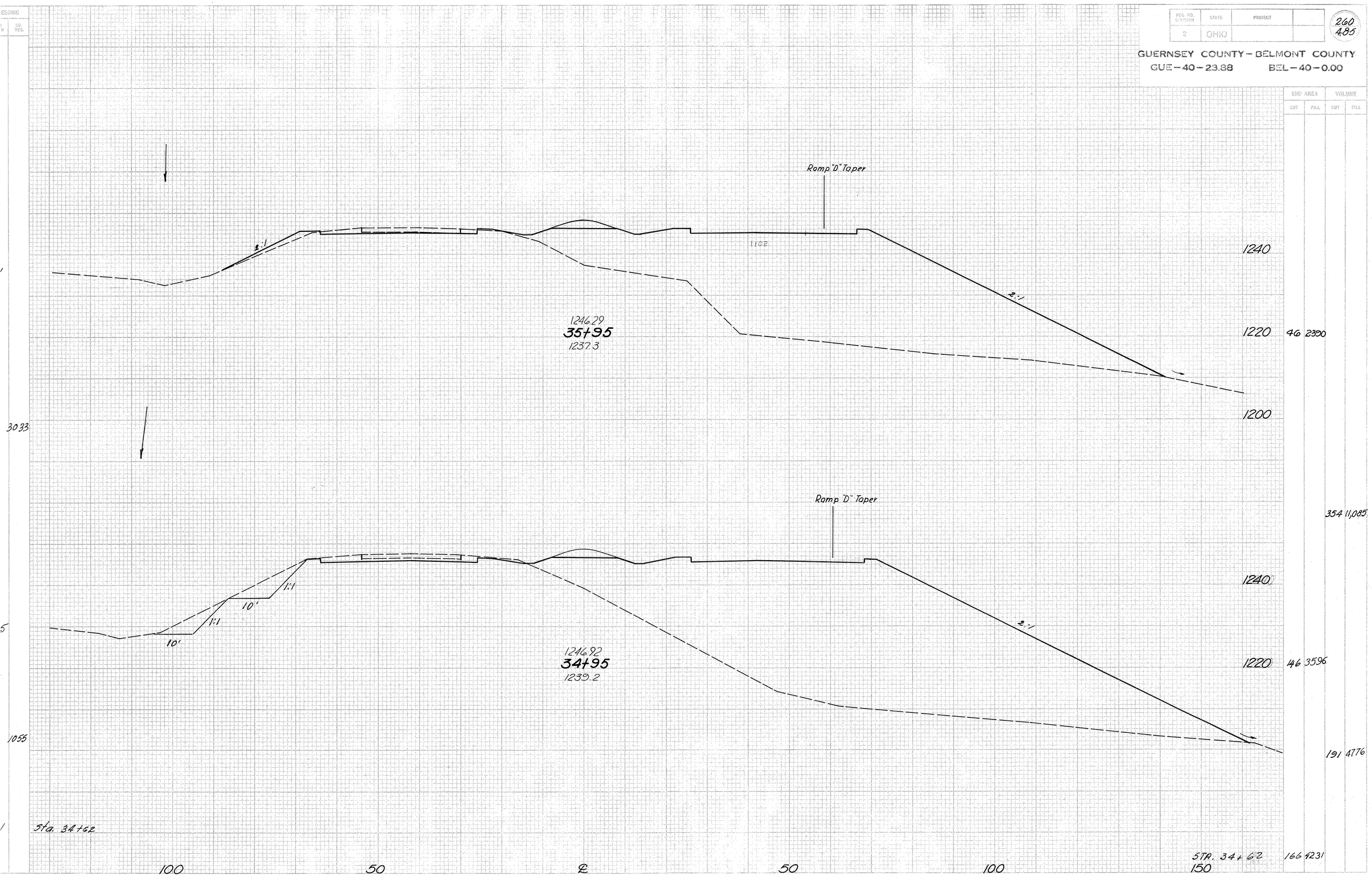


STA 637+00 TO STA 638+50 RIGHT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

260
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
46	2390		
		354	11,085
146	3596		
		191	4776
166	4231		

STA. 34+95 TO STA. 35+95

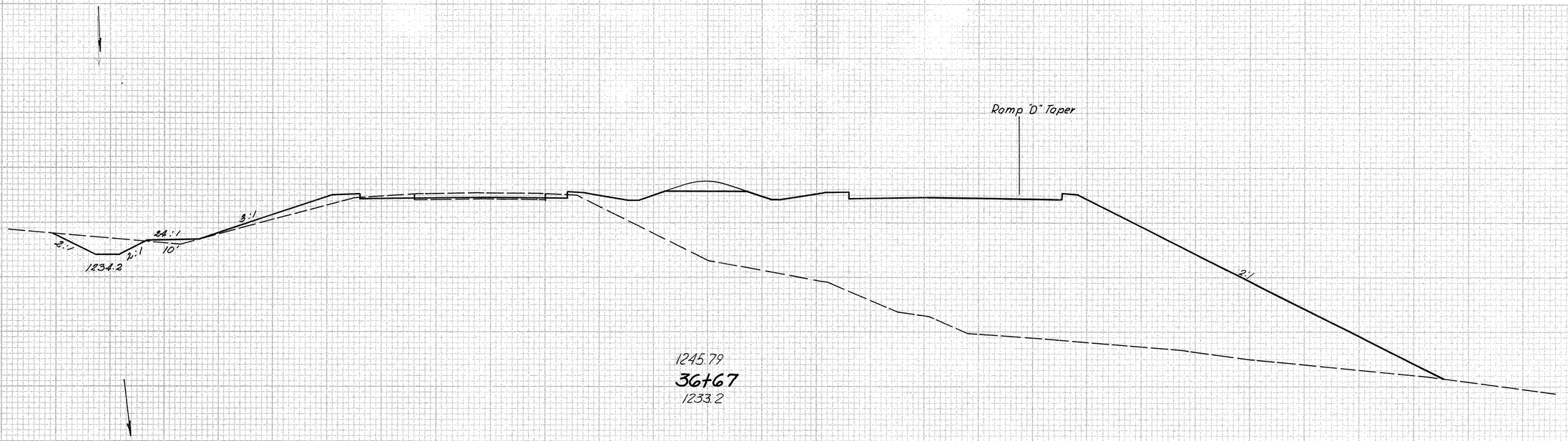
FED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

261
485

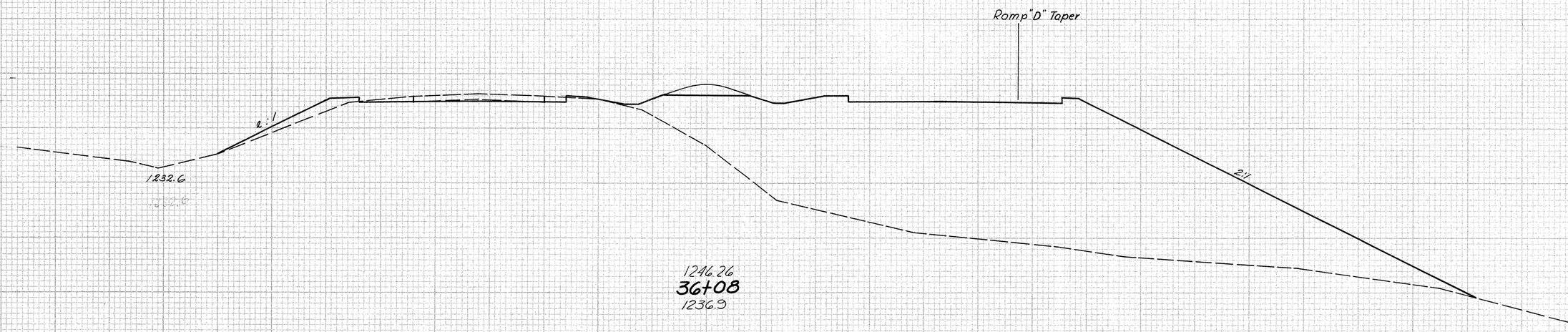
GUERNSEY COUNTY - BELMONT COUNTY

GUE-40-23.88 BEL-40-0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



61 2427



106 5439

35 2551

20 1190

46 2390

Sta. 35+95

100 50 ℄ 50 100 150

STA. 35+95

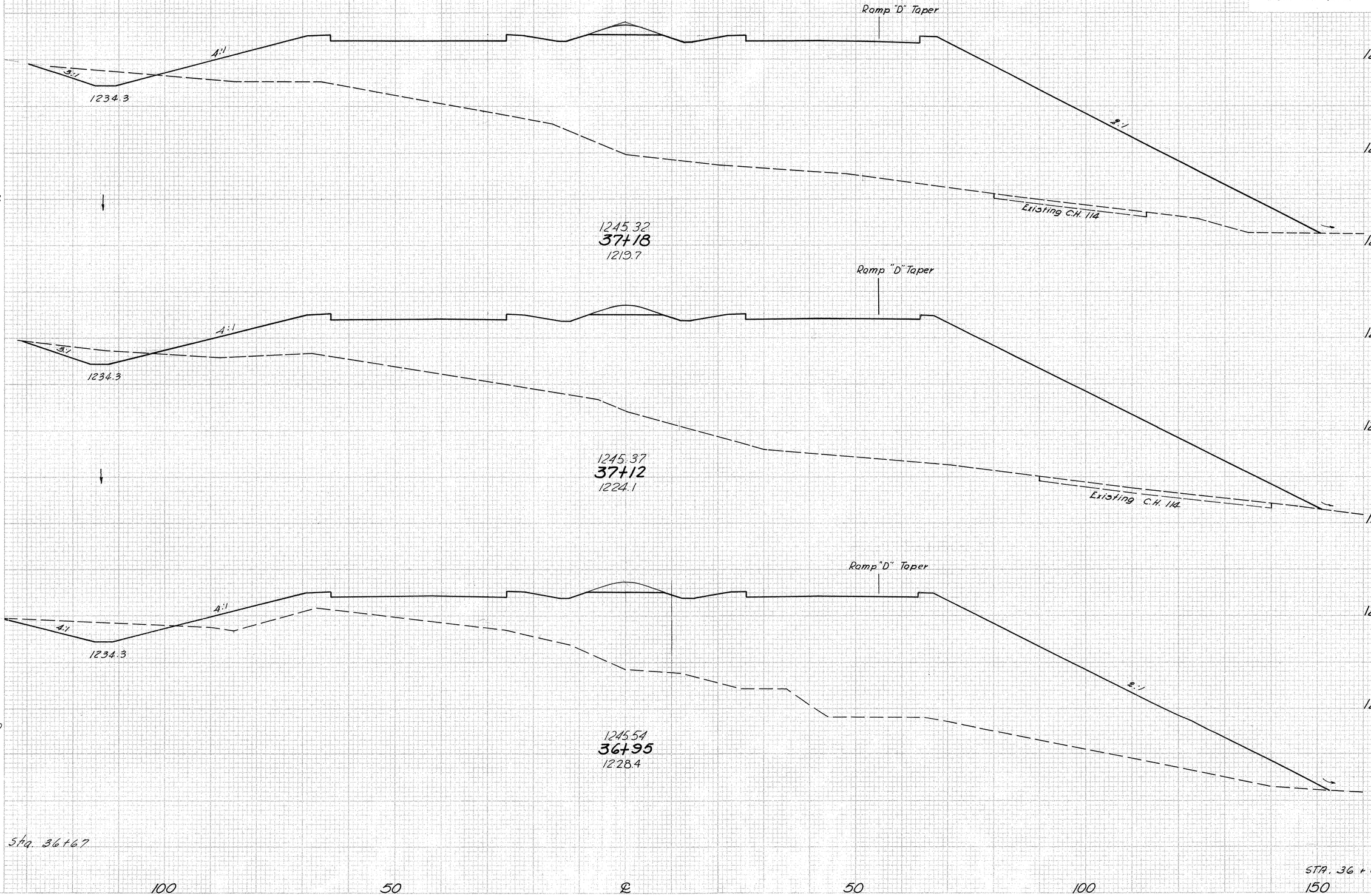
STA. 36+08 TO STA. 36+67

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

262
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE-40-23.88 BEL-40-0.00



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
		51		4522
		4		978
		46		4283
		41		2384
		86		3289
		76		2964
		61		2427

STA. 36+95 TO STA. 37+18

PRINTED IN U. S. A.
ON DIAL-TRACE CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

263
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
112	4940		
		36	1946
67	4613		
		32	2738
40	4628		
		39	3897
51	4522		

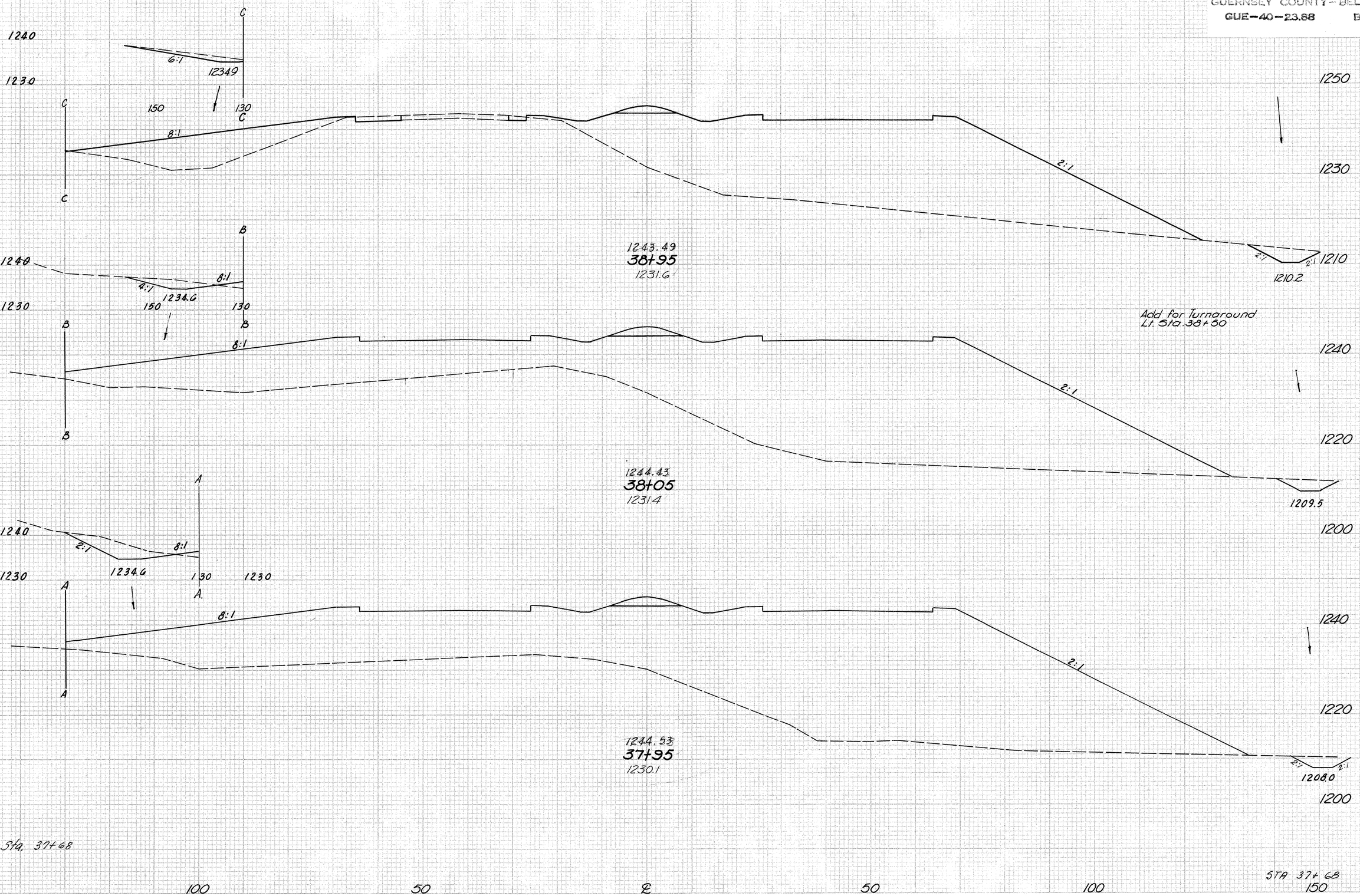
STA. 37+41 TO STA. 37+68

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

264
485

GUERNSEY COUNTY - BELMONT COUNTY

GUE-40-23.88 BEL-40-0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
53	2261		
		40	43
		160	9685
43	3550		
		32	1470
72	4390		
		92	4665
112	4940		

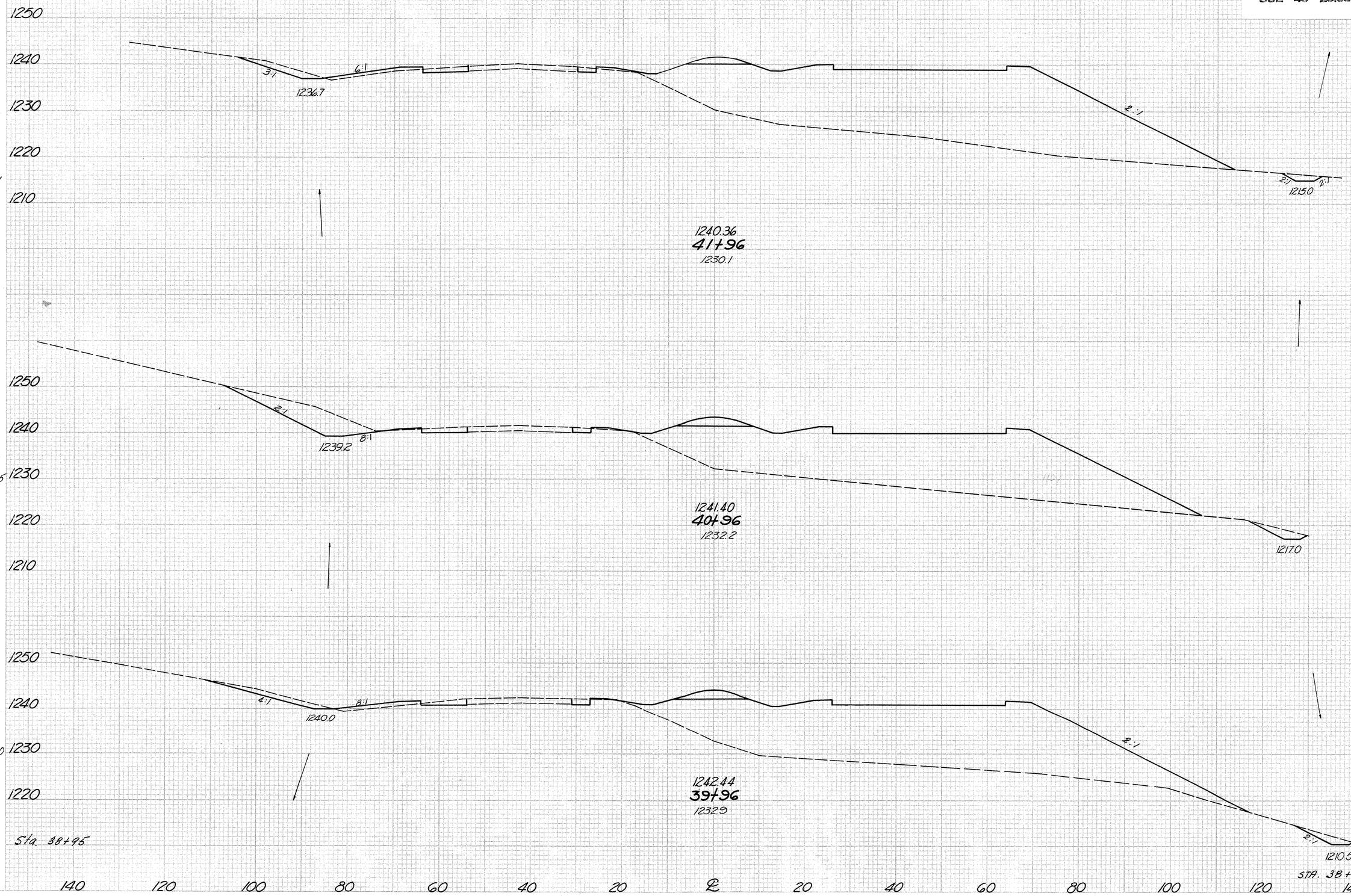
STA. 37+95 TO STA. 38+95

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

265
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00



END AREA		VOLUME	
CUT	FILL	CUT	FILL
35	1419		
		304	4682
		129	1109
		322	4498
45	1320		
		183	6099
53	2261		

STA. 39+96 TO STA. 41+96

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

266
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
166	3437		
504	13,735		
106	3980		
269	11,800		
39	2392		
137	7058		
35	1419		

Inlet 36" Exist. Culvert
Sta. 44+79.40

88'+12" Cl. E @ 0.76%

135' Lt Sta. 44+57
Std. No. 4 C.B.
E Grate 1236.81
R 12" Cl. E-1 1233.81

1238.48
44+96
1228.3

1238.65
43+96
1223.2

1239.33
42+96
1228.7

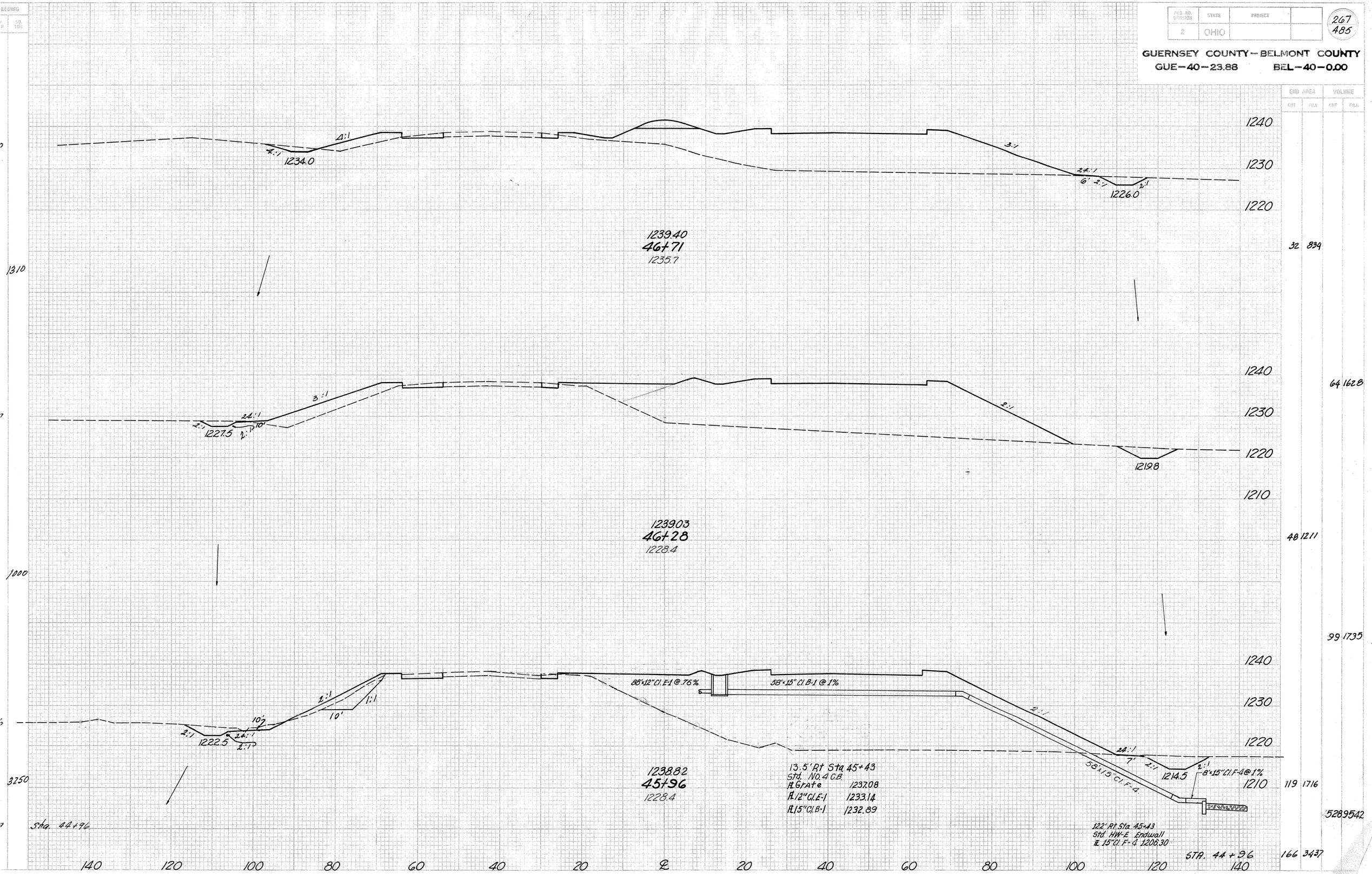
Sta. 41+96

STA. 42+96 TO STA. 44+96

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

267
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
32	834		
		64	1628
48	1211		
		99	1735
119	1716		
		5289	542
166	3437		

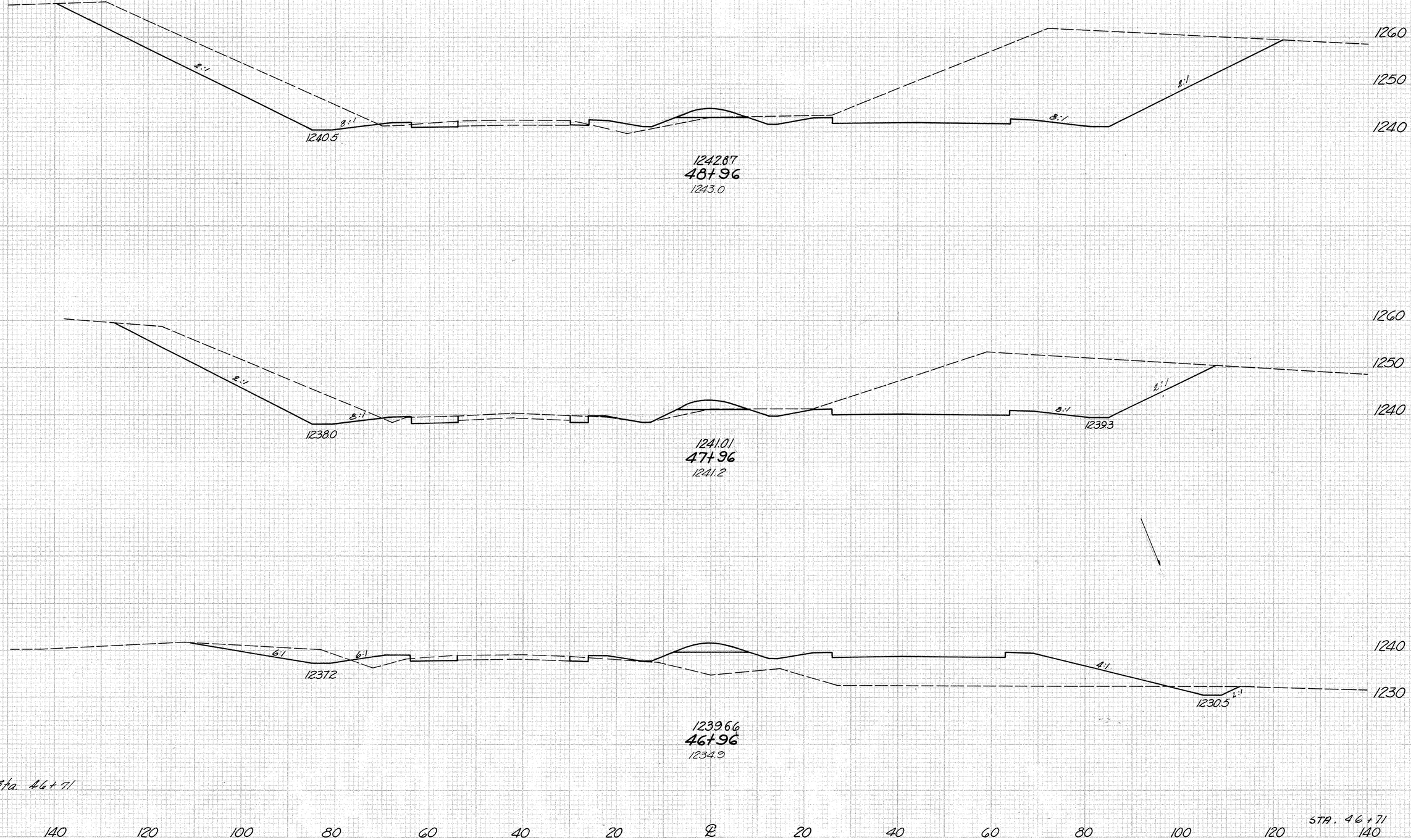
STA. 45+96 TO STA. 46+71

FED. AID PROJECT NO.	STATE	PROJECT	
2	OHIO		

268
486

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00



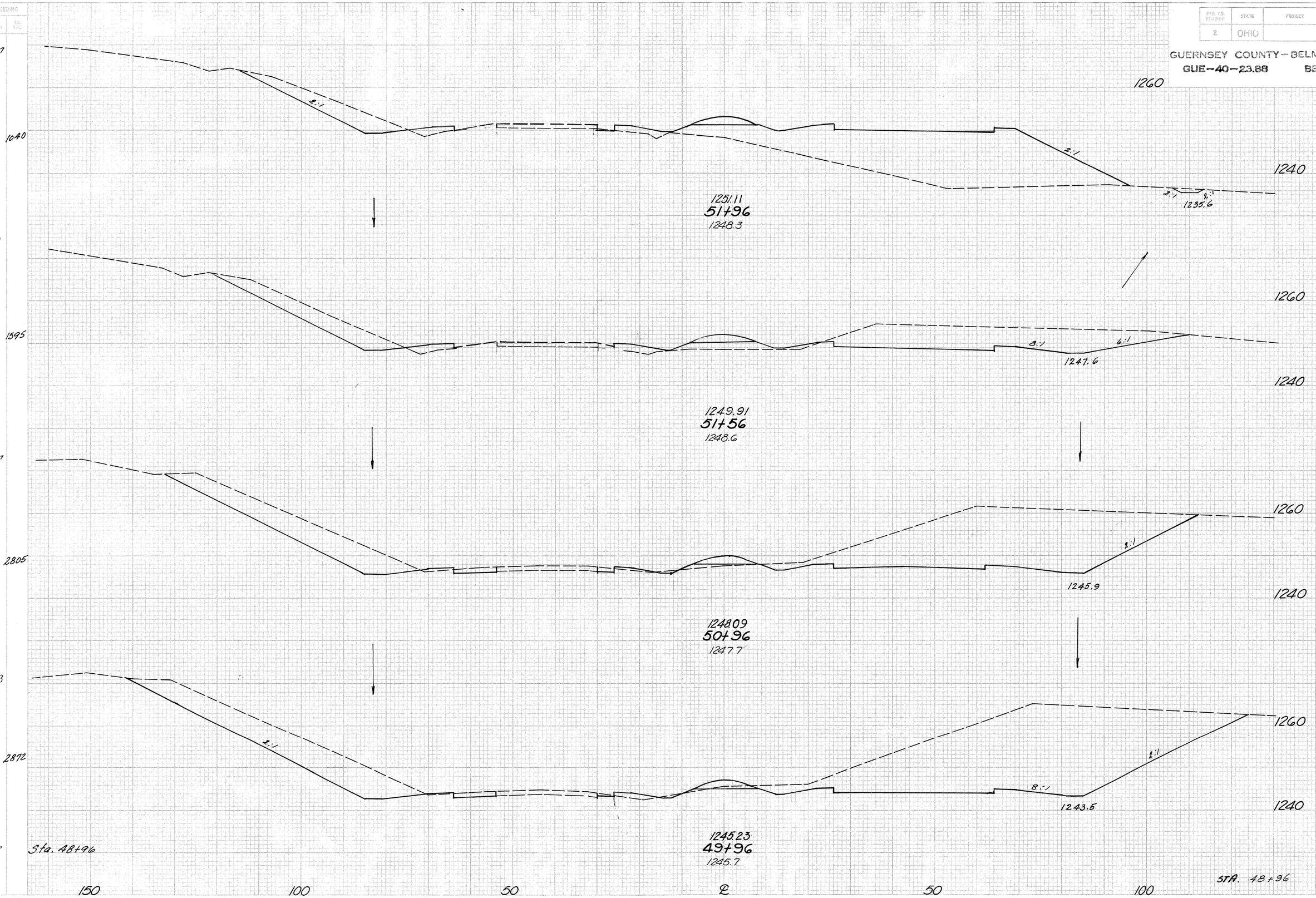
END AREA		VOLUME	
CUT	FILL	CUT	FILL
1515	10		
		4661	69
1002	27		
		1996	1080
78	556		
		51	644
32	834		

STA. 46+96 TO STA. 48+96

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

269
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
128	872		
		472	696
509	67		
		1873	88
1176	12		
		5308	44
1690	12		
		5936	41
1515	10		

STA. 49+96 TO STA. 51+96

REG. NO. DIVISION	STATE	PROJECT	
2	OHIO		

270
485

GUERNSEY COUNTY -- BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
4				
3139				
B53				
1910				
1				
2656				
7				

4:1
12525
54+20
4:1
8:1
1255.6
27"x12" CI E-1 @1%
56.5 x15" CI B-1 @1%
13.5' Lt. Sta. 54+00
Std. No. 8 C.B.
IE Grate 1255.16
IE 12" CI E-1 1252.16
1257.16
53+96
1250.7
Std. No. 8 C.B.
13.5 Rt. Sta. 54+00
IE Grate 1255.53
IE 12" CI E-1 1251.89
IE 15" CI B-1 1251.64
1:1
30'
79'x15" CI F-1
1260
1260.17
54+96
1247.6
2:1
1240
CULVERT OUTLET
A
1220
A
1210
RAVINE
1240
1203.0
170
7'x15" CI F-1@1%
1220
2:1
1:1
1209.6
1652 12,081
274 4154
618 2341
632 2578
4:1
1255.2
148' RT. Sta. 54+00
Std. HW-E Endwall
IE 15" CI F-1 1215.50
1256.24
53+66
1252.3
1240
520 2271
2:1
8:1
1251.9
1220
1210.0
1269 5859
1254.14
52+96
1249.8
1240
1220
459 2249
1087 5780
Sta. 51+96
2:1
1:1
1211.0
100
50
℄
50
100
150
STA. 51+96
128 872

STA. 52+96 TO STA. 54+96

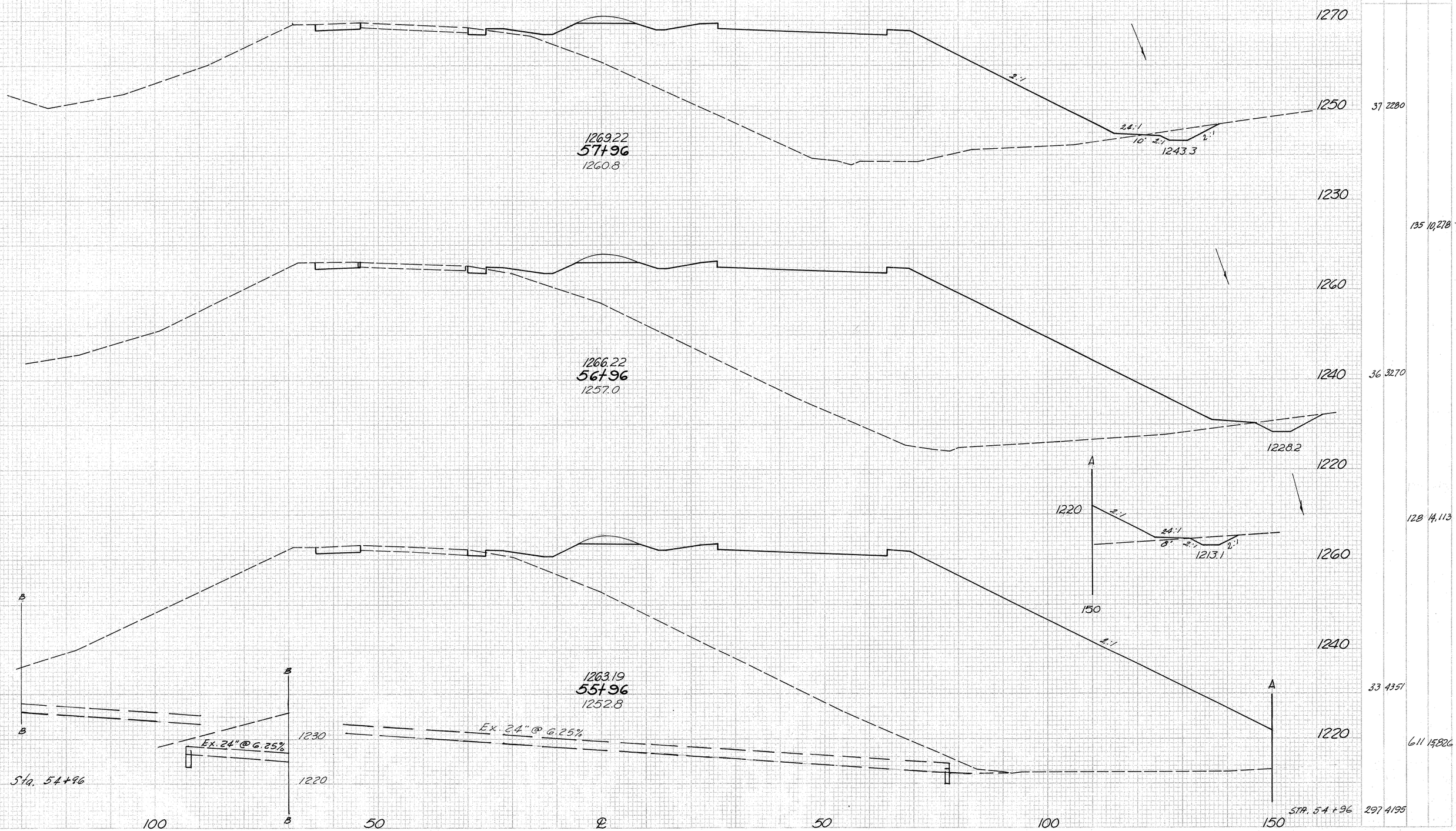
FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

271
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE-40-23.88 BEL-40-0.00

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1270				
1250	37	2280		
1230			135	10,278
1260				
1240	36	3270		
1220			128	14,113
1260				
1240	33	4351		
1220			6.11	15,826
STA. 54+96	29	7.4195		



STA. 55+96 TO STA. 57+96

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

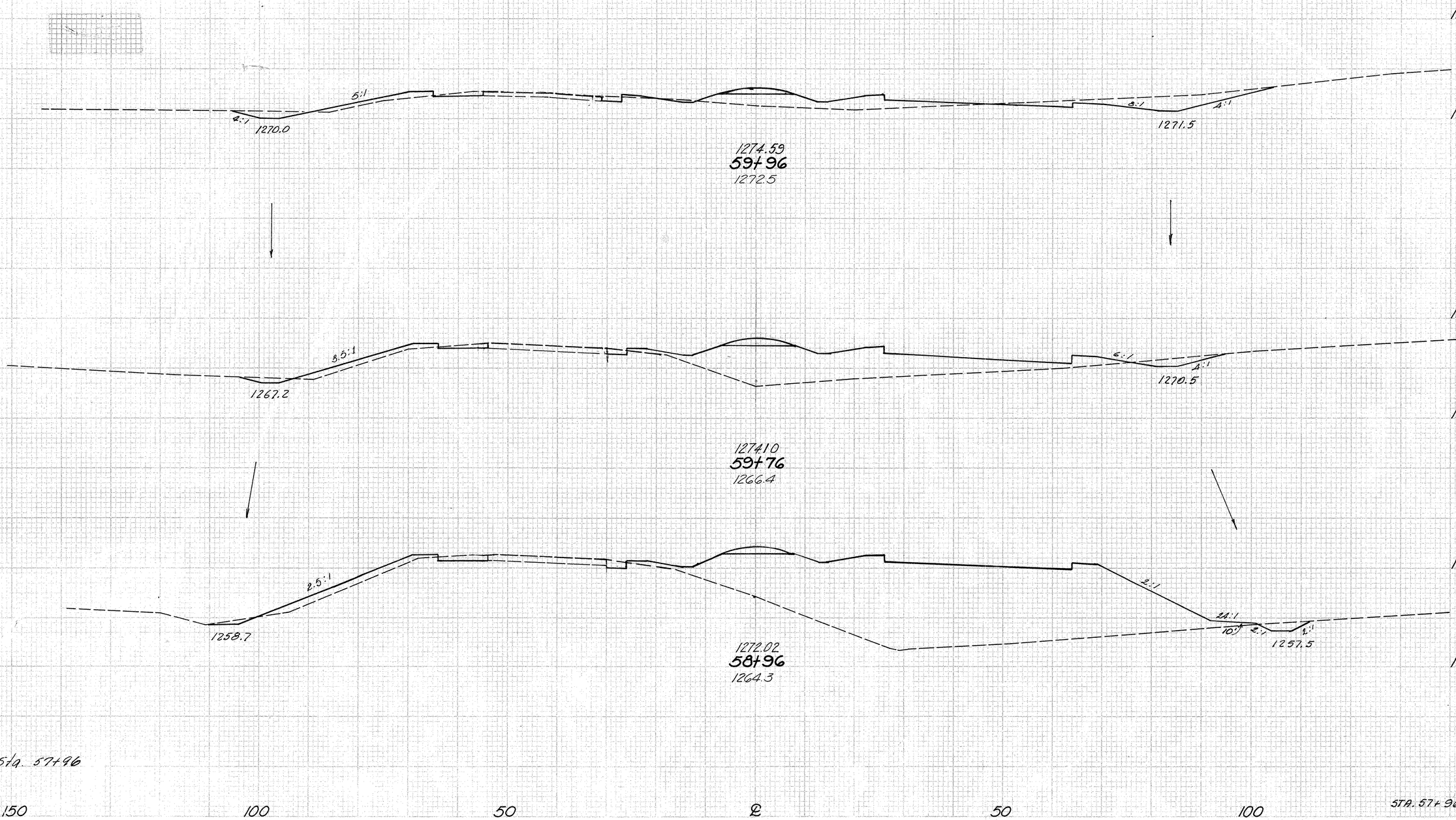
272
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00

BEGIN PROJECT BEL.-40-0.95

END WORK & END PROJECT.
STA. 60+00



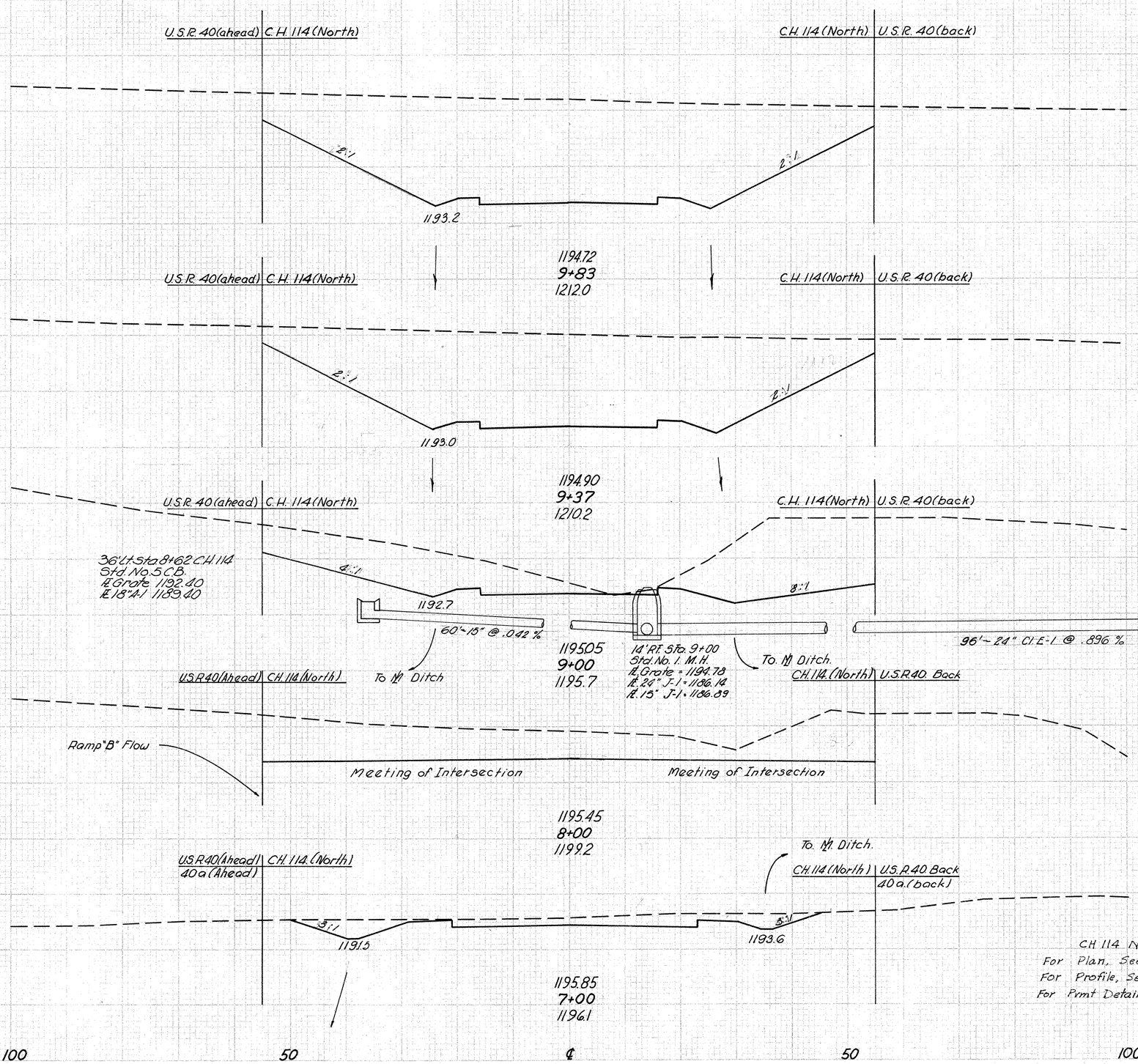
END AREA		VOLUME	
CUT	FILL	CUT	FILL
8	8		
		9	9
122	120		
		57	208
		32	442
		87	2693
		27	1353
		119	6728
		37	2280

STA. 58+96 TO STA. 59+96

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

273
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



	EXC. AREA		VOLUME	
	CUT	FILL	CUT	FILL
1210		1579		
1190				2574
1210		1442		
1190				1498
1210				
		744		
1190				
				2641
1210				
1190		682		
1210				
		1559		
1190		160		
			86	0
	STA. 6+71		0	0

CH 114 North STA. 7+00 TO STA. 9+83

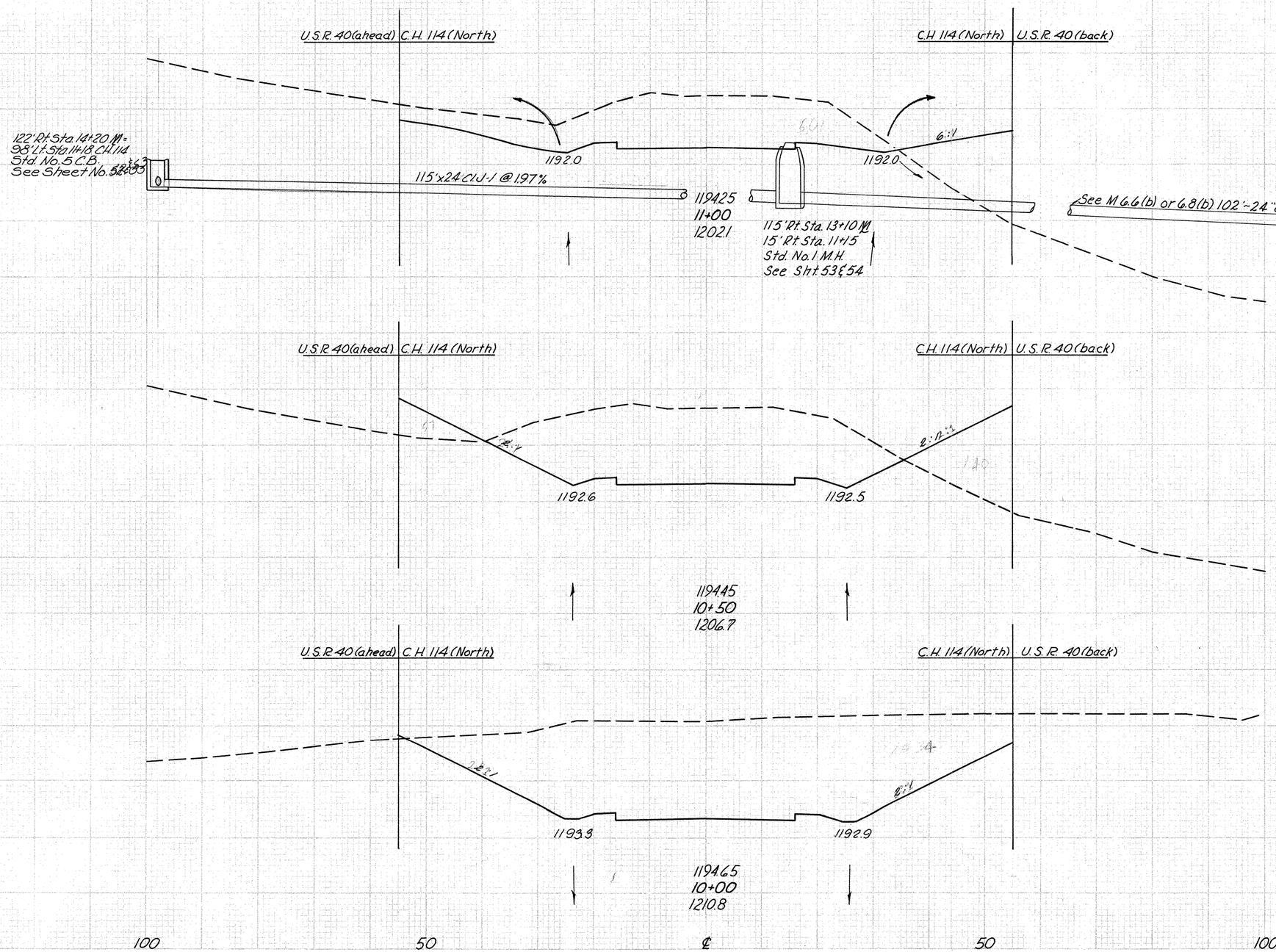
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

274
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00

END AREA		VOLUMES	
CUT	FILL	CUT	FILL

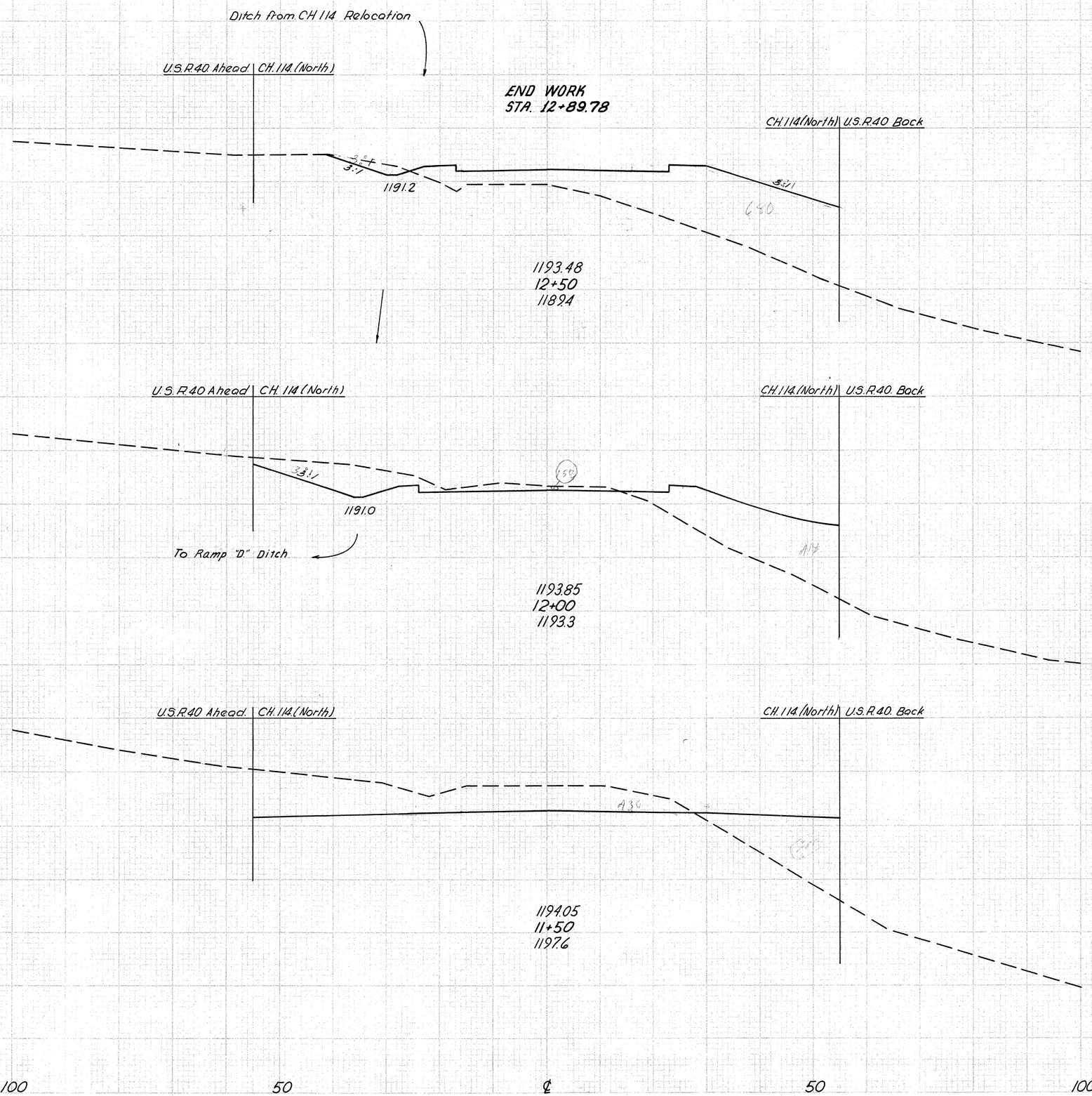


CH 114 North STA. 10+00 TO STA. 11+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

275
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
Sta. 12+55.91	10	680		
1190				2 151
1170	10	680		
1190			148	1017
1170			150	418
1200			537	665
1180			430	300
1160			918	425
STA. 11+00			561	159

CH 114 North STA. 11+50 TO STA. 12+50

SIDEROADS SUB-SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

276
485

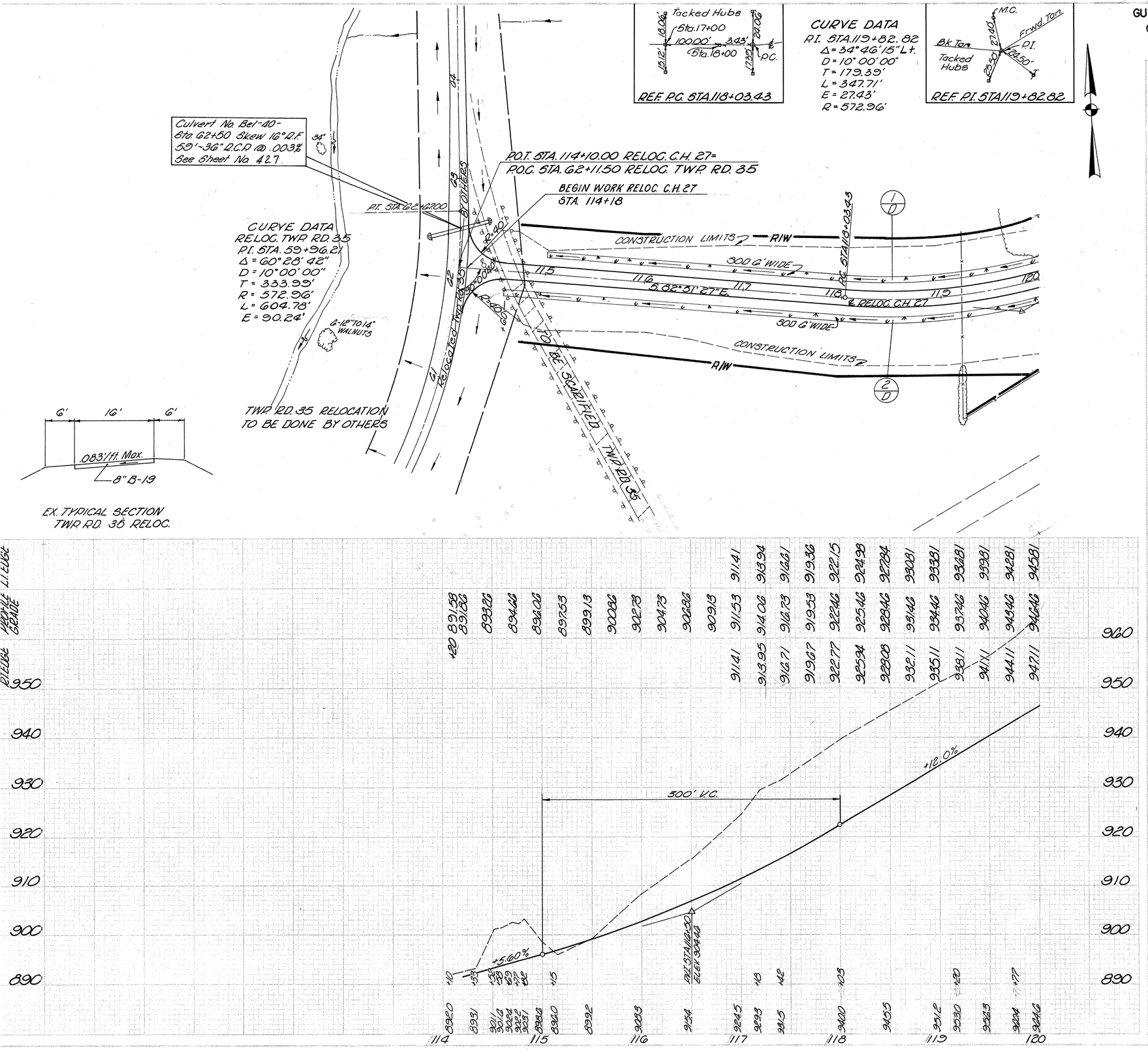
GUERNSEY COUNTY - BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00

ITEM	SHEET NUMBER																							ITEM	QUANTITIES	UNIT	DESCRIPTION
	277	278	279	280	281	282	283	284	285	286	321	337	340	341	342	343	363	364	365	366	367	368	369				
																											ROADWAY
-8								190	124			107				60							103	E-8	584 ✓	Sq. Yds.	Removal and Disposal of Existing Pavement, as per plan
-12							35																	E-12	35 ✓	Lin. Ft.	Pipe Removed, 15" and Under
-12																						2		E-12	2 ✓	Lin. Ft.	Pipe Removal Over 15"
-10	693	1000	372	633		353	367		26	4	514			4				100		178	189	229	83	L-10	4745 ✓	Sq. Yds.	Sodding
-4								2																I-4	2 ✓	Tons	Calcium Chloride, For Dust Control
																											DRAINAGE
-1														117										I-1	117 ✓	Lin. Ft.	15" Pipe, Class A-1, Sec. M-6.6 (c)
-1									158												151			I-1	309 ✓	Lin. Ft.	15" Pipe, Class A-1, Sec. M-6.4 (d)
-1										160														I-1	160 ✓	Lin. Ft.	15" Pipe, Class E-1,
-1										46														I-1	46 ✓	Lin. Ft.	15" Pipe, Class E-1, Sec. M-6.6(b) or 6.8(b)
-1										44												18		I-1	62 ✓	Lin. Ft.	18" Pipe, Class B-1
-1								40		35			76			54								I-1	205 ✓	Lin. Ft.	15" Pipe, Class F-4
-1												66												I-1	66 ✓	Lin. Ft.	12" Pipe, Class C-1
-1			100																					I-1	100 ✓	Lin. Ft.	18" Pipe, Class F-4
-1										39														I-1	39 ✓	Lin. Ft.	15" Pipe, Class B-1
-1																						174		I-1	174 ✓	Lin. Ft.	42" Pipe, Class A-1 Sec. M-6.4(d) Shop strutted as per plan
-2									0.52	0.26				0.52							6	4		I-2	11.30 ✓	Cu. Yds.	Masonry
-5										1														I-5	1 ✓	Each	15" Pipe Specials, Class F-4
-8										2												1		I-8	1 ✓	Each	Standard Number 2 Man Hole
-8																								I-8	2 ✓	Each	Standard Number 5 Catch Basin
-8										1														I-8	1 ✓	Each	Standard Number 5 Catch Basin, Modified as per Plan
-10						33			11	2				2				200	33		191	87	28	I-10	587 ✓	Cu. Yds.	Dumped Rock Channel Protection
-1																					5	43		I-10	48 ✓	Sq. Yds.	Rip Rap, 6" Reinforced Concrete Slab
																											PAVEMENT
-35											45													T-35	45 ✓	Cu. Yds.	Asphaltic Concrete Surface Course Type "A" (85-100)
-35			4					11					7			5								T-35	27 ✓	Cu. Yds.	Asphaltic Concrete Surface Course Type "C" (70-85)
-30			40					80			511		53			52								T-30	736 ✓	Gals.	Bituminous Prime Coat, Sec. M-5.1, RT-2, or RT-3
-19			57					174			300	33	53			58								B-19	675 ✓	Cu. Yds.	Aggregate Base Course
-9											260													I-9	260 ✓	Lin. Ft.	Stone Underdrain, No. 2
-35											62					6								B-35	68 ✓	Cu. Yds.	Asphaltic Concrete Leveling Course (85-100)

GUERNSEY COUNTY BELMONT COUNTY
GUE – 40–23.88 BEL.–40–0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

277
485



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	L-10 BODDING
1D	115+00 ~ 120+00	LT.	Sq. Yds. 333
2D	114+60 ~ 120+00	RT.	360

RELOCATED C.H. 27 STA.114+10.00 TO STA.120+00

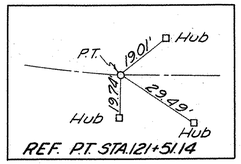
277

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

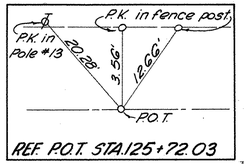
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

278
485

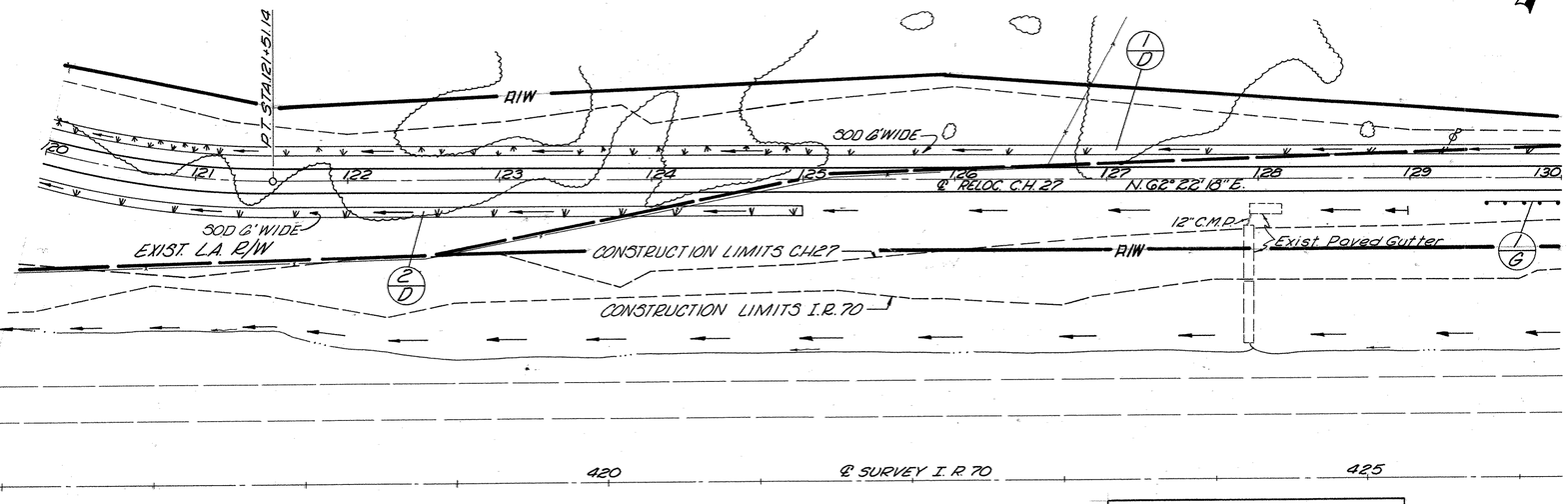
CURVE DATA
P.I. STA. 119+82.82
Δ = 34°46'15" Lt.
D = 10°00'00"
T = 179.39'
L = 347.71'
E = 27.43'
R = 572.96'



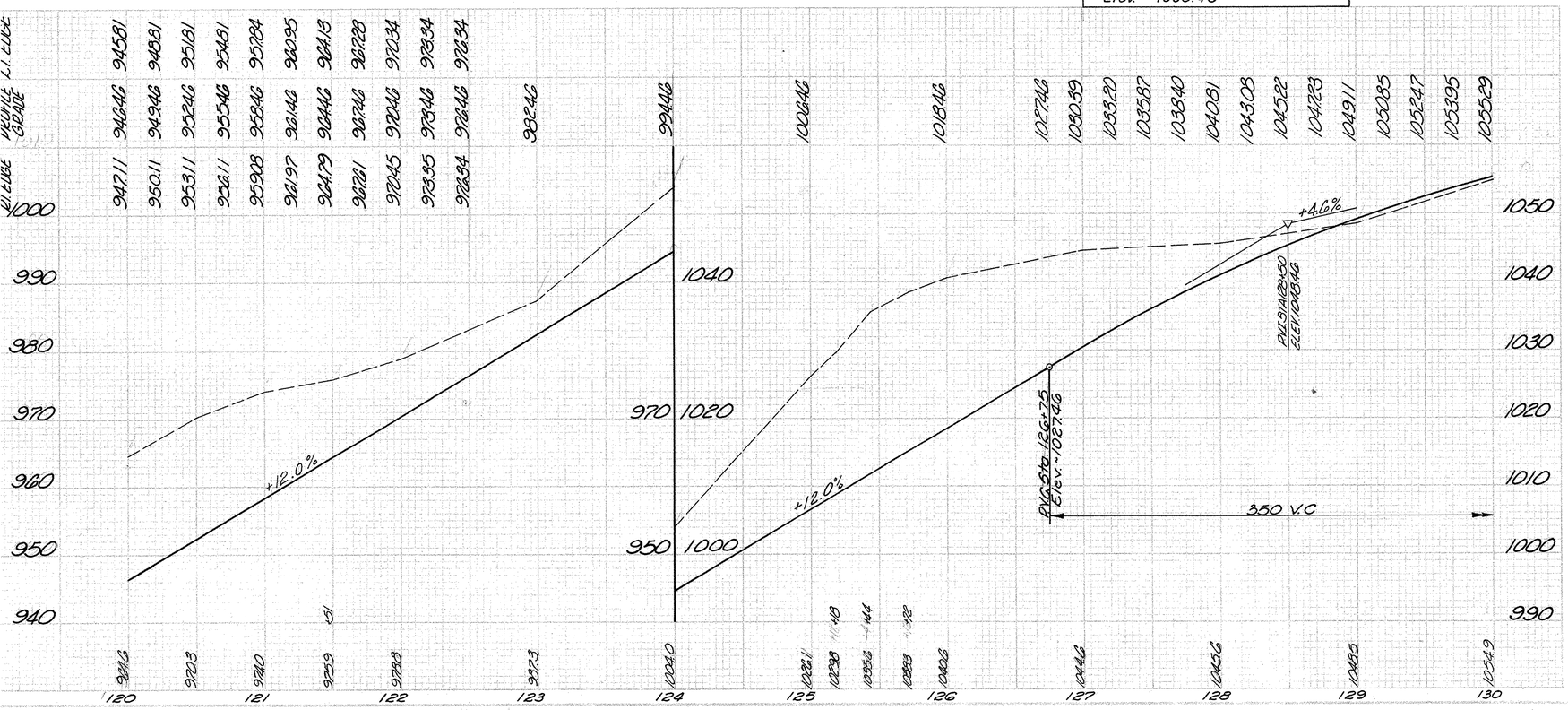
REF. P.T. STA. 121+51.14



REF. P.O.T. STA. 125+72.03



BENCH MARK #3A
Center Brick end pavt. gutter
Chisled □ 31' Lt. Sta. 424+24.
Elev. ~ 1005.48



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE
18	129+50 ~ 130+00	RT.
19	120+00 ~ 130+00	LT.
20	120+00 ~ 130+00	RT.

I-16 QUAD EAVE STRIPE L.F.	50		
I-10 CONCRETE S.Y.		427	333
	*50	1000	

TOTAL TO SHEET NO. 18

RELOCATED C.H. 27 STA. 120+00 TO STA. 130+00

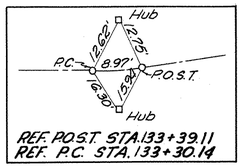
SEE SHEET NO.

2778A

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

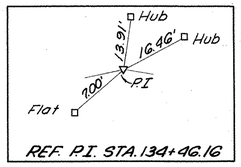
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

279
485

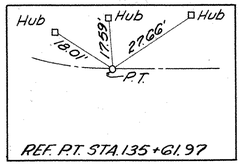


REF. P.O.S.T. STA.133+39.11
REF. P.C. STA.133+30.14

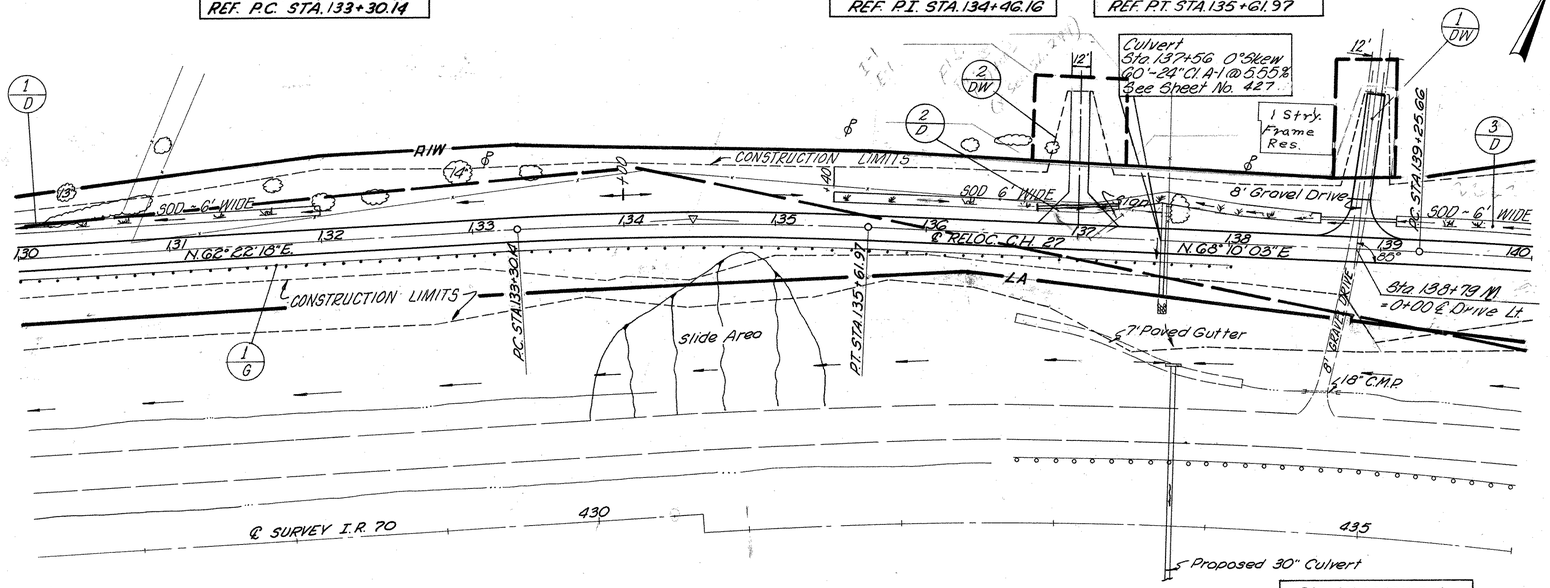
CURVE DATA
P.I. STA.134+46.16
Δ = 5°47'45" Rt.
D = 2°30'00"
T = 116.02'
L = 231.83'
E = 2.93'
R = 2291.83'



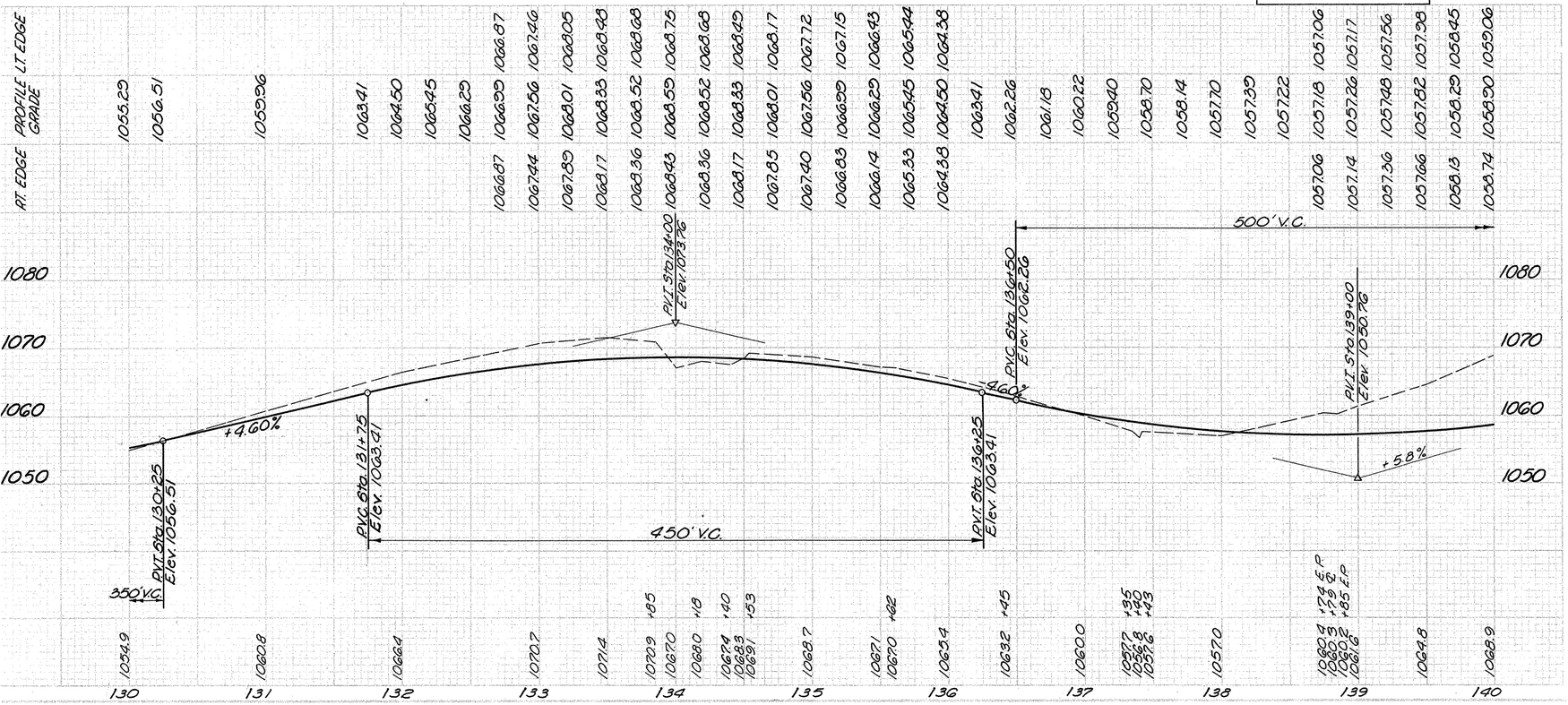
REF. P.I. STA.134+46.16



REF. P.T. STA.135+61.97



BENCH MARK # 4
R.R. Spike in T.P.
45' Lt. Sta. 435+00
Elev. 1047.50



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	B-19 AGGREGATE BASE COURSE T=5" C.Y.	B-19 AGGREGATE BASE COURSE T=8" C.Y.	T-30 BIT PRIME COAT AGAL/S.Y. GALS.	T-1 CLASS F-4 PIPE M-6.4(c) 18" L.F. 14 Gage	T-15 GUARD RAIL STD. TYPE (DEEP) L.F.	L-10 SODDING S.Y.	T-35 ASPHALTIC CONC. SURFACE COURSE TYPE "C" C.Y.
1-G	130+00 ~ 138+00	R.				800			
1-DW	138+79	L.	9	21	40	50			4
2-DW	137+00			*27		50			
1-D	130+00 ~ 132+00	L.						133	
2-D	135+40 ~ 138+60	L.						180	
3-D	139+12 ~ 140+00	L.						59	
SUB-TOTALS			9	48					
TOTAL			57		40	100	*800	372	4

* TOTAL TO SHEET No. 18

RELOCATED C.H. 27 STA.130+00 TO STA.140+00

GUERNSEY COUNTY – BELMONT COUNTY

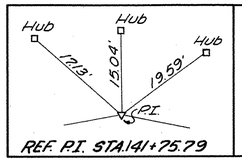
GUE – 40 – 23.88 BEL – 40 – 0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

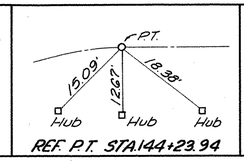
280
485

CURVE DATA

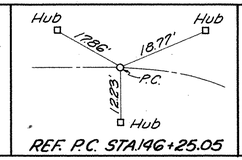
P.I. STA. 141+75.79
Δ = 12°27'25" Rt.
D = 2°30'00"
T = 250.13'
L = 498.28'
E = 13.61'
R = 2291.83'



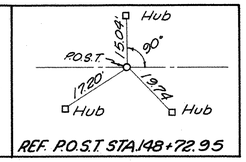
REF. P.I. STA. 141+75.79



REF. P.T. STA. 144+23.94



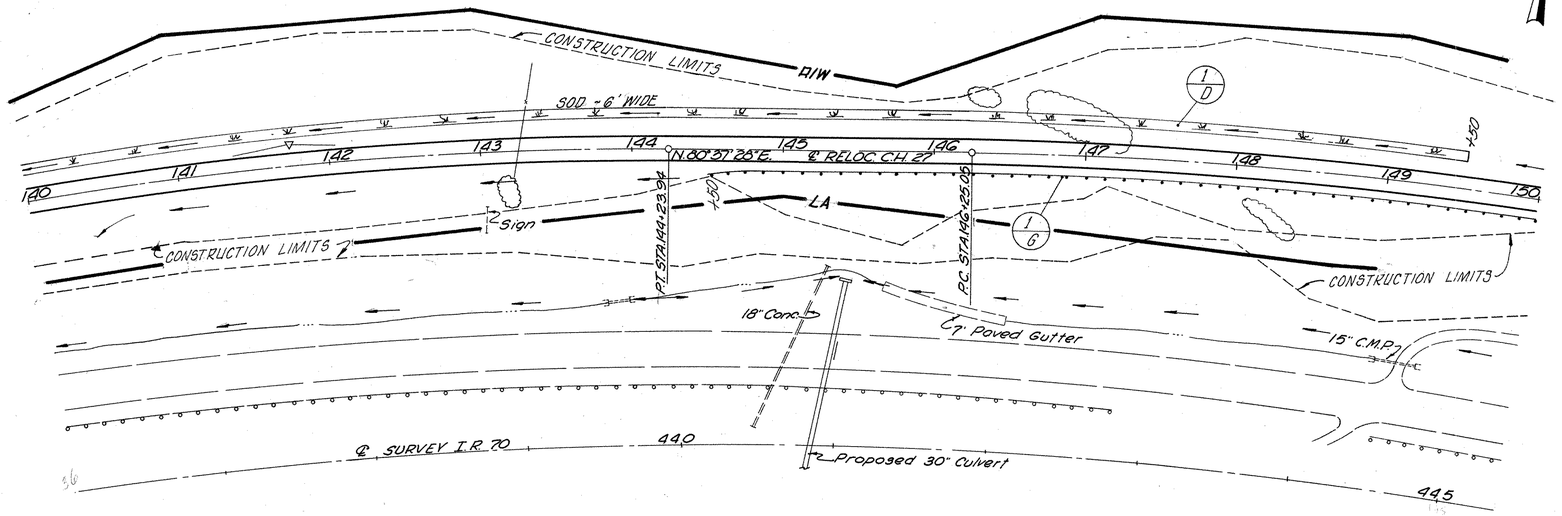
REF. P.C. STA. 146+25.05



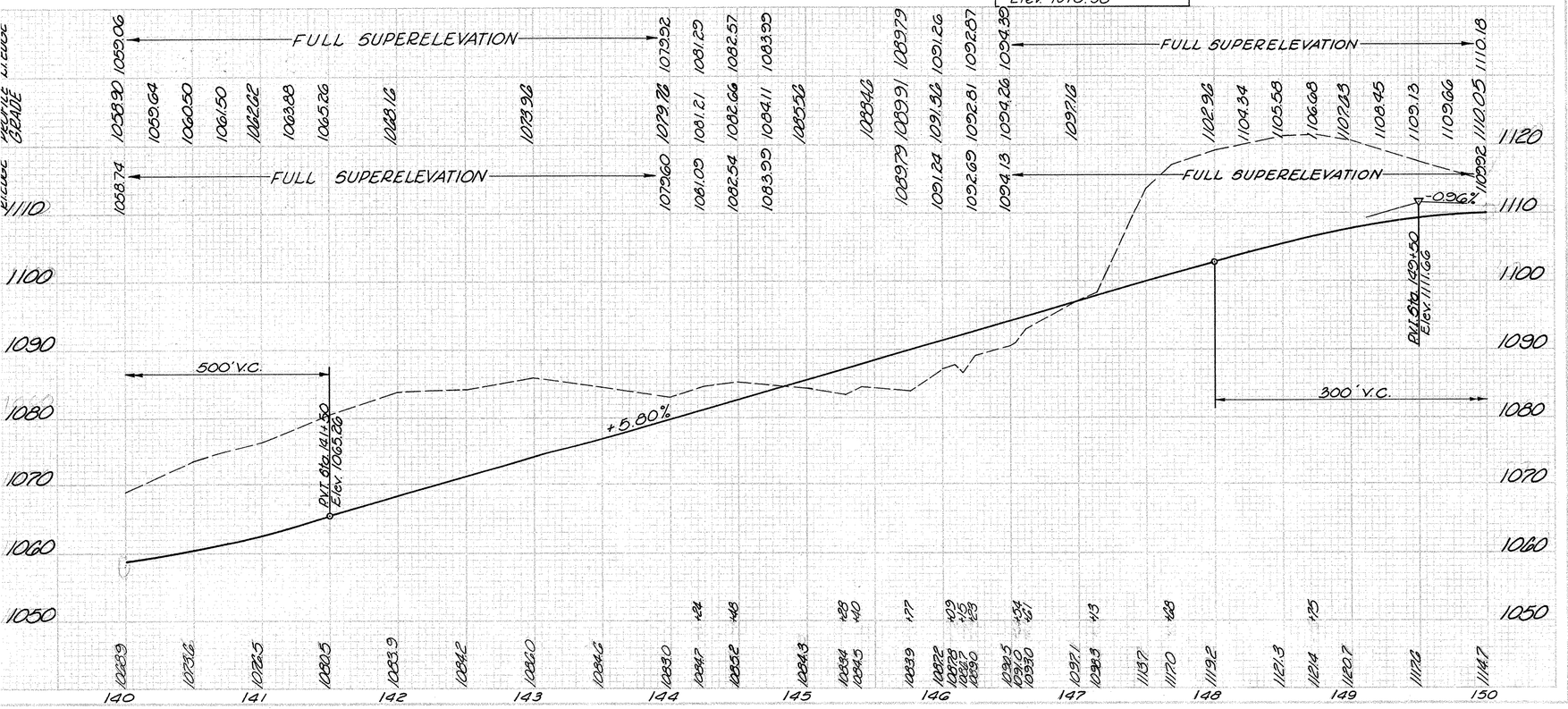
REF. P.O.S.T STA. 148+72.95

CURVE DATA

P.I. STA. 153+17.65
Δ = 27°10'56"
D = 2°00'00"
T = 692.59'
L = 1359.11'
E = 82.53'
R = 2864.79'



BENCH MARK #4A
R.R. Spike G/R Post 37.
5' Lt. Sta. 442+81
Elev. 1075.98



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-10 SODDING S.Y.	I-15 GUARD RAIL STD. TYPE (OPEN) L.F.
1-G	144+50 ~ 150+00	R.		550
1-D	140+00 ~ 149+50	L.	633	
			633	*550

*TOTAL TO SHEET 18

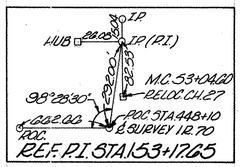
RELOCATED C.H. 27 STA. 140+00 TO STA. 150+00

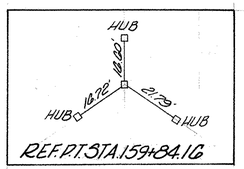
277-C

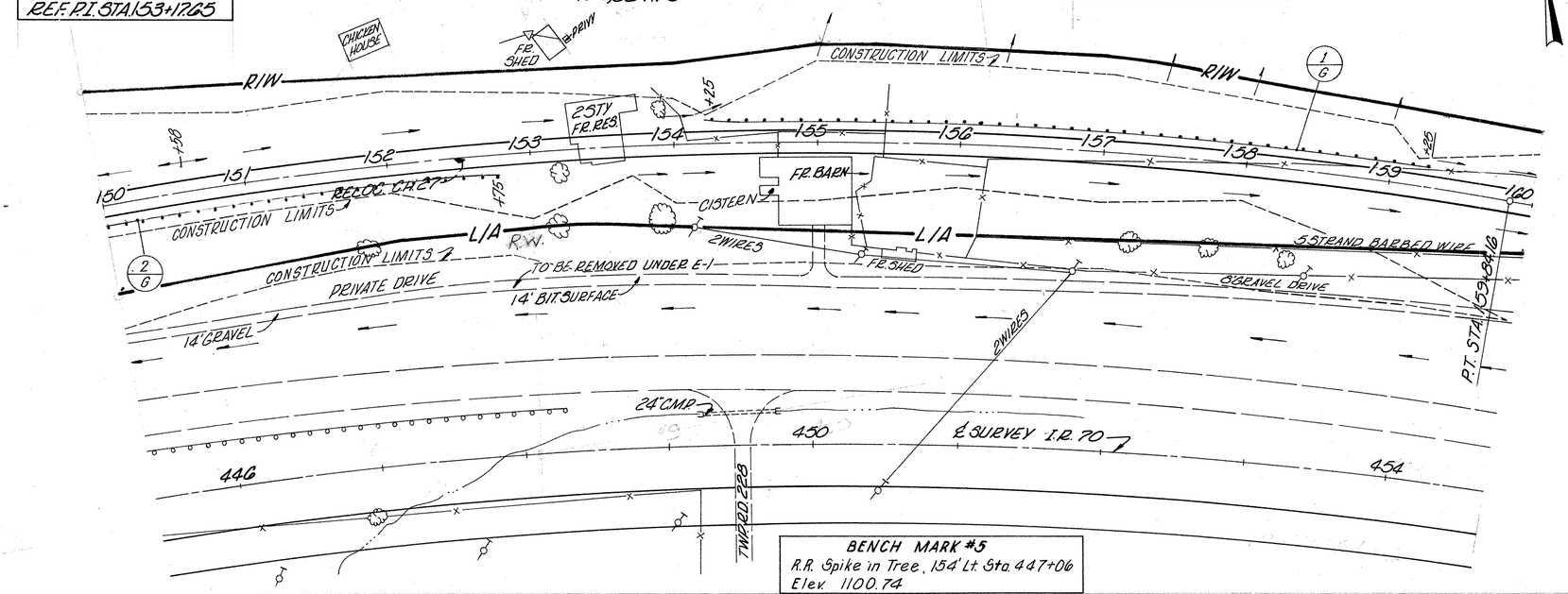
CURVE DATA

P.I. STA. 153+17.65
Δ = 27°10'56" Rt.
D = 2°00'00"
T = 692.59'
L = 1359.11'
E = 82.53'
R = 2,864.79'

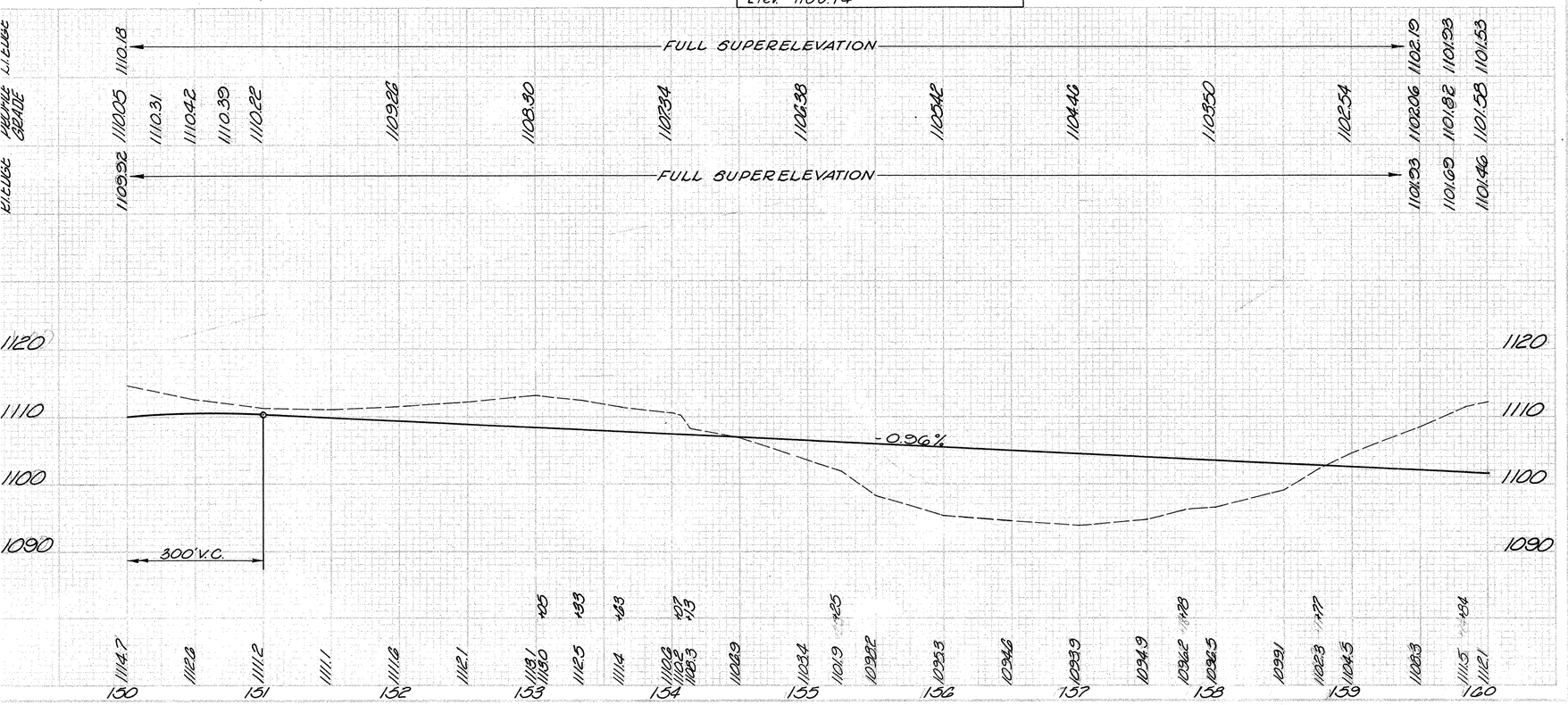
Note: Cistern 35' Rt. Sta. 154+70 to be filled under Item E-1.08 Payment for this item shall be included in the unit price bid for Item E-1.







BENCH MARK #5
R.R. Spike in Tree, 154' Lt. Sta. 447+06
Elev. 1100.74



ESTIMATED QUANTITIES

CKT. NO.	STATION TO STATION	SIDE	I-15 GUARD RAIL STD. TYPE (DEEP) L.F.
1-G	154+25 ~ 159+25	L.	500
2-G	150+00 ~ 152+75	R.	275

*775

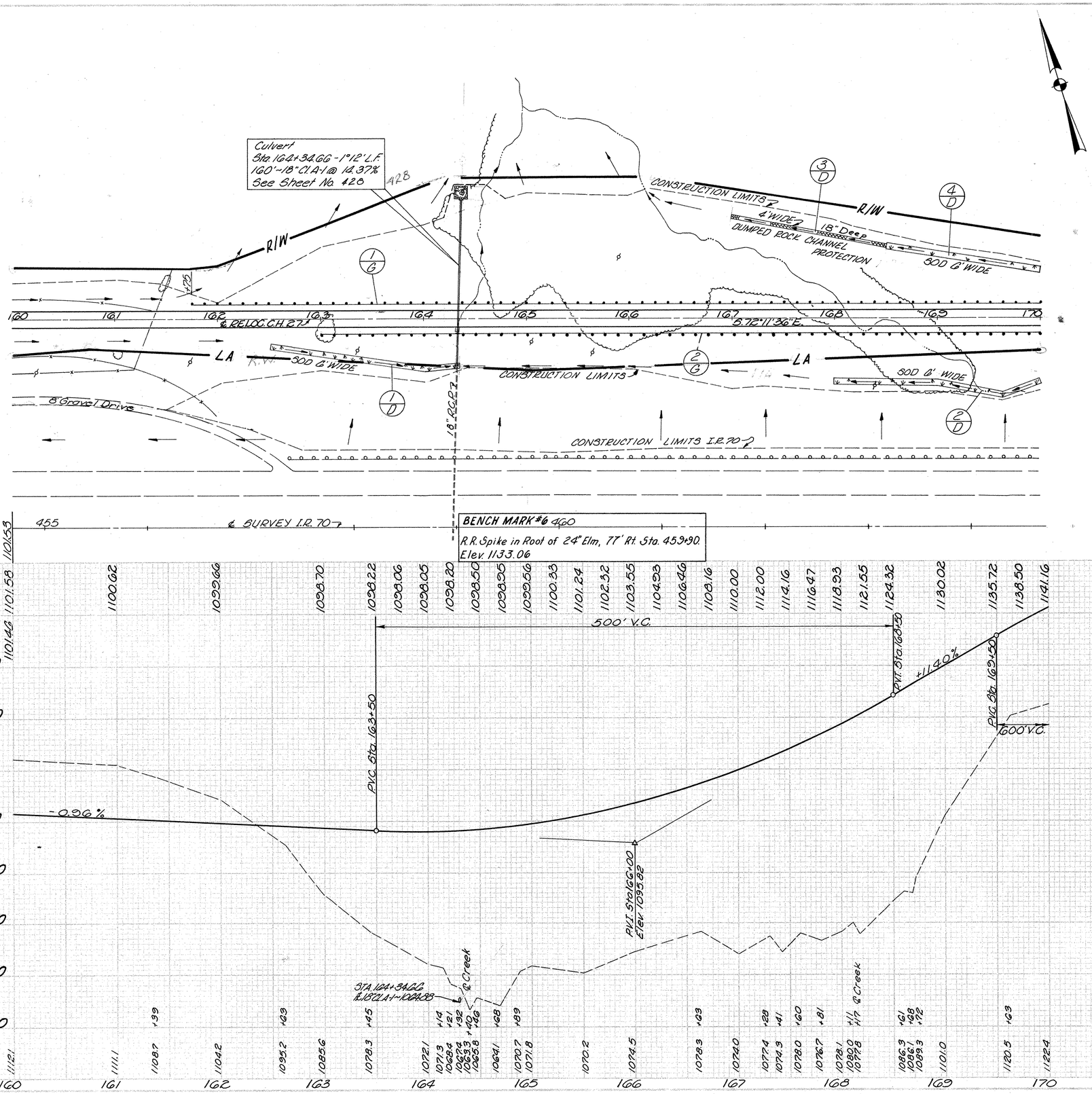
* TOTAL TO SHEET 18

RELOC. C.H. 27 STA. 150+00 TO STA. 160+00

GUERNSEY COUNTY GUE.-40-23.88 BELMONT COUNTY BEL.-40-0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

262
485



ESTIMATED QUANTITIES

REF NO	STATION TO STATION	SIDE	T-10 DUMPED ROCK CHANN. PROT. CY	T-10 EXCAVATION CY	T-15 CLASS A CRUSHED AGG. TYPE B DEPTH L.F.	T-15 CLASS A CRUSHED AGG. TYPE B DEPTH L.F.
1B	121+25 ~ 120+00	LT.			825	
2B	123+00 ~ 120+00	RT.			700	
1D	122+50 ~ 124+30	RT.		120		
2D	123+00 ~ 120+00	RT.		133		
3D	127+00 ~ 123+50	LT.	33			
4D	128+50 ~ 120+00	LT.		100		
			33	353	*825	

* TOTAL TO SHEET 18

RELOCATED C.H. 27 STA. 160+00 TO STA. 170+00

GUERNSEY COUNTY GUE.-40-23.88 | BELMONT COUNTY BEL.-40-0.00

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

283
485

Tacked Hub
Tacked Hub Tangent
41.42'
P.C.
330
423
36" Tree
REF. P.C. STA 171+79.12

CURVE DATA
P.I. STA 172+96.75
Δ = 3° 23' 22" RT.
D = 4° 00' 00"
T = 117.63'
L = 234.74'
E = 4.82'
R = 1432.39'

Tacked Hubs
Bk. Tangent
To 2
C.P.I.
Frwd. Tangent
Tacked Hub
2330
2204
REF. P.I. STA. 172+96.75

Tacked Hubs
1454
4200
33.23
P.I.
P.C.
REF. P.I. STA. 174+31.86 ℄
REF. P.C. STA. 174+60.41

CURVE DATA
P.I. STA. 176+36.18
Δ = 13° 59' 30" LT.
D = 4° 00' 00"
T = 175.77'
L = 349.79'
E = 10.74'
R = 1432.39'

Tacked Hub
2200'
Bk Tan.
Frwd. Tan.
P.I.
3925
Tacked Hub
REF. P.I. STA. 176+36.18

POC. STA. 174+00 RELOC. C.H. 27
P.C. STA. 0+00 C.H. 286 CONN.

EQUATION
P.T. STA 178+10.20 ℄ C.H. 27 BK. =
P.O.T. STA 10+33.11 ℄ C.H. 27 A.H.

FOR TWP. RD. 213
SEE SHEET NO. 284

R/W
℄ CONSTRUCTION LIMITS
300' WIDE
Twp. Rd. 213
Frame Sheds
Dirt Field Drive
Ft. Barn
CONSTRUCTION LIMITS
Fr. Shed
12" C.M.P.
S. 72° 11' 36" E
S. 62° 48' 14" E
Shed
Conc. Block Chicken House
Sheds
Dirt Dr.
2 Story Fr. Res.
Gr. Dr.
Brk. Blk. Barn & Ben Sta.
Dumps
2-1000 Gal. Tanks
Gravel
C.H. 286
L/A
CONSTRUCTION LIMITS
Hedge
Paved Gutters
12" C.M.P.
℄ SURVEY I.R. 70

BENCH MARK #6A
R.R. Spike G/R Post
20' Lt. Sta. 469+01
Elev. 1151.48

FOR C.H. 286 CONN.
SEE SHEET NO. 321

AT EDGE PROFILE LT EDGE GRADE
1141.16 1143.68 1146.07 1148.33 1150.45 1152.33 1154.19 1155.91 1157.40 1158.85 1160.45 1161.85 1162.73 1163.67 1164.98 1165.16 1165.71 1166.13 1166.41 1166.56 1166.59 1166.47 1166.23 1165.62 1165.00 1164.75 1164.05 1164.66 1164.81 1165.08 1165.34 1165.69 1165.82
1152.45 1154.31 1156.04 1157.64 1159.11 1160.45 1161.85 1162.73 1163.67 1164.98 1165.16 1165.71 1166.13 1166.41 1166.56 1166.59 1166.47 1166.23 1165.62 1165.00 1164.75 1164.05 1164.66 1164.81 1165.08 1165.49 1165.82
1152.33 1154.25 1156.17 1157.88 1159.37 1160.45 1161.85 1162.73 1163.67 1164.98 1165.42 1165.93 1166.20 1166.34 1166.34 1166.33 1166.33 1166.23 1165.62 1165.00 1164.75 1164.05 1164.66 1164.81 1164.82 1165.23 1165.56
FULL SUPER
FULL SUPERELEVATION
+1.14%
1.23%
-1.23%
EXIST. 5" at 172+50 Elev 1169.92
EXIST. 12" CMP
EXIST. STA 178+00 Elev 1163.15
P.V.T. STA. 175+50
P.V.C. 176+50
600' V.C.
300 V.C.
STATION EQUATION:
P.T. STA. 178+10.20 ℄ C.H. 27 BK. =
P.O.T. STA. 10+33.11 ℄ C.H. 27 A.H.
1160 1150 1140 1130 1120
170 171 172 173 174 175 176 177 178
1122.4 1122.9 1140.6 1149.4 1158.2 1166.0 1180.3 1181.6 1182.3 1181.3 1176.4 1175.5 1174.2 1173.6 1173.5 1174.7 1168.9 1170.0 1165.9 1164.2 1163.2 1163.0
+32 +29 +29 +23 +31 +32 +34 +30 +21 +28

ESTIMATED QUANTITIES

SEQ. NO.	STATION TO STATION	SIDE	E-152 REMOVAL OF STR. 15" DIA. & UNDER L.F.	T-15 SLOPED CUT TYPE DEEP L.F.	L-10 GUARDRAIL 6'Y. 200 12'7
10	170+00 ~ 173+00	LT.		150	
20	170+00 ~ 172+50	RT.		50	
13	170+00 ~ 171+50	RT.			
23	170+00 ~ 170+30	LT.			
12	174+35	LT.	35		
			35	200	367

* TOTAL TO SHEET 18

RELOCATED C.H. 27 STA. 170+00 TO STA. 178+10.20

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL. – 40 – 0.00

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

284
485

END WORK 3+00

* Denotes same type pavt. construction as in typical section.

For Typical of Twp Rd. 213 See Sheet No. 8

For Typical Section See Sheet No. 5

For C.H. 27 Typical Section See Sheet No. 8

FOR TYPICAL OF DRIVES, SEE SHEET No. 437

Construction Limits

16' Width

Shed

2 DW

Str. Fr. Shed

STA. 1+73 (219) = STA. 0+00 DR.

STA. 0+65 END WORK

Twp. Rd. 213

16' Gravel

Ditch

TWP. R. 0+85 = ℄ Field Dr.

1 D.W.

1 P

Begin Typical

Aggregate Surface

16'±

Exist. Typical T.W.P. Rd. 213

1 6

BEGIN WORK STA. 0+085

FOR X-SECTION OF TWP. RD. 213 SEE SHEET NO. 319

CURVE DATA

P.I. Sta. 17+21.79
Δ_c = 17° 20' 00" Lt.
D_c = 7° 00' 00"
T_c = 124.76'
L_c = 247.62'
R_c = 818.50'
E_c = 9.45'

FOR PROFILE OF DR. RT. STA. 1+73 TWP. 213 SEE SHEET No. 320

P.K. in Telephone Pole 57.90

℄ C.H. 27

49.36' N

12.0' Lt.

P.K. 16+79 P.K.

REF. P.C. STA. 15+96.79

℄ C.H. 27

42.50' 34.30' 41.34'

P.K. in 6" Ash P.K. in 4" Twin Elms P.K. in 4" Elm

REF. P.I. STA. 17+21.55

Tack Hub Tack Hub Tack Hub

29' 28' 28'

℄ C.H. 27

REF. P.T. STA. 18+44.41

5 Strand Barbed Wire

Shed

P.C. Sta. 15+96.79

P.T. Sta 18+44.41

R/W

Construction Limits

20 19 18 17 16 15

Asphalt Surface

S 76° 47' 44" E

℄ C.H. 27 Relocation

10+50 C.H. 27 = 0+00 TWP. RD. 213

N 85° 52' 16" E

Guernsey County Road 286

To Be Abandoned

42' ± U.S.R.

12' C.M.P.

Conc. Approach

Stop

House Trlr.

Sheds

Shed

Pole w. Trans.

2 wire Xing

CONSTR. LIMITS

202' x 15'

Construction Limits

B.M. #7 Cumberland 183 Mile Marker

℄ Survey I.R. 70

Slide Area

Note: For U.S. 40 Sta. 472+50 to Sta. 483+10 See Sheets No. 30 & 31

BENCH MARK #7A
R.R. Spike in P.P. #2047/38
15' Rt. Sta. 479+29
Elev. 1168.35

2 wires

P.T. STA. 78+10.20 ℄ C.H. 27 BK. =
P.O.T. STA. 10+33.11 ℄ C.H. 27 AH.

STATION EQUATION:

EXIST. 12' C.M.P.

300' V.C.

P.V.T. Sta. 11+72.29 Elev. 1170.66

+50%

600' V.C.

P.V.I. Sta. 18+25 Elev. 1203.25

P.V.I. Sta. 0+40 Elev. 1165.45

P.V.C. Sta. 15+25

-15.04%

-1.44%

-2.72%

50' V.C.

P.V.T. 2+75 ELEV. 1138.2

50' V.C.

150' = 213 = ℄ TWP. RD. = ℄ C.H. 27

Profile Twp. Rd. 213

0+00 = 10+50

| | | |

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL.–40–0.00

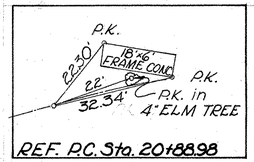
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

285
485

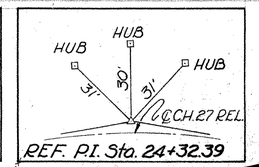
CURVE DATA

P.I. Sta. 24+32.39

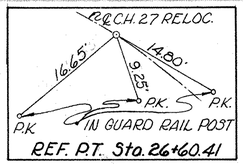
Δ = 80° 00' 00" RT.
D = 14° 00' 00"
R = 409.26'
T = 343.41'
L = 571.43'
E = 124.99'



REF. P.C. Sta. 20+88.98



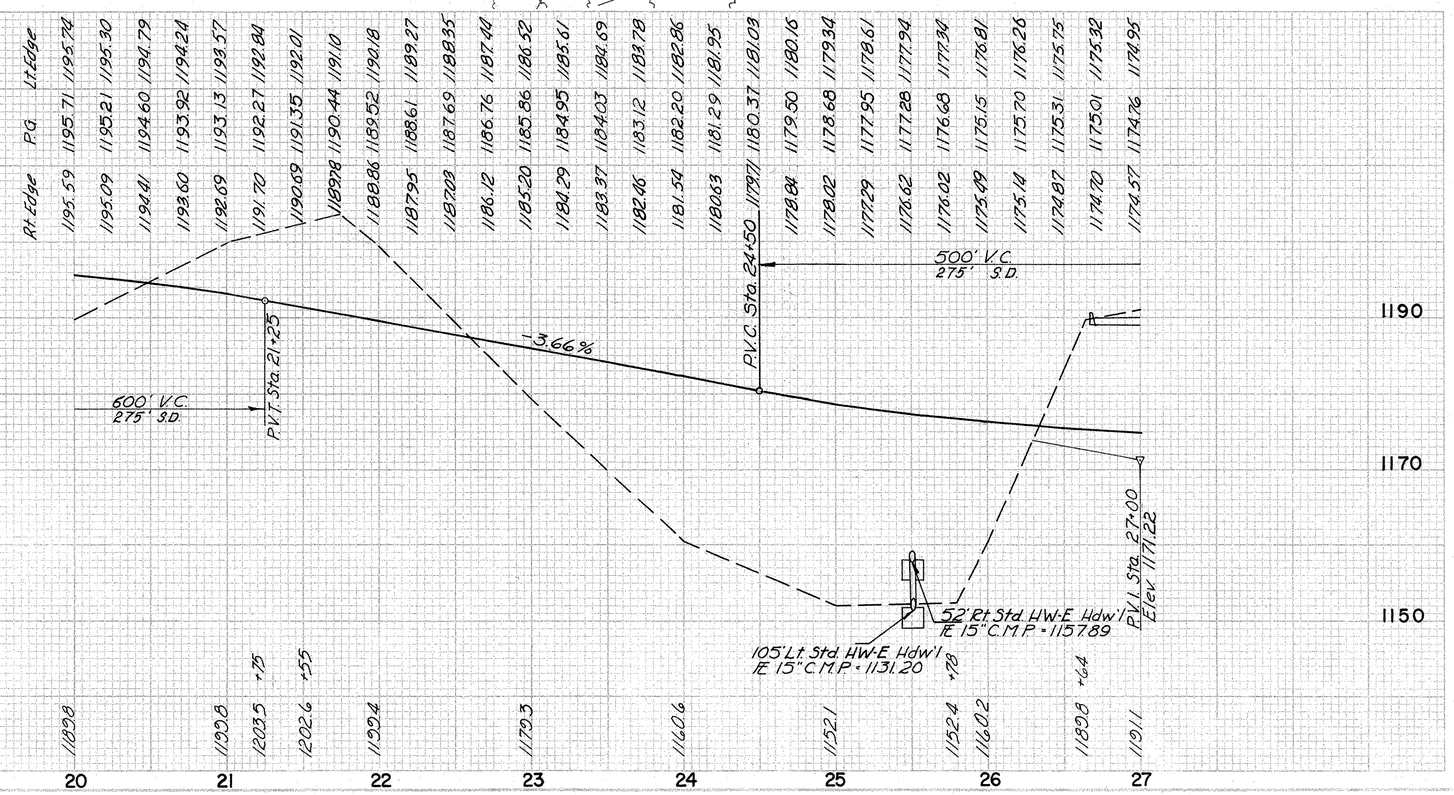
REF. P.I. Sta. 24+32.39



REF. P.T. Sta. 26+60.41

Note: For U.S. 40 Sta. 483+10 to Sta. 490+30 See Sheets No. 31 & 32.

For Bridge Site Plans See Sheet No. 441.



C.H. 27 STA. 20+00 TO STA. 27+00

ESTIMATED QUANTITIES

AGR. NO.	STATION TO STATION	SIDE	E-8 Removal & Disposal of Asph. Pav't. S.Y.	I-10 Sodding S.Y.	I-15 Guard Rail Steel Beam Type (Deep) L.F.	I-10 Dumped Rock Ch. Prot. C.Y.	I-2 Masonry C.Y.	I-1 Cl. A-1 Sec. M.4.1 15" L.F.
1G	20+00 to 20+50	Rt.			50			
2G	23+50 to 26+85	Lt.			275			
3G	23+50 to 26+00	Rt.			250			
1D	25+50	Lt.		4		11	0.52	158
2D	22+50 to 23+00	Lt.		22				
1R	20+00 ~ 22+00	Rt.	124					
			124	26	*575	11	0.52	158

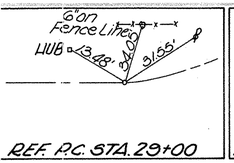
*TOTAL TO SHEET 18

GUERNSEY COUNTY — BELMONT COUNTY

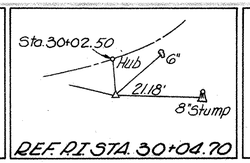
GUE.-40-23.88 BEL.-40-0.00

FED. RD DIVISION	STATE	PROJECT	
2	OHIO		

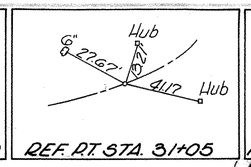
286
485



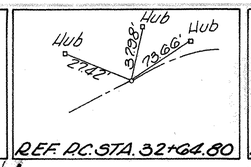
REF. P.C. STA. 29+00



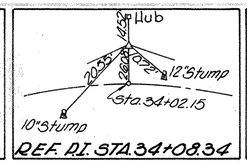
REF. P.I. STA. 30+04.70



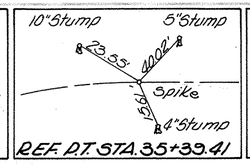
REF. P.T. STA. 31+05



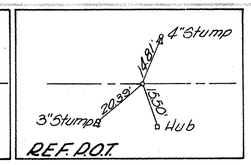
REF. P.C. STA. 32+64.80



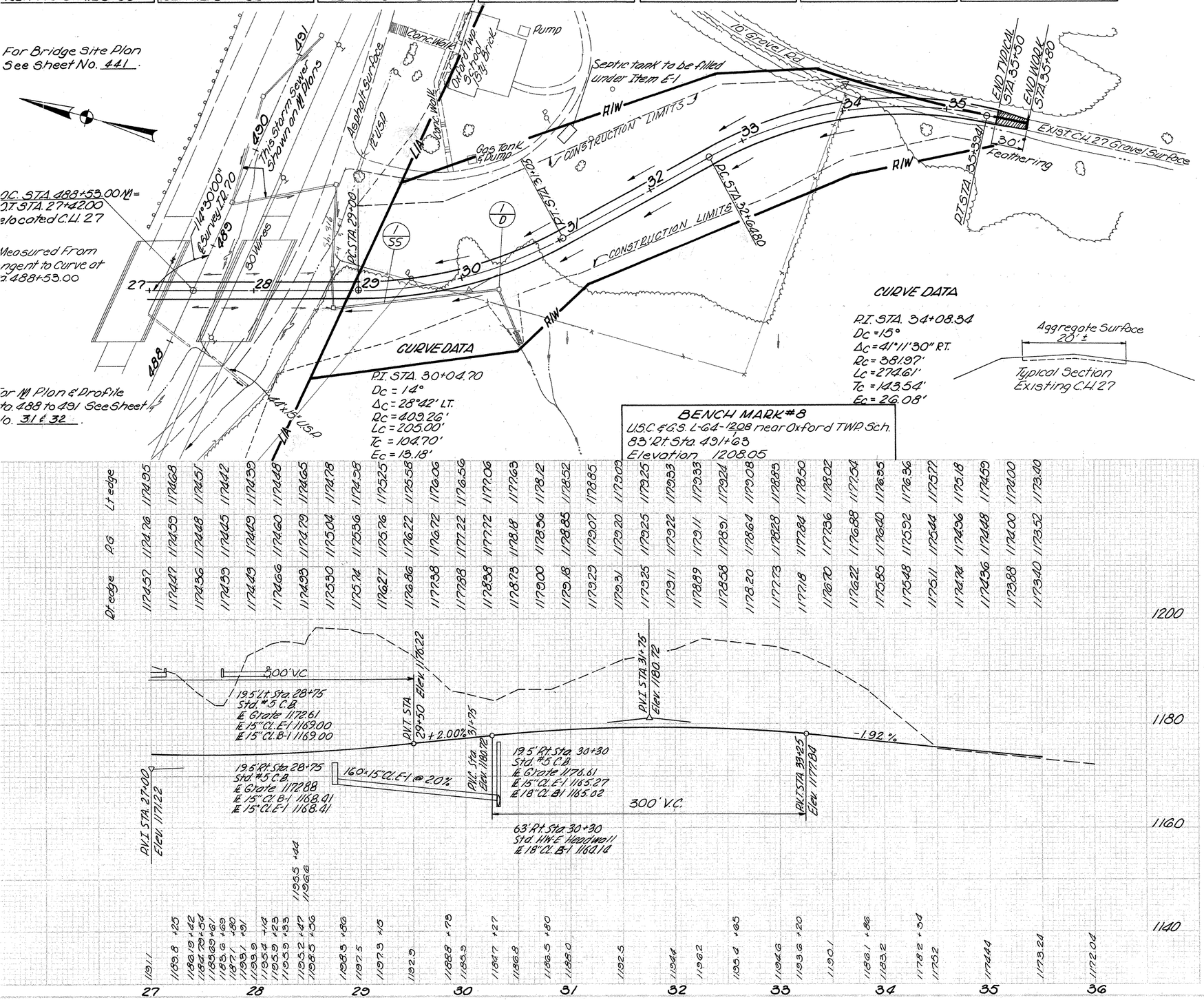
REF. P.I. STA. 34+08.34



REF. P.T. STA. 35+39.41



REF. P.O.T.



ESTIMATED QUANTITIES

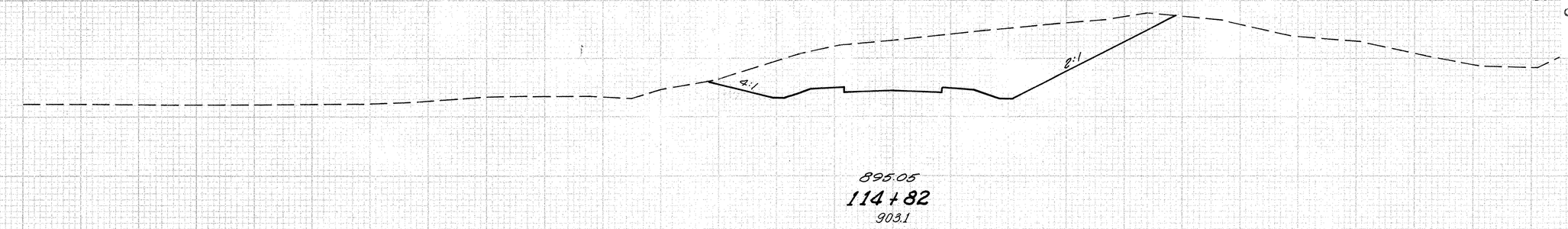
| REF. NO. | SIDE | STATION TO STATION | | |

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

287
485

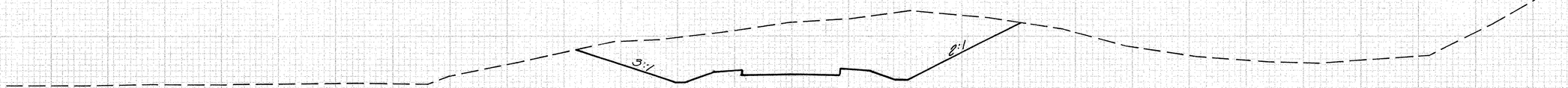
GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
910				
		570		255
890				
910				
		558		305
890				
910				
			410	
890				
				319
890				
Sta 114+18			0	
870				
				81



895.05
114 + 82
903.1

95



894.32
114 + 69
902.4

117



893.37
114 + 52
901.1

304

Sta 114+18

BEGIN WORK
STA. 114+18

114 + 10
892.0

150 100 50 ℄ 50 100

Add for E-1 Excavation
From Sheet No. 427.

RELOC. C.H. 27 STA. 114+10 TO STA. 114+82

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

288
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
930				
	1021			
910			1604	
920	677			
900			998	
910	422			
890			1530	
910	404			
890			325	
	570			

485

911.53
117+00
924.5

906.86
116+49
915.4

902.73
116+00
908.3

896.06
115+00
898.6

400

728

129

Sta. 114+82

150 100 50 ℄ 50 100

Sta. 114+82

RELOC. C.H. 27 STA. 115+00 TO STA. 117+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

289
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
970	1306			
			5382	
950				
970	1600			
			5454	
950				
960	1401			
			5241	
940				
940	1429			
			4537	
920				
Sta. 117+00	1021			

958.96
121+00
974.0

946.96
120+00
964.5

934.96
119+00
951.2

922.96
118+00
939.2

2:1

2:1

2:1

2:1

1178

1222

1183

1111

Sta. 117+00

150 100 50 ℄ 50 100

RELOC. C.H. 27 STA. 118+00 TO STA. 121+00

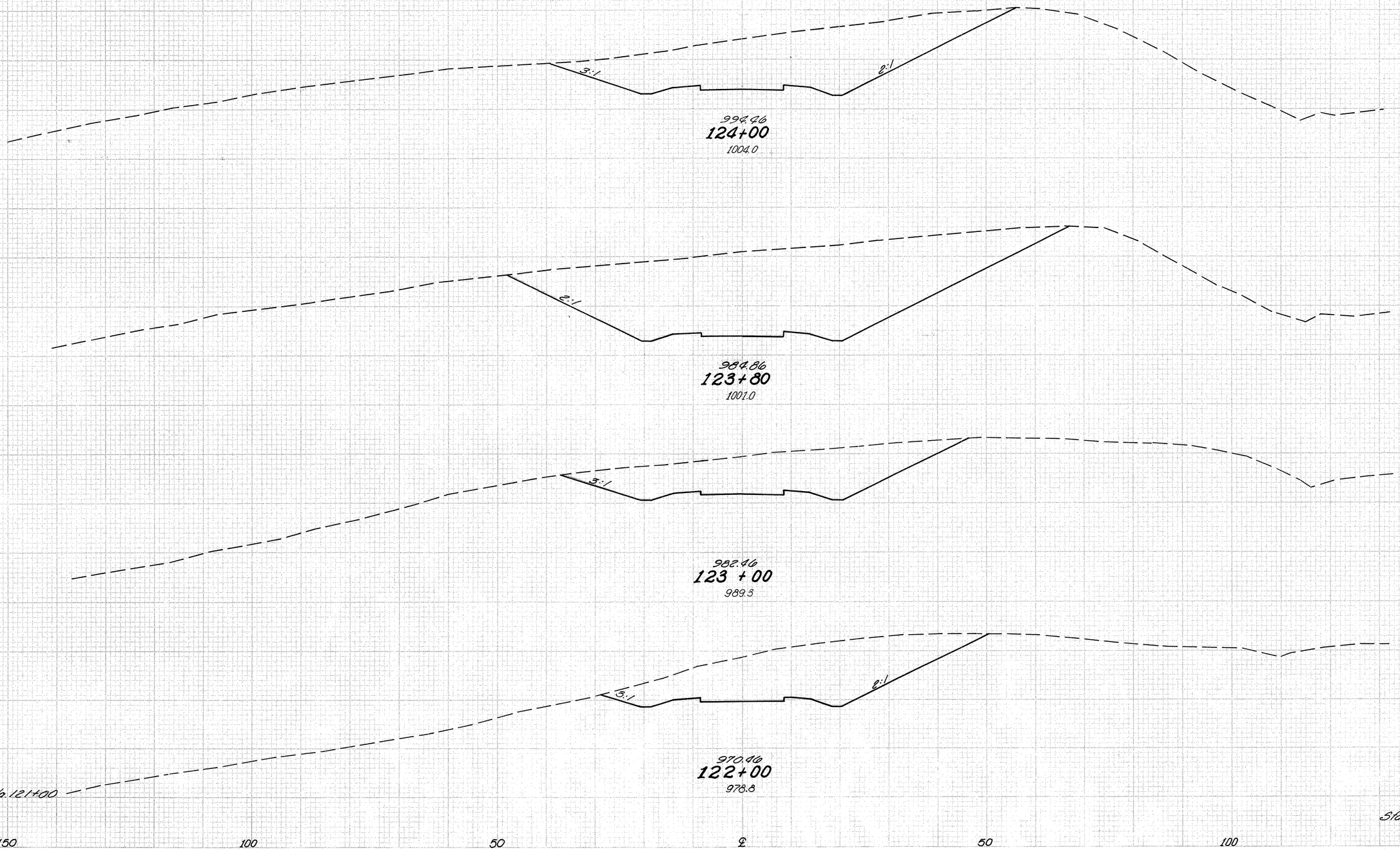
280-0

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

290
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

		END AREA		VOLUME	
		CUT	FILL	CUT	FILL
	1010				
216	990	721		3720	
	1010				
	990	1393		3558	
751	990	526		8098	
	970				
828	980	606		3591	
1033	960				
	Sta. 121+00	1306			

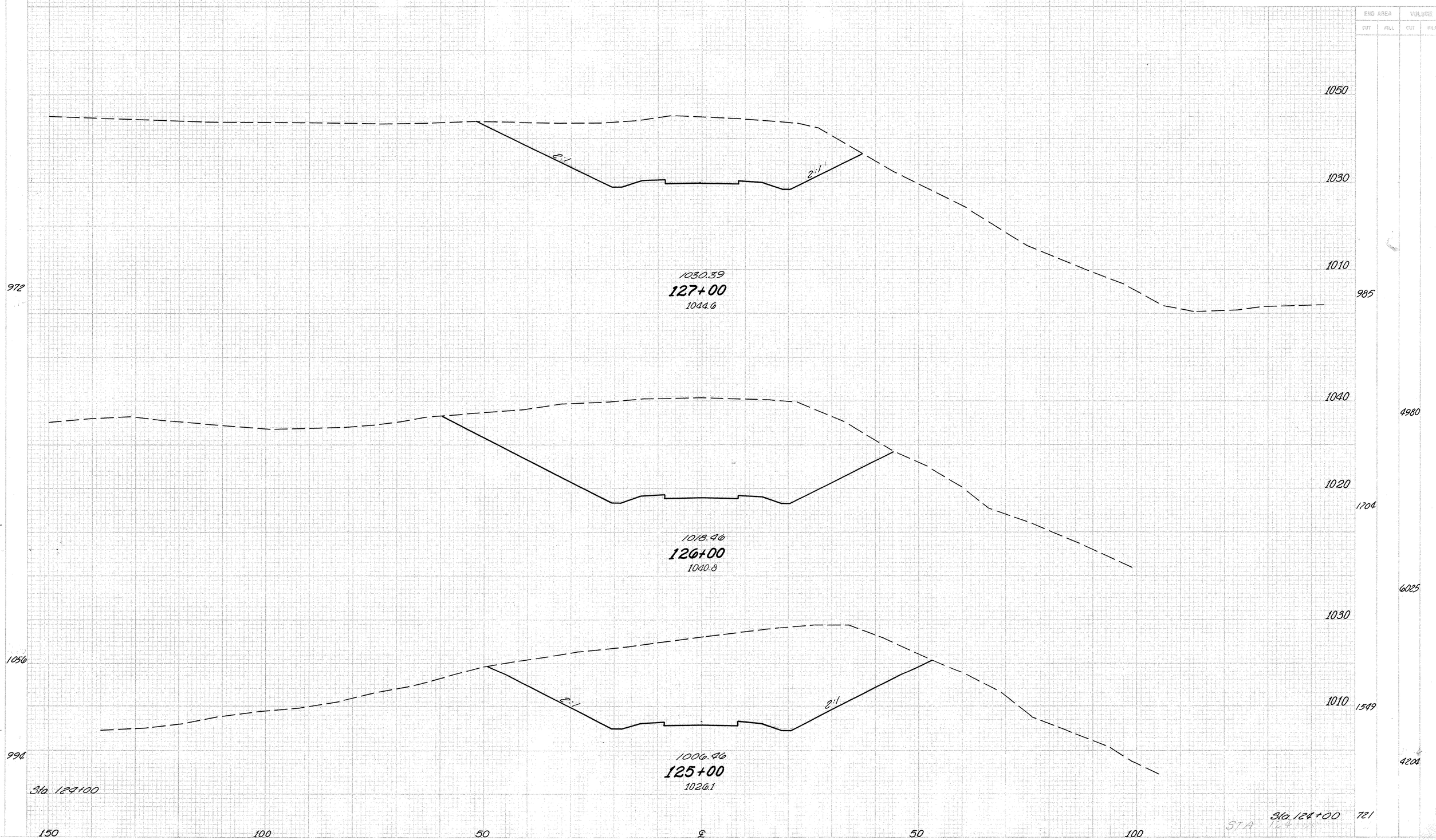


RELOC. C.H.27 STA.122+00 TO STA.124+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

291
485

GUERNSEY COUNTY—BELMONT COUNTY
GUE—40—23.88 BEL—40—0.00



RELOC. C.H.27 STA.125+00 TO STA.127+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

292
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



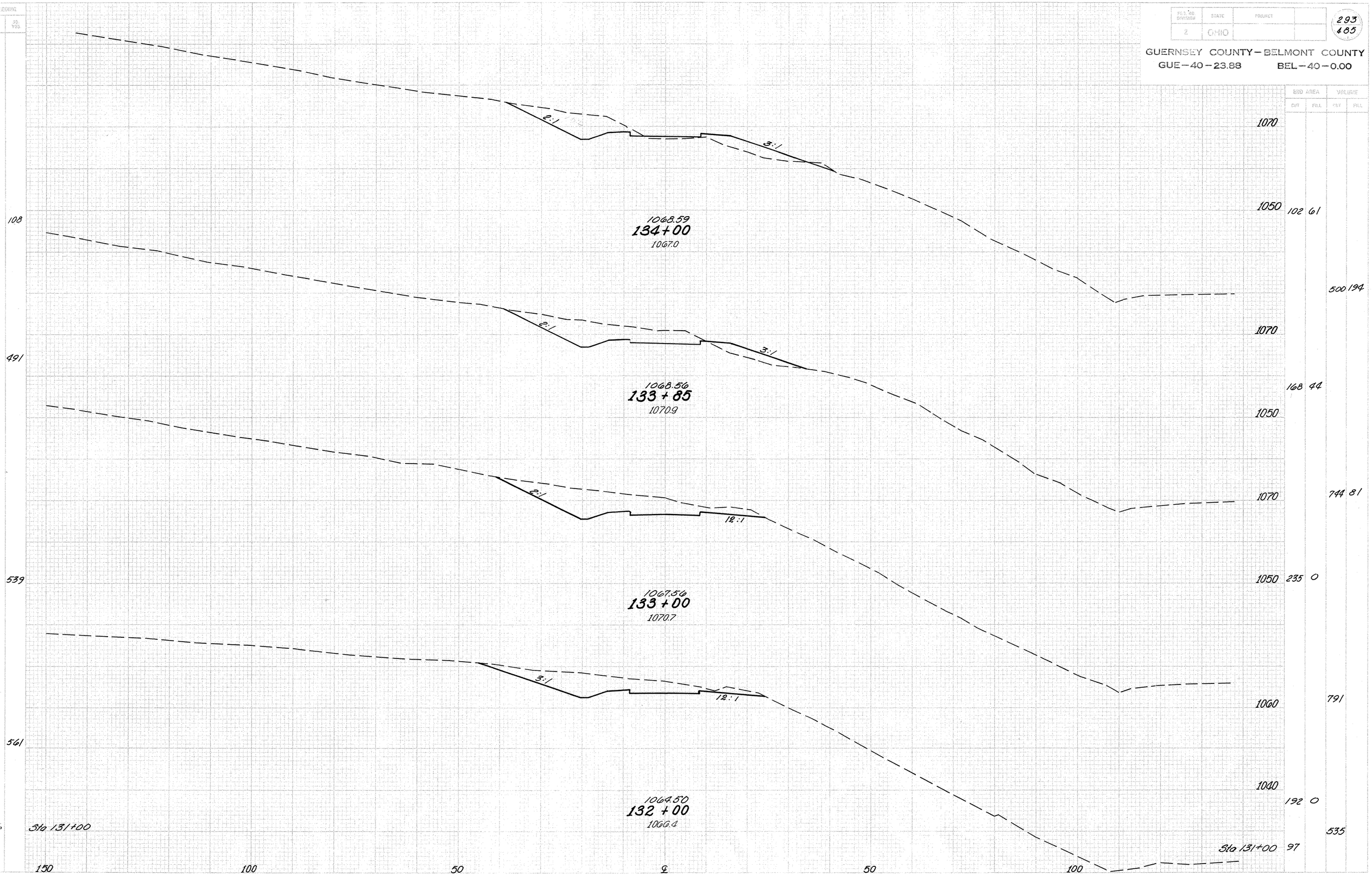
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
97			
		219	
21	5		
		190	15
38	3		
		889	
942			
		2643	
985			

RELOC. C.H. 27 STA. 128+00 TO STA. 131+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

293
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



RELOC. C.H.27 STA.132+00 TO STA.134+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

294
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1070				
			140	39
1050				
	98	18		
			400	37
1070				
	118	2		
1050				
			431	22
1070				
	115	10		
1050				
			420	106
1070				
	112	47		
1050				
			162	82
Sta 134+00	102	61		

14% See sh. 279 Also

@ Profile Field Drive
Lt Sta. 137+00

14.2%

3:1

Add for Field Drive
Lt Sta 137+00

1060.32
137+00
1060.0

3:1

1064.50
136+00
1065.4

2:1

1067.56
135+00
1068.2

2:1

3:1

1068.43
134+41
1067.4

Sta. 134+00

528

461

315

287

150 100 50 ℄ 50 100

RELOC. C.H.27 STA.134+41 TO STA.137+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

295
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1070				
	772	0		
1050				
			2059	0
1060				
	340	0		
1040				
			193	0
1060				
	257	0		
1040				
			481	56
1060				
	72	30		
1040				
			315	89
	516 137+00		98	18

728

1058.90
140+00
1068.9

Replot

2:1

2.5:1

168

1057.26
139+00
1061.6

END WORK 103' L.T.
OF STA. 138+79

12%
Drive Profile

2:1

18"CI F.A.

14:1

461

1057.18
138+79
1060.3

3:1

3:1

561

1057.70
138+00
1057.0

CULVERT @ STA. 137+56

316 137+00

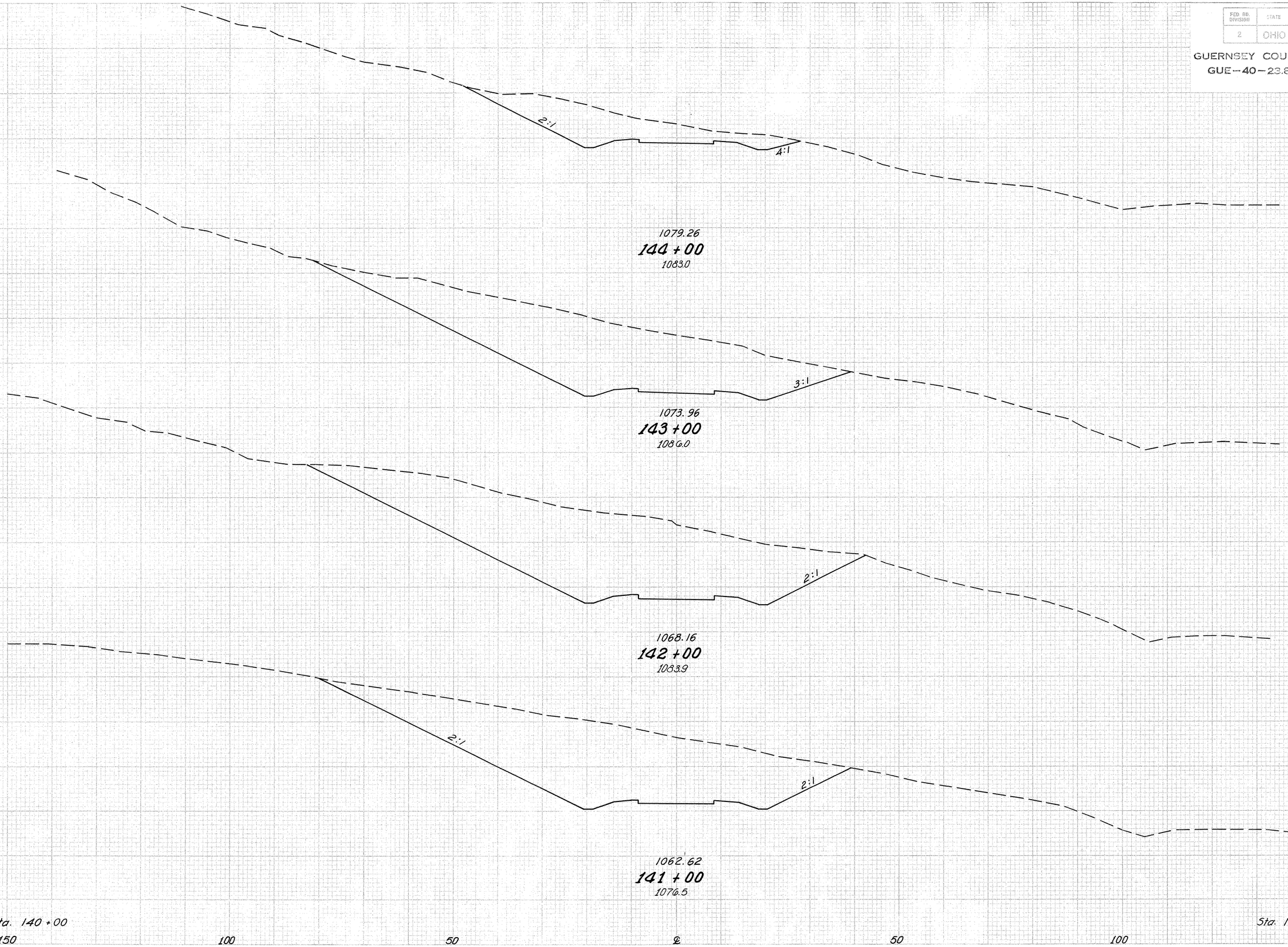
150 100 50 ℄ 50 100 150

RELOC. C.H. 27 STA. 138+00 TO STA. 140+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

296
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



END AREA		VOLUME	
CUT	FILL	CUT	FILL
330			
		2763	
1162			
		5371	
1545			
		5343	
1340	0		
		3911	0
772	0		

RELOC. C.H. 27 STA. 141+00 TO STA. 144+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

207
185

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.83 BEL–40–0.00

		END AREA		VOLUME	
		CUT	FILL	CUT	FILL
101	1090				
	1092.23				
	146+15				
	1086.7				
	1070	249	6		
				831	22
	1090				
189	1091.36				
	146+00				
	1087.2				
	1070	200	6		
	1090			948	22
	1090.03				
	145+77				
663	1083.6				
	1070	312	6		
	1090			720	211
	1085.56				
	145+00				
744	1084.3				
	1070	77	98		
				754	181
Sta. 144+00					
	1070	330	0		

150 100 50 ℄ 50 100

RELOC. C.H. 27 STA.145+00 TO STA.146+16

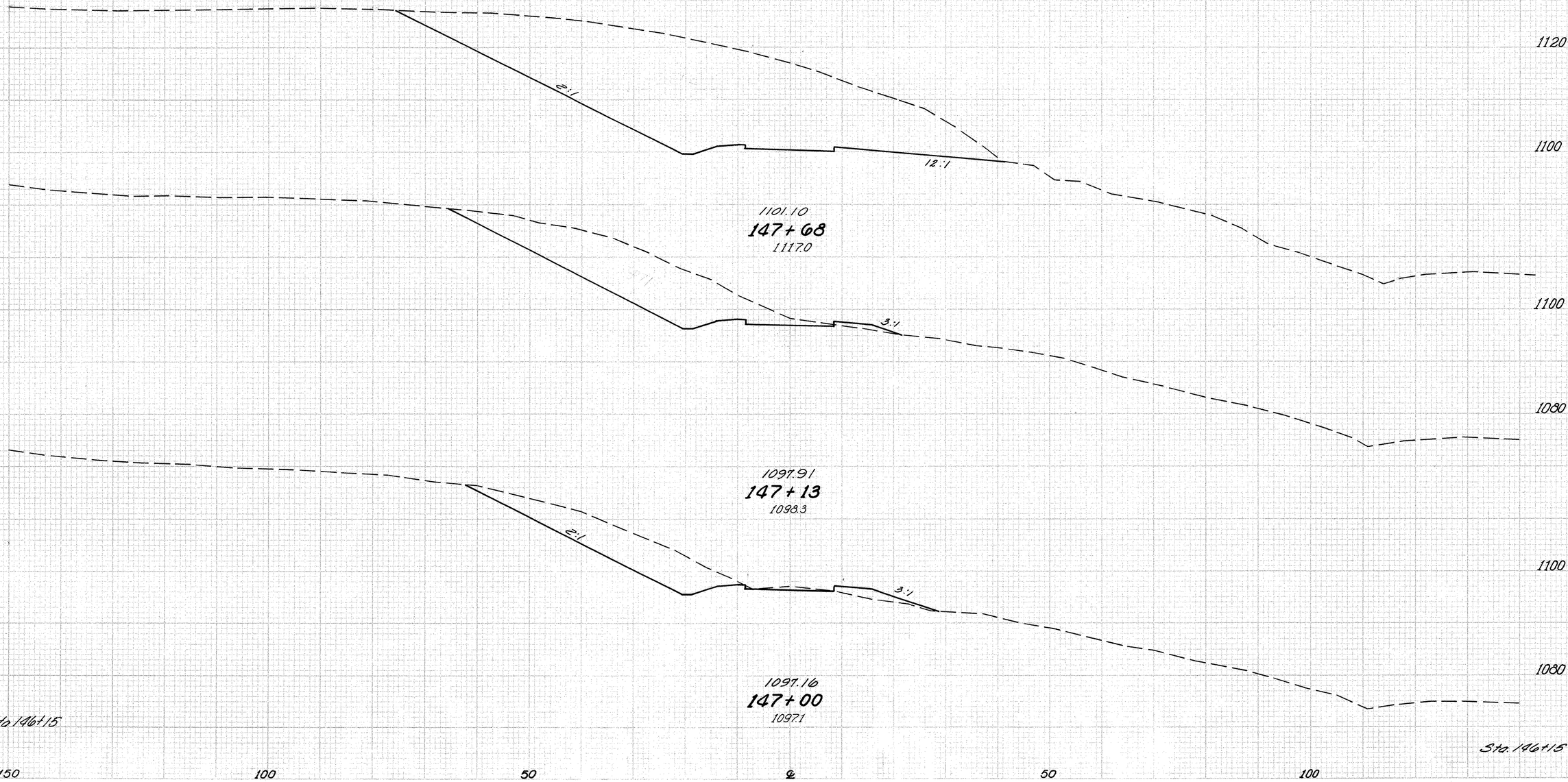
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

298
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL

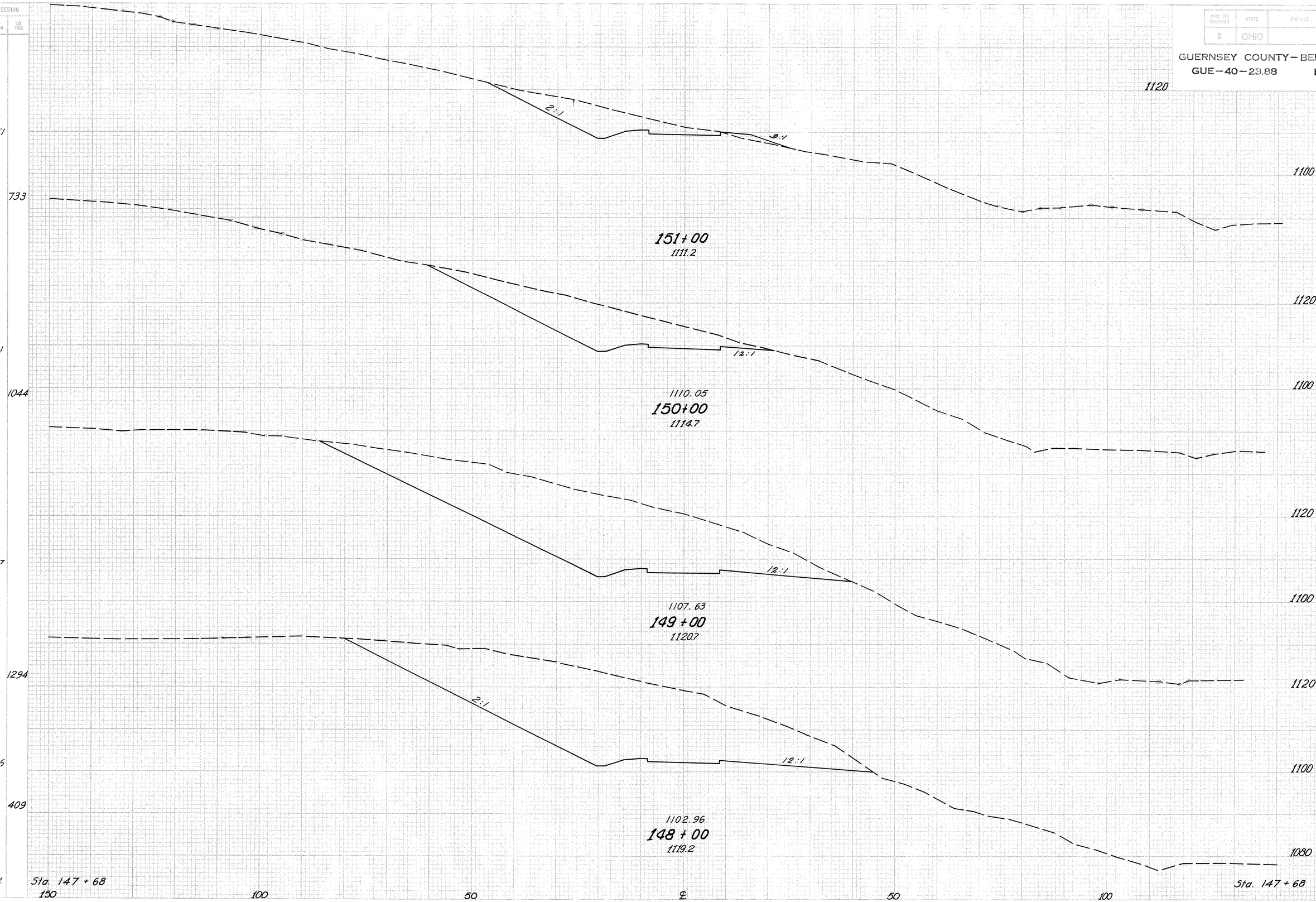


RELOC. C.H.27 STA.147+00 TO STA.147+68

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

299
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



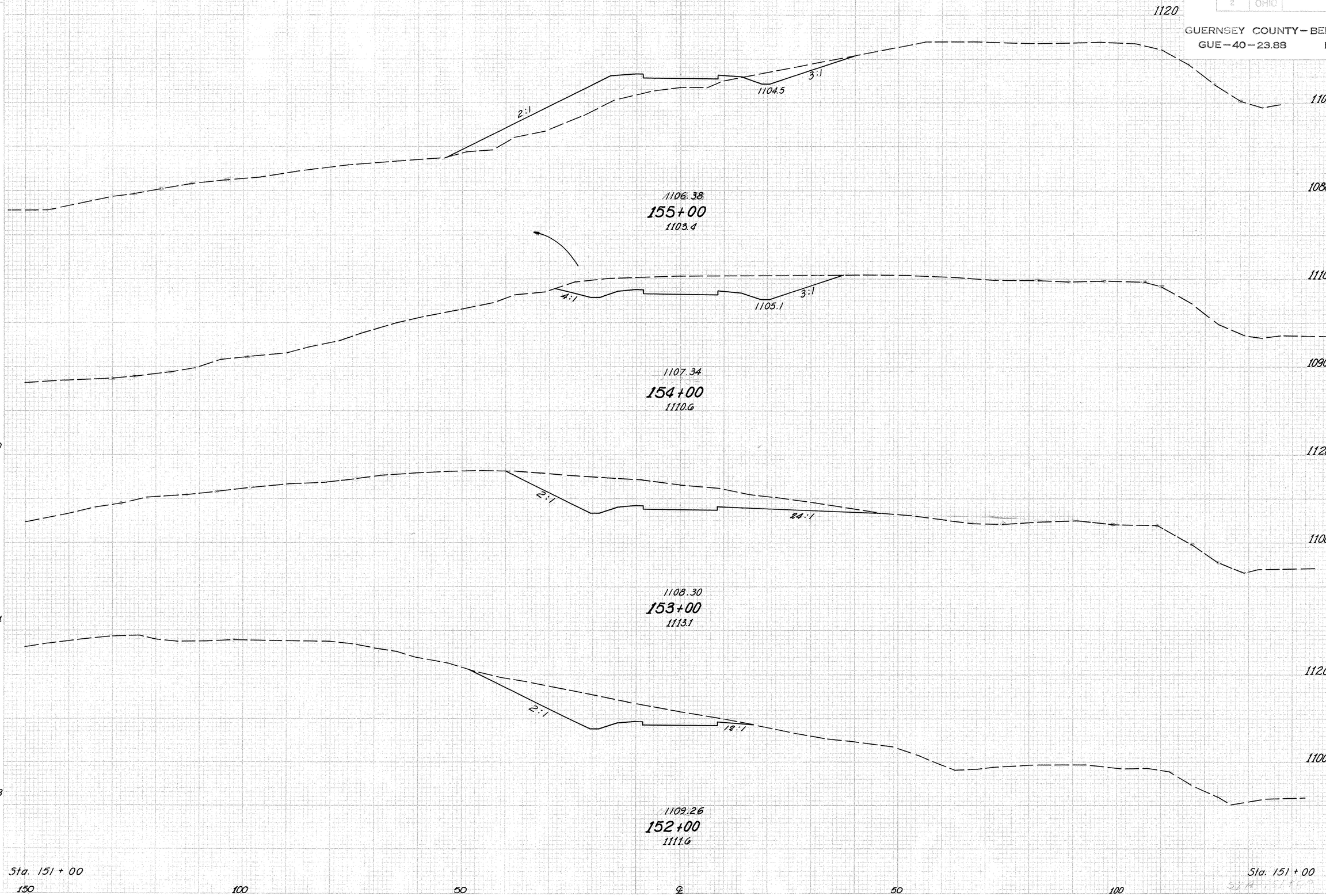
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
204	14		
		1198	26
443			
		3232	
1302			
		5154	
1481	0		
		1709	
1403	0		

RELOC. C.H. 27 STA 148+00 TO STA 151+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

300
465

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



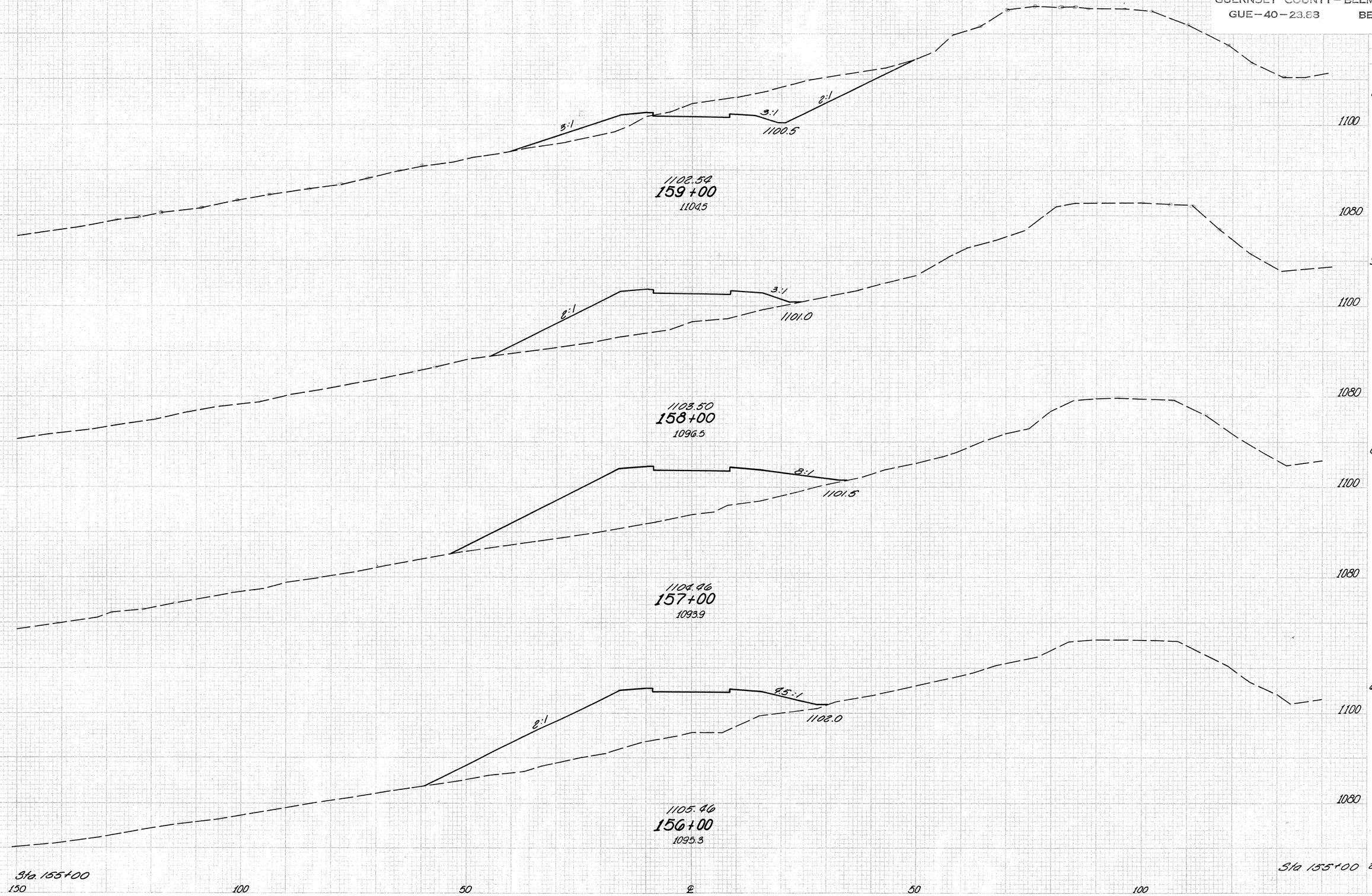
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1100	231	43		
			859	80
1110	233	0		
1090			1033	0
1120	325	0		
1100			1039	0
1120	236	0		
1100			815	26
	204	14		

RELOC. C.H. 27 STA. 152+00 TO STA. 155+00

FED. RD. DIVISION	STATE	PROJECT		301 485
2	OHIO			

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.83 BEL–40–0.00



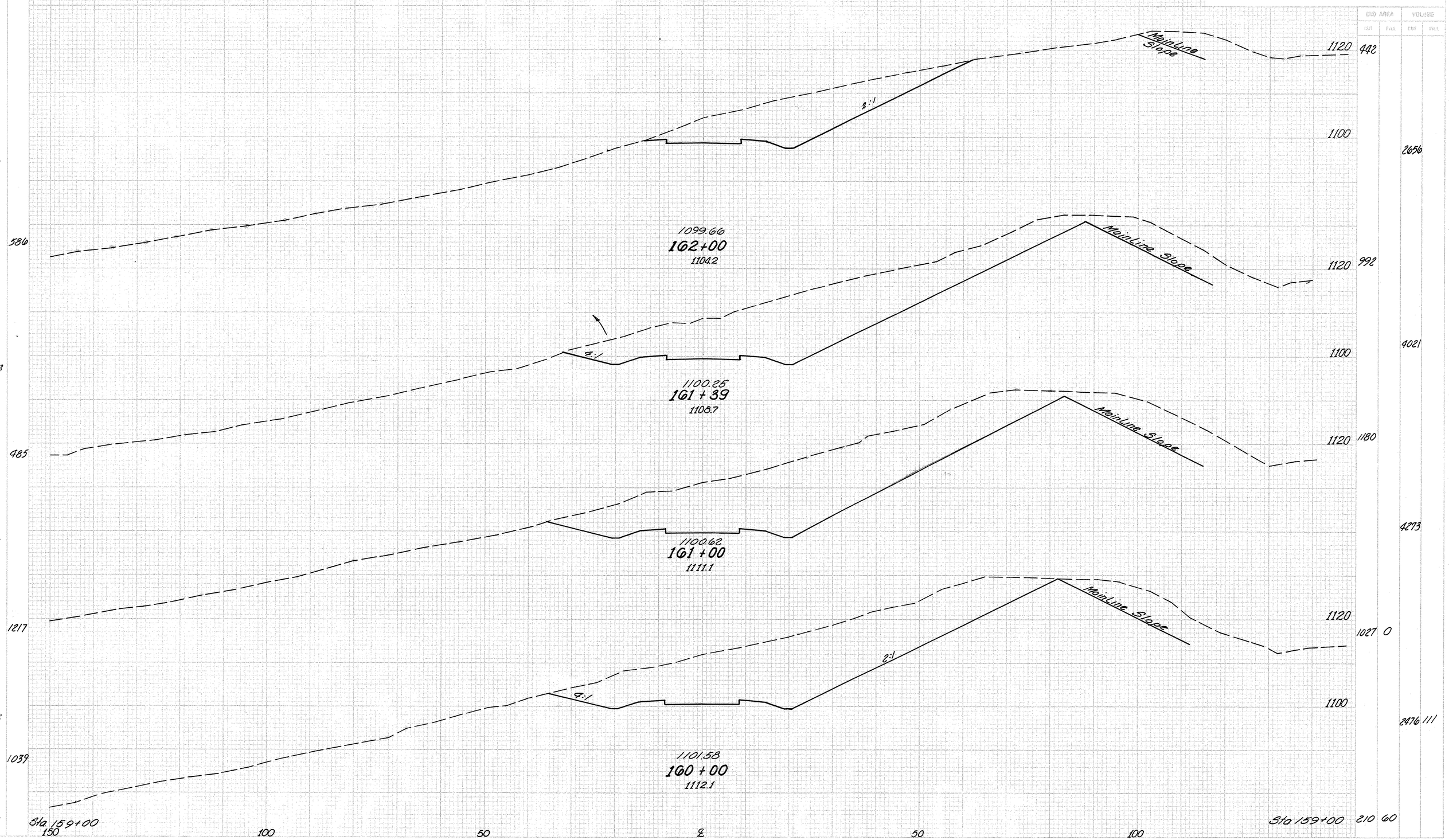
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1100	210	60		
			1098	11
1080	383	0		
1100			1826	0
1080	603	0		
1100			2296	0
1080	643	0		
1100			1619	80
1080	231	43		

RELOC. C.H. 27 STA. 156+00 TO STA. 159+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

302
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

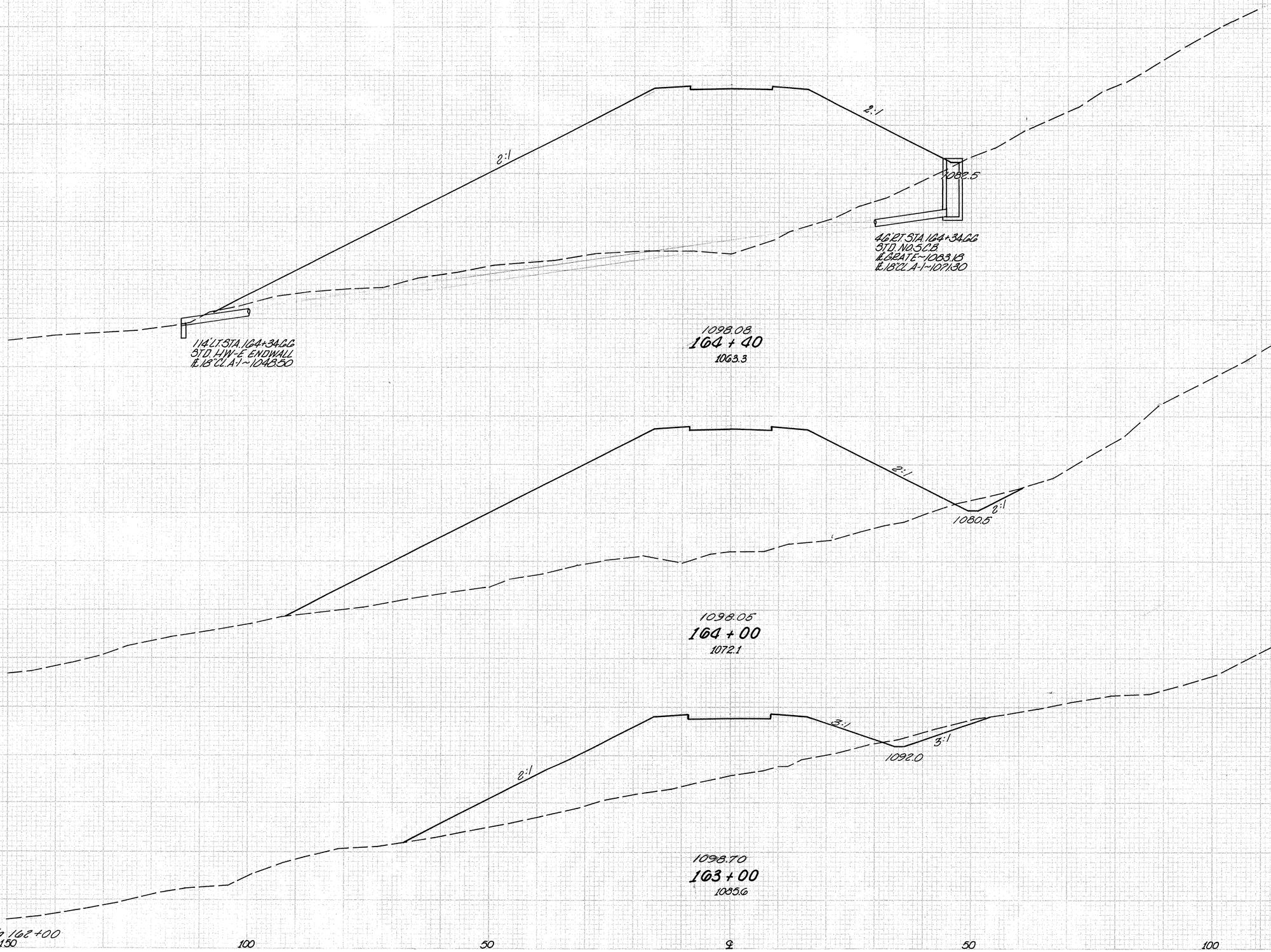


RELOC. C.H. 27 STA.160+00 TO STA.162+00

FED. RD. DIVISION	STATE	PROJECT		303 485
2	OHIO			

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	0	2933		
				19 3896
			25 2204	
				74 5693
			15 870	
				848 1611
			442 0	

RELOC. C.H. 27 STA. 163+00 TO STA. 164+40

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

304
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	2987		
			11,267
	3097		
			6700
	2935		



RELOC. C.H. 27 STA.165+00 TO STA.165+53

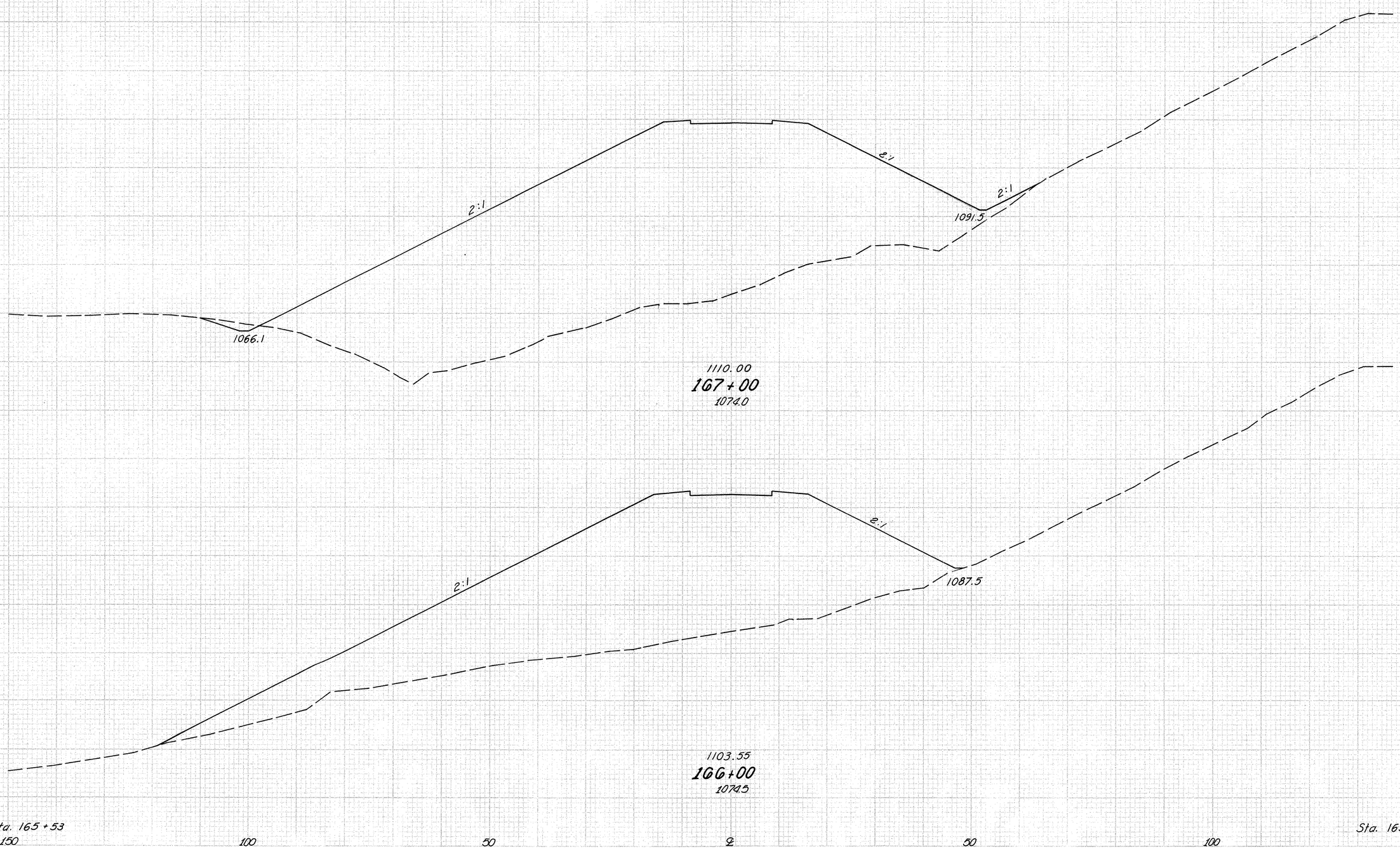
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

305
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
20	3735		
		37	12074
0	2785		
			5024
		2987	



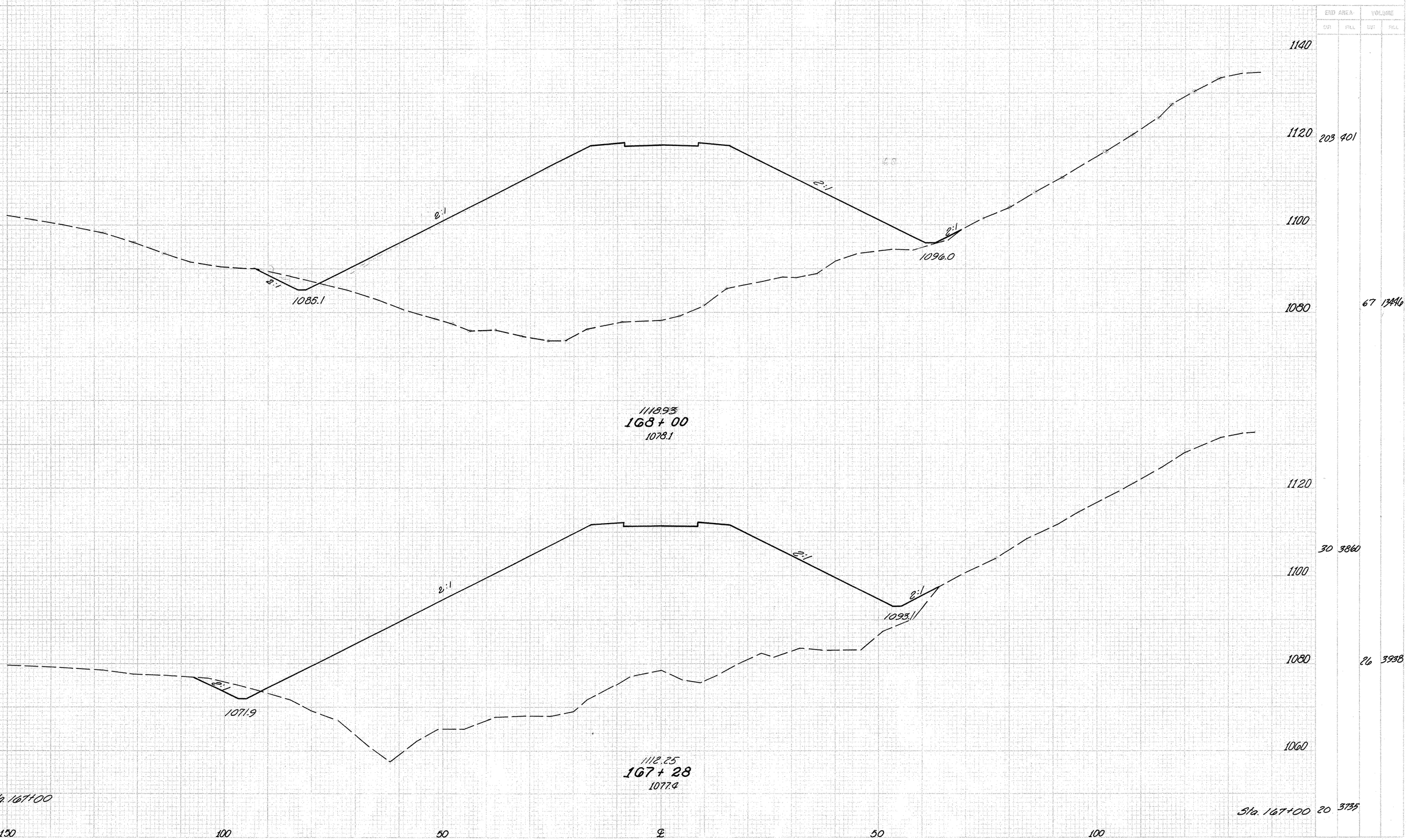
RELOC. C.H. 27 STA. 166+00 TO STA. 167+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

306
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	203	401		
			67	1346
	30	386		
			26	393
Sta. 167+00	20	373		

RELOC. C.H. 27 STA. 167+28 TO STA. 168+00

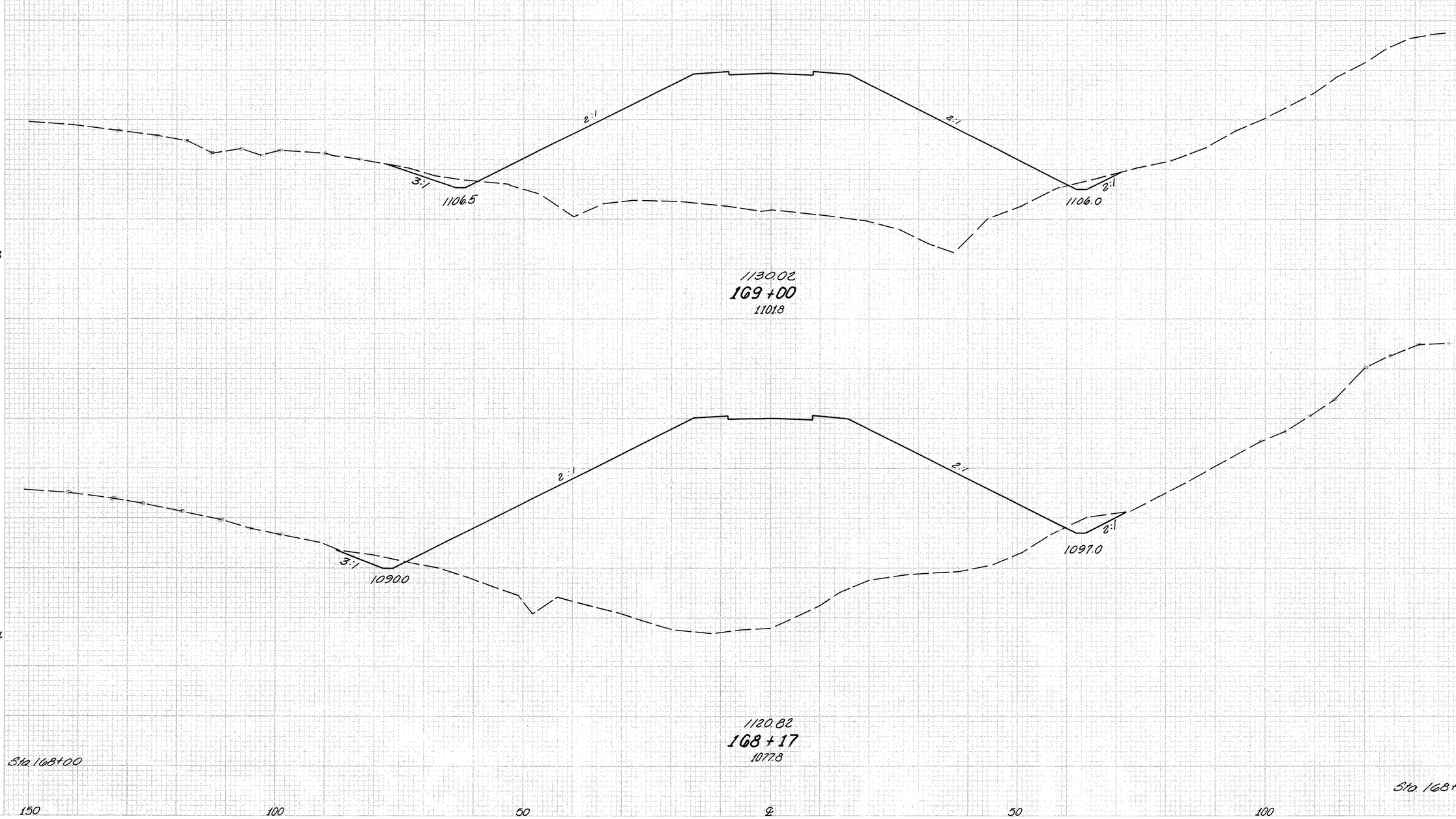
PER SQ. DIVISION	STATE	PROJECT	
2	OHIO		

307
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

SEEDING	
	SQ. YDS.
	1323
	284

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	13		2307
			82 8716
	40		3363
	19		2129
	20		3401

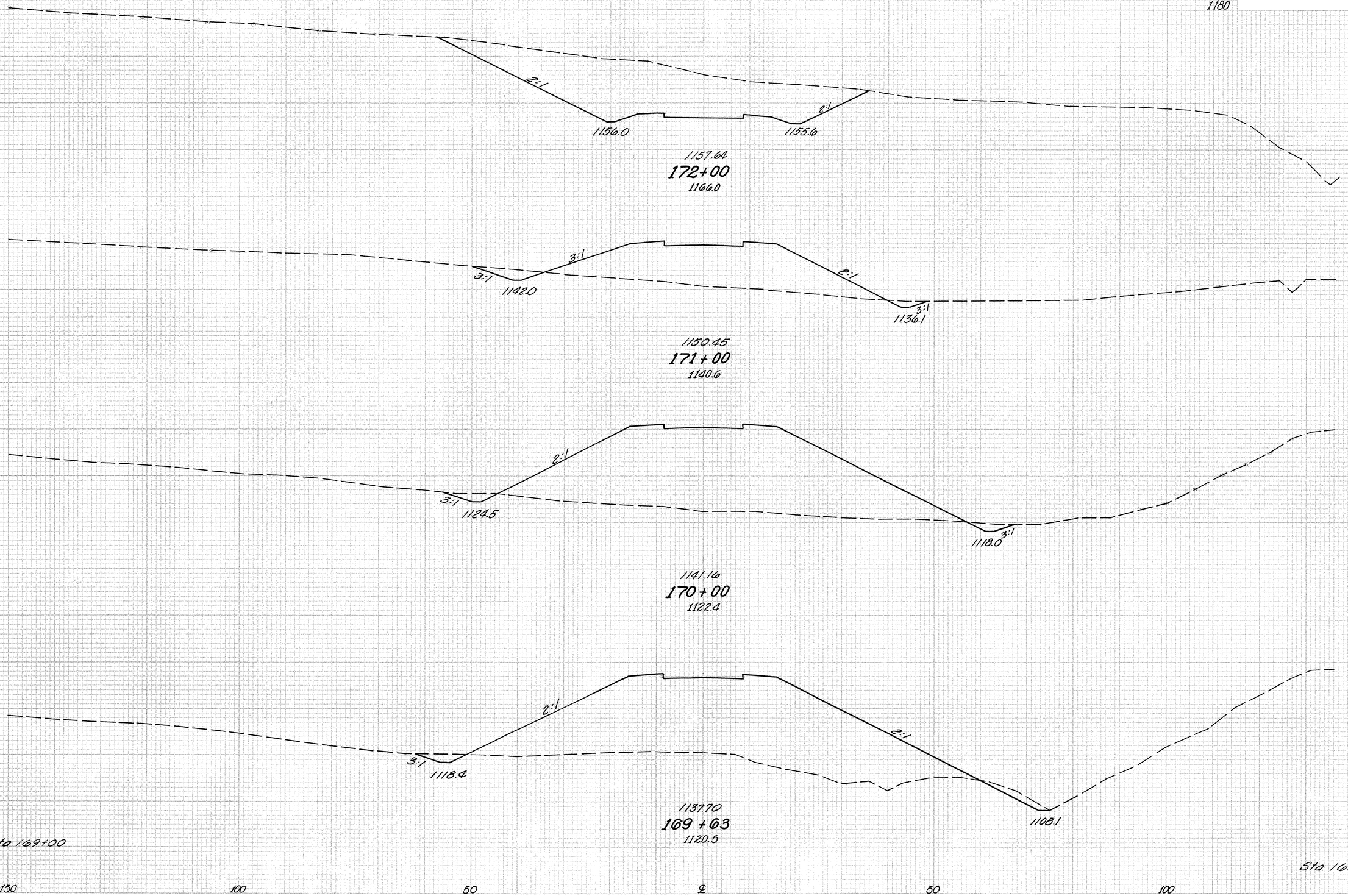


RELOC. C.H. 27 STA. 168+17 TO STA. 169+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

308
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	716	0		
			1331	851
	25	483		
			111	3152
	35	1203		
			48	1447
	35	1317		
			24	4229
Sta 169+00	13	2307		

RELOC. C.H. 27 STA. 169+63 TO STA. 172+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

309
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

SEEDING SQ. YDS
646
5808
800
1194

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		31233	9
676			
			1968
888			
2335			
			2929
828			
			1534
828			
			2859
716			

Add for C.H. 286 Conn

1180
1160
1190
1170
1150
1180
1160
1180
1160
1160

1166.59
175+00
1171.7

2:1
4:1

Add for C.H. 286 Conn

1166.21
174+32
1175.5

2:1
6:1

C.H. 286 CONN | RELOC. C.H. 27

1165.71
174+00
1181.3

STA. 173+50

2:1
6:1

1162.73
173+00
1181.6

Sta. 172+00

Sta. 172+00

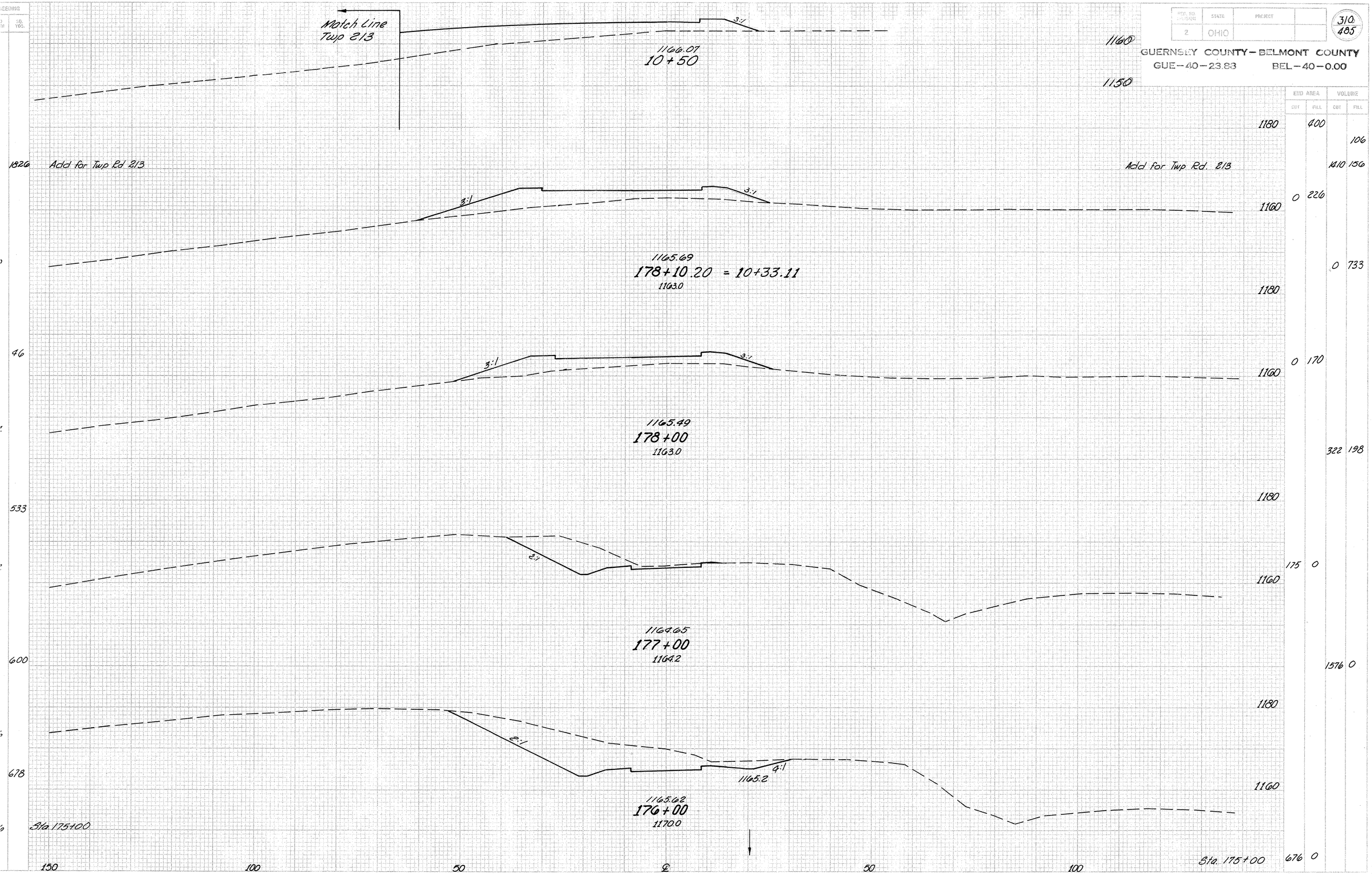
150 100 50 ℄ 50 100

RELOC. C.H. 27 STA 173+00 TO STA 175+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

310
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.83 BEL–40–0.00



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1180		400		
				106
1160	0	226	1410	156
1180			0	733
1160	0	170		
1180			322	198
1160	175	0		
1180			1576	0
1160				
	676	0		

RELOC. C.H. 27 STA.176+00 TO STA.178+10

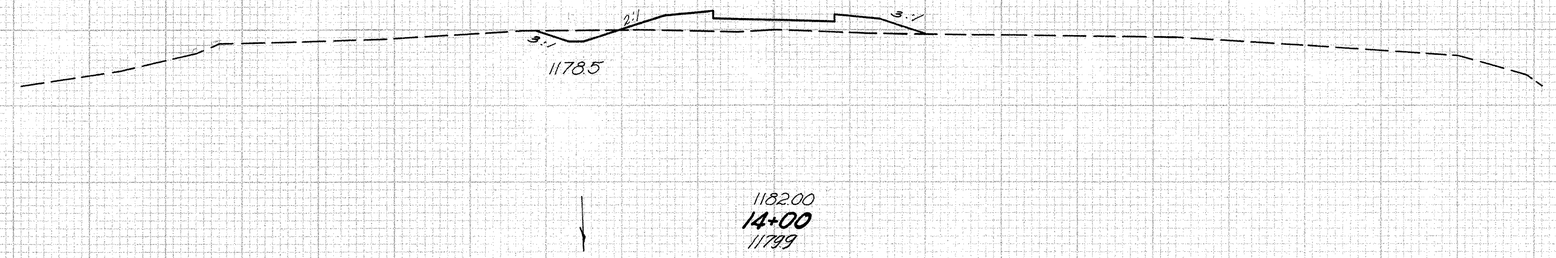
SEEDING

LB.	SQ. YDS.
5	
789	
7	
1089	
9	
911	
5	
424	
9	

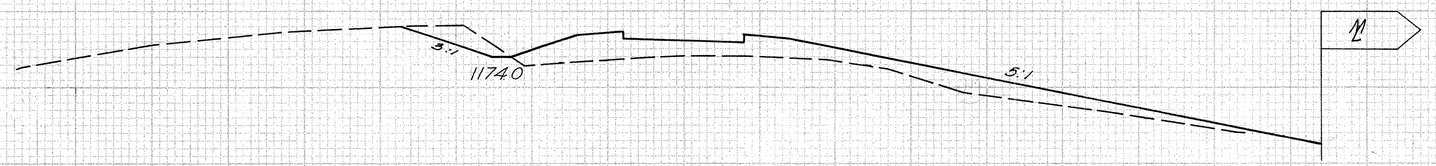
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

311
485

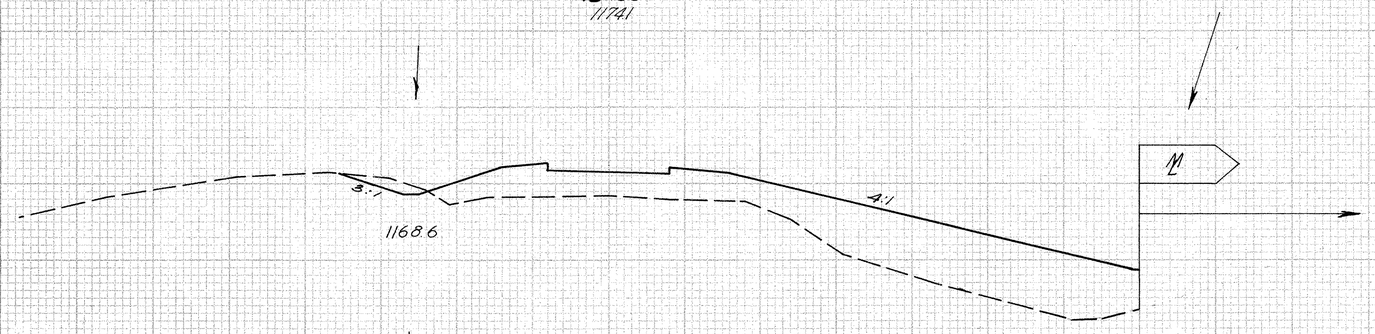
GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



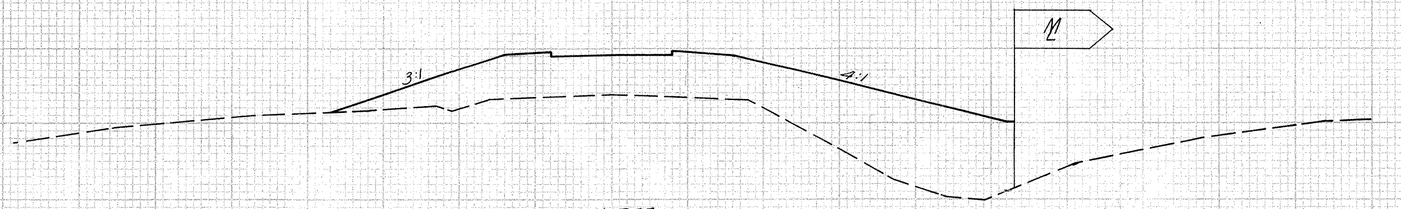
118200
14+00
11799



117700
13+00
11741



117200
12+00
11684



116755
11+00
11637

Sta 10+33

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1170				
	9	60		
			57	476
1170				
	22	197		
			63	1359
1170				
1150	12	307		
			33	2152
1160		625		
Add For TWP. 213 Lt @ Sta. 10+50			19	1972
STA 10+00	10	440		

100 50 ℄ 50 100

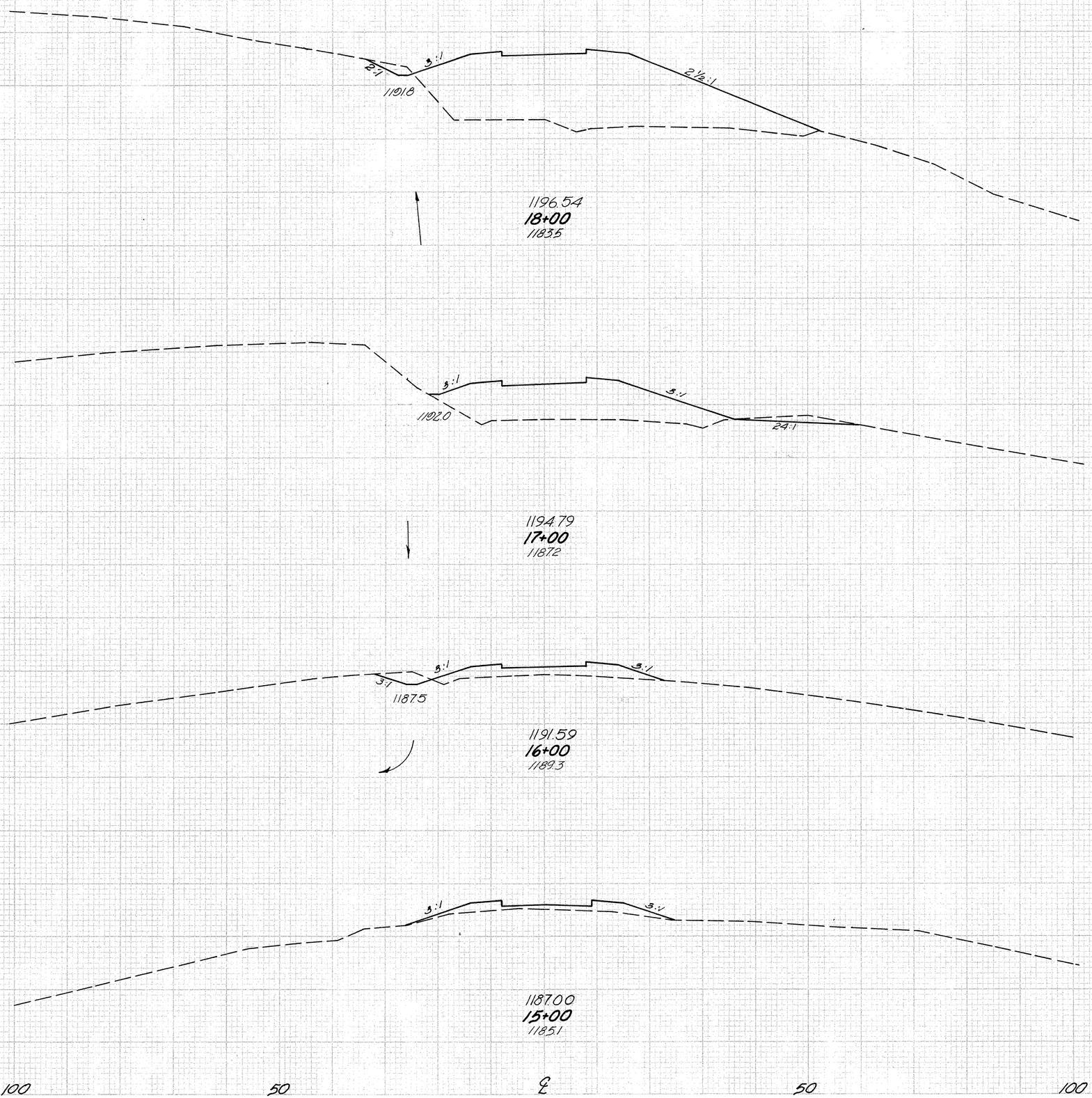
RELOCATED C.H. 27 STA. 11+00 TO STA. 14+00

PRINTED IN U.S.A.
KEUFFEL & ESSER CO.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

312
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



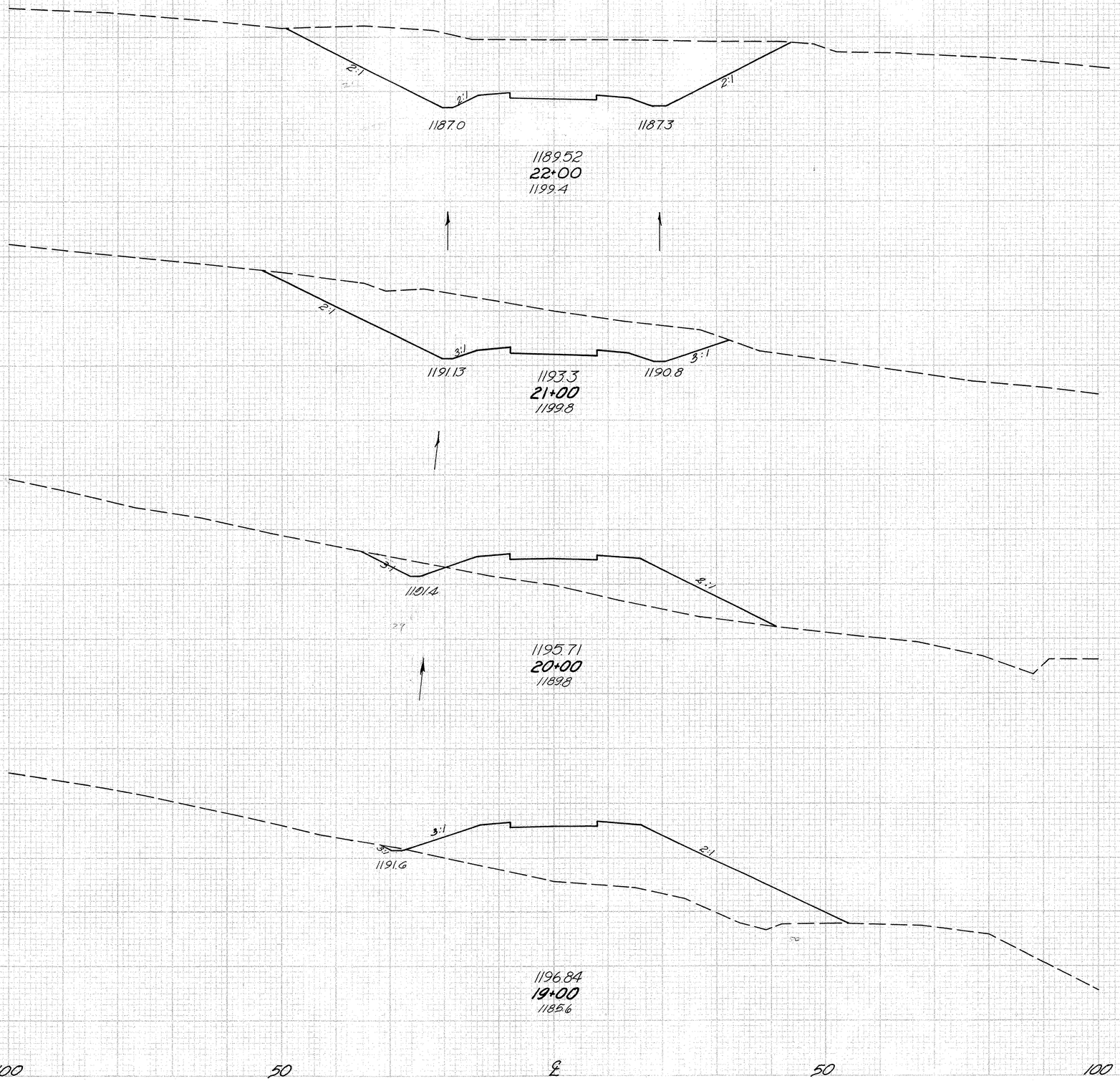
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1180	13	730		
1200			50	1917
1180				
	10	305		
1180			57	715
	12	81		
1180			22	246
	0	52		
			17	207
STA. 14+00	0	60		

RELOCATED C.H. 27 STA. 15+00 TO STA. 18+00 GOOD

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

313
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



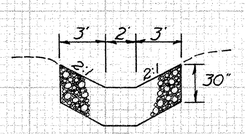
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1200				
1180	812	0		
				2578
1210				
1190				
	580	0		
1200			1110	537
1180	24	290		
				48 1722
1200				
1180	2	640		
				28 2537
STA. 18+00	13	730		

RELOCATED C.H. 27 STA. 19+00 TO STA. 22+00 Good

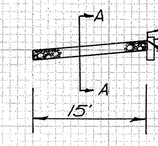
FED. RD DIVISION	STATE	PROJECT	
2	OHIO		

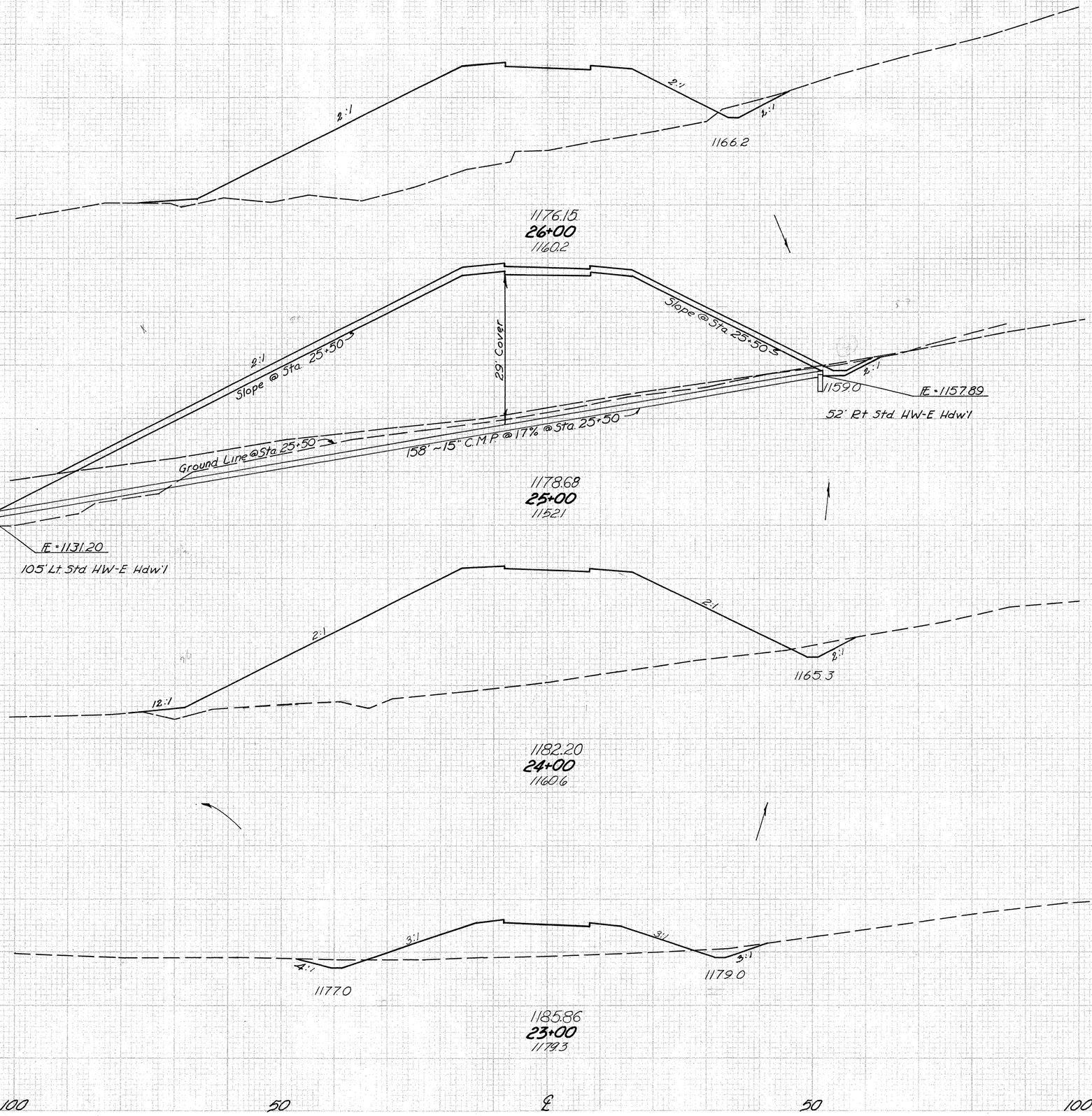
314
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



Section A-A





	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1180				
1160				
	15	1200		
1170				43 6556
1160				
	8	2340		
1140				
				43 7295
1170				
1150	15	1599		
				54 3458
1180				
	14	268		
				1530 496
STA. 22+00	812	0		

1989 1567 1128 867

STA. 22+00

100 50 ℄ 50 100

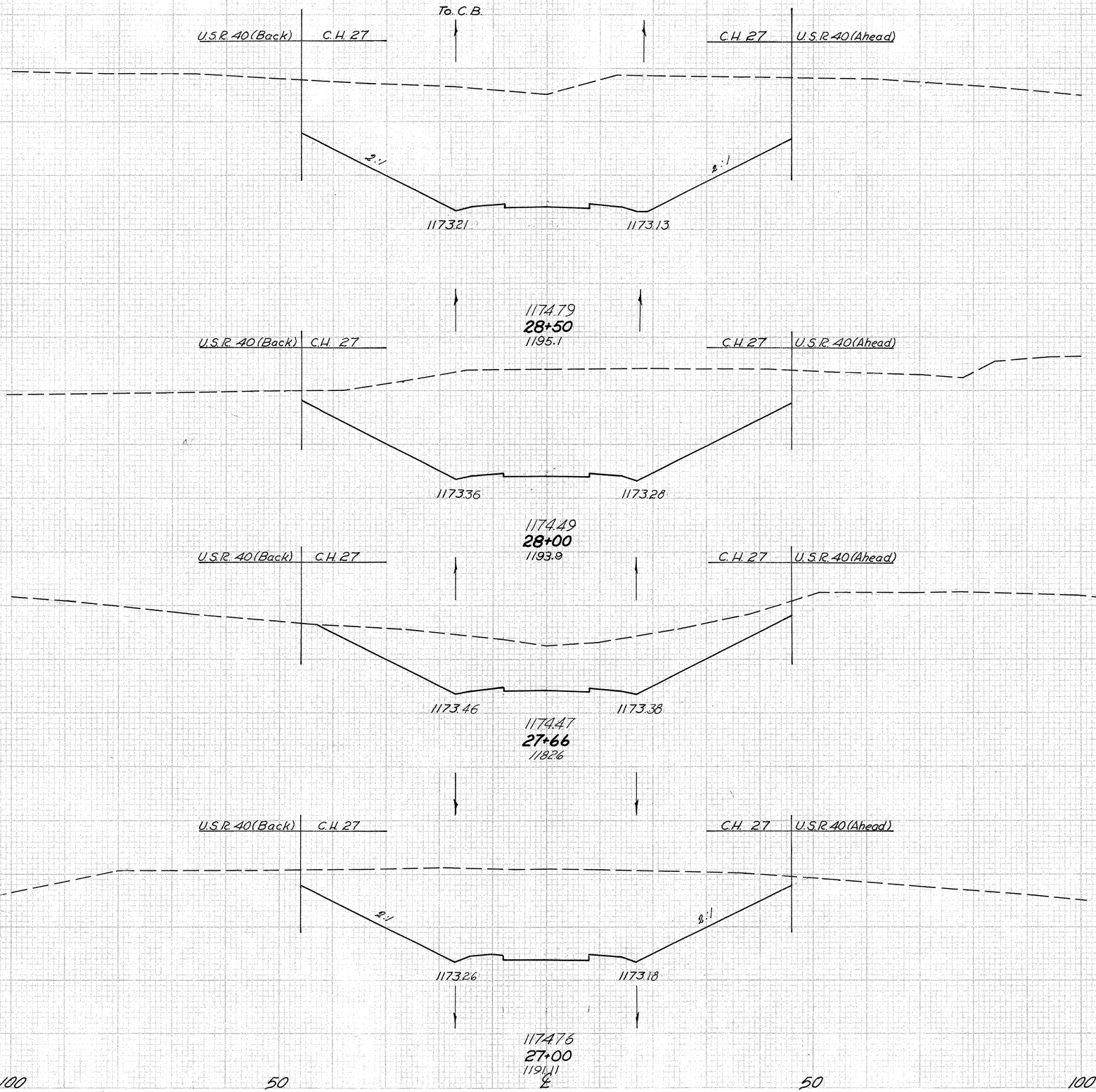
RELOCATED C.H. 27 STA. 23+00 TO STA. 26+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

315
486

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00



	SND AREA		VOLUME	
	CUT	FILL	CUT	FILL
1190				
1797				
1170				
				2961
1190				
1400				
1170				
1190				1326
			706	0
1190				2330
1170			1200	0
				2152 2222
STA 26+00			15	1200

Sta. 28+20

Sta. 26+65

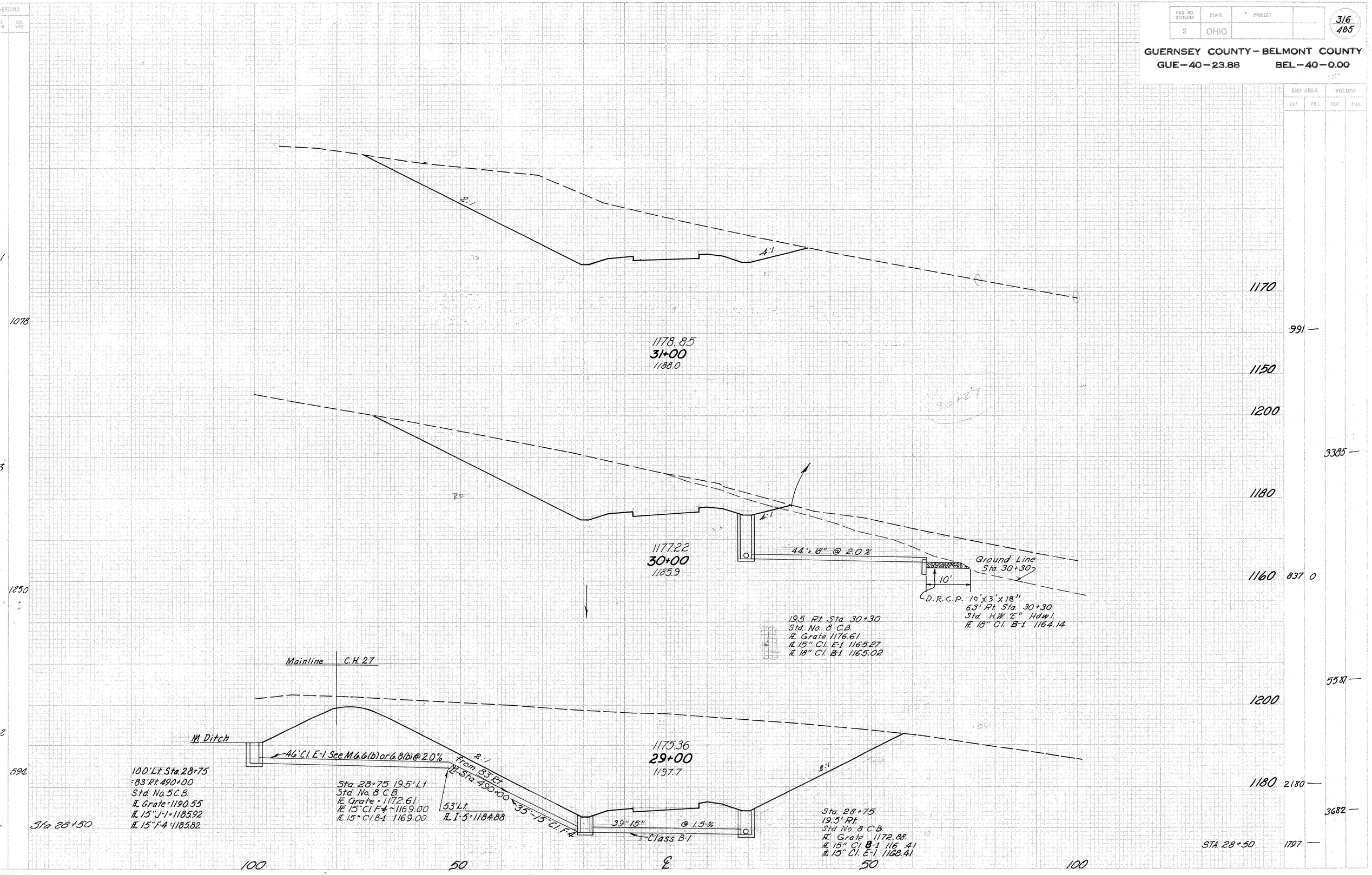
Sta. 26+00

RELOCATED C.H. 27 STA. 27+00 TO STA. 28+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

316
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



RELOCATED C.H. 27 STA. 29+00 TO STA. 31+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

3/7
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL

1200

1180

1160

440 —

1176.40
34+00
1183.2

1190

3346 —

1170

1367 —

1178.28
33+00
1194.6

1150

1190

4956 —

1170

1309 —

1179.22
32+00
1194.4

1150

4259 —

STA 31+00

991

991 —

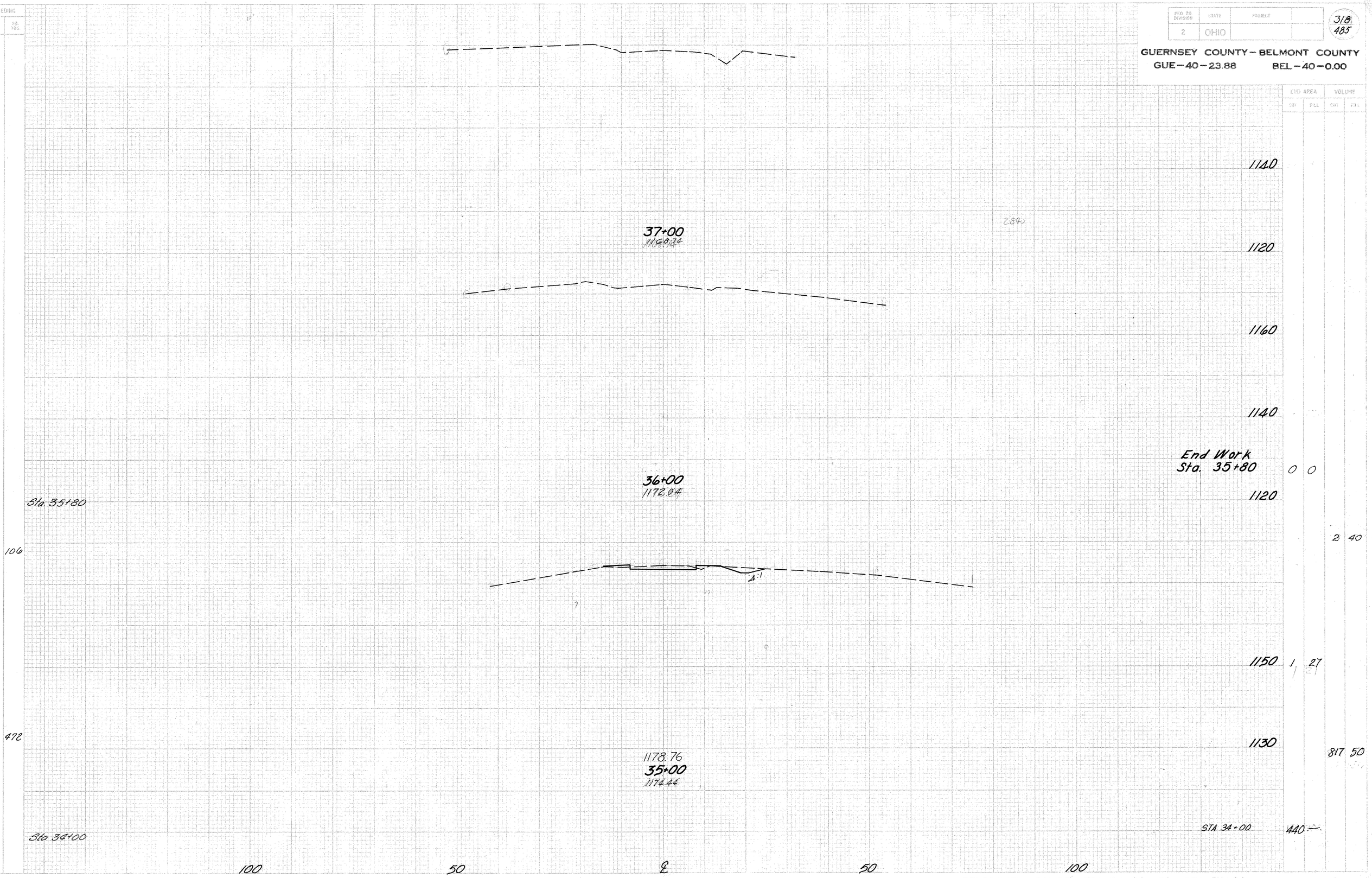
100 50 ℄ 50 100

RELOCATED C.H. 27 STA. 32+00 TO STA. 34+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

318
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

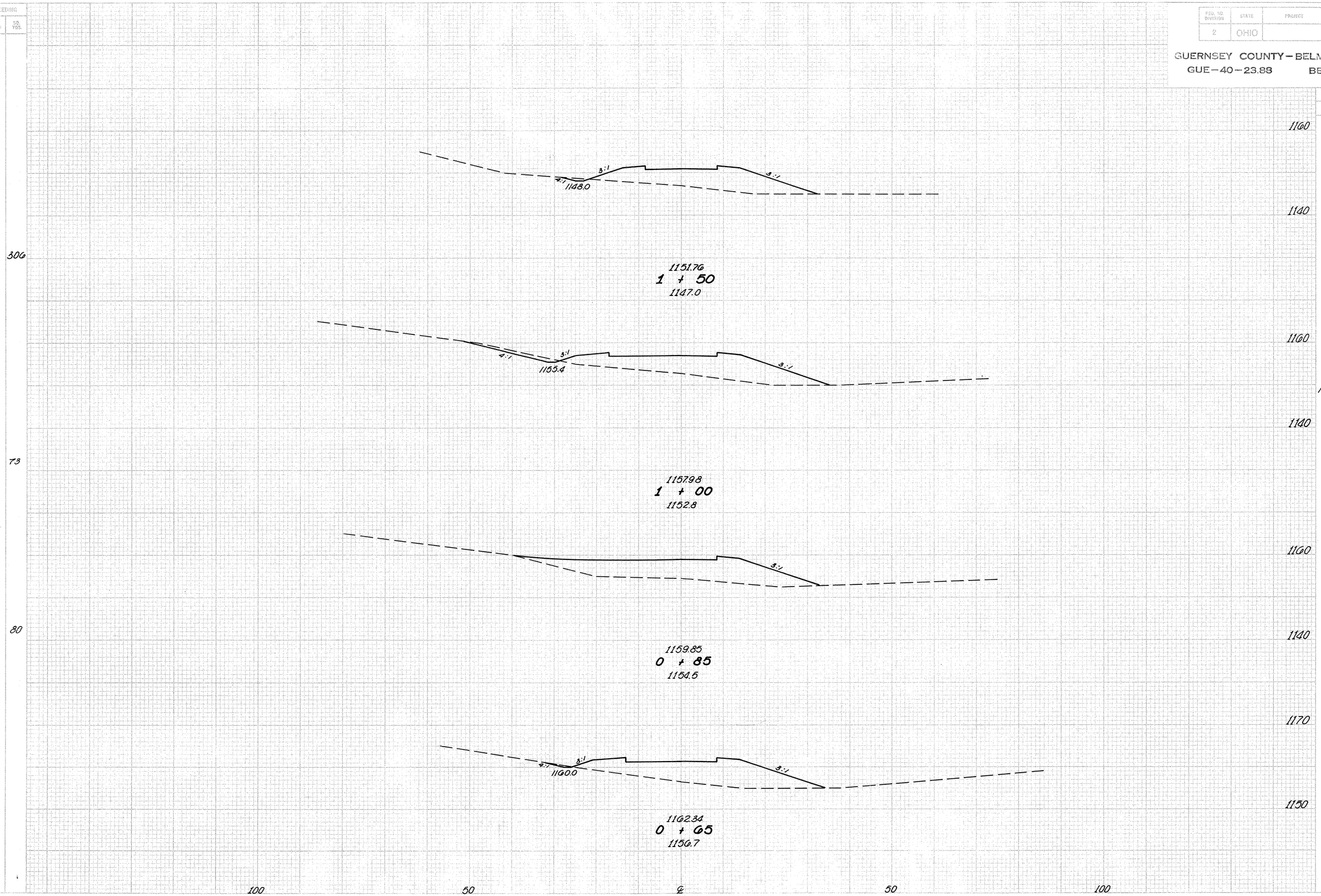


RELOCATED C.H. 27 STA. 35+00 TO STA. 37+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

319
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



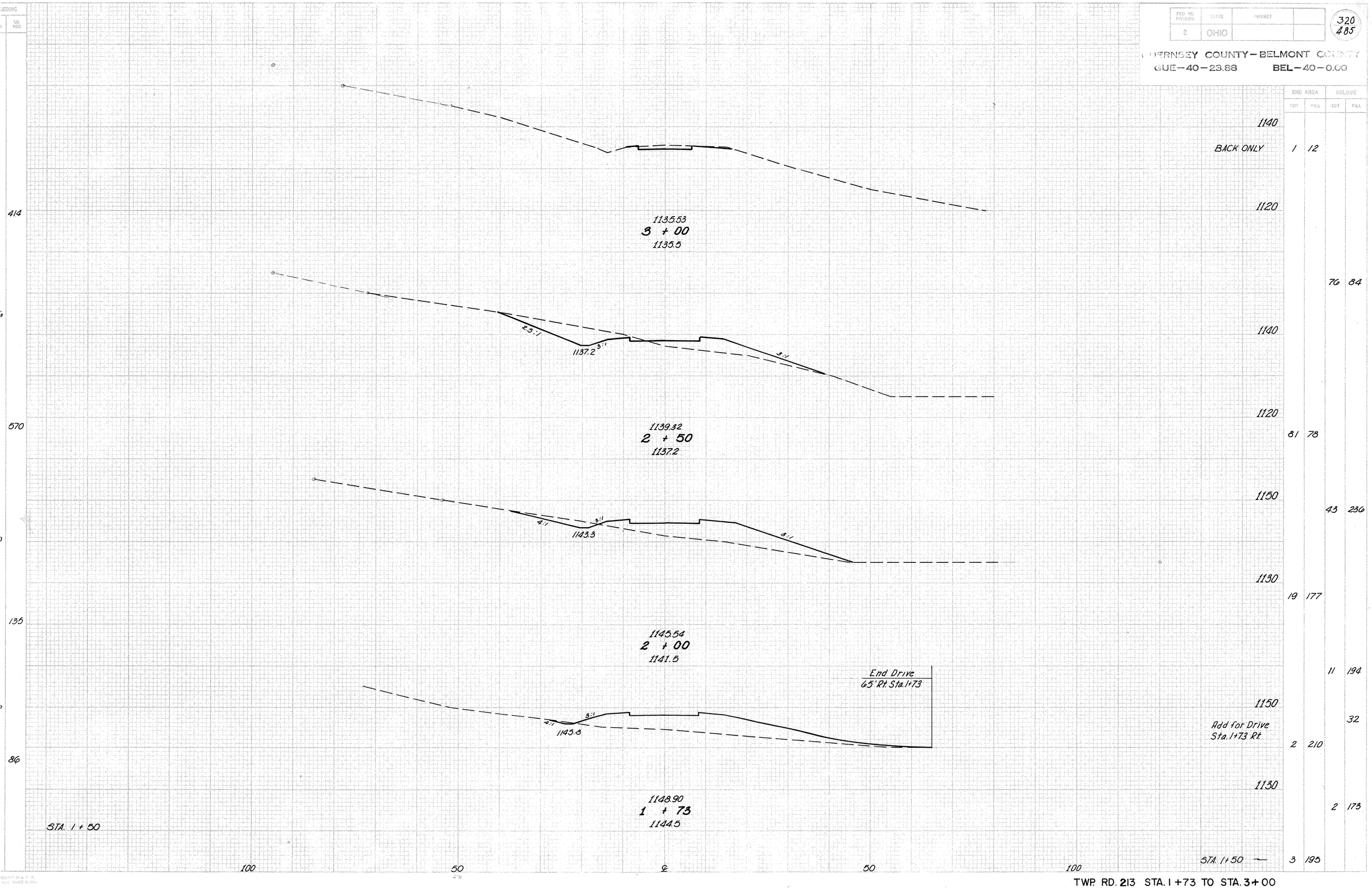
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
3	195		
		18	400
16	237		
		5	139
0	262		
		1	184
1	235		

TWP. RD 213 STA. 0 + 65 TO STA. 1 + 50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

320
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
BACK ONLY	1	12		
			76	84
	81	78		
			43	236
	19	177		
			11	194
Add for Drive Sta. 1+73 Rt.				32
	2	210		
			2	173
STA. 1+50	3	195		

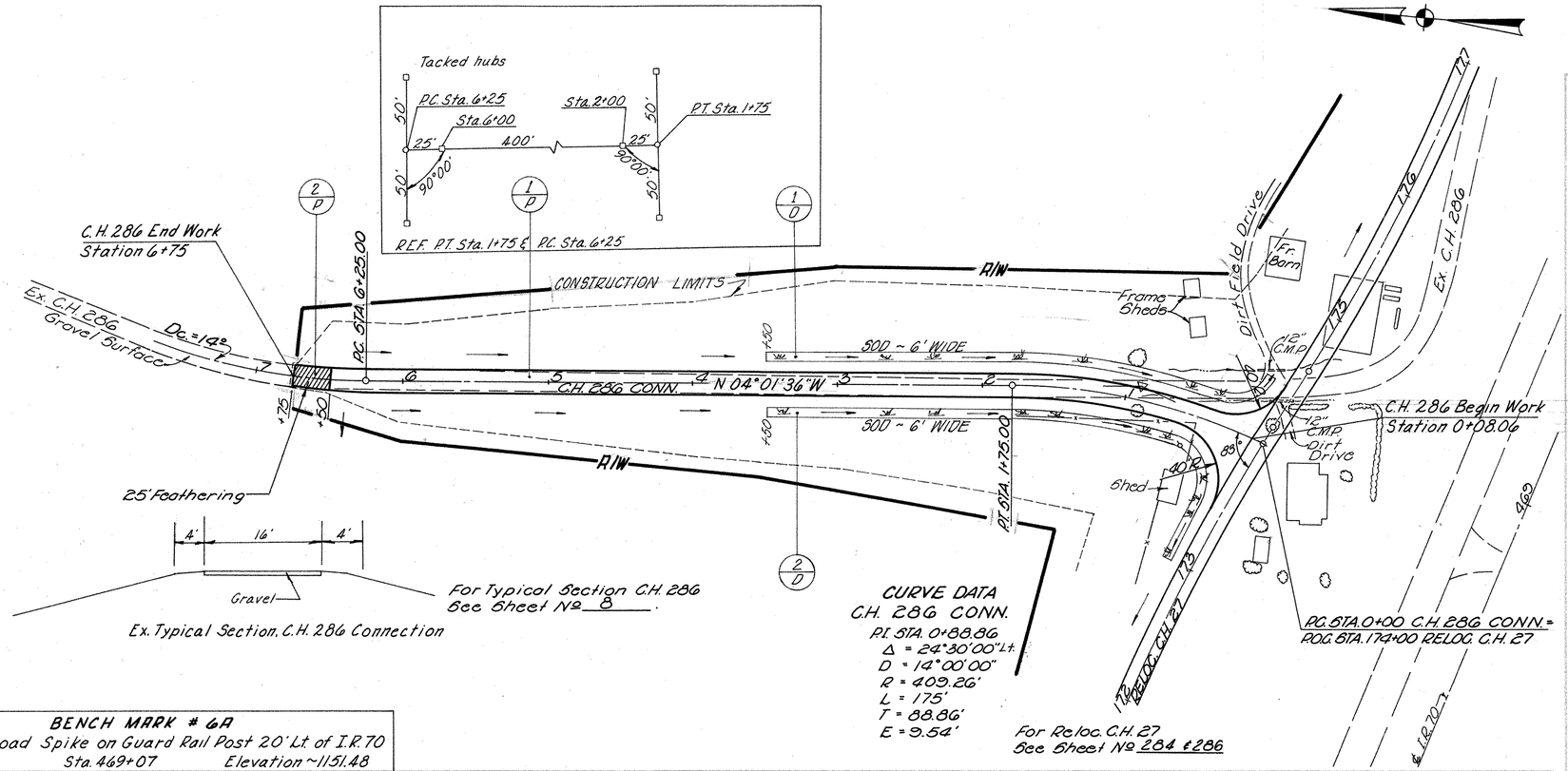
TWP. RD. 213 STA. 1 +73 TO STA. 3+00

GUERNSEY COUNTY GUE.-40-23.88 | BELMONT COUNTY BEL.40-0.00

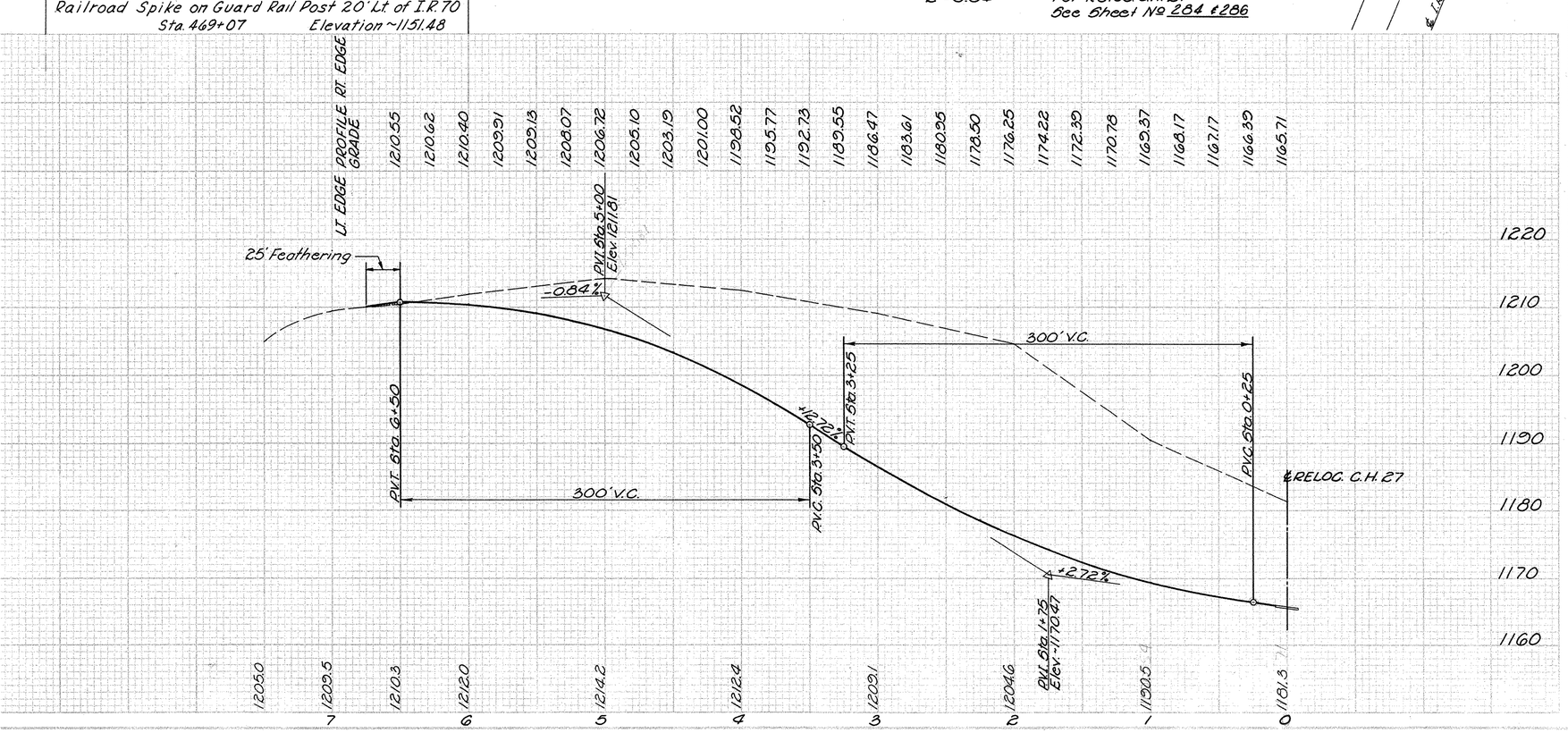
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

321
485

SEE SHEET NO.



BENCH MARK # 6A
Railroad Spike on Guard Rail Post 20' Lt. of I.R. 70
Sta. 469+07 Elevation ~1151.48



ESTIMATED QUANTITIES

REF NO.	STATION TO STATION		SIDE	B-19 ASPHALTIC AGGREGATE BASE COURSE	*B-35 ASPHALTIC CONCRETE LEVELING COURSE	T-30 BITUMINOUS PRIME COAT GALS.	T-35 ASPHALTIC CONCRETE FACE COURSE TYPE "1" C.Y.	T-9 STONE LINER DRAINS NO. 2 L.F.	L-10 SODDING S.Y.
				C.Y.	C.Y.				
1-D	0+08	~	6+50	290	60	494	43	260	
2-D	6+50	~	6+75	10	2	17	2		
1-D	0+04	~	3+50						240
2-D	0+20	~	3+50						274
TOTALS				300	62	511	45	260	514

* (85-00)

C.H. 286 CONNECTION

FED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

322
485

GUERNSEY COUNTY – BELMONT COUNTY

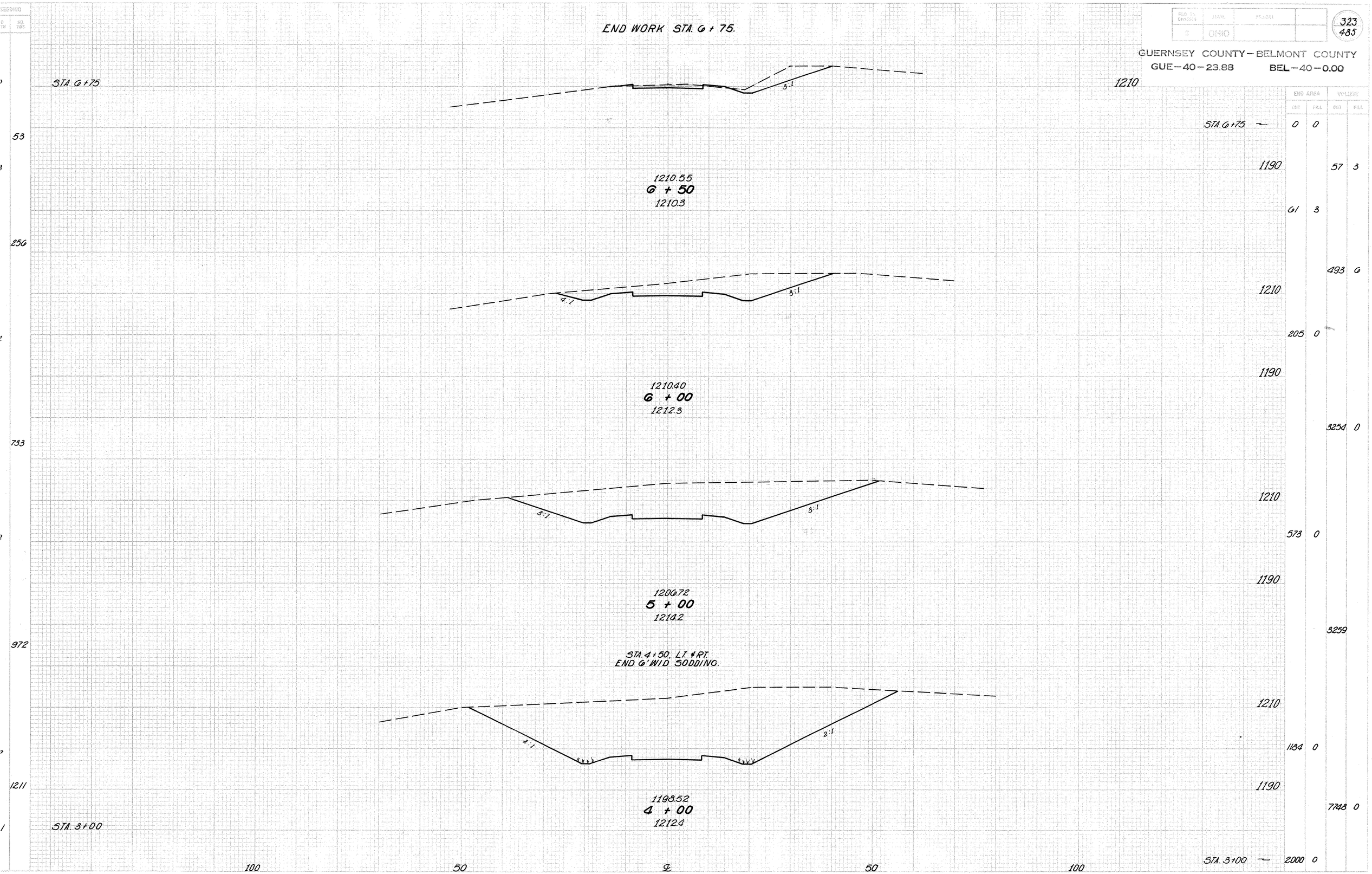
GUE–40–23.88 BEL–40–0.00

SEEDING		END AREA		VOLUMES	
END	SQ. YDS.	CUT	FILL	CUT	FILL
21		1210			
		2000			
		1190			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

END WORK STA. 6 + 75.



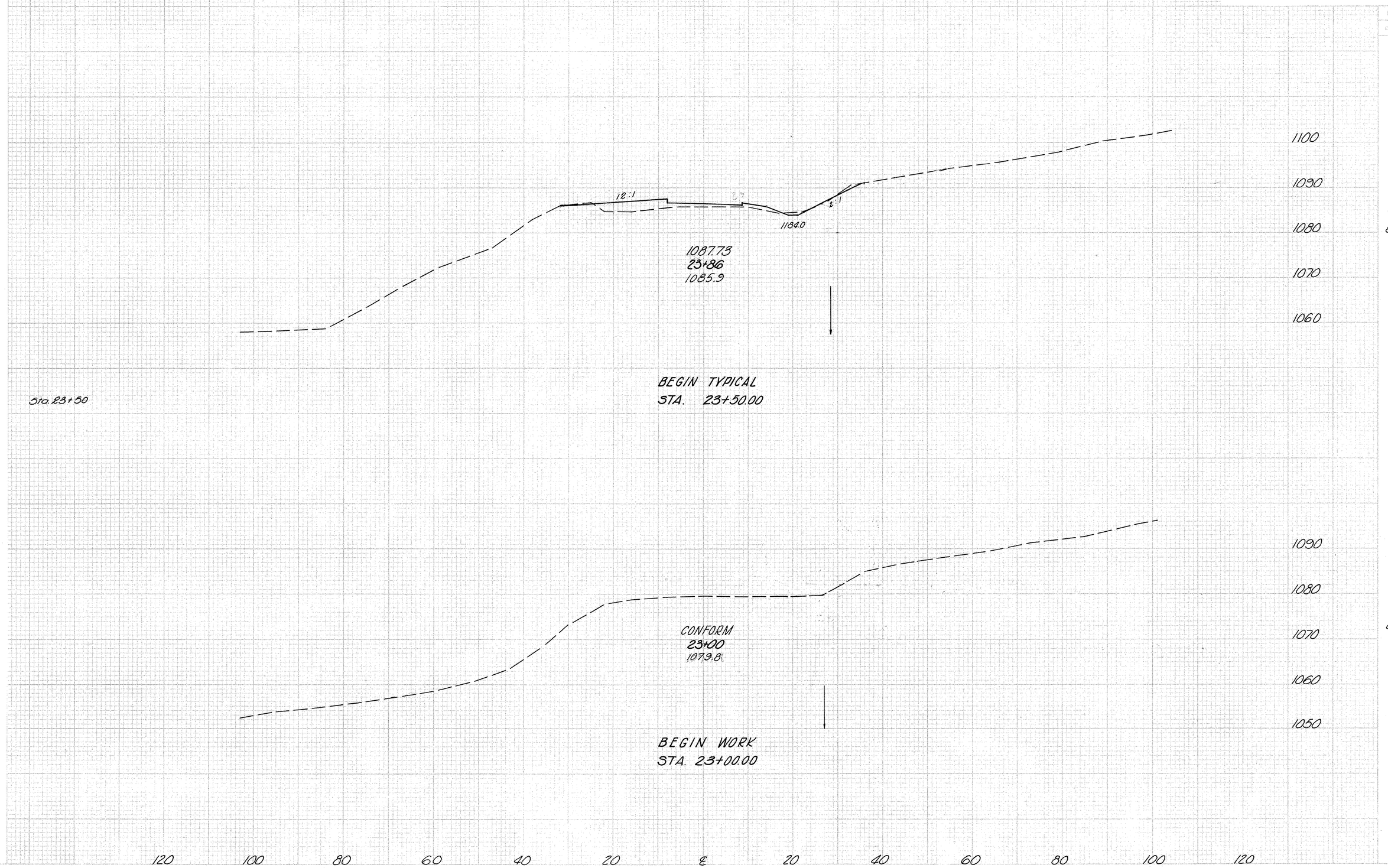
	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
STA. 6+75	0	0		
			57	3
	61	3		
			493	6
	205	0		
			3254	0
	573	0		
			3259	
	1184	0		
			7748	0
STA. 3+00	2000	0		

C.H. 286 CONNECTION STA. 4+00 TO STA. 6+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

324
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
8	49		
		13	78
0	0		

C.H. 202 RELOC. STA. 23+00 TO STA. 23+86

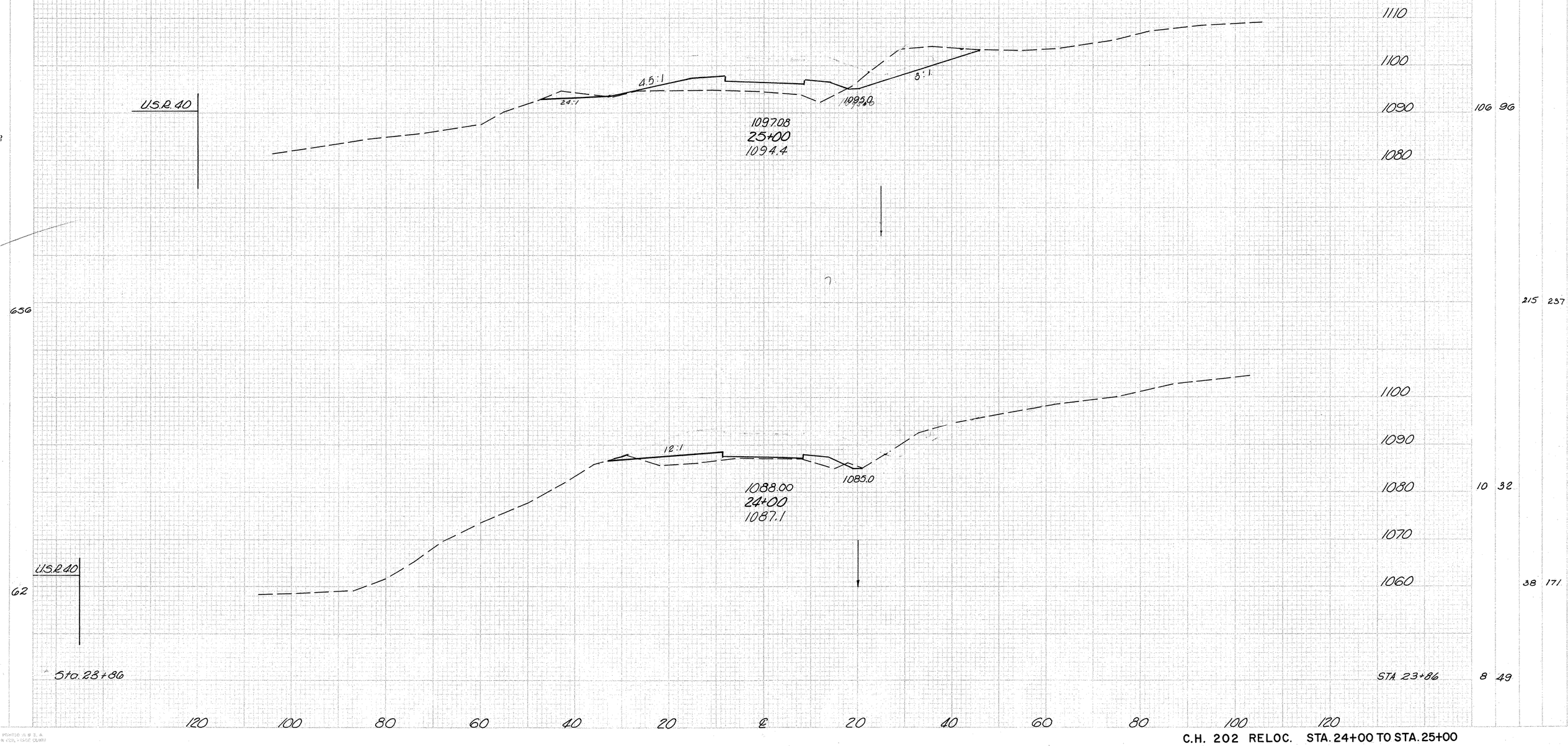
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

325
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



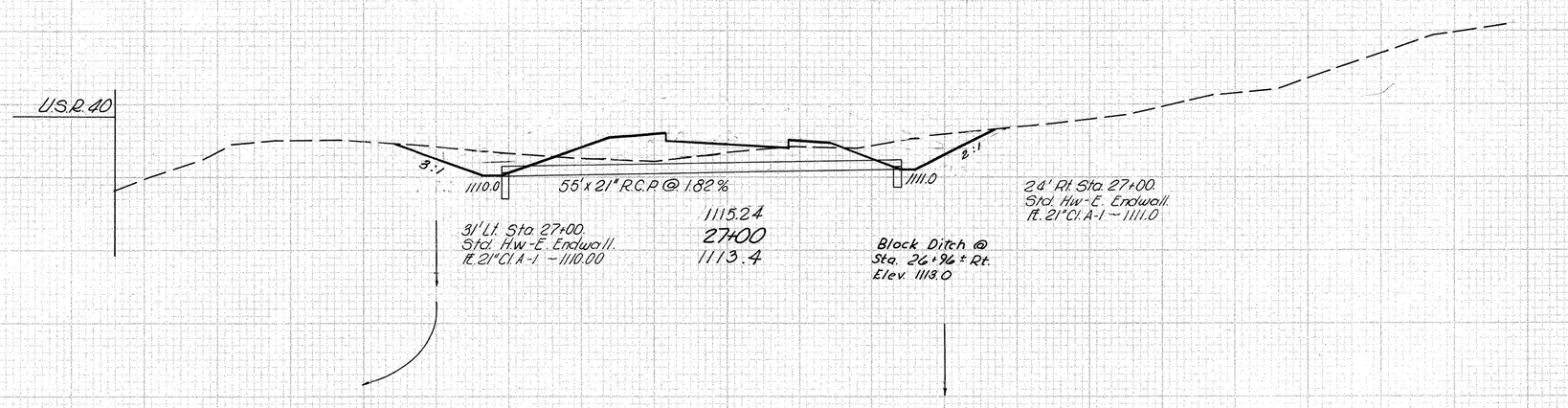
C.H. 202 RELOC. STA. 24+00 TO STA. 25+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

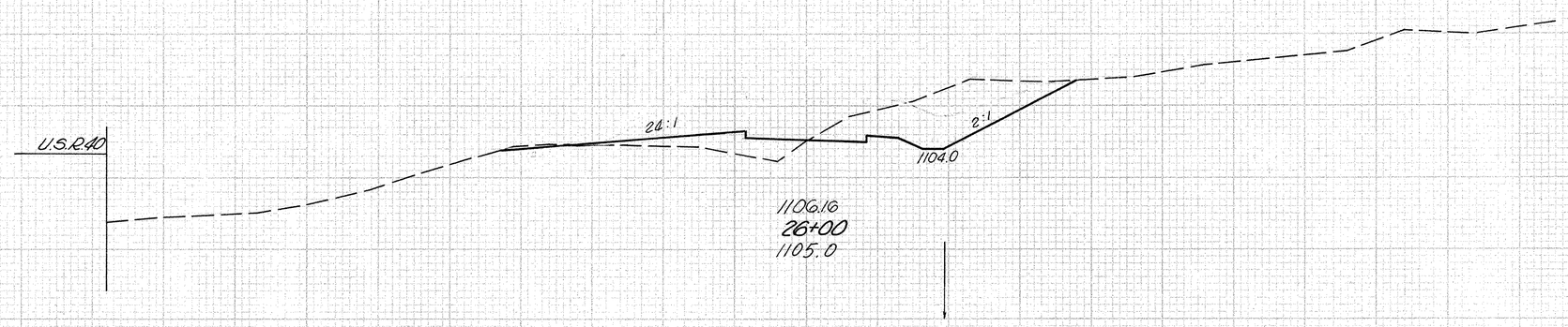
326
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



100 67



174 56

507 228

744

789

519 281

Sta. 25+00

STA 25+00

106 96

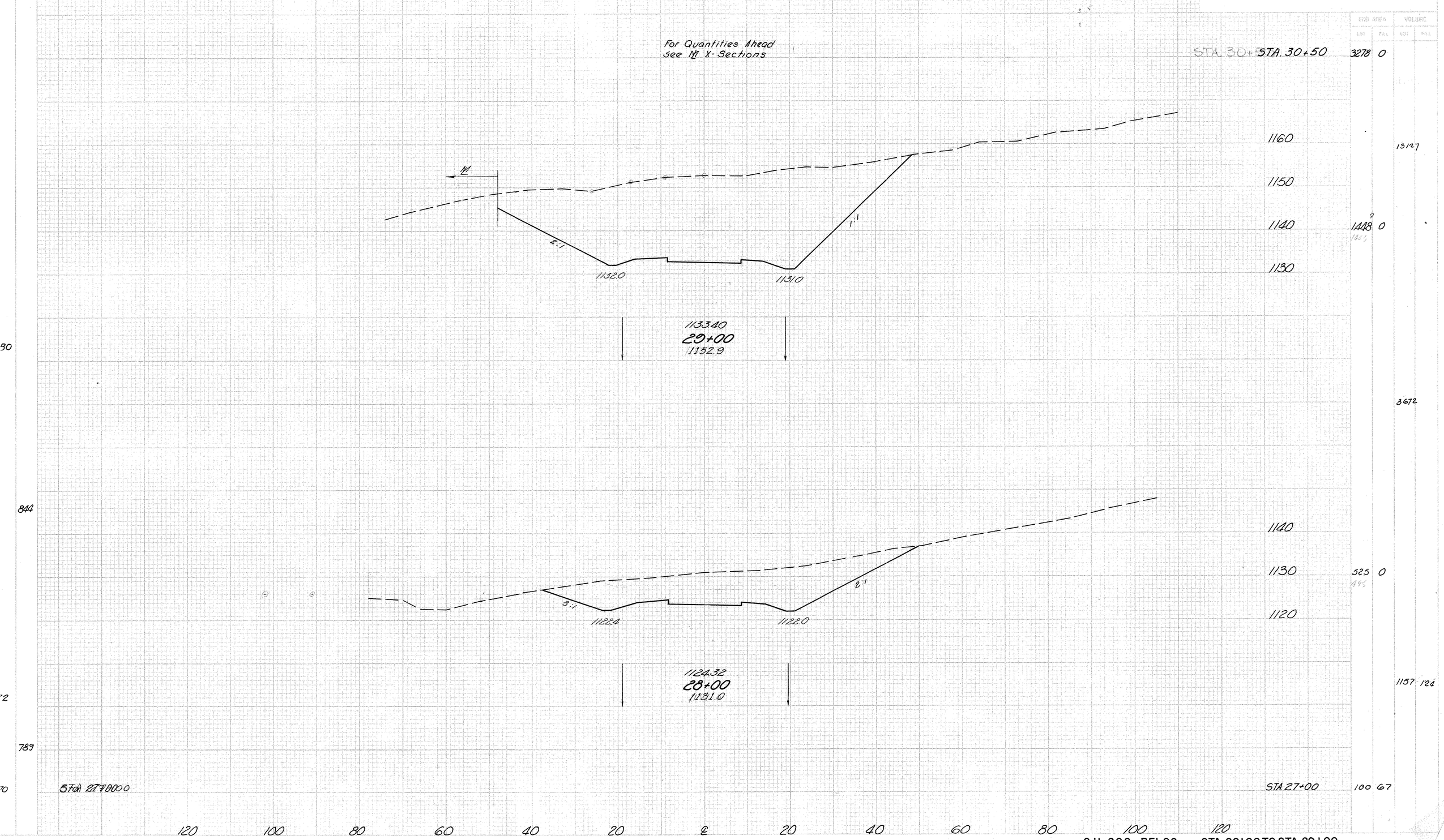
120 100 80 60 40 20 ℄ 20 40 60 80 100 120

C.H. 202 RELOC. STA. 26+00 TO STA. 27+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

327
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



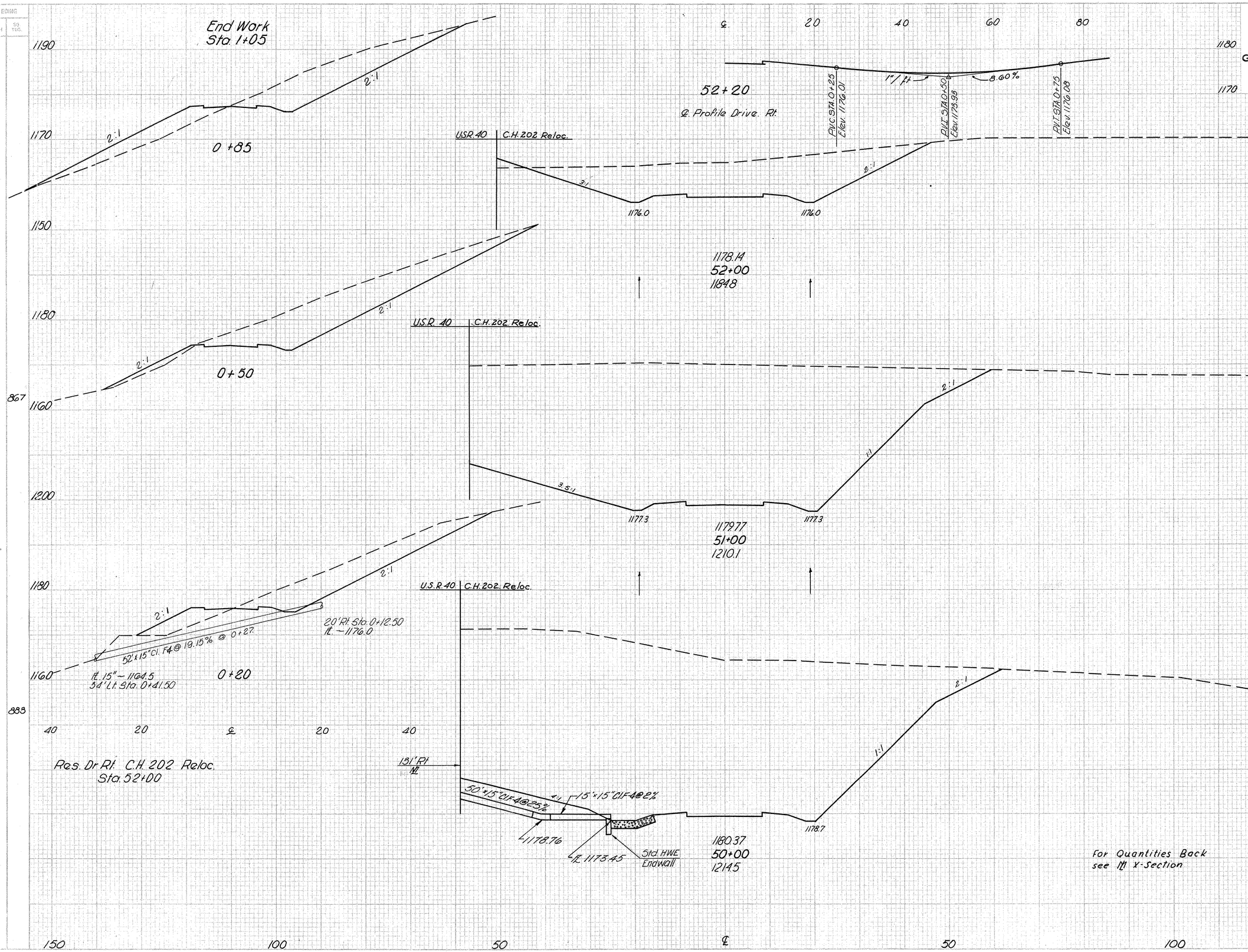
	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
STA. 30+50	3278	0		
			13127	
	1448	0		
			3672	
	525	0		
			1157	124
STA. 27+00	100	67		

C.H. 202 RELOC. STA. 28+00 TO STA. 29+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

328
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1190			825	181
	555	6		
1170				
			6321	11
1210				
	2858	0		
1190				
				11,774
1170				
1210			3500	
				11,565
1190	2745	0		
1170				

C.H. 202 RELOC. STA. 50+00 TO STA. 52+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

329
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL

U.S.R.40 | C.H. 202 Reloc.

2:1
1170.5
2:1
2:1
1136.0
1173.90
53+50
1141.2

U.S.R.40 | C.H.202 Reloc.

2:1
1170.7
1150.5
1175.49
53+00
1150.1

U.S.R.40 | C.H.202 Reloc.

2:1
2:1
2:1
2:1
1170.9
1166.5
1176.94
52+50
1164.8

1180
1170
1160
1150
1140 9 3152
1180
1170
1160
1150 5 2060
13 4826
1180
1170
1160 5 945
10 2783
519 880
STA. 52+00 555 6

STA. 52+000

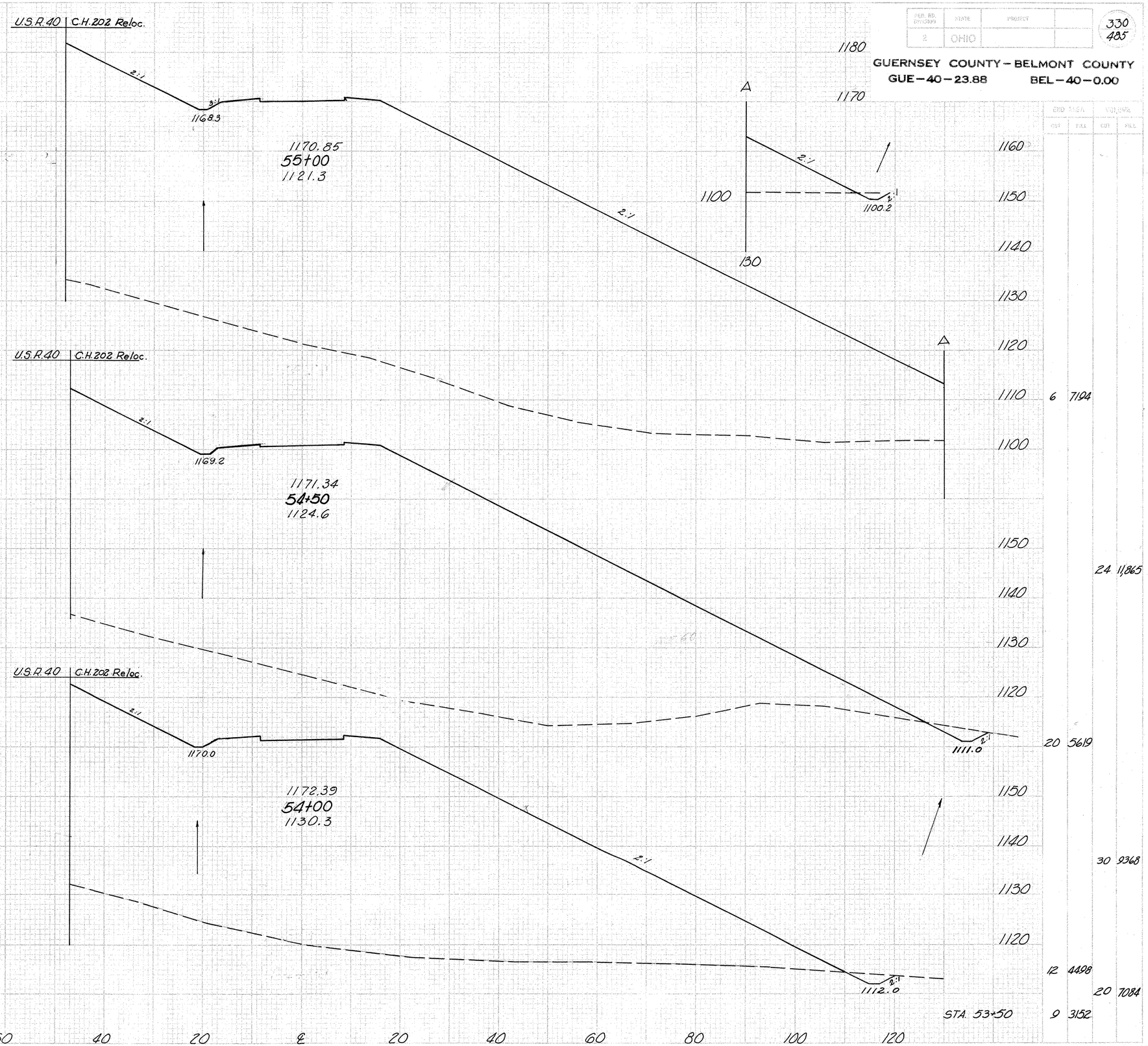
120 100 80 60 40 20 ℄ 20 40 60 80 100 120

C.H. 202 RELOC. STA. 52+50 TO STA. 53+50

PER. RD. DIVISION	STATE	PROJECT	
2	OHIO		

330
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



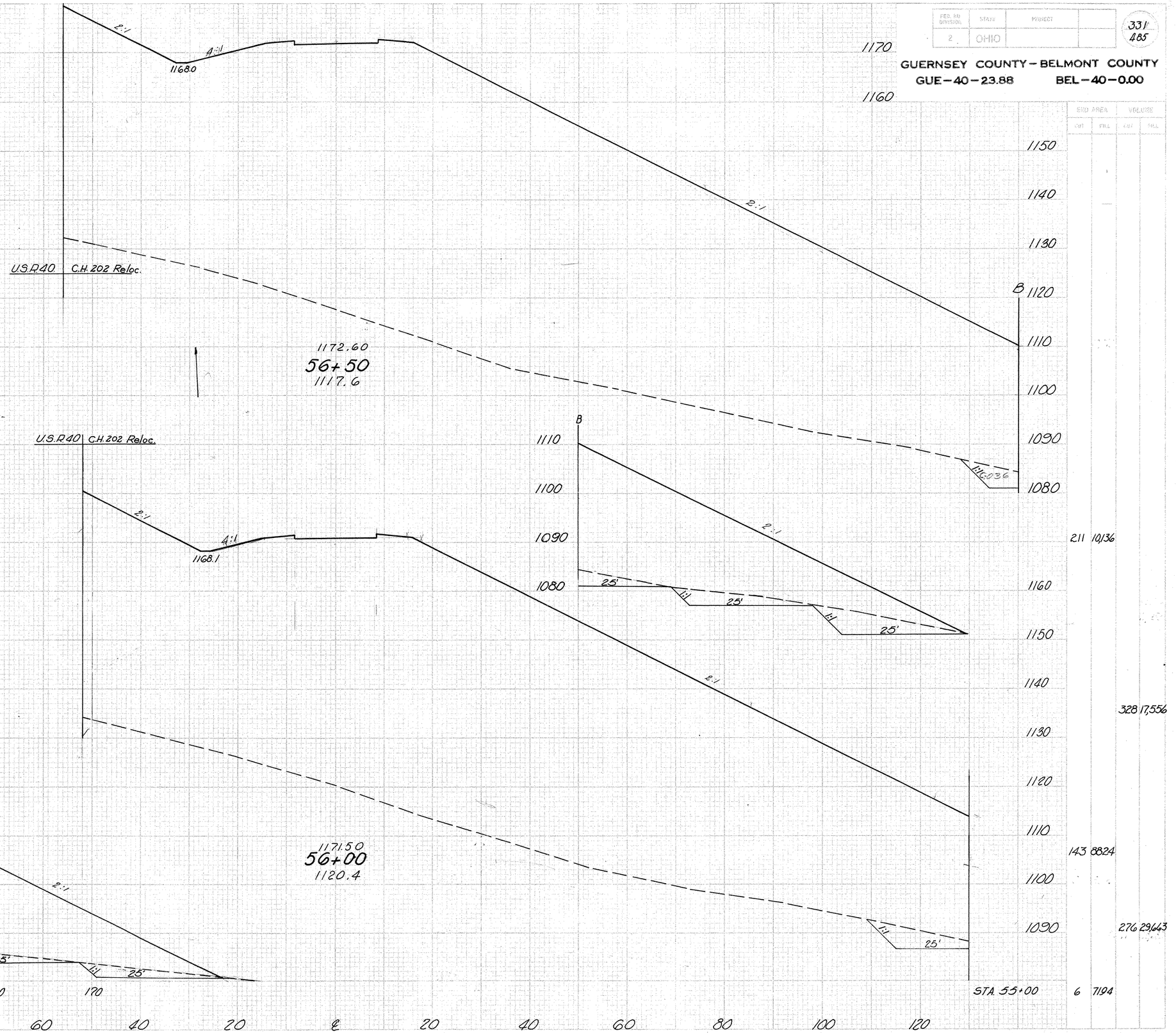
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
6			7104	
24	11,865			
20	5619			
30	9368			
12	4498			
20	7084			
9	3152			

C.H. 202 RELOC. STA. 54+00 TO STA. 55+00

FED. RD DIVISION	STATE	PROJECT		331 485
2	OHIO			

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



C.H. 202 RELOC. STA. 56+00 TO STA. 56+50

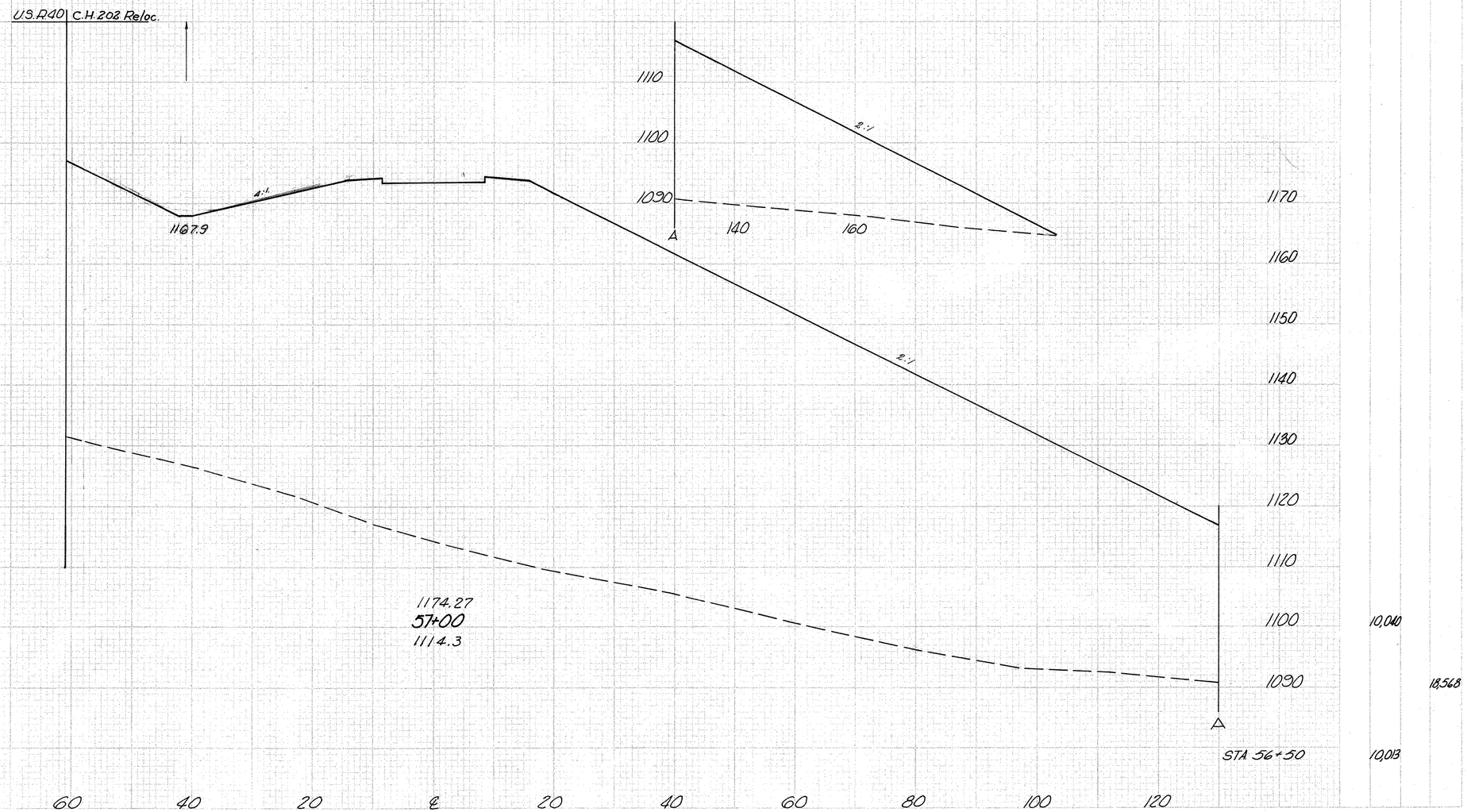
FED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

332
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



10,040

18,568

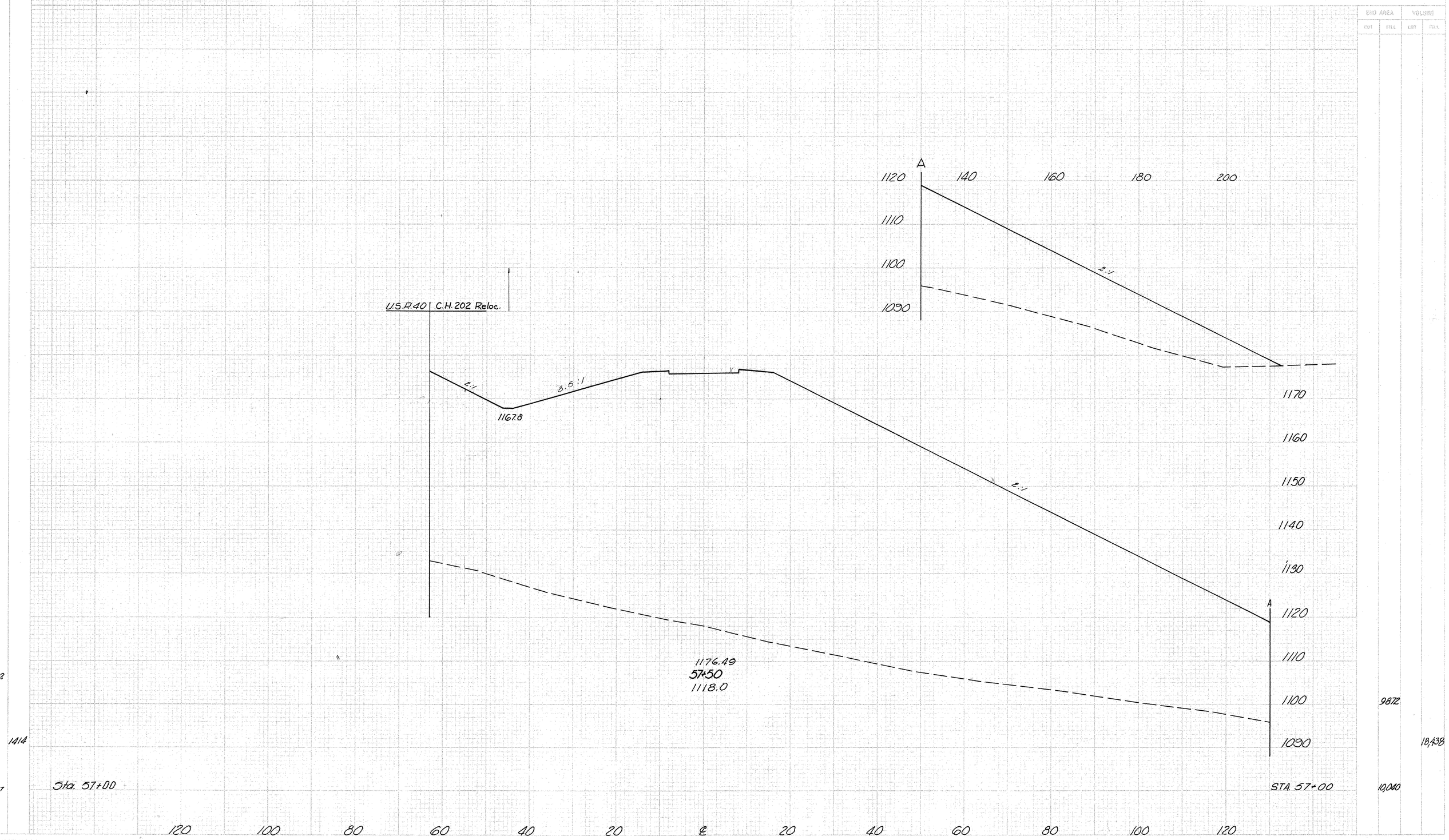
10,013

C.H. 202 RELOC. STA. 57+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

333
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



C.H. 202 RELOC. STA. 57+50

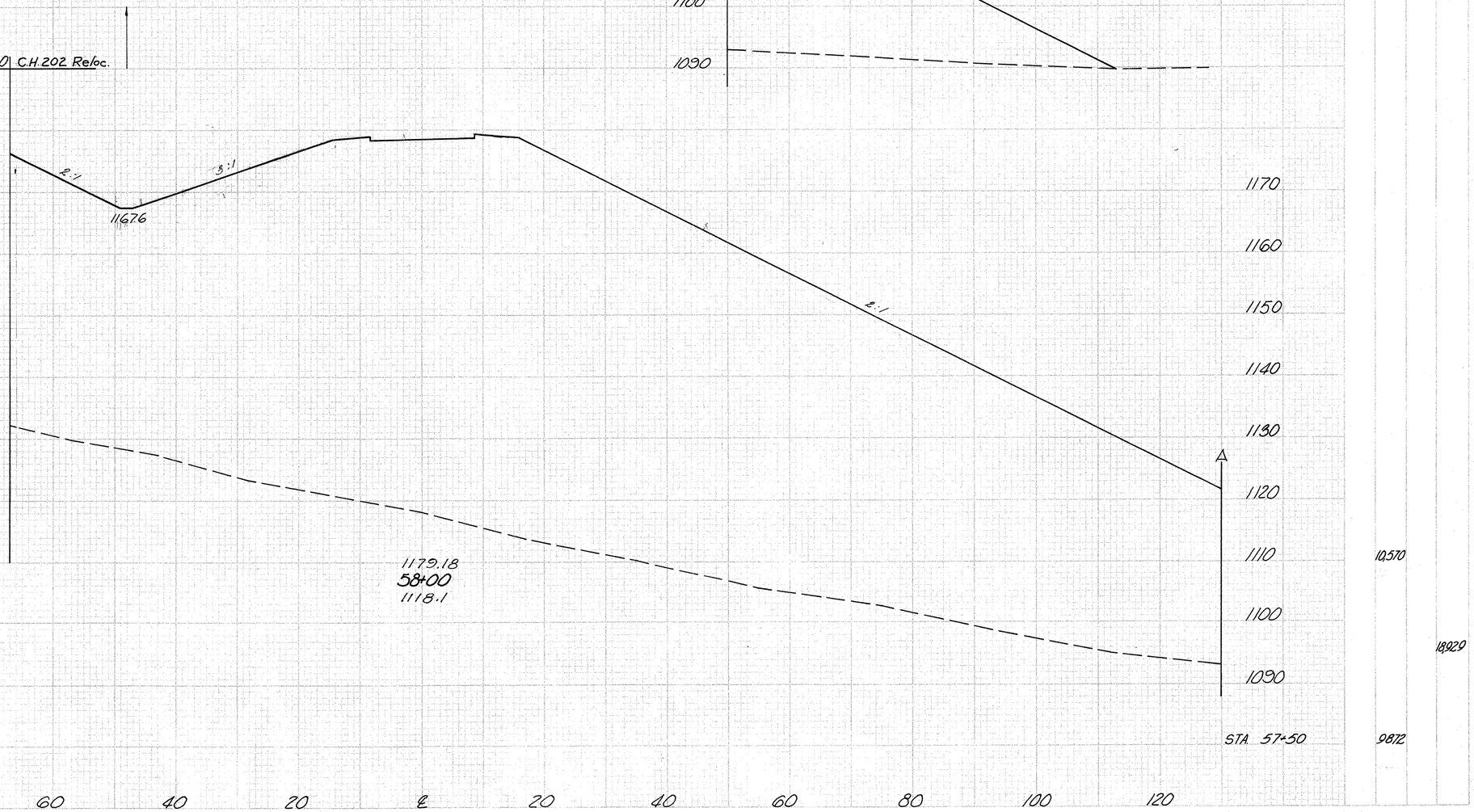
FED RD DIVISION	STATE	PROJECT	
2	OHIO		

334
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL

US.R.40 C.H.202 Reloc.



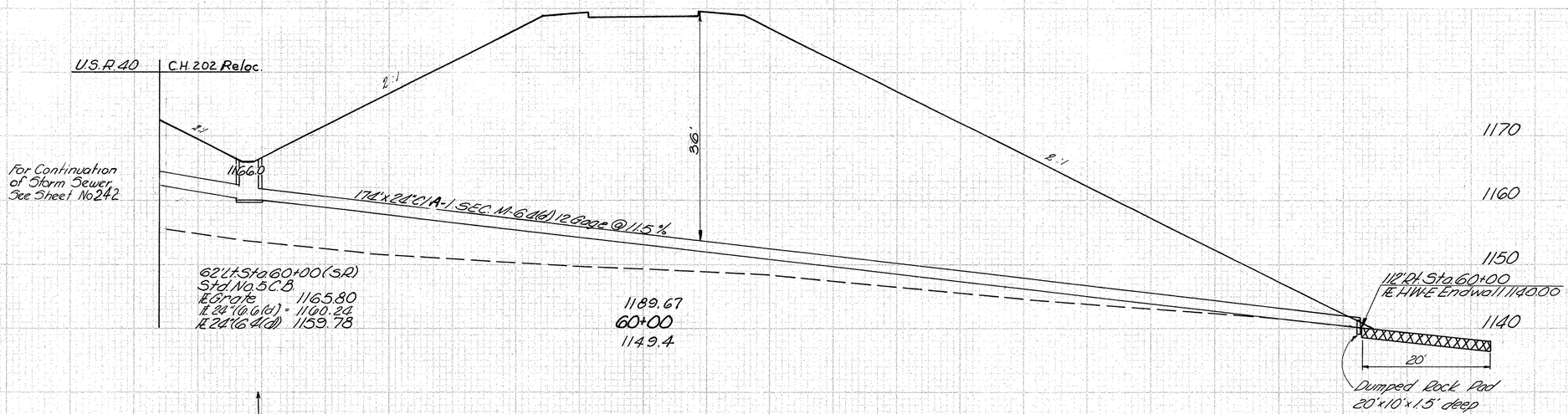
C.H. 202 RELOC. STA.58+00

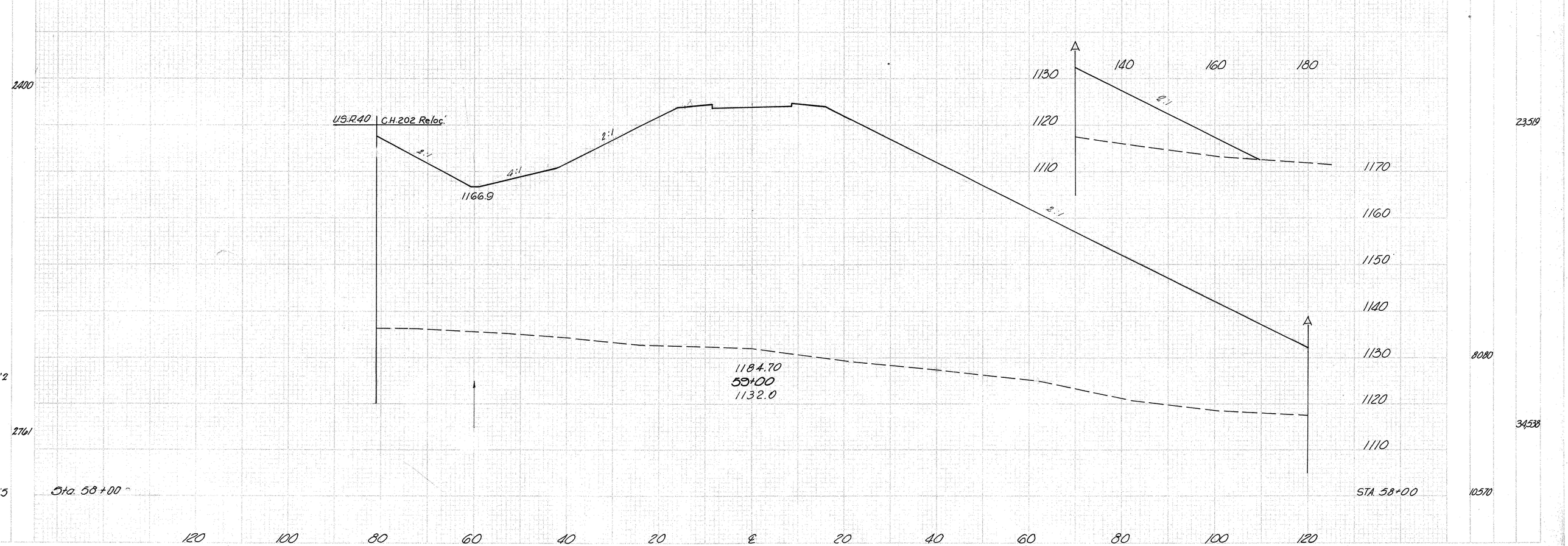
FED. HIG. DIVISION	STATE	PROJECT	
2	OHIO		

335
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL





C.H. 202 RELOC. STA. 59+00 TO STA. 60+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

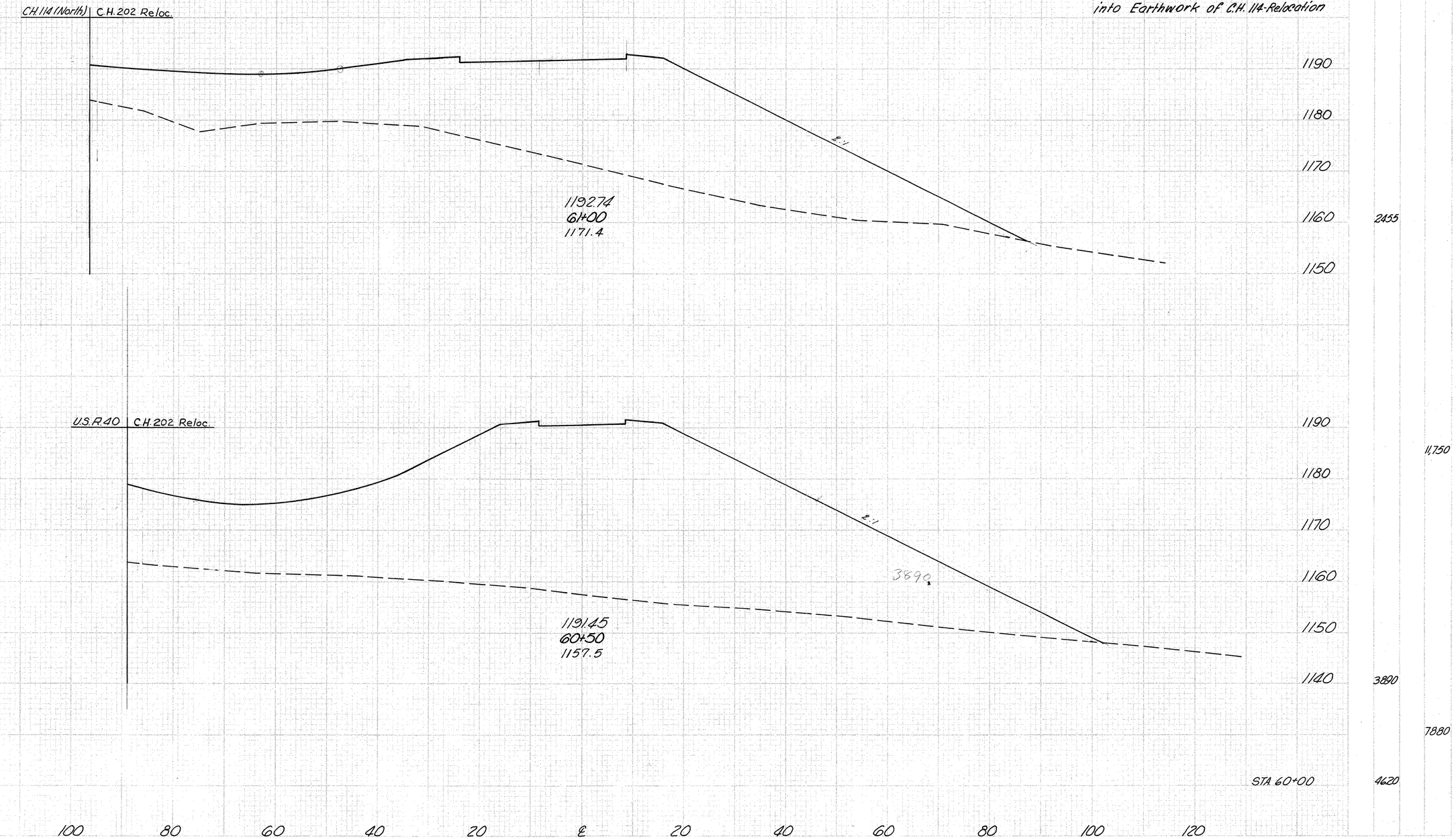
336
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL

NOTE:
Earthwork between STA. 61+00 and STA. 61+41.51 included into Earthwork of C.H. 114-Relocation



C.H. 202 RELOC. STA.60+50 TO STA.61+00

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

337
485

P.K. IN 12" LOCUST
P.K. IN 3" ASH
P.K. IN 10" LOCUST
17.80'
23.00'
21.30'
P.O.T.
F. P.O.T. STA. 6+24.00

P.K. IN 8" WILD CHERRY
24.00'
P.K. IN 6" LOCUST
29.31'
30.29'
P.C.
P.K. IN 6" LOCUST
REF. P.C. STA. 10+57.96

P.K. IN 10" LOCUST
31.27'
25.74'
P.I.
P.K. IN 10" LOCUST
37.06'
P.K. IN 4" WILD CHERRY
REF. P.I. STA. 11+44.00

P.K. IN 4" LOCUST
6.54'
P.T.
P.K. IN 5" LOCUST
12.35'
16.90'
P.K. IN 4" LOCUST
REF. P.T. STA. 12+14.20

P.K. IN 5" LOCUST
P.K. IN 4" LOCUST
23.82'
43.59'
P.K. IN 6" LOCUST
32.22'
P.O.T.
REF. P.O.T. STA. 12+32.13

P.O.C. STA. 37+25.00 & CO. HWY. 202 =
P.O.T. STA. 12+32.13 & CEMETERY RD.
N. 14° 11' 21" E.
90° TO TANGENT.
CEMETERY ROAD END WORK
STA. 12+24.13

BEGIN WORK
STA. 6+25.00.

+50 END 25' TAPER
BEGIN TYPICAL.

P.O.T. STA. 8+00 & CEMETERY RD. =
P.O.T. STA. 0+00 & RES. DRIVE, RT.

R/W

R.C.C. STA. 34+41.21

CO. HWY. 202

P.T. STA. 12+14.20

P.C. STA. 10+57.96

70.01'
140' L
66.60

50' R.
64.77
79.11

BEGIN T-35 &
END B-19 TYPICAL

RELOCATION

N. 73° 52' 01" E.

CEMETERY ROAD RELOCATION

EXISTING CEMETERY ROAD

EXISTING CEMETERY ROAD (TO BE ABANDONED)

FIELD DRIVE
TO BE ABANDONED

GRAVEL SURFACE

HEADSTONES

CEMETERY

12'

R/W

SHED

GARAGE

SHED

END WORK
STA. 0+77

- FOR TYPICAL SECTION OF RES. DR. – SEE MISC. DETAIL SHEET NO. 4 37.
- FOR PROFILE OF RES. DRIVE – SEE SHEET NO. 338

INDICATES PAV'T REMOVAL

- FOR TYPICAL SECTIONS OF CEMETERY RD. & CO. HWY. 202 RELOC. SEE SHEET NO. 8
- FOR PLAN OF CO. HWY. 202 RELOC. – SEE SHEET NO. 44.
- FOR PROFILE OF CO. HWY. 202 RELOC. – SEE SHEET NO. 45.

TYPICAL SECTION
EXISTING CEMETERY ROAD
14'
AGGREGATE SURFACE

CURVE DATA
P.I. = STA. 11+44.00
Δ = 59° 40' 40" LT.
D = 38° 11' 50"
R = 150.00'
L = 156.24'
T = 86.04'
E = 22.93'

BENCH MARK #16
CHISELED × ON CONC. @ C.B. (U.E. 1156/1) – 193' LT. STA. 165+15 – ELEV. 1156.07

	LT. EDGE OF PAV'T.	PROFILE GRADE	RT. EDGE OF PAV'T.
	CONFORM	CONFORM	CONFORM
6		1214.85	
12.7 +25		1216.60	
1215.3		1217.84	
1220.3		1218.57	
1225.0		1218.79	
1228.0		1218.52	
1229.1 +41		1217.73	
1226.6		1216.43	
1222.4		1210.52	
1218.2	1202.05	1202.30	1202.09
12.14.7	1.19999	1200.24	1200.17
1214.1 +72	1197.94	1198.19	1198.26
1213.8 +86	1195.89	1196.14	1196.35
1213.0	1194.83	1194.08	1194.33
1212.2 +15	1191.77	1192.02	1192.27
1211.0	1189.72	1189.37	1190.22
12.05.5	1187.85	1188.10	1188.35
1201.69 +33	1186.97	1187.17	1187.37
		1187.74	
		1187.56	

INDICATES ELEVATION ARE 8'0" RT. OR LT. OF ℄

+32.13

P.V.I. STA. 7+50
ELEV. ~ 1222.85
+8.00%
P.V.C. STA. 6+50
200' V.C.
P.V.T. STA. 8+50
-8.22%
60' V.C.
P.V.C. STA. 11+60
ELEV. ~ 1189.15
P.V.T. STA. 12+20
ELEV. ~ 1187.16
+1.64%
P.V.I. STA. 11+90
ELEV. ~ 1186.68
℄ CO. HWY. 202 RELOCATION

1220
1210
1200
1190
1180

6 7 8 9 10 11 12 13

ESTIMATED QUANTITIES

SEE SHEET NO.	STATION TO STATION	SIDE		B-19 8" A66 BASE COURSE CU YD	E-8 PAV'T RE-MOVAL AS PER PLAN SQ YD	I-1 PIPE CL A SSC-1 12" LIN FT
1-DW	8+00	RT.		33		
1-55	11+88	RT & LT			107	66
1-R	11+50	RT.				
				33	107	66

CEMETERY ROAD RELOCATION STA. 6+25.00 TO STA. 12+32.13

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

338
485

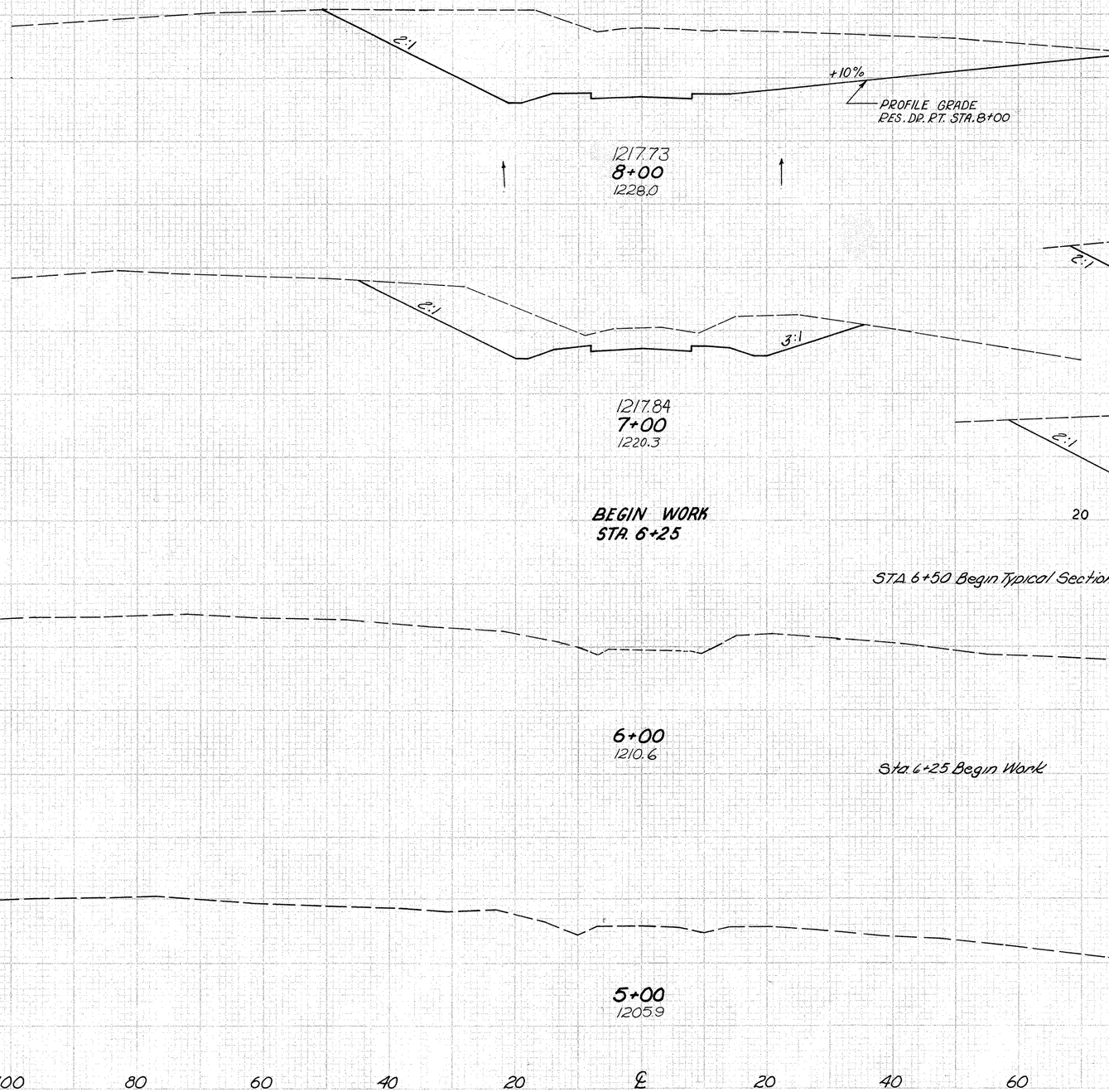
GUERNSEY COUNTY – BELMONT COUNTY

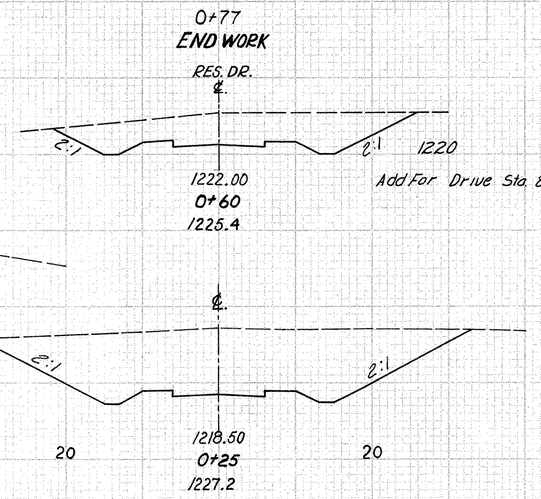
GUE – 40 – 23.88 **BEL – 40 – 0.00**

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1240				
1220				
	1877	0		
1200				
			4119	0
			670	
1220				
	347	0		
1200			483	0
1220	0	0		
1200				
1210				
1190				

739

271





STA. 6+50 Begin Typical Section

Sta. 6+25

Sta. 6+25 Begin Work

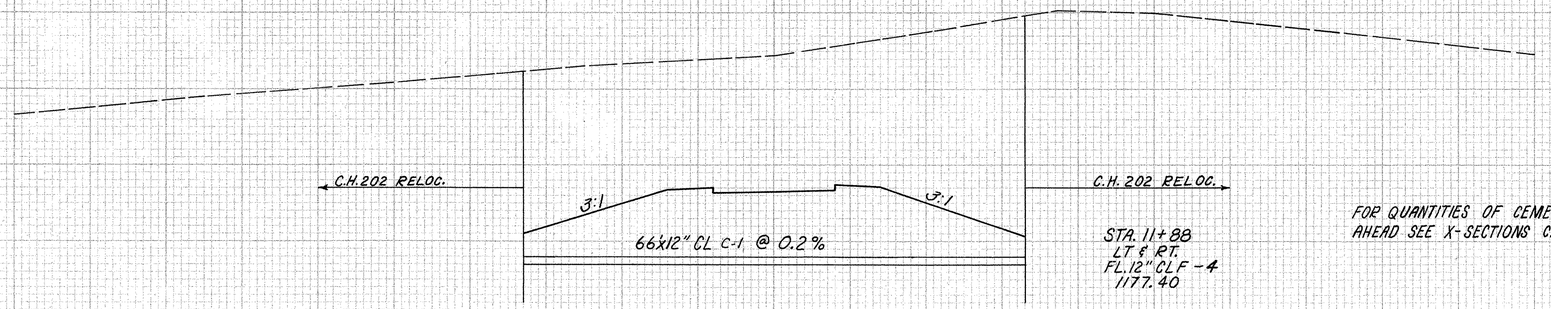
RELOC. CEMETERY RD. STA. 5+00 TO STA. 8+00

FED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

339
485

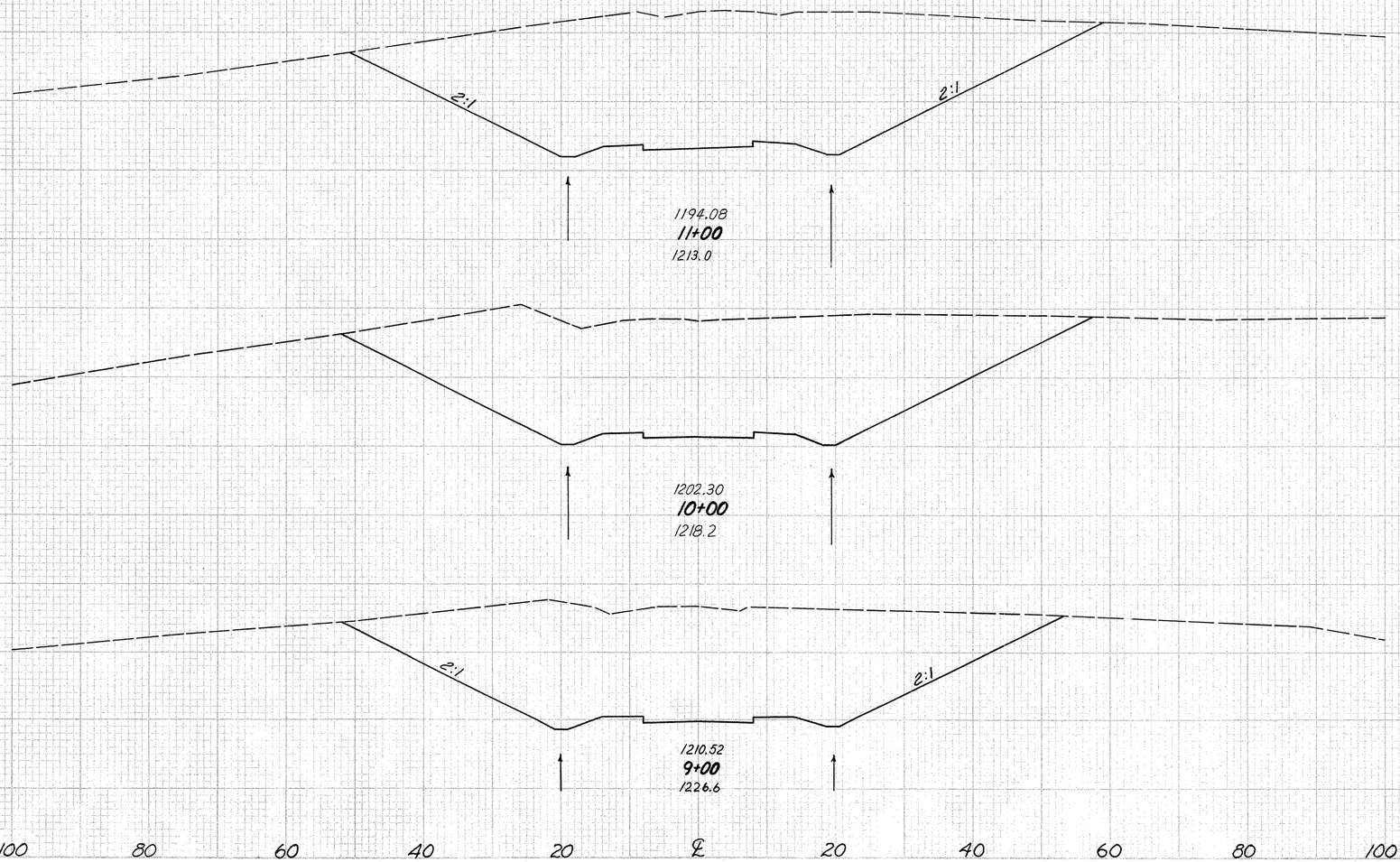
GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

END WORK
12+24.13



FOR QUANTITIES OF CEMETERY RD. RELOC.
AHEAD SEE X-SECTIONS C.H. 202 RELOC.

1187.17
12+00
1205.5



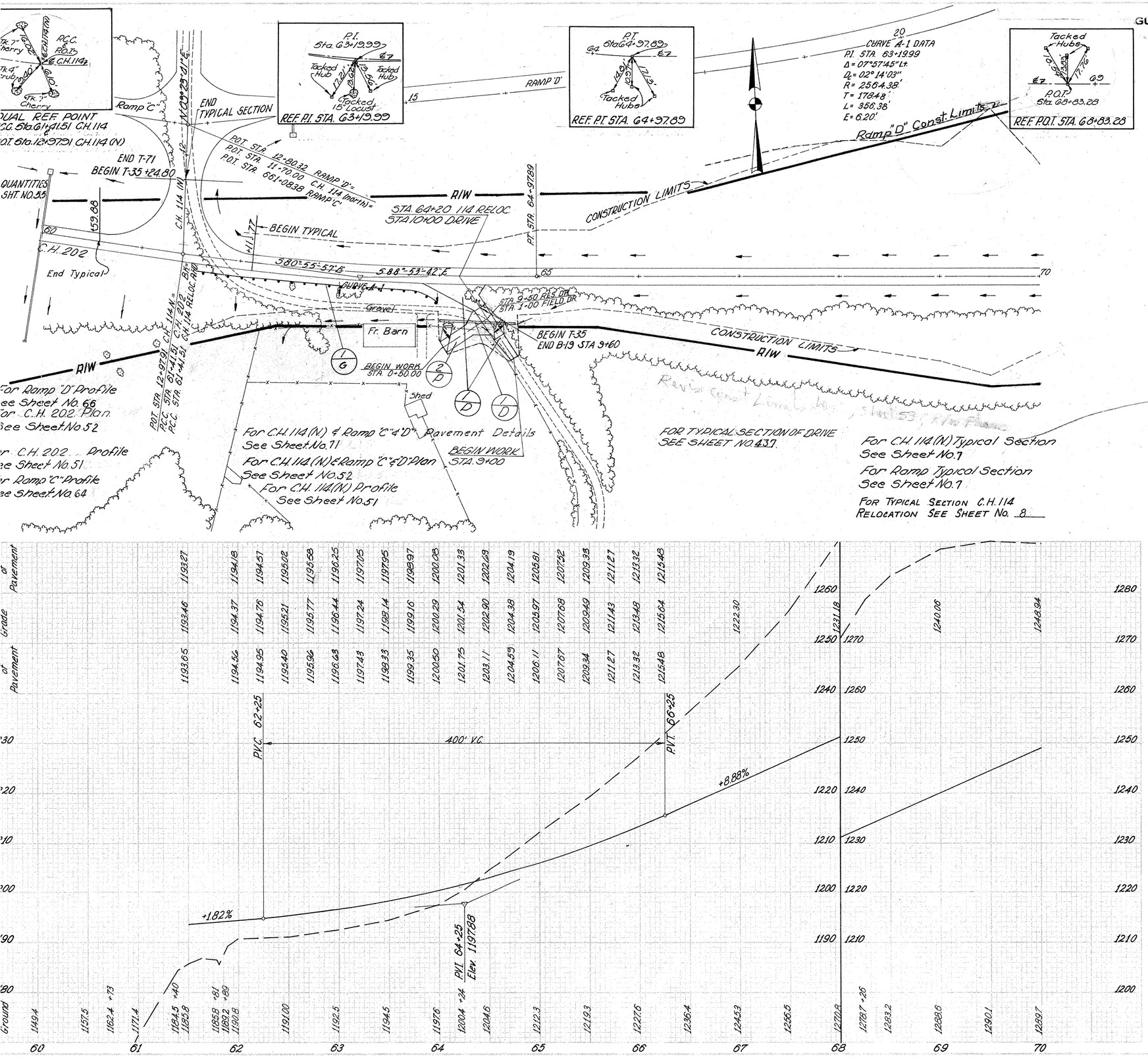
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1200	1332	0		
1190				
1180			5248	0
1220	1502	0		
1200			5354	0
1230				
1210	1389	0		
1240			4960	0
1220	1289	0		
1200			5863	0
	1877	0		

RELOC. CEMETERY RD. STA. 9+00 TO STA. 12+00

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

340
485



ESTIMATED QUANTITIES

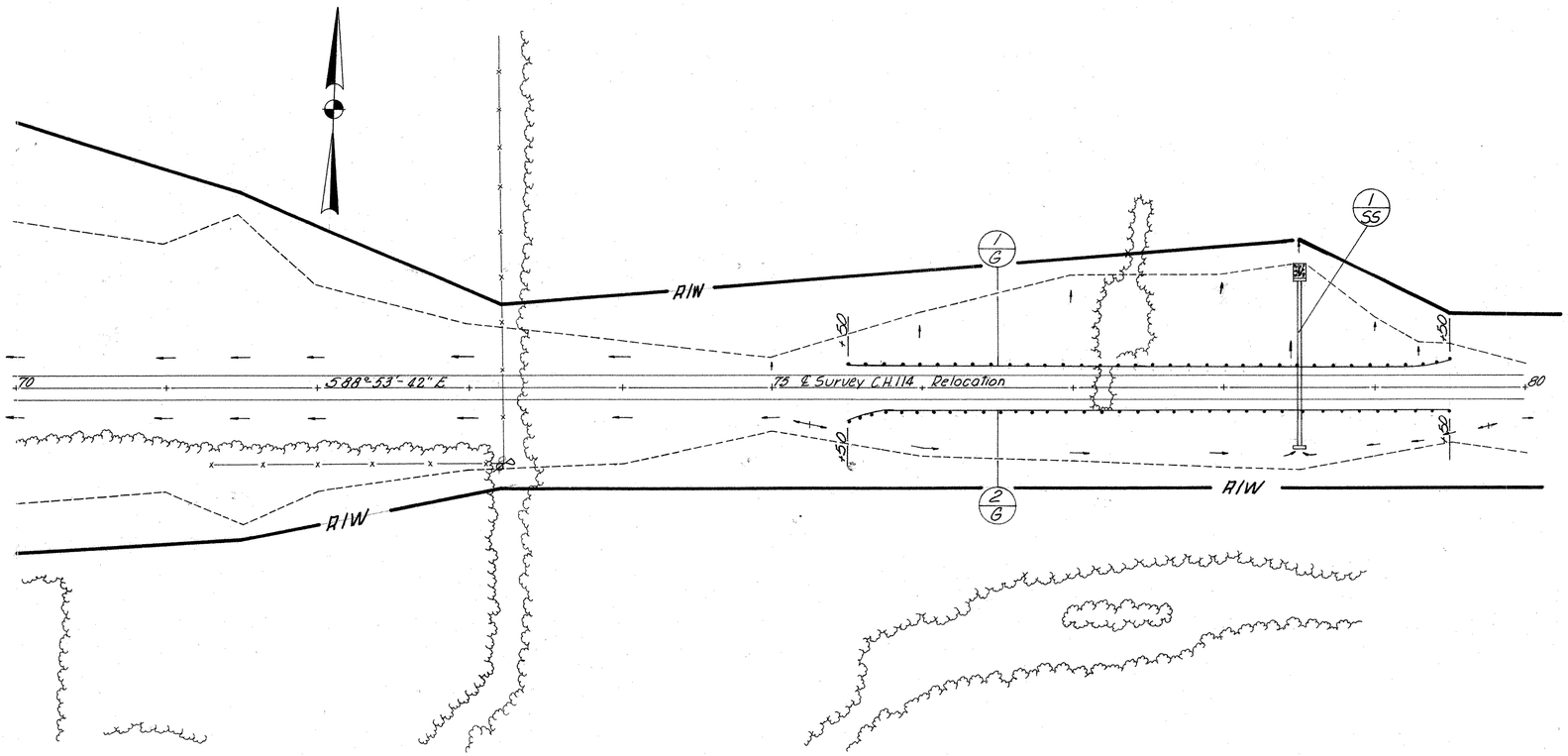
REF. NO.	STATION TO STATION	SIDE	T-30 BIT. PRIME COAT	T-15 GUARD RAIL STD. TYPE DEEP	T-35 ASPHALTIC CONCRETE SURFACE COURSE	B-19 AGG. BASE COURSE	B-19 AGG. BASE COURSE	B-19 AGG. BASE COURSE	I-1 CLF4
			GALS.	LIN. FT.	2" TYPE "C" CU. YDS.	5" CU. YDS.	8" CU. YDS.	6" CU. YDS.	15" L.F.
1P	60+20	RT.	53		?	19	17		
2P	64+00	RT.						17	
1D	64+00 ~ 64+76	RT.							76'
1G	61+50 ~ 64+00	RT.		250					
	Subtotals		53	250	?	19	17	17	76

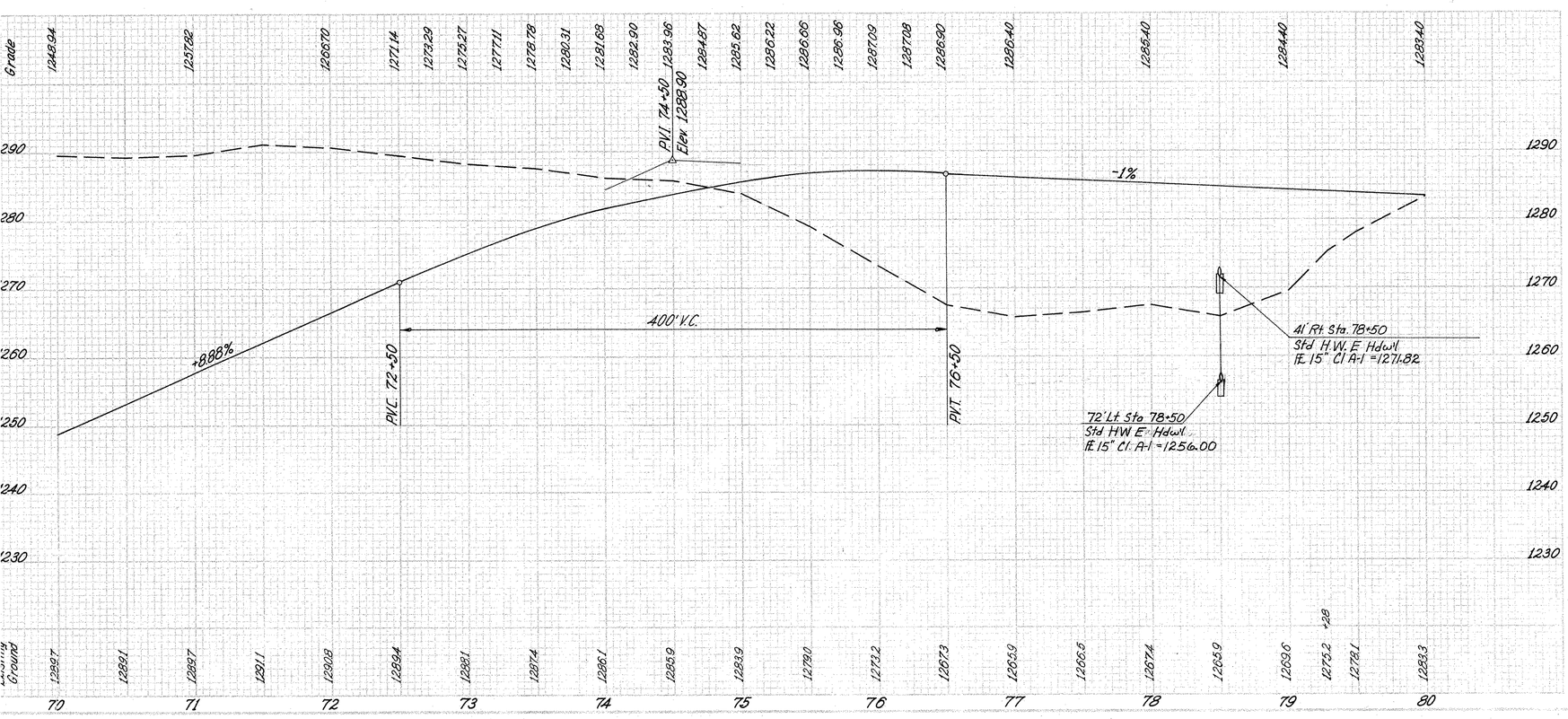
C.H. 114 Relocation Sta. 61+41.51 to Sta. 70+00

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

341
485





ESTIMATED QUANTITIES

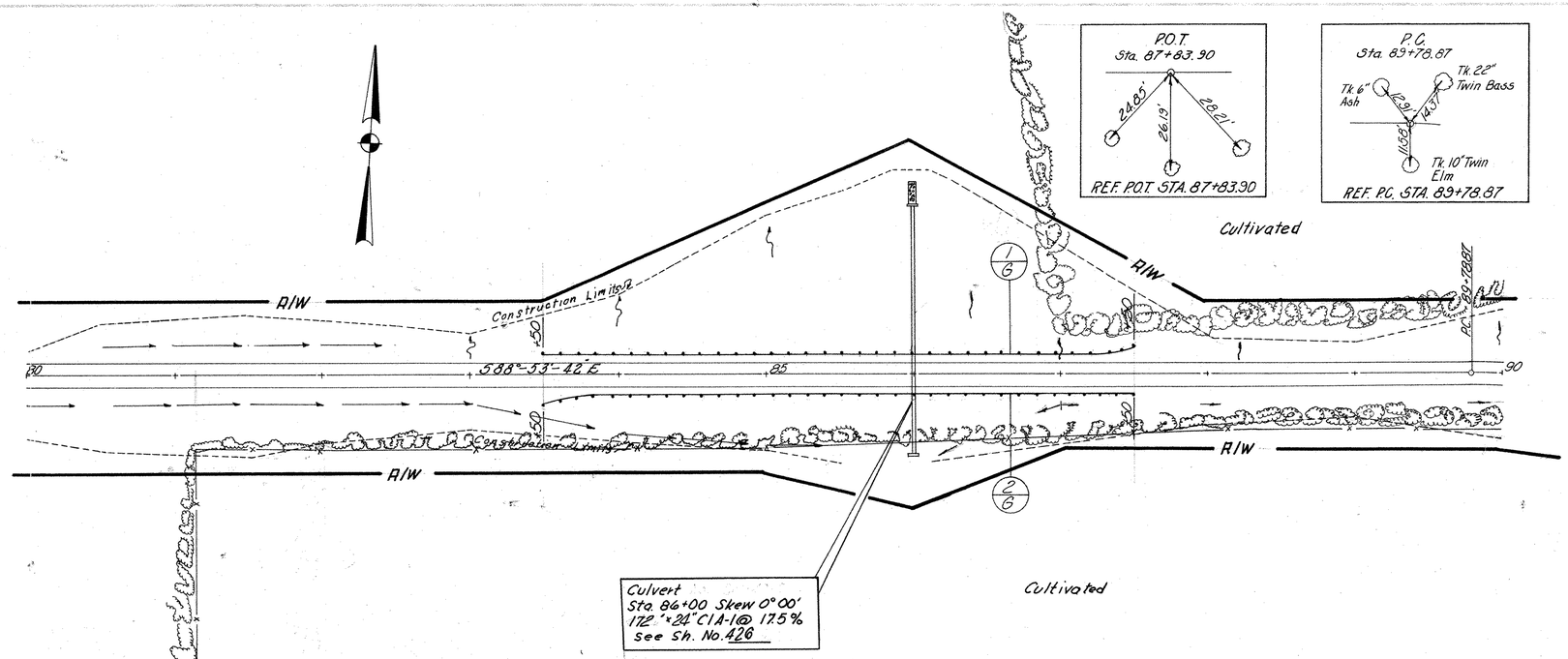
REF. NO.	STATION TO STATION	SIDE	I-10 DUMPED ROCK CHANNEL PROT.	L-10 SODDING	I-15 GUARD RAIL STD. TYPE DEEP	I-1 CL. A-1 M6.6(c) 15"	I-2 MASONRY
			CY	SY	L.F.	L.F.	CY
1SS	78+50	LT&RT	2	4		117	0.52
1G	75+50 ~ 79+50	LT.			400		
2G	75+50 ~ 79+50	RT.			400		
TOTALS			2	4	800	117	0.52

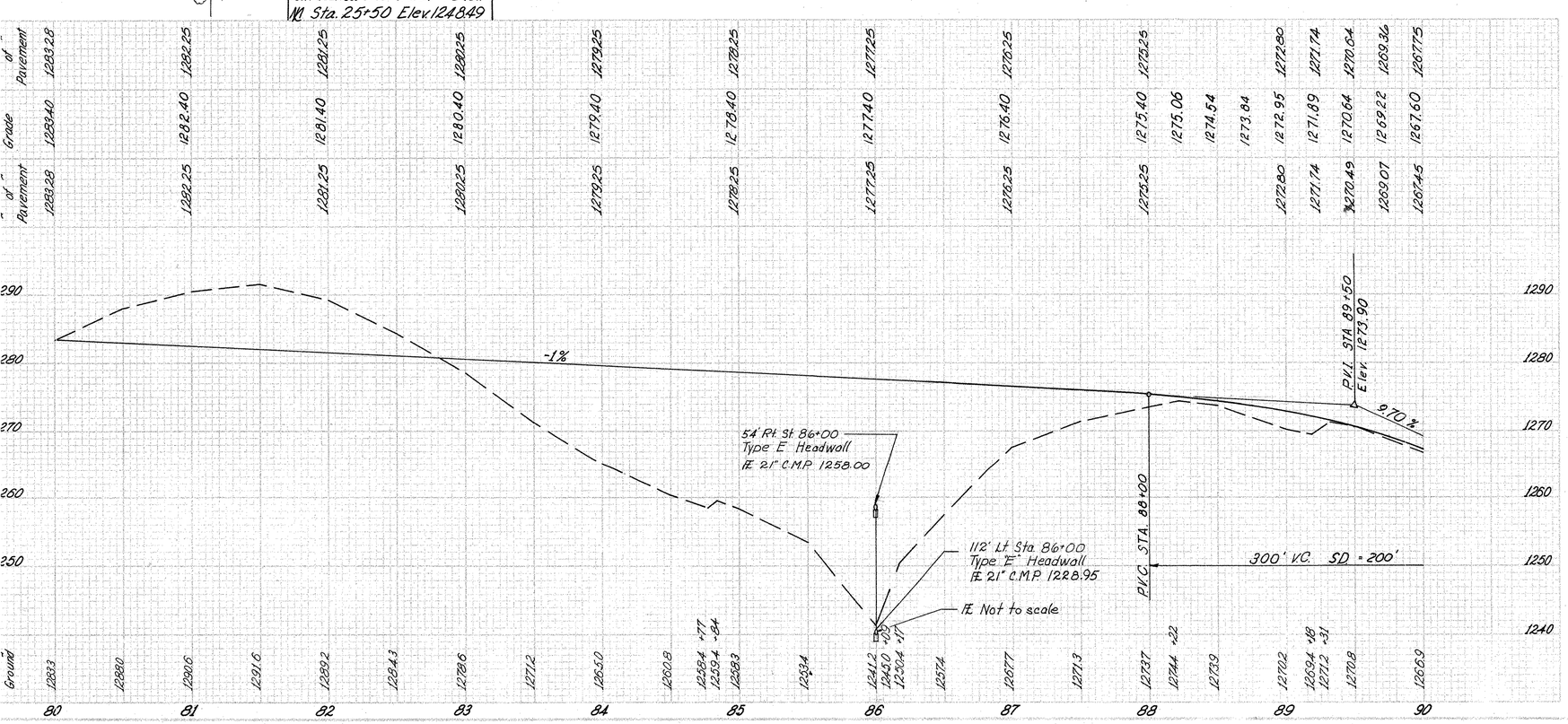
C.H. 114 Relocation Sta. 70+00 to Sta. 80+00

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

342
485





ESTIMATED QUANTITIES

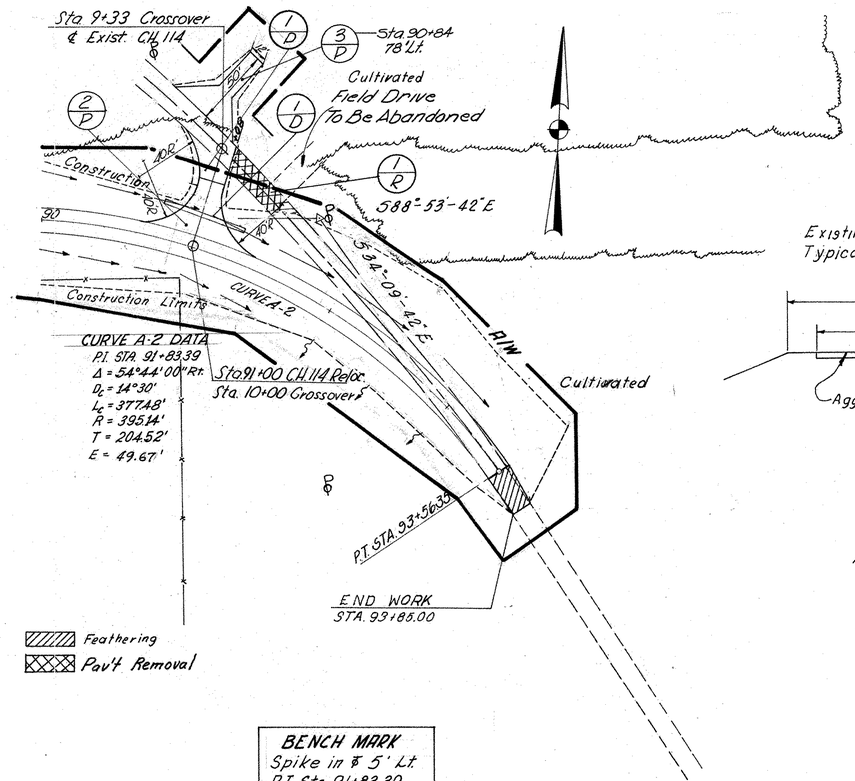
SEE SHEET NO.	ITEM NO.	STATION TO STATION	SIDE	
				I-15 GUARD RAIL STD. TYPE DEEP
				L.F.
18		83+50 - 87+50		400
28		83+50 - 87+50		400
				800
				TOTALS

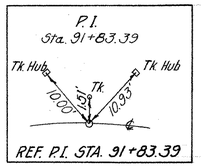
C.H. 114 Relocation Sta. 80+00 to Sta. 90+00

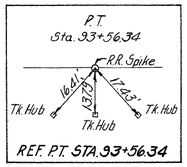
GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

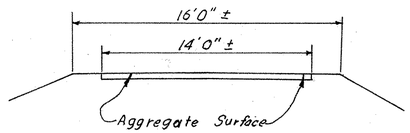
343
485





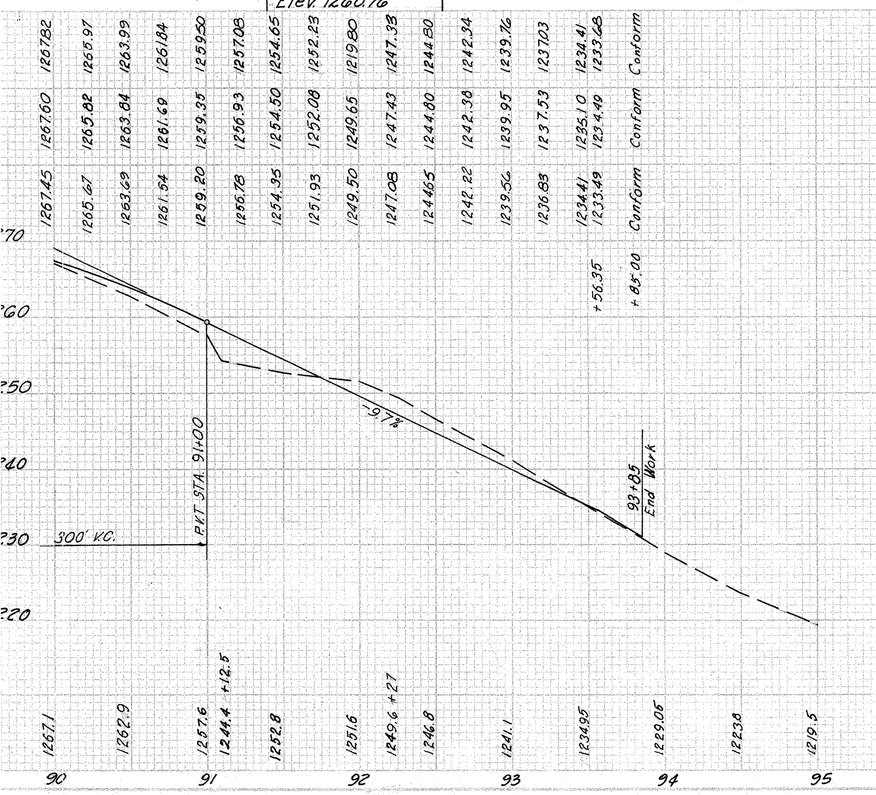


Existing C.H. 114
Typical Section



Note: Composition of Pavt for X-over at Sta. 91+00 same as for C.H. 114 Reloc.

BENCH MARK
Spike in ℄ 5' Lt
P.I. Sta. 91+83.39
Elev. 1260.76



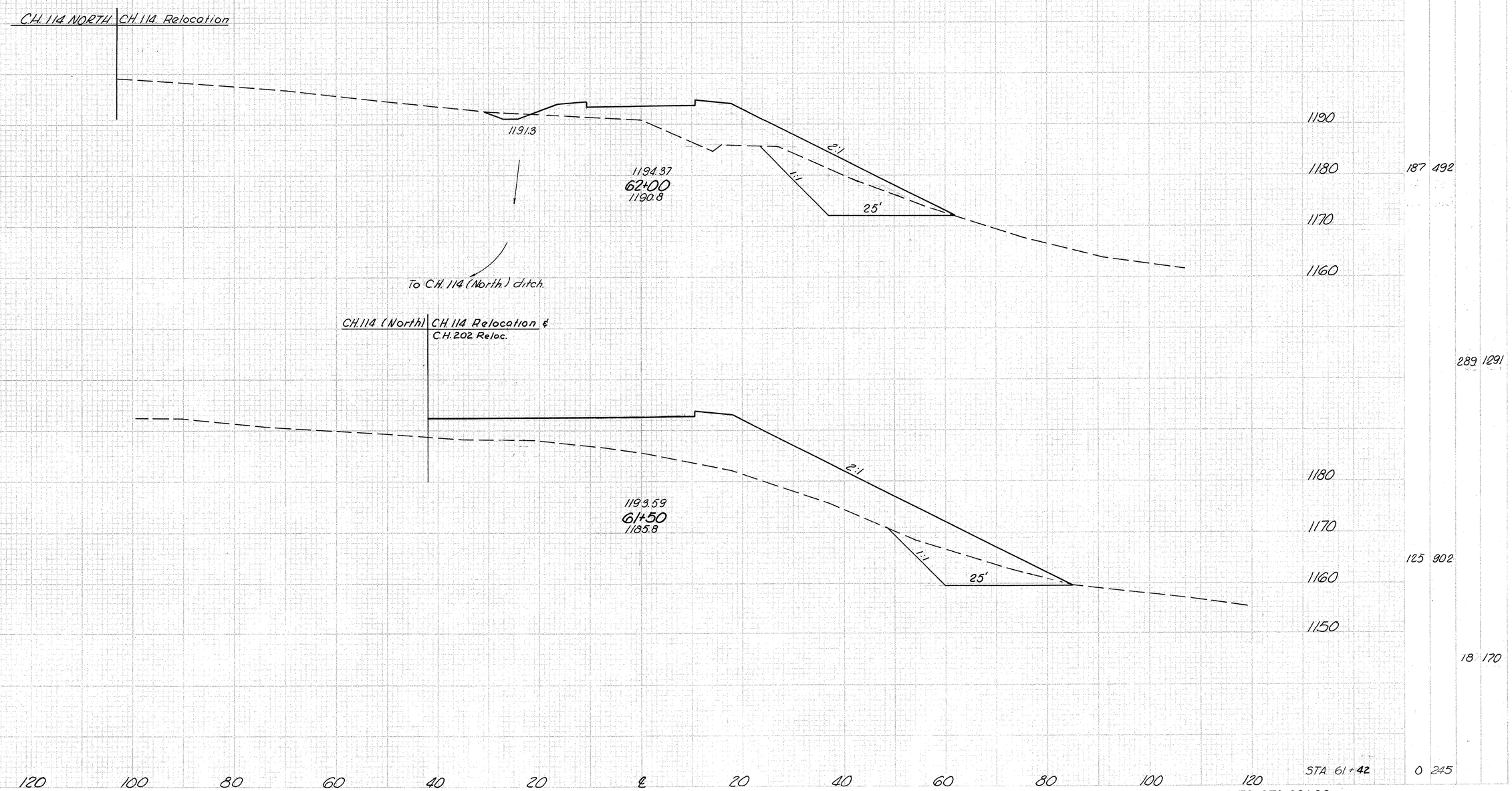
ESTIMATED QUANTITIES

| REF. NO. | STATION TO STATION | SIDE | | |

DIST. NO. DIVISION	STATE	PROJECT	
2	OHIO		

344
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



END AREA		VOLUME	
CUT	FILL	CUT	FILL
	187		492
	289		1291
	125		902
	18		170
STA 61+42		0	245

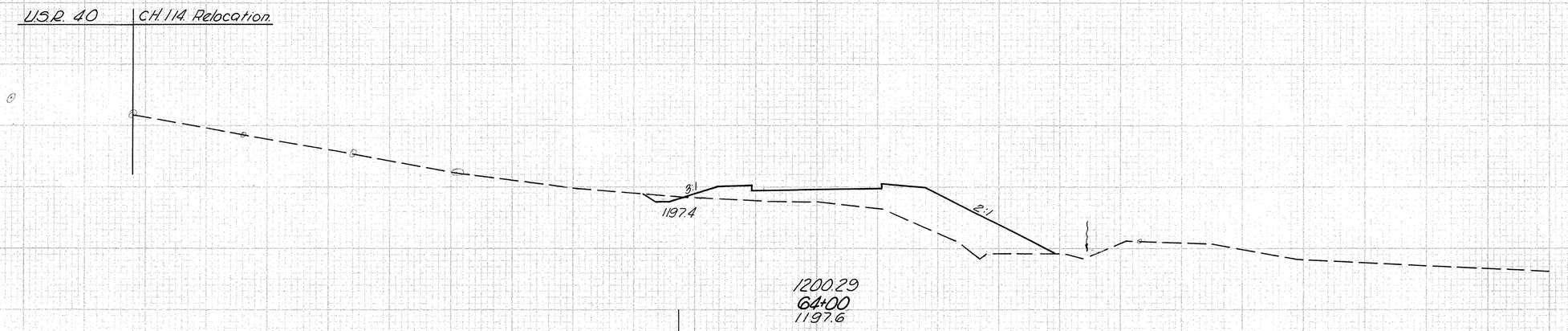
C.H. 114 RELOCATION STA. 61+50 TO STA. 62+00

FED. RD DIVISION	STATE	PROJECT	
2	OHIO		

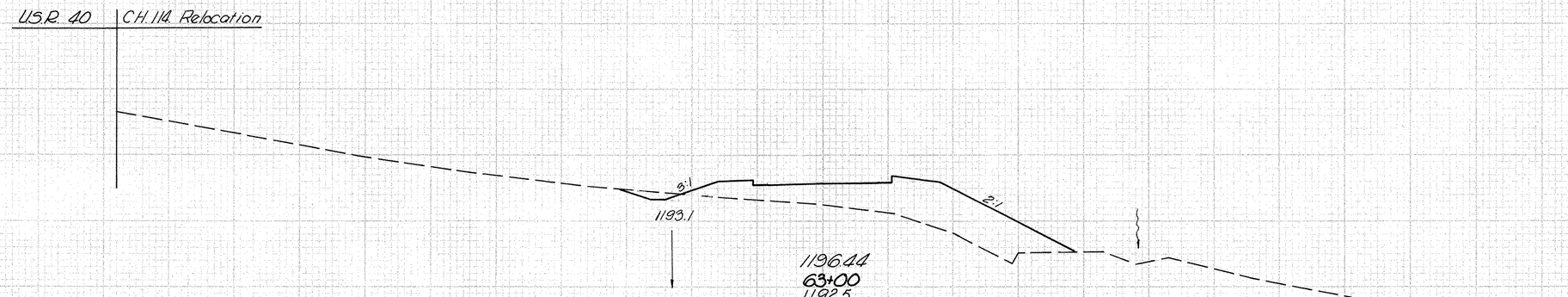
345
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



5 211



1244

22 848

7 247

1266

359 1469

Sta 62+00

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

STA. 62+00

187 492

C.H. 114 RELOCATION STA. 63+00 TO STA. 64+00

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

346
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL

445 1

478 64

116 68

112 259

462

5 211

U.S.R. 40 CH. 114 Relocation

2:1

5:1

1203.9

1205.97
65+00
1212.3

1220
1210
1200
1190

1200

1201.25
9+00

1201.44
9+35
1197.0

1201.61
9+65
1197.5

1201.75
9+90

END AREA		VOLUME	
Cut	Fill	Cut	Fill
0	0		
		0	124
0	192		
		0	214
0	192		
		0	124
0	0		
0	384	0	462

Add for Drive Rt. 64+50

628

625

U.S.R. 40 CH. 114 Relocation

3:1

3:1

1200.7

1202.90
64+50
1204.6

STA. 64+00

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

STA. 64+00

C.H. 114 RELOCATION STA. 64+50 TO STA. 65+00

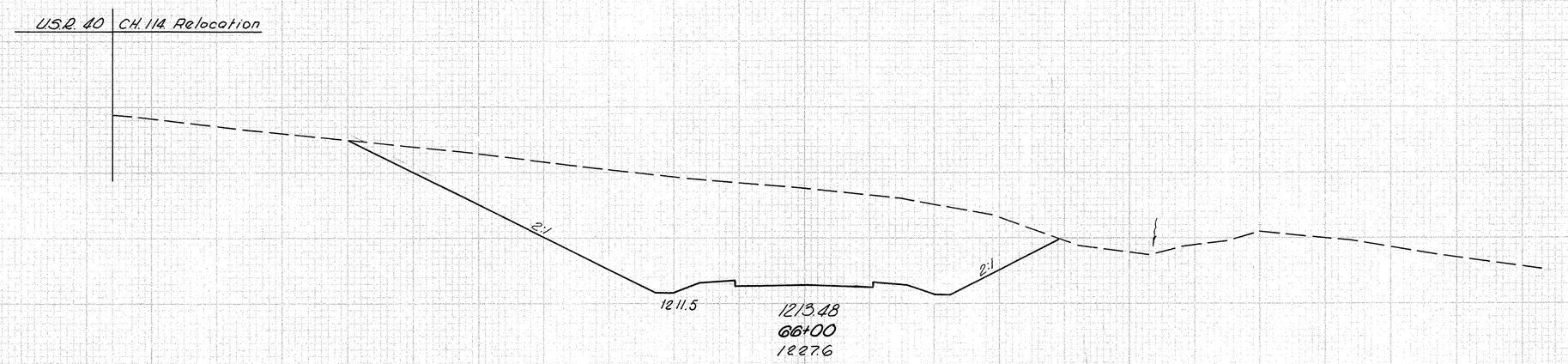
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

347
485

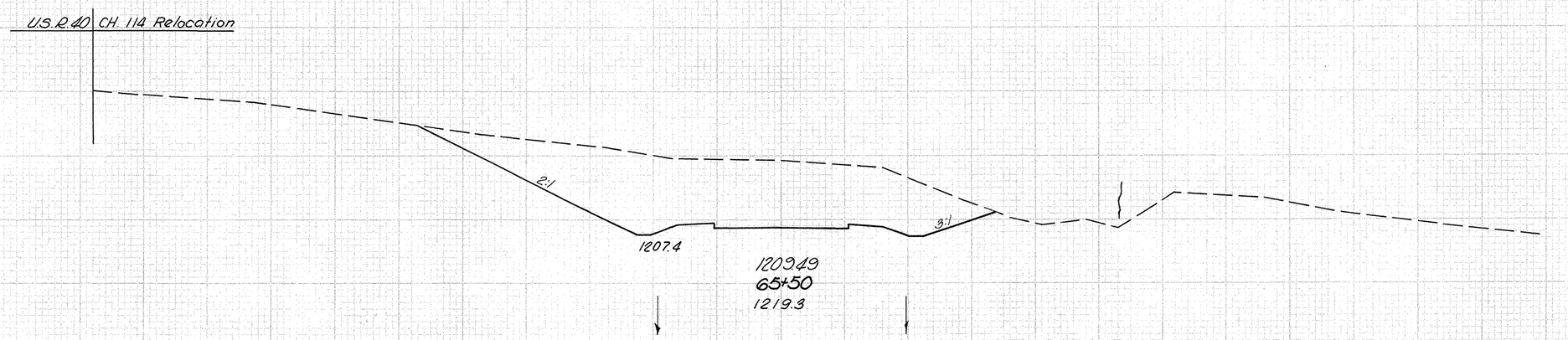
GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00

EMU AREA		VOLUME	
CUT	FILL	CUT	FILL



1220 0



1811 0

786 0

1094 1

STA 65+00 445 1

Sta. 65+00

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

C.H. 114 RELOCATION STA. 65+00 TO STA. 66+00

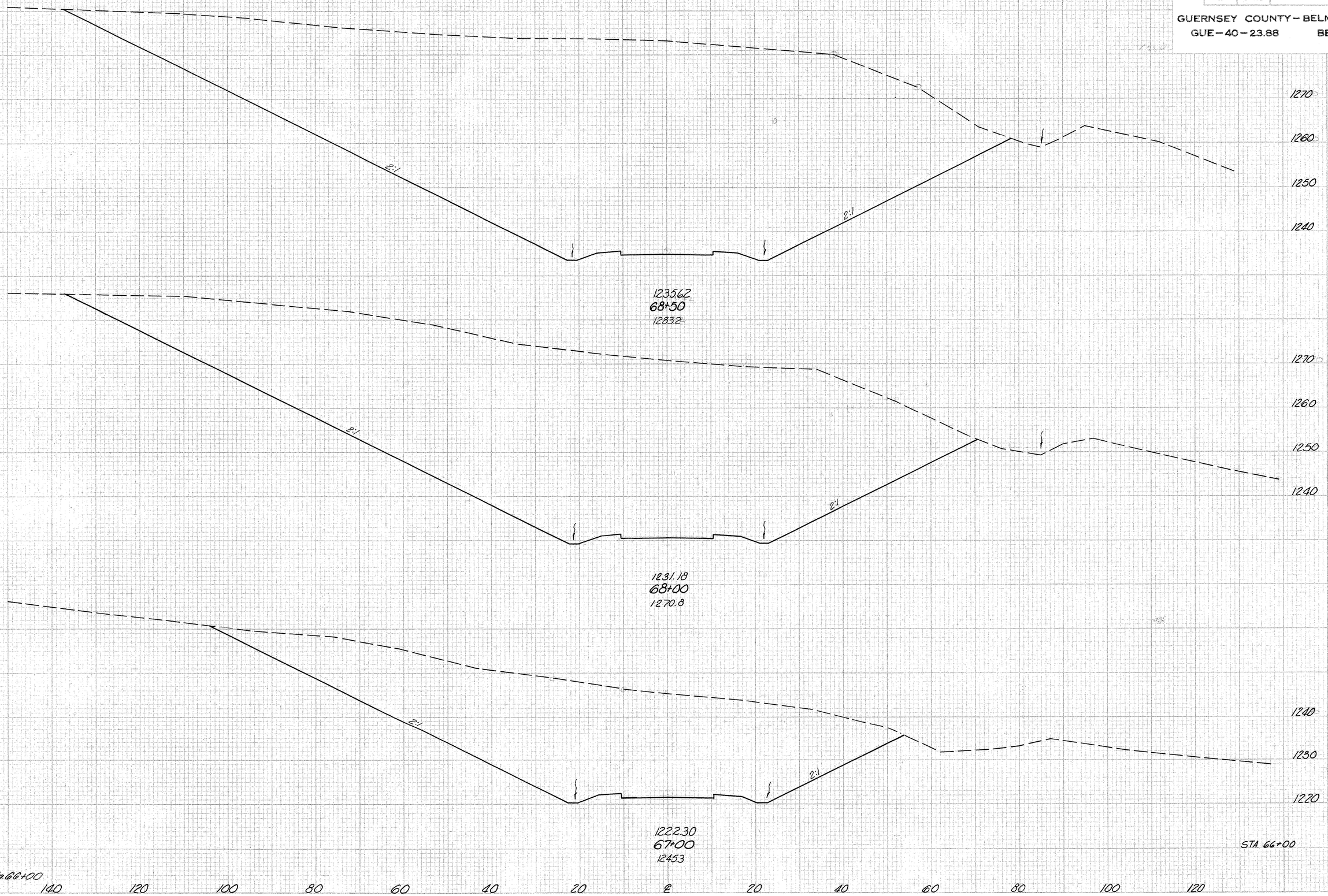
FED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

348
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	6521		
			11225
	5601		
			15315
2669			7202



C.H. 114. RELOCATION STA. 67+00 TO STA. 68+50

FED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

349
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00

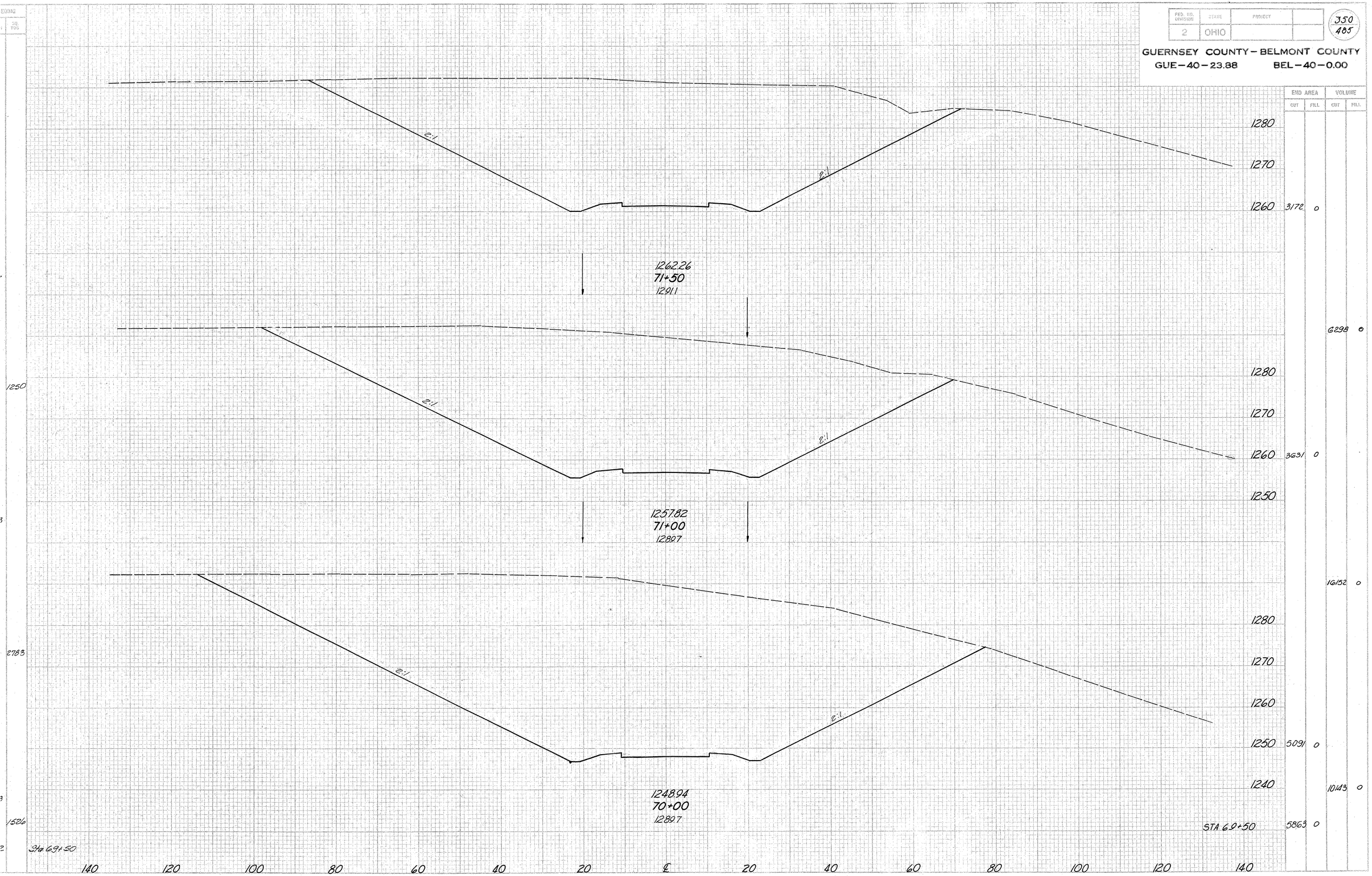
END AREA		VOLUME	
CUT	FILL	CUT	FILL

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

350
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1280				
1270				
1260	3172	0		
			6298	0
1280				
1270				
1260	3631	0		
1250				
			16152	0
1280				
1270				
1260				
1250	5091	0		
1240			10143	0
STA 69+50	5863	0		

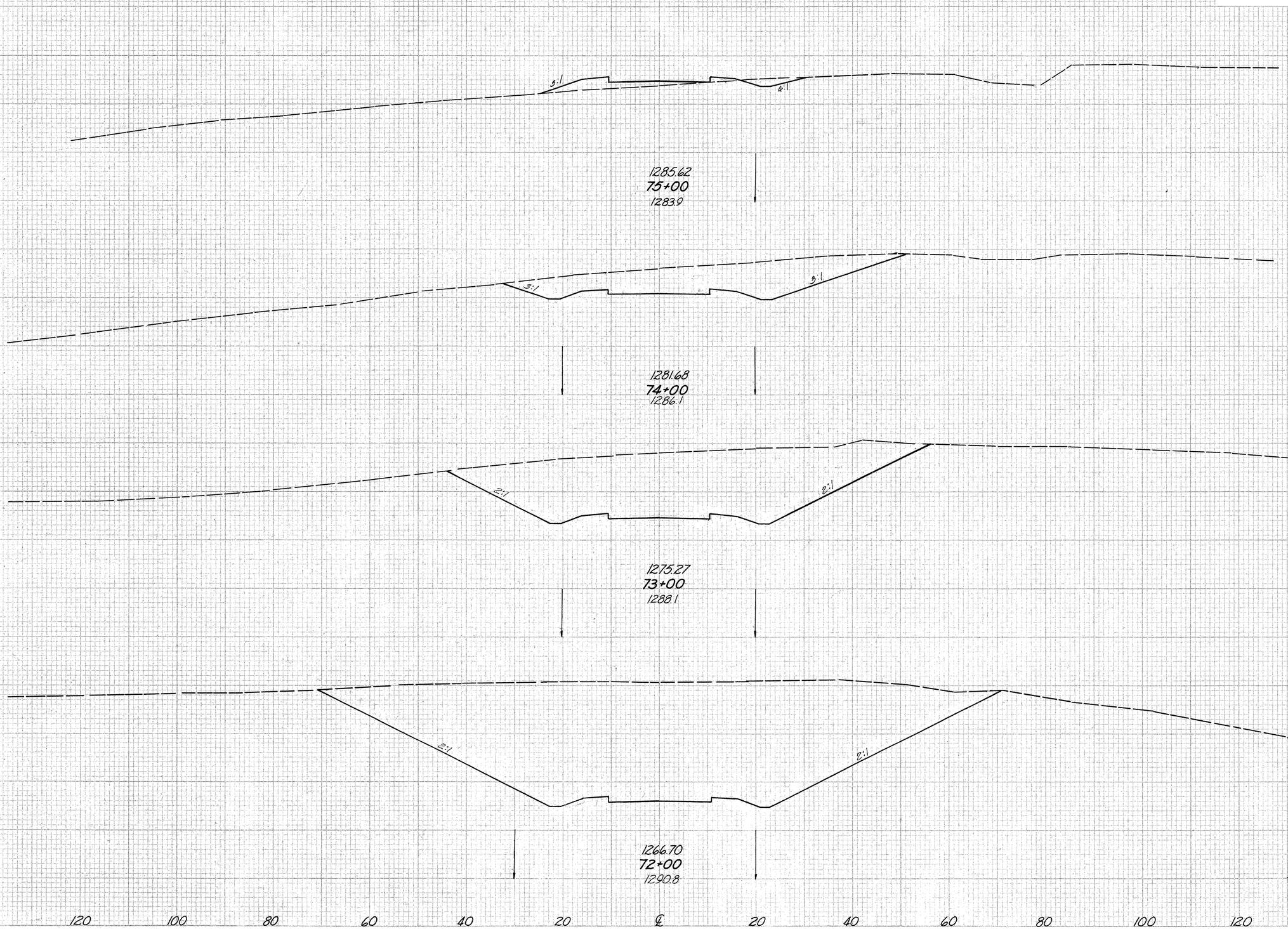
C.H. 114 RELOCATION STA. 70+00 TO STA. 71+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

3511
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1290				
1280	14	60		
			743	111
1290				
1280	387			
			2619	
1290				
1280				
1270				
	1022			
1290			6356	
1280				
1270	2410			
			5169	
1260				
STA 71+50	3172			

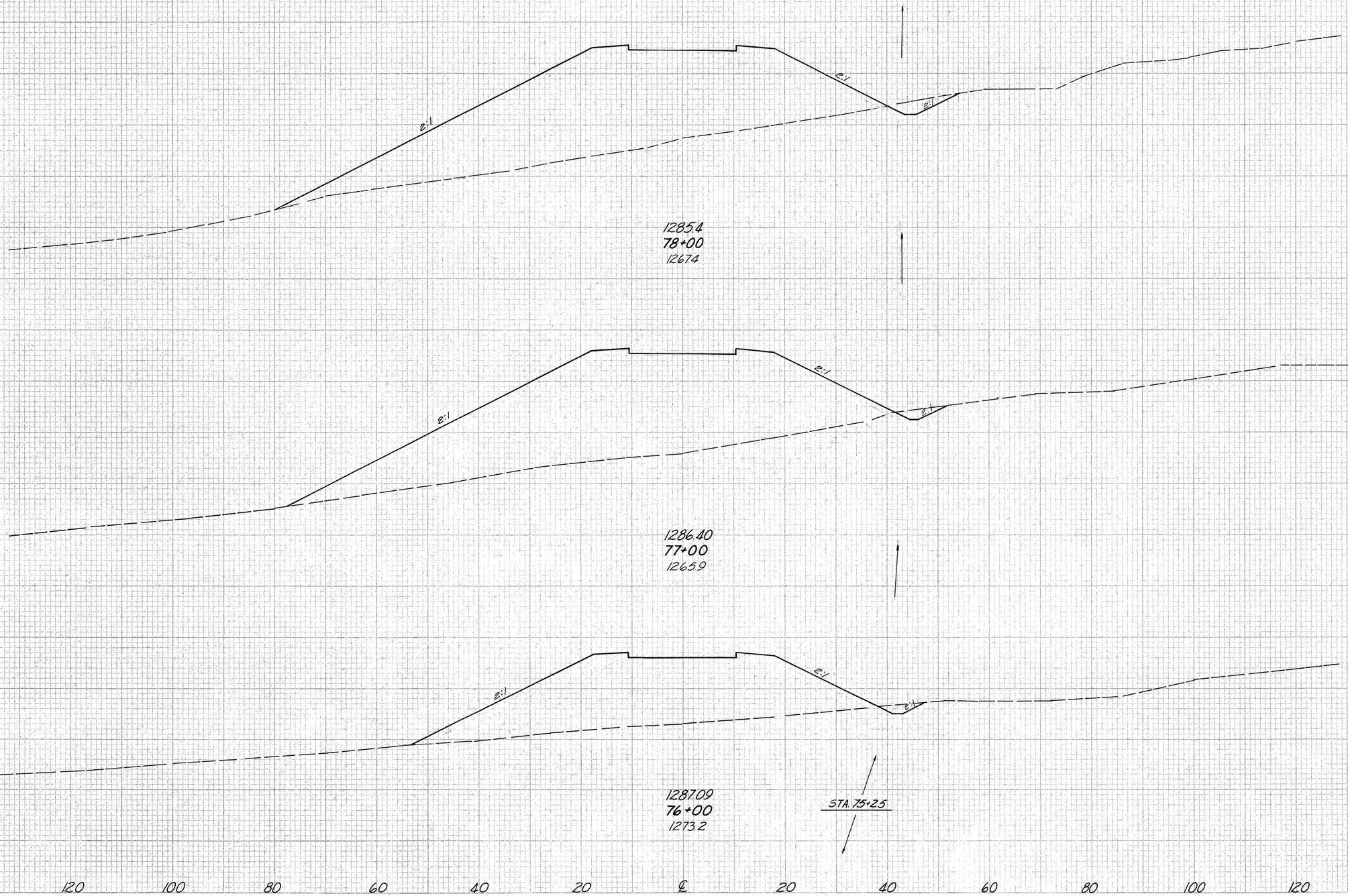
C.H. 114 RELOCATION STA. 72+00 TO STA. 75+00

FED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

352
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	23	1450		
	12	1551		
			65	5558
			41	4484
	10	870		
			44	1722
STA. 75+00	14	60		

C.H. 114 RELOCATION STA. 76+00 TO STA. 78+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

353
485

GUERNSEY COUNTY – BELMONT COUNTY

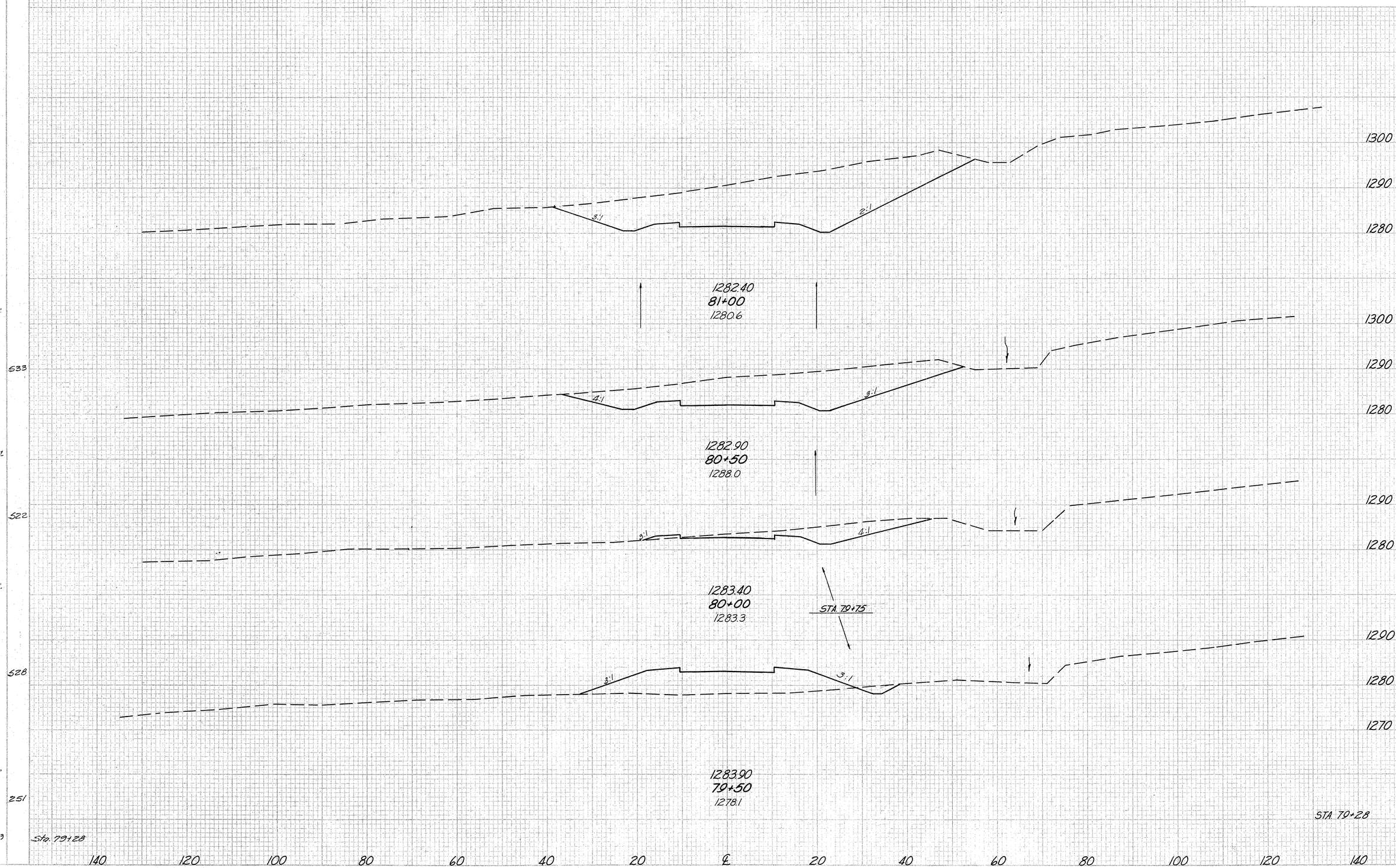
GUE – 40 – 23.88 BEL – 40 – 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

354
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
744	0		
		1108	0
452	0		
		513	15
102	6		
		105	243
11	256		
		8	280
9	431		

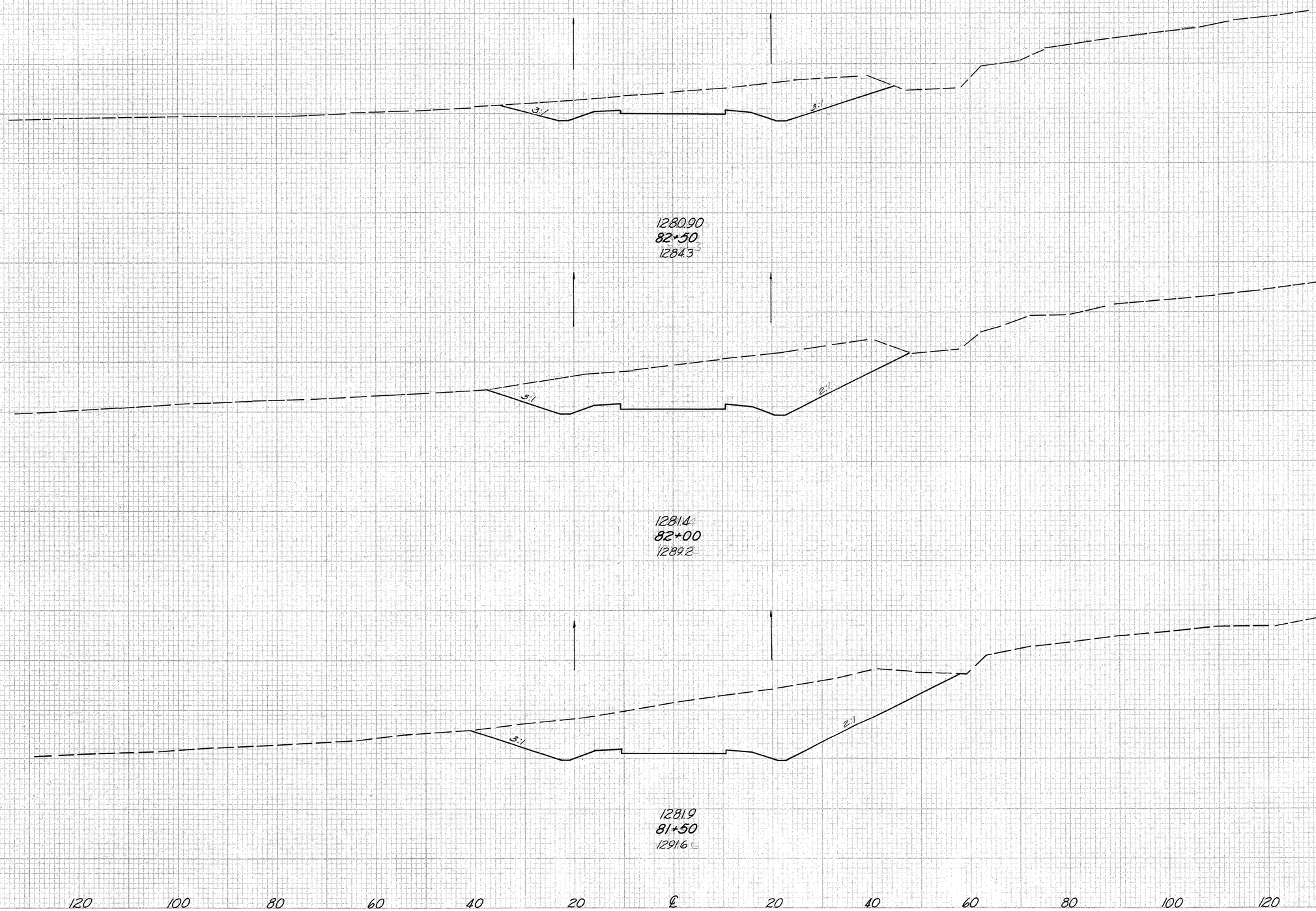
C.H.114 RELOCATION STA. 79+50 TO STA. 81+00

FED RD. DIVISION	STATE	PROJECT	
2	OHIO		

353
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1300				
1290				
1280				
	343	0		
1300				
1290			914	0
1280				
	644	0		
1300			1385	0
1290				
1280				
	851	0		
	744	0	1477	0

539

544

544

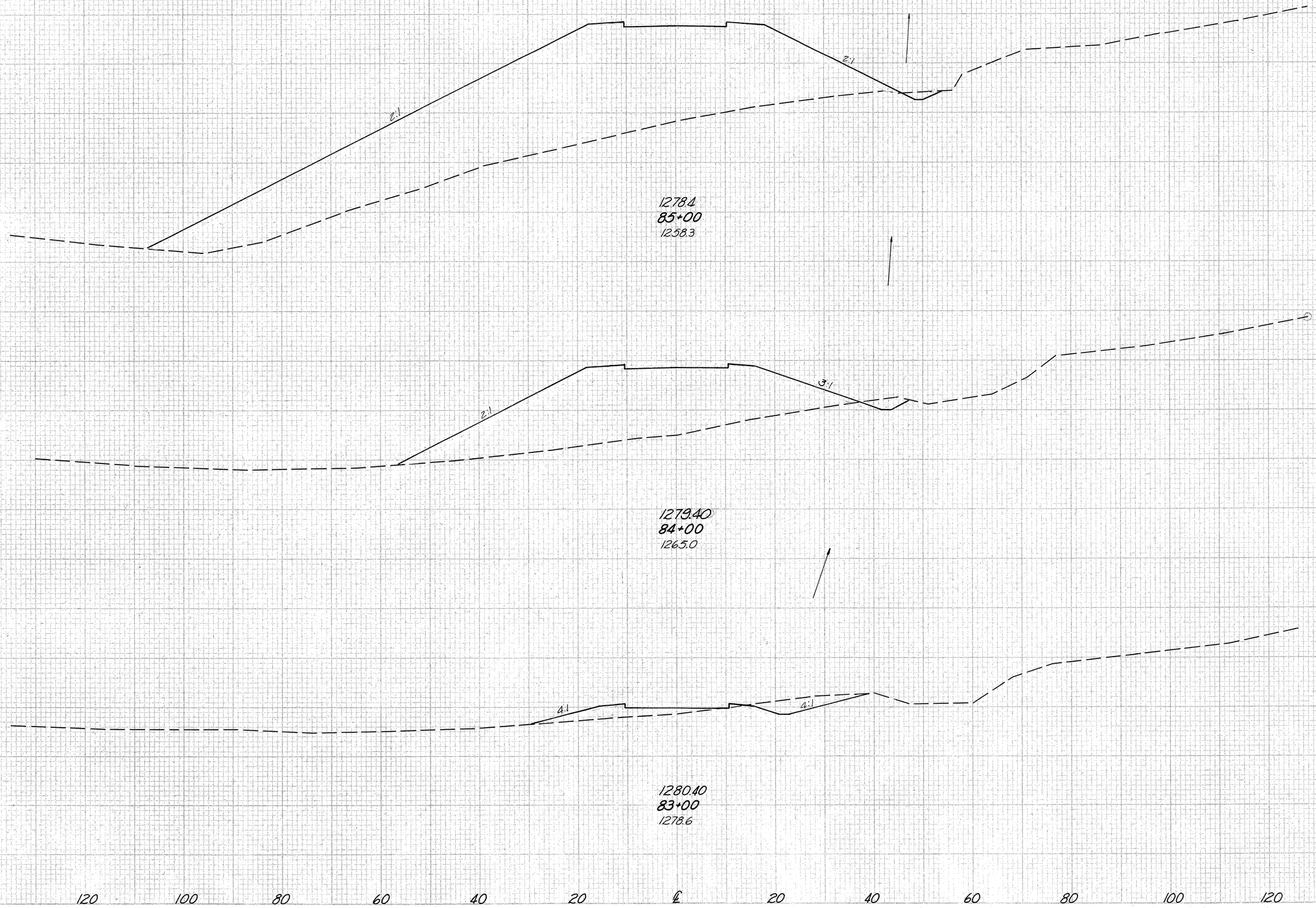
C.H 114 RELOCATION STA. 81+50 TO STA. 82+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

356
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00



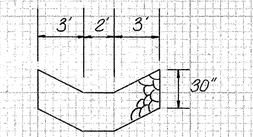
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	10	2166		
			48	566
	16	890		
			107	1759
	42	60		
			357	56
	343	0		

C.H. 114 RELOCATION STA. 83+00 TO STA. 85+00

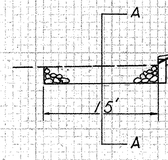
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

357
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



Section A-A

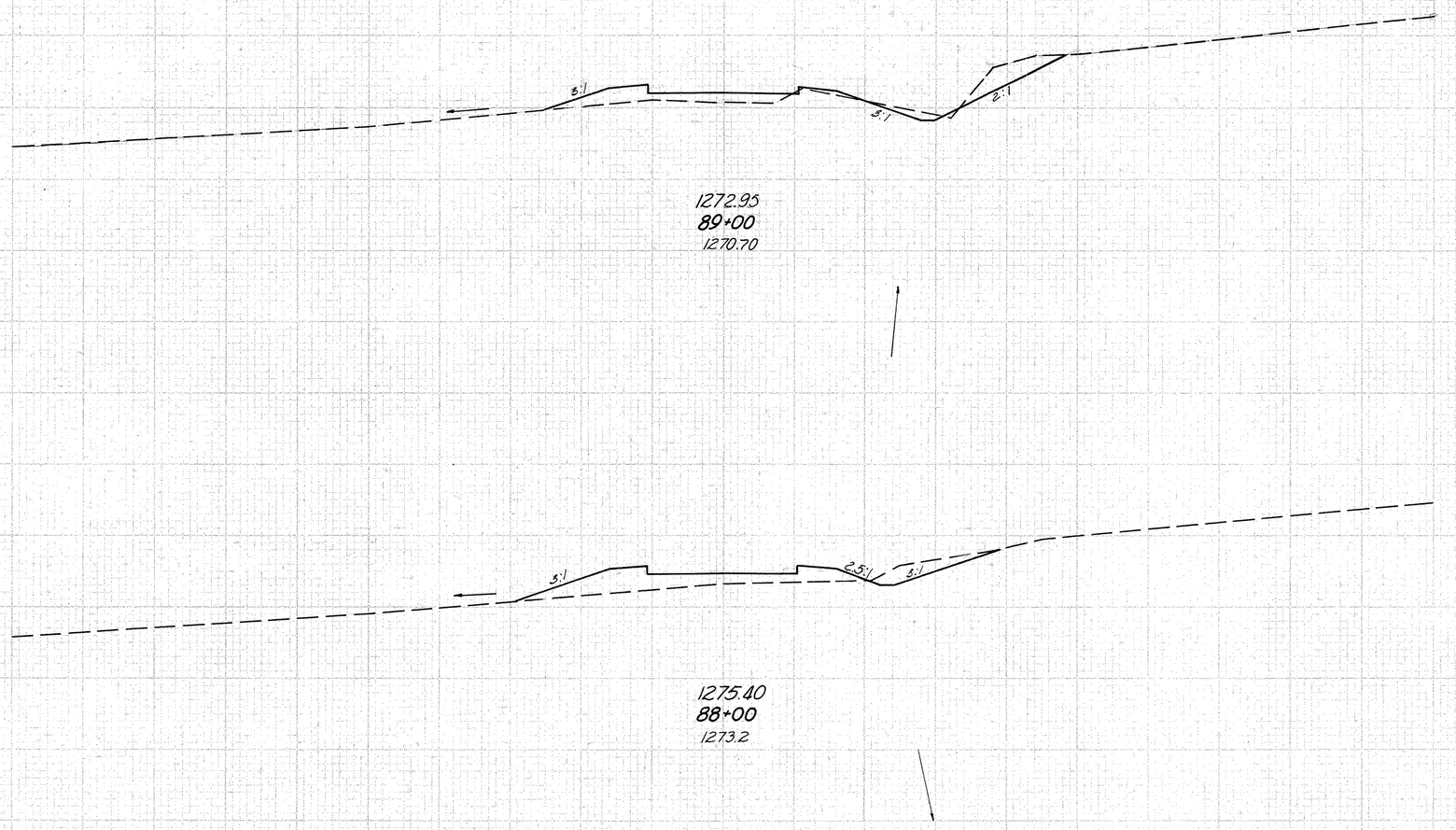


	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1260				
1240			141	3496
1280				
1260			38	1376
1270				
1250			56	4380
1230	33	2716		
			40	4548
STA 85+00	10	2166		

C.H.114 RELOCATION STA. 85+50 TO STA.86+00

REG. NO. DIVISION	STATE	PROJECT		358 485
2	OHIO			

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



END AREA		VOLUME	
CUT	FILL	CUT	FILL
10	53		
		72	291
29	104		
		67	1711
7	820		
		274	7992
141	3496		

STA 86+00

100 80 60 40 20 ℄ 20 40 60 80 100

C.H. 114 RELOCATION STA. 87+00 TO STA. 89+00

SEEDING

CUM	YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

359
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

End Area		Volume	
Fill	Cut	Fill	Cut
0	0		
			18
0	120		
			40
0	0		
		24	
182	0		
		58	
0	0		

Add for crossover Lt Sta 91+00 82 58

Sta 9+68

9+42
1260
1258.9
9+50
1261.5
1250

54"×15' C1 F-4 @ 6.3%

1259.9
9+75
1255.5
1260
1250

9+92
1250

Crossover Profile

3:1

25' Lt. Sta. 90+77
Rt 15" C1 F-4 1257.4

1259.35
91+00
1272.1

Sta 91+00

480

3:1 4:1

1263.84
90+50
1272.1

466

3:1 4:1

1267.60
90+00
1267.1

906

Sta 89+00

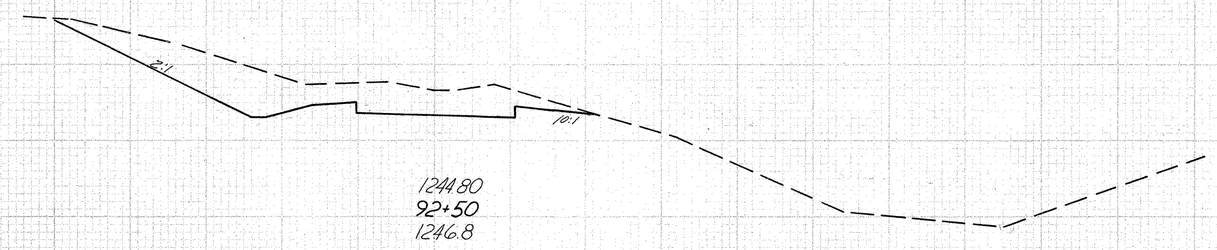
100 80 60 40 20 ℄ 20 40 60 80 100

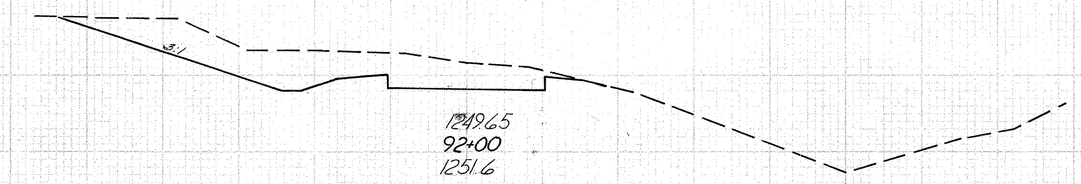
END AREA		VOLUME	
CUT	FILL	CUT	FILL

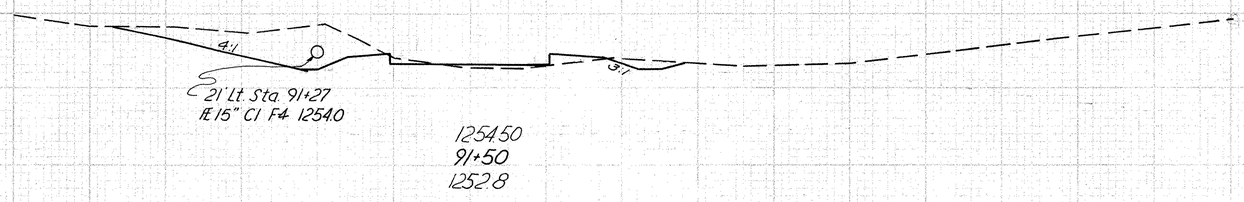
FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

360
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00







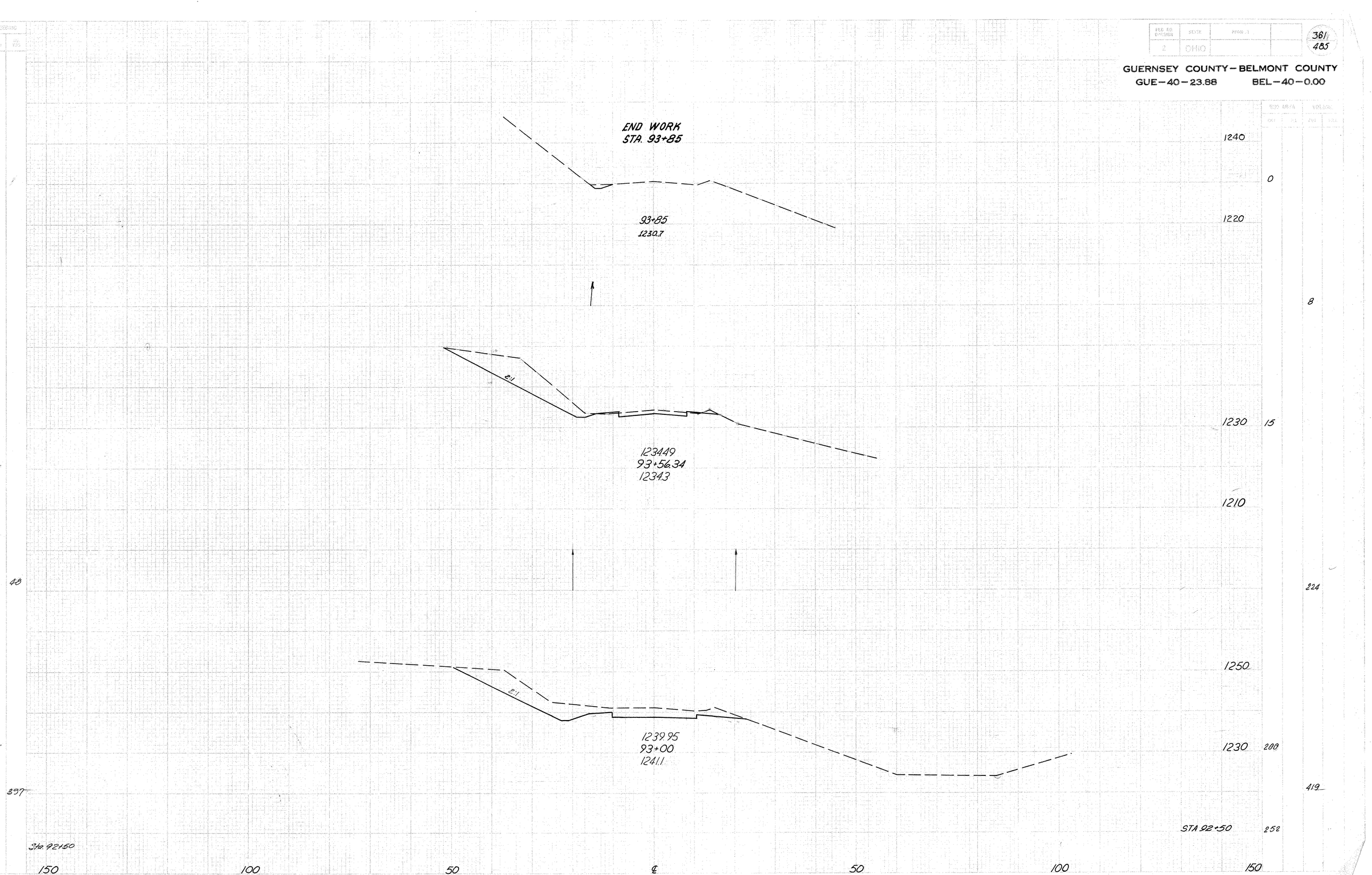
	AREA CUT	AREA FILL	VOLUME CUT	VOLUME FILL
1250				
1230	252	0		
			451	0
1250				
	235	0		
1230				
			322	12
1250				
	112	13		
1230			135	85
STA 91+00	34	79		

150 100 50 ℄ 50 100 150

CH114 RELOCATION | STA. 91+50 TO STA. 92+50

FED. RD. DIVISION	STATE	PROJ. #		361 485
2	OHIO			

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

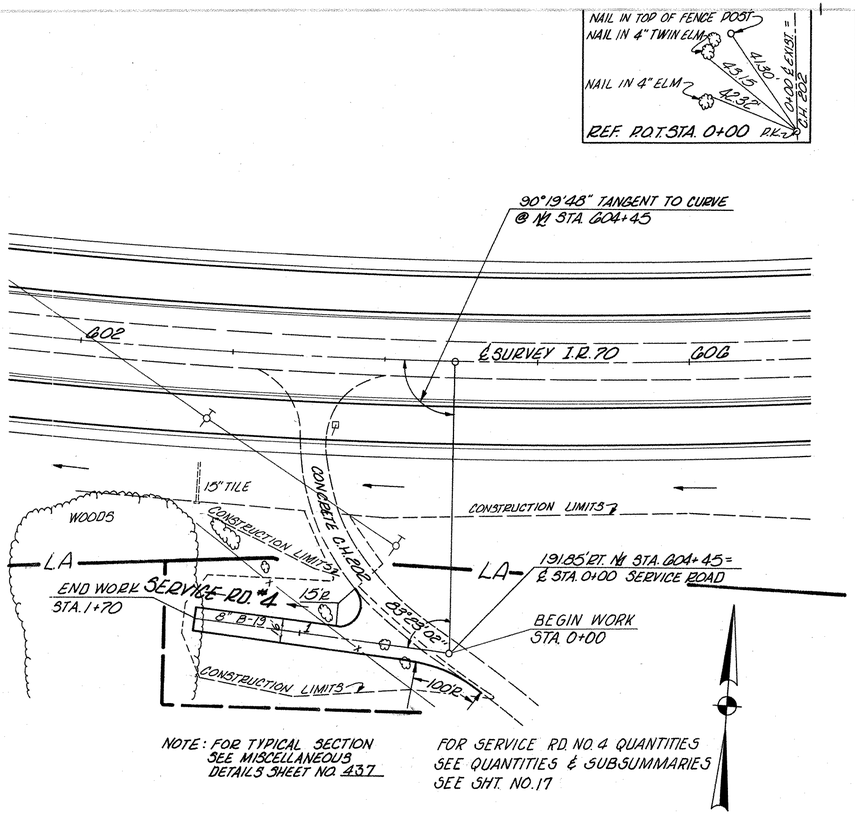


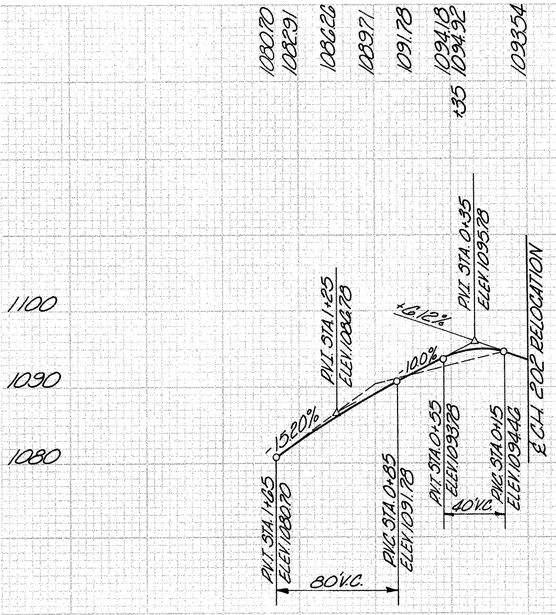
C.H.114 RELOCATION STA. 93+00 TO STA. 93+85

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL.–40–0.00

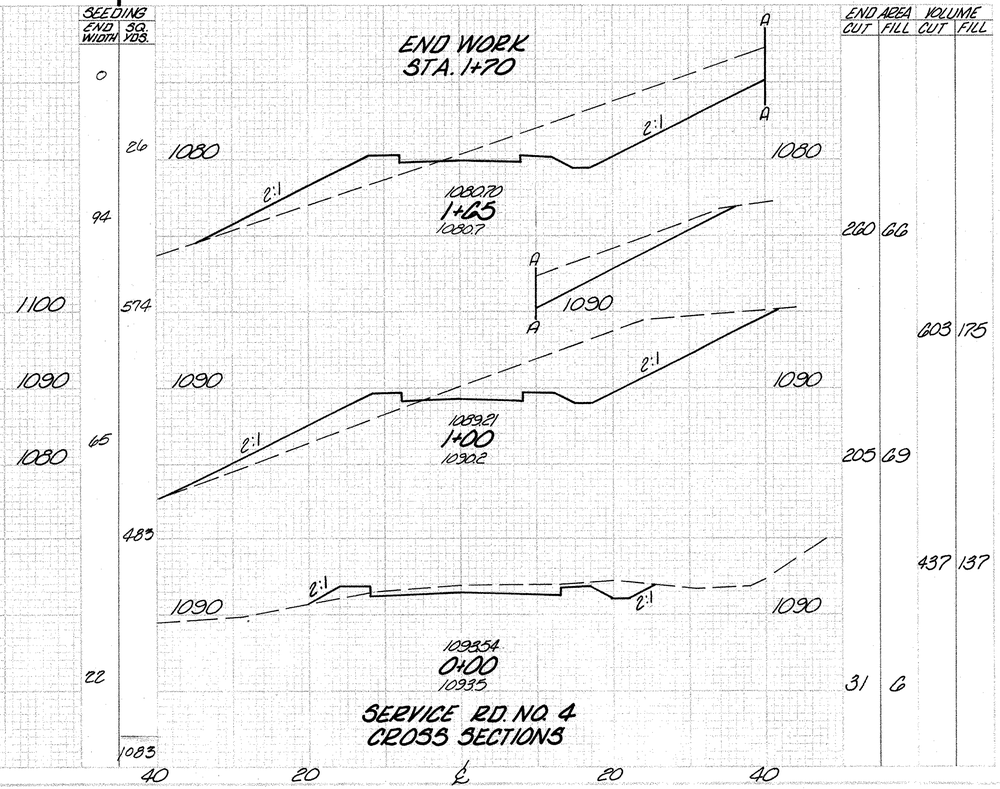
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

362
485





SERVICE RD. NO. 4 PROFILE



SERVICE RD. NO. 4 CROSS SECTIONS

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
260	66		
		603	175
205	69		
		437	137
31	6		

ESTIMATED QUANTITIES

SEE SHEET NO.

STATION TO STATION SIDE

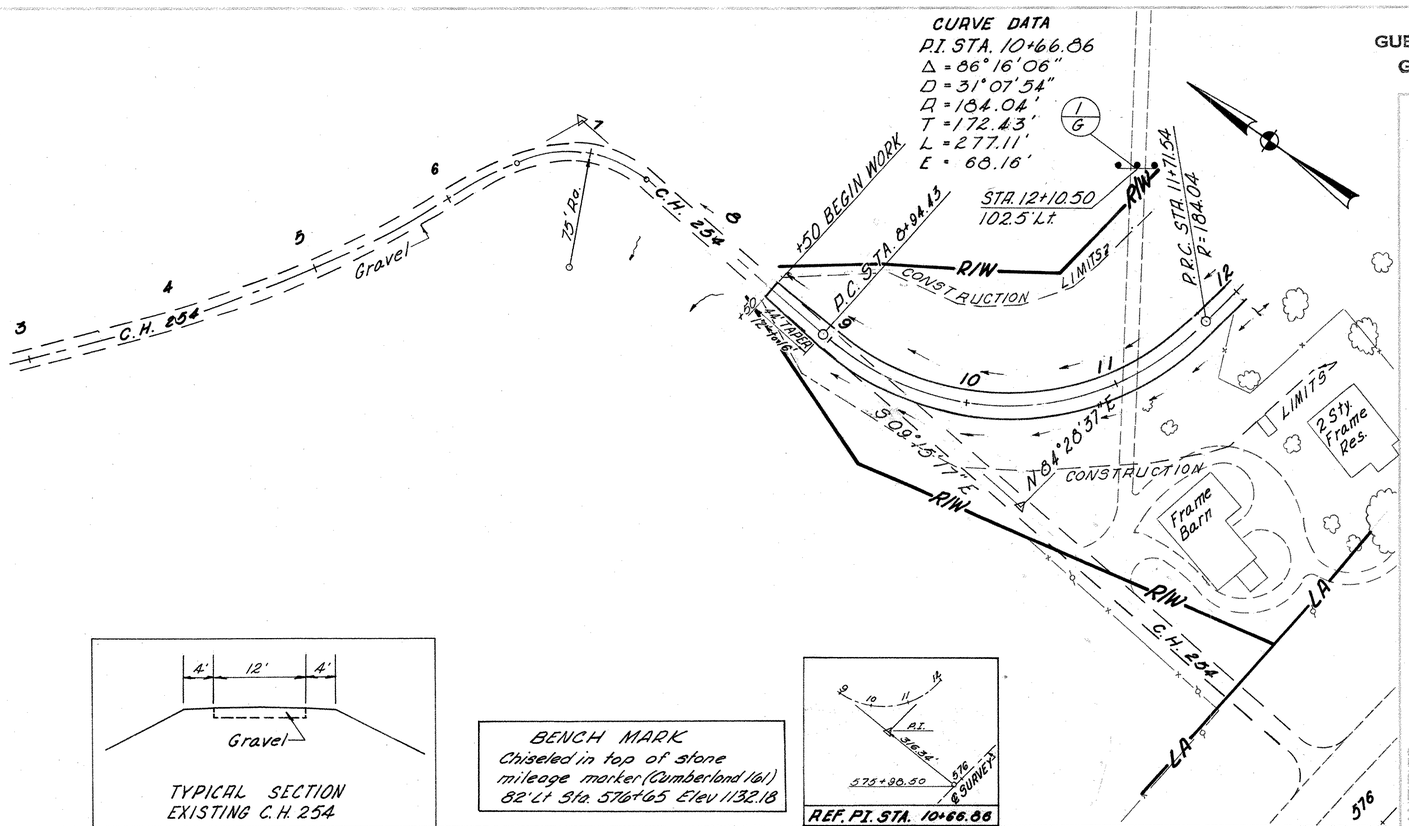
SERVICE RD. NO. 4

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

363/485

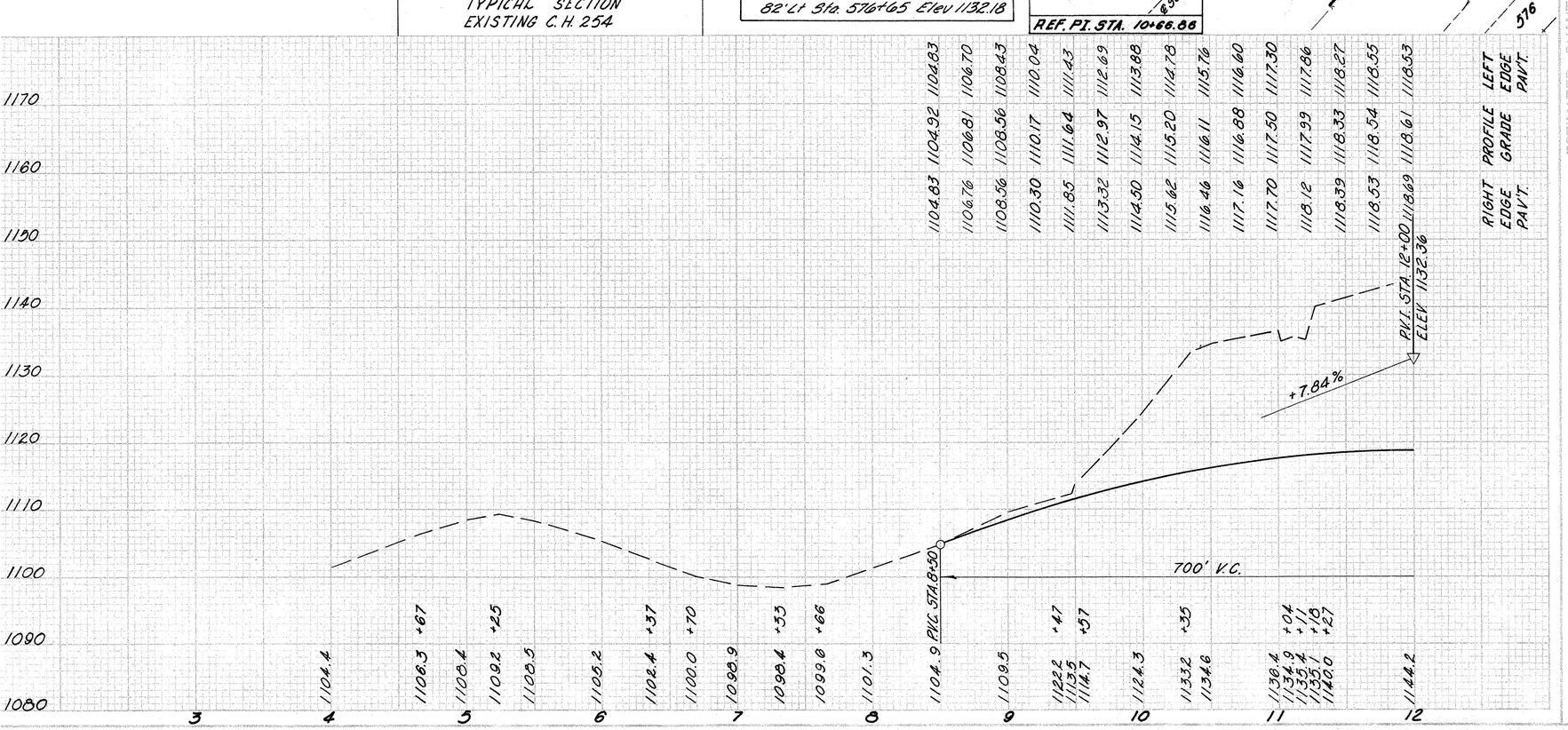
CURVE DATA
P.I. STA. 10+66.86
Δ = 86°16'06"
D = 31°07'54"
R = 184.04'
T = 172.43'
L = 277.11'
E = 68.16'



TYPICAL SECTION
EXISTING C.H. 254

BENCH MARK
Chiseled in top of stone mileage marker (Cumberland 16 mi)
82'Lt Sta. 576+65 Elev 1132.18

REF. PI. STA. 10+66.86



	RIGHT EDGE PAV'T.	PROFILE GRADE	LEFT EDGE PAV'T.
1104.83	1104.92	1104.83	1104.83
1106.70	1106.81	1106.76	1106.70
1108.43	1108.56	1108.56	1108.43
1110.04	1110.17	1110.30	1110.04
1111.43	1111.64	1111.85	1111.43
1112.69	1112.97	1113.32	1112.69
1113.88	1114.15	1114.50	1113.88
1114.78	1115.20	1115.62	1114.78
1115.76	1116.11	1116.46	1115.76
1116.60	1116.88	1117.16	1116.60
1117.30	1117.50	1117.70	1117.30
1117.86	1117.99	1118.12	1117.86
1118.27	1118.33	1118.39	1118.27
1118.55	1118.54	1118.53	1118.55
1118.53	1118.369	1118.61	1118.53

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-15 Guard Sel. Type Desp. L.F.
16	Sta. 12+105	Lt.	25
TOTALS			*25

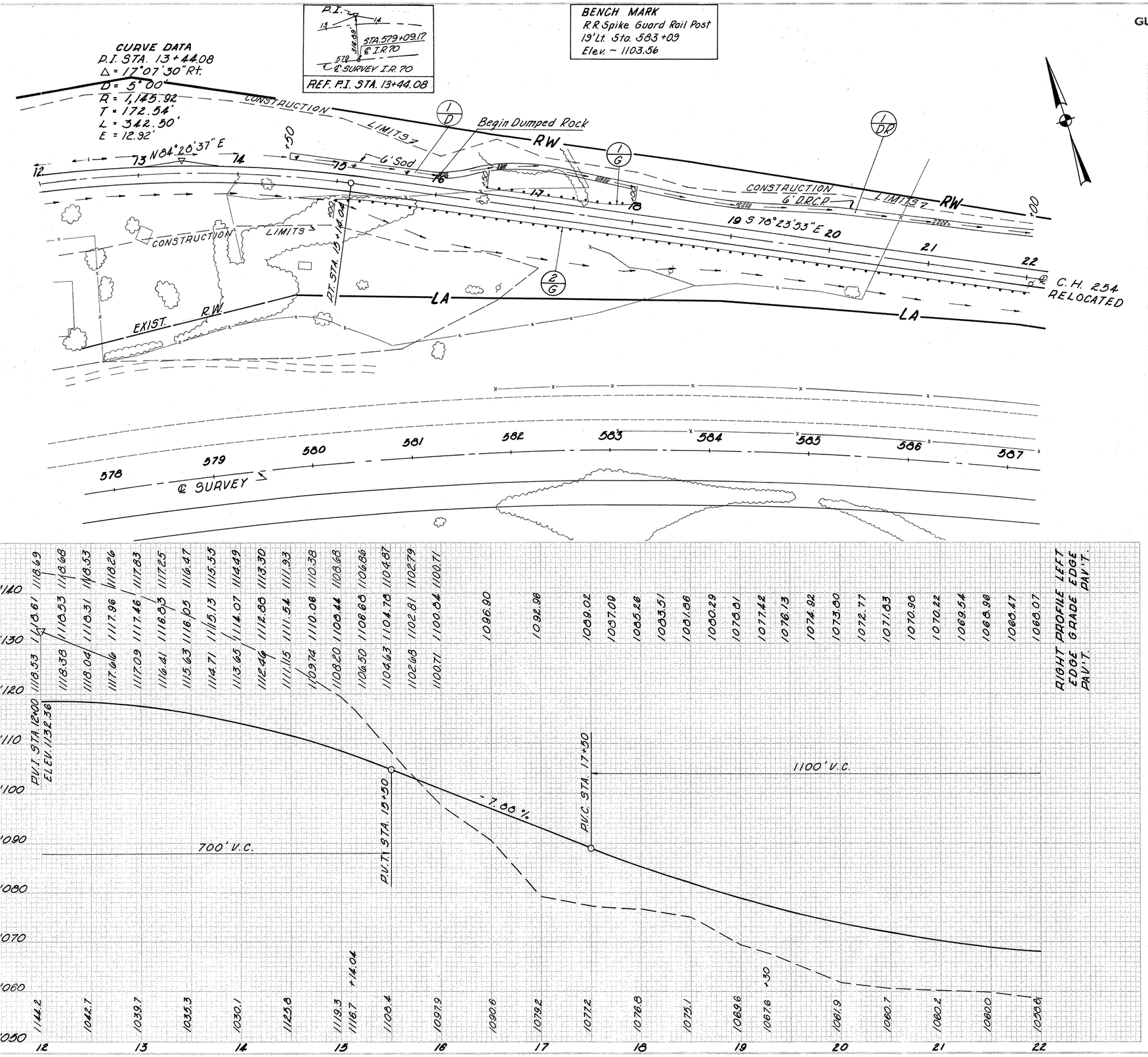
*TOTAL TO SHEET 18

RELOC. C.H. 254 STA. 3+00 to STA. 12+00

GUERNSEY COUNTY — BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

364
485



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-10 DUMPED ROCK CHANNEL PROT. C.U.YD.	L-10 SODDING SQ. YDS.	I-15 GUARD RAIL STD. TYPE DEEP L.F.	SEE SHEET NO.
1-G	16+50 ~ 18+00	LT			150	
2-G	15+00 ~ 22+00	RT			700	
1-D	14+50 ~ 16+00	Lt.				
1-DR	16+00 ~ 22+00	Lt.				
TOTALS						*850

*TOTAL TO SHEET 18

RELOC. C.H. 254 STA. 12+00 to STA. 22+00

BENCH MARK
□ Chiseled on N.W. Cor. Cap
Stone W. End S. Rail of Bridge
200' Rt Sta. 589+00
Elev. ~ 1054.68

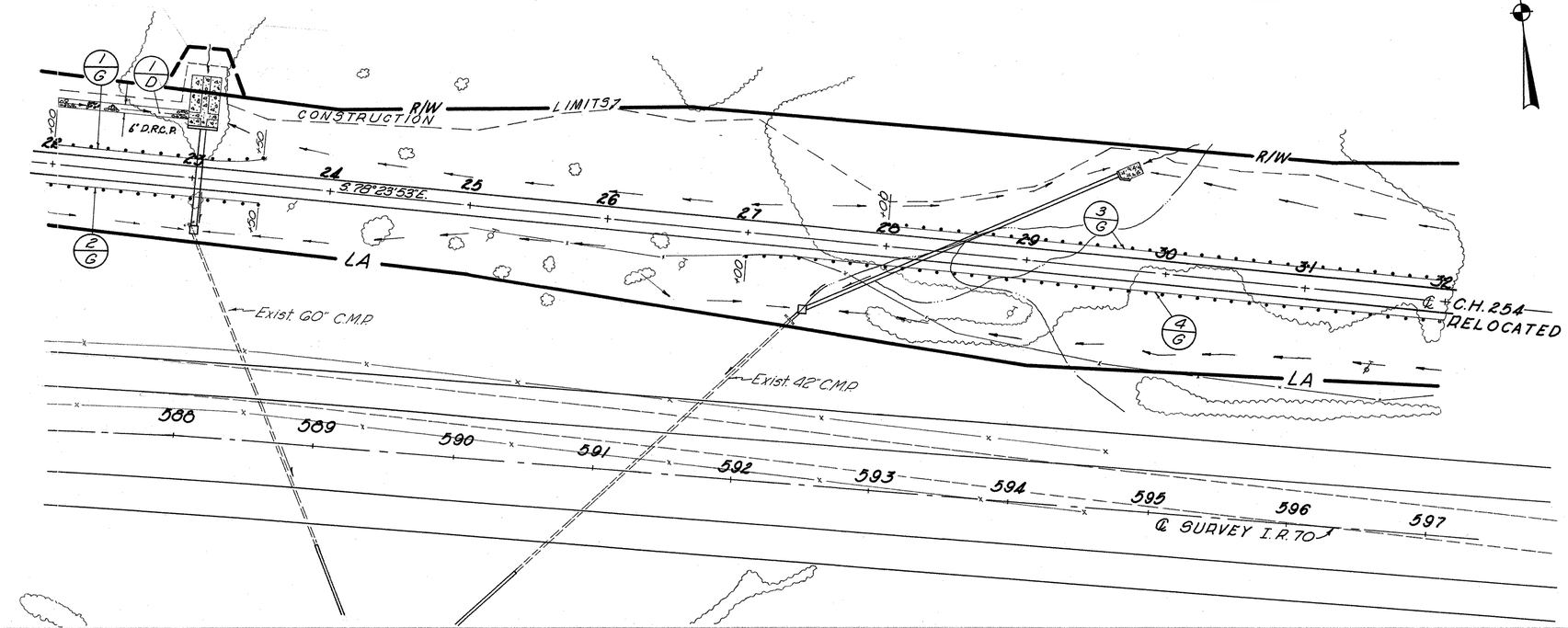
GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

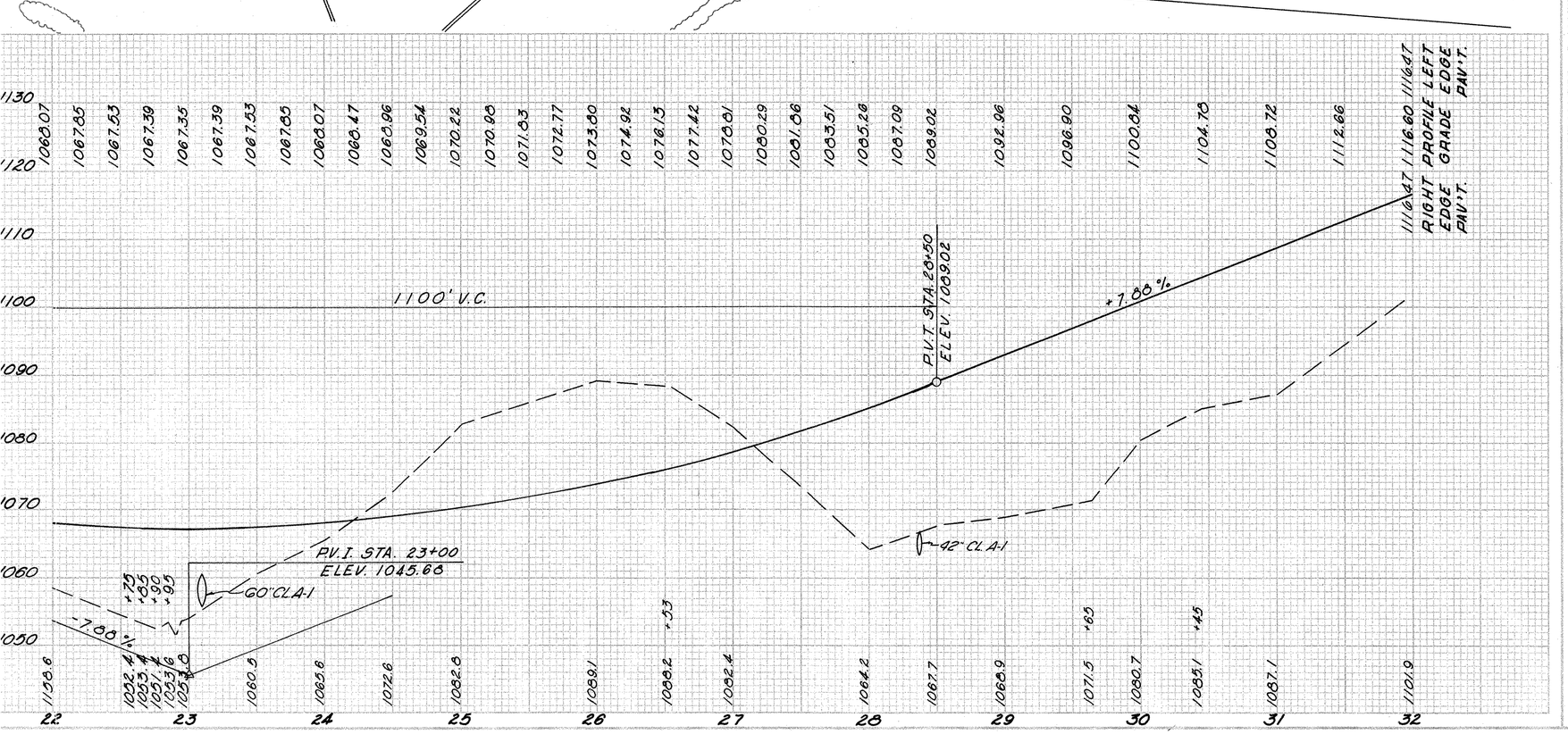
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

365/485

FOR CULVERT DETAILS - STA 23+09.51 - SEE SHEET NO. 418

FOR CULVERT DETAILS - STA 28+37.10 - SEE SHEET NO. 429





ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-15 GUARD RAIL STD. TYPE DEEP L.F.	I-10 DUMPED ROCK CHANNEL PROT. W/ TRUCK C.Y.	
1-G	22+00 ~ 23+50	LT.	150		
2-G	22+50 ~ 23+50	RT.	150		
3-G	29+00 ~ 32+00	LT.	400		
4-G	29+00 ~ 32+00	RT.	500		
1-D	22+00 ~ 22+95	LT.		33	
TOTALS			*1200	33	

*TOTAL TO SHEET 18

RELOC. C.H. 254 STA. 22+00 to STA. 32+00

GUERNSEY COUNTY – BELMONT COUNTY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

GUE-40-[illegible] BEL-40-0.00

366
485

BENCH MARK
R.R. Spike &
45' Rt. Sta. 602+87
Elev. ~1109.41

P.C. STA. 32+72.00

CURVE DATA
P.I. STA. 39+79.95
Δ = 21°00'00" Lt.
D = 1°30'
R = 3819.72'
T = 707.35'
L = 1400.00'
E = 65.05'

R/W
R/W
CONSTRUCTION LIMITS
4' SODDING
5' SODDING
LA
LA
1/G
2/G
1/D
2/D
+00
+50
+00
+00
+00
32 33 34 35 36 37 38 39 40 41 42
590 599 600 601 602 603 604 605 606 607

1170
1160
1150
1140
1130
1120
1110
1100
1090

1116.60 1120.38 1123.84 1126.98 1129.80 1132.30 1134.48 1136.33 1137.87 1139.09 1139.99 1140.57 1140.82 1140.76 1140.38 1139.68 1138.65 1137.31 1135.64 1133.66 1131.35
LEFT EDGE PAV'T.
PROFILE GRADE
RIGHT EDGE PAV'T.

+7.88%
-5.00%
P.V.I. STA. 37+00
ELEV. 1136.00
1000' V.C.
P.V.C. STA. 32+00
P.V.T. STA. 42+00

+35 +47 +72 +4.4 +6.2

1101.9 1106.5 1111.8 1116.9 1122.9 1130.9 1140.6 1153.3 1153.2 1154.8 1156.9 1157.5 1156.1 1155.6 1153.7 1151.4 1155.8 1160.1 1164.2 1167.3 1167.7 1166.6 1160.6 1164.1 1159.1 1151.9
32 33 34 35 36 37 38 39 40 41 42

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	F-15 GUARD RAIL STATIONS DEEP L.F.
1-G	32+00 ~ 33+00	LT.	100
2-G	32+00 ~ 33+00	RT.	100
1-D	33+50 ~ 35+00	LT.	
2-D	40+00 ~ 42+00	LT.	
TOTALS			*200

SEE SHEET NO.			
L-10	SODDING	SQ. YD.	67 111 178

* TOTAL TO SHEET 18

RELOC. C.H. 254 STA. 32+00 to STA. 42+00

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

367
485

CURVE DATA
P.I. STA. 39+79.95
Δ = 21°00'00" Lt.
D = 1°30'
R = 3,819.72'
T = 707.95'
L = 1400.00'
E = 65.05'

BENCH MARK
U.S.C. & G.S. Std. Disk
Stamped "K-64-1934"
359' Rt. Sta. 611+62
Elev. 1034.62

FOR DETAILS OF 15" CULVERT STA 44+04 SEE SHEET No. 390

CHANNEL EASEMENT

FOR DETAILS OF 60" CULVERT STA. 45+63, SEE SHEET NO. 430

R/W

Begin Dump Rock

P.T. STA. 46+72.00

4' Dump Rock

Begin Sod

CONSTRUCTION LIMITS

4' Sod

5' Sod

48 N 80°36'07"E 49

C.H. 254 RELOCATED

LA

Exist. 60" C.M.P.

42 43 44 45 46 47 48 49 50 51 52

607 608 609 610 611 612 613 614 615 616 617 618

400' V.C.

P.V.C. STA. 43+00 ELEV. 1126.63

P.V.I. STA. 45+00 ELEV. 1116.56

P.T. STA. 47+00 ELEV. 1120.13

4.93%

+1.85%

115' CL. A-1

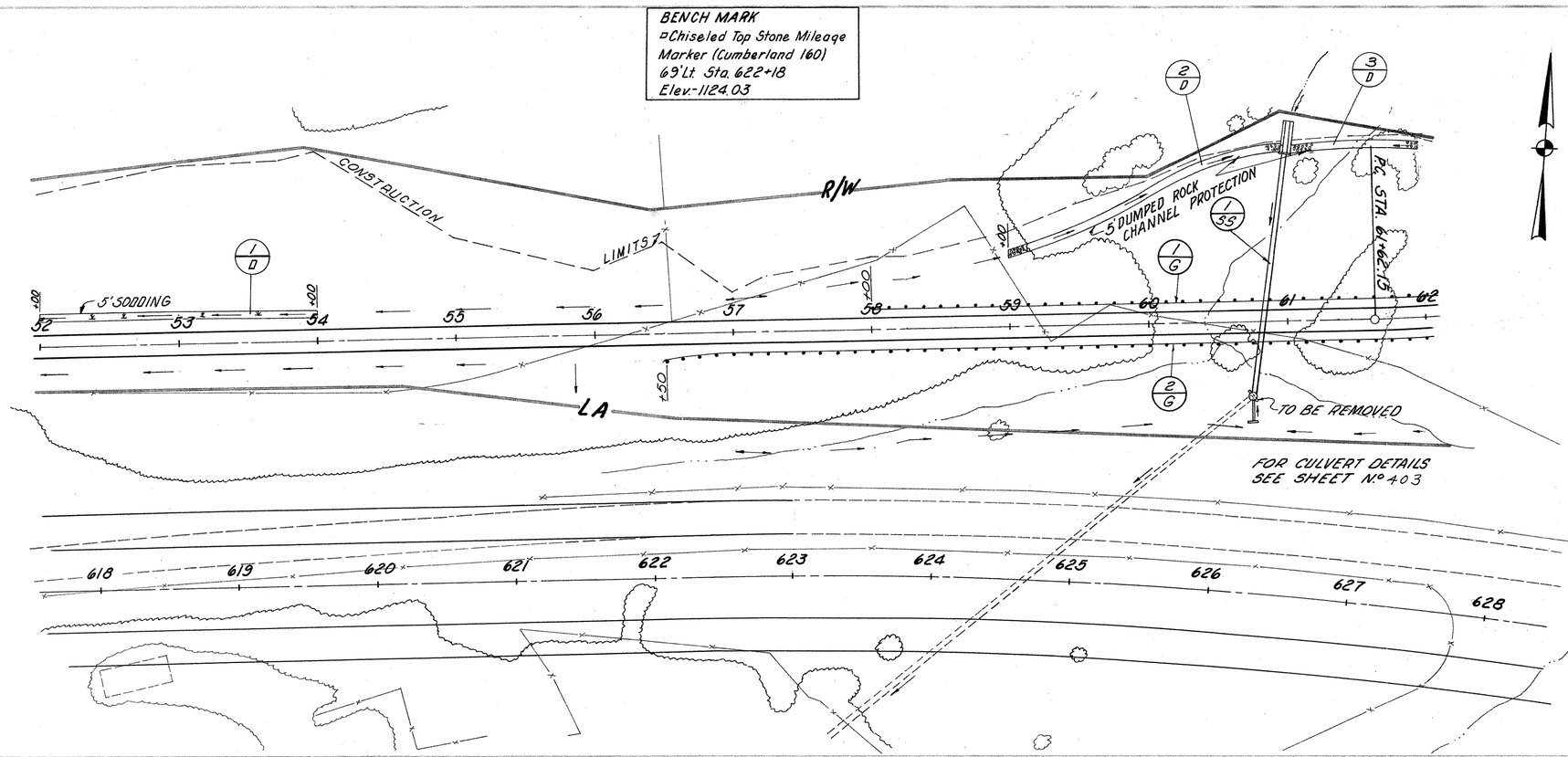
60" CL. A-1

	42	43	44	45	46	47	48	49	50	51	52
RIGHT EDGE PAVT.	1131.27	1129.98	1128.76	1127.52	1126.63	1125.11	1124.04	1123.07	1122.21	1121.45	1120.81
	1130.12	1128.89	1127.65	1126.63	1125.24	1124.17	1123.20	1122.34	1121.58	1120.94	1120.39
PROFILE GRADE	1131.35	1130.25	1129.02	1127.78	1126.56	1125.37	1124.30	1123.33	1122.47	1121.71	1121.07
	1131.48	1130.25	1129.02	1127.78	1126.56	1125.37	1124.30	1123.33	1122.47	1121.71	1121.07
LEFT EDGE PAVT.	1131.27	1129.98	1128.76	1127.52	1126.63	1125.11	1124.04	1123.07	1122.21	1121.45	1120.81

	42	43	44	45	46	47	48	49	50	51	52
RIGHT EDGE PAVT.	1120.52	1120.08	1119.75	1119.53	1119.40	1119.39	1119.48	1119.68	1119.84	1120.19	1120.60
	1120.39	1119.95	1119.62	1119.40	1119.27	1119.26	1119.35	1119.55	1119.85	1120.13	1120.73
PROFILE GRADE	1120.52	1120.08	1119.75	1119.53	1119.40	1119.39	1119.48	1119.68	1119.84	1120.19	1120.60
	1120.26	1119.87	1119.49	1119.20	1119.14	1119.13	1119.22	1119.42	1119.72	1120.13	1120.60
LEFT EDGE PAVT.	1120.26	1119.87	1119.49	1119.20	1119.14	1119.13	1119.22	1119.42	1119.72	1120.13	1120.60

FED. RD. DIVISION	STATE	PROJECT		368 485
2	OHIO			

BENCH MARK
□Chiseled Top Stone Mileage Marker (Cumberland 160)
69'Lt. Sta. 622+18
Elev-1124.03



* Sec. Mod. 8 Gage Strutted & shop elongated As per plan, see sheet #403

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	F-15 GUARD RAIL STD. TYPE DEEP L.F.		F-1 (21 3/4"x13") * 16" L.F.	42" L.F.		SEE SHEET NO.
1-G	58+00 - 62+00	LT.	400					
2-G	56+50 - 62+00	RT.	550					
1-55	60+82	LT.& RT.				18	174*	
1-D	52+00 ~ 54+00	LT.						
2-D	59+00 ~ 61+00	LT.						
3-D	61+00 ~ 62+00	LT.						
TOTALS			*950			18	174*	

REF. NO.	STATION TO STATION	SIDE	F-10 DUMPED ROCK CHANNEL PROTECT. 18"THICK C.Y.	F-12 SIDE REMOVAL OVER 15" L.F.	F-10 SODDING S.Y.	F-10 PAD & R.C. CONC. SLAB S.Y.	MASONRY C.Y.	F-8 STD. N.º 2 M.H. EACH	SEE SHEET NO.
1-55	60+82	LT.& RT.	59 28	2	87				
1-D	52+00 ~ 54+00	LT.							
2-D	59+00 ~ 61+00	LT.		2	2				
3-D	61+00 ~ 62+00	LT.							
TOTALS				2	229	43	4	1	

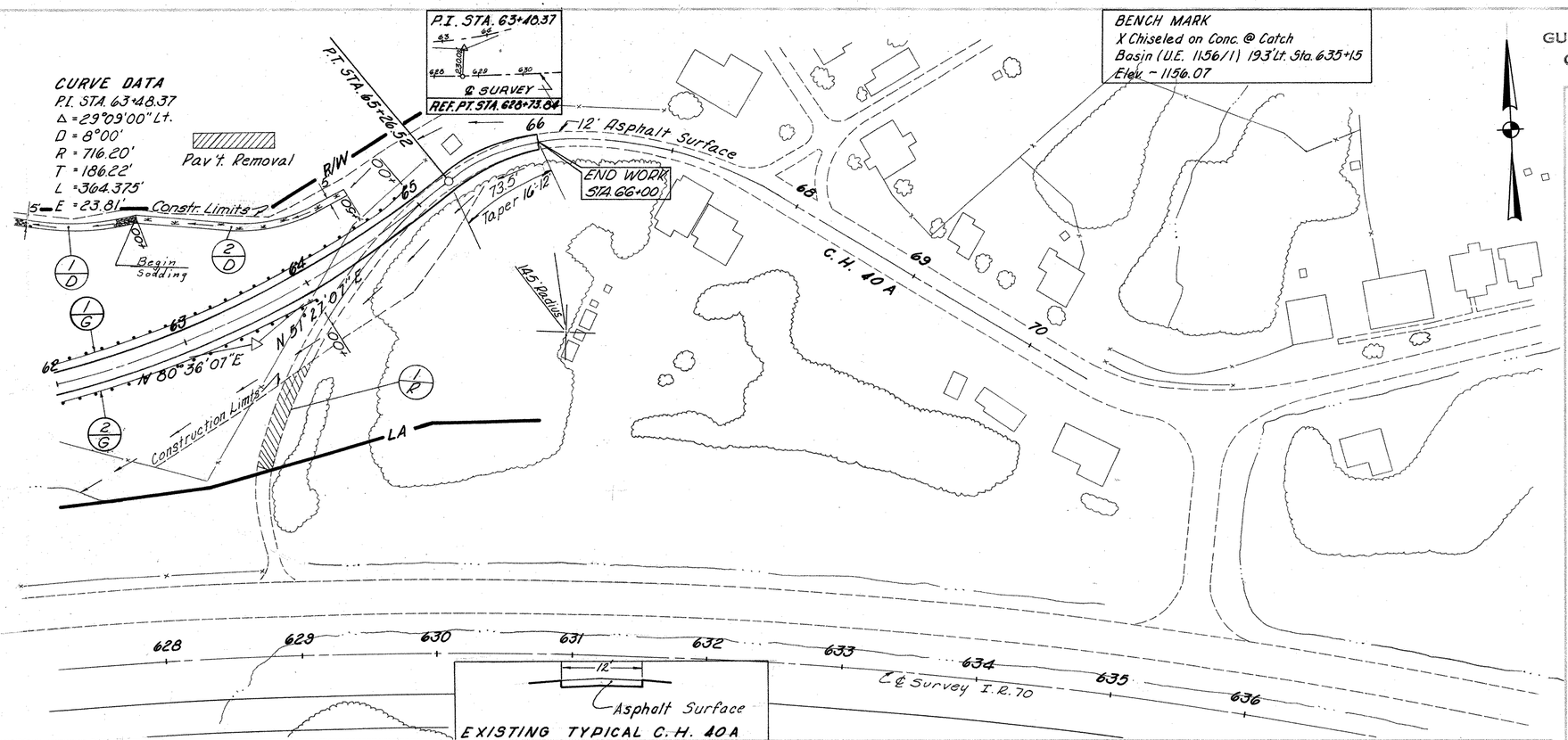
* TOTAL TO SHEET 18

RELOC. C.H. 254 STA. 52+00 TO STA. 62+00

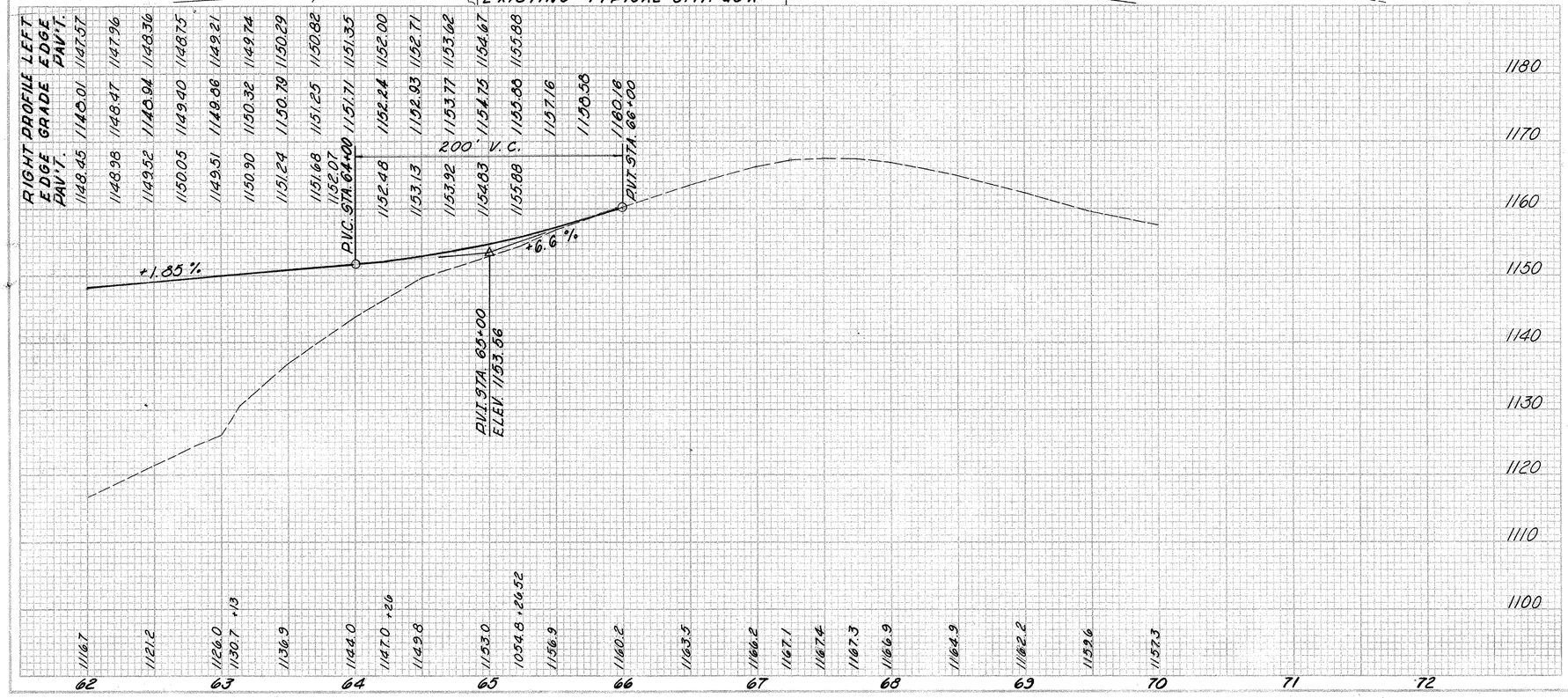
GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

369
485



BENCH MARK
X Chiseled on Conc. @ Catch
Basin (U.E. 1156/1) 193' Lt. Sta. 635+15
Elev. – 1156.07



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-15 GUARD RAIL STD. TYPE DEEP L.F.	E-8 Remove & Disp. of Ex. Pav't as per plan Sq. Yds.	I-10 DUMPED ROCK CHANNEL PROT. 18" THICK C.Y.	L-10 SODDING S.Y.	SEE SHEET NO.
1-G	G2+00 ~ G5+00	LT.	300				
2-G	G2+00 ~ G4+00	RT.	200				
1-R	G3+50±	RT.		103			
1-D	G2+00 ~ G3+00	LT.			28	83	
2-D	G3+00 ~ G4+50	LT.					
TOTALS			*500	103	28	83	

* TOTAL TO SHEET 18

RELOC. C.H. 254 STA. 62+00 TO STA. 66+00

SECTIONS

END SECTION	CU. YDS.

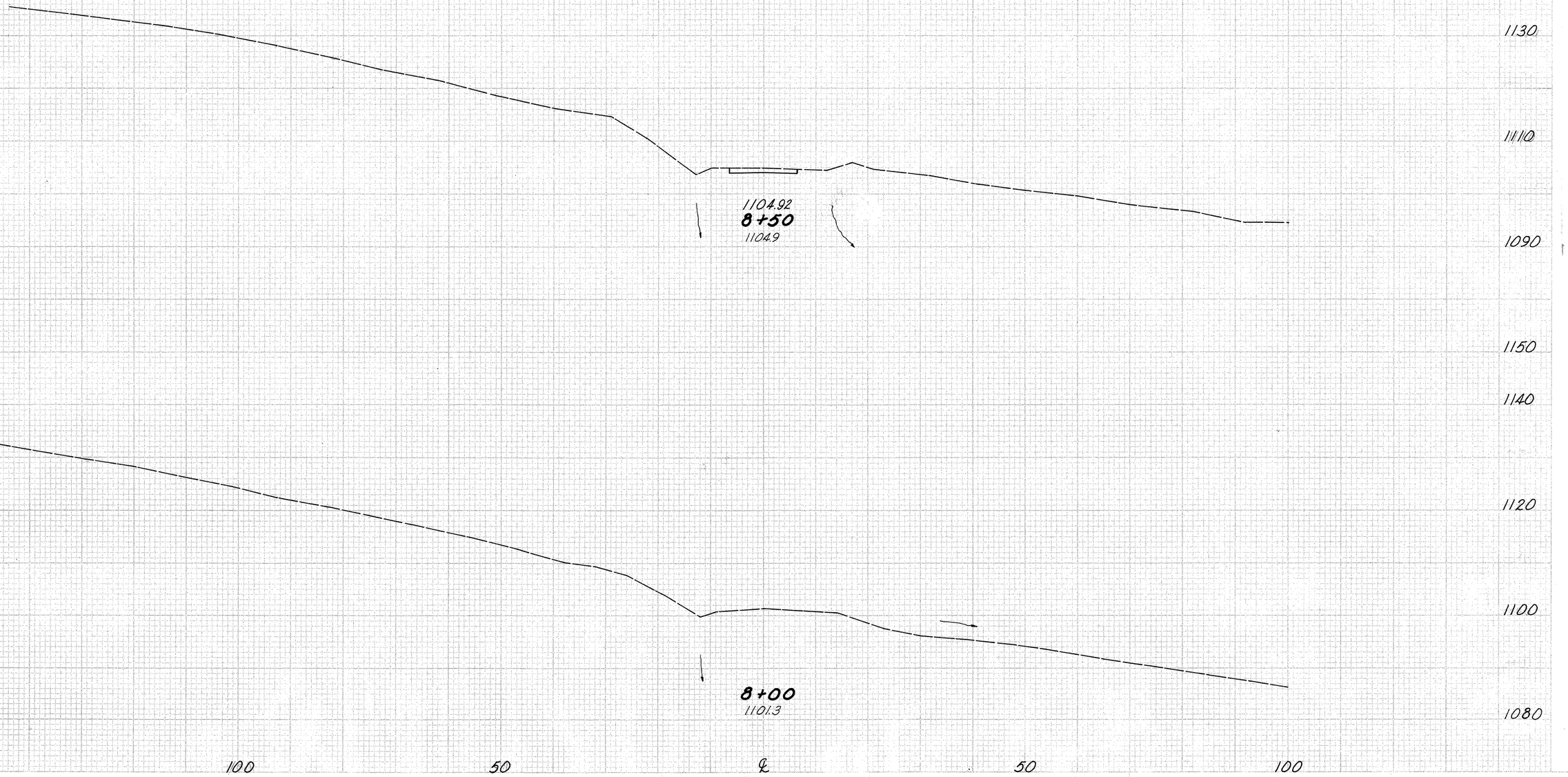
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

370
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



RELOC. C.H. 254 ~ STA. 8+00 TO STA. 8+50

SEEDING

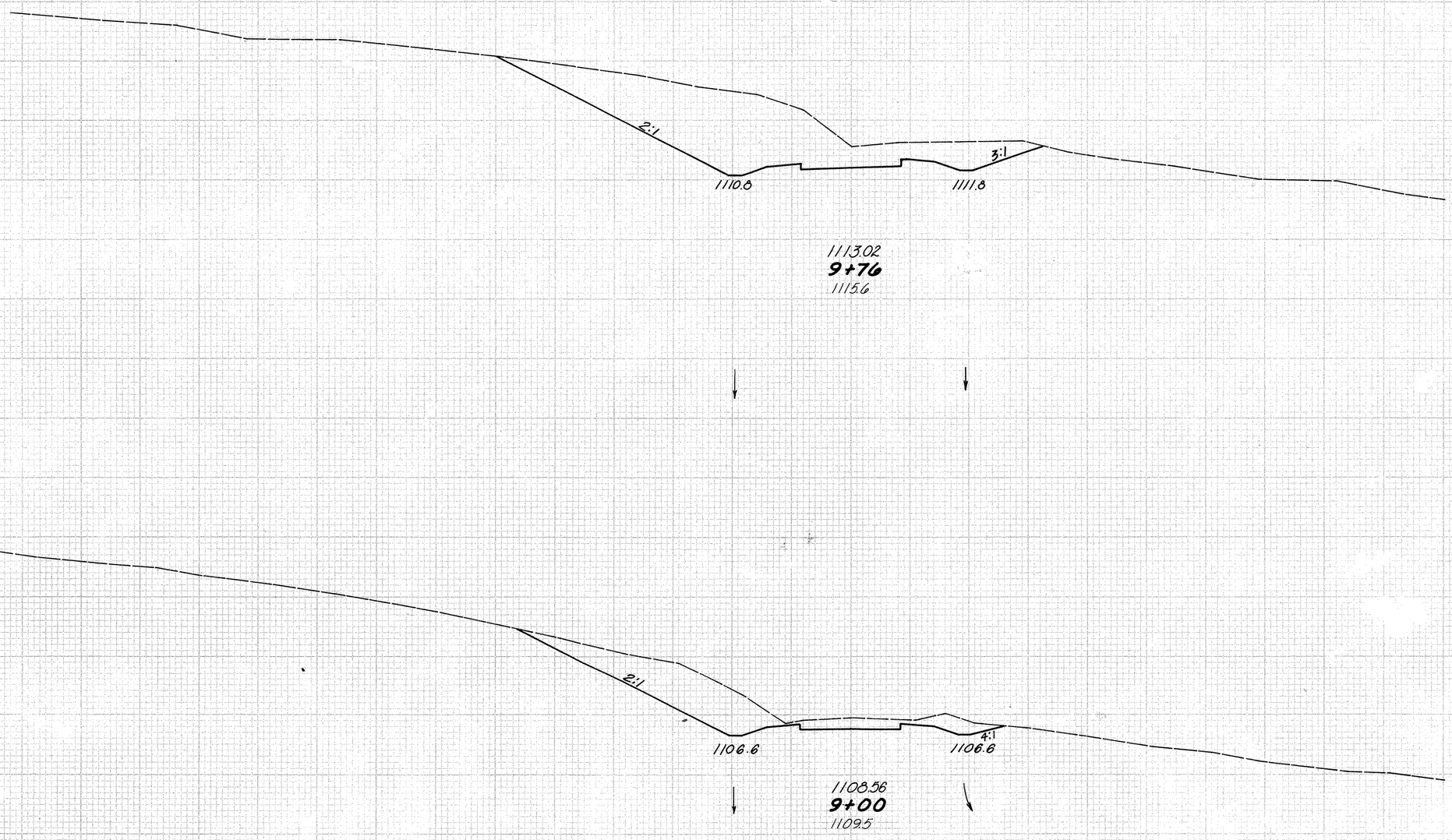
END WIDTH	NO. LBS.

DIST.	DIVISION	STATE	PROJECT	
	05	OH		

371
485

GUERNSEY COUNTY – BELMONT COUNTY

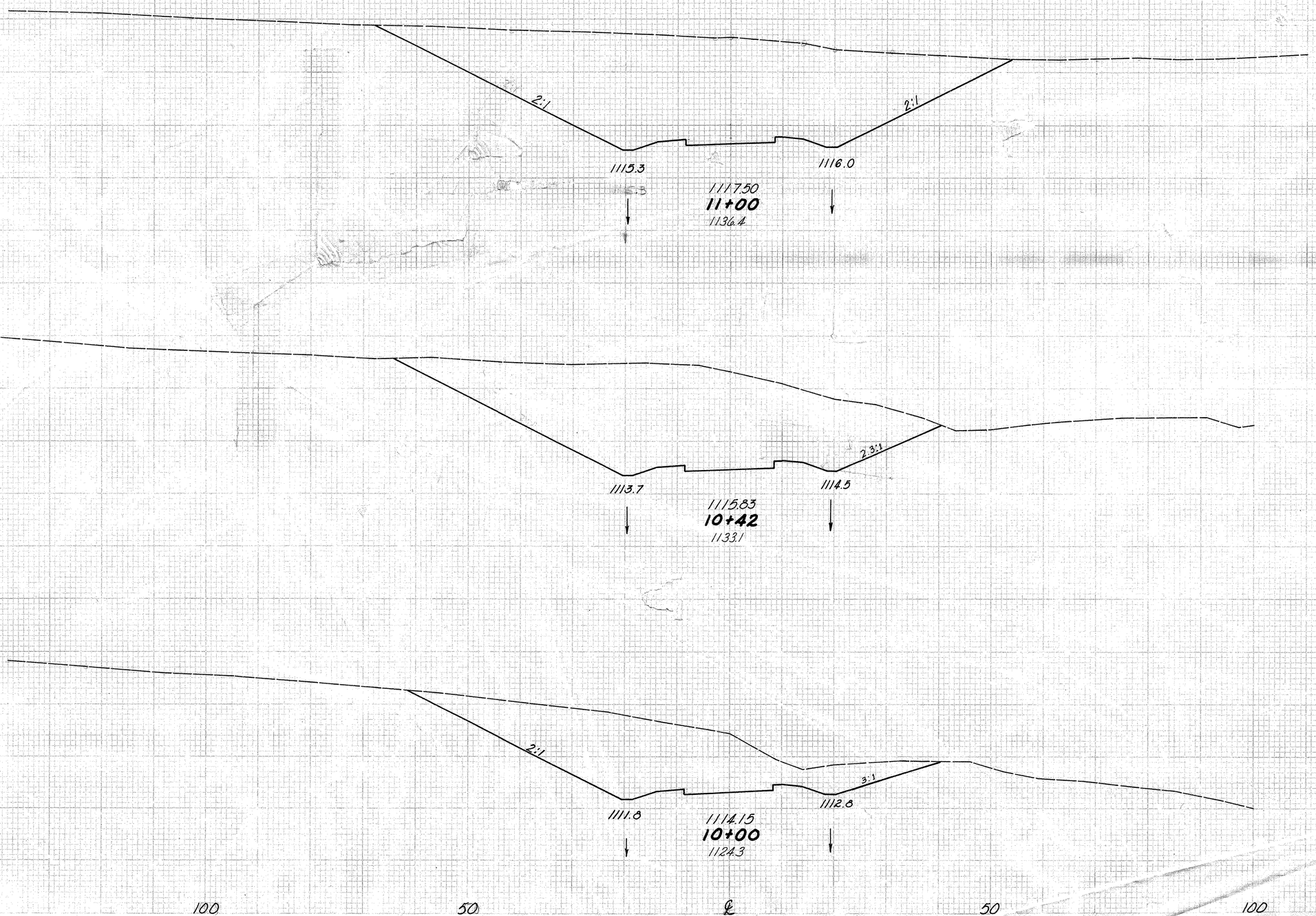
GUE – 40 – 23.73 BEL. – 40 – 0.00



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		607	0

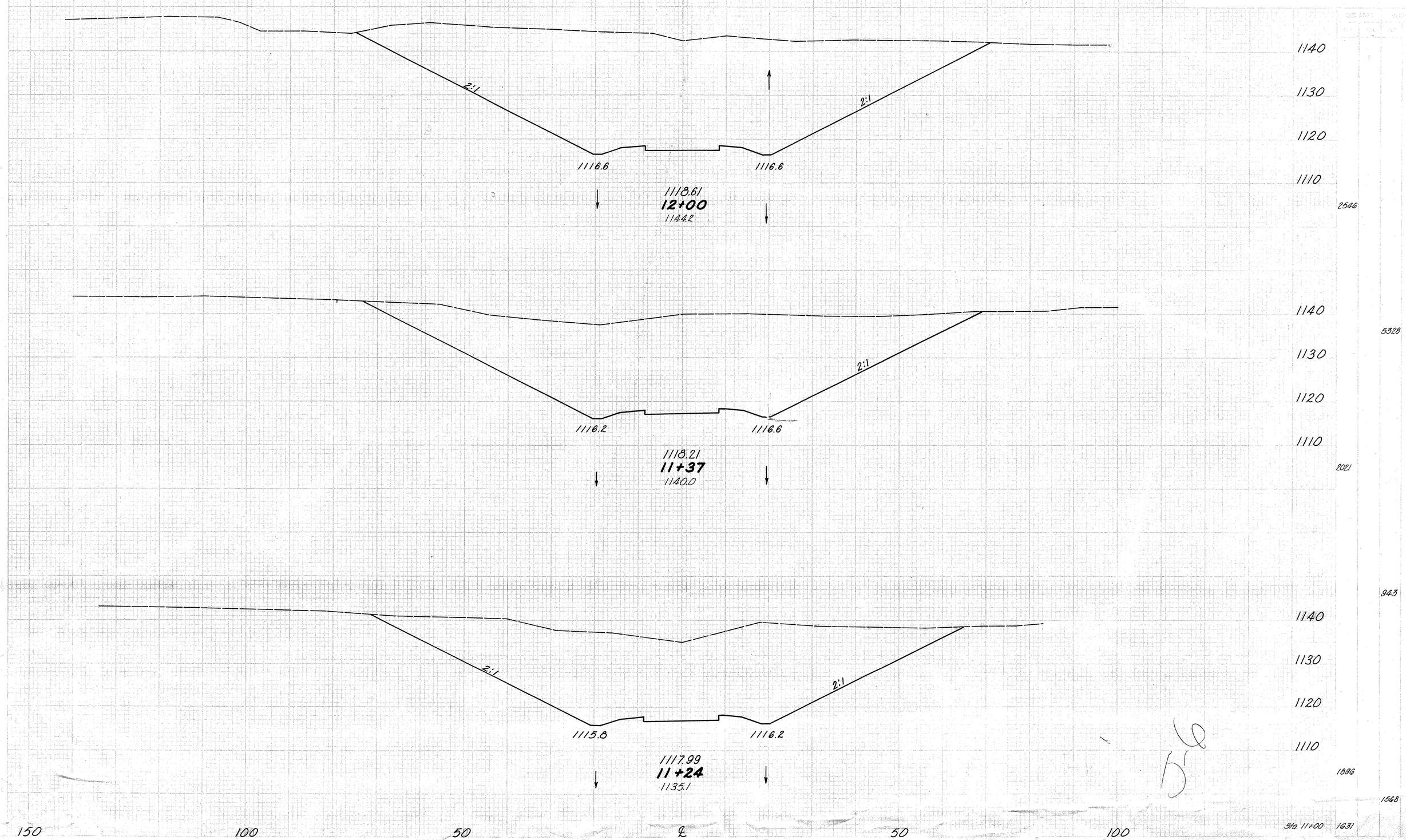
372
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.0Q



RELOC. C.H. 254 ~ STA. 10+00 TO STA. 11+00

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



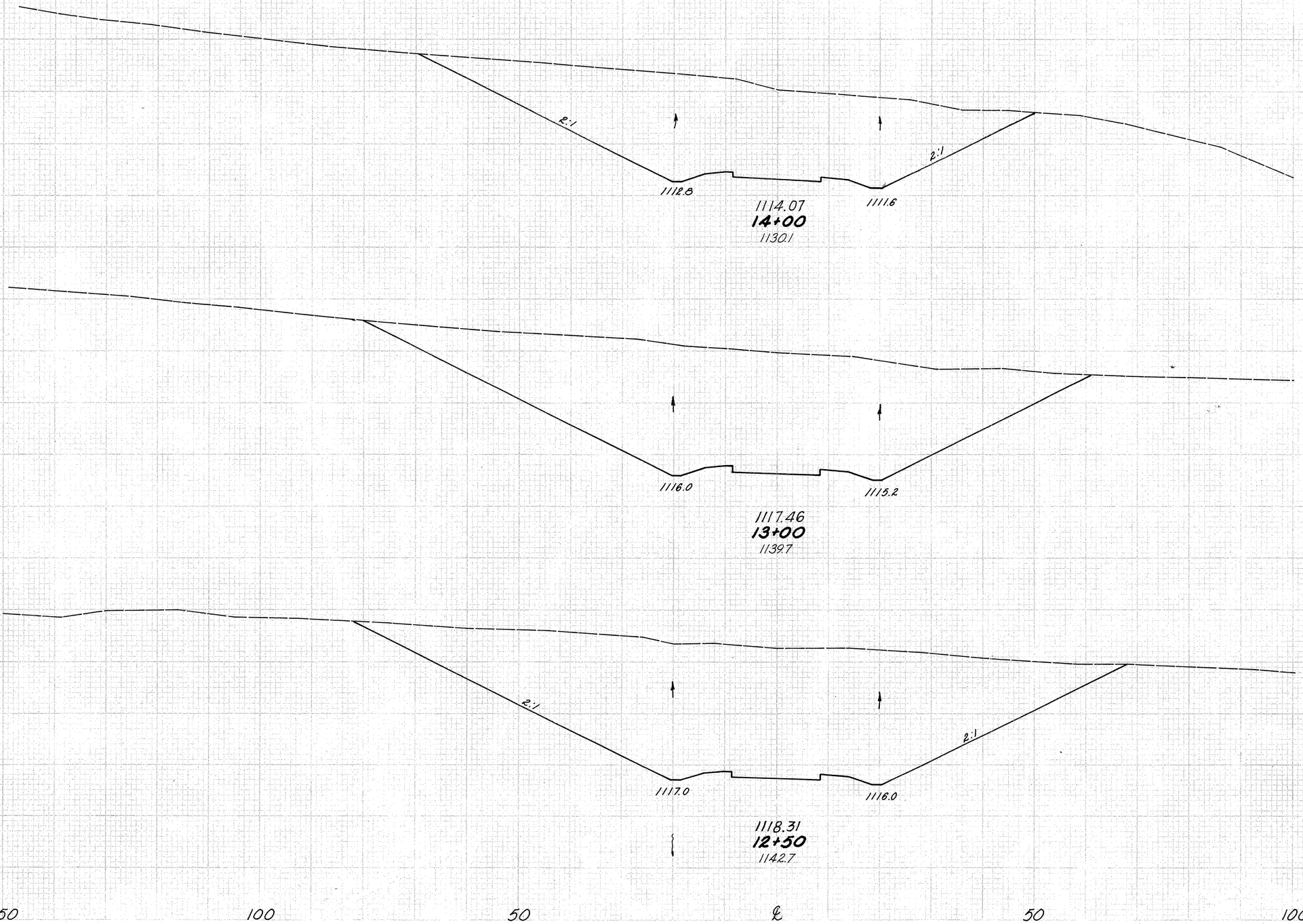
RELOC. C.H. 254 ~ STA. 11+24 TO STA. 12+00

SEEDING

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

374
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



J-7

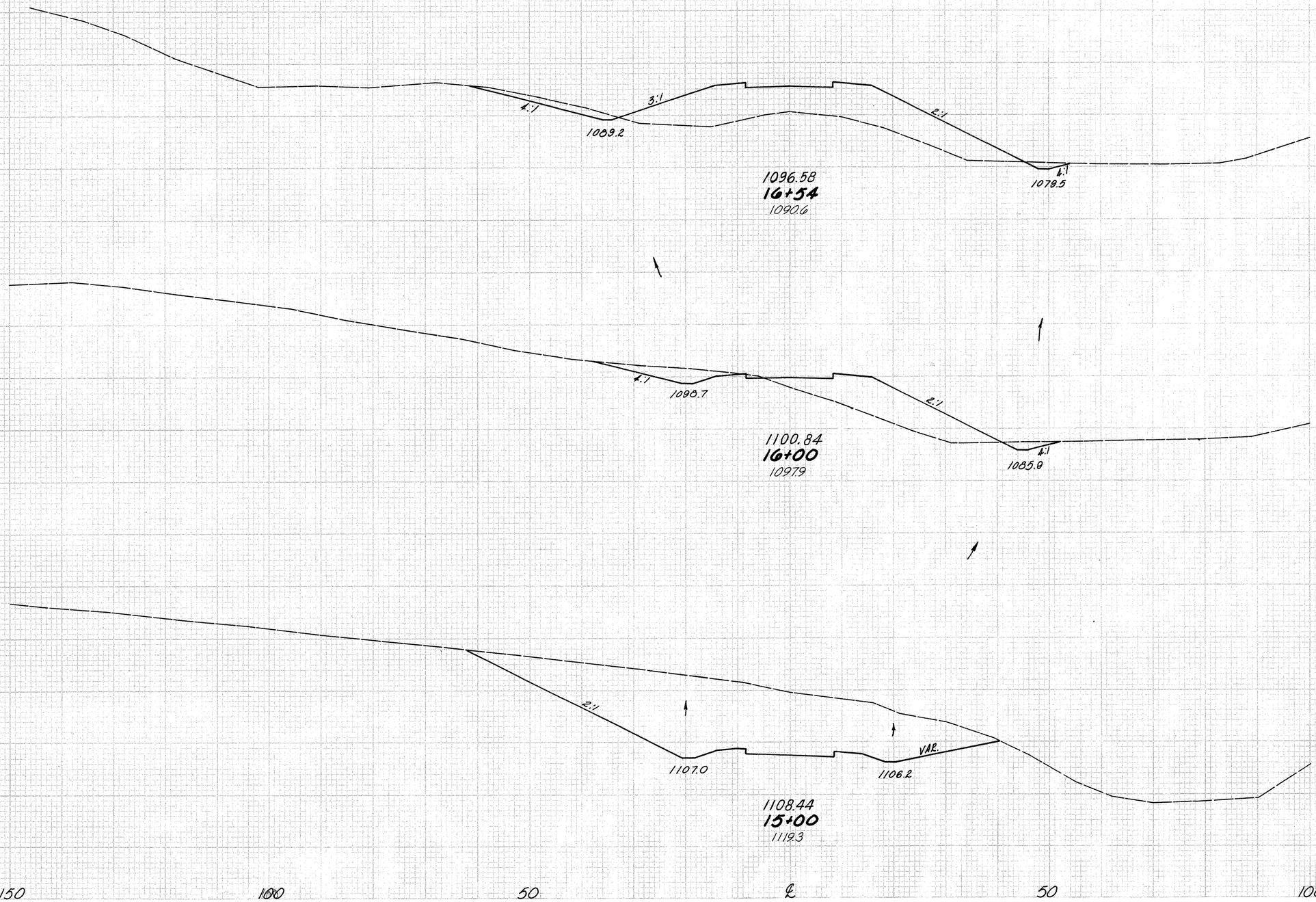
RELOC. C.H. 254 ~ STA. 12+50 TO STA. 14+00

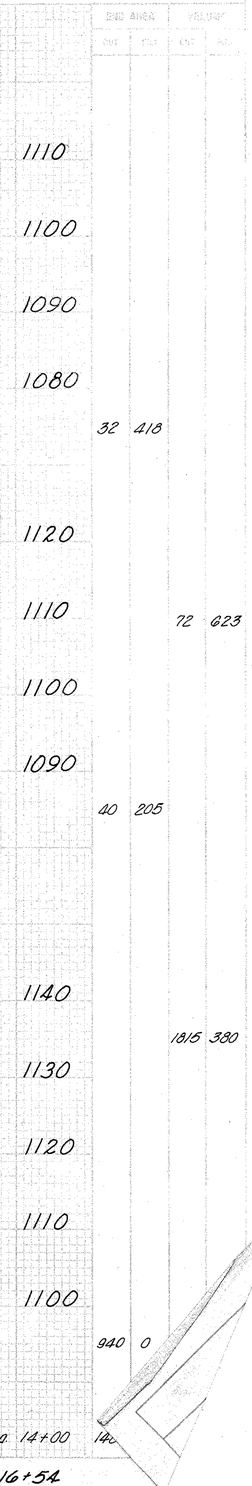
SEEDING

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

375
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



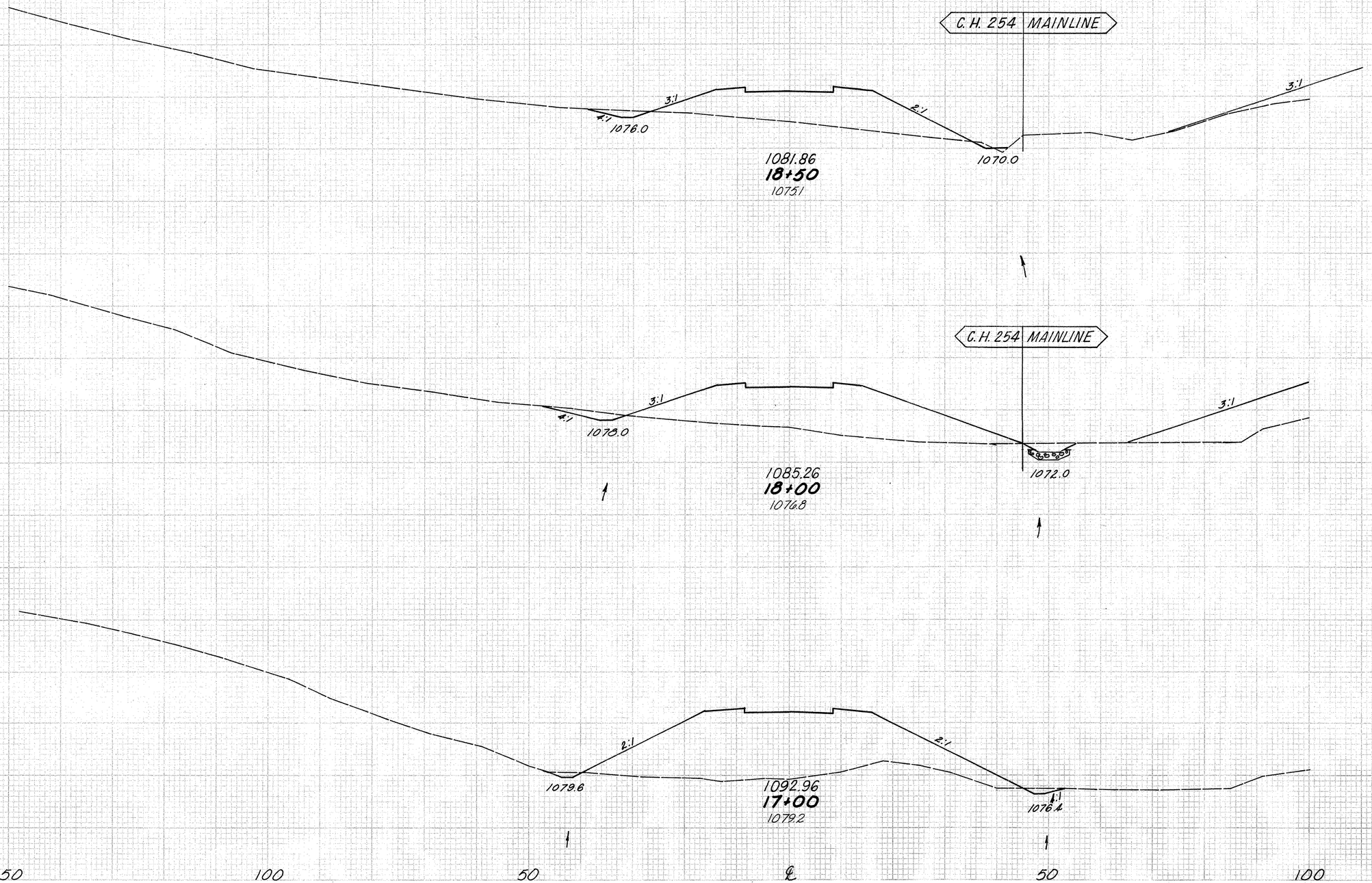


RELOC. C.H. 254 ~ STA. 15+00 TO STA. 16+54

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

376
485

GUERNSEY COUNTY - BELMONT COUNTY
GUE-40-21.83 BEL-40-0.00



	END AREA		FILL VOL.	
	CUT	FILL	CUT	FILL
			8	292
			21	687
			14	450
			44	2102
			10	685
STA	18+54		32	

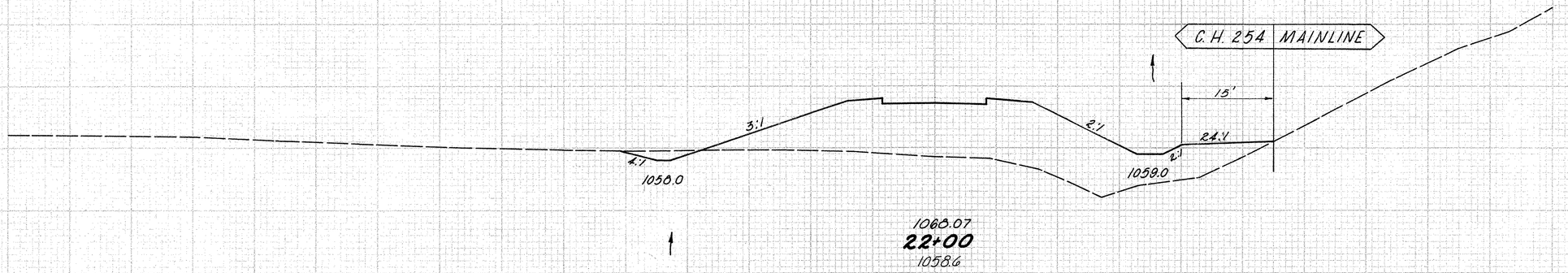
RELOC. C.H. 254 ~ STA. 17+00 TO STA. 18+50

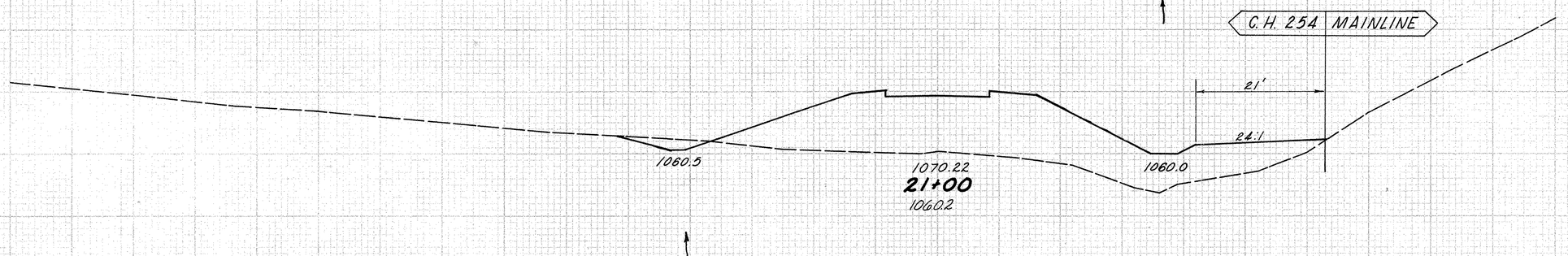
FED. RD. DIVISION	STATE		
2	OHIO		

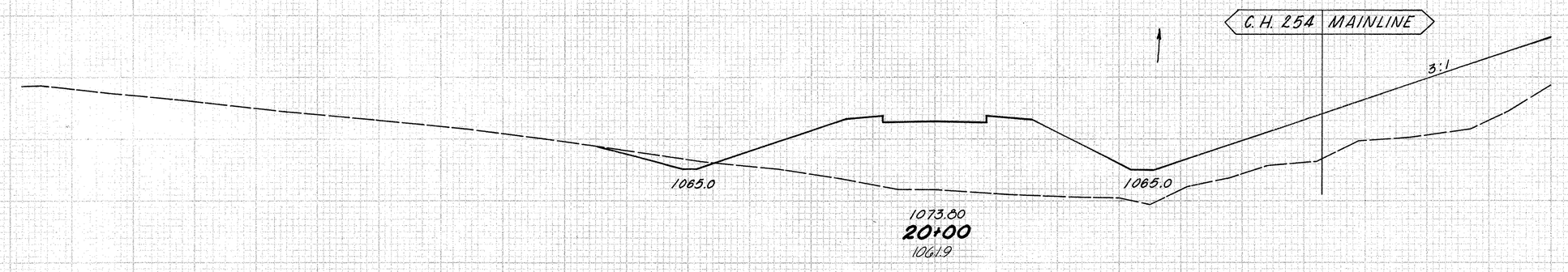
377
485

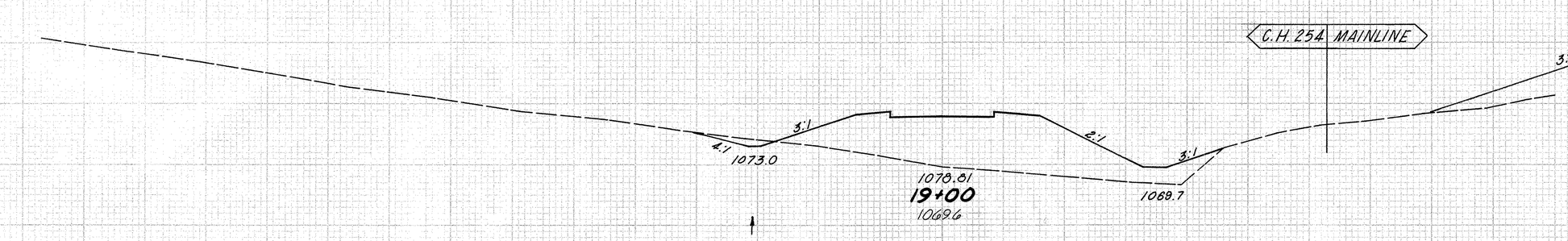
GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.68 BEL–40–0.00









	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1070				
1060				
1050				
	10	596		
1080				
			46	2350
1070				
1060				
	15	673		
1080				
			57	2617
1070				
1060				
	16	740		
1090				
			44	2148
1080				
1070				
	8	420		
1060				
			15	660
Sta. 18+50	8	292		

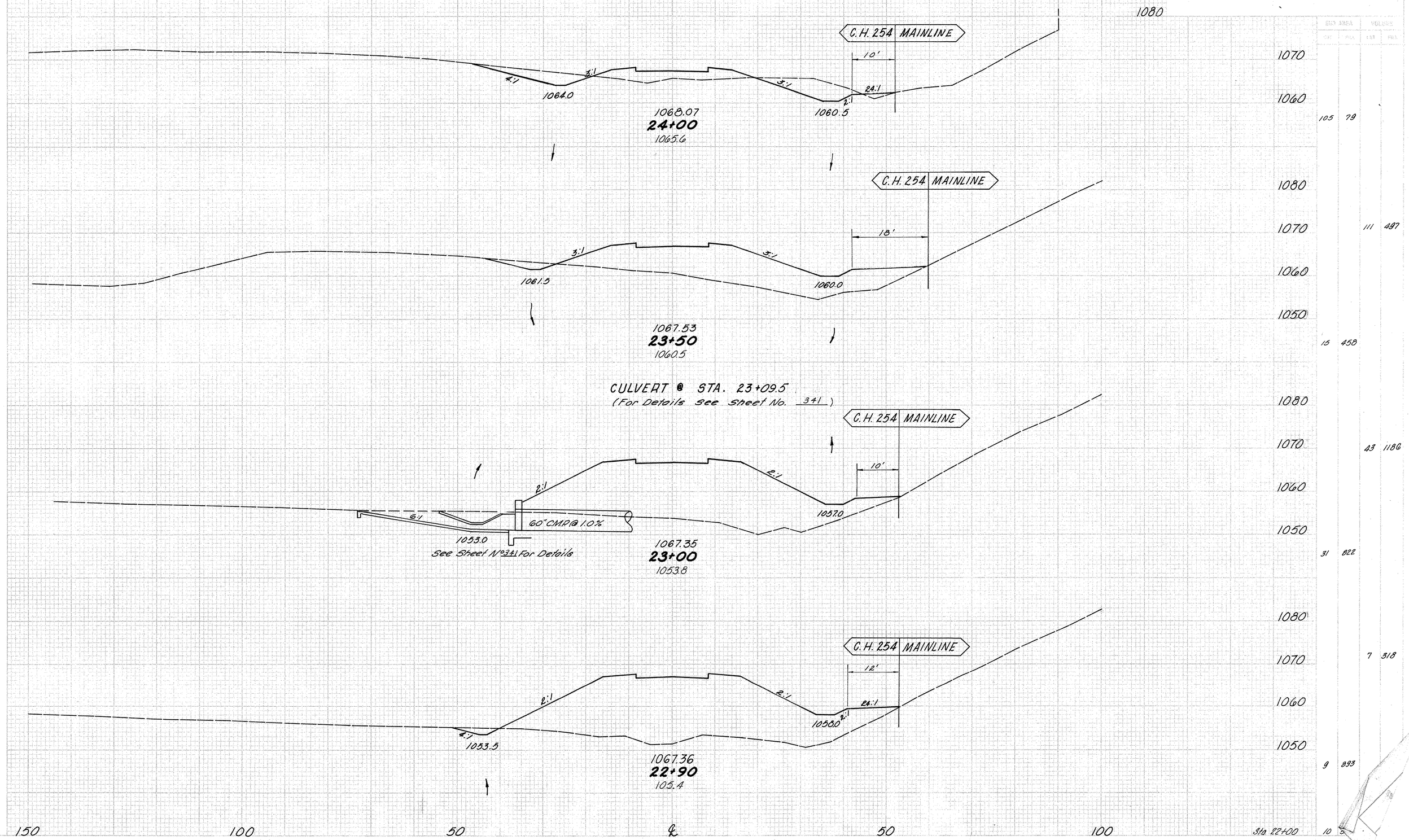
150 100 50 ℄ 50 100

RELOC. C.H. 254 ~ STA. 19+00 TO STA. 22+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

378
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00



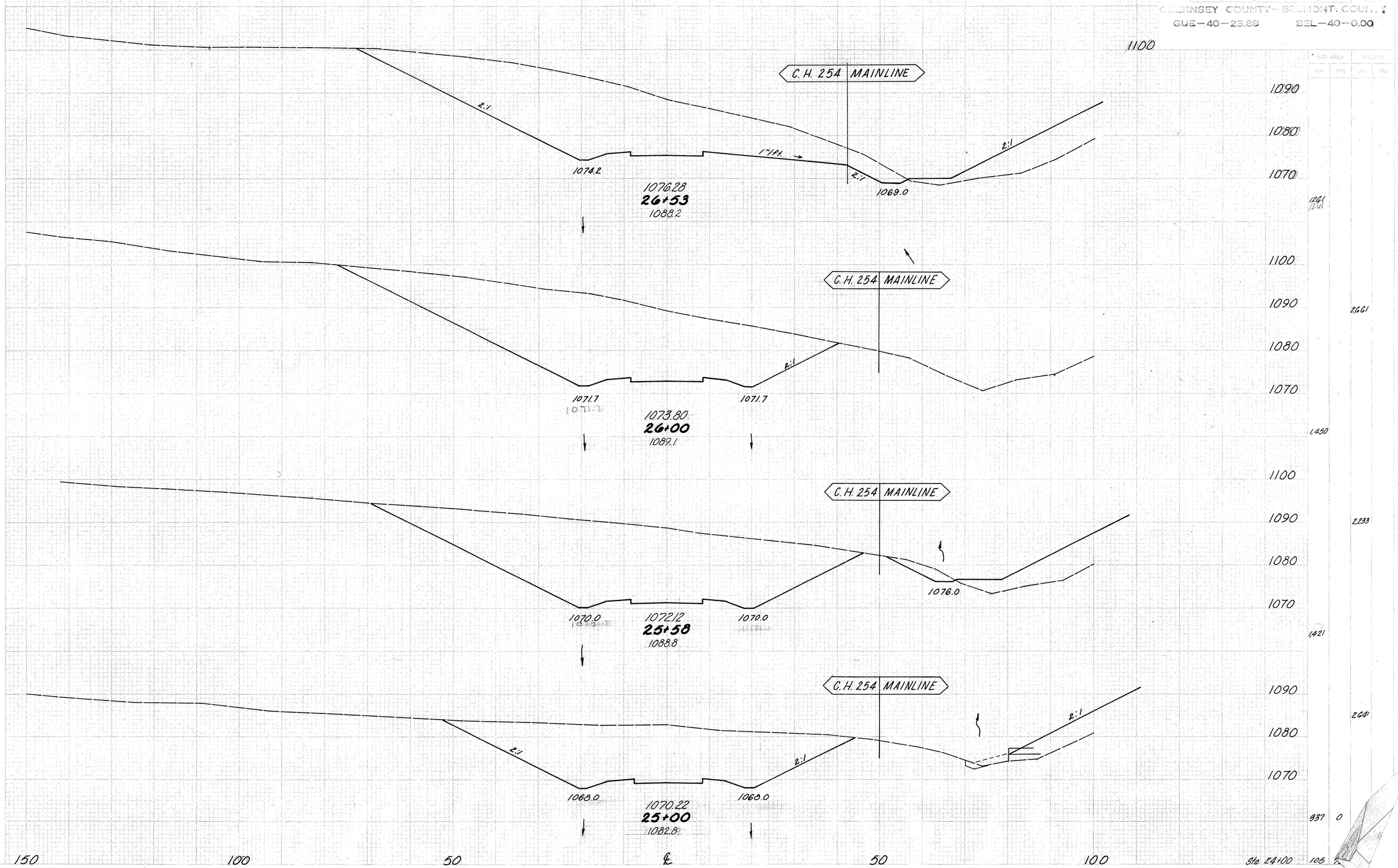
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
105	79		
		111	497
15	458		
		43	1186
31	822		
		7	318
9	893		
10	5		

RELOC. C.H. 254 ~ STA. 22+90 TO STA. 24+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

379
485

GUERNSEY COUNTY - BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00



RELOC. C.H. 254 ~ STA. 25+00 TO STA. 26+53

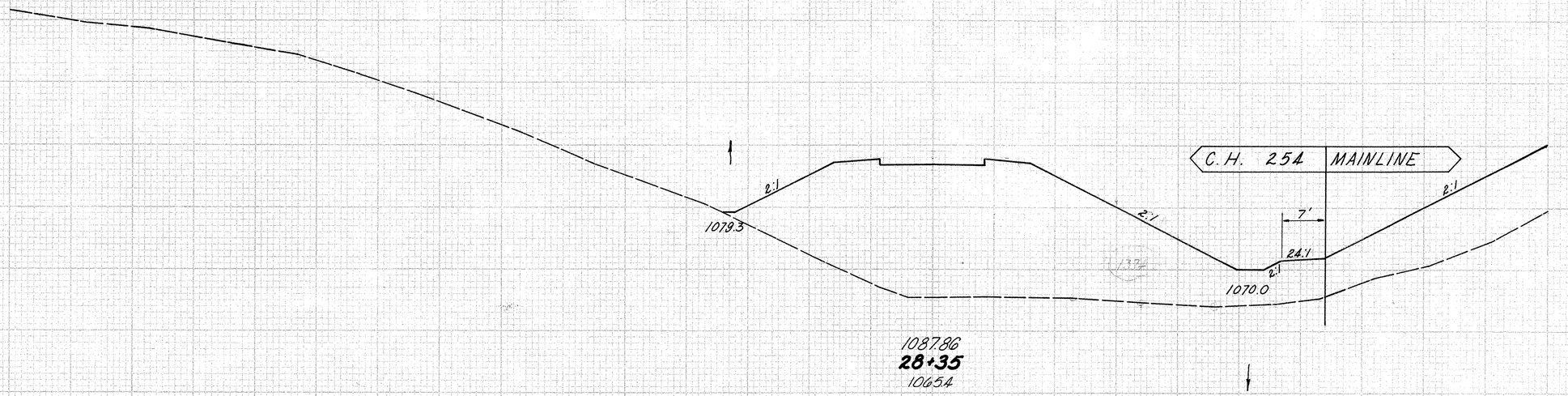
SEEDING	
FIND WIDTH	SQ YDS

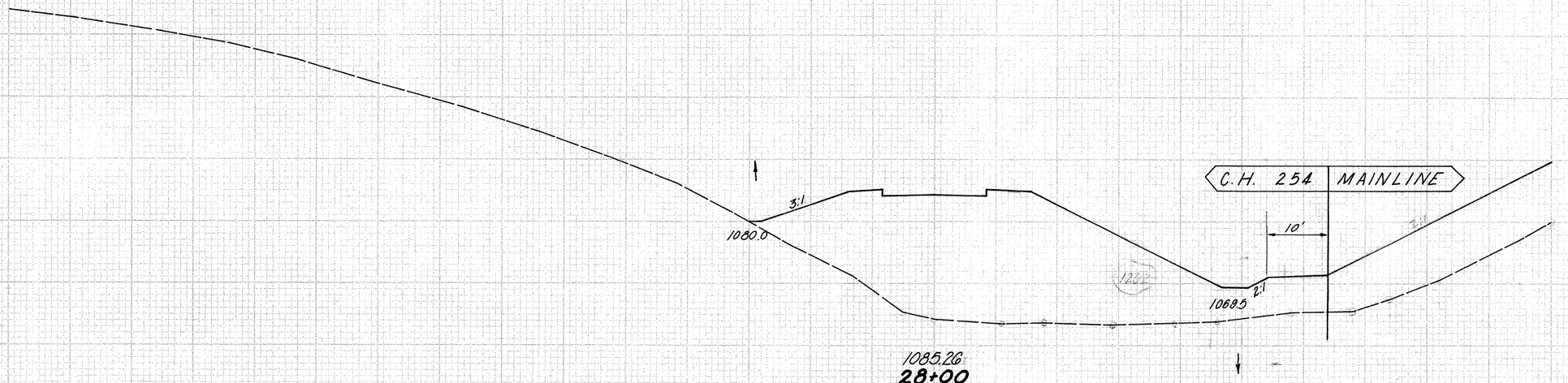
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

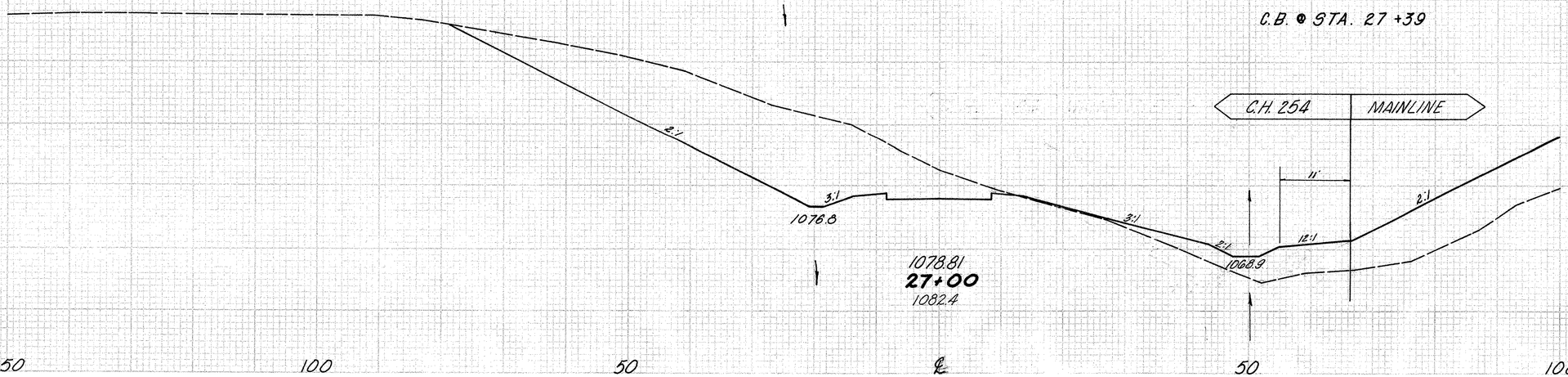
380
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00







150 100 50 ℄ 50 100

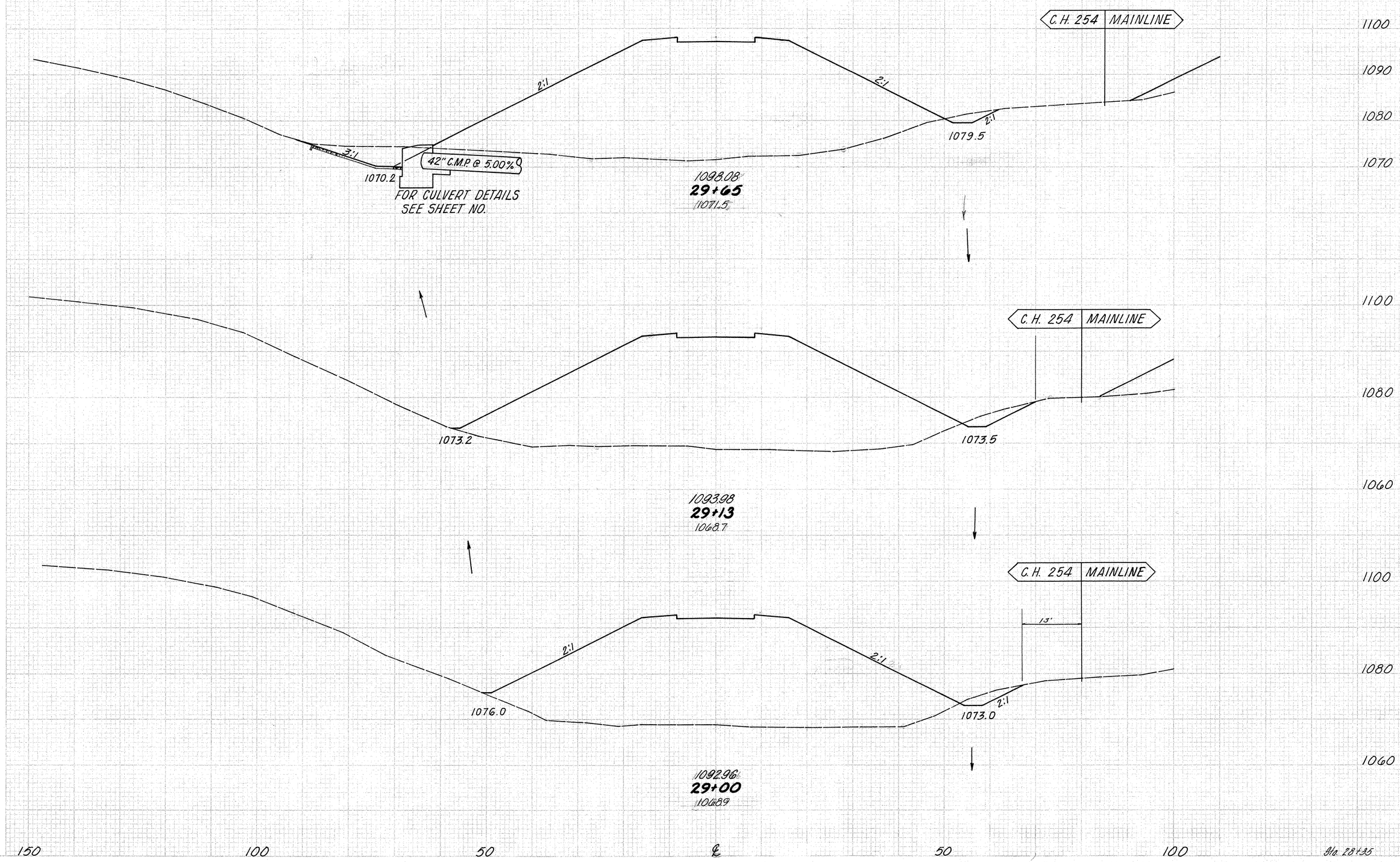
RELOC. C.H. 254 ~ STA. 27+00 TO STA. 28+35

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1110				
1100				
1090				
1080				
1070				
1060				
		1374		
1110				
1100				1,670
1090				
1080				
1070				
1060				
		1,202		
1100				
1090				1380 2,445
1080				
1070				
1060	745	118		
Sta 28+53		1261		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

381
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE-40-23.33 BEL-40-0.00



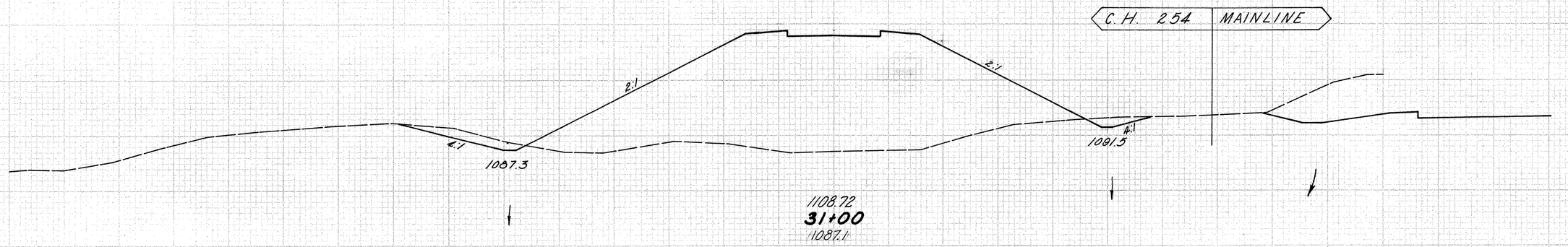
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
76	1,892		
		96	3,598
24	1844		
		11	862
21	1,737		
		25	3,745
0	1,374		

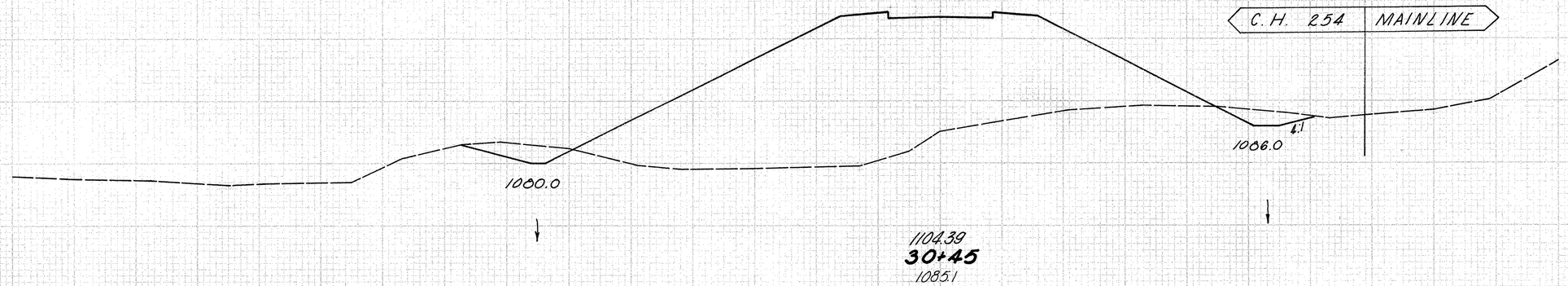
RELOC. C.H. 254 ~ STA. 29+00 TO STA. 29+65

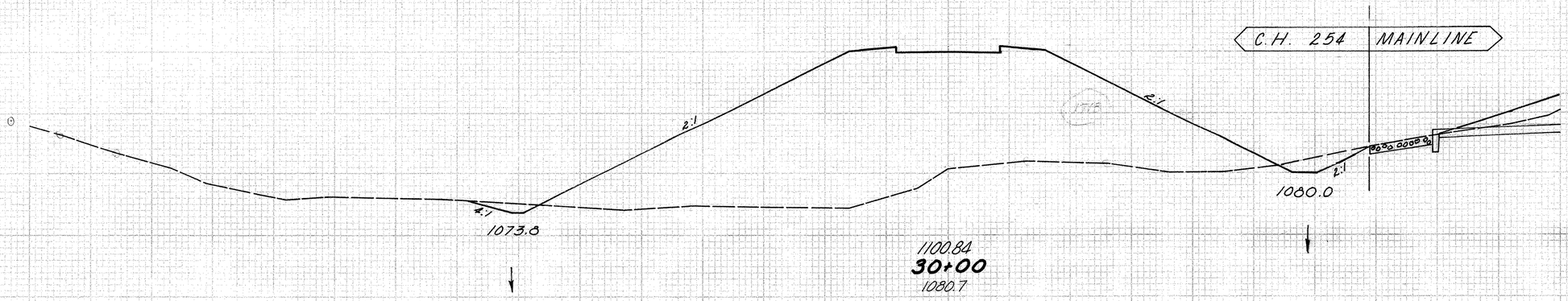
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

382
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00







	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1110				
1100				
1090				
1080				
	36	1391		
1100				91 2,883
1090				
1080				
1070				
	53	1,439		
1100				71 2,631
1090				
1080				
1070				
	32	1,718		
Sta. 29+65	76	1,092		

150 100 50 ℄ 50 100

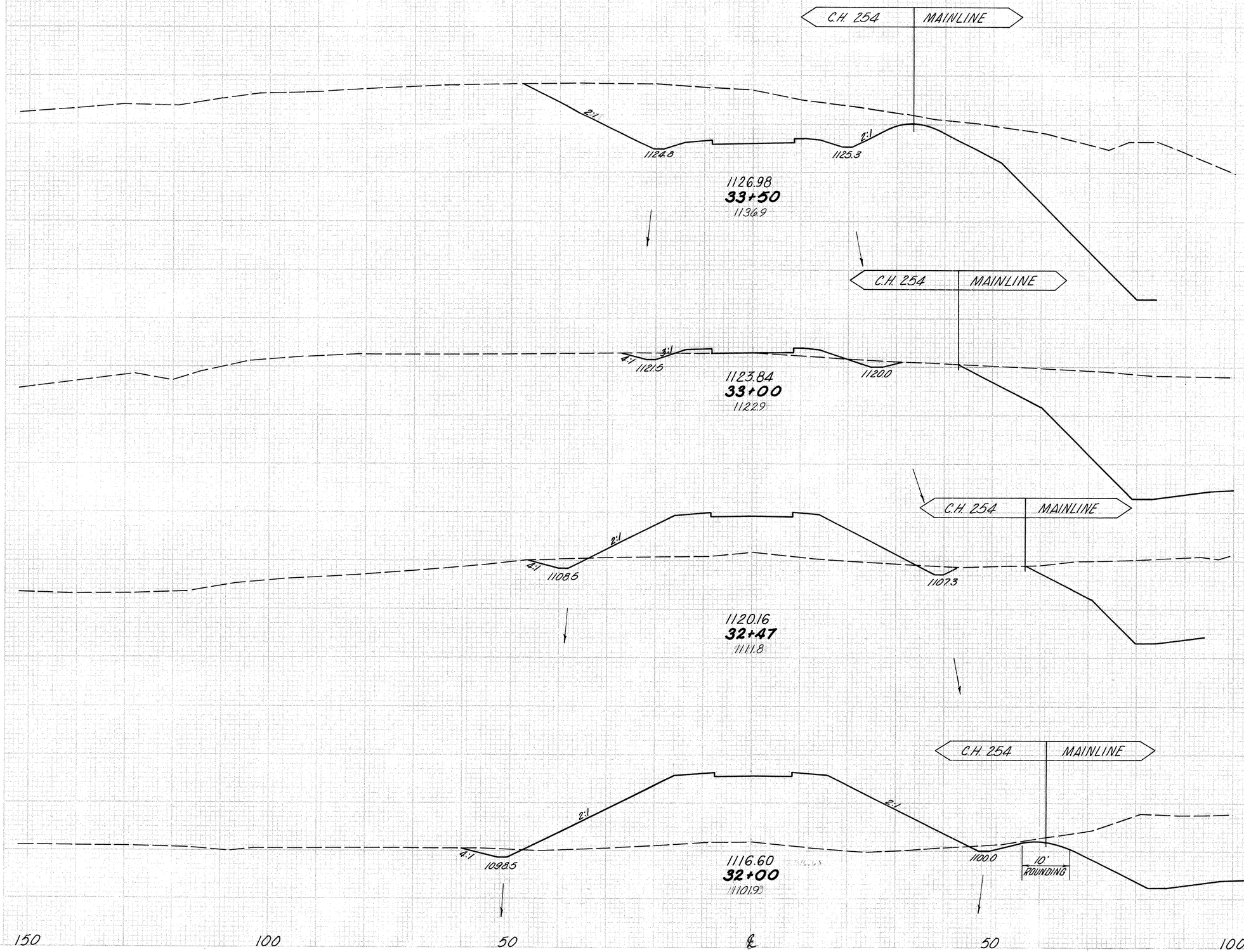
RELOC. C.H. 254 ~ STA. 30+00 TO STA. 31+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

383
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1130				
1120	670	0		
			636	19
1130				
1120				
1110	17	20		
1120			38	440
1110				
1100				
	22	428		
			39	1183
1120				
1110				
1100				
	23	931		
			109	4300
Sta 31+00	36	1391		

RELOC. C.H. 254 ~ STA. 32+00 TO STA. 33+50

FED. RD DIVISION	STATE	PROJECT	
2	OHIO		

384
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL

1170
1160
1140
1120

2,100

C.H. 254 MAINLINE

2:1

4:1

1132.6

1132.8

10' ROUNDING

1134.48
35+00
1153.2

C.H. 254 MAINLINE

2:1

4:1

1129.5

1129.6

10' ROUNDING

1131.43
34+32
1152.5

1150
1140
1130
1120

5,163

2,000

C.H. 254 MAINLINE

2:1

2:1

1127.6

1129.80
34+00
1148.6

1128.0

10' ROUNDING

1150
1140
1130
1120

2,110

1,561

2,066

150 100 50 ℄ 50 100

Sta. 33+50

670

RELOC. C.H. 254 ~ STA. 34+00 TO STA. 35+00

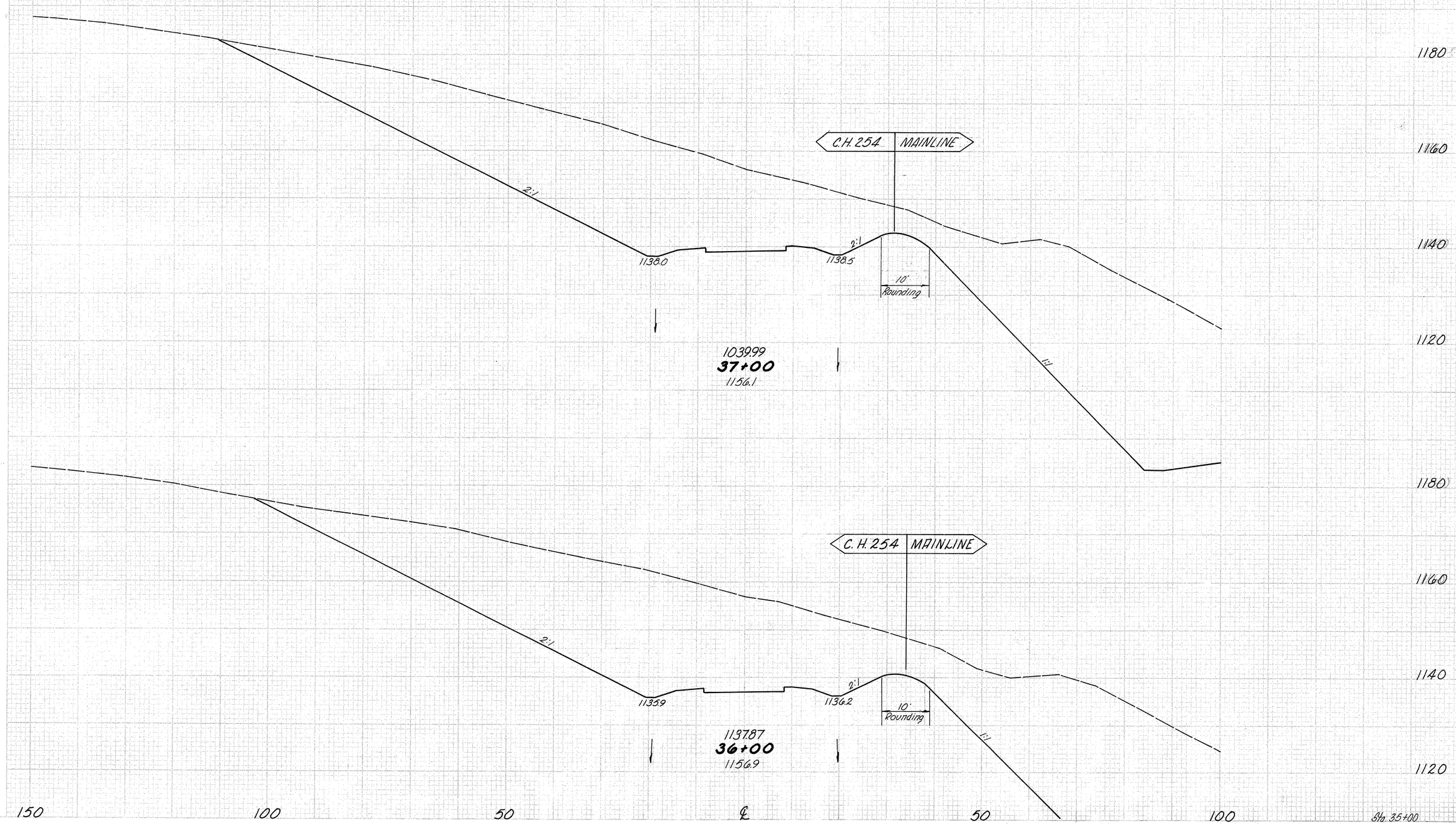
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

385
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE-40-23.88 BEL-40-0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



2,046

2,738

2,133

2,838

2,100

RELOC. C.H. 254 ~ STA. 36+00 TO STA. 37+00

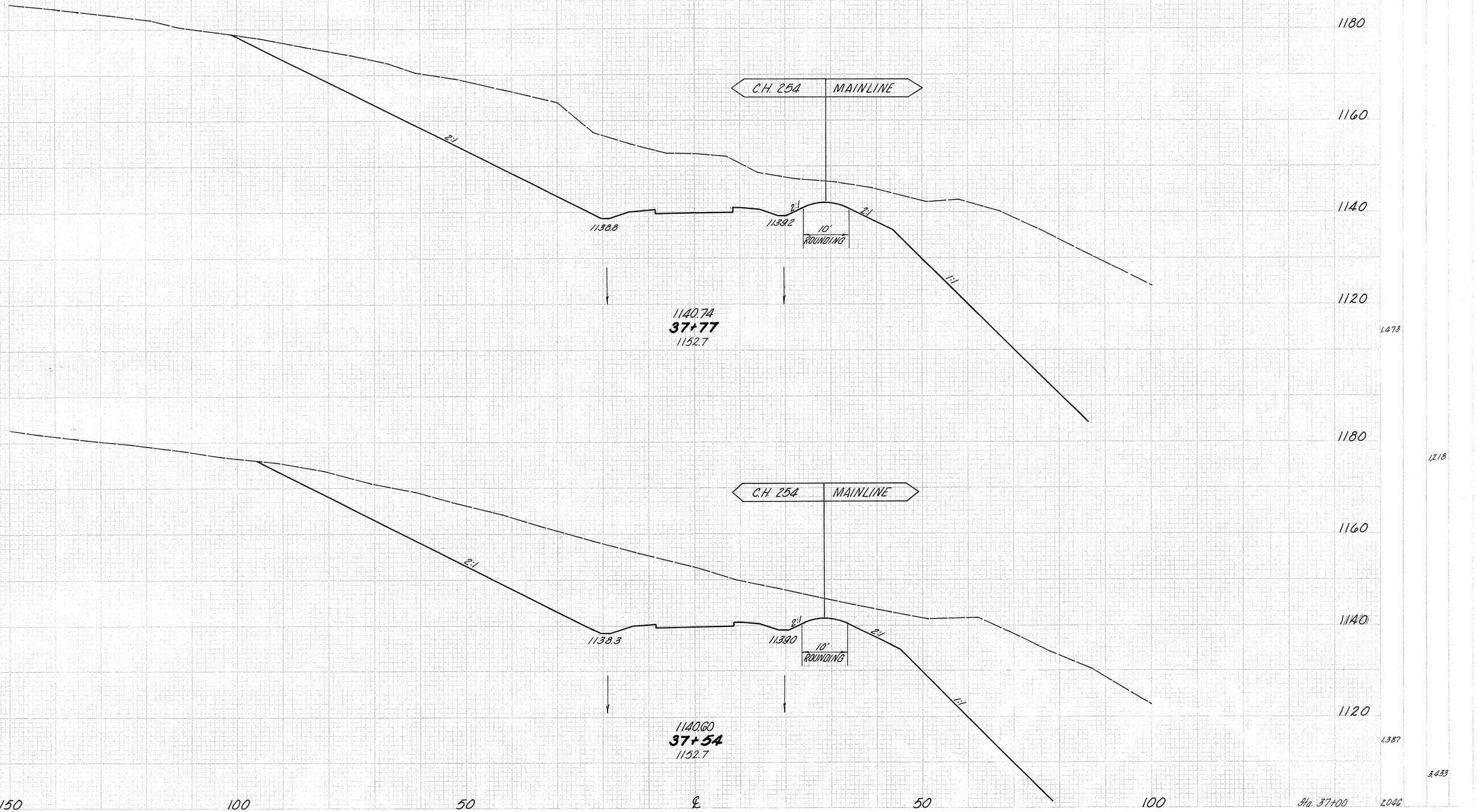
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

386
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00

SIDE AREA		VOLUMES	
CUT	FILL	CUT	FILL



1.473

1.218

1.387

3.433

2.046

RELOC. C.H. 254 ~ STA. 37+54 TO STA. 37+77

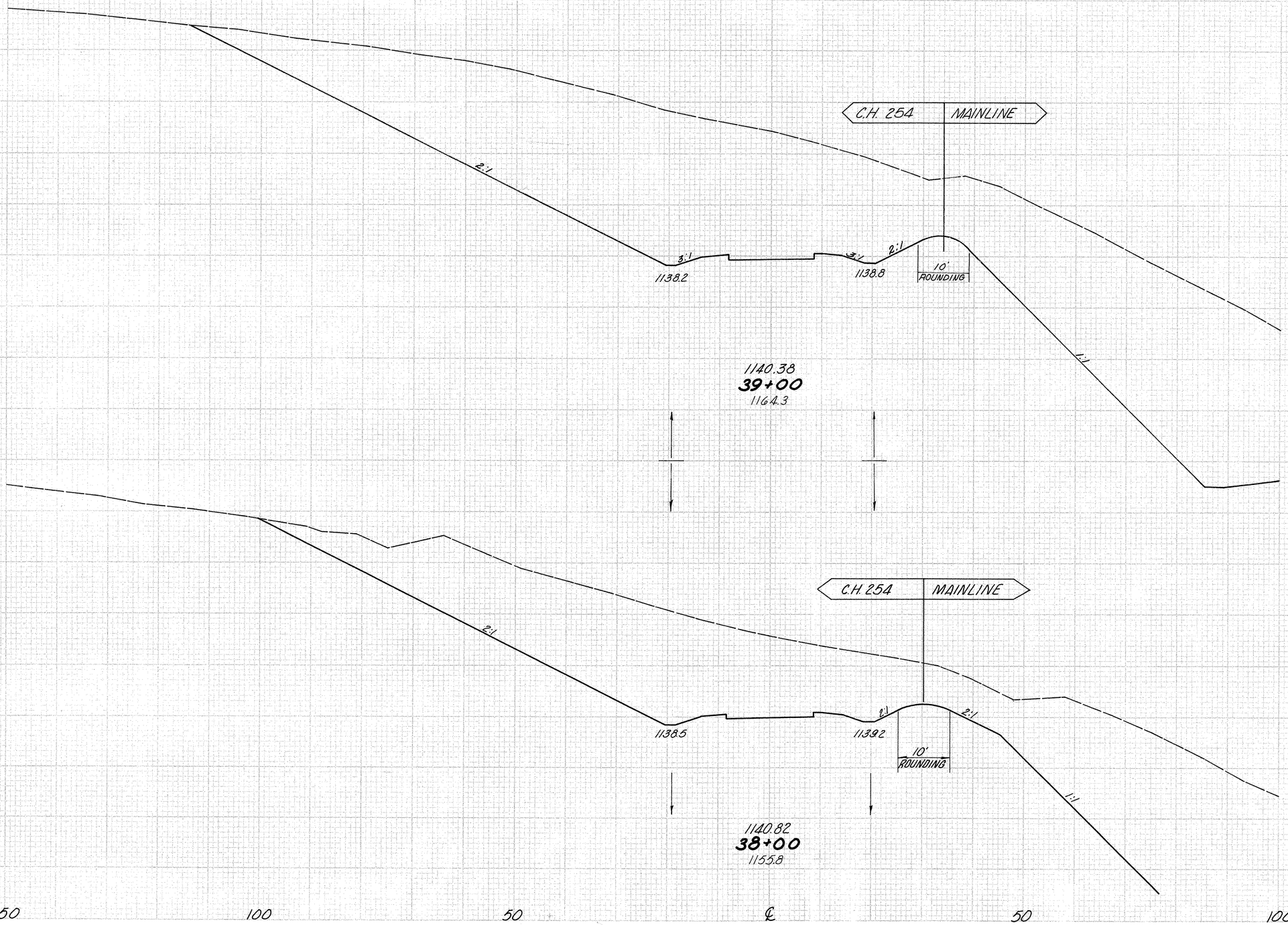
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

387
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00

CUT AREA		FILL AREA		CUT VOLUME		FILL VOLUME	



2767

8290

1710

1356

1473

RELOC. C.H. 254 ~ STA. 38+00 TO STA. 39+00

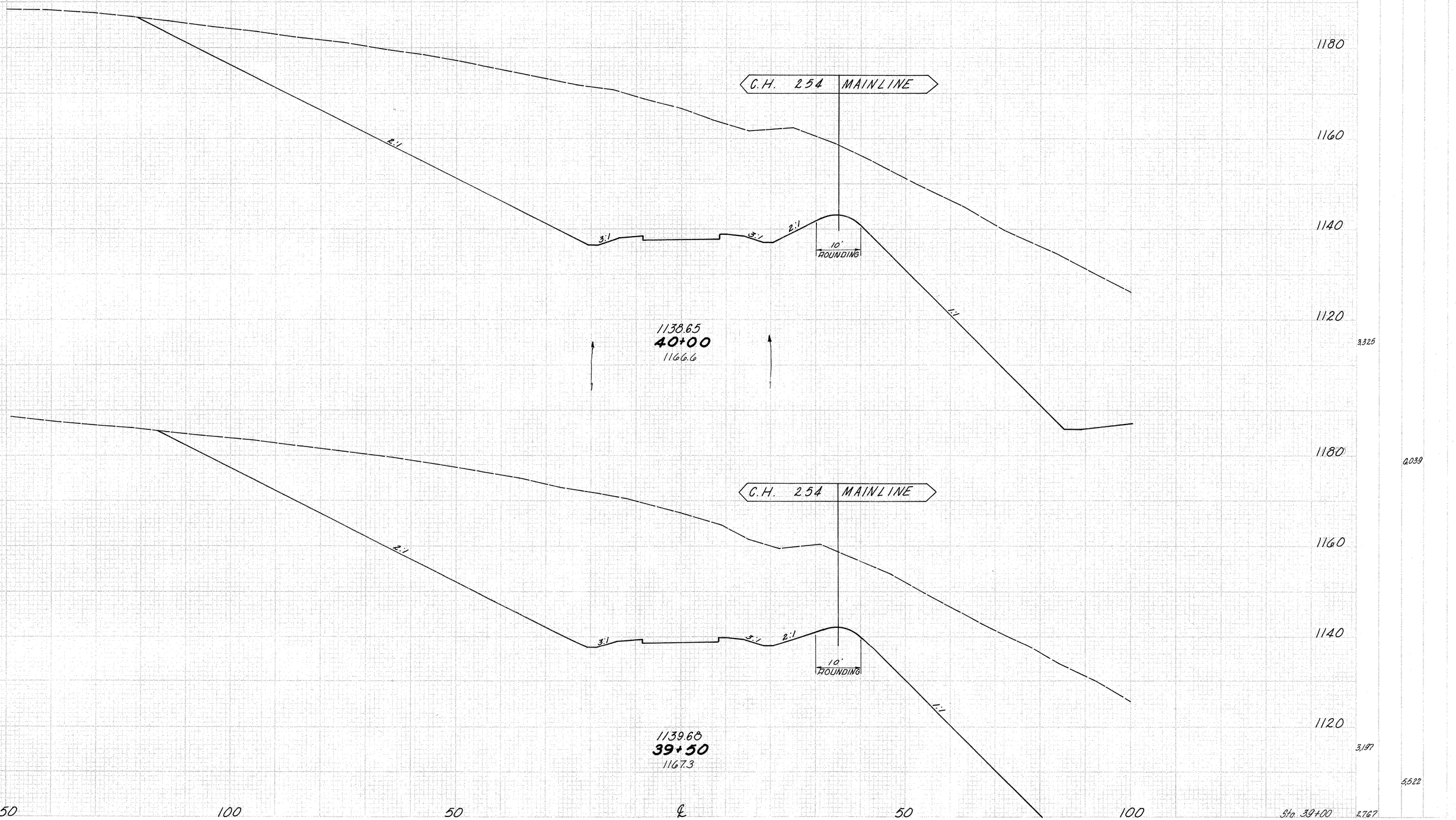
FED. RD. DIV.NO.	STATE	PROJECT	
2	OHIO		

388
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE-40-23.66 BEL-40-0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



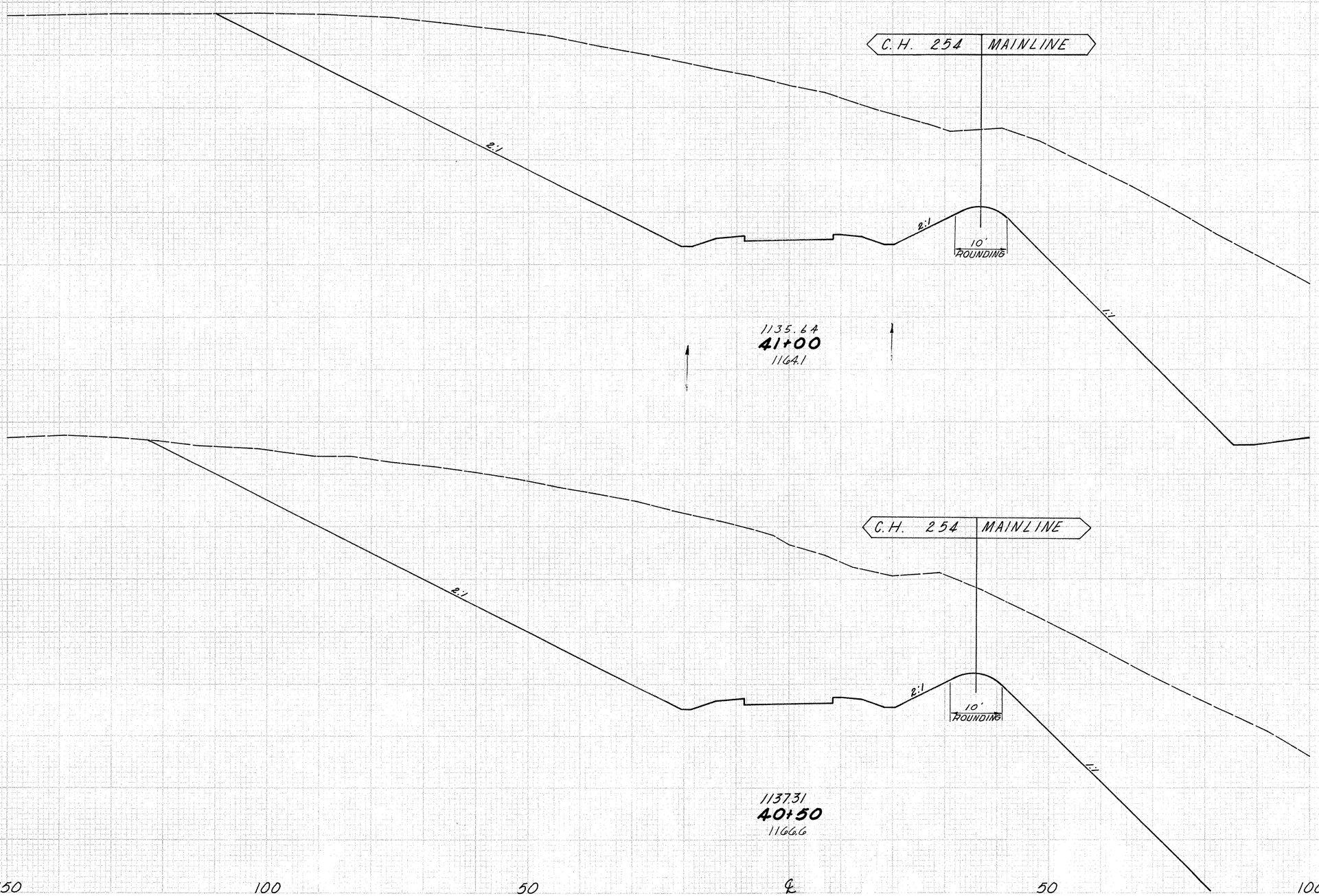
SECTIONS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

SEQ. NO. DIVISION	STATE	PROJECT	
2	OHIO		

389
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



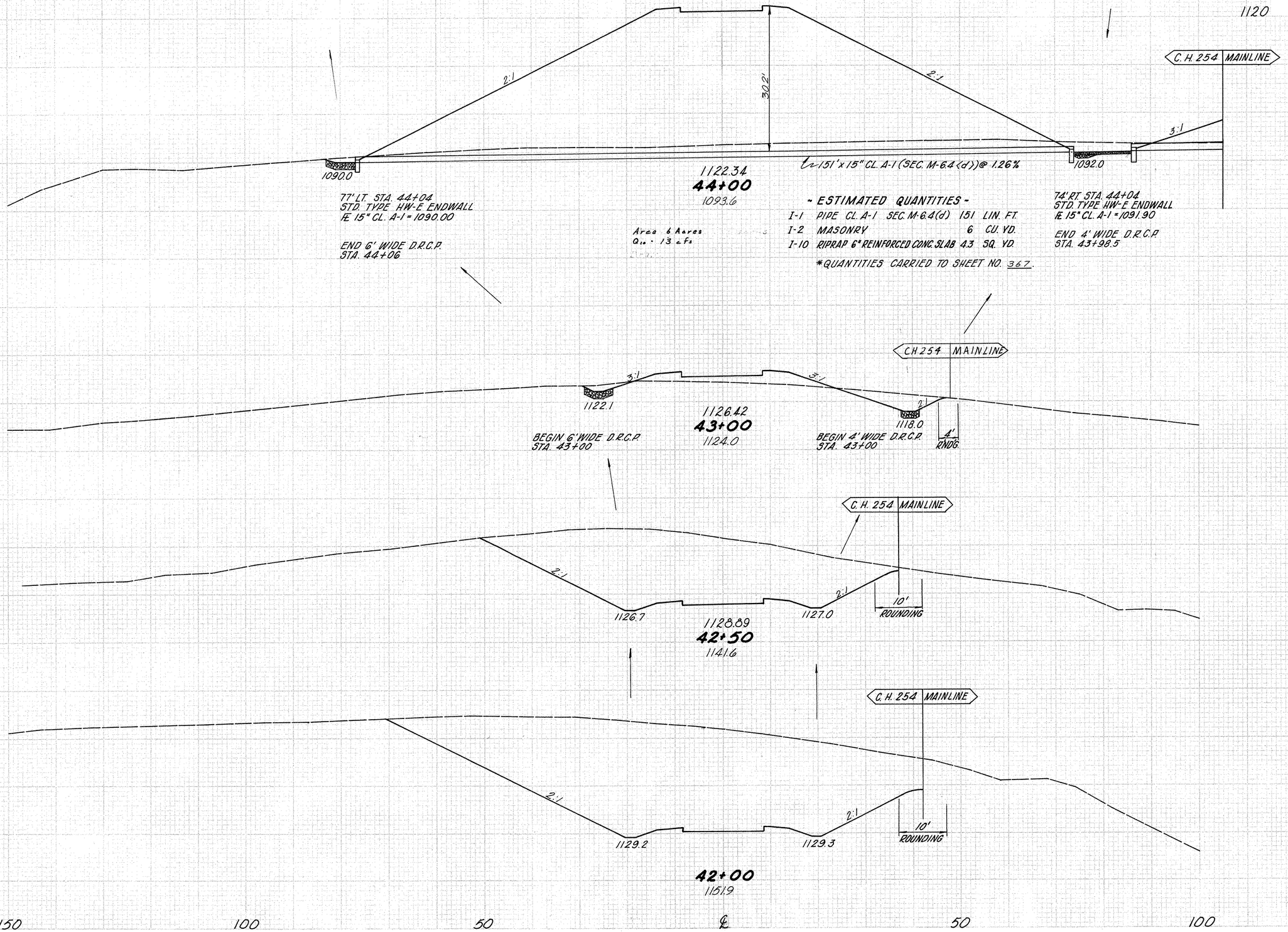
3238
Q385
3658
Q466
3325

RELOC. C.H. 254 ~ STA. 40+50 TO STA. 41+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

390
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
		40		2,438
			144	4,645
		38		70
		910	0	
				2,503
		1,793	0	
				9,316
		3238		

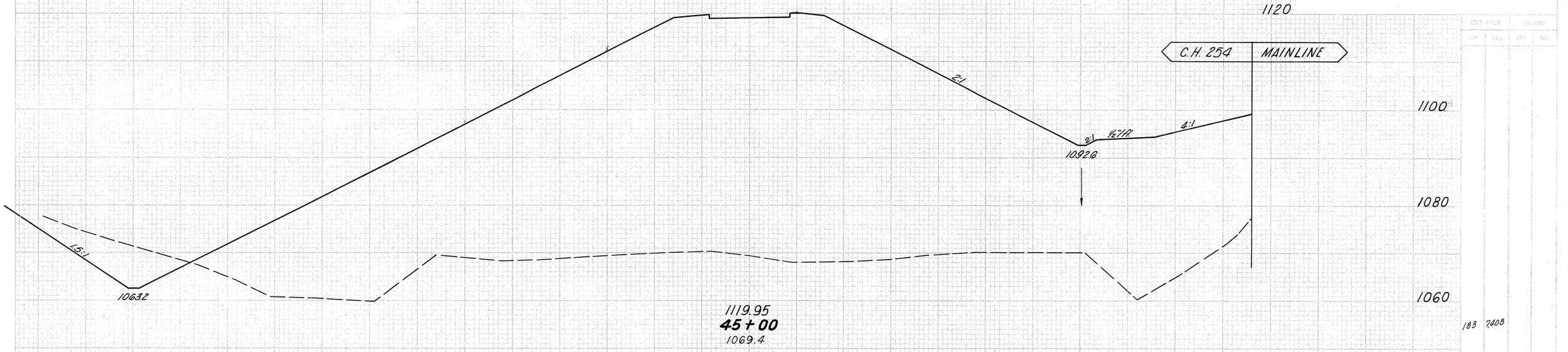
RELOC. C.H. 254 ~ STA. 42+00 TO STA. 44+00

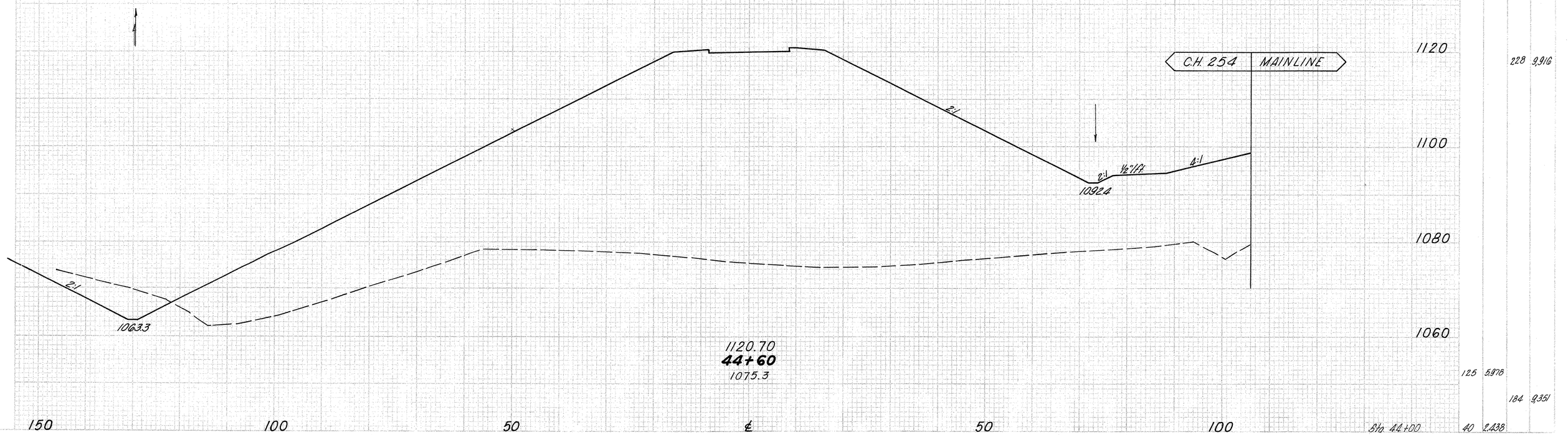
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

391
485

GUERNSEY COUNTY -- BELMONT COUNTY

GUE-40-23.88 BEL-40-0.00





228 9.916

125 5.978

184 9.351

40 2.438

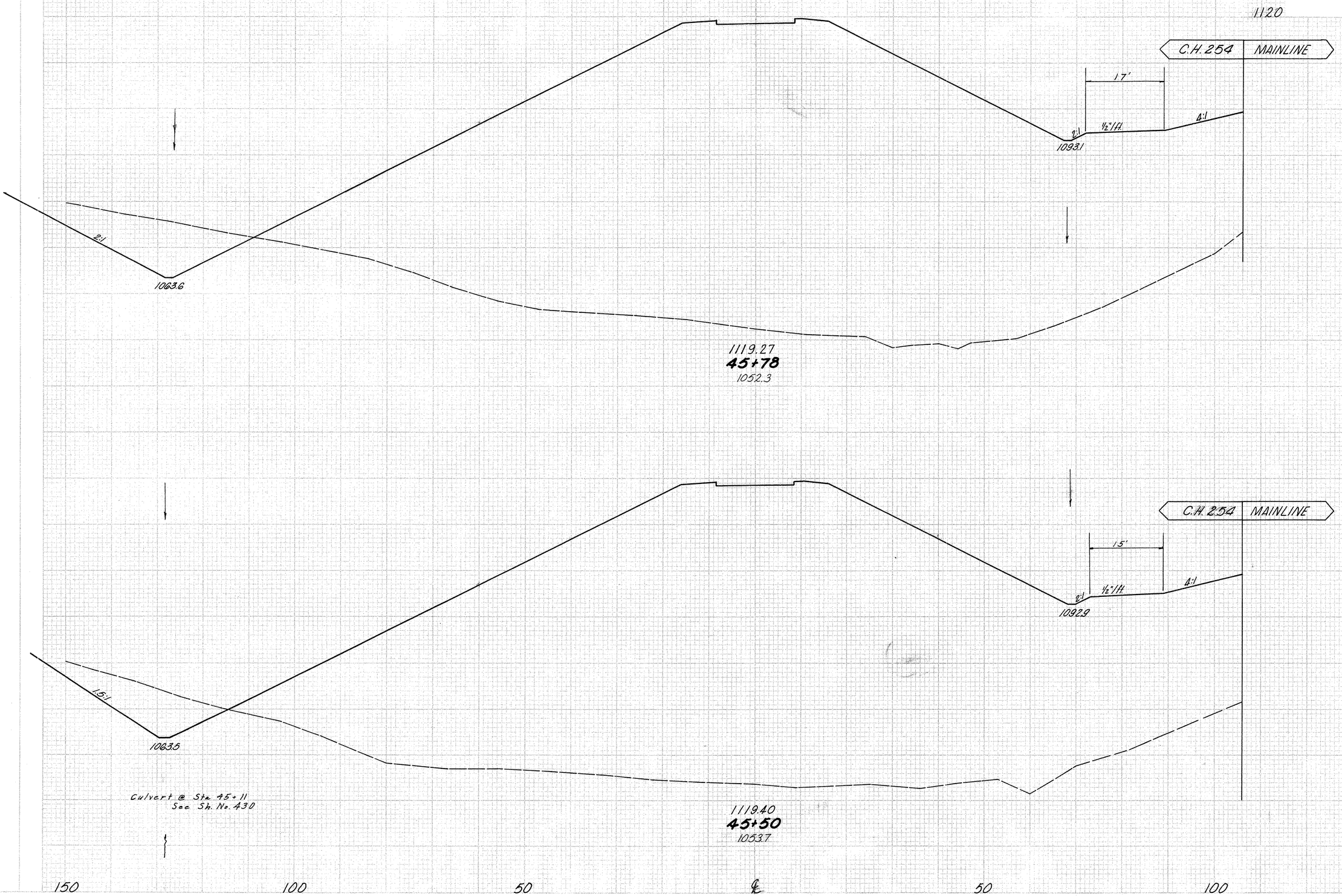
183 7.408

RELOC. C.H. 254 ~ STA. 44 + 60 TO STA. 45 + 00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

392
485

GUERNSEY COUNTY - BELMONT COUNTY
GUE-40-23.83 BEL-40-0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
352	9,385		
		310	9,747
246	9,489		
		397	15,046
183	7,408		

RELOC. C.H. 254 ~ STA. 45+50 TO STA. 45+78

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

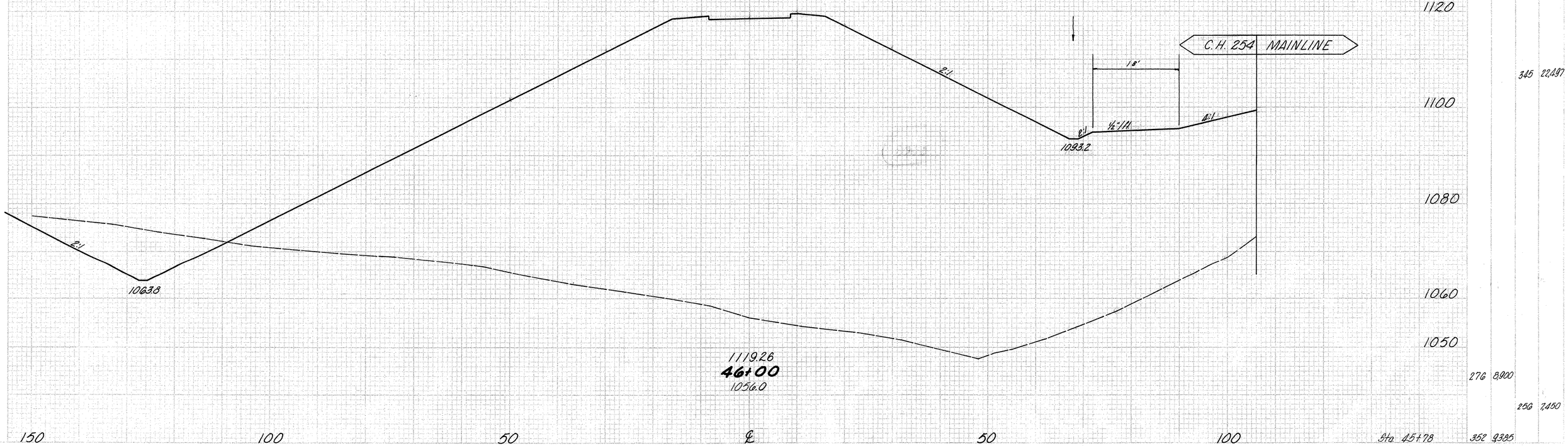
393
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE-40-23.83 BEL-40-0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL





RELOC. C.H. 254 ~ STA. 46+00 TO STA. 46+66

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

394
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00

SPECIMEN

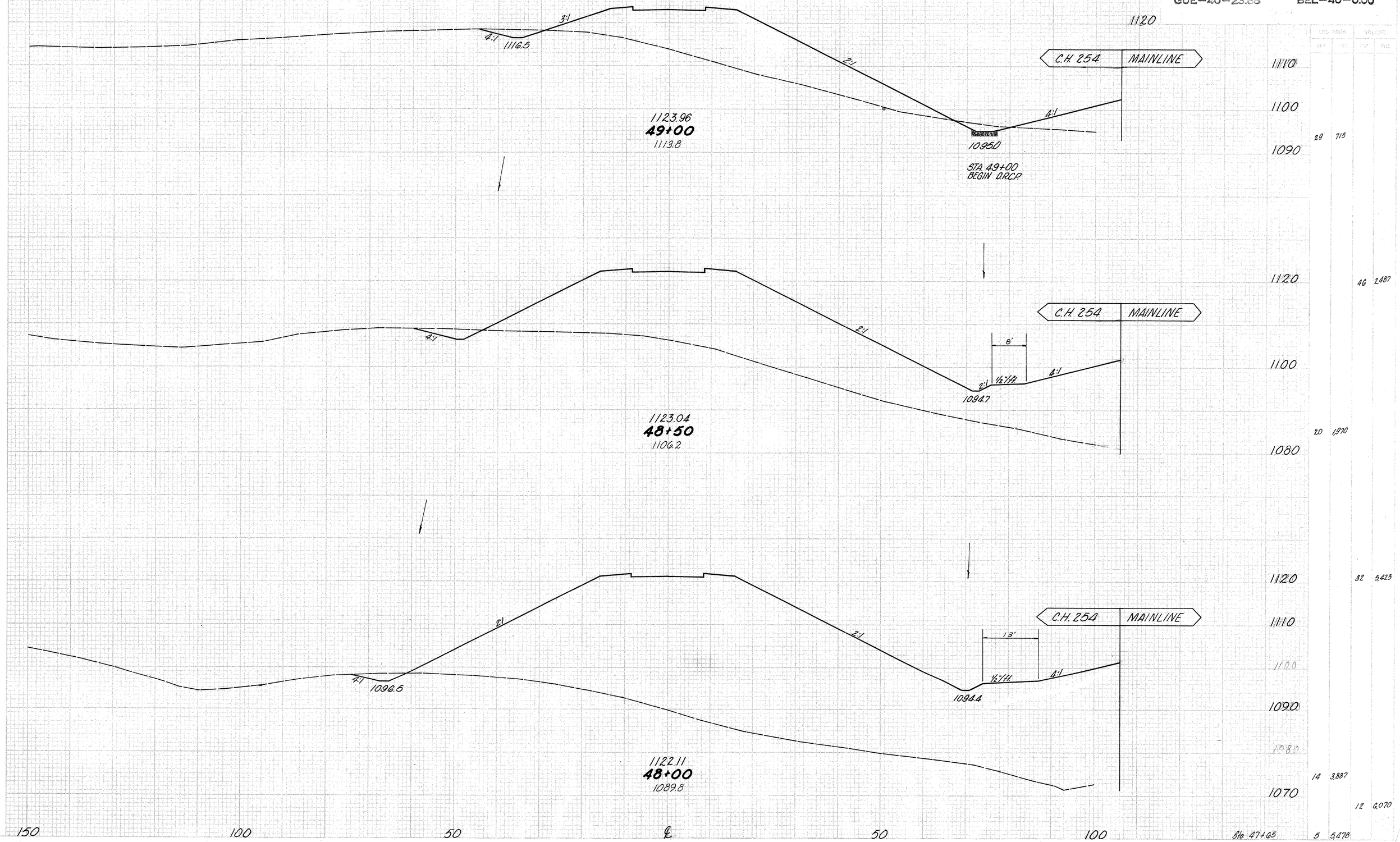
CUT (CUBIC YARDS)	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		395 / 485

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00



29	715		
		46	2,487
20	1,970		
		32	5,423
14	3,887		
		12	6,070
5	5,478		

RELOC. C.H. 254 ~ STA. 48+00 TO STA. 49+00

DESIGN	
END WIDTH	SQ. YDS.

FED. AID DIVISION	STATE	PROJECT		396 485
5	OHIO			

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL

1160
1150
1130
1110
1150
1140
1130
1120
1140
1130
1120
1110
1130
1120

C.H. 254 MAINLINE
2:1
2:1
10' ROUNDING
2:1
1129.07
51+76
1159.3

3,193

C.H. 254 MAINLINE
2:1
1127.66
51+00
1151.9
10' ROUNDING

2,421

2,080

C.H. 254 MAINLINE
1126.55
50+40
1143.8
10' ROUNDING

3,849

1,384

C.H. 254 MAINLINE
2:1
6:1
10' ROUNDING
2:1
1125.81
50+00
1134.7
STA. 50+00 END D.R.C.P.

1,016

797

1,930 1,326

150 100 50 ℄ 50 100

Sta. 49+00

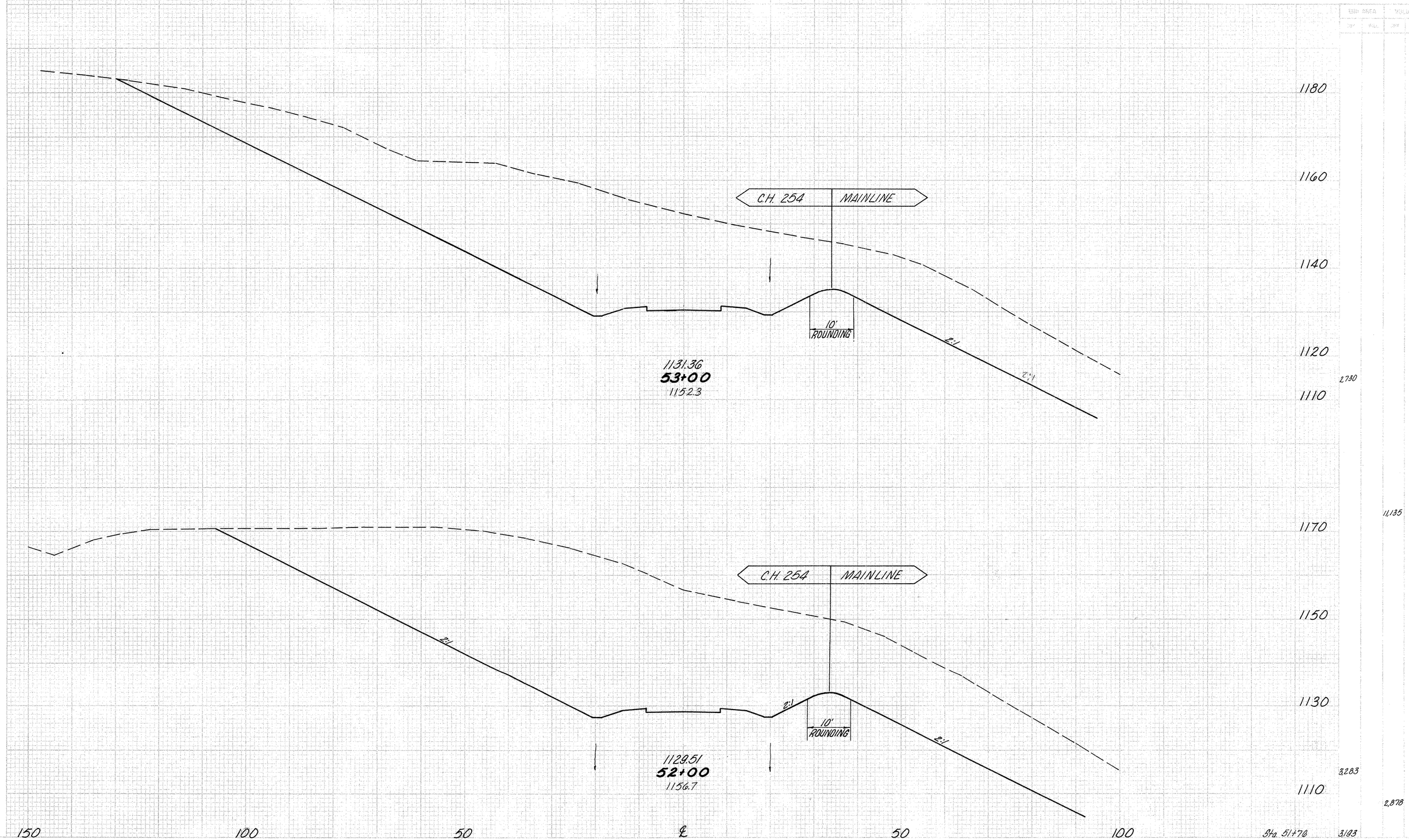
29 715

RELOC. C.H. 254 ~ STA. 50+00 TO STA. 51+76

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

397
485

GUERNSEY COUNTY - BELMONT COUNTY
GUE-40-23.[illegible] [illegible]-40-0.00



RELOC. C.H. 254 ~ STA. 52+00 TO STA. 53+00

SEEDING

SEED WIDTH	SQ YDS

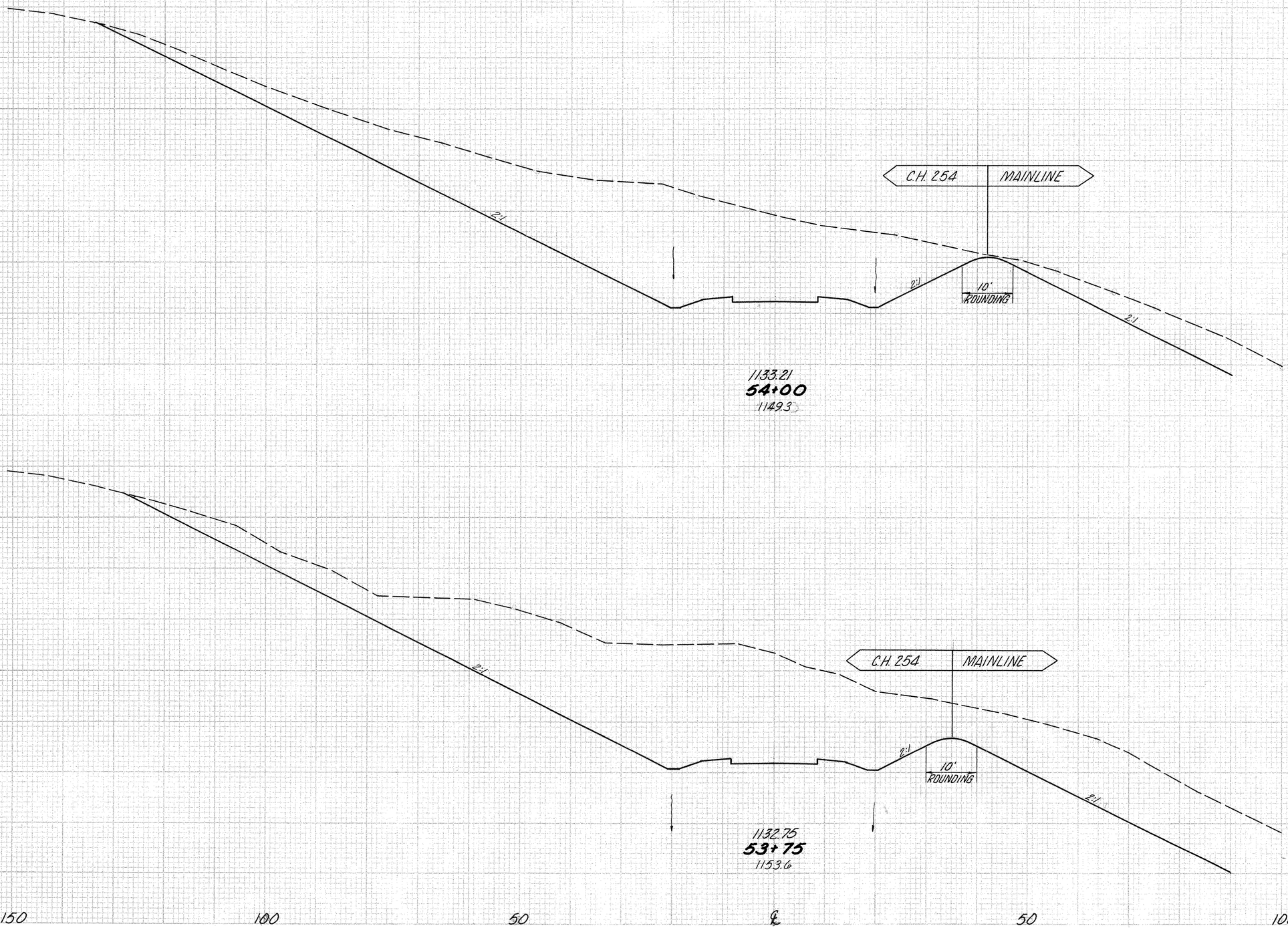
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

398
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE-40-28.83 BEL-40-0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



1878

1837

2090

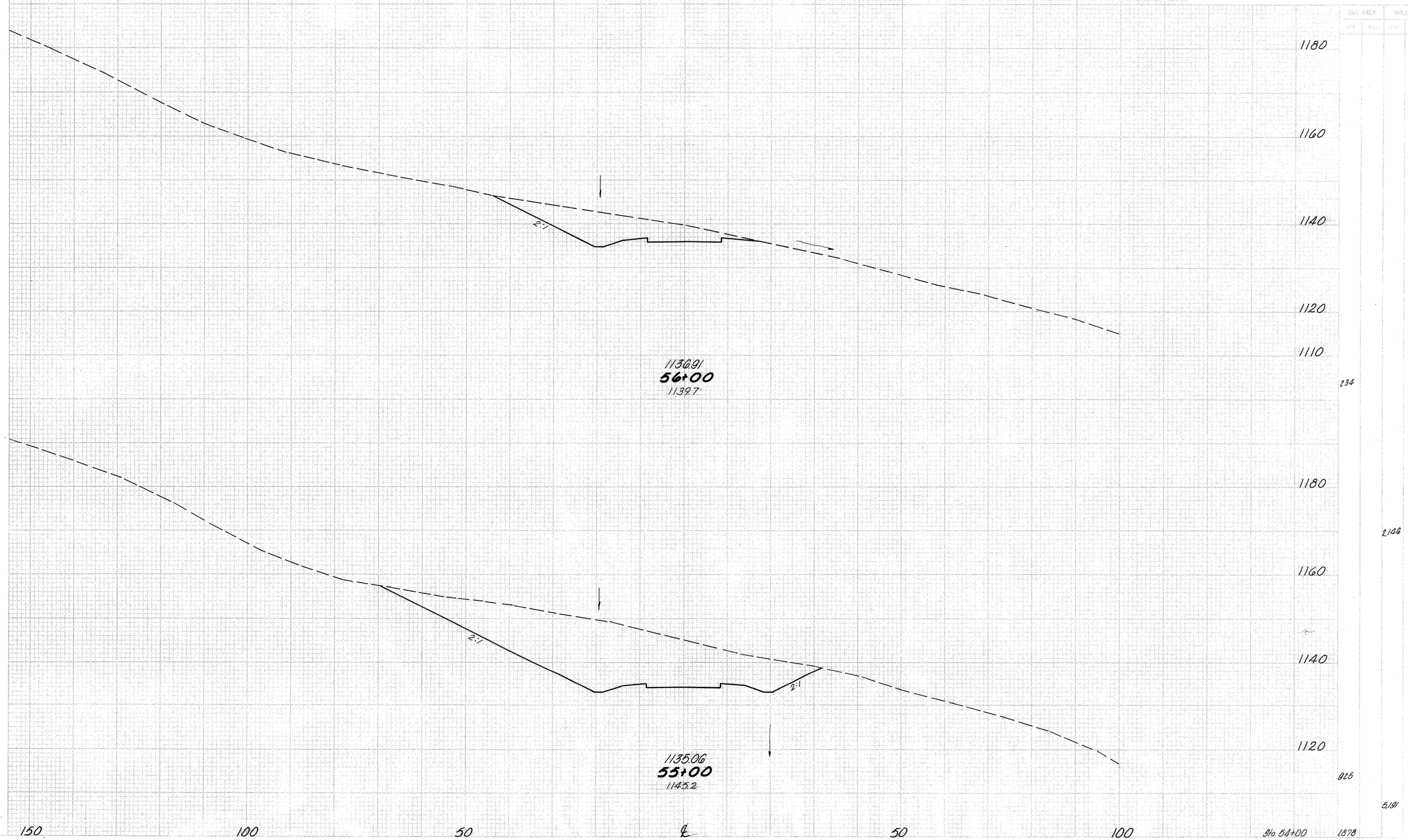
2730

RELOC. C.H. 254 ~ STA. 53+75 TO STA. 54+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

399
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00



RELOC. C.H. 254 ~ STA. 55+00 TO STA. 56+00

SEEDING	
END WIDTH	SQ. YDS.

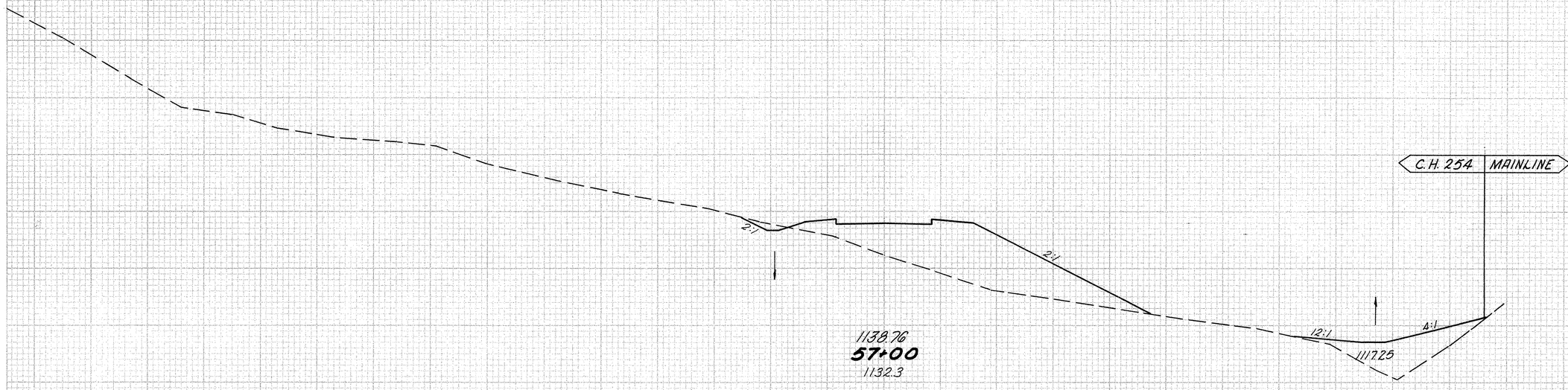
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

400
485

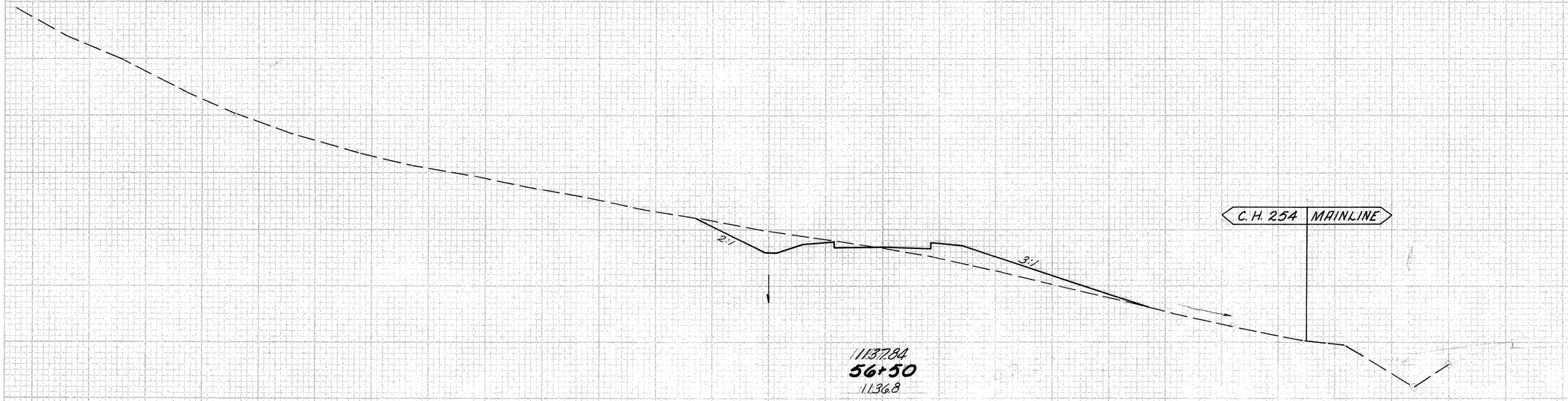
GUERNSEY COUNTY — BELMONT COUNTY

GUE-40-23.88 BEL-40-0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



4 463



53 496

53 72

266 67

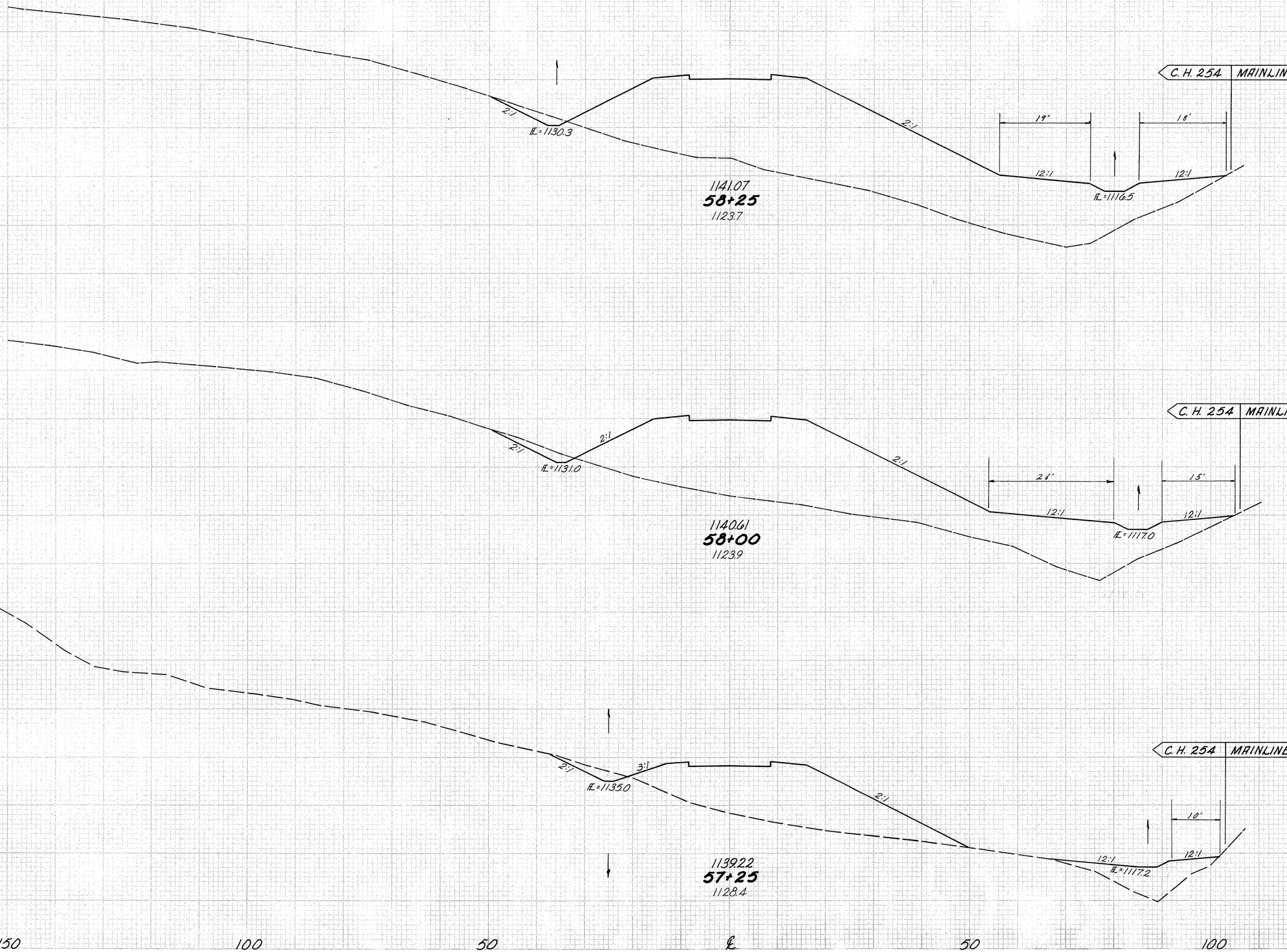
234 0

RELOC. C.H. 254 ~ STA. 56+50 TO STA. 57+00

STD. SHT. DIVISION	STATE	PROJECT	
2	OHIO		

401
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE-40-23.68 BEL-40-0.00



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1G	1,728			
1G	1,445			
19	1393			
54	2830			
20	647			
11	514			
4	463			

RELOC. C.H. 254 ~ STA. 57+25 TO STA. 58+25

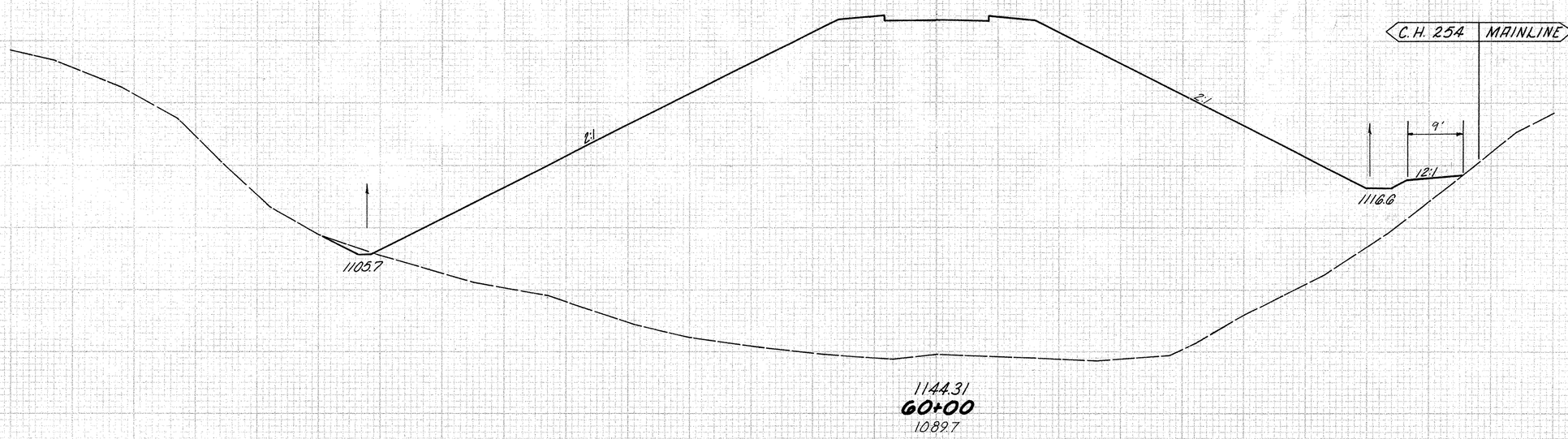
SEEDING

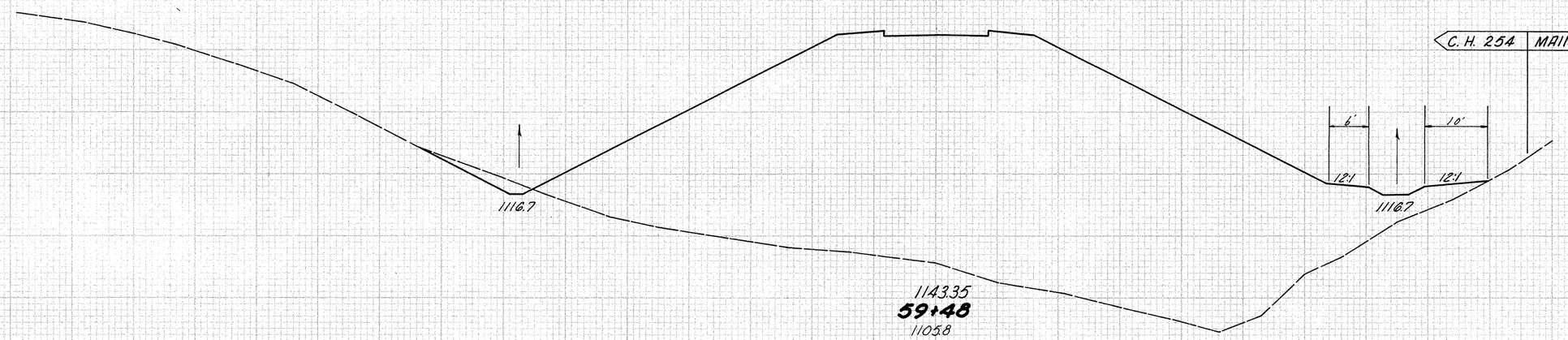
SEED MIXTURE	SQ. YD.

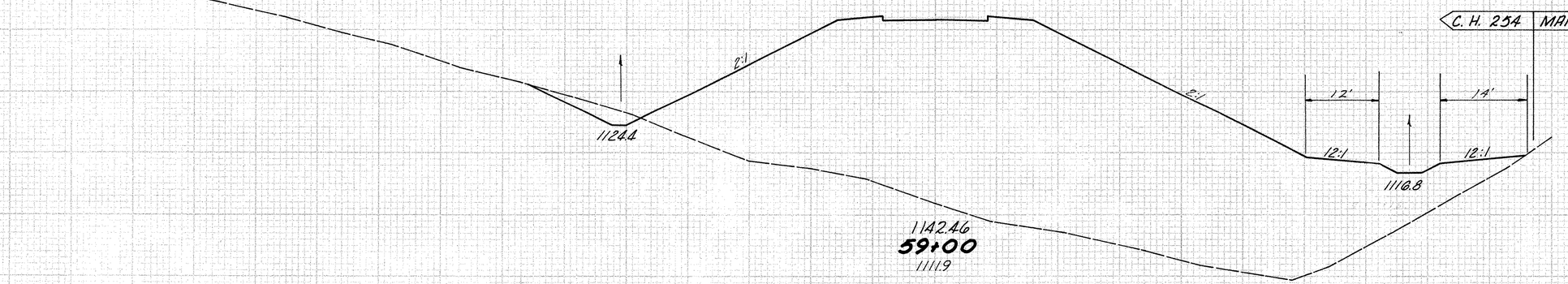
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

402
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00







SHD AREA CUT	SHD AREA FILL	VOLUME CUT	VOLUME FILL
4	5891		
		25	9327
22	3795		
		41	5950
24	2899		
		56	6426
16	1728		

150 100 50 ℄ 50 100

Sta. 58+25

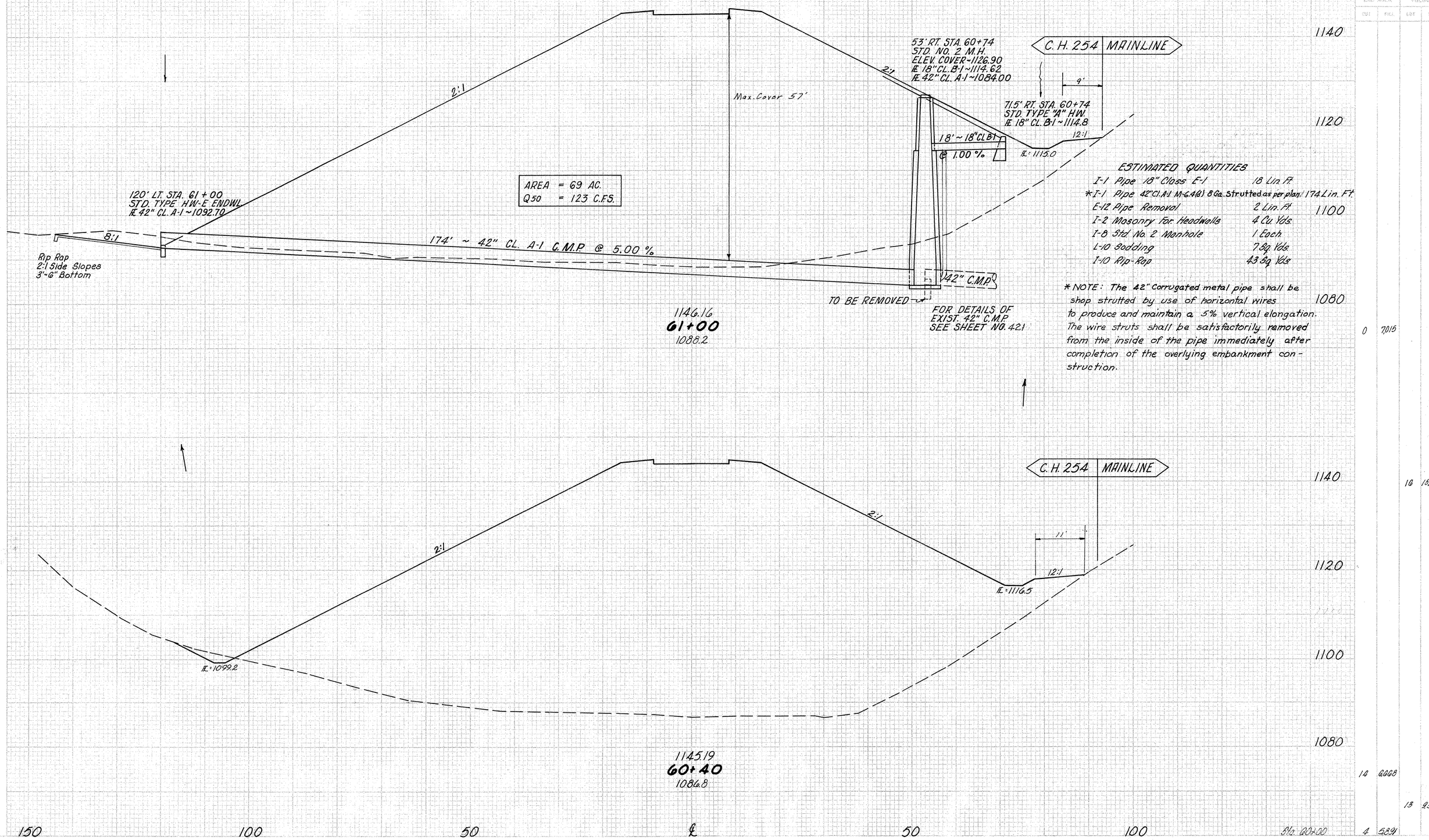
RELOC. C.H. 254 ~ STA. 59+00 TO STA. 60+00

FED. RD. DIVISION	STATE	PROJECT		403 485
2	OHIO			

GUERNSEY COUNTY – BELMONT COUNTY

GUE-40-26.68 BEL-40-0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



ESTIMATED QUANTITIES

I-1 Pipe 18" Class E-1	18 Lin. Ft.
*I-1 Pipe 42" Cl. A-1 M-6.4(B) 8 Ga. Strutted as per plan	174 Lin. Ft.
E-12 Pipe Removal	2 Lin. Ft.
I-2 Masonry for Headwalls	4 Cu. Yds.
I-8 Std. No. 2 Manhole	1 Each
L-10 Sodding	7.5 Sq. Yds.
I-10 Rip-Rap	43.5 Sq. Yds.

*NOTE: The 42" Corrugated metal pipe shall be shop strutted by use of horizontal wires to produce and maintain a 5% vertical elongation. The wire struts shall be satisfactorily removed from the inside of the pipe immediately after completion of the overlying embankment construction.

0	7,015		
16	15,021		
14	6668		
13	9303		
4	5834		

SEEDING

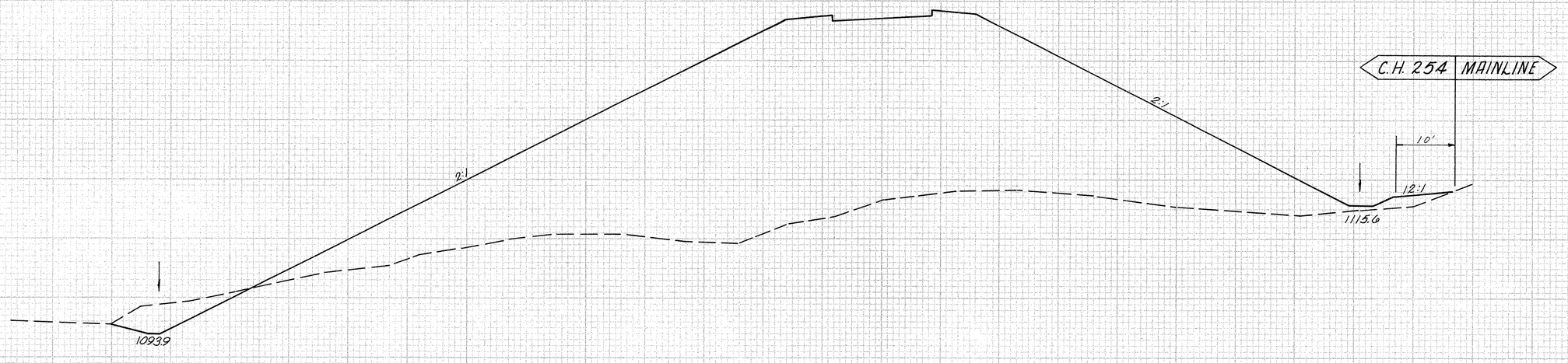
SEED WIDTH	SEED YDS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

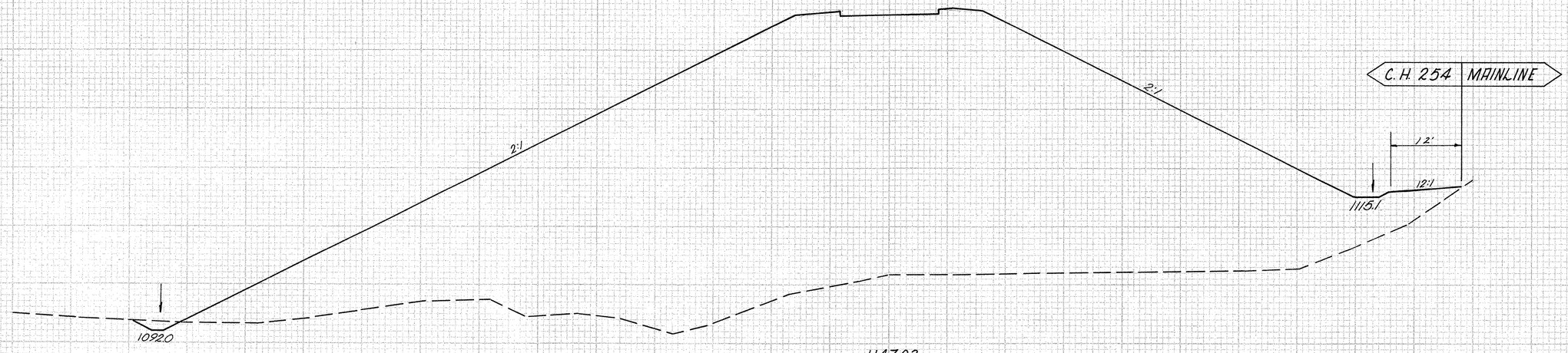
404
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00



1148.01
62+00
1116.7



1147.03
61+47
1101.8

1140
1120
1100
1090
1140
1120
1100
1090

150 100 50 ℄ 50 100

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL	
		63	3500	
		69	9315	
		8	5991	
		7	11,320	
		0	7015	Sta. 61+00

RELOC. C.H. 254 ~ STA. 61+47 TO STA. 62+00

SEEDING

DIG WIDTH	SQ. YDS.

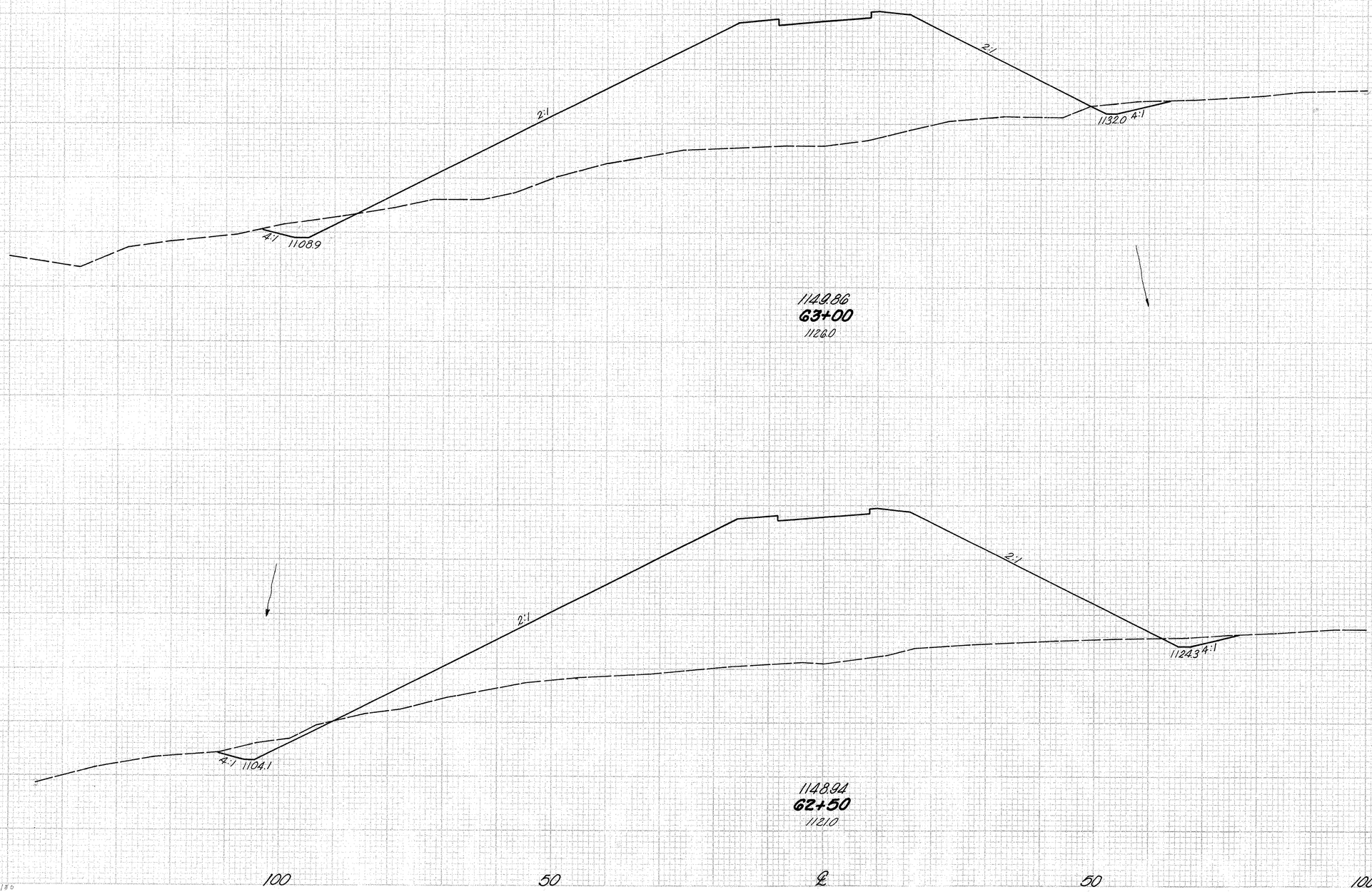
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

405
485

GUERNSEY COUNTY - BELMONT COUNTY

GUE-40-23.88 BEL-40-0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



RELOC. C.H. 254 ~ STA. 62+50 TO STA. 63+00

180

FED. RO. DIVISION	STATE	PROJECT	
2	OHIO		

406
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00



STA.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
11.50				
1140				
1120	29	276		
			20	215
1140				
1120	32	370		
1140			73	2388
1120				
1100				
	19	1284		
			27	1284
Sta. 63+00	48	1868		

RELOC. C.H. 254 ~ STA 63+22 TO STA 64+18

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

407
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.33 BEL–40–0.00

STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
66+00	0	0		
			53	4
65+50	57	4		
			82	69
65+00	31	70		
			53	144
64+60	41	125		
			55	312
Sta 64+18	29	276		

1170
1160
1150
1160
1150
1160
1150
1140
1150
1140
1130

1160.16
66+00
1160.2

1157.16
65+50
1156.9

1154.75
65+00
1153.0

1153.24
64+60
1150.0

1150.0
4:1
3:1

1144.9
2:1
3:1

1152.0
4:1

1141.3
4:1
2:1

1158.6
4:1

100 50 ℄ 50 100

RELOC. C.H. 254 ~ STA. 64+60 TO 66+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

407-A
485

GUE~40~23.88

1-X

P.I.= 172+96.75
Δ = 9°-23'22" Rt
D = 4°00'

P.I.= 0+88.86
Δ = 25°-18' Lt
D = 14°-00'
R = 409.26'
L = 175.00'
T = 88.86'
E = 9.54'

P.C. 171+79.12

P.T. 174+39.46

P.C. Co. Rd. #27

P.I.= 176+36.18
Δ = 13°-55' 30" Lt
D = 4°00'

P.C. 174+60.41

STA. 174+00 CO. RD. #27 =
STA. 0+00 CO. RD. #286

P.T. 1+75

N 4° 01' 36" W

BEGIN T-32 Work
STA. 6+50

P.I.= 7+06.40
Δ = 26°00' Rt
D = 16°15'
R = 352.59
T = 81.40'
L = 160.00'
E = 9.27'

P.C. 6+25

P.T. 7+85

N 21° 58' 24" E

P.I.= 10+91.70
Δ = 34°30' Lt
D = 13°00'
R = 440.74'
T = 136.85'
L = 265.38'
E = 20.76'

P.C. 9+54.85

P.I.= 15+86.13
Δ = 16°30' Lt
D = 10°00'
R = 572.96'
T = 83.08'
L = 165.00'
E = 5.99'

P.T. 12+20.23

P.C. 15+03.05

N 12° 31' 36" W

P.I.= 18+44.50
Δ = 13°48' Lt
D = 8°30'
R = 674.07'
T = 81.58'
L = 162.35'
E = 4.92'

P.I.= 20+31.61
Δ = 9°30' Lt
D = 10°00'
R = 572.96'
T = 47.61'
L = 95.00'
E = 1.97'

P.C. 16+80.22

P.T. 17+42.92

P.C. 17+62.87

P.T. 19+25.87

P.C. 19+84.00

P.T. 20+94.00

N 29° 01' 36" W

CO. RD. Nº 286

N 42° 43' 36" W

N 52° 13' 36" W

P.C. 22+12.00

P.I.= 22+66.45
Δ = 5°56' Rt
D = 2°30'
R = 2291.83'
T = 118.76'
L = 237.33'
E = 3.08'

P.T. 23+49.33

P.C. 23+72.42

P.I.= 25+21.21
Δ = 9°10' Rt
D = 4°00'
R = 1432.39'
T = 114.83'
L = 228.17'
E = 4.60'

P.T. 24+00.25

N 46° 23' 36" W

P.C. 26+35.55

P.I.= 27+64.74
Δ = 3°30' Lt
D = 3°00'
R = 1900.86'
T = 58.37'
L = 116.67'
E = 0.90'

P.T. 27+81.41

P.C. 28+23.04

N 37° 13' 36" W

N 40° 43' 36" W

P.C. 29+02.23

P.I.= 29+66.18
Δ = 16°00' Rt
D = 12°00'
R = 477.46'
T = 67.10'
L = 133.33'
E = 4.69'

P.I. 21.45'
P.I. 7+06.40
M.C. 29.72'

P.I. 22.73'
M.C.
16.19'
P.I. 15+86.13

P.I. 16.25'
P.I. 25+21.21
M.C.
20.30'

TYPICAL SECTION
ADJOINING PAVEMENT
STA. 6+50

8' for G.R.
1'G"-0"
G'-0"
G'-0"
P.G.
3/8"/ft
1"/ft
1"/ft
3:1
2:1
T-35 on B-12
4:1
2'

Note:~ For details of Typical Section, Sta. 0+00 to Sta. 6+50, See Sheet 8

5% Survey
1'G"-0"
3'-0"
8'-0"
8'-0"
3'-0"
3/8"/ft
1"/ft
1½ Av.
Exist Gravel
1
2
3

TYPICAL SECTION
NORMAL
CO. ROAD #286

Schedule of Stationing
Sta. 6+50 to Sta. 4444.53

1. T-32 Bituminous Road Mix, 90 lbs Treatment
2. T-30 Bituminous Prime Coat @ 0.5 Gal per Sq. Yd.
3. I-18 3" Avg. depth, Stabilized Crushed Aggregate, for crown correction (includes quantity for berms).

NOTE: For details & Profile Sta. 0+00 to 6+50, see Sheet #321 GUE~40~23.88

End T-35 Sta. 6+50
Begin T-32 Sta. 6+50

1220
1210
1200
1190
1180
℄ Co. Rd. #27
1170
1160
1150
1140

NOTE:
Center line profile Elevs. to be approximately 3½" above those of present pavement.

B.M.~Sp in W. Root 20" Pine Tree
28' Rt. Sta. 13+92 El. 1187.65

B.M.~Sp in W. Root of 36" Maple Tree
29' Rt. Sta. 28+34 El. 1153.04

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

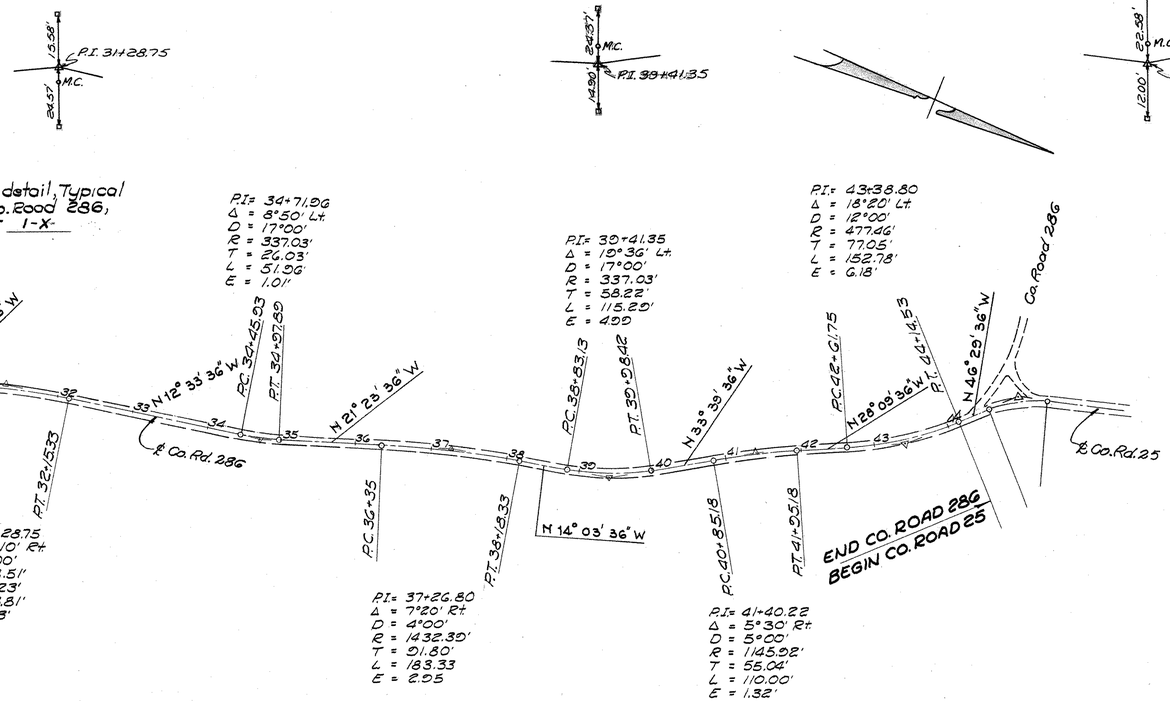
G+50~30+00
CO. ROAD #286

FED. RD DIVISION	STATE	PROJECT	
2	OHIO		

407B
485

GUE-40-23.88

2-X



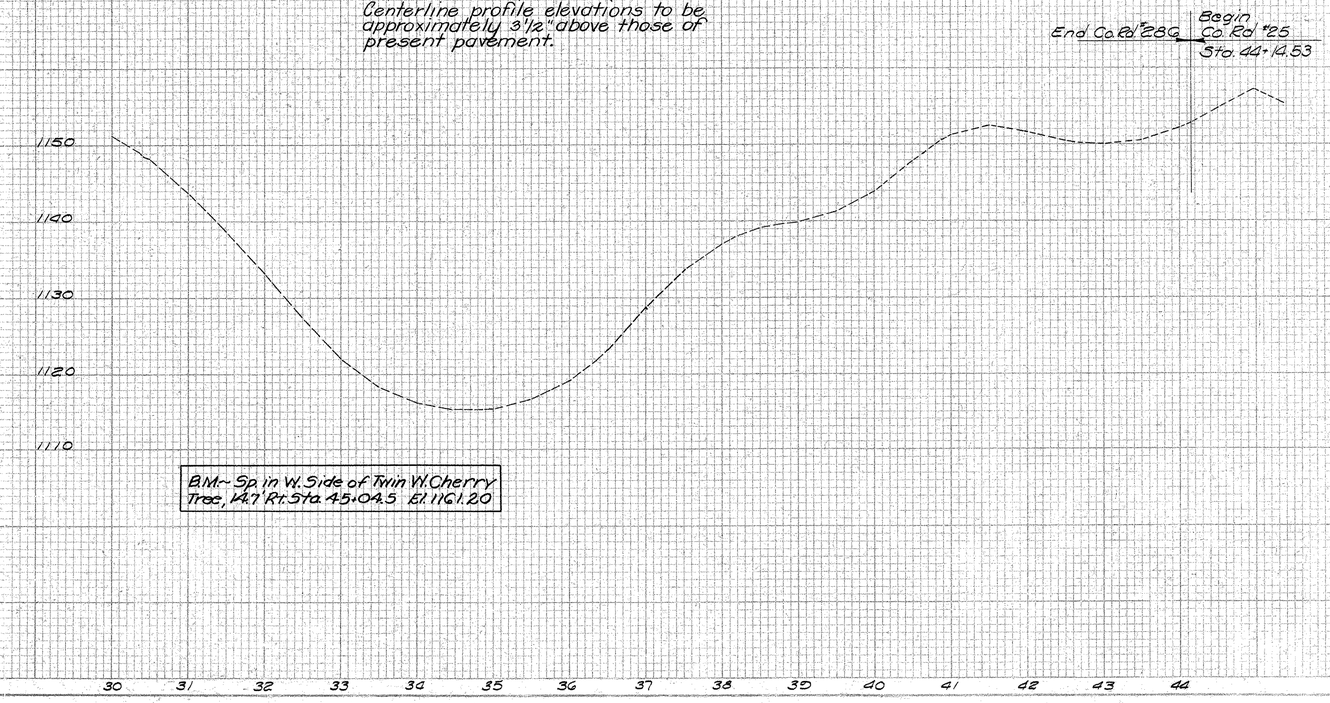
CALCULATIONS
CO. ROAD 286

Surface Area:
Sta. 6+50 to Sta. 44+14.53 = 3764.53 Lin. Ft. × 16' Width = 60,232.48 Sq. Ft. ÷ 9 = 6692.50 Sq. Yds.

	(PRIME)			
T-30	Prime Coat using 0.5 gal/sq.yd. (Sec. M-5.7, RT-2 or RT-3) 6692.50 Sq. Yds. × 0.5 gal./sq. yds.	=	3346 Gals.	Use 3346 Gals.
	(MIX)			
T-32	Bituminous Material, MC-4 or 5, Sec. M-5.3 6692.50 sq. yds. × 0.61 gal./sq. yds.	=	4082.4 Gals.	Use 4082 Gals.
T-32	No. 46 Aggregate, Sec. M-3.1 6692.50 sq. yds. × 90 lbs./sq. yd ÷ 2400 (CHOKE)	=	250.9 Cu. Yds.	Use 251 Cu. Yds.
T-32	No. 9 Aggregate, Sec. M-3.1 6692.50 sq. yds. × 10 lbs./sq. yd) ÷ 2400 (SEAL COAT)	=	27.9 Cu. Yds.	Use 28 Cu. Yds.
T-32	Bituminous Material MC-5, Sec. M-5.3 6692.50 sq. yds. × 0.30 gals./sq. yd.	=	2007.75 Gals.	Use 2008 Gals.
T-32	No. G Aggregate, Sec. M-3.1 6692.50 sq. yds. × 22 lbs./sq. yd. ÷ 2400 (BERM & CROWN CORRECTION)	=	61.3 Cu. Yds.	Use 61 Cu. Yds.
I-18	Stabilized Crushed Aggregate for Crown and Berm Correction (3" Ave.) 6692.50 sq. yds. × 0.0833 yd.	=	557.5 Cu. Yds.	Use 558 Cu. Yds.

NOTE: Quantities carried to Sub-Summary, Sheet No. 17-X.

NOTE:
Centerline profile elevations to be approximately 3 1/2" above those of present pavement.



B.M.- Sp. in W. Side of Twin W. Cherry Tree, 14.7' Rt. Sta. 45+04.5 El. 1161.20

CALCULATIONS
CO. RD. NO. 25

Surface Area:
Sta. 44+14.53 to Sta. 75+00 = 3085.47 Lin. Ft. × 16' Width = 49,367.52 Sq. Ft. ÷ 9 = 5485.28 Sq. Yds.

	(PRIME)			
T-30	Prime Coat using 0.5 gal/Sq. Yd (Sec. M-5.7, RT-2 or RT-3) 5485.28 × 0.5 Gal./Sq. Yd	=	2742.64 gals.	Use 2743 Gals
T-32	Bituminous Material MC-4 or 5, Sec. M-5.3 5485.28 sq. yds. × 0.61 gal/sq. yd.	=	3346.02 gals.	Use 3346 Gals.
T-32	No 46 Aggregate, Sec. M-3.1 5485.28 sq. yds. × 90 lbs./sq. yd. ÷ 2400 (CHOKE)	=	205.7 cu. yds.	Use 206 Cu. Yds.
T-32	No 9 Aggregate, Sec. M-3.1 5485.28 sq. yds. × 10 lbs./sq. yd ÷ 2400 (SEAL COAT)	=	22.9 cu. yds.	Use 23 Cu. Yds.
T-32	Bituminous Material MC-5, Sec. M-5.3 5485.28 sq. yds × 0.30 gals./sq. yd	=	1645.58 gals.	Use 1646 Gals.
T-32	No G Aggregate, Sec. M-3.1 5485.28 sq. yds. × 22 lbs./sq. yd ÷ 2400 (BASE COURSE)	=	50.3 cu. yds.	Use 50 Cu. Yds.
B-19	6" Crushed Aggregate Base Course, (incl. 6" Subgrade Compaction) 5485.28 sq. yds. × .1667 yd.	=	914.4 cu. yds.	Use 914 Cu. Yds.

NOTE: Quantities carried to Sub-Summary, Sheet No. 17-X.

30+00 ~ 44+14.53
CO. ROAD 286

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

407C
485

3-X

GUE-40-23.88

P.I. 46+95.36 — 19.04' — 19.2' — M.C.

P.I. 51+34.35 — 16.58' — 21.75' — M.C.

P.I. = 51+36.35
Δ = 1°-30'-00" Lt.
D = 13°-00'-00"
R = 440.74'
T = 42.44'
L = 84.66'
E = 2.04'

P.I. 52+89.78 — 16.07' — 18.76' — M.C.

12"CMP-to be Removed

12"x44'Cl. A-1 Pipe

P.I. 57+47.55 — 6.46' — 3.75'

P.C. 52+10.58

P.T. 53+71.93

P.I. = 57+47.55
Δ = 56°-30'-Rt.
D = 40°-00'
R = 143.24'
T = 76.97'
L = 141.25'
E = 19.37'

P.I. = 60+64.33
Δ = 3°-08'-Lt.
D = 4°-00'
R = 1432.39'
T = 38.75'
L = 77.50'
E = 0.52'

P.C. 60+25.58

P.T. 61+03.08

P.I. 66+04.22 — 19.05' — 12.12' — M.C.

P.I. 68+19.15 — 19.51' — 11.43' — M.C.

NOTE:
Fill existing channel and slope to drain

End Channel 0+60 Lt.

Sta. 61+12

Dumped Rock Channel Prot. 3'x12'x2.5'

PLAN
0 5' 10' 20' HOR.
0 5' 10' VER.

Longitudinal Section

34'-0" — 36'-0"

Ft. El. 988.00 — Exist. Channel — El. 989.0

0.6% — Ft. El. 987.58 — Exist. Channel

60"x 70' Cl. A-1 M-6.6(a) or M-6.8(b)

5'-6" — Std. SP-53 — 1'-10" — Dumped Rock Channel Prot. 2.5' Thick

P.I. 46+29.36
Δ = 1°-30'-00" Lt.
D = 13°-00'-00"
R = 440.74'
T = 42.44'
L = 84.66'
E = 2.04'

N 5° 29' 36" W

P.C. 50+39.51

P.T. 51+78.53

12"CMP-to be Removed

N 2° 54' 24" E

P.T. 53+42.18

P.C. 52+97.18

P.I. = 52+55.78
Δ = 56°-30'-24"
D = 8°-00'-00"
R = 716.80'
T = 382.60'
L = 705.00'
E = 99.37'

NOTE: For Drive Typical See Sheet No. 5-X.

NOTE:
For Detail of Pipes see Cross Section Sheets Nos 10-X & 11-X

NOTE:
For detail of Pipes, See Cross Section Sheets No. 10-X & 11-X.

N 56° 18' 24" E

15"CMP-to be Removed

15"x42'Cl. A-1 Pipe

P.C. 63+20.58

N 67° 58' 24" E

N 73° 41' 24" E

P.C. 64+29.15
Δ = 96°-40'-Rt.
D = 19°-30'-00"
R = 293.94'
T = 319.39'
L = 495.74'
E = 167.74'

P.T. 65+25.02

P.C. 65+83.78

P.C. 67+15.75

P.T. 66+24.61

P.I. = 66+04.22
Δ = 14°-13'-Rt.
D = 40°-00'-00"
R = 143.24'
T = 17.85'
L = 35.56'
E = 1.11'

24"x40'Cl. A-1 Pipe

24"CMP-to be Removed

P.T. 69+22.42

N 69° 33' 24" E

18"x40'Cl. A-1 Pipe

18"CMP-to be Removed

P.C. 73+91.21

END CO. ROAD 25
BEGIN TWP RD 81
STA. 75+00

P.I. = 46+29.36
Δ = 1°-30'-00" Lt.
D = 13°-00'-00"
R = 440.74'
T = 42.44'
L = 84.66'
E = 2.04'

P.T. 47+35.44

P.C. 46+55.13

N 27° 29' 36" W

P.C. 48+28.39

P.T. 49+86.03

P.I. = 49+09.71
Δ = 39°-30'-00" Rt.
D = 21°-00'-00"
R = 272.84'
T = 98.82'
L = 187.99'
E = 17.72'

Co. Rd. 286

18"x 52' Cl. A-1
Sec. M-6.4 (d)

N 18° 39' 36" W

P.T. 44+14.53

P.C. 44+57.62

N 46° 29' 36" W

P.I. = 44+29.90
Δ = 55°-00'-00" Rt.
D = 63°-39'-43"
R = 90.00'
T = 49.50'
L = 86.39'
E = 13.32'

P.T. 45+37.14

BEGIN CO. ROAD #25
STA. 44+14.53

CULVERT DATA

Type : Pipe Culvert Std Drwg. I-1 & SP-53
Size : 60"x 70'
Work : Required: Install pipe culvert as shown using 60" pipe. Excavate channel at inlet as shown. Place dumped rock channel protection at inlet and outlet. Construct Std. SP-53 Endwalls.

ESTIMATED QUANTITIES

I-1 60" Reinforced Concrete Pipe Class A-1 Sec. M-6.6 (a) or M-6.8 (b)	70 Lin.Ft.
I-2 Masonry	6.1 Cu. Yds.
I-10 Dumped Rock Channel Prot.	10 Cu. Yds.
I-15 Guard Rail, Steel Beam Deep	100 Lin. Ft.
S-24 Removal of Existing Structures	Lump Lump
E-3 Channel Excavation	2 Cu. Yds.

2'± — 10'-0"± — 2'± — 3/16"/ft — 6" Earth & Gravel

TYPICAL SECTION ADJOINING PAVT. CO. RD. #25

2' for G.R. — 4' — 8' — ℄ — 8' — 4' — 16' — 3/8"/ft — 1"/ft — 1"/ft — 3:1 — 18" min. — 18":1 or to meet R/W

3:1 Under 5
2:1 Over 5

① ② ③

TYPICAL SECTION NORMAL CO. ROAD #25

SCHEDULE OF STATIONING
Sta. 44+14.53 to Sta. 75+00

① T-32 Bituminous Road Mix, 90 lb. Treatment.
② T-30 Bituminous Prime Coat @ 0.5 Gal. Per Sq. yd.
③ B-10 6" Crushed Aggr. Base Course, (incl. 6" subgrade compaction.)

EARTHWORK

Excavation	6031	Cu. Yds.
Embankment	2288	Cu. Yds.
Emb. +11%	2540	Cu. Yds.

1152.8 +14.53 — 1154.1 — 1154.2 — 1152.6 — 1146.1

18"x 52' Cl. A-1 Sec. M-6.4 (d)

El. El. 1134.12
19.5' Rt., 47+00

6.0%

El. El. 1131.0
18' Lt., 47+36

El. El. 1059.82

12"x44' Cl. A-1 Pipe

El. El. 1032.10

El. El. 1079.52

18"x46' Cl. A-1 Pipe

El. El. 1077.50

60"x70' Cl. A-1 Pipe

El. El. 988.00

El. El. 987.58

El. El. 993.1

15"x42' Cl. A-1 Pipe

El. El. 989.7

El. El. 1000.50

24"x40' Cl. A-1 Pipe

El. El. 997.80

El. El. 976.52

18"x40' Cl. A-1 Pipe

El. El. 973.10

1000.6 — 996.9 — 995.1 — 995.1 — 996.9 — 1000.0 — 997.4 — 996.0

1152.8 — 1152.2 — 1148.1 — 1137.7 — 1127.2 — 1113.0 — 1058.9 — 1087.8 — 1082.1 — 1073.8 — 1065.0 — 1056.6 — 1049.7 — 1037.1 — 1023.6 — 1000.3 — 1000.6 — 994.7 — 993.0 — 992.7 — 992.2 — 1002.3 — 1004.7 — 1004.2 — 1002.0 — 997.7 — 997.8 — 997.6 — 996.8

45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75

44+14.53 - 75+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

407-D
485

GUE-40-23.88

4-X

P.I. 75+86.05
28.92'
C.M.C.
63.61'

P.I. 81+94.72
13.84'
C.M.C.
11.31'

P.I. 91+91.39
20.43'
C.M.C.
14.11'

P.I. 102+81.46
34.43'
C.M.C.
12.25'

TYPICAL SECTION ADJOINING PAVEMENT TWP. RD. Nº 81

2'± 10'-0" ± 2'±
3/16"/Ft.
6" Earth & Gravel

END CO. ROAD 25/81
BEGIN TWP. RD. 81 STA. 75+00

Co. Rd. 25
Twp. Rd. 81
Fd. Nail
Fd. Pin
Fd. Pin & Cap
Fd. Pin & Cap
Fd. Pin & Cap

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

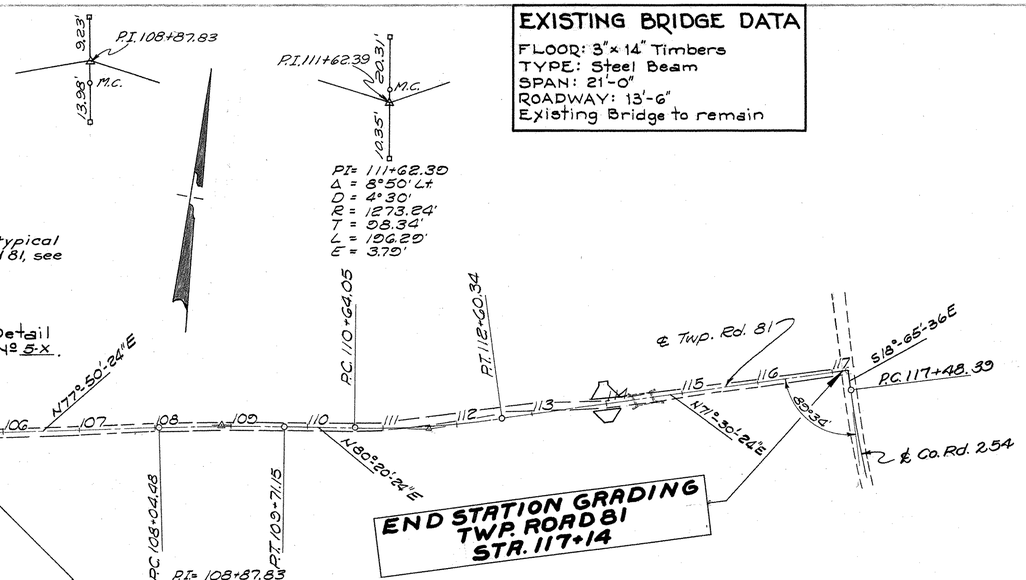
407-E 485

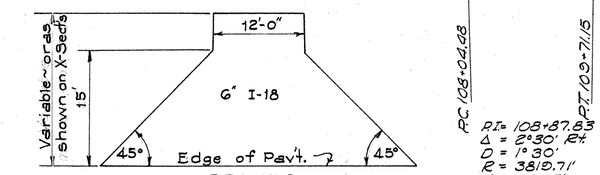
5-X

GUE-40-23.88

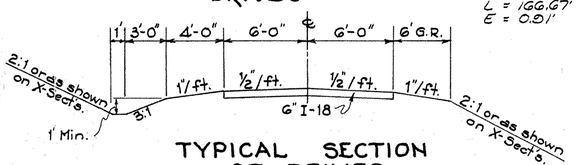
EXISTING BRIDGE DATA

FLOOR: 3"x 14" Timbers
TYPE: Steel Beam
SPAN: 21'-0"
ROADWAY: 13'-6"
Existing Bridge to remain

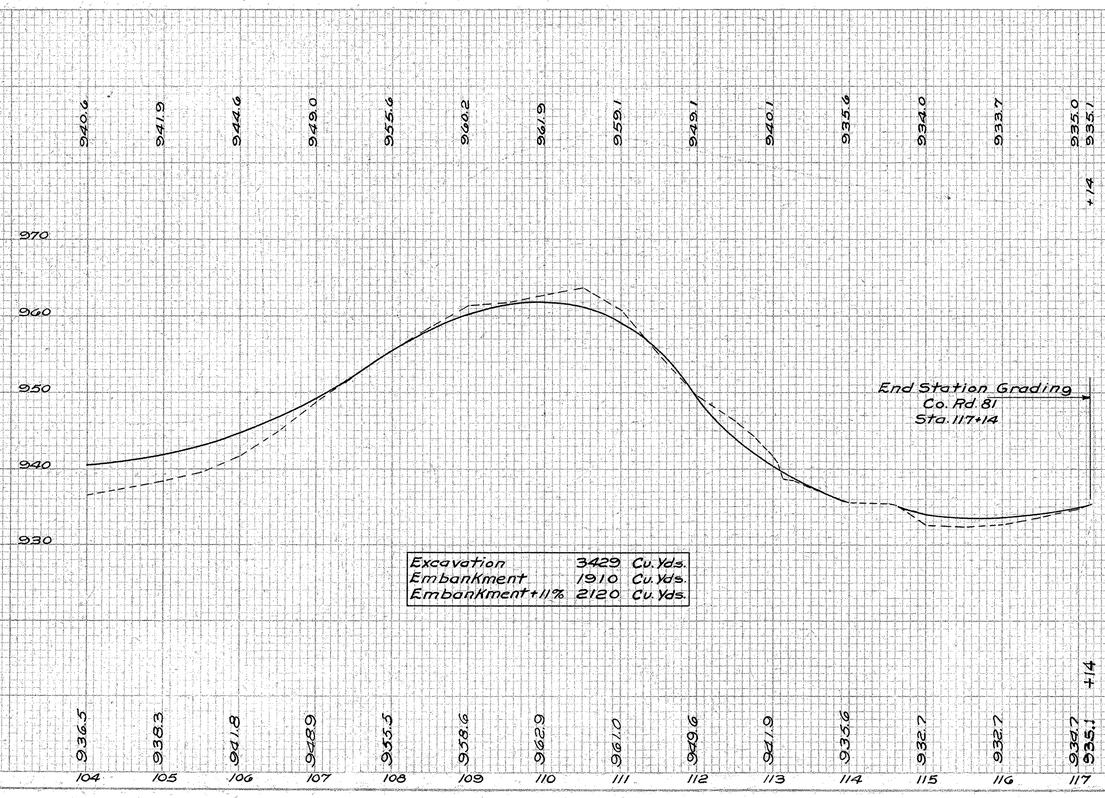




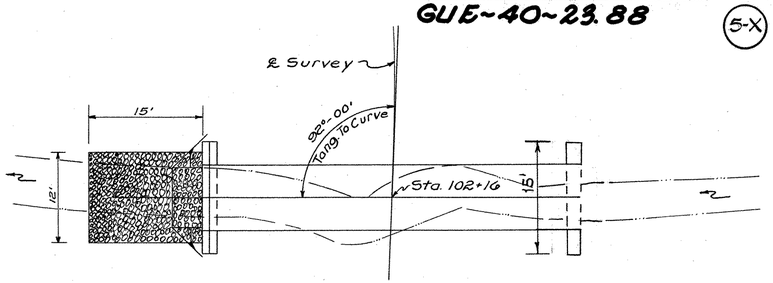
DRIVES



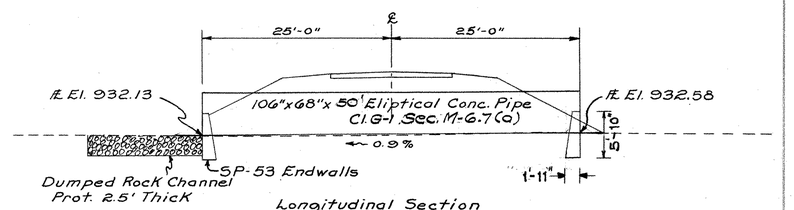
TYPICAL SECTION OF DRIVES



Excavation	3429 Cu.Yds.
Embankment	1910 Cu.Yds.
Embankment +11%	2120 Cu.Yds.



PLAN
0 10'
Scale in Feet



Longitudinal Section

CULVERT DATA

Type : Pipe Culvert Std Drwg. I-1, SP-53
Size : 106"x68"x 50'
Work Required: Install pipe culvert as shown using 106"x 68" eliptical pipe culvert. Construct SP-53 endwalls. Place dumped rock channel prot. at outlet.

ESTIMATED QUANTITIES

I-1	106"x 68" Eliptical Concrete Pipe Class Gal, Sec. M-6.7(a)	50	Lin. Ft.
I-2	Masonry	7.4	Cu. Yds.
I-10	Dumped Rock Channel Prot.	17	Cu. Yds.
I-15	Guard Rail Steel Beam Deep.	100	Lin. Ft.
S-24	Removal of Exist. Structure	Lump	Lump

CALCULATIONS
TWP. RD. NO. 81

SURFACE AREA:
Equation: Sta. 94+45.65 Back = Sta. 93+95.65 Ahead
Sta. 75+00 to 94+45.65 = 1945.65 Lin. Ft.
Sta. 93+95.65 to 117+14 = 2318.35 Lin. Ft.
4264.00 Lin. Ft.
Bridge Deduction - 21.00 Lin. Ft.
4243.00 Lin. Ft.
4243.00 Lin. Ft. x 16' (Width) = 67,888 Sq. Ft. ÷ 9 = 7543.11 Sq. Yds.

(PRIME)

T-30 Prime Coat using 0.5 gal/sq. yd
7543.11 sq. yds x 0.5 gal/sq. yd = 3771.56 Gals. Use 3772 Gals

(MIX)

T-32 Bituminous Material MC-4 or 5, Sec. M-5.3
7543.11 sq. yds x 0.61 Gal./sq. yd. = 4601.30 Gals. Use 4601 Gals.

T-32 Nº 4G Aggregate Sec. M-3.1
7543.11 sq. yds. x 90 lbs/sq. yd ÷ 2400 = 282.9 Cu.Yds. Use 283 Cu. Yds.

(CHOKE)

T-32 Nº 9 Aggregate, Sec. M-3.1
7543.11 sq. yds. x 10 lbs/sq. yd ÷ 2400 = 31.4 Cu.Yds. Use 31 Cu. Yds.

(SEAL COAT)

T-32 Bituminous Material MC-5, Sec. M-5.3
7543.11 sq. yds x 0.30 Gals/sq. yd. = 2262.93 Gal. Use 2263 Gals.

T-32 Nº 6 Aggregate, Sec. M-3.1
7543.11 sq. yds. x 22 lbs/sq. yd ÷ 2400 = 69.2 Cu.Yds. Use 69 Cu. Yds.

(BASE COURSE)

B-19 6" Crushed Aggregate Base Course incl. 6" Subbase Compaction
7543.11 sq. yds. x .1667 = 1257.4 Cu.Yds. Use 1257 Cu. Yds.

NOTE: Quantities carried to Sub-Summary, Sheet Nº 17-X.

104+00 - 117+14
TWP RD 81

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

GUE-40-23.88

407-F
485

G-X

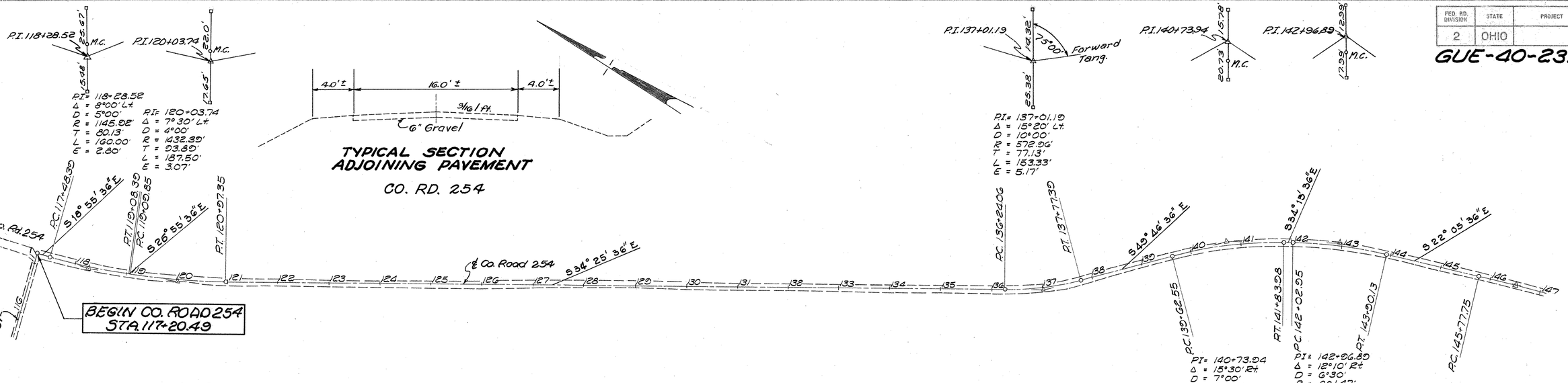
P.I. 118+28.52
Δ = 8°00' Lt.
D = 5°00'
R = 1145.92'
T = 80.13'
L = 160.00'
E = 2.80'

P.I. 120+03.74
Δ = 7°30' Lt.
D = 4°00'
R = 1432.39'
T = 93.69'
L = 187.50'
E = 3.07'

P.I. 137+01.19
Δ = 15°20' Lt.
D = 10°00'
R = 572.96'
T = 77.13'
L = 153.33'
E = 5.17'

P.I. 140+73.94
Δ = 15°30' Rt.
D = 7°00'
R = 818.51'
T = 111.39'
L = 221.43'
E = 7.55'

P.I. 142+96.89
Δ = 12°10' Rt.
D = 6°30'
R = 881.47'
T = 93.04'
L = 187.18'
E = 4.99'



TYPICAL SECTION ADJOINING PAVEMENT

CO. RD. 254

TYPICAL SECTION NORMAL CO. ROAD #254

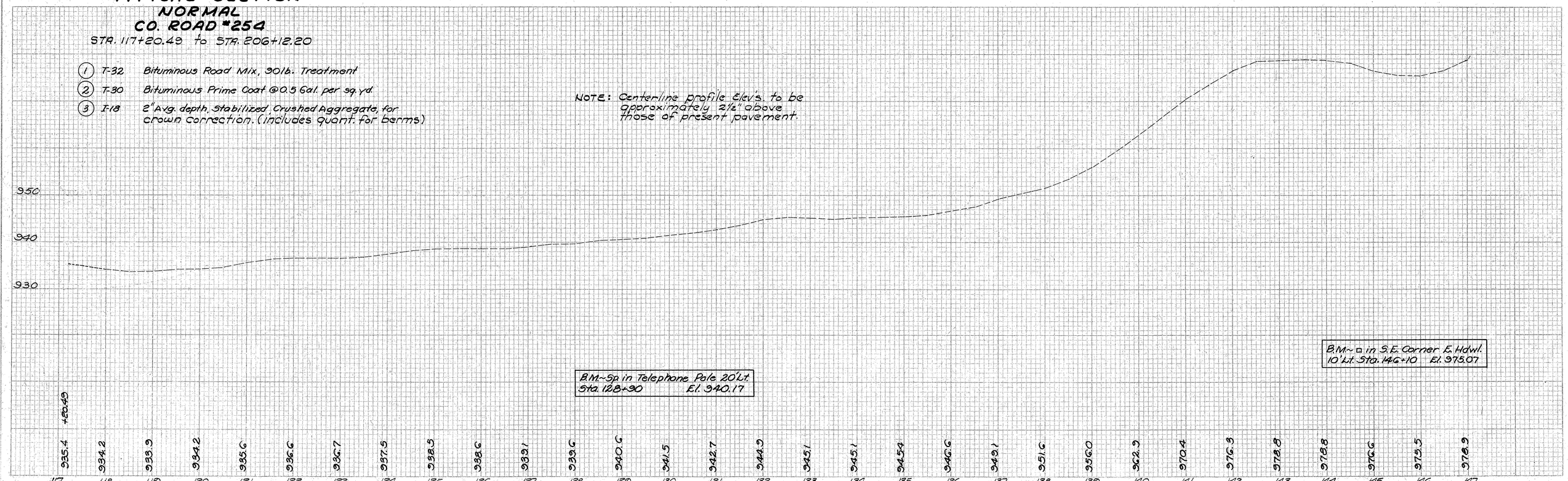
STA. 117+20.49 to STA. 206+12.20

(1) T-32 Bituminous Road Mix, 90 lb. Treatment

(2) T-30 Bituminous Prime Coat @ 0.5 Gal. per sq. yd.

(3) I-18 2" Avg. depth, Stabilized Crushed Aggregate, for crown correction. (Includes quant. for berms)

NOTE: Centerline profile Elev's. to be approximately 2½' above those of present pavement.



117+20.49 ~ 147+00
CO. ROAD 254

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

407-G
485

7-X

GUE-40-23.88

P.I. 149+19.57
Δ = 3°-00' Rt.
D = 2°-00'
R = 2864.79'
T = 75.02'
L = 150.00'
E = 0.98'

P.I. 140+19.57
Δ = 24°40' Lt.
D = 13°30'
R = 424.41'
T = 92.80'
L = 182.72'
E = 10.03'

P.I. 150+08.03
Δ = 8°00' Lt.
D = 7°00'
R = 818.51'
T = 57.24'
L = 114.29'
E = 2.0'

P.I. 152+51.57
Δ = 3°48' Rt.
D = 2°00'
R = 2864.79'
T = 95.04'
L = 190.00'
E = 1.58'

P.I. 156+38.06
Δ = 10°18' Rt.
D = 3°18'
R = 1730.24'
T = 156.48'
L = 312.12'
E = 7.04'

P.I. 162+92.20
Δ = 43°18' Lt.
D = 12°30'
R = 305.14'
T = 156.85'
L = 206.62'
E = 20.90'

P.I. 166+55.17
Δ = 25°06' Lt.
D = 10°30'
R = 545.67'
T = 121.47'
L = 239.05'
E = 13.36'

P.I. 170+24.78
Δ = 29°06' Rt.
D = 11°00'
R = 520.87'
T = 135.19'
L = 264.55'
E = 17.25'

P.I. 173+23.50
Δ = 1300' Rt
D = 6°00'
R = 954.93'
T = 108.80'
L = 216.67'
E = 6.18'

Note: For details, Typical Section, Co. Road 254, See Sheet No. G-X.

P.C. 147+27.75
S 19°-05'-36" E
P.C. 148+26.77
P.T. 150+09.40
P.C. 150+40.79
P.T. 151+55.08
S 55°-45'-36" E
S 43°-45'-36" E
P.C. 151+56.53
P.T. 153+46.53
P.C. 154+19.58
℄ Co. Road 254
P.T. 157+93.70
S 37°-39'-36" E
P.C. 161+35.35
P.T. 164+33.07
P.C. 165+73.70
P.T. 168+12.75
N 73°-56'-24" E
P.C. 168+58.68
S 80°-57'-36" E
P.T. 171+54.14
P.C. 172+14.70
S 76°-57'-36" E
P.T. 174+31.37
S 63°-57'-36" E
P.C. 175+77.98

NOTE:
Centerline profile Elev's. to be approx. 8½" above those of present pavement.

1010
1000
990
980
970

147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176

147+00 ~ 176+00
CO. ROAD 254

FED. HD. DIVISION	STATE	PROJECT	
2	OHIO		

407-H
485

GUE-40-23.88

8-X

P.I. 177+30.89
5.80'
24.10'
M.C.

P.I. 183+70.14
33.49'
17.70'
M.C.

Note: For details, Typical Section, Co. Road 254, See Sheet No. 6-X.

P.I. 192+64.73
M.C.
29.57' (088)

25.22'
14.78'
M.C.
P.I. 198+41.52

25.94'
M.C.
10.24'
P.I. 201+77.62

P.I. = 180+11.51
Δ = 13°-48' Lt.
D = 13°-42'
R = 418.22'
T = 58.04'
L = 115.33'
E = 4.01'

P.I. = 192+64.73
Δ = 19°-12' Lt.
D = 13°-30'
R = 424.41'
T = 71.79'
L = 142.22'
E = 6.03'

P.I. = 198+41.52
Δ = 6°-54' Lt.
D = 2°-36'
R = 2203.68'
T = 132.84'
L = 265.38'
E = 4.00'

P.I. = 201+77.62
Δ = 16°-18' Lt.
D = 6°-30'
R = 881.47'
T = 126.25'
L = 250.77'
E = 9.00'

P.C. 179+39.47
P.T. 180+68.50
S 39°-21'-36" E
P.C. 191+32.94
P.T. 193+35.16
S 72°-33'-36" E
P.C. 197+08.68
P.T. 199+74.06
P.C. 200+51.37
P.T. 203+02.14
S 63°-21'-36" E
S 78°-57'-36" E
S 62°-39'-36" E
S 55°-45'-36" E
S 57°-21'-36" E

176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203

& Co. Road 254

P.I. = 177+30.89
Δ = 16°-24' Rt.
D = 5°-24'
R = 1061.03'
T = 152.91'
L = 303.70'
E = 10.96'

P.T. 178+81.69
S 47°-33'-36" E

P.C. 182+70.09

P.I. = 183+70.14
Δ = 4°-00' Rt.
D = 2°-00'
R = 2864.79
T = 100.05'
L = 200.00'
E = 1.75'

P.T. 184+70.09
P.C. 184+84.29

P.I. = 188+17.62
Δ = 2°-00' Rt.
D = 0°-18'
R = 19098.60'
T = 333.33'
L = 666.66'
E = 3.00'

P.T. 194+50.95

P.C. 194+11.60

P.I. = 195+32.47
Δ = 20°-48' Rt.
D = 8°-42'
R = 658.57'
T = 120.87'
L = 239.08'
E = 11.00'

P.T. 196+50.68

1100
1090
1080
1070
1060
1050
1040
1030
1020
1010
1000

176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203

NOTE:
Centerline profile Elevs. to be approx. 1/2" above those of present pavement.

CALCULATIONS
Co. ROAD 254

Surface Area:
Sta. 117+20.49 to Sta. 206+12.20 = 8891.71 Lin. Ft. x 16' Width = 142,267.36 Sq. Ft. ÷ 9 = 15,807.48 Sq. Yds.

T-30	Prime Coat using 0.5 gal./sq. yd. (Sec. 141-5.7, RT-2 or RT-3) 15,807.48 sq. yds. x 0.5 gal./sq. yd. (MIX)	= 7903.7	Gals.	Use	7904	Gals.
T-32	Bituminous Material, MC-4 or 5, Sec. M-5.3 15,807.48 sq. yds. x 0.61 gal./sq. yd.	= 9642.6	Gals.	Use	9643	Gals.
T-32	No. 46 Aggregate, Sec. M-3.1 15,807.48 sq. yds. x 90 lbs./sq. yd. ÷ 2400 (CHOKE)	= 592.8	Cu. Yds.	Use	593	Cu. Yds.
T-32	No. 9 Aggregate, Sec. M-3.1 15,807.48 sq. yds. x 10 lbs./sq. yd. ÷ 2400 (SEAL COAT)	= 65.9	Cu. Yds.	Use	66	Cu. Yds.
T-32	Bituminous Material MC-5, Sec. M-5.3 15,807.48 sq. yds. x 0.30 Gal./sq. yd.	= 4742.24	Gals.	Use	4742	Gals.
T-32	No. 6 Aggregate, Sec. M-3.1 15,807.48 sq. yds. x 22.1 lbs./sq. yd. ÷ 2400	= 144.9	Cu. Yds.	Use	145	Cu. Yds.
I-18	Stabilized Crushed Aggregate for Crown and Berm Correction (2" Ave.) 15,807.48 sq. yds. x 0.0556 yd.	= 878.9	Cu. Yds.	Use	879	Cu. Yds.

Note: Quantities carried to Sub-Summary Sheet No. 17-X.

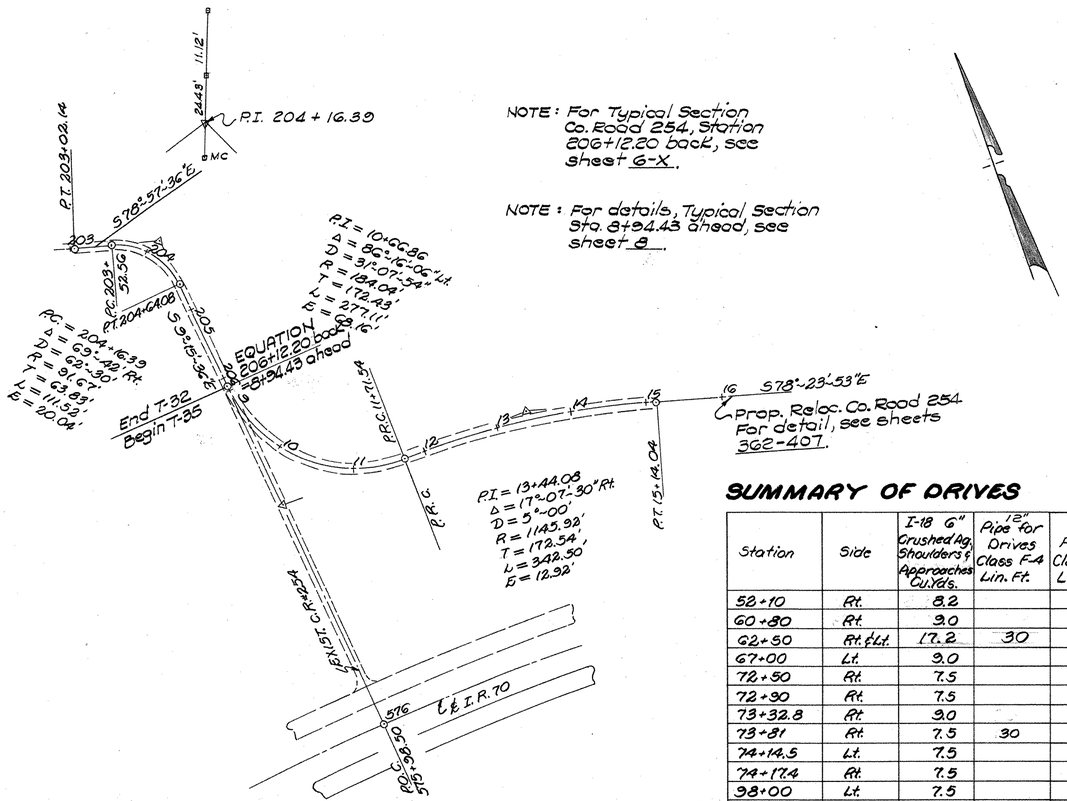
176+00 ~ 203+00
CO. ROAD 254

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

407-1
485

GUE~40~23.88

9-X



NOTE: For Typical Section Co. Road 254, Station 206+12.20 back, see sheet 6-X.

NOTE: For details, Typical Section Sta. 3+34.43 ahead, see sheet 8.

SUMMARY OF DRIVES

Station	Side	I-18 6" Crushed Ag. Shoulders & Approaches Cu.Yds.	12" Pipe for Drives Class F-4 Lin. Ft.	10" Pipe Class F-4 Lin. Ft.	Details on Sheet
52+10	Rt.	8.2			10-X
60+80	Rt.	9.0			10-X
62+50	Rt. & Lt.	17.2	30		10-X
67+00	Lt.	9.0			10-X
72+50	Rt.	7.5			11-X
72+90	Rt.	7.5			11-X
73+32.8	Rt.	9.0			11-X
73+81	Rt.	7.5	30		11-X
74+14.5	Lt.	7.5		10	11-X
74+17.4	Rt.	7.5			11-X
98+00	Lt.	7.5			14-X
101+00	Lt.	9.0			15-X
101+50	Rt.	9.0			15-X
114+00	Lt.	9.0			16-X
114+00	Rt.	7.5	30		16-X
		*15.0			
	TOTALS	147	90	10	

*Includes 15 Cu. Yds. I-18 for North-East intersection Co. Road 286 & Co. Road 25.

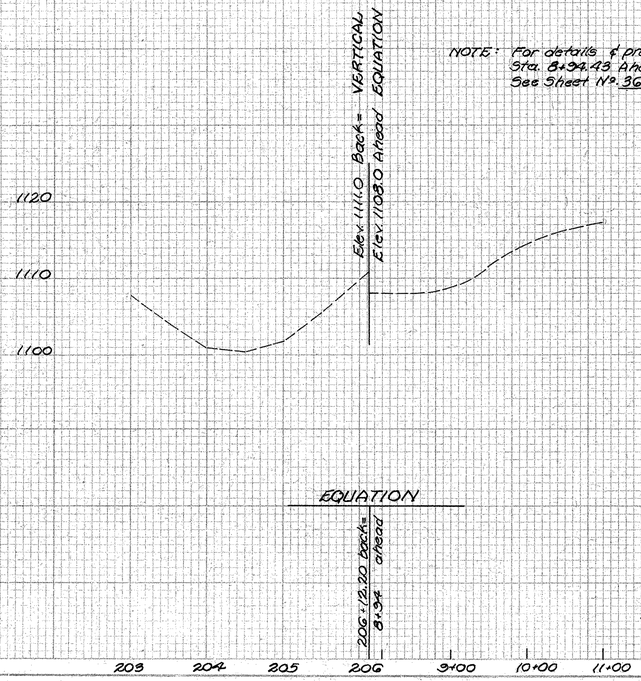
NOTE:
Summary of Drive quantities Carried to Sub-Summary Sheet No. 17-X.

PIPE REMOVAL

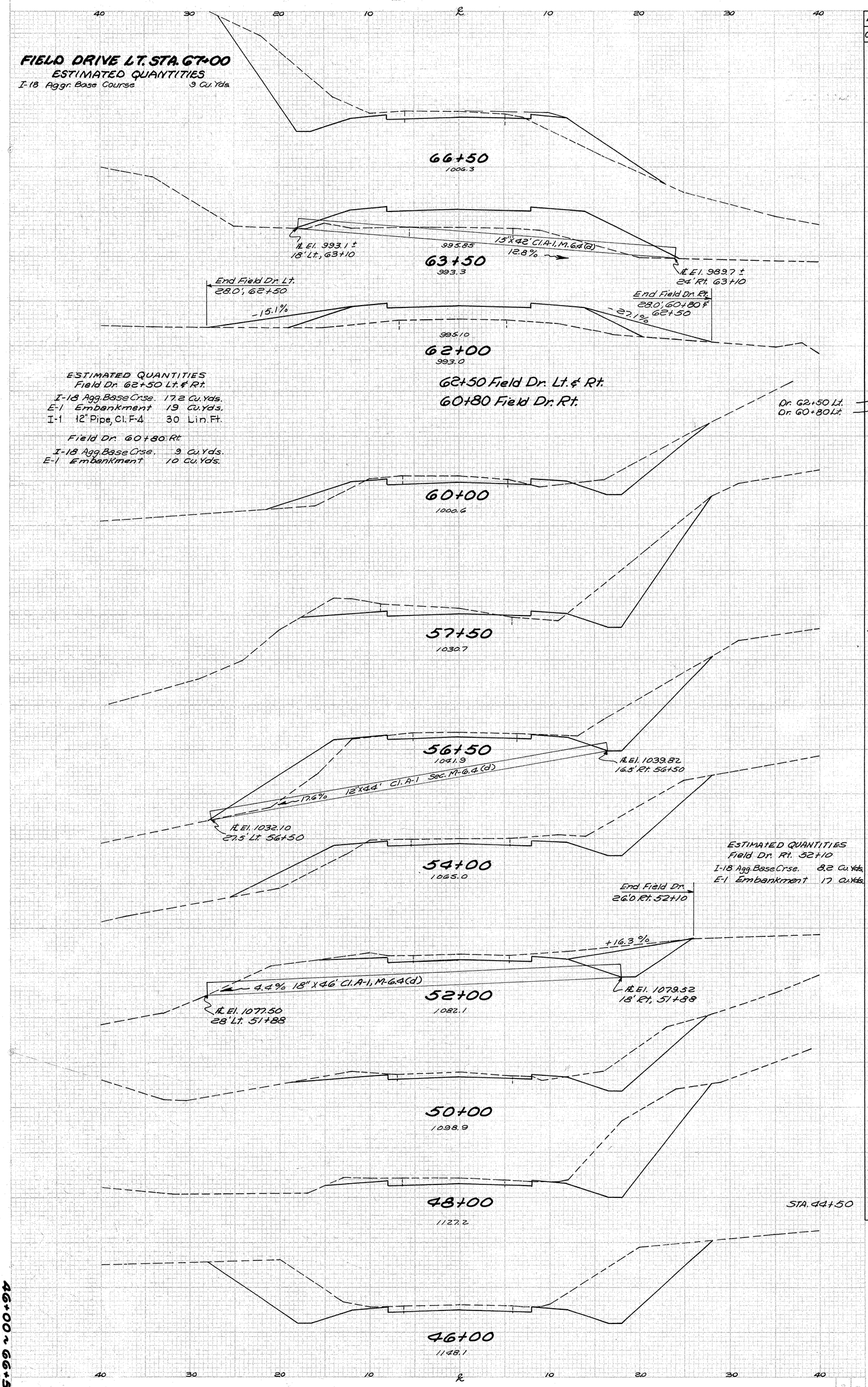
Station	E-12 Removal of Pipe	
	Under 15"	15" & over
56+20	20	
68+78		18
72+40		24
77+00		22
91+50	18	
*TOTALS	38	64

*Carried to Sub-Summary, Sheet No. 17-X.

NOTE: For details & profile Sta. 3+34.43 Ahead See Sheet No. 363.



203+00 ~ 206+12.20
CO. ROAD 254



END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		920	149
73	21		
		406	622
0	91		
		0	431
0	64		
		126	278
34	11		
			19
			10
		495	69
73	4		
		230	65
51	31		
		505	241
58	21		
		359	78
			17
39	0		
		322	7
48	2		
		519	7
92	0		
		852	0
138	0		
		383	0
0	0		

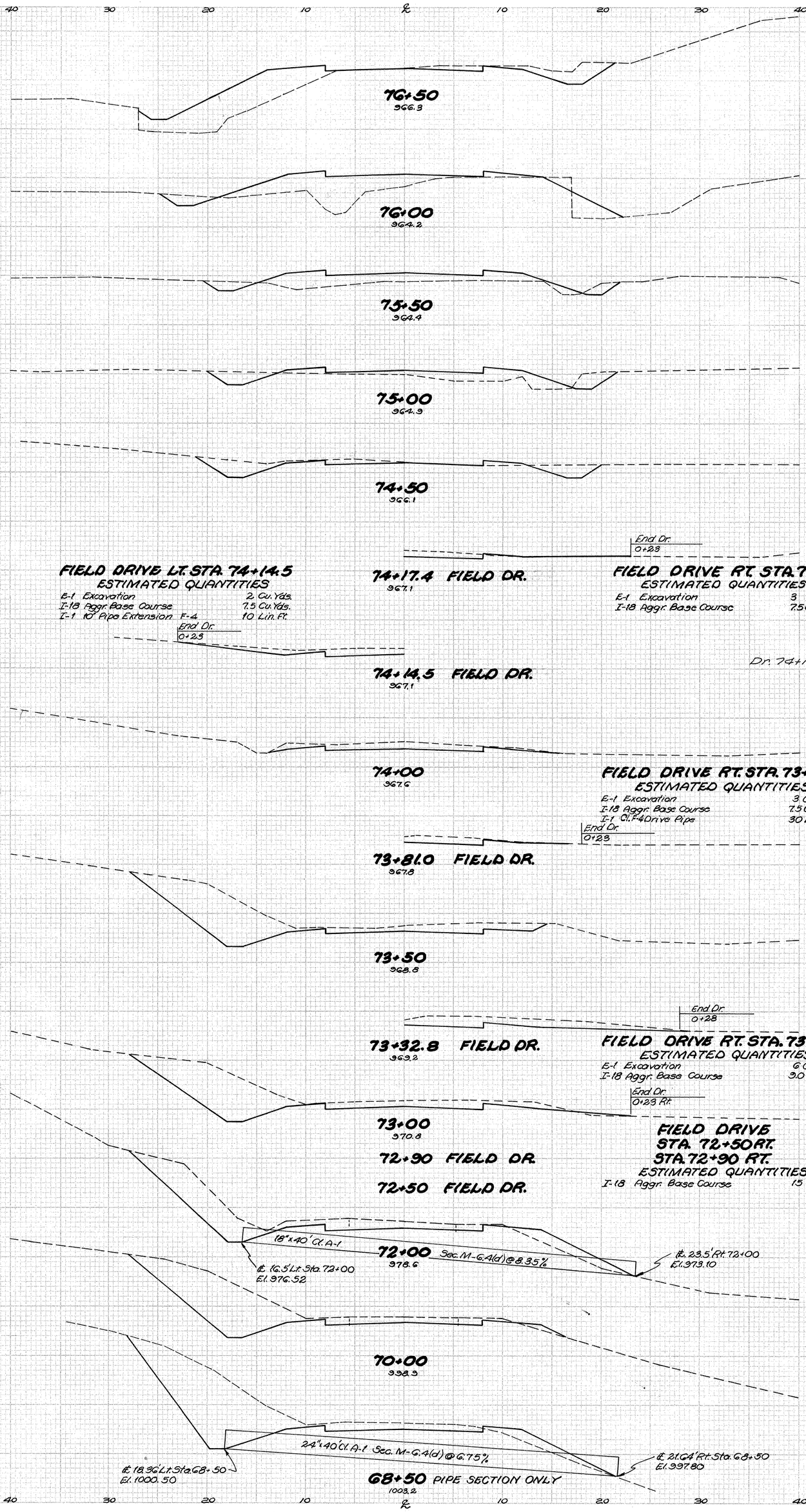
GUE-40-23.88

2 OHIO

407-J 485

10-X

46+00 ~ 66+50



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		56	72
15	48		
		19	89
6	48		
		10	71
5	29		
		15	45
11	20		
		29	20
20	2		
		3	
		34	2
		2	
17	0		
		3	
		77	0
66	0		
		122	0
		6	
66	0		
		213	20
49	11		
		437	48
69	2		

Dr. 74+14.5 Lt.

70+00 ~ 76+50

GUE ~ 40~23.88

11-X

407-X
485

SEEDING

END WIDTH	SQ. YDS.

END AREA CU. YDS.	CUT	FILL
	68	234
	82	100
	106	168
	109	253
	394	626
	616	181
	493	4
	115	3
	112	30
CUT	FILL	
39	68	
51	66	
45	86	
59	70	
48	39	
85	0	
48	1	
76	2	
45	30	

FED. AID PROJ.NO.	STATE	PROJECT	
2	OHIO		

GUE~40~23.88

407-L
485

12-X

END AREA		VOLUME	
CUT	FILL	CUT	FILL

77+00 ~ 87+37.63

SEEDING

END WIDTH	SQ. YDS.

	CU.YDS. CUT	CU.YDS. FILL
92+50	85	183
92+00	83	142
91+50	41	96
91+00	71	171
90+50	129	99
90+00	90	269
89+50	37	302
89+00	82	140
88+50	56	242
88+00	0	295

END AREA CUT	END AREA FILL
69	38
21	95
23	117
54	68
85	39
12	252
28	74
61	77
0	184
0	135

VOLUME CUT	VOLUME FILL

FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

GUE-40-23.88

407-M
485

13-X

92+50
999.3
999.05

92+00
999.6
990.90

91+50
999.5
991.35

91+00
990.7
991.80

90+50
992.6
992.25

90+00
984.35
992.70

89+50
993.0
993.15

89+00
993.2
993.60

88+50
993.3
994.0

88+00
993.3
994.50

Fl. El. 989.50
19.5' Rt. 90+00

12.3%
12"x52' Cl. A-II, M-84(d)

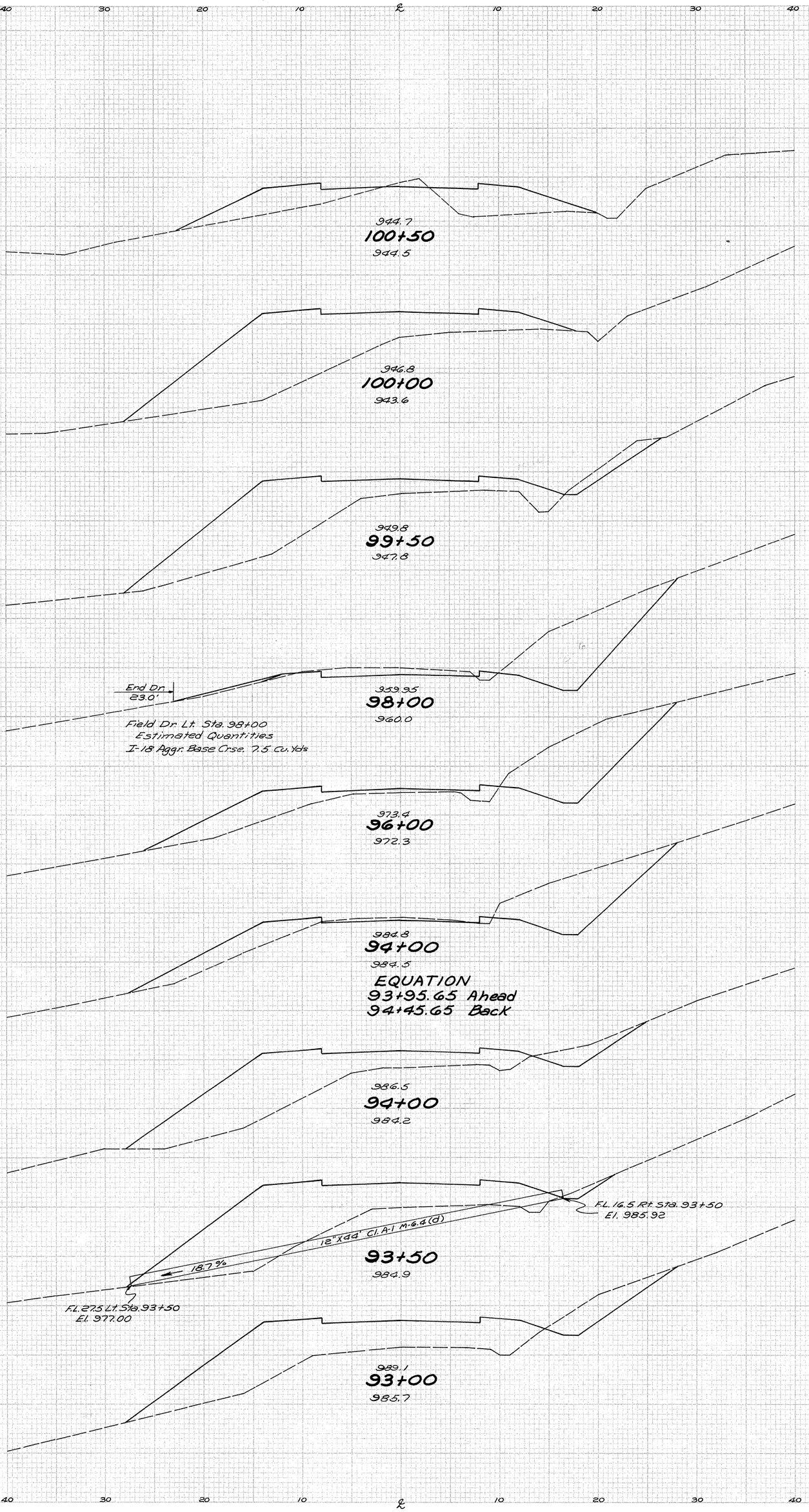
R.E. El. 980.50
32.5' Lt. 90+00

El. 990.55
24.0' Rt. 88+20

13.5%
Sec. M.6.4 (01)
15"x 52' Cl. A-I

L.E. El. 983.54
28.0' Lt. 88+20

88+00 ~ 92+50



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		3	119
3	67		
		3	219
0	170		
		9	287
10	140		
		250	392
80	1		
		567	170
73	45		
		515	278
66	30		
		73	144
13	125		
		15	264
3	162		
		24	280
23	140		

GUE-40-23.88

93+00 - 100+50

SEEDING	
END WIDTH	SQ. YDS.

End Area	Cu. Yds.
Cut	Fill	Cut	Fill
132	0	224	0
116	1	459	2
89	1	569	6
42	14	485	56
4	121	128	375
6	149	46	1250
0	106	6	236
0	130	0	219
0	62	0	178

PER SG DIVISION	STATE	PROJECT	
2	OHIO		

GUE-40-23.88

407-0
485

15X

END AREA		VOLUME	
CUT	FILL	CUT	FILL

Field Dr. Rt. Sta. 101+50
ESTIMATED QUANTITIES
Embankment 3 Cu. Yds.
Aggr. Base Crse. 9 Cu. Yds.

I-18 -18.2%

End Dr. 0+28

0

959.07
961.0
111+00

961.30
962.9
110+00

958.20
958.6
108+50

944.4
945.0
106+50

941.9
938.3
105+00

940.6
937.1
102+50

941.0
938.1
102+00

941.9
938.4
101+50

End Dr. 0+28

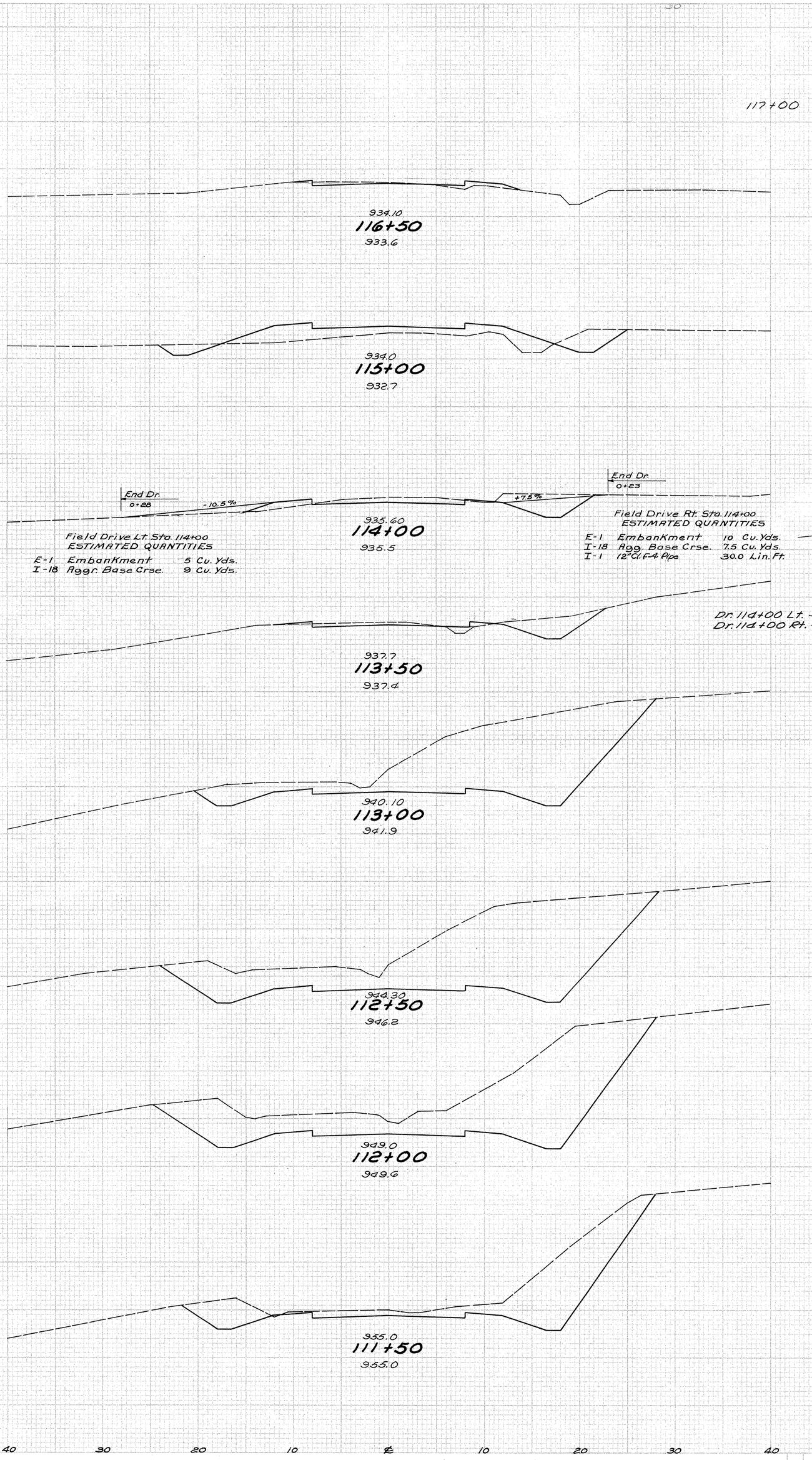
+21.0%

Field Dr. Lt. Sta. 101+00
ESTIMATED QUANTITIES
I-18 Aggr. Base Crse. 9 Cu. Yds.

943.0
939.2
101+00

40 30 20 10 0 10 20 30 40

101+00 ~ 111+00



END AREA		C U. YDS.	
CUT	FILL	CUT	FILL
0	0		
		3	3
3	3		
		50	114
15	38		
		80	78
28	4		
		44	7
		→ 10	
20	4		
		Dr. 114+00 Lt. →	5
		Dr. 114+00 Rt. →	10
		200	4
196	0		
		408	0
245	0		
		426	0
215	0		
		301	0
110	0		

GUE-40-23.88

16

407-D
485

111+50~116+50

SUB-SUMMARY

COUNTY ROADS 286, 25, 254 – TOWNSHIP ROAD 81

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

407Q

GUE-40-23.88

17X

ITEM NO.	ESTIMATED QUANTITIES SHEET NUMBERS 2-X	3-X	4-X	5-X	8-X	9-X	ITEM	TOTAL QUANTITY	UNIT	100% State DESCRIPTION
										ROADWAY
E-1		6081	4,550	3429			E-1	14,060	Cu.Yds.	Roadway Excavation, Method "B"
I-15		100	250	100			I-15	450	Lin. Ft.	Guard Rail, Steel Beam Standard Type (Deep)
E-9			Lump				E-9	Lump	Lump	Removal of Trees and Stumps
E-12						38	E-12	38	Lin. Ft.	Pipe Removed, 15" and under
E-12						64	E-12	64	Lin. Ft.	Pipe Removed, over 15"
										DRAINAGE
I-1						10	I-1	10	Lin. Ft.	10" Pipe, Class F-4
I-1						90	I-1	90	Lin. Ft.	12" Pipe, Class F-4
I-1		44	96				I-1	140	Lin. Ft.	12" Pipe, Class A-1, Sec. M-6.4 (d)
I-1		42	52				I-1	94	Lin. Ft.	15" Pipe, Class A-1, Sec. M-6.4 (d)
I-1		138					I-1	138	Lin. Ft.	18" Pipe, Class A-1, Sec. M-6.4 (d)
I-1		40					I-1	40	Lin. Ft.	24" Pipe, Class A-1, Sec. M-6.4 (d)
I-1		70					I-1	70	Lin. Ft.	60" Pipe, Class A-1, Sec. M-6.6 (a) or M-6.8 (b)
I-1			88				I-1	88	Lin. Ft.	91" x 58" Pipe, Class G-1, Sec. M-6.7 (a)
I-1				50			I-1	50	Lin. Ft.	106" x 68" Pipe, Class G-1, Sec. M-6.7 (a)
I-2		6.1	10	7.4			I-2	23.5	Cu. Yds.	Masonry
I-10		10	9	17			I-10	36	Cu. Yds.	Dumped Rock Channel Protection
S-24		Lump	Lump	Lump			S-24	Lump	Lump	Removal of Existing Structures
E-3		2	4				E-3	6	Cu. Yds.	Channel Excavation
										PAVEMENT
I-18	558				879	147	I-18	1584	Cu. Yds.	Stabilized Crushed Aggregate Shoulders and Approaches
B-19	914			1257			B-19	2171	Cu. Yds.	Aggregate Base Course
T-30	6,089			3,772	7904		T-30	17,765	Gals.	Bituminous Prime Coat : (Sec M-5.1, RT-2 or RT-3)
T-32	7,428			4601	9643		T-32	21,672	Gals.	Road Mix Bituminous Material, MC-4 or 5, Sec. M-5.3
T-32	3654			2263	4742		T-32	10,659	Gals.	Seal Coat Bituminous Material, MC-5, Sec. M-5.3
T-32	457			283	593		T-32	1,333	Cu. Yds.	No. 4G Aggregate for Road Mix, Sec. M-3.1
T-32	51			31	66		T-32	148	Cu. Yds.	No. 9 Aggregate for Choke, Sec. M-3.1
T-32	111			69	145		T-32	325	Cu. Yds.	No. 6 Aggregate for Seal Coat, Sec. M-3.1

Rev. 11-4-64 C.E.H.

SUB-SUMMARY
COUNTY ROADS 286, 25, 254 – TOWNSHIP ROAD 81

CULVERT SUB-SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

408
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

STATION	SKEW	I-1 PIPE (CLASS (A-1))																		E-3	I-2	E-12	I-5		I-8					S-23	I-10		L-10	See Sheet No.
		SEC. M G.A (d)											SEC. G.A (g)			M-6.6(a)	class	M G.6(b)		Channel Exc.	Masonry	Pipe Removed Over 15"	Pipe Specials		Std. C.B.	Std. Manholes		No 2-4 C.B. Modified as per plan		Dowel Holes	Dumped Rock Ch. Prof.	Rip-Rap 6" R.C. s/ab. As Per Plan	Sodding	
		8 Ga.	10 Gage		12 Gage		14 Gage						T-8 Ga. B-7 Ga. 60"	T-10 Ga. B-8 Ga. 60"	42"	M-6.8(b)	J-1	M G.8(b)					Class A-1 Bend											
		42"	30"	36"	24"	30"	15"		24"	30"	15"	18"				36" 21"	24"	21"					30"	60"	No 5	No 6	No 1	No 2							
		Lin. Feet																		Cu. Yds.	Cu. Yds.	L.F.	Each		Each					Each	Cu. Yds.	Sq. Yds.	Sq. Yds.	
415+47	0°-0'									246										40	17.1											23	36	7	409
433+75	0°-0'					284				22											7.7				1		1							4	410
440+86	11° L.F.					298				19										11	11.6						1						51	6	411
458+99	1°-6' L.F.											7						61							1			1						412
473+52	6° L.F.						146													25	4.93				1					3	22.		3	413
481+87	3°-30' L.F.						250				18									3	3.3						1						3	414
508+34	0°-0'								56											83	5.59									3	19		3	415
522+09	11° L.F.				92															43	4.2										33	57	6	416
565+71	0°-0'								100												5.59									3	22		3	417
588+74	25° R.F.													172	18						29.0	6		1		1						86	7	418
591+25	43°-03-30" L.F.	112																		16	0.70						1			3			4	419
611+92	20° R.F.													46							15.5									5	26		5	420
624+68	47° L.F.	116																			11.35									3	23		5	421
644+01	9° R.F.		278																		52.0		1								29		4.	422
34+09	8°-9' R.F.	94																			8.65									3	33		8	423
44+58	9° L.F.			86																	6.59									3	35		3	424
55+98	13°-30' L.F.				106																3.89									3	32		4	425
C.H. 27																																		
164+34.66	1°12' L.F											160									0.30				1						17		4	428
137+56	0° Skew																60				0.82										33		4	427
C. H. 114																																		
80+00	0° Skew								172											7	0.8										6		2	426
C.H. 202																																		
27+00	0° Skew																55				0.7										8		2	426
Twp Rd. 35																																		
62+50	16° R.F.															59					1.18												4	427
C.H. 254																																		
28+37	62°32'00" L.F.	254																			13.5							1				18	4	429
45+63	21°45'00" R.F.												194								3.8									5			4	430
Totals to Gen. Summary		576	278	86	198	582	396		328	287	18	167	194	218	18	59	55	60	61	228	161.99	6	1	1	4	1	4	1	1	34	361	248	99	

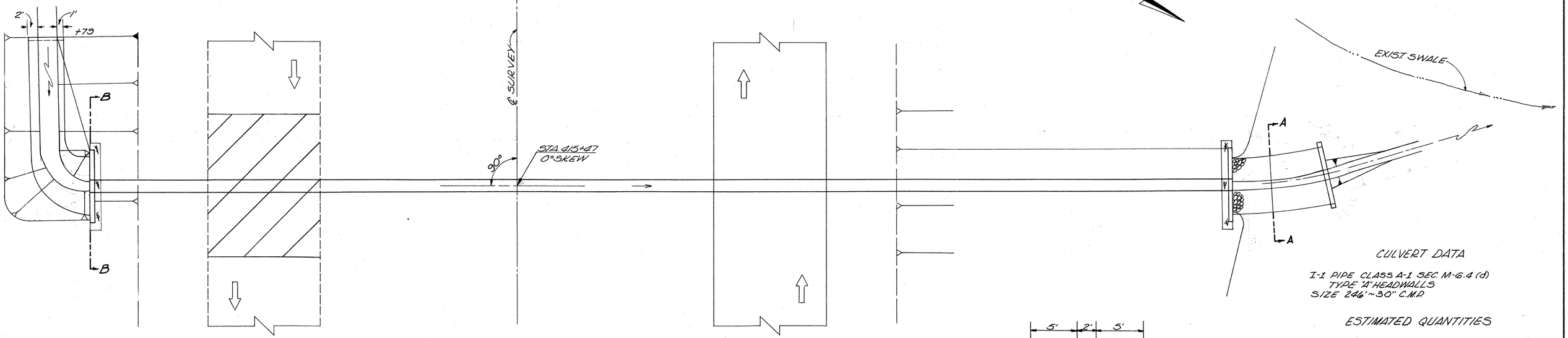
CULVERT SUB-SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

409
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

CUTOFF WALL FOR I-10
RIPRAP SEE SHEET NO. 438

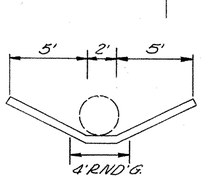


CULVERT DATA

I-1 PIPE CLASS A-1 SEC. M-6.4 (d)
TYPE "A" HEADWALLS
SIZE 246'~30" C.M.P.

ESTIMATED QUANTITIES

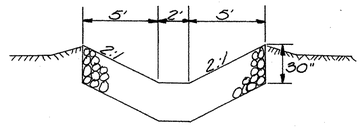
I-1 PIPE 30" C.M.P.	246 LIN. FT.
I-2 MASONRY	17.1 CU. YDS.
I-10 DUMPED ROCK CHANNEL PROTECTION	23 CU. YDS.
I-10 RIPRAP USING 6" REINF. CONC. SLAB	36 SQ. YDS.
L-10 SODDING	7.5 SQ. YDS.
E-3 CHANNEL EXCAVATION	40 CU. YDS.



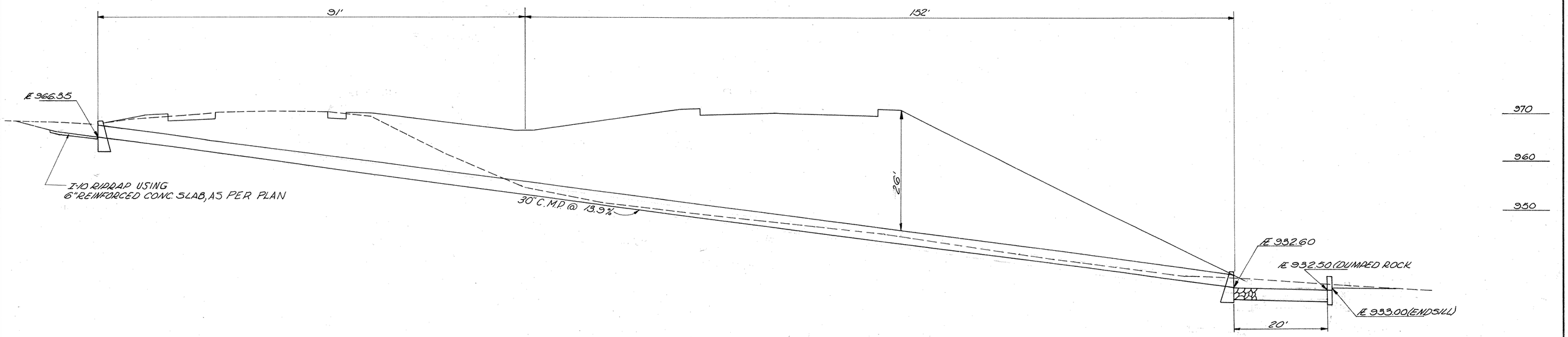
SECTION B-B

AREA = 7 ACRES
Q50 25 C.F.S.

Scale: 1" = 10'



SECTION A-A



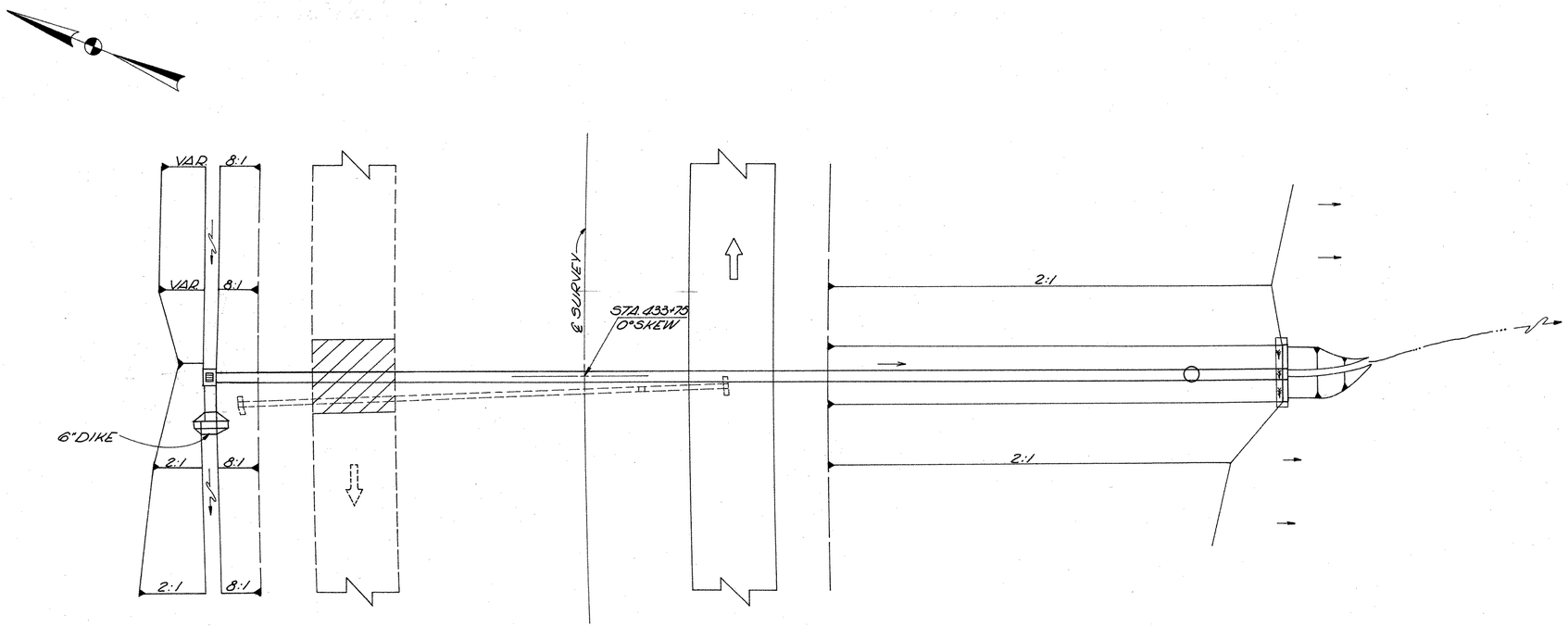
SEE SHEET NO. 438 FOR ENDSILL DETAILS

CULVERT ~ STA. 415+47

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

410
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



CULVERT DATA

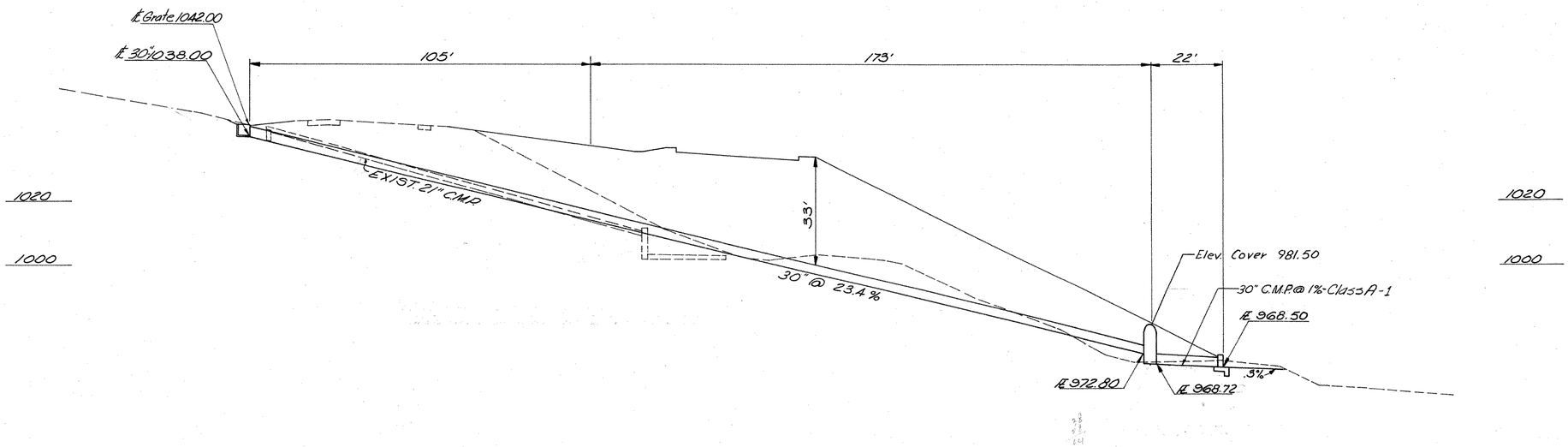
PIPE: CLASS A-1 SEC. M-6.4(D)

TYPE: "A" HEADWALL
SIZE: 284'-30" C.M.P. (12 GAGE)
22'-30" C.M.P.

ESTIMATED QUANTITES

I-1 PIPE 30" C.M.P. (12 GAGE)	284' LIN.FT.
I-1 PIPE 30" C.M.P.	22' LIN.FT.
I-2 MASONRY	17 CU.YDS.
I-8 STD. TYPE NO.1 MANHOLES	1 EACH
I-8.5 STD. TYPE NO.5 CATCH BASIN	1 EACH
L-10 SODDING	4 SQ.YDS.

AREA = 7.5 ACRE
Q50 = 27 C.F.S.
SCALE 1"=20'



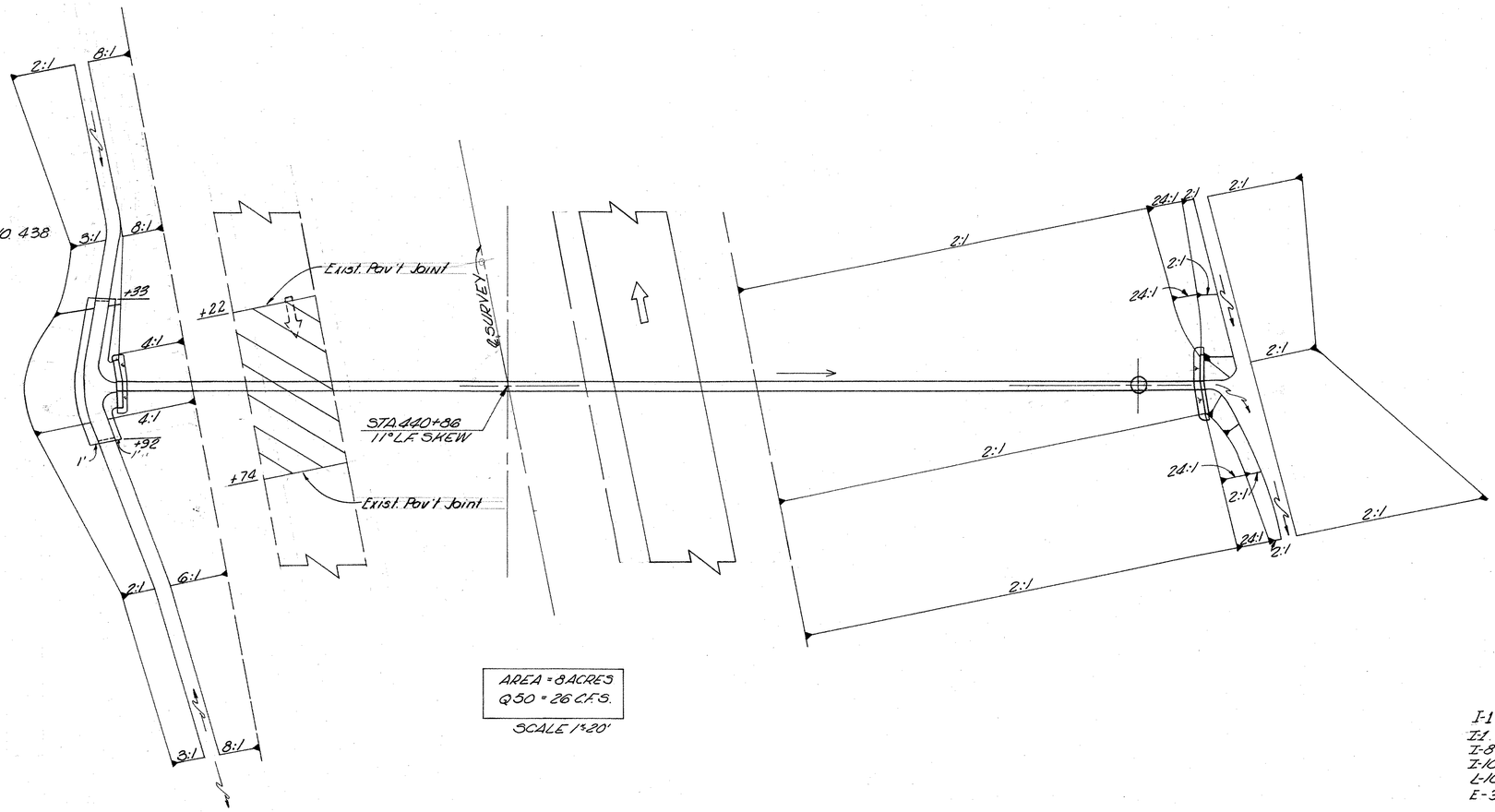
CULVERT ~ STA. 433+75

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

411
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

FOR STD. DETAILS OF CUTOFF WALLS FOR RIPRAP SEE SHEET NO. 438



AREA = 8 ACRES
Q50 = 26 C.F.S.

SCALE 1"=20'

CULVERT DATA

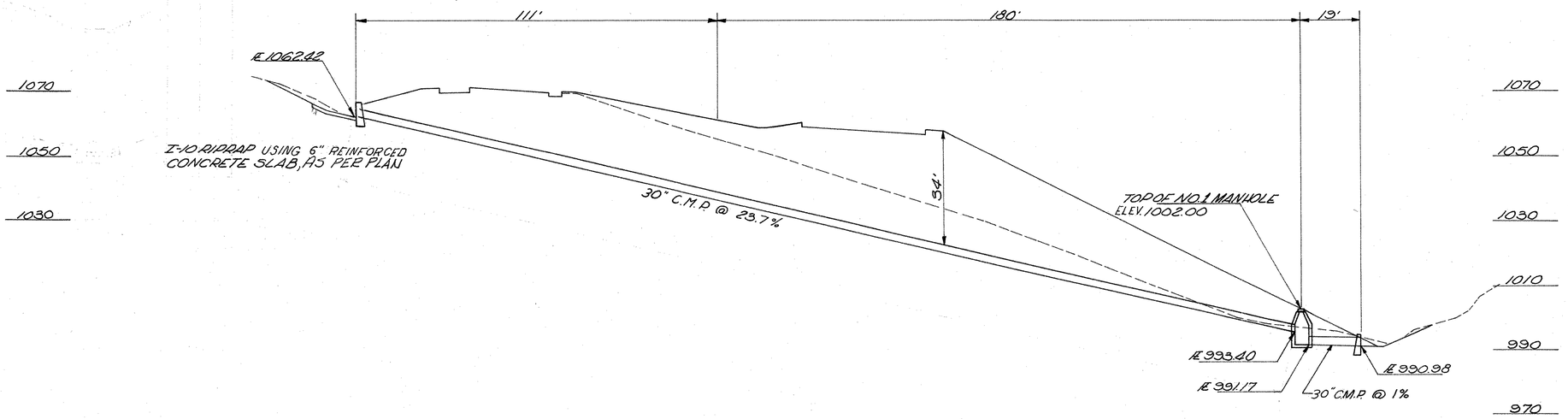
I-1 PIPE CLASS A-1 SEC. M-6.4(d)

SIZE: 298' X 30" CMP (12 GAGE)
19' – 30" CMP
TYPE: B-2 HEADWALL

ESTIMATED QUANTITES

I-1 PIPE 30" C.M.P. (12 GAGE)	298 L.F.
I-1 PIPE 30" C.M.P.	19 LIN. FT.
I-8 STD. NO. 1 MANHOLE	1 Ea.
I-10 RIPRAP USING 6" REINF. CONC. SLAB	51 SQ. YDS.
L-10 SODDING	6 SQ. YDS.
E-3 CHANNEL EXCAVATION	11 CU. YDS.

I-2 MASONRY FOR B-2 HEADWALLS
SEE SHEET NO. 431



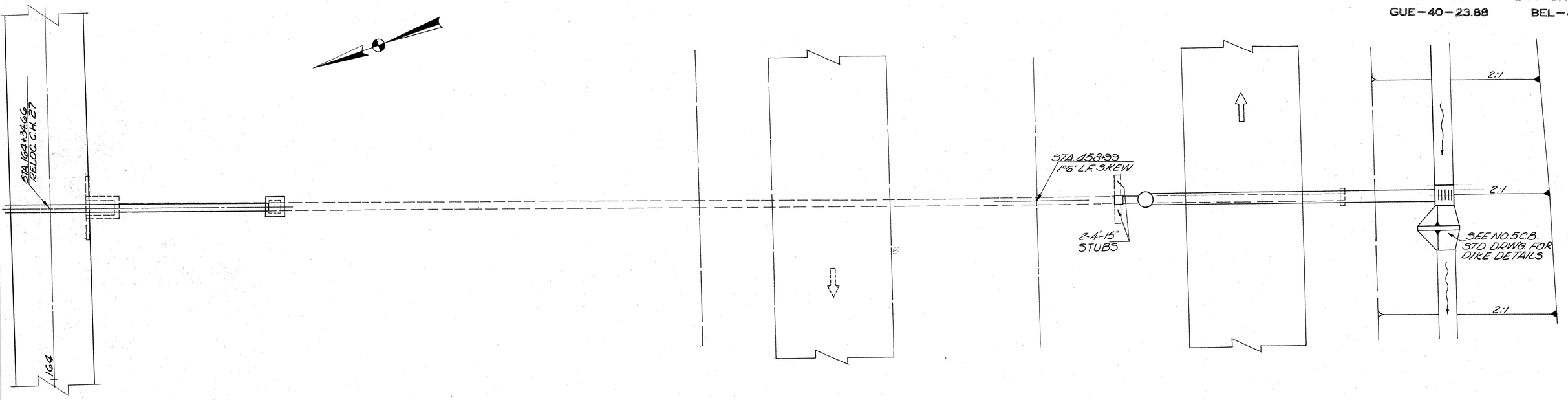
CULVERT – STA. 440+86

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

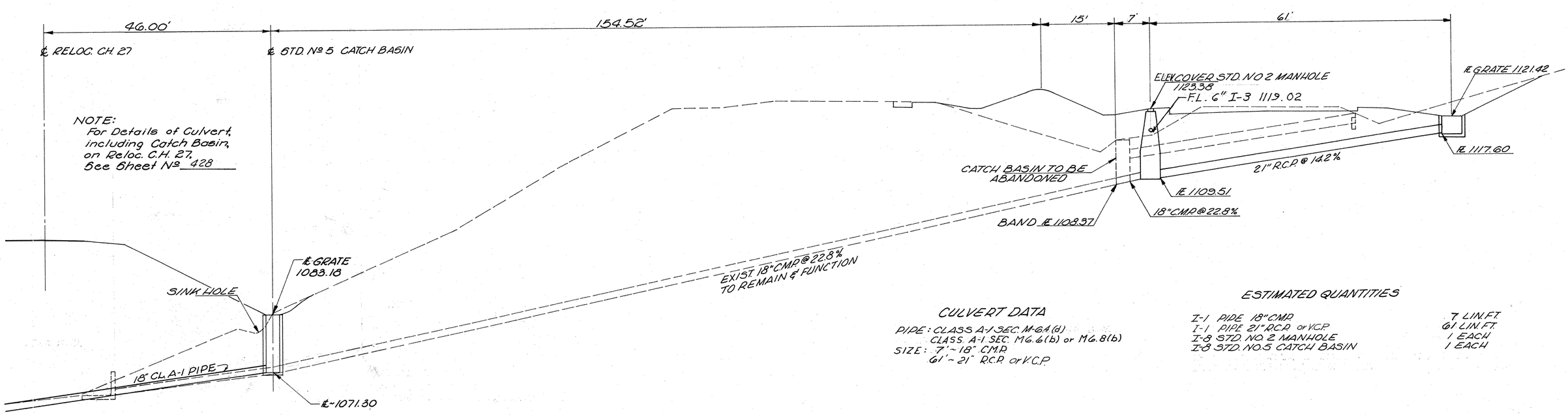
412
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00



AREA = 6 ACRES
Q50 = 22 C.F.S.
SCALE = 1"=10'



CULVERT DATA

PIPE: CLASS A-1 SEC. M-6.4 (d)
CLASS. A-1 SEC. M6.6 (b) or M6.8 (b)
SIZE: 7' ~ 18" C.M.P.
61' ~ 21" R.C.P. or V.C.P.

ESTIMATED QUANTITIES

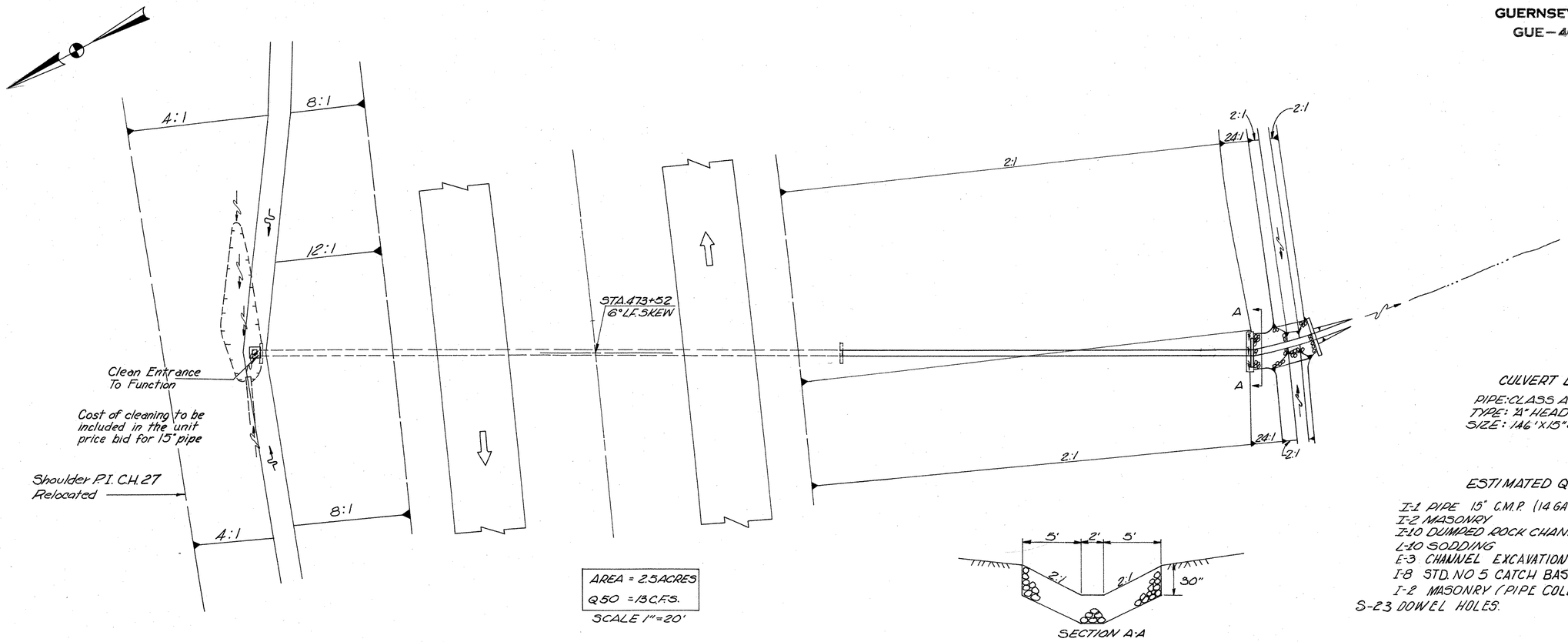
I-1 PIPE 18" CMP	7 LIN. FT.
I-1 PIPE 21" R.C.P. or V.C.P.	61 LIN. FT.
I-8 STD. NO. 2 MANHOLE	1 EACH
I-8 STD. NO. 5 CATCH BASIN	1 EACH

CULVERT ~ STA. 458+99

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

413
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

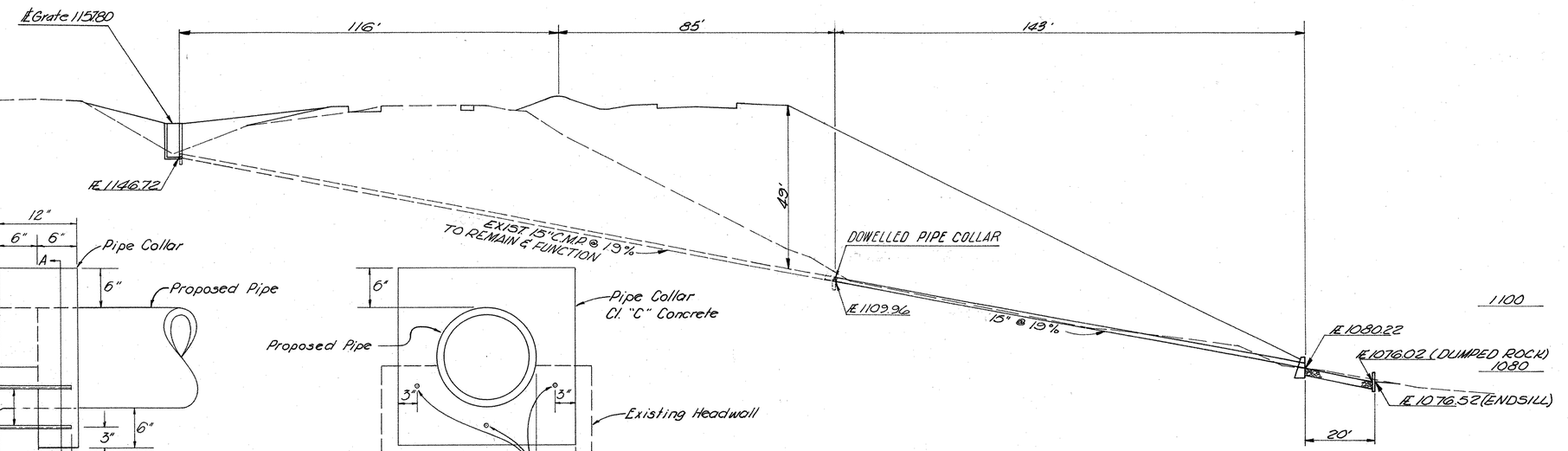


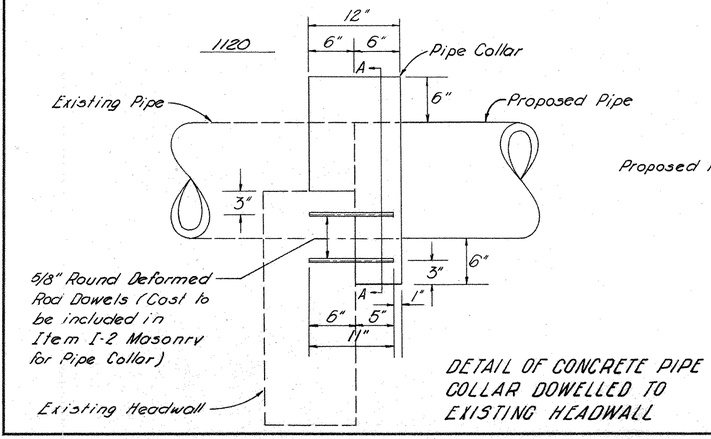
CULVERT DATA

PIPE: CLASS A-1 SEC. M-6.4(d) (14 GAGE)
TYPE: ½" HEADWALL
SIZE: 146' X 15" C.M.P.

ESTIMATED QUANTITIES

I-1 PIPE 15" C.M.P. (14 GAGE)	146 LIN.FT.
I-2 MASONRY	4.8 CU.YDS.
I-10 DUMPED ROCK CHANNEL PROTECTION	22 CU.YDS.
L-10 SODDING	3 SQ.YDS.
E-3 CHANNEL EXCAVATION	25 CU.YDS.
I-8 STD. NO 5 CATCH BASIN	1 EACH
I-2 MASONRY (PIPE COLLAR)	0.13 CU.YDS.
S-23 DOWEL HOLES.	3 EACH.





DETAIL OF CONCRETE PIPE COLLAR DOWELLED TO EXISTING HEADWALL

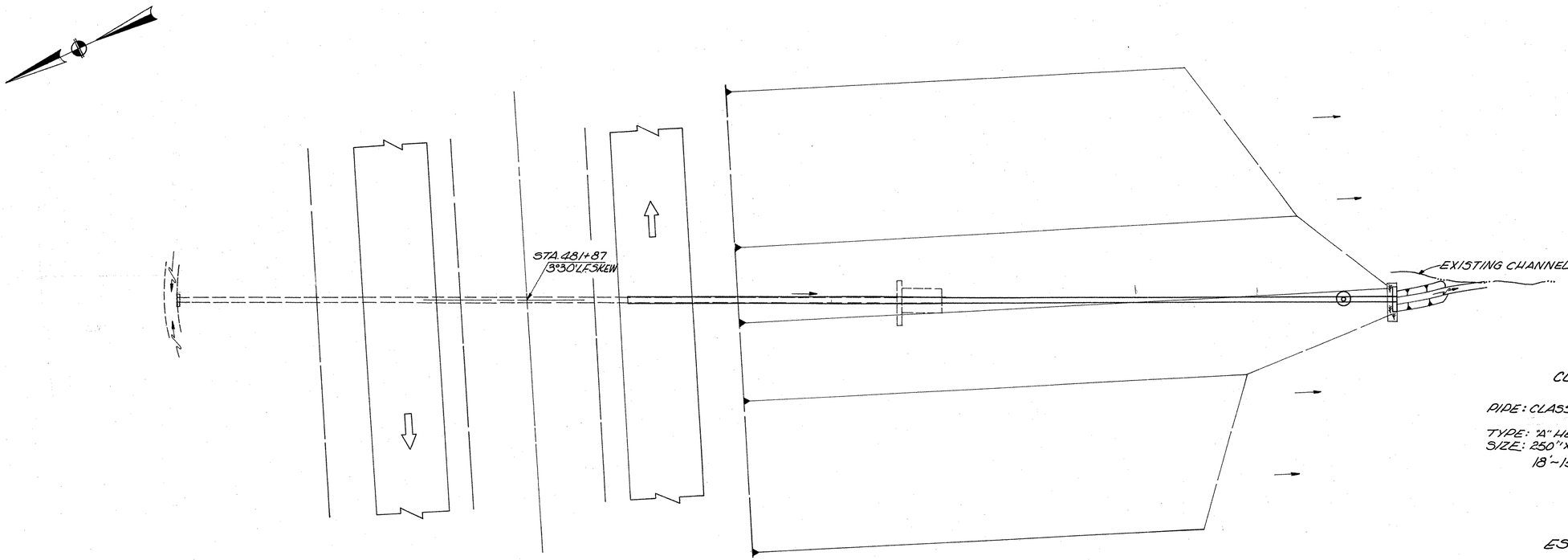
SECTION A-A.

CULVERT ~ STA. 473+52

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

414
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



CULVERT DATA

PIPE: CLASS A-1 SEC. M64.1(d)

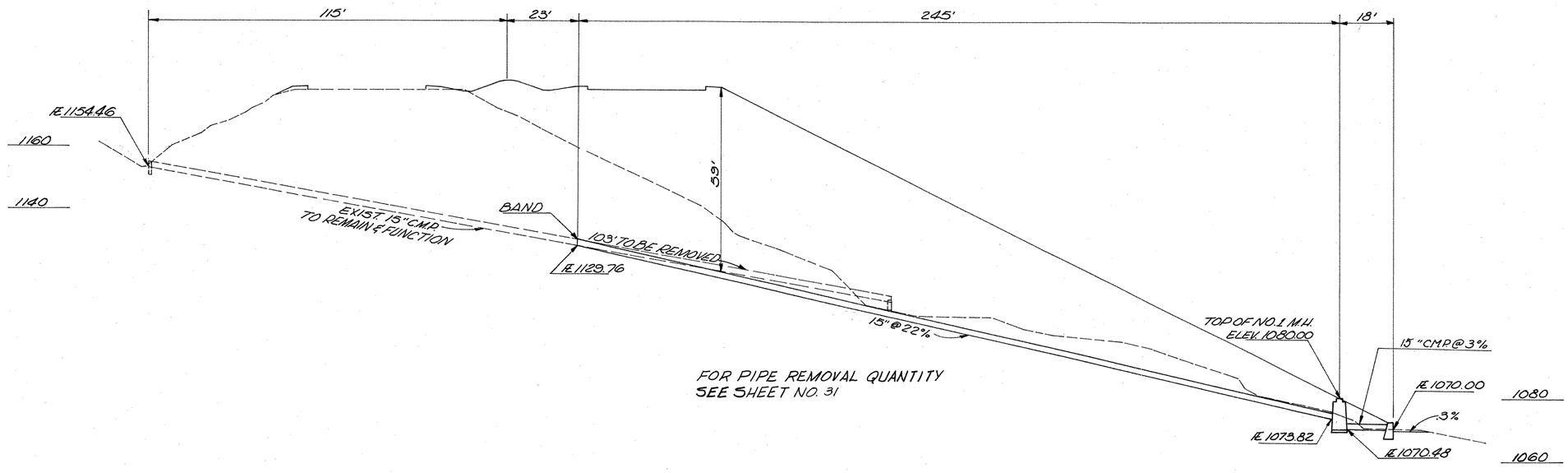
TYPE: "A" HEADWALL
SIZE: 250" X 15" CMP (14 Gage)
18'-15" CMP.

ESTIMATED QUANTITIES

I-1 PIPE 15" C.M.P.	18 LIN.FT.
I-1 PIPE 15" C.M.P. (14 GAGE)	250 LIN.FT.
I-2 MASONRY	3.3 CU.YDS.
I-8 STD. NO. 1 MANHOLE	1 EACH
L-10 SODDING	3 SQ.YDS.
E-3 CHANNEL EXCAVATION	3 CU.YDS.

AREA = 4.0 ACRE
Q50 = 20 C.F.S.

SCALE 1"=20'



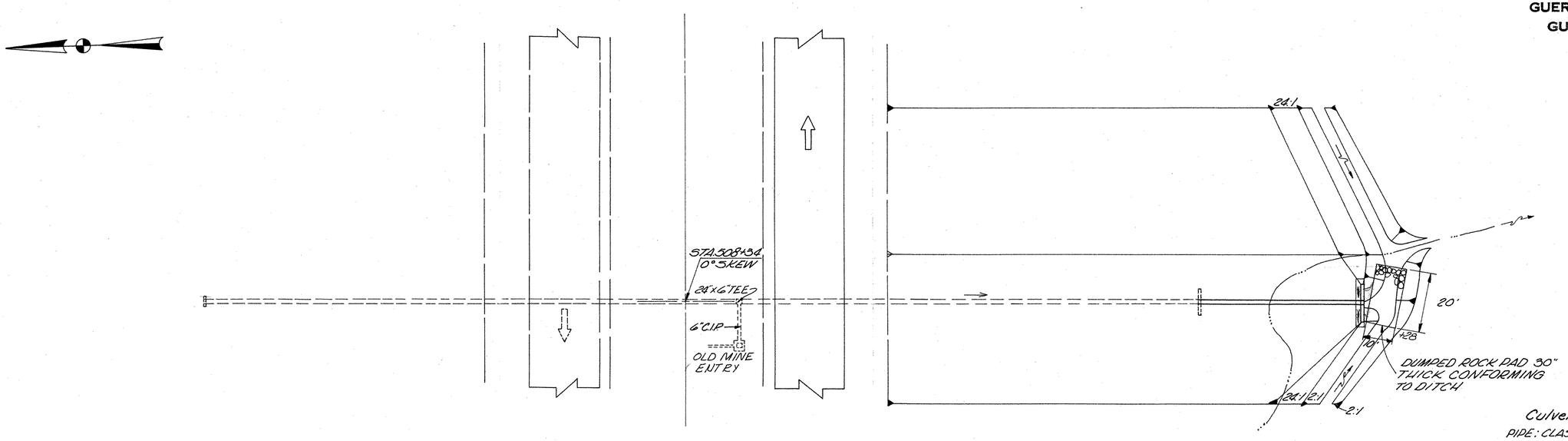
FOR PIPE REMOVAL QUANTITY
SEE SHEET NO. 31

CULVERT – STA. 481+87

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

415
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



AREA = 3.5 ACRES
Q50 = 15 C.F.S.

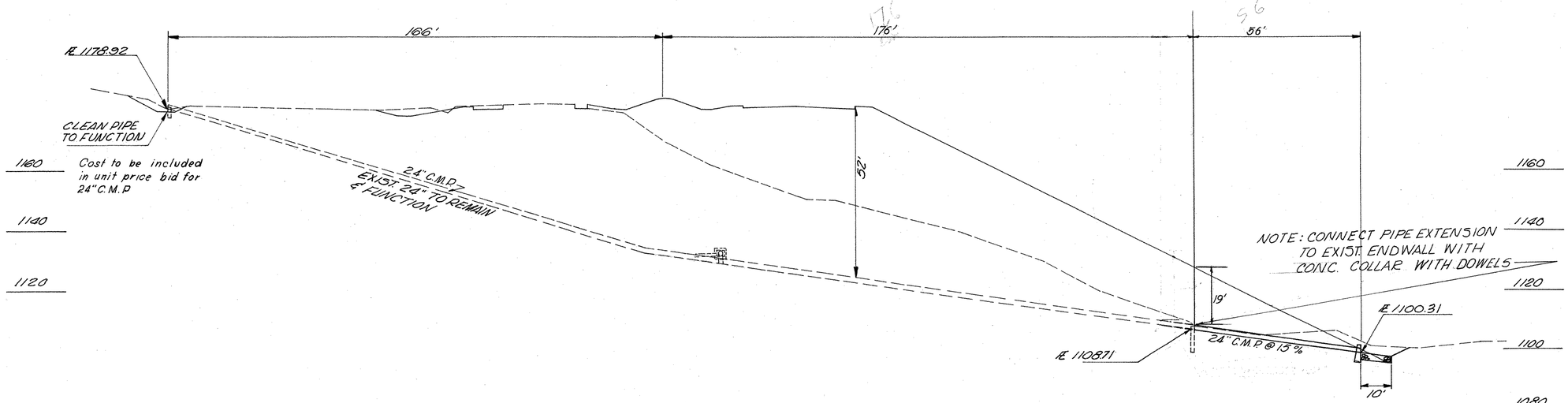
SCALE 1" = 20'

Culvert Data

PIPE: CLASS A-1 SEC. M-6.4(d)
SIZE: 56'X 24"
TYPE: "A" HEADWALL

Estimated Quantities

I-1 PIPE, 24"	56 LIN.FT.
I-2 MASONRY	5.4 CU.YDS.
I.10 DUMPED ROCK CHANNEL PROTECTION	19 CU.YDS.
L-10 SODDING	3 SQ.YDS.
E-3 CHANNEL EXCAVATION	83 CU.YDS.
I-2 MASONRY (PIPE COLLAR)	0.19 CU.YDS.
S-23 DOWEL HOLES	3 EACH



FOR DETAIL OF DOWELLED PIPE COLLAR SEE SHT. NO. 413

CULVERT – STA. 508+34

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

416
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

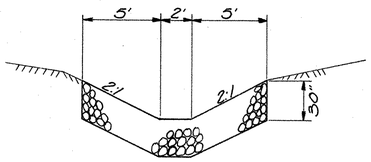
FOR DETAILS OF CUTOFF WALLS FOR RIPRAP SEE SHEET NO. 438



CULVERT DATA
PIPE : CLASS A-1 SEC. M-6.01(d) (12 GAGE)
SIZE : 92"x 24" CM.P.
TYPE : B_2 HEADWALLS

ESTIMATED QUANTITIES

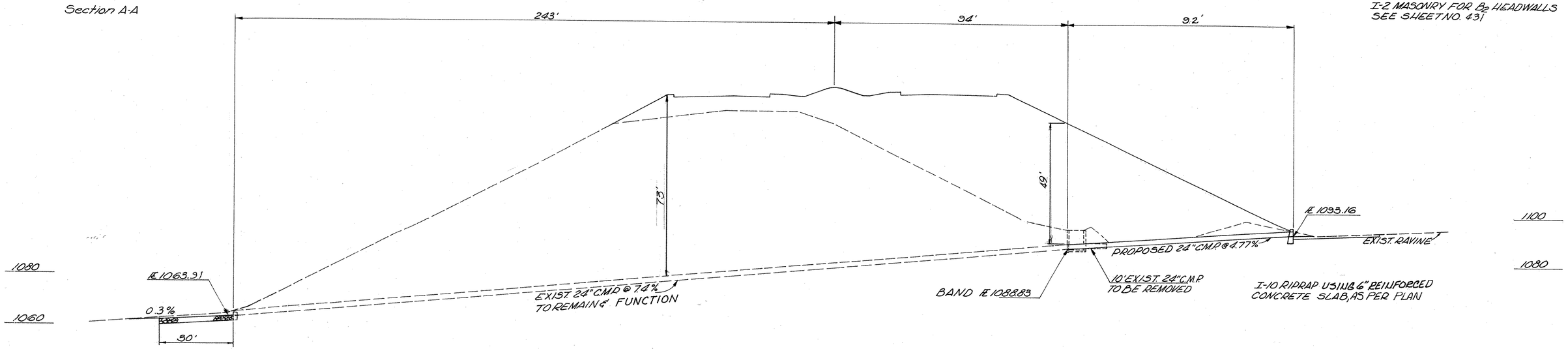
I-1	PIPE, 24" C.M.P. (12 GAGE)	92 LIN. FT.
I-10	DUMPED ROCK CHANNEL PROTECTION	33 CU. YDS.
I-10	PAVED RIPRAP ON 6" REINFORCED CONCRETE SLAB	57 SQ. YDS.
L-10	SODDING	6 SQ. YDS.
E-3	CHANNEL EXCAVATION	43 CU. YDS.



Section A-A

AREA = 16 ACRES
Q50 = 48 C.F.S.
SCALE 1" = 20'

I-2 MASONRY FOR B_2 HEADWALLS
SEE SHEET NO. 431

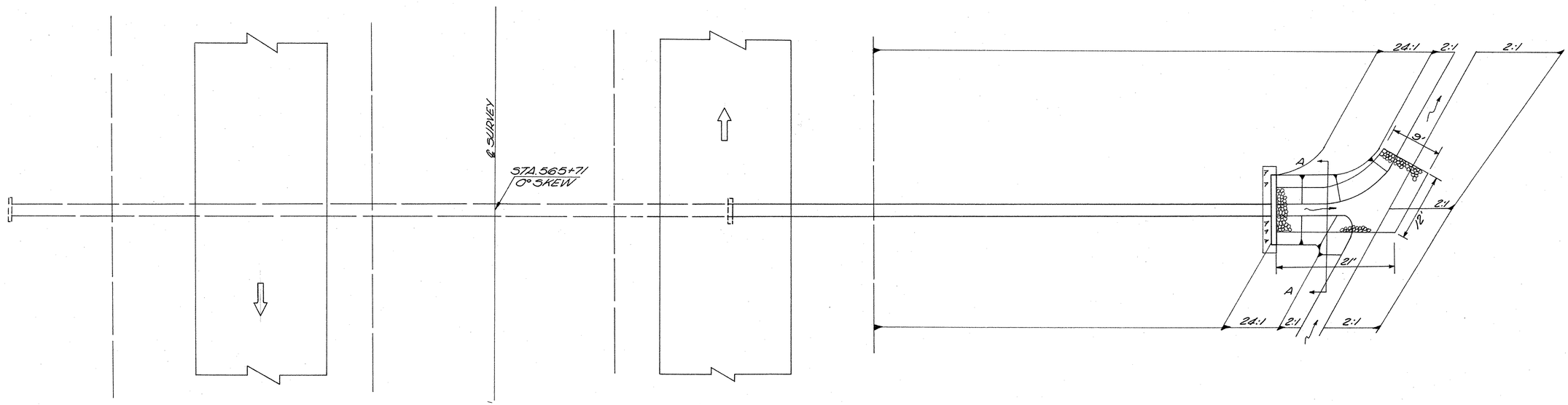


CULVERT ~ STA. 522+09

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

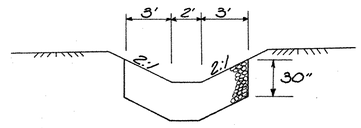
417
185

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

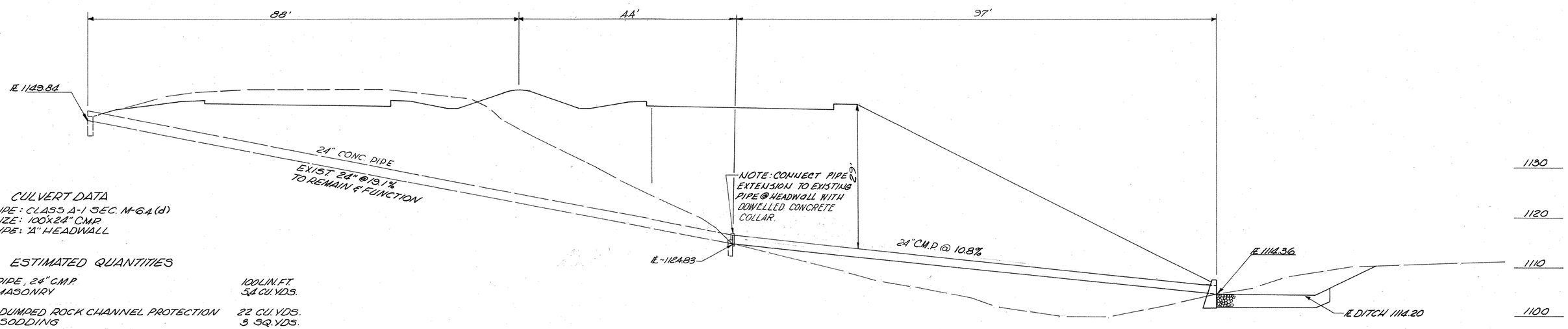


AREA = 4.5 ACRES
Q 50 = 19 C.F.S.

SCALE 1"=10'



SECTION A-A



CULVERT DATA
PIPE: CLASS A-1 SEC. M-6.4 (d)
SIZE: 100'x24" C.M.P.
TYPE: "A" HEADWALL

ESTIMATED QUANTITIES

I-1 PIPE, 24" C.M.P.	100 LIN. FT.
I-2 MASONRY	5.4 CU. YDS.
I-10 DUMPED ROCK CHANNEL PROTECTION	22 CU. YDS.
L-10 SODDING	3 SQ. YDS.
I-2 MASONRY (PIPE COLLAR)	0.19 CU. YDS
3-23 DOWEL HOLES	3 EACH.

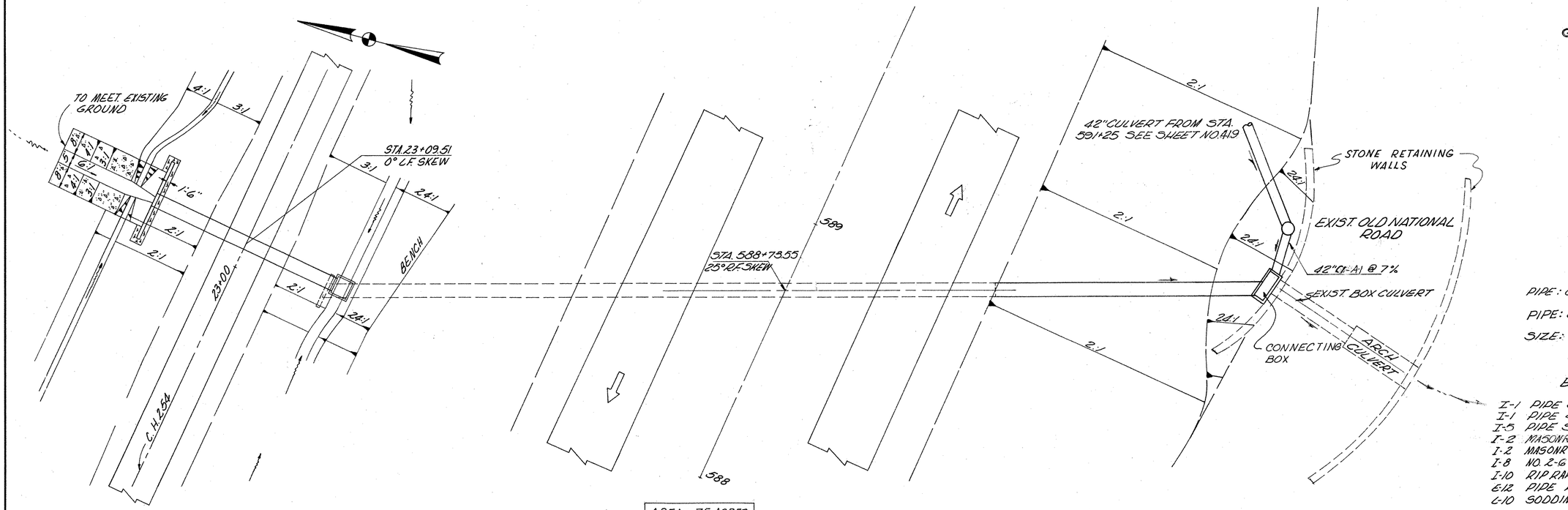
FOR DETAILS OF PIPE COLLAR
SEE SHEET NO 413

CULVERT – STA. 565+71

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

418
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



AREA = 75 ACRES
Q50 = 128 C.F.S.

SCALE 1"=20'

CULVERT DATA

PIPE: CLASS A-1 SEC. M-6.4(g) 8 GAGE BOTTOM, ROW. SEC. 12
10 GAGE TOP, ROW SEC. 12.

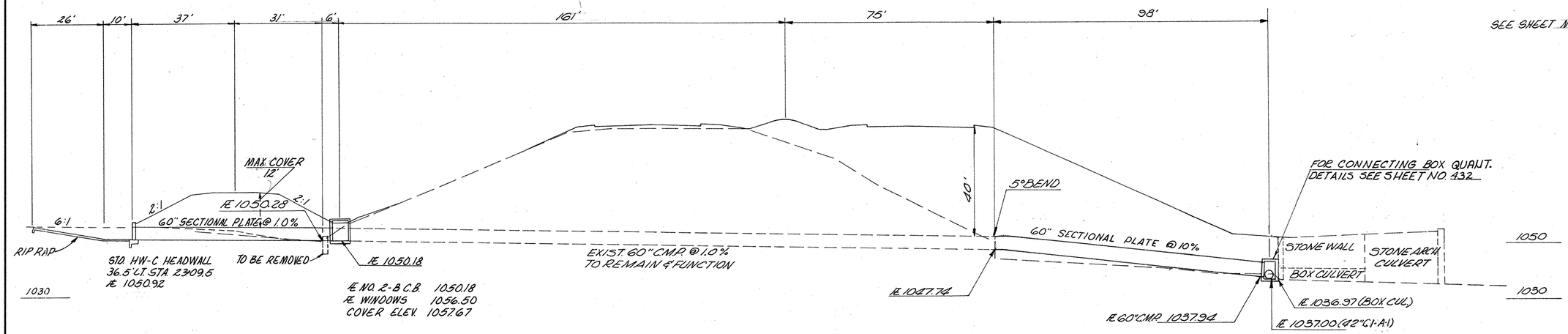
PIPE: CLASS A-1 SEC. M-6.4(d).

SIZE: 172'-0" X 60" SEC. 12
18' X 42" C.M.P.

ESTIMATED QUANTITIES

I-1	PIPE 60" SEC. 12	172 LIN. FT.
I-1	PIPE 42" CL. A-1	18 LIN. FT.
I-5	PIPE SPECIAL (5° BEND) 60"	1 EACH
I-2	MASONRY FOR JUNCTION BOX	6.0 CU. YDS.
I-2	MASONRY FOR HEADWALL	22 CU. YDS.
I-8	NO. 2-6 CATCH BASIN (MOD)	1 EACH
I-10	R.I.P. RAP 6" REINFORCED CONCRETE SLAB	86 SQ. YDS.
E-12	PIPE REMOVAL (OVER 15")	6 LIN. FT.
L-10	SODDING	7 SQ. YDS.

SEE SHEET NO. 438 FOR NO. 2-6 C.B. MOD.



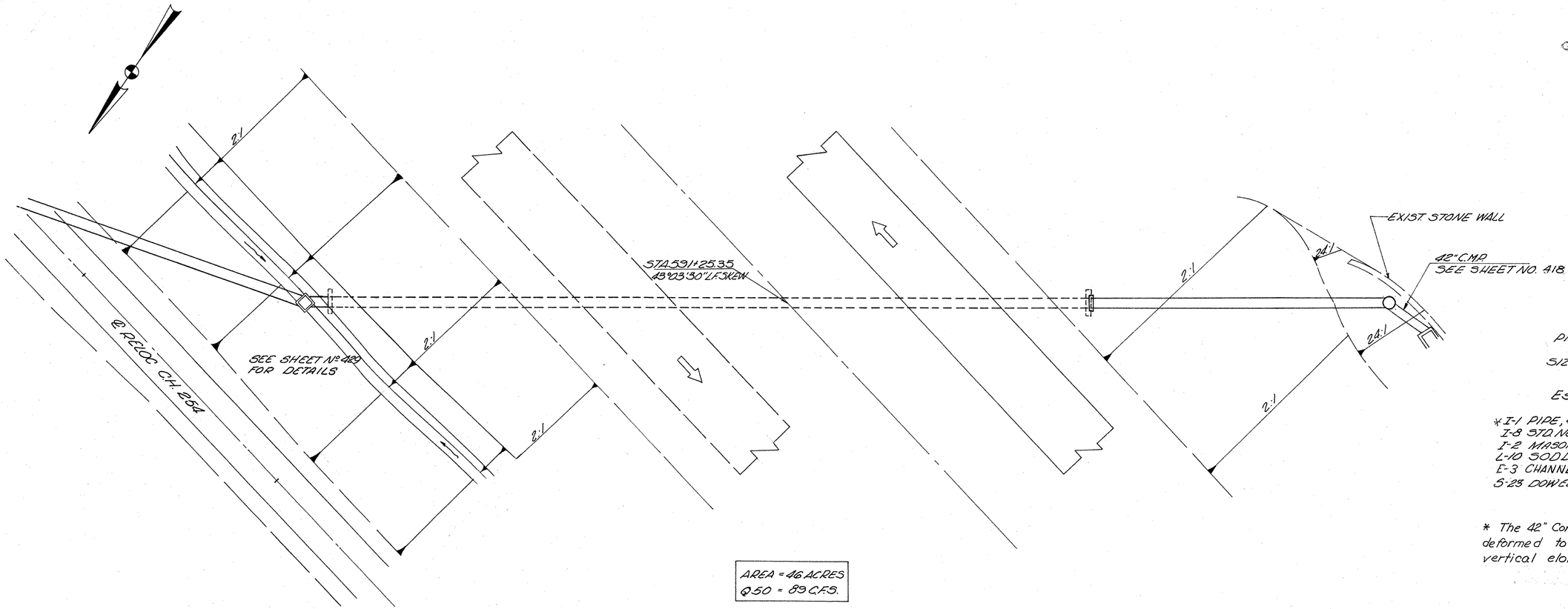
CULVERT ~ 588+74

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

419
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE–40–23.88 BEL–40–0.00



AREA = 46 ACRES
Q 50 = 89 C.F.S.

SCALE 1"= 20'

Culvert Data

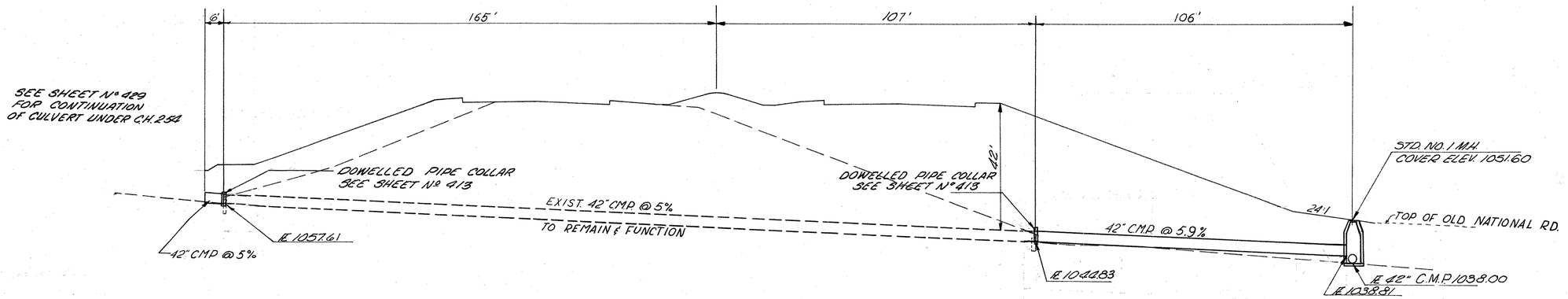
PIPE : CLASS A-1 SEC. M-6A(d) 8 GAGE *

SIZE : 112' X 42" C.M.P.

Estimated Quantities

* I-1 PIPE, 42" C.M.P. Shop elongated As per plan.	112 L.F.
I-8 STD. NO. I MANHOLE	1 EA.
I-2 MASONRY (PIPE COLLARS)	0.70 CU. YDS.
L-10 SODDING	4 SQ. YDS.
E-3 CHANNEL EXCAVATION	16 CU. YDS.
S-23 DOWEL HOLES	6 EACH

* The 42" Corrugated metal pipe shall be shop deformed to produce and maintain a 5% vertical elongation.

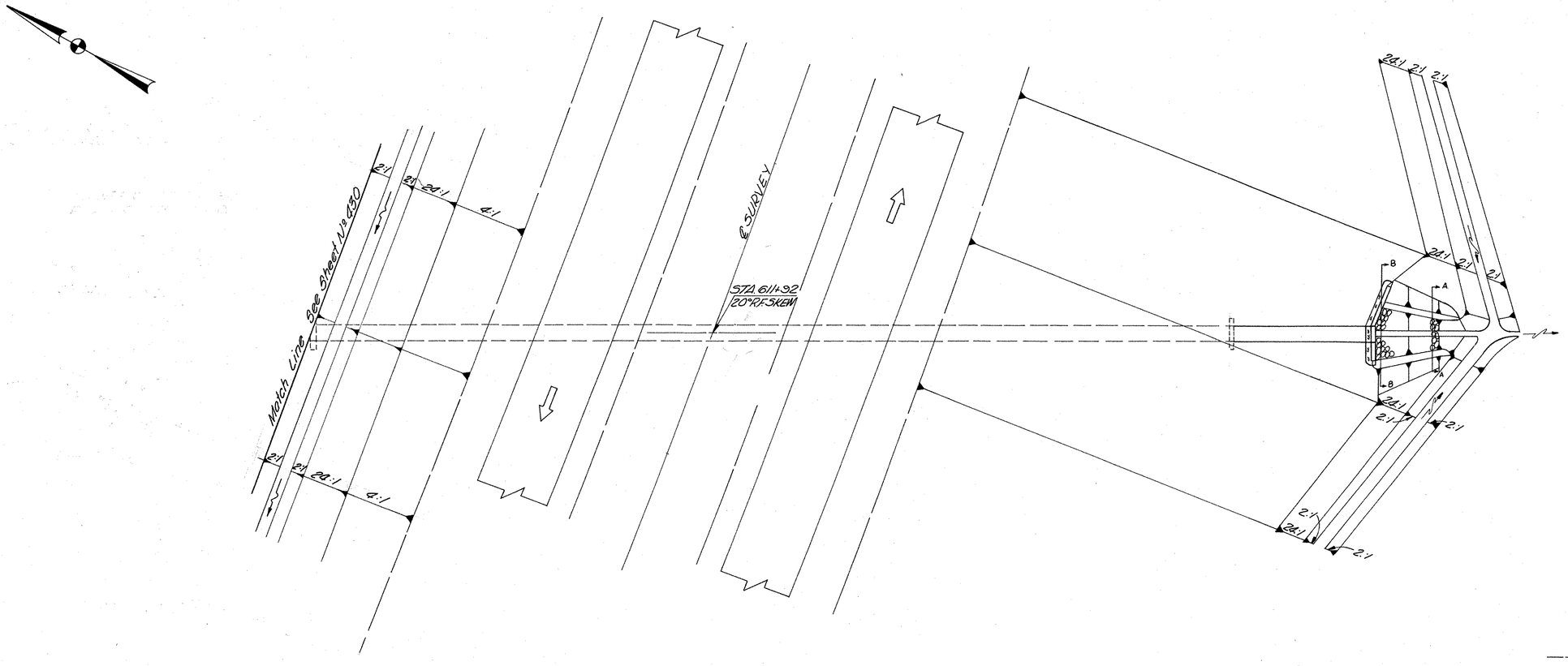


CULVERT ~ STA. 591+25

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

420
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

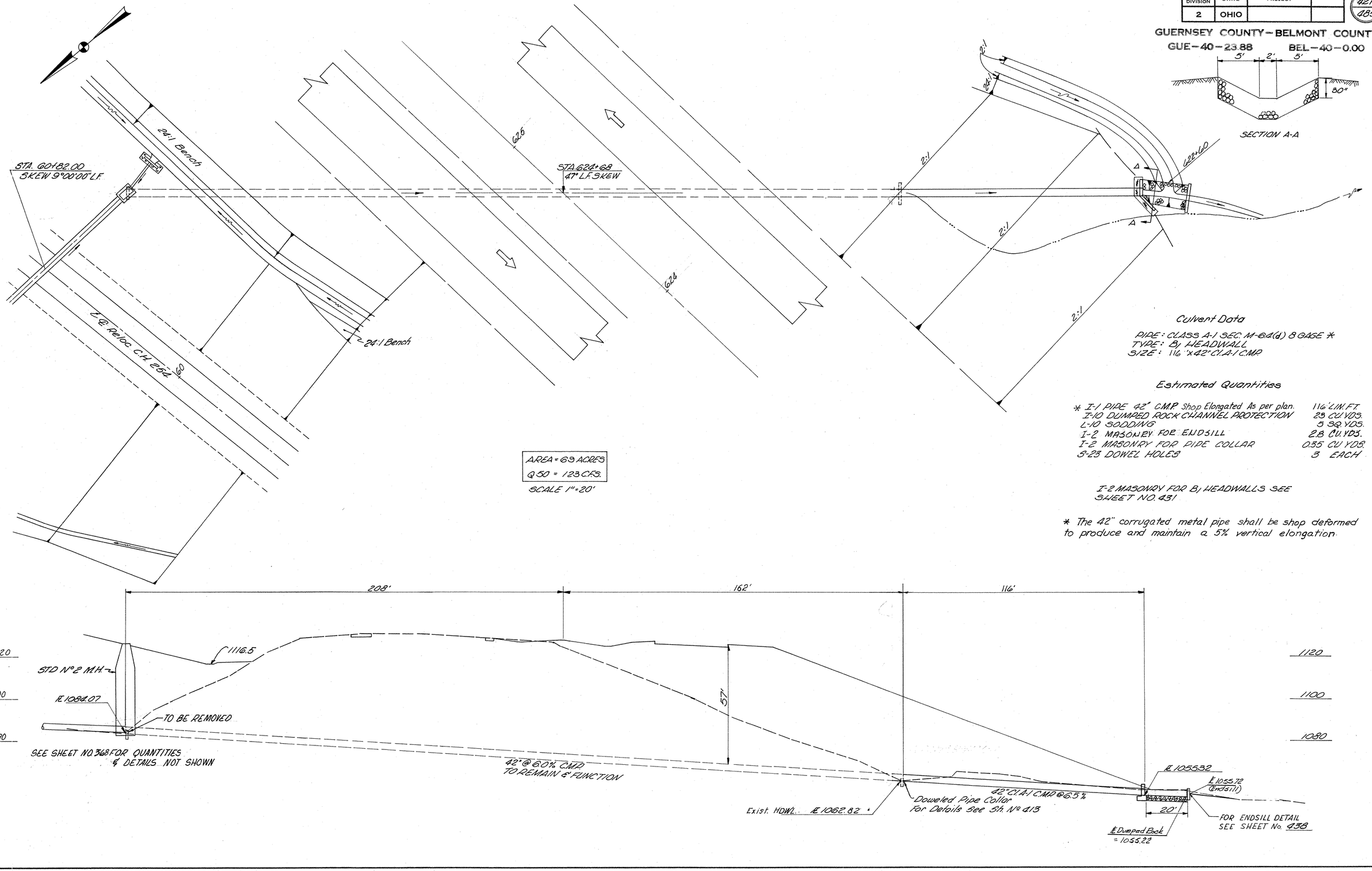

Match Line See Sheet N° 430
2:1
2:1
2:1
4:1
℄ SURVEY
STA 611+92
20° R.F. SKEW
B
A
2:1
2:1
2:1

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

421
485

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00



AREA = 6.9 ACRES
Q 50 = 12.3 C.F.S.
SCALE 1" = 20'

Culvert Data

PIPE: CLASS A-1 SEC. M-6.4(d) 8 GAGE *
TYPE: B, HEADWALL
SIZE: 116' x 42" Cl. A-1 C.M.P.

Estimated Quantities

* I-1 PIPE 42" C.M.P. Shop Elongated As per plan.	116' LIN. FT.
I-10 DUMPED ROCK CHANNEL PROTECTION	25 CU. YDS.
L-10 SODDING	5 SQ. YDS.
I-2 MASONRY FOR ENDSILL	2.8 CU. YDS.
I-2 MASONRY FOR PIPE COLLAR	0.35 CU. YDS.
S-23 DOWEL HOLES	3 EACH

I-2 MASONRY FOR B, HEADWALLS SEE SHEET NO. 431

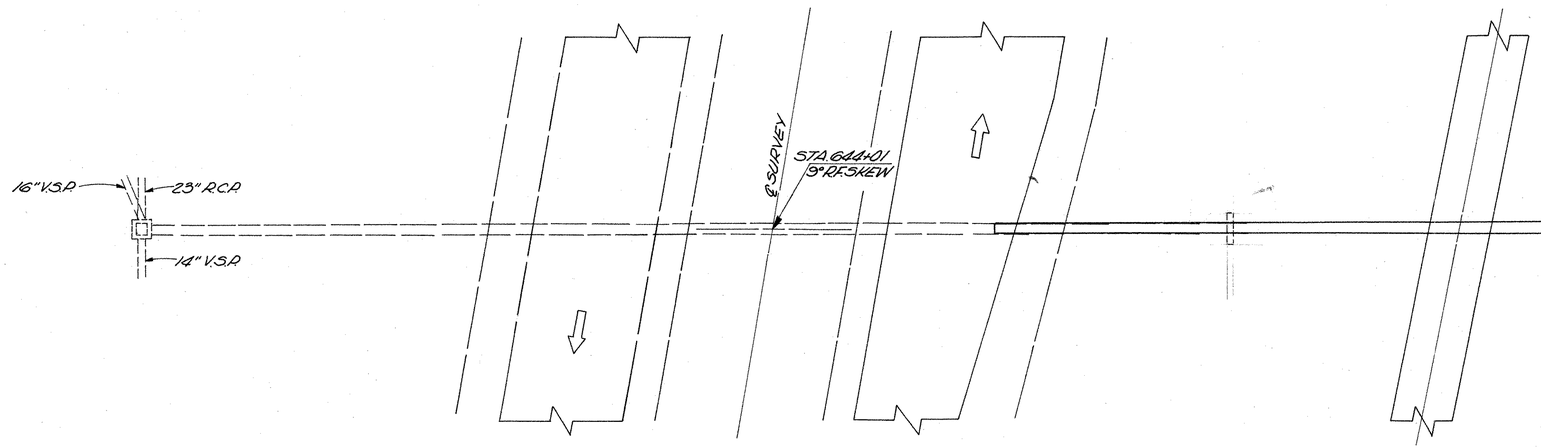
* The 42" corrugated metal pipe shall be shop deformed to produce and maintain a 5% vertical elongation.

CULVERT – STA. 624+68

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

422
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

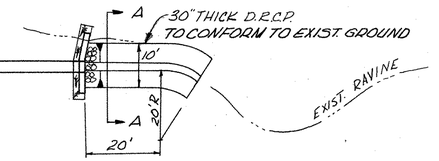


AREA = 9 ACRES
Q 50 = 34 C.F.S.

SCALE 1" = 20'

CULVERT DATA

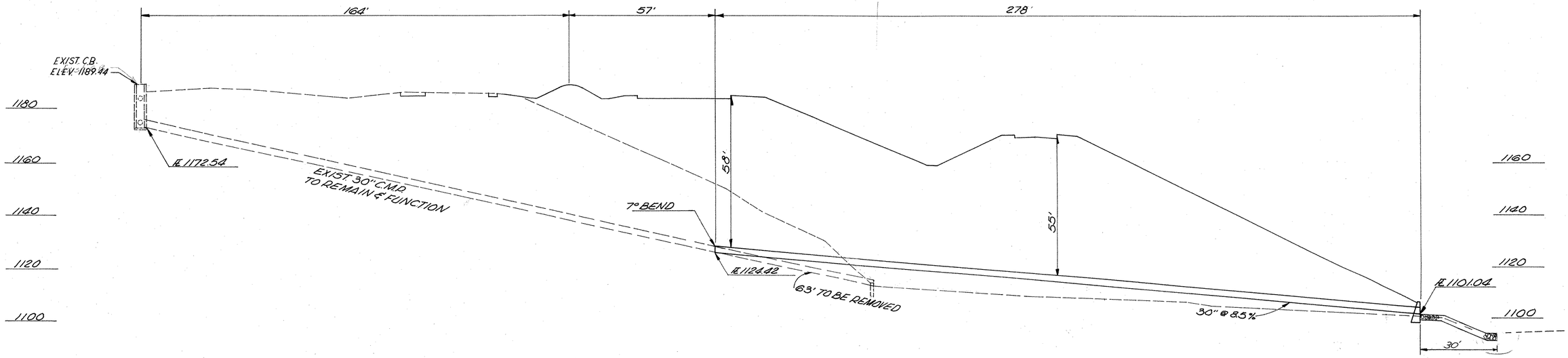
PIPE: CLASS A-1 SEC. M-6.4(D) (10 GAGE)
TYPE: B2 HEADWALL
SIZE: 278' x 30" C.M.P.



ESTIMATED QUANTITIES

I-1 PIPE, 30" C.M.P.	278 L.IN.FT.
I-10 DUMPED ROCK CHANNEL PROTECTION	29 CU. YDS.
L-10 SODDING	4 SQ. YDS.
I-5 PIPE SPECIAL	1 EA.

I-2 MASONRY FOR TYPE B2 HEADWALLS SEE SHEET NO. 431



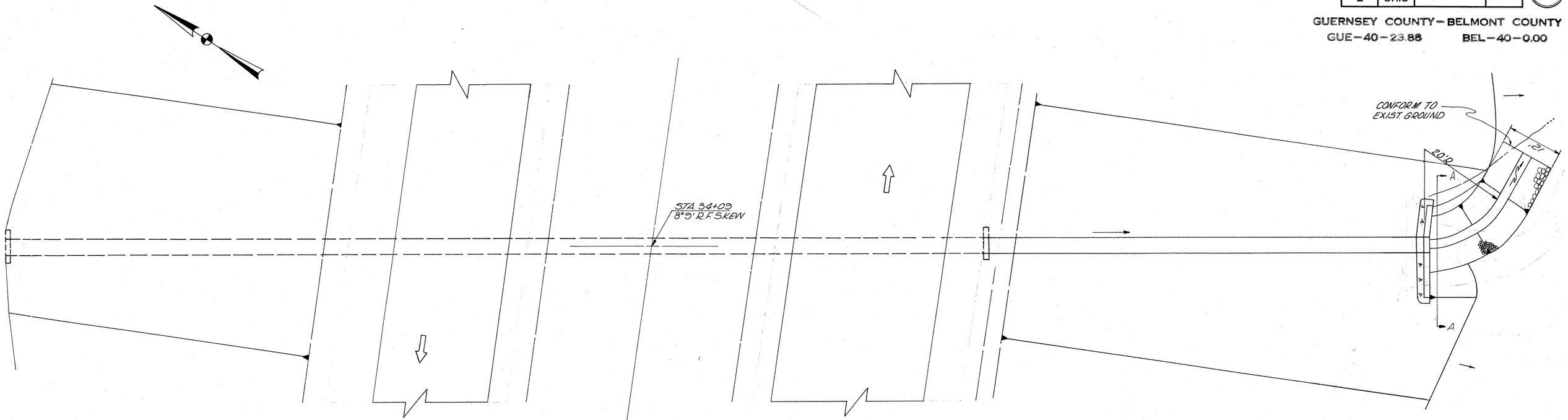
CULVERT ~ STA. 644+01

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

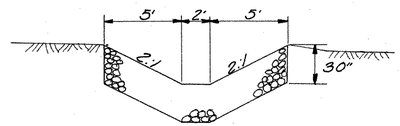
423
485

GUERNSEY COUNTY – BELMONT COUNTY

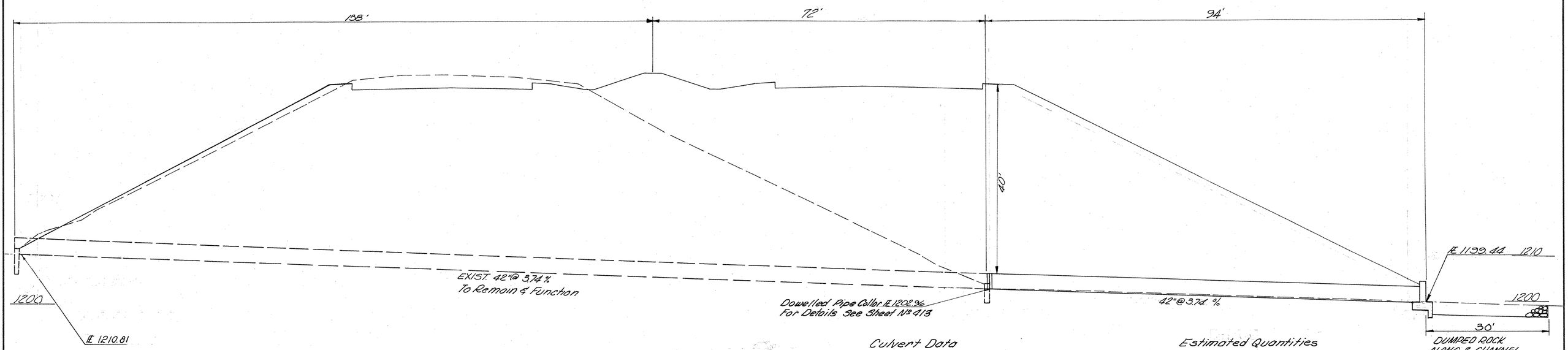
GUE–40–23.88 BEL–40–0.00



AREA = 23 ACRES
Q50 = 59 CFS.
SCALE 1"=10'



SECTION A-A



Culvert Data

PIPE: CLASS A-1 SEC. M-6.01(1) (8 GAGE)*
SIZE: 94"x42" CMP
TYPE: B1 HEADWALLS

* The 42" Corrugated metal pipe shall be shop deformed to produce and maintain a 5% Vertical Elongation.

Estimated Quantities

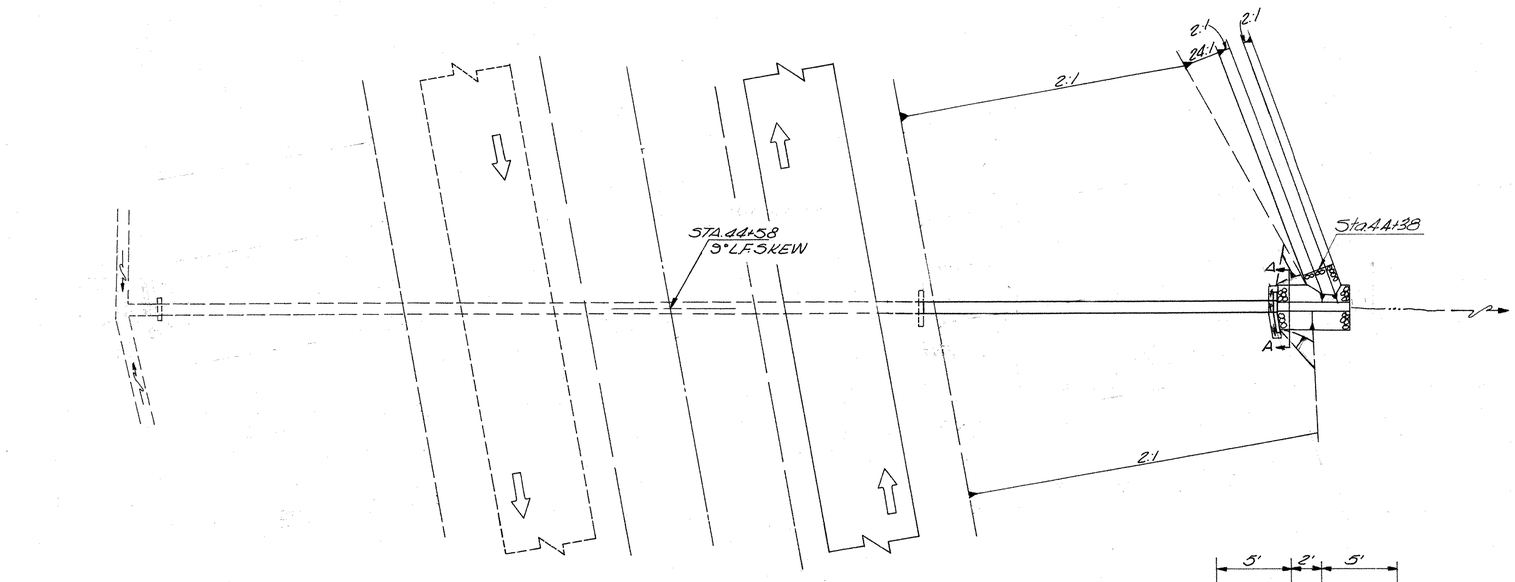
* I-1 PIPE 42" C.M.P. Shop Elongated As per plan.	94 L.F.
I-10 DUMPED ROCK CHANNEL PROTECTION	33 CU.YD.
L-10 SODDING	8 SQ.YD.
I-2 MASONRY (PIPE COLLAR)	0.35 CU. YD.
3-23 DOWEL HOLES	3 EA.
I-2 MASONRY FOR B1 HEADWALLS	
SEE SHEET NO. 431	

CULVERT STA. 34+09

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

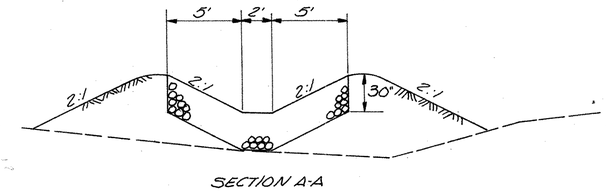
424
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



AREA = 13 ACRES
Q50 = 41 C.F.S.

SCALE 1"=20'



SECTION A-A

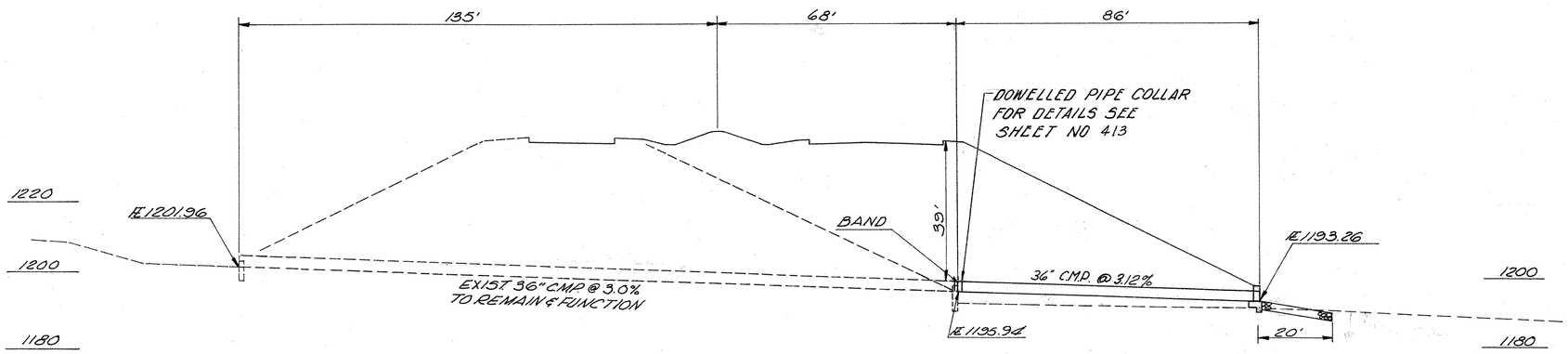
CULVERT DATA

PIPE : I-1 CL. A-1 SEC. M-6.4(d)(10 GAGE)
TYPE B, HEADWALL
SIZE : 86"x36" CM.P.

ESTIMATED QUANTITIES

I-1 PIPE 36" SEC. M-6.4(d) 10 GAGE	86 LIN.FT.
I-10 DUMPED ROCK CH. PROT.	35 CU. YDS.
L-10 SODDING	3 SQ.YDS.
I-2 MASONRY (PIPE COLLAR)	0.29 CU. YDS
S-23 DOWEL HOLES	3 EACH.

I-2 MASONRY FOR B, HEADWALLS
SEE SHEET NO. 431

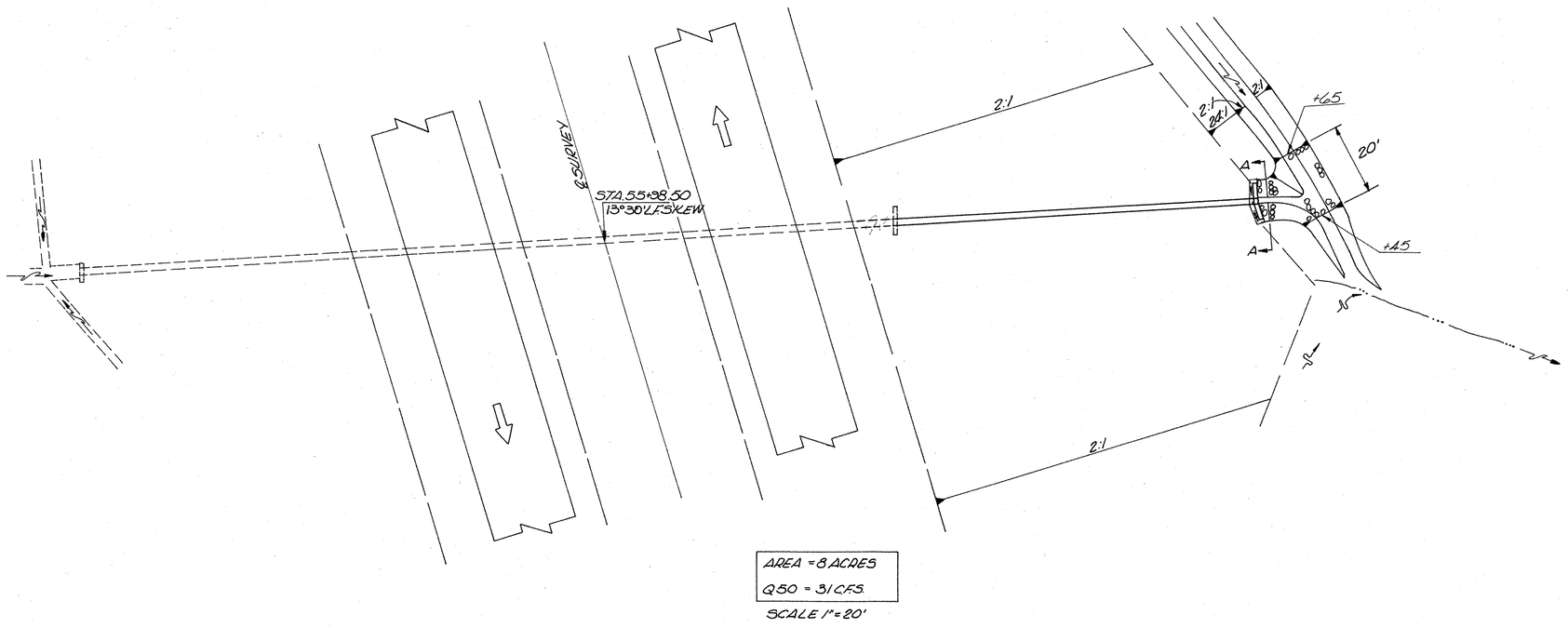


CULVERT ~ STA. 44+58

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

425
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



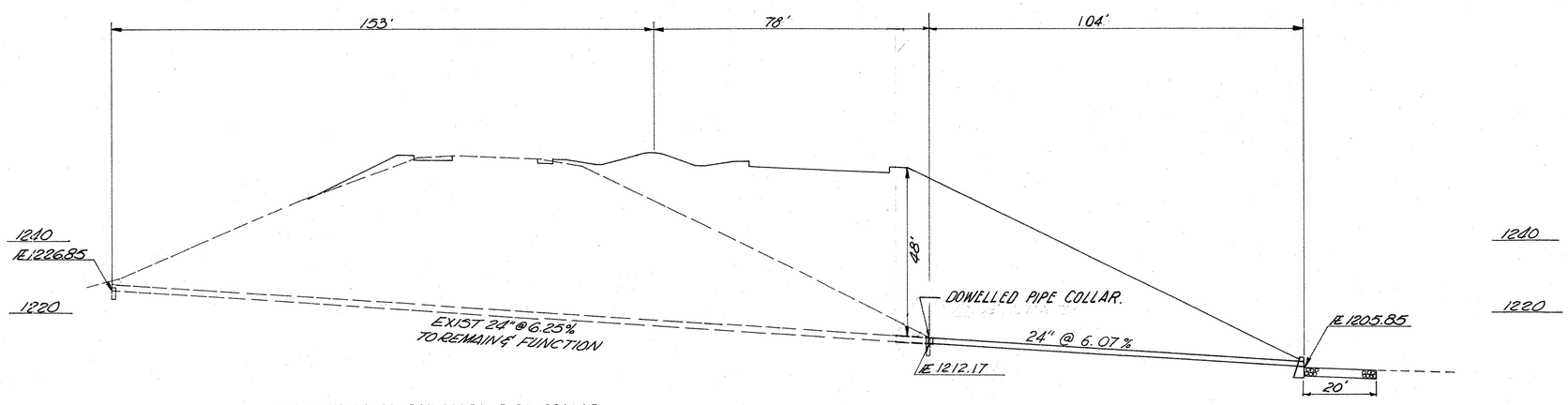
CULVERT DATA

I-1 PIPE: CLASS A-1 SEC. M-6.4(d) (12 GAGE)
TYPE: B_2 HEADWALL
SIZE: 106' X 24" C.M.P.

ESTIMATED QUANTITIES

I-1 PIPE 24" C.M.P.	106' LIN. FT.
I-10 DUMPED ROCK CHANNEL PROTECTION	32 CU. YDS.
L-10 SODDING	4 SQ. YDS.
I-2 MASONRY (PIPE COLLAR)	0.19 CU. YDS
S-23 DOWEL HOLES	3 EACH.

I-2 MASONRY FOR TYPE B_2 HEADWALL
SEE SHEET NO. 431



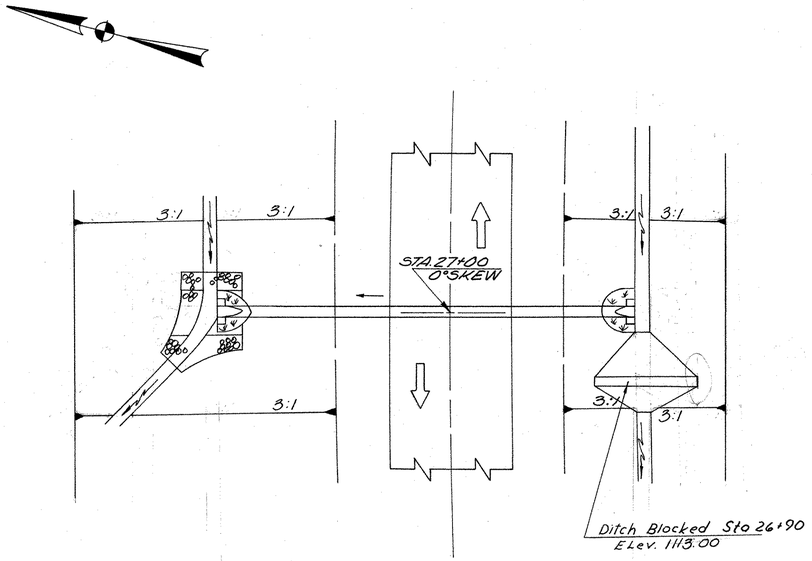
FOR DETAILS OF DOWELLED PIPE COLLAR
SEE SHEET NO. 413

CULVERT – STA. 55+98.50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

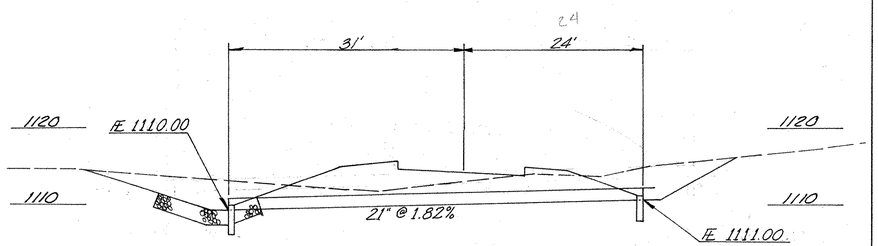
426
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.38 BEL–40–0.00



AREA = 5.4 ACRES
Q.10 = 15 C.F.S.

SCALE 1" = 10'



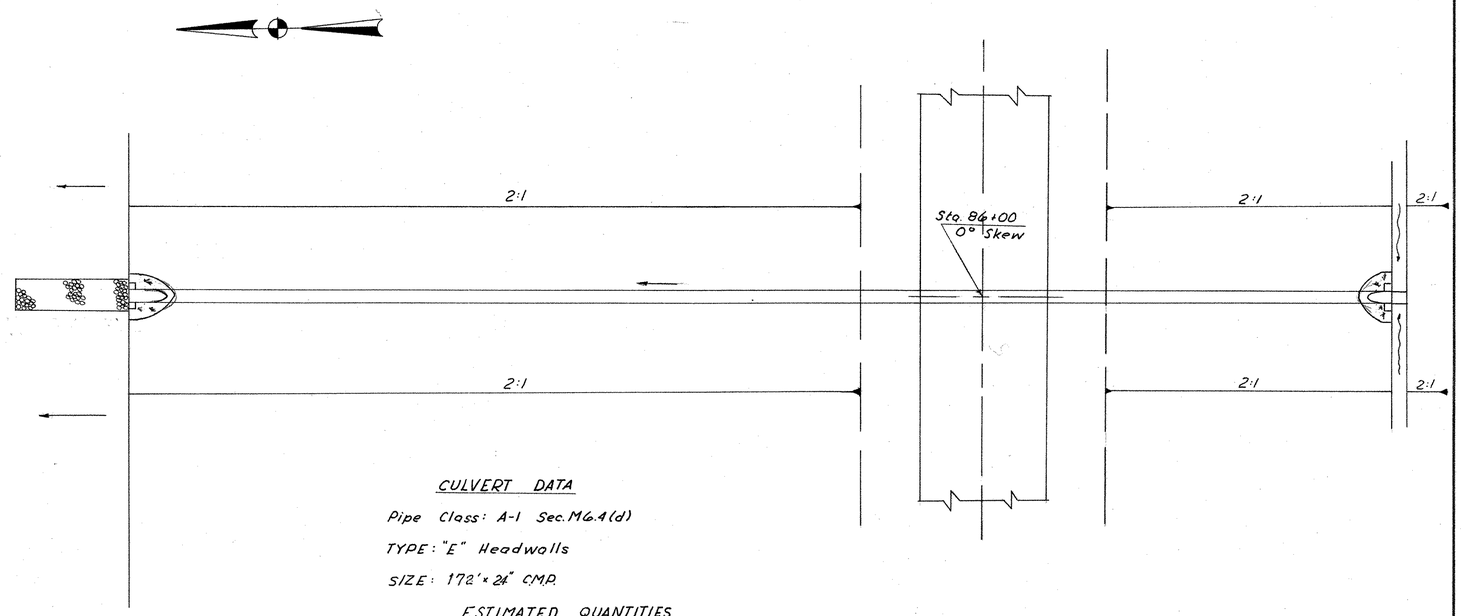
Culvert Data

PIPE : CLASS A-1 SEC. M-6.6(a)
OR SEC. M-6.8(b)
TYPE : "E" HEADWALLS
SIZE : 55'x21"

Estimated Quantities

I-1 PIPE, 21"	55 LIN.FT.
I-2 MASONRY	0.72 CU.YDS.
I-10 DUMPED ROCK CHANNEL PROTECTION	8 CU.YDS.
L-10 SODDING	2 SQ. YDS.

CO. HWY. 202 RELOCATION
CULVERT – STA. 27+00



CULVERT DATA

Pipe Class: A-1 Sec. M6.4(d)

TYPE: "E" Headwalls

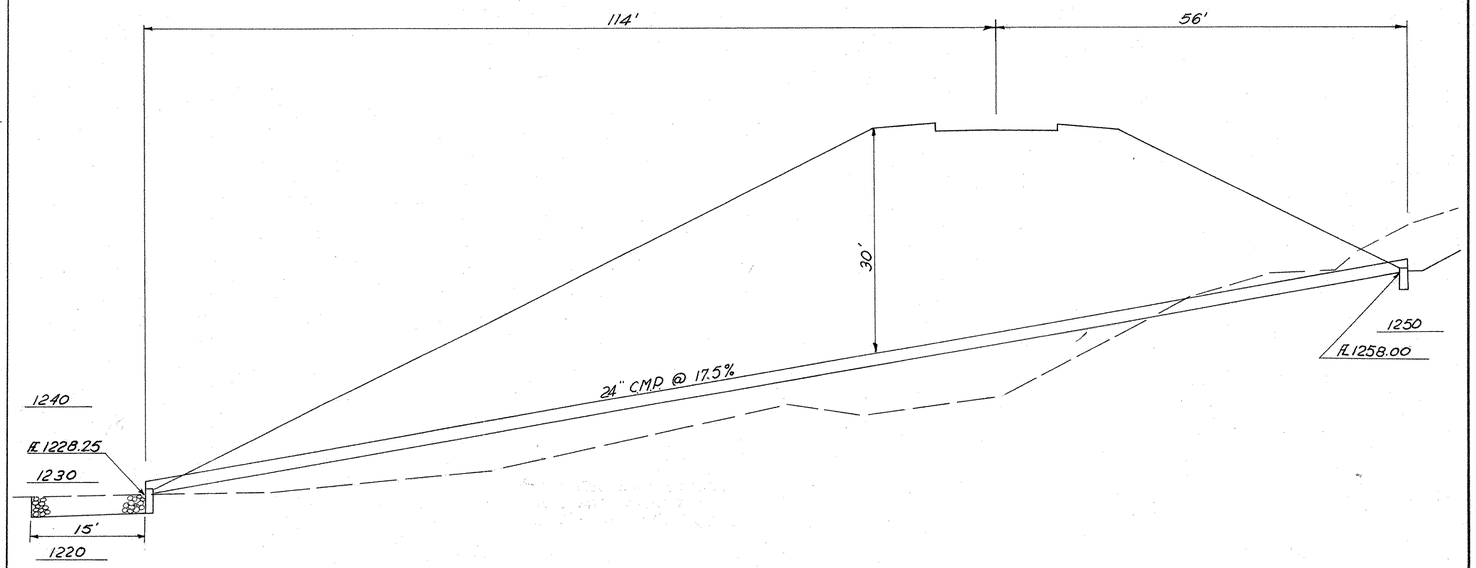
SIZE: 172'x 24" C.M.P.

ESTIMATED QUANTITIES

I-1 Pipe, 24" C.M.P.	172 L.F.
I-2 Masonry	0.82 Cu. Yds.
I-10 Dumped Rock Ch. Prot.	6 Cu. Yds.
L-10 Sodding	2 Sq. Yds.
E-3 Channel Excavation	7 Cu. Yds.

AREA = 5 ACRES
Q 10 = 9 C.F.S.

SCALE: 1"=10'



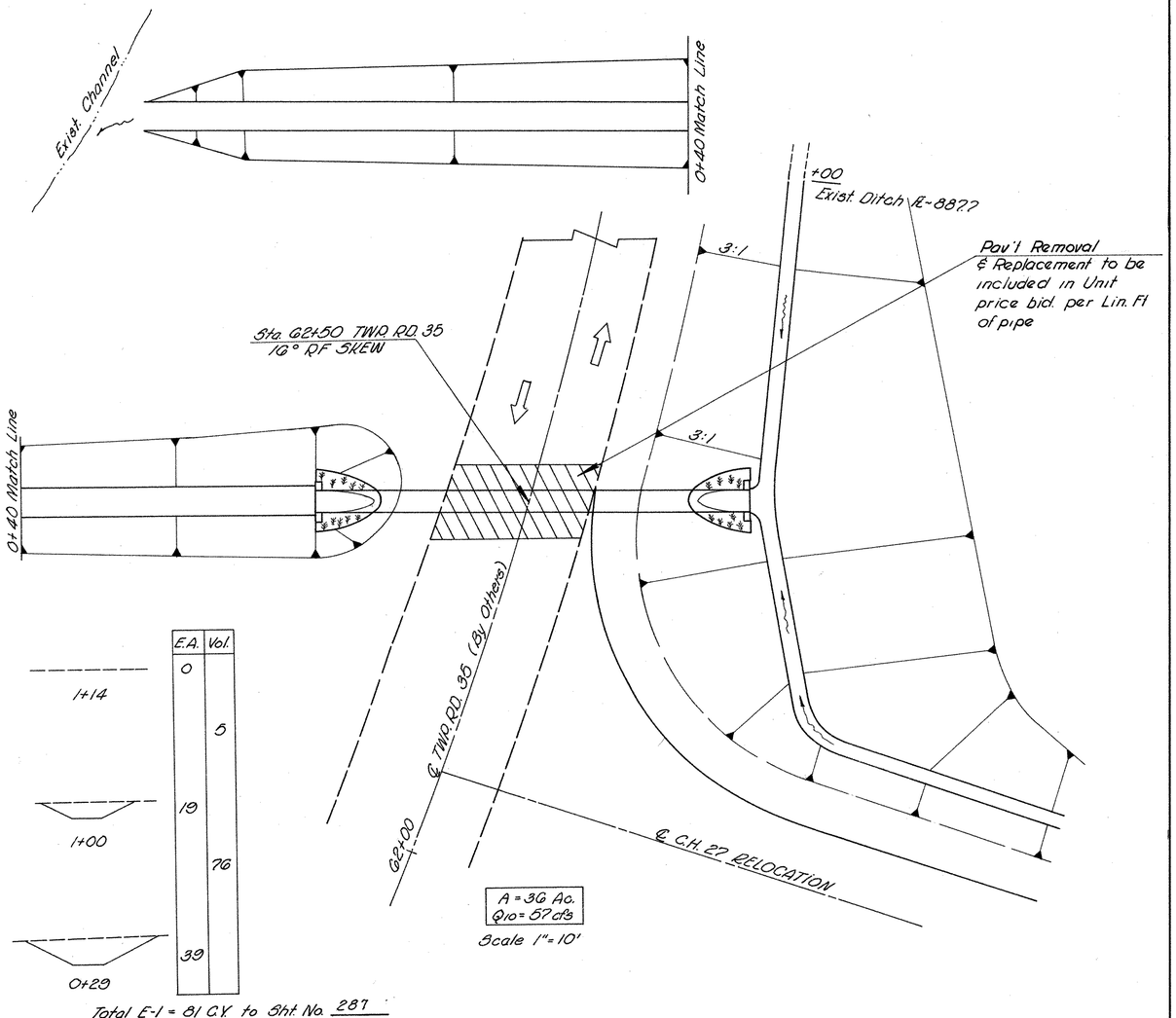
C.H. 114
CULVERT – STA. 86+00

CULVERT S.R. STA. 27+00 , CULVERT C.H. 114 STA. 86+00

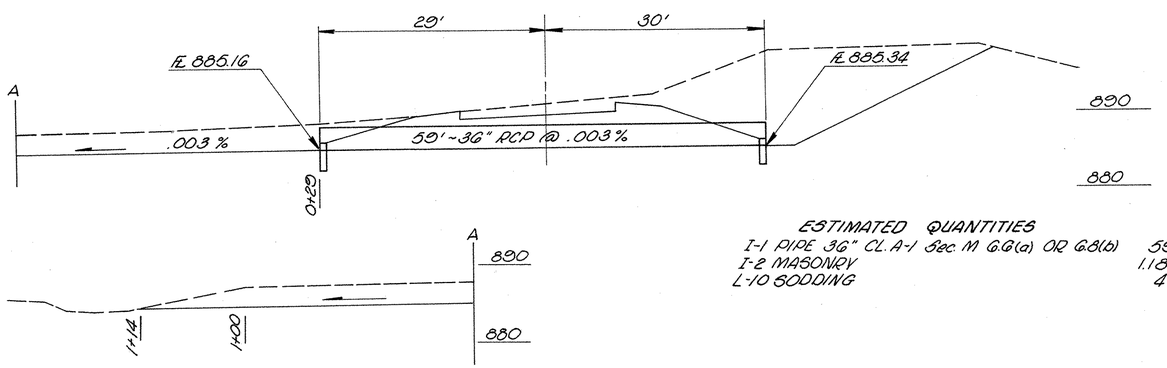
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

427
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 **BEL–40–0.00**

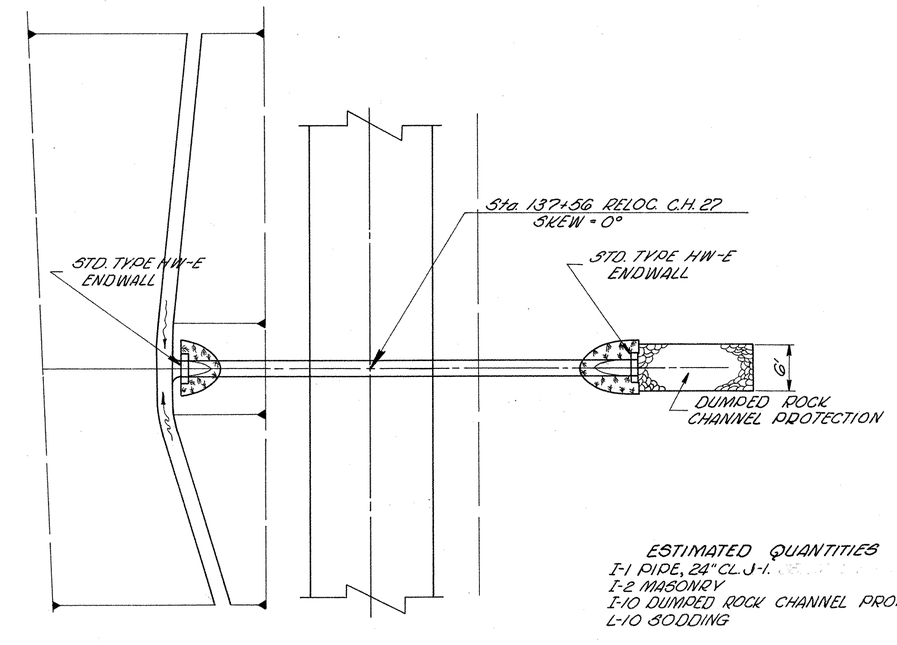


Total E-1 = 81 C.Y. to Sht. No. 287



ESTIMATED QUANTITIES

I-1 PIPE 36" CL. A-1 Sec. M 6.6(a) OR 6.8(b)	59 Lin. Ft.
I-2 MASONRY	1.18 Cu. Yds.
L-10 SODDING	4 Sq. Yds.

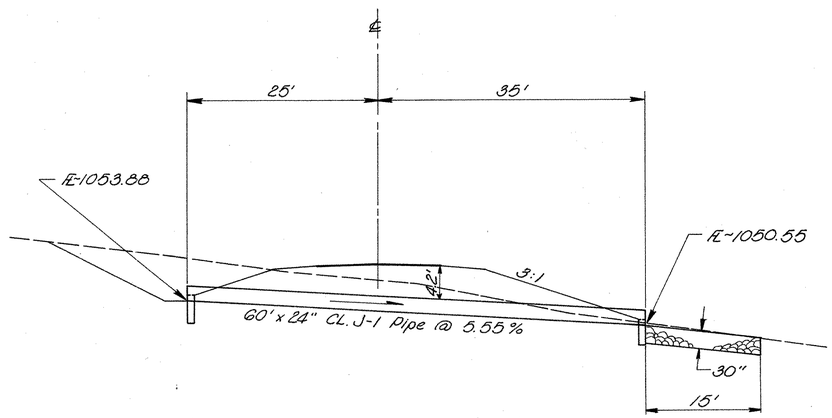


ESTIMATED QUANTITIES

I-1 PIPE, 24" CL. J-1	60 L.F.
I-2 MASONRY	0.82 C.Y.
I-10 DUMPED ROCK CHANNEL PROTECTION	33 C.Y.
L-10 SODDING	4 S.Y.

D.A. = 7 ACRES
Q10 = 20 c.f.s.

SCALE ~ 1" = 10'

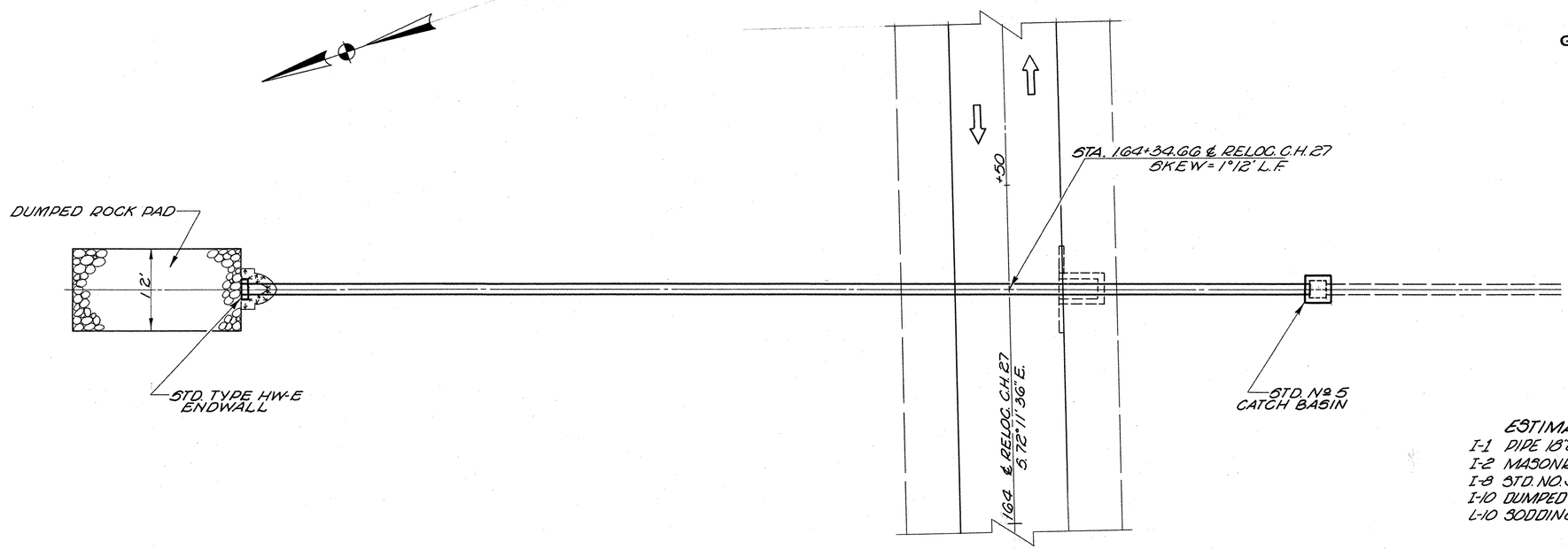


CULVERT SECTION ~ 137+56 RELOC. C.H. 27 ℄ 62+50 ~ TWP. RD. 35

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

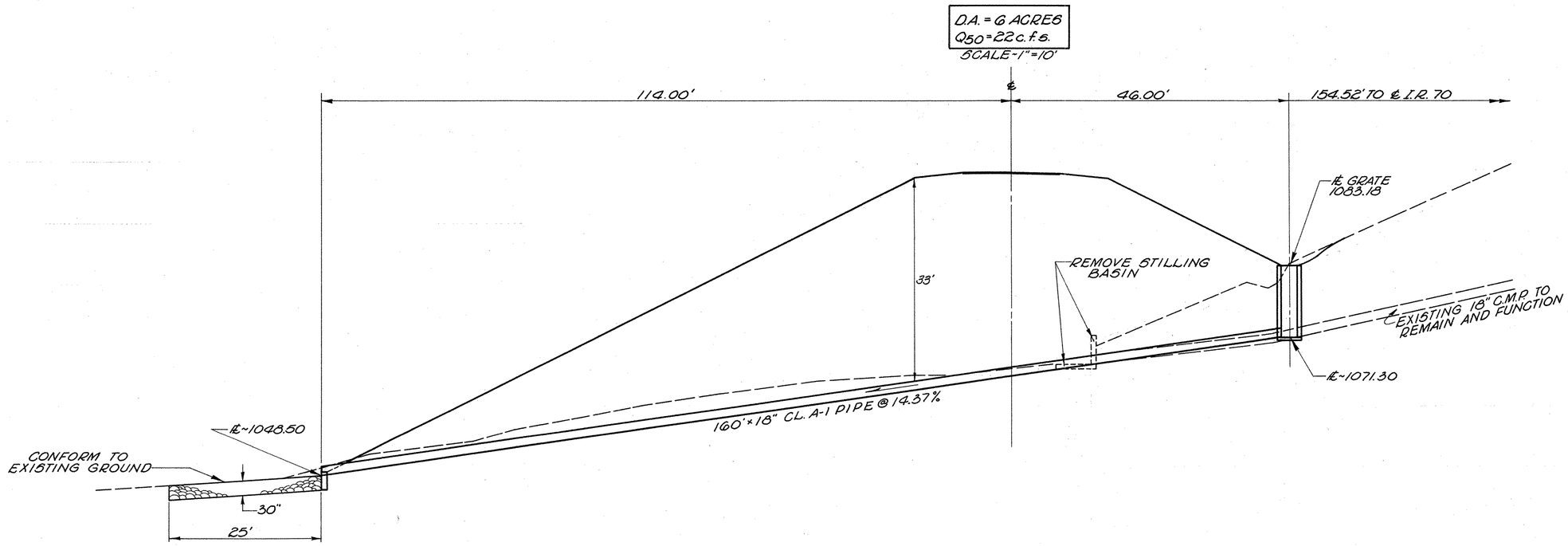
428
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00



ESTIMATED QUANTITIES

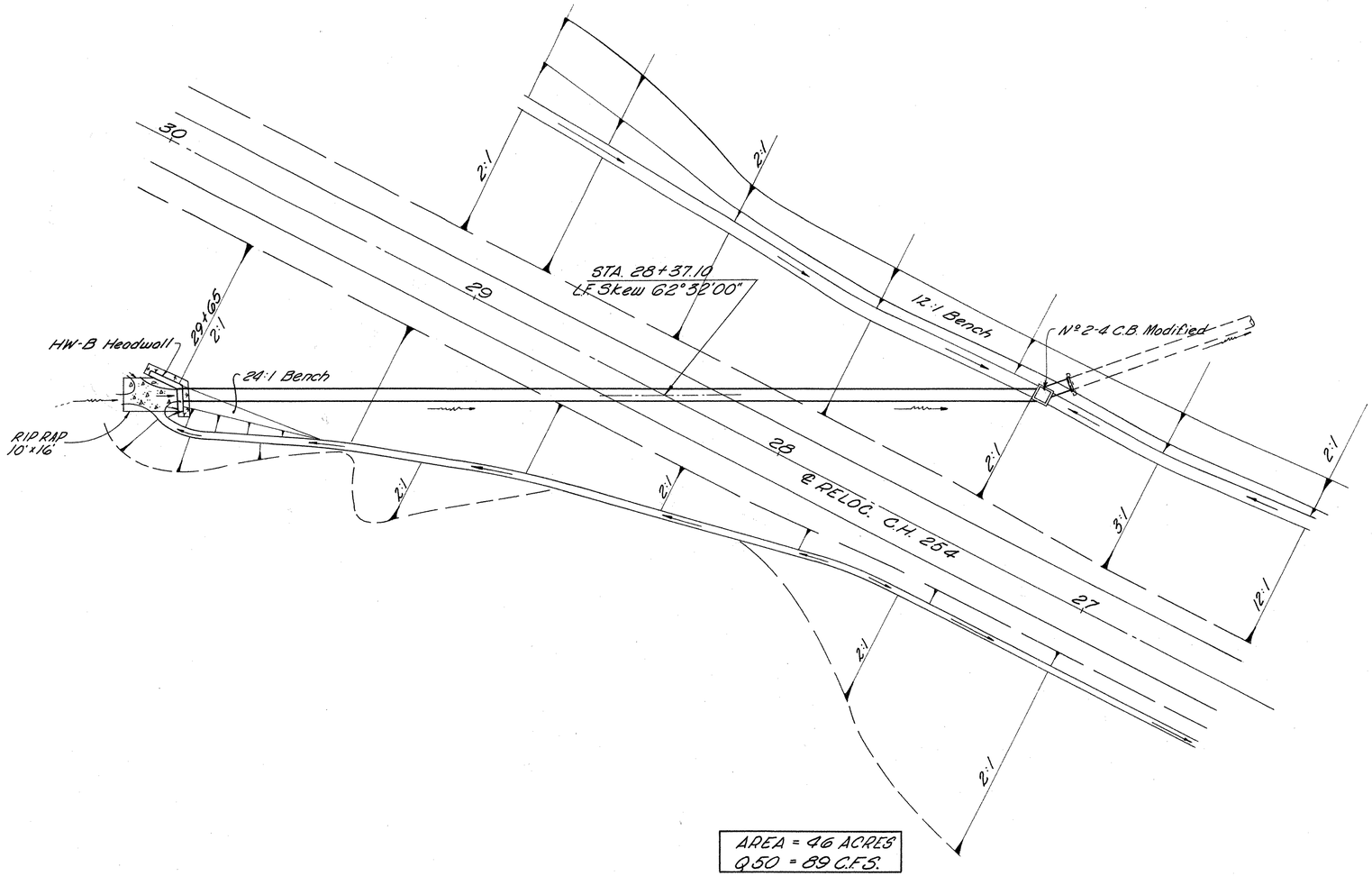
I-1	PIPE 18"CL. A-1 SEC. M 6.4 (d)	160	LIN. FT.
I-2	MASONRY	0.30	CU. YD.
I-8	STD. NO. 5 C.B.	1	EA.
I-10	DUMPED ROCK CHANNEL PROT.	17	CU. YD.
I-10	SODDING	4	SQ. YD.



CULVERT SECTION STA. 164+34.66 RELOC. C.H. 27

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

429
485

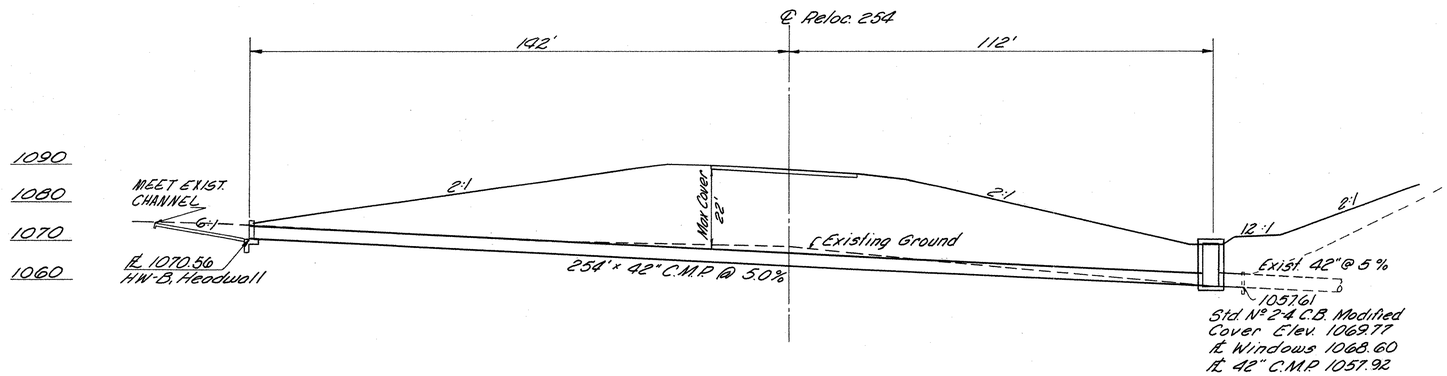


CULVERT DATA
PIPE: CLASS A-1 Sec M-6.4(d) 8 Gage
TYPE B, Headwall
N° 2-4 Catch Basin Modified
SIZE 254'x 42" C.M.P.

ESTIMATED QUANTITIES

I-1	PIPE 42" C.M.P.	254	LIN. FT.
I-2	MASONRY FOR HEADWALL	13.5	CU. YDS.
I-8	NO 2-4 CATCH BASIN MODIFIED	1	EACH
I-10	RIP RAP 6" REINFORCED CONCRETE SLAB	18	SQ. YDS.
L-10	SODDING	4	SQ. YDS.

I-2 MASONRY FOR B, HEADWALLS SEE SHEET NO. 431



SEE SHEET NO. 419 FOR DETAILS OF EXIST. 42" PIPE UNDER MAINLINE

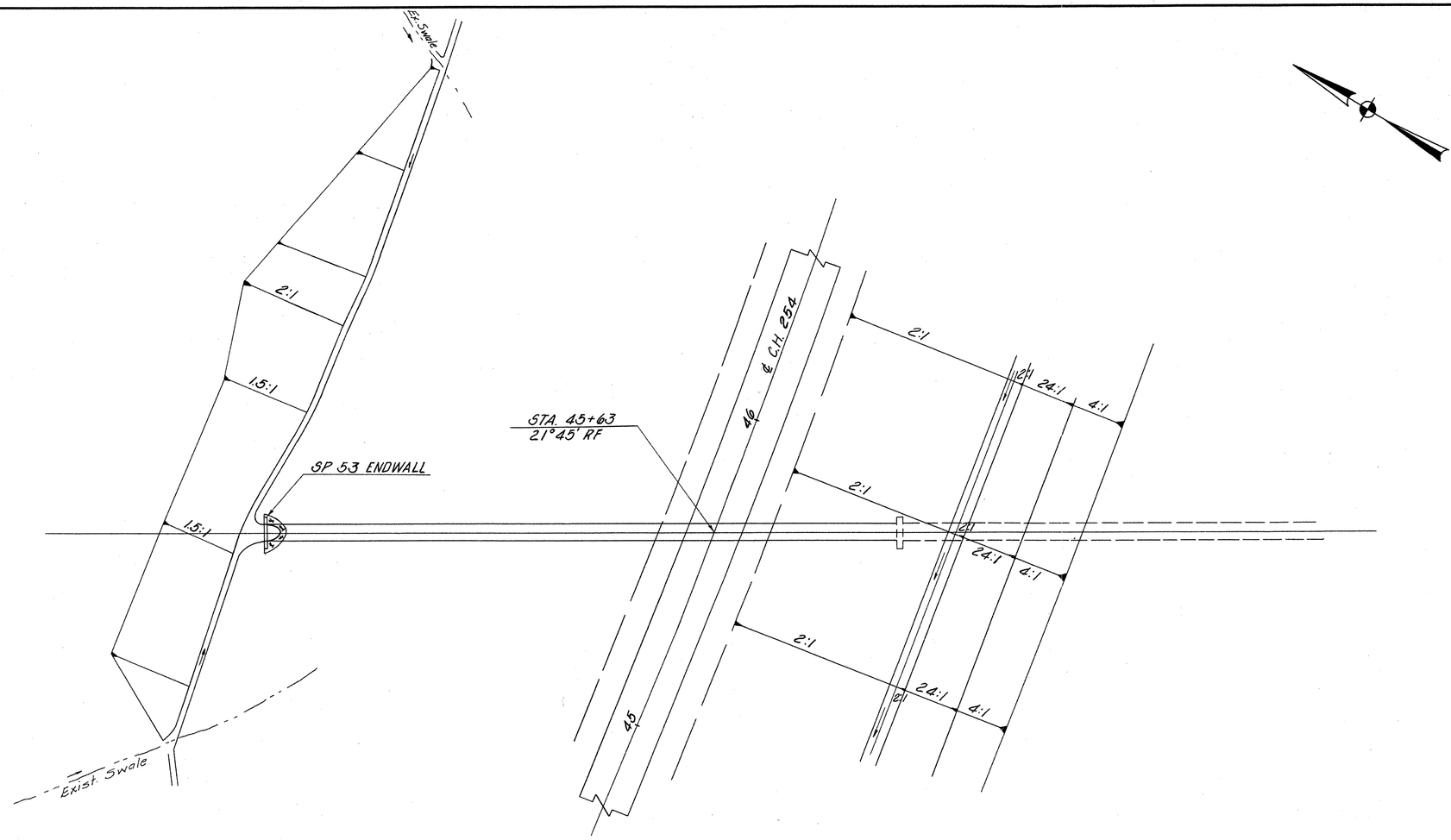
SEE SHEET NO. 438 FOR MODIFICATION OF N° 2-4 C.B.

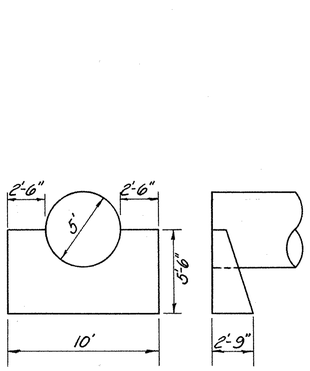
CULVERT - STA 28+37.10 - RELOC. C.H. 254

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

430
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.83 BEL–40–0.00

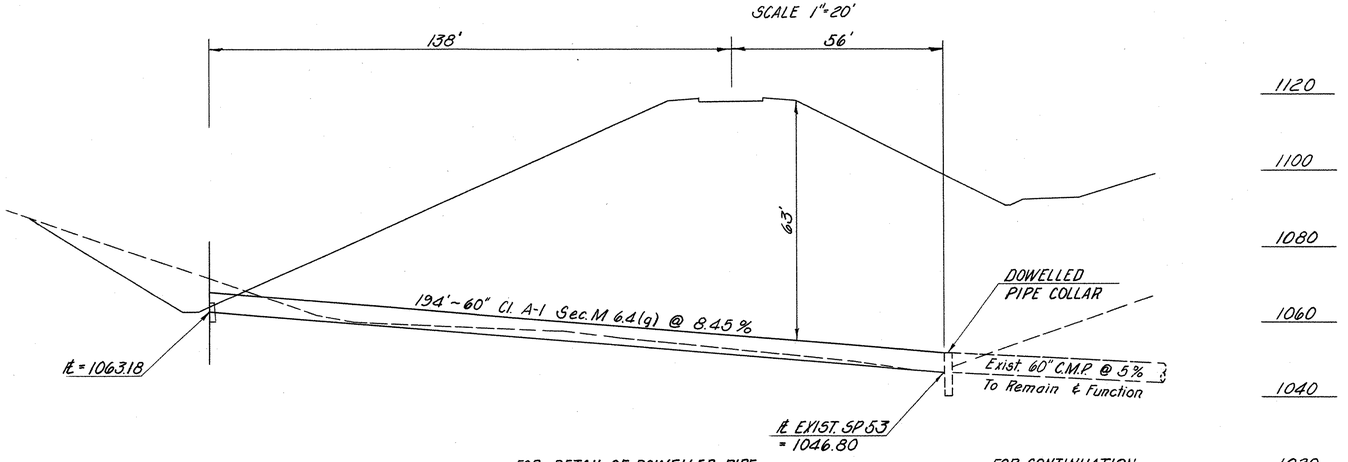




SP 53 ENDWALL DETAIL
1"=5'

A = 37 ACRES
Q_{50} = 82 cfs.

SCALE 1"=20'



FOR DETAIL OF DOWELLED PIPE SEE SHEET NO. 413

FOR CONTINUATION SEE SHEET NO. 420

ESTIMATED QUANTITIES

I-1 PIPE CL. A-1 SEC. M 6.4(g) 60" TOP 8 GAGE BOTTOM 7GAGE	194	LIN. FT.
I-2 MASONRY FOR ENDWALL	2.7	CU. YDS.
MASONRY FOR PIPE COLLAR	1.1	CU. YDS.
S-23 DOWEL HOLES	5	EACH
L-10 SODDING	4	S.Y.

CULVERT ~ STA. 45+63 C.H. 254 RELOC.

TYPE B HEADWALLS

GUERNSEY COUNTY – BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

431
485

HEADWALL DIMENSIONS

STATION	ANGLE θ	PIPE SIZE	TYPE	H	W	A	B	C	D	E
34+09 R	8°-9'	42"	B-1	4-3	4-0	1-3	6-6	9-0	5-3	0-7
44+58 R	9°-0'	36"	B-1	3-10	3-6	1-0	5-7	7-6	4-3	0-7
55+98.50 R	13°-30'	24"	B-2	5-10	–	–	4-2	5-0	2-10	0-7
440+86 L	11°00'	30"	B-2	6-4	–	–	5-7	7-6	–	–
440+86 R	11°00'	30"	B-2	6-5	–	–	5-3	6-9	4-0	0-8
522+09 R	11°00'	24"	B-2	5-10	–	–	4-1	6-2	–	–
591+25.35 L	43° 03' 30"	42"	B-1	4-4	4-0	1-3	8-11	6-0	2-5	2-3
611+92 L&R	20°00'	60"	B-1	5-10	5-3	1-10½	10-1	10-11	5-9	1-11
624+68.00 R	43°00'	42"	B-1	4-4	4-0	1-3	8-11	6-0	2-5	2-3
644+01.00 R	13°09'	30"	B-2	6-4	–	–	5-2	6-3	3-7	0-9
C.H.254 28+37.10 L	62°32'	42"	B-1	4-3	4-0	1-3	13-9	9-11	–	–

REINFORCING STEEL LIST

	a bars		b bars		c bars		d bars		e bars		f bars		g bars		h bars		j bars		k bars		l bars		m bars		n bars		p bars		q bars		r bars		s bars		t bars			u bars		
	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	Dim."T"	No.	Length	Dim."U"
34+09 R	6	4-2	3	7-11	3	8-8	2	8-0	2	8-9	3	8-1	1	8-10	3	8-3	1	9-0	6	8-1	5	7-6 to 8-1 l each-vary by 1¾	3	6-3	3	5-9 to 6-4 l each-vary by 3½	3	6-5	4	5-0	3	6-4	–	–	2	8-11	3-10	2	8-10	3-9
44+58 R	6	4-2	3	7-1	3	7-3	2	7-2	2	7-4	3	7-2	1	7-4	3	7-3	1	7-5	5	7-5	4	6-10 to 7-4 l each-vary by 2	3	6-0	3	5-4 to 5-10 l each-vary by 3	3	5-6	4	4-0	3	5-5	–	–	2	7-6	3-3	2	7-4	3-3
55+98.50 R	3	5-9	3	5-5	5	5-9	3	4-10	1	4-0	2	2-6	–	—	1	6-2	1	5-4	1	6-1	3	5-2 to 5-8 l each-vary by 3	1	5-4	3	4-10 to 5-4 l each-vary by 3	1	6-0	1	5-3	1	4-3	2	5-10	2	5-0	2-3	2	4-11	2-2
440+86 L	4	6-3	4	5-11	5	7-2	3	7-4	1	5-5	2	4-6	–	—	1	7-5	1	7-8	1	7-4	3	6-3	1	7-8	3	5-11	1	7-4	1	7-7	1	5-7	2	7-3	2	7-6	–	2	7-5	–
440+86 R	4	6-4	4	6-0	5	6-10	3	6-7	1	5-1	2	3-9	–	—	1	7-2	1	7-0	1	7-2	3	5-8 to 6-1 l each-vary by 2½	1	7-0	3	5-4 to 5-9 l each-vary by 2½	1	7-1	1	6-11	1	5-3	2	6-10	2	6-8	2-10	2	6-7	2-9
522+09 R	3	5-9	3	5-5	5	5-8	3	6-0	1	3-11	2	3-8	–	—	1	5-11	1	6-5	1	5-11	3	5-9	1	6-5	3	5-5	1	5-10	1	6-4	1	4-1	2	5-9	2	6-1	–	2	6-0	–
591+25.35 L	6	4-2	3	10-1	3	5-5	2	10-5	2	5-9	3	10-6	1	5-10	3	10-11	1	6-3	7	8-2	3	5-11 to 7-11 l each-vary by 1'-0"	4	6-5	2	4-2 to 6-2 l each-vary by 2'-0"	3	9-3	4	2-0	3	8-9	2	1-1	2	7-2	4-1	2	6-9	3-7
611+92 L&R	8	4-2	3	11-4	3	10-5	2	11-5	2	10-7	3	11-8	1	10-9	3	11-11	1	10-11	8	10-5	5	8-6 to 10-5 l each-vary by 5¾	5	7-11	3	6-2 to 8-1 l each-vary by 1½	4	10-1	6	5-5	4	9-11	2	3-0	2	11-3	5-4	2	11-1	5-2
624+68.00 R	6	4-2	3	10-1	3	5-5	2	10-5	2	5-9	3	10-6	1	5-10	3	10-11	1	6-3	7	8-2	3	5-11 to 7-11 l each-vary by 1-0	4	6-5	2	4-2 to 6-2 l each-vary by 2-0	3	9-3	4	2-0	3	8-9	2	1-1	2	7-2	4-1	2	6-9	3-7
644+01.00 R	4	6-3	4	5-11	5	6-9	3	6-1	1	5-0	2	3-3	–	—	1	7-1	1	6-7	1	7-1	3	5-6 to 6-2 l each-vary by 4	1	6-7	3	5-2 to 5-10 l each-vary by 4	1	7-0	1	6-6	1	5-2	2	6-10	2	6-3	2-9	2	6-2	2-8
C.H.254 28+37.10 L	9	4-2	3	14-7	3	9-0	2	14-11	2	9-4	3	15-4	1	9-9	3	16-0½	1	10-6	11	8-1½	6	8-1½	6	6-4½	3	6-4½	3	14-3½	6	6-1	3	13-7	–	–	2	10-6	10-8	2	9-9	9-11

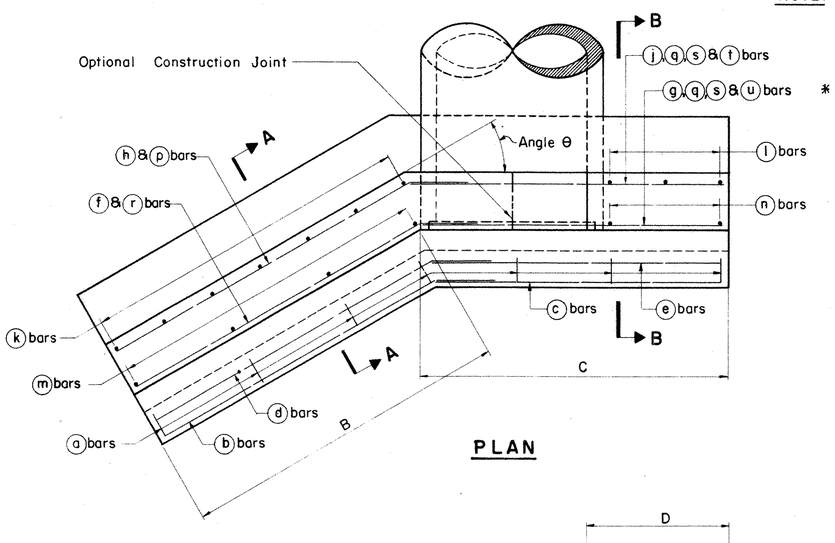
ESTIMATED QUANTITIES

REINF. STEEL Lbs.	CONCRETE Cu. Yds.
410	8.3
348	6.3
195	3.7
263	6.0
248	5.6
209	4.2
403	8.2
675*	14.4*
403	8.2
241	5.2
654	13.5

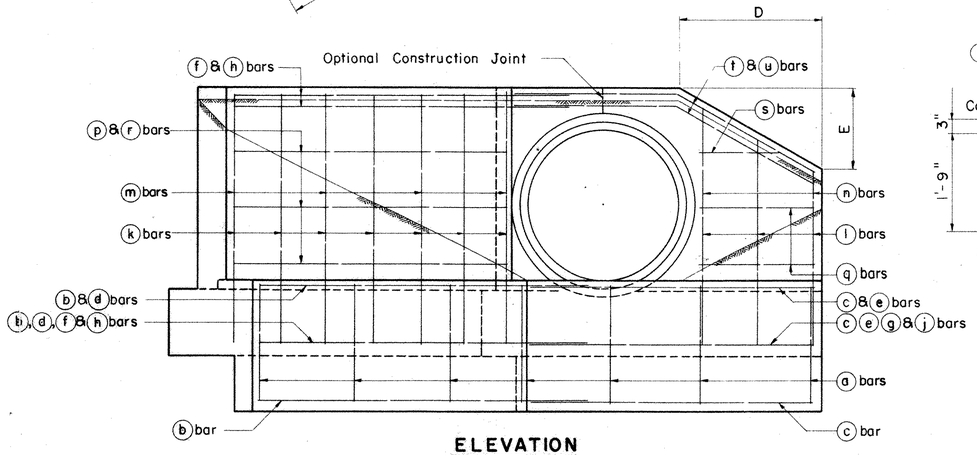
NOTE: All reinforcing steel shall be #5 bars except (k) and (l) bars for Type B-1 headwalls shall be #6 bars for "H" of 5'-9" thru 7'-6"; #7 bars for "H" of 7'-7" thru 8'-6" and #8 bars for "H" of 8'-7" thru 9'-9". Lengths given in the steel list are in feet and inches.

* Quantities shown on this sheet are for one headwall.

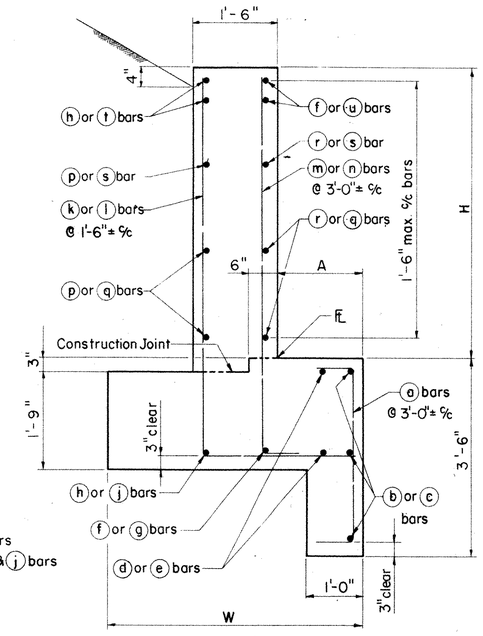
All other notes and details not shown on this sheet shall conform to standard headwalls A and C.



PLAN

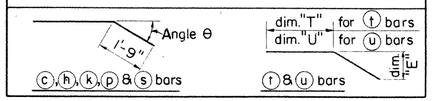


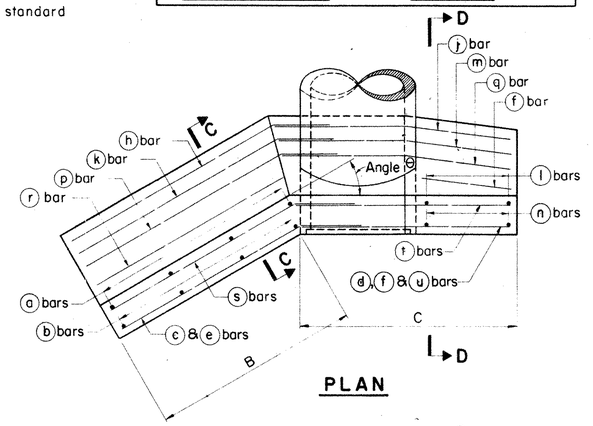
ELEVATION
TYPE B-1 HEADWALL



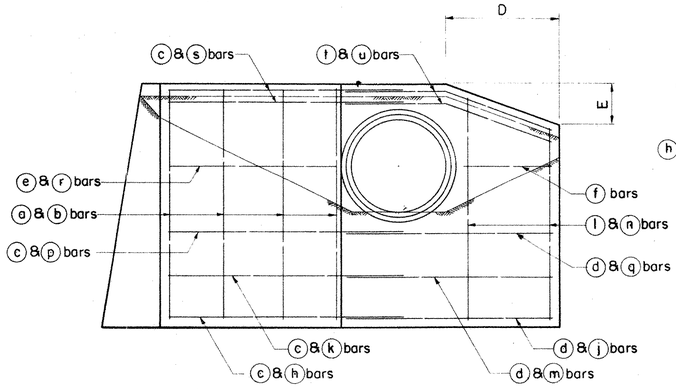
SECTION A-A & B-B

BAR BENDING DIAGRAMS FOR B-2 HEADWALLS



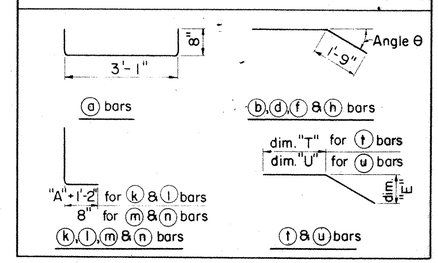


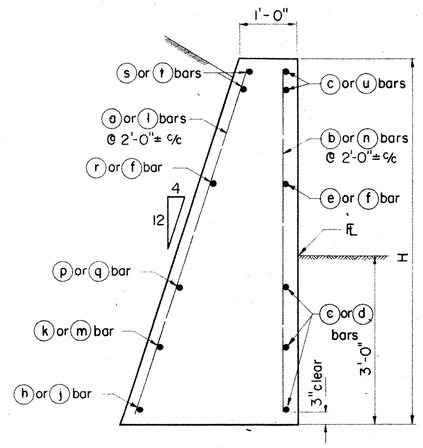
PLAN



ELEVATION
TYPE B-2 HEADWALL

BAR BENDING DIAGRAMS FOR B-1 HEADWALLS





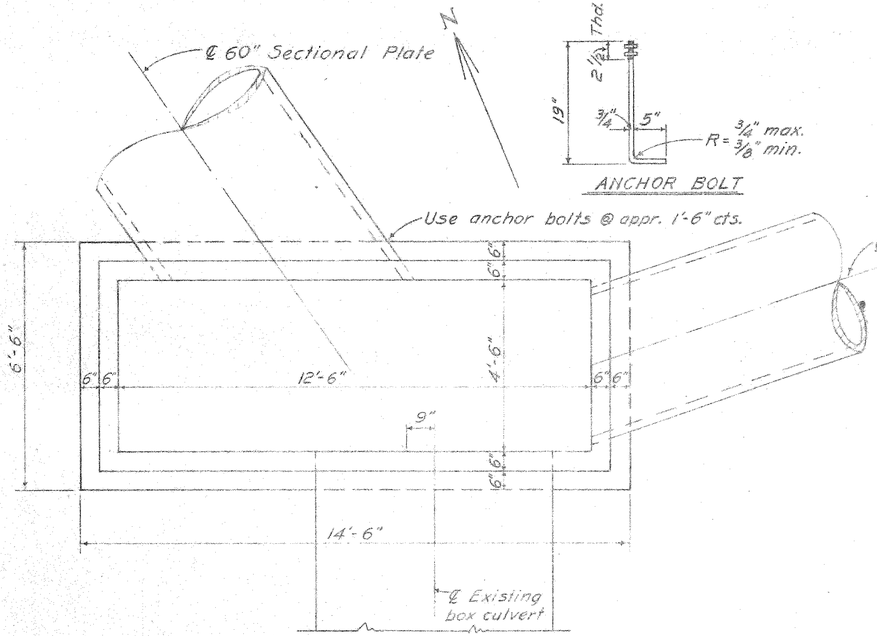
SECTION C-C & D-D

TYPE B HEADWALL DETAILS

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

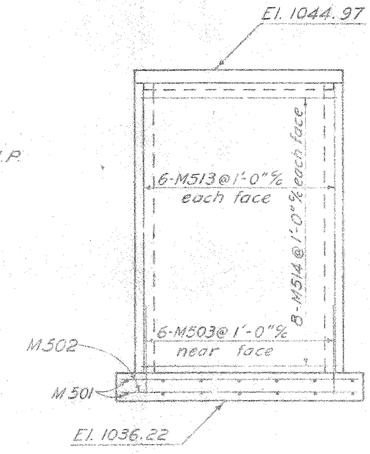
432
485

GUERNSEY COUNTY - BELMONT COUNTY
GUE - 40 - 23.88 BEL - 40 - 0.00

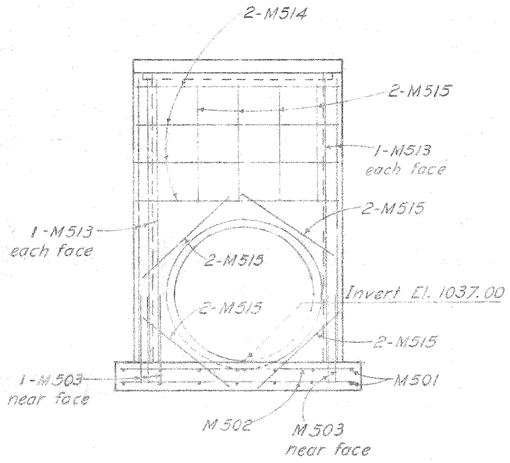


PLAN

ANCHOR BOLT



VIEW OF WEST SIDE WALL

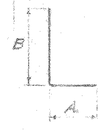


VIEW OF EAST SIDE WALL

REINFORCING STEEL LIST

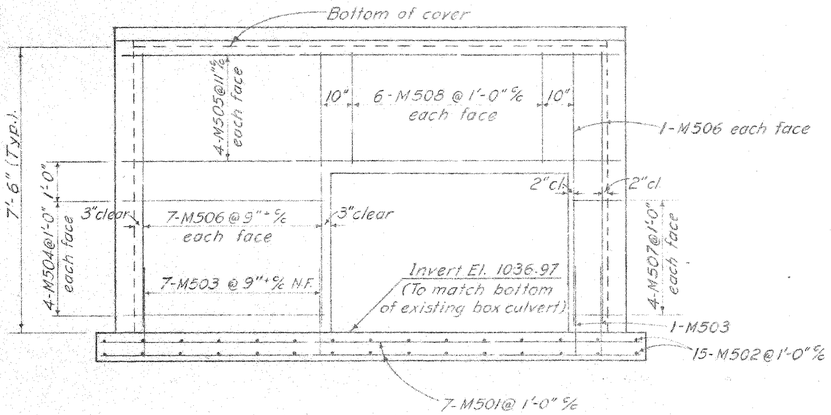
MARK	NO.	LENGTH	WEIGHT	TYPE	A	B
M501	14	14-2	207	S		
M502	30	6-2	193	S		
M503	29	3-6	106	1	1-7	2-1
M504	8	5-5	45	S		
M505	8	13-2	110	S		
M506	36	7-4	275	S		
M507	8	1-2	10	S		
M508	12	2-10	35	S		
M509	16	5-3	88	S		
M510	8	4-6	38	S		
M511	8	9-9	81	S		
M513	22	7-6	172	S		
M514	24	5-2	129	S		
M515	16	3-3	54	S		
M516	14	4-10	71	S		
M517	6	13-4	83	S		
		Total	1,697			
Anchor bolts: 12						
Concrete: 6.6 Cu. Yds.						

6.6 Cu. Yds 1-2 Masonry carried to Sheet No. 41

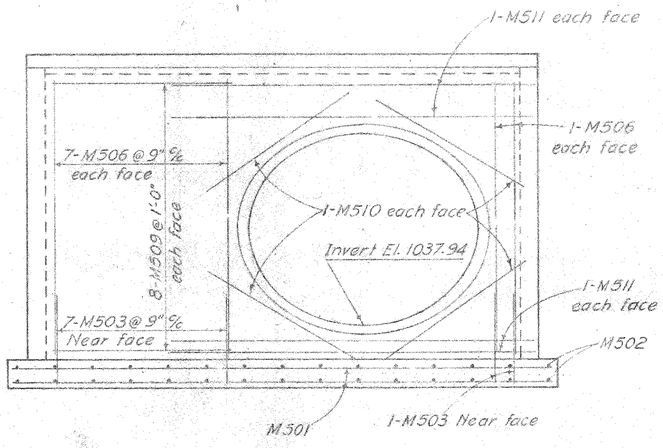


Type 1

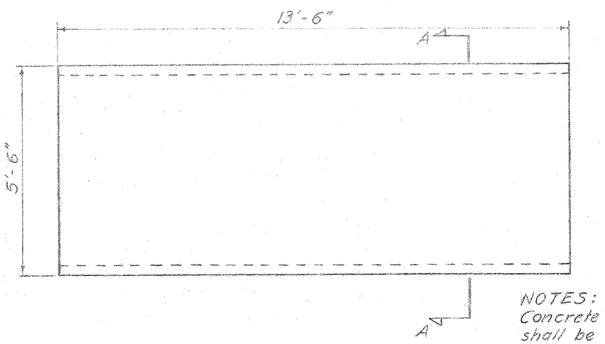
NOTE:
S in the column for "TYPE" indicates straight bars.



VIEW OF SOUTH SIDE WALL

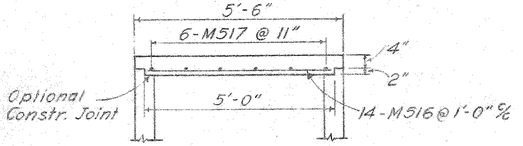


VIEW OF NORTH SIDE WALL



PLAN OF TOP COVER

NOTES:
Concrete for the junction box shall be class "C".
Reinforcing steel shall be in accordance with steel details shown hereon and conforming to Item 5-4 of the construction materials specifications.



SECTION A-A

RACKOFF ASSOCIATES
ENGINEERS COLUMBUS, OHIO

JUNCTION BOX
Sta. 589+46.66
GUERNSEY COUNTY - BELMONT COUNTY

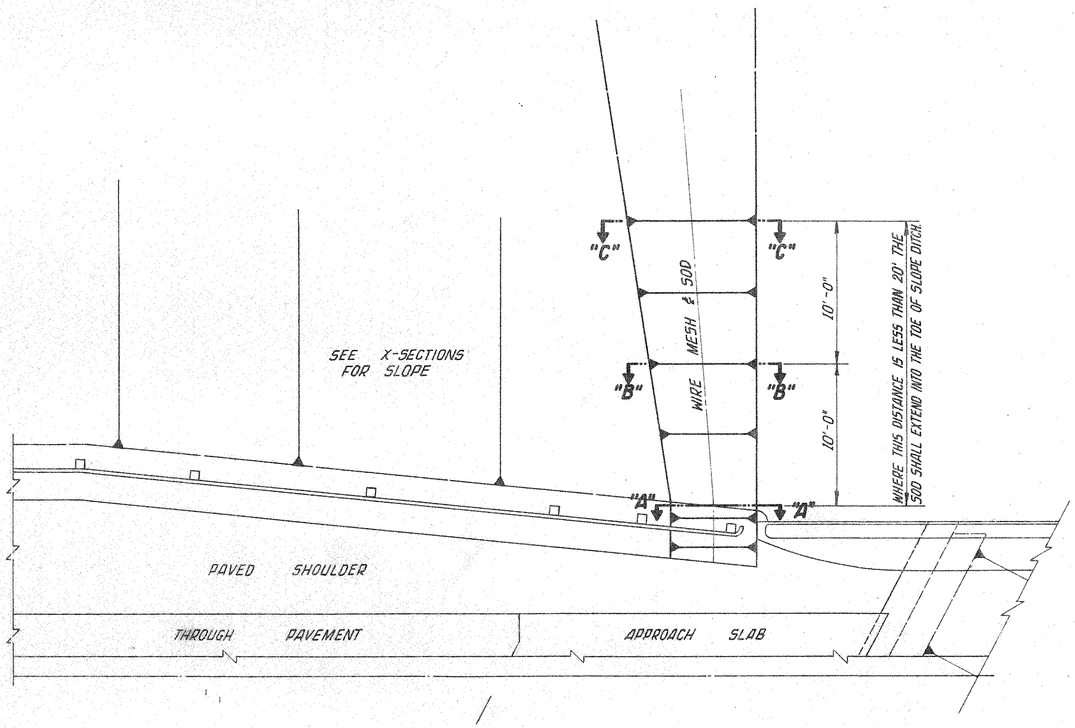
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
R.V.R.	M.R.		F.A.			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

433/485

GUERNSEY COUNTY – BELMONT COUNTY

GUE – 40 – 23.88 BEL – 40 – 0.00



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 PLACED AT FOUR FOOT INTERVALS.

STAKES SHALL BE OF WOOD 1"x1"x8" AND SHALL BE PERPENDICULAR TO THE GROUND AND FLUSH WITH THE TOP OF THE SOD.

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

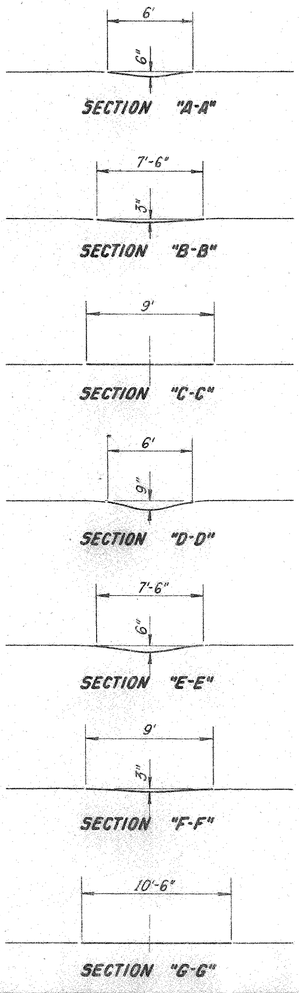
THE STRANDS OF FENCING SHALL BE FASTENED TOGETHER AT TWELVE INCH INTERVALS BY MEANS OF HOG RINGS.

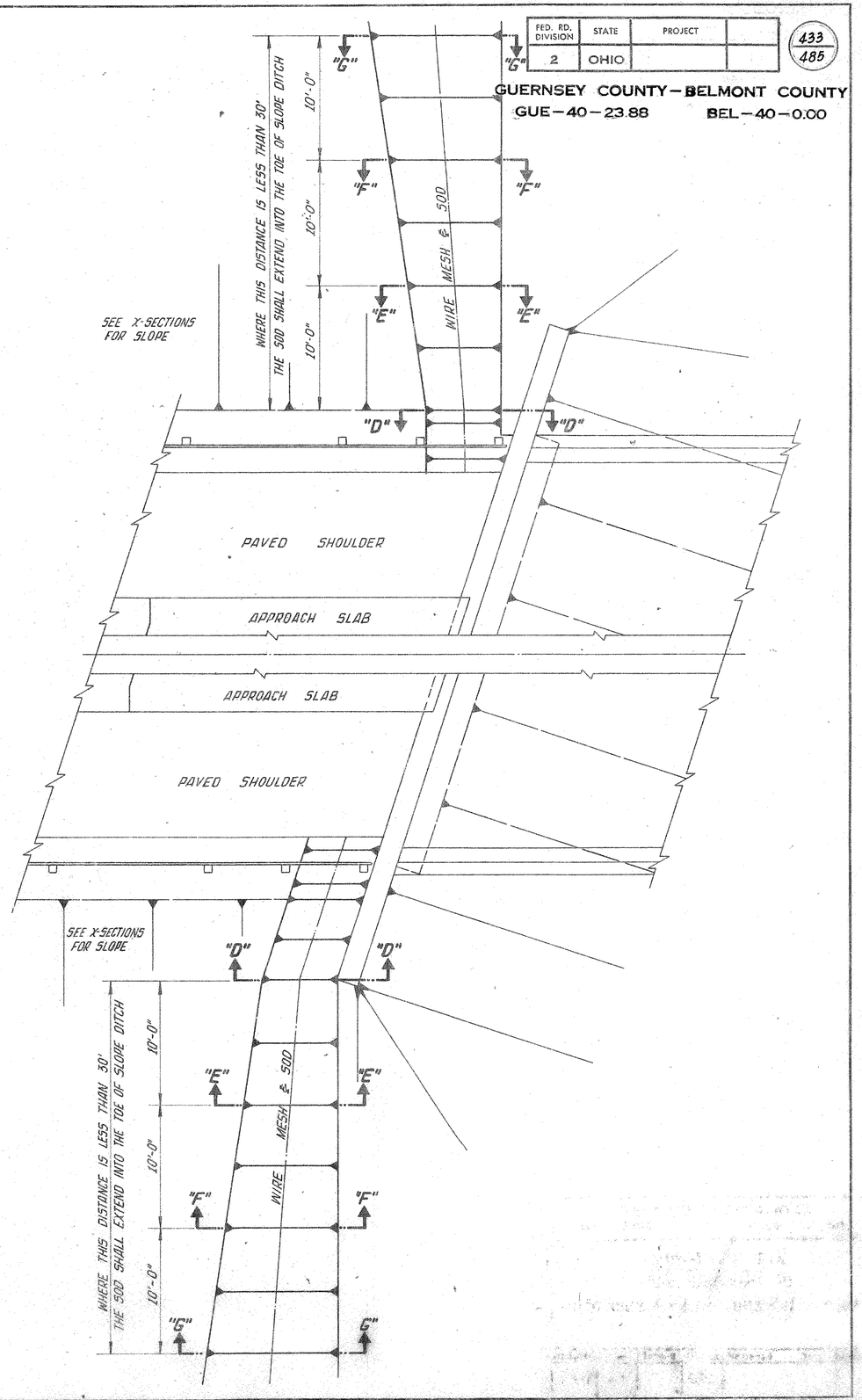
THE FENCE SHALL BE SECURED TO THE WOOD STAKES BY METAL STAPLES.

SOD SHALL BE LAID IN ACCORDANCE WITH CONSTRUCTION AND MATERIALS SPECIFICATIONS SECTION L-10.07.

THIS ITEM IS REQUIRED ONLY WHERE RATE OF SIDE SLOPE IS STEEPER THAN 6:1

PAYMENT FOR ALL THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM L-10 SODDING FOR SPECIAL BERM AND SLOPE PROTECTION.





SPECIAL BERM & SLOPE PROTECTION DETAILS

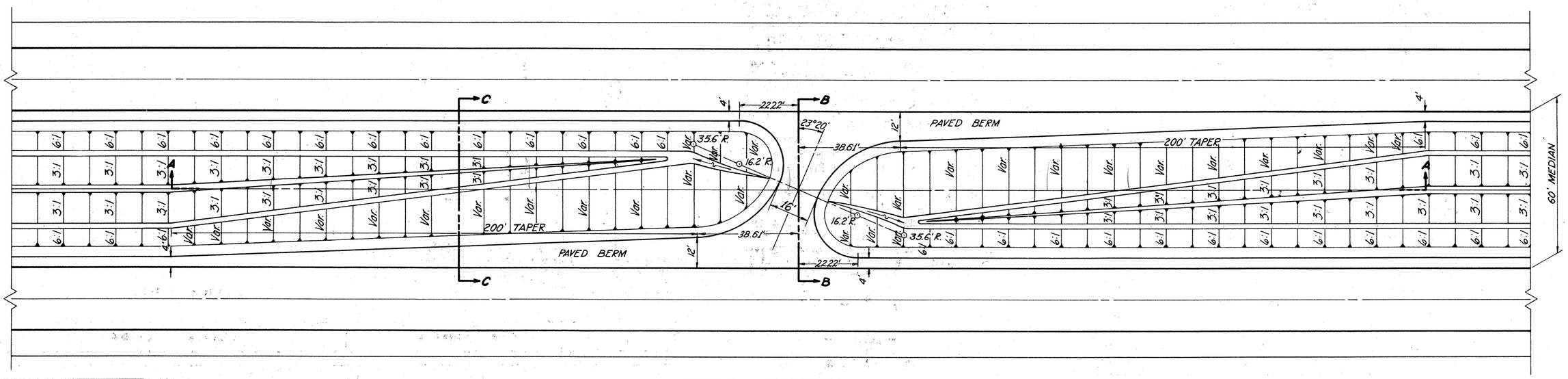
352

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

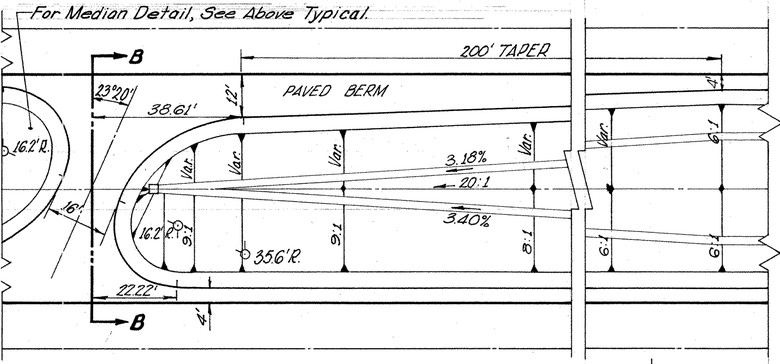
434
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

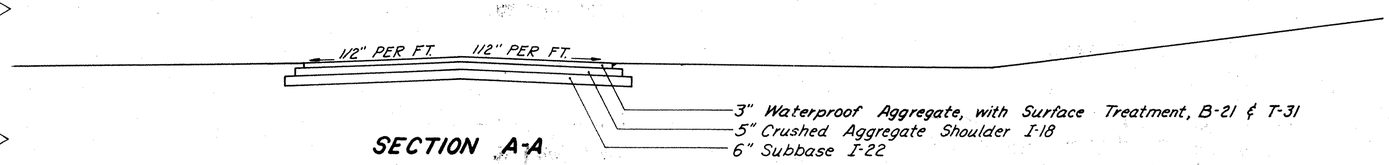
U-TURN MEDIAN OPENING



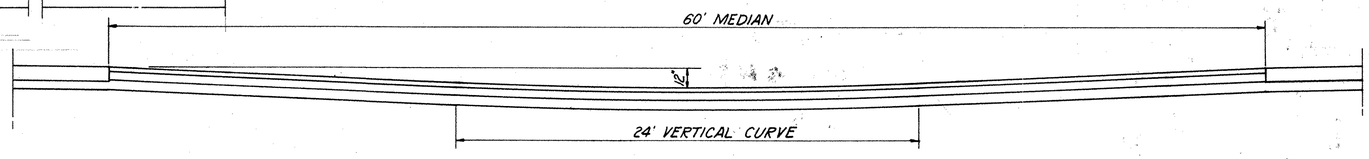
TYPICAL CROSSOVER



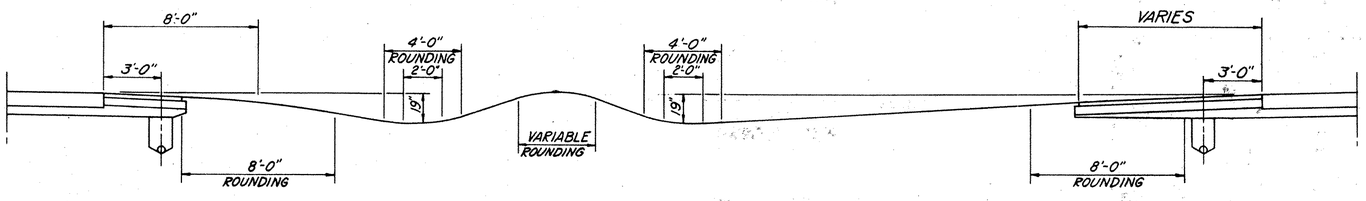
TYPICAL CROSSOVER STA. 627+83.50



SECTION A-A



SECTION B-B



SECTION C-C

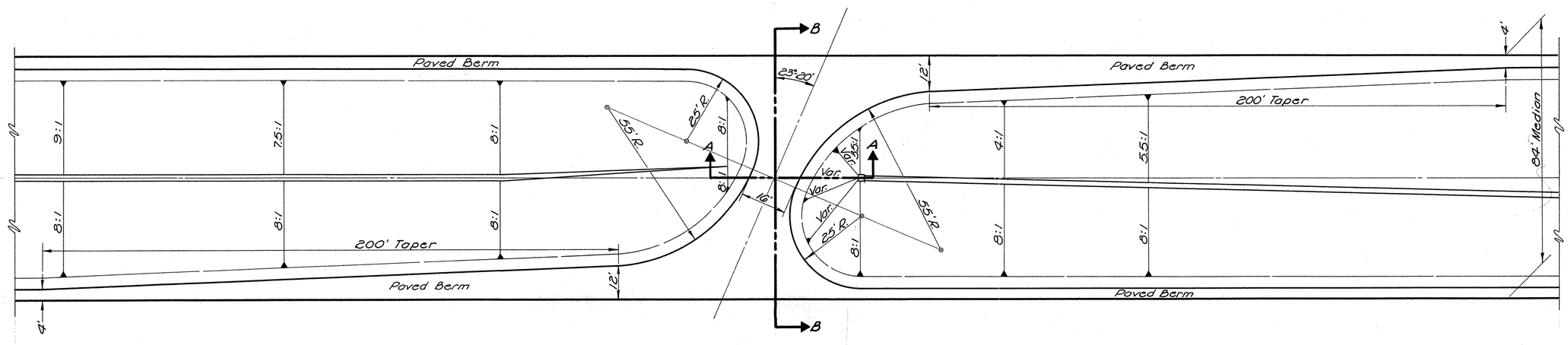
MISCELLANEOUS DETAILS - U-TURN MEDIAN OPENING

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

435
485

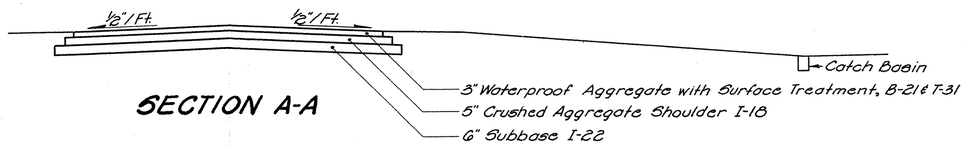
GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

U-TURN MEDIAN OPENING

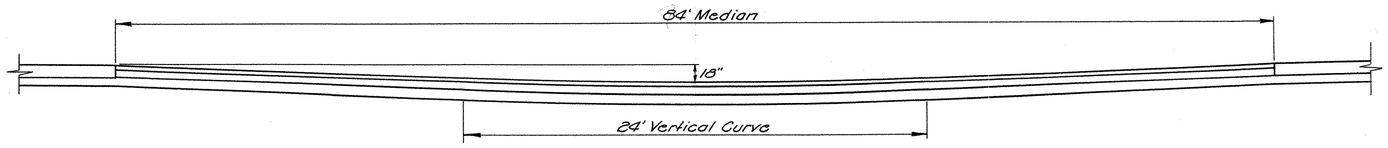


TYPICAL CROSSOVER

Sta. 418+70.00



SECTION A-A



SECTION B-B

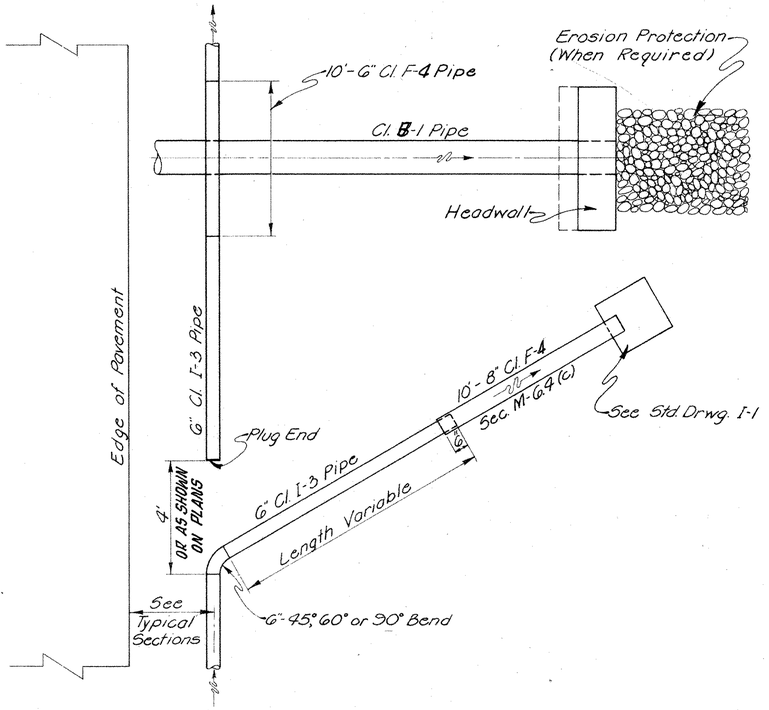
MISCELLANEOUS DETAILS – U-TURN MEDIAN OPENING

TYPICAL DETAILS OF UNDERDRAIN OUTLETS

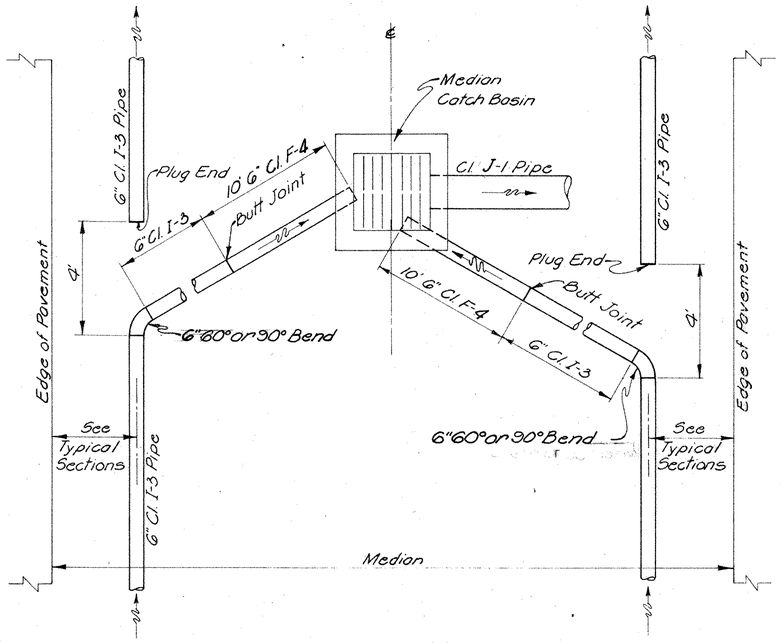
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

436
485

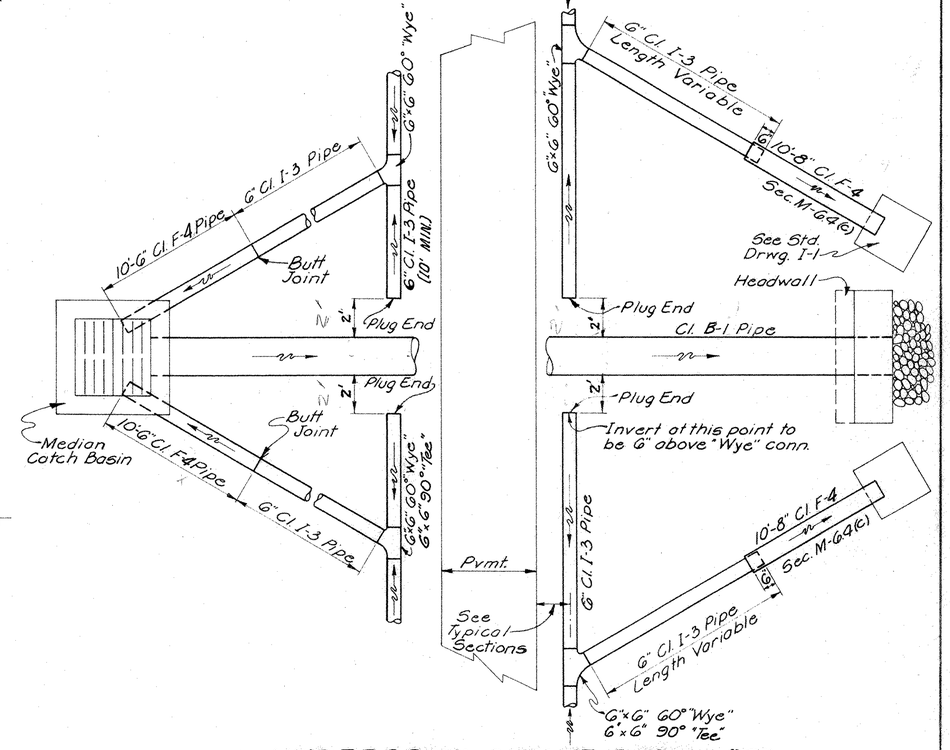
GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



UNDERDRAIN OUTLET DETAIL "A"

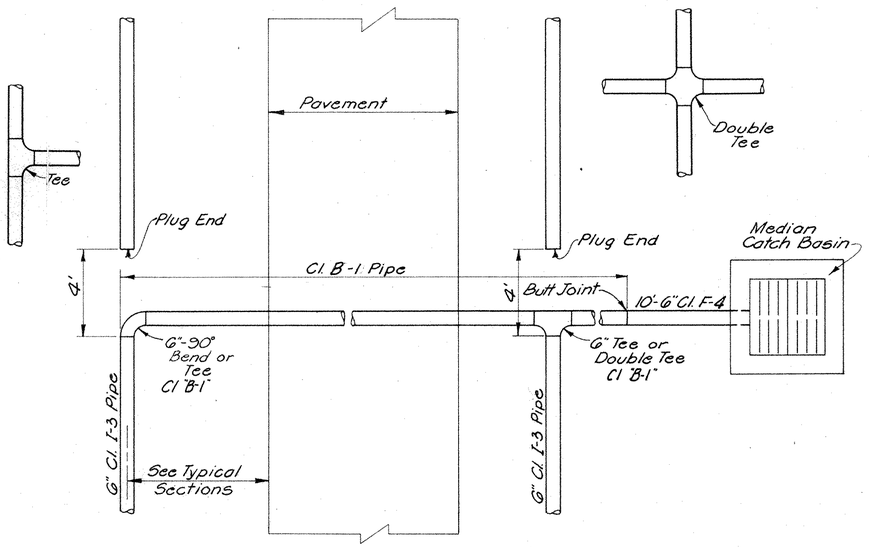


UNDERDRAIN OUTLET DETAIL "B"

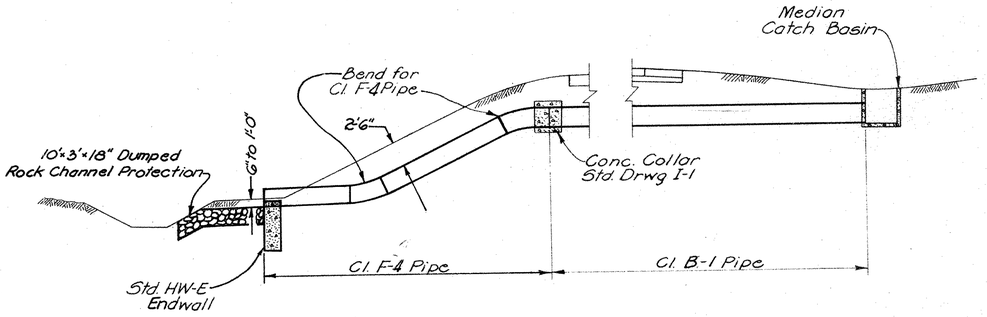


UNDERDRAIN OUTLET DETAIL "C"

NOTES:
1. Where 8" Cl. F-4 Pipe (Sec. M-6.4 (c)) is shown it shall be furnished with one rolled end.
2. All fitting shall be Cl "I-3" unless otherwise shown.



UNDERDRAIN OUTLET DETAIL "D"

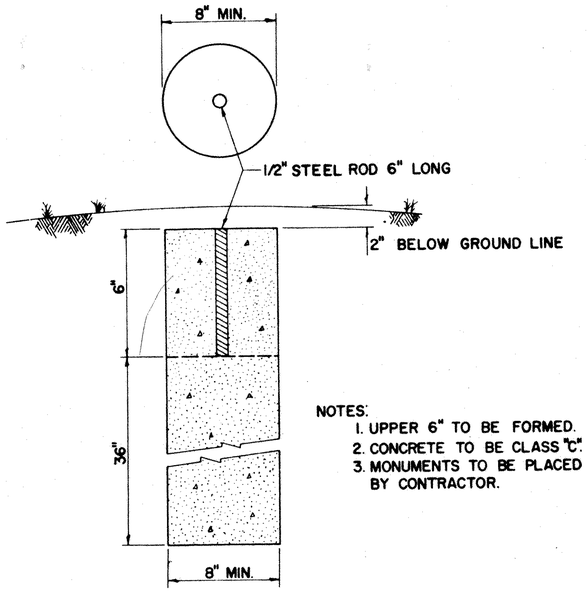


MEDIAN OUTLET DETAIL IN HIGH FILL

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

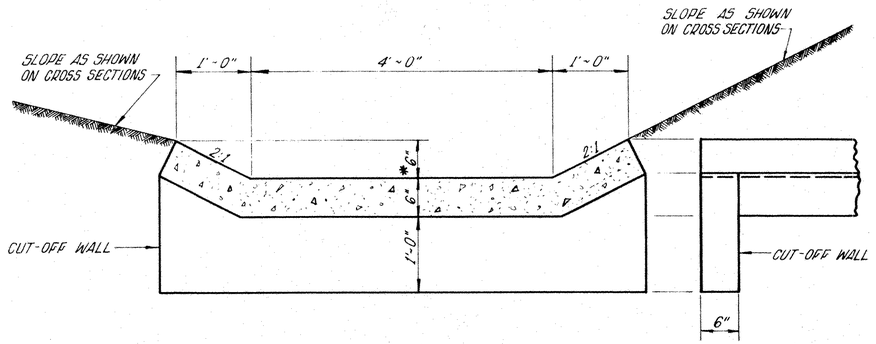
437
485

GUERNSEY COUNTY - BELMONT COUNTY
GUE-40-23.88 BEL-40-0.00



NOTES:
1. UPPER 6" TO BE FORMED.
2. CONCRETE TO BE CLASS "C".
3. MONUMENTS TO BE PLACED BY CONTRACTOR.

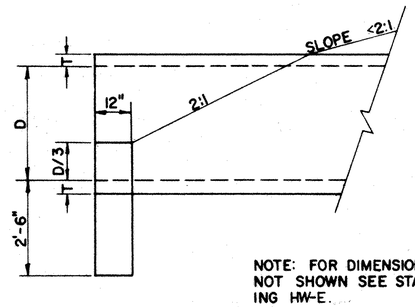
CENTERLINE REFERENCE MONUMENT DETAIL



* UNLESS OTHERWISE SHOWN ON THE PLANS

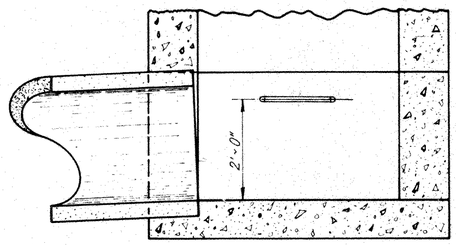
END VIEW SIDE VIEW

MODIFIED TYPE 1 PAVED GUTTER



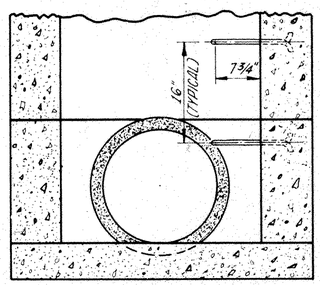
NOTE: FOR DIMENSIONS & DETAILS NOT SHOWN SEE STANDARD DRAWING HW-E.

DETAIL OF SLOPE TREATMENT AT HW-E ENDWALLS

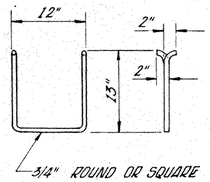


DETAIL OF I-8 NO. 5 CATCH BASIN
C.H. 27 STA. 30+30 RT.
(SEE SHEET NO. 280)

SIDE VIEW



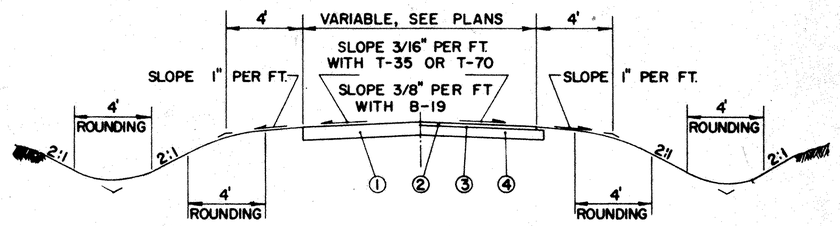
END VIEW



STEP DETAIL

STEPS SHALL BE WROUGHT IRON OR MODULAR IRON MEETING THE REQUIREMENTS OF ITEM I-8

STEP DETAILS FOR I-8 NO. 5 CATCH BASIN WITH A DEPTH MORE THAN 6'



NOTE: FOR DIMENSIONS & DETAILS NOT SHOWN SEE STANDARD DWG. DR-1.

① ITEM B-19 8" CRUSHED AGGREGATE BASE COURSE FOR RESIDENCE DRIVES.
6" CRUSHED AGGREGATE BASE COURSE FOR FIELD DRIVES.

② ITEM T-35 2-1" ASPHALTIC CONCRETE SURFACE COURSES, TYPE AS PER PLAN.

③ ITEM T-30 BITUMINOUS PRIME COAT, SEC. M-5.7, RT-2 OR RT-3 OR SEC. M-5.2, RC-1 OR RC-2 APPLIED AT THE RATE OF 0.40 GAL. PER SQ. YD.

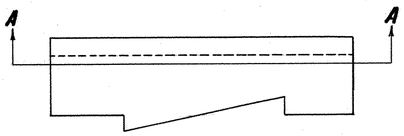
④ ITEM B-19 5" CRUSHED AGGREGATE BASE COURSE FOR RESIDENTIAL.
7" CRUSHED AGGREGATE BASE COURSE FOR COMMERCIAL.

TYPICAL HALF SECTION FOR DRIVEWAYS & SERVICE ROADS

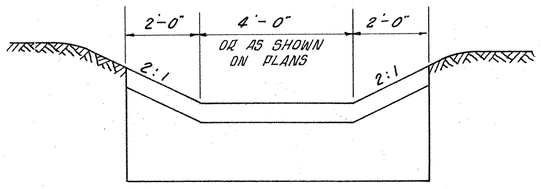
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

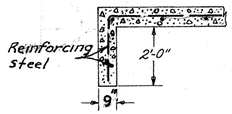
438
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

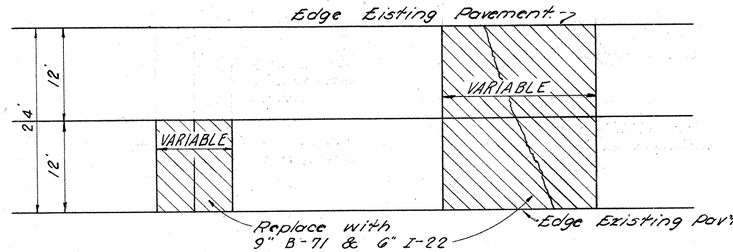


PLAN



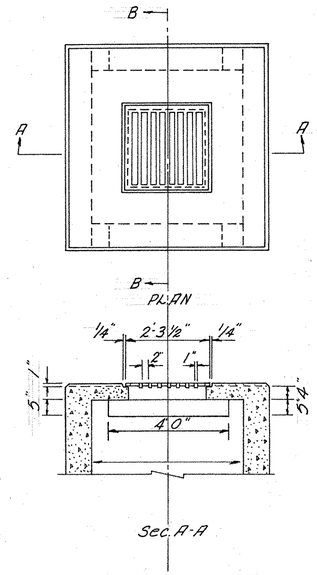


SECTION A-A
CUTOFF WALL DETAIL
FOR I-10 PAVED RIP-RAP
USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN



PAVEMENT REPLACEMENT IN AREAS OF FAILURE

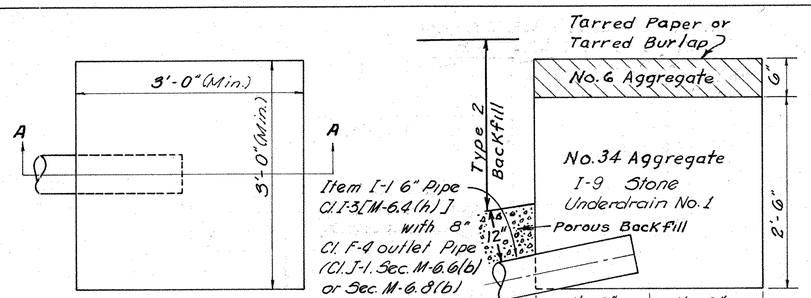
FOR STATIONING OF REPLACEMENT AREA SEE SHT. NO. 12



NOTES:

1. FOR DETAILS AND DIMENSIONS NOT SHOWN, SEE STANDARD CONSTRUCTION DRAWING I-8 C.B. 2-4 & 2-6
2. WHEN CATCH BASIN IS USED ON CONTINUOUS SLOPE, OMIT WINDOW ON DOWNSTREAM SIDE OF CATCH BASIN

STANDARD NO. 2-4 C.B.
STANDARD NO. 2-6 C.B.
(MODIFIED)
NOT TO SCALE



PLAN
SPRING DRAIN DETAIL

SECTION A-A

NOTE;

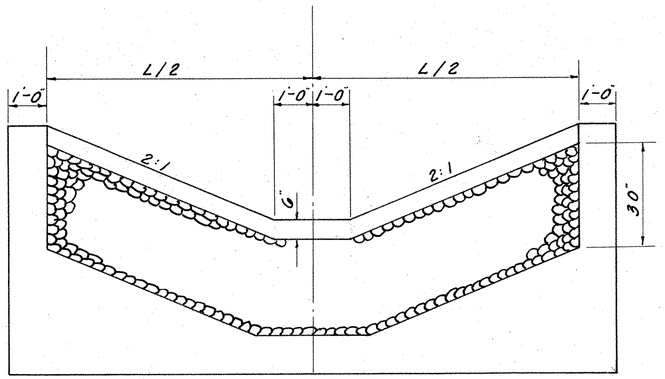
No. 34 Aggregate shall be used with a 6" layer of No. 6 Aggregate over the top and sealed with Tarred Paper or Tarred Burlap.

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. Spring Drains are to be Placed as shown on plan or at Locations Designated By The Engineer.

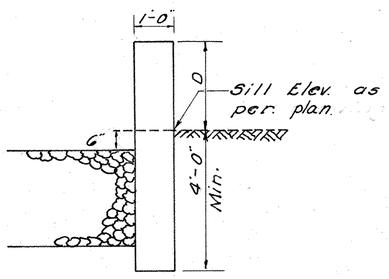
Quantities of I-9 Stone Underdrains, No. 1, as per plan, and of I-1 Pipe are carried in the General Notes (Sheet No. 12) for Spring Drains This item shall be non-performed in the event that none are encountered. The size of the Spring Drains shall be determined by the Engineer.

Payment shall be based on final measurement.

DETAIL SECTION SPRING DRAIN
Scale 1" = 1'-0"



ENDSILL DETAIL



D	L (ft.)	Conc. Cu. Yds.
15"	7.0	1.5
30"	12.	2.7
42"	16.	3.8

I-125 PAVEMENT MARKING

STATION TO STATION	LENGTH	4" EDGE LINE	4" LANE LINE	6" LANE LINE	8" CHAN LINE	CURB PAINT	DIAG. LINE	REMARKS
	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LUMP	LUMP	
415+00 657+41.53	24,241.6	48,483		18,181				℄ PAV'T & 2 MED. EDGES
9+99.42 ~ 60+00	5,000.6	10,001		3,750				℄ PAV'T & 2 MED. EDGES
415+00 ~ 651+50	23,650	23,650						RT. EDGE TO CURB NOSING
415+00 ~ 650+52	23,552	23,552						LT. EDGE TO CURB NOSING
652+50 ~ 657+41.53	491.5	492						RT. EDGE
9+99.42 ~ 26+00	1600.6	1601						RT. EDGE TO CURB NOSING
26+00 ~ 60+00	3400	3400						RT. EDGE TO END PROJECT
644+76.4 ~ 657+41.53	1265	1265						LT. EDGE
9+99.42 ~ 22+50	1250.6	1251						LT. EDGE TO CURB NOSING
23+62.5 ~ 60+00	3637.5	3638						LT. EDGE TO END PROJECT
50+52 ~ 59+75	923	1246						RAMP "A" - EDGE
14+00 ~ 23+63	1926	1826						RAMP "B" - EDGE
65+53 ~ 660+50	897	1694						RAMP "C" - EDGE
13+50 ~ 26+00	2500	2050						RAMP "D" - EDGE
644+76.4 ~ 650+52.42	576		68		396			RAMP "A"
22+50.00 ~ 26+00.00	595				595			RAMP "B"
26+00.00 ~ 30+50.00			84					RAMP "B"
648+75.00 ~ 652+50	650				650			RAMP "C"
644+50.00 ~ 648+75.00	425		255					RAMP "C"
26+00.00 ~ 31+28.00	528		76		325			RAMP "D"
SUBTOTALS (FT.)		124,149	483	21,931	1966	LUMP	LUMP	
SUBTOTALS (MILES)		23.51	0.09	4.15	0.37			
TOTALS TO GEN. SUM		23.51	0.09	4.15	0.37	LUMP		

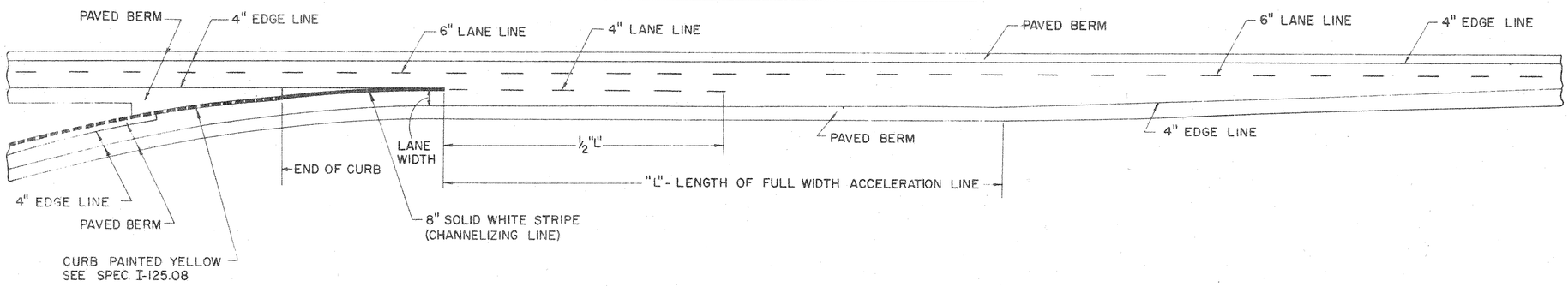
MISCELLANEOUS DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

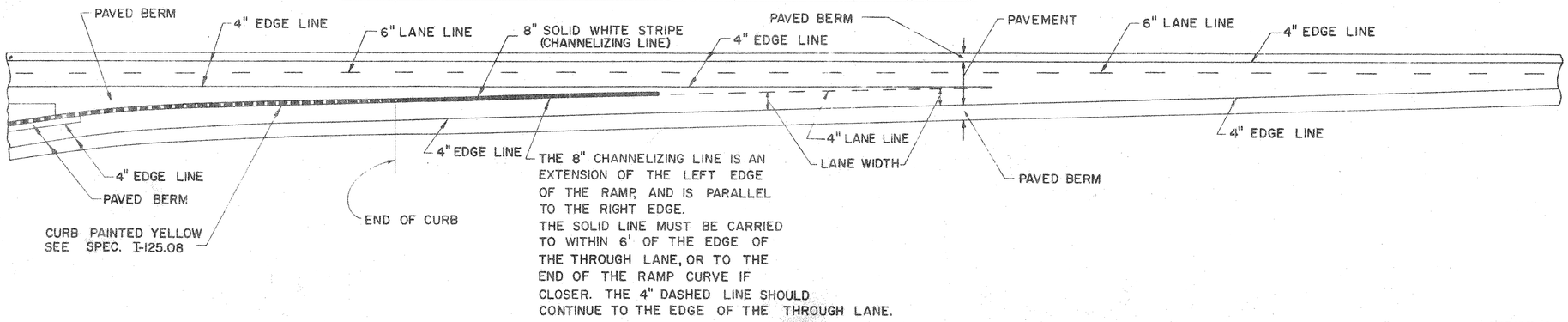
439
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 / BEL–40–0.00

ENTRANCE TERMINAL - PARALLEL ACCELERATION LANE

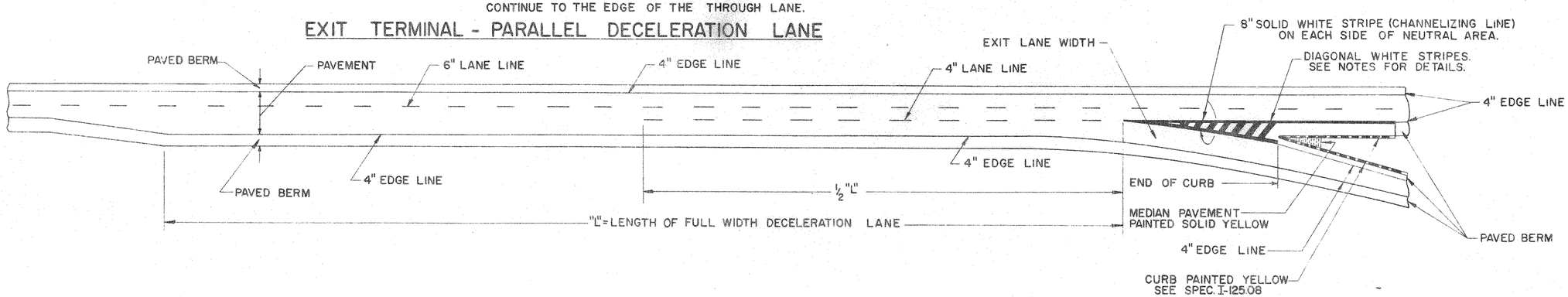


ENTRANCE TERMINAL - TAPERED ACCELERATION LANE

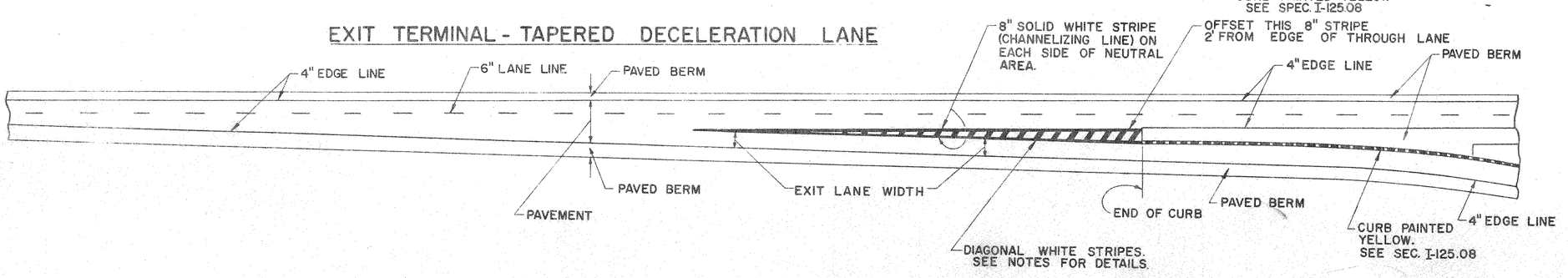


THE 8" CHANNELIZING LINE IS AN EXTENSION OF THE LEFT EDGE OF THE RAMP, AND IS PARALLEL TO THE RIGHT EDGE. THE SOLID LINE MUST BE CARRIED TO WITHIN 6' OF THE EDGE OF THE THROUGH LANE, OR TO THE END OF THE RAMP CURVE IF CLOSER. THE 4" DASHED LINE SHOULD CONTINUE TO THE EDGE OF THE THROUGH LANE.

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.

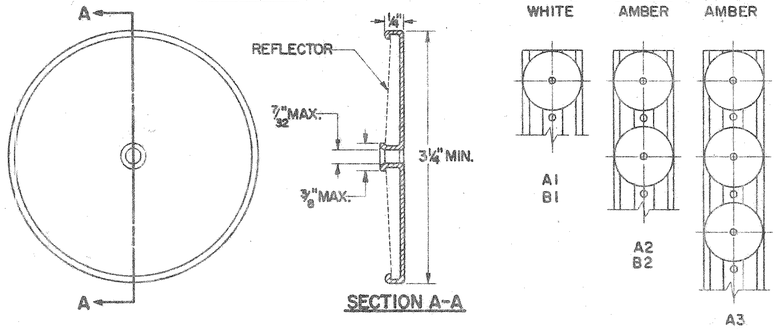
MISCELLANEOUS DETAILS PAVEMENT MARKING

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

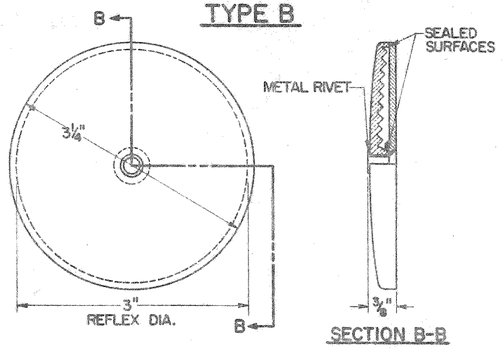
440
485

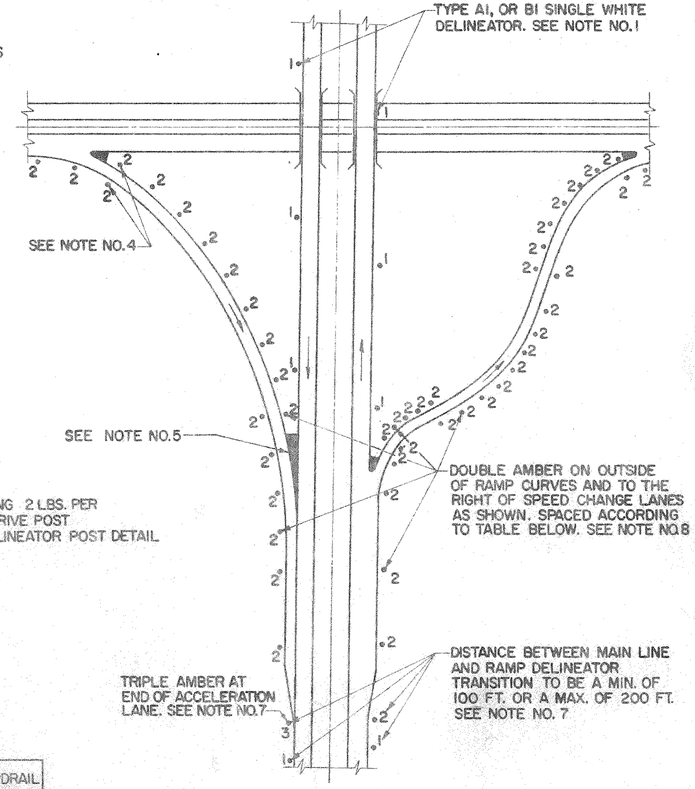
GUERNSEY COUNTY – BELMONT COUNTY
GUE–40–23.88 BEL–40–0.00

TYPE A



TYPE B



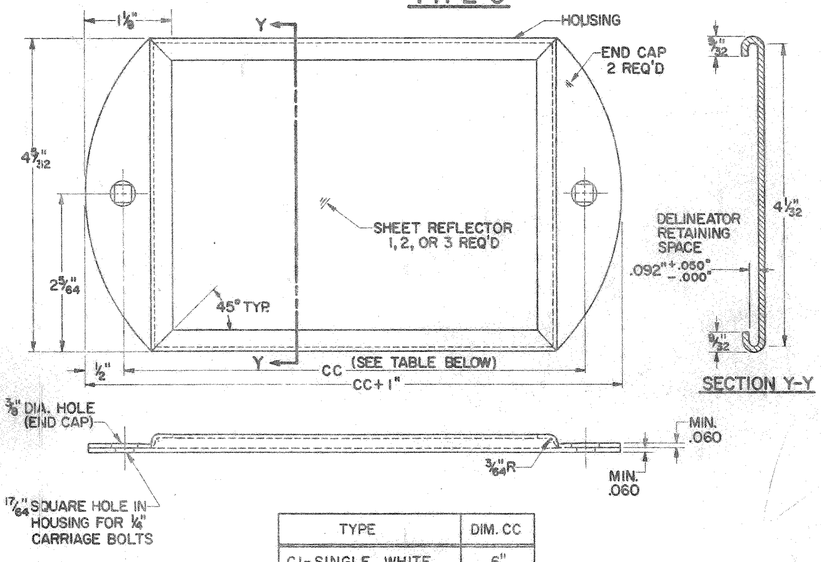


TYPICAL DELINEATOR PLACEMENT

NOTES

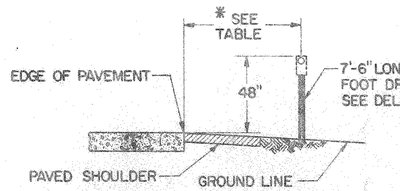
1. TYPE A1 OR B1 DELINEATORS ON THE RIGHT OF THE THROUGH ROADWAY ARE TO BE SPACED AT 200 FT. INTERVALS THROUGHOUT, REGARDLESS OF CURVES, BEGINNING AT STA. +00, +25, +50, OR + 75.
2. DELINEATORS SHALL BE FURNISHED AND ERECTED IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION NO. I-127, (1-15-62).
3. PAYMENT 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.

TYPE C



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

LATERAL PLACEMENT OF DELINEATORS



* TABLE

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

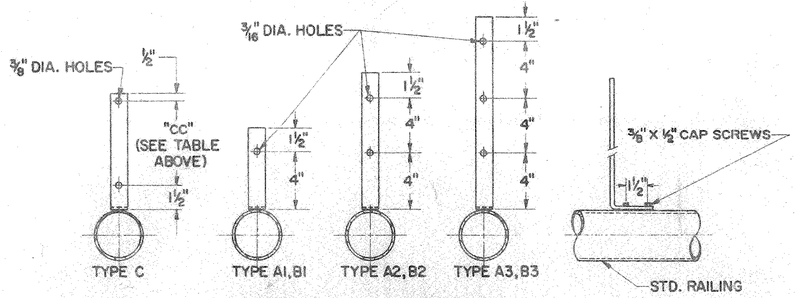
** THIS DIMENSION SHALL VARY ON SPEED CHANGE LANES TO MAINTAIN MINIMUM DISTANCE OF 2'-6" FROM EDGE OF PAVED SHOULDER.

DELINEATOR SPACING ON RAMP HORIZONTAL CURVES

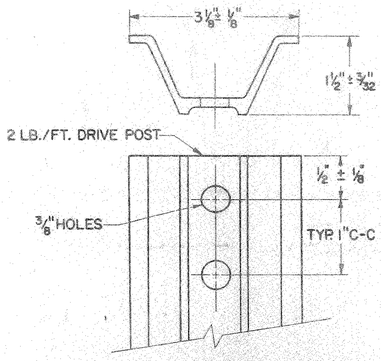
RADII, FT. FROM	RADII, FT. TO	SPACING ON CURVE	* TRANSITION SPACING	
TANGENT	1,801	100'	100'	100'
1,800	1,401	80'	100'	100'
1,400	1,001	70'	100'	100'
1,000	751	60'	100'	100'
750	551	50'	80'	100'
550	326	40'	70'	100'
325	———	30'	60'	100'

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

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



BRIDGE RAIL BRACKET



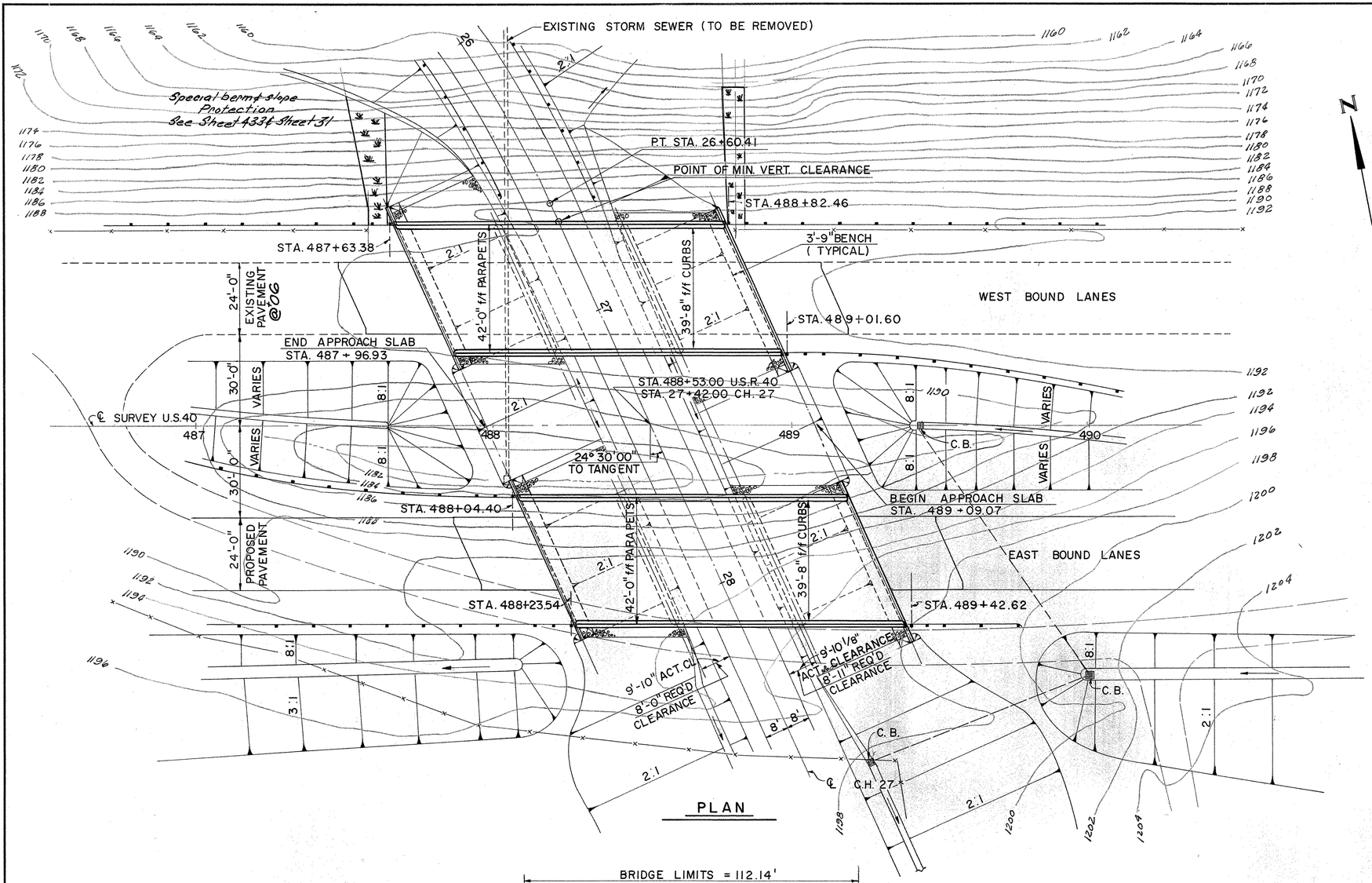
DELINEATOR POST

DELINEATOR DETAILS I-127

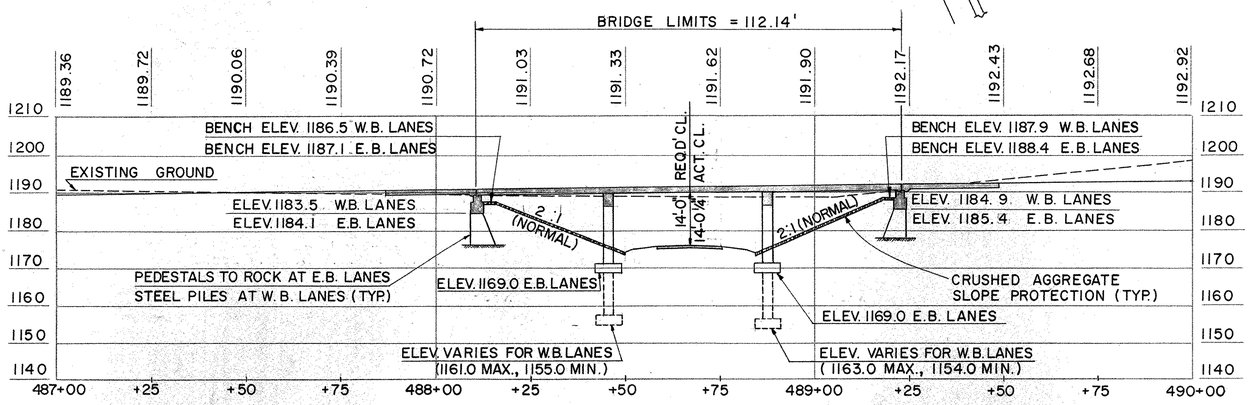
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

441
185

GUERNSEY COUNTY - BELMONT COUNTY
GUE - 40 - 23.88 BEL - 40 - 0.00



PLAN



PROFILE
(ALONG E.B. LANES P.G. LINE)

Piles for abutments #1 and #3 shall be 10BP42 steel piles:
Estimated average pay length for piles
Abutment #1 = 21'
Abutment #3 = 27'

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 may be inspected in the office of the Bureau of Bridges in Columbus or in the Division office, but the State does not guarantee the accuracy thereof.

HORIZONTAL CURVE DATA = U.S.R.40

P.I STA. 490+56.12
Δc = 16° 34' 33" LT.
Dc = 0° 23' 58"
Rc = 14,343.87'
Lc = 4,149.72'
Tc = 2,089.45'
Ec = 151.38'

VERTICAL CURVE DATA = U.S.R. 40

G_1 = + 2.16 % G_2 = - 2.50 %
P.V.I. STA. 496+65 ELEV. 1211.78
V.C. 2800 CORRECTION = 16.31

PROPOSED STRUCTURE

TYPE: Continuous reinforced concrete slab with reinforced concrete piers and capped pile abutments.

SPANS: 34'-0", 42'-6", 34'-0" center to center of bearings, measured along ℄ survey.

ROADWAY: Two at 42'-0" face to face parapets.

LOAD FREQUENCY: C.F. 2000(57), adequate for A.A.S.H.O. alternate loading.

WEARING SURFACE: 1" monolithic concrete.

SKEW: 24°30'00" R.F.

APPROACH SLABS: AS-1-54 (25' long)

ALIGNMENT: 0° 23'58" Curve left.

SUPERELEVATION: None.

RACKOFF ASSOCIATES
ENGINEERS COLUMBUS, OHIO

SITE PLAN

BRIDGE NO. GUE - 40 - 2527 L & R.
U.S. 40 OVER C.H. 27

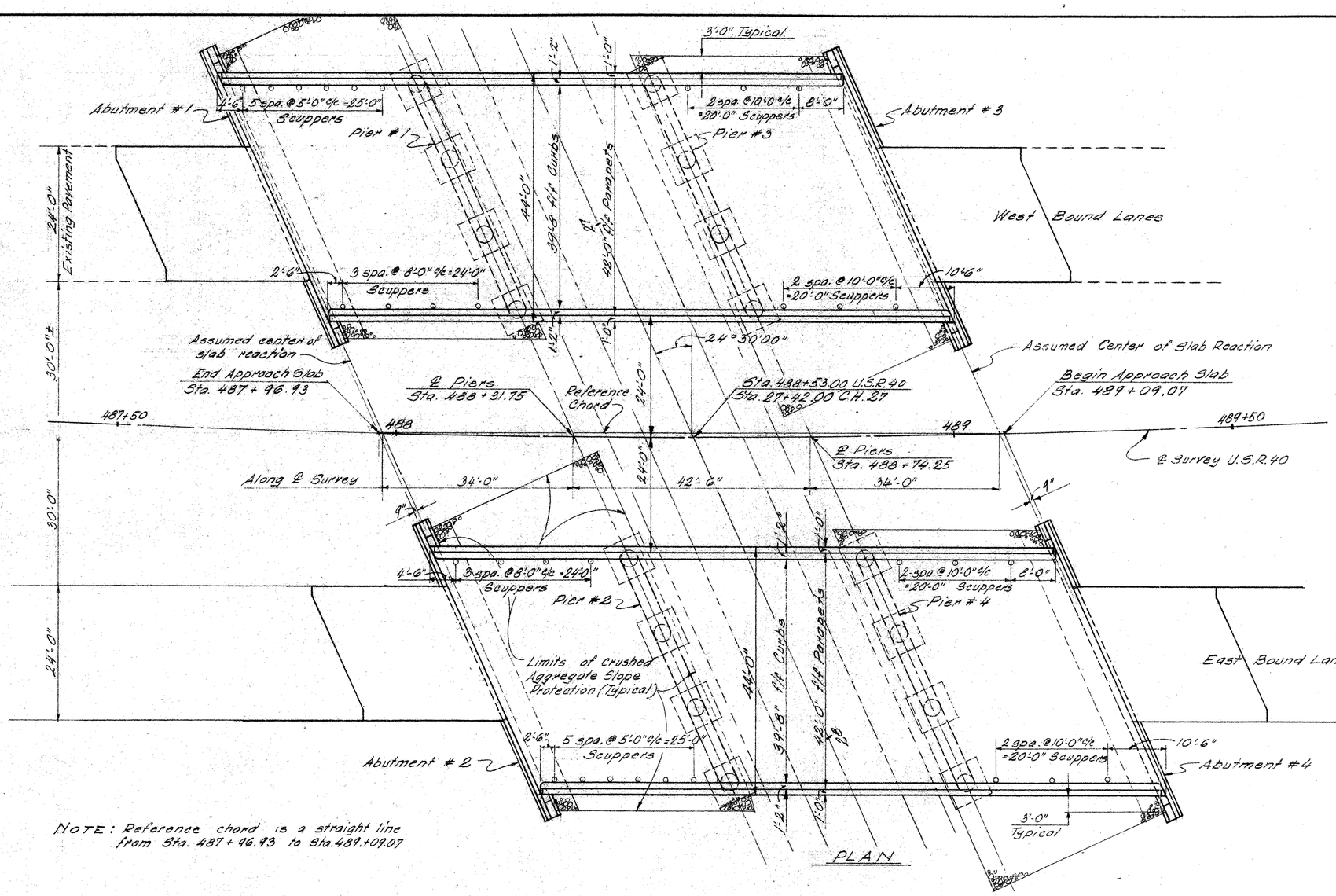
GUERNSEY COUNTY STA. 487 + 96.93
STA. 489 + 09.07

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
P.M.	E.D.A.	G.M.	N.U.	666	8-1 62	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

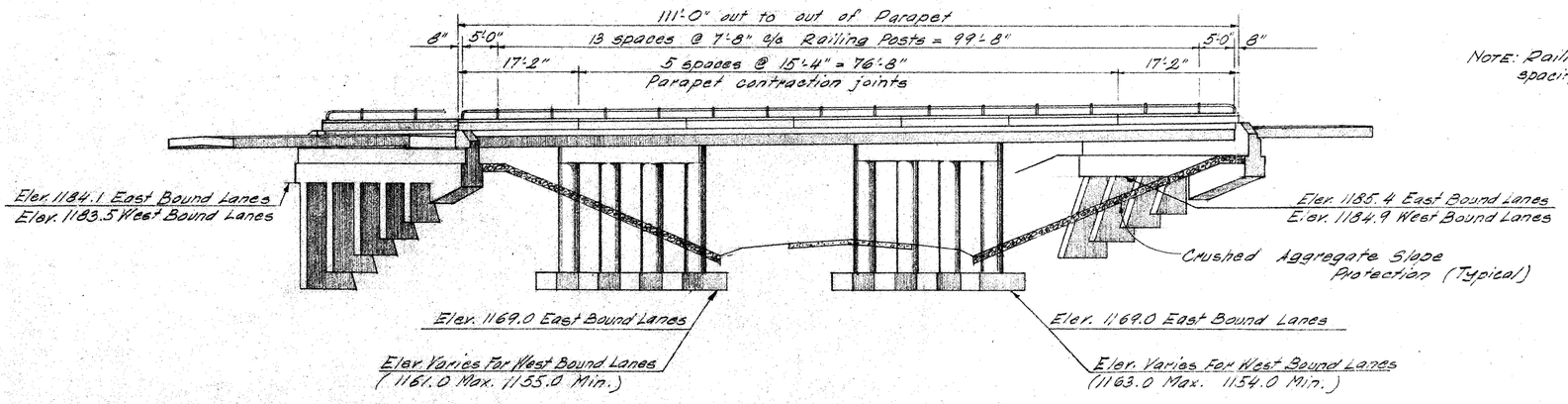
443
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00



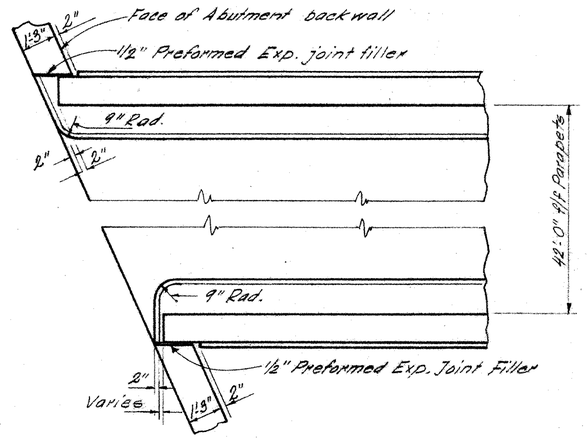
PLAN

NOTE: Reference chord is a straight line from Sta. 487 + 96.93 to Sta. 489+09.07



ELEVATION

NOTE: Railing post and parapet joint spacings typical for all parapets.



PARTIAL PLAN AT ENDS OF CURBS

NOTE: See sheet #444 for substructure location plan.

RACKOFF ASSOCIATES
ENGINEERS COLUMBUS, OHIO

GENERAL PLAN

BRIDGE NO. GUE-40-2527 L & R
U.S. 40 OVER CH. 27
GUERNSEY COUNTY
STA. 487 + 96.93
STA. 489 + 09.07

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
P. M.	G. M.		N. U.	666	8-1-62	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

443
485

GUERNSEY COUNTY - BELMONT COUNTY
GUE - 40 - 23.88 BEL - 40 - 0.00

GENERAL NOTES

REFERENCE SHALL BE MADE TO:
Supplemental Specification S-101, dated 7-12-62
Standard Drawing CS-2-54, revised 2-2-59
Standard Drawing AR-1-57, revised 4-2-62

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 the 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 for abutments # 1 and # 3 shall be driven with a hammer of not less than 11,000 ft. lbs. per blow to firm contact with shale. If the length of penetration is approximately equal to the depth to rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. S-18.05 is not less than the following value for a pile hammer of the indicated energy rating:

For abutment # 1 piles
40 tons per pile using an 11,000 ft. lb. hammer
36 tons per pile using a 15,000 ft. lb. or greater hammer
For abutment # 3 piles
36 tons per pile using an 11,000 ft. lb. hammer
32 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 30 tons per pile.

PIER FOOTINGS shall extend a minimum of three inches into undisturbed shale or to elevation 1169.0, whichever is lower.

PEDESTALS for abutments # 2 and # 4 shall extend a minimum of six inches into undisturbed shale.

OPEN EXCAVATIONS: Before construction of the footings and abutment pedestals the open excavations shall be inspected by the Engineer, in order to insure that the excavations have been extended to shale throughout the entire founding area. The excavations shall be kept well drained at all times and prolonged atmospheric exposure shall be avoided.

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 6.2 tons per sq. ft. Abutment pedestals are designed for a maximum bearing pressure of 6.2 tons per sq. ft.

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 sidewalks and roadways.

b) The entire surface of piers and abutments except the face of abutments between edges of superstructure.

MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine.

SLAB THICKNESS of concrete deck is 18 3/4", which includes 1" monolithic wearing surface.

ESTIMATED QUANTITIES (2 BRIDGES)

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUT.	PIER	GEN.	AS BUILT	
E-2	lump	sum	Cofferdams, cribs and sheeting						
E-2	716	cu. yds.	Unclassified excavation		344	372			
E-2	100	cu. yds.	Shale excavation		4	96			
S-1	605	cu. yds.	Class "C" concrete, superstructure	605					
S-1	139	cu. yds.	Class "C" concrete, piers above footings			139			
S-1	73	cu. yds.	Class "E" concrete, pier footings			73			
S-1	155	cu. yds.	Class "E" concrete, abutments		155				
S-4	213,581	lbs.	Reinforcing steel	155,080	14,384	44,117			
S-9	17	sq. ft.	1/2" preformed expansion joint filler		17				
S-14	444.00	lin. ft.	Railing (aluminum rail and supports, concrete parapet)	444.00					
S-16	lump	sum	First test pile						
S-18	427	lin. ft.	10 BP 42 steel piles		427				
S-29	114	cu. yds.	Porous backfill	114					
S-29	32	each	Scuppers (4" ϕ cast or wrought iron pipe)	32					
I-10	975	sq. yds.	Crushed aggregate slope protection				975		
S-101	605	each	Water-reducing, set-retarding admixture	605					

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 (except piling) 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.

RACKOFF ASSOCIATES
ENGINEERS COLUMBUS, OHIO

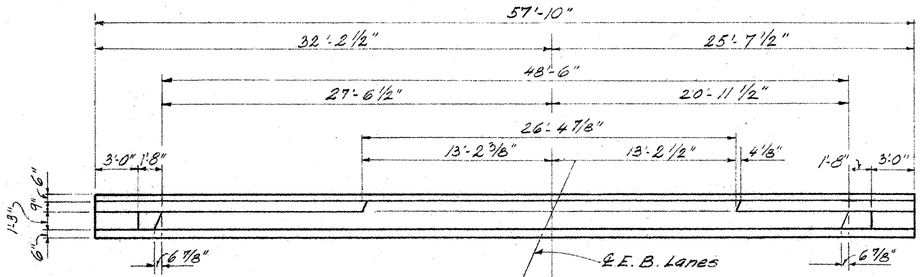
GENERAL NOTES
AND ESTIMATED QUANTITIES
BRIDGE NO. GUE-40-2527 L & R
U.S. 40 OVER CH. 27
GUERNSEY COUNTY STA. 487 + 96.93
STA. 489 + 09.07

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
P. M.	E.D.A.		N.U.	666	8-1 62	
N. U.	M. R.		M.R.			

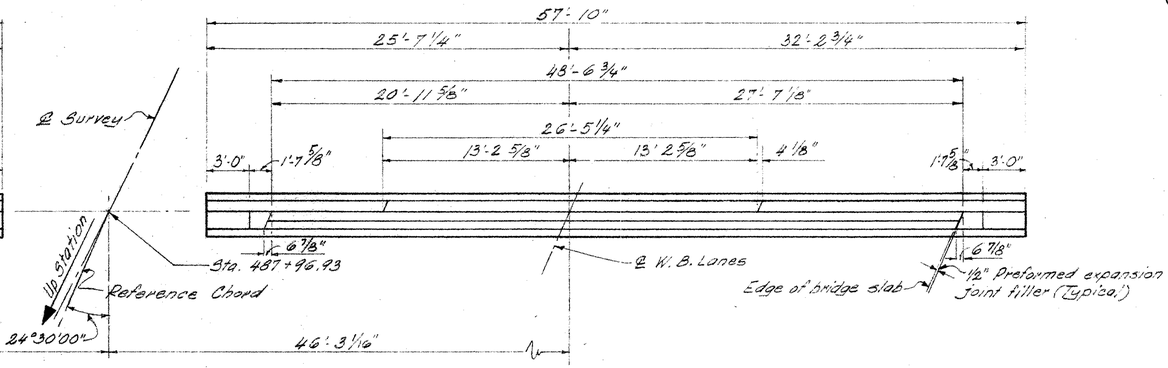
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

444 / 485

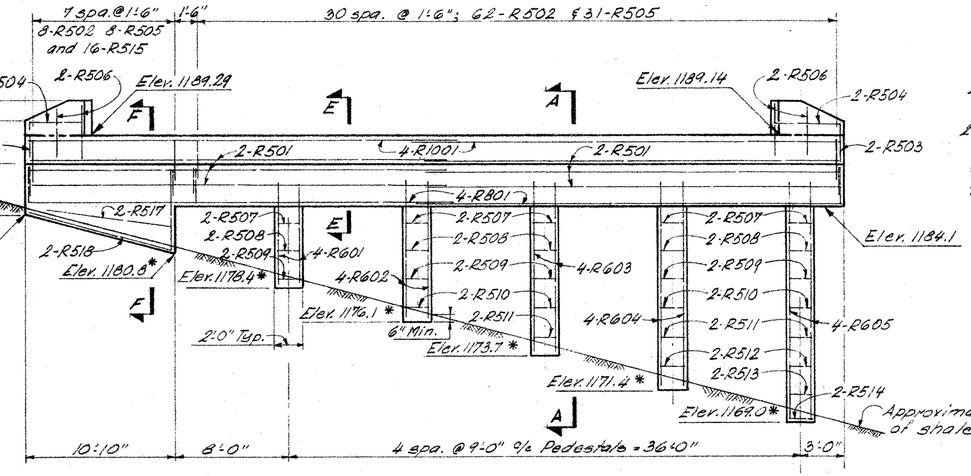
GUERNSEY COUNTY — BELMONT COUNTY
GUE - 40 - 23.88 BEL - 40 - 0.00



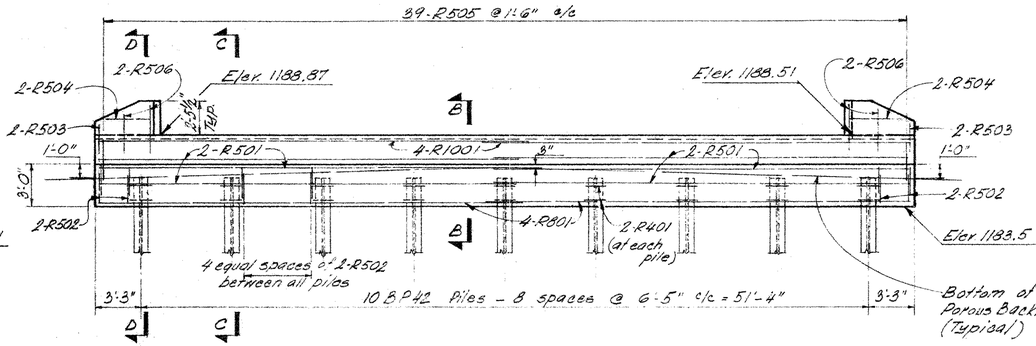
PLAN - ABUTMENT # 2

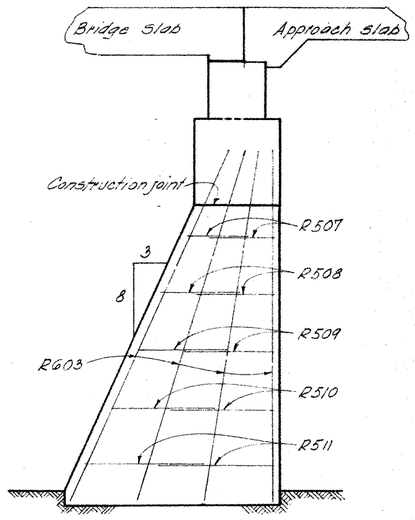


PLAN - ABUTMENT # 1



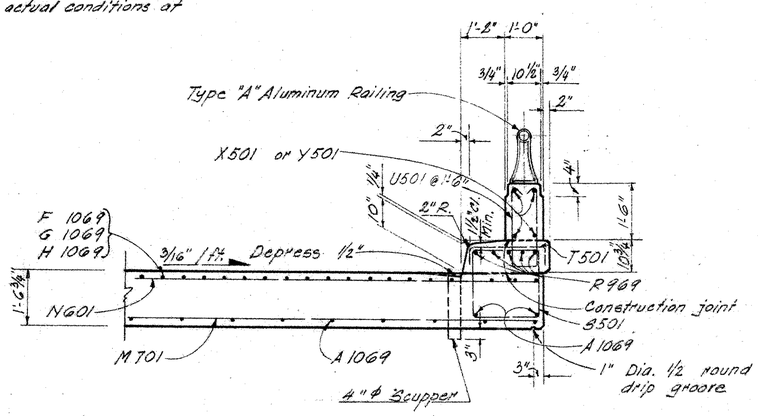
ELEVATION - ABUTMENT # 2





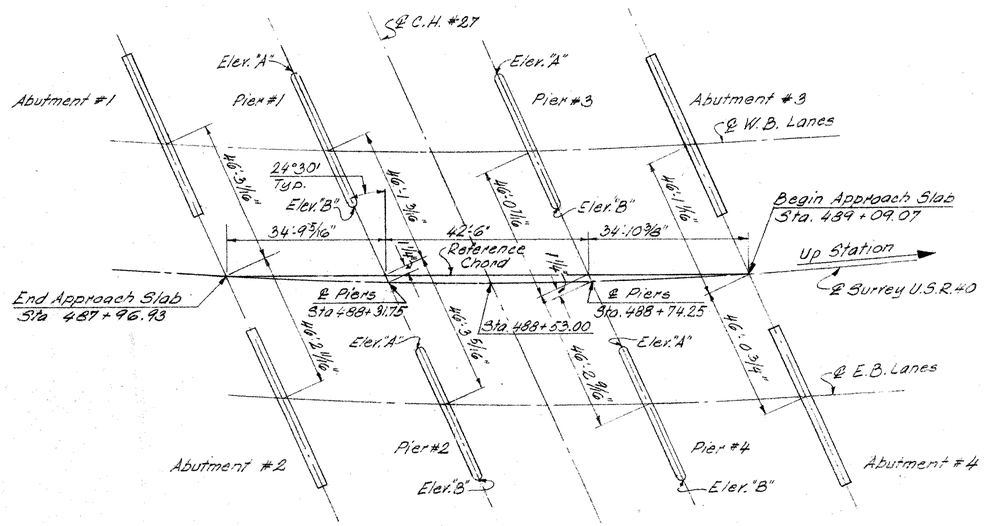
SECTION A-A
Showing pedestal reinforcing

* These are approximate elevations and shall be adjusted to fit the actual conditions at the site.



ELEVATION - ABUTMENT # 2

SUPERSTRUCTURE SECTION THROUGH CURB AT PIER
For details not shown see Standard Drawing CS-2-54



SUBSTRUCTURE LOCATION PLAN

NOTES:

PROCEDURE: After the pedestals have been constructed the backfill shall be placed and compacted up to the top of the pedestals, after which the abutment crossbeam shall be constructed.

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 the bid price per cu. yd. paid for porous backfill.

See sheet #445 for Sections B-B, C-C, D-D, E-E & F-F.

RACKOFF ASSOCIATES
ENGINEERS COLUMBUS, OHIO

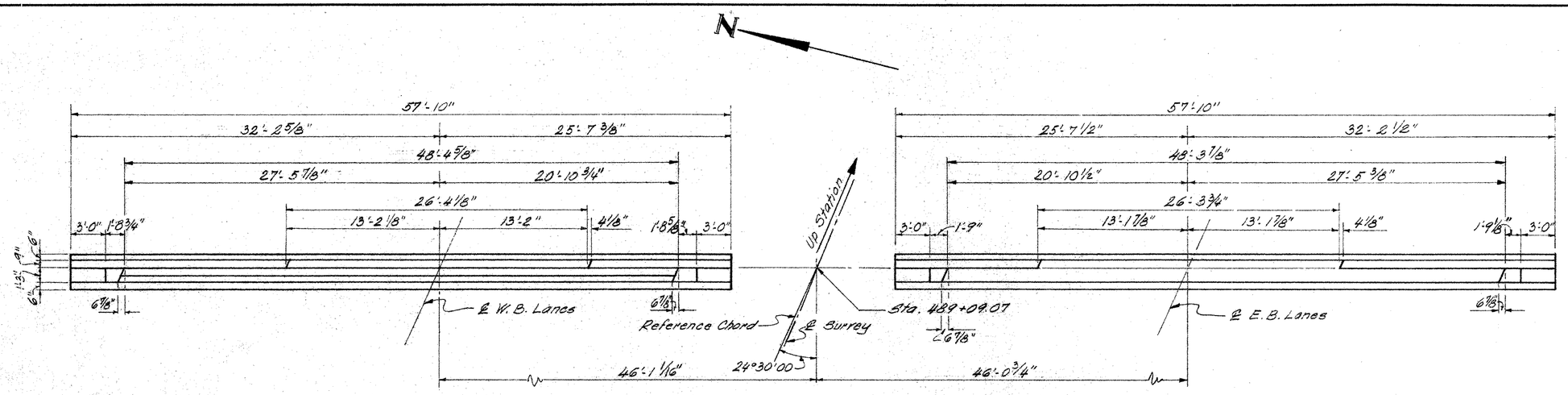
ABUTMENT AND SUPERSTRUCTURE DETAILS
BRIDGE NO. GUE-40-2527 L & R
U.S. 40 OVER CH. 27
GUERNSEY COUNTY STA. 487+96.93 STA. 489+09.07

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
P. M.	G. M.		N. U.	-666	8-1 62	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

445
485

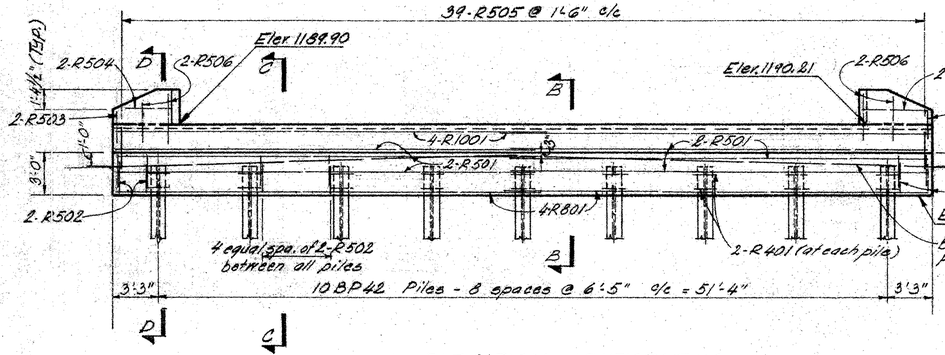
GUERNSEY COUNTY — BELMONT COUNTY
GUE - 40 - 23.88 BEL - 40 - 0.00



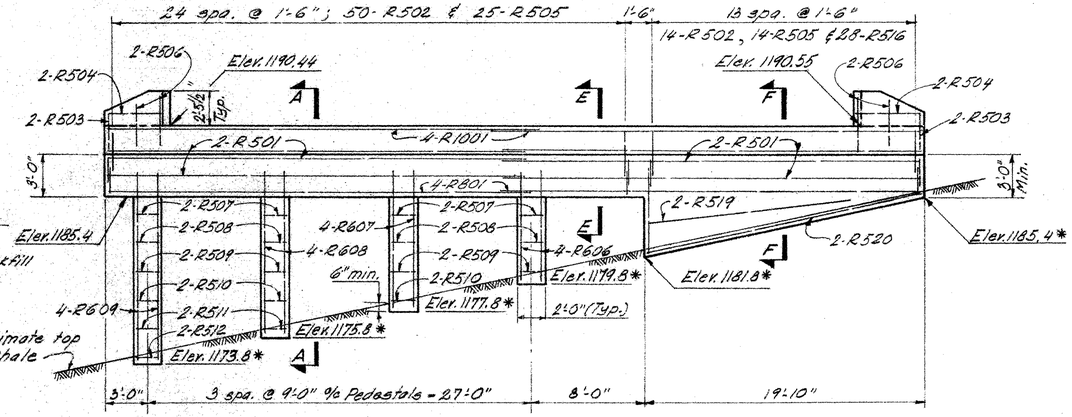
PLAN - ABUTMENT # 3

PLAN - ABUTMENT #4

NOTE:
See sheet #444 for Section A-A and additional notes.

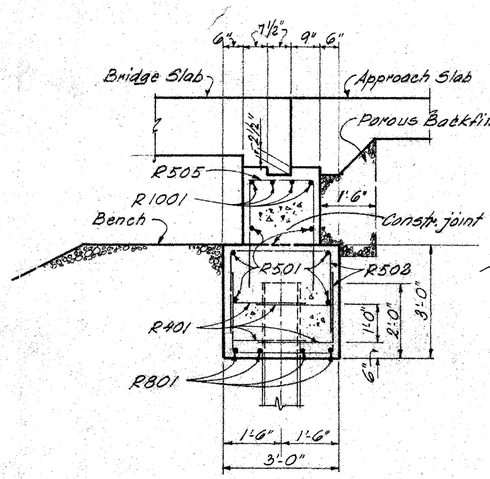


ELEVATION - ABUTMENT #3

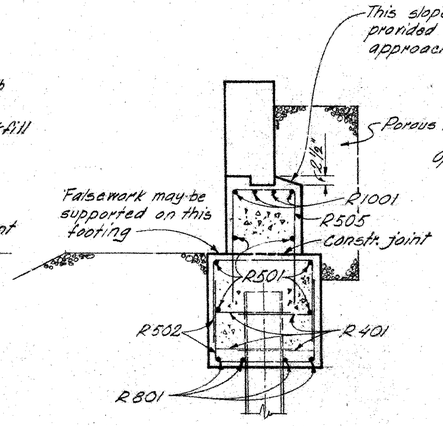


ELEVATION - ABUTMENT #4

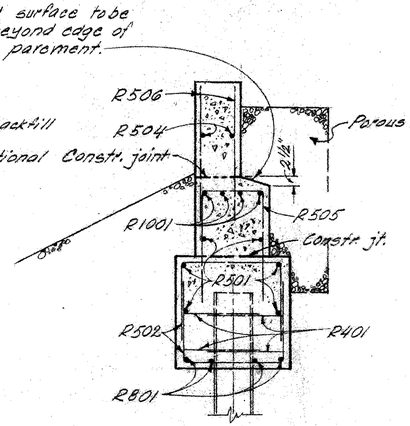
* These are approximate elevations and shall be adjusted to fit the actual conditions at the site.



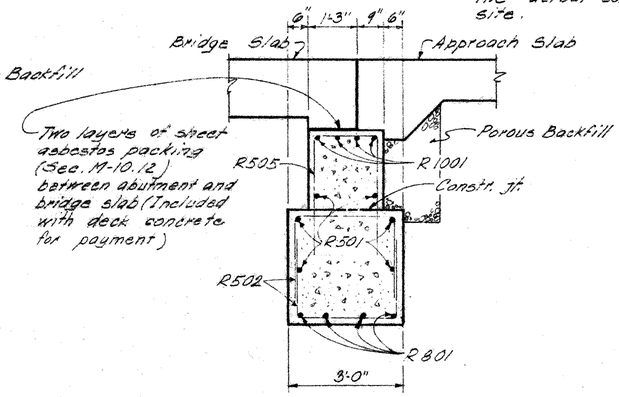
SECTION B-B



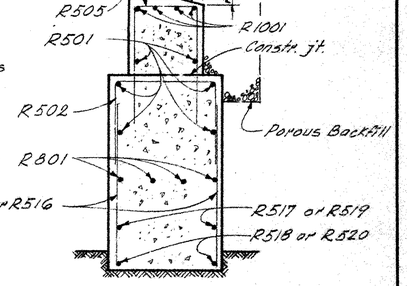
SECTION C-C



SECTION D-D



SECTION E-E



SECTION F-F

RACKOFF ASSOCIATES
ENGINEERS COLUMBUS, OHIO

ABUTMENT DETAILS

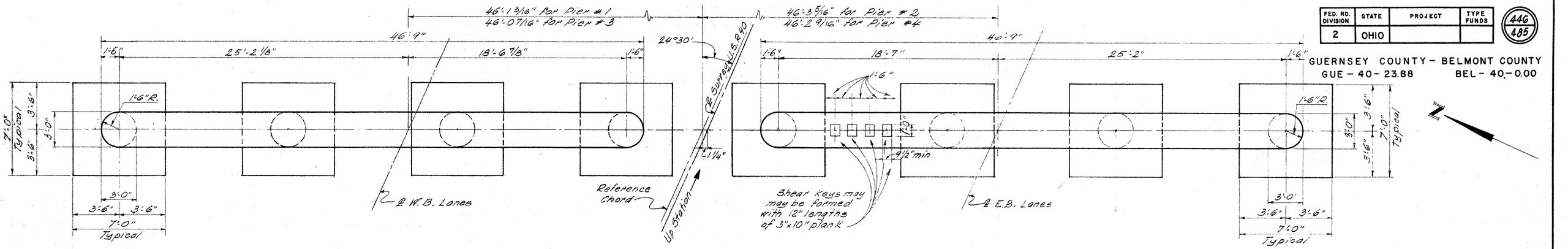
BRIDGE NO GUE-40-2527 L & R
U.S. 40 OVER CH. 27
GUERNSEY COUNTY
STA. 487 + 96.93
STA. 489 + 09.07

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
P.M.	G.M.		N.U.	666	8-1-62	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

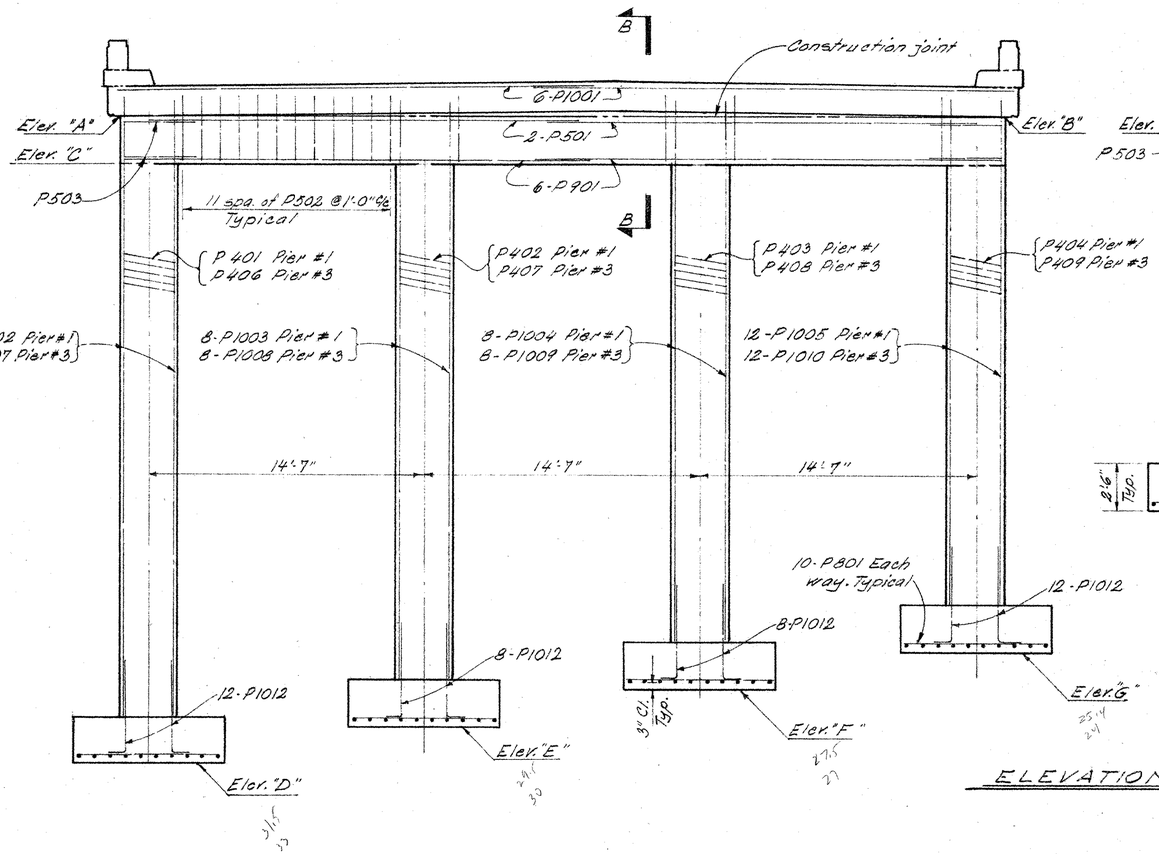
446
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

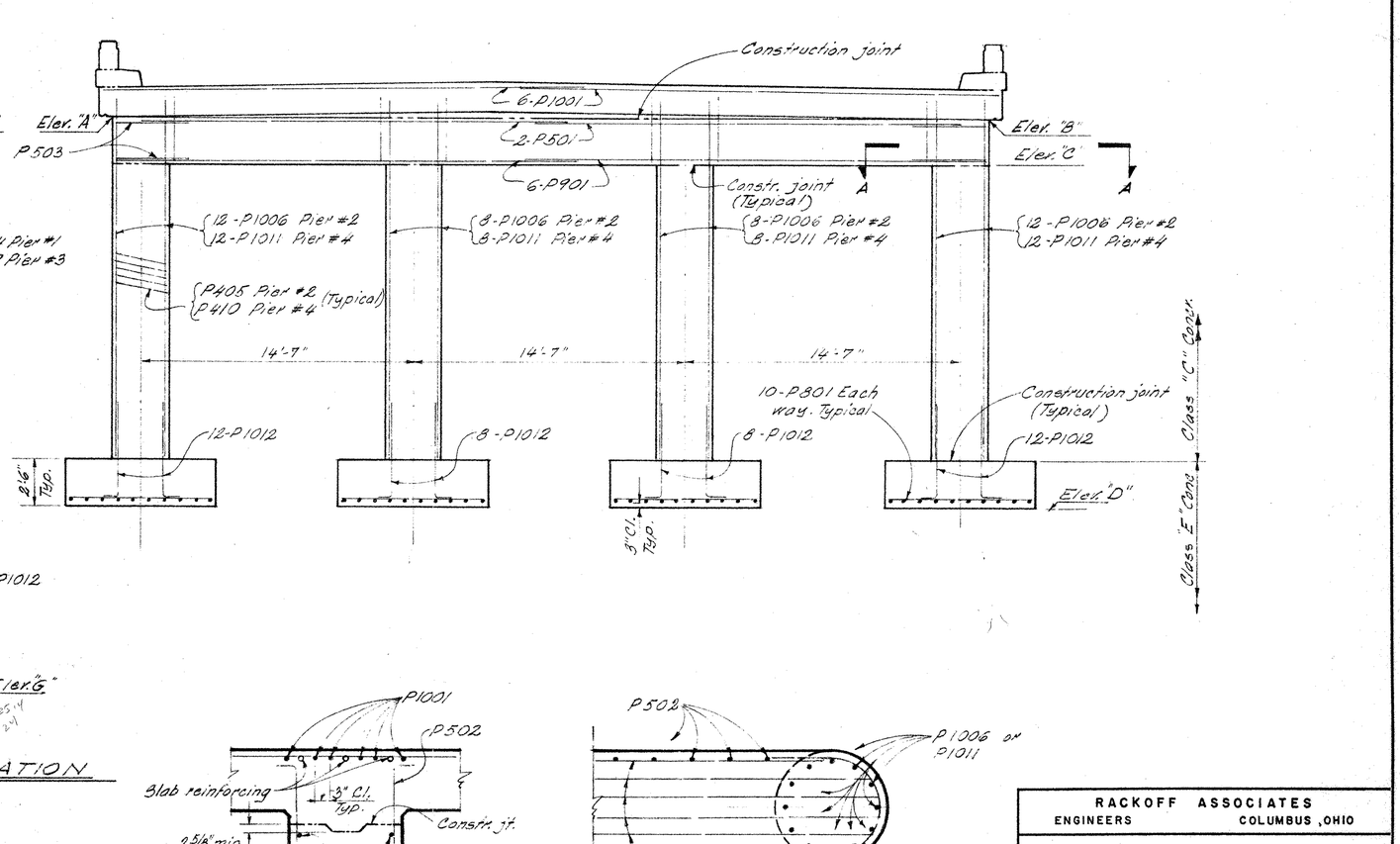


PLAN

NOTE:
The pier cap shall not be used to support falsework for the deck slab.



ELEVATION



ELEVATIONS							
LOCATION	"A"	"B"	"C"	"D"	"E"	"F"	"G"
Pier # 1	1188.98	1189.32	1186.48	1155.0	1157.0	1159.0	1161.0
Pier # 2	1189.58	1189.71	1187.08	1169.0	—	—	—
Pier # 3	1189.50	1189.83	1187.00	1154.0	1157.0	1160.0	1163.0
Pier # 4	1190.07	1190.19	1187.57	1169.0	—	—	—

SECTION B-B

SECTION A-A

RACKOFF ASSOCIATES
ENGINEERS COLUMBUS, OHIO

PIER DETAILS

BRIDGE NO. GUE-40-2527 L & R
U.S. 40 OVER CH. 27
GUERNSEY COUNTY
STA. 487 + 96.93
STA. 489 + 09.07

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
N. U.	G.M.		P.M.	666	8-1-62	

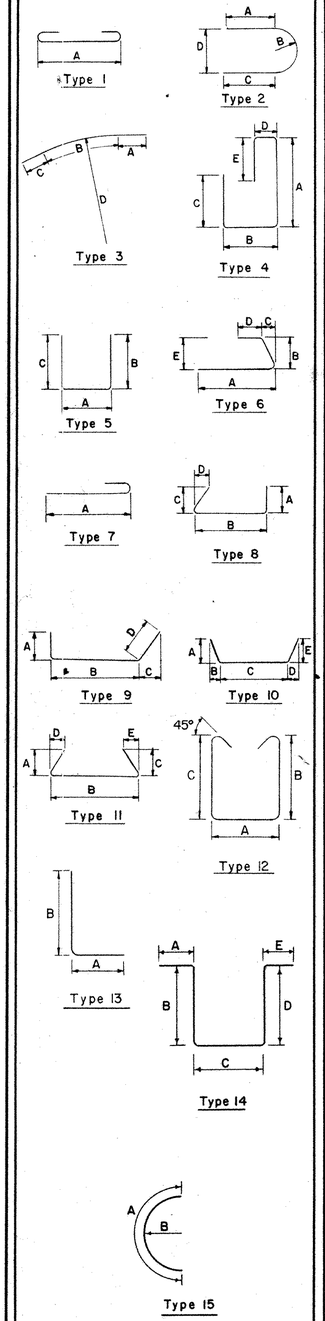
REINFORCING STEEL LIST

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

447
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40 – 0.00

BENDING DIAGRAM



S IN THE COLUMN FOR "TYPE" INDICATES STRAIGHT BARS.

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F
ABUTMENTS										
R 401	72	5-5	260	5	1-9	1-11	1-11			
R 501	48	29-7	1,481	S						
R 502	310	6-7	2,128	5	2-8	2-1	2-1			
R 503	16	2-3	38	S						
R 504	16	3-6	58	S						
R 505	156	7-11	1,288	5	1-8	3-3	3-3			
R 506	32	3-6	117	S						
R 507	18	6-1	114	5	1-8	2-4	2-4			
R 508	18	6-11	130	5	1-8	2-9	2-9			
R 509	18	7-7	142	5	1-8	3-1	3-1			
R 510	14	8-5	123	5	1-8	3-6	3-6			
R 511	10	9-1	95	5	1-8	3-10	3-10			
R 512	6	9-11	62	5	1-8	4-3	4-3			
R 513	2	10-7	22	5	1-8	4-7	4-7			
R 514	2	11-5	24	5	1-8	5-0	5-0			
R 515	16	2-11 to 5-10	74	S	2 each, vary by 5"					
R 516	28	2-3 to 5-6	114	S	2 each, vary by 3"					
R 517	2	9-0	19	S						
R 518	2	10-6	22	S						
R 519	2	14-0	29	S						
R 520	2	19-6	41	S						
R 601	8	7-9	93	S						
R 602	8	10-0	120	S						
R 603	8	12-5	149	S						
R 604	8	14-9	177	S						
R 605	8	17-1	205	S						
R 606	8	7-7	91	S						
R 607	8	9-7	115	S						
R 608	8	11-7	139	S						
R 609	8	13-7	163	S						
R 801	32	30-0	2,563	S						
R 1001	32	30-5	4,188	S						
		TOTAL	14,384							

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F
PIERS										
P 501	16	22-8	378	S						
P 502	144	10-0	1,502	14	0-6	3-5	2-8	3-5	0-6	
P 503	16	7-3	121	2	1-7	1-3½	1-7	2-8¼		
P 801	320	6-8	5,696	S						
P 901	48	24-8	4,026	S						
P 1001	48	24-10	5,129	S						
P 1002	12	32-3	1,665	S						
P 1003	8	30-3	1,041	S						
P 1004	8	28-3	972	S						
P 1005	12	26-3	1,355	S						
P 1006	40	18-10	3,242	S						
P 1007	12	33-9	1,743	S						
P 1008	8	30-9	1,059	S						
P 1009	8	27-9	955	S						
P 1010	12	24-9	1,278	S						
P 1011	40	19-4	3,328	S						
P 1012	160	6-6	4,475	13	1-6	5-4				
			37,965							
		SPIRAL	6,152							
		TOTAL	44,117							

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F
SUPERSTRUCTURE										
A1069	264	39-4	44,682	S						
B1069	76	28-4	9,266	7	27-1					
C1069	80	24-9	8,520	7	23-6					
D1069	38	25-10	4,224	S						
E1069	40	18-4	3,156	S						
F1069	176	34-7	26,191	S						
G1069	88	19-0	7,195	S						
H1069	88	14-7	5,522	S						
J 601	88	22-1	2,919	S						
K 601	44	12-9	842	S						
M 701	412	25-2	21,194	S						
N 601	280	25-0	10,514	S						
O 501	12	22-3	278	S						
P 501	24	24-6	613	S						
R 969	40	23-5	3,185	S						
S 501	528	6-1	3,350	4	1-8	2-0	0-6	2-0	0-6	
T 501	528	2-11	1,606	5	1-10	0-8	0-8			
U 501	304	5-9	1,823	12	0-8	2-3	2-3			
		TOTAL	155,080							
X 501	32	16-10	—	S						
Y 501	80	15-0	—	S						
REPLACEMENT BARS										
RE 401	1	5-5	—	5	1-9	1-11	1-11			
RE 402	1	5-3	—	15	5-3	1-3½				
RE 501	1	5-7	—	S						
RE 601	1	5-11	—	S						
RE 701	2	6-3	—	S						
RE 801	1	6-6	—	S						
RE 901	1	6-10	—	S						
RE 1001	7	7-3	—	S						

SPIRAL REINFORCEMENT

MARK	NO.	LENGTH	CORE	PITCH	TURNS	SPACERS	WEIGHT
P 401	1	28.98	32"	4½	83	4	539
P 402	1	26.98	32"	4½	75	4	487
P 403	1	24.98	32"	4½	70	4	454
P 404	1	22.98	32"	4½	65	4	422
P 405	4	15.58	32"	4½	45	4	1,164
P 406	1	30.50	32"	4½	85	4	552
P 407	1	27.50	32"	4½	77	4	500
P 408	1	24.50	32"	4½	69	4	448
P 409	1	21.50	32"	4½	61	4	396
P 410	4	16.07	32"	4½	46	4	1,190
						TOTAL	6,152

NOTES

BAR SIZE is indicated in bar mark. The first digit where three digits are used, and the first two where four are used indicate the bar size number.

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 three turns (total number of closed coils), expressed as the nearest whole number.

Spiral reinforcing bars shall not have deformations but shall in other respects conform to item 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.

RACKOFF ASSOCIATES
ENGINEERS COLUMBUS, OHIO

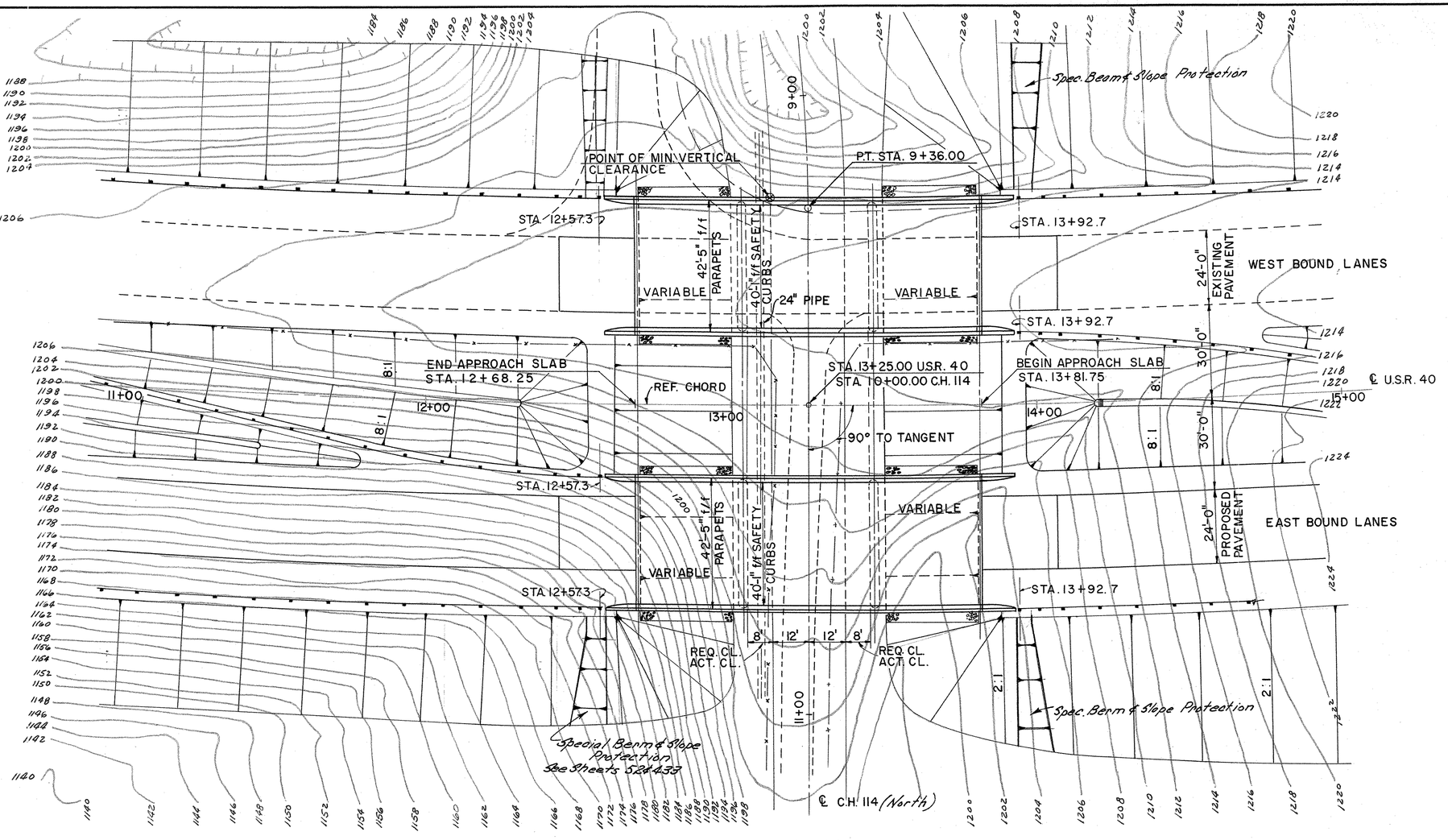
REINFORCING STEEL LIST

BRIDGE NO GUE-40-2527 L & R
U.S. 40 OVER CH. 27
GUERNSEY COUNTY
STA. 487 + 96.93
STA. 489 + 09.07

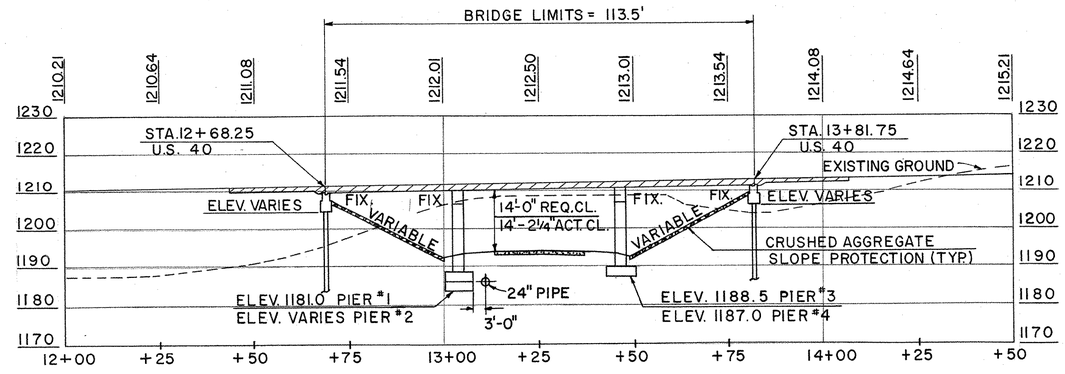
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
N.U. P.M.	G.M. M.R.		H.H N.U.	666	8-1 62	

FED. RD. DIVISION	STATE	PROJECT		448 / 485
2	OHIO			

GUERNSEY COUNTY - BELMONT COUNTY
GUE - 40 - 23.88 BEL - 40 - 0.00



PLAN



PROFILE
ALONG E.B. LANES P.G. LINES

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 may be inspected in the office of the Bureau of Bridges in Columbus or in the Division office, but the State does not guarantee the accuracy thereof.

HORIZONTAL CURVE DATA - U.S.R. 40

P.I. Sta. 665+08.86 = Sta. 17+66.75
Δc = 44°05'26" LT.
Dc = 1° 29' 29"
Rc = 3,841.77'
Lc = 2,956.34'
Tc = 1,555.71'
Ec = 303.03'

VERTICAL CURVE DATA - U.S.R. 40

G1 = + 1.40% G2 = + 3.00%
P.V.I. Sta. 14+00 ELEV. 1212.88
V.C. = 600' Corr. = 1.20'

ABUTMENT PILES SHALL BE 10 BP 42 STEEL PILES.
ESTIMATED AVERAGE PAY LENGTH FOR PILES
ABUTMENT 1 AND 2 - 32'
ABUTMENT 3 AND 4 - 15'

PROPOSED STRUCTURE

TYPE: Continuous reinforced concrete slab with reinforced concrete piers and capped pile abutments.
SPANS: 34'-6", 43'-0" and 34'-6" center to center of bearings, measured along ref. chord.
ROADWAY: Two at 42'-5" face to face of parapets
LOAD FREQUENCY: C F 2000 (57) adequate for AASHO alternate loading.
WEARING SURFACE: 1" monolithic concrete
SKEW: None
APPROACH SLABS: AS-1-54 (25' long)
ALIGNMENT: 1°29'29" curve, left
SUPERELEVATION: 0.048 ft./ft.

RACKOFF ASSOCIATES
ENGINEERS COLUMBUS, OHIO

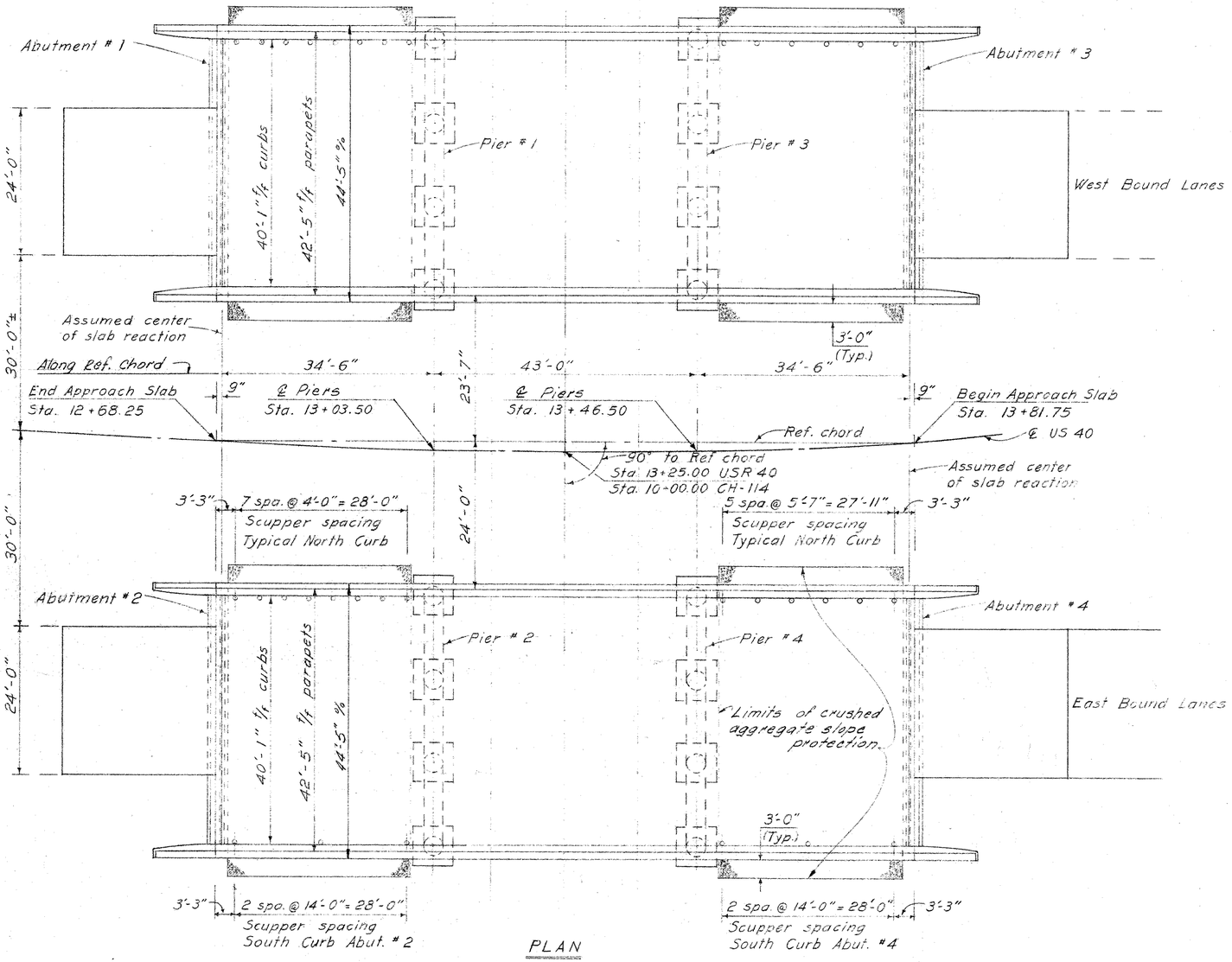
SITE PLAN
BRIDGE NO. BEL.-40-0005 L AND R
USR OVER C.H. 114
BELMONT COUNTY STA. 12+68.25 STA. 13+81.75

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
N.W.U.	E.D.A.		H.H.	666	8-1 62	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

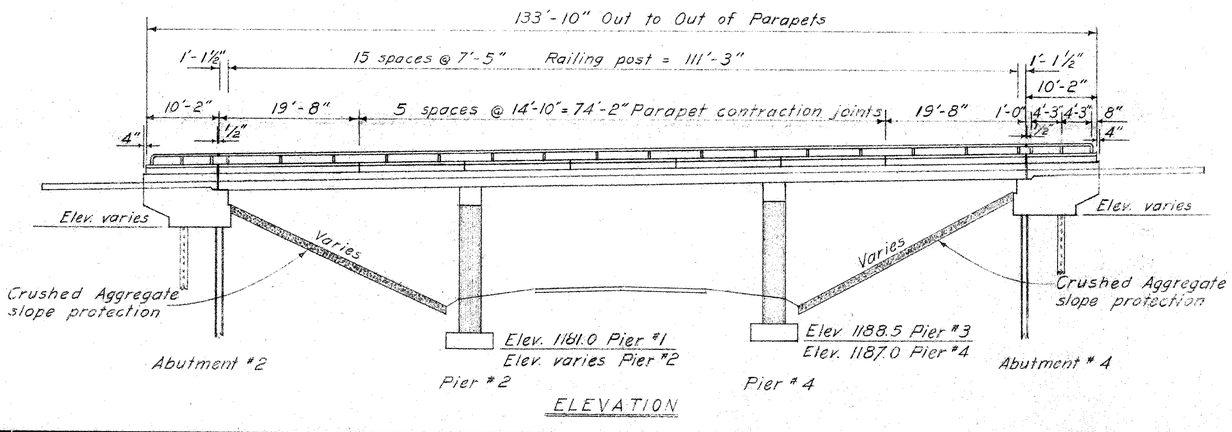
449
485

GUERNSEY COUNTY - BELMONT COUNTY
GUE - 40 - 23.88 BEL - 40 - 0.00



PLAN

Note : Reference chord is straight line from Sta. 12+68.25 to Sta. 13+81.75



ELEVATION

Note: Railing post and parapet contraction joint spacings typical for all parapets.

RACKOFF ASSOCIATES
ENGINEERS COLUMBUS, OHIO

GENERAL PLAN

BRIDGE NO. BEL-40-0005 L AND R
USR OVER C.H. 114

BELMONT COUNTY STA. 12+68.25
STA. 13+81.75

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
N.W.U.	M.R.		H.H.	666	8-1 62	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

450
485

GUERNSEY COUNTY – BELMONT COUNTY
GUE – 40 – 23.88 BEL – 40–0.00

GENERAL NOTES

REFERENCE SHALL BE MADE TO:
Standard Drawing CS-2-54, revised 2-2-59
Standard Drawing AR-1-57, revised 4-2-62
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 for abutments shall be driven to firm contact with rock. If the length of penetration is approximately equal to the depth to rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. S-18.05 is not less than the following value for a pile hammer of the indicated energy rating:

For abutment # 1 and # 2 piles
32 tons per pile using a 7,000 ft. lb. hammer
27 tons per pile using a 11,000 ft. lb. hammer
27 tons per pile using a 15,000 ft. lb. or greater hammer
For abutment # 3 and # 4 piles
39 tons per pile using a 7,000 ft. lb. hammer
32 tons per pile using a 11,000 ft. lb. hammer
29 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 27 tons per pile.

PIER FOOTINGS shall extend a minimum of three inches into undisturbed rock or to elevation 1188.5, whichever is lower. Before construction of the footings the open excavations shall be inspected by the Engineer, in order to insure that the excavations have been extended to rock throughout the entire founding area.

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 6.2 tons per sq. ft.

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 sidewalks and roadways.
b) The entire surface of piers and abutments except the face of abutments between edges of superstructure.

MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine.

SLAB THICKNESS of concrete deck is 19", which includes 1" monolithic wearing surface.

ESTIMATED QUANTITIES (2 BRIDGES)

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUT.	PIER	GEN.	AS BUILT	
E-2	614	cu.yds.	Unclassified excavation		200	414			
E-2	20	cu.yds.	Rock excavation			20			
S-1	623	cu.yds.	Class "C" concrete, superstructure	623					
S-1	138	cu.yds.	Class "C" concrete, piers above footings			138			
S-1	73	cu.yds.	Class "E" concrete, pier footings			73			
S-1	135	cu.yds.	Class "E" concrete, abutments		135				
S-4	203,013	lbs.	Reinforcing steel	144,917	14,679	43,417			
S-9	44	sq. ft.	½" preformed expansion joint filler		44				
S-14	535.33	lin. ft.	Railing (aluminum rail and supports, concrete parapet)	535.33					
S-16	lump	sum	First test pile						
S-18	846	lin. ft.	10 BP 42 steel piles		846				
S-29	32	cu.yds.	Porous backfill		32				
S-29	34	each	Scuppers (4" ϕ cast or wrought iron pipe)	34					
I-10	817	sq.yds.	Crushed aggregate slope protection				817		
S-101	623	each	Water-reducing, set-retarding admixture	623					

Design Loading - CF 2000(57)

Concrete Class E - basic unit stress 1,333
Concrete Class E - basic unit stress 1,133

Structural Steel (except pilings) 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.

RACKOFF ASSOCIATES
ENGINEERS COLUMBUS, OHIO

GENERAL NOTES
AND ESTIMATED QUANTITIES
BRIDGE NO. BEL.-40-0005 L & R
U.S. 40 OVER C.H.-114
BELMONT COUNTY STA. 12+68.25
STA. 13+81.75

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
N.W.U.	E.D.A. M.R.		H. H.	666	8-1 62	

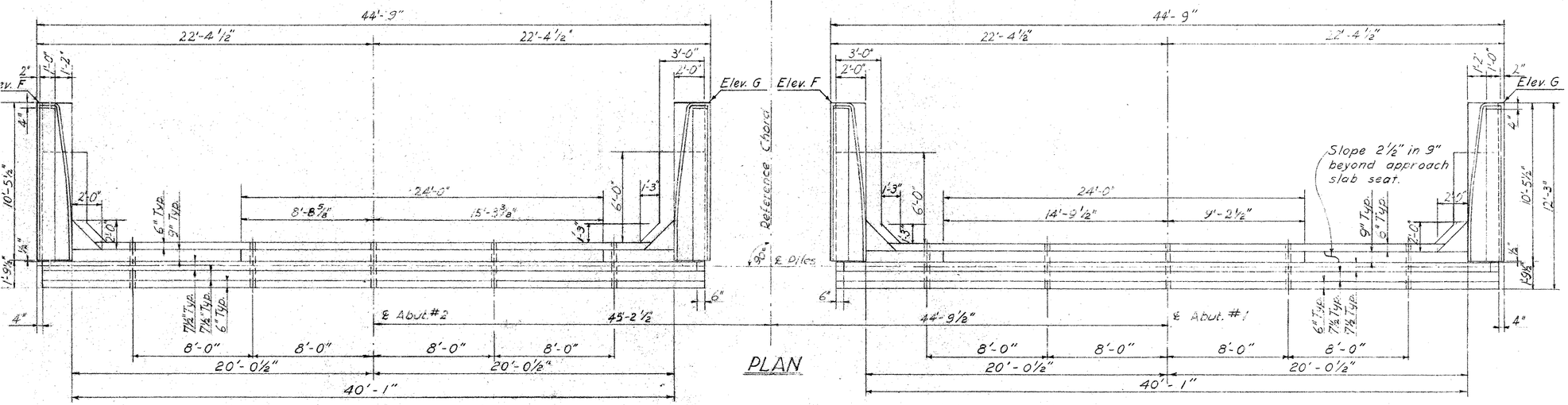
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

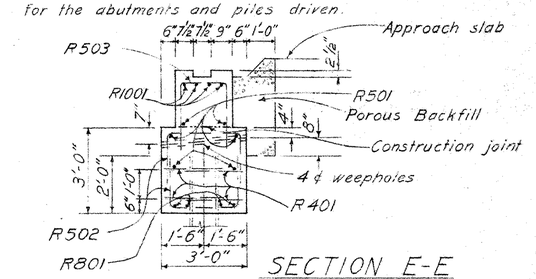
451/485

GUERNSEY COUNTY — BELMONT COUNTY

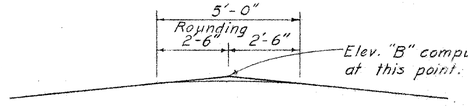
GUE - 40 - 2388 BEL - 40 - 0.00

NOTES:
Porous backfill shall extend upward to the approach slab or finished ground surface.
The embankment shall be placed and compacted up to the finished spill thru slope after which excavation shall be made for the abutments and piles driven.

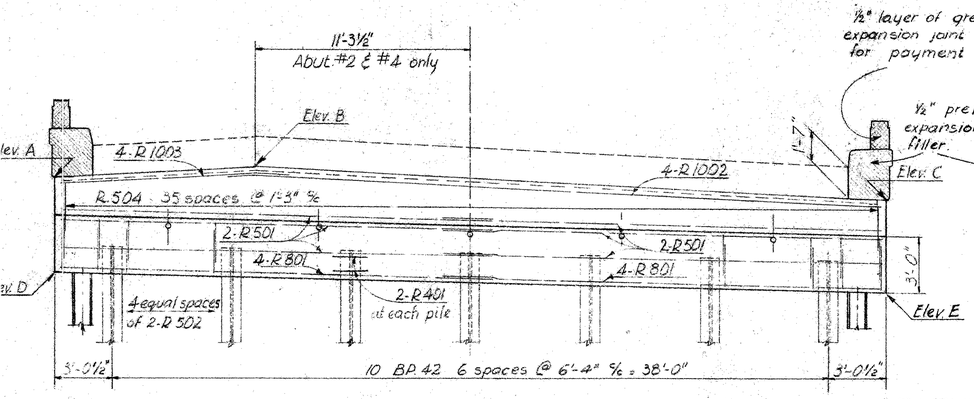


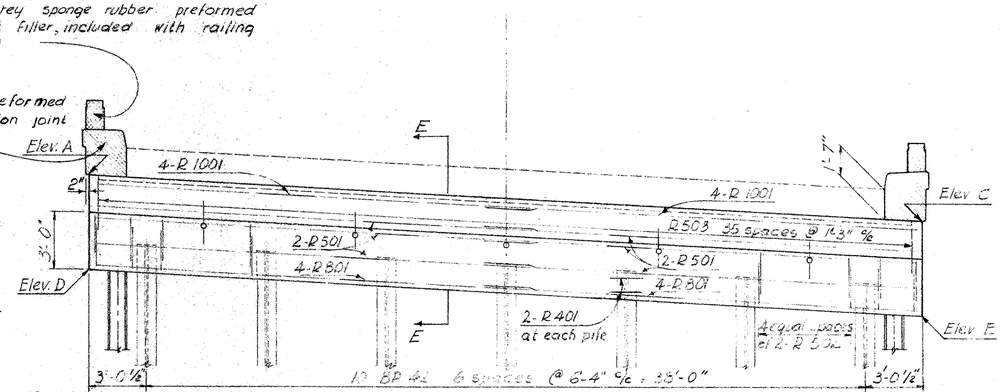


SECTION E-E

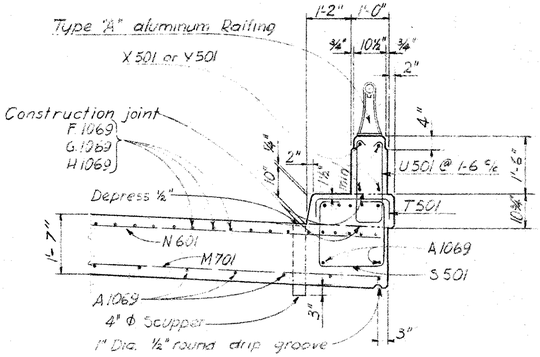


Elev. Diagram Abut. ℄ Pier #2 ℄ #4 only

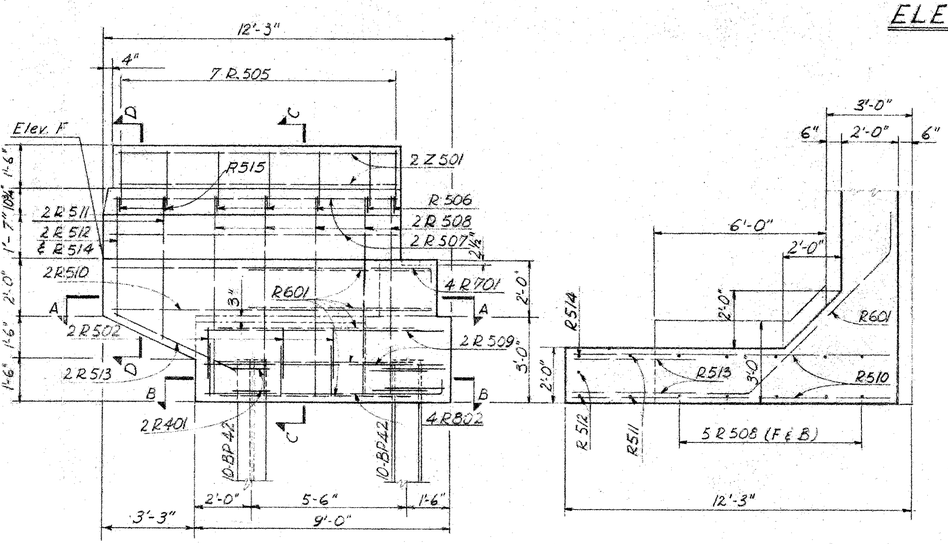




ELEVATION

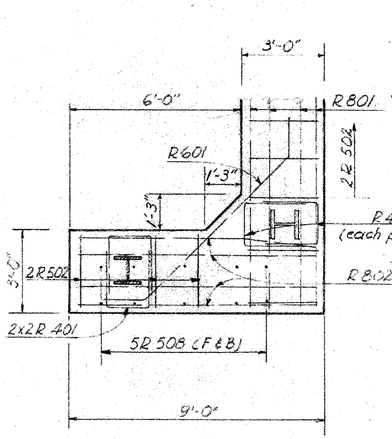


SECTION THROUGH CURB AT PIER

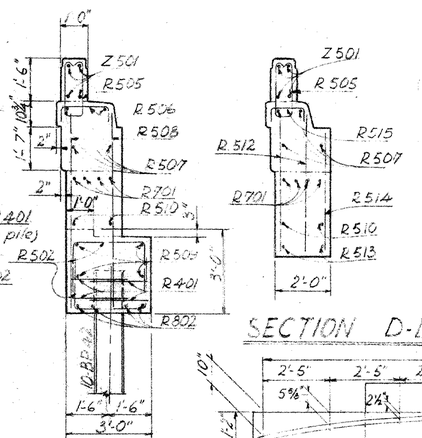


WINGWALL ELEVATION

SECTION A-A

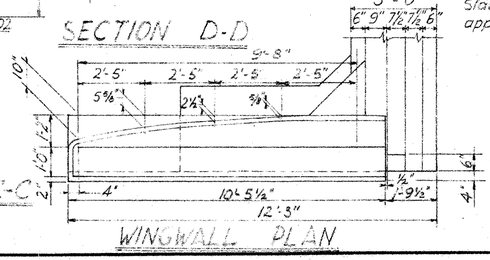


SECTION B-B



SECTION C-C

SECTION D-D



WINGWALL PLAN

NOTE: Except for slab depth & length, Bridge slab same as shown for spans of 34-42.5-34 shown on CS-2-54.

ELEVATIONS

Location	A	B	C	D	E	F	G
Abut. # 1	1210.17	—	1208.03	1205.2	1203.0	1209.98	1207.84
Abut. # 2	1210.68	1211.12	1209.51	1205.7	1204.5	1210.49	1209.31
Abut. # 3	1210.34	—	1212.46	1205.3	1207.5	1210.57	1212.68
Abut. # 4	1211.76	1213.36	1212.91	1206.8	1207.9	1211.99	1213.14

Slab seat elevations computed at end and begining approach slab.

RACKOFF ASSOCIATES
ENGINEERS COLUMBUS, OHIO

ABUTMENT AND SUPERSTRUCTURE DETAIL

BRIDGE NO. BEL-40-0005-L & R
U.S. 40 OVER CH 114
STA. 12 + 69.00
BELMONT COUNTY STA. 13 + 81.00

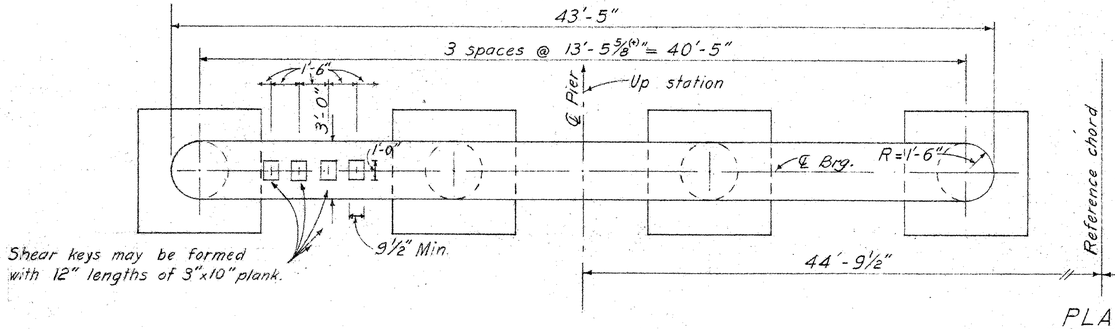
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
H.H.	H.H.		N.W.U.	666	8-1 62	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

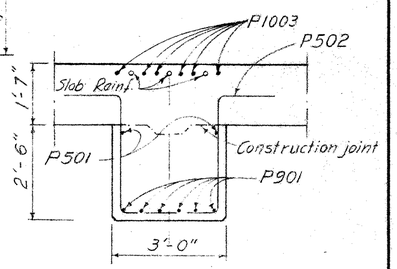
452
485

GUERNSEY COUNTY - BELMONT COUNTY

GUE - 40 - 23.88 BEL - 40 - 0.00

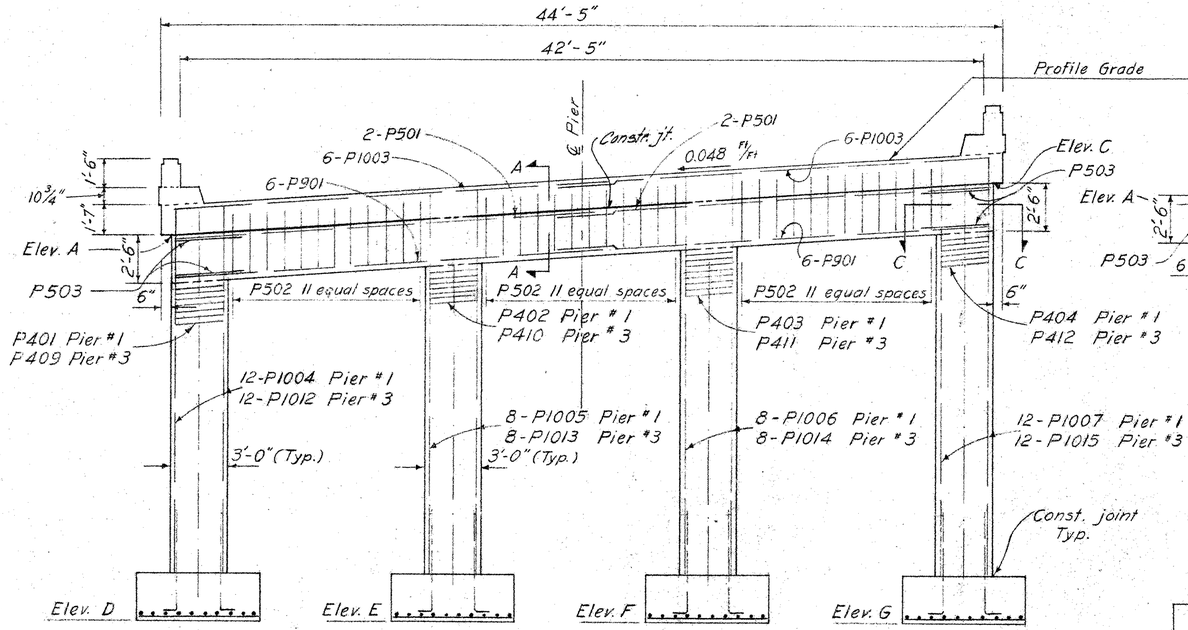


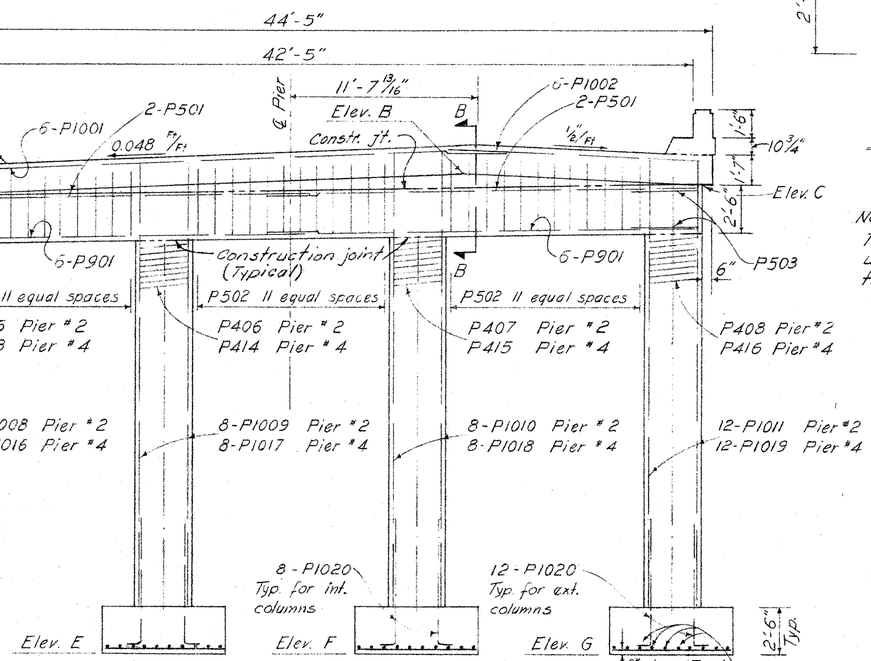
PLAN



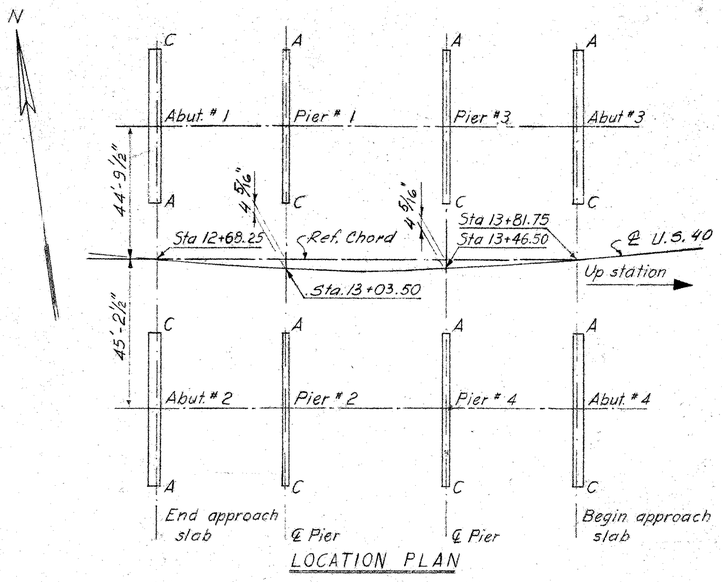
SECTION A-A

NOTE:
The pier cap shall not be used to support falsework for the deck slab.

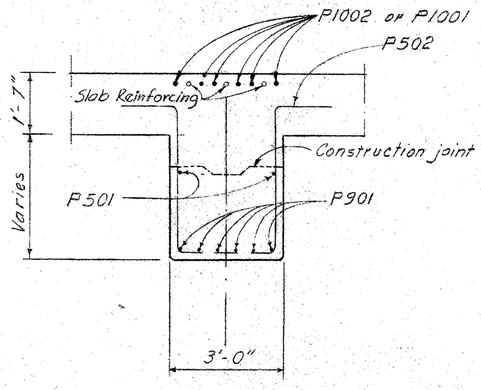




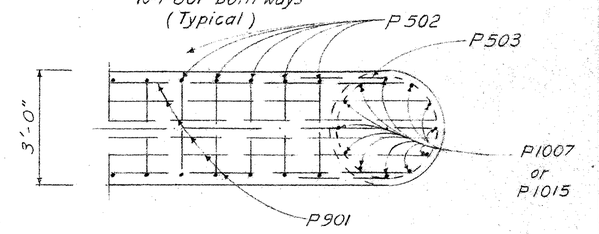
ELEVATION



LOCATION PLAN



SECTION B-B



SECTION C-C

ELEVATIONS

LOCATION	A	B	C	D	E	F	G
PIER #1	1208.73	—	1210.83	1181.0	1181.0	1181.0	1181.0
PIER #2	1210.17	1211.78	1211.40	1183.0	1184.0	1184.0	1184.0
PIER #3	1209.60	—	1211.70	1188.5	1188.5	1188.5	1188.5
PIER #4	1211.02	1212.63	1212.21	1187.0	1187.0	1187.0	1187.0

Slab seat Elevations computed at centerline Pier.

10.83 -5.3 12.08.73 -1.1 -2.27

RACKOFF ASSOCIATES
ENGINEERS COLUMBUS, OHIO

PIER DETAILS

BRIDGE NO. BEL-40-0005 L AND R
USR OVER C.H. 114

BELMONT COUNTY STA. 12 + 68.25
STA. 13 + 81.75

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
N.W.U.	M.R.		H.H.	666	8-1 62	

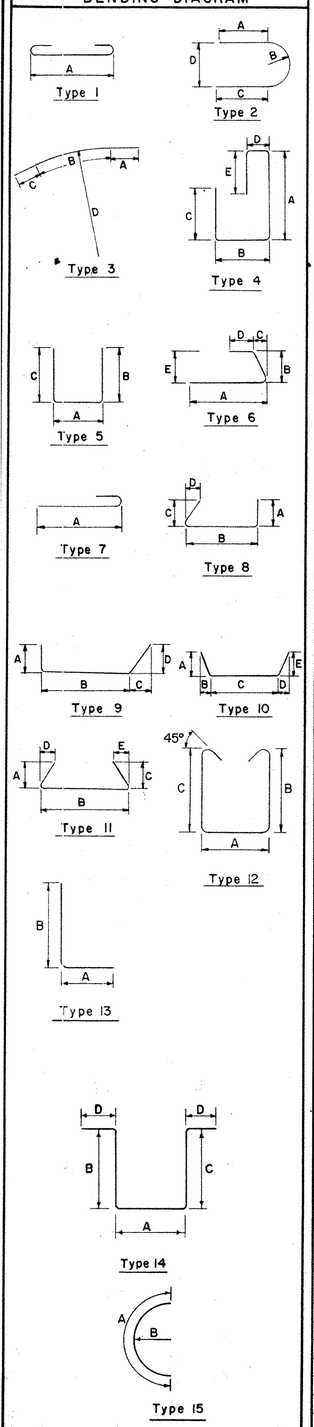
REINFORCING STEEL LIST

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

453
485

GUERNSEY COUNTY - BELMONT COUNTY
GUE - 40 - 23.88 BEL - 40 - 0.00

BENDING DIAGRAM



S IN THE COLUMN FOR "TYPE" INDICATES STRAIGHT BARS.

ABUTMENTS

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F
R1001	16	23-6	1,618	S						
R1002	8	34-9	1,196	S						
R1003	8	12-2	419	S						
R 801	32	23-2	1,979	S						
R 802	32	9-0	769	13	8-6	0-9				
R 701	32	12-1	790	13	11-6	0-9				
R 601	40	9-4	561	10	0-10	0-10	7-0	0-10	0-10	
R 501	48	22-9	1,139	S						
R 502	320	6-7	2,197	5	2-8	2-1	2-1			
R 503	72	7-11	595	5	1-8	3-3	3-3			
R 504	72	8-9	657	5	1-8	3-8	3-8			
R 505	56	6-3	365	12	0-8	2-1	2-1			
R 506	40	2-11	122	5	1-8	0-9	0-9			
R 507	32	10-0	334	S						
R 508	80	7-7	632	13	0-6	7-2				
R 509	32	8-6	284	S						
R 510	16	11-6	192	S						
R 511	16	5-5	90	13	0-6	5-2				
R 512	16	4-3	71	S						
R 513	16	4-9	79	S						
R 514	8	3-6	29	S						
R 515	16	2-5	40	5	1-2	0-9	0-9			
R 401	144	5-5	521	5	1-9	1-11	1-11			
		TOTAL	14,679							

PIERS

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F
P1001	12	34-9	1,794	S						
P1002	12	11-6	594	S						
P1003	24	23-2	2,392	S						
P1004	12	26-0	1,343	S						
P1005	8	26-9	921	S						
P1006	8	27-5	944	S						
P1007	12	28-1	1,450	S						
P1008	12	25-5	1,312	S						
P1009	8	24-10	855	S						
P1010	8	25-3	869	S						
P1011	12	25-8	1,325	S						
P1012	12	19-4	998	S						
P1013	8	20-1	691	S						
P1014	8	21-9	749	S						
P1015	12	21-5	1,106	S						
P1016	12	22-3	1,149	S						
P1017	8	22-8	780	S						
P1018	8	23-1	795	S						
P1019	12	23-6	1,213	S						
P1020	160	6-6	4,475	13	1-6	5-4				
P 901	48	23-2	3,781	S						
P 801	320	6-8	5,696	S						
P 501	16	21-0	350	S						
P 502	144	11-0	1,652	14	2-8	3-8	3-8	0-6		
P 503	16	7-3	121	2	1-7	1-3½	1-7	2-8¼		
			37,355							
		SPIRAL	6,062							
		TOTAL	43,417							

SUPERSTRUCTURE

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F
A1069	264	39-7	44,966	S						
B1069	76	30-0	9,811	7	28-4					
C1069	76	26-5	8,639	7	24-9					
D1069	38	26-1	4,265	S						
E1069	38	18-7	3,039	S						
F1069	176	28-7	21,647	S						
G1069	88	13-6	5,112	S						
H1069	88	9-1	3,440	S						
J 601	88	22-4	2,952	S						
K 601	44	18-9	1,239	S						
M 701	412	23-1	19,439	S						
N 601	284	22-11	9,776	S						
O 501	12	22-6	282	S						
P 501	24	24-9	620	S						
R 969	40	23-8	3,219	S						
S 501	532	5-10	3,237	4	1-5	2-0	0-6	2-0	0-6	
T 501	532	2-6	1,387	5	1-5	0-8	0-8			
U 501	308	5-9	1,847	12	0-8	2-3	2-3			
		TOTAL	144,917							
X 501	80	14-6	—	S			included with railing			
Y 501	32	18-2	—	S			for payment.			
Z 501	32	9-9	—	S						

REPLACEMENT BARS

RE 401	1	5-5	—	5	1-9	1-11	1-11			
RE 402	1	5-3	—	15	5-3	1-3½				
RE 501	1	5-7	—	S						
RE 601	1	5-11	—	S						
RE 701	2	6-3	—	S						
RE 801	1	6-6	—	S						
RE 901	1	6-10	—	S						
RE1001	7	7-3	—	S						

SPIRAL REINFORCEMENT

MARK	NO.	LENGTH	CORE	PITCH	TURNS	SPACERS	WEIGHT
P401	1	22.73	32"	4½	64	4	415
P402	1	23.43	32"	4½	66	4	428
P403	1	24.13	32"	4½	68	4	441
P404	1	24.83	32"	4½	70	4	454
P405	1	22.17	32"	4½	63	4	409
P406	1	21.58	32"	4½	61	4	396
P407	1	21.99	32"	4½	62	4	402
P408	1	22.40	32"	4½	63	4	409
P409	1	16.10	32"	4½	46	4	298
P410	1	16.80	32"	4½	48	4	311
P411	1	17.50	32"	4½	50	4	324
P412	1	18.20	32"	4½	52	4	337
P413	1	19.02	32"	4½	54	4	350
P414	1	19.42	32"	4½	55	4	356
P415	1	19.82	32"	4½	56	4	363
P416	1	20.22	32"	4½	57	4	369

TOTAL 6,062

NOTES:

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 three turns (total number of closed coils), expressed as the nearest whole number.

Spiral reinforcing bars shall not have deformations but shall in other respects conform to item S-4. 1½ closed coils shall be provided at the ends of each spiral unit. Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two where four are used indicate the bar size number.

RACKOFF ASSOCIATES
ENGINEERS COLUMBUS, OHIO

REINFORCING STEEL LIST
BRIDGE NO. BEL.-40-0005 L AND R
USR OVER C.H. 114

BELMONT COUNTY STA. 12 + 68.25
STA. 13 + 81.75

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
H.H. N.W.U.	M.R.		N.W.U. H.H.	666	8-1 62	