FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-71-1(38)13	

1/445

I-71-1(38)13

HAMILTON COUNTY
HAM-71-13.05

265 Red
1-100

STATE OF OHIO

DEPARTMENT OF HIGHWAYS

HAM.-71-13.05

VILLAGE OF MONTGOMERY
CITY OF BLUE ASH
SYCAMORE TOWNSHIP
HAMILTON COUNTY

265 Red

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.

The standard specifications of the State of Ohio, Department of Highways including changes and supplemental specifications listed in the proposal shall govern this improvement.

The Right of Way for this improvement will be provided by the State of Ohio.

I hereby approve these plans and declare that the making of this improvement will not require the closing of the highway to traffic and that provisions for the maintenance and safety of traffic will be as set forth on these plans and estimates.

Approved _____ J. R. Sloodler _____
Date 9-17-64 Division Deputy Director

Approved _____ C.H. Albrates _____
Date 9-14-64 Engineer of Bridges

Approved _____ R.N. Richter _____
Date 9-15-64 Engineer of Location & Design

Approved _____ R.E. Shultz _____
Date 9-15-64 Deputy Director of Design & Construction

Approved _____ T.H. Babcock _____
Date 9-24-64 Deputy Director of Right of Way

Approved _____ E.W. Wilson _____
Date 9-28-64 Deputy Director of Planning & Programming

Approved _____
Date _____ Chief Engineer

Approved _____ P.T. Marsh _____
Date 9/28/64 Director of Highways

CONVENTIONAL SIGNS

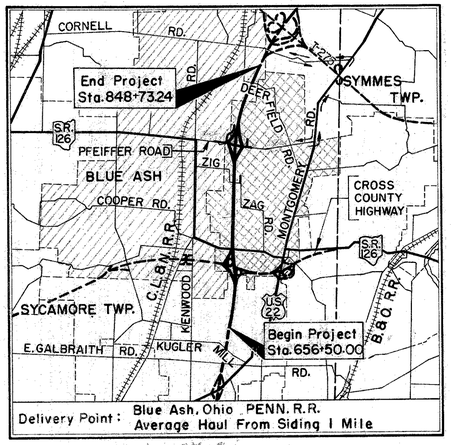
Corporation Line
Section Line
Right of Way — Exist. — ROW — Prop.
Limited Access — LA ROW
Property Line
Construction Limits
Center Line
Fence — x — x — x
Water Main — W — W — W
Gas Main — G — G — G
Hedge
Stone Wall
Pole Lines — Power & Telephone & Lights & Guy Wire
Valves — W. Water Valve — G. Gas Valve
Meters — W. Water Meter — G. Gas Meter
Hydrants
Manholes — Exist. — Prop.
Inlets & Catch Basins — Exist. — Prop.
Drains & Sewers — Exist. — Prop.
Culverts — Exist. — Prop.
Ditches — Exist. — Prop.
Creeks & Ponds — Creek — Pond
Trees — Exist. to Remain — Exist. to be Removed
Signs — Advertising Sign — Roadway Sign
Bill Boards
Guard Rail — Exist. — Prop.
Mailbox
Swamp or Marsh

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NOTE: Sheet No. 29 & 30 not used.

[49] Revised As-Built 2-23-68 JVA



LOCATION MAP

SCALE OF MILES 0 1 2 3 4

Portion to be improved
State Highways
Other Roads
Future Construction
Deerfield Road Detour

SCALES
Plan 0 20 40 60 80 100 | 0 10 20 30 40
Profile Horizontal
Profile Vertical 0 5 10 | 0 5 10 15 20
Cross Sections

City of Blue Ash

Village of Montgomery

LINE DATA

Begin Project Sta. 656+50.00
End Project Sta. 848+73.24
Net Length of Project 19,223.24 Lin.Ft. or 3.640 Miles
Add for Approaches
South Approach Sta. 655+10 to Sta. 656+50.00 140.00 Lin.Ft.
North Approach Sta. 848+73.24 Bk. = Sta. 849+00.00 Ahd. to Sta. 850+01.76 101.76 Lin.Ft.
Cross County Highway
Begin Work Sta. 255+00
End Work Sta. 295+15.11
Gross Length of Work 4,015.11 Lin.Ft.
Deduct for Equation Sta. 288+54.70 Bk. = Sta. 288+58.61 Ahd. = -3.91 Lin.Ft.
Net Length of Work 4,011.20 Lin.Ft.
Add for Approaches
Cooper Road Sta. 41+60 to Sta. 52+75 1,115.00
Zig Zag Road Sta. 45+75 to Sta. 59+75 1,400.00
Service Road No.1 Sta. 11+01 to Sta. 19+25 824.00
Pfeiffer Road Sta. 41+00 to Sta. 57+10 1,610.00
Lakecrest Drive Sta. 20+24 to Sta. 28+75 851.00
Deerfield Road Sta. 46+00 to Sta. 52+70 670.00
TOTAL LENGTH OF WORK 29,946.20 Lin.Ft. or 5.671 Miles

FILE NO.	HAMILTON COUNTY HAM-71-13.05
	DATE OF LETTING 196
	CONTRACT NUMBER

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

B-T-70-71	11-15-60	SD-53	6-30-61	I-8 M.H. No.2	2-1-63	FAC I-1	2-25-64
B-T-71 R	3-2-53	I-1	11-15-60	I-12	2-1-63	FAC I-2	2-25-64
DR-1	1-3-55	I-8 C.B. 2,2A & B	2-1-63	I-15 No.1	11-15-60	RI-1	7-15-58
F-1	2-1-63	I-8 C.B. 2-3 & 2-4	2-1-63	I-15 No.2A	8-17-60	T-35	1-2-56
F-2	2-1-63	I-8 C.B. No.3	2-1-63	I-15 No.5-B	2-1-63	T.J.	9-12-60
F-3	2-1-63	I-8 C.B. No.4	2-1-63	I-15 No.6	2-1-63	AR-1-57	4-2-62
G-7.07	4-1-64	I-8 C.B. No.5	2-1-63	I-21-23	3-10-64	A5-1-54	7-5-62
HW-No.1	8-1-63	I-8 C.B. No.6	2-1-63	L-1	4-1-50	SD-1-63	11-12-63
HW-No.2	8-1-63	I-8 I. No.2	2-1-63	L-3	4-1-50	(Sheets 1 thru 4)	
HW-No.3	8-1-63	I-8 M.H. No.1	2-1-63	L-3-A	4-1-50	FSB-1-62	1-15-63
HW-E	2-1-63	I-8 M.H. No.1-A	2-1-63	L.J. No.1	7-1-55	RB-1-55	2-2-59
		I-8 C.B. 2-5 & 2-6	2-1-63	I-8 C.B. No.3-A	2-1-63		

SUPPLEMENTAL SPECS.

			M-206.14		7-15-49
CE-101.04	5-22-56		I-129	R	4-5-61
T-335	10-28-63		L-120	R.	1-2-62
I-125	R.	6-26-61	M-107.18	R.	4-3-61
I-127	R.	1-15-62	S-302		8-23-60
I-212	R.	6-23-61	S-101		7-12-62

Sheets Nos. S-423 and S-439 Supersedes Sheets Nos. 423 and 439, respectively. revised 6-3-65 C.E.H.
Sheet Nos. 370, 371 revised 4-27-65
Sheets Nos. 17, 54, 58, 74, 346 and 347 revised 6-3-65 CEH.
Sheet No. 371 revised 6-4-65

PREPARED BY
HARRY BALKE ENGINEERS
CINCINNATI, OHIO

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION ENGINEER _____ DATE

Rev. 10-6-64

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

2/445

HAMILTON COUNTY
HAM-71-13.05

NOTE: Proposed Typical Section of adjoining pavement same as normal Pavement Section on Sheet No. 3

℄ SURVEY CURVE DATA
P.I. = Sta. 703+28.38
Δ = 19°33'10" Lt.
D = 1°28'00"
R = 3,906.53'
L = 1,333.14'
T = 673.12'
S.E. = .047'/'

CROSS COUNTY CURVE DATA
P.I. = Sta. 265+22.09
Δ = 42°23'35" Rt.
D = 3°30'00"
R = 1,637.02'
Ls = 250.00'
Lc = 961.23'
Ts = 760.45'
LT = 166.72'
ST = 83.38'
Es = 120.50'
θs = 4°22'30"

Begin Work Sta. 255+00
Begin Pavement Sta. 257+18.50
Sta. 257+18.50 F.A.I. Participation
Sta. 264+33.50 Cross County: Sta. 50+00 Pedestrian Overpass
Sta. 266+45.36 F.A.I. Participation
Sta. 41+60 Begin Work
F.A.C.I. Sign
CITY OF BLUE ASH
VILLAGE OF MONTGOMERY CORPORATION LINE
DELRAY STREET
Pt. Sta. 729+36.68
Pt. Sta. 743+80.73
ZIGZAG ROAD
MATCH LINE STA. 754+00
Sta. 716+54.44 — I-71 = Sta. 50+00 Cooper Rd. HAM-71-14.19
For Temporary Run-around See Sht. No. 34
Sta. 52+75 End Work
Sta. 702+87.28 — I-71 = Sta. 274+13.28 Cross County HAM-71-13.93
Sta. 285+54 F.A.I. Participation
Sta. 288+54.70 Bk = Sta. 288+58.61 Ahd.
End Pavement Sta. 293+34.86
End Work Sta. 295+15.11
Sta. 293+34.86 F.A.I. Participation
HAMILTON COUNTY
VILLAGE OF MONTGOMERY CORPORATION LINE
HAMILTON COUNTY
CITY OF BLUE ASH CORPORATION LINE
HAMILTON COUNTY CITY OF BLUE ASH CORPORATION LINE
Pt. Sta. 677+13.69
Pt. Sta. 689+57.05
Pt. Sta. 696+55.28
Pt. Sta. 710+50
CHARTEROAK ROAD
DRIVE
WHITECHAPEL DRIVE
DONJOY DRIVE
DELLEVIEW AVE.
FEDELIS DRIVE
SCAMPER LANE
HIGHWAY 260
DRIVE
RAMP 'Z'
RAMP 'A'
RAMP 'B'
RAMP 'C'
RAMP 'D'
RAMP 'O'
PAW PAW ROAD
GLENOVER DRIVE
STILLMEADOW LANE
KENNEDY LANE
CROSS COUNTY 280
COOPER ROAD
KUGLER MILL ROAD
WESTOVER CIRCLE
STURBRIDGE DRIVE
WEATHERFIELD LANE
Future Construction
Sta. 644+35.71 — I-71 = Sta. 50+00 Kugler Mill Rd.
BEGIN WORK STA. 655+10
HAM. -71- BEGIN PROJECT STA. 656+50.00
I-71-1(37)12 I-71-1(38)13
SL.M. 13.05
For Location See Sht. No. 85

℄ SURVEY CURVE DATA
P.I. = Sta. 683+37.71
Δ = 8°16'45" Rt.
D = 0°40'00"
R = 8,594.37'
L = 1,241.88'
T = 622.02'
S.E. = .021'/'

CROSS COUNTY CURVE DATA
P.I. = Sta. 282+61.32
Δ = 26°35'00" Lt.
D = 3°00'00"
R = 1,909.86'
Ls = 250.00'
Lc = 636.11'
Ts = 576.98'
LT = 166.70'
ST = 83.37'
Es = 53.96'
θs = 3°45'00"

℄ SURVEY CURVE DATA
P.I. = Sta. 739+59.54
Δ = 6°44'20" Rt.
D = 0°28'00"
R = 12,277.67'
L = 1,444.05'
T = 722.86'
S.E. = N.C.

Note: See General Notes For Location Of F.A.C.I. Signs, Sht. No. 49

F.A.C.I. Sign
Sta. 41+00 Begin Work
Sta. 44+45 Pfeiffer Rd. = Sta. 20+00.00 Lakecrest Dr.
Sta. 20+24.00 Begin Work
Sta. 28+75 End Work
For Temporary Run-around See Sheet No. 36
VILLAGE OF MONTGOMERY
CITY OF BLUE ASH
CORPORATION LINE
MATCH LINE STA. 754+00
Sta. 763+79.65, I-71 = Sta. 50+00 Zig Zag Rd. HAM-71-15.05
Sta. 59+75 End Work
Sta. 45+75 Begin Work
Sta. 11+01 Begin Work
Sta. 11+00.70 Service Rd. No. 1 = Sta. 43+34.50 Zig Zag Rd.
Sta. 0+00 End Work
Sta. 0+00.00 & Drive = Sta. 1+81.70 & Ser. Rd. No. 1
Sta. 19+25 End Work
Sta. 59+10 End Work
Sta. 792+04.34 — I-71 = Sta. 50+00 Pfeiffer Rd. HAM-71-15.60
Sta. 2+10 End Work
Sta. 53+54.89 Pfeiffer Rd. = Sta. 0+00.00 Twinkle Lane
Pt. Sta. 812+19.73
Sta. 818+70.5
Sta. 837+37.19 — I-71 = Sta. 50+00 Deerfield Rd. HAM-71-16.42
Sta. 46+00 Begin Work
Sta. 52+70 End Work
END WORK STA. 850+01.76
Under Construction
END PROJECT STA. 848+73.24 Bk. = STA. 849+00.00 Ahd.
HAM. 50 B-27.98
I-71-1 (38) 13 I-275-2 (8) 22
S.L.M. 16.69
ROAD
KERRIANNA LANE
TWINKLE LE
CINDERELLA DRIVE
STORYBOOK DRIVE
PFEIFFER ROAD
LAKECREST DRIVE
KENRIDGE DRIVE
DEERFIELD ROAD
HUCKLEBERRY LANE
PRIVATE DRIVE
SERVICE RD. NO. 1
ZIGZAG ROAD
CITY OF BLUE ASH CORPORATION LINE
VILLAGE OF MONTGOMERY

℄ SURVEY CURVE DATA
P.I. = Sta. 802+05.24
Δ = 20°24'30"
D = 1°00'00"
R = 5,729.58'
L = 2,040.83'
T = 1,031.34'
S.E. = .032'/'

NOTE: Proposed Typical Section of adjoining pavement same as normal Pavement Section on Sheet No. 3

SCHEMATIC PLAN
REV. 10/6/64 SCALE 1" = 400'

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

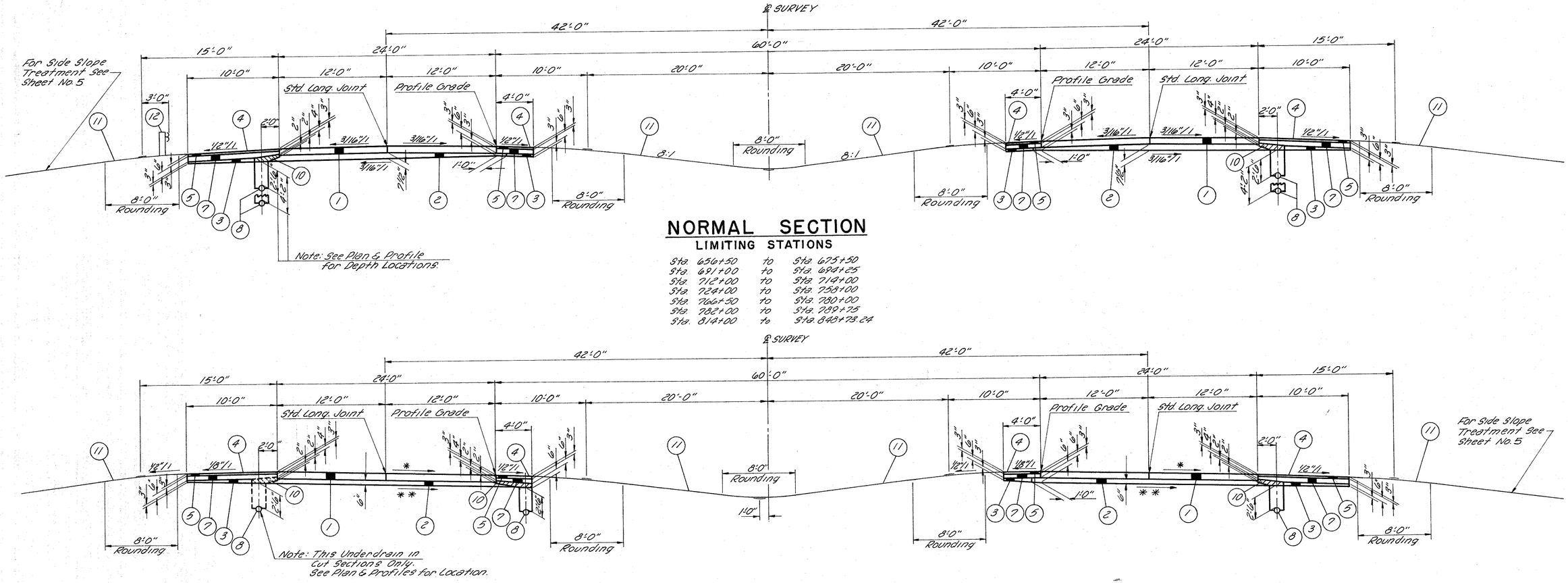
3
445

HAMILTON COUNTY
HAM. 71-13-05

TYPICAL SECTIONS

TYPE T-71

SCALE: 3/16"=1'-0"



* For Slope see Superelevation Table on Sheet No. 11
** Same as superelevation

NORMAL SECTION

LIMITING STATIONS

Sta.	656+50	to	Sta. 675+50
Sta.	691+00	to	Sta. 694+25
Sta.	712+00	to	Sta. 714+00
Sta.	724+00	to	Sta. 758+00
Sta.	766+50	to	Sta. 780+00
Sta.	782+00	to	Sta. 789+75
Sta.	814+00	to	Sta. 848+73.24

SUPERELEVATED SECTION

FOR 0°40' CURVE
LIMITING STATIONS

Sta.	675+50	to	Sta. 678+00 Transition
Sta.	678+00	to	Sta. 688+75
Sta.	688+75	to	Sta. 691+00 Transition

NOTE: SEQUENCE OF CONSTRUCTION OPERATIONS

(1) Install pipe underdrain on outside shoulder. Installation of shallow underdrain in median may be deferred until T-71 is placed, (2) Place subbase out to outside edge of underdrain or to one foot beyond median edge of pavement where no underdrain is present, (3) Construct T-71, (4) Remove subbase and any contaminated backfill over drain and replace with No. 6 aggregate as shown by Item 10, (5) Complete shoulder construction.

ITEM LEGEND

(1) Item T-71, 9" Reinforced Portland Cement Concrete Pavement.
(2) Item I-22, 6" Subbase (Except as Noted)
(3) Grading "A" or "B" as per plan. (See General Notes)
(4) Item I-22, Subbase.
(5) Item T-31, Bituminous Surface Treatment (See Note in Proposal)
* (6) Item B-21, 3" Waterproofed Aggregate Base Course (Type A T-35 or T-335 material may be used in construction of this Course. See Note in proposal)
* (6) Item B-21, 6" Waterproofed Aggregate Base Course (Type A T-35 or T-335 material may be used in Construction of this Course. See Note in proposal)
(7) Item B-19, Aggregate Base Course.
(8) Item I-1, 6" Pipe Underdrain Class I-3
(9) Item I-1, 6" Pipe Underdrain Sec. M-6.4(h) Class I-3.
(10) Item Special, Drainage Connection, using No. 6 Aggregate (See Note in proposal)
(11) Item L-9, Seeding and Protection.
(12) Item I-15 Guard Rail, Steel Beam Std. Type (Deep).
(13) Item I-12 Standard Concrete Curb, Type 2-A
* (14) Item T-35, 1 1/4" Asphaltic Concrete Surface Course Type "A" (70 to 85).
* (15) Item B-35, 1 3/4" Asphaltic Concrete Leveling Course (70 to 85).
(16) Item T-30 Bituminous Prime Coat, Sec. M-5.7, RT-2 or RT-3 applied at the rate of 0.40 Gal. Per Sq. Yd.
(17) Item B-19, 6" Aggregate Base Course.
(18) Item I-22, 5" Subbase.
(19) Item I-9 Stone Underdrains No. 2 (See General Notes for Spacing of this Item).
* (20) Item T-35, 2" Asphaltic Concrete Surface Course Type "A" (70-85)
(21) Item B-19, 7" Aggregate Base Course.

* Note: Thicknesses shown are "designs" thicknesses as described in Sections (T-35.01), (B-35.01) and (B-21.01)

MAINLINE
TYPICAL SECTIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

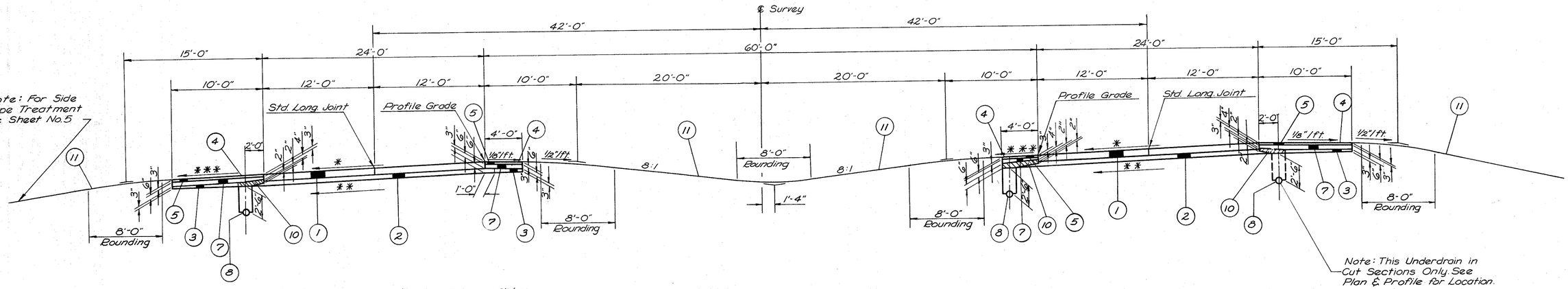
4
445

HAMILTON COUNTY
HAM. 71-13.05

TYPICAL SECTIONS

TYPE T-71

SCALE: 3/16"=1'-0"



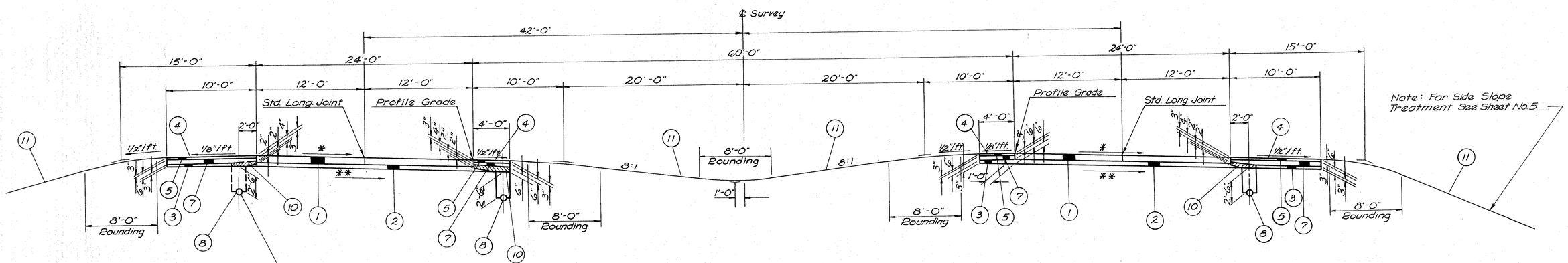
* For Slope see Superelevation Table on Sht. No. 11
** Same as Superelevation
*** Whenever Superelevation is greater than 1/2" per ft. shoulder slope must be same as Superelevation Pavement.

SUPERELEVATED SECTION

FOR
1°-28' CURVE
LIMITING STATIONS

Sta. 694+25 to Sta. 697+50 Transition
Sta. 697+50 to Sta. 708+75
Sta. 708+75 to Sta. 712+00 Transition

Note: For Item Legend See Sheet No. 3



SUPERELEVATED SECTION

FOR
1°-00' CURVE
LIMITING STATIONS

Sta. 789+75 to Sta. 792+50 Transition
Sta. 792+50 to Sta. 811+50
Sta. 811+50 to Sta. 814+00 Transition

* For Slope see Superelevation Table on Sht Nos. 11 & 12
** Same as Superelevation.
*** Whenever Superelevation is greater than 1/2" per ft. shoulder slope must be same as Superelevation Pavement.

MAINLINE
TYPICAL SECTIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

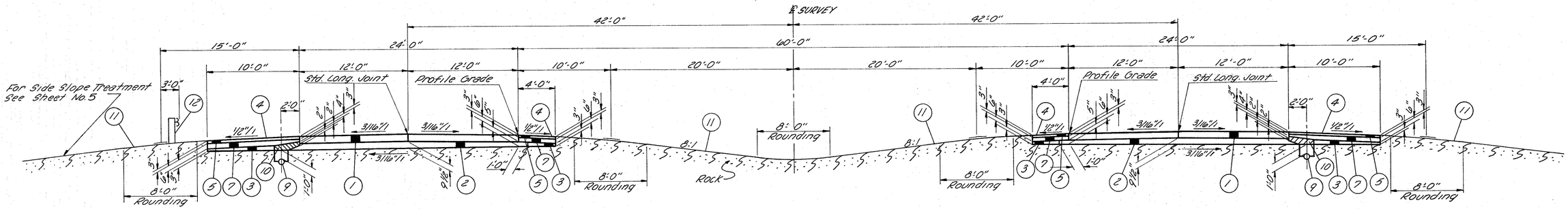
5/445

HAMILTON COUNTY
HAM. 71-13.05

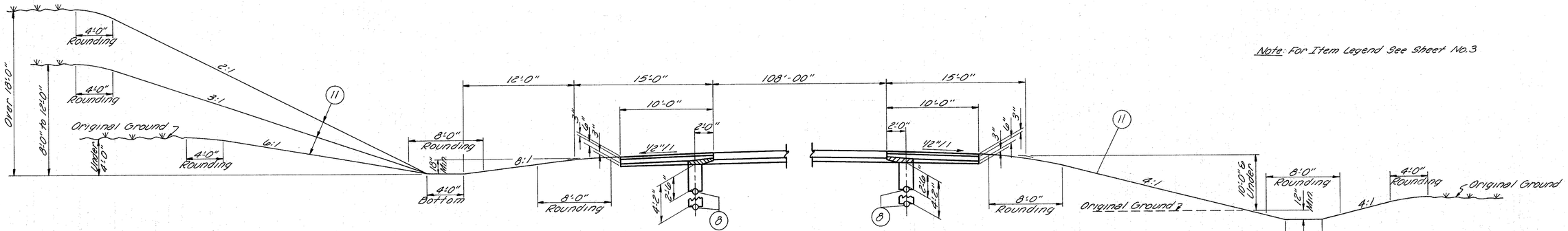
TYPICAL SECTIONS

TYPE T-71

SCALE: 3/16"=1'-0"



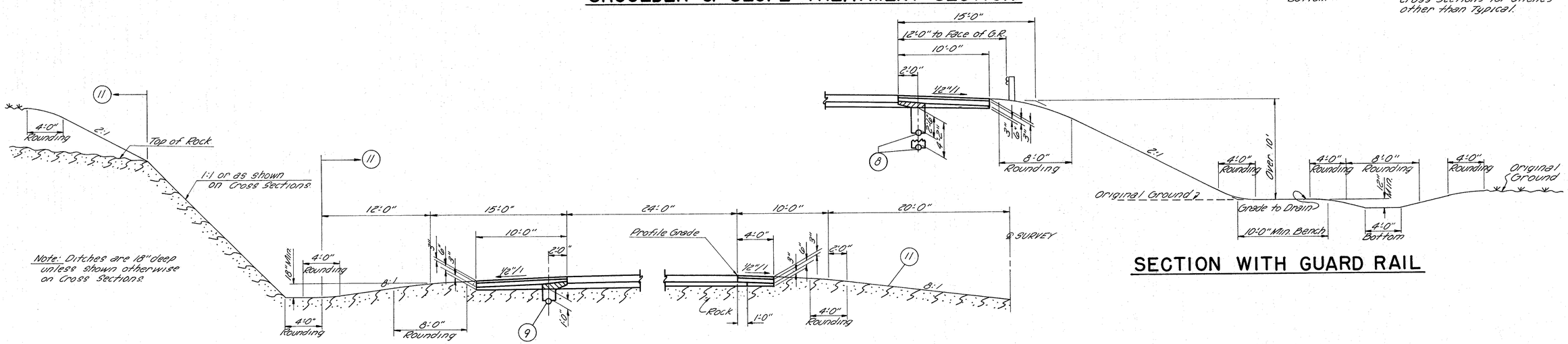
ROCK SECTION



Note: For Item Legend See Sheet No. 3

SHOULDER & SLOPE TREATMENT SECTION

Note: See Plan & Profile and Cross Sections for ditches other than Typical.



ROCK SECTION

SECTION WITH GUARD RAIL

MAINLINE
TYPICAL SECTIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

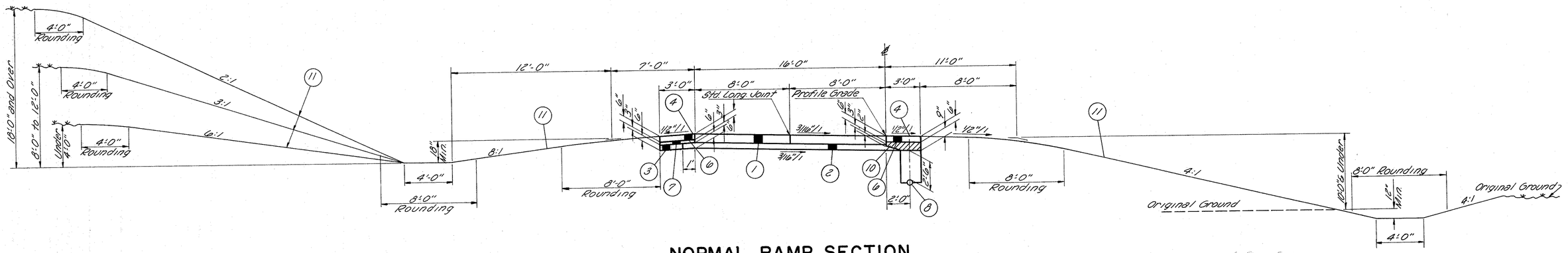
HAMILTON COUNTY
HAM. 71-13.05

6
445

TYPICAL SECTIONS

TYPE T-71

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



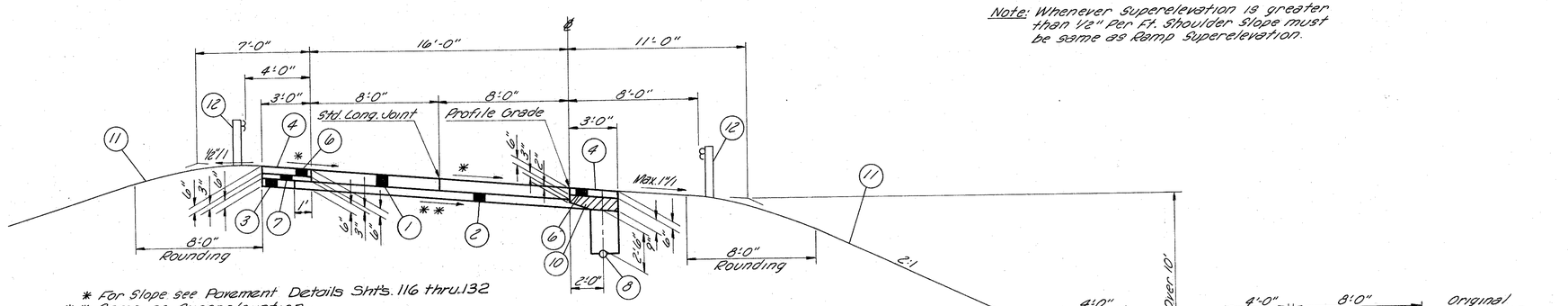
NORMAL RAMP SECTION

LIMITING STATIONS

RAMP "B" Sta. 10+50 to Sta. 11+50
RAMP "G" Sta. 5+00 to Sta. 11+50
RAMP "I" Sta. 1+00 to Sta. 5+25

Note: For Item Legend See Sheet No. 3

Note: Whenever superelevation is greater than 1/2" Per Ft. Shoulder Slope must be same as Ramp Superelevation.



* For Slope see Pavement Details Sht's. 116 thru. 132
** Same as Superelevation.

SUPERELEVATED RAMP SECTION

LIMITING STATIONS

RAMP "A" Sta. 0+00 To Sta. 10+39.28
RAMP "B" Sta. 0+00 To Sta. 10+50 & Sta. 11+50 to Sta. 19+72.55
RAMP "C" Sta. 21+78.12 To Sta. 14+28.87
RAMP "D" Sta. 21+42.71 To Sta. 10+86.50
RAMP "E" Sta. 0+00 To Sta. 13+75.23
RAMP "F" Sta. 1+00 To Sta. 13+34.27
RAMP "G" Sta. 0+00 To Sta. 5+00
RAMP "H" Sta. 5+25 To Sta. 13+00
RAMP "I" Sta. 5+25 To Sta. 10+24.90

RAMP
TYPICAL SECTION

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

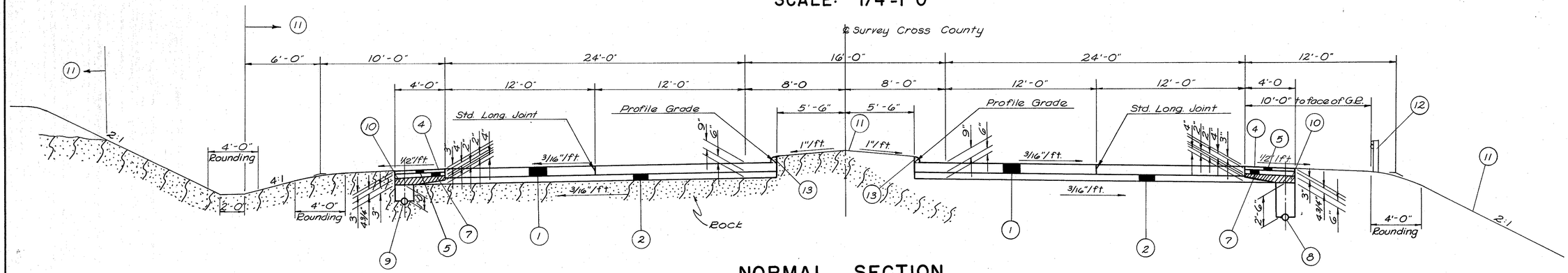
7
445

HAMILTON COUNTY
HAM. 71 - 13.05

TYPICAL SECTIONS

TYPE T-71

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

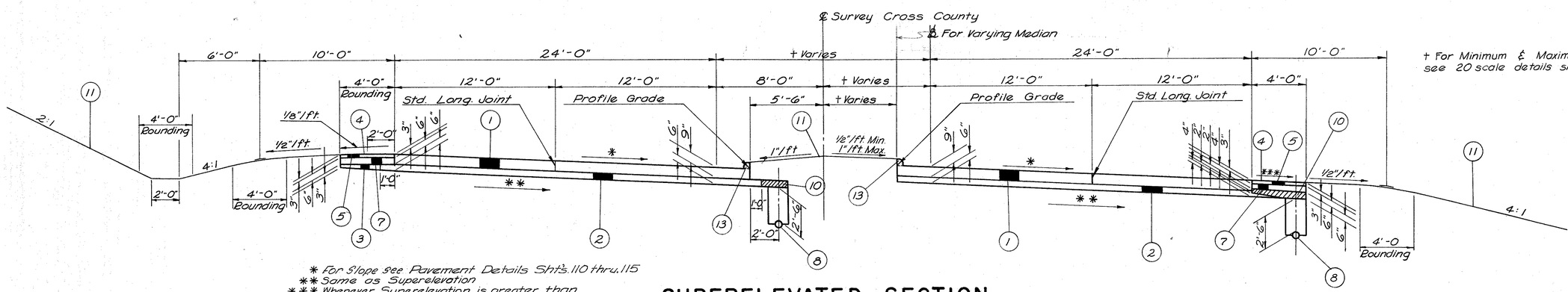


NORMAL SECTION

LIMITING STATIONS

STA. 290+25 to STA. 293+34.86

Note: For Item Legend See Sheet No. 3



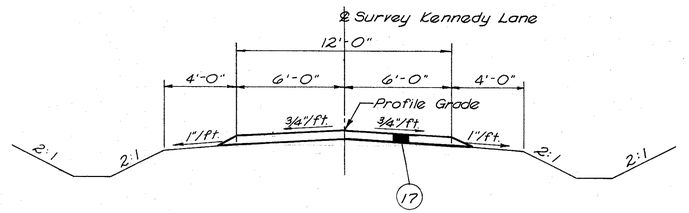
† For Minimum & Maximum dimension see 20 scale details sheets 110 thru. 115

* For Slope see Pavement Details Sht's. 110 thru. 115
** Same as Superelevation
*** Whenever Superelevation is greater than 1/2" per ft. shoulder slope must be same as Pavement Superelevation.

SUPERELEVATED SECTION

LIMITING STATIONS

STA. 257+18.50	to	STA. 260+25 Transition
STA. 260+25	to	STA. 269+50
STA. 269+50	to	Bridge Transition
Bridge	to	STA. 279+50 Transition
STA. 279+50	to	STA. 285+50
STA. 285+50	to	STA. 290+25 Transition



TYPICAL SECTION KENNEDY LANE

CROSS COUNTY HIGHWAY &
KENNEDY LANE TYPICAL SECTIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

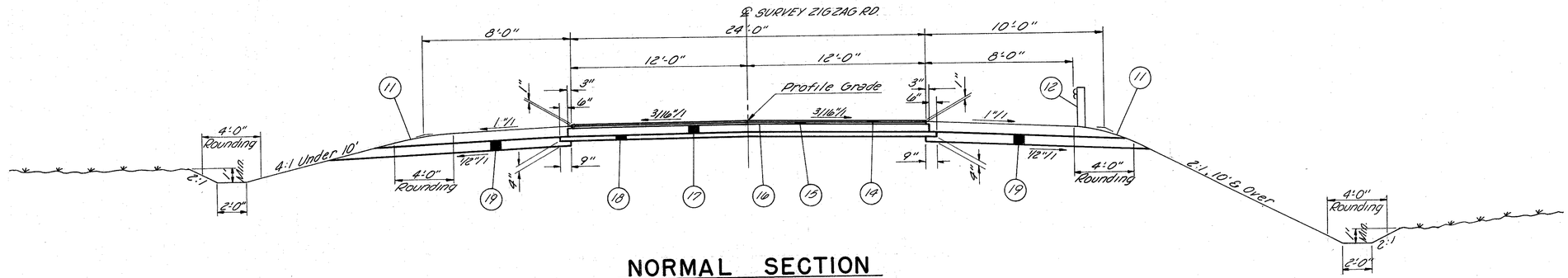
8
445

HAMILTON COUNTY
HAM. 71-13.05

TYPICAL SECTIONS

TYPE T-35

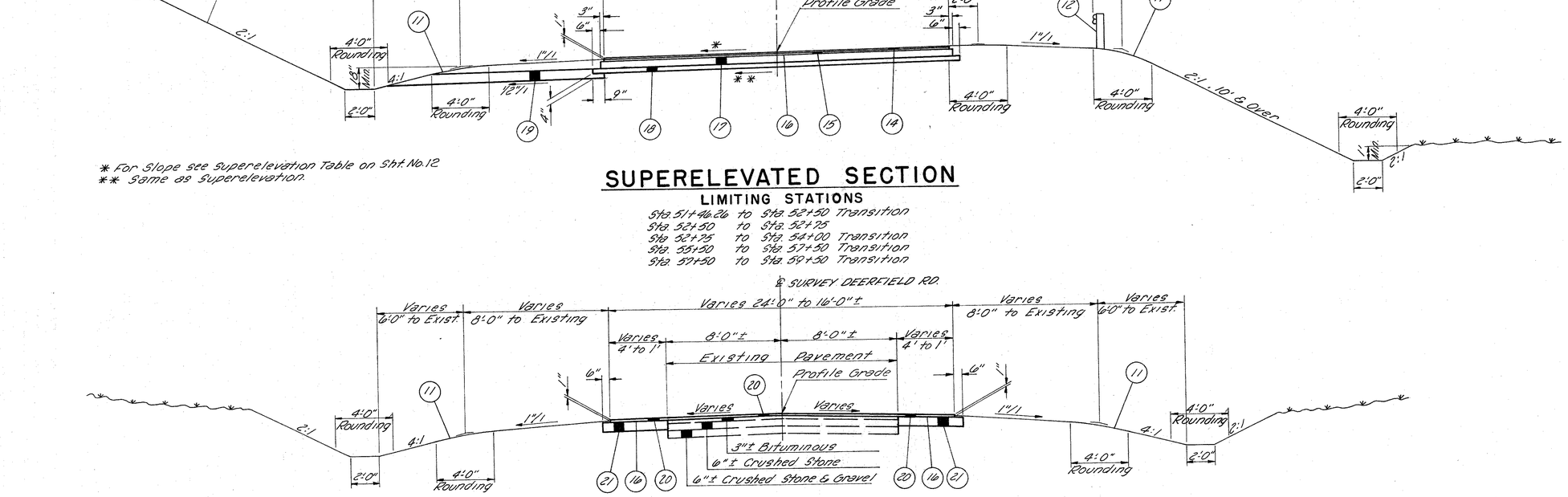
SCALE: 1/4"=1'-0"



NORMAL SECTION

LIMITING STATIONS

Sta. 47+50 to Sta. 48+53.74
Sta. 54+00 to Sta. 55+50



* For Slope see Superelevation Table on Sht. No. 12
** Same as Superelevation.

SUPERELEVATED SECTION

LIMITING STATIONS

Sta. 51+46.26 to Sta. 52+50 Transition
Sta. 52+50 to Sta. 52+75
Sta. 52+75 to Sta. 54+00 Transition
Sta. 55+50 to Sta. 57+50 Transition
Sta. 57+50 to Sta. 59+50 Transition

TRANSITION SECTION

LIMITING STATIONS

Sta. 47+50 to Sta. 48+47.70
Sta. 52+30 to Sta. 52+50

Note: For Item Legend See Sheet No. 3

ZIG ZAG RD. & DEERFIELD RD.
TYPICAL SECTIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

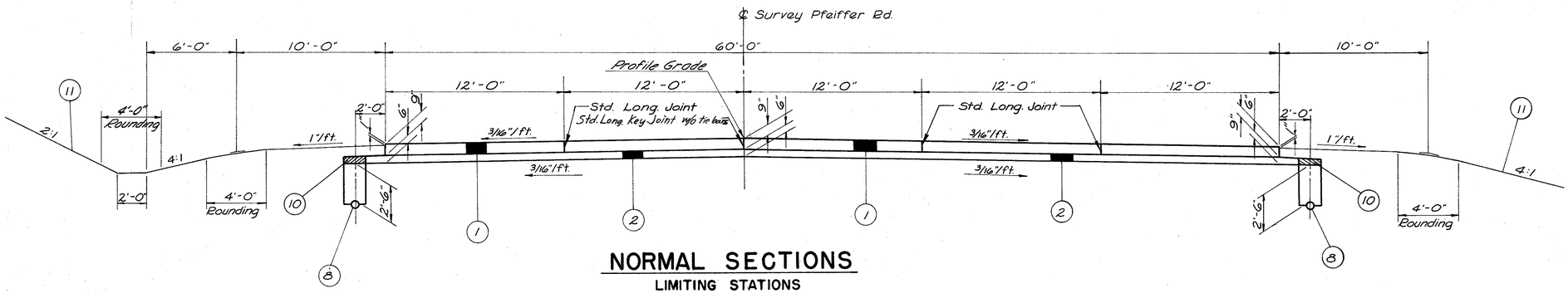
9
445

HAMILTON COUNTY
HAM. 71-13.05

TYPICAL SECTIONS

TYPE T-71 & T-35

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

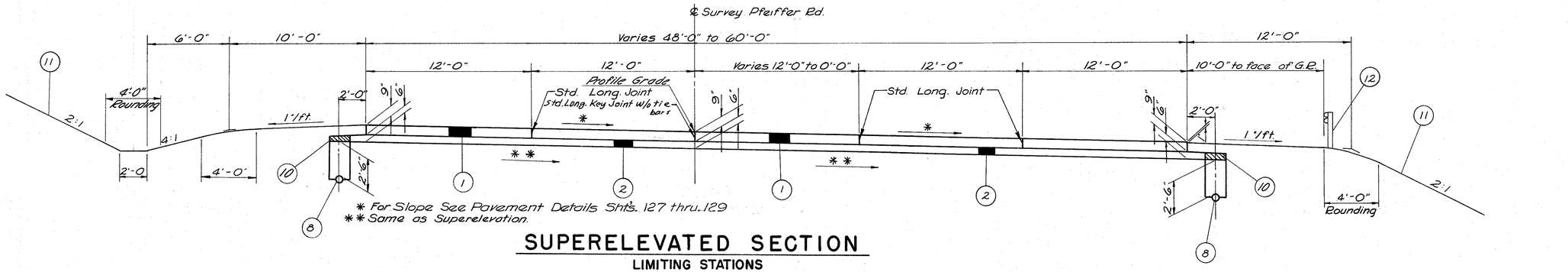


NORMAL SECTIONS

LIMITING STATIONS

Sta. 48+25 to Sta. 49+75

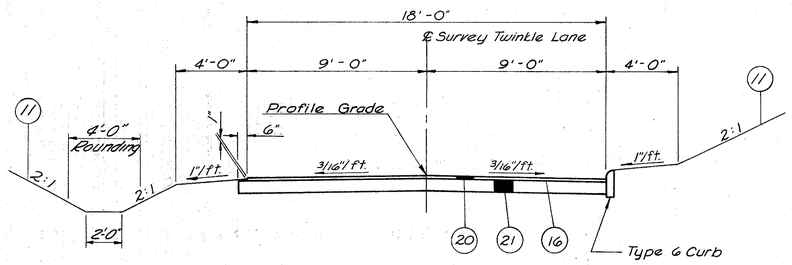
Note: For Item Legend See Sht. No. 3



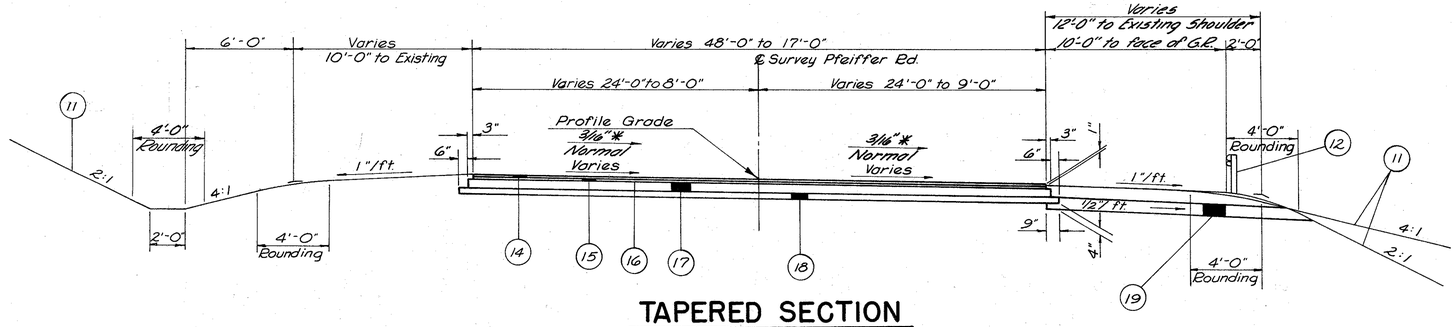
SUPERELEVATED SECTION

LIMITING STATIONS

Sta. 43+97.28	to	Sta. 44+50	Transition		
Sta. 44+50	to	Sta. 46+50		Sta. 49+75	to	Sta. 52+00	Transition
Sta. 46+50	to	Sta. 48+25	Transition	Sta. 52+00	to	Sta. 53+75	
				Sta. 53+75	to	Sta. 54+40	Transition



TYPICAL SECTION TWINKLE LANE



* For Superelevation See Sht. No's 27 & 29

TAPERED SECTION

LIMITING STATIONS

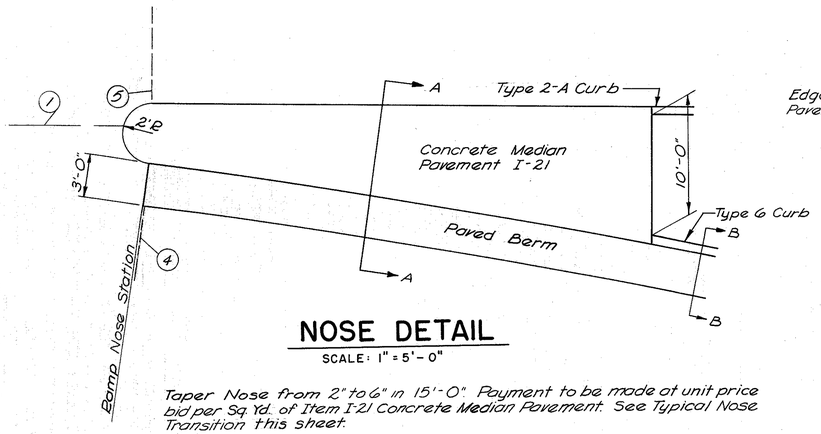
Sta. 41+00	to	Sta. 42+75	Normal
Sta. 55+50	to	Sta. 57+00	Normal
Sta. 42+75	to	Sta. 43+97.28	Transition
Sta. 54+40	to	Sta. 55+50	Transition

PFEIFFER ROAD & TWINKLE LANE TYPICAL SECTIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

10/445

HAMILTON COUNTY
HAM. 71 - 13.05



NOSE DETAIL

SCALE: 1" = 5'-0"

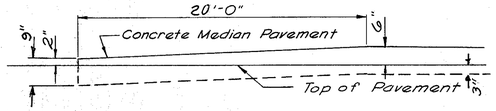
Taper Nose from 2" to 6" in 15'-0". Payment to be made at unit price bid per Sq. Yd. of Item I-21 Concrete Median Pavement. See Typical Nose Transition this sheet.

LOCATION CROSS COUNTY HIGHWAY

Ramp A Sta. 1+34.79 to Sta. 2+34.79
Ramp B Sta. 2+79.81 to Sta. 3+79.81
Ramp E Sta. 2+54.99 to Sta. 3+54.99

LOCATION: PFEIFFER ROAD

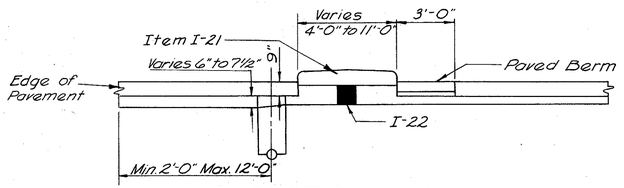
Ramp G Sta. 3+86.95 to Sta. 4+38.35±
Ramp H Sta. 5+15.80 to Sta. 5+68.80±



TYPICAL NOSE TRANSITION

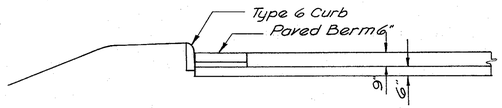
NO SCALE

Nose Transition to be paid for at unit price bid per Sq. Yd. of Item I-21 Concrete Median Pavement.



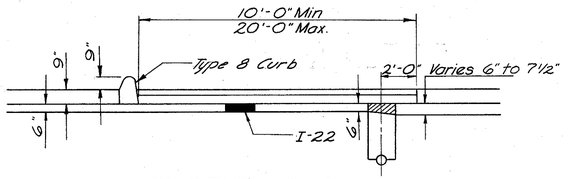
SECTION A-A

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



SECTION B-B
SUBBASE TREATMENT EXIT DETAIL

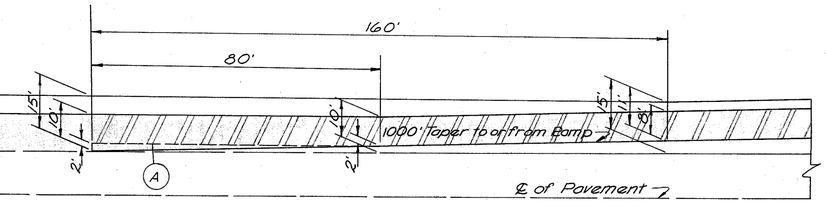
SCALE: 1/4" = 1'-0"



SECTION C-C
SUBBASE TREATMENT ENTRANCE DETAIL

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

See 20 Scale Details for Location



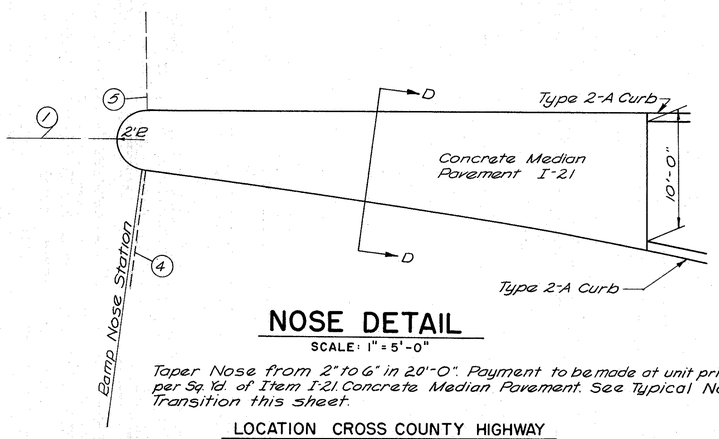
TYPICAL DETAIL OF TAPER-JOINT ACCELERATION LANE TERMINALS ON HAM. 71

SCALE: 1" = 20'-0"

LOCATION

Ramp A Sta. 685+19.16 End of 1000' Taper
Ramp D Sta. 699+19.16 End of 1000' Taper
Ramp C Sta. 709+60.33 End of 1000' Taper
Ramp F Sta. 779+92.59 End of 1000' Taper
Ramp I Sta. 812+00.00 End of 1000' Taper

Note:
Area (A) shall be constructed to an elevation 1/2" lower than the adjacent pavement and surfaced with T-3 and No. 6 aggregate. Cost of T-3 and aggregate shall be included in the unit price bid for Item T-71.



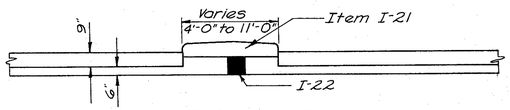
NOSE DETAIL

SCALE: 1" = 5'-0"

Taper Nose from 2" to 6" in 20'-0". Payment to be made at unit price bid per Sq. Yd. of Item I-21 Concrete Median Pavement. See Typical Nose Transition this sheet.

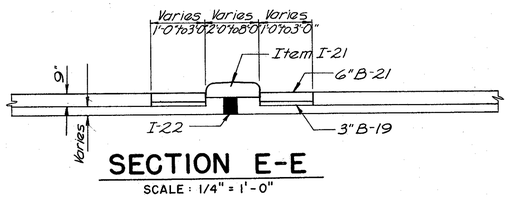
LOCATION CROSS COUNTY HIGHWAY

Ramp B Sta. 14+13.30 to Sta. 14+34.00±
Ramp C Sta. 2+78.12 to Sta. 3+02.00±
Ramp D Sta. 2+42.71 to Sta. 2+65.00±
Ramp E Sta. 9+85.27 to Sta. 10+00.00±
Ramp G Sta. 1+38.71 to Sta. 1+62.00±



SECTION D-D

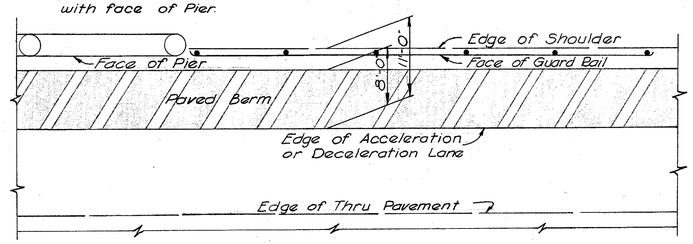
SCALE: 1/4" = 1'-0"



SECTION E-E

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

See 20 Scale Details for Location



Note:
Guard Rail shall be alined with face of Pier.

TYPICAL RAMP GUARD RAIL PROTECTION AT PIER

SCALE: 1" = 10'-0"

Ramp C Sta. 701+36.50 to Sta. 702+09.00
Ramp D Sta. 703+71.00 to Sta. 704+33.50
Ramp E Sta. 716+92.00 to Sta. 714+54.50

TYPICAL DETAIL OF TAPER ON DECELERATION LANE TERMINALS ON HAM. 71

SCALE: 1" = 20'-0"

LOCATION

Ramp B Sta. 680+15.83 Begin Taper; Sta. 681+15.83 End Taper
Ramp E Sta. 720+65.72 Begin Taper; Sta. 721+65.72 End Taper
Ramp G Sta. 775+30.00 Begin Taper; Sta. 776+30.00 End Taper
Ramp H Sta. 808+00.00 Begin Taper; Sta. 809+00.00 End Taper

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HAMILTON COUNTY
HAM. 71 -13.05

11
445

MAINLINE

Dc=0°-40'00" S.E.=0.021
MAX. SUPERELEVATION FOR 24' = 0.50

STATION	PROFILE GRADE	SOUTHBOUND LANE ℄	SOUTHBOUND LANE OUTER EDGE	NORTHBOUND LANE ℄	NORTHBOUND LANE OUTER EDGE
675+50	789.38	789.57	789.38	789.57	789.38
+75	789.57	789.76	789.59	789.74	789.55
676+00	789.76	789.95	789.82	789.88	789.70
+25	789.95	790.14	790.08	790.01	789.82
+50	790.14	790.33	790.33	790.14	789.95
+75	790.33	790.52	790.58	790.27	790.08
677+00	790.52	790.71	790.84	790.39	790.20
P.C. +15.69	790.64	790.83	791.00	790.47	790.28
+25	790.71	790.91	791.09	790.53	790.33
+50	790.90	790.12	791.34	790.68	790.46
+75	791.09	791.33	791.57	790.85	790.61
678+00	791.28	791.53	791.78	791.03	790.78
+25	791.47	791.72	791.97	791.22	790.97
+50	791.66	791.91	792.16	791.41	791.16
+75	791.85	792.10	792.35	791.60	791.35
679+00	792.04	792.29	792.54	791.79	791.54
+25	792.23	792.48	792.73	791.98	791.73
+50	792.42	792.67	792.92	792.17	791.92
+75	792.61	792.86	793.11	792.36	792.11
680+00	792.80	793.05	793.30	792.55	792.30
+25	792.99	793.24	793.49	792.74	792.49
+50	793.18	793.43	793.68	792.93	792.68
+75	793.37	793.62	793.87	793.12	792.87
681+00	793.56	793.81	794.06	793.31	793.06
+25	793.75	794.00	794.25	793.50	793.25
+50	793.94	794.19	794.44	793.69	793.44
+75	794.13	794.38	794.63	793.88	793.63
682+00	794.32	794.57	794.82	794.07	793.82
+25	794.51	794.76	795.01	794.26	794.01
+50	794.70	794.95	795.20	794.45	794.20
+75	794.89	795.14	795.39	794.64	794.39
683+00	795.08	795.33	795.58	794.83	794.58
+25	795.27	795.52	795.77	795.02	794.77
+50	795.46	795.71	795.96	795.21	794.96
+75	795.65	795.90	796.15	795.40	795.15
684+00	795.84	796.09	796.34	795.59	795.34
+25	796.03	796.28	796.53	795.78	795.53
+50	796.22	796.47	796.72	795.47	795.72
+75	796.41	796.66	796.91	796.16	795.91
685+00	796.60	796.85	797.10	796.35	796.10
+25	796.79	797.04	797.29	796.54	796.29
+50	796.98	797.23	797.48	796.73	796.48
+75	797.17	797.42	797.67	796.92	796.67
686+00	797.36	797.61	797.86	797.11	796.86
+25	797.55	797.80	798.05	797.30	797.05
+50	797.74	797.99	798.24	797.49	797.24
+75	797.93	798.18	798.43	797.68	797.43
687+00	798.12	798.37	798.62	797.87	797.62
+25	798.31	798.56	798.81	798.06	797.81
+50	798.50	798.75	799.00	798.25	798.00
+75	798.69	798.94	799.19	798.44	798.19
688+00	798.88	799.13	799.38	798.63	798.38
+25	799.07	799.32	799.57	798.82	798.57
+50	799.26	799.51	799.76	799.01	798.76
+75	799.45	799.70	799.95	799.20	798.95
689+00	799.64	799.88	800.12	799.40	799.16
+25	799.83	800.05	800.27	799.61	799.39
+50	800.02	800.22	800.40	799.84	799.64
P.T. 689+52.57	800.08	800.27	800.44	799.91	799.72
+75	800.21	800.40	800.53	800.08	799.89
690+00	800.40	800.59	800.65	800.34	800.15
+25	800.59	800.78	800.78	800.59	800.40
+50	800.78	800.97	800.91	800.84	800.65
+75	800.97	801.16	801.03	801.09	800.91
691+00	801.16	801.35	801.18	801.33	801.14
+25	801.35	801.54	801.35	801.54	801.35

MAINLINE

Dc=1°-28'00" S.E.=0.047
MAX. SUPERELEVATION FOR 24' = 1.12

STATION	PROFILE GRADE	SOUTHBOUND LANE ℄	SOUTHBOUND LANE OUTER EDGE	NORTHBOUND LANE ℄	NORTHBOUND LANE OUTER EDGE
694+25	803.63	803.82	803.63	803.82	803.63
+50	803.82	803.99	803.80	804.01	803.84
+75	804.01	804.14	803.95	804.20	804.07
+90	804.12	804.20	804.02	804.31	804.22
695+00	804.20	804.26	804.07	804.39	804.33
+25	804.39	804.39	804.20	804.58	804.58
+50	804.58	804.52	804.33	804.77	804.83
+75	804.77	804.64	804.45	804.96	805.09
696+00	804.96	804.76	804.56	805.16	805.36
+25	805.15	804.89	804.63	805.41	805.67
+50	805.34	805.00	804.66	805.68	806.02
P.C. +55.26	805.38	805.03	804.68	805.73	806.08
+75	805.53	805.12	804.71	805.94	806.35
697+00	805.72	805.24	804.75	806.20	806.69
+25	805.91	805.37	804.83	806.45	806.99
+50	806.10	805.54	804.98	806.66	807.22
+75	806.29	805.73	805.17	806.85	807.41
698+00	806.48	805.92	805.36	807.04	807.60
+25	806.67	806.11	805.55	807.23	807.79
+50	806.86	806.30	805.74	807.42	807.98
+75	807.05	806.49	805.93	807.61	808.17
699+00	807.24	806.68	806.12	807.80	808.36
+25	807.43	806.87	806.31	807.99	808.55
+50	807.62	807.06	806.50	808.18	808.74
+75	807.81	807.25	806.69	808.37	808.93
700+00	808.00	807.44	806.88	808.56	809.12
+25	808.19	807.63	807.07	808.75	809.31
+50	808.38	807.82	807.26	808.94	809.50
+75	808.57	808.01	807.45	809.13	809.69
701+00	808.76	808.20	807.64	809.32	809.88
+25	808.95	808.39	807.83	809.51	810.07
+50	809.14	808.58	808.02	809.70	810.26
+75	809.33	808.77	808.21	809.89	810.45
702+00	809.52	808.96	808.40	810.08	810.64
+25	809.71	809.15	808.59	810.27	810.83
+50	809.90	809.34	808.78	810.46	811.02
+75	810.09	809.53	808.97	810.65	811.21
703+00	810.28	809.72	809.16	810.84	811.40
+25	810.47	809.91	809.35	811.03	811.59
+50	810.66	810.10	809.54	811.22	811.78
+65	810.77	810.21	809.65	811.33	811.89
+75	810.85	810.29	809.73	811.41	811.97
704+00	811.04	810.48	809.92	811.60	812.16
+25	811.23	810.67	810.11	811.79	812.35
+50	811.42	810.86	810.30	811.98	812.54
+75	811.61	811.05	810.49	812.17	812.73
705+00	811.80	811.24	810.68	812.36	812.92
+25	811.99	811.43	810.87	812.55	813.11
+50	812.18	811.62	811.06	812.74	813.30
+75	812.37	811.81	811.25	812.93	813.49
706+00	812.56	812.00	811.44	813.12	813.68
+25	812.75	812.19	811.63	813.31	813.87
+50	812.94	812.38	811.82	813.50	814.06
+75	813.13	812.57	812.01	813.69	814.25
707+00	813.32	812.76	812.20	813.88	814.44
+25	813.51	812.95	812.39	814.07	814.63
+50	813.70	813.14	812.58	814.26	814.82
+75	813.89	813.33	812.77	814.45	815.01
708+00	814.08	813.52	812.96	814.64	815.20
+25	814.27	813.71	813.15	814.83	815.39
+50	814.46	813.90	813.34	815.02	815.58
+75	814.65	814.09	813.53	815.21	815.77
709+00	814.84	814.30	813.76	815.38	815.92
+25	815.03	814.55	814.06	815.51	816.00
+50	815.22	814.81	814.40	815.63	816.04
+75	815.41	815.07	814.73	815.75	816.09
P.T. 709+88.40	815.51	815.21	814.91	815.81	816.11

MAINLINE

Dc=1°-28'00" S.E.=0.047
MAX. SUPERELEVATION FOR 24'=1.12

STATION	PROFILE GRADE	SOUTHBOUND LANE ℄	SOUTHBOUND LANE OUTER EDGE	NORTHBOUND LANE ℄	NORTHBOUND LANE OUTER EDGE
710+00	815.60	815.34	815.08	815.86	816.12
+25	815.79	815.59	815.39	816.99	816.19
+50	815.98	815.85	815.66	816.17	816.30
+75	816.17	816.11	815.92	816.36	816.42
711+00	816.36	816.36	816.17	816.55	816.55
+25	816.55	816.61	816.42	816.74	816.68
+50	816.74	816.87	816.68	816.93	816.80
+75	816.93	817.10	816.91	817.12	816.95
712+00	817.12	817.31	817.12	817.31	817.12

MAINLINE

Dc=1°-00'-00" S.E.=0.032
MAX. SUPERELEVATION FOR 24'= 0.76

STATION	PROFILE GRADE	SOUTHBOUND LANE ℄	SOUTHBOUND LANE OUTER EDGE	NORTHBOUND LANE ℄	NORTHBOUND LANE OUTER EDGE
789+75	806.87	807.06	806.87	807.06	806.87
790+00	806.98	807.17	806.99	807.16	806.97
+25	807.08	807.27	807.14	807.21	807.02
+50	807.16	807.35	807.29	807.22	807.03
+75	807.23	807.42	807.42	807.23	807.04
791+00	807.28	807.47	807.56	807.22	807.03
+25	807.33	807.53	807.71	807.20	807.01
+50	807.35	807.59	807.83	807.16	806.96
P.C. +73.90	807.36	807.65	807.93	807.11	806.86
+75	807.36	807.65	807.93	807.11	806.86
792+00	807.36	807.69	808.02	807.04	806.72
+25	807.34	807.71	808.08	806.97	806.61
+50	807.31	807.69	808.07	806.93	806.55
+75	807.27	807.65	808.03	806.89	806.51
793+00	807.20	807.58	807.96	806.82	806.44
+25	807.13	807.51	807.89	806.75	806.37
+50	807.04	807.42	807.80	806.66	806.28
+75	806.94	807.32	807.70	806.56	806.18
794+00	806.82	807.20	807.58	806.44	806.06
+25	806.68	807.06	807.44	806.30	805.92
+50	806.54	806.92	807.30	806.16	805.78
+75	806.38	806.76	807.14	806.00	805.62
795+00	806.20	806.58	806.96	805.82	805.44
+25	806.01	806.39	806.77	805.63	805.25
+50	805.80	806.18	806.56	805.42	805.04
+75	805.58	805.96	806.34	805.20	804.82
796+00	805.35	805.73	806.11	804.97	804.59
+25	805.10	805.48	805.86	804.72	804.34
+50	804.84	805.22	805.60	804.46	804.08
+75	804.57	804.95	805.33	804.19	803.81
797+00	804.30	804.68	805.06	803.92	803.54
+25	804.03	804.41	804.79	803.65	803.27
+50	803.76	804.14	804.52	803.38	803.00
+75	803.49	803.87	804.25	803.11	802.73
798+00	803.22	803.60	803.98	802.84	802.46
+25	802.95	803.33	803.71	802.57	802.19
+50	802.68	803.06	803.44	802.30	801.92
+75	802.41	802.79	803.17	802.03	801.65
799+00	802.14	802.52	802.90	801.76	801.38
+25	801.87	802.25	802.63	801.49	801.11
+50	801.62	802.00	802.38	801.24	800.86
+75	801.40	801.78	802.16	801.02	800.64
800+00	801.23	801.61	801.99	800.85	800.47
+25	801.09	801.47	801.85	800.71	800.33
+50	800.98	801.36	801.74	800.60	800.22
+75	800.91	801.29	801.67	800.53	800.15
801+00	800.88	801.26	801.64	800.50	800.12
+25	800.89	801.27	801.65	800.51	800.13

SUPERELEVATION TABLES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HAMILTON COUNTY
HAM.71-13.05

12
445

MAINLINE

Dc = 1° 00' 00" S.E. = 0.032
MAX. SUPERELEVATION FOR 24' = 0.76'

STATION	PROFILE GRADE	SOUTHBOUND LANE ℄	SOUTHBOUND LANE OUTER EDGE	NORTHBOUND LANE ℄	NORTHBOUND LANE OUTER EDGE
801+50	800.94	801.32	801.70	800.56	800.18
+75	801.02	801.40	801.78	800.64	800.26
802+00	801.14	801.52	801.90	800.76	800.38
+25	801.30	801.68	802.06	800.92	800.54
+50	801.49	801.87	802.25	801.11	800.73
+75	801.71	802.09	802.47	801.33	800.95
803+00	801.98	802.36	802.74	801.60	801.22
+25	802.28	802.66	803.04	802.90	801.52
+50	802.60	802.98	803.36	802.22	801.84
+75	802.92	803.30	803.68	802.54	802.16
804+00	803.24	803.62	804.00	802.86	802.48
+25	803.56	803.94	804.32	803.18	802.80
+50	803.88	804.26	804.64	803.50	803.12
+75	804.20	804.58	804.96	803.82	803.44
805+00	804.52	804.90	805.28	804.14	803.76
+25	804.84	805.22	805.60	804.46	804.08
+50	805.16	805.54	805.92	804.78	804.40
+75	805.48	805.86	806.24	805.10	804.72
806+00	805.80	806.18	806.56	805.42	805.04
+25	806.12	806.50	806.88	805.74	805.36
+50	806.44	806.82	807.20	806.06	805.68
+75	806.76	807.14	807.52	806.38	806.00
807+00	807.08	807.46	807.84	806.70	806.32
+25	807.40	807.78	808.16	807.02	806.64
+50	807.72	808.10	808.48	807.34	806.96
+75	808.04	808.42	808.80	807.66	807.28
808+00	808.36	808.74	809.12	807.98	807.60
+25	808.68	809.06	809.44	808.30	807.92
+50	809.00	809.38	809.76	808.62	808.24
+75	809.32	809.70	810.08	808.94	808.56
809+00	809.64	810.02	810.40	809.26	808.88
+25	809.96	810.34	810.72	809.58	809.20
+50	810.28	810.66	811.07	809.90	809.52
+75	810.60	810.98	811.36	810.22	809.84
810+00	810.92	811.30	811.68	810.54	810.16
+25	811.24	811.62	812.00	810.86	810.48
+50	811.56	811.94	812.32	811.18	810.80
+75	811.88	812.26	812.64	811.50	811.12
811+00	812.20	812.58	812.96	811.82	811.44
+25	812.52	812.90	813.28	812.14	811.76
+50	812.84	813.22	813.60	812.46	812.08
+75	813.16	813.53	813.90	812.79	812.42
812+00	813.48	813.81	814.14	813.16	812.84
P.T. 812+14.73	813.67	813.98	814.28	813.39	813.11
+25	813.80	814.09	814.37	813.55	813.30
+50	814.12	814.36	814.60	813.93	813.73
+75	814.44	814.64	814.82	814.31	814.12
813+00	814.76	814.95	815.04	814.70	814.51
+25	815.08	815.97	815.27	815.08	814.89
+50	815.40	815.59	815.53	815.46	815.27
+75	815.72	815.91	815.78	815.85	815.66
814+00	816.04	816.23	816.05	816.22	816.03
+25	816.36	816.55	816.36	816.55	816.36

ZIG ZAG ROAD

Dc = 76° 23' 40" S.E. = 00156
MAX. SUPERELEVATION FOR 24' = 0.38'

STATION	PROFILE GRADE	LEFT EDGE	RIGHT EDGE
51+43	831.63	831.44	831.44
+50	831.36	831.18	831.17
+75	830.36	830.29	830.17
P.C. 51+83.26	830.04	830.01	829.85
52+00	829.36	829.42	829.17
+25	828.36	828.52	828.17
+50	827.36	827.55	827.17
+75	826.36	826.55	826.17
53+00	825.36	825.52	825.17
P.T. 53+07.41	825.08	825.22	824.89
+25	824.36	824.42	824.17
+50	823.36	823.29	823.17
+75	822.36	822.19	822.17
54+00	821.36	821.17	821.17

ZIG ZAG ROAD

Dc = 6° 00' 00" S.E. = 0.032
MAX. SUPERELEVATION FOR 24' = 0.76'

STATION	PROFILE GRADE	LEFT EDGE	RIGHT EDGE
55+50	816.97	816.78	816.78
+75	816.55	816.36	816.39
56+00	816.22	816.03	816.12
+25	815.98	815.79	815.98
+50	815.83	815.64	815.93
+75	815.77	815.55	815.96
P.C. 56+91.35	815.78	815.52	816.03
57+00	815.80	815.51	816.09
+25	815.91	815.55	816.27
+50	816.12	815.74	816.50
+75	816.41	816.05	816.77
58+00	816.80	816.51	817.09
+25	817.23	817.01	817.42
+50	817.66	817.47	817.76
P.T. 58+58.51	817.82	817.63	817.88
+75	818.09	817.90	818.09
59+00	818.52	818.33	818.42
+25	818.95	818.76	818.79
+50	819.38	819.19	819.19

I-127 DELINEATORS

SIDE	STATION FROM	STATION TO	SPACING FEET	POST A1	POST C-2	POST C-3	BRIDGE BRKT. A1	BRIDGE BRKT. C-2
SOUTH BOUND / NORTH BOUND	Mainline							
R	656+50	678+50	200	12				
R	689+75	697+75	200	5				
R	710+60	773+60	200	32				
R	785+00	799+00	200	8			1	
R	814+00	848+00	200	18				
R	848+00	810+00	200	20				
R	811+50	783+50	200	8			1	
R	768+65	722+65	200	24				
R	712+00	708+00	200	3				
R	684+00	656+00	200	15				
	Ramp "A"							
R	685+20				1			
R	686+20	695+20	100		10			
R	9+40	7+40	100		3			
R&L	6+80				2			
L	3+80	6+20	60		5			
L	2+30	3+30	50		3			
R&L	1+80				2			
R	0+30	1+30	50		3			
	Ramp "B"							
R	680+15	685+15	100		6			
R	0+85	2+85	100		3			
R&L	3+65				2			
L	4+45	7+65	80		5			
R&L	8+45				2			
R	9+45	13+45	100		5			
R&L	14+45				2			
L	15+25				1			
L	15+75	19+75	50		9			
	Ramp "B1"							
R	1+50	3+40	50		5			
	Ramp "C"							
R	709+60				1			
R	708+60	699+60	100		10			
R	13+20				1			
R&L	12+90				2			
L	12+60	8+10	30		16			
L	5+70	3+70			8			
R&L	3+10				2			
R	2+10	0+10			3			
	Ramp "C1"							
R	3+85		70		1			
R&L	3+15				2			
L	2+65	0+15	50		6			
	SUB-TOTAL			145	119	2	2	0

SIDE	STATION FROM	STATION TO	SPACING FEET	POST A1	POST C-2	POST C-3	BRIDGE BRKT. A1	BRIDGE BRKT. C-2
	Ramp "D"							
R	698+30	704+50	100		8			
R	10+60				1			
R	9+90	9+50	40		2			
R&L	9+10				2			
L	8+70	7+10	40		5			
L	6+80	6+20	30		3			
L	5+10	3+30	30		7			
L&R	3+00				2			
R	2+30	0+20	70		4			
	Ramp "E"							
R	721+65	716+65	100		6			
R	0+40	2+80	80		4			
L&R	3+30				2			
L	3+80	7+80	50		9			
L	10+20	11+80	40		5			
L&R	12+20				2			
R	13+10				1			
	Ramp "E1"							
L	1+00	2+50	50		4			
	Ramp "F"							
R	769+90					1		
R	770+90	778+90	100		9			
R	13+35	11+35	100		3			
L&R	10+35				2			
L	9+35	7+35	100		3			
L&R	6+35				2			
R	5+35	1+35			5			
	Ramp "G"							
R	775+30	778+30	100		4			
R	0+00	11+00	100		12			
	Ramp "H"							
R	809+00	807+00	100		3			
R	0+00	5+00	100		6			
L&R	6+00				2			
L	7+00	10+00	100		4			
L&R	11+00				2			
R	12+00	13+00	100		2			
	Ramp "I"							
R	812+00					1		
R	911+00	803+00	100		9			
R	10+25	1+25	100		10			
	GRAND TOTAL			145	264	4	2 *	0

Notes: Delineators Are Located in Relation to Flow of Traffic.

For Details See Sheet No. 13.

* To Bridge Quantities Sheet No 397

JOINT LEGEND

- or ① Standard Longitudinal Joint.
- or ② Standard Longitudinal Key Joint without Tie Bars.
- or ③ Expansion Joint without Dowels.
- or ④ Standard Expansion Joint.
- or ⑤ Standard Contraction Joint.
- or ⑥ Standard Construction Joint.

I-125 PAVEMENT MARKINGS

	Location	4" Edge Lines	4" Barrier Lines	4" Lane Lines	6" Lane Lines	8" Channelizing	Curb/Island Painting	Diagonal Striping	24" Stop Bars
	Mainline	68,233	——	——	14,415	——	——	——	
	Cross County	8,574	——	135	2,220	——	——	——	L.S.
	Ramp "A"	3,303	——	195	——	450	L.S.	L.S.	
	Ramp "B"	4,534	——	90	——	525	L.S.	L.S.	
	Ramp "B1"	665	——	——	——	——	L.S.	——	
	Ramp "C"	3,352	——	90	——	432	L.S.	L.S.	
	Ramp "C1"	641	——	——	——	——	L.S.	——	L.S.
	Ramp "D"	2,731	——	90	——	419	L.S.	L.S.	
	Ramp "E"	3,378	——	105	——	409	L.S.	L.S.	
	Ramp E1	320	——	——	——	——	L.S.	——	L.S.
	Ramp "F"	3,550	——	90	——	193	L.S.	——	
	Ramp "G"	2,404	——	105	——	414	L.S.	L.S.	L.S.
	Ramp "H"	2,481	——	90	——	526	L.S.	L.S.	L.S.
	Ramp "I"	2,956	——	90	——	200	L.S.	——	
	P. Pfeiffer Road	2,624	2,740	1,020	780	24	——	L.S.	L.S.
	Total Lin. Ft.	109,996	2,740	2,100	17,415	3,592	L.S.	L.S.	L.S.
①	Total Miles	20.83	.52	.40	3.30	.68	L.S.	L.S.	L.S.
	Cross County	2,615	——	——	495	——	——	——	
	Total Lin. Ft.	2,615	——	——	495	——	——	——	
①②	Total Miles	.50	——	——	.09	——	——	——	

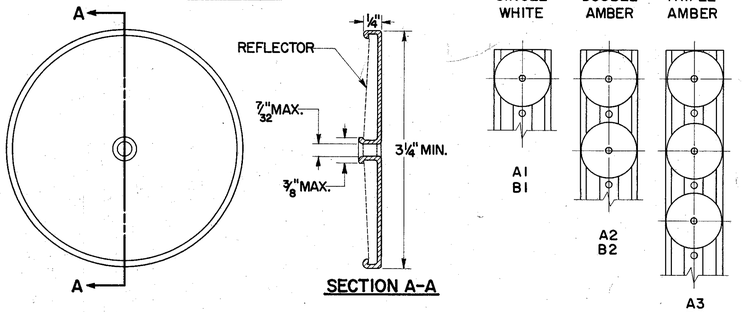
SUPERELEVATION TABLES, DELINEATORS & PAVEMENT MARKING QUANTITIES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

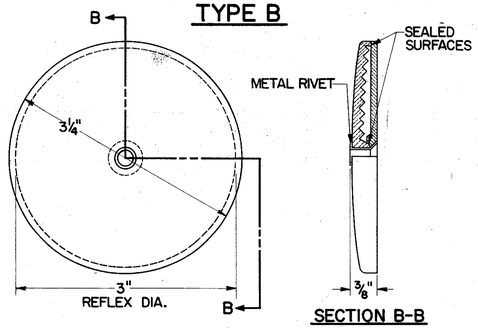
13/445

HAMILTON COUNTY
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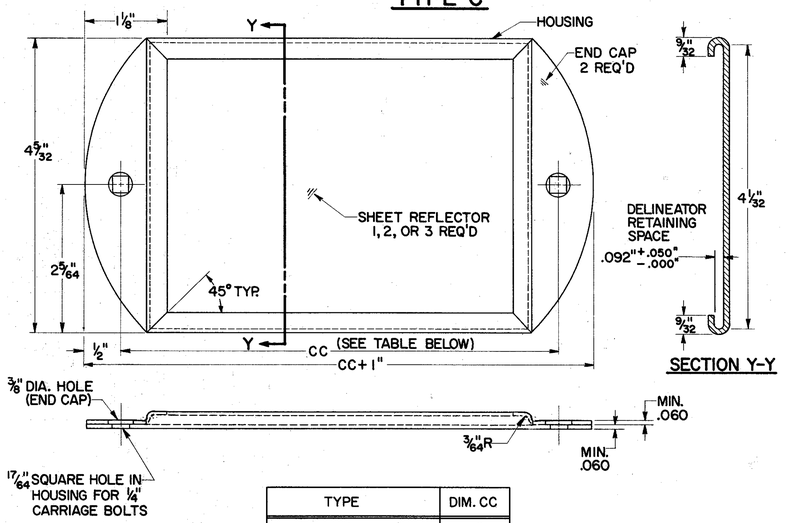
TYPE A



TYPE B

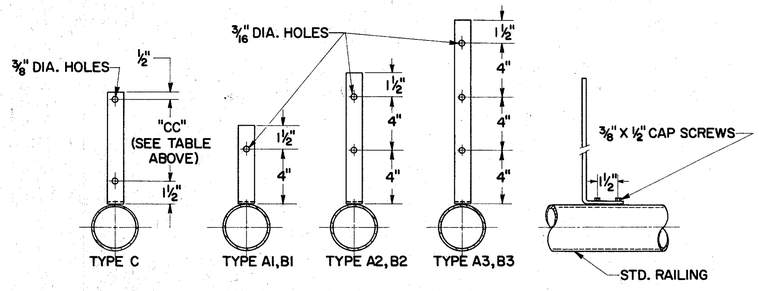


TYPE C

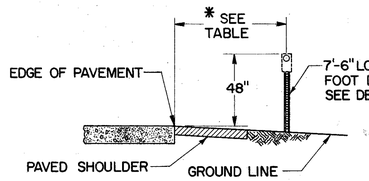


TYPE	DIM. CC
C1- SINGLE WHITE	6"
C2- DOUBLE AMBER	11"
C3- TRIPLE AMBER	16"

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



BRIDGE RAIL BRACKET

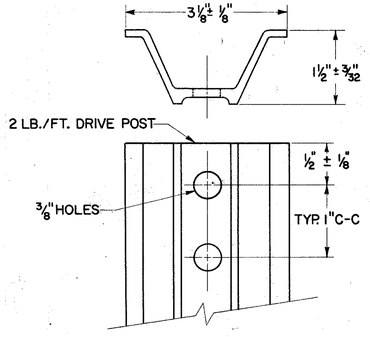


LATERAL PLACEMENT OF DELINEATORS

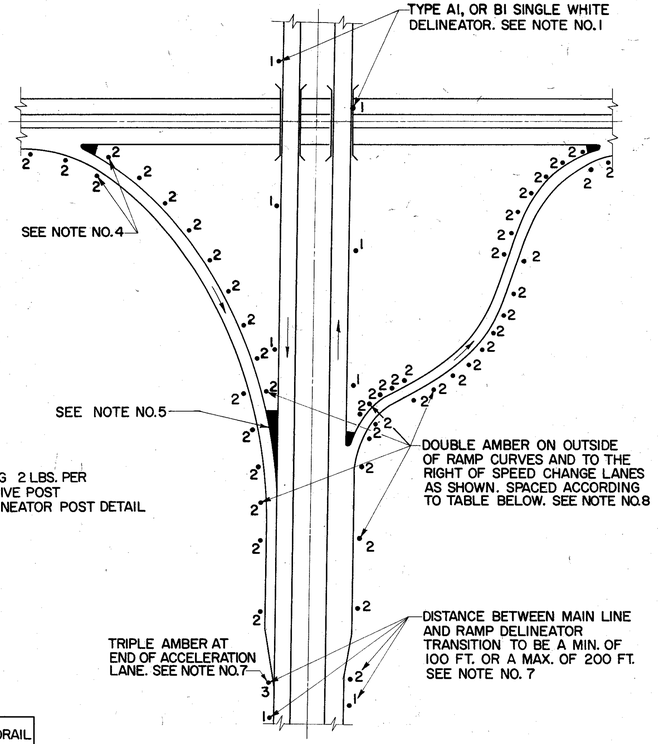
* TABLE

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

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



DELINEATOR POST



TYPICAL DELINEATOR PLACEMENT

DELINEATOR SPACING ON RAMP HORIZONTAL CURVES

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

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

NOTES

1. TYPE A1 OR B1 DELINEATORS ON THE RIGHT OF THE THROUGH ROADWAY ARE TO BE SPACED AT 200 FT. INTERVALS THROUGHOUT, REGARDLESS OF CURVES, BEGINNING AT STA. +00, +25, +50, OR + 75.
2. DELINEATORS SHALL BE FURNISHED AND ERECTED IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION NO. I-127, (1-15-62).
3. PAYMENT FOR SUPPORTS (DRIVEPOST OR BRACKET) SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR "ITEM I-127 DELINEATORS".
4. WHEN CROSSING FROM LEFT TO RIGHT OR FROM RIGHT TO LEFT ON THE RAMPS THE DELINEATORS AT THE POINT OF CROSSOVER ARE TO BE AT THE SAME STATION ON EACH SIDE.
5. NO DELINEATORS ARE TO BE PLACED IN PAVED BERM
6. WHEN RADII OF CURVE ON RAMPS REQUIRE 100' SPACING THE DELINEATORS SHALL BE PLACED ON THE RIGHT IN RELATION TO THE FLOW OF TRAFFIC.
7. RAMP DELINEATOR AT END OF ACCELERATION & BEGINNING OF DECELERATION LANES TO BE A MAXIMUM OF 5' FROM POINT OF TANGENCY AT MAIN LINE.
8. ALL RAMP DELINEATORS SHALL BE PLACED TO THE NEAREST 5' INCREMENTS, SUCH AS +05, +10, +15, +20 AND SO ON.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

DELINEATOR DETAILS	I-127	DATE 9-25-62 10-2-63

APPROVED Robert L. Comer
ENGINEER OF TRAFFIC

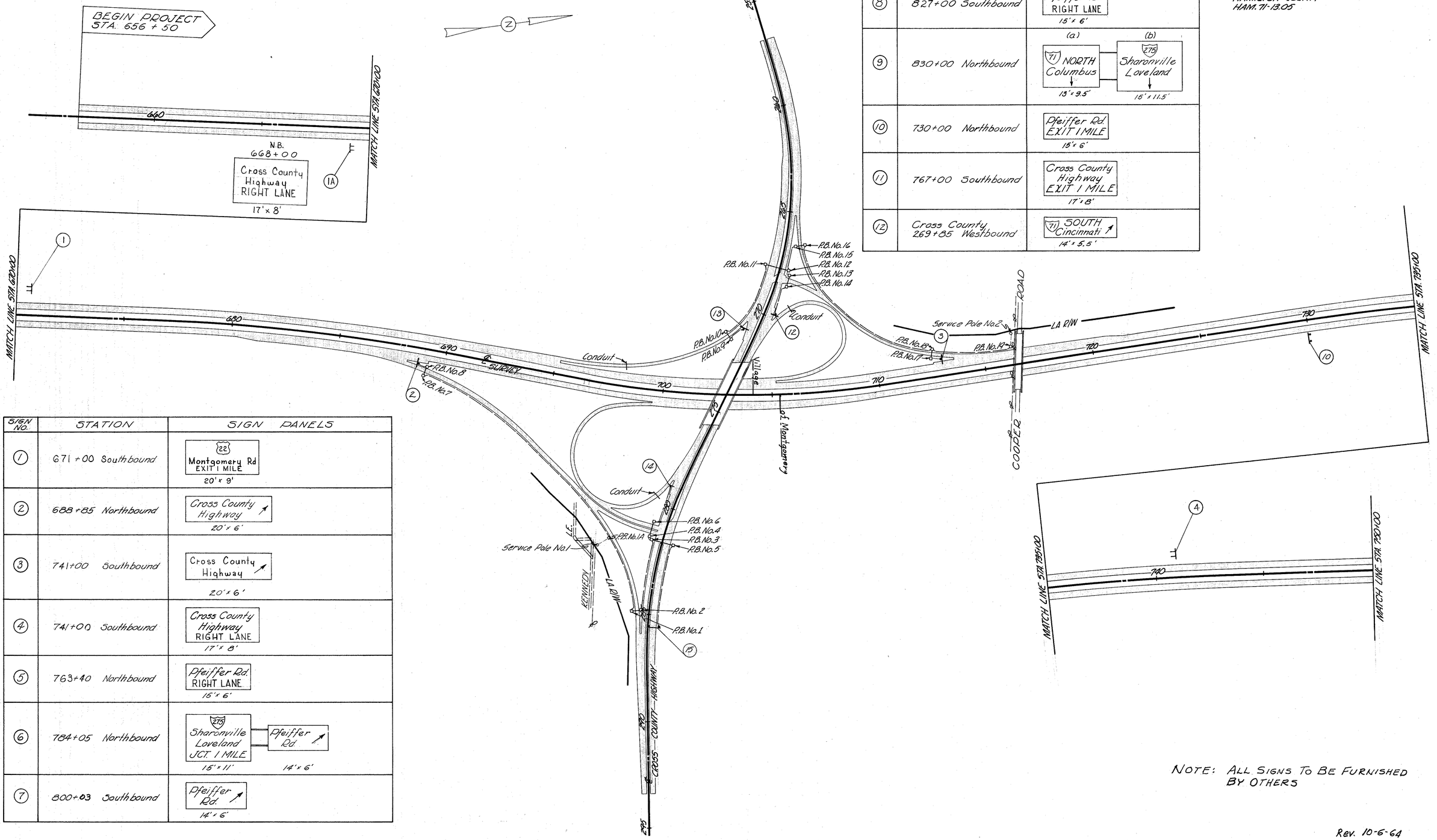
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM. 71-13.05

SIGN NO	STATION	SIGN PANELS
(8)	827+00 Southbound	Pfeiffer Rd. RIGHT LANE 15'x6'
(9)	830+00 Northbound	(a) 71 NORTH Columbus 13'x9.5' ; (b) 275 Sharonville Loveland 15'x11.5'
(10)	730+00 Northbound	Pfeiffer Rd. EXIT 1 MILE 15'x6'
(11)	767+00 Southbound	Cross County Highway EXIT 1 MILE 17'x8'
(12)	Cross County 269+85 Westbound	71 SOUTH Cincinnati 14'x5.5'

SIGN NO.	STATION	SIGN PANELS
(1)	671+00 Southbound	22 Montgomery Rd EXIT 1 MILE 20'x9'
(2)	688+85 Northbound	Cross County Highway 20'x6'
(3)	741+00 Southbound	Cross County Highway 20'x6'
(4)	741+00 Southbound	Cross County Highway RIGHT LANE 17'x8'
(5)	763+40 Northbound	Pfeiffer Rd. RIGHT LANE 15'x6'
(6)	784+05 Northbound	275 Sharonville Loveland JCT. 1 MILE 15'x11' ; Pfeiffer Rd 14'x6'
(7)	800+03 Southbound	Pfeiffer Rd 14'x6'



NOTE: ALL SIGNS TO BE FURNISHED BY OTHERS

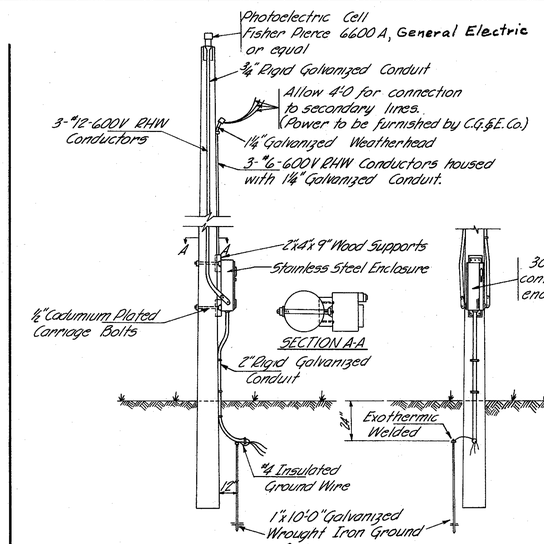
Rev. 10-6-64

OVERHEAD SIGN ELECTRICAL LAYOUT & DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

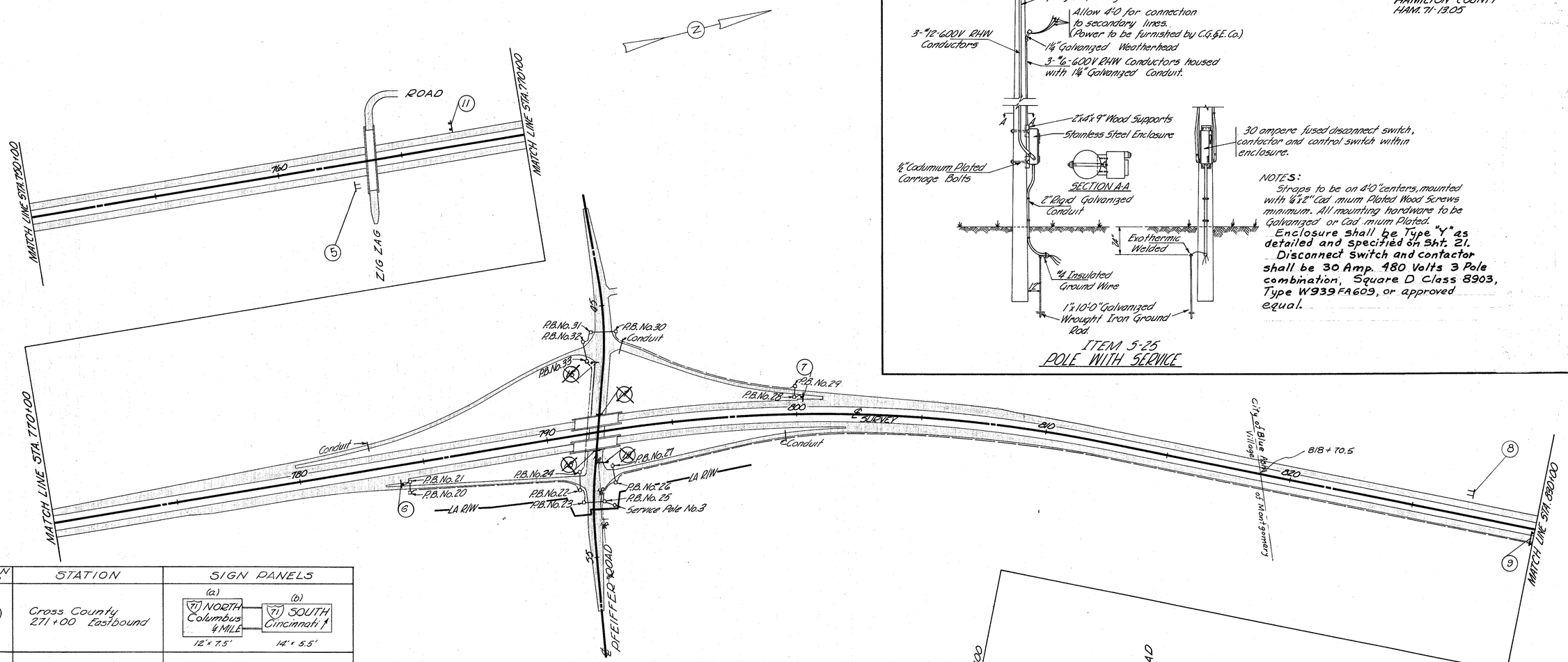
15
445

HAMILTON COUNTY
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NOTES:
Straps to be on 4'0" centers, mounted with ⅜"x2" Cadmium Plated Wood Screws minimum. All mounting hardware to be Galvanized or Cadmium Plated.
Enclosure shall be Type "Y" as detailed and specified on Sht. 21.
Disconnect Switch and contactor shall be 30 Amp. 480 Volts 3 Pole combination, Square D Class 8903, Type W939FA609, or approved equal.

ITEM 5-25
POLE WITH SERVICE



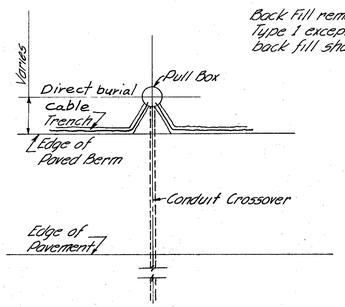
SIGN NO.	STATION	SIGN PANELS
13	Cross County 271+00 Eastbound	(a) 71 NORTH Columbus ¼ MILE 12'x7.5' (b) 71 SOUTH Cincinnati 14'x5.5'
14	Cross County 279+10 Eastbound	71 NORTH Columbus 14'x5.5'
15	Cross County 285+60 Westbound	(a) 71 NORTH Columbus 13'x5.5' (b) 71 SOUTH Cincinnati NEXT RIGHT 11'x7'
16	Pfeiffer Road 47+25 Eastbound	71 SOUTH Cincinnati 11'x7.5' FUTURE
17	Pfeiffer Road On Structure Eastbound	71 NORTH Columbus 13'x5.5' FUTURE
18	Pfeiffer Road On Structure Westbound	71 SOUTH Cincinnati 14'x5.5' FUTURE
19	Pfeiffer Road 51+00 Westbound	71 NORTH Columbus 11'x7.5' FUTURE

NOTE: ALL SIGNS TO BE FURNISHED BY OTHERS

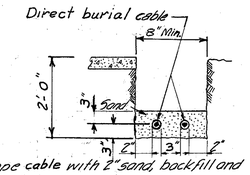
BACK FILLING and COMPACTING: The Cable shall be enveloped with 2" of unwashed sand meeting the following grading requirements:

Sieve No.	Percent Passing
4	100%
8	70 - 100%
50	5 - 60%
200	0 - 20%

Back Fill remainder of trench in accordance with Sec. I-107 Type 1 except that the material in the first 4" above the sand back fill shall contain no pieces larger than 2".



CABLE AND PULL BOX LOCATIONS

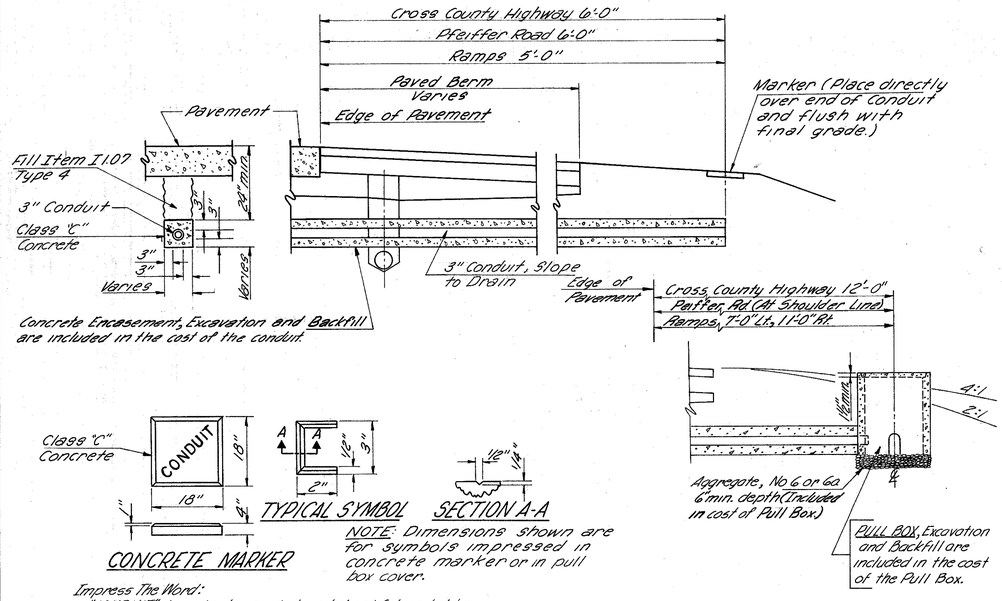


NOTE: Envelope cable with 2" sand, backfill and compact as per note.

TYPICAL TRENCH DETAIL

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OVERHEAD SIGN ELECTRICAL LAYOUT & DETAILS



CONCRETE MARKER

TYPICAL SYMBOL

SECTION A-A

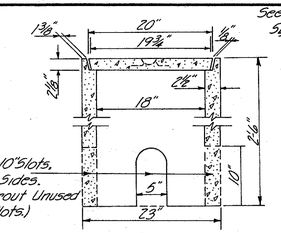
NOTE: Dimensions shown are for symbols impressed in concrete marker or in pull box cover.

Impress The Word:
"CONDUIT" to indicate conduit initial and future lighting.
"CABLE" to indicate direct burial cable change in direction.

TYPICAL ROADWAY CONDUIT AND MARKER DETAILS

ROADWAY CONDUIT CROSSOVER & PULL BOX LOCATIONS				
SHT. NO.	LOCATION	STATION	LENGTH	PB-ea.
82	Cross County Highway	267+90	108'	2
85	Cross County Highway	281+60	97'	2
88	Ramp "A"	2+25	34'	2
88	Ramp "A"	7+25	27'	-
61	Ramp "B"	3+75	34'	2
86	Ramp "B"	18+75	33'	2
85	Ramp "C", "B1"	3+72	52'	2
85	Ramp "C"	3+83	25'	-
82	Ramp "D"	3+41	28'	-
64	Ramp "E"	3+51	34'	2
82	Ramp "E"	12+00	35'	2
82	Ramp "E1"	2+52	30'	2
101	Pfeiffer Road	45+75	78'	2
101	Pfeiffer Road	53+00	71'	2
101	Ramp "F"	0+75	56'	2
103	Ramp "F"	10+20	27'	-
104	Ramp "G"	4+85	34'	2
101	Ramp "G"	11+50	48'	2
105	Ramp "H"	6+15	39'	2
101	Ramp "H"	13+36	34'	-
101	Ramp "I"	0+70	47'	2
106	Ramp "I"	7+80	27'	-
85	Ramp "B"	15+00 (1 AH)	—	1
64	Mainline	1116+40 (7 TLX)	—	1
		TOTAL	993'	34

NOTES:
Conduits: Conduits shall be Type I Fiber Conduit (Fed. "General Services" Specs. WC 511c) or Type I Asbestos Cement Conduit. (Fed. "General Services" Specs. WC 511b) Concrete Encased.
Markers: Terminate each end of Conduit with a coupling set flush with concrete encasement, install No. 10 galvanized steel fish wire and close each end with removeable plug.
Pull Boxes: Pull Boxes shall be reinforced concrete pipe, Sec. M-6.6 (a), modified as detailed. The cover shall be reinforced precast concrete conforming with Sec. M-1, air-entrained Portland Cement Class "C" Concrete with No. 4 maximum aggregate. Each cover shall also be provided with 2 galvanized steel lifting eyes recessed flush with the top of the cover as detailed.



Dimensions May Vary Due To Manufacturing Methods

PULL BOX DETAILS

NOTES:
STRUCTURE ELECTRICAL GROUND SYSTEM: To ground superstructure use No. 1/0 AWG 7 strand soft annealed bare copper cable encased in outside column at the following fixed piers:
(1) Cross County Structure - Pier No. 3 Lt & Rt outside columns.
(2) Pfeiffer Road Structure - Piers No. 3-II Rt. and No. 3-I Lt outside column.
Connect (by exothermic weld process) lower end of cable to a steel pile in Pier No. 3-II Pfeiffer Road Structure and at all other locations loop an additional 25 feet of cable under the pier footings and separate from the concrete with 2 layers of tar paper. Extend the upper end of the cables (in one continuous length) through top of the pier caps with lead of sufficient length to exothermic weld cable to outside beam of the super-structure.

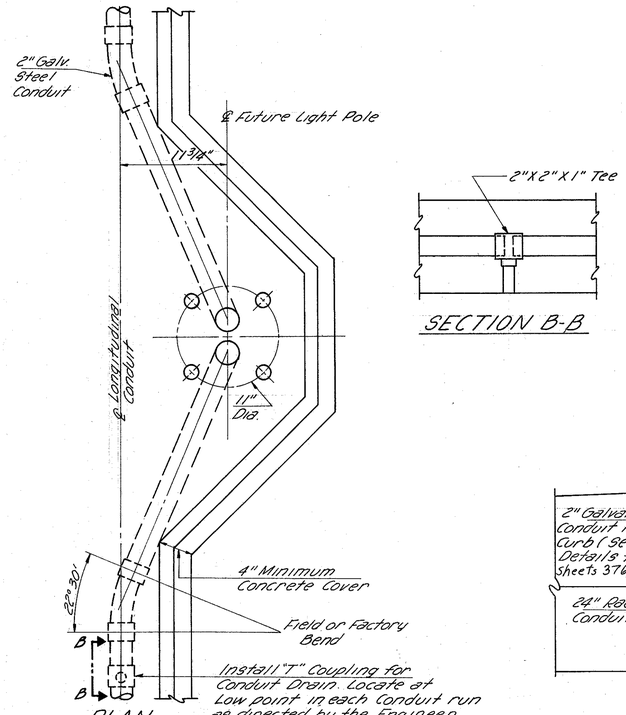
ANCHOR BOLT GROUND SYSTEM: To ground light pole anchor bolts use No. 1/0 AWG 7 strand soft annealed bare copper cable welded (by exothermic weld process) to the anchor bolt and top flange of outside beam at each proposed light standard.

CONDUIT GROUND SYSTEM: Ground each individual run of conduit by use of No. 1/0 AWG 7 strand soft annealed bare copper cable welded (by exothermic weld process) to the conduit and to the grounded anchor bolt or the outside beam of the super-structure.

CONDUIT FITTINGS & GROUND STRAPS AT EXPANSION JOINTS: At all structural expansion joints the conduit shall be spliced by use of an expansion fitting as detailed on this sheet and a ground strap shall be placed between the two runs of conduit with sufficient slack to accommodate expansion of the super-structure.

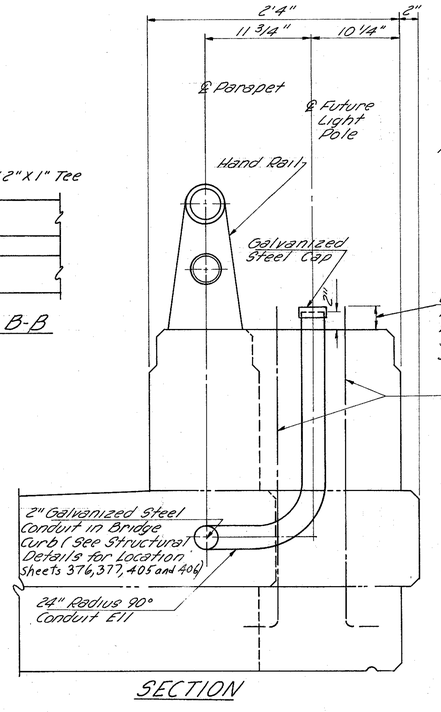
2" GALVANIZED STEEL CONDUIT: All bridge conduit shall be 2" diameter galvanized steel pipe. The conduit and fittings shall be rigid galvanized steel and hot-dipped galvanized inside and outside after threading and must further meet Federal Specification WWC 581c. Install a No. 10 galvanized steel fish wire in each conduit run for pulling future lighting cables.
CONDUIT DRAIN: Cost for placing conduit drain, all material, labor and incidentals necessary to complete this Item shall be included in the unit price bid per lineal foot of 2" galvanized steel conduit.

For Bridge Structural Details & Physical Dimensions see Bridge Drawings, Sheet Nos. 376, 377, 405 and 406

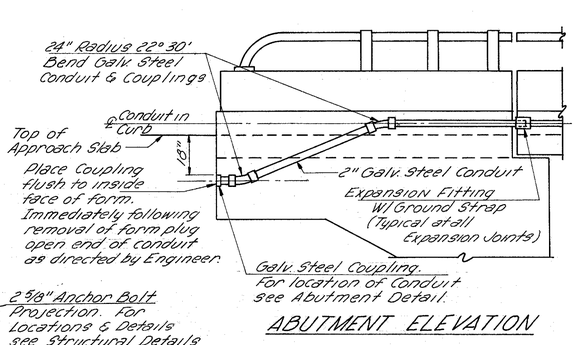


PLAN

SECTION B-B



SECTION



ABUTMENT ELEVATION

TYPICAL BRIDGE CONDUIT DETAILS

ESTIMATED LIGHTING QUANTITIES

ITEM	ROADWAY										BRIDGE No. HAM-71-		ROADWAY QUAN.	UNIT	ITEM	DESCRIPTION
											1393	1560				
5-25	235	208	33	61	1142	83	86	68	74				993	Lin. Ft.	5-25	Conduit-1 Way-3" Fiber or Asbestos Cement, Type I, Conc. Encased.
5-25											L.S.	L.S.		Lump	5-25	Bridge Structure Grounding System
5-25											716	417		Lin. Ft.	5-25	Conduit-2" Rigid Galvanized Steel in Bridge (as per plan)
5-25											5	3		Set. 4	5-25	Light Pole Anchor Rods for Bridges.
5-25	8	7	2	2	4	2	4	2	2	1			34	Each	5-25	Pull Box - Round 18" I.D.
5-25	2	2		2		2		2	2				12	Each	5-25	Markers (marked "conduit")
5-25		1								1			2	Each	5-25	Markers (marked "cable")

LIGHTING DETAILS & QUANTITIES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
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Pull Box, Sign and Service Pole Reference Numbers		5-E5 Sign Service Circuits Direct Burial Cable	
		#8 AWG With Two Conductors	#4 AWG With Two Conductors
From	To	Lin.Ft.	Lin.Ft.
S.P.No.1	P.B.No.1A		84
P.B.No.1A	No.7		1,235
No.7	P.B.No.8		36
No.8	S.No.2		38
No.1A	P.B.No.1		410
No.1	No.2		33
No.2	No.3		348
No.3	No.5		101
No.5	S.No.15		486
No.3	P.B.No.4		21
No.4	No.6		53
No.6	S.No.14		245
S.P.No.2	P.B.No.19		75
No.19	P.B.No.18		410
No.18	No.17		35
No.17	S.No.3		47
No.18	P.B.No.16		928
No.16	No.15		35
No.15	No.12		170
No.12	No.13		20
No.13	No.14		29
No.14	S.No.12		190
No.12	P.B.No.11		114
No.11	No.10		370
No.10	No.9		33
No.9	S.No.13		66
S.P.No.3	P.B.No.25	64	
P.B.No.25	No.26	156	
No.26	S.No.9	4,124	
No.25	P.B.No.23		75
No.23	No.22		116
No.22	No.20		738
No.20	P.B.No.21		35
No.21	S.No.6		31
No.22	P.B.No.24		50
No.24	No.33		534
No.33	P.B.No.32		75
No.32	No.31		88
No.31	No.30		78
No.30	No.29		788
No.29	No.28		35
No.28	S.No.7		34
(I) Grand Total		4,344	8,249

Pole With Service Location			5-25 Pole With Service
	Station	Offset	Each
No.1	15+00 Ramp "B"	80' Rt.	1
No.2	71+60 "D"	145' Lt.	1
No.3	53+00 P.Rd.	90' Lt.	1
(I)	Grand Total		3

Sign Installation Reference No.		Structural Supports Steel Beam Type 14 WF 30	I-129 Structural Supports Steel Beam Type 10B17	Structural Supports Steel Beam Type 12W27	Structural Supports Steel Beam Type 12B22	Reinforced Conc. Foundations for Overhead Supports	Unreinforced Conc. Foundations For Ground Mtd. Supports	Sign Erection Guide Signs as per Detail	5-25 Sign Circuits 0.50 KVA Transformer	0.75 KVA Transformer	#4 AWG Single Conductor Switch Feeder Type 8A Unfused	ESNA Connector	100 KVA Transformer	30 Amp. Fusible Disconnect Switch With Enclosure Type Y	Enclosure Type Z	Sign Support Ground Rod & Wire	Sign Lighting Ballast Watts	Ballast Type A	Ballast Type B	Ballast Type C	Ballast Type D	Fixture With Lamp Type 72" HO	Fixture With Lamp Type 72" SHO	Fixture With Lamp Type 96" SHO	Sign Wiring Complete	I-129 No. 7.3 Des. 1 40' Span Mod. As Per Plan	No. 7.4 Des. 1 48' Span Mod. As Per Plan		No. 9.24 Des. 2 20' Arm Mod. As Per Plan	No. 9.24 Des. 2 14' Arm Mod. As Per Plan	No. 10.48 Des. 5 20' Arms As Per Plan	No. 9.12 Des. 2 14' Arms Mod. As Per Plan		No. 10.48 Des. 8 22' Arms Mod. As Per Plan
		Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	C.Y.	C.Y.	Sq.Ft.	Each	Each.	Lin.Ft.	Each	Each	Each	Each	K.V.A.		Each	Each	Each	Each	Each		Each	Each	Lump									
1		57.5				4.0	3.0	180																											
2						3.7		120		1	20	2		1		1	440	1	1			3			L.S.				1					
1A				51.5			2.9	136																											
3						3.7		120		1	20	2		1		1	440	1	1			3			L.S.				1					
4					46		2.5	136																											
5			41				2.2	90														2													
6	a					5.2		165			20	2	1		1	1	425				1		2		L.S.									1
	b							84									250		1			2												
7						3.6		84	1		20	2		1		1	250		1			2			L.S.				1					
8			41				2.2	90														2													
9	a					9.7		1235			20	2	1		1	1	425				1		2		L.S.		1								
	b							1725									425				1		2												
10			41				2.2	90																											
11				54			2.9	136																											
12						1.8		63	1		20	2		1		1	250		1			2			L.S.						1			
13	a					4.8		90			20	2	1		1	1	425				1		2		L.S.									
	b							771									250		1			2								1					
14						1.7		771	1		20	2		1		1	250		1			2			L.S.					1				
15	a					9.2		715		1	20	2		1		1	250		1			2			L.S.	1								
	b							771									250			1			1												
TOTALS		57.5	123	105.5	46	43.4	17.9	2,182.5	3	3	180	18	3	6	3	9	—	2	8	1	4	18	8	1	L.S.	1	1		2	1	1	2		1

NOTES

Item 5-25, Pole with Service: The poles with service shall be installed at the location shown or as directed by the Engineer and constructed in accordance with the detail shown in these plan. The basis of payment shall be per each Pole with Service and shall include all wiring, conduits, fittings, fastenings, hardware, photoelectric cell, switch enclosures, ground rod, pole and all other items required to furnish an accepted operable service system when connections are made to Cincinnati Gas and Electric Co. feed.

Item I-15, Guard Rail, Steel Beam Std. Type (Deep), as per plan: Special independent runs of guard rail have been placed as detailed on the line sheets for sign protection. The basis of payment shall be in accordance with Item I-15 and shall in addition include the additional post as detailed on sheet No. 31.

10 B 22, 14 WF 30

Item I-129, Structural Supports, Steel Beam Type 10 B17 & 12WF27: The steel structural supports for sign Nos. ~~10 & 11~~ 1, 1A, 4, 5, 8, shall be in accordance with S.S. No. I-129 and shall meet the requirements of ASTM A-36 steel (working stress 20,000 psi).

Item I-129, Overhead Sign Supports: S.S. No. I-129 is modified as follows: ① "Switch enclosure mounting bracket including installation and mounting bolts and drilled holes shall be included in the payment for I-129 overhead sign support structures at the contract price per support structure type." ② "The conduit in the sign support foundations is included in the cost of concrete foundations." ③ "Future support arms 'G' with mounting holes and hardware are to be included with the cost of furnishing and installation of overhead sign supports and sign brackets."

Item I-129, Sign Erection ~~by Type~~ as per plan: The contractor shall erect sign panels furnished by others as noted on the schematic signing layout sheet Nos. 14 & 15. The panels shall be mounted on the brackets or beam supports provided in the plans.

The schedule for sign erection shall be submitted to the Engineer, Bureau of Traffic, 450 East Town Street, Columbus, Ohio, 60 calendar days prior to the start of any scheduled erection work. The schedule shall included proposed dates, time, sign numbers, and delivery point.

The price bid per square foot for, "I-129, sign erection ~~by Type~~, as per plan," shall include all necessary equipment, manpower, and tools to erect the signs noted. All sign material and accessories will be furnished and transported to a designated delivery point, on or near the subject project, by others.

The contractor shall be responsible for the handling and storage of the sign panels and accessories from the time of arrival at the delivery point.

Item 5-25, Sign Wiring, Complete: Sign wiring shall include the furnishing and installation of all wiring, rigid and flexible conduit, fittings, fastenings, hardware and all other items required to completely energize the sign lighting system from wiring the switch to the light fixtures. Basis of payment for this shall be under Item 5-25 at the contract price per sign support installation.

Item 5-25, Direct Burial Cable Installation: The trench shall be dug and backfilled in accordance with the plans. The sand bed and first course of backfill shall be free of rocks, stones or other material which may injure the cable.

Cable shall be installed with slack. In no case shall cable be pulled into trench from a reel.

In areas where cable passes close to obstructions around which there may later be excavation, a wood plank shall be laid to warn of the presence of the cable.

Splices are not permitted except in pull boxes or handholes. Splices shall be made utilizing unfused ESNA connectors style 51 or 84.
When cables are run parallel with the roadway no markers are necessary. However, when a cable run is not parallel to the roadway and the plans do not call for a pull box, a concrete marker shall be installed at points of departure. Payment for Direct Burial Cable shall be at the contract unit price per lineal foot including splice connectors.
Item 5-25, Cable & Conduit (Method of Measurement): Cable length shall be considered as the length from center to center of pull boxes, splices connectors to pull boxes and switch enclosure to splice connectors plus 10% for slack, waste, and installation requirements.

Direct burial cable items shall include trench excavation, backfill and route markers if required.

Conduit lengths shall be from center to center of pull boxes or lengths shown on the plan if no pull boxes are required.

Overhead Sign Light Fixtures: The light fixtures for sign numbers ①2, 3, ~~5~~ 6, 7, ~~8~~ and 9 are bottom mounted and the actual vertical sign dimension has been increased 1'-0" to accommodate the glare shield.

The fixtures for sign numbers 12, 13, 14 and 15 are top mounted.

Item 5-25 Wire and Cable: Direct burial cable shall be NEC approved for direct burial, 7 strand butyl insulation (⅛") copper with neoprene jacket (¾6"), 3000 volt direct burial wire or equal.

Paragraph A

Certification and Approval of Supports and Lighting Items: The contractors shall submit, through the proper channels the drawing, information or samples as required below:

(A) Six (6) copies of shop drawings or materials lists of the following for approval:
1. Overhead Signs
2. ~~Sign Face Layouts and~~ Ground Mt. Sign Supports
3. ~~Sign Panels and Accessories~~ (does not apply)
4. Sign Lighting Details
5. Catalog Cuts, Description or samples of fabricator's standard items as shown in the plans or their equal for approval.

(B) Certifications or samples for all materials which have been aproved under item (A) above shall be in possession of the contractor prior to any purchase or installation.

Inspection and Testing of Sign Lighting: The contractor shall furnish all equipment necessary to demonstrate to the satisfaction of the engineer that all circuits are free from short circuits and unspecified grounds, and are properly connected and operable before acceptance.

This demonstration shall include a meggaring test to show that all conductors are clear of grounds and that the resistance at the ground is not more than 15 ohms. Voltage and amperage tests shall be made at the service pole switch and the sign support switch.

After the sign lighting system is completed, the entire system shall be operated continuously each night until Seven (7) consecutive days elapse without failure or defect. The contractor shall correct any defects which may develop at no extra cost to the state.

During the test period adjustments to the fixture aiming angles shall be made as directed by the engineer to obtain maximum uniformity in sign illumination. The photo electric cell shall be adjusted during this period for proper operation as directed by the engineer.

Revised C.E.H. 6-3-65
Rev. 10-6-64

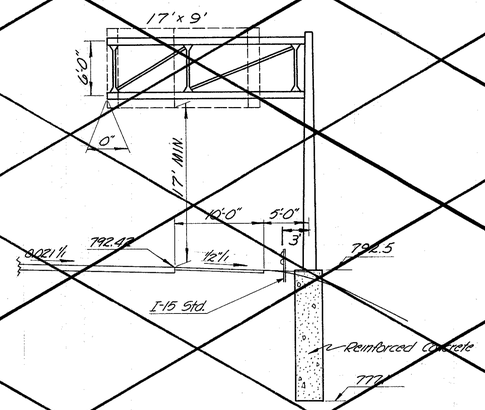
OVERHEAD SIGN QUANTITIES & NOTES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM. 71-13.05

1

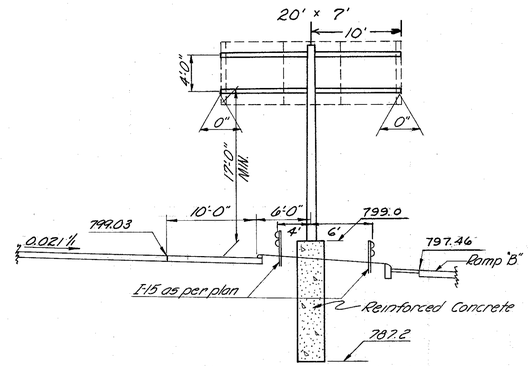


STA. 680+15 NORTHBOUND

I-129 No. 12.24 Design-6, as per plan, 22' Arm Mod.

17'x9' = 153 S.F. Sign Area
Bracket Spacing = 1'-2⅜", 6'-3⅜", 8'-3⅜", 1'-2⅜"
No. of Brackets = 3 Height = 9'
Type = X_S

2

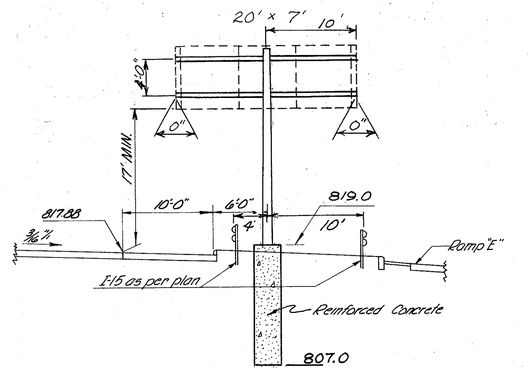


STA. 688+85 NORTHBOUND

I-129 No. 9.24 Design-2, as per plan, 20' Arm

20'x7' = 140 S.F. Sign Area
Bracket Spacing = 0'-7", 3@6'-3⅜", 0'-6⅜"
No. of Brackets = 4 Height = 7'
Type = X_S

3

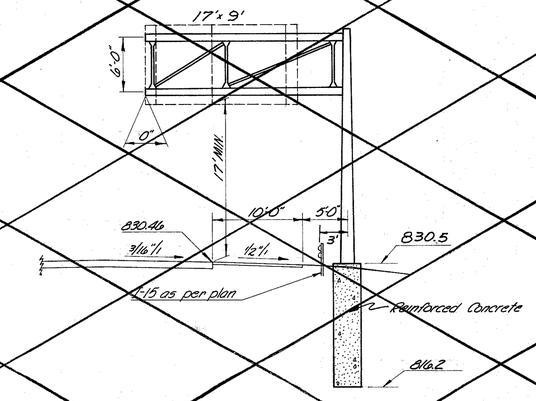


STA. 713+00 SOUTHBOUND

I-129 No. 9.24 Design-2, as per plan, 20' Arm

20'x7' = 140 S.F. Sign Area
Bracket Spacing = 0'-7", 6'-3⅜", 6'-3⅜", 0'-6⅜"
No. of Brackets = 4 Height = 7'
Type = X_S

4

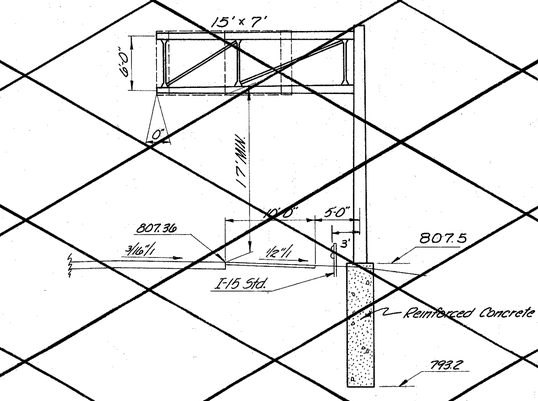


STA. 721+66 SOUTHBOUND

I-129 No. 12.24 Design-6, as per plan, 22' Arm Mod.

17'x9' = 153 S.F. Sign Area
Bracket Spacing = 1'-2⅜", 6'-3⅜", 8'-3⅜", 1'-2⅜"
No. of Brackets = 3 Height = 9'
Type = X_S

5

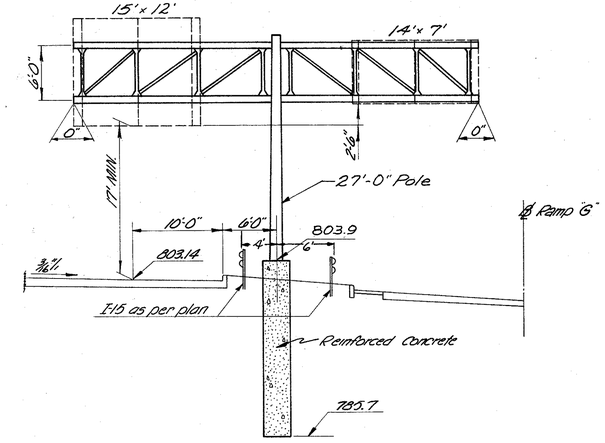


STA. 715+30 NORTHBOUND

I-129 No. 12.24 Design-6, as per plan, 22' Arm Mod.

15'x7' = 105 S.F. Sign Area
Bracket Spacing = 1'-2⅜", 6'-3⅜", 6'-3⅜", 1'-2⅜"
No. of Brackets = 3 Height = 7'
Type = X_S

6



STA. 784+05 EASTBOUND

I-129 No. 10.48 Design-8, as per plan, 22' Arm Mod.

(a)
15'x12' = 180 S.F. Sign Area
Bracket Spacing = 1'-2⅜", 6'-3⅜", 6'-3⅜", 1'-2⅜"
No. of Brackets = 3 Height = 12'
Type = X_S

(b)
14'x7' = 98 S.F. Sign Area
Bracket Spacing = 0'-8⅜", 6'-3⅜", 6'-3⅜", 0'-8⅜"
No. of Brackets = 3 Height = 7'
Type = X_S

Rev. 10-6-64

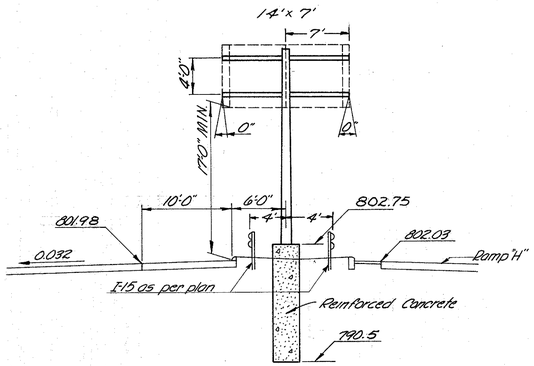
SIGN SUPPORT DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

19
445

HAMILTON COUNTY
HAM. 71-13.05

(7)

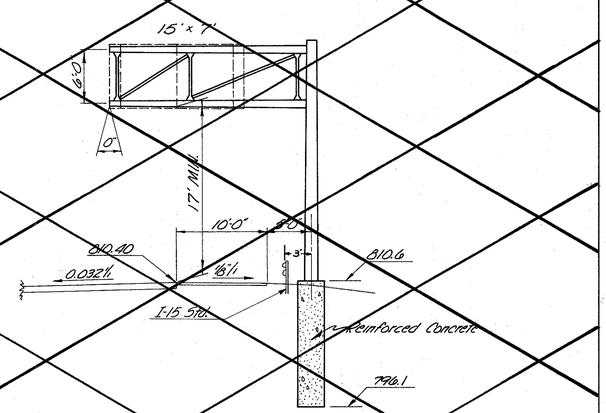


STA. 800+03 SOUTHBOUND

I-129 No. 9.24 Design-2, as per plan, 14' Arm

14'x 7' = 98 S.F. Sign Area
Bracket Spacing 0'-8⅝", 6'-3⅛", 6'-3⅛", 0'-8⅝"
No. of Brackets = 3 Height = 7'
Type = X_S

(8)

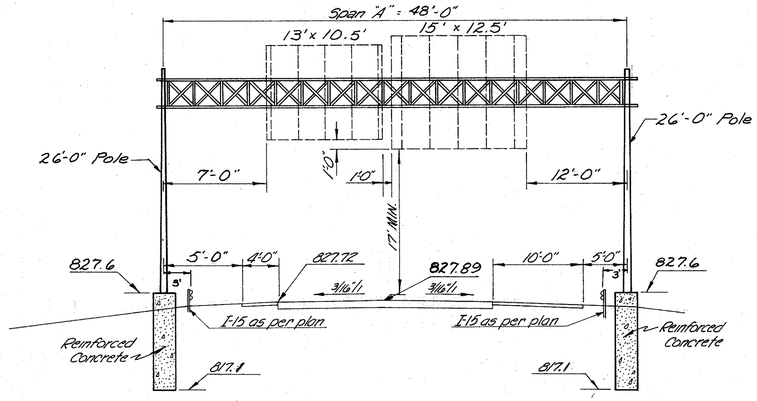


STA. 809+00 SOUTHBOUND

I-129 No. 12.24 Design-6, as per plan, 22' Arm Mod.

14'x 7' = 105 S.F. Sign Area
Bracket Spacing = 1'-2⅞", 6'-3⅛", 6'-3⅛", 1'-2⅞"
No. of Brackets = 3 Height = 7'
Type = X_S

(9)



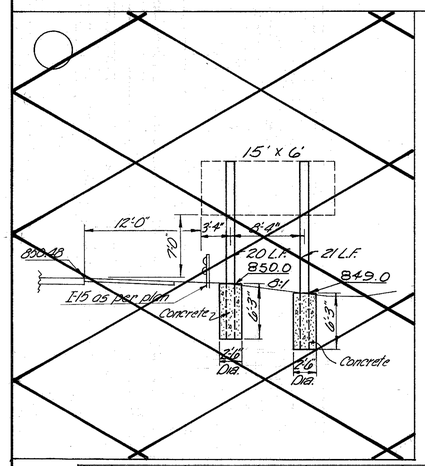
STA. 830+00 NORTHBOUND

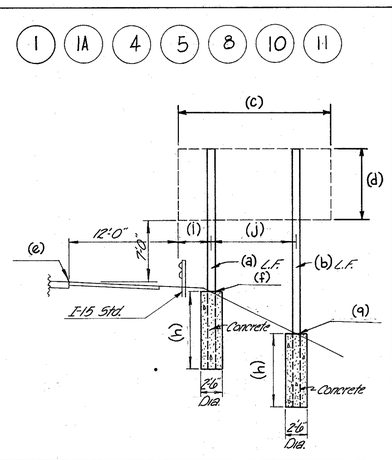
I-129 No. 7.6 Design-1, as per plan Mod.

(a)
13'x 10.5' = 136.5 S.F. Sign Area
Bracket Spacing = 0'-6", 4@ 3'-0", 0'-6"
No. of Brackets = 5 Height = 10.5'
Type = V_a

(b)
15'x 12.5' = 187.5 S.F. Sign Area
Bracket Spacing = 1'-2⅜", 3'-1⅜", 3'-1⅜", 3'-1⅜", 3'-1⅜", 1'-2⅜"
No. of Brackets = 5 Height = 12.5'
Type = V_a

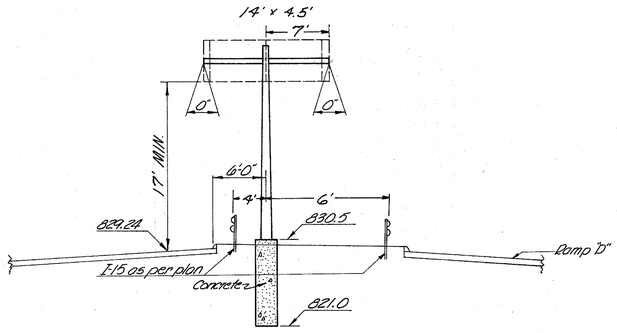
(1) (1A) (4) (5) (8) (10) (11)





Ref. No.	Location	Structural Supports Steel Beam Type		Beam Lengths (L.F.) (a)	Beam Lengths (L.F.) (b)	Sign Dimensions (Ft.) (c)	Sign Dimensions (Ft.) (d)	Edge Pav't Elev. (e)	Top Foundation Elev. (f)	Top Foundation Elev. (g)	Depth Fdn. (FT.) (h)	Lateral Support Placement (FT) (i)	Lateral Support Placement (FT) (j)
1	671+00 S.B.	14WF30		26'	31.5'	20'	9'	787.61	786.1	780.6	8.25'	4.5'	11.0'
1A	668+00 N.B.	12WF27		23.5'	28.0'	17'	8'	792.65	791.2	786.5	8.0'	3.75'	9.5'
4	741+00 SB	12B22		22.5'	23.5'	17'	8'	863.47	862.7	861.5	6.75'	3.75'	9.5'
5	763+45 N.B.	10B17		20'	21'	15'	6'	817.40	816.4	815.4	6.0'	3.33'	8.33'
8	827+00 S.B.	10B17		20'	21'	15'	6'	826.50	825.5	824.5	6.0'	3.33'	8.33'
10	730+00 N.B.	10B17		20'	21'	15'	6'	850.48	850.0	849.0	6.25'	3.33'	8.33'
11	767+00 S.B.	12WF27		25'	29'	17'	8'	811.68	810.7	805.9	8.5'	3.75'	9.5'

(12)

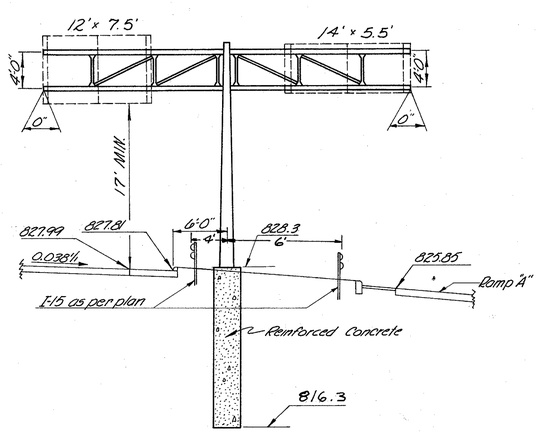


CROSS COUNTY HIGHWAY
STA. 269+85 WESTBOUND

I-129 No. 9.12 Design-2, as per plan

14'x 4.5' = 63 S.F. Sign Area
Bracket Spacing = 0'-8⅜", 6'-3⅛", 6'-3⅛", 0'-8⅜"
No. of Brackets = 3 Height = 5.0'
Type = X_S

(13)



CROSS COUNTY HIGHWAY
STA. 271+05 EASTBOUND

I-129 No. 10.48 Design-5, as per plan, 20' Arm

(a)
12'x 7.5' = 90 S.F. Sign Area
Bracket Spacing = 0'-6", 5'-6", 5'-6", 0'-6"
No. of Brackets = 3 Height = 8.0'
Type = X_S

(b)
14'x 5.5' = 77 S.F. Sign Area
Bracket Spacing = 0'-8⅜", 6'-3⅛", 6'-3⅛", 0'-8⅜"
No. of Brackets = 3 Height = 6.0'
Type = X_S

Rev. 10-6-64

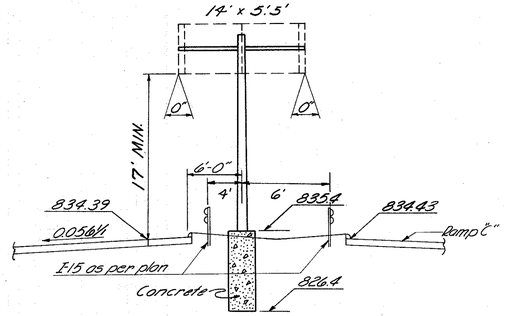
SIGN SUPPORT DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

20
445

HAMILTON COUNTY
HAM-71-13.05

14

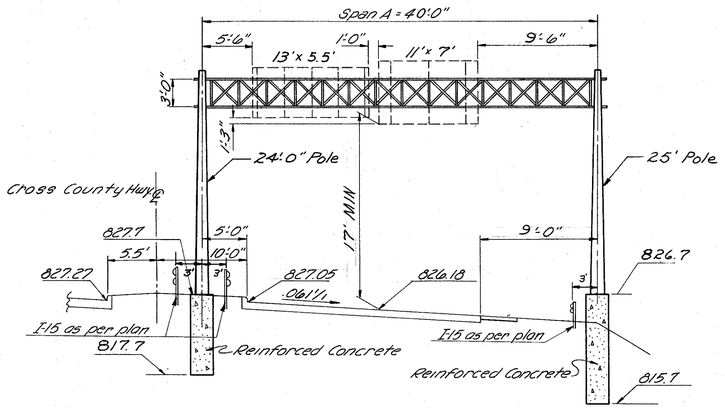


CROSS COUNTY HIGHWAY
STA 279+10 EASTBOUND

I-129 No. 9.12 Design-2, as per plan 14' Arm

14' x 5.5' = 77 S.F. Sign Area
Bracket Spacing = 0'-8⅝", 6'-3⅜", 6'-3⅜", 0'-8⅝"
No. of Brackets = 3 Height = 6.0'
Type Y_S

15



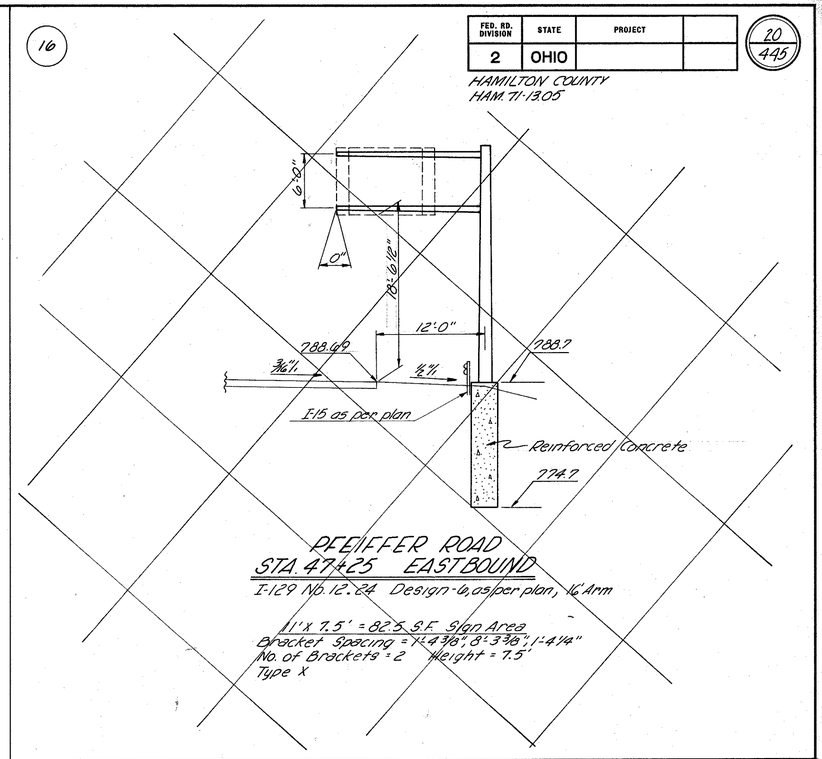
CROSS COUNTY HIGHWAY
STA. 285+60 WESTBOUND

I-129 No. 7.3 Design-1, as per plan Mod.

(a)
13' x 5.5' = 71.5 S.F. Sign Area
Bracket Spacing = 0'-6", 4@3'-0", 0'-6"
No. of Brackets = 5 Height = 6'-0"
Type X_a

(b)
11' x 7' = 77 S.F. Sign Area
Bracket Spacing = 1'-4 3/8", 4'-1 3/8", 4'-1 3/4", 1'-4 1/4"
No. of Brackets = 3 Height = 7.5'
Type X_a

16

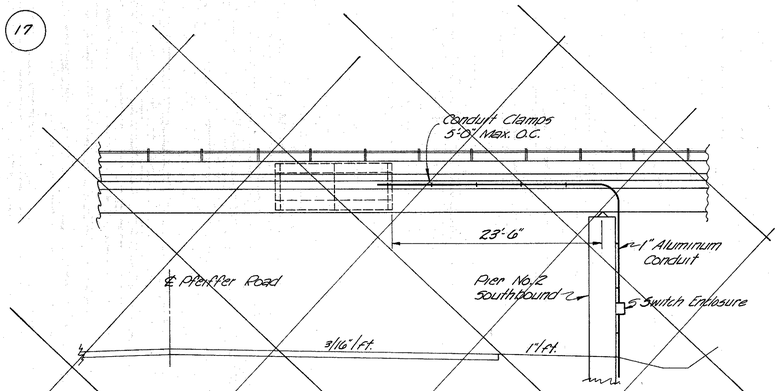


PFEIFFER ROAD
STA. 47+25 EASTBOUND

I-129 No. 12.24 Design-6, as per plan, 16' Arm

11' x 7.5' = 82.5 S.F. Sign Area
Bracket Spacing = 1'-4 3/8", 3'-3 3/8", 1'-4 1/4"
No. of Brackets = 2 Height = 7.5'
Type X

17

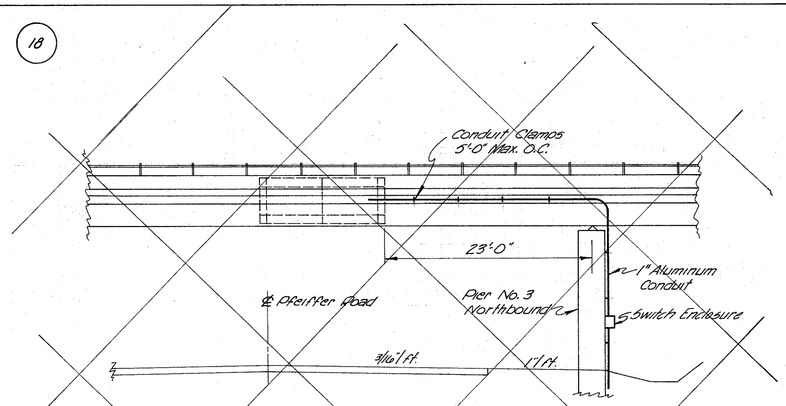


PFEIFFER ROAD
ON STRUCTURE EASTBOUND

I-129 Special Structural Detail, as per plan

13' x 5.5' = 71.5 S.F. Sign Area
Bracket Spacing = Vert. = 0'-6", 6'-2⅛", 6'-2⅛", 0'-6"
Hor. = 1'-2⅛", 3'-1", 1'-2⅛"

18

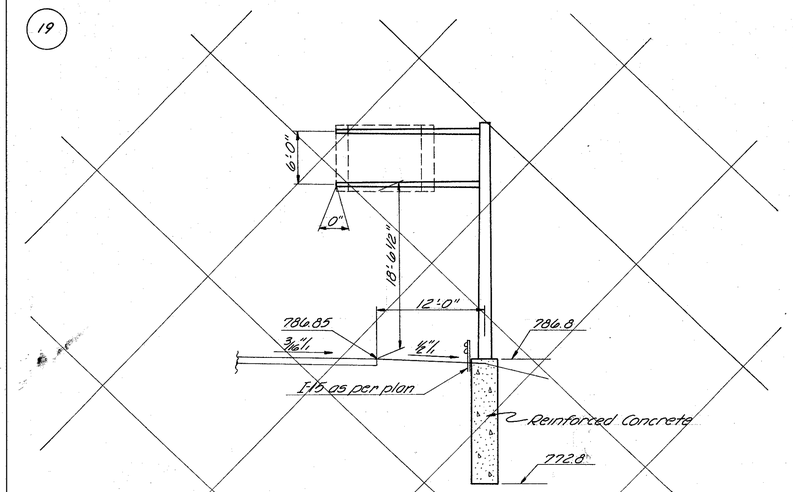


PFEIFFER ROAD
ON STRUCTURE WESTBOUND

I-129 Special Structural Detail, as per plan

14' x 5.5' = 77 S.F. Sign Area
Bracket Spacing = Vert. = 0'-9⅛", 6'-2⅛", 6'-2⅛", 0'-9⅛"
Hor. = 1'-2⅛", 3'-1", 1'-2⅛"

19



PFEIFFER ROAD
STA. 51+00 WESTBOUND

I-129 No. 12.24 Design-6, as per plan, 16' Arm

11' x 7.5' = 82.5 S.F. Sign Area
Bracket Spacing = 1'-4 3/8", 3'-3 3/8", 1'-4 1/4"
No. of Brackets = 2 Height = 7.5'
Type X

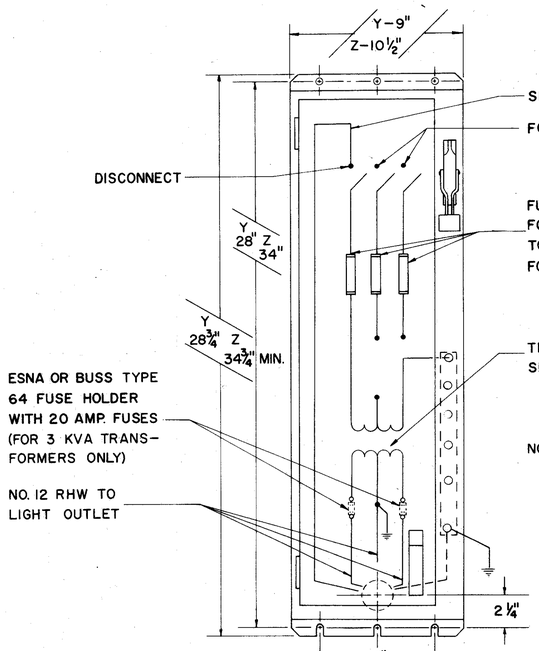
Rev. 10-6-64

SIGN SUPPORT DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

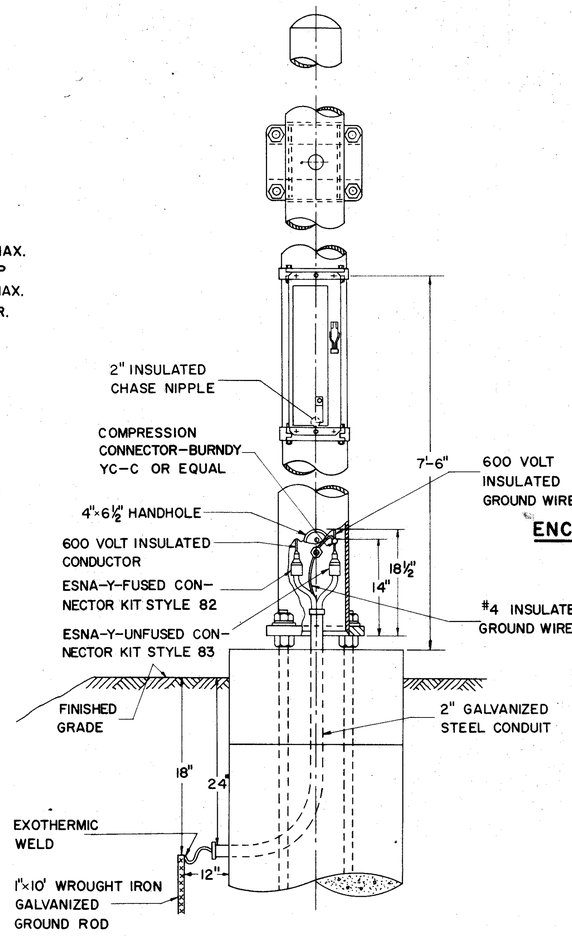
21
1995

HAM-71-13.05

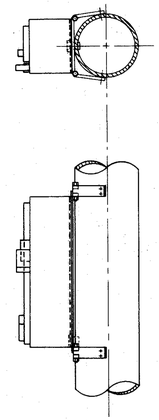


TYPICAL ENCLOSURE DETAIL

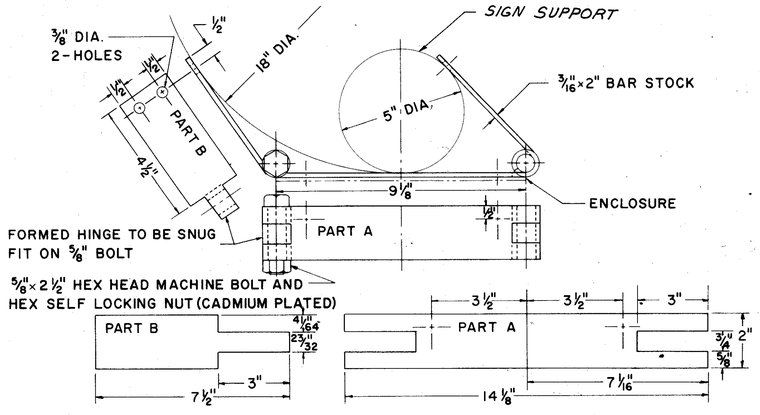
480 VOLT SIGN LIGHTING SERVICE



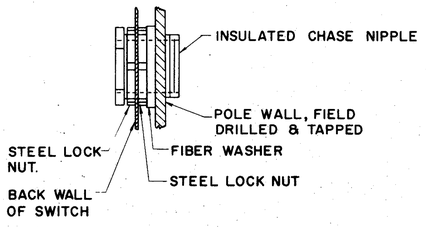
SIGN SUPPORT DETAIL FOR ILLUMINATED SIGNS



ENCLOSURE MOUNTING DETAIL



ENCLOSURE MOUNTING BRACKET



CHASE NIPPLE ASSEMBLY DETAIL

NOTES

GENERAL

DETAILS OF THIS SHEET SHALL APPLY TO EACH OVERHEAD SIGN STRUCTURE TO SUPPORT EXTERNALLY ILLUMINATED SIGNS.

SERVICE

ELECTRIC SERVICE SHALL ENTER THROUGH A 2" GALVANIZED RIGID STEEL CONDUIT INSTALLED IN STRUCTURE FOUNDATION AS PER DETAIL. SIGN SERVICE OR CIRCUITRY SHALL BE CONTROLLED AS REQUIRED BY THE SYSTEM DESIGN AT THE PRIMARY SOURCE.

SERVICE CONDUCTORS SHALL BE THE SIZE AND TYPE AS SPECIFIED.

COMBINATION SWITCH AND TRANSFORMER

(TYPE Y OR Z ENCLOSURE REQUIRED AS PER SCHEDULE ON THIS SHEET)

THIS COMBINATION SHALL BE A 30 OR 60 AMPERE 600 VOLT SWITCH WITH A .25 TO 3.0 KVA TRANSFORMER. THE COMBINATION AND ENCLOSURE SHALL BE AS SQUARE D CLASS 9421, COLUMBUS ELECTRIC WORKS CLASS 101, PANALS INCORPORATED-CLASS 9400, OR APPROVED EQUAL.

TRANSFORMER

THE TRANSFORMER SHALL BE DRY TYPE SINGLE FACE 240/480 VOLT PRIMARY 120/240 VOLT SECONDARY, THE TYPE AND CAPACITY AS SPECIFIED IN DETAILED SCHEDULE ON THIS SHEET.

ENCLOSURE

THE ENCLOSURE SHALL BE NEMA #4 WATER TIGHT .063 GAGE STAINLESS STEEL ASTA 302-303. A DISCONNECT HANDLE SHALL BE FLANGE MOUNTED AND CAPABLE OF BEING LOCKED IN EITHER POSITION. THE ENCLOSURE SHALL BE EQUIPPED WITH A DOOR LOCKING MECHANISM WITH A DEFEATER THAT NECESSITATES TWO HANDS TO OPERATE MECHANISM WITH THE SWITCH IN OFF POSITION. SPACE FOR A 2" INSULATED CHASE NIPPLE SHALL BE PROVIDED APPROXIMATELY 2 ¼" ABOVE THE CENTER LINE OF THE LOWER MOUNTING SLOT. THIS ENCLOSURE AND STRUCTURE SHALL BE FIELD DRILLED AND TAPPED FOR THE REQUIRED NIPPLE AS SHOWN ON THE DETAIL ON THIS SHEET.

THIS ENCLOSURE SHALL BE FLANGE MOUNTED ON BRACKETS WITH 5/16"-18×¾" HEX HEAD CADMIUM PLATED MACHINE BOLTS. ENCLOSURES SHALL BE TYPE Y OR Z AS SPECIFIED AND DIMENSIONED ON THIS SHEET.

ENCLOSURE MOUNTING BRACKET

THE ENCLOSURE MOUNTING BRACKET SHALL BE FABRICATED THEN GALVANIZED BEFORE ASSEMBLY. THE BRACKET SHALL BE FIELD MOUNTED WITH 5/16" HEX HEAD SELF TAPPING CADMIUM PLATED SCREWS. THE SIGN SUPPORT SHALL BE FIELD DRILLED, AS PER DETAIL.

WIRE AND CABLE

ALL WIRE AND CABLE UP TO AND INCLUDING #4 SHALL COMPLY WITH FAA TYPE A SPECIFICATIONS. #2 OR LARGER WIRE OR CABLE SHALL BE G.E. 58006 OR ANACONDA AP-10711, OR EQUAL. ALL WIRE AND CABLE SHALL BE 600 VOLT.

GROUNDING

EACH SIGN SUPPORT OR STRUCTURE SHALL BE GROUNDED WITH A #4 RUBBER INSULATION AND NEOPRENE JACKETED CONDUCTOR. THE GROUNDING CONDUCTOR SHALL BE CONNECTED TO THE SWITCH THEN TO THE COMPRESSION CONNECTOR IN THE SIGN SUPPORT THEN TO A 1"×10' GALVANIZED WROUGHT IRON GROUND ROD. GROUND CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO GROUND ROD AND THEN TAPED WITH PLASTIC ELECTRICAL TAPE AT EACH EXPOSED PORTION OF CONDUCTOR. THE WELDED CONNECTION AND TAPED PORTION SHALL BE PAINTED 2 COATS OF GLYPTAL INSULATING ENAMEL.

NOTE: SEE SHEET 15 FOR SERVICE POLE AND CABLE PLACEMENT DETAILS.

TRANSFORMERS

TYPE	MANUFACTURERS G.E.	MANUFACTURERS JEFFERSON	OUTPUT K.V.A.	SWITCH TRANSFORMER ENCLOSURE
I	9T51Y7	244-241	.25	Y
II	9T51Y8	244-251	.50	Y
III	9T51Y9	244-261	.75	Y
IV	9T51Y10	244-401	1.00	Z
V	9T51Y11	244-411	1.50	Z
VI	9T51Y12	244-421	2.00	Z
VII	9T51Y13	244-431	3.00	Z

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

ELECTRICAL SIGN SERVICE DETAILS 480 VOLT SYSTEM

ES-3A

DATE 6-18-64

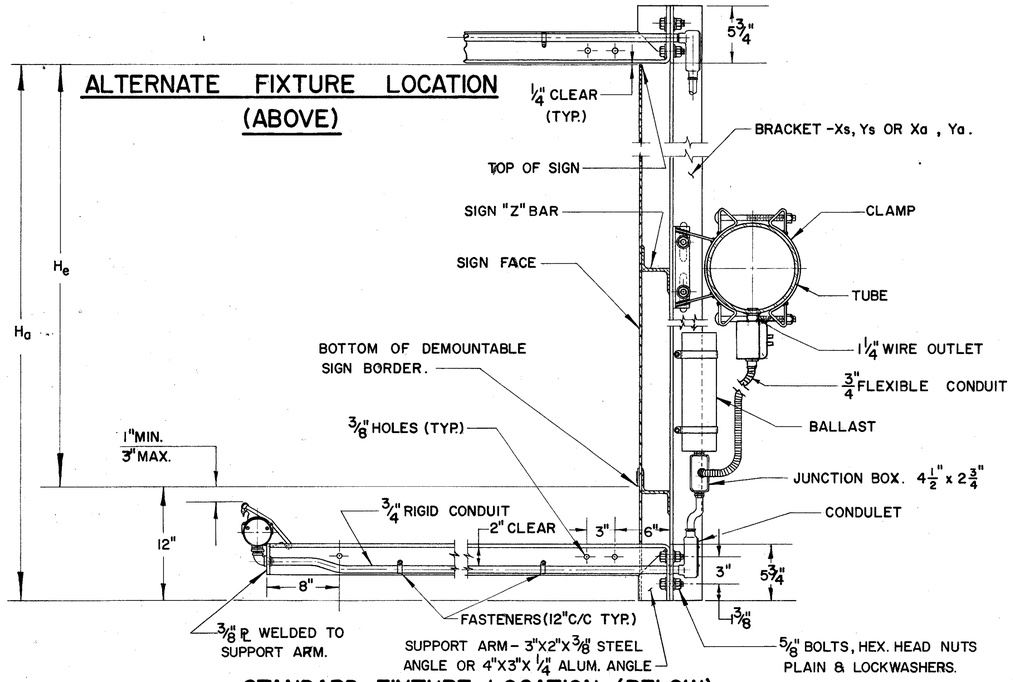
APPROVED _____
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

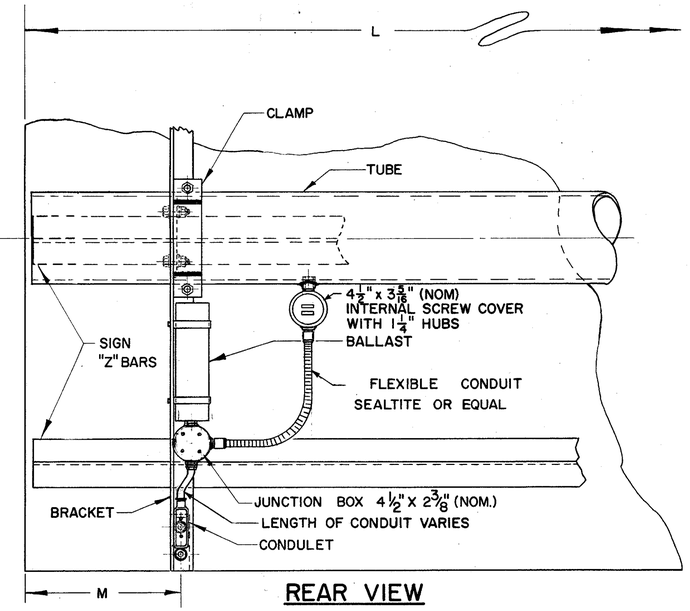
22
145

HAMILTON COUNTY
HAM-71-13.05

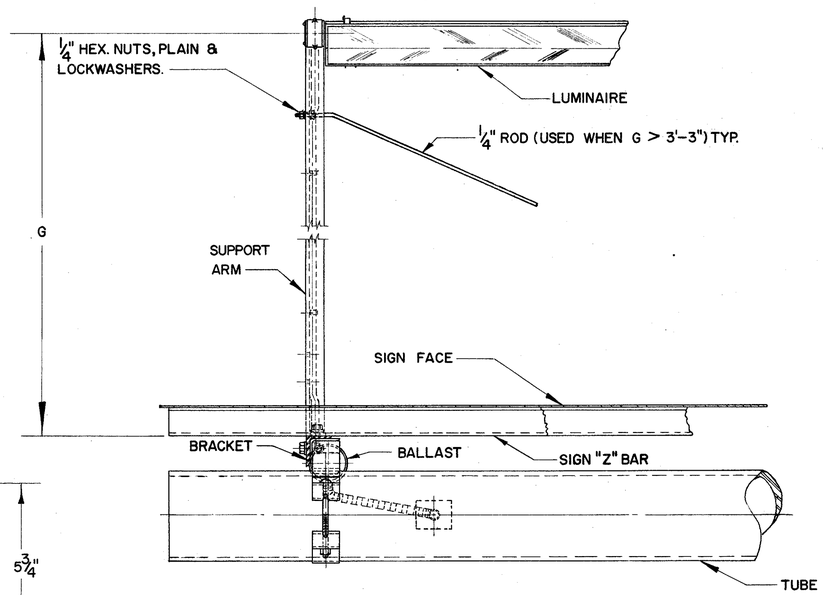
ALTERNATE FIXTURE LOCATION (ABOVE)



STANDARD FIXTURE LOCATION (BELOW)



REAR VIEW



TOP VIEW

TABLE I.

"L" SIGN LENGTH A	"L" SIGN LENGTH B	NUMBER OF FIXTURES 75	NUMBER OF FIXTURES 99	"M" EDGE DISTANCE A LT.	"M" EDGE DISTANCE A RT.	"M" EDGE DISTANCE B LT.	"M" EDGE DISTANCE B RT.	NO. BALLAST
6'-0"	7'-0"	1		6"	6"	6"	6"	1
8'-0"	9'-0"	1		10 3/16"	10 1/4"	16 3/16"	16 1/4"	1
10'-0"	11'-0"		1	10 3/16"	10 1/4"	16 3/16"	16 1/4"	1
12'-0"	13'-0"	2		6"	6	6	6	1
14'-0"	15'-0"	2		8 5/16"	8 5/16"	14 5/16"	14 5/16"	1*
16'-0"	17'-0"	1	1	8 5/16"	8 5/16"	14 5/16"	14 5/16"	1
18'-0"	19'-0"		2	8 5/16"	8 5/16"	14 5/16"	14 5/16"	1
20'-0"	21'-0"	3		7"	6 7/8"	13	12 7/8"	2
22'-0"	23'-0"	2	1	7"	6 7/8"	13	12 7/8"	2
24'-0"	25'-0"	1	2	7"	6 7/8"	13	12 7/8"	2
26'-0"	27'-0"		3	7"	6 7/8"	13	12 7/8"	2

Sn = Nominal Fixture Length, 72" & 96" respectively.
Sa = Actual Fixture Length, for mounting purposes, 74 1/4" and 98 1/4" respectively. (Slight variation for different manufacturers.)
M = Distance from edge of sign to ℄ of notch, min. 6". When the length of the sign minus 1'-0" is less than the sum of the actual fixture lengths, an offset "K" is used. For additional details see detail A and table III.

TABLE II

MAX. BRACKET SPACING FOR EXTERNALLY ILLUMINATED SIGNS

ACTUAL SIGN HEIGHT "Ha"	SUPPORT TYPES: 9.12, 11.08, 13.2, 7.2 — SINGLE TUBE DOUBLE TUBE LESS 36" C/C	9.24, 10.48, 12.24, 14.5, 15.8, 7.2 to 7.6 — DOUBLE TUBE C/C 36"-42"	C/C 48"-54"	C/C 60"-72"
	MAXIMUM BRACKET SPACING			
to 5'-0"	6'-4" with X 8'-4" with Y	8'-4" with X	8'-4" with X	8'-4" with X
5'-6" to 8'-0"	6'-4" with Y	4'-2" with X 6'-4" with Y	6'-4" with X 8'-4" with Y	8'-4" with X
8'-6" to 10'-0"	3'-2" with X 4'-2" with Y	6'-4" with Y	6'-4" with Y	8'-4" with Y
10'-6" to 12'-0"	———	4'-2" with Y	6'-4" with Y	6'-4" with Y
12'-6" to 14'-0"	———	3'-2" with Y	3'-2" with Y	4'-2" with Y

Ha = ACTUAL SIGN HEIGHT
He = EFFECTIVE SIGN HEIGHT
BRACKET SIZE: Xs = 3½" X 2½" X 5/16" — L @ 6.1 LB. STEEL; Ys = 4" X 3 1/16" X ¼" — Z @ 8.2 LB. STEEL } 9.12, 10.48, 11.08, 12.24, 14.5 & 15.8
Xa = 3" X 2 1/16" X ¼" — Z @ 2.33 LB. ALUM.; Ya = 4" X 2 2/32" X 3/16" — I @ 2.64 LB. ALUM. } 7.2 Thru 7.6
BRACKET LENGTH: WITH FIXTURE ABOVE = Ha + 0'-6" = He + 0'-6"
WITH FIXTURE BELOW = Ha = He + 1'-0"
WITHOUT FIXTURE SUPPORT ARM = Ha

WHEN MAX. ALLOWABLE SPACING IS LESS THAN ACTUAL FIXTURE LENGTHS, Sa, ADDITIONAL STANDARD BRACKETS MUST BE FURNISHED, EQUAL IN HEIGHT TO "Ha".

SUPPORTS 7.2 THROUGH 7.6 SHALL HAVE AN ALUMINUM FIXTURE ARM, 4"X3"X¼" ANGLE. SEE DETAIL B. BOLTS AND ACCESSORIES SHALL BE STAINLESS STEEL.

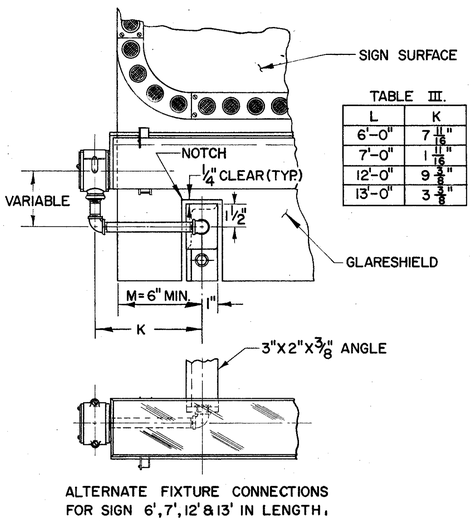
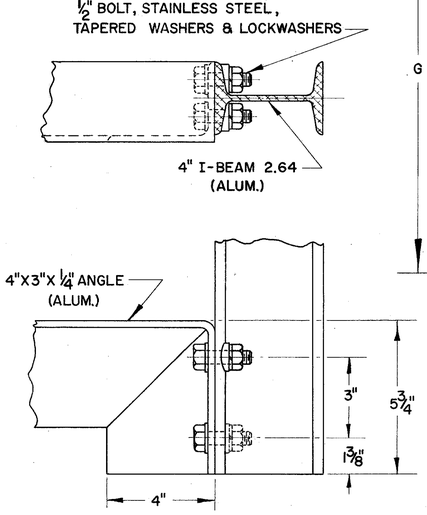


TABLE III. L	K
6'-0"	7 11/16"
7'-0"	1 11/16"
12'-0"	9 3/8"
13'-0"	3 3/8"

ALTERNATE FIXTURE CONNECTIONS FOR SIGN 6', 7', 12' & 13' IN LENGTH.

DETAIL A.



FOR SUPPORTS 7.2-7.6

DETAIL B.

FABRICATION — ALL STRUCTURAL COMPONENTS SHOWN ON THIS SHEET SHALL CONFORM TO SUPPLEMENT SPECIFICATIONS I-129.

MATERIALS — THE MATERIALS USED IN THE COMPONENTS SHOWN ON THIS SHEET SHALL BE IN CONFORMANCE WITH THE MATERIALS USED IN THE SIGN SUPPORT.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

STRUCTURAL DETAILS FOR EXTERNALLY ILLUMINATED SIGNS

EI-1

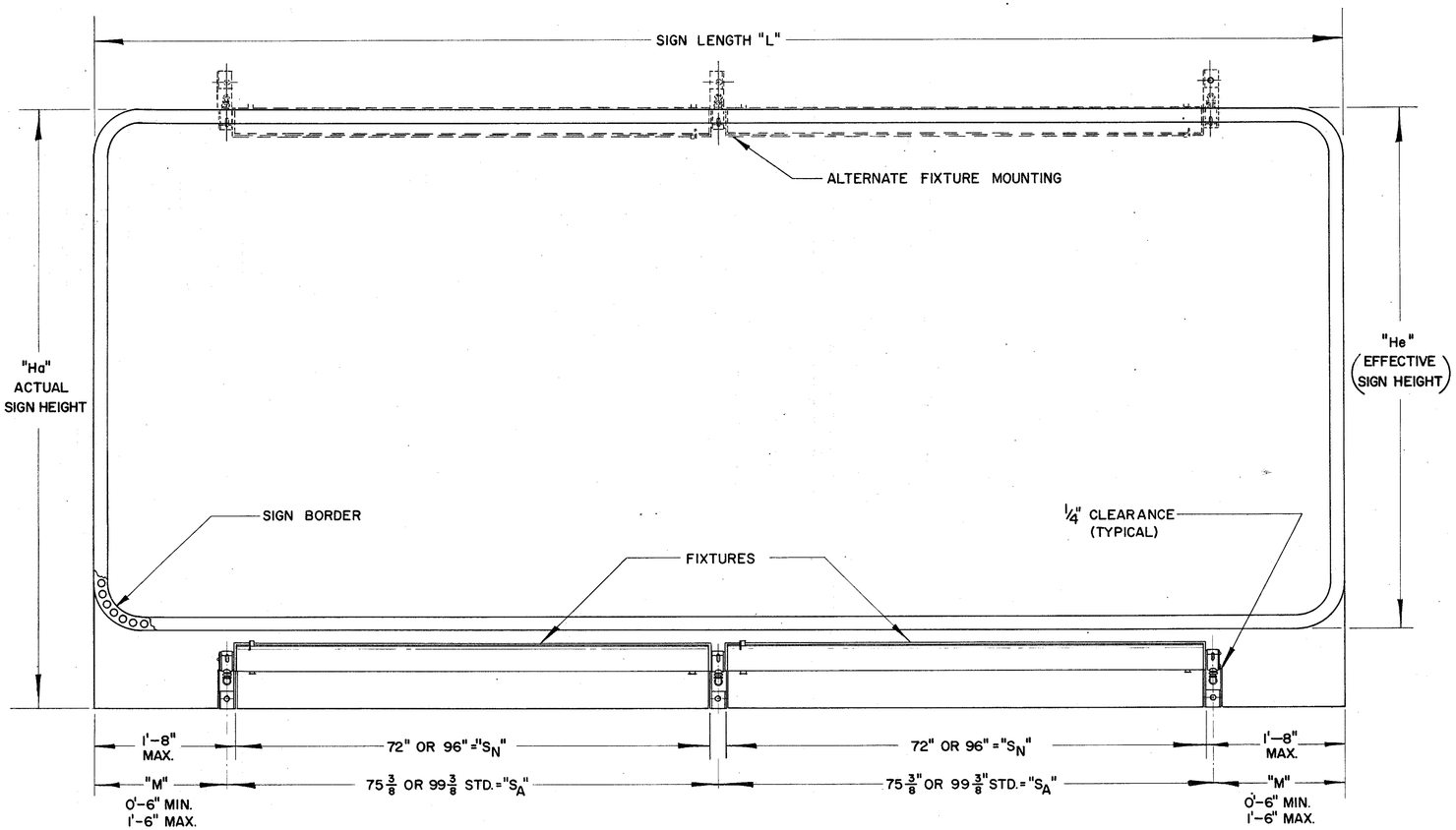
DATE 10-16-63 5-6-64

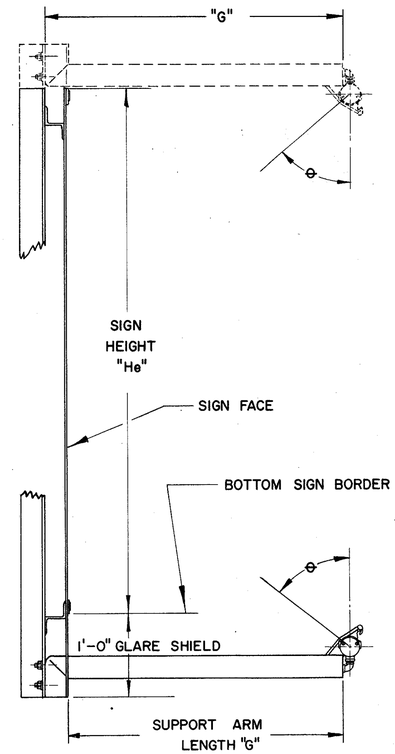
APPROVED _____ ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

23/445

HAMILTON COUNTY
HAM-71-13.05





SIGN LIGHTING NOTES

SIGN ILLUMINATION

SIGN ILLUMINATION SHALL BE BY ATTACHED FLUORESCENT FIXTURES AS SHOWN ON ILLUMINATED SIGN DETAIL SHEETS.

LAMPS

LAMPS SHALL BE TYPE F72 OR F96-T12/CW/HO AS MANUFACTURED BY WESTINGHOUSE, GENERAL ELECTRIC OR APPROVED EQUAL FOR SIGNS TO A MAXIMUM HEIGHT OF 6'-6". LAMP TYPE SHALL BE F72 OR F96-T12/CW/SHO AS MANUFACTURED BY WESTINGHOUSE, F72 OR F96-PG17/CW AS MANUFACTURED BY GENERAL ELECTRIC OR APPROVED EQUAL FOR SIGNS THAT ARE 7'-0" OR GREATER IN HEIGHT.

LAMP FIXTURES

LIGHTING FIXTURES SHALL BE CONSTRUCTED OF CORROSION RESISTANT MATERIALS OR WITH HIGH QUALITY CORROSION RESISTANT FINISH. ALL FIXTURES SHALL BE SPECIFICALLY DESIGNED FOR OUTDOOR SIGN LIGHTING SERVICE. MAJOR COMPONENTS SHALL INCLUDE WEATHERPROOF CAST ALUMINUM MOUNTING HUBS DESIGNED TO SECURELY LOCK THE FIXTURES AT ANY ANGLE THROUGH 360 DEGREES. INDICATORS IN 10 DEGREE INCREMENTS SHALL BE STAMPED OR CAST INTO THE HUB TO FACILITATE PROPER AIMING OF THE FIXTURE. FINAL ADJUSTMENT OF FIXTURE SHALL BE DONE AT NIGHT UNDER THE PROJECT ENGINEER'S DIRECTION.

THE BODY DESIGN OF THE FIXTURE SHALL PROVIDE AN ASYMMETRIC SPECULAR ALZAK REFLECTOR TO GIVE A HIGH LEVEL OF UNIFORM ILLUMINATION AND SHALL PROVIDE A WIREWAY FROM END TO END. WHEN ADJACENT FIXTURES ARE WIRED TOGETHER THROUGH THE WIREWAY, WIRE BETWEEN FIXTURES SHALL BE ENTIRELY ENCLOSED.

EXTERIOR FINISH OF THE FIXTURE BODY SHALL BE INTERSTATE GREEN COLOR, HEAT RESISTANT BAKED ENAMEL AS #8950 UNIVERSAL PAINT AND VARNISH INC., OR APPROVED EQUAL. REFLECTOR, LAMP AND SOCKETS SHALL BE PROTECTED BY A HINGED DOOR OF CLEAR ACRYLIC PLASTIC WITH ALUMINUM OR STAINLESS STEEL FRAME AND NEOPRENE GASKETING.

BALLASTS

BALLASTS FOR FIXTURES SHALL BE WEATHER-PROOF OUTDOOR TYPE FOR A 120 VOLT 60 CYCLE SYSTEM AND SHALL PROVIDE LAMP STARTING AT AN AMBIENT TEMPERATURE OF -20°F.

EFFECTIVE SIGN HEIGHT "H"	SUPPORT ARM LENGTH "G"	APPROX. AIMING ANGLE ⊖
3'-0" to 5'-0"	2'-9"	25°
5'-0" to 6'-6"	3'-3"	25°
7'-0" to 10'-0"	4'-3"	17°
10'-6" to 13'-0"	5'-9"	23°

"L" SIGN LENGTH	NO. OF FIXTURES			He=3'-0" to 6'-6" LAMP=T12/cw/ho			He=7'-0" to 13'-0" LAMP=T12/cw/sho		
	72	96		BALLAST NO.	BALLAST TYPE	WATTAGE PER SIGN	BALLAST NO.	BALLAST TYPE	WATTAGE PER SIGN
6'-0" to 7'-0"	1		1	A	190	1	C	250
8'-0" to 9'-0"	1		1	A	190	1	C	250
10'-0" to 11'-0"		1	1	A	190	1	C	250
12'-0" to 13'-0"	2		1	B	250	1	D	425
14'-0" to 15'-0"	2		1	B	250	1	D	425
16'-0" to 17'-0"	1	1	1	B	250	1	D	425
18'-0" to 19'-0"		2	1	B	250	1	D	425
20'-0" to 21'-0"	3		2	A & B	440	2	C & D	675
22'-0" to 23'-0"	2	1	2	A & B	440	2	C & D	675
24'-0" to 25'-0"	1	2	2	A & B	440	2	C & D	675
26'-0" to 27'-0"		3	2	A & B	440	2	C & D	675

BALLASTS

TYPE	MANUFACTURERS		WATTAGE
	G.E.	JEFFERSON	
A	GG 3583	257-151	190
B	GG 3535	257-171	250
C	GG 3585	257-231	250
D	GG 3588	257-181	425

BALLASTS SHALL BE GENERAL ELECTRIC, JEFFERSON AS SPECIFIED ABOVE OR EQUAL.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

ELECTRICAL DETAILS FOR EXTERNALLY ILLUMINATED SIGNS

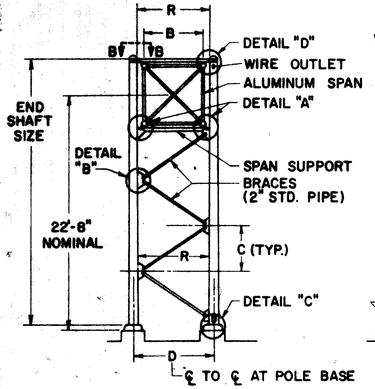
EI-2

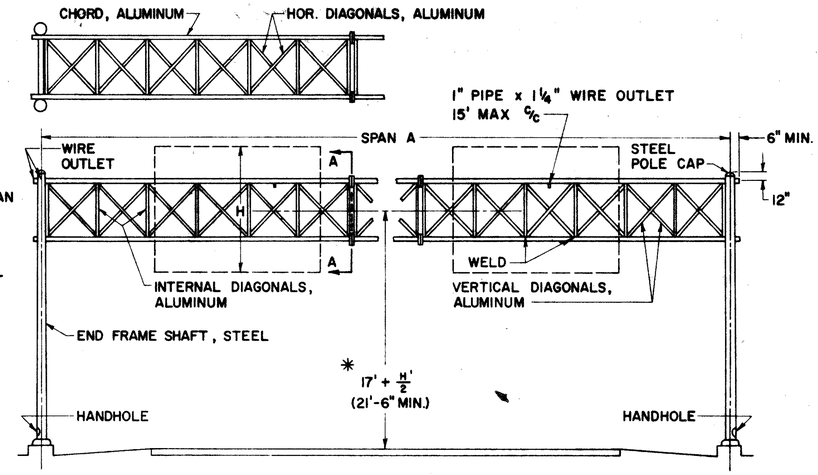
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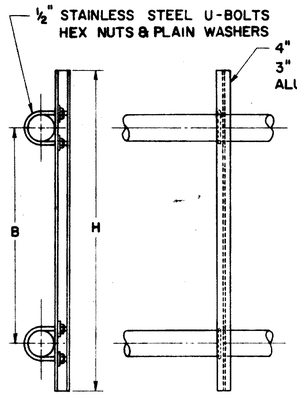
APPROVED _____
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

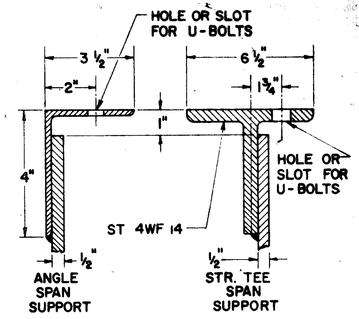
HAMILTON COUNTY
HAM-71-19.05







SIGN BRACKET



SECTION D-D

NOTES

MATERIALS

THE OVERHEAD SPAN TRUSS SHALL BE ALUMINUM AND THE END FRAMES SHALL BE STEEL.

SPAN TRUSS AND END FRAMES, INCLUDING HARDWARE, SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION I-129 UNLESS OTHERWISE NOTED.

STEEL POLE BASES AND GUSSETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A-373.

AFTER FABRICATION THE TAPERED POLES SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

FABRICATION

THE ENTIRE STEEL END FRAME SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH SEC. M-7.4(d).

MAXIMUM LENGTH OF SPAN SECTIONS IS 30 FT.

ERECTION

USE A MINIMUM OF 1" CAMBER IN SPAN TRUSS MEMBER FOR A 50' SPAN; ADD ¼" OF CAMBER FOR EACH 5' OF INCREASE IN SPAN OVER 50'.

PAYMENT

PAYMENT FOR THE GALVANIZED CONDUIT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS.

SOILS

THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY).

FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

REINFORCING STEEL

COST OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM I-129 CONCRETE FOR SIGN SUPPORT FOUNDATIONS.

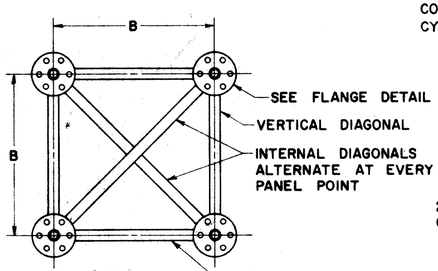
BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER.

***FOUNDATION ELEVATION**

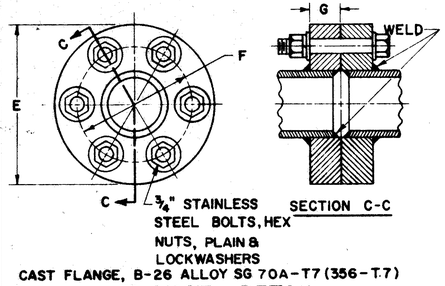
ELEVATION OF TOPS OF FOUNDATIONS SHALL BE BUILT UP SO THAT 17' CLEARANCE IS MAINTAINED OVER THE ENTIRE WIDTH OF THE PAVEMENT AND SHOULDERS.

DESIGN

THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

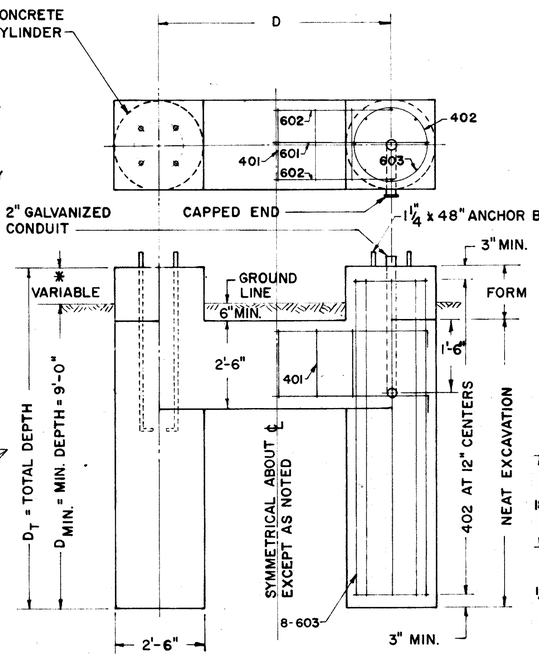


SECTION A-A



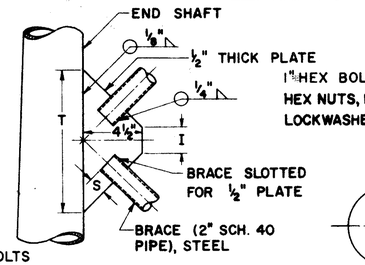
CAST FLANGE, B-26 ALLOY SG 70A-T7 (356-T7)

FLANGE DETAIL



FOUNDATION DETAIL

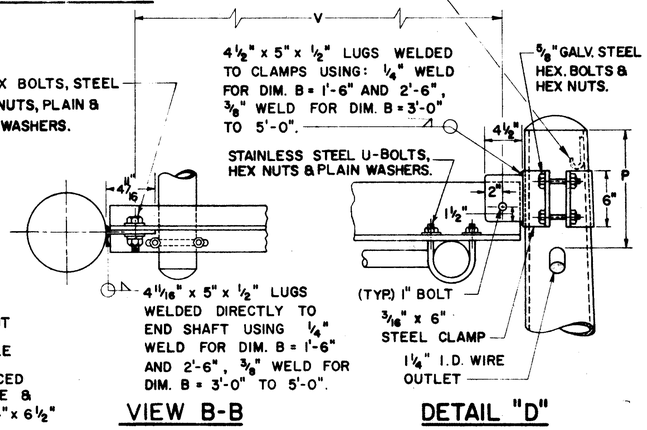
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DETAIL "B"

DETAIL "C"

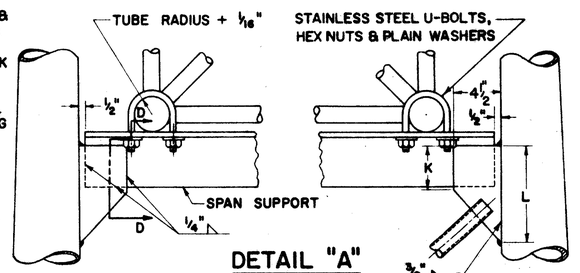
POLE BASE DETAIL



VIEW B-B

DETAIL "D"

UPPER SPAN SUPPORT (ALTERNATE METHODS)

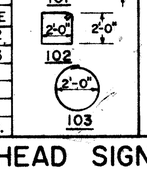


DETAIL "A"

LOWER SPAN SUPPORT

DESIGN NO.	SPAN A	B	C	D	E	END SHAFT	BRACE LENGTH	F	G	I	K	L	P	Q	R	S	T	U BOLTS	V	BOLT CIRCLE	SPAN SUPPORT SECTION D-D	CHORDS	HORIZONTAL AND INTERNAL DIAGONAL	VERTICAL DIAGONAL
1	50'Thru 55'	3'-0"	4'-11¾"	4'-5"	7"	8"x 4.5"x 25'-0", 3GA	5'-10 13/16"	5½"	1¼"	3½"	4¾"	8"	12"	6⅝"	3'-9"	1½"	10"	⅝"	3'-3⅝"	11"	SPLIT TEE 3'-8"	3½" x .188"	1.660"x .140"	1.660"x .140"
2	56'Thru 80'	3'-0"	4'-11¾"	4'-5"	9¼"	8"x 4.5"x 25'-0", 3GA	5'-10 13/16"	7 7/16"	1⅜"	3½"	4¾"	8"	12"	6⅝"	3'-9"	1½"	10"	⅝"	3'-3⅝"	11"	SPLIT TEE 3'-8"	4¾" x .188"	1.900"x .145"	1.660"x .140"
3	81'Thru 90'	4'-0"	4'-10¼"	5'-7"	9¼"	8"x6.22"x 25'-6", 3GA	6'-7⅛"	7 7/16"	1⅜"	⅝"	4⅜"	7¾"	12"	6¼"	4'-11"	1½"	9½"	⅝"	4'-5⅝"	11"	SPLIT TEE 4'-10"	4¾" x .188"	1.900"x .145"	1.900"x .145"
4	91'Thru 105'	4'-0"	4'-10¼"	5'-7"	9¼"	8"x6.22"x 25'-6", 3GA	6'-7⅛"	7 7/16"	1⅜"	⅝"	4⅜"	7¾"	12"	6¼"	4'-11"	1½"	9½"	⅝"	4'-5⅝"	11"	SPLIT TEE 4'-10"	4¾" x .188"	2" x .188"	1.900"x .145"

REINFORCEMENT SCHEDULE			
MARK	NO.	LENGTH	TYPE
401	12"C/C	8'-6"	102
402	12"C/C	7'-6"	103
601	4	D+ 4'-0"	101
602	8	D+ 2'-0"	101
603	32	D_T - 6"	STR.



BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD SIGN SUPPORTS

I-129 No. 7.3

DATE 7-25-62 5-5-64

APPROVED Robert E. Bower
ENGINEER OF TRAFFIC

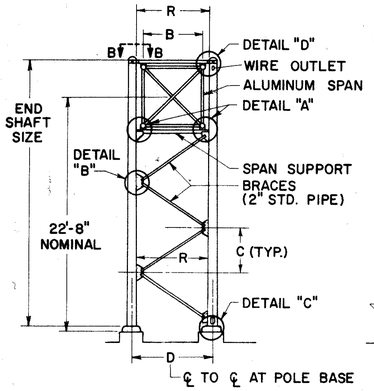
300 SQ. FT. SIGN AREA

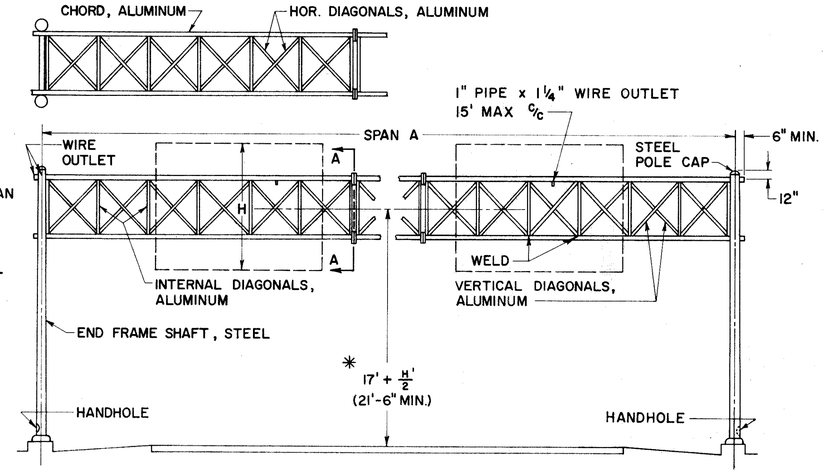
OVERHEAD SIGN SUPPORT, I-129 NO. 7.3

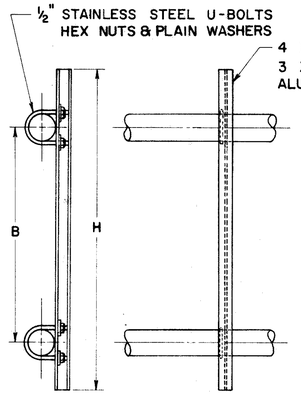
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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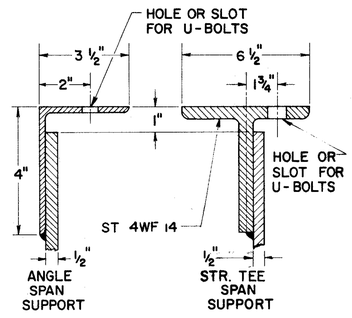
HAMILTON COUNTY
HAM-71-13.05



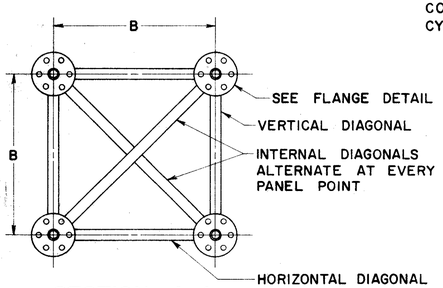




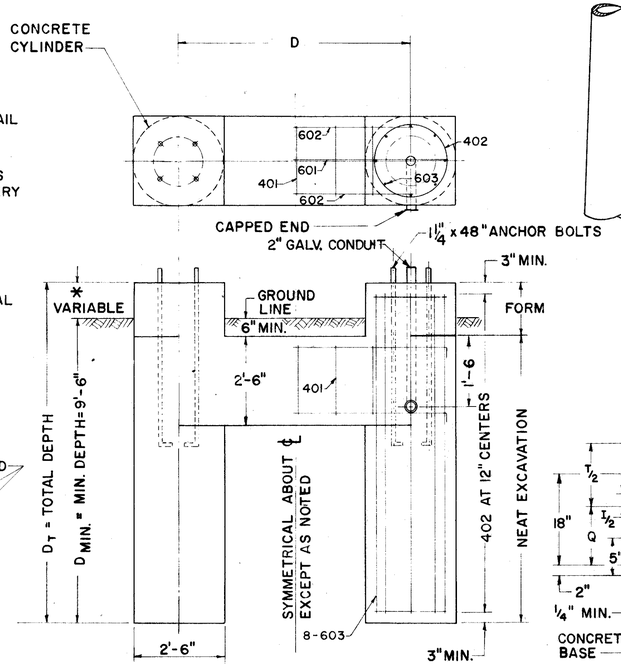
SIGN BRACKET



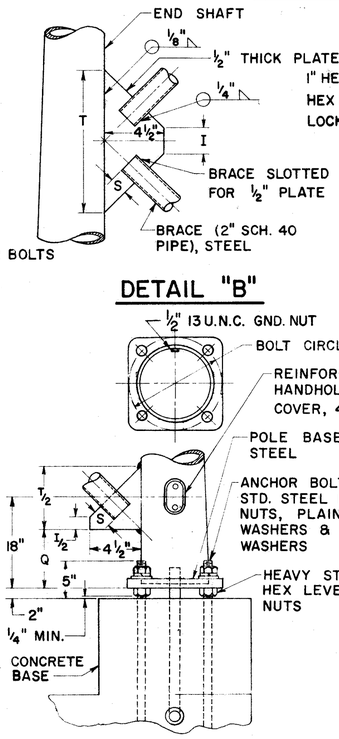
SECTION D-D



SECTION A-A



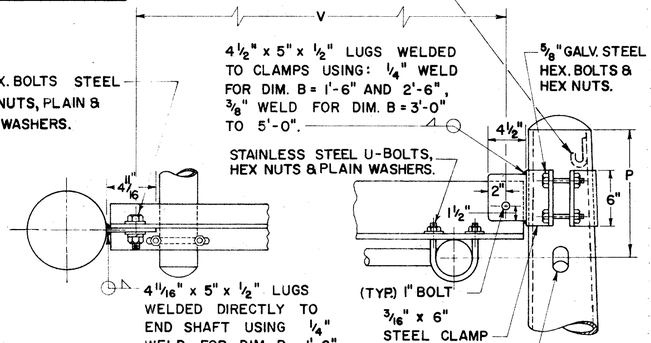
FOUNDATION DETAIL
(RIGHT HAND SHOWN — LEFT HAND OPPOSITE)



DETAIL "B"

DETAIL "C"

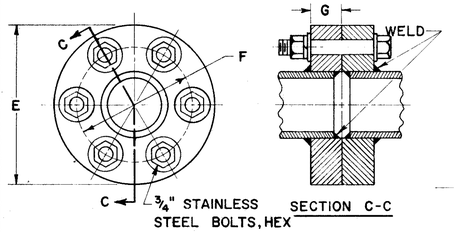
POLE BASE DETAIL



VIEW B-B

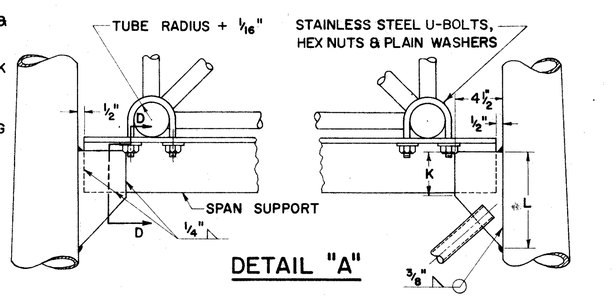
DETAIL "D"

UPPER SPAN SUPPORT (ALTERNATE METHODS)



CAST FLANGE, B-26 ALLOY SG 70A-T7 (356-T7)

FLANGE DETAIL



DETAIL "A"

LOWER SPAN SUPPORT

NOTES

MATERIALS

THE OVERHEAD SPAN TRUSS SHALL BE ALUMINUM AND THE END FRAMES SHALL BE STEEL.

SPAN TRUSS AND END FRAMES, INCLUDING HARDWARE, SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION I-129 UNLESS OTHERWISE NOTED.

STEEL POLE BASES AND GUSSETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A-373.

AFTER FABRICATION THE TAPERED POLES SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

FABRICATION

THE ENTIRE STEEL END FRAME SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH SEC. M-7.4(d).

MAXIMUM LENGTH OF SPAN SECTIONS IS 30 FT.

ERECTION

USE A MINIMUM OF 1" CAMBER IN SPAN TRUSS MEMBER FOR A 50' SPAN; ADD ¼" OF CAMBER FOR EACH 5' OF INCREASE IN SPAN OVER 50'.

PAYMENT

PAYMENT FOR THE GALVANIZED CONDUIT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS.

SOILS

THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY).

FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

REINFORCING STEEL

COST OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM I-129 CONCRETE FOR SIGN SUPPORT FOUNDATIONS. BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER.

*FOUNDATION ELEVATION

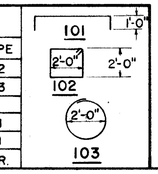
ELEVATION OF TOPS OF FOUNDATIONS SHALL BE BUILT UP SO THAT 17' CLEARANCE IS MAINTAINED OVER THE ENTIRE WIDTH OF THE PAVEMENT AND SHOULDERS.

DESIGN

THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

DESIGN NO.	SPAN A	B	C	D	E	END SHAFT	BRACE LENGTH	F	G	I	K	L	P	Q	R	S	T	U BOLTS	V	BOLT CIRCLE	SPAN SUPPORT SECTION D-D	CHORDS	HORIZONTAL AND INTERNAL DIAGONAL	VERTICAL DIAGONAL
1	50' thru 75'	3'-0"	4'-11¾"	4'-5"	9¼"	8"x4.5"x25'-0", 3 GA.	5'-10 13/16"	7 7/16"	1⅜"	3½"	4¾"	8"	12"	6⅝"	3'-9"	1½"	10"	⅝"	3'-3⅝"	11"	SPLIT TEE 3'-8"	4¾" x .188"	1.900" x .145"	1.660" x .140"
2	76' thru 85'	4'-0"	4'-10¼"	5'-7"	9¼"	8"X6.22"x25'-6"3GA.	6'-7⅛"	7 7/16"	1⅜"	⅝"	4⅜"	7¾"	12'	6¼"	4'-10"	1½"	9½"	⅝"	4'-4⅝"	11"	SPLIT TEE 4'-10"	4¾" x .188"	2" x .188"	1.900" x .145"
3	86' thru 90'	4'-0"	4'-10¼"	5'-7"	11"	8"X6.22"x25'-6"3GA.	6'-7⅛"	8½"	1½"	⅝"	4⅜"	7¾"	42"	6¼"	4'-10"	1½"	9½"	⅝"	4'-4⅝"	11"	SPLIT TEE 4'-10"	5½" x .250"	2" x .188"	1.900" x .145"
4	91' thru 110'	5'-0"	4'-8½"	6'-7"	11"	8"X6.18"x26'-0", 3GA.	7'-3¼"	8½"	1½"	—	3½"	7¾"	12"	7¼"	5'-10"	1¾"	11¼"	¾"	5'-4⅝"	11"	SPLIT TEE 5'-10"	5½" x .250"	2½" x .188"	2½" x .188"

REINFORCEMENT SCHEDULE			
MARK	NO.	LENGTH	TYPE
401	12"C/C	8'-6"	102
402	12"C/C	7'-6"	103
601	4	D+ 4'-0"	101
602	8	D+ 2'-0"	101
603	32	D_T - 6"	STR.



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OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD SIGN SUPPORTS | I-129 No. 7.4 | DATE 5-2-62, 7-25-62, 5-6-64

APPROVED Robert E. Comer
ENGINEER OF TRAFFIC

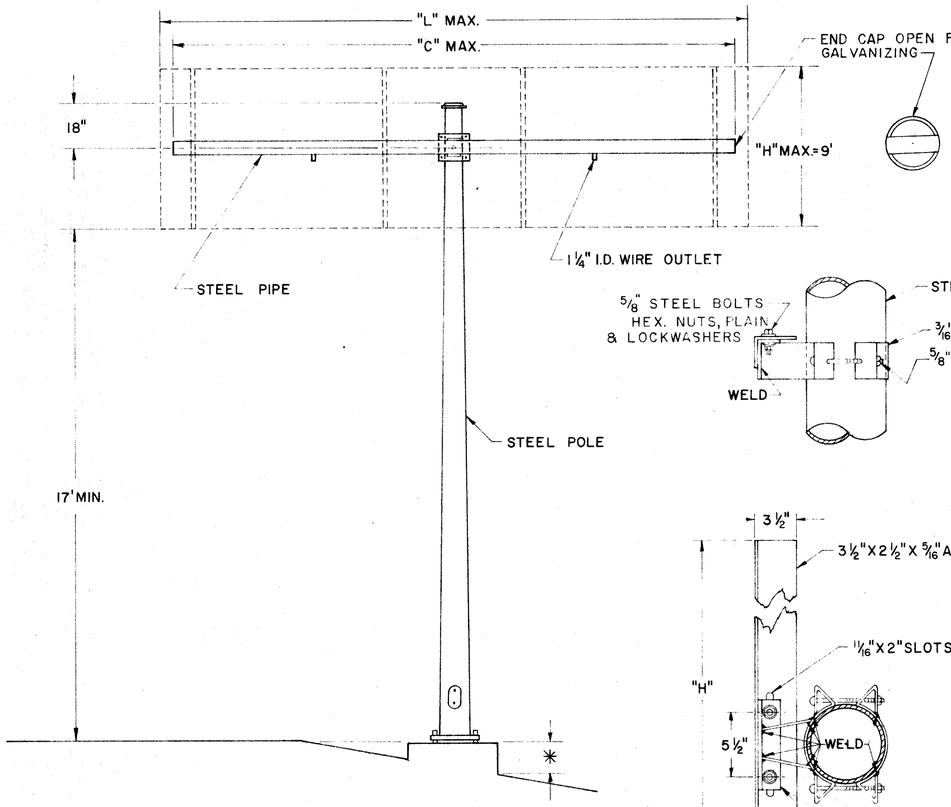
400 SQ. FT. SIGN AREA

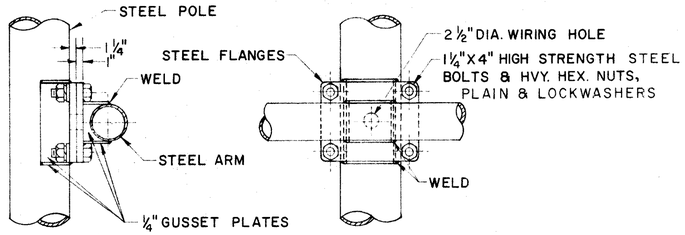
OVERHEAD SIGN SUPPORT, I-129 NO. 7.4

FED. RD. DIVISION	STATE	PROJECT	
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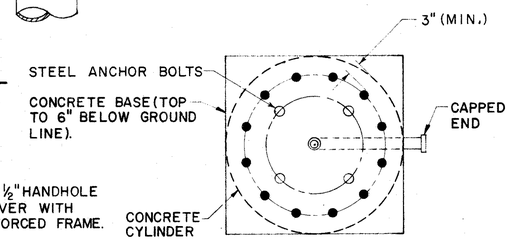
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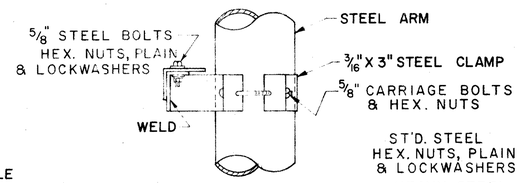
HAMILTON COUNTY
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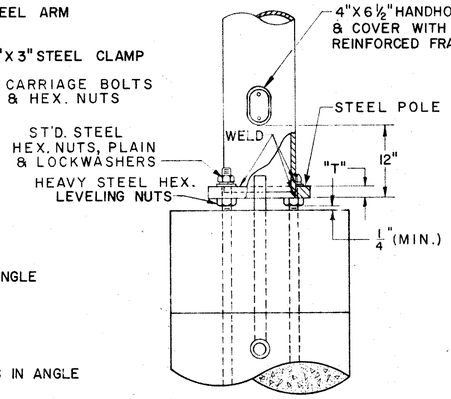


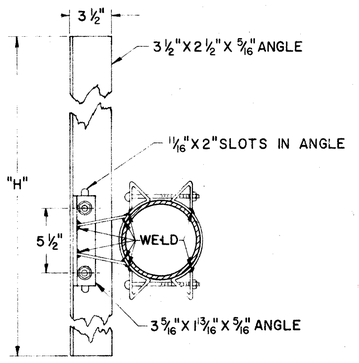


ARM ATTACHMENT

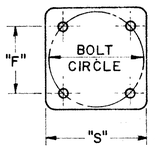




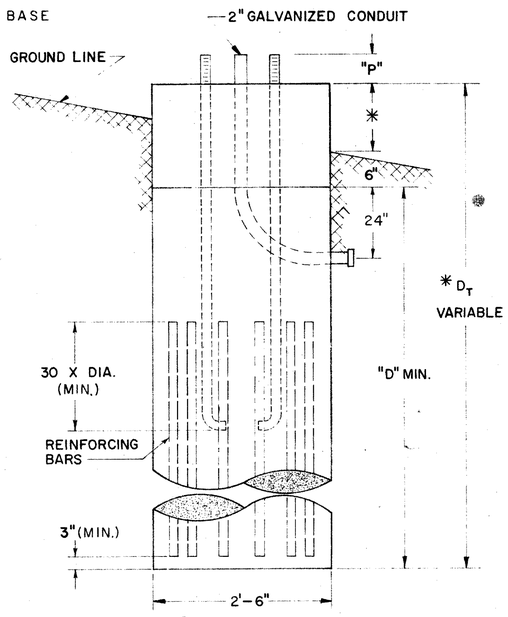




SIGN ATTACHMENT DETAIL



POLE DETAIL



FOUNDATION DETAIL

DESIGN NO.	POLE SIZE	PIPE SIZE	DIM C	DIM F	DIM P	DIM S	DIM T	BOLT CIRCLE	ANCHOR BOLT SIZE	MAX SIGN AREA	MAX. "L" WITH MAX. SIGN AREA	"D" MIN.	REINF. BARS	
													TYPE	NO.
1	7ga, 11"X 7.99 X 21'-6"	4"SCH.40 GRADE A	18'	10 5/8"	6½"	15 5/8"	1½"	15"	1½"X60"	60	24'-9"	7'-0"	#6	8
2	3ga, 13"X 9.99 X 21'-6"	4"SCH.80 GRADE A	14'	12¾"	7¾"	18½"	2"	18"	1¾"X90"	120	16'-9"	8'-6"	#7	12
3	3ga, 13"X 9.99 X 21'-6"	6"SCH.40 GRADE A	20'	12¾"	7¾"	18½"	2"	18"	1¾"X90"	120	24'-0"	9'-0"	#7	12

NOTES

FABRICATION – ALL PORTIONS OF THE SIGN SUPPORT, INCLUDING SIGN ATTACHMENTS, SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF A.S.T.M. DESIGNATIONS A-123 AND A-153. THE CONDUIT SHALL BE GALVANIZED IN ACCORDANCE WITH SEC. S-25.08 AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS FOR PAYMENT.

* FOUNDATION – THE TOP ELEVATION OF FOUNDATIONS SHALL BE VARIED SO AS TO MAINTAIN A MINIMUM CLEARANCE OF 17' BETWEEN THE BOTTOM OF THE SIGN AND THE HIGHWAY CROWN.

MATERIAL – STEEL POLE BASES, FLANGES, AND END CAPS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 30 GRADE B. HIGH STRENGTH STEEL BOLTS SHALL CONFORM TO ASTM SPECIFICATION A 193 GRADE B7. AFTER FABRICATION TAPERED POLES SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

SOILS – THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY). FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

REINFORCING STEEL – REINFORCING STEEL AS SHOWN IN TABLE SHALL BE INSTALLED WHEN "D_T" EXCEEDS THE ANCHOR BOLT LENGTH BY MORE THAN 3 FT. THE COST AND PLACEMENT OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR I-129 CONCRETE FOR SIGN SUPPORT FOUNDATION.

DESIGN
THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD SIGN SUPPORT	I-129 No.9.12	DATE 1-19-62 3-30-62

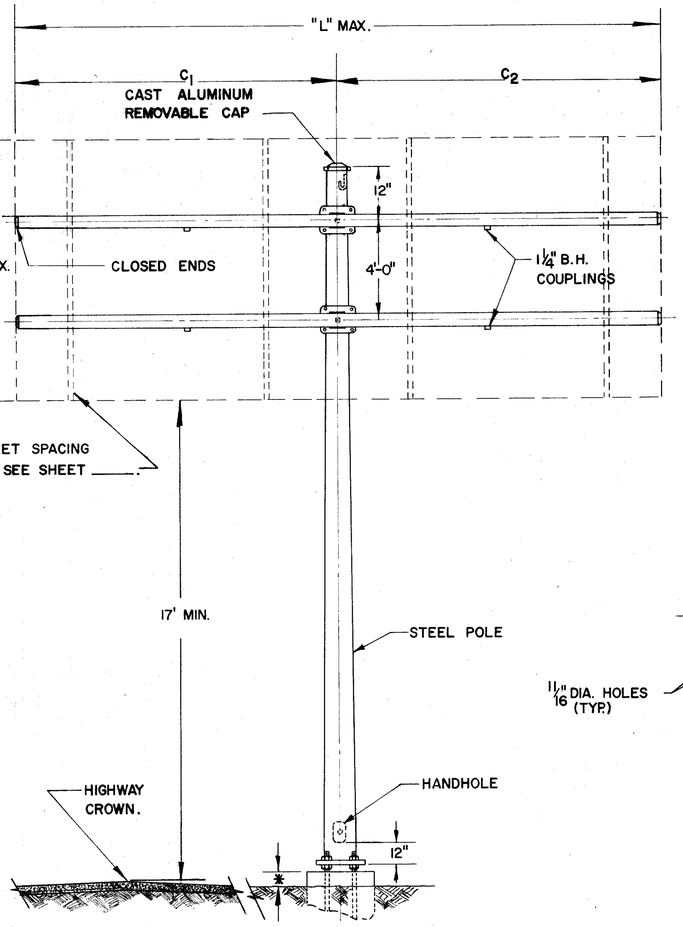
APPROVED Robert E. Comer
ENGINEER OF TRAFFIC

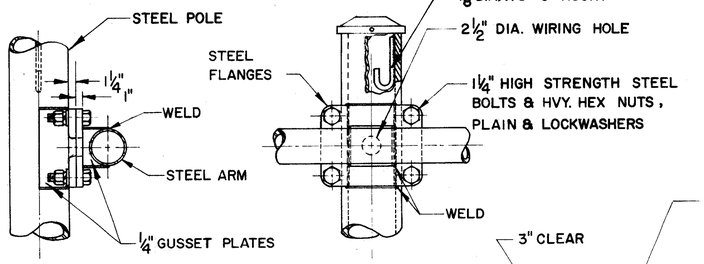
OVERHEAD SIGN SUPPORT, I-129 No.9.12

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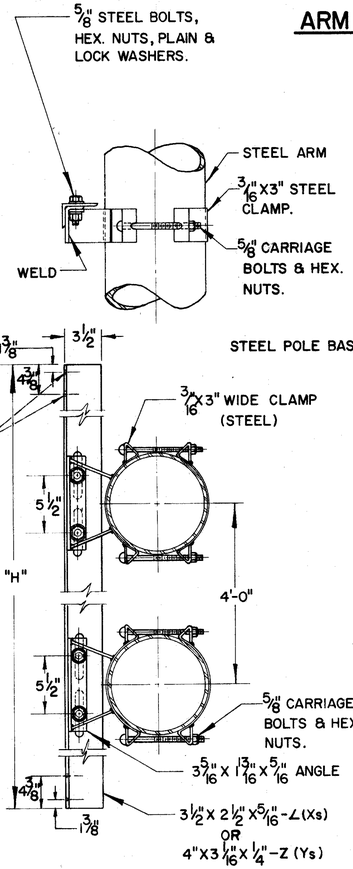
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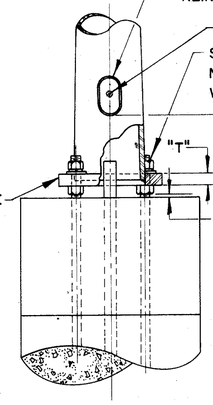


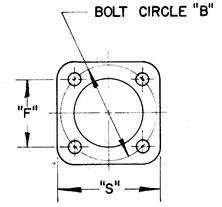


ARM ATTACHMENT DETAIL

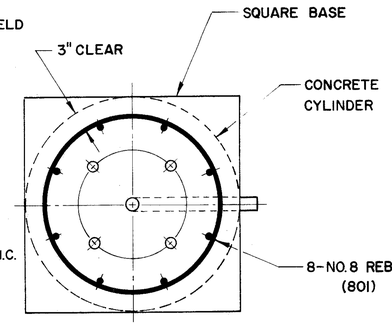


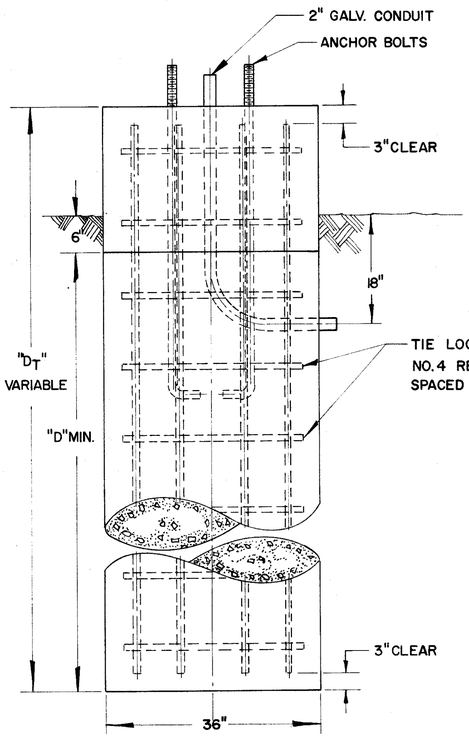
SIGN ATTACHMENT DETAIL





POLE DETAIL





FOUNDATION DETAIL

DESIGN	POLE SIZE (STD.)	MAX. ARM SIZE	MAX. SIGN LENGTH "L"	MAX. SIGN AREA	B	F	P	S	T	ANCHOR BOLTS	"D" MIN.
1.	3GA. 14"X10.78"X23'	4" SCH. 40 12'-0"	24'-0"	120 SQ FT	20"	14 1/16"	7"	20½"	2"	1¾" X 90"	9'
2.	3GA. 16.5"X13"X 25'	4"SCH. 40 9"-0"	18'-0"	180 SQ FT	23½"	16 5/16"	8"	24½"	2"	2"X 96"	11'
3.	3GA. 16.5" X13.28"X23'	6"SCH. 40 12'-0"	24'-0"	180 SQ FT	23½"	16 5/8"	8"	24½"	2"	2"X 96"	11'
4.	0GA. 18"X 14.5"X25'	6"SCH. 40 12'-0"	24'-0"	240 SQ FT	25½"	18"	9"	26½"	2½"	2¼"X96"	13'

REINFORCEMENT SCHEDULE				
MARK	NO.	LEN.	TYPE	
402	12"c/c	8'-6"	103	2'-6"
801	8	D_T-6"	STR.	103

NOTES

GENERAL

MAXIMUM SIGN AREAS AND ARM LENGTHS SHOWN IN TABLE, ARE FOR BALANCED DESIGN ($C_1 = C_2$).

FOR UNBALANCED DESIGN ($C_1 \neq C_2$), THE PRODUCT OF THE ACTUAL SIGN AREA (C_1 H or C_2 H) TIMES 1/2 OF ACTUAL ARM (1/2 C_1 or 1/2 C_2) SHALL BE LESS THAN THE PRODUCT OF 45% OF MAXIMUM SIGN AREA TIMES 1/2 MAX ARM FOR BALANCED DESIGN. (0.45 H $2C_1$ 1/2C_1 or 0.45 H $2C_2$ 1/2C_2)

DESIGN

THE DESIGN OF OVERHEAD SUPPORTS SHALL BE IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 13, 1961.

* FOUNDATION

THE TOP ELEVATION OF FOUNDATIONS SHALL BE VARIED SO AS TO MAINTAIN A MINIMUM CLEARANCE OF 17' BETWEEN THE BOTTOM OF THE SIGN AND THE HIGHWAY CROWN.

SOILS

THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY). FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

FINISH

ALL STRUCTURAL PORTIONS OF THE SIGN SUPPORTS, SIGN BRACKETS, HARDWARE AND CONDUIT SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH S.S. I-129.02 (EXCEPT AS OTHER WISE SHOWN).

MATERIALS

ALL MATERIALS TO BE FURNISHED SHALL BE IN ACCORDANCE WITH S.S. I-129.02 WITH THE FOLLOWING ADDITIONS:

TAPERED TUBES SHALL BE STEEL, SAE 1015 AND COLD ROLLED TO OBTAIN A MINIMUM YIELD STRENGTH OF 48,000PSI.
STEEL PIPE: 4" DIAMETER AND UNDER SHALL BE STEEL-ASTM-A120
OVER 4" DIAMETER SHALL BE ASTM-A53, GRADE B
ANCHOR BOLTS SHALL BE HIGH STRENGTH STEEL ASTM-A107, GRADE C-1035
HIGH STRENGTH CLAMPS SHALL BE STEEL-ASTM-A242

PAYMENT FOR CONDUIT

PAYMENT FOR THE GALVANIZED CONDUIT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS.

REINFORCING STEEL

COST OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM I-129 CONCRETE FOR SIGN SUPPORT FOUNDATIONS.

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INCIDATE THE BAR SIZE NUMBER.

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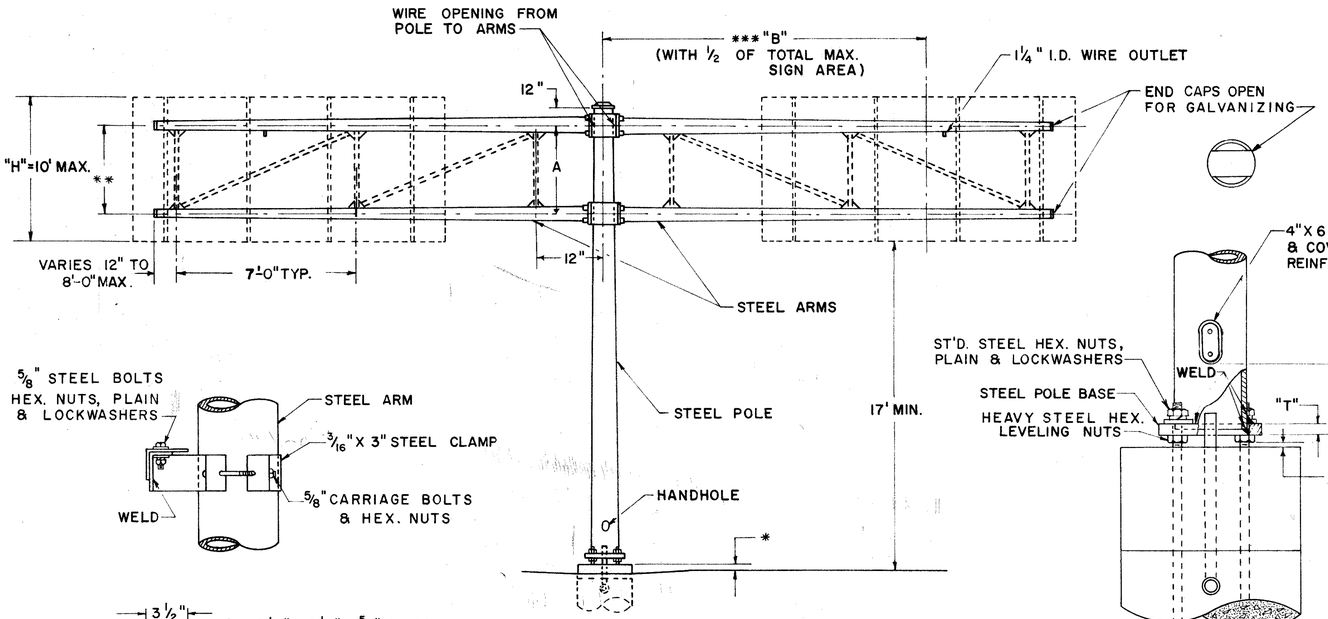
OVERHEAD SIGN SUPPORT	I-129 No.9.24	DATE 6-17-64

APPROVED _____
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
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HAMILTON COUNTY
HAM-71-13.05



SIGN ATTACHMENT DETAIL

BEAM CONNECTION DETAIL

POLE DETAIL

FOUNDATION DETAIL

DESIGN NO.	POLE SIZE	* * ARM SIZE	DIM. A	DIM. *** B	DIM. "D" MIN.	DIM. F	DIM. P	DIM. S	DIM. T	BOLT CIRCLE	ANCHOR BOLT SIZE	DIM. V	MAX SIGN AREA	REINF. BARS SIZE	REINF. BARS NO.
1	3ga. 18"X 14.64"X 24'-0"	7ga., 5.7"X 4.02"X 12'-0"	4'	8'	9'	18"	8⅜"	26½"	2"	25½"	2"X 96"	3'-0"	160	¾"	12
2	3ga. 18"X 14.64"X 24'-0"	7ga., 6.9"X 4.66"X 16'-0"	4'	12'	9'	18"	8⅜"	26½"	2"	25½"	2"X 96"	3'-0"	160	¾"	12
3	0ga., 18"X 14.64"X 24'-0"	7ga., 7.5"X 5.82"X 12'-0"	4'	8'	11'	18"	9⅜"	26½"	2½"	25½"	2¼" X 108"	3'-0"	240	1"	12
4	0ga., 18"X 14.64"X 24'-0"	7ga., 8.3"X 6.06"X 16'-0"	4'	12'	11'	18"	9⅜"	26½"	2½"	25½"	2¼" X 108"	3'-0"	240	1"	12
5	0ga., 18"X 14.64"X 24'-0"	7ga., 10"X 7.2 "X 20'-0	4'	16'	11'	18"	9⅜"	26½"	2½"	25½"	2¼" X 108"	3'-0"	220	1"	12
6	2 ply 3ga., 18"X 14.5"X 25'-0"	7ga., 10"X 7.48"X 18'-0"	6'	10'	14'	18"	11¼"	26½"	3'	25½"	3"X 144"	3'-0"	360	1⅛"	12
7	2 ply 3ga., 18"X 14.5"X 25'-0"	7ga., 11"X 7.92" X 22'-0"	6'	14'	14'	18"	11¼"	26½"	3'	25½"	3"X 144"	3'-0"	360	1⅛"	12
8	2 ply 0ga., 18"X 14.5"X 25'-0"	7ga., 12.5"X 9.14"X 24'-0"	6'	14'	17'	18"	11¼"	26½"	3"	25½"	3"X 168"	3'-0"	480	1¼"	12
9	2 ply 0ga., 18"X 14.5" X 25'-0"	3ga., 12.5"X 8.58"X 28'-0"	6'	18'	17'	18"	11¼"	26½"	3"	25½"	3"X 168"	3'-0"	480	1¼"	12

NOTES

FABRICATION – ALL PORTIONS OF THE SIGN SUPPORT INCLUDING SIGN ATTACHMENTS, SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF A.S.T.M. DESIGNATIONS A-123 AND A-153. THE CONDUIT SHALL BE GALVANIZED IN ACCORDANCE WITH SEC. S-25.08 AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS FOR PAYMENT.

*FOUNDATION – THE TOP ELEVATION OF ALL FOUNDATIONS SHALL BE BUILT UP 1'-0" ABOVE THE HIGHWAY CROWN.

**ERECTION – ARMS 20' AND OVER IN LENGTH SHALL BE TRUSS TYPE USING 3"X 3"X ⅜" ANGLES WELDED TO GUSSET PLATES WITH THE INSIDE EDGES OF THE ARMS PARALLEL.

***VALUES OF "B" MAY BE EXCEEDED PROVIDED THE PRODUCT OF ACTUAL SIGN AREA TIMES THE DISTANCE FROM ℄ OF POLE TO ℄ OF SIGN DOES NOT EXCEED THE PRODUCT OF "B" TIMES ½ THE MAX. SIGN AREA.

GENERAL – THE MAX. SIGN AREA ON EACH SIDE OF THE POLE EQUALS ½ THE MAX. TOTAL AREA IN THE CHART.

MATERIAL – STEEL POLE BASES, AND FLANGES SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 30 GRADE B.
HIGH STRENGTH STEEL BOLTS SHALL CONFORM TO ASTM SPECIFICATION A 193 GRADE B 7.
AFTER FABRICATION TAPERED POLES AND ARMS SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

SOILS – THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY). FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

REINFORCING STEEL – REINFORCING STEEL AS SHOWN IN TABLE SHALL BE INSTALLED WHEN "D_T" EXCEEDS THE ANCHOR BOLT LENGTH BY MORE THAN 3 FT. THE COST AND PLACEMENT OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR I-129 CONCRETE FOR SIGN SUPPORT FOUNDATIONS.

DESIGN

THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD SIGN SUPPORT

I-129 No. 10.48

DATE
11-2-61
1-18-62
3-30-62
4-18-62

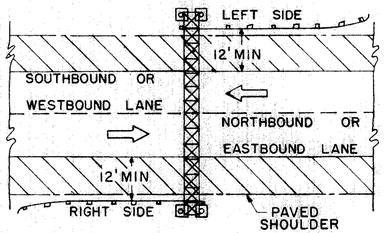
APPROVED Robert E. Cowen
ENGINEER OF TRAFFIC

Mega-Flex Tracing.

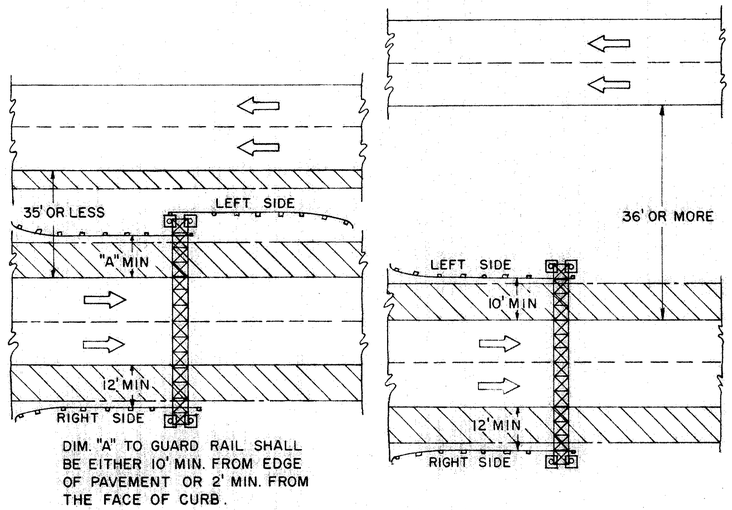
FED. RD. DIVISION	STATE	PROJECT	
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HAMILTON COUNTY
HAM-71-13.05

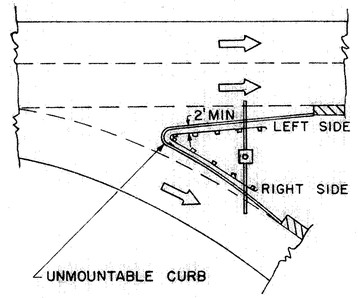


MULTIPLE LANE UNDIVIDED

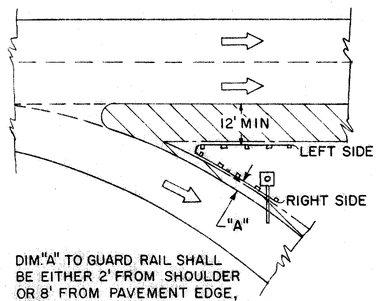


DIM. "A" TO GUARD RAIL SHALL BE EITHER 10' MIN. FROM EDGE OF PAVEMENT OR 2' MIN. FROM THE FACE OF CURB.

FOUR LANE DIVIDED



(CURB SECTION)



DIM."A" TO GUARD RAIL SHALL BE EITHER 2' FROM SHOULDER OR 8' FROM PAVEMENT EDGE, WHICHEVER DISTANCE IS GREATER.

(SHOULDER SECTION)

BIFURCATION

NOTES

GENERAL

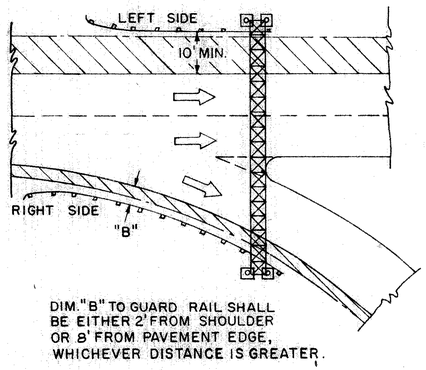
PROTECTIVE GUARD RAIL FOR OVERHEAD SIGN STRUCTURES SHALL CONFORM TO SEC. I-15, FOR STEEL BEAM TYPE (DEEP).

AT LOCATIONS WHERE GUARD RAIL IS IN PLACE, THE SIGN SUPPORT FOUNDATIONS SHALL BE ERECTED BEHIND EXISTING GUARD RAIL.

A MINIMUM OF SIX GUARD RAIL POSTS IS REQUIRED IN ADVANCE OF THE SIGN SUPPORT.

THE LENGTH OF GUARD RAIL DEPENDS ON THE POST SPACING. (EXAMPLE: FOR A SINGLE LINE OF GUARD RAIL IN ADVANCE OF A SIGN SUPPORT, THE MINIMUM LENGTH IS 50 FT. FOR A POST SPACING OF 6'-3", 75 FT. FOR A POST SPACING OF 12'-6".)

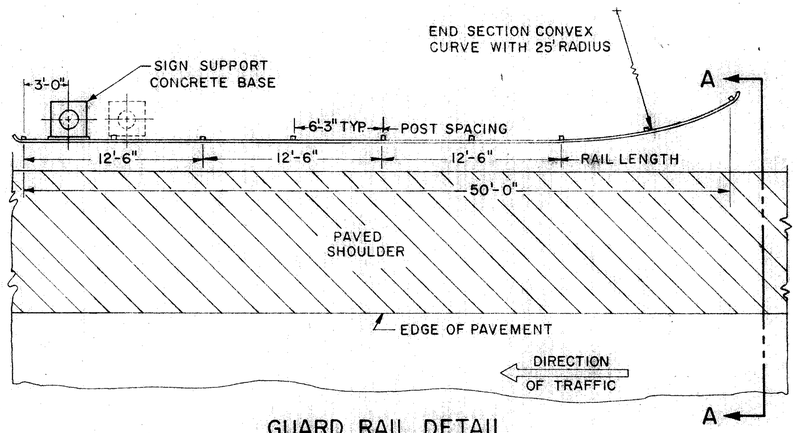
WHERE PROPOSED GUARD RAIL FLARES ARE CONSTRUCTED OF RAIL ELEMENTS WHICH HAVE NOT BEEN FABRICATED EXACTLY TO FIT THE CURVATURE SHOWN ON THE PLANS. THE TWO END POSTS OF EACH FLARED SECTION SHALL BE ENCASED IN A MINIMUM 4" THICKNESS OF CLASS "E" CONCRETE FOR THE FULL DEPTH OF THE POST BELOW THE GROUND LINE.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



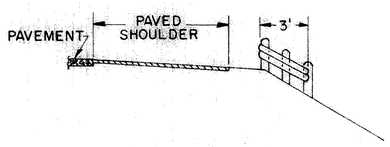
DIM."B" TO GUARD RAIL SHALL BE EITHER 2' FROM SHOULDER OR 8' FROM PAVEMENT EDGE, WHICHEVER DISTANCE IS GREATER.

(ROADWAY SPAN)

BIFURCATION



GUARD RAIL DETAIL



SECTION A-A

DESIGN

THE DESIGN OF GUARD RAIL PROTECTION FOR OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

GUARD RAIL

I-129
I-15

DATE
4-8-60
6-20-60
1-2-62
4-18-62

APPROVED Robert E. Comer
ENGINEER OF TRAFFIC

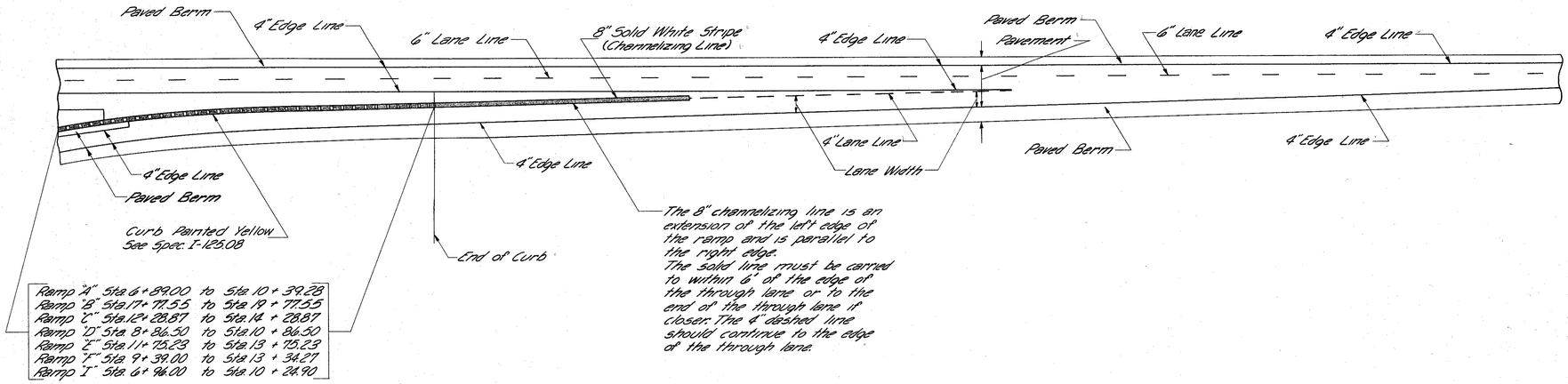
GUARD RAIL FOR OVERHEAD SIGN SUPPORTS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

32
445

HAMILTON COUNTY
HAM. 71 - 13.05

ENTRANCE TERMINAL - TAPERED ACCELERATION LANE



Ramp "A"	Sta. 6+89.00	to	Sta. 10+39.28
Ramp "B"	Sta. 17+77.55	to	Sta. 19+77.55
Ramp "C"	Sta. 12+28.87	to	Sta. 14+28.87
Ramp "D"	Sta. 8+86.50	to	Sta. 10+86.50
Ramp "E"	Sta. 11+75.23	to	Sta. 13+75.23
Ramp "F"	Sta. 9+39.00	to	Sta. 13+34.27
Ramp "I"	Sta. 6+96.00	to	Sta. 10+24.90

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.

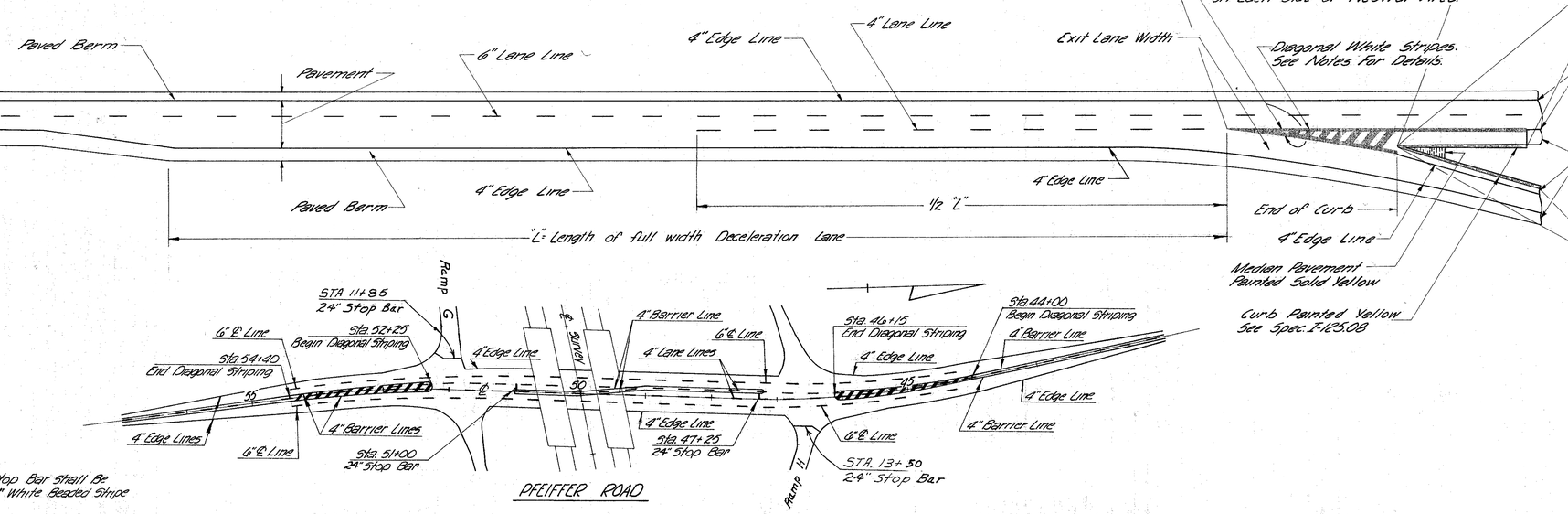
Channelizing lines shall be continuous white beaded stripes 8" in width placed in the locations as shown to conform to supplemental specification No. I-125 and defined in section I-125.07b.

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 I-125 and defined in section I-125.07c.

Barrier lines shall be placed in the locations as shown to conform to supplemental specification No. I-125 and defined in section I-125.07a.

EXIT TERMINAL - PARALLEL DECELERATION LANE

Ramp "A"	Sta. 269+55.00	to	Sta. 270+43.00
Ramp "B"	Sta. 686+93.00	to	Sta. 683+15.83
Ramp "C"	Sta. 277+74.00	to	Sta. 278+55.08
Ramp "D"	Sta. 270+32.43	to	Sta. 271+05.00
Ramp "E"	Sta. 713+63.72	to	Sta. 714+81.00
Ramp "G"	Sta. 781+54.00	to	Sta. 783+28.00
Ramp "H"	Sta. 800+81.00	to	Sta. 803+00.00



Note:
Stop Bar Shall Be 24" White Beaded Stripe

Ramp "A"	Sta. 70+45.36	to	Sta. 71+25.36
Ramp "B"	Sta. 688+15.83	to	Sta. 689+15.83
Ramp "B'"	Sta. 1+14.80	to	Sta. 2+14.80
Ramp "C"	Sta. 278+55.08	to	Sta. 279+35.08
Ramp "D"	Sta. 269+52.43	to	Sta. 270+32.43
Ramp "E"	Sta. 712+65.72	to	Sta. 713+65.72
Ramp "E'"	Sta. 1+20.19	to	Sta. 2+20.19
Ramp "G"	Sta. 783+29.57	to	Sta. 784+29.57
Ramp "H"	Sta. 799+89.39	to	Sta. 800+89.39

Ramp "A"	Sta. 1+34.79	to	Sta. 2+34.79
Ramp "B"	Sta. 2+79.81	to	Sta. 3+79.81
Ramp "B"	Sta. 14+13.30	to	Sta. 15+13.30
Ramp "C"	Sta. 2+78.12	to	Sta. 3+78.12
Ramp "D"	Sta. 2+42.71	to	Sta. 3+42.71
Ramp "E"	Sta. 2+54.99	to	Sta. 3+54.99
Ramp "E"	Sta. 9+85.27	to	Sta. 10+85.27
Ramp "G"	Sta. 3+86.95	to	Sta. 4+86.95
Ramp "H"	Sta. 5+15.80	to	Sta. 6+15.80
Cross County	Sta. 268+46.70 ℄	to	Sta. 68+21.17 ℄
Cross County	Sta. 80+49.06 ℄	to	Sta. 280+96.37 ℄

Note: For Quantities See Sht. No. 12

PAVEMENT MARKING DETAIL

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM. 71 - 13.05

ITEM L-10 SODDING FOR SPECIAL BERM AND SLOPE PROTECTION

Prior to placement of Sodding on the Berm & Slope, Galvanized Poultry Fence shall be placed on the finished grade in strands which shall be at right angles to the direction of flow. Each strand shall be staked securely on top and bottom with stakes at Four foot intervals and alternated in rows Four feet apart.

Stakes shall be 1"x1"x8" Wood Stakes and shall be perpendicular to the ground and flush with the finished grade.

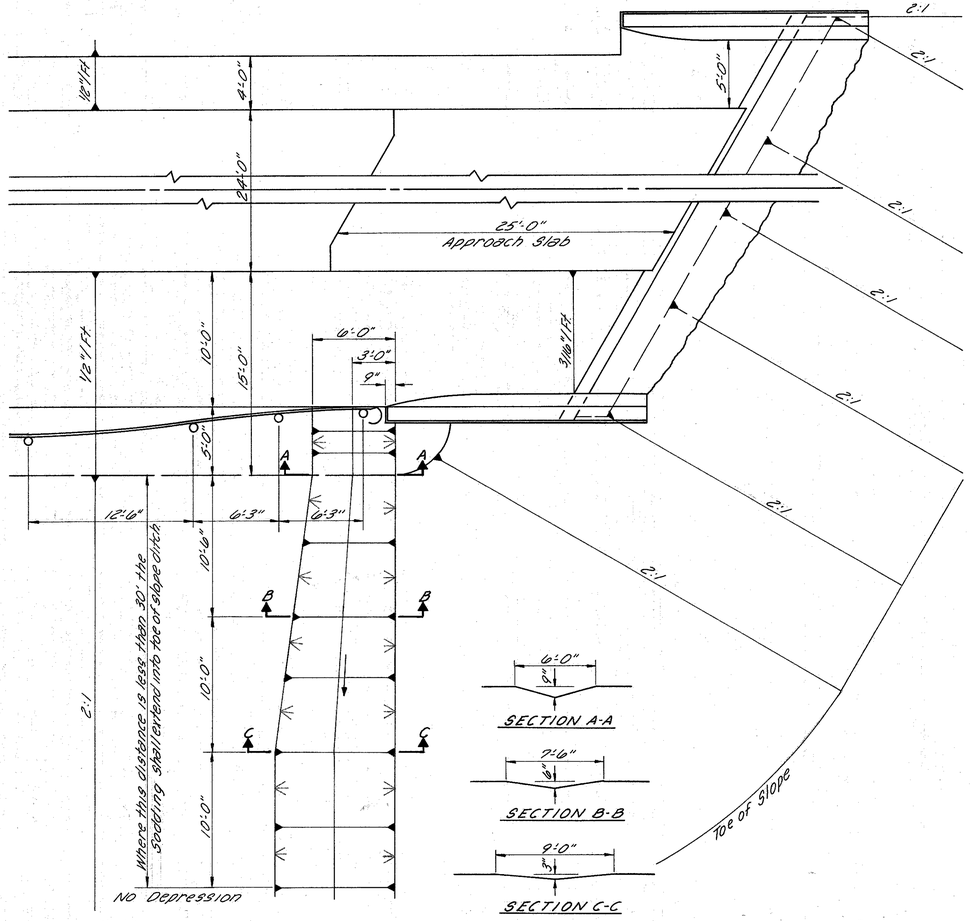
The Fence shall be straight line poultry fence or equivalent with strand width of Four feet, having a two inch mesh and all wires No. 20 gauge.

The strands of fencing shall be fastened together at twelve inch intervals by means of Hog Rings.

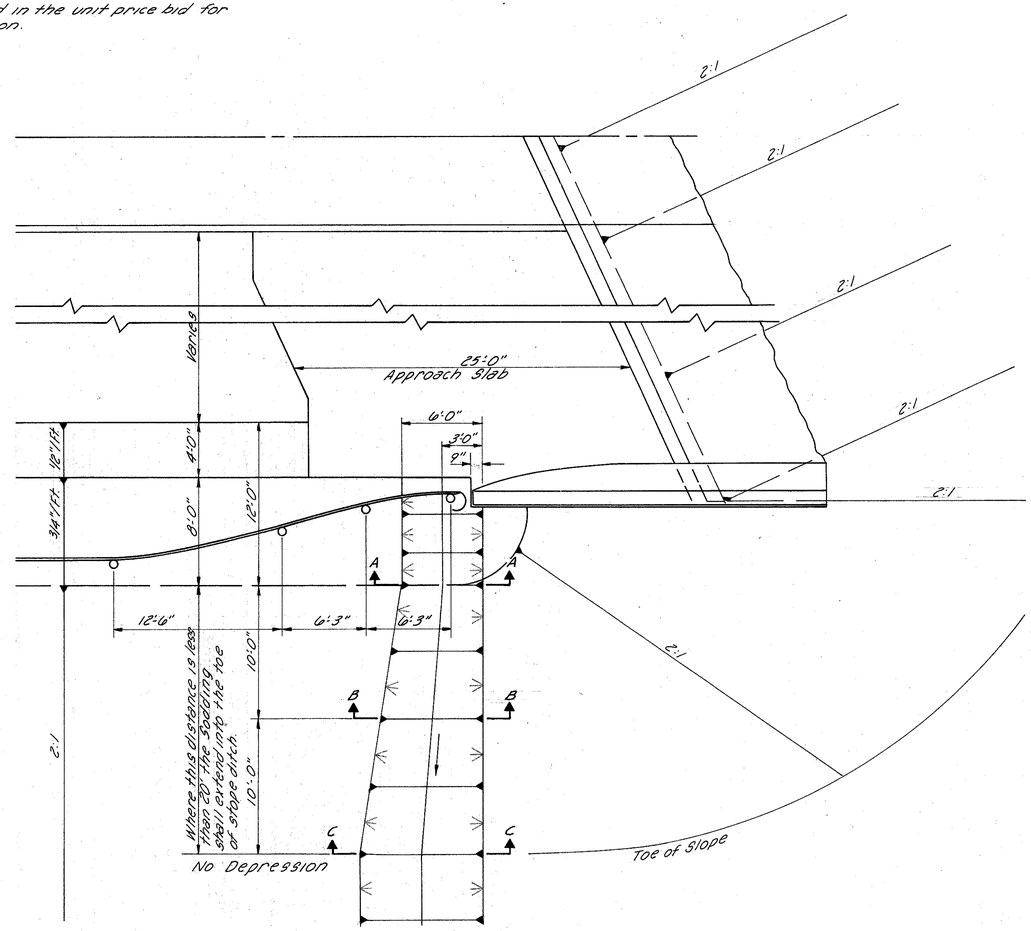
The Fence shall be secured to the Wood Stakes by Metal Staples.

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

Payment for all the above items shall be included in the unit price bid for Item L-10 Sodding for Special Berm and Slope Protection.



PFEIFFER ROAD
HAM.-71-15.60 LT. & RT.



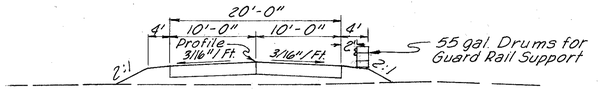
CROSS COUNTY HIGHWAY
HAM.-71-13.93

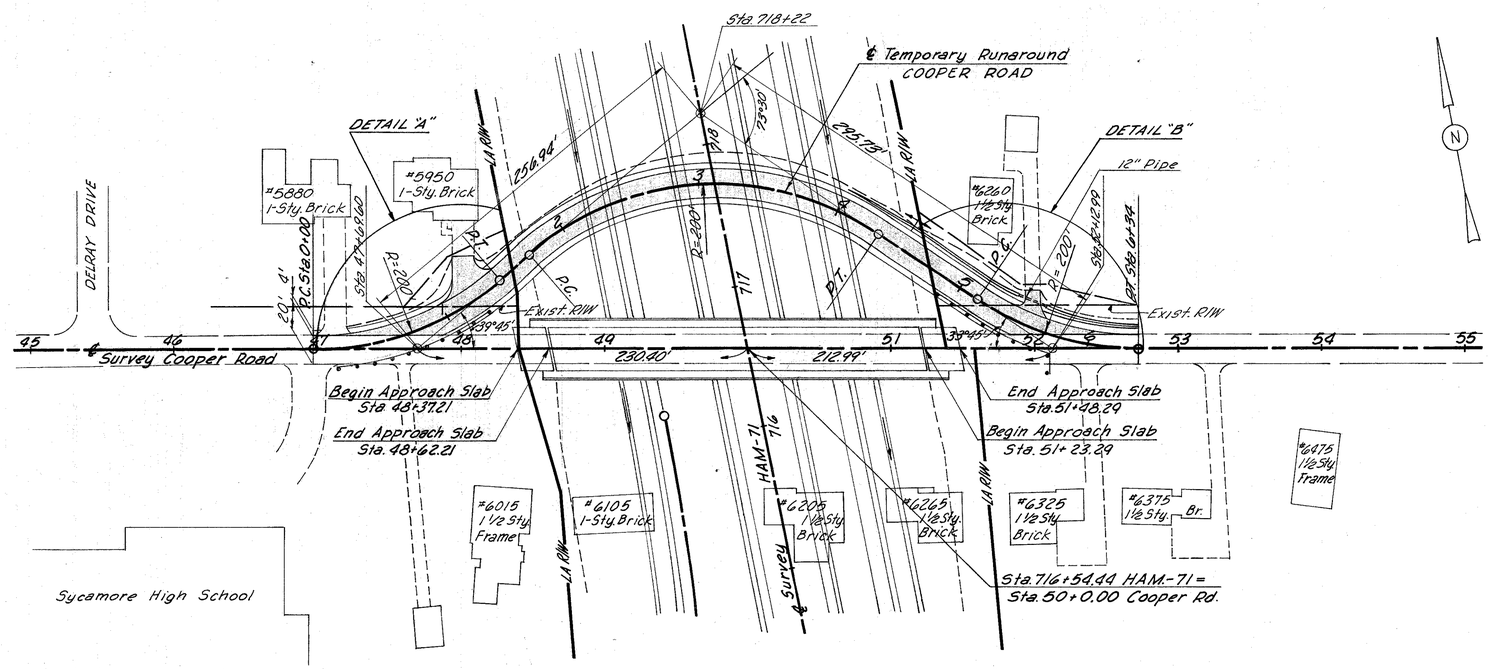
BERM PROTECTION DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM.71-13.05





TYPICAL SECTION
TEMPORARY RUNAROUND - COOPER ROAD

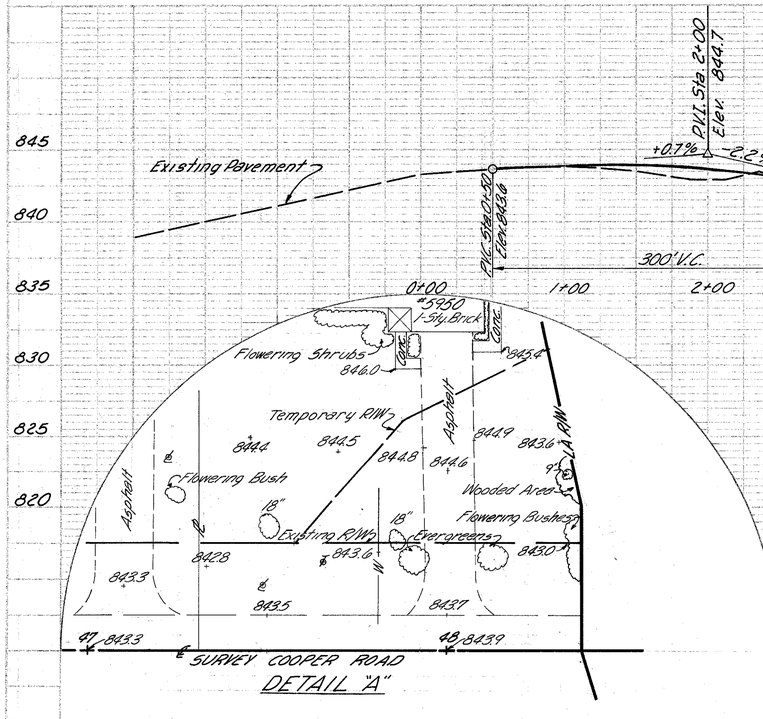
ESTIMATED QUANTITIES

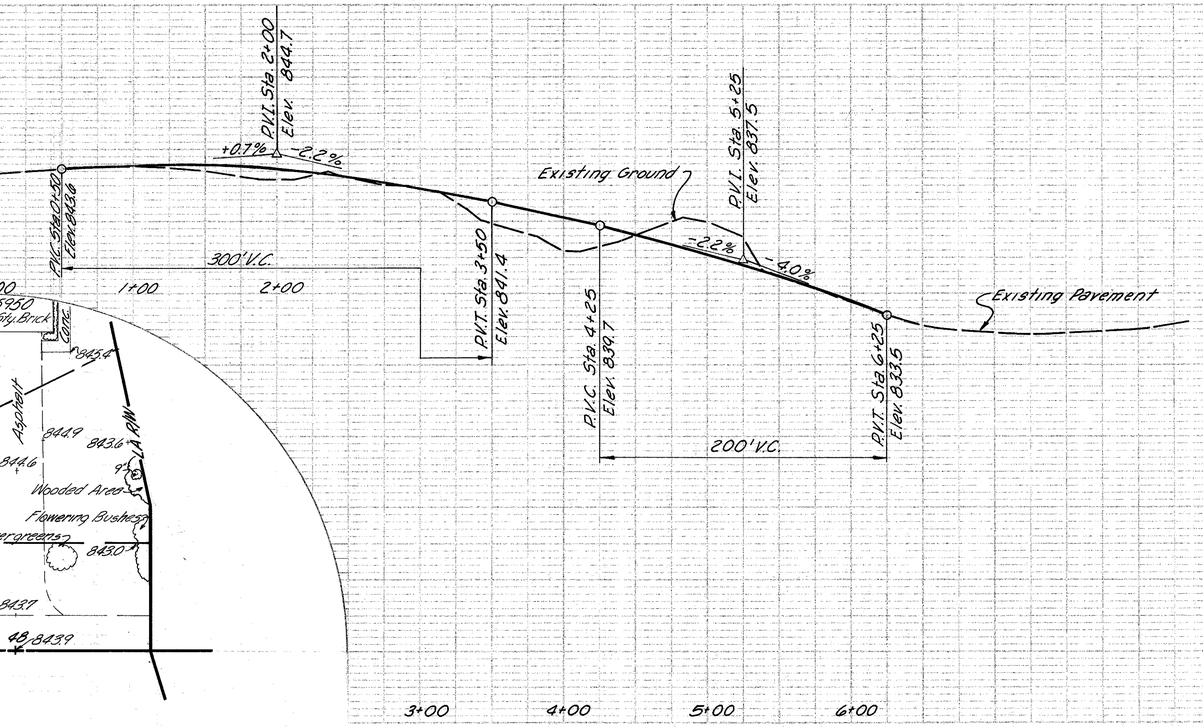
*S-15	Temporary Runaround Class B Pavement as per plan	Lump Sum	
✡	Roadway Area	1,188	Sq. Yds.
✡	Embankment	253	Cu. Yds.
✡	Roadway Excavation	253	Cu. Yds.
	12" Pipe	20	Lin. Ft.
*I-15	Temporary Guard Rail, using Barrels (See Proposal Note)	212.5	Lin. Ft.

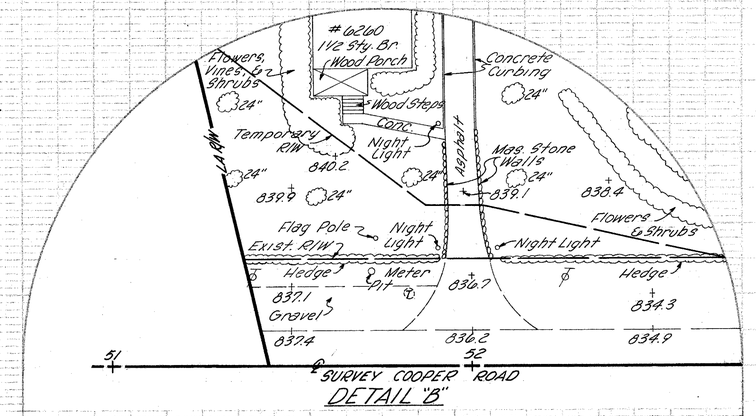
*Note: These Items carried to General Summary

✡Note: These Quantities are provided for the Contractors convenience only. The State of Ohio makes no guarantee as to their accuracy or completeness. (included in S-15 for payment)

*S-15 When the Temporary Runaround is no longer needed it shall be removed as per S-15.09. The Engineer shall so direct the Contractor to restore all property used for the Temporary Runaround outside the LA R/W to its original condition, including all sodding, shrubs, trees, walks, driveways, etc. Cost for completing this Item is to be included in the Lump Sum bid per Item S-15 Temporary Runaround.





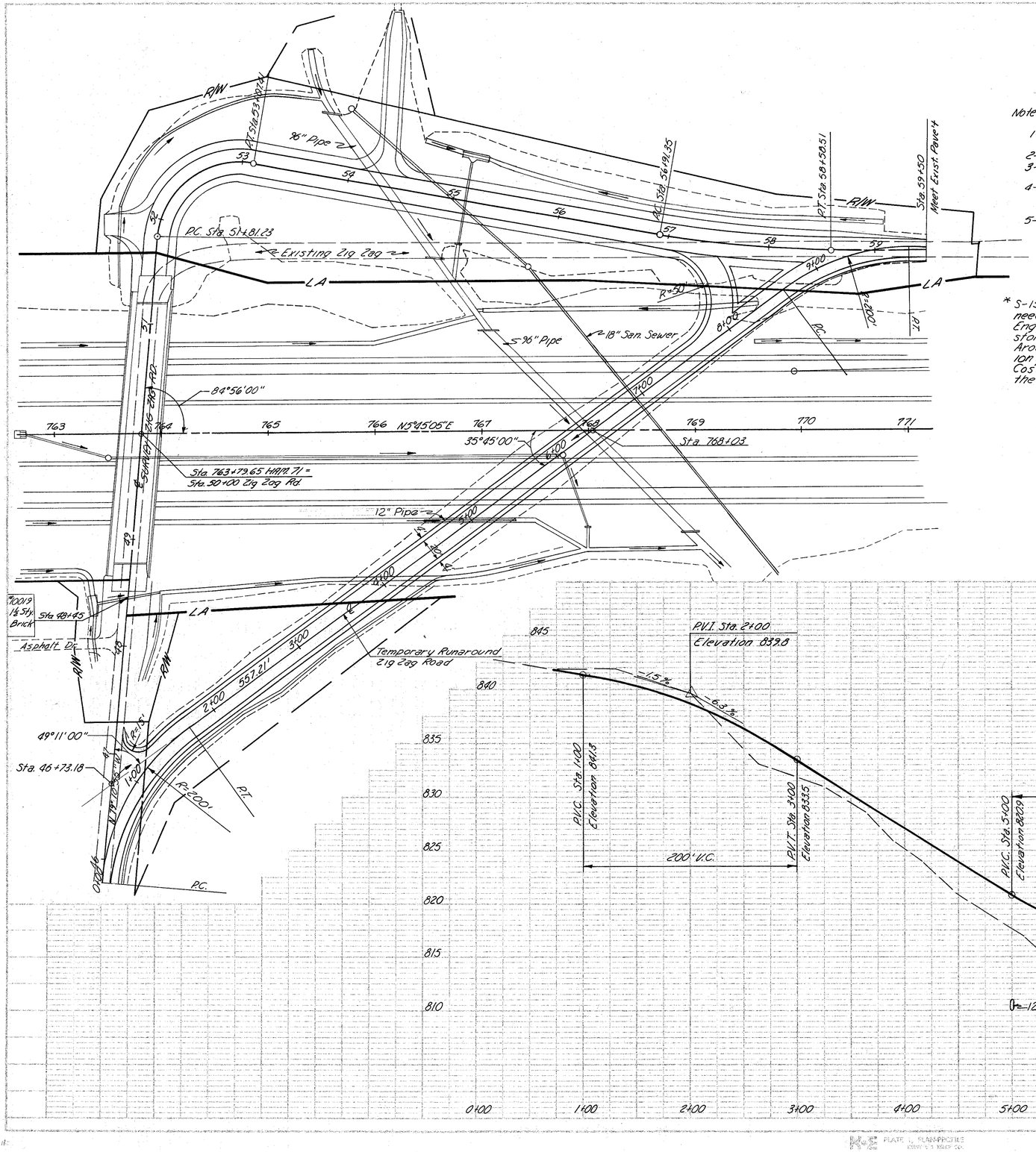


TEMPORARY RUNAROUND
COOPER ROAD

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

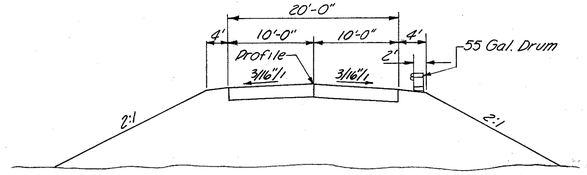
35
445

HAMILTON COUNTY
HAM 71-13.06



Note: Recommended Sequence of Construction for Temporary Runaround:
1- Construct 96" Pipe at Sta. 768+00 and place Embankment to grade.
2- Construct Temporary Runaround
3- Construct 96" Pipe under Relocated Zig Zag Rd. Sta. 54+32.
4- Construct Relocated Zig Zag Road complete from Sta. 52+00 to Sta. 59+50 also Drives at Sta. 51+95.5 Lt. & Sta. 54+32 Lt.
5- Then excavate and construct Zig Zag Bridge.

* S-15 When the Temporary Run-Around is no longer needed it shall be removed as per S-15.09. The Engineer shall so direct the Contractor to restore all property used for Temporary Run-Around outside the LA/RW to its original condition, including all sodding, shrubs & trees, etc. Cost for Completing this item to be included in the Lump Sum bid per item S-15 Temporary Run-Around.

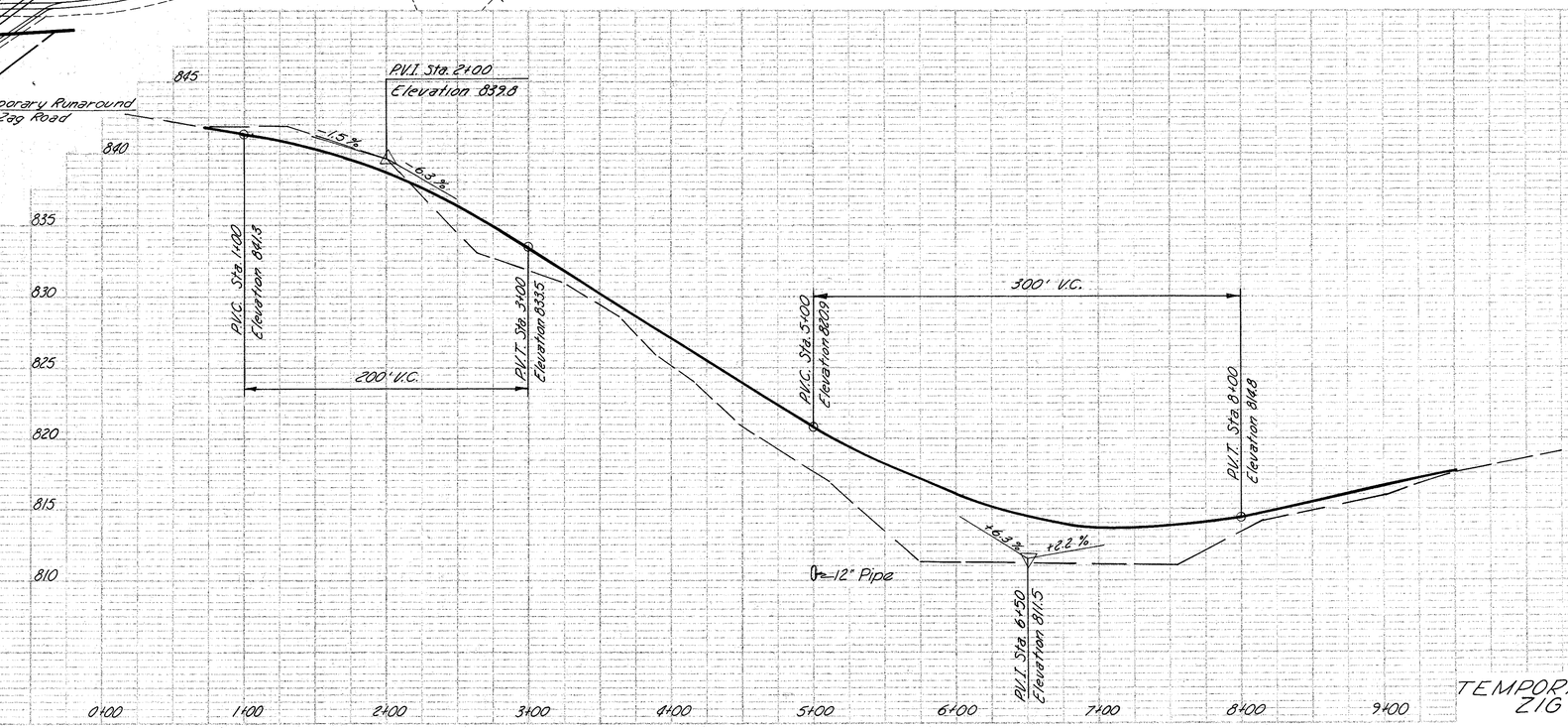


TYPICAL SECTION
TEMPORARY RUNAROUND ZIG ZAG ROAD

ESTIMATED QUANTITIES:

* S-15	Temporary Runaround Class B Pavement as per plan	Lump Sum	
✡	Roadway Area	1,958	Sq. Yds.
✡	Embankment	1,976	Cu. Yds.
✡	Roadway Excavation	180	Cu. Yds.
✡	12" Pipe	86	Lin. Ft.
* I-15	Temporary Guard Rail, using Barrels (See Proposal Note)	200	Lin. Ft.

* Note: These Items Carried to General Summary
✡ Note: These Quantities are provided for the Contractors convenience only. The State of Ohio makes no guarantee as to their accuracy or completeness. (Included in S-15 for payment)

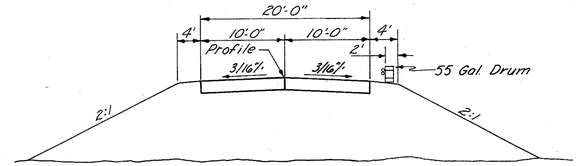


TEMPORARY RUNAROUND ZIG ZAG ROAD

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM 71-13.05



TYPICAL SECTION
TEMPORARY RUNAROUND - PFEIFFER ROAD

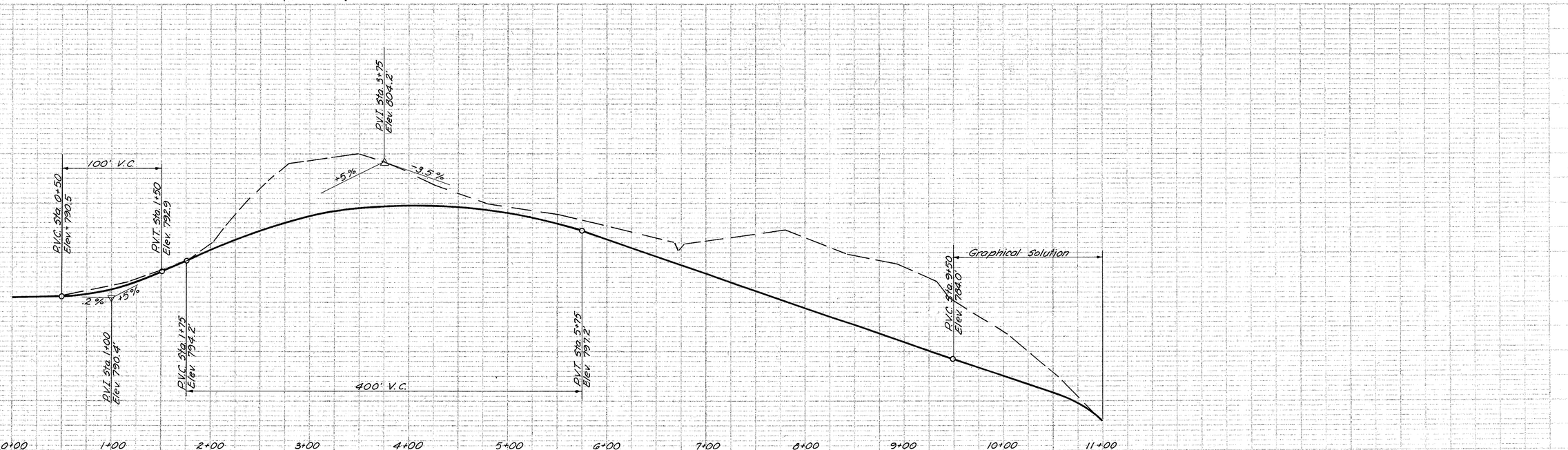
ESTIMATED QUANTITIES:

- ✱ 5-15 Temporary Runaround Class B Pavement (as per plan) ____ Lump Sum
- ✡ Roadway Area ____ 2444 Sq. Yds.
- ✡ Roadway Embankment ____ 0 Cu. Yds.
- ✱ T-15 Temporary Guard Rail, using Barrels (See proposal Note) ____ 275 Lin. Ft.

✱ Note: These Items Carried to General Summary

✡ Note: These Quantities are provided for the Contractors convenience only. The State of Ohio makes no guarantee as to their accuracy or completeness.

Note: Excavation necessary to complete Temporary Runaround is included in the permement construction of this project.

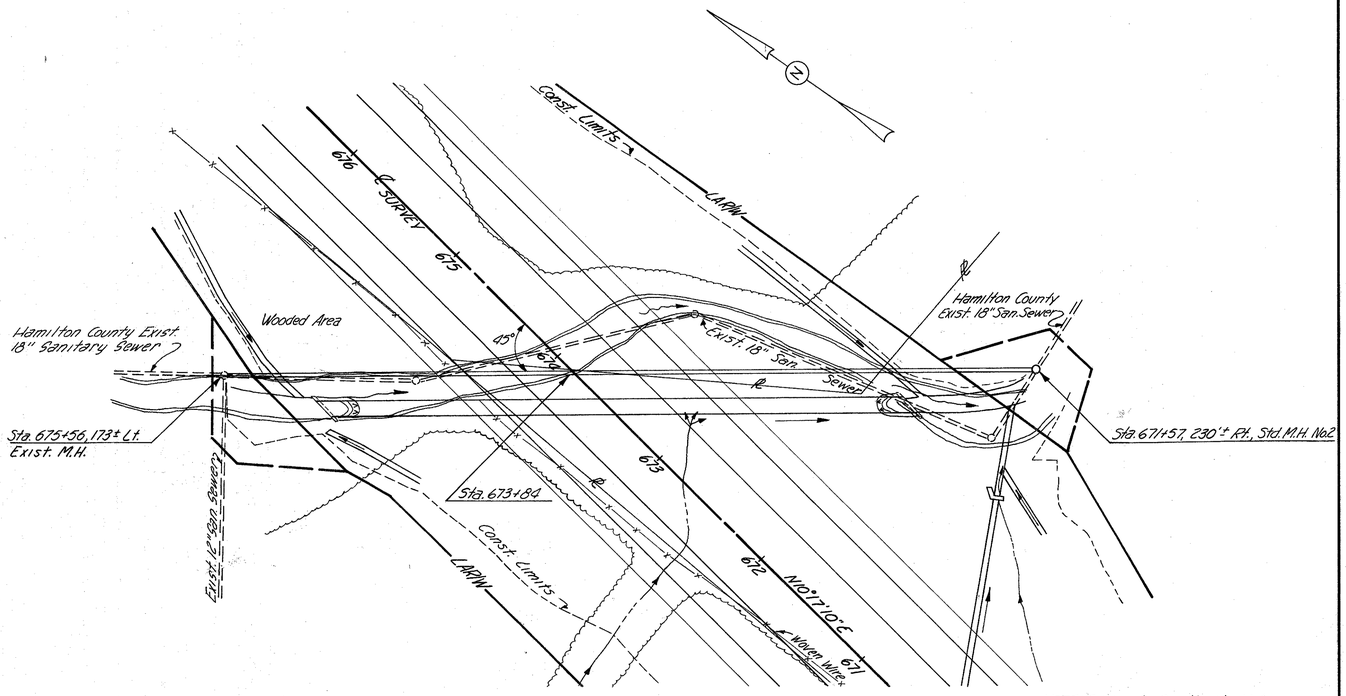


TEMPORARY RUNAROUND
PFEIFFER ROAD

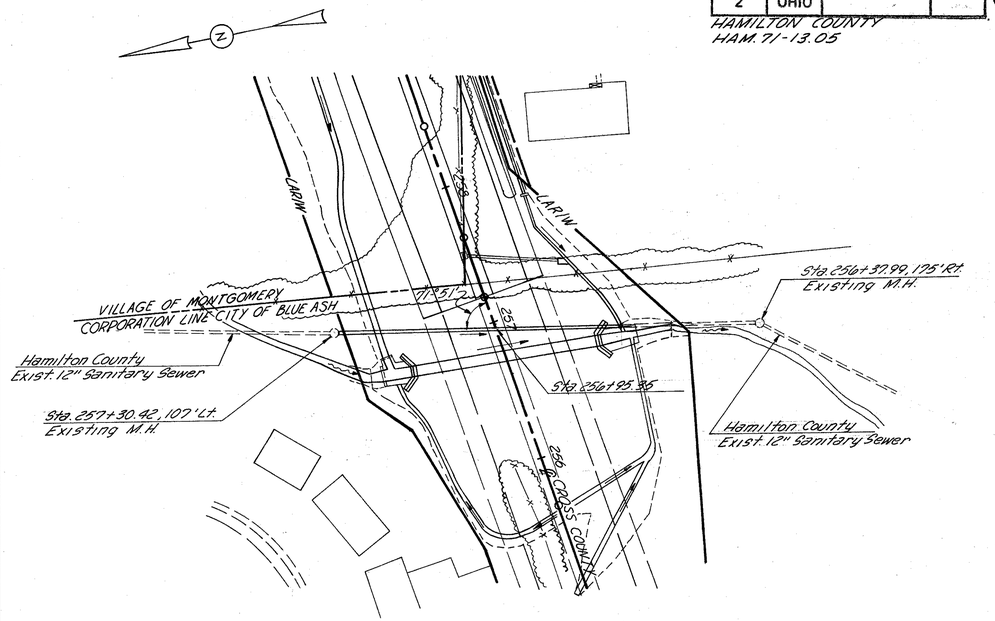
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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245

HAMILTON COUNTY
HAM. 71-13.05



NOTE: Concrete Cradle shall be in accordance with Std. Drawing HW-E



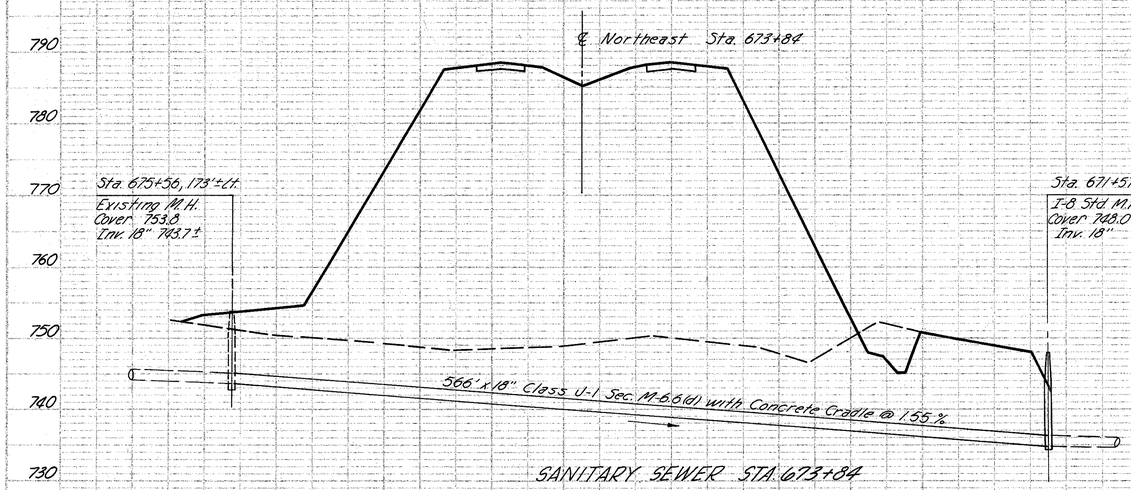
ESTIMATED QUANTITIES

(I)

ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	18" Pipe Class U-1 Sec. M-6.6 (d)	566	Lin. Ft.
I-2	Masonry	44.81	Cu. Yds.
* I-8	Std. M.H. No. 2 (w/o frame & cover, no Drop Pipe)	1	Each
I-16	Manhole Abandoned	3	Each

NOTE: The Contractor shall maintain Sanitary Sewer flow until the new Sanitary Sewer is in place and accepted. Method used to maintain flow shall be approved by the Engineer. Cost for maintaining flow and removal of existing Sanitary Sewer pipe shall be included in the unit price bid per Item I-1 18" Pipe Class U-1, Sec. M-6.6 (d)

* Note: The existing manhole frames & covers stored under Item I-16 shall be used with Item I-8 Std. M.H. No. 2. No Drop Pipe.



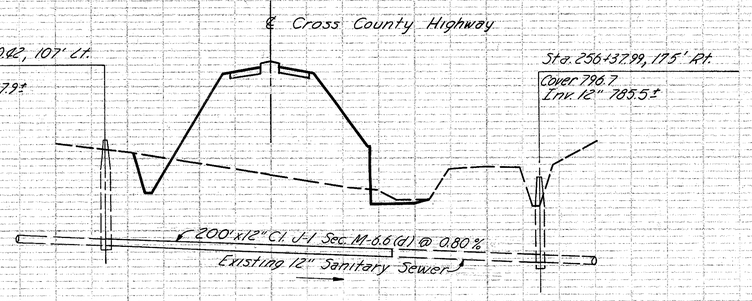
SANITARY SEWER STA. 673+84

ESTIMATED QUANTITIES

(US)

ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	12" Pipe Class U-1 Sec. M-6.6 (d)	200	Lin. Ft.

NOTE: The Contractor shall maintain Sanitary Sewer flow until the new Sanitary Sewer is in place and accepted. Method used to maintain flow shall be approved by the Engineer. Cost for maintaining flow and removal of existing Sanitary Sewer pipe shall be included in the unit price bid per Item I-1 12" Pipe Class U-1 Sec. M-6.6 (d).



SANITARY SEWER STA. 256+95.35 CROSS COUNTY

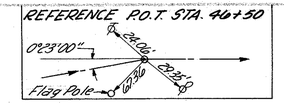
SANITARY SEWER DETAILS
STA. 673+84 M & STA. 256+95.35 CROSS COUNTY

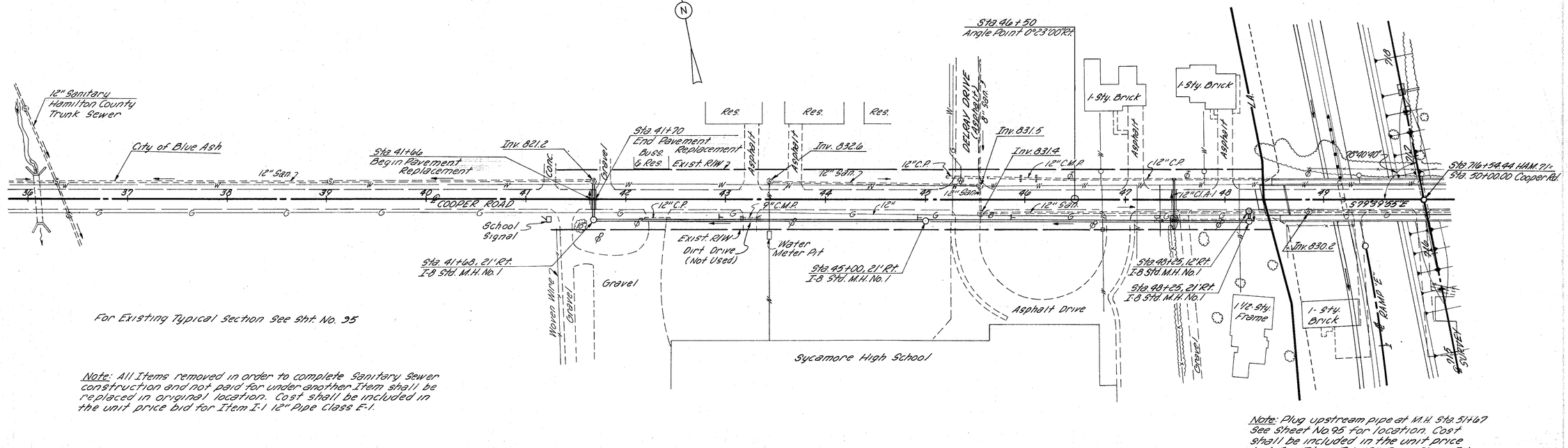
SHEET 1 PLAN-PROFILE
QUANTITIES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM. 71-13.05

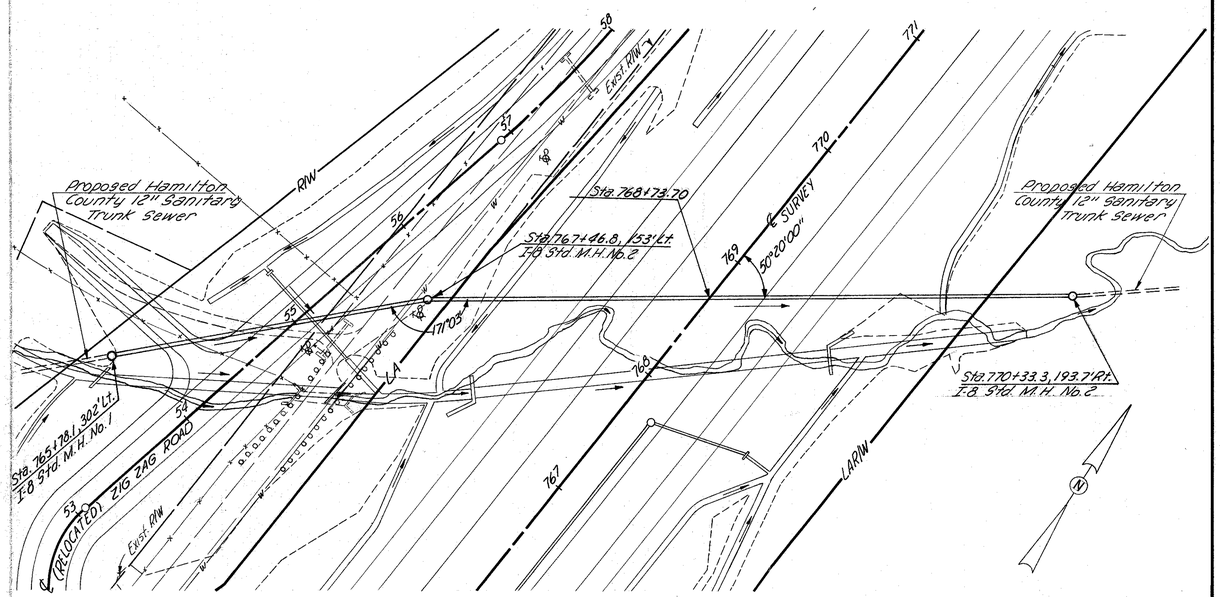



12" Sanitary Hamilton County Trunk Sewer
City of Blue Ash
Sta. 41+66 Begin Pavement Replacement
Inv. 821.2
Conc.
Gravel
Sta. 41+70 End Pavement Replacement Buss. & Res.
Exist. R/W
Asphalt
Inv. 832.6
Res.
Res.
Res.
12" San.
12" C.P.
12" C.M.P.
12" San.
12" C.P.
12" C.M.P.
12" C.P.
12" Cl. A-1
12" C.M.P.
12"
12" San.
Inv. 831.5
Inv. 831.4
DELRAY DRIVE
Asphalt
8" Conc.
Sta. 46+50
Angle Point 0°23'00" Rt.
1-Sty. Brick
1-Sty. Brick
Asphalt
28°40'40"
Sta. 716+54.94 HAM. 71-
Sta. 301+00.00 Cooper Rd.
S 79°39'35" E
30
37
38
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40
41
42
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44
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46
47
48
49
COOPER ROAD
School Signal
Sta. 41+68, 21' Rt.
I-8 Std. M.H. No. 1
Exist. R/W
Dirt Drive (Not Used)
Water Meter Pit
Sta. 45+00, 21' Rt.
I-8 Std. M.H. No. 1
Sta. 48+25, 12' Rt.
I-8 Std. M.H. No. 1
Sta. 48+25, 21' Rt.
I-8 Std. M.H. No. 1
Inv. 830.2
Woven Wire Fence
Gravel
Gravel
Asphalt Drive
Sycamore High School
1½ Sty. Frame
1-Sty. Brick
Fence
Fence
Fence

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

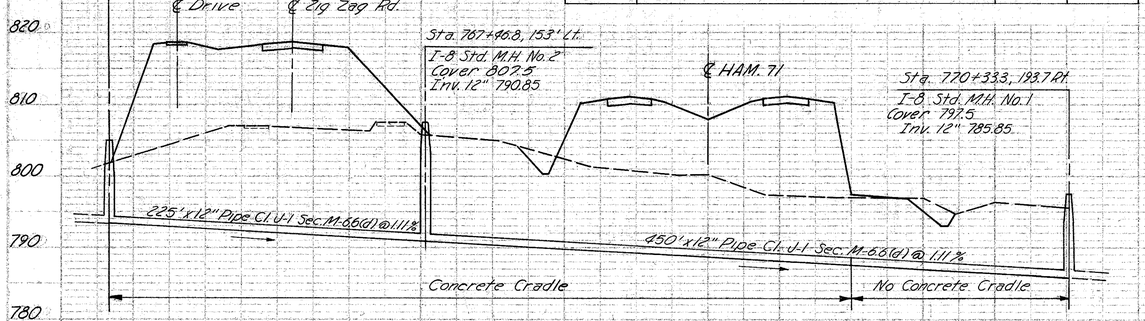
39
145

HAMILTON COUNTY
HAM. 71-13.05

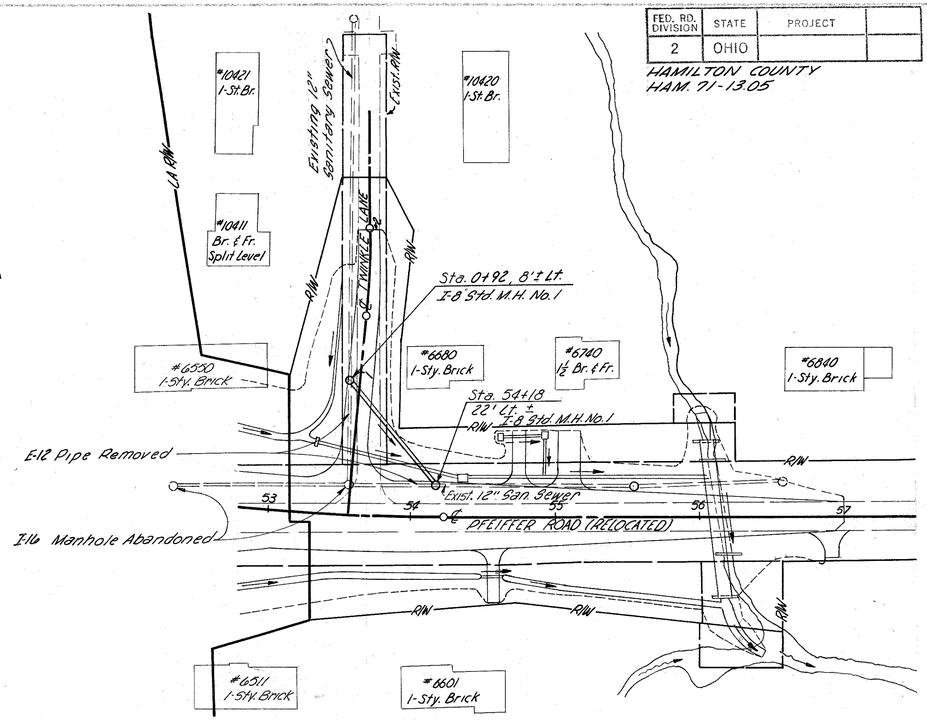


Note: Concrete Cradle shall be in accordance with Standard Drawing HW-E.

(NA) ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	12" Pipe Class J-1 Sec. M-6.6(d)	675	Lin. Ft.
I-8	Std. Manhole No. 1	2	Each
I-8	Std. Manhole No. 2 (No Drop Pipe)	1	Each
I-2	Masonry	24.55	Cu. Yds.



SANITARY SEWER
ZIG ZAG RD. & NB STA. 768+73.70



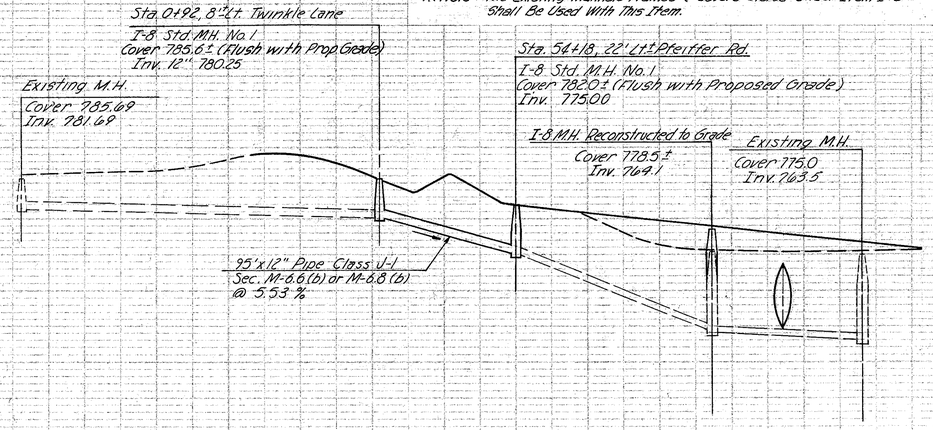
Note: The Contractor shall maintain sanitary sewer flow until the new sanitary sewer is in place & accepted. Method used to maintain flow shall be approved by the engineer. Cost for maintaining flow shall be included in the unit price bid per Item I-1 12" Pipe Class U-1 M-6.6(b) or M-6.8(b).

(1)

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	12" Pipe Class J-1 Sec. M-6.6(d) or M-6.8(d)	95	Lin. Ft.
✳ I-8	Std. Manhole No. 1 (Without Frame & Cover)	2	Each
I-8	Manhole (Reconstructed to grade) (as per plan)	1	Each
E-12	Pipe Removed 24" & Under	132	Lin. Ft.
I-16	Manhole Abandoned	2	Each

✳ Note: The Existing Manhole Frames & Covers Stored Under Item I-16 Shall Be Used With This Item.



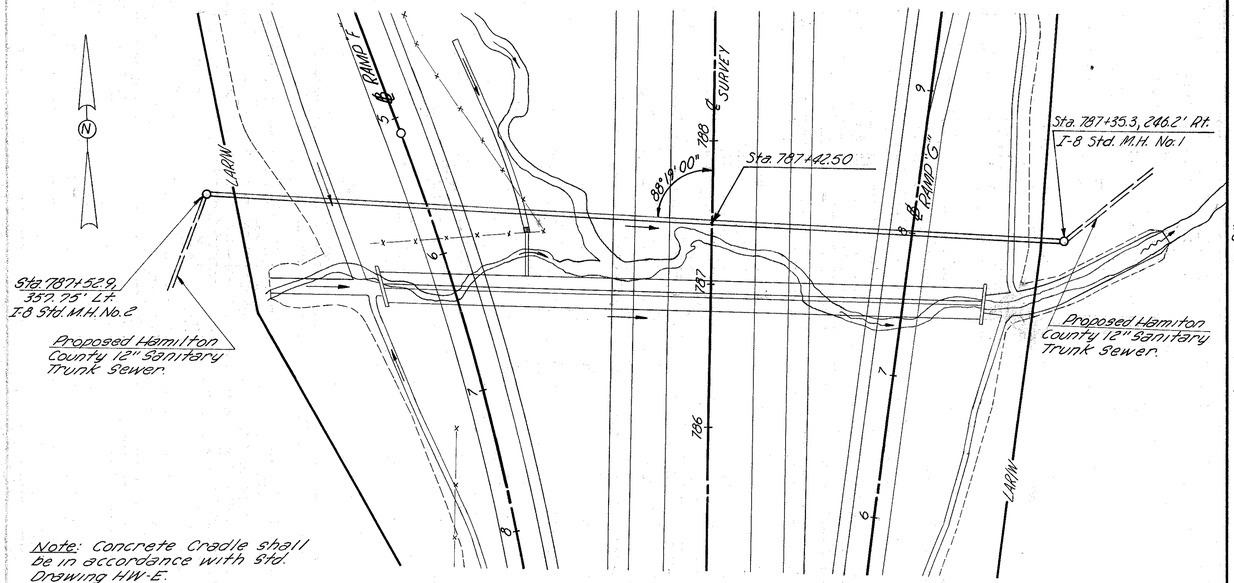
SANITARY SEWER
TWINKLE LANE & PFEIFFER RD.

SANITARY SEWER DETAILS
ZIG ZAG RD, TWINKLE LANE & PFEIFFER RD.

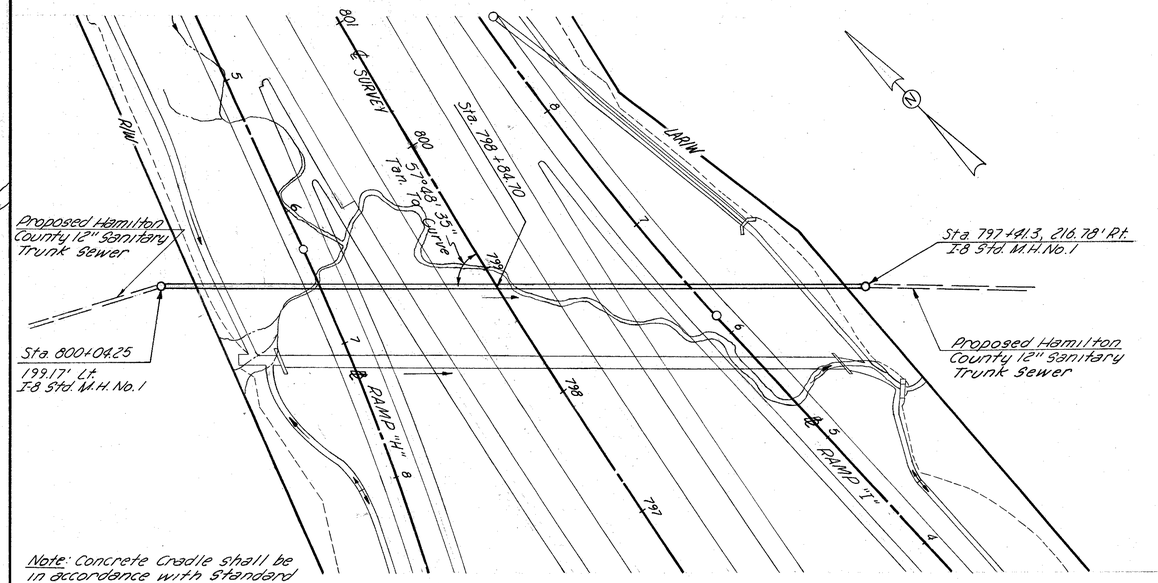
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

40
445

HAMILTON COUNTY
HAM. 71-13.05



Note: Concrete Cradle shall be in accordance with Std. Drawing HW-E.

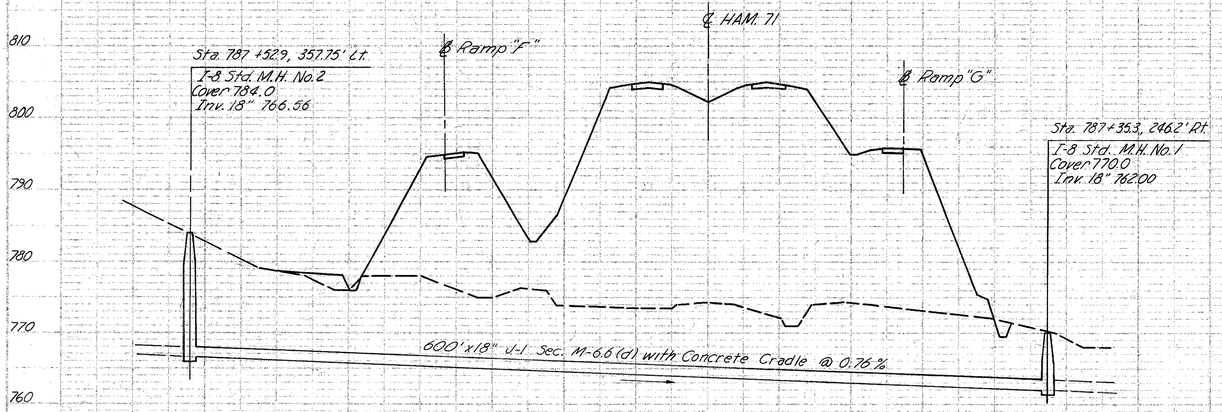


Note: Concrete Cradle shall be in accordance with Standard Drawing HW-E

ESTIMATED QUANTITIES

(N.P.)	ITEM	DESCRIPTION	QUANTITY	UNIT
	I-1	18" Pipe Class U-1 Sec. M-6.6 (d)	600	Lin. Ft.
	I-2	Masonry	47.38	Cu. Yds.
*	I-8	Std. Manhole No. 2 (W/O Frame & Cover, No Drop Pipe)	1	Each
*	I-8	Std. Manhole No. 1 (W/O Frame & Cover)	1	Each

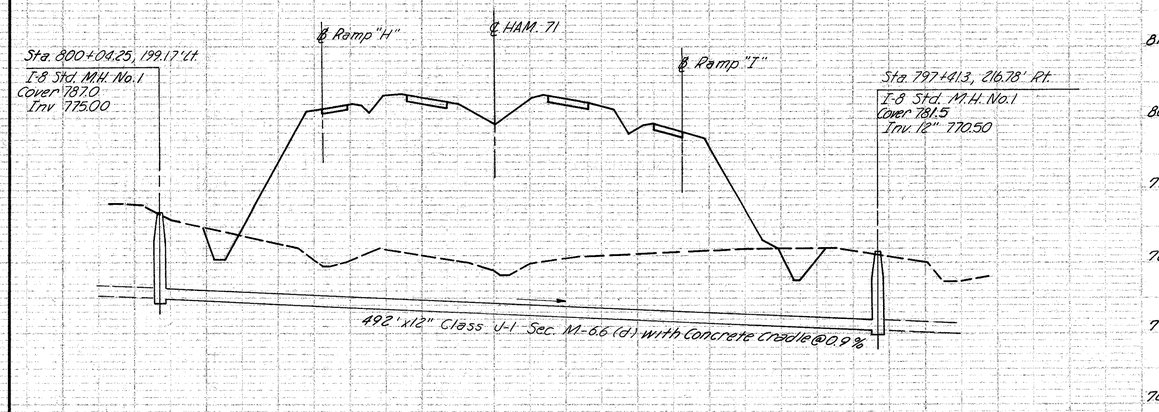
* Note: The existing manhole frames & covers stored under Item I-1u shall be used with Item I-8 Std. M.H. No. 1, and I-8 Std. M.H. No. 2, No Drop Pipe.



SANITARY SEWER STA. 787+42.50

ESTIMATED QUANTITIES

(N.P.)	ITEM	DESCRIPTION	QUANTITY	UNIT
	I-1	12" Pipe Class U-1 Sec. M-6.6 (d)	492	Lin. Ft.
	I-2	Masonry	23.17	Cu. Yds.
	I-8	Std. Manhole No. 1	2	Each



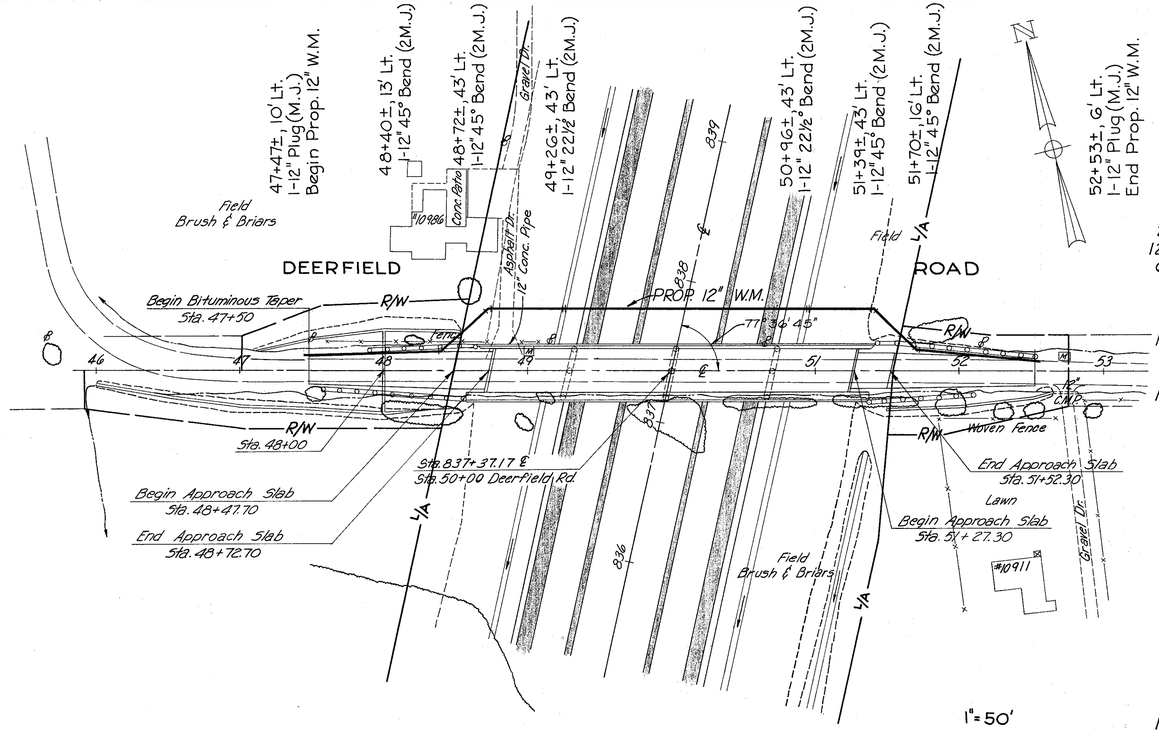
SANITARY SEWER STA. 798+84.70

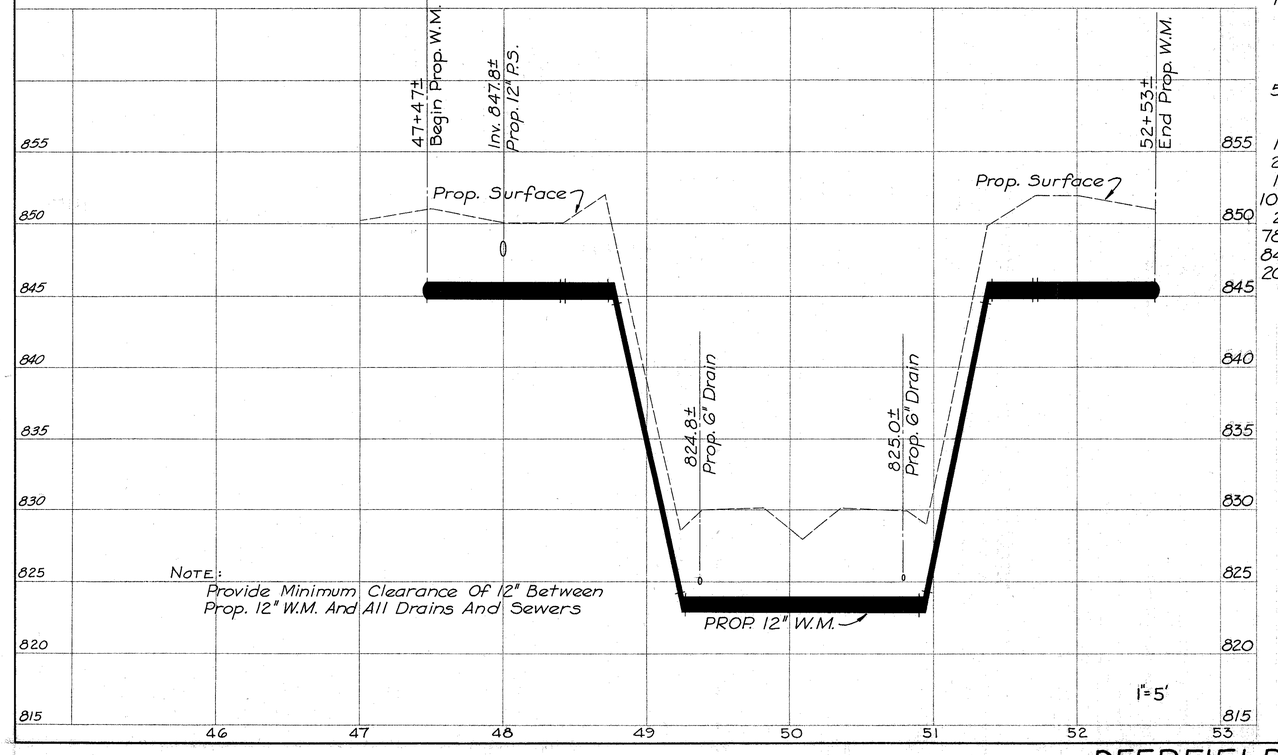
SANITARY SEWER DETAILS
STA. 787+42.50 ~ STA. 798+84.70

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

41/445

HAMILTON COUNTY
HAM.11-13.05





The Following Is A List Of Material Necessary To Perform The Water Main And Branch Relocation Work As Proposed On The Drawings. The Contractor Shall Furnish Additional Material Needed To Meet Unexpected Conditions. No Extra Payment Will Be Allowed For Additional Specials Required To Complete The Water Main Work.

Pipe Shall Be Compression Joint, Class 250 And Specials Shall Be Mechanical Joint, Class D, Except As Noted.

BILL OF MATERIAL

- 24 - 18 Ft. Lengths 16" C.I. Pipe-Comp. Jt.
- 120 - 18 Ft. Lengths 12" C.I. Pipe-Comp. Jt.
- 66 - 18 Ft. Lengths 8" C.I. Pipe-Comp. Jt.
- 7 - 18 Ft. Lengths 6" C.I. Pipe-Comp. Jt.
- 6 - Each 16" 22½° Bends - 2 M.J.
- 2 - " 16" 11¼° Bends - P.E. x M.J.
- 12 - " 12" 45° Bends - 2 M.J.
- 2 - " 12" 22½° Bends - 2 M.J.
- 2 - " 8" 90° Bends - 2 M.J.
- 10 - " 8" 22½° Bends - 2 M.J.
- 6 - " 8" 11¼° Bends - P.E. x M.J.
- 4 - " 6" 90° Bends - 2 M.J.
- 1 - " 6" 22½° Bend - 2 M.J.
- 2 - 16" Plugs - M.J.
- 4 - 12" Plugs - M.J.
- 4 - 8" Plugs - (For H.&S. Pipe)
- 4 - 12" Sleeves - M.J.
- 5 - 8" Sleeves - Solid
- 1 - 6" Sleeve - Solid
- 2 - 16" x 8" Tees - 3 M.J.
- 2 - 12" x 6" Tees - 3 M.J.
- 3 - 8" x 6" Tees - 3 M.J.
- 2 - 12" Valves
- 3 - 8" Valves
- 5 - 6" Valves
- 5 - Valve Box Hoods, Lids & Tel.
- 1 - M.H.C.&C.
- 13 - Roadway Boxes
- 2 - 2" Ferrules
- 15 - 1" Ferrules
- 9 - ¾" Ferrules
- 2 - 2" Stop Cocks
- 3 - 1" Stop Cocks
- 7 - ¾" Stop Cocks
- 53 - 2" Copper to Copper Couplings And Bends
- 2 - 1½" Copper to Copper Couplings
- 12 - 1" Copper to Copper Couplings
- 21 - ¾" Copper to Copper Couplings
- 10 - 2" Galvanized Couplings
- 1025 - Lin. Ft. 2" Copper Service Pipe
- 20 - 1½" Copper Service Pipe
- 785 - 1" Copper Service Pipe
- 846 - ¾" Copper Service Pipe
- 205 - 2" Galvanized Pipe
- 1 - Each 12" x 2" Service Saddle
- 1 - " 8" x 2" Service Saddle

WATER WORKS SUMMARY

ITEM		① Normal Perf.c	② 100% County	③ Normal Perf.c	④	⑤ N.R. 100% County	⑥ 51.61% Norm. 48.39% County	INTER-STATE	UNIT	CITY OF CINCINNATI SPECIFICATION NUMBER
	DESCRIPTION	BRANCHES	FIDELIS DR.	ZIG ZAG RD.	PFEIFFER RD	DEERFIELD RD.	COOPER RD.	①③④		
SPECIAL	* CONTINGENCY ITEMS	70	5	20	20			110	LIN.FT.	W-1
"	16" C.I. PIPE, VALVES & SPECIALS			1140			37	1140	LIN.FT.	W-1
"	12" C.I. PIPE, VALVES & SPECIALS			1620		540		1620	LIN.FT.	W-1
"	8" C.I. PIPE, VALVES & SPECIALS						420		UN.FT.	W-1
"	6" C.I. PIPE, VALVES & SPECIALS				2		1	3	EACH	W-13
"	16" x 8" TEES			1	2			75	LIN.FT.	W-15
"	12" x 6" TEES		5	36	40		25	3	EACH	W-20
"	8" x 6" TEES			1	2		1	3	EACH	W-21
"	16" 22½° BENDS			2				2	EACH	W-21
"	12" 45° BENDS			2	2		2	2	EACH	W-23
"	12" 22½° BENDS			20	20		20	40	LIN.FT.	W-25
"	8" 90° BENDS							245	LIN.FT.	W-25
"	8" 22½° BENDS							2	EACH	W-27
"	8" 11¼° BENDS	245		93	10	10	169	846	UN.FT.	W-28
"	6" 90° BENDS	2		10	10	10	10	785	LIN.FT.	W-28
"	6" 22½° BEND	846		2			3	20	LIN.FT.	W-28
"	16" PLUGS	785		19	4	8	15	20	LIN.FT.	W-28
"	12" PLUGS	20		19	10			103	LIN.FT.	W-28
"	8" PLUGS	1025						13	EACH	W-40
"	12" SLEEVES	13	1	2	2			5	EACH	W-41
"	8" SLEEVES	1						3	EACH	W-42
"	6" SLEEVE	3		93	10	10	169	103	CU.YDS.	W-45
"	16" x 8" TEES			10	10	10	10	20	CU.YDS.	W-46
"	12" x 6" TEES			2			3	6	CU.YDS.	W-47
"	8" x 6" TEES			19	4	8	15	22	CU.YDS.	W-48
"	16" 22½° BENDS				10			205	LIN.FT.	W-49
"	12" 45° BENDS	205	1	2	2			4	EACH	W-60
"	12" 22½° BENDS			2				1	EACH	W-62
"	8" 90° BENDS	1						6	EACH	W-67
"	8" 11¼° BENDS	6						1	EACH	W-68
"	6" 90° BENDS	1							EACH	
"	6" 22½° BEND			300	200	180	300	500	LBS.	C-3
"	VALVE BOX HOODS, LIDS & TEL.				1	1	1	2	M.BD.FT.	S-25
"	M.H.C.&C.		1	3	3			6	EACH	W-54
"	ROADWAY BOXES									

N.R. = Non-Participation

Drawing No. D-004-5
Scale: AS SHOWN
Sheet No. 1 of 8

DEERFIELD ROAD WATER LINE — WATER WORKS SUMMARY

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

42 / 445

HAMILTON COUNTY
HAM. 71-13.05

41+00 Begin Prop. 12" W.M.
1-12" Sleeve

42+58± Salvage Ex. F.H. (42+52±) & Relocate (42+58±)
1-12"x6" Tee (3 M.J.)
1-6" 90° Bend (2M.J.)
1-6" Valve
1-Valve Box Hood, Lid, & Tele.
NOTE: Valve & Head to be Strapped
1-Remove Ex. Valve Box.

Prop. 2" Br. #6200 H-215998

H-185648 #6200

PFEIFFER R/W

Ex. 6" G.M.

PROP. 12" W.M.

RAMP "H"

RAMP "I"

RAMP "F"

RAMP "G"

Ex. 12" W.M.

Ex. 12" W.M.

41+00± Begin 12" W.M.

44+40± Salvage Ex. M.H.C.&C.
45+38± 12" 45° Bend 2 M.J.
45+44± 12" 45° Bend 2 M.J.
45+55± 12" 45° Bend 2 M.J.
45+62± 12" 45° Bend 2 M.J.

45+65±
1-12" Valve & Chamber
2-1" Ferrules
1-M.H.C.&C. (Salvaged from 44+40±)

46+60±
Remove Ex. F.H. Head

1-Remove Ex. Valve Box

50+62±
Remove Ex. F.H. Head

H-216000 #10421
H-186157
#10430 H-216001 H-185128
#10420 H-185469 H-216002
H-215999
#10411 H-193219
3-Ex. Branch in Same Trench
#6352 H-187339
#6680 H-182785
#6740 H-188959
#6840
TWINKLE LE.
ROAD
San Sewer
Ex. 6" G.M.
#6471 H-169904
#6511 H-166287
#6601 H-167360
#6751 H-166097

2-12" Plugs M.J. (Temp.)
2-12" Sleeves M.J. (Temp.)

These Temporary Plugs to be Used Where Necessary to Provide Continuous Water Service for All Consumers.

54+40± Salvage Ex. F.H. (54+50±) & Relocate (54+40±)
1-12"x6" Tee (3 M.J.)
1-6" 90° Bend (2M.J.)
1-6" Valve
1-Valve Box Hood, Lid & Tel.
1-Remove Ex. Valve Box
56+00 - 12" 45° Bend (2 M.J.)
56+07.5 - 12" 45° Bend (2M.J.)
56+20 - 12" 45° Bend (2M.J.)
56+26 - 12" 45° Bend (2M.J.)
56+30 - 12" Valve & Chamber
1-M.H.C.&C. (Salvaged from 56+52±)
2-1" Ferrules
56+52± Salvage Ex. M.H.C.&C.

57+00 End Prop. 12" W.M.
1-12" Sleeve

Ex. 12" W.M.

Scale 1" = 50'

Ex. Surface
PROP. SURFACE
Ex. 12" W.M.
PROP. 12" W.M.

Inv. 782.6±
Prop. 30" P.S.

Ex. Surface
PROP. SURFACE
PROP. 12" WATER MAIN

Inv. 764.2±
Prop. 108" P.S.

57+00±
End Prop. 12" W.M.

Ex. 12" W.M.

NOTE:
Provide Minimum Clearance Of 12" Between Prop. 12" W.M. And All Drains & Sewers.

Scale 1" = 5'

Drawing No. D-004-5
Scale: As Shown
Sheet No. 2 of 8

PFEIFFER ROAD WATER LINE

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

43/445

HAMILTON COUNTY
HAM. 71-13.05

H-216004

52+15± H-191065-SCYAMORE GRADE SCHOOL
70 Lin. ft. - 6" C.I. Pipe (Comp. Jt.)
1-6" Valve
1-Valve Box Hood, Lid, & Tele.
1-6" Sleeve (Solid)
1-8" x 6" Tee (3M.J.)
1-6" 22½° Bend (2M.J.)

53+90± 1-Salvage M.H.C. & C. (Use At Sta. 51+70±)
53+90± 1-Salvage & Relocate Ex. F.H. from 54+00
1-Valve Box Hood, Lid, & Tele.
1-6" Valve
1-8" x 6" Tee (3M.J.)
1-6" 90° Bend (2M.J.)
Valve & Head To Be Strapped
1-Remove Ex. Valve Box.

57+90± 1-Salvage & Relocate Ex. F.H.
1-Valve Box Hood, Lid, & Tele.
1-6" Valve
1-8" x 6" Tee (3M.J.)
1-6" 90° Bend (2M.J.)
1-Remove Ex. Valve Box.

59+30±, 10' Rt.
End Prop. 8" W.M.
1-8" Sleeve (Solid)
Sta. 59+50 Meet Exist. Pavement

H-216003

Ex. 6" Branch

51+70±, 15'± Rt. Ex. 2" Branch
1-8" Valve & Chamber
2-1" Ferrules
1-Salvaged M.H.C. & C.

4-8" 22½° Bends (2M.J.)

PROP. 8" W.M.

Abandon Ex. 8" W.M.

Ex. 8" W.M.

51+40± 20'± Rt.
1-8" Plug (Temporary)
1-8" Sleeve (Temporary)

51+58±, 15'± Rt.
1-8" 22½° Bend (2M.J.)
1-8" 11¼° Bend (P.E. x M.J.)

51+15±, 45' Rt.
1-8" 22½° Bend (2M.J.)
1-8" 11¼° Bend (P.E. x M.J.)

50+87±, 45' Rt.
1-8" 22½° Bend (2M.J.)
1-8" 11¼° Bend (P.E. x M.J.)

Abandon Ex. 8" W.M.

PROP. 8" W.M.

49+22±, 45' Rt.
1-8" 22½° Bend (2M.J.)
1-8" 11¼° Bend (P.E. x M.J.)

48+98±
1-Remove Ex. Fire Hydrant

1-Remove Ex. Valve Box.
48+80±, 45' Rt.
1-8" 22½° Bend (2M.J.)
1-8" 11¼° Bend (P.E. x M.J.)

48+36±, 12'± Rt.
1-8" 22½° Bend (2M.J.)
1-8" 11¼° Bend (P.E. x M.J.)
48+30±, 12'± Rt.
Begin Prop. 8" W.M.
1-8" Solid Sleeve
1-8" Plug (Temporary)
Sta. 47+50 Begin Bituminous Taper Meet Existing Pavement

Ex. 8" W.M.

Ex. ¾" Branch

Prop. 2" Casing
Prop. ¾" Branch

H-167558

℄ NORTHEAST EXPRESSWAY

#10085 #10084 #10077 #10080 #10029 #10033 #10025 #10019 #10015 #10013

R/W L/A

761 762 763 767 768 769 770 771 772 773 774

Drawing No. D-004-S
Scale: 1" = 50'
Sheet No. 3 of 8

ZIG ZAG ROAD WATER LINE PLAN

SUPPLEMENTAL WATER WORKS SPECIFICATIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

44
445

HAMILTON COUNTY
HAM. 71 - 13.05

W-59 FURNISHING AND INSTALLING GALVANIZED PIPE CASING FOR SERVICE BRANCHES

W-59.01 Description. This item shall cover the furnishing and installing of new galvanized pipe casing for service branches where shown on the plans or as directed by the engineer. The galvanized pipe shall conform to the standards required by the State Highway Department for small pipe casing. The contractor shall make the necessary excavation, furnish and install the galvanized pipe casing, and backfill the opening.

W-59.02 Payment. Payment for this item will be made at the unit price bid for the various sizes which shall include all labor, material, and equipment required to furnish and install the galvanized pipe casing complete including excavation and backfill

W-60 SALVAGING AND RELOCATING EXISTING FIRE HYDRANTS

W-60.01 Description. This item shall cover the salvaging of an existing fire hydrant as shown on the plans or as directed by the engineer. This item shall apply only to a fire hydrant that is to be attached to a lead other than the lead to which it is currently connected. The contractor shall make the necessary excavation, carefully disconnect the hydrant, clean the hydrant by means of wire brushing and flushing, haul, and install the hydrant in the new location. The hydrant shall be set in accordance with the provisions set forth in Item W-11.02

W-60.02 Payment. Payment for the item of "Salvaging and Relocating Existing Fire Hydrants" will be made at the unit price bid which shall cover all the labor, materials, and equipment required to salvage and relocate the fire hydrant complete, including excavation, loading, hauling, unloading, and backfilling. Any necessary pipe laying will be paid for under Item W-1.

W-62 FURNISH AND INSTALL STANDARD METER SETTING COMPLETE

W-62.01 Description. This item shall cover the furnishing and installing of a standard frost proof meter setting complete, where shown on the plans or as directed by the water works inspector. The contractor shall make the necessary excavation, install the tile, hood, meter and its appurtenances, and backfill all openings. The contractor shall also remove the existing meter setting and reconnect the ends of the service branch where the original meter setting was removed. All work shall be done in accordance with the water works standard drawings and the rules and regulations governing the installation of service branches. All service pipe, from the water main to the new meter setting, shall comply with the rules and regulations of the water works governing service branches

W-62.02 Payment. Payment for this item will be made at the unit price bid which shall cover all labor, equipment and material required to furnish and install the frost proof meter setting complete, including excavating, furnishing and installing the tile, hood and meter appurtenances, salvaging and relocating the existing meter, reconnecting the ends of the service branch where the original setting was removed, making all joints and connections, backfilling and restoring the surrounding area. All new pipe, other than that required to reconnect the ends of the branch where the original meter setting was removed, which must be installed to conform to the rules and regulations of the water works, will be paid for at the unit price bid to furnish and install the appropiate size service pipe and fittings.

W-67 SALVAGING AND RELOCATING EXISTING METER BOX SETTINGS

W-67.01 Description. This item shall cover the salvaging and relocating of existing standard frost proof meter box settings, where shown on the plans or as directed by the engineer. The contractor shall make any necessary excavation, carefully remove the tile, hood, meter and its appurtenances and reset them in a new location, as directed by the engineer. The contractor shall reconnect the ends of the service branch where the original meter setting was removed. The branch shall be reconnected in a straight line grade at 3.5 feet of cover. The tile, hood, meter and its appurtenances shall all be reset to conform to the water works standard drawings on file in the office of the superintendent of the water works. All service pipe, from the water main to the new meter setting, shall comply with the rules and regulations of the water works governing service branches.

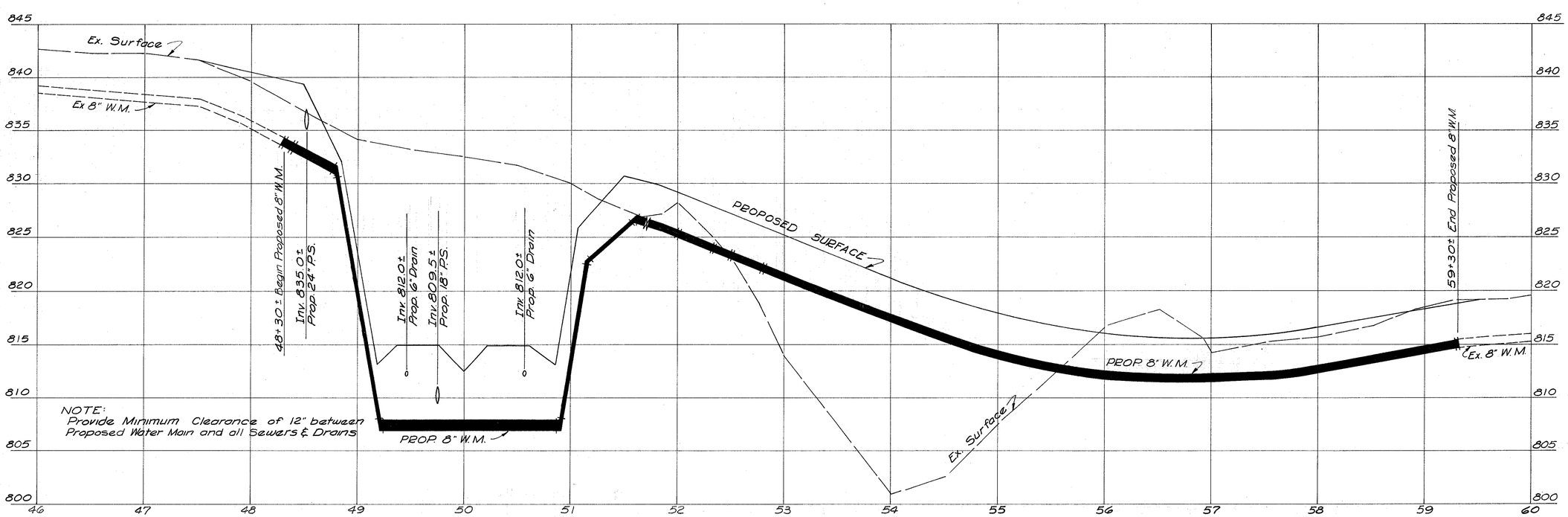
W-67.02 Payment. Payment for the item of "Salvaging and Relocating Existing Meter Box Settings" will be made at unit price bid which shall cover all labor, material and equipment required to salvage and relocate the meter box setting complete, including excavating, salvaging and resetting the tile, hood, meter and its appurtenances, reconnecting the ends of the service branch where the original meter setting was removed, making all joints and connections, backfilling and restoring the surrounding disturbed area. All new pipe, other than that required to reconnect the ends of the branch where the original meter setting was removed, which must be installed to conform to the rules and regulations of the water works, will be paid for at the unit price bid to furnish and install the appropriate size service pipe and fittings.

W-68 RESETTING EXISTING METER BOX SETTINGS

W-68.01 Description. This item shall cover the resetting to grade of existing standard frost proof meter box settings, where shown on the plans or as directed by the engineer. The contractor shall make any necessary excavation, carefully remove the existing tile, hood, meter and its appurtenances, add or remove any pipe and fittings required to reset the meter to the proper grade, reset the meter and its appurtenances, and the tile and hood to the proper grade. The completed installation shall conform to the water works standard drawings on file in the office of the superintendent of the water works.

W-68.02 Payment. Payment for the item of "Resetting Existing Meter Box Settings" will be made at the unit price bid which shall cover all labor, material, and equipment required to reset the existing meter box setting complete, including excavation, removal of existing tile, hood, meter and its appurtenances, removal of existing pipe, the furnishing and installation of additional pipe and fittings, resetting of the tile, hood and the meter and its appurtenances, backfill, restoration of the surrounding disturbed area, and any other operation necessary for the satisfactory completion of the resetting.

SPECIAL NOTE:
Payment for Item W-68 "Resetting Existing Meter Box Settings", will be made either by the property owner or by the sponsor of the street improvement. No payment will be made by the water works for this item.



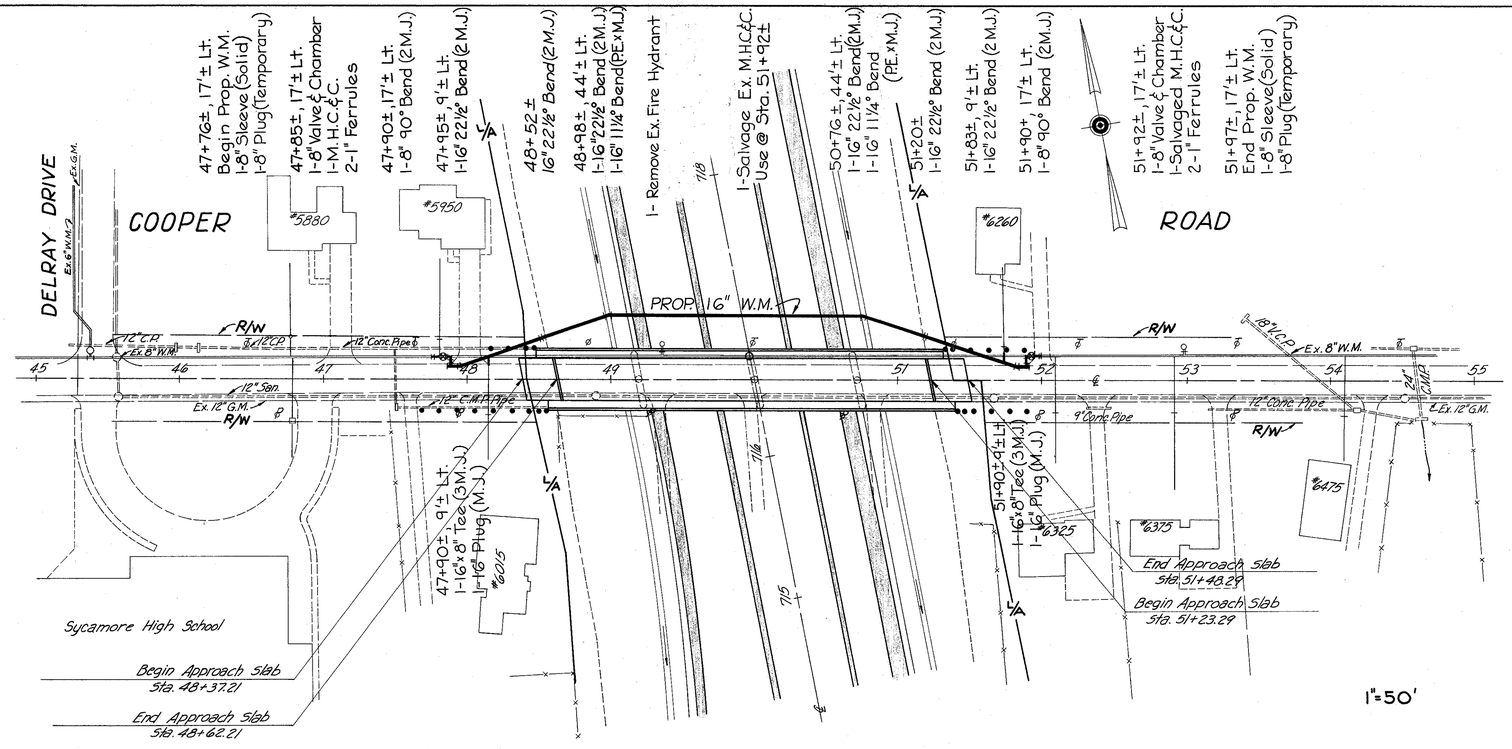
SUPPLEMENTAL WATER WORKS SPECIFICATIONS
ZIG ZAG ROAD
WATER LINE PROFILE

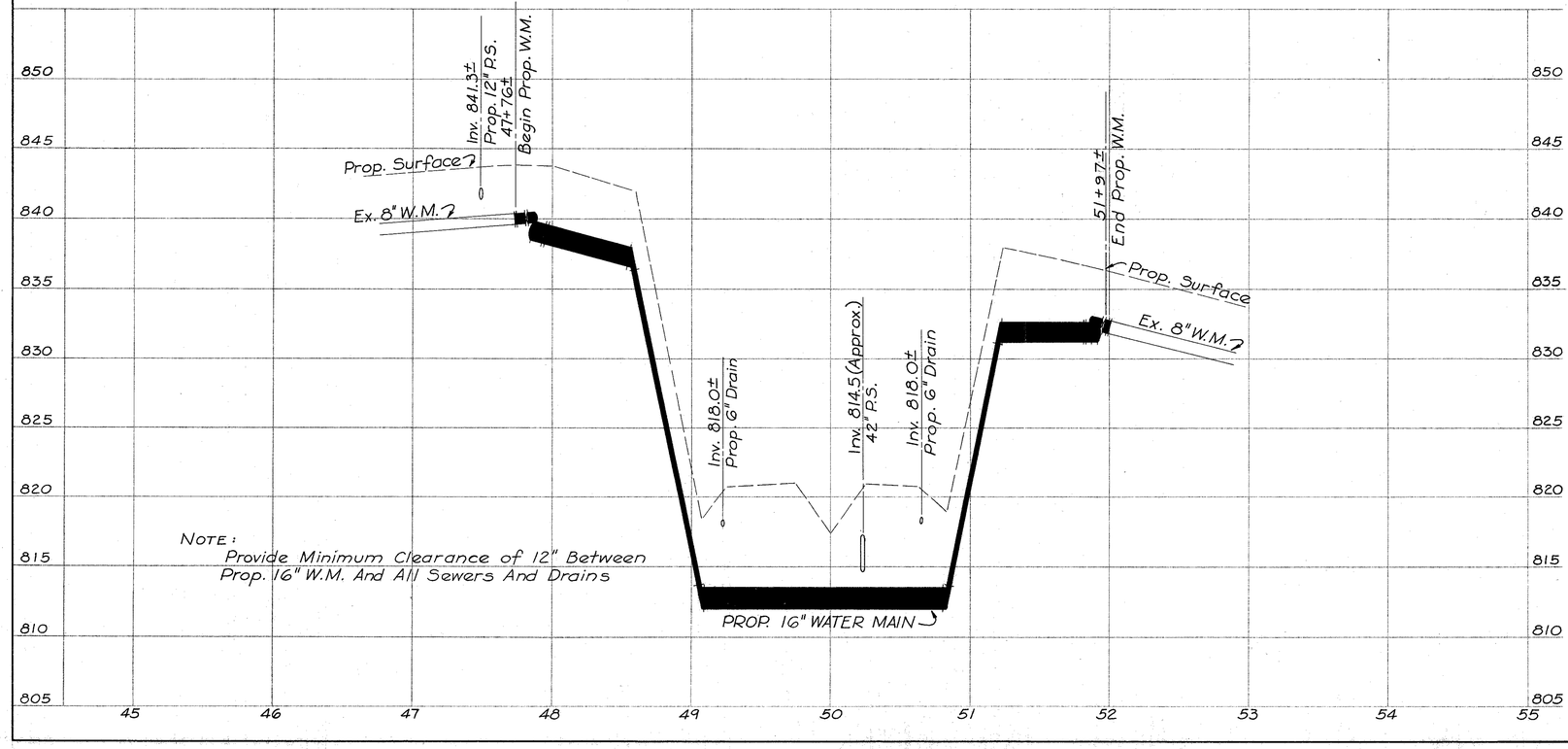
Drawing No. D-004-S
Scale: 1" = 50'
Sheet No. 4 of 8

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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HAMILTON COUNTY
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NOTE:
Provide Minimum Clearance of 12" Between Prop. 16" W.M. And All Sewers And Drains

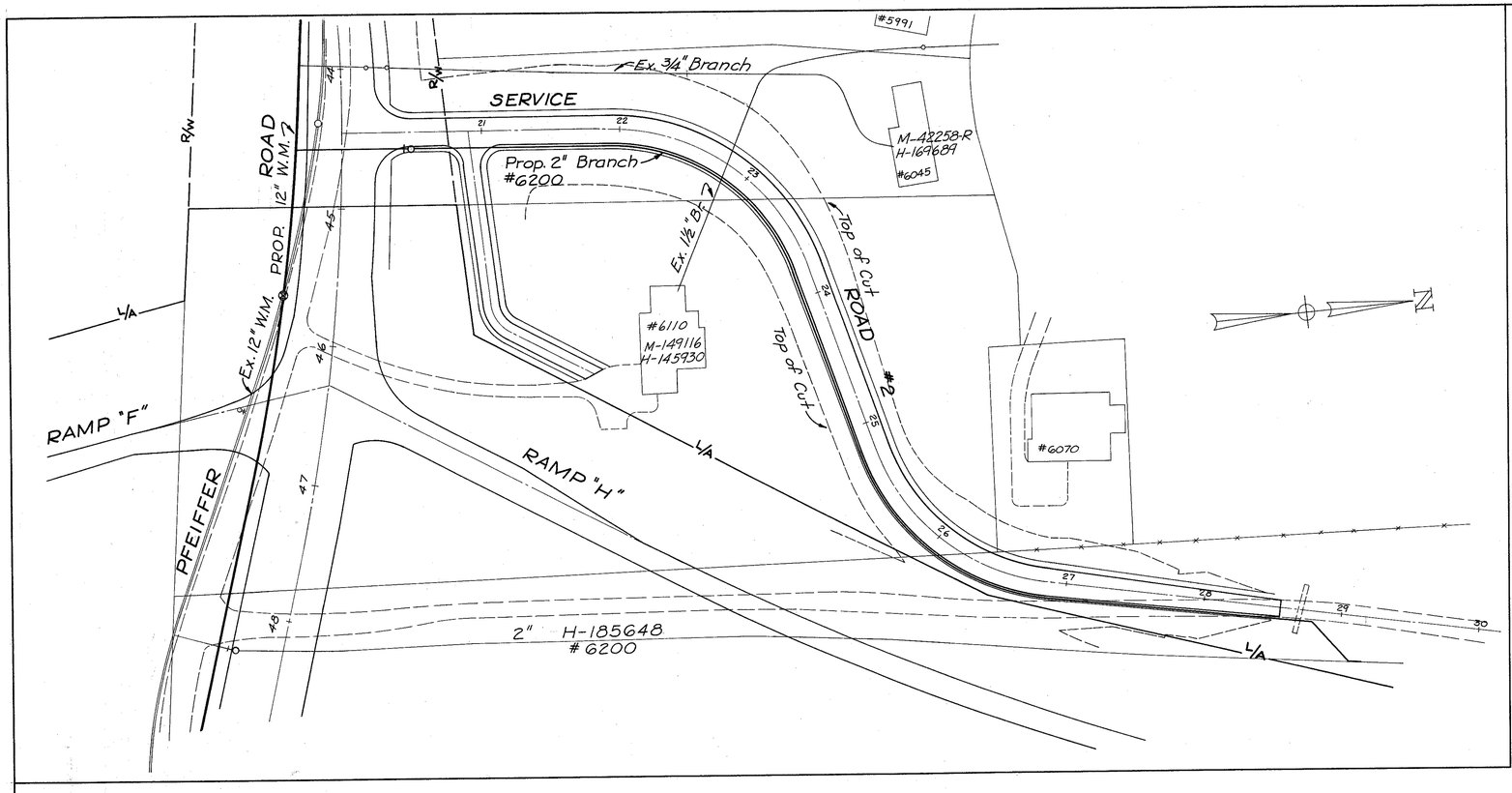
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Scale: AS SHOWN
Sheet No. 5 of 8

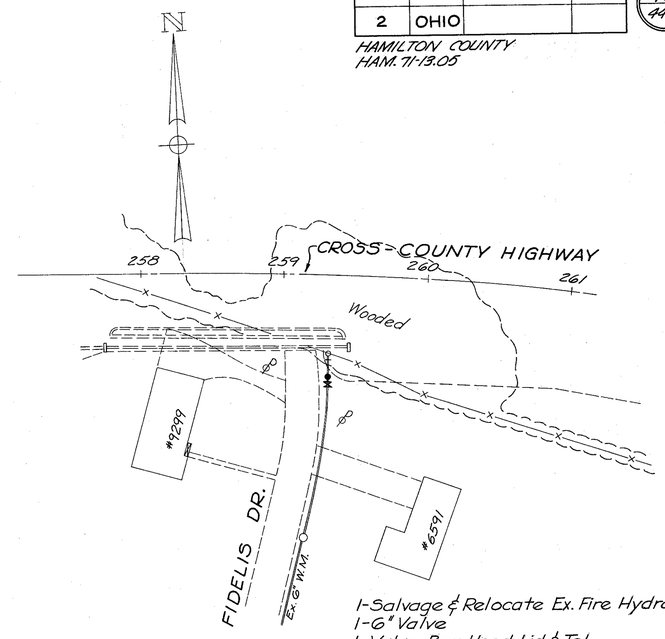
COOPER ROAD WATER LINE

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
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1-Salvage & Relocate Ex. Fire Hydrant
1-6" Valve
1-Valve Box Hood, Lid & Tel.
1-6" Solid Sleeve
1- Remove Existing Valve Box.

FIDELIS DRIVE SERVICE ROAD #2

DRAWING NO. D-004-S
Scale: 1" = 50'
Sheet No. 6 of 8

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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SERVICE BRANCH SUMMARY

HOUSE NO. STREET	STATION	OUT T.L.	EXIST. BR. SIZE	HYDRANT NO.	METER NO.	COPPER PIPE	FERRULE	STOP COCK	COPPER TO COPPER COUPLING	PROP. HYDRANT NO.	CURB BOX	ROADWAY BOX	SERVICE SADDLE	RE-CONNECT	CUT IN STOP COCK	RENEW	CUT & REVERSE	RESET	LOWER EX. SER. BR.	REMARKS
6045 KENRIDGE DR.	44+03 PFIEFFER		¾"	169689	42258-R	90'-¾"	1-¾"	1-¾"	2-¾"			1				1			160'-¾"	Tapped On Pfeiffer Rd.
6200 PFEIFFER RD.	48+32 "	40.0'Rt.	2"	185648	185648															Abandon When Relocated
	44+58 "	45.0'Lt.	PROP. 2"			960'-2"	1-2"	1-2"	50-2" Couplings & Bends	215998		1	1-12"x2"							Salvage & Relocate Ex. Meter Setting From 48+32
6471 " "	51+81 "	39.0'Rt.	¾"	169904	43147-R															Abandon When Vacated
6511 " "	53+08 "	24.0'Rt.	¾"	166287	31340-R															Abandon When Vacated
6550 " "	52+70 "	21.0'Lt.	¾"	187339	187339															Abandon When Vacated
10411 TWINKLE LANE	53+83 "	26.0'Lt.	1"	193219	193219	245'-1"	1-1"	1-1"	4-1"	215999		1				1				Salvage & Relocate Ex. Meter Setting to 53+30±
10421 " "	53+53 "	27.0'Lt.	1"	186157	186157	245'-1"	1-1"	1-1"	4-1"	216000		1				1				Salvage & Relocate Ex. Meter Setting to 53+33±
10430 " "	53+53 "	29.0'Lt.	¾"	185128	185128	245'-¾"	1-¾"	1-¾"	4-¾"	216001		1				1				Salvage & Relocate Ex. Meter Setting to 53+36±
10420 " "	53+53 "	28.0'Lt.	1"	185469	185469	295'-1"	1-1"	1-1"	4-1"	216002		1				1				Salvage & Relocate Ex. Meter Setting to 53+80±
6601 PFEIFFER RD.	54+20 "	20.0'Rt.	¾"	167360	34308-R	25'-¾"	1-¾"	1-¾"	1-¾"			1				1				
6680 " "	54+17 "	36.0'Lt.	¾"	182785	182785	80'-¾"	1-¾"	1-¾"	2-¾"			1				1				
6740 " "	55+40 "	27.0'Lt.	¾"	188959	188959	65'-¾"	1-¾"	1-¾"	2-¾"			1				1				
6751 " "	56+78 "	16.0'Rt.	¾"	166097	30180-R		1-¾"					1		1						
6110 " "	22+80 SERVICE ROAD #2		1½"	145930	149116	20'-1½"			2-1½"										85'-1½"	Tapped On Kenridge Dr.
10015 ZIG ZAG ROAD	47+58 ZIG ZAG RD.	14.0'Lt.	¾"	202663	202663	15'-¾"		1-¾"	1-¾"			1								
10019 " " "	48+25 " " "	15.0'Lt.	¾"	165548	27874-R	25'-¾"		1-¾"	2-¾"			1								
10025 " " "	49+05 " " "	15.0'Lt.	1"	180405	180405															Abandon When Vacated
10033 " " "	50+86 " " "	16.0'Lt.	1"	165794	28618-R															Abandon When Vacated
SYCAMORE GRADE SCHOOL	51+75 " " "	4.0'Lt.	2"	191066	191066	65'-2"	1-2"	1-2"	3-2"	216003		1	1-8"x2"							
" " "	51+50 " " "	25.0'Rt.	6"	191065	191065					216004										70 Lin.ft. Laying 6" C.I. Pipe Including Furnishing Material 1-Ea. Installing Valve Box Including Furnish Material
" " "																				
" " "																				
" " "																				
10076 ZIG ZAG ROAD	61+82 ZIG ZAG RD.	22.0'Rt.	¾"	167558	34717	290'-¾" Copper 205'-2" Galv.			5-¾" 10-2" Galv.											Salvage & Relocate Ex. Meter Setting
																				2" Galvinized Pipe to Be Used As Casing
5950 COOPER ROAD	47+81 COOPER RD.	27.0'Lt.	¾"	167909	34399-R		1-¾"							1				CURB BOX		
6015 " "	48+14 " "	25.0'Rt.	¾"	113545	102175	5'-¾"	1-¾"		1-¾"									CURB BOX		
6260 " "	51+74 " "	27.0'Lt.	¾"	104880	94694-R	6'-¾"	1-¾"		1-¾"									CURB BOX		

Drawing No. D-004-S
Sheet No. 7 of 8

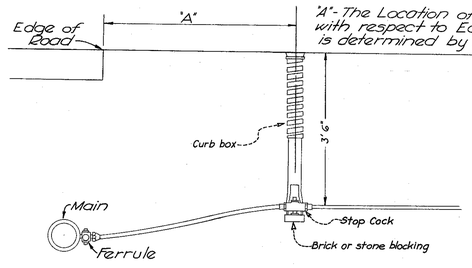
WATER WORKS BRANCH SUMMARY

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

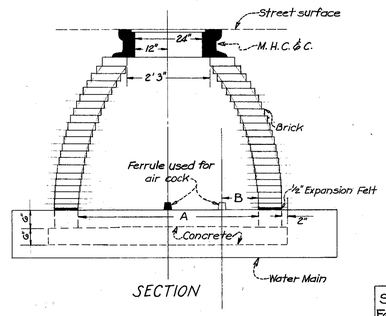
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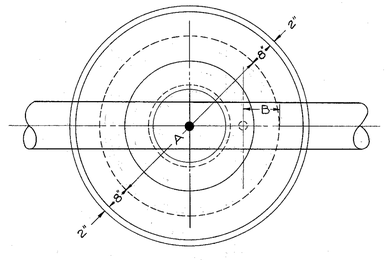
TYPICAL SERVICE BRANCH INSTALLATION



STANDARD CHAMBER FOR AIR COCKS

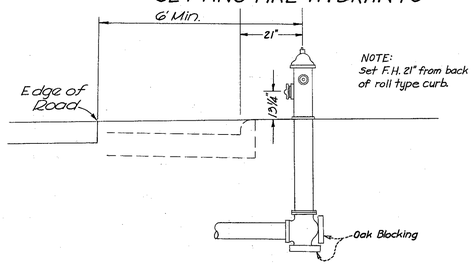


SECTION



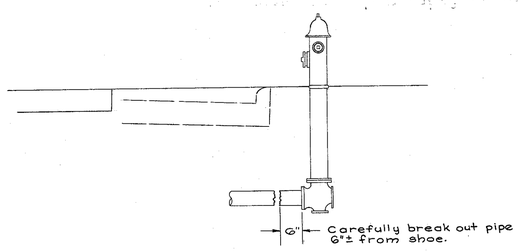
PLAN

STANDARD MEASUREMENTS FOR SETTING FIRE HYDRANTS

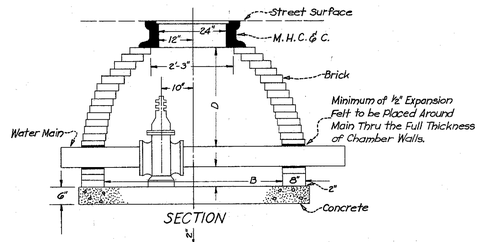


FIRE HYDRANT REMOVAL

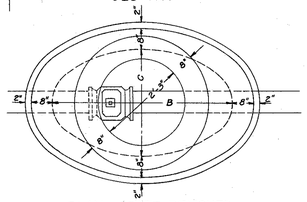
Note: Fire Hydrant and shoe to be carefully removed.



STANDARD CHAMBER FOR VERTICAL VALVES



SECTION

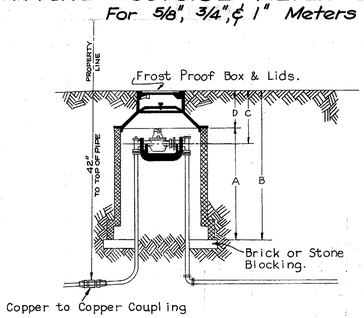


PLAN - COVER REMOVED

For Estimate Only

SIZE OF VALVE	A	B	C	D	CONC. CU. YDS.	BRICK CU. YDS.
4"-6"-8"	6"	5'-0"	3'-0"	2'-11"	0.5	1.3
10"-12"	6"	5'0"	4'-0"	2'-11"	0.6	1.6

TYPICAL OUTSIDE METER SETTING For 5/8", 3/4", & 1" Meters

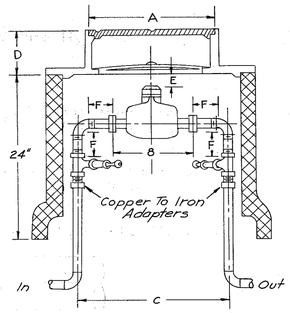


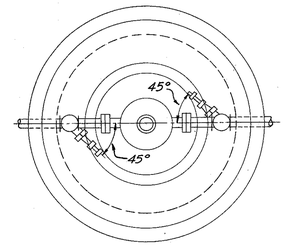
For Estimate Only

Size of Ferrule	A	B	Cu. Yds Conc.	Cu. Yds. Brick
1"	3'0"	1'0"	0.3	1.0
1½" & 2"	5'0"	2'6"	0.6	1.4

METER SIZE	A	B	C	D		VITRIFIED TILE
5/8"	27½"	36¾"	16"	9¼"		20"
¾"	27½"	36¾"	16"	9¼"		20"
1"	27½"	36¾"	17"	9¼"		20"

TYPICAL OUTSIDE METER SETTING For 1½" & 2" METERS





Notes:

1 - All pipe to inlet valve must be copper.

2 - All nipples & fittings between copper to iron adapters must be Red Brass.

3 - All gate valves must be I.P.S.

Meter	Tile	A	B	C	D	E	F
1½"	30"	20¾"	13"	22"	7¼"	2"	4"
2"	36"	20¾"	17"	27"	7¼"	2"	4"

WATER MAIN NOTES

WATER MAIN ITEMS ARE TO BE CONSTRUCTED IN ACCORANCE WITH THE PROVISIONS OF GENERAL CONSTRUCTION AND MATERIAL SPECIFICATIONS FOR HIGHWAYS AND SEWERS, DATED JANUARY 1, 1956, AND THE SPECIFICATIONS OF THE CINCINNATI WATER WORKS GOVERNING THE INSTALLATION OF WATER MAINS AND APPURTENANCES IN FORCE AT THE TIME OF THE OPENING OF THE BIDS. COPIES OF THESE SPECIFICATIONS ARE ON FILE AT THE OFFICE OF THE ENGINEER OF CONTRACT SALES FOR STATE HIGHWAY DEPARTMENT AND AT THE OFFICES OF THE CITY ENGINEER OF CINCINNATI, OHIO.

ALL PIPE SPECIALS AND APPURTENANCES USED ON THIS PROJECT SHALL BE THAT WHICH HAS BEEN INSPECTED AT SITE OF MANUFACTURER BY THE CINCINNATI WATER WORKS. ALL CAST IRON PIPE AND SPECIALS SHALL BE CEMENT LINED.

PIPE SHALL BE COMPRESSION JOINT, CLASS 250, AND SPECIALS SHALL BE MECHANICAL JOINT, CLASS D.

CONTRACTOR IS TO NOTIFY CINCINNATI WATER WORKS INSPECTION OFFICE PRIOR TO WATER MAIN RELOCATION.

PROVIDE 12" MINIMUM CLEARANCE AND CUSHION BETWEEN SEWER PIPES OR STRUCTURES AND PROPOSED WATER MAINS, EXCEPT WHERE NOTED ON PLANS.

ADDITIONAL CONCRETE AND STEEL FOR BACKING OR REINFORCING BENDS MAY BE ADDED AT THE DISCRETION OF THE WATER WORKS ENGINEER OR INSPECTOR. PAYMENT FOR THIS WORK WILL BE MADE AT THE UNIT PRICE BID FOR CONCRETE MASONRY, ITEM W-48, AND REINFORCING STEEL, ITEM C-3.

MATERIAL REMOVED FOR CONSTRUCTION PURPOSES IS NO LONGER THE PROPERTY OF THE HAMILTON COUNTY SANITARY ENGINEERING DEPARTMENT AND SHALL BE DISPOSED OF BY THE CONTRACTOR. NO PAYMENT WILL BE MADE FOR HAULING THIS MATERIAL.

ALL WATER CONSUMERS MUST BE PROVIDED WITH ADEQUATE WATER SERVICE FOR REQUIRED USAGE AND FIRE PROTECTION AT ALL TIMES AT THE CONTRACTOR'S EXPENSE. IN THE EVENT THAT DURING CONSTRUCTION TEMPORARY WATER LINES ARE NECESSARY TO PROVIDE SUCH SERVICE, THE CONTRACTOR MUST PROVIDE, AT HIS COST, PIPE OF SUFFICIENT SIZE.

Drawing No. D-004-9
Scale: None
Sheet No. 8 of 8

WATER MAIN STANDARDS & NOTES

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GENERAL NOTES

MAINTENANCE OF TRAFFIC

Provisions for the maintenance of traffic on public roads, public walkways and private entrances affected by this improvement shall be as follows:

Kennedy Lane: Relocated Kennedy Lane shall be completed and opened to traffic before any interruption of traffic on existing Kennedy Lane.

Dorroy Drive Walkway to Sycamore Public High School (Sta. 26+38.50 Cross County Highway): This existing walkway shall be temporarily relocated as directed by the Engineer and surfaced with Item T-10 and Calcium Chloride and maintained to the satisfaction of the Engineer within the Cross County Highway work limits. The Pedestrian Overpass as detailed elsewhere in these plans shall then be constructed in its entirety including fence erection as shown on the Structure Drawing and 72" Chain Link Fence As Per Plan, as shown on Sht. No. 303, prior to any roadway construction within the immediate area. Immediately upon completion of the above, the overpass shall be opened to pedestrian traffic.

Cooper Road: Two-way traffic shall be maintained at all times by use of either the existing pavement, the proposed structure and approaches or Item 5-15 temporary run-around road as detailed elsewhere in these plans.

Zig Zag Road: Two-way traffic shall be maintained at all times by use of either the existing pavement, the proposed structure and approaches or Item 5-15 temporary run-around road as detailed elsewhere in these plans.

Service Road No. 1: The existing private entrance at approximate Station 773+25 shall be maintained until Service Road No. 1 and the Private Drive are completed and opened to traffic.

Pfeiffer Road: Two-way traffic shall be maintained at all times by use of either the existing pavement, the proposed pavement or Item 5-15 temporary run-around road as detailed elsewhere in these plans. If traffic is transferred to improved Pfeiffer Road prior to completion of the two overhead structures, the contractor shall safeguard the traveling public on Pfeiffer Road 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."

Relocated Lakecrest Drive: Two-way traffic on the existing drive to the Montgomery Swim Club shall be maintained at all times until the relocated drive is completed and opened to traffic.

Deerfield Road: Two-way traffic shall be maintained at all times except for a period not to exceed 180 consecutive calendar days. During this period, traffic may be detoured as shown on the Title Sheet Location Map. The detour shall not be placed into effect until approved by the Director.

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 at the following locations during the period in which Deerfield Road is closed to traffic:

1. Deerfield Road just south of Cornell Road.
2. Deerfield Road just north of Pfeiffer Road.

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."

The Contractor shall, in addition to the above outlined requirements and the general requirements of Sec. G-7.07, on this project perform the following:

Provide, erect and maintain lights, signs and barricades at the work limits on all intersection roads. Payment for providing, erecting, maintaining and removing barricades, gates, lights, signs and sign supports shall be included in the lump sum price bid for "Item I-3, Maintaining Traffic."

The limits and duration of use of temporary roadways shall be held to an absolute minimum and in all cases shall be subjected to the approval of the Engineer.

Traffic compacted surface course, Item T-10 and Calcium Chloride, Item I-4, shall be applied on temporary roadways as directed and in the amounts requested by the Engineer. The hardness and soundness requirements of the Specifications shall be waived on all of the T-10 material used for Maintenance of Traffic.

ESTIMATED QUANTITIES (To General Summary)	INTERSTATE	URBAN SECONDARY
Item T-10 Aggregate	829 Cu. Yds.	25 Cu. Yds.
Item T-10 Aggregate (No. 34 Size)	446 Cu. Yds.	13 Cu. Yds.
Item I-4 Calcium Chloride	25.5 Tons	0.8 Tons

In addition to the above, Section G-4.05, Maintenance of Local Traffic, and Section G-7.07, Barricades and Warning Signs, shall be in force during the entire life of the contract.

Payment for all of the above, including construction, maintenance and subsequent removal, where required, of temporary roadways, except Item 5-15 Temporary Run-arounds and Furnishing and placing Item T-10 Traffic Compacted Surface Course and Item I-4 Calcium Chloride, is included in the lump sum bid for Item I-3, Maintaining Traffic.

GENERAL

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.

SPECIAL DITCHES

For special ditch grades See Cross Sections.

ELEVATION DATUM

All elevations are based on U.S.C. & G.S. datum.

UTILITY ADJUSTMENT

The Contractor shall notify at least two (2) working days before breaking ground all Public Service Corporations having wire, poles, pipe, conduits, manhole or other structures that may be effected by this operation, including all structures which are affected and not shown on these plans. Any and all work required for public or private utilities will be done by and at the expence of their respective owners, unless otherwise noted on these plans.

FIELD OFFICE

The Contractor shall, in accordance with Sec. 5-0.01(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 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.

DESIGN SPEED

The geometrics of this project have been planned for a design speed of 70 miles per hour.

UNDERGROUND UTILITIES

The locations of the underground utilities shown on the plans have been obtained by diligent field checks and searches of available records. It is believed that they are essentially correct, but the State of Ohio makes no guarantees as to their accuracy or completeness.

ESTIMATED QUANTITIES

Specific locations and usage of estimated quantities set up on these plans to be used "as directed by the Engineer" shall not be delivered until requested by the Engineer and shall be made a matter of record by incorporation into the final change order governing completion of this project.

CONSTRUCTION LAYOUT STAKES

See note in proposal describing the work included in this lump sum pay item.

CONTRACTOR'S MAINTENANCE RESPONSIBILITY

On this project, the Contractor's responsibility for maintenance of the existing pavement per Item I-3 shall be limited to those portions of the existing pavement lying within the proposed work limits.

FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS

The Contractor shall furnish, erect, maintain and subsequently remove Federal Aid construction identification signs at each of the following locations.

1. Cooper Road Sta. 46+00 Right and Sta. 54+25 Left
2. Zig Zag Road Sta. 44+50 Right and Sta. 60+40 Left
3. Pfeiffer Road Sta. 40+00 Right and Sta. 58+80

Sign details shall be as specified on Standard Drawing FAC1-1, "Code N-55(1)-132(3)" and the signs shall be erected in accordance with Standard Drawing FAC1-2. Additional requirements shall be in accordance with notes in the proposal.

COOPERATION BETWEEN CONTRACTORS

The Contractor's attention is specifically directed to the probable concurrent construction of the cross country highway between Kenwood Road and Montgomery Road.
The Contractors on these projects shall arrange, one with the other, to use the area of Right-of-Way common to each project so that each may prosecute his work with a minimum of interference with the other.

ROADWAY

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.

ITEM E-4 BORROW, USING GRANULAR MATERIAL, AS PER PLAN

An 18" Granular Blanket shall be placed on the existing swamp prior to embankment construction in the areas between approximate Stations 841+75 to 842+80 and 843+50 to 847+75. See cross sections for limits.

The material furnished for this item shall be as defined in Sec. E-1.02 (except that at least 75% by weight of the grains or particles shall be retained on a No. 200 sieve). The areas on which this material is to be placed shall be cleared and grubbed but need not be scalped and may be placed by the method of end dumping.

The method of measurement for this pay item shall be determined in accordance with the provisions outlined in Sec. E-4.04 of the Specifications.

Total quantity to General Summary is 2,222 Cu. Yds.

REMOVAL OF EXISTING PIPE

The removal of all existing pipe within the limits of construction whose inverts are above the finished grade, shall be included for payment in the unit price bid for the respective Excavation Items unless otherwise itemized in the plans.

Pipe abandoned or removed shall be sealed in accordance with requirements under note headed "Plugging Pipe Ends."

PLUGGING PIPE ENDS

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 undamaged length is encountered. This pipe shall then be blocked with concrete, flat stone or brick laid in mortar, or a precast clay or concrete stopper. Payment for the above work shall be included in the unit price bid for Item E-1, Roadway Excavation.

DRAINAGE OF BASE MATERIAL

Where the base material is drained by I-9 Stone Underdrains 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. The actual area of the outcrop of the I-9 Underdrain shall not be seeded.

REMOVAL OF TREES AND STUMPS

All trees and stumps lying within the construction limits of this project shall be removed under the lump sum price bid for Item E-9, Removal of Trees and Stumps, except that those trees and stumps for which protection and preservation work is indicated elsewhere in these plans shall not be removed.

The following is an approximate estimate of the number of trees and stumps to be removed

SIZES	INTERSTATE		URBAN SECONDARY	
	No. Trees	No. Stumps	No. Trees	No. Stumps
12"-18"	1,582	0	29	1
18"-24"	377	0	4	1
24"-30"	151	0	4	0
30"-36"	33	1	0	0
36"-42"	20	0	2	0
42"-48"	6	0	0	0
Over 48"	0	0	0	0

The above estimated is approximate and the State of Ohio reserves the right to order the removal of additional trees or stumps outside of the limits of construction but within the right-of-way and/or easement lines. Payment for the removal of these additional trees or stumps shall be included in the lump sum price bid for Item E-9, Removal of Trees and Stumps.

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GENERAL NOTES

SCARIFICATION OF EXISTING FLEXIBLE PAVEMENT

Within the limits of construction where the existing flexible pavement will have less than twenty four(24) 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.

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 Sec. E-1.04. No additional payment will be made for benching required by the provisions of Sec. E-1.04.

CENTERLINE REFERENCE MONUMENTS, AS PER PLAN

Monuments shall be constructed of Class "C" concrete, cast-in-place in a circular hole eight (8) inches in diameter and forty-four (44) inches in depth. Top of concrete shall be finished at a depth of two(2) inches below ground level and the upper six (6) inch portion of the concrete shall be formed. One-half (½) inch steel rods six (6) inches long shall be embedded in the wet concrete as directed by the Engineer to mark the centerline and station. For location see Sheet Numbers

GUARD RAIL ADJACENT TO BRIDGE

One (1) additional guard rail post shall be provided in the center of each panel of guard rail adjacent to the bridge, payment for which shall be included in the unit price bid for Item L-15 Guard Rail.

GUARD RAIL ADJUSTMENT

The stationing of individual runs of guard rail shall be adjusted, if necessary, by the Engineer at the time of construction to accommodate the standard panel lengths furnished.

GUARD RAIL FLARES

Where proposed guard rail flares are constructed of rail elements which have not been fabricated exactly to fit the curvature shown on the plans, the two (2) 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.

FLARING GUARD RAIL AT BRIDGES

Guard rail on bridge approaches shall be flared to meet the bridge railing in such a manner that the change in alignment of the guard rail shall not exceed 1:20, unless otherwise required by the structure details.

RIGHT OF WAY FENCE

Fencing shall be Woven Wire, Item-25 Type 47, Standard Chain Link, Item-26 and 72"-high Chain Link, Item 26. See Fencing Plans for location.

SEEDING

Interstate Limits: 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 agreements, temporary agreements or drainage easements.

Cross County Highway, Cooper Road and Pfeiffer Road: Quantities for seeding are calculated for the soil areas between lines ten (10) feet outside the work limits, as shown on the cross sections, or to the right-of-way line if such line is less than ten (10) feet from the work limits.

Kennedy Lane, Zig Zag Road, Service Road No.1, Twinkle Lane, Relocated Lakecrest Drive and Deerfield Road: Quantities for seeding are calculated for the soil areas between the work limits, as shown on the cross sections.

SEEDING FORMULA

The following seed mixtures shall, in lieu of the mixture listed in Sec. L-9.11, be used throughout the limits of this project.

Areas adjacent to residential properties:

- 40% Kentucky Blue Grass (Poa pratensis)
- 35% Illahee Fescue (Festuca elatior var. Illahee)
- 15% Red Top (Agrostis alba)
- 10% White Clover (Trifolium repens)

All other areas:

- 60% Kentucky 31 Fescue (Festuca elatior var. Ky. 31)
- 20% Kentucky Blue Grass (Poa Pratensis)
- 20% Red Clover (Trifolium pratense)

The above shall be thoroughly mixed and then evenly sown over the areas at the rate of three (3) pounds per 1,000 square feet in accordance with Item L-9 of the Construction and Material Specifications.

SPECIAL SEEDING PREPARATION AREAS

The reference in the Seeding Formula note, "areas adjacent to residential properties", shall be considered to be particularly applicable in the following areas.

Cross County Highway:
Station 257+81 to Station 258+90 Right (Sewer Easement)

Zig Zag Road:
Station 47+27 to Station 48+70 Left
Station 51+64 to Station 52+10 Left
Station 53+90 to Station 54+70 Left

Service Road No. 1:
Station 11+00 to Station 12+65 Right

Relocated Lakecrest Drive:
Station 20+75 to Station 28+50 Left and Right
Station 0+00 to Station 2+25 Left and Right (Driveway)

Pfeiffer Road:
Station 53+50 to Station 57+10 Right
Station 53+10 to Station 57+00 Left

Twinkle Lane:
Station 0+60 to Station 2+00 Left and Right

Deerfield Road:
Station 47+55 to Station 48+60 Left
Station 51+80 to Station 52+75 Right

L-9 COMMERCIAL FERTILIZER

All areas to be seeded under Item L-9, sodded under Item L-10 or Jute Matting under Item L-120 shall have commercial fertilizer 12-12-12, applied at the rate of twenty (20) pounds per 1,000 sq.ft.

AGRICULTURAL LIMING MATERIALS

Agricultural Liming Materials, L-9.02 shall be applied to all seeded, sodded or Jute Matting areas at the rate of 100 lbs. per 1,000 sq.ft. as per specifications.

ITEM T-10, AS PER PLAN

The weights to be used in calculating the yardage 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 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 required 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" inches of subgrade shall not exceed optimum at the time of proof rolling. Tire pressure and total load shall be varied as directed by the Engineer within the limits provided in CE-101.04.

EXCAVATION FOR ITEM B-19 OR I-18

Excavation for B-19 or I-18 material used on side road approaches, mail box turnouts and drives has been included in earthwork quantities when same is in "cut". Where side road approaches, mail box turnouts and drives are in "fill," excavation for B-19 or I-18 material shall be made by the Contractor at his own expense if he builds the embankment up to finished grade before placing the B-19 or I-18 material.

EXCAVATION OF UNSUITABLE MATERIALS

Soils excavated from under the roadway embankment area due to insufficient bearing capacity or having other objectionable qualities that make them unsuitable for use within the roadway embankment area are to be used to fill low areas outside the embankment area that are contained within the indicated construction limits.

Payment for spreading, hauling, stockpiling or compacting this material within the Right of Way Limits shall be included in the unit price bid for Item E-1 Roadway Excavation.

DUST CONTROL

Quantities for Items I-4 Water for Dust Control and I-4 Calcium Chloride for Dust Control have been included in these plans for dust control of the total project. The use of these items shall be in accordance with Item I-3 and as directed by the Engineer.

ESTIMATED QUANTITIES (To General Summary)	INTERSTATE	URBAN SECONDARY
Item I-4, Water for Dust Control	413 M.Gal	7 M.Gal
Item I-4, Calcium Chloride for Dust Control	138 Ton	2 Ton

EXCAVATION FOR DRIVEWAY PIPES

Excavation for all pipes is included in the 1963 Specifications in the price bid for the pertinent pipe item. The intent is not to duplicate payment for pipe excavation where same has already been included in Item E-1 Roadway Excavation. Attention is specifically directed to pipe for driveways where excavation is normally paid for in Item E-1, and no deduction will be made from E-1 where drive pipes are to be laid in the ditch excavated under Item E-1.

DRAINAGE

ITEM I-8, MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN

This item shall consist of the careful removal of the existing manhole down to the spring line and reconstruction of the manhole to the new grade, conforming as nearly as practicable to the existing dimensions and type of construction and using the salvaged frame and cover.

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.

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 variation found during construction.

PIPE CONNECTIONS TO CORRUGATED METAL STRUCTURES

Connections of proposed longitudinal drainage to the proposed corrugated metal structure shall be by means of a shop fabricated (or field welded) stub on the structure. The stub shall meet the requirements of Sec. M-6.4 and have a minimum length of two(2) feet and a minimum gage of 14.

Location and elevation of the stub are to be considered approximate and may be adjusted by the Engineer to avoid cutting through joints in the structure.

(The field welded joint, if used, shall be painted on the inside and outside with two(2) coats of red lead paint, Sec. M-9.9, and two(2) coats of graphite paint, Sec. M-9.11. Welding shall be Class "B").

Payment for cutting into the structure and providing the connection described shall be included in the unit price bid for Item I-1.

EROSION CONTROL

Items I-10, I-14, L-10 and 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. Wherever paved gutter or six(6) inch reinforced concrete riprap are indicated in these plans, the inlet ends of the paving shall be placed three(3) inches to six (6) inches below the finished ground elevation.

INTERCEPTOR DITCHES

Interceptor ditches, when provided by the plans, shall be constructed at the beginning of the grading operation, and any erosion protection provided by the plans shall be placed immediately.

EROSION PROTECTION AT CULVERTS AND OTHER OUTLETS

Erosion Protection, such as Paved Gutters, Dumped Rock Channel Protection, etc:, where provided in the plans at structures and other pipe outlets, shall be placed immediately after installation of the pipe or structure.

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GENERAL NOTES

SEALING OF PIPE JOINTS

Where connections are made between rigid and flexible pipe sections or between pipe section of different kind or type of end fabrication. Whether required by the plans, arising from permissible use of optional materials, or encountered in connection to existing facilities, the joint shall be sealed by means of a Class "E" concrete collar having a minimum thickness of six (6) inches and a minimum length of twelve (12) inches. Payment for sealing as described above shall be included in the unit price bid for the pertinent pipe item.

6" CLASS I-3 PIPE, AS PER PLAN (SPRING DRAIN)

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. See sheet number 340 for typical detail.

The location of required Spring Drains shall be determined by the Engineer during construction and payment shall be made on final measurements.

The following estimated quantities have been included in the General Summary.

Item I-1, 6" Pipe, Class I-3	100 L.F.
Item I-1, 8" Pipe, Class F-4	40 L.F.
Item I-9 Stone Underdrain No.1, as per plan	20 L.F.

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 Item I-1 Pipe Underdrains have been provided. These stone underdrains will be provided on Elq Zeq Road, Pfeiffer Road, Service Road No.1, and Relocate Lakecrest Drive. (See Typical Sections)

DUMPED ROCK CHANNEL PROTECTION

The size of stone furnished for this item, as provided in Sec.I-10.07, is hereby modified to permit the use of stones as large as may be conveniently placed to the lines and grades called for in the plans and to permit the inclusion (not to exceed 10 per cent by weight) of spalls and stones of less than 1/3 cubic foot volume. Any piece of stone broken masonry resulting from the removal of existing structures and meeting the above requirements may be used in this 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.

SANITARY FLOW INTO HIGHWAY DRAINAGE SYSTEMS

This plan makes no provision for connecting, nor shall the Engineer or Contractor connect any existing or new drainage into the highway drainage system when such drains carry flow from any plumbing fixtures including floor drains and sink drains or drains from livestock lots or barns or polluted water of any kind.

Existing pipe carrying flow which comes within the category outlined above shall be plugged with Class E concrete at the right-of-way line. Payment for said plugging shall be included in the unit price bid for "Item E-1 Roadway Excavation."

TILE FOR SUBGRADE DRAINAGE

6" Drain Tile, Section M-6.1 or M-6.2 shall be furnished and placed by the Contractor, in manholes, catch basins and inlets for subgrade drainage, where, and as directed by the Engineer. Payment for same shall be included in the price bid per "each" for manholes, catch basins and inlets.

SKEWED PIPE ENDS

Where required by the structure details, the skewed end sections of pipe shall be specially fabricated by the manufacturer. The short side of any specially fabricated pipe section shall not be less than two (2) feet long.

REINFORCED ENDS ON CORRUGATED METAL PIPE

Reinforced ends shall 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, manholes or connecting pipe.

CHANNEL PROTECTION ITEMS

Widths of Items I-10.03, I-10.07 and L-120 channel protection shown on these plans are surface dimensions.

PAVEMENT

FLARED APPROACH SLABS

Place additional A-bars in flared areas by maintaining the standard spacing along the wide end of the slab and fanning the bars in toward the bridge as directed by the Engineer.

CURBS ON APPROACH SLABS

The height and face of curbs on approach slabs shall be transitioned from the standard section used on the approach pavement to the section used on the bridge curbing within the limits of the approach slab.

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.

CONTRACTION AND EXPANSION JOINTS

Although specific locations of certain expansion and contraction joints have been detailed on this plan, no waiver of the specifications is intended. Provisions 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 P.U.

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 Sec.I-22.02 except that for either grading not more than 10% of the material shall pass a No. 200 sieve after all operations of placing and compacting have been completed.

PART WIDTH CONSTRUCTION

Because of the necessity of building portions of this project under traffic and constructing the pavement part at a time, extreme care shall be taken to prevent the construction of a butt joint on centerline in the B-19 and I-22 courses.

This shall be accomplished by building the B-19 and I-22 courses, placed with the first portion of the pavement built, at least eighteen (18) inches beyond the centerline and by surfacing no closer than eighteen (18) inches to this edge of the above courses. When the second portion of the pavement is built, at least twelve (12) inches of these projecting courses shall be broken down and thoroughly keyed in with the newly placed corresponding courses in the second portion of the pavement built. Payment for this operation shall be included in the unit prices bid for the pertinent pavement items.

SPECIAL

EXISTING STREAMS STATION 845+00 AND STATION 847+00

The Contractor's attention is directed to the fact that right of approximate Station 843+50 is the University of Cincinnati's Hazelwood Preserve. This is a 70 acre tract of land devoted to the study of botanical problems. The program was initiated in 1926 for the purpose of investigating the occurrence of a colony of plants not indigenous to Ohio or neighboring states. The University is extremely concerned about any variation of quantity and/or velocity of water in these streams during construction which could damage their studies.

The Contractor shall exercise extreme caution while working in the area. The flow of water in the existing streams at Stations 845+00 and 847+00 and their combined flow right of Station 843+50 shall be maintained at all times. The Contractor shall not dam these streams during construction of the two culverts, or at any time impede the flow of water during the life of the contract. All work in the area that could effect the Preserve shall be subjected to strict supervision by the Engineer.

It may be necessary to construct a temporary channel to accomplish the preceding. Payment for any additional work required to accomplish this shall be included in the cost bid for the pipe items in this area.

WATER WORKS ITEMS

Water works items are to be constructed in accordance with the provisions of the City of Cincinnati, General Construction and Material Specifications for Highways and Sewers, dated January 1, 1954 and the Specifications of the Cincinnati Water Works governing the installation of water mains appurtenances in force at the time of the opening of bids.

Copies of these specifications are on file at the office of the Administrator of Contract Sales of the State Highway Department, at the office of the City Engineer of Cincinnati, Ohio.

ITEM I-5 PIPE SPECIALS

Pipe without perforations will be permitted for use on this project for all Item I-5 Pipe Specials.

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Fertilizer and Liming Material

	I.	U.S.	GRAND TOTALS
Seeding Areas	549,901	46,091	595,992
Sodding Areas	380	18	398
Special Sodding Areas	227		227
TOTALS (Sq. Yds.)	550,508	46,109	596,617
			Tons
Fertilizer @ 20 lbs. per 1000 Sq. Ft.	49.55	4.15	53.70
Lime @ 100 lbs. per 1000 Sq. Ft.	247.75	20.75	268.50

I-8 Monument & Assemblies		I-8 Reference Monuments	
I Sub-Total	7	I. Sub-Total	138
U.S. Sub-Total	0	U.S. Sub-Total	0
GRAND TOTAL	7	GRAND TOTAL	138

Note: For Locations, See Tables on Sheets Nos. 419 & 420.

Excavation and Embankment

	Station to Station	Excavation ITEM E-1 Cu. Yds.	Embankment ITEM E-1 Cu. Yds.	Emb. + 15% Cu. Yds.
	655+10 – 665+00	36,054	4,115	4,732
	665+00 – 675+00	5,398	152,312	175,159
	675+00 – 685+00	2,804	129,132	148,502
	685+00 – 695+00	41,967	35,824	41,198
	695+00 – 704+82.23	9,236	37,910	43,596
I	Sub-Total Ham. Co.	95,459	359,293	413,187
	704+82.23 705+00	134	428	492
	705+00 715+00	5,388	8,428	9,692
	715+00 725+00	139,316	130	150
	725+00 735+00	39,675	0	0
	735+00 745+00	41,663	0	0
	745+00 755+00	20,841	4,682	5,384
	755+00 765+00	109,636	0	0
	765+00 775+00	31,614	13,673	15,723
	775+00 785+00	133,696	1,968	2,263
	785+00 795+00	2,779	94,518	108,697
	795+00 805+00	5,376	71,854	82,632
	805+00 815+00	3,892	62,744	72,156
	815+00 818+70.50	1,353	10,679	12,281
I	Sub-Total Montgomery	583,463	269,104	309,470
	818+70.50 825+00	2,149	13,203	15,183
	825+00 835+00	58,050	230	264
	835+00 845+00	108,800	17,134	19,704
	845+00 848+73.24	2,367	26,981	31,028
I	Sub-Total Blue Ash	171,366	57,548	66,180
	Cross-County Highway			
U.S.	255+00 260+00	782	6,949	7,991
I	257+18.50 257+61.64	6	343	394
I	257+33.79 262+45.36	9,190	778	895
U.S.	257+61.64 262+45.36	6,029	41	47
I	262+45.74 270+65.06	24,129	12,030	13,835
I	270+65.06 281+21.36	6,054	53,712	61,769
I	281+21.36 293+34.86	14,962	14,541	16,722
U.S.	285+54 295+14	17,796	0	0
I	Ramp A	1,919	9,308	10,704
I	Ramp B	4,497	50,164	57,694
I	Ramp B	693	15,824	18,198
I	Ramp C	6,611	49,148	56,520
I	Ramp D	10,295	3,679	4,231
I	Ramp E	22,111	405	466
I	Pedestrian Overpass	244	793	912
I	Zig-Zag Road	2,590	12,504	14,380
I	Service Road No. 1	5,077	1,625	1,869
	Pfeiffer Road			
I	41+00 45+07	1,502	1,625	1,869
I	45+07 57+00	45,264	3,113	3,580
I	Ramp F	6,050	20,677	23,779
I	Ramp G	2,985	19,135	22,005
I	Ramp H	24,081	5,255	6,043
I	Ramp I	12,657	10,702	12,307
I	Twinkle Lane	1,608	1	1
I	Lakecrest Drive	10,272	54	62
I	Deerfield Road	281	111	128

	I	U.S.	GRAND TOTALS
E-1 Excavation	1,063,366	24,607	
Channel Excavation	2,131	56	
TOTAL EXCAVATION	1,065,497	24,663	1,090,160
Embankment + 15%	1,117,199	8,038	
*Channel Emb. + 15%	304	64	
TOTAL EMBANKMENT+15%	1,117,503	8,102	1,125,605
SURPLUS		16,561	
BORROW	52,006		Net 34,445

*Note: For Channel Embankment see Sheets Numbered: 336; 338; 344; 348; 351; 352; 353.

Seeding Calculations

	ITEMS	I Sq. Yds.	U.S. Sq. Yds.	Total Sq. Yds.
	Gross Area between Seeding Limits	811,495	51,877	863,372
DEDUCTIONS	Pavement (Concrete)	161,794	3,840	165,634
	Pavement (Bituminous) (Driveways Included)	9,068	36	9,104
	Paved Shoulders B-21	66,084	588	66,672
	Drives B-19	822		822
	Paved Ditch and Dumped Rock Area	9,003	228	9,231
	Median Pavement	799	108	907
	Approach Slabs	1,126		1,126
	Rock Areas	12,291	968	13,259
	Sod Areas	380	18	398
	Special Sod Areas	227		227
	TOTAL AREA to be DEDUCTED	261,594	5,786	267,380
	NET AREA to be SEEDED and PROTECTED	549,901	46,091	595,992

E-1 Compacted Subgrade

ITEMS	I Sq. Yds.	U.S. Sq. Yds.	Total Sq. Yds.
Pavement (T-71)	149,948	2,936	152,884
Pavement (T-35) Full Depth Flexible Pavement	9,068	36	9,104
Paved Shoulder (B-21)	61,390	450	61,840
Approach Slab (I-7)	1,126		1,126
Median Concrete Pavement (I-21)	799	108	907
GRAND TOTALS	222,331	3,530	225,861

Water Calculations

ITEMS	Cu. Yd.	Gal/Cu Yd	Water Item E-11 M-Gals.
Roadway Embankment	1,117,503	5	5,588
B-19	10,816	5	54
I-22	38,412	5	192
(I) Sub-Total			5,834
Roadway Embankment	8,102	5	41
B-19	99	5	1
I-22	754	5	4
(US) Sub-Total			46
GRAND TOTAL			5,880

SUB-SUMMARY

GENERAL SUMMARY

Throughout this plan all references to Urban Secondary or U.S. shall be considered to mean 100% County.

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ITEM	INTER-STATE	URBAN SECONDARY 100% HAMILTON COUNTY	NON-FEDERAL PAR.	GRAND TOTAL	UNIT	DESCRIPTION
						ROADWAY
E-1	1,063,366	24,607		1,087,973	Cu. Yds.	Roadway Excavation, Method "B" as per plan
E-1	222,331	3,530		225,861	Sq. Yds.	Compacted Subgrade
E-4	34,445			34,445	Cu. Yds.	Borrow
E-4	2,222			2,222	Cu. Yds.	Borrow Using Granular Material, as per plan
E-8	694			694	Sq. Yds.	Removal and Disposal of Existing Pavement
E-9	L.S.	L.S.		L.S.	Lump	Removal of Trees and Stumps
E-11	5,834	46		5,880	M.Gals.	Water
E-12	471			471	Lin.Ft.	Pipe Removed 24" and Under
E-12	82			82	Lin.Ft.	Pipe Removed over 24"
F-10	829	25		854	Cu. Yds.	Traffic Compacted Surface Course, for Maintaining Traffic
F-10	446	13		459	Cu. Yds.	Traffic Compacted Surface Course, Using Size No. 34 Material for Maintaining Traffic, as per plan.
S-15	L.S.			L.S.	Lump	Temporary Run-around Roads, as per plan.
S-24	L.S.			L.S.	Lump	Removal of Existing Structures
I-25	25,588	771		26,359	Lin.Ft.	Woven Wire Fence Type 47
I-26	13,916	673		14,589	Lin.Ft.	60" Chain Link Fence
I-26	707			707	Lin.Ft.	72" Chain Link Fence
I-26	1686			1,686	Lin.Ft.	72" Chain Link Fence, As Per Plan
659.10 659.04	111	2		113	Hours	Compaction, Using Heavy Pneumatic Tired Roller
I-4	413	7		420	M.Gals.	Water for Dust Control
I-4	163.5	2.8		166.3	Tons	Calcium Chloride for Dust Control
I-8	138			138	Each	Centerline Reference Monuments, as per plan
I-8	7			7	Each	Monument Assemblies Standard
I-15	21,950.00	75.0		22,025.00	Lin.Ft.	Guard Rail, Steel Beam Standard Type (Deep)
I-15	750.00			750.00	Lin.Ft.	Guard Rail, Steel Beam Standard Type (Deep) as per plan
I-15	200.00			200.00	Lin.Ft.	Guard Rail, Steel Beam ... Barrier Type (Deep)
I-15	325.00			325.00	Lin.Ft.	Guard Rail, Removed and Disposed of
I-15	687.50			687.50	Lin.Ft.	Temporary Guard Rail, as per plan
I-125	L.S.			L.S.	L.S.	24" Stop Bars, As Per Plan
I-125	20.83	0.50		21.33	Miles	4" Edge Lines
I-125	0.52			0.52	Miles	4" Barrier Lines
I-125	0.40			0.40	Miles	4" Lane Lines
I-125	3.30	0.09		3.39	Miles	6" Lane Lines
I-125	0.68			0.68	Miles	8" Channelizing Lanes
I-125	L.S.			L.S.	Lump	Curb and Island Marking, as per plan
I-125	L.S.			L.S.	Lump	Diagonal Stripes, as per plan
I-127	145			145	Each	Delineators ... Type A-1, Post Mounted
I-127	264			264	Each	Delineators ... Type C-2, Post Mounted
I-127	4			4	Each	Delineators ... Type C-3, Post Mounted
L-7	23	10		33	Sq. Yds.	15" Riprap for Tree Protection
L-9	583,901	46,091		595,992	Sq. Yds.	Seeding and Protection, as per plan
L-9	49.55	4.15		53.70	Tons	Commercial Fertilizer (12-12-12)
L-9	247.75	20.75		268.50	Tons	Agricultural Liming Material
L-10	380	18		398	Sq. Yds.	Sodding
L-10	227			227	Sq. Yds.	Sodding for Special Berm and Slope Protection, as per plan
L-120	14,771	229		15,000	Sq. Yds.	Jute Matting
						DRAINAGE
E-3	2,131	56		2,187	Cu. Yds.	Channel Excavation
I-1	410			410	Lin.Ft.	6" Pipe Class F-4
I-1	51,228	1,047		52,275	Lin.Ft.	6" Pipe Class I-3
I-1	5,499	352		5,841	Lin.Ft.	6" Pipe Class I-3 See M-6.4 (A)
I-1	895	44		939	Lin.Ft.	6" Pipe Class I-1

Rev. 10-6-64

GENERAL SUMMARY

GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TYPE CODE 7221

HAMILTON COUNTY
HAM. 71-13.05

| ITEM | SHEET NUMBER | | |

GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
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TYPE CODE 7221

HAMILTON COUNTY
HAM.71-13.05

| ITEM | SHEET NUMBER | | |

GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
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TYPE CODE Y060 HAMILTON COUNTY
HAM.71-13.05

ITEM	SHEET NUMBER (51.61% PROJECT, 48.39% Hamilton Co.) I 37	N.P. 37	I 38	I 39	N.P. 39	N.P. 40	I 41	N.P. 41	N.P. 41	41	ITEM	INTER-STATE	URBAN SECONDARY 100% HAMILTON COUNTY	51.61% Project 48.39% Hamilton Co.	GRAND TOTAL	UNIT	DESCRIPTION	City of Cincinnati Spec. No.
																	UTILITIES	
																	Water Mains	
Spl.							110		5		Spl.	110	5		115	Lin.Ft.	Furnishing & Laying 6" C.I. Pipe, Valves & Specials.	W-1
Spl.							1,140			37	Spl.	1140		37	1177	Lin.Ft.	Furnishing & Laying 8" C.I. Pipe, Valves & Specials.	W-1
Spl.							1,620	540			Spl.	1620	540		2160	Lin.Ft.	Furnishing & Laying 12" C.I. Pipe, Valves & Specials.	W-1
Spl.										420	Spl.			420	420	Lin.Ft.	Furnishing & Laying 16" C.I. Pipe, Valves & Specials	W-1
Spl.							3			1	Spl.	3		1	4	Each	Removing Existing Fire Hydrants	W-13
Spl.							75		5	25	Spl.	75	5	25	105	Lin.Ft.	Removing Existing Water Mains (6"-8"-12")	W-15
Spl.							3			1	Spl.	3		1	4	Each	Salvaging & Re-using Existing M.H.C.& C.	W-20
Spl.							2			2	Spl.	2		2	4	Each	Plugging Existing Water Mains-8" Incl. Furn. Material	W-21
Spl.							2				Spl.	2			2	Each	Plugging Existing Water Mains; 12" Incl. Furn. Material	W-21
Spl.							40			20	Spl.	40		20	60	Lin.Ft.	Lowering Existing Water Mains (6"-8"-12")	W-23
Spl.							245				Spl.	245			245	Lin.Ft.	Lowering Existing Service Branches (3/4" Thru 2")	W-25
Spl.							2				Spl.	2			2	Each	Reconnecting Existing Service Branches (3/4" Thru 2")	W-27
Spl.							846				Spl.	846			846	Lin.Ft.	Furnishing & Installing 3/4" Copper Service Pipe & Fittings	W-28
Spl.							785				Spl.	785			785	Lin.Ft.	Furnishing & Installing 1" Copper Service Pipe & Fittings	W-28
Spl.							20				Spl.	20			20	Lin.Ft.	Furnishing & Installing 1½" Copper Service Pipe & Fittings	W-28
Spl.							1,025				Spl.	1,025			1,025	Lin.Ft.	Furnishing & Installing 2" Copper Service Pipe & Fittings	W-28
Spl.							13				Spl.	13			13	Each	Furnishing & Installing Roadway Boxes.	W-40
Spl.							5		1		Spl.	5	1		6	Each	Furnishing & Installing Valve Boxes.	W-40
Spl.							3				Spl.	3			3	Each	Resetting Existing Curb & Roadway Boxes.	W-42
Spl.							103	10		169	Spl.	103	10	169	282	Cu.Yds.	Rock Excavation	W-45
Spl.							20	10		10	Spl.	20	10	10	40	Cu.Yds.	Additional Excavation	W-46
Spl.							6			3	Spl.	6		3	9	Cu.Yds.	Brick Masonry for Valve Chambers.	W-47
Spl.							29	8		15	Spl.	29	8	15	52	Cu.Yds.	Concrete Masonry Class "C" (1:5 Mix)	W-48
Spl.							205				Spl.	205			205	Lin.Ft.	Furnishing & Installing 2" Galvanized Pipe Casing	W-59
Spl.							4		1		Spl.	4	1		5	Each	Salvaging & Resetting Existing Fire Hydrants	W-60
Spl.							1				Spl.	1			1	Each	Furnishing & Installing Standard Meter Setting, Complete.	W-62
Spl.							6				Spl.	6			6	Each	Salvaging & Relocating Existing Meter Box Settings (5/8"-2")	W-67
Spl.							1				Spl.	1			1	Each	Resetting Existing Meter Box Settings (5/8" Thru 2")	W-68
Spl.							500	180		300	Spl.	500	180	300	980	Lbs.	Reinforcing Steel.	C-3
Spl.							2	1		1	Spl.	2	1	1	4	M.B.D.F.	Sheeting & Bracing Ordered Left in Place.	S-25
Spl.							6		1		Spl.	6	1		7	Each	Remove Existing Valve Boxes.	W-54
																	Sanitary Sewers	
I-1			666								I-1	666			666	Lin.Ft.	12" Pipe Class E-1 Spec. M-6.6 (b)	
I-1			38								I-1	38			38	Lin.Ft.	12" Pipe Class J-1 Spec. M-6.6 (b)	
I-1				95							I-1	95			95	Lin.Ft.	12" Pipe Class J-1 Spec. M-6.6 (b) or M-6.8 (b)	
I-1		200			615	492					I-1		1367		1,367	Lin.Ft.	12" Pipe Class J-1 Spec. M-6.6 (d)	
I-1	566					600					I-1	566	600		1,166	Lin.Ft.	18" Pipe Class J-1 Spec. M-6.6 (d)	
I-2	448				216	70.8					I-2	448	95.4		140.2	Cu.Yds.	Masonry	
I-8			4		2	2					I-8	4	4		8	Each	Standard Manhole No.1	
I-8				2		1					I-8	2	1		3	Each	Standard Manhole No.1, using salvaged frames and covers	
I-8					1						I-8		1		1	Each	Standard Manhole No.2 (w/o Drop Pipe)	
I-8	1					1					I-8	1	1		2	Each	Standard Manhole No.2, w/8 drop pipe, using salvaged frame & cover	
I-8				1							I-8	1			1	Each	Manhole (Reconstructed to Grade, as per plan)	
I-16	3			2							I-16	5			5	Each	Manhole Abandoned	
E-12				132							E-12	132			132	Lin.Ft.	Pipe Removed 24" & Under	
T-30			4								T-30	4			4	Gals.	Bituminous Tack Coat, Spec. M-5.5 MS-2 or RS-1 or Spec. M-5.2 RC-1 or RC-2 as per Spec. T-30.02	
T-35			1								T-35	1			1	Cu.Yds.	Asphaltic Concrete Surface Course	
T-10			9								T-10	9			9	Sq.Yds.	7" Portland Cement Concrete Pavement	

Note 7

GENERAL SUMMARY

GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
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TYPE CODE 7221

HAMILTON COUNTY
HAM.71-13.05

ITEM	SHEET NUMBER			ITEM	INTER-STATE			GRAND TOTAL	UNIT	DESCRIPTION
	I 16	I 17								
			TRAFFIC SIGN SUPPORTS							
I-129		1	No. 7.3, Des. 1, Modified, 40' Span, As Per Plan	I-129	1			1	Each	Overhead Sign Support
I-129		1	No. 7.4, Des. 1, Modified, 48' Span, As Per Plan	I-129	1			1	Each	Overhead Sign Support
I-129		2	No. 9.12, Des. 2, Modified, 14' Arms, As Per Plan	I-129	2			2	Each	Overhead Sign Support
I-129		1	No. 9.24, Des. 2, Modified, 14' Arms, As Per Plan	I-129	1			1	Each	Overhead Sign Support
I-129		1	No. 9.24, Des. 2, Modified, 20' Arms, As Per Plan	I-129	1			1	Each	Overhead Sign Support
I-129		1	No. 10.48, Des. 5, 20' Arms, As Per Plan	I-129	1			1	Each	Overhead Sign Support
I-129		1	No. 10.48, Des. 8, Modified, 22' Arms, As Per Plan	I-129	1			1	Each	Overhead Sign Support
I-129										
I-129										
I-129										
I-129										
I-129										
I-129										
I-129		57.5		I-129	57.5			57.5	Lin.Ft.	Structural Supports, Steel Beam Type 14WF 30
I-129		46		I-129	46			46	Lin.Ft.	Structural Supports Steel Beam Type 12B22
I-129										
I-129		123		I-129	123			123	Lin.Ft.	Structural Supports, Steel Beam Type 10B17 As Per Plans
I-129		54		I-129	54			54	Lin.Ft.	Structural Supports, Steel Beam 12WF27 As Per Plan
		17.9		I-129	17.9			17.9	Cu.Yds.	Concrete for Ground Mount Sign Support Fdns. As Per Plan
I-129		43.4		I-129	43.4			43.4	Cu.Yds.	Conc. For Overhead Sign Support Foundations, As Per Plan
I-129										
I-129		2,183		I-129	2,183			2,183	Sq.Ft.	Sign Erection, as per plan
			ELECTRICAL EQUIPMENT							
5-25	34			5-25	34			34	Each	Pull Box, Round 18" I.D.
5-25	14			5-25	14			14	Each	Markers
5-25	993			5-25	993			993	Lin.Ft.	Conduit - 1 Way - 3" Fiber, Type 1, or Asbestos Cement, Type 1, Concrete Encased.
5-25		9		5-25	9			9	Each	Sign Support Ground Rod and Wire
5-25		4,344		5-25	4,344			4,344	Lin.Ft.	Circuit Cable - No. 4 A.W.G. Direct Burial, 600 Volt
5-25		8249		5-25	8249			8249	Lin.Ft.	Circuit Cable - No. 6 A.W.G. Direct Burial, 600 Volt
5-25		180		5-25	180			180	Lin.Ft.	Sign Switch Feeder Cable - 1/c No. 12 A.W.G., 600 Volt
5-25		18		5-25	18			18	Each	ESNA Connector Kit, Type 84 Unfused
5-25		3		5-25	3			3	Each	Pole with Service
5-25		6		5-25	6			6	Each	30 Amp. Fusible Disconnect Switch with Enclosure, Type "Y"
5-25		3		5-25	3			3	Each	30 Amp. Fusible Disconnect Switch with Enclosure, Type "Z"
5-25		L.S.		5-25	L.S.			L.S.	Lump	Sign Wiring, Complete,
5-25		2		5-25	2			2	Each	Ballast, Type A
5-25		8		5-25	8			8	Each	Ballast, Type B
5-25		1		5-25	1			1	Each	Ballast Type C
5-25		4		5-25	4			4	Each	Ballast Type D
5-25		18		5-25	18			18	Each	Fixture with Lamp, Type 72" HO
5-25		8		5-25	8			8	Each	Fixture with Lamp, Type 72" SHO
5-25		1		5-25	1			1	Each	Fixture with Lamp, Type 96" SHO
		3		5-25	3			3	Each	Transformer, 0.50 K.V.A.
		3		5-25	3			3	Each	Transformer, 0.75 K.V.A.
		3		5-25	3			3	Each	Transformer, 1.00 K.V.A.

REV. 10-6-64

GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
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TYPE CODE 7221

HAMILTON COUNTY
HAM. 71-13.05

ITEM	SHEET NUMBER	ITEM	PARCEL NO.		INTER-STATE	GRAND TOTAL	UNIT	DESCRIPTION
								REMOVAL OF BUILDINGS
		E-10	9052-WL		Lump Sum	Lump Sum	Lump	One Concrete Block Shed.
		E-10	9083-WL		Lump Sum	Lump Sum	Lump	One 1-Sty. Frame Residence, One Corr. Metal Shed, One Corr.
								Metal Garage, One Frame Privy.
		E-10	9094-WL		Lump Sum	Lump Sum	Lump	One 1-Sty. Brick Residence, One 1-Sty. Frame Residence
								Two Frame Sheds, One Frame Barn.
		E-10	9096-WL		Lump Sum	Lump Sum	Lump	One 1-Sty. Brick Residence
		E-10	9097-WL		Lump Sum	Lump Sum	Lump	One 1 1/2-Sty. Brick Residence
		E-10	9105-WL		Lump Sum	Lump Sum	Lump	One 1 1/2-Sty. Brick Residence
		E-10	9126-WL		Lump Sum	Lump Sum	Lump	One 1-Sty. Brick Residence, One Concrete Block Garage,
								One Frame Barn.
		E-10	9127-WL		Lump Sum	Lump Sum	Lump	One 1-Sty. Brick Residence
		E-10	9150-WL		Lump Sum	Lump Sum	Lump	One 1-Sty. Brick Residence
		E-10	9151-WL		Lump Sum	Lump Sum	Lump	One 1-Sty. Brick Residence
		E-10	9155-WL		Lump Sum	Lump Sum	Lump	One 1-Sty. Brick Residence
		E-10	9183-WL		Lump Sum	Lump Sum	Lump	One Frame Attached Garage
		E-10	9185-WL		Lump Sum	Lump Sum	Lump	One Frame Shed
		E-10	9146		Lump Sum	Lump Sum	Lump	One 2-Story Brick & Frame Residence with attached Br. Gar
								STRUCTURES OVER 20' SPAN
See	Sht. No. 368			For Estimated Quantities				Bridge No. HAM. 71-1398, under Cross County Highway
See	Sht. No. 379			For Estimated Quantities				Bridge No. HAM. 71-1419, under Cooper Road
See	Sht. No. 386			For Estimated Quantities				Bridge No. HAM. 71-1508, under Zig Zag Road
See	Sht. No. 397			For Estimated Quantities				Bridge No. HAM. 71-1560 L. & R., over Pfeiffer Road
See	Sht. No. 408			For Estimated Quantities				Bridge No. HAM. 71-1648, under Deerfield Road
See	Sht. No. 416			For Estimated Quantities				Bridge Pedestrian Overpass, over Cross County Highway,
					Lump Sum	Lump Sum	Lump	Construction Layout Stakes
		I-3			Lump Sum	Lump Sum	Lump	Maintaining Traffic

Revised C.E.H. 6-3-65

GENERAL SUMMARY

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HAMILTON COUNTY
HAM. 71-13.05

HUBS NOT REFERENCED
Sta. 651+35 Sta. 653+00

For Typical Section of Adjoining Pavement
See Sheet No. 3

2-Sty. Brick

2-Sty. Br.
& Frame

REFERENCE P.O.T. Sta. 651+61.84
24.51' 15" Ash
8.66' 15" Ash
5.19' 24" Elm
HUB 2-18" Ash

REFERENCE P.O.T. Sta. 662+25.82
662 Hub
20.97' 20.28' 12" Ash
2-10" Hickory

Wooded Area

12" Conc. Pipe

FUTURE CONSTRUCTION

UNDER SEPARATE CONTRACT

BEGIN WORK
STA. 655+10

Nursery

Dumped Rock Channel Protection 8'x1'-6"

Evergreens, Flowering Shrubs, Bushes, Etc.

10' Dirt Road

Woven Wire

Wooded Area

Field

BEGIN PROJECT
STA. 656+50.00

Q.M. 1305

B.M. R.R. Spike in Root of 48" Elm.
150' Lt. of Sta. 657+55
Elev. 813.23

MATCH LINE STA. 665+00

651+75

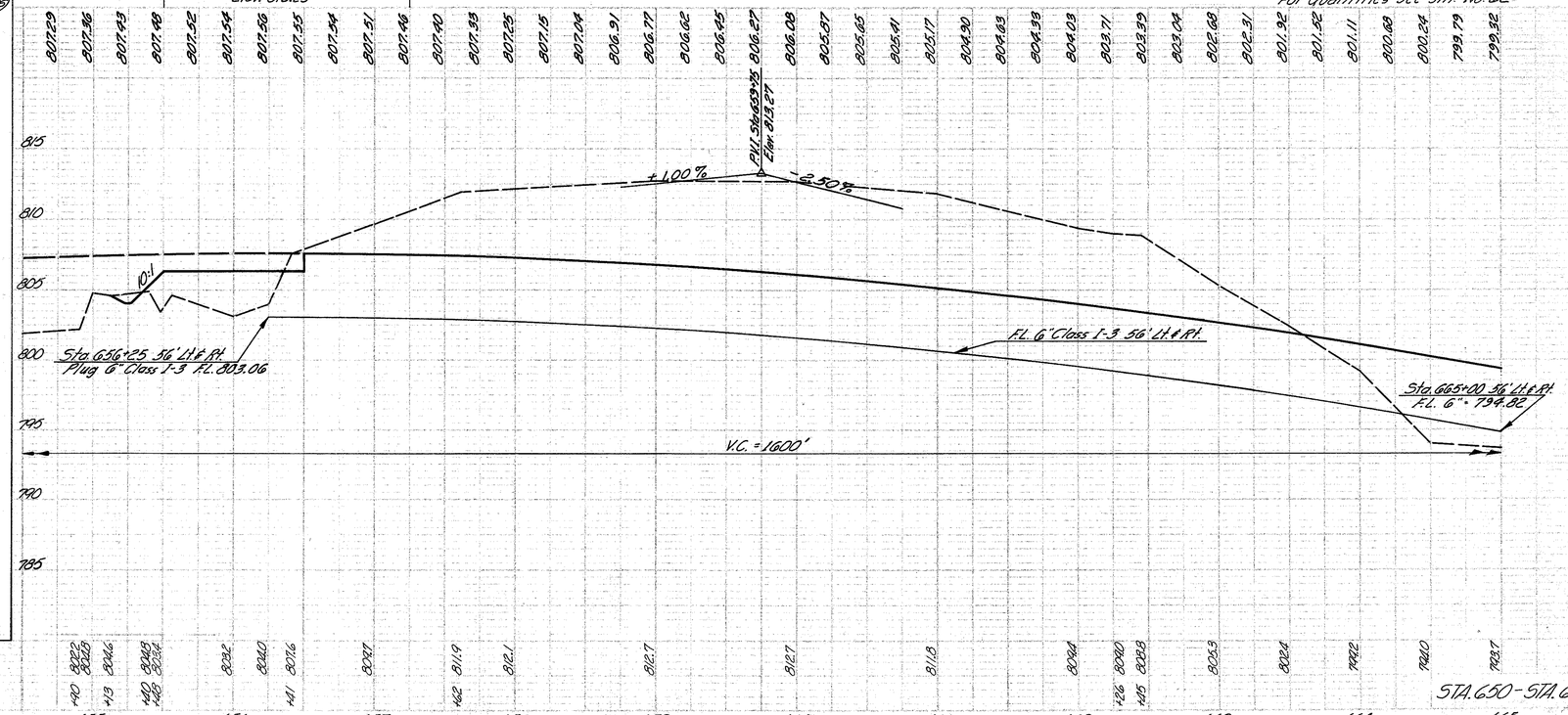
For Quantities See Sht. No. 62

PAVING LEGEND

- Item T-71 9" Reinforced Portland Cement Concrete Pavement
  Item I-22 Subbase Grading 'A' or 'B' (See Typicals for Thickness)
- Item T-31 Bituminous Surface Treatment (See Proposal Notes)
  Item B-21 3" Waterproofed Aggregate Base Course
  Item B-19 6" Aggregate Base Course
  Item I-22 Subbase (See Typical Sections for Thickness & Grading)
- Item T-31 Bituminous Surface Treatment (See Proposal Notes)
  Item B-21 6" Waterproofed Aggregate Base
  Item B-19 Aggregate Base Course (See Typical Sections for Locations & Thickness)
  Item I-22 Subbase (See Typical Section for Thickness & Grading)
- Item T-35 1½" Asphaltic Concrete Surface Course Type A (70-85)
  Item B-35 1¾" Asphaltic Concrete Leveling Course (70-85)
  Item T-30 Bituminous Prime Coat, Sec. M-5.7, RT-2 or RT-3 Applied at the Rate of 0.40 Gal. Per Sq. Yd.
  Item B-19 6" Aggregate Base Course
  Item I-22 5" Subbase Grading 'A' or 'B'
- Item T-35 2" Asphaltic Concrete Surface Course Type A (70-85)
  Item T-30 Bituminous Prime Coat, Sec. M-5.7, RT-2 or RT-3 Applied at the Rate of 0.40 Gal. Per Sq. Yd.
  Item B-19 7" Aggregate Base Course
- Item T-35 2" Asphaltic Concrete Surface Type 'A' (70-85)
  Item T-30 Bituminous Prime Coat Sec. M-5.7, RT-2 or RT-3 Applied at the Rate of 0.40 Gal. Per Sq. Yd.
  Item B-19 5" Aggregate Base Course
- Item T-35 2" Asphaltic Concrete Surface Course Type A (70-85)

UTILITY OWNERS

TYPE	NAME	ADDRESS
Power	Cincinnati Gas & Electric Co.	Fourth & Main St. Cincinnati, Ohio
Gas	Cincinnati Gas & Electric Co.	Fourth & Main St. Cincinnati, Ohio
Water	Cincinnati Water Works	4747 Spring Grove Ave. Cincinnati, Ohio
Sanitary	Hamilton County Sanitary Dept.	Hamilton County Court House Cincinnati, Ohio
Sanitary	Village of Montgomery	Montgomery Municipal Bldg. Cooper & West Rd. Cincinnati, Ohio
Telephone	Cincinnati & Suburban Bell Telephone Co.	225 E. Fourth St. Cincinnati, Ohio



HUBS NOT REFERENCED
Sta. 674+38.62 Sta. 679+00
Sta. 676+46.56 Sta. 680+00
Sta. 678+00

REFERENCE P.O.T. Sta. 668+50.60
13" Elm
6" Ash
Hub
15" Walnut

REFERENCE P.O.T. Sta. 671+86.82
4" Ash
Hub 672
5" Ash
4" Ash

REFERENCE P.C. Sta. 677+15.69
7" Elm
Hub 677
5" Elm
9" Elm

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HAMILTON COUNTY
HAM. 71-13.05

MATCH LINE STA. 665+00

MATCH LINE STA. 680+00

Dumped Rock Channel Protection 8'X1'-6"
Field
Wooded Area
Jute Matting 7'-8" Wide
LA R/W
Dumped Rock Channel Protection 14'X6.5'X1'-6"
Nursery
Dumped Rock Channel Protection 22'X6.5'X1'-6"
Dumped Rock Channel Protection 8'X1'-6"
TEMPORARY EASEMENT
Hamilton County Exist. 12" Sanitary Sewer
Sta. 675+50, 173'± Lt. Existing M.H.
CORPORATION LINE CITY OF BLUE ASH
Lawn
Garden
Conc. Blk. Shed
Rose Bush
Woven Wire
Dumped Rock Channel Protection 10'X6.5'X1'-6"
Sta. 667+00 ℄ See Sht. No. 139
Sta. 669+50 36" Cl. A-1
Sta. 670+10 60" Cl. A-1
Sta. 673+50 126" Cl. A-1
15" Cl. V-1
18" Cl. V-1
SURVEY
N10°17'10"E
Sta. 673+84
Sta. 672+00 ℄ See Sht. No. 143
Sta. 679+00 ℄ See Sht. No. 147
10'X6" Cl. F-1 Overpipe
Exist. 18" San. Sewer
Sta. 678+00, 140' Rt. 12" Pipe Class B-1
P.C. Sta. 677+15.69
Dumped Rock Channel Protection 6'X6.3'X1'-6"
Dumped Rock Channel Protection 8'X1'-6"
Dumped Rock Channel Protection 8'X1'-6"
Wooded Area
Dumped Rock Channel Protection 10'X6.5'X1'-6"
Dumped Rock Channel Protection 12"X1'-0"
Jute Matting 7'-8" Wide
Sta. 671+57, 230' Rt. I-8 Std. M.H. No. 2
Dumped Rock Channel Protection 16'X1'-6"
Field
Bushes & Briars
Woodcut Area
Lawn
TEMPORARY EASEMENT

Note:
For 18" Sanitary Sewer
See Sheet No. 37

℄ SURVEY
CURVE DATA
P.I.= Sta. 683+39.71
Δ = 8°16'45" Rt.
D = 0°20'
R = 8,594.37'
L = 1,201.88'
T = 622.02'
E = 22.48'
S.E. = .021 ft

For Quantities see Sht. No. 62

B.M. R.R. Spike in Root of 12" Ash. 115' Rt. of Sta. 669+20 Elev. 767.85

B.M. R.R. Spike 2.0' above ground in 12" Ash. 165' Lt. of Sta. 672+22 Elev. 781.60

B.M. R.R. Spike in Root of 18" Elm. 120' Lt. of Sta. 676+20 Elev. 767.58

V.C. = 500'
-2.50%
+0.76%
Sta. 667+00 I-8 Std. C.B. No. 4 FL. Grate 792.17 Inv. 15" 788.17 Outlet Inv. 784.91
Sta. 663+00, 36' Lt. & Rt. F.L. 6", 794.82
F.L. 6" Cl. I-3 Lt. & Rt.
V.C. = 1,600'
Ext. 52' @ -2.50% 75
Ext. 52' @ -2.50% 75
Existing Ground
36" Pipe
Sta. 671+30, 36' Lt. F.L. 6", 782.9
Sta. 671+99, 89' Lt. F.L. 8", 777.12 Outlet
Sta. 672+00 ℄ I-8 Std. C.B. No. 4 F.L. Grate = 784.31 Inlet Inv. 15" = 780.31 F.L. 6", 782.0 Outlet Inv. = 776.75
Ext. 75' @ -2.50% 75
Ext. 52' @ 0.76% 75
Elev. 785.77
60" Pipe
Sta. 673+25, 36' Lt. & Rt. F.L. 6", 783.17
F.L. 6" Cl. I-3 Rt. & Lt.
Sta. 672+20, 36' Lt. F.L. 6", 782.9
Sta. 672+00, 36' Rt. F.L. 6", 782.73
Sta. 672+01, 89' Lt. F.L. 8" Outlet 777.20
Ext. 52' @ 0.76% 75
126" Pipe
Existing Ground
Sta. 675+50, 36' Lt. & Rt. F.L. 6", 784.88
Sta. 675+50, 26.75' Lt. F.L. 6", 785.0
Sta. 676+00, 36' Lt. F.L. 6", 785.3
F.L. 6" Cl. I-3 Rt.
Sta. 679+15, 26.75' Lt. F.L. 6" 787.6
Sta. 680+00, 26.75' Lt. F.L. 6", 788.30
Sta. 680+00, 36' Rt. F.L. 6", 787.90
Sta. 678+98, 26.75' Lt. F.L. 6", 787.5
Existing Ground
Sta. 678+00, ℄ I-3 Std. C.B. No. 4 F.L. Grate 788.12 Inlet Inv. 18" 785.12 F.L. 6", 787.12 Outlet Inv. 784.24
Sta. 678+00, 140' Rt. Headwall No. 3, Type A. Inv. 72", 752.48
EI. 200' X 72" Class B-1 @ 1.20%
1.20%

STA. 665 - STA 680

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HAMILTON COUNTY
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HUBS NOT REFERENCED

Sta. 680+00	Sta. 688+00
Sta. 682+00	Sta. 690+00
Sta. 683+36.63	Sta. 692+00
Sta. 685+00	Sta. 694+00
Sta. 686+00	

REFERENCE R.I. Sta. 683+37.71
8" Ash, 18" Ash, 9.15, 16.41', 6" Ash, 6" Ash

REFERENCE R.T. Sta. 689+57.57
689, 35°33', 9.10, Iron Pin, Woven Wire

MATCH LINE STA. 680+00

MATCH LINE STA. 695+00

CORPORATION LINE CITY OF BLUE ASH

Stone Garden

Lawn

Flower Beds

Jute Matting 7'-8" Wide

Dumped Rock Channel Protection 10'x1'-6"

Sta. 683+19.16 Begin Taper

Flowering Shrubs

Rose Bushes

Barbed Wire

Pond

LA R/W

Flower Bed

Woven Wire

Wooden Bridge

Sta. 691+50 ℄ See Sht. No. 157

Sta. 694+40, 40' Lt. See Sht. No. 273

Sta. 688+20, 63' Rt. See Sht. No. 155

℄ SURVEY

N.10°17'10"E

N.18°33'55"E

90° Tan. to Curve

Garden

Rosebush Hedge

Wooded Area

Rail

All Trees Under 12"

Sta. 683+75, 93' Rt. M.H. No. 2 (Mod. as per plan)

Sta. 680+00, 26.75' Lt. Begin Taper

Sta. 687+00, 145' Rt. Headwall No. 3, Type A

I-10 Riprap 12' Wide

Wooden Foot Bridge

Sta. 687+00, 60.52' Lt. Sta. 687+00, 26.75' Lt. Sta. 687+00, 145' Rt. Sta. 689+00, 65.52' Lt. Sta. 689+20, 63' Rt. Sta. 691+00, 56' Rt. & 70.52' Lt. Sta. 690+50, 26.75' Lt. Sta. 695+00, 56' Rt. Sta. 695+00, 80.52' Lt.

Sta. 4+60, Ramp "B", 90' Lt. Sta. 2+20.8 B. C.B. No. 2 F.L. Grate 796.1 F.L. 15" 793.50 F.L. 15" 791.5 Outlet

Sta. 691+50 ℄ I-8 Std. C.B. No. 4 F.L. Grate 798.62 Inv. 15" 795.62

Sta. 689+20, 63' Rt. I-8 Std. C.B. No. 6 F.L. Grate 798.29 F.L. 6" 794.0 F.L. 12" 793.5 F.L. 12" 783.5 Outlet

Sta. 683+75, 93' Rt. I-8 M.H. No. 2 (Mod. as per plan) Top 789.5 Inv. 30" 769.30 Inv. 72" 759.38

Sta. 685+31.07, 68' Rt. F.L. 6" 790.9 For Underdrain Continuation See Ramp "B" Sta. 0+00, 2' Rt. See Sht. No. 90

Sta. 680+00, 26.75' Lt. F.L. 6", 788.30

Sta. 681+15.83, 68' Rt. F.L. 6", 788.60

Sta. 680+15.83, 56' Rt. F.L. 6", 788.02

Sta. 680+00, 56' Rt. F.L. 6", 787.90

Sta. 682+50, 68' Rt. F.L. 6", 789.5

Sta. 685+50, 57' Lt. F.L. 8", 793.26

Sta. 685+32, 93' Lt. F.L. 6", 788.2

F.L. 6" Cl. I-3 Lt.

F.L. 6" Cl. I-3 Rt.

30" Pipe

I-1 375'x72" Class B-1 @ 4.20%

I-1 325'x72" Class B-1 @ 2.78%

+0.76%

2.78%

1.20%

See Cross Section for Profile, Sht. No. 135

See Ramp "B" Cross Sections Sht. No. 273

174'x15" Cl. J-1

B.M. R.R. Spike in Root of 36" Beech. 118' Lt. of Sta. 682+45 Elev. 779.63

B.M. R.R. Spike in Root of 36" Elm. 155' Lt. of Sta. 689+35 Elev. 816.16

℄ SURVEY CURVE DATA
P.I. = Sta. 683+37.71
Δ = 8°16'45" Rt.
D = 0°40'
R = 8,594.37'
L = 1,241.88'
T = 622.02'
E = 22.48'
S.E. = .021%

RAMP "B" CURVE DATA
P.I. = Sta. 4+96.72
Δ = 38°14'35"
D = 4°00'00"
R = 1,432.40'
L = 956.08'
T = 496.62'
E = 83.65'

10'x6" Cl. F-4 Overpipe

15" Cl. J-1

12" Cl. J-1

Dumped Rock Channel Protection 15'14'x1'6"

Dumped Rock Channel Protection 6'x6.5'x1'6"

Play Area

Field

For Continuation of Ramp "B" See Sht. No. 85

For Ramp "B" Detail See Sht. No. 118

For Ramp "B" Quantities See Sht. No. 92

Corr. Metal Shed

For Quantities See Sht. No. 62

STA. 680 - STA. 695

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ESTIMATED QUANTITIES

DRAINAGE

REF. NO.	STATION TO STATION	SIDE	E-3	I-1											I-2	I-5				I-8		I-10		L-10	L-120	ITEM SPL.		SEE SHEET NO.
			Channel Ex.	6" Class F-4	6" Class I-3	6" Class J-1	8" M-164(c) Class F-4	15" Class J-1	18" Class J-1	30" M-170(60) Class A-1	36" M-170(60) Class A-1	60" M-170(9) Gage 16-8 Class A-1	72" M-170(60) Class B-1	126" M-170(9) Gage 5-3 Class A-1	Masonry	6" 60° Bend Class I-3	6" 90° Bend Class J-1	6"x6" Wye Class I-3	6"x6" Tee Class J-1	C.B. No. 4 Standard	M.H. No. 2 Mod. as per plan	6" R.C. Riprap	Dumped Rock	Sodding	Jute Matting	Drainage Connection Using No. 6 Aggregate		
			Cu. Yds.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Cu. Yds.	Each	Each	Each	Each	Each	Each	Sq. Yds.	Cu. Yds.	Sq. Yds.	Sq. Yds.	Cu. Yds.		
	655+50 TO 665+00																											
1-D	656+25 — 665+00	L			875																				50		
2-D	656+25 — 665+00	R			875																				50		
3-D	Not Used																										
4-D	662+95 — 663+00	L																				94					
5-D	663+95 — 665+00	R																				56					
6-D	Not Used																										
7-D	Not Used																										
8-D	Not Used																										
	665+00 TO 680+00																										
9-D	665+00 — 671+98	L			726		10											1							40		
10-D	665+00 — 680+00	R		20	1490	44													1						81		
11-D	672+02 — 676+00	L			420		10											1	1						23		
12-D	675+50 — 678+98	L			348	29											1								25		
13-D	679+02 — 680+00	L		10	119													1							7		
14-D	665+00 — 665+92	L																				41					
15-D	665+00 — 665+60	R																				32					
16-D	666+15 — 667+00	L																						75			
17-D	666+97 — 668+80	R																				82					
18-D	667+00	R	3					105							0.26					1		2	3	128			
19-D	667+50	E	32								352				13.20							42	77	6			334
20-D	668+00 — 669+06	L																					123		93		
21-D	669+20 — 671+00	R																									
22-D	669+31 — 670+00	L																							62		
23-D	670+10	E	167									340			25.40							23	55	6			335
24-D	672+00	E	3					89							0.26					1			8	3	256		
25-D	672+03 — 672+32	L																							25		
26-D	672+11 — 672+75	R																							55		
27-D	672+32 — 672+38	L																					5				
28-D	672+38 — 673+40	L																							87		
29-D	673+50	E	212											408	21.60							73	58	28			337
30-D	673+40 — 674+77	L																					62				
31-D	675+24 — 677+00	L																					83				
32-D	677+00 — 678+97	L																							16		
33-D	677+85 — 678+00	R																					18				
34-D	679+00	E&L	3						92						0.30					1			4	3	128		
35-D	678+00 — 680+00	R											200		16.20							24					339
36-D	678+25 — 680+00	R																							150		
	680+00 TO 695+00																										
37-D	680+00 — 690+50	L			1050																				75		
38-D	685+50 — 695+00	L			980		10										1								61		
39-D	680+00 — 685+31.07	R			531																				26		
40-D	688+20 — 695+00	R		20	660																				36		
41-D	680+90 — 683+62	L																							231		
42-D	680+00 — 681+50	R																							128		
43-D	680+00 — 687+00	E											700		16.20							24					339
44-D	683+75	E	4							206					4.70					1		43	206	3			340
45-D	683+86 — 687+00	L																							212		
46-D	684+25 — 686+75	R																				50					
47-D	687+00 — 687+25	R																									
48-D	4+00 Ramp "B" 691+50	R&E						174												1					128		
49-D	Not Used																										
(I)	TOTAL		424	40	8080	73	40	368	92	206	352	340	900	408	98.12	1	1	3	2	4	1	279	1006	52	1774	474		

ROADWAY & PAVEMENT

REF. NO.	STATION TO STATION	SIDE	I-15	S-24	L-7	I-15	B-19	B-21	T-31	T-31	T-71	I-22		SEE SHEET NO.
			Guard Rail	Removal of Exist. Structure	Riprap For Tree Protection	Guard Rail As Per Plan	Aggregate Base Course	Water-proofed Aggregate	Surface Treat. Bitum.	Surface Treat. Aggregate	9" Reinf. Concrete Pavement	Grading A or B Subbase	Subbase	
	Roadway		Lin. Ft.	L.S.	Sq. Yds.	Lin. Ft.	Cu. Yds.	Cu. Yds.	Gals.	Cu. Yds.	Sq. Yds.	Cu. Yds.	Cu. Yds.	
	650+00 TO 665+00													
1-R	664+00 — 665+00	L	100											
2-R	682+36	L			10									
12-R	686+00	L			4									
	665+00 TO 680+00													
3-R	665+00 — 677+50	L	1250											
4-R	667+00 — 680+00	R	1300											
	680+00 TO 695+00													
5-R	680+50 — 687+00	L	650											
6-R	680+00 — 685+31.07	R	531.07											
7-R	693+75 — 695+00	R	125											
8-R	694+50 — 695+00	L	50											
9-R	687+10	R		L.S.										
10-R	694+90	R		L.S.										
11-R	694+90	L		L.S.										
	Pavement													
	656+50 665+00						426	220	661	21	4,538	917	226	
	665+00 680+00						750	389	1,167	37	8,000	1,605	388	
	680+00 695+00						406	281	644	21	8,000	1,505	391	
(I)	TOTAL		4,006.07	L.S.	14	50	1,582	890	2,472	79	20,533	4,027	1,005	
13-R	688+63 — 688+88	R				50								

QUANTITIES
STA. 655+10 ~ STA. 695

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HUBS NOT REFERENCED

Sta. 696+08.03	Sta. 706+00
Sta. 698+00	Sta. 707+00
Sta. 700+00	Sta. 708+00
Sta. 702+00	Sta. 709+00
Sta. 703+21.83	

S.T. Sta. 10+39.28 Ramp "A" =
Sta. 695+19.16 Ham. 71

REFERENCE P.C. Sta. 696+55.26
6" Cedar, 10.97, 11.45, 6" Twin Cedar, 697, 2.98, 6" Cedar, 7" Cedar

REFERENCE P.I. Sta. 703+28.38
5" Locust, 6.20, 4.78, 3" Wild Cherry, 6.20, 4" Locust

REFERENCE P.I. Sta. 709+88.40
8" Ash, 20.24, To N.E. Cor. of Bn. Smoke Stack @ S. End of School Bldg., 93°58'30", 24" Ash Hub, 21.70, 710

E SURVEY
CURVE DATA
P.I.= Sta. 703+28.38
Δ = 14°33'10" Lt.
D = 1°28'
R = 3,906.53'
L = 1,393.14'
T = 679.12'
E = 57.51'

Field (Brush & Briars)

Wooded Area

Jute Matting 15'-0" Wide

For Continuation of Ramp "A" See Sht. No. 88

Sta. 272+25.81 Begin Approach Slab
Sta. 272+50.81 End Approach Slab

Sta. 272+76.61 ℄ = Sta. 0+00.00 Ramp "D"

Sta. 273+43.69 Cross County ℄ = Sta. 73+38.82 Cross County ℄

Sta. 702+87.28 Ham. 71 = Sta. 274+18.28 Cross County

Sta. 695+23.63' Lt. See Sht. No. 160

Sta. 695+23.63' Rt. See Sht. No. 161

Dumped Rock Channel Protection 25'W x 5'x No 15" Cl. J-1

10'X6" Cl. F-4 Overpipe

Sta. 695+13.30 54" Cl. A-1

Abandoned Foundation

Orchard

Garden

Barbed Wire

Fence

Gravel Dr.

1-Sty. Frame

Conc. Slab (Cistern)

Frame Barn

Field

For Continuation of Ramp "C" See Sht. No. 85

Jute Matting 7'8" Wide

Jute Matting 11'4" Wide

S.T. Sta. 11+28.02 Ramp "C" = Sta. 690+00.33 Ham. 71

P.C. Sta. 0+00.00 Ramp "C" = Sta. 275+28.95 ℄ Cr. Co.

Sta. 275+67.75 Begin Approach Slab

℄ Sta. 275+86.03 = ℄ Sta. 75+86.03

Sta. 276+92.25 End Approach Slab

C.S. Sta. 11+78.82 Ramp "C"

B.M. R.R. Spike in Root of 36" Stump. 145' Rt. of Sta. 696+35 Elev. 803.86

B.M. R.R. Spike in Root of 36" Ash. 170' Lt. of Sta. 703+90 Elev. 806.90

Wooded Area

Jute Matting 15'-0" Wide

Field

For Continuation of Ramp "D" See Sht. No. 82

S.T. Sta. 10+36.50 Ramp "D" = Sta. 705+19.16 Ham. 71

Sta. 705+23.63' Lt. See Sht. No. 166

Sta. 704+18 ℄ See Sht. No. 165

Sta. 709+50.23' Rt. See Sht. No. 169

Dumped Rock Channel Protection 12'X1'-6"

Dumped Rock Channel Protection 20'X13'X2'-6"

Dumped Rock Channel Protection 10'X1'-6"

Jute Matting 7'8" Wide

Field

Orchard

Wooded Area

Barbed Wire

Fence

Woven Wire

Cross County

Sta. 709+54.26.75' Rt. Fl. 6", 810.9

Sta. 710+00.56' ℄ 26.75' Rt. Fl. 6", 811.1

Sta. 709+46.26.75' Rt. Fl. 6", 810.7

Sta. 709+52.122' Rt. Fl. 8", 809.67 Outlet

Sta. 709+54.56' Rt. Fl. 6", 810.2

Sta. 710+00.56' Lt. Fl. 6", 810.7

Sta. 708+75.56' Lt. Fl. 6", 809.1

Sta. 705+19.16, 81' Lt. Fl. 6", 804.3 For Underdrain Continuation See Ramp "D" Sht. No. 93

120'x 18" Cl. J-1

Sta. 705+25.63' Lt. I-8 Std. C.B. No. 6 Fl. Grate 810.27 Fl. 18", 804.66 Fl. 6", 806.5 Fl. 18", 803.84 Outlet

Sta. 704+18 ℄ I-8 Std. C.B. No. 4 Fl. Grate, 808.26 Ink. 18" 805.26

Sta. 703+75, 77.4' Lt. Fl. 6", 805.3

Sta. 700+50, 69.3' Lt. Fl. 6", 802.2

Sta. 699+80.33, 80.5' Rt. Fl. 6", 804.3

Sta. 699+60.33, 81' Rt. Fl. 6", 804.2 For Underdrain Continuation See Ramp "C" Sht. No. 91

Sta. 698+00, 63' Lt. Fl. 6", 800.6

Sta. 695+19.16, 81' Lt. Fl. 6", 799.4 For Underdrain Continuation See Ramp "A" Sht. No. 88

Sta. 695+08, 100' Rt. Fl. 6", 792.50 Outlet

Sta. 695+08.56' Rt. Fl. 6", 799.00

Sta. 695+00.56' Rt. Fl. 6", 799.7

Sta. 695+08, 26.75' Rt. Fl. 6", 799.8

Sta. 695+50, 56' Rt. Fl. 6", 800.4

Sta. 695+00, 80.52' Lt. Fl. 6", 799.3

Sta. 695+82, 64' Lt. I-8 Std. C.B. No. 6 Fl. Grate 803.98 Ink. 12" 799.70

Sta. 695+23, 63' Lt. I-8 Std. C.B. No. 6 Fl. Grate 803.94 Fl. 12", 798.82 Fl. 15", 798.57 Fl. 6", 799.6 Fl. 15", 795.0 Outlet

+0.76%

0.50%

1.50%

0.70%

59'x12" Cl. J-1

54" Pipe

50'x42" Cl. E-1

Fl. 6" Cl. I-3 Rt.

Fl. 6" Cl. I-3 Lt.

Sta. 709+50, 23' Rt. I-8 Std. M.H. No. 1-A Top 814.97 Inv. 42", 809.22 Fl. 42", 808.37 Outlet

Sta. 710+00.56' ℄ 26.75' Rt. Fl. 6", 811.1

Sta. 709+54, 26.75' Rt. Fl. 6", 810.9

Sta. 709+46, 26.75' Rt. Fl. 6", 810.7

Sta. 709+54, 56' Rt. Fl. 6", 810.2

Sta. 710+00.56' Lt. Fl. 6", 810.7

Sta. 709+52, 122' Rt. Fl. 8", 809.67 Outlet

Sta. 708+75.56' Lt. Fl. 6", 809.1

Note: For Cross County See Sht. 81, 82, 85 & 86

For Quantities See Sht. No. 65

STA. 695 - STA. 710

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HUBS NOT REFERENCED
Sta. 712+00 Sta. 714+00
Sta. 713+58.61 Sta. 724+00

REFERENCE P.O.T. Sta. 716+81.58
X Notch on Rim
11.09 (12.00) Hub
9.48 Hub
3.31 Hub
Tack Tack in Corner Post

REFERENCE P.O.T. Sta. 721+06.47
721
Hub
7" Locust
19.18
5.26
5.08
5.72
7" Maple
8" Locust

P.C.C. Sta. 4+00.00 Ramp "E"

Nose Sta. 2+54.99 Ramp "E" Sta. 713+65.92 Ham. 71

P.C. Sta. 0+00.00 Ramp "E-2" Sta. 713+23.44 Ham. 71

Sta. 720+65.72 Begin Taper

Sta. 721+50.85 "L" See Sht. No. 175

Sta. 721+65.72 End Taper

Sta. 5+41 See Sht. No. 343

For Continuation of Ramp "E" See Sht. No. 82

Sta. 713+50 ℄ See Sht. No. 172

Sta. 717+64 ℄ See Sht. No. 174

℄ SURVEY

Sta. 716+54.99 Ham. 71 = Sta. 50+00.00 Cooper Rd.

B.M. S.W. Corner of Concrete Headwall. 250' Lt. of Sta. 716+82 Elev. 823.49

Note: For Cooper Rd. See Sht. No. 95
For Cooper Rd. Sanitary Sewer See Sht. No. 38

For Quantities See Sht. No. 65

MATCH LINE STA. 710+00

MATCH LINE STA. 725+00

TEMPORARY EASEMENT

Jute Matting 2'3" Wide

Jute Matting 11'4" Wide

Woven Wire

Dog Area

Wooded Area

Golf Course

Garden

Lawn

Field

Gravel Parking Area

Football Field

Asphalt Dr.

Conc. Walk

Board

Flower Trellis

Flowers

Rose Bush

Flag Pole

Flower Bush

Grill

Grate

Frame Garage

#6015 12.5% Frame

#6205 ½ Sty. Brick

#6265 ½ Sty. Br.

#6325 ½ Sty. Br.

#6260 ½ Sty. Brick

#5950 1½ Sty. Br.

90° Tan to Curve

180°00'00"

98°40'40"

30° Cl. I-12

Sta. 713+50.23' Rt. Std. M.H. No. 1-A

Sta. 717+64.23' Rt. Std. M.H. No. 1-A

Sta. 721+50.23' Rt. Std. M.H. No. 1-A

N 0°59'15" W

42" Cl. E-1

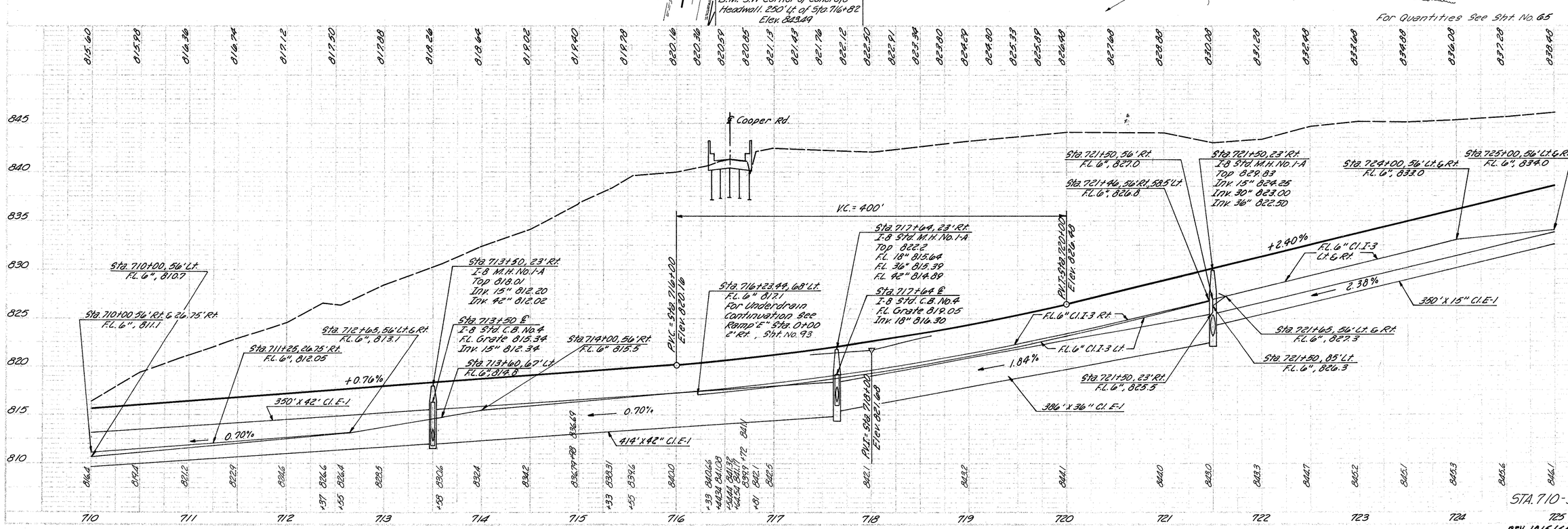
15" Cl. E-1

18" Cl. E-1

36" Cl. E-1

RAMP "E-2" CURVE DATA
P.I. = Sta. 2+01.31
Δ = 16°00'00" Rt.
D = 4°00'00"
R = 1,432.90'
L = 400.00'
T = 201.31'
E = 14.08'

RAMP "E-3" CURVE DATA
P.I. = Sta. 3+98.99
Δ = 34°52'49" Rt.
D = 9°00'00"
R = 636.62'
L = 387.56'
T = 199.99'
E = 31.35'



REV. 10/6/64

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HAMILTON COUNTY
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ESTIMATED QUANTITIES

DRAINAGE

REF. NO.	STATION TO STATION	SIDE	E-3	I-1																I-2	I-5				I-8				I-10		L-10	L-120	ITEM SPL.	SEE SHEET NO.
			Channel Ex.	6" Class F-4	6" Class I-3	6" M-6.4 (A) Class I-3	6" Class J-1	8" M-6.4 (C) Class F-4	12" Class J-1	15" Class E-1	18" Class E-1		18" Class J-1	30" Class J-1	36" Class E-1	42" Class E-1	42" Class J-1	54" M-6.6 (B) Class A-1		Masonry	6"×6" 90° Bend Class J-1	6"×6" Tee Class J-1	6"×6" M-6.4 (A) 60° Wye Class I-3	6"×6" Cross Class J-1		C.B. No. 4 Standard	C.B. No. 5 Standard	C.B. No. 6 Standard	M.H. No. 1-A Standard		6" R.C. Riprap	Dumped Rock	Sodding	Jute Matting	Drainage Connection Using No. 6 Aggregate	
			Cu. Yds.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.		Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.		Cu. Yds.	Each	Each	Each	Each		Each	Each	Each	Each		Sq. Yds.	Cu. Yds.	Sq. Yds.	Sq. Yds.	Cu. Yds.	
	695+00 TO 704+82																																	
1-D	695+00 — 695+19.16	L			19																												2	
2-D	695+24 — 704+82	L		10	958																												63	
3-D	695+08 — 704+82	R			974		64	10													1			1									69	
4-D	695+00 — 695+50	R			50																												3	
5-D	699+60.33 — 699+80.33	R			20																												1	
6-D	695+23 — 695+82	L							59																		1							
7-D	695+30	L&R	8															210		20.0										51	19	6			341
8-D	704+18 — 704+82	R&L											70												1										
9-D	703+35 — 704+82	R																													113				
10-D	Not Used																																		
(I)	Total Hamilton County		8	10	2,021		64	10	59				70					210		20.0	1			1	1		1			51	132	6	81	138	
	704+82 — 710+00																																		
11-D	704+82 — 705+19.16	L			37																												3	
12-D	703+26 — 710+00	L		10	464																												24	
13-D	704+82 — 709+46	R			464																												33	
14-D	709+54 — 710+00	R			46																												4	
15-D	709+54 — 710+00	R			46		84	10													1	1											2	
16-D	704+82 — 705+25	L											50																					
17-D	709+50 — 710+00	R														50	99			0.59							1				3	47		
18-D	704+82 — 705+10	R																													20				
19-D	709+40 — 709+80	R																													30				
20-D	709+40 — 709+60	R																													24				
21-D	709+60 — 710+00	R																															35		
22-D	Not Used																																		
	710+00 — 725+00																																		
23-D	710+00 — 713+60	L			265	95																											20	
24-D	710+00 — 711+25	R			125																												7	
25-D	710+00 — 721+46	R			265	881																											24	
26-D	716+28.44 — 721+96	L				523																											38	
27-D	721+54 — 725+00	L		10	100	267																	1										22	
28-D	721+50 — 725+00	R			100	250	33														1												23	
29-D	710+00 — 713+50	R														350																		
30-D	713+50 — 717+64	R								23						414									1			1					128	
31-D	717+64 — 721+50	R									23				386										1			1					128	
32-D	721+50	℄												108												1								
33-D	721+50 — 725+00	R								350																		1							
34-D	710+00 — 711+50	R																															128		
35-D	Not Used																																		
36-D	724+00 — 725+00	L																															125		
37-D	Not Used																																		
(I)	Total Village of Montgomery			20	1,912	2,016	117	10		373	23		50	108	386	814	99		0.59	2	1	1			2	1		4		74	3	591	250	

ROADWAY & PAVEMENT

REF. NO.	STATION TO STATION	SIDE	I-15	I-15	B-19	B-21	T-31		T-71	I-22		SEE SHEET NO.
			Guard Rail	Guard Rail As Per Plan	Aggr. Base Course	Water-proofed Aggr.	Surface Treat. Aggr.	Surface Treat. Bitum.	9" Reinf. Conc. Pav't	Grading A or B Subbase	Subbase	
			Lin. Ft.	Lin. Ft.	Cu. Yds.	Cu. Yds.	Cu. Yds.	Gals.	Sq. Yds.	Cu. Yds.	Cu. Yds.	
	Roadway											
	695+00 To 704+82											
1-R	695+00 — 695+50	R	50									
2-R	701+36.50 — 702+09.00	R	62.5									
3-R	703+71.00 — 704+33.50	L	62.5									
4-R	Not Used											
(I)	Total Hamilton County		175									
	710+00 To 725+00											
5-R	715+60 — 716+60	R	100									
6-R	716+92.00 — 717+34.50	L	62.5									
7-R	712+97 — 713+22	L		50								
			162.5	50								
	Pavement											
	695+00 — 704+82											
(I)	Total Hamilton County				194	103	10	309	5,239	975	74	
					194	103	10	309	5,239	975	74	
	704+82 — 710+00				136	73	7	218	2,761	525	56	
	710+00 — 725+00				593	305	29	917	8,000	1,895	341	
(I)	Total Village of Montgomery				729	378	36	1,135	10,761	2,420	397	

QUANTITIES
STA. 695 ~ STA. 725

REV. - 10/6/64

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

66
445

HAMILTON COUNTY
HAM. 71 - 13.05

HUBS NOT REFERENCED
Sta. 726+00 Sta. 736+58.70
Sta. 732+00 Sta. 740+00
Sta. 734+00

REFERENCE P.C. Sta. 729+36.68
12" Elm
729
Wooded
60 Lt.
9" Walnut

REFERENCE P.I. Sta. 736+59.54
9" Ash
80 23' 6" Ash
Lt.
6" Elm

Swimming Pool (Conc.)
Filter Tank
Evergreen Shrubs
Wood
LA R/W
Garden
Jute Matting 11'-4" Wide
Field
Wooded Area
Woven & Barbed Wire
Sand Trap
Golf Course
5-D
1-D
2-D
3-D
4-D
7-D
1-R
Sta. 728+75 ℄ See Sht. No. 179
Sta. 725+50 29' Rt. See Sht. No. 178
15" Cl. E-1
MATCH LINE STA 725+00
MATCH LINE STA 740+00
726 727 728 729 730 731 732 733 734 735 736 737 738 739
N0°59'15"W
N5°25'05"E
℄ SURVEY
P.C. Sta. 729+36.68

℄ SURVEY
CURVE DATA
P.I. Sta. 736+59.54
Δ - 6°44'20" Rt.
D - 0°28'
R - 12,277.67'
L - 1,444.05'
T - 722.86'
E - 21.26'

For Quantities See Sht. No. 68

B.M. S.E. Corner of Concrete Base of Swimming Pool Filter. 152' Lt. of Station 728+65 Elev. 852.94

B.M. R.R. Spike in Root of 36" Elm. 155' Lt. of Sta. 738+25 Elev. 867.63

Sta. 725+50 56' Lt. & Rt.
Rt. F.L. 6" 834.0
Top. 839.43
Inv. 15" 833.80
Sta. 728+75 ℄
1-B Std. C.B. No. 4
F.L. Grate 844.56
Inv. 15" 841.56
F.L. 6" 842.31
Sta. 728+71 56' Lt. & Rt.
F.L. 6" 842.9
Sta. 728+25 56' Lt. & Rt. F.L. 6" 843.0
Sta. 730+00 Elev. 850.48
Sta. 740+00 56' Lt. & Rt.
F.L. 6" 858.9
F.L. 6" Class I-3 56' Lt. & Rt.
+2.40%
2.38%
2.38%
325'-15" Class E-1 Pipe
50'-15" Class E-1 Pipe
V.C. = 2400'

STA. 725 - STA. 740

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

67
445

HAMILTON COUNTY
HAM. 71 - 13.05

HUBS NOT REFERENCED
Sta. 748+79.08 Sta. 754+00
Sta. 752+00

REFERENCE P.I. Sta. 743+00.73
10" Wild Cherry
Woven & Barbed
192.38°
200.0
12" Ash
743
Hub
℄

REFERENCE P.O.T. Sta. 746+56.46
6" Locust
6" Locust
222.5°
Ohio
746
℄
40ft
30.5
6" Locust
6" Locust

Z

MATCH LINE STA. 740+00

Woven Wire & Barbed Wire
LA R/W
Wooded Area
Jute Matting 7'-8" Wide
Field
Tee
Sand Trap
2-R
9-D
10-D
Green
Sand Trap
741
742
N 52°45'05" E
743
℄ SURVEY
744
745
746
747
748
749 (Abandoned)
750
751
N 52°45'05" E
752
753
754
Sta. 752+00 & See Sht. No. 194
14-D
30°
11-D
18" Cl. E-1
15" Cl. J-1
12-D
Wooded Area
18"
12"
15"
16"
36"
LA R/W
Golf Course
PT. Sta. 742+60.73
Green
Sand Trap
15-D
Sand Trap
Conc. Blk. Garage
Asphalt Parking Area
(Conc.) Swimming Pool
Tennis Courts
1-Sty. Brick
Woven Wire
16-D
Jute Matting 7'-8" Wide
Dumped Rock Channel Protection 15'x6.5'x1'-6"
Field

MATCH LINE STA. 755+00

℄ SURVEY
CURVE DATA
P.I.- Sta. 736+59.54
Δ = 6°44'20" Rt.
D = 0°28'
R = 12277.67'
L = 1444.05'
T = 722.86'
E = 21.26

NOTE: Sta. 747+75 Rt.
Existing Pavement shall be sawed or cut in a neat manner along the Right of Way line. Removal of pavement and earth backfill shall be included in the unit price bid per Item E-1 Roadway Excavation. (For Quantities See Sht. No. 191)

For Quantities See Sht. No. 68

B.M. R.R. Spike 2.0' above ground in 12" Wild Cherry. 165' Lt. of Sta. 748+55
Elev. 856.34

863.10 863.41 863.56 863.47 863.67 863.95 863.92 863.38 863.33 863.25 863.16 863.16 862.95 862.82 862.69 862.53 862.36 862.17 861.96 861.77 861.54 861.30 861.05 860.79 860.51 860.21 859.91 859.58 859.25 858.90 858.54 858.16 857.77 857.37 856.95 856.52 856.07 855.61 855.14 854.65 854.15 853.63 853.10 852.56 852.00 851.43 850.85 850.25 849.64 849.01 848.37 847.72 847.05 846.37 845.67 844.96 844.24 842.78 841.92

875 870 865 860 855 850 845 840

PVI Sta. 742+10.00
Elev. 873.28

Sta. 740+75.56' Lt. & Rt.
F.L. 6" 859.0
Sta. 740+00.56' Lt. & Rt.
F.L. 6" 858.9

HW-E
Sta. 745+00.83' Rt.
Inv. 839.41
-1.92 %
F.L. 6" Class E-1 Sta. 746+56.56' Lt. & Rt.
450'x18" Class E-1 Pipe
HW-E
Sta. 749+50.83' Rt.
Inv. 853.01

Sta. 751+81.56' Lt.
F.L. 6" 845.6
Sta. 752+02.56' Rt.
F.L. 6" 845.1
-2.32 %
Sta. 751+77.56' Lt. & Rt.
F.L. 6" 845.7
Sta. 751+98.33' Rt.
F.L. 8" 842.14
Sta. 751+98.94' Lt.
F.L. 8" 842.3
Sta. 752+00 & I-8 Std. C.B. No. 4
F.L. Grate 846.72
Inv. 15" 842.72
Inv. 15" 841.72
PVT Sta. 754+40.00
Elev. 844.24
Sta. 755+00.56' Lt. & Rt.
F.L. 6" 836.82

V.C. = 2400'

870.1 868.4 869.3 868.0 866.5 868.0 867.5 867.6 880.78 867.9 882.1 868.0 868.3 868.2 868.3 868.0 866.3 864.5 864.8 860.5 858.6 858.4 857.3 855.1 852.6 850.3 848.5 847.0 845.7 843.8 842.4

740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755

STA. 740 - STA. 755

REV. 10/6/64

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

GB 445

HAMILTON COUNTY
HAM. 71-13.05

ESTIMATED QUANTITIES

DRAINAGE

REF. NO.	STATION TO STATION	SIDE	I-1 6" Class F-4 Lin. Ft.	I-1 6" Class I-3 Lin. Ft.	I-1 6" Class J-1 Lin. Ft.	I-1 8" M-6A(c) Class F-4 Lin. Ft.	I-1 15" Class E-1 Lin. Ft.	I-1 15" Class J-1 Lin. Ft.	I-1 18" Class E-1 Lin. Ft.	I-2 Masonry Cu. Yds.	I-5 60° Bend Class F-3 Each	I-5 90° Bend Class J-1 Each	I-8 C.B. Standard No. 4 Each	I-8 M.H. Standard No. 1-A Each	I-10 Dumped Rock Cu. Yds.	L-10 Sodding Sq. Yds.	L-120 Jute Matting Sq. Yds.	ITEM SPL. Drainage Connection Using No. 6 Aggregate Cu. Yds.	I-5 6" Wye Class I-3 Each	SEE SHEET NO.
	725+00 To 740+00																			
1-D	725+00 — 728+71	L		371														21		
2-D	728+75 — 740+00	L	10	1125	44							1						64		
3-D	725+00 — 728+71	R		371														21		
4-D	728+75 — 740+00	R	10	1125	44							1						64		
5-D	725+00 — 730+00	L															630			
6-D	Not Used																			
7-D	725+00 — 728+75	R & L					375						1	1			128			
8-D	Not Used																			
	740+00 To 755+00																			
9-D	740+00 — 751+77	L		1211		10					1							67		
10-D	751+81 — 755+00	L		319														18		
11-D	740+00 — 751+98	R		1228		10												68	1	
12-D	752+02 — 755+00	R		298														17		
13-D	748+00 — 749+00	L															85			
14-D	752+00	L & R						93		0.26			1		6	3	128			
15-D	745+00 — 749+50	R							450	0.60						6				
16-D	749+50 — 751+97	R															210			
17-D	Not Used																			
(I) TOTAL	Village of Montgomery		20	6048	88	20	375	93	450	0.86	1	2	2	1	6	9	1181	340	1	

ROADWAY & PAVEMENT

REF. NO.	STATION TO STATION	SIDE	I-15 Guard Rail As Per Plan Lin. Ft.	B-19 Aggregate Base Course Cu. Yds.	B-21 Water-proofed Aggregate Cu. Yds.	T-31 Surface Treatment Bituminous Gals.	T-31 Surface Treatment Aggregate Cu. Yds.	T-11 9" Reinforced Concrete Pavement Sq. Yds.	I-22 Grading A or B Subbase Cu. Yds.	I-22 Subbase Cu. Yds.	SEE SHEET NO.
	Roadway										
1-R	729+53 — 730+03	R	50								
2-R	740+53 — 741+03	L	50								
	Pavement										
	725+00 — 740+00			752	389	1,167	37	8,000	1,618	399	
	740+00 — 755+00			752	389	1,167	37	8,000	1,618	399	
(I) TOTAL	Village of Montgomery		100	1,504	778	2,334	74	16,000	3,236	798	

QUANTITIES
STA. 725 ~ STA. 755

REV. 10/6/64

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

69
145

HAMILTON COUNTY
HAM. 71 - 13.05

HUBS NOT REFERENCED
Sta. 756+00 Sta. 764+06.29
Sta. 757+55.93 Sta. 767+50

REFERENCE P.O.T. Sta. 760+77.44
Hub 12.82' Swimming Pool
Corner Post 761
22.82' Corner Post
Swimming Pool

MATCH LINE STA. 755+00

MATCH LINE STA. 770+00

Woven Wire
Garden
Jute Matting 7'-8" Wide
Asphalt Dr
Gravel Dr
Flowers Bushes
Flower Bushes
Frame Barn
Conc. Blk. Garage
Leaching Bed
Picket
Board
Conc. Slab
Concrete Swimming Pool
Chain Link
Evergreens
Apple
Shrubs
Maple
Frame Shed
Conc. Blk. Gar.
Conc. Pipe
Bushes & Briers
Dumped Rock Channel Protection 8'x1'-6"
Dumped Rock Channel Protection 19'x6.5'x1'-6"
Jute Matting 11'-4" Wide
Hamilton County Sanitary Sewer
Sta. 762+46.80, 153' Lt.
I-8 Std. M.H. No. 2
See Sht. No. 39
Sta. 763+50 22' Rt.
See Sht. No. 200
Sta. 762+70 ℄
See Sht. No. 199
Sta. 767+75 22' Rt.
See Sht. No. 203
Sta. 768+00 ℄
See Sht. No. 344
Sta. 768+23.70
84°56'00"
50°20'00"
105°40"
45°
Sta. 763+79.65 HAM 71 = Sta. 80+00 Zig Zag Proj.
NOTE: For Zig Zag Rd. See Sht. No. 96
18" Cl. E-1
18" Cl. J-1
12" Cl. J-1
36" Cl. A-1
LA R/W
℄ SURVEY
TEMPORARY EASEMENT

B.M. R.R. Spike 1.0' above ground in 8" Popular. 165' Lt. of Sta. 756+70 Elev. 844.60

B.M. R.R. Spike in Power Pole 195' Lt. of Sta. 763+48 Elev. 832.75

For Quantities See Sht. No. 71

841.32 839.86 838.40 836.94 835.48 834.02 832.56 831.10 829.64 828.18 826.72 825.26 823.80 822.34 820.88 819.42 818.69 817.98 817.91 816.67 816.07 815.51 814.99 814.50 814.05 813.64 813.27 812.93 812.63 812.37 812.15 811.96 811.81 811.68 811.42 811.16 810.90 810.64 810.38 810.12

845 840 835 830 825 820 815 810

Sta. 755+00 56' Lt. & Rt.
F.L. 6" = 836.82
Sta. 757+00 56' Lt. & Rt.
F.L. 6" = 830.98
Sta. 758+00 56' Lt. & Rt.
F.L. 6" = 829.46
-2.92 %
F.L. 6" Class I-3 Lt. & Rt.
Sta. 762+70 ℄
F-8 Std. C.B. No. 4
F.L. Grate 813.32
Inv. 18" = 811.27
84'x18" Class E-1 Pipe
1.20 %
P.V.C. Sta. 762+75
Elev. 818.69
Sta. 763+50 22' Rt.
I-8 Std. M.H. No. 1
Top = 816.3
Inv. 18" = 810.37
℄ Zig Zag Rd.
P.V.I. Sta. 764+75
Elev. 812.85
V.C. = 400'
P.V.T. Sta. 766+75
Elev. 811.81
Sta. 766+84 56' Lt.
F.L. 6" = 807.26
425'x18" Class E-1 Pipe
Sta. 766+75 56' Rt.
F.L. 6" = 808.71
F.L. 6 Class I-3 Lt. & Rt.
Sta. 766+80 56' Lt. F.L. 6" = 808.68
Sta. 767+02 94' Lt. F.L. 8" = 799.6 -Outlet
Sta. 767+75 22' Rt.
I-8 Std. M.H. No. 1
Top 811.0
Inv. 18" 805.27
Sta. 767+78 56' Rt. F.L. 6" = 806.78
Sta. 767+97 89' Rt. F.L. 8" = 804.35 -Outlet
Sta. 767+89 56' Rt.
F.L. 6" = 806.72
72'x18" Class J-1 Pipe
HW-E Headwall
Inv. 18" = 804.45
36" Pipe
-0.52 %
Sta. 770+00 56' Rt. & 56.19' Lt.
F.L. 6" = 805.62
Sta. 763+93 56' Lt.
F.L. 6" = 805.66

755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770

STA. 755 - STA. 770

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

70
445

HAMILTON COUNTY
HAM. 71 - 13.05

HUBS NOT REFERENCED
Sta. 773+00 Sta. 776+26.89

REFERENCE P.O.I. Sta. 771+49.76
Hub – 15" @ 6" Elm
372 Deg. 772
37.53
36.76 @ 30" Oak
@ 5" Elm

REFERENCE P.O.I. Sta. 781+81.73
Hub – 11.0 @ 6" Wild Cherry
55.61 @ 5" Maple
292
64.77
@ 3" Wild Cherry

Sta. 13+34.27
I-8 Std. Ramp "F" = Sta. 772+82.50
Horiz. Cl.

Sta. 101+34.27 = Sta. 783+20.00 Ramp "F"

Sta. 794+12 ℄
See Sht. No. 115

STA. 770+00

STA. 785+00

MATCH LINE

R/W
Woven Wire

59 ± ℄ ZIG ZAG ROAD

Asphalt Conc.

LA R/W

Jute Matting
7'-8" Wide

Wooded Area

Sta. 774+68
Top of Dyke = Elev. 806.67

Sta. 772+00
See Sht. No. 20

Sta. 774+20
36" Class A-1

771 N 5°45'05" E

773 774 775 ℄ SURVEY 776 777 778 779 780 N 5°45'05" E 781 782 783 784

Sta. 784+12 ℄
See Sht. No. 115

10'x6" Class F-4
over pipe

13" Cl. V-1

Under 12"

Dumped Rock Channel Protection 32'x16.5'x1'-6"

Dumped Rock Channel Protection 10'x1'-6"

Dumped Rock Channel Protection 13'x1'-6"

Dumped Rock Channel Protection 15'x8.5'x1'-6"

5-12" Cl. V-1

TEMPORARY EASEMENT

Hamilton County Sanitary Sewer

36" C.P.

Bird Bath

Flag Pole

2.5'x' Frame

Sta. 775+30
Begin 100' Taper

Sta. 776+30
End 100' Taper

Field

Sta. 779+41.68 = Sta. 0+00 Ramp "G"
11° 00' Tan. to Curve
Horiz. Cl. Ramp "G"

Sta. 1+85.00
3" Cond.

Sta. 3+31.96 to Ramp "G"
Sta. 783+20.00 Ramp "F"
Horiz. Cl.

Sta. 5+10.20.00
3" Cond.

Jute Matting
7'-8" Wide

Sta. 773+33.30, 193.2' Rt.
I-8 Std. M.H. No. 1
See Sht. No. 33

B.M. R.R. Spike in Root of 42" Beech. 120' Lt. of Sta. 772+30
Elev. 818.75

Note: For Relocated Drive
See Sheet No. 99

B.M. R.R. Spike in Root of 18" Gum. 115' Lt. of Sta. 782+05
Elev. 821.80

For Quantities See Sheet No. 71

Sta. 772+00 ℄
I-8 Std. C.B. No. 4
F.L. Grate 806.16
Inv. 15" 802.16
Outlet El. 800.48

Sta. 774+18, 88.6' Rt.
F.L. 8", 801.0 Outlet

Sta. 774+00, 56' Rt.
F.L. 6", 803.54

Sta. 774+23, 56' Rt.
F.L. 6", 803.43

Sta. 775+30, 56' Rt.
F.L. 6", 802.86

Sta. 776+30, 68' Rt.
F.L. 6", 802.15

Sta. 774+23, 66.74' Lt.
F.L. 6", 803.26

Sta. 774+00, 66.19' Lt.
F.L. 6", 803.38

Sta. 774+16, 91.5' Lt.
F.L. 8", 803.0 Outlet

36" Pipe

Sta. 770+00, 56' Rt. & 56.19' Lt.
Elev. 805.62

F.L. 6" Cl. I-3 Rt.

F.L. 6" Cl. I-3 Lt.

-0.52%

Sta. 779+41.68' Rt.
F.L. 6", 800.54

Sta. 779+93, 56' Lt.
F.L. 6", 800.46

Sta. 779+93, 81' Lt.
F.L. 6", 800.07
For Continuation
See Ramp "F"
Sta. 13+34
See Sht. No. 103

Sta. 783+30, 66' Rt.
F.L. 6", 798.76

Sta. 783+30, 91' Rt.
F.L. 6", 797.62
For Continuation
See Ramp "G"
Sta. 3+87
See Sht. No. 104

Sta. 784+12, 56' Rt. & Lt.
F.L. 6", 798.64

Sta. 784+12 @ ℄
F.L. 6", 798.24

Sta. 784+12 ℄
I-8 Std. C.B. No. 4
F.L. Grate 800.21
Inv. 18" 796.21

P.V.C. - Sta. 782+75
Elev. 803.49

V.C. = 400'

Sta. 785+00, 56' Rt. & Lt.
F.L. 6", 798.78

100%

P.V.T. - Sta. 784+25
Elev. 802.98

HW-E Headwall
Inv. 18" 794.70

STA. 770 - STA. 785

REV. 10-6-64

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HAMILTON COUNTY
HAM. 71-13.05

71
345

ESTIMATED QUANTITIES

DRAINAGE

REF. NO.	STATION TO STATION	SIDE	E-3 Channel Ex. Cu. Yds.	I-1 6" Class F-4 Lin. Ft.	I-1 6" Class I-3 Lin. Ft.	I-1 6" M-164(h) Class I-3 Lin. Ft.	I-1 6" Class J-1 Lin. Ft.	I-1 8" M-164(c) Class F-4 Lin. Ft.	I-1 15" Class J-1 Lin. Ft.	I-1 18" Class E-1 Lin. Ft.	I-1 18" Class J-1 Lin. Ft.	I-1 36" M-164(a) or M-164(b) Class A-1 Lin. Ft.	I-1 96" M-164(b) Class A-1 Lin. Ft.	I-2 Masonry Cu. Yds.	I-5 6" 60° Bend Class I-3 Each	I-5 6"x6" Wye Class I-3 Each	I-5 6"x6" Tee Class J-1 Each	I-8 C.B. Standard No. 4 Each	I-8 M.H. Standard No. 1 Each	I-10 6" R. Conc. Riprap Sq. Yds.	I-10 Dumped Rock Cu. Yds.	L-10 Sodding Sq. Yds.	L-120 Jute Matting Sq. Yds.	ITEM SPL. Drainage Correction Using 10.6 Aggregate Cu. Yds.	SEE SHEET NO.
	755+00 TO 770+00																								
1-D	755+00 — 766+80	L			334	880		10							1										77	
2-D	755+00 — 767+85	R			438	875		10								1									83	
3-D	766+84 — 770+00	L			316																				18	
4-D	767+89 — 770+00	R			211																				12	
5-D	755+00 — 758+00	L																						256		
6-D	755+00 — 758+00	R																						256		
7-D	766+00-48+45 Zig Zag	R																				69				
8-D	762+70 — 763+50	R								84								1						128		
9-D	763+50 — 767+75	R								425									1							
10-D	767+75	R	16								72			0.30					1			7	3			
11-D	763+95 — 768+96	R																				223				
12-D	765+30 — 766+30	L																						101		
13-D	766+30 — 766+80	L																				22				
14-D	767+50 — 767+97	R																				21				
15-D	768+00	E	209										274	10.50							81	44	30			344
16-D	Not Used																									
	770+00 to 785+00																									
17-D	770+00 — 774+17	L			435			10								1									24	
18-D	770+00 — 774+17	R		10	434			10								1									24	
19-D	774+23 — 779+93	L			570																				33	
20-D	774+23 — 783+30	R			708	200																			54	
21-D	779+93 — 785+00	L		10	307	200	44										1								32	
22-D	783+30 — 785+00	R		20	160		44										1								10	
23-D	772+00	R	30						84					0.26				1				12	2	128		
24-D	772+03 — 773+93	R																				106				
25-D	773+80 — 774+08	L																						24		
26-D	774+20	E	451									180		13.0							81	50	6			345
27-D	Not Used																									
28-D	Not Used																									
29-D	784+12	R									150			0.30				1				7	2	256		
30-D	Not Used																									
(I) TOTAL	Village of Montgomery		706	40	3913	2155	88	40	84	509	222	180	274	24.36	1	3	2	3	2	162	561	43	1149	367		

ROADWAY & PAVEMENT

REF. NO.	STATION TO STATION	SIDE	E-12 Pipe Removed Over 24" Lin. Ft.	S-24 Removal of Existing Structure Lump Sum	I-15 Guard Rail Lin. Ft.	L-7 Riprap for Tree Protection Sq. Yds.	I-15 Guard Rail As Per Plan Lin. Ft.	B-19 Aggregate Base Course Cu. Yds.	B-21 Water-proofed Aggregate Cu. Yds.	T-31 Surface Treatment Bitumin-ous Gals.	T-31 Surface Treatment Aggregate Cu. Yds.	T-11 9" Reinforced Concrete Pavement Sq. Yds.	I-22 Grading A or B Subbase Cu. Yds.	I-22 Subbase Cu. Yds.	SEE SHEET NO.
	Roadway														
	755+00 To 770+00														
1-R	761+20	L		L.S.											
2-R	761+20	R		L.S.											
3-R	762+90 — 763+90	R			100										
4-R	763+66 — 764+66	L			100										
5-R	766+50 — 769+00	L			250										
6-R	767+50 — 770+00	R			250										
7-R	773+50	L				9									
	770+00 To 785+00														
8-R	770+00 — 775+37.5	R			537.5										
9-R	772+80	R	16												
10-R	Not Used														
11-R	784+16.75 — 785+00	R			83.25										
12-R	783+83 — 784+08	R					50								
	Pavement														
	755+00 — 770+00							752	389	1,167	37	8,000	1,809	442	
	770+00 — 785+00							366	186	559	18	8,000	1,552	172	
(I) TOTAL	Village of Montgomery		16	L.S.	1,320.75	9	50	1118	575	1726	55	16,000	3461	614	

QUANTITIES
STA. 755 ~ STA. 785

FED. RD. DIVISION	STATE	PROJECT		72 / 445
2	OHIO			

HAMILTON COUNTY
HAM. 71 - 13.05

HUBS NOT REFERENCED
Sta. 787+45.84 Sta. 796+50

REFERENCE P.C. Sta. 791+73.90
18 Walnut 22.26' ℄ Tack
59.88' 772

For Continuation of Ramp "F" See Sht. No. 103

Sta. 791+08.10
End Approach Slab

Sta. 790+63.10
Begin Approach Slab

Sta. 792+04.34 HAM. 71 =
Sta. 50+00.00 PFEIFFER RD.

Sta. 790+67 ℄
See Sht. No. 221

Sta. 793+29 ℄
See Sht. No. 222

Sta. 787+42.50
See Sht. No. 40

Sta. 798+88.70
See Sht. No. 40

MATCH LINE STA. 785+00

MATCH LINE STA. 800+00

RAMP "F"

RAMP "G"

RAMP "H"

RAMP "I"

Wooded Area

Barbed Wire

℄ SURVEY

℄ PFEIFFER RD.

Asphalt

Field

Lawn

Sta. 786+90
2-96" C.I.A-1

Sta. 798+24
96" C.I.A-1

Sta. 780+00
3"Cond.

15" C.I.J-1

18" C.I.J-1

12" C.I.J-1

72" C.I.B-1

S 88°19'00" E

N 5°45'05" E

90° Tan. to Curve

37° Tan. to Curve

76°23'46" Tan. to Curve

57°48'33" Tan. to Curve

See Ramp "G" For Location

See Ramp "I" For Location

Erosion Control See Sht. No. 33

For Continuation of Ramp "G" See Sht. No. 104

For Continuation of Ramp "H" See Sht. No. 105

For Continuation of Ramp "I" See Sht. No. 106

Note: For Pfeiffer Rd See Sht. Nos. 101 & 102

20'1.33" Swimming Pool (Conc.) 4'to 8' Deep

Chain Link

#6411 1-Sty. Brick

Conc.

W

SW

18'x30' 3'to 8' Deep Swimming Pool (Conc.)

Chain Link

32'x24' 3'to 7' Deep Swimming Pool (Conc.)

Chain Link

#6511 1-Sty. Brick

#6550 1-Sty. Brick

Foot Bridge (Wood)

TEMPORARY EASEMENT

TEMPORARY EASEMENT

℄ SURVEY CURVE DATA
P.I.= Sta. 802+05.24
Δ = 20°24'30" Rt.
D = 1°00'
R = 5,729.58'
L = 2,040.83'
T = 1,031.34'
E = 92.08'
S.E. = .032'/'

B.M. R.R. Spike 1.5' above ground in 12" Locust. 180' Lt. of Sta. 791+20 Elev. 797.05

For Quantities See Sht. No. 74

V.C. = 400'

P.V.T. = Sta. 786+75
Elev. 796.35

+1.00%

Sta. 790+67
I-8 Std. C.B. No. 4
F.L. Grate 804.29
Inv. 12" 800.29

Sta. 791+08.10

Sta. 791+00, 26.75' Lt.
F.L. 6" 803.08

Sta. 793+09, 26.75' Lt.
F.L. 6" 802.77

Sta. 792+88.24

Sta. 793+29
I-8 Std. C.B. No. 4
Fl. Grate 804.20
Inv. 12", 800.20

-1.08%

P.V.C. = Sta. 799+41.87
Elev. 801.87

V.C. = 400'

Sta. 790+25, 26.75' Lt.
F.L. 6" 802.88

Bridge Limits 179.87'

Sta. 790+25, 56' Lt.
F.L. 6" 802.58

Sta. 790+78.56' Rt.
F.L. 6" 802.73

Sta. 791+07.56' Lt.
F.L. 6" 802.79

Sta. 792+98.56' Rt.
F.L. 6" 802.00

Sta. 800+00, 26.75' Lt.
F.L. 6" 796.83

Sta. 800+00, 56' Rt.
F.L. 6" 796.12

Sta. 785+00, 56' Rt. & Lt.
F.L. 6", 798.78

P.V.C. = Sta. 787+50
Elev. 805.20

P.V.T. = Sta. 792+00
Elev. 809.70

P.V.T. = Sta. 798+40
Elev. 804.84

V.C. = 900'

2-96" Pipes

84" Pipe

12" C.I. J-1

HAM-71-1560
PROPOSED STRUCTURE

TYPE: Continuous steel beam with reinforced concrete deck and substructure.
SPAN: Northbound: 45'0", 85'6", 45'0"
Southbound: 45'0", 85'6", 45'0"
ROADWAY: 40'0" F-1 parapet
LOAD FREQUENCY: C.F. 2000(57) Adequate for AASHO Alternate loading.
SKEW: 13°36'14" right forward
WEARING SURFACE: 1" monolithic concrete
APPROACH SLAB: A5-1-5d (25' long)
ALIGNMENT: Combination tangent and 1° horizontal curve to the right
CURB: 1'0" each side

STA. 785 - STA. 800

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

73
445

HAMILTON COUNTY
HAM. 71 - 13.05

HUBS NOT REFERENCED
Sta. 801+94.32 Sta. 808+00
Sta. 805+00

TEMPORARY EASEMENT

REFERENCE P.I. Sta. 802+05.24
6" Elm 15" Elm 24" 22" 6" Ash 6" Ash

REFERENCE P.I. Sta. 812+14.73
15" Elm
812
3.00
12" Elm 6" Ash

MATCH LINE STA. 800+00

MATCH LINE STA. 815+00

Asphalt Parking Area

Pool Area

Tennis Court

Field

Jute Matting 7'-8" Wide

Wooded Area

Brush & Briars

Garden

Bushes

Lawn

Sta. 800+89.39 HAM-71

Sta. 801+08 ℄ See Sht. No. 295

Sta. 802+00.00 HAM-71

Sta. 806+00.00 HAM-71

Sta. 806+30

Sta. 811+50

Sta. 813+00 ℄ See Sht. No. 296

N 26°09'35" E

90° Tan. to Curve

91°25'56" Tan. to Curve

35° tan. to curve

RAMP "I"

RAMP "H"

N 5°00'00" E

17°43'38"

36" Cl. A-1

18" Cl. I-1

15" Cl. J-1

1:0 Riprap 10' Wide

Dumped Rock Channel Protection 10'x1'-6"

Dumped Rock Channel Protection 8'x1'-6"

Dumped Rock Channel Protection 6'x6.5'x1'-6"

Jute Matting 11'-4" Wide

Jute Matting 15'-0" Wide

Conc. Patio

Wood Foot Bridge

Wood Steps

72" Cl. B-1

M.H. No. 2 (Modified per Plan)

Sta. 800+50, 95' Rt.

℄ SURVEY
CURVE DATA
P.I. = Sta. 802+05.24
Δ = 20°24'30" Rt.
D = 1°00'
R = 5,729.58'
L = 2,040.83'
T = 1,031.34'
E = 92.08'

Sta. 802+25, 123.5' Rt.
Headwall No. 3, Type A

NOTE: For Continuation of Ramp "I" and Storm Sewer Profile See Sht. No. 108

B.M. R.R. Spike in Roof of 18" Gum. 118' Rt. of Sta. 809+35 Elev. 795.93

For Quantities See Sht. No. 74

V.C. = 400'

+1.28 %

Sta. 800+00 26.75' Lt. F.L. 6" = 796.83

Sta. 800+00 56' Rt. F.L. 6" = 796.12

Sta. 801+08 26.75' Lt. F.L. 6" = 796.98
Sta. 801+08 56' Rt. F.L. 6" = 795.78
Sta. 801+08 ℄ F.L. 6" = 795.50

Sta. 801+08 ℄ I-8 Std. C.B. No. 4
F.L. Grate 797.95
Inv. 18" 793.95

P.V.I. Sta. 801+23 Elev. 798.11

Sta. 802+00 56' Rt. F.L. 796.04

Sta. 802+00 81' Rt. Elev. 794.68
For Continuation See Ramp "I" Sta. 10+84.90 See Sht. No. 106

P.V.T. Sta. 803+25 Elev. 802.28

F.L. 6" Class I-3 Lt.

F.L. 6" Class I-3 Rt.

36" Pipe

66" Pipe

Sta. 812+00 56' Rt. F.L. 6" = 808.98

Sta. 812+38 56' Rt. F.L. 6" = 809.63

Sta. 813+00 ℄ I-8 Std. C.B. No. 4
F.L. Grate 811.84
Inv. 15" = 807.84
Inv. 15" = 806.92

Sta. 813+25 56' Lt. & Rt. F.L. 6" = 810.67

Sta. 813+25 26.75' Lt. F.L. 6" = 810.68

Sta. 813+02 36' Rt. F.L. 8" = 807.34 Outlet

Sta. 813+00 100' Lt. F.L. 8" = 800.00 Outlet

Sta. 815+00 56' Lt. & Rt. F.L. 6" = 812.82

801.23 801.09 800.98 800.91 800.88 800.89 800.94 801.02 801.14 801.30 801.49 801.71 801.93 802.28 802.60 802.94 803.38 804.52 805.16 805.80 806.44 807.08 807.72 808.36 809.00 809.64 810.28 810.92 811.56 812.20 812.84 813.48 814.12 814.76 815.40 816.04 816.68 817.32

785.2 786.6 786.2 782.6 786.3 785.1 785.1 785.7 786.3 786.9 788.4 793.0 795.1 797.0 794.5 802.0 801.7 798.9 798.9 799.0 795.2 795.2 793.3 795.5 794.6 795.3 795.1 795.9 797.3 795.5 796.9 796.6 796.7 796.9 797.2 797.6 797.2 799.3 799.9 801.3 802.0 802.6 803.3 808.4 811.2

800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815

STA. 800 - STA. 815

REV. 10/6/64

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

74
445

HAMILTON COUNTY
HAM. 71 - 13.05

ESTIMATED QUANTITIES

DRAINAGE

REF. NO.	STATION TO STATION	SIDE	E-3	I-1						M-106.6(c)	M-106.6(d)	I-2	I-5					I-8		I-10		L-10		L-120	ITEM 502.	I-1	I-1	I-8			SEE SHEET NO.
			Channel Ex.	6" Class F-4	6" Class I-3	6" Class J-1	8" M-106.6(c) Class F-4	15" Class J-1	18" Class D-1	18" Class J-1	84" M-106.6(c) Class A-1	96" M-106.6(d) Class A-1	Masonry	6" 60° Bend Class I-3	6" 90° Bend Class J-1	6"x6" Tee Class I-3	6"x6" Tee Class J-1	6"x6" Wye Class I-3	C.B Standard No.4	C.B Standard No.5	6" R. Conc. Riprap	Dumped Rock	Sodding	Sodding for Spl Berm & Slope Prot.	Jute Matting	Drainage Connection Using No.6 Aggregate	36" M-6.4(c) Gage 12 Class A-1	66" N-6.6(b) Class A-1	No. 2-5 Catch Basin (Mod. as per Plan)			
			Cu. Yds.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Cu. Yds.	Each	Each	Each	Each	Each	Each	Each	Sq. Yds.	Cu. Yds.	Sq. Yds.	Sq. Yds.	Sq. Yds.	Cu. Yds.	Lin. Ft.	Lin. Ft.	Each			
	785+00 to 800+00																														
1-D	785+00 — 791+07	L			607											1									34						
2-D	785+00 — 790+78	R			587																				32						
3-D	790+65 — 791+00	L			75	29								1											5						
4-D	793+09 — 800+00	L			691																				49						
5-D	792+90 — 800+00	R			710																				35						
6-D	786+90	℄	206						32			838	20.78							1	78	20	36								346
7-D	790+67	R						160											1					70							
8-D	790+79	R																						70							
9-D	792+86	R																													
10-D	793+29	R						145											1												
11-D	798+24	℄	89								382		46.60								56	38	20								347
12-D	Not Used																														
	800+00 to 815+00																														
13-D	800+00 — 813+25	L		10	1340											1									94						
14-D	800+00 — 802+00	R		10	200	44											1								10						
15-D	802+00 — 812+98	R			1098																				78						
16-D	813+25 — 815+00	L			215		10							1											10						
17-D	813+02 — 815+00	R			234		10											1							11						
18-D	801+08	R								70									1						256						
19-D	800+50 — 804+50	L																							350						
20-D	802+25 — 802+45	R																			22										
21-D	802+45 — 802+90	R																				33									
22-D	802+90 — 806+00	R																							390						
23-D	806+30	℄	28										6.5								27	12	3				216		1		349
24-D	806+00 — 811+00	R																				272									
25-D	811+50	℄	77										33.8								27	17	8					310			350
26-D	810+82 — 810+90	R																				6									
27-D	811+00 — 812+00	R																							167						
28-D	812+00 — 815+00	R																				168									
29-D	810+50 — 812+77	L																							198						
30-D	813+00	R	2					96					0.26						1			2	2		128						
31-D	813+10 — 815+00	L																							164						
32-D	Not Used																														
(I) TOTAL	Village of Montgomery		402	20	5757	73	20	401	32	70	382	838	107.94	1	1	1	2	1	4	1	210	568	69	140	1653	358	216	310	1			

ROADWAY & PAVEMENT

Revised C.E.H. 6-3-65

REF. NO.	STATION TO STATION	SIDE	I-15		S-24	I-15	B-19	B-21	T-31		T-71	I-7	I-22		SEE SHEET NO.
			Guard Rail Standard Lin. Ft.	Guard Rail Barrier Lin. Ft.	Removal of Exist. Structure Lumpsum	Guard Rail As Per Plan Lin. Ft.	Aggregate Base Course Cu. Yds.	Water-proofed Aggregate Cu. Yds.	Surface Treatment Bitumin-ous Gals.	Surface Treatment Aggregate Cu. Yds.	9" Reinforced Concrete Pavement Sq. Yds.	Reinforced Concrete Approach Slab T-13" Sq. Yds.	Grading A or B Subbase Cu. Yds.	Subbase Cu. Yds.	
	Roadway														
	785+00 To 800+00														
1-R	785+48.50 — 791+11	L	562.50												
2-R	785+00 — 790+79.25	R	579.25												
3-R	788+76.50 — 790+89	L & R	112.50	100											
4-R	792+86.50 — 798+49.00	R	562.50												
5-R	793+06.25 — 795+18.75	L & R	112.50	100											
6-R	793+15.25 — 794+65.25	L	150.00												
7-R	796+75	R			L.S.										
	800+00 To 815+00		612.50												
8-R	805+37.50 — 815+00	L													
9-R	802+00 — 813+00	R	1100.00												
10-R	800+25	L			L.S.										
11-R	800+00 - 800+25	L				50									
	Pavement														
	785+00 — 800+00						650	341	1014	33	6,773		1390	336	
1-P	790+83.10 — 791+08.10	L & R										134			
2-P	792+88.24 — 793+13.24	L & R										134			
	800+00 — 815+00						368	194	633	20	8,000		1502	160	
(I) TOTAL	Village of Montgomery		3,791.75	200 ✓	L.S.	50	1018	535	1647	53	14,773	268	2892	496	

QUANTITIES
STA. 785 ~ STA. 815

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

75/445

HAMILTON COUNTY
HAM. 71 - 13.05

HUBS NOT REFERENCED
Sta. 815+86.54 Sta. 825+00
Sta. 820+00 Sta. 830+00

REFERENCE P.O.T. Sta. 818+01.87
818 18.20 ⊗ 12" Oak
Hub 12.79 ⊗ 15" Maple

REFERENCE P.O.T. Sta. 827+78.92
6" Maple ⊗ 11.35 ⊗ 4" Maple
828
Hub 11.20 ⊗ 6" Sassafras

Wooded Area
Heavily Wooded
Small Trees & Brush
Field
Scattered Trees, Brush & Briars
Flower Garden
Garden
Edge of Lawn
Lawn
Brush & Briars
Jute Matting 7'-8" Wide
Jute Matting 11'-4" Wide
Dumped Rock Channel Protection 13'x16.5'x1'-6"
Dumped Rock Channel Protection 10'x1'-6" Field
Dumped Rock Channel Protection 8'x6.5'x1'-6"
MATCH LINE STA. 815+00
MATCH LINE STA. 830+00
LAWN
Sta. 818+70.50
CORPORATION LINE BETWEEN BLUE ASH & MONTGOMERY
816 817 818 819 N26°09'35"E 820 ℄ SURVEY 821 822 823 824 825 826 N26°09'35"E 827 828 829
Sta. 825+00 ℄
See Sheet No. 292
18" Cl. V-1
90°
15' C.P.
B.M. R.R. Spike in Root of 24" Oak. 145' Rt. of Sta. 819+15 Elev. 820.11
B.M. R.R. Spike 1.0' above ground in 8" Elm. 115' Rt. of Sta. 826+80 Elev. 829.53
For Quantities See Sh. No. 77

817.32 817.96 818.60 819.24 819.88 820.19 820.50 820.80 821.09 821.37 821.64 821.90 822.15 822.39 822.62 822.85 823.08 823.27 823.46 823.65 823.83 824.00 824.16 824.31 824.45 824.59 824.70 824.81 824.92 825.12 825.32 825.52 825.72 825.92 826.12 826.32 826.52 826.72 826.92 827.12 827.32 827.52 827.72

811.1 120 813.1 814.2 +86 815.4 815.1 +60 817.1 814.9 816.5 817.3 816.3 816.7 +70 815.9 817.1 817.6 818.2 818.8 820.3 821.6 823.6 825.3 827.2 828.6 830.8 832.9

Sta. 820+00 P.V.I. Elev. 823.72
Sta. 833+00 P.V.I. Elev. 824.92
+1.28%
+0.40%
V.C. = 600'
F.L. 6" Class I-3, 56' Lt. & Rt.
Sta. 815+00 56' Rt. & Lt. F.L. 6" 812.82
Sta. 825+00 ℄ I-8 Std C.B. No. 4 F.L. Grate 822.80 Inv. 18" 818.80 Outlet El. 817.85
Sta. 824+96 56' Rt. F.L. 6" 821.20
Sta. 824+98 56' Lt. F.L. 6" 821.21
Sta. 825+00 56' Rt. = F.L. 6" 819.62
Sta. 825+00 ℄ = F.L. 6" 819.40
Sta. 825+22 56' Lt. = F.L. 6" 819.71
Sta. 825+02 93' Lt. = F.L. 8" 818.35 Outlet
Sta. 830+00 56' Rt. & Lt. F.L. 6" 821.62

815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830

STA. 815 - STA. 830

REV. 10/6/64

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

76/445

HAMILTON COUNTY
HAM. 71-13.05

HUBS NOT REFERENCED
Sta. 830+00 Sta. 837+09.70

REFERENCE R.O.T. Sta. 835+39.69
835
22.8' 35.3'
6" Ash
9" Multiple Ash 4" Ash

REFERENCE R.O.T. Sta. 839+37.02
9" Walnut
Corner
15.16' 90.13' 3" Post
223°
840

Heavily Wooded Area
Small Trees & Bushes
Concrete Swimming Pool
2 Sty. Frame
Cork Patio
1-Sty. Corr. Metal Shed
Frame Shed
Gravel Dr.
Asphalt Dr.
Stump
Jute Matting 7'-8" Wide
Field Bushes & Briars
Woven Wire
Wooded Area
Jute Matting 7'-8" Wide

WORK AGREEMENT

LA RIW

MATCH LINE STA. 830+00

MATCH LINE STA. 845+00

831 832 N26°09'35"E 833 834 835 836 837 838 839 840 841 842 N26°09'35"E 843 844

SURVEY

Sta. 837+37.17 HAM 71 = Sta. 50+00.00 Deerfield Rd.

77°36'45"

Sta. 838+47 ℄ See Sht. No. 245

Sta. 843+50 22' Rt. See Sht. No. 247

Sta. 844+00 ℄ See Sht. No. 249

Sta. 845+00 ℄ See Sht. No. 351

18" C.I.E-1

18" C.I.J-1.2

Sta. 841+50 89' Rt. See Sht. No. 247

10'x6' Class F-4 Over pipe

15" C.I.J-1

15" C.I.F-4

36" C.I.A-1.5

Dumped Rock Channel Protection 33'x6.5'x1'-6"

Dumped Rock Channel Protection 27'x8.5'x1'-6"

See General Note Sht. No. 51

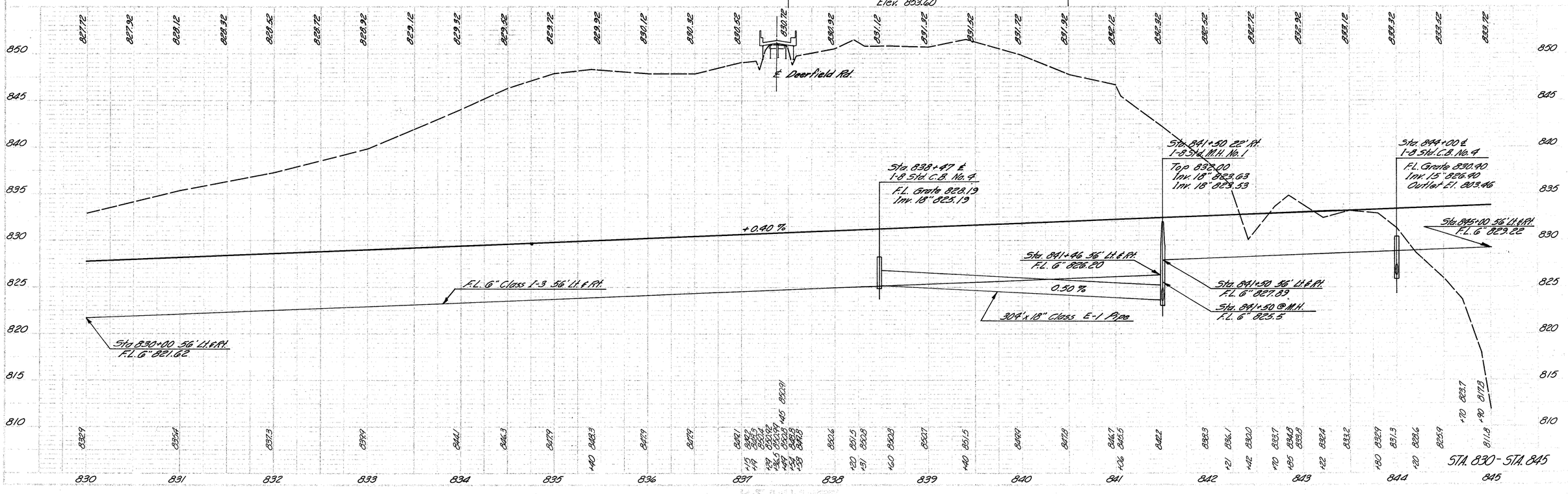
DEERFIELD RD.

NOTE: For Deerfield Rd. See Sht. No. 109

B.M. R.R. Spike in Root of 30" Walnut No. Side of Deerfield Rd. in Yard of House #10986. 140' Lt. of Sta. 837+60 Elev. 853.60

For Quantities See Sht. No. 77

16-D 17-D 21-D 16-R 5-R 18-D 19-D 22-D 23-D 24-D 7-R 8-R 20-D



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HAMILTON COUNTY
HAM. 71-13.05

77
445

ESTIMATED QUANTITIES

DRAINAGE

	REF. NO.	STATION TO STATION	SIDE	E-3	I-1											I-2	I-5			I-8		I-10	L-10	L-120	ITEM SPL.	SEE SHEET NO.
				Channel Ex.	6" Class F-4	6" Class I-3	6" Class I-3 Deep	6" Class J-1	6" Class J-1 Deep	8" M-164(c) Class F-4	15" Class F-4	15" Class J-1	18" Class E-1	18" Class J-1	36" M-164(d) Class A-1	Masonry	6" Bend Class J-1	6"x6" Wye Class I-3	15" 30° Bend Class F-4	C.B. No. 4 Standard	M.H. No. 1 Standard	Dumped Rock	Sodding	Jute Matting	Drainage Connection Using No. 6 Aggregate	
				Cu. Yds.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Cu. Yds.	Each	Each	Each	Each	Each	Sq. Yds.	Sq. Yds.	Sq. Yds.	Cu. Yds.	
		815+00 TO 818+70.50																								
	1-D	815+00 — 818+70.50	L			371																			22	
	2-D	815+00 — 818+70.50	R			370																			22	
	3-D	815+00 — 818+70.50	L																					315		
	4-D	815+00 — 815+30	R																			20				
	5-D	815+30 — 818+70.50	R																					429		
	6-D	Not Used																								
(I)	TOTAL	Village of Montgomery				741																20		744	44	
		818+70.50 To 830+00																								
	7-D	818+70.50 — 824+98	L			627																			36	
	8-D	818+70.50 — 824+96	R			626																			36	
	9-D	825+02 — 830+00	L				530			10								1							28	
	10-D	825+00 — 830+00	R		10		500		44								1								29	
	11-D	818+70.50 — 820+50	L																					153		
	12-D	818+70.50 — 824+00	R																					667		
	13-D	Not Used																								
	14-D	825+00	L											92		0.30				1		5	3	128		
	15-D	Not Used																								
		830+00 To 845+00																								
	16-D	830+00 — 841+46	L				1146																		65	
	17-D	830+00 — 841+46	R				1146																		65	
	18-D	841+50 — 845+00	L		10	350		66									1								20	
	19-D	841+50 — 845+00	R		10	340		32									1								20	
	20-D	Not Used																								
	21-D	838+47 — 841+50	L & R										304							1				128		
	22-D	841+50	R	9										67		0.30					1	12	3			
	23-D	841+53 — 842+50	R																					85		
	24-D	844+00	R	18							56	76				0.26			2	1		10	2	128		
	25-D	844+30 — 844+98	L																					66		
	26-D	845+00	℄	150											238	13.00						56	6			351
	27-D	Not Used																								
(I)	TOTAL	City of Blue Ash		177	30	1,943	3322	98	44	10	56	76	304	159	238	13.86	3	1	2	3	1	83	14	1355	299	

ROADWAY & PAVEMENT

	REF. NO.	STATION TO STATION	SIDE	I-15	I-15	B-19	B-21	T-31		T-71	I-22		SEE SHEET NO.
				Guard Rail	Guard Rail As Per Plan	Aggregate Base Course	Water-proofed Aggregate	Surface Treatment Bitumin-ous	Surface Treatment Aggregate	9" Reinforced Concrete Pavement	Grading A or B Subbase	Subbase	
				Lin. Ft.	Lin. Ft.	Cu. Yds.	Cu. Yds.	Gals.	Cu. Yds.	Sq. Yds.	Cu. Yds.	Cu. Yds.	
		Roadway											
		815+00 To 817+70.50											
	1-R	815+00 — 816+50	L	150									
	2-R	Not Used											
(I)	Total	Village of Montgomery		150									
		817+70.50 To 830+00											
	3-R	829+53 — 830+03	R		50								
	4-R	829+53 — 830+03	R.R.		50								
	10-R	826+97 — 827+47	L		50								
		830+00 To 845+00											
	5-R	836+70 — 837+70	R	100.00									
	6-R	837+01 — 838+01	L	100.00									
	7-R	841+00 — 845+00	R	400.00									
	8-R	844+30 — 845+00	L	50.00									
	9-R	Not Used											
(I)	Total	City of Blue Ash		650.00	150								
		Pavement											
		815+00 — 818+70.50				186	96	289	10	1,976	400	99	
(I)	Total	Village of Montgomery				186	96	289	10	1,976	400	99	
		818+70.50 — 830+00				567	293	879	28	6,024	1218	301	
		830+00 — 845+00				752	389	1,167	37	8,000	1618	399	
(I)	TOTAL	City of Blue Ash				1,319	689	2046	65	14,024	2836	700	

QUANTITIES
STA. 815 ~ STA. 845

REV. 10/6/64

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

78
445

HAMILTON COUNTY
HAM. 71-13.05

HUBS NOT REFERENCED
Sta. 846+36.42 Sta. 860+91.29

REFERENCE P.C. Sta. 851+18.05
6" Wild Cherry
12" Elm
6" Wild Cherry

END WORK
STA. 850+01.76

Wooded Pasture (No Underbrush)

Dumped Rock to be placed under HAM 50 B-27.98 Section

Dumped Rock Channel Protection 8'x1'-6"

Jute Matting 7'-8" Wide

for Typical Section of Adjoining Pavement See Sheet No. 3

LARIW

MATCH LINE STA. 845+00

Sta. 845+00 36" Cl. A-1

Sta. 847+00 36" Cl. A-1

90°

55°

N26°09'35"E

℄ SURVEY

Clearing

Under Construction

HAM 50 B-27.98

15" Pipe

N26°09'35"E

Jute Matting 7'-8" Wide

Dumped Rock Channel Protection 8'x2'-6"

END PROJECT
STA. 848+73.24 Bk. =
STA. 849+00.00 Ah.

P.C. Sta. 851+18.05

Wooded

B.M. R.R. Spike in Root of 24" Beech. 125' Rt. of Sta. 847+50
Elev. 829.11

℄ SURVEY
CURVE DATA
P.I. = Sta. 858+28.24
Δ = 18°39'54" Rt.
D = 1°20'
R = 4297.18'
L = 1399.88'
T = 706.19'
E = 57.64'

For Quantities See Sht. No. 79

Sta. 847+89, 56' Lt.
F.L. 6", 830.38

+0.40%

Sta. 847+63, 27' Rt.
F.L. 6", 830.09

Sta. 847+93, 27' Lt.
F.L. 6", 830.39

Sta. 847+29, 56' Rt.
F.L. 6" 830.14

Sta. 845+00, 56' Lt. & Rt.
F.L. 6", 829.22

Sta. 847+63, 57' Rt.
F.L. 6" 827.78

Existing 6" C.I. I.-3

Sta. 847+93, 107' Lt.
F.L. 8" 827.40 Outlet

Sta. 847+93, 57' Lt.
F.L. 6" 828.57

Sta. 847+63, 57' Rt.
F.L. 6" 827.87

Sta. 847+08, 100' Rt.
F.L. 8" 827.0 Outlet

36" Pipe

36" Pipe

EQUATION Sta. 848+73.24 Back = Sta. 849+00 Ahead

STA. 845 - STA. 860

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

79
445

HAMILTON COUNTY
HAM. 71-13.05

ESTIMATED QUANTITIES

DRAINAGE

REF. NO.	STATION TO STATION	SIDE	E-3 Channel Ex. Cu.Yds.	I-1 6" Class I-3 Lin.Ft.	I-1 6" Class J-1 Lin.Ft.	I-1 8" M-6.4(c) Class F-4 Lin.Ft.	I-1 36" M-6.6(d) Class A-1 Lin.Ft.	I-2 Masonry Cu.Yds.	I-5 6" 60° Bend Class E-3 Each	I-5 6" 90° Bend Class J-1 Each	I-5 6"x6"x6" Tee Class J-1 Each	I-10 6" R.C. Riprap Sq.Yds.	I-10 Dumped Rock Cu.Yds.	L-10 Sodding Sq.Yds.	L-120 Jute Matting Sq.Yds.	ITEM SPL. Drainage Connection Using Nat. Aggregate Cu.Yds.	SEE SHEET NO.
	845+00 To 848+73.24																
1-D	845+00 — 847+89	L		289												21	
2-D	845+00 — 847+29	R		229												21	
3-D	847+93	L		40	70	10				1	1					6	
4-D	847+05 — 847+63	R		40	30	10			1	1	1					8	
5-D	845+02 — 846+00	L													86		
6-D	845+20 — 846+00	R											60				
7-D	846+37 — 847+00	R													55		
8-D	847+00	E	22				270	11.6				32	35	6			352
9-D	847+22 — 847+67	L											21				
10-D	Not Used																
(I) TOTAL	City of Blue Ash		22	598	100	20	270	11.6	1	2	2	32	116	6	141	56	

ROADWAY & PAVEMENT

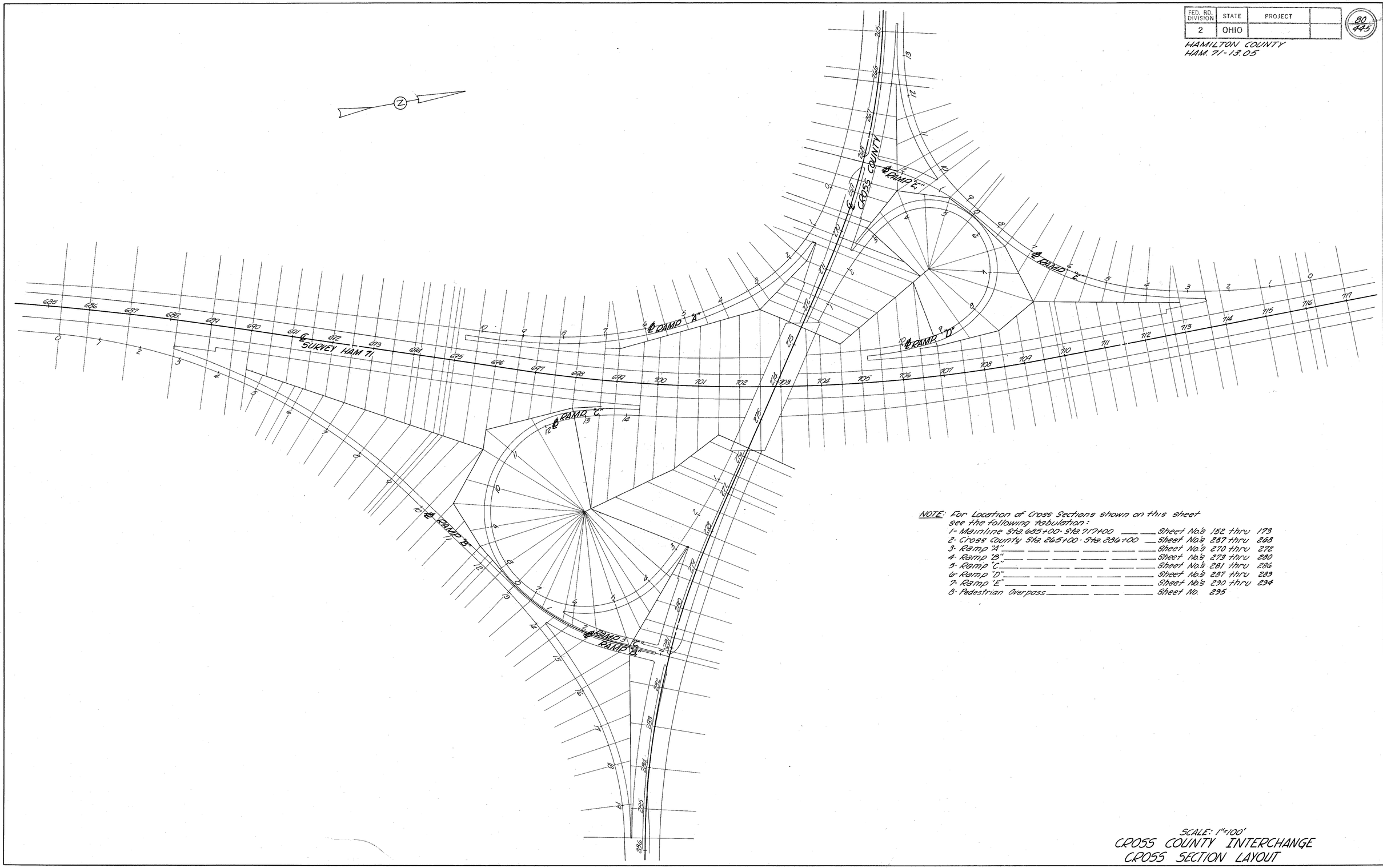
REF. NO.	STATION TO STATION	SIDE	E-12 Pipe Removal 24"& Under Lin.Ft.	I-15 Guard Rail Lin.Ft.	B-19 Aggregate Base Course Cu.Yds.	B-21 Water-proofed Aggregate Cu.Yds.	T-31 Surface Treatment Bitum-inous Gals.	T-31 Surface Treatment Aggregate Cu.Yds.	T-71 9" Reinforced Concrete Pavement Sq.Yds.	I-22 Grading A or B Subbase Cu.Yds.	I-22 Subbase Cu.Yds.	SEE SHEET NO.
	Roadway											
	845+00 To 850+01.76											
1-R	845+00 — 850+01.76	L		475								
2-R	845+00 — 847+00	R		200								
3-R	847+30	R	10									
4-R	847+60	R	10									
5-R	847+80	L	10									
6-R	847+90	L	10									
7-R	Not Used											
	Pavement											
	845+00 — 848+73.24				187	97	290	9	1,991	402	92	
(I) TOTAL	City of Blue Ash		40	675	187	97	290	9	1,991	402	92	

QUANTITIES
STA. 845 ~ STA. 848+73.24

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

80/445

HAMILTON COUNTY
HAM. 71-13.05



NOTE: For Location of Cross Sections shown on this sheet see the following tabulation:

1- Mainline Sta. 685+00 - Sta. 717+00	Sheet No.'s	152	thru 173
2- Cross County Sta. 265+00 - Sta. 286+00	Sheet No.'s	257	thru 268
3- Ramp "A"	Sheet No.'s	270	thru 272
4- Ramp "B"	Sheet No.'s	273	thru 280
5- Ramp "C"	Sheet No.'s	281	thru 286
6- Ramp "D"	Sheet No.'s	287	thru 289
7- Ramp "E"	Sheet No.'s	290	thru 294
8- Pedestrian Overpass	Sheet No.	295	

SCALE: 1"=100'

CROSS COUNTY INTERCHANGE
CROSS SECTION LAYOUT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

81/445

HAMILTON COUNTY
HAM. 71-13.05

URBAN SECONDARY — INTERSTATE

BEGIN PAVEMENT STA. 257+18.50

WORK AGREEMENT

REFERENCE T.S. Sta. 257+61.64: 6" Maple, 4.70' Rt., 258, 15.0' Rt., 4" Cherry, 24" Hickory

REFERENCE S.C. Sta. 260+11.64: 5" Ash, 260, 11.1' Rt., 4" Cherry, 24" Hickory

WYNNECREST DRIVE — Walk — Walk

Cultivated

1-Sty. Brick #9300 — 1-Sty. Brick #9306 — 1-Sty. Brick #9314 — 1-Sty. Brick #9320 — 1-Sty. Brick #9328 — 1-Sty. Brick #9334 — 1-Sty. Brick #9342 — 2-Sty. Brick #9350

Concrete — 2-1-Sty. Concrete Block — Wood — Chain Link — Wooded Area — Woven Wire — Barbed Wire

N81°30'53"E

Proposed Construction under Separate Contract.

Open Field Dumped Rock Channel Protection 4'X1'-6"

BEGIN WORK STA. 255+00

Hamilton County Sanitary Sewer For Detail See Sht. No. 37

For Typical Section of Adjoining Pavement See Sheet No. 7

Sta. 257+30.42, 107' Lt. Existing M.H.

Dumped Rock Channel Protection 8'X1'-6"

Dumped Rock Channel Protection 4'X1'-6"

Sta. 257+50, 3.5' Lt. See Sht. No. 254

Jute Matting 7'-8" Wide

Jute Matting 4'-0" Wide

Sta. 256+25, 3.5' Lt. See Sht. No. 254

Sta. 256+25, 84" Cl. A-1

Sta. 256+37.99, 174.9' Rt. Existing M.H.

Dumped Rock Channel Protection 5'X4'X1'-6"

Dumped Rock Channel Protection 4'X1'-6"

Sta. 257+79 to Sta. 259+43 NOTE: For Retaining Wall Detail See Sht. Nos. 359 & 360

Sta. 256+75.34 Rt. 6" Cl. E-1 Plug End

Sta. 257+00, 3.5' Lt. 6" Cl. E-1 Plug End

Sta. 257+35, 34' Rt. 6" Cl. E-1 Plug End

18" Cl. I-1 — 12" Cl. E-1 — 6" Cl. I-3 — 18" Cl. E-1

Wooded Area — Asphalt Drive — Conc. Walk — 1-Sty. Brick #9342

SEWER EASEMENT

FIDELIS DRIVE

1-Sty. Brick #9391

Sta. 259+00, 3.5' Lt. See Sht. No. 254

Sta. 261+30.50, 3.5' Lt. See Sheet No. 82

TEMPORARY EASEMENT

Meet Existing Walkway

VILLAGE OF MONTGOMERY — CORPORATION LINE CITY OF BLUE ASH

Sta. 262+00.00 Cross County ℄ Curve Tangent

Sta. 263+35.08 Cross County ℄ P.C.C. Sta. 263+55.00 Cross County ℄ — Sta. 263+75.08 Cross County ℄ End Tangent

Sta. 263+82.50 Cross County ℄ Free End of Guard Rail

Sta. 264+38.50 Cross County Hwy. = Sta. 50+00 Pedestrian Overpass

Exist. 5' Asphalt Walk

MATCH LINE STA. 264+50 CROSS COUNTY ℄ See Sheet No. 82

Note: See Sht. No. 415 for Pedestrian Overpass Detail.

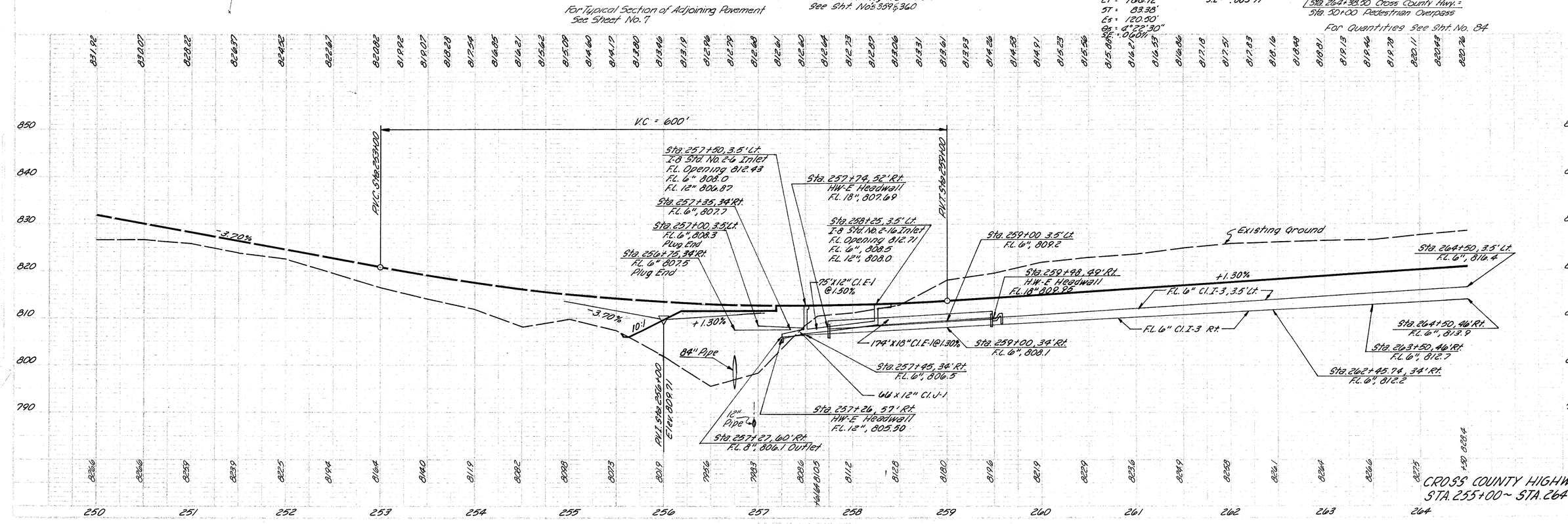
For Quantities See Sht. No. 84

CROSS COUNTY ℄ CURVE DATA

P.I. =	Sta. 260+22.09
Δ =	42°23'35" Rt.
D =	3°30'00"
R =	1,637.02'
Ls =	250.00'
Lc =	961.23'
Ts =	760.45'
LT =	166.72'
ST =	89.38'
Es =	120.50'
Θs =	4°22'30"
SE =	.060ft

CROSS COUNTY ℄ CURVE DATA

P.I. =	Sta. 661+78.62
Δ =	18°54'34" Lt.
D =	4°00'00"
R =	1,432.40'
L =	472.74'
T =	238.54'
E =	19.73'
SE =	.083'

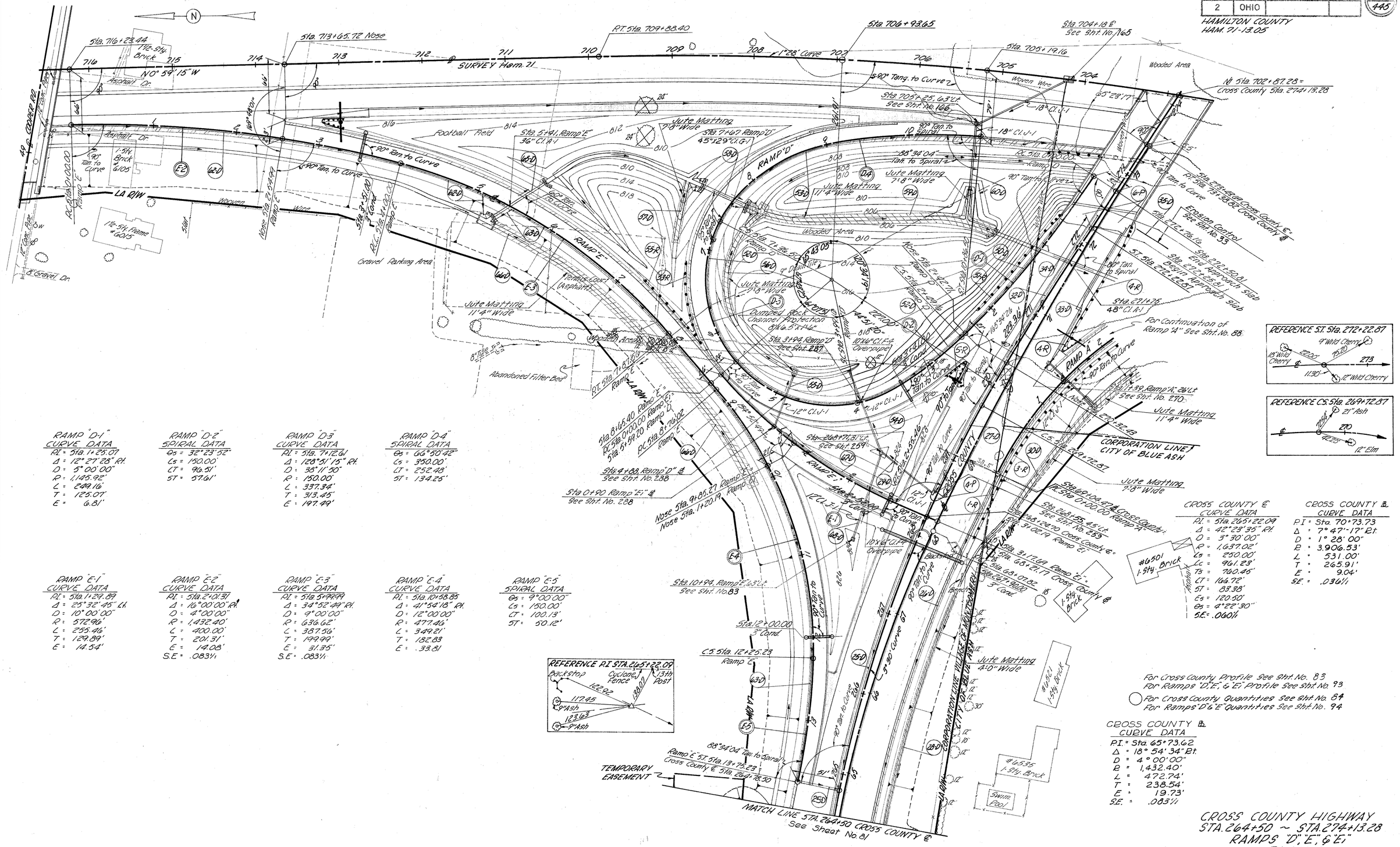


CROSS COUNTY HIGHWAY
STA. 255+00 ~ STA. 264+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

82
445

HAMILTON COUNTY
HAM. 71-13.05


Sta. 716+23.44
Sta. 713+65.72 Nose
P.T. Sta. 709+88.40
Sta. 706+93.65
Sta. 704+18.2
See Sht. No. 165
Sta. 705+19.16
SURVEY Harm. 71
N 0° 54' 15" W
1°28' Curve
90° Tang. to Curve
Sta. 705+25.63 Lt.
See Sht. No. 166
90° Tan. to Spiral
Asphalt Dr.
Football Field
Jute Matting 7'-8" Wide
Sta. 5+91, Ramp "E" 36" Cl. IV-I
Sta. 7+07 Ramp "D" 45" 129° Cl. G-1
RAMP "D"
RAMP "E"
LA R/W
Woven Wire
Wooded Area
Gravel Parking Area
Tennis Court (Asphalt)
Jute Matting 11'-4" Wide
Abandoned Filter Bed
8" Gravel Dr.
1-Sty. Brick 6105
1-Sty. Frame 6015
Sta. 71+61.50 Ramp "E"
Sta. 3+51.00 Ramp "E"
Sta. 3+00.00 Ramp "E"
Nose Sta. 2+42.71 Ramp "D"
Sta. 71+26.50 Ramp "D"
Jute Matting 7'-8" Wide
Jute Matting 11'-4" Wide
Dumped Rock Channel Protection 8'K x 5'K x 1'd"
Sta. 3+94, Ramp "D" See Sht. 287
10'K @ Cl. F-2 Overpipe
Sta. 4+65.40 Ramp "E"
Sta. 5+49.20 Ramp "E"
Sta. 0+00.00 Ramp "E"
Sta. 1+60.02 Ramp "E"
Sta. 4+88, Ramp "D" See Sht. No. 288
Sta. 0+90 Ramp "E1" See Sht. No. 288
Nose Sta. 9+05.27 Ramp "E1"
Nose Sta. 1+20.19 Ramp "E1"
Sta. 10+94, Ramp "E" 31° Lt. See Sht. No. 83
Sta. 12+00.00 3° Cond.
C.S. Sta. 12+29.23 Ramp "E"
Sta. 268+77.81 Lt. See Sht. 259
Sta. 3+00.00 3° Cond.
Sta. 1+30, Ramp "A" 26° Lt. See Sht. No. 270
Sta. 2+70.32.43
CORPORATION LINE CITY OF BLUE ASH
Jute Matting 7'-8" Wide
Sta. 69+10.47 & Cross County ℄ Pt. Sta 0+00.00 Ramp "A"
Sta. 268+25.45 Lt. See Sht. No. 259
Sta. 268+94.70 Cross County ℄
Sta. 3+06.19 Ramp "E1"
Sta. 3+17.69 Ramp "E1"
Sta. 68+21.11 Cross County ℄
Sta. 68+07.82 3° Cond.
Sta. 67+70.00 3° Cond.
Sta. 271+22.87 Cross County ℄ Sta. 751+38.02 Cross County ℄
Erosion Control See Sht. No. 33
Sta. 272+76.16
Sta. 272+50.81 End Approach Slab
Sta. 272+22.81 Begin Approach Slab
Sta. 271+72.87
48" Cl. A-1
For Continuation of Ramp "A" See Sht. No. 88
RAMP "A"
Sta. 1+30, Ramp "A" 26° Lt. See Sht. No. 270
Jute Matting 11'-4" Wide
Sta. 269+72.87
Nose Sta. 2+27.71 Ramp "D"
Sta. 2+43.20 Ramp "D"
Sta. 2+55.46 Ramp "D"
Sta. 2+68.71 Ramp "D"
Sta. 2+81.96 Ramp "D"
Sta. 2+95.21 Ramp "D"
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Sta. 71+72.00 Ramp "D"
Sta. 71+85.25 Ramp "D"
Sta. 71+98.50 Ramp "D"
Sta. 72+11.75 Ramp "D"
Sta. 72+25.00 Ramp "D"
Sta. 72+38.25 Ramp "D"
Sta. 72+51.50 Ramp "D"
Sta. 72+64.75 Ramp "D"
Sta. 72+78.00 Ramp "D"
Sta. 72+91.25 Ramp "D"
Sta. 73+04.50 Ramp "D"
Sta. 73+17.75 Ramp "D"
Sta. 73+31.00 Ramp "D"
Sta. 73+44.25 Ramp "D"
Sta. 73+57.50 Ramp "D"
Sta. 73+70.75 Ramp "D"
Sta. 73+84.00 Ramp "D"
Sta. 73+97.25 Ramp "D"
Sta. 74+10.50 Ramp "D"
Sta. 74+23.75 Ramp "D"
Sta. 74+37.00 Ramp "D"
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Sta. 74+63.50 Ramp "D"
Sta. 74+76.75 Ramp "D"
Sta. 74+90.00 Ramp "D"
Sta. 75+03.25 Ramp "D"
Sta. 75+16.50 Ramp "D"
Sta. 75+29.75 Ramp "D"
Sta. 75+43.00 Ramp "D"
Sta. 75+56.25 Ramp "D"
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Sta. 77+02.00 Ramp "D"
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Sta. 77+28.50 Ramp "D"
Sta. 77+41.75 Ramp "D"
Sta. 77+55.00 Ramp "D"
Sta. 77+68.25 Ramp "D"
Sta. 77+81.50 Ramp "D"
Sta. 77+94.75 Ramp "D"
Sta. 78+08.00 Ramp "D"
Sta. 78+21.25 Ramp "D"
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Sta. 78+61.00 Ramp "D"
Sta. 78+74.25 Ramp "D"
Sta. 78+87.50 Ramp "D"
Sta. 79+00.75 Ramp "D"
Sta. 79+14.00 Ramp "D"
Sta. 79+27.25 Ramp "D"
Sta. 79+40.50 Ramp "D"
Sta. 79+53.75 Ramp "D"
Sta. 79+67.00 Ramp "D"
Sta. 79+80.25 Ramp "D"
Sta. 79+93.50 Ramp "D"
Sta. 80+06.75 Ramp "D"
Sta. 80+20.00 Ramp "D"
Sta. 80+33.25 Ramp "D"
Sta. 80+46.50 Ramp "D"
Sta. 80+59.75 Ramp "D"
Sta. 80+73.00 Ramp "D"
Sta. 80+86.25 Ramp "D"
Sta. 80+99.50 Ramp "D"
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Sta. 81+52.50 Ramp "D"
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Sta. 88+68.00 Ramp "D"
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Sta. 90+66.75 Ramp "D"
Sta. 90+80.00 Ramp "D"
Sta. 90+93.25 Ramp "D"
Sta. 91+06.50 Ramp "D"
Sta. 91+19.75 Ramp "D"
Sta. 91+33.00 Ramp "D"
Sta. 91+46.25 Ramp "D"
Sta. 91+59.50 Ramp "D"
Sta. 91+72.75 Ramp "D"
Sta. 91+86.00 Ramp "D"
Sta. 91+99.25 Ramp "D"
Sta. 92+12.50 Ramp "D"
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Sta. 92+92.00 Ramp "D"
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Sta. 95+43.75 Ramp "D"
Sta. 95+57.00 Ramp "D"
Sta. 95+70.25 Ramp "D"
Sta. 95+83.50 Ramp "D"
Sta. 95+96.75 Ramp "D"
Sta. 96+10.00 Ramp "D"
Sta. 96+23.25 Ramp "D"
Sta. 96+36.50 Ramp "D"
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Sta. 96+63.00 Ramp "D"
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Sta. 96+89.50 Ramp "D"
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Sta. 97+42.50 Ramp "D"
Sta. 97+55.75 Ramp "D"
Sta. 97+69.00 Ramp "D"
Sta. 97+82.25 Ramp "D"
Sta. 97+95.50 Ramp "D"
Sta. 98+08.75 Ramp "D"
Sta. 98+22.00 Ramp "D"
Sta. 98+35.25 Ramp "D"
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Sta. 98+61.75 Ramp "D"
Sta. 98+75.00 Ramp "D"
Sta. 98+88.25 Ramp "D"
Sta. 99+01.50 Ramp "D"
Sta. 99+14.75 Ramp "D"
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Sta. 99+67.75 Ramp "D"
Sta. 99+81.00 Ramp "D"
Sta. 99+94.25 Ramp "D"
Sta. 100+07.50 Ramp "D"
Sta. 100+20.75 Ramp "D"
Sta. 100+34.00 Ramp "D"
Sta. 100+47.25 Ramp "D"
Sta. 100+60.50 Ramp "D"
Sta. 100+73.75 Ramp "D"
Sta. 100+87.00 Ramp "D"
Sta. 101+00.25 Ramp "D"
Sta. 101+13.50 Ramp "D"
Sta. 101+26.75 Ramp "D"
Sta. 101+40.00 Ramp "D"
Sta. 101+53.25 Ramp "D"
Sta. 101+66.50 Ramp "D"
Sta. 101+79.75 Ramp "D"
Sta. 101+93.00 Ramp "D"
Sta. 102+06.25 Ramp "D"
Sta. 102+19.50 Ramp "D"
Sta. 102+32.75 Ramp "D"
Sta. 102+46.00 Ramp "D"
Sta. 102+59.25 Ramp "D"
Sta. 102+72.50 Ramp "D"
Sta. 102+85.75 Ramp "D"
Sta. 102+99.00 Ramp "D"
Sta. 103+12.25 Ramp "D"
Sta. 103+25.50 Ramp "D"
Sta. 103+38.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

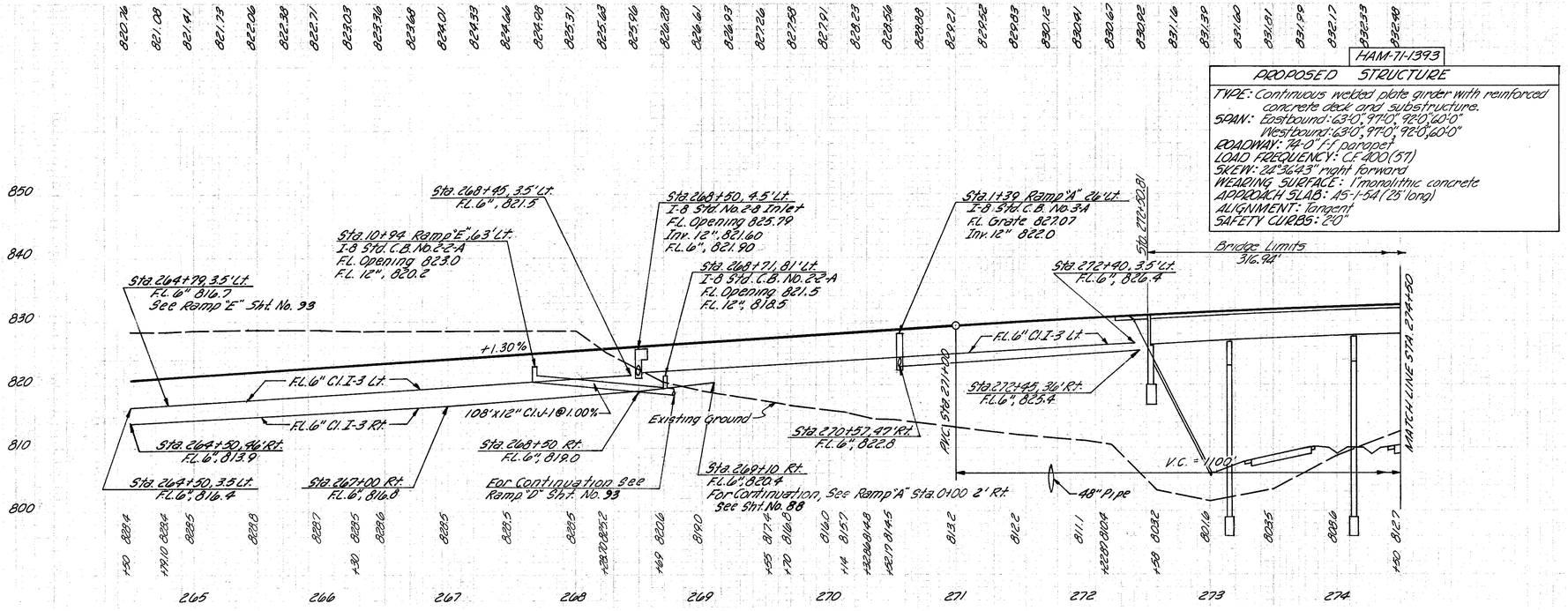
83
445

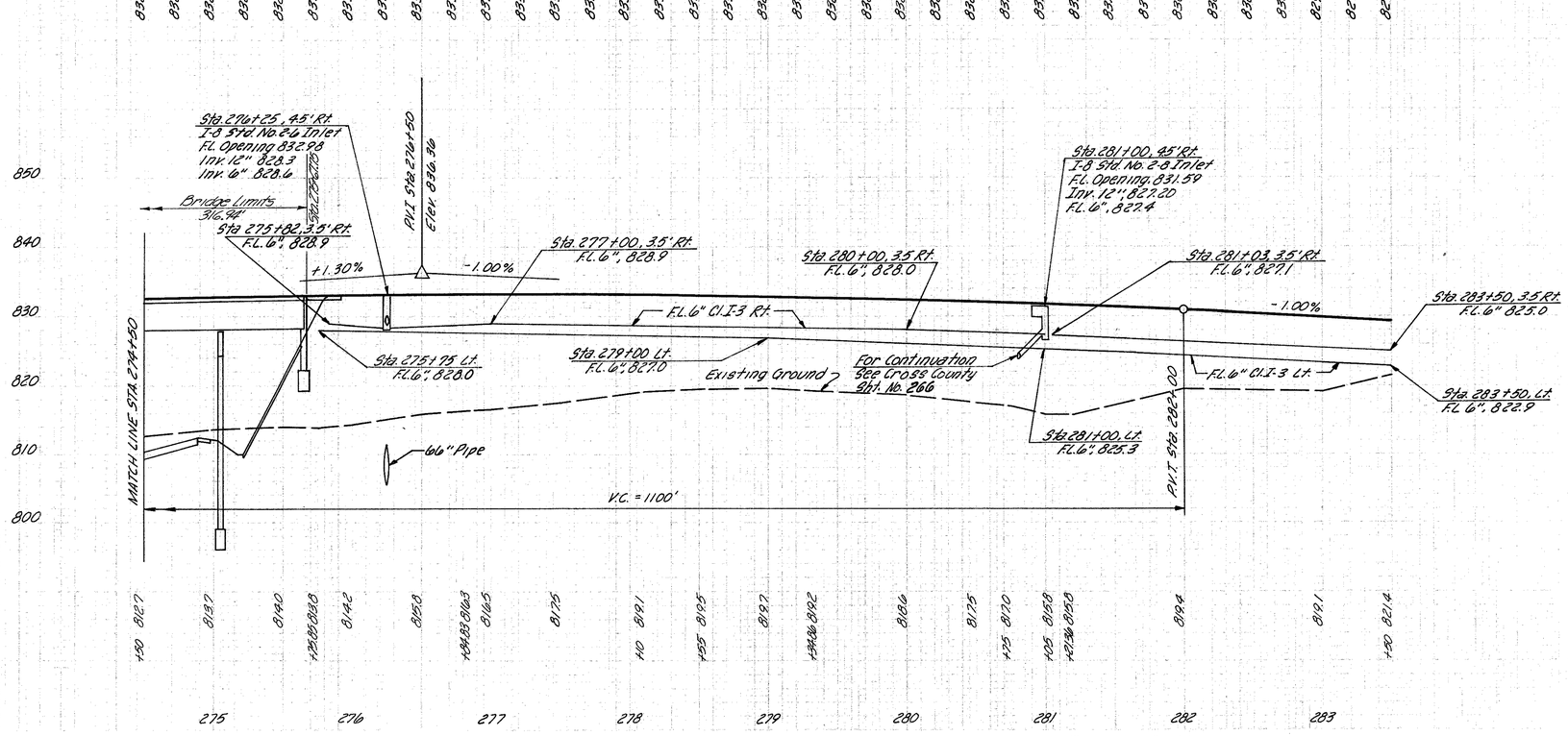
HAMILTON COUNTY
HAM. 71-13.05

HAM-71-1393

PROPOSED STRUCTURE

TYPE: Continuous welded plate girder with reinforced concrete deck and substructure.
SPAN: Eastbound: 630', 970', 920', 600"
Westbound: 630', 970', 920', 600"
ROADWAY: 74'-0" F-F parapet
LOAD FREQUENCY: CF 400 (S1)
SKEW: 028°36'43" right forward
WEARING SURFACE: 1" monolithic concrete
APPROACH SLAB: AS-1-54 (25' long)
ALIGNMENT: Tangent
SAFETY CURBS: 20"





CROSS COUNTY HIGHWAY
STA. 264+50 ~ STA. 283+50
PROFILE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

84
445

HAMILTON COUNTY
HAM. 71-13.05

ESTIMATED QUANTITIES

DRAINAGE

REF. NO.	STATION TO STATION	SIDE	E-3 Channel Ex. Cu. Yds.	I-1 6" Class F-4 Lin. Ft.	I-1 6" Class I-3 Lin. Ft.	I-1 6" Class J-1 Lin. Ft.	I-1 8" M-6.04(c) Class F-4 Lin. Ft.	I-1 12" Class E-1 Lin. Ft.	I-1 12" Class J-1 Lin. Ft.	I-1 18" Class E-1 Lin. Ft.	I-1 48" M-6.04(d) Class A-1 Lin. Ft.	I-1 84" M-6.04(d) Class A-1 Lin. Ft.	I-2 Masonry Cu. Yds.	I-5 6"x6" Tee Class J-1 Each	I-5 6"x6" Wye Class I-3 Each	I-8 Median Inlet Standard No.Ala Each	I-8 Median Inlet Standard No.2b Each	I-8 Median Inlet Standard No.21b Each	I-10 6" R.C. Riprap Sq. Yds.	I-10 Dumped Rock Cu. Yds.	L-10 Sodding Sq. Yds.	L-120 Jute Matting Sq. Yds.	ITEM SPL. Drainage Connection Using Nola Aggregate Cu. Yds.	L-10 Sodding for Sil. Berm & Slope Prot Sq. Yds.	SEE SHEET NO.
	Cross County 255+00-264+50																								
1-D	256+75 – 257+35	R			60																		5		
2-D	257+39 – 258+68	R			193		10								1								11		
3-D	255+75 – 256+53	R																		18					
4-D	256+25 – 256+50	L																				11			
5-D	256+50 – 256+76	L																		6					
6-D	256+68 – 257+60	R																		22					
7-D	256+75	℄	56									134	45.60						44	34	10				353
8-D	257+02 – 257+18	L																		4					
9-D	257+25 – 257+50	L & R							66				0.23			1				1	2				
10-D	Not Used																								
11-D	257+74 – 259+48	R								174			0.60								6				
12-D	Not Used																								
(US)	Total City of Blue Ash		56		213		10		66	174		134	46.43		1	1			44	85	18	11	16		
13-D	258+68 – 262+46	R			372																		27		
14-D	259+48 – 259+58	R																	7						
15-D	259+58 – 262+46	R																				124			
16-D	Not Used																								
(US)	Total Village of Montgomery				372														7			124	27		
17-D	257+00 – 257+49	L		10	39																		2		
18-D	258+26 – 264+50	L		10	614																		20		
19-D	262+46 – 264+50	R			200																		14		
20-D	257+18 – 258+60	L																		63					
21-D	257+50 – 258+25	L						75									1								
22-D	258+60 – 260+00	L																				124			
23-D	262+46 – 264+50	R																				88			
24-D	Not Used																								
	264+50 TO 274+13.28																								
25-D	264+50 – 268+45	L			395	50								1									13		
26-D	264+50 – 268+10	R			445																		32		
27-D	268+51 – 270+65	L		10	204																		7		
28-D	264+50 – 267+50	R																				128			
29-D	268+55 – 268+71	L							79								1								
30-D	268+75 – 270+40	R																				137			
31-D	Not Used																								
(I)	Total Village of Montgomery			30	1897	50		75	79					1		1	1			63		477	88		
32-D	270+65 – 272+90	L			175																		6		
33-D	270+39 – 272+45	R		10	177																		14		
34-D	271+25	℄	5								286		19.00							32	6				354
35-D	272+50	R																						42	
(I)	TOTAL Hamilton County		5	10	352						286		19.00							32	6		20	42	

ROADWAY & PAVEMENT

REF. NO.	STATION TO STATION	SIDE	I-15 Guard Rail Lin. Ft.	L-7 Riprap For Tree Protection Sq. Yds.	I-15 Guard Rail As Per Plan Lin. Ft.	T-30 Bitum. Prime Coat Gals.	T-35 Asphaltic Concrete Surface Course Cu. Yds.	B-19 Aggregate Base Course Cu. Yds.	B-21 Water-proofed Aggregate Cu. Yds.	T-31 Surface Treat. Bitum. 6" Gals.	T-31 Surface Treat. Aggregate Cu. Yds.	T-71 9" Reinf. Concrete Pavement Sq. Yds.	I-7 Reinf. Concrete Approach Slab T-13 Sq. Yds.	I-12 Standard Type 2-A Curb Lin. Ft.	I-21 Concrete Median Pavement Sq. Yds.	I-22 Grading A or B Subbase Cu. Yds.	Subbase Cu. Yds.	SEE SHEET NO.
	Roadway																	
	255+65 To 264+50																	
1-R	257+79 – 259+43	R	For Quantities See Sheet No.															
2-R	259+00 – 259+25	R	25															
3-R	257+28 – 257+79	R	50															
4-R	259+61	R		10														
(US)	Total City of Blue Ash		75	10														
	264+50 To 274+13.28																	
4-R	270+81.75 – 272+50.50	R	168.75		50													
5-R	269+82 – 270+07	L			50													
(I)	Total Hamilton County		168.75		100													
	Pavement																	
	257+18.50-259+43																	
	257+18.50 – 259+43	R						17	9	25	1	661		225		122		
1-P	257+79 – 259+43	R														108	18	
2-P	258+25.3	R				17	2	6										
(US)	Total City of Blue Ash					17	2	23	9	25	1	661		225	108	145		
	259+43 – 262+45.36	R						23	12	34	1	891		303		171		
3-P	Not Used																	
(US)	Total Village of Montgomery							23	12	34	1	891		303		171		
T-P	264+38.50	L & R				34	3	10										
	257+18.50-262+45.36	L										1561		527		270		
	262+45.36-264+50	L & R										1206		410		205		
4-P	268+51.70	L & R													18			
	264+50 – 270+65	L & R						24	12	36	.1	3622		1225		622	20	
5-R	257+25 - 258+00	L	75															
(I)	Total Village of Montgomery		75			34	3	34	12	36	1	6389		2162	18	1097	20	
	270+65 – 272+25.81							8	4	12	1	947		320		169		
6-P	272+28.81-272+50.81	L & R											171	50		29		
B-P	Not Used																	
(I)	TOTAL Hamilton County							8	4	12	1	947	171	370		198		

QUANTITIES
CROSS COUNTY STA. 255+00 ~ STA. 274+13.28

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

85
445

HAMILTON COUNTY
HAM. 71 - 13.05

Mainline Sta. 702+87.28 =
Cross County ℄ Sta. 274+13.28

P.T. Sta. 689+57.57

10'x6" Cl. F-4 Overpipe

Sta. 691+50 ℄
See Sht. No. 137

Sta. 695+30
54" Cl. A-1

P.C. Sta. 696+55.26

Sta. 698+51.62

Sta. 699+60.93

Sta. 9+60 Ramp "B" 40' Lt.
See Sht. No. 273

N 18°33'55"E

℄ SURVEY HAM. 71

15" Cl. J-1

1°28' Curve

Abandoned Foundation

90° Tan. to Curve

(Conc. Slab (Cistern)

1-Sty. Frame

Barn

Erosion Control
See Sht. No. 33

Dumped Rock Channel Protection 12'x1'-6"

Sta. 275+62.28
Begin Approach Slab

Sta. 275+78.85
℄ Sta. 275+80.03=
℄ P.C. Sta. 75+06.03

Sta. 275+92.75
End Approach Slab

Dumped Rock Channel Protection 22'x20'x1'-6"

Sta. 276+25
66" Cl. A-1

10'x6" Cl. B89 F-4 Overpipe

Dumped Rock Channel Protection 10'x1'-6"

90° Tan. to Curve

Field

Jute Matting 7'-8" Wide

Dumped Rock Channel Protection 6'x6'x1'-6"

Sta. 10+60
72" Cl. A-1

Dumped Rock Channel Protection 12'x1'-6"

Garden

Jute Matting 7'-8" Wide

Jute Matting 11'-4" Wide

Sta. 276+25.43 Rt.
See Sht. No. 268

P.C. Sta. 0+00.00
Ramp "C"

Sta. 11+78.67
Ramp "C"

Sta. 5+17.44
Ramp "C"

Barbed Wire

First Pine Trees 75° Tan. to Curve

Multiple 12"

Corr. Metal Garage

Cedars & Pines 75° Tan. to Curve

Sta. 8+85
72" Cl. A-1

Sta. 8+60.00
Ramp "B"

Pier

Pond

TEMPORARY ℄ EASEMENT

Jute Matting 7'-8" Wide

Dumped Rock Channel Protection 10'x1'-6"

Pony

Summer House

Sta. 12+96.00 Ramp "B" ℄
P.T. Sta. 0+00.00 Ramp "B" ℄
Sta. 7+49.09 Ramp "B" ℄

Jute Matting 7'-8" Wide

Sta. 14+12.30 Ramp "B"

Nose Sta. 1+38.71
Ramps "C-1" & "B-1"

Sta. 14+29.27
Ramp "B-1"

Sta. 15+39.30
Ramp "B-1" ℄

Sta. 1+00
Ramp "B-1" ℄
See Sht. No. 90

Sta. 1+45 Ramp "C-1"
19.0 Lt. See Sht. No. 283

Sta. 2+00 Ramp "C-1"
See Sht. No. 286

Sta. 16+15
Ramp "B" 86' Lt.
See Sht. No. 279

Sta. 281+00, 4.5' Rt.
See Sht. No. 266

Sta. 281+60.00
3" Cond.

Jute Matting 7'-8" Wide

28'x12" Cl. E-4
See Sht. No. 279

CORPORATION LINE

For Kennedy Lane Typical Section See Sheet No. 7

Dumped Rock Channel Protection 18'x16.5'x1'-6"

Jute Matting 7'-8" Wide

MATCH LINE STA. 283+50 CROSS COUNTY ℄
See Sheet No. 86

Mainline Sta. 2+78.15
Ramp "C"

C.S. Sta. 2+92.70
Ramp "C"

30592'

90° Tan. to Spiral

Sta. 2+83.00
3" Cond.

Nose Sta. 2+78.15

Wood Platform

Sta. 6+20.40
Ramp "B" ℄

Sta. 6+15.80
Ramp "B" ℄

Pond

2.12" Cl. U-1

Sta. 6+15

90° Tan. to Curve

Nose Sta. 2+78.15

Sta. 279+34.83
P.C.C.

Sta. 279+55.08

Sta. 280+79.40 ℄

VILLAGE OF MONTGOMERY

Sta. 281+21.93
Ramp "B1" & "C1"

Sta. 281+21.36 Cross County ℄

Sta. 281+37.43 Ramp "B1" & "C1"

Sta. 281+17.11 Cross County ℄

Jute Matting 7'-8" Wide

CROSS COUNTY ℄ CURVE DATA
P.I. = Sta. 78+33.04
Δ = 7°14'10" Lt.
D = 1°28'00"
R = 3,906.53'
L = 493.37'
T = 247.01'
E = 7.80

CROSS COUNTY ℄ CURVE DATA
P.I. = Sta. 83+40.97
Δ = 15°35'50" Lt.
D = 3°00'00"
R = 1,909.86'
L = 519.91'
T = 261.57'
E = 17.83'

CROSS COUNTY ℄ CURVE DATA
P.I. = Sta. 282+61.32
Δ = 26°35'00" Lt.
D = 3°00'00"
R = 1909.86'
Ls = 250.00'
Lc = 636.11'
Ts = 576.48'
Es = 53.96'
θs = 3°45'00"

REFERENCE TS Sta. 276+84.83
2' Bush
3' Bush
Lt. 20.81'
277
Lt. 40.30'
2' Apple

Note: The existing pond right of Sta. 10+75± Ramp "B" shall be drained prior to placement of the roadway embankment in the pond area. The method used to drain the pond and the rate of discharge of the water shall be subject to approval of the Engineer. After completion of the embankment, the pond dike shall be restored to its original condition.

RAMP "B-1" CURVE DATA
P.I.: Sta. 4+96.72
Δ: 38°14'35" Rt.
D: 4°00'00"
R: 1,432.40'
L: 956.08'
T: 496.62'
E: 83.65'

RAMP "B-2" CURVE DATA
P.I.: Sta. 14+07.73
Δ: 15°20'39" Rt.
D: 4°00'00"
R: 1,432.40'
L: 383.60'
T: 192.95'
E: 12.94'

RAMP "B-3" CURVE DATA
P.I.: Sta. 17+92.52
Δ: 30°20'01" Rt.
D: 8°00'00"
R: 716.20'
L: 378.17'
T: 194.14'
E: 25.85'

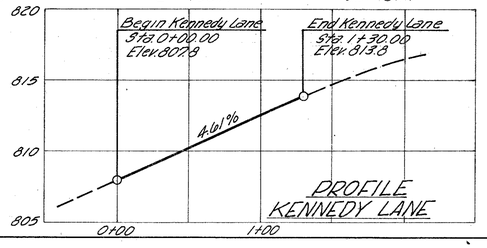
RAMP "B1 & C1"-1 CURVE DATA
P.I.: Sta. 1+50.33
Δ: 29°24'09" Lt.
D: 10°00'00"
R: 572.96'
L: 294.03'
T: 150.33'
E: 19.39'

RAMP "C-1" SPIRAL DATA
θs: 31°15'00"
Ls: 250.00'
LT: 169.34'
ST: 85.77'

RAMP "C-2" CURVE DATA
Δ: 164°02'35" Rt.
D: 25°00'00"
R: 229.18'
L: 736.17'

RAMP "C-3" SPIRAL DATA
θs: 27°45'00"
Ls: 150.00'
LT: 94.11'
ST: 57.71'

RAMP "C-4" CURVE DATA
P.I.: Sta. 1+46.86
Δ: 11°42'29" Rt.
D: 4°00'00"
R: 1,432.40'
L: 292.70'
T: 146.86'
E: 7.51'



For Cross County Profile See Sht. No. 83
For Ramps "B" & "B1" "C1" Profiles See Sht. No. 90
For Ramp "C" Profile See Sht. No. 91
◯ For Cross County Quantities See Sht. No. 87.
For Ramps "C" & "B" Quantities See Sht. No. 92.

CROSS COUNTY HIGHWAY
STA. 274+13.28 ~ STA. 283+50
RAMPS "B", "B1", "C" & "C1"
PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

86
445

HAMILTON COUNTY
HAM. 71 - 13.05

CROSS COUNTY ℄ CURVE DATA
PI: Sta. 283+30.97
Δ: 15° 35' 50" Lt.
D: 3° 00' 00"
R: 1909.86'
L: 519.91'
T: 261.57'
E: 17.83'

CROSS COUNTY ℄ SPIRAL DATA
Θs: 3° 45' 00"
Ls: 250.00'
LT: 166.70'
ST: 83.37'

CROSS COUNTY ℄ CURVE DATA
PI: Sta. 282+61.32
Δ: 26° 35' 00" Lt.
D: 3° 00' 00"
R: 1909.86'
Ls: 250.00'
Lc: 636.11'
Ts: 576.48
Es: 53.96
Θs: 3° 45' 00"

RAMP 'B' CURVE DATA
PI: Sta. 171+92.52
Δ: 30° 20' 01" Rt.
D: 6° 00' 00"
R: 716.20'
L: 379.17'
T: 194.14'
E: 25.85'

REFERENCE ST. STA. 288+20.95
9" Locust
9" Ash
12" Ash

END PAVEMENT STA. 293+34.86

END WORK STA. 295+15.11

INTERSTATE — URBAN SECONDARY

CROSS COUNTY

RAMP 'B'

MATCH LINE STA. 283+30 CROSS COUNTY ℄
See Sheet No. 85

Jute Matting 7'-8" Wide

Golf Course

Wooded

Green

Tee

Evergreens

Tree Row

Frame Shed

Sta. 283+50, 35' Rt.
F.L. 6", 825.0

Sta. 283+50, Lt.
F.L. 6", 822.9

Sta. 286+00, Lt.
F.L. 6", 820.7

Sta. 288+05 Median
F.L. 6", 820.4

Sta. 288+00, 45' Rt.
I-8, Std. No. C-16 Inlet
F.L. Opening 824.69
F.L. 6", 820.5
F.L. 12", 820.0

Sta. 288+50, 34' Lt.
F.L. 6", 819.6

66" X 12" Cl. E-1

Sta. 288+70, 45' Rt.
I-8 Std. No. C-16 Inlet
F.L. Opening 824.0
F.L. 6" 819.7
F.L. 12" 819.20

Sta. 288+75 Median
F.L. 6", 821.29

Sta. 289+00, 34' Lt.
F.L. 6", 820.7

Sta. 289+08, 58' Lt.
HW-E Headwall
F.L. 12", 618.9

Sta. 289+25, 44.26' Rt.
F.L. 6", 820.7

Sta. 289+35 Median
F.L. 6", 820.6

Sta. 289+50, 34' Lt.
F.L. 6", 820.1

Sta. 289+03, 58' Lt.
F.L. 8" 818.9 Outlet

See Cross Sect. For Profile

Sta 288+89 34' Lt.
F.L. 6", 819.3

EQUATION: Sta. 288+54.70 Back = Sta. 288+58.61 Ahead

-1.00%

1.30%

Existing Ground

Sta. 292+00 Lt. & Rt.
F.L. 6", 817.5

Sta. 292+50, Lt. & Rt.
F.L. 6", 815.3

PVC = Sta. 291+25

V.C. = 800'

PVT = Sta. 295+25
Elev. 817.65

Sta. 293+50, Lt. & Rt.
F.L. 6" 813.7
Plug Ends

-1.00%

-3.96%

Proposed Construction under Separate Contract.

For Typical Section of Adjoining Pavement See Sht. No. 7

100% Hamilton County

For Quantities See Sht. No. 87

CROSS COUNTY HIGHWAY
STA. 283+50 ~ STA. 295+15.11

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

87/445

HAMILTON COUNTY
HAM. 71-13.05

ESTIMATED QUANTITIES

DRAINAGE

REF. NO.	STATION TO STATION	SIDE	E-3 Channel Ex. Cu.Yds.	I-1 6" Class F-4 Lin.Ft	I-1 6" Class I-3 Lin.Ft	I-1 6" M-6.4(h) Class I-3 Lin.Ft	I-1 6" Class J-1 Lin.Ft	I-1 8" Class F-4 M-6.4(c) Lin.Ft	I-1 12" Class E-1 Lin.Ft	I-1 12" Class F-4 Lin.Ft	I-1 12" Class J-1 Lin.Ft	I-1 66" M-6.4(II) Class A-1 Lin.Ft	I-2 Masonry	I-5 6" 60° Bend Class I-3 Each	I-5 6" 60° Bend M-6.4(h) Class I-3 Each	I-5 6" 60° Bend Class J-1 Each	I-5 6"x6" Wye Class J-1 Each	I-5 12" 30° Bend Class F-4 Each	I-8 Median Inlet Standard No.2-b Each	I-8 Median Inlet Standard No.2-8 Each	I-8 Median Inlet Standard No.2-la Each	I-10 6" R.C. Riprap Sq.Yds.	I-10 Dumped Rock Cu.Yds.	L-10 Sodding Sq.Yds.	L-120 Jute Matting Sq.Yds.	ITEM SPL. Drainage Connection Using No.6 Aggregate Cu.Yds.	L-10 Sodding for Spl. Berm & Slope Prot Sq.Yds.	SEE SHEET NO.
	Cross County																											
	274+13.28 To 283+50																											
1-D	275+75 – 281+26	L		10	541																					39		
2-D	275+82 – 276+34	R		10	32																					1		
3-D	276+26 – 280+99	R		20	453																					15		
4-D	275+79 – 278+15	L																					131					
5-D	276+25	℄										214	26.28									63	31	8				355
6-D	276+25	L & R	4							40	49		0.23					2	1				8	2				
7-D	280+52 – 281+00	R									95									1								
8-D	281+03 – 281+26	R			23																					1		
9-D	275+68	L																									45	
(I) Total	Hamilton County		4	40	1069					40	144	214	26.51					2	1	1		63	170	10		56	45	
10-D	281+26 – 283+50	L			220																					16		
11-D	281+26 – 283+50	R			224																					8		
12-D	281+20 – 283+50	L																							188			
13-D	Not Used																											
	283+50 To 295+14																											
14-D	283+50 – 285+54	L			204																					15		
15-D	283+50 – 287+99	R		10	350	89																				15		
16-D	288+05 – 288+69	R		10		54																				2		
17-D	288+75 – 289+35	R				60										1										2		
18-D	289+25 – 293+35	R			135	275																				29		
19-D	283+50 – 285+00	L																							125			
20-D	288+00 – 288+70	R							66										1		1							
21-D	292+25 – 293+35	R																							94			
22-D	Not Used																											
(I) Total	Village of Montgomery			20	1133	478			66							1			1		1				407	87		
23-D	285+54 – 288+89	L			147	202		10							1											25		
24-D	289+00 – 293+50	L			300	150																				32		
25-D	289+35 – 289+57	L & R					44										1											
26-D	289+70 – 289+08	L & R									72		0.23											2				
27-D	292+25 – 293+35	L																							94			
28-D	293+35 – 293+50	R			15																							
29-D	Not Used																											
(US) TOTAL	Village of Montgomery				462	352	44	10			72		0.23		1		1							2	94	57		

ROADWAY & PAVEMENT

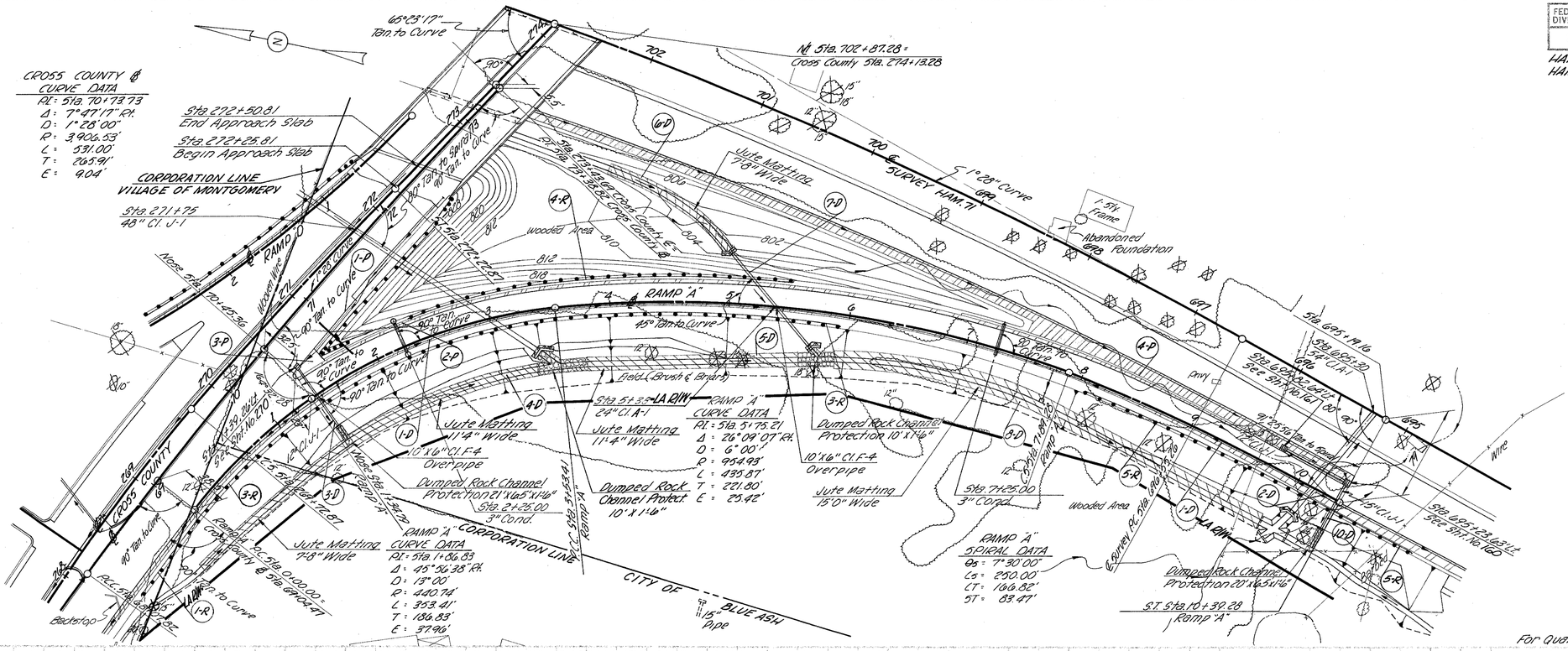
REF. NO.	STATION TO STATION	SIDE	I-15 Guard Rail Lin.Ft	I-15 Guard Rail As Per Plan Lin.Ft	B-19 Aggregate Base Course Cu.Yds.	B-21 Water-proofed Aggregate Cu.Yds.	T-31 Surface Treat. Bitum. 6" Gals.	T-31 Surface Treat. Aggregate Cu.Yds.	T-71 9" Reinf. Concrete Pavement Sq.Yds.	I-7 Reinf. Concrete Approach Slab T-13 Sq.Yds.	I-12 Standard Type 2A Curb Lin.Ft.	I-21 Concrete Median Pavement Sq.Yds.	I-22 Grading A or B Subbase Cu.Yds.	I-22 Subbase Cu.Yds.	SEE SHEET NO.
	Roadway														
	275+67.75 To 281+26														
1-R	275+68 – 81+23 ℄	L	558.00												
2-R	278+88 - 279+13			50											
(I) Total	Hamilton County		558.00	50											
	281+26 – 283+50														
3-R	81+23 ℄ – 82+02.50 ℄	L	79.50												
4-R	285+15 – 285+65	L		50											
(I) 5-R	285+55 – 286+05	L		50											
6-R	285+55 – 286+05	L-L		50											
Total	Village of Montgomery		79.50	150											
	Pavement														
	275+67.75 – 281+26														
1-P	275+67.75 – 275+92.75	R & L			53	27	79	3	3288		974		603	10	
2-P	280+86 – 281+01.37	R & L								173	53		29		
3-P	Not Used											20			
4-P	Not Used														
(I) Total	Hamilton County				53	27	79	3	3288	173	1027	20	632	10	
	281+26 – 283+50				32	16	48	2	1641				298	12	
5-P	281+44.36 – 283+50	L & R										192			
	283+50 – 285+54				25	13	37	2	1405		92		297	7	
6-P	283+50 – 285+54	R										128			
7-P	Not Used														
	285+54 – 293+34.86	R							2288		777		398		
8-P	Not Used														
(I) Total	Village of Montgomery				57	29	85	4	5334		869	320	993	19	
	285+54 – 293+34.86	L			53	28	84	3	2288		777		438		
9-P	Not Used														
(US) TOTAL	Village of Montgomery				53	28	84	3	2288		777		438		

QUANTITIES
CROSS COUNTY STA. 274+13.28 ~ STA. 293+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

88
445

HAMILTON COUNTY
HAM. 71-13.05


65°23'17" Tan. to Curve
CROSS COUNTY ℄
CURVE DATA
PI: Sta. 70+73.73
Δ: 7°47'17" Rt.
D: 1°28'00"
R: 3906.53'
L: 531.00'
T: 265.91'
E: 9.04'
Sta. 272+50.81
End Approach Slab
Sta. 272+25.81
Begin Approach Slab
CORPORATION LINE
VILLAGE OF MONTGOMERY
Sta. 271+75
48" Cl. J-1
RAMP "D"
Move Sta. 270+45.36
Wood Wire
90° Tan. to Curve
Sta. 271+22.57
Sta. 271+39.57
Sta. 271+22.57 on Cross County ℄
Sta. 269+10 on Cross County ℄
Move Sta. 269+10
Sta. 269+10
Sta. 268+39.43
52° Skew
Spiral
Jct. Cl. J-1
Move Sta. 268+28
CROSS COUNTY
40' Tan. to Curve
Sta. 268+10
Sta. 267+75.00
3" Cond.
Jute Matting
7'-8" Wide
Remove to Sta. 268+00.00
Sta. 268+04.47
Backslope
Ditch
Sta. 267+75.00
Rt. 40.00'
Sta. 267+75.00
Lt. 40.00'

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

89
445

HAMILTON COUNTY
HAM.71-13.05

ESTIMATED QUANTITIES

DRAINAGE

REF. NO.	STATION TO STATION	SIDE	E-3 Channel Ex. Cu. Yds.	I-1 6" Class F-A Lin. Ft.	I-1 6" Class I-3 Lin. Ft.	I-1 8" Class F-A M-6.4(C) Lin. Ft.	I-1 12" Class J-1 Lin. Ft.	I-1 15" Class J-1 Lin. Ft.	I-1 24" M-6.6(B) or M-6.8(D) Class A-1 Lin. Ft.	I-2 Masonry	I-5 6"x6" Tee Class I-3 Each	I-8 C.B. No. 3-A Standard Each	I-8 C.B. No. 6 Standard Each	I-10 Dumped Rock Cu. Yds.	L-10 Sodding Sq. Yds.	L-120 Jute Matting Sq. Yds.	ITEM SPL. Drainage Connection Using No. 6 Aggregate Cu. Yds.	SEE SHEET NO.
	Ramp "A"																	
1-D	0+00 – 10+10	R		20	1004	10					1						80	
2-D	10+18 – 10+39	R			21												2	
3-D	1+39	L&R					60			0.23		1		8	2			
4-D	1+42 – 3+32	R														209		
5-D	3+77 – 5+62	R														219		
6-D	702+00 ML. – 4+98	L														104		
7-D	5+38	L&R	3						106	7.20				45	4			341
8-D	5+92 – 9+87	R														637		
9-D	Not Used																	
10-D	695+23 ML.	L&R	2					42		0.26			1	8	2			
11-D	Not Used																	
(I) TOTAL	Ramp "A" Hamilton County		5	20	1,025	10	60	42	106	7.69	1	1	1	61	8	1,169	82	

ROADWAY & PAVEMENT

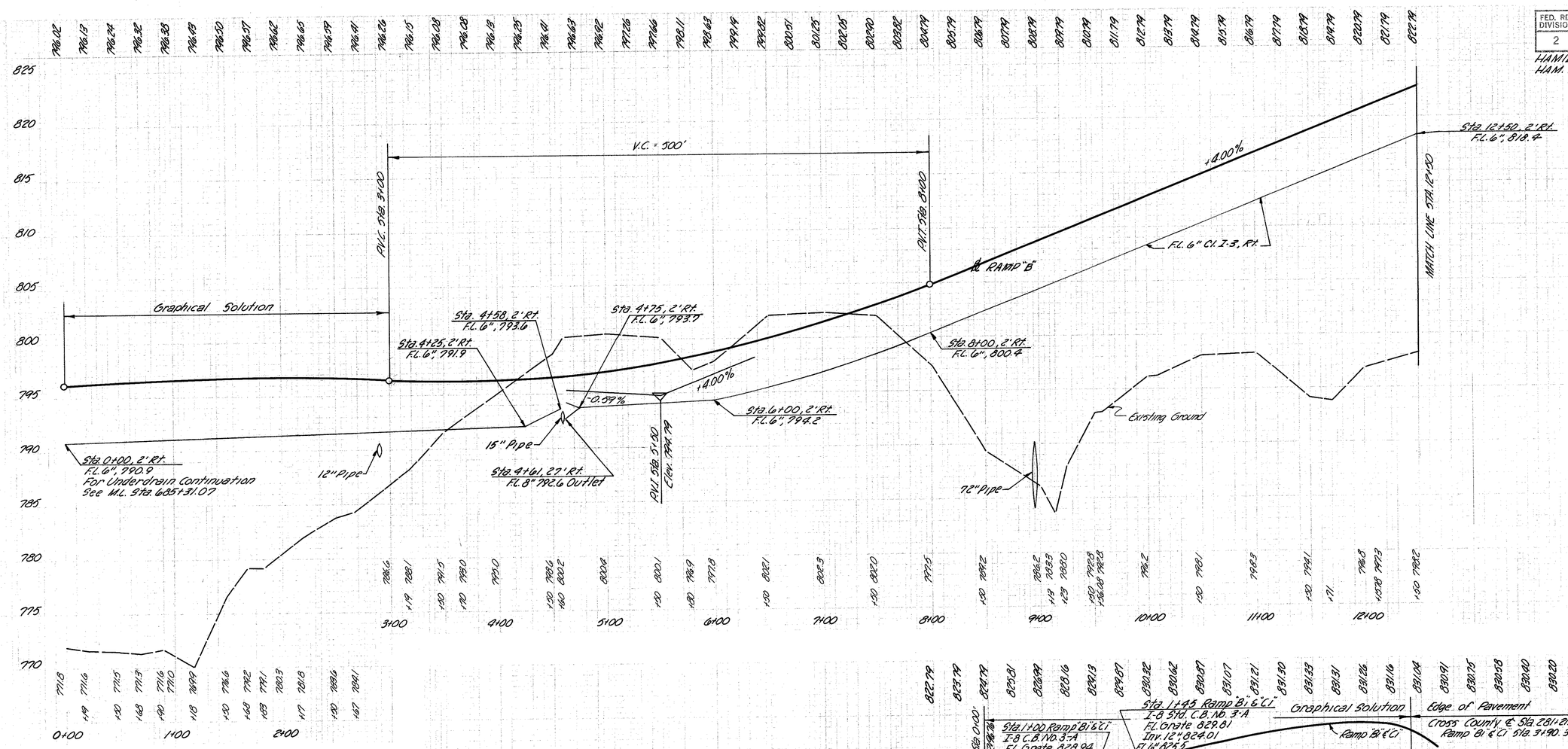
REF. NO.	STATION TO STATION	SIDE	I-15 Guard Rail Lin. Ft.	B-19 Aggregate Base Course Cu. Yds.	B-21 Water-proofed Aggregate 6" Cu. Yds.	T-31 Surface Treat. Bitum. 6" Gals.	T-31 Surface Treat Aggregate Cu. Yds.	T-71 9" Reinf. Concrete Pavement Sq. Yds.	I-12 Standard Type 2-A Curb Lin. Ft.	I-12 Standard Type 6 Curb Lin. Ft.	I-12 Standard Type 3 Curb Lin. Ft.	I-21 Concrete Median Pavement Sq. Yds.	I-22 Grading A or B Subbase Cu. Yds.	I-22 Subbase Cu. Yds.	SEE SHEET NO.
	Roadway														
	Ramp "A"														
1-R	68+22.36 ℄ – 0+00 Ramp "A"	R	82.47												
2-R	Not Used														
(I) Total	Village of Montgomery		82.47												
3-R	0+00 – 5+92.53	R	592.53												
4-R	2+37.50 – 5+50	L	312.50												
5-R	3+08.44 – 69+50.16 ℄	R	300.0												
6-R	Not Used														
(I) Total	Hamilton County		1205.03												
	Pavement														
	Ramp "A"														
	62+45.36 ℄ – 0+00			0	49	74	3	814					184	0	
(I) Total	Village of Montgomery			0	49	74	3	814					184	0	
	0+00 – 2+34.79			3	22	33	1	511					101	37	
1-P	70+69.36 ℄ – 71+25.36 ℄	L							56						
2-P	1+58 – 2+34.79	L								81					
3-P	1+34.79 – 1+58	L										21			
	2+34.79 – 8+39.28			17	68	101	4	1075					224	23	
4-P	6+90 – 10+39.28	L									351				
	8+39.28 – 685+19.16			56	174	262	9	1732					356	119	
(I) TOTAL	Hamilton County			76	264	396	14	3318	56	81	351	21	681	179	

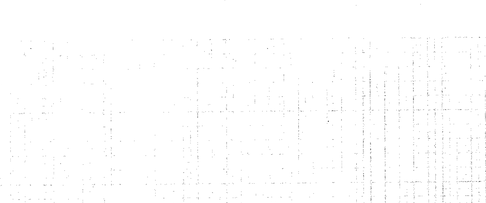
QUANTITIES
RAMP "A"

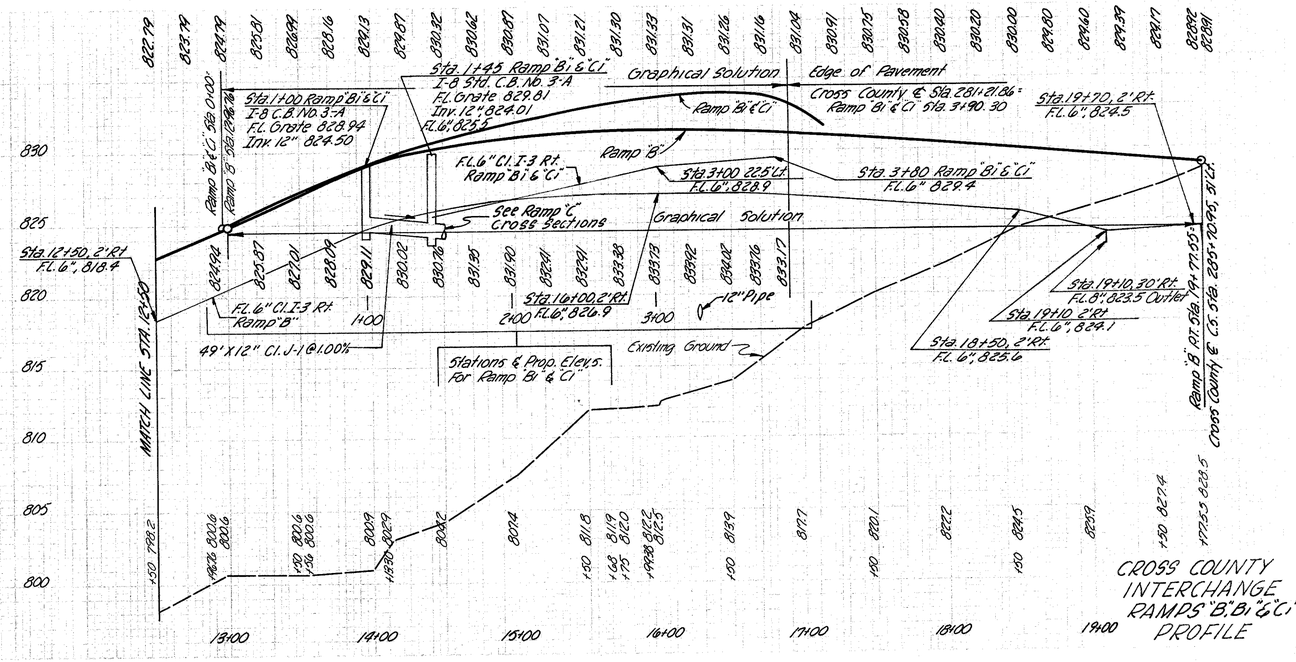
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

90
445

HAMILTON COUNTY
HAM. 71-13.05







CROSS COUNTY
INTERCHANGE
RAMPS "B", Bi" & "Ci"
PROFILE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HAMILTON COUNTY
HAM.71-13.05

833.09 833.21 833.38 833.54 833.72 833.87 833.98 834.04 834.03 833.99 833.93 833.89 833.81 833.68 833.50 833.27 832.98 832.58 832.25 831.80 831.30 830.75 830.15 829.49 828.78 828.02 827.20 826.36 825.41 824.44 823.44 822.44 821.42 820.44 819.44 818.44 817.44 816.48 815.44 814.44 813.44 812.44 811.44 810.44 809.44 808.52 807.77 807.19 806.77 806.52 806.41 806.32 806.27

807.11 807.49 807.77 808.10 823.51 +28.87 828.38

835
830
825
820
815
810

Graphical Solution

-0.20%

-4.00%

PVI. Sta 5+00
Elev. 832.44

Sta 1+75, 2' Rt.
FL 6", 829.6

PVC. Sta 2+75

Sta 4+25, 2' Rt.
FL 6", 828.1

FL 6" Cl. I-3 Rt.

12" Pipe

V.C. = 500'

PVT. Sta 7+25

12" Pipe

Sta 7+25, 2' Rt.
FL 6", 820.0

66" Pipe

V.C. = 200'

PVC. Sta 11+00

PVT. Sta 13+00

-4.00%

+1.33%

Sta 10+75, 2' Rt.
FL 6" 806.0

Existing Ground

72" Pipe

Sta 11+20.38' Rt.
FL 8" 801.1 Outlet

PVI. Sta 12+00
Elev. 805.44

Sta 11+20, 2' Rt.
FL 6" 801.6

Sta 13+00, 2' Rt.
FL 6", 802.4

Sta 12+50, 2' Rt.
FL 6", 802.0

Sta 14+28.87, 2' Rt.
FL 6", 804.2
For Underdrain
Continuation See
M.L. Sta 699+60.33

Ramp "C" STA 141+28.87 =
HAM-71 Sta. 699+60.33, 74' Rt.

812.9 1.50 814.0 8.51 1.50 816.3 817.0 1.50 817.7 +28.12 817.9 817.7 1.50 816.7 1.70 816.0 814.0 1.74 812.0 +0.40 812.2 +1.50 813.0 1.73 807.7 802.6 1.50 802.5 800.1 +28.87 800.1 1.50 800.7 1.70 802.6 812.0 +0.40 820.5 820.0 1.50 820.0 1.40 820.5 1.05 822.0 823.2 825.5 1.63 826.5 1.00 826.5 +28.87 802.2 801.6 1.50 806.8 1.70 806.8 807.3 1.50 808.1 808.3 +28.87 828.9

0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00 9+00 10+00 11+00 12+00 13+00 14+00

CROSS COUNTY
INTERCHANGE
RAMP "C"
PROFILE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

92
445

HAMILTON COUNTY
HAM. 71-13.05

ESTIMATED QUANTITIES

DRAINAGE

REF. NO.	STATION TO STATION	SIDE	E-3	I-1											I-2	I-5		I-8			I-10		L-10	L-120	ITEM SPL.	SEE SHEET NO.
			Channel Ex.	6" Class F-4	6" Class I-3	6" M-6.4(1f) Class I-3	8" Class F-4 M-6.4(c)	12" Class F-4	12" Class J-1	12" M-6.6(1)a or M-6.8(1)a Class J-1	12" M-6.6(c) Class J-1	15" Class J-1	72" M-6.4(c) Gage 10 Class A1	72" M-6.9(a) Gage 10/10 Class A1	Masonry	6"×6" Tee Class I-3	6"×6" Wye Class I-3	C.B. No.2.2A Standard	C.B. No.3.A Standard	C.B. No.6 Standard	6" R.C. Riprap	Dumped Rock	Sodding	Jute Matting	Drainage Connection Using No.6 Aggregate	
			Cu. Yds.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Cu. Yds.	Each	Each	Each	Each	Each	Sq. Yds.	Cu. Yds.	Sq. Yds.	Sq. Yds.	Cu. Yds.	
	Ramp "B" & "B1"																									
50-D	0+00 - 4+58	R		10	448																			35		
51-D	4+62 - 15+29	R			994	91	10									1								81		
52-D	68ST.125ML - 4+57	R																						216		
53-D	68St.120ML - 2+87	L&R	2						61						0.23					1		3	2			
54-D	4+60	L&R										67			0.26			1				2	2			
55-D	6+00 - 6+50	R																						42		
56-D	8+95	L&R	31											112	35.60						30	136	8			342
57-D	9+00 - 11+00	R																						168		
58-D	11+00 - 12+00	R																				56				
59-D	12+00 - 15+29	R																						267		
60-D	Not Used																									
(I) Total	Ramp "B" & "B1" Hamilton County		33	10	1442	91	10		61			67		112	36.09		1	1		1	30	197	12	693	116	
61-D	15+29 - 19+78	R			467		10									1								34		
62-D	15+29 - 16+25	R																						77		
63-D	16+28	L&R								131					0.23			1				7	2			
64-D	16+31 - 19+78	R																						275		
65-D	Kennedy Lane 15+00	R						28																		
66-D	Not Used																									
(I) Total	Ramp "B" Village of Montgomery				467		10	28		131					0.23	1		1				7	2	352	34	
	Ramp "C" & "C1"																									
67-D	1+75 - 14+29	R		20	1,260		10									1								95		
68-D	1+25 - 10+70	R																						509		
69-D	280+52 CC - 4+88	L&R									117				0.23			1				10	2			
70-D	4+65 - 6+10	R																						86		
71-D	1+45 "C1" - 6+15	L&R							72						0.23				1			9	2			
72-D	6+20 - 10+69	R																						279		
73-D	10+60	L&R											76		35.60						15	187	8			342
74-D	10+85 - 12+00	R																						84		
75-D	1+46 "C" - 3+80 "C"	L		10	222																					
76-D	1+00 "C" - 1+45 "C1"	L&R							49										1							
77-D	Not Used																									
Total	Ramp "C" & "C1" Hamilton County			30	1482		10		121		117		76		36.06	1		1	2		15	206	12	958	95	
(I) TOTAL	Hamilton County		33	40	2924	91	20		182		117	67	76	112	72.15	1	1	2	2	1	45	403	24	1651	211	

ROADWAY & PAVEMENT

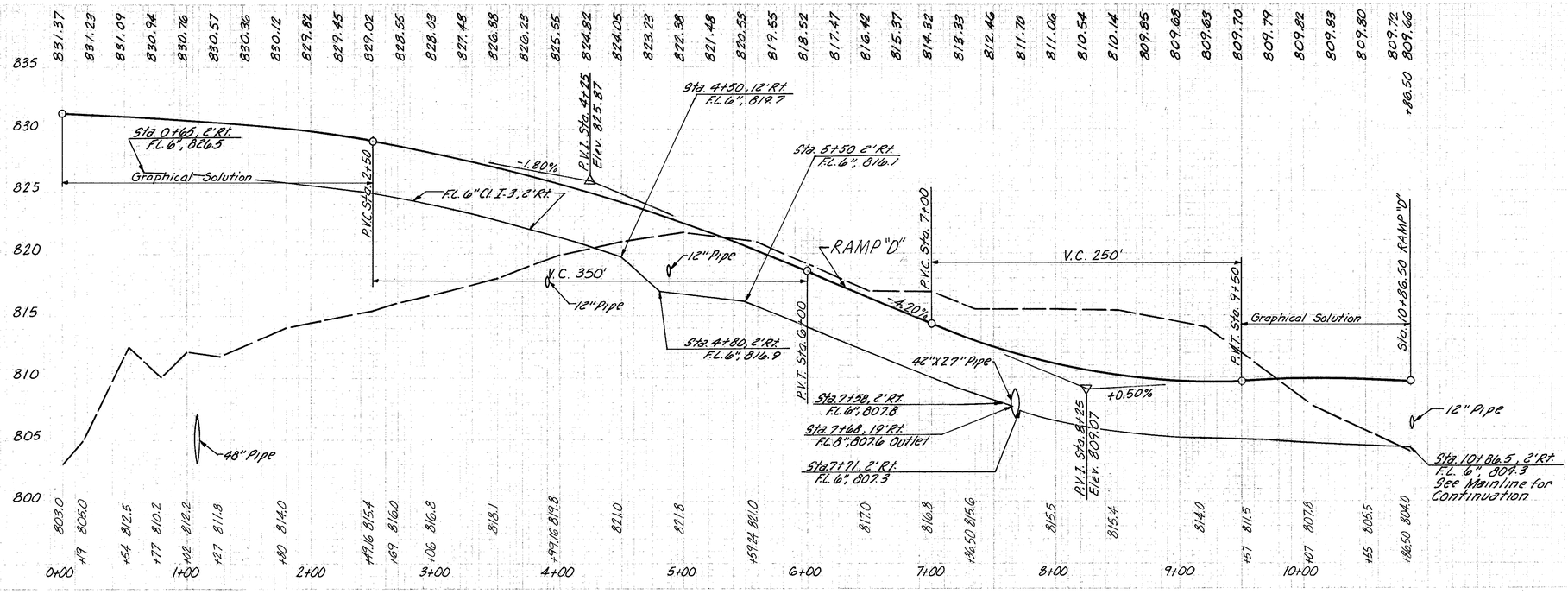
REF. NO.	STATION TO STATION	SIDE	I-15	E-12	B-19	B-21	T-31		T-71	I-12			I-21	I-22		SEE SHEET NO.
	Roadway		Guard Rail	Pipe Removal 24" & Under	Aggregate Base Course	Water-proofed Aggregate 6"	Surface Treat. Bitum.	Surface Treat. Aggregate	9" Reinf. Concrete Pavement	Standard Type 2-A Curb	Standard Type 6 Curb	Standard Type B Curb	Concrete Median Pavement	Grading A or B Subbase	Subbase	
			Lin. Ft.	Lin. Ft.	Cu. Yds.	Cu. Yds.	Gals.	Cu. Yds.	Sq. Yds.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Sq. Yds.	Cu. Yds.	Cu. Yds.	
	Ramp "B" & "B1"															
50-R	0+00 - 3+68.93	R	368.93													
51-R	7+00 - 12+37.50	L	537.50													
52-R	7+00 - 15+29	R	829.00													
53-R	12+92	R		14												
	Ramp "C" & "C1"															
54-R	0+29.50 - 11+00	R	1062.50													
55-R	8+01.50 - 11+25	L	350.00													
56-R	7+85 - 8+10	L		103												
(I) Total	Hamilton County		3147.93	117												
	Ramp "B"															
57-R	15+29 - 17+50	R	221.00													
(I) Total	Village of Montgomery		221.00													
	Pavement - Ramp "B" & "B1"															
	680+13.83 NL - 3+79.81	℄			38	121	181	6	1525					300	50	
52-P	3+23 - 3+79.81	L								56	57					
53-P	2+79.81 - 3+23	L											38			
	3+79.81 - 12+14.78	℄			24	93	140	5	1485					310	31	
	12+14.78 - 15+29	℄			5	119	178	6	788	102			37	153	4	
	1+14.80 Ramp "B" - 3+88.93 "B1"	℄				10	15	1	534	256			30	151		
	Kennedy Lane 15+00	R			28											
	Pavement - Ramp "C" & "C1"															
	0+00 - 3+78.12	℄			6	25	38	2	609	134			21	115	17	
	3+78.12 - 6+20.47	℄				14	21	1	485	238				95		
	6+20.47 - 7+49.09	℄			4	13	19	1	378				19	70		
	7+49.09 - 12+28.87	℄			13	55	82	3	883				4	184	18	
	12+28.87 - 709+60.33 NL				119	192	317	11	1733			208		358	106	
	1+38.71 "C1" - 3+90.30 "C1"	℄			5	10	14	1	486	245				112		
51-P	12+63 "C" - 3+85 "C1"	℄											95			
(I) Total	Hamilton County				242	652	1005	37	8906	1031	57	208	244	1854	226	
	Pavement - Ramp "B"															
	15+29 - 17+77.55					14	21	1	484	249				95		
	17+77.55 - 283+34.86 NL				12	61	103	3	1162			200		261		
(I) Total	Village of Montgomery				12	75	124	4	1646	249		200		356		

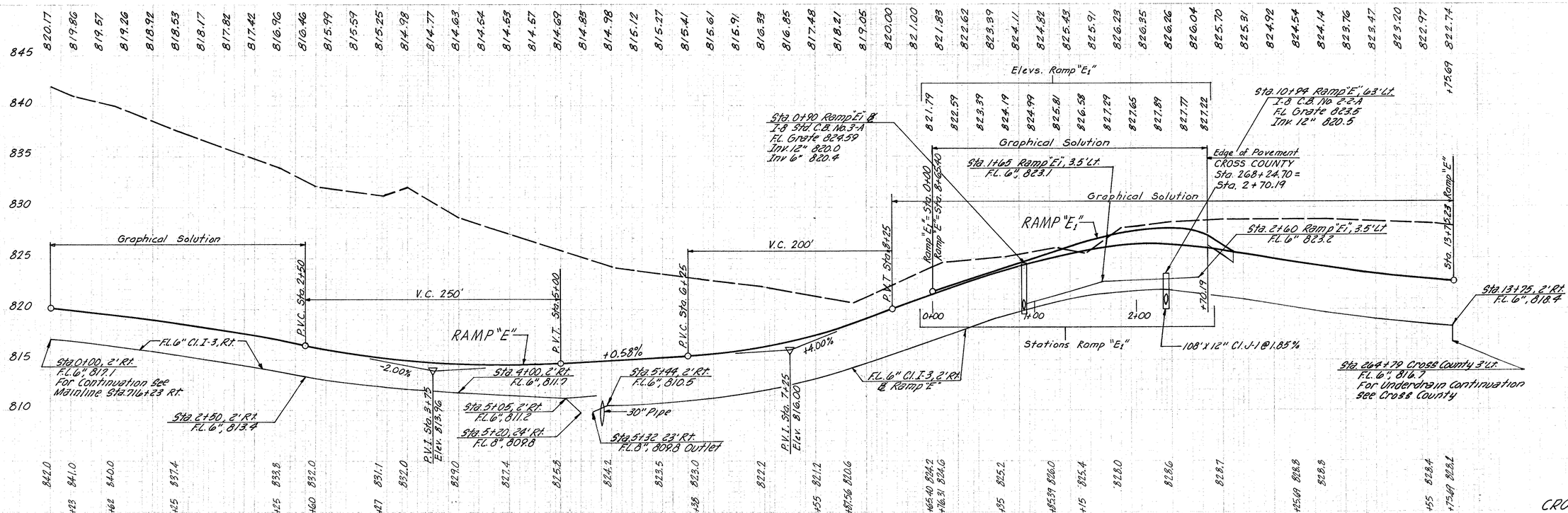
QUANTITIES
RAMPS "B," "B1," "C," & "C1"

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

93
145

HAMILTON COUNTY
HAM. 71-13.05





CROSS COUNTY
INTERCHANGE
RAMPS "D", "E", "E1"
PROFILE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

94
445

HAMILTON COUNTY
HAM. 71-13.05

ESTIMATED QUANTITIES

DRAINAGE

	REF. NO.	STATION TO STATION	SIDE	I-1 6" Class F-4 Lin. Ft.	I-1 6" Class I-3 Lin. Ft.	I-1 6" M-6.4(n) Class I-3 Lin. Ft.	I-1 8" Class F-3 M-6.4(c) Lin. Ft.	I-1 12" Class J-1 Lin. Ft.	I-1 18" Class J-1 Lin. Ft.	I-1 30" Class A-1 Lin. Ft.	I-1 45"x29" M-6.9(a) Class C-1 Lin. Ft.	I-2 Masonry Cu. Yds.	I-5 6" Bend Class I-3 Each	I-5 6"x6" Wye M-6.4(h) Class F-3 Each	I-8 C.B. No. 2-2A Standard Each	I-8 C.B. No. 3-A Standard Each	I-8 C.B. No. 6 Standard Each	I-10 6" R.C. Riprap Sq. Yds.	I-10 Dumped Rock Cu. Yds.	L-10 Sodding Sq. Yds.	L-120 Jute Matting Sq. Yds.	ITEM SPL. Drainage Connection Using Neat Aggregate Cu. Yds.	SEE SHEET NO.
		Ramp "D"																					
	50-D	0+65 — 2+16	R		151																	15	
	51-D	Not Used																					
(I)	Total	Ramp "D" Hamilton Co.			151																	15	
	52-D	2+16 — 7+63	R	10	547		10						1									43	
	53-D	7+71 — 10+87	R		316																	17	
	54-D	CW3+71 Cr.Co. — 3+94	L & R					104				0.23			1								
	55-D	0+90 Ramp E1-4+88	L & R					70				0.23				1			3	2			
	56-D	6+15 — 7+66	R																		108		
	57-D	7+00 — 7+55	L																		63		
	58-D	7+67	L & R								62	9.78							29	6			
	59-D	7+83 — 11+27	R																		346		
	60-D	705+25 ML	R						82			0.30					1			2	27		
	61-D	Not Used																					
(I)	Total	Village of Montgomery		10	863		10	174	82		62	10.31	1		1	1	1		32	10	544	60	
		Ramp "E" & "E1"																					
	62-D	0+00 — 5+35	R			549	10							1								47	
	63-D	5+44 — 13+75	R		847		10						1									65	
	64-D	Not Used																					
	65-D	5+41	L & R							78		13.40						32		6			343
	66-D	5+35 — 10+00	R																		562		
	67-D	0+90 "E1" — 2+60 "E1"	L	20	150																	60	
	68-D	2+27 Ramp "E1"	L & R					108							1								
	69-D	Not Used																					
	Total	Village of Montgomery		20	997	549	20	108		78		13.40	1	1	1			32		6	562	172	
(I)	TOTAL	Interstate Participation		30	1,860	549	30	282	82	78	62	23.71	2	1	2	1	1	32	32	16	1,106	232	

ROADWAY & PAVEMENT

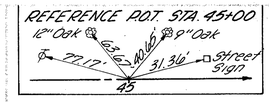
	REF. NO.	STATION TO STATION	SIDE	I-15 Guard Rail Lin. Ft.	B-19 Aggregate Base Course Cu. Yds.	B-21 Water-proofed Aggregate 6" Cu. Yds.	T-31 Surface Treat. Bitum. 6" Gals.	T-31 Surface Treat Aggregate Cu. Yds.	T-71 9" Reinf. Concrete Pavement Sq. Yds.	I-12 Standard Type 2-A Curb Lin. Ft.	I-12 Standard Type 6 Curb Lin. Ft.	I-12 Standard Type B Curb Lin. Ft.	I-21 Concrete Median Pavement Sq. Yds.	I-22 Grading A or B Subbase Cu. Yds.	I-22 Subbase Cu. Yds.	SEE SHEET NO.
		Roadway														
		Ramp "D"														
	51-R	0+39.43 — 2+09.43	R	150.00												
(I)	Total	Hamilton County		150.00												
		Ramp "D"														
	52-R	Not Used														
	53-R	5+99 — 6+79	L	100												
	54-R	Not Used														
		Ramp "E" & "E1"														
	55-R	7+30 — 8+29	L	100												
	56-R	Not Used														
(I)	Total	Village of Montgomery		200												
		Pavement														
		Ramp "D"														
		0+00 — 2+16				12	17	1	209					47		
(I)	Total	Hamilton County				12	17	1	209					47		
		Ramp "D"														
		2+16 — 3+42.71				9	14	1	450	138			19	84		
		3+42.71 — 8+86.50			9	41	61	2	1172	212				248	11	
		8+86.50 — 695+19.16			70	201	302	10	1733	207				420	63	
		Ramp "E"														
		721+65.92 — 3+54.99			30	120	183	6	1532	63	65		32	392	56	
		3+54.99 — 8+65.40			13	57	86	3	911				5	192	18	
		8+65.40 — 10+85.27				14	21	1	584	158			24	119		
		10+85.27 — 257+18.50			43	70	97	4	1339	92		104		255	29	
		Ramp "E1"														
		1+20.19 — 2+70.19							323	285			14	67		
(I)	TOTAL	Village of Montgomery			173	512	764	27	8044	1155	65	104	94	1777	177	

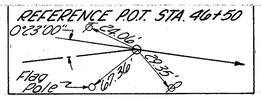
QUANTITIES
RAMPS "D," "E" & "E1"

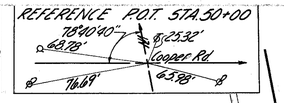
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

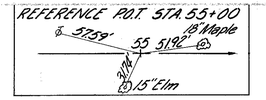
35/145

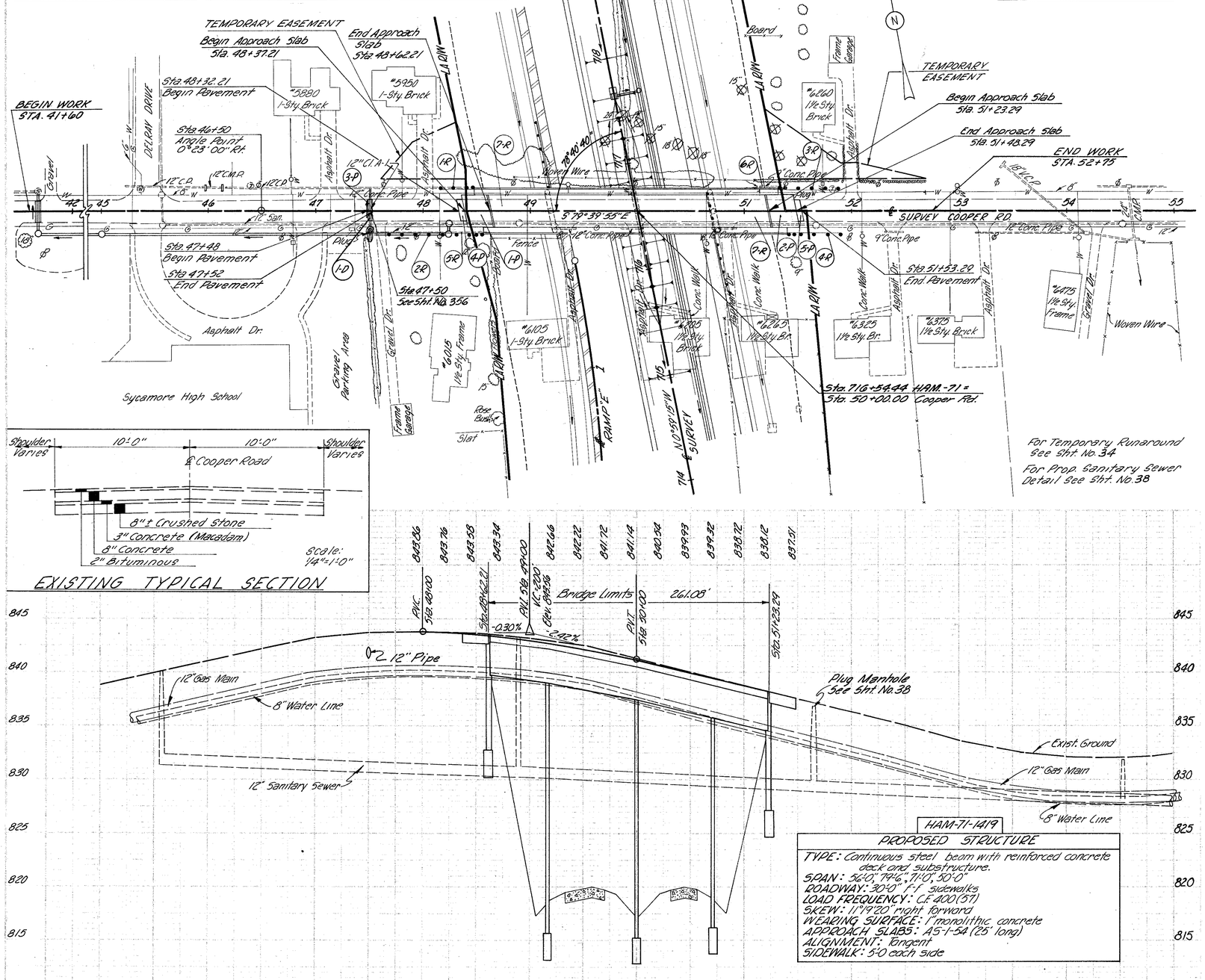
HAMILTON COUNTY
HAM. 71 - 13.05











For Temporary Runaround
See Sht. No. 34

For Prop. Sanitary Sewer
Detail See Sht. No. 38

EXISTING TYPICAL SECTION

HAM-71-1419

PROPOSED STRUCTURE

TYPE: Continuous steel beam with reinforced concrete deck and substructure.
SPAN: 36'0" 79'6", 71'10", 50'0"
ROADWAY: 30'0" F-F. sidewalks
LOAD FREQUENCY: LF 400 (57)
SKEW: 11°9'20" right forward
WEARING SURFACE: 1" monolithic concrete
APPROACH SLABS: AS-1-54 (25' long)
ALIGNMENT: Tangent
SIDEWALK: 5'0 each side

EST. QUANTITIES

SEE SHT. NO.	I-1 12" M.W.W. 10 Gage Class A-1 Lin. Ft.	I-2 Masonry Co. Yds.	I-5 Concrete Fee Class A-1 Cu. Yds.	I-10 Seeding Sq. Yds.	I-15 Guard Rail Lin. Ft.	E-8 Removal of Pipe Culvert Sq. Yds.	E-12 Pipe Culvert Class 54"-S Under Lin. Ft.
356							
Total Village of Montgomery	40	0.23	1	2			

EST. QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-15 Guard Rail Lin. Ft.	E-8 Removal of Pipe Culvert Sq. Yds.	E-12 Pipe Culvert Class 54"-S Under Lin. Ft.
	DRAINAGE				
1-D	477+50	℄	40		
2-D	Not Used				
	ROADWAY				
1-P	476+15.26 - 476+40.00	L	31.25		
2-P	477+67.0 - 483+54.5	R	612.50		
3-P	514+91.0 - 514+87.25	L	356.25		
4-P	514+91.0 - 514+87.0	R	50.00		
5-P	48+45 - 51+25	R		20	
6-P	51+25 - 51+48.29	L		30	
7-P	481+37.21 - 514+48.29	℄	694		
8-P	Not Used				
	PAVEMENT				
1-P	476+15.26 - 476+40.00	℄			
2-P	514+28.29 - 514+48.29	℄			
3-P	477+68 - 483+54.5	℄			
4-P	481+32.21 - 481+37.21	℄			
5-P	514+48.29 - 514+53.20	℄			
	Total Village of Montgomery		694	50	225.00

	I-7	I-22	T-70	T-95	T-30			
	Sampler Pan Conc. & C.I.P. Adaptor	Geotextile Fabric 270 Type 1 or 3	1" Cement Concrete Pavt. Fr.	Asph. Surface Course 2"	Asph. Base Course			
	200 Yds.	Sq. Yds.	Sq. Yds.	Cu. Yds.	Cu. Yds.			
1-D					4	83		
2-D					4	83		
3-P		14						
4-P		14						
5-P			11	1	4			
6-P			11	1	4			
7-P			9	1	4			
8-P			31	3	12			
	1.00	28	31	3	12	83	83	166

COOPER ROAD

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

96
445

HAMILTON COUNTY
HAM. 71-13.05

REFERENCE P.O.T. Sta. 45+00
18" Catalpa
Nail & Cap
12" Maple

REFERENCE P.O.T. Sta. 50+00
Stake
15" Maple
12" Maple

REFERENCE P.I. Sta. 52+64.90
Stake
7" Post
Iron Post
Chain Link
(0.0 Above Ground)

REFERENCE P.I. Sta. 57+75.12
24" Ash
Nail & Cap

CURVE DATA
PI = Sta 52+64.90
Δ = 94°51'10"
R = 75.00'
T = 81.64'
L = 124.15'
E = 35.86'
S.E. = R.C.

CURVE DATA
PI = Sta 57+75.12
Δ = 10°01'45"
D = 6°00'00"
R = 954.93'
T = 83.77'
L = 167.16'
S.E. = 0.032'/'

Future Subdivision Street
Dumped Rock Channel Protection 8'x1'-6"
TEMPORARY EASEMENT
Sta. 765+78.10 ℄, 302' Lt.
I-B Std. M.H. No. 2
See Sht. No. 39
Woven Wire
Sta. 1+65 End Work
12' Meet Exist. Pavement
Sta. 1+90
Begin Taper
Sta 54+32
96" Cl. A-1
Evergreens
Sta 55+10, See Sht. No. 357
18" Cl. A-1
Jute Matting
7'-8" Wide
Sta 59+30 End Bituminous Taper
Sta 59+30.58
Begin Bituminous Taper
Sta 59+75
End Work
Sta. 52+02
Inv. 825.19
I-1 35'x12" Pipe Class F-A
To Sycamore Grade School
Chain Link
Sta. 0+50
End Work
Asphalt Dr.
Gravel
Frame Barn
Conc. Blk. Garage
Flower Beds
Sta. 51+35.50
Sta. 0+00.00
Sta. 51+21.25
Begin Approach Slab
Conc. Slab
Picket
Leaching Lines
Board
"10033 1-Sty. Br. Basement
Swimming Pool (Conc.)
Chain Link
Cavattete
Apple Trees
Abond. Cistern
Sta. 51+46.26 ℓ
End Approach Slab
Sta. 51+83.26 P.I.
Woven Wire (Band)
Conc. Area
Sta. 52+35.00
Sta. 0+00.00
Woven Wire
Conc. Pipe
Woven Wire (Band)
Sta. 52+75
Sta. 0+40
Woven Wire (RELOCATED)
Sta. 53+10
Sta. 0+75
Sta. 53+50
Sta. 1+15
Sta. 54+00
Sta. 1+65
Sta. 54+32
Sta. 56+91.35
Sta. 57+75.12
P.I.
Sta. 58+58.51
Begin Bituminous Taper
Sta. 59+30
End Work
Sta. 59+75
Asphalt
Conc. Dr.
"10085 1-Sty. Brick
Asphalt Dr.
4" Tile
"10086 1½ Sty. Br.
"10084 1-Sty. Brick
"10077 1½ Sty. Brick
6" Tile
"10080 1-Sty. Brick
5' Conc. Walk
Gravel Dr.
Wooded Area
Hamilton County Sanitary Sewer For Detail See Sht. No. 39
Sta 768+73.70
Sta 769+44.18
50°20'00"
84°56'00"
Under 12" Ash
Under 12" Ash
Bird Bath
Flag Pole
2.5 Sty. Frame
Field
Conc. Block Foundation
1-Sty. Fr. Gar.
Asphalt
PRIVATE DR.
Sta. 4+48, 96" Pipe See Sht. No.
2-Sty. Frame
Evergreens
Sta. 763+79.65 HAMILTON = Sta. 50+00 Zig Zag Rd.
Sta. 48+28.74
End Approach Slab
Sta. 48+45
Sta. 48+53.74
Begin Approach Slab
Sta. 48+00
End Bituminous Taper
Sta. 47+50 Begin Bituminous Taper
Meet Existing Pavement
Begin Work
Sta. 45+75
Frame Shed
Sta. 0+35
End Work
I-1 18"x12" Class F-A
Sta. 47+33
Inv. 838.28
1-Sty. Brick
1½ Sty. Brick
Sta. 0+00
Sta. 48+45
See Sht. No. 293
Sta. 767+96.80, 153' Lt.
I-B Std. M.H. No. 2
See Sht. No.

For Quantities See Sht. No. 97
For Typical Sections See Sht. No. 8
For Temporary Run-around See Sht. No. 35
For Bridge Data & Limiting Stations See Sht. No. 97
For Service Rd. No. 1 Private Drive See Sht. No. 99

Shoulder Varies
8'±
8'±
Shoulder Varies
℄ Zig Zag Rd.
4" Bituminous
10"± Gravel
Scale: 1/4" = 1'-0"

EXISTING TYPICAL SECTION

PLAN
ZIG ZAG ROAD

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

97
445

HAMILTON COUNTY
HAM. 71-13.05

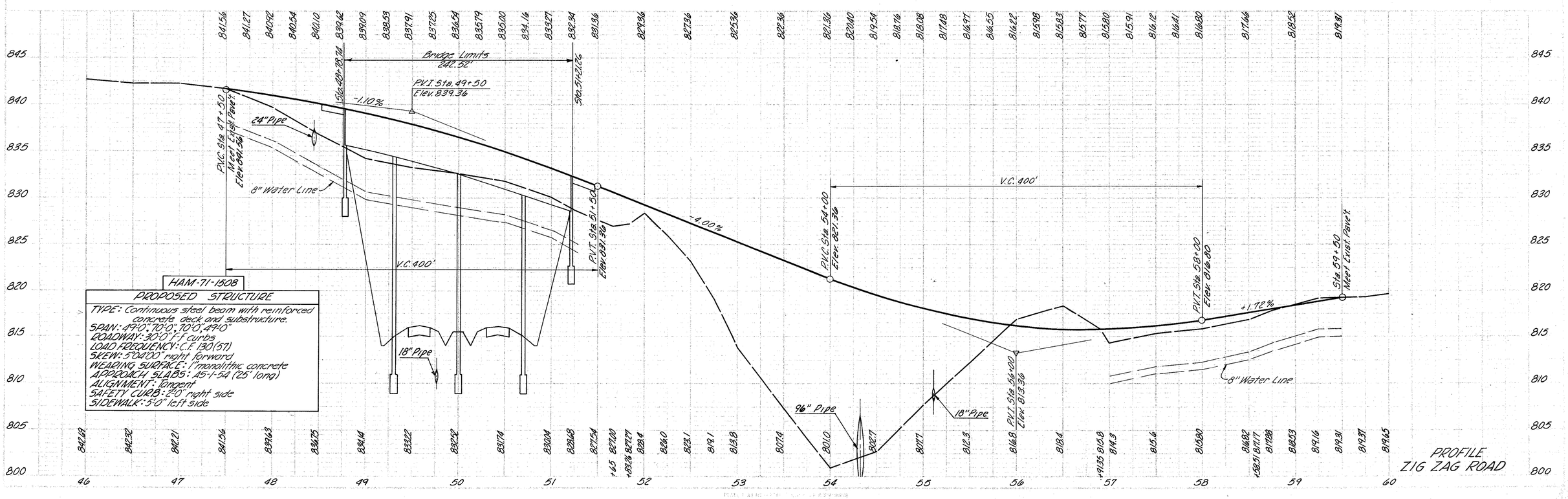
ESTIMATED QUANTITIES

DRAINAGE

EST. QUANTITIES			E-3	I-1				I-2	I-10		L-10	L-120																				SEE SHT. NO.
REF. NO.	STATION TO STATION	SIDE	Channel Ex.	12" Class F-4	18" M-1.6(12) or M-1.8(13) Class A-1	24" M-1.6(18) or M-1.8(19) Gage 14 Class A-1	96" M-1.6(48) or M-1.8(49) Class A-1	Masonry	6" R.C. Riprap	Dumped Rock	Sodding	Jute Matting																				
			Cu. Yds.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Cu. Yds.	Sq. Yds.	Cu. Yds.	Sq. Yds.	Sq. Yds.																				
1-D	47+93 98+11	L		18																												
2-D	98+45	℄				60		0.82	17		12																					299
3-D	51+76 52+02	L		35																												
4-D	53+00 53+48	L								17																						
5-D	54+32	℄	193				182	10.50	126		30																					357
6-D	55+10	℄	38		82			0.60	31		6																					357
7-D	55+25 56+00	L								33																						
8-D	56+00 59+00	L										252																				
(I)	Total Village of Montgomery		231	53	82	60	182	11.92	174	50	36	252																				

ROADWAY & PAVEMENT

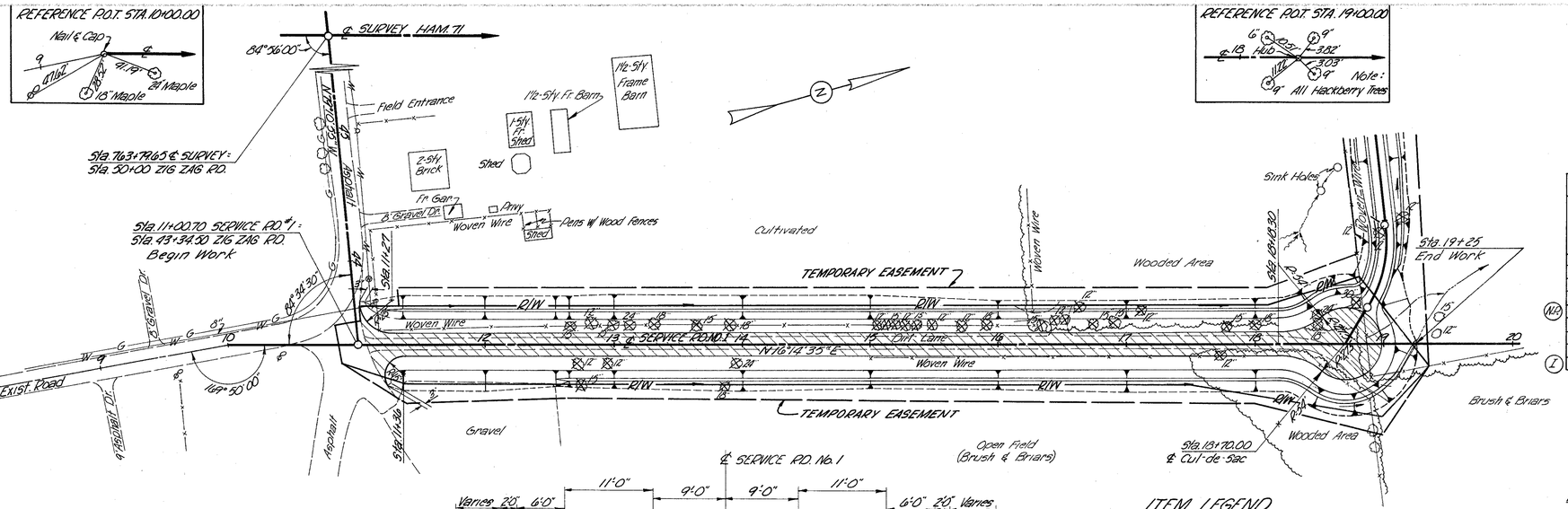
EST. QUANTITIES			E-12	I-15		S-24			B-19	B-35	T-30	T-35	I-7	I-9	I-22	SEE SHT. NO.
REF. NO.	STATION TO STATION	SIDE	Pipe Removal 24"ℓ Under Lin. Ft.	Guard Rail Lin. Ft.	Guard Rail Removed & Disposed Lin. Ft.	Removal of Exist. Structures Lump			Aggr. Base Course Cu. Yds.	Asphaltic Base Course Cu. Yds.	Bitum. Prime Coat Gals.	Asphaltic Surface Course Cu. Yds.	Reinf. Conc. Appr. Slab T=13 Sq. Yds.	Stone Underdrain No. 2 Lin. Ft.	Grading A or B Subbase Cu. Yds.	
	Roadway											1½"	2"			
1-R	47+54.50 — 48+67	R		112.50												
2-R	48+05	L	22													
3-R	48+07.75 — 48+64	L		56.25												
4-R	51+32.50 — 51+79	L		475.00												
5-R	51+36 — 56+41	R		50.00												
6-R	51+95	R	50													
7-R	51+98 — 54+20	L		262.50												
8-R	54+08 — 55+46	R			225											
9-R	54+80	R				L.S.										
10-R	54+41 — 56+44.50	L		212.50												
11-R	55+10	R	32													
12-R	57+65	℄	32													
13-R	Not Used															
	Pavement															
	47+50 48+53.74								43	12	101	3		70	37	
1-P	48+05	L							6		15		2			
2-P	48+53.74 49+78.74	L&R							14				87		12	
3-P	51+21.26 51+46.26	L&R							14				87		12	
	51+46.26 59+50								357	102	839	73		427	310	
4-P	51+95.50	L							24		56		8			
5-P	54+35 Driveway	L							43		28		4			
(I)	Total Village of Montgomery		136	1,168.75	225	L.S.			501	114	1039	82	14	174	497	371

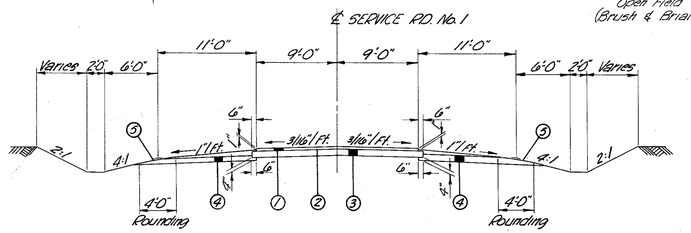


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

98
445

HAMILTON COUNTY
HAM. 71 - 13.05





ITEM LEGEND

(1) Item T-35 2" Asphaltic Concrete Surface Course Type A. (710-83)

(2) Item T-30 Bituminous Prime Coat, Sec. M-3.7, RT-2 or RT-3, Shall be Applied at the Rate of 0.40 Gal. per Sq. Yd.

(3) Item B-19 7" Aggregate Base Course.

(4) Item I-9 Stone Underdrains No. 2 (See General Notes for Spacing of This Item.)

(5) Item L-9 Seeding & Protecting

EST. QUANTITIES

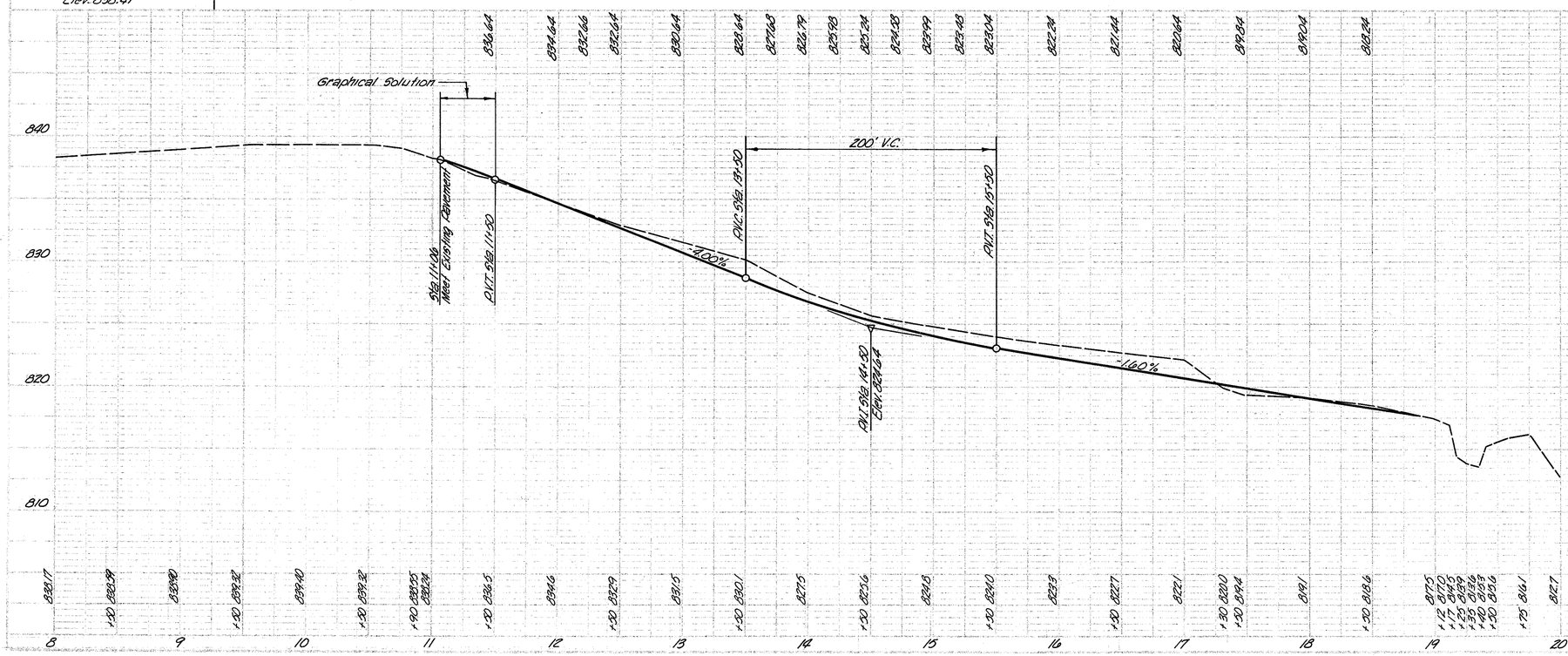
REF. NO.	STATION TO STATION	SIDE	B-19 7" Aggr. Base Course Cu. Yds.	T-30 Bitum. Prime Coat Gals.	T-35 A.S.P.H. Conc. Surf. Course 2" Type A Cu. Yds.	I-9 Stone Under-drains No 2 Lin. Ft.
	Pavement					
	11+05 to 18+97.50	℄	92	716	100	216
(N)	Total Non-Federal Participation		92	716	100	216
	11+05 to 18+97.50	℄	274			
(F)	Total Federal Participation		274			

NOTE: The Bureau of Public Roads will participate in all earthwork and only participate in 16' of 7" B-19 on Service Road No. 1.

CITY of CINCINNATI B.M. # 2198
Conc. Monu. 17' Lt. of Sta. 10+13
Elev. 833.41

TYPICAL SECTION

Scale: 1" = 10'

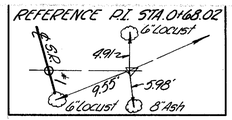


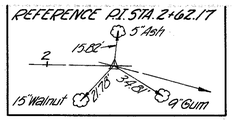
For Private Drive see Plan & Profile Sheet No. 99

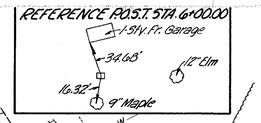
SERVICE ROAD NO. 1

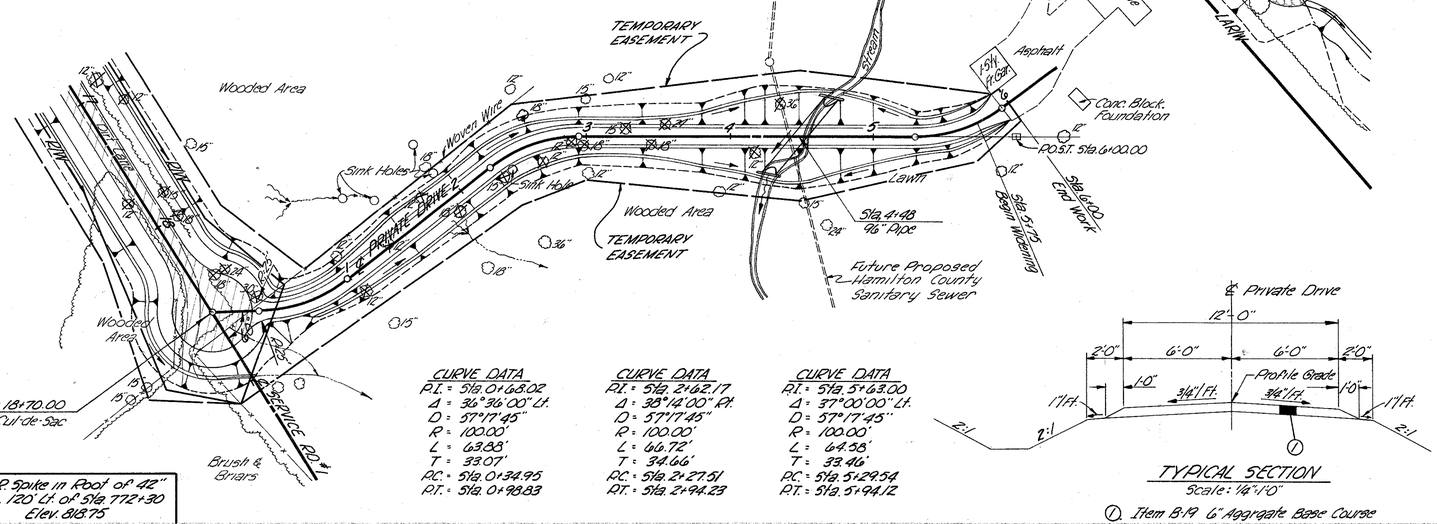
FED. RD. DIVISION	STATE	PROJECT		99 / 445
2	OHIO			

HAMILTON COUNTY
HAM. 71-13.05









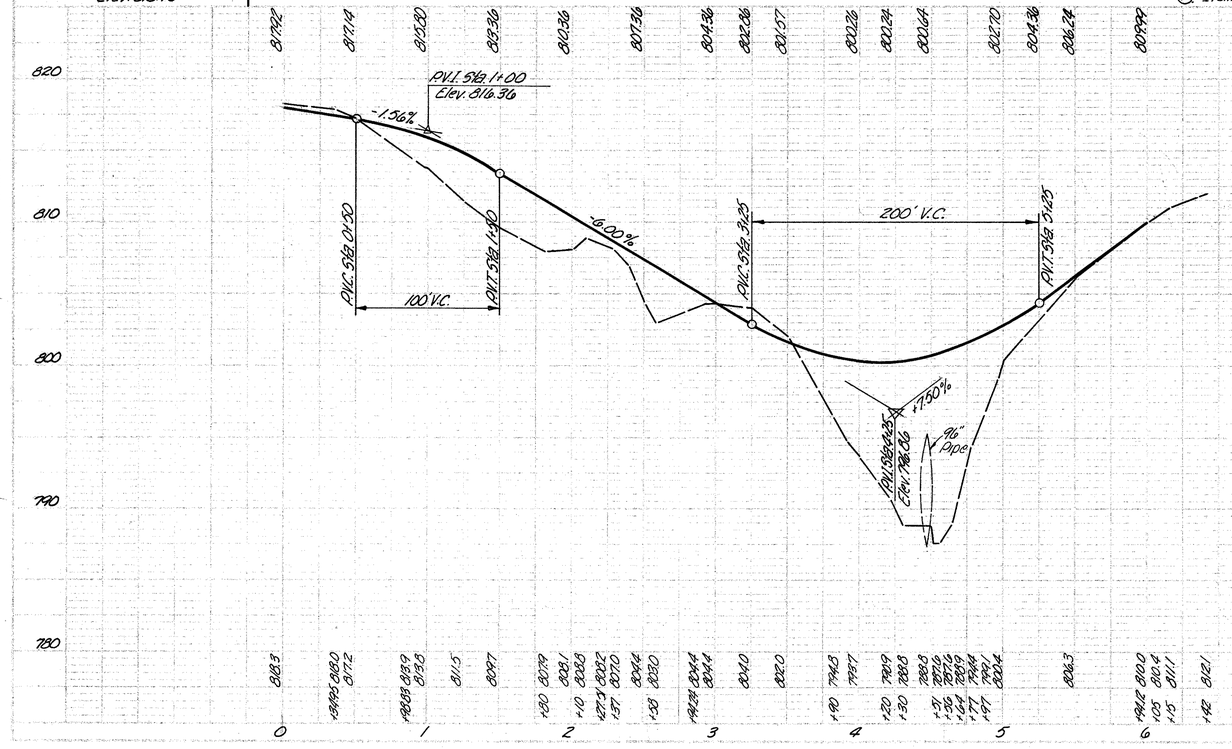
CURVE DATA
P.I. = Sta. 0+68.02
Δ = 36°36'00" Lt.
D = 57°17'45"
R = 100.00'
L = 63.88'
T = 33.07'
P.C. = Sta. 0+34.95
P.T. = Sta. 0+98.83

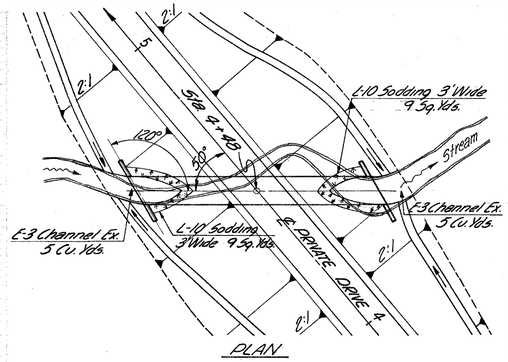
CURVE DATA
P.I. = Sta. 2+62.17
Δ = 38°14'00" Rt.
D = 57°17'45"
R = 100.00'
L = 66.72'
T = 34.66'
P.C. = Sta. 2+27.51
P.T. = Sta. 2+94.23

CURVE DATA
P.I. = Sta. 5+63.00
Δ = 37°00'00" Lt.
D = 57°17'45"
R = 100.00'
L = 64.58'
T = 33.46'
P.C. = Sta. 5+29.54
P.T. = Sta. 5+94.12

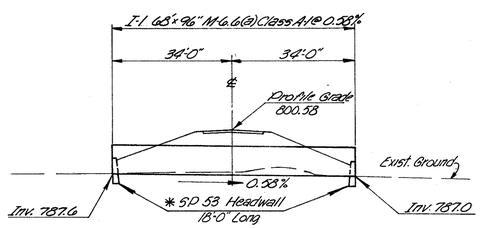
TYPICAL SECTION
Scale: 1/4"=1'-0"

① Item B-19 6" Aggregate Base Course





PLAN



PROFILE

* For Note & Detail See Sht. No. 346

DRAINAGE DETAIL STA. 4+48
Scale: 1"=20'-0"

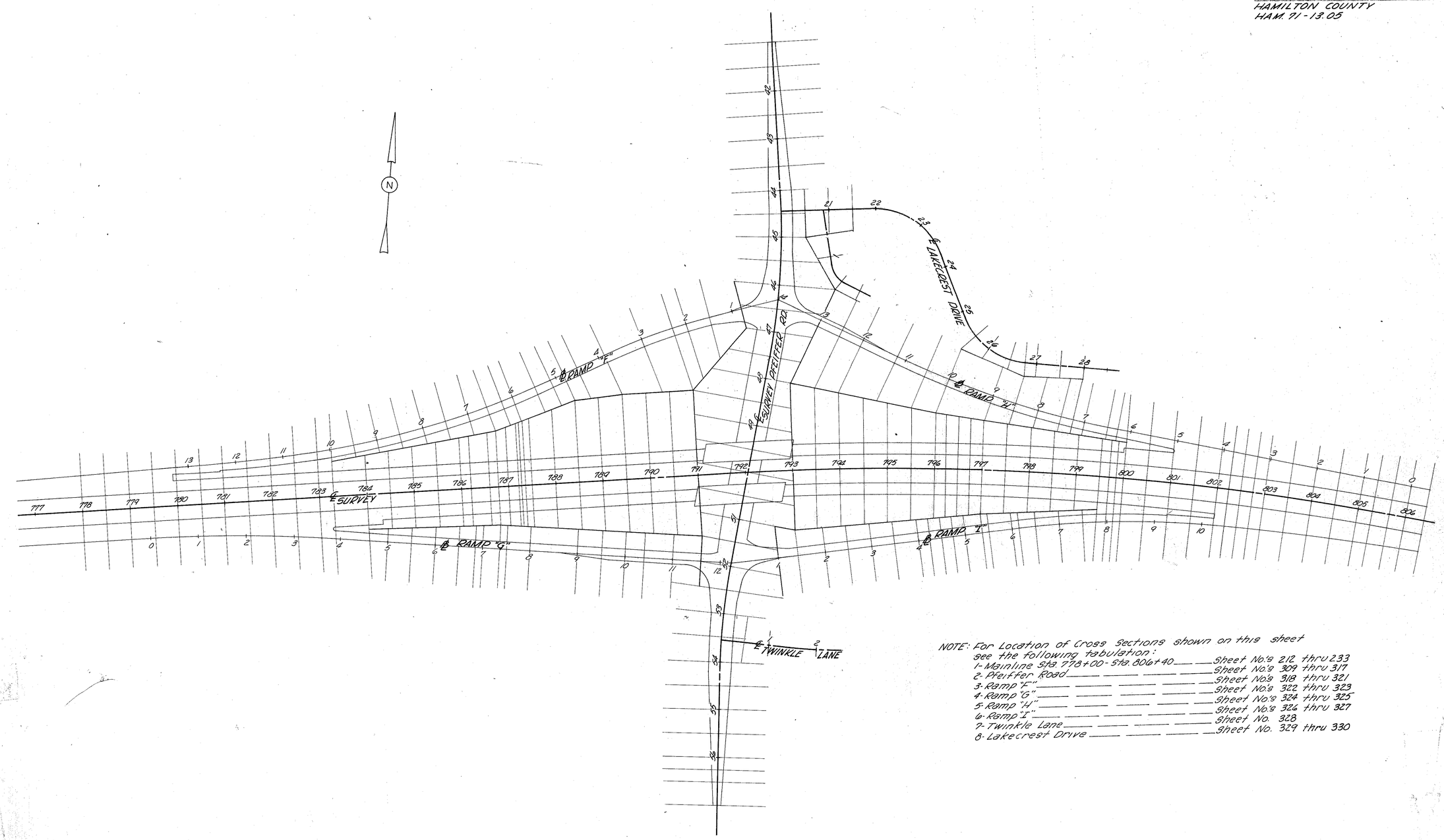
EST. QUANTITIES			I-1	I-2	E-3	L-10					B-19	SEE
REF. NO.	STATION TO STATION	SIDE	96" M-66(a) Class A ⑴ Lin. Ft.	Masonry Cu. Yds.	Channel Ex. Cu. Yds.	Sodding Sq. Yds.					Aggr. Base Course Cu. Yds.	SHEET NO.
	DRAINAGE											
I-D	4+48	℄	68	12.99	10	18						99
	PAVEMENT											
I-P	0+27.5 - 5+96										137	
①	TOTAL		68	12.99	10	18					137	

SERVICE ROAD NO. 1
(PRIVATE DRIVE)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

100

HAMILTON COUNTY
HAM. 71 - 13.05



NOTE: For Location of Cross Sections shown on this sheet see the following tabulation:

1- Mainline Sta. 778+00 - Sta. 806+40	Sheet No.'s 212 thru 233
2- Pfeiffer Road	Sheet No.'s 309 thru 317
3- Ramp "E"	Sheet No.'s 318 thru 321
4- Ramp "G"	Sheet No.'s 322 thru 323
5- Ramp "H"	Sheet No.'s 324 thru 325
6- Ramp "I"	Sheet No.'s 326 thru 327
7- Twinkle Lane	Sheet No. 328
8- Lakecrest Drive	Sheet No. 329 thru 330

SCALE: 1"=100'

PFEIFFER ROAD INTERCHANGE
CROSS SECTION LAYOUT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

101
745

HAMILTON COUNTY 266 Reel
HAM. 71-13.05 (R) — 20.01

266

REFERENCE P.C. STA. 43+97.28
43 — 18.08 — 18.91 — Guard Rail Posts

REFERENCE P.T. STA. 47+52.70
6 Locust, 6 Wild Cherry
47 — 11.96' — 12.01' — 10.30' — 6" Locust

REFERENCE P.T. STA. 54+22.38
54 — 30.94' — 22.12' — 31.20' — 15" Ash — 36" Elm — 15" Ash

Proposed 12" Sanitary Sewer by City of Blue Ash (To be constructed by others)

Sta. 41+20.00 Begin Drum Taper — BEGIN WORK

Sta. 20+00 Lakecrest Dr. = Sta. 44+45 Pfeiffer Rd

Sta. 44+80 30° Cl. A

End Drum Taper — Warm Cove Lane

Sta. 46+30.00 Pfeiffer Rd Relocated
Sta. 0+00.00 Ramp "F"
Sta. 14+04.11 Ramp "H"

TEMPORARY EASEMENT

CORPORATION LINE CITY OF BLUE ASH
VILLAGE OF MONTGOMERY

Leaking Lines
Jute Matting 7'8" Wide

Ramp "F"

Sta. 46+22.70 P.T.

Under 12"

90°00'00" Tan. to Curve

Asphalt

Sta. 46+23.96 Tan. to Curve

Sta. 793+20 ℄ See Sht. No. 222

Chain Link

Concrete Swimming Pool 15'x30' 3' to 8' Deep

Sta. 2+10 TWINKLE LANE END WORK

Conc. Steps & Conc. P.T. Sta. 2+00.00

#10411 1-Sty. Brick — Bar & Fr. Split Level — Asphalt

Jute Matting 7'8" Wide
P.T. Sta. 1+90.05

Jute Matting 7'8" Wide

Sta. 0+92.81 Lt.
1-8 Std. M.H. No. 1

#6350 1-Sty. Brick

Lawn

Sta. 2+00.00 3" Cond.

Asphalt

Ramp "I"

Sta. 54+40.00 End Conc. Pavement Begin Drum Taper
See Sht. No. 1039
Sta. 54+22.38 Ramp "I"
P.T. Sta. 54+22.38

TWINKLE LANE CURVE DATA
P.I. = Sta. 1+70.05
Δ = 5°26'11" Lt.
D = 9°04'03"
R = 631.98'
L = 59.95'
T = 30.00'
E = 0.71'
S.E. = None

#6490 1-Sty. Brick

Sta. 54+18.22' Lt.
1-8 Std. M.H. No. 1

Sta. 0+60 End Work

See Sht. No. 316

Sta. 0+00 = Sta. 54+74

Sta. 0+00 = Sta. 54+57

Jute Matting 7'8" Wide

Sta. 0+60 End Work

Sta. 54+66 Elev. 777.56

24" I.J.I. Class I-A

Sta. 0+60 End Work

Sta. 54+48 Elev. 779.84

Sta. 53+54.88 Pfeiffer Rd. = Sta. 0+00.00 Twinkle Lane

#6601 1-Sty. Brick

#6511 1-Sty. Brick

Conc.

Concrete Swimming Pool 20'x35' 4' to 9' Deep

Chain Link

Concrete Swimming Pool 32'x24' 3' to 7' Deep

Chain Link

WORK AGREEMENT

Sta. 793+31 ℄ See Sht. No. 221

Sta. 792+04.34 HAM. 71 = Sta. 50+00.00 Pfeiffer Rd.

Field

Wooded Area

Future Proposed 15" Sewer Pipe By Hamilton Co.

Note: For Pfeiffer Road & Ramp Intersection Details See Sheets 127-129

Dumped Rock Channel Protection 9'x 2'10"

Guard Posts

Sta. 41+75 3" Cond.

PC Sta. 41+79.75

10°00'00" Tan. to Curve

PC Sta. 791+79.40 HAM. 71

Survey

Brick Sign

Sta. 47+23.70

Sta. 48+98.23

Sta. 49+62.50

Sta. 50+22.50

Sta. 51+23.10

Sta. 51+59.21

97°08'12"

-87°38'30" Tan. to Curve

Sta. 53+48 Elev. 779.84

Sta. 53+54.88 Pfeiffer Rd. = Sta. 0+00.00 Twinkle Lane

Sta. 54+18.22' Lt.
1-8 Std. M.H. No. 1

Sta. 54+40.00 End Conc. Pavement Begin Drum Taper

Sta. 54+22.38 Ramp "I"

P.T. Sta. 54+22.38

Ramp "J"

Ramp "G"

Asphalt

Lawn

Conc.

Chain Link

Sta. 54+36.24' Lt.
I-8 Std. C.B. No. 3
F.L. Grate 781.00
Inv. 18" 774.82

Sta. 54+36.23' Rt.
F.L. 6" 777.20

Sta. 54+35.23' Lt.
F.L. 776.62 Outlet

Sta. 54+36.22' Lt.
F.L. 6" 776.62 Outlet

6" Gas Line

12" Water Line

Sta. 53+00.29' Rt.
F.L. 6" 780.92

-2.11%

109'x18" C.I.J-1

Sta. 53+29.51' Lt.
HW-F Headwall
Inv. 18" 778.00

-2.93%

17'x18" C.I.J-1

V.C. 300'

PVC Sta. 50+25

PVT Sta. 53+25

Sta. 52+20.62' Rt.
F.L. 6" 782.45
For Underdrain Continuation See Ramp "G" Sta. 11+59.21' Rt.

Sta. 51+70.35' Rt.
F.L. 6" 782.60

Sta. 49+75.26' Lt.
F.L. 6" 783.12

Sta. 49+25.26' Lt.
F.L. 6" 783.87

Sta. 49+25.38' Rt.
F.L. 6" 783.68

Sta. 49+75.38' Rt.
F.L. 6" 782.93

Sta. 49+00.37' Rt.
F.L. 6" 784.34

Sta. 48+27.26' Lt.
F.L. 6" 786.09
For Underdrain Continuation See Ramp "H" Sta. 13+64.18' Rt.

Sta. 46+75.26' Lt.
F.L. 6" 785.90

Sta. 46+30.46' Rt.
F.L. 6" 784.39
For Underdrain Continuation See Ramp "F" Sta. 0+44.16' Rt.

Sta. 45+69.26' Lt.
F.L. 6" 786.00

Sta. 45+52.30' Lt.
F.L. 8" 785.83 Outlet

Sta. 45+36.26' Lt.
F.L. 786.09

Sta. 45+48.30' Lt.
F.L. 785.83 Outlet

Sta. 45+52.29' Rt.
F.L. 6" 785.03

Sta. 45+48.53' Rt.
F.L. 8" 782.83 Outlet

Sta. 44+00.26' Lt.
F.L. 6" 786.66

Sta. 44+00.26' Rt.
F.L. 6" 786.00

6" C.I.I-3 Lt.

6" C.I.I-3 Rt.

30" Pipe

Sta. 95+35.29' Rt.
F.L. 6" 785.09

6" Gas Line

12" Water Line

Meet Existing Pavt.

Ramp "H"

Ramp "F"

Ramp "I"

Ramp "J"

Ramp "G"

Survey

HAM.-71
Sta. 792+04.34

NOTE: Existing Drive Pavement and Concrete Walks lying outside the construction limits but within the R/W limits at Sta. 53+00 Rt. & Lt., Sta. 12+25± Ramp "H" Lt. and Sta. 2+25± Ramp "I" Rt., shall be removed and paid for at the contract unit price bid for Item E-1, Roadway Excavation. For Quantities see Cross Sections.

For Typical Sections See Sht. No. 3
For Sewer & Water Line Details See Sht. No. 39 & 42
For Lakecrest Drive Plan & Profile See Sht. No. 108

For Twinkle Lane Profile See Sht. No. 102
For Quantities See Sht. No. 102

PFEIFFER ROAD CURVE DATA

①	②	③	④
P.I. = Sta. 45+75.91	P.I. = Sta. 45+27.05	P.I. = Sta. 53+08.10	P.I. = Sta. 52+32.88
Δ = 14°13'00"	Δ = 14°13'00"	Δ = 9°10'45"	Δ = 9°10'45"
D = 4°00'00"	D = 5°30'21"	D = 4°00'00"	D = 2°25'05"
R = 1,432.40'	R = 1,040.62'	R = 1,432.40'	R = 2,369.60'
L = 355.42'	L = 258.21'	L = 229.48'	L = 379.61'
T = 178.63'	T = 129.77'	T = 115.00'	T = 190.22'
E = 11.09'	E = 8.06'	E = 4.61'	E = 7.62'
S.E. = 0.022%	S.E. = Varies	S.E. = 0.022%	S.E. = Varies

Shoulder Varies — 8'± — ℄ Pfeiffer Rd — 8'± — Shoulder Varies
8" Gravel & Stone
8" Crushed Stone
3" Asphalt
Scale: 1/4"=1'-0"

EXISTING TYPICAL SECTION

792.25 792.13 791.88 791.63 791.38 791.13 790.88 790.63 790.38 790.13 789.88 789.63 789.38 789.13 788.88 788.63 788.38 788.13 787.88 787.75 787.61 787.43 787.23 786.98 786.71 786.41 786.05 785.69 785.27 784.82 784.34 783.84 783.31 782.75 782.25 781.20 780.14

805 800 795 790 785 780 775

40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55

PFEIFFER ROAD
STA 40+00-55+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

102/445

HAMILTON COUNTY
HAM. 71-13.05

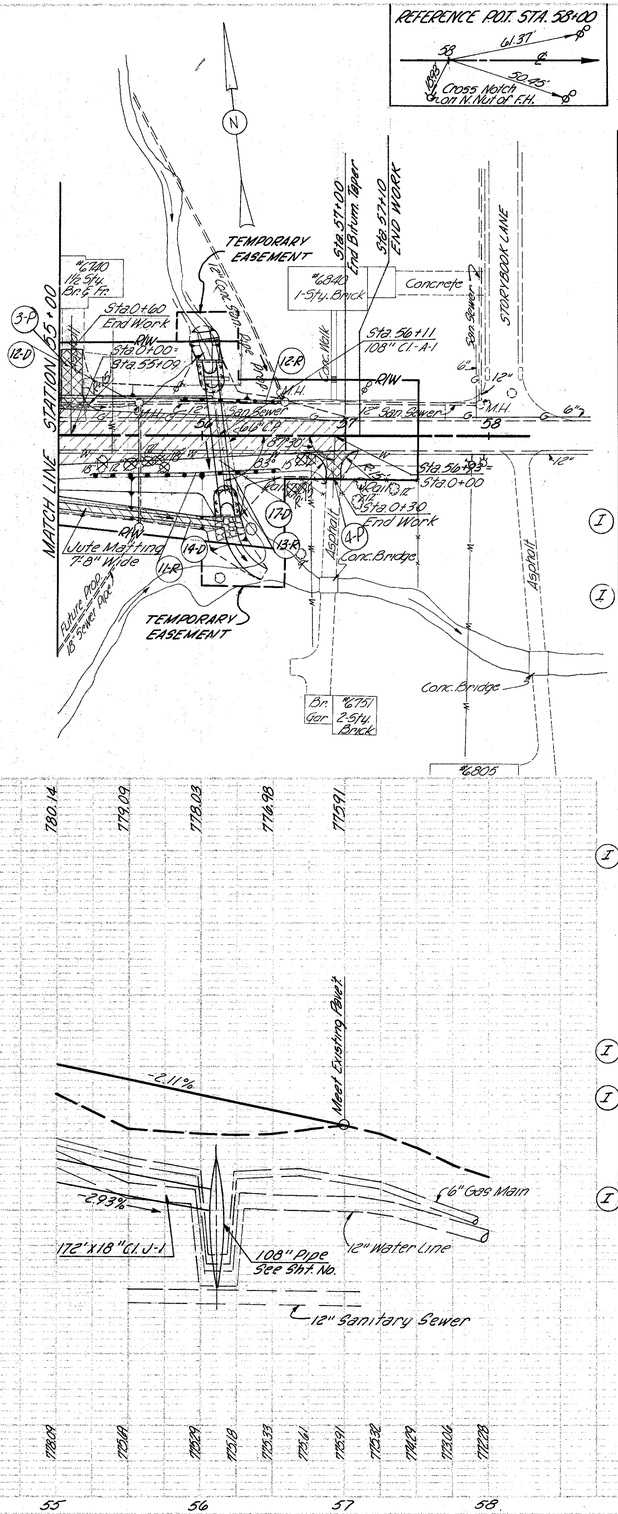
ESTIMATED QUANTITIES

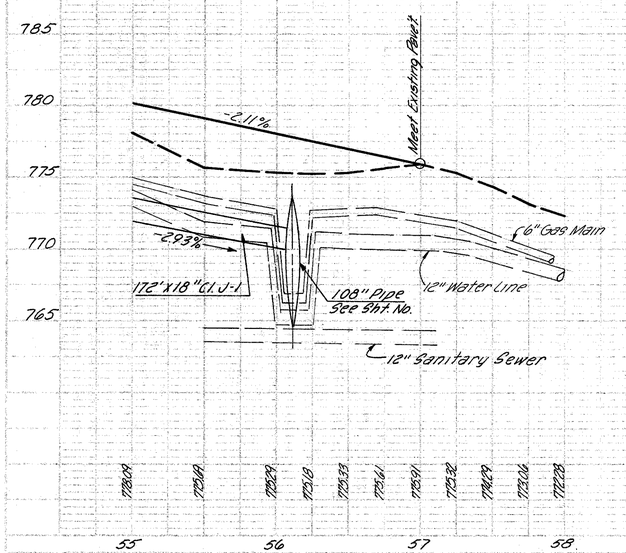
DRAINAGE

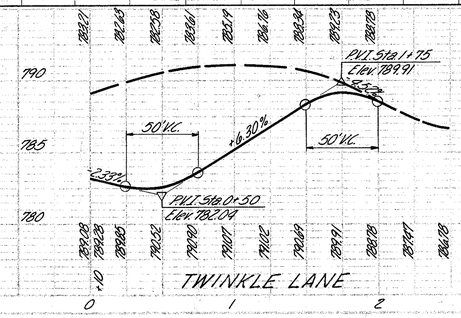
EST. QUANTITIES			E-3	I-1										I-2	I-5					I-8		I-10		L-10	L-120	ITEM SPL.				SEE SHT. NO.
REF. NO	STATION TO STATION	SIDE	Channel Ex.	6" Class F-4	6" Class I-3	6" Class J-1	8" M-(a)4(c) Class F-4	12" Class F-4	12" Class E-1	18" Class J-1	30" Class A-1	108" M-(a)4(g) Gage 108 Class A-1		Masonry	6" 30° Bend Class I-3	6" 90° Bend Class J-1	6"x6" Tee Class I-3	6"x6" Wye Class I-3	18"x12" Tee Class J-1	C.B. No. 2-2B Standard	C.B. No. 3 Standard	6" R.C. Riprap	Dumped Rock	Sodding	Jute Matting	Drainage Connection Using No. 6 Aggr.				
			Cu. Yds.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.		Cu. Yds.	Each	Each	Each	Each	Each	Each	Each	Sq. Yds.	Cu. Yds.	Sq. Yds.	Sq. Yds.	Cu. Yds.				
1-D	45+07 — 45+48	L			39		10											1								3				
2-D	45+07 — 45+48	R			39		10											1								3				
3-D	45+52 — 46+27	L			96		10											1								6				
4-D	45+52 — 46+30	R			80																					6				
5-D	46+75 — 54+35	L		10	746																					55				
6-D	47+00 — 54+36	R			751	52									1	1	1									56				
7-D	45+07 — 46+00	R																				76								
8-D	44+75 — 45+50	L																							67					
9-D	45+50	℄									102			1.02									7	8		13					356
10-D	53+00 — 53+15	L																												
11-D	53+29 — 54+36	L								109				0.30										3						
12-D	54+36 — 56+08	L								172								1			1									
13-D	54+48 — 54+66	R					18																							
14-D	54+66 — 56+10	R																							124					
15-D	54+62 — 54+92	L							30											1										
16-D	54+92	L							28											1										
17-D	56+11	℄	104									110		15.18								34	29	32						358
18-D	Not Used																													
(I)	Total Village of Montgomery		104	10	1791	52	30	18	58	281	102	110		16.50	1	1	1	3	1	2	1	34	112	43	204	129				
19-D	44+00 — 45+07	L			107																					8				
20-D	44+00 — 45+07	R			107																					8				
21-D	43+75 — 45+07	R																					112							
22-D	Not Used																													
(I)	Total City of Blue Ash				214																		112			16				

ROADWAY & PAVEMENT

EST. QUANTITIES			E-12		I-15	B-19	B-35	T-30	T-35	T-71	I-9	I-12		I-22	SEE SHT. NO.
REF. NO	STATION TO STATION	SIDE	Pipe Removed 24" & Under	Pipe Removed 24" & Over	Guard Rail	Aggr. Base Course	Asphaltic Base Course	Bitum Prime Coat	Asphaltic Surface Course	9" Reinf. Conc. Pav't.	Stone Underdrain No. 2	Std Type 2-A Curb	Std Type B Curb	Grading A or B Subbase	
			Lin. Ft.	Lin. Ft.	Lin. Ft.	Cu. Yds.	Cu. Yds.	Gals.	1½"	2"	Lin. Ft.	Lin. Ft.	Lin. Ft.	Cu. Yds.	
	Roadway														
	41+00 To 45+07														
1-R	41+50 — 45+07	R			357										
2-R	43+65	℄	48												
3-R	45+07	R	40												
4-R	Not Used														
(I)	Total City of Blue Ash		88		357										
	45+07 To 57+00														
15-R															
5-R	45+07 — 46+17	R			105.50										
6-R	46+10	L	40												
7-R	48+66.50 — 49+44.00	R			75.00										
8-R	49+69.50 — 50+13.25	L			43.75										
9-R	49+90.75 — 50+34.50	R			43.75										
10-R	50+00.00 — 50+97.51	L			97.50										
11-R	55+25 — 56+50	R			125.00										
12-R	55+87.50 — 56+50	L			62.50										
13-R	56+16	℄		66											
(I)	Total Village of Montgomery		40	66	493.00										
	Pavement														
	41+00 — 45+07					182	52	429	37		1309	105		385	
(I)	Total City of Blue Ash					182	52	429	37		1309	105		385	
	45+07 — 57+00					166	48	393	34		5084	108	47	189	1057
1-P	54+57	R				7		17		2					
2-P	54+74	L				7		18		3					
3-P	55+09	L				11		31		4					
4-P	56+93	R				5		13		2					
	Twinkle Lane 0+28-2+00					93		159		22					
(I)	Total Village of Montgomery					289	48	631	34	33	5084	108	47	189	1057







PFEIFFER ROAD
STA 55+00-58+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM. 71-13.05

Sta. 792+04.34 HAM. 71 = Sta. 50+00.00 Pfeiffer Rd.

76°23'46" Tan. to Curve

N5°45'05"E

Sta. 787+42.50

Sta. 786+90 2-96" Cl. A-1

88°19'00"

90°

Sta. 6+02 Ramp "F" 6' Lt. See Sht. No. 346

Existing Pfeiffer Rd.

Planter

Asph.

RAMP "F" CURVE DATA
PI = Sta. 2+64.55
Δ = 10°37'49"
Dc = 4°30'00"
R = 1,273.24'
Lc = 236.23'
T = 118.45'
E = 5.50'
S.E. = 0.04'/'

PT. Sta. 4+82.33

PC. Sta. 2+46.10

Sta. 0+75.00 3" Cond.

90° Tan. to Curve

Wooded Area

Field

RAMP "F"

Sta. 7+74.29
Δ = 15°41'52"
Dc = 3°00'00"
R = 1,909.86'
Lc = 523.26'
T = 263.28'
E = 18.06'
S.E. = 0.10'/'

Dead Trees

Jute Matting 7'-8" Wide

Field Brush & Briars

Sta. 10+20.00 3" Cond.

Sta. 10+34.27

Woven Wire

Open Sewerage Drainage

RAMP "F"

SPIRAL DATA
Θs = 4°30'00"
Ls = 300.00'
Lt = 200.06'
St = 100.06'

LARW

Logs

Sewerage

Septic Tanks

Leaching Lines

1-Sty. Brick #10300

1-Sty. Brick #10290

1-Sty. Brick #10280

1-Sty. Brick #10270

1-Sty. Brick #10260

Asphalt

Sta. 46+30.00 Pfeiffer Rd. Sta. 0+00.00 Ramp "F"

4° Curve

Dumped Rock Channel Protection 9'x 2'-6"

Note: For Ramp "F" & Pfeiffer Road Intersection Detail See Sht. No. 127

TEMPORARY EASEMENT

Sta. 787+52.9, 357.75' Lt. I-8 Std. M.H. No. 2 See Sht. No. 40

Dumped Rock Channel Protection 8'x 1'-6"

Note: For Ramp "F" Entrance Detail See Sht. No. 130

For Quantities See Sht. No. 107

Sta. 779+92.59

N5°45'05"E

SURVEY HAM. 71

Sta. 0+00.00 Ramp "F" Sta. 46+30.00 Pfeiffer Rd.

V.C. 150'

-2.27%

PVI Sta. 1+00

PVI Sta. 2+50

Sta. 1+00, 24' Lt. F.L. 6", 783.12

Sta. 0+44, 16' Rt. F.L. 6", 784.34 For Underdrain Continuation See Pfeiffer Rd. Sta. 46+30, 46' Rt.

Sta. 1+26, 2' Rt. F.L. 6", 782.49

6" Cl. I-3 Lt.

Sta. 1+75, 18' Lt. F.L. 6", 782.08

Sta. 1+75, 2' Rt. F.L. 6", 781.76

Sta. 1+75, 20' Rt. F.L. 8", 781.00 Outlet

PVI Sta. 1+75 Elev. 785.76

Sta. 4+50, 18' Lt. F.L. 6", 786.84

+2.10%

Sta. 4+50, 2' Rt. F.L. 6", 782.04

Sta. 3+50, 16' Lt. F.L. 6", 784.95

Sta. 6+02, 6' Lt. I-8 Std. C.B. No. 5 Fl. Grate 781.1 Inlet Inv. 18": 777.8 Outlet Inv. 18": 777.0

PVI Sta. 6+00

V.C. 250'

PVI Sta. 8+50

2-96" Pipes

2.00%

18" Pipe

PVI Sta. 7+25 Elev. 797.31

+1.23%

6" Cl. I-3 Rt.

Sta. 10+01.50

Graphical Solution

Sta. 13+34, 2' Rt. F.L. 6", 800.07 For Underdrain Continuation See Mainline Sta. 779+93, 81' Lt.

PFEIFFER ROAD INTERCHANGE RAMP "F"

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM. 71 - 13.05

Sta. 779+40.81 HAM. 71

Sta. 783+29.57 HAM. 71

Sta. 784+12 ℓ
See Sht. No. 215

Sta. 786+90
2-96" Cl. A-1

Sta. 787+42.50

Sta. 790+67 ℓ
See Sht. No. 221

℄ SURVEY HAM. 71

N 5°45'05" E

P.C. = Sta 779+73.90

76°23'46" Tan. to Curve

Sta. 792+04.34 HAM. 71 =
Sta. 50+00.00 Pfeiffer Rd.

Existing Pfeiffer Rd.

Sta 10+20 Ramp "G" 46' Lt.
See Sht. No. 323

18" Cl. I-1

15" Cl. I-1

91°41'00"

90°

66'

173°13'42"

RAMP "G"
CURVE DATA
P.I. = Sta 1+93.71
Δ = 6°-46'-18"
D = 1°-45'-00"
R = 3274.04
L = 386.95
T = 193.71
E = 5.72
S.E. = 0.40%

P.C. = Sta 0+00.000
Ramp "G"

P.T. = Sta 3+86.95
Ramp "G"

10'x6" Cl. F-A Overpipe

Jute Matting 7'-8" Wide

Dumped Rock Channel Protection 8" x 1'-6"

TEMPORARY EASEMENT

Wooded Area
Sta. 787+35.3, 246.2' Rt.
I-8 Std. M.H. No. 2
See Sht. No. 40

Sta. 9+65.00 Begin Taper

Sta. 9+65.00 End Taper

Sta. 10+00
99' Rt.

Chain Link

Swim. Pool (Conc.)

Asphalt

WORK AGREEMENT

Sta. 11+23.83 Ramp "G" ℓ
Sta. 51+93.10 ℓ Pfeiffer Rd.

Sta. 3+87.2 Rt.
FL. 6" 797.62
For underdrain continuation See Mainline Sta. 783+30.91 Rt.

6" Cl. I-3 Rt.

V.C. 400'

-0.75%

Graphical Solution

P.I. Sta 6+00
Elev. 800.52

V.C. 150'

-2.66%

P.I.C. Sta 8+15

Sta. 9+82 10' Rt.
F.L. 6" 786.14

P.I.T. Sta 10+25

11.5%

-1.84%

Sta. 9+78 10' Rt.
F.L. 6" 786.23

P.I.T. Sta 9+30
Elev. 791.20

Sta. 10+20
I-8 Std. C.B. No. 5
F.L. Grate 784.7
Inv. 18" 781.9
Inv. 15" 781.9

1%

2-96" Pipes

Sta. 9+98. 43' Rt.
F.L. 8" 781.50 Outlet

HW-E Headwall
Inv. 18" 781.00

Sta. 11+59. 21' Rt.
F.L. 6" 782.45
For underdrain continuation See Pfeiffer Rd. Sta 52+30, 62' Rt.

Sta 790+67 ℓ
I-8 Std. C.B. No. 4
F.L. Grate 804.29
Inv. 15" 800.29

18" Pipe

Note: For Exit Detail See Sht. 130

For Quantities See Sht. 107

Note: For Ramp "G" & Pfeiffer Road Interchange Detail See Sht. 128

PFEIFFER ROAD
INTERCHANGE
RAMP "G"

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM. 71-13.05

Sta. 806+00.00 HAM. 71

Sta. 792+04.34 HAM. 71 = Sta. 50+00.00 Pfeiffer Rd.

Sta. 801+08 ℄ See Sht. No. 229

Sta. 800+89.39 No. 32

Sta. 798+84.70

Sta. 798+24 84" Cl. A-1

Sta. 793+20 ℄ See Sht. No. 222

N 5° 45' 05" E

90° Tang. to Curve

57° 48' 35" Tan. to Curve

5° 90° Tang. to Curve

1° Curve

57° Tan. to Curve

74° 23' 46" Tan. to Curve

℄ SURVEY HAM. 71

5 12" Cl. J-1

Foot Bridge

RAMP "H"

LAKECREST DR. DRIVE

Utility Wires

Cedars

Jute Matting 7'-8" Wide

Asphalt Parking Area

Swim. Pool (Conc.)

1-Sty. Brick

Swimming Pool (Conc.)

Asphalt Drive

Gravel Drive

Sta. 800+04.25, 199.19' Lt. I-8 Std. M.H. No. 1 See Sht. No. 40

CORPORATION LINE VILLAGE OF MONTGOMERY
CITY OF BLUE ASH

TEMPORARY EASEMENT

Septic Tank

Leaching Lines

Asphalt

#6070 1-Sty. Brick

RAMP "H" CURVE DATA
Δ = 14° 44' 21"
Dc = 3° 00' 00"
R = 1,909.86'
Lc = 491.31'
T = 247.02'
E = 15.90'
S.E. = 0.70 ft

Sta. 11+22.68 Ramp "H" ℄ = Sta. 11+30.00 Pfeiffer Rd. ℄

P.T. Sta. 97+52.70

TEMPORARY IE EASEMENT

#6110 2-Sty. Brick

Sta. 13+36.00 3" Cond.

Sta. 14+30.00 Pfeiffer Rd. ℄ = Sta. 14+06.11 Ramp "H" ℄

Field

Asphalt

Note: For Exit Detail See Sht. 131

For Quantities See Sht. No. 107

Note: For Ramp "H" & Pfeiffer Road Interchange Detail See Sht. 127

Note: For Plan & Profile of Lakecrest Drive & Driveway to Resident #6110 See Sht. Nos. 108 & 109

Graphical Solution

-0.51 6%

-1.62%

-1.88%

P.V.I. Sta. 7+50 Elev. 801.09

Sta. 7+54, 2' Rt. F.L. 6", 795.30

P.C. Sta. 5+50

Sta. 9+25, 2' Rt. F.L. 6", 797.10

Sta. 7+50, 2' Rt. F.L. 6", 795.34

V.C. 400'

P.T. Sta. 9+50

Sta. 7+67, 34' Rt. F.L. 8", 794.00 Outlet

84" Pipe

12" Pipe

P.V.I. Sta. 11+00 Elev. 795.42

P.C. Sta. 10+25

P.V.I. Sta. 11+75

V.C. 150'

Sta. 11+50, 2' Rt. F.L. 6", 789.37

Sta. 12+50, 10' Rt. F.L. 6", 787.98

Sta. 13+64, 18' Rt. F.L. 6", 786.09
For underdrain continuation see Pfeiffer Rd. Sta. 46+37, 26' Lt.

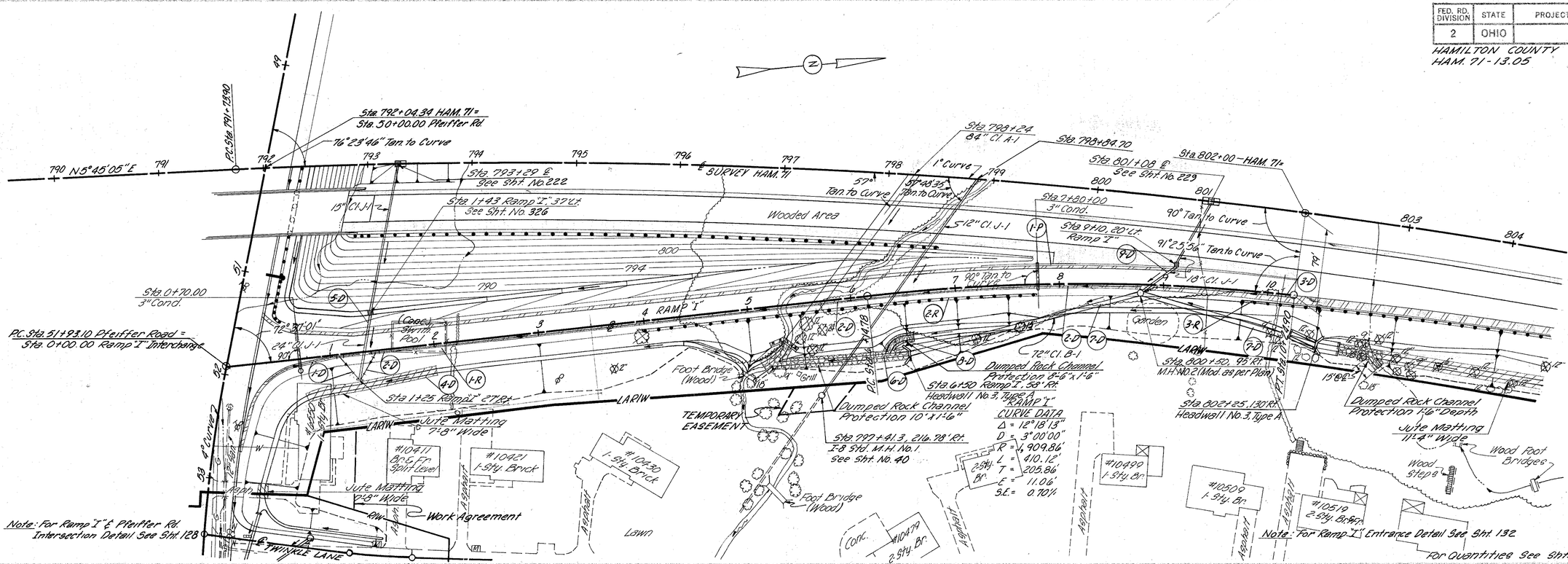
Sta. 14+02.94 Ramp "H" ℄ Sta. 48+30.00 ℄ Pfeiffer Rd.

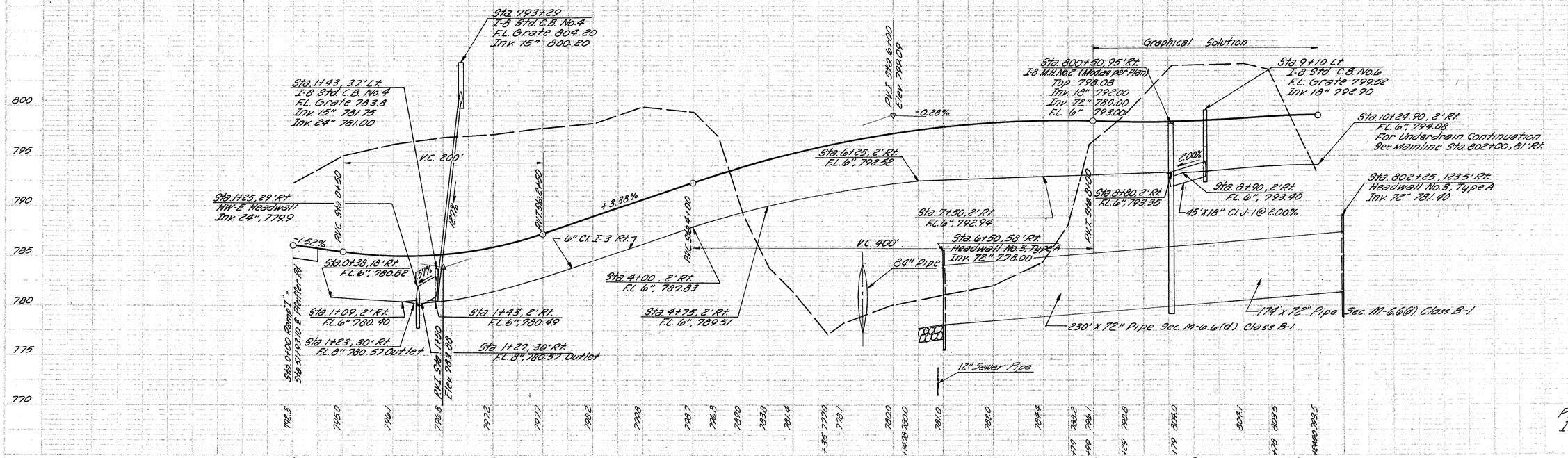
PFEIFFER ROAD INTERCHANGE RAMP "H"

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

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HAMILTON COUNTY
HAM. 71 - 13.05





FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM. 71-13.05

ESTIMATED QUANTITIES

DRAINAGE

REF. NO.	STATION TO STATION	SIDE	I-1 6" Class F-4 Lin.Ft.	I-1 6" Class I-3 Lin.Ft.	I-1 6" M-6.4(A) Class I-3 Lin.Ft.	I-1 6" Class J-1 Lin.Ft.	I-1 8" Class F-4 M-6.4(C) Lin.Ft.	I-1 18" Class J-1 Lin.Ft.	I-1 24" Class J-1 Lin.Ft.	I-1 72" M-6.6(D) Class B-1 Lin.Ft.	I-2 Masonry Cu.Yds.	I-5 30°Bend Class I-3 Each	I-5 60°Bend Class I-3 Each	I-5 90°Bend Class J-1 Each	I-5 6"x6" Tee Class J-1 Each	I-5 6"x6" Wye Class I-3 Each	I-8 C.B. No.4 Standard Each	I-8 C.B. No.5 Standard Each	I-8 C.B. No.6 Standard Each	I-8 M.H. No.2 Mod. Each	I-10 6" R.C. Riprap Sq.Yds.	I-10 Dumped Rock Cu.Yds.	L-10 Sodding Sq.Yds.	L-120 Jute Matting Sq.Yds.	ITEM SPL. Drainage Connection Using No.6 Aggregate Cu.Yds.	SEE SHEET NO.
	Ramp "F"																									
1-D	0+44 — 1+75	R		132																					15	
2-D	1+00 — 13+34	L&R		1034	200	48	10							2	2										99	
3-D	0+80 — 1+50	R																				61				
4-D	6+25 — 7+00	R																				33				
5-D	7+00 — 8+50	R																						128		
6-D	Not Used																									
	Ramp "G"																									
1-D	3+87 — 9+78	R	10	611			10						1												52	
2-D	9+82 — 11+59	R	10	170																					13	
3-D	5+00 — 5+48	R																						43		
4-D	5+63 — 6+85	R																						106		
5-D	6+85 — 7+50	R																				28				
6-D	10+00 — 10+20	R&L						94			0.30							1					3			
7-D	Not Used																									
	Ramp "H"																									
1-D	4+25 — 7+50	R		351			10						1												14	
2-D	9+54 — 13+64	R		612																					63	
3-D	Not Used																									
	Ramp "I"																									
1-D	0+38 — 1+29	R		116			10									1									9	
2-D	1+33 — 8+80	R		769			10									1									57	
3-D	8+90 — 10+25	R	10	135								1													10	
4-D	0+75 — 2+00	R																						107		
5-D	1+25 — 1+43	R&L							70		0.41						1						4			
6-D	5+35 — 6+50	R																				67				
7-D	6+50 — 802+25 M.L.	R								404	32.4									1	24					339
8-D	6+25 — 6+55	R																				17				
9-D	800+50 M.L. — 9+10	R						45											1							
10-D	Not Used	R&L																								
(I) TOTAL	Village of Montgomery		30	3930	200	48	50	139	70	404	33.11	1	2	2	2	2	1	1	1	1	24	206	7	384	332	

ROADWAY & PAVEMENT

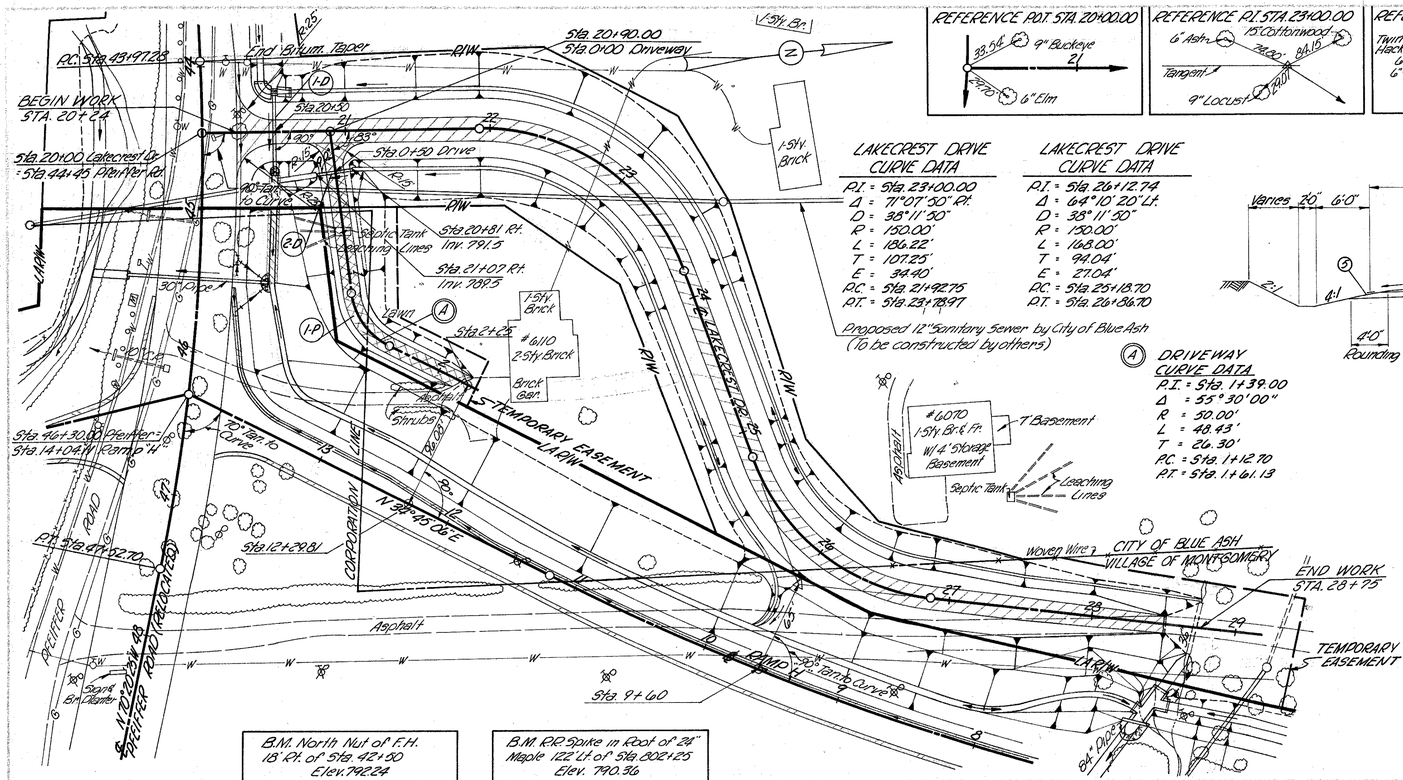
REF. NO.	STATION TO STATION	SIDE	I-15 Guard Rail Lin.Ft.	S-24 Removal of Exist. Structure Lump	B-19 Aggregate Base Course Cu.Yds.	B-21 Water-proofed Aggregate 6" Cu.Yds.	T-31 Surface Treat. Bitum. Gals.	T-31 Surface Treat. Aggregate Cu.Yds.	T-71 9" Reinf. Concrete Pavement Sq.Yds.	I-12 Std. Type 2-A Curb Lin.Ft.	I-12 Std. Type B Curb Lin.Ft.	I-12 Std. Type B Curb Lin.Ft.	I-21 Concrete Median Pavement Sq.Yds.	I-22 Grading A or B Subbase Cu.Yds.	I-22 Subbase Cu.Yds.	SEE SHEET NO.
	Roadway															
	Ramp "F"															
1-R	0+40 — 7+50	R	712.5													
2-R	3+75 — 8+00	L	425													
	Ramp "G"															
1-R	5+50 — 10+00	R	450													
2-R	10+25	R		L.S.												
3-R	10+30	L		L.S.												
	Ramp "H"															
1-R	2+50 — 7+75	R	525													
	Ramp "I"															
1-R	1+80	L		L.S.												
2-R	4+00 — 7+75	R	375													
3-R	9+74.90 — 10+24.90	R	50													
	Pavement Ramp "E"															
	0+00 — 111+34.27				28	125	187	6	2163					448	37	
	111+34.27 — 769+92.57				117	206	310	10	1731					538	101	
1-P	9+35 — 131+34.29	L										399				
	Ramp "G"															
	775+30 — 4+86.95				35	116	175	6	1647					376	65	
	4+86.95 — 12+03.83				19	82	123	4	1647					331	26	
1-P	703+29.27 — 708+39.27	R								48						
2-P	3+96.25 — 4+96.25	L									48					
3-P	3+96.25 — 4+18	L											40			
	Ramp "H"															
	809+00 — 6+15.80				54	113	170	6	1762					342	64	
	6+15.80 — 14+04.11				42	88	132	4	1607					328	27	
1-P	800+89.39 — 799+89.39	R								47						
2-P	5+15.80 — 6+15.80	L									46					
3-P	5+15.80 — 5+62	L											42			
	Ramp "I"															
	0+00 — 8+24.90				24	92	138	4	1621					330	32	
	8+24.90 — 812+00				112	202	304	10	1731					119	3	
(I) 1-P	7+25 — 10+24.90	L										300				
TOTAL	Village of Montgomery		2,537.5	L.S.	431	1024	1539	50	13909	213	200	699	82	2812	355	

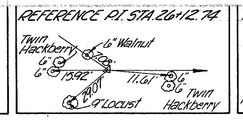
QUANTITIES
RAMPS "F", "G", "H", & "I"

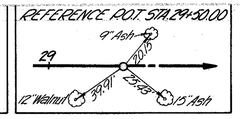
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM. 71-13.05







LAKECREST DRIVE CURVE DATA

P.I. = Sta. 23+00.00
Δ = 71°07'55" Rt.
D = 38°11'30"
R = 150.00'
L = 186.22'
T = 107.25'
E = 34.40'
P.C. = Sta. 21+92.75
P.T. = Sta. 23+78.97

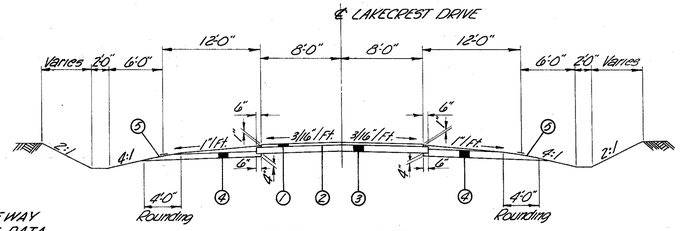
LAKECREST DRIVE CURVE DATA

P.I. = Sta. 26+12.74
Δ = 64°10'20" Lt.
D = 38°11'30"
R = 150.00'
L = 168.00'
T = 94.04'
E = 27.04'
P.C. = Sta. 25+18.70
P.T. = Sta. 26+86.70

Proposed 12" Sanitary Sewer by City of Blue Ash (To be constructed by others)

(A) DRIVEWAY CURVE DATA

P.I. = Sta. 1+39.00
Δ = 55°30'00"
R = 30.00'
L = 48.49'
T = 26.30'
P.C. = Sta. 1+12.70
P.T. = Sta. 1+61.13



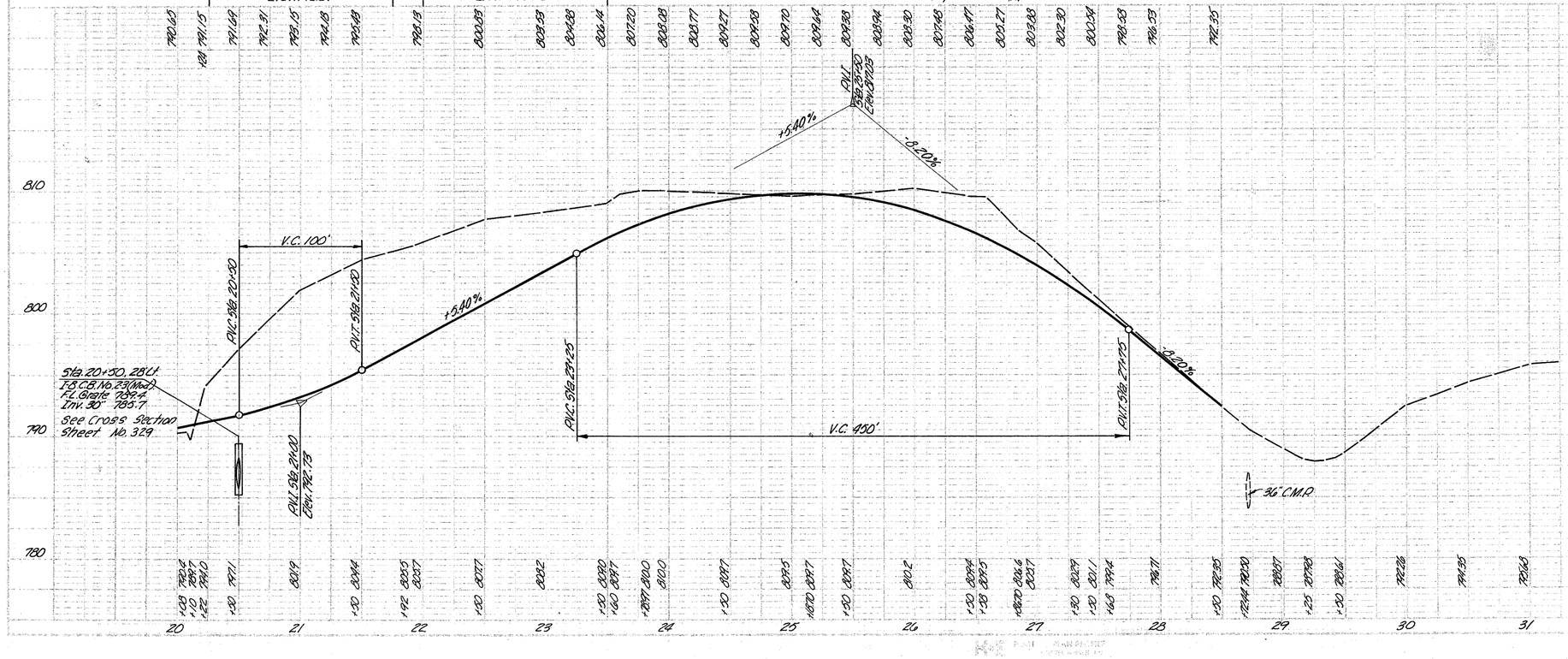
TYPICAL SECTION

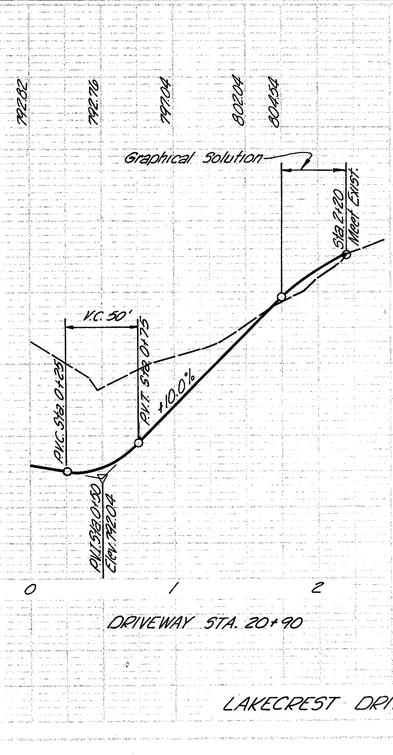
ITEM LEGEND

1. Item T-35 2" Asphaltic Concrete Surface Course Type A. (710-89)
2. Item T-30 Bituminous Prime Coat, See M-5.1, PT. 2 or PT. 3, Shall be Applied at the Rate of 0.40 Gal. per. Sq. Yd.
3. Item B-19 7" Aggregate Base Course.
4. Item I-9 Stone Underdrains No. 2 (See General Notes for Spacing of this Item)
5. Item L-9 Seeding & Protecting.

EST. QUANTITIES

QUANTITY	STATION TO STATION	SIDE	I-1 12" Class B F-4 Lin. Ft.	I-1 30" M-6.4 (Modified) Gage 14 Cl. A-1 Lin. Ft.	I-2 Masonry Cu. Yds.	I-8 C.B. No. 2-3 (Mod.) Each	I-10 6" R.C. Riprap Sq. Yds.	L-10 Sodding Sq. Yds.		I-9 Stone Underdrain No. 2 Lin. Ft.	B-19 Aggregate Base Course Cu. Yds.	T-30 Bitum. Prime Coat Gals.	T-35 Asph. Conc. Surface Course Cu. Yds.	SEE SHT. NO.
	Drainage													
1-D	20+50	℄		58	0.51	1	5	2						329
2-D	20+81 – 21+07	R	26											
	Roadway 20+00 – 28+75									396				
	Pavement 20+00 – 28+75										312	605	84	
1-P	0+08 – 2+17 Drive	R									42	111	16	
(1)	TOTAL		26	58	0.51	1	5	2		396	354	716	100	





DRIVEWAY STA. 20+90

LAKECREST DRIVE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

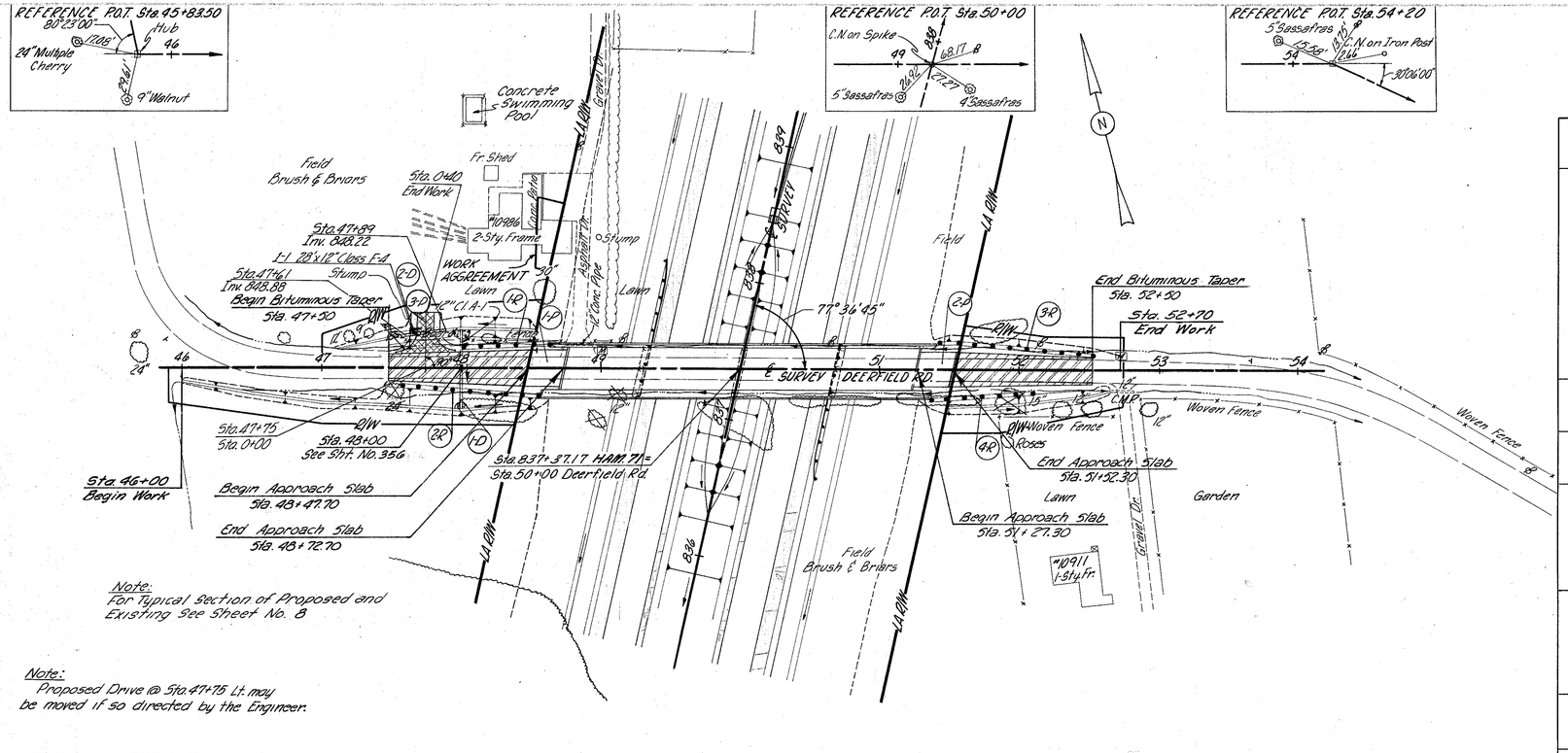
109
445

HAMILTON COUNTY
HAM. 71-13.05

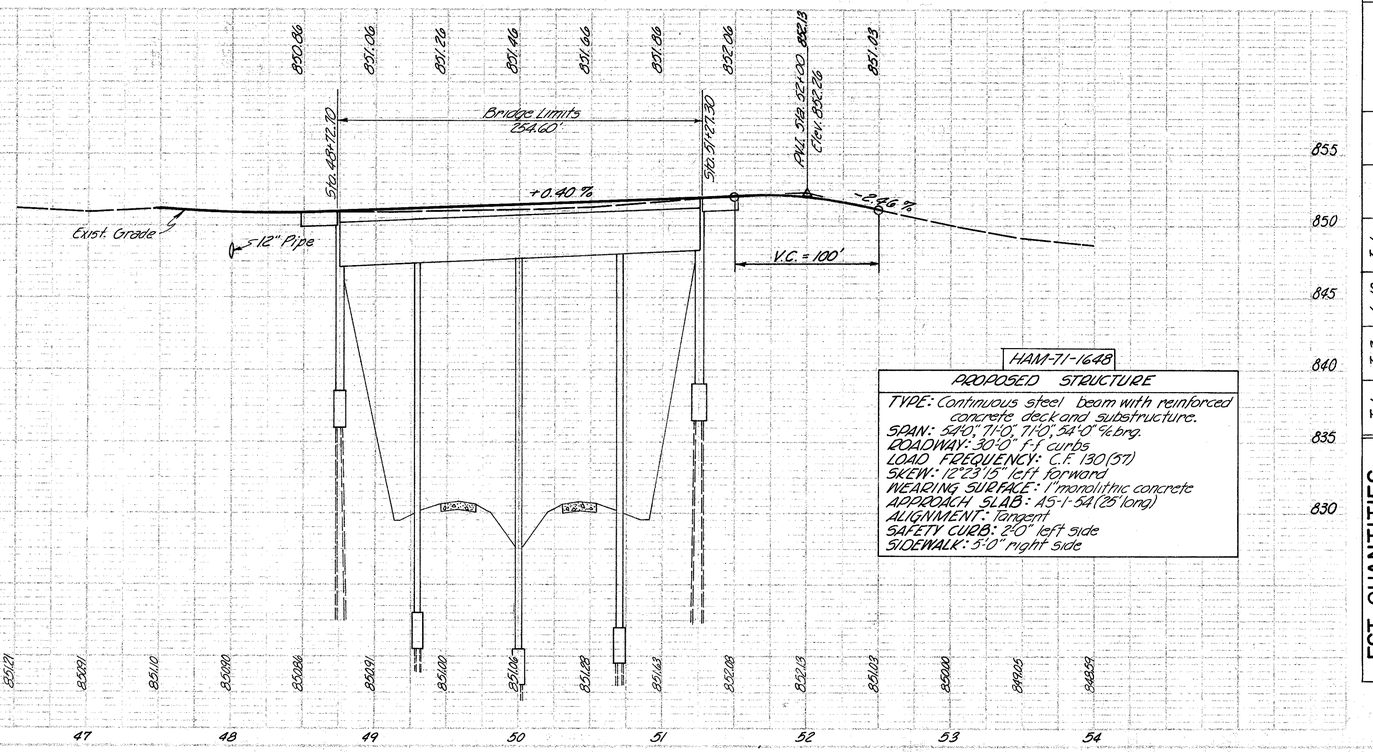
REFERENCE P.O.T. Sta. 45+83.50
80°23'00" — 1.06' Hub — 9 — 46
24" Multiple Cherry — 2.46' — 9" Walnut

REFERENCE P.O.T. Sta. 50+00
C.N on Spike — 2.89 — 68.17 ft
49 — 2.62 — 47.27
5" Sassafras — 4" Sassafras

REFERENCE P.O.T. Sta. 54+20
5" Sassafras — 43.32 — 2.66 — C.N on Iron Post
54 — 90°06'00"



Note:
Proposed Drive @ Sta. 47+75 Lt. may be moved if so directed by the Engineer.



HAM-71-16.48

PROPOSED STRUCTURE

TYPE: Continuous steel beam with reinforced concrete deck and substructure.
SPAN: 54'0", 71'0", 71'0", 54'0" ℄ brg.
ROADWAY: 30'-0" f-f curbs
LOAD FREQUENCY: C.F. 130(ST)
SKEW: 12°23'15" left forward
WEARING SURFACE: 1" monolithic concrete
APPROACH SLAB: AS-1-54 (25' long)
ALIGNMENT: Tangent
SAFETY CURB: 2'-0" left side
SIDEWALK: 5'-0" right side

| EST. QUANTITIES | | |

CROSS COUNTY HIGHWAY

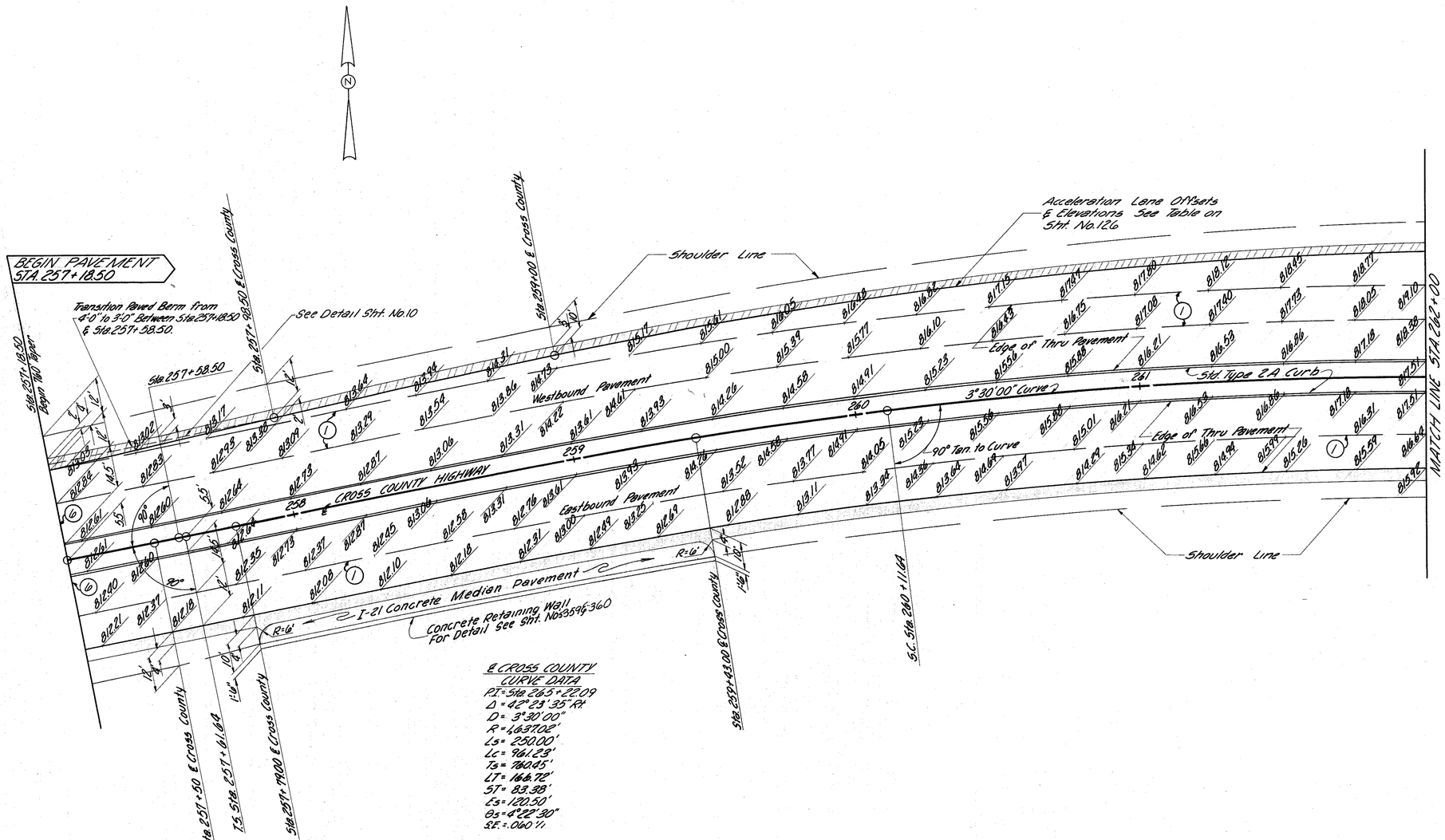
Note: For Joint Legend See Sht. No. 12

Scale: 1" = 20'-0"

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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145

HAMILTON COUNTY
HAM. 71-13.05



℄ CROSS COUNTY
CURVE DATA
P.T. = Sta 265+22.09
Δ = 42°23'35" Rt
D = 3°30'00"
R = 1,637.02'
Ls = 250.00'
Lc = 961.23'
Ts = 760.95'
LT = 166.72'
ST = 83.38'
Es = 120.50'
Θs = 4°22'30"
SE = .060 ft

CROSS COUNTY HIGHWAY DETAIL
STA. 257+18.50 ~ STA. 262

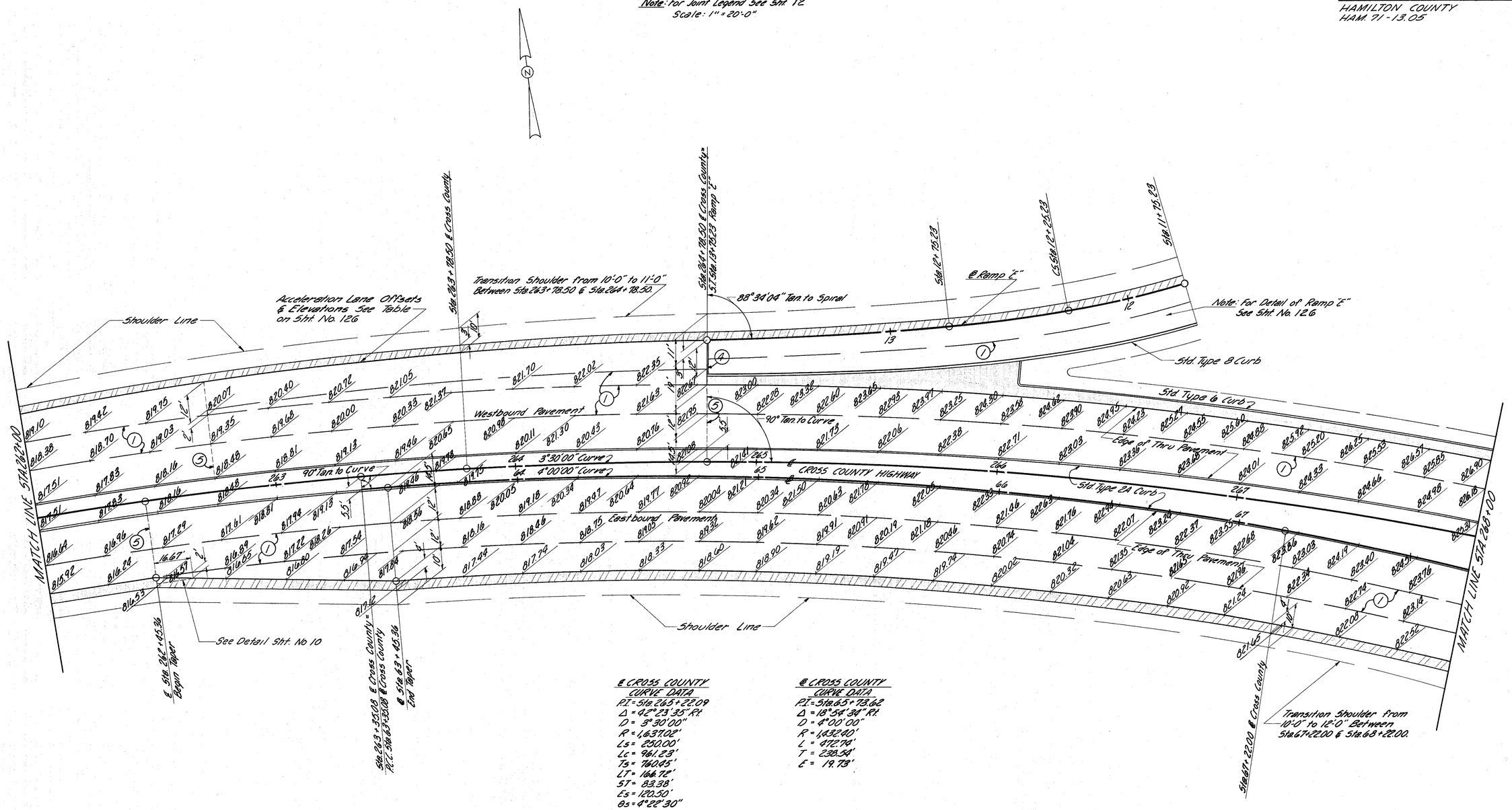
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HAMILTON COUNTY
HAM. 71 - 13.05

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445

CROSS COUNTY HIGHWAY

Note: For Joint Legend See Sht. 12
Scale: 1" = 20'-0"



℄ CROSS COUNTY CURVE DATA

P.I. = Sta. 265 + 22.09
Δ = 42°23'35" Rt.
D = 3°30'00"
R = 1,637.02'
Ls = 250.00'
Lc = 961.23'
Ts = 760.45'
LT = 166.72'
ST = 83.38'
Es = 120.50'
θs = 4°22'30"
S.E. = .060'/'

℄ CROSS COUNTY CURVE DATA

P.I. = Sta. 65 + 73.62
Δ = 18°54'34" Rt.
D = 4°00'00"
R = 1,432.40'
L = 472.74'
T = 238.54'
E = 19.78'

CROSS COUNTY HIGHWAY DETAIL
STA. 262 ~ STA. 268

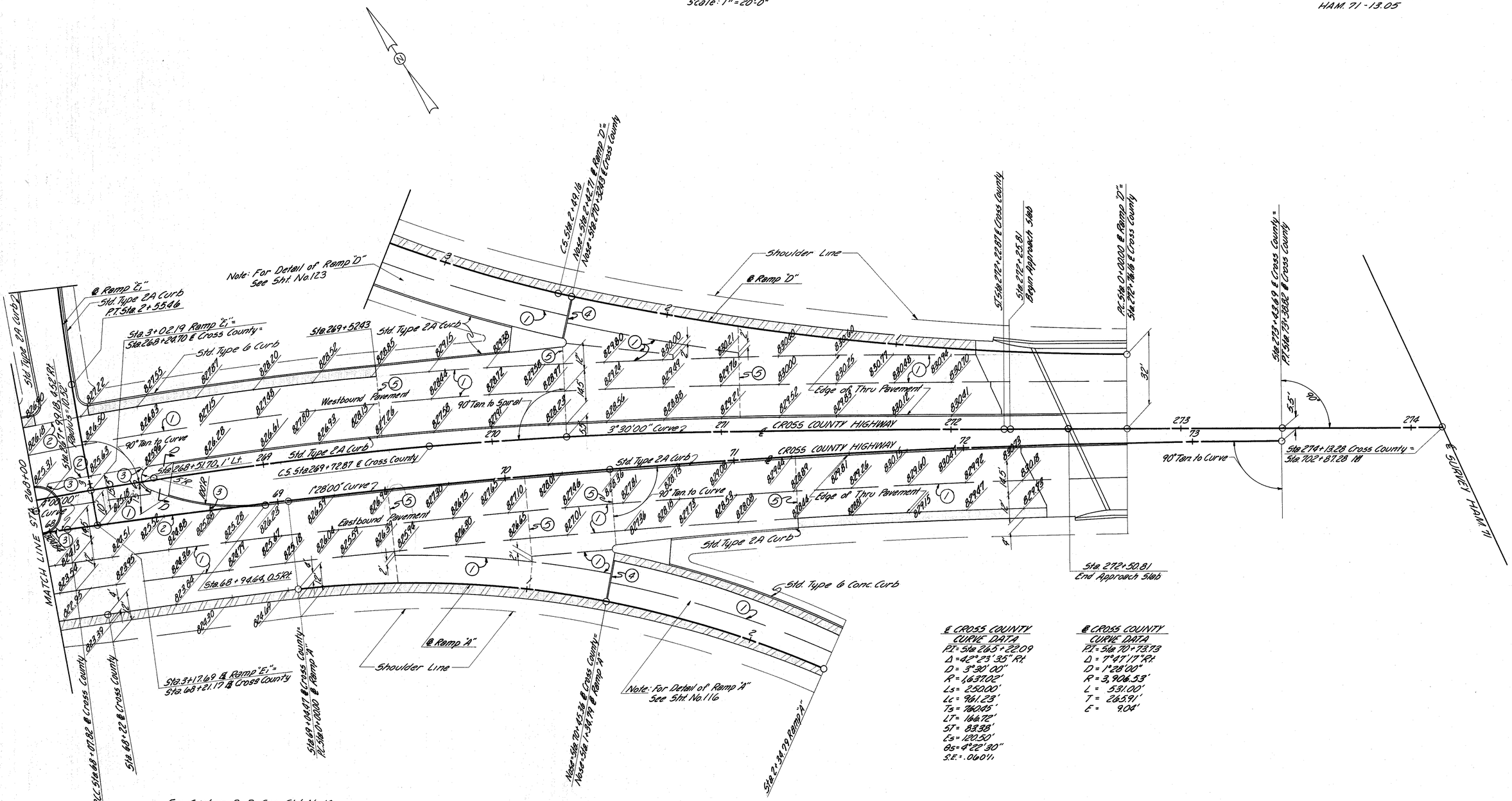
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HAMILTON COUNTY
HAM. 71 - 13.05

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445

CROSS COUNTY HIGHWAY

Note: For Joint Legend See Sht. No. 12
Scale: 1" = 20'-0"



For Section D-D See Sht. No. 10
Note: Do Not Taper I-81 Concrete Median Nose at Sta. 268+51.70. Median Shall Remain 6" in Height.

℄ CROSS COUNTY CURVE DATA

P.I. = Sta. 265+22.09
Δ = 42°23'35" Rt.
D = 3°30'00"
R = 1,637.02'
Ls = 250.00'
Lc = 761.23'
Ts = 410.95'
LT = 766.72'
ST = 83.38'
Es = 20.50'
θs = 4°22'30"
S.E. = .060'/'

℄ CROSS COUNTY CURVE DATA

P.I. = Sta. 70+73.73
Δ = 7°41'17" Rt.
D = 1°28'00"
R = 3,906.53'
L = 531.00'
T = 266.91'
E = 9.04'

CROSS COUNTY HIGHWAY DETAIL
STA. 268 ~ STA. 274+13.28

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM. 71-13.05

CROSS COUNTY HIGHWAY

Note: For Joint Legend See Sht. No. 12

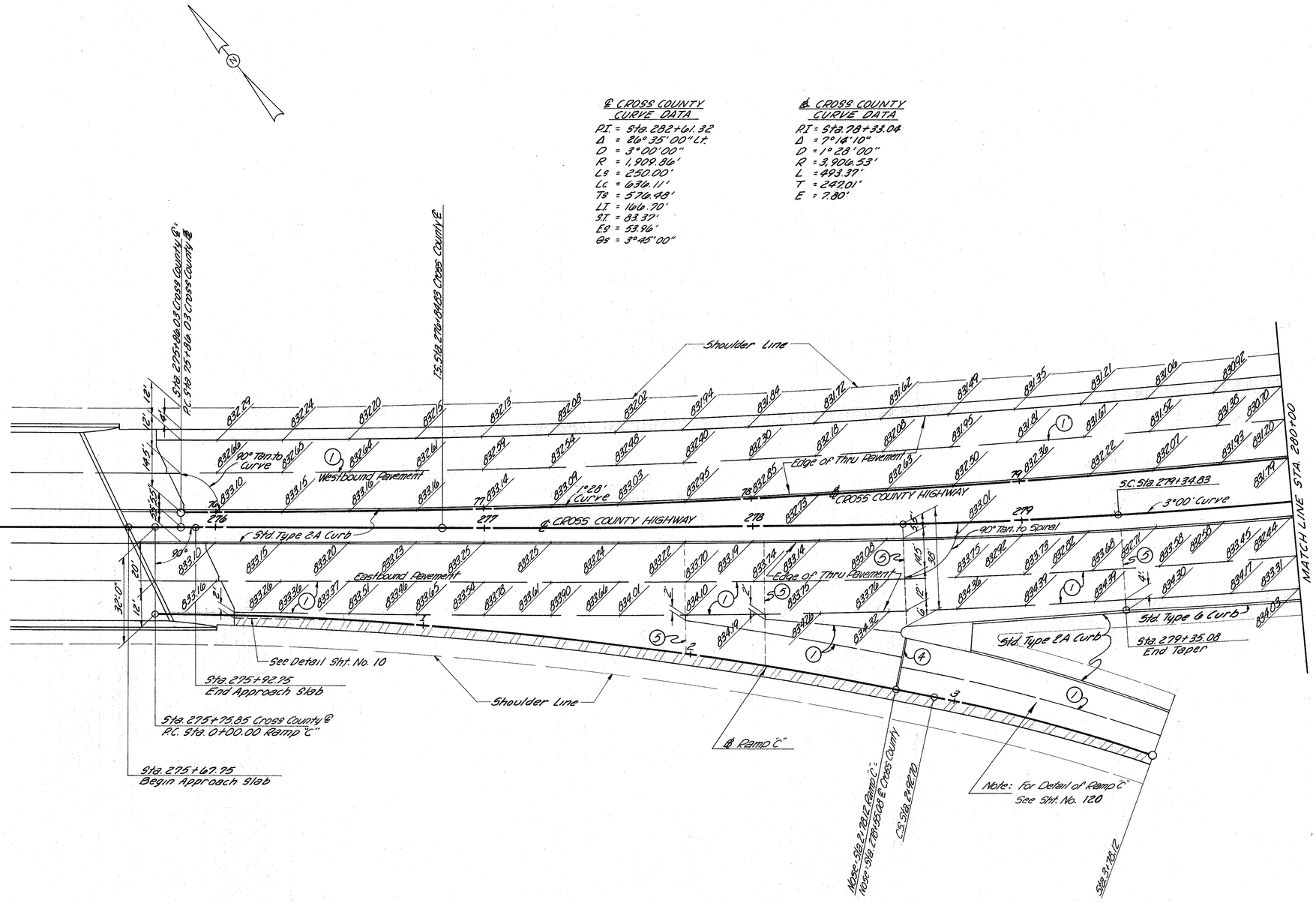
Scale: 1" = 20'-0"

℄ CROSS COUNTY CURVE DATA

PI = Sta. 282+61.32
Δ = 86° 35' 00" Lt.
D = 3° 00' 00"
R = 1,909.86'
Ls = 250.00'
Lc = 636.11'
Ts = 576.48'
LI = 166.70'
ST = 83.37'
Es = 53.96'
θs = 3° 45' 00"

℄ CROSS COUNTY CURVE DATA

PI = Sta. 78+33.04
Δ = 7° 14' 10"
D = 1° 28' 00"
R = 3,906.53'
L = 493.37'
T = 247.01'
E = 7.80'



CROSS COUNTY HIGHWAY DETAIL
STA. 274+13.28 ~ STA. 280

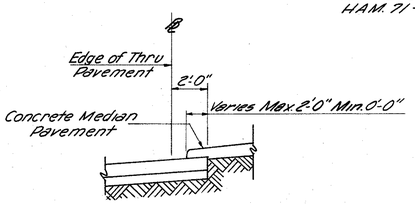
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM. 71 - 13.05

CROSS COUNTY HIGHWAY

Note: for Joint Legend See Sht. No. 12
Scale: 1"=20'-0"

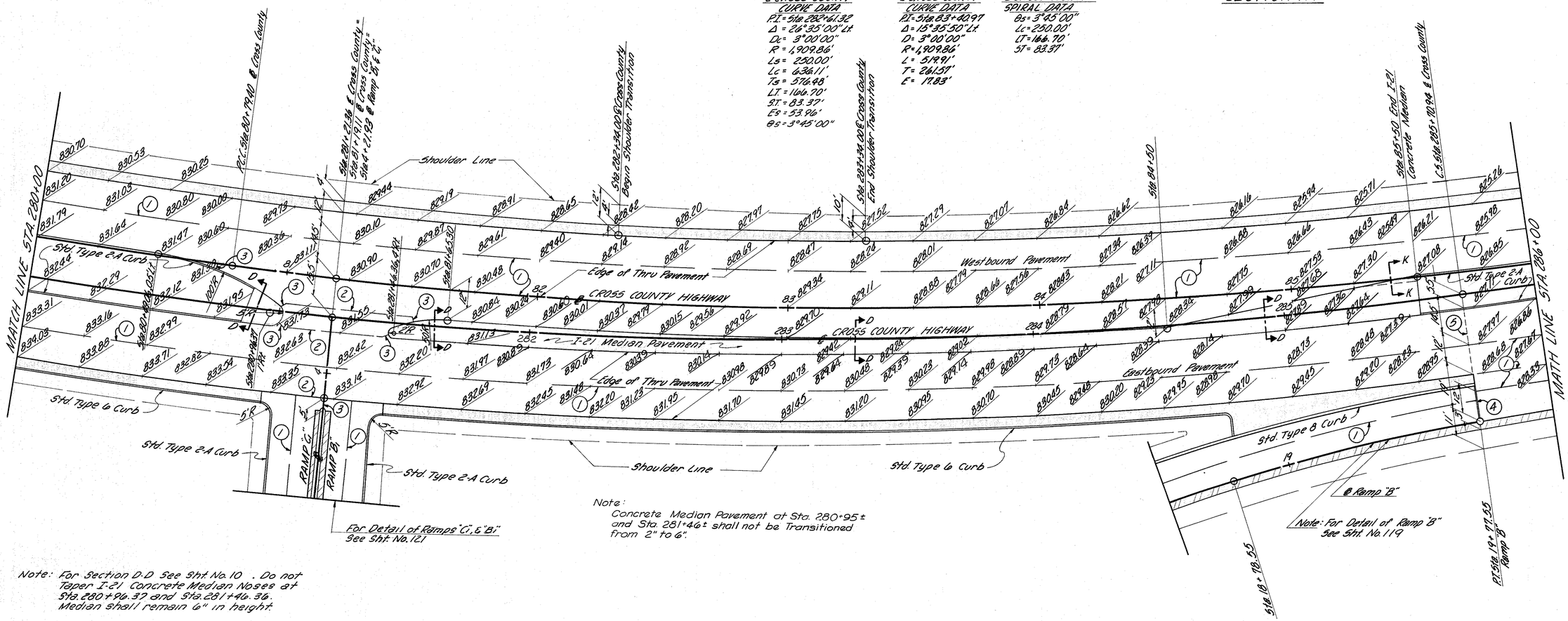


SECTION K-K

℄ CROSS COUNTY CURVE DATA
P.I. = Sta. 282+61.32
Δ = 24°35'00" Lt.
Dc = 3°00'00"
R = 1,909.86'
Ls = 250.00'
Lc = 636.11'
Ts = 516.98'
LT = 166.70'
ST = 83.37'
Es = 53.96'
θs = 3°45'00"

℄ CROSS COUNTY CURVE DATA
P.I. = Sta. 83+80.97
Δ = 15°35'50" Lt.
D = 3°00'00"
R = 1,909.86'
L = 519.91'
T = 261.59'
E = 17.83'

℄ CROSS COUNTY SPIRAL DATA
θs = 3°45'00"
Lc = 250.00'
LT = 166.70'
ST = 83.37'



Note: For Section D-D See Sht. No. 10 . Do not Taper I-21 Concrete Median Noses at Sta. 280+96.37 and Sta. 281+46.36. Median shall remain 6" in height.

For Detail of Ramps "C" & "B" See Sht. No. 121

Note:
Concrete Median Pavement at Sta. 280+95± and Sta. 281+46± shall not be Transitioned from 2" to 6".

Note: For Detail of Ramp "B" See Sht. No. 119

CROSS COUNTY HIGHWAY DETAIL
STA. 280 ~ STA. 286

CROSS COUNTY HIGHWAY

Note: For Joint Legend See Sht. No. 12

Scale: 1" = 20'-0"

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM. 71 - 13.05

℄ CROSS COUNTY
CURVE DATA
PT = Sta 282+41.32
Δ = 26°35'00" Lt.
Dc = 3°00'00"
R = 1,909.86'
Ls = 250.00'
Lc = 436.11'
Ts = 576.48'
LT = 166.70'
ST = 83.37'
Es = 53.96'
θs = 3°45'00"

℄ CROSS COUNTY
SPIRAL DATA
θs = 3°45'00"
Ls = 250.00'
LT = 166.70'
ST = 83.37'

Sta 288+49.31 ℄ Back
Sta 289+33.01 ℄ Ahead

CS Sta 285+99.31 ℄ Cross County

MATCH LINE STA 286+00

MATCH LINE STA 292+00

Shoulder Line

Edge of Thru Pavement

Std. Type 2-A Curb

Westbound Pavement

Eastbound Pavement

℄ CROSS COUNTY HIGHWAY

Sta 289+20.94 ℄ Cross County
End Shoulder Transition

Sta 289+20.94

Sta 289+34.70 ℄ Back
Sta 289+38.61 ℄ Ahead

NOTE: For Acceleration Offsets & Elevations
See Table on Sht. No. 113

For Detail See Sht. No. 10

END PAVEMENT
STA. 293+34.86

Transition Paved Berm from
3'-0" to 4'-0" Between Sta. 292+12.54
& Sta 292+52.54

Sta. 292+52.54

Sta 292+94.86

Transition Paved Berm from 3'-0"
to 4'-0" Between Sta 292+94.86
& Sta 293+34.86

Sta 293+34.86
End 760' Taper

For Detail See Sht. No. 10

CROSS COUNTY HIGHWAY DETAIL
STA. 286 ~ STA. 293+34.86

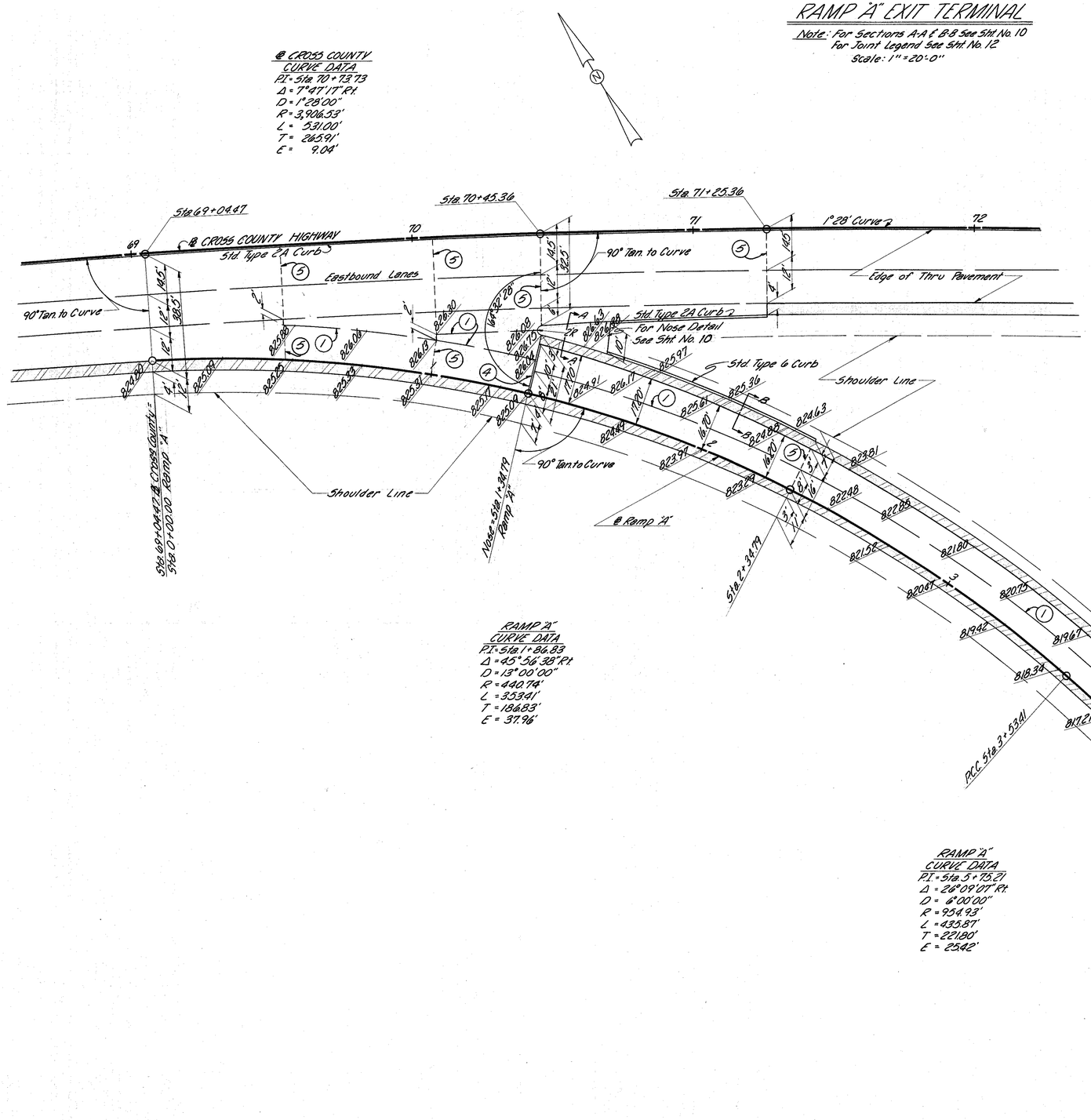
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM. 71-13.05

RAMP "A" EXIT TERMINAL

Note: For Sections A-A & B-B See Sht. No. 10
For Joint Legend See Sht. No. 12
Scale: 1" = 20'-0"



CROSS COUNTY INTERCHANGE
RAMP "A" DETAIL

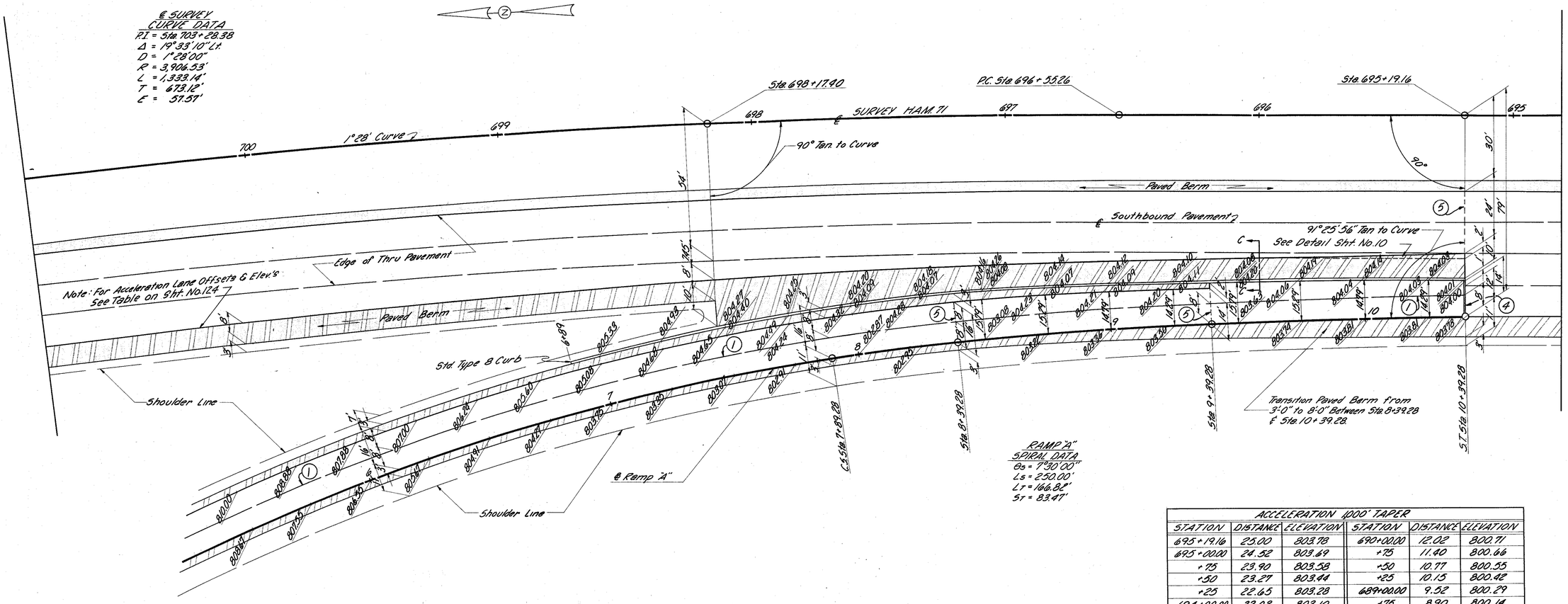
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM. 71-13-05

RAMP "A" ENTRANCE TERMINAL

Note: For Section CC See Sht. No. 10
For Joint Legend See Sht. No. 12
Scale: 1" = 20'-0"



ACCELERATION 1000' TAPER

STATION	DISTANCE	ELEVATION	STATION	DISTANCE	ELEVATION
695+19.16	25.00	803.78	690+00.00	12.02	800.71
695+00.00	24.52	803.69	+75	11.40	800.66
+75	23.90	803.58	+50	10.77	800.55
+50	23.27	803.44	+25	10.15	800.42
+25	22.65	803.28	689+00.00	9.52	800.29
694+00.00	22.02	803.10	+75	8.90	800.14
+75	21.40	802.92	+50	8.27	799.93
+50	20.77	802.74	+25	7.65	799.73
+25	20.15	802.56	688+00.00	7.02	799.53
693+00.00	19.52	802.38	+75	6.40	799.32
+75	18.90	802.20	+50	5.77	799.12
+50	18.27	802.01	+25	5.15	798.92
+25	17.65	801.83	687+00.00	4.52	798.72
692+00.00	17.02	801.65	+75	3.90	798.51
+75	16.40	801.47	+50	3.27	798.31
+50	15.77	801.29	+25	2.65	798.11
+25	15.15	801.11	686+00.00	2.02	797.90
691+00.00	14.52	800.97	+75	1.40	797.70
+75	13.90	800.88	+50	0.77	797.50
+50	13.27	800.84	+25	0.15	797.29
+25	12.65	800.78	685+19.16	0.00	797.22

CROSS COUNTY INTERCHANGE
RAMP "A" DETAIL

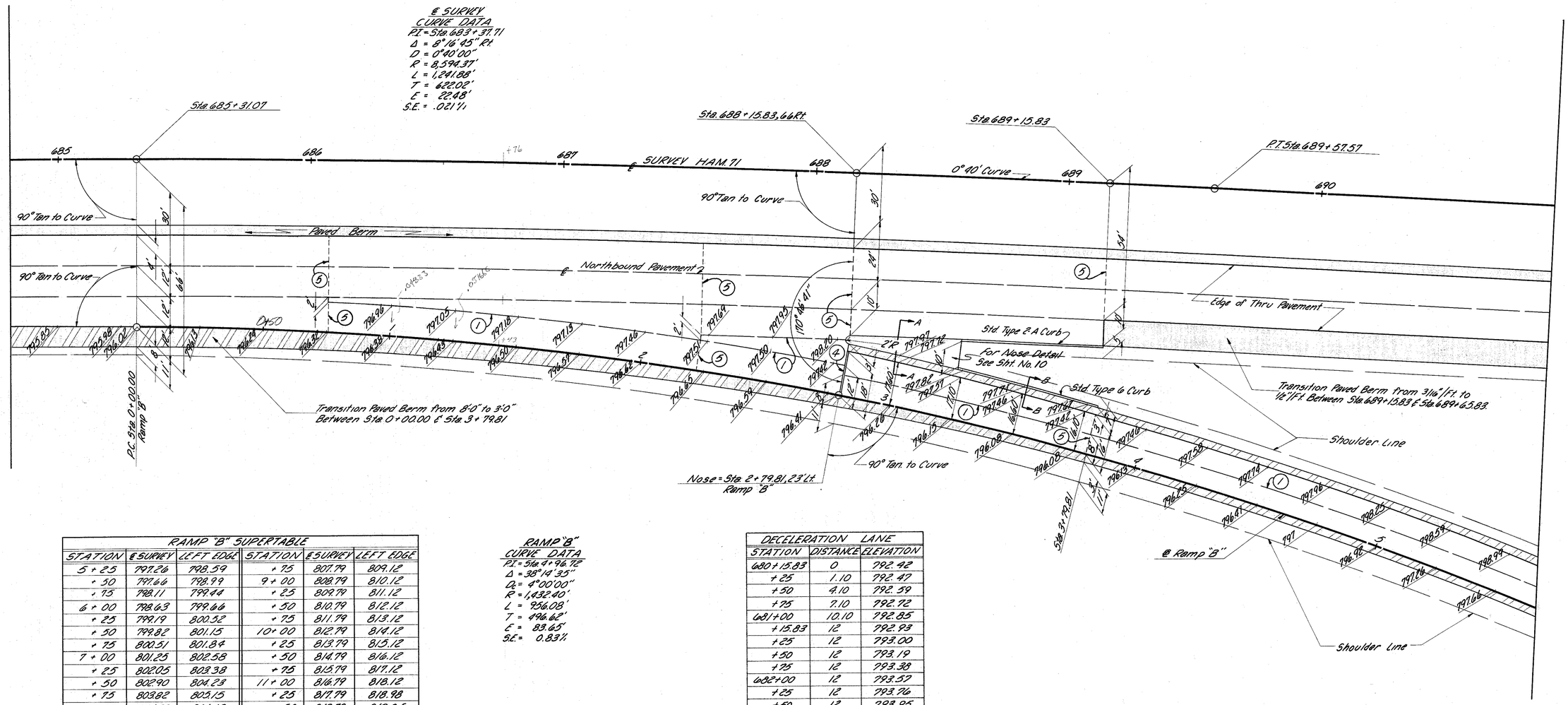
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM. 71-13.05

RAMP "B" EXIT TERMINAL

Note: For Sections A-A & B-B See Sht. No. 10
For Joint Legend See Sht. No. 12
Scale: 1" = 20'-0"



RAMP "B" SUPERTABLE					
STATION	℄ SURVEY	LEFT EDGE	STATION	℄ SURVEY	LEFT EDGE
5+25	797.26	798.59	+75	807.79	809.12
+50	797.66	798.99	9+00	808.79	810.12
+75	798.11	799.44	+25	809.79	811.12
6+00	798.63	799.66	+50	810.79	812.12
+25	799.19	800.52	+75	811.79	813.12
+50	799.82	801.15	10+00	812.79	814.12
+75	800.51	801.84	+25	813.79	815.12
7+00	801.25	802.58	+50	814.79	816.12
+25	802.05	803.38	+75	815.79	817.12
+50	802.90	804.23	11+00	816.79	818.12
+75	803.82	805.15	+25	817.79	818.98
8+00	804.79	806.12	+50	818.79	819.85
+25	805.79	807.12	+75	819.79	820.71
+50	806.79	808.12	12+00	820.79	821.58

RAMP "B"
CURVE DATA
P.I. = Sta 4+96.72
Δ = 38°14'35"
D_c = 4°00'00"
R = 1,432.40'
L = 956.08'
T = 496.62'
E = 83.45'
S.E. = 0.83%

DECELERATION LANE		
STATION	DISTANCE	ELEVATION
680+15.83	0	792.42
+25	1.10	792.47
+50	4.10	792.59
+75	7.10	792.72
681+00	10.10	792.85
+15.83	12	792.93
+25	12	793.00
+50	12	793.19
+75	12	793.38
682+00	12	793.57
+25	12	793.76
+50	12	793.95
+75	12	794.14
683+00	12	794.33
+25	12	794.52
+50	12	794.71
+75	12	794.90
684+00	12	795.09
+25	12	795.28
+50	12	795.47
+75	12	795.66
685+00	12	795.85
+25	12	795.98

CROSS COUNTY INTERCHANGE
RAMP "B" DETAIL

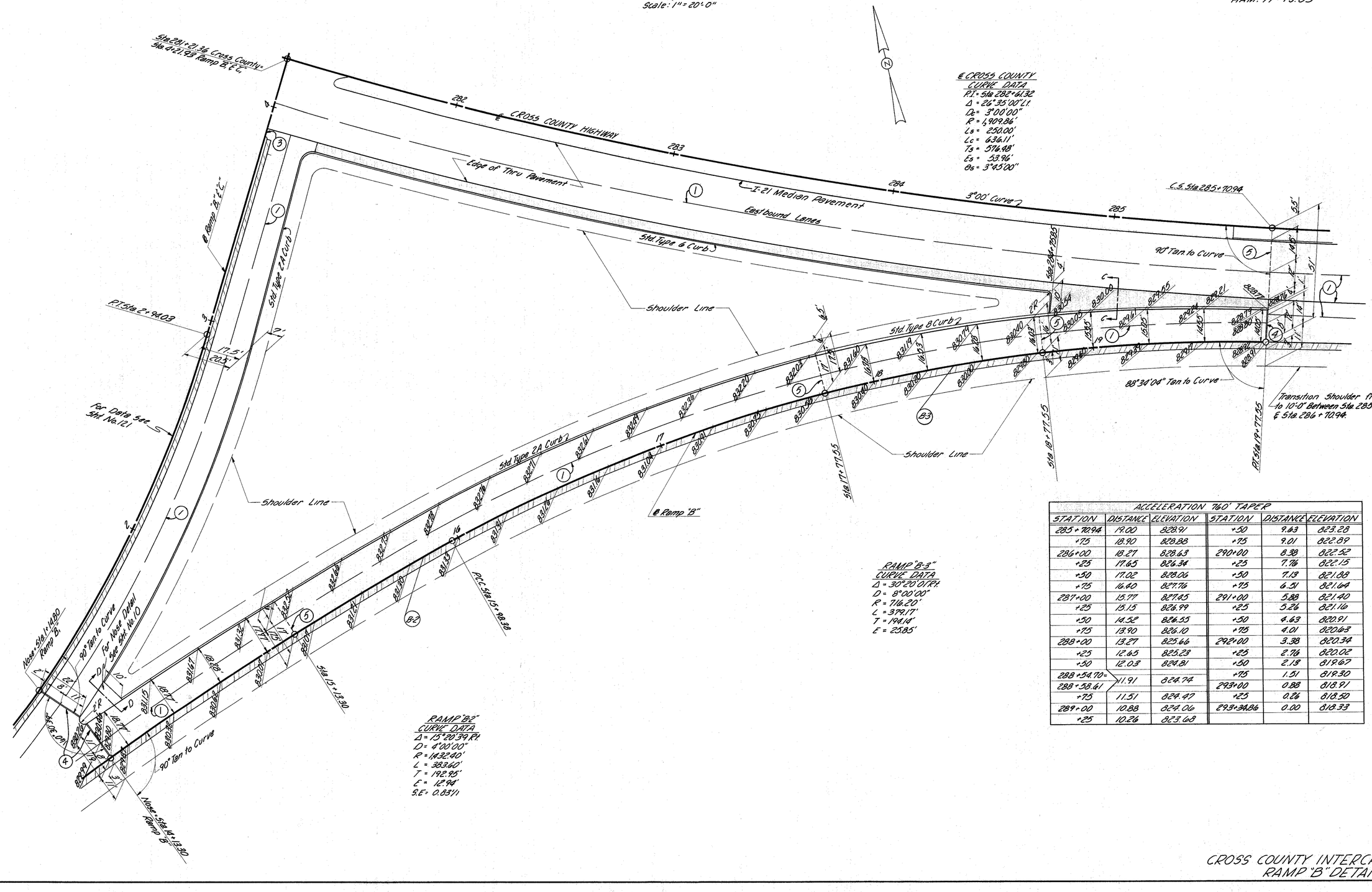
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM. 71 - 13.05

RAMP "B" ENTRANCE TERMINAL

Note: For Sections CC & DD See Sht. No. 10
For Joint Legend See Sht. No. 12
Scale: 1" = 20'-0"



℄ CROSS COUNTY CURVE DATA

P.I. = Sta 282+61.32
Δ = 26°35'00" Lt.
D_z = 3°00'00"
R = 1,909.86'
L_s = 250.00'
L_c = 636.11'
T_s = 376.98'
E_s = 53.96'
θ_s = 3°45'00"

RAMP "B-3" CURVE DATA

Δ = 30°20'01" Rt.
D = 8°00'00"
R = 716.20'
L = 379.17'
T = 194.14'
E = 25.85'

RAMP "B2" CURVE DATA

Δ = 15°20'39" Rt.
D = 4°00'00"
R = 1432.40'
L = 383.60'
T = 192.95'
E = 12.94'
S.E. = 0.0311

ACCELERATION 760' TAPER

STATION	DISTANCE	ELEVATION	STATION	DISTANCE	ELEVATION
285+70.94	19.00	828.91	+50	9.63	823.28
+75	18.90	828.88	+75	9.01	822.89
286+00	18.27	828.63	290+00	8.38	822.52
+25	17.65	826.34	+25	7.76	822.15
+50	17.02	828.06	+50	7.13	821.88
+75	16.40	827.76	+75	6.51	821.64
287+00	15.77	827.45	291+00	5.88	821.40
+25	15.15	826.99	+25	5.26	821.16
+50	14.52	826.55	+50	4.63	820.91
+75	13.90	826.10	+75	4.01	820.63
288+00	13.27	825.66	292+00	3.38	820.34
+25	12.65	825.23	+25	2.76	820.02
+50	12.03	824.81	+50	2.13	819.67
288+54.70 =	11.91	824.74	+75	1.51	819.30
288+58.61	11.91	824.74	293+00	0.88	818.91
+75	11.51	824.47	+25	0.26	818.50
289+00	10.88	824.06	293+38.86	0.00	818.33
+25	10.26	823.68			

CROSS COUNTY INTERCHANGE
RAMP "B" DETAIL

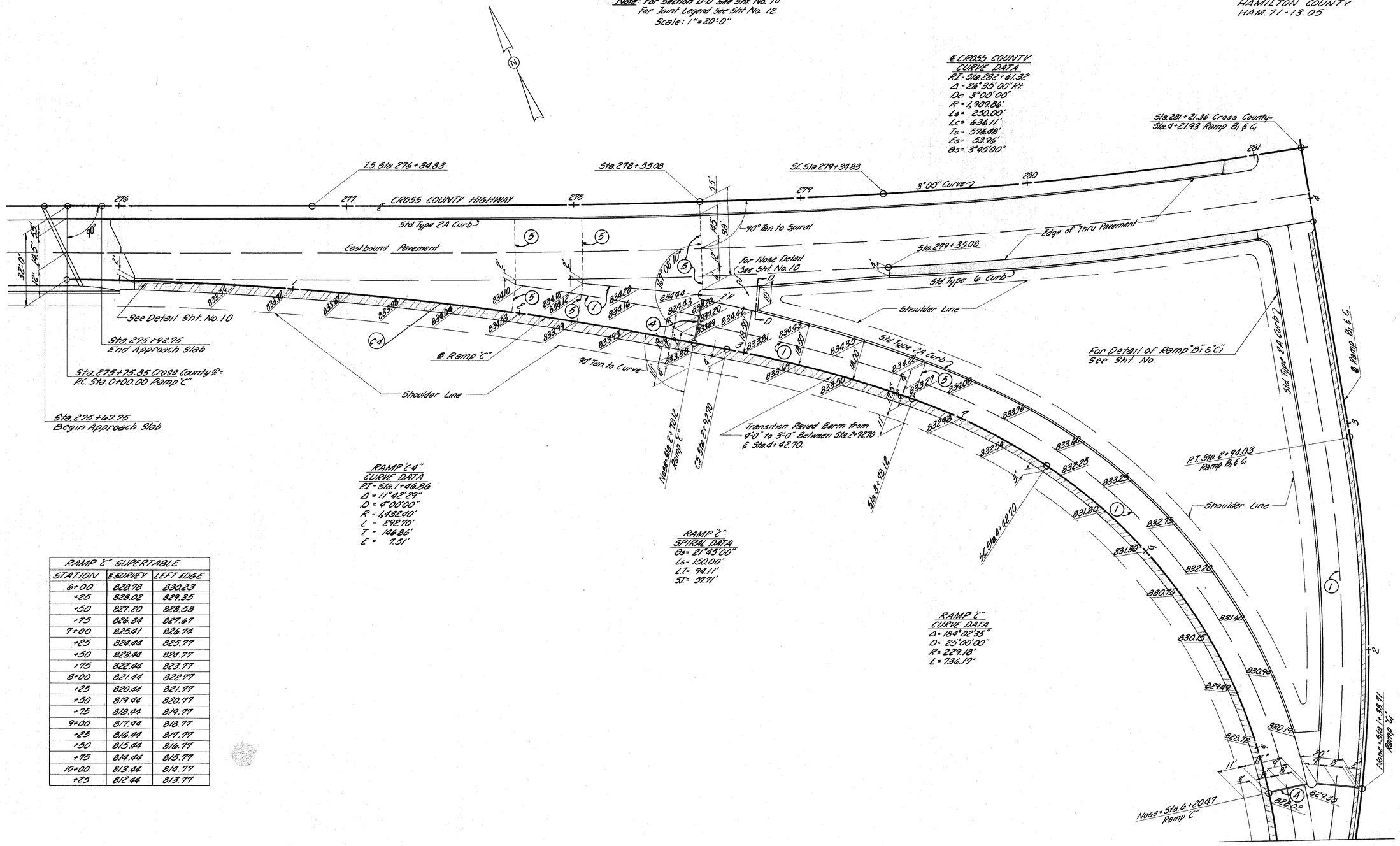
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM. 71 - 13. 05

RAMP "C" EXIT TERMINAL

Note: For Section D-D See Sht. No. 10
For Joint Legend See Sht. No. 12
Scale: 1"=20'-0"



℄ CROSS COUNTY CURVE DATA

P.I. = Sta 282+61.32
Δ = 28°35'00" Rt
Dc = 3°00'00"
R = 1,909.86'
Ls = 250.00'
Lc = 636.11'
Ts = 376.48'
Es = 53.96'
θs = 3°45'00"

RAMP "C-A" CURVE DATA

P.I. = Sta 1+46.86
Δ = 11°42'29"
D = 4°00'00"
R = 1,432.40'
L = 292.70'
T = 146.86'
E = 7.51'

RAMP "C" SPIRAL DATA

θs = 21°45'00"
Ls = 150.00'
LT = 94.11'
ST = 37.11'

RAMP "C" CURVE DATA

Δ = 184°02'35"
D = 25°00'00"
R = 229.18'
L = 736.17'

RAMP "C" SUPERTABLE		
STATION	℄ SURVEY	LEFT EDGE
6+00	828.78	830.23
+25	828.02	829.35
+50	827.20	828.53
+75	826.34	827.67
7+00	825.41	826.74
+25	824.44	825.77
+50	823.44	824.77
+75	822.44	823.77
8+00	821.44	822.77
+25	820.44	821.77
+50	819.44	820.77
+75	818.44	819.77
9+00	817.44	818.77
+25	816.44	817.77
+50	815.44	816.77
+75	814.44	815.77
10+00	813.44	814.77
+25	812.44	813.77

CROSS COUNTY INTERCHANGE RAMP "C" DETAIL

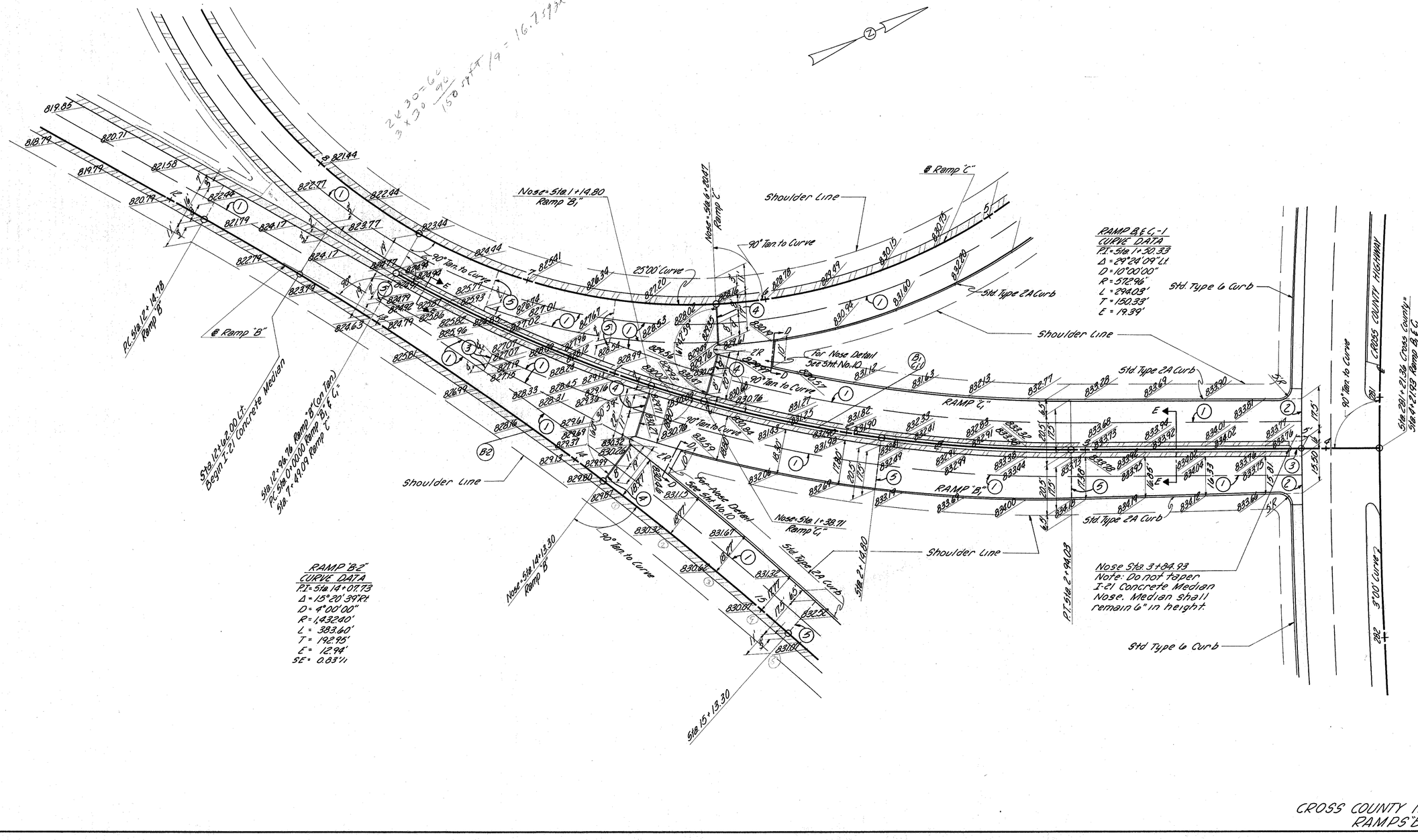
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM. 71-13.05

RAMP B, ENTRANCE TERMINAL
RAMP C, EXIT TERMINAL

Note: For Section D-D See Sht. No. 10
For Joint Legend See Sht. No. 12
For Section E-E See Sht. No. 10
Scale: 1"=20'-0"



CROSS COUNTY INTERCHANGE
RAMPS "B" & "C" DETAIL

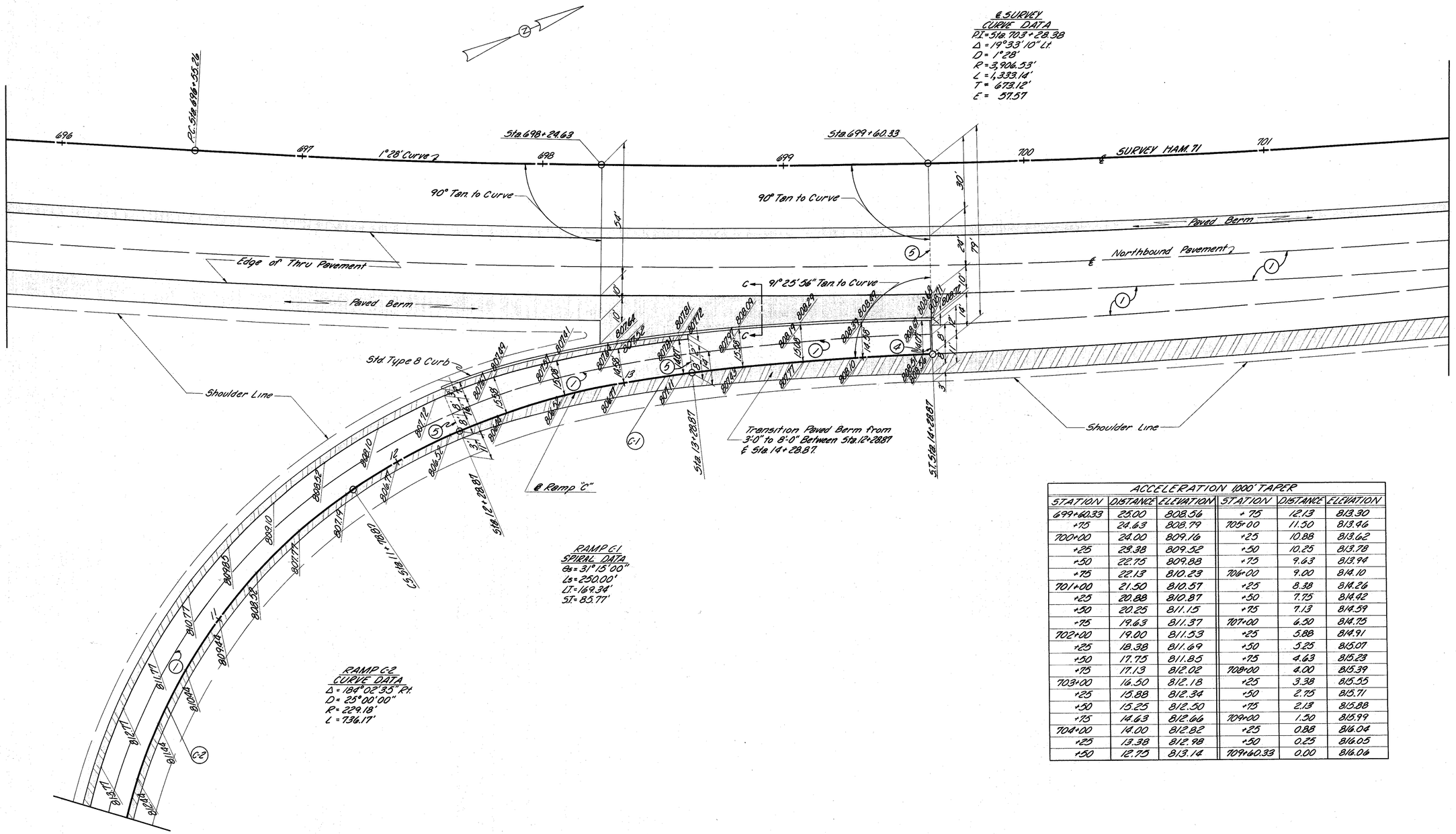
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM. 71-13.05

RAMP "C" ENTRANCE TERMINAL

Note: For Section C-C See Sht No. 10
For Joint Legend See Sht No. 12
Scale: 1" = 20'-0"



ACCELERATION 1000' TAPER					
STATION	DISTANCE	ELEVATION	STATION	DISTANCE	ELEVATION
699+60.33	25.00	808.56	+75	12.13	813.30
+75	24.63	808.79	705+00	11.50	813.96
700+00	24.00	809.16	+25	10.88	813.62
+25	23.38	809.52	+50	10.25	813.78
+50	22.75	809.88	+75	9.63	813.94
+75	22.13	810.23	706+00	9.00	814.10
701+00	21.50	810.57	+25	8.38	814.26
+25	20.88	810.87	+50	7.75	814.42
+50	20.25	811.15	+75	7.13	814.59
+75	19.63	811.37	707+00	6.50	814.75
702+00	19.00	811.53	+25	5.88	814.91
+25	18.38	811.69	+50	5.25	815.07
+50	17.75	811.85	+75	4.63	815.23
+75	17.13	812.02	708+00	4.00	815.39
703+00	16.50	812.18	+25	3.38	815.55
+25	15.88	812.34	+50	2.75	815.71
+50	15.25	812.50	+75	2.13	815.88
+75	14.63	812.66	709+00	1.50	815.99
704+00	14.00	812.82	+25	0.88	816.04
+25	13.38	812.98	+50	0.25	816.05
+50	12.75	813.14	709+60.33	0.00	816.06

CROSS COUNTY INTERCHANGE
RAMP "C" DETAIL

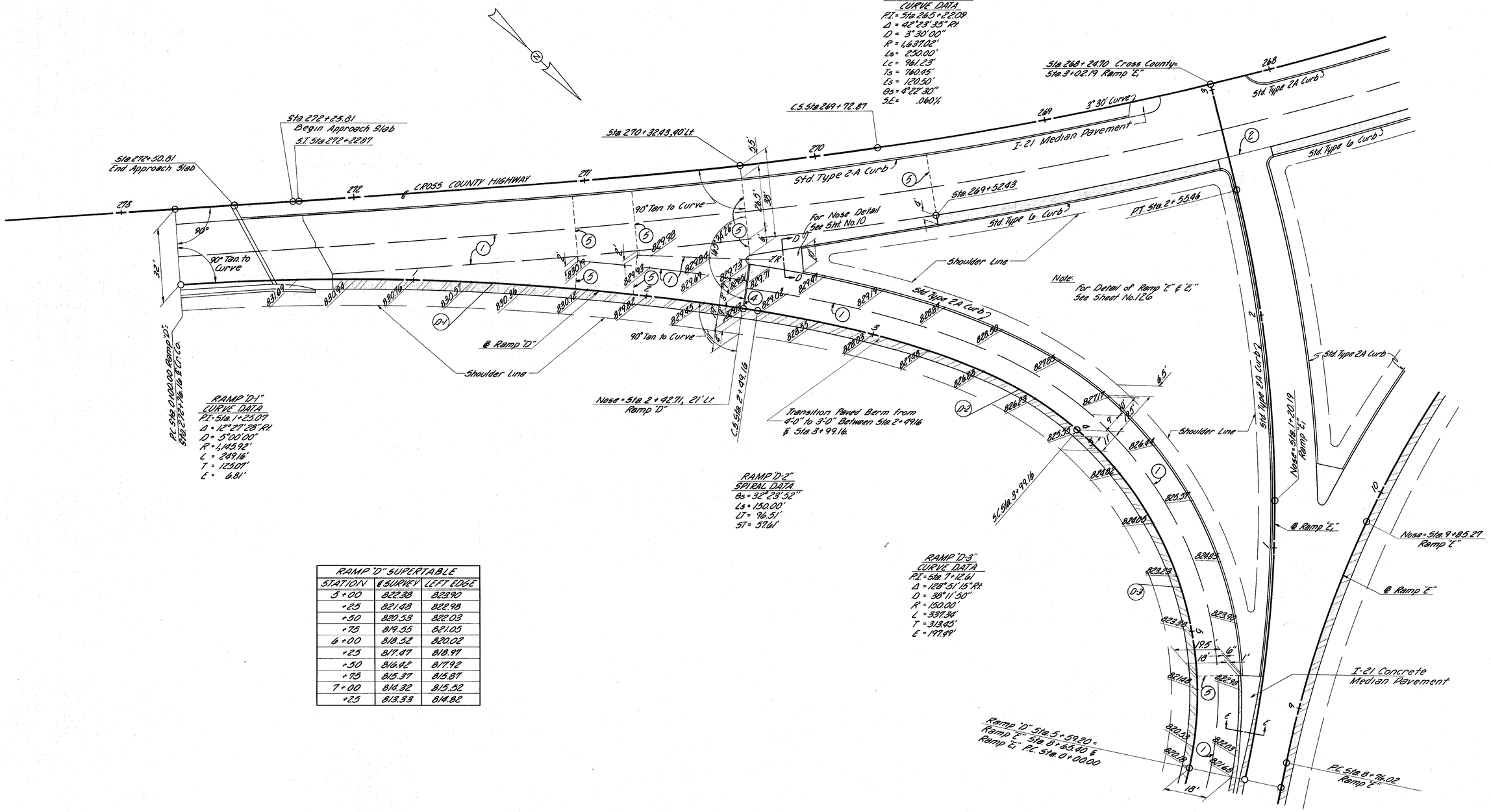
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM. 71-13.05

RAMP "D" EXIT TERMINAL

Note: For Sections D-D & E-E See Sht. No. 10
For Joint Legend See Sht. No. 12
Scale: 1"=20'-0"



RAMP "D" SUPERTABLE

STATION	℄ SURVEY	LEFT EDGE
5+00	822.38	823.90
+25	821.48	822.98
+50	820.53	822.03
+75	819.55	821.05
6+00	818.52	820.02
+25	817.47	818.97
+50	816.42	817.92
+75	815.37	815.87
7+00	814.32	815.52
+25	813.33	814.82

CROSS COUNTY INTERCHANGE
RAMP "D" DETAIL

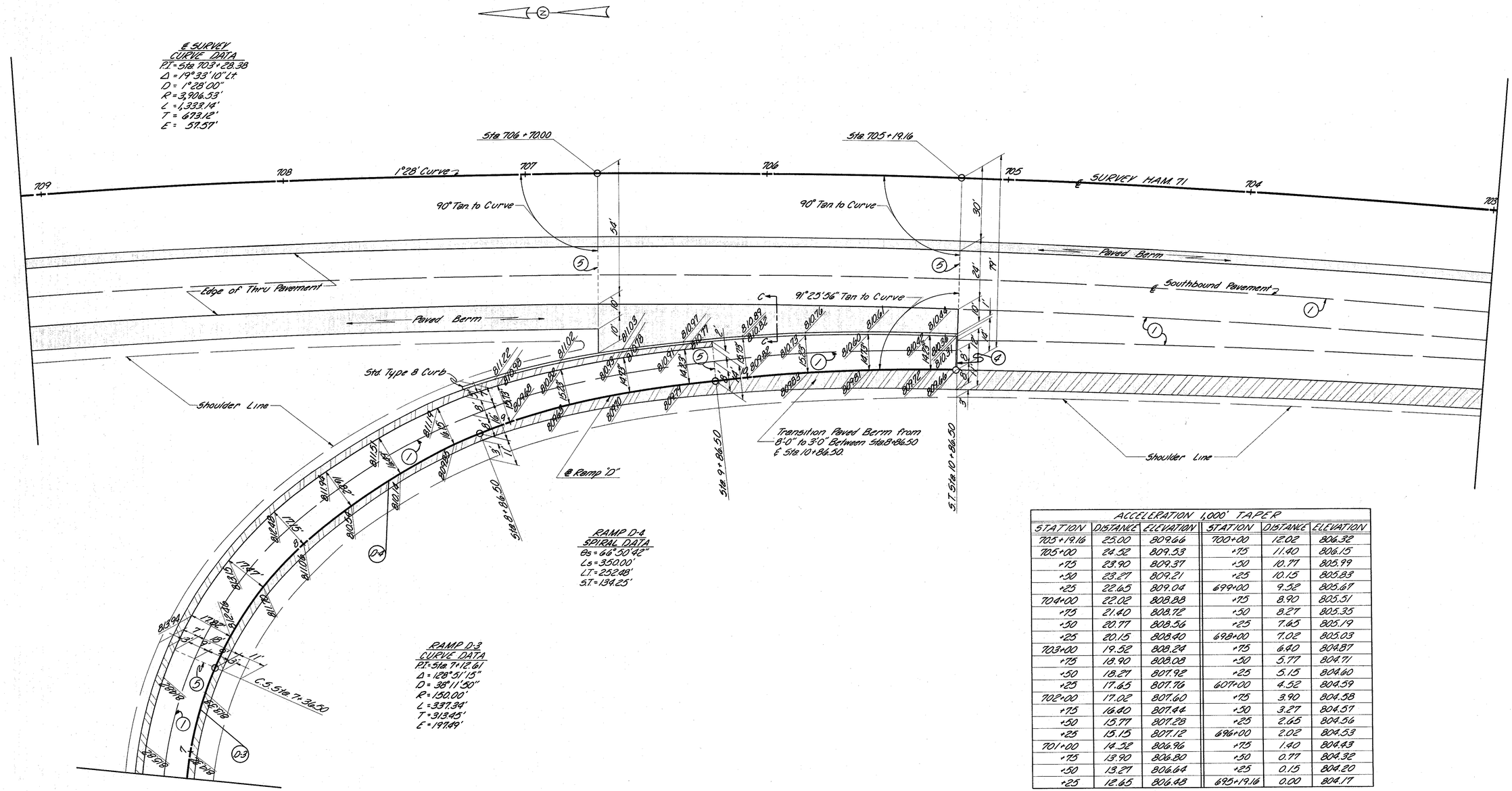
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
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RAMP "D" ENTRANCE TERMINAL

Note: For Section C-C See Sht. No. 10
For Joint Legend See Sht. No. 12
Scale: 1" = 20'-0"



ACCELERATION 1,000' TAPER					
STATION	DISTANCE	ELEVATION	STATION	DISTANCE	ELEVATION
705+19.16	25.00	809.66	700+00	12.02	806.32
705+00	24.52	809.53	+75	11.40	806.15
+75	23.90	809.37	+50	10.77	805.99
+50	23.27	809.21	+25	10.15	805.83
+25	22.65	809.04	699+00	9.52	805.67
704+00	22.02	808.88	+75	8.90	805.51
+75	21.40	808.72	+50	8.27	805.35
+50	20.77	808.56	+25	7.65	805.19
+25	20.15	808.40	698+00	7.02	805.03
703+00	19.52	808.24	+75	6.40	804.87
+75	18.90	808.08	+50	5.77	804.71
+50	18.27	807.92	+25	5.15	804.60
+25	17.65	807.76	697+00	4.52	804.59
702+00	17.02	807.60	+75	3.90	804.58
+75	16.40	807.44	+50	3.27	804.57
+50	15.77	807.28	+25	2.65	804.56
+25	15.15	807.12	696+00	2.02	804.53
701+00	14.52	806.96	+75	1.40	804.43
+75	13.90	806.80	+50	0.77	804.32
+50	13.27	806.64	+25	0.15	804.20
+25	12.65	806.48	695+19.16	0.00	804.17

CROSS COUNTY INTERCHANGE
RAMP "D" DETAIL

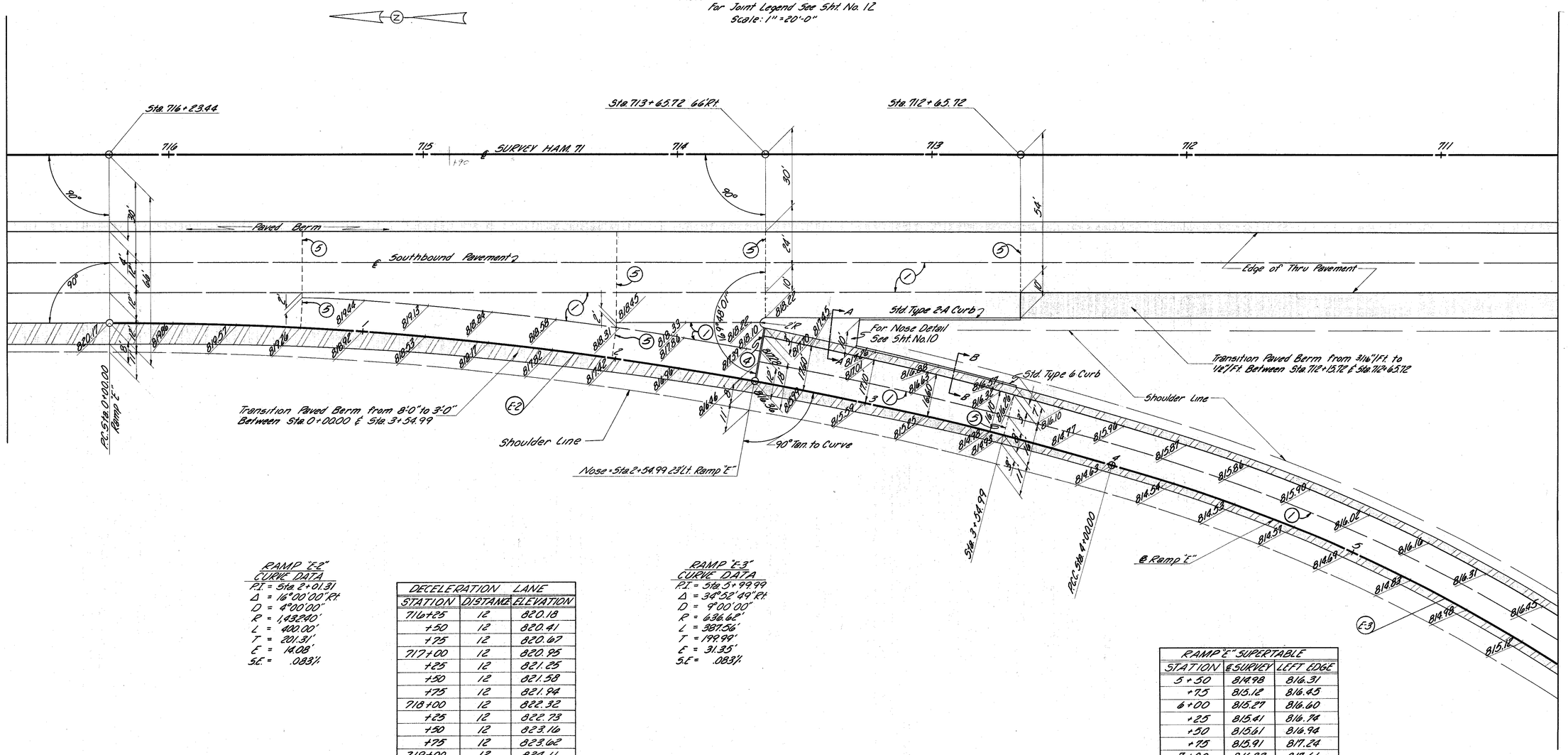
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM. 71-13.05

RAMP "E" EXIT TERMINAL

Note: For Section AA & BB See Sht. No. 10
For Joint Legend See Sht. No. 12
Scale: 1" = 20'-0"



RAMP "E-2" CURVE DATA

P.I. = Sta. 2+01.31
Δ = 16°00'00" Rt.
D = 4°00'00"
R = 1,432.40'
L = 400.00'
T = 201.31'
E = 14.08'
S.E. = .083%

DECELERATION LANE		
STATION	DISTANCE	ELEVATION
716+25	12	820.18
+50	12	820.41
+75	12	820.67
717+00	12	820.95
+25	12	821.25
+50	12	821.58
+75	12	821.94
718+00	12	822.32
+25	12	822.73
+50	12	823.16
+75	12	823.62
719+00	12	824.11
+25	12	824.62
+50	12	825.15
+75	12	825.71
720+00	12	826.30
+25	12	826.90
+50	12	827.50
+65.72	12	827.88
+75	10.89	828.11
721+00	7.89	828.76
+25	4.89	829.40
+50	1.89	830.06
+63.72	0	830.46

RAMP "E-3" CURVE DATA

P.I. = Sta. 3+99.99
Δ = 34°52'49" Rt.
D = 9°00'00"
R = 636.62'
L = 387.56'
T = 199.99'
E = 31.35'
S.E. = .083%

RAMP "E" SUPERTABLE		
STATION	℄ SURVEY	LEFT EDGE
5+50	8/4.98	8/6.31
+75	8/5.12	8/6.45
6+00	8/5.27	8/6.60
+25	8/5.41	8/6.74
+50	8/5.61	8/6.94
+75	8/5.91	8/7.24
7+00	8/6.33	8/7.66
+25	8/6.85	8/8.00
+50	8/7.48	8/8.46
+75	8/8.21	8/9.00
8+00	8/9.05	8/9.66
+25	8/0.00	8/0.43
+50	8/1.00	8/1.29

CROSS COUNTY INTERCHANGE
RAMP "E" DETAIL

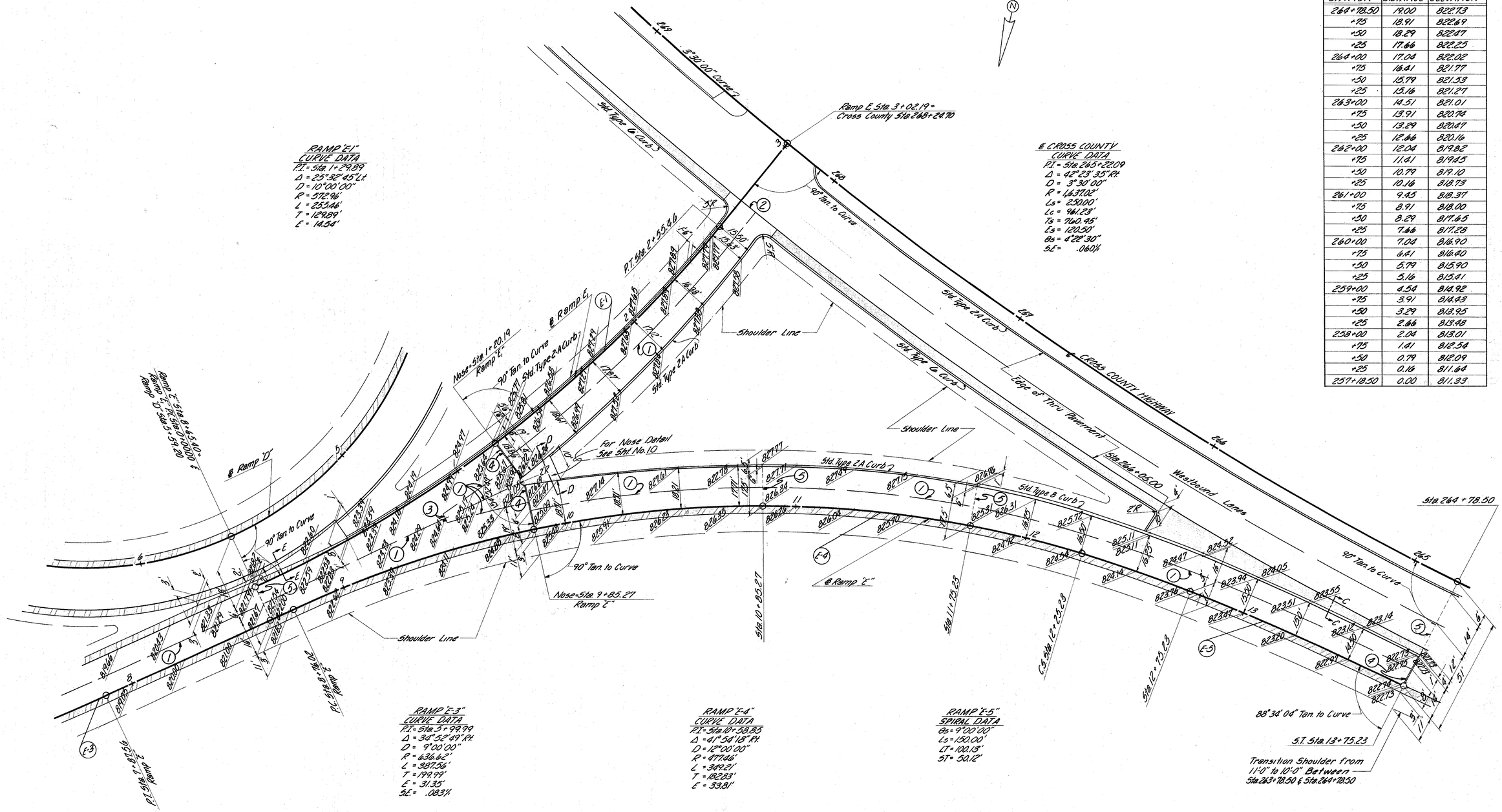
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
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RAMP "E" ENTRANCE TERMINAL
RAMP "E1" ENTRANCE TERMINAL

Note: For Sections C-C, D-D, & E-E See Sht. No. 10
For Joint Legend See Sht. No. 12
Scale: 1" = 20'-0"



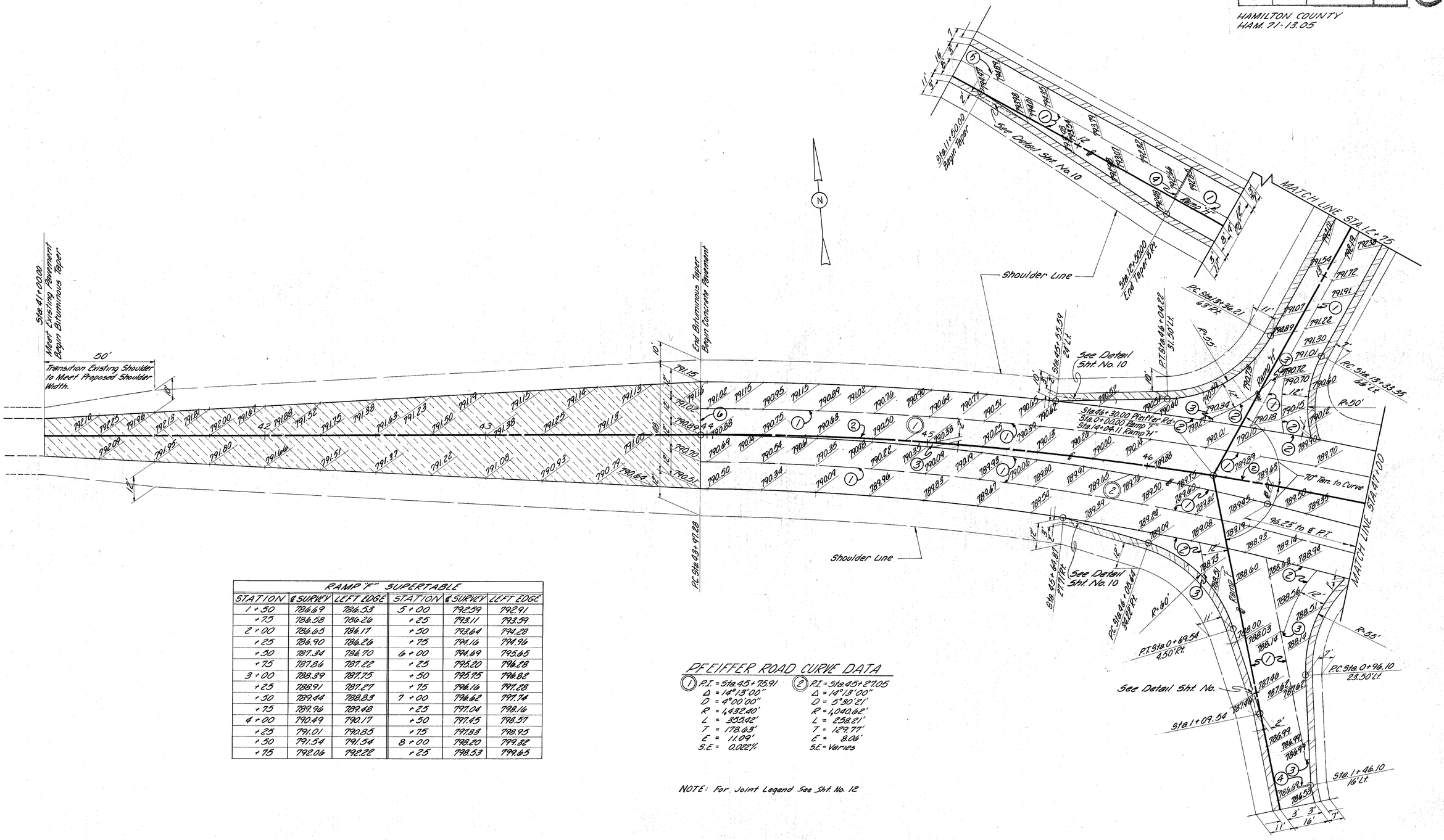
ACCELERATION 760' TAPER		
STATION	DISTANCE	ELEVATION
264+78.50	19.00	822.73
+75	18.91	822.69
+50	18.29	822.47
+25	17.66	822.25
264+00	17.04	822.02
+75	16.41	821.77
+50	15.79	821.53
+25	15.16	821.27
263+00	14.51	821.01
+75	13.91	820.74
+50	13.29	820.47
+25	12.66	820.16
262+00	12.04	819.82
+75	11.41	819.45
+50	10.79	819.10
+25	10.16	818.73
261+00	9.45	818.37
+75	8.91	818.00
+50	8.29	817.65
+25	7.66	817.28
260+00	7.04	816.90
+75	6.41	816.40
+50	5.79	815.90
+25	5.16	815.41
259+00	4.54	814.92
+75	3.91	814.43
+50	3.29	813.95
+25	2.66	813.48
258+00	2.04	813.01
+75	1.41	812.54
+50	0.79	812.09
+25	0.16	811.64
257+18.50	0.00	811.33

CROSS COUNTY INTERCHANGE
RAMP "E" & "E1" DETAIL

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
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RAMP "F" SUPERTABLE					
STATION	℄ SURVEY	LEFT EDGE	STATION	℄ SURVEY	LEFT EDGE
1+50	786.69	786.53	5+00	792.59	792.91
+75	786.58	786.26	+25	793.11	793.59
2+00	786.65	786.17	+50	793.64	794.28
+25	786.90	786.26	+75	794.16	794.96
+50	787.34	786.70	6+00	794.69	795.65
+75	787.86	787.22	+25	795.20	796.28
3+00	788.39	787.75	+50	795.75	796.82
+25	788.91	787.27	+75	796.16	797.28
+50	789.44	788.83	7+00	796.62	797.74
+75	789.96	789.48	+25	797.04	798.16
4+00	790.49	790.17	+50	797.45	798.57
+25	791.01	790.85	+75	797.83	798.95
+50	791.54	791.54	8+00	798.20	799.32
+75	792.06	792.22	+25	798.53	799.65

PFEIFFER ROAD CURVE DATA

① P.I. = Sta 45+75.91
Δ = 14°13'00"
D = 4°00'00"
R = 1,432.40'
L = 355.42'
T = 178.63'
E = 11.09'
S.E. = 0.022%

② P.I. = Sta 45+27.05
Δ = 14°13'00"
D = 5°30'21"
R = 1,040.62'
L = 258.21'
T = 129.77'
E = 8.06'
S.E. = Varies

NOTE: For Joint Legend See Sht. No. 12

PFEIFFER ROAD DETAIL
STA. 41 - STA. 47, RAMPS "F" & "H"

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
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N

PFEIFFER ROAD CURVE DATA

(3)	(4)
P.I.=Sta 53+08.10	P.I.=Sta 52+32.88
Δ = 9°10'45"	Δ = 9°10'45"
D = 4°00'00"	D = 2°25'05"
R = 1,432.40'	R = 2,369.60'
L = 229.48'	L = 379.61'
T = 115.00'	T = 190.22'
E = 4.61'	E = 7.62'
SE = 0.022 ft	Sf. = Varies

MATCH LINE STA 47+00

E.P.T. Sta 47+52.70

76.28' from ℄ P.T.

℄ SURVEY

76°23'46" Tan to Curve

S-1° Curve

Sta 792+04.39 HAM. 71 =
Sta 50+00.00 Pfeiffer Rd.

P.C. Sta 791+73.90 HAM. 71

℄ PFEIFFER RD.

℄ P.C. Sta 50+43.42 Offset 12' Lt.

Shoulder Line

P.T. Sta 0+73.87
23.50' Lt.

Sta 1+23.87
16' Lt.

Sta 1+05.01

P.T. Sta 0+65.10
4.50' Rt.

R=55'

R=40'

P.C. Sta 52+42.66
28.50' Lt.

Sta 52+70.38
2.40' Lt.

See Detail
Sht. No. 10

P.C. Sta 51+93.10 Pfeiffer Rd.=
Sta 0+00.00 Ramp "I"

P.C. Sta 51+93.10 Pfeiffer Rd.=
Sta 12+23.83 Ramp "G"

Ramp "G"

Ramp "I"

R=50'

P.T. Sta 11+73.69
16' Lt.

P.T. Sta 52+24.27
30.00' Rt.

P.C. Sta 11+27.67
8' Rt.

R=95'

Sta 53+02.19
24.00' Rt.

MATCH LINE STA. 10+75

Sta 9+65.00
Begin Taper

End Taper Sta 9+85.00

See Detail Sht. No. 10

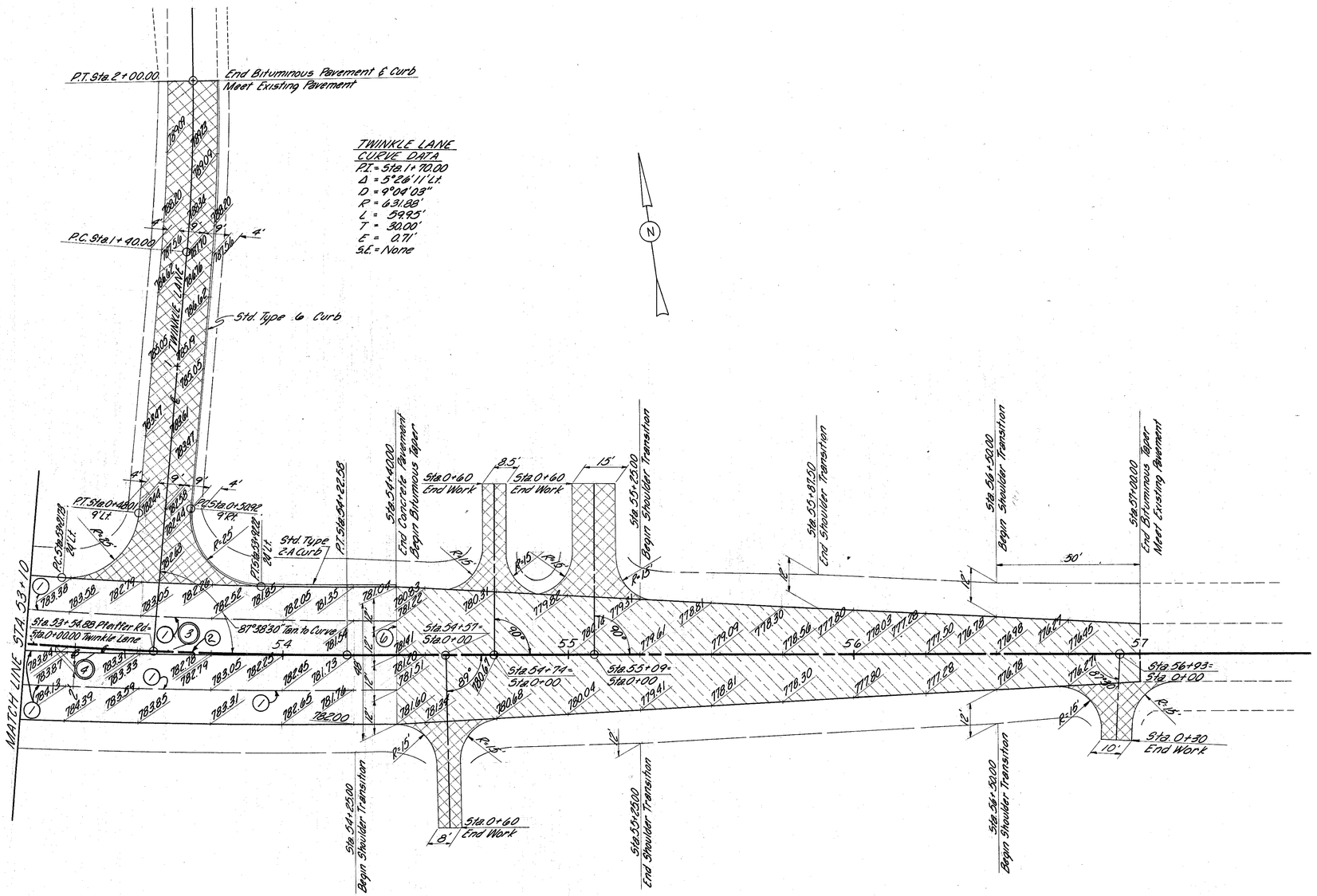
NOTE:
For joint legend see Sht. No. 12

PFEIFFER ROAD DETAIL
STA. 47 ~ STA. 53+10, RAMPS "G" & "I"

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
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NOTE:
For Joint Legend See Sht. No. 12

PFEIFFER ROAD DETAIL
STA. 53+10 - STA. 57 & TWINKLE LANE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
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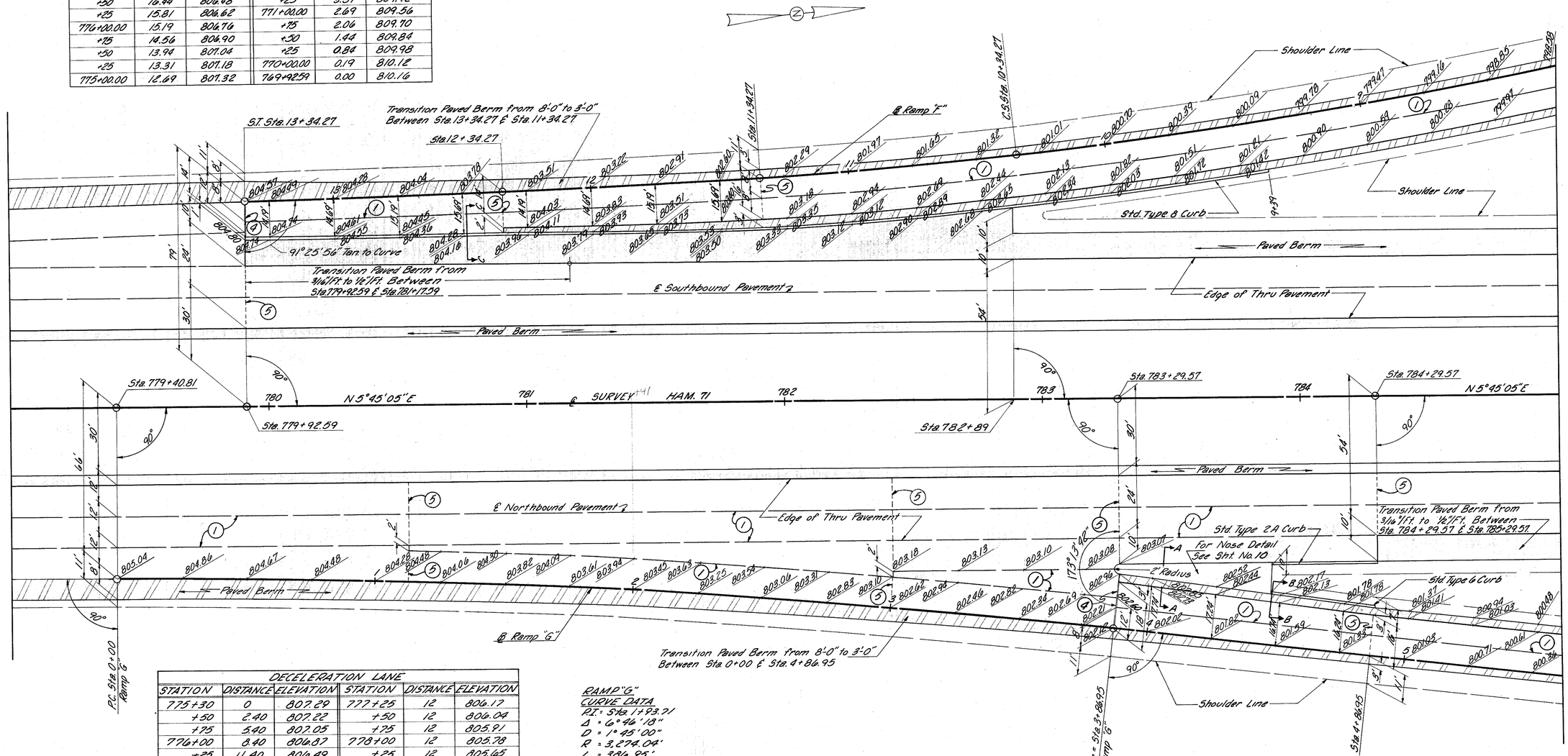
RAMP "F" ENTRANCE TERMINAL

Note: For Section C-C See Sht. No. 10
For Joint Legend See Sht. No. 12

ACCELERATION 4,000' TAPER					
STATION	DISTANCE	ELEVATION	STATION	DISTANCE	ELEVATION
779+92.59	25.00	804.57	+75	12.06	807.46
+75	24.56	804.67	+50	11.44	807.60
+50	23.94	804.81	+25	10.81	807.74
+25	23.31	804.95	774+00.00	10.19	807.88
779+00.00	22.69	805.09	+75	9.56	808.02
+75	22.06	805.23	+50	8.94	808.16
+50	21.44	805.37	+25	8.31	808.30
+25	20.81	805.51	773+00.00	7.69	808.44
778+00.00	20.19	805.64	+75	7.06	808.58
+75	19.56	805.78	+50	6.44	808.72
+50	18.94	805.92	+25	5.81	808.86
+25	18.31	806.06	772+00.00	5.19	809.00
777+00.00	17.69	806.20	+75	4.56	809.14
+75	17.06	806.34	+50	3.94	809.28
+50	16.44	806.48	+25	3.31	809.42
+25	15.81	806.62	771+00.00	2.69	809.56
776+00.00	15.19	806.76	+75	2.06	809.70
+75	14.56	806.90	+50	1.44	809.84
+50	13.94	807.04	+25	0.81	809.98
+25	13.31	807.18	770+00.00	0.19	810.12
775+00.00	12.69	807.32	769+92.59	0.00	810.16

RAMP "F"
SPIRAL DATA
$\theta s = 4°30'00''$
$Ls = 300.00'$
$LT = 200.06'$
$ST = 100.06'$

RAMP "F"
CURVE DATA
P.I. = Sta. 7+74.29
$\Delta = 15°41'52''$
$Dc = 3°00'00''$
$R = 1,909.86'$
$Lc = 523.26'$
$T = 263.28'$
$E = 18.06'$



DECELERATION LANE					
STATION	DISTANCE	ELEVATION	STATION	DISTANCE	ELEVATION
775+30	0	807.29	777+25	12	806.17
+50	2.40	807.22	+50	12	806.04
+75	5.40	807.05	+75	12	805.91
776+00	8.40	806.87	778+00	12	805.78
+25	11.40	806.49	+25	12	805.65
+30	12	806.59	+50	12	805.52
+50	12	806.56	+75	12	805.39
+75	12	806.43	779+00	12	805.26
777+00	12	806.30	+25	12	805.13

RAMP "G"
CURVE DATA
P.I. = Sta. 1+93.71
$\Delta = 6°46'18''$
$D = 1°45'00''$
$R = 3,274.04'$
$L = 386.95'$
$T = 193.71'$
$E = 5.72'$

RAMP "G" EXIT TERMINAL

Note: For Sections A-A & B-B See Sht. No.
For Joint Legend See Sht. No.

PFEIFFER ROAD INTERCHANGE
RAMPS "F" & "G" DETAIL

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

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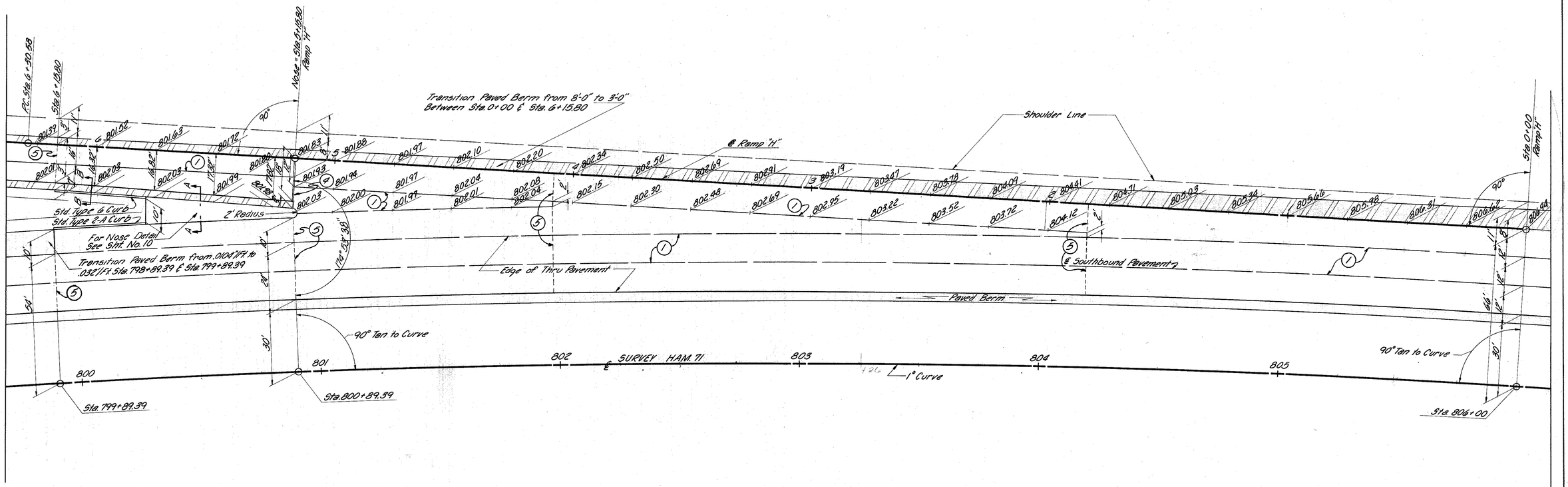
HAMILTON COUNTY
HAM. 71-13.05

RAMP "H" EXIT TERMINAL

Note: For Sections A-A & B-B See Sht. No. 10
For Joint Legend See Sht. No. 12

RAMP "H" SUPERTABLE					
STATION	℄ SURVEY	LEFT EDGE	STATION	℄ SURVEY	LEFT EDGE
6+00	801.52	802.03	9+00	798.62	799.74
+25	801.39	802.01	+25	798.25	799.37
+50	801.25	802.00	+50	797.85	798.97
+75	801.08	801.95	+75	797.44	798.47
7+00	800.88	801.88	10+00	797.04	797.98
+25	800.67	801.79	+25	796.64	797.49
+50	800.44	801.56	+50	796.22	796.99
+75	800.18	801.30	+75	795.80	796.48
8+00	799.91	801.03	11+00	795.37	795.97
+25	799.63	800.75	+25	794.93	795.44
+50	799.31	800.43	+50	794.47	794.89
+75	798.98	800.10	+75	794.01	794.35

DECELERATION LANE		
STATION	DISTANCE	ELEVATION
806+00	12	806.94
+25	12	807.26
+50	12	807.58
+75	12	807.90
807+00	12	808.22
+25	12	808.54
+50	12	808.86
+75	12	809.18
808+00	12	809.50
+25	9	809.73
+50	6	809.97
+75	3	810.18
809+00	0	810.40



PFEIFFER ROAD INTERCHANGE
RAMP "H" DETAIL

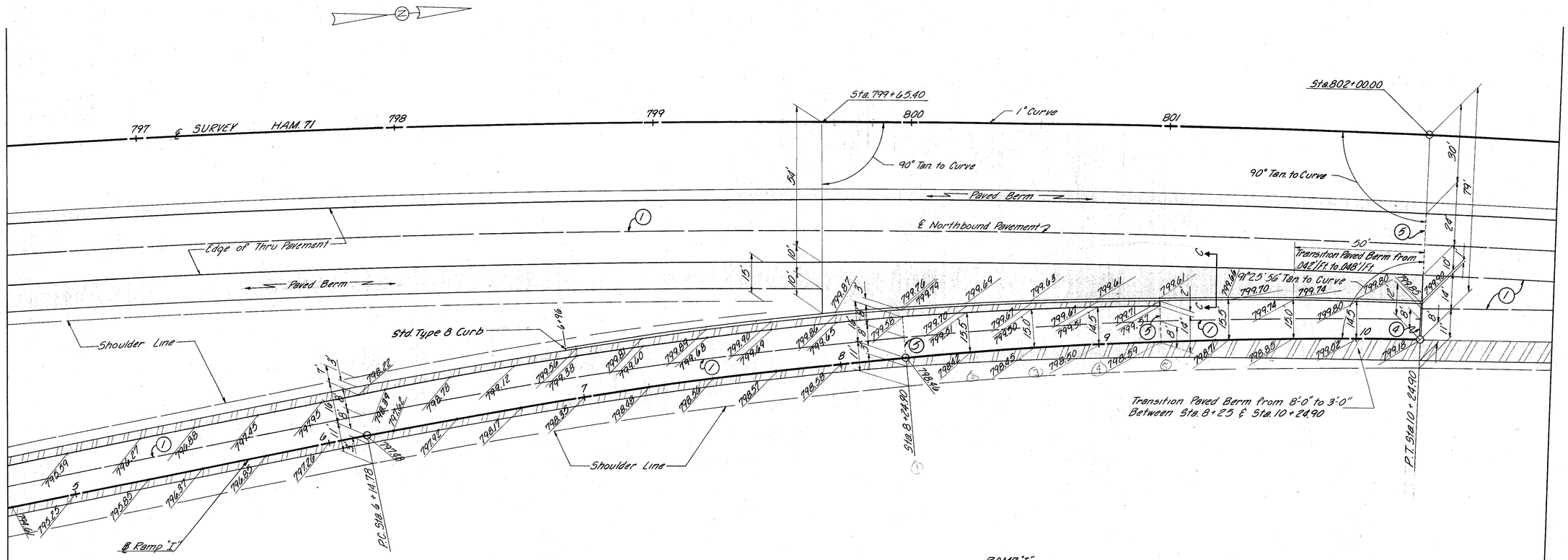
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
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RAMP "I" ENTRANCE TERMINAL

Note: For Section C-C See Sht. No. 10
For Joint Legend See Sht. No. 12



RAMP "I"
CURVE DATA
Δ = 12°18'13"
Dc = 3°00'00"
R = 1,909.86'
L = 410.12'
T = 205.86'
E = 11.06'
S.E. = 0.070%

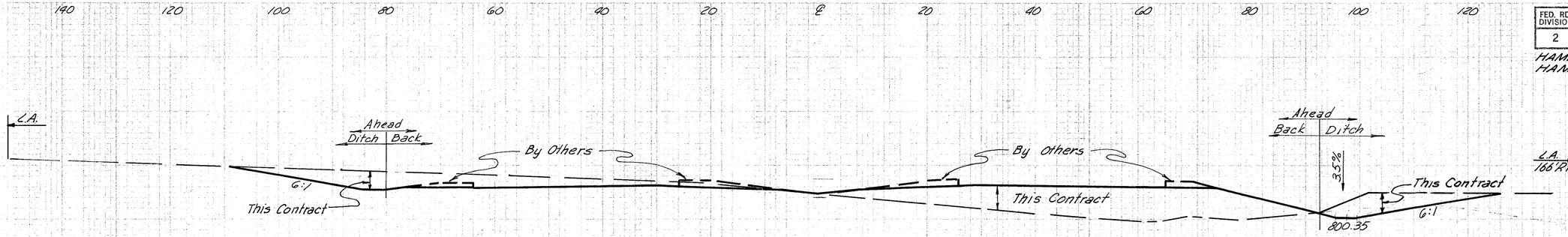
ACCELERATION 1,000' TAPER					
STATION	DISTANCE	ELEVATION	STATION	DISTANCE	ELEVATION
802+00.00	25.00	799.18	+25	11.88	806.26
+25	24.38	799.49	+50	11.25	806.60
+50	23.75	799.85	+75	10.63	806.94
+75	23.13	800.21	808+00.00	10.00	807.28
803+00.00	22.50	800.50	+25	9.38	807.62
+25	21.88	800.82	+50	8.75	807.96
+50	21.25	801.16	+75	8.13	808.30
+75	20.63	801.50	809+00.00	7.50	808.64
804+00.00	20.00	801.84	+25	6.88	808.98
+25	19.38	802.18	+50	6.25	809.32
+50	18.75	802.52	+75	5.63	809.66
+75	18.13	802.86	810+00.00	5.00	810.00
805+00.00	17.50	803.20	+25	4.38	810.34
+25	16.88	803.54	+50	3.75	810.68
+50	16.25	803.88	+75	3.13	811.02
+75	15.63	804.22	811+00.00	2.50	811.36
806+00.00	15.00	804.56	+25	1.88	811.70
+25	14.38	804.90	+50	1.25	812.04
+50	13.75	805.24	+75	0.63	812.41
+75	13.13	805.58	812+00.00	0.00	812.84
807+00.00	12.50	805.92			

PFEIFFER ROAD INTERCHANGE
RAMP "I" DETAIL

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM.71-13.05



	End Area Cut	End Area Fill	Volume Cut	Volume Fill
Ahead	253	375		
Back	197	195		
			55	54
Sta. 655+35	0	0		
Ditch Rt. Sta. 655+50	84	0		
Ditch Rt. Sta. 655+40	90	0	32	0
Ditch Rt. Sta. 655+30	0	0	17	0
Ditch Lt. Sta. 655+50	56	0		
Ditch Lt. Sta. 655+25 65'Lt	42	0	45	0
Cross Ditch Sta. 655+25 65'Lt	42	0		
Cross Ditch Sta. 655+25 0'Lt	10	0	63	0
Cross Ditch Sta. 655+25 95'Rt	0	0	18	0

790

Sta. 655+50 Lt.
End 4' Bottom Special Ditch

Sta. 655+25, 65' Lt
Begin 4' Bottom Special Ditch
Ditch continues to
Sta 655+25, 95' Rt.

807.98
655+50
809.6

BEGIN WORK
STA. 655+10

Sta 655+30 Rt.
Begin 4' Bottom Special Ditch

By Others

790

807.36
655+00
804.8

By Others

790

807.31
654+80
798.8

By Others

790

807.23
654+60
800.0

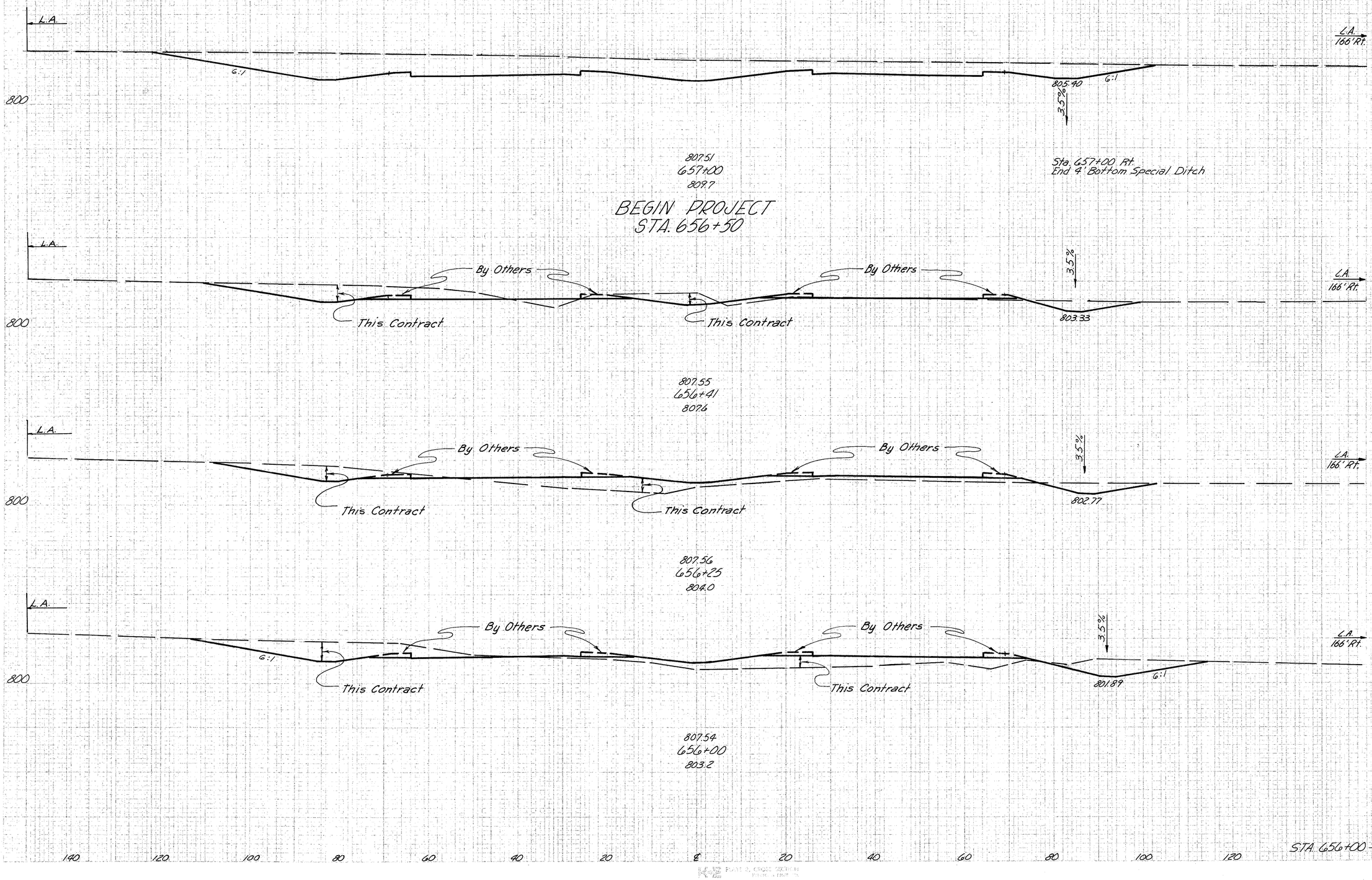
STA 654+60 - STA 655+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM-71-13.05

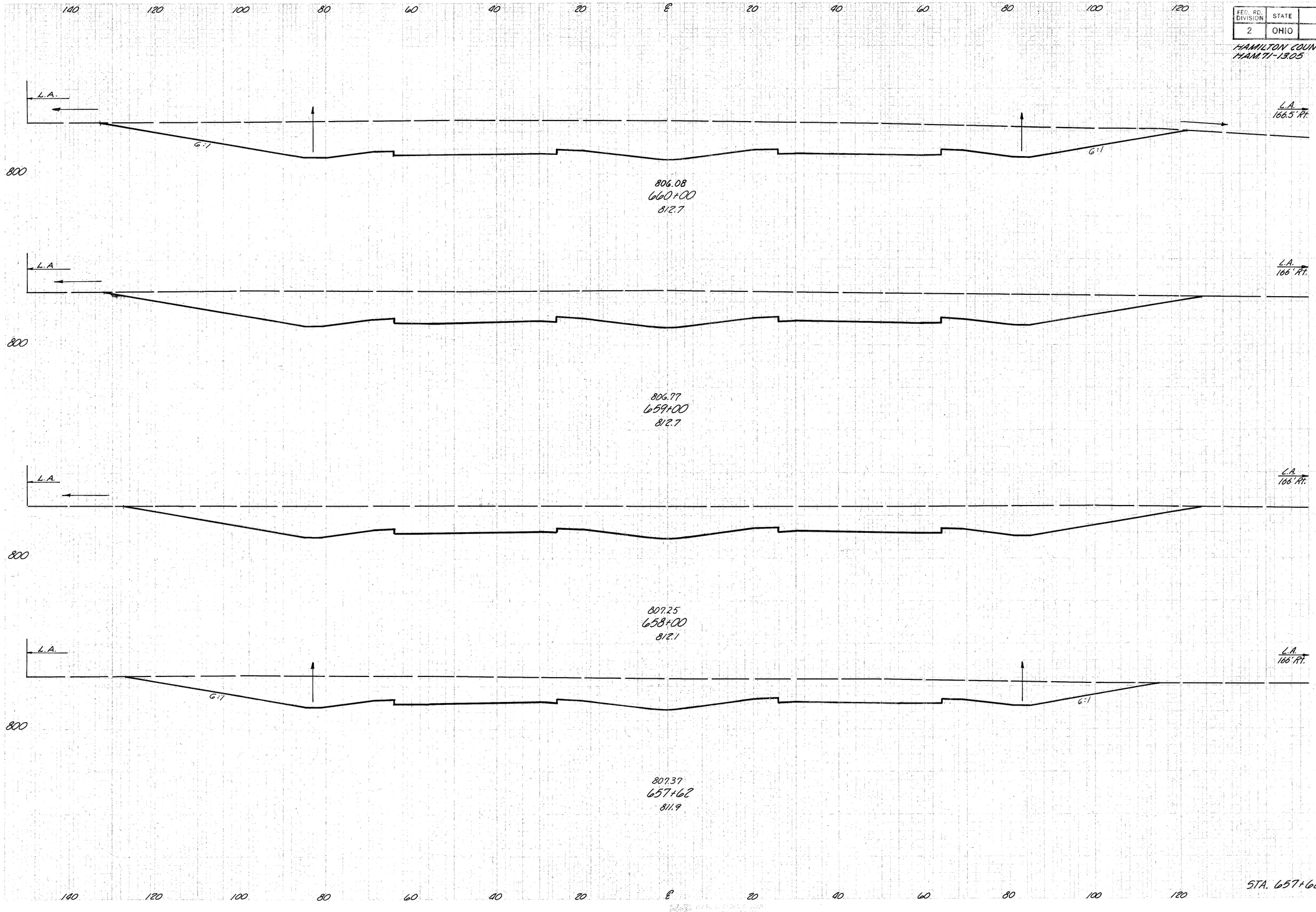
END AREA		VOLUME	
CUT	FILL	CUT	FILL
784	0		
		1123	29
244	27		
		111	92
129	284		
		175	211
250	172		
		466	506



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM-71-13.05



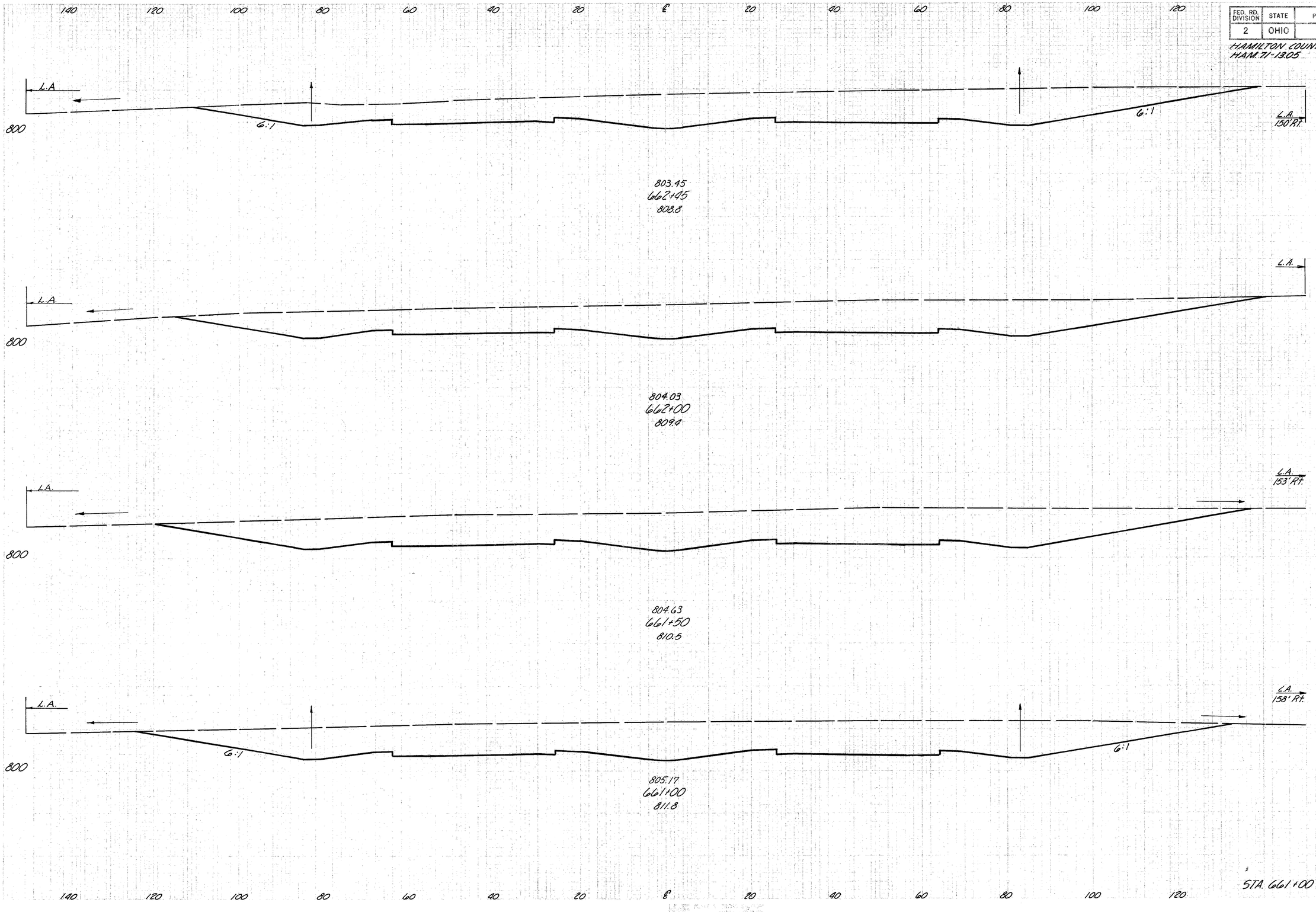
END AREA		VOLUME	
CUT	FILL	CUT	FILL
1631	0		
		5902	0
1556	0		
		5403	0
1362	0		
		1037	0
1249	0		
		2334	0

STA. 657+62 - STA. 660+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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495

HAMILTON COUNTY
HAM.71-13.05



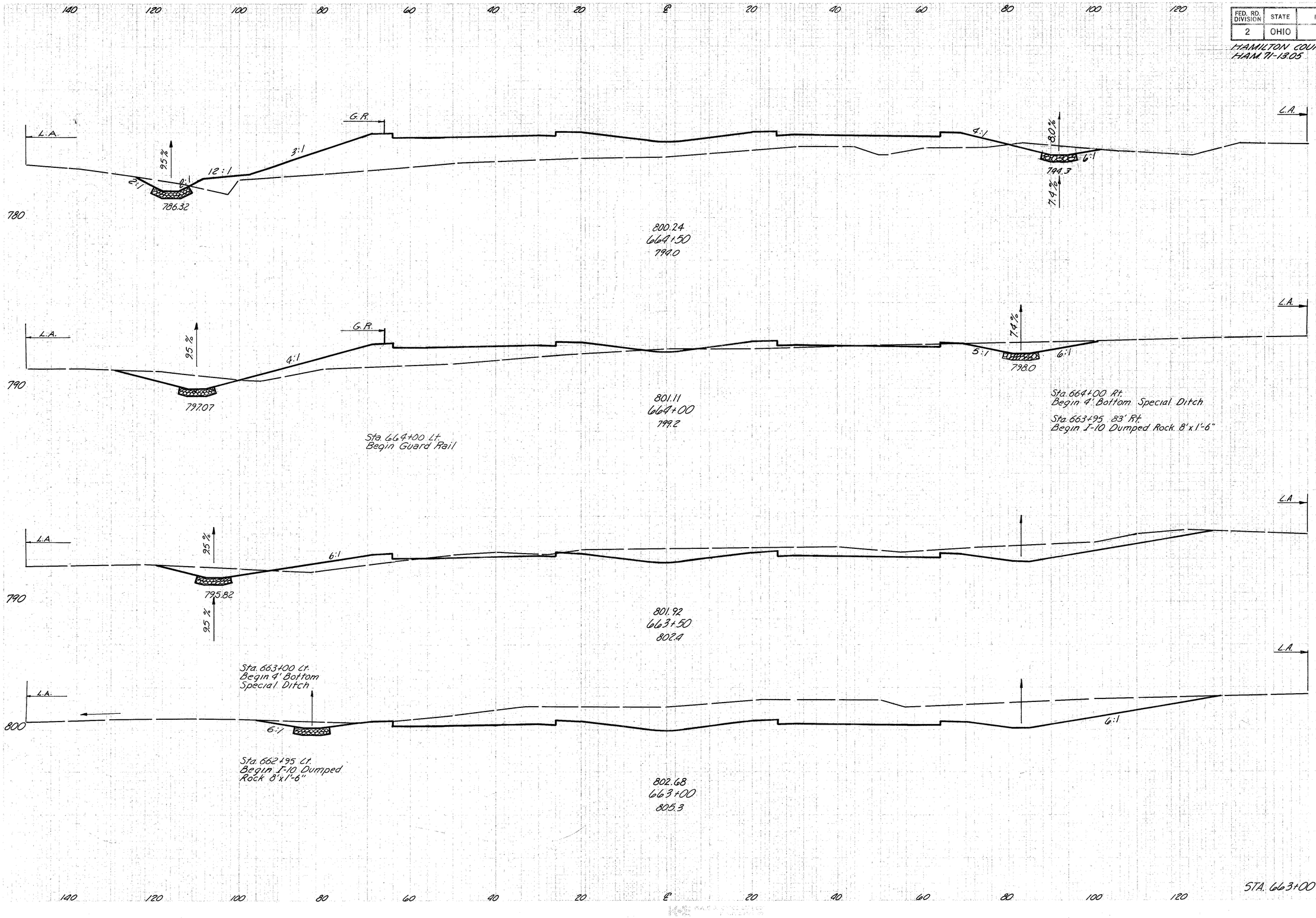
END AREA		VOLUME	
CUT	FILL	CUT	FILL
1317	0		
		2335	0
1685	0		
		2906	0
1654	0		
		3101	0
1695	0		
		6159	0

STA. 661+00 - STA. 662+45

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM. 71-13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
53	883		
		125	1099
82	304		
		417	326
368	98		
		1122	94
844	0		
		2201	0

STA. 663+00 - STA. 669+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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145

HAMILTON COUNTY
HAM-71-19.05

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

760

Sta. 666+15
End I-10 Riprap
Begin 4' Bottom Special Ditch
Begin L-120 Jute Matting 7'-8" Wide

L.A. Ahead Ditch Back G.R. 12% 2:1 12:1 2:1 779.0 12% 4:1 12:1 2% 2:1 2:1 785.8 L.A. 0.5%

796.23
666+50
780.9

Sta. 666+14
Culvert Inlet
Inv. 771.0

770

L.A. E-3 Channel Exc. For Quantity see Drainage Structure Sheet No. 334 772.5

L.A. 0.5% 2:1 786.05

797.32
666+00
786.1

Sta. 665+92 Lt.
End 4' Bottom Special Ditch
End I-10 Dumped Rock 8'x1'-6"
Begin I-10 Riprap
(Quantity carried with drainage structure) Back Ditch Ahead

L.A. 38% 776.82

L.A. 0.5% 786.3 8.0%

770

798.35
665+50
790.3

G.R. L.A. 9.5% 2:1 12:1 2:1 2:1 781.57 8.0% 4:1 6:1 790.3 L.A.

780

799.32
665+00
793.7

Sta. 665+60 Rt.
End I-10 Dumped Rock 8'x1'-6"

Hamilton County
Sta. 655+10 to Sta. 665+00

Excavation	36,054	C.Y.
Embankment	4,115	C.Y.
Embankment +15%	4,732	C.Y.

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Ahead	84	3126		
Back	68	3126		
Ditch Lt. Sta. 666+50	16			13
Ditch Lt. Sta. 666+15	4			
			130	5130
	72	2415		
			67	3708
Ditch Lt. Sta. 665+92	8	0		
Ditch Lt. Sta. 665+50	45	0	41	
Ahead	0	1590		
Back	45	1590		
			100	2409
	63	1012		
			107	1754

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

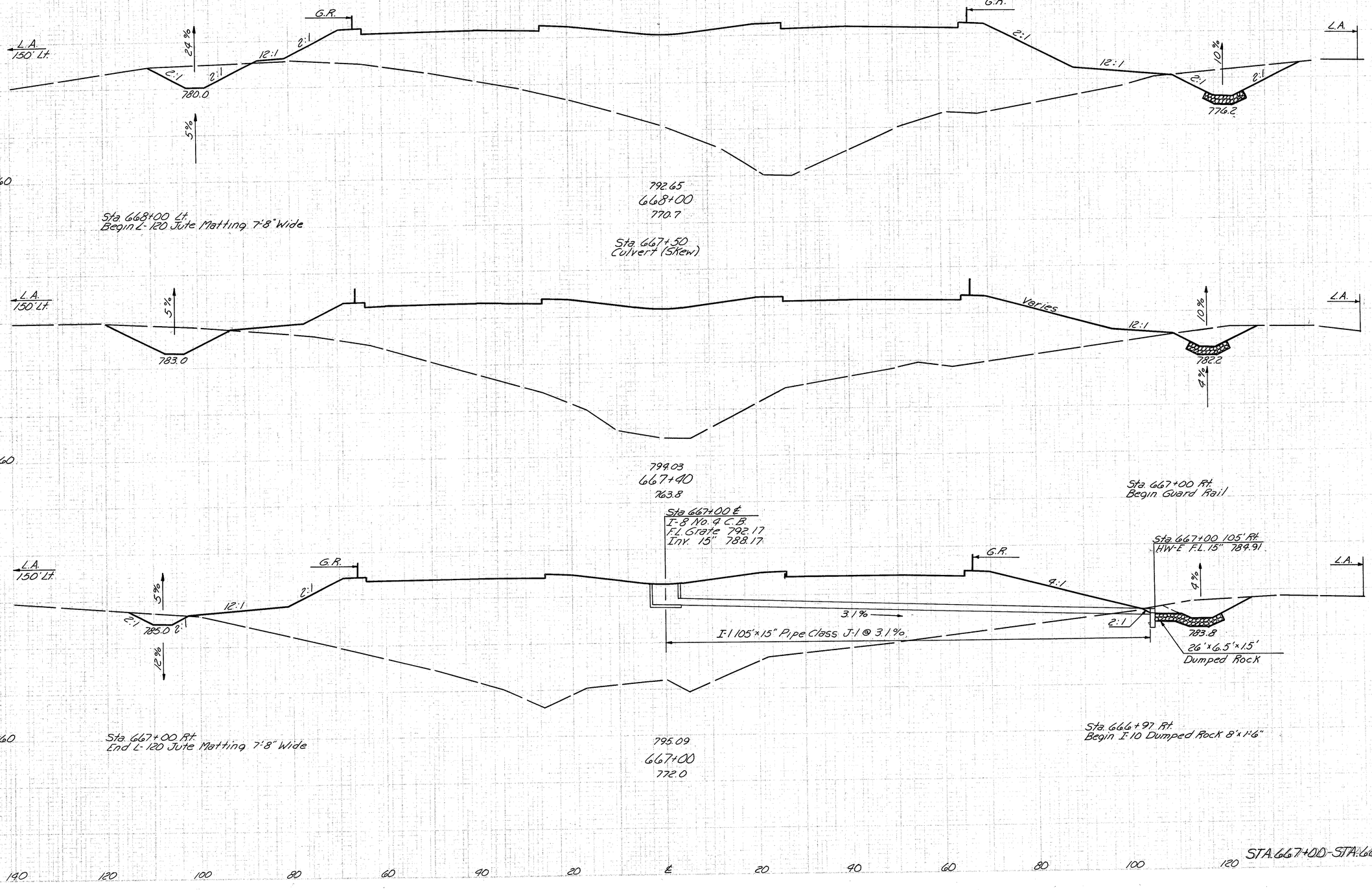
STA. 665+00 – STA. 666+50

SHEET NO.	TOTAL SHEETS	PROJECT
2	OHIO	

139
445

HAMILTON COUNTY
HAM.71-13.05

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



155 2916

324 6397

137 2891

156 9358

74 3042

196 5711

STA 667+00-STA 668+00

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

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM.71-13.05

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

G.R.

Ahead
Bck. Ditch | Back

L.A

2:1

12:1

760.0

750

Sta. 669+22 Lt.
Begin 4' Bottom Special Ditch

Sta 669+18 Lt.
Culvert Inlet
Inv. 755.0

Sta. 669+10 Lt
End 4' Bottom Special Ditch

Sta 669+06 Lt.
End L-120 Jute Matting 7'-8" Wide
Begin I-10 Riprap (Quantity
Carried With Drainage Structure.)

789.85
669+25
769.3

Sta. 669+20 Rt.
End I-10 Dumped Rock 2'-6" Thick
Quantity Carried With Drainage Structure
Begin I-10 Dumped Rock 12'x1'-6"

62%

L.A.
157' Rt.

764.65

Ditch Lt.

10%

17.0' x 3 / 27 = 1.8 C.Y.

766.2

Back
Ahd. Ditch | Ahead

5%

756.0

24%

790.33
669+00
770.3

Sta. 668+84 Rt.
Culvert Outlet
Inv. = 767.0

E-3 Channel Exc. And
I-10 Dumped Rock
Quantity Carried With
Drainage Structure Sht. No. 334

Sta. 668+80 Rt.
End I-10 Dumped Rock 8'x1'-6"
Begin I-10 Dumped Rock 2'-6" Thick
Quantity Carried With Drainage Structure

771.2

768.0

791.42
668+50
772.7

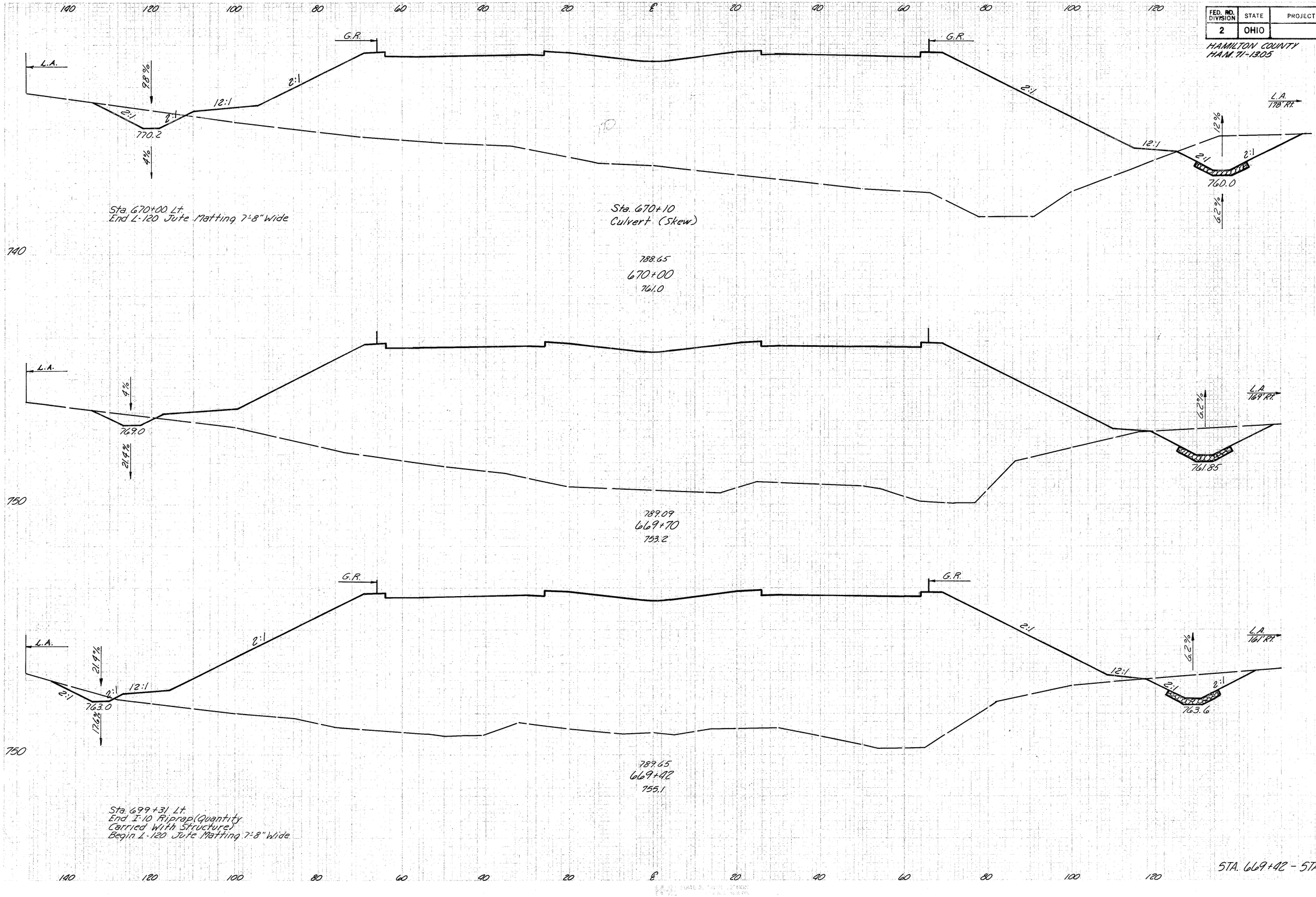
	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Ahead	71	5630		
Back	64	5630		
Sta 669+25	7			1
Ditch Lt. Sta 669+22	4			
			54	4763
Sta 669+10	0			1
Ditch Lt. Sta 669+00	8			
L.A. Ahead	37	4658		
Back	45	4658		
				2
			149	7370
			116	3302
			251	5757

STA. 668+50 – STA. 669+25

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM. 71-13.05



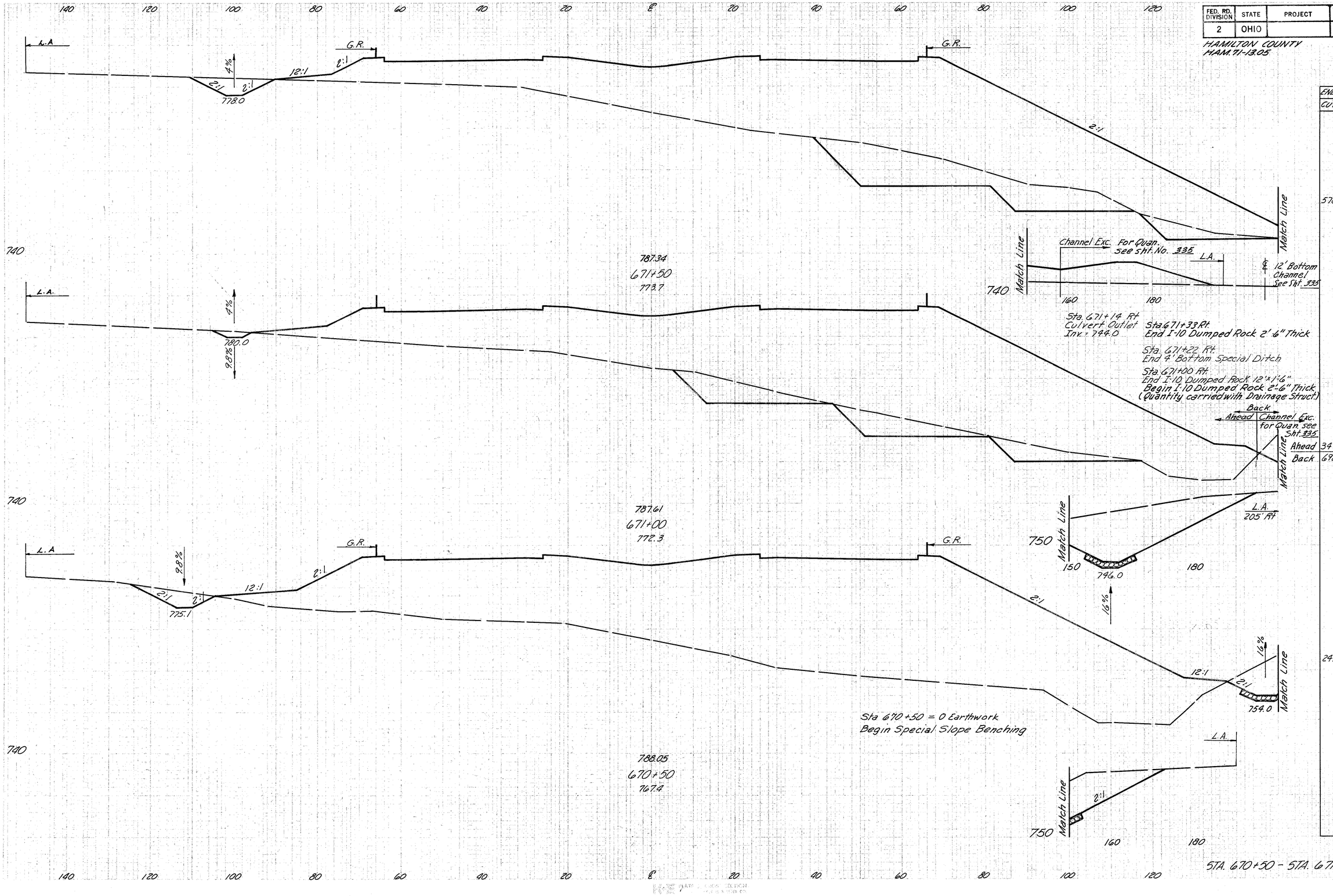
END AREA		VOLUME	
CUT	FILL	CUT	FILL
194	5132		
		180	6076
130	5804		
		120	6158
102	6072		
		54	3684

STA. 669+42 - STA. 670+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM.71-13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
578	3526		
		856	6774
347	3790		
692	3790		
		864	7459
241	4266		
		403	8702

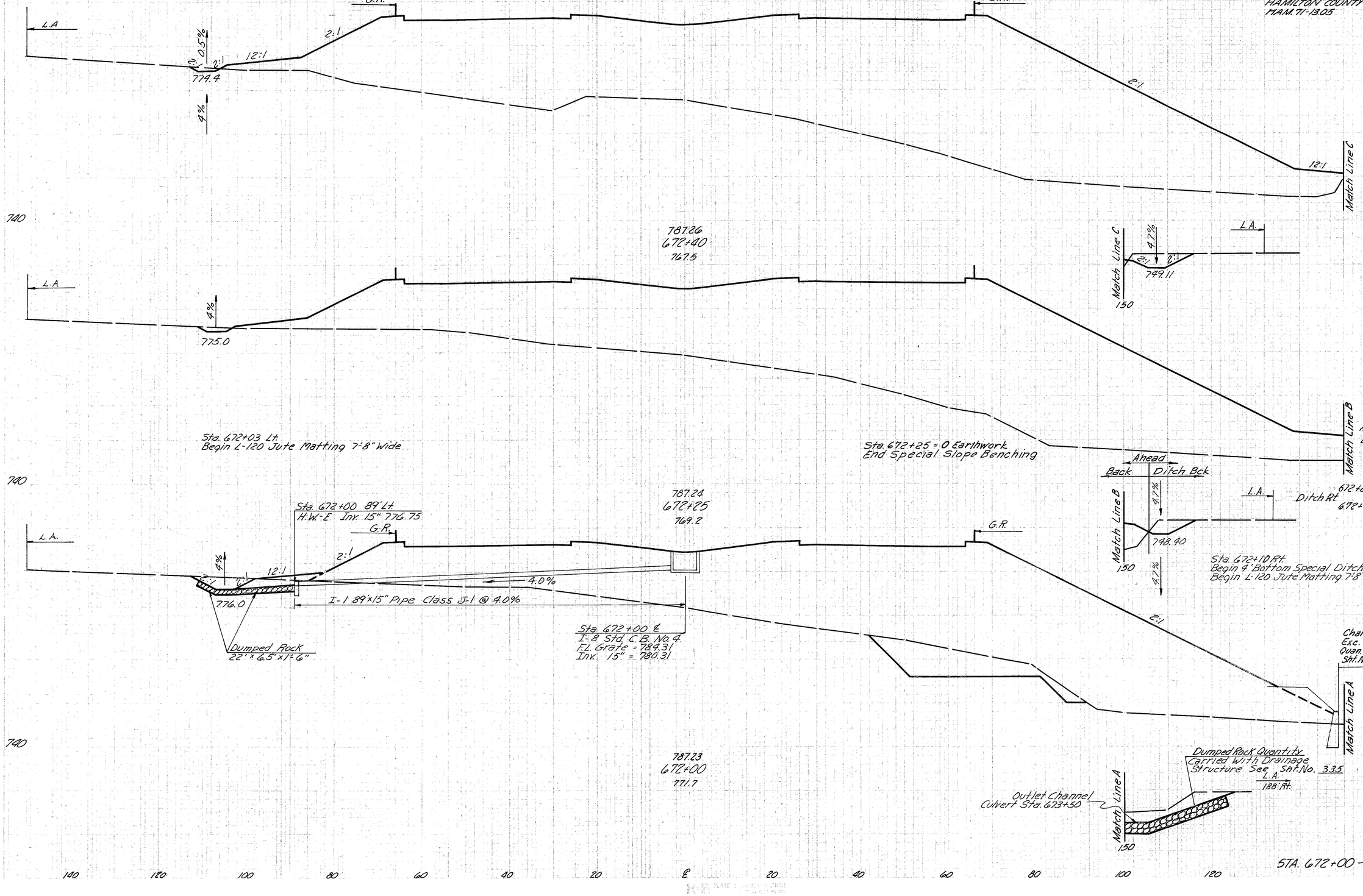
STA. 670+50 - STA. 671+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM-71-13.05

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



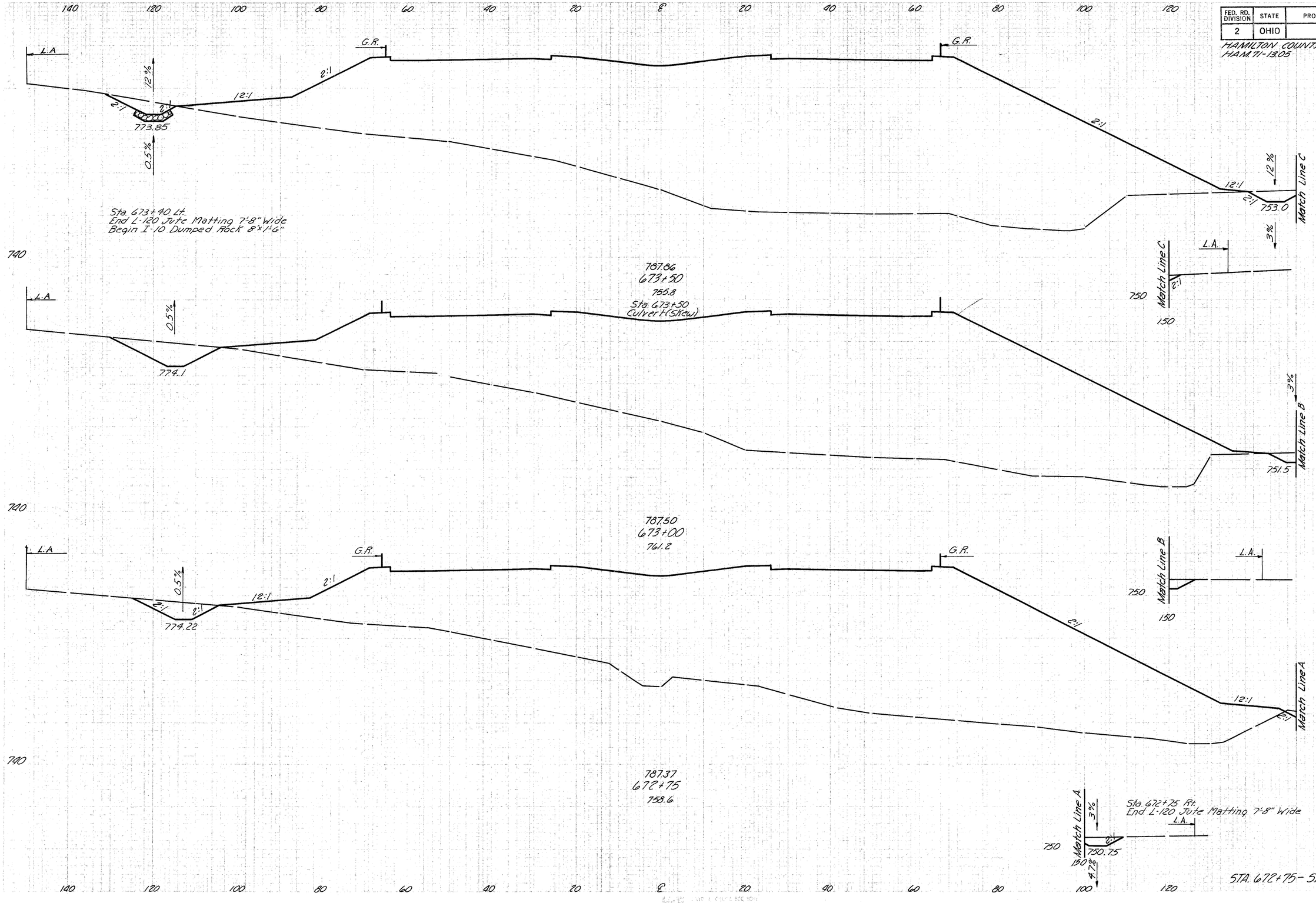
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	38	4767		
			19	2483
Ahd.	31	4173		
Bck.	6	4173		
672+25	25		10	
672+10	11			
			145	3680
	287	3776		
			801	6761

STA. 672+00 - STA. 672+40

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM-71-13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
51	3659		
		143	9878
103	5010		
		76	4674
62	5086		
		65	6386

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

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445

HAMILTON COUNTY
HAM.71-13.05

780

G.R.

Ahead
Ditch Back
L.A.
157'Lt
13.3%
2:1 2:1 12:1
753.20

2:1

789.38
675+50
767.5

G.R.

2:1
12:1
6%
2:1 2:1
774.0
L.A.

Ahead	254	9135	
Back	299	9135	
Ditch Lt. Sta.675+50	5		6
Ditch Lt. Sta.675+07	3		

299 9112

780

Sta. 675+29 Lt.
End I-10 Riprap
Begin I.10 Dumped Rock 8'x1'-6"

Sta. 675+07 Lt
Begin 9' Bottom Special Ditch

Channel
Exc. for Quan. See Sht. No. 337
Match Line B

Sta. 674+90
Rt. 749.2
I-10 Riprap Quantity Carried With Structure

Sta. 675+00 = 0 Earthwork
Begin Special Slope Benching

789.00
675+00
758.8

6%
L.A.
771.0
12%

14 5706

Hamilton County

Sta. 665+00 to Sta. 675+00	
Excavation	5,398 C.Y.
Embankment	152,312 C.Y.
Embankment +15%	175,159 C.Y.

35 11265

Temp. R/W
205'
L.A.
Match Line B
750
150

780

Sta. 674+75 Lt.
End 4' Bottom Special Ditch
End I-10 Dumped Rock 8'x1'-6"
Begin I-10 Riprap (Quantity Carried With Structure)

763.85
Ditch Ahead
Back
L.A.
Match Line A
760

170 150

788.62
674+50
753.3

Sta 674+75 6
Ditch Lt
Sta 674+50 42
22

12%
L.A.
765.0

Ahead	24	6960	
Back	68	6960	

93 11735

780
L.A.
8%
2:1
12:1
2:1
767.85

G.R.
2:1
G.R.
2:1
12:1
12%
L.A.
155'Rt.
2:1
759.0

32 6214

77 10997

788.24
674+00
748.7

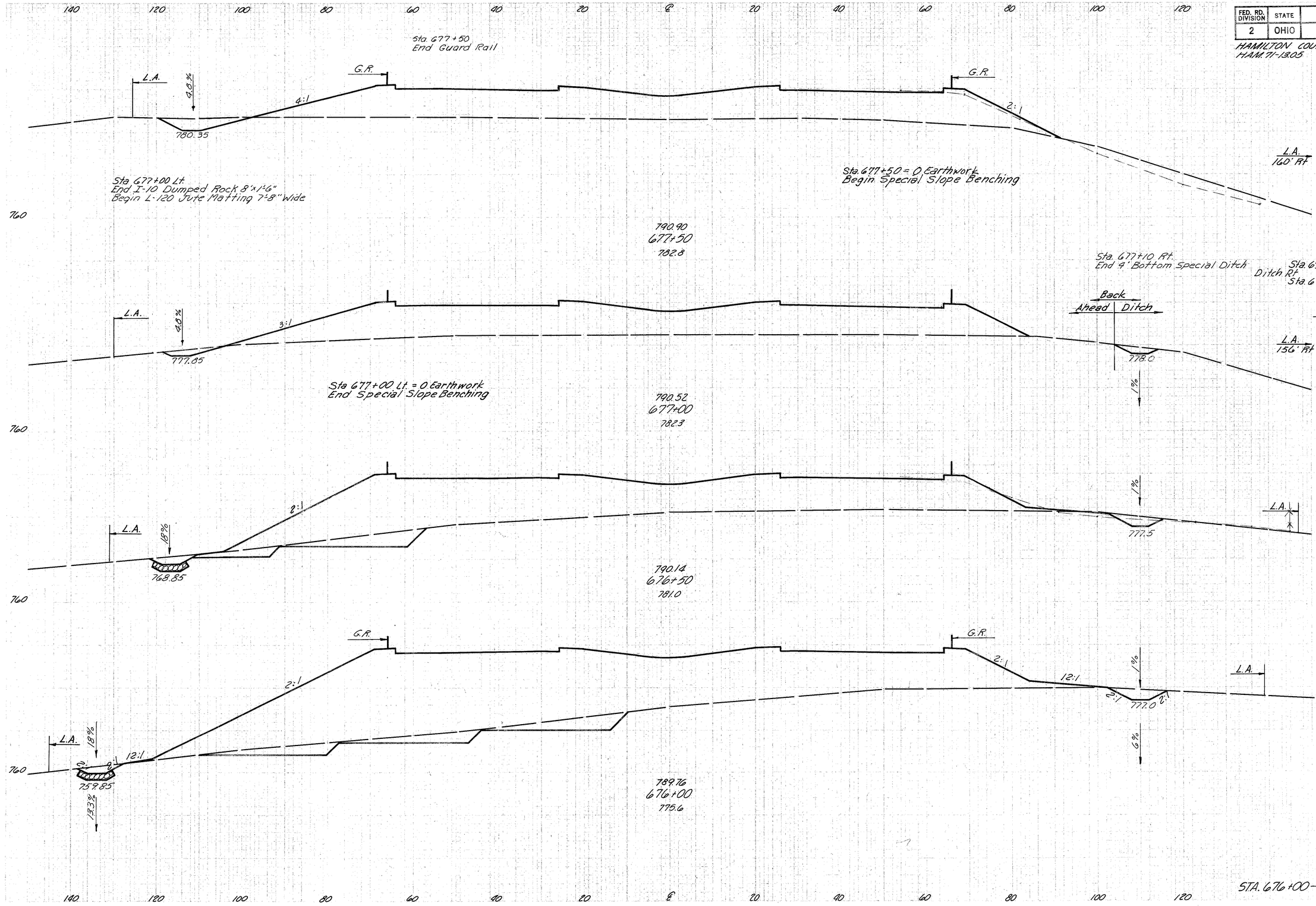
STA.674+00 - STA.675+50

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

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM-71-13.05



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	35	1121		
			48	2113
Sta 677+10	0			
Ditch Rt			2	
Sta 677+00	11			
Ahead	17	1161		
Back	28	1161		
			179	2606
	199	1654		
			309	3999
	189	2665		
			406	6296

STA. 676+00 – STA. 677+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM-71-13.05

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

Sta. 679+03
End I-10 Dumped Rock

L.A.

0.3%

Sta. 679+00 92Lt.
HW-E Headwall
Inv. 18" 785.30

4:1

2:1

785.30

I-1 92'x18" Pipe Cl. V-1 @ 10 %

I-10 Dumped Rock
10'x6'-6"x1'-6"

Sta. 679+100 ℄
I-8 Std. C.B. No. 4
F.L. Grate 789.12
Inv. 786.22

2:1

L.A
160' Rt.

2:1 2:1 4:1

7.85 %

784.08

72" Pipe

753.63

750

Sta. 678+97 Lt.
End L-120 Jute Matting 7'-8" Wide
Begin I-10 Dumped Rock

792.04
679+00
777.6

L.A.

0.3%

4:1

785.15

4.0%

7.85 %

L.A
160' Rt.

760.15

72" Pipe

753.02

0.3%

750

Sta. 678+50 = 0 Earthwork
End Special Slope Benching

791.66
678+50
783.1

Sta. 678+25 Rt.
End I-10 Riprap
Begin L-120 Jute Matting 7'-8" Wide

Sta. 678+00
End I-10 Dumped Rock 16'x1'-6"
Begin I-10 Riprap, Quantity
Carried With Storm Sewer
Begin I-1 575' x 72" Pipe
Sec. M-6.6(6) Cl. B-1 @ 1.2 %

L.A.

4.0%

4:1

2:1

782.75

2:1

Ahead
Back
Ditch Back

L.A.
160' Rt.

760.00

Ahead

752.42

Sta. 678+00
Ditch Rt.
Sta. 677+85

Sta. 677+85 Rt.
Begin 4' Bottom Special Ditch
Begin I-10 Dumped Rock 16'x1'-6"

750

791.28
678+00
784.0

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	69	3375		
			69	5592
	6	2610		
			303	4317
Ahead	321	2053		
Back	321	1933		
	23	4	6	1
Sta. 678+00 Ditch Rt. Sta. 677+85	0	0		
			330	2828

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

STA. 678+00 – STA 679+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM-71-13.05

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

790
750

L.A.
2%
2:1
785.5
4:1
G.R.
2:1
1%
24:1
2:1
772.5
6%
L.A.
157' Rt.
72" Pipe

79299
680+25
761.4

Sta. 680+15.83 Rt.
Begin Shoulder Transition
Begin Ramp Taper

790
750

L.A.
2%
11.8%
786.0
6%
L.A.
159' Rt.
771.00
72" Pipe

79280
680+00
763.1

790
750

L.A.
11.8%
2:1
785.45
03%
4:1
G.R.
2:1
6%
24:1
2:1
768.00
785%
72" Pipe
754.23
L.A.
159' Rt.

79242
679+50
768.7

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

END AREA		VOLUME	
CUT	FILL	CUT	FILL
28	4563		
		28	3917
32	3898		
		64	7211
37	3890		
		98	6227

STA. 679+50 - STA. 680+25

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HAMILTON COUNTY
HAM.71-13.05

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

750

L.A. 4% 2:1 12:1 2:1 G.R. 782.0

793.94
681+50
766.8

Sta. 681+15.83
End Shoulder Transition
End Ramp Taper

Sta. 681+50
End L-120 Jute Matting 7'-8" Wide

G.R. 2:1 24:1 2:1 20% 2:1 12:1 L.A. 152' Rt. 778.0 2.5% 72" Pipe

L.A. 4% 12:1 3:1 784.0

Sta. 680+90 Lt.
Begin L-120 Jute Matting 7'-8" Wide

793.56
681+00
762.4

Sta. 680+50 Lt.
Begin Guard Rail

L.A. 2% 2:1 785.0 4:1 G.R.

G.R. 2:1 24:1 2:1 8% 2:1 L.A. 156' Rt. 772.75 1% 72" Pipe

793.18
680+50
757.7

2.5% L.A. 154' Rt. 776.75 8% 72" Pipe

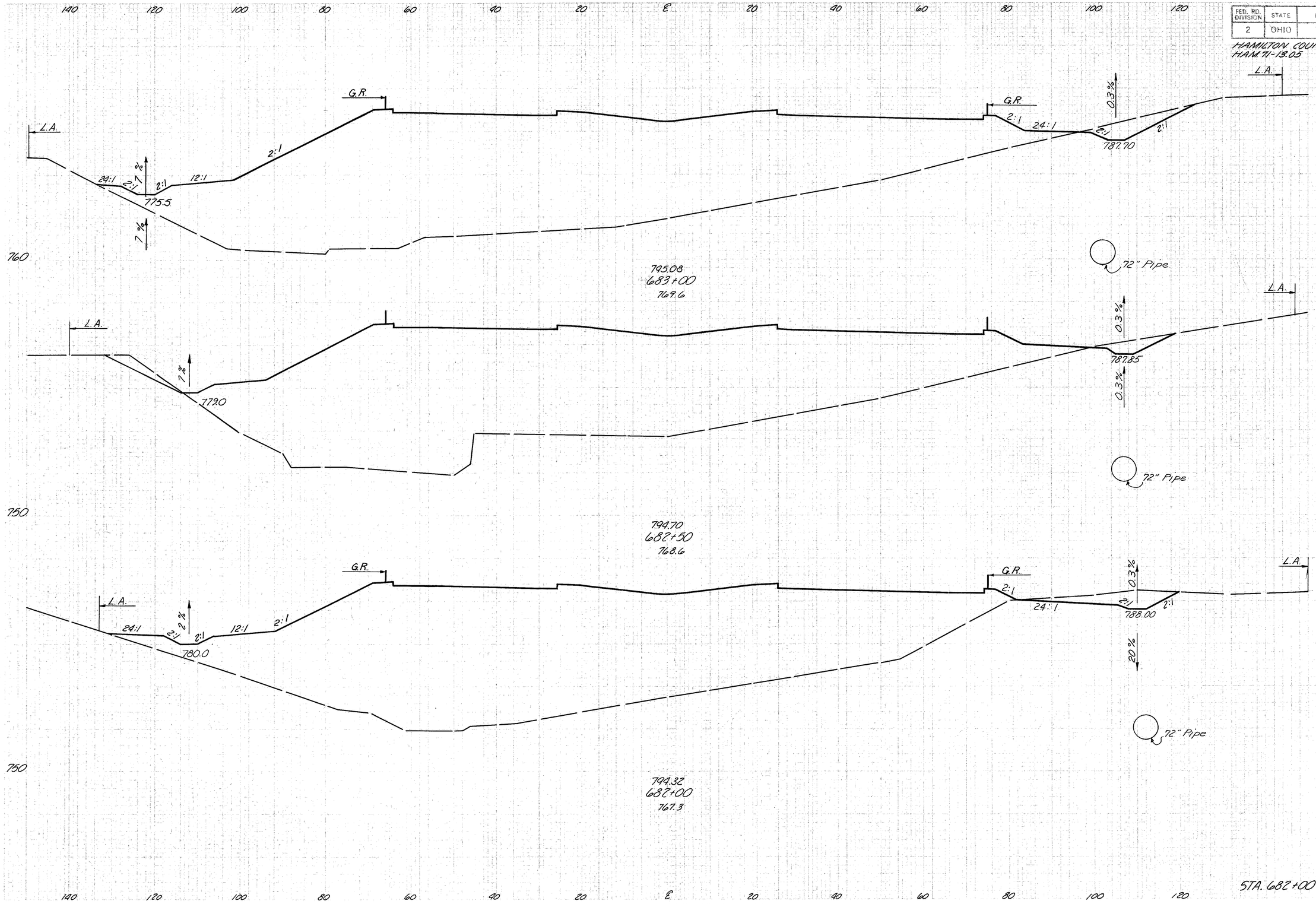
END AREA		VOLUME	
CUT	FILL	CUT	FILL
	4	4486	
			32 8163
	30	4330	
			41 8271
	14	4603	
			19 4243

STA. 680+50 - STA. 681+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

150
445

HAMILTON COUNTY
HAM 71-13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
56	4297		
		99	7769
51	4094		
		113	7721
71	4245		
		82	8120

STA. 682+00 - STA. 683+00

FED. SD. DIVISION	STATE	PROJECT		
2	OHIO			

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445

HAMILTON COUNTY
HAM 71-13.05

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

760

L.A. 8% 2:1 2% 12:1 2:1 G.R. 778.0

Sta. 683+86 Lt.
End I-10 Rip Rap
Begin I-10 Dumped Rock 10"x1'-6"

L.A. 16% 774.0 13%

Sta. 683+75
Culvert 7 771.0

L.A. Sta. 683+63 Lt.
End L-120 Jute Matting 7'-8" Wide
Begin I-10 Rip Rap, Quantity Carried With Structure

4% 12:1 2% 2:1 12:1 2:1 G.R. 772.0 7% 0.83%

79603
684+25
765.0

795.84
684+00
770.3

795.46
683+50
770.1

G.R. 2:1 24:1 10% 2% 2:1 787.32 0.3%

Sta 684+25 Rt
Begin L-120 Jute Matting 7'-8" Wide

72" Pipe

L.A. 787.40

72" Pipe

Sta. 683+75 93' Rt.
I-8 M.H. No. 2
Modified As Per
Plan. (No Drop Pipe)
Top = 789.5
Inv. 30" = 769.30
Inv. 72" = 759.38

Sta. 683+75 93' Rt.
End I-1 575' x 72" Pipe
Sec. M-6.6 (d) Cl. B-1 @ 1.2 %
Begin I-1 325' x 72" Pipe
Sec. M-6.6 (d) Cl. B-1 @ 2.78 %

G.R. 2:1 24:1 0.3% 2% 2:1 787.55 L.A.

72" Pipe

END AREA		VOLUME	
CUT	FILL	CUT	FILL
44	4106		
		46	3886
55	4288		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM.71-13.05

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

760

L.A. 10% 2:1 12:1 2.5:1 G.R. 3:1 787.5 14%

Sta 685+19.16 Lt
Begin Shoulder Transition
Begin Ramp Taper

796.79
685+25
779.8

G.R. 2:1 12:1 0.3% L.A. 2% 8:1 777.82 10% 72" Pipe

760

L.A. 14% 2% 2:1 784.00 10%

10% L.A. 780.32

760

796.60
685+00
775.0

Hamilton County

Sta. 675+00 to Sta. 685+00	
Excavation	2,804 C.Y.
Embankment	129,132 C.Y.
Embankment +15%	148,502 C.Y.

72" Pipe

L.A. 10% 2:1 12:1 2:1 G.R. 779.0 4%

G.R. 2:1 12:1 10% 2% 785.82 8:1 L.A.

72" Pipe

760

796.22
684+50
768.6

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

STA. 684+50 - STA. 685+25

END AREA		VOLUME	
CUT	FILL	CUT	FILL
84	3046		
		50	2931
24	3285		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM.71-13.05

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

760

L.A. 1% 2:1 Varies 795.22 ℄ G.R. 2:1 2%:1 L.A 153' Rt 2% 0.2' 2:1 776.96 72" Pipe 766.92

797.53
686+22
783.1

L.A. 1% 3:1 Varies 795.0 10% Sta. 686+00 Lt. END GUARD RAIL ℄ 2% •L.A. 777.60 72" Pipe 765.64 2%

760

797.36
686+00
783.8

L.A. 10% 4:1 2:1 790.0 12:1 3:1 G.R. ℄ Ramp "B" G.R. 2:1 2%:1 L.A. 2% 0.3' 2:1 2:1 777.75 72" Pipe 764.25

760

796.98
685+50
781.0

END AREA		VOLUME	
CUT	FILL	CUT	FILL
27	2554		
		20	2134
24	2685		
		85	5237
60	2971		
		70	2785

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

STA. 685+50 - STA. 686+22

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM-71-13.05

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

770

L.A.
Varies
℄
G.R.
2:1
24:1
L.A.
168' Rt.
2.25 %
769.88
798.23
687+15
791.5

Sta. 687+25 Rt.
End I-10 Riprap 12' Wide
Begin L-120 Jute Matting 7'-8" Wide

Sta. 687+00 Rt.
End I-1 325' x 72" Pipe Sec. M-6.6 (d)
Cl. B-1 @ 2.78 %
End 4' Bottom Special Ditch
End I-10 Riprap
Begin 4' Bottom Special Ditch
Begin I-10 Riprap 12' Wide

L.A.
3:1
3%
Sta. 687+00 Lt.
End 4' Bottom Special Ditch
End I-10 Dumped Rock 10"x1'6"
L.A.
166' Rt.
2.75 %
Ahead
Sta. 687+00
Back
776.00
Back
Ahead
768.42
03 %

770

Sta. 686+79.16
End Shoulder Transition
798.12
687+00
790.2

L.A.
3%
2:1
varies
1%
℄
G.R.
2:1
24:1
L.A.
158' Rt.
03 %
776.15
72" Pipe
767.03

Sta. 686+75 Rt.
Begin I-10 Riprap
Quantity Carried With
Storm Sewer
End L-120 Jute Matting
7'-8" Wide

760

797.74
686+50
787.2

Sta. 686+50 = 0 Earthwork
Begin Special Slope Benching.

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	230	1595		
			146	965
Ahead Sta. 687+00 Back	296	1878		
	259	1988		
			276	4095
			39	2435
			34	2587

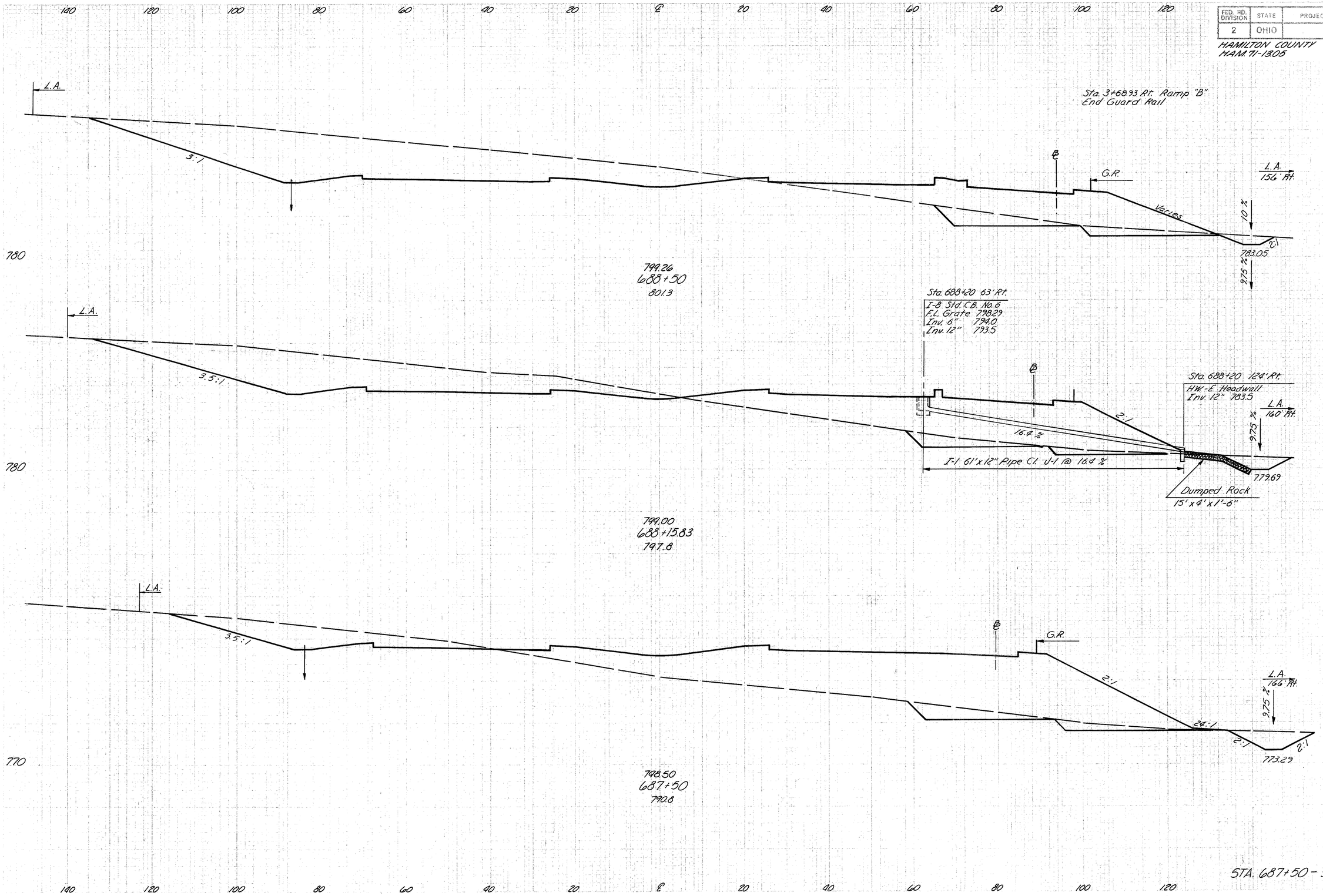
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STA. 686+50 - STA. 687+15

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM 71-13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1206	690		
		1296	987
852	920		
		1511	2887
384	1948		
		398	1972

STA. 687+50 - STA. 688+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM-71-13.05

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

L.A.
158' Lt

3:1

790

800.40
690+00
811.0

L.A.
154' Lt

3:1

780

800.08
689+57.57
809.0

L.A.
151

3:1

780

799.64
689+00
804.8

Sta. 690+00
4' Bottom Special Ditch
continued to Sta. 4+69 Ramp "B"

Back
Ahead Ramp "B"

℄

L.A.
181' Rt.

Approximate Top of Rock

4:1

2:1

Sta. 689+84 Rt.
End I-10 Dumped Rock

6.5%

Sta. 689+78 Rt.
End L-120 Jute Matting 7'-8" Wide,
Begin I-10 Dumped Rock
Quantity carried with Structure
Sta. 4+60 Ramp B

℄

L.A.
166' Rt.

6.5%

4:1

791.05

℄

3:1

6.5%

L.A.

2:1

788.05

Sta. 689+00
End Special Slope Benching

Sta. 688+88 Rt.
End Guard Rail

Sta. 688+63 Rt.
Begin Guard Rail

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
Ahead	2402	0		
Back	2740	0		
			3970	0
	2310	0		
			4117	117
	1552	110		
			2554	694

STA. 689+00 - STA. 690+00

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

FED. RD. DIVISION	STATE	PROJECT	
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HAMILTON COUNTY
HAM-71-13.05

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

L.A. 164

800

4:1

Sta. 691+50 ℄
I-8 Std. C.B. No. 4
F.L. Grate 798.62
Inv. 15" 795.62

804.0

Ramp "B"

4:1

℄ See Mainline Profile

I-1 174' x 15" Pipe Cl. V-1 @ 1.2 %

801.54
691+50
810.4

L.A. 165

800

4:1

802.1

4:1

801.16
691+00
810.4

L.A. 162

800

4:1

Ramp "B"

799.6

800.78
690+50
811.2

END AREA		VOLUME	
CUT	FILL	CUT	FILL
2094	0		
		4037	0
2266	0		
		4557	0
2655	0		
		4682	0

STA. 690+50 - STA. 691+50

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

FED. RD. DIVISION	STATE	PROJECT	
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HAMILTON COUNTY
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Sta. 693+75 Rt.
Begin Guard Rail
Sta 693+65 Rt.
End 4' Bottom Ditch

Ramp "B"

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

L.A 156

800

6:1

5:1

803.06
693+50
804.4

L.A 158

800

6:1

4:1

802.68
693+00
803.5

L.A 160

800

5:1

802.30
692+50
803.7

L.A 162

800

4:1

4:1

801.92
692+00
810.3

Ramp "B"

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

END AREA		VOLUME	
CUT	FILL	CUT	FILL
816	0		
		2261	0
1626	0		
		3281	0
1917	0		
		3723	0
2104	0		
		3887	0

STA. 692+00 - STA. 693+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

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

Sta. 694+50 Lt.
Begin Guard Rail

L.A. 153'

10 %

797.5

24:1

4:1

G.R.

G.R.

3:1

Match Line

780

Ramp "B"

790

Match Line

150

803.82
694+50
799.0

L.A. 154'

10 %

800.0

Grade to Drain

780

Sta. 694+15 Lt
Begin 4' Bottom Special Ditch

790

Match Line

150

803.63
694+25
796.0

Sta. 694+22 Lt.
End 4' Bottom Ditch

L.A. 155'

6:1

G.R.

3:1

Match Line

790

Ramp "B"

Match Line

790

150

803.44
694+00
797.9

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

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	10	2232		
			22	1863
	38	1792		
			7	
Sta 694+15 Lt 0-Excavation	0			1240
Sta 694+22 Lt 0-Excavation	0			
			44	
	107	887		
			855	821

STA. 694+00 - STA. 694+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM.71-13.05

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

Sta. 695+23 105' Lt.
HW-E Headwall
Outlet 15" 795.00
Back
Ahd. Ditch Ahead

Sta. 695+23 63' Lt.
I-8 Std. C.B. No.6
F.L. Grate 80.394
F.L. 12" 798.82
F.L. 15" 798.57

Sta. 695+19.16 Lt.
End Ramp Taper

L.A.
151' Lt.

33%
12:1
2:1
G.R.
85%
79.417
I-10 Dumped Rock
25'x6'-6"x1'-6"
I-1 42"x15" Pipe Cl. U-1 @ 8.5%

Sta. 695+26 Lt.
End I-10 Dumped Rock 6'-6"x1'-6"
Begin L-120 Jute Matting 7'-8" Wide

Sta. 695+23 63' Lt.
Begin I-1 59'x12" Pipe Cl. U-1 @ 1.5%

Sta. 695+20.5 Lt.
Begin I-10 Dumped Rock 6'-6"x1'-6"

780

Hamilton County
Sta. 685+00 to Sta. 695+00

Excavation	41,967	C.Y.
Embankment	35,829	C.Y.
Embankment + 15 %	41,198	C.Y.

804.20
695+00
791.5

G.R.
3:1
Match Line C

Ramp "B"
Match Line C
789.0
150

L.A.
151

33%
12:1
2:1
79.450

Match Line B
150

780

804.12
694+90
789.5

L.A.
152

33%
2:1
2:1
795.0
10%
12:1
3:1
G.R.

Match Line A

Ramp "B"
Match Line A
150

780

804.01
694+75
790.0

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
Ahead	225	2110		
Back	236	2110		
			49	872
	29	2596		
			16	1427
	30	2542		
			19	2210

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

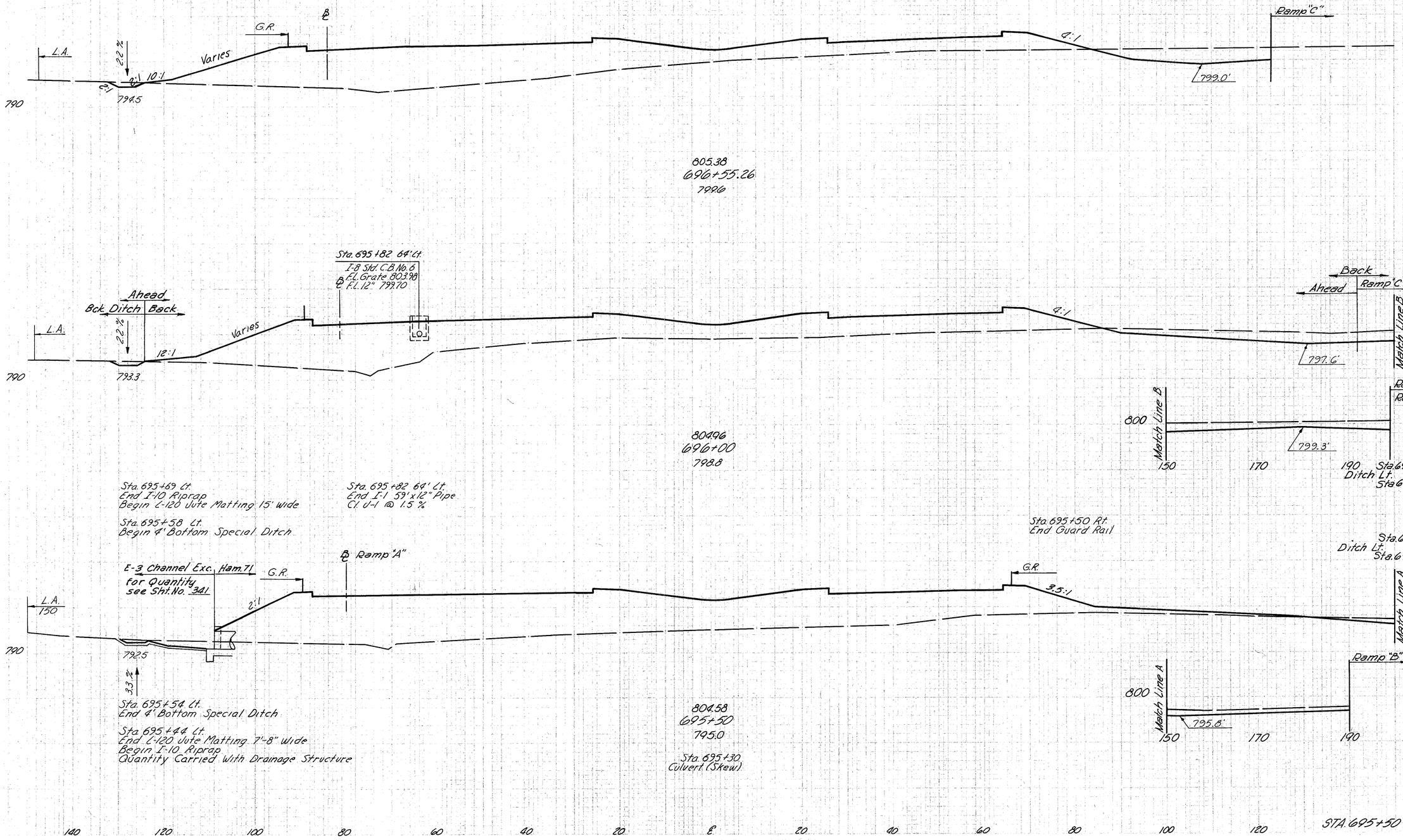
STA. 694+75 – STA. 695+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM-71-13.05

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



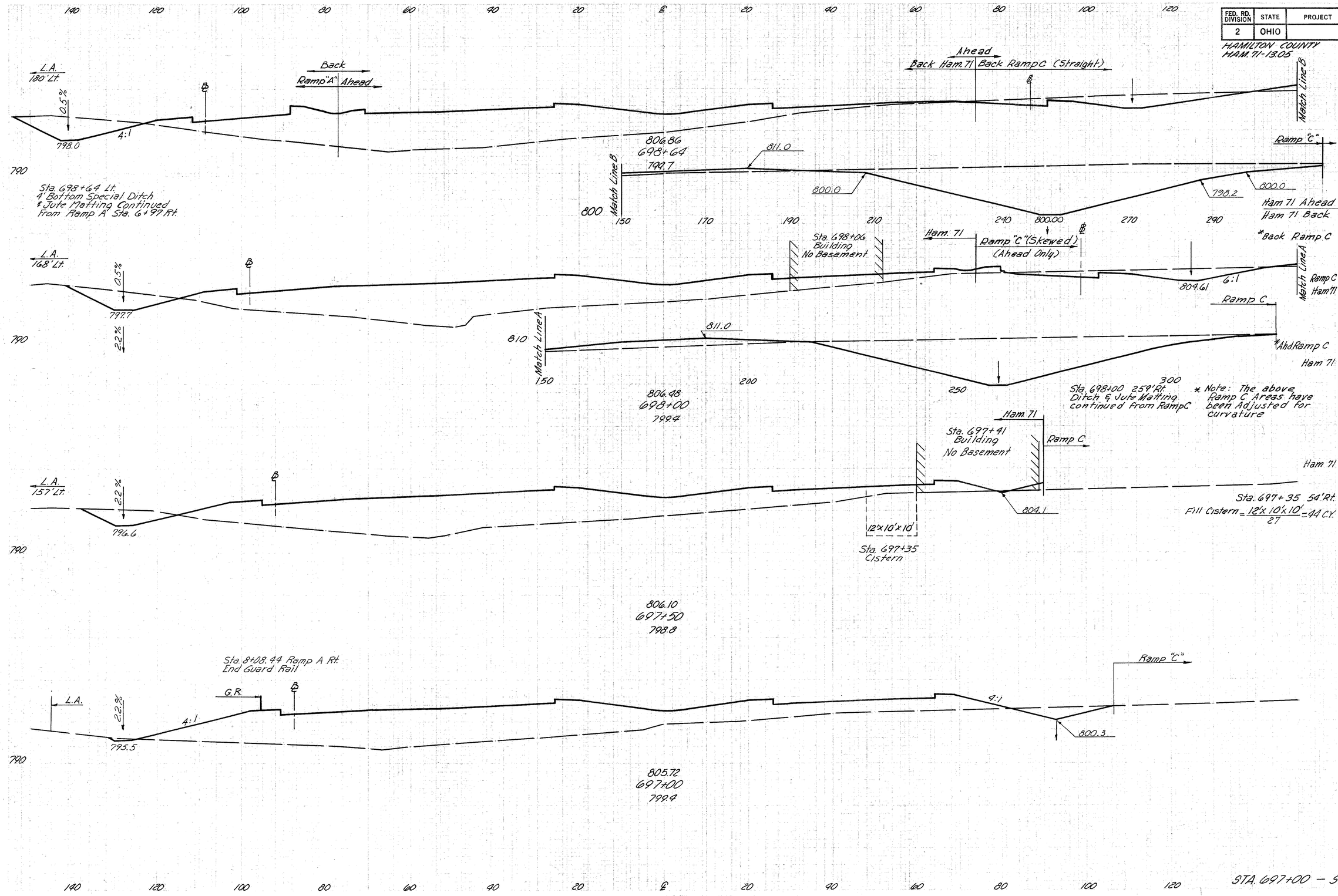
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	88	1086		
			195	2217
Ahead	103	1080		
Back	192	1080		
Sta. 696+00	6		7	
Ditch Lt. Sta. 695+58	3		226	2444
Sta. 695+54	3			
Ditch Lt. Sta. 695+00	11		14	
	52	1566		
			256	3398

STA. 695+50 — STA. 696+55.26

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM 71-13.05

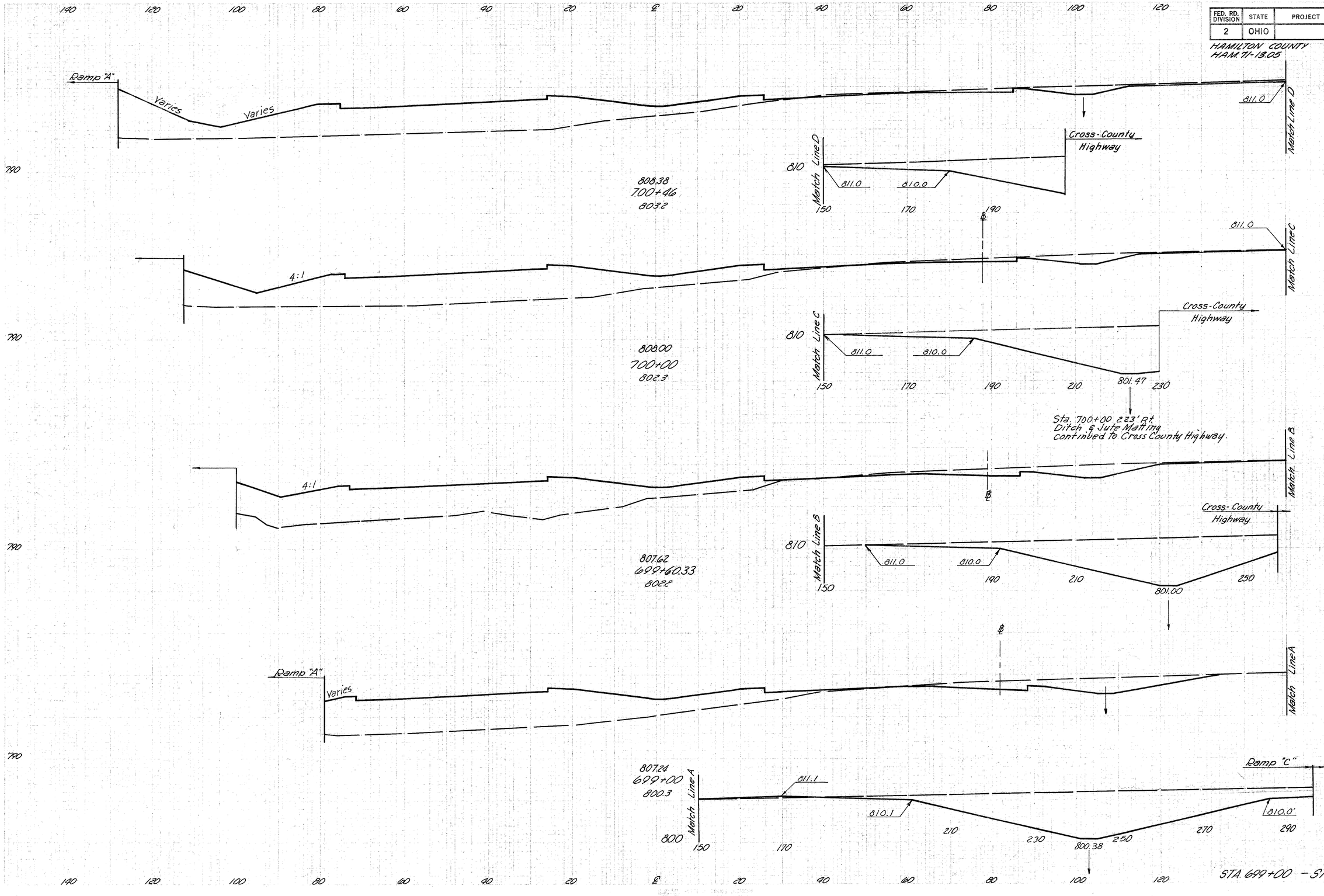


	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Ham 71 Ahead	730	780		
Ham 71 Back	101	961		
*Back Ramp C	224	20		
Ramp C Ham 71			503	90
			170	1925
*Ahd Ramp C	200	46		
Ham 71	69	964		
			108	1867
Ham 71	48	1053		
Sta. 697+35 54' Rt. Fill Cistern = 12'x10'x10' / 27 = 44 C.Y.				44
			77	2037
	35	1147		
			102	1850

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM.71-13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
232	829		
		554	1392
418	805		
		756	1182
611	804		
		1538	1719
766	735		
		997	1010

STA. 699+00 - STA. 700+46

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM. 71-13.05

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

Match Line C
800
811.8
809.9
806.00
Pier
0.3%
2:1
Match Line

Ramp "A"
Cross-County Highway
811.1
170
150
Match Line C
800

809.90
702+50
808.0

812.0
Cross-County Highway
Match Line
820

Sta. 702+09 Rt.
End Guard Rail

Match Line B
800
810.0
810.0
805.96
4.35%
G.R.
0.3%
2:1

Ramp "A"
Match Line B
800
150

Sta. 702+00 Lt.
End 4' Bottom Special Ditch
End C-120 Jute Matting 7'-8" Wide

809.52
702+00
810.2

Match Line A
800
805.0
4.35%
Varies
803.88
G.R.
2:1

Ramp "A"
Match Line A
800
150

809.14
701+50
807.6

Sta. 701+96.50 Rt.
Begin Guard Rail

Cross County Highway

Ramp "A"
800
804.0
4.35%
Varies
801.62
809.9

Sta. 700+80 Lt.
Begin 4' Bottom Special Ditch
Begin C-120 Jute Matting 7'-8" Wide

808.76
701+00
804.5

END AREA		VOLUME	
CUT	FILL	CUT	FILL
205	1709		
		338	2795
160	1310		
		206	1956
63	802		
		189	1463
141	778		
		373	1607

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

STA. 701+00 - STA. 702+50

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HAMILTON COUNTY
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END AREA		VOLUME	
CUT	FILL	CUT	FILL
440	711		
		426	1153
218	1068		
		705	3178
368	1572		
		531	3038

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

Cross-County Highway

2:1

G.R.

806.92

800

0.5 %

Sta. 704+18 ℄
I-8 Std. C.B. No. 4
F.L. Grate 808.26
Inv. 18" 805.26

I-1 120'x18" Pipe Class U-1 @ 0.5 %

Connect to No.6 C.B.
@ Sta. 705+25 63' Lt.

Match Line C

Sta. 703+71 Lt.
Begin Guard Rail

811.04
704+00
806.7

Match Line C

L.A.
197' Rt.

2.5:1

1.9%

2:1

130 150 805.57

1.39%

Cross-County Highway

806.66

800

8113.5

Match Line B

Match Line B

8113.9

1.38%

L.A.
202' Rt.

810

3:1

2:1

130 150 805.09

Sta. 703+35
End Transition
Begin 9' Bottom Special Ditch
End I-10 Riprap
Begin I-10 Dumped Rock 12'x1'-6"

Sta. 703+10 183' Rt.
Begin Transition of 6' Bottom to
9" Bottom Special Ditch
Sta. 703+00 183' Rt Begin I-10 Riprap - Quan.
Carried With Drainage Structure

810.77
703+65
809.2

822.0

Match Line A

Match Line

2:1

806.28

800

Cross-County Highway

Match Line

810

150

810.28
703+00
810.4

Match Line A

Cross-County Highway

810

150 170

190 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

STA. 703+00 - STA. 704+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM.71-13.05

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

800

Match Line

811.0

℄

814.9 814.5 0.3 % L.A. 177' Rt.

2:1 2:1

807.10

Cross-County Highway

Match Line

Sta. 705+25 117' Lt.
HW-E Inv. 18" 805.24

812.0

1.0 %

I-1 82' x 18" Pipe Cl. V-1 @ 1.0%

Sta. 705+25 63' Lt.
I-8 Std C.B. No. 6
F.L. Grate 810.27
Inv. 18" 806.02

812.18
705+50
807.4

Sta. 705+10
End F-10 Dumped
Rock 12'x1'-6"

Village of Montgomery

Sta 704+82.23 to Sta 705+00		
Excavation	134	C.Y.
Embankment	428	C.Y.
Embankment + 15 %	492	C.Y.

814.3 814.1 0.3 % L.A. 184' Rt.

Cross-County Highway

8:1

806.96

1.4 %

811.80
705+00
807.2

Sta. 704+82.23
Village of Montgomery (Ahead)
Hamilton County (Back)

Hamilton County

Sta. 695+00 to Sta. 704+82.23		
Excavation	9,236	C.Y.
Embankment	37,910	C.Y.
Embankment +15%	43,597	C.Y.

Sta. 704+82.23 Ahead
Village of Montgomery

Sta. 704+82.23 Back
Hamilton County

L.A. 190' Rt.

Cross-County Highway

2:1 2:1

1.4 %

806.26

1.4 %

Sta. 709+33.50 Lt.
End Guard Rail

812.42
709+50
809.5

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	185	650		
			304	1264
	187	715		
			134	428
	220	586		
	220	586		
			298	560
	280	353		
			667	985

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

STA. 709+50 – STA. 705+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
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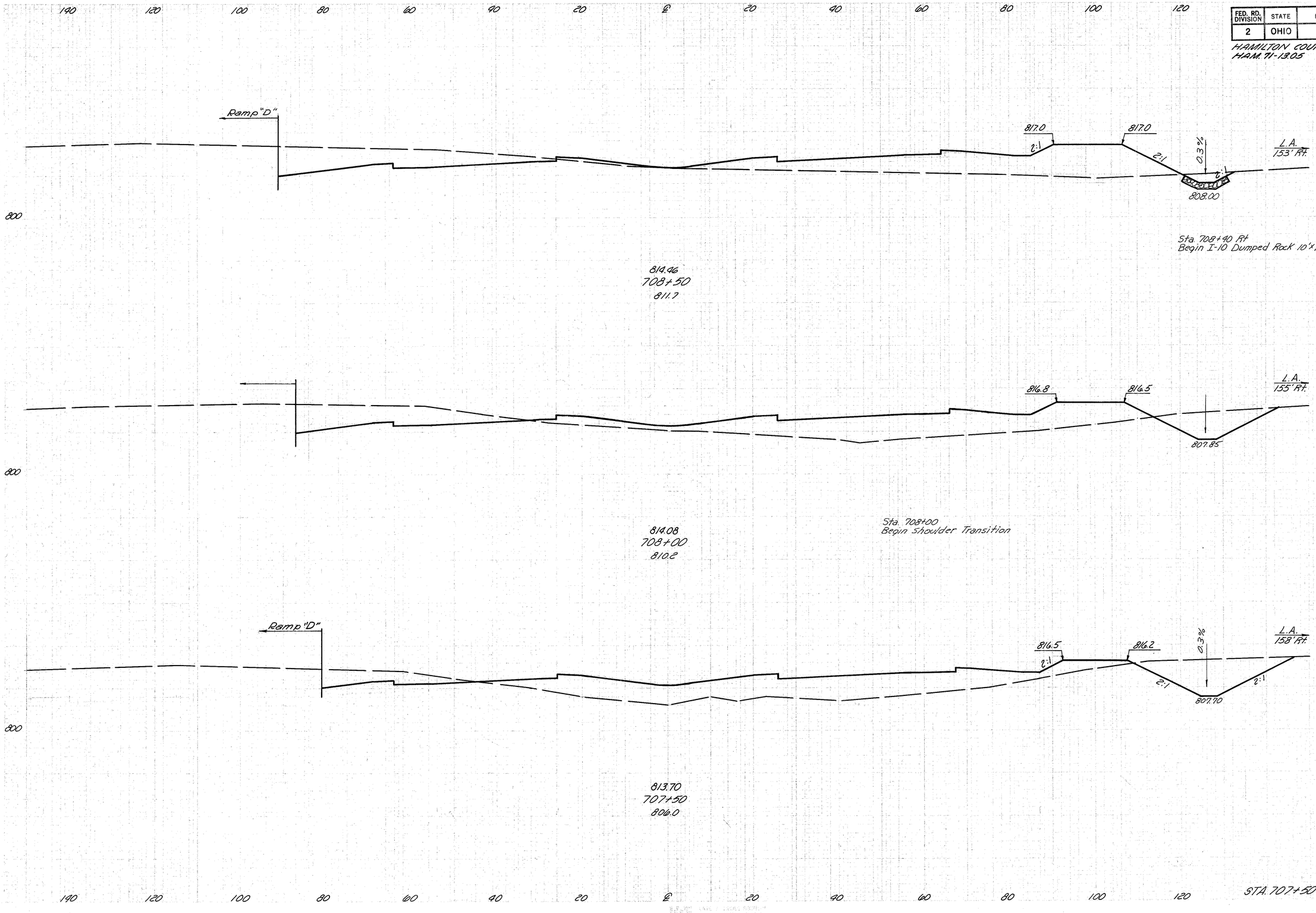
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	165	581		
			261	861
Ahead	163	500		
Back	615	500		
			941	866
	401	435		
			543	1005

STA. 706+00 – STA. 706+93

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM. 71-13.05



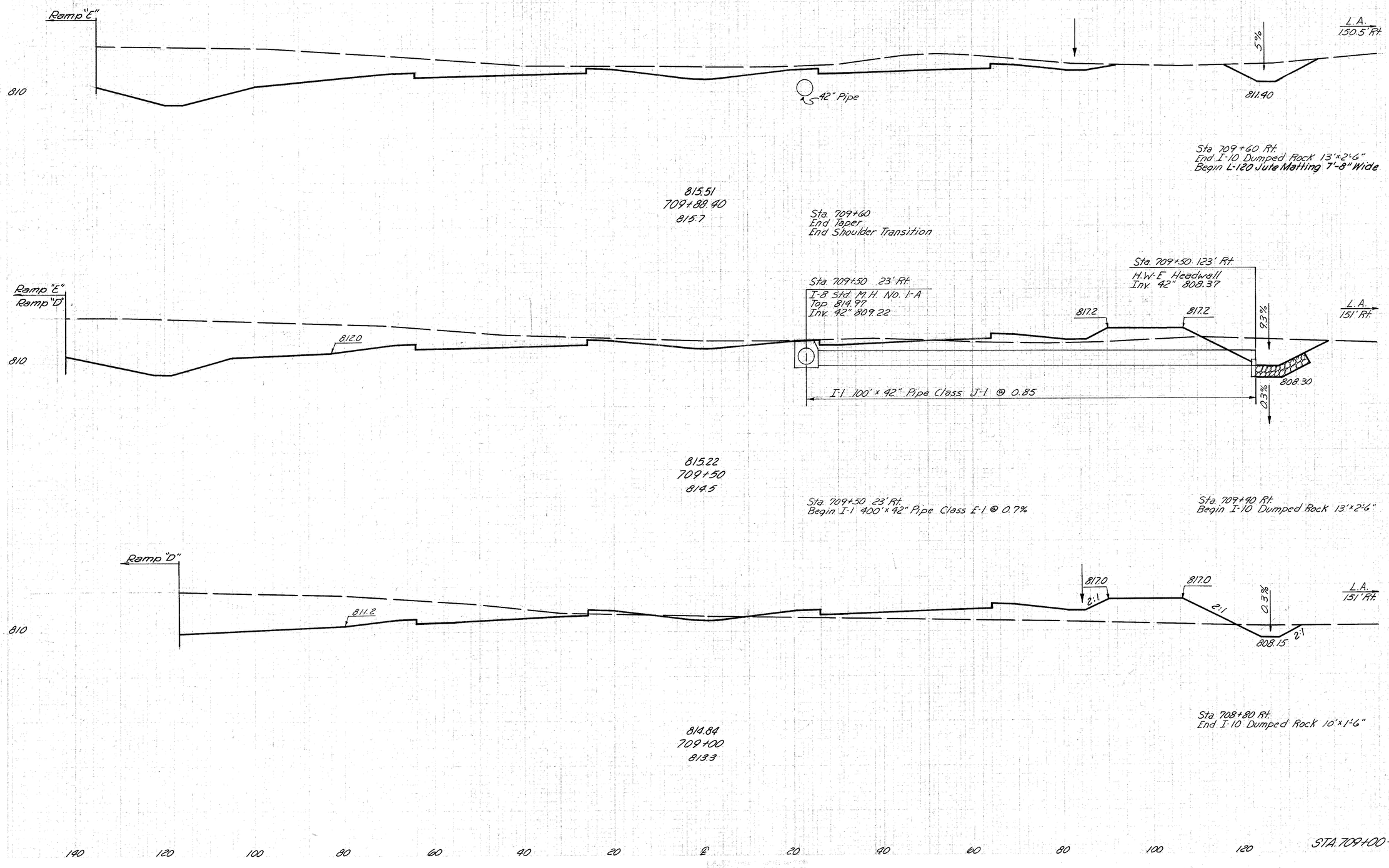
END AREA		VOLUME	
CUT	FILL	CUT	FILL
266	483		
		531	956
308	550		
		528	1067
262	602		
		451	1249

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

169
445

HAMILTON COUNTY
HAM-71-13.05

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



END AREA		VOLUME	
CUT	FILL	CUT	FILL
986	0		
		1365	68
933	96		
		1342	367
516	300		
		724	725

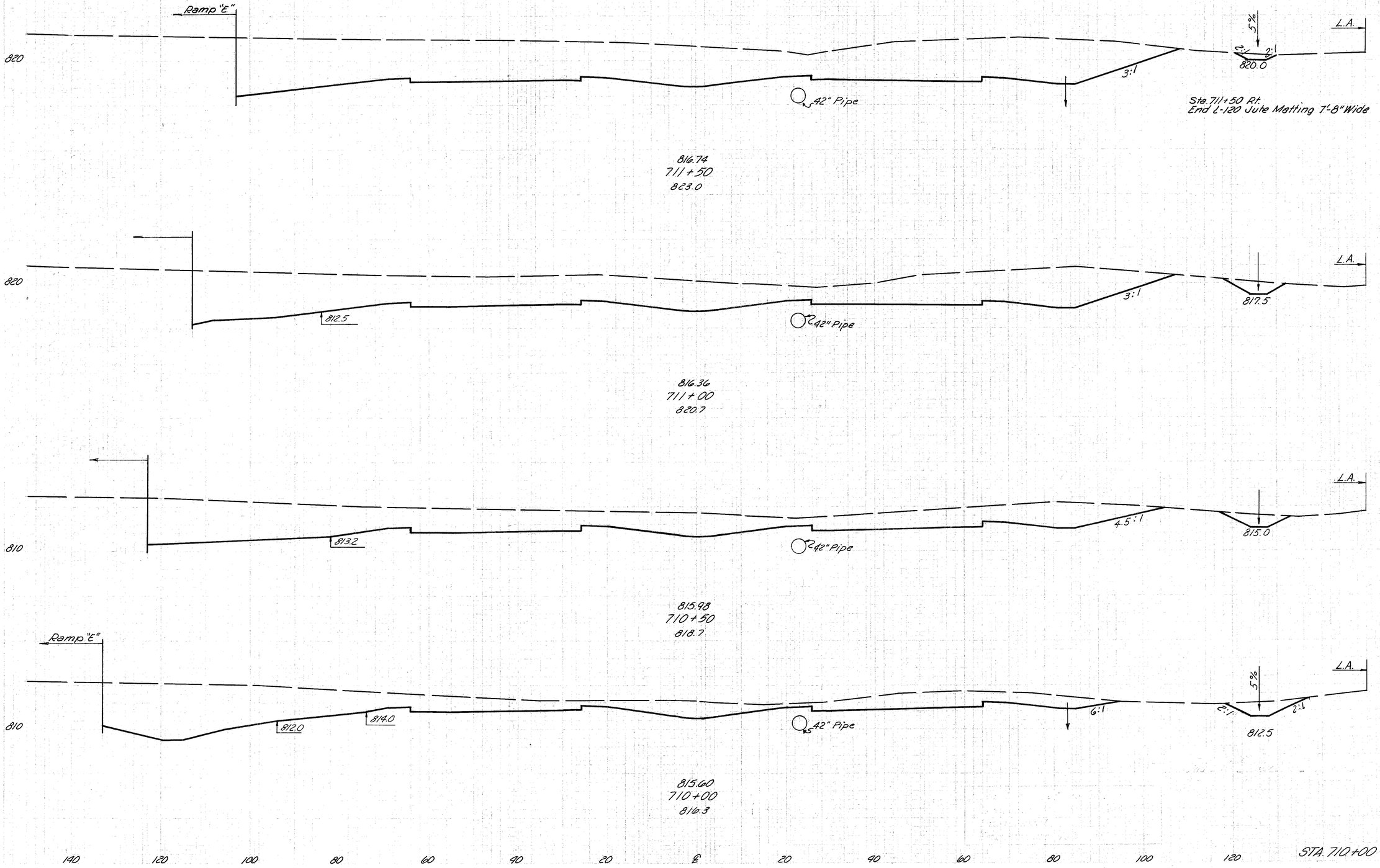
STA. 709+00 – STA. 709+88.40

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

170 / 445

HAMILTON COUNTY
HAM.71-13.05

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



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1804	0		
		3048	0
1488	0		
		2478	0
1186	0		
		2067	0
1096	0		
		437	0

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

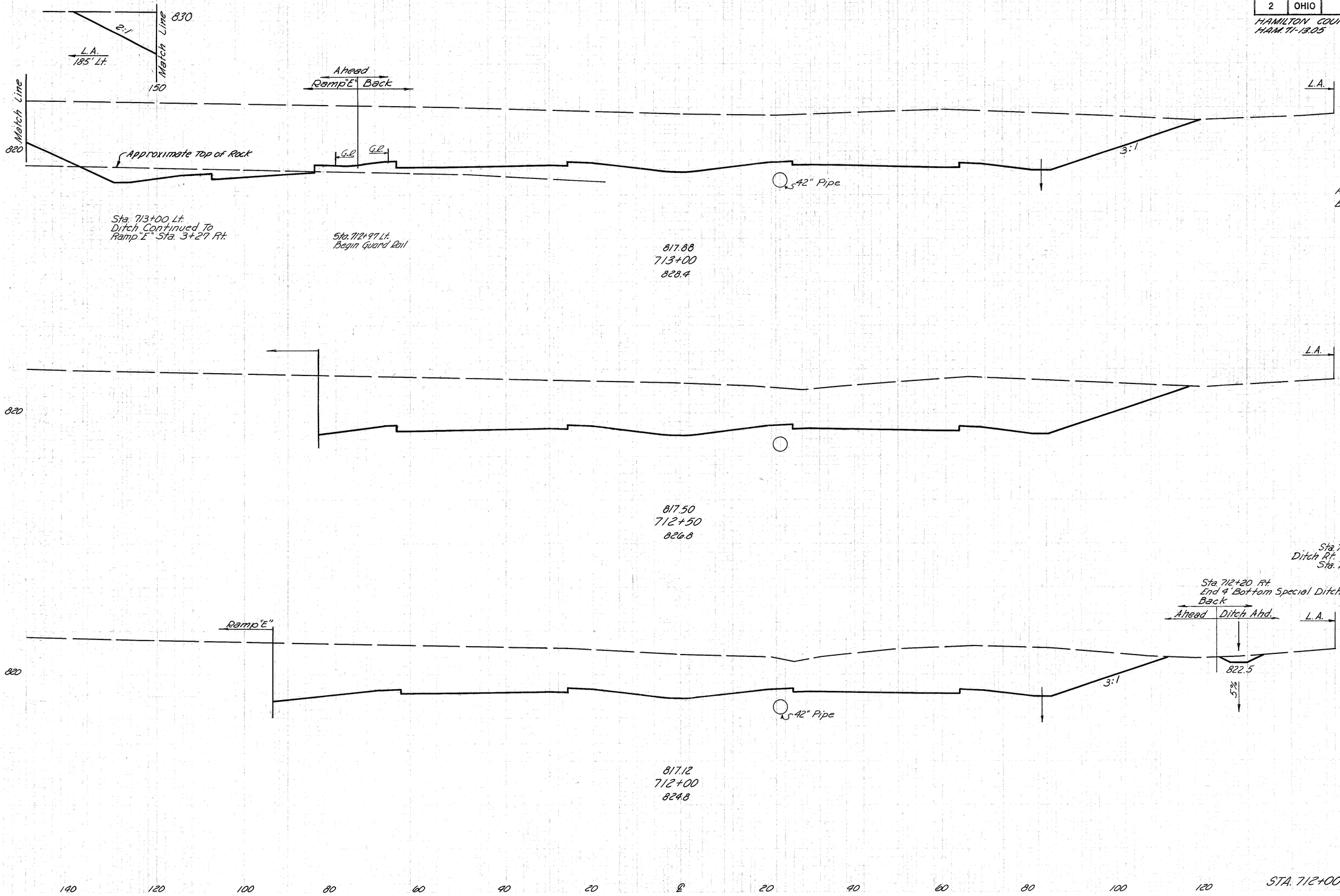
STA. 710+00 – STA. 711+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

171
445

HAMILTON COUNTY
HAM. 71-13.05

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



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Ahead	3485	0		
Back	2215	0		
			3980	0
L.A.	2051	0		
			3687	0
Sta. 712+20	0		2	
Ditch Rt. Sta. 712+00	7			
	1931	0		
			3458	0

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

STA. 712+00 – STA. 713+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

172
445

HAMILTON COUNTY
HAM. 71-13.05

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

L.A.
159' Lt.

830

2:1

℄ Approx. Top of Rock

Sta. 715+28 Rt.
Bsm't.

Sta. 715+14 Rt.
Bsm't.

L.A.

2:1

5-42" Pipe

81940
715+00
836.8

Village of Montgomery

Sta. 705+00 to Sta. 715+00		
Excavation	53,488	C.Y.
Embankment	8,428	C.Y.
Embankment + 15%	9,692	C.Y.

$\frac{245^{D'} \times 36'}{27} = 326$ Sta. 715+28 Rt. Basement

Fill $\frac{66^{D'} \times 37'}{27} = 90$ Sta. 715+14 Rt. Basement

Cut $\frac{110^{D'} \times 37'}{27} = 151$

L.A
171' Lt.

830

℄ Approx. Top of Rock

L.A.

81864
714+00
832.4

L.A
175' Lt.

830

2:1

℄ Ramp "C"

Approx. Top of Rock

Sta. 713+50 ℄
I-8 Std C.B. No. 4
F.L. Grate 815.34
Inv. 15" 812.34

Sta. 713+50 23' Rt.
I-8 M.H. No. 1-A
Top 818.01
Inv. 15" 812.20
Inv. 42" 812.02

L.A.

2:1

42" Pipe

I-1 23'x15" Pipe
Cl. E-1 @ 0.6%

81838
713+65.72
830.6

Sta. 713+50 23' Rt.
End I-1 400'x42" Pipe Class E-1 @ 0.7%
Begin I-1 414'x42" Pipe Class E-1 @ 0.7%

Sta. 713+22 Lt.
End Guard Rail

END AREA		VOLUME	
CUT	FILL	CUT	FILL
4180	0		
		-326	
		-151	+90
14528	0		
3665	0		
4965	0		
3368	0		
8390	0		

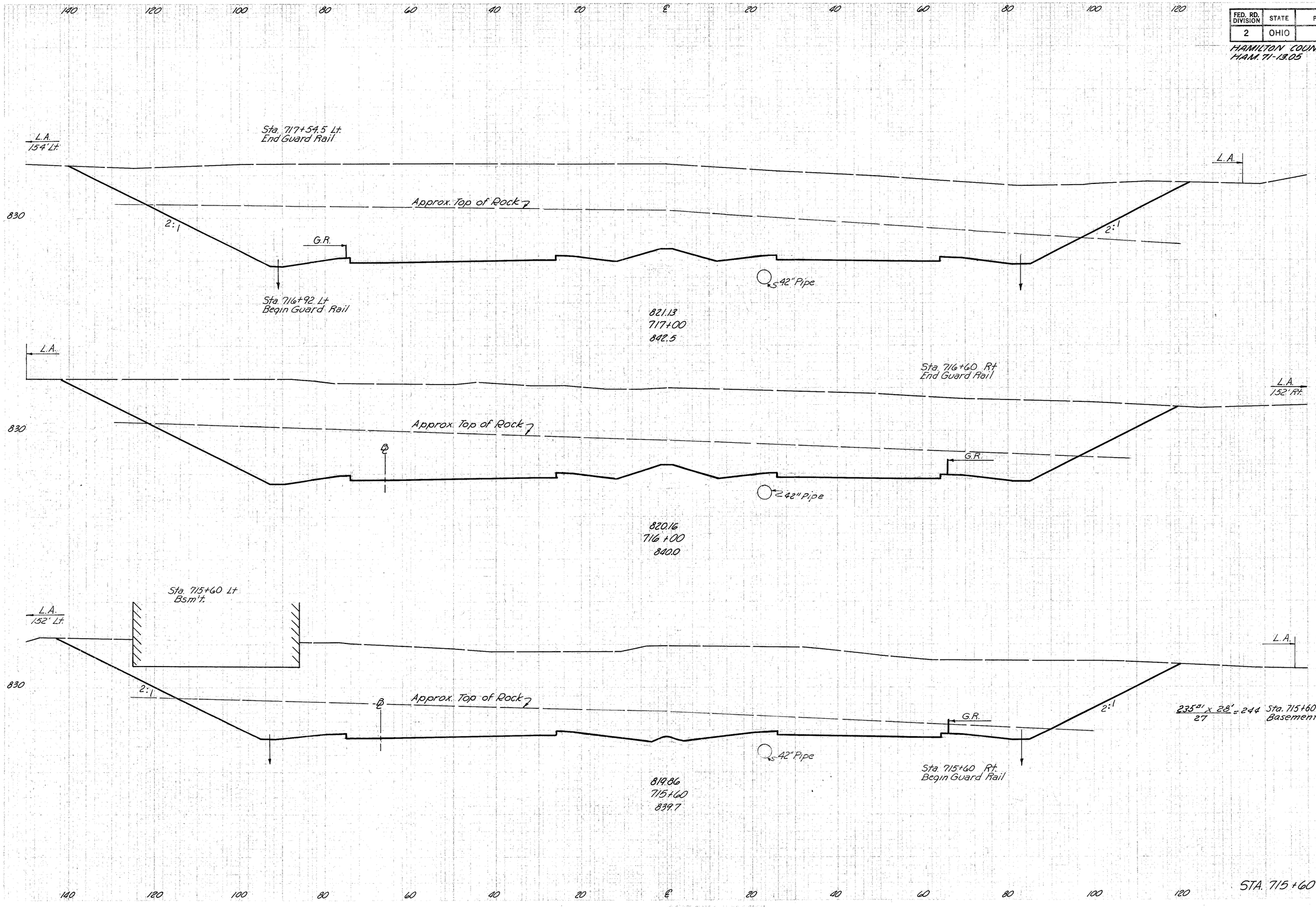
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

STA. 713+65.72 - STA. 715+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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443

HAMILTON COUNTY
HAM. 71-13.05



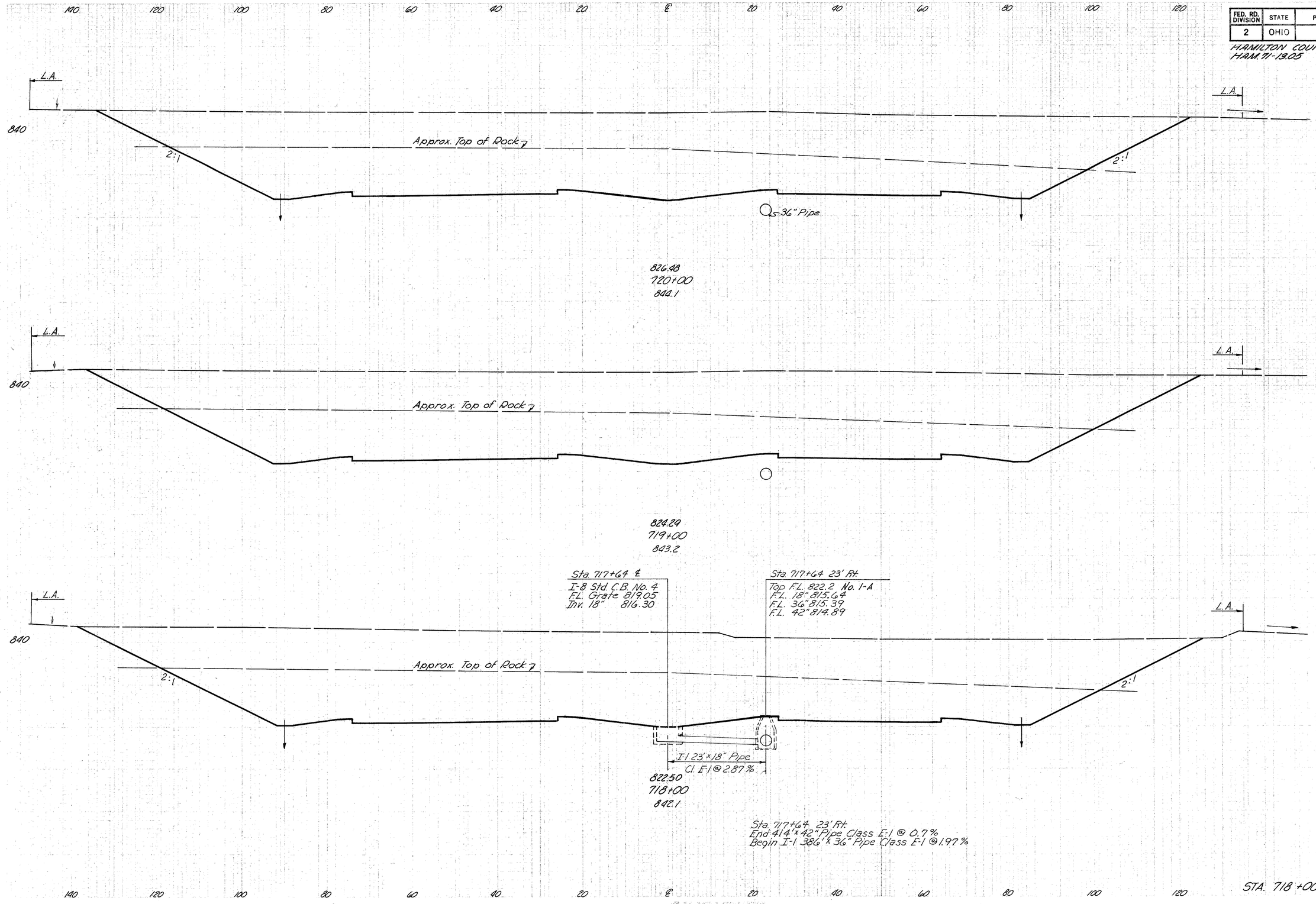
END AREA		VOLUME	
CUT	FILL	CUT	FILL
4725	0		
		17363	0
4651	0		
		7178	0
5040	0		
			244
		10244	0

STA. 715+60 - STA. 717+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM.71-13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
4202	0		
		16337	0
4620	0		
		17093	0
4610	0		
		17287	0

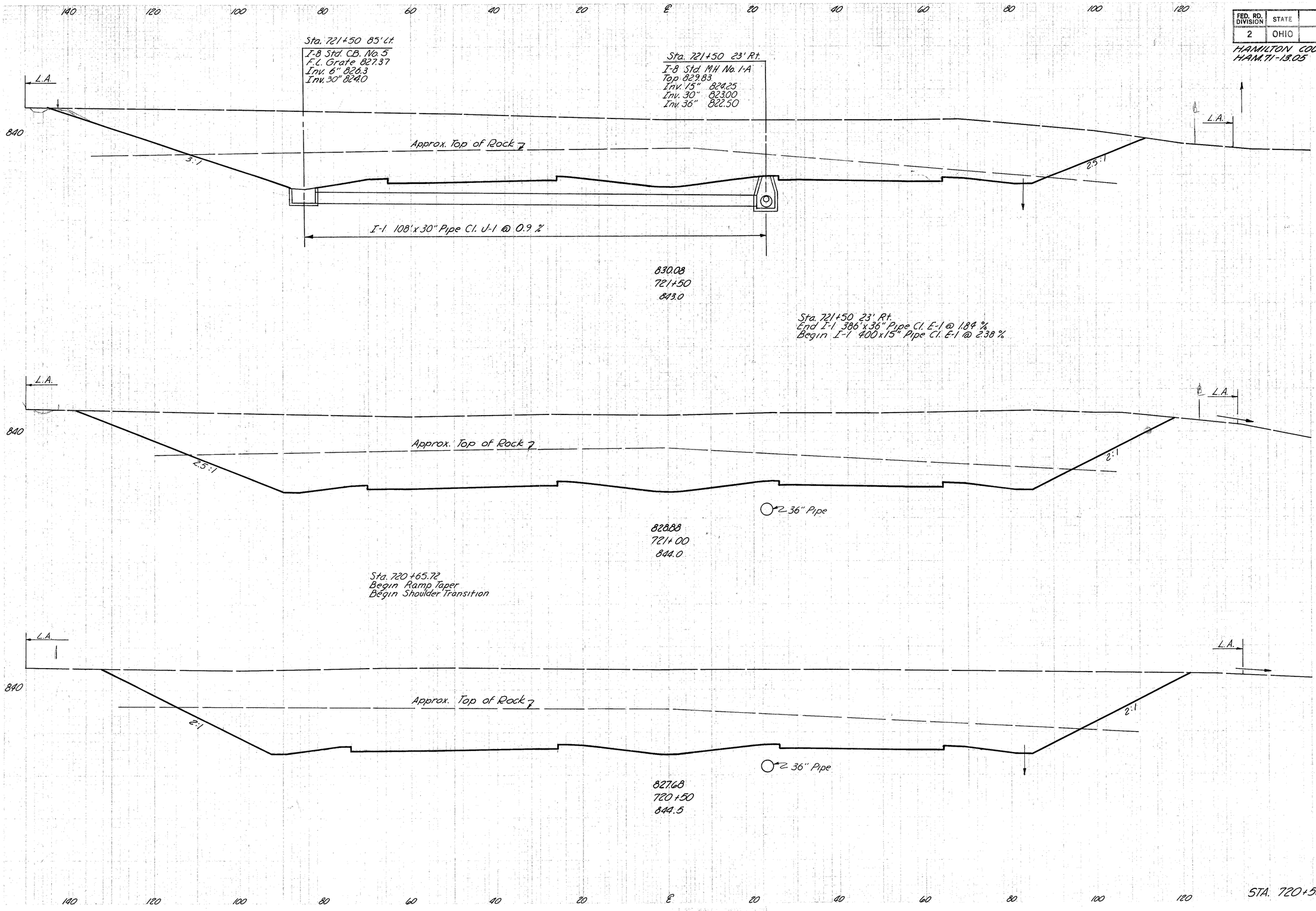
Sta. 717+64 23' Rt
End 414'x42" Pipe Class E-1 @ 0.7%
Begin I-1 386'x36" Pipe Class E-1 @ 1.97%

STA. 718+00 - STA. 720+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

175
445

HAMILTON COUNTY
HAM-71-13.05



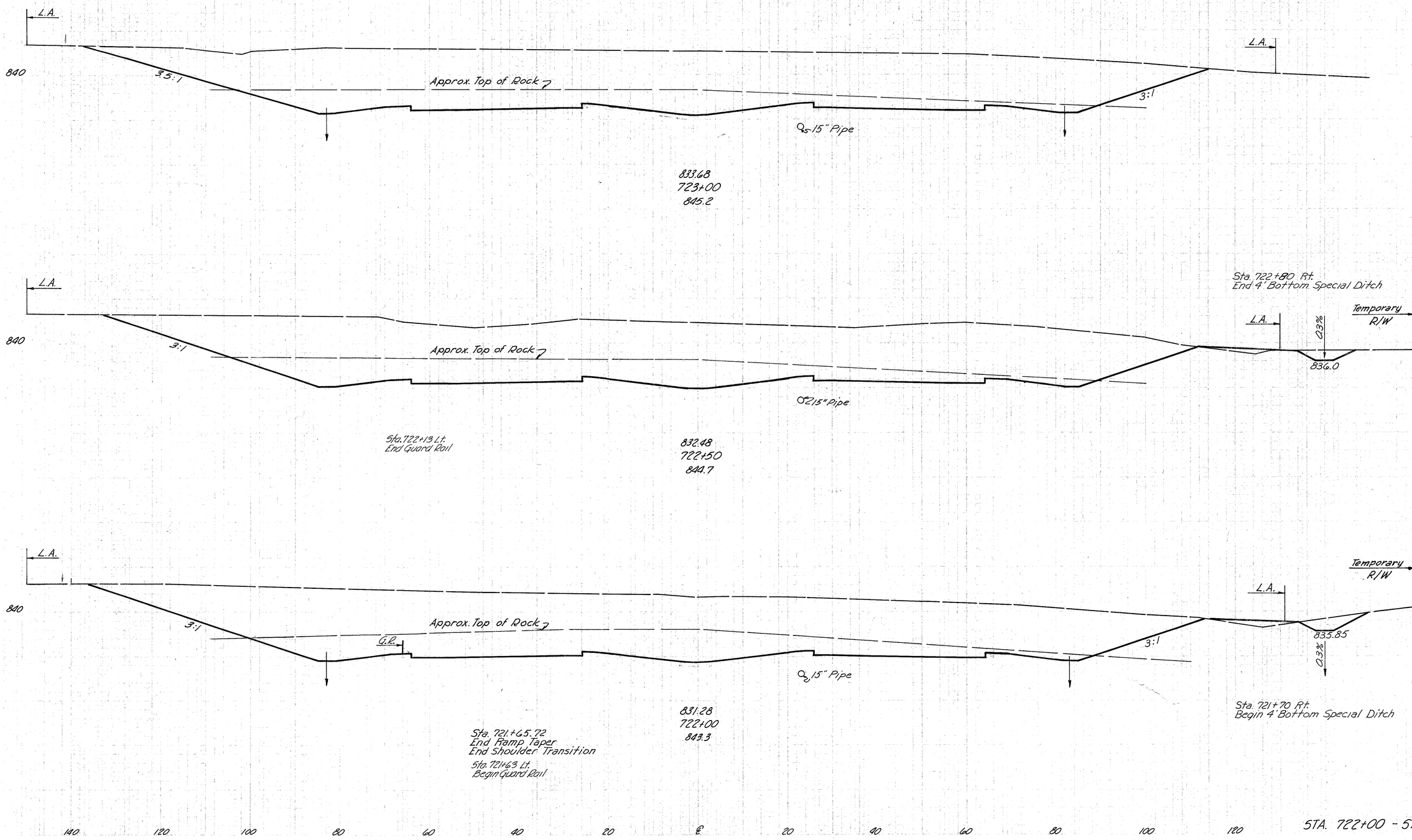
END AREA		VOLUME	
CUT	FILL	CUT	FILL
326.7	0		
		617.8	0
344.5	0		
		708.5	0
420.7	0		
		778.6	0

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM. 71-13.05

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



END AREA		VOLUME	
CUT	FILL	CUT	FILL
2753	0		
		5233	9
2888	10		
		5420	20
2966	12		
		5771	11

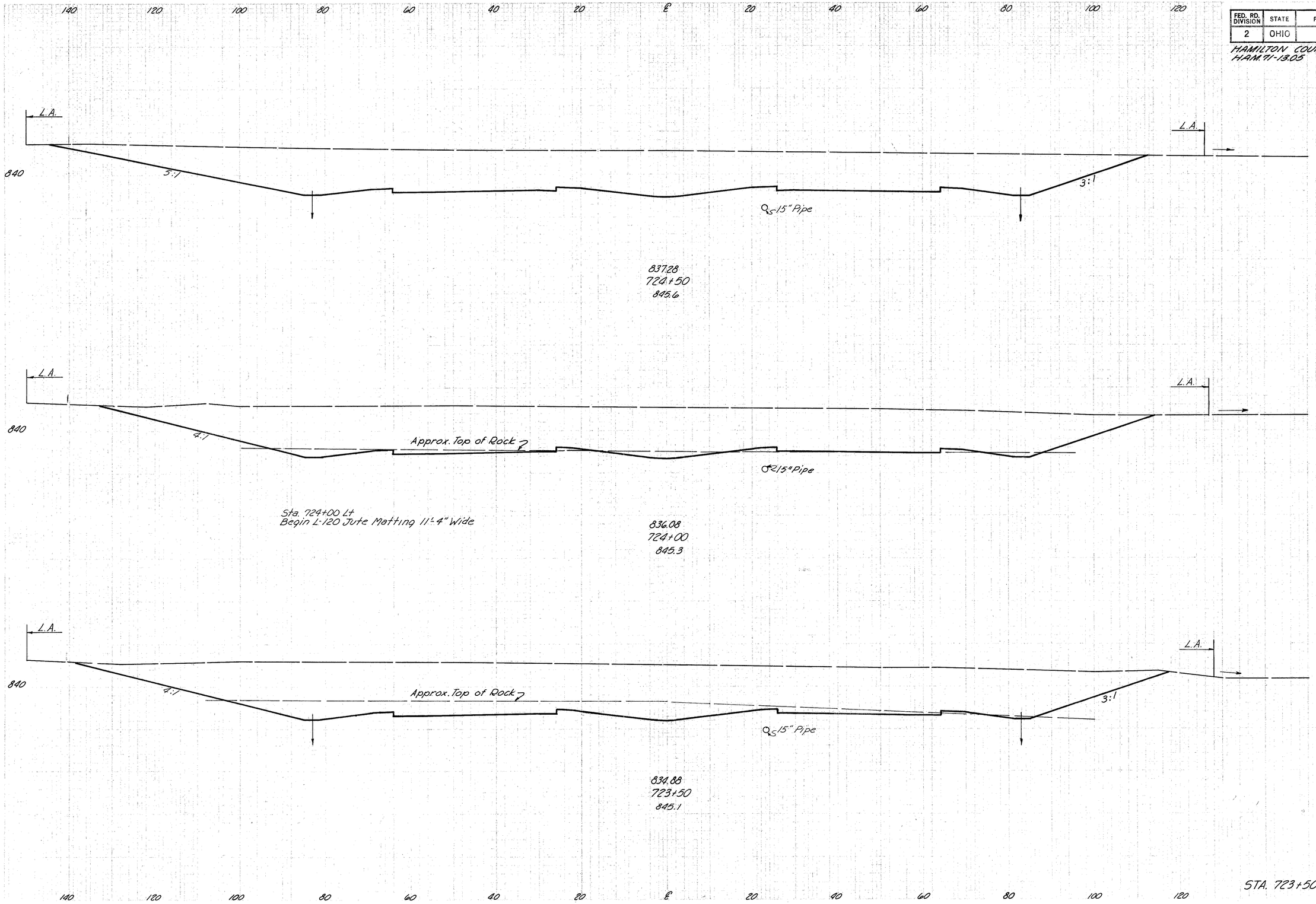
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

STA. 722+00 - STA. 723+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

177
445

HAMILTON COUNTY
HAM-11-13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
2069	0		
		3974	0
2228	0		
		4428	0
2554	0		
		4914	0

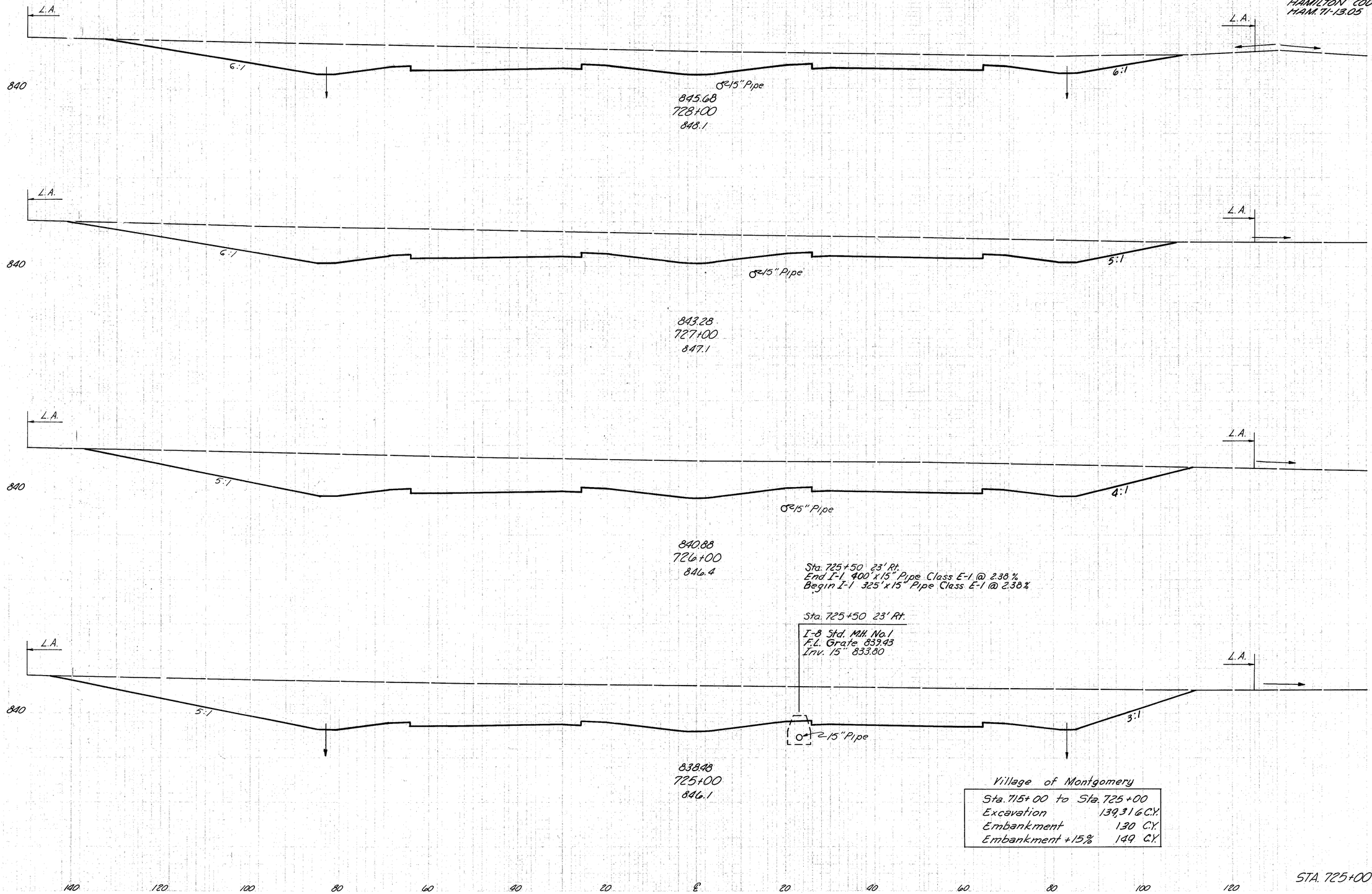
STA. 723+50 - STA. 724+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

178
445

HAMILTON COUNTY
HAM 71-13.05

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



Sta. 725+50 23' Rt.
End I-1 400' x 15" Pipe Class E-1 @ 2.38%
Begin I-1 325' x 15" Pipe Class E-1 @ 2.38%

Sta. 725+50 23' Rt.
I-8 Std. Mh. No. 1
F.L. Grate 839.43
Inv. 15" 833.80

Village of Montgomery

Sta. 715+00 to Sta. 725+00	
Excavation	139,316 C.Y.
Embankment	130 C.Y.
Embankment +15%	149 C.Y.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
919	0		
		3746	0
1104	0		
		4961	0
1575	0		
		6587	0
1982	0		
		3746	0

STA. 725+00 – STA. 728+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

179
445

HAMILTON COUNTY
HAM. 71-13.05

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

840

L.A.

6:1

Sta. 730+00 Lt.
End L-120 Jute
Matting 11'-4" Wide

850.48
730+00
852.7

G.P.

Sta. 729+53 Lt.
Begin Guard Rail

840

848.94
729+36.68
851.2

840

848.08
729+00
850.2

Sta. 728+75 ℄
End I-1 325' x 15" Pipe
Class E-1 @ 2.38 %

Sta. 728+75 ℄
I-8 Std. C.B. No. 4
F.L. Grate 844.56
Inv. 15" 841.56

15" Pipe

840

846.88
728+50
848.5

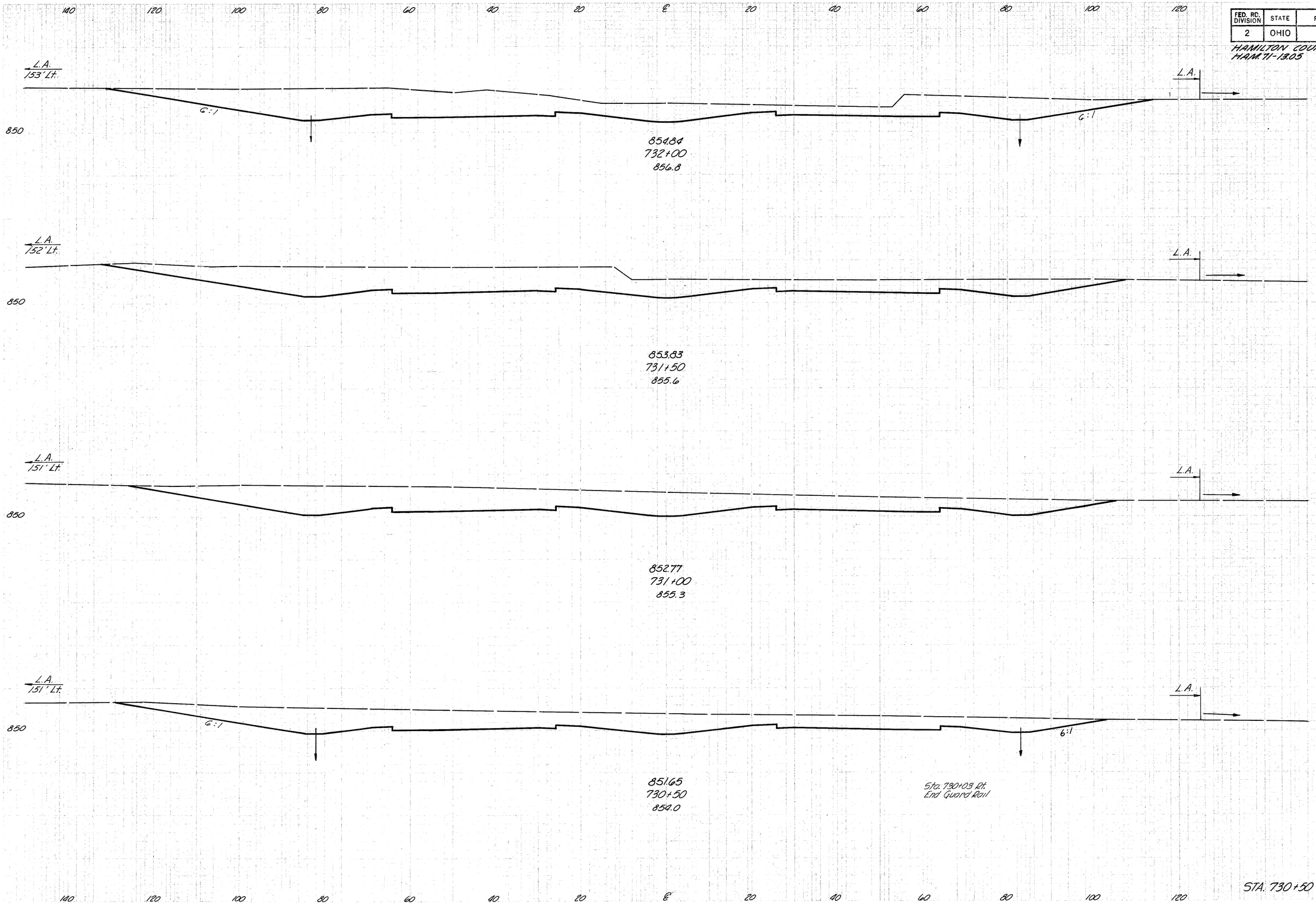
END AREA		VOLUME	
CUT	FILL	CUT	FILL
718	0		
		1826	0
847	0		
		1226	0
942	0		
		1701	0
895	0		
		1680	0

STA. 728+50 - STA. 730+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

180/445

HAMILTON COUNTY
HAM.71-13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
972	0		
		1773	0
943	0		
		1742	0
938	0		
		1617	0
808	0		
		1413	0

STA. 730+50 - STA. 732+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

181/445

HAMILTON COUNTY
HAM. 11-13.05

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

L.A. 158' Lt.

6:1

L.A.

6:1

850

858.31
734+00
862.4

L.A. 156' Lt.

L.A.

850

857.52
733+50
862.2

L.A. 154' Lt.

L.A.

850

856.68
733+00
861.6

L.A. 153' Lt.

6:1

L.A.

6:1

850

855.79
732+50
857.1

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

END AREA		VOLUME	
CUT	FILL	CUT	FILL
970	0		
		1892	0
1074	0		
		1940	0
1021	0		
		1946	0
1081	0		
		1901	0

STA. 732+50 - STA. 734+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

182
445

HAMILTON COUNTY
HAM 71-13.05

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

L.A.
168' Lt.

6:1

L.A.

6:1

850

86089
736+00
863.5

L.A.
165' Lt.

L.A.

850

860.33
735+50
863.1

L.A.
162' Lt.

L.A.

850

859.71
735+00
862.9

L.A.
160' Lt.

L.A.

6:1

6:1

850

85904
734+50
862.8

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

Village of Montgomery

Sta. 725+00 to	Sta. 735+00
Excavation	39,675 C.Y.
Embankment	0 C.Y.
Embankment +15%	0 C.Y.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
866	0		
		1650	0
916	0		
		1758	0
983	0		
		1868	0
1034	0		
		1856	0

STA. 734+50 - STA. 736+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

183
445

HAMILTON COUNTY
HAM.71-13.05

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

L.A.
177' Lt.

860

6:1

862.25
737+50
864.2

L.A.

6:1

L.A.
174' Lt.

860

L.A.

861.85
737+00
864.0

L.A.
171' Lt.

860

L.A.

861.48
736+58.70
864.0

L.A.
171' Lt.

860

6:1

L.A.

6:1

861.90
736+50
863.9

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

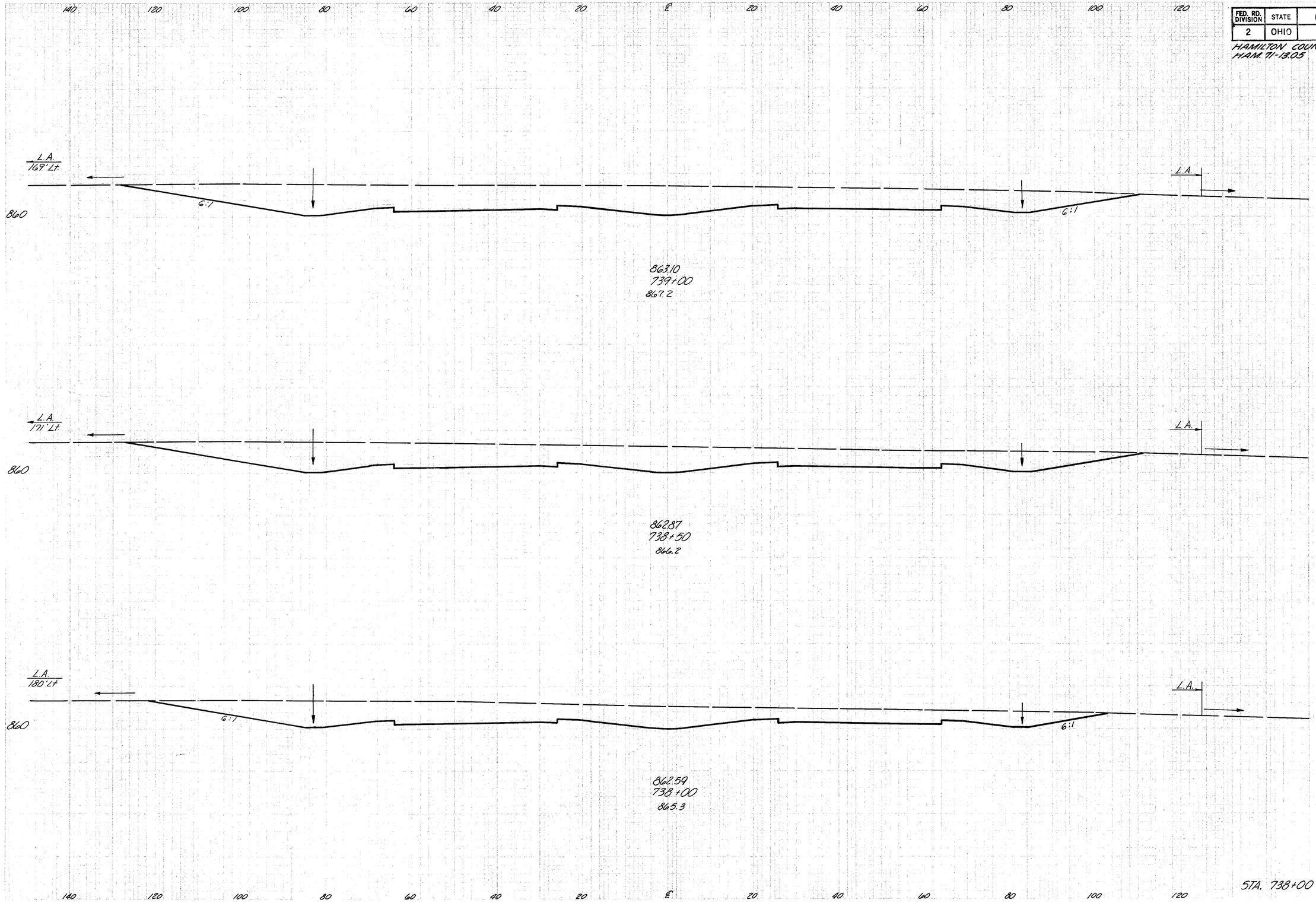
END AREA		VOLUME	
CUT	FILL	CUT	FILL
728	0		
		1373	0
755	0		
		1197	0
821	0		
		276	0
837	0		
		1577	0

STA. 736+50 - 737+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

184
445

HAMILTON COUNTY
HAM. 71-13.05



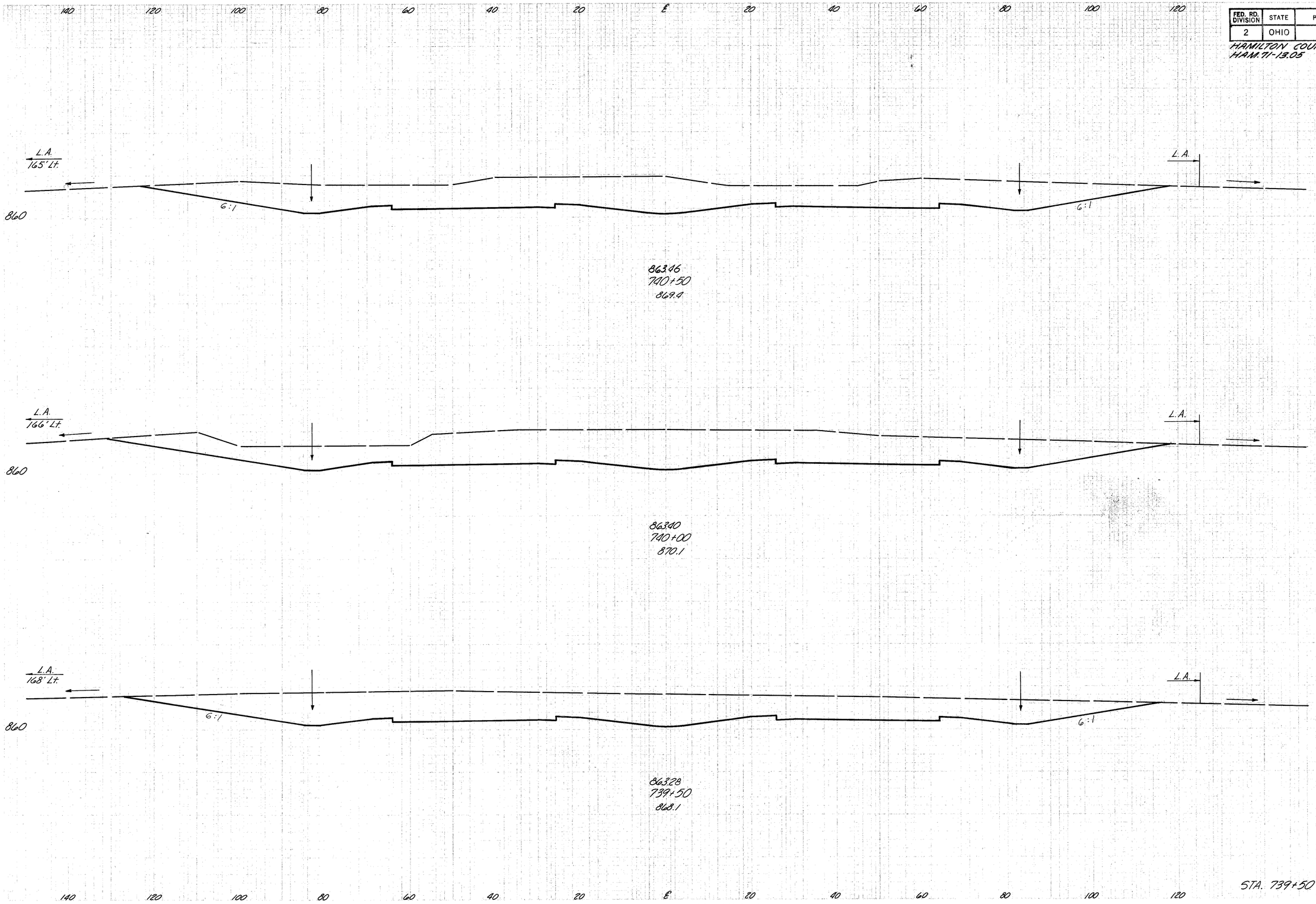
END AREA		VOLUME	
CUT	FILL	CUT	FILL
1157	0		
		1988	0
1044	0		
		1715	0
862	0		
		1472	0

STA. 738+00 – STA. 739+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

185
445

HAMILTON COUNTY
HAM.71-13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1334	0		
		2602	0
1476	0		
		2568	0
1297	0		
		2272	0

STA. 739+50 - STA. 740+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

186/445

HAMILTON COUNTY
HAM.11-13.05

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

L.A.
163' Lt.

860

6:1

863.32
742+00
868.5

L.A.

6:1

L.A.
164' Lt.

860

5:1

863.42
741+50
869.0

L.A.

5:1

L.A.
165' Lt.

860

6:1

863.47
741+00
869.3

L.A.

5:1

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

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1264	0		
		2430	0
1360	0		
		2592	0
1385	0		
		2518	0

STA. 741+00 - STA. 742+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

187/445

HAMILTON COUNTY
HAM.71-13.05

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

L.A. 163' Lt.

860

6:1

L.A.

6:1

862.68
743+50

860

6:1

L.A.

6:1

862.95
743+00
867.5

L.A. 163' Lt.

860

6:1

L.A.

6:1

863.16
742+50
868.0

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

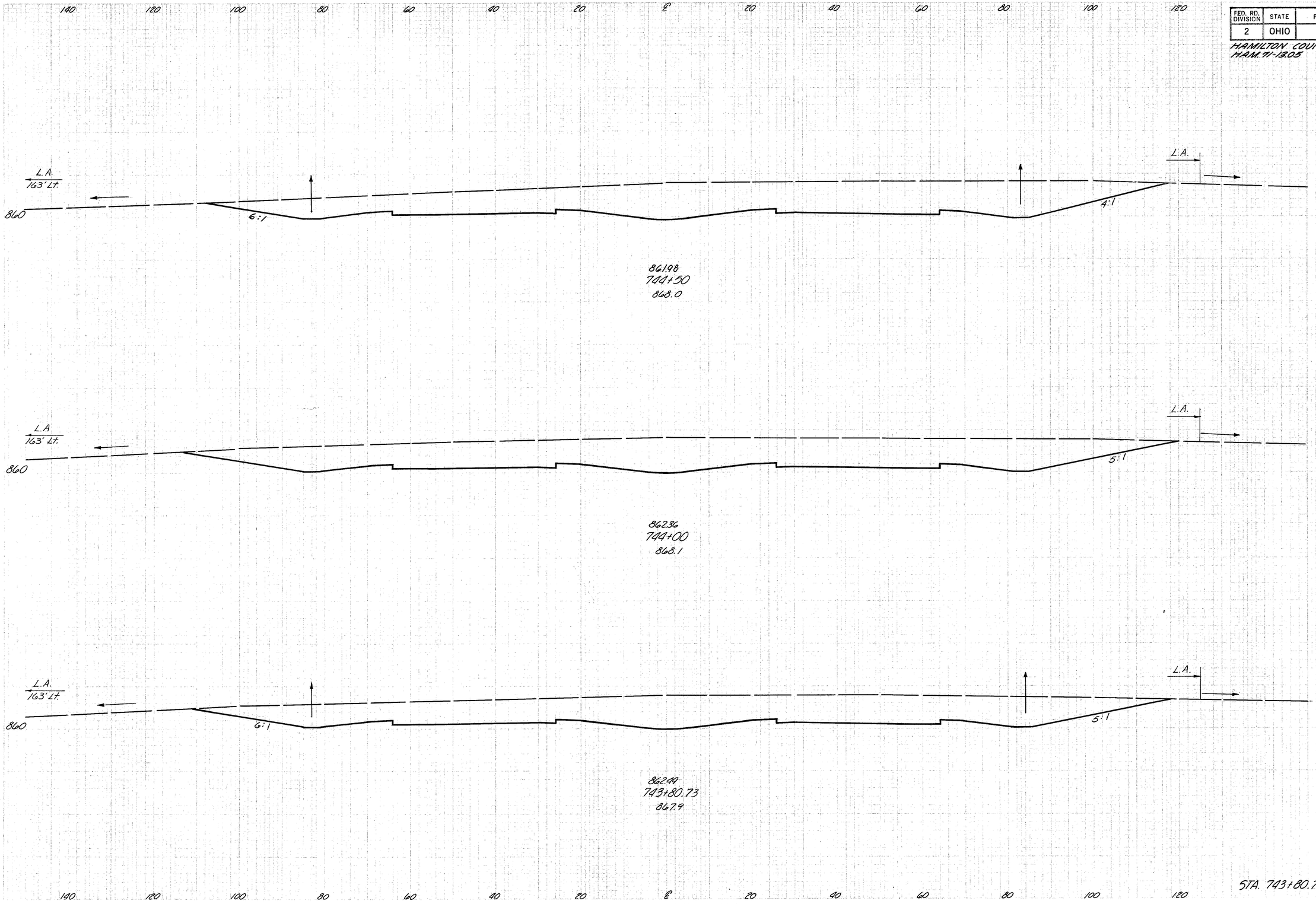
END AREA		VOLUME	
CUT	FILL	CUT	FILL
1165	0		
		1993	0
987	0		
		1962	0
1132	0		
		2218	0

STA. 742+50 - STA. 743+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

188
445

HAMILTON COUNTY
HAM-71-13.05



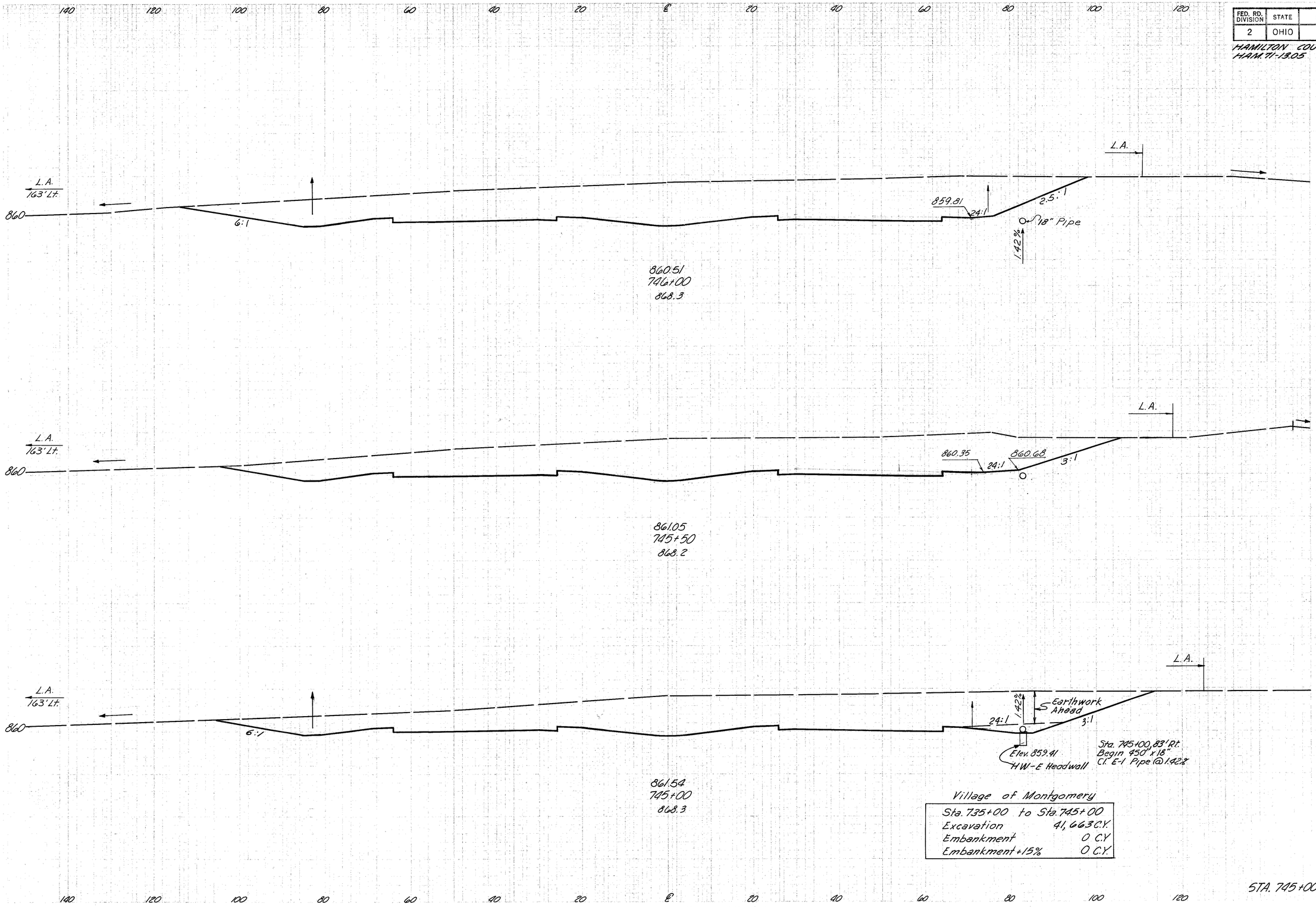
END AREA		VOLUME	
CUT	FILL	CUT	FILL
1323	0		
		2748	0
1695	0		
		1030	0
1241	0		
		1369	0

STA. 743+80.73 – STA. 744+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM-71-13.05



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	1585	0		
			2784	0
	1422	0		
			2567	0
Ahead	1350	0		
Back	1375	0		
			2405	0

Village of Montgomery

Sta. 735+00 to Sta. 745+00	
Excavation	41,663 C.Y.
Embankment	0 C.Y.
Embankment +15%	0 C.Y.

STA. 745+00 - STA. 746+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

190
445

HAMILTON COUNTY
H.A.M. 71-13.05

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

L. A.
163' Lt.

6:1

850

858.54
747+50
864.5

L. A.

857.84

2:1

18" Pipe

1.42%

Flat

L. A.
163' Lt.

850

859.25
747+00
866.3

L. A.

858.55

2-18" Pipe

L. A.
163' Lt.

860

6:1

859.91
746+50
868.0

L. A.

859.21

2:1

18" Pipe

1.42%

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1128	0		
		2306	0
1363	0		
		2672	0
1523	0		
		2878	0

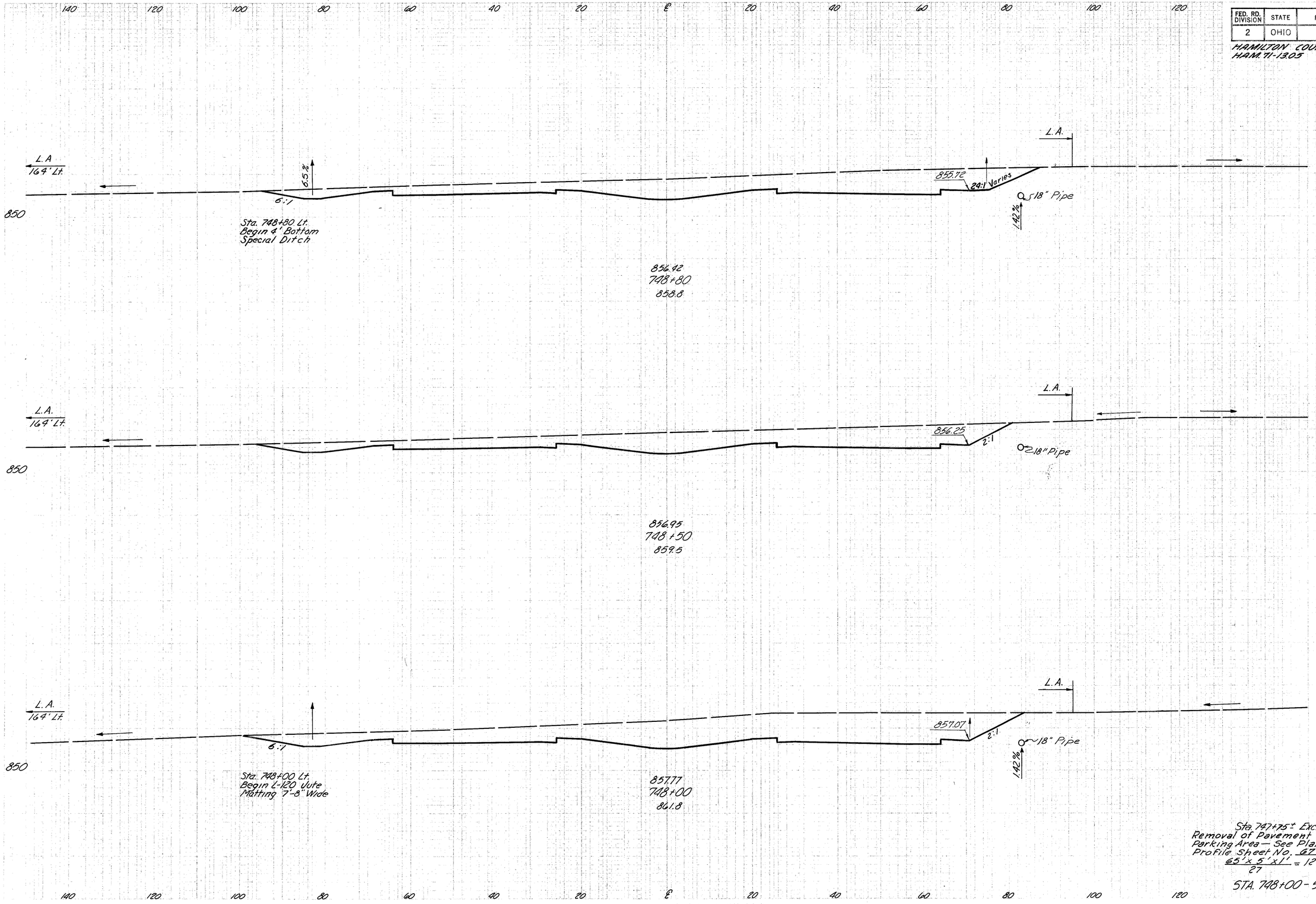
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

STA. 746+50 - STA. 747+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

191
445

HAMILTON COUNTY
HAM-71-13.03



END AREA		VOLUME	
CUT	FILL	CUT	FILL
690	0		
		662	0
552	0		
		1313	0
866	0		
		1846	0
		12	

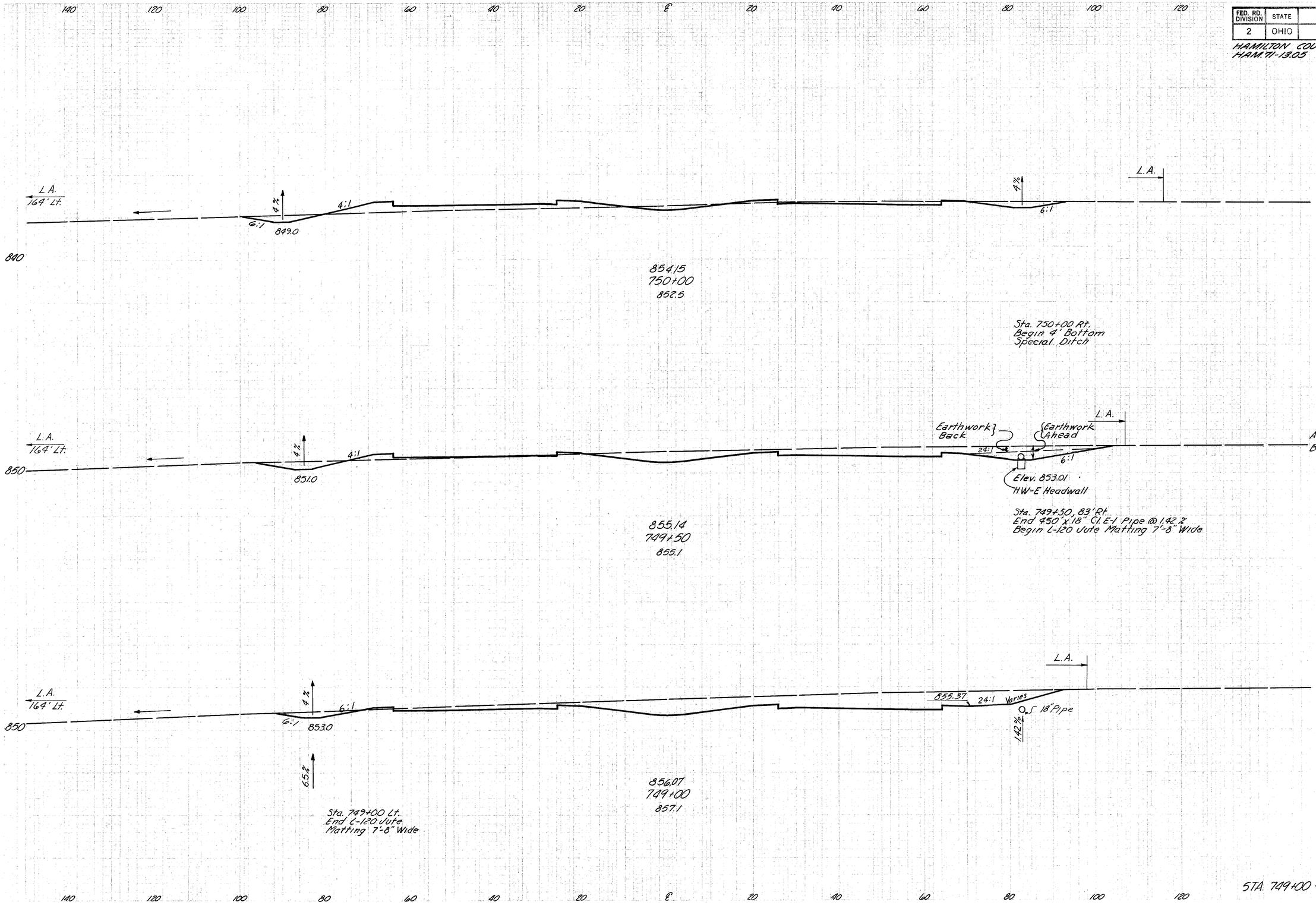
Sta. 747+75± Exc.
Removal of Pavement from
Parking Area — See Plan &
Profile Sheet No. 67
$\frac{65' \times 5' \times 1'}{27} = 12$ C.Y.

STA. 748+00 - STA. 748+80

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

192
445

HAMILTON COUNTY
HAM-71-13.05



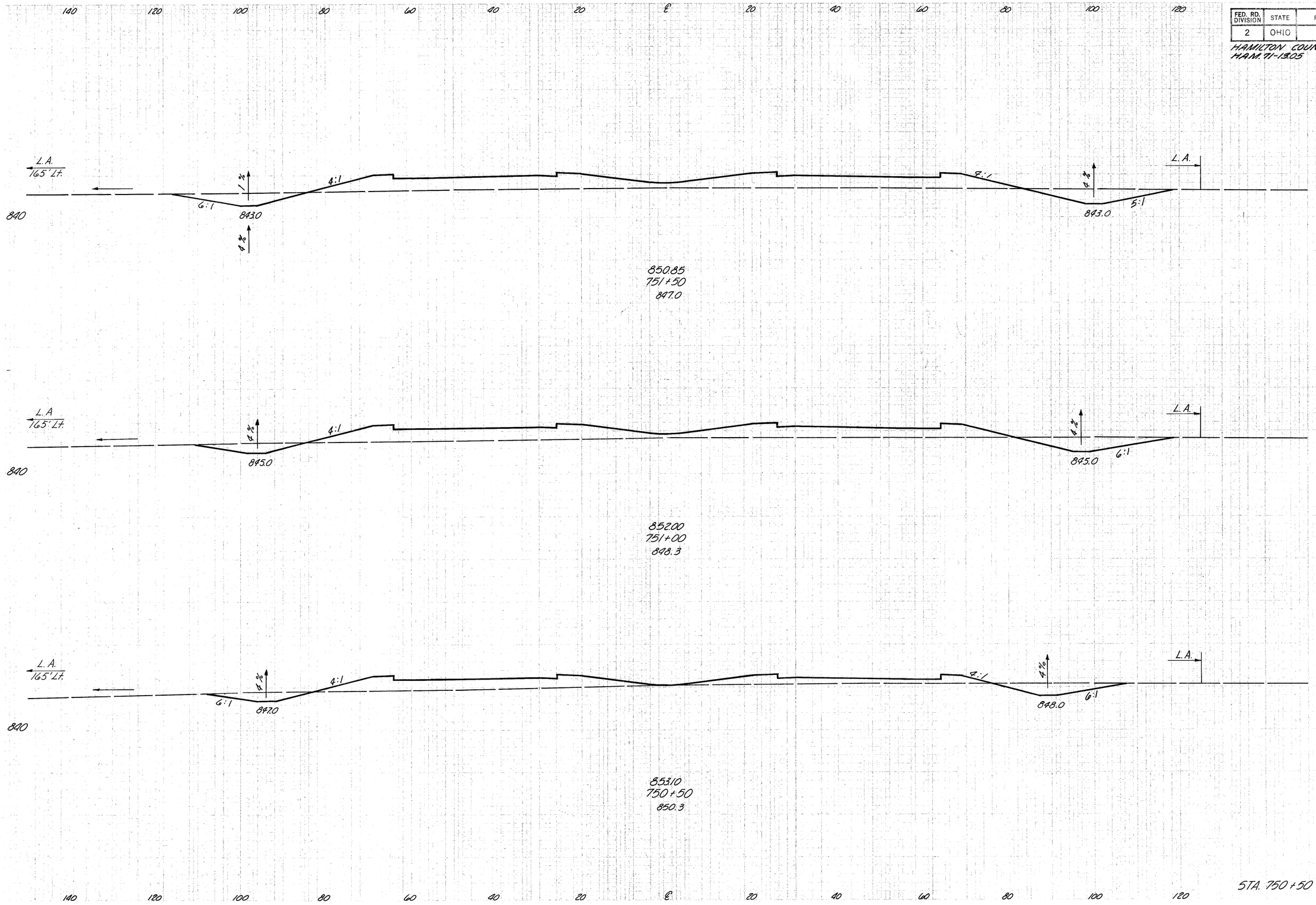
END AREA		VOLUME	
CUT	FILL	CUT	FILL
70	107		
		294	113
Ahead 247		15	
Back 211		15	
		540	16
372	2		
		375	1

STA. 749+00 - STA. 750+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

193
445

HAMILTON COUNTY
HAM. 71-13.05



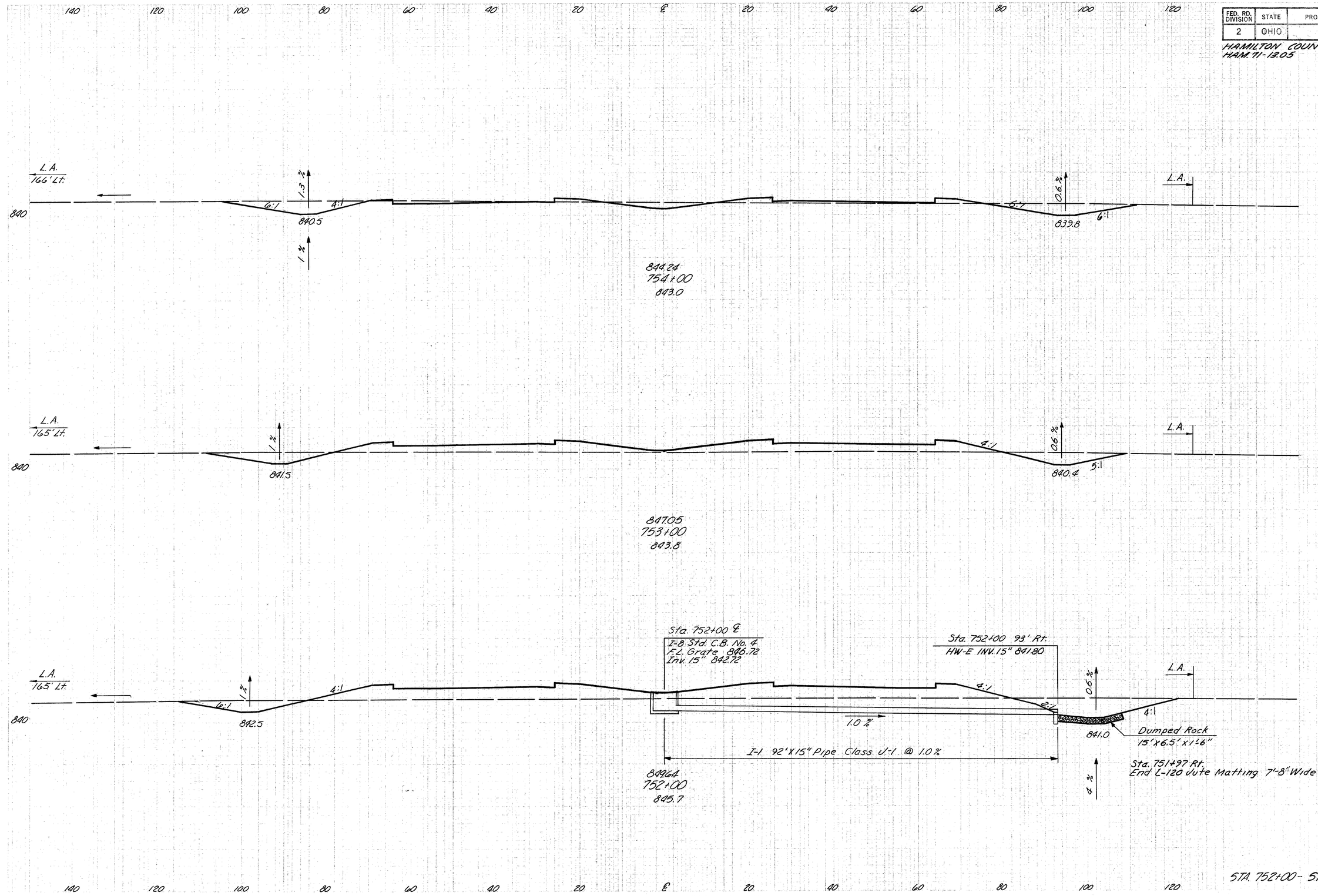
END AREA		VOLUME	
CUT	FILL	CUT	FILL
105	445		
		184	792
94	410		
		154	625
72	265		
		131	344

STA. 750+50 - STA. 751+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

194
445

HAMILTON COUNTY
HAM. 71-13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
136	44		
		422	594
92	277		
		448	1307
150	429		
		236	809

STA. 752+00 - STA. 754+00

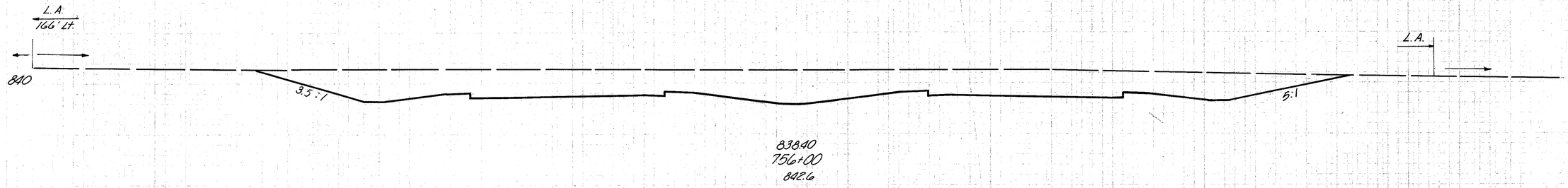
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

195
445

HAMILTON COUNTY
HAM-71-13.05

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1920	0		
		5424	0
1009	0		
		2633	0
413	0		
		1017	81





Village of Montgomery

Sta. 745+00 to Sta. 755+00	
Excavation	20,841 C.Y.
Embankment	4,682 C.Y.
Embankment +15%	5,384 C.Y.

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

STA. 755+00 - STA. 757+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

196
445

HAMILTON COUNTY
HAM-71-13.05

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

L.A.
167' Lt.

840

2:1

1:1

Approx. Top of Rock

1:1

2:1

L.A.

829.69
759+00
844.8

Sta. 758+00 Lt.
End L-120 Jute Matting 7'8" Wide

L.A.
167' Lt.

840

Varies

Varies

L.A.

832.56
758+00
844.7

Sta 758+00 Rt.
End L-120 Jute Matting 7'-8" Wide

L.A.
167' Lt.

840

3:1

3:1

L.A.

834.02
757+50
844.4

END AREA		VOLUME	
CUT	FILL	CUT	FILL
3264	0		
		11204	0
2186	0		
		4842	0
2443	0		
		4040	0

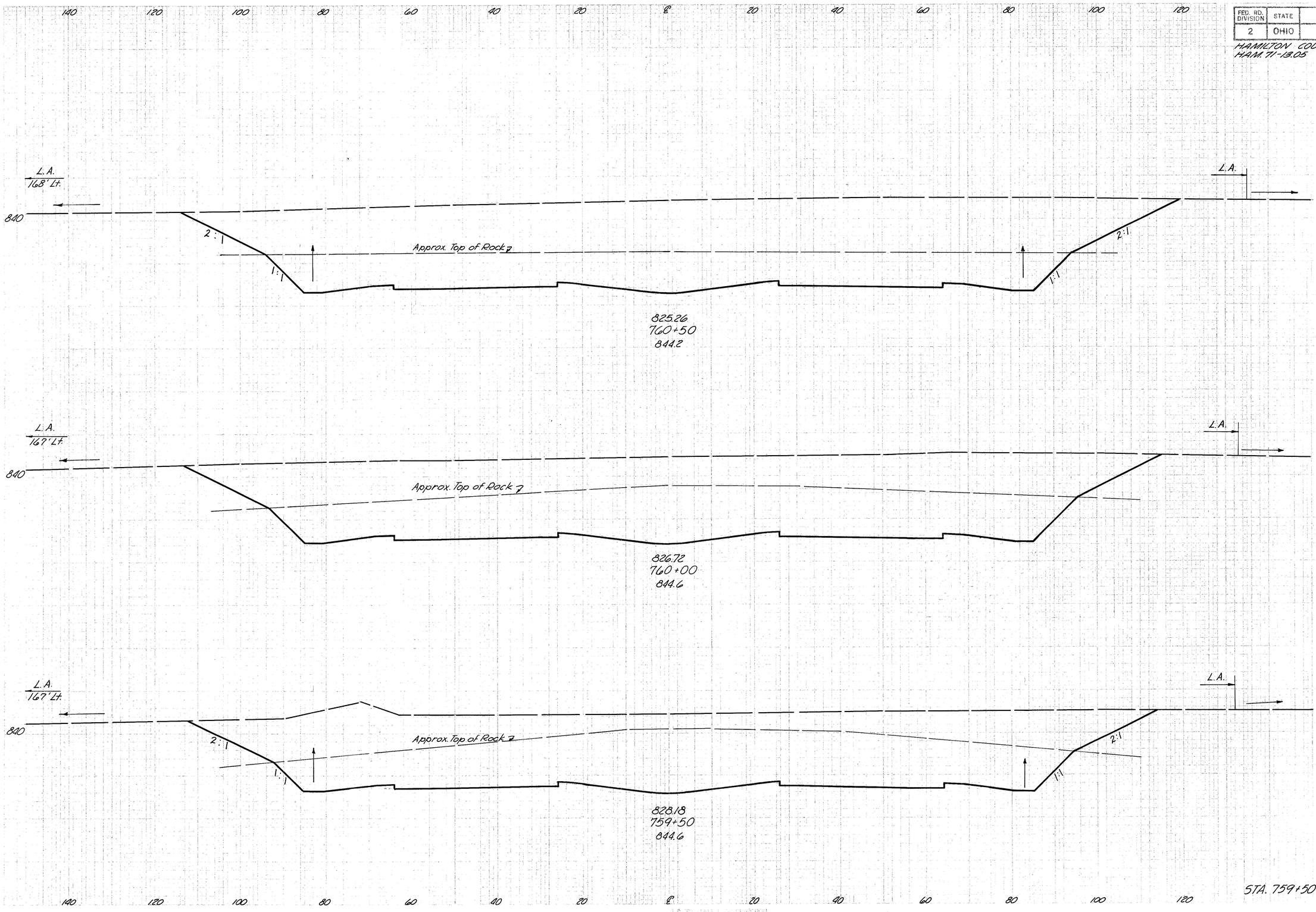
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

STA. 757+50 - STA. 759+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

197
445

HAMILTON COUNTY
HAM. 71-19.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
3965	0		
		7117	0
3722	0		
		6664	0
3975	0		
		6280	0

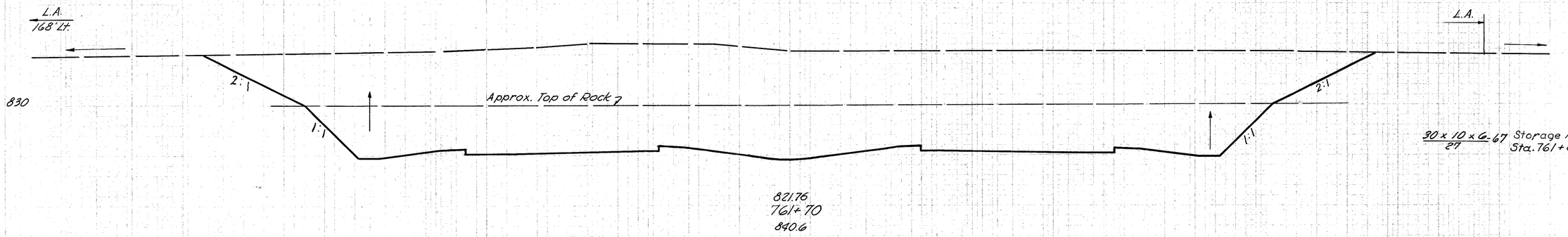
STA. 759+50 - STA. 760+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

198
445

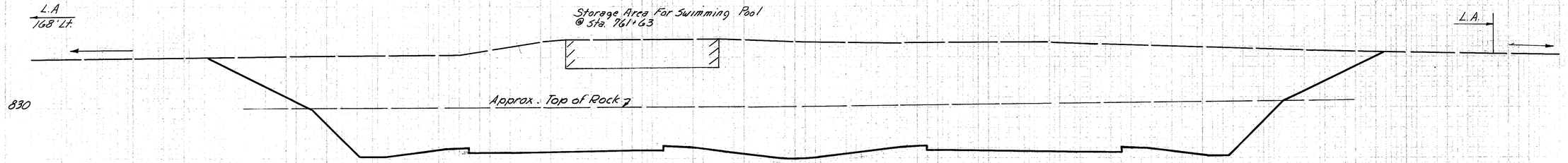
HAMILTON COUNTY
HAM-71-1305

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



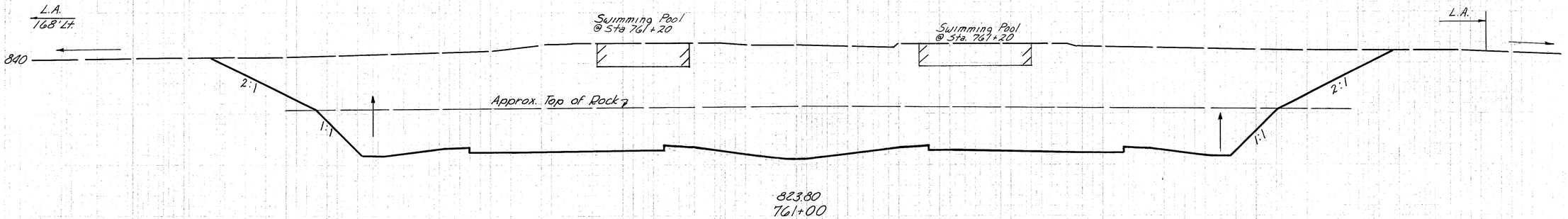
821.76
761+70
840.6

30 x 10 x 6.67 / 27 Storage Area Sta. 761+63 Lt.



822.49
761+45
843.0

18 x 40 x 4.5 / 27 = 120 Swimming Pools Sta. 761+20 Lt.
20 x 40 x 4.5 / 27 = 133 Sta. 761+20 Rt.



823.80
761+00
843.6

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
4039	0		
		-67	
		3791	0
4150	0		
		-120	
		-133	
		6845	0
4064	0		
		7034	0

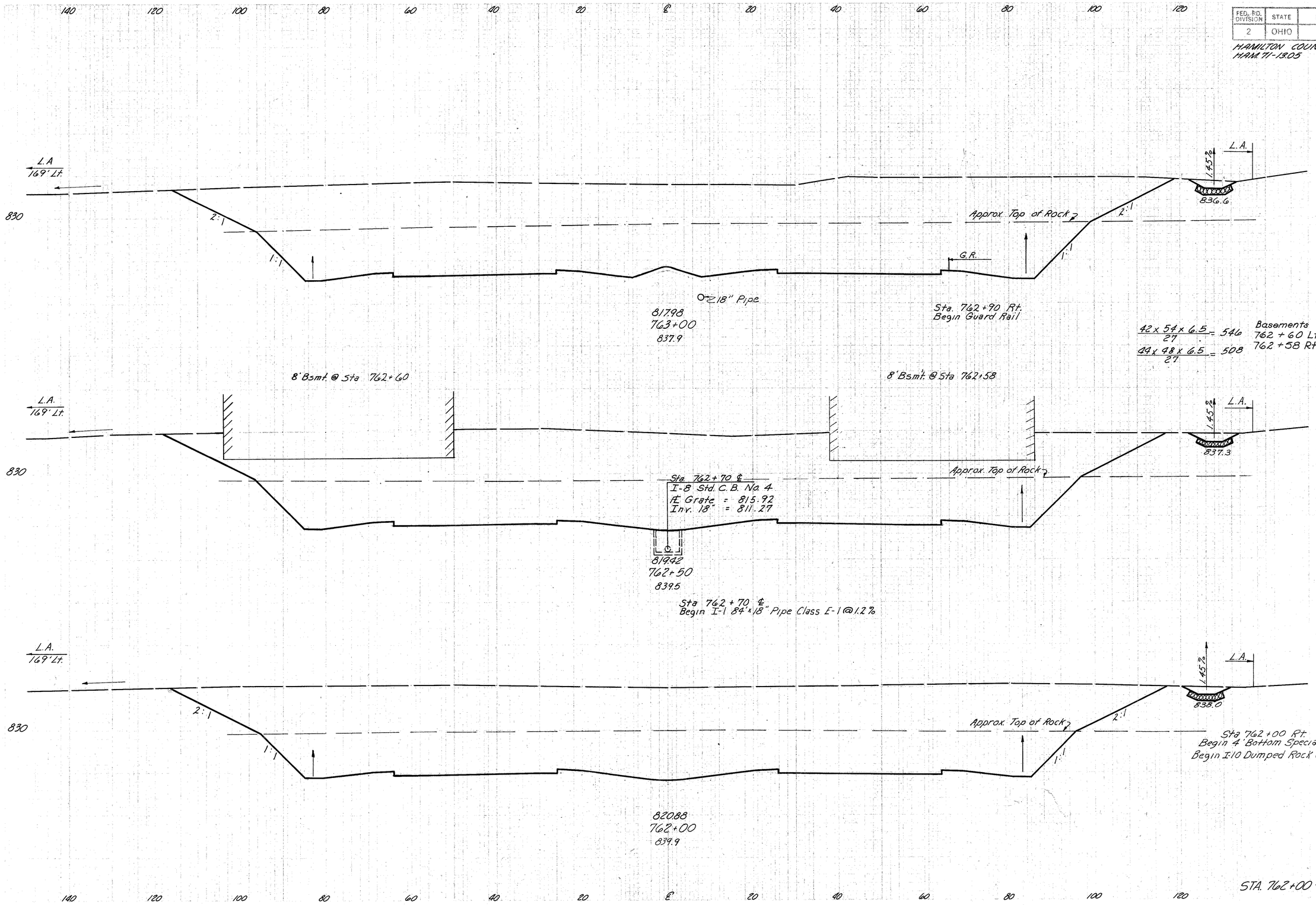
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

STA. 761+00 – STA. 761+70

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

199
445

HAMILTON COUNTY
HAM-71-13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
4327	0		
		7496	0
		-546	
		-508	
4309	0		
		7785	0
4099	0		
4521	0		

STA. 762+00 - STA. 763+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

200
445

HAMILTON COUTY
HAM-71-18.05

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

820

L.A. 169' Lt.

2:1

1:1

G.R.

815.51
764+00

18" Pipe

Approx. Top of Rock

2:1

1:1

L.A. 168' Rt.

5%

835.0

Sta 763+90 Rt.
End Guard Rail

Sta 763+95 Rt.
Begin 4' Bottom Special Ditch
Begin I-10 Dumped Rock 8'x1'-6"

Bridge Over
Sta 763+79.65

L.A.

Zig Zag Rd

Existing 12" Conc. Pipe
@ Sta 763+79.65 58' Rt

L.A
169' Lt.

Zig Zag Rd

820

G.R.

Pier

G.R.

Approx. Top of Rock

18" Pipe

816.23
763+68
832.0

Sta. 763+66 Lt.
Begin Guard Rail

L.A.
169' Lt.

820

2:1

1:1

Sta 763+50 22' Rt
I-8 Std. M.H. No. 1
Top Elev. 816.3
Inv. 18" 810.37

Approx. Top of Rock

2:1

1:1

G.R.

L.A.

816.67
763+50
835.6

Sta. 763+50 22' Rt
End I-1 84'x18" Pipe Class E-1 @ 1.2%
Begin I-1 425'x18" Pipe Class E-1 @ 1.2%

Sta 763+26 Rt.
4' Bottom Special Ditch
& I-10 Dumped Rock 8'x1'-6"
Continued to Zig Zag Rd.
Sta. 98+66 Lt.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
3189	0		
		3409	0
3407	0		
		2384	0
3747	0		
		7476	0

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

STA. 763+50 - STA. 764+00

267 Rev (201 300)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

(201 / 445)

HAMILTON COUNTY
HAM-71-13.05

267

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

L.A.
160' Rt.
6%
827.5
5%

L.A.
5:1
Varies
Approx. Top Of Rock
18" Pipe

800

Sta 765+50 Lt.
Begin L-120 Jute Matting 11' 4" Wide

8/2.93
765+50
819.7

L.A.
163' Rt.
5%
830.0

L.A.
3:1
Approx. Top Of Rock
Varies
18" Pipe

810

8/3.64
765+00
822.8

Village of Montgomery

Sta. 755+00 to Sta. 765+00	
Excavation	109,636 C.Y.
Embankment	0 C.Y.
Embankment +15%	0 C.Y.

L.A.
165' Rt.
5%
2:1
832.5

Sta. 764+66 Lt.
End Guard Rail

L.A.
154' Lt.
2:1
1:1
G.R.
Approx. Top Of Rock
2:1
1:1

820

8/4.50
764+50
827.8

18" Pipe

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2250	0		
		4599	0
2717	0		
		5134	0
2828	0		
		5571	0

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

STA. 764+50 - STA. 765+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

202
445

HAMILTON COUNTY
HAM. 71-13.05

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

Sta. 767+05
Culvert Inlet
Inv. 795.6

Channel Exc.
For Quantity See Sht. No. 344

Ham. 71

G.R.

Zig Zag Rd.

L.A.

1.8%

2:1

800

Sta. 767+05
End 1-10 Riprap

Sta. 766+95 Lt.
Begin 4' Bottom Special Ditch

Sta. 766+90 Lt.
End 4' Bottom Special Ditch

Sta. 766+80 Lt.
End Dumped Rock 8'x1'-6"
Begin Riprap Quantity Carried With Drainage Structure

Back Ditch Ahead

20%

Varies

805.25

L.A.

800

Sta. 766+30 Lt.
End I-120 Jute Matting 11'-4" Wide
Begin I-10 Dumped Rock 8'-1'-6"

Zig Zag Rd.

L.A.

800

10%

6:1

Sta. 766+00 Lt.
Begin 4' Bottom Special Ditch

Cℓ 18" Pipe

811.68
767+00
813.1

Sta. 766+50 Lt.
Begin Guard Rail

Cℓ 2-18" Pipe

811.96
766+50
815.5

Cℓ 18" Pipe

812.37
766+00
817.9

12%

L.A.
152' Rt.

2:1

4:1

815.5

12%

L.A.
155' Rt.

2:1

3:1

821.5

6%

6%

L.A.
157' Rt.

2:1

2.5:1

824.5

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	615	329		
			1390	451
766+90 Lt.	10			
Ditch Exc. 766+50 Lt.	6		12	
Ahead	886	158		
Back	896	161		
			2301	149
			1589	0
			3555	0

STA. 766+00 - STA. 767+00

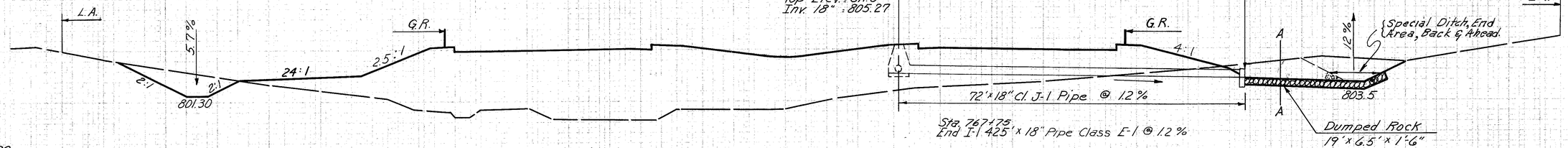
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

203
445

HAMILTON COUNTY
HAM. 71-13.05

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



811.16
768+00
798.2

Sta. 768+00
Culvert (Skew)

Sta. 768+00 Sect. A-A

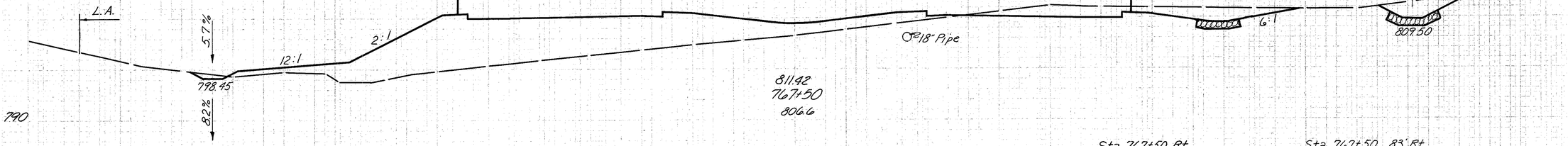
Typical Section for Channel Excavation

$\frac{(\frac{16+2}{2})35 \times 14}{27}$ = 16 C.Y.

Note: Quantity carried on Sub-summary Sht. No. 63

Sta. 767+97 Rt.
End 4' Bottom Special Ditch
End I-10 Dumped Rock 8'x1'-6"

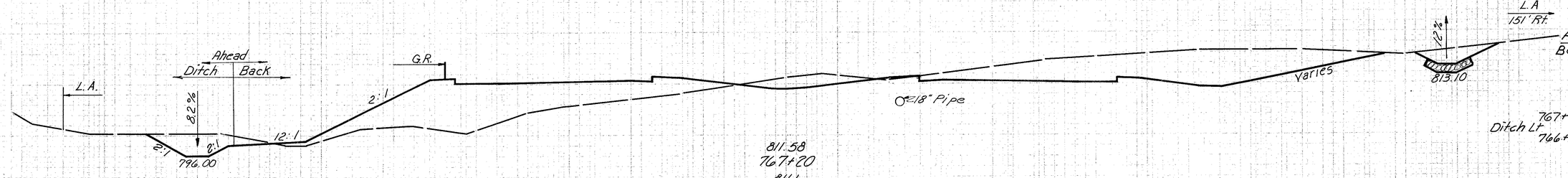
Note: Above Ditch Earthwork Volume included in Cross-Sections.



811.92
767+50
806.6

Sta. 767+50 Rt.
Begin Guard Rail

Sta. 767+50 83' Rt.
Begin 4' Bottom Special Ditch
Begin I-10 Dumped Rock 8'x1'-6"



811.58
767+20
811.1

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	11.7	155.0		
			264	2097
	16.8	7.15		
			369	619
Ahead	496	400		
Back	445	400		
767+20	48		393	270
Ditch Lt. 766+95	28		35	

STA. 767+20 - STA. 768+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

204
445

HAMILTON COUNTY
HAM-71-13.05

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

L.A. 10% 2:1 807.00 24:1 G.R. Sta. 769+00 Lt. End Guard Rail 57% 790

810.64
769+00
802.6

Sta. 769+20 Rt.
End I-10 Dumped Rock 2'-6" Thick

Sta. 769+05 Rt.
End 4' Bottom Special Ditch

769+05 Ditch Rt.
769+00

Back
Ahead
Channel Exc.
for Quantity see Sht. No. 344

G.R. 2:1 L.A. 793.8

Ditch Ahead End Area.

Sta. 768+96
Culvert Outlet
Inv. 794.0

Sta. 768+96
End I-10 Dumped Rock 8'x1'6"
Begin I-10 Dumped Rock 2'-6" Thick
Quantity carried with Drainage Structure

L.A. Varies 804.15

810.90
768+50
798.6

Varies L.A. 12% 797.50 790

L.A. 57% 2:1 2:1 801.87 24:1 G.R. Varies

811.11
768+10
795.8

G.R. Varies 12:1 L.A. 12% 2:1 2:1 802.30 790

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0		1	
10			
83	1285		
137	1295		
		310	2653
198	1570		
		249	2467
		138	1760
		47	613

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

STA. 768+10 - STA. 769+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

105
445

HAMILTON COUNTY
HAM-71-13.05

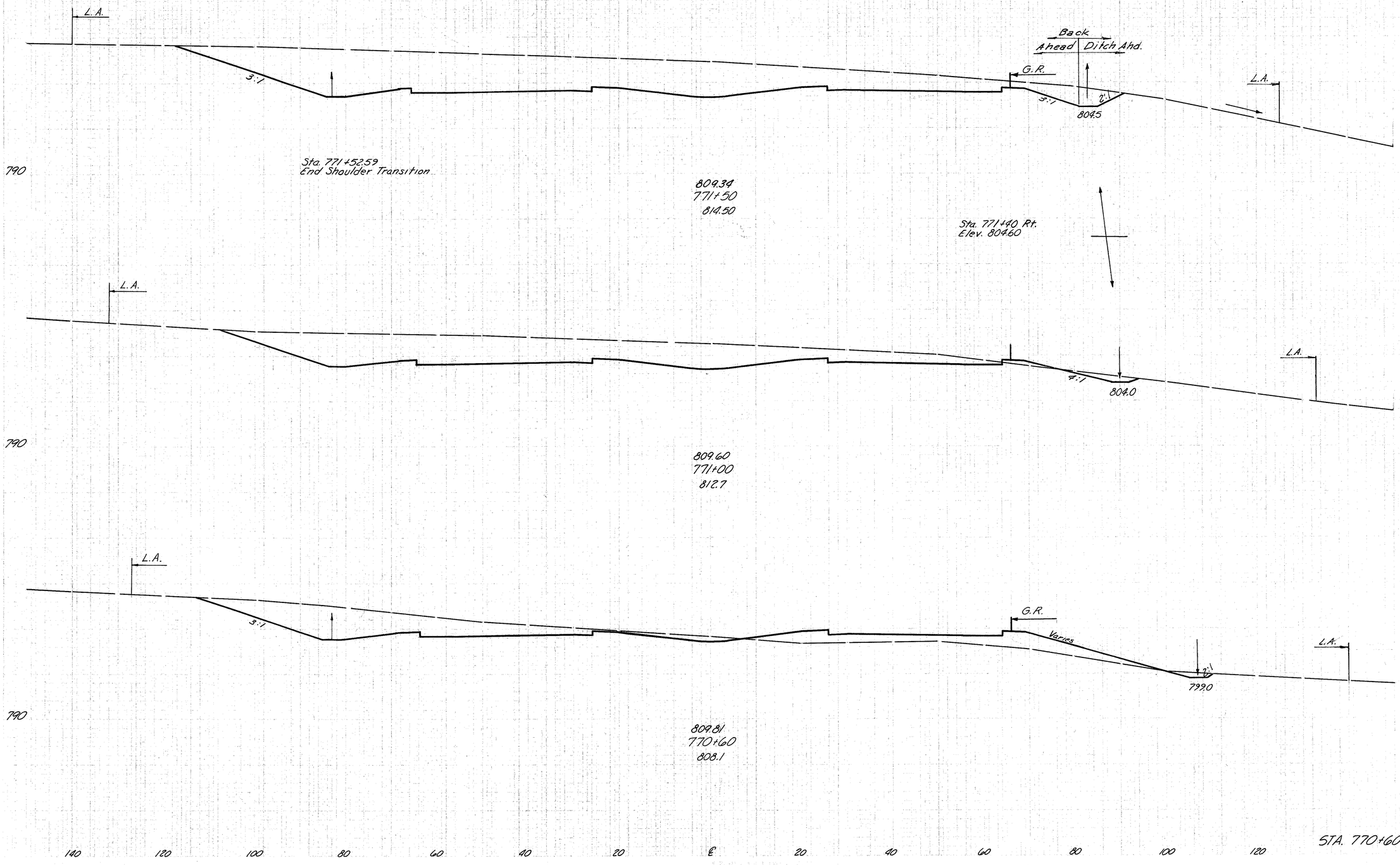
END AREA		VOLUME	
CUT	FILL	CUT	FILL
554	299		
		502	362
488	453		
		557	902

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

206
445

HAMILTON COUNTY
HAM. 71-13.05

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



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Ahead	1188	0		
Back	1212	0		
			1810	7
			743	8
			819	144
			362	186
			577	305

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

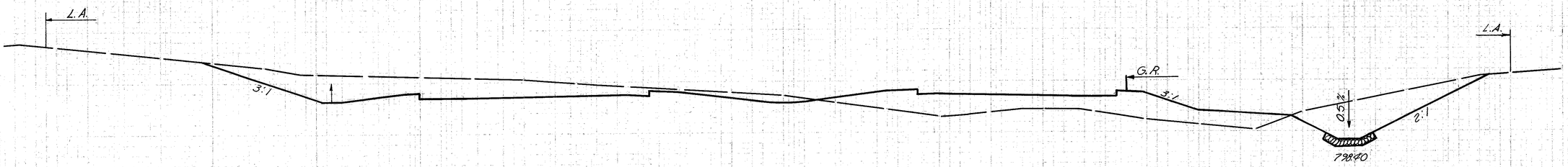
STA. 770+60 - STA 771+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

207
445

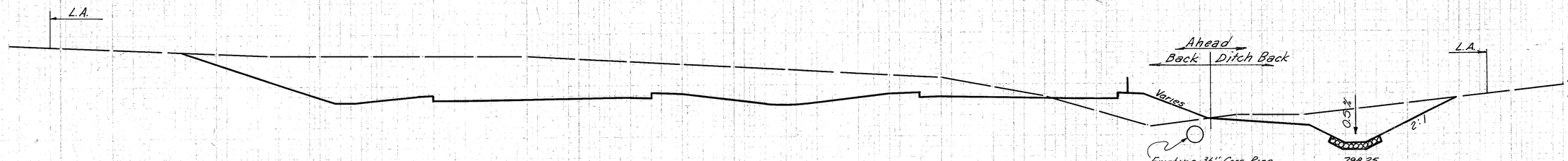
HAMILTON COUNTY
HAM 71-13.05

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



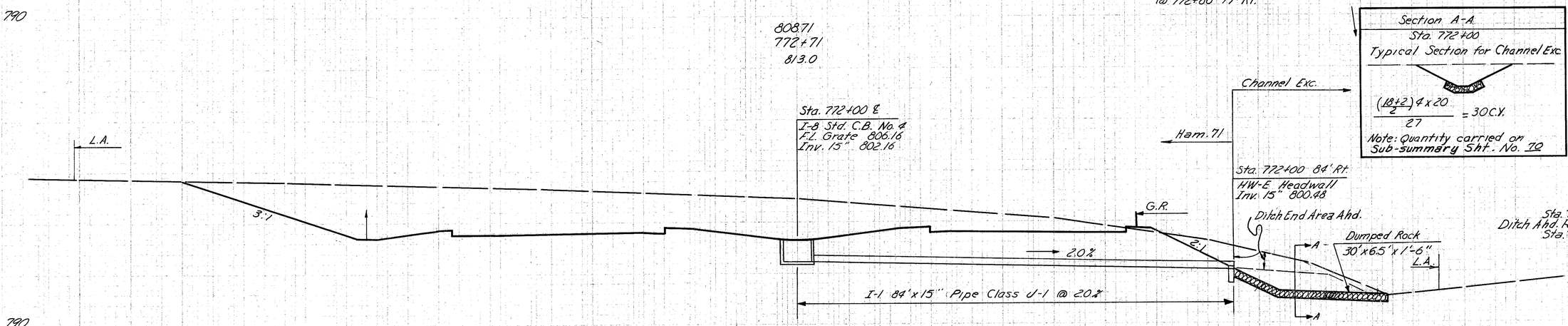
790

808.56
773+00
807.1



790

808.71
772+71
813.0



790

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
		462		284
				839
Ahead	1100	91		
Back	1060	91		
				2989
Sta. 772+71	140			268
Ditch Ahd. Rt. Sta. 770+02	70			
			1213	2
				2223
Sta. 771+85	36			39
Ditch Rt. Sta 771+50	24			

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

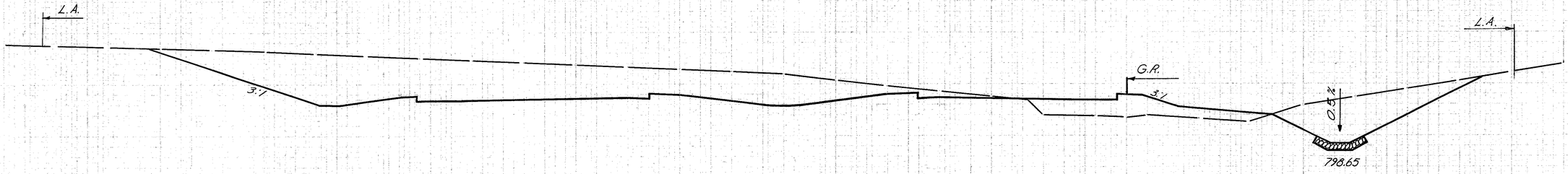
STA. 772+00 - STA. 773+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

208
445

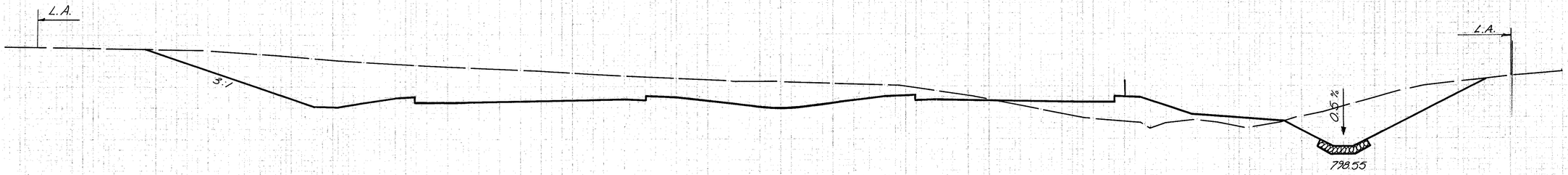
HAMILTON COUNTY
HAM-71-13.05

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



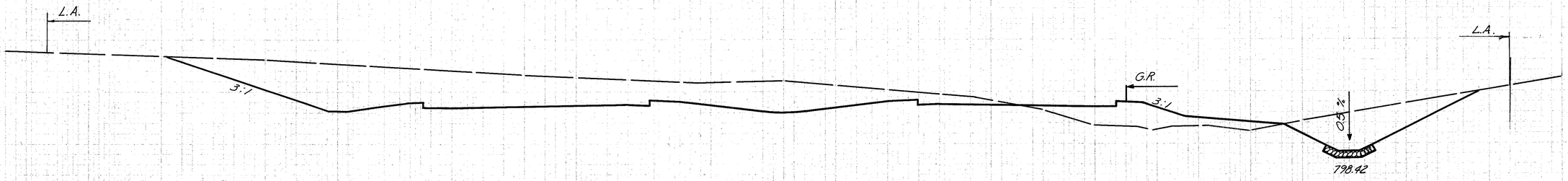
790

808.30
773+50
812.0



800

808.40
773+31
811.0



790

808.53
773+05
812.1

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

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1085	113		
		718	84
955	125		
		912	119
939	122		
		13	4

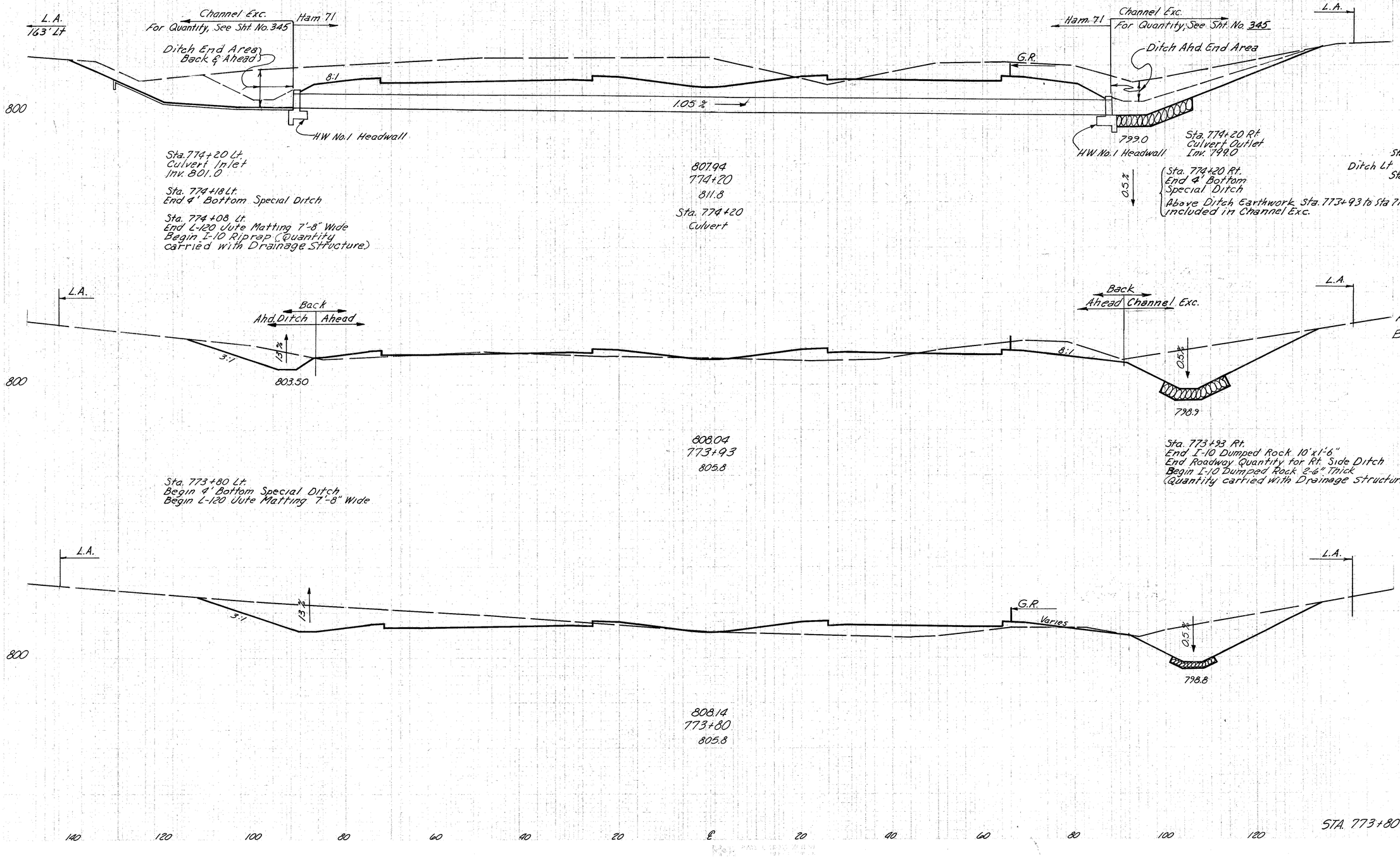
STA. 773+05 - STA. 773+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

209
425

HAMILTON COUNTY
HAM. 71-13.05

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



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		68	4	13
Sta. 774+18	86		422	53
Ditch Lt Sta. 773+93	65		70	
Ahead	159	92		
Back	348	92		
			223	24
	579	9		
			924	68

STA. 773+80 - STA. 774+20

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

2.10
445

HAMILTON COUNTY
HAM-71-13.05

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

L.A.
173' Lt.

L.A.

3:1

3:1

800

807.26
775+50
812.8

Sta. 775+37.5 Rt.
End Guard Rail

Sta. 775+30
Begin 100' Ramp Taper

L.A.
173' Lt.

L.A.

3:1

G.R.

4.5:1

800

807.52
775+00
809.0

Village of Montgomery

Sta. 765+00 ~ Sta. 775+00		
Excavation	31,614	C.Y.
Embankment	13,673	C.Y.
Embankment +15%	15,723	C.Y.

Sta. 774+68
Construct Dike
Top Elev. 806.67

L.A.
173' Lt.

Ahead
Back Ditch Back

5:1

805.66

800

Sta. 774+50 Lt.
End 4' Bottom Special Ditch

Sta. 774+31 Lt.
End I-10 Riprap

Sta. 774+22 Lt.
Begin 4' Bottom Special Ditch

807.78
774+50
812.6

Ahead
Back Ditch Back

G.R.

6:1

L.A.

Sta. 774+50 Rt.
End 4' Bottom Special Ditch

Sta. 774+27 Rt.
Begin 4' Bottom Special Ditch

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

STA. 774+50 - STA. 775+50

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	1954	0		
			3311	0
	1622	0		
			2720	0
Ahead	1316	0		
Back	1124	0		
Sta. 774+50 Ditch Lt.	142		100	
Sta. 774+22	86			
Sta. 774+50 Ditch Rt.	50		66	
Sta. 774+27	104			
			1004	7

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

211
445

HAMILTON COUNTY
HAM-71-13.05

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

L.A.
173' Lt.

2:1

800

806.93
777+00
818.9

L.A.

2.5:1

L.A.
173' Lt.

800

806.74
776+50
817.2

L.A.

Varies

L.A.
173' Lt.

25:1

800

807.00
776+00
816.0

Sta. 776+30
End 100' Ramp Taper

L.A.

3:1

END AREA		VOLUME	
CUT	FILL	CUT	FILL
3201	0		
		5378	0
2607	0		
		4372	0
2115	0		
		3768	0

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

STA. 776+00 - STA. 777+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

212
445

HAMILTON COUNTY
HAM-71-13.05

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

L.A
174.5 Lt.

L.A

810

2:1

℄ Ramp "F"

Approx. Top of Rock

2:1

80492
780+00
825.2

L.A
174 Lt.

L.A

810

℄

805.44
779+00
822.7

L.A
174 Lt

L.A.

810

2:1

℄

2:1

805.96
778+00
820.4

END AREA		VOLUME	
CUT.	FILL	CUT	FILL
5232	0		
		17,783	0
4371	0		
		15,031	0
3746	0		
		12,865	0

STA. 778+00 - STA. 780+00

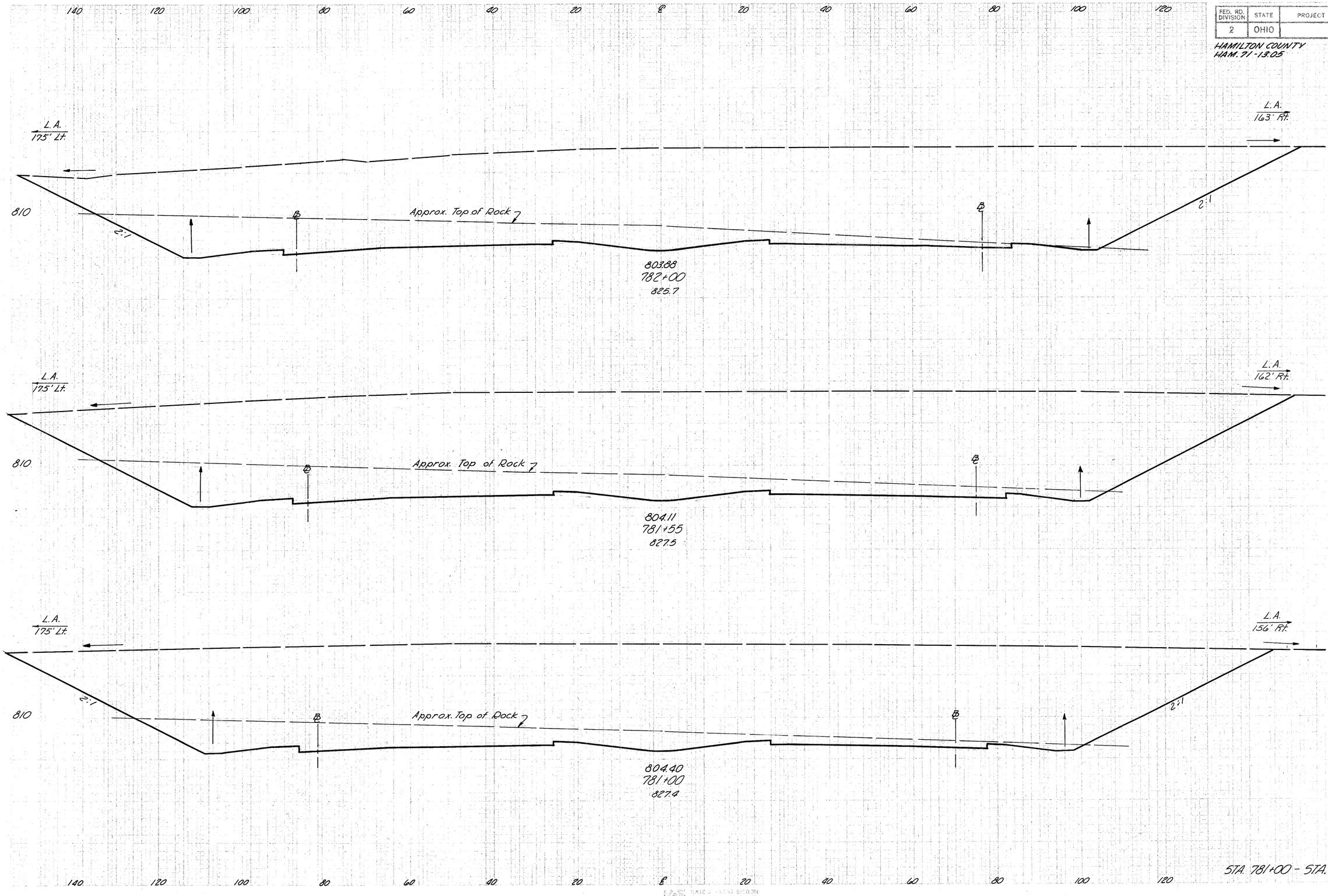
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

LAYOUT PLANS & CROSS SECTION
NOT TO BE USED FOR CONSTRUCTION

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

213
445

HAMILTON COUNTY
HAM.71-13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
5919	0		
		10302	0
6443	0		
		13213	0
6529	0		
		21819	0

STA. 781+00 - STA. 782+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

214
745

HAMILTON COUNTY
HAM. 71-13.05

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

Back
Ramp "F" Ahead

L.A.
176' Lt.

800

3:1

℄

Sta. 783+29.57 Lt.
Std. Ditch is Continued to
Ramp F Sta. 9+97.5 Rt.

Match Line

3:1

END AREA		VOLUME	
CUT	FILL	CUT	FILL
Ahead 2303	0		
Back 2828	0		

80327
783+29.57
809.2

Match Line

L.A.
183' Rt.

3396 0

L.A.
180' Rt.

L.A.
175.5' Lt.

800

2.5:1

℄

Approx. Top of Rock

2.5:1

3373 0

80337
783+00
814.5

L.A.
173' Rt.

L.A.
175.5' Lt.

810

2:1

℄

Approx. Top of Rock

2:1

7435 0

4657 0

9793 0

80362
782+50
820.5

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

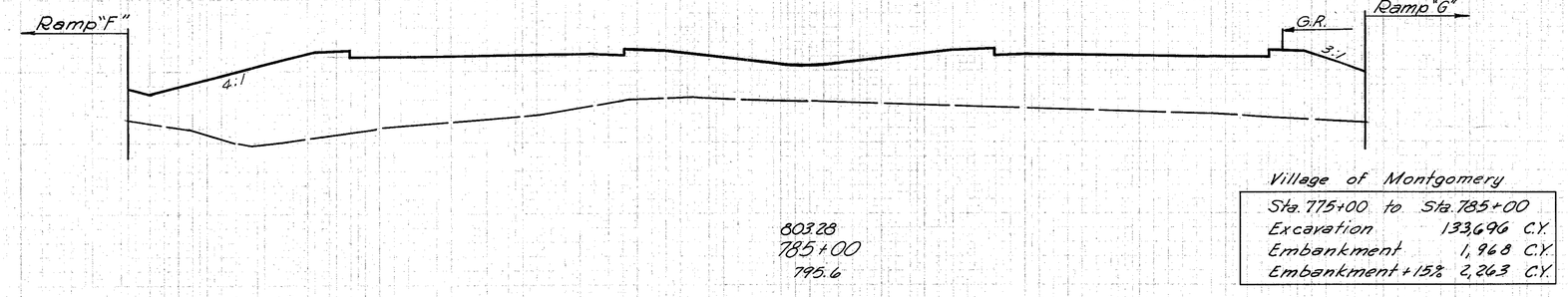
STA. 782+50 - STA. 783+29.57

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

215
445

HAMILTON COUNTY
HAM.71-13.05

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

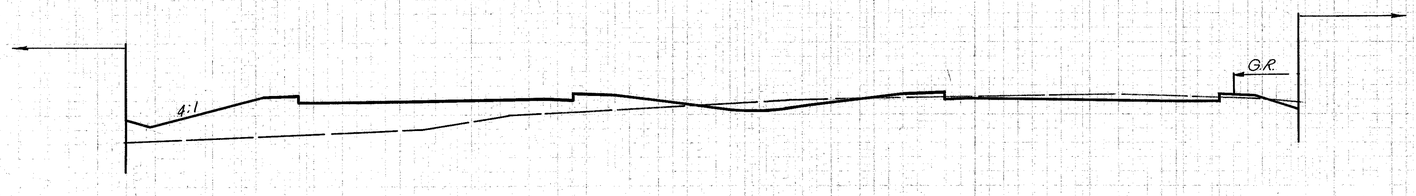


790

Village of Montgomery

Sta. 775+00 to Sta. 785+00		
Excavation	133,696	C.Y.
Embankment	1,968	C.Y.
Embankment +15%	2,263	C.Y.

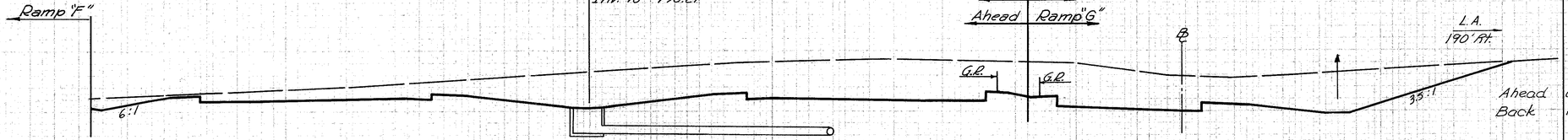
80328
785+00
795.6



790

803.16
784+50
801.8

Sta. 784+12 ℄
I-8 Std. C.B. No. 4
F.L. Grate 800.21
Inv. 18" 796.21



800

I-1 150' x 18" Pipe Class V-1 @ 1.0 %

803.14
784+00
806.5

Sta. 784+00 Rt.
Std. Roadway Ditch is continued to
Ramp G Sta. 4+60.5 Rt.

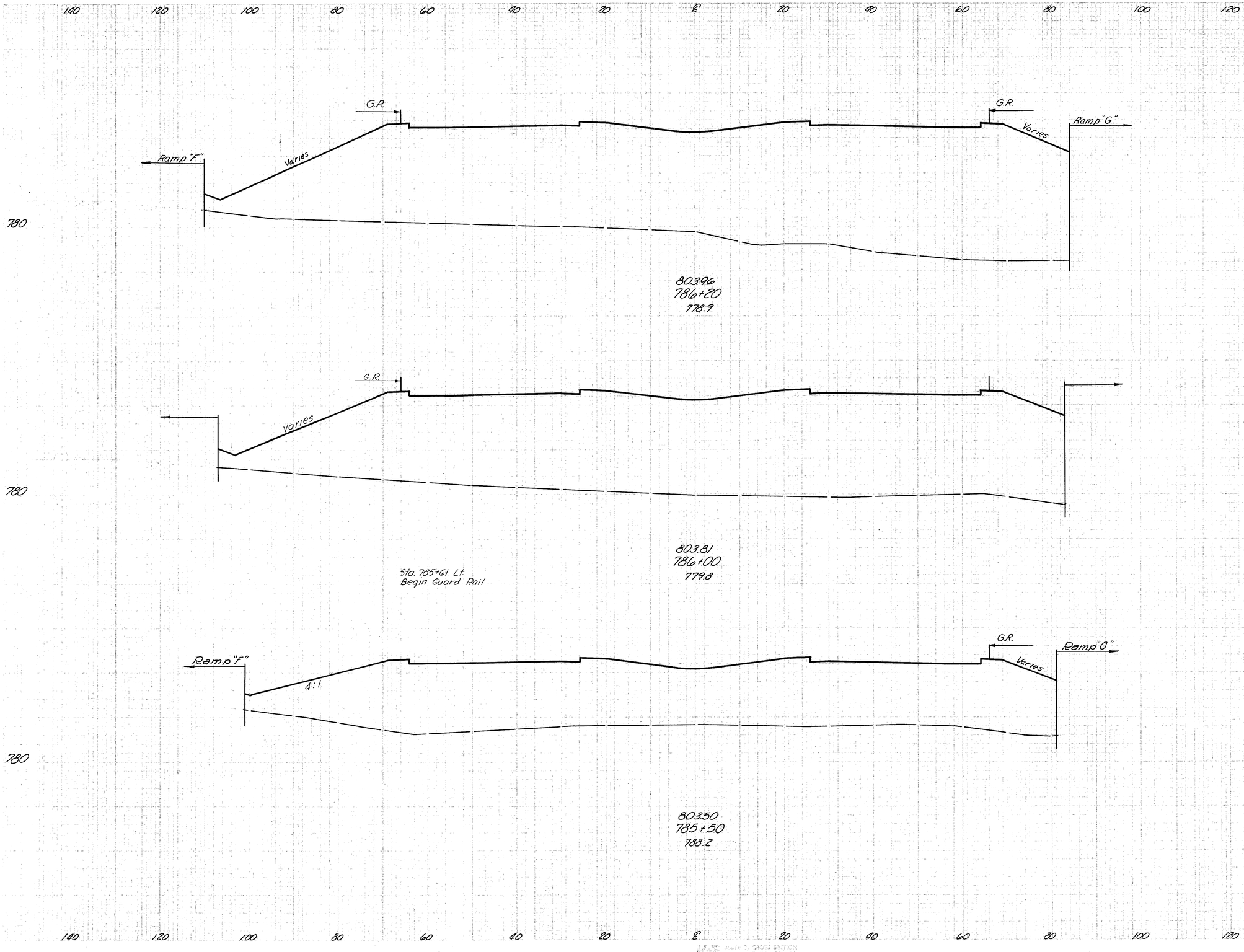
Sta. 783+91.75 Rt.
Begin Guard Rail

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	1359		
		125	1613
135	383		
		700	355

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

216
445

HAMILTON COUNTY
HAM.71-13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	1401		
		0	3031
0	3782		
		0	5308
0	2599		
		0	3665

STA. 785+50 – STA. 786+20

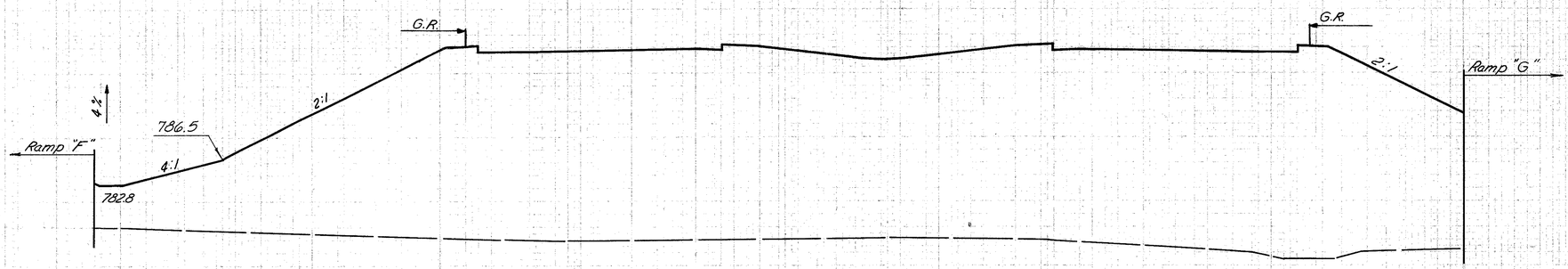
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

217
445

HAMILTON COUNTY
HAM. 71-13.05

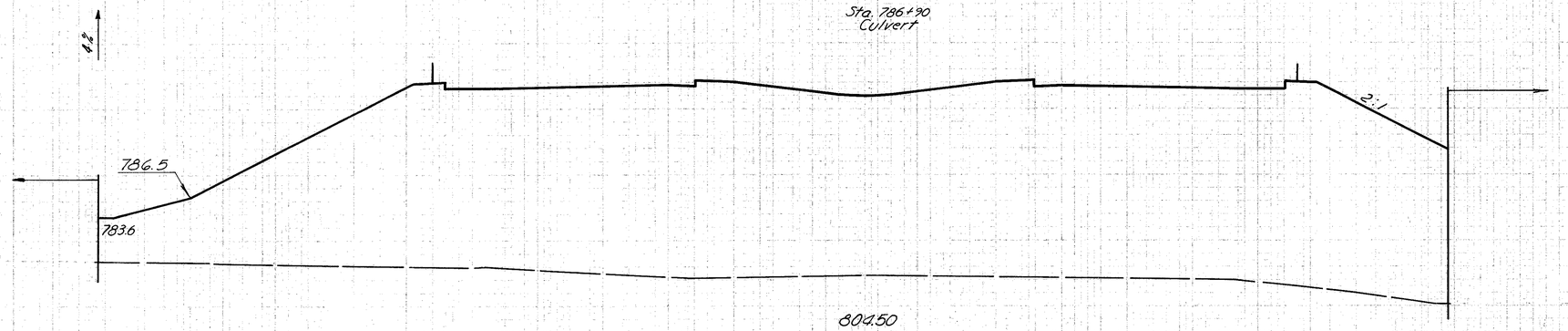
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

770

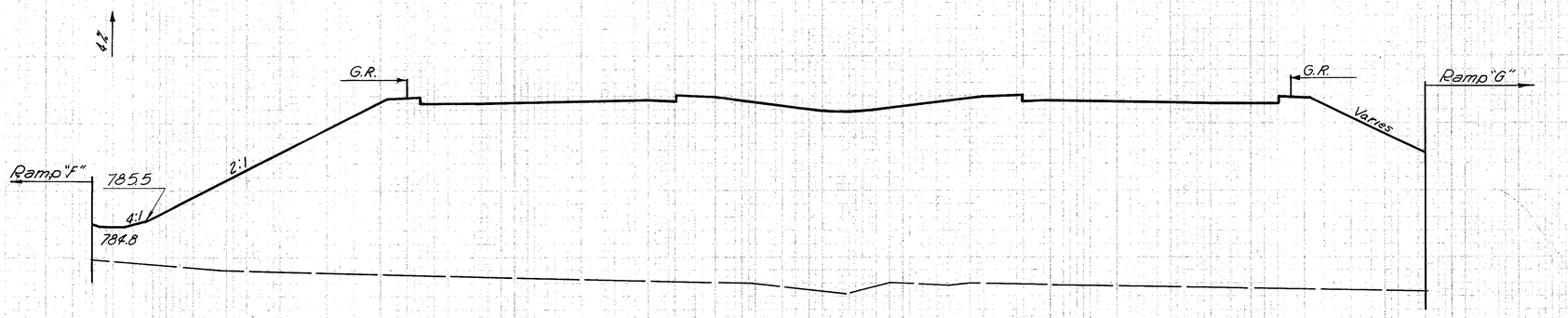


804.70
787+00
774.3

Sta. 786+90
Culvert



804.50
786+80
774.7



804.21
786+50
774.3

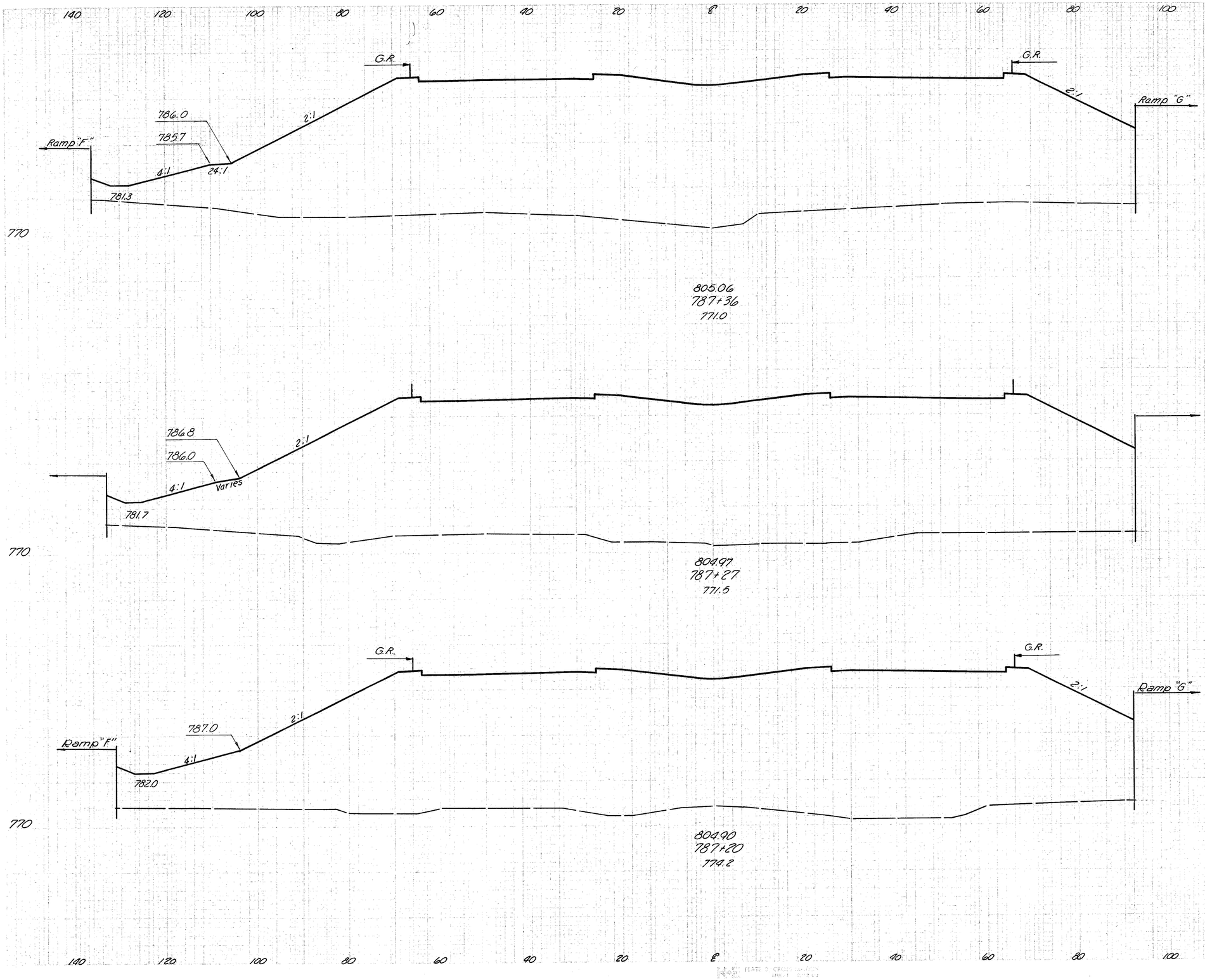
END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	5621		
		0	4049
		0	5311
		0	5798
		0	5126
		0	5293

STA. 786+50 – STA. 787+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

218
445

HAMILTON COUNTY
HAM-71-13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	553		
		0	1893
0	582		
		0	1511
0	583		
		0	1243

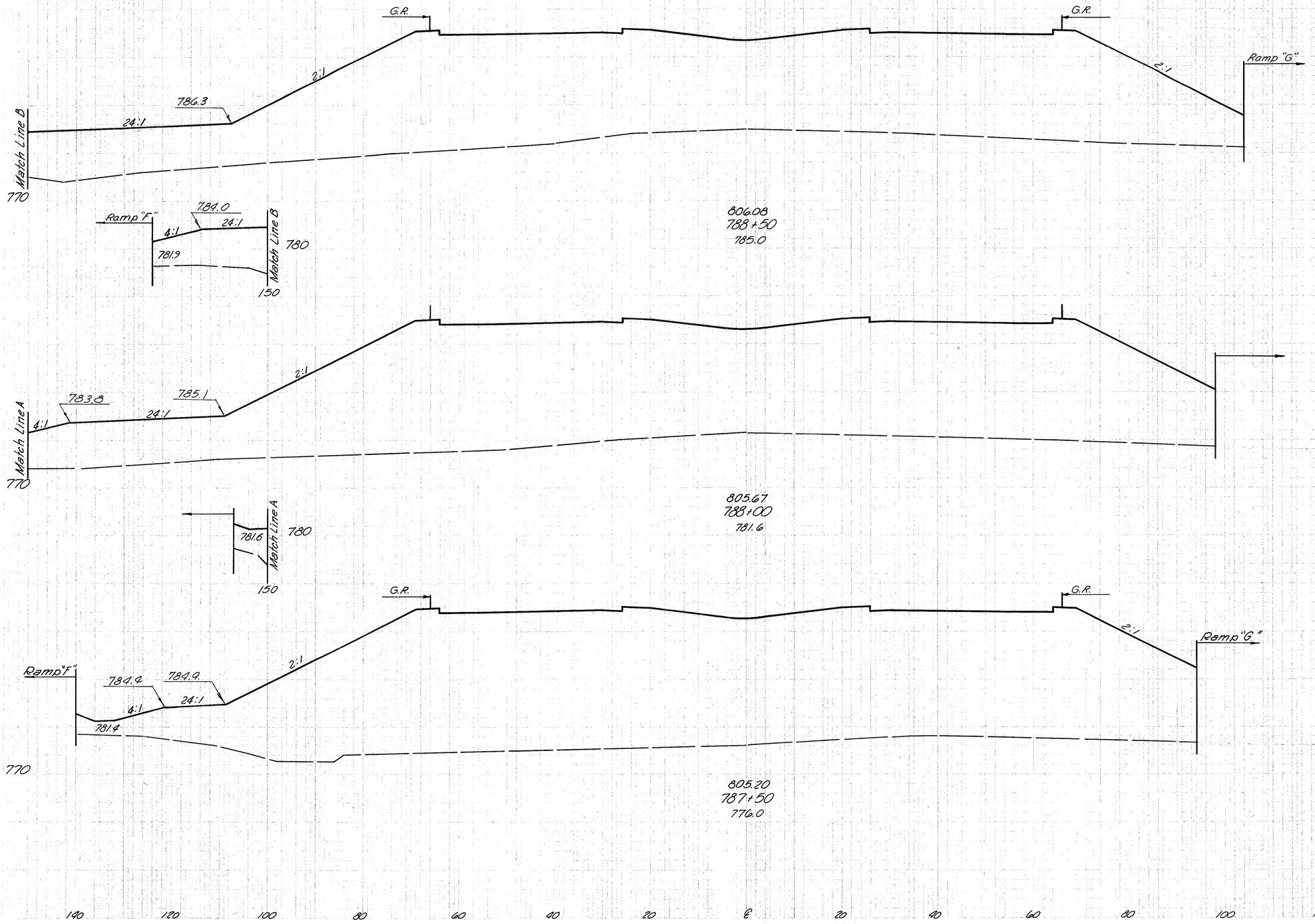
STA. 787+20 – STA. 787+36

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

219
445

HAMILTON COUNTY
HAM. 71-13.05

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



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	4783		
		0	9124
0	5071		
		0	9719
0	5425		
		0	2842

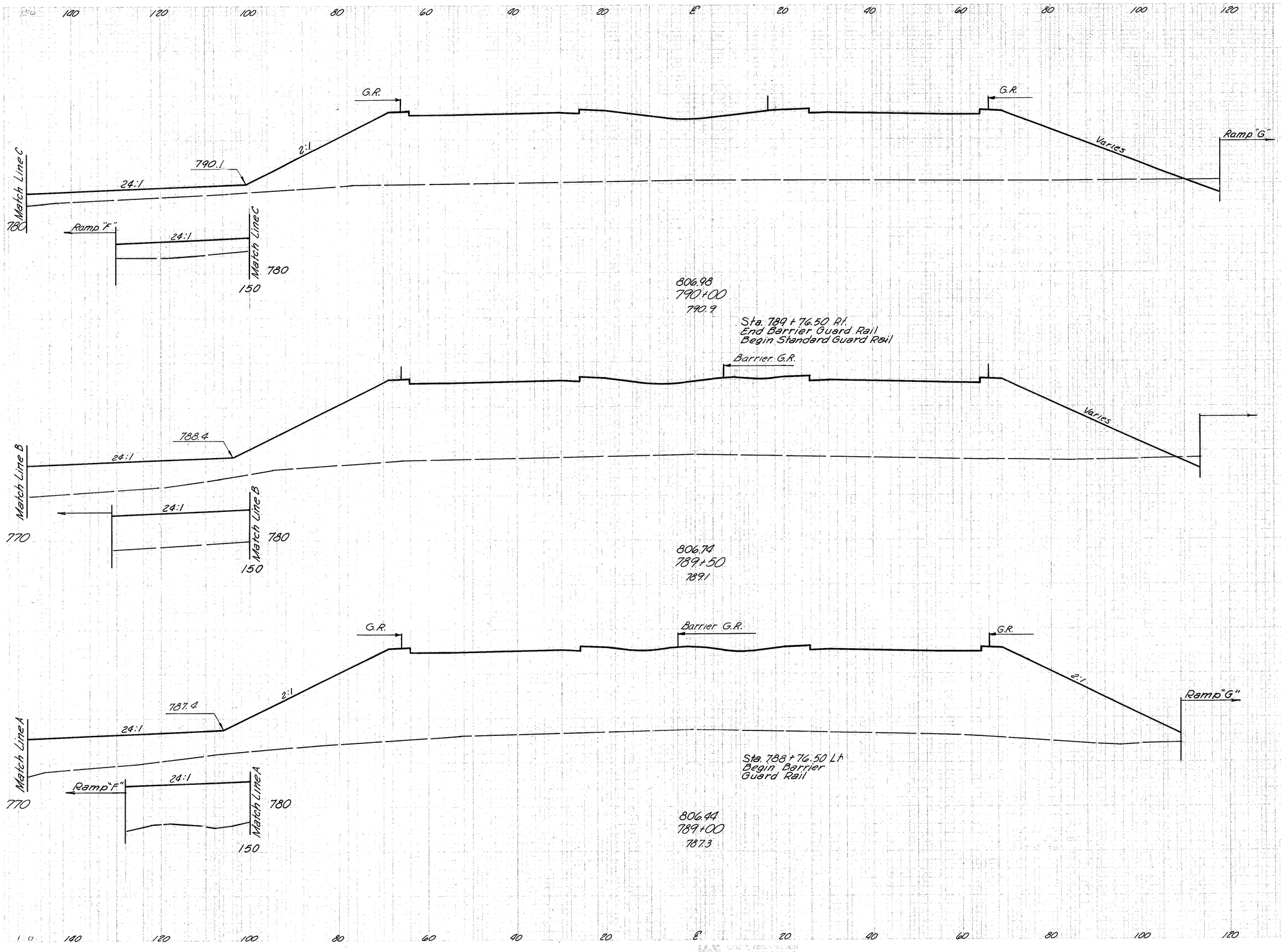
STA. 787+50 - STA. 788+50

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

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

220
245

HAMILTON COUNTY
HAM-71-13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
13	2912		
		18	6139
6	3623		
		6	7217
0	4116		
		0	8240

STA. 789+00 - STA. 790+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

221
445

HAMILTON COUNTY
HAM. 71-13.05

END AREA		VOLUME	
CUT	FILL	CUT	FILL
Back Only	321	1373	
		380	3304
89	2195		
		94	4766

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

790

PFEIFFER RD. BRIDGE

Sta. 791+11.00 Lt.
End Guard Rail

807.35
791+50
800.5

G.R.

2:1

793.0

Match Line B

Sta. 790+67
Median Slope Line

Ramp "G"
Pfeiffer Rd.

780

Pfeiffer Rd.
Ramp "F"

Match Line B

790

150

807.28
791+00 (Back Only)
796.4

Sta. 790+67
I-8 Std. C.B. No. 4
F.L. Grate 804.29
Inv. 15" 800.29

Sta. 790+89.00 Rt.
End Median Guard Rail

Sta. 790+79.25 Rt.
End Guard Rail

G.R.

G.R.

Ramp "C"

Varies

2:1

791.9

Match Line A

11.5%

See Ramp "G"
Cross Section
Sta. 10+00

780

Ramp "F"

Match Line A

790

150

807.16
790+50
793.7

I-1 160'x15" Pipe Class U-1 @ 11.5%

I-1 74'x18" Cl. U-1 @ 1.1%

Sta. 10+20 Ramp "G" 96' Lt.
I-8 Std. C.B. No. 5
F.L. Grate 784.7
Inv. 18" 781.9
Inv. 15" 781.9

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

STA. 790+50 - STA. 791+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

222
445

HAMILTON COUNTY
HAM. 71-13.05

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

Sta. 793+15.25 Lt.
Begin Guard Rail

Sta. 793+06.25 Lt.
Begin Median
Guard Rail

Sta. 793+29
I-8 C.B. No. 4
F.L. Grate 804.20
Inv. 15" 800.20

G.R.

Ramp "I"

Ahead Only

12.7%

See Ramp "I" Cross Sections

I-1 145'x15" Pipe Class J-1 @ 12.7%

Match Line

790

Ramp "H"
Pfeiffer Rd.

800

Match Line

150

Sta. 792+86.50 Rt.
Begin Guard Rail

807.20
793+00 (Ahead Only)
798.7

Sta. 1+43 Ramp "I" 37' Lt.
I-8 C.B. No. 4
F.L. Grate 783.8
Inv. 15" 781.75
Inv. 24" 781.00

I-1 66'x24" Pipe Class J-1 @ 1.66%

790

BRIDGE

792+50
799.8

792+00
800.1

790

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

END AREA		VOLUME	
CUT	FILL	CUT	FILL
772	1222		

STA. 792+00 – STA. 793+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

223
445

HAMILTON COUNTY
HAM. 71-13.05

END AREA		VOLUME	
CUT	FILL	CUT	FILL
220	939		
		419	1903
232	1116		
		498	2041
306	1088		
		998	2139

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

Sta. 794+65.25 Lt.
End Guard Rail

Ramp "H"
802.2
4:1
G.R.
Barrier G.R.
G.R.
Ramp I
24:1
3:1
790

806.54
794+50
799.9

Sta 794+18.75 Lt.
End Std. Guard Rail
Begin Barrier Guard Rail

Match Line B
801.7
24:1
Varies
790

Ramp "H"
Match Line B
800
24:1
150

806.82
794+00
799.1

Match Line A
801.2
4:1
G.R.
G.R.
G.R.
Ramp I
24:1
2.5:1
790

Ramp "H"
Match Line A
800
24:1
150

807.04
793+50
799.2

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

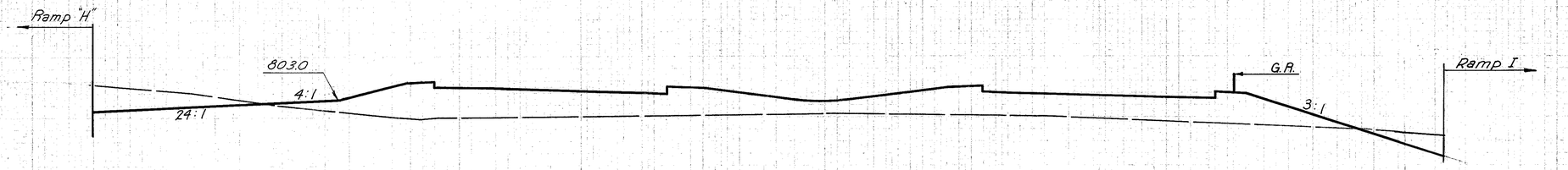
STA. 793+50 - STA. 794+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

224
445

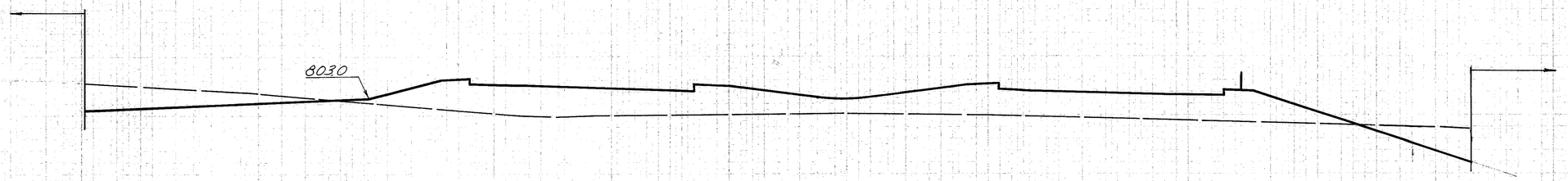
HAMILTON COUNTY
HAM. 71-13.05

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



790

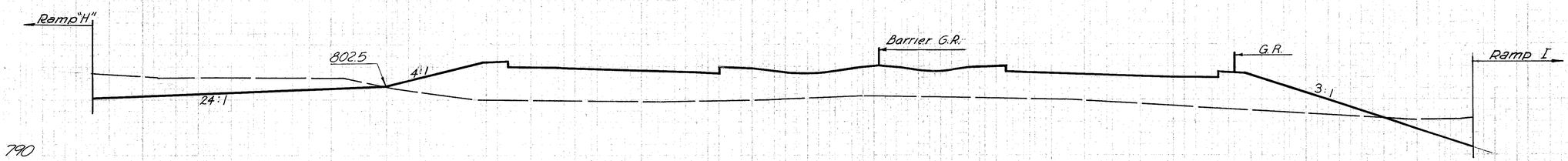
805.35
796+00
800.7



790

805.80
795+50
800.3

Sta. 795+18.75 Rt.
End Barrier Guard Rail



790

806.20
795+00
800.5

Village of Montgomery

Sta. 785+00 to	Sta. 795+00
Excavation	2,779 C.Y.
Embankment	94,518 C.Y.
Embankment + 15%	108,697 C.Y.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
88	681		
		229	1281
159	702		
		309	1474
175	890		
		366	1693

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

STA. 795+00 - STA. 796+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

225
445

HAMILTON COUNTY
HAM. 71-13.05

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

Ramp "H"

802.0

4:1

24:1

G.R.

Ramp I

3:1

780

804.57
796+75
798.1

802.5

780

804.84
796+50
802.0

Ramp "H"

802.9

4:1

24:1

G.R.

Ramp I

3:1

780

805.10
796+25
800.9

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

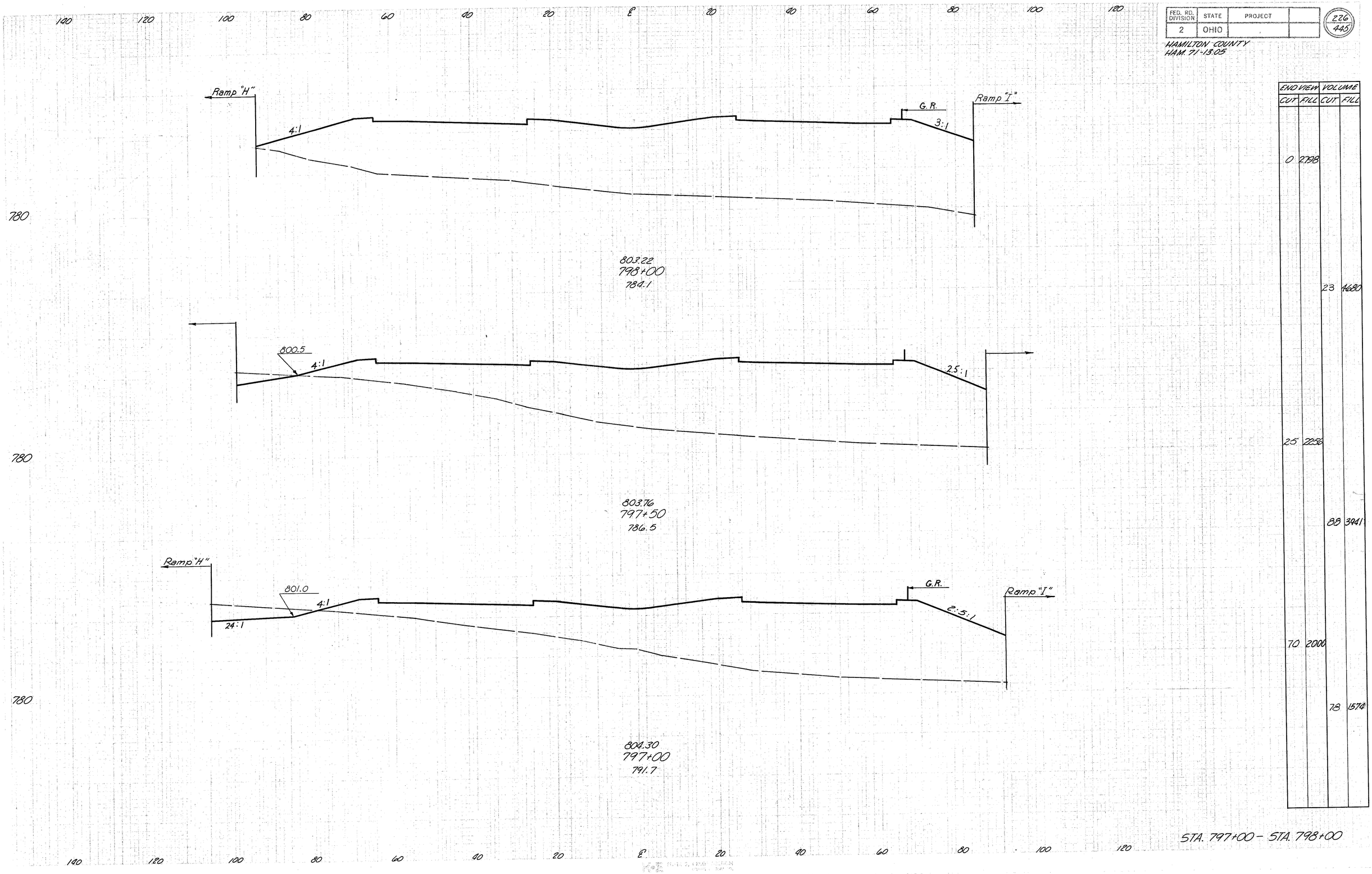
END AREA		VOLUME	
CUT	FILL	CUT	FILL
98	1400		
		57	1001
26	763		
		29	596
36	525		
		57	558

STA. 796+25 – STA. 796+75

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

226
445

HAMILTON COUNTY
HAM. 71-13.05



END VIEW		VOLUME	
CUT	FILL	CUT	FILL
0	2798		
		23	4680
25	2256		
		88	3941
70	2000		
		78	1574

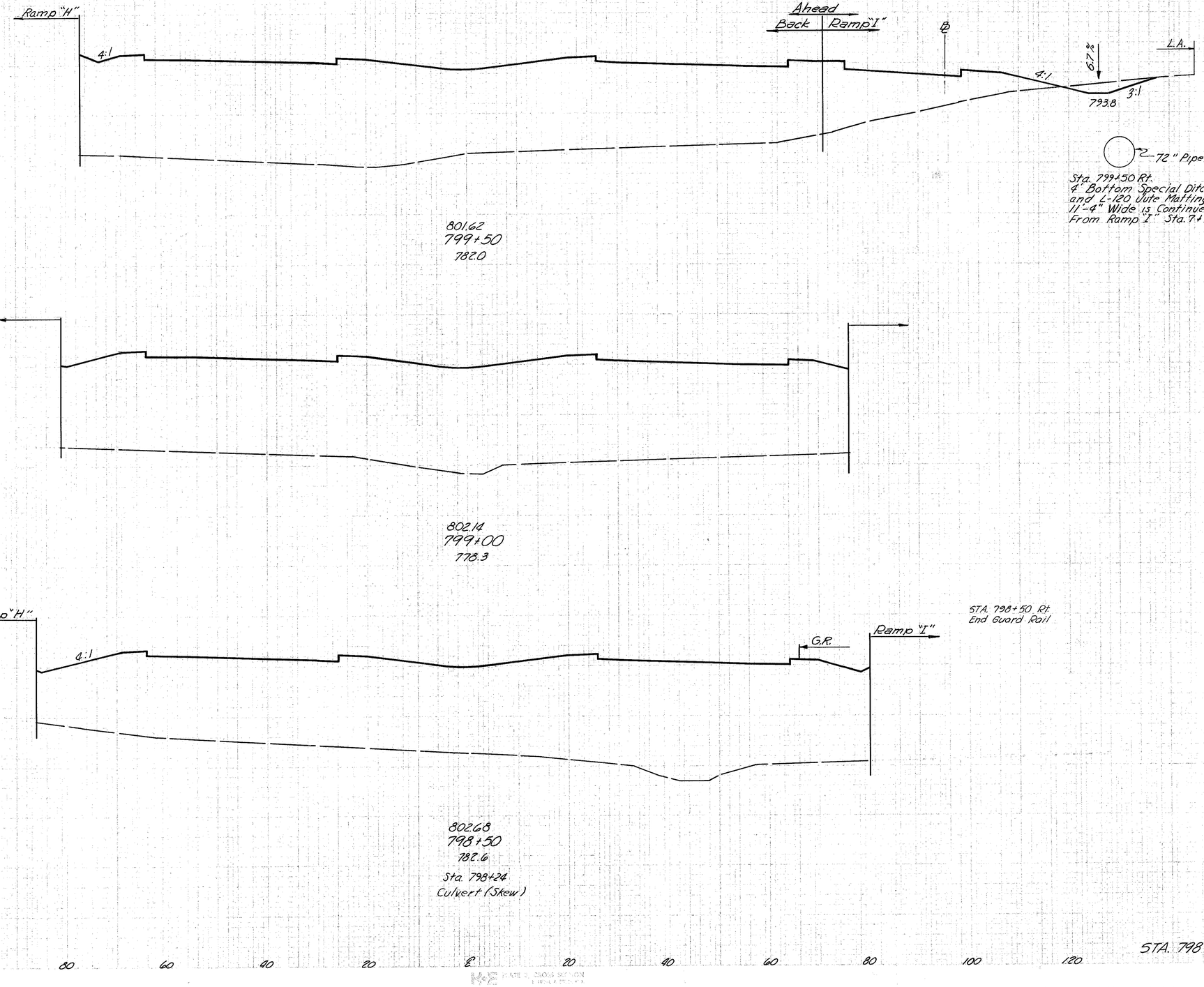
STA. 797+00 – STA. 798+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

227
445

HAMILTON COUNTY
HAM. 71-13.05

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



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Ahead	25	3031		
Back	0	2703		
			0	5340
			0	3064
			0	5645
	0	3033		
			0	5399

770

770

770

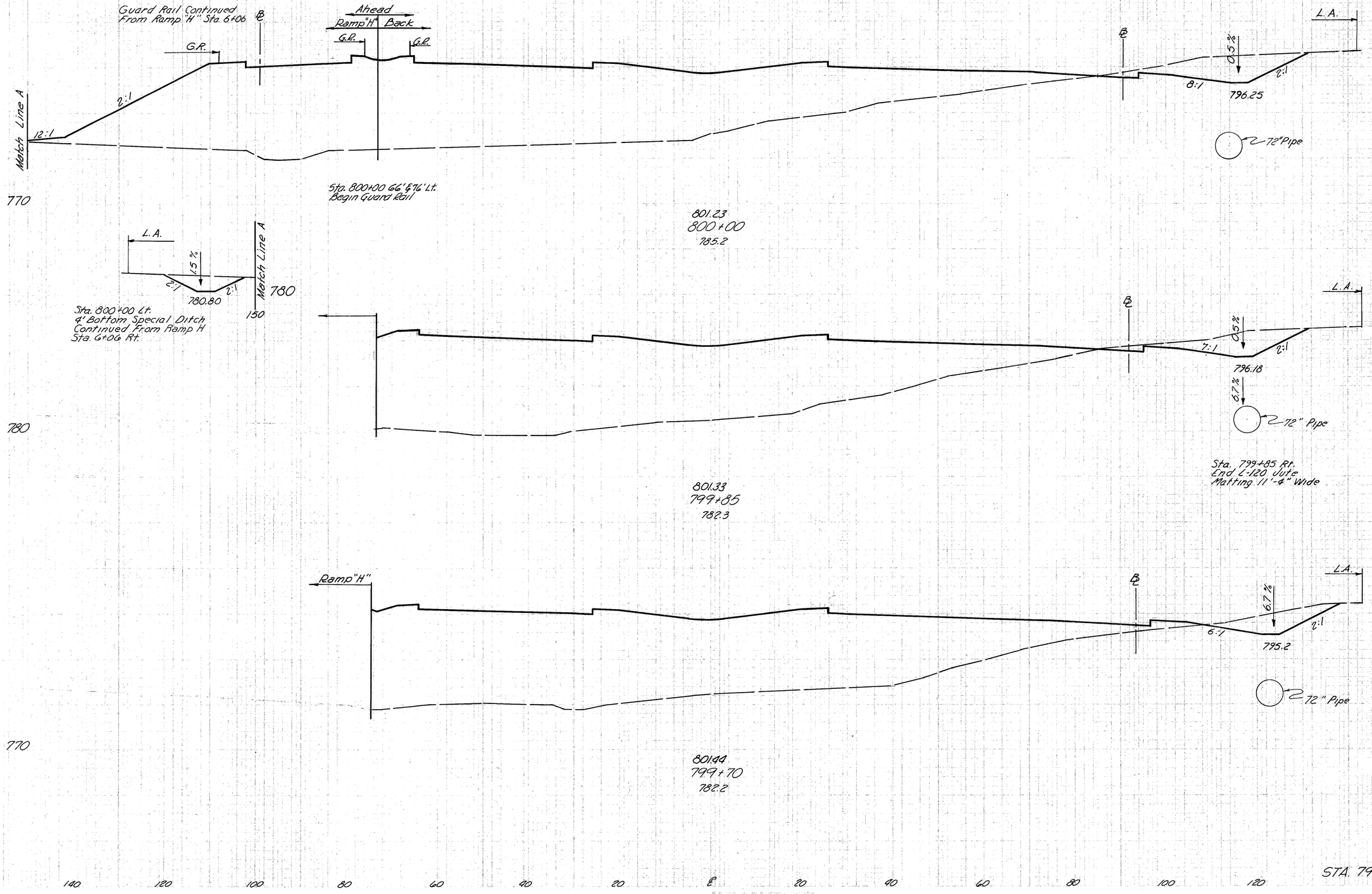
STA. 798+50 - STA. 799+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

228
445

HAMILTON COUNTY
HAM 71-13.05

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



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Ahead	179	2990		
Back	144	1908		
			74	1178
			123	2330
			63	1393
			102	2683
			47	2116

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

STA. 799+70 - STA. 800+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

229
445

HAMILTON COUNTY
HAM 71-13.05

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

L. A.
162' Lt.

G.R.

2:1

2:1 2:1 12:1

784.55

3.0 %

780

℄

℄

G.R.

8:1

2:1

72" Pipe

Sta. 801+50 Rt
Begin 4' Bottom Special Ditch

Sta 9+74.90 Ramp "I"
Begin Guard Rail

800.94
801+50
788.6

END AREA		VOLUME	
CUT	FILL	CUT	FILL
410	2007		
		1191	4621

L. A.

Match Line B

780

150

℄

Sta. 801+08 ℄
I-8 Std. C. B. No. 4
F.L. Grate 797.95
Inv 18" 793.95

L. A.

℄

2:1

Match Line B

782.75

3.0 %

770

'I-1 70' x 18" Pipe @ 1.5% Cl. J-1

72" Pipe

800.89
800+89.39
789.0

651	2110		
		834	3162

Sta 9+10 20' Lt. Ramp "I"
I-8 C.B. No. 6
F.L. Grate 797.52
F.L. 18" 792.90

Sta. 800+50, 97' Rt.
I-8 M.H. No. 2 (Mod. As Per Plan) (No Drop Pipe)
Top 798.08
Inv. 18" 792.00
Inv. 72" 780.00

L. A.

℄

8:1

2:1

796.50

0.5 %

72" Pipe

I-1 45' x 18" Pipe
Class J-1 @ 2%

Match Line A

G.R.

℄

2:1

12:1

2:1

770

L. A.

3.0 %

2:1

781.55

Match Line A

780

150

15%

Sta. 800+50 Lt.
Begin L-120 Jute Matting 7'-8" Wide

Sta. 800+25 66' Lt.
End Guard Rail

800.98
800+50
786.6

Sta. 800+50 Rt.
End 4' Bottom Special Ditch
End I-1 230' x 72" Pipe M-6.6 (d)
Cl B-1 @ 0.8%
Begin I-1 174' x 72" Pipe M-6.6 (d)
Cl B-1 @ 0.8%

492	2235		
		621	4238

STA. 800+50 - STA. 801+50

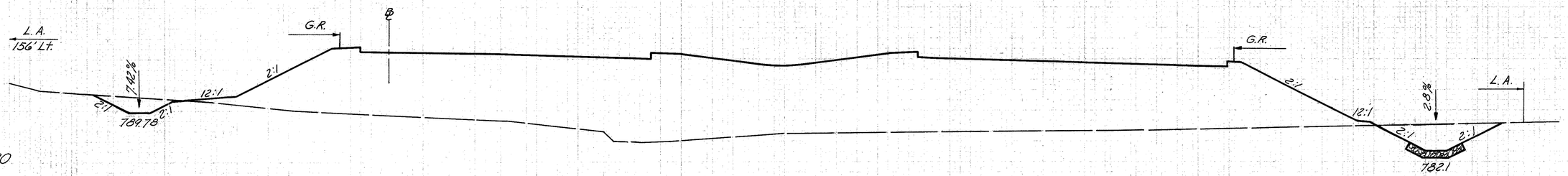
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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

230
A.F.S.

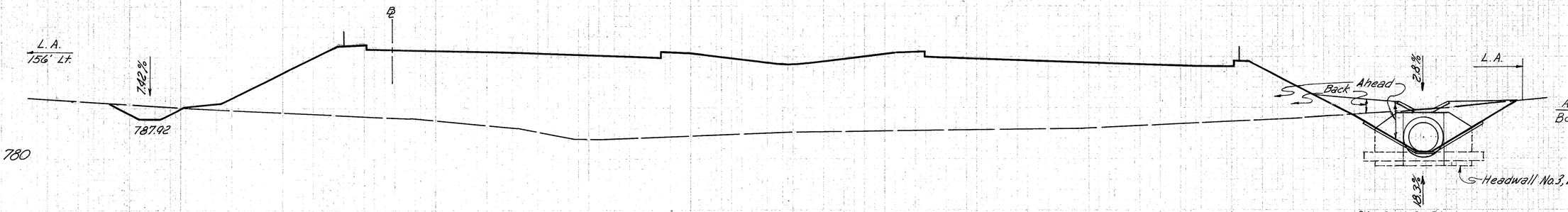
HAMILTON COUNTY
HAM. 71-13.05

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



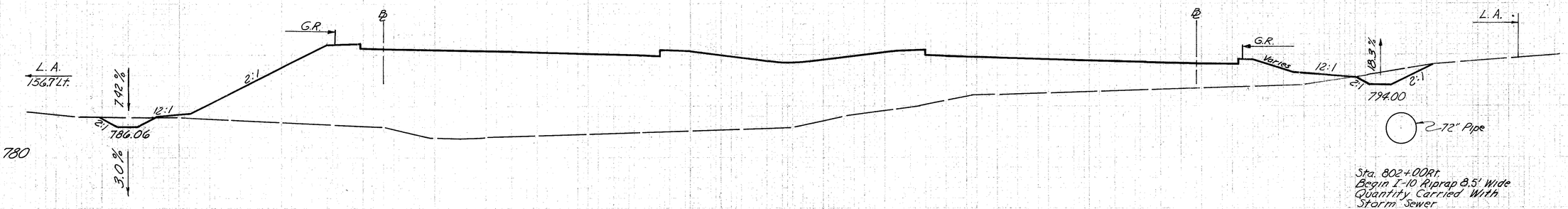
801+49
802+50
785.7

Sta. 802+45
End I-10 Riprap 11' Wide
Begin I-10 Dumped Rock 10'x1'-6"



801+30
802+25
785.1

Sta. 802+25 Rt.
End 4' Bottom Special Ditch
End I-10 Riprap 8.5' Wide
Begin 4' Bottom Special Ditch
Begin I-10 Riprap 25' Wide
End I-1 174'x 72" Pipe Inv. 781.30
Sec. M-6.6 (d) Cl. B-1 @ 0.8%



801+14
802+00
786.0

Sta. 802+00 Rt.
Begin Ramp Taper

Sta. 802+00 Rt.
Begin Ramp Taper
Quantity Carried With
Storm Sewer

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	109	2730		
			133	2587
Ahead	178	2859		
Back	30	2859		
			31	2419
	38	2366		
			415	4049

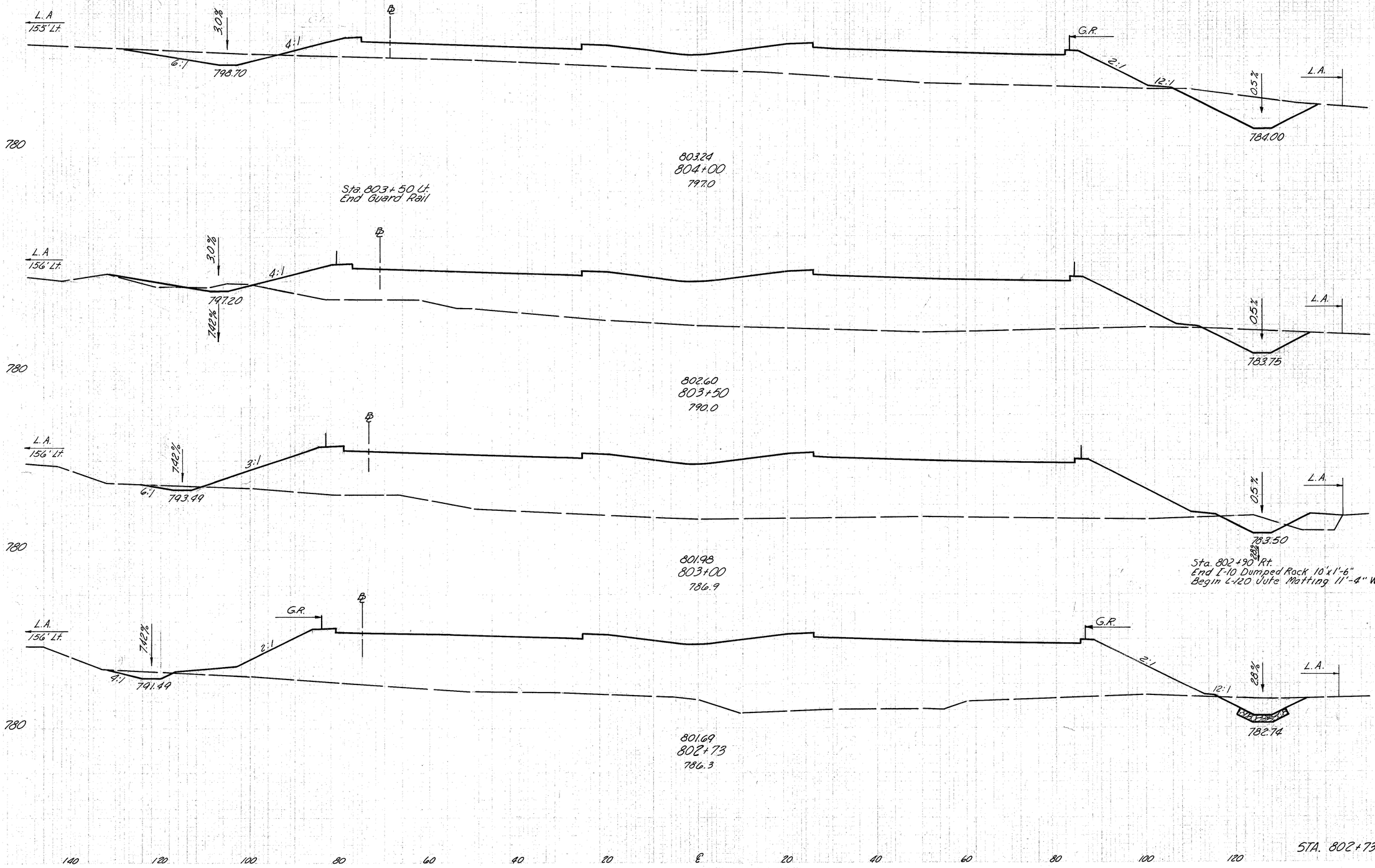
STA. 802+00 - STA. 802+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

231
745

HAMILTON COUNTY
HAM. 71-13.05

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



END AREA		VOLUME	
CUT	FILL	CUT	FILL
179	943		
		243	2664
83	1934		
		117	4104
43	2498		
		54	2581
64	2064		
		74	2297

STA. 802+73 – STA. 804+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

232
445

HAMILTON COUNTY
HAM. 71-13.05

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

790

L.A. 155' Lt.
6:1
2.6%
4:1
801.67
℄
805.36
805+66
794.9
G.R.
2:1
12:1
2:1
0.5%
2:1
L.A.
784.83

L.A. 155' Lt.
2.6%
802.60
3.0%
℄
804.90
805+30
801.7
0.5%
L.A.
784.65

L.A. 155' Lt.
3.0%
801.70
℄
804.52
805+00
802.0
0.5%
L.A.
784.5

L.A. 155' Lt.
3.0%
℄ Ramp "H"
6:1
4:1
800.20
803.88
804+50
799.5
G.R.
2:1
12:1
2:1
0.5%
2:1
L.A.
784.25

Village of Montgomery

Sta. 795+00 to Sta. 805+00	
Excavation	5,376 C.Y.
Embankment	71,854 C.Y.
Embankment +15%	82,632 C.Y.

Sta. 804+50
End L-120 Jute Matting 7'-8" Wide

END AREA		VOLUME	
CUT	FILL	CUT	FILL
74	1823		
		128	1591
118	564		
		149	563
		150	450
		291	950
164	576		
		318	1406

STA. 804+50 - STA. 805+66

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	[redacted]	

233
745

HAMILTON COUNTY
HAM. 71-13.05

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

790

L.A. 153' Lt.

1.0%

6:1 8:1

Sta. 807+50 Lt.
Begin 4' Bottom Special Ditch

G.R.

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

3%

L.A.

789.00

807.72
807+50
795.3

L.A. 153' Lt.

6:1 8:1

6.0%

Sta. 807+00
End 4' Bottom Special Ditch

L.A.

3%

787.5

807.08
807+00
794.6

2.5%

L.A. 154' Lt.

6.0%

4:1

2:1

800.85

6.0%

2.6%

Sta. 806+30, 105' Lt
I-8 Std. No 2-6 C.B.
(Mod. as per Plan)

806.30
806+39
796.5

Sta. 806+30
Culvert

℄ Ramp "H"

L.A.

2.5%

785.98

L.A. 154' Lt.

6:1 2.6% 4:1

800.78

G.R.

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

2.5%

L.A.

785.00

805.80
806+00
794.2

0.5%

Sta. 806+00 Rt.
End L-120 Jute Matting 11'-4" Wide
Begin I-10 Dumped Rock 10' x 1'-6"

END AREA		VOLUME	
CUT	FILL	CUT	FILL
79	1427		
		215	2631
153	1415		
		334	3218
143	1434		
		160	2341
79	1808		
		96	2286

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

STA. 806+00 - STA. 807+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM. 71 - 13.05

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

L.A.
152' Lt.
0.5%
6:1
4:1
G.R.
804.92
790
810.28
809+50
798.5
G.R.
2:1
12:1
0.8%
2:1
2:1
L.A.
792.82

L.A.
153' Lt.
0.5%
805.17
1.0%
790
Sta. 809+00 Lt.
End Ramp Taper
End Shoulder Transition
809.64
809+00
797.3
L.A.
0.8%
792.42

L.A.
153' Lt.
1.0%
G.R.
805.57
790
Sta. 808+87.50 Lt.
Begin Guard Rail
809.13
808+60
796.2
L.A.
0.8%
792.10
2.66%

L.A
153' Lt.
1.0%
4:1
6:1
806.17
790
Sta. 808+00 Lt.
Begin Ramp Taper
Begin Shoulder Transition
808.36
808+00
795.1
G.R.
2:1
12:1
L.A.
2.66%
2:1
2%
790.50
3%

END AREA		VOLUME	
CUT	FILL	CUT	FILL
248	1504		
		346	3042
126	1781		
		119	2603
35	1733		
		96	3772
51	1662		
		120	2860

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

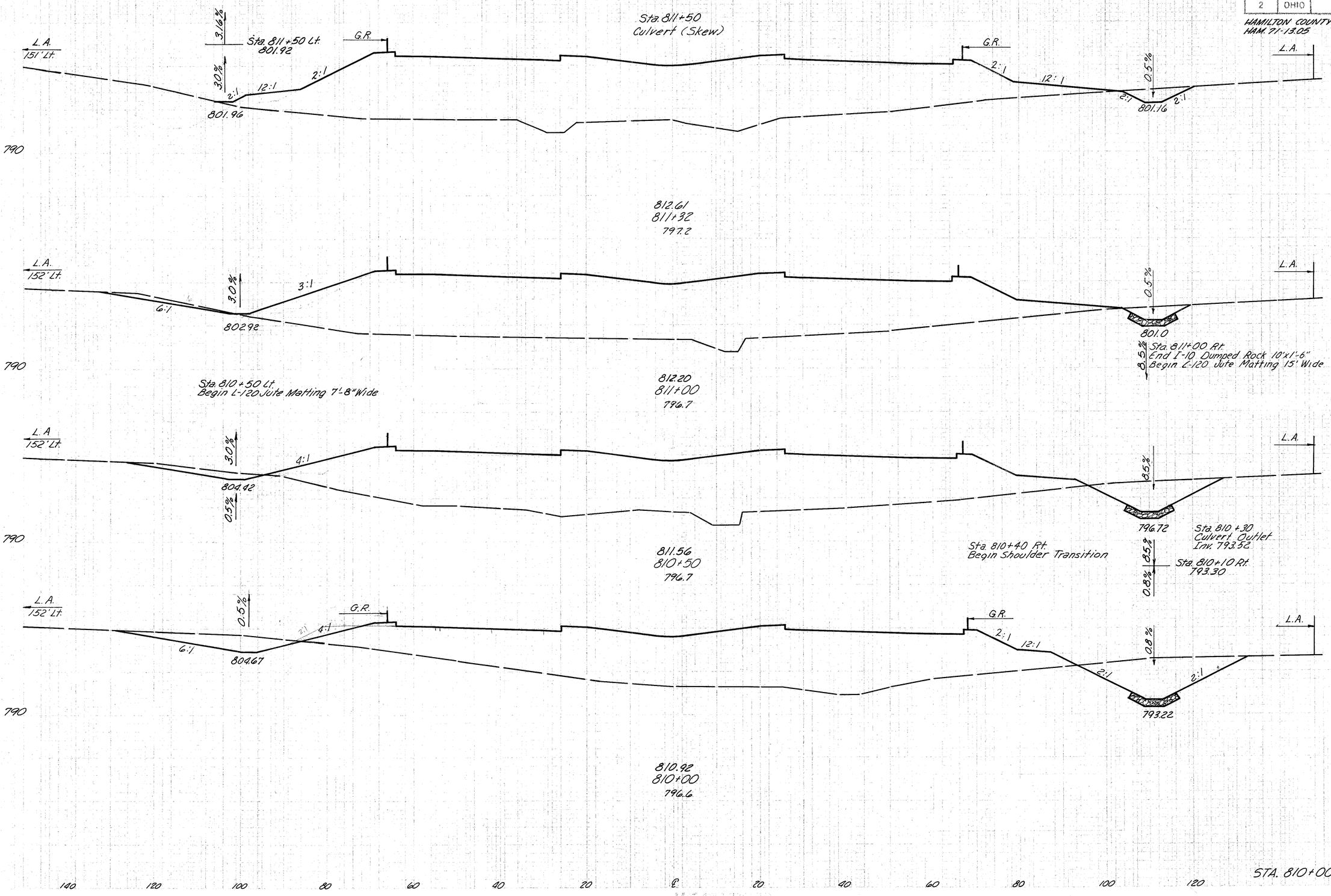
STA. 808+00 - STA. 809+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

235
445

HAMILTON COUNTY
HAM. 71-13.05

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



END AREA		VOLUME	
CUT	FILL	CUT	FILL
35	2220		
		53	2632
54	2222		
		196	3934
158	2027		
		431	3478
308	1729		
		515	2993

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

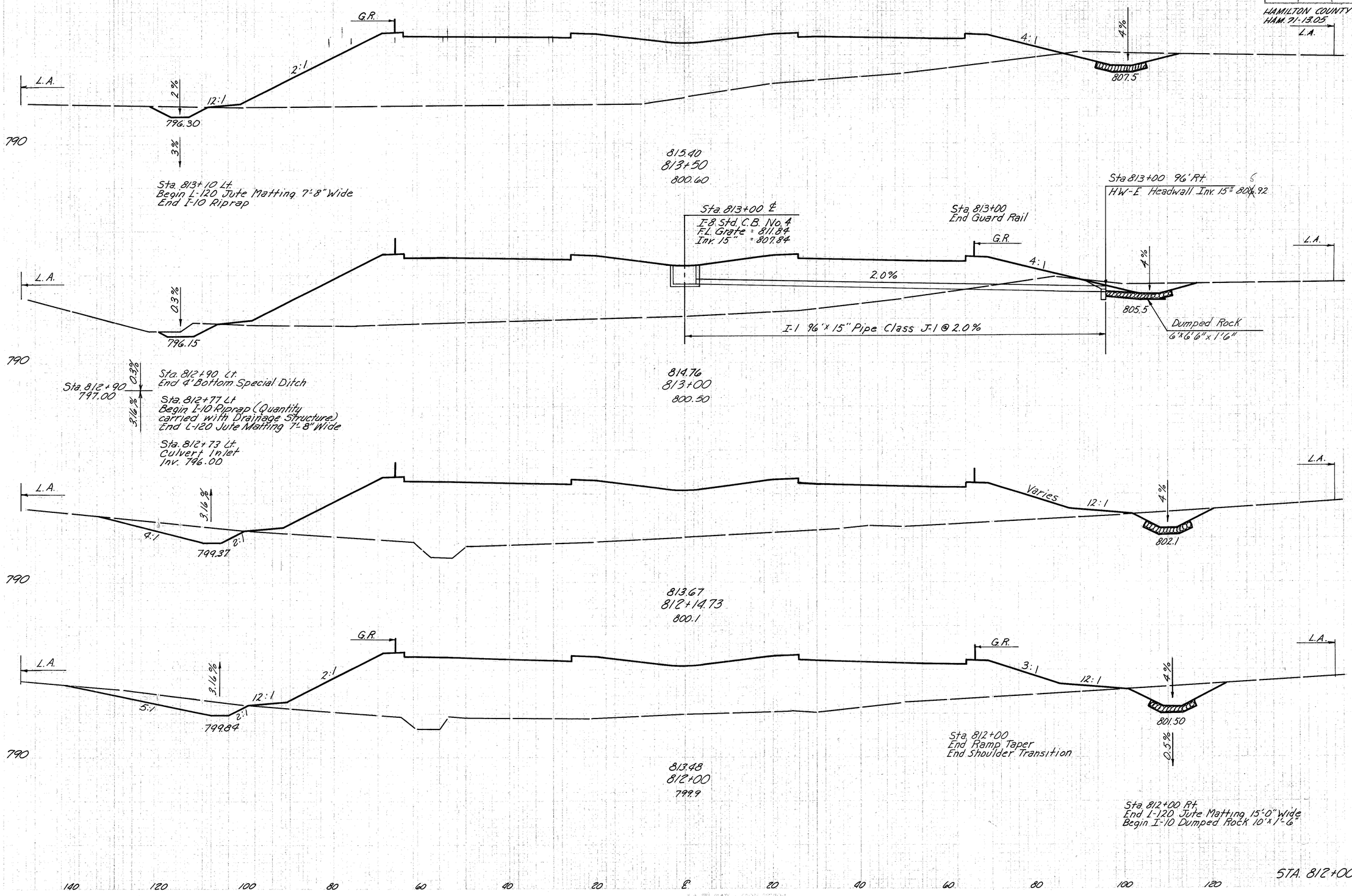
STA. 810+00 - STA. 811+32

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM. 71-13.05

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



END AREA		VOLUME	
CUT	FILL	CUT	FILL
66	2051		
		105	3738
47	1986		
		241	6199
106	1940		
		65	1063
133	1957		
		212	5260

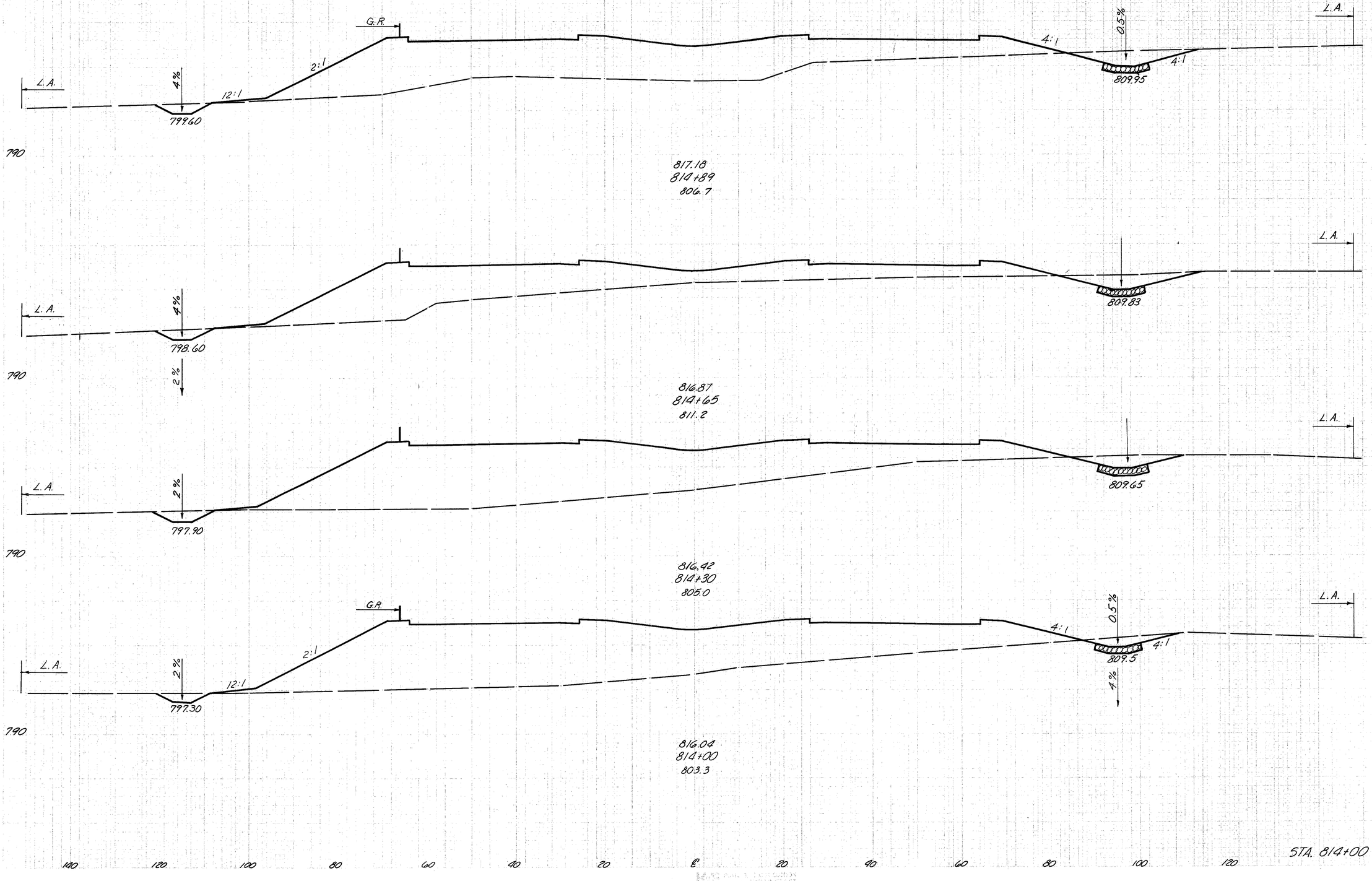
STA. 812+00 - STA. 813+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

237
445

HAMILTON COUNTY
HAM-71-13.05

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



END AREA		VOLUME	
CUT	FILL	CUT	FILL
75	1250		
		67	964
70	918		
		83	1628
58	1393		
		52	1874
35	1780		
		94	3547

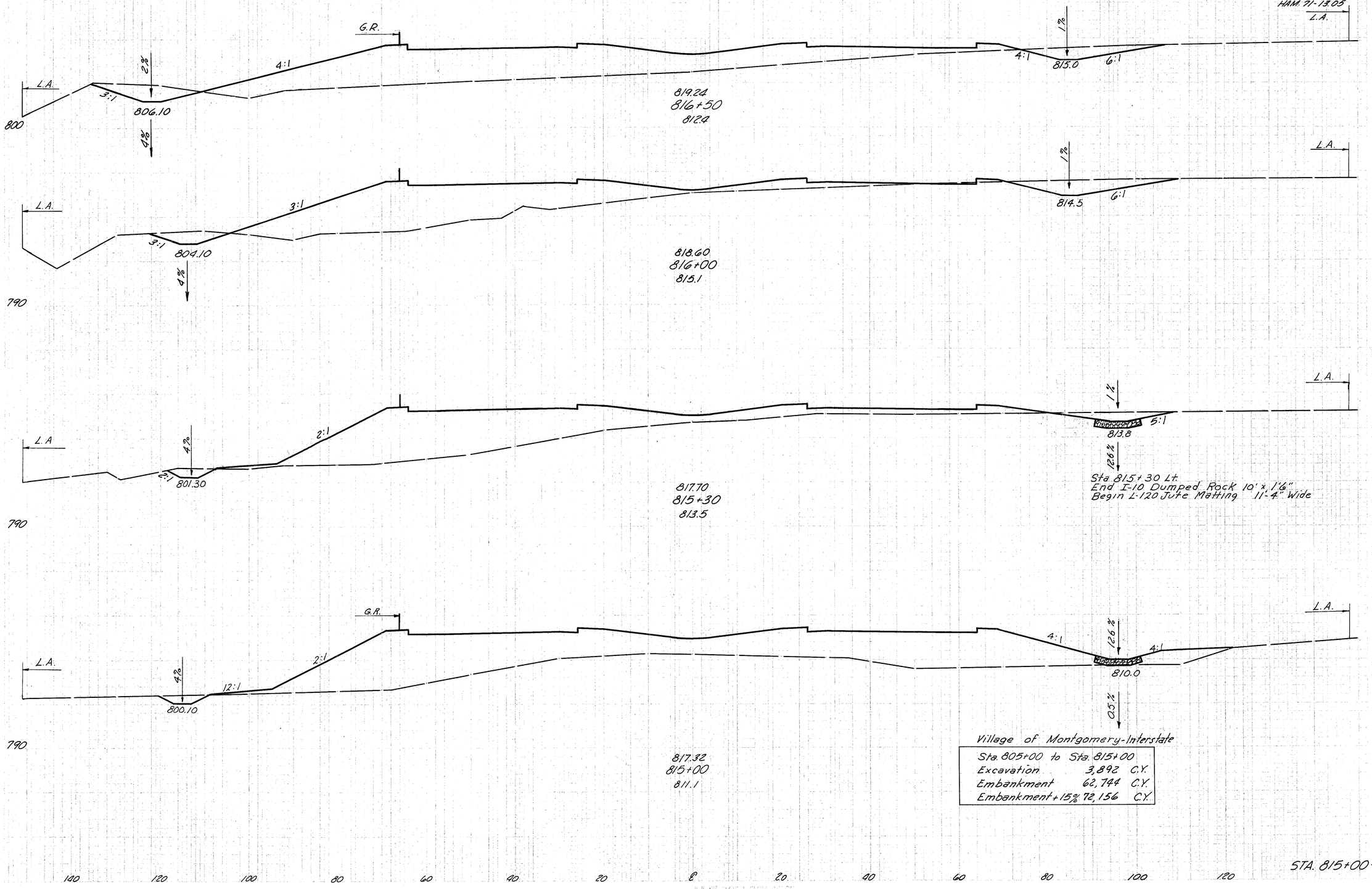
STA. 814+00 – STA. 814+89

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

238
425

HAMILTON COUNTY
HAM. 71-13.05

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



END AREA		VOLUME	
CUT	FILL	CUT	FILL
110	885		
		208	1495
115	730		
		192	1973
33	792		
		23	1182
12	1335		
		18	527

Village of Montgomery-Interstate

Sta. 805+00 to Sta. 815+00		
Excavation	3,892	C.Y.
Embankment	62,744	C.Y.
Embankment + 15%	72,156	C.Y.

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

STA. 815+00 - STA. 816+50

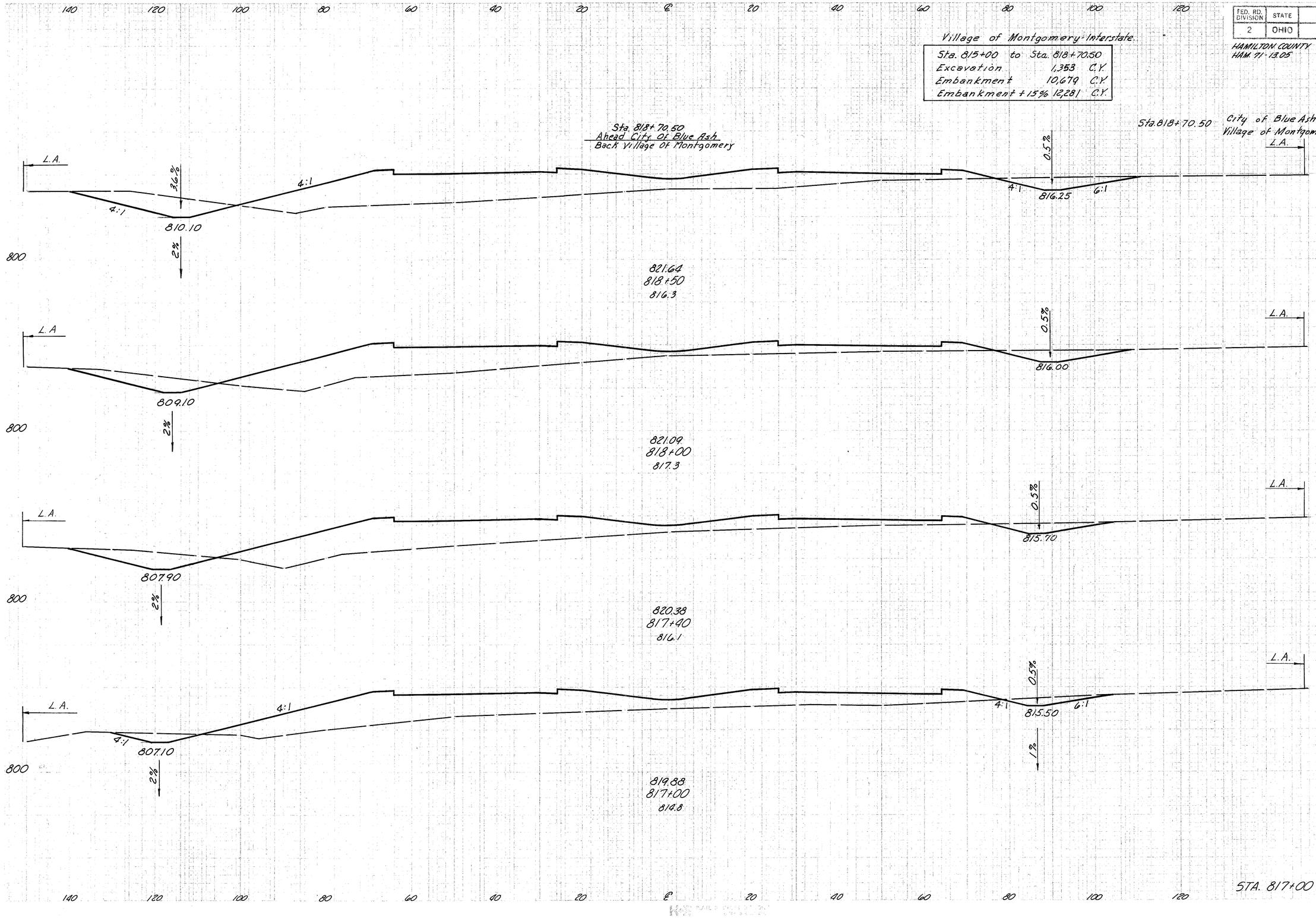
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM-71-13.05

Village of Montgomery - Interstate.

Sta. 815+00	to	Sta. 818+70.50	
Excavation		1,353	C.Y.
Embankment		10,679	C.Y.
Embankment + 15%		12,281	C.Y.



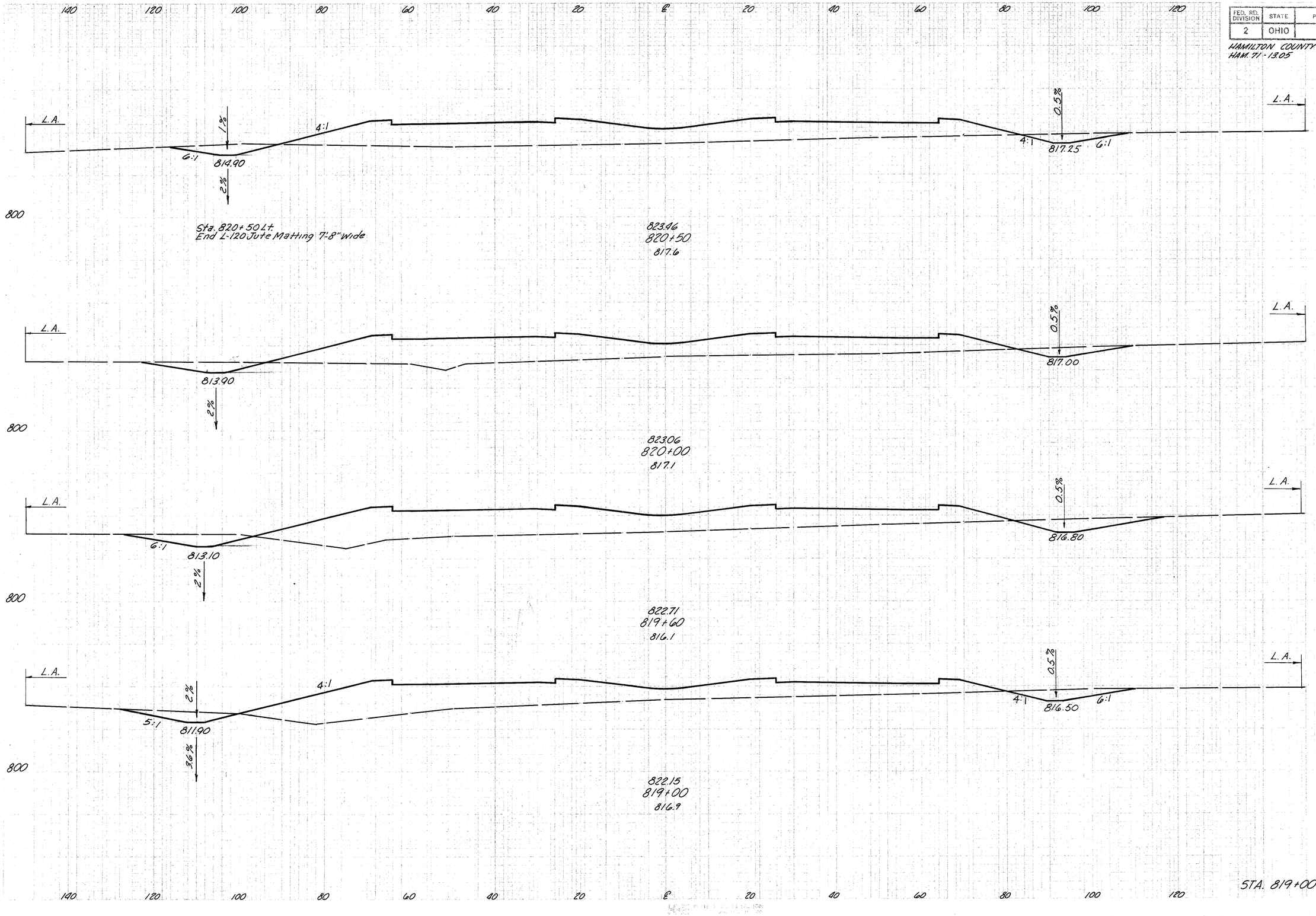
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	135	776		
	135	776		
			115	591
	169	780		
			268	1322
	120	648		
			263	1409
	117	690		
			129	1087
	57	778		
			155	1540

STA. 817+00 - STA. 818+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM. 71 - 13.05



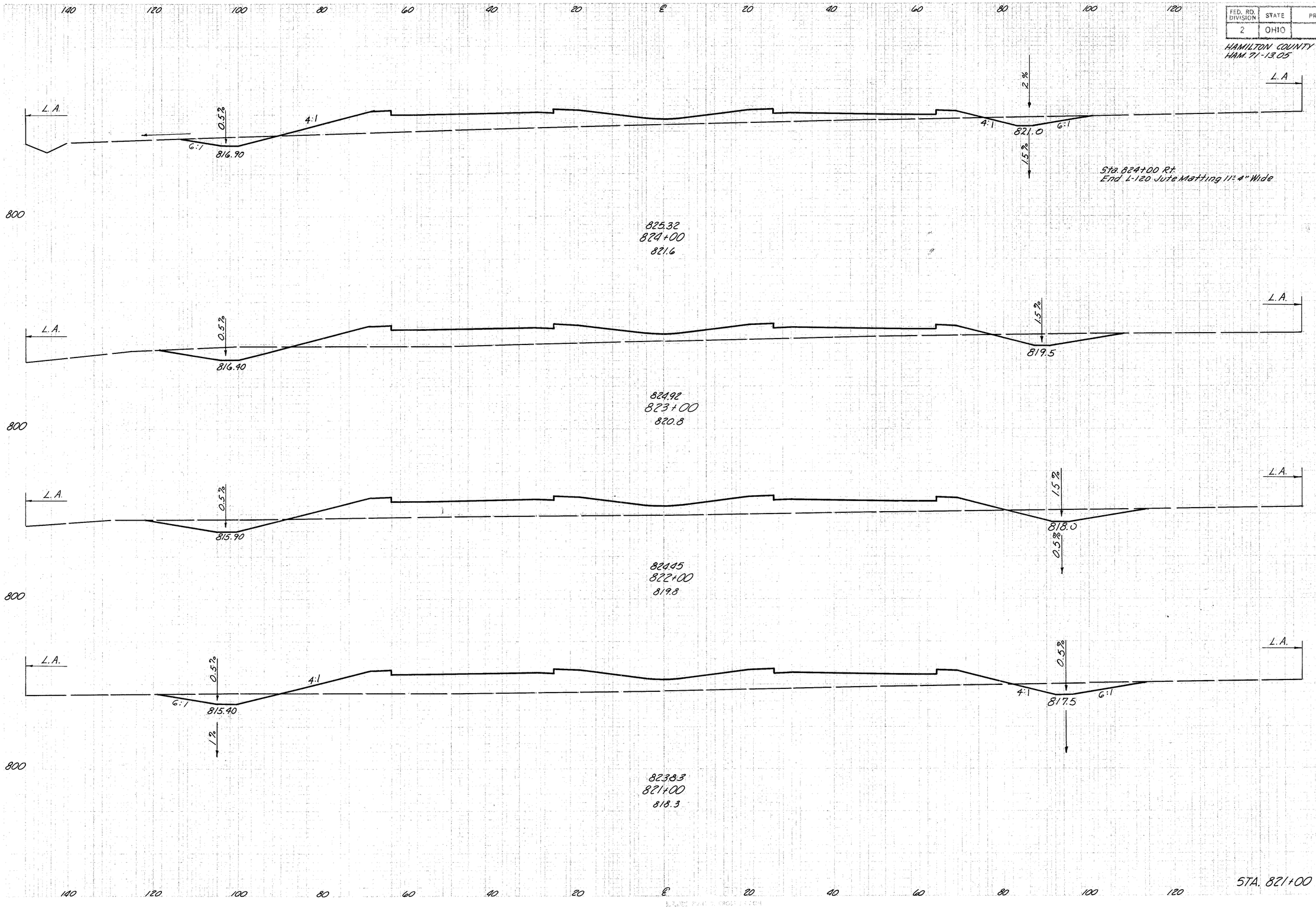
END AREA		VOLUME	
CUT	FILL	CUT	FILL
69	754		
		131	1418
73	778		
		133	1210

MICROFILMED

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM. 71-13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
53	430		
		280	1670
98	472		
		374	1856
104	530		
		341	2133
80	622		
		138	1274

STA. 821+00 - STA. 824+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM. 71 - 13.05

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

L.A. L.A. 6:1 8:1 6:1 L.A.

810

826.92
828+00
828.6

L.A. L.A. 3.5% 8:1 L.A.

826.52
827+00
827.2

Sta 827+00 Lt.
End 4' Bottom Special Ditch

L.A. L.A. 3.5% 820.90 8:1 L.A.

826.12
826+00
825.3

1%

Sta 826+00 Rt.
End 4' Bottom Special Ditch

Sta 825+00 93' Lt
HW-E, Inv. 18" 817.85

Sta 825+00 ℄
I-8 Std. C.B. No. 4
Fl. Grate = 822.80
Inv. 18" = 818.80

L.A. L.A 3.5% 6:1 1% 6:1 823.0 6:1 L.A.

2%

817.90

Dumped Rock
13' x 6.6' x 1'-6"

I-1 93' x 18" Pipe Class J-1 @ 1%

0.5%

825.72
825+00
823.6

City of Blue Ash-Interstate

Sta. 818+70.50 to Sta. 825+00		
Excavation	2,149	C.Y.
Embankment	13,203	C.Y.
Embankment +15%	15,183	C.Y.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
709	0		
		2063	0
405	0		
		1211	17
249	9		
		781	213
173	106		
		419	993

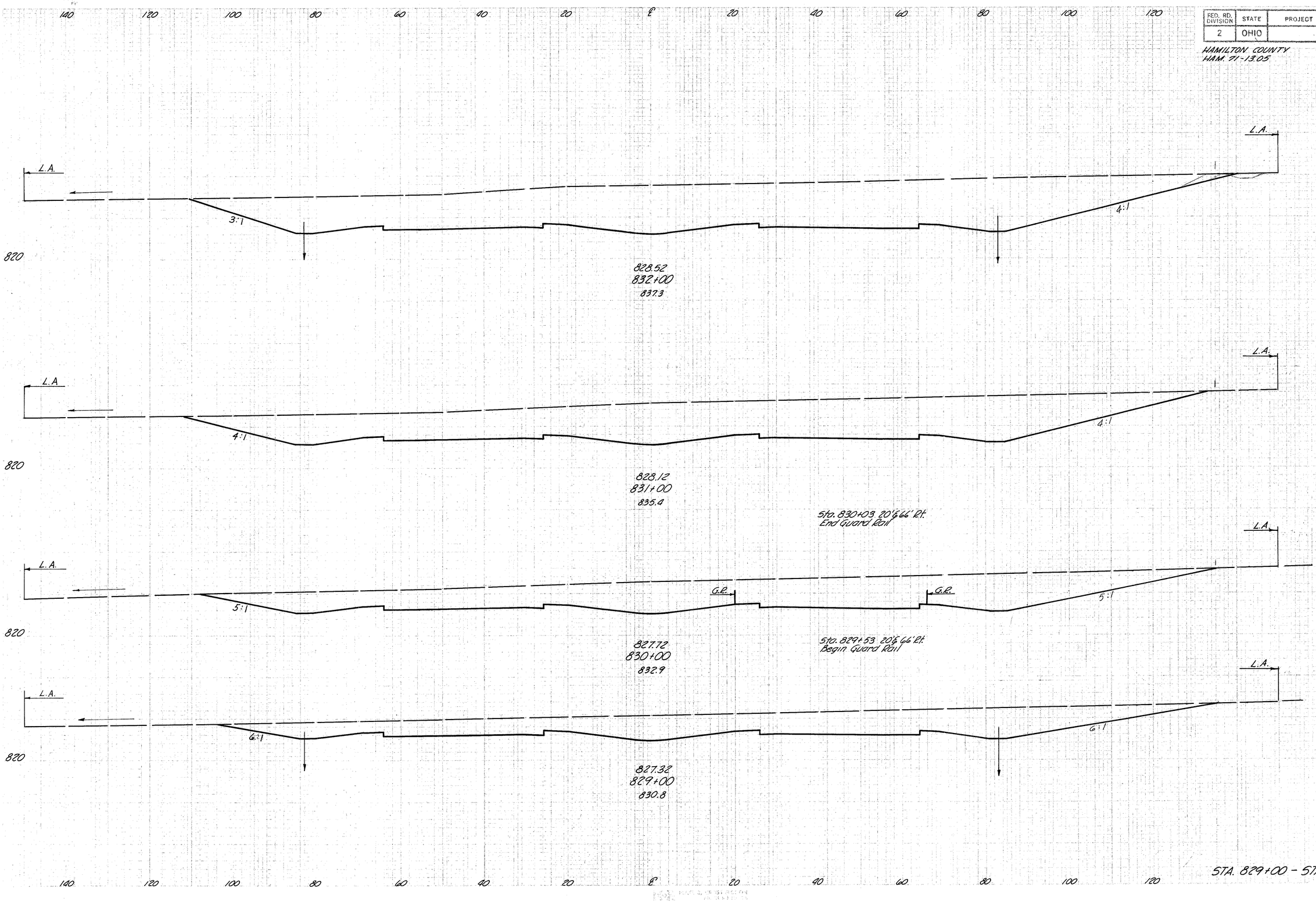
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

STA. 825+00 - STA. 828+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM. 71-13.05



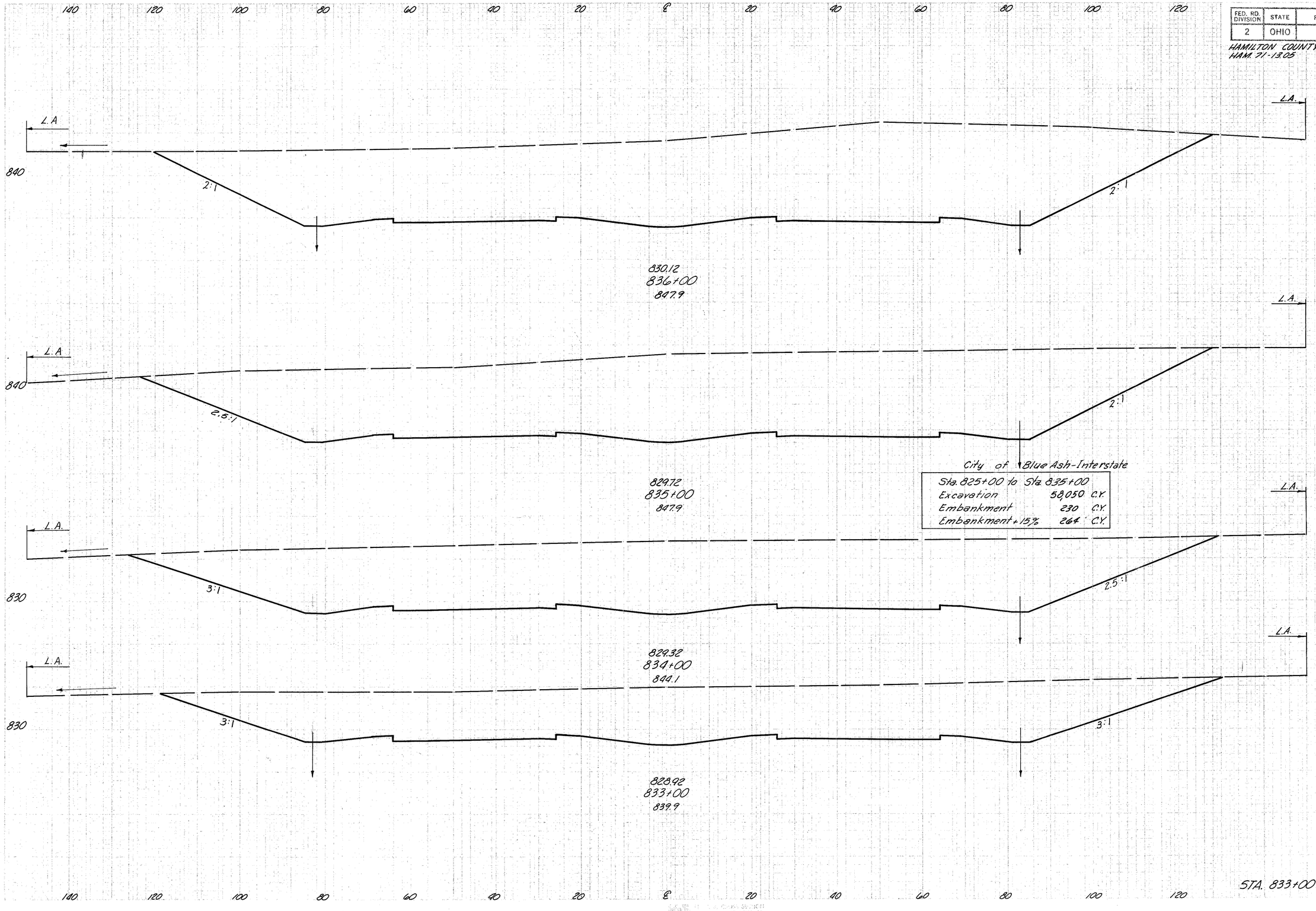
END AREA		VOLUME	
CUT	FILL	CUT	FILL
2172	0		
		7293	0
1766	0		
		5750	0
1339	0		
		4433	0
1055	0		
		3267	0

STA. 829+00 - STA. 832+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM 71-13.05



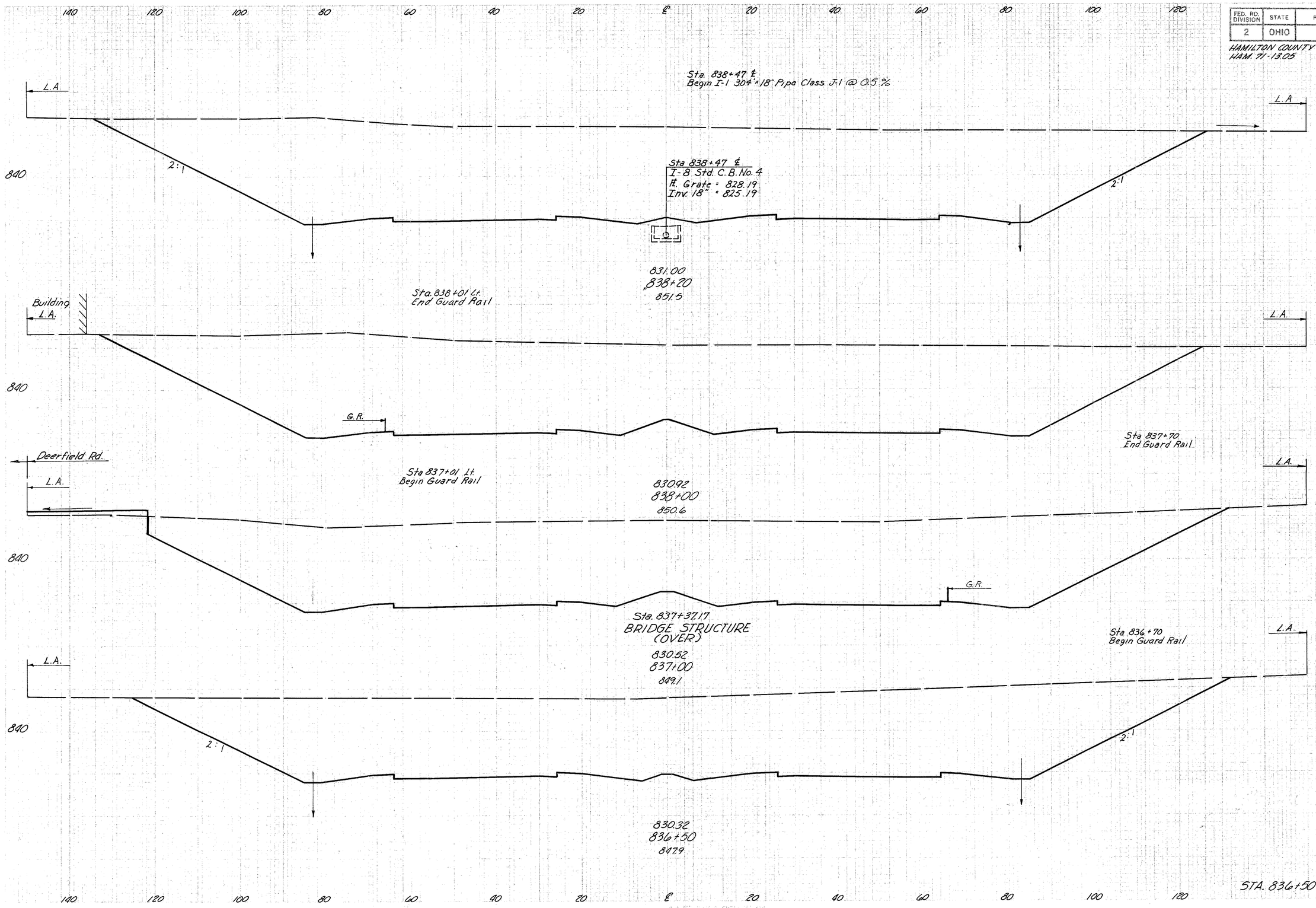
END AREA		VOLUME	
CUT	FILL	CUT	FILL
4211	0		
		14950	0
3862	0		
		13381	0
3364	0		
		11039	0
2597	0		
		8832	0

STA. 833+00 - STA. 836+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM. 71-13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1251	0		
		3471	0
1625	0		
		1669	0
4340	0		
		7941	0
4236	0		
		7821	0

STA. 836+50 – STA. 838+20

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM.71-13.05

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

L.A.

840

2:1

2.5:1

831.92
840+50
847.8

18" Pipe

850

831.72
840+00
849.9

850

831.48
839+40
851.5

850

831.32
839+00
850.7

END AREA		VOLUME	
CUT	FILL	CUT	FILL
373	0		
		735	0
421	0		
		965	0
469	0		
		695	0
469	0		
		139	0

STA. 839+00 - STA. 840+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM. 71-13.05

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

800

L.A.

3:1

G.R.

2:1

832.72
842+50
831.0

Granular Blanket 7

12:1

2%

2%

12:1

L.A.
160' Rt.

803.00

Sta 842+50 Rt.
End L-120 Jute Matting 7'-8" Wide

800

L.A.

832.52
842+00
838.3

Granular Blanket 7

18%

L.A.

812.00

Sta. 841+50 Section A-A
Typical Section For Channel Exc.

$\left(\frac{12+2}{2}\right) 2.5 \times 14 = 9$ C.Y.
27

This Quantity Carried on Sub-summary Sht. No. 76

Sta 841+75
Begin Granular Blanket

Sta 841+53 Rt.
Begin L-120 Jute Matting 7'-8" Wide

800

L.A.

3:1

Sta 841+50 22' Rt.
I-8 Std. M.H. No.1
Top 832.00
Inv. 18" 823.63
Inv. 18" 823.53

2:1

Sta 841+50 89' Rt.
H.W. - E. Inv. 18" = 821.45

L.A.

18%

A

12:1

3.1%

821.00

A

22%

820

832.32
841+50
842.2

I-1 67'x18" Pipe Class J-1 @ 3.1%

Sta. 841+50 22' Rt.
End I-1 304'x18" Pipe Class J-1

Sta. 841+50
Deduction for Channel Excavation as noted in Box.

Dumped Rock
33' x 6'-6" x 1'-6"

L.A.

Sta. 841+10 Rt.
End 4' Bottom Ditch
Back

Ahead | Ditch Only | Ahead
Ahead

22%

12:1

2:1

2:1

12:1

840

2.5:1

G.R.

3:1

832.00

832.12
841+00
846.7

18" Pipe

Sta 841+00 Rt.
Begin Guard Rail

Sta 840+90, 116' Rt.
Begin 4' Bottom Special Ditch

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	575	1588		
Gran. Blkt.		92		
			1581	2116
Gran. Blkt.				131
	1133	697		
Gran. Blkt.		50		
Gran. Blkt.				23
Sta. 841+75 Gran. Blkt.		0		
				2967
				675
			2071	32
				- 9
			4841	30
Sta. 841+10 Ditch Exc. Rt.		0		23
Sta. 841+00		122		
Ahead	3035	0		
Back	3157	0		
			6377	0

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

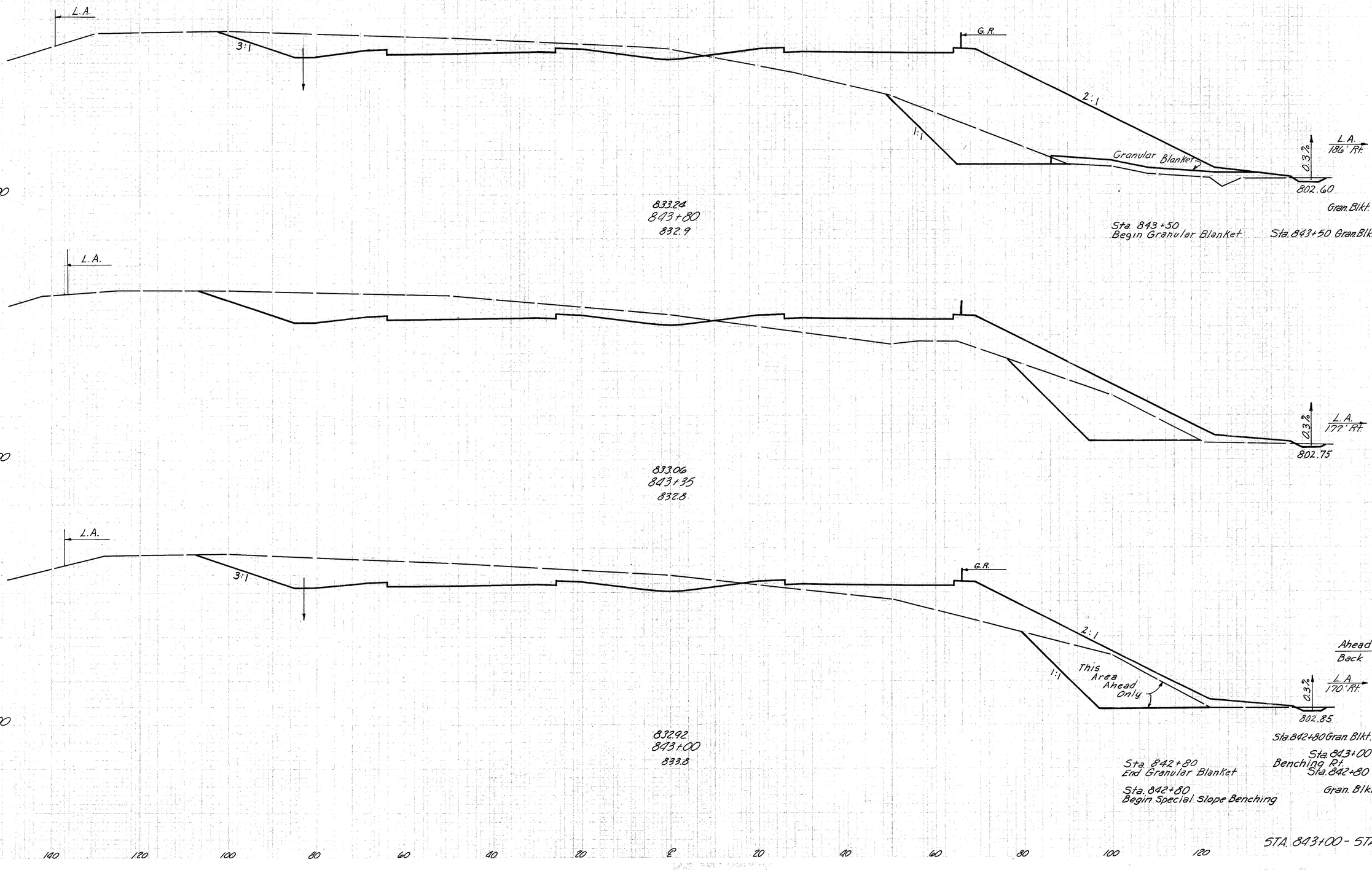
STA. 841+00 - STA. 842+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM. 71-13.05.

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



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	522	1330		
Gran. Blkt.		78		43
Sta. 843+50 Gran. Blkt.		0		
			1044	1731
	731	747		
			991	913
Ahead	798	661		
Back	508	371		
			1003	1814
Sta. 842+80 Gran. Blkt.		0		
Sta. 843+00 Benching Rt.	290		107	107
Sta. 842+80 Gran. Blkt.	0			51

STA. 843+00 - STA. 843+80

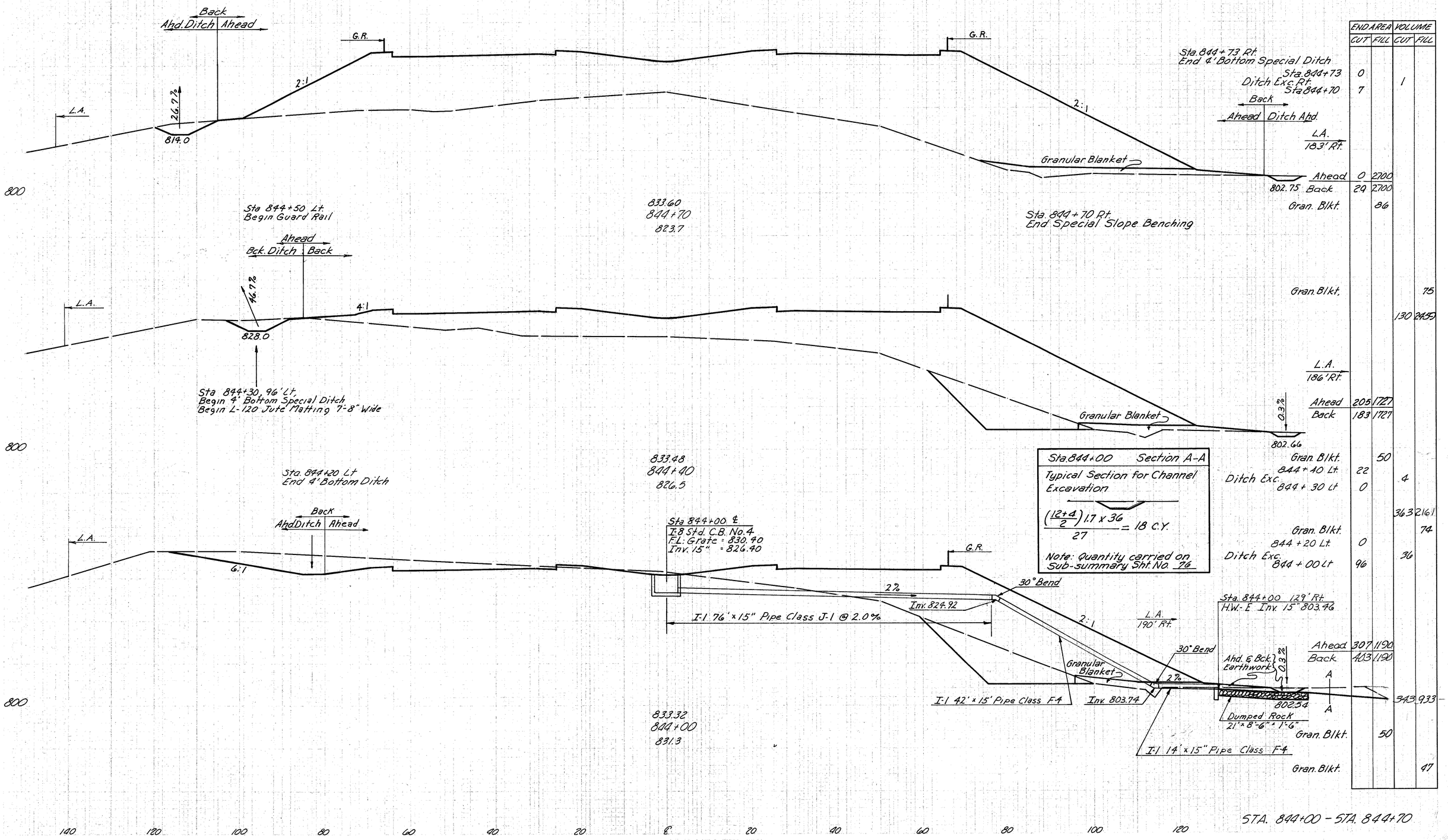
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

249
445

HAMILTON COUNTY
HAM. 71-13.05

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



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Sta. 844+73	0		1	
Ditch Exc. Rt. Sta 844+70	7			
Back				
Ahead Ditch Ahd.				
L.A. 183' Rt.				
Ahead	0	2700		
Back	29	2700		
Gran. Blkt.		86		
Gran. Blkt.				75
			130	2459
L.A. 186' Rt.				
Ahead	205	1727		
Back	183	1727		
Gran. Blkt.		50		
844+40 Lt.	22		4	
Ditch Exc. 844+30 Lt	0			
			36	3216
Gran. Blkt.				74
844+20 Lt.	0			
Ditch Exc. 844+00 Lt	96		36	
Ahead	307	1190		
Back	113	1190		
				343
Gran. Blkt.		50		
Gran. Blkt.				47

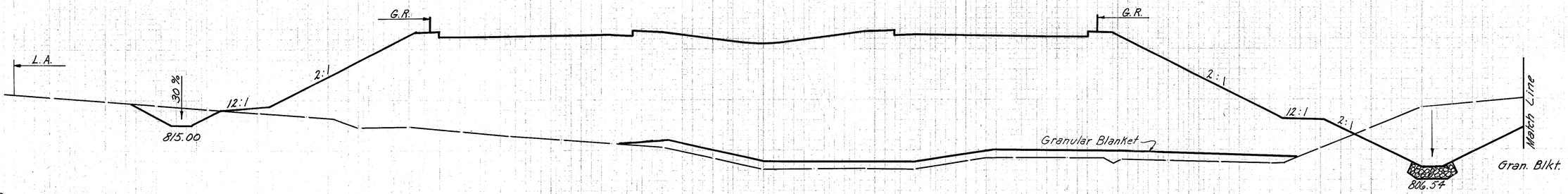
STA. 844+00 - STA. 844+70

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

250
445

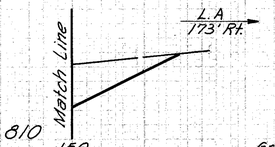
HAMILTON COUNTY
HAM. 71- 13.05

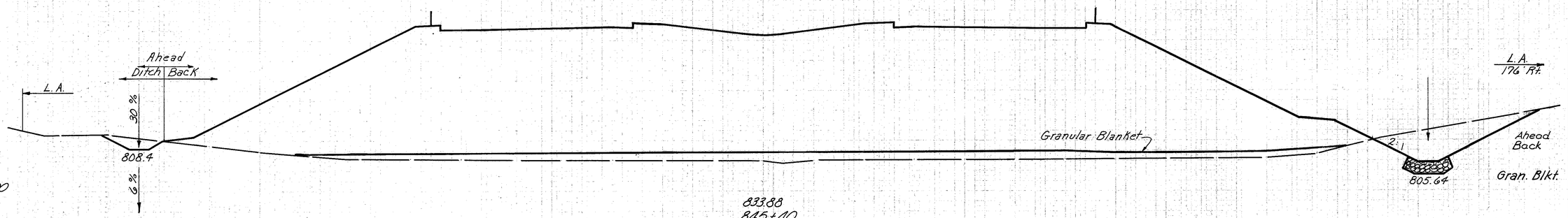
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120



800

83397
845+62
806.3

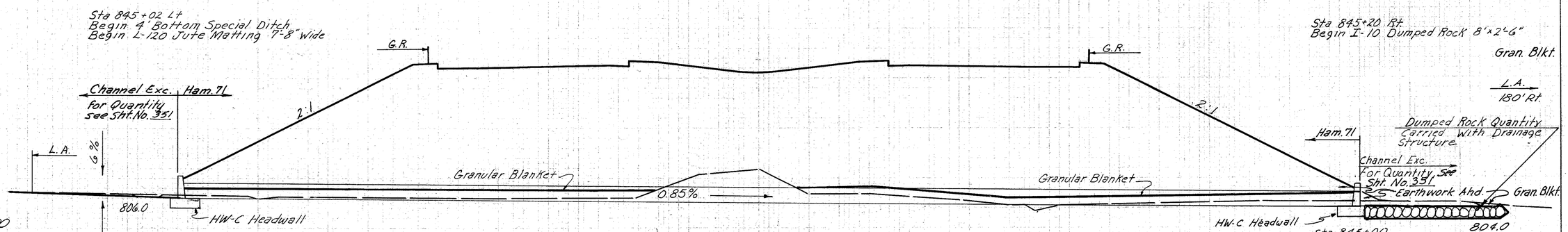




800

83388
845+40
806.0

845+40 Ditch Exc. Lt. 845+02



83372
845+00
811.8
Sta 845+00
Culvert

City of Blue Ash - Interstate

Sta 835+00 to Sta. 845+00	
Excavation	108,800 C.Y.
* Embankment	17,134 C.Y.
Embankment +15%	19,704 C.Y.

* Total Embankment does NOT include Granular Blanket.

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	355	3980		
Gran. Blkt.		192		
			202	3544
Gran. Blkt.				200
Ahead	142	4719		
Back	124	4719		
Gran. Blkt.		300		
845+40	22			17
845+02	2			
			93	7022
Gran. Blkt.				430
	2	4761		
Gran. Blkt.		280		
			1	4195
Gran. Blkt.				136
844+98	2			
844+70	22			12

STA. 845+00 - STA. 845+62

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

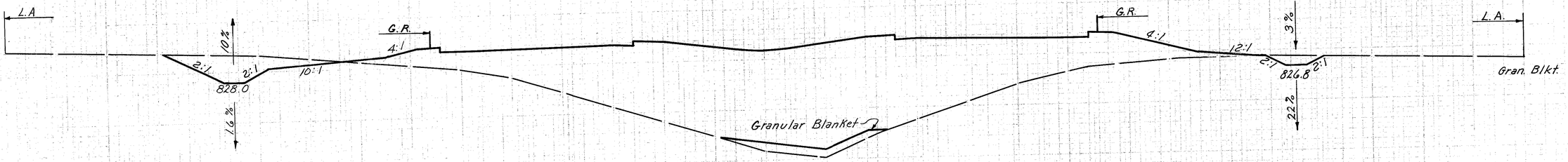
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

251
445

HAMILTON COUNTY
HAM. 71-13.05

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

Sta. 847+00
End Guard Rail



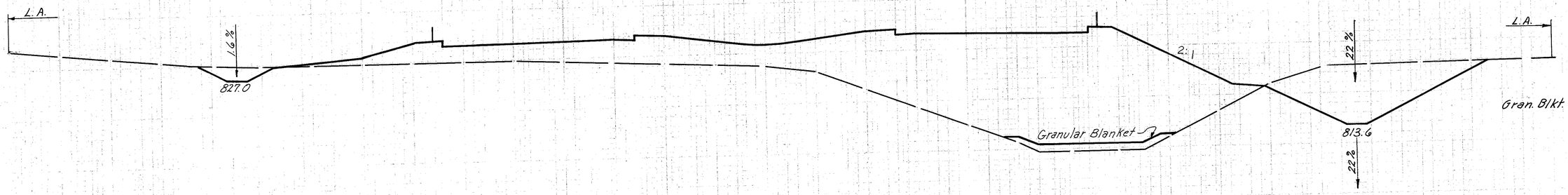
Sta 847+00 Rt.
End L-120 Jute Matting 7'-8" Wide

Gran. Blkt.

800

834.52
847+00
811.4

Sta 847+00
Culvert (Skew)



Gran. Blkt.

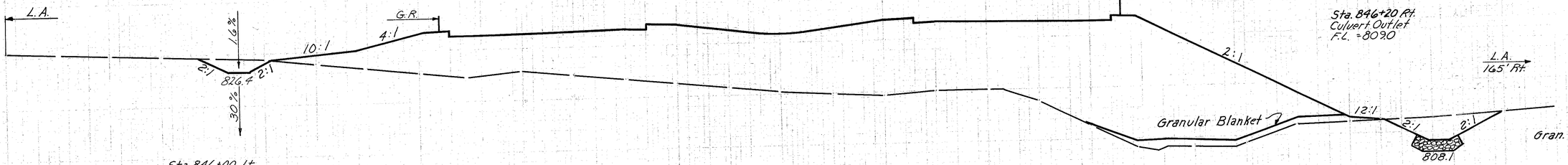
800

834.28
846+40
827.5

Sta 846+35 Rt.
Begin L-120 Jute Matting 7'-8" Wide

4%

Gran. Blkt.



Sta. 846+20 Rt.
Culvert Outlet
F.L. = 809.0

Gran. Blkt.

Sta 846+00 Lt.
End L-120 Jute Matting 7'-8" Wide

800

834.12
846+00
820.3

Sta 846+00 Rt.
End I-10 Dumped Rock 8'x2'-6"

Gran. Blkt.

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

STA. 846+00 - STA. 847+00

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	45		
110	1789		
			479
		3906	
			100
321	1726		
	47		
			301
		2976	
			84
			86
		2291	
	67		
			310
		4413	
			162

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HAMILTON COUNTY
HAM. 71-13.05

STA. 850+01.76
END WORK
STA. 848+73.24 Bk. = STA. 849+00 Ah.
END PROJECT

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

Sta. 850+01.76 Lt.
End Guard Rail

L.A.
165' Lt.

4' Bottom Std. Rdwy. Ditch continued
From HAM. 50 B-27.98

G.R.

Sta. 848+73.24 Rt.
End 4' Bottom Special Ditch

L.A.

833.5

5%

City Of Blue Ash

Sta. 845+00 to Sta. 848+73.24		
Excavation	2,367	C.Y.
*Embankment	26,981	C.Y.
Embankment +15%	31,028	C.Y.

*This Embankment total does NOT include Granular Blanket.

Sta 847+87 Lt. to Sta 848+73.24 Lt.
Quantity I-10 Dumped Rock to be placed
under HAM. 50 B-27.98 (Construction Section)

810

835.21
848+73.24
835.4

Ahead
Bck Ditch | Back

5%

L.A.

829.8

3%

L.A.
154' Lt.

Sta. 847+87 Lt.
End Rip Rap Quantity Carried With Structure
Begin 4' Bottom Special Ditch.

Sta 847+75
End Granular Blanket

834.92
848+00
833.7

Sta 841+75 ~ Sta. 847+75
Total Granular Blanket
1,696 Cu. Yds.

810

Culvert Inlet
See Detail, Sht. No. 352

Sta. 847+75 Lt.
End 4' Bottom Special Ditch

L.A

Sta. 847+65 Lt.
End I-10 Dumped Rock 8'x1:6"
Begin I-10 Rip Rap Quantity
Carried With Structure

Back
Ahd. Ditch | Ahead

Varies

Granular Blanket

815.2

834.76
847+60
828.1

3%

828.6

L.A.

810

L.A

21%

G.R.

Varies

823.2

10%

Granular Blanket

3%

827.5

L.A.

834.61
847+22
812.1

Sta 847+22 Lt
Begin I-10 Dumped Rock 8'x1:6"

810

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Back	345	0		
			507	170
	29	125		
Sta. 848+00	15			
Ditch Exc. Lt. Sta. 847+87	4		5	
			30	977
Sta. 847+75 Gran. Blkt.		0		
Sta. 847+75 Lt. Ditch Exc. Sta. 847+60 Lt	0		43	
	156			
Gran. Blkt.				6
L.A. Ahead	11	1194		
Back	167	1194		
Gran. Blkt.		21		
			255	2363
Gran. Blkt.				65
	196	2164		
Gran. Blkt.		72		
			125	1610
Gran. Blkt.				47

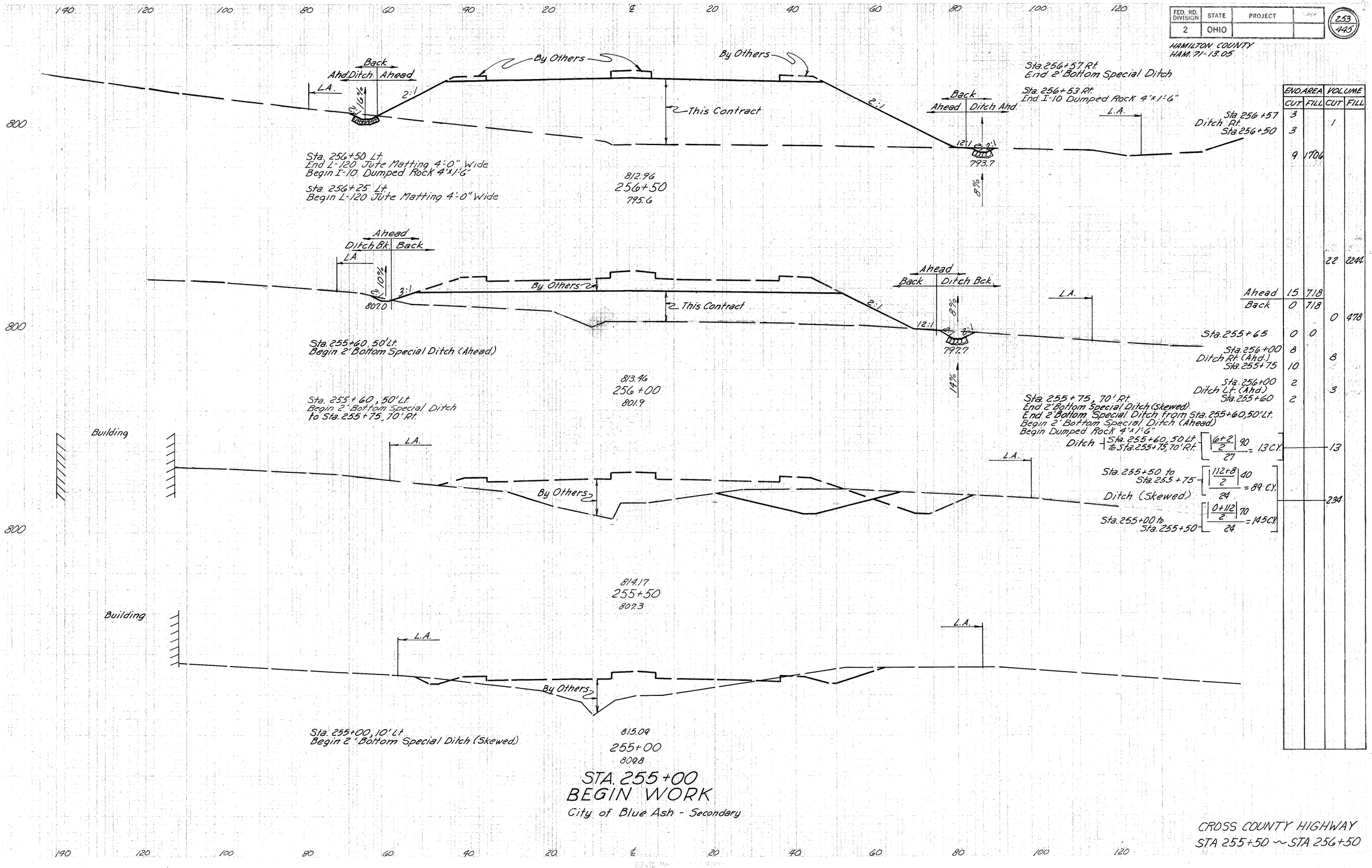
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

STA. 847+22 - STA. 848+73.24

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

253
445

HAMILTON COUNTY
HAM. 71-13.05



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
Sta 256+57	3		1	
Ditch Rt.				
Sta 256+50	3			
	9	1706		
			22	2244
Ahead	15	718		
Back	0	718		
			0	478
Sta. 255+65	0	0		
Sta. 256+00	8			
Ditch Rt. (Ahd.)			8	
Sta. 255+75	10			
Sta. 256+00	2			
Ditch Lt. (Ahd.)			3	
Sta. 255+60	2			

Ditch — Sta. 255+60, 50 Lt. to Sta. 255+75, 70' Rt. $\left[\frac{\left|\frac{6+2}{2}\right| 90}{27}\right]$ = 13 C.Y. — 13

Ditch (Skewed) — Sta. 255+50 to Sta. 255+75 $\left[\frac{\left|\frac{112+8}{2}\right| 40}{24}\right]$ = 89 C.Y.; Sta. 255+00 to Sta. 255+50 $\left[\frac{\left|\frac{0+112}{2}\right| 70}{24}\right]$ = 145 C.Y. — 234

STA. 255+00
BEGIN WORK

City of Blue Ash - Secondary

CROSS COUNTY HIGHWAY
STA 255+50 ~ STA 256+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

254
445

HAMILTON COUNTY
HAM. 71-13.05

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

800

Sta 258+25 3.5' Lt.
End 75'x12" Cl. E-1 @ 1.5%

L.A. 2:1 14% 805.0 G.R. 3.5:1

Montgomery Interstate | Blue Ash Secondary | Blue Ash Secondary

Sewer Easement L.A. House Ahead

6

Sta 258+25 3.5' Lt.
I-8 Std Inlet No. 2-16
F.L. Opening 812.71
F.L. 6" 808.5
F.L. 12" 808.0

812.73
258+00
811.2

2-18" Pipe

Sta. 258+00 Lt
Begin Shoulder Transition
End Guard Rail

Sta. 257+79 92' Rt.
Begin Concrete Retaining Wall
End Shoulder Transition

Sta. 257+74 52' Rt.
Begin 174'x18" Cl. E-1 Pipe
F.L. 807.69
End 2' Bottom Special Ditch

Sta. 257+78 Rt.
End Guard Rail

810

L.A. 6.1% 802.70 12:1 3:1 G.R.

Montgomery Interstate | Blue Ash Secondary

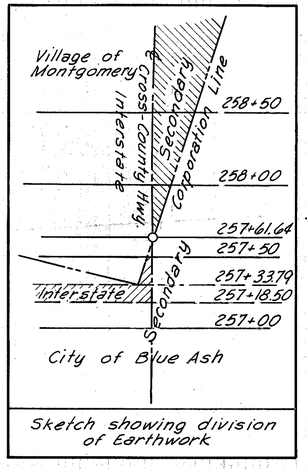
Back Ahead | Ditch Ahd

L.A. G.R. 1.3% 2:1 2:1 807.52

812.62
257+61.64
810.5

City of Blue Ash - Interstate

Sta. 257+18.50 to Sta. 257+61.64		
Excavation	6	C.Y.
Embankment	343	C.Y.
Embankment +15%	394	C.Y.



Sketch showing division of Earthwork

800

L.A. 6.3% 802.00 12:1 Varies G.R.

Montgomery Interstate | Blue Ash Secondary

Sta. 257+50 3.5' Lt.
I-8 Std. Inlet NO 2-6
F.L. Opening 812.43
F.L. 6" 809.0
F.L. 12" 806.87

812.60
257+50
808.6

66'x12" Class J-1 @ 2%

Sta. 257+50 Rt.
Begin Shoulder Transition

Sta. 257+60 Rt.
End I-10 Dumped Rock 4'x1'-6"

G.R. 1.3% L.A. 801.91

I-10 Dumped Rock
5'x4'x1'-6"

Sta. 257+26 57' Rt.
H.W.-E F.L. 12"=805.50

Sta. 257+50 Lt.
Begin 75'x12" Cl. E-1 @ 1.5%

Sta. 257+18.50 Lt.
Begin Ramp Taper

Sta. 257+25 Lt.
Begin Guard Rail

Sta. 257+33.79
Ahead Left Only - Village of Montgomery - Interstate.

STA. 257+18.50 BEGIN PAVEMENT

Sta. 257+18.50 { Ahead Left — City of Blue Ash-Interstate
Back Rt. & Lt. and Ahead Rt.-City of Blue Ash-Secondary

Sta. 257+02 Lt.
End I-10 Riprap
Begin I-10 Dumped Rock
8'x1'-6"

Ahead
Back | Ditch | Back
L.A. 2:1 2:1

By Others — This Contract — By Others

Sta. 257+28 Rt.
Begin Guard Rail

Ahead
Back | Ditch Bk.
L.A. 14.8% 2:1 12:1 2:1 800.0 27%

795.7

800

Sta. 256+92 Lt.
Begin 4' Bottom Special Ditch

Sta. 256+87± Culvert Inv. = 794.70

Sta. 256+80 Lt.
End 2' Bottom Special Ditch

Sta. 256+76 Lt.
End I-10 Dumped Rock 4'-1'-6"
Begin I-10 Riprap - Quantity Carried With Drainage Structure

812.68
257+00
798.3

Sta. 256+75
84' CULVERT 10° L.F. SKEW

Sta. 256+68 Rt.
Begin 2' Bottom Special Ditch
Begin I-10 Dumped Rock 4'x1'-6"

Sta. 256+63 Rt.
Culvert Outlet
Elev. = 793.80

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

CROSS COUNTY HIGHWAY
STA. 257+00 ~ STA. 258+00

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
City of Blue Ash - Secondary	60	34		
Village of Montgomery-Secondary	7	10		
" " " -Interstate	57	207		
City of Blue Ash - Secondary			4.3	42
Village of Montgomery-Secondary			5	14
" " " -Interstate			52	274
Sta. 257+74	65			
City of Blue Ash-Second-Ditch Rt.			30	
Sta. 257+61.64	66			
City of Blue Ash-Secondary Ahd	0	25		
" " " " Back	66	25		
Village of Montgomery-Secondary	0	0		
" " " -Interstate	16	180		
City of Blue Ash - Secondary			20	32
Village of Montgomery -Interstate			6	93
Village of Montgomery - Interstate	12	252		
City of Blue Ash - Secondary	27	123		
Village of Montgomery - Interstate			7	160
City of Blue Ash - Secondary			40	343
Village of Montgomery - Interstate Ahead Sta. 257+33.79	10	308		
City of Blue Ash Bck Lt Sta. 257+61.64 Interstate Ahd Lt Sta. 257+33.79	0	0	0	60
	0	117		
City of Blue Ash Bck Lt Sta. 257+33.79 Interstate Ahd Lt Sta. 257+18.50	11	425	6	283
	9	580		
Secondary Ahead Rt	42	466		
City of Blue Ash - Sta 257+18.50 Secondary Back	35	1050		
	66	1393	35	837
Sta 257+00	16			
Ditch Lt. Sta. 256+92	10		1	
Sta. 256+80	10			
Ditch Lt. Sta. 256+50	6		9	
			66	2869
Sta. 257+00	50			
Ditch Rt. Sta. 256+68	3		31	

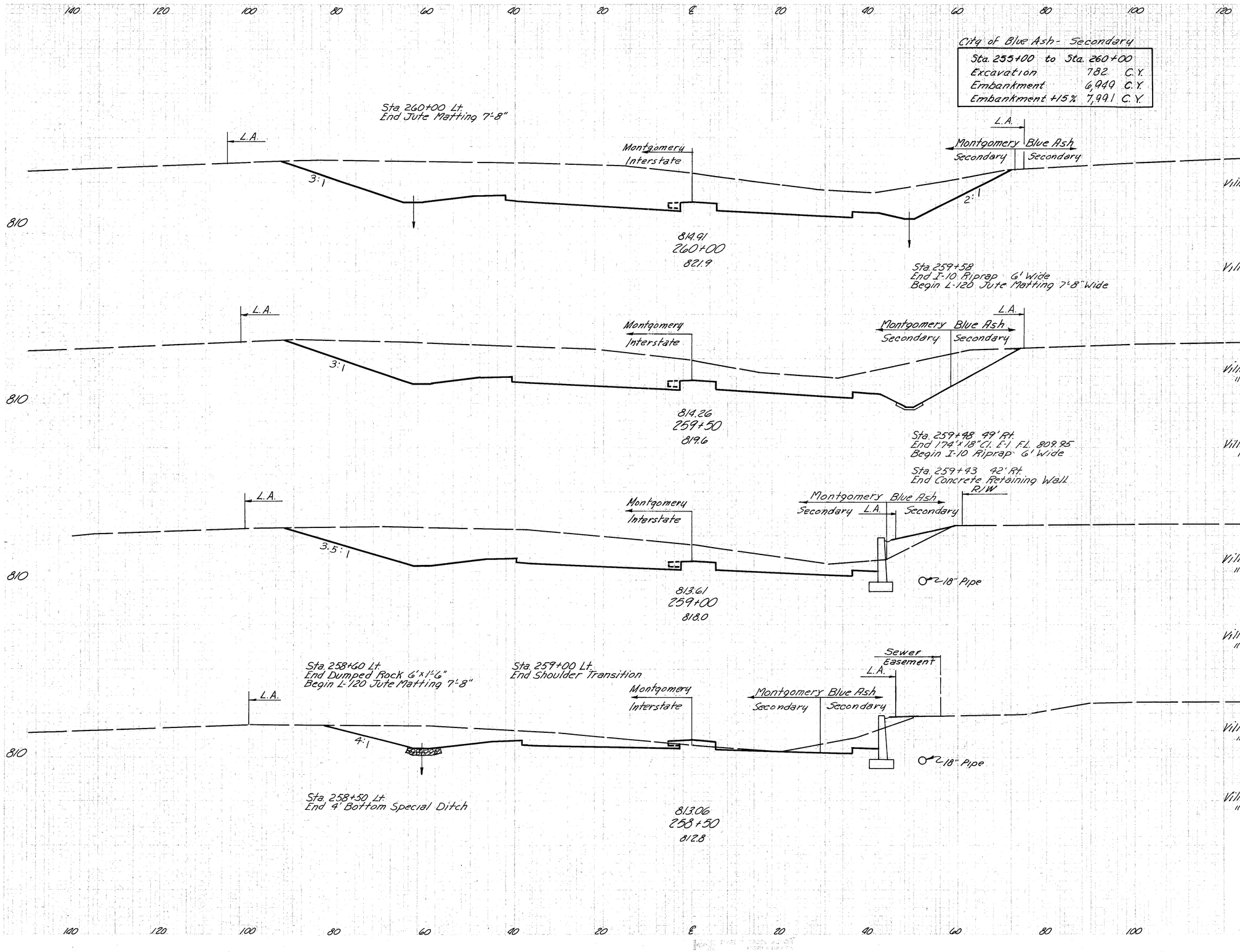
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

255
445

HAMILTON COUNTY
HAM.71-13.05

City of Blue Ash - Secondary

Sta. 255+00 to Sta. 260+00		
Excavation	782	C.Y.
Embankment	6,949	C.Y.
Embankment +15%	7,991	C.Y.



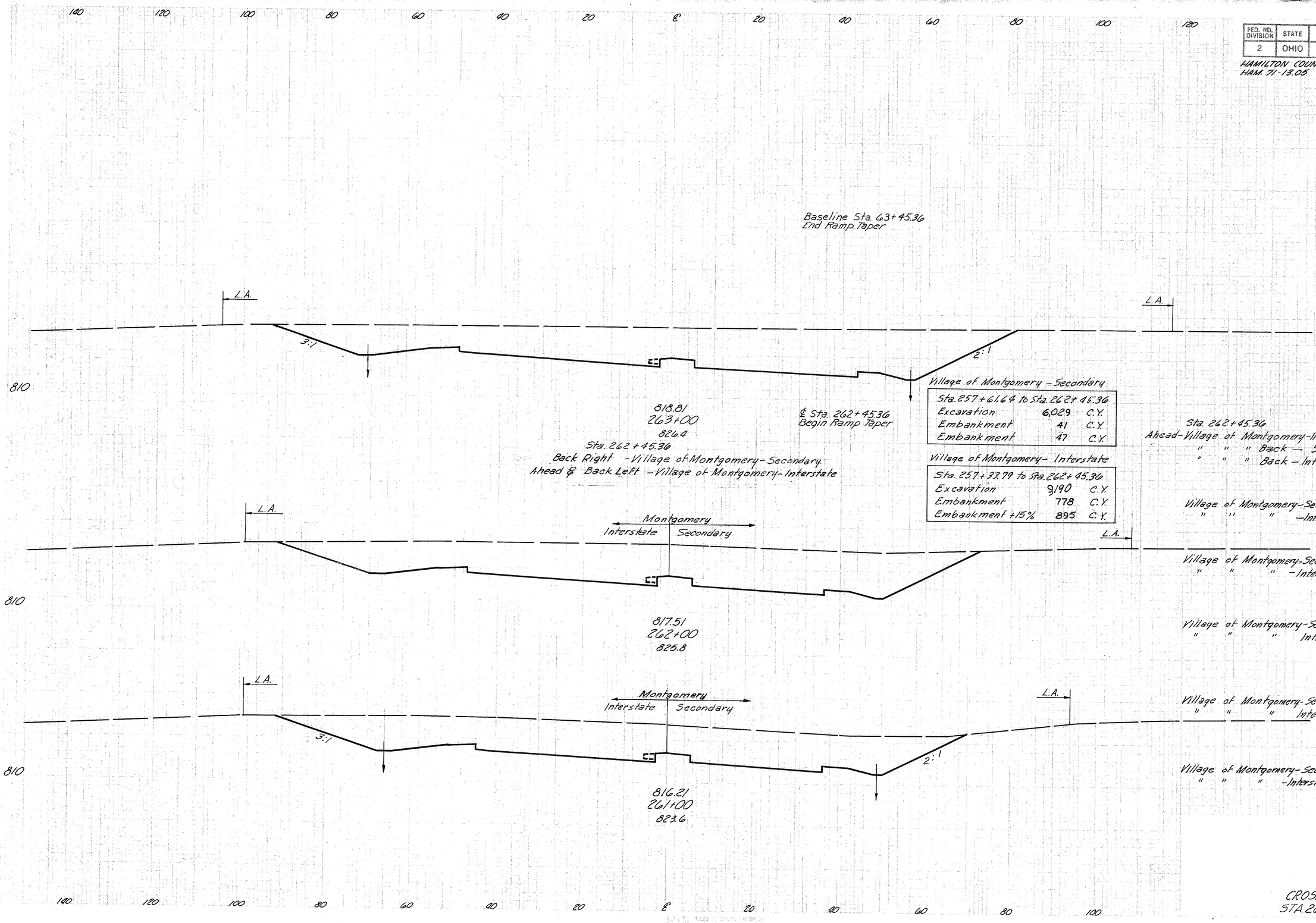
	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
City of Blue Ash - Secondary	0	0		
Village of Montgomery-Secondary	402	0		
-Interstate	690	4		
City of Blue Ash-Secondary			49	0
Village of Montgomery-Secondary			656	0
-Interstate			1230	7
City of Blue Ash - Secondary	53	0		
Village of Montgomery-Secondary	306	0		
" " " -Interstate	638	4		
City of Blue Ash - Secondary			49	30
Village of Montgomery-Secondary			408	0
" " " -Interstate			1103	7
City of Blue Ash-Secondary	0	32		
Village of Montgomery-Secondary	135	0		
" " " -Interstate	563	4		
City of Blue Ash-Secondary			36	36
Village of Montgomery-Secondary			135	6
" " " -Interstate			705	7
City of Blue Ash-Secondary	39	7		
Village of Montgomery-Secondary	11	6		
" " " -Interstate	218	4		
City of Blue Ash-Secondary			92	38
Village of Montgomery-Secondary			10	21
" " " -Interstate			245	195

CROSS COUNTY HIGHWAY
STA. 258+50 ~ STA. 260+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

256
445

HAMILTON COUNTY
HAM. 71-13.05



Village of Montgomery - Secondary

Sta. 257+61.64 to Sta. 262+45.36		
Excavation	6,029	C.Y.
Embankment	41	C.Y.
Embankment	47	C.Y.

Village of Montgomery - Interstate

Sta. 257+33.79 to Sta. 262+45.36		
Excavation	9,190	C.Y.
Embankment	778	C.Y.
Embankment +15%	895	C.Y.

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			1131	4
				2607 8
Sta. 262+45.36				
Ahead-Village of Montgomery-Interstate	1284	4		
" " " Back — Secondary	681	0		
" " " Back — Interstate	603	4		
Village of Montgomery-Secondary			1102	0
" " " -Interstate			1048	7
Village of Montgomery-Secondary	621	0		
" " " -Interstate	635	4		
Village of Montgomery-Secondary			2059	0
" " " Interstate			2346	14
Village of Montgomery-Secondary	463	0		
" " " Interstate	632	4		
Village of Montgomery-Secondary			1654	0
" " " -Interstate			2148	14

CROSS COUNTY HIGHWAY
STA. 261+00 ~ STA. 263+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

257
445

HAMILTON COUNTY
HAM. 71-13.05

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

830

L.A. ℄ L.A.

4:1 2:1

822.71 822.31
266+00
828.7

830

L.A. ℄ L.A.

3:1

821.41 821.21
265+00
828.5

830

Ahead
Pedestrian Overpass
L.A. ℄ Ramp "E" L.A.

821.12 820.96
264+78.50
828.3

Sta. 264+38.50
PEDESTRIAN OVERPASS

830

Back
L.A. Pedestrian Overpass Ahead L.A.

3.5:1 2:1

820.11 820.05
264+00
827.5

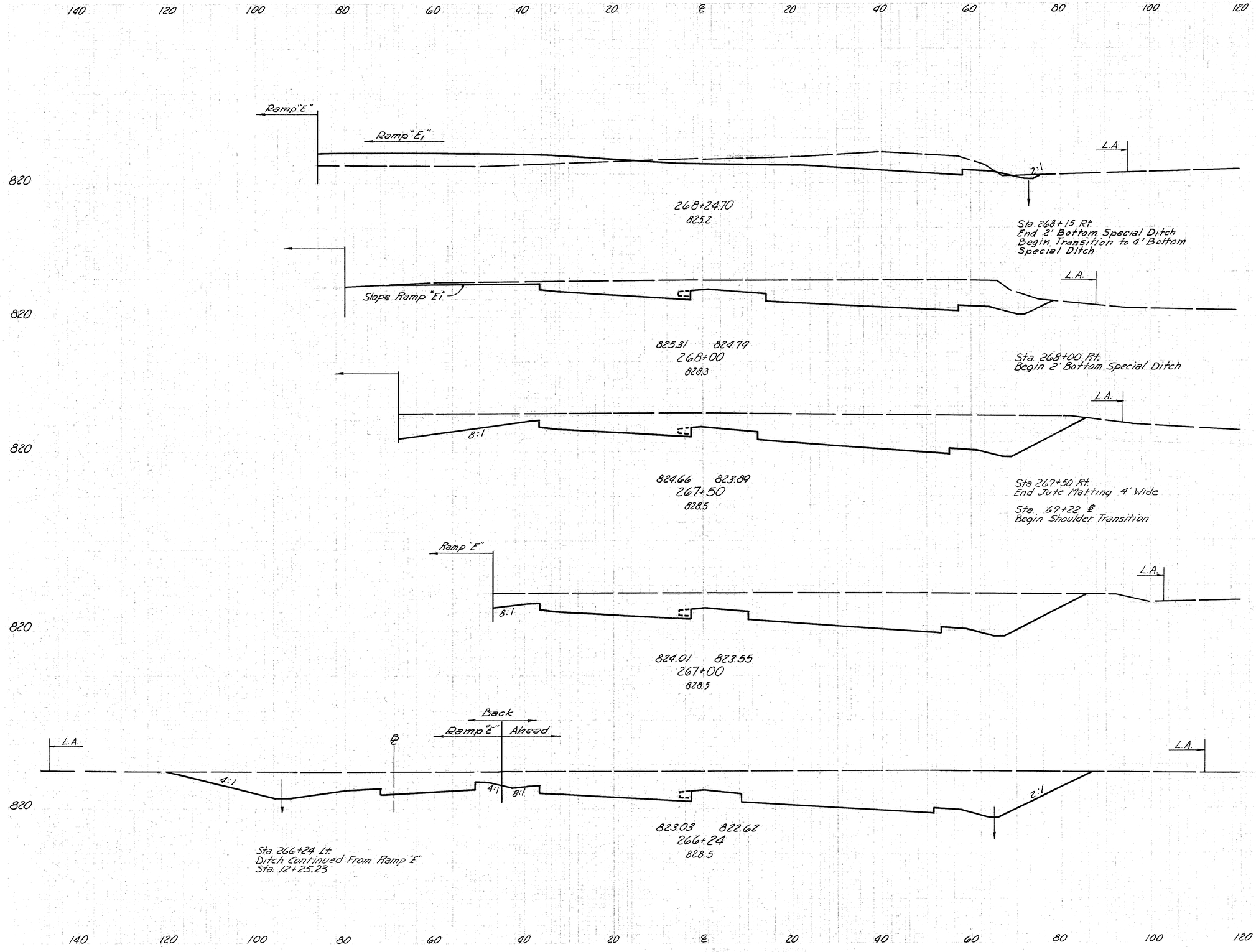
	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	1305	4		
			5031	15
	1412	4		
			1119	3
Ahead	1338	4		
Back	1328	4		
			3746	12
Ahead	1249	4		
Back	1322	4		
			4876	15

CROSS COUNTY HIGHWAY
STA. 264+00 ~ STA. 266+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

258
445

HAMILTON COUNTY
HAM. 71-13.05



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	192	160		
			339	75
	550	4		
			1255	7
	805	4		
			1435	7
	745	4		
			2301	11
Ahead	890	4		
Back	1200	4		
			1113	4

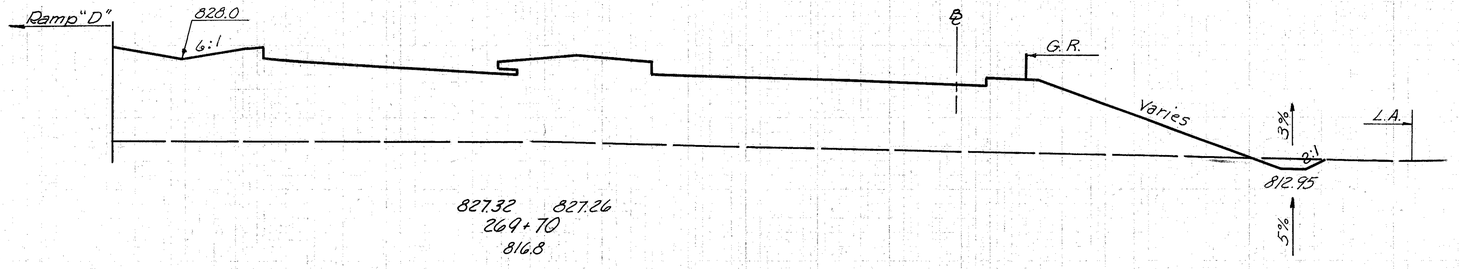
CROSS COUNTY HIGHWAY
STA. 266+24 ~ STA. 268+24.70

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

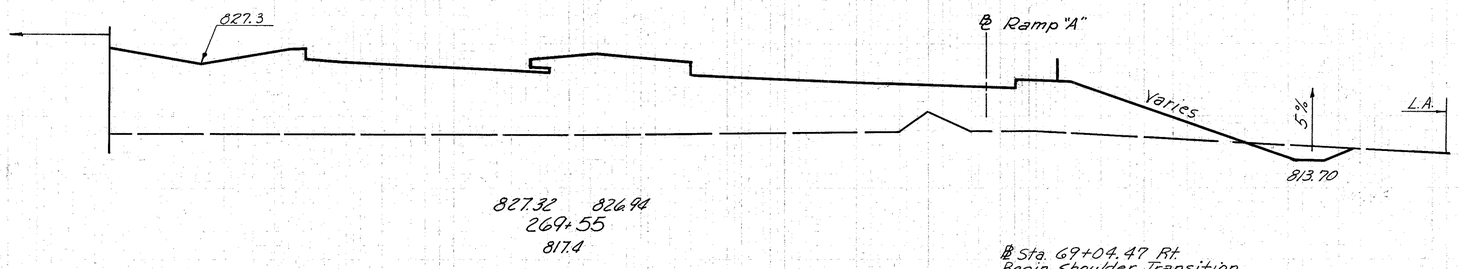
259
445

HAMILTON COUNTY
HAM. 71,-13.01

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

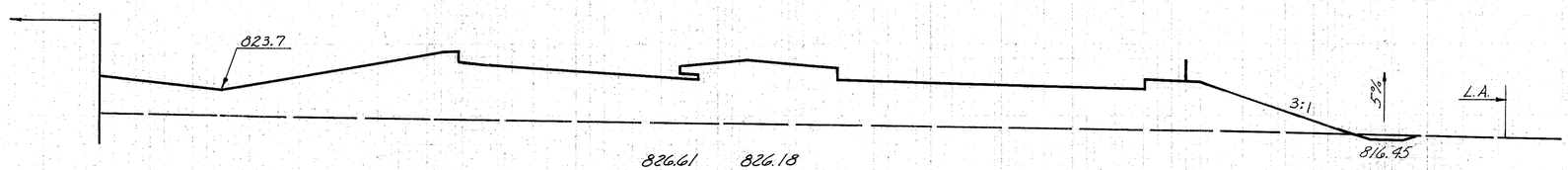


810



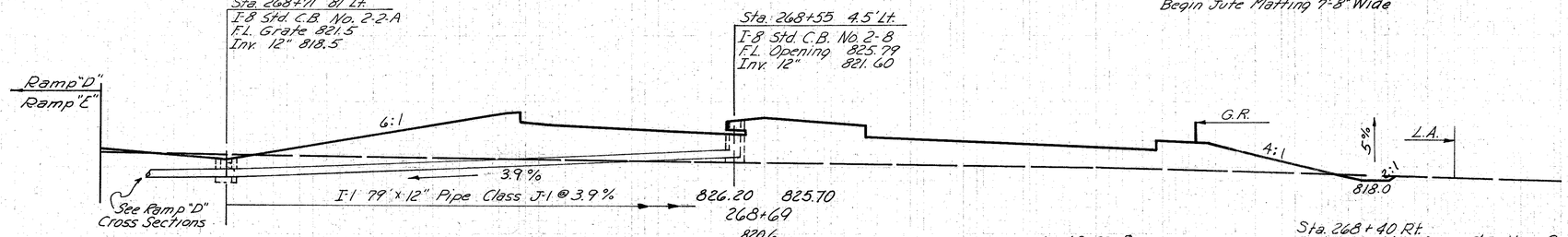
810

℄ Sta. 69+04.47 Rt.
Begin Shoulder Transition
From 12' To 11'



820

Sta. 268+75 Rt.
Begin Jute Matting 7'-8" Wide



820

Sta. 68+22 ℄
End Shoulder Transition
Begin Guard Rail

Sta. 268+40 Rt.
End Transition from 2' Bottom Spc. Ditch
Begin 4' Bottom Special Ditch

END AREA		VOLUME	
CUT	FILL	CUT	FILL
10	1481		
		8	769
18	1287		
		24	2435
6	1104		
		9	1014
10	663		
		166	675

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

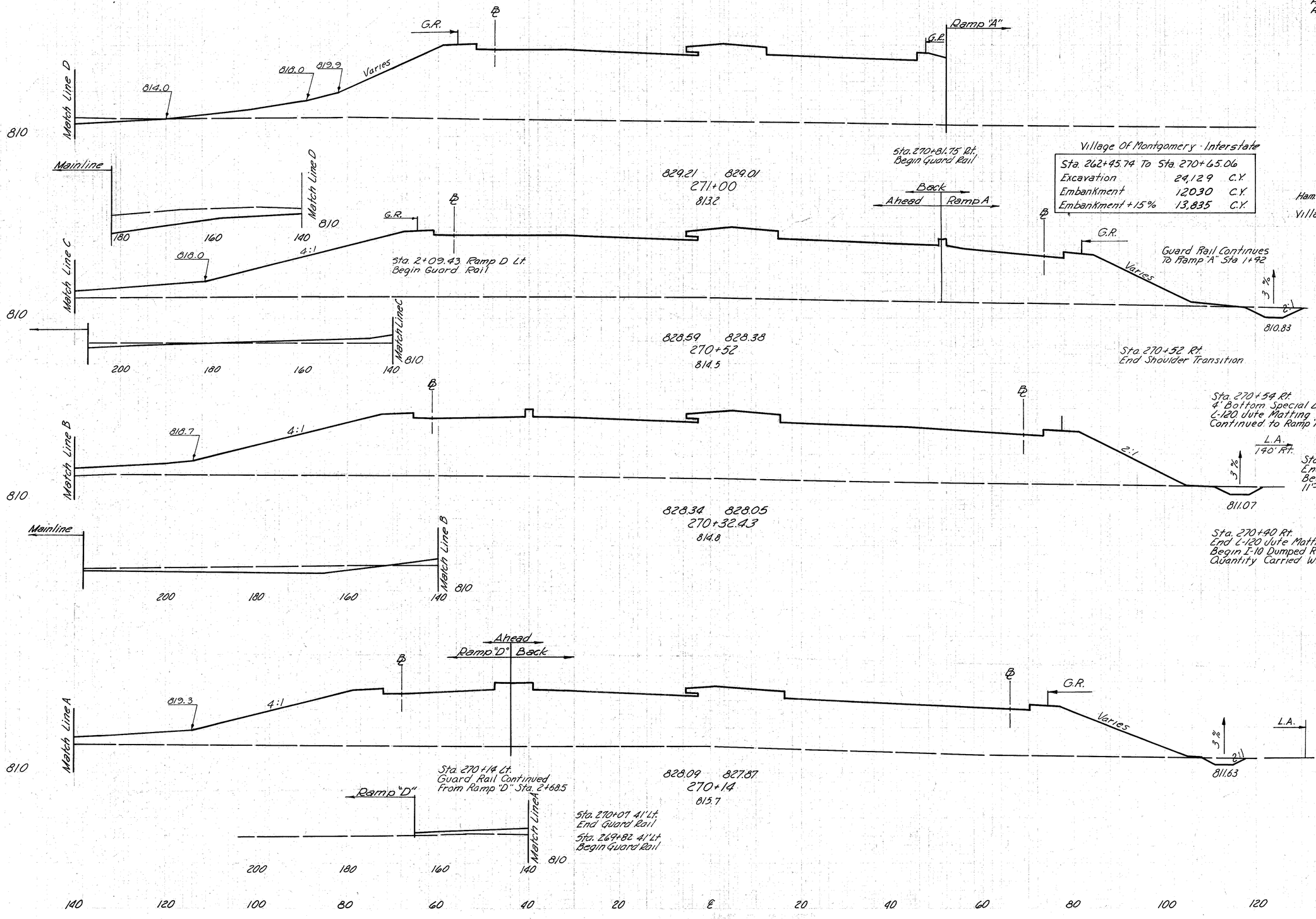
CROSS COUNTY HIGHWAY
STA. 268+69 — STA. 269+70

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

260
445

HAMILTON COUNTY
HAM. 71-13.05

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



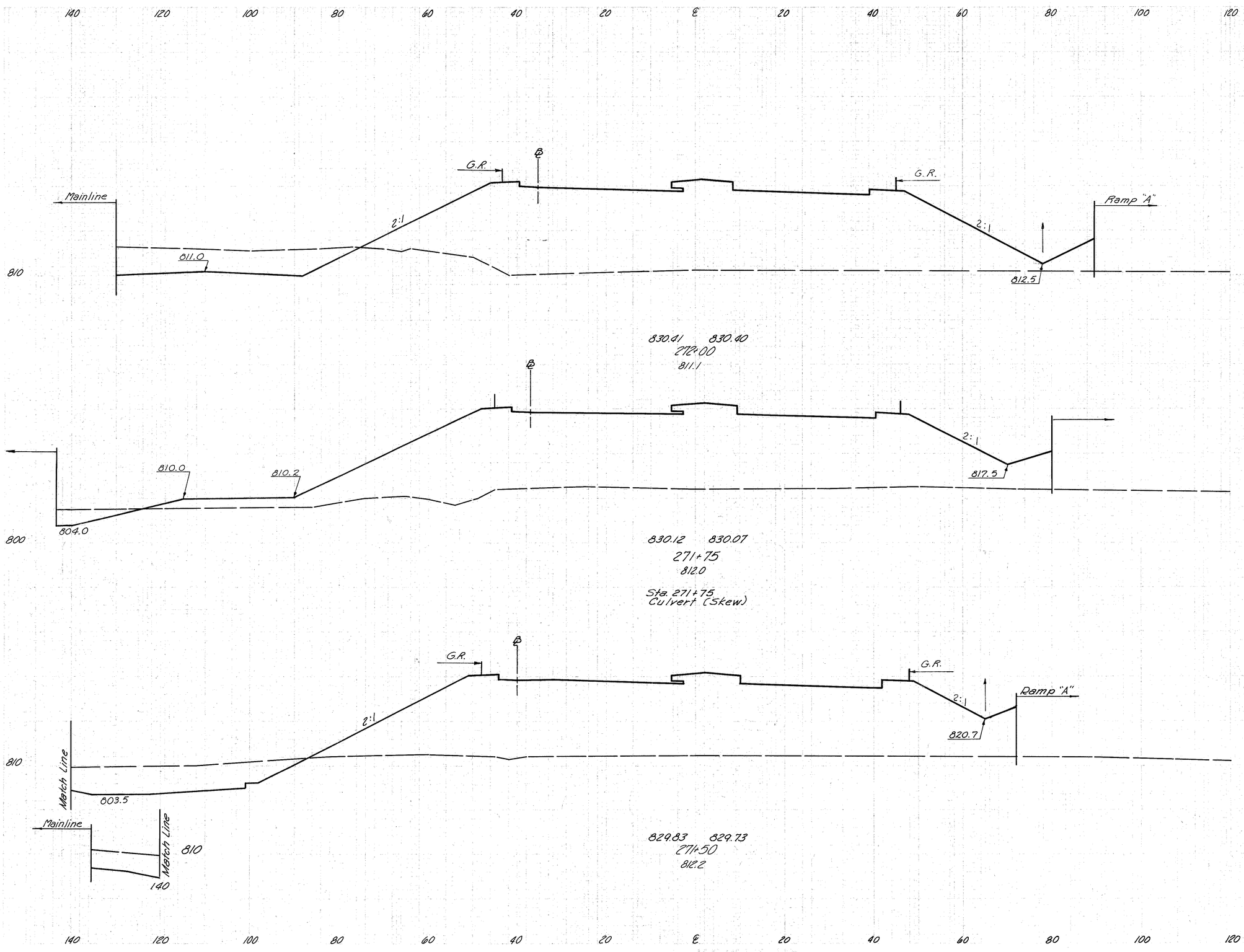
		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		115	2040		
				98	2619
Sta. 270+65.06 Ham. County Interstate Ahead		38	2008		
Sta. 270+65.06 Village Of Montgomery Interstate Back		38	2008		
				13	978
L.A. 153' Rt.	Ahead	15	2056		
	Back	30	2576		
				41	1871
		82	2475		
				31	1644
	Ahead	8	2349		
	Back	8	1575		
				15	2487

CROSS COUNTY HIGHWAY
STA. 270+14 – STA. 271+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

261/445

HAMILTON COUNTY
HAM.71-13.05



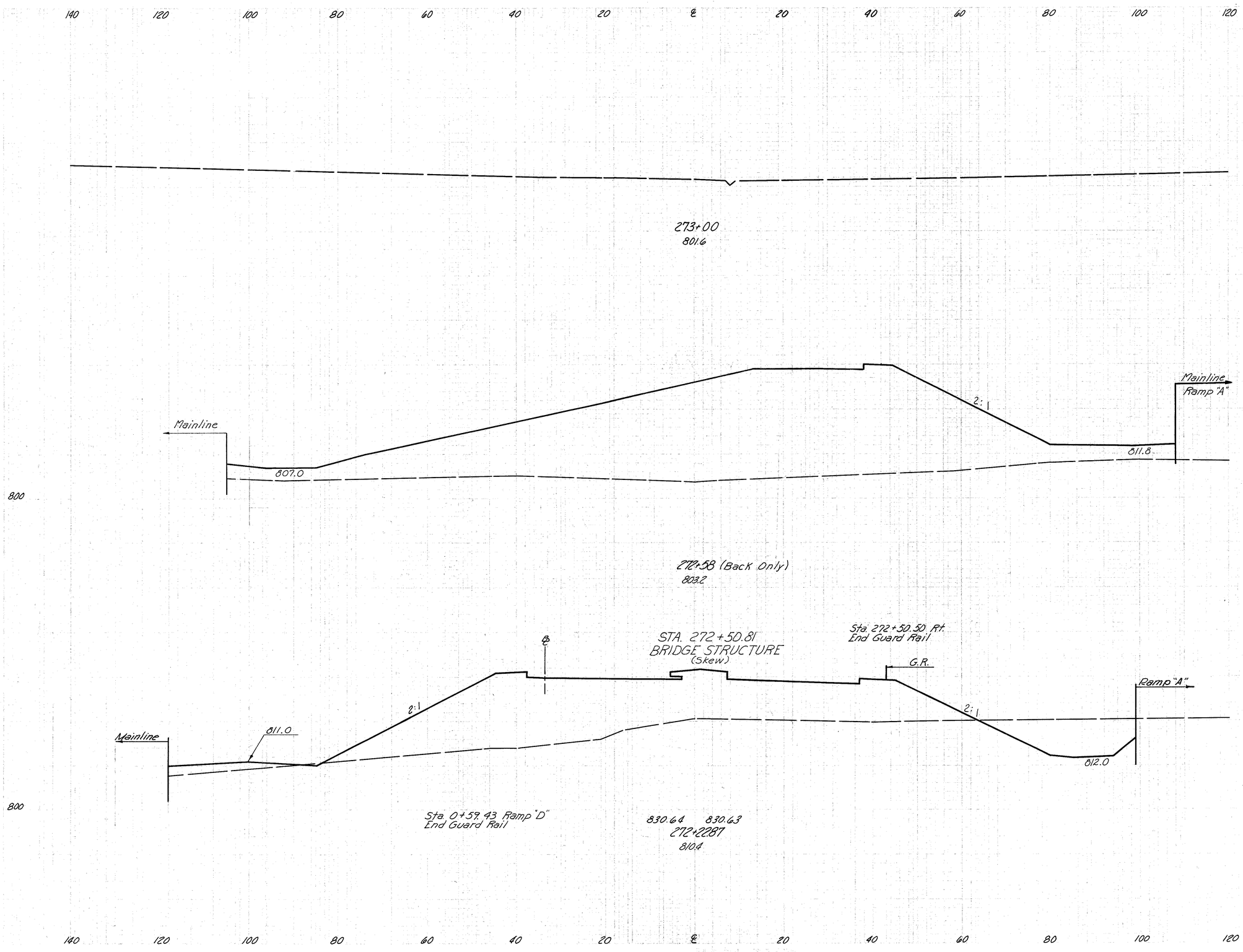
END AREA		VOLUME	
CUT	FILL	CUT	FILL
270	2320		
		143	2192
39	2414		
		126	2162
341	2256		
		422	3978

CROSS COUNTY HIGHWAY
STA.271+50 – STA.272+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

262
445

HAMILTON COUNTY
HAM. 71 - 13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	2762		
		146	2753
224	1471		
		209	1606

CROSS COUNTY HIGHWAY
STA. 272+22.87 – STA. 273+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

263
445

HAMILTON COUNTY
HAM. 71 - 13.05

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

Sta. 276+25 4.5' Rt.
I-8 Std. C.B. No. 2-6
F.L. Opening 832.98
Inv. 12" 828.3
Inv. 6" 828.6

Sta. 276+25 81' Lt.
H.W.-E Inv. 12" 813.74

G.R.

I-10 Dumped Rock
22'x6'-6"x 1'-6"

L.A.

2:1

5.05%

2:1

2:1

2%

F.L.: 827.32

I-1 49'x12" Pipe Class J-1 @ 2%

F.L.: 814.10

I-1 40'x12" Class F-4

808.55

810.0

Mainline

810

833.16 833.20
276+50
815.8
Sta. 276+25
Culvert (Skew)

Sta. 0+24.50 Ramp "C" Rt.
Begin Guard Rail

L.A.

12:1

5.05%

806.02

833.10 833.10
276+00
814.2

Sta. 275+76
End I-10 Rip Rap
Begin I-10 Dumped Rock 10'x1'-6"

Ahead

Ditch Lt. Bck.

804.75

Sta. 275+68 Lt.
Begin Guard Rail

275+75 (Ahead Only)
813.8

STA. 275+67.75
BRIDGE STRUCTURE
(Skew)

Sta. 275+65 Lt.
Begin 4' Bottom Special Ditch
Begin I-10 Rip Rap Quantity Carried With Structure

800

274+00
808.6

		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		293	2157		
				517	4125
		265	2298		
				262	1922
		300	1853		
Ditch Lt.	Sta 275+75	362		67	
	Sta. 275+65	0			

CROSS COUNTY HIGHWAY
STA. 274+00 ~ STA. 276+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

264
445

HAMILTON COUNTY
HAM. 71-13.05

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

Sta. 278+15 Lt.
End I-10 Dumped
Rock 10'x1'-6"

G.R. 2:1 12:1 L.A. 0.5% 816.65

℄ G.R. 2:1 816.0 Match Line B Mainline

832.80 833.17
278+10
819.1

810 Match Line B 150 200 240

Sta. 278+10

℄ L.A. 0.5% 813.61 814.0 812.0 Match Line A

833.07 833.24
277+50
817.5

810 5.05% Match Line A 150 190

Sta. 277+50

℄ L.A. 5.05% 811.08 803.0 804.2 802.15

833.14 833.25
277+00
816.5

810

℄ G.R. 2:1 12:1 L.A. 5.05% 810.30 G.R. 2:1 Mainline 802.4

833.15 833.24
276+84.83
816.3

810

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
322	1925		
		1078	4347
698	1987		
		1281	3712
736	2022		
		24	1148
664	2048		
		617	2712

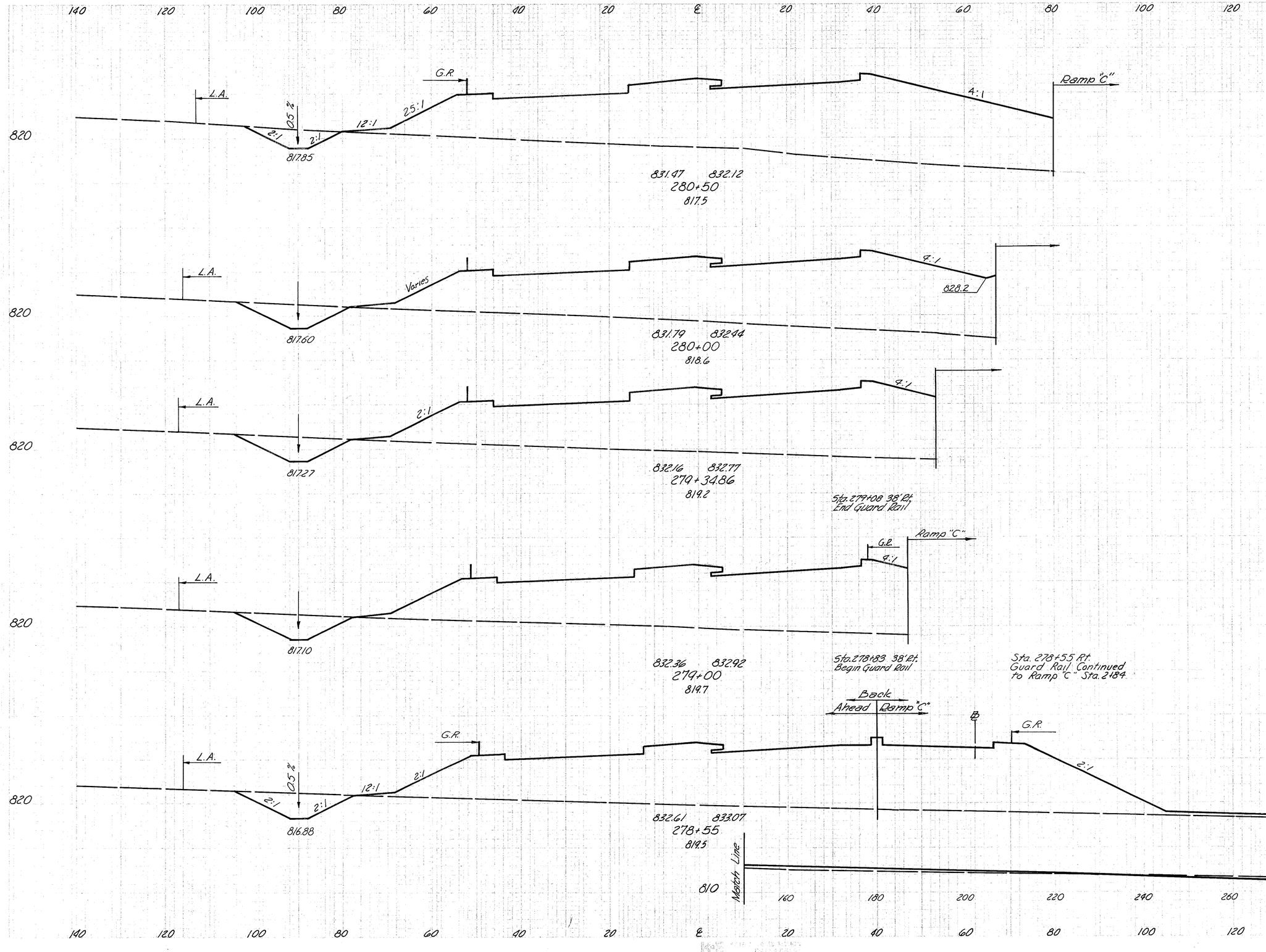
CROSS COUNTY HIGHWAY
STA. 276+84.83 ~ STA. 278+10

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

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

265/445

HAMILTON COUNTY
HAM. 71-13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
55	1985		
		123	3405
78	1693		
		199	3783
87	1443		
		110	1793
84	1335		
		150	2134
Ahead 95	1226		
Back 135	2083		
		381	3340

CROSS COUNTY HIGHWAY
STA. 278+55 ~ STA. 280+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

266
445

HAMILTON COUNTY
HAM.71-13.05

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

Sta 282+09 Lt.
End Guard Rail
Begin Shoulder Transition

L.A. .5% 2:1 4:1 G.R.

820 819.38

Ramp "B"

830.64 830.86
282+00
819.4

Ramp "B"
Ramp "C"

L.A. .5% Varies

820 818.20

Hamilton County - Interstate

Sta. 270+65.06 to Sta. 281+21.36

Excavation	6,054	C.Y.
Embankment	53,712	C.Y.
Embankment + 15%	61,768	C.Y.

.5% Sta. 281+20 Lt.
Begin L-120 Jute
Matting 7'-8" Wide

281+21.36
815.8

Sta. 281+21.36
Back - Hamilton County - Interstate
Ahead - Village of Montgomery - Interstate

Ramp "C"
Ramp "C1"

L.A. .5% 3:1

818.12

810

281+05
815.8

Sta. 281+00 45' Rt.
I-8 Std. Inlet No. 2-8
F.L. 831.59
Inv. 12" 822.20
F.L. 6" 827.4

Ramp "C"

L.A. .5% 12:1 Varies G.R. 2:1 2:1

817.97

8.4 %

See Ramp "C" Cross Sections

810

831.30 831.95
280+75
817.0

I-1 95'x12" Pipe Cl. U-1 @ 8.4 %

Sta. 280+52 82' Rt.
I-8 Std. C.B. No. 2-2-A
F.L. 822.3
Inv. 12" 819.2

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	48	1483		
			93	5781
Ahead - Village of Montgomery Int.				
Back - Hamilton County - Interstate	17	2487		
			13	1491
	27	2434		
			41	2562
	47	2178		
			47	1928

CROSS COUNTY HIGHWAY
STA. 280+75 ~ STA. 282+00

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

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

267
445

HAMILTON COUNTY
HAM. 71 - 13.05

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

820

L.A. G.R. 2:1 4:1

Sta. 285+63' 2' Lt.
End Guard Rail
Sta. 285+57 8'646' Lt
Begin Guard Rail
Sta. 285+13 2' Lt
Begin Guard Rail

Montgomery Secondary | Interstate
Ahead Back | Ramp "B"

826.93 827.15
285+70.94
829.5

Sta. 285+70.95 Rt.
Begin Ramp Taper
Begin Shoulder Transition

826.95

Sta. 285+70.95 Rt.
Ditch Continued From
Ramp "B" Sta. 19+77 55' Rt.

Sta. 285+54 ℄
Begin Earth Median

Sta 285+54 - Ahead - Left of ℄ - Village of Montgomery Secondary
Right of ℄ - Village of Montgomery Interstate
Sta. 285+54 - Back - Village of Montgomery Interstate

L.A. 823.88 1.5% 0.5%

Sta 285+00 Lt.
End 4' Bottom Special Ditch
End L-120 Jute Matting 7'8" Wide

827.74 827.86
285+00
827.3

L.A. 1.5% 4:1 822.38

828.61 828.86
284+00
823.8

Sta. 283+34 Lt.
End Shoulder Transition

L.A. 1.5% 4:1 2:1 820.88 0.5% Ramp "B"

829.75 829.86
283+00
819.1

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Secondary —	276	0		
Interstate { Ahead —	109	4		
Interstate { Back —	65	4		
Secondary			163	0
Interstate			37	4
Sta 285+54 — Ahead - Village of Montgomery - Secondary	245	0		
Sta 285+54 — Ahead - Village of Montgomery - Interstate	51	9		
Sta 285+54 — Back - Village of Montgomery - Interstate	296	9		
			449	46
	153	37		
			361	843
	42	418		
			159	2924
	44	1161		
			170	4917

Note: End Areas are interpolated

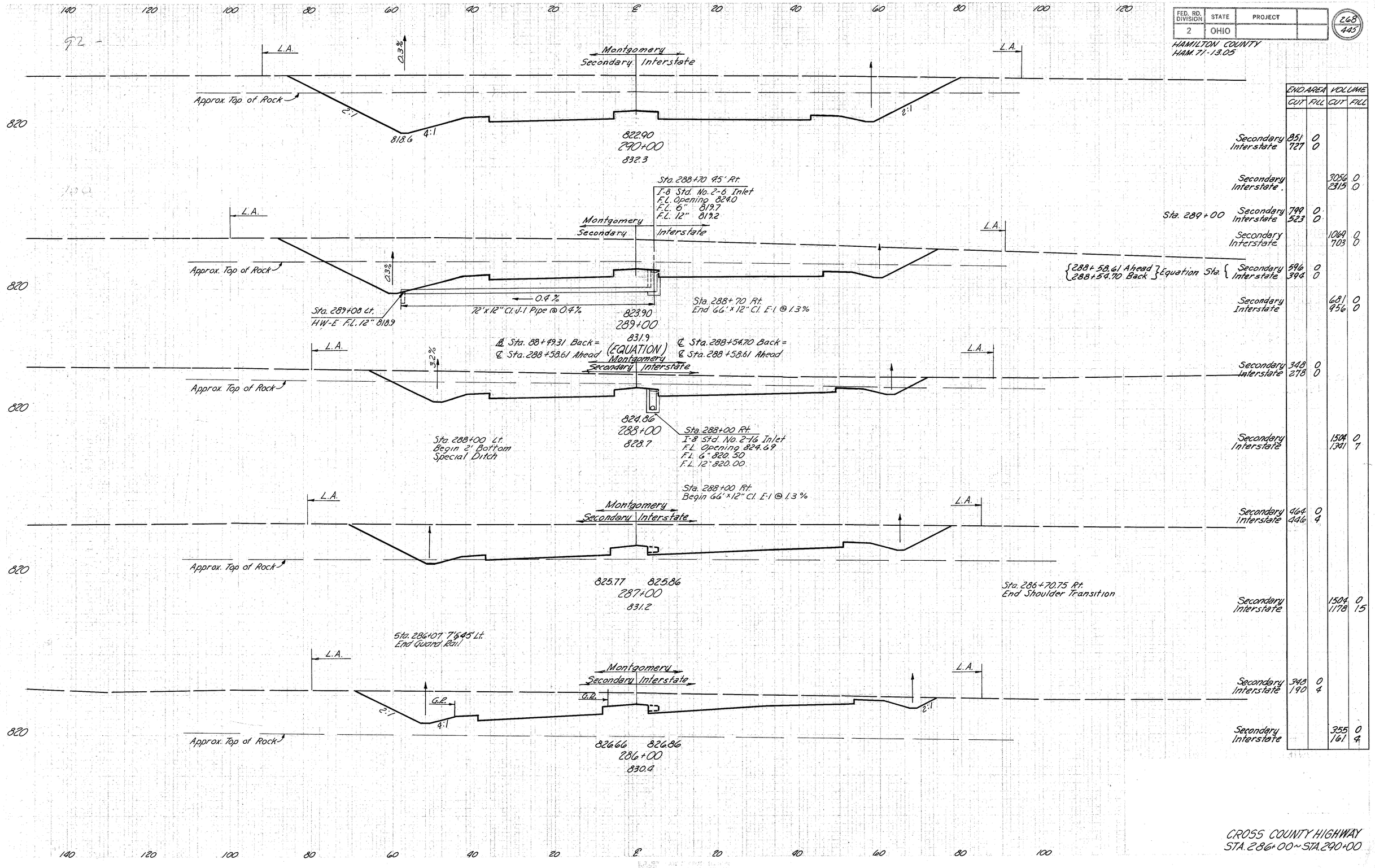
CROSS COUNTY HIGHWAY
STA. 283+00 ~ STA. 285+70.94

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

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

268
445

HAMILTON COUNTY
HAM. 71-13.05



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Secondary	851	0		
Interstate	727	0		
Secondary			3056	0
Interstate			2315	0
Sta. 289+00 Secondary	799	0		
Interstate	523	0		
Secondary			1069	0
Interstate			703	0
{288+58.61 Ahead / 288+54.70 Back} Equation Sta. Secondary	596	0		
Interstate	394	0		
Secondary			681	0
Interstate			956	0
Secondary	348	0		
Interstate	278	0		
Secondary			1504	0
Interstate			1341	7
Secondary	464	0		
Interstate	446	4		
Secondary			1504	0
Interstate			1178	15
Secondary	348	0		
Interstate	190	4		
Secondary			355	0
Interstate			161	4

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

269
445

HAMILTON COUNTY
HAM 71-13.05

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

Sta. 295+14
END WORK

Drainage Ditches
Outlet At Sta 295+14
Elev. = 816.2

L.A.

810

817.50
295+00
817.6

Village of Montgomery - Secondary

Sta. 285+54 to Sta. 295+14		
Excavation	17,796	C.Y.
Embankment	0	C.Y.
Embankment +15%	0	C.Y.

L.A.

2:1

817.70
294+00
821.8

816.75

Village of Montgomery - Interstate

Sta 281+21.36 to	Sta. 293+34.86	
Excavation	14,962	C.Y.
Embankment	14,541	C.Y.
Embankment +15%	16,722	C.Y.

Sta. 293+34.86 Lt.
End L-120 Jute Matting 7'-8"

Sta. 293+34.86 Rt.
End L-120 Jute Matting 7'-8"
End Ramp Taper Rt.

Ahead Sta. 293+34.86 Village of Montgomery - Secondary
Back - Sta. 293+34.86 Village of Montgomery - Left; Secondary - Right; Interstate.

STA. 293+34.86 END PAVEMENT

820

Montgomery
Secondary | Interstate

819.33
293+00
824.9

817.0

Sta. 293+00 Lt.
End Special Ditch

Sta. 292+25 Rt.
Begin L-120 Jute Matting 7'-8"

Sta. 292+25 Lt.
Begin L-120 Jute Matting 7'-8"
Sta. 292+12.59
Begin Taper Lt.

1%

818.0

820.80
292+00
828.5

Approx. Top of Rock

0.3%

818.3

821.90
291+00
831.1

Approx. Top of Rock

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Sta. 295+14 Secondary	0	0		
Sta. 295+00	10	0	3	0
Secondary			596	0
	312	0		
Secondary			1138	0
Sta. 293+34.86 Ahd. Only. Secondary	632	0		
Sta. 293+34.86 Bck. (Interpolated). Secondary	325	0		
Interstate	307	0		
Secondary			500	0
Interstate			407	0
Secondary	450	0		
Interstate	324	0		
Secondary			1896	0
Interstate			1612	0
Secondary	574	0		
Interstate	579	0		
Secondary			2404	0
Interstate			2343	0
Secondary	727	0		
Interstate	686	0		
Secondary			2932	0
Interstate			2617	0

CROSS COUNTY HIGHWAY
STA. 291+00 ~ STA. 295+14

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

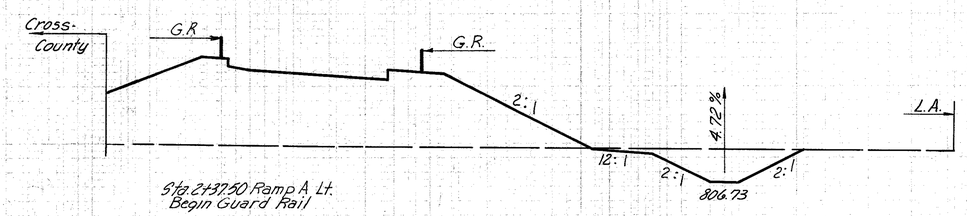
TYPICAL CROSS SECTION

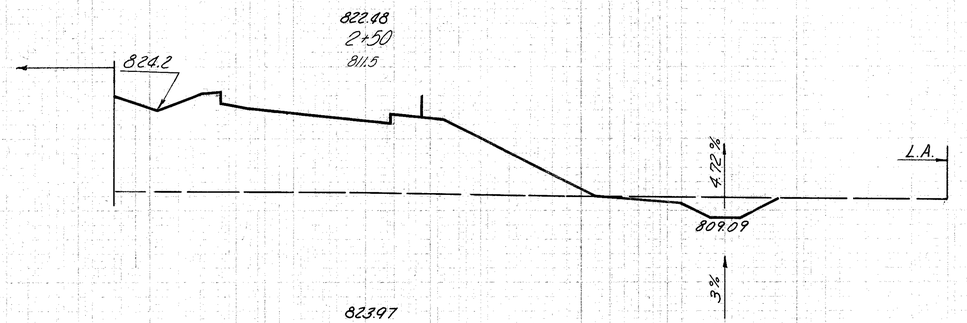
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

270
445

HAMILTON COUNTY
HAM. 71-13.05

100 80 60 40 20 ℄ 20 40 60 80 100





END AREA		VOLUME	
CUT	FILL	CUT	FILL
9	592		
		72	1147
29	647		
		20	509
24	662		
		27	460
16	520		

RAMP "A"
STA. 1+42 ~ STA. 2+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

271.445

HAMILTON COUNTY
HAM. 71 - 13.05

100 80 60 40 20 ℄ 20 40 60 80 100

800

Mainline G.R. 2:1 G.R. Varies L.A. 12.9%

801.70

03 %

813.69
4+50
805.4

3:1 L.A.

800

816.06
4+00
808.0

03 %

Sta. 3+77 Rt.
End E-10 Dumped Rock 10'x1'-6"
Begin C-120 Jute Matting 11'-4" Wide
Quantity Carried With Structure

Mainline
Cross-County
812.2
2:1
4.2 %
L.A.
48" Pipe
802.86

800

819.13
3+32
808.5

Sta. 3+32 Rt.
End C-120 Jute Matting 11'-4" Wide
Begin E-10 Dumped Rock 10'x1'-6"
Quantity Carried With Drainage Structure

Cross-County G.R. 2:1 G.R. 2:1 4.2 % L.A.

800

804.37

820.47
3+00
810.5
Sta. 3+00
Culvert (Skew)

END AREA		VOLUME	
CUT	FILL	CUT	FILL
78	466		
		184	893
121	498		
		314	1492
128	687		
		139	734
107	551		
		144	1058

100 80 60 40 20 ℄ 20 40 60 80 100

RAMP "A"

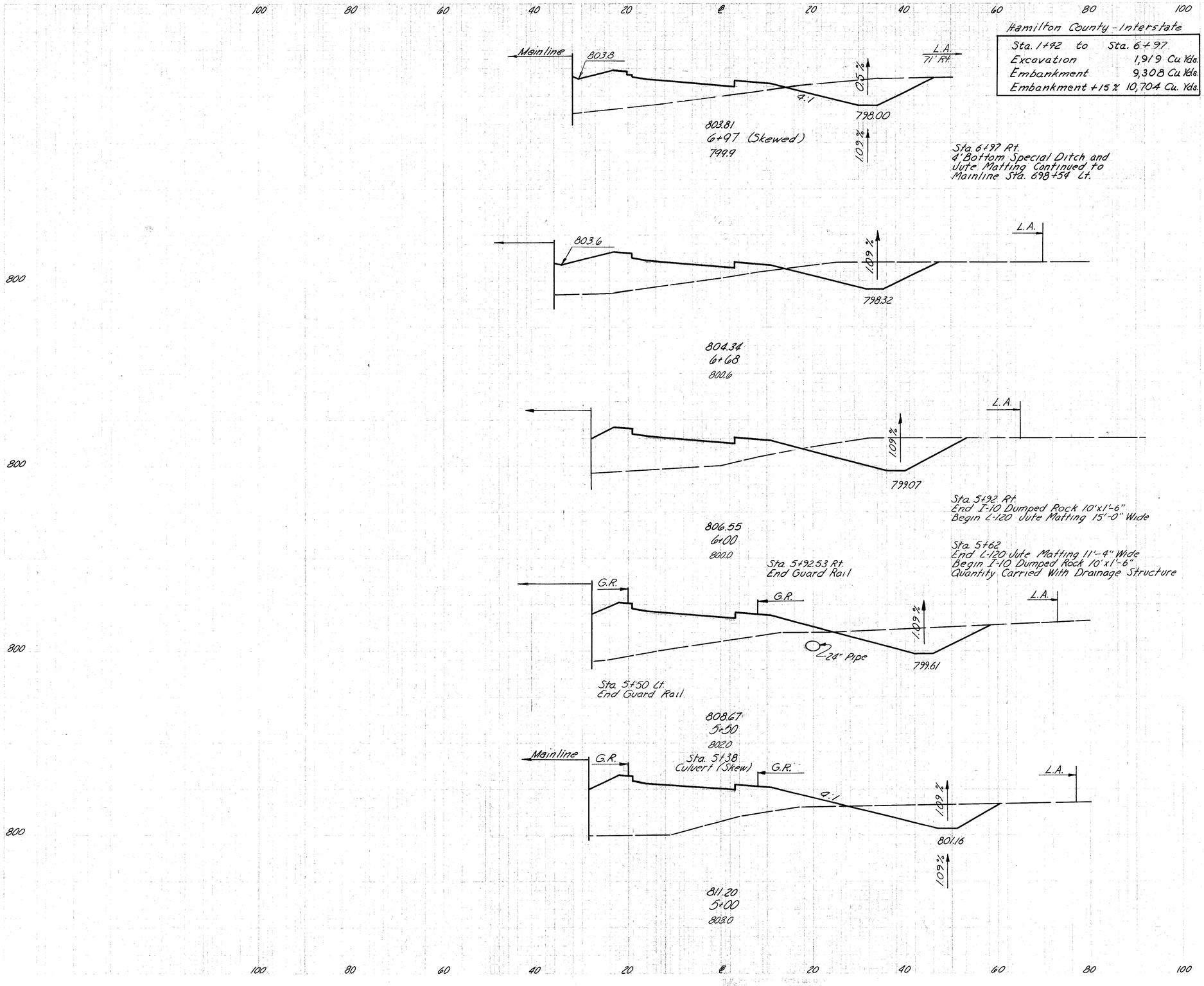
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

272
445

HAMILTON COUNTY
HAM 71-13.05

Hamilton County - Interstate

Sta. 1+92	to	Sta. 6+97
Excavation		1,919 Cu Yds.
Embankment		9,308 Cu Yds.
Embankment +15%		10,704 Cu. Yds.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
103	220		
		118	252
116	249		
		332	669
198	282		
		228	570
98	334		
		180	701
96	423		
		161	823

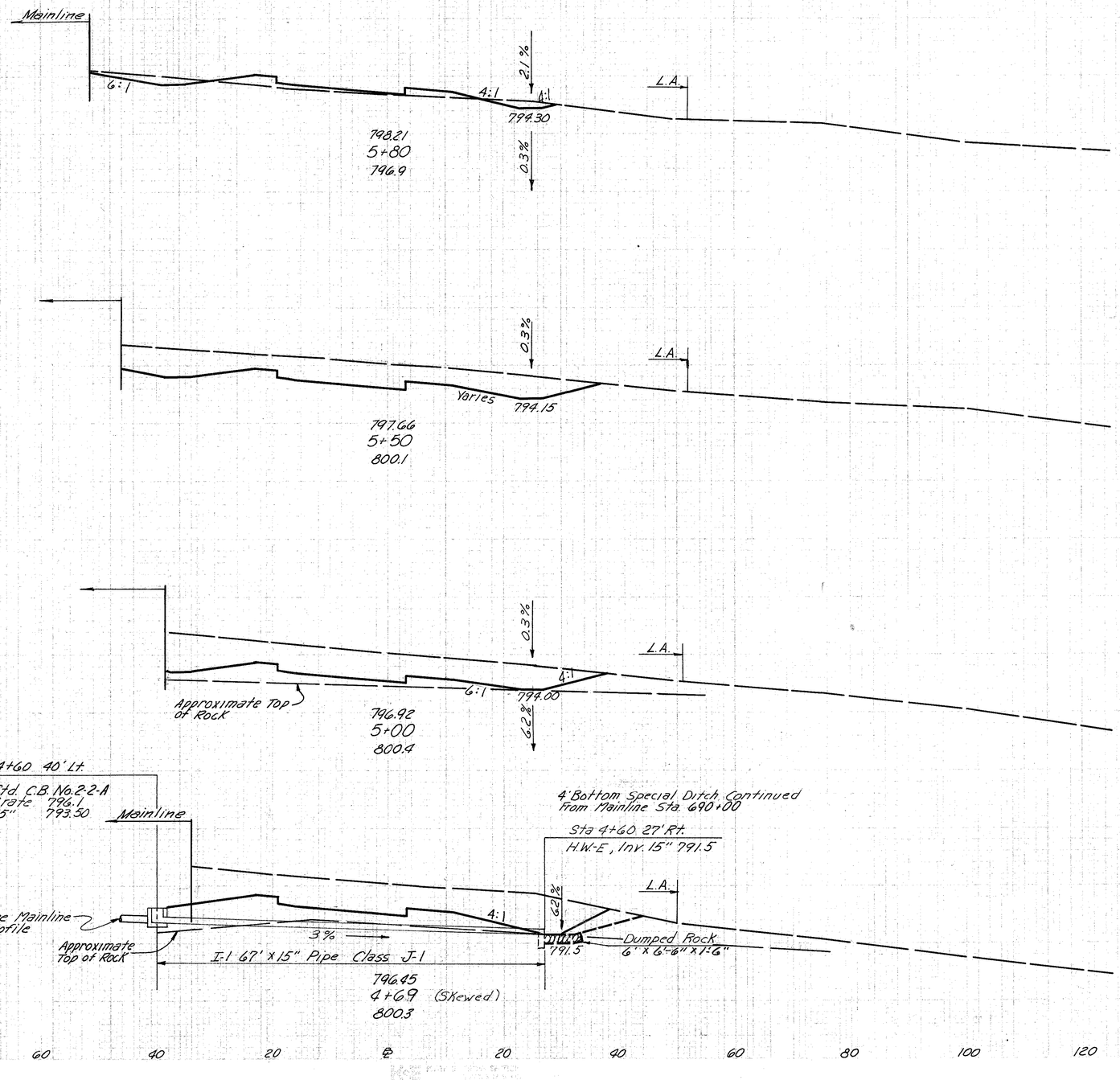
RAMP "A"
STA. 5+00 ~ STA. 6+97

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

273
445

HAMILTON COUNTY
HAM.71 - 13.05

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



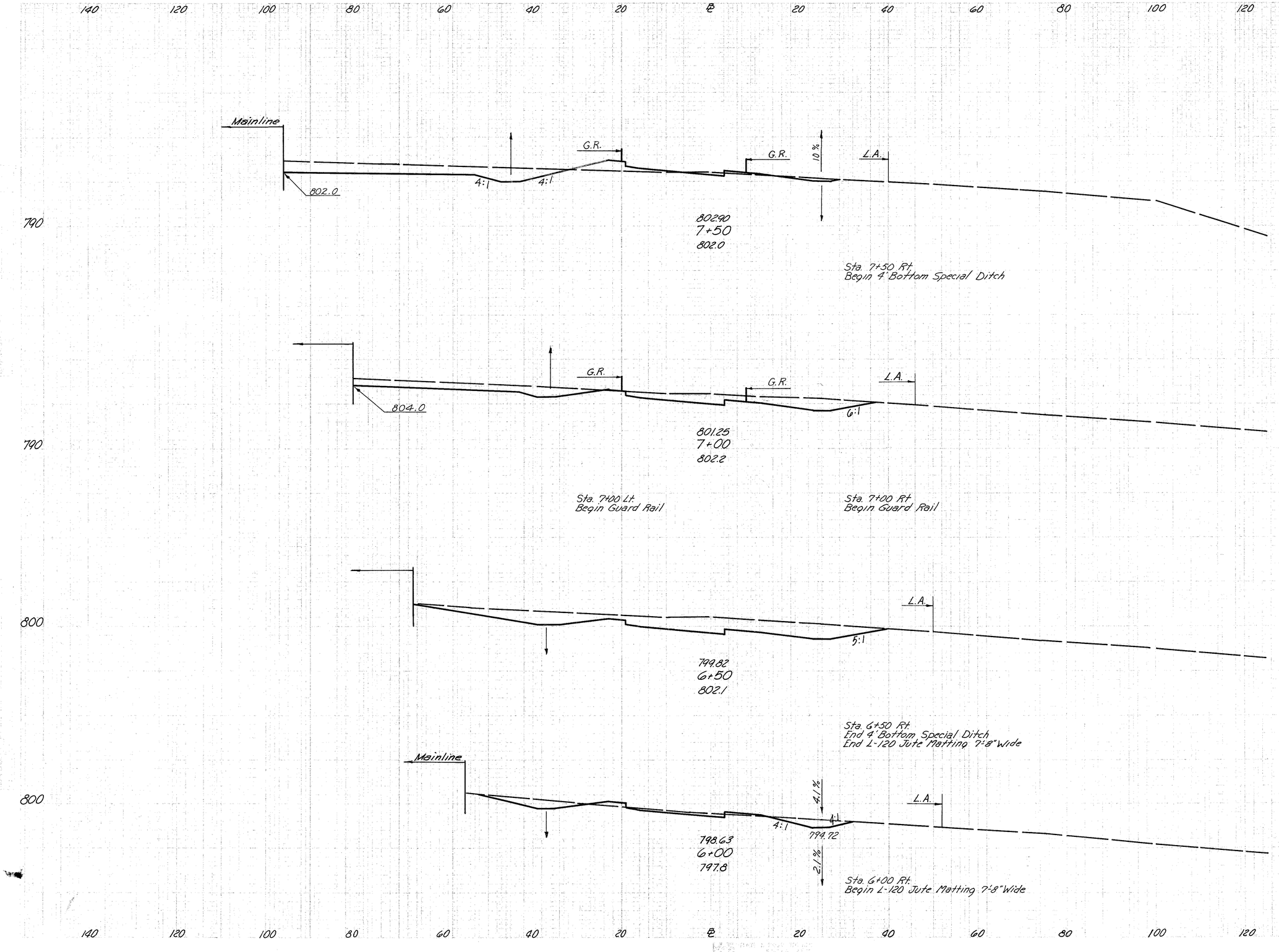
END AREA		VOLUME	
CUT	FILL	CUT	FILL
23	29		
		177	16
295	0		
		574	0
325	0		
		403	0
377	0		

RAMP "B"
STA. 4+69 ~ STA. 5+80

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

274-445

HAMILTON COUNTY
HAM. 71-13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
137	21		
		286	19
172	0		
		374	0
232	0		
		278	12
97	6		
		26	13

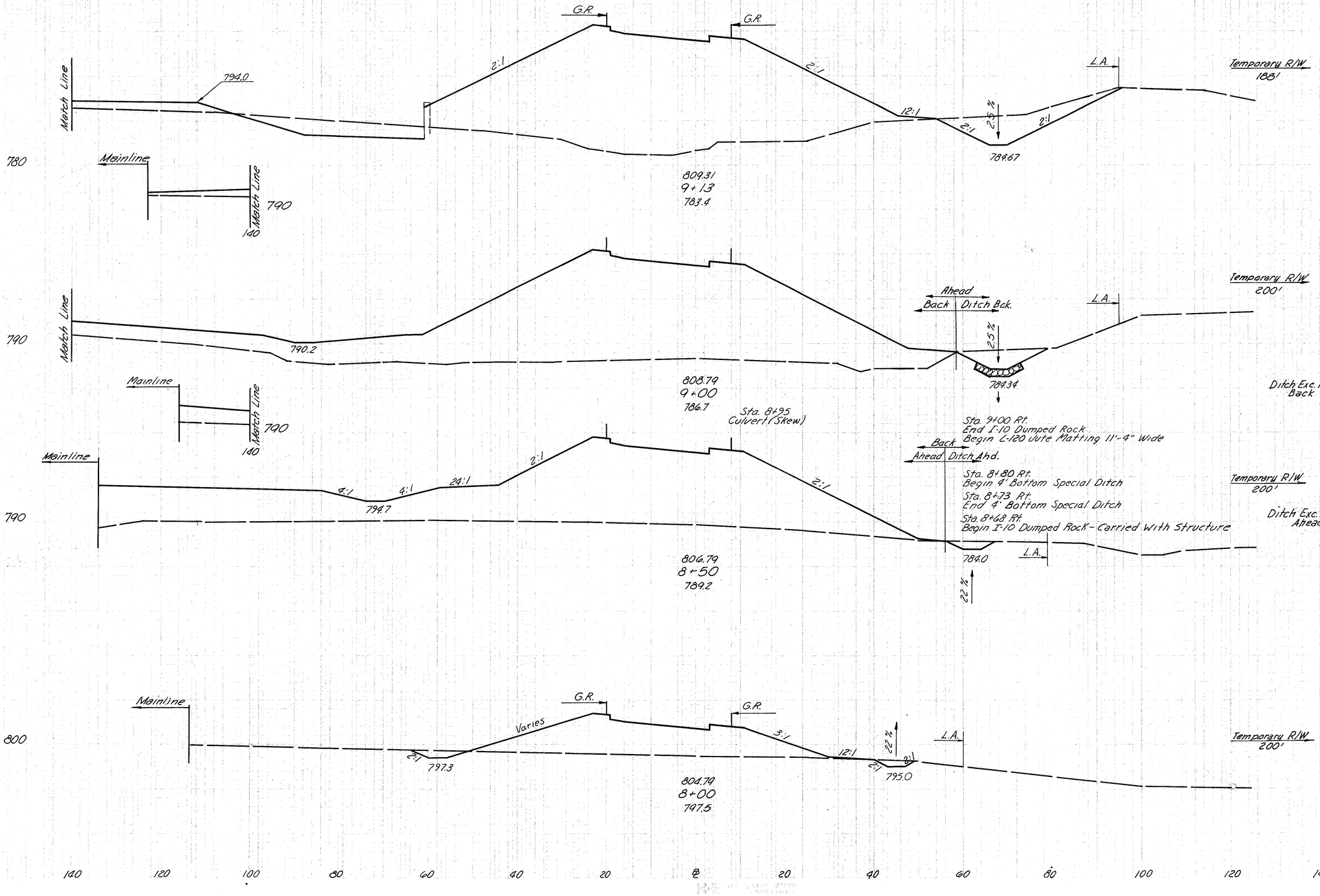
RAMP "B"
STA. 6+00 ~ STA. 7+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

275
445

HAMILTON COUNTY
HAM. 71-13.05

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



		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		267	1376		
				77	1014
Ahead		51	2234		
Back		0	2234		
Ditch Exc. Rt. Back	Sta. 9+00	51			
	Sta. 8+89	51		21	
	Sta. 8+80	0		8	
				0	3760
Ditch Exc. Rt. Ahead	Sta. 8+73	0		1	
	Sta. 8+68	11		7	
	Sta. 8+50	11			
Ahead		0	1827		
Back		11	1827		
				31	2092
		21	432		
				146	417

RAMP "B"
STA 8+00 ~ STA 9+13

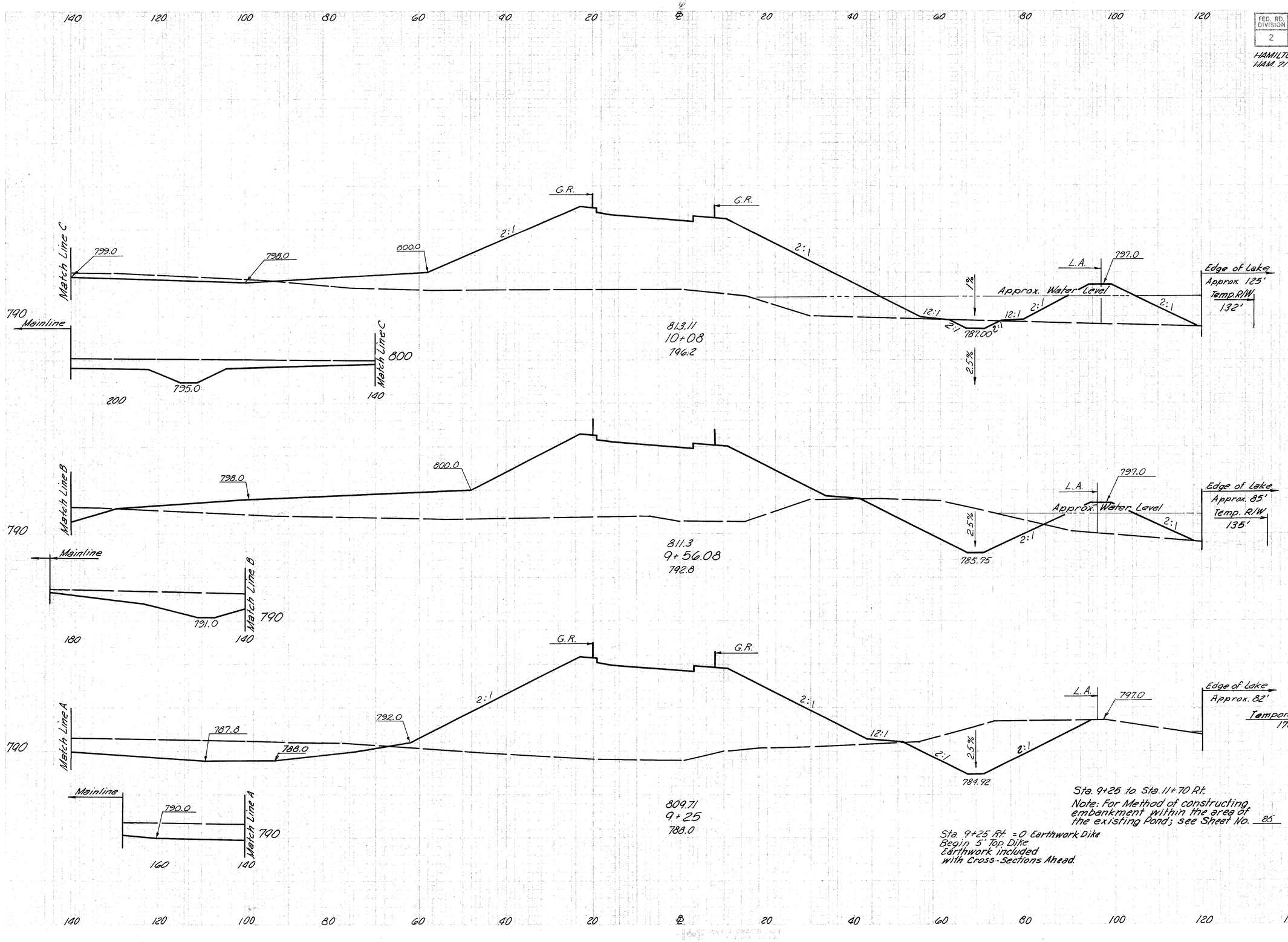
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

276
445

HAMILTON COUNTY
HAM. 71-13.05

END AREA		VOLUME	
CUT	FILL	CUT	FILL
229	1717		
		618	3175
913	1580		
		592	1780
619	1520		
		197	777



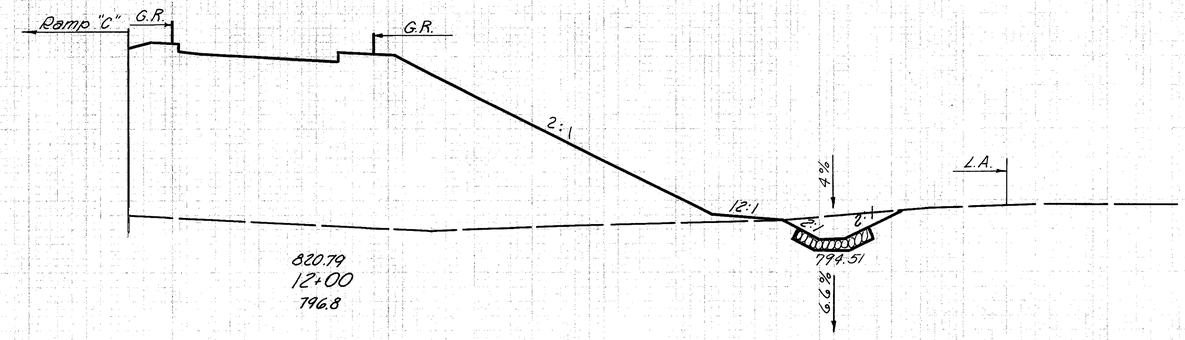
RAMP "B"
STA. 9+23 ~ STA. 10+08

FED. RD. DIVISION	STATE	PROJECT		277
2	OHIO			445

HAMILTON COUNTY
HAM.71-13.05

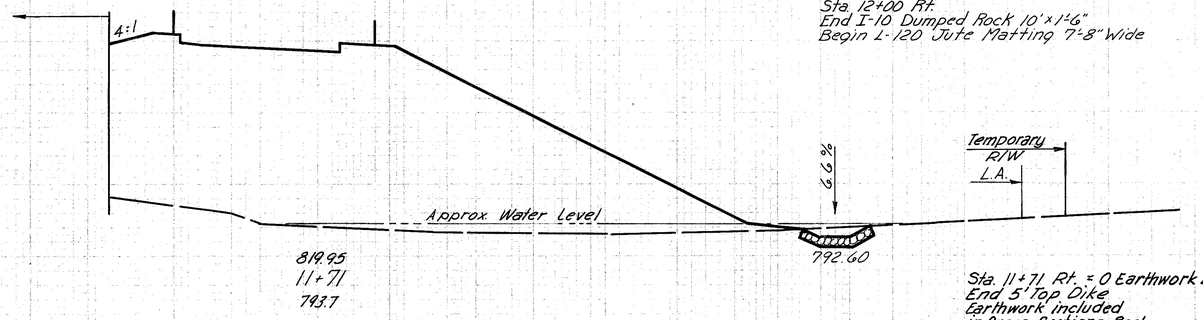
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

790



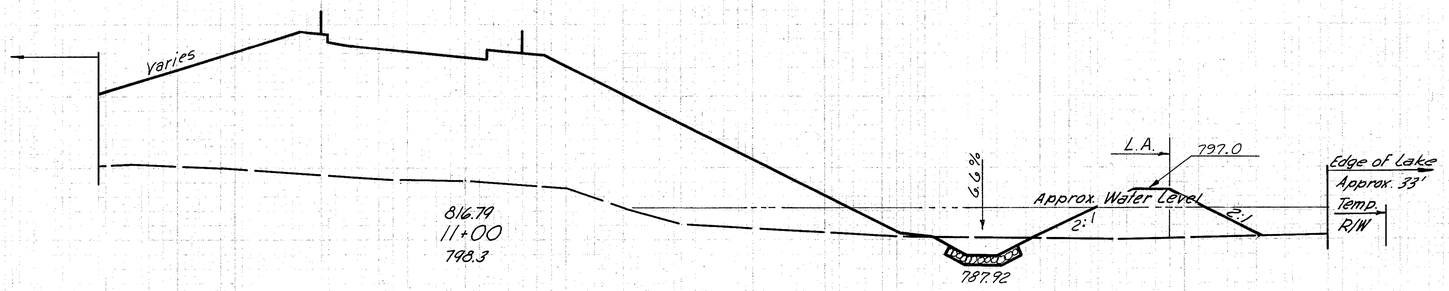
Sta. 12+00 Rt.
End I-10 Dumped Rock 10'x1'-6"
Begin L-120 Jute Matting 7'-8" Wide

790

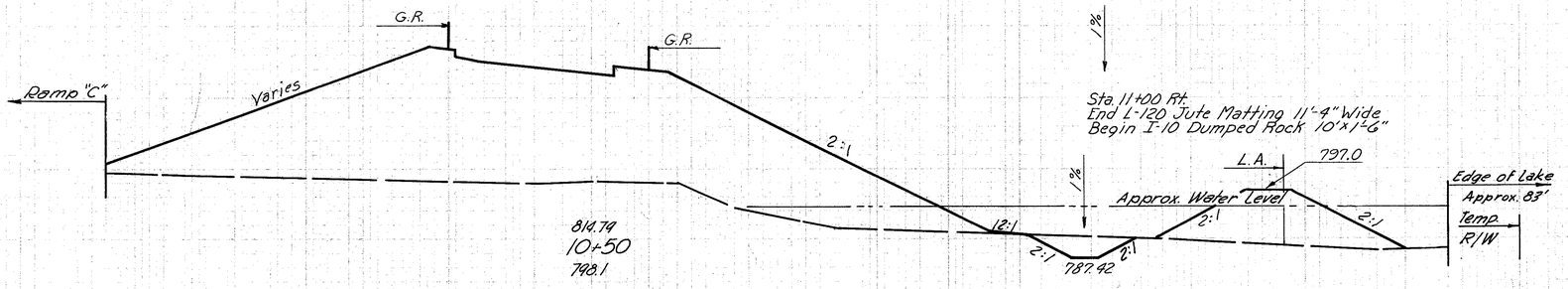


Sta. 11+71 Rt. = 0 Earthwork Dike
End 5' Top Dike
Earthwork included
in Cross-Sections Back.

790



Sta. 11+00 Rt.
End L-120 Jute Matting 11'-9" Wide
Begin I-10 Dumped Rock 10'x1'-6"



790

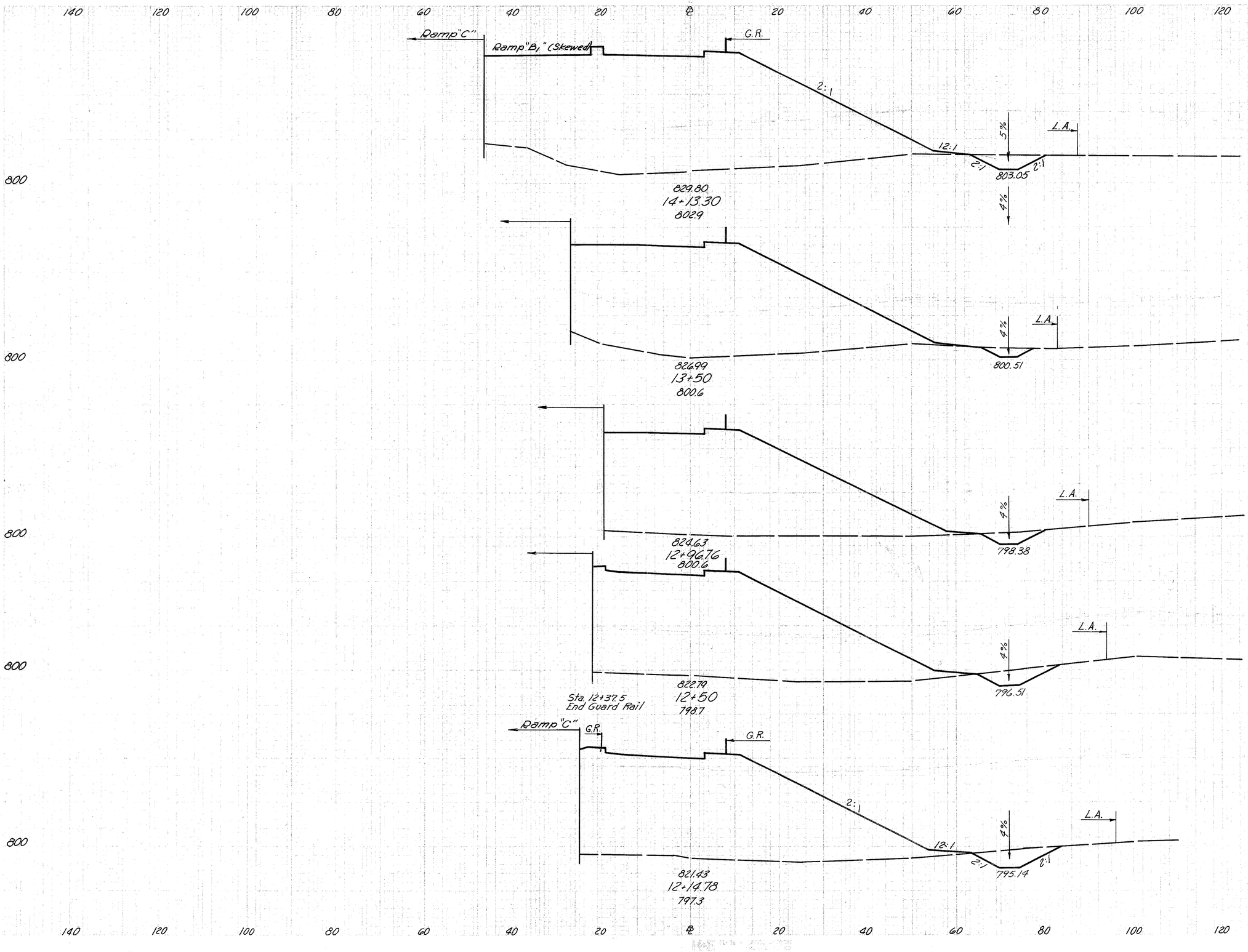
END AREA		VOLUME	
CUT	FILL	CUT	FILL
25	1927		
		17	1660
7	1626		
		33	4341
18	1676		
		40	3034
25	1601		
		198	2581

RAMP "B"
STA. 10+50~ STA. 12+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

278
445

HAMILTON COUNTY
HAM 71-13.05



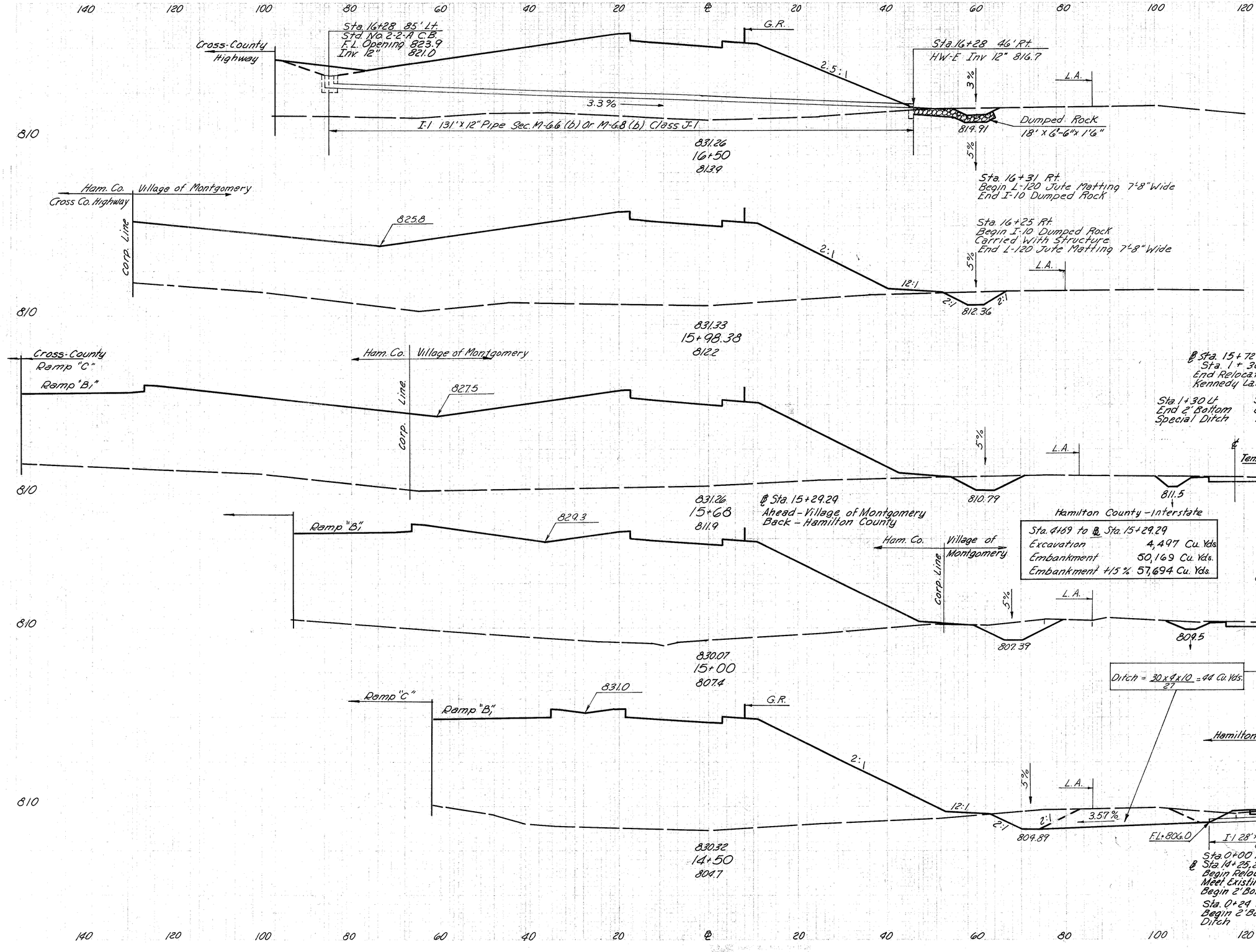
END AREA		VOLUME	
CUT	FILL	CUT	FILL
32	2041		
		52	4145
12	1492		
		34	2753
23	1300		
		49	2302
34	1359		
		53	1802
47	1404		
		20	775

RAMP "B"
STA.12+14.78~STA.14+13.30

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

277
445

HAMILTON COUNTY
HAM 71-13.05



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	10	1854		
			31	4169
Village of Montg.	22	2507		
Ham. Co.	0	0		
Village of Montg.			25	2432
Ham. Co.			0	847
Kennedy Le. Sta. 1+30	12			
" " Vil. of Montg.			2	
Kennedy Le. Sta 1+26	20			
Village of Montg.	23	1816		
Ham. Co.	0	1505		
{Kennedy Lane / Village of Montg.}			47	
			86	2287
Ham. Co.			0	5283
{Sta. 0+65 / Kennedy Lane}	22	0		
Village of Montg.	45	0		
Ham. Co.	0	2690		
Ham. Co.			44	
{Kennedy Lane / Village of Montg.}			40	
			42	0
Ham. Co.			62	4631
Kennedy Le. Ahd Sta 0+24	31			
Village of Montg.	0	0		
Ham. Co.	67	2311		
Ham. Co.			67	2960
Sta. 0+24 Bck	16		12	
Kennedy Lane Sta. 0+00 (Ham. Co.)	12			

RAMP "B"
STA. 14+50 ~ STA. 16+50

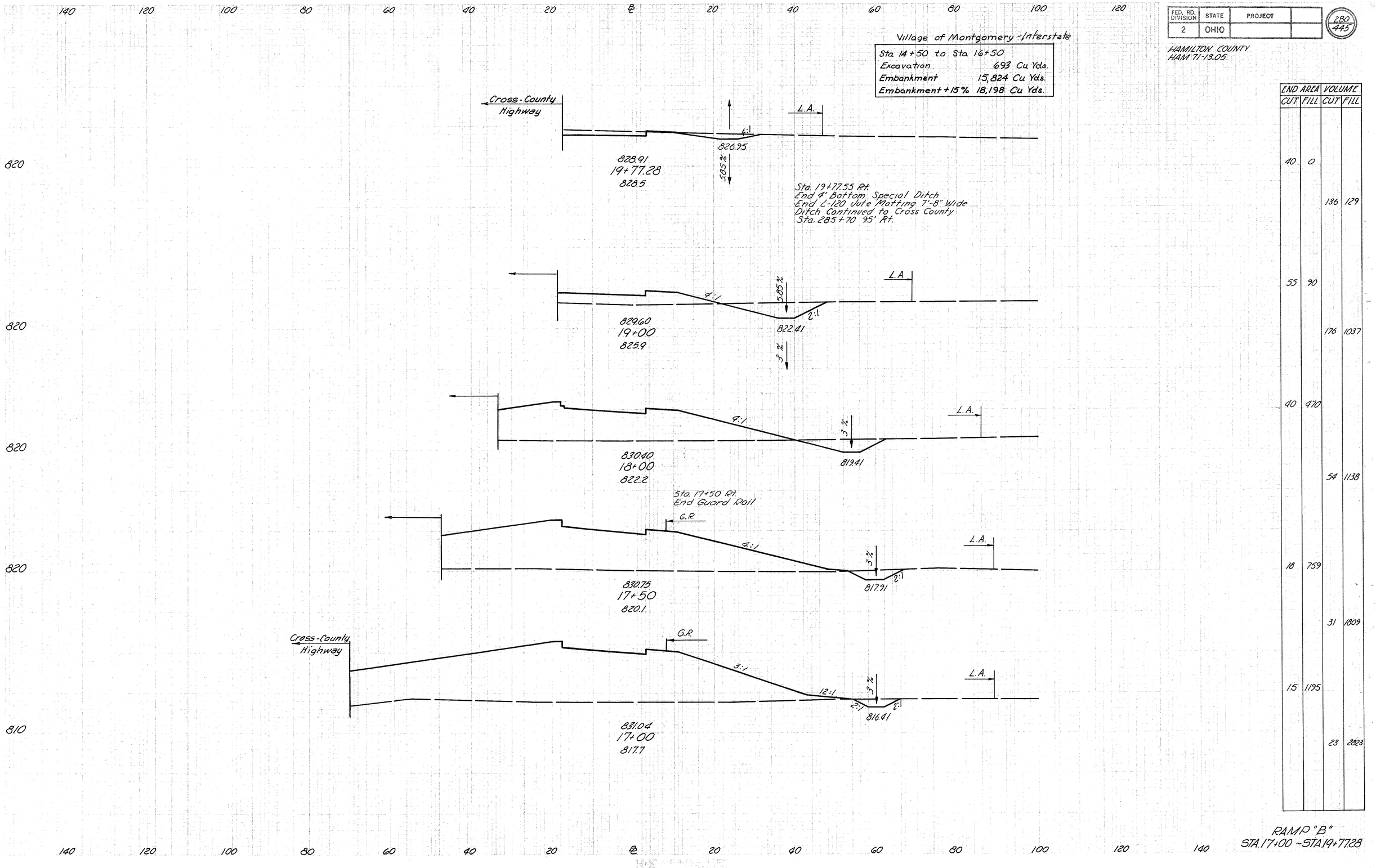
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

280
445

HAMILTON COUNTY
HAM 71-13.05

Village of Montgomery - Interstate

Sta 14+50 to Sta. 16+50	
Excavation	693 Cu Yds.
Embankment	15,824 Cu Yds.
Embankment + 15%	18,198 Cu Yds.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
40	0		
		136	129
55	90		
		176	1037
40	470		
		54	1138
18	759		
		31	1809
15	1195		
		23	2823

RAMP "B"
STA. 17+00 ~ STA. 19+77.28

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

281
445

HAMILTON COUNTY
HAM 71-13.05

60 40 20 ℄ 20 40 60 80 100 120 140 160 180 200

Sta 4+65 Rt
Begin L-120 Jute Matting 7'-8" wide
End I-10 Dumped Rock

Sta 4+55 Rt
Begin I-10 Dumped Rock
Catried With Structure

Sta 280+52 87' Rt
I-8 Std C.B. No 2-2-A
FL. Opening 822.3
Inv. 12" 819.2

G.R.

Cross-County Highway

4:1

2:1

814.1

Sta 4+58 51' Rt
H.W-E, Inv. 12" 811.4

812.0

811.0

814.3

Radial Center Ramp "C"

6.7%

810

I-1 117'x12" Pipe Sec. M-6.6 (c) Class J-1 @ 6.7%

832.33
4+42.70
811.2

See Cross County Cross Sections

809.0

Dumped Rock
26'x6'-6"x1'-6"

Sta 4+42.70
Begin Ditch

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
Radial Center Ramp "C"	176	1757		
			85	2581
Radial Center Ramp "C"	0	1430		
			58	1864
	78	1086		
			152	2716
Ramp "C"	30	844		

818.3

814.0

814.0

810

83298
4+00
814.0

Note: Areas of Cross-Sections Sta 4+00 to Sta 11+78.87 inclusive, have been corrected for Curvature by adding to, or subtracting from the End Area a correction factor C, computed from the formula $C = \frac{Ae}{R}$, and then multiplying the mean of two adjacent corrected Areas by the ℄ distance to obtain volume in cu.ft.
In the formula $C = \frac{Ae}{R}$;
c = correction to End Area in Sq.ft.
A = End Area (Fill & Cut computed separately)
e = Distance to Center of Gravity from ℄: + if Outside, − if Inside of ℄
R = Radius of ℄ curve

2:1

818.2

814.1

83341
3+60
816.7

810

Sta 2+84 Rt
Guard Rail Continued
From Mainline Sta 278+55

Cross-County Highway

G.R.

Varies

818.0

Ramp "C"

810

83388
2+84 (Skew)
817.9

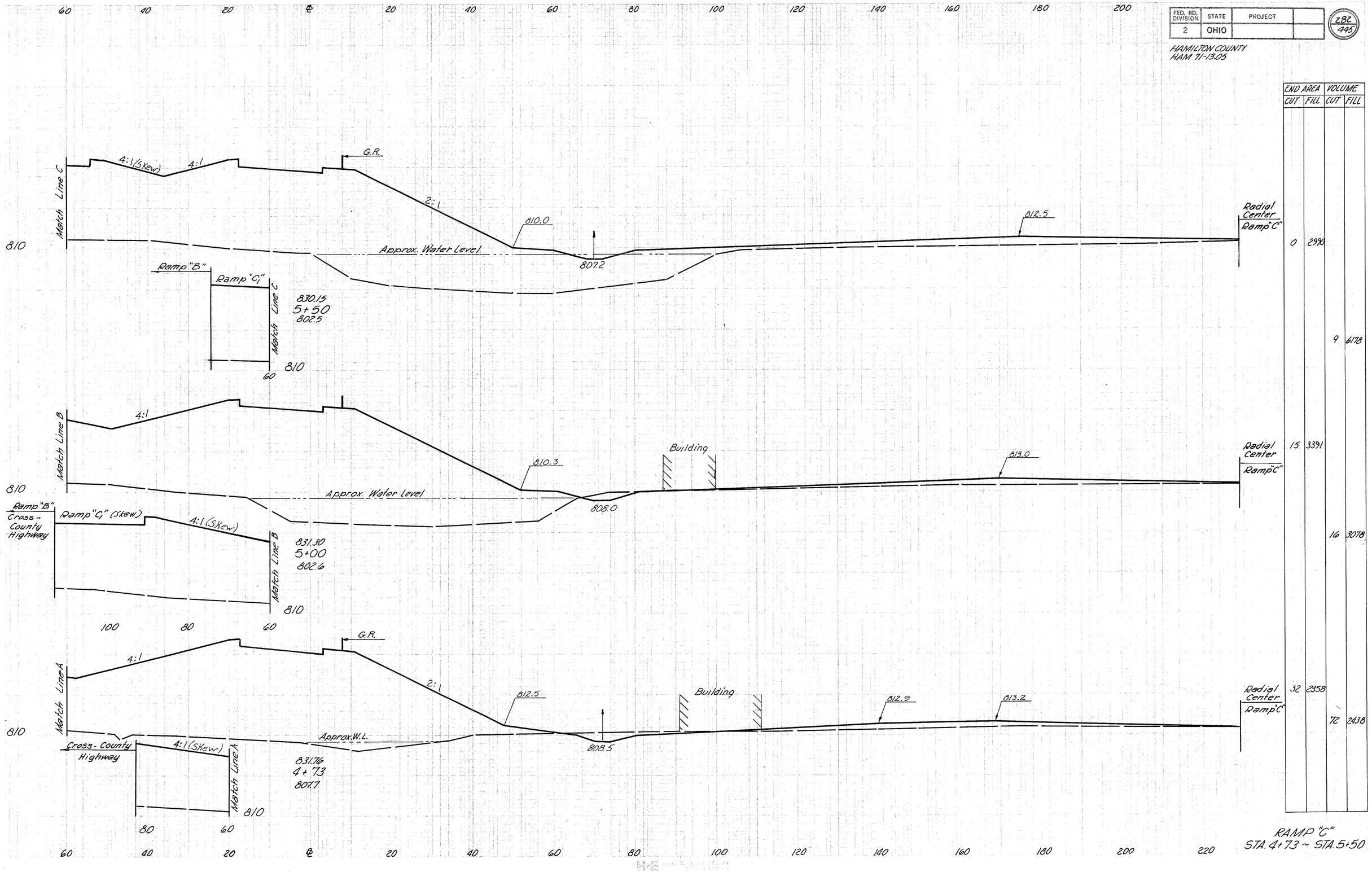
60 40 20 ℄ 20 40 60 80 100 120 140 160 180 200 220

RAMP "C"
STA. 2+84 ~ STA. 4+42.70

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

28E
445

HAMILTON COUNTY
HAM 71-13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	2990		
		9	6178
15	3391		
		16	3078
32	2358		
		72	2438

RAMP "C"
STA. 4+73 ~ STA. 5+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

283
445

HAMILTON COUNTY
HAM 71-13.05

60 40 20 ℄ 20 40 60 80 100 120 140 160 180 200

810

Ramp "B"

G.R.

2:1

Approx. W.L.

804.8

Existing 6" C.M.P.

825.41
7+00
812.0

Radial Center Ramp "C"

813.1

805.3

Sta. 1+45 1.4' Rt.
I-8 Std C.B. No. 3-A
Fl. Grate 829.81
Inv. 12" 824.01

826.52
6+70
808.6

Ramp "B"

Ramp "C"

Sta. 6+15 50' Rt.
H.W.-E Inv. 12" 808.0

22.2%

813.8

I-1 72' x 12" Pipe Class J-1 @ 22.2%

806.1

Dumped Rock
22' x 6'-6" x 1'-6"

828.16
6+20.47
800.1

Ramp "B"

Ramp "C"

G.R.

Sta. 6+20 Rt.
Begin L-120 Jute Matting 7'-8" Wide
End I-10 Dumped Rock

Sta. 6+10 Rt.
End L-120 Jute Matting 7'-8" Wide
Begin I-10 Dumped Rock
Carried With structure

2:1

809.0

Approx. W.L.

806.5

813.8

Radial Center Ramp "C"

828.78
6+00
800.1

END AREA		VOLUME	
CUT	FILL	CUT	FILL
12	2286		
		3	2249
4	2796		
		2	4659
0	3288		
		0	2296
0	3428		
		0	5702

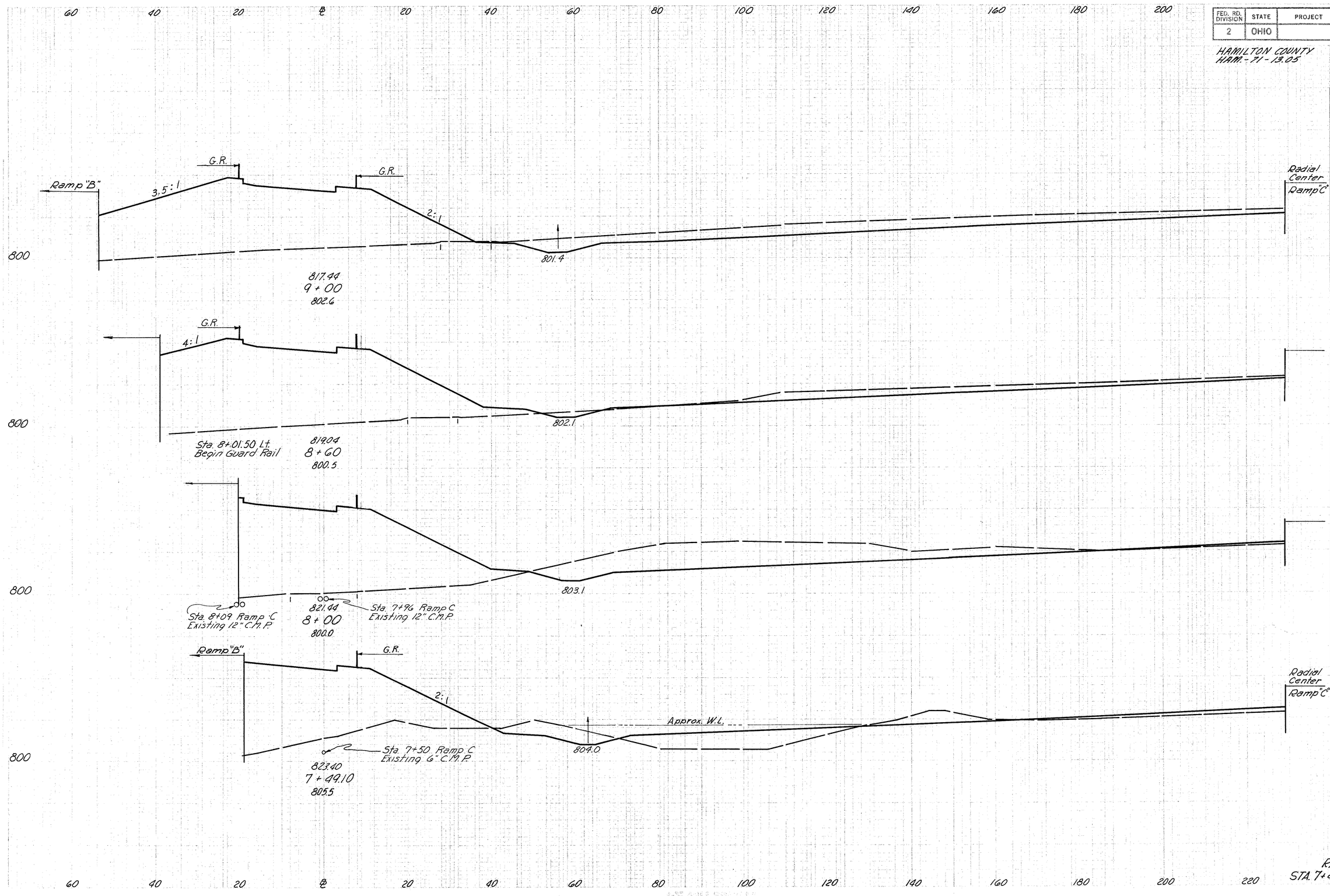
60 40 20 ℄ 20 40 60 80 100 120 140 160 180 200 220

RAMP "C"
STA. 6+00 ~ STA. 7+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

284
445

HAMILTON COUNTY
HAM-71-13.05



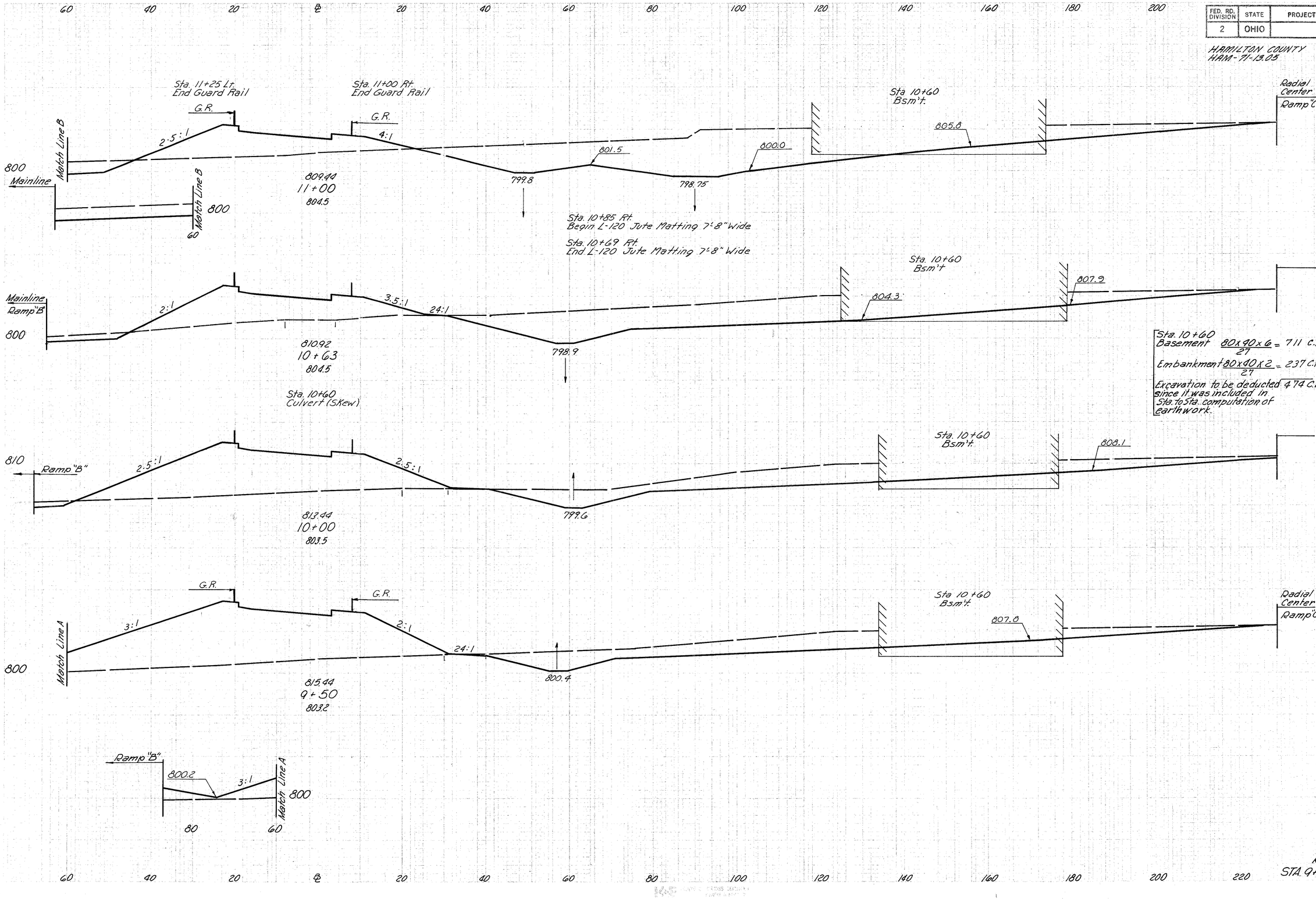
END AREA		VOLUME	
CUT	FILL	CUT	FILL
389	1102		
		181	1832
188	1235		
		410	2512
526	992		
		381	1816
134	975		
		102	2589

RAMP "C"
STA. 7+49.10 ~ STA. 9+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

285
445

HAMILTON COUNTY
HAM-71-13.05



Radial Center Ramp "C"	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	1230	272		
			795	454
	853	348		
			831	1253
	581	654		
			464	1618
	505	959		
			381	2067

Sta. 10+60
Basement $\frac{80 \times 90 \times 6}{27}$ = 711 C.Y.

Embankment $\frac{80 \times 40 \times 2}{27}$ = 237 C.Y.

Excavation to be deducted 474 C.Y. since it was included in Sta. to Sta. computation of earthwork.

-474 +237

RAMP "C"
STA. 9+50 ~ STA. 11+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

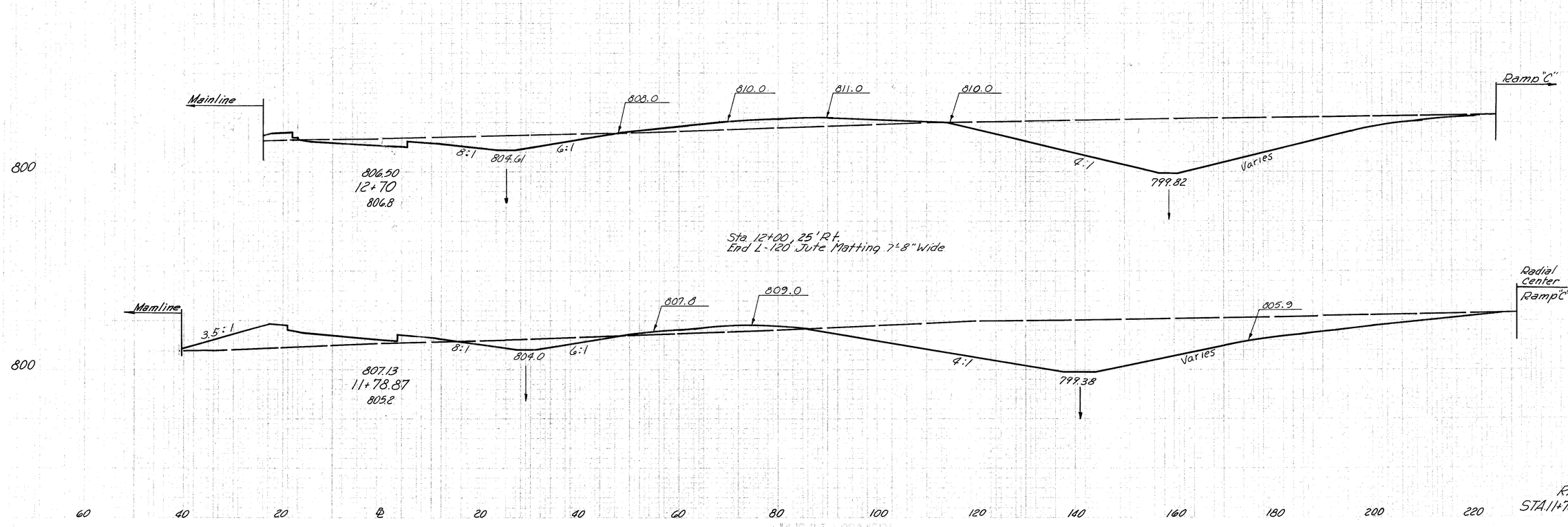
286
445

HAMILTON COUNTY
HAM.-71-19.05

END AREA		VOLUME	
CUT	FILL	CUT	FILL
680	75		
		1662	371
786	145		
		1481	638

Hamilton County-Interstate.

Sta. 2+84	to	Sta. 12+70	
Excavation		6,611	C.Y.
Embankment		49,148	C.Y.
Embankment +15%		56,520	C.Y.

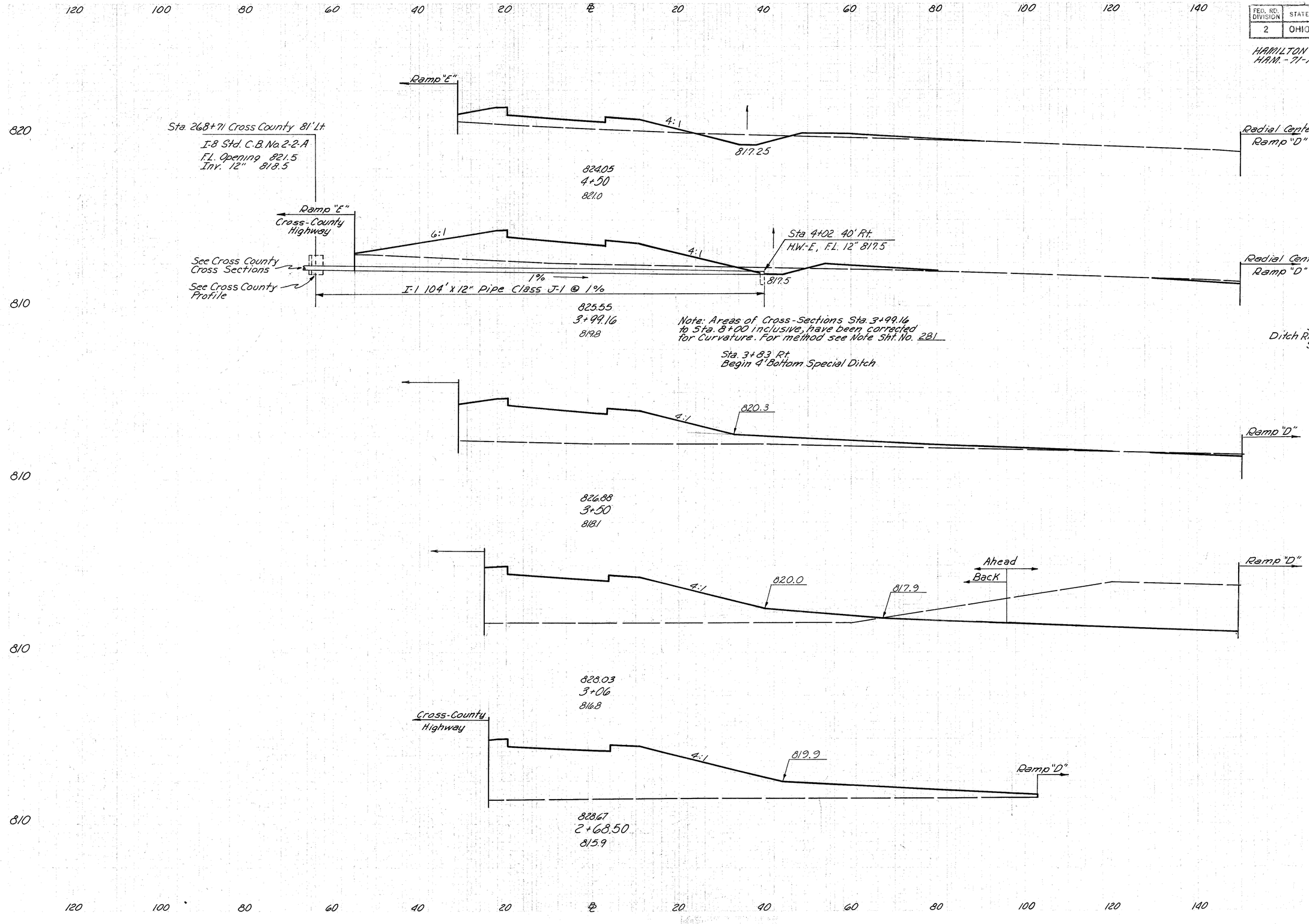


RAMP "C"
STA. 11+78.87 ~ STA. 12+70

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

281/445

HAMILTON COUNTY
HAM.-71-13.05



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	25	141		
			24	492
	1	382		
	10		3	
	0			
			8	830
	8	538		
			451	976
Ahead	545	660		
Back	88	660		
			61	1051
	0	854		

RAMP "D"
STA. 2+68.50 ~ STA. 4+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

288
445

HAMILTON COUNTY
HAM-71-19.05

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

Mainline
Ramp "E"

813.0 4:1 4:1 809.8 813.2 808.5

Radial Center
Ramp "D"

Existing 9" Tile Pipe

812.99
7+36.50
815.6

Ramp "E"

4:1 814.6 8:1 810.8

Existing 9" Tile Pipe

Sta. 7+00 Lt.
Begin L-120 Jute Matting 7'-8" Wide

814.32
7+00
816.8

Sta. 6+79 Lt.
End Guard Rail

G.R. 817.0 8:1 8:1 813.5 817.0

Sta. 5+99 Lt.
Begin Guard Rail

816.42
6+50
817.0

Sta. 6+15 Rt.
Begin L-120 Jute Matting 7'-8" Wide

820.0 6:1 816.8

Sta. 0+90 Ramp E. ℄
I-8 Std. C.B. No. 3-A
FL. Grate 822.4.59
Inv. 12" 820.0
Inv. 6" 820.4

820.18
5+59.20
821.0

Sta. 4+88.28' Rt.
HW-E, Inv. 12" 817.1

Ramp "E" 4:1 820.0 820.0 Radial Center Ramp "D"

4.1%

I-1. 70' x 12" Pipe Class J-1 @ 4.1 % 817.0

Dumped Rock
8' x 6'-6" x 1'-6"

822.38
5+00
821.8

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1353			
		1221	0
454			
		563	38
154	41		
		491	98
108	17		
		171	43
48	22		
		68	151

RAMP "D"
STA. 5+00 ~ STA. 7+36.50

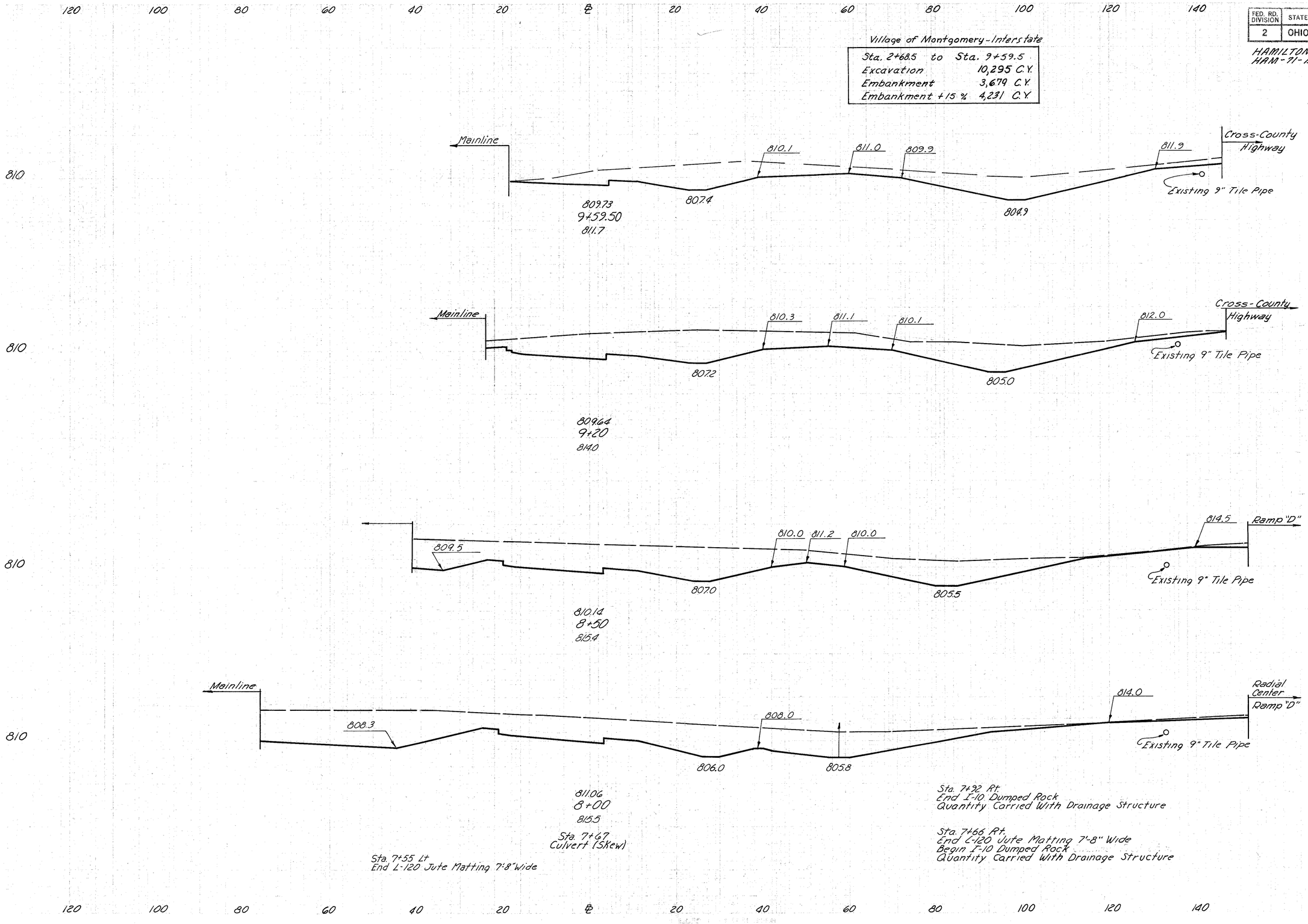
FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

289
445

HAMILTON COUNTY
HAM-71-13.05

Village of Montgomery - Interstate

Sta. 2+68.5	to	Sta. 9+59.5
Excavation		10,295 C.Y.
Embankment		3,679 C.Y.
Embankment +15 %		4,231 C.Y.



Sta. 7+55 Lt
End L-120 Jute Matting 7'-8" Wide

Sta. 7+67
Culvert (Skew)

Sta. 7+32 Rt.
End I-10 Dumped Rock
Quantity Carried With Drainage Structure

Sta. 7+66 Rt.
End C-120 Jute Matting 7'-8" Wide
Begin I-10 Dumped Rock
Quantity Carried With Drainage Structure

END AREA		VOLUME	
CUT	FILL	CUT	FILL
483	0		
		863	0
697	0		
		1939	0
799	0		
		1689	0
1025	0		
		2796	0

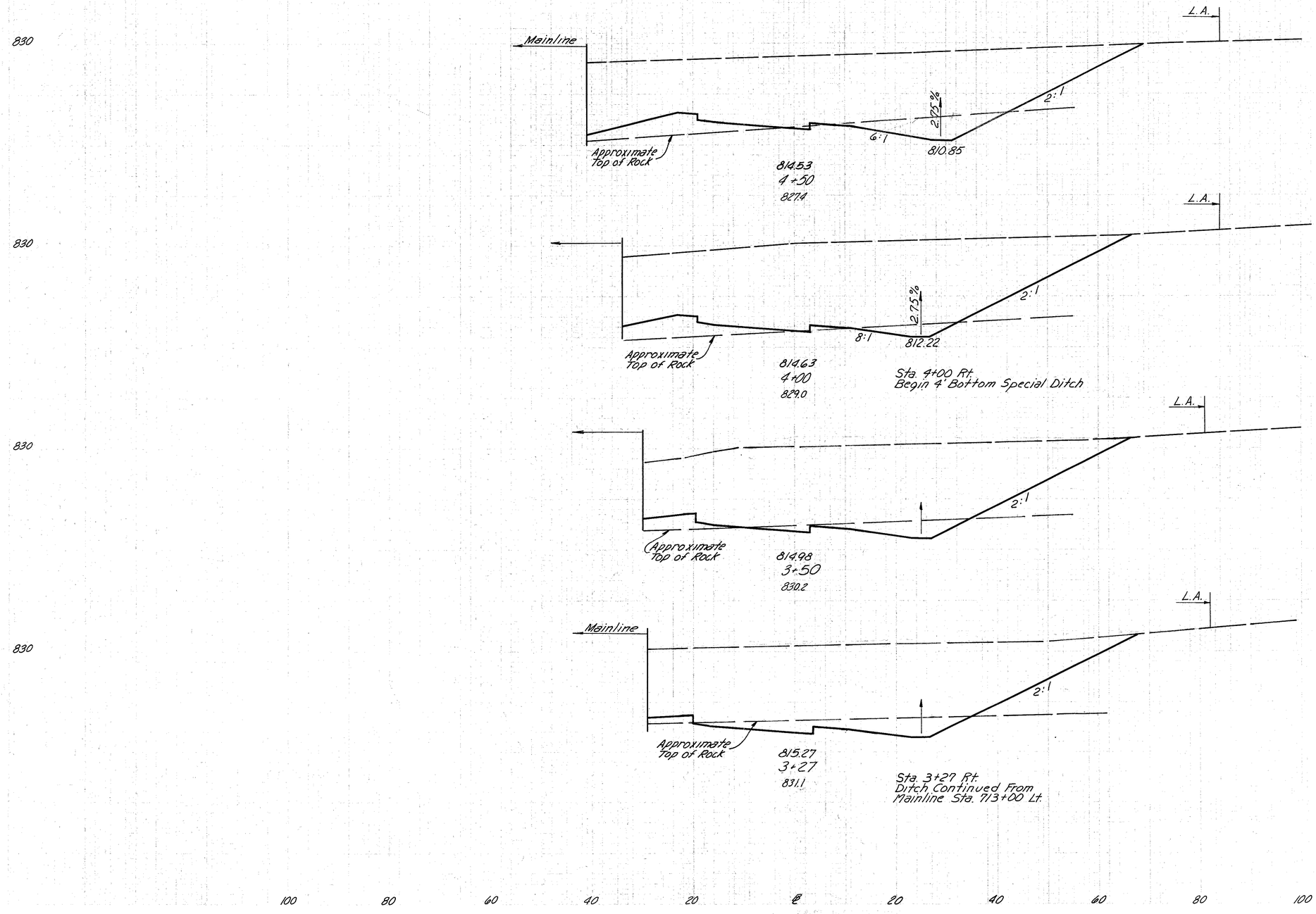
RAMP "D"
STA. 8+00 — STA. 9+59.50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

290
445

HAMILTON COUNTY
HAM. 71-13.05

100 80 60 40 20 ℄ 20 40 60 80 100



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1310	0		
		2463	0
1350	0		
		2403	0
1245	0		
		1084	0
1300	0		

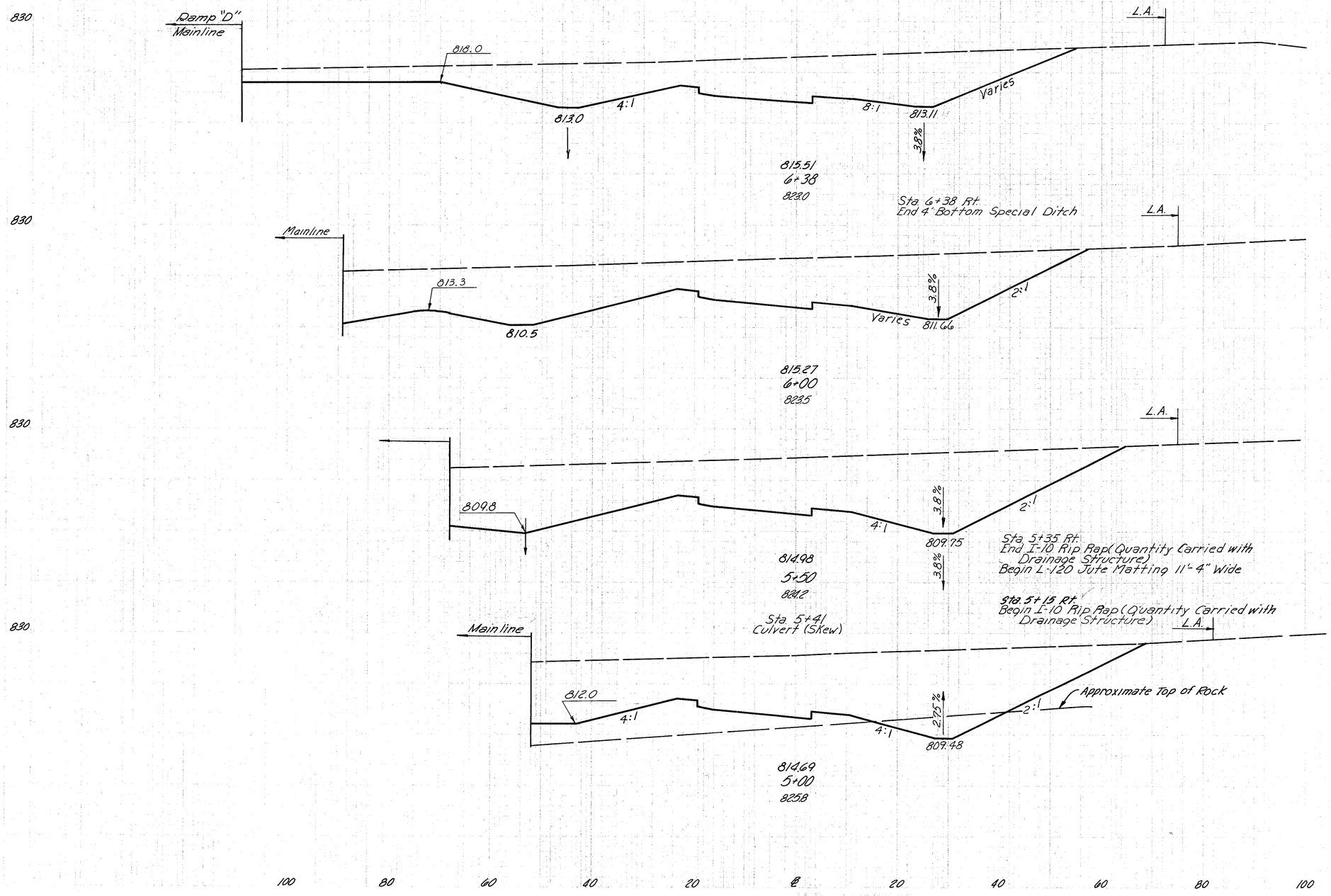
RAMP "E"
STA. 3+27 — STA. 4+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

291
445

HAMILTON COUNTY
HAM. 71-13.05

100 80 60 40 20 ℄ 20 40 60 80 100



END AREA		VOLUME	
CUT	FILL	CUT	FILL
990	0		
		1590	0
1270	0		
		2430	0
1355	0		
		2477	0
1320	0		
		2435	0

RAMP "E"
STA 5+00 – STA 6+38

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

292
445

HAMILTON COUNTY
HAM.71-13.05

100 80 60 40 20 ℄ 20 40 60 80 100

830

Ramp "D"

L.A.

4:1

821.54
8+65.40
824.2

830

Sta 8+29 Lt.
End Guard Rail

G.R.

L.A.

Varies

Existing 9" Tile Pipe
@ Sta. 7+87

818.61
7+87.56
820.6

830

G.R.

L.A.

Varies

Sta. 7+30 Lt.
Begin Guard Rail

816.97
7+55
821.2

830

Ramp "D"

L.A.

817.0

3:1

816.33
7+00
822.2

100 80 60 40 20 ℄ 20 40 60 80 100

END AREA		VOLUME	
CUT	FILL	CUT	FILL
220	0		
		663	0
240	0		
		376	0
384	0		
		982	0
580	0		
		1803	0

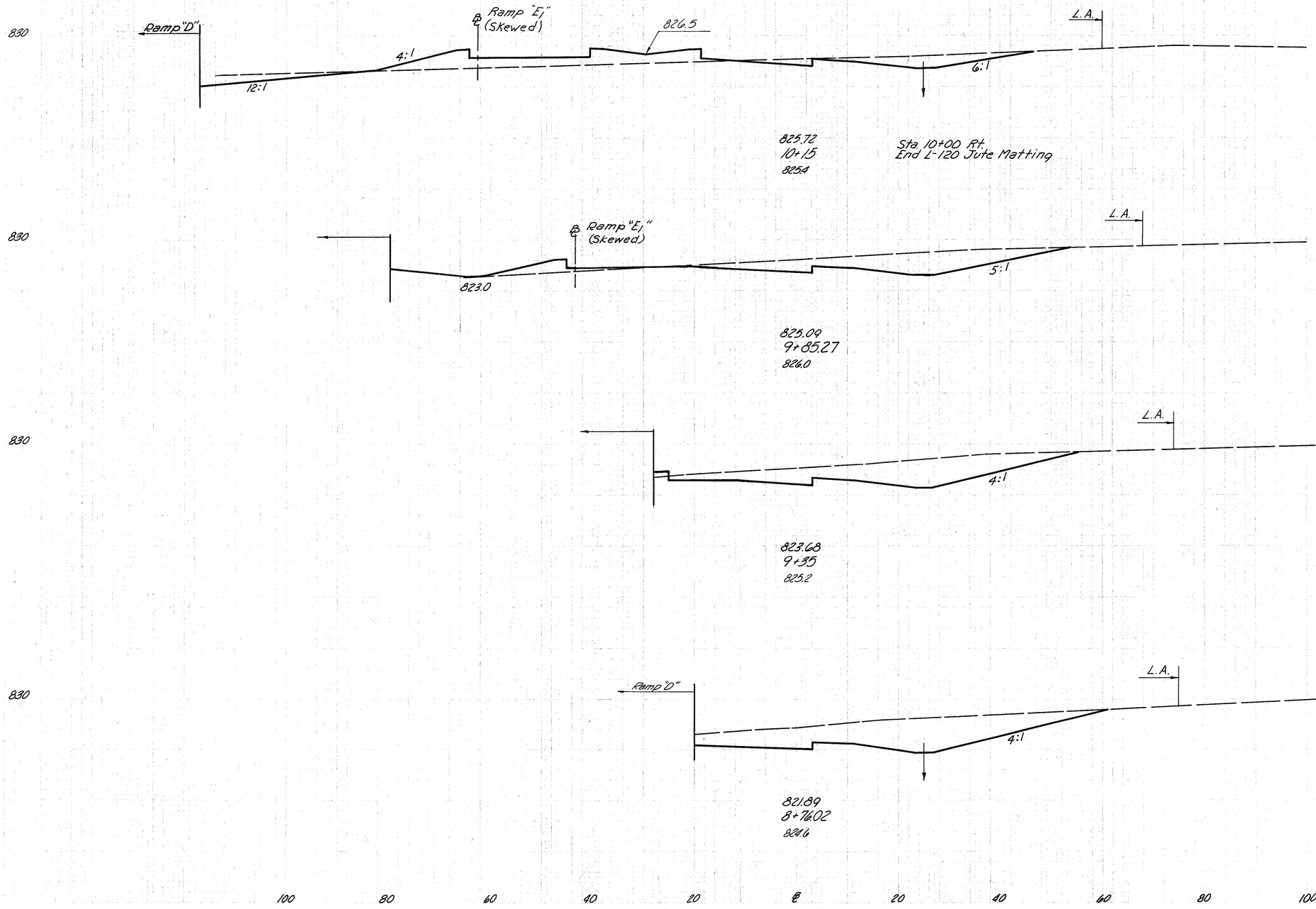
RAMP "E"
STA. 7+00 – STA. 8+65.40

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

293
445

HAMILTON COUNTY
HAM. 71-13.05

100 80 60 40 20 ℄ 20 40 60 80 100



END AREA		VOLUME	
CUT	FILL	CUT	FILL
98	146		
		146	113
168	60		
		380	59
240	3		
		612	3
320	0		
		106	0

100 80 60 40 20 ℄ 20 40 60 80 100

RAMP "E"
STA 8+76.02 — STA 10+15

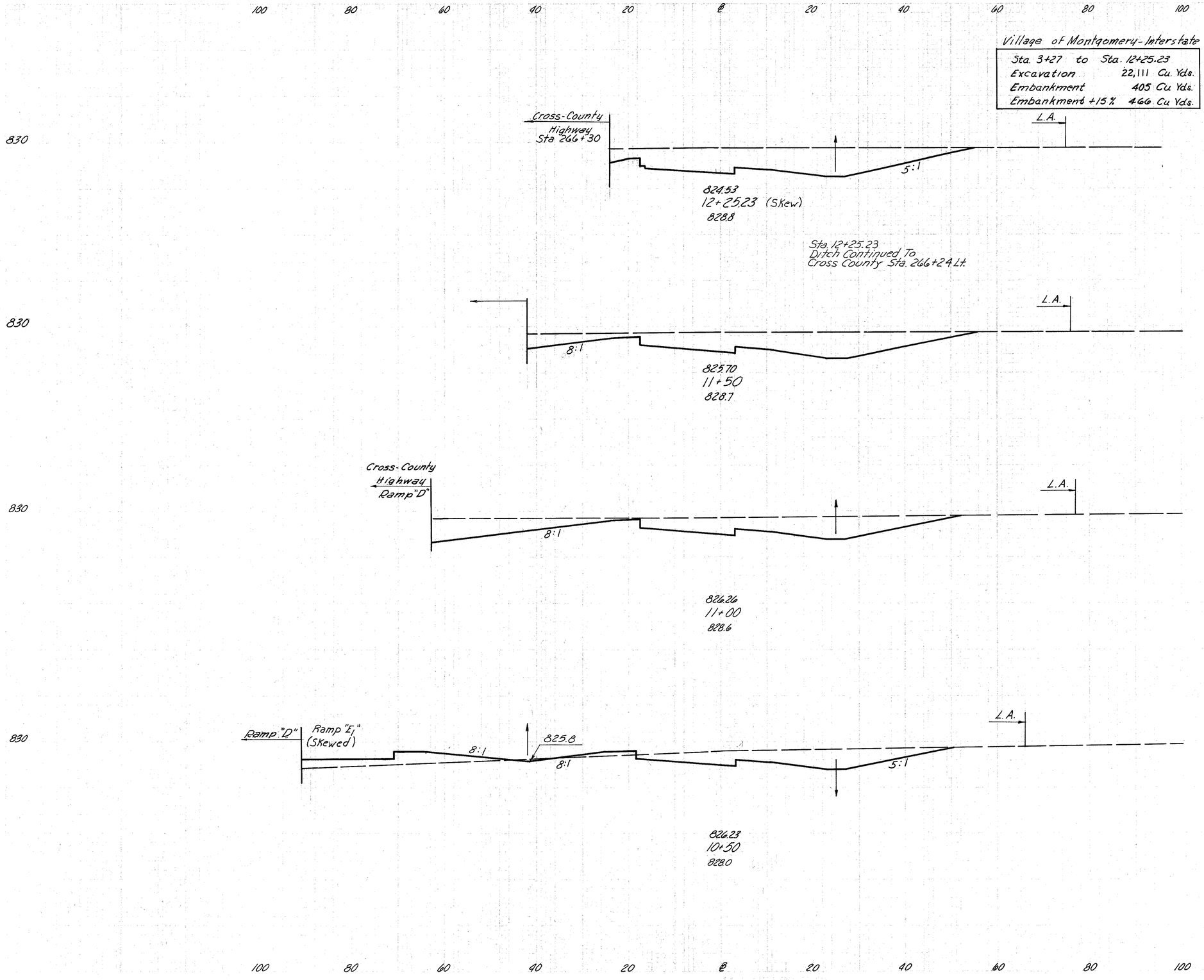
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

294
445

HAMILTON COUNTY
HAM. 71-13.05

Village of Montgomery - Interstate

Sta. 3+27 to Sta. 12+25.23	
Excavation	22,111 Cu. Yds.
Embankment	405 Cu. Yds.
Embankment +15%	466 Cu. Yds.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
330	0		
		899	0
315	0		
		606	0
340	0		
		478	80
176	86		
		178	150

RAMP "E"
STA. 10+50 - STA. 12+25.23

HAMILTON COUNTY
HAM 71-13.05

244 661

60 40 20 ℄ 20 40 60

Cross County — Cross County Sta. 264+00

820

49+25
827.6

Cross County — Cross County

820

49+08
827.5

Cross County — Cross County

820

837.41
48+94
827.0

820

835.15
48+70
826.4

820

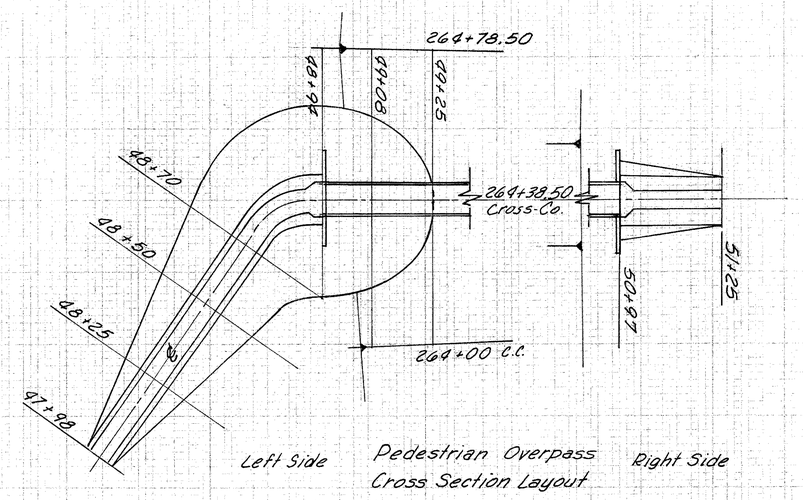
833.15
48+50
826.0

820

830.65
48+25
825.0

Sta. 47+98
Zero Earthwork

END AREA		VOLUME	
CUT	FILL	CUT	FILL
509	0		
		212	0
123	0		
		32	84
0	323		
		0	247
0	234		
		0	150
0	173		
		0	128
0	104		
		0	52
0	0		
		244	661



Left Side — Pedestrian Overpass Cross Section Layout — Right Side

Village of Montgomery Int.

Sta. 47+98 ~ Sta. 51+25	
Excavation	244 C.Y.
Embankment	683 C.Y.
Embankment +15%	785 C.Y.

Sta 51+25
Zero Earthwork

0 0

0 22

0 43

830

831.07
50+97
828.2

GRAND TOTAL 244 683

PEDESTRIAN OVERPASS
CROSS COUNTY HIGHWAY
STA. 264+38.50

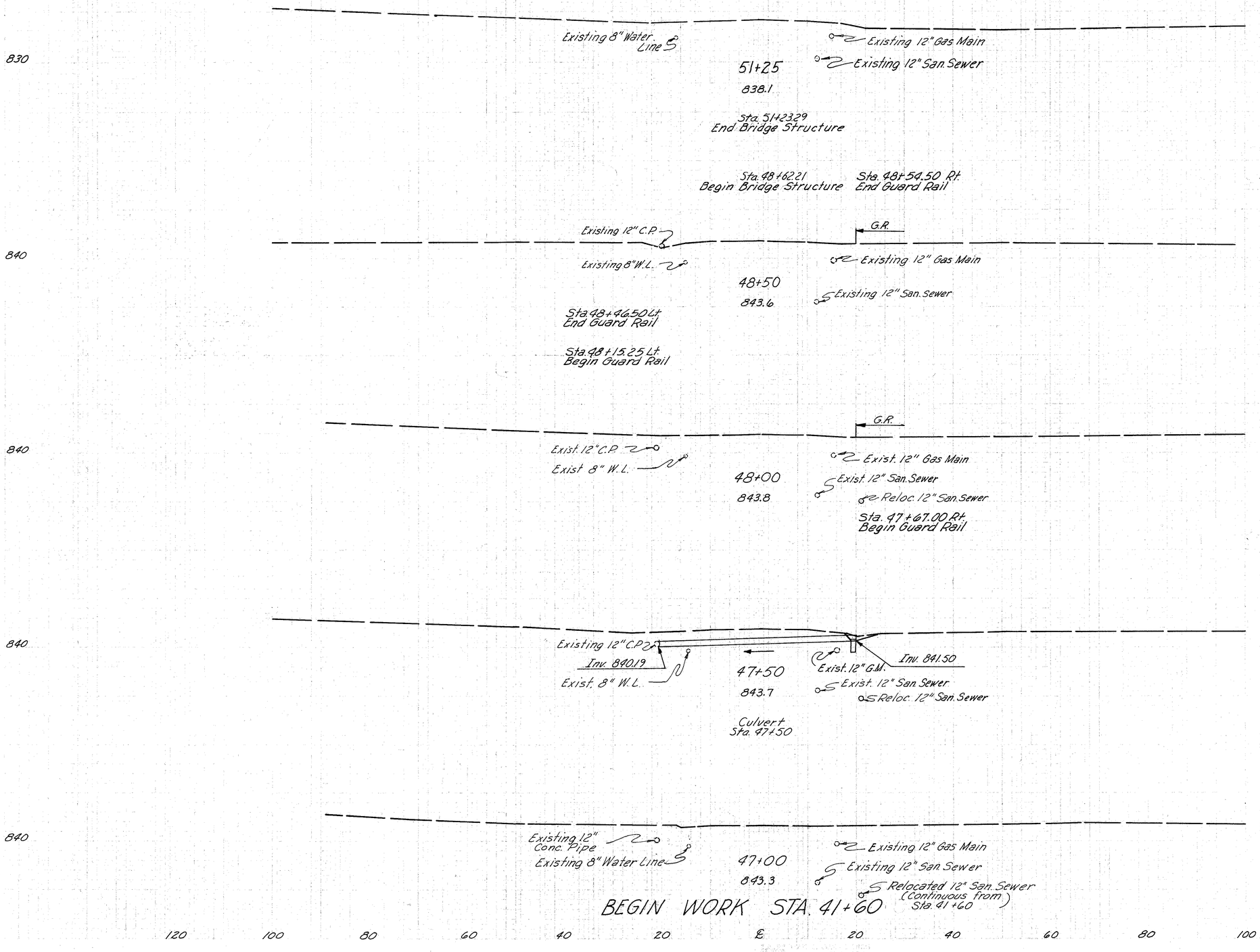
60 40 20 ℄ 20 40 60

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

296
445

HAMILTON COUNTY
HAM. 71-13.05

END AREA		VOLUME	
Cut	Fill	Cut	Fill



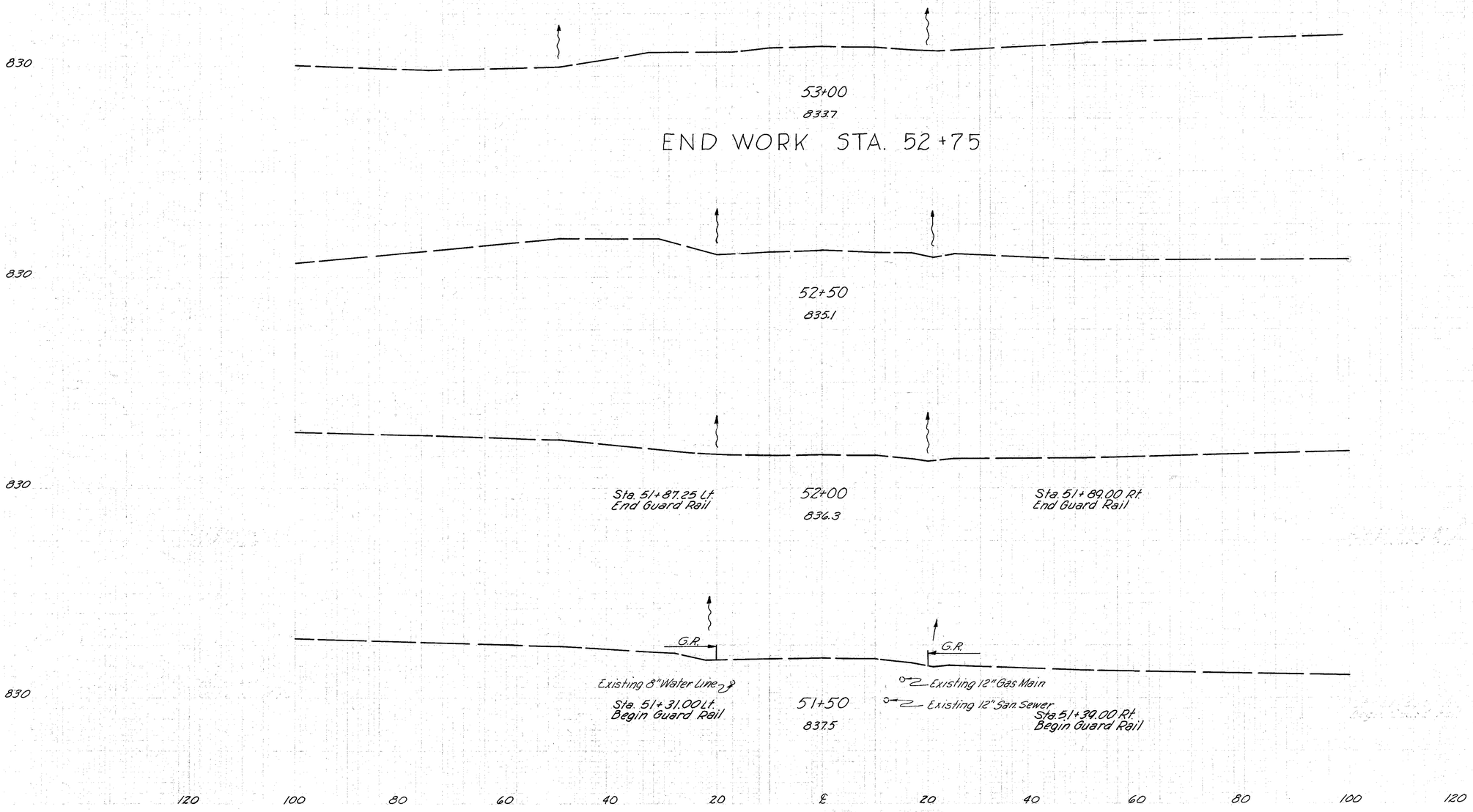
COOPER ROAD
STA 47+00-51+25

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

297
445

HAMILTON COUNTY
HAM. 71-13.05

END AREA		VOLUME	
CUT	FILL	CUT	FILL



COOPER ROAD
STA. 51+50 - 53+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM. 71-13.05

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

840

R/W

2:1 6:1

840.0

Existing Zig Zag Rd.

837.0

2:1

Sta. 47+54.50 Rt.
Begin Guard Rail

R/W

Temp. R/W
160'

Sta. 47+50 Lt.
Begin 2' Bottom Special Ditch 841.56
Begin Shoulder Transition

47+50
841.56

Sta. 47+50 Rt.
Begin 2' Bottom Special Ditch
Begin Shoulder Transition

Sta. 47+50
Begin Bituminous Taper

840

Exist. R/W

Exist. R/W

Temp. R/W

47+00
842.21

840

Exist. R/W

Exist. R/W

Temp. R/W

46+50
842.32

840

Exist. R/W

Exist R/W

Temp. R/W

46+00
842.69

BEGIN WORK STA. 45+75

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

END AREA		VOLUME	
CUT	FILL	CUT	FILL
23	0		

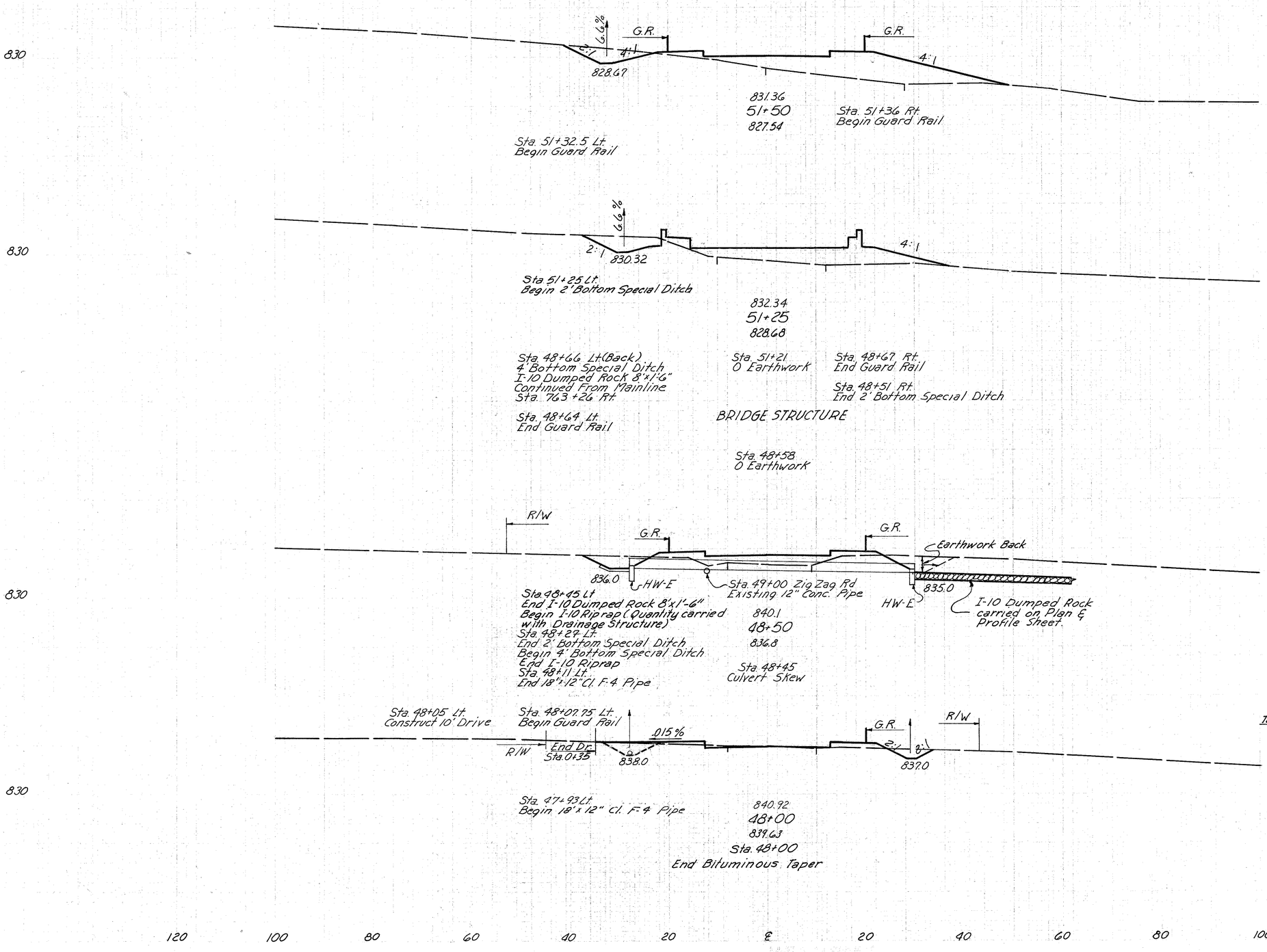
ZIG ZAG ROAD
STA. 46+00 — STA. 47+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

299/445

HAMILTON COUNTY
HAM. 71-13.05

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



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	29	192		
			92	156
	36	145		
			3	11
Sta. 51+21	0	0		
Sta. 48+58	0	0		
			5	11
Ahead	31	72		
Back	52	72		
			72	81
	53	15		
Drive Lt. No Earthwork			0	0
			71	14

ZIG ZAG ROAD
STA. 48+00 — STA. 51+50

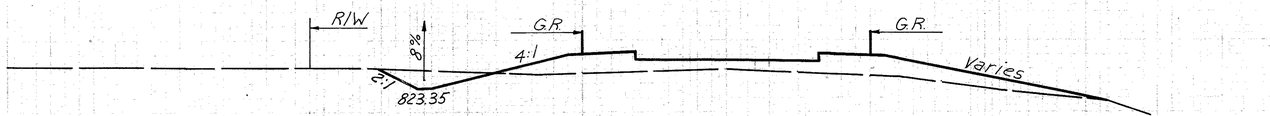
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

300
445

HAMILTON COUNTY
HAM. 71-13.05

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

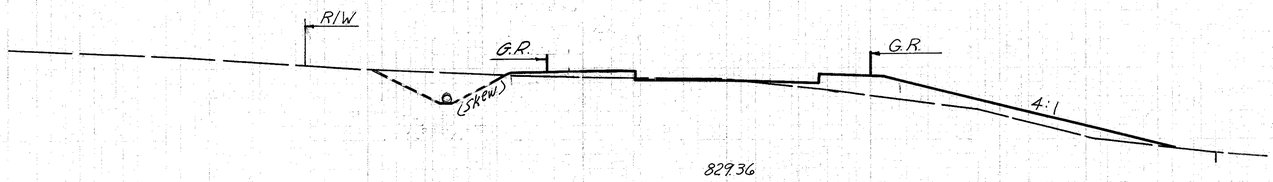
820



828.36
52+25
826.0

Sta. 52+02 Lt.
End 1-1 35'x12" Pipe Cl. F-4
Inv. 825.19
Begin 2' Bottom Special Ditch

830



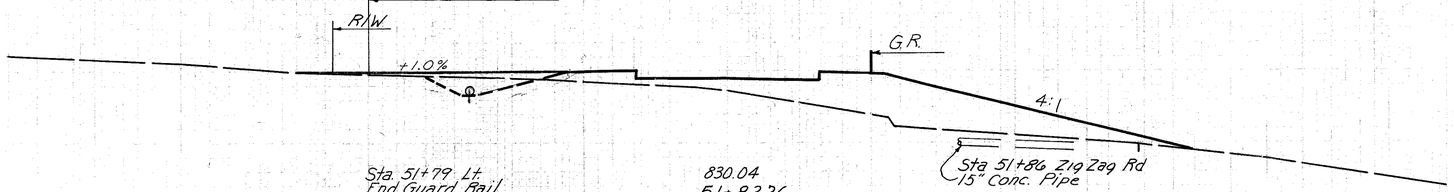
829.36
52+02
828.4

Sta. 51+98 Lt.
Begin Guard Rail

Sta. 51+95.50 Lt.
Construct 20' Drive

830

End Drive Sta. 0+50



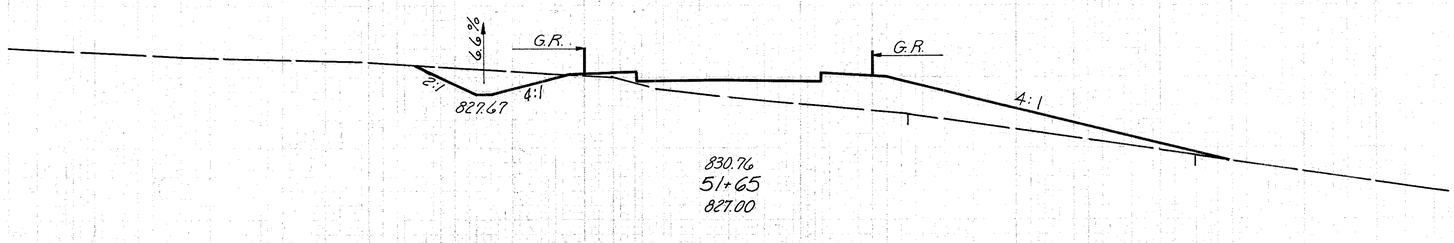
830.04
51+83.26
827.3

Sta. 51+79 Lt.
End Guard Rail

Sta. 51+76 35' Lt.
End 2' Bottom Special Ditch
Begin 1-1 35'x12" Pipe Cl. F-4
Inv. 826.88

Note: Areas of Cross-Sections Sta. 51+83.26 to Sta. 53+07.41 have been corrected for Curvature.
For Method see Sht. No. 281

830



830.76
51+65
827.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
34	131		
		44	81
75	59		
			5
		29	81
		18	159
35	212		
		18	112

Sta. 51+95.50
Drive Lt.
Avg. $\frac{28 \times 20 \times .25}{27}$

Corrected for Curve Ahead 10 234
Back 18 257

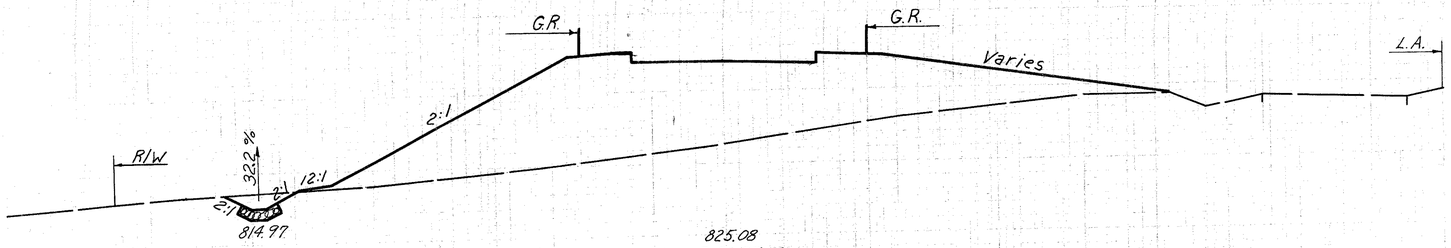
120 100 80 60 40 20 ℄ 20 40 60 80 100 120

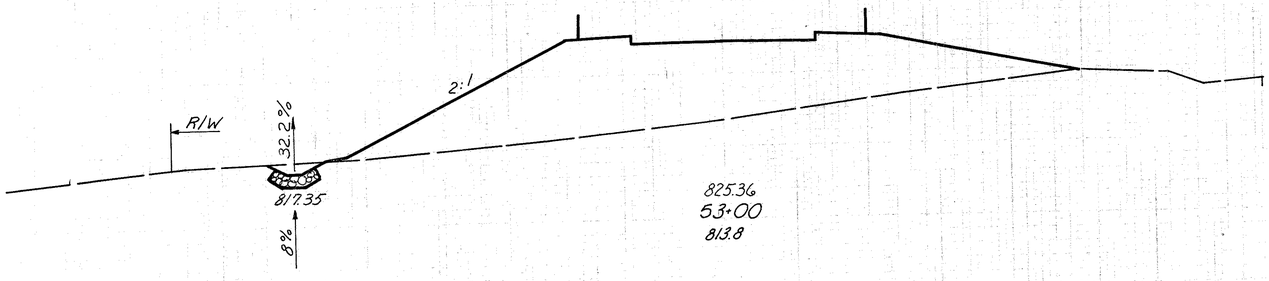
ZIG ZAG ROAD
STA. 51+65 — STA. 52+25

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

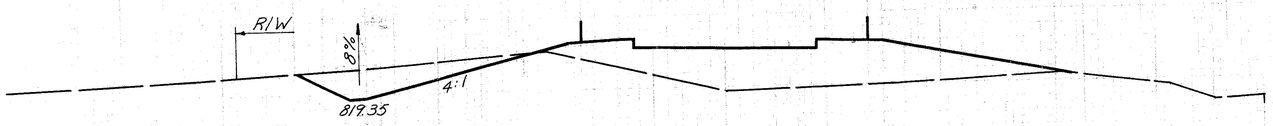
301 / 445

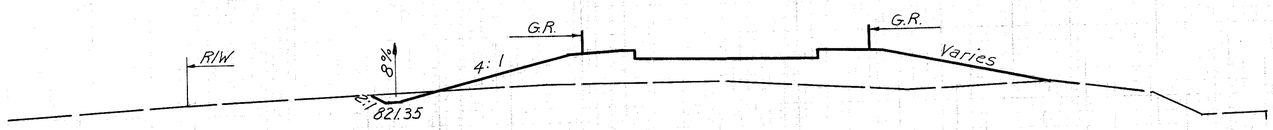
HAMILTON COUNTY
HAM. 71,-13.05





Sta. 53+00 Lt.
Begin I-10 Dumped Rock 6'x1'-6"





	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Ahead	11	910		
Corrected for Curve Back	21	993		
			5	259
	16	885		
			61	527
	117	253		
			59	290
	10	266		
			20	184

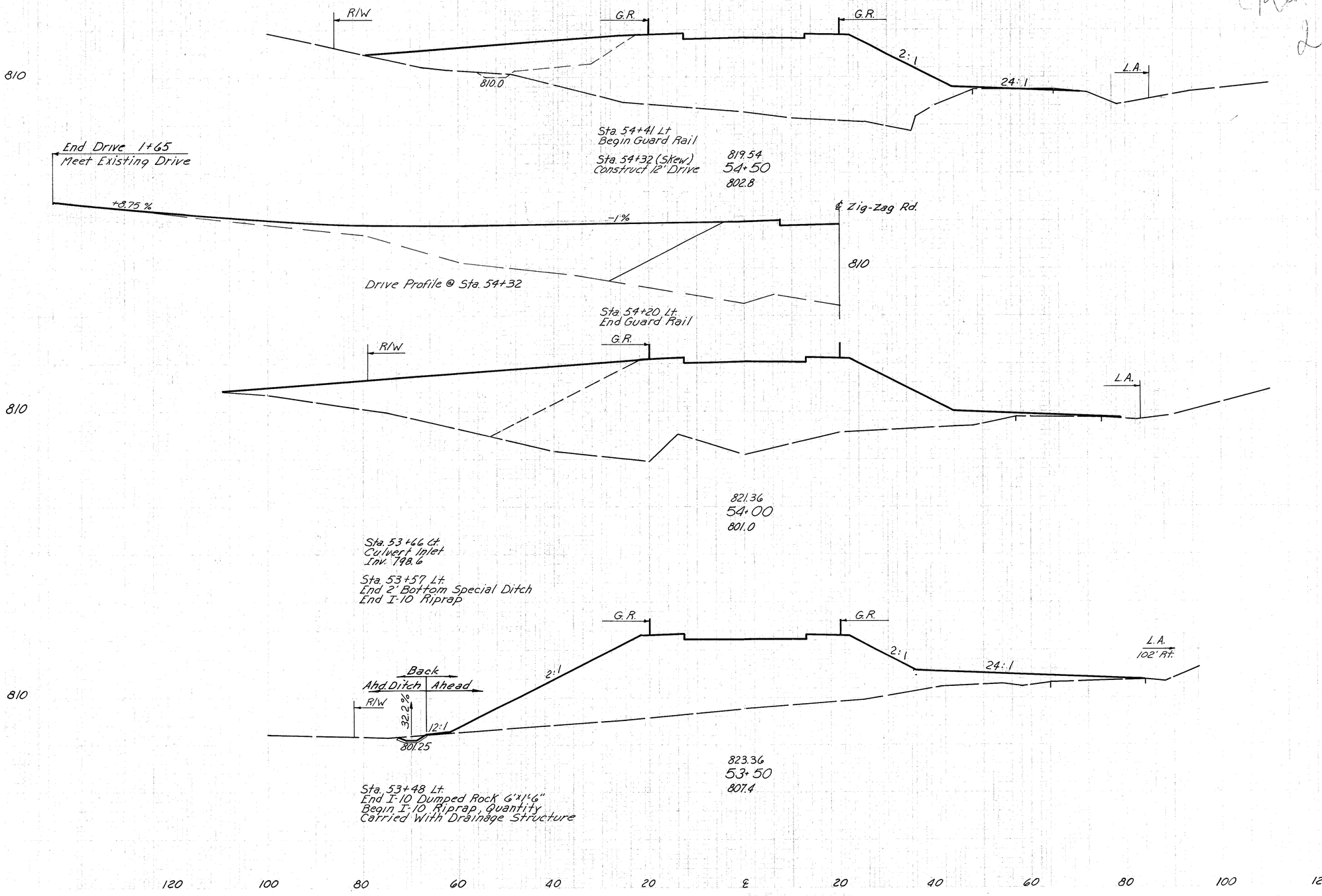
ZIG ZAG ROAD
STA. 52+50 — STA. 53+07.41

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM. 71-13.05

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



Red
268

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	0	1162		
			0	2331
Sta. 54+32 Lt. Driveway $\frac{(45\times13)+0}{2}\times\frac{81}{27}=878$				878
	0	1355		
			4	2380
Sta. 53+57	4			
Ditch Lt. Sta. 53+50	4		1	
Ahead	0	1212		
Back	4	1215		
			12	1676

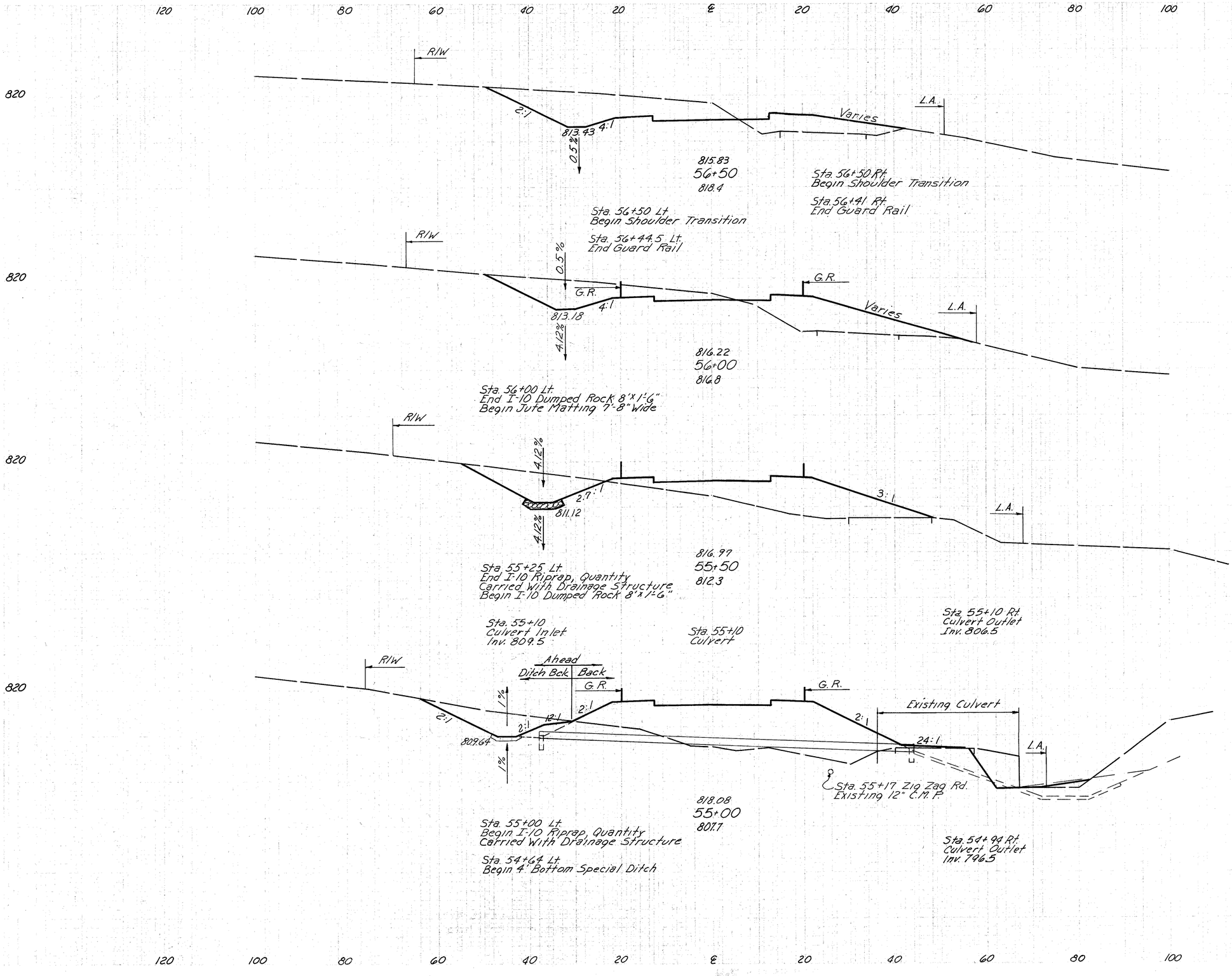
ZIG ZAG ROAD
STA. 53+50 — STA. 54+50

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

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM. 71-13.05



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	250	89		
			394	258
	175	190		
			273	435
	120	280		
			189	768
Ahead	84	550		
Back	0	550		
			0	1585
Sta 55+00	84		56	
Ditch Lt. Sta. 54+64	0			

ZIG ZAG ROAD
STA. 55+00 — STA. 56+50

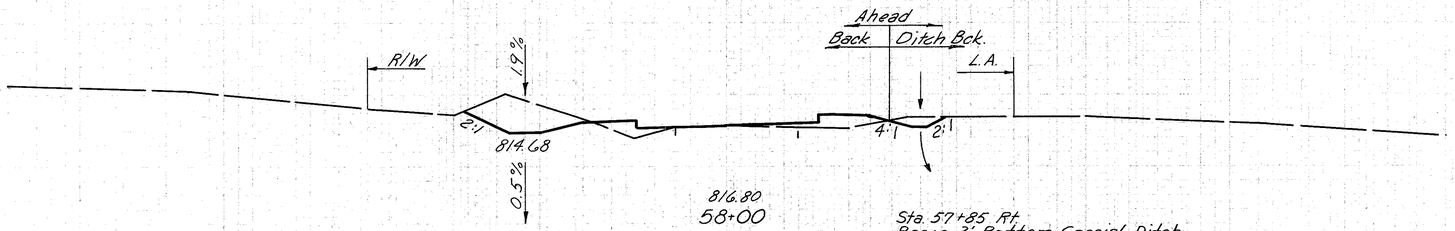
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

304
445

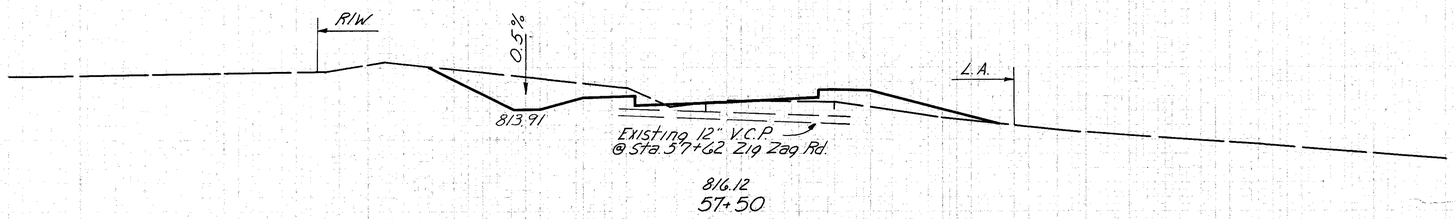
HAMILTON COUNTY
HAM. 71-13.05

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

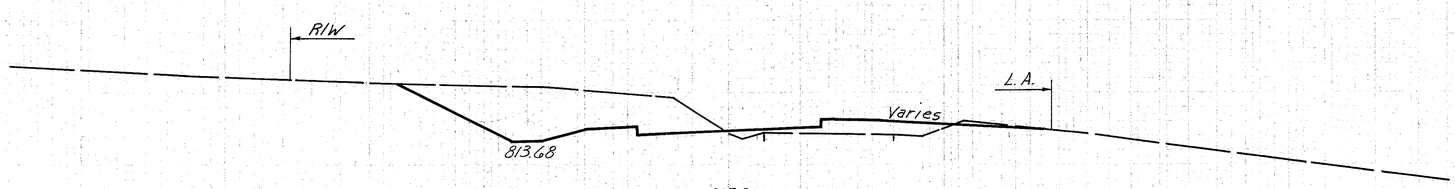
820



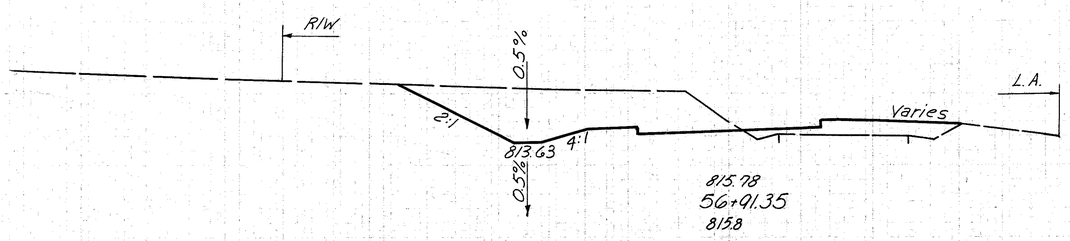
820



820



820



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Sta. 58+00	7		2	
Ditch Rt. Sta 57+85	0			
	49	25		
			111	53
	73	32		
			262	68
	210	91		
			39	14
	235	44		
			371	98

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

ZIG ZAG ROAD
STA. 56+91.35 – STA. 58+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM. 71-13.05

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

820

60+00

END WORK STA. 59+75

Village of Montgomery - Interstate

Sta. 47+50	to	Sta. 59+50
Excavation		2,590 Cu. Yds.
Embankment		12,504 Cu. Yds.
Embankment +15%		14,380 Cu. Yds.

Sta. 59+50
Meet Existing Pavement
End Bituminous Taper

R/W

L.A.

Existing
Zig Zag Rd.

819.38
59+50
819.31

Sta. 59+10
End 4' Bottom Special Ditch

Sta. 59+00
End L-120 Jute Matting 7'-8" Wide

R/W

Back
Ditch Ahd. Ahead

L.A.

2:1 816.58 4:1

1.9%

818.52
59+00
818.53

Sta. 58+65 Rt.
End 2' Bottom Special Ditch

Back
Ahead Ahd. Ditch

R/W

1.9%

L.A.

815.79

817.82
58+58.51
817.17

Sta. 58+58.51
Begin Bituminous Taper

R/W

1.9%

L.A.

2:1 815.63 4:1 4:1 2:1

1.9%

817.66
58+50
816.82

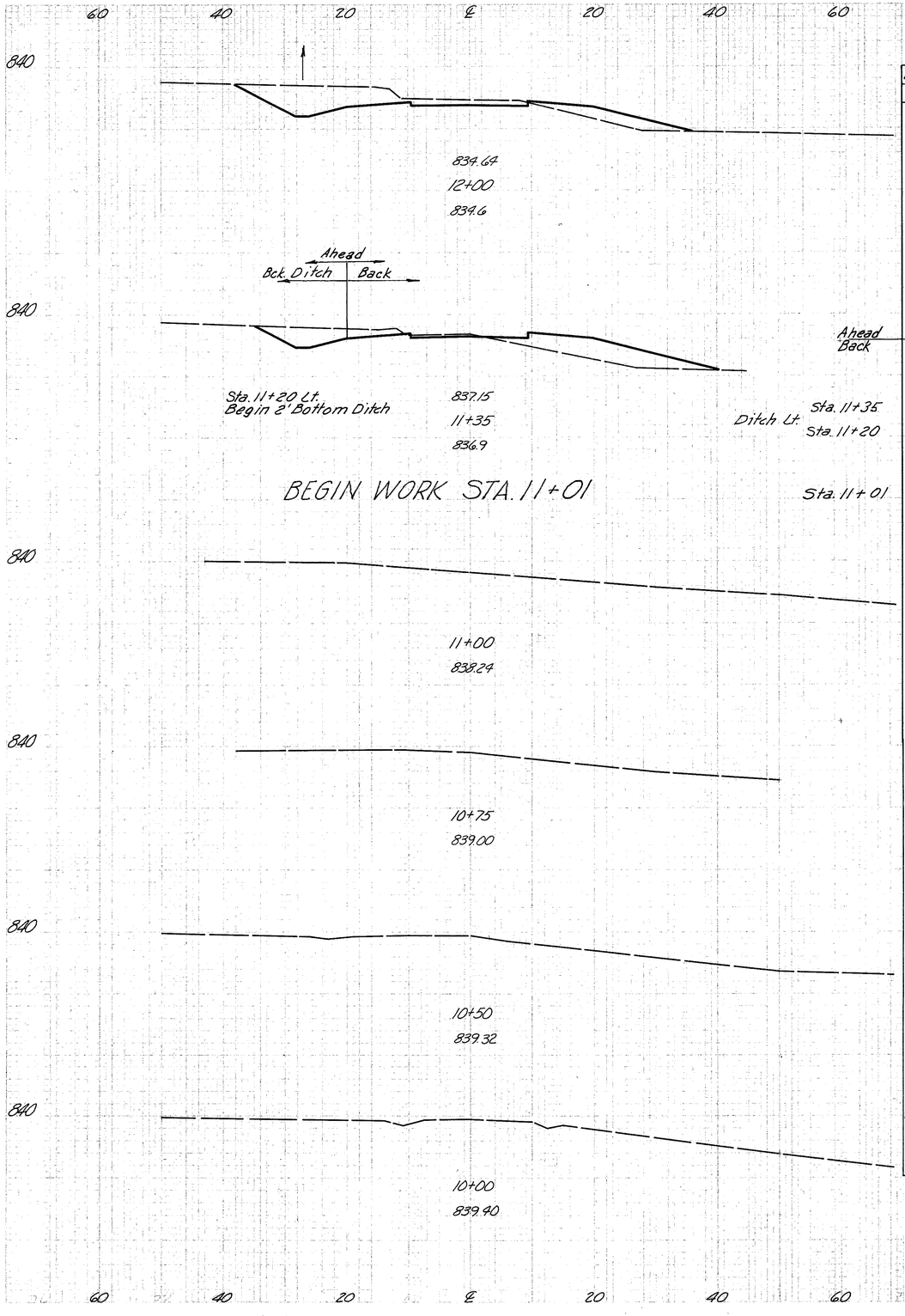
		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		20	3		
				41	4
Ditch Lt	Sta. 59+10	0	9		
	Sta. 59+00	47			
	Ahead	24			
	Back	71	2		
				119	6
Ditch Rt.	Sta. 58+65	4		4	
	Sta. 58+58.51	27			
	Ahead	84	6		
	Back	111	6		
				36	2
		118	4		
				159	27

ZIG ZAG ROAD
STA. 58+50 — STA. 60+00

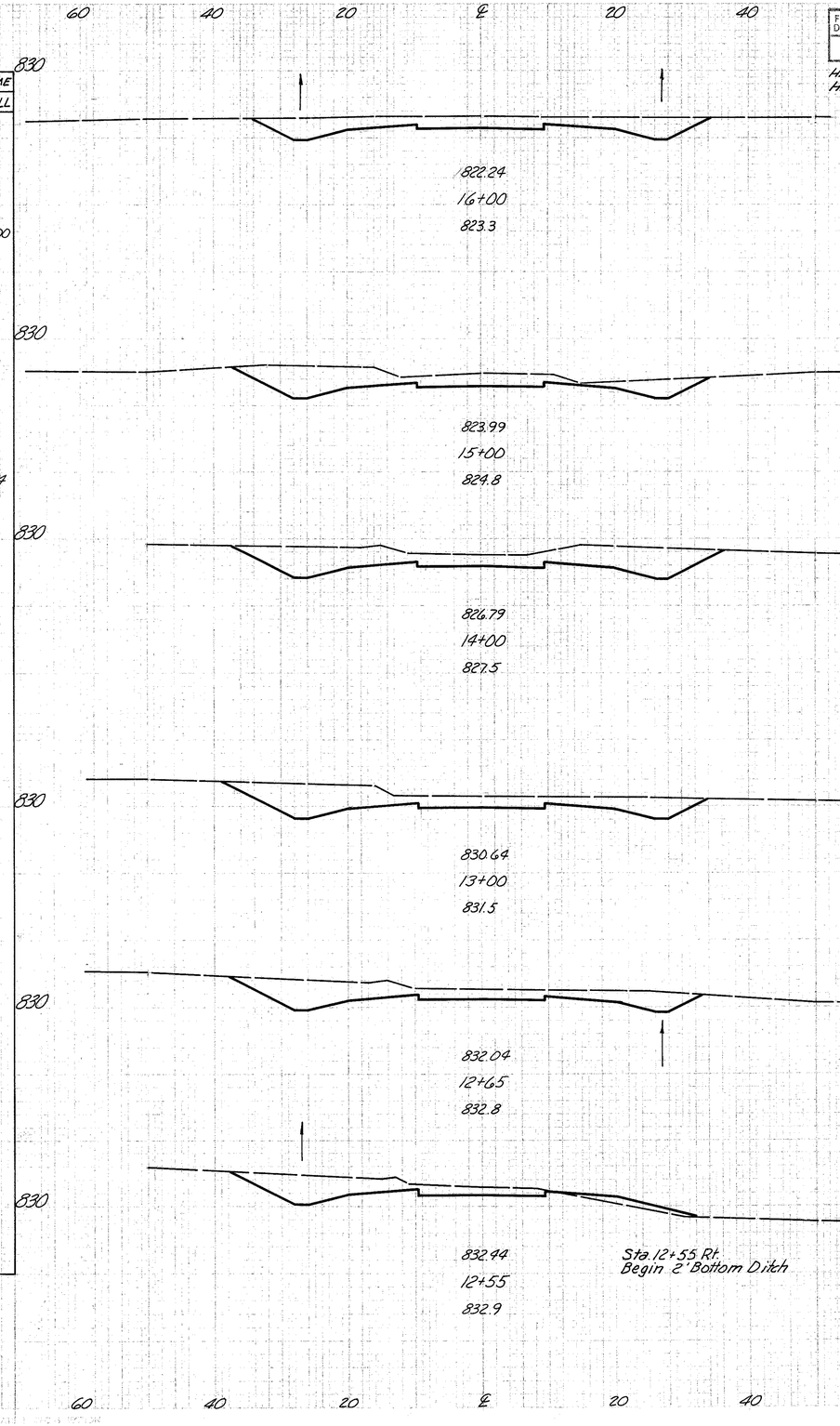
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM. 71-13.05



		END AREA		VOLUME	
		CUT	FILL	CUT	FILL
		89	34		
				147	100
Ahead		43	83		
Back		15	83		
Ditch Lt.	Sta. 11+35	28		8	
	Sta. 11+20	0		9	54
	Sta. 11+01	0	0		



END AREA		VOLUME	
CUT	FILL	CUT	FILL
117	0		
		476	0
140	0		
		589	0
178	0		
		619	0
156	0		
		342	0
128	0		
		39	2
83	13		
		175	48

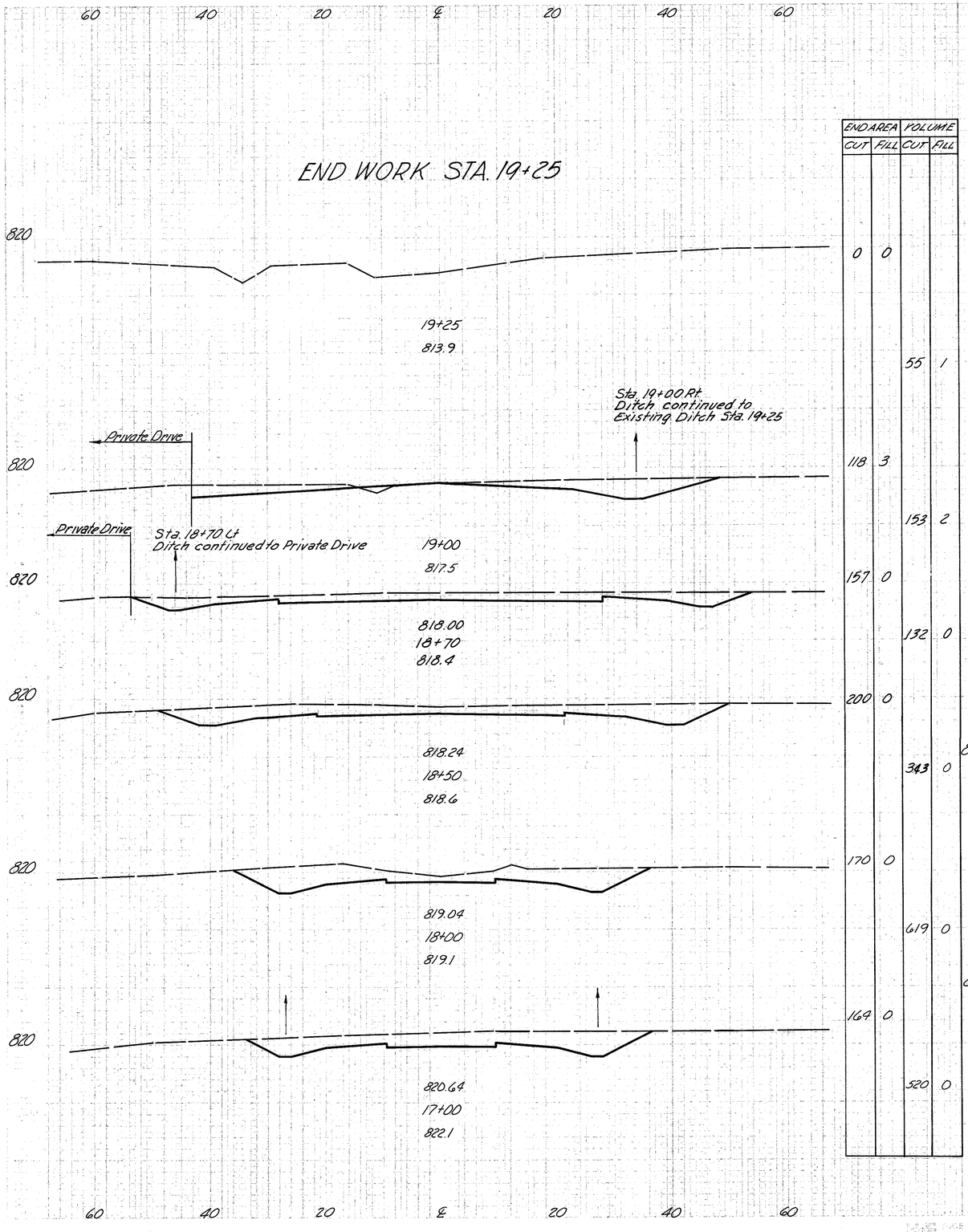
SERVICE ROAD #1
STA. 10+00 - STA. 16+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

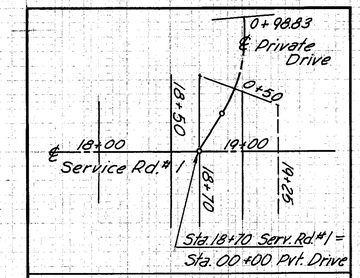
307
445

HAMILTON COUNTY
HAM. 71-13.05

END WORK STA. 19+25



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		
		55	1
118	3		
		153	2
157	0		
		132	0
200	0		
		343	0
170	0		
		619	0
169	0		
		520	0



Sketch showing Cross-Sections at Junction of Service Road #1 and Private Drive.

Combined Totals: Service Rd. #1 and Private Drive

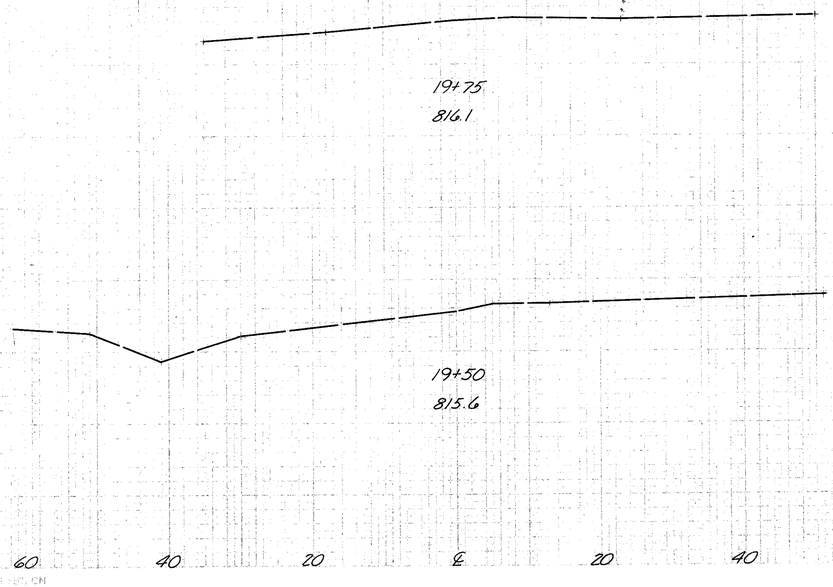
Excavation	5,077	C.Y.
Embankment	1,625	C.Y.
Embankment +15%	1,869	C.Y.

Note: for Drive Quantities see Sht. No. 308

Service Road #1 Only

Sta. 11+01 to Sta. 19+25

Excavation	4,226	C.Y.
Embankment	207	C.Y.
Embankment +15%	238	C.Y.



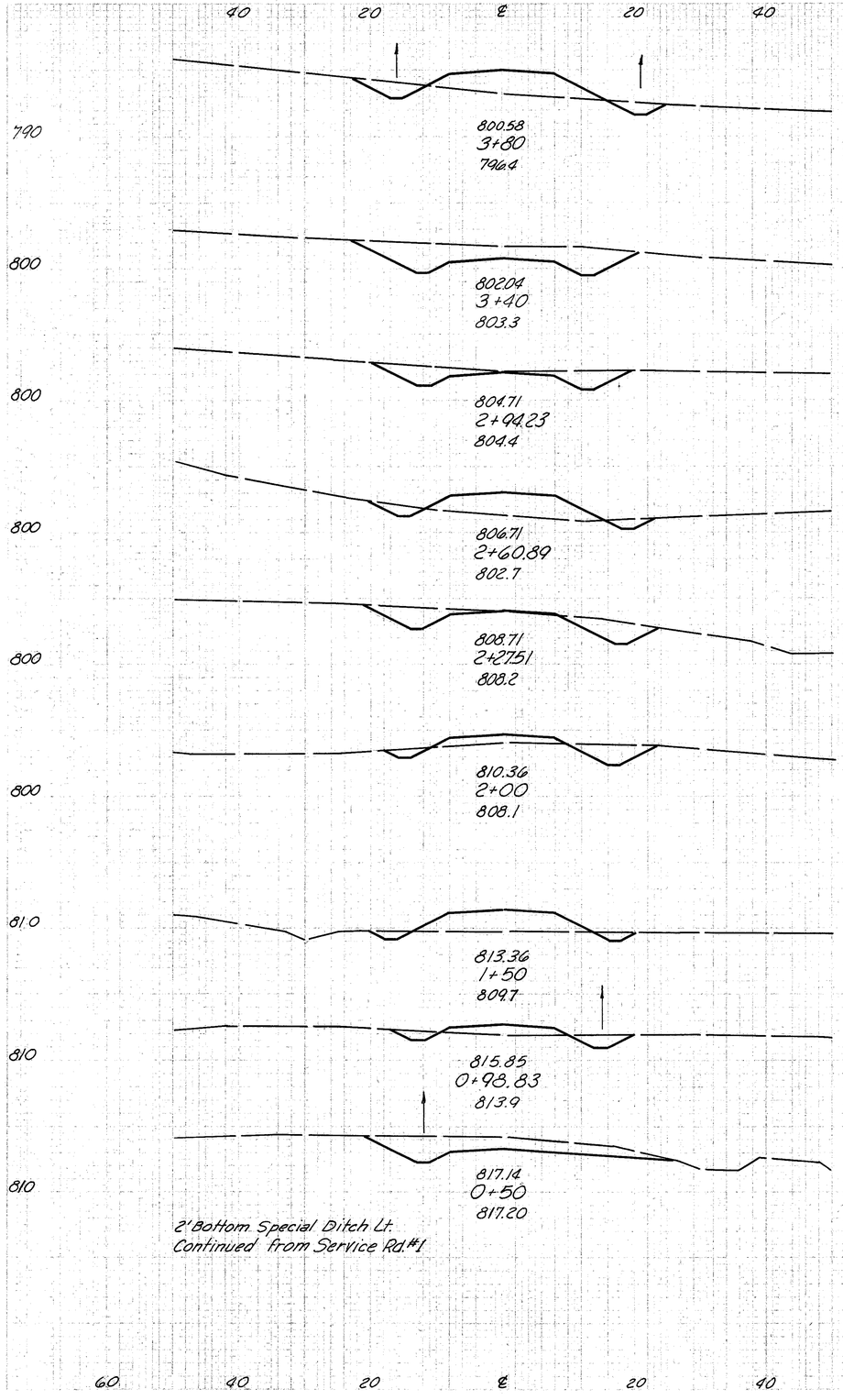
END AREA		VOLUME	
CUT	FILL	CUT	FILL

SERVICE ROAD #1
STA. 17+00 - STA 19+75

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

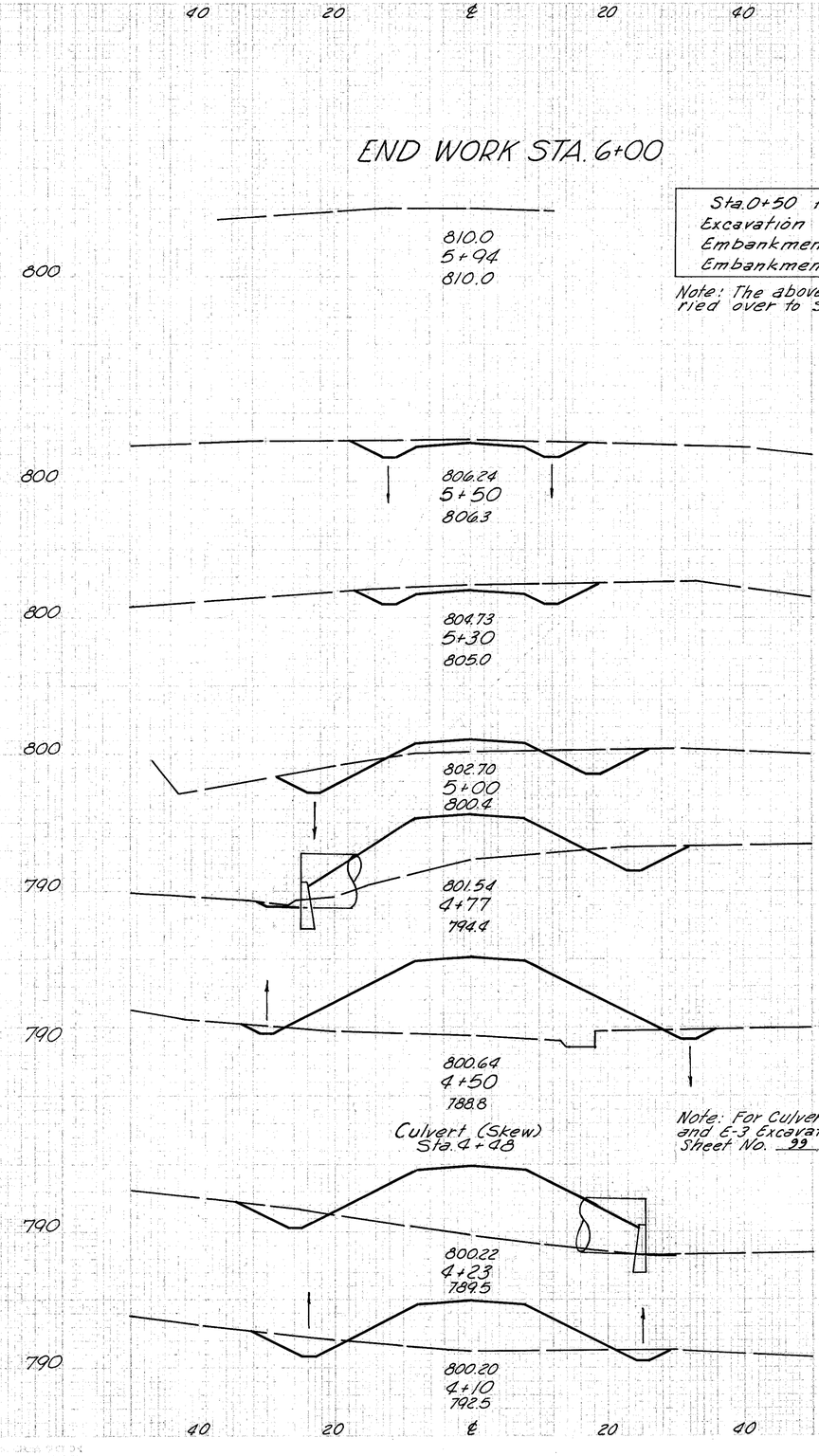
308
445

HAMILTON COUNTY
HAM. 71 - 13.05



2' Bottom Special Ditch Lt.
Continued from Service Rd. #1

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
27	71		
		107	53
117	0		
		150	0
60	0		
		47	43
17	70		
		48	43
60	0		
		46	13
31	26		
		38	85
10	66		
		26	83
17	22		
		102	20
96	0		



END WORK STA. 6+00

Sta. 0+50 to Sta. 5+94	
Excavation	851 C.Y.
Embankment	1,418 C.Y.
Embankment +15%	1,630 C.Y.

Note: The above Totals are carried over to Sheet No. 307

Culvert (Skew)
Sta. 4+48

Note: For Culvert Details and E-3 Excavation see Sheet No. 99

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	0		
		37	0
45	0		
		39	0
60	0		
		76	18
76	32		
		47	106
35	217		
		23	312
11	407		
		18	374
26	341		
		14	126
32	184		
		33	142

SERVICE ROAD #1
PRIVATE DRIVE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

309
445

HAMILTON COUNTY
HAM. 71-13.05

END AREA		VOLUME	
CUT	FILL	CUT	FILL
65	19		
		75	18
16	0		

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

790

R/W

2:1

4:1

Sta. 41+50 Lt.
End Shoulder Transition

792.13
41+50
791.8

G.R.

2:1

R/W

Sta. 41+50 Rt.
Begin Guard Rail
End Shoulder Transition

790

R/W

Sta. 41+00 Lt.
Begin Shoulder Transition

Existing
Pfeiffer Rd.

R/W

41+00
792.4

Sta. 41+00
Begin Bituminous Taper

Sta. 41+00 Rt.
Begin Shoulder Transition

BEGIN WORK STA. 41+00

790

40+50
793.4

790

40+00
794.1

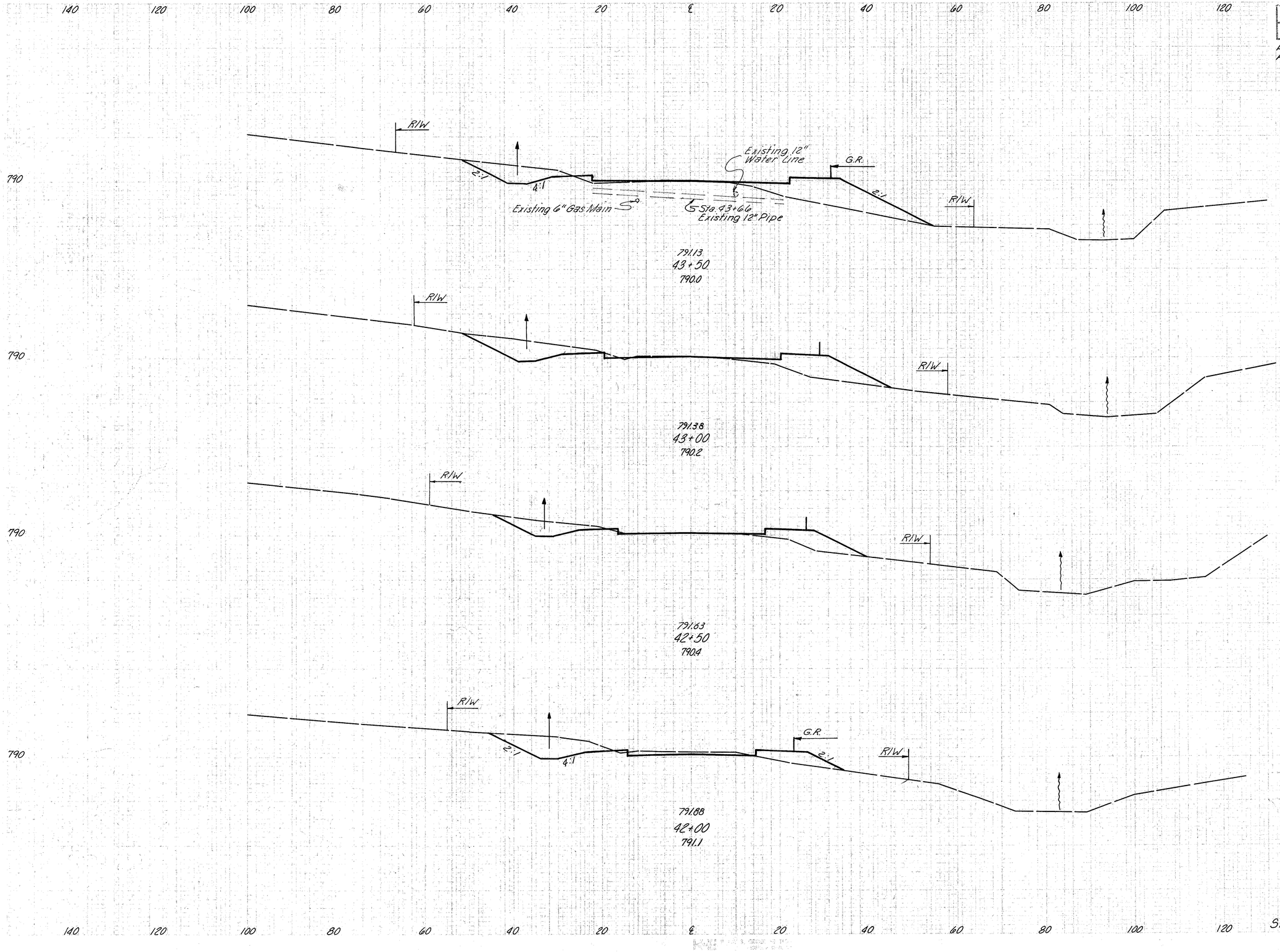
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

PFEIFFER ROAD
STA. 40+00 — STA. 41+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM. 71-13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
54	124		
		122	197
78	89		
		118	134
49	56		
		133	83
95	34		
		148	49

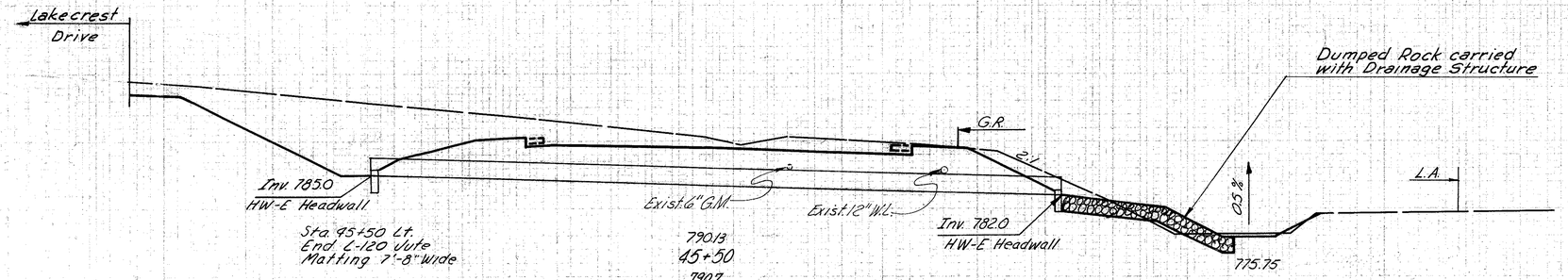
PFEIFFER ROAD
STA. 42+00 — STA. 43+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

311/445

HAMILTON COUNTY
HAM. 71-13.05

Sta. 46+00 Rt.
8' Bottom Ditch and Dumped Rock
Continued To Ramp "F" Sta. 0+80 Rt.



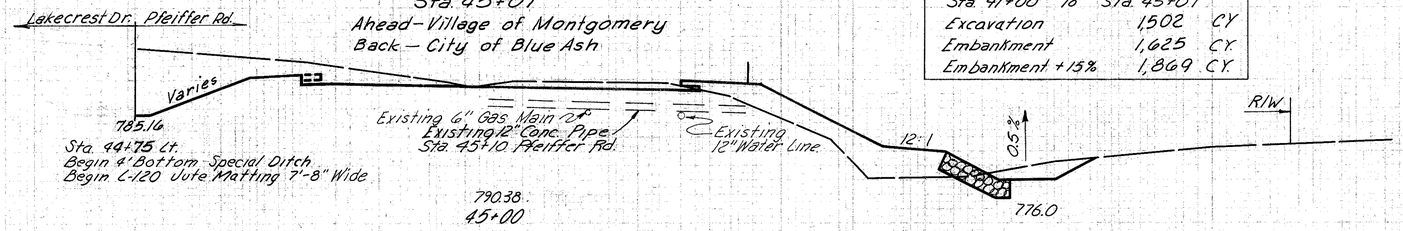
Sta. 95+50 Lt.
End C-120 Jute
Matting 7'-8" Wide

Sta. 45+50
Culvert

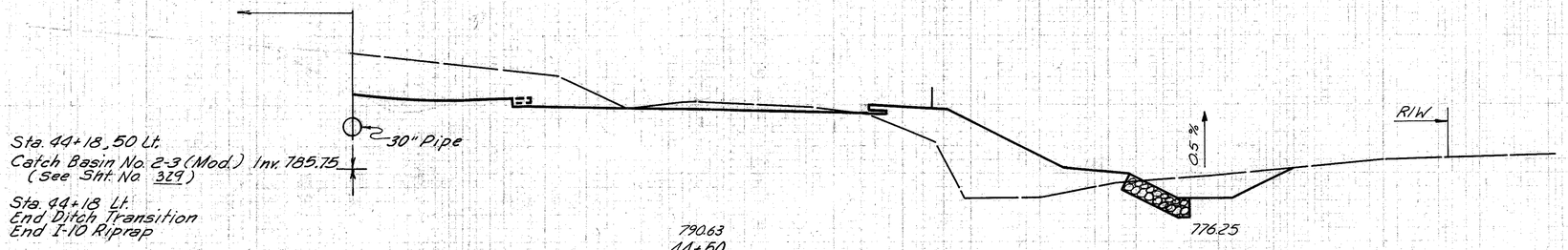
Sta. 45+07
Ahead—Village of Montgomery
Back—City of Blue Ash

City of Blue Ash-Interstate

Sta. 41+00 To Sta. 45+07		
Excavation	1,502	C.Y.
Embankment	1,625	C.Y.
Embankment +15%	1,869	C.Y.



Sta. 44+75 Lt.
Begin 4' Bottom Special Ditch
Begin C-120 Jute Matting 7'-8" Wide

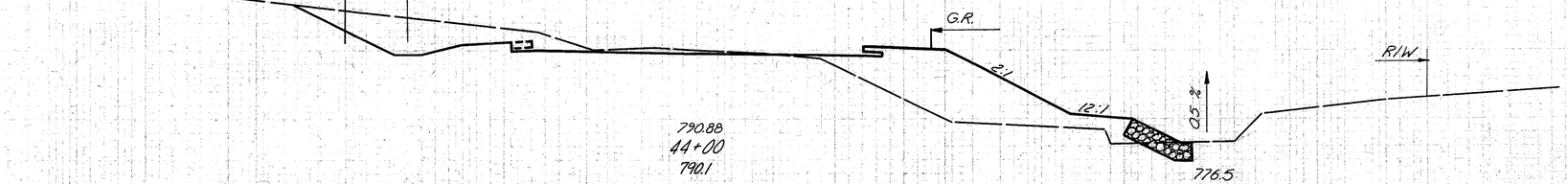


Sta. 44+18.50 Lt.
Catch Basin No. 2-3 (Mod.) Inv. 785.75
(See Sht. No. 319)

Sta. 44+18 Lt.
End Ditch Transition
End I-10 Riprap

Sta. 44+12 Lt.
End 4' Bottom Ditch
Begin Ditch Transition from 4' to 3' Bottom
Begin I-10 Riprap

Sta 44+45
Construct Drive Left.



Sta. 43+97.28
End Bituminous Taper
Begin Conc. Pavement and Widening

Sta. 43+75 Rt.
Begin 8' Bottom Special Ditch
Begin I-10 Dumped Rock 9'x2'-6"

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	475	5		
			569	81
Village of Montgomery-Ahead	240	101		
City of Blue Ash-Back	240	101		
			57	39
	200	125		
			370	319
	200	220		
			297	437
			182	349
Ahead	121	252		
Back	143	252		

PFEIFFER ROAD
STA. 44+00 — STA. 45+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

312
445

HAMILTON COUNTY
HAM. 71- 13.05

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

790

Ramp H

Sta 47+52.70 ℄
End Concrete Pavement Widening

2:1
4:1

Exist. 6" G.M.

Ramp F

Exist. 12" W.L.

789.13
47+50
798.2

Sta. 47+28 Rt.
End Guard Rail
Sta. 47+10 Rt.
Ditch Continued To
Ramp "F" Sta. 0+87.50 Lt.

790

2:1
4:1

Exist. 6" G.M.

G.R.

Exist. 12" W.L.

Sta. 46+90 Lt.
Ditch Continued From
Ramp "H" Sta. 13+35 Lt.

789.38
47+00
796.1

Ramp "F" Sta. 0+84 Lt.
Begin Guard Rail

790

Exist. 6" G.M.

Exist. 12" W.L.

789.63
46+50
792.2

Sta. 46+17 Rt.
Guard Rail Continues
To Ramp F Sta. 0+40.

Ramp H

790

Varies

Varies

787.17

3.94%

Existing 6"
Gas Main

Existing 12"
Water Line

G.R.

2:1

12:1

Ramp F

795.60

Sta. 46+00 Lt.
Ditch Continued From
Ramp "H" Sta. 13+60 Rt.

789.88
46+00
791.5

Existing 12" Conc. Pipe
@ Sta 46+10 Pfeiffer Rd.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1292	22		
		2199	24
1083	4		
		1891	11
905	8		
		1572	69
793	66		
		1174	66

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

PFEIFFER ROAD
STA. 46+00 — STA. 47+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

313
445

HAMILTON COUNTY
HAM. 71 - 13.05

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

800

Mainline

Sta. 49+69.50 Lt.
Begin Guard Rail

Sta. 49+90.75 Rt.
Begin Guard Rail

Mainline

Exist. 6" G.M.

Exist. 12" W.L.

2:1

4:1

4:1

2:1

788.13
49+50
801.0

Sta. 49+44 Rt.
End Guard Rail

800

Mainline

Exist. 6" G.M.

Exist. 12" W.L.

G.R.

788.38
49+00
801.0

Sta. 48+69.00 Rt.
Begin Guard Rail

800

Mainline

Ramp F
Mainline

Exist. 6" G.M.

Exist. 12" W.L.

788.63
48+50
802.2

800

Mainline
Pfeiffer Rd.

Ramp F

Existing 6"
Gas Main

Existing 12"
Water Line

2:1

4:1

4:1

2:1

788.88
48+00
801.1

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

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1815	247		
		3521	232
1988	4		
		3797	7
2113	4		
		3988	7
1654	4		
		2728	24

PFEIFFER ROAD
STA. 48+00 —— STA. 49+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM. 71 - 13.05

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

790

Ramp "I"

Sta. 51+68 Rt.
Ditch Is Continued
To Ramp G Sta 11+60 Lt.

Ramp G
Mainline

Exist. 6" G.M.

Exist. 12" W.L.

4:1 2:1

785.5

Ramp "I" Sta. 0+55 Lt.
End Guard Rail

786.71
51+50
794.0

Sta. 51+27 Lt.
Ditch Continued To
Ramp I" Sta. 0+75

Ramp "I"
Mainline

Back
Ramp I Ahead

Mainline

Exist. 6" G.M.

Exist. 12" W.L.

G.R.

Varies

4:1

787.23
51+00
796.0

Mainline

Sta. 50+60 Lt.
Begin Guard Rail

Exist. 6" G.M.

Exist. 12" W.C.

2:1

787.61
50+50
799.0

Mainline

Sta. 50+13.25 Lt.
End Guard Rail

Sta. 50+43.62 ℄
Begin Concrete Pavement Transition

Sta. 50+34.50 Rt.
End Guard Rail

Mainline

Existing 12" Gas Main

Existing 12" Water Line

2:1

G.R.

4:1

G.R.

4:1

2:1

787.88
50+00
800.0

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	1555	2		
			2745	6
Ahead	1410	4		
Back	1725	4		
			3070	281
	1591	299		
			3127	568
	1786	314		
			3339	519

PFEIFFER ROAD
STA. 50+00 — STA. 51+50

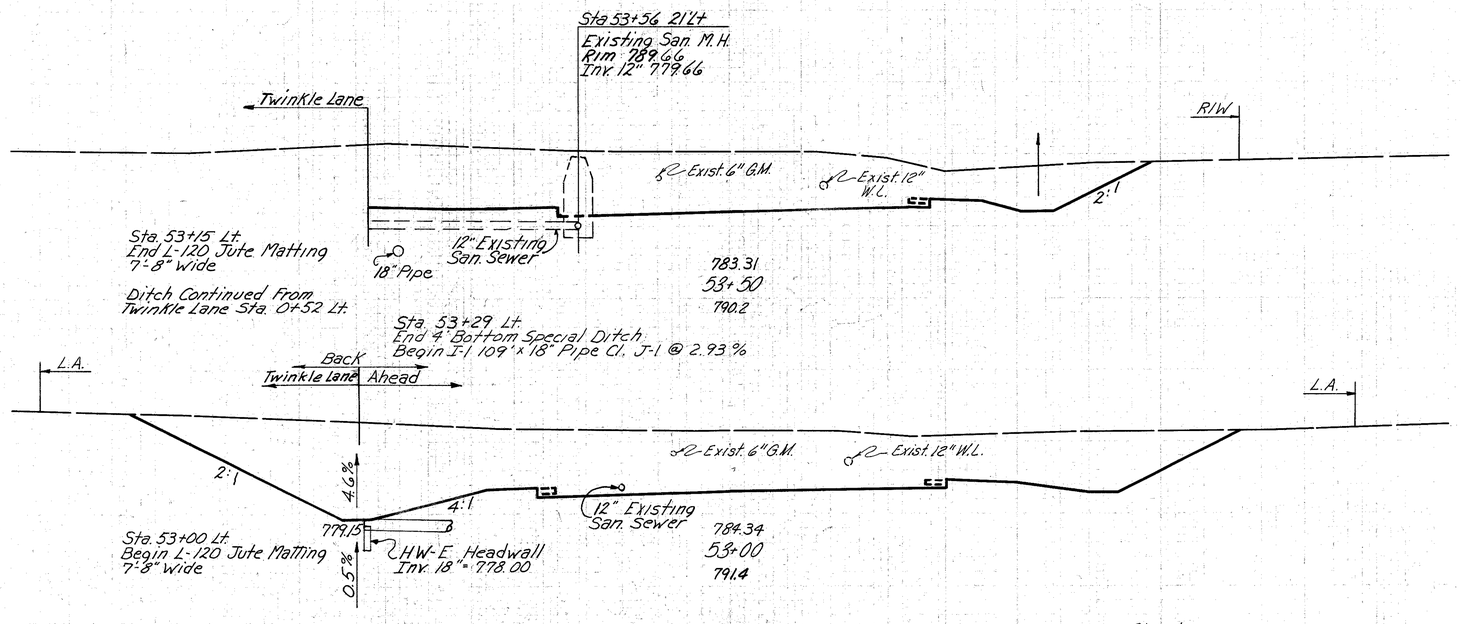
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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	- -	-

315/445

HAMILTON COUNTY
HAM.71 - 13.05

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



Removal of Asphalt or Concrete Drives & Walks under E-1 Exc.

Sta. 52+80 ± to Sta. 53+35 ±
158' to 65' Left

$\frac{18' \times 20' \times .5'}{27} = 7$ C.Y.

$\frac{5' \times 105' \times .5'}{27} = 10$ C.Y.

$\frac{40' \times 18' \times .5'}{27} = 13$ C.Y.

$\frac{4' \times 30' \times .5'}{27} = 2$ C.Y.

32 C.Y.

Sta. 52+90 ± to Sta. 53+25 ±
84' to 109' Right

$\frac{28' \times 25' \times .5'}{27} = 13$ C.Y.

Sta. 52+43 ± to Sta. 52+65 ±
118' to 130' Right

$\frac{22' \times 12' \times .5'}{27} = 5$ C.Y.

Basement
Sta. 52+20 Lt

$\frac{55 \times 33 \times 9}{27} = 269$ C.Y.

Fill $\frac{78'' \times 10}{27} = 29$ C.Y.

Exc. to be deducted 240 C.Y.

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	780	4		
			1695	7
			32	
			13	
Ahead	997	4		
Back	1222	4	5	
			2423	7
Ahead	1895	4		
Back	1315	4		
			2931	6
			-240	29
	1850	2		
			3153	4

PFEIFFER ROAD
STA. 52+00 —— STA. 53+50

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

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

316
445

HAMILTON COUNTY
HAM. 71-13.05

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

780

Sta. 0+60
End Work

Pfeiffer Rd. ℄

780

-3%±

Profile of Drive @ 55+09

Sta. 55+53 22' Lt.
Existing San. M.H.
Rim 775.30
Inv. 769.10

R/W

3:1

18" Pipe

Exist. 6" G.M.

Exist. 12" W.L.

G.R.

2:1

12:1

5%

R/W

771.5

Sta. 55+25 Rt.
End Shoulder Transition
Begin Guard Rail

Sta. 55+25 Lt.
Begin Shoulder Transition

Sta. 55+09 Lt.
Construct 15' Drive

773.09
55+50
775.7

780

Sta. 0+60
End Work

Pfeiffer Rd. ℄

780

+3%

Profile of Drive @ 54+74 Lt.

Sta. 54+92 27' Lt.
Inv. 12" 773.55
Inv. 18" 773.30

Sta. 54+92 55' Lt.
I-8 Std. C.B. No 2-2B
F.L. Grate 777.01
Inv. 12" 774.0

R/W

Grade to Drain

4:1

Exist. 6" G.M.

Exist. 12" W.L.

5%

R/W

774.0

I-1 28'x12" Pipe Cl. E-1 @ 1.6%

I-5 12'x18" Tee Cl. U-1

12" Existing San. Sewer

Sta. 54+92 55' Lt.
End I-1 30'x12" Pipe Cl. E-1 @ 6.7%

Sta. 54+74 Lt.
Construct 85' Drive

Sta. 54+62 55' Lt.
Begin I-1 30'x12" Pipe Cl. E-1 @ 6.7%

780.14
55+00
778.1

Sta. 54+66 Rt.
End I-1 18'x12" Pipe Cl. F-4

Begin L-120 Jute Matting 7'-8" Wide

Sta. 54+57 Rt.
Construct 8' Wide Drive

R/W

Sta. 0+60
End Drive
+4%

780

Sta. 54+62 55' Lt.
I-8 Std. C.B. No. 2-2B
F.L. Grate 781.0
Inv. 12" 776.0

R/W

Varies

Exist. 6" G.M.

Exist. 12" W.L.

4:1

18" Pipe

Sta. 54+36 Lt.
End I-1 109'x18" Pipe Cl. U-1 @ 2.93%
Begin I-1 172'x18" Pipe Cl. U-1 @ 2.93%

12" Existing San. Sewer

781.20
54+50
783.1

Sta. 54+48 Rt.
Begin I-1 18'x12" Cl. F-4

Sta. 54+25
Begin Shoulder Transition

Sta. 54+36 24' Lt.
I-8 Std. C.B. No. 3
F.L. Grate 781.00
Inv. 18" 777.82

R/W

Twinkle Lane

Ahead

Back

Sta. 54+40.00 ℄
End Concrete Pavement Transition
Begin Bituminous Taper

Existing 6" Gas Main

Existing 12" Water Line

R/W

4:1

2:1

3:1

780

18" Pipe

12" Existing San. Sewer

782.25
54+00
787.2

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	7	236		
			19	336
Drive Sta. 55+09 Lt. $\frac{[\frac{15+19}{2}]30}{54} - \frac{30\times15\times.66}{27}$ = 1				1
Fill – Pavement	14	127		
Drive Sta. 54+74 Lt. Exc. $\frac{85\times25\times.66}{27} + \frac{[\frac{85+30}{2}]15\times.66}{27}$ = 12 C.Y.			12	
			222	118
Drive Sta. 54+57 Rt. Exc. $\frac{8\frac{1}{3}36\times.66}{27}$ = 7 C.Y.			7	0
	226	0		
			663	4
Ahead	490	4		
Back	482	4		
			1168	7

PFEIFFER ROAD
STA. 54+00 —— STA. 55+50

FED. RD. DIVISION	STATE	PROJECT		317 / 445
2	OHIO			

HAMILTON COUNTY
HAM. 71-13.05

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

Sta. 57+10
END WORK

Village of Montgomery - Interstate

Sta. 45+07 to	Sta. 57+00	
Excavation	45,264	C.Y.
Embankment	3,113	C.Y.
Embankment +15%	3,580	C.Y.

770

Sta. 57+93.5 23.5 Lt.
Existing San. M.H.
Rim 777.6
Inv. 12" 759.1
R/W

Sta. 57+00
End Bituminous Transition
Meet Existing Pavement

Sta. 0+30
End Drive R/W

-7.5%

Sta. 57+00 Lt.
End Shoulder Transition
Meet Exist. Shoulder

Existing 6" Gas Main

Existing 12" Water Line

Drive Profile
Sta. 56+93 Rt.

775.91
57+00
775.9

Sta. 56+93 Rt.
Construct 10' Drive

Sta. 56+78 Rt.
End Shoulder Transition
Meet Drive Shoulder

770

Sta. 56+58 23' Lt.
Existing San. M.H. (Covered)
Rim 776.55
Inv. 12" 761.90
R/W
G.R.

G.R.
2:1

R/W

Exist. 6" G.M.

Exist. 12" W.L.

Sta. 56+50 Lt.
End Guard Rail
Begin Shoulder Transition

12" Existing San. Sewer

776.98
56+50
775.5

Sta. 56+50 Rt.
End Guard Rail
Begin Shoulder Transition

770

R/W
2:1

Exist. 6" G.M.

Exist. 12" W.L.

2:1
Varies

Channel Exc.
For Quantity See Sht. No. 358

R/W

12" Existing San. Sewer

Channel at Culvert Sta. 56+11 (Skew)

Sta. 56+08 27' Lt.
End I-1 172'x18" Pipe
Cl. U-1 @ 2.93%

777.50
56+25
775.2

Sta. 56+11
Culvert (Skew)

Sta. 56+15 Rt.
End 4' Bottom Special Ditch

Sta. 56+10 Rt.
End C-120 Jute Matting 7'-8" Wide

Pipe Length Based on
2-12' Lane and 12'
Shoulder for Future

770

E-3 Channel Exc.
For Quantity
see Sht. No. 324

Roadway Excavation

Pfeiffer Rd.

G.R.
R/W
Varies

G.R.
2:1

Back Ahead Ditch

16.8'

R/W

18" Pipe

12" Existing San. Sewer

Exist. 6" G.M.

Exist. 12" W.L. under Exist. Culvert.

5.2'

Channel at Culvert Sta. 56+11 (Skew)

Sta. 55+87.5 Lt.
End Shoulder Transition
Begin Guard Rail

778.03
56+00
775.2

		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		22	0		
				20	26
		0	28		
				0	108
		0	205		
Sta 56+15 Ditch Right Sta 56+00	0			2	
	7				
				0	179
Ahead	0	183			
Back	6	183			
Roadway Exc Lt. Sta. 56+20	0			6	
Roadway Exc Lt. Sta. 56+00	16			6	
Roadway Exc Lt. Sta. 55+80	0				
				12	386

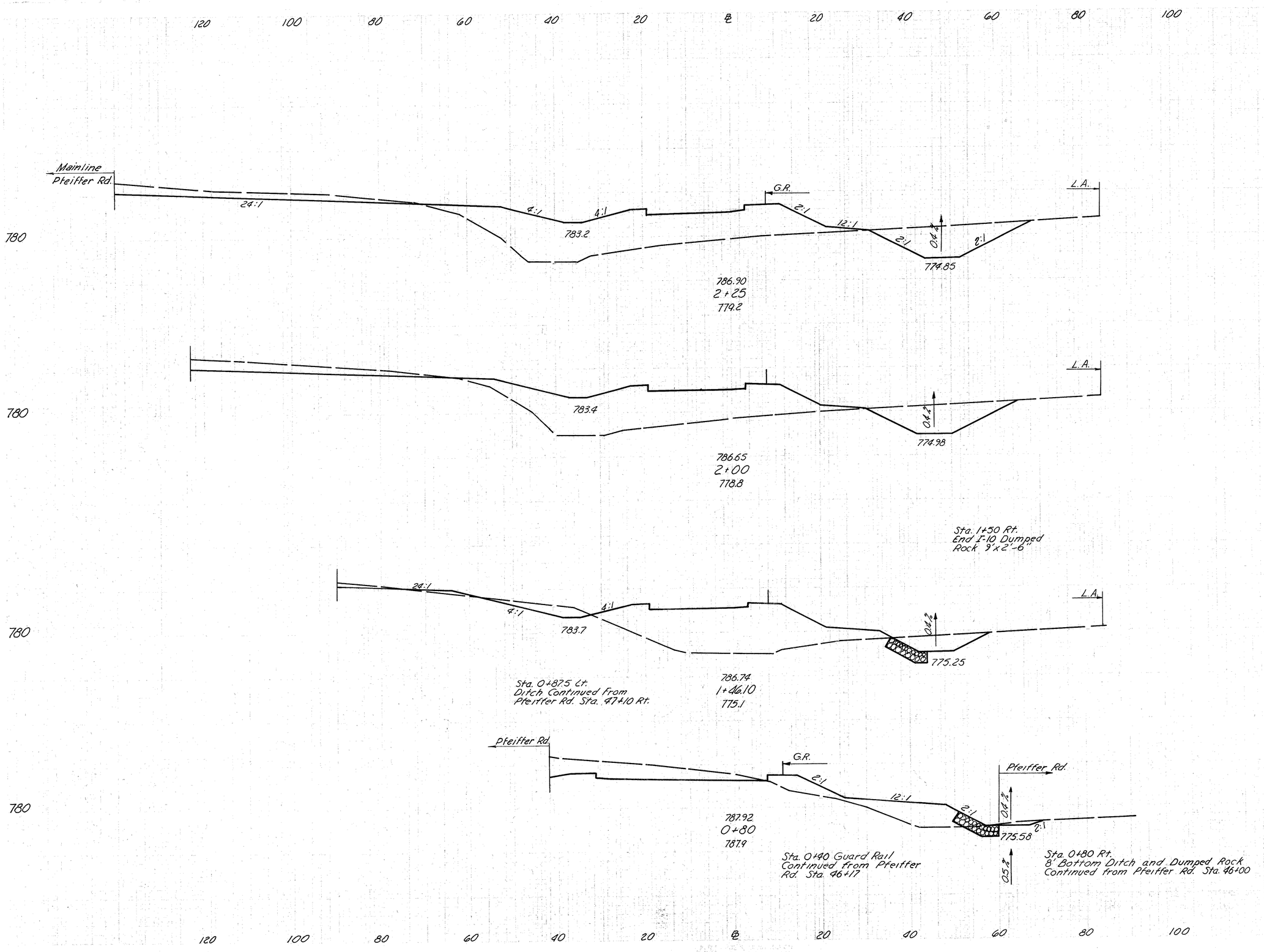
PFEIFFER ROAD
STA. 56+00 — STA. 57+00

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

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM. 71 - 13.05



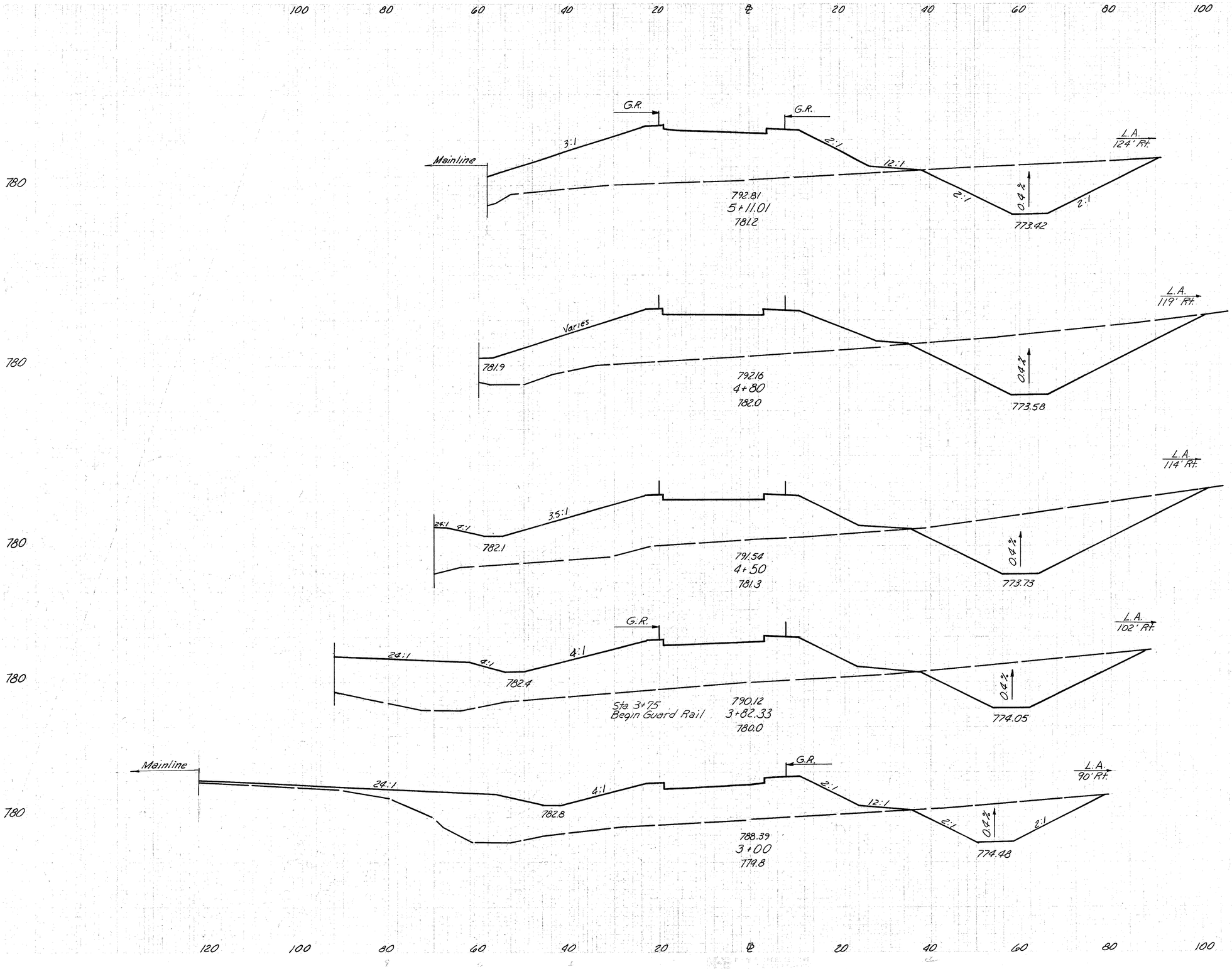
END AREA		VOLUME	
CUT	FILL	CUT	FILL
235	590		
		213	521
225	535		
		304	1072
80	542		
		263	823
135	130		

RAMP "F"
STA. 0+80 ~ STA 2+25

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM. 71 - 13.05



END AREA		VOLUME	
CUT	FILL	CUT	FILL
330	780		
		465	875
480	745		
		533	875
480	830		
		971	2393
295	1040		
		785	2843
220	825		
		632	1965

RAMP "F"
STA. 3+00 ~ STA. 5+11.01

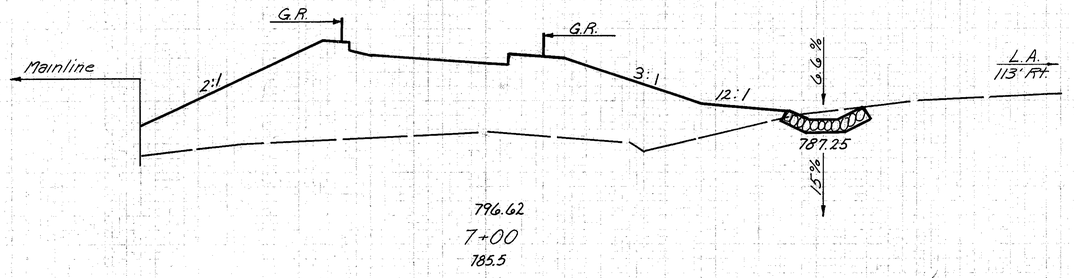
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

320
445

HAMILTON COUNTY
HAM. 71-13.05

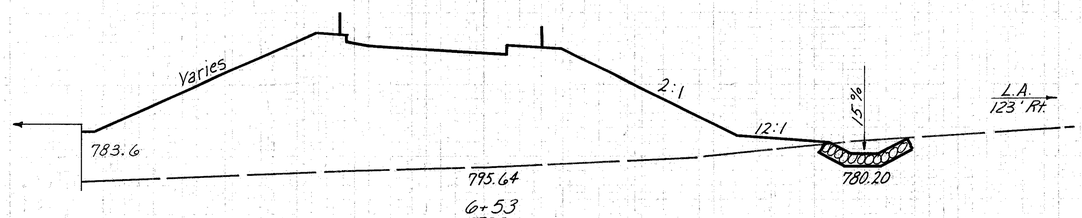
100 80 60 40 20 ℄ 20 40 60 80 100

780

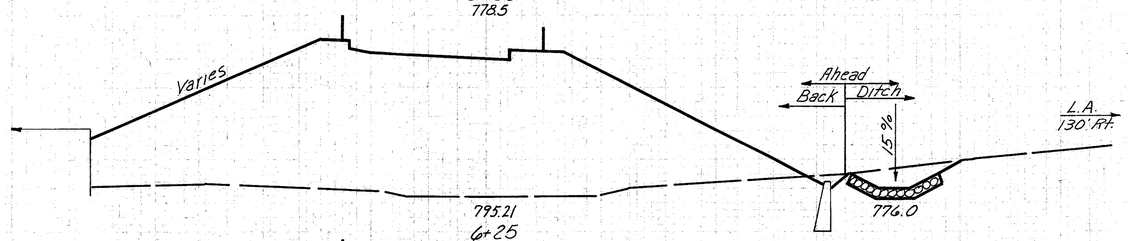


Sta. 7+00 Rt.
Begin L-120 Jute Matting 7'-8" Wide
End I-10 Dumped Rock 8'x1'-6"

780



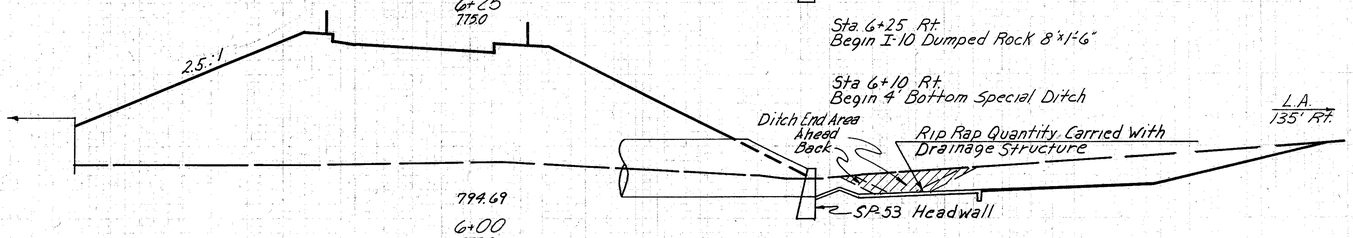
780



Sta. 6+25 Rt.
Begin I-10 Dumped Rock 8'x1'-6"

Sta 6+10 Rt.
Begin 4' Bottom Special Ditch

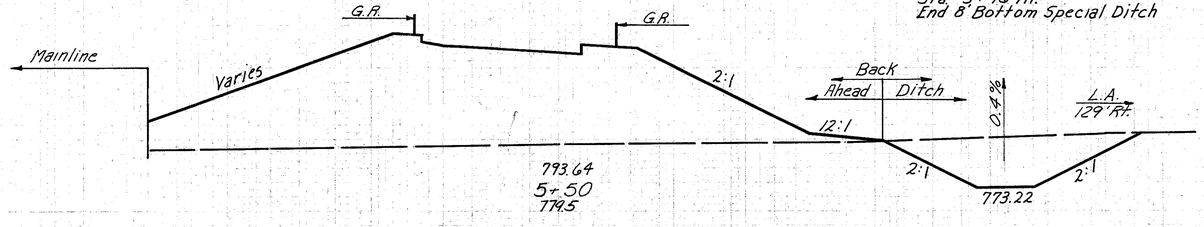
780



Culvert 786+90 Mainline

Sta. 5+96 Rt.
End 8' Bottom Special Ditch

780



	End Area		Volume	
	Cut	Fill	Cut	Fill
	8	730		
			20	1702
	15	1225		
			19	1366
Ahead	22	1410		
Back	0	1410		
	22			
Sta. 6+25	22			
Ditch Exc. Rt.		12		
Sta. 6+10	22			
			0	1218
	0	1220		
			0	2028
Sta 5+96	34			
Ditch Exc. Rt.			166	
Sta. 5+50	145			
Ahead	0	970		
Back	145	970		
			343	1264

RAMP "F"
STA. 5+50 ~ STA. 7+00

100 80 60 40 20 ℄ 20 40 60 80 100

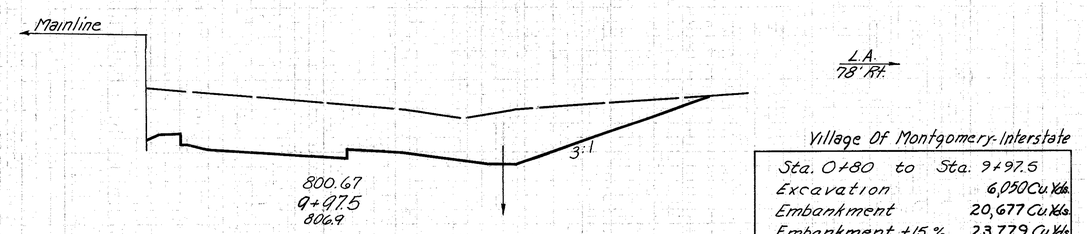
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

321
445

HAMILTON COUNTY
HAM. 71 - 13.05

100 80 60 40 20 ℄ 20 40 60 80 100

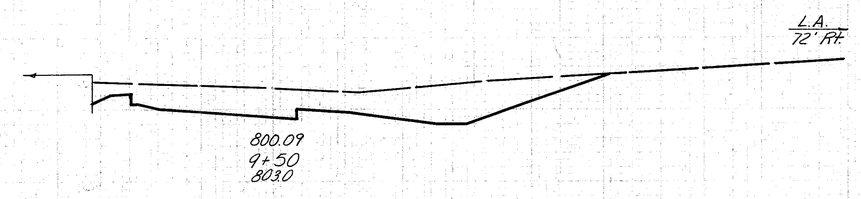
Sta. 9+97.5 Rt.
Standard Ditch Is Continued From
Mainline Sta 783+29.57 Lt.



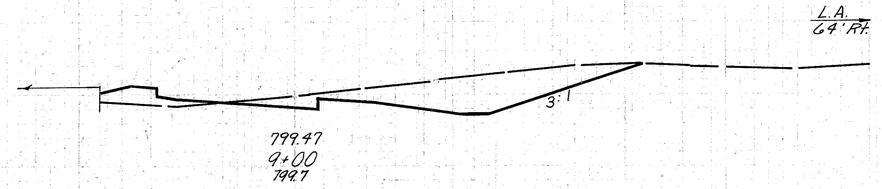
Village Of Montgomery-Interstate

Sta. 0+80 to Sta. 9+97.5	
Excavation	6,050 Cu.Yds.
Embankment	20,677 Cu.Yds.
Embankment +15 %	23,779 Cu.Yds.

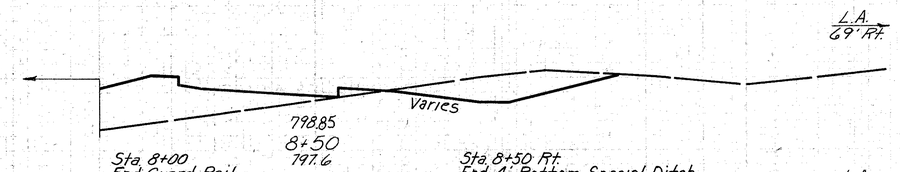
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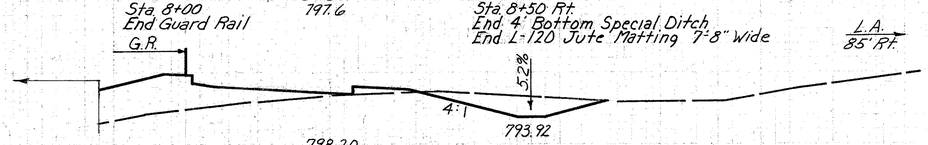
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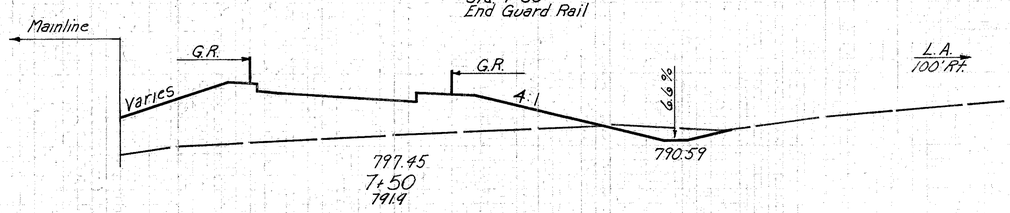
800



790



790



END AREA		VOLUME	
CUT	FILL	CUT	FILL
445	0		
		603	0
240	0		
		361	16
150	17		
		199	131
65	125		
		99	213
42	105		
		53	422
15	350		
		21	1000

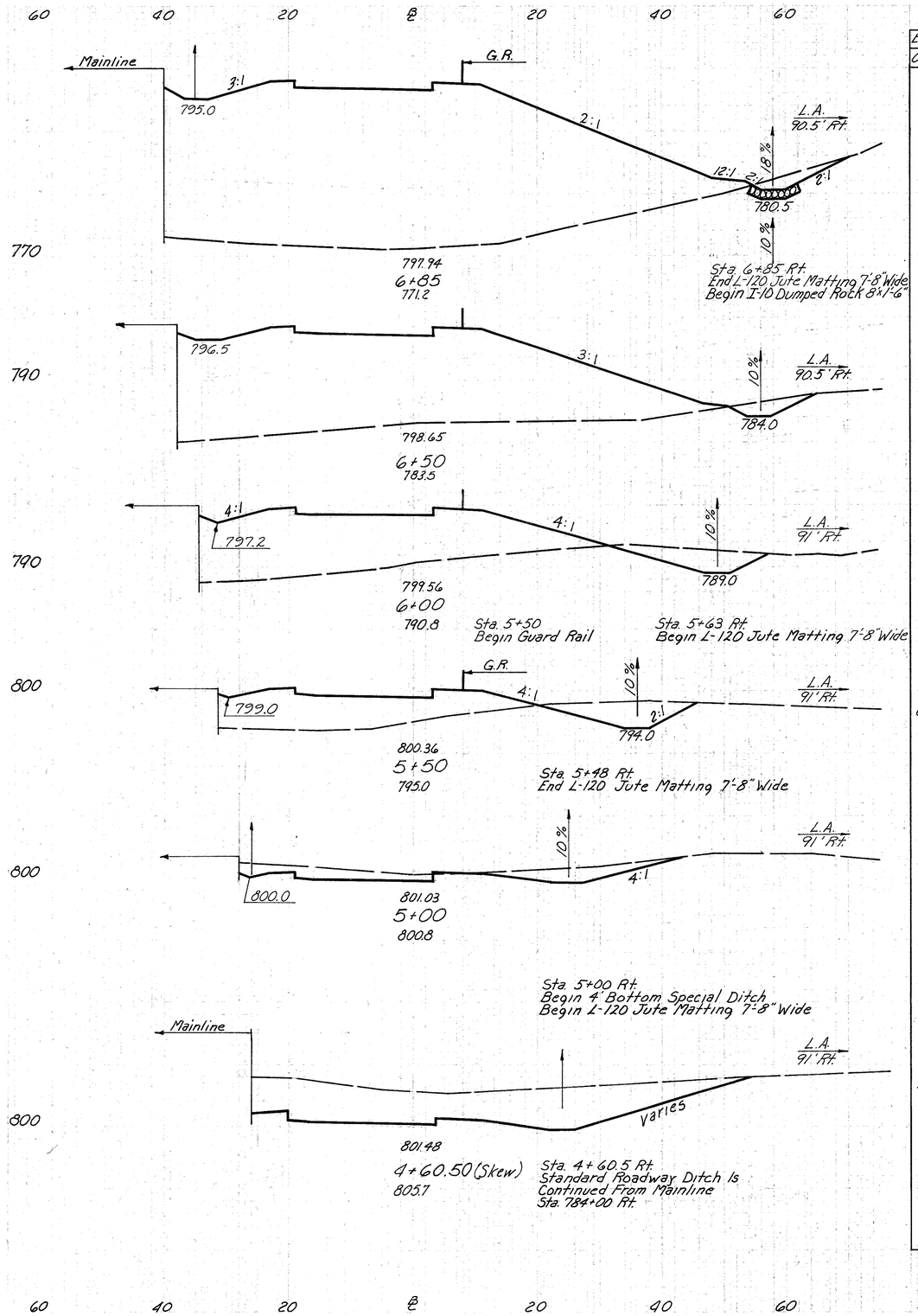
RAMP "F"
STA. 7+50 ~ STA. 9+97.5

100 80 60 40 20 ℄ 20 40 60 80 100

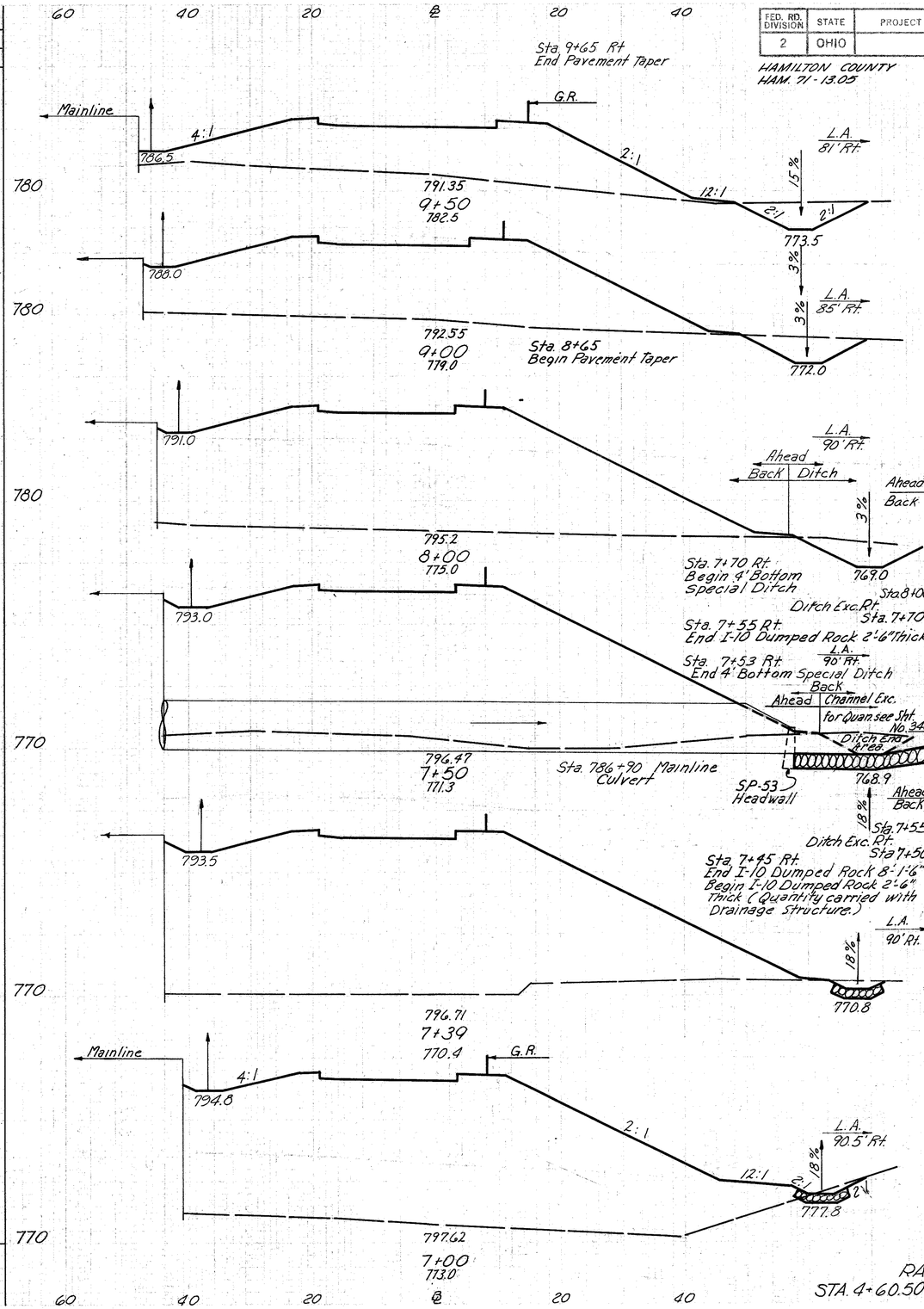
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

322
445

HAMILTON COUNTY
HAM. 71 - 13.05



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
15	1810		
		21	1867
18	1070		
		68	1069
55	495		
		106	667
60	225		
		130	208
80	0		
		344	0
390	0		



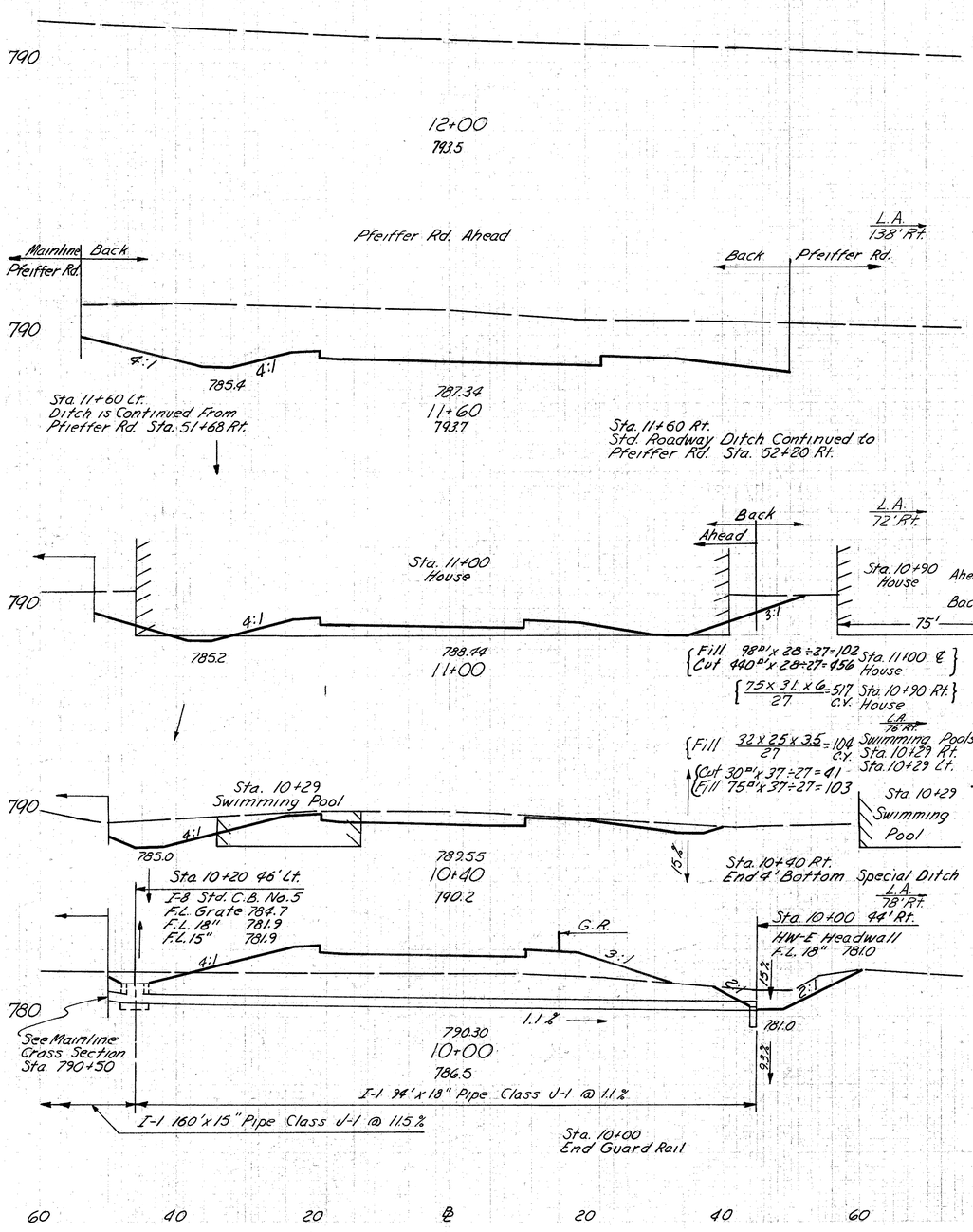
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
60	560		
		105	1366
53	915		
		191	4352
Ahead	50	1435	
Back	0	1435	
Sta. 8+00	50		
		55	
Sta. 7+70	32		
		0	3069
Ahead	0	1880	
Back	32	1880	
Sta. 7+55	32		
		6	
Sta. 7+50	32		
		8	783
7	1965		
		7	2730
3	1815		
		5	1007

RAMP "G"
STA. 4+60.50 ~ STA. 9+50

FED. RD. DIVISION	STATE	PROJECT		323/445
2	OHIO			

HAMILTON COUNTY
HAM. 71 · 13.05

60 40 20 ℄ 20 40 60



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
730			
		1406	0
Ahead 535	0		
Back 545	0		
		-456	+102
			+517
		772	0
		-41	+104
			+103
150	0		
		152	130
55	175		
		106	681

Village of Montgomery – Interstate

Sta. 9+60.5	to Sta. 11+60	
Excavation	2,985	Cu. Yds.
Embankment	19,135	Cu. Yds.
Embankment +15%	22,005	Cu. Yds.

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL

RAMP "G"
STA. 10+00 ~ STA. 12+00

60 40 20 ℄ 20 40 60

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

324
445

HAMILTON COUNTY
HAM. 71-13.05

60 40 20 ℄ 20 40 60

Sta. 7+03 Rt.
Begin 4' Bottom
Special Ditch

G.R.

L.A.
79' Rt.

Mainline

2:1

Ramp "H" Channel Exc.
For Quantity, See Sht. No. 347

Sta. 7+25 85
Ditch Exc. Rt.
Sta. 7+03 30

Ditch End
Area Ahead

780

800.88
7+00
785.0

Sta. 798+24
Culvert
(Mainline)

Headwall No. 3

Sta. 6+85 Rt.
End 4' Bottom
Special Ditch

Sta. 6+85 0
Ditch Exc. Rt.
Sta. 6+50 50

L.A.
79.8' Rt.

Back
Ahead Ditch

Ahead 0
Back 44

8%

780.91

770

801.25
6+50
779.0

L.A.
79.5' Rt.

8%

780.63

770

801.31
6+28
782.2

Mainline

G.R.

2:1

12:1

Guard Rail Continued
to Mainline Sta. 800+00

Sta. 6+06 Rt.
4' Bottom Special Ditch
Continued to Mainline
Sta. 800+00 Lt.

L.A.
79' Rt.

8%

780.85

15%

801.54
6+06 (Skew)
780.3

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	850		
		47	
85			
			0 1829
0			
		34	
50			
0	1125		
44	1125		
		34	880
40	1035		
			31 843
36	1035		

790
790
790
790
780

60 40 20 ℄ 20 40

LAKECREST DR.

L.A.

Mainline

4:1

797.0

798.62
9+00
805.7

4:1

LAKECREST DR.

L.A.

797.3

Varies

799.31
8+50
803.8

LAKECREST DR.

L.A.
74' Rt.

4:1

6:1

799.91
8+00
800.2

10%

Sta. 8+00 Rt.
End 4' Bottom Special Ditch

Sta. 7+75
End Guard Rail

LAKECREST DR. 82'

G.R.

3:1

12:1

L.A.
77' Rt.

10%

800.44
7+50
793.0

789.0

Mainline

G.R.

2:1

12:1

Ahead
Back Ditch Bck.

L.A.
78' Rt.

10%

800.67
7+25
788.1

784.5

LAKECREST DR.

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
717	0		
		1097	0
480	0		
		546	46
115	50		
		208	444
110	430		
		90	509
Ahead 85	670		
Back 0	670	0	704

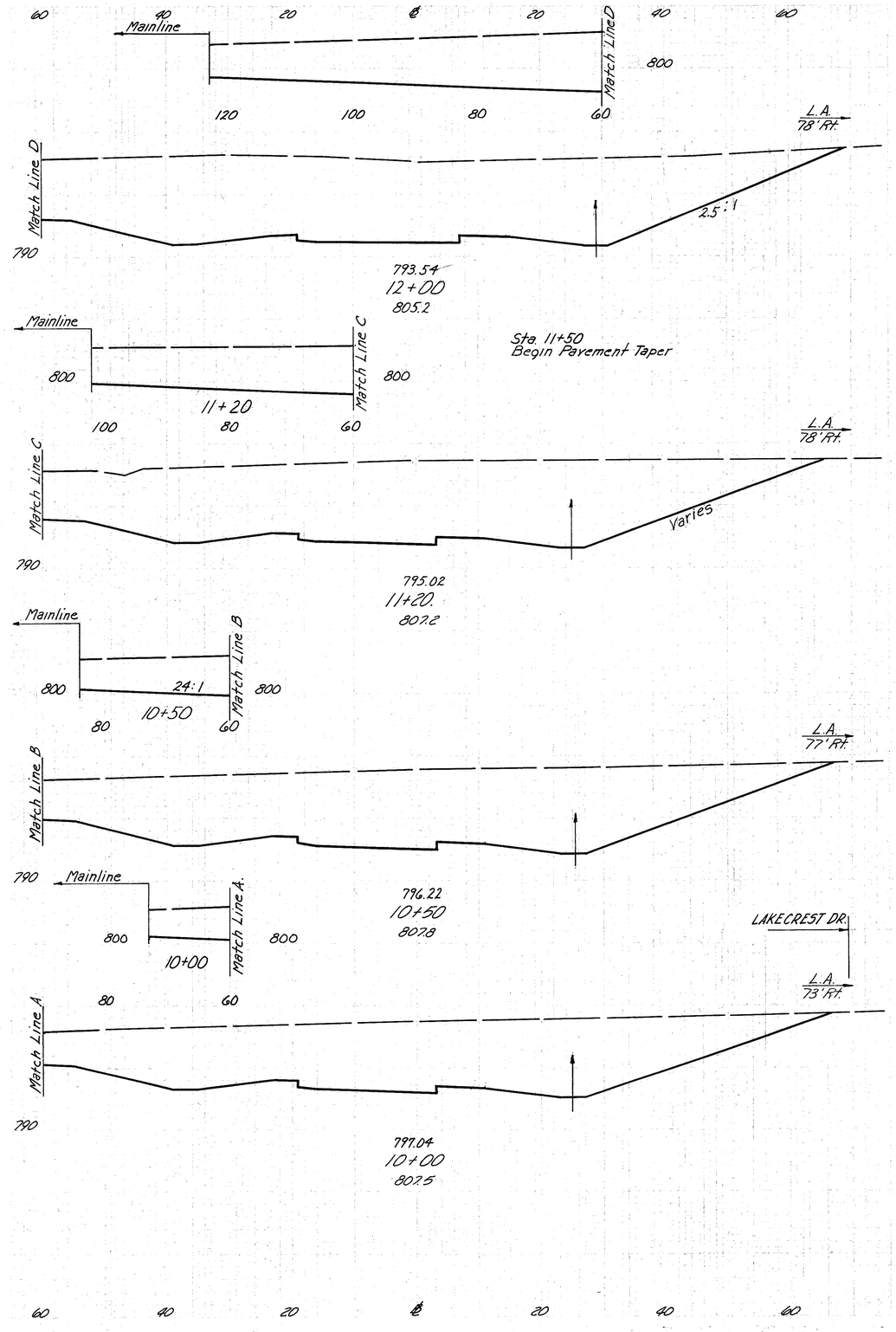
60 40 20 ℄ 20 40

RAMP "H"
STA. 6+06 ~ STA. 9+00

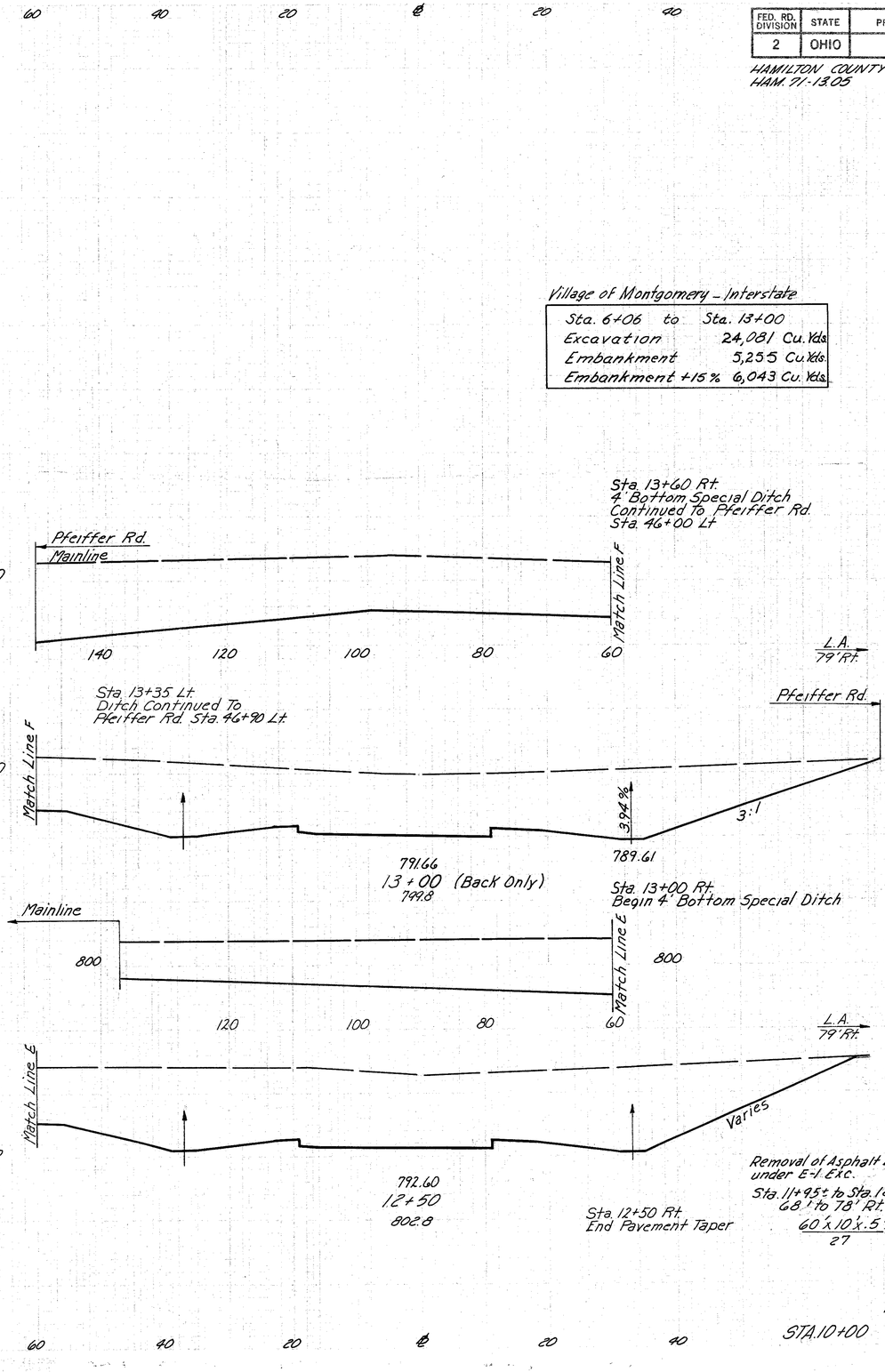
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

325
445

HAMILTON COUNTY
HAM. 71-13.05



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1890	0		
		5140	0
1580	0		
		3811	0
1360	0		
		2356	0
1185	0		
		3509	0



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2020	0		
		3644	0
1915	0		
		3523	0
		11	

RAMP "H"
STA. 10+00 — STA. 13+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

326/445

HAMILTON COUNTY
HAM. 71-13.05

60 40 20 ℄ 20 40 60

Mainline
790
788.95
3+00
798.2
3:1
L.A.

Mainline
790
787.26
2+50
797.7
L.A.

Removal of Asphalt
Drive under E-1 Exc.
Sta. 2+18± to Sta. 2+46±
64' to 72' Rt.
$\frac{3+8}{2} \times 28' \times .5' = 3$ C.Y.
27

Swimming Pool
@ Sta. 1+83

Mainline
790
785.88
2+00
797.2
783.92
6.9%
3:1
L.A.
71' Rt.

Sta. 1+83 Lt.
Swimming Pool
$30' \times 15' \times 6' = 100$ C.Y.
27

Sta. 1+43 37' Lt.
I-8 C.B. No. 4
F.L. Grate = 783.8
F.L. 15" = 781.75
F.L. 24" = 781.00

Sta. 2+00 Rt.
End 4' Bottom Special Ditch
End L-120 Jute Matting 7'-8" Wide

Mainline
790
See Mainline Cross Section Sta. 793+00
I-1 145' x 15" Pipe Class J-1 @ 12.7%
1.43%
1+43
796.8
780.0
6.9%
4:1
2:1
L.A.
71.5' Rt.
Sta. 1+25 26' Rt.
H.W.-E Headwall
F.L. 24": 780.04
0.5%
I-1 63' x 24" Pipe Class J-1 @ 1.57%

Match Line
790
784.95
1+00
796.1
779.8
4:1
2:1
0.5%
L.A.
72' Rt.

Pfeiffer Rd.
Match Line

Sta. 0+75 Lt.
Ditch Continued From
Pfeiffer Rd. Sta. 51+27 Lt.

Sta. 0+75 Rt.
Begin L-120 Jute Matting 7'-8" Wide
4' Bottom Special Ditch Continued
To Pfeiffer Rd. Sta. 52+10 Lt.

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
930	0		
		1833	0
1050	0		
		2065	0
		3	
1180	0		
		-100	
		2649	0
1330	0		
		2206	0
1440	0		

60 40 20 ℄ 20 40

Mainline
790
Varies
G.R.
Back
Ahead
Ditch Ahd.
2:1
22%
L.A.
75.8' Rt.
794.61
4+75
783.8
782.5

Mainline
790
3:1
22%
L.A.
74.8' Rt.
788.0
793.91
4+50
784.0

Sta. 4+35 Rt.
Begin 4' Bottom Special Ditch

Mainline
790
793.15
4+25
796.8
6:1
L.A.
72.8' Rt.

Sta. 4+00 Rt.
Begin Guard Rail

Mainline
800
G.R.
4:1
L.A.
72' Rt.
792.33
4+00
798.7

Mainline
800
3.5:1
L.A.
71' Rt.
790.64
3+50
799.8

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Ahead	0	606	
Back	6	610	
		19	359
35	165		
		171	76
335	0		
		447	0
630	0		
		1417	0
900	0		
		1694	0

RAMP I
STA. 1+00 ~ STA. 4+75

60 40 20 ℄ 20 40 60

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

327
445

HAMILTON COUNTY
HAM. 71-13.05

Village of Montgomery - Interstate

Sta. 1+00	to	Sta. 7+77.4	
Excavation		12,657	Cu. Yds.
Embankment		10,702	Cu. Yds.
Embankment +15%		12,307	Cu. Yds.

60 40 20 ℄ 20 40 60

780

Mainline

4:1

G.R.

2:1

12:1

1%

L.A. 81.5' Rt.

2:1 2:1

797.48
6+14.78
780.0

777.64

L.A. 79.5' Rt.

797.26
6+00
780.0

777.5

L.A. 78.3' Rt.

1%

796.37
5+50
778.1

777.0

Sta. 5+35 Rt.
Begin I-10 Dumped Rock 10'x1'-6"

Ahead
Back Channel Exc.
For Quantity, see Sht. No. 347

L.A. 77.5' Rt.

796.06
5+35
777.0

Culvert @
Sta. 798+24 Mainline

Headwall No.3

Mainline

Varies

G.R.

2:1

12:1

Sta. 5+22 Rt.
Begin 4' Bottom Special Ditch

Sta. 5+07 Rt.
End 4' Bottom Special Ditch

Back
Ahead Ditch Ahd

L.A. 76.8' Rt.

795.25
5+00
781.4

777.0

22%

END AREA		VOLUME	
CUT	FILL	CUT	FILL
66	1075		
		36	584
67	1058		
		81	2006
20	1109		
		8	635
Ahead 7	1177		
Back 0	1177		
		3	
		0	1343
Ahead 0	895		
Back 0	895		
7		2	
5		0	695
7			

Sta. 5+35 Rt
Ditch Exc. Rt.
Sta. 5+22

Sta. 5+07 Rt
Ditch Exc.
Sta. 5+00

60 40 20 ℄ 20 40 60

780

790

Sta. 7+77.4 Rt.
4' Bottom Special Ditch And
L-120 Jute Matting 11'-4" Wide
Continued To Mainline Sta 799+50 Rt.

Mainline

6.7%

L.A.

4:1

2.5:1

793.8

8.2%

798.57
7+77.4
791.5

Sta. 7+77 Rt.
End L-120 Jute Matting 11'-4"

72" Pipe

Sta. 7+75 Rt.
End Guard Rail

G.R.

3:1

L.A.

791.4

798.56
7+50
789.4

72" Pipe

2.5:1

L.A.

787.35

787.35

798.35
7+00
782.0

72" Pipe

Sta. 6+55 Rt
End I-10 Dumped Rock 8'-6" Wide
Begin L-120 Jute Matting 11'-4 Wide

Mainline

G.R.

2:1

L.A. 77' Rt.

Earthwork Ahead

8.2%

783.42

Earthwork Back

797.92
6+50
781.0

778.00

72" Pipe FL. 778.00

Sta. 6+50 Rt.
End 4' Bottom Special Ditch, Headwall No. 3 Type A
End I-10 Dumped Rock 10'x1'-6"
Begin I-1 230'x72" Pipe @ 0.8%

Sta. 6+32 Rt.
Begin 4' Bottom Special Ditch
Begin I-10 Dumped Rock 8'-6" Wide

END AREA		VOLUME	
CUT	FILL	CUT	FILL
15	336		
		10	495
4	640		
		4	1439
0	914		
		0	1749
Ahead 0	975		
Back 100	950		
		108	1321
0		1	
3			

Sta. 6+50 Rt.
Ditch Rt.
Sta. 6+32

60 40 20 ℄ 20 40 60

780

790

RAMP I
STA. 5+00 ~ STA. 7+77.4

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

328
145

HAMILTON COUNTY
HAM. 71-13.05

40 20 ℄ 20 40

790

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

8" 12" Exist. San. Sewer

787.70
1+40
790.7

R/W R/W House 2:1

8" 12" Exist. San. Sewer

786.76
1+25
791.02

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

8" 12" Exist. San. Sewer
785.19
1+00
791.07

Sta. 0+80 Lt.
End 2' Bottom Special Ditch

Pfeiffer Rd. L.A. Pfeiffer Rd. 4:1 2:1

778.0 12" Exist. San. Sewer 782.58 0+50 790.52

18" Pipe

Sta. 0+52 Lt.
Ditch Continued To
Pfeiffer Rd Sta. 53+15

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
150	0		
		98	0
202	0		
		257	0
311	0		
		1130	0
909	0		

Village of Montgomery - Interstate

Sta. 0+50 to Sta. 2+00	
Excavation	1,608 C.Y.
Embankment	1 C.Y.
Embankment +15%	1 C.Y.

2+50
786.78

R/W R/W

2+25
787.47

STA. 2+10 END WORK

Sta. 2+00
Meet Existing Pavement

R/W R/W

8" 12" Exist. San. Sewer

788.78
2+00
788.78

Sta. 1+85 Lt.
Existing Driveway

R/W R/W 4:1

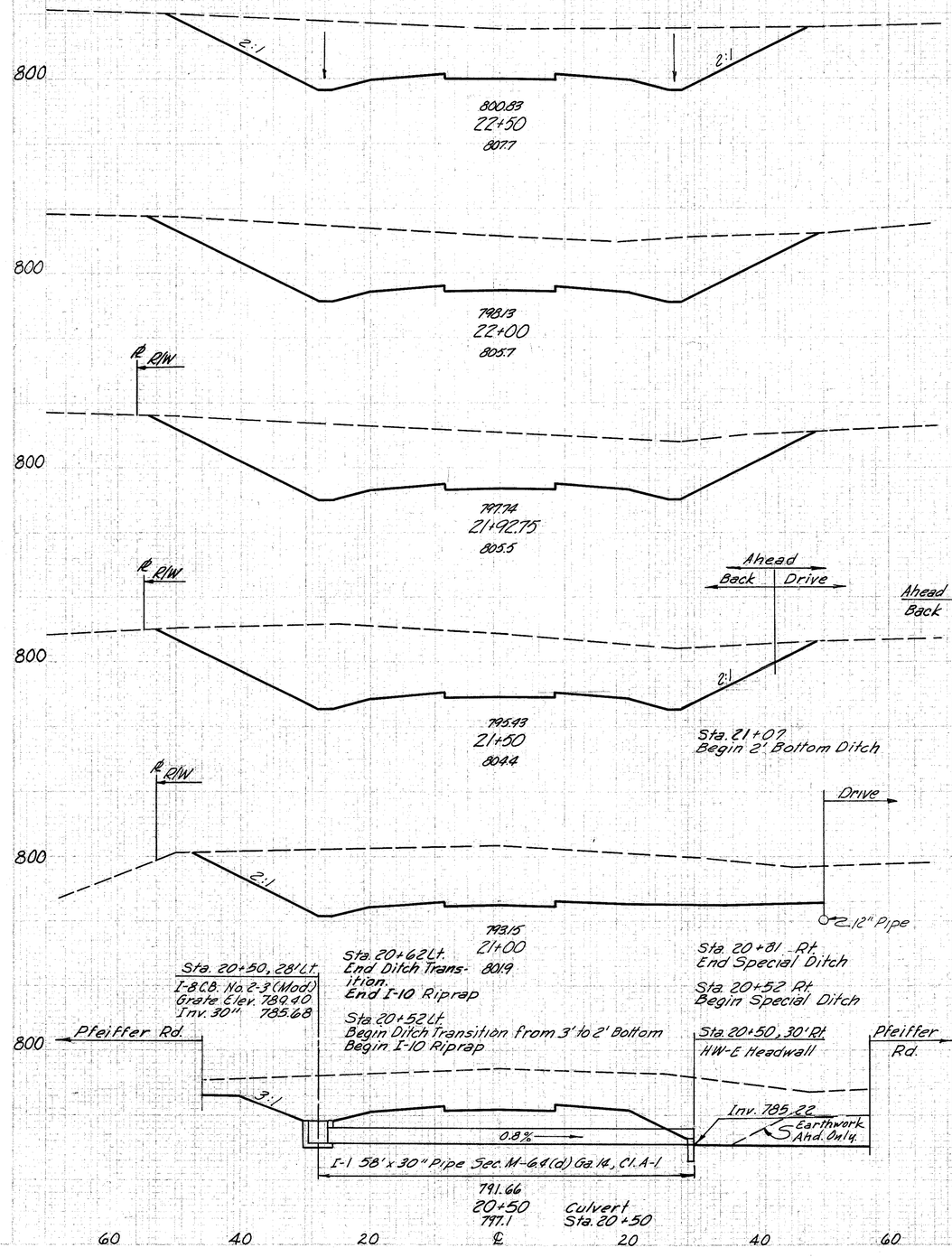
8" 12" Exist. San. Sewer

789.23
1+75
789.91

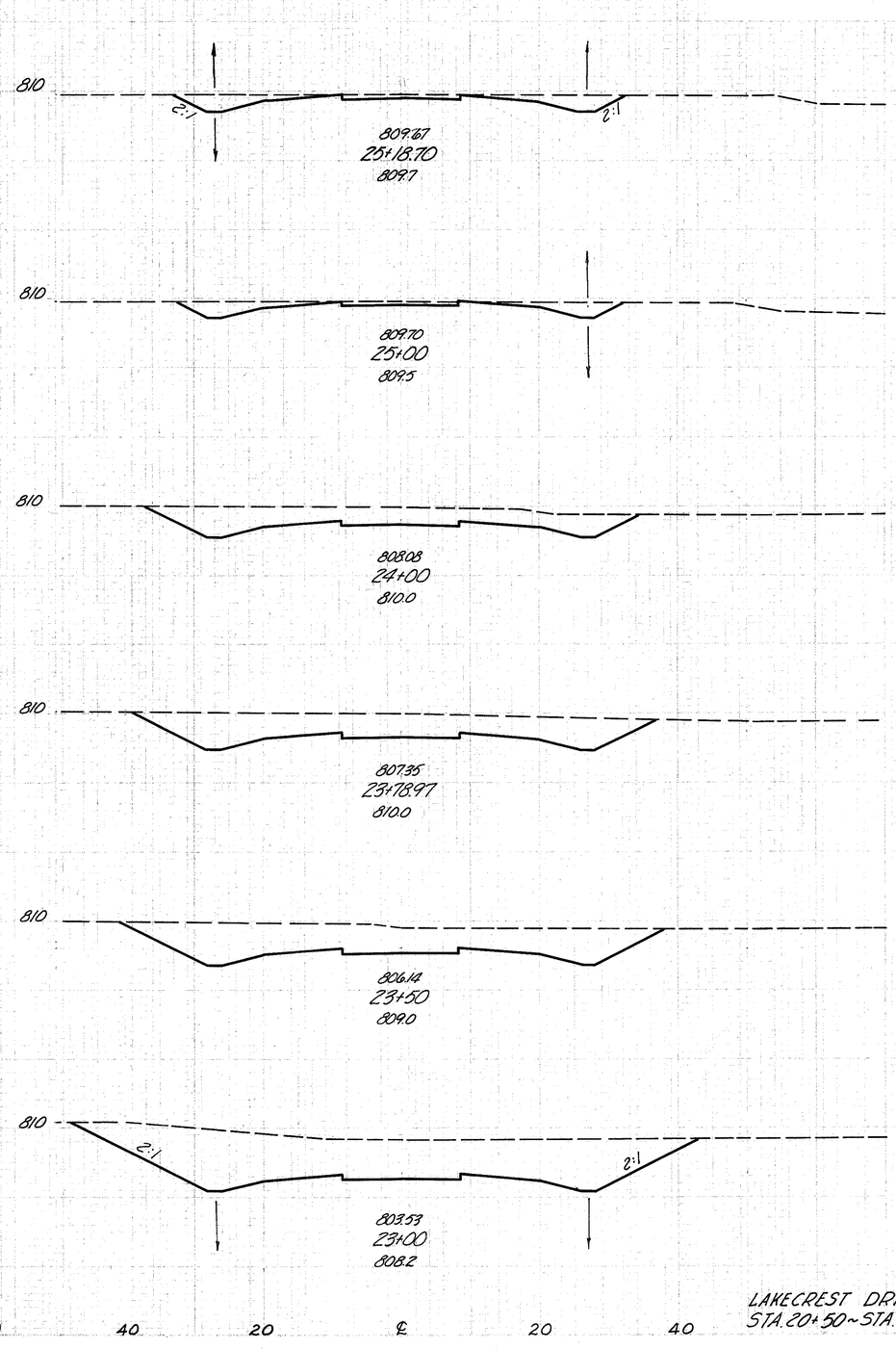
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
18	0		
		24	1
33	2		
		119	0

TWINKLE LANE
STA. 0+50 —— STA. 2+50

HAMILTON COUNTY
HAM.71-13.05

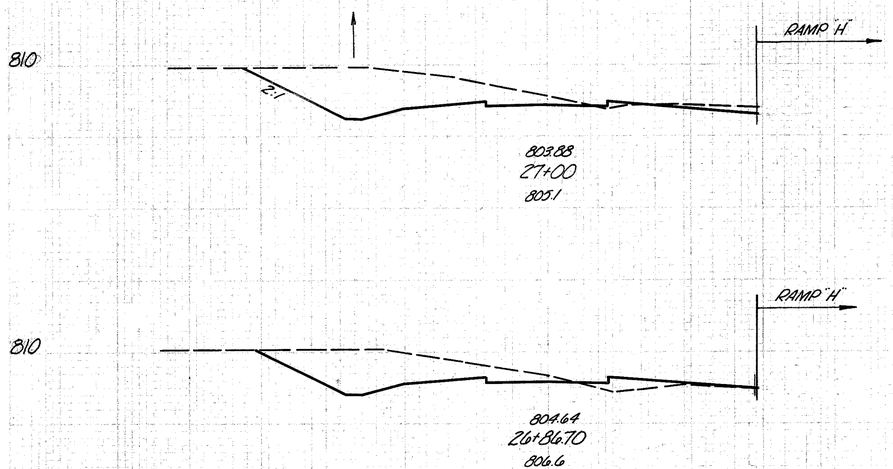


	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	648			
			1,240	
	732			
			195	
	725			
			1208	
Ahead	837			
Back	816			
			1431	
	730			
			1246	
	616			

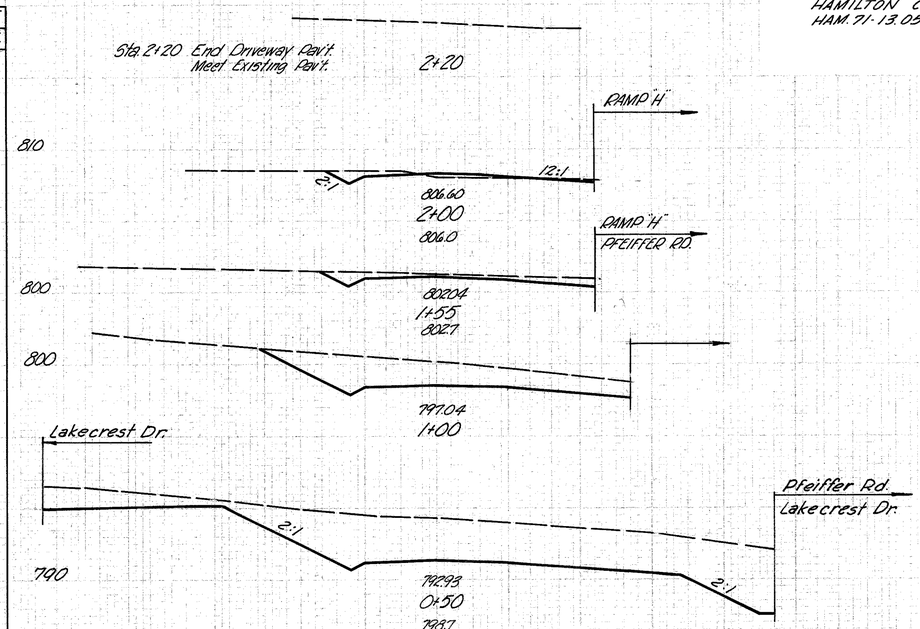


LAKECREST DRIVE
STA. 20+50 ~ STA. 25+18.70

HAMILTON COUNTY
HAM.71-13.05



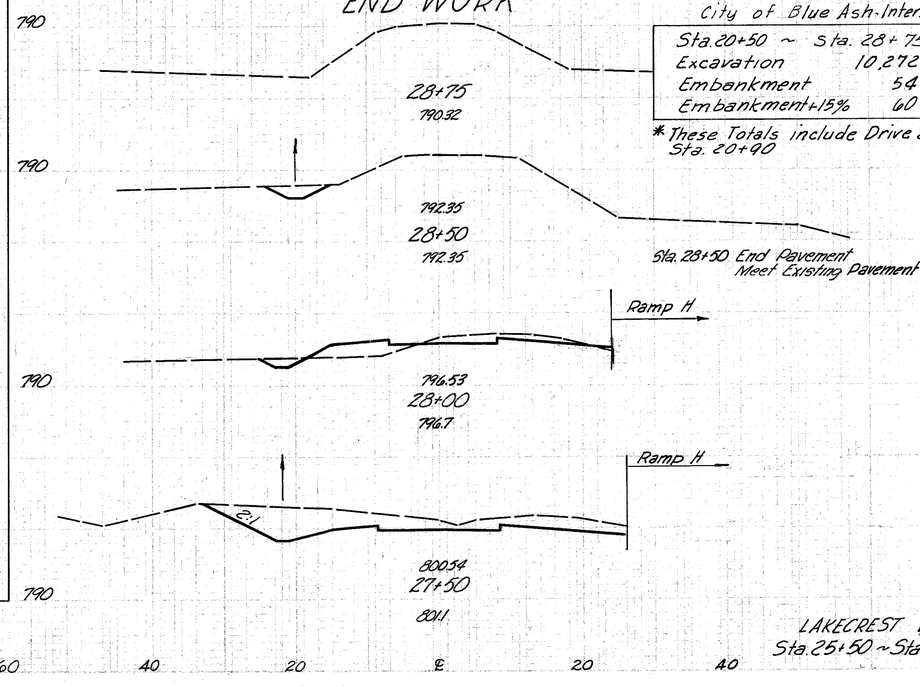
END AREA		VOLUME	
CUT	FILL	CUT	FILL
180	2		
		79	4
142	15		
		246	10
220	0		
		385	0
196			
		263	0
95			
		90	0



Drive at STA. 20+90 Lakecrest Drive

	8 3
	31 2
	29 0
	186 0
	154 0
	602 0
	496 0
*TOTAL	819 2

STA. 28+75
END WORK



City of Blue Ash-Interstate

Sta. 20+50 ~ Sta. 28+75		
Excavation	10,272	C.Y.
Embankment	54	C.Y.
Embankment+15%	60	C.Y.

*These Totals include Drive at Sta. 20+90

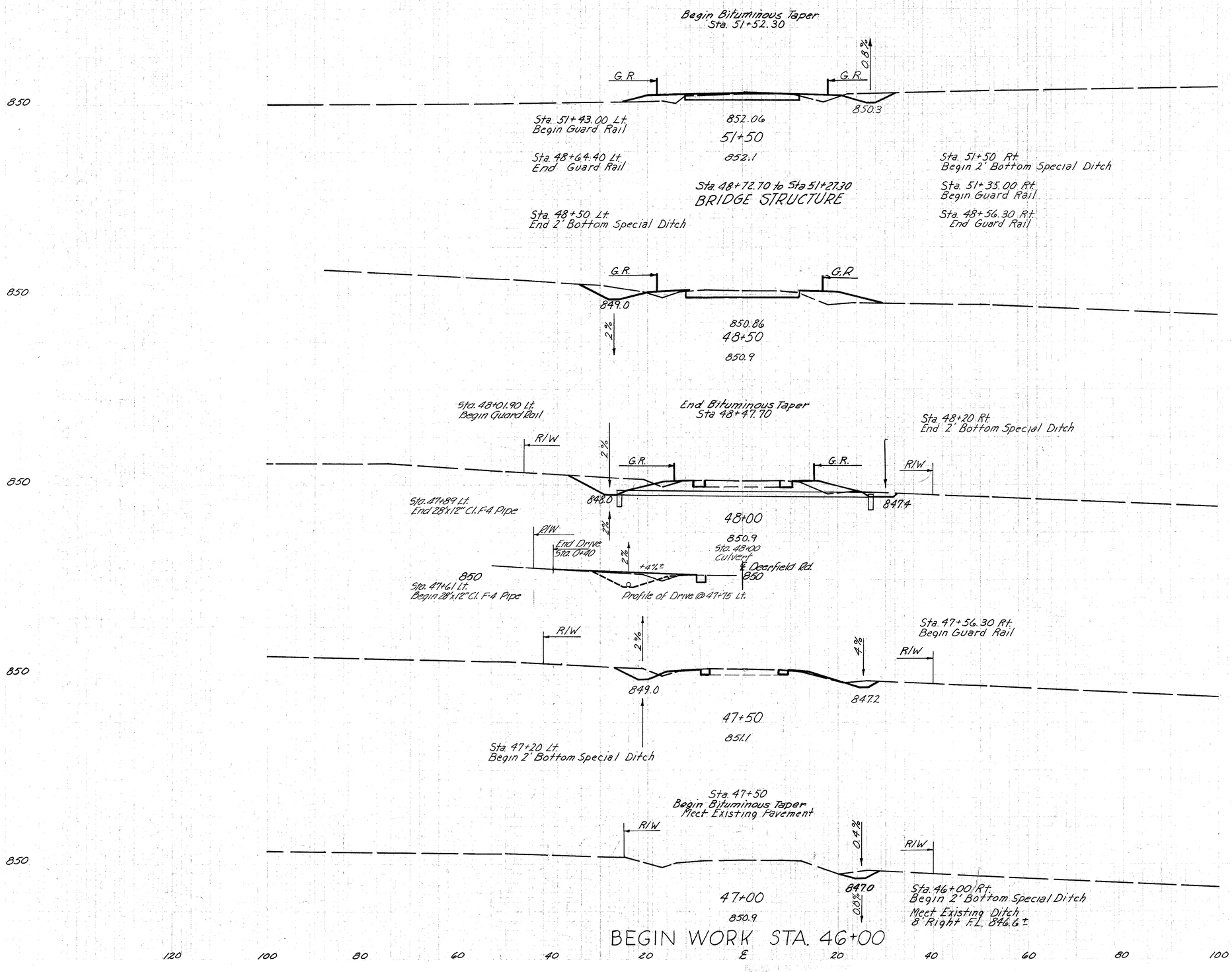
	0 0
	5 0
	11 0
	27 19
	18 21
	167 17
	162 0
TOTAL	224 2
	9,453 52

LAKECREST DRIVE
Sta. 25+50 ~ Sta. 28+75

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

331
445

HAMILTON COUNTY
HAM. 71-13.05



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	37	18		
			16	8
Sta. 51+27	0	0		
Sta. 98+73	0	0		
			15	13
Ahead	35	31		
Back	55	31		
			55	42
Sta. 98+20 Rt.	44			
			34	
	49	16		
			59	15
	15	0		
			19	0
	6	0		

DEERFIELD ROAD
STA 47+00 - 51+50

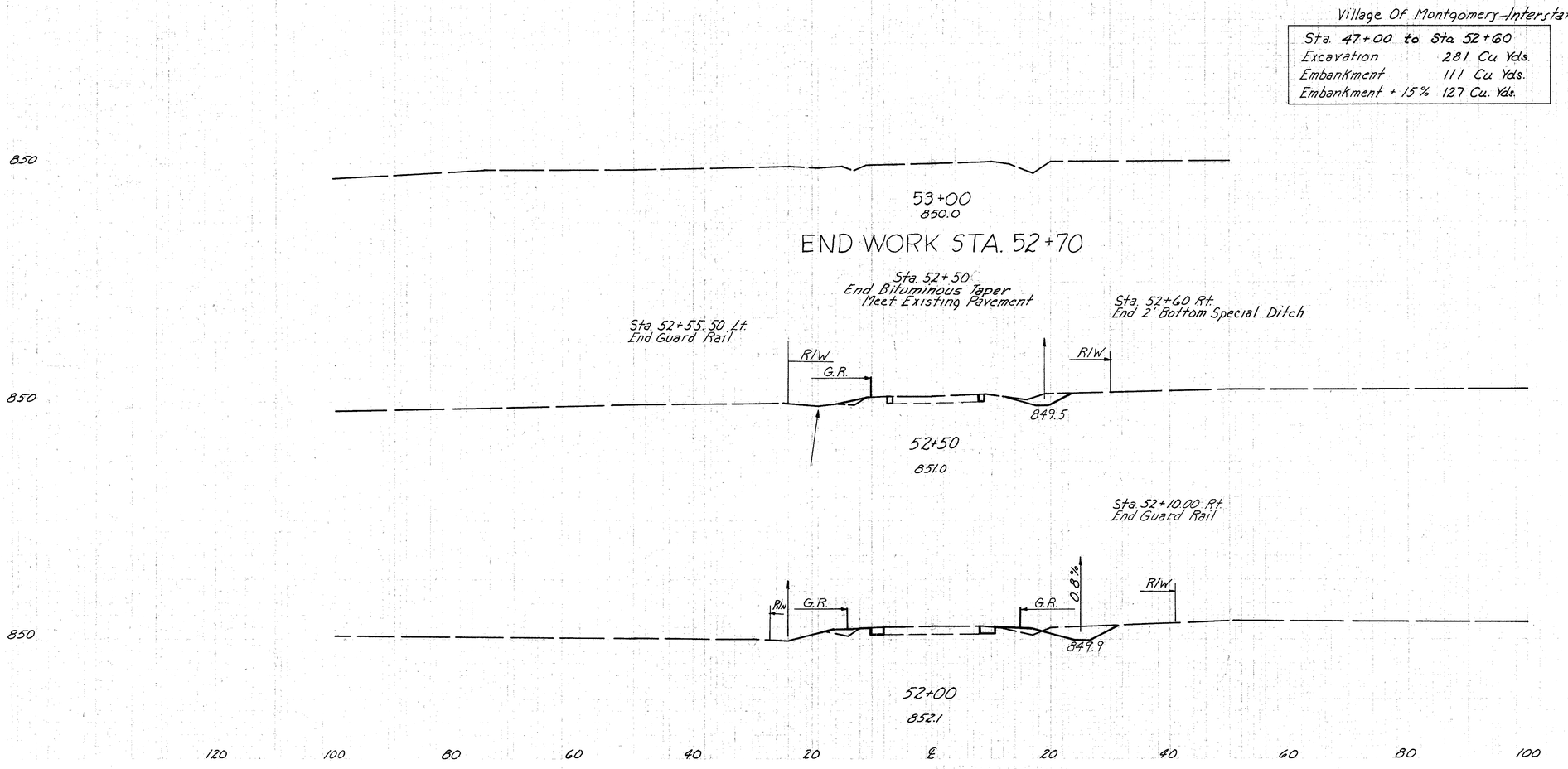
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

332
445

HAMILTON COUNTY
HAM. 71-13.05

Village Of Montgomery-Interstate

Sta. 47+00 to Sta. 52+60	
Excavation	281 Cu Yds.
Embankment	111 Cu Yds.
Embankment + 15%	127 Cu. Yds.

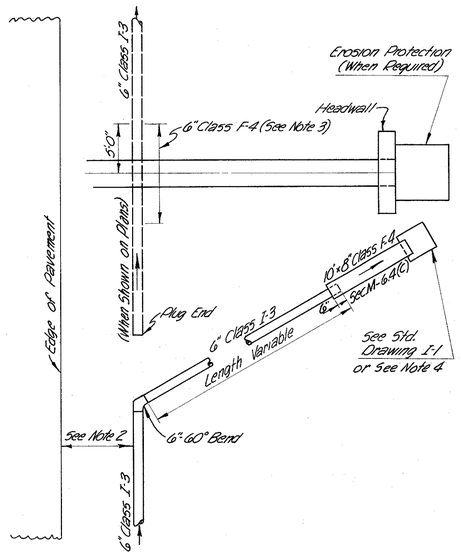


END AREA		VOLUME	
Cut	Fill	Cut	Fill

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

333
445

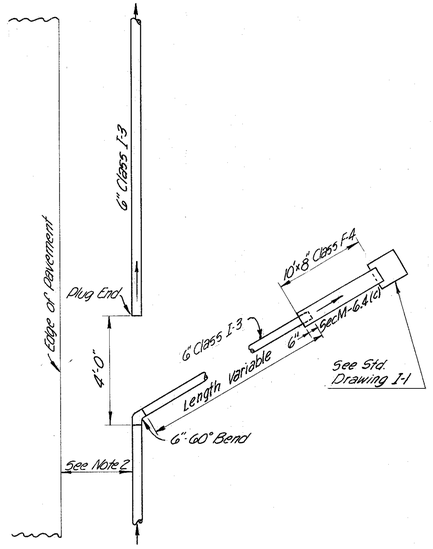
HAMILTON COUNTY
HAM. 71-13.05



Sta. 10+00 Rt. Ramp G

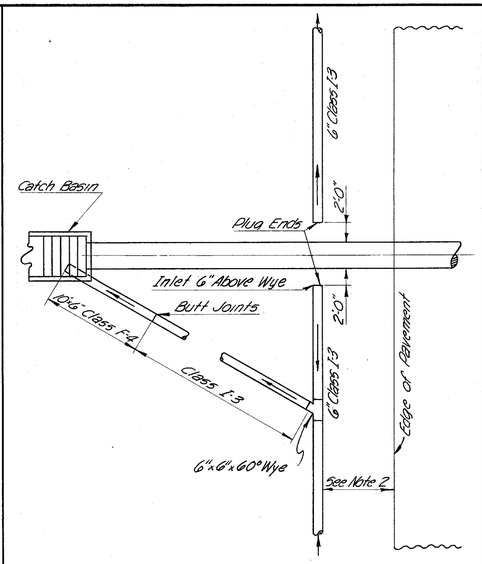
Opposite Hand
Sta. 767+02 Lt.
Sta. 5+32 Rt. Ramp E

DETAIL "A"



Sta. 5+20 Rt. Ramp E
Sta. 7+67 Rt. Ramp H

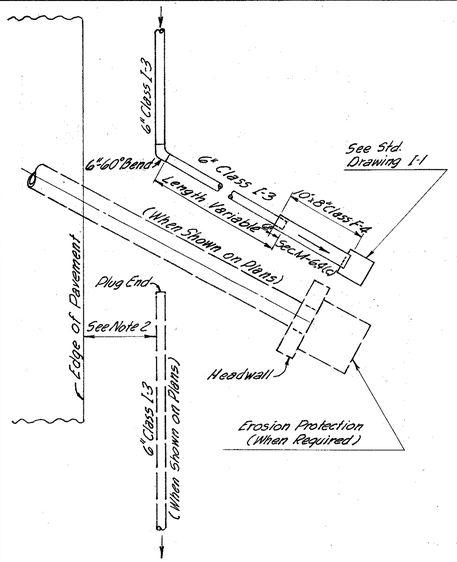
DETAIL "B"



Sta. 679+00 Lt.

Opposite Hand
Sta. 721+50 Lt.

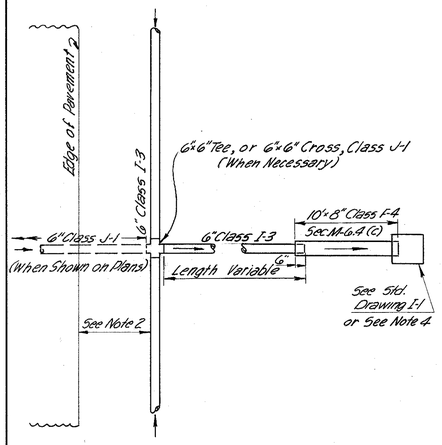
DETAIL "C"



Sta. 685+32 Lt.
Sta. 751+98 Lt.
Sta. 847+03 Rt.
Sta. 289+03 Lt. Cross-County

Opposite Hand
Sta. 813+00 Lt.

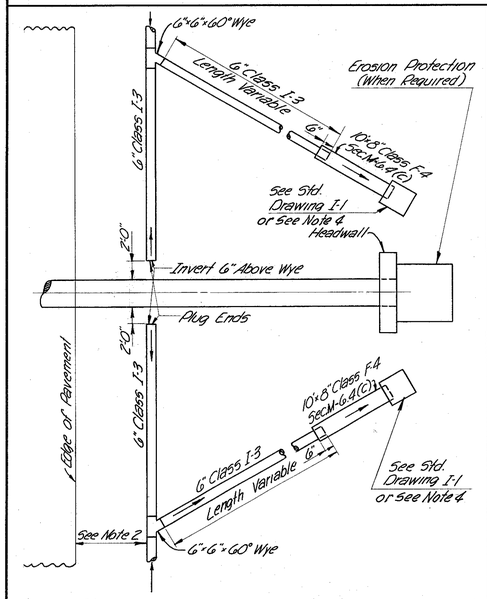
DETAIL "D"



Sta. 695+08 Rt.
Sta. 801+08 Lt.
Sta. 847+93 Lt.

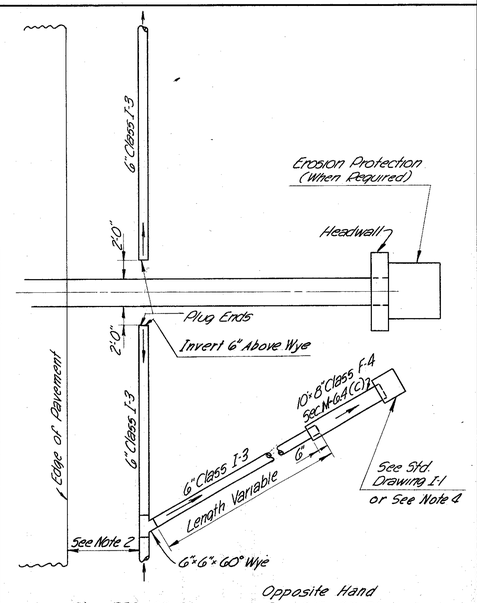
Sta. 7+75 Rt. Ramp A
Sta. 19+10 Rt. Ramp B
Sta. 11+20 Rt. Ramp C

DETAIL "E"



Sta. 672+00 Lt
Sta. 1+25 Rt. Ramp I
Sta. 45+50 Lt. Pfeiffer Rd.

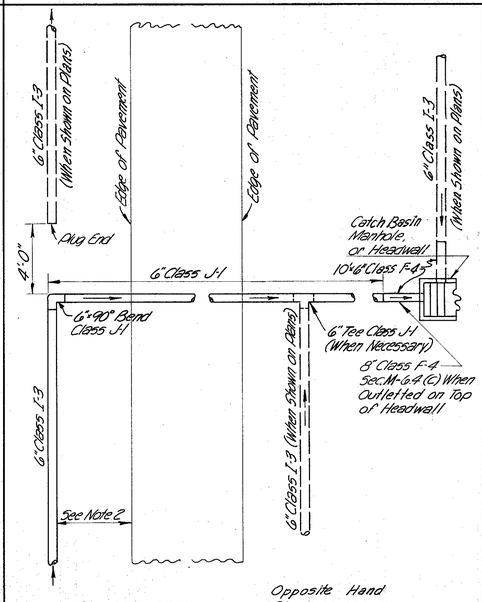
DETAIL "F"



Sta. 752+00 Rt.
Sta. 768+00 Rt.
Sta. 774+20 Lt. & Rt.
Sta. 7+68 Rt. Ramp D
Sta. 5+20 Rt. Ramp E
Sta. 45+50 Rt. Pfeiffer Rd.

Opposite Hand
Sta. 813+00 Rt.
Sta. 825+00 Lt.
Sta. 4+61 Rt. Ramp B
Sta. 257+26 Rt. Cross-County Highway

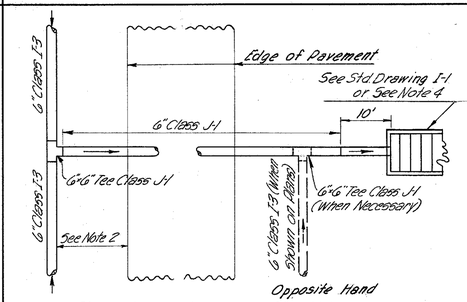
DETAIL "G"



Sta. 825+00 Rt.
Sta. 54+36 Lt. Pfeiffer Rd.

Opposite Hand
Sta. 709+50 Rt.
Sta. 721+50 Rt.
Sta. 728+75 Lt. & Rt.
Sta. 841+50 Lt. & Rt.

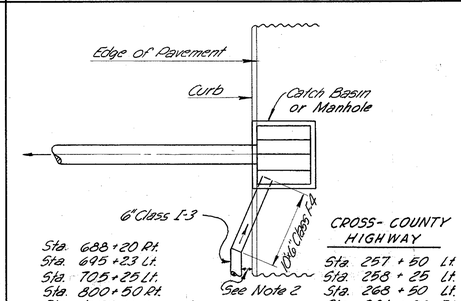
DETAIL "H"



Sta. 672+00 Rt.
Sta. 784+12 Lt.
Sta. 1+75 Rt. Ramp F

Opposite Hand
Sta. 784+12 Rt.
Sta. 801+08 Rt.

DETAIL "I"

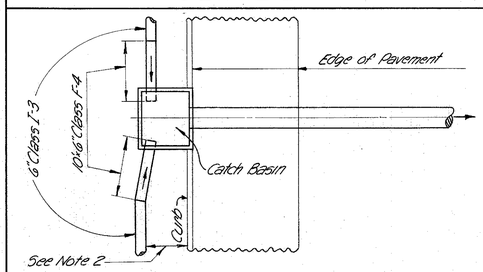


CROSS-COUNTY HIGHWAY

Sta. 688+20 Rt.
Sta. 695+23 Lt.
Sta. 705+25 Lt.
Sta. 800+50 Rt.
Sta. 1+39 Lt. Ramp A
Sta. 1+45 Lt. Ramp B & G
Sta. 0+90 ℄ Ramp E

Sta. 257+50 Lt.
Sta. 258+25 Lt.
Sta. 268+50 Lt.
Sta. 281+00 Rt.
Sta. 288+00 Rt.
Sta. 288+70 Rt.

DETAIL "K"



Sta. 276+25 Rt. Cross-County Highway

DETAIL "J"

Notes:

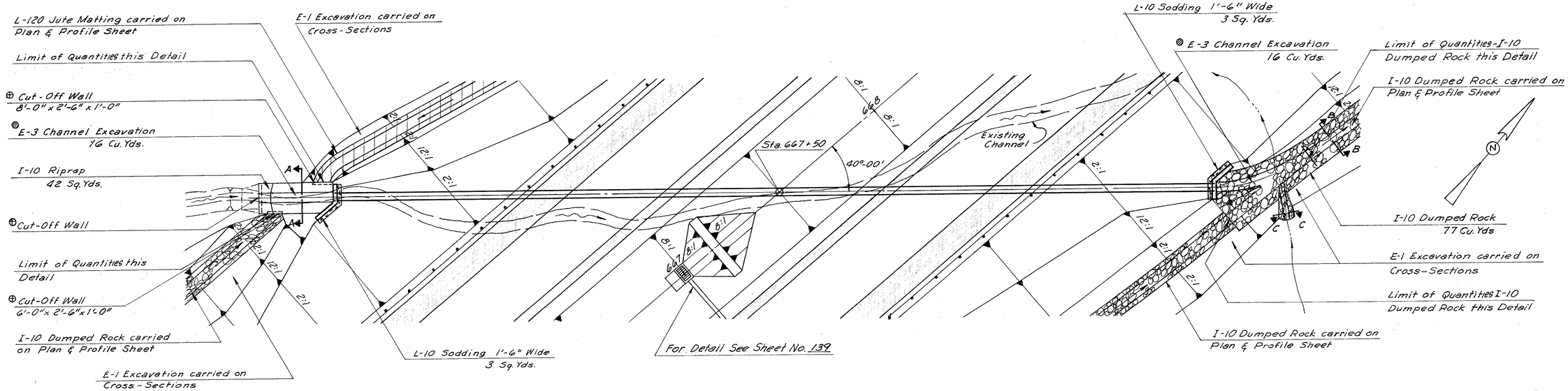
1. Details Shall Be Modified As Required.
2. The Distance of Underdrain Lines From The Edge of Pavement Shall Be Taken From The Typical Sections, Unless Otherwise Shown on The Plans.
3. When The Underdrain Continues Across A Transverse Line Such As In Detail "A" a Minimum 10' Length of 6" Class F-4 Pipe Shall Be Used To Span The Trench Unless Such Crossing is One Ft. Above The Area of Granular Backfill.
4. Outlet Shall Be in Catch Basin; in Ditch; on Top of HW-E Headwall; or Through The Headwall as Shown on Plans. 6" Class F-4 is to be Used for Outlets and Through Headwall or in Catch Basin, and 8" Class F-4 Sec M-6.4 (C) for Outlets in Ditch or on Top of HW-E Headwall.

I-1 PIPE UNDERDRAIN DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

334
445

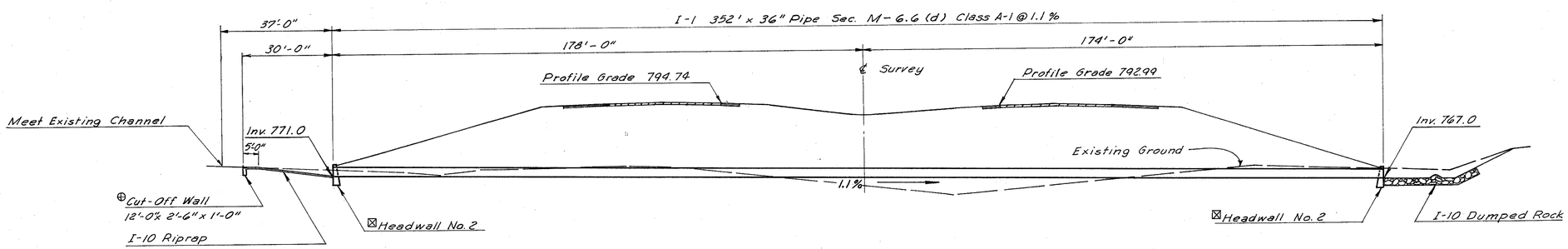
HAMILTON COUNTY
HAM 71-13.05



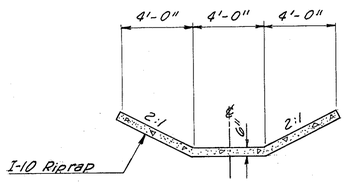
⊕ For Note & Detail see Sheet No. 340

PLAN
Scale: 1" = 20'-0"

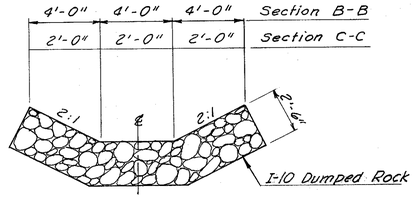
◍ Note: For Channel Cross-Sections see Sheet No. 340



PROFILE
Scale: 1" = 20'-0"



SECTION A-A
Scale: 1/4" = 1'-0"



SECTIONS B-B, C-C

⊠ Use Standard Headwall No. 2, 45° Skew

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	36" Pipe Sec. M-6.6 (d) Class A-1	352	Lin. Ft.
I-2	Masonry	13.2	Cu. Yds.
I-10	Riprap (Using 6" Rein. Conc. Slab as per Plan)	42	Sq. Yds.
I-10	Dumped Rock Channel Protection	77	Cu. Yds.
L-10	Sodding	6	Sq. Yds.
E-3	Channel Excavation	32	Cu. Yds.

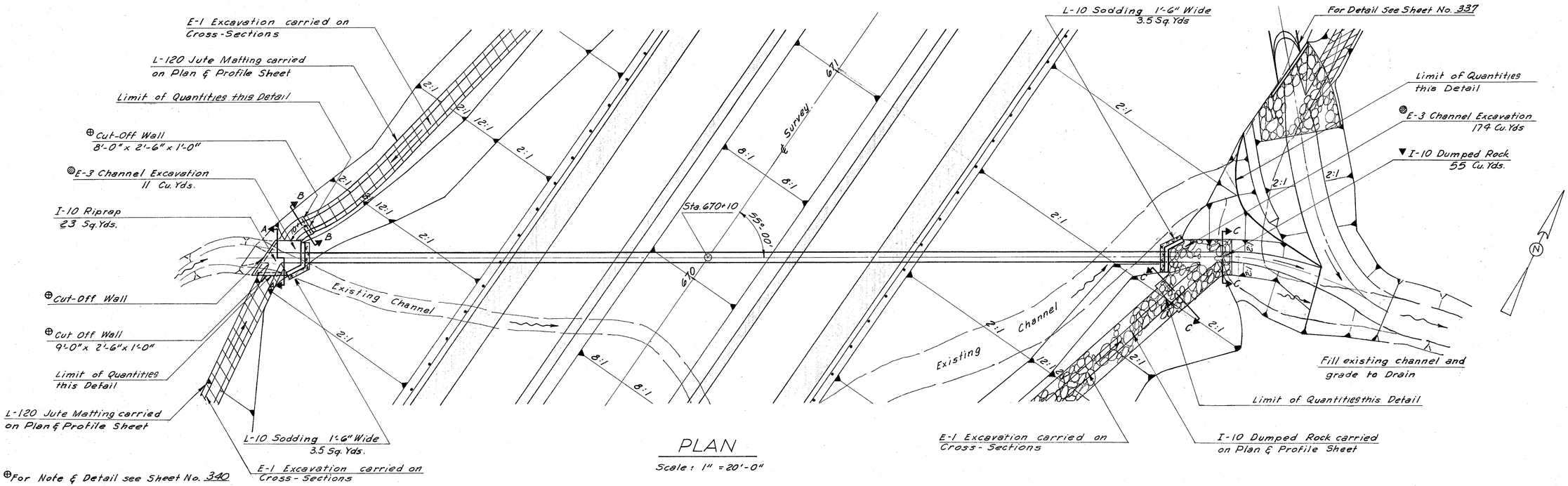
Drainage Area = 16 Acres
Q 50 = 65 c.f.s.

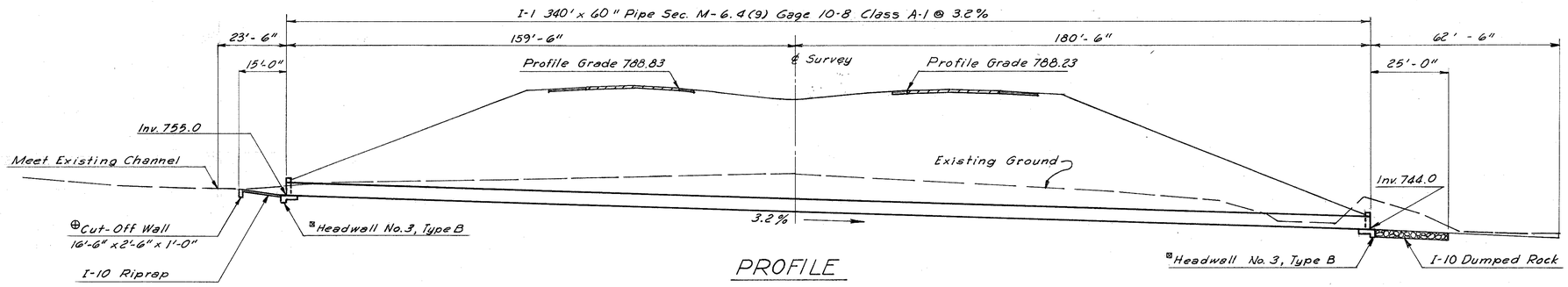
DRAINAGE STRUCTURE STA. 667+50

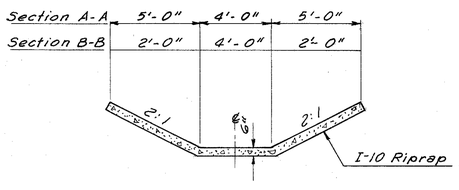
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

335
445

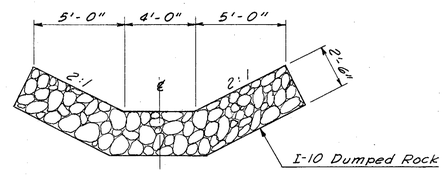
HAMILTON COUNTY
HAM. 71-13.05







SECTIONS A-A, B-B



SECTION C-C
Scale: 1/4" = 1'-0"

ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	60" Pipe Sec. M-6.4(9) Gage 10-8 Class A-1	340	Lin. Ft.
I-2	Masonry	25.4	Cu. Yds.
I-10	Riprap (Using 6" Rein. Conc. Slab as per Plan)	23	Sq. Yds.
I-10	Dumped Rock Channel Protection	55	Cu. Yds.
L-10	Sodding	7	Sq. Yds.
E-3	Channel Excavation	185	Cu. Yds.

Drainage Area = 78 Acres
Q 50 = 190 c.f.s.

⊠ Note:
Use Standard Headwall No. 3, Type B, 30° Skew

▼ Note:
All Dumped Rock Channel Protection Item I-10, used at the Outlet of Culvert shall be uniformly placed so that at least 50 percent of the pieces will weigh at least 75 pounds.

◎ Note:
For Channel Cross-Sections see Sht. No. 336

DRAINAGE STRUCTURE STA. 670+10

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

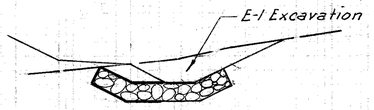
336
445

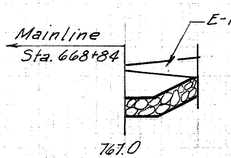
HAMILTON COUNTY
HAM. 71-13.05

30 20 10 ℄ 10 20 30

ZERO SECTION
2+14 Rt.

Sta. 2+14 Rt.
End I-10 Dumped Rock





Sta. 1+74 Rt.
Begin I-10
Dumped Rock

Note: E-1 Excavation carried on Mainline Cross-Sections

ZERO SECTION
2+15 Lt.



Sta. 2+08 Lt.
End I-10
Riprap



Sta. 1+78 Lt.
Begin I-10
Riprap

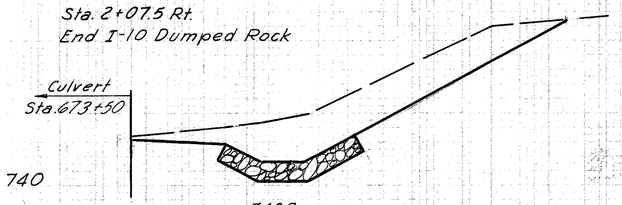
STA. 667+50

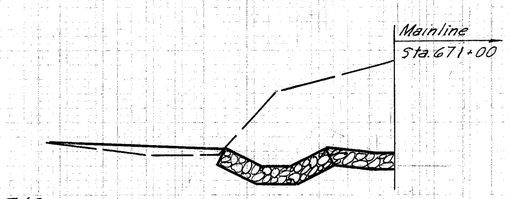
30 20 10 ℄ 10 20 30

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0			
		4	
11			
		12	
22			
TOTAL RT.	16	—	
0			
	1		
7			
		15	
20			
TOTAL LT.	16	—	
GR. TOTAL	32	—	

30 20 10 ℄ 10 20 30

Sta. 2+07.5 Rt.
End I-10 Dumped Rock

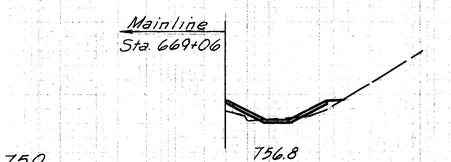




Sta. 1+80.5 Rt
Begin I-10
Dumped Rock

744.0
1+80.5 Rt
754.5

ZERO SECTION
1+83 Lt.



Sta. 1+76.5 Lt.
End I-10 Riprap

1+76.5 Lt.
756.8



Sta. 1+59.5 Lt.
Begin I-10
Riprap

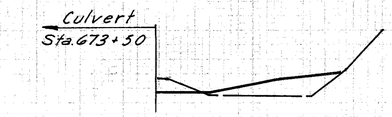
1+59.5 Lt.
757.2

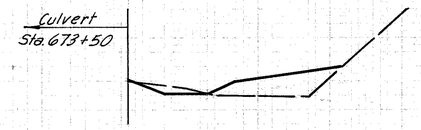
END AREA		VOLUME	
CUT	FILL	CUT	FILL
252			
		170	
152	7		
217	21		
⓪			
		1	0
10	1		
		10	1
26	4		
TOTAL LT.	11	1	

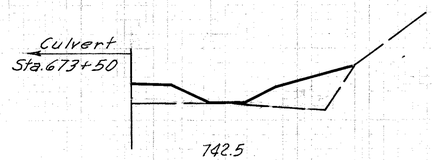
740

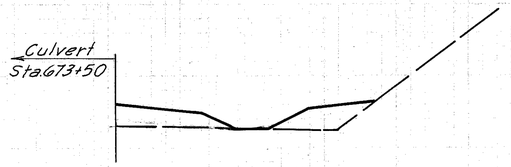
STA. 670+10

30 20 10 ℄ 10 20 30









END AREA		VOLUME	
CUT	FILL	CUT	FILL
8	32		
		4	27
8	40		
		0	20
0	67		
		0	20
0	68		
		0	15
TOTAL RT.	156	89	
GR. TOTAL	167	90	

170
185

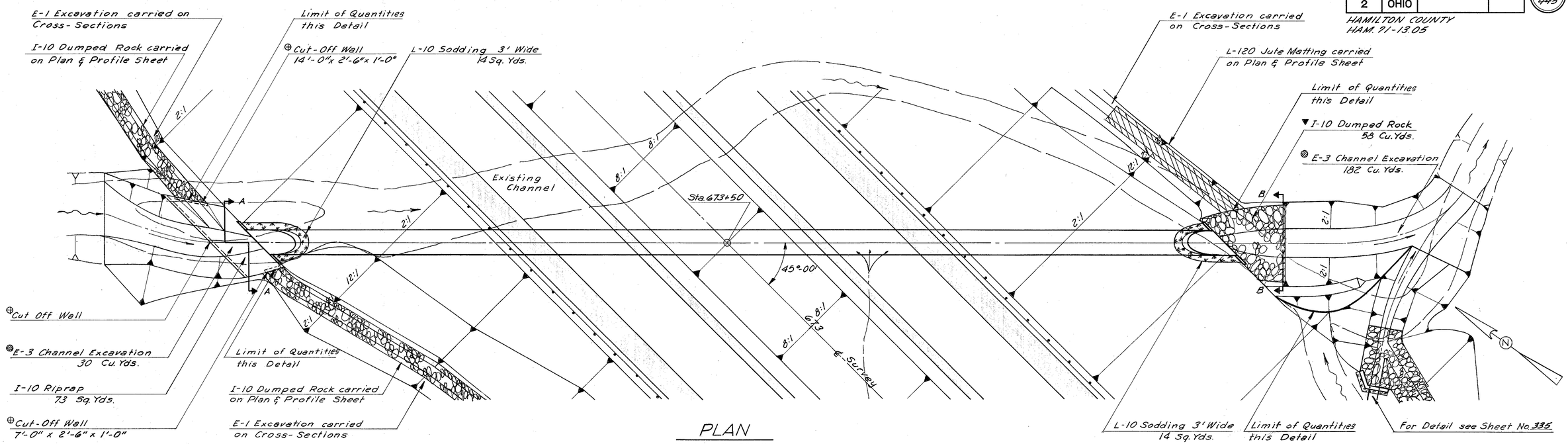
CULVERTS AT STA. 667+50 & STA. 670+10
CHANNEL SECTIONS

30 20 10 ℄ 10 20 30

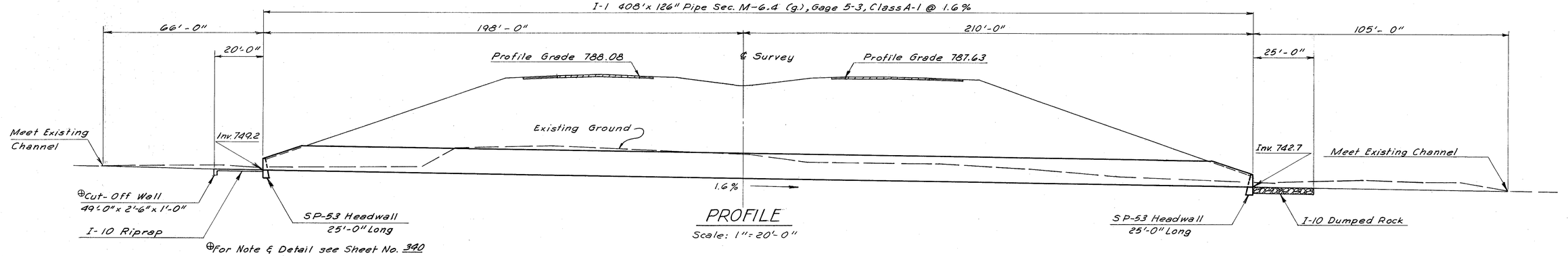
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

337
445

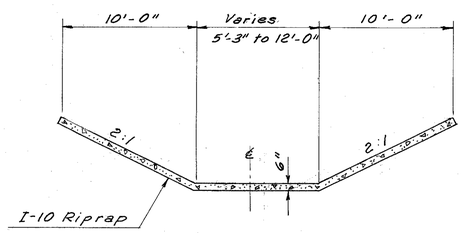
HAMILTON COUNTY
HAM. 71-13.05



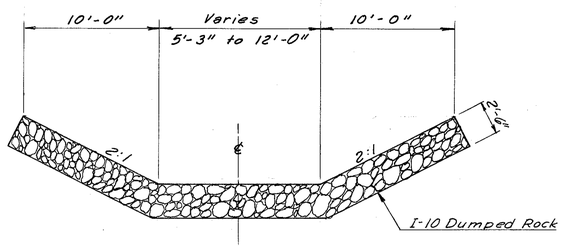
PLAN
Scale : 1" = 20'-0"



PROFILE
Scale: 1" = 20'-0"



SECTION A-A
Scale: 3/16" = 1'-0"



SECTION B-B
Scale: 3/16" = 1'-0"

ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	126" Pipe Sec. M-6.4 (g), Gage 5-3, Class A-1	408	Lin. Ft.
I-2	Masonry	21.6	Cu. Yds.
I-10	Riprap (Using 6" Rien. Conc. Slab as per Plan)	73	Sq. Yds.
I-10	Dumped Rock Channel Protection	58	Cu. Yds.
L-10	Sodding	28	Sq. Yds.
E-3	Channel Excavation	212	Cu. Yds.

Drainage Area = 750 Acres
Q 50 = 840 c.f.s.

◍ Note:
For Channel Cross-Sections see Sheet No. 338

▼ Note:
All Dumped Rock Channel Protection, Item I-10, used at the outlet of Culvert shall be uniformly placed so that at least 50 percent of the pieces will weigh at least 75 pounds.

DRAINAGE STRUCTURE STA. 673+50

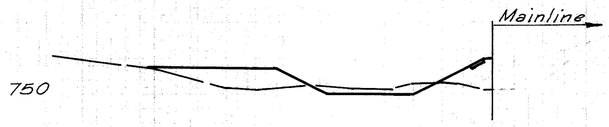
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

338
445

HAMILTON COUNTY
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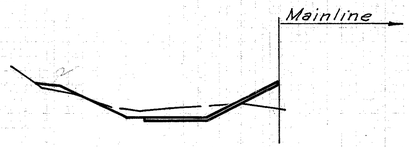
30 20 10 ℄ 10 20 30

ZERO SECTION
2+64 Lt.

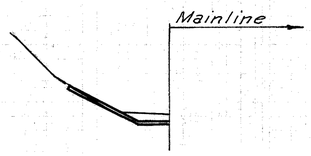


750.13
2+39 Lt.
750.7

Sta. 2+18 Lt.
End I-10 Riprap

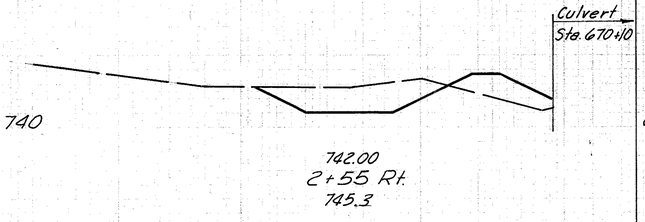


749.57
2+14 Lt.
750.9



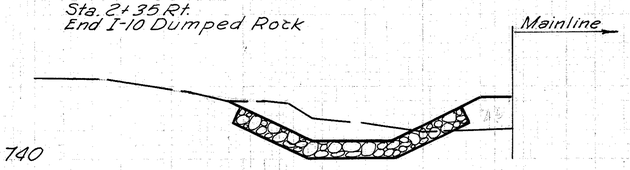
749.2
1+98 Lt.
750.3

Sta. 1+98 Lt.
Begin I-10 Riprap

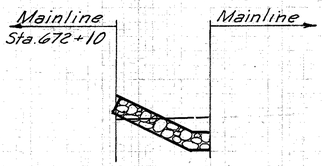


742.00
2+55 Rt.
745.3

Sta. 2+35 Rt.
End I-10 Dumped Rock



742.39
2+30 Rt.
745.0



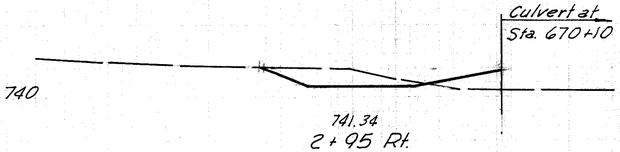
742.7
2+10 Rt.
744.7

Sta. 2+10 Rt.
Begin I-10 Dumped Rock

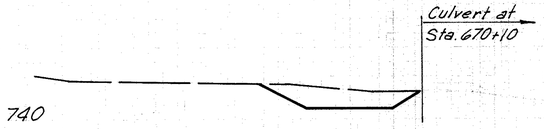
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	0		
		7	29
16	63		
		16	34
19	11		
		7	3
6	—		
TOTAL LT.		30	66

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
80	40		
		65	37
60	40		
		25	18
7	10		
		90	55

ZERO SECTION
3+15 Rt.



741.34
2+95 Rt.
744.3



741.61
2+80 Rt.
744.2

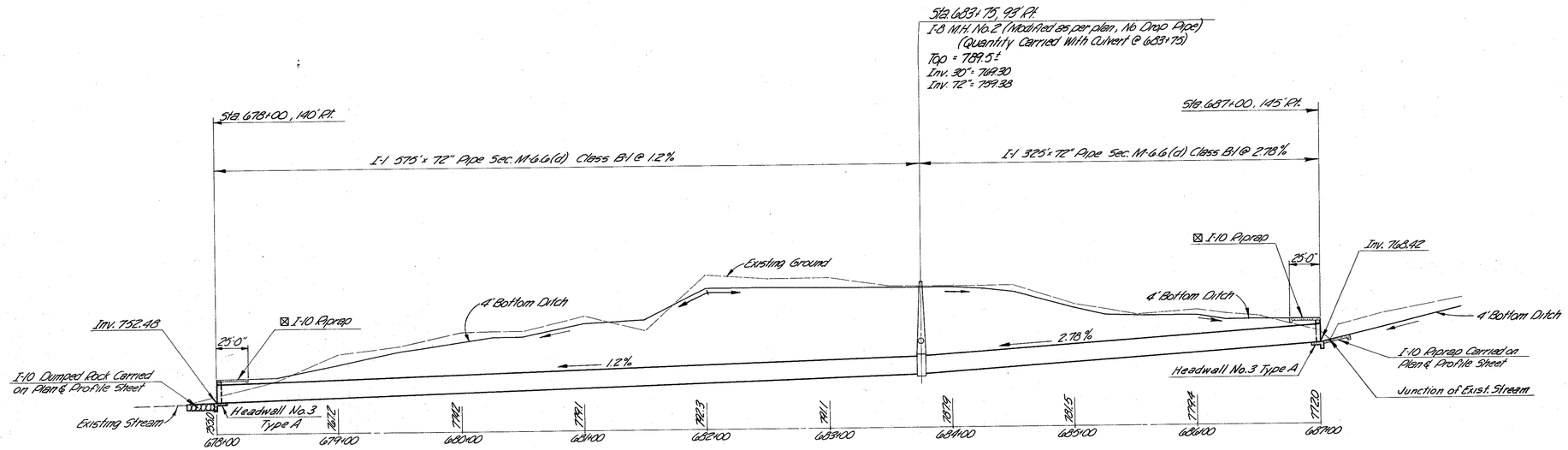
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		90	55
0	0		
		12	6
33	15		
		22	4
45	0		
		58	19
TOTAL RT.		182	84
GR. TOTAL		212	150

CULVERT AT STA. 673+50
CHANNEL SECTIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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Scale: Hor. 1" = 50'
Ver. 1" = 20'

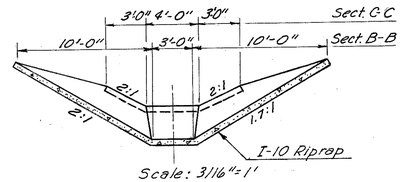
☒ Note:
For Riprap Entrance Detail See Storm Sewer Sta. 6+50 Ramp I to Sta. 802+00 N/I (Below)

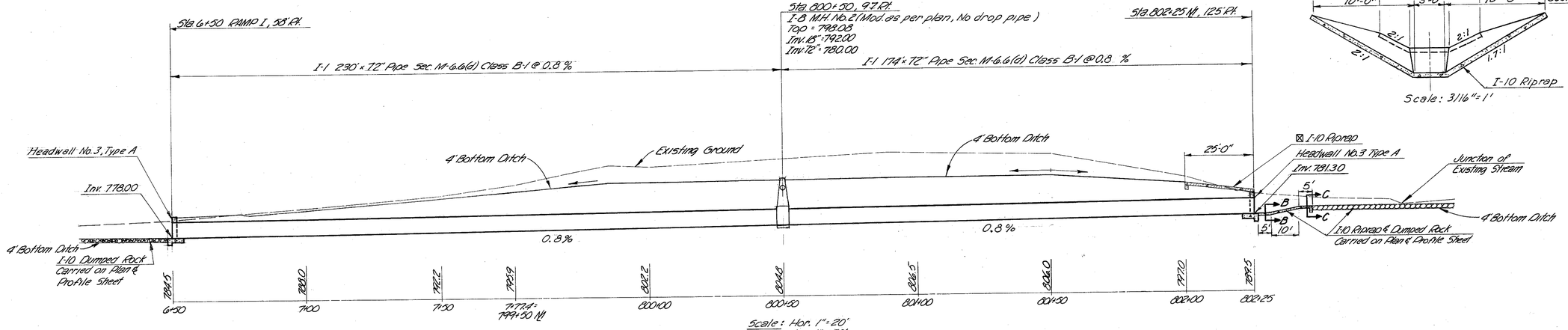
ESTIMATED QUANTITIES

ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	72" Pipe Sec. M-6.6(d) Class B-1	900	Lin. Ft.
I-2	Masonry	32.4	Cu. Yds.
I-10	Riprap (Using 6" Rein. Conc. Slab as per plan)	48	Sq. Yds.

Drainage Area	= 176	Acs.
Q10	= 280	C.F.S.
Q50	= 398	C.F.S.

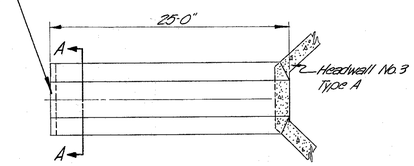
STORM SEWER STA. 678+00 TO STA. 687+00





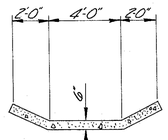
Scale: Hor. 1" = 20'
Ver. 1" = 20'

⊕ Cut off Wall 8'-0" x 2'-6" x 1'-0"



☒ RIPRAP ENTRANCE DETAIL

⊕ For Note & Detail See Shf. No. 340



SECTION A-A

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	72" Pipe Sec. M-6.6(d) Class B-1	404	Lin. Ft.
I-2	Masonry	32.4	Cu. Yds.
I-8	Std. Manhole No.2 (Mod. as per plan - no drop pipe)	1	Each
I-10	Riprap (Using 6" Rein. Conc. Slab as per plan)	24	Sq. Yds.

Drainage Area	= 49	Acs.
Q10	= 102	C.F.S.
Q50	= 285	C.F.S.

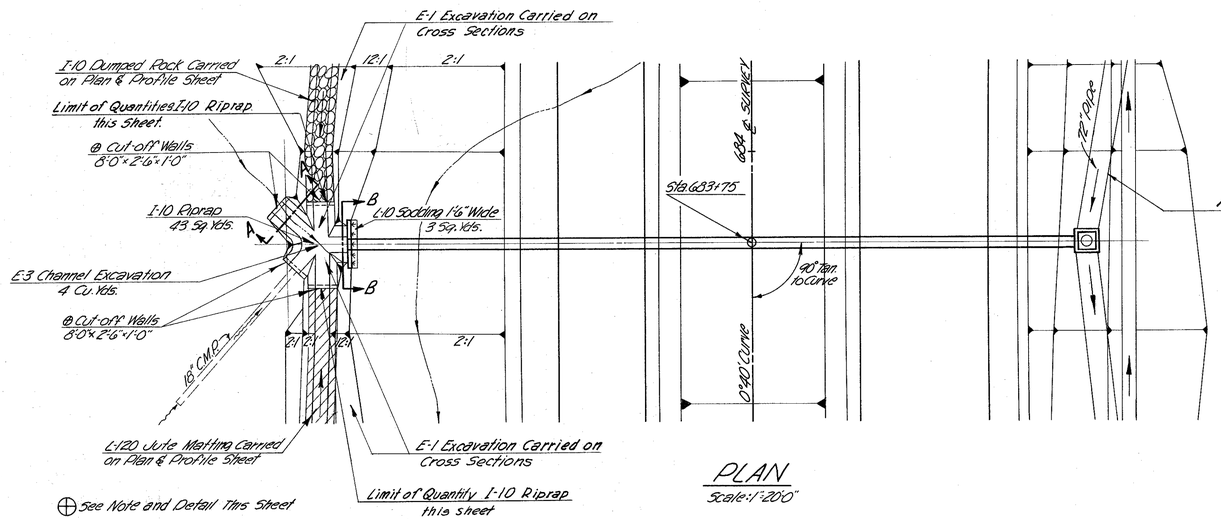
STORM SEWER STA. 6+50 RAMP I TO STA. 802+25 N/I

DRAINAGE STRUCTURES STA. 678+00 TO STA. 687+00 & STA. 6+50 RAMP I TO STA. 802+25 N/I

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

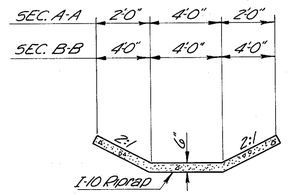
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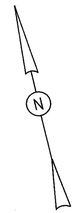


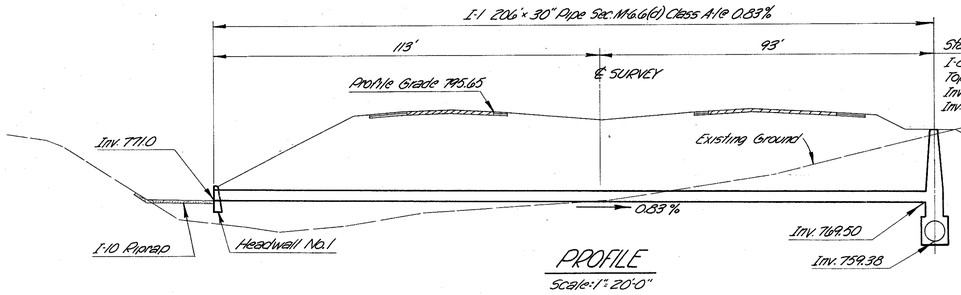
⊕ See Note and Detail This Sheet

PLAN
Scale: 1"=200'



SECTION AA & B-B
Scale: None





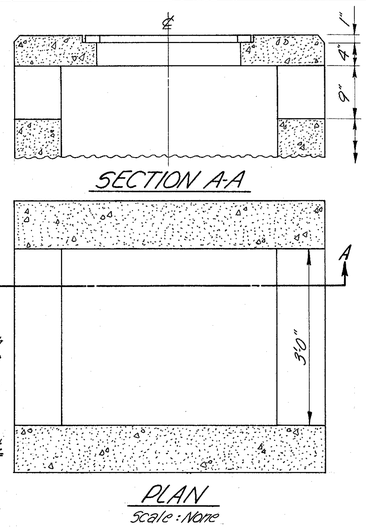
PROFILE
Scale: 1"=20'-0"

Drainage Area	= 9 Acs.
Q50	= 48 C.F.S.

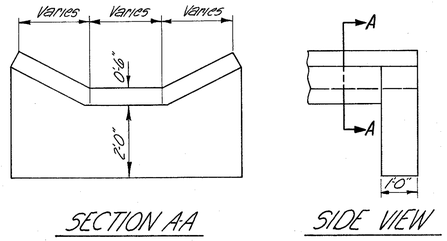
ESTIMATED QUANTITIES

ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	30" Pipe Spec. M-6.6 (G) Class A-1	206	Lin. Ft.
I-2	Masonry	4.7	Cu. Yds.
I-3	Manhole No. 2 (No Drop Pipe)	1	Each
I-10	Riprap (Using 6" Rein. Conc. Slab as per plan)	43	Sq. Yds.
L-10	Sodding	3	Sq. Yds.
E-3	Channel Excavation	4	Cu. Yds.

DRAINAGE STRUCTURE STA. 683+75



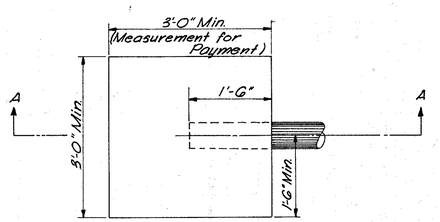
CATCH BASIN NO. 23 (MODIFIED)

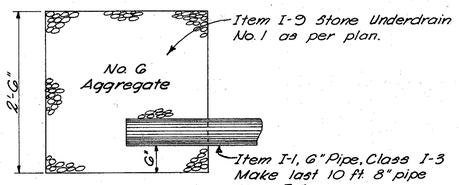


CUT-OFF WALL DETAIL
Scale: 1/2"=1'-0"

⊕ Note:
Cost of constructing Cut-off Wall shall be included in the unit price per Sq. Yd. of riprap (Using 6" Rein. Conc. Slab as per plan)

TYPICAL SPRING DRAIN DETAIL



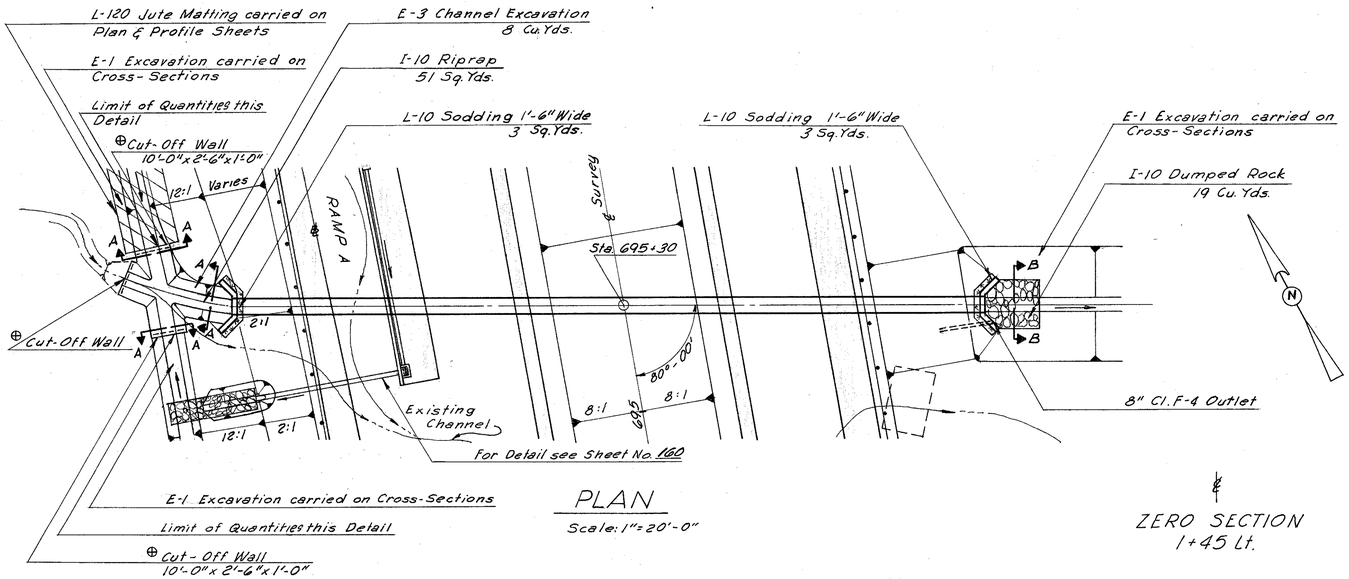


DRAINAGE STRUCTURE STA. 683+75 AND MISCELLANEOUS DETAILS

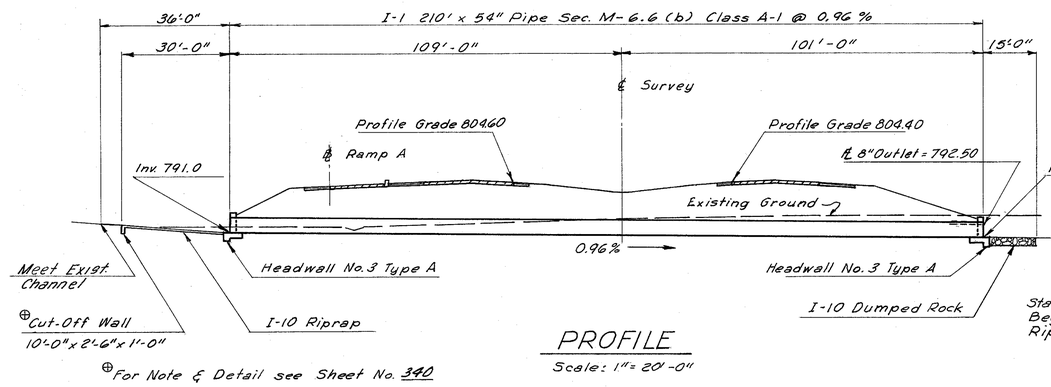
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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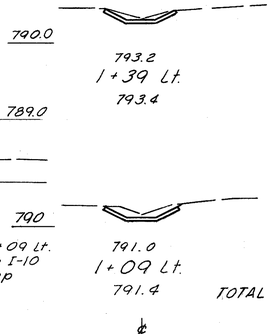
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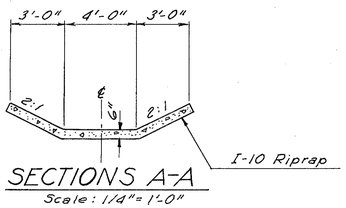
PLAN
Scale: 1"= 20'-0"



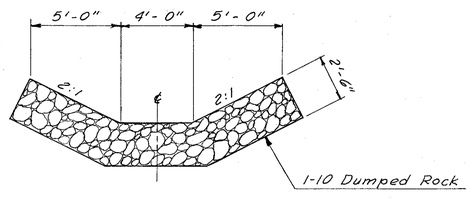
PROFILE
Scale: 1"= 20'-0"



END AREA	CUT CU.YD.
0	
	1
5	
	7
8	
	8
TOTAL	



SECTIONS A-A
Scale: 1/4"= 1'-0"

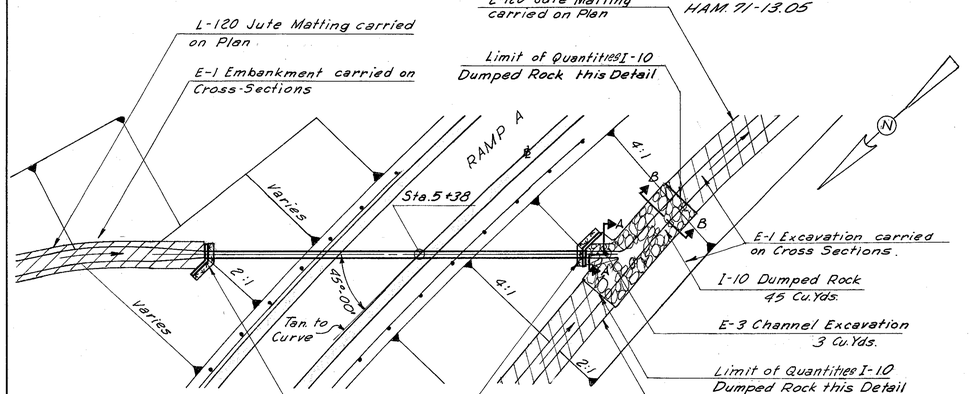


SECTION B-B
Scale: 1/4"= 1'-0"

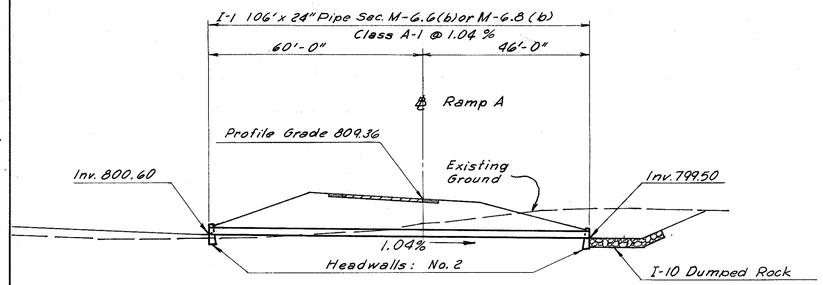
ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	QUANTITY	UNIT
I - 1	54" Pipe Sec. M-6.6 (b) Class A-1	210	Lin. Ft.
I - 2	Masonry	20.0	Cu. Yds.
I - 10	Riprap (Using 6" Rein. Conc. Slab as per Plan)	51	Sq. Yds.
I - 10	Dumped Rock Channel Protection	19	Cu. Yds.
L - 10	Sodding	6	Sq. Yds.
E - 3	Channel Excavation	8	Cu. Yds.

Drainage Area = 48 Acres
Q 50 = 143 c.f.s.

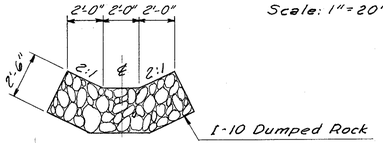
DRAINAGE STRUCTURE STA. 695+30



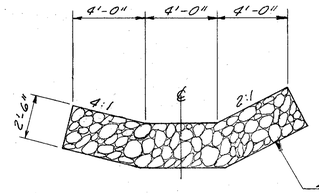
PLAN
Scale: 1"= 20'-0"



PROFILE
Scale: 1"= 20'-0"



SECTION A-A
Scale: 1/4"= 1'-0"



SECTION B-B
Scale: 1/4"= 1'-0"

ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	QUANTITY	UNIT
I - 1	24" Pipe Sec. M-6.6 (b) or M-6.8 (b) Class A-1	106	Lin. Ft.
I - 2	Masonry	7.2	Cu. Yds.
I - 10	Dumped Rock Channel Protection	45	Cu. Yds.
L - 10	Sodding	4	Sq. Yds.
E - 3	Channel Excavation	3	Cu. Yds.

Drainage Area = 3 Acres
Q 50 = 19 c.f.s.

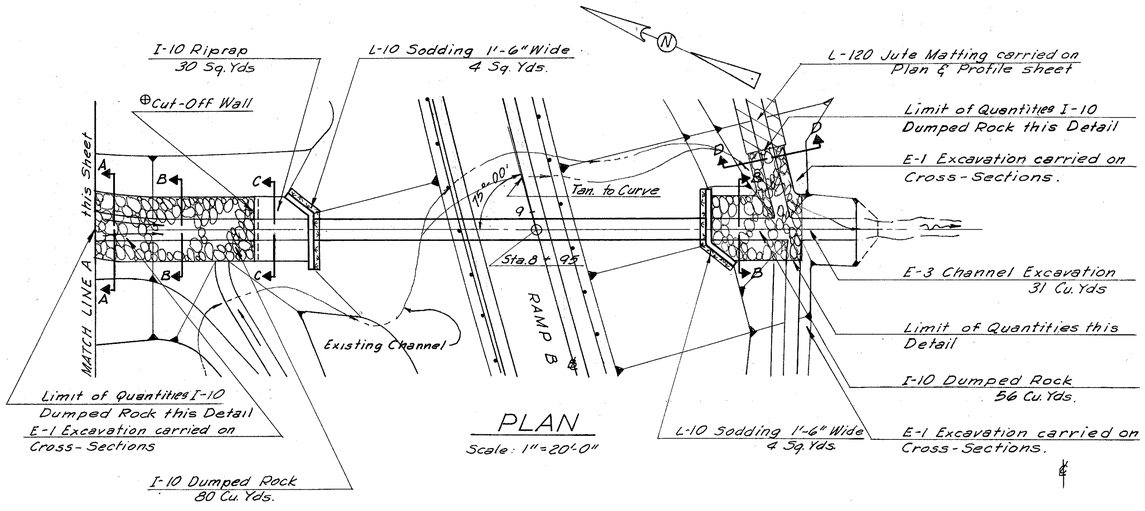
DRAINAGE STRUCTURE STA. 5+38 RAMP A

DRAINAGE STRUCTURES STA. 695+30 & STA. 5+38 RAMP A

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

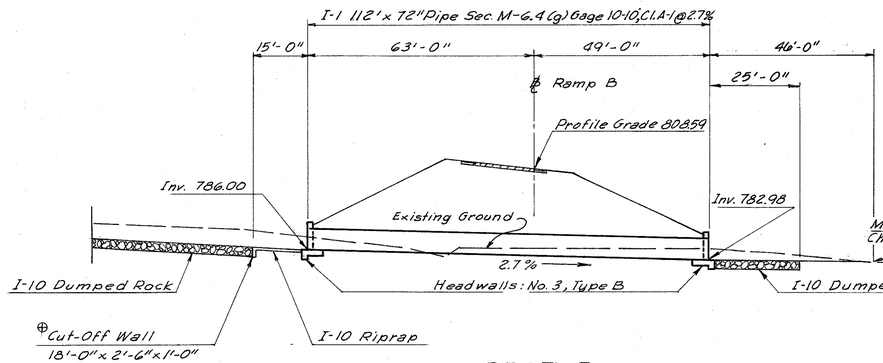
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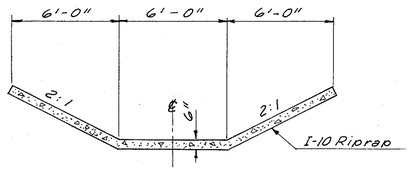


PLAN
Scale: 1"=20'-0"

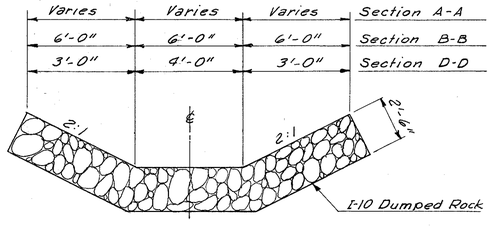
⊕For Note & Detail see Sheet No 340



PROFILE
Scale: 1"=20'-0"



SECTION C-C
Scale: 1/4"=1'-0"



SECTIONS A-A, B-B, D-D

ZERO SECTION
0+95 Rt

END AREA	CUT CUYD.
0	
	1
12	
	30
28	
TOTAL	31

780
782.20
0+89 Rt.
782.2

Sta. 0+74 Rt.
End I-10 Dumped Rock

780
782.98
Sta. 0+49 Rt.
Begin I-10 Dumped Rock
0+49 Rt.
785.0

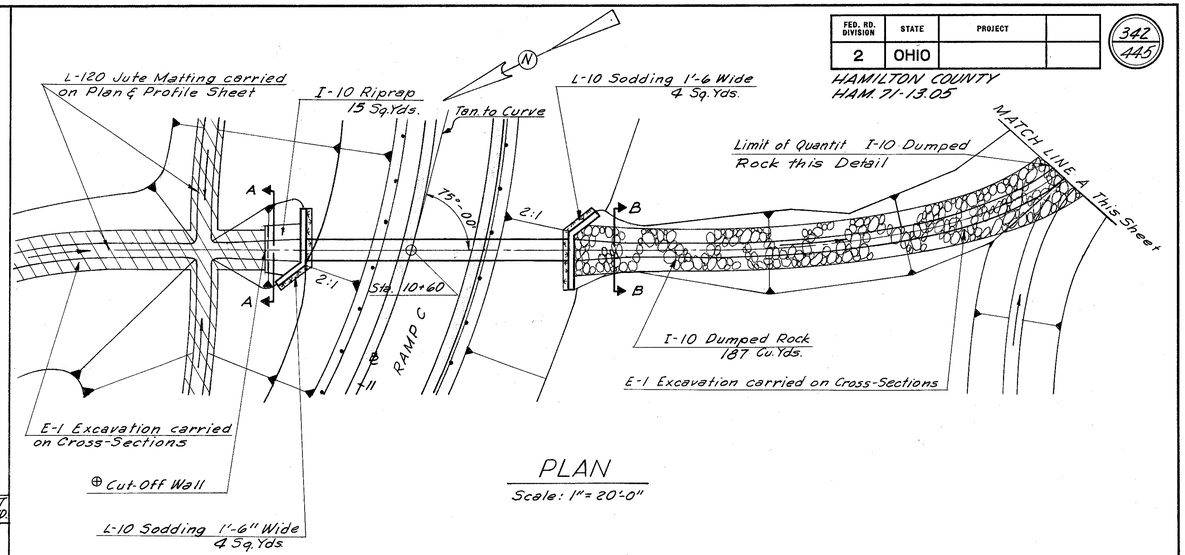
Cross-Sections
Scale: 1"=10'-0"

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	72" Pipe Sec. M-6.4 (g) Gage 10-10, Class A-1	112	Lin. Ft.
I-2	Masonry	35.6	Cu. Yds.
I-10	Riprap (Using 6" Rein. Conc. Slab as per Plan)	30	Sq. Yds.
I-10	Dumped Rock Channel Protection	136	Cu. Yds.
L-10	Sodding	8	Sq. Yds.
E-3	Channel Excavation	31	Cu. Yds.

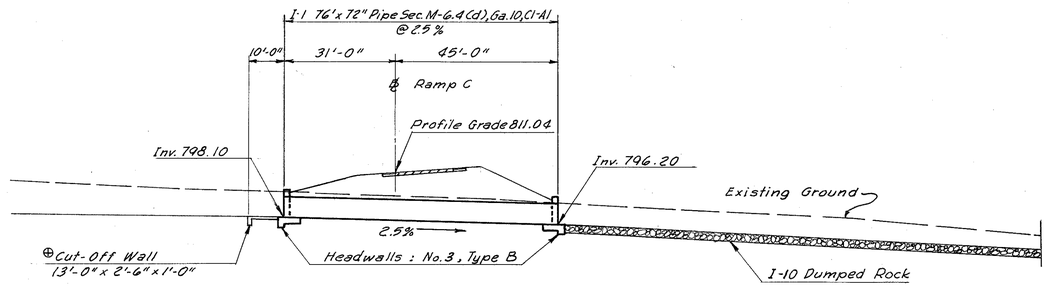
Drainage Area = 140 Acres
Q 50 = 284 c.f.s.

DRAINAGE STRUCTURE STA. 8+95, RAMP B

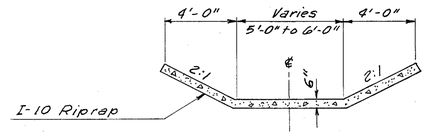


PLAN
Scale: 1"=20'-0"

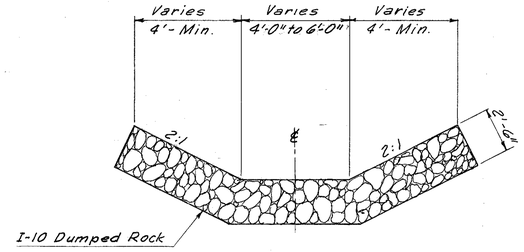
⊕ For Note & Detail see Sheet No. 340



PROFILE
Scale: 1"=20'-0"



SECTION A-A
Scale: 1/4"=1'-0"



SECTION B-B
Scale: 1/4"=1'-0"

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	72" Pipe Sec. M-6.4 (d) Gage 10, Class A-1	76	Lin. Ft.
I-2	Masonry	35.6	Cu. Yds.
I-10	Dumped Rock Channel Protection	187	Cu. Yds.
I-10	Riprap (Using 6" Rein. Conc. Slab as per Plan)	15	Sq. Yds.
L-10	Sodding	8	Sq. Yds.

Drainage Area = 88 Acres
Q 50 = 202 c.f.s.

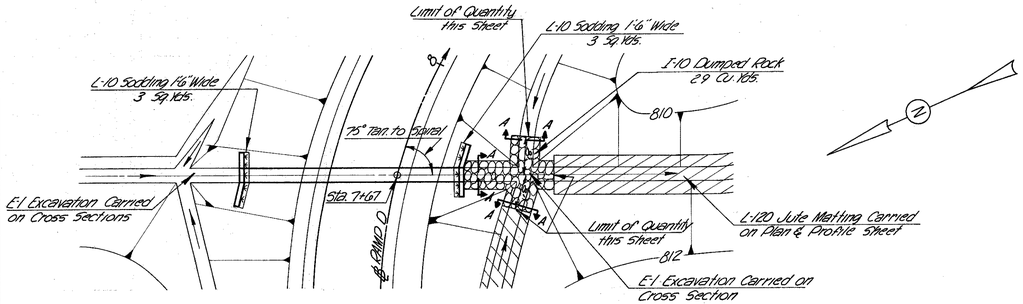
DRAINAGE STRUCTURE STA. 10+60 RAMP C

DRAINAGE STRUCTURES STA. 8+95 RAMP B & STA. 10+60 RAMP C

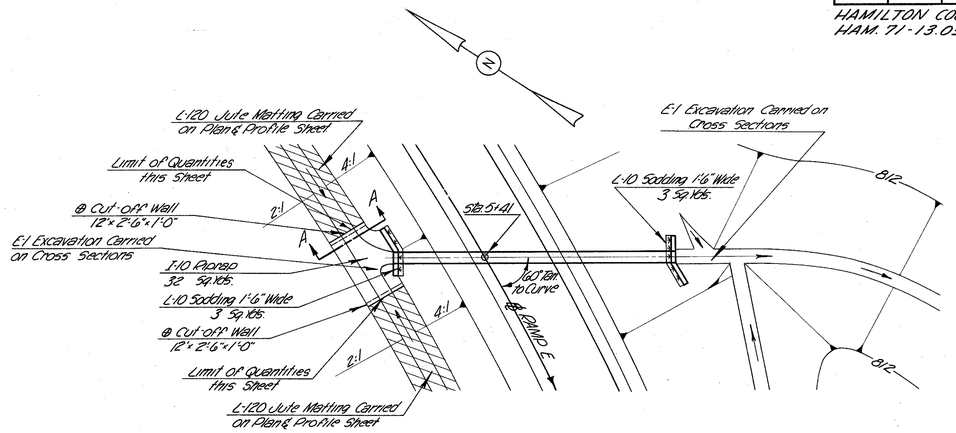
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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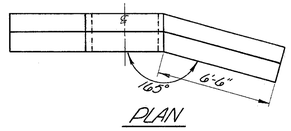


PLAN
Scale: 1"=20'0"

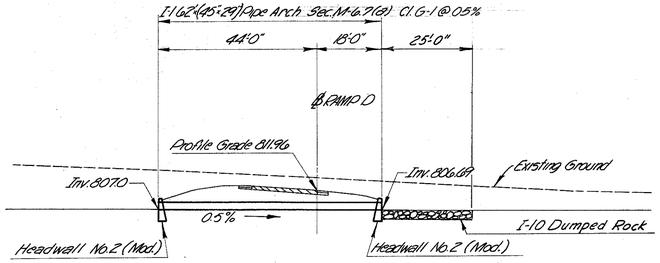


PLAN
Scale: 1"=20'0"

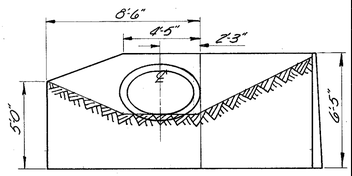
@ For Note & Detail See Sht. No. 340



PLAN



PROFILE
Scale: 1"=20'0"



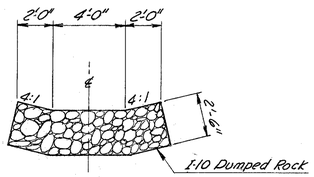
ELEVATION

QUANTITIES FOR ONE HEADWALL	
Concrete Cu. Yds.	4.89
Steel lbs.	85

HEADWALL NO. 2 MODIFIED
Scale: 1/4"=1'-0"

Drainage Area = 12 Acres
Q 50 = 47 c.f.s.

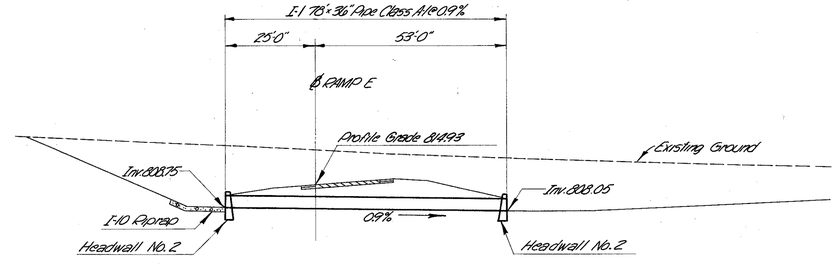
Note: For Details not shown here see Standard Drawing HW No. 2



SECTION A-A
Scale: 1/4"=1'-0"

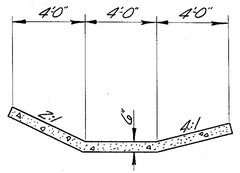
ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	45"x29" Pipe Arch Sec. M-6.7(a) Class G-1	62	Lin. Ft.
I-2	Masonry	9.78	Cu. Yds.
I-10	Dumped Rock Channel Protection	29	Cu. Yds.
L-10	Sodding	6	Sq. Yds.

DRAINAGE STRUCTURE STA. 7+67 RAMP D



PROFILE
Scale: 1"=20'0"

Drainage Area = 9 Acs.
Q 50 = 43 C.F.S.



SECTION A-A
Scale: 1/4"=1'-0"

ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	36" Pipe Class. A-1	78	Lin. Ft.
I-2	Masonry	13.4	Cu. Yds.
I-10	Riprap (Using 6" Rein. Conc. Slab as per plan)	32	Sq. Yds.
L-10	Sodding	6	Sq. Yds.

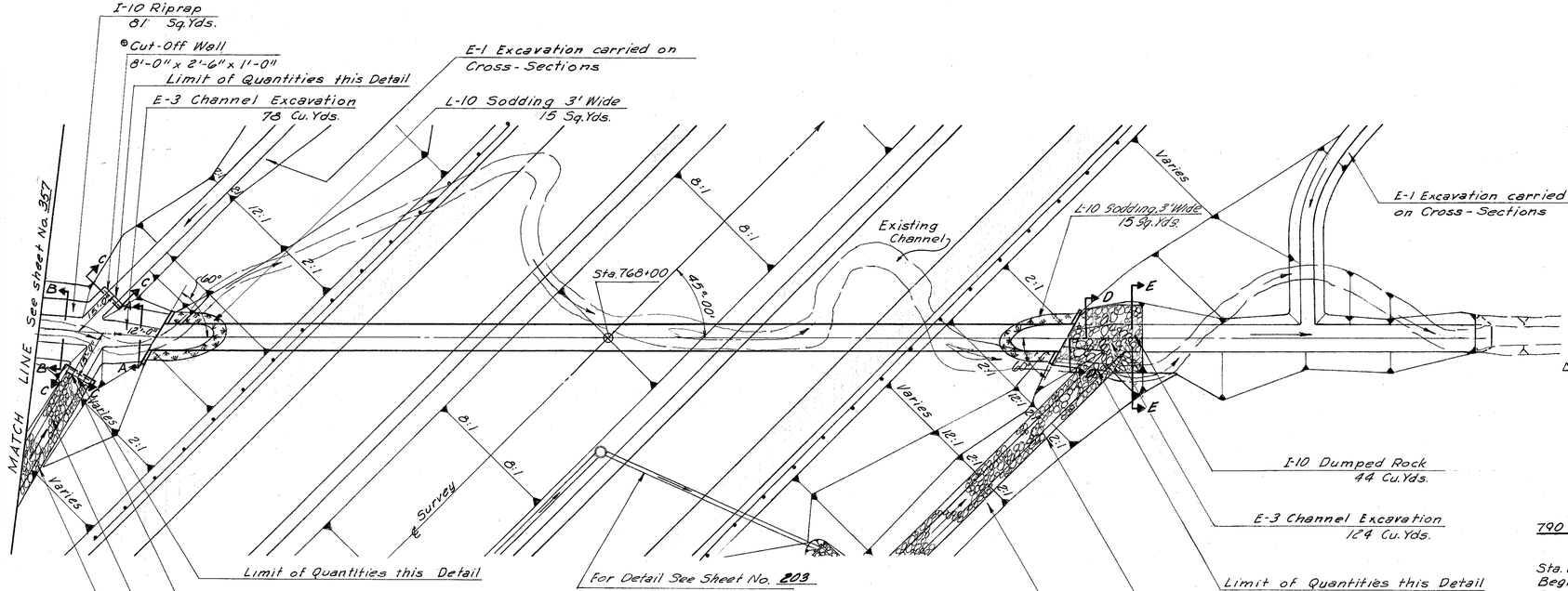
DRAINAGE STRUCTURE STA. 5+41 RAMP E

STA. 7+67 RAMP D & STA. 5+41 RAMP E DRAINAGE STRUCTURES

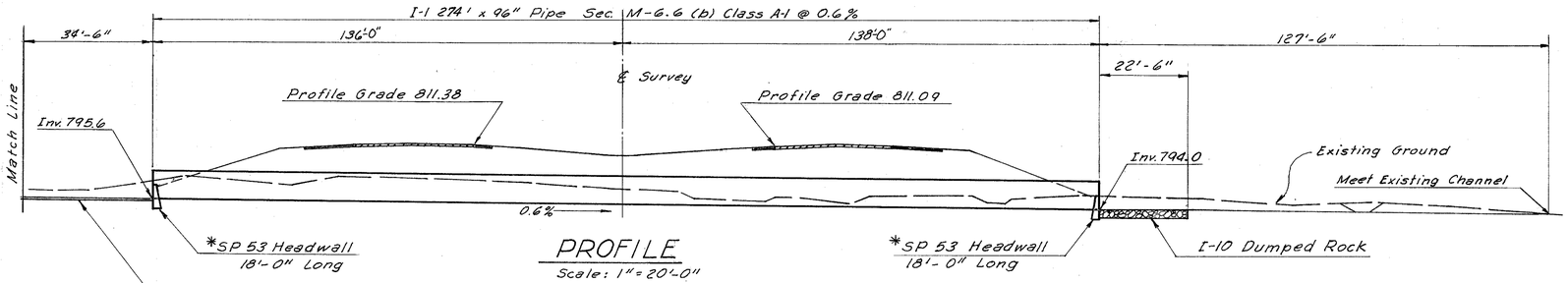
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

344
445

HAMILTON COUNTY
HAM. 71-13.05

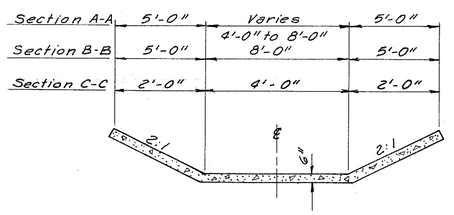


PLAN
Scale: 1" = 20'-0"

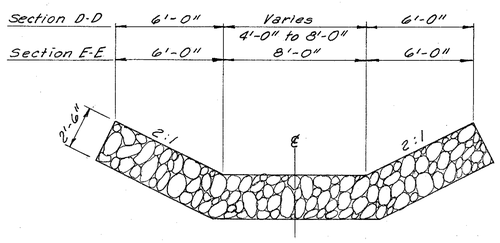


PROFILE
Scale: 1" = 20'-0"

*For Note & Detail see Sheet No. 346



SECTIONS A-A, B-B, & C-C



SECTIONS D-D & E-E

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	96" Pipe Sec. M-6.6 (b) Class A-1	274	Lin. Ft.
I-2	Masonry	10.5	Cu. Yds.
I-10	Riprap (Using 6" Rein. Conc. Slab as per Plan)	81	Sq. Yds.
I-10	Dumped Rock Channel Protection	44	Cu. Yds.
L-10	Sodding	30	Sq. Yds.
E-3	Channel Excavation	209	Cu. Yds.

Drainage Area = 285 Acres
Q 50 = 427 c.f.s.

△ Note Embankment Quantity

	END AREA	EMB. CU.YD.
1+71	0	1
1+60	3	5
1+37.5	9	
		6

790
794.0
Sta. 1+37.5 Rt. Begin I-10 Dumped Rock
1+37.5 Rt.
796.6

Sta. 1+35.5 Lt. End I-10 Riprap

790
795.6
1+35.5 Lt.
802.7

790
795.72
1+48 Lt
796.6

790
796.0
1+70 Lt
798.2

Note: I-10 Riprap is continued from Sta. 1+315 Rt. Zig-Zag Rd = Sta. 1+70 Lt on Mainline

ZERO SECTION
2+65 Rt.

END AREA	CUT CU.YD.
	0
	1
	12
790	
21	
	17
	25
790	
97	
	29
790	
36	
	28
58	
	31
790	
42	
	30
45	
	34
790	
TOTAL LT. 78	23
	TOTAL RT. 124
	GR. TOTAL 209

790.4
2+60 Rt.
792.4

792.7
2+35 Rt.
794.7

793.01
2+10 Rt.
795.8

793.32
1+85 Rt.
795.0
Sta. 1+71 = Zero Emb. For Quan. see note △

Sta. 1+60 Rt.
End I-10 Dumped Rock

℄
793.63
1+60 Rt.
796.6

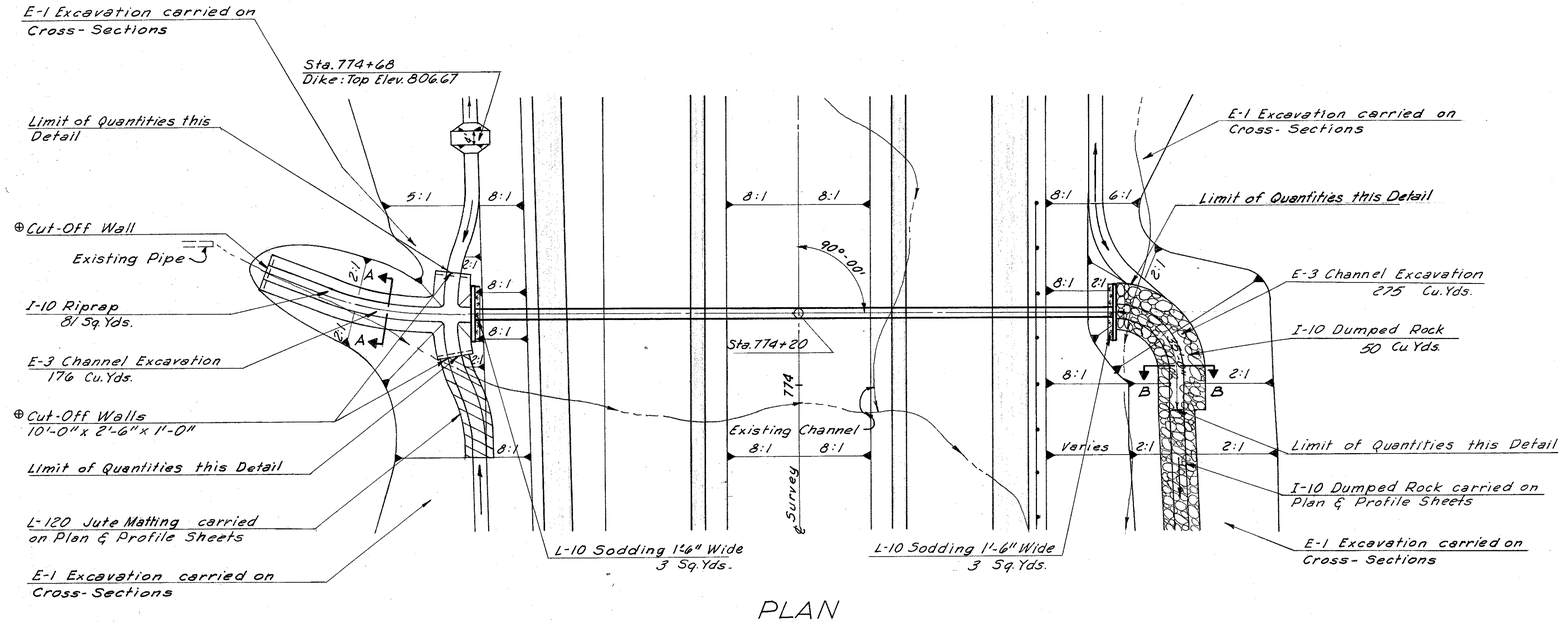
Cross Sections
Scale: 1" = 10'

DRAINAGE STRUCTURE STA. 768+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

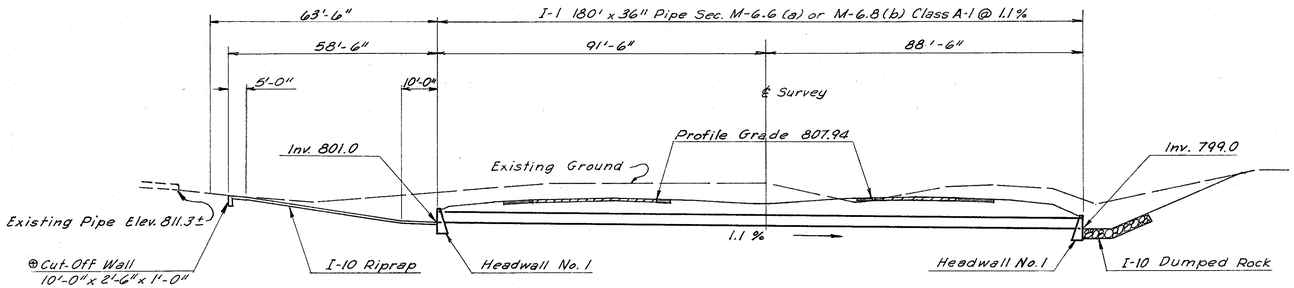
345
445

HAMILTON COUNTY
HAM.71.-13.05

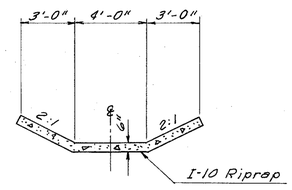


PLAN
Scale: 1" = 20'-0"

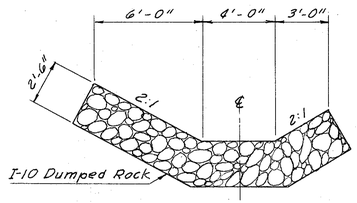
⊕ Note: For Note & Detail see Sheet No. 340



PROFILE
Scale: 1" = 20'-0"



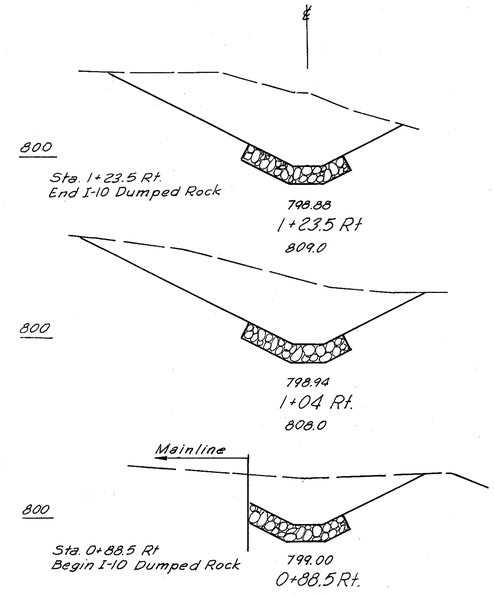
SECTION A-A
Scale: 1/4" = 1'-0"



SECTION B-B
Scale: 1/4" = 1'-0"

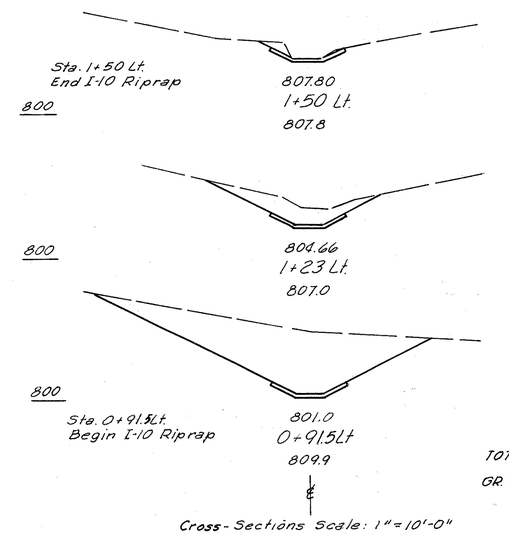
ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	QUANTITY	UNIT
I- 1	36" Pipe Sec. M-6.6 (a) or M-6.8 (b) Class A-1	180	Lin. Ft.
I - 2	Masonry	13.0	Cu. Yds.
I -10	Riprap (Using 6" Rein. Conc Slab as per Plan)	81	Sq. Yds
I -10	Dumped Rock Channel Protection	50	Cu. Yds.
L -10	Sodding	6	Sq. Yds.
E - 3	Channel Excavation	451	Cu. Yds.

Drainage Area = 16 Acres
Q 50 = 96 c.f.s.



END AREA	CUT CU.YD.
244	178
249	97
90	
	275

ZERO SECTION
1+55 Lt.



0	0	
4	22	
39	154	
825		
TOTAL LT.	176	
GR. TOTAL	451	

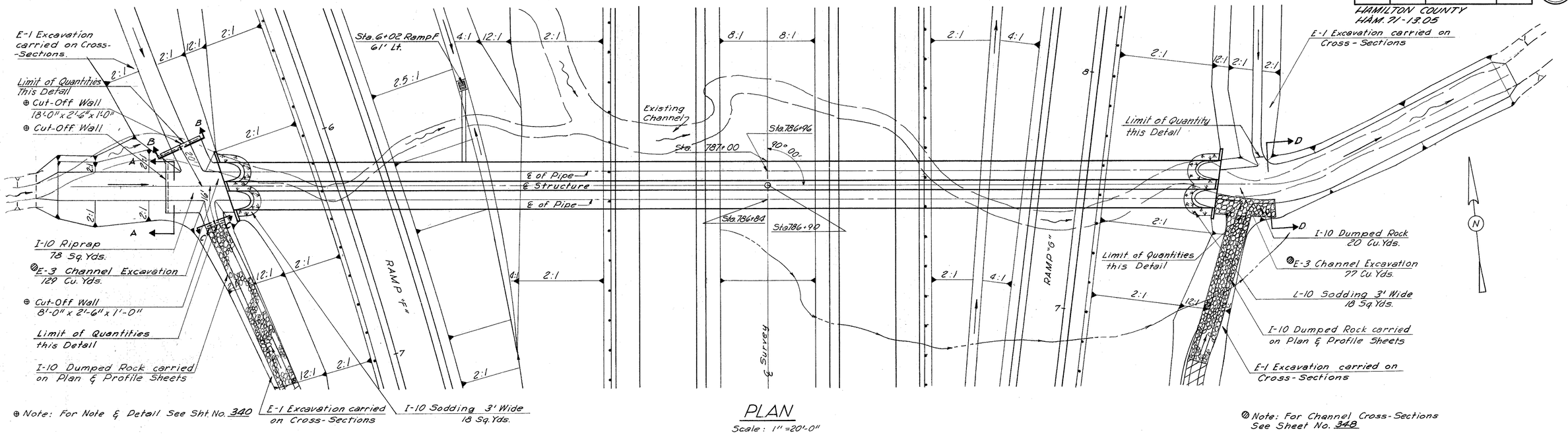
Cross-Sections Scale: 1" = 10'-0"

DRAINAGE STRUCTURE STA. 774+20

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

346
445

HAMILTON COUNTY
HAM. 71-13.05



⊕ Note: For Note & Detail See Sht. No. 340

PLAN

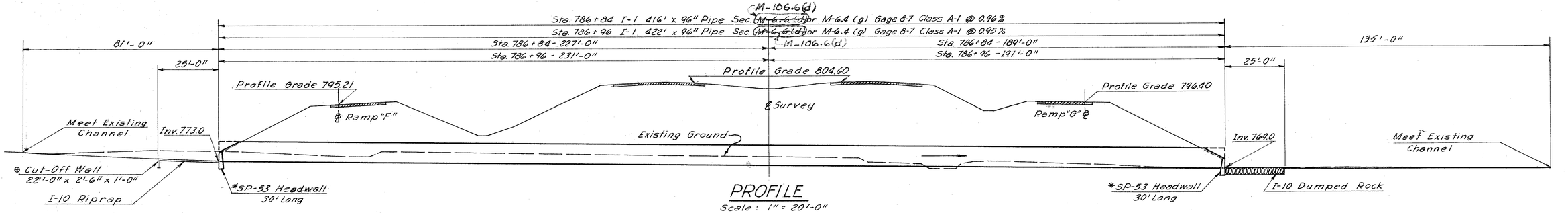
Scale: 1" = 20'-0"

◍ Note: For Channel Cross-Sections See Sheet No. 348

M-106.6(d)

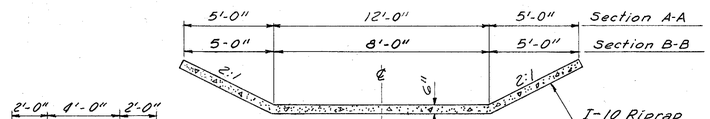
Sta. 786+84 I-1 416' x 96" Pipe Sec ~~M-6.6(d)~~ or M-6.4 (g) Gage 8-7 Class A-1 @ 0.96%
Sta. 786+96 I-1 422' x 96" Pipe Sec ~~M-6.6(d)~~ or M-6.4 (g) Gage 8-7 Class A-1 @ 0.95%

M-106.6(d)

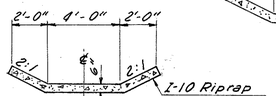


PROFILE

Scale: 1" = 20'-0"

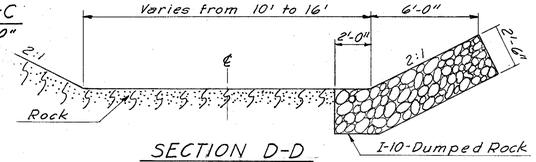


SECTION A-A & B-B



SECTION C-C

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



SECTION D-D

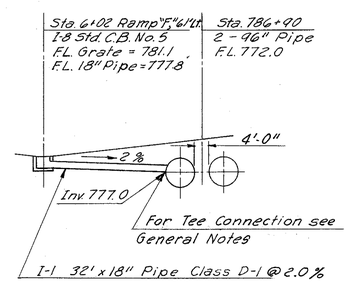
Scale 1/4" = 1'-0"

Note:
If the Contractor selects Smooth Pipe: All Dumped Rock Channel Protection, Item I-10, used at the outlet of Culvert, shall be uniformly placed so that at least 50 percent of the pieces will weigh at least 75 pounds.

ESTIMATED QUANTITIES

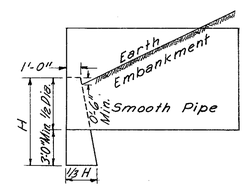
ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	18" Pipe Class D-1	32	Lin. Ft.
I-1	96" Pipe Sec ~~M-6.6(d)~~ or M-6.4(g) Gage 8-7 Cl. A-1	838	Lin. Ft.
I-2	Masonry M-106.6(d)	20.78	Cu. Yds.
I-8	Standard Catch Basin No. 5	1	Each
I-10	Riprap (Using 6" Rein. Conc. Slab as per plan)	78	Sq. Yds.
I-10	Dumped Rock Channel Protection	20	Cu. Yds.
L-10	Sodding	36	Sq. Yds.
E-3	Channel Excavation	206	Cu. Yds.

Drainage Area = 955 Acres
Q 50 = 1010 c.f.s.



PROFILE — STORM SEWER STA. 6+02 LT., RAMP "F"

Scale: 1" = 20'-0"



*SP-53 HEADWALL

Note:
When Smooth Pipe is used SP 53 Headwall shall be modified to the extent that no anchor bolts shall be used and the pipe shall not be mitred to conform to slope.

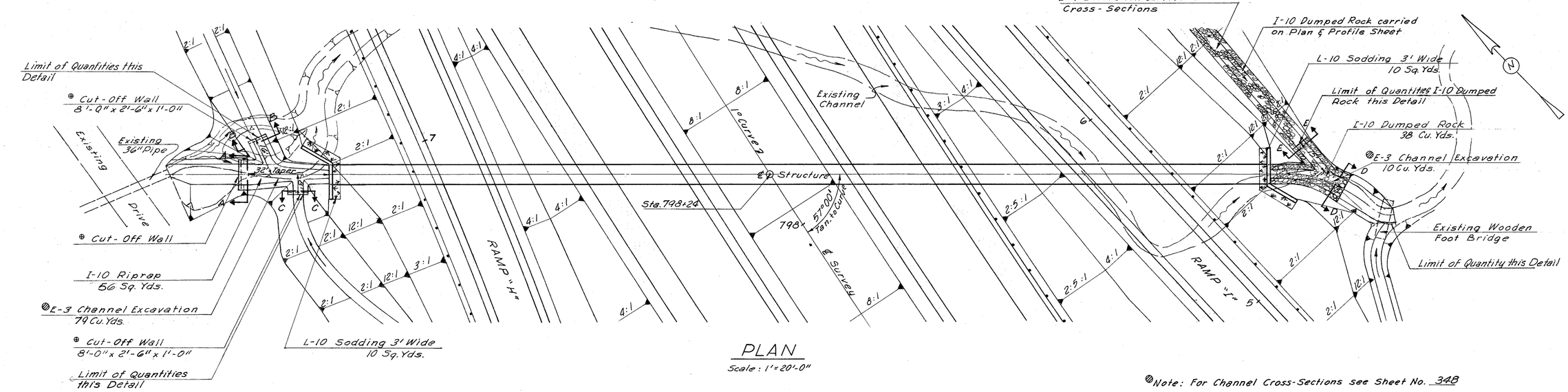
Revised C.E.H. 6-3-65

DRAINAGE STRUCTURE STA. 786+90

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

347
445

HAMILTON COUNTY
HAM. 71-13.05

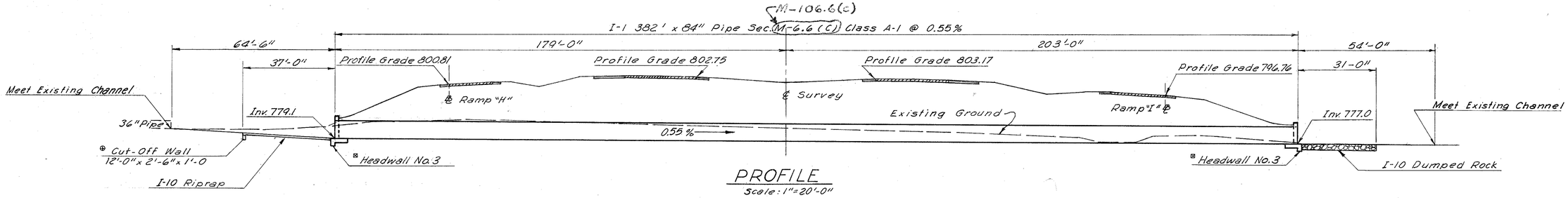


⊕ For Note & Detail see Sheet No. 340

PLAN

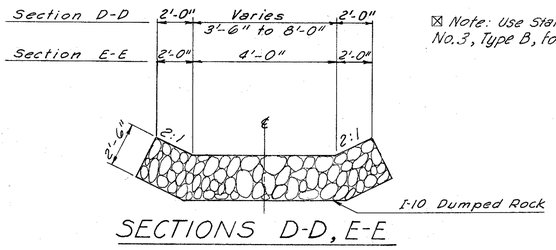
Scale: 1"=20'-0"

◍ Note: For Channel Cross-Sections see Sheet No. 348



PROFILE

Scale: 1"=20'-0"



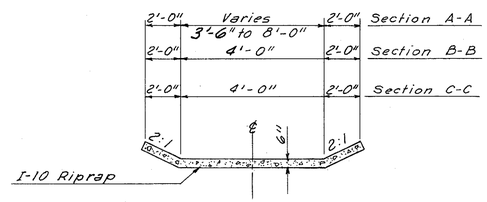
SECTIONS D-D, E-E

⊠ Note: Use Standard Headwall No. 3, Type B, for 30° Skew.

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	84" Pipe Sec. M-6.6 (C) Class A-1	382	Lin. Ft.
I-2	Masonry M-106.6(C)	46.6	Cu. Yds.
I-10	Riprap (Using 6" Rein. Conc. Slab as per Plan)	56	Sq. Yds.
I-10	Dumped Rock Channel Protection	38	Cu. Yds.
L-10	Sodding	20	Sq. Yds.
E-3	Channel Excavation	89	Cu. Yds.

Drainage Area = 240 Acres
Q 50 = 355 c.f.s.



SECTIONS A-A, B-B, C-C

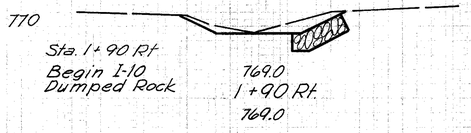
Revised C.E.H. 6-3-65

DRAINAGE STRUCTURE STA. 798+24

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

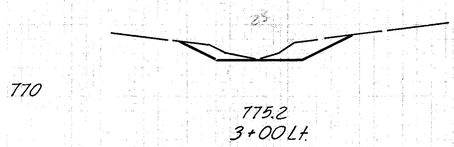
348
445

HAMILTON COUNTY
HAM. 71-13.05

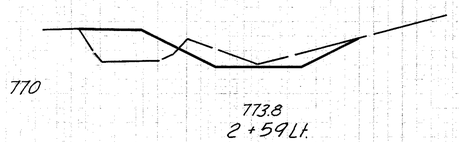


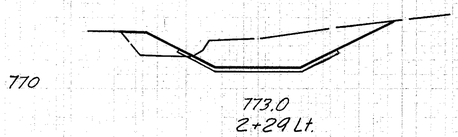
END AREA		VOLUME	
CUT	FILL	CUT	FILL
15		14	
0		5	0
25	0		
		23	4
51	12		
		39	26
30	45		
		64	34
85	16		
TOTAL LT.		129	64

ZERO SECTION
3+10 Lt.



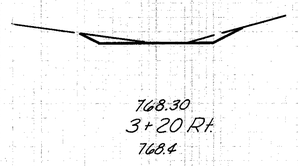


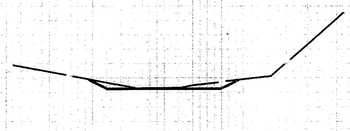


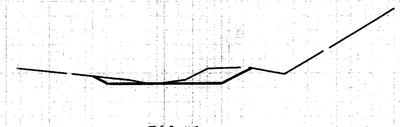


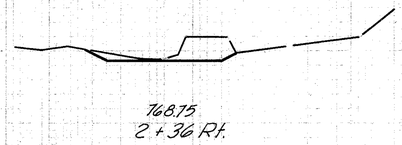
STA. 786+90

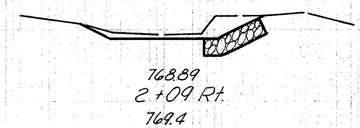
ZERO SECTION
3+25 Rt.









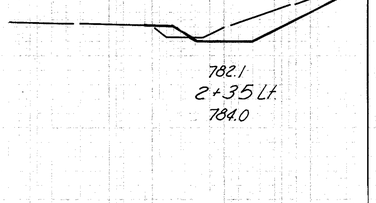


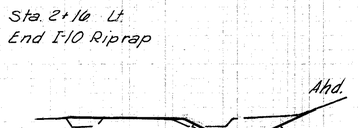
END AREA	CUT CU.YD.
0	
	1
9	
	8
6	
	9
12	
	19
25	
	26
26	
TOTAL RT.	77
GR. TOTAL	206

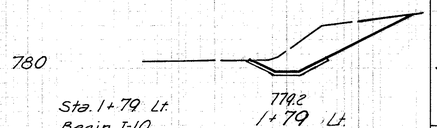
STA. 786+90

20 10 ℄ 10 20

ZERO SECTION
2+43.5 Lt.
782.3





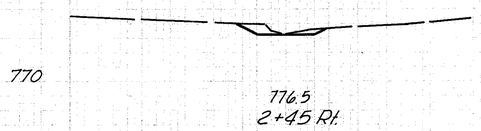


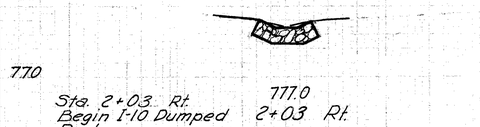
END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		
		8	1
50	5		
		30	4
15	4		
		41	
56			
TOTAL LT.		79	5

STA. 798+24

20 10 ℄ 10 20

ZERO SECTION
2+57 Rt.





END AREA	CUT CU.YD.
0	
	2
8	
	8
2	
TOTAL RT.	10
GR. TOTAL	89

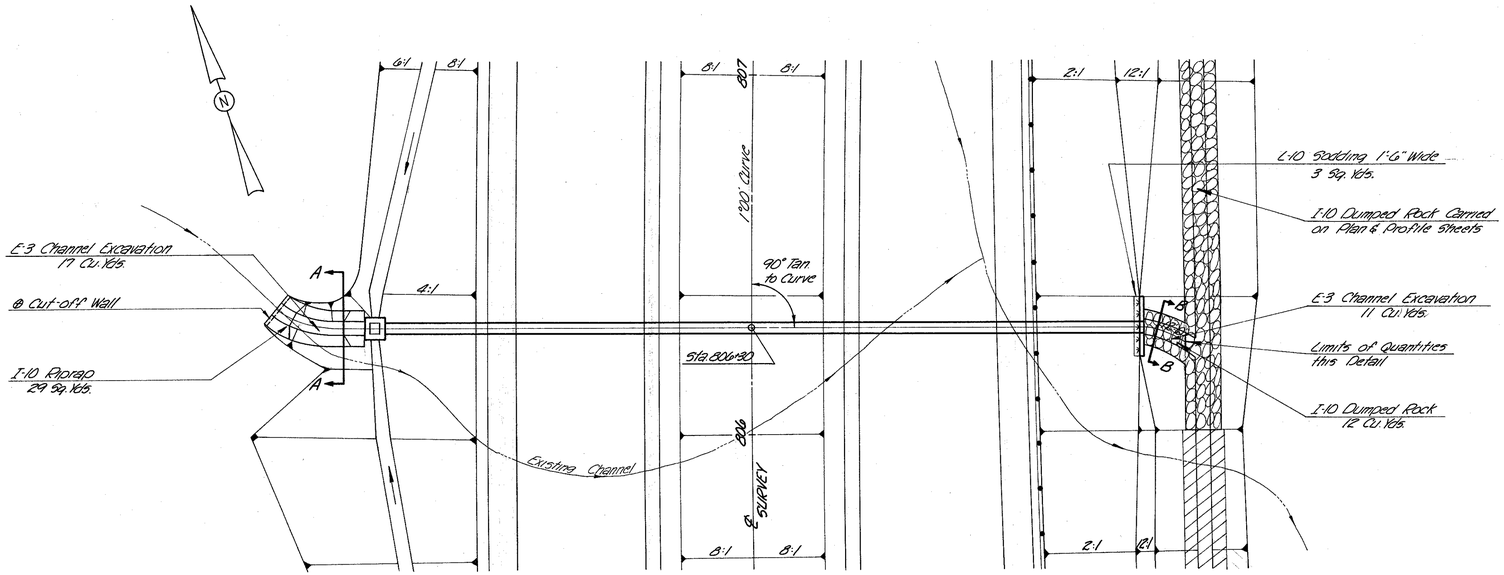
20 10 ℄ 10 20

CULVERTS AT STA. 786+90 & STA. 798+24
CHANNEL SECTIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

349
445

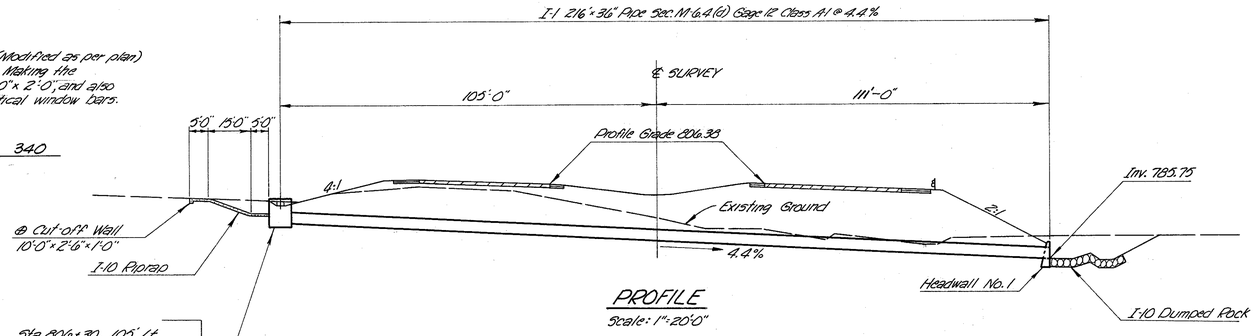
HAMILTON COUNTY
HAM. 11-13.05



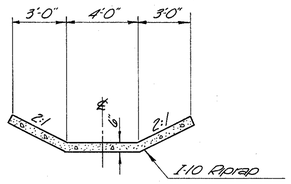
PLAN
Scale: 1"=20'0"

Note:
Std. No. 2-6 C.B. (Modified as per plan) is Modified by Making the West Window 4'-0" x 2'-0", and also deleting all vertical window bars.

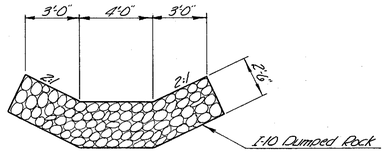
℄ For Note and Detail See Sht. 340



PROFILE
Scale: 1"=20'0"



SECTION A-A
Scale: 1/4"=1'0"



SECTION B-B
Scale: 1/4"=1'0"

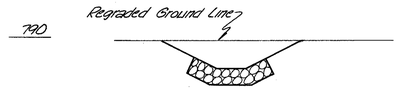
ESTIMATED QUANTITIES

ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	36" Pipe Spec. M 6.4 (c) Gage 12 Class A1	216	Lin. Ft.
I-2	Masonry	6.5	Cu. Yds.
I-3	Std. No. 25 C.B. (Modified as per plan)	1	Each
I-10	Riprap (Using 6" Rein. Conc. Slab, as per plan.)	27	Sq. Yds.
I-10	Dumped Rock Channel Protection	12	Cu. Yds.
L-10	Sodding	3	Sq. Yds.
E-3	Channel Excavation	28	Cu. Yds.

Drainage Area = 15 Acres
Q 50 = 99 C.F.S.

ZERO SECTION
Sta. 122+00 R.P.

Sta. 1+22 R.P.
End I-10 Dumped Rock



Sta. 1+10 R.P.
785.75

Sta. 1+10 R.P.
Begin I-10 Dumped Rock

Total R.P.

ZERO SECTION

Sta. 1+28 Lt.
End I-10 Riprap



800.5

Sta. 1+28 Lt.
800.00



801.0

Sta. 1+13 Lt.
798.00



801.0

Sta. 1+08 Lt.
798.00

Sta. 1+08 Lt.
Begin I-10 Riprap

℄

Cross Section Scale: 1"=10'0"

END AREA	CUT CU YD.
0	
	11
20	
	11
0	
	1
5	
	10
30	
	6
30	
	17
	28

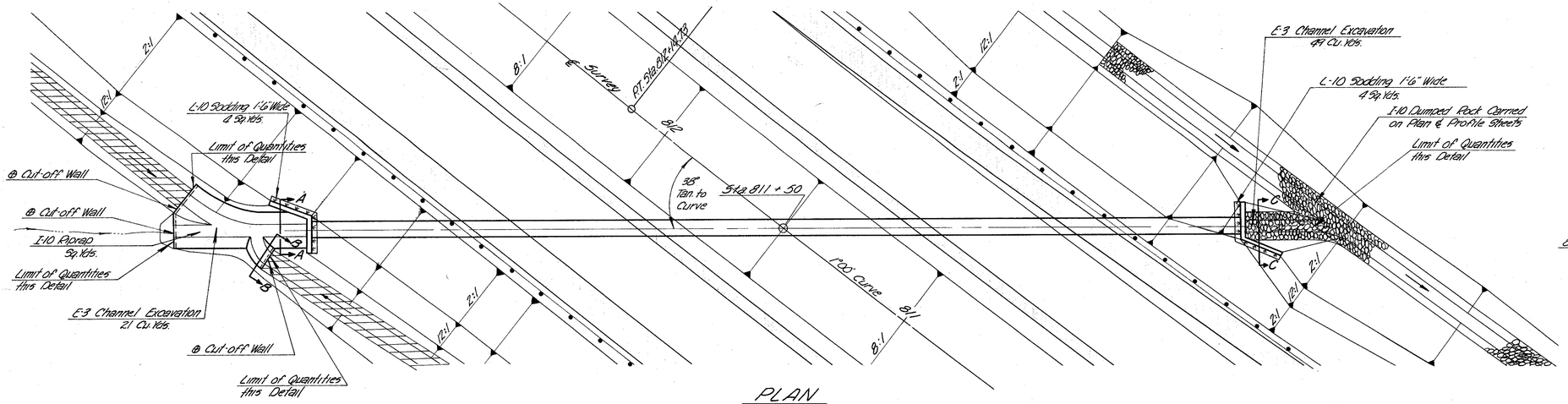
Total Lt.
Grand Total

DRAINAGE STRUCTURE STA. 806+30

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

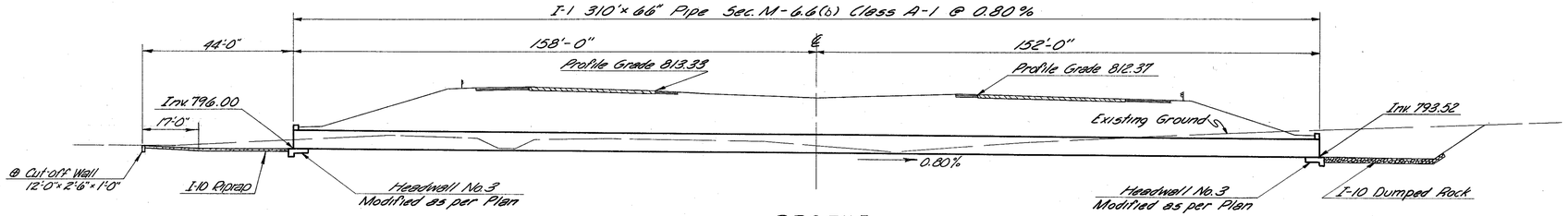
350
145

HAMILTON COUNTY
HAM. 71-13.05

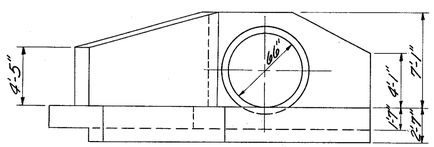


PLAN
Scale: 1"=20'-0"

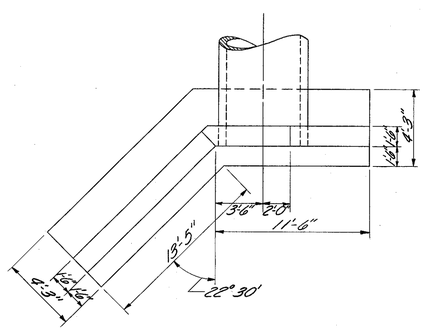
℄ Note: for Note & Detail See Sheet No. 340



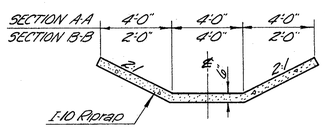
PROFILE
Scale: 1"=20'-0"



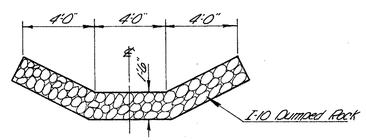
ELEVATION
Scale: 3/16"=1'-0"



PLAN
Scale: 3/16"=1'-0"



SECTION A-A & B-B
Scale: 1/4"=1'-0"



SECTION C-C
Scale: 1/4"=1'-0"

Drainage Area =	114 Acres
Q 50	203 c.f.s.

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	66" Pipe Sec. M-6.6(b) Class A-1	310	Lin. Ft.
I-2	Masonry	33.8	Cu. Yd.
I-10	Riprap (Using 6" Rein. Conc. Slab, as per plan.)	27	Sq. Yd.
I-10	Dumped Rock Channel Protection	17	Cu. Yd.
L-10	Sodding	8	Sq. Yd.
E-3	Channel Excavation	77	Cu. Yd.

ZERO SECTION
Sta. 1+80 Rt.

800



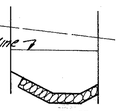
793.29
Sta. 1+76 Rt.
802.9

800



793.40
Sta. 1+64 Rt.
798.5

795

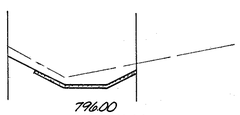


793.52
Sta. 1+52 Rt.
799.6

Total Rt.

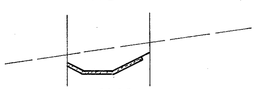
ZERO SECTION
Sta. 2+07

795



796.00
Sta. 1+71 Lt.
797.8

800



796.00
Sta. 1+58 Lt.
798.9

Cross Section Scale: 1"=10'-0"

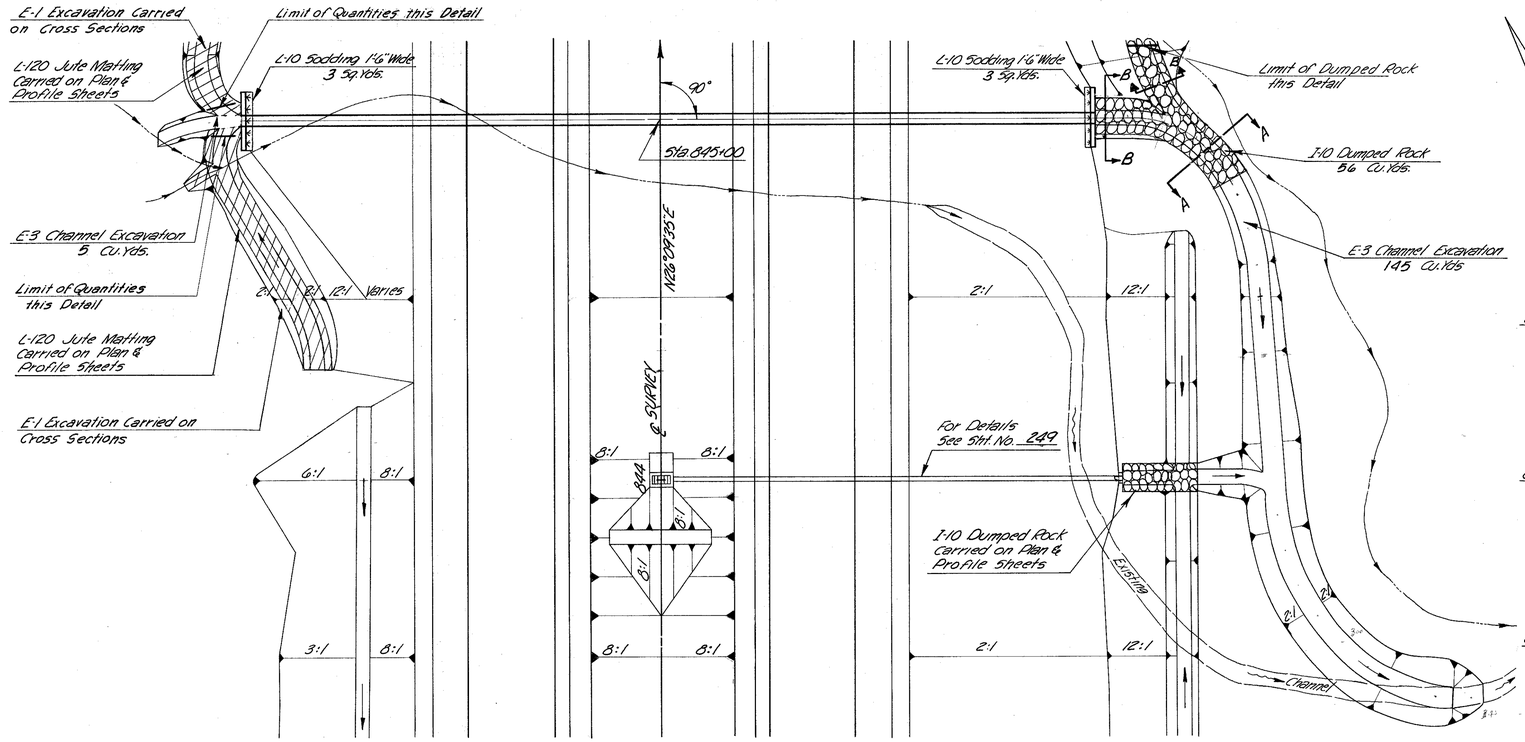
	END AREA	CUT CUM.
		0
5		
		18
74		
		31
64		
Total Rt.		49
		16
24		
		12
27		
Total Lt.		28
Grand Total		77

DRAINAGE STRUCTURE STA. 811+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

351
445

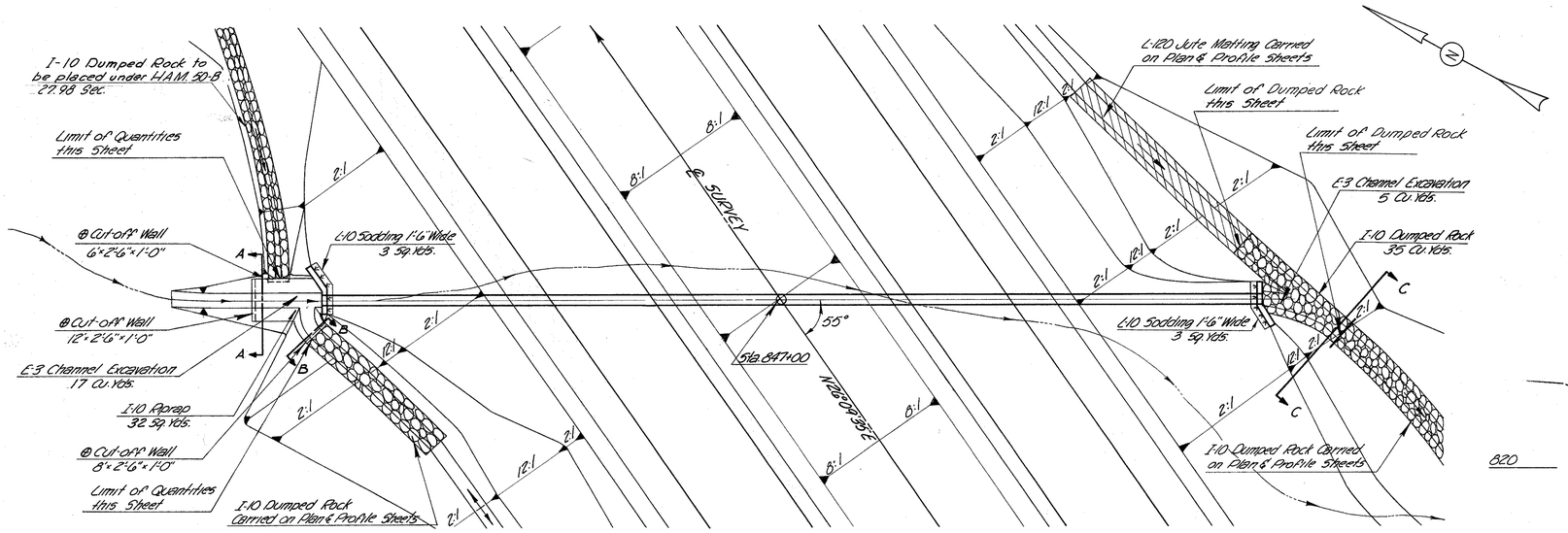
HAMILTON COUNTY
HAM. 71-13.05


E-1 Excavation Carried on Cross Sections
Limit of Quantities This Detail
L-120 Jute Matting Carried on Plan & Profile Sheets
L-10 Sodding 1'6" Wide 3 Sq. Yds.
90°
Sta. 845+00
N 26° 24' 35" E
E-3 Channel Excavation 5 Cu. Yds.
Limit of Quantities this Detail
L-120 Jute Matting Carried on Plan & Profile Sheets
E-1 Excavation Carried on Cross Sections
2:1
8:1
12:1
Varies
6:1
3:1
8:1
8:1
8

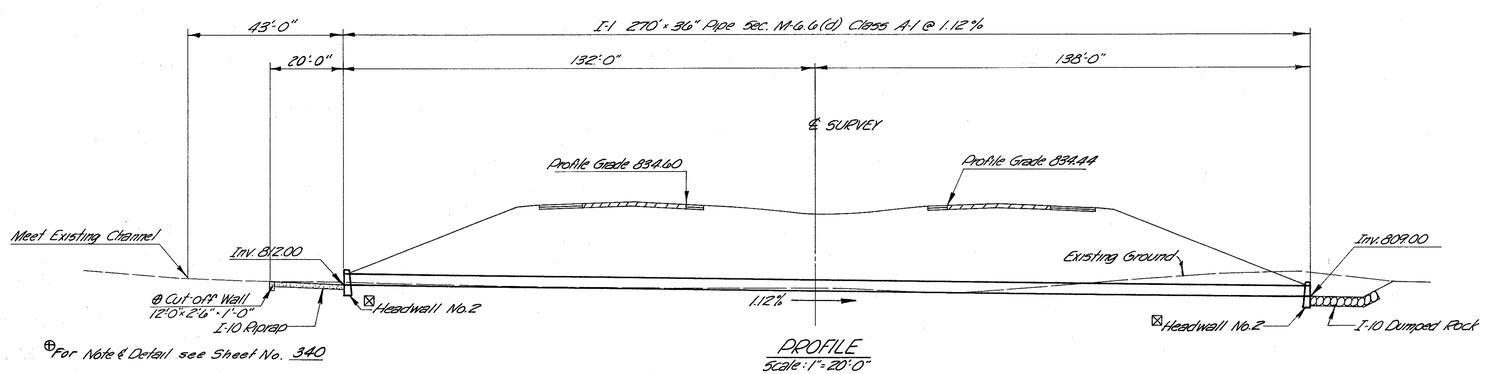
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

352
445

HAMILTON COUNTY
HAM-71-13.05

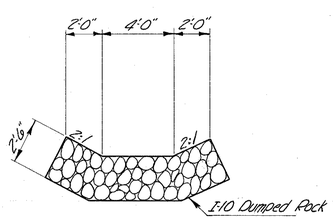


PLAN
Scale 1" = 20'-0"

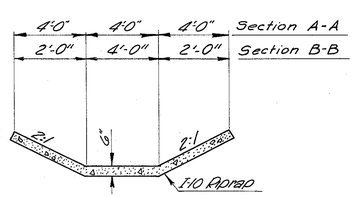


PROFILE
Scale: 1" = 20'-0"

⊠ Note:
Use Standard Headwall No. 2, 30° Skew



SECTION C-C
Scale: 1/4" = 1'-0"



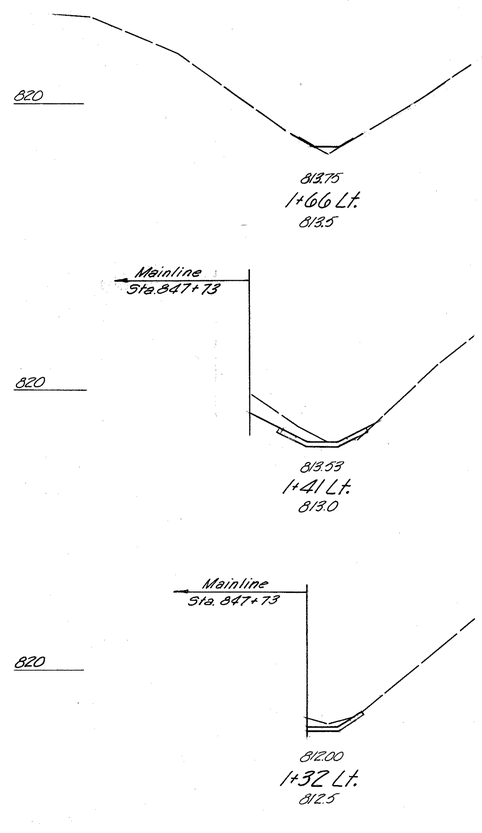
SECTION A-A, B-B
Scale: 1/4" = 1'-0"

Drainage Area	=	26 Acs.
Q50	=	65 C.F.S.

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	36" Pipe Sec. M-6.6(d) Class A-1	270	Lin.Ft.
I-2	Masonry	11.6	Cu.Yds.
I-10	Riprap (Using 6" Reinf. Conc. Slab as per plan)	32	Sq.Yds.
I-10	Dumped Rock Channel Protection	35	Cu.Yds.
L-10	Sodding	6	Sq.Yds.
E-3	Channel Excavation	22	Cu.Yds.

ZERO STATION
1+75 Lt.



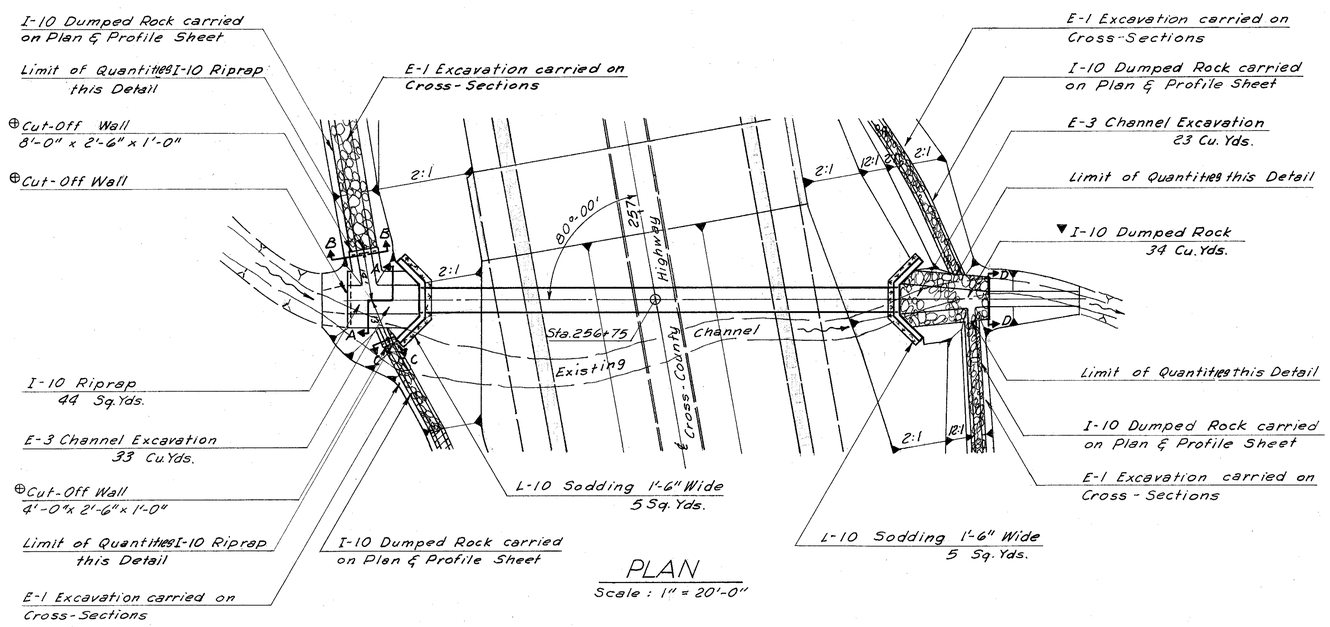
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	0		
		0	0
0	2		
		10	3
20	3		
		7	1
4	-		
TOTAL LT.		17	4

DRAINAGE STRUCTURE STA. 847+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

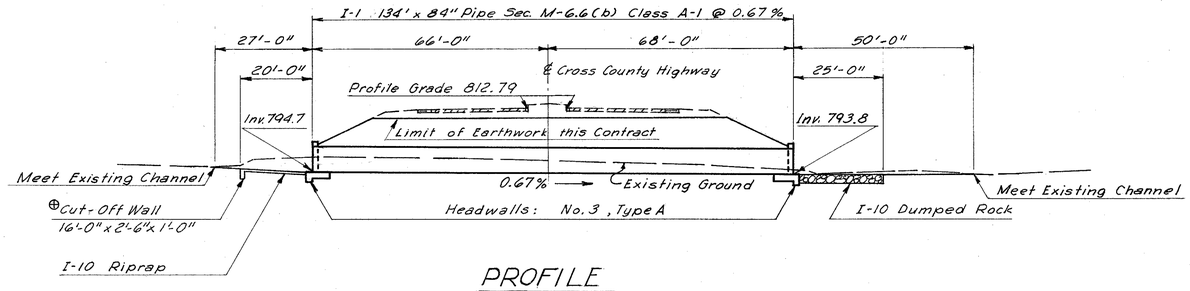
353
445

HAMILTON COUNTY
HAM. 71-13.05

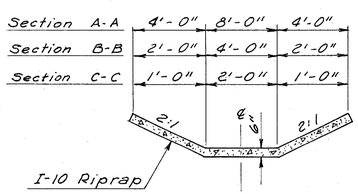


PLAN
Scale : 1" = 20'-0"

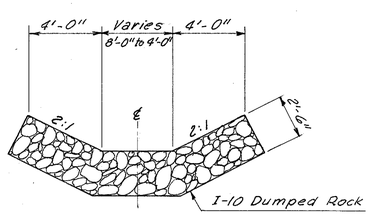
⊕ For Note & Detail see Sheet No. 340



PROFILE
Scale: 1" = 20'-0"



SECTIONS A-A, B-B, C-C



SECTION D-D
Scale: 1/4" = 1'-0"

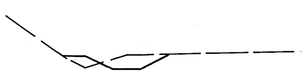
ESTIMATED QUANTITIES

ITEM	DESCRIPTION	QUANTITY	UNIT
I - 1	84" Pipe Sec. M-6.6 (d) Class A-1	134	Lin. Ft.
I - 2	Masonry	45.6	Cu. Yds.
I - 10	Riprap (Using 6" Rein. Conc. Slab as per Plan)	44	Sq. Yds
I - 10	Dumped Rock Channel Protection	34	Cu. Yds.
L - 10	Sodding	10	Sq. Yds.
E - 3	Channel Excavation	56	Cu. Yds.

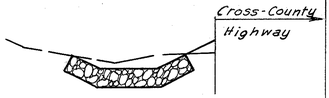
Drainage Area = 218 Acres
Q 50 = 380 c.f.s.

▼ Note:
All Dumped Rock Channel Protection, Item I-10, used at the outlet of Culvert shall be uniformly placed so that at least 50 percent of the pieces will weigh at least 75 pounds.

ZERO SECTION
1+18 Rt.



790
793.74
1+00 Rt.
795.7
Sta. 0+93 Rt.
End I-10 Dumped Rock
End Transition



790
793.8
0+68 Rt.
794.8
Sta. 0+68 Rt.
Begin I-10 Dumped Rock
Begin Transition from 8' to 4' Bottom

ZERO SECTION
0+93 Lt.



790
796.06
0+86 Lt.
796.7
Sta. 0+86 Lt.
End I-10 Riprap



790
796.65
0+80 Lt.
798.7



790
794.7
0+66 Lt.
799.0
Sta. 0+66 Lt.
Begin I-10 Riprap

Cross-Sections
Scale: 1" = 10'-0"

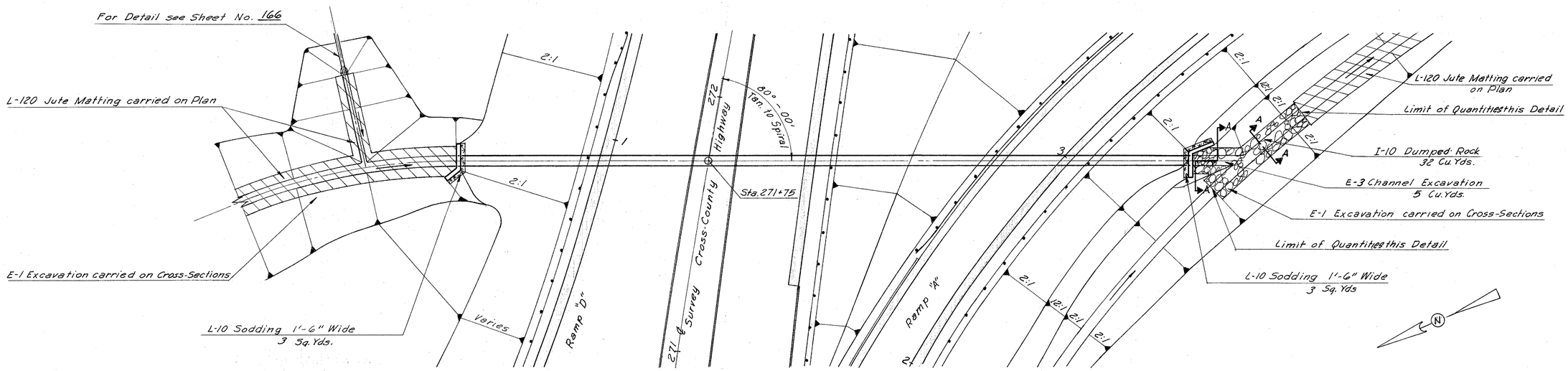
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	0	0		
			4	1
	12	4		
			19	4
TOTAL RT.			23	5
	0	0		
			1	3
	11	22		
			5	4
	35	12		
			27	3
	70	0		
TOTAL LT.			33	10
GR. TOTAL			56	15

DRAINAGE STRUCTURE
CROSS-COUNTY HIGHWAY STA. 256 + 75

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

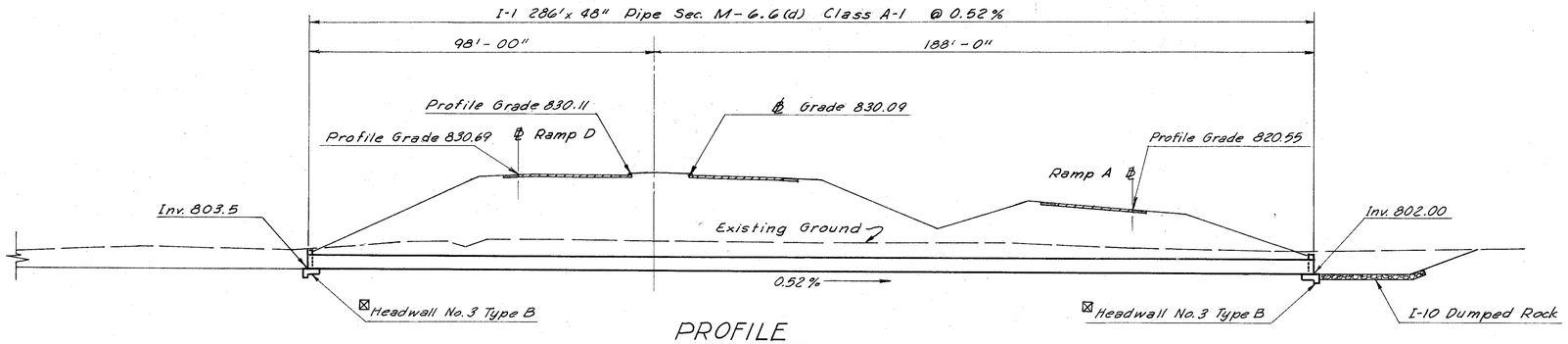
354
445

HAMILTON COUNTY
HAM. 71-13.05



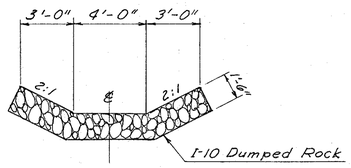
PLAN

Scale: 1"=20'-0"



PROFILE

Scale: 1"=20'-0"



SECTION A-A

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

☒ **Note:**
Use Standard Headwall No. 3, Type B, 15° Skew

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	QUANTITY	UNIT
I - 1	48" Pipe Sec. M-6.6 (d) Class A-1	286	Lin. Ft.
I - 2	Masonry	19.0	Cu. Yds.
I - 10	Dumped Rock Channel Protection	32	Cu. Yds.
L - 10	Sodding	6	Sq. Yds.
E - 3	Channel Excavation	5	Cu. Yds.

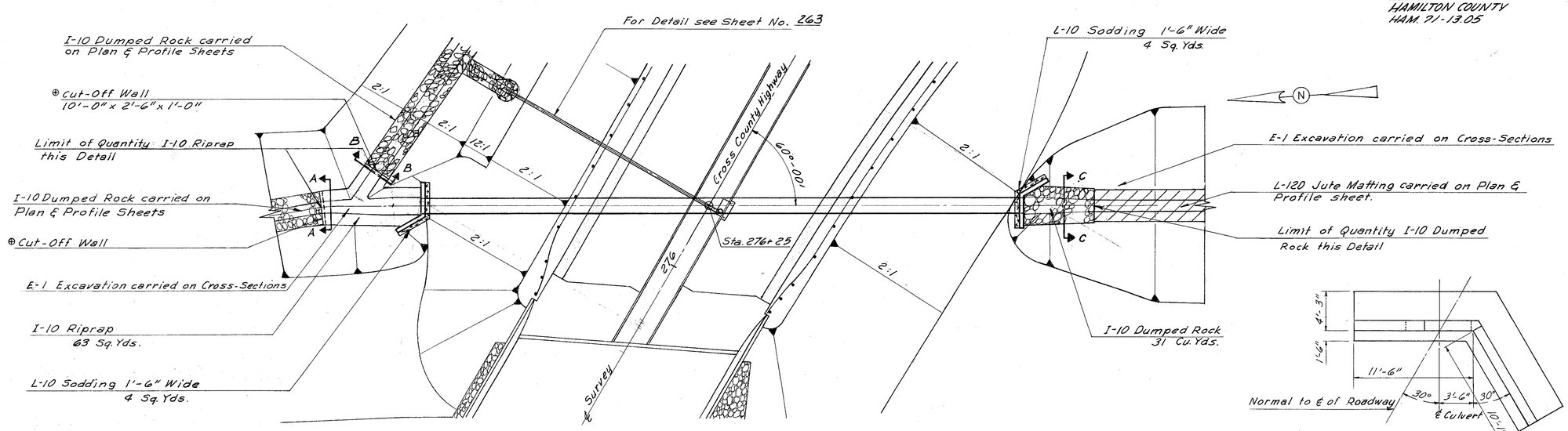
Drainage Area = 15 Acres
Q 50 = 64 c.f.s.

DRAINAGE STRUCTURE STA 271 + 75 CROSS-COUNTY HIGHWAY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

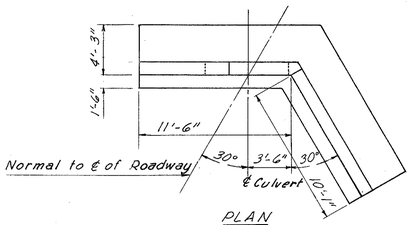
355
445

HAMILTON COUNTY
HAM. 71-13.05

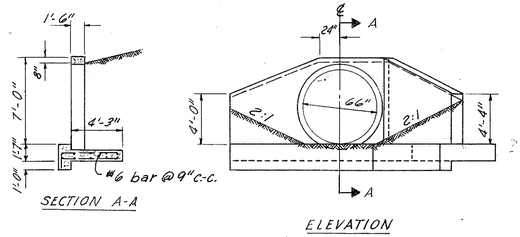


⊕ For Note & Detail see Sheet No. 340

PLAN
Scale: 1" = 20'-0"

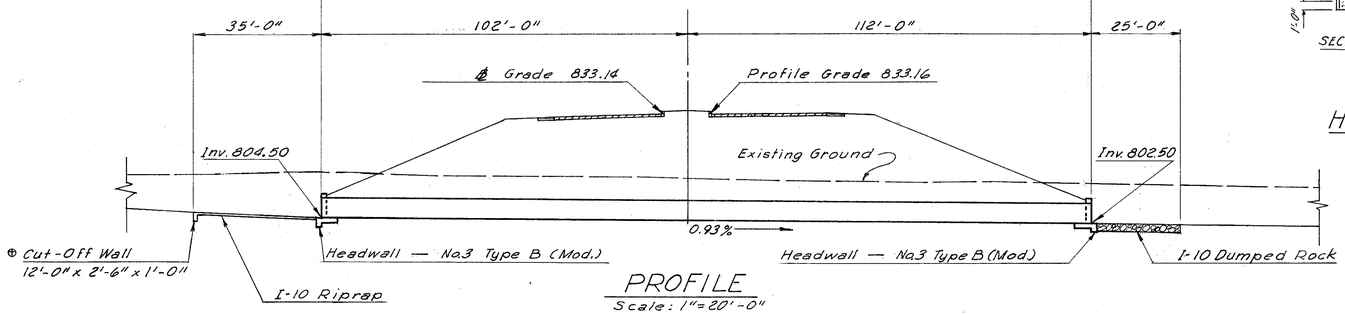


PLAN

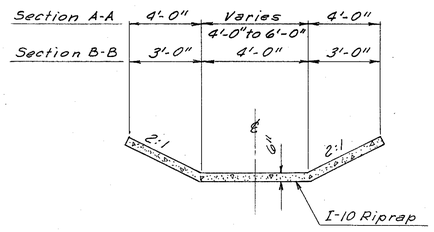


HEADWALL NO. 3 - TYPE B MODIFIED

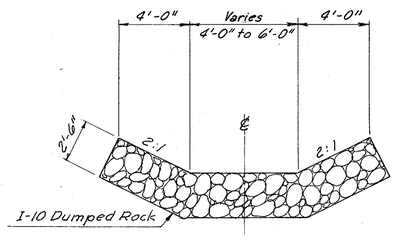
QUANTITIES FOR ONE HEADWALL	
Concrete-C.Y.	Steel - Lbs.
13.14	1473



PROFILE
Scale: 1" = 20'-0"



SECTIONS A-A, B-B



SECTION C-C
Scale: 1 1/4" = 1'-0"

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	QUANTITY	UNIT
I - 1	66" Pipe Sec. M-6.6 (d) Class A-1	214	Lin. Ft.
I - 2	Masonry	26.28	Cu. Yds.
I - 10	Riprap (Using 6" Rein. Conc. Slab as per Plan)	63	Sq. Yds.
I - 10	Dumped Rock Channel Protection	31	Cu. Yds.
L - 10	Sodding	8	Sq. Yds.

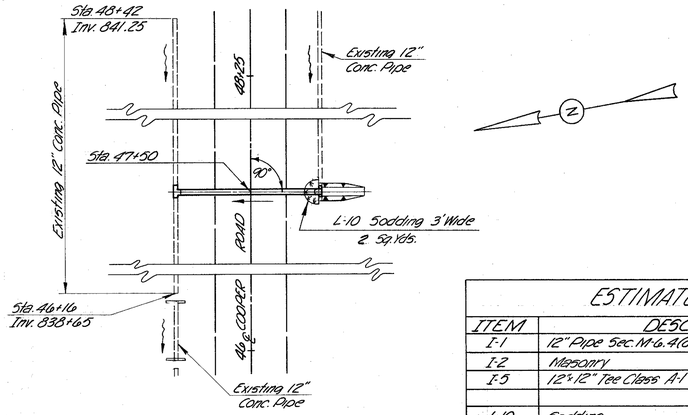
Drainage Area = 82 Acres
Q 50 = 202 c.f.s.

DRAINAGE STRUCTURE STA. 276+25 CROSS-COUNTY HIGHWAY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

356
445

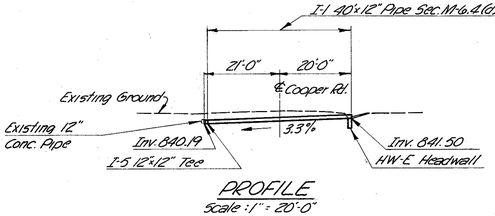
HAMILTON COUNTY
HAM. 71-13.05



PLAN
Scale: 1" = 20'-0"

ESTIMATED QUANTITIES

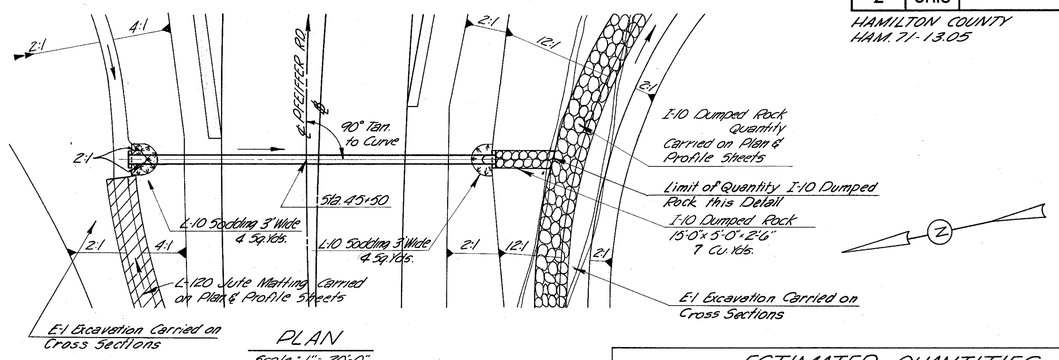
ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	12" Pipe Sec. M-6.4(d) Gage 16 Class A-1	40	Lin. Ft.
I-2	Masonry	0.23	Cu. Yds.
I-5	12"x12" Tee Class A-1	1	Each
L-10	Sodding	2	Sq. Yds.



PROFILE
Scale: 1" = 20'-0"

Minimum Size Pipe

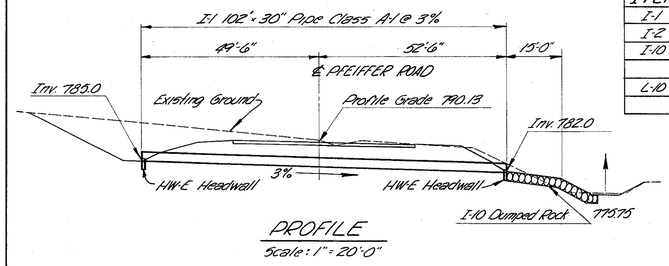
DRAINAGE STRUCTURE STA. 47+50 COOPER ROAD



PLAN
Scale: 1" = 20'-0"

ESTIMATED QUANTITIES

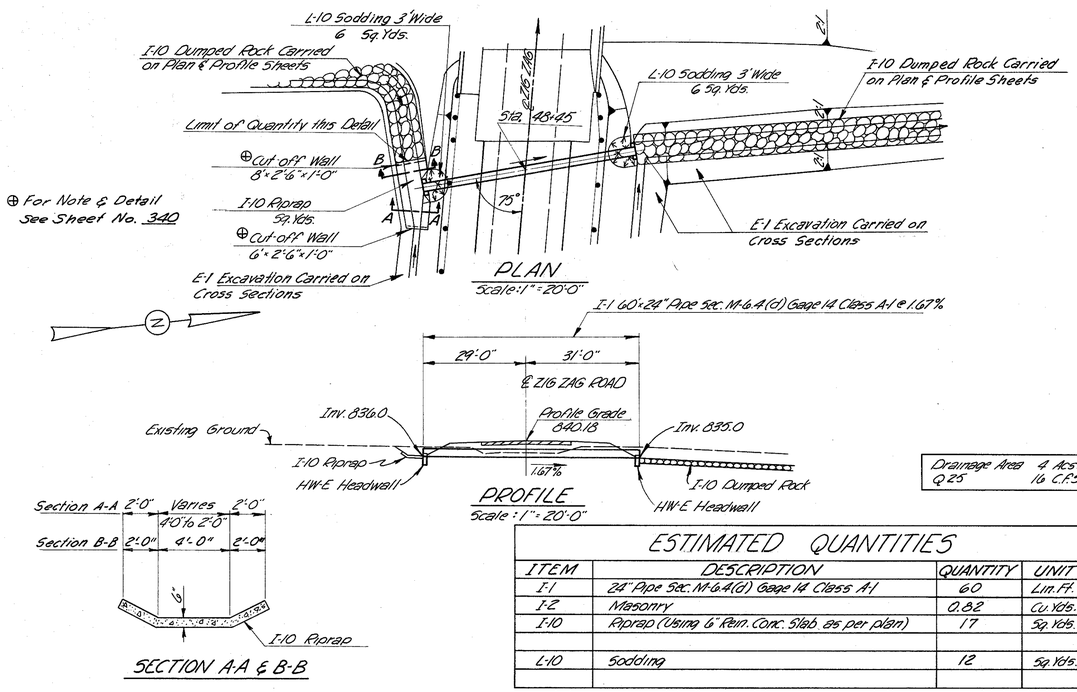
ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	30" Pipe Class A-1	102	Lin. Ft.
I-2	Masonry	1.02	Cu. Yds.
I-10	Dumped Rock Channel Protection	7	Cu. Yds.
L-10	Sodding	8	Sq. Yds.



PROFILE
Scale: 1" = 20'-0"

Drainage Area	9 Acs.
Q 25	34 C.F.S.

DRAINAGE STRUCTURE STA. 45+50 PFEIFFER ROAD



PROFILE
Scale: 1" = 20'-0"

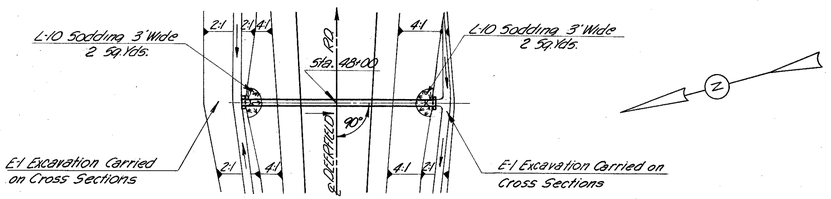
SECTION A-A & B-B

Drainage Area	4 Acs.
Q 25	16 C.F.S.

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	24" Pipe Spc. M-6.4(d) Gage 14 Class A-1	60	Lin. Ft.
I-2	Masonry	0.82	Cu. Yds.
I-10	Riprap (Using 6" Reinf. Conc. Slab as per plan)	17	Sq. Yds.
L-10	Sodding	12	Sq. Yds.

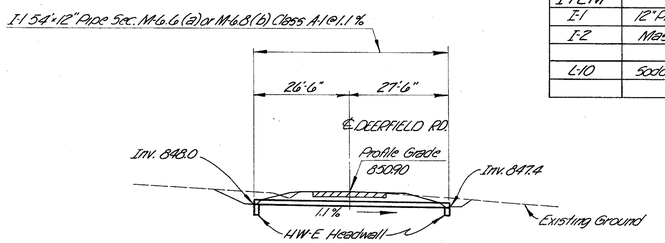
DRAINAGE STRUCTURE STA. 48+45 ZIG ZAG ROAD



PLAN
Scale: 1" = 20'-0"

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	QUANTITY	UNIT
E-1	12" Pipe Spc. M-6.6(2) or M-6.8(1) Class A-1	54	Lin. Ft.
I-2	Masonry	0.46	Cu. Yds.
L-10	Sodding	4	Sq. Yds.



PROFILE
Scale 1" = 20'-0"

Drainage Area	1 Ac.
Q 25	4.3 C.F.S.

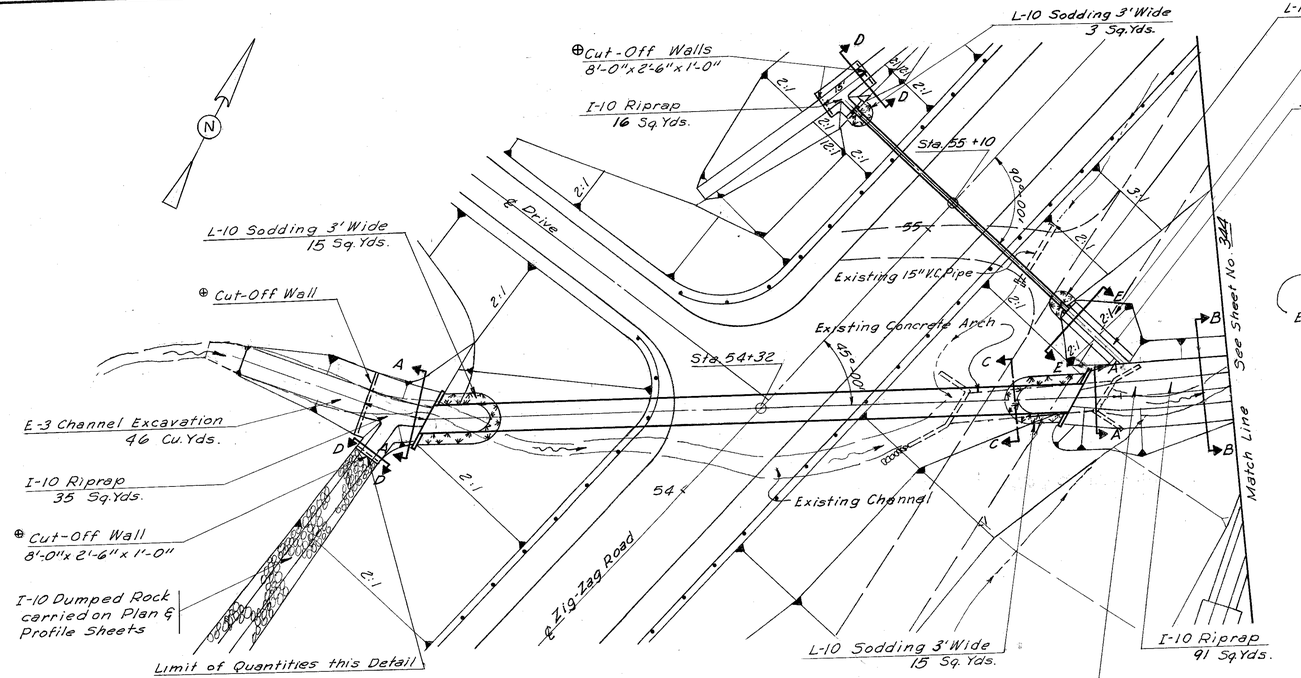
DRAINAGE STRUCTURE STA. 48+00 DEERFIELD ROAD

COOPER, PFEIFFER, ZIG ZAG, & DEERFIELD ROAD DRAINAGE STRUCTURES

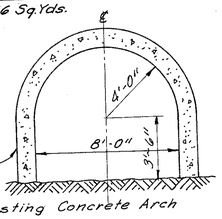
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

357
145

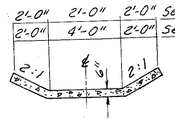
HAMILTON COUNTY
HAM. 71-13.05



PLAN
Scale: 1"=20'-0"



SECTION C-C
Scale: 1/4"=1'-0"



SECTIONS D-D, E-E

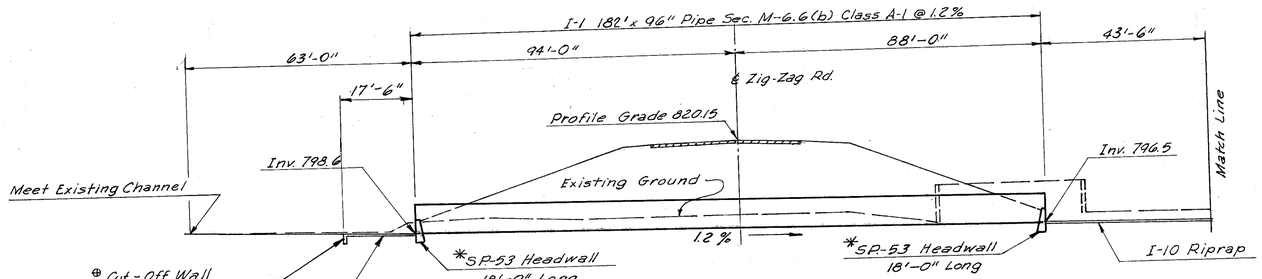
END AREA	CUT CU.YD.
800	
Sta. 0+93 Lt Begin I-10 Riprap	798.60 0+93 Lt. 801.0
	25
STA. 54+32	
810	
STA. 55+10	
Culvert Channel Sta. 54+32	0
799.90 0+64 Rt 804.6	19
810	
803.20 0+54 Rt 807.3	100
	19
810	
806.5 0+44 Rt. 807.3	3
TOTAL	38

Note: I-10 Riprap is continued to Sta. 1+70 Lt. on Mainline = Sta. 1+30 Rt. Zig-Zag Rd. =

END AREA	CUT CU.YD.
800	
796.00 1+30 Rt. 798.20	37
	52
800	
796.72 1+05 Rt. 798.5	75
	95
800	
796.50 0+88 Rt. 807.2	228
Sta. 0+88 Rt. Begin I-10 Riprap	
TOTAL RT.	147

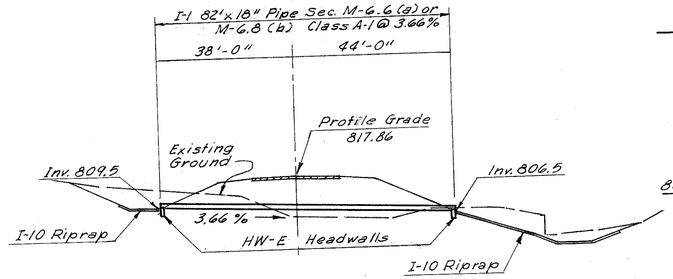
ZERO SECTION
STA. 1+56 Lt.

0	
800	1
801.0 1+46 Lt. 801.0	3
	14
800	31
799.21 1+23 Lt. 801.1	26
Sta. 1+10.5 Lt. End I-10 Riprap	
800	29
Cross-Sections Scale: 1"=10'-0" 798.42 0+98 Lt 800.0	3
TOTAL LT.	4
GR. TOTAL	14

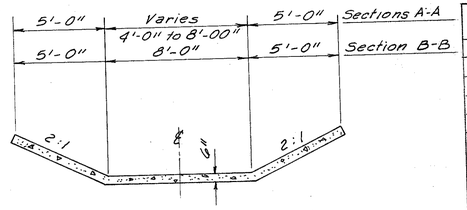


PROFILE
Scale: 1" = 20'-0"

* For Note & Detail see Sheet No. 346



PROFILE
Scale: 1" = 20'-0"



SECTIONS A-A, B-B

STA. 54+32

ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	96" Pipe Sec. M-6.6(b) Class A-1	182	Lin. Ft.
I-2	Masonry	10.50	Cu. Yds.
I-10	Riprap (Using 6" Rein. Conc. Slab as per Plan)	126	Sq. Yds.
		30	Sq. Yds.
L-10	Sodding	193	Cu. Yds.
E-3	Channel Excavation	1	L.S.
S-24	Removal of Existing Structure		

Drainage Area = 285 Acres
Q 25 = 393 c.f.s

STA. 55+10

ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	18" Pipe Sec. M-6.6(a) or M-6.8(b) Cl. A-1	82	Lin. Ft.
I-2	Masonry	0.60	Cu. Yds.
I-10	Riprap (Using 6" Rein. Conc. Slab as per Plan)	31	Sq. Yds.
L-10	Sodding	6	Sq. Yds.
E-3	Channel Excavation	38	Cu. Yds.

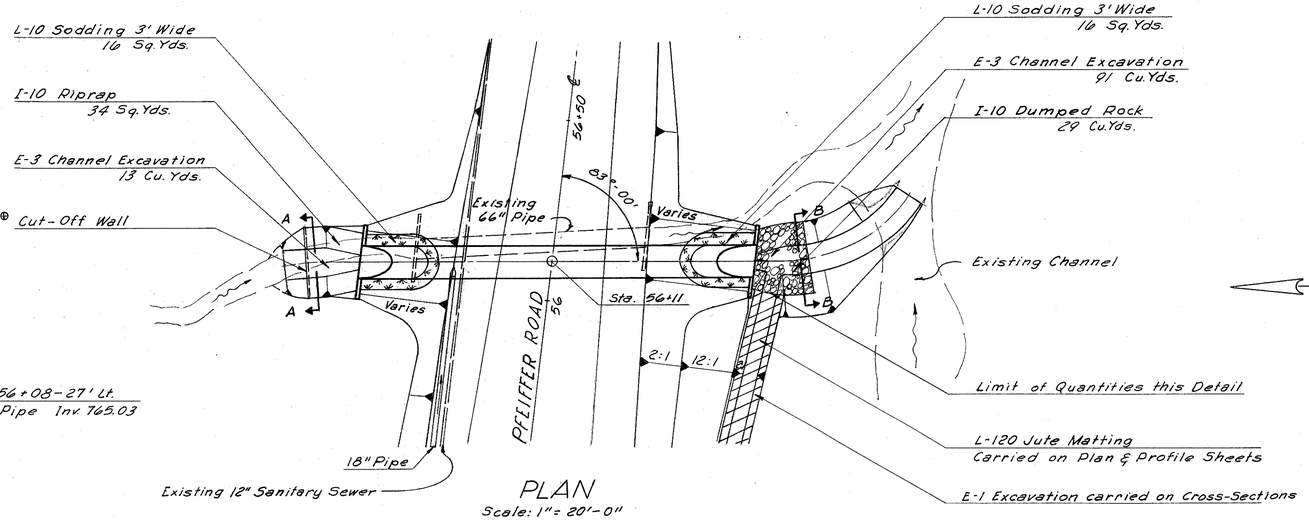
Drainage Area = 4 Acres
Q 25 = 18 c.f.s.

DRAINAGE STRUCTURES STA. 54+32 & STA. 55+10, ZIG-ZAG RD.

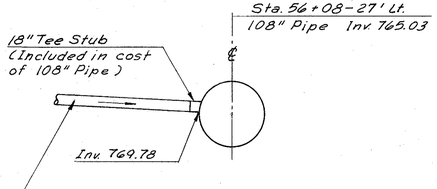
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

358
445

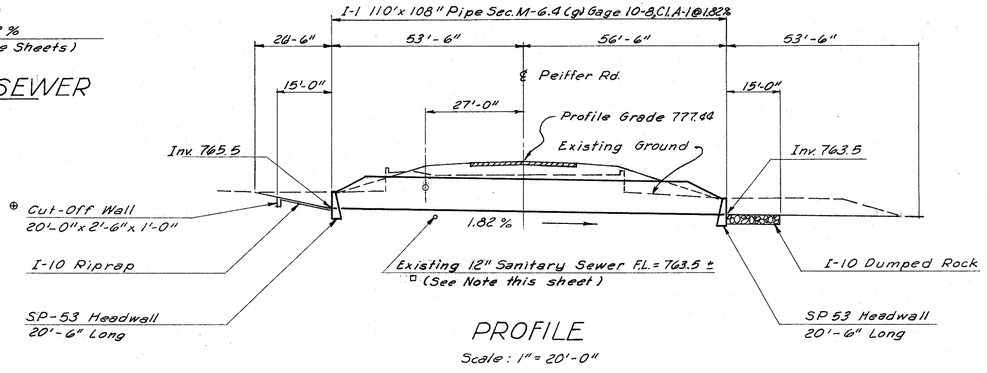
HAMILTON COUNTY
HAM. 71-13.05



PLAN
Scale: 1" = 20'-0"



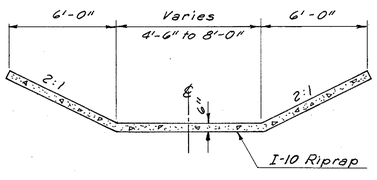
PROFILE - STORM SEWER
Scale: 1" = 10'-0"



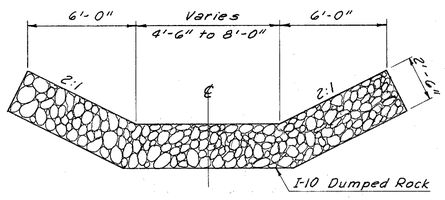
PROFILE
Scale: 1" = 20'-0"

⊕ Note: For Note and Detail see Sheet No. 340

Note:
This Pipe was designed on the basis of 4-12' lanes and 2-12' Shoulders for Future improvement of Pfeiffer Road



SECTION A-A
Scale: 1/4" = 1'-0"



SECTION B-B
Scale: 1/4" = 1'-0"

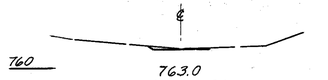
ESTIMATED QUANTITIES

ITEM	DESCRIPTION	QUANTITY	UNIT
I-1	108" Pipe Sec. M-6.4 (g) Gage 10-B, Cl. A-1	110	Lin. Ft.
I-2	Masonry	15.18	Cu. Yds.
I-10	Riprap (Using 6" Reinf. Conc Slab as per Plan)	34	Sq. Yds.
I-10	Dumped Rock Channel Protection	29	Cu. Yds.
I-12	Existing Pipe Removed & Stored	66	Lin. Ft.
L-10	Sodding	32	Sq. Yds.
E-3	Channel Excavation	104	Cu. Yds.

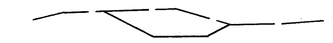
Drainage Area = 369 Acres
Q 25 = 378 c.f.s.

□ NOTE:
The contractor shall exercise extreme Caution when excavating around the existing 12" Sanitary Sewer at Sta. 56+11 Pfeiffer Road. If the 12" Sanitary Sewer is uncovered during construction, the Project Engineer shall consider encasing the Sewer with 6" concrete.

ZERO SECTION
1+10 Rt



763.0
1+05 Rt.
763.0



763.16
0+90 Rt.
767.0



763.31
0+75 Rt.
767.8

Sta. 0+71.5 Rt.
End I-10
Dumped Rock



763.4
0+66.5 Rt.
767.5



763.5
0+56.5 Rt.
767.5

Sta. 0+56.5 Rt.
Begin I-10
Dumped Rock

TOTAL RT.

ZERO SECTION
0+80 Lt.



769.6
0+75 Lt.
769.6



Sta. 0+68.5 Lt.
End I-10
Riprap



767.4
0+63.5 Lt.
768.5



765.5
0+53.5 Lt.
768.5

Sta. 0+53.5 Lt.
Begin I-10
Riprap

℄ Cross-Sections
Scale: 1" = 10'-0"

TOTAL LT.
GR. TOTAL

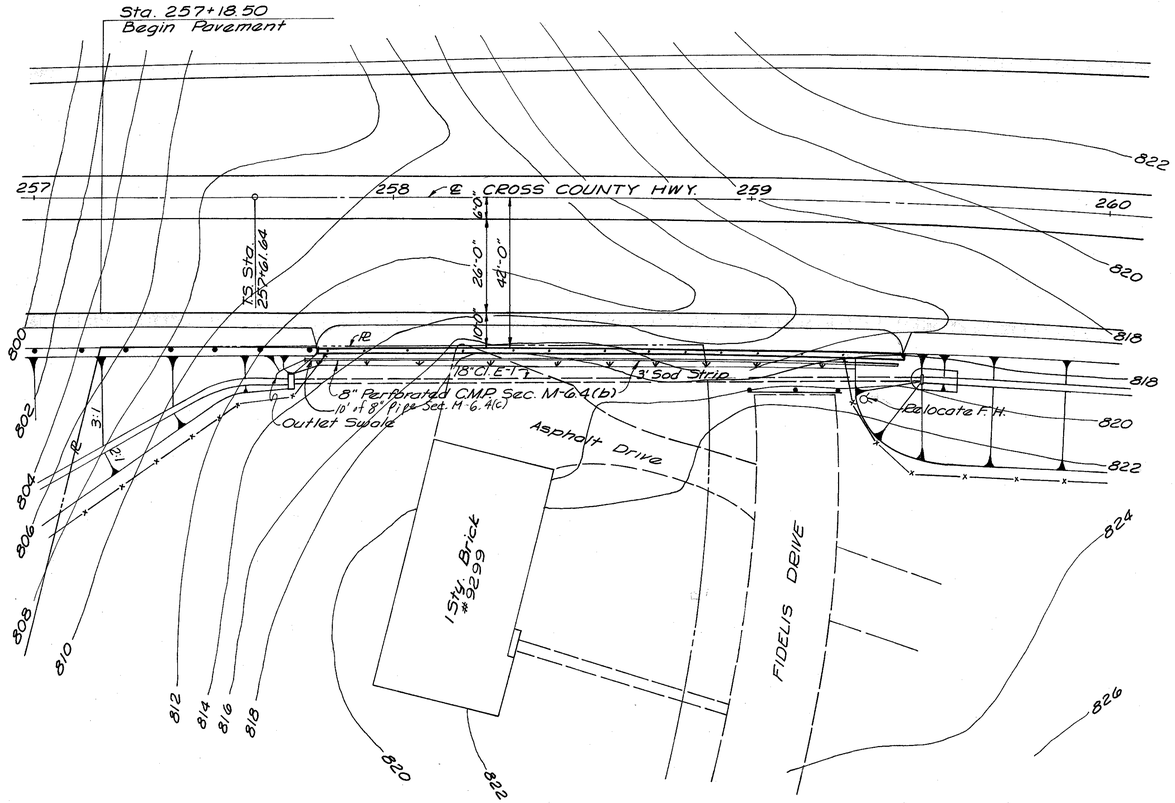
END AREA	CUT CU YD
0	0
2	12
42	33
78	23
70	23
54	91
0	1
8	4
10	8
34	13
	104

DRAINAGE STRUCTURE STA. 56+11, PFEIFFER ROAD

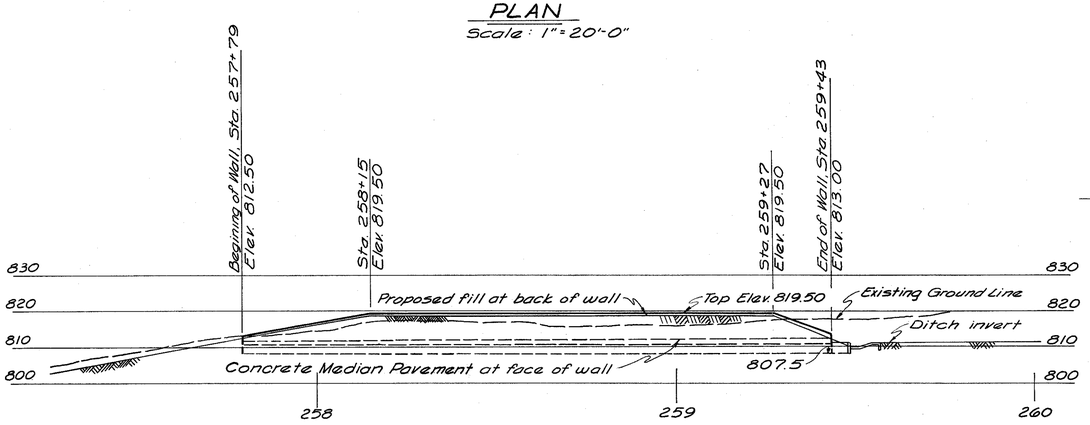
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

359
445

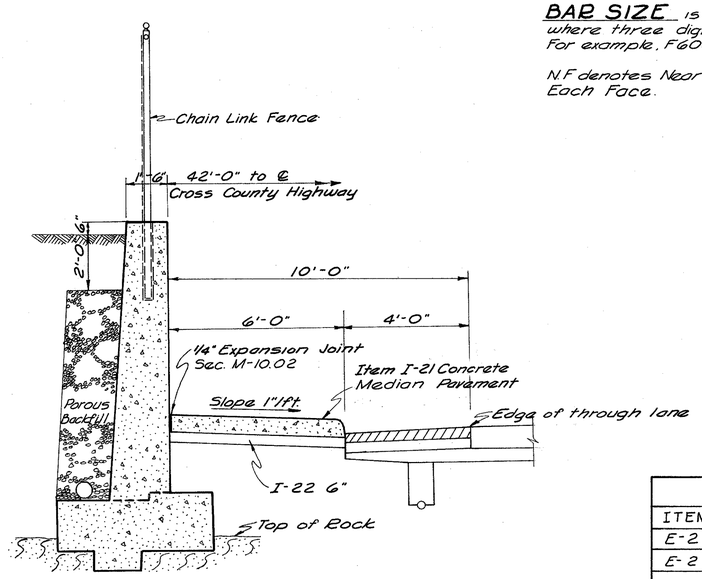
HAMILTON COUNTY
HAM.-71-13.05



PLAN
Scale : 1" = 20'-0"



ELEVATION
Scale : 1" = 20'-0"



SECTION THRU WALL
No Scale

GENERAL NOTES

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.

DESIGN DATA:

Concrete Class E	Basic unit stress 1,133 psi
Reinforcing Steel	ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 psi

FOOTINGS Shall extend a minimum of 3" into undisturbed rock or to the elevation shown, whichever is lower.

FOUNDATION BEARING PRESSURE: Footings are designed for a maximum bearing pressure of 4.0 tons per sq. ft.

CONCRETE: All concrete shall be "Class E Concrete".

BAR SIZE is indicated in the bar mark. The first digit where three digits are used indicate the bar size number. For example, F600 is a No. 6 size bar.

N.F denotes Near Face, F.F denotes Far Face, E.F. denotes Each Face.

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	TOTAL
E-2	Shale excavation	Cu. Yd.	19
E-2	Unclassified excavation	Cu. Yd.	300
S-1	Class "E" concrete	Cu Yd.	175
S-3	Premolded Sealing Strip	Lin. Ft.	45
S-4	Reinforcing Steel	lbs.	5172
S-9	1" Preformed Expansion Jt. Filler	Sq. Ft.	54
S-29	Porous Backfill	Cu. Yd.	76
S-29	8" Perforated C.M.P. M-6.4(b)	Lin. Ft.	156
S-29	8" C.M.P. M-6.4(c)	Lin. Ft.	10

HARRY BALKE ENGINEERS
990 NASSAU STREET
CINCINNATI, OHIO 45206

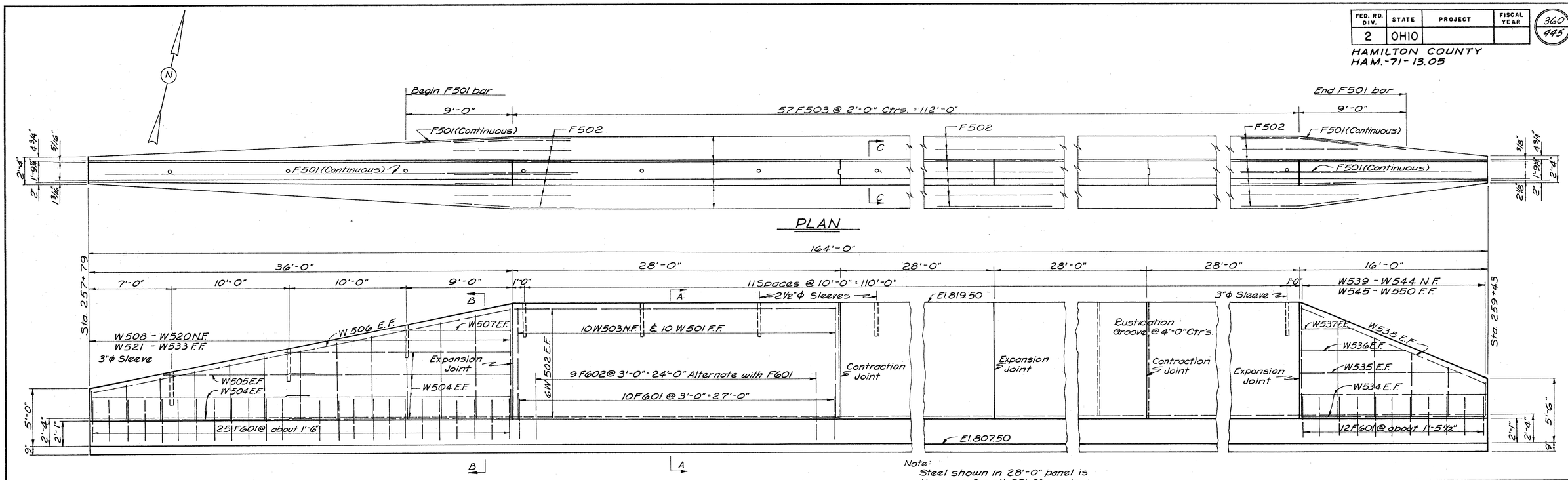
RETAINING WALL

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
R.G.E.	K.R.	R.J.	A.B.	ELLIS 4-64	

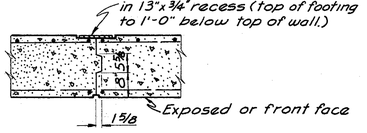
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

360
445

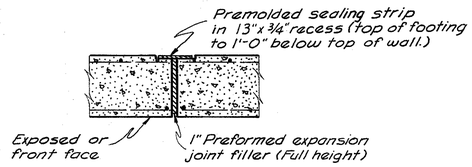
HAMILTON COUNTY
HAM.-71-13.05



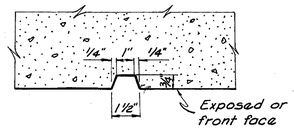
Note:
Steel shown in 28'-0" panel is the same for all 28'-0" panels.



CONTRACTION JOINT DETAIL

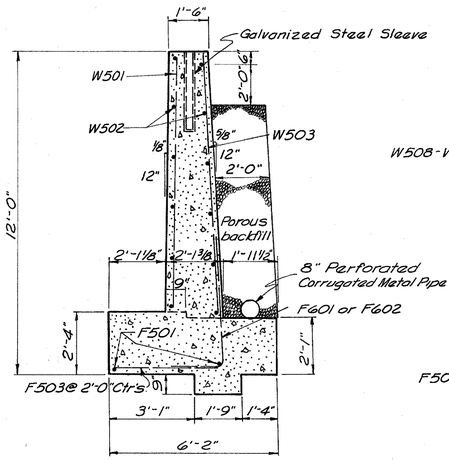


EXPANSION JOINT DETAIL

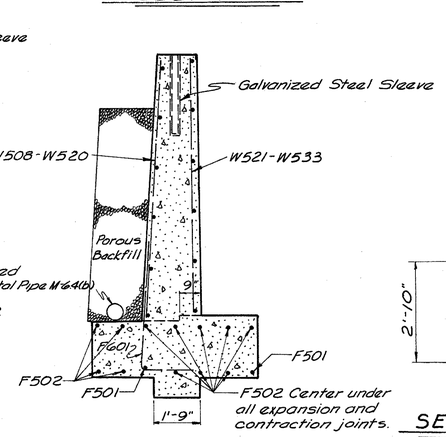


VERTICAL RUSTICATION GROOVE

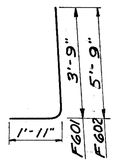
Spaced 4'-0" c/c



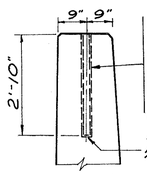
SECTION A-A



SECTION B-B



F601 & F602



Place 2 std. 3"ϕ I.D. galvanized steel sleeves to accommodate Std. End Fence Posts. Also place 13 std. 2½"ϕ I.D. galvanized steel sleeves to accommodate Std. Intermediate Fence Posts. Cost of furnishing and placing sleeves included in unit price for Item S-1 Concrete.

¼" Ø welded to sleeve

SECTION C-C

MARK	LENGTH	SHAPE	NO.	WEIGHT	MARK	LENGTH	SHAPE	NO.	WEIGHT
F501	34'-0"	Str.	9	319	W521	2'-6"	Str.		
F502	10'-0"	Str.	60	626	W521 - W533			13	81
F503	3'-11"	Str.	57	233	Varies	by 7"	1 ea.		
					W533	9'-6"	Str.		
F601	5'-6"	Bent	77	636	W534	15'-8"	Str.	4	65
F602	7'-6"	Bent	36	406	W535	14'-2"	Str.	2	30
					W536	9'-6"	Str.	2	20
					W537	5'-0"	Str.	2	10
W501	9'-6"	Str.	40	396	W538	17'-0"	Str.	2	35
W502	27'-8"	Str.	48	1385	W539	3'-3"	Str.		
W503	9'-9"	Str.	40	407	W539 - W544			6	41
W504	18'-6"	Str.	12	232	Varies	by 15"	1 ea.		
W505	12'-4"	Str.	2	26	W544	9'-9"	Str.		
W506	18'-8"	Str.	4	78	W545	3'-0"	Str.		
W507	10'-6"	Str.	2	22	W545 - W550			6	39
W508	2'-9"	Str.			Varies	by 15"	1 ea.		
W508 - W520			13	85	W550	9'-6"	Str.		
Varies	by 7"	1 ea.							
W520	9'-9"	Str.							
							TOTAL		5172

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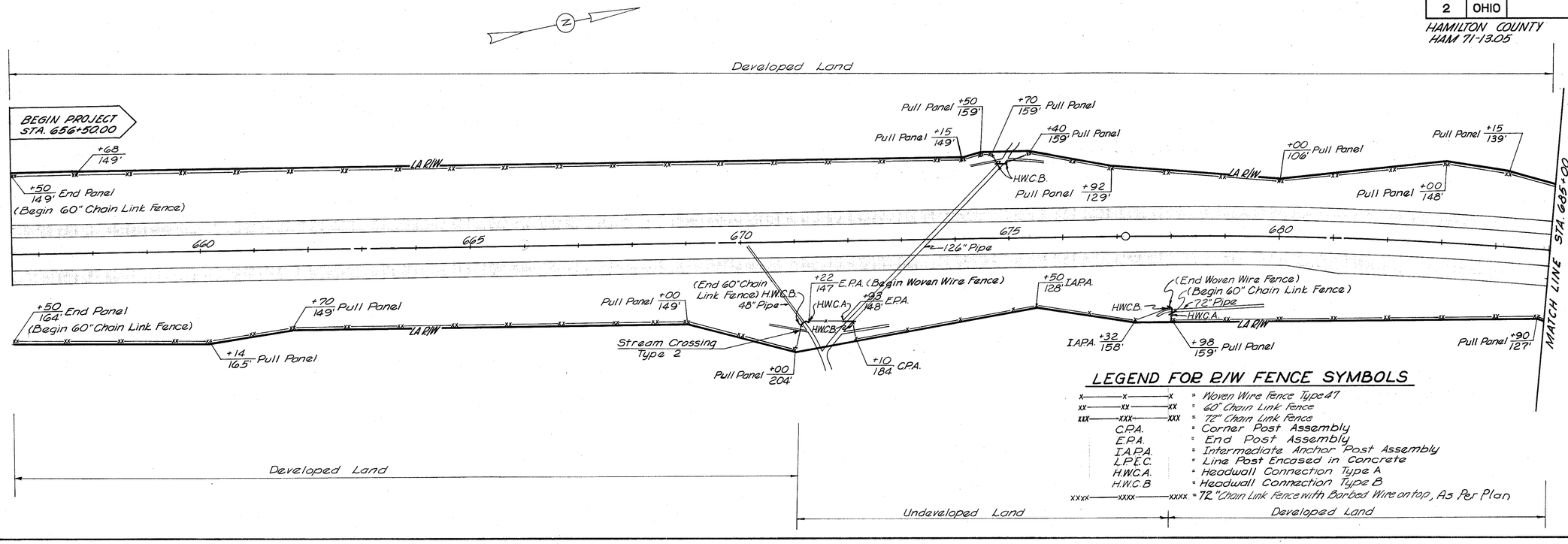
RETAINING WALL

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
R.G.E	K.R.	R.J.	A.B.	ELLIS 4-69	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

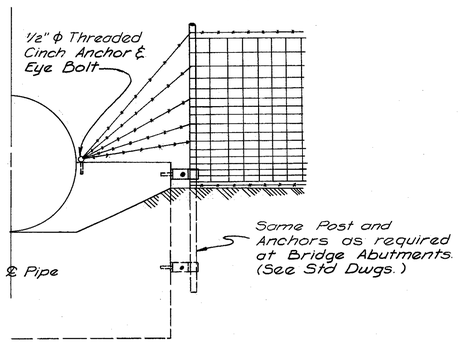
HAMILTON COUNTY
HAM 71-13.05

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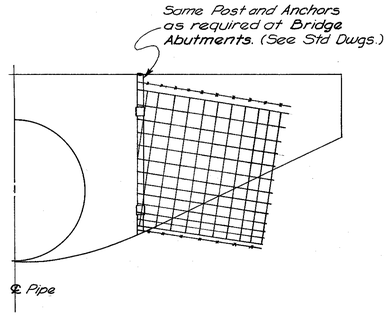


LEGEND FOR R/W FENCE SYMBOLS

x——x——x	= Woven Wire Fence Type 47
xx——xx——xx	= 60" Chain Link Fence
xxx——xxx——xxx	= 72" Chain Link Fence
C.P.A.	= Corner Post Assembly
E.P.A.	= End Post Assembly
I.A.P.A.	= Intermediate Anchor Post Assembly
L.P.E.C.	= Line Post Encased in Concrete
H.W.C.A.	= Headwall Connection Type A
H.W.C.B	= Headwall Connection Type B
xxxx——xxxx——xxxx	= 72" Chain Link Fence with Barbed Wire on top, As Per Plan



HEADWALL CONNECTION TYPE-A



HEADWALL CONNECTION TYPE-B

SUMMARY OF RIGHT OF WAY FENCE QUANTITIES

SHEET NO.	INTERSTATE					URBAN SECONDARY			
	I-25 Woven Wire Type 47	I-26 60" Chain Link	I-26 72" Chain Link	I-26 72" Chain Link As Per Plan	I-10 Dumped Rock	I-25 Woven Wire Type 47	I-26 60" Chain Link	I-26 72" Chain Link	I-10 Dumped Rock
361	707	5075			18				
362	4275	612			24	771			
363	1520	1367		1686			673		
364	8250	3242	707		18				
365	4019	2226			20				
366	6817	1394			24				
TOTAL	25588	13916	707	1686	104	771	673	—	—

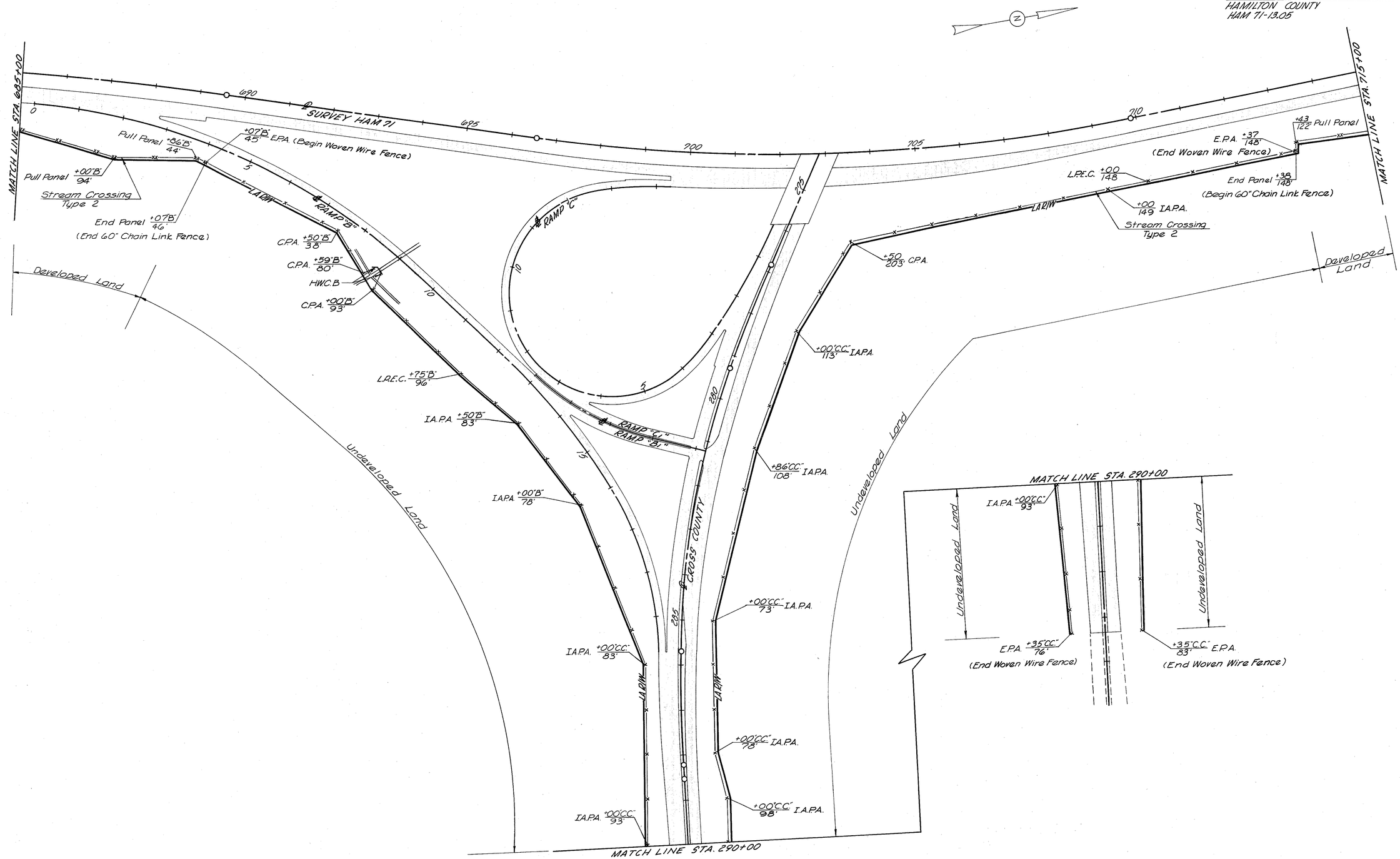
Quantities Carried to General Summary Sht. No. 53

FENCE PLAN
STA. 656+50 to STA. 685+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
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FENCE PLAN
STA. 685+00 to STA. 715+00 RIGHT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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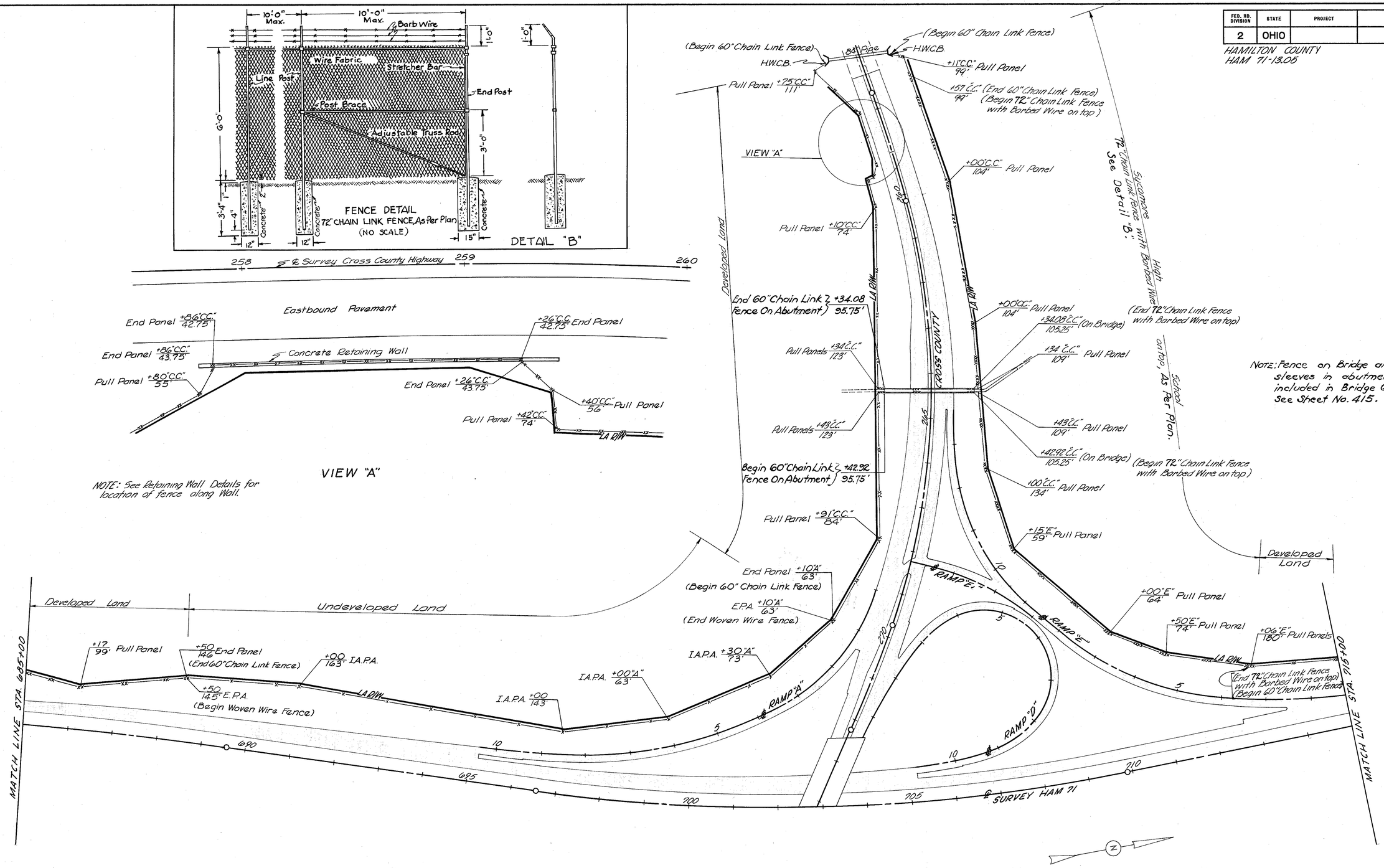
HAMILTON COUNTY
HAM 71-13.05

FENCE DETAIL
72" CHAIN LINK FENCE, As Per Plan
(NO SCALE)

DETAIL "B"

VIEW "A"

NOTE: See Retaining Wall Details for location of fence along Wall.



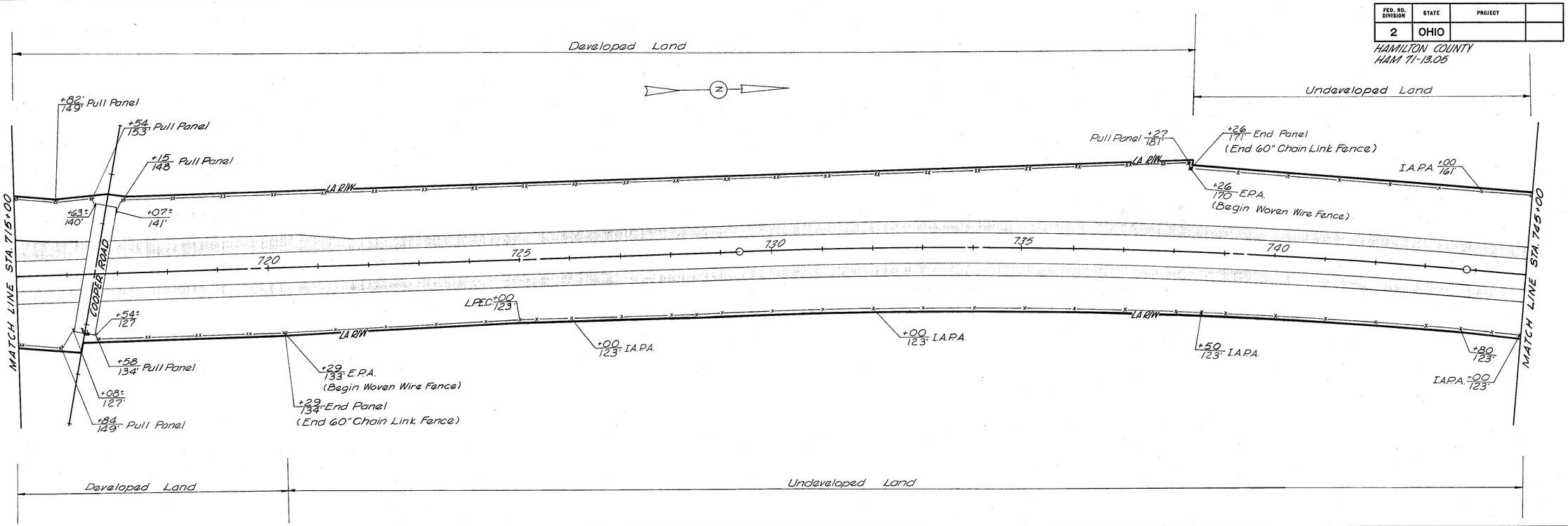
NOTE: Fence on Bridge and pipe sleeves in abutments, included in Bridge Quantities, See Sheet No. 415.

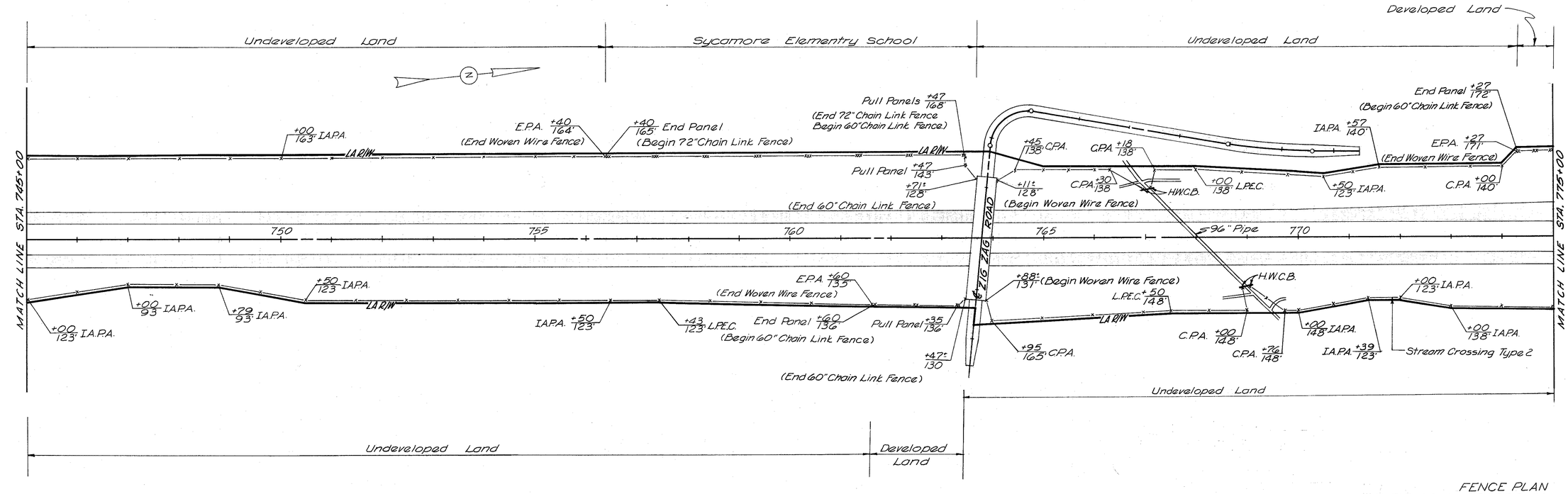
FENCE PLAN
STA. 685+00 to STA. 715+00 LEFT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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445

HAMILTON COUNTY
HAM 71-13.06





FENCE PLAN
STA. 715+00 to STA. 775+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM 71-13.05

Developed Land

Undeveloped Land

Undeveloped Land

Stream Crossing Type 2

E.P.A. +38 / 174' (Begin Woven Wire Fence)

End Panel +38 / 175' (End 60" Chain Link Fence)

I.A.P.A. +00"F" / 133'

C.P.A. +86"F" / 83'

E.P.A. +04"P" / 85' (End Woven Wire Fence)

C.P.A. +04"P" / 108'

+97"P" / 80' E.P.A. (Begin Woven Wire Fence)

+27"H" / 77' C.P.A.

I.A.P.A. +00"H" / 63'

+10"H" / 76' C.P.A.

+21"H" / 77' C.P.A.

I.A.P.A. +00 / 134'

H.W.C.B.

℄ RAMP F

℄ RAMP H

℄ SURVEY

℄ GURVEY PFEIFFER RD.

Std. Abut. Connection +14 / 23'

+93 / 23' Std. Abut. Connection

Std. Abut. Connection +02 / 23'

+83 / 23' Std. Abut. Connection

℄ RAMP G

℄ RAMP I

MATCH LINE STA. 775+00

MATCH LINE STA. 805+00

+75 / 143' I.A.P.A.

I.A.P.A. +50 / 148'

C.P.A. +30"G" / 88'

+02"G" / 88' C.P.A.

C.P.A. +17"G" / 68'

E.P.A. +33"P" / 73' (End Woven Wire Fence)

Pull Panel +92"I" / 52'

+12"I" / 69'

+84"I" / 71' Pull Panel

Pull Panel +67"I" / 74'

+82"I" / 46' Pull Panel

+50"I" / 76' Pull Panel

+06"P" / 94' End Panel (Begin 60" Chain Link Fence)

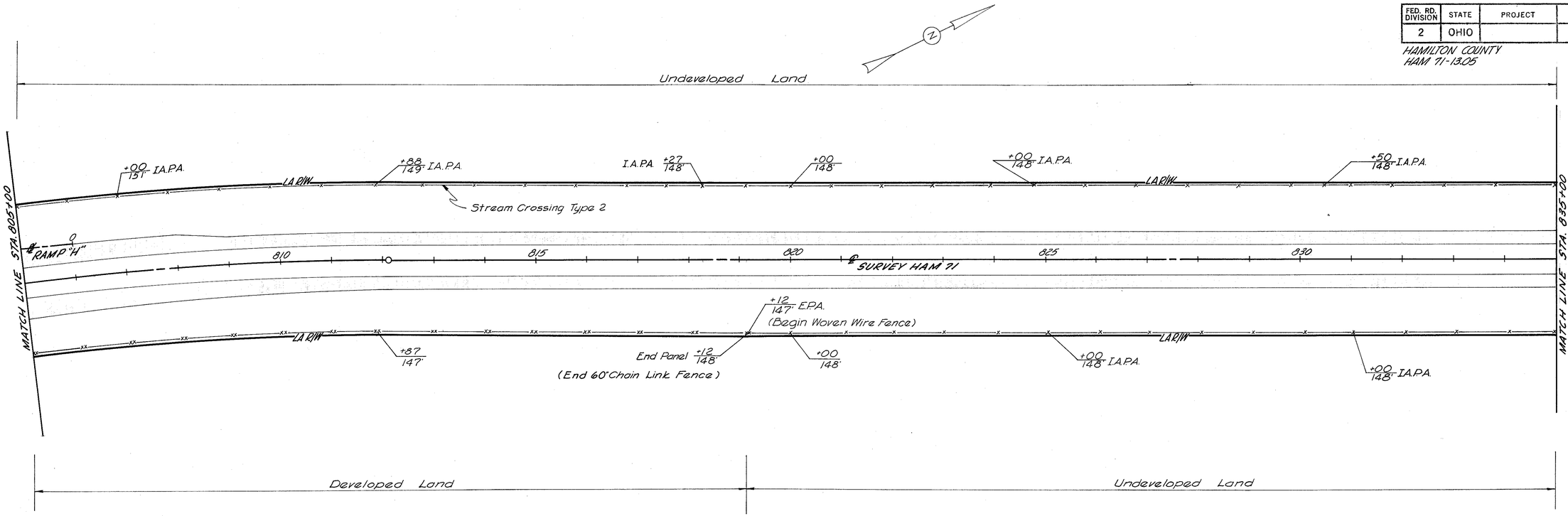
48" Pipe

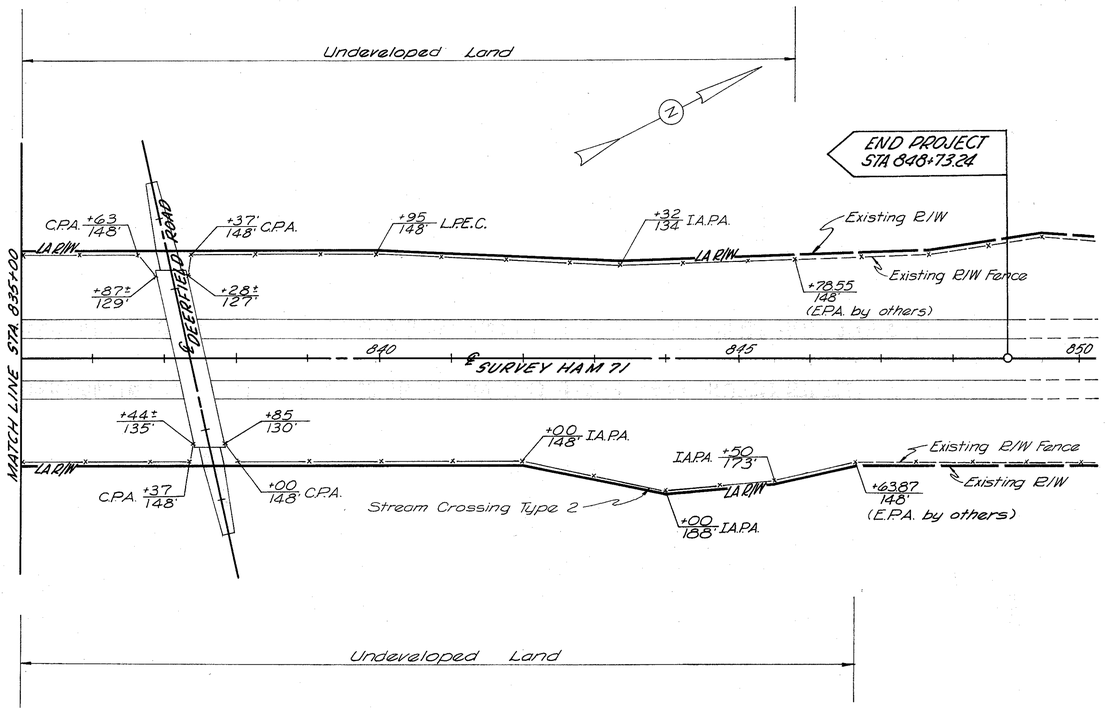
FENCE PLAN
STA. 775+00 to STA. 805+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HAMILTON COUNTY
HAM 71-13.05





FENCE PLAN
STA. 805+00 to STA. 850+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

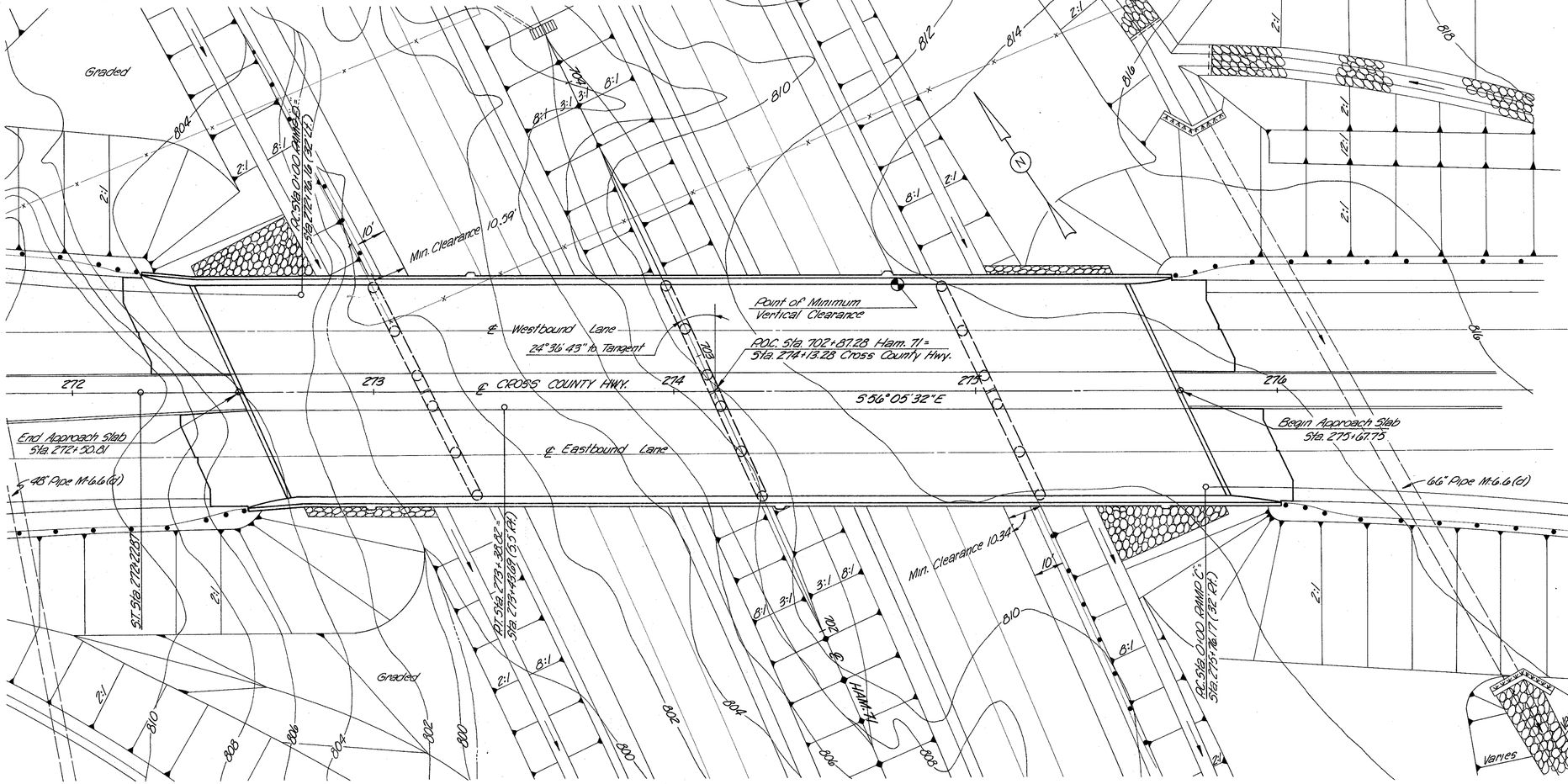
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HAMILTON COUNTY
HAM. 71-13.05

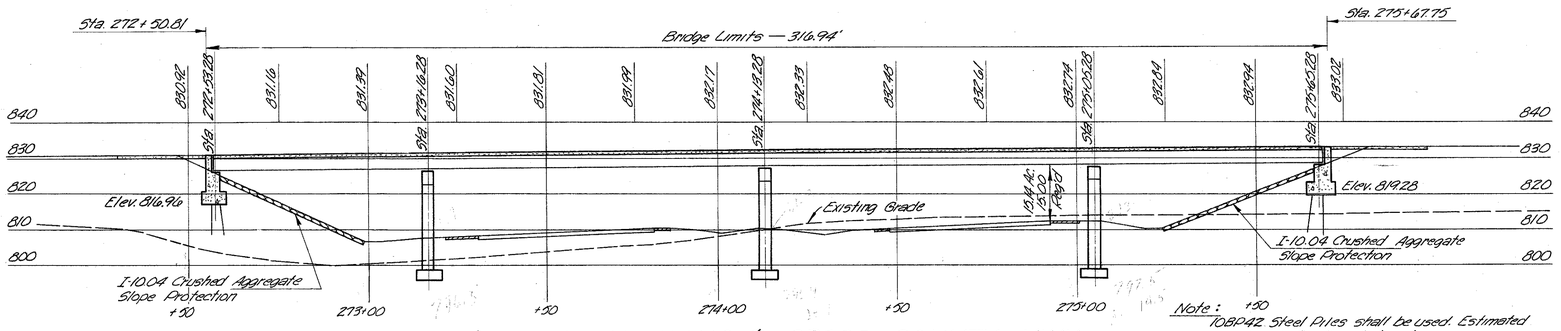
REFERENCE P.C. Sta. 696+55.86
6" Cedar
9" Twin Cedar
6" Cedar
7" Cedar

REFERENCE P.I. Sta. 703+28.38
3" Locust
3" Wild Cherry
4" Locust

B.M. R.R. Spike in Root of 36" Ash. 175' Lt. of Sta. 703+90.00 Elev. 806.90



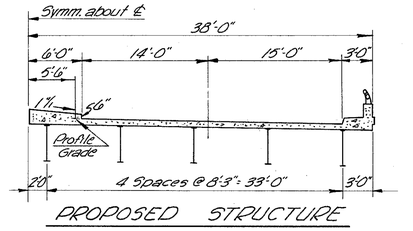
PLAN



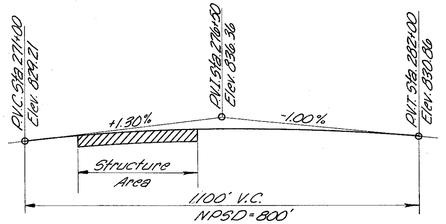
SECTION ALONG ℄ CROSS COUNTY HWY.

Note: Refer to Pier Detail Sheet for Pier Footing Elevations

Note: 108P42 Steel Piles shall be used. Estimated pile length for the abutments is approximately 20'.



PROPOSED STRUCTURE



CROSS COUNTY HWY. PROFILE GRADE

PROPOSED STRUCTURE

TYPE: Continuous Welded Plate Girder With Reinforced Concrete Deck & Substructure.

SPAN: Eastbound: 63'0", 97'0", 92'0", 60'0"
Westbound: 63'0", 97'0", 92'0", 60'0"

ROADWAY: 70'0" F.F. or 2'0" Safety Curbs

LOAD FREQUENCY: C.F. 400 (57)

SKEW: 24°36'43" Right Forward

WEARING SURFACE: 1" Monolithic Conc.

APPROACH SLABS: AS-1-54 (25' Long)

ALIGNMENT: Tangent

SAFETY CURBS: 2'0"

℄ HAM. 71 CURVE DATA

P.I. = Sta. 703+28.38
Δ = 19°33'10" Lt.
D = 1°28'
R = 3,900.53'
L = 1,393.14'
T = 673.12'
E = 57.57'
P.C. = Sta. 696+55.26
P.T. = Sta. 709+88.40
S.E. = 0.047 ft

TRAFFIC: 1975—19850 V.P.D.

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CINCINNATI OHIO 45206

SITE PLAN

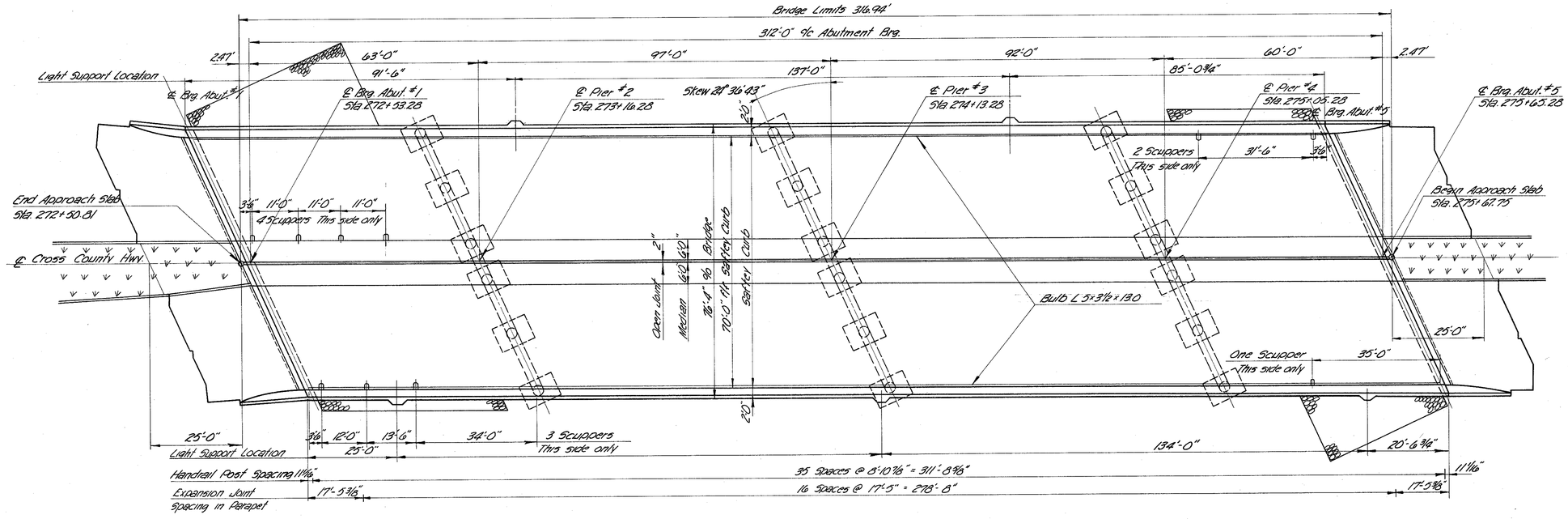
BRIDGE NO. HAM-71-1393
I-71 UNDER CROSS COUNTY HWY.
HAMILTON CO. I-71
P.O.C. STA. 702+87.28

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
Aerial Survey	Aerial Survey	R.G.E.	R.B.S.	E.H.H.	2/64

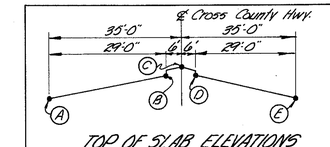
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

368
445

HAMILTON COUNTY
HAM. 71-13.05



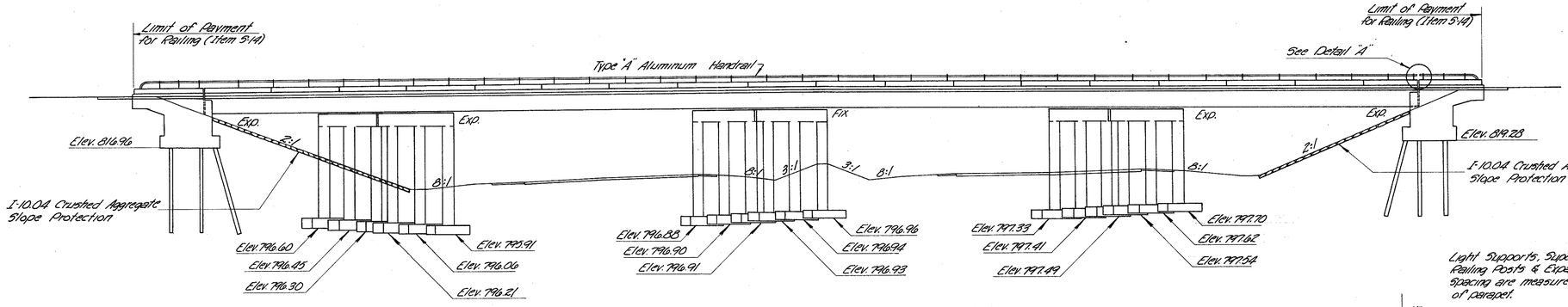
GENERAL PLAN



TOP OF SLAB ELEVATIONS

STATION	POINT (A)	POINT (B)	POINT (C)	POINT (D)	POINT (E)
272+00	831.29	830.93	———	———	———
+75	831.42	831.16	832.16	831.16	830.89
273+00	831.61	831.39	832.39	831.39	830.48
+25	831.60	831.60	832.60	831.60	830.77
+50	831.69	831.81	832.81	831.80	831.09
+75	831.73	831.99	832.99	831.98	831.40
274+00	831.76	832.16	833.16	832.16	831.71
+25	831.85	832.32	833.32	832.32	831.87
+50	831.99	832.47	833.47	832.47	832.02
+75	832.11	832.60	833.60	832.60	832.16
275+00	832.25	832.73	833.73	832.73	832.39
+25	832.27	832.83	833.84	832.84	832.61
+50	832.26	832.93	833.94	832.94	832.83
+75	———	———	———	———	833.02

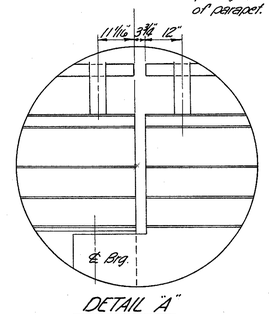
Note:
See Standard Drawing AP-1-57 for Handrail and Parapet expansion joint details.



Note:
All slopes shown are normal to ℄ I-71

Light Supports, Superstructure Railing Posts & Expansion Joint Spacing are measured from end of parapet.

ELEVATION



DETAIL "A"

HARRY BALKE ENGINEERS
990 NASSAU STREET
CINCINNATI, OHIO 45206

GENERAL PLAN AND ELEVATION

BRIDGE NO. HAM-71-1393
I-71 UNDER CROSS COUNTY HWY.
HAMILTON CO. I-71
P.O.C. STA. 702+87.28

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
R.G.E.	J.H.Z.	Neil	R.G.E.	E 11/5 2/64	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

369
445

HAMILTON COUNTY
HAM.71-13.05

ESTIMATED QUANTITES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER-STRUCT.	ABUT.#1	ABUT.#3	PIER#2	PIER#3	PIER#4	GEN'L
E-2	Lump Sum	Lump Sum	Cofferdams, Cribs and Sheeting							Lump Sum
E-2	1382	Cu.Yds.	Unclassified Excavation		215	213	179	401	374	
E-2	112	Cu.Yds.	Shale Excavation				40	30		
5-1	798	Cu.Yds.	Class "C" Concrete Superstructure	798						
5-1	209	Cu.Yds.	Class "C" Concrete Piers above footings				71	68	70	
5-1	198	Cu.Yds.	Class "E" Concrete Abutments above footings		99	99				
5-1	235	Cu.Yds.	Class "E" Concrete Footings		69	69	39	39	39	
5-3	20	Lin.Ft.	Waterproofing, Premolded Sealing Strip		10	10				
5-4	319,635	Lbs.	Reinforcing Steel	211,895	10,695	10,695	28,710	28,710	28,710	
5-7	657,920	Lbs.	Structural Steel	657,920						
5-8	657,920	Lbs.	Field Painting of Structural Steel	657,920						
5-9	40	Sq.Ft.	1" Preformed Expansion Joint Filler		20	20				
5-14	693.12	Lin.Ft.	Railing (Type "A" Aluminum Rail and Supports, Concrete Parapet)	625.12	34	34				
5-16	Lump Sum	Lump Sum	First Test Pile							Lump Sum
5-18	960	Lin.Ft.	Steel Piles, 10BP42		480	480				
S-25			See Sheet 16							
5-29	84	Cu.Yds.	Porous Backfill		42	42				
5-29	10	Each	Scuppers, Including Supports	10						
5-29	150	Lin.Ft.	6" Perforated Helical C.M.P. M-36.4(n) Including Specials		75	75				
5-29	96	Lin.Ft.	6" Helical C.M.P. M-36.4(n) Non-Perforated		48	48				
E-10	810	Sq.Yds.	Crushed Aggregate Slope Protection		417	393				
5-101	798	Each	Water-Reducing Set-Retarding Admixtures for Concrete	798						

GENERAL NOTES

REFERENCE Shall be made to Standard Drawings SD-1-63 Sheets 1 thur 4, dated November 12, 1963, AR-1-57 dated April 9, 1957 and revised April 2, 1962, RB-1-55 dated March 1, 1955 and revised February 2, 1959, and to Supplemental Specifications No. S-101 dated July 12, 1962 and No. S-307 dated August 28, 1964.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.

DESIGN DATA:

Design Loading	CF 400
Concrete Class C	Basic unit stress 1,333 psi.
Concrete Class E	Basic unit stress 1,133 psi.
Structural Steel	ASTM A36 - Basic unit stress 20,000 psi (ASTM A7 and A373 steel not permitted except for piles. Piles need not be ASTM A36)
Reinforcing Steel	ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 psi except spiral reinforcement may be plain and of structural grade with basic unit stress of 18,000 psi.

FOOTINGS without piles shall extend a minimum of 3' into undisturbed rock or to the elevation shown whichever is lower.

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 5.0 tons per square foot.

PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 Feet back of the abutment, after which excavation shall be made for the abutments.

EXCAVATION QUANTITY includes the removal of fill material required for construction of the abutments.

PILES shall be driven with a hammer of not less than 11,000 Ft. lbs. per blow to firm contact with rock. If the length of penetration is approximately equal to the depth 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. 5-18.05 is not less than the following value for a pile hammer of the indicated energy rating:

For the abutment piles..

50 tons per pile using a 11,000 Ft. lb. hammer.

43 tons per pile using a 13,000 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 95 tons per pile for the abutment piles.

WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop. Class "B" welds are shown thus (B)

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.

MACHINE FINISH: At the Contractor's option, the concrete bridge deck may be finished by the use of a finishing machine.

CONCRETE: Superstructure and piers above footings shall be "Class C Concrete". Abutments and pier footings shall be "Class E Concrete."

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example, A700 is a No. 7 size bar and A1014 is a No. 10 size bar.

RAILING: Aluminum rail and supports, concrete parapet, reinforcing bars wholly within the concrete parapet, and sponge rubber for parapet joints shall be included in Item 5-14 for payment.

ERECTION PROCEDURE: The Contractor shall submit to the Director, for approval, three (3) prints showing the proposed erection procedure for the plate girders.

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990 NASSAU STREET
CINCINNATI, OHIO 45206

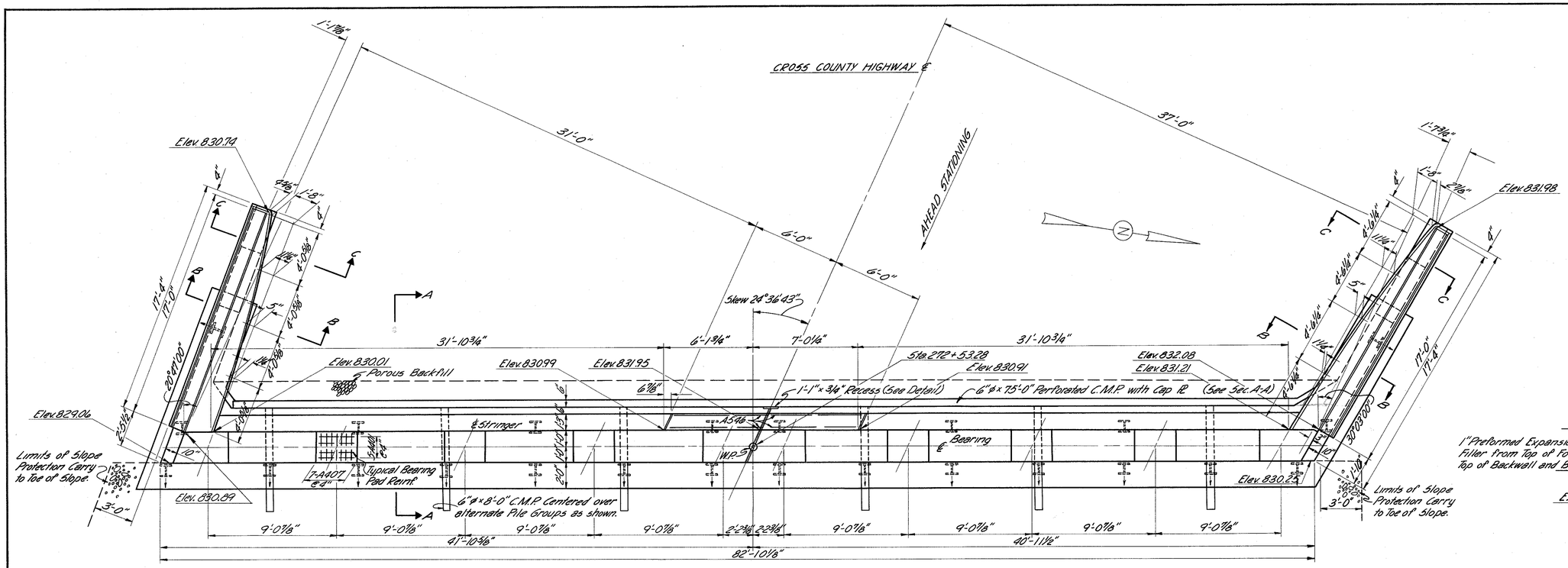
ESTIMATED QUANTITIES & GENERAL NOTES
BRIDGE NO. HAM-71-1393
I-71 UNDER CROSS COUNTY HWY.
HAMILTON CO. I-71
P.O.C. STA. 702+87.28

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
N.R.K.	J.H.Z.	Neil	R.G.E.	Ellis 2/64	11-10-64 JHZ.

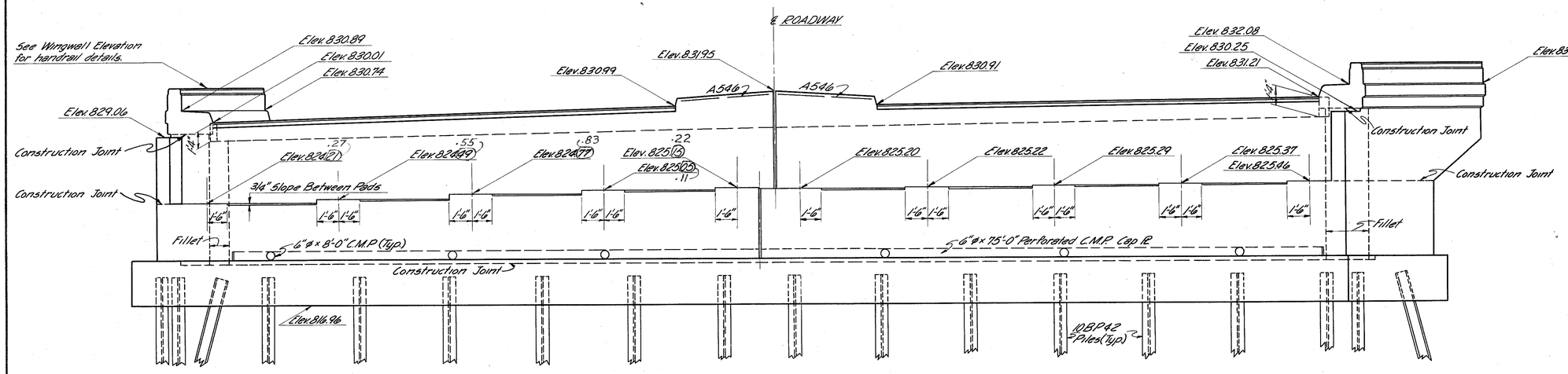
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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HAMILTON COUNTY
HAM. 71-13.05



PLAN ABUTMENT No. 1



ELEVATION ABUTMENT No. 1

NOTES:
1. All piles shall be 10BP42.
2. Piles marked thus, → H shall be battered 1:4 in the direction of the arrow.
3. Maximum pile load 35 tons per pile.
4. Piles shall be driven to a minimum bearing capacity of 35 tons per pile for the abutments.
5. Refer to Std. Dwg. No. SD-1-63 sheets 2 and 4 for expansion dam and curb plate details.
6. Parapet concrete, and A545 reinforcing bars in Item 5-14 for payment.

EF = Each Face
NF = Near Face
FF = Far Face

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ABUTMENT DETAILS

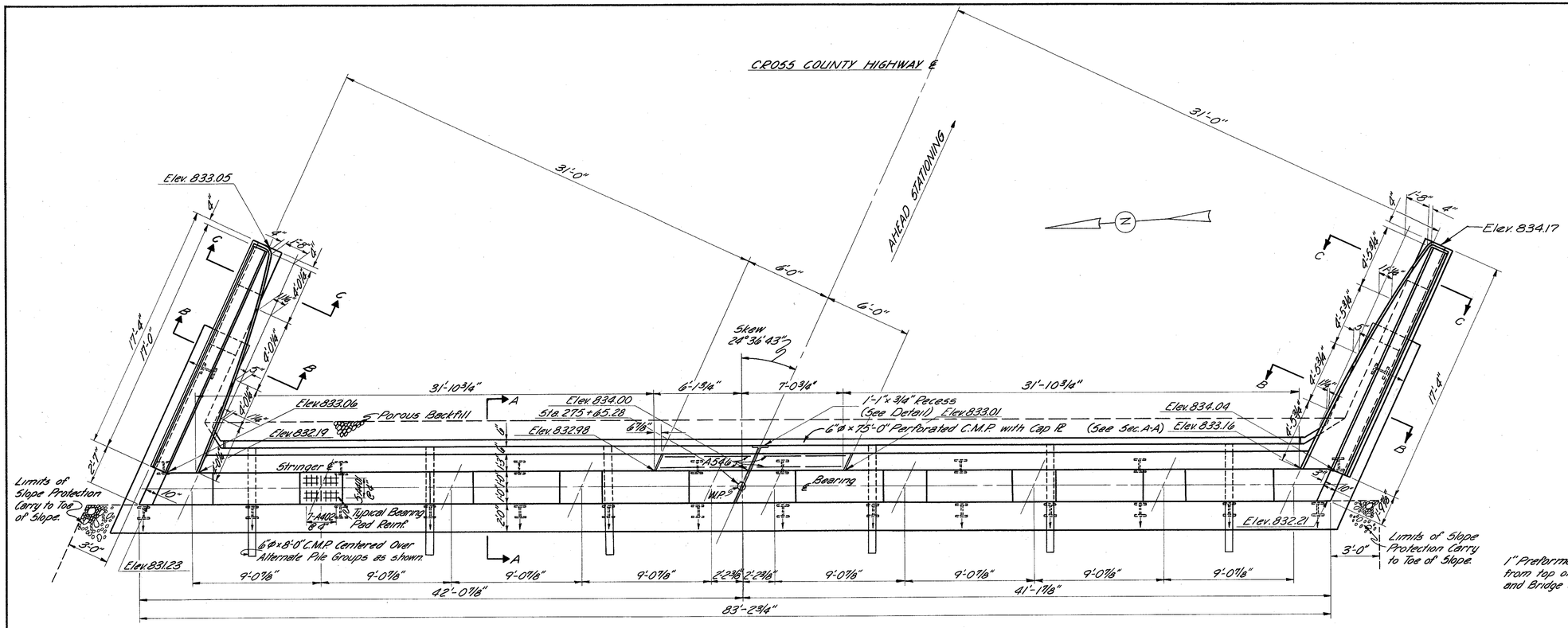
BRIDGE NO. HAM-71-1393
I-71 UNDER CROSS COUNTY HWY.
HAMILTON CO. I-71
P.O.C. STA. 702+87.28

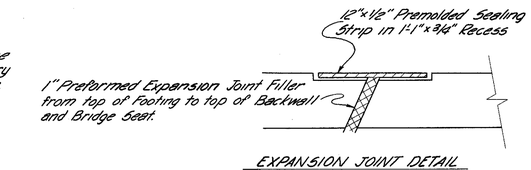
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
G.J.C.	J.H.Z.	K.C.H.	R.G.E.	Ellis 2/64	4-27-65

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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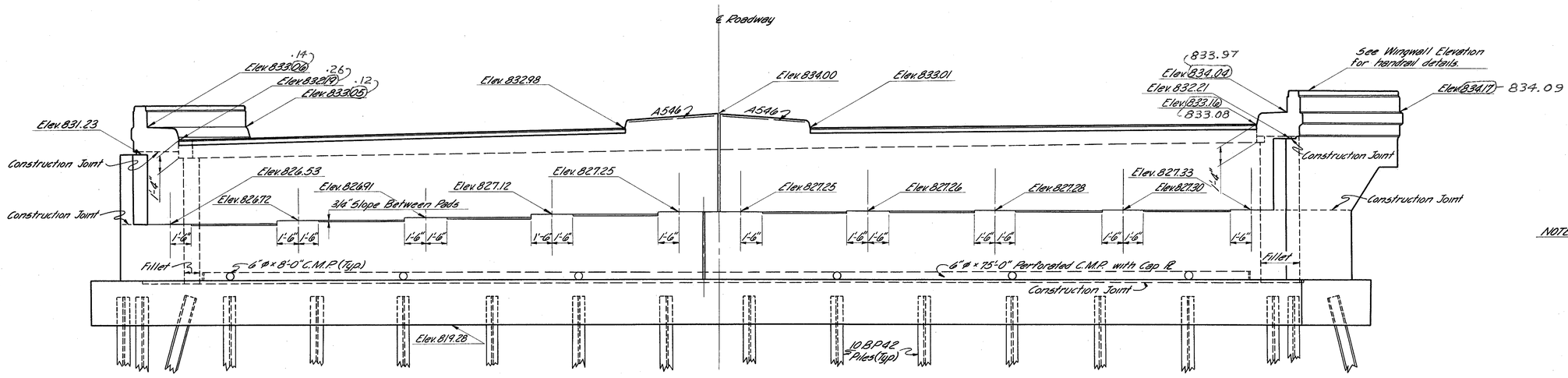
HAMILTON COUNTY
HAM. 71 - 13.05





EXPANSION JOINT DETAIL

PLAN ABUTMENT No. 5



ELEVATION ABUTMENT No. 5

NOTE:
Refer to Abutment No. 1 Details for additional notes.

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ABUTMENT DETAILS

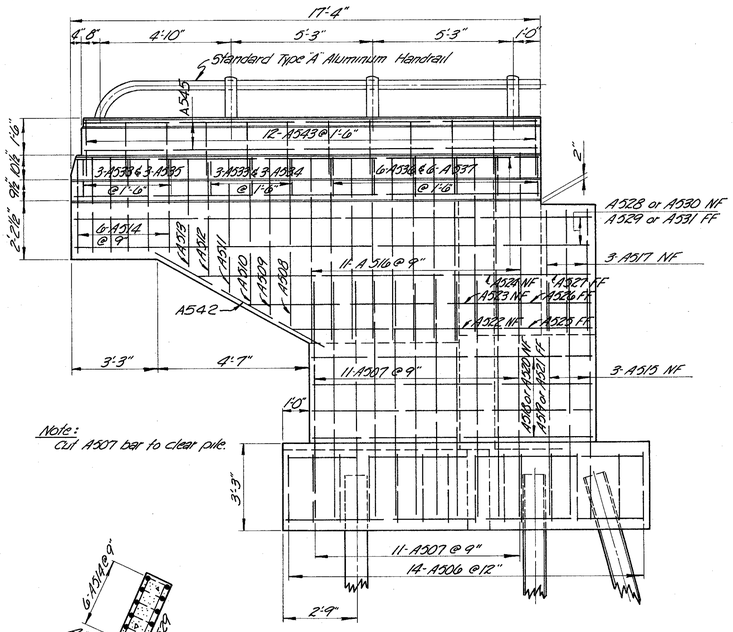
BRIDGE NO. HAM-71-1393
I-71 UNDER CROSS COUNTY HWY.
HAMILTON CO. I-71
P.O.C. STA. 702+87.28

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
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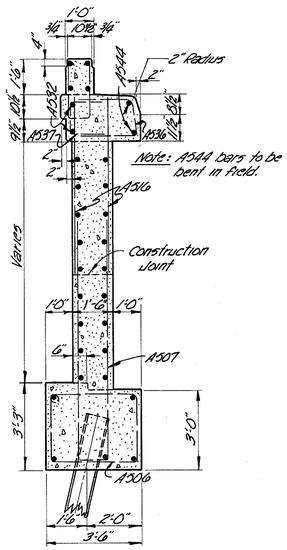
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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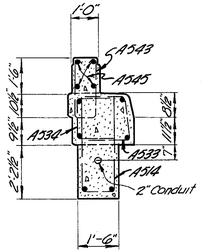
HAMILTON COUNTY
HAM. 71-13.05



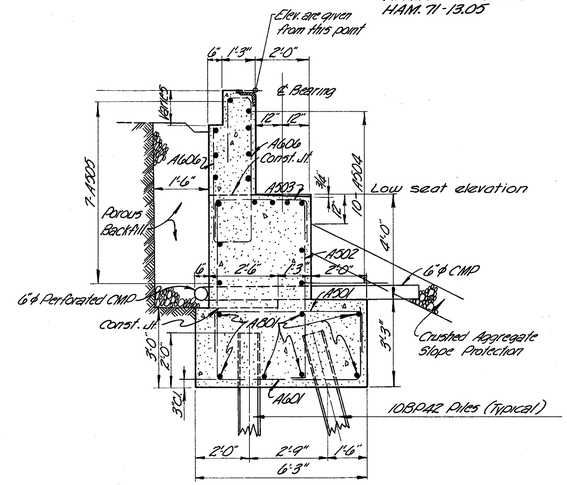
WINGWALL ELEVATION



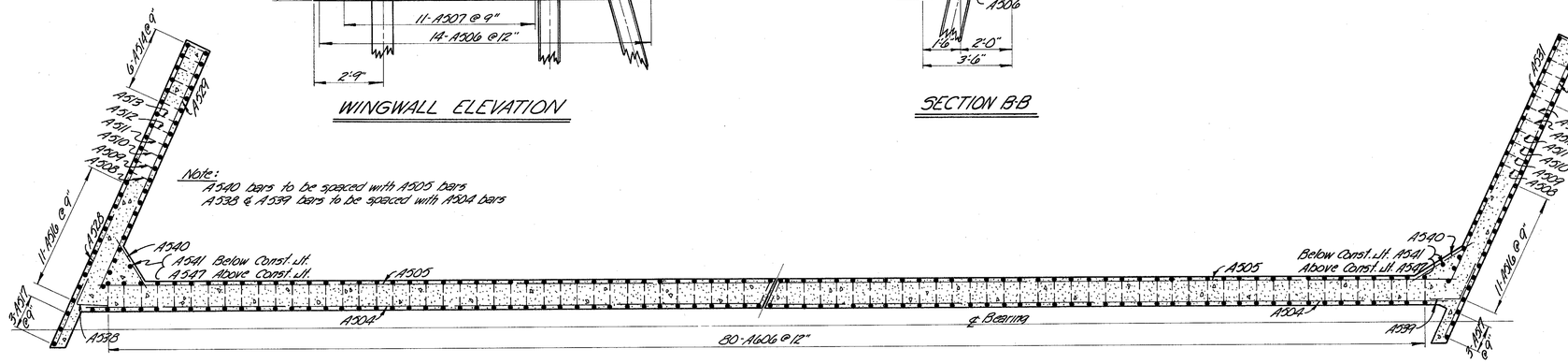
SECTION B-B



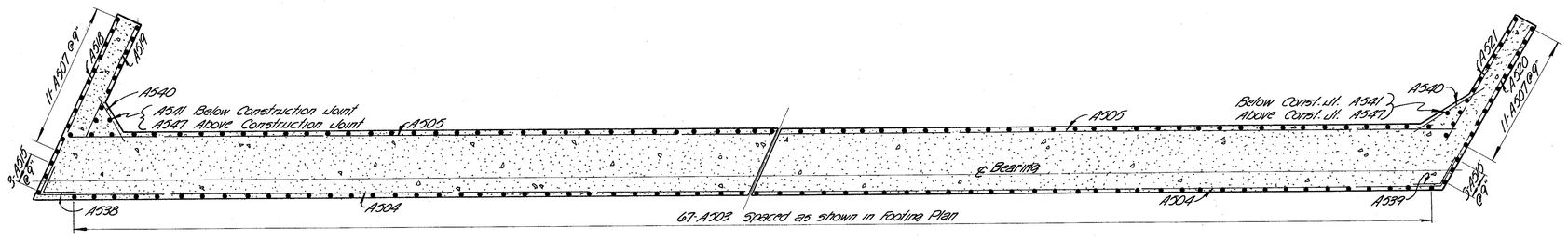
SECTION C-C



SECTION A-A



SECTION ABOVE BRIDGE SEAT



SECTION ABOVE FOOTING

Note:
Refer to Abutment No. 1 Details for additional notes.

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CINCINNATI, OHIO 45206

ABUTMENT DETAILS

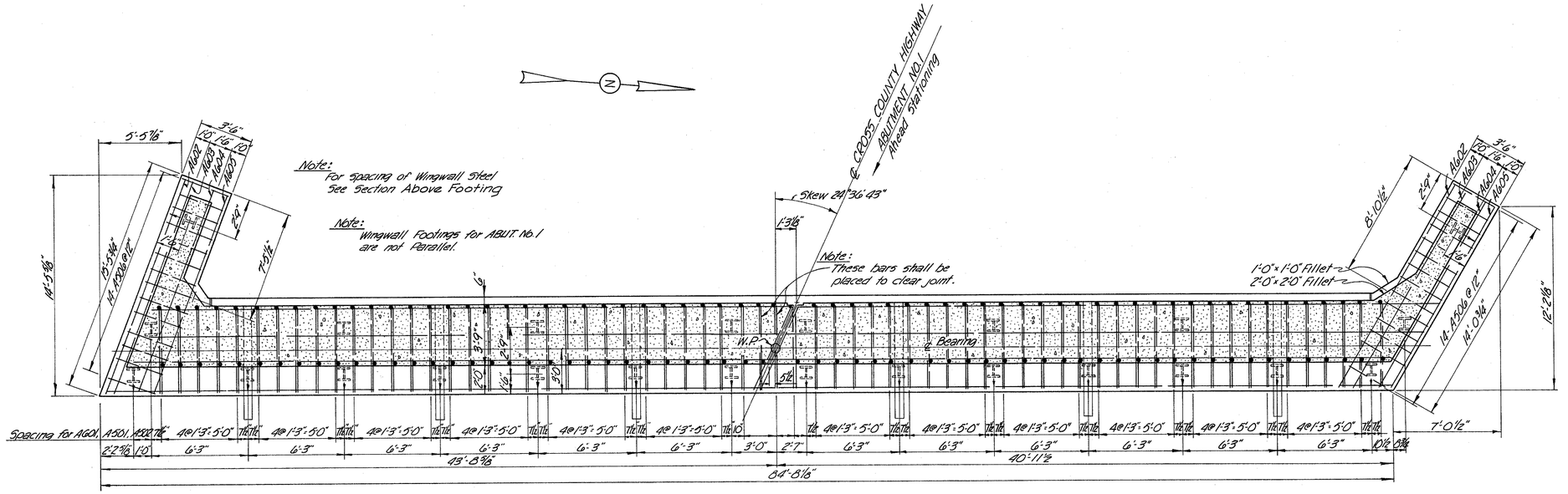
BRIDGE NO. HAM-71-1393
I-71 UNDER CROSS COUNTY HWY.
HAMILTON CO. I-71
P.O.C. STA. 702+87.28

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
G.J.C.	J.H.Z.	Neil	R.G.E.	Ellis 2/64	

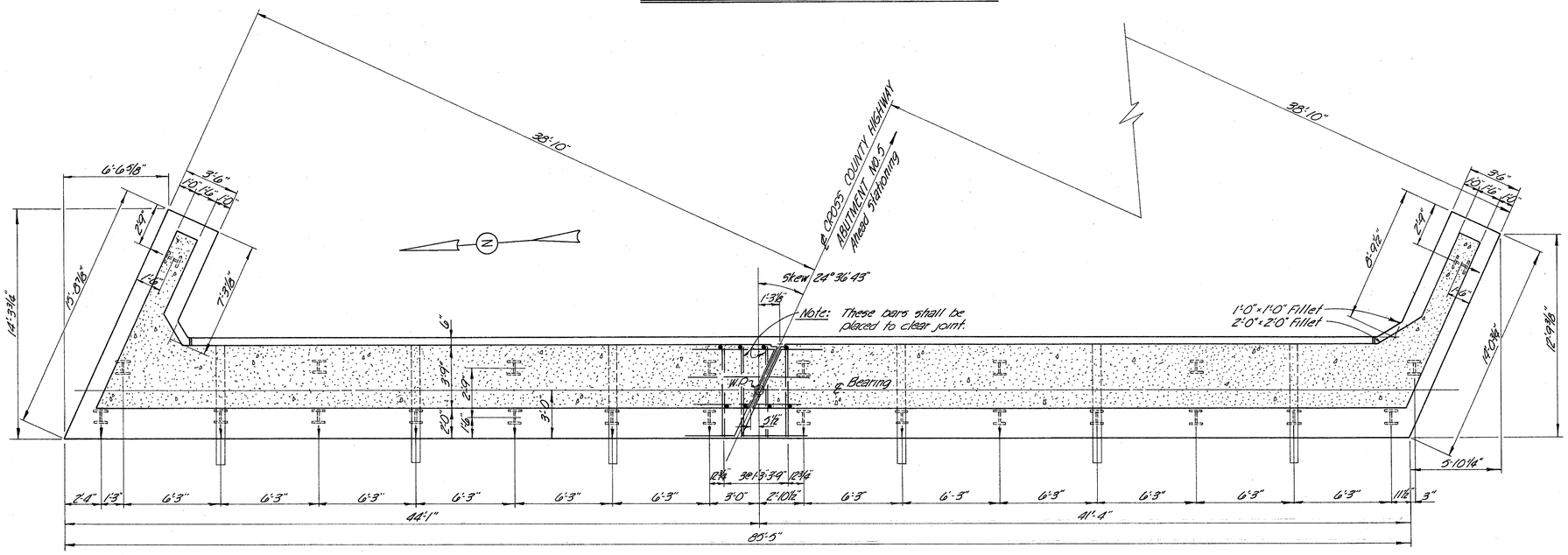
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
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HAMILTON COUNTY
HAM.71-1305



FOOTING PLAN FOR ABUTMENT NO.1



FOOTING PLAN ABUTMENT NO.5

All steel not shown is the same as in ABUT. No.1

Note: Refer to Abutment No.1 Details for Additional Notes

REINFORCING STEEL LIST

TOTAL FOR BOTH ABUTMENTS

MARK	LENGTH	SHAPE	DIM. A	NO.	WEIGHT	BAR DIAGRAM
A401	2'-8"	Str.		100	178	
A402	1'-8"	Str.		140	156	
A501	8'-4"	Bent		134	1163	
A502	7'-4"	Bent		134	1023	
A503	8'-4"	Bent		134	1163	
A504	21'-3"	Str.		80	1773	
A505	21'-0"	Str.		56	1227	
A506	11'-11"	Bent		56	696	
A507	18'-1"	Bent	6'-7"	44	830	
A508	12'-7"	Bent	5'-10"	4	52	
A509	11'-11"	Bent	5'-6"	4	50	
A510	11'-1"	Bent	5'-1"	4	46	
A511	10'-5"	Bent	4'-9"	4	43	
A512	9'-7"	Bent	4'-4"	4	40	
A513	8'-11"	Bent	4'-0"	4	37	
A514	8'-1"	Bent	3'-7"	24	202	
A515	8'-7"	Str.		12	107	
A516	6'-3"	Str.		44	287	
A517	4'-3"	Str.		12	33	
A518	11'-7"	Str.		8	97	
A519	9'-0"	Str.		8	75	
A520	11'-0"	Str.		8	92	
A521	8'-9"	Str.		8	73	
A522	11'-10"	Str.		4	49	
A523	13'-3"	Str.		4	55	
A524	14'-9"	Str.		4	62	
A525	9'-6"	Str.		4	40	
A526	11'-3"	Str.		4	47	
A527	12'-9"	Str.		4	53	
A528	19'-6"	Str.		4	81	
A529	15'-7"	Str.		4	65	
A530	18'-9"	Str.		4	78	
A531	15'-7"	Str.		4	65	
A532	17'-0"	Str.		8	142	
A533	2'-11"	Bent		24	73	
A534	3'-9"	Bent		12	47	
A535	3'-1"	Bent		12	39	
A536	4'-5"	Bent		24	111	
A537	4'-7"	Bent		24	115	
A538	3'-0"	Bent		14	44	
A539	3'-0"	Bent		14	44	
A540	4'-9"	Str.		24	119	
A541	5'-6"	Str.		4	23	
A542	7'-3"	Str.		8	60	
A543	5'-5"	Bent		48	275	
A544	17'-0"	Str.		8	142	
A545	16'-8"	Str.		16		
A546	6'-3"	Str.		8	52	
A547	3'-9"	Str.		4	16	
A601	14'-6"	Bent		134	2918	
A602	15'-0"	Str.		4	90	
A603	14'-8"	Str.		4	88	
A604	14'-2"	Str.		4	85	
A605	13'-8"	Str.		4	82	
A606	13'-8"	Bent		160	3284	
A801	23'-3"	Str.		56	3477	
			Total		21,390	

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ABUTMENT DETAILS

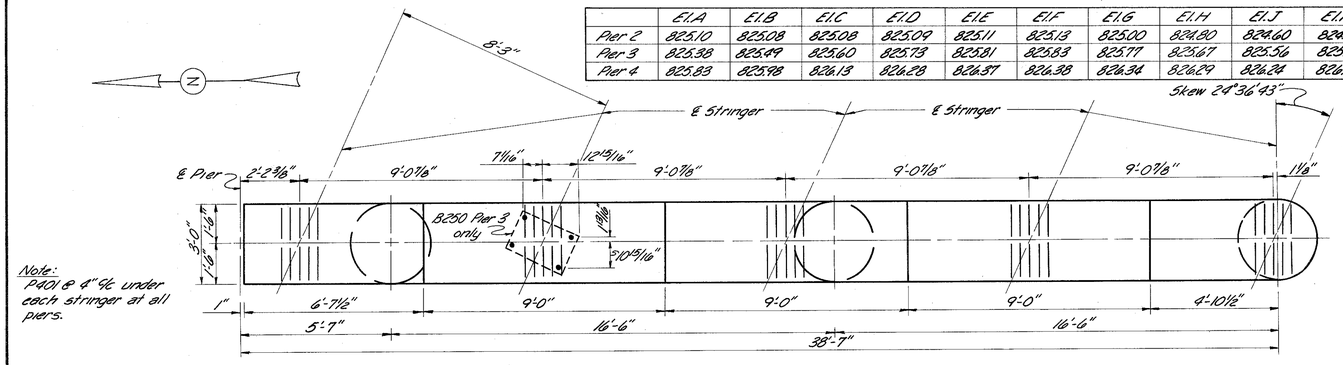
BRIDGE NO. HAM-71-1393
I-71 UNDER CROSS COUNTY HWY
HAMILTON CO. I-71
P.O.C. STA. 702+87.28

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
G.J.C.	J.H.Z.	Neil	R.G.E.	E.I.I.S 2/64	

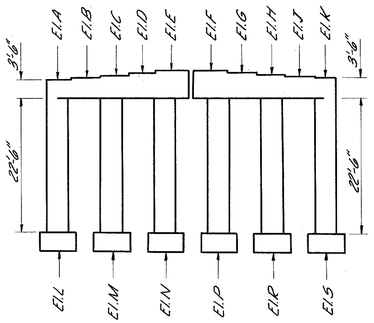
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR	374 / 445
2	OHIO			

HAMILTON COUNTY
HAM.71-1305

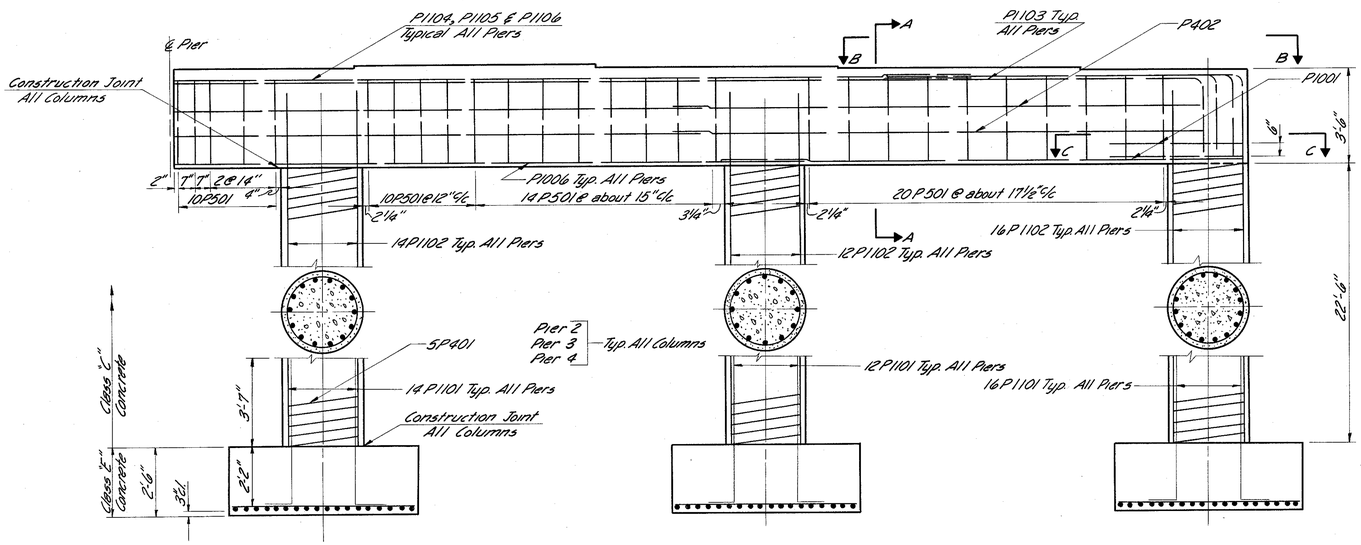
	El.A	El.B	El.C	El.D	El.E	El.F	El.G	El.H	El.J	El.K	El.L	El.M	El.N	El.P	El.R	El.S
Pier 2	825.10	825.08	825.08	825.09	825.11	825.13	825.00	824.80	824.60	824.41	796.60	796.65	796.30	796.21	796.06	795.91
Pier 3	825.38	825.49	825.60	825.73	825.81	825.83	825.77	825.67	825.56	825.46	796.88	796.90	796.91	796.93	796.94	796.96
Pier 4	825.83	825.98	826.13	826.28	826.37	826.38	826.34	826.29	826.24	826.20	797.33	797.41	797.49	797.54	797.62	797.70



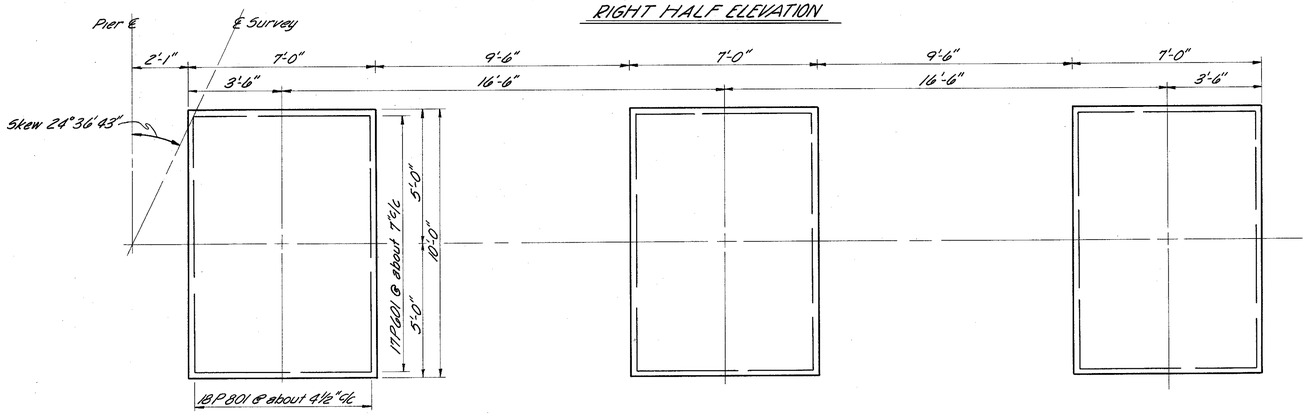
Note:
P401 @ 4" ℄c under each stringer at all piers.



RIGHT HALF CAP PLAN

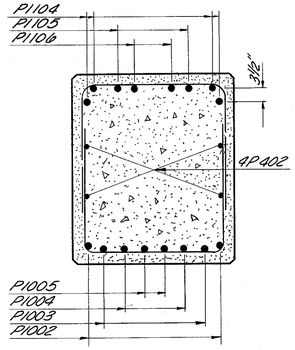


RIGHT HALF ELEVATION

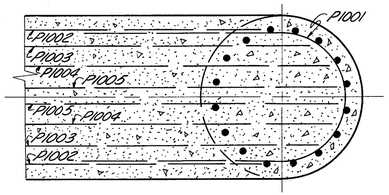


RIGHT HALF FOOTING PLAN

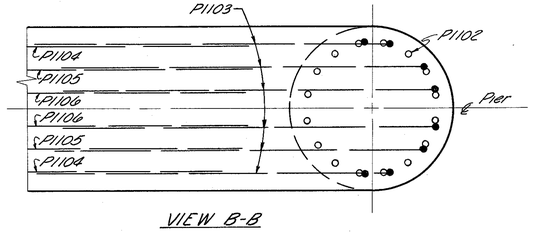
ELEVATION
Looking Ahead Stationing



SECTION A-A



SECTION C-C

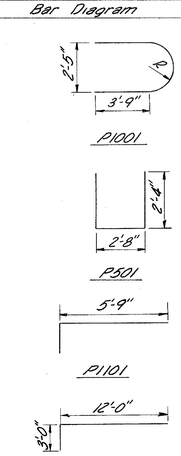


VIEW B-B

REINFORCING STEEL LIST
INCLUDES ALL THREE PIERS

Mark	Length	Shape	No.	Pier 2	Pier 3	Pier 4	Weight
P401	2'-3"	Str.	150	50	50	50	225
P402	19'-9"	Str.	48	16	16	16	633
P501	7'-1"	Bent	324	108	108	108	2,394
P801	6'-8"	Str.	306	102	102	102	3,064
P801	9'-8"	Str.	324	108	108	108	8,362
P1001	11'-4"	Bent	12	4	4	4	585
P1002	18'-2"	Str.	12	4	4	4	938
P1003	18'-8"	Str.	12	4	4	4	964
P1004	18'-10"	Str.	12	4	4	4	972
P1005	19'-0"	Str.	12	4	4	4	981
P1006	23'-6"	Str.	48	16	16	16	4,854
P1101	6'-11"	Bent	252	84	84	84	9261
P1102	25'-3"	Str.	252	84	84	84	33,807
P1103	14'-8"	Bent	48	16	16	16	3,740
P1104	30'-1"	Str.	24	8	8	8	3,837
P1105	31'-1"	Str.	12	4	4	4	1982
P1106	31'-3"	Str.	12	4	4	4	1,992
					TOTAL		78,591

Bar Diagram



SPIRAL REINFORCING BARS

Mark	No.	Size	Core Dia.	Length	Pitch	No. of Turns	Weight
SP401	18	½"ø	32"	22'-6"	4½"	63	7539
						TOTAL	7539

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 3 turns (total number of closed coils), expressed as the nearest whole number. Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item 5-4.11½ closed coils shall be provided at the ends of each spiral unit.
Four steel channel, tee or angle spacers, weigth 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.

BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes.

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PIER DETAILS

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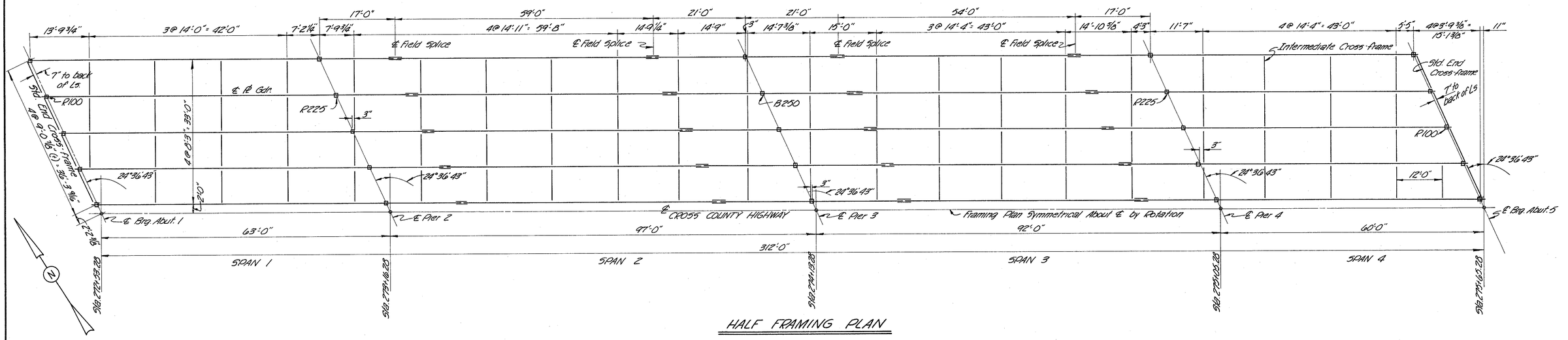
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
G.J.C.	N.M.M.	K.C.H.	R.G.E.	Ellis 2/64	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

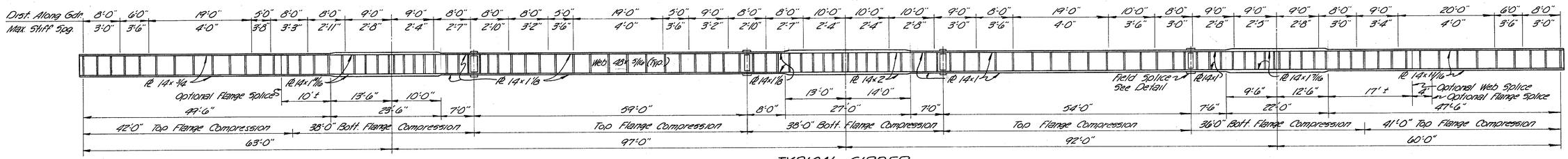
375
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HAMILTON COUNTY
HAM.71-13.05

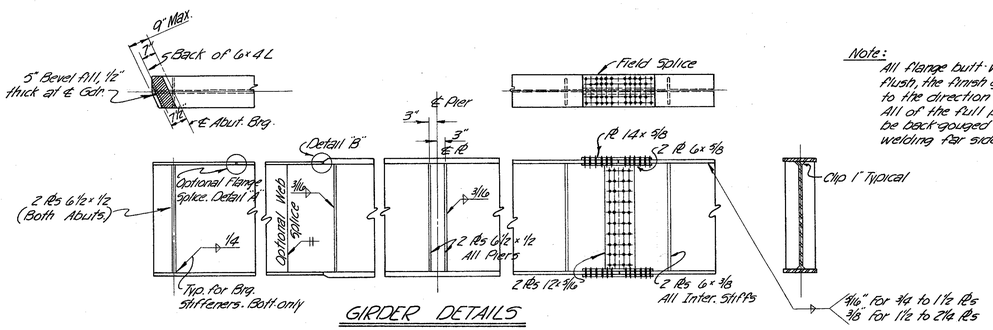
Note: Location points shown for cross-frames are ℄'s of supporting stiffeners.



HALF FRAMING PLAN

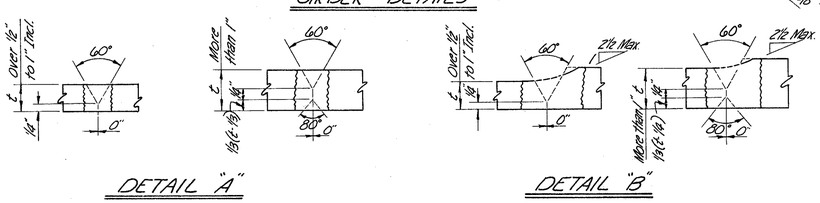


TYPICAL GIRDER



GIRDER DETAILS

Note:
All flange butt-welds shall be ground flush, the finish grinding being parallel to the direction of stress.
All of the full penetration welds shall be back-gouged and welded after welding far side.



DETAIL "A"

DETAIL "B"

NOTES:

1. CROSS FRAMES: For details of intermediate cross-frames see typical section of deck. For details of end cross-frames see Std. Drawing SD-1-63, Sheet 2 of 4. End cross-frames shall be welded to girder webs.
2. STIFFENERS: Intermediate stiffeners shall be located so as to support cross-frames at locations shown and so that maximum spacing given is not exceeded. Intermediate stiffeners shall have contact bearing with the compression flange, but may have a clearance of not more than 1/8 inch from the tension flange. In shop painting, care shall be taken to make certain that paint is forced through one side to the other of the 1/8 inch opening. Bearing stiffeners, over piers and at abutments shall be machine to a true contact bearing with the flange plates and shall be welded as shown to bottom flange.
3. For details of end dams, scuppers, bulb angle gutters, and curb plates, see Std. Drawing SD-1-63, Sheets 2, 3 and 4 of 4.
4. For details of rockers and bolsters see Standard Drawing RB-1-55.
5. SHOP SPLICES: If splices in addition to those shown are required, their location and detail shall be submitted to the Director for approval prior to ordering of material.
6. FIELD SPLICES: Open holes shown are for 7/8" ϕ high strength steel bolts, in accordance with Specifications S-7-10. Joints shall be friction-type.

9 Item S-7.10, bolt lengths determined by the use of Table No. 1 shall be adjusted to the next 1/4 inch increment.

7. Radiographic examination of welds shall be made in accordance with Supplemental Specifications S-307
8. "In the final assembly of the parts to be bolted, drift pins shall be placed in a sufficient number of holes (not less than 25 percent for field erection) to provide and maintain accurate alignment of holes and parts, and sufficient bolts shall be installed and brought to a snug tight condition to bring the parts into complete contact. Bolts shall then be installed in any remaining open holes and tightened to a snug tight fit, after which all bolts shall be tightened completely by calibrated wrenches or by the turn-of-nut method. Drift pins shall then be replaced with bolts, tightended in the same manner."

DEFLECTION & CAMBER

	SPAN 1			SPAN 2					SPAN 3					SPAN 4		
	1/4 Pt.	1/2 Pt.	3/4 Pt.	Left Splice	1/4 Pt.	1/2 Pt.	3/4 Pt.	Right Splice	Left Splice	1/4 Pt.	1/2 Pt.	3/4 Pt.	Right Splice	1/4 Pt.	1/2 Pt.	3/4 Pt.
Defl. due to Weight of Steel	1/16	0	0	1/8	1/8	3/16	1/16	1/16	1/16	1/16	1/8	1/16	1/16	1/16	1/16	1/16
Defl. due to Remain. D.L.	1/8	1/8	0	3/16	7/16	1/16	3/16	3/16	1/4	1/4	9/16	3/8	1/4	0	3/16	1/8
Camber for Vertical Curve	1/16	1/8	1/8	3/16	3/16	3/16	3/16	3/16	3/16	3/16	1/4	3/16	3/16	1/16	1/8	1/16
Total Deflection & Camber	1/4	1/4	1/8	5/8	3/4	1 3/16	5/8	9/16	1/2	1/2	15/16	5/8	1/2	1/8	3/8	1/4
Shop Camber	0	0	0	5/8	3/4	1 3/16	5/8	9/16	1/2	1/2	15/16	5/8	1/2	0	0	0

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CINCINNATI, OHIO 45206

SUPERSTRUCTURE DETAILS

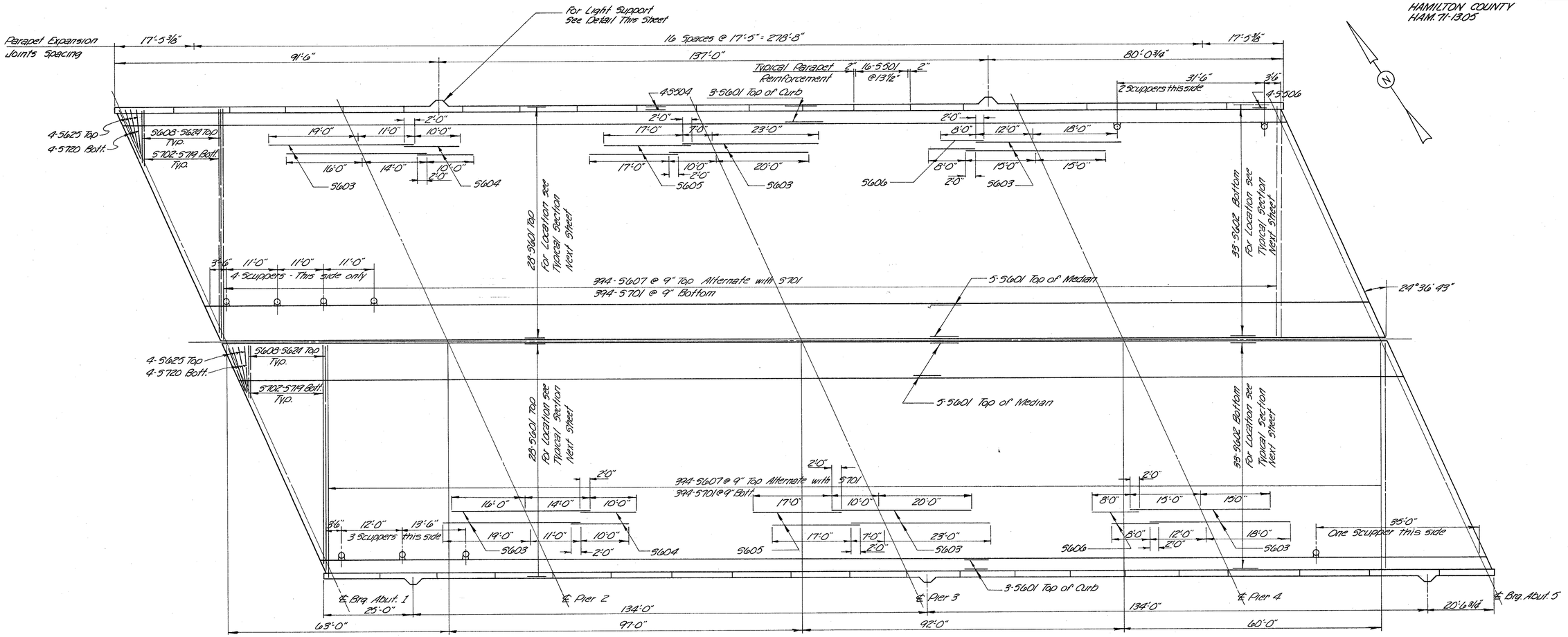
BRIDGE NO. HAM-71-1393
I-71 UNDER CROSS COUNTY HWY.
HAMILTON CO. I-71
P.O.C. STA. 702+87.28

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NMM	G.J.C.	Neil	R.G.E.	6/15 2/64	.

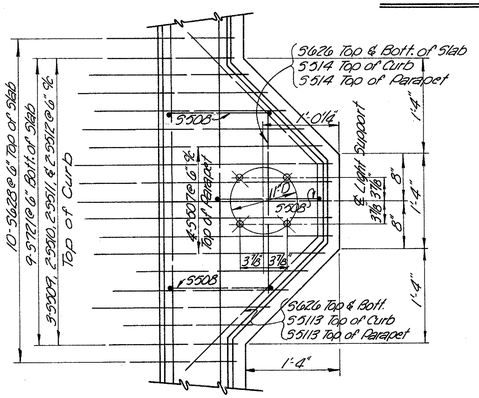
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

376/445

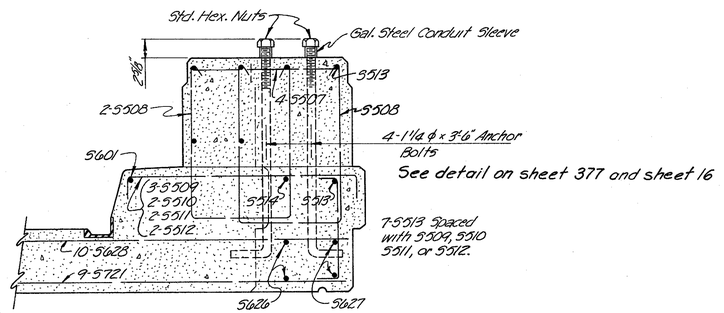
HAMILTON COUNTY
HAM.71-13.05



SLAB PLAN



PLAN-LIGHT-SUPPORT DETAILS



See detail on sheet 377 and sheet 16

SECTION—LIGHT SUPPORT DETAILS

HARRY BALKE ENGINEERS
990 NASSAU STREET
CINCINNATI, OHIO 45206

SUPERSTRUCTURE DETAILS

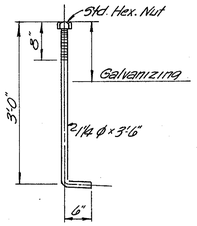
BRIDGE NO. HAM-71-1393
I-71 UNDER CROSS COUNTY HWY.
HAMILTON CO I-71
P.O.C.STA. 702+87.28

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
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FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

377
445

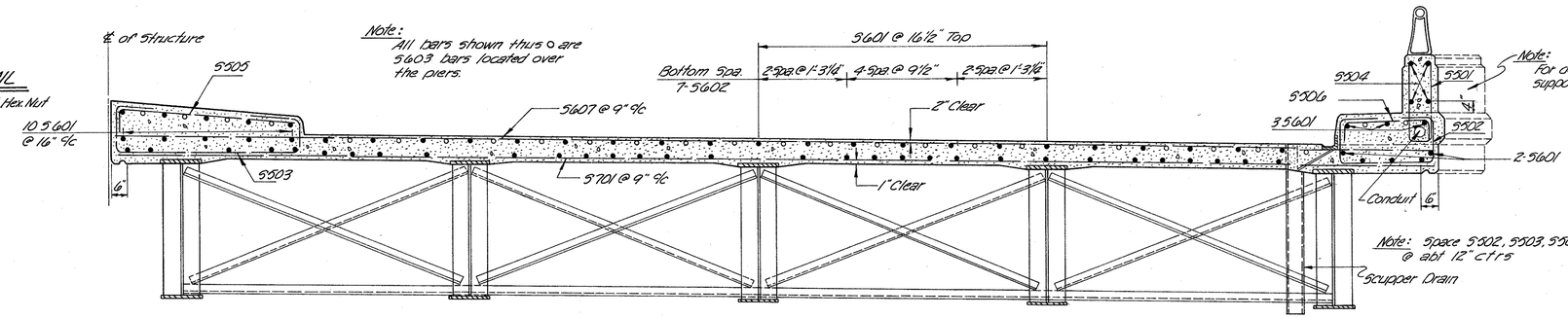
HAMILTON COUNTY
HAM-71-13.05

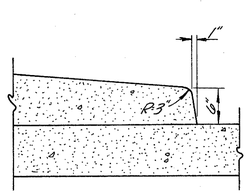


ANCHOR BOLT DETAIL

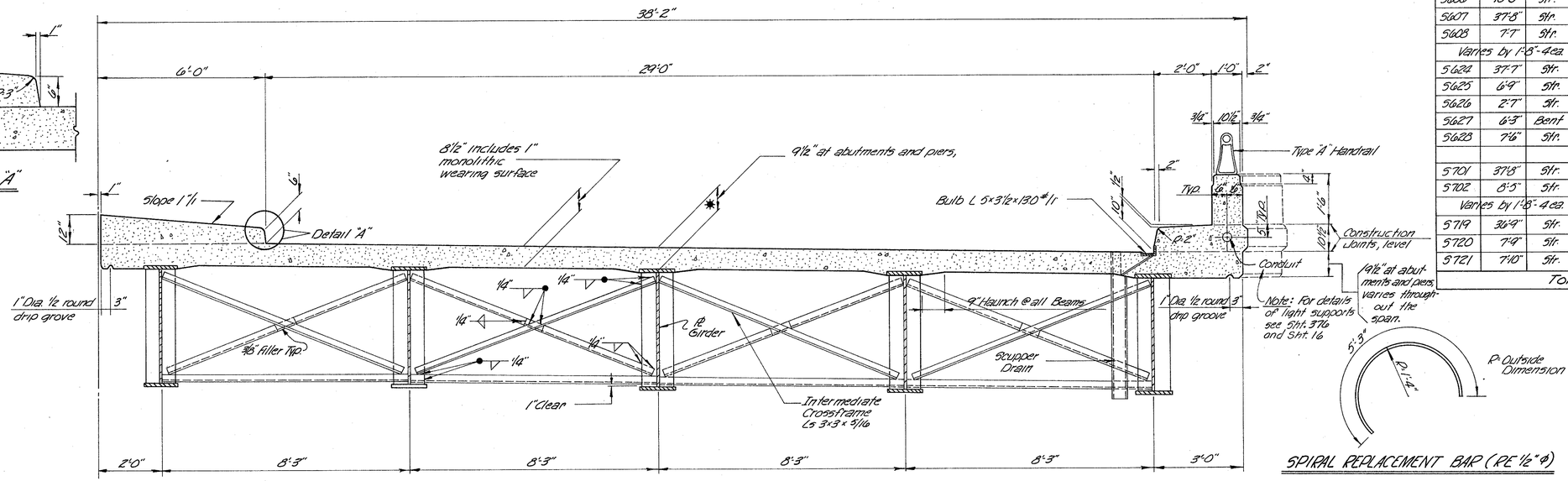
No. Reqd. 20-1 1/4" ø 3'-6" with Std. Hex. Nut

Note: The threaded ends and nuts shall be galvanized in accordance with ASTM A-153 with galvanizing extending 1" to 4" beyond the threads. Anchor bolts shall conform to ASTM A-107, Grade 1035 Special Quality, and shall have a minimum yield strength of 40,000 p.s.i. Bolt stock shall conform with ASTM Spec. A-29 and nominal bar size shall equal nominal bolt size.





DETAIL "A"



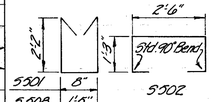
DETAIL "A"

TYPICAL SECTION

REINFORCING STEEL LIST
SUPERSTRUCTURE

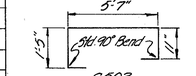
MARK	LENGTH	SHAPE	NO.	WEIGHT
5501	5'-7"	Bent	576	3,354
5502	5'-9"	Bent	626	3,754
5503	8'-8"	Bent	626	5,460
5504	17'-0"	Str.	144	
5505	6'-1"	Bent	626	3,972
5506	3'-6"	Bent	626	2,236
5507	2'-1"	Str.	16	35
5508	6'-4"	Bent	12	79
5509	4'-3"	Bent	12	53
5510	3'-10"	Bent	8	32
5511	3'-3"	Bent	8	27
5512	2'-10"	Bent	8	24
5513	6'-3"	Bent	8	52
5514	2'-7"	Str.	8	22
5601	36'-9"	Str.	648	35,768
5602	33'-0"	Str.	660	32,714
5603	30'-0"	Str.	162	7,300
5604	12'-0"	Str.	54	974
5605	19'-0"	Str.	54	1,542
5606	10'-0"	Str.	54	812
5607	37'-8"	Str.	788	44,582
5608	7'-7"	Str.	Varies by 1'-8"-4 ea.	68 2,306
5624	37'-7"	Str.		
5625	6'-9"	Str.	16	162
5626	2'-7"	Str.	8	31
5627	6'-3"	Bent	8	75
5628	7'-6"	Str.	40	457
5701	37'-8"	Str.	788	60,668
5702	8'-5"	Str.	Varies by 1'-8"-4 ea.	72 3,324
5719	36'-9"	Str.		
5720	7'-9"	Str.	16	254
5721	7'-10"	Str.	36	576
Total				211,895

BAR DIAGRAM

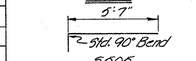


5502

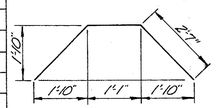
5501 & 5503



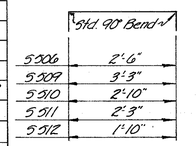
5503



5505



5513 & 5627



5506	2'-6"
5509	3'-3"
5510	2'-10"
5511	2'-3"
5512	1'-10"

5506 & 5509 – 5512

REPLACEMENT BARS

MARK	LENGTH	SHAPE	NO.
RE 401	5'-3"	Str.	1
RE 501	5'-7"	Str.	2
RE 601	5'-11"	Str.	7
RE 701	6'-2"	Str.	4
RE 801	6'-6"	Str.	1
RE 1001	7'-3"	Str.	1
RE 1101	7'-7"	Str.	3
RE 1/2" ø	5'-3"	Bent	1

SPIRAL REPLACEMENT BAR (RE 1/2" ø)

Notes:

1. For slab pouring sequence see General Notes.
2. Parapet concrete 5504 reinforcement bars are included with Item 5-14 for payment.
3. Rocker and bolsters included with Item 5-7 for payment.
4. For details of scuppers, bulb angles, end dams, curb plates and end crossframes see Std. Drawing No. SD-1-63.
5. All scupper details to be in accordance with those for a Type I Scupper.
6. For rocker and bolsters details see Std. Drawing No. RB-1-55.
7. The haunch in the deck slab adjacent to the top of the steel beams, which is shown as 9" wide may vary from this dimension between the limits of 6" and 12", except that the maximum slope shall not exceed 3" per foot. Payment for deck slab concrete shall be based on the 9" width.

✱ This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

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SUPERSTRUCTURE DETAILS

BRIDGE NO. HAM-71-1393
I-71 UNDER CROSS COUNTY HWY.
HAMILTON CO. I-71
P.O.C. STA. 702+87.28

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
G.J.C.	J.H.Z.	Neil	R.G.E.	E/11/5 2/64	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

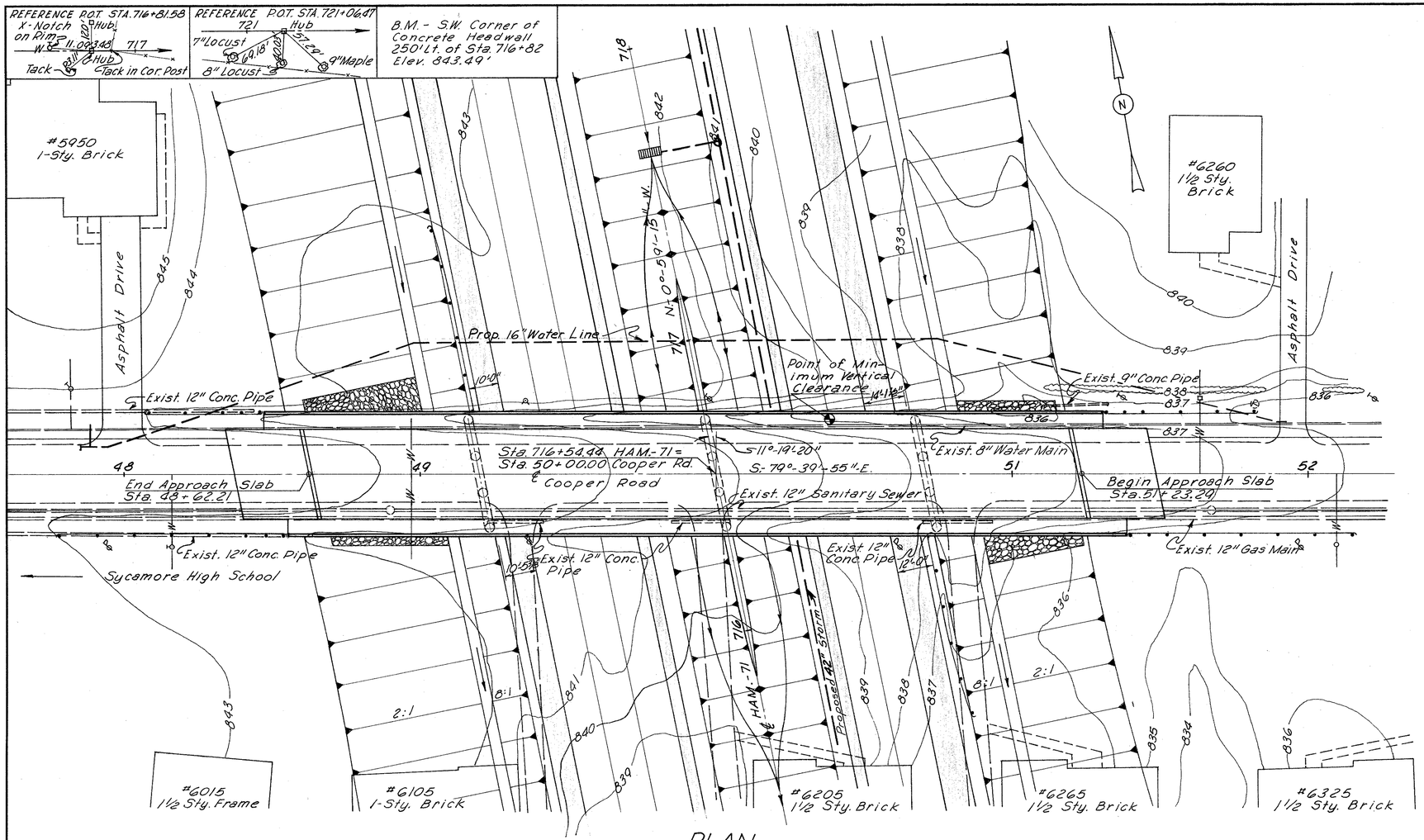
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HAMILTON COUNTY
HAM. 71-13.05

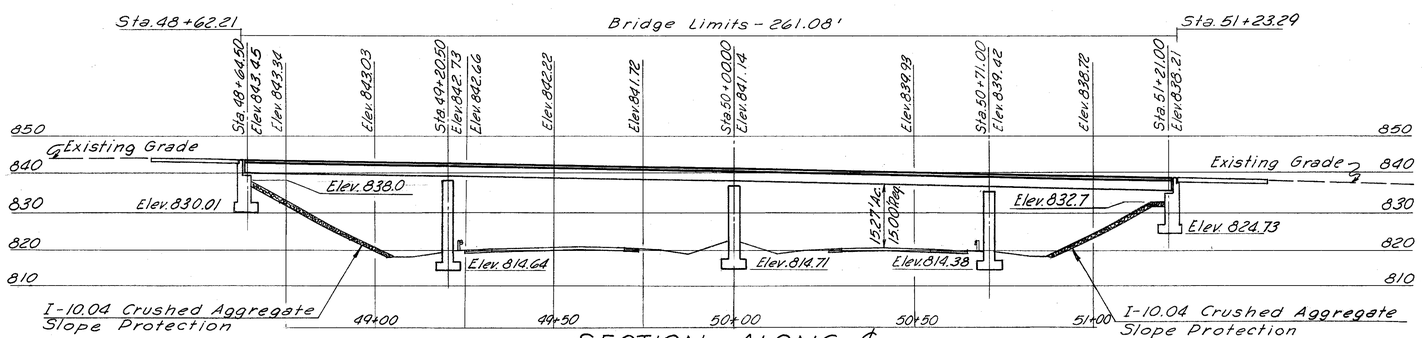
REFERENCE POT. STA. 716+81.58
X-Notch on Rim
Hub
11.00
120°
345°
717
W
Hub
Tack
Tack in Cor. Post

REFERENCE POT. STA. 721+06.47
721
Hub
7" Locust
64.18'
57.22'
9" Maple
8" Locust

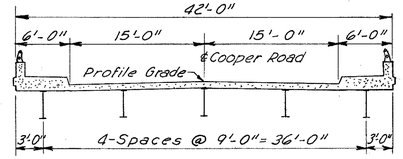
B.M. - S.W. Corner of Concrete Headwall 250' Lt. of Sta. 716+82
Elev. 843.49'



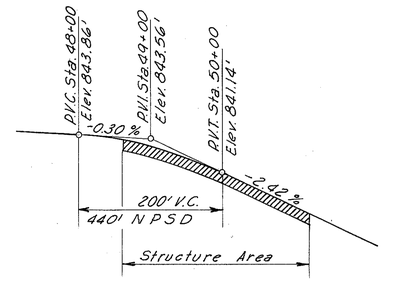
PLAN



SECTION ALONG ℄



PROPOSED STRUCTURE



COOPER ROAD PROFILE GRADE

PROPOSED STRUCTURE

TYPE: Continuous Steel Beam with Reinforced Concrete Deck & Substructure

SPAN: 56'-0", 79'-6", 71'-0", 50'-0"

ROADWAY: 30'-0" f-f of 5'-0" Sidewalks

LOAD FREQUENCY: CF 400 (57)

SKEW: 11°-19'-20" Right Forward

WEARING SURFACE: 1" Monolithic Conc.

APPROACH SLABS: AS-1-54 (25' Long)

ALIGNMENT: Tangent

SIDEWALK: 5'-0" Each Side

TRAFFIC: 1975 - 6850 V.P.D.

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SITE PLAN

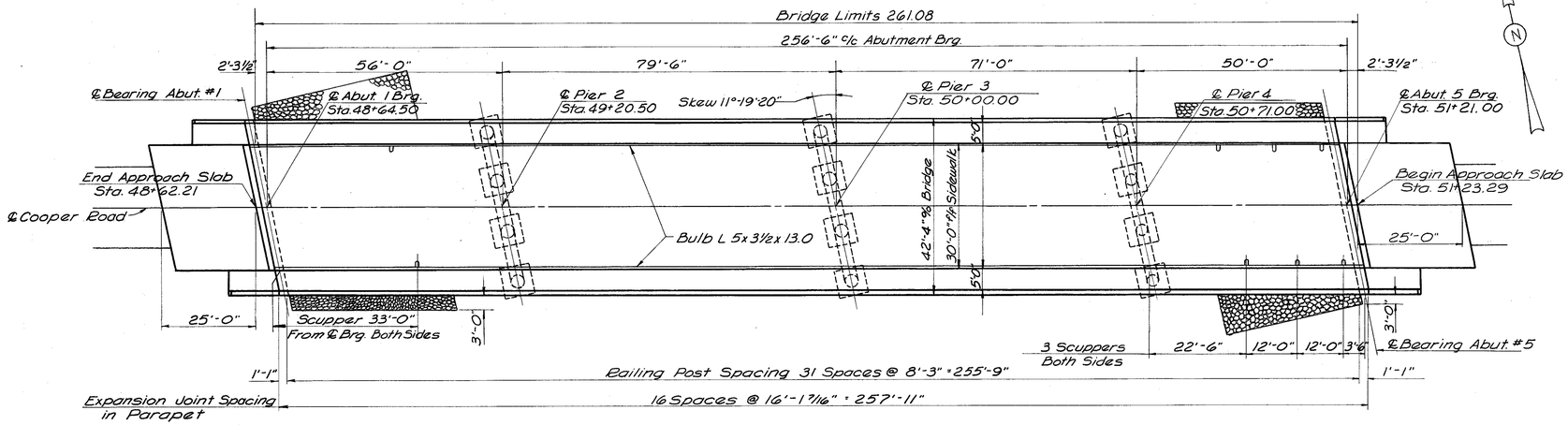
BRIDGE NO. HAM-71-1419
I-71 UNDER COOPER ROAD
HAMILTON CO. I-71
STA. 716+54.44

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
Aerial Survey	Aerial Survey	BGE	ES	BGE	2/64

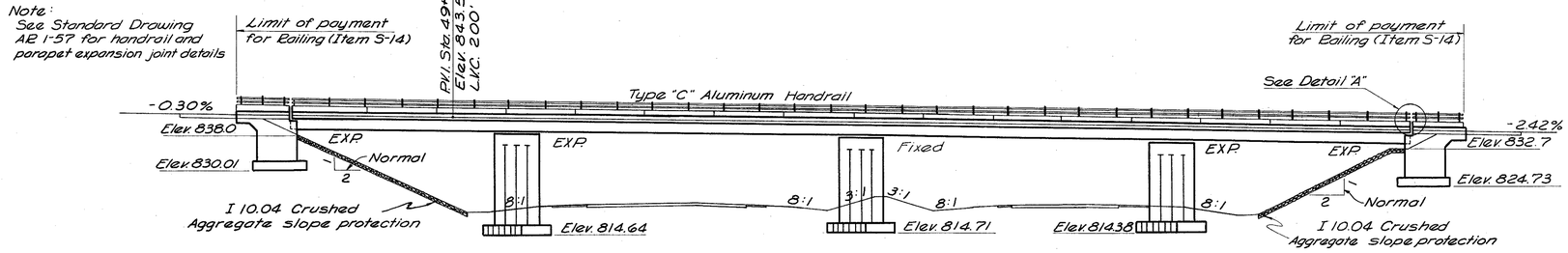
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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445

HAMILTON COUNTY
HAM-71-13.05



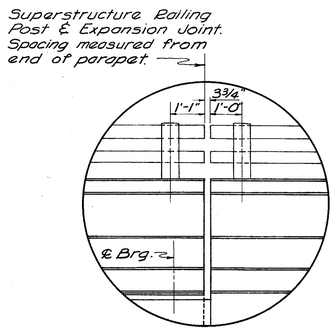
GENERAL PLAN



ELEVATION

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Super Struct.	Abut 1	Abut 5	Pier 2	Pier 3	Pier 4	Gen'l.		
E-2	325	Cu. Yd.	Unclassified Excavation		160	165						
E-2	135	Cu Yd.	Shale Excavation				40	57	38			
S-1	400	Cu. Yd.	Class "C" Concrete, Superstructure	400								
S-1	94	Cu. Yd.	Class "C" Concrete, Piers above footings				33	31	30			
S-1	138	Cu. Yd.	Class "E" Concrete, Abutments above footing		69	69						
S-1	106	Cu. Yd.	Class "E" Concrete, Footings		26	26	18	18	18			
S-4	137,232	Lbs.	Reinforcing Steel	100,183	6,190	6,190	8568	8159	7942			
S-7	301,700	Lbs.	Structural Steel	301,700								
S-8	301,700	Lbs.	Field painting of structural steel	301,700								
S-14	566.83	Lin. Ft.	Railing (Type "C" aluminum rail and supports, Concrete Parapet	518.83	24.00	24.00						
S-29	42	Cu. Yd.	Porous Backfill		21	21						
S-29	8	Each	Scuppers, including supports	8								
S-29	70	Lin. Ft.	6" Perforated helical C.M.P. M-6.4(h) including specials		35	35						
S-29	80	Lin. Ft.	6" Helical C.M.P. M-6.4(h) non-perforated		40	40						
I-10	410	Sq. Yd.	Crushed aggregate slope protection		235	175						
S-101	400	Each	Water-reducing, Set-retarding admixtures for concrete	400								



DETAIL "A"

GENERAL NOTES

REFERENCE shall be made to Standard Drawings SD-1-63 sheets 1 thru 4 dated November 12, 1963, AE-1-57 dated April 9, 1957 and revised April 2, 1962, FSB-1-62 dated April 19, 1962 and revised January 15, 1963, and to Supplemental Specification N° S-101 dated July 12, 1962 and N° S-307 dated August 23, 1960.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highway, dated 9-1-57, together with current revisions thereof.

DESIGN DATA:

Design Loading	CF400(57)
Concrete Class C	Basic unit stress 1,333 psi
Concrete Class E	Basic unit stress 1,133 psi
Structural Steel	A.S.T.M. A36 - Basic unit stress 20,000 psi (A.S.T.M. A7 and A373 steel not permitted)
Reinforcing Steel	A.S.T.M. A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 psi except spiral reinforcement may be plain and of structural grade with basic unit stress of 18,000 psi.

FOOTINGS shall extend a minimum of 3" into undisturbed rock or to the elevation shown, whichever is lower.

FOUNDATION BEARING PRESSURE: Pier and abutment footings are designed for a maximum bearing pressure of 5.0 tons per square foot.

WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop. Class "B" welds are shown thus B→.

CONTINUOUS BEAM SHOP ASSEMBLY: Reference paragraph 4, Section S-7.12 of the Construction and Material Specifications, if rolled beams are field spliced only at supports, for the purpose of checking the fit-up of weld joint preparation, only two adjacent beams need be shop assembled at a time in their correct unloaded positions. All beams shall be assembled and match marked.

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.

MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine.

CONCRETE: Superstructure and piers above footings shall be "Class C Concrete." Abutments and pier footings shall be "Class E Concrete."

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example A700 is a No. 7 size bar and A1014 is a No. 10 size bar.

RAILING: Aluminum rail and support, concrete parapet, reinforcing bars wholly within the concrete parapet and sponge rubber for parapet joints shall be included in item S-14 for payment.

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CINCINNATI, OHIO 45206

GENERAL PLAN AND ELEVATION

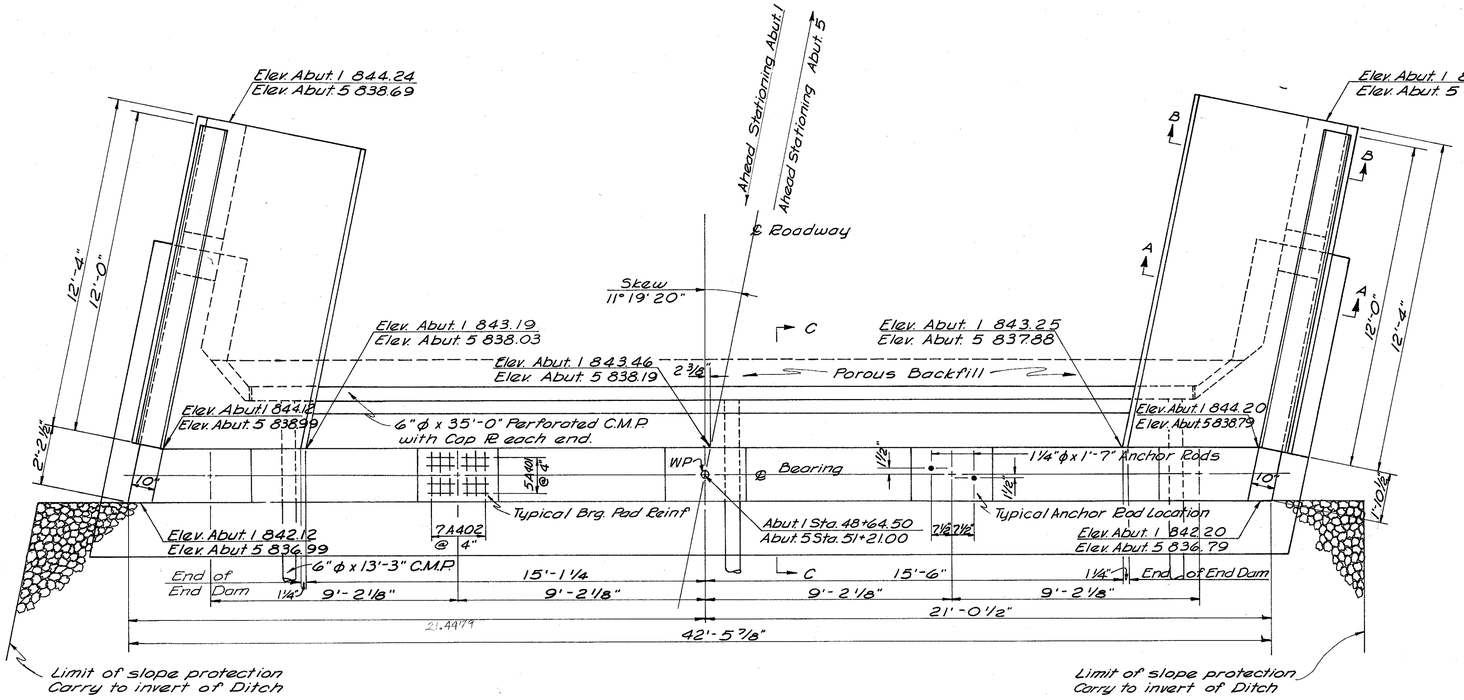
BRIDGE NO. HAM-71-1419
I-71 UNDER COOPER ROAD
HAMILTON CO. I-71
STA. 716+54.44

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
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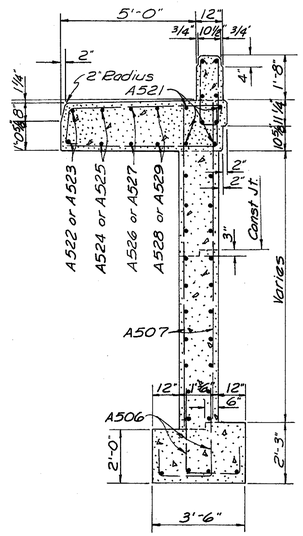
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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445

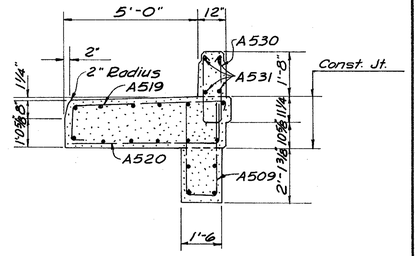
HAMILTON COUNTY
HAM.-71-13.05



PLAN



SECTION A-A

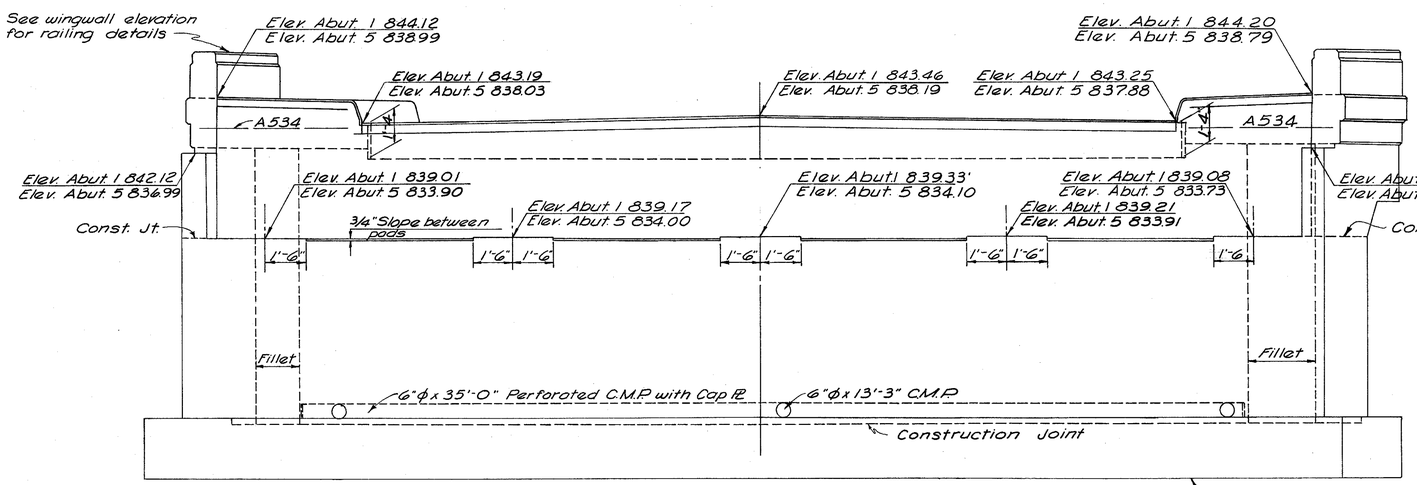


SECTION B-B

Note:
Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor rod holes.

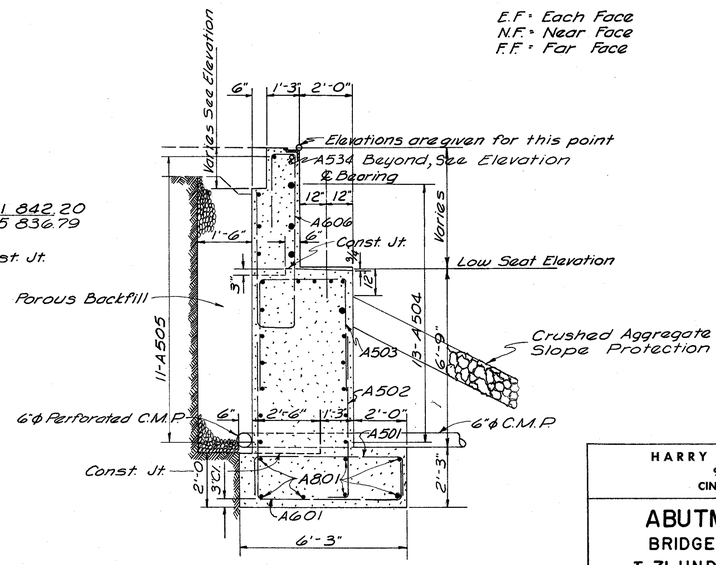
Parapet concrete and A531 reinforcing bars included in Item S-14 for payment.

E.F. = Each Face
N.F. = Near Face
F.F. = Far Face



ELEVATION

Note:
Concrete above bridge seat construction Joint shall not be placed until after superstructure steel is in place but before deck is poured



SECTION C-C

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990 NASSAU STREET
CINCINNATI, OHIO 45206

ABUTMENT DETAILS

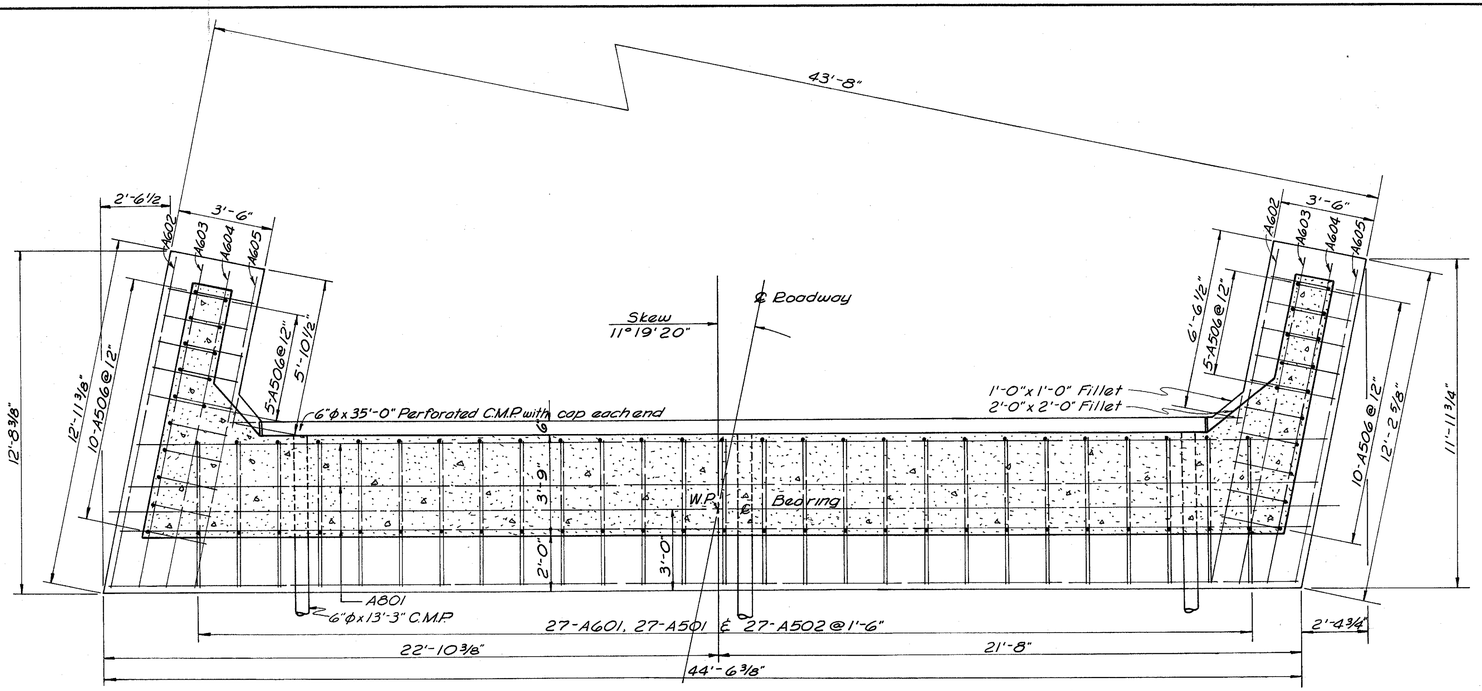
BRIDGE NO. HAM-71-1419
I-71 UNDER COOPER ROAD
HAMILTON CO. I-71
STA. 716+54.44

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
GJC	EBS	REV	RGE	Ellis 2/64	

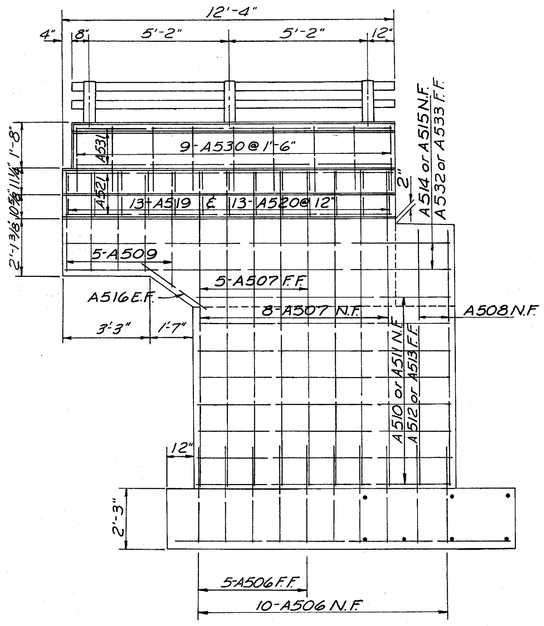
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

381
445

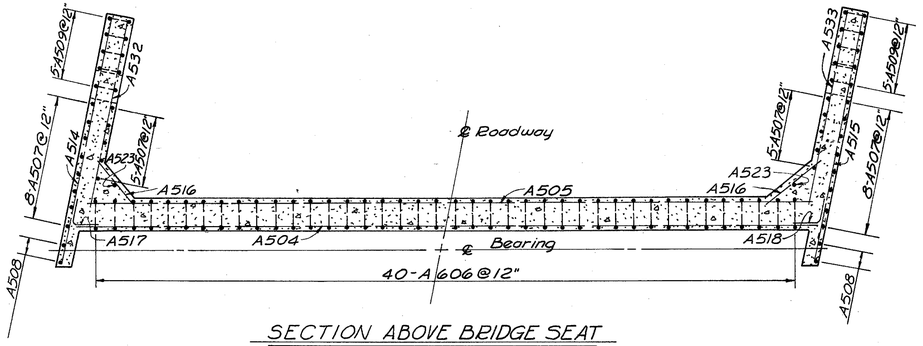
HAMILTON COUNTY
HAM.-71-13.05



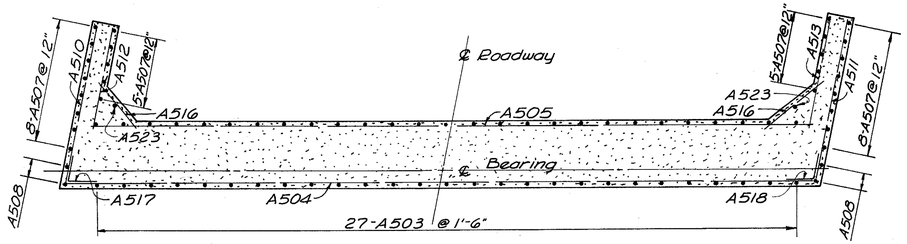
FOOTING PLAN



WINGWALL ELEVATION



SECTION ABOVE BRIDGE SEAT



SECTION ABOVE FOOTING

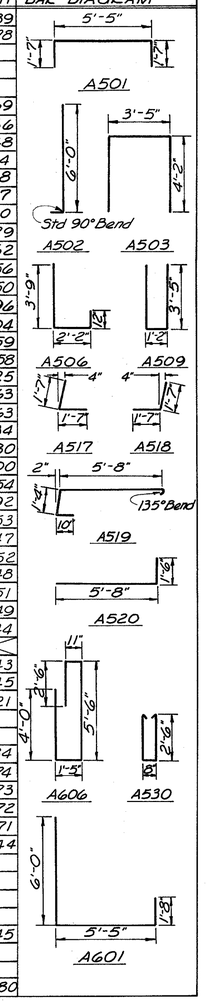
Note:
A516 bars to be spaced with 10-A505 bars
A517 & A518 bars to be spaced with 10-A504 bars.

REINFORCING STEEL LIST

BOTH ABUTMENTS

MARK	LENGTH	SHAPE		NO	WEIGHT
A401	2'-8"	Str.		50	89
A402	1'-8"	Str.		70	78
A501	8'-4"	Bent		54	469
A502	6'-6"	Bent		54	366
A503	11'-6"	Bent		54	648
A504	42'-2"	Str.		26	1144
A505	40'-0"	Str.		22	918
A506	6'-8	Bent		60	417
A507	11'-3"	Str.		52	610
A508	9'-6"	Str.		8	79
A509	7'-9"	Bent		20	162
A510	9'-4"	Str.		16	156
A511	9'-0"	Str.		16	150
A512	5'-9"	Str.		16	96
A513	6'-3"	Str.		16	104
A514	14'-2"	Str.		4	59
A515	13'-10"	Str.		4	58
A516	4'-6"	Str.		48	225
A517	3'-0"	Bent		20	63
A518	3'-0"	Bent		20	63
A519	8'-0"	Bent		52	434
A520	7'-0"	Bent		52	380
A521	12'-0"	Str.		16	200
A522	13'-0"	Str.		4	54
A523	11'-0"	Str.		8	92
A524	12'-9"	Str.		4	53
A525	11'-3"	Str.		4	47
A526	12'-6"	Str.		4	52
A527	11'-6"	Str.		4	48
A528	12'-3"	Str.		4	51
A529	11'-9"	Str.		4	49
A530	6'-6"	Bent		36	244
A531	11'-8"	Str.		16	
A532	10'-4"	Str.		4	43
A533	10'-10"	Str.		4	45
A534	5'-0"	Str.		4	21
A601	12'-9"	Bent		54	1034
A602	12'-4"	Str.		4	74
A603	12'-2"	Str.		4	73
A604	11'-11"	Str.		4	72
A605	11'-9"	Str.		4	71
A606	13'-8"	Bent		80	1644
A801	44'-0"	Str.		14	1645
			TOTAL		12,380

BAR DIAGRAM



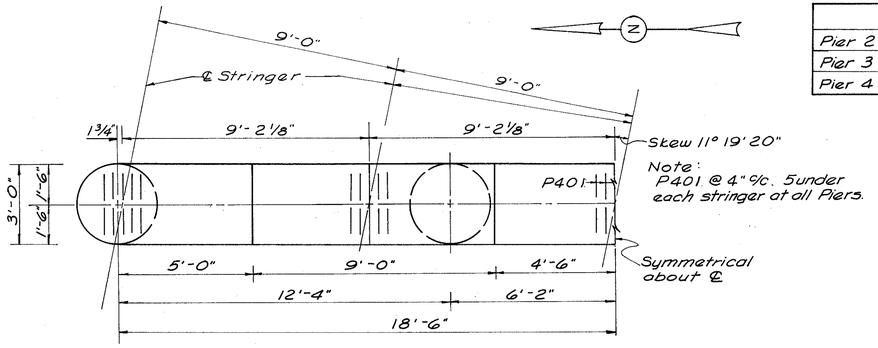
HARRY BALKE ENGINEERS
990 NASSAU STREET
CINCINNATI, OHIO 45206

ABUTMENT DETAILS

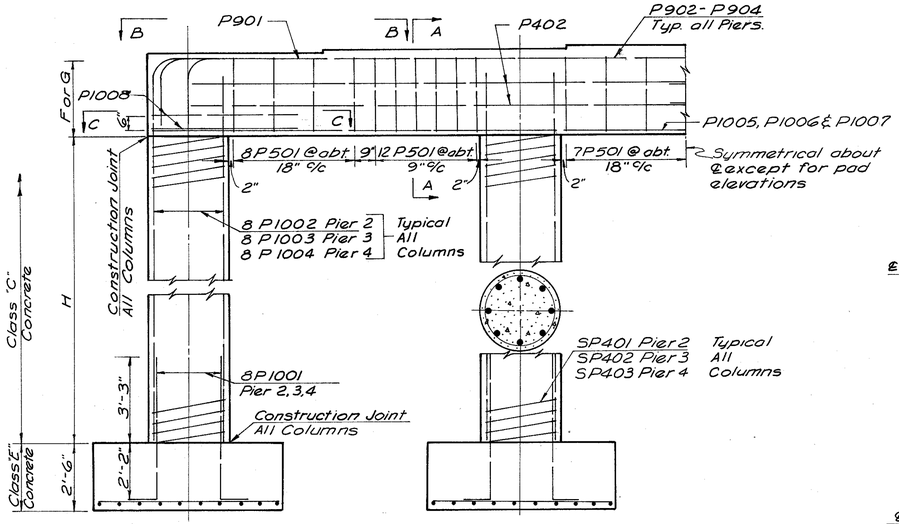
BRIDGE NO. HAM-71-1419
I-71 UNDER COOPER ROAD
HAMILTON CO. I-71
STA. 716+54.44

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
GJC	RBS	REJ	RGE	Ellis 2/64	

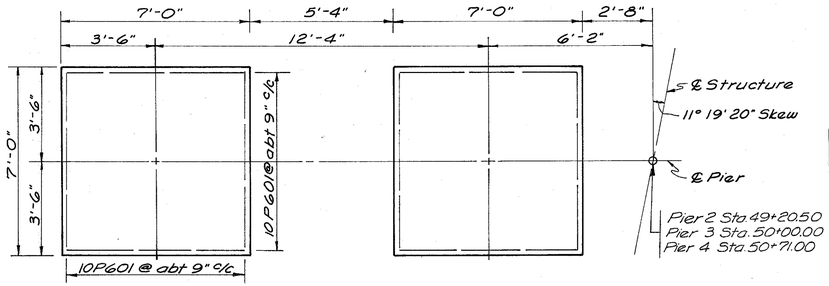
	El. A	El. B	El. C	El. D	El. E	El. Bot. Ftg.	H	F	G
Pier 2	838.25	838.37	838.48	838.31	838.14	814.64	18'-0"	3'-1 3/8"	3'-0"
Pier 3	836.38	836.48	836.58	836.39	836.21	814.71	16'-0"	3'-2"	3'-0"
Pier 4	835.05	835.15	835.24	835.06	834.88	814.38	15'-0"	3'-2"	3'-0"



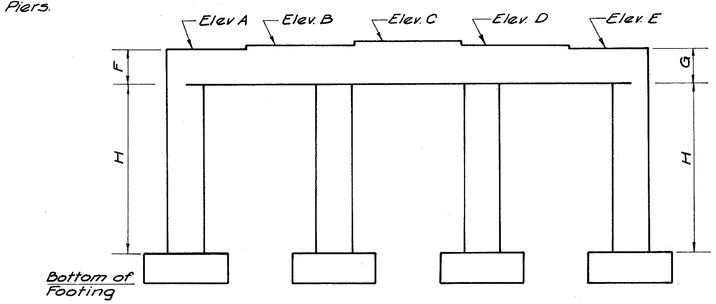
HALF CAP PLAN



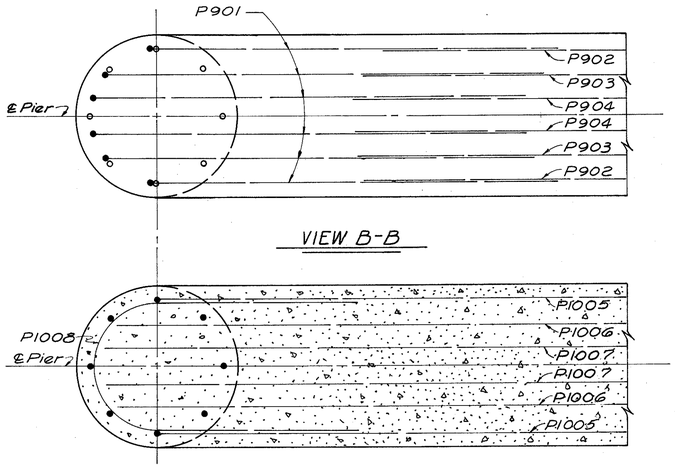
HALF ELEVATION



HALF FOOTING PLAN

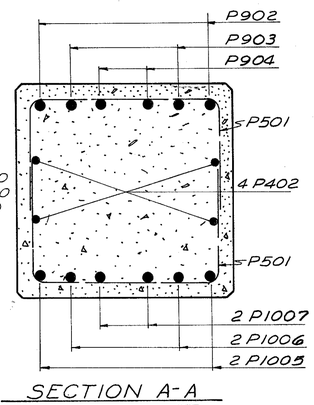


ELEVATION LOCATION

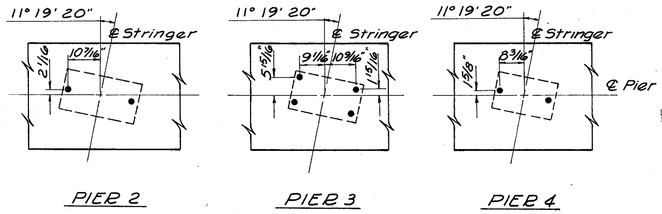


VIEW B-B

SECTION C-C



SECTION A-A



PIER 2 PIER 3 PIER 4

ANCHOR ROD LOCATION

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

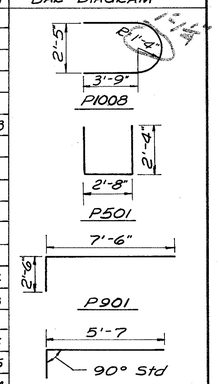
382/445

HAMILTON COUNTY
HAM.-71-13.05

REINFORCING STEEL LIST
INCLUDES ALL THREE PIERS

MARK	LENGTH	SHAPE	NO.	PIER 2	PIER 3	PIER 4	WEIGHT
P401	2'-3"	Str.	75	25	25	25	113
P402	19'-8"	Str.	24	8	8	8	315
P501	7'-0"	Bent	162	54	54	54	1183
P601	6'-8"	Str.	240	80	80	80	2403
P901	10'-0"	Bent	36	12	12	12	1224
P902	27'-8"	Str.	6	2	2	2	564
P903	29'-6"	Str.	6	2	2	2	602
P904	30'-0"	Str.	6	2	2	2	612
P1001	6'-8"	Bent	96	32	32	32	2754
P1002	20'-3"	Str.	32	32			2788
P1003	18'-3	Str.	32		32		2513
P1004	17'-3"	Str.	32			32	2375
P1005	37'-0"	Str.	6	2	2	2	955
P1006	38'-6"	Str.	6	2	2	2	994
P1007	39'-0"	Str.	6	2	2	2	1007
P1008	11'-4"	Bent	12	4	4	4	585
						TOTAL	20956

BAR DIAGRAM



SPIRAL REINFORCING LIST

MARK	NO.	SIZE	CORE DIA	LENGTH	PITCH	NO. of TURNS	WEIGHT
SP401	4	1/2" ϕ	32"	18'-0"	4 1/2	51	1354
SP402	4	1/2" ϕ	32"	16'-0"	4 1/2	46	1219
SP403	4	1/2" ϕ	32"	15'-0"	4 1/2	43	1140
					TOTAL		3713

Note:
The 'length' shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap.
The 'No. of Turns' shown is the length divided by the 'pitch' plus 3 turns (total number of closed coils), expressed as the nearest whole number. Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item S-4. 1½ closed coils shall be provided at the ends of each spiral unit.
Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is incuded in the tabulated quantity of spiral bars.

Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of the anchor bar holes.

Revised As-Built
2-13-68 J.V.A.

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PIER DETAILS
BRIDGE NO. HAM-71-1419
I-71 UNDER COOPER ROAD
HAMILTON CO. I-71
STA. 716+54.44

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
EK	NMM	REJ	EGE	Ellis 2/64	

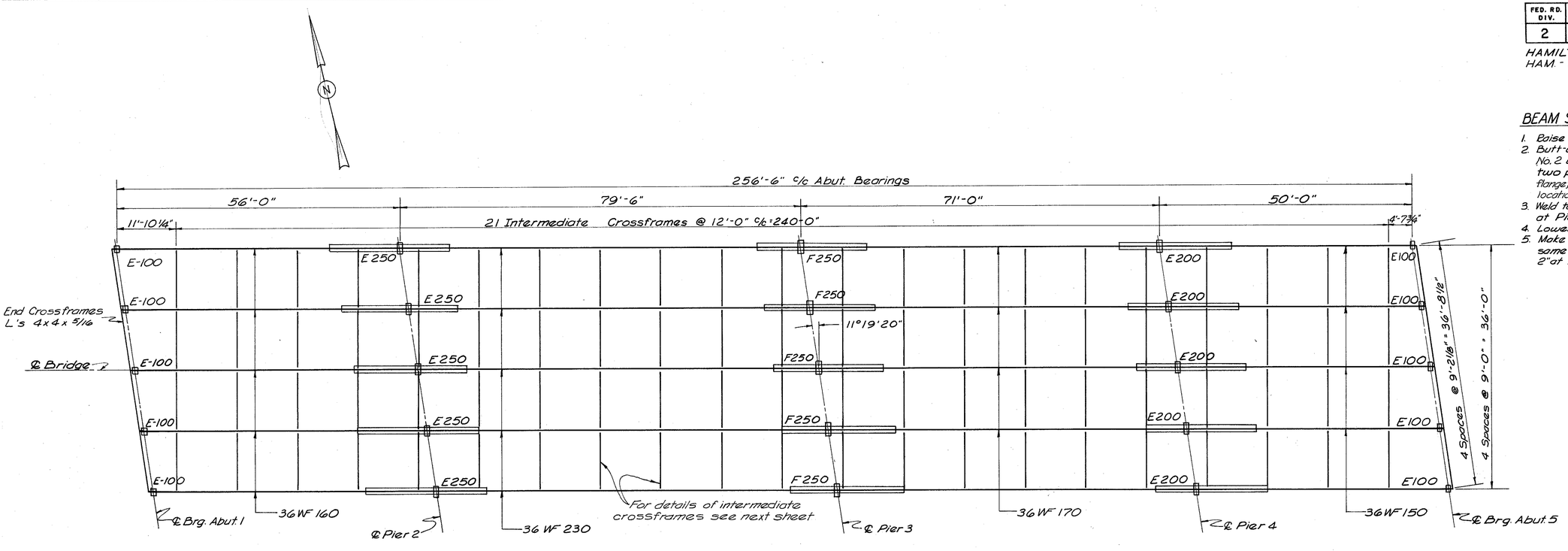
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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445

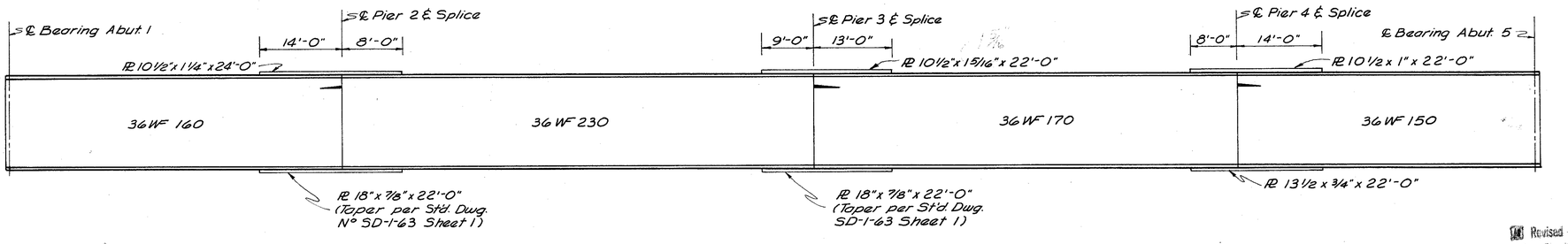
HAMILTON COUNTY
HAM.-71-13.05

BEAM SPLICE WELDING PROCEDURE

1. Raise end of beam at Pier # 3 2"
2. Butt-weld beam flanges and web at Pier No. 2 using the following sequence: make two passes on the web; then two on each flange; repeat, using one or two passes at each location until welds are completed.
3. Weld top and bottom flange moment plates at Pier #2
4. Lower end of beam at Pier # 3
5. Make splice at Pier #3 and Pier #4 in the same manner raising the end of beams 2" at Pier #4 and 0" at Abutment #5



FRAMING PLAN



ELEVATION

DEFLECTIONS AND CAMBERS

LOCATION	Outside Beam Span 1	Span 2	Span 3	Span 4	Inside Beam Span 1	Span 2	Span 3	Span 4
Deflection due to weight of Steel	0	1/8	1/16	0	0	1/8	1/16	0
Deflection due to remaining Dead Load	3/16	1/2	5/16	1/8	3/16	1/2	5/16	1/8
Convexity required for Vertical Curve	9/16	1	0	0	9/16	1	0	0
Sum of Deflection and Convexity	3/4	1 5/8	3/8	1/8	3/4	1 5/8	3/8	1/8
Required Camber	3/4	1 5/8	0	0	3/4	1 5/8	0	0

Where no camber is required the beams shall be so fabricated that any curved beam will be placed with convex flange up.

Note:
For details of beam splices, scuppers, bulb angles, end dams, sidewalk plates and end crossframes see Std. Dwg. N° SD-1-63

Revised As-Built
2-15-65 JVA

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SUPERSTRUCTURE DETAILS

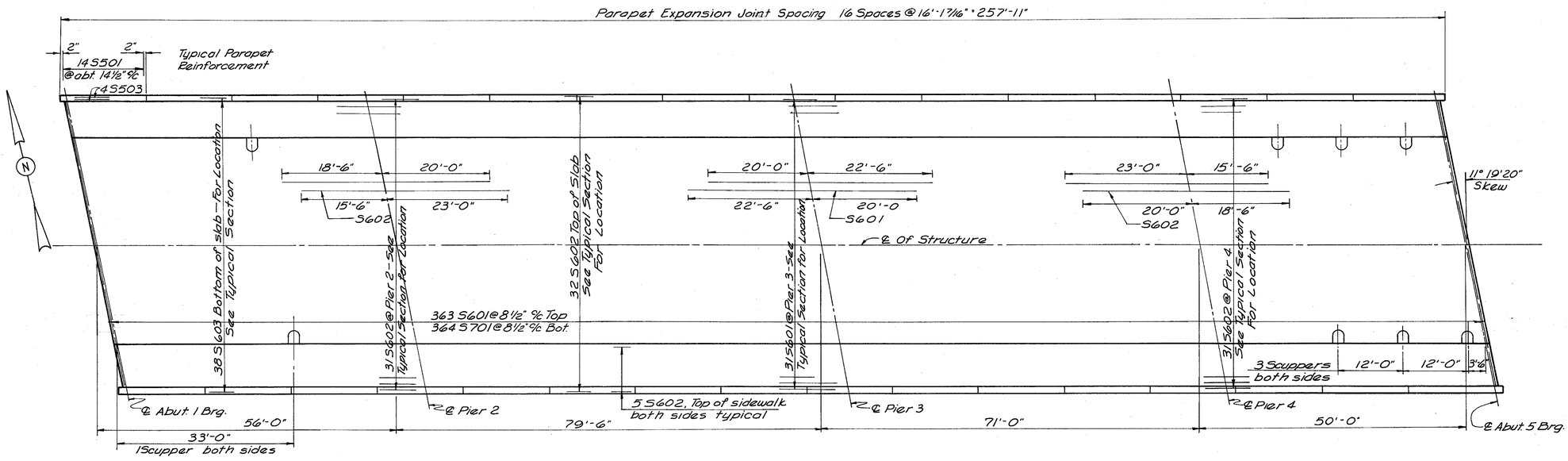
BRIDGE NO. HAM-71-1419
I-71 UNDER COOPER ROAD
HAMILTON CO. I-71
STA. 716+54.44

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
RGE	NMM	REJ	RGE	Ellis 2/64	

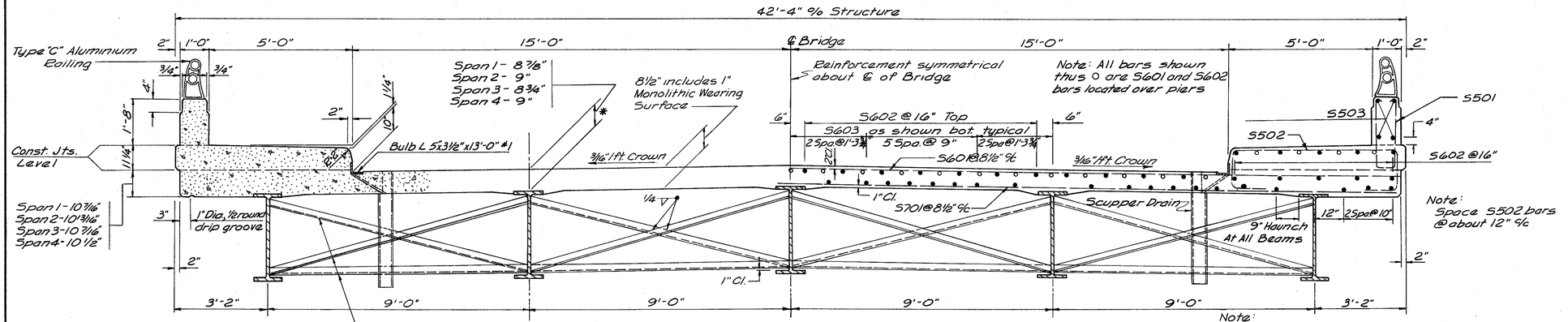
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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HAM.-71-13.05



SLAB PLAN



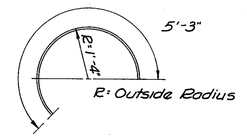
Intermediate crossframe Ls-3"x3"x5/16" Weld both sides of vertical leg and top side of horizontal leg to beam web with ¼" continuous fillet weld.

* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because of the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

Note:
The haunch in the deck slab adjacent to the top of the steel beams which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12", except that the maximum slope shall not exceed 3" per ft. Payment for deck slab concrete shall be based on the 9" width.

TYPICAL SECTION

Notes:
1. For slab pouring sequence see General Notes.
2. Parapet concrete and S503 reinforcement bars are included with Item S-14 for payment.
3. Fixed and sliding bearings included with Item S-7 for payment.
4. For details of beam splices, scuppers, bulb angles, end dams, sidewalk plates and end crossframes see Std. Dwg. No. SD-1-63.
5. For fixed and sliding bearing details see Std. Dwg. No. F.S. B-1-62.
6. All scupper details to be in accordance with those for a Type 1 Scupper.



SPIRAL REPLACEMENT BAR (RE ½ ϕ)

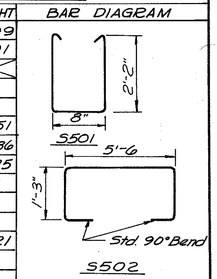
REPLACEMENT BARS			
MARK	LENGTH	SHAPE	NO.
RE401	5'-3"	Str.	1
RE501	5'-7"	Str.	1
RE601	5'-11"	Str.	4
RE701	6'-3"	Str.	2
RE801	6'-6"	Str.	1
RE901	6'-10"	Str.	1
RE1001	7'-3"	Str.	1
RE½ϕ	5'-3	Bent	1

REINFORCING STEEL LIST

SUPERSTRUCTURE

MARK	LENGTH	SHAPE	NO.	WEIGHT
S501	5'-7"	Bent	448	2609
S502	8'-9"	Bent	514	4691
S503	15'-9	Str.	128	
S601	42'-6"	Str.	394	25,151
S602	38'-6"	Str.	356	20,586
S603	34'-0"	Str.	304	15,525
S701	42'-6	Str.	364	31,621
TOTAL				100,183

BAR DIAGRAM



HARRY BALKE ENGINEERS
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CINCINNATI, OHIO 45206

SUPERSTRUCTURE DETAILS

BRIDGE NO. HAM-71-1419
I-71 UNDER COOPER ROAD
HAMILTON CO. I-71
STA. 716+54.44

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
EASA	EASA	EEJ	EGE	Ellis 2/64	

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

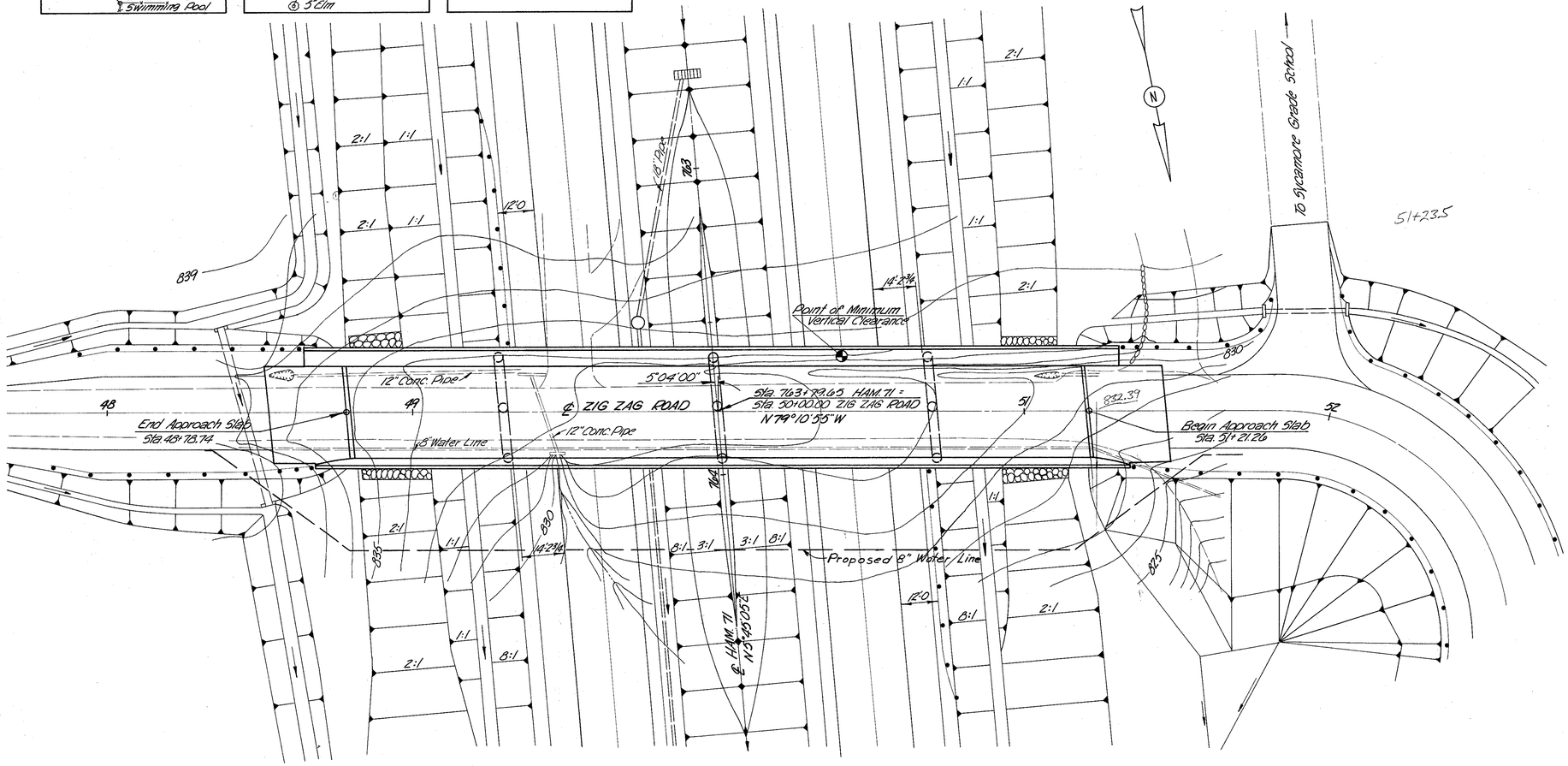
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HAMILTON COUNTY
HAM. 71-13.05

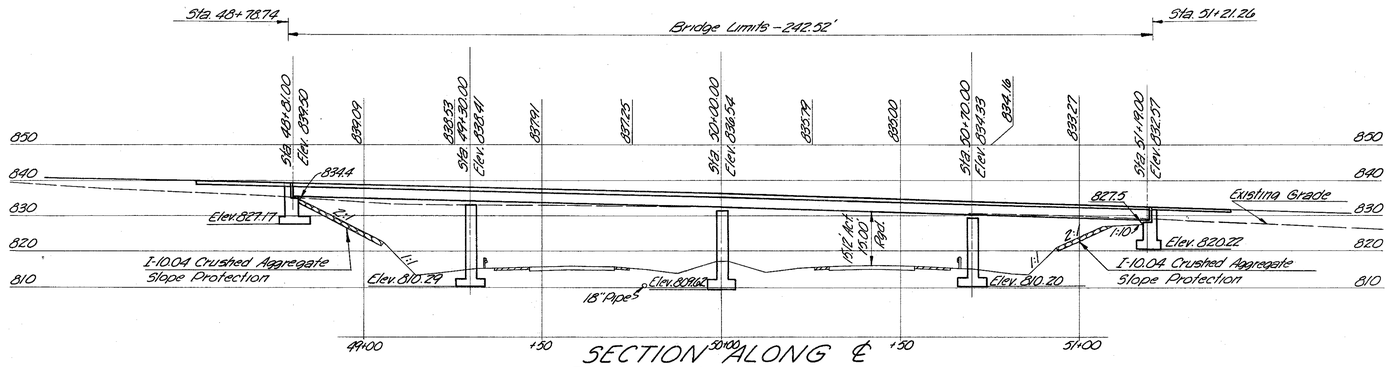
REFERENCE P.O.T. Sta. 760+77.44
Hub = 22.82' Swimming Pool Corner Post 761
27.29' Corner Post Swimming Pool

REFERENCE P.O.T. Sta. 771+49.76
Hub = 13.46' ⊗ 8" Elm 772
37.73' 34.74' ⊗ 30" Oak
⊗ 5" Elm

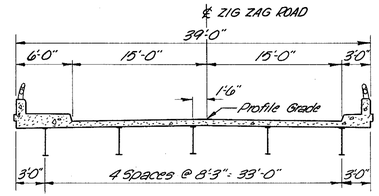
B.M. R.R. Spike in Power Pole 175' Lt. of Sta. 763+48 Elev. 832.75



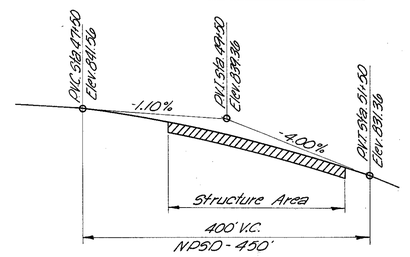
PLAN



SECTION ALONG ℄



PROPOSED STRUCTURE



ZIG ZAG ROAD PROFILE GRADE

PROPOSED STRUCTURE

TYPE: Continuous Steel Beam With Reinforced Concrete Deck & Substructure.

SPAN: 49'-0", 70'-0", 70'-0", 49'-0"

ROADWAY: 30'-0" F.F. 5' Sidewalk & 2' Safety Curb

LOAD FREQUENCY: C.F. 130 (57)

SKEW: 5°04'00" Right Forward

WEARING SURFACE: 1" Monolithic Conc.

APPROACH SLABS: AS-1-54 (25' Long)

ALIGNMENT: Tangent

SAFETY CURB: 2'-0" Right Side

SIDEWALK: 5'-0" Left Side

TRAFFIC: 1975 — 3836 V.P.D.

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990 NASSAU STREET
CINCINNATI, OHIO 45206

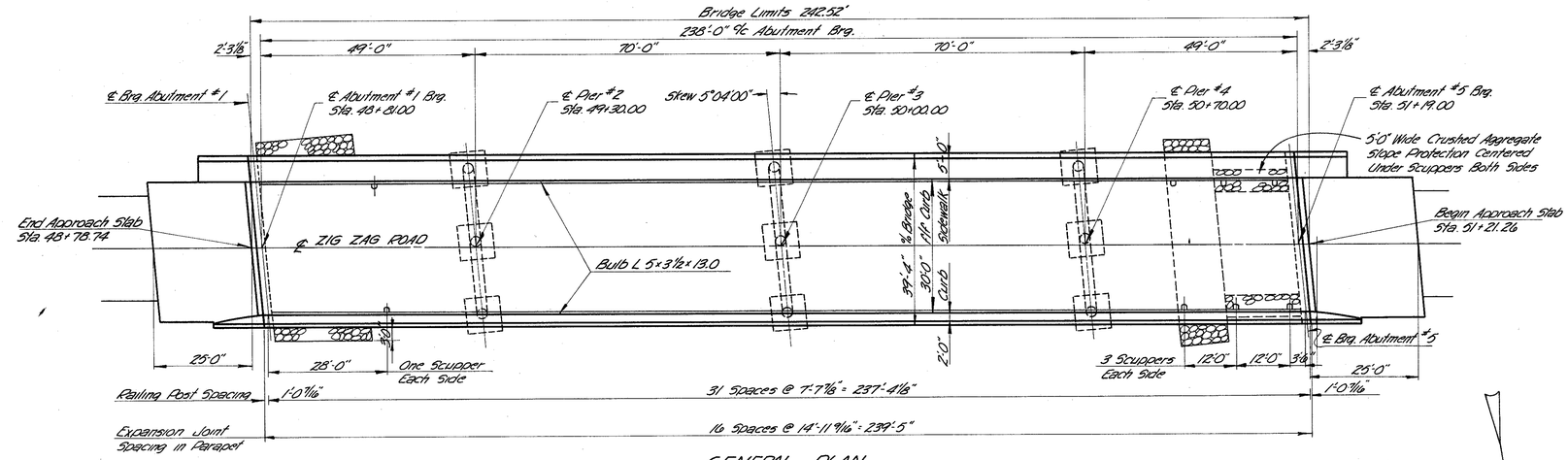
SITE PLAN
BRIDGE NO. HAM-71-1508
I-71 UNDER ZIG ZAG ROAD
HAMILTON CO. I-71
STA. 763+79.65

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
J.W.	J.W.	R.G.E.	R.B.S.	R.G.E.	

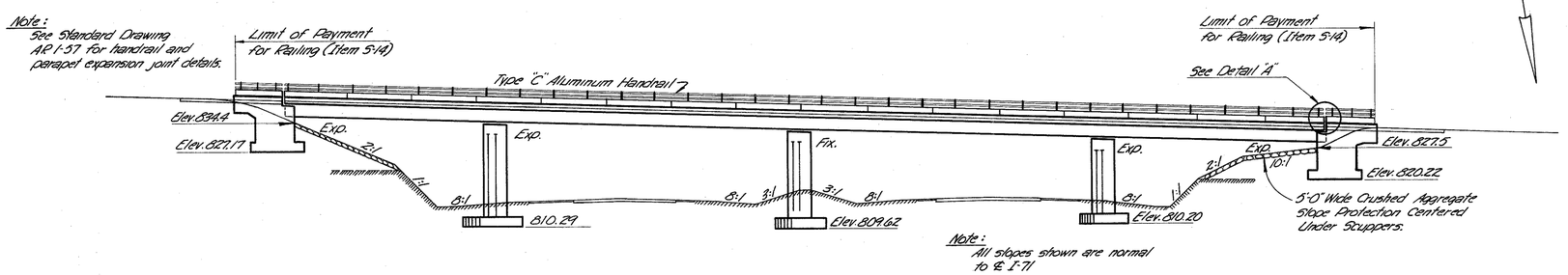
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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HAM. 71-13.05



GENERAL PLAN

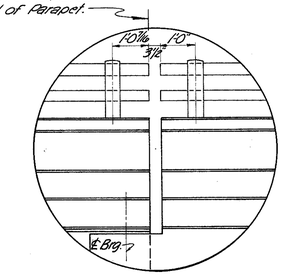


ELEVATION

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER STRUCT.	ABUT. 1	ABUT. 5	PIER 2	PIER 3	PIER 4	GEN'L		
E-2	250	Cu. Yds.	Unclassified Excavation		125	125						
E-2	137	Cu. Yds.	Shale Excavation				38	61	38			
511	308	Cu. Yds.	Class "C" Concrete, Superstructure	308								
511	80	Cu. Yds.	Class "C" Concrete, Piers above Footings				28	27	25			
511	116	Cu. Yds.	Class "E" Concrete, Abutments above Footings		58	58						
511	102	Cu. Yds.	Class "E" Concrete, Footings		24	24	18	18	18			
514	122,361	Lbs.	Reinforcing Steel	77,018	5,485	5,485	11,921	11,654	10,798			
517	208,300	Lbs.	Structural Steel	208,300								
518	208,300	Lbs.	Field Painting of Structural Steel	208,300								
514	526.83	Lin. Ft.	Railing (Type "C" Aluminum Rail and Supports, Concrete Parapet)	478.83	24.00	24.00						
529	32	Cu. Yds.	Porous Backfill		16	16						
529	8	Each	Scuppers Including Supports	8								
529	62	Lin. Ft.	6" Perforated Helical C.M.P. M-6.4 (A) Including Specials		31	31						
529	120	Lin. Ft.	6" Helical C.M.P. M-6.4 (A) Non-Perforated		36	84						
610	240	Sq. Yds.	Crushed Aggregate Slope Protection		145	95						
5101	308	Each	Water-Reducing Set Retarding Admixtures for Concrete	308								

Superstructure Railing Posts & Expansion Joint Spacing Are Measured From End of Parapet.



DETAIL "A"

GENERAL NOTES

REFERENCE: Shall be made to Standard Drawings SD-1-63 sheets 1 thru 4, dated November 12, 1965, AP-1-57 dated April 9, 1957 and revised April 2, 1962, FSB-1-62 dated April 19, 1962 and revised January 13, 1963, and to Supplemental Specification No. 5-101 dated July 12, 1962 and No. 5-307 dated August 23, 1960.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated September 1, 1957, together with current revisions thereof.

DESIGN DATA:

Design Loading	CF 130 (ST)
Concrete Class C	Basic unit stress 1,333 psi
Concrete Class E	Basic unit stress 1,133 psi
Structural Steel	ASTM A36 - Basic unit stress 20,000 psi (ASTM A7 and A373 steel not permitted)
Reinforcing Steel	ASTM A15, A16, A160, deformed, Intermediate or Hard Grade. Basic unit stress 20,000 psi except spiral reinforcement may be plain and of structural grade with basic unit stress of 18,000 psi.

FOOTINGS: Shall extend a minimum of 3" into undisturbed rock or to the elevation shown, whichever is lower.

FOUNDATION BEARING PRESSURE: Pier and abutment footings are designed for a maximum bearing pressure of 5.0 tons per square foot.

WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop. Class B welds are shown thus B)

CONTINUOUS BEAM SHOP ASSEMBLY: Reference paragraph 4, Section 507.12 of the Construction and Material Specifications, if rolled beams are field spliced only at supports, for the purpose of checking the fit-up of weld joint preparation, only two adjacent beams need be shop assembled at a time in their correct, unloaded positions. All beams shall be assembled and match marked.

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.

MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine.

CONCRETE: Superstructure and Piers above footings shall be "Class C Concrete". Abutments and pier footings shall be "Class E Concrete".

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example, A700 is a No. 7 size bar and A1014 is a No. 10 size bar.

RAILING: Aluminum rail and supports, concrete parapet, reinforcing bars wholly within the concrete parapet, and sponge rubber for parapet joints shall be included in Item 514 for payment.

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GENERAL PLAN AND ELEVATION

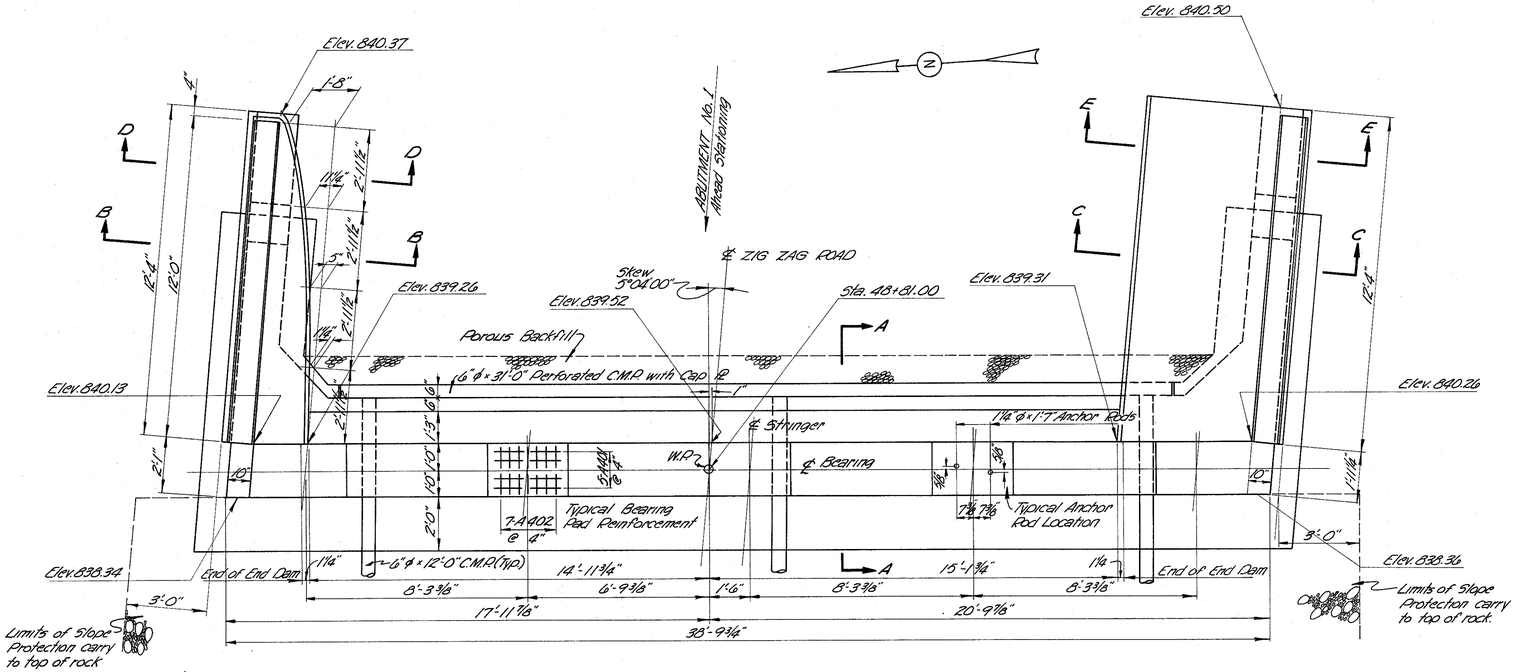
BRIDGE NO. HAM-71-1508
I-71 UNDER ZIG ZAG ROAD
HAMILTON CO. I-71
STA. 763+79.65

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
R.G.E.	J.H.Z.	Neil	R.G.E.	Ellis 2/64	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

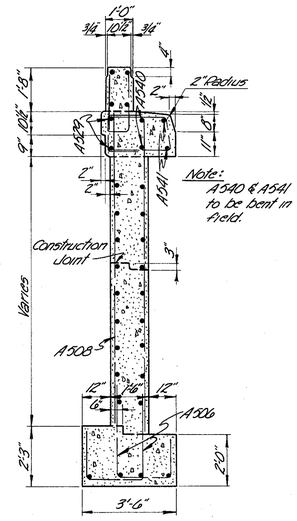
387
445

HAMILTON COUNTY
HAM-71-13.05

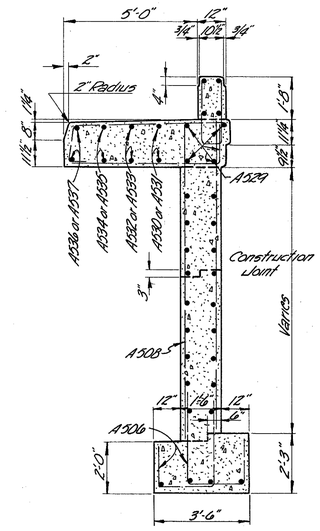


Note:
Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor rod holes.

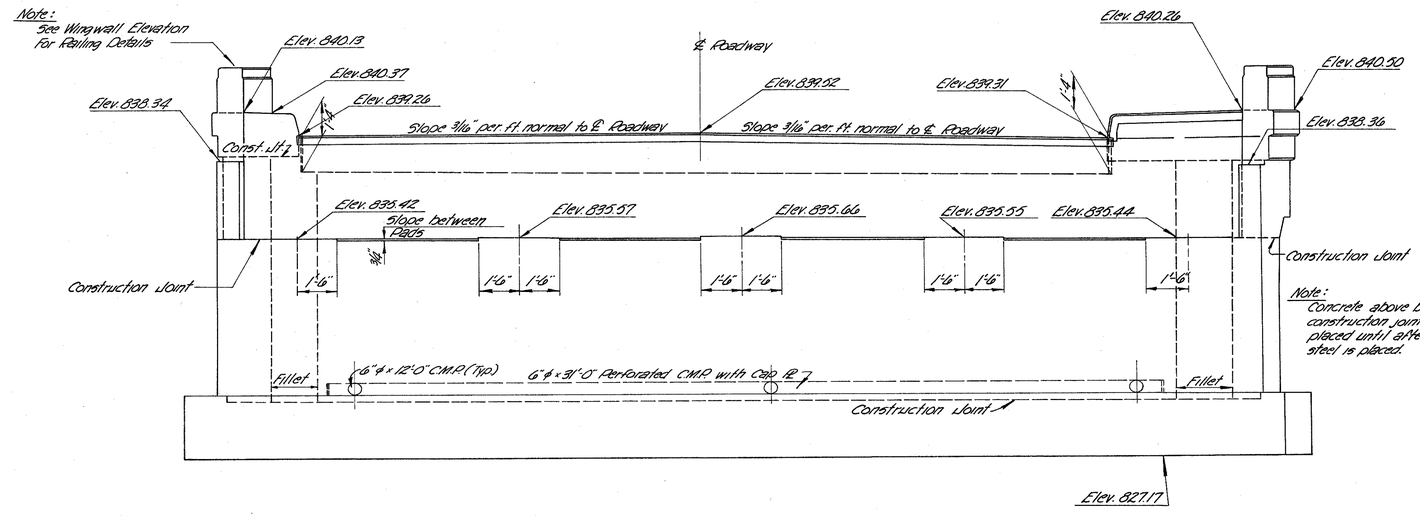
PLAN OF ABUTMENT NO. 1



SECTION B-B

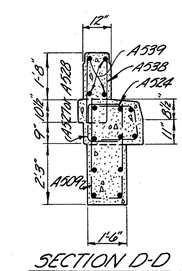


SECTION C-C

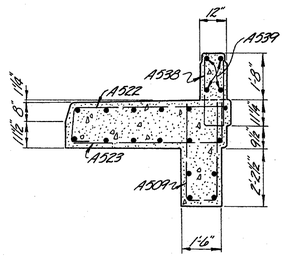


Note:
Concrete above bridge seat construction joint shall not be placed until after superstructure steel is placed.

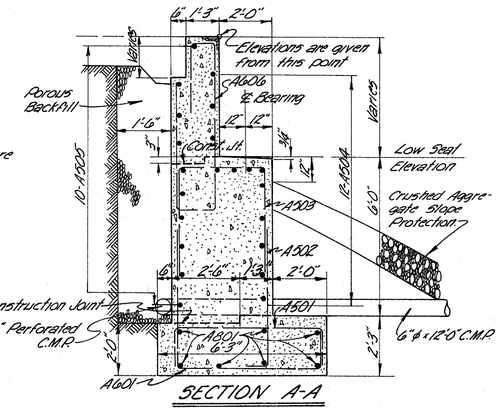
ELEVATION OF ABUTMENT NO. 1



SECTION D-D



SECTION E-E



SECTION A-A

Note:
Refer to ABUTMENT No. 5 Details for additional notes.

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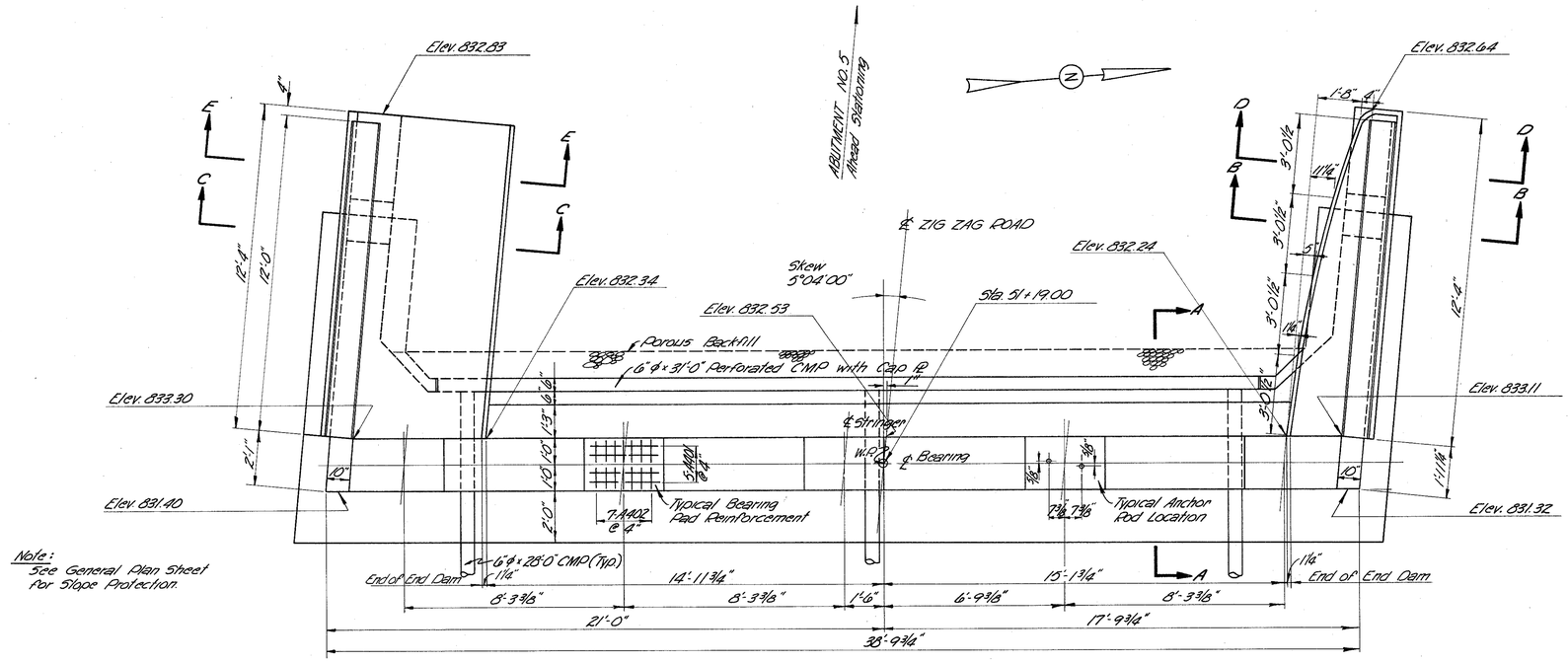
ABUTMENT DETAILS
BRIDGE NO. HAM-71-1508
I-71 UNDER ZIG ZAG ROAD
HAMILTON CO. I-71
STA. 763+79.65

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
G.J.C.	J.H.Z.	Neil	R.G.E.	Ellis 2/64	

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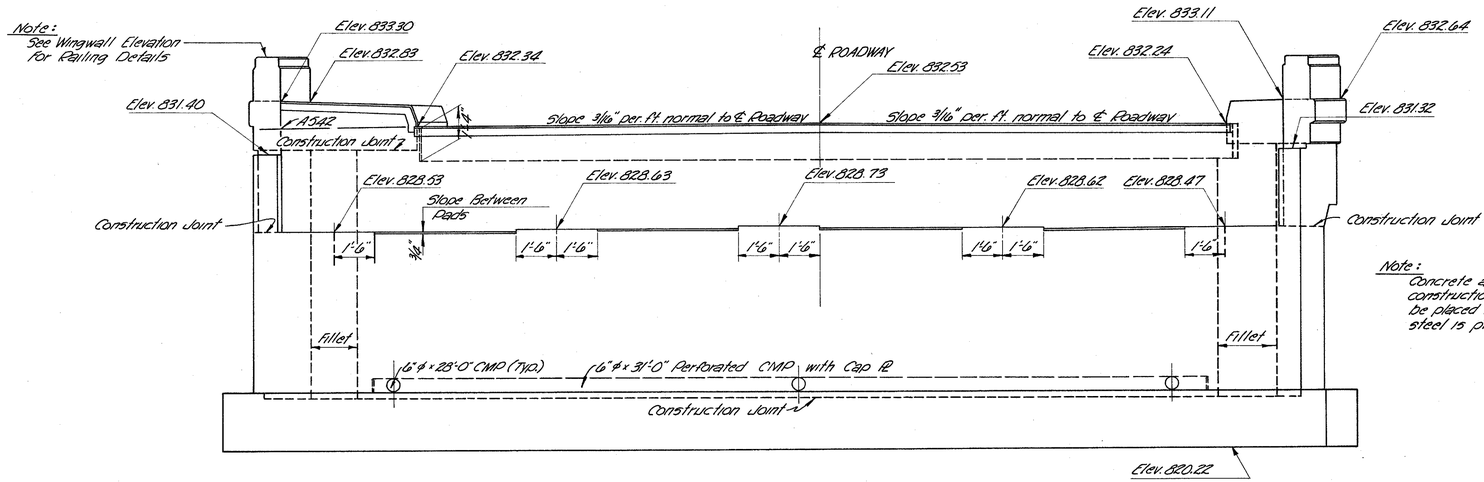
388
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HAMILTON COUNTY
HAM. 71-13.05



Note:
Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor rod holes.

PLAN OF ABUTMENT NO.5



ELEVATION OF ABUTMENT NO. 5

Note:
Parapet concrete and A 559 reinforcing bars included in Item 514 for payment.

EF - Each Face
NF - Near Face
FF - Far Face

Note:
Concrete above bridge seat construction joint shall not be placed until after superstructure steel is placed.

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ABUTMENT DETAILS

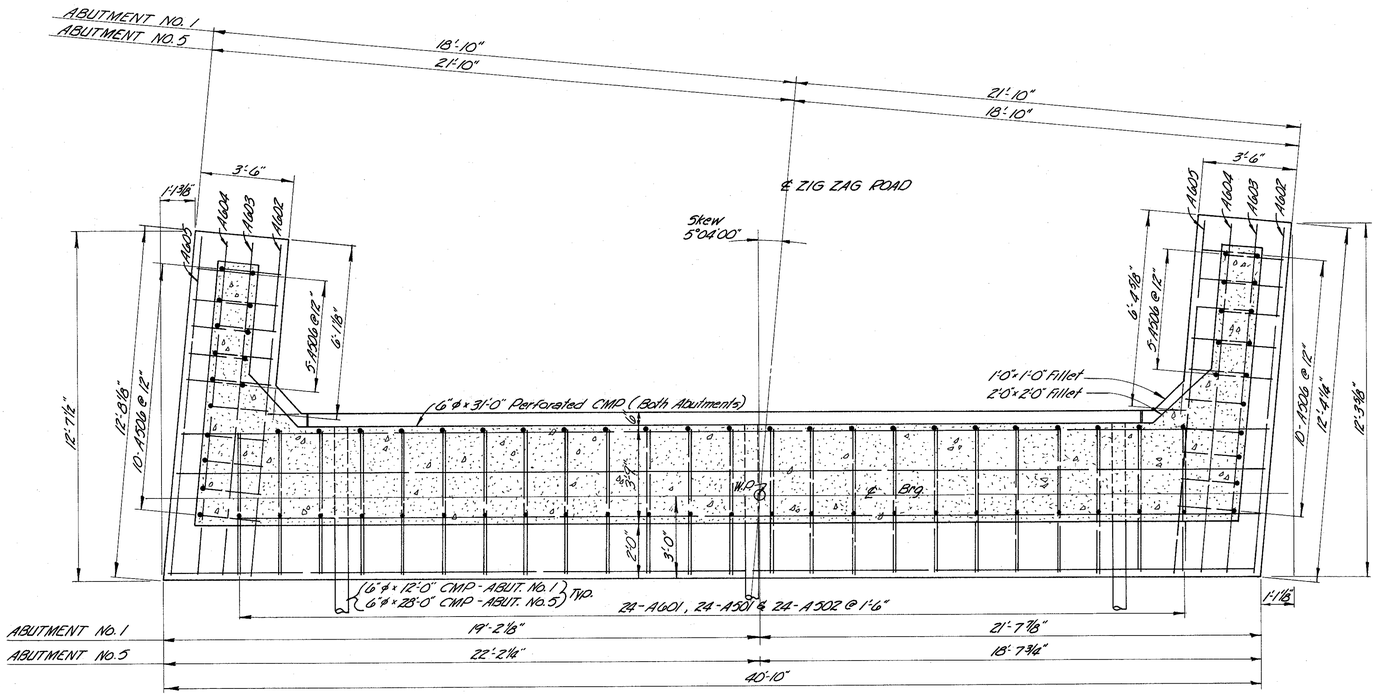
BRIDGE NO. HAM-71-1508
I-71 UNDER ZIG ZAG ROAD
HAMILTON CO. I-71
STA. 763+79.65

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
G.J.C.	J.H.Z.	Neil	R.G.E.	E1115 2/64	

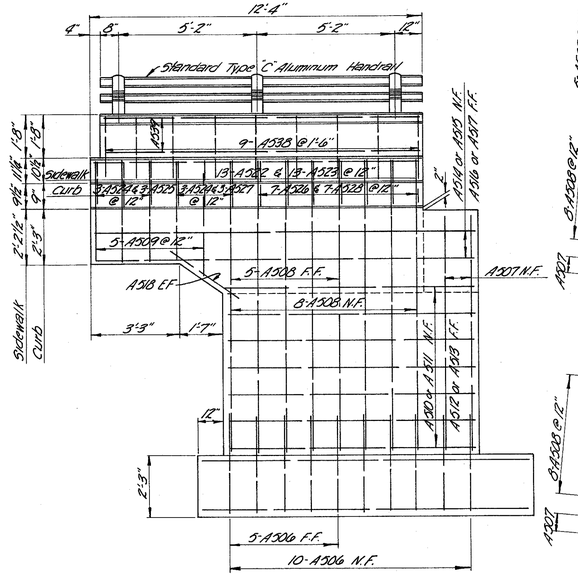
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

389
445

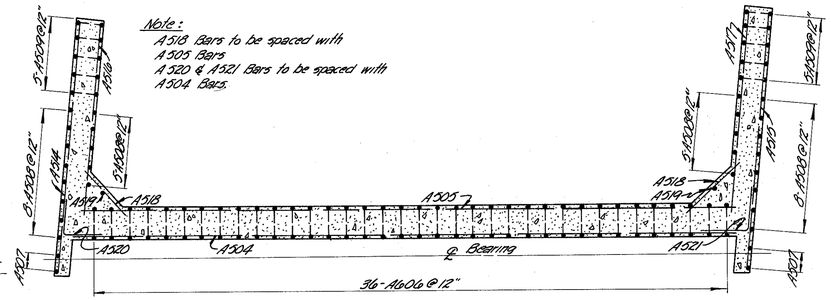
HAMILTON COUNTY
HAM. 71-13.05



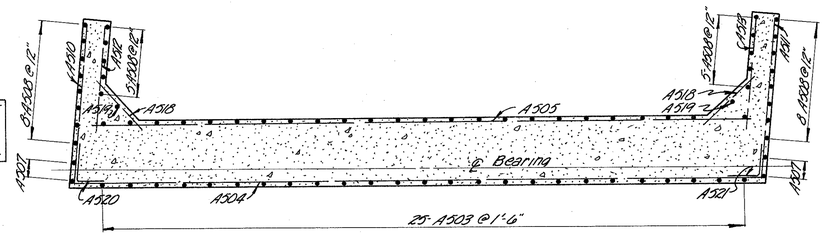
FOOTING PLAN



WINGWALL ELEVATION



SECTION ABOVE BRIDGE SEAT



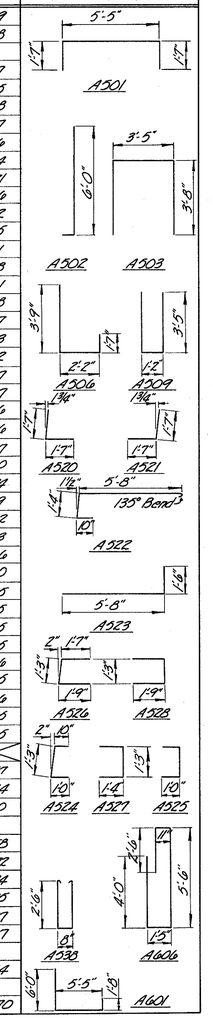
SECTION ABOVE FOOTING

REINFORCING STEEL LIST

BOTH ABUTMENTS

MARK	LENGTH	SHAPE	NO.	WEIGHT
A401	2'-8"	Str.	50	89
A402	1'-8"	Str.	70	78
A501	8'-4"	Bent	48	417
A502	6'-6"	Bent	48	325
A503	10'-6"	Bent	50	548
A504	38'-3"	Str.	24	907
A505	36'-3"	Str.	20	756
A506	7'-3"	Bent	60	454
A507	8'-6"	Str.	8	71
A508	10'-3"	Str.	52	356
A509	7'-9"	Bent	20	162
A510	9'-3"	Str.	28	135
A511	9'-0"	Str.	28	131
A512	6'-0"	Str.	28	88
A513	6'-3"	Str.	28	91
A514	14'-0"	Str.	4	38
A515	13'-9"	Str.	4	37
A516	10'-3"	Str.	4	43
A517	10'-0"	Str.	4	42
A518	4'-6"	Str.	44	207
A519	8'-9"	Str.	4	37
A520	3'-0"	Bent	18	36
A521	3'-0"	Bent	18	36
A522	8'-0"	Bent	26	217
A523	7'-0"	Bent	26	190
A524	2'-9"	Bent	12	34
A525	3'-0"	Bent	6	19
A526	4'-3"	Bent	14	62
A527	3'-9"	Bent	6	23
A528	4'-6"	Bent	14	66
A529	12'-0"	Str.	12	130
A530	12'-1"	Str.	2	25
A531	11'-9"	Str.	2	25
A532	12'-2"	Str.	2	25
A533	11'-9"	Str.	2	25
A534	12'-3"	Str.	2	26
A535	11'-9"	Str.	2	25
A536	12'-3"	Str.	2	26
A537	11'-9"	Str.	2	25
A538	6'-3"	Bent	36	235
A539	11'-8"	Str.	16	
A540	11'-3"	Str.	4	47
A541	10'-6"	Str.	4	44
A542	5'-0"	Str.	2	10
A601	12'-9"	Bent	50	993
A602	12'-0"	Str.	4	72
A603	12'-3"	Str.	4	74
A604	12'-6"	Str.	4	75
A605	12'-9"	Str.	4	77
A606	13'-9"	Bent	72	1487
A801	40'-6"	Str.	14	1314
		TOTAL		10,970

BAR DIAGRAM



Note:
Refer to Abutment No. 5 Details for additional notes.

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ABUTMENT DETAILS

BRIDGE NO. HAM-71-1508
I-71 UNDER ZIG ZAG ROAD
HAMILTON CO. I-71
STA. 763+79.65

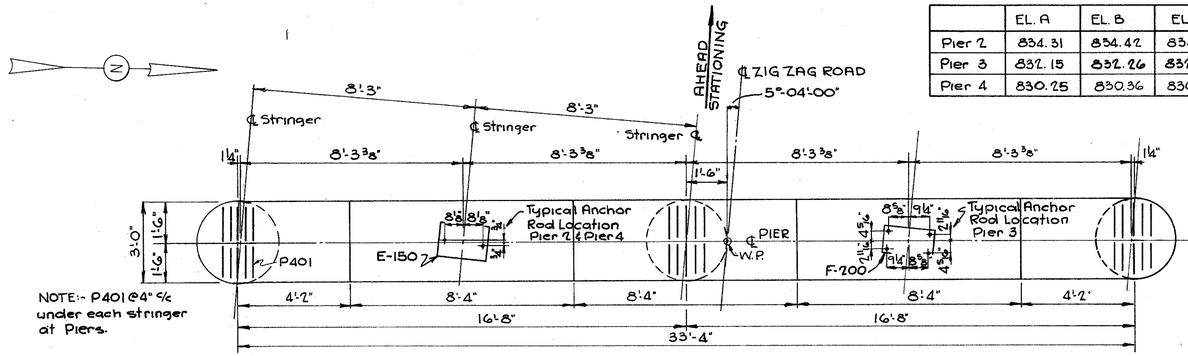
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
G.U.C.	J.H.Z.	Neil	R.G.E.	E/11/5 2/64	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

390
445

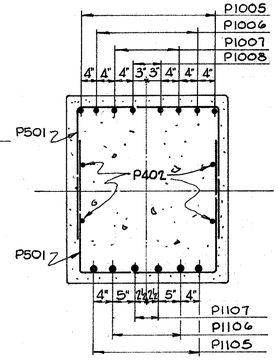
HAMILTON COUNTY
HAM. 71-13.05

	EL. A	EL. B	EL. C	EL. D	EL. E	EL. BOTT. FOOTING	H	F
Pier 2	834.31	834.42	834.54	834.44	834.29	810.29	18'-0"	3'-6¼"
Pier 3	832.15	832.26	832.37	832.27	832.12	809.62	16'-6"	3'-6⅝"
Pier 4	830.25	830.36	830.46	830.35	830.20	810.20	14'-0"	3'-6⅝"

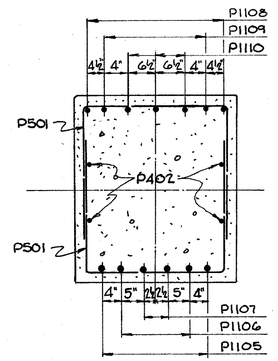


NOTE:- P401 @ 4" c/c under each stringer at Piers.

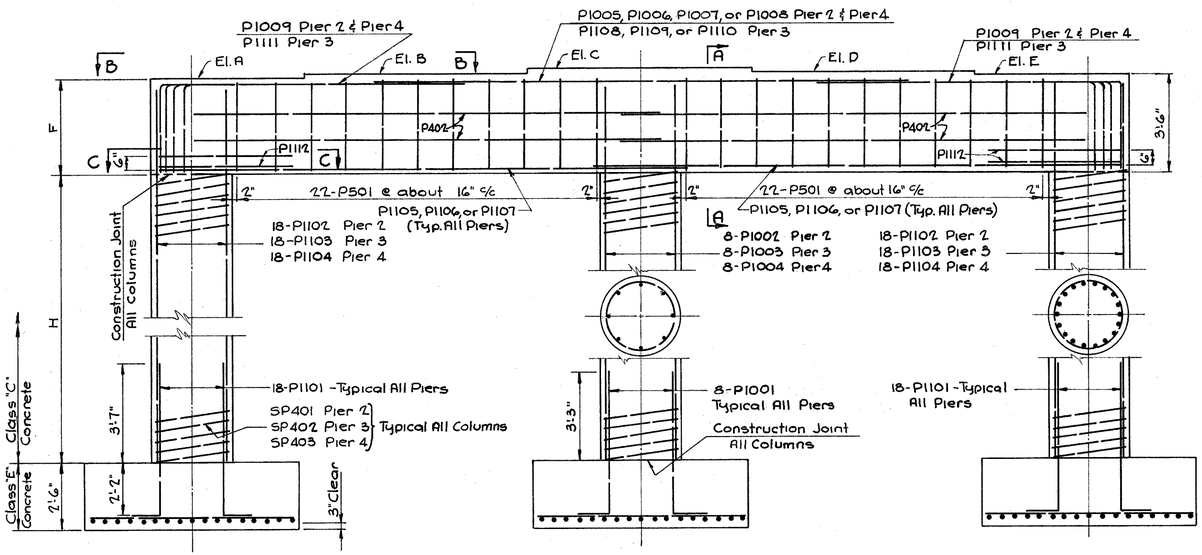
CAP PLAN



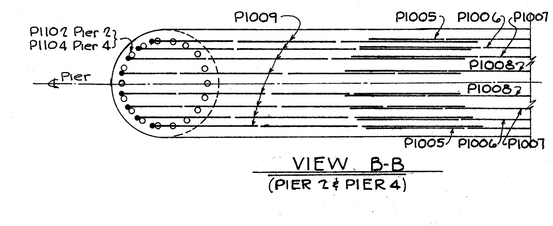
SECTION A-A
PIER 2 & PIER 4



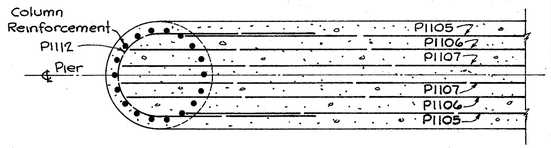
SECTION A-A
PIER 3



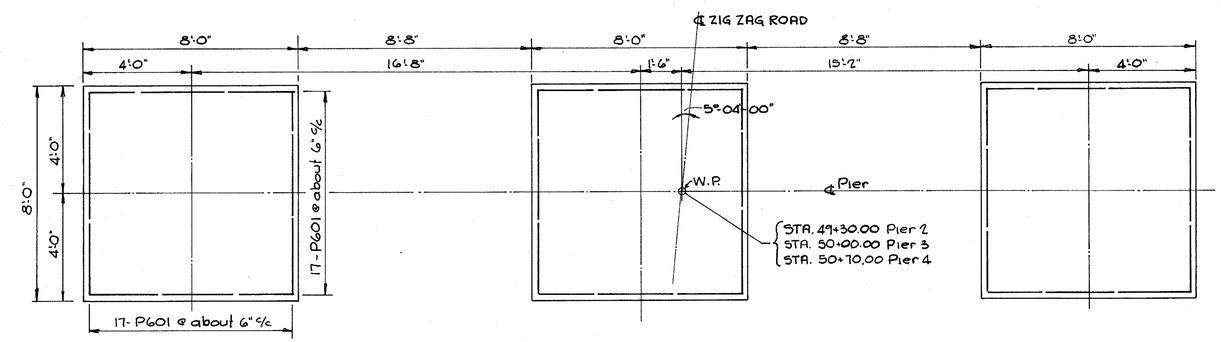
ELEVATION



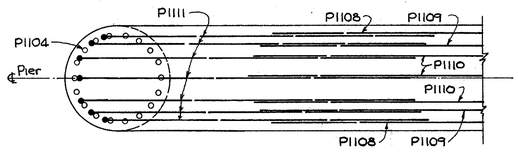
VIEW B-B
(PIER 2 & PIER 4)



SECTION C-C
(Typical All Piers)



FOOTING PLAN



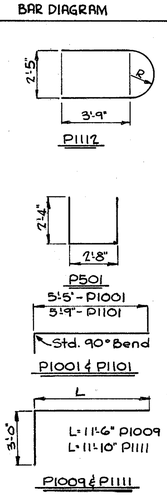
VIEW B-B
(Pier 3)

REINFORCING STEEL LIST

INCLUDES ALL THREE PIERS

MARK	LENGTH	SHAPE	NO.	PIER 2	PIER 3	PIER 4	WEIGHT
P401	2'-3	Str.	75	25	25	25	113
P402	17'-4	Str.	24	8	8	8	278
P501	7'-0	Bent	132	44	44	44	964
P601	7'-8	Str.	306	102	102	102	3524
P1001	6'-6	Bent	24	8	8	8	671
P1002	20'-9	Str.	8	8			714
P1003	19'-3	Str.	8		8		663
P1004	16'-9	Str.	8			8	577
P1005	16'-10	Str.	4	2		2	290
P1006	18'-0	Str.	4	2		2	310
P1007	19'-0	Str.	4	2		2	327
P1008	19'-6	Str.	4	2		2	336
P1009	14'-7	Bent	32	16		16	1951
P1101	6'-11	Bent	108	36	36	36	3969
P1102	20'-9	Str.	36	36			3969
P1103	19'-3	Str.	36		36		3687
P1104	16'-9	Str.	36			36	3704
P1105	18'-0	Str.	12	4	4	4	1148
P1106	19'-0	Str.	12	4	4	4	1212
P1107	19'-6	Str.	12	4	4	4	1243
P1108	17'-6	Str.	2		2		186
P1109	18'-0	Str.	2		2		191
P1110	19'-0	Str.	3		3		303
P1111	14'-6	Bent	14		14		1079
P1112	11'-4	Bent	12	4	4	4	723
						TOTAL	31,627

BAR DIAGRAM



SPIRAL REINFORCING LIST

MARK	NO.	SIZE	CORE DIA.	LENGTH	PITCH	NO. OF TURNS	WEIGHT
SP401	3	½"ϕ	32"	18'-0"	4½"	51	1016
SP402	3	½"ϕ	32"	16'-6"	4½"	47	935
SP403	3	½"ϕ	32"	14'-0"	4½"	40	795
					TOTAL		2746

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 3 turns (total number of closed coils), expressed as the nearest whole number. Spiral reinforcing bars shall not have deformations, but shall in other respects conform to Item S-4. 1½ closed coils shall be provided at the ends of each spiral unit.

Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

BRIDGE SEAT REINFORCING:- Special care shall be taken in placing reinforcing in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes.

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PIER DETAILS

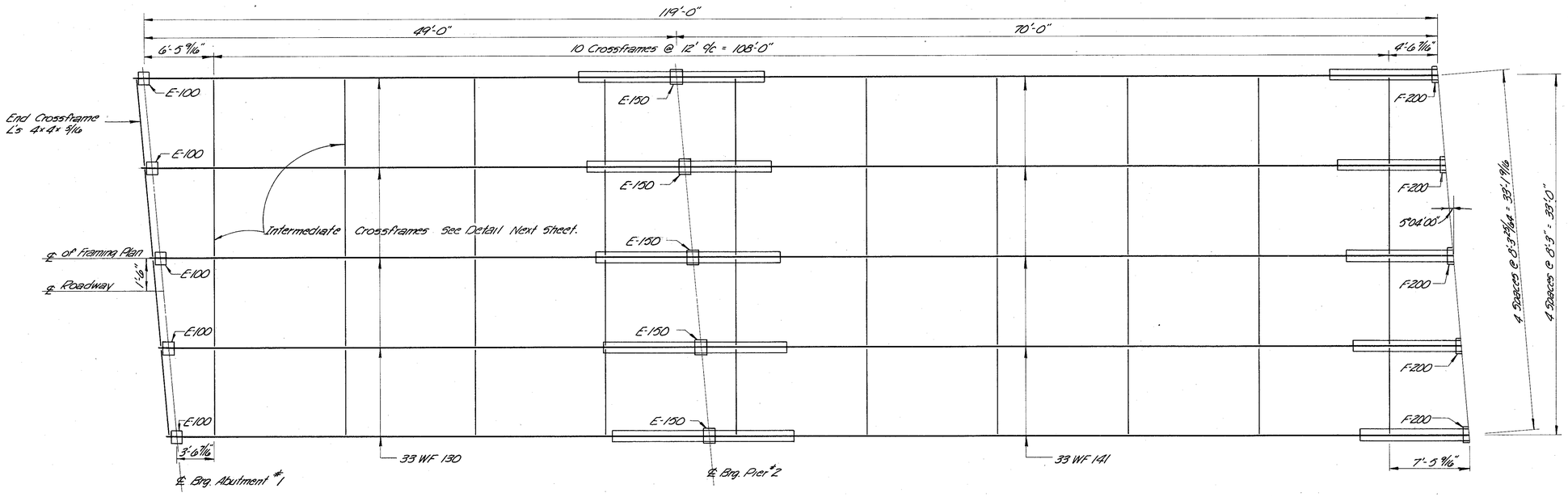
BRIDGE NO. HAM-71-1508
I-71 UNDER ZIG ZAG ROAD
HAMILTON CO. I-71
STA. 763+79.65

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
G.J.C.	NMM	J.H.Z.	R.G.E.	11/15 2/64	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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HAMILTON COUNTY
HAM. 71-13.05

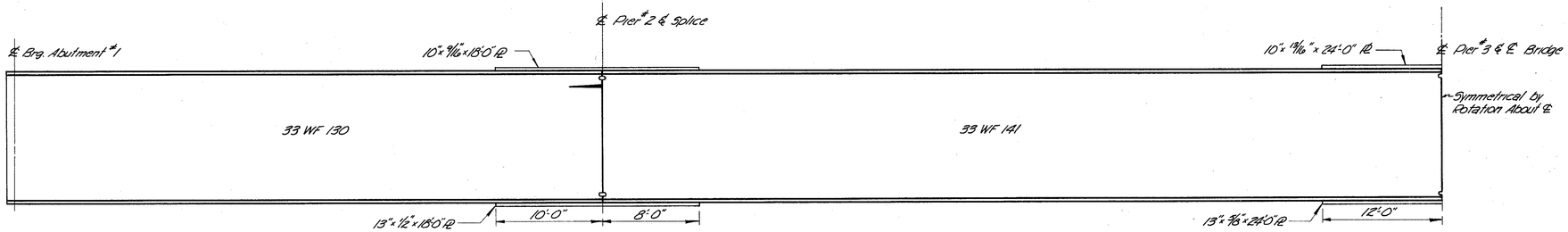


BEAM SPLICE WELDING PROCEDURE

1. Raise end of beam at Pier #3, 2".
2. Butt-weld beam flanges and web at Pier #2 using the following sequence: Make two passes on the web, then two on each flange, repeat, using one or two passes at each location, until welds are completed.
3. Weld top and bottom flange moment plates at Pier #2.
4. Lower end of beam at Pier #3.
5. Make splice at Pier #3 and Pier #4 in the same manner raising the end of the beams 2 1/16" at Pier #4 and 1/16 at Abutment #5.

HALF FRAMING PLAN

(Symmetrical by Rotation)



ELEVATION

Note:
For details of beam splices, scuppers bulb angles, end dams, sidewalk plates and end crossframes see Standard Drawing No. 50-1-63.

DEFLECTIONS AND CAMBER

LOCATION	Outside Beams				Inside Beams			
	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 1	SPAN 2	SPAN 3	SPAN 4
Deflections due to weight of steel	0	1/16	1/16	0	0	1/16	1/16	0
Deflections due to remaining Dead Load	3/16	3/8	3/8	3/16	1/8	3/8	3/8	1/8
Convexity required for Vertical Curve	1/4	9/16	9/16	1/4	1/4	9/16	9/16	1/4
Sum of Deflection and Convexity	7/16	1	1	7/16	3/8	1	1	3/8
Required Camber	0	1	1	0	0	1	1	0

When no camber is required the beams shall be so fabricated that any curved beam will be placed with the convex flange up.

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CINCINNATI, OHIO 45206

SUPERSTRUCTURE DETAILS

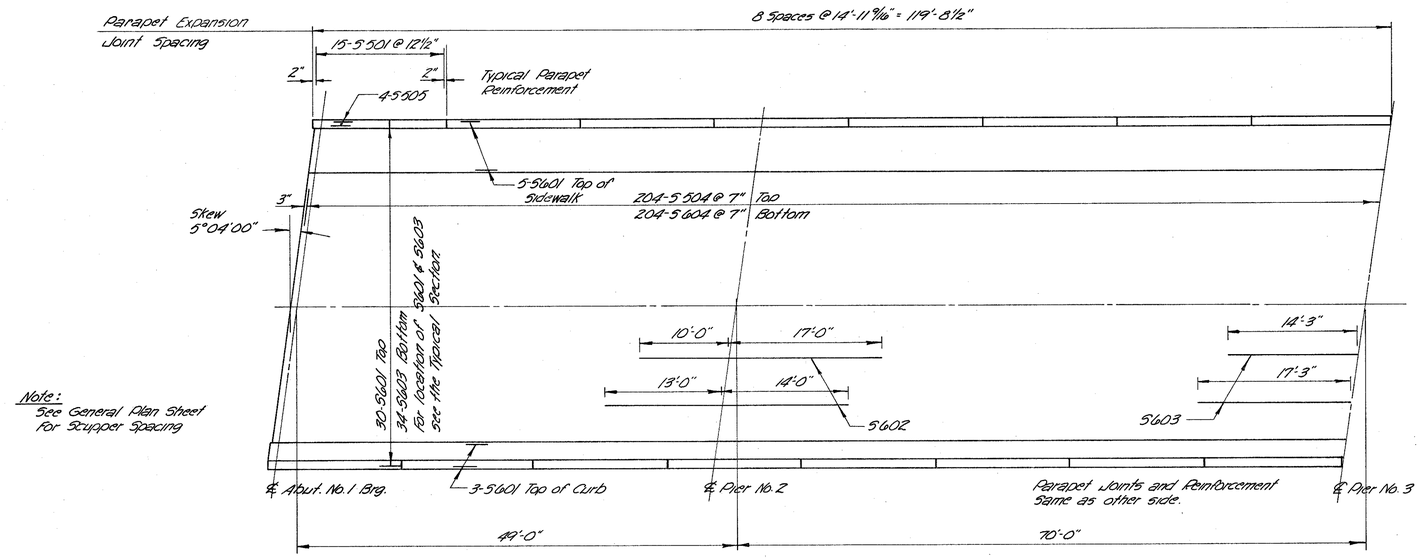
BRIDGE NO. HAM-71-1508
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HAMILTON CO. I-71
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DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
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FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
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HAMILTON COUNTY
HAM. 71-13.05

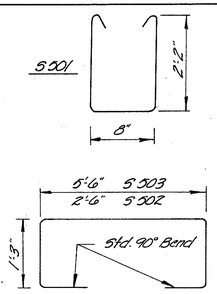


HALF PLAN

REINFORCING STEEL LIST
SUPERSTRUCTURE

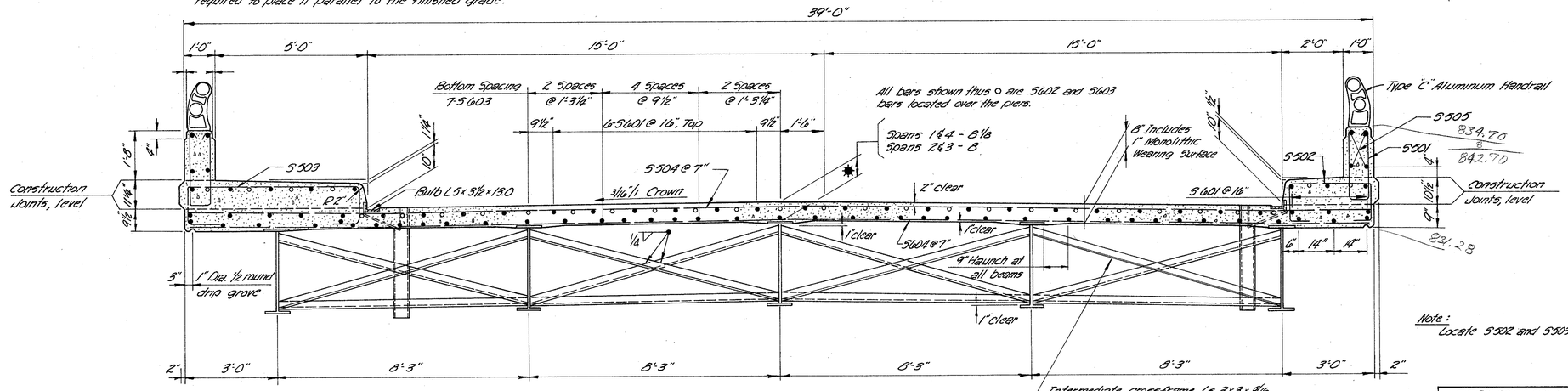
MARK	SHAPE	LENGTH	NO.	WEIGHT
5501	Bent	3'-7"	480	2,795
5502	Bent	5'-9"	240	1,439
5503	Bent	8'-9"	240	2,190
5504	Str.	38'-8"	409	16,495
5505	Str.	14'-7"	128	
5601	Str.	35'-9"	266	14,283
5602	Str.	27'-0"	58	2,352
5603	Str.	31'-6"	291	13,768
5604	Str.	38'-8"	408	23,196
TOTAL				77,018

BAR DIAGRAM



5502 & 5503

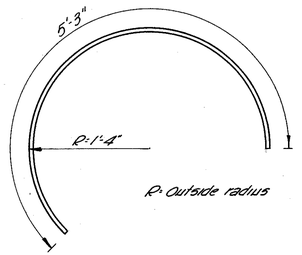
✸ This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.



Intermediate crossframe L s 3 x 3 x 5/16 Weld both sides of vertical leg and top side of horizontal leg to beam web with 1/4" continuous fillet weld.

TYPICAL SECTION

Notes:
1. For slab pouring sequence see General Notes.
2. Parapet concrete and 5505 reinforcement bars are included with Item 511A for payment.
3. Fixed and sliding bearings included with Item 517 for payment.
4. For details of beam splices, scuppers, bulb angles, end dams, curb plates, sidewalk plates and end Crossframes see Standard Drawing No. 501-1-63.
5. All scupper details to be in accordance with those for a Type I scupper.
6. For fixed and sliding bearing details see Standard Drawing No. F 5 8-1-62.
7. The haunch in the deck slab adjacent to the top of steel beams, which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12" except that the maximum slope shall not exceed 3" per foot. Payment for deck slab concrete shall be based on the 9" width.



SPIRAL REPLACEMENT BAR (RE 1/2 ℄)

Note:
Locate 5502 and 5503 bars @ abt 12".

REPLACEMENT BARS

MARK	LENGTH	SHAPE	NO.
RE 401	5'-3"	Str.	1
RE 501	5'-7"	Str.	2
RE 601	5'-11"	Str.	3
RE 801	6'-6"	Str.	1
RE 1001	7'-3"	Str.	1
RE 1101	7'-7"	Str.	1
RE 1/2 ℄	5'-3"	Bent	1

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SUPERSTRUCTURE DETAILS
BRIDGE NO. HAM-71-1508
I-71 UNDER ZIG ZAG ROAD
HAMILTON CO. I-71
STA. 763+79.65

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
R.G.E.	EASA	Neil	R.G.E.	Ellis 2/64	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

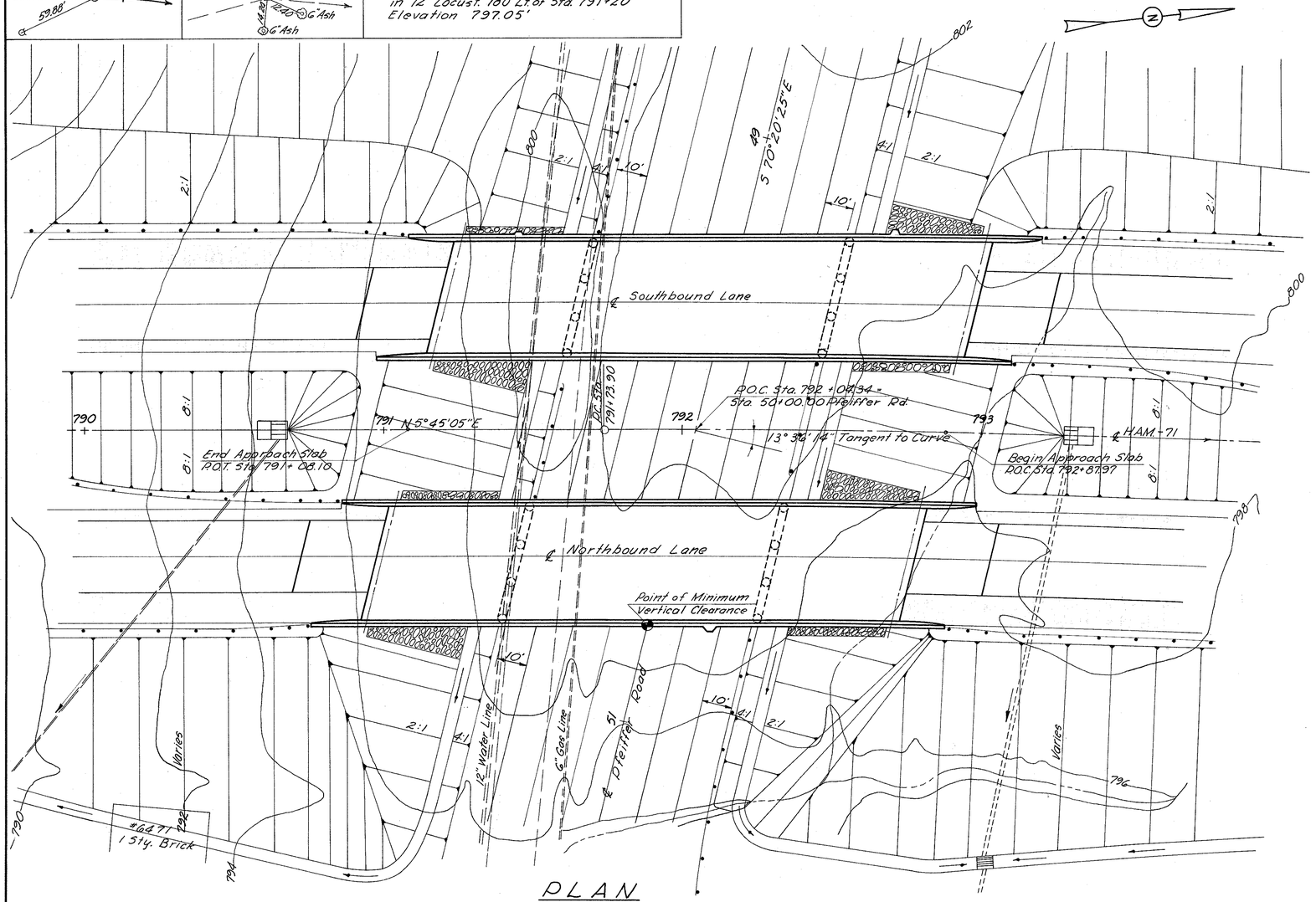
393
445

HAMILTON COUNTY
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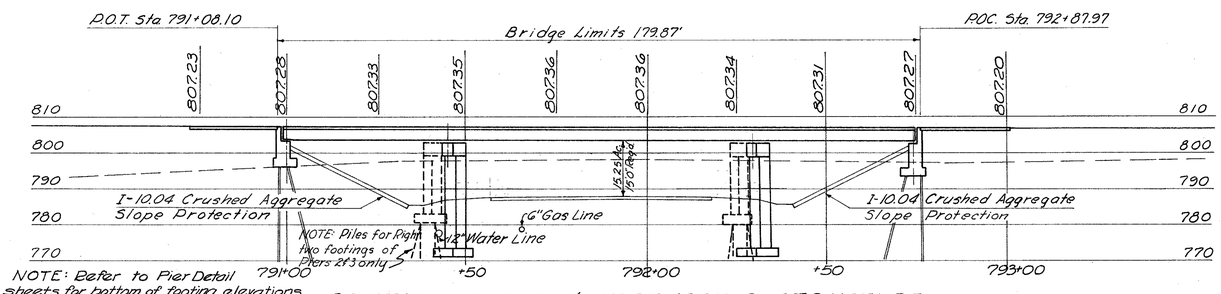
REFERENCE P.C. Sta. 791+73.90
16" Walnut, 21.29°, 22.98, Tack, 792, 59.88

REFERENCE P.I. Sta 802+05.24
6" Elm, 23.48°, 15" Elm, 14.42, 16.20, 6" Ash, 6" Ash

B. M. R. R. Spike 1.5' above ground in 12" Locust. 180' Lt. of Sta. 791+20 Elevation 797.05'

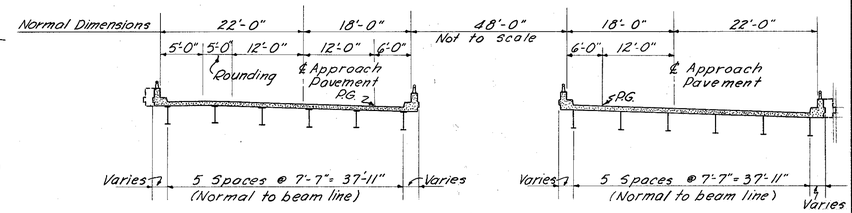


PLAN



NOTE: Refer to Pier Detail sheets for bottom of footing elevations

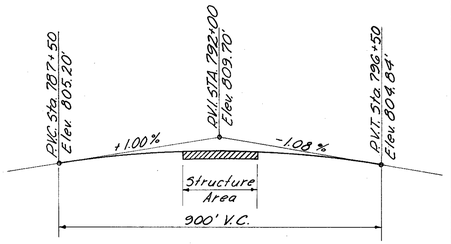
SECTION ALONG ℄ NORTHBOUND STRUCTURE



PROPOSED STRUCTURE

℄ HAM-71 Curve Data

P.I. Sta. 802+05.24
Δ = 20° 24' 30" Rt.
D = 1° 00'
R = 5729.58'
L = 2040.83'
T = 1031.34'
E = 92.08'
P.C. Sta. 791+73.90
P.T. Sta. 812+14.73
S.E. = 0.032 ft/ft



I-71 PROFILE GRADE

NOTE:
Refer to sheet No 33 for I-10 Special Berm & Slope Protection detail showing treatment of shoulders and side slopes at end of structure.

NOTE:
10BP42 Steel Piles shall be used. Estimated pile length for the abutments varies from approximately 10' for the extreme left piles to 25' for the extreme right piles. Estimated pile length for Pier 2 & Pier 3 footings on piles approximately 10'.

PROPOSED STRUCTURE

TYPE: Continuous Steel Beam With Reinforced Concrete Deck & Substructure.

SPAN: Northbound 45'-0", 85'-6", 45'-0"
Southbound 45'-0", 85'-6", 45'-0"

ROADWAY: 40'-0" f-f Parapet

LOAD FREQUENCY C.F. 2000 (57)
Adequate for AASHO Alternate Loading

SKEW: 13° 36' 14" Right Forward

WEARING SURFACE: 1" Monolithic Concrete

APPROACH SLABS: AS-1-54 (25' long)

ALIGNMENT: Combination Tangent & 1° Horizontal Curve to the Right

CURBS: 1'-0" Each Side

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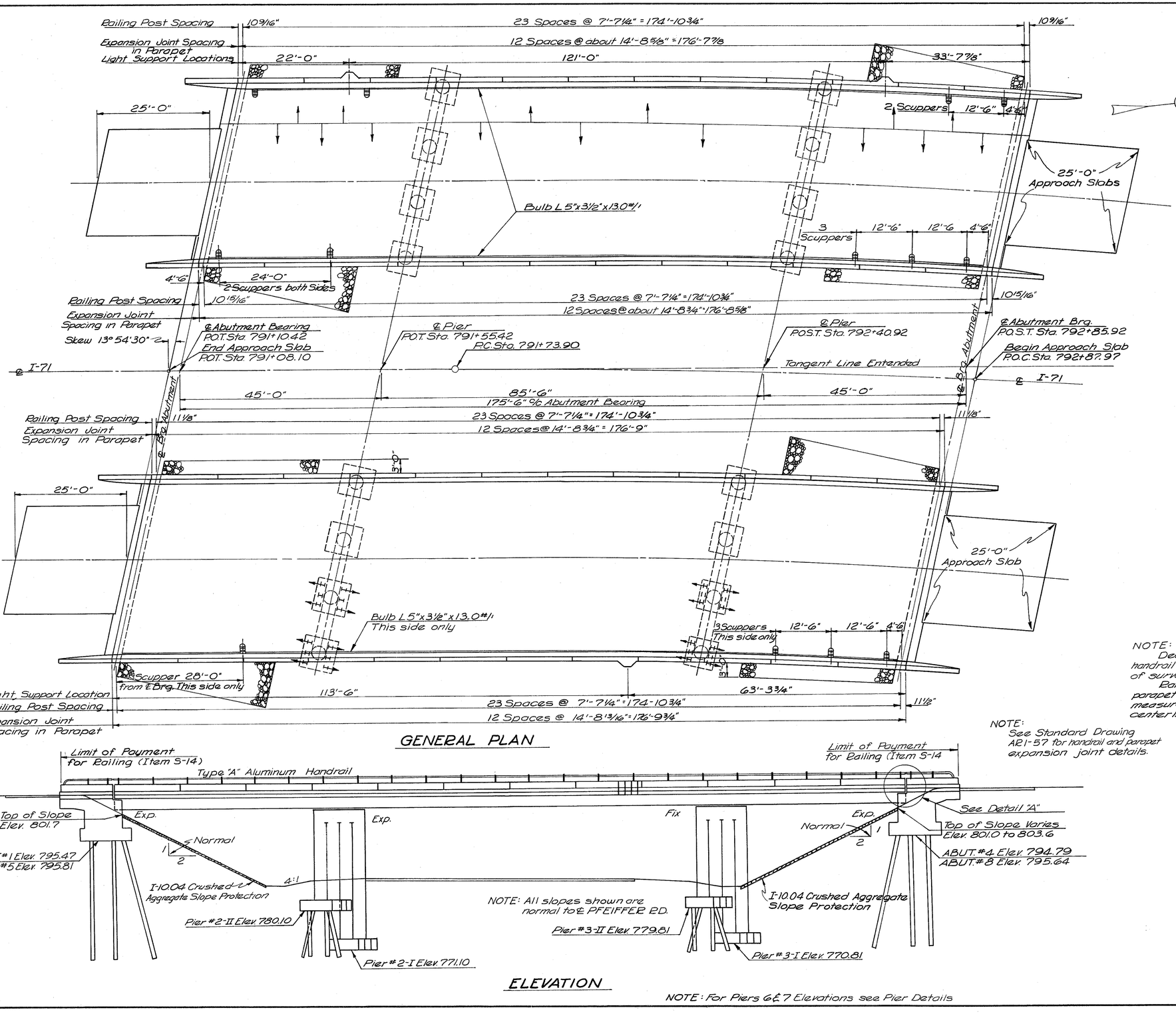
SITE PLAN
BRIDGE NO. HAM-71-1560 L&R
I-71 OVER PFEIFFER ROAD
HAMILTON CO. I-71
P.O.C. STA. 792+04.34

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
Aerial Survey	Aerial Survey	EGE	EBS	EGE	2/64

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

394
445

HAMILTON COUNTY
HAM.-71-13.05

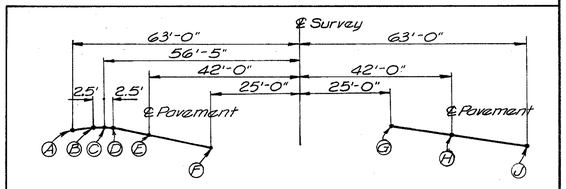


GENERAL PLAN

NOTE: All slopes shown are normal to ℄ PFEIFFER RD.

ELEVATION

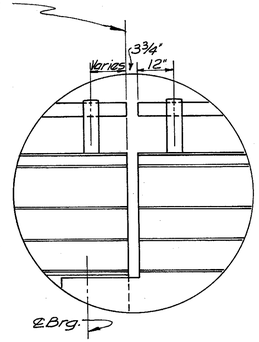
NOTE: For Piers 6 & 7 Elevations see Pier Details



TOP OF SLAB ELEVATIONS

STATION	Point A	Point B	Point C	Point D	Point E	Point F	Point G	Point H	Point J
791+00	——	——	——	——	——	——	——	807.22	806.89
+25	——	807.65	807.71	807.71	807.53	807.25	807.38	807.20	806.87
+50	807.61	807.78	807.84	807.83	807.59	807.25	807.41	807.16	806.81
+75	807.72	807.89	807.95	807.93	807.65	807.24	807.46	807.11	806.67
792+00	807.82	807.99	808.05	808.02	807.69	807.22	807.49	807.04	806.48
+25	807.89	808.06	808.11	808.02	807.71	807.19	807.49	806.97	806.32
+50	807.88	808.05	808.10	808.07	807.69	807.15	807.47	806.93	806.26
+75	807.84	808.01	808.06	808.03	807.65	807.11	807.43	——	——

Light Supports, Superstructure Railing Posts & Expansion Joint Spacing are measured from end of parapet.



DETAIL "A"

NOTE:
Deck, curb, parapet and handrail are to follow centerline of survey alignment.
Railing Post spacing and parapet expansion joint spacing measurements are along the centerline of parapet.

NOTE:
See Standard Drawing AR1-57 for handrail and parapet expansion joint details.

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GENERAL PLAN AND ELEVATION

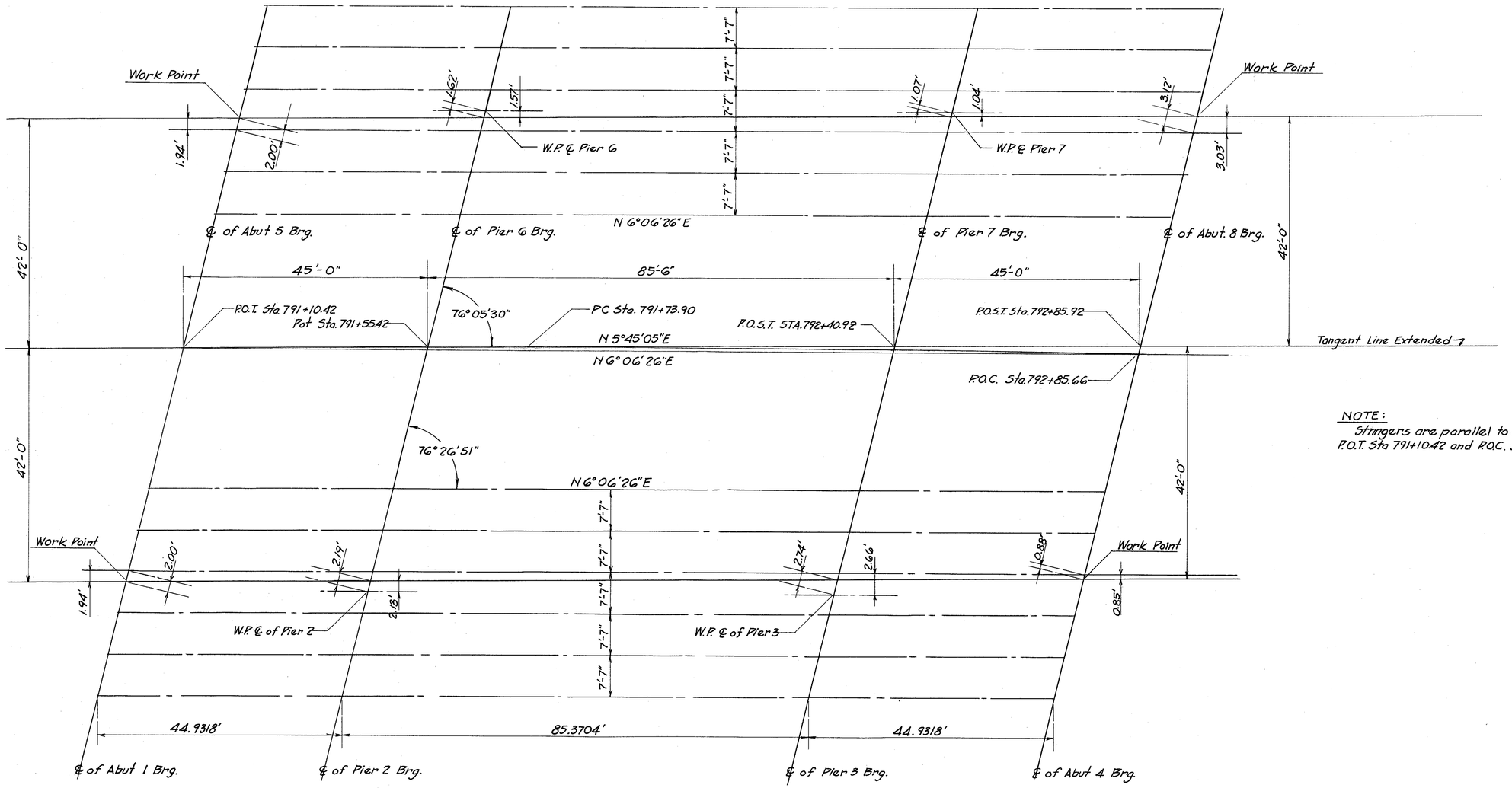
BRIDGE NO. HAM-71-1560 L&R
I-71 OVER PFEIFFER ROAD
HAMILTON CO. I-71
P.O.C. STA. 792+04.34

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
EGE	JHZ	EEJ	EGE	ELLIS 2/64	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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HAMILTON COUNTY
HAM-71-13.05



NOTE:
Stringers are parallel to a line between P.O.T. Sta 791+10.42 and P.O.C. Sta. 792+85.66.

GEOMETRIC PLAN

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GEOMETRICS

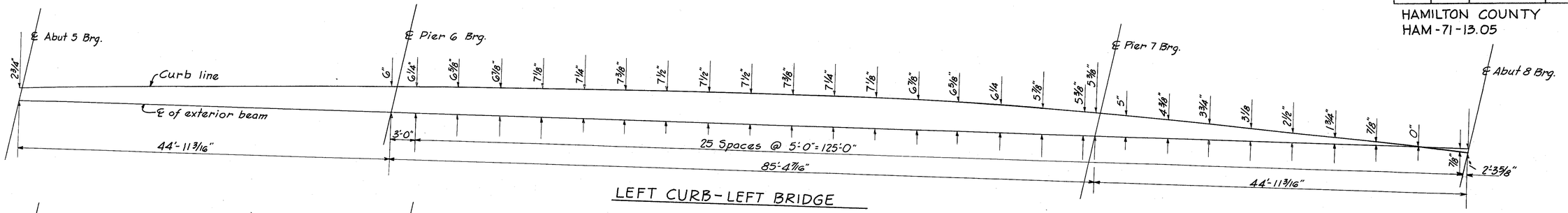
BRIDGE NO. HAM-71-1560 L&R
I-71 OVER PFEIFFER ROAD
HAMILTON CO. I-71
P.O.C. STA. 792+04.34

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
RK	RK	KAR	RGE	E1115 2/64	

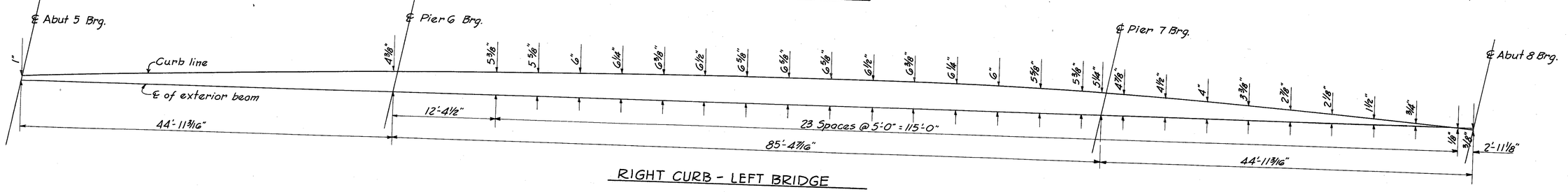
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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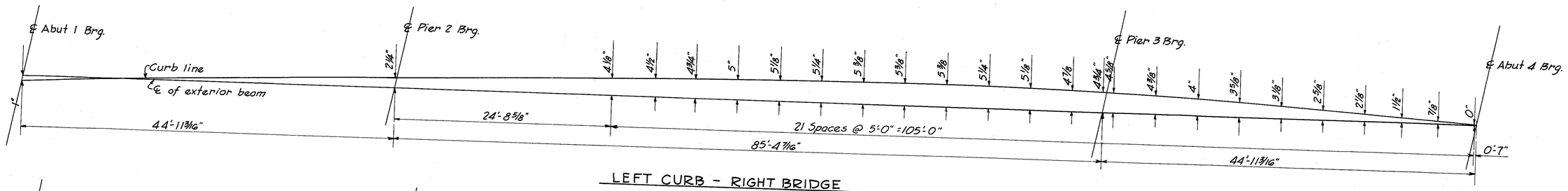
HAMILTON COUNTY
HAM-71-13.05



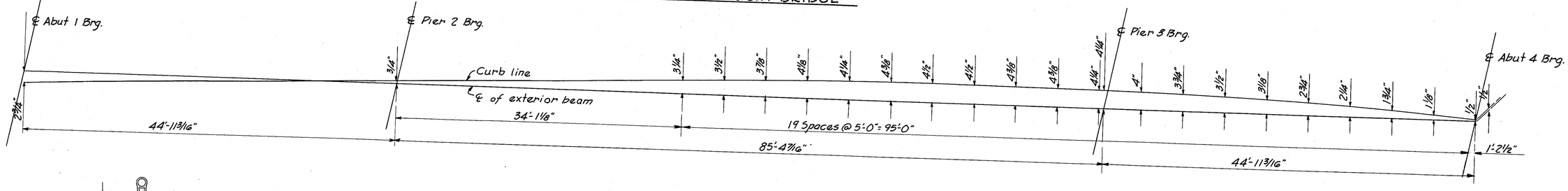
LEFT CURB - LEFT BRIDGE



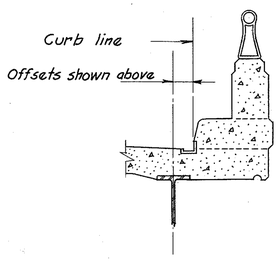
RIGHT CURB - LEFT BRIDGE



LEFT CURB - RIGHT BRIDGE



RIGHT CURB - RIGHT BRIDGE



SECTION THRU CURB

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CURB OFFSETS

BRIDGE NO. HAM-71-1560 L&R
I-71 OVER PFEIFFER ROAD
HAMILTON CO. I-71
P.O.C. STA. 792+04.34

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
RK	RK	KAR	RGE	Ellis 2/64	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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445

HAMILTON COUNTY
HAM-71-13.05

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	HAM-71-1560 RIGHT TOTAL	Super Structure	ABUT #1	ABUT #4	PIER #2	PIER #3	GEN'L	HAM-71-1560 LEFT TOTAL	Super Structure	ABUT #5	ABUT #8	PIER #6	PIER #7	GEN'L	GEN'L
E-2	Lump Sum	Lump Sum	Cofferdoms, Cribs and Sheeting															Lump Sum
E-2	485	Cu. Yds.	Unclassified Excavation	335		10	55	130	140		150		5	75	35	35		
E-2	80	Cu. Yds.	Shale Excavation	15				5	10		65				30	35		
S-1	472	Cu. Yds.	Class "C" Concrete Superstructure	236	236						236	236						
S-1	143	Cu. Yds.	Class "C" Concrete Piers above Footings	76				38	38		67				33	34		
S-1	184	Cu. Yds.	Class "E" Concrete Abutments above Footings	92		46	46				92		46	46				
S-1	238	Cu. Yds.	Class "E" Concrete Footings	120		38	38	22	22		118		38	38	21	21		
S-4	210,489	Lbs.	Reinforcing Steel	103,374	69,148	5,745	5,745	11,483	11,253		107,115	71,977	5,745	5,745	11,692	11,956		
S-7	464,380	Lbs.	Structural Steel	230,962	230,962						233,418	233,418						
S-8	464,380	Lbs.	Field Painting of Structural Steel	230,962	230,962						233,418	233,418						
S-14	807.02	Lin. Ft.	Railing (Type "A" aluminum rail and supports, conc. parapet)	403.55	353.55	25.00	25.00				403.47	353.47	25.00	25.00				
S-16	Lump Sum	Lump Sum	First Test Pile	Lump Sum						Lump Sum								
S-18	1080	Lin. Ft.	Steel Piles, 10BP42	780		270	270	120	120		300		150	150				
S-25			See Sheet 16															
S-29	64	Cu. Yds.	Porous Backfill	32		16	16				32		16	16				
S-29	13	Each	Scuppers including Supports	4	4						9	9						
S-29	140	Lin. Ft.	6" Perforated Helical C.M.P. M-6.4(h) including Specials	70		35	35				70		35	35				
S-29	96	Lin. Ft.	6" Helical C.M.P. M-6.4(h) non-perforated	48		24	24				48		24	24				
T-10	920	Sq. Yds.	Crushed Aggregate Slope Protection	460		230	230				460		230	230				
S-101	472	Each	Water Reducing Set-Retarding Admixtures for Concrete	236	236						236	236						
I-127	2	Each	Delineators, Type A-1, Bracket Mounted															

GENERAL NOTES

REFERENCE: Shall be made to Standard Drawings SD-1-63 sheets 1 thru 4, dated November 12, 1963, AR-1-57 dated April 9, 1957 and revised April 2, 1962, FSB-1-62 dated April 19, 1962 and revised January 15, 1963, and to Supplemental Specifications N° 5101 dated July 12, 1962 and N° 5307 dated August 23, 1960.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.

DESIGN DATA:

Design Loading	C.F. 2000 (57)
Concrete Class C	Basic unit stress 1,333 psi
Concrete Class E	Basic unit stress 1,133 psi
Structural Steel	ASTM A36 - Basic unit stress 20,000 psi (ASTM A7 and A373 steel not permitted except for piles. Piles need not be ASTM A36.)
Reinforcing Steel	ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 psi except spiral reinforcement may be plain and of structural grade with basic unit stress of 18,000 psi.

FOOTINGS: Without piles shall extend a minimum of 3" into undisturbed rock or to the elevation shown, whichever is lower

FOUNDATION BEARING PRESSURE: Pier spread footings are designed for a maximum bearing pressure of 5.0 tons per square foot.

WELDING: Of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop. Class "B" welds are shown thus B>——

CONTINUOUS BEAM SHOP ASSEMBLY: Reference paragraph 4, Section S-7.12 of the Construction and Material Specifications, if rolled beams are field spliced only at supports, for the purpose of checking the fit-up of weld joint preparation, only two adjacent beams need be shop assembled at a time in their correct unloaded positions. All beams shall be assembled and match marked.

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.

MACHINE FINISH: At the Contractor's option, the concrete deck may be finished by the use of a finishing machine.

CONCRETE: Superstructure and piers above footings shall be "Class C Concrete". Abutments and pier footings shall be "Class E Concrete".

BAR SIZE: is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example, A700 is a No. 7 size bar and A1014 is a No. 10 size bar.

RAILING: Aluminum rail and supports, concrete parapet, reinforcing bars wholly within the concrete parapet, and sponge rubber for parapet joints shall be included in Item S-14 for payment.

FIRST TEST PILE: Payment will be made for only one first test pile. It may be driven for either the Right or Left bridge.

PILES: shall be driven with a hammer of not less than 11,000 ft. lbs. per blow to firm contact with rock. If the length of penetration is approximately equal to the depth 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 the abutment piles -
50 tons per pile using a 11,000 ft. lb. hammer
43 tons per pile using a 15,000 ft. lb. or greater hammer

For the pier piles -
64 tons per pile using a 11,000 ft. lb hammer
56 tons per pile using a 15,000 ft. lb. or greater hammer

If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 35 tons per pile for the abutment piles and 35 tons per pile for the pier piles.

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ESTIMATED QUANTITIES & GENERAL NOTES

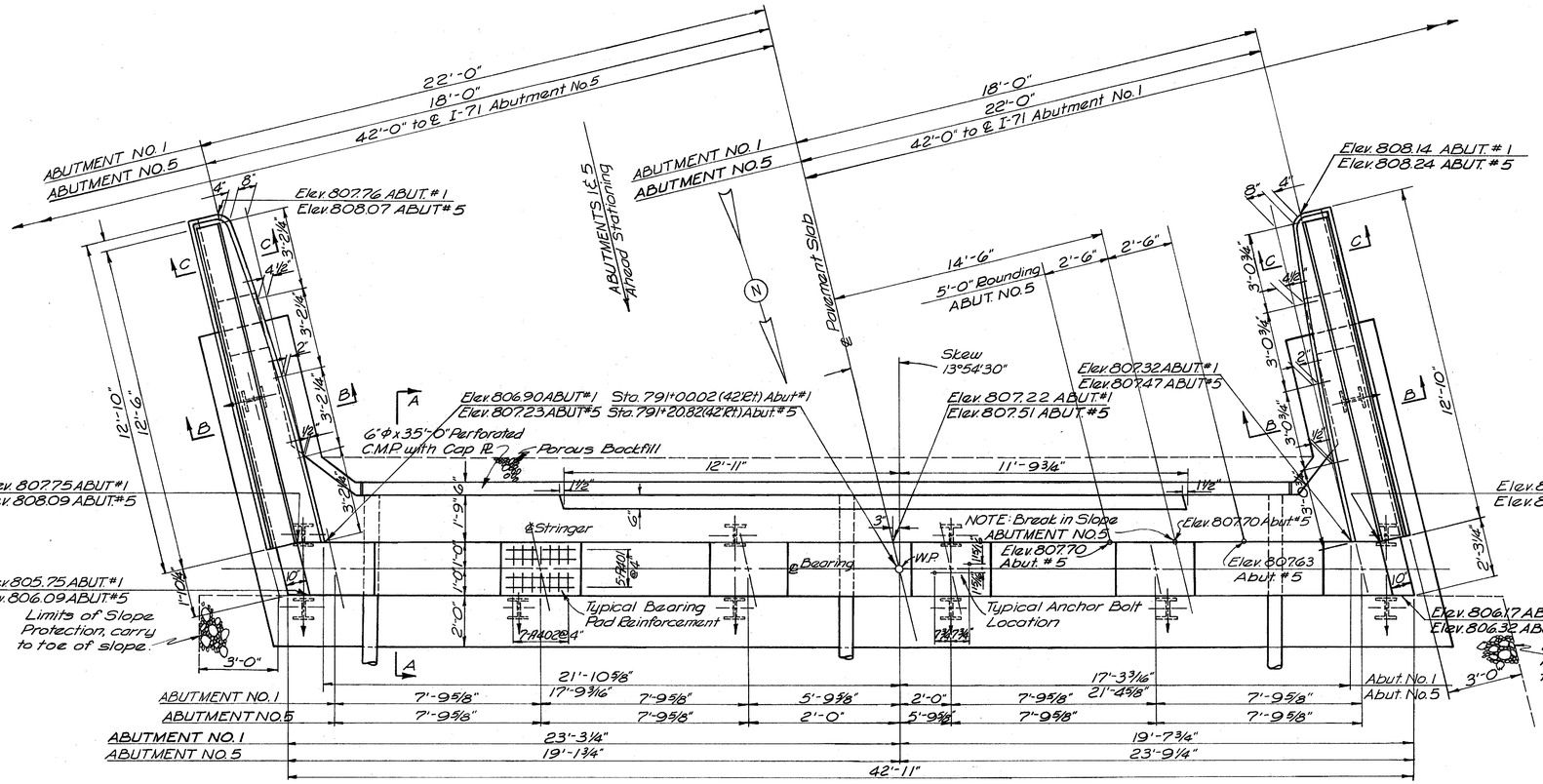
BRIDGE NO. HAM-71-1560 L&R
I-71 OVER PFEIFFER ROAD
HAMILTON CO. I-71
P.O.C. STA. 792+04.34

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
RGE	JHZ	GWS	RGE	ELLIS 2/64	11-10-64 WHL

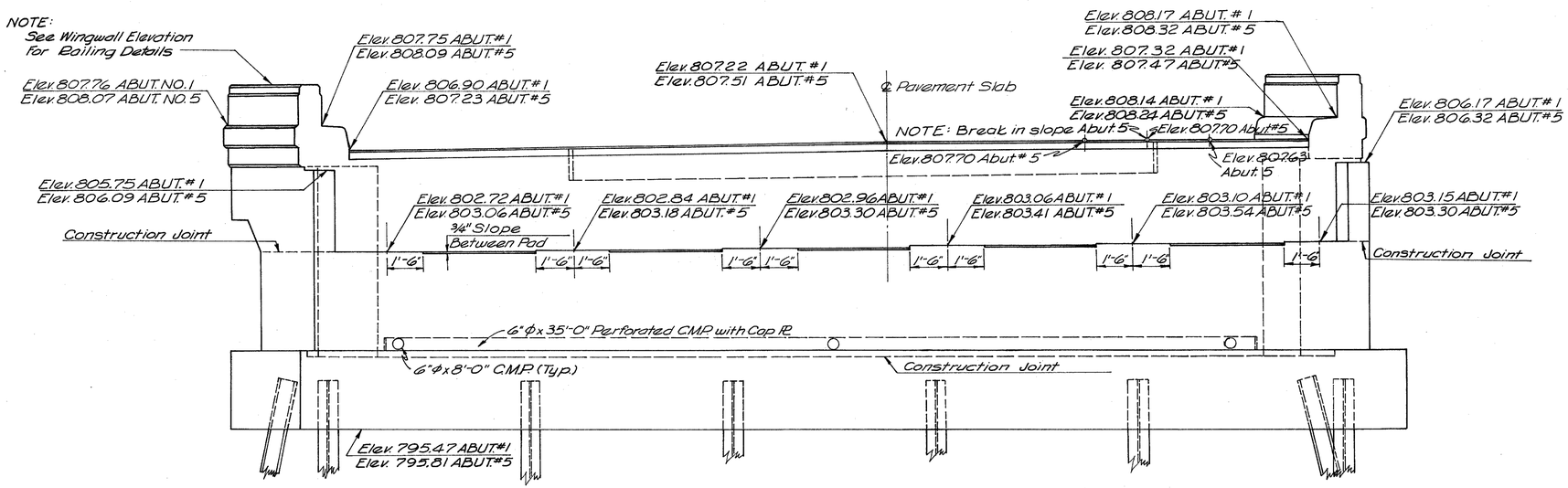
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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HAM.-71-13.05

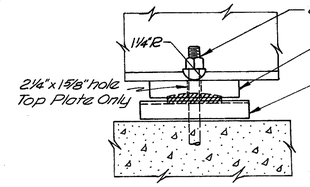


PLAN of ABUTMENTS Nº 1 & 5



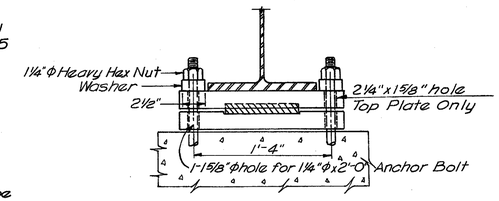
ELEVATION of ABUTMENTS Nº 1 & 5

NOTE: The nut shall be tightened to a snug fit to bring the parts into complete contact, after which the nut shall be backed off one-half turn and tack welded.



TYPICAL DETAIL of E-100 (MOD.)

For Details not shown See Std. Dwg. FSB-1-62



TYPICAL DETAIL of E-100 (MOD.)

For Details not shown See Std. Dwg. FSB-1-62

NOTES

1. All Piles shall be 10BP42
2. Piles marked thus, H→ to be battered 1:4 in the direction of the arrow.
3. Maximum pile load 35 tons per pile.
4. Piles shall be driven to a minimum bearing capacity of 35 tons per pile for the abutments.
5. Parapet concrete, and A528 reinforcing bars included in Item S-14 for payment.

EF = Each Face
NF = Near Face
F.F. = Far Face

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ABUTMENT DETAILS

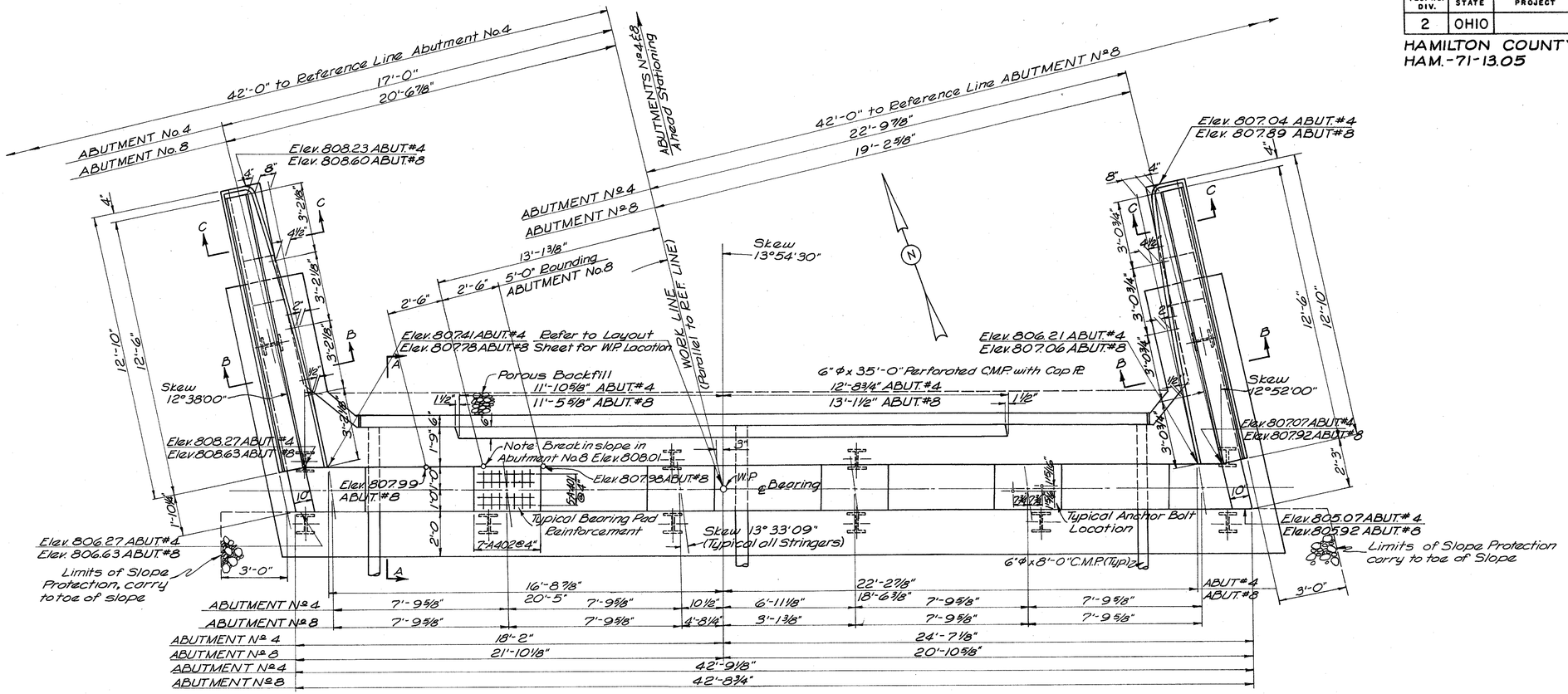
BRIDGE NO. HAM-71-1560 L&R
I-71 OVER PFEIFFER ROAD
HAMILTON CO I-71
P.O.C. STA. 792+04.34

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
JHZ	JHZ	BEJ	BGE	Ellis 2/64	

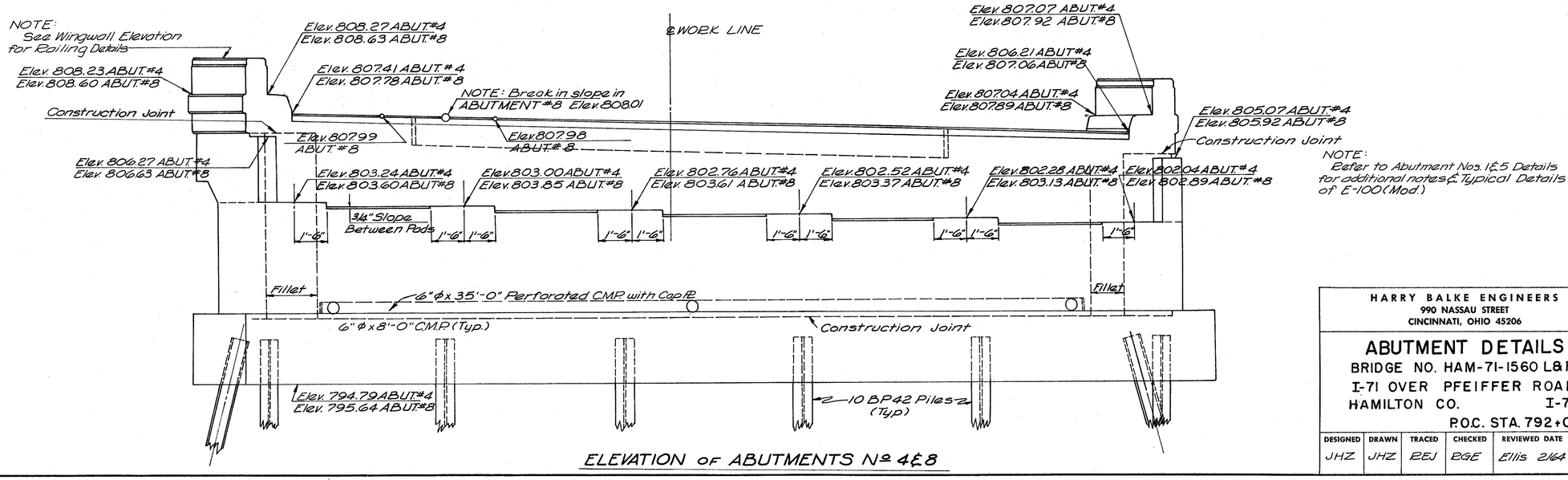
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

392
445

HAMILTON COUNTY
HAM.-71-13.05



PLAN of ABUTMENTS No 4 & 8



NOTE:
Refer to Abutment Nos. 1 & 5 Details for additional notes & Typical Details of E-100 (Mod.)

ELEVATION of ABUTMENTS No 4 & 8

HARRY BALKE ENGINEERS
990 NASSAU STREET
CINCINNATI, OHIO 45206

ABUTMENT DETAILS

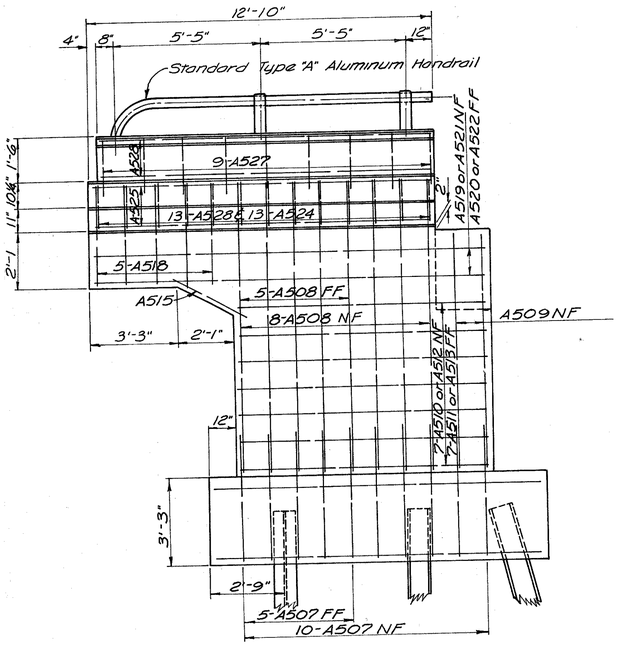
BRIDGE NO. HAM-71-1560 L&R
I-71 OVER PFEIFFER ROAD
HAMILTON CO. I-71
P.O.C. STA. 792+04.34

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
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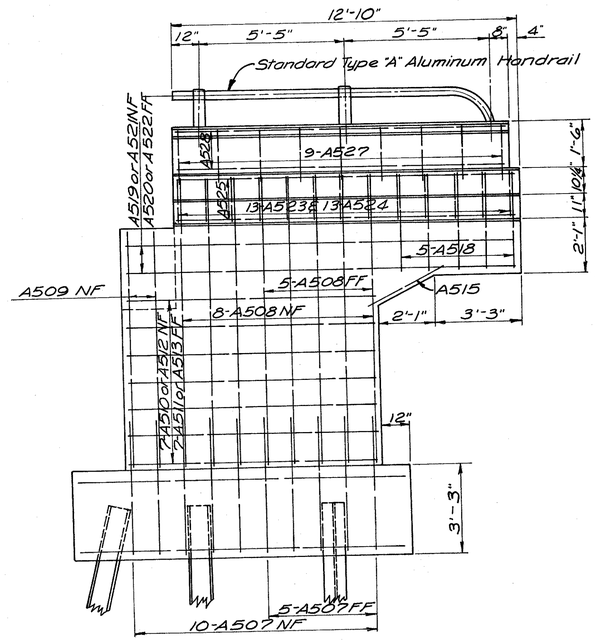
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

400/445

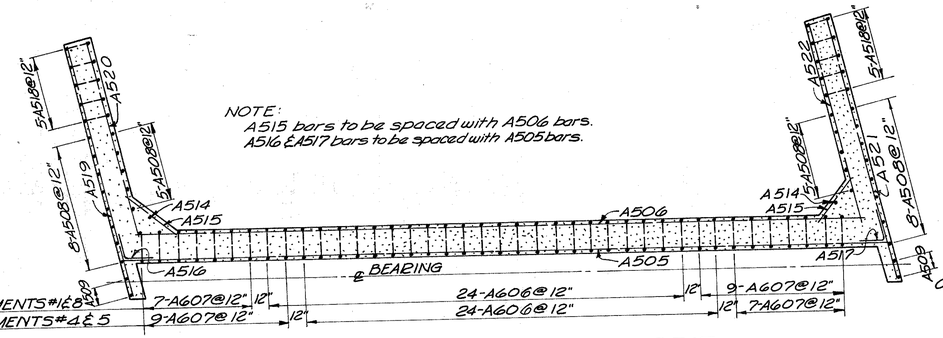
HAMILTON COUNTY
HAM.-71-13.05



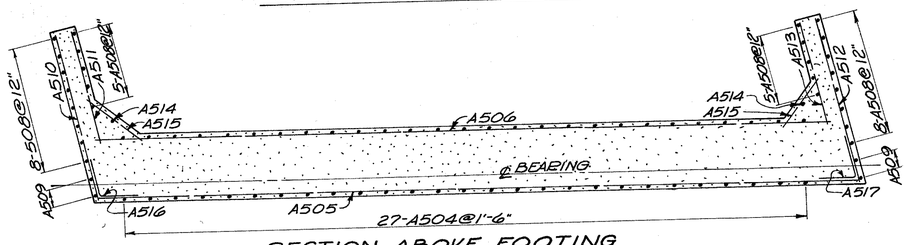
WINGWALL ELEVATION ABUTMENTS 1&5



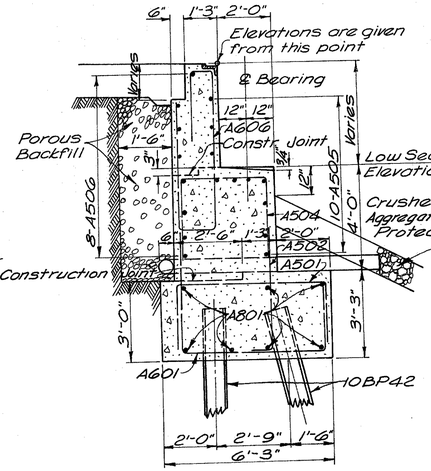
WINGWALL ELEVATION ABUTMENTS 4&8



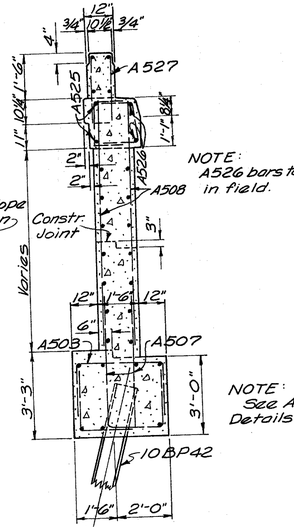
SECTION ABOVE BRIDGE SEAT



SECTION ABOVE FOOTING



SECTION A-A

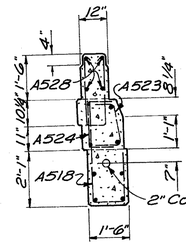


NOTE:
A526 bars to be bent in field.

NOTE:
See Abutments No. 1&5 Details for additional notes.

4

SECTION B-B



2" Conduit (See Detail Sheet 16

SECTION C-C

HARRY BALKE ENGINEERS
990 NASSAU STREET
CINCINNATI, OHIO 45206

ABUTMENT DETAILS

BRIDGE NO. HAM-71-1560 L&R
I-71 OVER PFEIFFER ROAD
HAMILTON CO. I-71
P.O.C. STA. 792+04.34

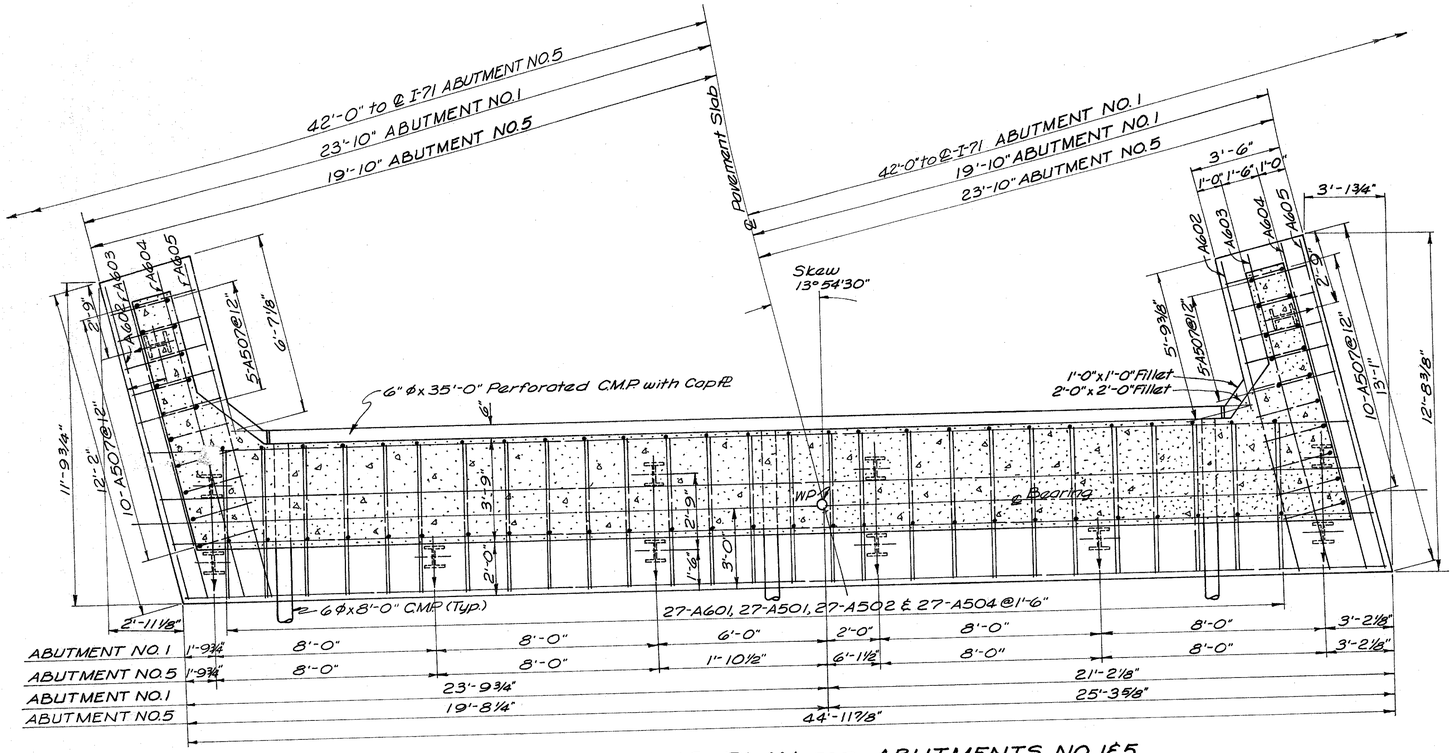
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
JHZ	JHZ	EEJ	EGE	Ellis 2/64	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

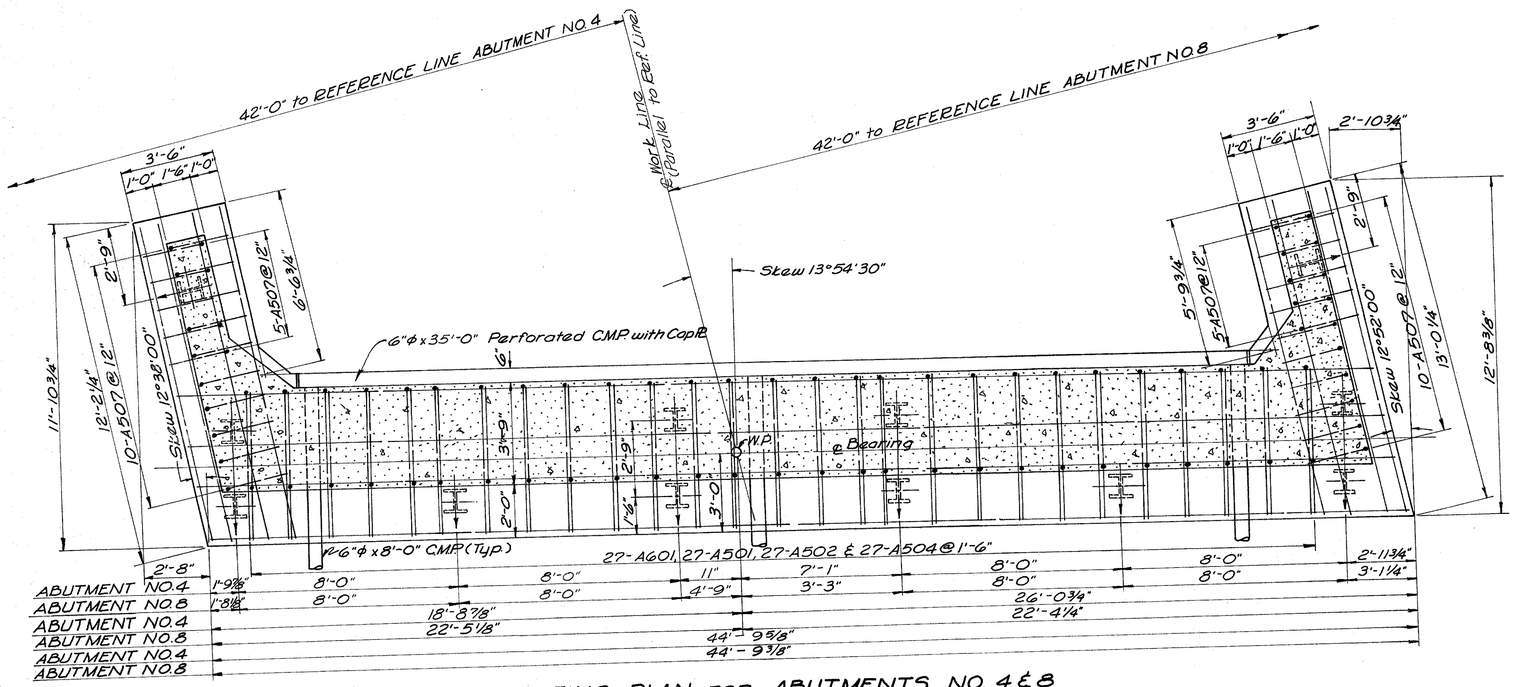
401
445

HAMILTON COUNTY
HAM.-71-13.05

269 Reel
401 – 445
PLUS Soil Profile



FOOTING PLAN FOR ABUTMENTS NO. 1 & 5



FOOTING PLAN FOR ABUTMENTS NO. 4 & 8

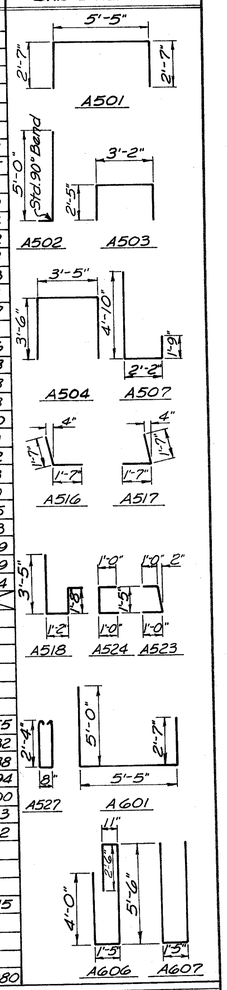
NOTE:
See Abutment No's. 1&5 Detail Sheet for additional notes.

REINFORCING STEEL LIST

TOTAL FOR FOUR ABUTMENTS

MARK	LENGTH	SHAPE	NO.	WEIGHT
A401	2'-8"	Str.	120	214
A402	1'-8"	Str.	168	187
A501	10'-4"	Bent	108	1164
A502	5'-6"	Bent	108	620
A503	7'-9"	Bent	80	647
A504	10'-3"	Bent	108	1155
A505	22'-9"	Str.	80	1898
A506	22'-0"	Str.	64	1469
A507	8'-6"	Bent	120	1064
A508	8'-6"	Str.	104	922
A509	6'-6"	Str.	16	108
A510	9'-0"	Str.	28	263
A511	5'-9"	Str.	28	168
A512	9'-6"	Str.	28	277
A513	5'-6"	Str.	28	161
A514	6'-9"	Str.	8	56
A515	4'-6"	Str.	72	338
A516	3'-0"	Bent	28	88
A517	3'-0"	Bent	28	88
A518	6'-0"	Bent	40	250
A519	14'-3"	Str.	8	119
A520	11'-0"	Str.	8	92
A521	14'-9"	Str.	8	123
A522	10'-9"	Str.	8	90
A523	3'-0"	Bent	104	325
A524	3'-3"	Bent	104	353
A525	12'-6"	Str.	16	209
A526	12'-5"	Str.	16	209
A527	5'-11"	Bent	72	444
A528	12'-2"	Str.	32	
A601	12'-8"	Bent	108	2055
A602	11'-9"	Str.	16	282
A603	12'-0"	Str.	16	288
A604	12'-3"	Str.	16	294
A605	12'-6"	Str.	16	300
A606	13'-9"	Bent	96	1983
A607	12'-1"	Bent	64	1162
A801	23'-6"	Str.	56	3515
		TOTAL		22,980

BAR DIAGRAM



HARRY BALKE ENGINEERS
990 NASSAU STREET
CINCINNATI, OHIO 45206

ABUTMENT DETAILS

BRIDGE NO. HAM-71-1560 L&R
I-71 OVER PFEIFFER ROAD
HAMILTON CO. I-71
P.O.C. STA. 792+04.34

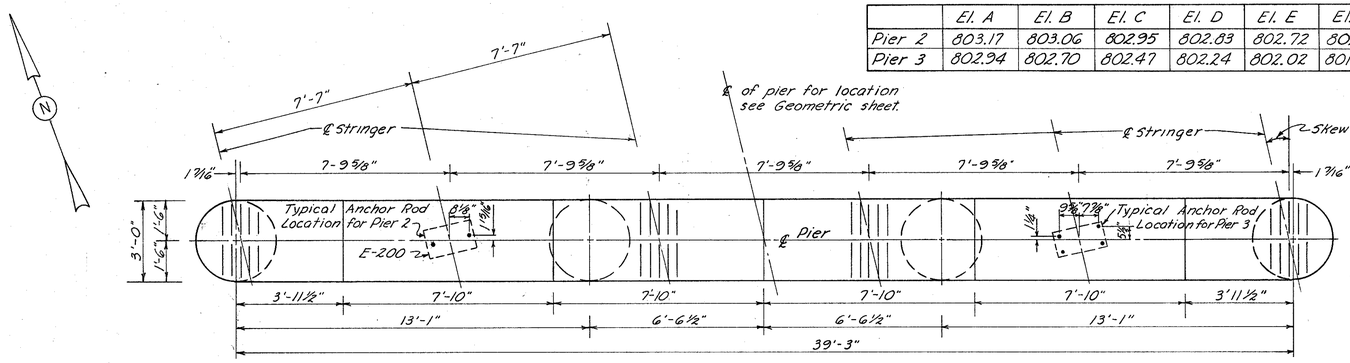
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
JHZ	JHZ	EEJ	EGE	Ellis 2/64	

	El. A	El. B	El. C	El. D	El. E	El. F	El. Bot. Ftg. I	El. Bot. Ftg. II	H	I	F
Pier 2	803.17	803.06	802.95	802.83	802.72	802.60	771.10	780.10	26'-0"	17'-0"	3'-6 7/8"
Pier 3	802.94	802.70	802.47	802.24	802.02	801.81	770.81	779.81	25'-6"	16'-6"	4'-1 1/2"

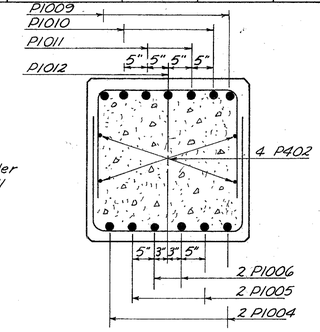
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

402
445

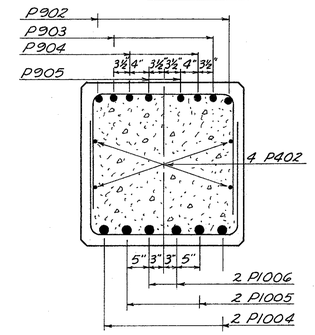
HAMILTON COUNTY
HAM-71-13.05



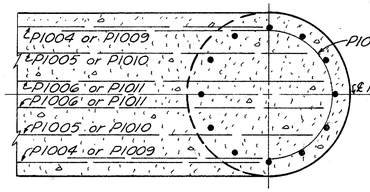
Note:
P 401 @ 4" c/c under each stringer at all piers.



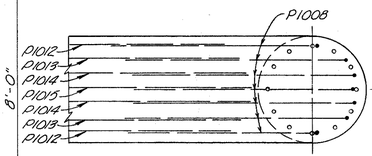
SECTION A-A
(PIER 2)



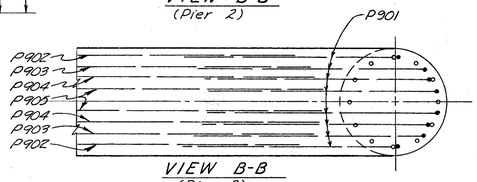
SECTION A-A
PIER 3



SECTION C-C
(Typical all Columns)

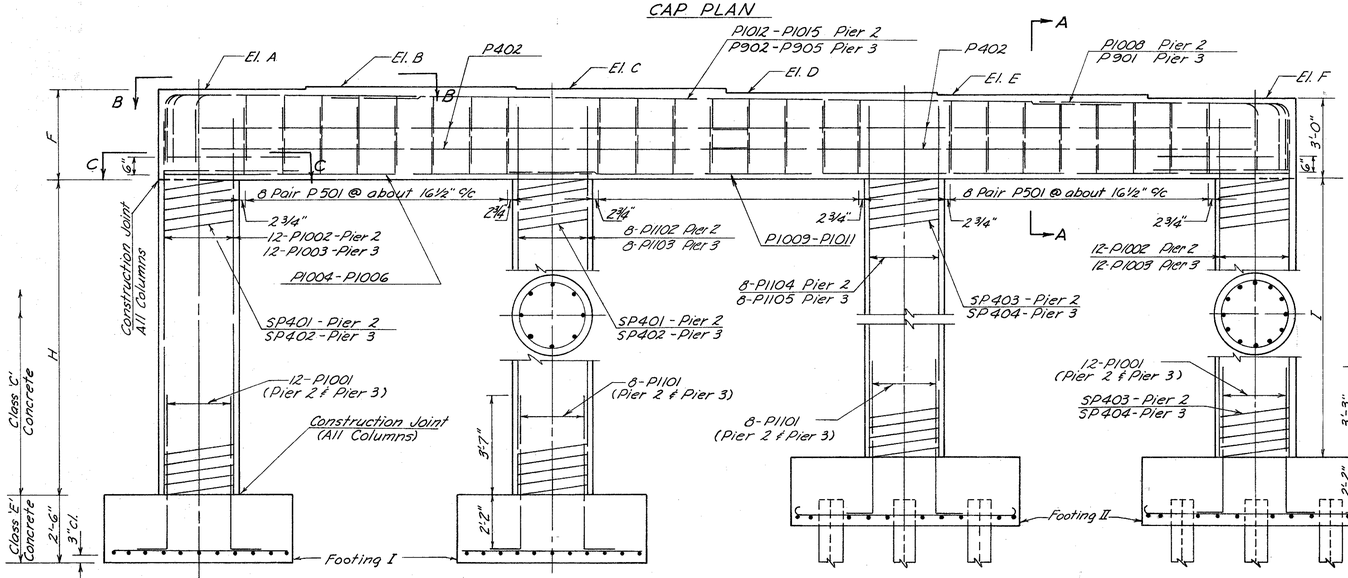


VIEW B-B
(Pier 2)

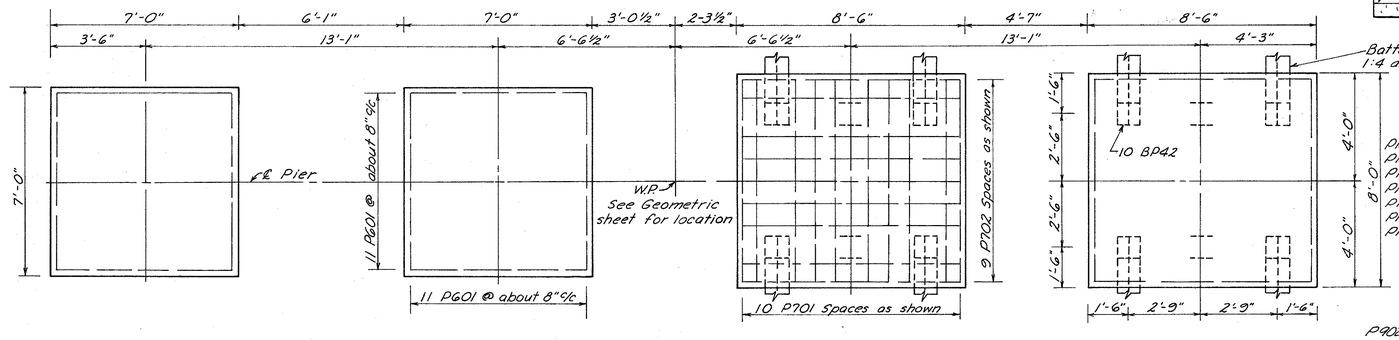


VIEW B-B
(Pier 3)

CAP PLAN



ELEVATION

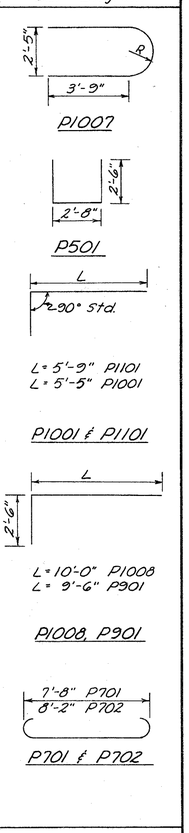


FOOTING PLAN

REINFORCING STEEL LIST
INCLUDES TWO PIERS

Mark	Length	Shape	No.	Pier 2	Pier 3	Weight
P401	2'-3"	Str.	60	30	30	90
P402	20'-2"	Str.	16	8	8	216
P501	7'-5"	Bent	96	48	48	743
P601	6'-8"	Str.	88	44	44	881
P701	9'-4"	Bent	40	20	20	762
P702	9'-10"	Bent	36	18	18	724
P901	11'-9"	Bent	16		16	757
P902	26'-0"	Str.	2		2	177
P903	27'-4"	Str.	2		2	186
P904	28'-0"	Str.	2		2	190
P905	28'-4"	Str.	2		2	193
P1001	6'-6"	Bent	48	24	24	1343
P1002	19'-3"	Str.	24	24		1988
P1003	18'-9"	Str.	24		24	1936
P1004	14'-9"	Str	4	2	2	254
P1005	15'-7"	Str.	4	2	2	268
P1006	15'-9"	Str.	4	2	2	271
P1007	11'-4"	Bent	8	4	4	390
P1008	12'-2"	Bent	14	14		733
P1009	27'-10"	Str.	4	2	2	479
P1010	28'-8"	Str.	4	2	2	493
P1011	28'-10"	Str.	4	2	2	496
P1012	25'-9"	Str.	2	2		222
P1013	27'-5"	Str.	2	2		236
P1014	27'-9"	Str.	2	2		239
P1015	28'-0"	Str.	1	1		120
P1101	7'-0"	Bent	32	16	16	1190
P1102	28'-3"	Str.	8	8		1201
P1103	27'-9"	Str.	8		8	1179
P1104	19'-3"	Str.	8	8		818
P1105	18'-9"	Str.	8		8	797
						19,572

Bar Diagram



SPIRAL REINFORCING BARS

Mark	No.	Size	Core Diam	Length	Pitch	No. of Turns	Weight
SP401	2	½" ϕ	32"	26'-0"	4½"	72	959
SP402	2	½" ϕ	32"	25'-6"	4½"	71	945
SP403	2	½" ϕ	32"	17'-0"	4½"	48	637
SP404	2	½" ϕ	32"	16'-6"	4½"	47	624
							3165

Note:
Refer to additional notes on Pier No. 6 and 7 detail sheet.

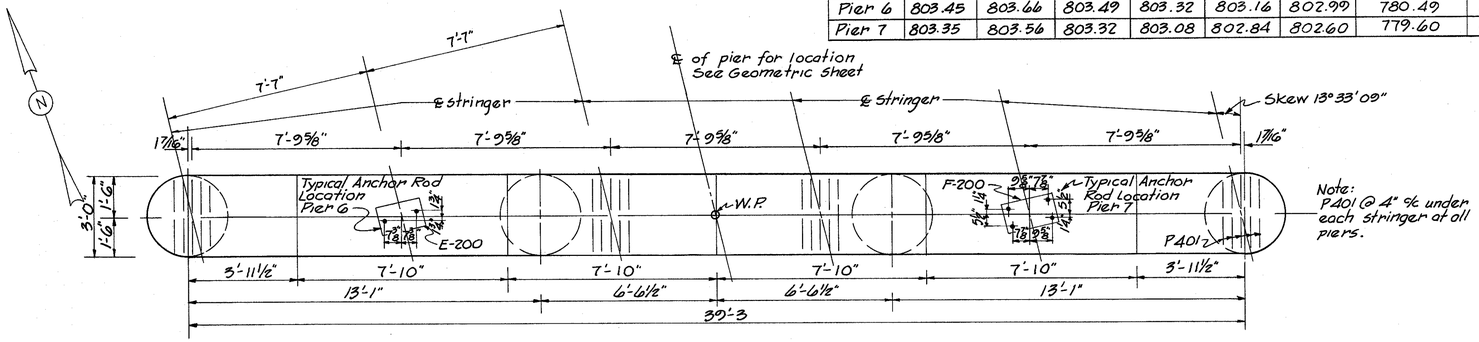
HARRY BALKE ENGINEERS
990 NASSAU STREET
CINCINNATI, OHIO 45206

PIER NO. 2 & 3 DETAILS

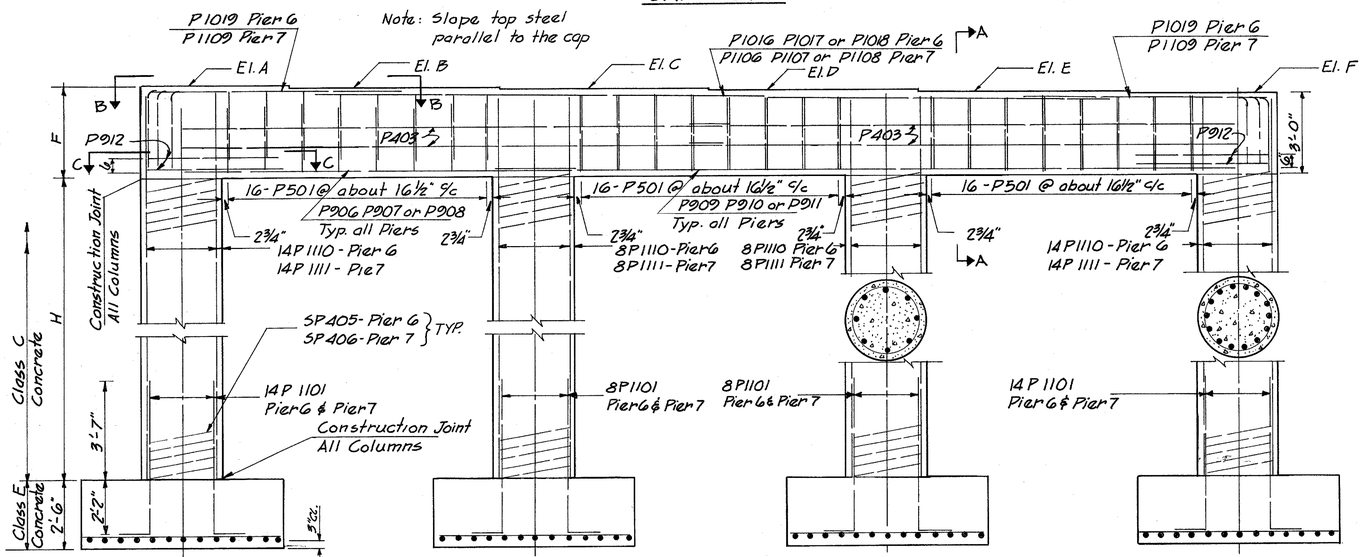
BRIDGE NO. HAM-71-1560 L&R
I-71 OVER PFEIFFER ROAD
HAMILTON CO. I-71
P.O.C. STA. 792 + 04.34

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
GJC	NMM	GWS	RGE	ELLIS 2/64	

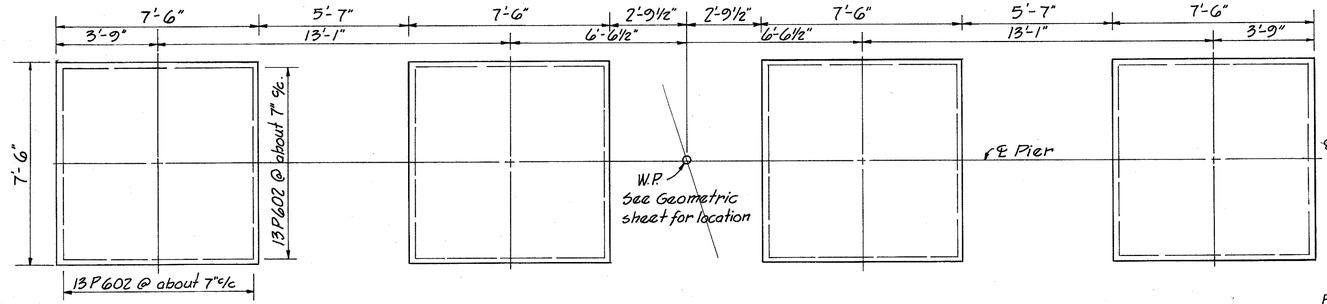
	El. A	El. B	El. C	El. D	El. E	El. F	El. Bot. Ftg.	H	F
Pier 6	803.45	803.66	803.49	803.32	803.16	802.99	780.49	17'-0"	3'-5 5/8"
Pier 7	803.35	803.56	803.32	803.08	802.84	802.60	779.60	17'-6	3'-9"



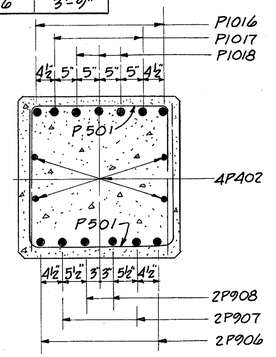
CAP PLAN



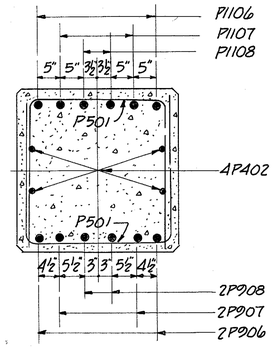
ELEVATION



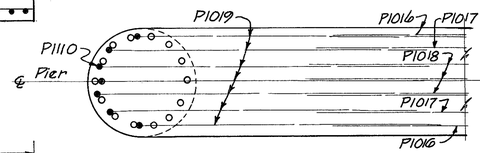
FOOTING PLAN



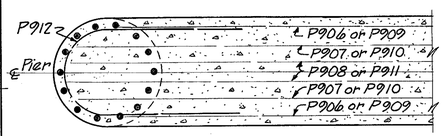
SECTION A-A
PIER 6



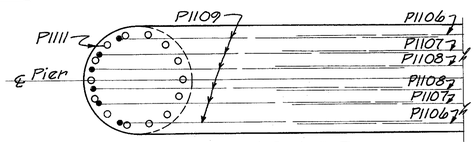
SECTION A-A
PIER 7



VIEW B-B
PIER 6



SECTION C-C
TYP. ALL PIERS



VIEW B-B
PIER 7

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

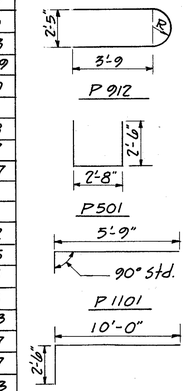
403/445

HAMILTON COUNTY
HAM-71-1305

REINFORCING STEEL LIST
INCLUDES TWO PIERS

Mark	Length	Shape	No	Pier 6	Pier 7	Weight
P401	2'-3"	Str	60	30	30	90
P402	20'-2"	Str	16	8	8	216
P501	7'-5	Bent	96	48	48	743
P602	7'-2"	Str.	208	104	104	2239
P906	14'-0"	Str.	4	2	2	190
P907	15'-6"	Str.	4	2	2	211
P908	16'-9"	Str.	4	2	2	228
P909	26'-3"	Str.	4	2	2	357
P910	27'-9"	Str.	4	2	2	377
P911	28'-0"	Str.	4	2	2	381
P912	15'-1"	Bent	8	4	4	411
P1016	25'-9"	Str.	2	2		222
P1017	27'-4"	Str.	2	2		235
P1018	28'-0"	Str.	3	3		361
P1019	12'-2"	Bent	14	14		733
P1101	7'-0"	Bent	88	44	44	3273
P1106	27'-0"	Str.	2		2	287
P1107	28'-0"	Str.	2		2	297
P1108	28'-6"	Str.	2		2	303
P1109	12'-2"	Bent	12		12	776
P1110	19'-3"	Str.	44	44		4500
P1111	19'-9"	Str.	44		44	4618
					Total	21,048

Bar Diagram



SPIRAL REINFORCING BARS

Mark	No	Size	Core Dia	Length	Pitch	No. of Turns	Weight
5P405	4	1/2" ϕ	32"	17'-0"	4 1/2	48	1274
5P406	4	1/2" ϕ	32"	17'-6"	4 1/2	50	1326
						Total	2600

Note:
The "length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap.
The "No. of Turns" shown is the length divided by the "pitch", plus 3 turns (total number of closed coils), expressed as the nearest whole number. Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item 544. 1½ closed coils shall be provided at the ends of each spiral unit.
Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of the anchor bar holes.

HARRY BALKE ENGINEERS
990 NASSAU STREET
CINCINNATI, OHIO 45206

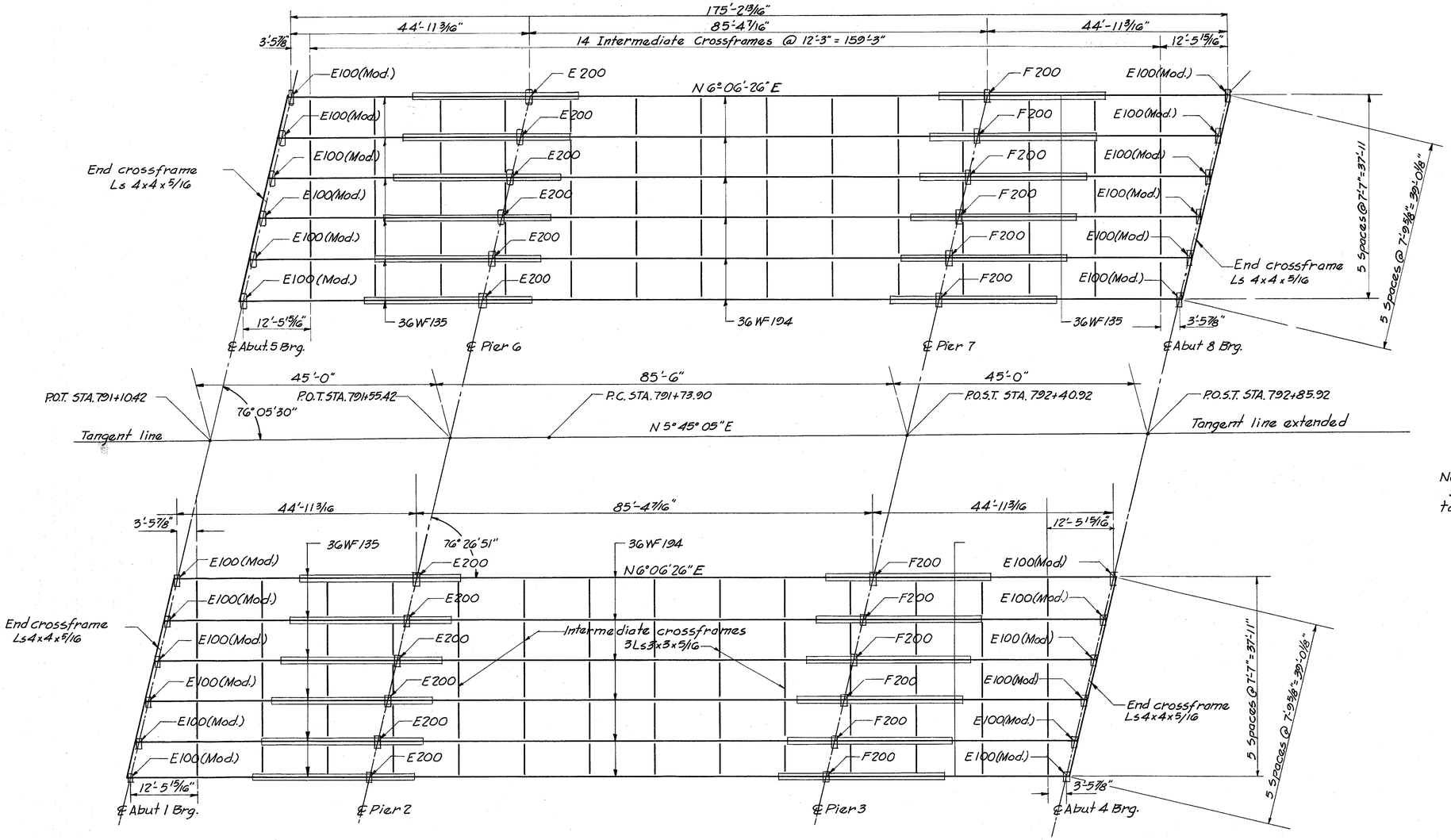
PIER NO. 6 & 7 DETAILS
BRIDGE NO. HAM-71-1560 L&R
I-71 OVER PFEIFFER ROAD
HAMILTON CO. I-71
P.O.C. STA. 792+04.34

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
G.J.C.	N.M.M.	K.R.	R.G.E.	2/64	

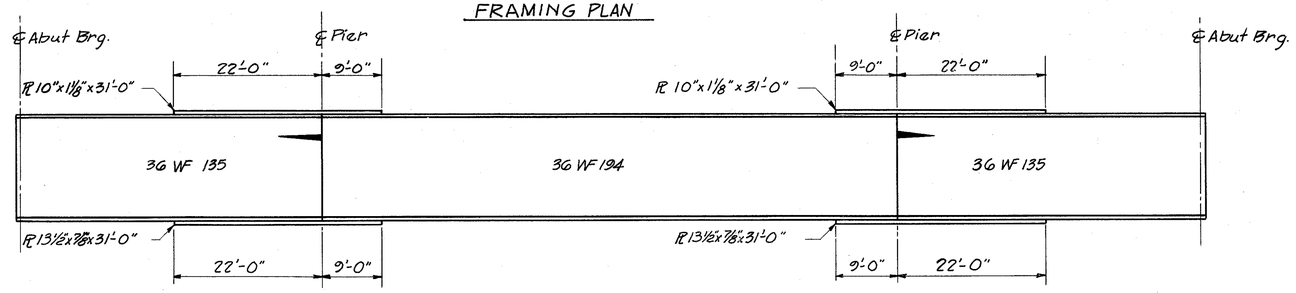
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

404
445

HAMILTON COUNTY
HAM-71-13.05



FRAMING PLAN



ELEVATION

BEAM SPLICE WELDING PROCEDURE

1. Raise the abutment end of the beam 3/4".
2. Butt-weld the beam flanges and the web, using the following sequence: make two passes on the web, then two passes on each flange; repeat, using one or two passes at each location, until welds are completed.
3. Weld the bottom of the top moment plates.
4. Lower the beam ends to final position.

Note:
Stringers are not parallel to tangent line extended.

NOTE:
For E100 Modifications refer to detail shown on Abut 1 & 5 detail sheet. Cost of modification included in unit price bid for Item 5-7 Structural Steel.

DEFLECTION AND CAMBERS

LOCATION	Outside beam SPAN 1	Outside beam SPAN 2	Outside beam SPAN 3	Inside beam SPAN 1	Inside beam SPAN 2	Inside beam SPAN 3
Deflection due to Weight of steel	1/32	1/8	1/32	1/32	1/8	1/32
Deflection due to remaining dead load	1/16	13/32	1/16	3/32	15/32	3/32
Convexity required for vertical curve	0	1/2	0	0	1/2	0
Sum of deflection and convexity	3/32	1 1/32	3/32	1/8	1 3/32	1/8
Required camber	0	1	0	0	1 1/8	0

Where no camber is required the beams shall be so fabricated that any curved beam will be placed with convex flange up.

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SUPERSTRUCTURE DETAILS

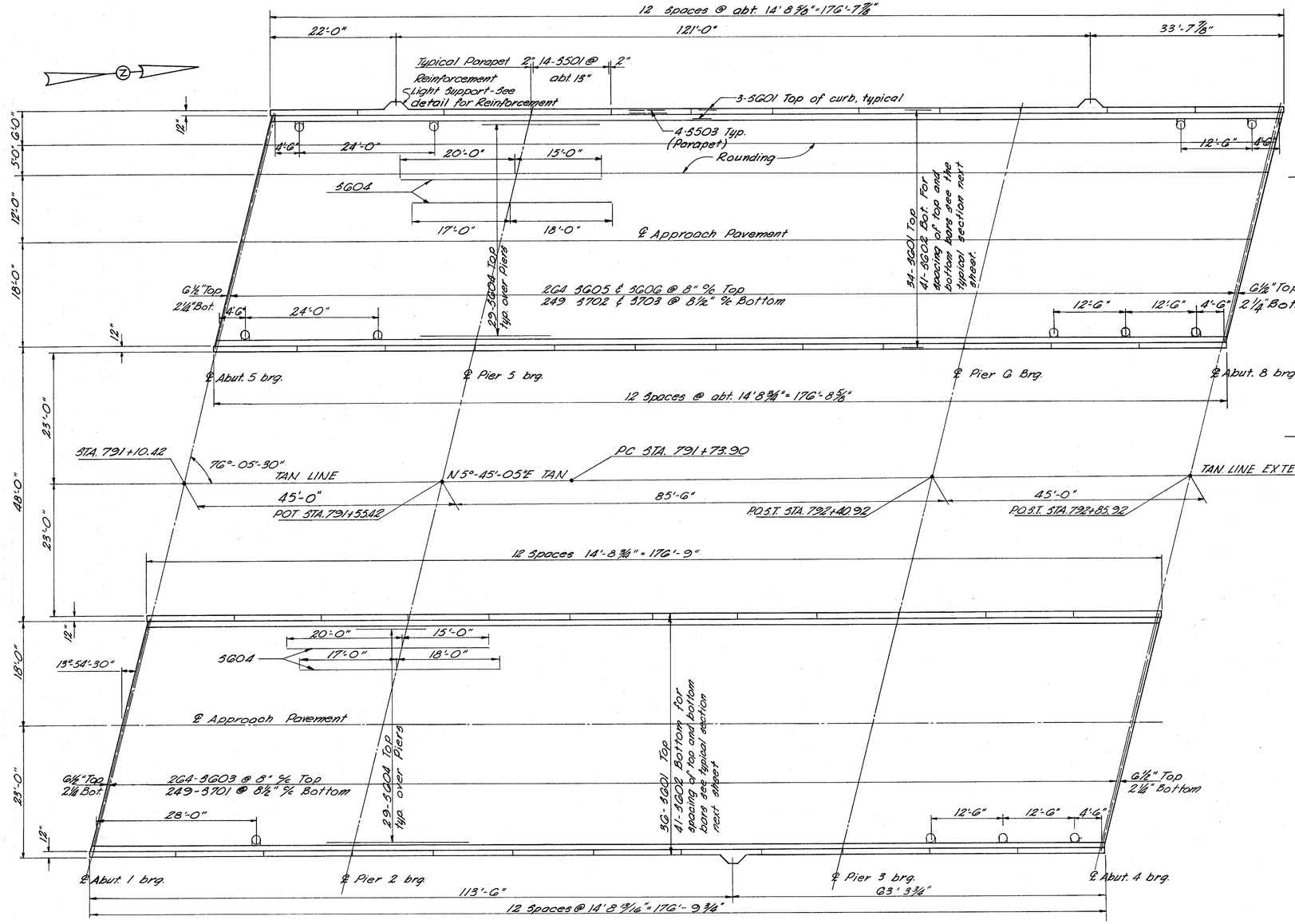
BRIDGE NO. HAM-71-1560 L&R
I-71 OVER PFEIFFER ROAD
HAMILTON CO. I-71
P.O.C. STA. 792+04.34

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
M.E.	E.A.S.A	K.A.R.	R.G.E.	ELLIS	7/64	

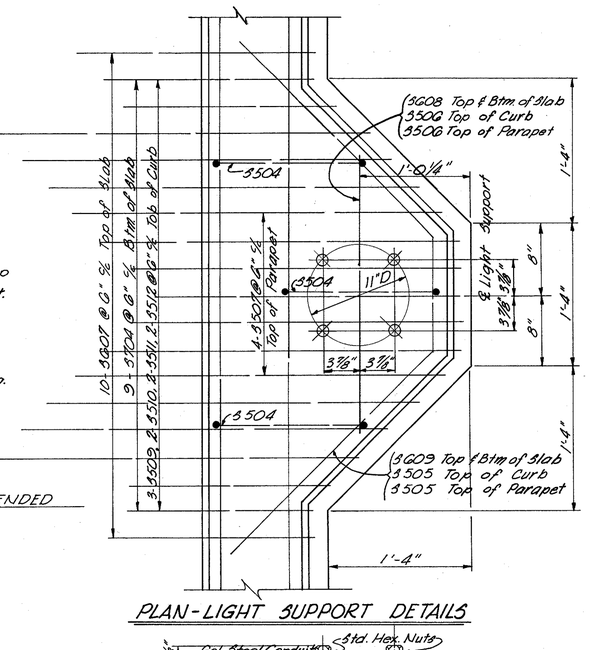
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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445

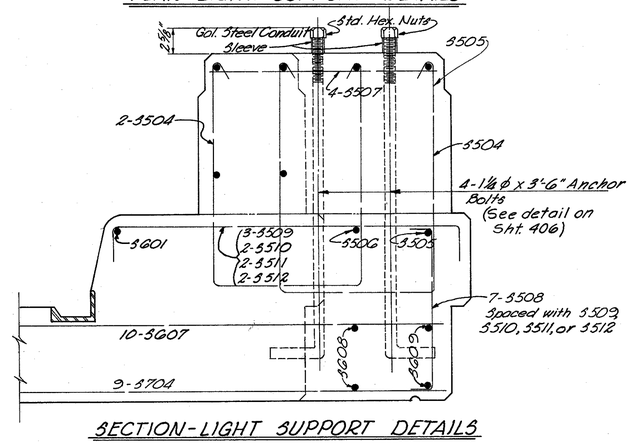
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SLAB PLAN



PLAN - LIGHT SUPPORT DETAILS



SECTION - LIGHT SUPPORT DETAILS

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SUPERSTRUCTURE DETAILS

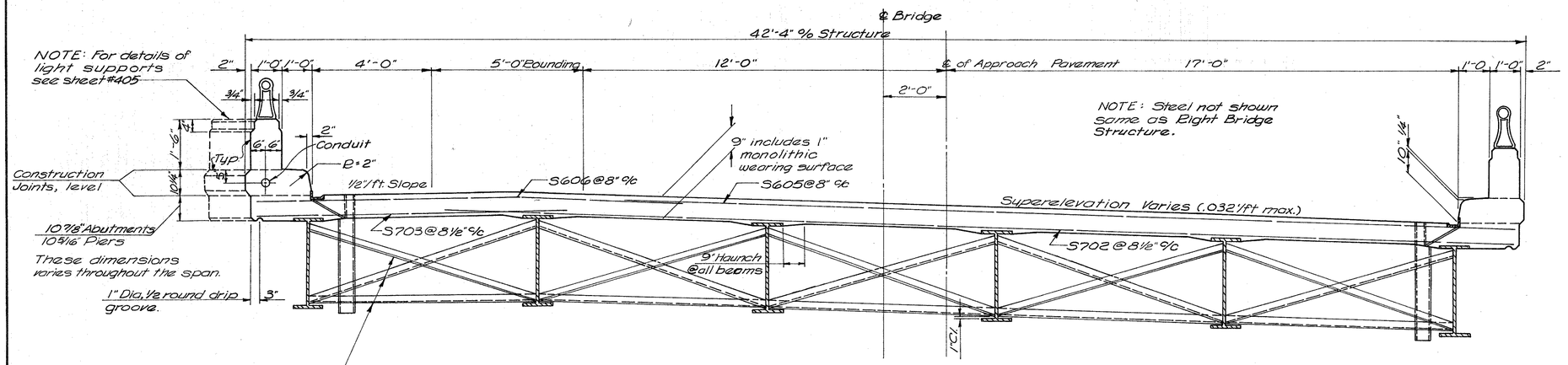
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I-71 OVER PFEIFFER ROAD
HAMILTON CO. I-71
P.O.C. STA. 792+04.34

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
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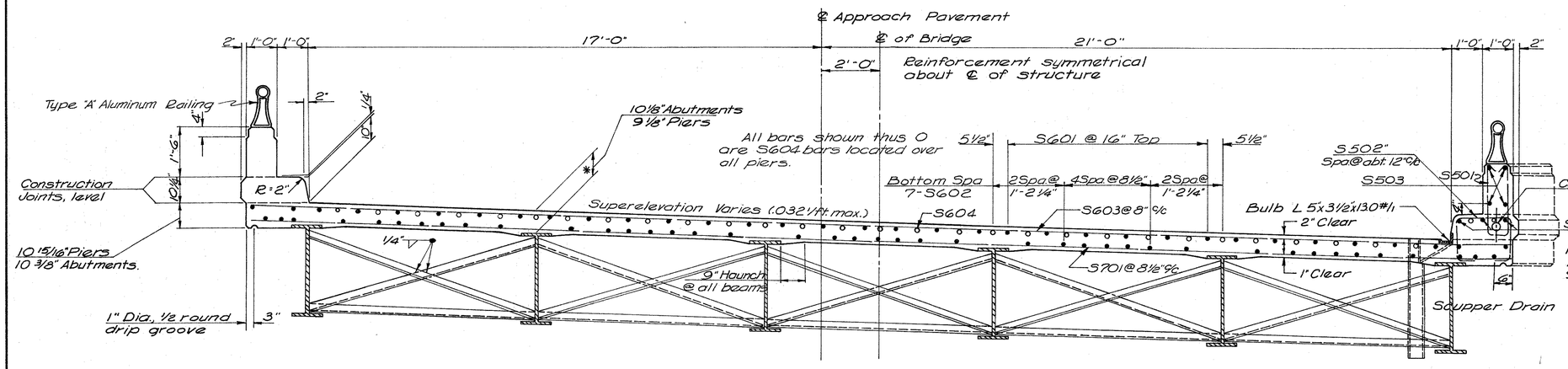
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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HAMILTON COUNTY
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TYPICAL SECTION - LEFT BRIDGE

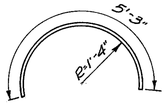


TYPICAL SECTION - RIGHT BRIDGE

NOTES:
1. For slab pouring sequence see general notes.
2. Parapet concrete S503 reinforcement bars are included with Item S-14 for payment.
3. Fixed and sliding bearings included with Item S-7 for payment.
4. For details of beam splices, bulb angles, scuppers, end dams, curb plates, sidewalk plates and end crossframes see Std Dwg. No. SD-1-63
5. All scupper details to be in accordance with those for a Type I scupper.
6. For fixed and sliding bearing details see Std. Dwg. No. F.S.B.-1-62.

*7. The haunch in the deck slab adjacent to the top of the steel beams, which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12" on the low side and between 9" and 12" on the high side. Except on the high side, the maximum slope shall not exceed 3" per foot. Payment for deck slab concrete shall be based on the 9" width.

* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

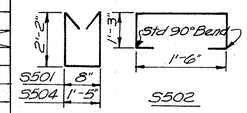


SPIRAL REPLACEMENT BAR (RE 1/2" ϕ)

REINFORCEMENT LIST FOR BOTH BRIDGES
SUPERSTRUCTURE

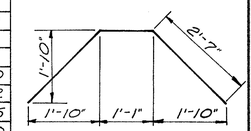
MARK	LENTH	SHAPE	NO.	WEIGHT
S501	5'-7"	Bent	672	3913
S502	4'-9"	Bent	708	3508
S503	14'-4"	Str.	192	
S504	6'-4"	Bent	9	59
S505	6'-3"	Bent	6	39
S506	2'-7"	Str.	6	16
S507	2'-1"	Str.	12	26
S508	1'-4"	Bent	12	17
S509	4'-3"	Bent	9	40
S510	3'-10	Bent	6	24
S511	3'-3"	Bent	6	20
S512	2'-10	Bent	6	17
S601	37'-0"	Str.	400	22,230
S602	31'-2"	Str.	492	23,032
S603	42'-10"	Str.	264	16,985
S604	35'-0"	Str.	132	6,940
S605	30'-3"	Str.	264	11,995
S606	14'-7"	Bent	264	5,783
S607	7'-6"	Str.	30	338
S608	2'-7"	Str.	6	23
S609	6'-3"	Bent	6	56
S701	42'-10"	Str.	249	21,800
S702	36'-3"	Str.	249	18,450
S703	10'-7"	Str.	249	5,386
S704	7'-9"	Str.	27	428
		TOTAL		141,125

BAR DIAGRAM

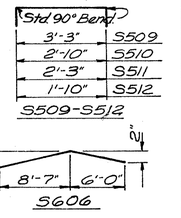


S502

S501 & S504



S505 & S609

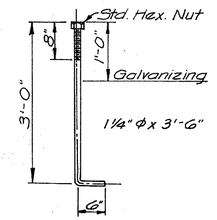


S509-S512

S606

REPLACEMENT BARS

MARK	LENGTH	SHAPE	NO.
RE401	5'-3"	Str.	1
RE501	5'-7"	Str.	2
RE601	5'-11"	Str.	5
RE701	6'-2"	Str.	3
RE801	6'-6"	Str.	1
RE901	6'-10"	Str.	1
RE1001	7'-3"	Str.	1
RE1101	7"-7	Str.	2
RE 1/2"ϕ	5'-3"	Bent	1



ANCHOR BOLT DETAIL

No. Reqd. 12-1 1/4"ϕ x 3'-6" with Std. Hex. Nut

NOTE: The threaded ends and nuts shall be galvanized in accordance with ASTM A-153 with galvanizing extending 1" to 4" beyond the threads. Anchor bolts shall conform to ASTM A107 Grade 1035 Special Quality, and shall have a minimum yield strength of 46,000 psi. Bolt stock shall conform with ASTM Spec. A-29 and nominal bar size shall equal nominal bolt size.

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SUPERSTRUCTURE DETAILS

BRIDGE NO. HAM-71-1560 L&R
I-71 OVER PFEIFFER ROAD
HAMILTON CO. I-71
P.O.C. STA. 792+04.34

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
EASA	EASA	REJ	EGE	Ellis 2/64	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

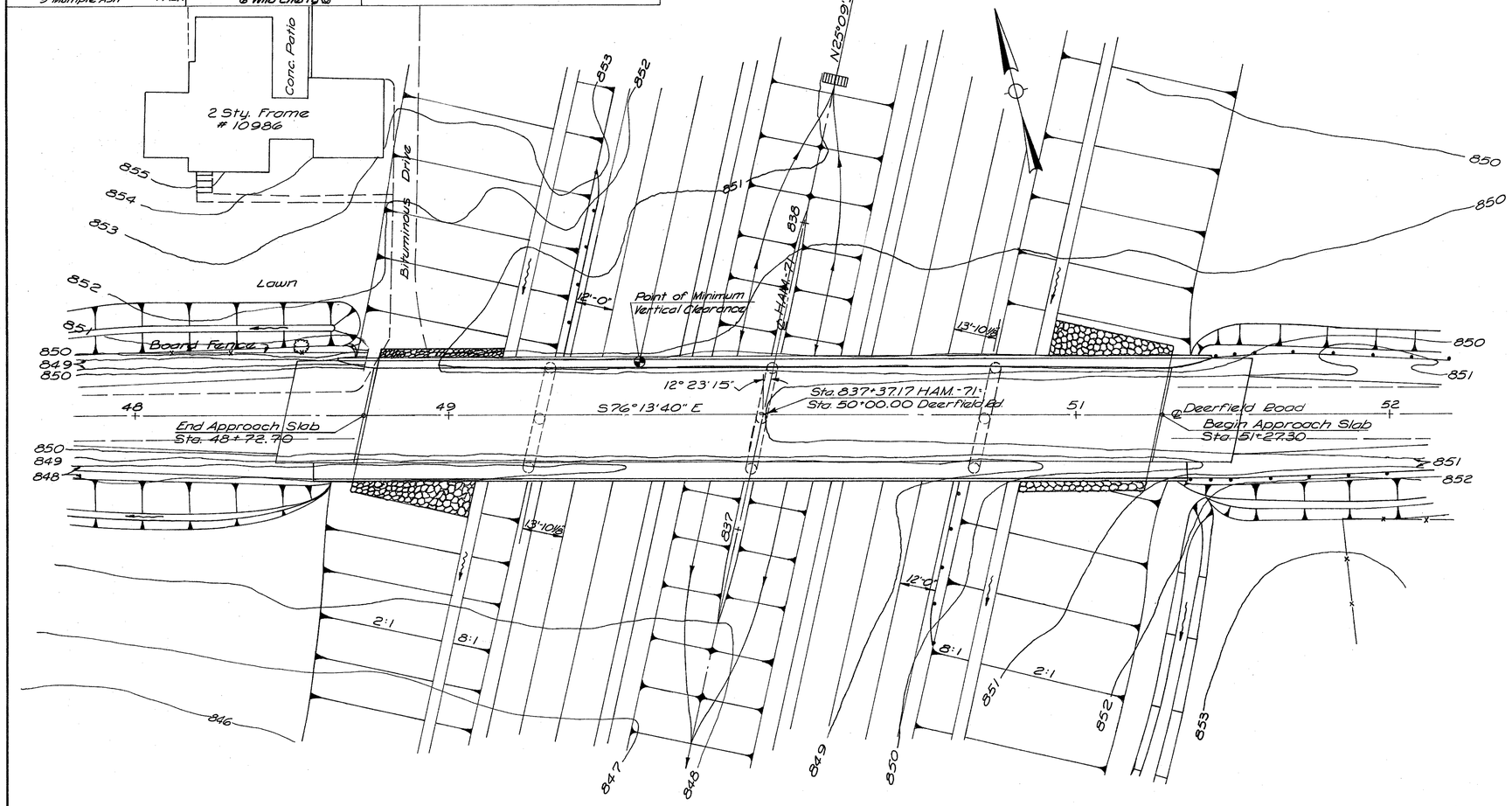
407
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HAMILTON COUNTY
HAM.-71-13.05

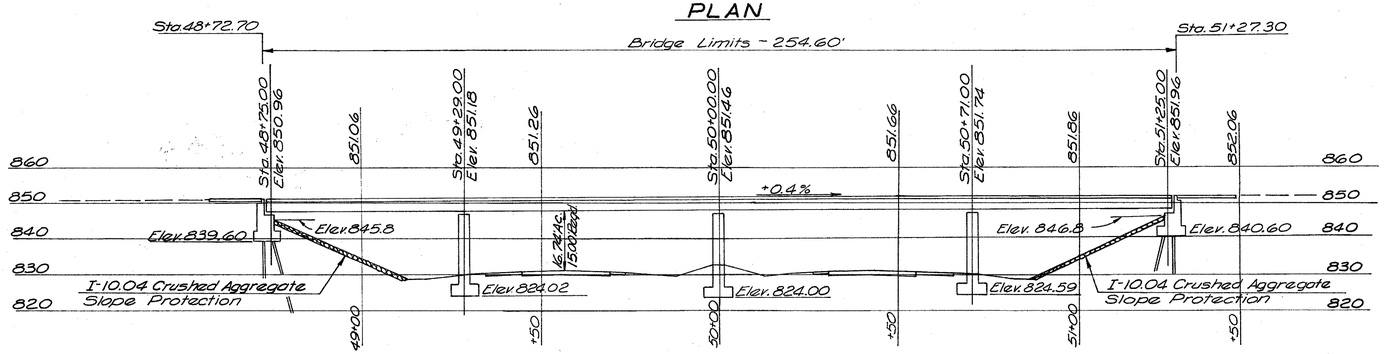
REFERENCE POT 835+39.60
835
35.31'
21.61'
7.23'
6" Ash
9" Multiple Ash
4" Ash

REFERENCE P.C. 851+18.05
8" Wild Cherry
12" Elm
15.30'
851
43.16'
6" Wild Cherry

B.M. R.R. Spike in Root of 30" Walnut North Side of Deerfield Road in Yard of House # 10986, 140' Lt. of Sta. 837+60. Elevation 853.60

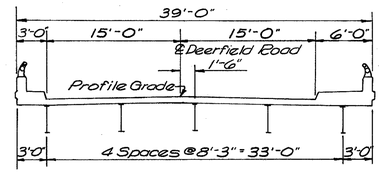


PLAN

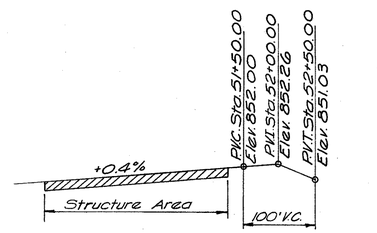


Note:
All piles shall be 12" diameter cast-in-place reinforced concrete piles. Estimated average lengths 20' for both abutments.

SECTION ALONG ℄



PROPOSED STRUCTURE



DEERFIELD ROAD PROFILE GRADE

PROPOSED STRUCTURE

TYPE: Continuous Steel Beam With Reinforced Concrete Deck & Substructure.
SPAN: 54'-0", 71'-0", 71'-0", 54'-0" % Brg.
ROADWAY: 30'-0" f-f 2'-0" Safety Curbs
LOAD FREQUENCY: C.F 130 (57)
SKEW: 12° 23' 15" Left Forward
WEARING SURFACE: 1" Monolithic Conc.
APPROACH SLABS: AS-1-54 (25' long)
ALIGNMENT: Tangent
SAFETY CURB: 2'-0" Left Side
SIDEWALK: 5'-0" Right Side

TRAFFIC: 1975-2170 V.P.D.

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SITE PLAN

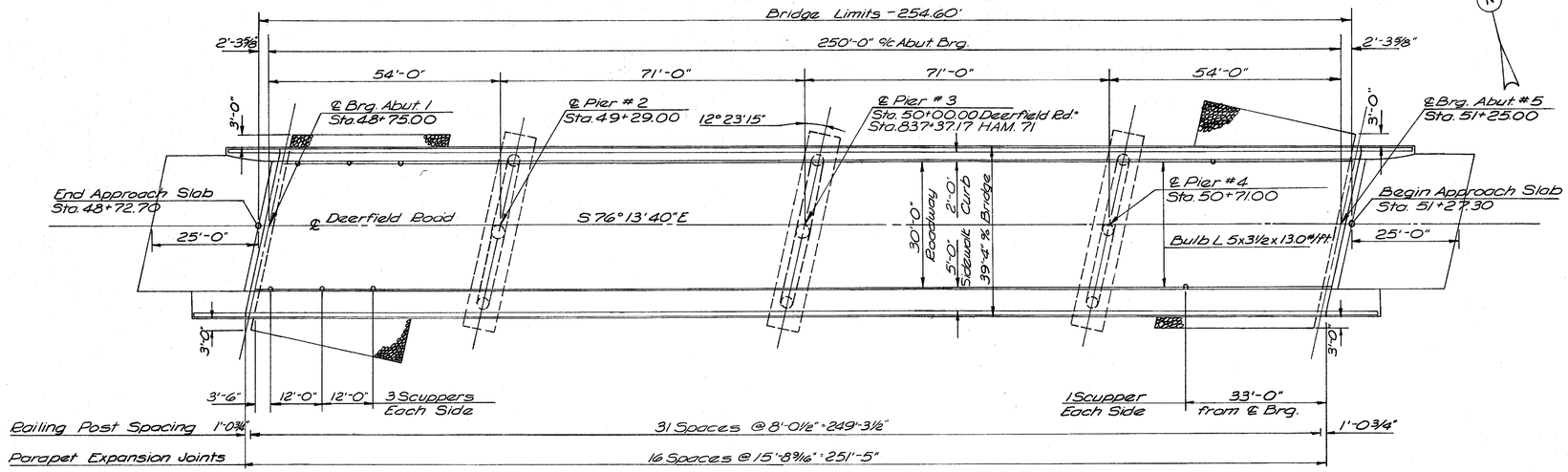
BRIDGE NO. HAM-71-1648
I-71 UNDER DEERFIELD ROAD
HAMILTON CO. I-71
STA. 837+37.17

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
Aerial Survey	Aerial Survey	RGE	ES	RGE	7/64

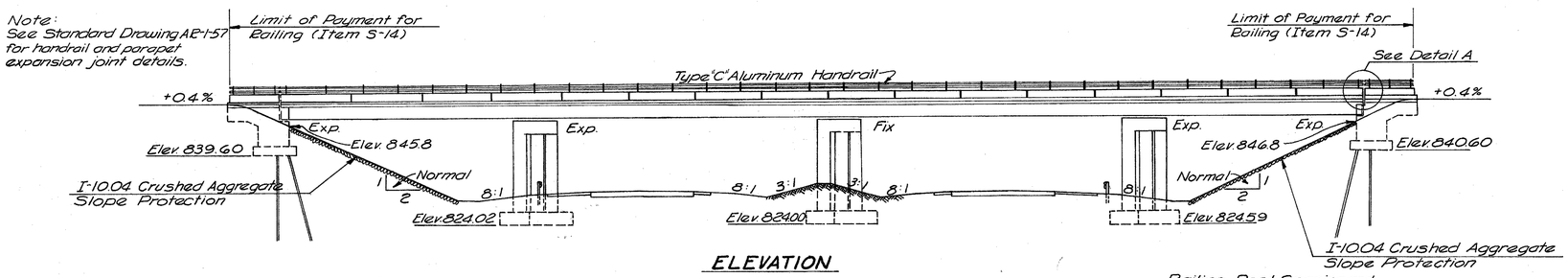
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

408/445

HAMILTON COUNTY
HAM.-71-13.05



GENERAL PLAN

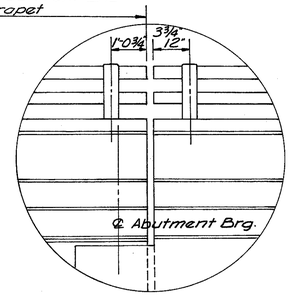


ELEVATION

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER-STRUCT.	ABUT. 1	ABUT 5	PIER 2	PIER 3	PIER 4	GENERAL		
E-2	562	Cu. Yds.	Unclassified Excavation		120	120	97	138	87			
S-1	330	Cu Yds.	Class "C" Concrete, Superstructure	330								
S-1	84	Cu. Yds.	Class "C" Concrete, Piers above Footings				28	28	28			
S-1	90	Cu. Yds.	Class "E" Concrete, Abutments above Footings		45	45						
S-1	184	Cu. Yds.	Class "E" Concrete, Footings		35	35	38	38	38			
S-4	144,190	Lbs.	Reinforcing Steel	83,683	5,106	5,106	16,765	16,765	16,765			
S-7	221,400	Lbs.	Structural Steel	221,400								
S-8	221,400	Lbs.	Field Painting of Structural Steel	221,400								
S-14	550.83	Lin. Ft.	Railing (Type "C" Aluminum Rail and Supports, Concrete Parapet	502.83	24.00	24.00						
S-16	Lump	Lump	First Test Pile							Lump		
S-18	480	Lin. Ft.	12" Cast-in-place Reinforced Concrete Piles		240	240						
S-29	26	Cu Yds.	Porous Backfill		13	13						
S-29	8	Each	Scuppers including Supports	8								
S-29	64	Lin. Ft.	6" Perforated Helical C.M.P. M-64.4(h) including Specials		32	32						
S-29	48	Lin. Ft.	6" Helical C.M.P. M-64.4(h) Non-Perforated		24	24						
I-10	445	Sq Yds.	Crushed Aggregate Slope Protection		215	230						
S-101	330	Each	Water-Reducing, Set-Retarding Admixtures for Conc.	330								

Railing Post Spacing and Parapet Expansion Joint Spacing Measured From End of Parapet



DETAIL A

GENERAL NOTES

REFERENCE: Shall be made to Standard Drawings SD-1-63 Sheets 1 thru 4, dated November 12, 1963, AE-1-57 dated April 9, 1957 and revised April 2, 1962, FSB-1-62 dated April 19, 1962 and revised January 15, 1963, and to Supplemental Specifications No. S-101 dated July 12, 1962 and No. S-307 dated August 23, 1960.

DESIGN SPECIFICATION: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.

DESIGN DATA:

Design Loading	CF 130 (57)
Concrete Class C	Basic unit stress 1,333 psi
Concrete Class E	Basic unit stress 1,133 psi
Structural Steel	ASTM A36 - Basic unit stress 20,000 psi (ASTM A7 and A373 steel not permitted)
Reinforcing Steel	ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 psi except spiral reinforcement may be plain and of structural grade with basic unit stress of 18,000 psi.

PILES Shall be driven to a minimum bearing capacity of 35 tons per pile for the abutments.

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 2.5 tons per square foot.

WELDING of structual steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop. Class "B" weld are shown thus B>

CONTINUOUS BEAM SHOP ASSEMBLY: Reference paragraph 4, Section S-7.12 of the Construction and Material Specifications, if rolled beams are field spliced only at supports, for the purpose of checking the fit-up of weld joint preparation, only two adjacent beams need be shop assembled at a time in there correct, unloaded positions. All beams shall be assembled and match marked.

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.

MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine.

CONCRETE: Superstructure and piers above footings shall be "Class C Concrete". Abutments and pier footings shall be "Class E Concrete".

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example, A700 is a No. 7 size bar and A1014 is a No. 10 size bar.

RAILING Aluminum rail and supports, concrete parapet, reinforcing bars wholly within the concrete parapet and sponge rubber for parapet joints shall be included in Item S-14 for payment.

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GENERAL PLAN AND ELEVATION

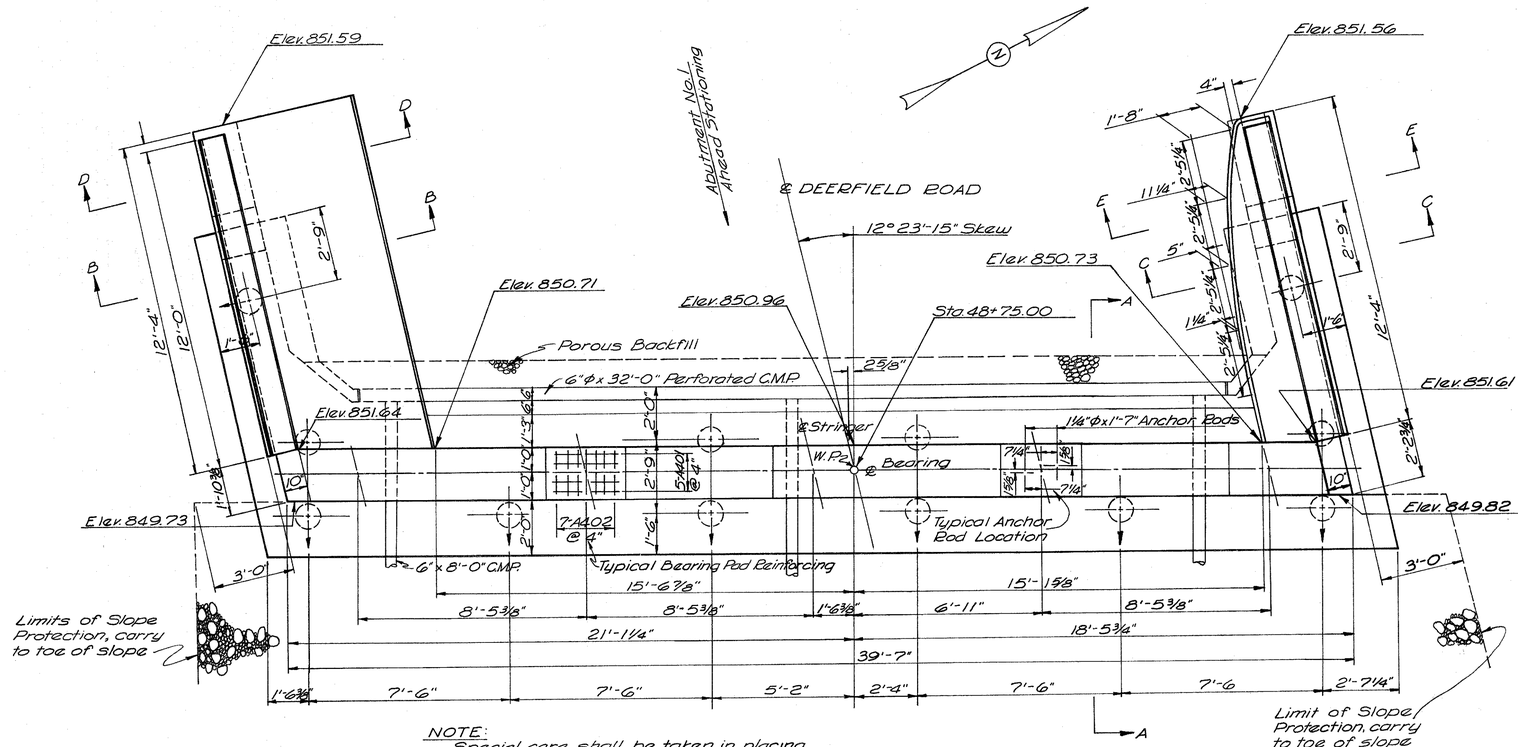
BRIDGE NO. HAM-71-1648
I-71 UNDER DEERFIELD ROAD
HAMILTON CO I-71
STA. 837+37.17

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
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FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

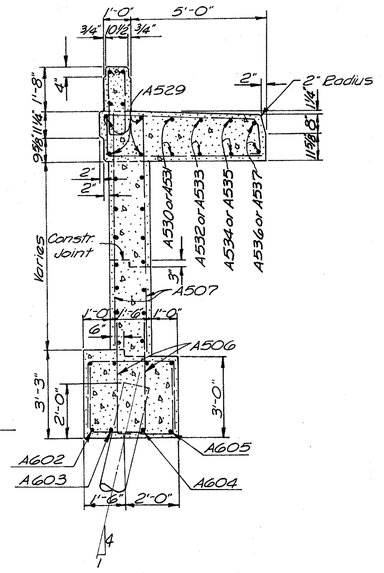
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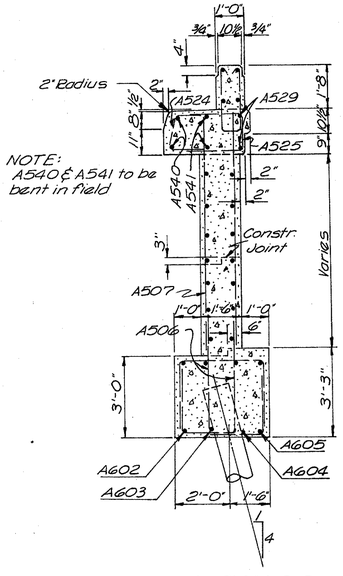


NOTE:
Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interferance with the drilling of anchor rod holes.

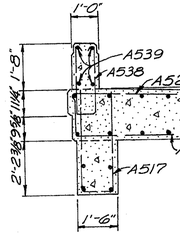
PLAN OF ABUTMENT NO.1



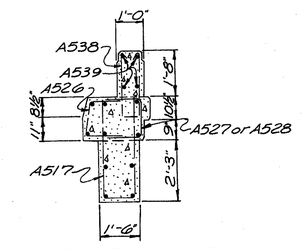
SECTION B-B



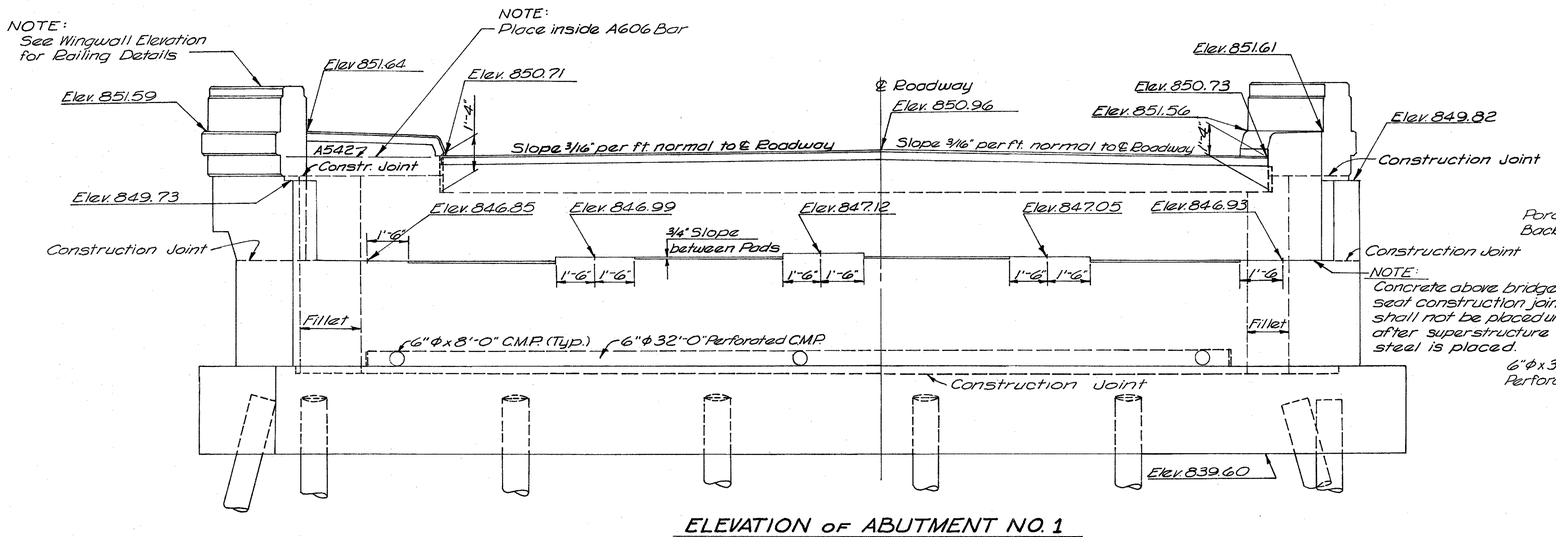
SECTION C-C



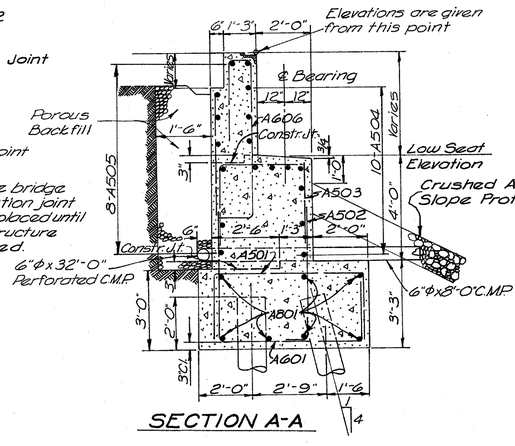
SECTION D-D



SECTION E-E



ELEVATION OF ABUTMENT NO.1



SECTION A-A

NOTE:
Refer to Abutment No.5 Detail Sheet for additional notes.

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CINCINNATI, OHIO 45206

ABUTMENT DETAILS

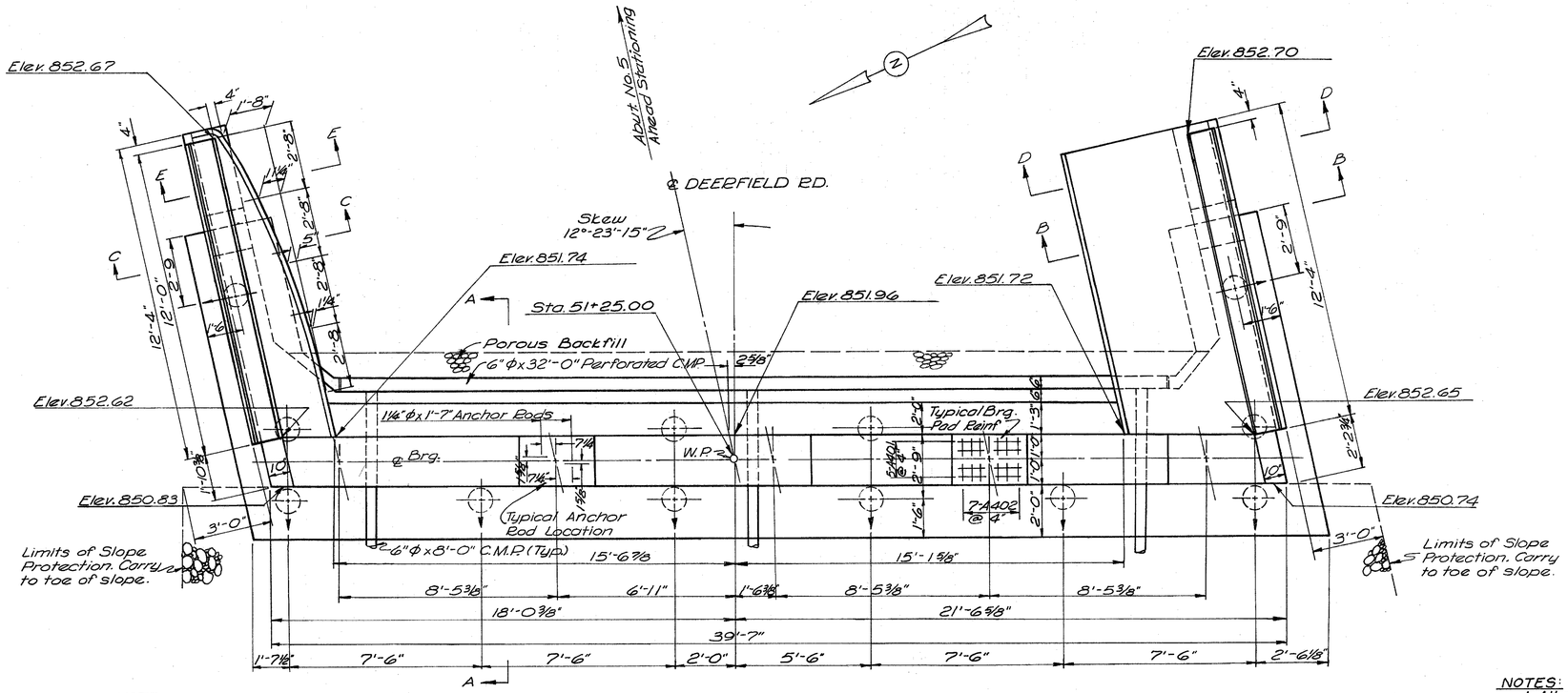
BRIDGE NO. HAM-71-1648
I-71 UNDER DEERFIELD ROAD
HAMILTON CO. I-71
STA. 837+37.17

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
GJC	JHZ	REU	EGE	Ellis 2/64	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

410
445

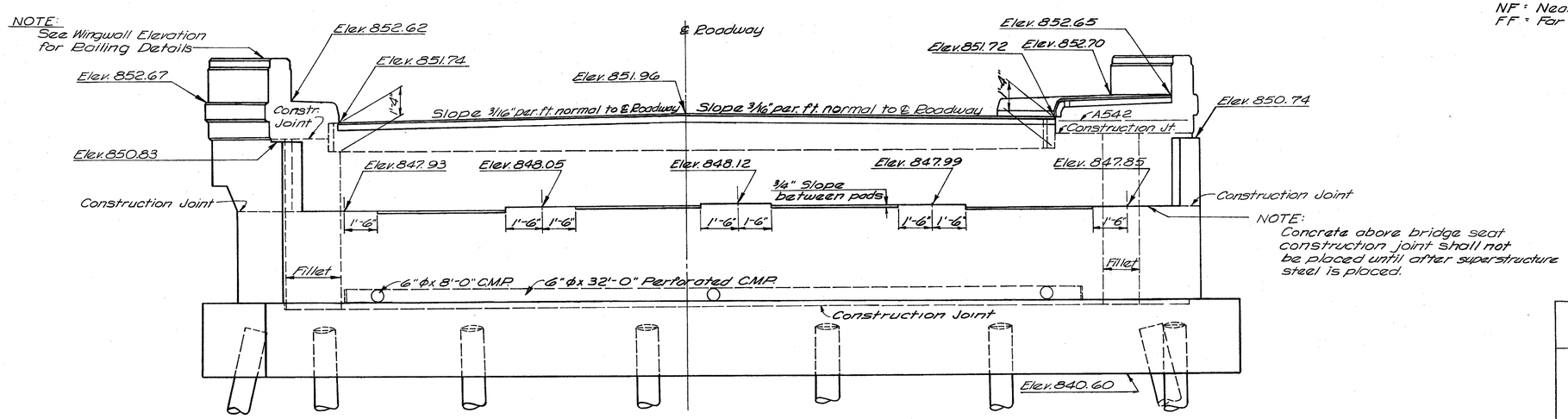
HAMILTON COUNTY
HAM.-71-13.05



NOTE:
Special care shall be taken in placing reinforcing in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor rod holes.

PLAN of ABUTMENT NO. 5

NOTES:
1. All piles shall be 12" diameter cast-in-place reinforced concrete piles.
2. Piles marked thus, ○→ to be battered 1:4 in the direction of the arrow.
3. Maximum pile load 35 tons per pile.
4. Piles shall be driven to a minimum bearing capacity of 35 tons per pile for the abutments.
5. Parapet concrete and A539 reinforcing bars included in Item S-14 for payment.
EF = Each Face
NF = Near Face
FF = Far Face



ELEVATION of ABUTMENT NO. 5

NOTE:
Concrete above bridge seat construction joint shall not be placed until after superstructure steel is placed.

HARRY BALKE ENGINEERS
990 NASSAU STREET
CINCINNATI, OHIO 45206

ABUTMENT DETAILS

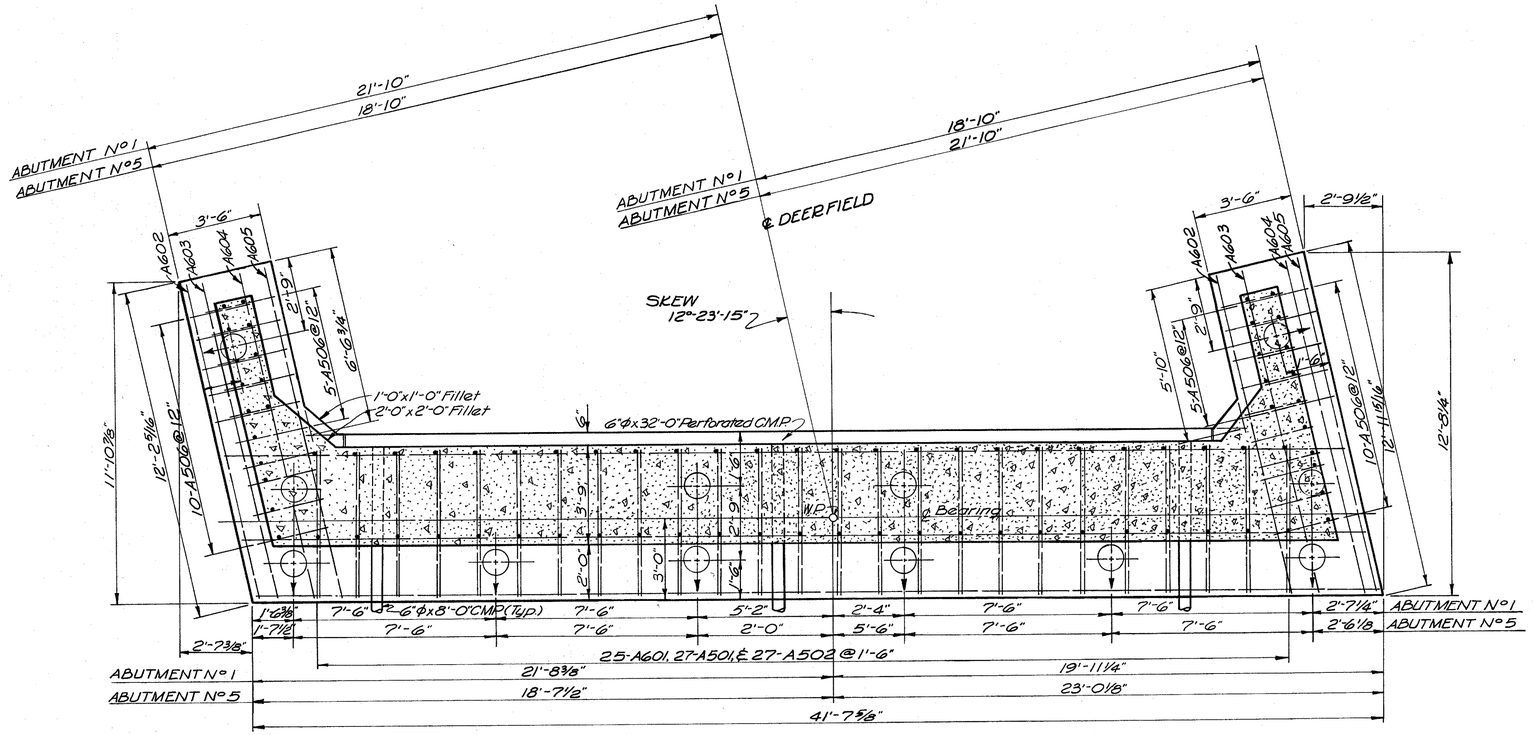
BRIDGE NO. HAM-71-1648
I-71 UNDER DEERFIELD ROAD
HAMILTON CO. I-71
STA. 837+37.17

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
G.J.C.	J.H.Z.	R.E.J.	R.G.E.	Ellis 2/64	

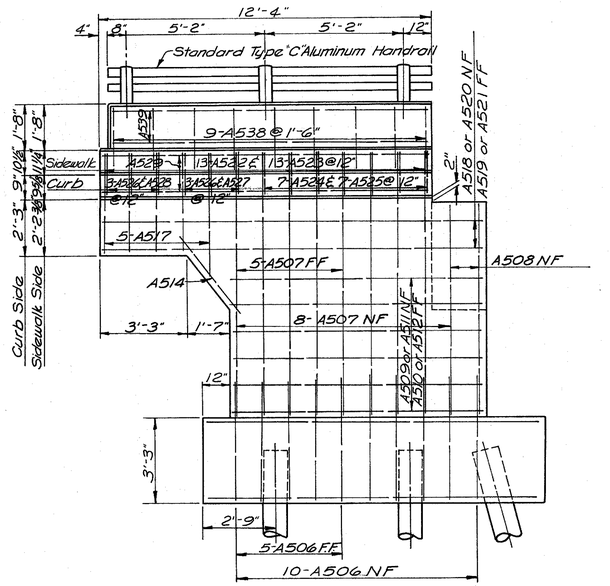
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

411
445

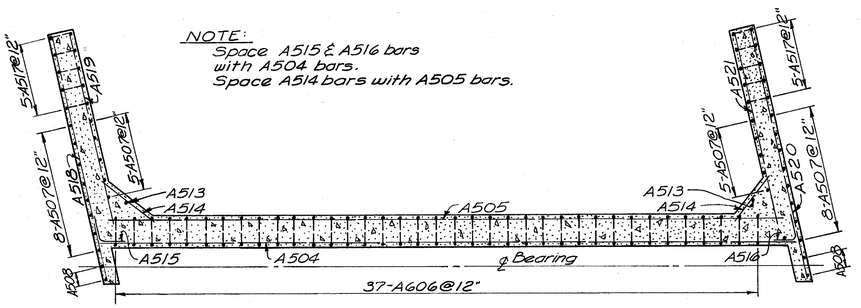
HAMILTON COUNTY
HAM.-71-13.05



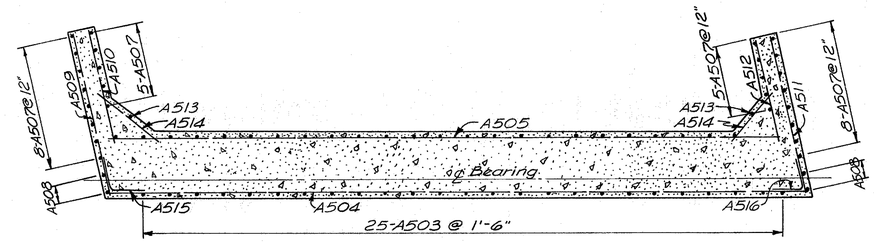
FOOTING PLAN



WINGWALL ELEVATION



SECTION ABOVE BRIDGE SEAT



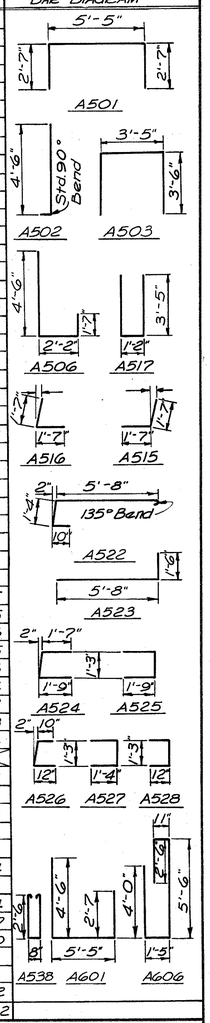
SECTION ABOVE FOOTING

REINFORCING STEEL LIST

BOTH ABUTMENTS

MARK	LENGTH	SHAPE		No	WEIGHT
A401	2'-8"	Str.		50	89
A402	1'-8"	Str.		70	78
A501	10'-4"	Bent		50	539
A502	5'-0"	Bent		50	261
A503	10'-3"	Bent		50	535
A504	39'-3"	Str.		20	819
A505	37'-0"	Str.		16	617
A506	8'-0"	Bent		60	501
A507	8'-2"	Str.		52	443
A508	6'-4"	Str.		8	53
A509	9'-4"	Str.		14	136
A510	5'-9"	Str.		4	24
A511	9'-0"	Str.		4	38
A512	6'-3"	Str.		4	26
A513	6'-6"	Str.		4	27
A514	4'-6"	Str.		16	113
A515	3'-0"	Bent		16	50
A516	3'-0"	Bent		16	50
A517	7'-9"	Bent		20	162
A518	13'-10"	Str.		4	58
A519	10'-10"	Str.		4	45
A520	14'-3"	Str.		4	59
A521	10'-9"	Str.		4	45
A522	8'-0"	Bent		26	217
A523	7'-0"	Bent		26	190
A524	4'-4"	Bent		14	63
A525	4'-6"	Bent		14	66
A526	2'-10"	Bent		12	35
A527	3'-8"	Bent		6	24
A528	3'-0"	Bent		6	19
A529	12'-0"	Str.		8	150
A530	12'-0"	Str.		2	25
A531	11'-11"	Str.		2	25
A532	12'-3"	Str.		2	26
A533	11'-9"	Str.		2	25
A534	12'-6"	Str.		2	26
A535	11'-6"	Str.		2	24
A536	12'-9"	Str.		2	27
A537	11'-3"	Str.		2	23
A538	6'-6"	Bent		36	244
A539	11'-8"	Str.		12	
A540	11'-3"	Str.		4	47
A541	10'-6"	Str.		4	44
A542	5'-0"	Str.		4	10
A601	12'-2"	Bent		50	914
A602	11'-9"	Str.		4	141
A603	12'-0"	Str.		4	144
A604	12'-3"	Str.		4	147
A605	12'-6"	Str.		4	150
A606	13'-9"	Bent		54	1116
A801	41'-3"	Str.		14	1542
TOTAL					10,232

BAR DIAGRAM



NOTE:
Refer to Abutment No.5 Detail Sheet for additional notes.

HARRY BALKE ENGINEERS
990 NASSAU STREET
CINCINNATI, OHIO 45206

ABUTMENT DETAILS

BRIDGE NO. HAM-71-1648
I-71 UNDER DEERFIELD ROAD
HAMILTON CO. I-71
STA. 837+37.17

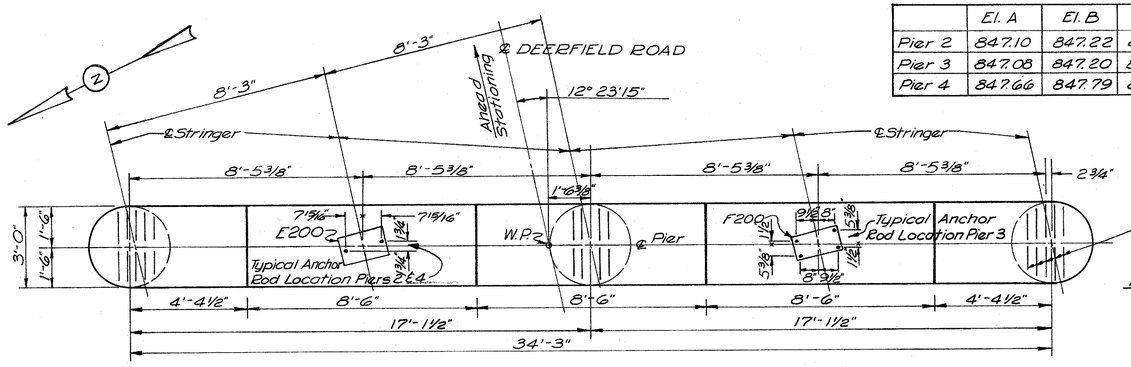
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
GJC	JHZ	BEJ	BGE	Ellis 2/64	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

412/445

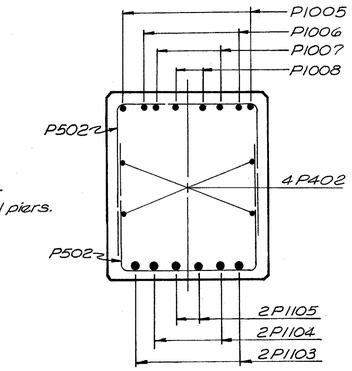
HAMILTON COUNTY
HAM.-71-13.05

	El. A	El. B	El. C	El. D	El. E	El. Bot. Ftg.	F
Pier 2	847.10	847.22	847.29	847.16	847.02	824.02	3'-7"
Pier 3	847.08	847.20	847.27	847.14	847.00	824.00	3'-7"
Pier 4	847.66	847.79	847.86	847.72	847.59	824.59	3'-6⅞"

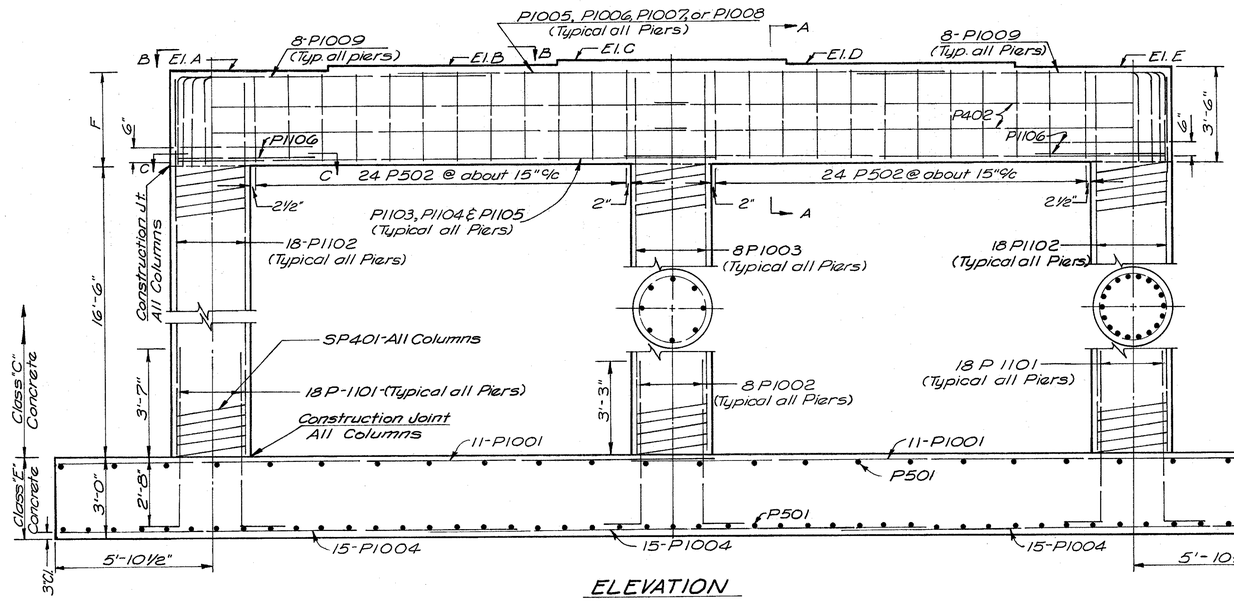


CAP PLAN

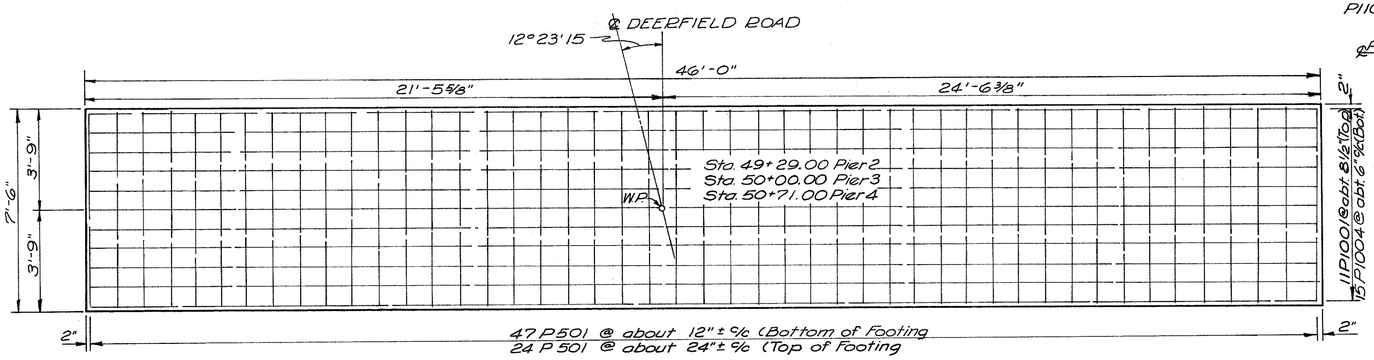
NOTE:
P401 @ 4" c/c under each stringer at all piers.



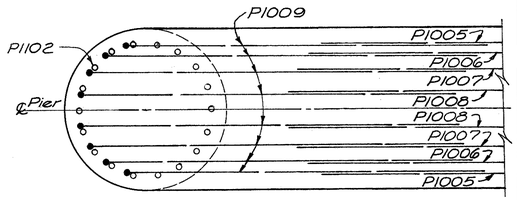
SECTION A-A



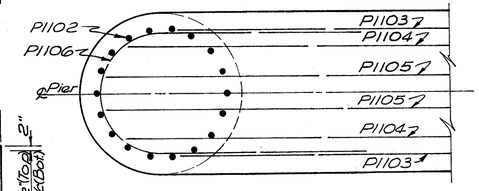
ELEVATION



FOOTING PLAN



VIEW B-B

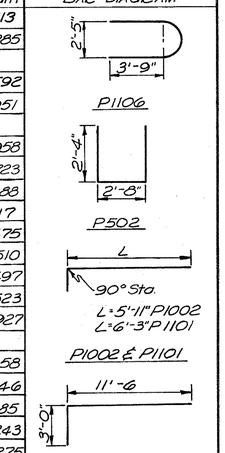


SECTION C-C

REINFORCING STEEL LIST
INCLUDES ALL THREE PIERS

MARK	LENGTH	SHAPE	NO.	PIER 2	PIER 3	PIER 4	WEIGHT
P401	2'-3"	Str.	75	25	25	25	113
P402	17'-9"	Str.	24	8	8	8	285
P501	7'-2"	Str.	213	71	71	71	1592
P502	7'-0"	Bent	144	48	48	48	1051
P1001	24'-6"	Str.	66	22	22	22	6958
P1002	7'-0"	Bent	24	8	8	8	723
P1003	19'-3"	Str.	24	8	8	8	1988
P1004	17'-5"	Str.	135	45	45	45	10117
P1005	18'-5"	Str.	6	2	2	2	475
P1006	19'9"	Str.	6	2	2	2	510
P1007	16'-0"	Str.	6	2	2	2	497
P1008	20'-3"	Str.	6	2	2	2	523
P1009	14'-2"	Bent	48	16	16	16	2927
P1101	7'-5"	Bent	108	36	36	36	4258
P1102	19'-3"	Str.	108	36	36	36	11046
P1103	18'-7"	Str.	12	4	4	4	1185
P1104	19'-6"	Str.	12	4	4	4	1243
P1105	20'-0"	Str.	12	4	4	4	1275
P1106	11'-4"	Bent	12	4	4	4	723
					TOTAL		47489

BAR DIAGRAM



SPIRAL REINFORCING LIST

MARK	NO	SIZE	CORE DIA	LENGTH	PITCH	NO. of TURNS	WEIGHT
SP401	9	½" ϕ	32"	16'-6"	4½"	47	2806
						TOTAL	2806

NOTE:
The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap.
The "No. of Turns" shown is the "Length" divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number.
Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item S-4.
1½ closed coils shall be provided at the ends of each spiral unit.
Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. Ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per. lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.
Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes.

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990 NASSAU STREET
CINCINNATI, OHIO 45206

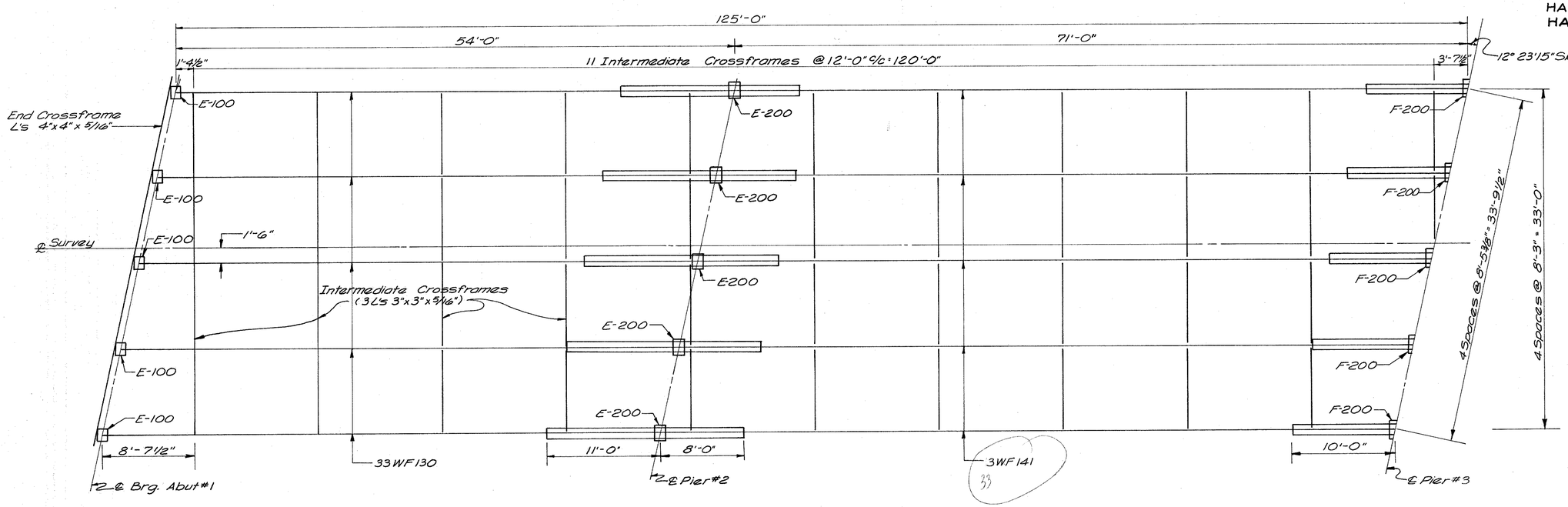
PIER DETAILS
BRIDGE NO. HAM-71-1648
I-71 UNDER DEERFIELD ROAD
HAMILTON CO. I-71
STA. 837+37.17

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
RK	NWM	REJ	RGE	Ellis 2/64	

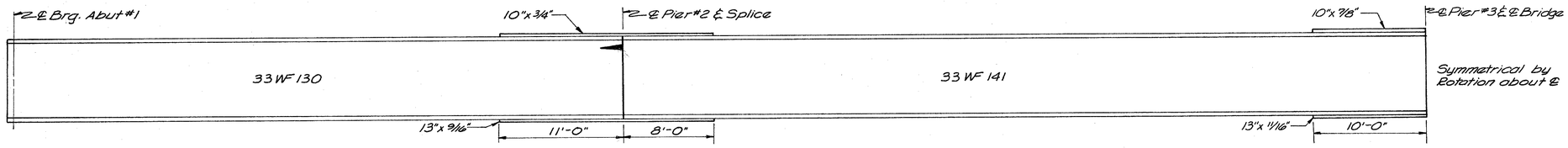
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

413
445

HAMILTON COUNTY
HAM.-71-13.05



HALF FRAMING PLAN
(Symmetrical by Rotation)



ELEVATION

DEFLECTIONS AND CAMBER								
LOCATION	Outside Beams				Inside Beams			
	Span 1	Span 2	Span 3	Span 4	Span 1	Span 2	Span 3	Span 4
Deflections due to weight of steel	11/16	1/8	1/8	11/16	11/16	1/8	1/8	11/16
Deflection due to remaining Dead Load	1/4	5/8	5/8	1/4	1/4	5/8	5/8	1/4
Convexity required for Vertical Curve	0	0	0	0	0	0	0	0
Sum of Deflection and Convexity	5/16	3/4	3/4	5/16	5/16	3/4	3/4	5/16
Required Camber	0	3/4	3/4	0	0	3/4	3/4	0

NOTE: Where no camber is required the beams shall be so fabricated that any curved beam will be placed with the convex flange up.

NOTE:
For Details of beam splices, scuppers, bulb angles, end dams, sidewalk plates and end crossframes see Std. Dwg. No. SD-1-63.

BEAM SPLICE WELDING PROCEDURE

1. Raise end of beam at Pier #3 2½"
2. Butt-weld the beam flanges and web, using the following sequence: make two passes on the web, then two on each flange, repeat, using one or two passes at each location, until welds are completed.
3. Weld top and bottom flange moment plates at Pier #2
4. Lower end of beam at Pier #3
5. Make splice at Pier #3 and Pier #4 in the same manner raising the end of the beams 3" at Pier #4 and 1¼" at Abutment #5

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CINCINNATI, OHIO 45206

SUPERSTRUCTURE DETAILS

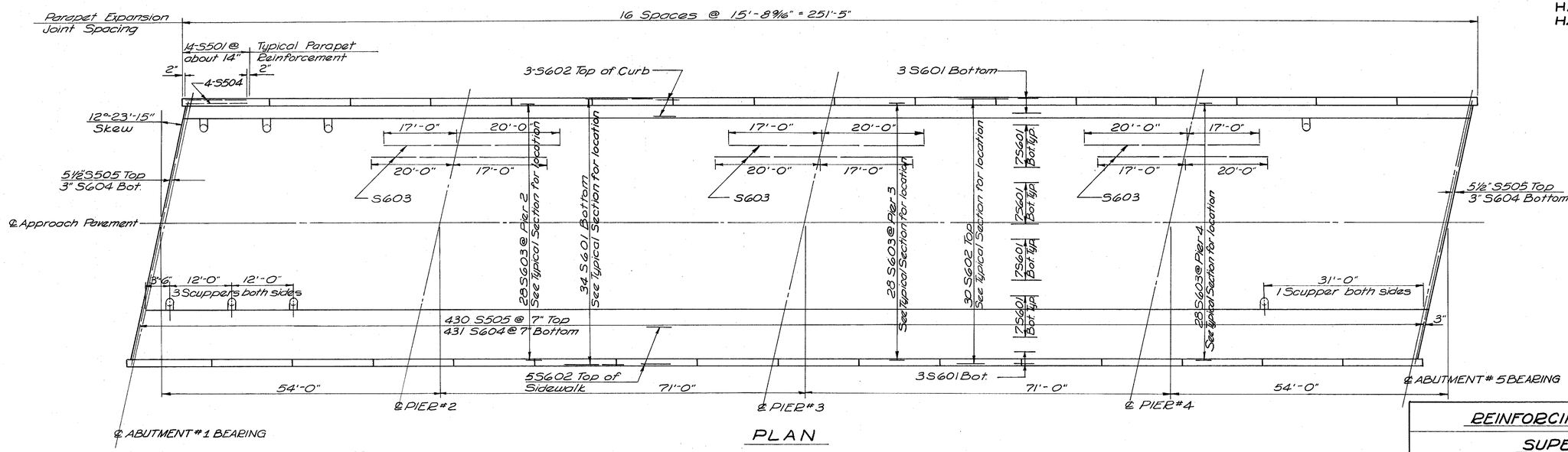
BRIDGE NO. HAM-71-1648
I-71 UNDER DEERFIELD ROAD
HAMILTON CO. I-71
STA. 837+37.17

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
RK	NMM	EEJ	RGE	Ellis 2/64	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

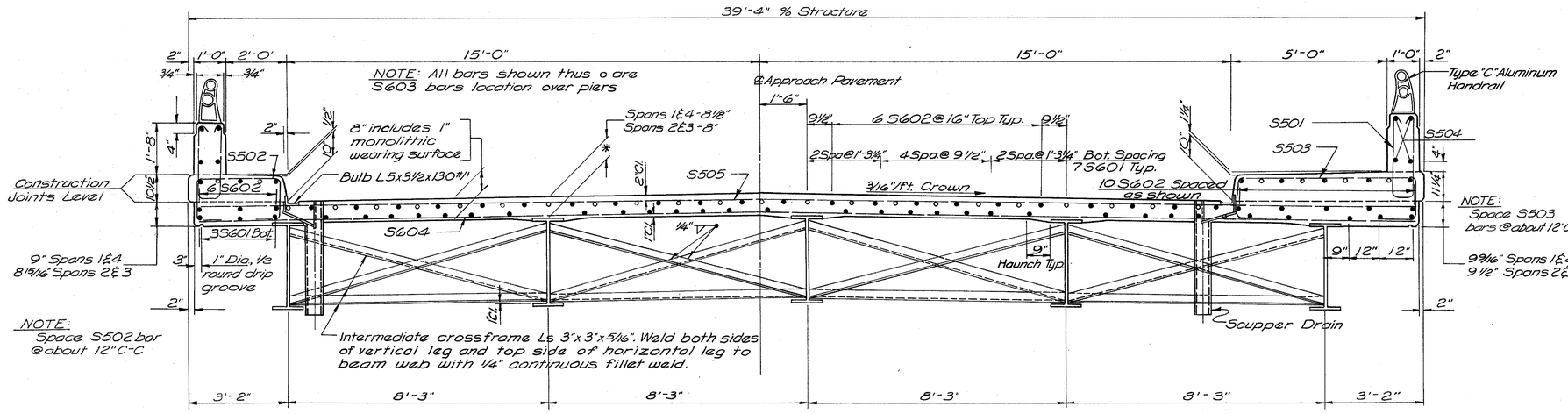
414
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HAMILTON COUNTY
HAM.-71-13.05



PLAN

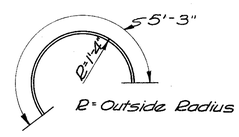
* NOTE:
This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension even though deviation from it may be necessary because of the top flange of the beam may not have the exact camber conformation required to place it parallel to the finish grade.



TYPICAL SECTION

NOTES:
1. For slab pouring sequence see General Notes.
2. Parapet concrete and S504 reinforcement bars included with Item S-14 for payment.
3. Fixed and sliding bearings included with Item S-7 for payment.
4. For details of beam splices, scuppers, bulb angles, end dams, curb plates, sidewalk plates and end crossframes see Std. Dwg. N² SD-1-63.
5. For fixed and sliding bearing details see Std. Dwg. N² FSB-1-62
6. All scupper details to be in accordance with those for a Type 1 scupper.

NOTE:
The haunch in the deck slab adjacent to the top of the steel beams which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12", except that the maximum slope shall not exceed 3" per foot. Payment for deck slab concrete shall be based on the 9" width.



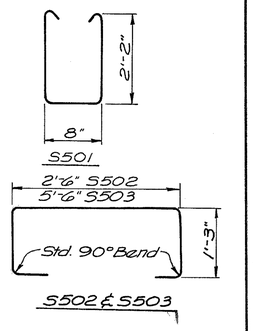
SPIRAL REPLACEMENT BAR (RE½"ϕ)

REINFORCING STEEL LIST

SUPERSTRUCTURE

MARK	LENGTH	SHAPE	No.	WEIGHT
S501	5'-7"	Bent	448	2609
S502	5'-9"	Bent	251	1505
S503	8'-9"	Bent	251	2291
S504*	15'-4"	Str.	128	⊠
S505	39'-7"	Str.	430	17753
S601	27'-0"	Str.	340	13788
S602	29'-9"	Str.	342	15282
S603	37'-0"	Str.	84	4668
S604	39'-7	Str.	431	25787
TOTAL				83,683

BAR DIAGRAM



* Included in Item S-14 for payment

REPLACEMENT BARS			
MARK	LENGTH	SHAPE	No.
RE401	5'-3"	Str.	1
RE501	5'-7"	Str.	2
RE601	5'-11"	Str.	4
RE801	6'-6"	Str.	1
RE1001	7'-3"	Str.	2
RE1101	7'-7"	Str.	1
RE½"ϕ	5'-3"	Bent	1

HARRY BALKE ENGINEERS
990 NASSAU STREET
CINCINNATI, OHIO 45206

SUPERSTRUCTURE DETAILS

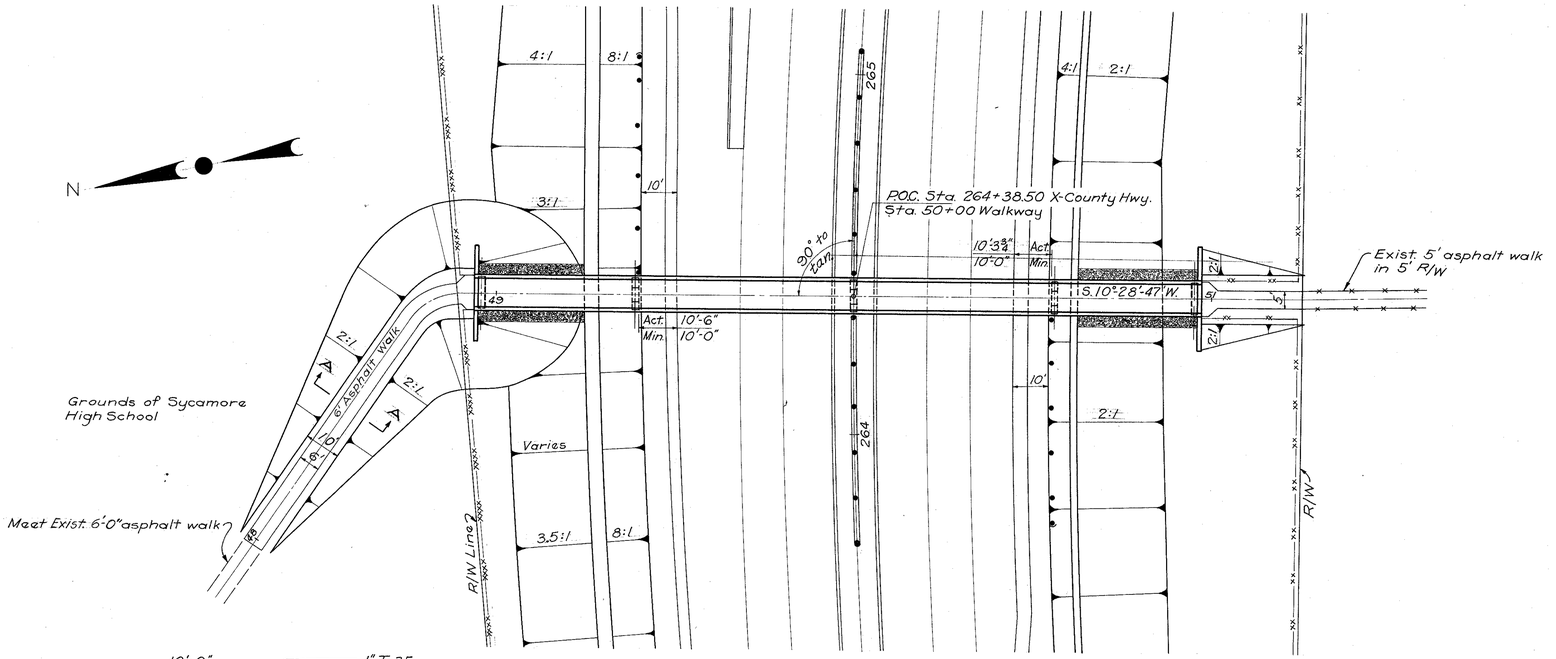
BRIDGE NO. HAM-71-1648
I-71 UNDER DEERFIELD ROAD
HAMILTON CO I-71
STA. 837+37.17

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
EASA	EASA	BEJ	BGE	Ellis 2/64	

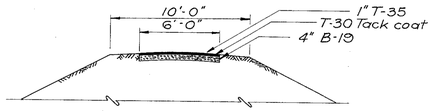
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

415
445

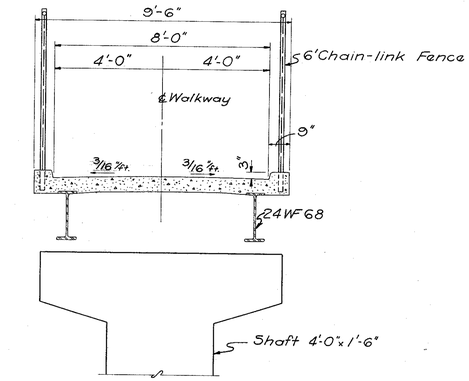
HAMILTON COUNTY
HAM. - 71 - 1305



PLAN



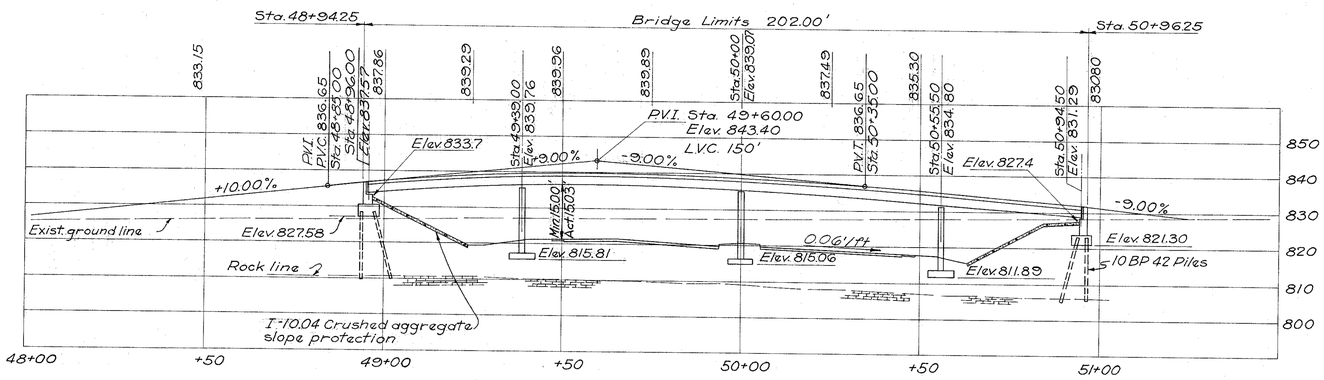
SECTION A-A



PROPOSED STRUCTURE

℄ CROSS COUNTY HWY.
CURVE DATA

P.I. Sta. 265+22.09
Δ = 42°-23'-35" Rt.
D_c = 3°-30'
R_c = 1637.02'
L_s = 250'
L_c = 961.23'
T_s = 760.45'
E_s = 120.50'
θ_s = 4°-22'-30"
T.S.: Sta. 257+61.64
S.C.: Sta. 260+11.64
C.S.: Sta. 269+72.87
S.T.: Sta. 272+22.87



SECTION ALONG ℄ WALKWAY

Estimated Average pay length
Abutment Piles 19'

PROPOSED STRUCTURE

TYPE: Continuous steel beam with Reinf. Concr. deck and sub-structure.
SPANS: 43'-0", 61'-0", 55'-6", 39'-0"
SKEW: 0°-00'
LOADING: 85 Lbs/Sq. Ft.
ALIGNMENT: Tangent
WALKWAY: 8'-0" face to face of curbs.

HARRY BALKE ENGINEERS
990 NASSAU STREET
CINCINNATI, OHIO 45206

SITE PLAN

CROSS-COUNTY HWY. UNDER WALKWAY
HAMILTON COUNTY I-71
STA. 264+38.50

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
J.W.	J.W.	G.J.C.	G.J.C.	R.G.E.	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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445

HAMILTON COUNTY
HAM.-71-13.05

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER-STRUCTURE	ABUT. 1	ABUT. 5	PIER 2	PIER 3	PIER 4	GENERAL
E-2	127	Cu. Yds.	Unclassified Excavation		30	33	21	20	23	
S-1	39	Cu. Yds.	Class "C" Concrete Superstructure	39						
S-1	15	Cu. Yds.	Class "C" Concrete Piers above Footings				5	5	5	
S-1	16	Cu. Yds.	Class "E" Concrete Abutments above Footings		8	8				
S-1	28	Cu. Yds.	Class "E" Concrete, Footings		8	8	4	4	4	
S-4	9558	Lbs.	Reinforcing Steel	4137	991	991	1154	1140	1142	
S-7	32355	Lbs.	Structural Steel	32355						
S-8	32355	Lbs.	Field Painting of Structural Steel	32355						
S-16	Lump	Lump Sum	First Test Pile							Lump
S-18	133	Lin. Ft.	Steel Piles, 10 BP42		57	7				
S-29	8	Cu. Yds.	Porous Backfill		4	4				
S-29	16	Each	Scuppers, Including Supports	16						
I-10	125	Sq. Yds.	Crushed Aggregate Slope Protection		60	65				
I-26	400	Lin. Ft.	Aluminum, Chain Link Fence	400						
S101	39	Each	Water-Reducing, Set-Retarding Admixtures for Concrete	39						

GENERAL NOTES

REFERENCE shall be made to the following:

Standard Drawing F-1	Revised 2-1-63
Standard Drawing FSB-1-62	Revised 1-15-63
Standard Drawing SD-1-63, Sheets 1,2,&4 of 4	Dated 11-12-63
Supplementary Specification No S-101	Dated 7-12-62
Supplementary Specification No S-307	Dated 8-23-60

DESIGN SPECIFICATIONS: The structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57 together with current revisions thereof.

DESIGN DATA:

Design Loading	85 Lbs. per Sq Ft
Concrete Class C	Basic unit stress 1333 psi
Concrete Class E	Basic unit stress 1133 psi
Structural Steel (Except piling)	ASTM A36 - Basic unit stress 20000 psi (ASTM A7 and A373 steel not permitted)
Reinforcing Steel	ASTM A15, A16, A160, Deformed Intermediate or Hard Grade

FOUNDATION BEARING PRESSURE: Pier spread footings are designed for a maximum bearing pressure of 2.5 tons per square foot.

WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop. Class "B" welds are shown thus ▷.

CONTINUOUS BEAM SHOP ASSEMBLY: Reference paragraph 4, Section S-7.12 of the Construction and Material Specifications, if rolled beams are field spliced only at supports, for the purpose of checking the fit-up of weld joint preparation, only two adjacent beams need be shop assembled at a time in there correct, unloaded positions. All beams shall be assembled and match marked.

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are parallel to the transverse reinforcing steel, and are located near the center of any span.

CONCRETE: Superstructure and piers above footings shall be "Class C Concrete". Abutments and pier footings shall be "Class E Concrete.

BAR SIZE is indicated in the bar mark. The first digit where three digits are used indicate the bar size number. For example, A600 is a No 6 size bar

PILES shall be driven with a hammer of not less than 11000 ft lbs per blow 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 Section S-18.05 is not less than the following value for a pile hammer of the indicated energy rating:

50 tons per pile using a 11000 ft lb. hammer
43 tons per pile using a 15000 ft lb or greater hammer

If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 35 tons per pile.

EXCAVATION QUANTITY includes the removal of fill material required for construction of the abutments

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CINCINNATI, OHIO 45206

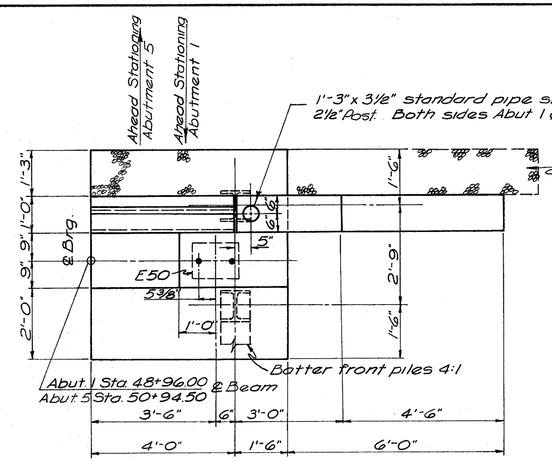
ESTIMATED QUANTITIES & GENERAL NOTES
CROSS COUNTY HWY. UNDER WALKWAY
HAMILTON COUNTY I-71
STA. 264+38.50

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	JEI	EEJ	GJC		

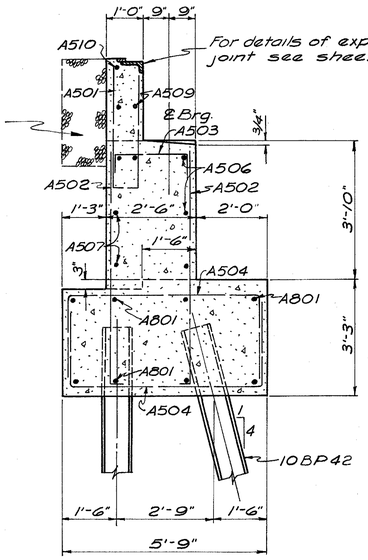
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

417
445

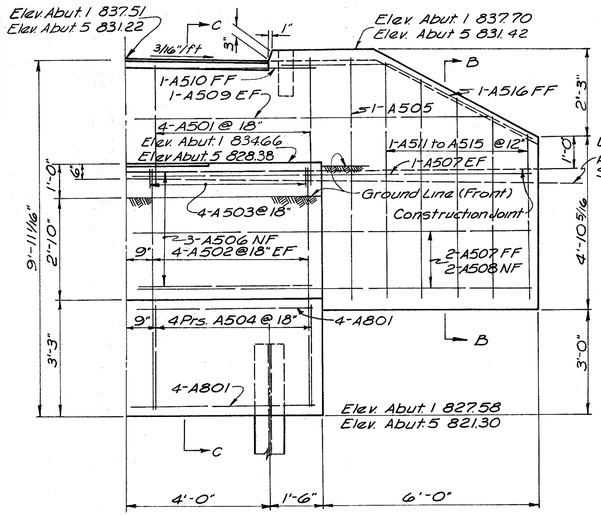
HAMILTON COUNTY
HAM.-71-13.05



HALF PLAN ABUTMENT (1&5)

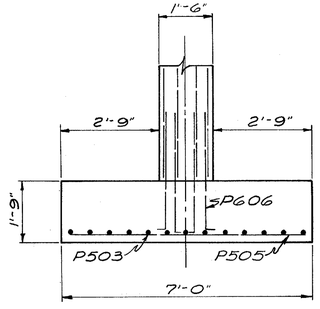


SECTION C-C

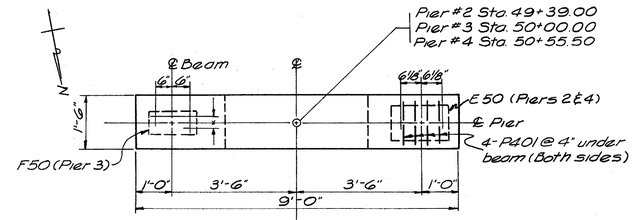


HALF ELEVATION

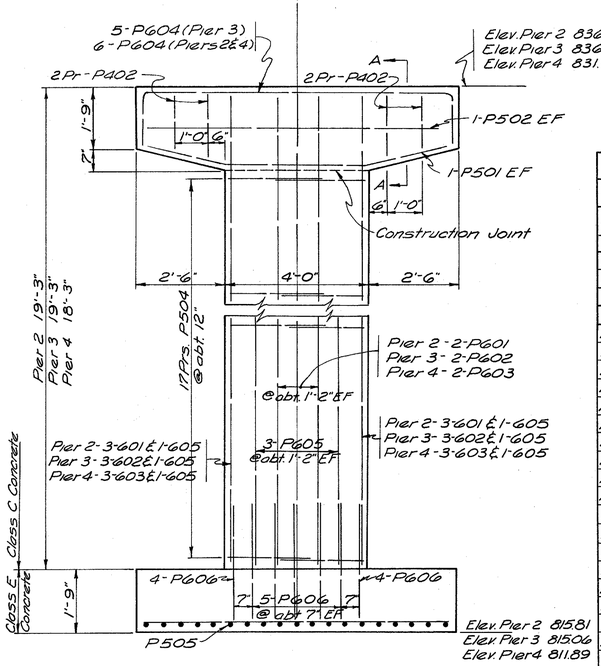
SECTION B-B



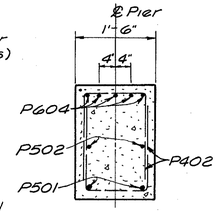
PART END VIEW



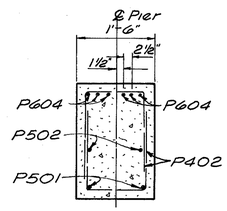
PLAN PIERS



ELEVATION PIERS



PIER 3



PIERS 2&4

SECTION A-A

PLAN FOOTING

NOTES

1. Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes
2. Cost of pipe sleeves in Abutments 1&5 shall be included in Item I-26
3. PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope after which excavation shall be made and piles driven.

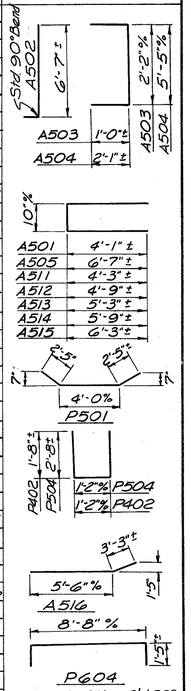
N.F. = Near Face
F.F. = Far Face
E.F. = Each Face

REINFORCING STEEL LIST

SUPERSTRUCTURE, ABUTMENTS 1&5 AND PIERS 2,3 & 4

Mark	Length	Shape	No.	Super-struct.	Abut. 1	Abut. 5	Pier 2	Pier 3	Pier 4	Weight
SUPERSTRUCTURE										
S401	9'-2"	Str.	332	332						2033
S402	35'-0"	Str.	90	90						2104
ABUTMENTS										
A501	8'-9"	Bent	16		8	8				146
A502	7'-1"	Bent	32		16	16				236
A503	3'-11"	Bent	16		8	8				65
A504	9'-4"	Bent	32		16	16				312
A505	13'-9"	Bent	4		2	2				52
A506	10'-8"	Str.	6		3	3				67
A507	22'-8"	Str.	8		4	4				189
A508	7'-5"	Str.	8		4	4				62
A509	18'-6"	Str.	4		2	2				77
A510	11'-6"	Str.	2		1	1				24
A511	9'-1"	Bent	4		2	2				38
A512	10'-1"	Bent	4		2	2				42
A513	11'-1"	Bent	4		2	2				46
A514	12'-1"	Bent	4		2	2				50
A515	13'-1"	Bent	4		2	2				55
A516	7'-9"	Bent	8		4	4				65
A801	10'-8"	Str	16		8	8				456
PIERS										
P401	1'-2"	Str.	24				8	8	8	19
P402	4'-3"	Bent	24				8	8	8	68
P501	8'-9"	Bent	6				2	2	2	55
P502	8'-8"	Str.	6				2	2	2	54
P503	8'-8"	Str.	39				13	13	13	353
P504	6'-3"	Bent	108				36	36	36	704
P505	6'-8"	Str.	57				19	19	19	396
P601	18'-10"	Str.	10				10			283
P602	18'-10"	Str.	10					10		283
P603	17'-10"	Str.	10						10	268
P604	11'-2"	Bent	17				6	5	6	285
P605	10'-0"	Str.	24				8	8	8	360
P606	3'-10"	Bent	54				18	18	18	311

Bar Diagram



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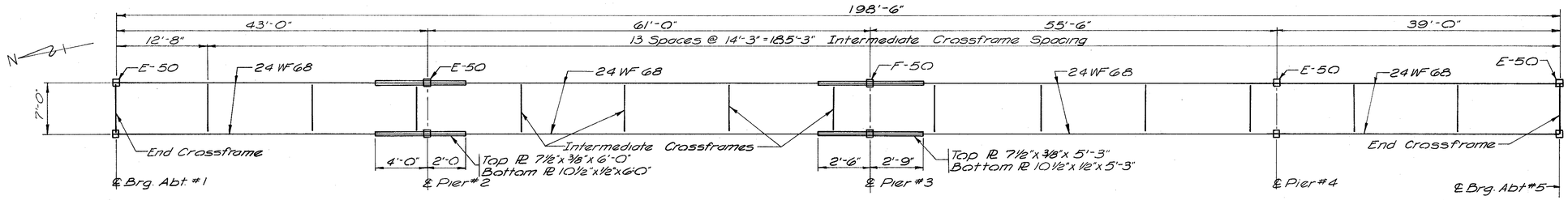
SUBSTRUCTURE DETAILS
CROSS-COUNTY HWY. UNDER WALKWAY
HAMILTON COUNTY I-71
STA. 264+38.50

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
GJC	JH	EEJ	GJC		

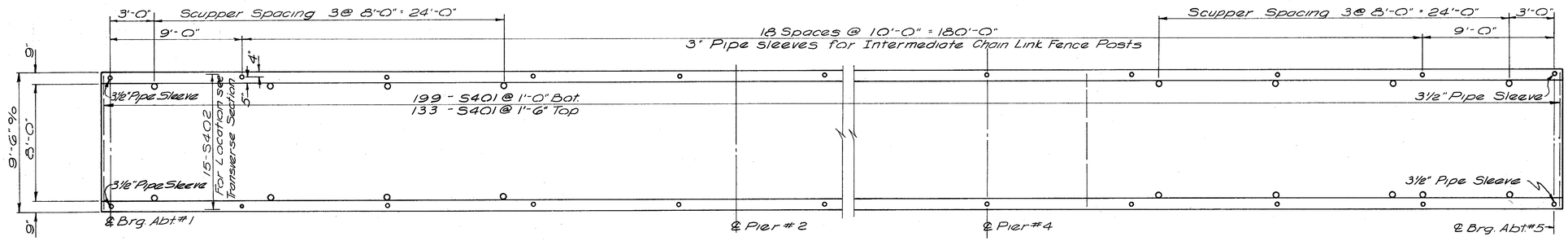
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

413
445

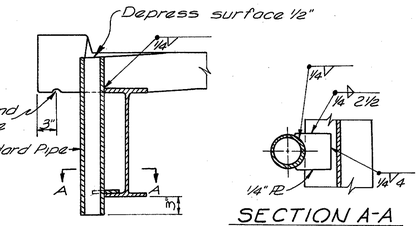
HAMILTON COUNTY
HAM-71-13.05



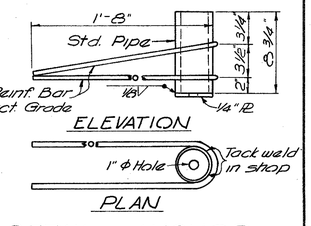
FRAMING PLAN



SLAB PLAN

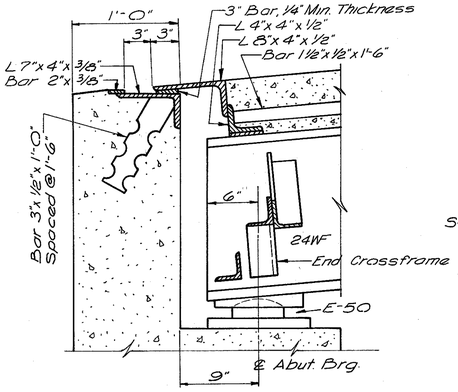


SCUPPER DETAIL



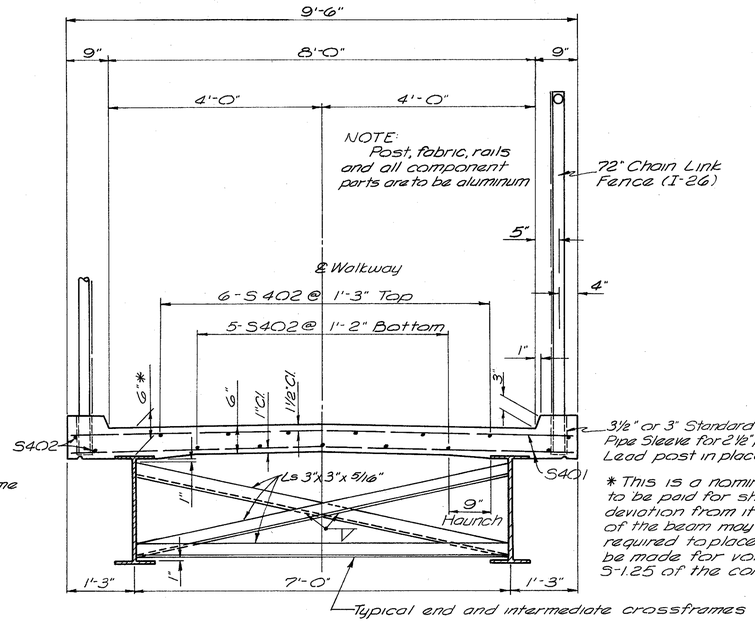
DETAIL - ANCHOR FOR TYPICAL PIPE SLEEVE

DEFLECTION & CAMBER				
LOCATION	SPAN 1	SPAN 2	SPAN 3	SPAN 4
Deflection due to weight of steel	1 1/16"	1 1/16"	3/16"	1/16"
Deflections due to remaining dead load	1/4"	1 3/16"	9/16"	3/16"
Convexity required for Vertical Curve	3 5/16"	2 5/16"	4"	0"
Sum of Deflection and Convexity	3 5/8"	3 7/16"	5/16"	1/16"
Required Camber	3 5/8"	3 7/16"	5/16"	0"



END FINISH DETAIL

(Follow Std. Dwg. SD-1-63 for welds, lubrication, erection procedure and details not given.) Curb Plates not required.



TRANSVERSE SECTION

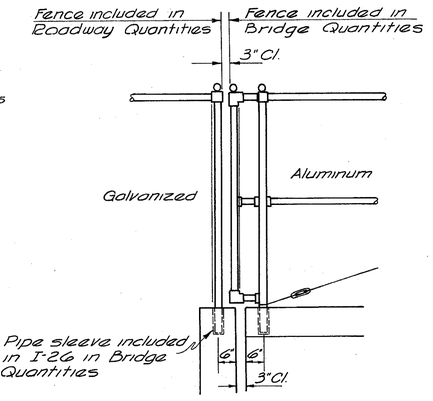
* This is a nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to finish grade. Deduction shall be made for volume of encased steel plates as Per Sec. S-1.25 of the construction and material specifications.

NOTES

1. For Slab pouring sequence see General Notes
2. Aluminum chain link fence post, fabric, rails, all component parts, and lead are to be included under Item I-26 in Bridge Quantities for payment
3. For details of fixed and sliding bearings, see Std. Dwg. No. FSB-1-62
4. For details of beam welds, and additional details of end finish, see Std Dwg. No. SD-1-63
5. Pipe sleeves are to be galvanized after welding
6. For details of Fence, see Std. Dwg. No. F-1

BEAM SPLICE WELDING PROCEDURE

1. With all beams in place, raise the pier 4 ends of span 3 beams 3½"
2. Butt-weld the beam flanges and web at pier 3, using the following sequence: Make two passes on the web, then two on each flange, repeat, using one or two passes at each location, until welds are completed.
3. Weld the top and bottom moment plates.
4. Lower beam ends at pier 4. Raise beam ends at Abutment 1 1⅜"
5. Weld beams at pier 2, repeating steps 2 and 3.
6. Lower beam ends at Abutment 1. Raise beam ends at Abutment 5 ¾"
7. Weld beams at pier 4, repeating step 2.
8. Lower beam ends at Abutment 5.



FENCE AT ABUTMENT

HARRY BALKE ENGINEERS
990 NASSAU STREET
CINCINNATI, OHIO 45206

SUPERSTRUCTURE DETAILS
CROSS COUNTY HWY. UNDER WALKWAY
HAMILTON COUNTY I-71
STA. 264+38.50

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
GJC	JH	REU	GJC		

This improvement has been declared a Limited Access Highway from Sta 656+50 to Sta 848+73.74 by action of the Director of Highways and recorded in Volume 45, Page 314, of the Director's Journal pursuant to law.

LOCATION SURVEY PLAT

NORTHEAST EXPRESSWAY
STATE ROUTE 1 (IR 71) SEC. 13.05
HAMILTON COUNTY, OHIO
SYCAMORE TOWNSHIP
E.R. 1, T.4. SECTIONS 8, 9, 10, 11 & 12
CITY OF BLUE ASH
VILLAGE OF MONTGOMERY
1963

0 200 400 800 1200
SCALE IN FEET

Received _____ 19____
Recorded _____ 19____
Book _____ Page _____
Hamilton County Recorder

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-71-1(38)13	

419/445

HAMILTON COUNTY
HAM. 71-13.05
R/W PLANS
LIMITED ACCESS

Signed _____
J.R. Cooke
Date _____ Division Deputy Director

I hereby certify that this Plat is a true delineation of a survey made for the Ohio Department of Highways in 1963 by Harry Balke Engineers.

John Ray Robinson Date June 25, 1964
Associate Engineer
Reg. Surveyor No. 4515

RAMP "A"

"A1"
CURVE DATA
P.I. = Sta 1+86.83
Δ = 45°56'38" Rt.
D = 13°00'
R = 440.74'
L = 353.41'
T = 186.83'
E = 37.96'
P.C. = Sta. 0+00.00
P.C.C. = Sta. 3+53.41

"A2"
CURVE DATA
P.I. = Sta. 5+75.21
Δ = 26°39'07" Rt.
D = 6°00'
R = 954.93'
L = 435.97'
T = 221.80'
E = 25.42'
P.C. = Sta. 3+53.41
C.S. = Sta. 7+89.28

"A3"
SPIRAL DATA
θs = 7°30'00" Rt.
Ls = 250.00'
L.T. = 166.82'
S.T. = 83.47'
C.S. = Sta. 7+89.28
S.T. = Sta. 10+39.28

RAMP "B"

"B1"
CURVE DATA
P.I. = Sta. 4+96.62
Δ = 38°14'35" Rt.
D = 4°00'
R = 1,432.40'
L = 956.09'
T = 496.62'
E = 83.65'
P.C. = Sta. 0+00.00
P.I. = Sta. 9+56.08

"B2"
CURVE DATA
P.I. = Sta. 14+07.73
Δ = 15°20'37" Rt.
D = 4°00'
R = 1,432.40'
L = 383.60'
T = 192.95'
E = 12.94'
P.C. = Sta. 12+14.78
P.C.C. = Sta. 15+98.38

"B3"
CURVE DATA
P.I. = Sta. 17+92.52
Δ = 30°20'01" Rt.
D = 8°00'
R = 716.20'
L = 379.17'
T = 194.14'
E = 25.85'
P.C.C. = Sta. 15+98.38
P.T. = Sta. 19+77.55

℄ SURVEY
CURVE DATA
P.I. = STA. 703+28.38
Δ = 19°33'10" Lt.
D = 1°28'
R = 3,906.53'
L = 1,333.14'
T = 673.12'
E = 57.57'

CROSS COUNTY HWY.

℄ CONST. CURVE DATA
P.I. = Sta. 265+22.08
Δ = 42°23'35" Rt.
D = 3°30'00"
R = 1,637.02'
Ls = 250.00'
Lc = 961.23'
Ts = 760.44'
Es = 120.50'
θs = 4°22'30"
T.S. = Sta. 257+61.64
S.C. = Sta. 260+11.64
C.S. = Sta. 269+72.87
S.T. = Sta. 272+22.87

R/W CURVE DATA
CC.1 Δ = 4°22'30" Lt.
R = 2,182.85'
T = 83.38'
L = 166.68'

CC.2 Δ = 38°38'35" Lt.
R = 1,637.02'
T = 494.92'
L = 961.23'

P.C. = Sta. 258+44.98
P.C.C. = Sta. 260+11.66 Bk. = Sta. 260+11.64 Ahd.
P.C.C. = Sta. 269+72.91 Bk. = Sta. 269+72.86 Ahd.
P.T. = Sta. 271+39.54

℄ SURVEY
CURVE DATA
P.I. = STA. 736+59.54
Δ = 6°44'20" Rt.
D = 0°28'
R = 12,277.67'
L = 1,444.05'
T = 722.87'
E = 21.26'

℄ SURVEY
CURVE DATA
P.I. = STA. 683+37.71
Δ = 8°16'45" Rt.
D = 0°40'
R = 8,594.37'
L = 1,241.88'
T = 622.02'
E = 22.48'

CROSS COUNTY HWY.

℄ CONST. CURVE DATA
P.I. = Sta. 282+61.32
Δ = 26°35'00" Lt.
Dc = 3°00'
Rc = 1,909.86'
Ls = 250.00'
Lc = 636.11'
Ts = 576.48'
Es = 53.96'
θs = 3°45'00"
T.S. = Sta. 276+34.83
S.C. = Sta. 279+34.83
C.S. = Sta. 285+70.94
S.T. = Sta. 288+20.94

R/W CURVE DATA
CC.3 Δ = 3°45'00" Lt.
R = 2,546.61'
T = 83.37'
L = 166.68'

CC.4 Δ = 19°05'00" Lt.
R = 1,909.86'
T = 321.03'
L = 636.11'

P.C. = Sta. 277+68.17
P.C.C. = Sta. 279+34.85 Bk. = Sta. 279+34.83 Ahd.
P.C.C. = Sta. 285+70.94 Bk. = Sta. 285+70.93 Ahd.
P.T. = Sta. 287+37.61

RAMP "E"

"E1"
CURVE DATA
P.I. = Sta. 240+31
Δ = 16°00'00" Rt.
D = 4°00'
R = 1,432.40'
L = 400.00'
T = 201.31'
E = 14.08'
P.C. = Sta. 0+00.00
P.C.C. = Sta. 4+00.00

"E2"
CURVE DATA
P.I. = Sta. 5+99.90
Δ = 38°52'49" Rt.
D = 9°00'
R = 636.62'
L = 387.56'
T = 199.99'
E = 31.35'
P.C.C. = Sta. 4+00.00
P.T. = Sta. 7+87.56

"E3"
CURVE DATA
P.I. = Sta. 10+58.85
Δ = 41°54'18" Rt.
D = 12°00'
R = 477.46'
L = 349.21'
T = 182.83'
E = 33.81'
P.C. = Sta. 8+76.02
C.S. = Sta. 12+25.23

"E4"
SPIRAL DATA
θs = 9°00'00" Rt.
Ls = 150.00'
L.T. = 100.13'
S.T. = 50.12'
C.S. = Sta. 12+25.23
S.T. = Sta. 13+75.23

LOCATION OF CENTERLINE REFERENCE MONUMENTS

STATION	LOCATION	STATION	LOCATION	STATION	LOCATION
657+00	On Centerline	265+00	On Centerline	RAMP "E"	
662+00	" "	C.S. 269+72.67	" "	P.C. 0+00	Detail C
667+00	" "	S.T. 272+22.87	" "	P.C.C. 4+00	Right & 21' Lt., 7' Rt.
672+00	" "	T.S. 276+84.83	" "	P.T. 7+89.56	Right & 21' Lt., 7' Rt.
P.C. 677+15.69	" "	S.C. 279+34.83	" "	P.C. 8+76.02	Detail A
683+00	" "	C.S. 285+70.95	" "	C.S. 12+25.23	Detail B
P.T. 685+57.57	" "	S.T. 288+20.95	" "	S.T. 13+75.23	Detail A
693+00	" "	293+00	On Centerline		
P.C. 696+53.26	" "				
700+00	" "	RAMP "A"			
705+00	" "	P.C. 0+00	Detail A		
P.T. 709+88.40	" "	P.C.C. 3+53.41	Right & 21' Lt. 7' Rt.		
715+00	" "	C.S. 7+89.28	Detail B		
720+00	" "	* S.T. 10+39.28	Detail A		
725+00	" "				
P.C. 729+36.68	" "	RAMP "B"			
734+00	" "	* P.C. 0+00	Detail A		
739+00	" "	5+00	Right & 21' Lt., 7' Rt.		
P.T. 743+80.73	On Centerline	P.T. 9+56.08	" "		
		P.C. 12+14.78	Right & 21' Lt., 7' Rt.		
CROSS COUNTY HIGHWAY		P.C.C. 15+98.38	Right & 21.5' Lt., 7' Rt.		
T.S. 257+61.64	On Centerline	P.I. 19+77.55	Detail A		
S.C. 260+11.64	On Centerline				

Detail A
P.C., P.I., T.S., S.T.

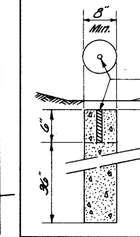
Detail B
P.C.C., C.S., S.C.

Detail C
P.C., P.T., T.S., S.T.

Detail D
P.C., P.I., T.S., S.T.

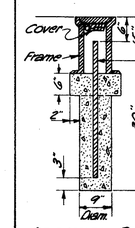
NOTE:
* I-8 Monument Assemblies. All others are I-8 Centerline Reference Monuments.

CENTERLINE REFERENCE MONUMENT DETAIL



Notes:
1. Upper 6" to be Formed.
2. Concrete to be Class "C".
3. Monuments to be Placed by Contractor.

MONUMENT ASSEMBLIES



Notes:
1. Concrete to be Class "C".
2. Monuments to be Placed by Contractor.

1/27

LOCATION PLAN SHEET 1 OF 2

JUN 25 '64

This improvement has been declared a Limited Access Highway from Sta. 656+50 to Sta. 848+73.74 by action of the Director of Highways and recorded in Volume 45, Page 1311, of the Director's Journal pursuant to law.

LOCATION SURVEY PLAT

NORTHEAST EXPRESSWAY
STATE ROUTE 1 (IR 71) SEC. 13.05
HAMILTON COUNTY, OHIO
SYCAMORE TOWNSHIP
E.R. 1, T.4. SECTIONS 8, 9, 10, 11 & 12

CITY OF BLUE ASH
VILLAGE OF MONTGOMERY
1963

0 200 400 800 1200
SCALE IN FEET

Received _____ 19____
Recorded _____ 19____
Book _____ Page _____
Hamilton County Recorder

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

420/445

HAMILTON COUNTY
HAM. 71-13.05
R/W PLANS
LIMITED ACCESS

Signed _____
J.R. Cooke
Date _____ Division Deputy Director

I hereby certify that this Plot is a true delineation of a survey made for the Ohio Department of Highways in 1963 by Harry Bolke Engineers.
John Paul Robinson Date June 25, 1964
Associate Engineer
Reg. Surveyor No. 4515

OHIO
JOHN PAUL ROBINSON
4515
REGISTERED SURVEYOR

"F1" CURVE DATA
P.I. = Sta. 2+46.55
Δ = 10°37'49" Lt.
D = 4°30'00"
R = 1,273.24'
L = 236.23'
T = 118.45'
E = 5.50'
P.C. = Sta. 1+46.10
P.T. = Sta. 3+82.33

RAMP "F"

"F2" CURVE DATA
P.I. = Sta. 7+76.29
Δ = 15°21'52" Rt.
D = 3°00'
R = 1,909.86'
L = 523.26'
T = 263.28'
E = 18.06'
P.C. = Sta. 5+11.01
C.S. = Sta. 10+34.27

"F3" SPIRAL DATA
θs = 4°30'00" Rt.
Ls = 300.00'
LT = 200.06'
ST = 100.06'
C.S. = Sta. 10+34.27
S.T. = Sta. 13+34.27

RAMP "G" CURVE DATA
P.I. = Sta. 1+98.71
Δ = 6°46'18" Rt.
D = 1°45'00"
R = 3,271.04'
L = 386.95'
T = 193.71'
E = 5.72'
P.C. = Sta. 0+00.00
P.T. = Sta. 3+86.95

RAMP "H" CURVE DATA
P.I. = Sta. 8+77.60
Δ = 14°24'21" Rt.
D = 3°00'
R = 1,909.86'
L = 491.31'
T = 247.02'
E = 15.96'
P.C. = Sta. 6+30.58
P.T. = Sta. 11+21.89

RAMP "I" CURVE DATA
P.I. = Sta. 8+20.64
Δ = 12°18'30" Rt.
D = 3°00'
R = 1,909.86'
L = 410.12'
T = 205.86'
E = 11.06'
P.C. = Sta. 6+14.78
P.T. = Sta. 10+24.90

LAKECREST DRIVE

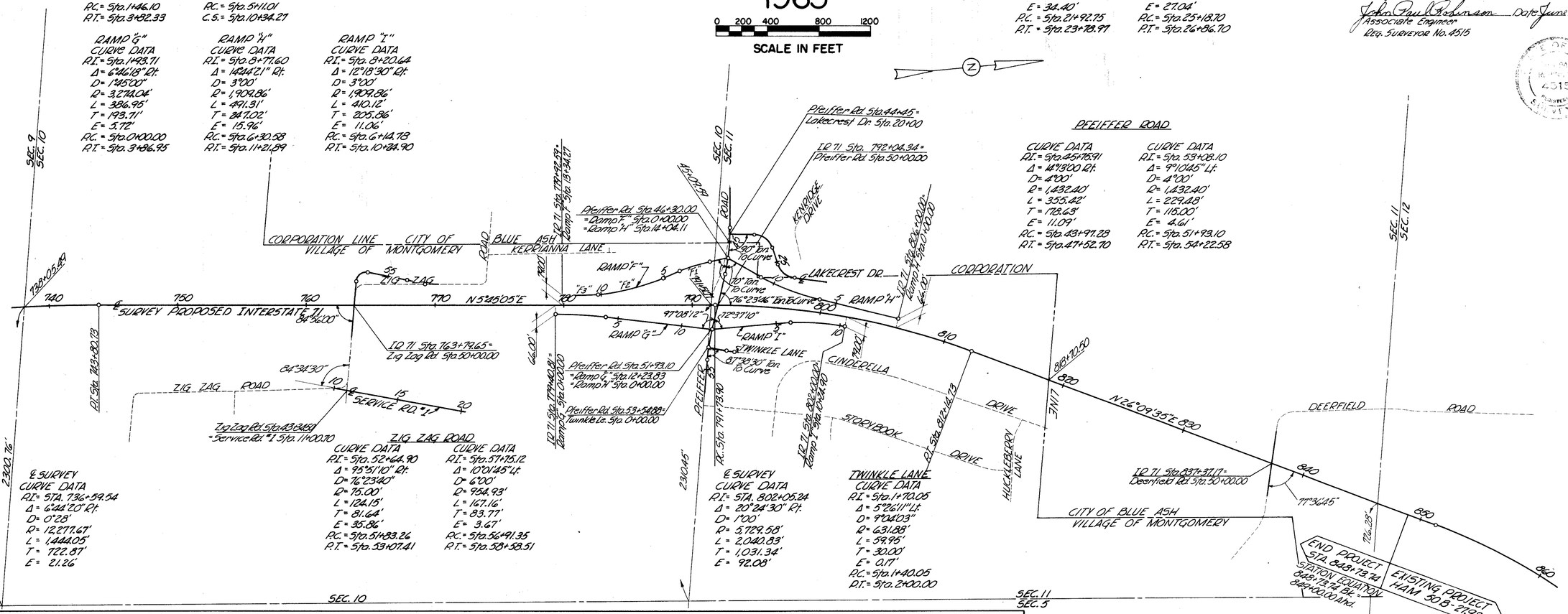
CURVE DATA
P.I. = Sta. 23+00
Δ = 71°07'50" Rt.
D = 38°11'50"
R = 150.00'
L = 186.22'
T = 107.25'
E = 34.40'
P.C. = Sta. 21+92.75
P.T. = Sta. 23+78.97

CURVE DATA
P.I. = Sta. 26+12.74
Δ = 64°10'20" Lt.
D = 38°11'50"
R = 150.00'
L = 168.00'
T = 94.04'
E = 27.04'
P.C. = Sta. 25+18.70
P.T. = Sta. 26+86.70

PFEIFFER ROAD

CURVE DATA
P.I. = Sta. 45+76.91
Δ = 44°13'00" Rt.
D = 4°00'
R = 1,432.40'
L = 355.42'
T = 178.63'
E = 11.09'
P.C. = Sta. 43+97.28
P.T. = Sta. 47+52.70

CURVE DATA
P.I. = Sta. 53+08.10
Δ = 9°10'45" Lt.
D = 4°00'
R = 1,432.40'
L = 229.48'
T = 115.00'
E = 4.61'
P.C. = Sta. 51+93.10
P.T. = Sta. 54+22.58



E SURVEY CURVE DATA
P.I. = STA. 736+59.54
Δ = 6°44'20" Rt.
D = 0°28'
R = 12,277.67'
L = 1,444.05'
T = 722.87'
E = 21.26'

ZIG ZAG ROAD

CURVE DATA
P.I. = Sta. 52+64.90
Δ = 95°51'10" Rt.
D = 76°23'40"
R = 75.00'
L = 124.15'
T = 81.64'
E = 35.86'
P.C. = Sta. 51+83.26
P.T. = Sta. 53+07.41

CURVE DATA
P.I. = Sta. 57+75.12
Δ = 10°01'45" Lt.
D = 6°00'
R = 954.93'
L = 167.16'
T = 83.77'
E = 3.67'
P.C. = Sta. 56+91.35
P.T. = Sta. 58+58.51

E SURVEY CURVE DATA
P.I. = STA. 802+05.24
Δ = 20°24'30" Rt.
D = 1°00'
R = 5,729.58'
L = 2,040.83'
T = 1,031.34'
E = 92.08'

TWINKLE LANE CURVE DATA
P.I. = Sta. 1+70.05
Δ = 5°26'11" Lt.
D = 9°04'03"
R = 631.88'
L = 59.95'
T = 30.00'
E = 0.17'
P.C. = Sta. 1+40.05
P.T. = Sta. 2+00.00

Location Of Centerline Reference Monuments

STATION	LOCATION	STATION	LOCATION	STATION	LOCATION	STATION	LOCATION	STATION	LOCATION
750+00	On Centerline	827+00	On Centerline	* P.C. 51+93.10	On Centerline	RAMP "H"		SERVICE ROAD "1"	
755+00	" "	832+00	" "	P.T. 54+22.58	Right & 30' Lt., 30' Rt.	3+00	Detail A	12+00	Right & 18' Lt., 18' Rt.
760+00	" "	837+00	" "			P.C. 6+28.94	Right & 21' Lt., 7' Rt.	17+00	Right & 18' Lt., 18' Rt.
765+00	" "	842+00	" "	RAMP "F"		P.T. 11+20.25	Right & 21' Lt., 7' Rt.		
770+00	" "	848+73.74	On Centerline	P.C. 1+46.10	Right & 21' Lt., 7' Rt.			LAKECREST DRIVE	
775+00	" "			P.T. 3+82.33	" " "	RAMP "I"		P.C. 21+92.75	Right & 18' Lt., 18' Rt.
780+00	" "	ZIG ZAG ROAD		P.C. 5+11.01	Right & 21' Lt., 7' Rt.	3+00	Right & 21' Lt., 7' Rt.	P.T. 23+78.97	" " "
785+00	" "	49+50	Right & 17' Lt., 17' Rt.	C.S. 10+34.27	Detail B	P.C. 6+14.78	Right & 21' Lt., 7' Rt.	P.C. 25+18.70	" " "
790+00	" "	P.C. 51+83.26	Detail D	S.T. 13+34.27	Detail C	* P.T. 10+24.90	Detail A	P.T. 26+86.70	Right & 18' Lt., 18' Rt.
795+00	" "	P.T. 53+07.41	Right & 17' Lt., 17' Rt.						
800+00	" "	P.C. 56+91.35	" " "	RAMP "G"		DEERFIELD ROAD		TWINKLE LANE	
805+00	" "	P.T. 58+58.51	Right & 17' Lt., 17' Rt.	P.C. 0+00	Detail C	48+50	Right & 17' Lt., 17' Rt.	P.C. 1+40.05	Right & 12' Lt., 12' Rt.
810+00	" "			P.T. 3+86.95	Detail A	51+50	Right & 17' Lt., 17' Rt.		
P.T. 812+14.73	" "	PFEIFFER ROAD		8+00	Right & 21' Lt., 7' Rt.				
817+00	" "	P.C. 43+97.28	Right & 30' Lt., 30' Rt.						
822+00	On Centerline	P.T. 47+52.70	Right & 30' Lt., 45' Rt.						

LOCATION PLAN SHEET 2 OF 2

2/27

PROPERTY MAP

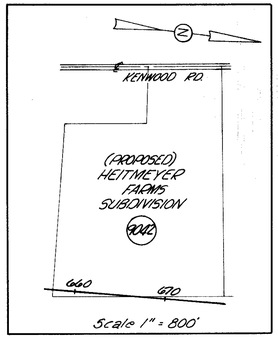
Scale 1" = 200'

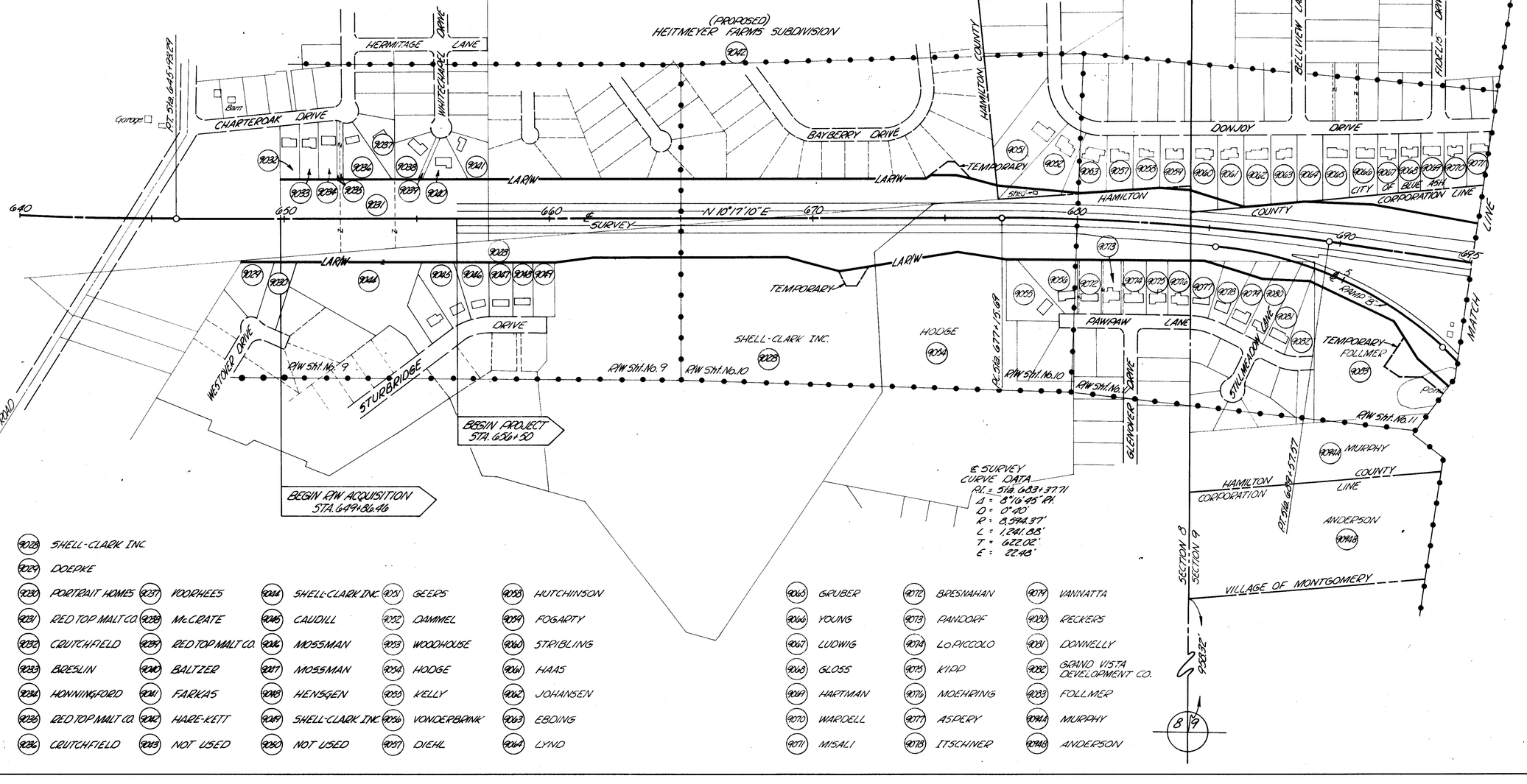
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

421
445

HAMILTON COUNTY
HAM. 71-13.05
R/W PLANS
LIMITED ACCESS

LEGEND
- Property Line
- Lot Line
- Existing R/W
- Dwelling Unit (Unless otherwise noted)
- Res. Garage
- Commercial Building





9028	SHELL-CLARK INC.						
9029	DOEPKE						
9030	PORTRAIT HOMES	9037	HOOPHEES	9044	SHELL-CLARK INC.	9051	GEERS
9031	RED TOP MALT CO.	9038	Mc CRATE	9045	CAUDILL	9052	DAMMEL
9032	CRUTCHFIELD	9039	RED TOP MALT CO.	9046	MOSSMAN	9053	WOODHOUSE
9033	BRESLIN	9040	BALTZER	9047	MOSSMAN	9054	HODGE
9034	HONNINGFORD	9041	FARKAS	9048	HENSGEN	9055	KELLY
9035	RED TOP MALT CO.	9042	HARE-KETT	9049	SHELL-CLARK INC.	9056	VONDERBANK
9036	CRUTCHFIELD	9043	NOT USED	9050	NOT USED	9057	DIEHL

9058	HUTCHINSON	9065	GRUBER	9072	BRESNAHAN	9079	VANNATTA
9059	FOGARTY	9066	YOUNG	9073	PANDORF	9080	RECKERS
9060	STRIBLING	9067	LUDWIG	9074	LO PICCOLO	9081	DONNELLY
9061	HAAS	9068	GLOSS	9075	KIPP	9082	GRAND VISTA DEVELOPMENT CO.
9062	JOHANSEN	9069	HARTMAN	9076	MOEHRING	9083	FOLLMER
9063	EBOING	9070	WARDELL	9077	ASPERY	9084	MURPHY
9064	LYND	9071	MISALI	9078	ITSCHNER	9084A	ANDERSON

3
27

PROPERTY MAP

Scale 1"=200'

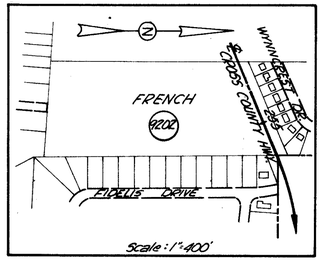
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

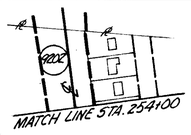
422
445

HAMILTON COUNTY
HAM. 71-19.05
R/W PLANS
LIMITED ACCESS

9088 FOLLMER
9094 HESTER
9095 RICHARDSON
9096 SCHULTZ
9097 STROTTMAN
9098 JOHNSON
9099 SCHNEIDER
9090 BOATE
9091 TYE
9092 CHAPPEL
9092A RUFF
9093 BOARD OF EDUCATION SYCAMORE LOCAL SCHOOL DIST.
9093A PHILLIP & PAINTER
9094 MURPHY
9094A MURPHY
9094B ANDERSON
9094C SWAIM
9094D TODD ETAL
9094E SWAIM
9095 BARTLETT ET AL
9096 McBEE
9097 KELLEY
9098 GRIBBLE
9099 WILHELM
9100 SHARP
9101 MILLER
9102 JACKSON
9103 MULLINS
9104 FERRIS & WILLIAMS DEVELOPMENT CO.
9105 PAYNE

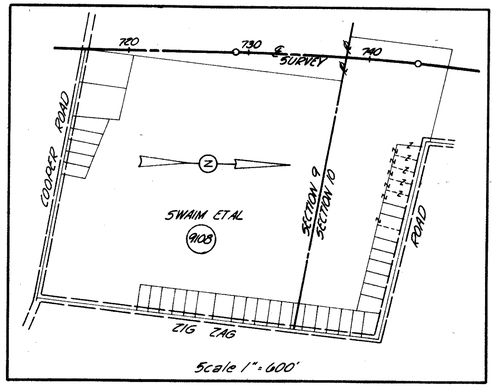
9106 WUENKER
9107 HULSBECK
9108 SWAIM ET AL
9109 BETTNER
9110 ROHE
9111 RUSSELL
9112 PETRIE
9113 JACKSON
9114 COURTNEY
9115 SCHRODER
9116 AUSTIN
9117 JACKSON
9118 STAHLGREN
9119 KIMBLE
9120 BRADLEY
9121 FERRIS
9122 McFARLAND
9123 CLARK
9123A HAMAGAMI
9124 TEPWELL
9190 JACKSON
9191 FERRIS & WILLIAMS DEVELOPMENT CO.
9192 PRO. FIDELIS DRIVE
9193 MYERS
9194 POLMAN
9195 RAUL
9196 NASON
9197 POWER
9198 GARTEN
9199 OAKS
9200 OTTOFAL
9201 MANNING
9202 FRENCH





℄ SURVEY
CURVE DATA
P.I.: 516 709+28.38
Δ = 19°33'10" Lt.
D = 1°28'
R = 3,906.53'
L = 1,333.14'
T = 673.12'
E = 57.57'

℄ SURVEY
CURVE DATA
P.I. = 516 736+59.54
Δ = 6°44'20" Rt.
D = 0°28'
R = 12,277.67'
L = 1,444.05'
T = 722.86'
E = 21.26'



JUN 26 1964

PROPERTY MAP

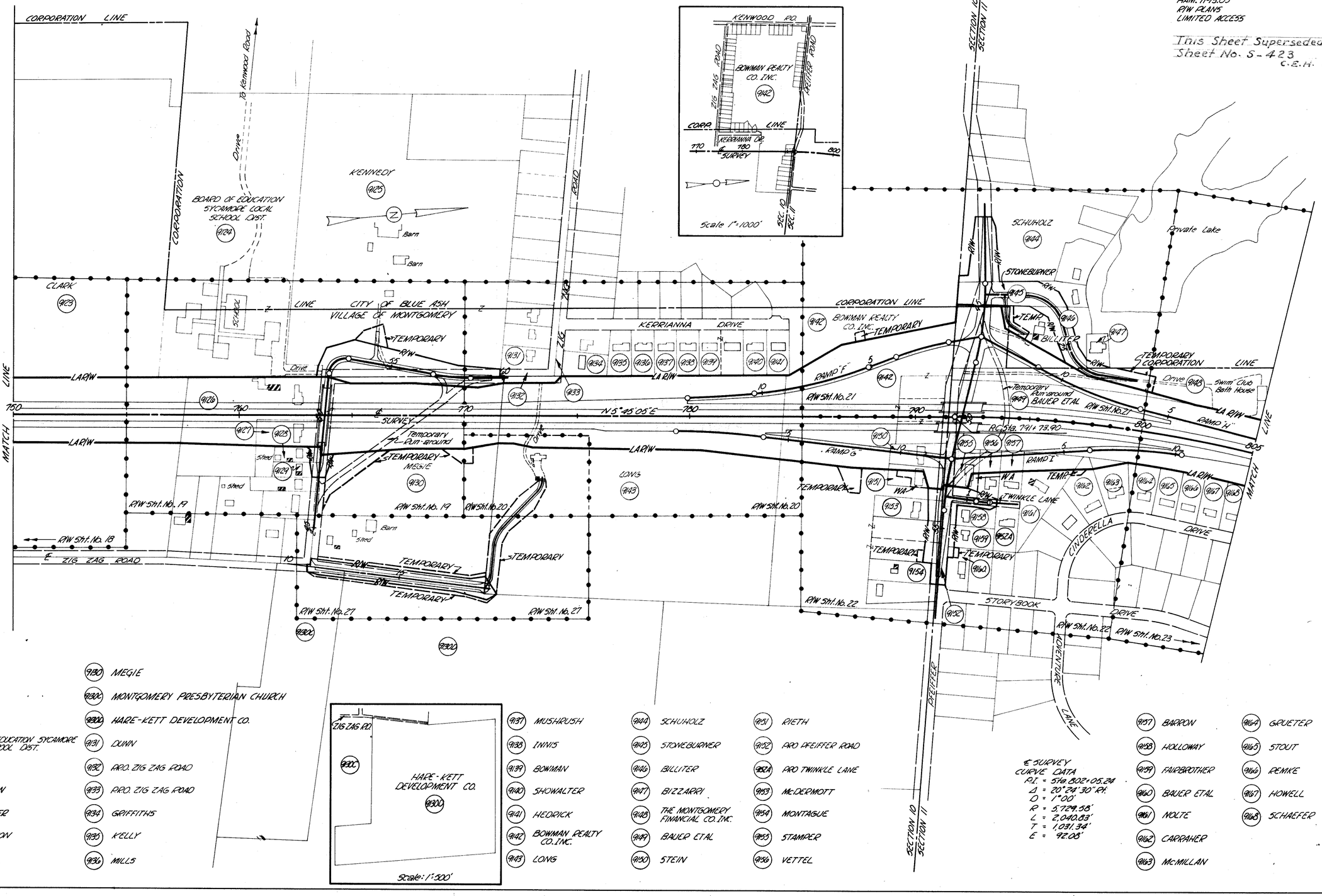
Scale 1"=200'

FED. RD. DIVISION	STATE	PROJ.	
2	OHIO		

423
445

HAMILTON COUNTY
HAM. 11-13.05
R/W PLANS
LIMITED ACCESS

This Sheet Superseded by Sheet No. S-423
C.E.H. 6-3-65



9123 CLARK
9124 BOARD OF EDUCATION SYCAMORE LOCAL SCHOOL DIST.
9125 KENNEDY
9126 DOUGHMAN
9127 COMBERGER
9128 RICHARDSON
9129 RAINSDELL
9130 MEGIE
9200 MONTGOMERY PRESBYTERIAN CHURCH
9200 HARE-KETT DEVELOPMENT CO.
9131 DUNN
9132 PRO. ZIG ZAG ROAD
9133 PRO. ZIG ZAG ROAD
9134 GRIFFITHS
9135 KELLY
9136 MILLS
9137 MUSHRUSH
9138 INNIS
9139 BOWMAN
9140 SHOWALTER
9141 HEDRICK
9142 BOWMAN REALTY CO. INC.
9143 LONG
9144 SCHUHOLZ
9145 STONEBURNER
9146 BILLITER
9147 BIZZARRI
9148 THE MONTGOMERY FINANCIAL CO. INC.
9149 BAUER ETAL
9150 STEIN
9151 RIETH
9152 PRO PFEIFFER ROAD
9152A PRO TWINKLE LANE
9153 McDERMOTT
9154 MONTAGUE
9155 STAMPER
9156 VETTEL
9157 BARRON
9158 HOLLOWAY
9159 FAIRBROTHER
9160 BAUER ETAL
9161 NOLTE
9162 CARRAHER
9163 McMILLAN
9164 GRUETER
9165 STOUT
9166 REMKE
9167 HOWELL
9168 SCHAEFER

℄ SURVEY
CURVE DATA
P.I. = Sta. 802+05.24
Δ = 20°24'30" Rt.
D = 1°00'
R = 5,729.58'
L = 2,040.83'
T = 1,031.34'
E = 92.08'

5
27

PROPERTY MAP

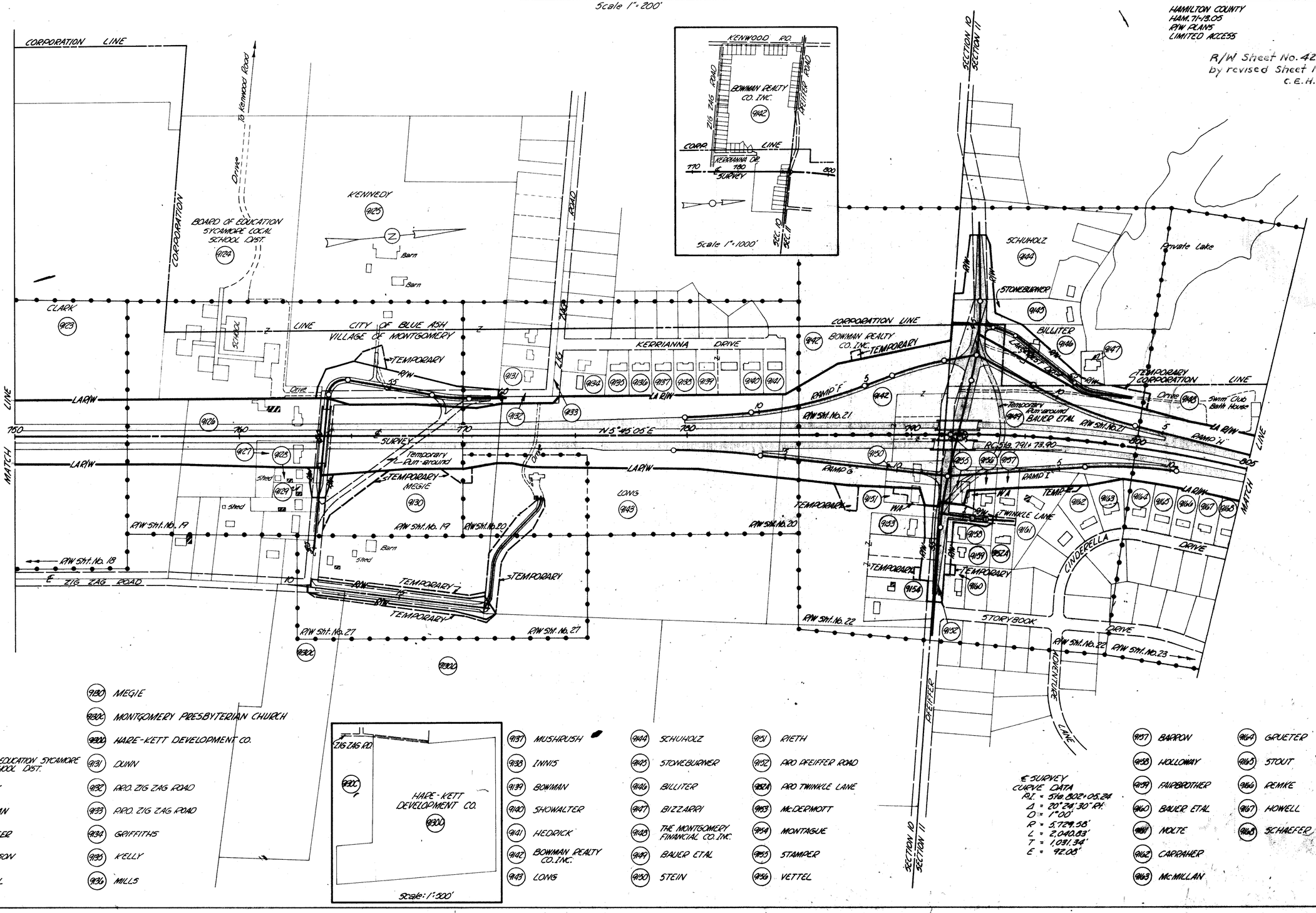
Scale 1"=200'

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

423 445

HAMILTON COUNTY
HAM. 71-13.05
R/W PLANS
LIMITED ACCESS

R/W Sheet No. 423 Superseded by revised Sheet No. S-423
C.E.H. 6-3-65



9123 CLARK
9124 BOARD OF EDUCATION SYCAMORE LOCAL SCHOOL DIST.
9125 KENNEDY
9126 DOUGHMAN
9127 COMBERGER
9128 RICHARDSON
9129 RAINSDELL
9130 MEGIE
9130C MONTGOMERY PRESBYTERIAN CHURCH
9130B HARE-KETT DEVELOPMENT CO.
9131 QUINN
9132 P.RO. ZIG ZAG ROAD
9133 P.RO. ZIG ZAG ROAD
9134 GRIFFITHS
9135 KELLY
9136 MILLS
9137 MUSHRUSH
9138 INNIS
9139 BOWMAN
9140 SHOWALTER
9141 HEDRICK
9142 BOWMAN REALTY CO. INC.
9143 LONG
9144 SCHUHOLZ
9145 STONEBURNER
9146 BILLITER
9147 BIZZARRI
9148 THE MONTGOMERY FINANCIAL CO. INC.
9149 BAUER ET AL
9150 STEIN
9151 RIETH
9152 P.RO PFEIFFER ROAD
9152A P.RO TWINKLE LANE
9153 McDERMOTT
9154 MONTAGUE
9155 STAMPER
9156 VETTEL
9157 BARRON
9158 HOLLOWAY
9159 FAIRBROTHER
9160 BAUER ET AL
9161 MOLTE
9162 CARRAHER
9163 McMILLAN
9164 GRUETER
9165 STOUT
9166 REMKE
9167 HOWELL
9168 SCHAEFER

5/27

JUN 24 1964

PROPERTY MAP

Scale 1"=200'

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

424
445

HAMILTON COUNTY
HAM. 71-13.05
R/W PLANS
LIMITED ACCESS

SECTION 11
SECTION 12

CORPORATION

THE MONTGOMERY FINANCIAL CO. (9148)
Swimming Pool (Private)

BAUMES ETAL (9178)

DEERFIELD ROAD

(9185)
(9184)
(9183)
Shed
Shed
WA
Shed

L RAMP "H"

(9149) BAUER ETAL

LA R/W
LA R/W
LA R/W

805 810 820 830 840 850 860

℄ SURVEY
N 26° 09' 35" E

(9186)
END R/W ACQUISITION
Sta. 846+21.21

TEMPORARY
(9185) GALLENSTEIN BROTHERS INC.

END PROJECT
Sta. 848+73.24
HAM 50 B-27.98

(9187) THE CITY OF CINCINNATI "TR" OF U.C.

Equation
Sta. 848+73.24 Bk =
Sta. 849+00.00 Ahd.

MATCH LINE

(9169) (9170) (9171) (9172) (9173) (9174) (9175) (9176) (9177) (9179) (9180) (9181) (9182)

CINDERELLA DRIVE

R/W Sta. No. 23
R/W Sta. No. 24
R/W Sta. No. 24
R/W Sta. No. 25
R/W Sta. No. 25
R/W Sta. No. 26
R/W Sta. No. 26

PT. Sta. 802+14.73

HUCKLEBERRY LANE

STORYBOOK DRIVE

CITY OF BLUE ASH
VILLAGE OF MONTGOMERY

CORPORATION LINE

SECTION 12
SECTION 6

SECTION 11
SECTION 5

SECTION 5
SECTION 6

11 12
5 6

℄ SURVEY
CURVE DATA
P.I. = Sta. 802+05.24
Δ = 20°24'30" Rt.
D = 1°00'
R = 5,729.58'
L = 2,040.83'
T = 1,031.34'
E = 92.03'

℄ SURVEY
CURVE DATA
P.I. = Sta. 853+24.24
Δ = 18°39'54" Rt.
D = 1°20'
R = 4,297.18'
L = 1,399.88'
T = 709.19'
E = 57.64'

(9169) JACCOD
(9170) JOHNSON
(9171) SPELMAN
(9172) CERVINO
(9173) HANCOCK
(9174) FEIGHERY
(9175) GARNERET
(9176) ROBINS
(9177) BAUER ETAL
(9178) HUDSON ETAL
(9179) TOOHEY
(9180) SHARKEY
(9181) STAMBAUGH
(9182) HILL

(9183) MOLLOY
(9184) BRYAN EQUIPMENT SALES INC.
(9185) GALLENSTEIN BROTHERS INC.
(9186) MORATH
(9187) THE CITY OF CINCINNATI "TR" OF U.C.
(9188) THEYSOHN

6
27

LEGEND
(A.P.) = Advanced Procurement
(L.L.) = Land Locked

SUMMARY OF ADDITIONAL R/W REQUIRED

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

425
445

HAMILTON COUNTY
HAM. 71-13.05 LIMITED ACCESS

Total No. OF OWNERS 72

PARCEL NO.	OWNER	P.R.O.	DEED RECORD BOOK	DEED RECORD PAGE	RECORD AREA	TO BE ACQUIRED LAND	TO BE ACQUIRED BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	SHEET NO.	REMARKS
9028-WL 9028-T	Shell-Clark Inc.	—— ——	3214	207	37.14± Ac.	6.13 Ac. 0.10 Ac.	—— ——	——	31.01 Ac.	9&10	
9029	Grace D. Doepke		3302	551							Not Required
9030	Portrait Homes		3311	556							Not Required
9031-WL	Red Top Malt Company	——	R.L. 120	42778	4.72± Ac.	4.72 Ac.	——	——	——	9	(A.P.) School Employees Retirement Board, D.B. R.L. 131, Page 48721 Total Taking
9032	Wm. B. Crutchfield		R.L. 143	51386							Not Required
9033	Leo J. & Marian G. Breslin		R.L. 133	47702							" "
9034	Victor & Alma Honningford		R.L. 129	45482							" "
9035	Red Top Malt Company		R.L. 120	42778							" "
9036	Wm. B. Crutchfield		R.L. 141	50547							" "
9037	Wagner Leroy & Betty J. Voorhees		R.L. 144	51834							" "
9038	Ralph & Joyce T. McCrate		R.L. 129	46291							" "
9039	Red Top Malt Company		R.L. 120	42778							" "
9040	Elizabeth A. & Adolph G. Baltzer		R.L. 137	49002							" "
9041	Emil C. & Elva D. Farkas		R.L. 137	49291							Not Required
9042-WL 9042-T	Hare-Kelt Development Company	—— ——	3317	422	90.64± Ac.	6.76 Ac. 0.09 Ac.	—— ——	83.88 Ac.	—— ——	9&10	
9043	Not Used										Not Used
9044	Shell-Clark Inc.		3214	207							Not Required
9045	O'Neil & Joan A. Caudill		3305	275							" "
9046	George A. Mossman		3321	591							" "
9047	George A. Mossman		3301	499							" "
9048	George & Catherine A. Hensgen		3309	433							" "
9049	Shell-Clark Inc.		3214	207							Not Required
9050	Not Used										Not Used
9051-WL	Hazel I. Geers	——	2798	451	55,900± S.F.	1,290 S.F.	——	54,610 S.F.	——	10	
9052-WL	Thelma C. & Howard W. Dammel	——	2990	428	43,700± S.F.	6,644 S.F.	Yes	37,056 S.F.	——	10	1-Conc. Block Shed
9053-WL	Carolyn B. Woodhouse	——	3034	86	37,200± S.F.	362 S.F.	——	31,838 S.F.	——	10&11	
9054-WL	E. Gest & Joyce W. Hodge	——	2806 R.L. 90 R.L. 108 R.L. 139	83 31,953 23,973 24,256	19.04± Ac.	6.2765 Ac.	——	0.04 Ac. (L.L.)	12.735 Ac.	10&11	
9055	Robert J. & Mary B. Kelly		R.L. 139	49857							Not Required
9056	Mary E. Vonderbrink		R.L. 139	49857							" "
9057	Joseph F. & Margaret M. Diehl		2693	202							" "
9058	H. Craig & Ruth A. Hutchinson		2709	241							" "
9059	Kathryn M. Fogarty		2752	67							Not Required
9060-WL	John W. & Mildred L. Stribling	——	2750	570	28,841± S.F.	5,553 S.F.	——	23,288 S.F.	——	11	
9061-WL	Carrie E. Haas	——	2907	559	28,085± S.F.	1,851 S.F.	——	26,234 S.F.	——	11	
9062	Nicholas & Rose Johansen		2769	520							Not Required
9063	Stella M. Ebding		3237	446							" "
9064	William J. & Virginia Lynd		3063	394							" "
9065	J. Paul & Francess L. Gruber		2972	502							" "
9066	Louise M. Young		2798	288							" "
9067	Howard J. & Marion A. Ludwig		2890	572							" "
9068	Elmer W. & Eva Mae Gloss		3033	501							" "
9069	Elijah Nelson & Lucille M. Hartman		2915	124							" "
9070	Earl R. & Elsie May Wardell		2983	131							" "
9071	Ethel K. Misall		3293	154							" "
9072	Nancy E. Bresnahan		R.L. 131	48362							" "
9073	Barbara R. Pandorf		R.L. 118	42100							" "
9074	Anthony & Lucille A. LoPiccolo		R.L. 119	42298							" "
9075	Clarence J. Kipp		R.L. 113	40261							" "
9076	Jane P. Moehring		R.L. 115	40833							Not Required
9077-WL	A. Daniel & Kathleen E. Aspery	——	3208	138	24,600± S.F.	8,29 S.F.	——	——	28,771 S.F.	11	
9078-WL	Anne Ifschner	——	3130	627	22,700± S.F.	4,347 S.F.	——	——	18,353 S.F.	11	
9079-WL	Rosemary H. Vannatta	——	3109 3260	232 30	22,972± S.F.	5,453 S.F.	——	——	17,519 S.F.	11	
9080-WL	Donald J. & Mary Louise Reckers	——	3171	95	25,947± S.F.	6,014 S.F.	——	——	19,933 S.F.	11	
9081-WL	Jean M. Donnelly	——	3102	296	24,300± S.F.	4,047 S.F.	——	——	20,253 S.F.	11	
9082-WL	Grand Vista Development Company	——	3186	165	20,000± S.F.	434 S.F.	——	——	19,516 S.F.	11	
9083-WL 9083-T	Margaret M. Follmer	—— ——	2123	9	15.75 Ac.	10.67 Ac. 0.42 Ac.	Yes ——	(L.L.) 1.22 Ac.	3.86 Ac.	11-12 & 18	1-Fr. Privy 1-Sty. Fr. Res., 1-C. Metal Gen. & 1-C. Metal Shed
9084	James O. Hester		2991	617							Not Required

PARCEL NO.	OWNER	P.R.O.	DEED RECORD BOOK	DEED RECORD PAGE	RECORD AREA	TO BE ACQUIRED LAND	TO BE ACQUIRED BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	SHEET NO.	REMARKS
9085	Fred B. & Ethel H. Richardson		2887	352							Not Required
9086	Walter J. & Edna L. Schultz		3010	35							" "
9087	George Strottman		2926	626							" "
9088	Ernest E. & Olive I. Johnson		3047	320							" "
9089	Erwin J. JR. & Janice R. Schneider		2950	470							" "
9090	Edward R. JR. & Betty M. Boate		2979	3							Not Required
9091-WL	Estel R. Tye	——	2869	167	29,620± S.F.	1,597 S.F.	——	——	28,003 S.F.	12	
9092-WL	Charles W. Chappel	——	3125	316	29,100± S.F.	7,228 S.F.	——	——	21,872 S.F.	12	
9092A	Carol B. Ruff		3081	461							Not Required
9093-WL 9093-T	The Board of Education of Sycamore Local School District	0.03 Ac.	2461 2857	301 92	31.98± Ac.	13.89 Ac. 0.20 Ac.	—— ——	13.21 Ac. ——	(L.L.) 4.85 Ac.	12-13 & 14	
9093A	John Phillip & Marjorie W. Painter		2869 3143	132 597							Not Required
9094-WL 9094-T	Emily G. Murphy	—— ——	2219	554	21.45 Ac.	15.91 Ac. 0.05 Ac.	Yes ——	(L.L.) 2.58 Ac.	(L.L.) 2.96 Ac.	13	2.83 Ac. of Right Side Res. Idue is (L.L.) & 0.8 Ac. of R. side Residue is not (L.L.) 1-Sty. Brick Res., 1-Sty. Fr. Res., 2-Fr. Sheds & 1-Fr. Barn
9094A-WL	Evangeline Murphy	——	2365	513	5.94 Ac.	0.175 Ac.	Yes		5.765 Ac.	13	Frame Privy
9094B-WL 9094B	George L. & Christena Anderson	—— ——	1992	333	12.06 Ac.	0.02 Ac. 0.14 Ac.	—— ——	——	11.90 Ac.	13	
9094C-WL	Harriet M. Swaim	——	1136	238	22.55± Ac.	3.32 Ac.	——	18.10 Ac.	1.13 Ac.	13&15	
9094D-WL	William S. Todd ET AL	——	3312 3259	321 735	23.21± Ac.	2.03 Ac.	——	18.65 Ac.	2.27 Ac.	15	
9094E-WL	Harriet M. Swaim	——	1662	205	10.37± Ac.	1.09 Ac.	——	7.85 Ac.	1.43 Ac.	15	
9095-WL	Bertha M. Hoffman & Dudley H. Bartlett	4905 S.F.	2978	67	43,560 S.F.	471 S.F.	——	42,599 S.F.		16	
9096-WL	Frank S. & Jessie M. McBee	2,400 S.F.	2626	606	22,400± S.F.	20000 S.F.	Yes	——	——	16	(A.P.) Industrial Commission of Ohio. D.B. 3214, Page 605 1-Sty. Br. Res. Total Taking
9097-WL	Wm. J. & Irene A. Kelley	2,550 S.F.	2583	141	23,800± S.F.	21,250 S.F.	Yes	——	——	16	Total Taking. 1½ Sty. Br. Res.
9098-T	Vera & Velma Gribble	——	2697	35	20,006± S.F.	2,688 S.F.	——	20,006 S.F.	——	16	
9099	Donald L. & Eva M. Wilhelm		2664	135							Not Required
9100	Howard K. & Anne Sharp		2501	241							" "
9101	Arthur R. Miller		2525	248							" "
9102	Mavis Jackson		2853	126							" "
9103	Stephen E. & Beulah K. Mullins		2528	199							Not Required
9104-WL	Ferris & Williams Development Co.	0.11 Ac.	3054	28	12.87 Ac.	11.90 Ac.	——	——	(L.L.) 0.086 Ac.	16&17	
9105-WL	Frank P. & Amelia O. Payne	2550 S.F.	2972	286	23,800± S.F.	21,250 S.F.	Yes	——	——	16	Total Take. 1½ Sty. Br. Res.
9106	Roger & Virginia Wuenker		2626	308							Not Required
9107-WL 9107-T	Wm. E. & Lucy A. Hulsbeck	4,163 S.F.	3054	41	108,900± S.F.	42,728 S.F. 3,297 S.F.	——	——	62,009 S.F.	16	
9108-WL 1 9108-WL 2 9108-T	Harriet M. Swaim ET AL	—— —— ——	1311 1988 2743 3319	563 279 381 531	125.42± Ac.	0.86 Ac. 5.46 Ac. 0.09 Ac.	—— —— ——	—— —— ——	119.10 Ac.	16-17 & 18	
9109	Walter F. & Catherine Bettner		2564	265							Not Required
9110	Frank & Helen Rohe		2793	83							" "
9111	R.E. & Ruth G. Russell		2990	484							" "
9112	Elizabeth L. Petrie		2576	628							" "
9113	Bobby Joe & Donna Lee Jackson		2657	139							" "
9114	Hilda A. Courtney		2572	539							" "
9115	George A. & Jean Adele Schroer		2574	470							" "
9116	Katherine L. & George S. Austin		2591	11							" "
9117	John C. & Dorothy K. Jackson		3047	656							" "
9118	Leonard S. Stahlgren		3266	65							" "
9119	Darwin & Eleanor Kimble		2612	375							" "
9120	Edward J. & Margaret H. Bradley		2628	291							" "
9121	Arthur C. & Dorothy Ferris		2625	173							" "
9122	Sadie M. McFarland		3201	677							Not Required
9123-WL	Gladys D. Clark	——	1125	599	55.63 Ac.	5.77 Ac.	——	39.73 Ac.	10.13 Ac.	17&18	
9123A-WL	Agnes F. Hamagami	——	3253	308	3.76 Ac.	1.49 Ac.	——	——	2.27 Ac.	18	
9124	The Board of Education of Sycamore Local School District	——	3008	98	9.47± Ac.	0.03 Ac.	——	9.44 Ac.	——	19	
9125 9125-T	Wilbur F. Kennedy	0.54 Ac. ——	682	180	25.73± Ac.	1.23 Ac. 0.23 Ac.	—— ——	23.96 Ac.	——	19&20	

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27

JUN 26 1964

SUMMARY OF ADDITIONAL R/W REQUIRED

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

426
445

HAMILTON COUNTY
HAM. 71-13.05 LIMITED ACCESS

PARCEL NO.	OWNER	P.R.O.	DEED RECORD BOOK	DEED RECORD PAGE	RECORD AREA	TO BE ACQUIRED LAND	TO BE ACQUIRED BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	SHEET NO.	REMARKS
9126-WL	Mattie Mae Doughman	0.13 Ac.	2681	533	4.63± Ac.	.340 Ac.	Yes	——	(L.L.) 1.10 Ac.	19	(A.R.) Industrial Commission of Ohio. D.B. 3212, Page 242 1-Sty. Br. Res., Conc. Blk. Gar. 1-Fr. Barn & Swimming Pool
9127-WL	Donna Comberger	3600 S.F.	2874	600	45581± S.F.	31,475 S.F.	Yes	——	(L.L.) 10,506 S.F.	19	(A.R.) The State of Ohio. D.B. 3010, Page 123, 1-Sty. Br. Res. & Swimming Pool
9128	Charles B. & Elizabeth S. Richardson	1,999 S.F.	2374	468	13,877± S.F.	1,303 S.F.	——	——	10,515 S.F.	19	
9129	Robert C. & Lila J. Ramsdell	1,999 S.F.	2482	53	13,882± S.F.	587 S.F.	——	——	11,396 S.F.	19	
9130-WL	Edna A. Megie	0.25 Ac.	1616	184	15.60 Ac.	4.88 Ac.	——	——	9.26 Ac.	19, 20 & 27	
9130		0.49 Ac.	1617	531		0.07 Ac.	——				
9130-A		0.07 Ac.				0.02 Ac.	——				
9130-B		0.28 Ac.				0.28 Ac.	——				
9130-T1		——				0.13 Ac.	——				
9130-T2		——				0.59 Ac.	——				
9130-T3		——				0.26 Ac.	——				
9130C 9130C-T	The Montgomery Presbyterian Church	0.07 Ac.	RL.123	43991	2.08± Ac.	0.03 Ac. 0.045 Ac.	——	——	1.96 Ac.	27	
9130D 9130D-T	Hare-Kelt Development Company	0.22 Ac.	RL.123	43992	5.93± Ac.	0.27 Ac. 0.18 Ac.	——	——	5.44 Ac.	27	
9131	Robert B. & Loretta A. Dunn		3157	396							Not Required
9132	P.R.O. ZIG ZAG ROAD										" "
9133	P.R.O. ZIG ZAG ROAD										" "
9134	Arthur George & Gloria Ann Griffiths		2835	466							" "
9135	Clifford & Eleanor V. Kelly		3269	424							" "
9136	Harold C. & Evelyn L. Mills		3004	629							" "
9137	Julia M. Mushrush		2996	409							" "
9138	Lester E. & Ruth Mae Innis		2926	548							" "
9139	Stanley R. Bowman		2938 2990	12 617							" "
9140	Frank Lynn Showalter		2825 3092	96 601							" "
9141	Arthur Harold & Zella Dorothy Hedrick		2945	464							Not Required
9142-WL1 9142-WL2 9142 9142-A 9142-T1 9142-T2 9142-T3	Bowman Realty Co. Inc.	0.20 Ac. —— .0038 Ac. .0128 Ac. —— —— ——	2954	426	48.68± Ac.	7.13 Ac. 1.38 Ac. .0042 Ac. 0.016 Ac. 0.20 Ac. 0.04 Ac. 0.03 Ac.	—— —— —— —— —— —— ——		32.10 Ac. 28.336 Ac.	20-21 & 22	9142-WL 2 is a Total Take
9143-WL 9143 9143-T	Bert H. Long	0.01 Ac. —— ——	2180	239	29.10 Ac.	9.24 Ac. 0.04 Ac. 0.82 Ac.	—— —— ——	——	19.81 Ac.	20 & 27	
9144	Albert J. Schuholz	0.42 Ac.	2015	269	5.19± Ac.	0.36 Ac.	——	4.41 Ac.	——	21	
9145	David L. & Margaret T. Stonebumer	0.14 Ac.	2722	193	1.30± Ac.	0.91 Ac.	——	0.25 Ac.	——	21	
9146-WL 9146 9146-T	Vincent P. & Mary E. Billiter	0.40 Ac. —— ——	2726	512	3.64± Ac.	1.56 Ac. 0.60 Ac. 0.17 Ac.	—— —— ——	1.08 Ac.	——	21	
9147	Esther Jane Bizzarri	——	3144	57	14,536± S.F.	1,578 S.F.	——	12,958 S.F.	——	21	
9148-WL 9148-T	The Montgomery Financial Co. Inc.	0.04 Ac. ——	R.L.98	345.89	16.66± Ac.	1.13 Ac. 0.45 Ac.	—— ——	15.49 Ac.	——	21	
9149-WL	Paul G. Bauer & Robert J. Nordloh	0.21 Ac.	RL.89	31310	18.73± Ac.	18.52 Ac.	——	——	——	21-22 23 & 24	Total Taking
9150-WL	Nathan & Mollie Stein	3,264 S.F.	2694	415	24,487± S.F.	21,173 S.F.	Yes	——	——	22	Total Taking. 1-Sty. Br. Res. & 1-Swimming Pool
9151-WL 9151-WA	Fred A. & Clarice M. Rieth	2,790 S.F. ——	3010	128	27,538± S.F.	9,038 S.F.	Yes Yes	——	(L.L.) 11,009 S.F.	22	1-Sty. Br. Res. & 1-Swimming Pool.
9152-WL	P.R.O. PFEIFFER ROAD	6,883 S.F.				0	——				
9152-A	Paul G. Bauer ET AL (Twinkle Lane)	6,000 S.F.	R.L.89	31310		0	——				
9153	Clifford J. & Evelyn J. McDermott	2,790 S.F.	3288	400	27,528± S.F.	2,926 S.F.	——	——	21,812 S.F.	22	
9154	James A. & Hilda F. Montague	2,790 S.F.	3177	172	27,528± S.F.	0	——	——	24,738 S.F.	22	
9155-WL 9155 9155-WA	John L. & Elsie Stamper	—— —— ——	R.L.103	36282	22,888± S.F.	16,369 S.F. 3,759 S.F.	Yes —— Yes	——	2,780 S.F.	22	1-Sty. Br. Res.
9156-WL 9156	Ruth M. Vettel	—— ——	R.L.132	47140	20,792± S.F.	9,952 S.F. 1,165 S.F.	—— ——	——	9,075 S.F.	22	1-Swimming Pool
9157-WL	Richard J. & Patricia J. Barron	——	R.L.119	42402	22,885± S.F.	9,679 S.F.	——	——	13,016 S.F.	22	
9158	John A. & Alma Holloway	——	R.L.94	33196	20,000± S.F.	4,298 S.F.	——	——	15,702 S.F.	22	

PARCEL NO.	OWNER	P.R.O.	DEED RECORD BOOK	DEED RECORD PAGE	RECORD AREA	TO BE ACQUIRED LAND	TO BE ACQUIRED BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	SHEET NO.	REMARKS
9159	Fredrick J. & Dorothy J. Fairbrother	——	R.L.106	37724	20,000± S.F.	2,537 S.F.	——	——	17,463 S.F.	22	
9160 9160-T	Paul G. Bauer & Robert J. Nordloh	—— ——	R.L.93	32847	20,788± S.F.	1,144 S.F. 878 S.F.	—— ——	——	19,054 S.F.	22	
9161-WL	Arthur C. & Lorraine Nolte	——	R.L.95	33244	62,554± S.F.	19,057 S.F.	——	——	43,497 S.F.	22	
9162-WL 9162-T	Charles J. Jr. & Joyce Carraher	—— ——	R.L.99	34947	35,600± S.F.	3,354 S.F. 1,467 S.F.	—— ——	——	32,246 S.F.	22	
9163-WL	John C. & Anita B. McMillan	——	R.L.139	50089	30,000± S.F.	4,802 S.F.	——	——	25,198 S.F.	22	
9164	Edward H. & Mary Jane Grueter		R.L.100	35426							Not Required
9165	Robert N. & Dolores Stout		R.L.108	36173							" "
9166	Elmore L. & Eleanor J. Remke		R.L.101	35893							" "
9167	Samuel G. & Constance I. Howell		R.L.106	37376							" "
9168	George F. & Jane H. Schaefer		R.L.128	42866							" "
9169	Jean Jaccod		R.L.106	37427							" "
9170	Harry E. & Mildred E. Johnson		R.L.110	38997							" "
9171	Matilda A. Spelman		R.L.110	39173							" "
9172	Michael P. & Josephine M. Cervino		R.L.110	39208							" "
9173	Judson B. & Fern L. Hancock		R.L.116	41110							" "
9174	John W. & Mary Kay Feighery		R.L.137	48348							" "
9175	Martin & Adele Garneret		R.L.134	48044							" "
9176	Wm. F. & Kathryn E. Robins		R.L.108	38411							" "
9177	Paul G. Bauer ETAL		R.L.101	35788							Not Required
9178-WL 9178 9178-A	Elmer L. Hudson ETAL	0.18 Ac. 0.14 Ac. 0.02 Ac.	2655	263	74.00 Ac.	12.68 Ac. 0.07 Ac. 0.02 Ac.	—— —— ——	46.51 Ac.	14.38 Ac.	24 & 25	
9179	Harold W. & Dorothy Toohey		R.L.121	43341							Not Required
9180	Raymond L. & Edna L. Sharkey		R.L.115	40750							" "
9181	Robert D. & Betty G. Stambaugh		R.L.106	37527							" "
9182	Mary Louise Hill		R.L.111	39318							Not Required
9183-WL 9183 9183-WA	Vera E. Molloy	0.03 Ac. 0.06 Ac. ——	3060	621	1.38 Ac.	0.17 Ac. 0.04 Ac.	Yes ——	1.08 Ac.	——	25	Frame Garage
9184-WL	Bryan Equipment Sales Inc.		3211	541							Not Required
9185-WL 9185 9185-A 9185-T	Gallenstein Brothers Inc.	0.12 Ac. 0.03 Ac. 0.03 Ac. ——	3188	665	12.80± Ac.	5.04 Ac. —— 0.02 Ac. 0.07 Ac.	Yes —— —— ——	5.46 Ac.	2.10 Ac.	25 & 26	0.12 Ac. of Left Residue is (L.L.). 1-Fr. Shed
9186-WL 9186	Jerome P. Moraith	0.02 Ac. 0.037 Ac.	3139	309	1.02 Ac.	0.85 Ac. 0.004 Ac.	—— ——	——	0.109 Ac.	25	
9187	The City of Cincinnati, Ohio. Trustee of The University Fund of The University of Cincinnati.		1527	419							Not Required
9188	Helena Theysohn	0.05 Ac.	1862	339	10.00 Ac.	0.02 Ac.	——	——	9.93 Ac.	25	
9189	Harold E. & Eva O. Terwell		3020	663							Not Required
9190-WL 9190-5	Gladys Jackson	—— ——	2915	192	18,700± S.F.	2,580 S.F. 972 S.F.	—— ——	——	15,178 S.F.	14	
9191-WL	Ferris & Williams Development Co.	——	2840	257	4,385± S.F.	4,385 S.F.	——	——	——	14	Total Take
9192-WL 9192	Ferris & Williams Development Co. (P.R.O. Fidelis Drive)	35 S.F. 741 S.F.	2840	257							
9193-WL	Marcella G. Myers	——	2995	507	20,500± S.F.	606 S.F.	——	——	19,894 S.F.	14	
9194	Robert E. & Josephine M. Rolman		2915	376							Not Required
9195	Gilbert T. & Hazel Paul		3072	339							" "
9196	Daniel & Patricia A. Nason		3075	331							" "
9197	John J. & Betty Power		3176	592							Not Required
9198-WL	Hazel R. Garten	——	1996	166	16,978 Ac.	2.63 Ac.	——	14.35 Ac.	——	14	
9199-WL	Larry J. Oaks	——	3071	582	7,937± S.F.	252 S.F.	——	7,685 S.F.	——	14	
9200-WL	Edw. H. Ottopal	——	2993	273	9,500± S.F.	2,091 S.F.	——	7,409 S.F.	——	14	
9201-WL 9201-WA	John J. & Elaine H. Manning	—— ——	3202	440	13,000± S.F.	3,053 S.F.	——	9,947 S.F.	——	14	
9202-WL1 9202-WL2	Ransford French Jr.	—— ——	2000	333	14.58± Ac.	0.97 Ac. 0.88 Ac.	—— ——	——	12.73 Ac.	14	

8
27

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

427
445

HAMILTON COUNTY
HAM. 71-13.05
R/W PLANS
LIMITED ACCESS

CHARTER OAKS SUBD.
PL. BK. 10, PAGE 25 & 26 R.O. R.C.

CHARTEROAK DRIVE

WHITECHAPEL DRIVE

HARE-KETT DEVELOPMENT CO.
9042

(PROPOSED)
HEITMEYER FARMS
SUBDIVISION

LOT 56 | LOT 55 | LOT 54 | LOT 53 | LOT 52 | LOT 43 | LOT 42 | LOT 59 | LOT 57 | LOT 58 | LOT 71 | LOT 55 | LOT 56 | LOT 69

WILLIAM B. CRUTCHFIELD — 9032
LEO J. BRESLIN, MARIAN G. BRESLIN — 9033
VICTOR HONNINGFORD, ALMA HONNINGFORD — 9034
WILLIAM B. CRUTCHFIELD — 9035
WAGNER LEROY VOORHEES, BETTY J. VOORHEES — 9036
9037
LOT 44, RALPH J. MCCRATE, JOYCE I. MCCRATE — 9038
ELIZABETH A. BALTZER, ADOLPH G. BALTZER — 9040
EMIL C. FARKAS, ELVA Q. FARKAS — 9041
RED TOP MALT COMPANY — 9039
RED TOP MALT COMPANY — 9031 WL — T.B.A. 4.72 Ac.

2-Sty. Brick & Frame
2-Sty. Brick
Drive
Wooded Area
Nursery
Open Field
Woven Wire
Dirt Road
Concrete Flowerpot Stands & Backing 3' High & 3' Apart Running Parallel With C&L
Concrete Flowerpot Stands & Backing 3' High & 3' Apart Running Parallel With C&L
Engineering Fence 4' High
(To Be Removed)

BEGIN R/W ACQUISITION STA. 649+86.46
BEGIN PROJECT STA. 656+50
MATCH LINE STA. 663+00

N 17°58'15" W
N 10°17'32" E 782.79'
N 10°17'23" E 1646.44'
N 10°17'10" E
N 79°56'43" W
N 5°42'04" E 1690.24'
(50°30'30" E Deed) 785.08'
928.63' N 5°32'02" E
1175.71' N 10°23'02" E
155.91' N 4°11'06" E
730.00' N 10°14'40" E
N 4°57'38" W 9.10'
N 5°32'02" E 928.63'
N 10°23'02" E 1175.71'

+86.79 / 150.11
+69.56 / 150.11
+69.17
+87.11 / 122.23
+70 / 150'
+46.97 / 126.37
+25.46

SHELL-CLARK INC. — 9044 — Wooded Area
O'NEIL CAUDILL, JOAN A. CAUDILL — 9045
GEORGE A. MOSSMAN — 9046
GEORGE A. MOSSMAN — 9047
GEORGE HENSGEN, CATHERINE A. HENSGEN — 9048
SHELL-CLARK INC. — 9049 — Field
SHELL-CLARK INC. — 9030 — PORTRAIT HOMES
SHELL-CLARK INC. — 9028 WL — T.B.A. 6.13 Ac.
9028 T — T.B.A. 0.10 Ac.
FRED SANDMAN, LUCILLE SANDMAN — 9029 — GRACE D. DOEPKE
SHELL-CLARK INC.

CONCORD SCHOOL SUBD. BLOCK "C"
PL. BK. 108, PAGE 11 & 12

STURBRIDGE DRIVE

MATCH LINE
MATCH LINE

COMPLETION DATE		
Rev.	Date	Description

HAMILTON COUNTY
SYCAMORE TWP.
SEC. 8 T. 4 E. R. 1

9
27

STA. 600 TO STA. 665

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

428
445

HAMILTON COUNTY
HAM. 71-13.05
R/W PLANS
LIMITED ACCESS

HARE-KETT DEVELOPMENT CO.
9042 WL T.B.A. 6.76 Ac. 9042 T T.B.A. 0.09 Ac.

(PROPOSED) HEITMEYER FARMS SUBDIVISION

BAY BERRY DRIVE

(PROPOSED) HEITMEYER FARMS SUBDIVISION

HAMILTON COUNTY
CITY OF BLUE ASH
CORPORATION LINE

Exist. 12" Sanitary Sewer

(Hamilton County) Exist. 18" San. Sewer

Exist. 18" San. Sewer

Nursery

Wooded Area

Field

Wooded Area

LA R/W

N1°17'23"E 1646.44'

Exist. Permanent (10) Easement

15" Pipe

36" Pipe

48" Pipe

126' Pipe

1690.24'

Woven Wire

SURVEY

N5°42'24"E

730.00'
N1°17'10"E

207.42'
N25°39'44"E

N1°17'10"E 900.00'

N5°19'24"E 244.41'
859.52'
(N2° 10'30"E Deed)
Woven Wire
HAMILTON CO.

N1°17'10"E

N89°27'50"W (Deed)
N89°42'30"W (Meas.)

N5°19'24"E 244.41'
(N2° 10'30"E Deed)
Woven Wire

SOL FERRIS EST.
PL. BK. 3, PAGE 3

Exist. Permanent (10) Easement

1.5% Brick #5061

1.5% Brick #5921

HAZEL I. GEERS
9051 WL T.B.A. 1290 Sq. Ft.

THELMA C. DAMMEL
HOWARD W. DAMMEL
9052 WL T.B.A. 6644 Sq. Ft.

9053 WL

Lawn

Garden

Rose Bush

Shed

Conc. Drk.

N15°17'23"E

Wooded Area

Lawn

Rose Bush

Conc. Patio

Steps

2.5% Brk Fr. #8811

Conc. Patio

Rock Lined Ditch #8864

RAIDERS RUN SUBD.
PL. BK. 8, PAGE 9

SEC. 8

LOT 53

LOT 52

Exist. R/W

RAWDAW LANE

E. GEST HOOGE
JOYCE W. HOOGE
9054 WL T.B.A. 6.265 Ac.

Field
Bushes & Briars

MARY E. VONDERBRINK
9056

ROBERT J. KELLY
MARY B. KELLY
9055

E SURVEY
CURVE DATA
P.I. = Sta. 683+37.71
Δ = 8°16'45" Rt.
D = 0°40'
R = 8594.37'
L = 1241.88'
T = 622.02'
E = 22.45'

MATCH LINE STA. 665+00

MATCH LINE STA. 690+00

COMPLETION DATE

Rev.	Date	Description

HAMILTON COUNTY
SYCAMORE TWP.
CITY OF BLUE ASH
SEC. 8 T.4 F.R.1

10
27

STA. 665 TO STA. 680

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

429
445

SECTION 8
SECTION 9

Exist. R/W
DONJOY DRIVE
Exist. R/W

SOL
FERRIS EST.
PL. BK. 3, PAGE 3
KATHRYN M. FOGARTY 9059
LOT 50
FERRIS & WILLIAMS 2ND SUBD.
LOT 52
LOT 54
LOT 56
BL. A
LOT 58
PL. BK. 67 PAGE 48
LOT 60
LOT 62
FERRIS & WILLIAMS 3RD SUBD. PL. BK. 78
LOT 37
LOT 38
SUBD. PAGE 37 & 38
LOT 39
LOT 40

Asphalt Dr.

1-Sty. Brick #5931
1-Sty. Brick #5961
1-Sty. Brick #6001
1-Sty. Brick #6031
Conc. Patio
1-Sty. Brick #6061
1-Sty. Brick #6101
1-Sty. Brick #6131
1-Sty. Brick #6161
1-Sty. Brick #6251
Conc. Patio
1-Sty. Brick #6301
Conc.
1-Sty. Brick #6333
1-Sty. Brick #6367
1-Sty. Brick #6369
1-Sty. Brick #6411
1-Sty. Brick #6421

CAROLYN B. WOODHOUSE 9053 WL T.B.A. 362 Sq. Ft.
JOSEPH F. DIEHL MARGARET M. DIEHL 9057
H. CRAIG HUTCHINSON RUTH A. HUTCHINSON 9058
JOHN W. STRIBLING MILDRED L. STRIBLING 9060 WL T.B.A. 5553 Sq. Ft.
CARRIE E. HAAS 9061 WL T.B.A. 1.051 Sq. Ft. Lawn
NICHOLAS JOHANSEN ROSE JOHANSEN 9062 Stone Garden
STELLA M. EBDING 9063
WILLIAM J. LYND VIRGINIA LYND 9064
J. PAUL GRUBER FRANCESS L. GRUBER 9065
LOUISE M. YOUNG 9066
HOWARD J. LUDWIG MARION A. LUDWIG 9067
ELMER W. GLOSS EVA MAE GLOSS 9068
ELIJAH NELSON HARTMAN LUCILLE M. HARTMAN 9069
EARL R. WARDELL ELSIE MAY WARDELL 9070
ETHEL K. MISALI 9071

CITY OF BLUE ASH
CORPORATION LINE
N5°41'43"E
Pond
Flower Beds
Shrubs
Exist. 18" C.M.P.
Flowering Shrubs
Barbed Wire
Wood
Rose Bushes
N14°31'19"E 252.48'
Field
L.A.R/W
N20°27'21"E 487.16'
Const. Limits
Brians
Corner
Limits

E. GEST HODGE JOYCE W. HODGE 9054 WL
(N2° 10'30"E Deed)
N19°49'36"E 104.33'
N26°29'14"E 104.33'
N5°46'13"E 100.31'
441.58'
N10°17'10"E 681.48'
N18°33'55"E 685.31'
JAMES KENNEDY EST. PL. BK. 5, PAGE 177 1/2 R.D.
SURVEY
90° Tan. To Curve
Woodcock Lane
72" Pipe
Garden
Const. Limits
Rose bush Hedge
Roll
Wooded Area
Bridge
Woven Wire
Wooden
Corn Metal
Corner
Metal
Myrtle 12"
Stump
Bridge
Barbed Wire
15" Pipe
CB.
Pipe
Field
Fence Corner
Limits
Brians
Pond
Const. Limits
Wooded Area
Barbed Wire
Fence Corner
Limits
Brians
Bridge
Woven Wire
Corner Metal
Corner Metal
Myrtle 12"
Stump
12" DIP
Wooded Area
Woven Wire
Pond
Const. Limits
Brians
Corner

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

430/445

HAMILTON COUNTY
HAM. 71-13.05
R/W PLANS
LIMITED ACCESS

℄ SURVEY
CURVE DATA
P.I. = Sta. 709+28.38
Δ = 19°33'10" Lt.
D = 1°28'
R = 3906.53'
L = 1,333.14'
T = 673.12'
E = 57.57'

RAMP "A"
CURVE DATA - A-1
P.I. = Sta. 1+86.83
Δ = 45°36'38" Rt.
D = 13°00'
R = 440.78'
L = 353.41'
T = 186.83'
E = 37.96'
P.C. = Sta. 0+00.00
P.C.C. = Sta. 3+53.41

RAMP "A"
CURVE DATA - A-2
P.I. = Sta. 3+75.21
Δ = 26°09'07" Rt.
D = 6°00'
R = 954.93'
L = 435.87'
T = 221.80'
E = 25.42'
P.C.C. = Sta. 3+53.41
C.S. = Sta. 7+89.28

RAMP "A"
SPIRAL DATA - A-3
θs = 7°30'00" Rt.
Ls = 250.00'
L.T. = 166.82'
S.T. = 83.47'
C.S. = Sta. 7+89.28
S.T. = Sta. 10+39.28

RAMP "E"
CURVE DATA - E-2
P.I. = Sta. 5+99.99
Δ = 34°52'49" Rt.
D = 9°00'
R = 636.62'
L = 387.56'
T = 199.99'
E = 31.35'
P.C.C. = Sta. 4+00.00
P.T. = Sta. 7+87.56

RAMP "E"
CURVE DATA - E-3
P.I. = Sta. 10+38.85
Δ = 41°54'18" Rt.
D = 12°00'
R = 477.46'
L = 349.21'
T = 182.83'
E = 33.81'
P.C. = Sta. 8+76.02
C.S. = Sta. 12+25.23

RAMP "E"
SPIRAL DATA - E-4
θs = 9°00.00" Rt.
Ls = 150.00'
L.T. = 100.13'
S.T. = 50.12'
C.S. = Sta. 12+25.23
S.T. = Sta. 13+75.23

CROSS COUNTY HWY.
℄ CONSTRUCTION
CURVE DATA
P.I. = Sta. 265+22.08
Δ = 42°23'35" Rt.
Dc = 3°30'00"
Rc = 1,637.02'
Ls = 250.00'
Lc = 961.23'
Ts = 760.44'
Es = 120.50'
θs = 4°22'30"
T.S. = Sta. 257+61.64
S.C. = Sta. 260+11.64
C.S. = Sta. 269+72.87
S.T. = Sta. 272+22.87

R/W
CURVE DATA
CC1 Δ = 4°22'30" Rt.
R = 2,182.85'
T = 83.38'
L = 166.68'

CC2 Δ = 33°35'35" Rt.
R = 1,637.02'
T = 494.92'
L = 961.23'

P.C. = Sta. 258+44.98
P.C.C. = Sta. 260+11.66 Bk. = Sta. 260+11.64 Ahd.
P.C.C. = Sta. 269+72.87 Bk. = Sta. 269+72.86 Ahd.
P.T. = Sta. 271+39.54

MATCH LINE STA. 264+50

JOHN PHILLIP PAINTER
MARJORIE W. PAINTER
Swimming Pool
1-Sty. Brick #6535
9093A
LOT 53
LOT 52
LOT 51
WILLIAM C. RUFF
CAROL B. RUFF
1-Sty. Brick #6521
9092A
LOT 50
LOT 49
37 & 38
1-Sty. Brick #6501
CHARLES W. CHAPPEL
9092 WL
T.B.A. 72,228 Sq.Ft.
ESTEL R. TYE
9091 WL
T.B.A. 1,597 Sq.Ft.
JAMES O. HESTER
9084
FRED B. RICHARDSON
ETHEL H. RICHARDSON
9085
WALTER J. SCHULTZ
EDNA L. SCHULTZ
9086
GEORGE STROTTMAN
9087
ERNEST E. JOHNSON
OLIVE I. JOHNSON
9088
ERWIN J. SCHNEIDER JR.
JANICE R. SCHNEIDER
9089
EDWARD R. BOATE JR.
BETTY M. BOATE
9090
LOT 42
LOT 43
LOT 44
LOT 45
LOT 46
LOT 47
LOT 48
FERRIS & WILLIAMS 3RD SUBD.
PL. BK. 78.
PAGE
Asphalt Drive
DONJOY DRIVE
Exist. R/W
9071
9083 WL
9094 WL
EMILY G. MURPHY
LINE CITY OF BLUE ASH
HAMILTON COUNTY
CORPORATION
VILLAGE OF MONTGOMERY
℄ Const. Limits
LARW
RAMP "A"
RAMP "C"
RAMP "D"
RAMP "E"
RAMP "E-2"
RAMP "E-3"
RAMP "E-4"
A-1
A-2
A-3
CC1
CC2
Field Brush & Briars
Wooded Area
Barbed Wire
Fence
Orchard
Abandoned foundation
Open Field
Play Field
Ball Field
Tennis Court (Asphalt)
Abandoned Filter Bed
Woven Wire
Fence
Inlet
C.B.
Bench
Backstop
4" Drain Tile
12" Pipe
15" Pipe
24" Pipe
Cyclone Fence
Garden
Concrete
Asphalt
Brick
Stone
Tar & Gravel
Gravel
THE BOARD OF EDUCATION OF SYCAMORE LOCAL SCHOOL DISTRICT
9093 WL T.B.A. 13.89 Ac. ARO. 0.03 Ac.
9093 T T.B.A. 0.20 Ac.
MATCH LINE STA. 695+00
MATCH LINE STA. 710+00
MATCH LINE STA. 6+00
N 30° 24' 21" E 111.05'
N 4° 04' 45" E 237.98'
N 12° 07' 00" W 247.41'
N 30° 45' 36" W 182.65'
N 5° 55' 26" E 85.00'
N 5° 49' 13" E 102.03'
N 0° 59' 15" W
N 18° 39' 35" E
N 30° 32' 12" W 191.05'
N 5° 41' 43" E
N 61° 00' 32" W
N 81° 14' 27" E 286.79'
N 30° 39' 58" E 98.37'
S 84° 04' 34" E 100.00'
S 5° 49' 13" W 102.20'
S 84° 10' 47" W

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

(431/445)

HAMILTON COUNTY
HAM. 71-13.05
R/W PLANS
LIMITED ACCESS

Note:
For Sta. 695 To Sta. 710 Left
See R/W Sheet No. 12

MATCH LINE STA. 694+00

P.I. Sta. 696+35.26

P.I. Sta. 709+88.90

SYCAMORE LINE ROAD

Sta. 702+87.28 ℄ SURVEY =
Sta. 2741+13.28 CROSS COUNTY HWY.

℄ SURVEY HAM. 71

N 13° 39' 55" E

N 36° 05' 32" W

N 0° 59' 15" W

N 5° 43' 13" E
112.20'

S 7° 41' 12" E
420.47'

N 1° 00' 22" W
496.78'

MARGARET M. FOLLMER
9093 WL
Field
Gravel Dr.
Barbed Wire
LOT 6
Firs & Pine Trees
Cedars & Pines
Fr. Privy
1-Sty. Fr.
Apple Trees
Abandoned Foundation
10' Deep Conc. Slab (Cistern)
Frame Shed
Cedars
1-Sty. Fr. Res.
Frame Barn
Lawn
Garden
Wood
Wooded Area
Woven Wire
Field
C.B.
66" Pipe
12" Pipe
42" Pipe
LA R/W
THE BOARD OF EDUCATION OF SYCAMORE LOCAL SCHOOL DISTRICT
Field

EMILY G. MURPHY
9094 WL T.B.A. 15.91 Ac.
9094 T T.B.A. 0.05 Ac.
1-Sty. Brick w/ Conc. w/ Basement
1-Sty. Frame
LOT 7
JAMES KENNEDY EST.
PL. BK. 5, PAGE 177½ R.O.

EVANGELINE MURPHY
9094A WL T.B.A. 0.175 Ac.
2-Sty. Frame
LOT 5

GEORGE L. ANDERSON
CHRISTENA ANDERSON
9094B WL T.B.A. 0.02 Ac.
9094B T.B.A. 0.14 Ac.

9093 T
Pond
Summer House
Pipe Line
Well
Wood Platform
Frame Shed
4" Conc. Slab
Privy
C.M.P.
RELOCATED KENNEDY LANE

RAMP "C"
RAMP "B"
RAMP "B1"
RAMP "B2"
RAMP "B3"
CROSS COUNTY
HAMILTON COUNTY
VILLAGE OF MONTGOMERY
LA R/W
R/W P.C. Sta. 277+68.17
R/W P.C.C. Sta. 279+34.83 Ahd.
R/W P.C.C. Sta. 279+34.83 Bk.
+00 C.C. 115
+80.30 C.C. 110
N 39° 15' 40" W
N 48° 33' 53" W
N 16° 31' 32" W
N 5° 35' 52" E
N 79° 25' 47" W
N 65° 31' 32" W
N 13° 02' 12" E
N 3° 48' 42" E
N 37° 35' 32" E
N 10° 30' 32" W
N 5° 35' 52" E

JAMES WILDER EST.
MUTILATED REC. BK. 39, PAGE 90 CO.
HARRIET M. SWAIM
LOT 1
MATCH LINE STA. 16+00
MATCH LINE STA. 282+00

LADELL H. FERRIS
RUTH C. FERRIS

Note:
For CROSS COUNTY STA. 282+00
Ahead Station See R/W Sht. No. 15

℄ SURVEY
CURVE DATA
P.I. = Sta. 703+28.28
Δ = 19°33'10" Lt.
D = 1°28'
R = 3906.53'
L = 1,333.14'
T = 673.12'
E = 57.57'

RAMP "B"
CURVE DATA - B2
P.I. = Sta. 14+07.78
Δ = 15°20'39" Rt.
D = 4°00'
R = 1,432.40'
L = 383.60'
T = 192.95'
E = 12.94'
P.C. = Sta. 12+14.78
P.C.C. = Sta. 15+98.38

RAMP "B"
CURVE DATA - B3
P.C. = Sta. 17+92.52
Δ = 30°20'01" Rt.
D = 8°00'
R = 716.20'
L = 379.17'
T = 194.14'
E = 25.85'
P.C.C. = Sta. 15+98.38
P.T. = Sta. 19+71.55

CROSS COUNTY HWY.
℄ CONSTRUCTION
CURVE DATA
P.I. = Sta. 282+61.32
Δ = 26°35'00" Lt.
Dc = 3°00'
Rc = 1909.86'
Ls = 250.00'
Lc = 636.11'
Ts = 376.48'
Es = 33.96'
θs = 3°45'00"
TS = Sta. 276+84.83
SC = Sta. 279+34.83
CS = Sta. 285+70.94
ST = Sta. 288+20.94

R/W
CURVE DATA
CC:3 Δ = 3°45'00" Lt.
R = 2,546.61'
T = 83.37'
L = 166.68'

CC:4 Δ = 19°05'00" Lt.
R = 1909.86'
T = 321.03'
L = 636.11'

P.C. = Sta. 277+68.17
P.C.C. = Sta. 279+34.85 Bk. =
Sta. 279+34.83 Ahd.
P.C.C. = Sta. 285+70.94 Bk. =
Sta. 285+70.93 Ahd.
P.T. = Sta. 287+37.61

COMPLETION DATE JUN 3 1966		
Rev.	Date	Description

HAMILTON COUNTY
SYCAMORE TWP.
VILLAGE OF MONTGOMERY
SEC. 9 T.4 E.R.1

(13/27)

STA. 695 TO STA. 710 RIGHT

(RW. RL.) DIVISION	STATE	PROJECT		432 / 445
2	OHIO			

HAMILTON COUNTY
HAM. 71-13.05
R/W PLANS
LIMITED ACCESS

LARRY L. OAKS
9199 WL — T.B.A. 252 Sq. Ft.

EDW. H. OTTOPAL
9200 WL — T.B.A. 2091 Sq. Ft.

JOHN J. MANNING
ELAINE H. MANNING
9201 WL — T.B.A. 3053 Sq. Ft.

HAZEL R. GAPTEN
9198 WL — T.B.A. 2.63 Ac.

RANSFORD FRENCH JR.
9202 WL-1 — T.B.A. 0.97 Ac.
9202 WL-2 — T.B.A. 0.88 Ac.

JOSEPH (JOEL) MALSBARY ESTATE
PL. BK. 5, PAGE 180 R.O.
LOT 4

GLADYS JACKSON
9190 WL — T.B.A. 2550 Sq. Ft.
9190 5 — T.B.A. 972 Sq. Ft.

FERRIS & WILLIAMS DEVELOPMENT CO.
9191 WL — T.B.A. 4385 Sq. Ft.

FERRIS & WILLIAMS DEVELOPMENT CO. (FIDELIS DRIVE)
9192 WL — T.B.A. 0 Sq. Ft. P.R.O. 35 Sq. Ft.
9192 — T.B.A. 0 Sq. Ft. P.R.O. 791 Sq. Ft.

THE BOARD OF EDUCATION OF THE SYCAMORE LOCAL SCHOOL DISTRICT
9093 7
9093 WL

Point of Access Sta. 264+38.50 Lt. for Pedestrian Overpass.

Point of Access Sta. 264+38.50 Rt. for Pedestrian Overpass.

5' Walkway to Sycamore School

CROSS COUNTY HWY.
℄ CONSTRUCTION

CURVE DATA	
PI. =	Sta. 265+22.08
Δ =	42°23'35" Rt.
Dc =	3°30'00"
Rc =	1637.02'
Ls =	250.00'
Lc =	961.23'
Ts =	760.44'
Es =	120.50'
Θs =	4°22'30"
T.S. =	Sta. 257+61.64
S.C. =	Sta. 260+11.64
C.S. =	Sta. 269+72.87
S.T. =	Sta. 272+22.87

R/W

CURVE DATA	
CC1 Δ =	4°22'30" Rt.
R =	2182.85'
T =	83.38'
L =	166.68'
CC2 Δ =	33°38'35" Rt.
R =	1637.02'
T =	494.92'
L =	961.23'
P.C. =	Sta. 253+44.98
P.C.C. =	Sta. 260+11.66 Bk. = Sta. 260+11.64 Ahd.
P.C.C. =	Sta. 269+72.87 Bk. Sta. 269+72.86 Ahd.
P.T. =	Sta. 271+39.54

COMPLETION DATE

Rev.	Date	Description

HAMILTON COUNTY
SYCAMORE TWP.
CITY OF BLUE ASH
VILLAGE OF MONTGOMERY
SEC. 9 T.4 E.R.1

14 / 27

CROSS COUNTY STA. 264+50 BACK

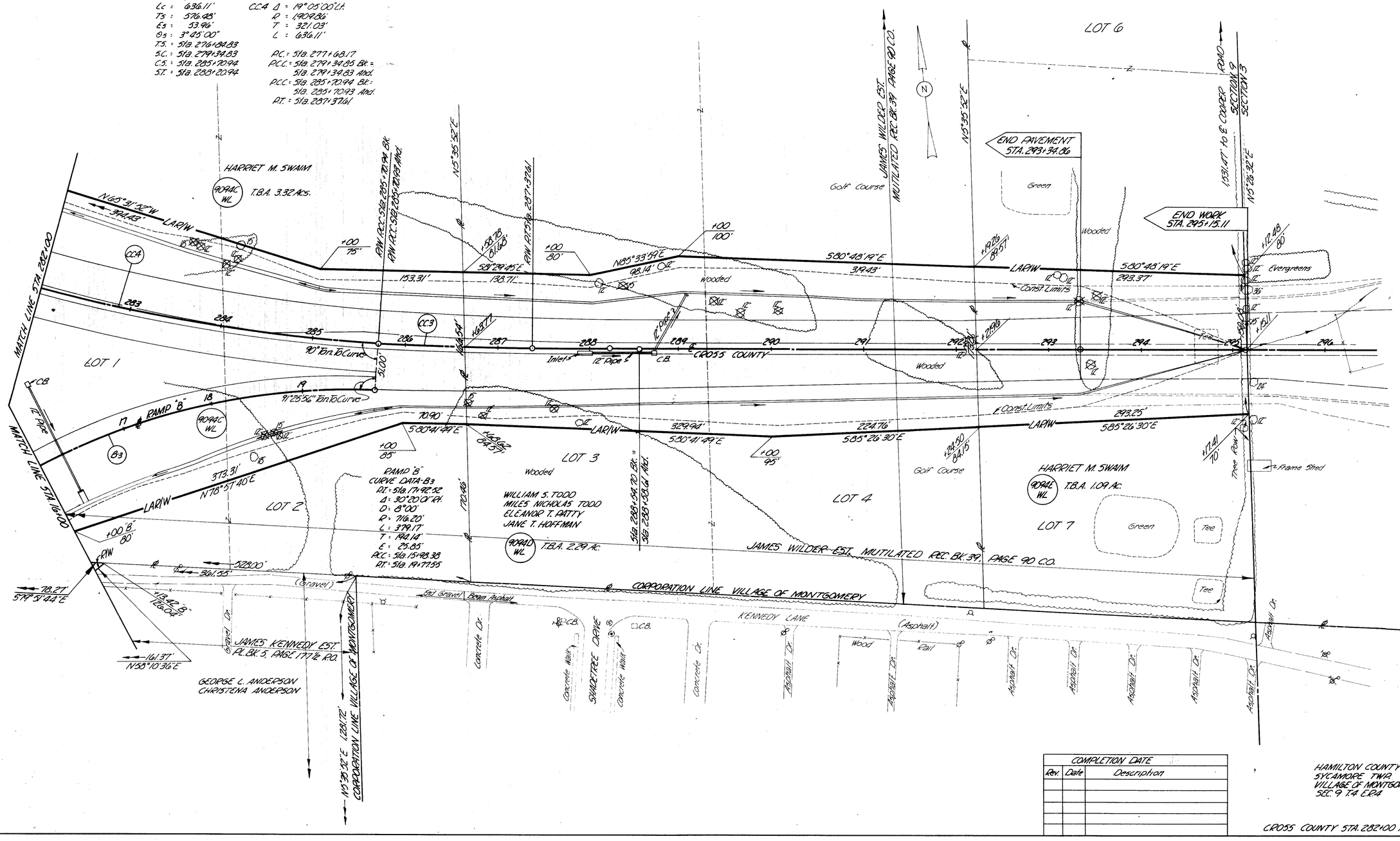
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

433/445

HAMILTON COUNTY
HAM. 71-13.05
R/W PLANS
LIMITED ACCESS

CROSS COUNTY HWY.

& CONSTRUCTION CURVE DATA		R/W CURVE DATA	
PI	= 51a. 282+61.32	CC3 Δ	= 3°45'00" Lt.
Δ	= 26°35'00" Lt.	R	= 2546.61'
Dc	= 3°00'	T	= 83.37'
Rc	= 1909.86'	L	= 166.68'
Ls	= 250.00'		
Lc	= 636.11'	CC4 Δ	= 19°05'00" Lt.
Ts	= 376.68'	R	= 1909.86'
Es	= 53.96'	T	= 321.03'
θs	= 3°45'00"	L	= 636.11'
T.S.	= 51a. 276+84.83		
S.C.	= 51a. 279+34.83	P.C.	= 51a. 277+68.17
C.S.	= 51a. 285+70.94	P.C.C.	= 51a. 279+34.95 Bk. = 51a. 279+34.83 Ahd.
S.T.	= 51a. 288+20.94	P.C.C.	= 51a. 285+70.94 Bk. = 51a. 285+70.93 Ahd.
		P.T.	= 51a. 287+37.61



COMPLETION DATE		
Rev.	Date	Description

HAMILTON COUNTY
SYCAMORE TWP.
VILLAGE OF MONTGOMERY
SEC. 9 T.4 E.R.4

15/27

CROSS COUNTY STA. 282+00 AHEAD

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

434
445

HAMILTON COUNTY
HAM. 71-18.05
R/W PLANS
LIMITED ACCESS

THE BOARD OF EDUCATION OF SYCAMORE LOCAL SCHOOL DISTRICT

Sycamore High School

Asphalt Dr.

Gravel Parking Area

Gravel Dr.

Tennis Court

MATCH LINE STA 6+00

Const. Limits

Existing R/W

DEL RAY DRIVE

Existing R/W

Asphalt

Frame Garage

Flower Trellis

Rose Bush

Flag Pole

Flowers

Woven Wire

Electric Wire

Flower Bush

W/Basement

Board

Concrete Walk

Football Field

Field

Dog Area

Shrubs

Wood

Grape Arbor

Lawn

Garden

Golf Course

Wooded Area

Temporary

CB

Pipe

Inlet

Manhole

BERTHA M. HOFFMAN
DUDLEY H. BARTLETT
9095 WL
T.B.A. 471 Sq.Ft.
A.R.O. 490 Sq.Ft.
#6015 1½ Sty. Frame

FRANK S. McBEE
JESSIE M. McBEE
9096 WL
T.B.A. 20,000 Sq.Ft.
A.R.O. 2,400 Sq.Ft.
#6105 1-Sty. Brick

WM. J. KELLEY
IRENE A. KELLEY
9097 WL
SURVEY
T.B.A. 21,250 Sq.Ft.
A.R.O. 2,550 Sq.Ft.
#6205 1½ Sty. Br.

FRANK R. PAYNE
AMELIA D. PAYNE
9105 WL
T.B.A. 21,250 Sq.Ft.
A.R.O. 2,550 Sq.Ft.
#6265 1½ Sty. Br.

ROGER WUENKER
VIRGINIA WUENKER
9106
#6325 1½ Sty. Br.

THE BOARD OF EDUCATION OF SYCAMORE LOCAL SCHOOL DISTRICT
9093 WL

LLOYD L. KENNEY
CHRISTINE KENNEY
#6375 1½ Sty. Brick

#6475 1½ Sty. Frame

HATTIE A. WILSON
#5890 1-Sty. Br.

VERA GRIBBLE
VELMA GRIBBLE
9098 T
T.B.A. 2,688 Sq.Ft.
#5950 1-Sty. Br.

FERRIS & WILLIAMS DEVELOPMENT CO.
AN OHIO CORPORATION
9104 WL
T.B.A. 11.90 AC.
A.R.O. 0.11 AC.
9098 T

WM. E. HULSBECK
LUCY A. HULSBECK
9107 WL
T.B.A. 42,728 Sq.Ft.
A.R.O. 4,163 Sq.Ft.
9107 T
T.B.A. 3,297 Sq.Ft.
#6260 1½ Sty. Brick

JAMES WILDER EST.
MUTILATED REC. BK. 39, PAGE 90 CO
LOT 10

DONALD L. WILHELM
EVA M. WILHELM
Grill
9099
#9544 1-Sty. Brick

HOWARD K. SHARP
ANNE SHARP
9100
#9558 1-Sty. Brick

ARTHUR R. MILLER
9101
#9572 1-Sty. Brick
1-Sty. Fr.

MAVIS JACKSON
9102
#9686 1-Sty. Brick

STEPHEN E. MULLINS
BEULAH K. MULLINS
9103
#9600 1-Sty. Brick
Conc.

9108 T

9109 WL-1

HARRIET M. SWAIM ½
WILLIAM S. TODD ⅛
ELEANOR T. PATTY ⅛
MILES NICHOLAS TODD ⅛
JANE T. HOFFMAN ⅛

MATCH LINE STA 710+00

MATCH LINE STA. 725+00

COMPLETION DATE		
Rev.	Date	Description

HAMILTON COUNTY
SYCAMORE TWP.
VILLAGE OF MONTGOMERY
SEC. 9 T.4 E.R.1

STA. 710 TO STA. 725

16
27

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

435
445

HAMILTON COUNTY
HAM. 71-13.05
R/W PLANS
LIMITED ACCESS

N

DELRAY DRIVE

Exist. R/W

Archert Dr.

1-St'y Brick #9614 — WALTER F. BETTNER, CATHERINE BETTNER — 9109 — 9103 — Cedars — Wood — LARW
1-St'y Brick #9628 — FRANK ROHE, HELEN ROHE — 9110 — Wood — LARW — Garden
1-St'y Brick #9642 — R.E. RUSSELL, RUTH G. RUSSELL — 9111 — Hedge — Const. Limits — LARW — Field
1-St'y Brick #9656 — ELIZABETH L. PETRIE — 9112 — Wood Rail — Swimming Pool — Filter Tank — LARW
1-St'y Brick #9670 — Conc. Patio — 20'-2" Portable Swimming Pool — Wood Slat — BOBBY JOE JACKSON, DONNA LEE JACKSON — 9113 — Evergreen Shrubs — LARW
1-St'y Brick #9682 — HILDA A. COURTNEY — 9114 — Wood Rail — Wood — LARW
1-St'y Brick #9698 — Conc. Patio — GEORGE A. SCHRODER, JEAN ADELE SCHRODER — 9115 — 20' Portable Swimming Pool — LARW
1-St'y Brick #9712 — Conc. Patio — KATHERINE L. AUSTIN, GEORGE S. AUSTIN — 9116 — Evergreen Shrubs — LARW
1-St'y Brick #9726 — JOHN C. JACKSON, DOROTHY K. JACKSON — 9117 — N0°59'36"W 2,115.55' — 24"
1-St'y Brick #9740 — Conc. Patio — LEONARD S. STAHLGREN — 9118
1-St'y Brick #9754 — Screen Porch — Hedge — DARWIN KIMBLE, ELEANOR KIMBLE — 9119 — Wood — LARW
1-St'y Brick #9768 — Conc. Patio — EDWARD J. BRADLEY, MARGARET H. BRADLEY — 9120 — LARW
1-St'y Brick #9782 — ARTHUR C. FERRIS, DOROTHY FERRIS — 9121 — Woven Wire — Garden — LARW
1-St'y Brick #9796 — SADIE M. McFARLAND — 9122 — 9118' — LARW

SECTION 9
SECTION 10

GLADYS D. CLARK — 9123 WL
+28.23
182.38
+67.37
172.84'
Woven & Barbed Wire
N5°32'48"E 823.20'
Wooded Area
Const. Limits
Sand Trap

FERRIS & WILLIAMS DEVELOPMENT CO. AN OHIO CORPORATION
9104 WL — T.B.A. 11.90 Ac. ARO. 0.11 Ac.
12"
Field
Wooded Area
1040.01'
226.01'
SECTION 9
SECTION 10
N5°45'05"E
139
737
736
735
734
733
732
731
730
729
728
727
726
NO°59'15"W
C.P.
SURVEY
15" ADS
15"
18"
24"
MATCH LINE STA 725+00
MATCH LINE STA 740+00

9108 WL-1 — T.B.A. 0.86 Ac.
9108 WL-2 — T.B.A. 5.46 Ac.
9108 T — T.B.A. 0.09 Ac.

Const. Limits
1,201.61'
349.72'
NO°59'15"W
LARW
100
125'
+37.72
125
NO°59'15"W
+36.68
125
86.96'
REC. STA 729+96.68
9104 WL
Arc = 844.16'
R = 12,152.67'
Ch = 844.00'
Brg. N1°00'09"E
Wooded
Wooded Area
N5°06'32"E
922.01'
+80.53
125
68.96'
Arc = 505.17'
R = 12,152.67'
Ch = 505.12'
Brg. N4°22'19"E
9108 WL-2
Const. Limits
Golf Course
Golf Course
Wooded Area
Wooded Area

HARRIET M. SWAIM 1/4
WILLIAM S. TODD 1/8
ELEANOR T. PATTY 1/8
MILES NICHOLAS TODD 1/8
JANE T. HOFFMAN 1/8

LOT 8

JAMES WILDER EST.
MUTILATED REC. BK. 39, PAGE 90 CO.

N 11°28'46" W 2,115.55'

℄ SURVEY
CURVE DATA
P.I. = Sta. 736+39.54
Δ = 6°48'20" Rt.
D = 0°28'
R = 12,277.67'
L = 1,444.05'
T = 722.86'
E = 21.26'

COMPLETION DATE		
Rev.	Date	Description

HAMILTON COUNTY
SYCAMORE TWP.
VILLAGE OF MONTGOMERY
SEC. 9 T.4 E.R.1.
SEC. 10 T.4 E.R.1.

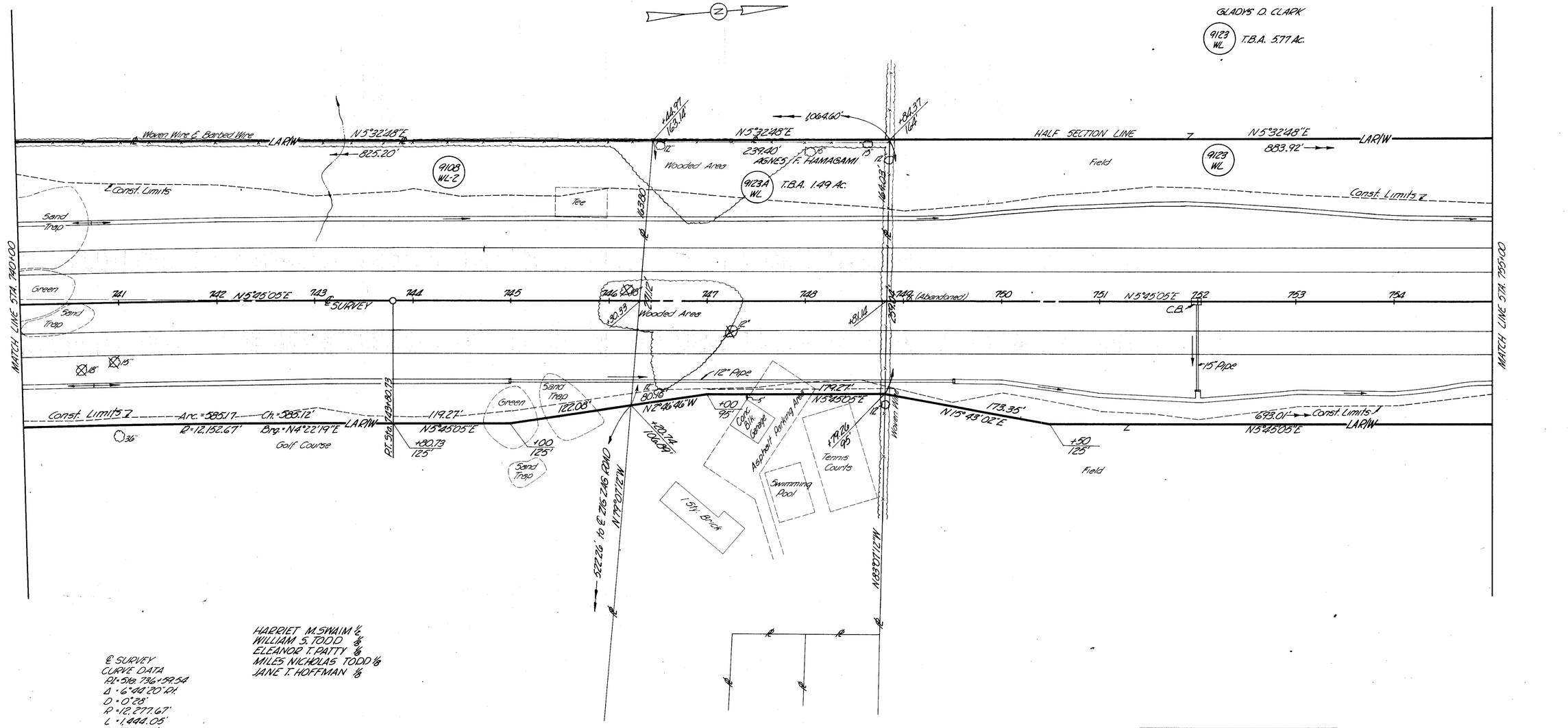
17
27

STA. 725 TO STA. 740

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

436
445

HAMILTON COUNTY
HAM. 71-13.05
R/W PLANS
LIMITED ACCESS



HARRIET M. SWAIM ½
WILLIAM S. TODD ⅛
ELEANOR T. PATTY ⅛
MILES NICHOLAS TODD ⅛
JANE T. HOFFMAN ⅛

℄ SURVEY
CURVE DATA
P.I. = 518+736.39
Δ = 6°44'20" Rt.
D = 0°28'
R = 12,277.67'
L = 1,444.05'
T = 722.86'
E = 21.26'

COMPLETION DATE		
Rev.	Date	Description

HAMILTON COUNTY
SYCAMORE TWP.
VILLAGE OF MONTGOMERY
SEC. 10 T.4 E.R.1

18
27

STA. 740 TO STA. 755

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

437/445

HAMILTON COUNTY
HAM. 71-13.05
R/W PLANS
LIMITED ACCESS

CORPORATION LINE CITY OF BLUE ASH
VILLAGE OF MONTGOMERY

THE BOARD OF EDUCATION OF SYCAMORE LOCAL SCHOOL DISTRICT OF HAMILTON COUNTY, OHIO
9124 T.B.A. 0.03 Ac.

GLADYS D. CLARK
9123 WL
Const. Limits
Garden
Woven Wire
HALF SECTION LINE
Z 1538.06' TO SECTION LINE
729.00'
883.92'
627.00'
N5°32'48"E 698.93'
LA/RW
+68.28 161.15
Const. Limits 693.01'
N5°45'05"E
MATTIE MAE DOUGHMAN
9126 WL
T.B.A. 3.40 Ac.
P.R.O. 0.13 Ac.
Frame Barn
Conc. Blk. Garages
Gravel
Asphalt Dr.
Flower Bushes
Picket Fence
Board
Hedge
Concrete Slab
Swimming Pool
Chain Link
Frame Shed
Asphalt Dr.
Basement
#10025 1-5/4 Brick
#10033
#10013
Concrete Pad
Apple Trees
Cable Chamber
Water Chamber
Concrete Pad
Wooded Area
Open Field
LOT 1
LOT 9
LOT 8
EDNA A. MEGIE
D. MEGIE EST. PL. BK. 24 PAGE 32
N7°23'41"E 336.37'
N1°45'23"E 1538.00'
N1°45'23"E 1538.00'
N1°45'23"E 1538.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

438
445

CORPORATION LINE CITY OF BLUE ASH
VILLAGE OF MONTGOMERY

HAMILTON COUNTY
HAM. 71-13.05
R/W PLANS
LIMITED ACCESS

Exist. R/W

KERRIANNA DRIVE

Exist. R/W

216 ZAG ROAD
CURVE DATA
P.I. : 518 371 75.12
Δ : 10°01'45" Lt.
D : 6°00'
R : 954.93'
L : 167.16'
T : 83.77'
E : 3.67'
P.C. : 518 368 91.35
P.T. : 518 368 58.51

LOT 9
LOT 10
LOT 11
WEEBER ACRES SUBD. SEC. 1 PL. BK. 76 PAGE 80
N 11°31'19" E
WILBUR F. KENNEDY
9125
ROBERT B. DUNN
LORETT A. DUNN
9131
9132
9133
ARTHUR GEORGE GRIFFITHS
GLORIA ANN GRIFFITHS
9134
CLIFFORD KELLY
ELEANOR V. KELLY
9135
HAROLD C. MILLS
EVELYN L. MILLS
9136
JULIA M. MUSHRUSH
9137
LESTER E. INNIS
RUTH MAE INNIS
9138
STANLEY P. BOWMAN
9139
FRANK LYNN SHOWALTER
9140
ARTHUR HAROLD HEDRICK
ZELLA DOROTHY HEDRICK
9141
9142 WL-1
9130
9130 WL
9130 T-1
EDNA A. MEGIE
O. MEGIE EST.
PL. BK. 24 PAGE 32
LOT 8
9143 WL
9143
9143 T
BERT H. LONG

TWINBROOKS ACRES 2nd SUBD. BL. "A"
PL. BK. 63, PAGE 10
TWINBROOKS ACRES 2nd SUBD. BL. "O"
PL. BK. 73 PAGE 19

1-Sty. Brick #10085
1-Sty. Brick #10088
1-Sty. Brick #10077
1-Sty. Brick #10290
1-Sty. Br. & Fr. #10240
1-Sty. Br. & Fr. #10250
1-Sty. Brick #10260
1-Sty. Brick #10270
1-Sty. Brick #10280
1-Sty. Brick #10290
1-Sty. Brick #10300
2-Sty. Frame

Asphalt Dr.
Conc. Dr.
Conc. Patio
Septic Tank
Leaching Lines
Open Sewerage Draining
Stack of Logs
Sewerage on top of ground
Asphalt
Conc. Curb & Gutter
Storm Sewer
Sanitary Sewer
Overhead Wires
Wooded Area
Open Field
Field
Const. Limits
Bird Bath
Flag Pole
Fence Post
Conc. Blk. Foundation
Fp. Gas
Pole
Inlet
Manhole
C.B.
Under 12"
Smaller Trees Mid Range

LA R/W
N5°32'45"E 242.59'
N5°32'45"E 999.87'
N5°32'45"E 351.71'
N 11°31'19" E
N 24°59'11" W
N 11°14'19" E
N 5°45'05" E
N 6°30'55" E 750.07'
N 3°18'00" W 100.77'
N 1°52'32" W 638.39'
N 7°37'48" E 740.00'
N 80°24'25" W 180.00'
N 26°21'41" W 214.07'
N 24°26'21" W 210.71'
N 1°14'32" W 389.06'

RAMP "F"
SPIRAL DATA F-3
θs : 4°30'00" Rt.
Ls : 300.00'
LT : 200.06'
ST. : 100.06'
C.S. : 518. 101+34.27
ST. : 518. 131+34.27

RAMP "F"
CURVE DATA F-2
P.I. : 518. 71+74.29
Δ : 15°41'52" Rt.
D : 3°00'
R : 1,909.86'
L : 523.26'
T : 263.25'
E : 18.06'
P.C. : 518. 5+11.01
C.S. : 518. 101+34.27

RAMP "G"
CURVE DATA
P.I. : 518. 1+93.71
Δ : 6°46'18" Rt.
D : 1°45'00"
R : 3,274.04'
L : 386.95'
T : 193.71'
E : 5.72'
P.C. : 518. 0+00.00
P.T. : 518. 3+86.95

RAMP "E"
RAMP "G"
91°25'56" Tan. To Spiral
90° Tan. To Curve
90°

Future Prop. 12" Sewer Pipe
Exist. Temporary Easement
Exist. Temporary Easement (TD)
96" Pipe
PRIVATE DR.
40'

For Private Drive see Sheet No. 27

MATCH LINE STA. 770+00
MATCH LINE STA. 785+00

COMPLETION DATE JUN 26 1954		
Rev.	Date	Description

HAMILTON COUNTY
SYCAMORE TWP.
VILLAGE OF MONTGOMERY
CITY OF BLUE ASH
SEC. 10 T4 E.R2

20
27

STA. 770 TO STA. 785

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

439
445

HAMILTON COUNTY
HAM. 71-13.05
R/W PLANS
LIMITED ACCESS

This Sheet Superseded by Sheet No. S-439
C.E.H. 6-3-65

BOWMAN REALTY CO. INC.
9142 WL-1 T.B.A. 7.13 Ac. P.R.O. 0.20 Ac.
9142 WL-2 T.B.A. 60,224 Sq.Ft.
9142 T.B.A. 1,869 Sq.Ft. P.R.O. 1,500 Sq.Ft.
9142 A T.B.A. 7,029 Sq.Ft. P.R.O. 5,580 Sq.Ft.
9142 T-1 T.B.A. 0.20 Ac.
9142 T-2 T.B.A. 0.04 Ac.
9142 T-3 T.B.A. 0.03 Ac.

THE MONTGOMERY FINANCIAL CO. INC. (AN OHIO CORPORATION)
9148 WL T.B.A. 1.13 Ac. P.R.O. 0.04 Ac.
9148 T T.B.A. 0.45 Ac.

PAUL G. BAUER
ROBERT J. NORDLOH
9149 WL T.B.A. 18.52 Ac. P.R.O. 0.21 Ac.

VINCENT R. BILLITER
MARY E. BILLITER
9146 WL T.B.A. 1.56 Ac. P.R.O. 0.40 Ac.
9146 T.B.A. 0.60 Ac.
9146 T T.B.A. 0.17 Ac.

Open Field

ESTHER JANE BIZZARRI
9147 T.B.A. 1,578 Sq.Ft.

ALBERT J. SCHUHOLZ
9144 T.B.A. 0.36 Ac. P.R.O. 0.42 Ac.

DAVID L. STONEBURNER
MARGARET T. STONEBURNER
9145 T.B.A. 0.91 Ac. P.R.O. 0.14 Ac.

℄ SURVEY
CURVE DATA
P.I. = Sta. 800+05.24
Δ = 20°24'30" Rt.
D = 1°00'
R = 5,729.58'
L = 2,040.83'
T = 1,031.34'
E = 92.08'

PFEIFFER ROAD
CURVE DATA
P.I. = Sta. 45+73.91
Δ = 14°13'00" Rt.
D = 4°00"
R = 1,432.40'
L = 355.42'
T = 178.63'
E = 11.09'
P.C. = Sta. 43+97.28
P.T. = Sta. 47+52.70

RAMP "F"
CURVE DATA - F1
P.I. = Sta. 2+64.55
Δ = 10°37'49" Lt.
D = 4°30.00
R = 1,273.24'
L = 236.23'
T = 118.45'
E = 5.50'
P.C. = Sta. 1+46.10
P.T. = Sta. 3+82.33

RAMP "F"
CURVE DATA - F2
P.I. = Sta. 7+74.59
Δ = 15°41'52" Rt.
D = 3°00'
R = 1,909.86'
L = 523.26'
T = 263.28'
E = 18.06'
P.C. = Sta. 5+11.01
C.S. = Sta. 10+34.27

RAMP "H"
CURVE DATA
P.I. = Sta. 8+77.60
Δ = 14°44'21" Rt.
D = 3°00'
R = 1,909.86'
L = 491.31'
T = 247.02'
E = 15.90'
P.C. = Sta. 6+30.58
P.T. = Sta. 11+21.89

LAKECREST DRIVE
CURVE DATA
P.I. = Sta. 23+00.00
Δ = 71°07'50" Rt.
D = 38°11'30"
R = 150.00'
L = 186.22'
T = 107.25'
E = 34.40'
P.C. = Sta. 21+92.75
P.T. = Sta. 23+18.97

LAKECREST DRIVE
CURVE DATA
P.I. = Sta. 26+12.74
Δ = 64°10'20" Lt.
D = 38°11'30"
R = 150.00'
L = 168.00'
T = 94.04'
E = 27.04'
P.C. = Sta. 25+18.70
P.T. = Sta. 26+86.70

Sta. 46+30.00 PFEIFFER ROAD (RELOCATED) = Sta. 0+00.00 RAMP "F" = Sta. 14+04.11 RAMP "H"

Sta. 44+45.00 PFEIFFER RD. (RELOCATED) = Sta. 20+00.00 LAKECREST DRIVE

Sta. 20+90.00 LAKECREST DR. = Sta. 0+00 DRIVEWAY

RC Sta. 43+97.28

CORPORATION LINE CITY OF BLUE ASH / VILLAGE OF MONTGOMERY

Proposed 12" Sanitary Sewer by City of Blue Ash (To be constructed by others)

Proposed Sanitary Sewer by Hamilton County

Field Brush & Briars

N6°28'24"W 526.84'

N73°38'30"E 53.85'

N5°26'35"E

N17°51'35"W 266.17'

N17°51'35"W 264.58'

N5°26'35"E 103.39'

N5°45'25"E 704.16'

N5°45'05"E 200.74'

N5°45'05"E

N24°59'11"W 271.41'

N15°52'43"W

N14°54'35"W

N14°20'25"W 79.78'

N14°54'35"W 181.26'

N14°54'35"W 181.26'

N14°54'35"W 161.98'

N5°14'55"W 288.44'

N34°45'05"E 532.31'

N5°09'18"E 532.21'

N20°50'45"E 479.42'

N20°00'45"E

N23°08'25"E 103.48'

N73°20'25"W 79.78'

N6°00'05"E 6.26'

Arc = 1057.42' R = 3,879.58'
Arc = 2,072.91' R = 3,879.58'
Ch. = 1054.00' Brg. = N11°09'18"E
Ch. = 2062.19' Brg. = N16°06'05"E

Wooded Area

Brush & Briars

All Dead Trees

All Dead Trees & Limits

Woven Wire

Barbed Wire

Two 6" Pines

18" Sewer Pipe

RAMP "F"

LOT 1

LOT 2

TWINBERRY ACRES 2nd SUBD. PB. 74, PAGE 75

DRIFTER ROAD

Temporary

Asphalt

Cedars

Bushes

Shrubs

Cont. Walk

Brick Gar.

Septic Tank

Leaching Lines

4 Silo gas Basement
1 Basement

#6110 2.5 Sty. Brick

#6010 1-Sty. Br. & Fr.

1-Sty. Brick #5991

1-Sty. Brick #6049

Under 12"

12" Branch

Exist. Perm. Easement (10)

Exist. Temp. Easement

Exist. perm. easement (10)

Exist. Temporary Easement

Field

Wooded Area

PAUL G. BAUER
ROBERT J. NORDLOH

ESTHER JANE BIZZARRI
LINE 3830

CITY OF BLUE ASH
MONTGOMERY

CORPORATION LINE VILLAGE

MATCH LINE STA. 785+00

MATCH LINE STA. 800+00

Note: Indicated Sewer Easements are Hamilton County Commissioners' Easements.

Note: For Sta. 785 to Sta. 800 Right See R/W Sheet No. 22

P.C. Sta. 791+73.90

Sta. 792+04.34 ℄ SURVEY = Sta. 30+00 PFEIFFER RD. (RELOCATED)

COMPLETION DATE		
Rev.	Date	Description

HAMILTON CO.
SYCAMORE TWP.
CITY OF BLUE ASH
VILLAGE OF MONTGOMERY
SEC. 10 T4 E.R.1
SEC. 11 T4 E.R.1

STA. 785 TO STA. 800 'LEFT

21
27

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

S-439
~~433~~ 445

HAMILTON COUNTY
HAM. 71-13.05
R/W PLANS
LIMITED ACCESS

R/W Sheet No. 439 Superseded by revised Sheet No. S-439
C.E.H. 6-3-65

BOWMAN REALTY CO. INC.
9142 WL-1 T.B.A. 7.13 Ac. R.R.O. 0.20 Ac.
9142 WL-2 T.B.A. 60,224 Sq.Ft.
9142 T.B.A. 1,869 Sq.Ft. R.R.O. 1,500 Sq.Ft.
9142A T.B.A. 7,029 Sq.Ft. R.R.O. 5,580 Sq.Ft.
9142 T-1 T.B.A. 0.20 Ac.
9142 T-2 T.B.A. 0.04 Ac.
9142 T-3 T.B.A. 0.03 Ac.

THE MONTGOMERY FINANCIAL CO. INC. (AN OHIO CORPORATION)
9148 WL T.B.A. 1.13 Ac. R.R.O. 0.04 Ac.
9148 T T.B.A. 0.45 Ac.

PAUL G. BAUER
ROBERT J. NAPOLOH
9149 WL T.B.A. 18.52 Ac. R.R.O. 0.21 Ac.

VINCENT R. BILLITER
MARY E. BILLITER
9146 WL T.B.A. 62,231 Sq.Ft. R.R.O. 16,896 Sq.Ft.
9146 T.B.A. 46,020 Sq.Ft. R.R.O. 504 Sq.Ft.

ESTHER JANE BIZZARRI
9147 T.B.A. 1,578 Sq.Ft.

ALBERT J. SCHUHOLZ
9144 T.B.A. 0.36 Ac. R.R.O. 0.42 Ac.

DAVID L. STONEBURNER
MARGARET T. STONEBURNER
9145 T.B.A. 0.35 Ac. R.R.O. 0.14 Ac.

Open Field

N 73°38'30" E 33.85'

N 5°26'35" E

N 17°37'35" W SECTION 10 — SECTION 11

N 17°10'08" W 200.77'

N 5°26'35" E 216.51' to SECTION CORNER

N 5°26'35" E 165.12' 103.99'

Z

BOWMAN REALTY CO. INC. R.C. Sta 43+97.28

Sta. 46+30.00 PFEIFFER ROAD (RELOCATED) = Sta. 0+00.00 RAMP "F" = Sta. 14+04.11 RAMP "H"

Arc. = 45.15' R = 1,432.40' Ch. = 45.15' Brg. S 74°35'37" E

CORPORATION LINE CITY OF BLUE ASH / VILLAGE OF MONTGOMERY

Proposed Sanitary Sewer by Hamilton County

Field Brush & Briers

N 6°28'24" W 526.64'

+20 F" 160 +80 F" 155 +90 F" 119.75' +30 F" 126.08' +00 F" 135'

LA R/W

Brush & Briers

N 24°59'11" W 277.41'

All Dead Trees

All Dead Trees

Corell Limits

Woven Wire

Barbed Wire

Wooded Area

Two 36" Trees

Exist. Perm Easement(A1) ±2.0Ac

Exist. Temp. Easement

MATCH LINE STA 785+00

MATCH LINE STA 800+00

RAMP "F" N 15°52'43" W

18" Sewer Pipe

Wooded Area N 6°00'05" E 626

Asphalt

RAMP "H" N 20°00'25" E

Arc. 1057.42' R. 5879.58' Ch. 1056.00' Brg. N 11°09'18" E
Arc. 207.91' R. 5879.58' Ch. 207.90' Brg. N 16°06'05" E

Field

PAUL G. BAUER
ROBERT J. NAPOLOH

LOT 1

LOT 2

BOWMAN REALTY CO. INC.

9142 WL-1 Field

9142 WL-2

N 5°27'25" E 200.74'

Twinbrook Acres 2nd Subd. Plat Book 73 Page 13

(RELOCATED) PFEIFFER ROAD

N 12°20'35" W 49.79'

Temporary

Pt. Sta. 791+73.90

Sta. 792+04.34 & SURVEY = Sta. 30+00 PFEIFFER RD. (RELOCATED)

Note: Indicated Sewer Easements are Hamilton County Commissioners' Easements.

Note: For Sta 785 to Sta 800 Right See R/W Sheet No. 22

N 5°48'25" E

Flag Pole

Sta. 45+00.00 PFEIFFER RD.
Sta. 20+00.00 LAKECREST DRIVE

N 7°26'25" E

Leaching Lines

Septic Tank

1-5½ Brick #6049

1-5½ Brick #5991

VINCENT R. BILLITER
MARY E. BILLITER

Coolers

Proposed 12" Sanitary Sewer by City of Blue Ash (To be constructed by others)

Off R/W

Brick Walk

Brick Curb

Shrubs

4" Storage Basement 7' Basement

#6070 1-5½ Brick 6' Ft.

Apples

Asphalt

LAKECREST DRIVE

N 62°27'25" E 364.79'

N 27°32'35" W

N 23°08'25" E 103.43'

ESTHER JANE BIZZARRI

CITY OF BLUE ASH / VILLAGE OF MONTGOMERY

Overhead Wire

Under 12"

Under 16"

Cleared R/W

Ditch

Drainage

Planter

Fence

Shed

Barn & Silo

Corner

Exist. Temporary Easement

N 5°45'05" E

788 789 790 791 792 793 C.B. 794 795 796 797 798

SURVEY

℄ SURVEY CURVE DATA
P.I. = Sta. 800+05.24
Δ = 20°28'30" Lt.
D = 1°00'
R = 5729.58'
L = 2040.83'
T = 1,031.34'
E = 92.08

PFEIFFER ROAD CURVE DATA
P.I. = Sta. 45+73.91
Δ = 14°13'00" Rt.
D = 4°00'
R = 1,432.40'
L = 355.42'
T = 178.63'
E = 11.09'
P.C. = Sta. 43+97.28
P.T. = Sta. 47+52.70

RAMP "F" CURVE DATA - F-1
P.I. = Sta. 2+64.55
Δ = 10°37'40" Lt.
D = 4°30.00
R = 1,273.24'
L = 236.23'
T = 118.45'
E = 5.50'
P.C. = Sta. 1+46.10
P.T. = Sta. 3+82.33

RAMP "F" CURVE DATA - F-2
P.I. = Sta. 7+74.59
Δ = 13°41'52" Rt.
D = 3°00'
R = 1,909.86'
L = 523.26'
T = 263.28'
E = 18.06'
P.C. = Sta. 5+11.01
C.S. = Sta. 10+34.27

RAMP "H" CURVE DATA
P.I. = Sta. 8+77.60
Δ = 14°44'21" Rt.
D = 3°00'
R = 1,909.86'
L = 491.31'
T = 247.02'
E = 15.90'
P.C. = Sta. 6+30.58
P.T. = Sta. 11+21.89

LAKECREST DRIVE CURVE DATA
P.I. = Sta. 21+20.00
Δ = 23°16'51" Rt.
D = 20°00'00"
R = 286.48'
L = 116.40'
T = 59.02'
E = 6.02'
P.C. = Sta. 20+60.98
P.T. = Sta. 21+79.02

LAKECREST DRIVE CURVE DATA
P.I. = Sta. 23+47.63
Δ = 23°31'10" Lt.
D = 38°11'30"
R = 150.00'
L = 74.66'
T = 38.12'
E = 4.77'
P.C. = Sta. 23+09.51
P.T. = Sta. 23+84.17

COMPLETION DATE		
Rev.	Date	Description
	10-24-66	Relocate Lakecrest Drive

HAMILTON CO.
SYCAMORE TWP.
CITY OF BLUE ASH
VILLAGE OF MONTGOMERY
SEC. 10 T-4 E.R.1
SEC. N T-4 E.R.1

STA. 785 TO STA. 800 LEFT

21
27

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

440
445

HAMILTON COUNTY
HAM. 71-13.05
R/W PLANS
LIMITED ACCESS

Note:
Indicated Sewer Easements are Hamilton County Commissioners' Easements.

Note:
For Sta. 785 to Sta. 800, Left
See R/W Sheet No. 21

Note:
STORYBOOK ACRES SEC. A RESUBD. of LOTS 22 & 23 (REG. LAND) PL. BK. 6, PAGE 69

MATCH LINE STA. 785+00

MATCH LINE STA. 800+00

Sta. 792+04.34 ℄ SURVEY
Sta. 50+00 PFEIFFER RD. (RELOCATED)

SECTION 10
SECTION 11

(A) N 74°37'35" W 2,177.11' From S.E. Cor. of SECTION 11

(B) S 74°37'35" E 2,878.40' From N.W. Cor. of SECTION 10

PC Sta. 51+93.10 PFEIFFER RD. (RELOCATED) =
Sta. 12+23.83 RAMP G =
Sta. 0+00.00 RAMP I

Exist. Temp. Easement
40'
40'
786
787
788 N 5°45'05" E
789
790
791
792
793
794
795
796
797
798
N 5°45'05" E

5/8" Sewer Pipe
±21.02
Exist. Perm Ease. (10')
Bush
Two 96" Pipes
Approx. Leaching Area
Septic Tank
Swimming Pool
Asphalt
Chain Link
Wire
Wooded Area
Exist. Temporary Easement
LAWN
Lawn
Flowering Shrubs
Foot Bridge (Wood)
Brg. N 16°05'05" E 12" Pipe
Brg. N 10°39'37" E
Brg. N 7°39'46" W
Brg. N 11°39'37" E
Brg. N 4°39'37" E
Brg. N 1°39'37" E
Brg. N 2°39'37" W
Brg. N 5°39'37" W
Brg. N 8°39'37" W
Brg. N 11°39'37" W
Brg. N 14°39'37" W
Brg. N 17°39'37" W
Brg. N 20°39'37" W
Brg. N 23°39'37" W
Brg. N 26°39'37" W
Brg. N 29°39'37" W
Brg. N 32°39'37" W
Brg. N 35°39'37" W
Brg. N 38°39'37" W
Brg. N 41°39'37" W
Brg. N 44°39'37" W
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Brg. N 86°39'37" W
Brg. N 89°39'37" W
Brg. N 92°39'37" W
Brg. N 95°39'37" W
Brg. N 98°39'37" W
Brg. N 101°39'37" W
Brg. N 104°39'37" W
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Brg. N 317°39'37" W
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Brg. N 359°39'37" E

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

441
445

HAMILTON COUNTY
HAM. 71-13.05
R/W PLANS
LIMITED ACCESS

CORPORATION LINE CITY OF BLUE ASH
VILLAGE OF MONTGOMERY

THE MONTGOMERY FINANCIAL CO. INC.
(AN OHIO CORPORATION)
9148

40' 40'

Future Proposed 12" Sewer Pipe

Easement (To) (From)

Asphalt Drive

Gravel Drive

Swimming Pool

Conc. 1 Sty. Brick

Pool

Tennis Courts (Asphalt)

Asphalt Parking Area

Cedars

Field

Brush & Briars

Garden

Bushes

Const. Limits

Lawn

Stone Steps

Stone Wall

Conc. Patio

Wood Foot Bridge

Wood Steps w/ Wood Rail

Wooded Area

Headwall

Small Saplings

Tr. Level

Bi Level

Drive

Exist. R/W

+95 "H" 155'

+95 "H" 79.03'

+10.00 "H" 76.39'

12" Sewer Pipe

N20°50'45"E 379.42'

L&RW

Arc = 207.29'

R = 5,879.58'

Ch. = 2,062.19'

Brg. = N16°06'05"E

N26°12'05"E

+88.86 151.41'

724.89'

PAUL G. BAUER
ROBERT J. NORDLOH

9149 WL

N26°00'35"E

RAMP "H"

N5°45'05"E

90°

90° Tan. To Curve

400'

36" Pipe

6" DIP

12" DIP

P.I. Sta. 812+14.73

MATCH LINE STA. 800+00

MATCH LINE STA. 815+00

800 801 802 803 804 805 806 807 808 809 810 811 812 813 814

℄ SURVEY

R.C.B.

18" Pipe

15" Pipe

91°35'56" Tan To Curve

RAMP "I"

PLOD

EDWARD H. GRUETER
MARY JANE GRUETER
9164
1-1/2 Sty. Brick #10499
Conc. Patio
LOT 35
STORYBOOK ACRES SUBD.

ROBERT N. STOUT
DOLORES STOUT
9165
1-1/2 Sty. Brick #10509
LOT 36

ELMORE L. REMKE
ELEANOR J. REMKE
9166
2-1/2 Sty. Br. & Ft. #10519
LOT 37
SEC. "B" (REG. LAND)

SAMUEL G. HOWELL
CONSTANCE I. HOWELL
9167
2-1/2 Sty. Br. & Ft. #10529
LOT 38
PL. BK. 6 PAGE 67

GEORGE F. SCHAEFER
JANE H. SCHAEFER
9168
1-1/2 Sty. Brick #10539
LOT 39

JEAN JACCOD
9169
1-1/2 Sty. Brick #10549
LOT 40

HARRY E. JOHNSON
MILDRED E. JOHNSON
9170
1-1/2 Sty. Brick #10559
LOT 41

MATILDA A. SPELMAN
9171
1-1/2 Sty. Brick #10567
LOT 42
STORYBOOK ACRES

MICHAEL P. CERVINO
JOSEPHINE M. CERVINO
9172
2-1/2 Sty. Br. & Ft. #10575
LOT 43
SUBD.

JUDSON B. HANCOCK
FERN L. HANCOCK
9173
1-1/2 Sty. Brick #10583
LOT 44
SEC. "C"

JOHN W. FEIGHERY
MARY KAY FEIGHERY
9174
Tr. Level Br. & Ft. #10591
LOT 45
(REG. LAND)

MARTIN GARNERET
ADELE GARNERET
9175
1-1/2 Sty. Brick #10599
LOT 46
PL. BK. 6

WM. F. ROBBINS
KATHRYN E. ROBBINS
9176
1-1/2 Sty. Brick #10607
LOT 47
PAGE 74

PAUL G. BAUER
ROBERT J. NORDLOH
9177
Bi Level 2-1/2 Sty. Brick #10615
LOT 48

CINDERELLA DRIVE

E SURVEY CURVE DATA	RAMP "H" CURVE DATA	RAMP "I" CURVE DATA
P.I. = Sta. 802+05.24	P.I. = Sta. 8+77.60	P.I. = Sta. 8+20.64
Δ = 20°24'30" Rt.	Δ = 14°44'21" Rt.	Δ = 12°18'30" Rt.
D = 1°00'	D = 3°00'	D = 3°00'
R = 5,729.58'	R = 1,909.86'	R = 1,909.86'
L = 2,040.83'	L = 491.31'	L = 410.12'
T = 1,031.34'	T = 247.02'	T = 205.86'
E = 92.08'	E = 15.90'	E = 11.06'
	P.C. = Sta. 6+30.58	P.C. = Sta. 6+14.78
	P.T. = Sta. 11+21.89	P.T. = Sta. 10+24.90

COMPLETION DATE JUN		
Rev.	Date	Description

HAMILTON COUNTY
SYCAMORE TWP.
CITY OF BLUE ASH
VILLAGE OF MONTGOMERY
SEC. 11 T4 E.R.1

STA. 800 TO STA. 815

23
27

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

442
445

HAMILTON COUNTY
HAM. 71-13.05
R/W PLANS
LIMITED ACCESS

THE MONTGOMERY FINANCIAL CO. INC.
(AN OHIO CORPORATION)
9148

CORPORATION LINE, CITY OF BLUE ASH
VILLAGE OF MONTGOMERY

433.58'
+27.68
150.86'

ELMER L. HUDSON
WILFORD C. HUDSON
DOROTHY H. BAUMES

9178 WL — T.B.A. 1.268 Ac. P.R.O. 0.18 Ac.
9178 — T.B.A. 0.07 Ac. P.R.O. 0.14 Ac.
9178A — T.B.A. 0.02 Ac. P.R.O. 0.02 Ac.

Wooded Area

N26°12'05"E 639.50'

Const. Limits

PAUL G. BAUER
ROBERT J. NOADLOH
9147 WL

N26°27'10"E 172.33'

9178 WL

+00
150'

LA R/W

Wooded Area

N26°09'35"E 1704.22'

LA R/W

9178 WL

Heavily Wooded

Const. Limits

18" Pipe

MATCH LINE STA. 815+00

816 817 818 819 820 821 822 823 824 825 826 827 828 829

SURVEY

C.B.

N26°09'35"E

MATCH LINE STA. 830+00

12"

Wooded Area

Const. Limits

Field
Brush & Briars
724.89'

Small Shade Trees

Scattered Bushes

Flower Garden

Garden

Shrubs

87.16'
N26°21'55"E
149.18'

+00
150'

Wooded Area

LA R/W

1770.12'
N26°09'35"E

Field
Scattered Trees, Brush & Briars

Const. Limits

Small Trees & Brush

LA R/W

HAROLD W. TOOHEY
DOROTHY TOOHEY
9179
Tri-Level Br. & Fr. #10623

RAYMOND L. SHARKEY
EDNA L. SHARKEY
Lawn
9180
Bi-Level Br. & Fr. #10631

ROBERT D. STAMBAUGH
BETTY G. STAMBAUGH
9181
1-Sty. Brick #10639

MARY LOUISE HILL
9182
1-Sty. Brick #10649

9177

LOT 48
LOT 49 STORYBOOK ACRES SUBD.
LOT 50
LOT 51 SEC. C (REG. LAND)
LOT 52 PL. BK. 6, PAGE 74

Asphalt Dr.
Asphalt Dr.
Conc. Dr.
Conc. Dr.

Existing Conc. Drive

Exist. R/W

CINDERELLA DRIVE

Exist. R/W

S. 27°10'E

COMPLETION DATE		
Rev.	Date	Description

HAMILTON COUNTY
SYCAMORE TWP.
VILLAGE OF MONTGOMERY
CITY OF BLUE ASH
SEC. 11 T.4 C.R.1

24
27

STA. 815 TO STA. 830

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

443
445

HAMILTON COUNTY
HAM. 71-13.05
R/W PLANS
LIMITED ACCESS

GALLENSTEIN BROTHERS INC.
9185 WL T.B.A. 5.04 Ac. A.R.O. 0.12 Ac.
9185 T T.B.A. 0.07 Ac.
9185 T.B.A. 0 A.R.O. 0.03 Ac.
9185A T.B.A. 0.02 Ac. A.R.O. 0.03 Ac.

ELMER L. HUDSON
WILFORD C. HUDSON
DOROTHY H. BAUMES

BRYAN EQUIPMENT SALES INC.
9184

VERA E. MOLLOY
9183 WL T.B.A. 0.17 Ac. A.R.O. 0.03 Ac.
9183 T.B.A. 0.04 Ac. A.R.O. 0.06 Ac.
9183 WA

HELENA THEYSOHN
9188 T.B.A. 0.02 Ac. A.R.O. 0.05 Ac.

JEROME R. MORATH
9186 WL T.B.A. 0.85 Ac. A.R.O. 0.02 Ac.
9186 T.B.A. 0.004 Ac. A.R.O. 0.037 Ac.

THE CITY OF CINCINNATI, OHIO. TRUSTEE OF THE UNIVERSITY FUND OF THE UNIVERSITY OF CINCINNATI
9187

MATCH LINE STA. 830+00
MATCH LINE STA. 845+00
SURVEY
L.A.R/W
Exist. R/W
Const. Limits
Deerfield Rd.
Gravel Dr.
Asphalt Dr.
Frame Shed
1-Sty. Conn. Metal Shed
Swimming Pool
Leaching Line Area
Fr. Shed
Conc. Patio
Small Shade Trees
Heavily Wooded Area
Small Trees & Bushes
Field Brush & Briars
Garden
Field
Wooded Area
Woven Wire Fence
Gravel Dr.
Frame 1-Sty.
CB.
18" Pipe
36" Pipe
15" Pipe
CITY OF BLUE ASH
VILLAGE OF MONTGOMERY
CORPORATION LINE

COMPLETION DATE - JUN 26 1964		
Rev.	Date	Description

HAMILTON COUNTY
SYCAMORE TWP.
CITY OF BLUE ASH
VILLAGE OF MONTGOMERY
SEC. 11 T4 E.R.1

25
27

STA. 830 TO STA. 845

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

444
445

HAMILTON COUNTY
HAM. 71-13.05
R/W PLANS
LIMITED ACCESS

BERNARD B. BRINKER
MILDRED G. BRINKER

Frame Shed

Wooded Pasture
(No Underbrush)

N22°57'39"E
246.67'

+78.55
150'

Exist. L.A.R/W

Ditch

Const. Limits

Water Line

GALLENSTEIN BROTHERS INC.
9185
W.L.

Ditch

N26°09'35"E

MATCH LINE STA 845+00

846 847 848 850 851 852 853 854 855 856 857 858 859 860

℄ SURVEY

3" Pipe

36" Pipe

N26°09'35"E

CONSTRUCTED UNDER PROJECT
HAM. 50 B-27.98

15" Pipe

END R/W ACQUISITION
STA. 846+21.21

Ditch

Const. Limits

L.A.R/W

Exist. L.A.R/W

150.75'
N13°46'37"E
100.57'

N20°26'57"E

N4°51'20"E
655.20'

+50.00
175'

S74°14'52"E
561.00'

Wooded

R.C. STA. 851+80.05

THE CITY OF CINCINNATI, OHIO
TRUSTEE OF THE UNIVERSITY
FUND OF THE UNIVERSITY
OF CINCINNATI

9187

SECTION 12
SECTION 11

END PROJECT
STA. 848+73.24

Equation
Sta. 848+73.24 Bk. =
Sta. 849+00.00 Ahd.

BERNARD B. BRINKER
MILDRED G. BRINKER

11 12

℄ SURVEY
CURVE DATA
P.I.: Sta. 850+20.28
Δ: 18°39'38" Rt.
D: 1°20'
R: 4,297.18'
L: 1,399.88'
T: 706.19'
E: 57.64

COMPLETION DATE		
Rev.	Date	Description

HAMILTON COUNTY
SYCAMORE TWP.
CITY OF BLUE ASH
SEC. 11 T4 E.R.1
SEC. 12 T4 E.R.1

STA. 845 TO STA. 860

26
27

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

445
445

HAMILTON COUNTY
HAM. 71-13.05
R/W PLANS
LIMITED ACCESS

Sta. 763+79.65 ℄ SURVEY=
Sta. 50+00 ZIG ZAG RD.

765 766 ℄ SURVEY 767 768 769

84°36'00"

ZIG ZAG ROAD

LOT 9

9130 WL

LAR/W

Temporary Runaround

EDNA A. MEGIE

D. MEGIE ESTATE
PL. BK. 24 PAGE 32

LOT 8

9143 WL

Bird Bath
Flag Pole
2-Sty. Frame
Gravel Dr.
Asphalt
Conc. Block Foundation
Sag
N 7°07'25"W
N 10°55'35"E END WORK
STA. 6+00
1-Sty. Fr. Gar.
Exist. Temporary Easement
Exist. Permanent Easement (10')
Future Proposed 12" Sewer Pipe
Exist. Temporary Easement
N 63°39'53"W 183.30'
Lawn
9143 T
N 40°00'28"W 206.49'
N 36°04'47"W 150.75'
Wooded Area
BERT H. LONG
Sink Holes
Woven Wire
N 3°40'35"W 73.38'
N 43°16'43"W 71.16'
N 60°14'25"W (N 60°55'30"W R.L. Deed)
N 5°15'35"E (N 4°39'30"E Deed)
Brush & Briars
N 30°16'44"E 103.08'
N 25°42'20"E 152.07'
N 40°14'35"W 253.37'
N 30°27'25"W 51.55'

PRIVATE DRIVE CURVE DATA

①	P.I. = Sta. 0+63.02	
	Δ = 36°36'00" Lt.	
	D = 57°17.45"	
	R = 100.00'	
	L = 63.88'	
	T = 33.07'	
	P.C. = Sta. 0+34.95	
	P.T. = Sta. 0+98.83	
②	P.I. = Sta. 2+62.17	
	Δ = 33°14'00" Rt.	
	D = 57°17.45"	
	R = 100.00'	
	L = 66.72'	
	T = 34.64'	
	P.C. = Sta. 2+27.53	
	P.T. = Sta. 2+94.23	
③	P.I. = Sta. 5+63.00	
	Δ = 37°00'00" Lt.	
	D = 57°17.45"	
	R = 100.00'	
	L = 64.28'	
	T = 33.46'	
	P.C. = Sta. 5+29.54	
	P.T. = Sta. 5+94.12	

Exist. R/W
Exist. R/W 7
Exist. R/W 2
Exist. R/W 3
Exist. R/W 4
Exist. R/W 5
Exist. R/W 6
Exist. R/W 8
Exist. R/W 9
Exist. R/W 10
Exist. R/W 11
Exist. R/W 12
Exist. R/W 13
Exist. R/W 14
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Exist. R/W 43
Exist. R/W 44
Exist. R/W 45
Exist. R/W 46
Exist. R/W 47
Exist. R/W 48
Exist. R/W 49

Field Entrance
1½-Sty. Fr. Barn
1½-Sty. Frame Barn
1-Sty. Fr. Shed
2-Sty. Brick
Fr. Gar.
Shed
Gravel
Asphalt
Woven Wire
Pairs of Wood Fences
Cultivated
Wooded Area
Sink Holes
Brush & Briars

Sta. 11+00.70 SERVICE RD. No. 1 =
Sta. 43+34.50 ZIG ZAG RD.

Sta. 18+70.00
℄ Cul-de-Sac

9130B
9130C
9130C T
9130 T-3
9130D
9130D T
9143

MONTGOMERY PRESBYTERIAN CHURCH
9130C T.B.A. 0.05 Ac. R.R.O. 0.07 Ac.
9130C T T.B.A. 0.045 Ac.

HARE-KETT DEVELOPMENT CO.
9130D T.B.A. 0.27 Ac. P.R.O. 0.22 Ac.
9130D T T.B.A. 0.18 Ac.

COMPLETION DATE		
Rev.	Date	Description

HAMILTON COUNTY
SYCAMORE TWP.
VILLAGE OF MONTGOMERY
SEC. 10 T.4 E.R.1

27
27

SERVICE ROAD No. 1 & PRIVATE DRIVE

TE 95
400-1-63

GENERAL INFORMATION

INTRODUCTION

The project consists of the proposed construction of 3.3 miles of SR 1 (IR 71), beginning approximately 0.5 mile west of SR 3 - USR 22, approximately 1 mile south of Cooper Road, extends northward, and terminates 1200 feet north of Deerfield Road. Included in the report are the profiles of Zig Zag Road, and the Pfeiffer Road Interchange (Pfeiffer Road, Ramps F, G, H, and I).

Proposed grades indicate the following maximum proposed cuts and fill embankments:

	CUTS (Max.)	FILL EMBANKMENTS (Max.)
Mainline (SR 1)	25'	41'
Zig Zag Road	3'	20'
Pfeiffer Rd. Interchange		
Pfeiffer Rd.	14'	2'
Ramp F	23'	17'
Ramp G	22'	27'
Ramp H	12'	20'
Ramp I	11'	19'

GEOLOGY OF THE PROJECT

The alignment traverses a dissected portion of the glaciated Lexington Peneplain, in an area where shallow to moderately deep glacial drift overlies interbedded shales and limestones, of Ordovician age.

EXPLORATION

Exploratory borings were made by means of truck-mounted mechanical soil auger, hand auger (in areas of difficult access), and rotary type drill rig, during June, July, and August, 1963. Included in the report are logs of borings made for structure foundation investigations along the project.

INVESTIGATIONAL FINDINGS

Mainline (SR 1)

Materials occurring immediately below proposed grade consist of sands (A-3, A-3a), silts (A-4a, A-4b), silt clays (A-6a, A-6b), and clays (A-7-6), having low moisture contents or moisture contents in the lower portion of the plastic range, as well as interbedded shale and limestone.

Interbedded shale and limestone is anticipated to occur in the following cut areas:

Stations 714+00 to 724+00 - both grades, ditches and lower portions of the backslopes.

Stations 758+00 to 765+50 - both grades, ditches and lower portions of the backslopes.

Stations 765+50 to 766+50 - right grade, right ditch and lower portion of the right backslopes.

Stations 780+00 to 792+00 - both grades, ditches and lower portions of the backslopes.

Frost susceptible silt was encountered within three feet of grade at stations 668+25, 709+30, 783+00, 829+00, 834+00, 844+00, and 849+00.

Zig Zag Road

Materials occurring immediately below proposed grade and in the embankment foundation area consist of silt clays and clays, in the A-6 and A-7-6 classifications, having moisture contents in the lower portion of the plastic range.

Pfeiffer Road Interchange

Pfeiffer Road, Ramps H and I

Materials occurring immediately below proposed grade and in the embankment foundation area consist of sandy silts, silts, silt clays and clays, in the A-4 and A-7-6 classifications, having low moisture contents or moisture contents in the lower portion of the plastic range. Frost susceptible silts were encountered within three feet of grade at Pfeiffer Road station 4E+30, Ramp H station 14+00, and Ramp I station 2+50.

Ramp G and F

Materials occurring immediately below proposed grade consist of frost susceptible silt (Ramp G station 5+00) (Ramp F station 0+00), and silt clay, in the A-4b and A-6a classifications, having moisture contents in the lower portion of the plastic range as well as shale, anticipated to occur between approximately Ramp G stations 0+50 to 3+50, and Ramp F stations 10+00 to 12+00.

Embankment foundation are comprised of shallow sandy silts and clays, in the A-4a and A-7-6 classifications.

LEGEND FOR PROJECT AVERAGE RESULTS OF TESTS - 223 SAMPLES TESTED

DESCRIPTION	H.R.B. CLASS	OHIO CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
Fine sand	A-3(0)	A-3	0	17	73	- 4 -		NP	NP	10	1
Coarse and fine sand	-----	A-3a	0	5	73	- 22 -		24	2	14	6
Stone fragments with sand and silt	A-2-4(0)	A-2-4	30	4	17	13	16	28	6	15	3
Stone fragments with sand, silt and clay	A-2-6(0)	A-2-6	30	31	13	11	15	29	12	15	3
Sandy silt	A-4(0)	A-4a	11	5	31	29	24	23	4	16	24
Silt	A-4(8)	A-4b	1	2	6	36	33	27	3	20	29
Silt and clay	A-6(3)	A-6a	8	4	9	35	44	32	12	19	73
Silty clay	A-6(11)	A-6a	8	4	9	33	46	38	18	21	28
Elastic clay	A-7-5(17)	A-7-5	10	3	2	25	60	60	23	23	3
Clay	A-7-6(15)	A-7-6	2	2	5	30	61	48	24	22	48
Bouldery zone			VISUAL CLASSIFICATION								
Fine textured peat			VISUAL CLASSIFICATION								
Clay bedrock			VISUAL CLASSIFICATION								
Weathered shale			VISUAL CLASSIFICATION								2
Shale			VISUAL CLASSIFICATION								3
Limestone			VISUAL CLASSIFICATION								
Various other material			VISUAL CLASSIFICATION								

Sod and/or Topsoil='X'= Approximate depth.

Auger boring - plan view.

Drive sample and/or core boring - plan view.

Auger boring plotted to vertical scale only.

Drive sample and/or core boring plotted to vertical scale only.

Number of blows for "Standard Penetration" test.
X=number of blows for the first 6 inches.
Y=number of blows for the second 6 inches.

Water content nearly equal to or greater than liquid limit.

Indicates a non-plastic material with high water content.

Free water.

B Indicates broken rock interval.

NOTE: Figures beside borings indicate water content in percent. e.g. 15

REVISED 10/18/63

SOIL PROFILE

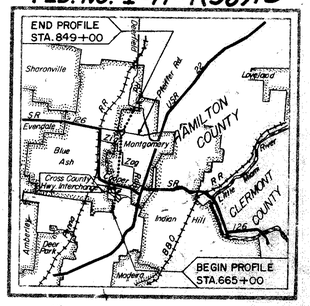
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HAMILTON COUNTY
HAM 71-13.05

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

NOTE: INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS OBTAINED SOLELY FOR USE IN ESTABLISHING DESIGN CONTROLS FOR THE PROJECT. THE STATE OF OHIO DOES NOT GUARANTEE THE ACCURACY OF THIS DATA AND IT IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT.

FED. NO. I-71-1(38)13



LOCATION MAP

Recon - J.S.M. - 6/5-7, 6/17-20/63
Drilling - Auger - A.J.P., T.R.S - 6/18/63 to 6/26/63, 7/10/63, 8/12/63 and 8/13/63
Core - K.D.E. - 7/11/63 to 7/12/63 incl.
Drafting - E.J.S - 9/12/63
REVISION
Drafting - C.L.I. - 10/18/63

SUPPLEMENTAL SUMMARY OF SOIL TEST DATA

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.
*Denotes sample taken at or near grade.

STATION & OFFSET	DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
842+00 100'Rt	0.4-3.0	0	6	33	20	41	33	11	11	A-4a
	3.0-5.5	0	0	78	2	20	NP	NP	19	A-3a
	5.5-14.0	0	1	73	4	17	24	2	24	A-3a
	14.0-19.0	0	0	32	32	36	40	19	21	A-6
	19.0-21.5	14	3	63	8	12	NP	NP	6	A-4b
	21.5-25.0	0	0	32	41	27	36	15	20	A-4a
	25.0-28.0	0	0	36	36	28	36	15	23	A-4b
843+00 30'Lt	0.4-3.0	0	4	32	26	38	31	6	14	A-4a
	3.0-10.0	0	0	86	7	7	19	NP	17	A-6a
	10.0-15.0	0	0	33	34	27	36	15	14	A-4a
	15.0-20.0	0	0	77	6	17	NP	NP	7	A-3a
843+00 100'Rt	0.4-2.0	0	3	52	20	25	NP	NP	27	A-4a
	2.0-7.0	0	0	24	35	41	36	15	20	A-4b
	7.0-12.0	0	1	21	36	42	36	15	20	A-4b
	12.0-17.0	0	0	19	37	44	36	15	20	A-4b
	17.0-20.0	0	0	7	73	20	NP	NP	22	A-4a
844+00 CL	0.4-2.0	10	3	28	26	34	31	12	12	A-4a*
	2.0-4.0	0	0	53	23	24	32	13	20	A-7-6*
	4.0-6.5	0	0	54	22	24	37	17	20	A-6a
	6.0-10.0	0	1	53	11	35	NP	NP	15	A-3a
844+25 110'Rt	0.4-2.0	0	4	46	21	29	25	5	15	A-4a
	2.0-5.0	0	1	62	19	18	23	5	15	A-4a
	5.0-9.0	0	1	57	20	22	26	6	15	A-4b
	9.0-14.0	0	1	61	16	22	26	6	15	A-4b
	14.0-16.0	0	1	62	18	19	24	5	17	A-6a
845+50 100'Lt	0.3-2.0	0	1	41	28	30	26	6	12	A-4a
	2.0-6.0	17	6	72	6	16	16	NP	7	A-3a
	6.0-9.0	17	1	31	35	33	36	15	18	A-4a
845+50 CL	0.5-4.0	0	1	36	37	26	26	6	13	A-4a
	4.0-9.0	0	4	76	1	19	NP	NP	3	A-3a
845+50 35'Rt	0.5-3.5	0	3	64	13	20	19	3	11	A-4a
	3.5-5.0	0	0	28	36	36	36	15	20	A-4b
	5.0-11.0	0	1	28	36	35	36	15	20	A-4b
846+40 70'Rt	0.3-2.0	0	6	64	23	7	19	NP	7	A-4a
	2.0-6.0	7	7	76	3	7	NP	NP	5	A-3a
	6.0-9.0	0	2	37	44	17	25	6	24	A-4a
847+25 CL	0.5-1.0	0	15	53	20	12	23	5	13	A-4a
	1.0-4.0	0	13	63	13	11	19	3	13	A-4a
	4.0-5.0	0	13	63	12	12	19	3	13	A-4a
847+95 100'Lt	0.5-1.0	0	7	36	28	29	28	7	15	A-4a
	1.0-2.0	41	9	33	8	9	NP	NP	9	A-2-4
848+00 CL	0.2-3.5	0	6	33	27	34	31	12	15	A-4a*
	3.5-7.0	0	2	43	18	37	36	15	18	A-7-6
	7.0-10.0	0	2	49	18	31	32	13	18	A-4a

SOIL PROFILE

HAMILTON COUNTY
HAM 71-13.05

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

2/40

SUMMARY OF SOIL TEST DATA

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.
*Denotes sample taken at or near grade.

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
665+00	CL	0.0-4.5	14	2	2	27	55	47	24	21	A-7-6
670+30	70'Rt	0.0-4.0	0	2	5	30	62	46	20	21	A-7-6
671+30	CL	0.0-4.0	0	2	7	30	61	49	23	23	A-7-6
671+80	90'Rt	0.0-2.5	0	1	2	32	65	52	27	21	A-7-6
672+50	90'Rt	0.0-3.5	0	8	9	37	46	35	11	17	A-6a
675+00	CL	0.0-4.0	0	2	5	39	54	41	22	21	A-7-6
677+00	CL	0.0-4.5	0	1	3	30	46	33	9	20	A-4b
678+00	CL	0.0-4.0	0	1	4	50	45	25	10	22	A-6a
678+00	30'Rt	0.0-2.0	26	4	10	19	41	33	12	14	A-6a
679+00	CL	0.0-2.5	17	4	11	30	38	31	11	14	A-6a
679+00	80'Rt	0.0-2.5	0	4	11	36	49	31	11	13	A-6a
680+00	CL	0.0-4.0	0	3	10	32	55	39	16	22	A-6a
682+00	CL	0.0-2.0	0	4	14	50	32	26	4	17	A-4b
686+00	CL	0.4-3.0 3.0-7.0	0	1	3	33	63	49	19	23	A-7-6 Visual
			Brown Silt with Limestone Fragments							-	
686+00	45'Rt	0.2-3.0 3.0-4.0	0	1	4	23	72	57	30	21	A-7-6 Visual
			Brown Silt with Limestone Fragments							-	
688+25	CL	0.4-5.0 5.0-10.0	6 0	11 5	16 17	45 23	22 55	38 23	6 6	17 19	A-4a * A-6b
689+60	30'Lt	0.4-6.0 6.0-8.0 8.0-11.0 11.0-12.0	0 0 38 36	2 10 4 3	8 15 15 15	46 28 13 13	46 47 30 33	38 25 17 NP	13 6 - NP	20 13 - 9	A-6b A-6a A-2-4 A-4a *
689+60	CL	0.4-4.0 4.0-6.0 6.0-10.0	0 23 0	4 4 10	12 15 15	44 24 27	40 34 28	26 24 24	11 10 6	18 13 15	A-6a A-6b A-4a
691+00	CL	0.4-5.0 5.0-9.0 9.0-12.0	4 0 Brown Clayey Silt with Limestone Fragments	4 3	10 10	46 34	46 53	38 30	11 10	21 -	A-6a A-6a Visual *
692+50	200'Rt	0.4-5.0 5.0-8.0	0 0	1 0	3 1	42 21	47 78	25 63	8 33	12 27	A-6a A-7-5
693+60	CL	0.4-4.0 4.0-9.0	7 24	6 2	8 2	33 33	46 43	33 13	10 17	21 26	A-6a * A-6b
694+50	CL	0.4-3.0 3.0-6.0	0 Brown Clayey Silt with Limestone Fragments	3	10	37	45	32	11	21	A-6a Visual
696+50	250'Rt	0.2-2.0 2.0-6.0 6.0-7.0	0 0 0	1 3 3	1 3 8	36 28 67	42 66 61	25 36 26	10 16 -	16 - -	A-6a A-7-6 Visual
			Brown Silty Clay with Limestone Fragments								
697+00	300'Rt	0.2-5.0 5.0-6.0	0 Brown Clayey Silt with Limestone Fragments	4	9	25	62	49	24	30	A-7-6 Visual
698+00	CL	0.3-4.0 4.0-6.5	0 Gray Silty Clay with Limestone Fragments	5	9	25	51	25	12	24	A-6a Visual
699+50	700'Rt	0.2-5.0 5.0-9.0 9.0-12.5	0 0 0	2 2 1	6 8 1	43 37 39	45 53 59	23 47 38	11 28 19	15 21	A-6a A-7-6 A-6b
701+00	CL	0.2-2.0 2.0-7.0 7.0-10.0	0 16 Brownish-Gray Sandy Silt with Limestone Fragments	4 4	18 13	38 27	43 45	23 47	22 28	17 19 -	A-6b A-7-6 Visual
702+00	240'Lt	0.3-5.0 5.0-10.0	0 7	2 4	7 19	23 23	43 45	35 37	15 15	17 16	A-6a A-6a
703+50	CL	0.3-5.0 5.0-11.0 11.0-13.0	21 9 53	4 9 3	12 15 6	23 16 16	40 51 22	27 38 23	16 9 3	13 15 -	A-6b * A-4a A-2-4
706+00	CL	0.4-7.5 7.5-9.0	23 Gray Broken Shale	12	11	22	32	33	17	23 10	A-6b Visual
708+50	400'Lt	0.2-4.0 4.0-9.0 9.0-11.5	0 38 0	1 5 1	2 12 2	54 38 38	43 27 57	40 28 28	13 11 17	25 - 23	A-6b A-6a A-7-6
709+50	CL	0.4-2.0 2.0-4.0 4.0-8.0	0 0 0	5 6 7	9 8 7	36 24 27	36 62 60	28 NP 46	9 NP 21	18 - 26	A-4b * A-7-6 * A-6b
713+50	CL	0.2-3.0 3.0-9.0 9.0-12.0	0 0 0	1 5 5	11 9 9	36 29 29	45 54 56	25 39 39	9 17 26	16 - 28	A-6b A-6b A-7-6 *
717+00	CL	0.4-5.0 5.0-6.0 6.0-10.5 10.5-12.0	0 0 23 Gray Broken Shale	1 1 5	1 6 7	36 28 26	43 65 38	41 NP 38	20 NP 15	13 17 10 11	A-7-6 A-6a A-6b Visual
721+50	CL	0.4-4.0 4.0-6.0 6.0-8.0	0 0 Gray Broken Shale	1 1	2 3	45 31	55 65	44 54	19 28	27 16 16	A-7-6 A-7-6 Visual
725+00	CL	0.4-6.0 6.0-8.0 8.0-9.0	0 0 43	1 1 2	1 2 2	34 28 19	64 69 34	38 NP 30	24 NP 13	32 - 19	A-7-6 A-6b * A-6a *
728+25	CL	0.4-2.0 2.0-3.0 3.0-11.0	0 0 23	4 1 4	3 1 2	46 29 29	47 69 38	28 46 21	11 17 11	19 17 16	A-6a * A-6b * A-6a
731+00	CL	0.4-5.0 5.0-10.0 10.0-11.0	0 24 Gray Silt with Limestone Fragments	6	10	38	51	38	11	18	A-6a * A-6b * Visual
734+50	CL	0.4-4.0 4.0-9.0 9.0-12.0	0 0 43	6 5	12 8	33 27	46 18	43 21	27 NP	12 11	A-6a * A-7-6 * A-6a
738+00	CL	0.4-4.0 4.0-7.0 7.0-13.0	0 14 45	3 6 9	6 9 9	46 24 18	49 51 19	28 20 24	11 6 6	28 - 13	A-6a * A-7-6 * A-4a
742+00	CL	0.4-4.5	0	2	1	44	53	43	18	25	A-7-6 *
746+00	CL	0.0-6.0 6.0-11.0	0 21	5 5	8 3	34 21	53 50	43 28	15 NP	18 18	A-6a A-7-6 *
749+50	CL	0.0-6.0 6.0-10.0	0 24	6 6	4 7	27 27	63 43	44 38	22 15	23 19	A-7-6 * A-6b
752+00	CL	0.0-5.0 5.0-10.5	0 0	1 3	1 10	26 20	43 36	28 22	8 2	16 26	A-6a * A-7-6
754+50	CL	0.0-5.0 5.0-10.0	0 0	2 2	4 6	28 28	66 64	41 38	21 18	23 23	A-7-6 A-7-6
757+50	CL	0.0-6.0 6.0-3.5	23 23	10 12	6 4	23 23	38 38	46 33	23 17	14 23	A-7-6 A-6b
760+50	CL	0.0-6.0 6.0-10.0	33 33	7 7	7 4	18 15	35 33	43 43	19 12	17 23	A-7-6 A-7-5
764+00	CL	0.0-5.0 5.0-7.0	17 0	1 1	1 2	33 41	48 56	28 NP	8 NP	14 16	A-6b A-6b
767+15	CL	0.0-6.0	0	3	4	34	59	43	22	20	A-7-6 *
769+10	CL	0.0-3.0 3.0-4.0	0 0	3 3	7 3	31 42	59 52	34 43	14 19	22 23	A-6a A-7-6
770+00	CL	0.0-3.0 3.0-5.0	0 0	4 1	9 12	22 22	65 65	51 43	29 20	24 24	A-7-6 * A-7-6
773+50	CL	0.0-5.0 5.0-10.0	20 20	8 8	12 12	29 29	38 38	31 27	26 11	18 11	A-7-6 * A-6a *
775+00	CL	0.0-5.0 5.0-7.0	6 21	8 4	14 3	33 33	39 43	37 42	11 18	15 13	A-6a A-6a
779+00	CL	0.0-4.0 4.0-8.0 8.0-14.0 14.0-20.0	0 0 0 0	2 3 3 1	3 3 3 1	46 27 27 27	49 67 67 70	37 NP NP NP	12 NP NP NP	16 - - -	A-6a * A-6a A-6a A-6b *
781+50	CL	0.0-5.0 5.0-10.0 10.0-15.0 15.0-13.0	0 14 7 45	3 3 11 4	10 8 27 5	14 37 37 13	73 52 25 33	38 NP NP NP	12 NP NP NP	23 - - -	A-6a A-4a A-6a A-6a
783+00	CL	0.0-5.0 5.0-10.0 10.0-15.0	0 0 0	2 1 1	7 2 2	37 71 71	53 26 26	45 NP NP	16 NP NP	23 - -	A-7-6 A-4b * A-4b *
794+30	CL	0.0-2.0	14	11	12	27	36	31	11	18	A-6a *

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
799+00	CL	0.2-2.5 2.5-7.0 7.0-10.0 10.0-11.0	12 0 0 Gray Broken Limestone	4 1	16 1	35 31	33 67	32 37	11 23	15 -	A-6a A-6a A-7-6 Visual
799+25	CL	0.2-2.0 2.0-7.0 7.0-13.0 13.0-15.0 15.0-19.0 19.0-22.0 22.0-23.5	0 0 0 0 0 0 Gray Clayey Silt with Limestone Fragments	2 1 1 1 1 1	10 14 14 10 41 41	45 78 78 47 57 57	43 NP NP 43 NP NP	32 NP NP NP 14 16	11 NP NP NP NP NP	15 - - - - -	A-6a A-6a A-6b A-7-6 A-6a A-6b Visual
732+00	CL	0.2-2.0 2.0-7.0 7.0-10.0	0 0 0	2 2 2	10 11 11	41 51 51	46 47 47	28 NP NP	8 NP NP	13 - -	A-6a A-7-6 A-4b
736+00	CL	0.0-6.0 6.0-10.0	0 0	0 0	2 3	31 67	67 30	34 NP	11 NP	18 -	A-6a A-4b
739+50	CL	0.0-4.0 4.0-8.0 8.0-15.0 15.0-19.0	15 0 0 0	2 1 1 0	17 7 51 1	37 7 47 99	29 85 NP NP	24 NP NP NP	7 NP NP NP	17 - - -	A-4a A-2-6 A-4b A-7-6
803+00	CL	0.2-5.0 5.0-7.0 7.0-8.0 8.0-13.0 13.0-18.0	0 0 0 0 0	1 1 1 1 1	7 7 7 7 7	45 32 32 32 32	47 60 60 60 60	32 NP NP NP NP	8 NP NP NP NP	14 - - - -	A-4a A-6b A-4b A-4b A-4b
805+75	CL	0.2-3.0 3.0-5.0 5.0-7.0 7.0-15.0	0 0 0 0	1 1 1 1	7 7 7 7	45 45 45 45	47 46 46 46	32 NP NP NP	8 NP NP NP	14 - - -	A-6a A-4b A-4b A-4b
808+50	CL	0.2-4.0 4.0-9.0	15 0	0 1	16 16	37 33	32 50	40 32	11 11	13 -	A-6a A-6b
811+50	CL	0.2-3.0 3.0-7.0 7.0-10.0	30 Bluish-Gray Silty Clay with Limestone Fragments	2	7	34	37	28	4	13	A-4b A-2-4 Visual
812+50	CL	0.2-3.0 3.0-6.0 6.0-15.0 15.0-17.0 17.0-19.0	0 0 0 0 0	2 1 1 1 1	24 24 24 24 24	43 43 43 43 43	33 33 33 33 33	28 NP NP 14 14	7 NP NP 4 4	15 - - 13 13	A-4a A-6a A-4b A-6a A-4b
819+60	CL	0.4-4.0 4.0-8.0 8.0-14.0 14.0-19.0	14 14 0 0	3 1 0 0	21 50 49 49	21 50 32 32	41 50 19 19	26 24 NP NP	8 11 NP NP	21 14 16 16	A-6a A-6b A-4a A-4a
819+75	CL	0.0-3.0 3.0-9.0 9.0-14.0	0 0 0	0 0 0	15 15 15	28 28 28	57 57 57	41 41 41	21 21 21	17 17 17	A-7-6 A-6a A-4a
823+00	CL	0.0-6.0 6.0-12.0 12.0-14.0	0 0 0	0 0 0	2 2 2	38 38 38	60 60 60	43 43 43	23 23 23	28 28 28	A-7-6 A-6a A-4a
826+50	CL	0.0-2.0 2.0-10.0 10.0-14.0	0 0 0	0 0 0	1 1 1	24 24 24	75 75 75	47 47 47	27 27 27	28 28 28	A-7-6 * A-7-6 * A-6a
829+00	CL	0.0-4.0 4.0-10.0 10.0-14.0	0 0 0	0 0 0	2 2 2	43 43 43	55 55 55	41 41 41	23 23 23	28 28 28	A-6b * A-6b * A-4a
831+00	CL	0.0-3.0 3.0-9.0 9.0-14.0 14.0-17.0	0 0 0 0	0 0 0 0	1 1 1 1	29 29 29 29	70 70 70 70	45 45 45 45	25 25 25 25	28 28 28 28	A-6a A-6a A-6a * A-4a *
834+00	CL	0.0-3.0 3.0-6.0 6.0-11.0 11.0-16.0 16.0-23.0 23.0-30.0	0 0 0 0 0 0	3 3 3 4 17	11 8 8 8 23	46 64 64 64 - 12 - - 4 -	40 25 25 24 NP NP	28 NP NP NP NP NP	11 NP NP NP NP NP	26 - - - - -	A-6a A-4b A-4b A-4b A-3a * A-3
837+00	CL	0.0-6.0 6.0-11.0 11.0-16.0 16.0-23.0 23.0-30.0	0 0 0 0 0	1 1 1 1 1	5 5 5 5 5	43 43 43 43 43	51 51 51 51 51	28 NP NP NP NP	8 NP NP NP NP	18 - - - -	A-6a A-4a A-3a A-3a * A-3

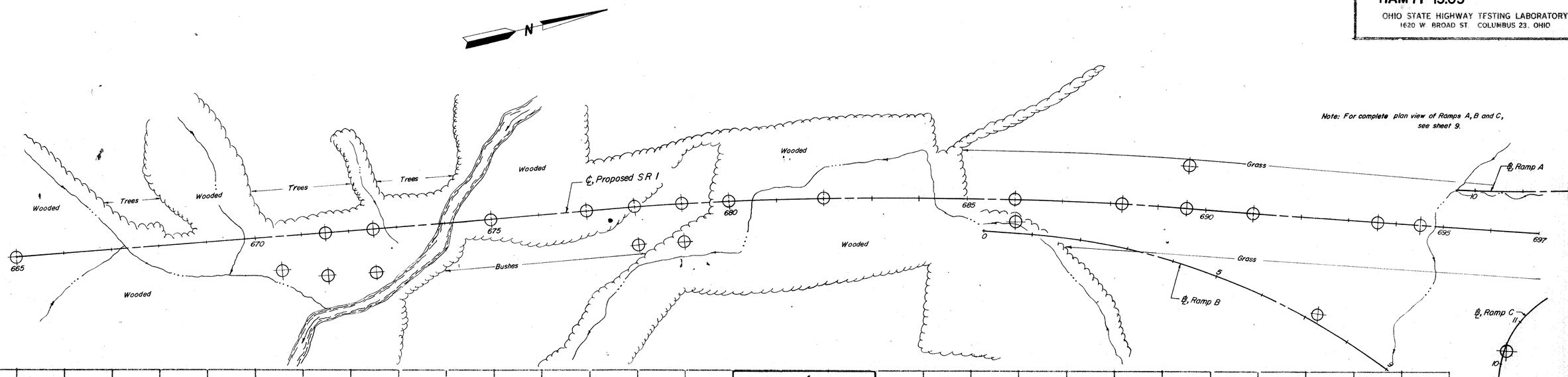
STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
840+00	CL	0.2-5.0 5.0-8.5 8.5-14.0 14.0-17.0 17.0-24.0 24.0-28.0	0 0 0 0 0 0	0 1 17 2 0 1	1 13 34 71 73 85	44 48 24 21 - 22 - - 14 -	54 38 25 6 NP NP	38 26 NP NP NP NP	14 8 NP NP NP NP	22 26 16 17 12 15	A-6a A-6b A-3a A-3a A-3a * A-3a
		RELOCATED ZIG-ZAG ROAD									
47+00	25'Rt	0.0-4.0 4.0-8.0	40 42	1 4	2 3	16 22	41 29	59 41	32 20	32 23	A-7-6 * A-7-6
54+00	CL	0.0-3.0	6	9	15	41	29	29	7	28	A-4a
56+30	CL	0.0-4.0	57	4	4	11	24	41	17	26	A-7-6 *
59+30	10'Lt	0.0-5.0 5.0-9.0	40 32	2 1	6 2	19 32	33 33	41 37	21 15	27 19	A-7-6 * A-6a
		PFEIFFER ROAD									
41+00	10'Lt	0.0-6.0	29	3	7	29	32	31	12	22	A-6a *
46+30	CL	0.0-5.0 5.0-9.0	10 Brown Clay and Stone Fragments	3	15	53	14	24	7	14	A-4b * Visual
52+00	CL	0.0-6.0 6.0-9.0	35 26	3 2	5 3	34 31	23 38	28 33	11 13	21 20	A-6a * A-6a *
54+75	10'Rt	0.0-3.0	55	7	4	16	18	30	11	9	A-2-6 *
		RAMP F									
3+00	BL	0.0-3.0 3.0-5.5	3 Gray Broken Limestone	5	20	41	26	33	5	12	A-4a * Visual
6+00	BL	0.0-2.0 2.0-3.0	25 Gray Broken Limestone	11	17	17	30	40	21	15 -	A-7-6 Visual
9+00	BL	0.0-2.5	0	3	5	39	53	38	14	18	A-6a *
		RAMP G									
2+00	BL	0.0-6.0 6.0-9.0	19 0	3 2	7 5	29 54	42 39	32 31	14 9	19 14	A-6a A-4b
5+00	BL	0.0-4.0	0	1	5	54	40	29	7	19	A-4b *
7+70	11'Lt	0.3-3.0 3.0-4.0	12 Brown Sandy Silt W/Limestone Fragments	13	22	31	22	25	6	19 -	A-4a Visual
		RAMP H									
3+00	BL	0.0-5.0 5.0-10.0	0 35	7 38	41 10	21 6	31 9	30 30	11 12	15 21	A-6a * A-2-6
11+20	45'Lt	0.3-3.0 3.0-7.0 7.0-11.0 11.0-14.0	0 13 0 Brown Silty Clay W/Limestone Fragments	2 9 1	4 16 4	47 28 51	47 34 44	39 29 29	15 9 7	24 - 22 -	A-6a A-4a A-4b Visual *
		RAMP I									
2+30	BL	0.0-6.0 6.0-10.0 10.0-13.0 13.0-20.0	0 0 Gray Weathered Shale Gray Weathered Shale	2 1	5 2	54 63	39 34	28 -	9 -	24 19 16 16	A-4b A-4b * Visual Visual
5+40	10'Lt	0.3-2.0 2.0-7.0 7.0-11.0 11.0-13.0 13.0-18.0 18.0-19.0	0 0 0 0 0 Gray Broken Limestone	6 1 1 1 1	13 24 1 1 3	50 35 44 58 93	29 29 54 40 82	24 12 28 31 37	5 14 11 11 31	35 34 28 28 31 -	A-4b A-6a A-6a A-6a A-7-6 Visual
9+00	BL	0.0-5.0 5.0-6.0	0 19	7 4	20 12	31 34	42 31	29 32	11 13	14 13	A-6a A-6a
		DRIVE SAMPLE SOIL TEST DATA									
		MAINLINE									
716+25	70'Rt	0.0-6.0 10.0-10.3	0 43	3 6	10 9	46 22	41 20	36 28	13 10	9 14	A-6b A-4a
		PFEIFFER ROAD									
50+60	33'Lt	0.0-6.0 10.0-11.0 13.0-16.0 20.0-21.0 25.0-26.0	0 0 0 0 0	1 1 0 0 0	3 4 1 0 0	64 52 52 41 15	32 NP NP 59 85	31 NP NP NP 48	11 NP NP NP 23	26 58 16 - 28	A-6a A-4b A-4b A-4a A-7-6
		RAMP J									
11+70	BL	0.0-6.0 10.0-11.0 15.0-15.5	30 30 0	4 7 2	12 9 1	23 19 74	31 35 23	30 29 NP	14 13 NP	17 14 19	A-6a A-6a A-4b

SOIL PROFILE

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HAMILTON COUNTY
HAM 71-13.05

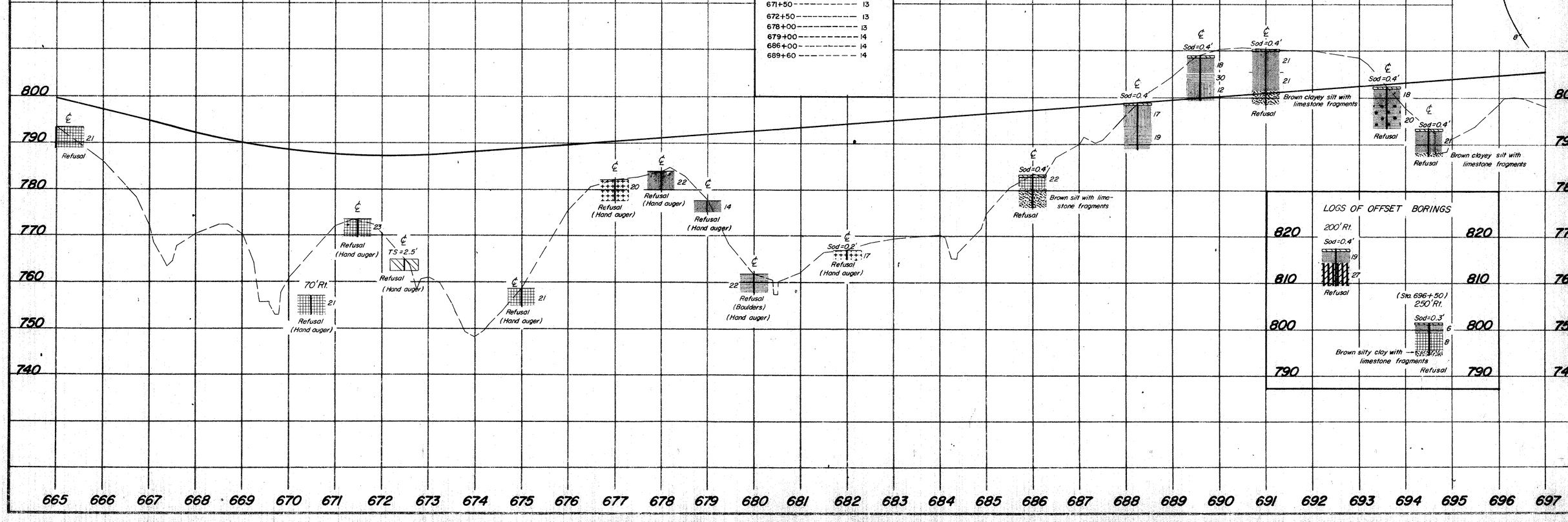
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO



Note: For complete plan view of Ramps A, B and C, see sheet 9.

CROSS SECTION INDEX

Station	Sheet
671+50	13
672+50	13
678+00	13
679+00	14
686+00	14
689+60	14



SOIL PROFILE

HAMILTON COUNTY
HAM 71-13.05

OHIO STATE HIGHWAY TESTING LABORATORY
1600 W. BROAD ST. COLUMBUS 23, OHIO

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N

Note: For complete plan view of Cross County Hwy. Interchange, see sheet 9.

℄, Ramp A
℄, Ramp C
℄, Ramp D
℄, Ramp E-1
℄, Ramp E
℄, Proposed Cross County Hwy.
℄, Proposed SR 1
℄, Proposed Cooper Rd.
℄, Existing Cooper Rd.

Sta. 716+54.44, ℄, Proposed SR 1
Sta. 50+00, ℄, Proposed Cooper Rd.

Sta. 702+87.27, ℄, Proposed SR 1
Sta. 274+13.69, ℄, Proposed Cross County Hwy.

Wooded
Cultivated
Football Field
Lawn
Grass and Weeds
Grass
Proposed grade Cross County Hwy.

Gray silty clay with limestone fragments
Brown-gray sandy silt with limestone fragments
Brown clayey silt with limestone fragments
Refusal
Top of Rock-In-Place

Shale, gray, hard to firm, dense, calcareous, fissile, with soft crumbly clay seams, interbedded with limestone, (gray to bluish-gray, hard, dense, crystalline, fossiliferous, containing argillaceous seams. Limestone intervals 0.1' to 0.4' thick and comprising 40 % of interval). Core loss 12%.

* = 0.3' Penetration

LOGS OF OFFSET BORINGS

520' Rt. Sod=0.3' — 30 — Refusal
700' Rt. Sod=0.2' — 18, 23, 21 — Refusal
240' Lt. Sod=0.3' — 17, 16 — Refusal

LOG OF OFFSET BORING

400' Lt. Sod=0.3' — 35, 18, 22 — Refusal

850 840 830 820 810 800 790

697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729

SOIL PROFILE

HAMILTON COUNTY
HAM 71-13.05

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

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N

Grass and Weeds
Wooded
Grass
Wooded
Golf Course
℄, Proposed SR 1
Grass
Pasture
Residential
Grass and Weeds
Wooded
Grass
Golf Course
Wooded
Grass
Pasture
Residential
Golf Course

729 730 735 740 745 750 755 760 761

Sod=0.4'
18
18
Gray silt with limestone fragments
Refusal

Sod=0.4'
25
23
11
Refusal

Sod=0.4'
20
27
8
Refusal

Sod=0.4'
25
Refusal
(Hand auger)

18
18
Refusal

23
19

26
21
Refusal
(Boulders)

23
23

23
14
Refusal

Brown clay
Top of Rock-In-Place

17
23
Refusal

Clay bedrock, dark-gray, soft, moist to damp, plastic-in-part, crumbly-in-part, calcareous; grading into shale, fissile-in-part below elev. 825.7' interbedded with limestone, (gray, hard, broken, fossiliferous, 0.4' to 0.8' intervals).
Core loss 23 %.

860 850 840 830 820 810 800

729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761

SOIL PROFILE

HAMILTON COUNTY
HAM 71–13.05

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

6/40

N

Note: For Profile of Zig Zag Rd., see sheet 11.

Note: For complete plan view of Pfeiffer Rd. Interchange, see sheet 10.

℄, Proposed Zig Zag Rd.

Sta. 763+79.65, ℄, Proposed SR 1
Sta. 50+00, ℄, Proposed Zig Zag Rd.

Existing Zig Zag Rd.

Residential — Grass — Wooded — Grass — Lawn — Wooded — Cultivated

℄, Proposed SR 1

761 765 770 775 780 785 790 793

Residential — Grass — Lawn — Cultivated — Wooded — Weeds — Weeds

℄, Ramp F — ℄, Ramp G

Note: Stream flowing on limestone bedrock.

Existing Pfeiffer Rd.

Sta. 792+04, ℄, Proposed SR 1
Sta. 50+00, ℄, Relocated Pfeiffer Rd.

℄, Relocated Pfeiffer Rd.

Match line

48 ℄ Existing Zig Zag Rd. 46

℄, Proposed Zig Zag Rd.

PROFILE INDEX

	Sheet
Pfeiffer Rd.	11
Ramp F	11
Ramp G	12

(Sta. 48+68, 13 Lt., Proposed Zig Zag Rd.)

Proposed grade Zig Zag Rd.

133' Rt.

Yellowish-brown and dark-brown calcareous clay

Top of Rock-In-Place

℄ 14 16 Refusal

A.

A. Shale, yellowish-brown in top 5.2', bluish-gray in remainder, with thin crumbly clay seams, fissile, firm, interbedded with limestone (bluish-gray, crystalline, fossiliferous, hard, with argillaceous seams, max. 0.4' beds, comprising 40% of the interval). Core loss 4%.

℄ 20 Refusal

℄ 23 20 Refusal

℄ 24 25 Refusal

℄ 18 11 Refusal

℄ 20 21 Refusal

℄ 22 24 13 21 Refusal

(Sta. 11+70, ℄, Ramp F)

℄ 21 12 11 14 Refusal 84' L.t.

B.

C.

Note: For complete descriptions of cored intervals, see profile of Ramp F, sheet 11.

℄ 23 18 20

℄ 18 Refusal (Hand auger)

Limestone, thin-bedded with interbedded calcareous clay.

℄ Sod=0.3' 18 22 26 B Refusal

℄ Sod=0.3' 15 24 19 28 17 20 Refusal

℄ Sod=0.2' 20 24

Gray clayey silt with limestone fragments

Proposed grade Relocated Pfeiffer Rd.

840 830 820 810 800 790 780 770

761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793

SOIL PROFILE

HAMILTON COUNTY
HAM 71-13.05

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

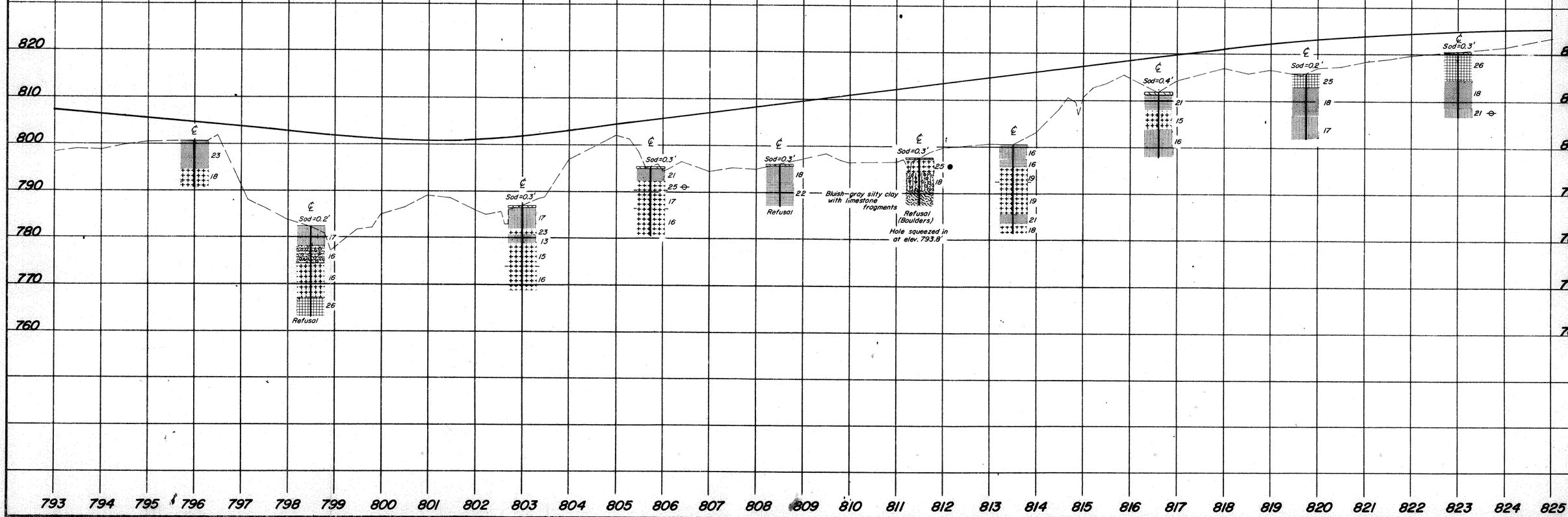
7/40

N

Note: For complete plan view of Ramps H and I, see sheet 10.

Grass
Grass
Weeds
℄ Ramp H
℄ Proposed SR 1
Wooded
Wooded
℄ Ramp I
Wooded
Lawn
Lawn
Brush and briors
Weeds
Scattered trees and Brush

9 5 1 0 793 795 800 805 810 815 820 825 4 5 10 11



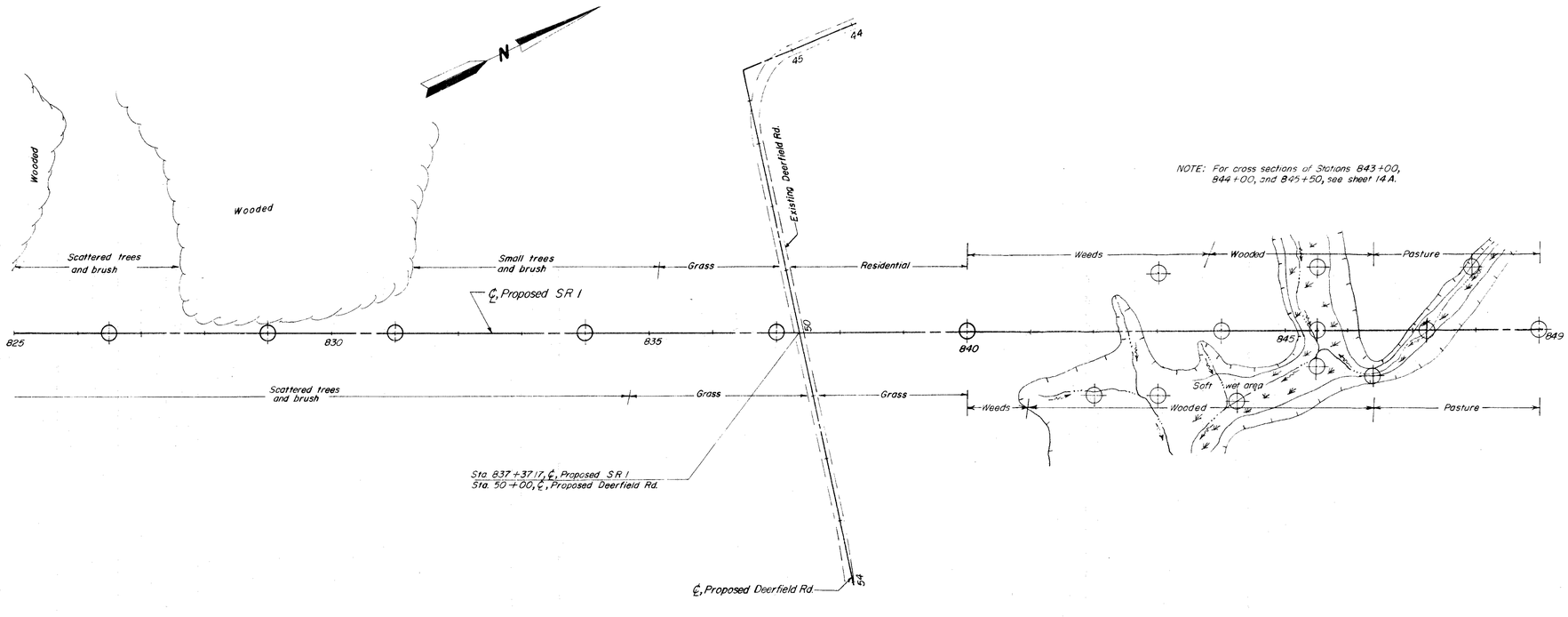
SOIL PROFILE

8
40

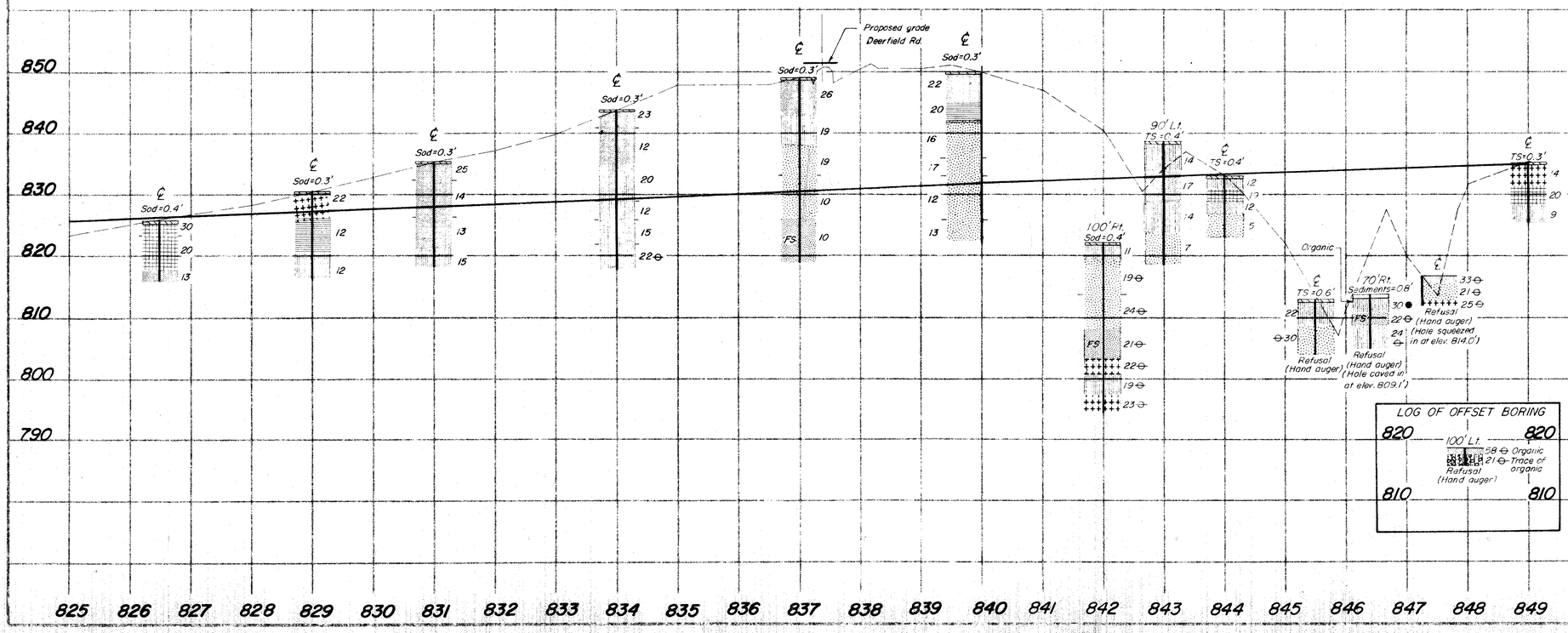
HAMILTON COUNTY
HAM 71—13.05

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

REVISED 10/18/63



NOTE: For cross sections of Stations 843+00, 844+00, and 845+50, see sheet 14A.



LOG OF OFFSET BORING

100' Lt.

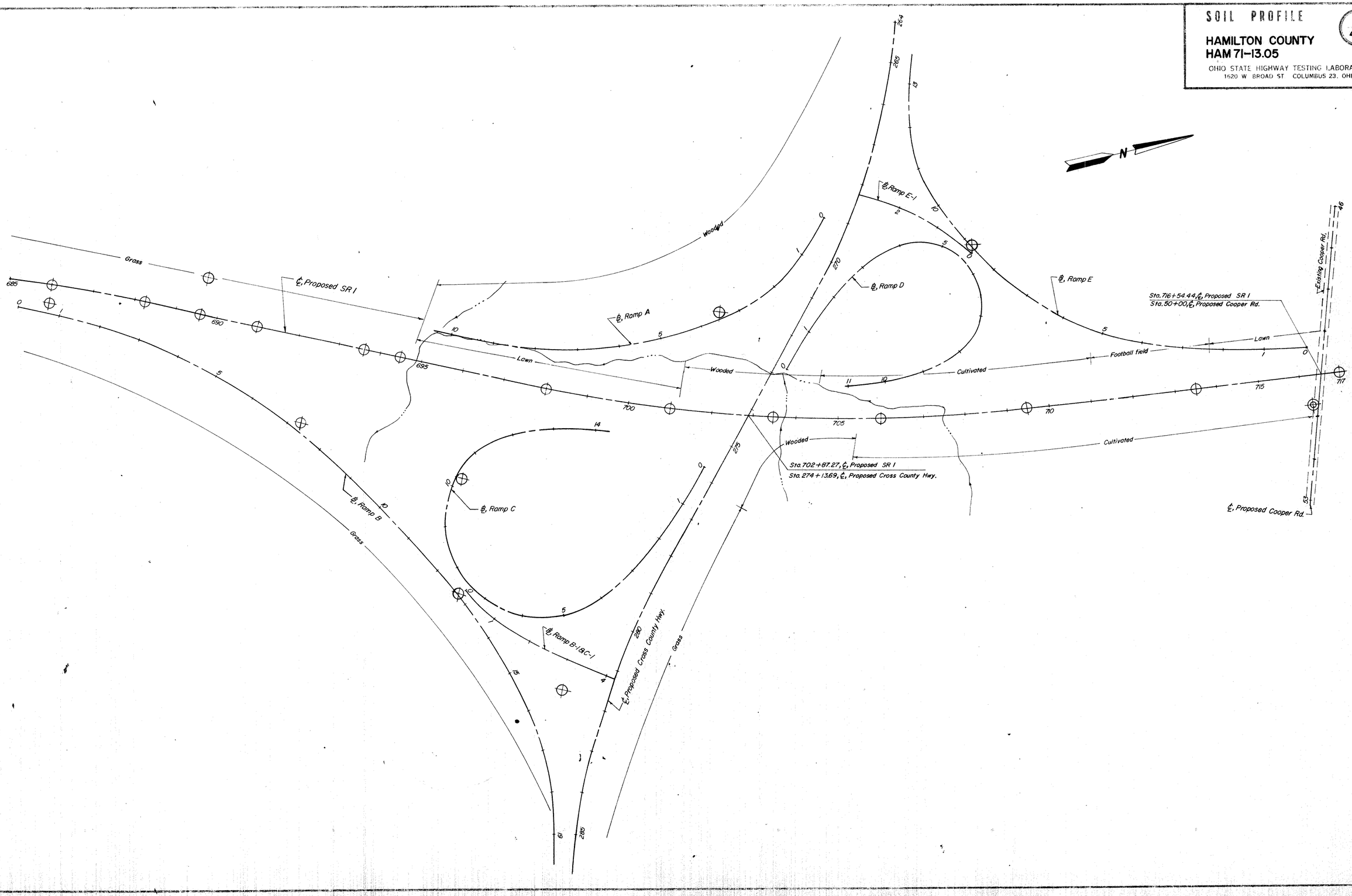
28 Organic
21 Trace of organic
Refusal (Hand auger)

SOIL PROFILE

9
40

HAMILTON COUNTY
HAM 71-13.05

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 23, OHIO

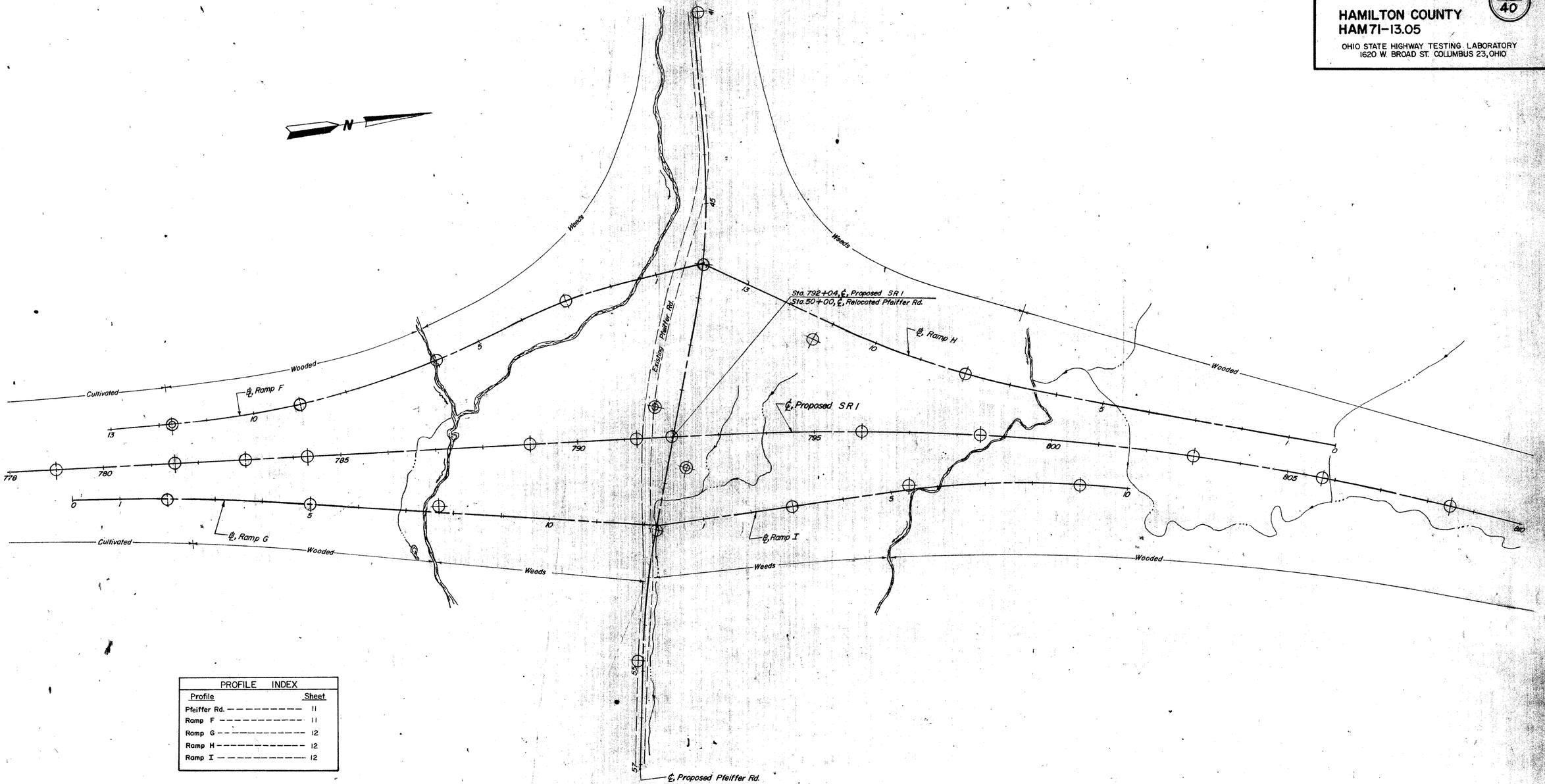


SOIL PROFILE

HAMILTON COUNTY
HAM 71-13.05

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

10
40



PROFILE INDEX	
Profile	Sheet
Pfeiffer Rd.	11
Ramp F	11
Ramp G	12
Ramp H	12
Ramp I	12

SOIL PROFILE

HAMILTON COUNTY
HAM 71–13.05

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

11/40

Zig Zag Rd.

25' Rt. — 32 — 23 — Refusal — Top of Rock-In-Place

13' Lt.

Shale, yellowish-brown in top 5.2', bluish-gray in remainder, with thin crumbly clay seams, fissile, firm, interbedded with limestone (bluish-gray, crystalline, fossiliferous, hard, with argillaceous seams, max. 0.4' beds, comprising 40 % of the interval). Core loss 4 %.

(Sta. 764+00, ℄, Proposed SR 1)

22' Rt. — 14 — 16 — Refusal

Proposed grade SR 1

Yellowish-brown and dark-brown calcareous clay

℄ — 28 — W — Refusal

℄ — 25 — Refusal

10' Lt. — 27 — 19 — Refusal

46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

840 830 820 810 800 790

Pfeiffer Rd.

10' Lt. — 22 — Refusal

Brown clay and stone fragments

℄ — 14 — Refusal

Yellowish-brown clay

Top of Rock-In-Place

A. Clay shale, mottled yellowish-brown and gray, very calcareous, with plastic clay seams, interbedded with limestone (gray, hard, dense, crystalline, moderately broken, maximum 0.3' thick comprises 20 % of interval). Core loss 7 %.

B. Limestone, gray, hard, dense, fossiliferous, with many argillaceous seams, interbedded with clay shale (gray, calcareous, firm; fissile-in-part, crumbly intervals; with soft moist clay intervals throughout, comprising 40 % of intervals). Limestone beds 0.3' maximum thickness. No core loss.

Proposed grade SR 1

(Sta. 792+00, ℄, Proposed SR 1)

49' Rt. — ℄ Sod=0.2' — 20 — 24

38' Lt. — ℄ — 21 — 20 — Refusal

10' Rt. — 9 — Refusal

Gray clay

Top of Rock-In-Place

Limestone, gray, fossiliferous, with argillaceous veins and carbonaceous partings, hard, dense, broken in bottom 1.3', maximum 0.5' beds, interbedded with clay shale (gray, calcareous, with clay seams, comprising 25 % of the interval). Core loss 3 %.

* = 8" Penetration

41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57

800 790 780 770 760 750

Ramp F

℄, Proposed Pfeiffer Rd.

(Sta. 46+30, ℄, Proposed Pfeiffer Rd.)

℄ — 14 — Brown clay and stone fragments — Refusal

B — 12 — Refusal

B — 15 — Refusal

℄ — 18 — Refusal (Hand auger)

Brown silty clay

Top of Rock-In-Place

A.

B.

C.

+ = 6" Penetration

A. Clay shale, mottled gray and brown, firm, carbonaceous inclusions, calcareous, slickensided in part, firm, dense; with fissile shale seams, and few hard gray limestone stringers. Core loss 60 %.

B. Clay shale, mottled greenish-gray, very calcareous, crumbly to firm. Core loss 60 %.

C. Clay bedrock, mottled yellowish-gray and gray, soft very calcareous crumbly, with interbeds of limestone, (light-gray, hard, fossiliferous, crystalline in part, argillaceous seams, 0.1 to 0.3' unit bed thickness comprising 20 % of the interval). Core loss 60 %.

0 1 2 3 4 5 6 7 8 9 10 11 12 13

820 810 800 790 780 770

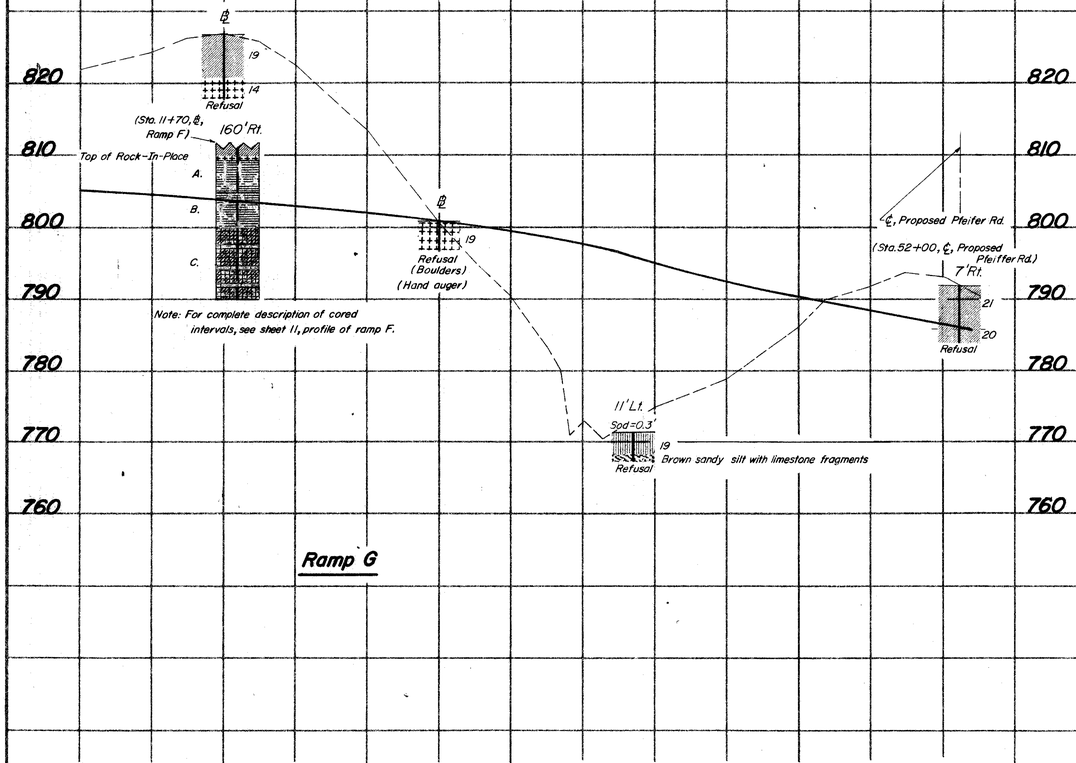
SOIL PROFILE

12/40

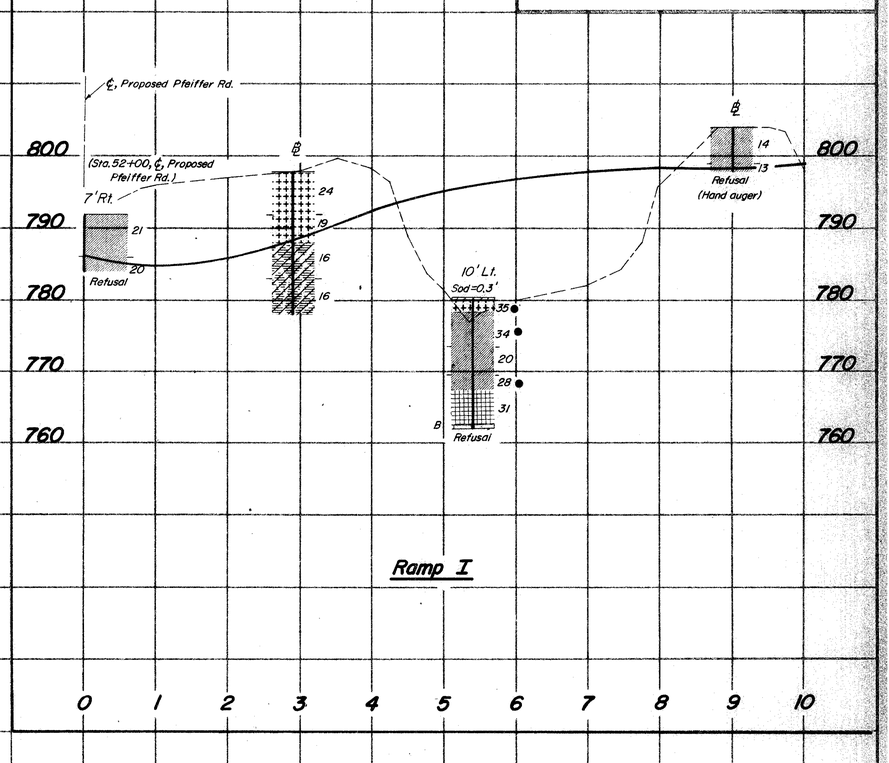
HAMILTON COUNTY
HAM 71-13.05

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

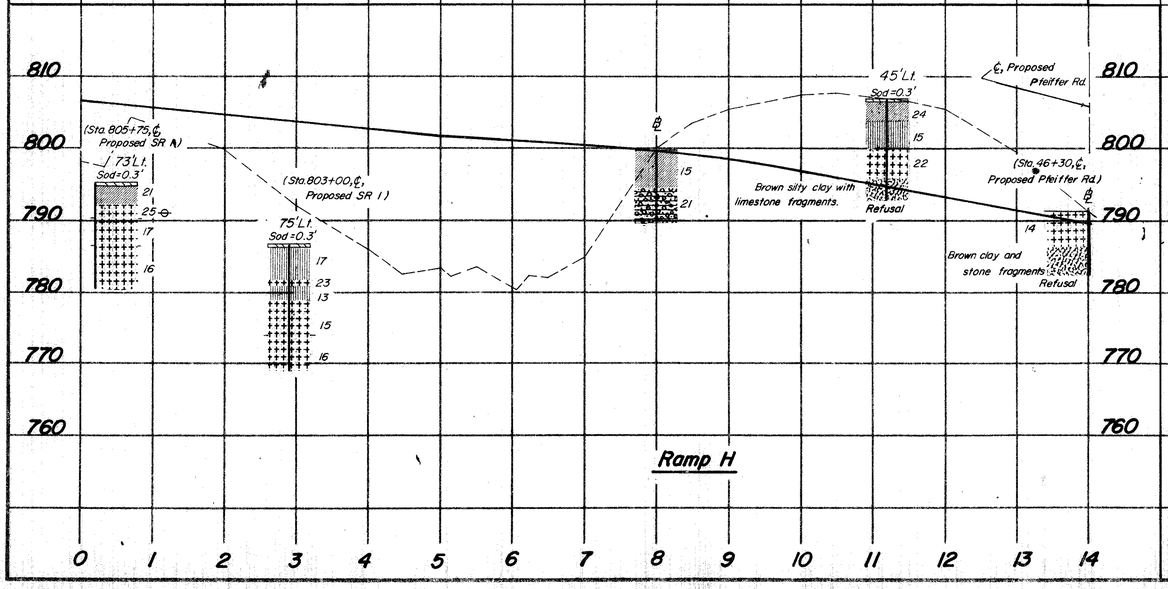
Ramp G



Ramp I



Ramp H



SOIL PROFILE

13
40

HAMILTON COUNTY
HAM 71-13.05

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

Sta. 678+00

Proposed section

22
Refusal
(Hand auger)

14
Refusal
(Hand auger)

790 780 770 760 750

100 50 ℄ 50 100 150

Sta. 672+50

Proposed section

Approximate ground line

T.S.=2.5'
Refusal
(Hand auger)

17
Refusal
(Hand auger)

790 780 770 760 750 740

100 50 ℄ 50 100 150

Sta. 671+50

Proposed section

23
Refusal
(Hand auger)

21
Refusal
(Hand auger)

790 780 770 760 750 740

140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180

SOIL PROFILE

14
4.0

HAMILTON COUNTY
HAM 71-13.05

GPO STATE HIGHWAY SOILS APPROVED
[illegible]

Sta. 689+60

Sod=0.4'
20
21
12
9
Refusal

Sod=0.4'
18
30
12

Proposed section

℄, Ramp B

Sta. 686+00

Proposed section

℄, Ramp B

Sod=0.4'
22
Brown silt with limestone fragments
Refusal

Sod=0.3'
21
Refusal
Brown silt with limestone fragments

Sta.679+00

Proposed section

14
Refusal
(Hand auger)

18
Refusal
(Hand auger)

810
800
790
780
770
760
750

140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180

SOIL PROFILE

15
40

HAMILTON COUNTY
HAM 71 – 13.05

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

SUPPLEMENT 10/18/63

Sta. 845+50

Proposed grade

Approximate ground line

W Sod=0.8' 29 Trace of organic 14 18 Refusal (Hand auger) (Hole caved in)

TS=0.6' 22 30 Refusal (Hand auger)

Sod & TS=0.5' 19 43 Organic 10 Refusal (Hand auger)

Sta. 844+00

Proposed grade

TS=0.4' 12 19 12 5

Approximate ground line

(Sta. 844+25) TS=0.4' Trace of organic 26 Slightly organic 23 23 20 22

Sta. 843+00

TS=0.4' 14 17 14 7

Proposed grade

Approximate grade line

W TS=0.4' 27 Slightly organic 21 21 19 23

840 830 820 810 800 790 780

100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120

TE-95
400-1-63

GENERAL INFORMATION

INTRODUCTION

THE PROJECT CONSISTS OF THE PROPOSED INTERCHANGE OF SR 1 (IR 71) WITH CROSS COUNTY HIGHWAY, APPROXIMATELY 0.3 MILE SOUTH OF BLUE ASH AND 0.7 MILE WEST OF USR 22-SR 3.

THE PROPOSED GRADE INDICATES THAT THE FOLLOWING PROPOSED MAXIMUM CUTS AND FILL EMBANKMENTS:

	CUTS (MAX.)	FILL EMBANKMENTS (MAX.)
CROSS COUNTY HIGHWAY	18′	30′
RAMP A	-	12′
RAMP B	4′	28′
RAMP C	1′	29′
RAMP D	5′	29′
RAMP E	22′	-

GEOLOGY OF THE PROJECT

THE PROJECT IS LOCATED ON THE DISSECTED LEXINGTON PENEPLAIN, IN AN AREA WHERE THIN TO MODERATELY DEEP GLACIAL DRIFT OVERLIES INTERBEDDED LIMESTONE AND SHALE BEDROCK, OF ORDOVICIAN AGE.

EXPLORATION

EXPLORATORY BORINGS WERE MADE BY MEANS OF TRUCK-MOUNTED MECHANICAL SOIL AUGER, AND HAND AUGER (IN AREAS OF DIFFICULT ACCESS), BETWEEN OCTOBER 24 AND 29, 1963. INCLUDED IN THIS REPORT ARE LOGS OF BORINGS MADE FOR THE BRIDGE FOUNDATION INVESTIGATION IN THIS AREA.

INVESTIGATIONAL FINDINGS

MATERIALS OCCURRING IMMEDIATELY BELOW PROPOSED GRADE CONSIST PREDOMINANTLY OF SILT CLAYS (A-6a AND A-6b) AND CLAYS (A-7-6), HAVING MOISTURE CONTENTS IN THE LOWER PORTIONS OF, OR BELOW THE PLASTIC RANGE, AS WELL AS INTERBEDDED LIMESTONE AND SHALE BEDROCK.

SHALE AND LIMESTONE BEDROCK IS ANTICIPATED IN THE EXCAVATIONS AT THE FOLLOWING STATIONS:

CROSS COUNTY HIGHWAY

STATIONS 288+00 TO 292+00 - AT GRADE, IN THE DITCHES, AND LOWER PORTIONS OF THE BACKSLOPES.

STATIONS 298+00 TO 299+00 - AT GRADE, IN THE DITCHES, AND LOWER PORTIONS OF THE BACKSLOPES.

RAMP B

STATIONS 4+50 TO 5+50 - AT GRADE AND IN THE DITCHES.

RAMP E

STATIONS 0+00 TO 5+00 - AT GRADE, IN THE DITCHES, AND LOWER PORTIONS OF THE BACKSLOPES.

IN THE EMBANKMENT FOUNDATIONS, MATERIALS ARE PREDOMINANTLY COMPRISED OF SILT CLAYS (A-6a) AND CLAYS (A-7-6), HAVING MOISTURE CONTENTS IN THE LOWER PORTION OF, OR BELOW THE PLASTIC RANGE. ELASTIC CLAYS (A-7-5) WERE ENCOUNTERED IN THE EMBANKMENT FOUNDATIONS AT RAMP B, STATION 7+25, AND RAMP C, STATION 3+00.

LEGEND FOR PROJECT AVERAGE RESULTS OF TESTS — 41 SAMPLES TESTED

DESCRIPTION	H.R.B. CLASS	OHIO CLASS	% AGG	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
STONE FRAGMENTS WITH SAND AND SILT	A-2-4(0)	A-2-4	23	15	27	21	14	NP	NP	15	1
SANDY SILT	A-4(0)	A-4a	23	6	15	15	21	22	6	14	2
SILT AND CLAY	A-6(9)	A-6a	14	3	7	40	36	35	13	16	11
SILTY CLAY	A-6(10)	A-6b	24	3	4	30	39	38	18	23	3
ELASTIC CLAY	A-7-5(20)	A-7-5	0	1	2	19	78	72	41	35	2
CLAY	A-7-6(15)	A-7-6	9	2	6	30	53	47	24	23	19
SHALE				VISUAL CLASSIFICATION							3
LIMESTONE				VISUAL CLASSIFICATION							-
VARIOUS OTHER MATERIALS				VISUAL CLASSIFICATION							-

SOD AND/OR TOPSOIL=X′= APPROXIMATE DEPTH.

AUGER BORING - PLAN VIEW.

DRIVE SAMPLE AND/OR CORE BORING - PLAN VIEW.

AUGER BORING PLOTTED TO VERTICAL SCALE ONLY.

DRIVE SAMPLE AND/OR CORE BORING PLOTTED TO VERTICAL SCALE ONLY.

(4) NUMBER OF BLOWS FOR "STANDARD PENETRATION" TEST.
X=NUMBER OF BLOWS FOR THE FIRST 6 INCHES.
Y=NUMBER OF BLOWS FOR THE SECOND 6 INCHES.

WATER CONTENT NEARLY EQUAL TO OR GREATER THAN LIQUID LIMIT.

FREE WATER.

NOTE: FIGURES BESIDE BORINGS INDICATE WATER CONTENT IN PERCENT. E.G. 15

SOIL PROFILE

HAMILTON COUNTY

HAM 71-13.05 (SUPPL.)

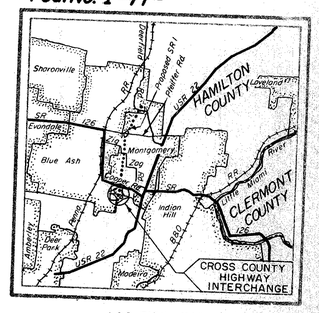
Cross County Highway Interchange

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 23, OHIO

16/40

NOTE: INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS OBTAINED SOLELY FOR USE IN ESTABLISHING DESIGN CONTROLS FOR THE PROJECT. THE STATE OF OHIO DOES NOT GUARANTEE THE ACCURACY OF THIS DATA AND IT IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT.

Fed. No. I-71-



LOCATION MAP

Recon – J.S.M. – 9/17/63

Drilling – B.D.L. – 10/24/63 to 10/29/63

Drafting – C.L.I. – 11/29/63

SUMMARY OF SOIL TEST DATA

NOTE: NP SHOWN IN LIQUID LIMIT AND PLASTICITY INDEX COLUMNS INDICATES THAT THE MATERIAL IS NON-PLASTIC.
*DENOTES SAMPLE TAKEN AT OR NEAR GRADE.

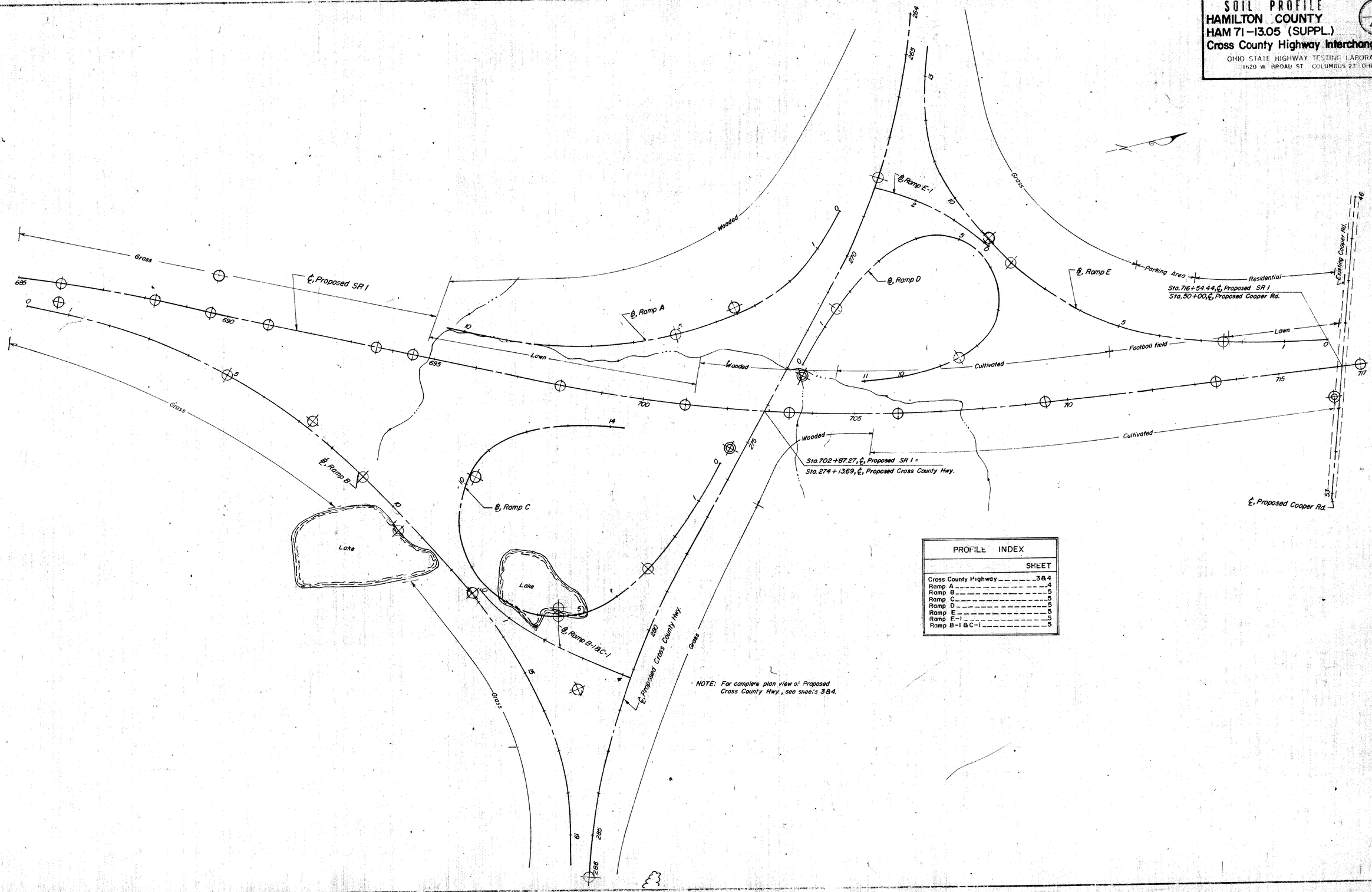
STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
CROSS COUNTY HIGHWAY INTERCHANGE											
SR 1											
⊙ 698+00	CL	0.3-4.0	C	3	9	35	51	35	12	24	A-6a
		4.0-6.5	Gray Silty Clay with Limestone Fragments							-	Visual
⊙ 703+50	CL	0.3-5.0	21	4	12	23	40	37	16	13	A-6a
		5.0-11.0	31	4	15	23	27	36	13	21	A-6a
		11.0-12.0	35	5	6	16	28	28	9	15	A-2-4
⊙ 706+00	CL	0.4-7.5	22	12	11	22	32	38	17	22	A-6a
		7.5-9.0	Gray Broken Shale							10	Visual
CROSS COUNTY HIGHWAY											
251+00	CL	0.3-5.0	4	4	12	27	53	46	28	23	A-7-6
		5.0-10.0	23	6	11	26	34	45	23	18	A-7-6
		10.0-13.0	24	6	27	23	20	22	6	11	A-2-4
		13.0-15.0			17	23	43				A-4a
254+50	CL	0.2-4.0	6	2	3	26	34	37	11	19	A-6a
		4.0-10.0	27	2	3	28	33	46	21	16	A-7-6
256+50	CL	0.2-2.0	0	6	17	46	31	33	11	16	A-6a
		2.0-4.0	24	8	9	32	36	35	15	13	A-6a
258+50	CL	0.3-4.0	Brown Clayey Silt with Limestone Fragments							-	Visual *
258+60	30'Rt	0.3-5.5	Brown Clayey Silt with Limestone Fragments							-	Visual *
259+60	CL	0.3-7.0	7	3	9	33	42	43	19	17	A-7-6 *
		7.0-10.0	Brown Clayey Silt with Limestone Fragments							-	Visual *
260+00	CL	0.2-6.0	11	1	5	50	33	33	11	21	A-6a *
		6.0-12.0	21	3	12	41	26	43	14	18	A-6a
		12.0-17.0				42	20	21	3		A-4a
296+00	CL	0.2-5.0	49	4	2	20	24	36	13	26	A-6a *
		5.0-10.0	20	2	2	28	44	30	27	26	A-7-6 *
298+00	CL	0.3-5.0	C	4	2	19	74	-	-	23	A-7-6
		5.0-8.0	Brown Broken Clay Shale							15	Visual
299+00	CL	0.3-6.0	23	3	10	26	39	44	22	23	A-7-6 *
		6.0-8.0	25	1	11	28	35	40	17	21	A-6b *
295+00	CL	0.3-4.0	29	3	9	29	30	30	11	12	A-6a *
		4.0-8.0	Brown Clayey Silt with Limestone Fragments							-	Visual *
299+00	CL	0.2-3.0	C	1	2	16	81	63	35	25	A-7-5
		3.0-8.0	21	3	6	28	43	44	23	15	A-7-6
		8.0-10.0	Gray Broken Clay Shale								Visual *
RAMP A											
⊙ 3+45	15'Pt	0.2-5.0	C	2	7	46	49	35	15	17	A-6a
		5.0-10.0	7	4	19	28	42	37	15	16	A-6a
5+50	BL	0.2-7.0	C	1	5	28	66	61	35	28	A-7-6
		7.0-11.0	C	3	5	28	63	43	24	24	A-7-6
RAMP B											
⊙ 0+70	24'Lt	0.2-3.0	C	1	4	23	72	37	30	21	A-7-6
		3.0-4.0	Brown Silt with Limestone Fragments							-	Visual
5+00	BL	0.3-3.0	0	3	9	13	65	65	36	24	A-7-6
		3.0-9.0	Brown Broken Clay Shale							17	Visual *
⊙ 7+25	20'Lt	0.4-3.0	0	1	3	49	47	32	13	19	A-6a *
		3.0-3.0	0	0	1	21	78	65	22	27	A-7-5
9+00	BL	0.2-4.0	29	5	5	35	26	37	15	21	A-6a
10+50	30'Rt	0.3-3.0	0	0	1	39	60	48	23	31	A-7-6
⊙ 12+75	4'Lt	0.2-5.0	0	4	22	33	62	43	24	30	A-7-6
		5.0-6.0	Brown Clayey Silt with Limestone Fragments							-	Visual
⊙ 15+35	35'Lt	0.2-5.0	0	3	6	43	42	33	11	16	A-6a
		5.0-9.0	0	2	5	36	57	32	13	23	A-7-6
		9.0-12.5	0	1	1	39	59	33	13	21	A-6b
RAMP C											
3+00	BL	0.2-6.0	0	1	2	21	76	76	43	25	A-7-5
		6.0-9.0	0	0	0	37	63	42	21	20	A-7-5
5+50	BL	0.2-7.0	0	1	5	28	66	61	35	28	A-7-6
		7.0-11.0	0	3	3	28	66	43	24	24	A-7-6
5+50	20'Rt	0.0-6.0	0	1	3	29	67	51	27	30	A-7-6
⊙ 10+28	15'Rt	0.2-2.0	0	1	1	36	62	35	12	16	A-6a
		2.0-6.0	0	2	3	28	67	51	26	16	A-7-6
		6.0-7.0	Brown Silty Clay with Limestone Fragments							-	Visual
RAMP D											
1+50	BL	0.2-5.0	26	2	15	41	43	30	16	13	A-6a
		5.0-10.0	28	1	3	28	39	41	19	13	A-7-6
		10.0-12.0	25	2	3	24	46	37	17	13	A-6a
3+30	BL	0.3-3.0	C	3	7	28	56	44	24	21	A-7-6
		3.0-11.0	15	3	11	24	47	42	23	15	A-7-6 *
RAMP E											
2+45	BL	0.2-5.0	26	2	7	42	43	28	13	13	A-6a
		5.0-10.0	22	2	9	28	39	31	13	13	A-7-6
		10.0-12.0	22	4	7	28	39	27	13	17	A-6a
3+00	BL	0.3-3.0	C	2	3	26	51	45	28	15	A-6a *
		3.0-9.0	23	3	6	28	40	38	20	15	A-7-6 *
		9.0-11.0	23	0	1	23	50	44	20	24	A-7-6
⊙ 6+78	3'RT	0.2-4.0	36	1	5	24	43	28	13	26	A-6a *
		4.0-9.0	30	1	5	28	47	28	11	23	A-6a *
		9.0-11.5	0	1	2	28	67	40	17	23	A-7-6
DRIVE SAMPLE SOIL TEST DATA											
CROSS COUNTY HIGHWAY											
275+30	30'Rt	5.0-6.0	23	3	3	23	31	23	12	11	A-6a
		10.0-11.0	38	10	3	23	21	23	3	27	A-4a

⊙ = Borings taken from HAM-1-12.23

SOIL PROFILE
HAMILTON COUNTY
HAM 71-13.05 (SUPPL.)
Cross County Highway Interchange

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

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PROFILE INDEX	SHEET
Cross County Highway	3 & 4
Ramp A	4
Ramp B	5
Ramp C	5
Ramp D	5
Ramp E	5
Ramp E-1	5
Ramp B-1 & C-1	5

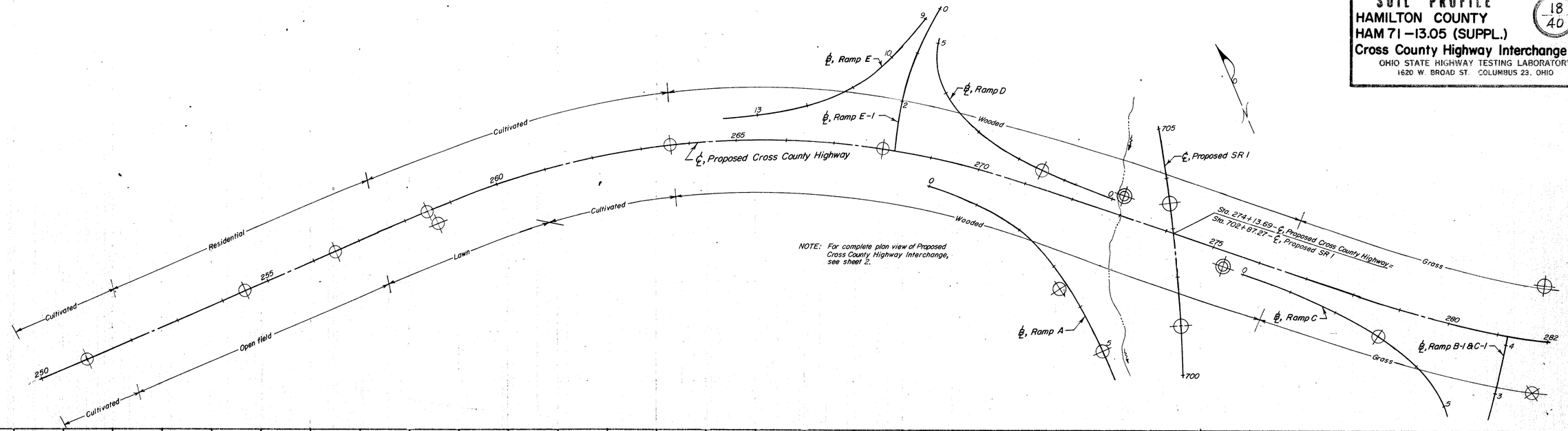
NOTE: For complete plan view of Proposed Cross County Hwy., see sheets 3 & 4.

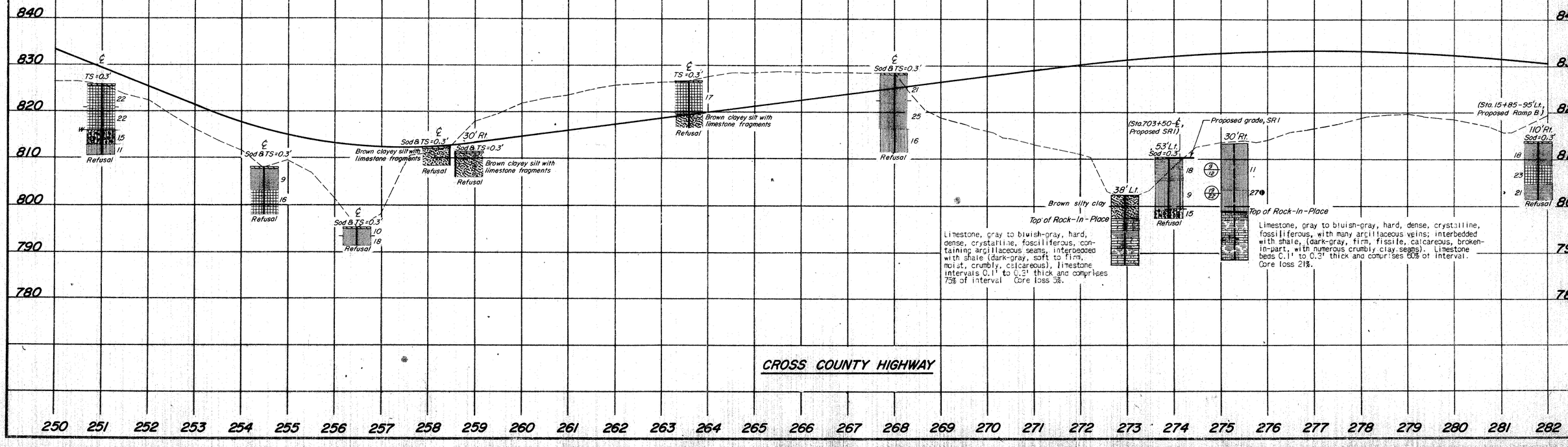
SOIL PROFILE

HAMILTON COUNTY
HAM 71-13.05 (SUPPL.)
Cross County Highway Interchange

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

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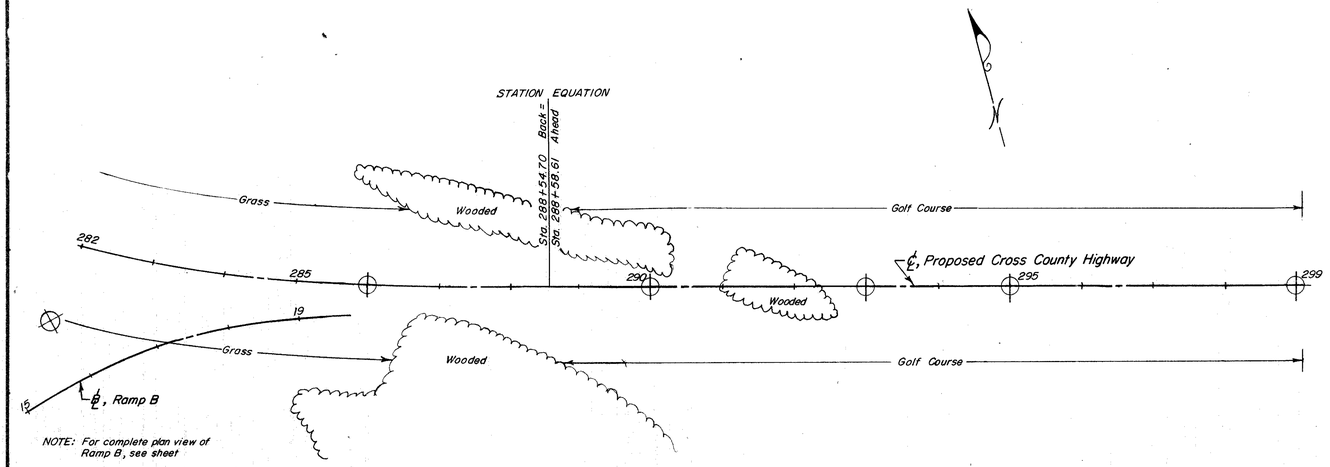




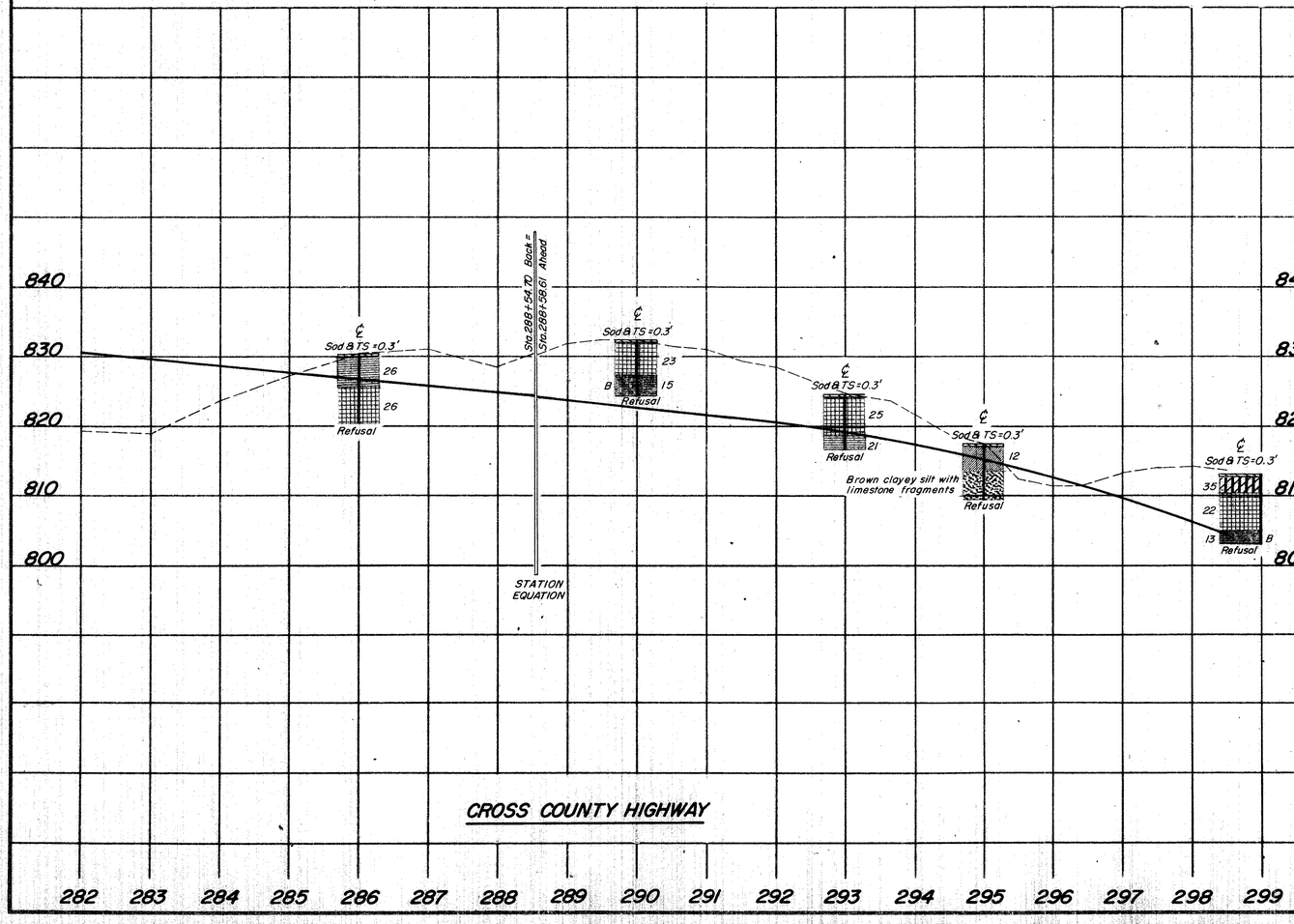
SOIL PROFILE
HAMILTON COUNTY
HAM 71-13.05 (SUPPL.)
Cross County Highway Interchange

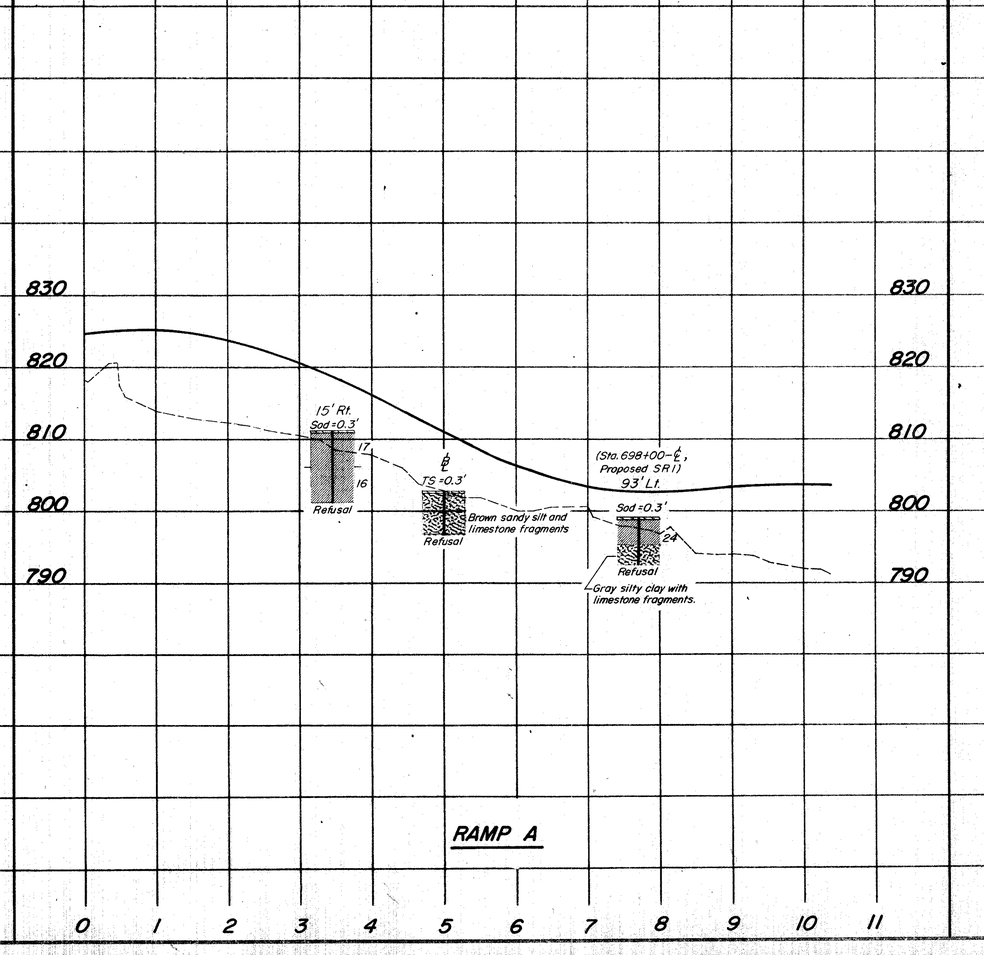
OHIO STATE HIGHWAY TESTING LABORATORY
1520 W. BROAD ST. COLUMBUS 23, OHIO

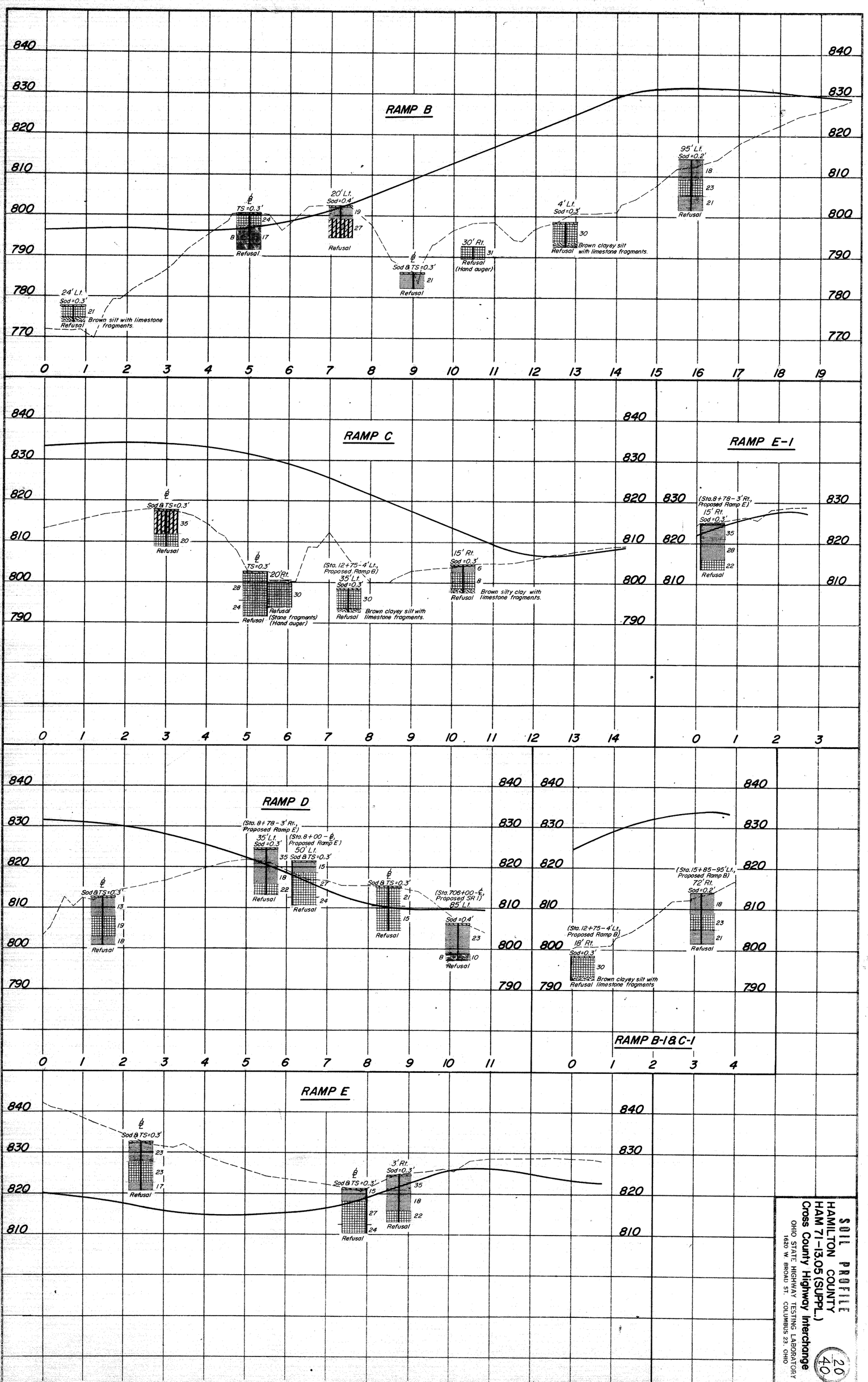
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NOTE: For complete plan view of Ramp B, see sheet







SOIL PROFILE
HAMILTON COUNTY
HAM 71-13.05 (SUPPL.)
Cross County Highway Interchange

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

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HAMILTON COUNTY
HAM-71-13.05

GEOLOGY OF THE SITE

The structure site is located upon the glaciated Lexington Peneplain and across a minor tributary stream to the Little Miami River. Shallow to thin soils overlie interbedded limestone and shale bedrock, of Ordovician age.

EXPLORATION

The exploration consisted of one core boring, one drive sample-core boring and ten drive rod penetration tests, made on August 14, 15, and 16, 1963.

INVESTIGATIONAL FINDINGS

The borings disclosed that bedrock surface, encountered at 5 and 14-foot depths, elevations 799 and 798 feet, is overlain by moist, very stiff clays and dense silt. The borings were terminated at 15 and 25-foot depths, elevations 799 and 798 feet, after penetrating 10 and 11 feet below bedrock surface.

The rod soundings, with exception of sounding number 5, met increasing resistance to penetration with increase in depth and were terminated upon encounter with abrupt refusal to penetration at 5 to 15-foot depths, elevations 801 to 796-feet, considered to be on or below bedrock surface, as substantiated by the borings, and is considered to approximate firm bedrock surface.

On the basis of the tests, bedrock surface is considered to be essentially flat-lying across the structure site, between elevations 801 and 797 feet.

If it is the intention to found substructure units on bedrock, it is considered advisable that the open excavation be inspected in the field in order to insure that the excavations have been extended to rock throughout the entire founding area.

Unconfined compression tests on similar interbedded limestone and shale bedrock indicates a crushing strength on the order of 150 tons per square foot.

No free water was observed in the rod sounding holes.

LEGEND

- Auger Boring - Plan View.
- Press and/or Drive Sample and/or Core Boring - Plan View.
- Drive Rod Penetration Resistance - Soundings - Plan View.
- (R) Electrical Resistivity Probe - Plan View.
- A — Indicates Auger Boring.
- B — Indicates Press and/or Drive Sample and/or Core Boring.
- (R) Electrical Resistivity Probe plotted to vertical scale only.
- TR — Top of Rock
- Water saturated zone.
- TD — Total Depth.
- Horizontal bar on log indicates the depth the sample was taken.
- X-Y — Figures to the right of boring log in profile view indicate the number of blows for Standard Penetration test. X = First 6 inches; Y = Second 6 inches
- Casing
- Resistance "R" ≤ 10,000 lbs.
- Resistance "R" ≥ 10,000 lbs.
- 1/16 — Indicates final measurement of penetration in inches.
- W — Indicates Free Water elevation.
- Indicates Static Water elevation.
- Footing; Capped pile
- Footing on pile

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface conditions may be evaluated.

Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and/or 5-foot depth intervals, driven by means of a 140-pound drop-hammer, with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The Boring Log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depths of press samples, field sample number, sample description - based on laboratory test results and the Casagrande A.C. classification system - and gradation, plasticity and moisture content determinations. Results of strength and consolidation testing appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions

8"	3"	2.0mm		0.42mm		0.074mm	0.005mm
Boulders	Cobbles	Gravel	Coarse Sand		Fine Sand	Silt	Clay
		No. 10 sieve		No. 40 sieve		No. 200 sieve	

LOG OF BORING

Date Started 8-15-63 — Sampler Type SS — Dia. 1 3/8" — Water Elev. —
Date Completed 8-16-63 — Casing: Length — Dia. —
Boring No. B-3 — Station & Offset 272+97, 38' Lt (REAR PIER) — Surface Elev. 802.6'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
802.6	0				Brown silty clay (Driller's description)										
	2														
797.6	4				TOP OF ROCK										
	6														
	8		4.5	0.5	Limestone, gray to bluish-gray, hard, dense, crystalline, fossiliferous, containing argillaceous seams, interbedded with shale (dark-gray, soft to firm, moist, crumbly, calcareous). limestone intervals 0.1' to 0.3' thick and comprise 75% of total interval. Core loss 5%.										
	10														
	12		5.0	0.0											
787.6	14				BOTTOM OF BORING										

LOG OF BORING

Date Started 8-15-63 — Sampler Type SS — Dia. 1 3/8" — Water Elev. —
Date Completed 8-15-63 — Casing: Length 12' — Dia. 3 1/2" —
Boring No. B-8 — Station & Offset 275+30, 30' Rt (FORWARD PIER) — Surface Elev. 813.6'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
813.6	0														
	2														
	4														
808.6	6	9/12			Mottled Brown and Gray Gravelly Clay	1	29	3	8	29	31	33	12	11	
	8														
803.6	10	19/22			Brown Sandy Gravelly Silt	2	38	10	9	22	21	23	8	27	
	12														
799.1	14		1.2	3.8	TOP OF ROCK										
	16														
	18		5.0	0.0	Limestone, gray to bluish-gray, hard, dense, crystalline, fossiliferous, with many argillaceous veins; interbedded with shale, (dark-gray, fire, fissile, calcareous, broken-in-part, with numerous crumbly clay seams). Limestone beds 0.1' to 0.3' thick and comprise 60% of interval. Core loss 21%.										
	20														
	22														
788.6	24		4.7	0.3	BOTTOM OF BORING										

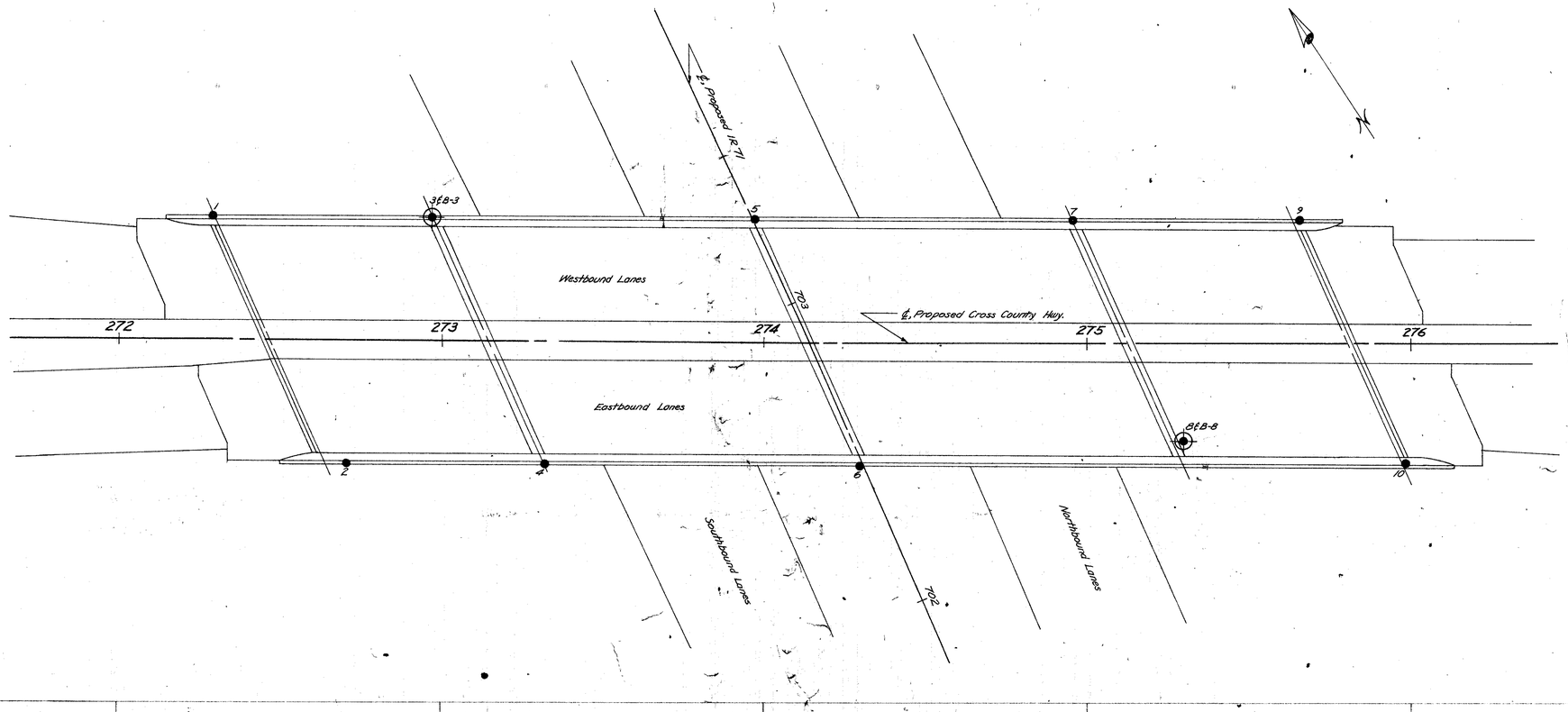
NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

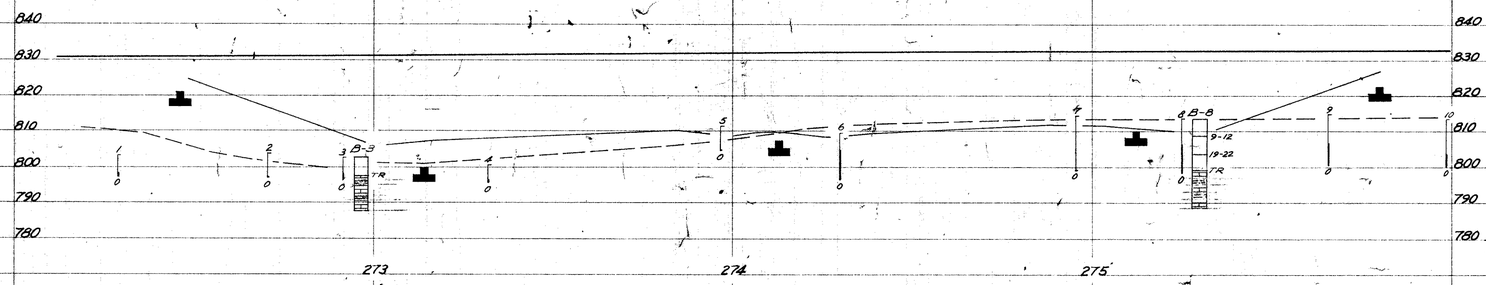
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. HAM-71-1393
IR 71 UNDER CROSS COUNTY HWY.
SEC. HAM-71-13.05

CHECKED BY	REVIEWED BY	DATE
F.L.P.	R.D.R.	9-11-63

HAMILTON COUNTY
HAM-71-13.05





SCALE: 1" = 20'

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST., COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. HAM-71-1393
IR 71 UNDER CROSS COUNTY HWY.
SEC. HAM-71-13.05

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
RPS	F.L.R	G.D.R	9-11-63

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____
Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____
Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____
Capacity "R" in Thousands of Pounds

Test Location No. 1
Station & Offset 272+29, 38' LT
REAR ABUTMENT
Surface Elev. 803.1 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
TEST ROD
Capacity "R" in Thousands of Pounds

Test Location No: 2
Station & Offset 272+71, 38' RT
REAR ABUTMENT
Surface Elev. 803.7 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
TEST ROD
Capacity "R" in Thousands of Pounds

Test Location No. 3
Station & Offset 272+97, 38' LT
REAR PIER
Surface Elev. 802.6' Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
TEST ROD
Capacity "R" in Thousands of Pounds

Test Location No. 4
Station & Offset 273+32, 38' RT
REAR PIER
Surface Elev. 802.7 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
TEST ROD
Capacity "R" in Thousands of Pounds

Test Location No. 5
Station & Offset 273+97, 38' LT
CENTER PIER
Surface Elev. 811.4 Water Elev. ____
HAMILTON COUNTY
HAM-71-13.05
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
TEST ROD
Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____
Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____
Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____
Capacity "R" in Thousands of Pounds

Test Location No. 6
Station & Offset 274+30, 38' RT
CENTER PIER
Surface Elev. 809.2 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
TEST ROD
Capacity "R" in Thousands of Pounds

Test Location No. 7
Station & Offset 274+96, 38' LT
FORWARD PIER
Surface Elev. 814.3' Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
TEST ROD
Capacity "R" in Thousands of Pounds

Test Location No. 8
Station & Offset 275+30, 30' RT
FORWARD PIER
Surface Elev. 813.6' Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
TEST ROD
Capacity "R" in Thousands of Pounds

Test Location No. 9
Station & Offset 275+66, 38' LT
FORWARD ABUTMENT
Surface Elev. 814.8 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
TEST ROD
Capacity "R" in Thousands of Pounds

Test Location No. 10
Station & Offset 275+99 38' RT
FORWARD ABUTMENT
Surface Elev. 813.2' Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
TEST ROD
Capacity "R" in Thousands of Pounds

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST., COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. HAM-71-1393
IR 71 UNDER CROSS COUNTY HWY
SEC. HAM-71-13.05

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
RC	RLR	EDR	2-4-63

HAMILTON COUNTY
HAM 71-13.05

GEOLOGY OF THE SITE

The structure site is located on the dissected glaciated Lexington Peneplain, in an area where moderately deep glacial drift, found to be about 12 feet deep, overlies interbedded shales and limestones, of Ordovician age.

EXPLORATION

The exploration consisted of two drive sample-core borings, and ten drive rod penetration tests, made between August 9 and 22, 1963.

INVESTIGATIONAL FINDINGS

Borings disclosed moist, stiff to hard clays and dense silts, with some gravel and stone fragments, to bedrock surface, encountered at 12-foot depths, elevations 831 and 826 feet.

Rod soundings met rapid increase in penetration resistance with increase in depth, and encountered refusal to penetration at 11 to 15-foot depths, elevations 829 to 825 feet; considered to be as much as 3 feet below bedrock surface in the rear portion - soundings 1 and 2, and to be on or slightly below bedrock surface in the remainder of the structure site, as revealed by the boring.

On the basis of tests, bedrock surface is considered to be sloping gently downward from rear portion of the structure site to forward portion, between elevations 831 and 826 feet.

The proposed footing elevations as shown on the site plan, will found the substructure units on bedrock. It is suggested that the area of footing contact not be subjected to prolonged atmospheric exposure, due to the fact that while this shale and limestone is generally firm in place, the shale is susceptible to disintegration upon exposure to the atmosphere and water.

Unconfined compression tests on similar bedrock indicate a crushing strength of about 150 tons per square foot.

No free water was encountered in the rod soundings.

LEGEND

- Auger Boring - Plan View.
- Press and/or Drive Sample and/or Core Boring - Plan View.
- Drive Rod Penetration Resistance - Soundings - Plan View.
- (R) Electrical Resistivity Probe - Plan View.
- A — Indicates Auger Boring.
- B — Indicates Press and/or Drive Sample and/or Core Boring.
- (R) Electrical Resistivity Probe plotted to vertical scale only.
- TR — Top of Rock
- Water saturated zone.
- TD — Total Depth.
- Horizontal bar on log indicates the depth the sample was taken.
- X-Y — Figures to the right of boring log in profile view indicate the number of blows for "Standard Penetration" test. X = First 6 inches; Y = Second 6 inches
- Casing
- Resistance "R" ≤ 10,000 lbs.
- Resistance "R" ≥ 10,000 lbs.
- 1/16 — Indicates final measurement of penetration in inches.
- Indicates Free Water elevation.
- Indicates Static Water elevation.
- Footing; Capped pile
- Footing on pile

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface conditions may be evaluated.

Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are by means of a rotary type drill rig, employing a 2" O.D., 1-3/8 I.D. sampler, at 2-1/2 and/or 5-foot depth intervals, driven by means of a 140 pound drop-hammer, with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The Boring Log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depths of press samples, field sample number, sample description based on laboratory test results and the Casagrande A-C classification system - and gradation, plasticity and moisture content determinations. Results of strength and consolidation testing appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
8"	3"	2.0mm (No 10 sieve)	0.42mm (No 40 sieve)	0.074mm (No 200 sieve)	0.005mm	

LOG OF BORING

Date Started 8-8-63 — Sampler Type SS — Dia. 1 3/8" — Water Elev. —
Date Completed 8-14-63 — Casing: Length — Dia. —
Boring No. B-1 — Station & Offset 48+58, 16' Lt (REAR ABUTMENT) — Surface Elev. 843.0'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
843.0	0														
	2														
	4														
838.0															
837.0	6	21/29			Brown Gravelly Clay	1	15	2	9	27	47	41	20	21	
	8				Yellowish-brown calcareous sandy clayey silt with limestone fragments.										
833.0	10														
831.0	12	18/37			Brown Sandy Gravelly Silt	2	18	6	11	38	27	26	9	13	
	14		3.8	0.2	℄ TOP OF ROCK										
	16														
	18		3.2	1.0	Shale, dark-gray, firm to hard, calcareous, fissile, with numerous soft, crumbly, clay seams; interbedded with limestone (bluish-gray to gray, hard, dense, crystalline, fossiliferous, jointed and broken-in-part. Limestone intervals 0.1' to 0.3' thick, comprises 40% of interval). Vertical joints between 12.0' and 15.0'. Core loss 10%.										
	20														
	22		4.2	0.8											
	24														
	26														
	28		4.8	0.2											
	30														
	32		4.9	0.1											
	34														
	36														
	38		5.0	0.0											
.0	40				℄ BOTTOM OF BORING										

LOG OF BORING

Date Started 8-14-63 — Sampler Type SS — Dia. 1 3/8" — Water Elev. —
Date Completed 8-14-63 — Casing: Length — Dia. —
Boring No. B-8 — Station & Offset 50+75, 16' Rt (FORWARD PIER) — Surface Elev. 838.0'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
838.0	0														
	2														
	4														
833.0	6	5/6			Brown Silty Clay	1	0	3	10	46	41	38	18	9	
	8														
828.0	10	50* (0.3')													
826.0	12		2.5	2.2	Brown Sandy Gravelly Silt	2	43	6	9	22	20	28	10	14	
	14				℄ TOP OF ROCK										
	16		3.8	1.2											
	18														
	20				Shale, gray, hard to firm, dense, calcareous, fissile, with soft crumbly clay seams, interbedded with limestone, (gray to bluish-gray, hard, dense, crystalline, fossiliferous, containing argillaceous seams. Limestone intervals 0.1' to 0.4' thick and comprising 40% of interval). Core loss 12%.										
	22		5.0	0.0											
	24														
	26		5.0	0.0											
	28														
	30		4.8	0.2											
	32														
	34														
	36		5.0	0.0											
	38														
	40				*REFUSAL ℄ BOTTOM OF BORING										

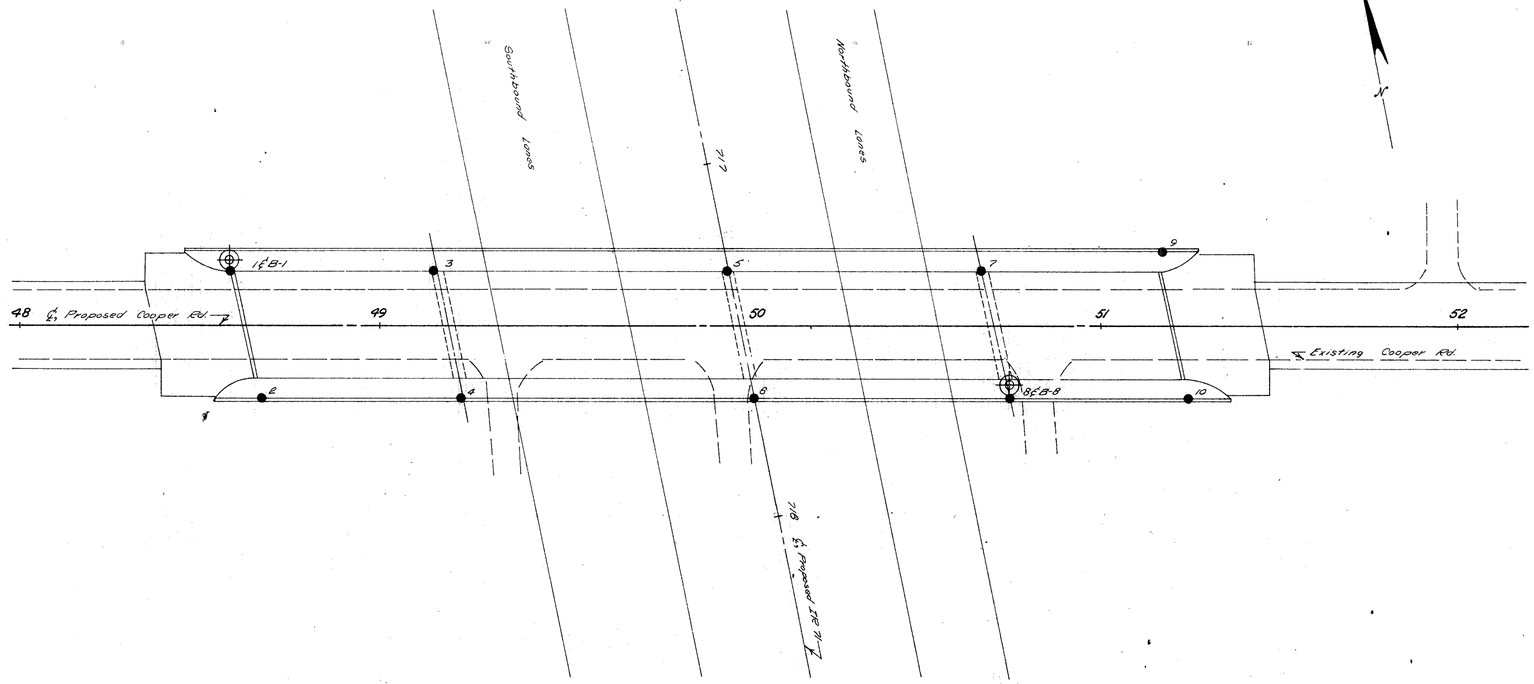
NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

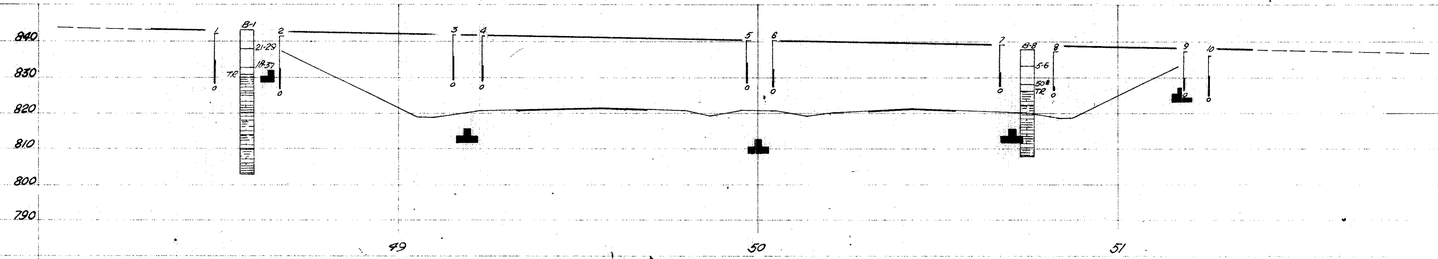
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. HAM-IR 71-14.19
IR 71 UNDER COOPER RD.
SEC. HAM-IR 71-13.05

CHECKED BY	REVIEWED BY	DATE
FLR	RDR	8-30-63

HAMILTON COUNTY
HAM. 71-13.05





SCALE: 1" = 20'

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST., COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION

BRIDGE NO. HAM-IR 71-1419
IR 71 UNDER COOPER RD.

SEC HAM-IR 71-13.05

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.L.F.	F.L.R.	R.D.R.	8-30-63

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____
B44 B40 B36 B32 B28 B24
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 1
Station & Offset 48+58, 15' LT
REAR ABUTMENT
Surface Elev. 842.1 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No: 2
Station & Offset 48+67 20' RT
REAR ABUTMENT
Surface Elev. 841.8 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 3
Station & Offset 49+15, 15' LT
REAR PIER
Surface Elev. 842.0 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 4
Station & Offset 49+23, 20' RT
REAR PIER
Surface Elev. 841.3 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 5
Station & Offset 49+97, 15' LT
CENTER PIER
Surface Elev. 841.2 Water Elev. ____
HAMILTON COUNTY
HAM-71-13.05
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
B40 B36 B32 B28 B24
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____
B44 B40 B36 B32 B28 B24
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 6
Station & Offset 50+04, 20' RT
CENTER PIER
Surface Elev. 840.4 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 7
Station & Offset 50+67, 15' LT
FORWARD PIER
Surface Elev. 839.1 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 8
Station & Offset 50+75, 20' RT
FORWARD PIER
Surface Elev. 837.7 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 9
Station & Offset 51+18, 20' LT
FORWARD ABUTMENT
Surface Elev. 837.5 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 10
Station & Offset 51+25, 20' RT
FORWARD ABUTMENT
Surface Elev. 836.2 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition POINT BADLY BENT
B40 B36 B32 B28 B24
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST., COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. HAM-IR 71-14.19
IR 71 UNDER COOPER RD.
SEC. HAM-IR 71-13.05

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
RC	FLR	RDR	8-30-63

HAMILTON COUNTY
HAM-71-13.05

Outlook of Structure

The structure site is located upon the dissected Lexington peneplain. Shallow rock, bedrock, fair drained soils and limestone quarries, of undetermined age.

Soil Log

The subsurface soil consist of two drive rod penetration tests made on May 21 and 22 and August 1, 2, and 13, 1963.

Physiographic Features

The borings disclosed that bedrock surface, encountered at 5-foot depth, elevation 831 and 826 feet, is a certain by stiff and hard clay. The borings were terminated at 35 and 40-foot depths, elevation 796 feet, after penetrating 5" and 25-foot [illegible] rock surface.

The soil soundings generally met fresh rock resistance to penetration with increase in depth and were terminated upon encounter of refusal to penetration at 2 to 5-foot depths, elevation 826 to 816 feet, confirmed to have penetrated to rock as 5 feet of bedrock surface into weathered rock, as indicated by the borings.

On the basis of the borings and the geology of the area, bedrock surface is considered to slope downward from the river to the forward portion of the structure site, between elevations 831 and 826 feet.

If it is the intention to found substructure units on bedrock, it is considered advisable that the open excavation be inspected in the field in order to insure that the excavations have been extended to rock throughout the entire founding area. It is further suggested that the area of the footing contact not be subjected to prolonged atmospheric exposure, and that the excavation be well drained at all times.

Unconfined compression tests on similar bearing indicates a crushing strength on the order of 150 tons per square foot.

No free water was observed in the rod sounding holes.

LEGEND

- Auger Boring - Plan View.
- Press and/or Drive Sample and/or Core Boring - Plan View.
- Drive Rod Penetration Resistance - Soundings - Plan View.
- Electrical Resistivity Probe - Plan View.
- A — Indicates Auger Boring.
- B — Indicates Press and/or Drive Sample and/or Core Boring.
- Electrical Resistivity Probe plotted to vertical scale only.
- TR — Top of Rock
- Water saturated zone.
- TD — Total Depth.
- Horizontal bar on log indicates the depth the sample was taken.
- X-Y — Figures to the right of boring log in profile view indicate the number of blows for "Standard Penetration" test. X = First 6 inches; Y = Second 6 inches
- Casing
- Resistance "R" ≤ 10,000 lbs.
- Resistance "R" ≥ 10,000 lbs.
- 1/16 — Indicates final measurement of penetration in inches.
- W — Indicates Free Water elevation.
- Indicates Static Water elevation.
- Footing — Capped pile
- Footing on pile

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface conditions may be evaluated.

Drive Sample Borings - Drive - Press Sample Borings

Drive sample borings are by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and/or 5-foot depth intervals, driven by means of a 140-pound drop-hammer, with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The Boring Log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depths of press samples, field sample number, sample description based on laboratory test results and the Casagrande AC classification system and gradation, plasticity and moisture content determinations. Results of strength and consolidation testing appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
	8"	3"	2.0mm (No. 10 sieve)	0.42mm (No. 40 sieve)	0.074mm (No. 200 sieve)	0.005mm

LOG OF BORING

Date Started 7-30-63 — Sampler Type SS — Dia. 1 3/8" — Water Elev. —
Date Completed 7-31-63 — Casing: Length — Dia. —
Boring No. B-1 — Station & Offset 48+68, 13' Lt (REAR ABUTMENT) — Surface Elev. 836.4'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
836.4	0				Clay, mottled yellowish-brown and dark-brown, firm to hard, very calcareous.										
	2														
831.4	4				TOP OF ROCK										
	6		4.0	0.1											
	8				Shale, bluish-gray, firm, fissile, weathered to 10.0', with crumbly thin beds of clay; inter bedded with limestone, (bluish-gray, hard, crystalline, fossiliferous, with argillaceous veins), comprising 40% of the interval. Maximum limestone unit 0.4'. Core loss 4%.										
	10														
	12		5.0	0.0											
	14														
	16														
	18		5.0	0.0											
	20														
	22		4.7	0.3											
	24														
	26														
	28		5.0	0.0											
	30														
	32		5.0	0.0											
	34														
	36														
	38		5.0	0.0											
796.4	40				BOTTOM OF BORING										

LOG OF BORING

Date Started 8-1-63 — Sampler Type SS — Dia. 1 3/8" — Water Elev. —
Date Completed 8-1-63 — Casing: Length — Dia. —
Boring No. B-8 — Station & Offset 50+71, 18' Rt (FORWARD PIER) — Surface Elev. 830.9'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
830.9	0														
	2				Brown Silty Clay										
825.9	4														
	6				TOP OF ROCK										
	8		2.3	2.7											
	10														
	12		4.8	0.2											
	14														
	16				Shale, brownish-gray to gray, generally firm, weathered to 14.0', calcareous, interbedded with limestone, (gray, dense, hard, fossiliferous, crystalline, occurring in 0.1' to 0.3' intervals, comprising 40% of interval), broken and jointed. Core loss 10%.										
	18		5.0	0.0											
	20														
	22		5.0	0.0											
	24														
	26														
	28		5.0	0.0											
	30														
	32														
	34		5.0	0.0											
795.9					BOTTOM OF BORING										

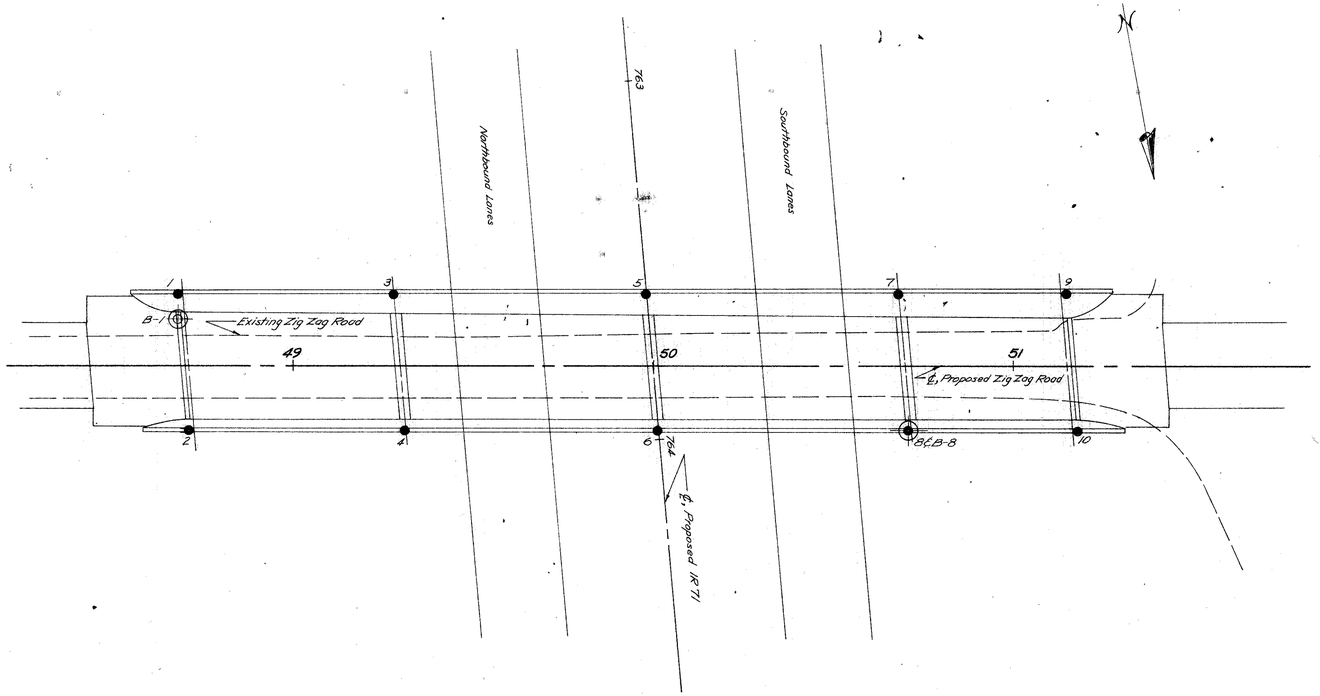
NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

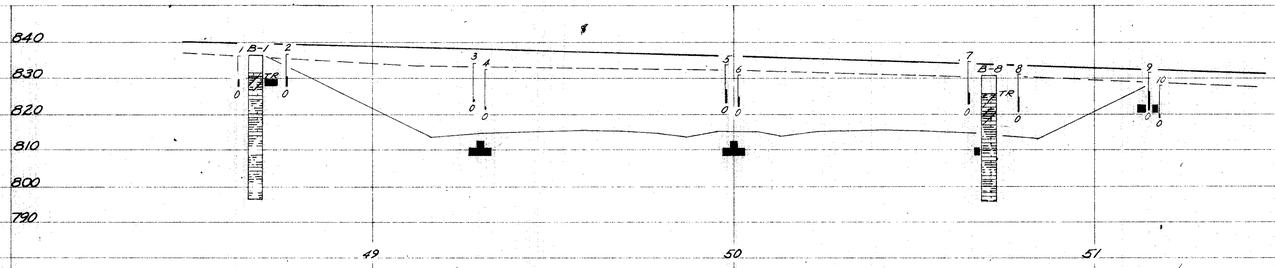
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. HAM-71-1508
IR 71 UNDER ZIG ZAG ROAD
SEC. HAM-71-13.05

CHECKED BY	REVIEWED BY	DATE
FLR	RDR	8-29-63

HAMILTON COUNTY
HAM-71-13.05





SCALE 1" = 20'

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST., COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. HAM-71-1508
IR 71 UNDER ZIG ZAG ROAD
SEC. HAM-71-13.05

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
RPS	FLR	RDR	8-29-63

Test Location No. 1
Station & Offset 48+69, 20 Lt
REAR ABUTMENT
Surface Elev. 836.2 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
840 836 832 828 824 820
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 2
Station & Offset 48+71, 18 Rt
REAR ABUTMENT
Surface Elev. 836.1 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 3
Station & Offset 49+28, 20 Lt
REAR PIER
Surface Elev. 834.2 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 4
Station & Offset 49+31, 18 Rt
REAR PIER
Surface Elev. 832.4 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 5
Station & Offset 49+98, 20 Lt
CENTER PIER
Surface Elev. 833.1 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 6
Station & Offset 50+01, 18 Rt
CENTER PIER
Surface Elev. 830.9 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 7
Station & Offset 50+68, 20 Lt
FORWARD PIER
Surface Elev. 834.6 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 8
Station & Offset 50+71, 18 Rt
FORWARD PIER
Surface Elev. 831.1 Water Elev. DRY
HAMILTON COUNTY
HAM-71-13.05
Piling
Hammer
Formula
Reference
Rod Condition GOOD
840 836 832 828 824 820
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No.
Station & Offset
Surface Elev. Water Elev.
Piling
Hammer
Formula
Reference
Rod Condition
836 832 828 824 820 816
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No.
Station & Offset
Surface Elev. Water Elev.
Piling
Hammer
Formula
Reference
Rod Condition
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No.
Station & Offset
Surface Elev. Water Elev.
Piling
Hammer
Formula
Reference
Rod Condition
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No.
Station & Offset
Surface Elev. Water Elev.
Piling
Hammer
Formula
Reference
Rod Condition
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No.
Station & Offset
Surface Elev. Water Elev.
Piling
Hammer
Formula
Reference
Rod Condition
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No.
Station & Offset
Surface Elev. Water Elev.
Piling
Hammer
Formula
Reference
Rod Condition
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 9
Station & Offset 51+15, 20 Lt
FORWARD ABUTMENT
Surface Elev. 831.5 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 10
Station & Offset 51+18, 18 Rt
FORWARD ABUTMENT
Surface Elev. 827.9 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
836 832 828 824 820 816
TEST ROD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST., COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. HAM-71-1508
IR 71 UNDER ZIG ZAG ROAD
SEC. HAM-71-13.05

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
RPS	FLR	RDR	8-29-63

30
40

HAMILTON COUNTY
HAM-71-13.05

GEOLOGY OF THE SITE

The structure site is located upon the glaciated, dissected Lexington Peneplain. Thin to moderately deep soils overlie interbedded limestone and shale bedrock, of Ordovician age.

EXPLORATION

The exploration consisted of three drive sample-core borings, one core boring and sixteen drive rod penetration tests, made between August 2 and 21, 1963.

INVESTIGATIONAL FINDINGS

The borings disclosed moist, stiff to hard silty and gravelly clays, very dense silts, and organic material and peat to bedrock surface, encountered at 12 to 29-foot depths, elevations 788 to 767 feet. The borings were terminated at 25 to 40-foot depths, elevations 775 to 757 feet, after penetrating 10 to 22 feet below bedrock surface.

The rod soundings met increasing and often erratic resistance to penetration with increase in depth and were terminated upon encounter with refusal to penetration at 12 to 16-foot depths, elevations 788 to 774 feet, considered to be on, above or below bedrock surface, as indicated by the borings.

On the basis of the tests, bedrock surface is considered to slope steeply downward from the left to the right side of the structure site, between elevations 788 and 767 feet.

If it is the intention to found substructure units on bedrock, it is considered advisable that the open excavation be inspected in the field in order to insure that the excavations have been extended to rock throughout the entire founding area. It is further suggested that the area of the footing contact not be subjected to prolonged atmospheric exposure, and that the excavation be well drained at all times.

Unconfined compression tests on similar bedrock indicates a crushing strength on the order of 150 tons per square foot.

No free water was observed in the rod sounding holes.

LEGEND

- Auger Boring - Plan View.
- Press and/or Drive Sample and/or Core Boring - Plan View.
- Drive Rod Penetration Resistance - Soundings - Plan View.
- R — Electrical Resistivity Probe - Plan View.
- A — Indicates Auger Boring.
- B — Indicates Press and/or Drive Sample and/or Core Boring.
- R — Electrical Resistivity Probe plotted to vertical scale only.
- TR — Top of Rock
- Water saturated zone.
- TD — Total Depth.

- Horizontal bar on log indicates the depth the sample was taken.
- X-Y — Figures to the right of boring log in profile view indicate the number of blows for "Standard Penetration" test. X = First 6 inches. Y = Second 6 inches
- Casing
- Resistance "R" ≤ 10,000 lbs.
- Resistance "R" ≥ 10,000 lbs.
- 1/16 — Indicates final measurement of penetration in inches.
- W — Indicates Free Water elevation.
- Indicates Static Water elevation.
- Footing — Capped pile
- Footing on pile

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface conditions may be evaluated.

Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and/or 5-foot depth intervals, driven by means of a 140-pound drop-hammer, with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The Boring Log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depths of press samples, field sample number, sample description-- based on laboratory test results and the Casagrande AC classification system - and gradation, plasticity and moisture content determinations. Results of strength and consolidation testing appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
8"	3"	2.0mm	0.42mm	0.074mm	0.005mm	
			No. 10 sieve	No. 40 sieve	No. 200 sieve	

NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

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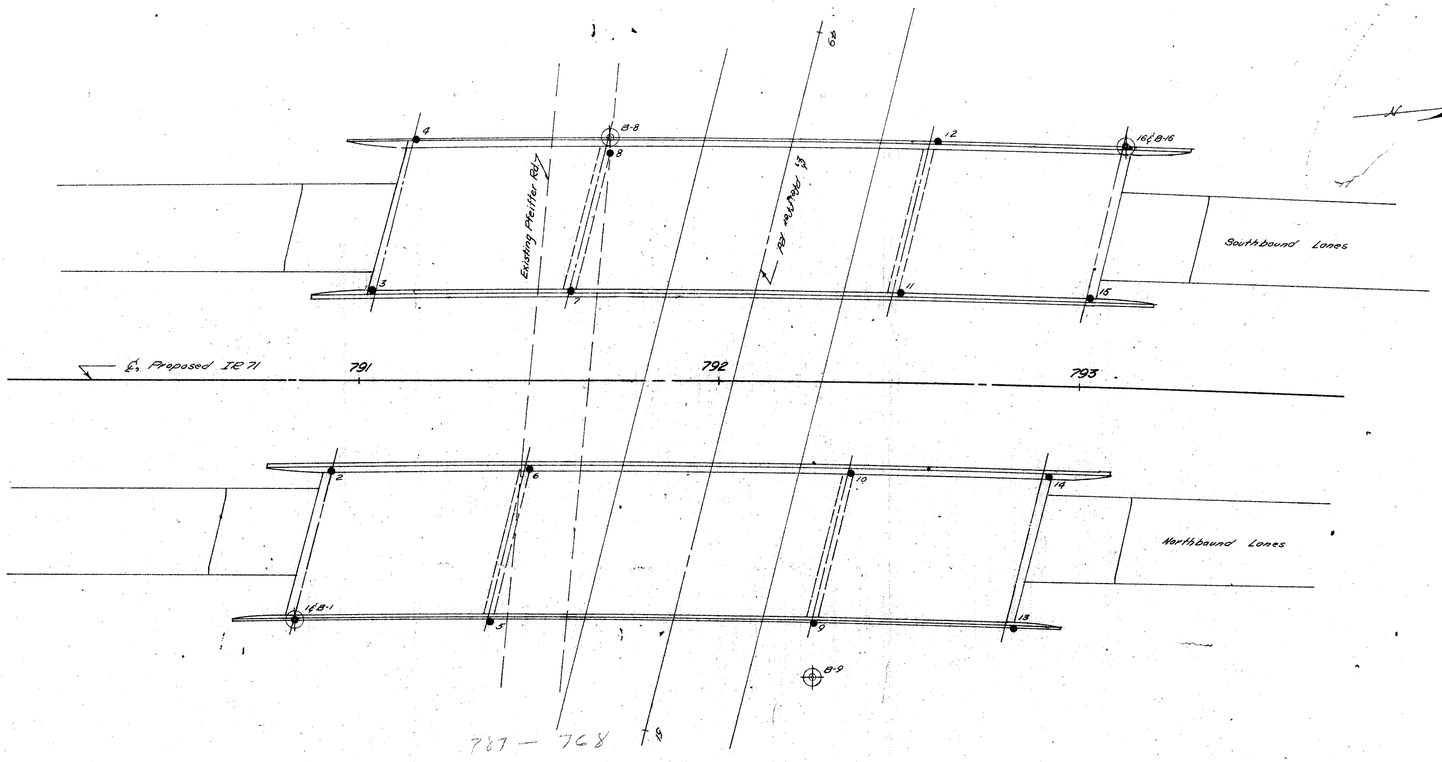
STRUCTURE FOUNDATION INVESTIGATION

BRIDGE NO. HAM-IR 71-1560 L&R OVER PFEIFFER RD.

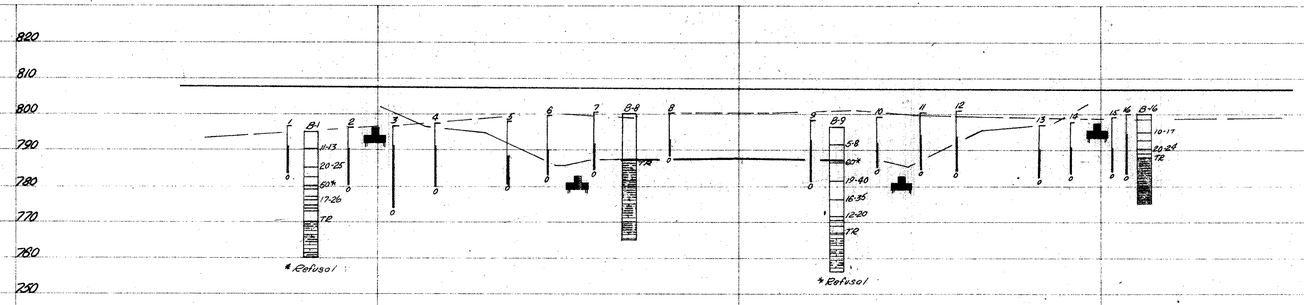
SEC. HAM-IR 71-13.05

CHECKED BY	REVIEWED BY	DATE
FLR	RDR	7-1-63

HAMILTON COUNTY
HAM 71-13.05



787 — 768 ft



SCALE: 1" = 20'

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST., COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. HAM-IR 71 - 1560 L&R
OVER PFEIFFER RD.
SEC. HAM-IR 71 - 13.05

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.L.F.	F.L.R.	R.D.R.	7-22-65

HAMILTON COUNTY
HAM-71-13.05

LOG OF BORING

Date Started 8-8-63 | Sampler Type SS | Dia. 1 3/8" | Water Elev.
Date Completed 8-8-63 | Casing: Length | Dia.
Boring No. B-1 | Station & Offset 790+82, 57' Rt (REAR ABUTMENT) | Surface Elev. 795.1'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W. C.	SHTL Class.
795.1	0														
	2														
	4														
790.1	6	11/13			Light Brown Clay	1	0	1	6	35	58	45	21	25	
	8														
785.1	10														
	12	20/25			Light Brownish-Gray Silt	2	0	0	0	61	39	28	5	21	
782.6	14				Yellow clay to 15.0'										
780.1	16	50* (0.6')			Brownish-Gray Silt	3	0	0	1	56	43	28	4	20	
779.5					15.6' to 17.7'; gray dense clay with wood fragments.										
777.4	18				17.7' to 18.4'; dark brown fine textured peat.										
776.7					18.4' to 20.0'; gray dense clay, firm with slickensides.										
775.1	20				Dark Brownish-Gray Silty Clay. Organic	4	0	1	9	69	21	74	17	65	
774.1		17/26			21.0' to 21.7'; dark-brown fine textured peat.										
773.4	22														
	24				21.7' to 25.0'; gray clay, dense, firm, with organic inclusions and slickensides.										
770.1	26				℄ TOP OF ROCK										
	28		3.8	1.2											
	30				Clay shale, gray, fissile, crumbly, soft to firm, interbedded with limestone, (maximum 0.9' thick, gray, hard, dense, fossiliferous with argillaceous veins) comprising 40% of the interval. Core loss 30%.											
	32		5.0	0.0											
760.1	34														

*REFUSAL ℄ BOTTOM OF BORING

LOG OF BORING

Date Started 8-6-63 | Sampler Type SS | Dia. 1 3/8" | Water Elev.
Date Completed 8-7-63 | Casing: Length | Dia.
Boring No. B-9 | Station & Offset 792+27, 82' Rt (FORWARD PIER) | Surface Elev. 796.7'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W. C.	SHTL Class.
796.7	0														
	2														
	4														
791.7	6	5/8			Brownish-Gray Silt and Clay	1	0	1	3	64	32	31	11	26	
	8														
786.7	10	60* (0.8')			Brown Silt	2	0	1	4	73	22	NP	NP	20	
	12														
781.7	14														
	16	19/40			Gray Clayey Silt	3	0	0	1	54	45	26	7	16	
	18														
776.7	20														
	22	16/35			Brown and Gray Clayey Silt	4	0	0	0	41	59	30	9	21	
	24														
771.7	26	12/20			Gray Clay	5	0	0	0	15	85	48	23	28	
770.7					Brown to black fine-textured peat.										
769.2	28		3.0	1.0	Gray calcareous clay.										
767.2	30				℄ TOP OF ROCK										
	32		4.7	0.3											
	34				Limestone, gray, fossiliferous, with argillaceous veins and carbonaceous partings, hard, dense, broken in bottom 1.3', maximum 0.5' beds, interbedded with clay shale (gray, calcareous, with clay seams, comprising 25% of the interval). Core loss 3%.											
	36														
	38		5.0	0.0											
756.7	40														

*REFUSAL ℄ BOTTOM OF BORING

LOG OF BORING

Date Started 8-2-63 | Sampler Type SS | Dia. 1 3/8" | Water Elev.
Date Completed 8-6-63 | Casing: Length | Dia.
Boring No. B-8 | Station & Offset 791+70, 67' Lt (REAR PIER) | Surface Elev. 800.1'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W. C.	SHTL Class.
800.1	0														
	2														
	4														
	6														
	8				Clay, yellowish-brown, mottled, stiff, moist, carbonaceous inclusions, crumbly and soft seams throughout.										
	10														
	12		4.5	0.5											
786.7	14				℄ TOP OF ROCK										
	16														
	18		4.8	0.2	Clay shale, mottled yellowish-brown and gray, very calcareous, with plastic clay seams, interbedded with limestone (gray, hard, dense crystalline, moderately broken, maximum 0.3' thick) comprises 20% of interval. Core loss 7%.										
780.1	20														
	22		5.0	0.0											
	24				Limestone, gray, hard, dense, fossiliferous, with many argillaceous seams, interbedded with clay shale (gray, calcareous, firm, fissile-in-part, crumbly intervals; with soft, moist clay intervals throughout. Limestone beds 0.3' maximum thickness) comprises 60% of interval. No core loss.											
	26		5.0	0.0											
	28														
	30														
	32		5.0	0.0											
	34														
765.1					℄ BOTTOM OF BORING										

LOG OF BORING

Date Started 8-7-63 | Sampler Type SS | Dia. 1 3/8" | Water Elev.
Date Completed 8-7-63 | Casing: Length | Dia.
Boring No. B-16 | Station & Offset 793+12, 67' Lt (FORWARD ABUTMENT) | Surface Elev. 800.2'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W. C.	SHTL Class.
800.2	0														
	2														
	4														
795.2	6	10/17			Brownish-Gray Silty Clay	1	0	4	11	34	51	36	17	21	
793.2	8				Mottled yellowish-and dark-brown calcareous clay with limestone fragments.										
790.2	10														
789.2		20/24			light Brown Gravelly Clay	2	51	2	3	15	29	42	21	25	
788.2	12														
	14		1.1	2.9	℄ TOP OF ROCK										
	16														
	18		3.8	1.2	Clay shale, gray, yellowish-brown in top 6.0'; calcareous, with soft clay seams throughout, interbedded with limestone, gray, hard, dense, fossiliferous, argillaceous veins, broken-in-part, open weathered joints in part. Core loss 28%.										
	20														
	22														
	24		4.5	0.5											
775.2					℄ BOTTOM OF BORING										

*Mottled yellowish-and dark-brown calcareous clay with limestone fragments.

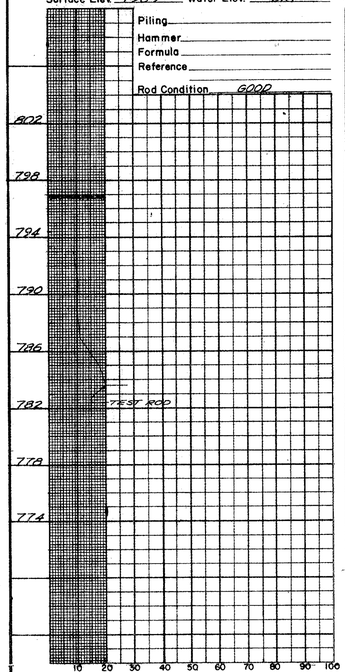
OHIO STATE HIGHWAY
TESTING LABORATORY
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STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. HAM-IR 71-1560 L&R
OVER PFEIFFER RD.
SEC. HAM-IR 71-13.05

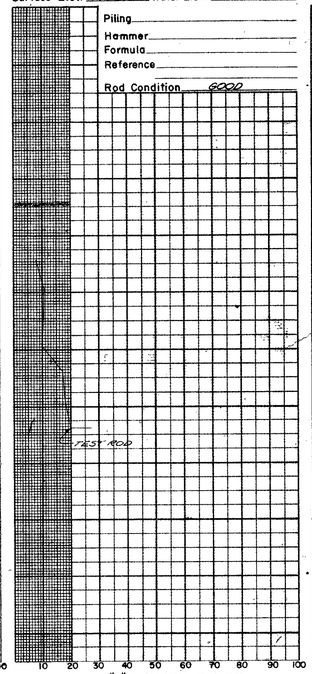
BORING DATA

TYPED BY	CHECKED BY	REVIEWED BY	DATE
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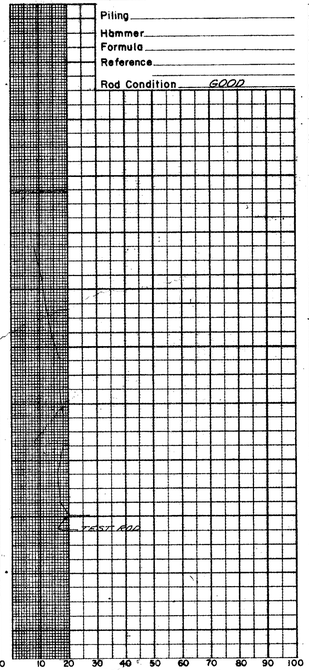
Test Location No. 1
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Surface Elev. 796.9' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD



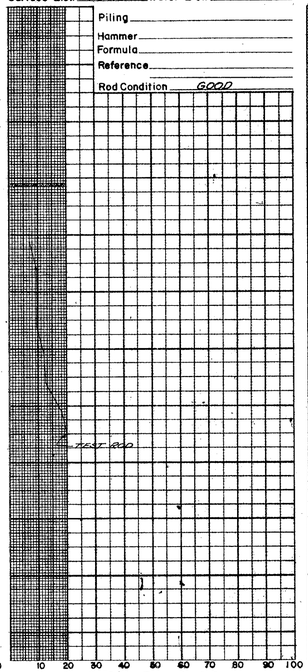
Test Location No. 2
Station & Offset 790+92.25 Rt. REAR ABUTMENT
Surface Elev. 796.3' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD



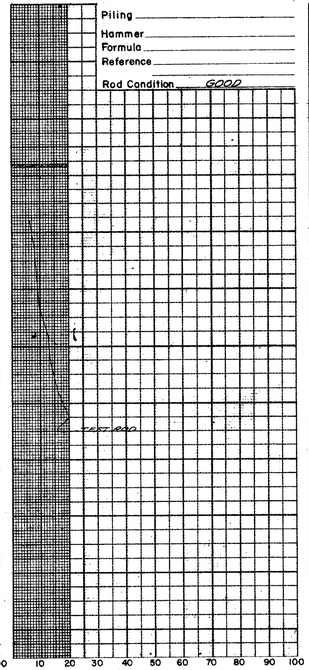
Test Location No. 3
Station & Offset 791+04.25 Lt. REAR ABUTMENT
Surface Elev. 797.0' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD



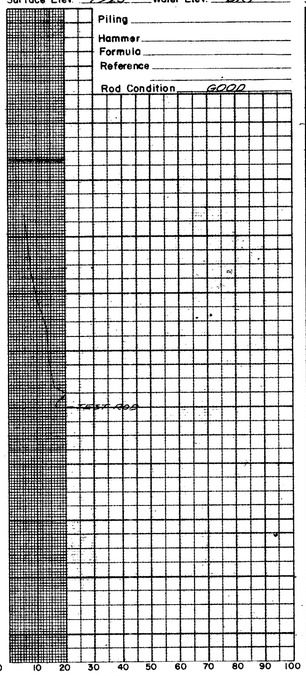
Test Location No. 4
Station & Offset 791+16.67 Lt. REAR ABUTMENT
Surface Elev. 797.6' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD



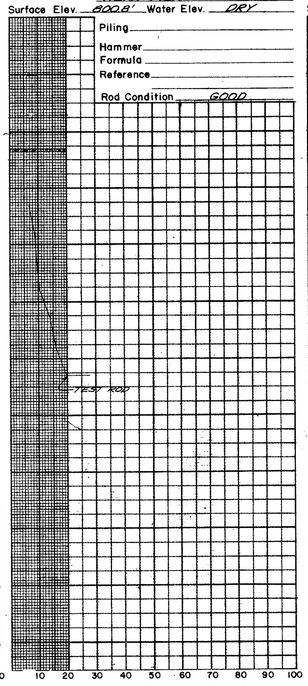
Test Location No. 5
Station & Offset 791+38.67 Rt. REAR PIER
Surface Elev. 798.8' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD



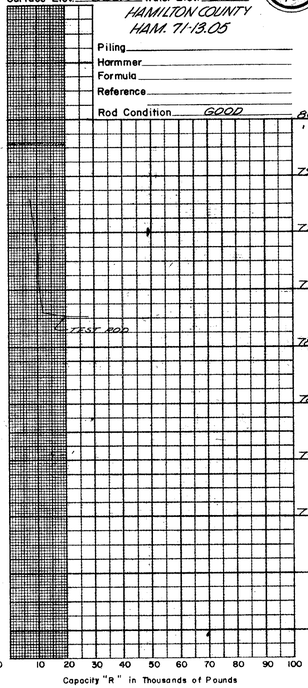
Test Location No. 6
Station & Offset 791+47.25 Rt. REAR PIER
Surface Elev. 799.5' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD



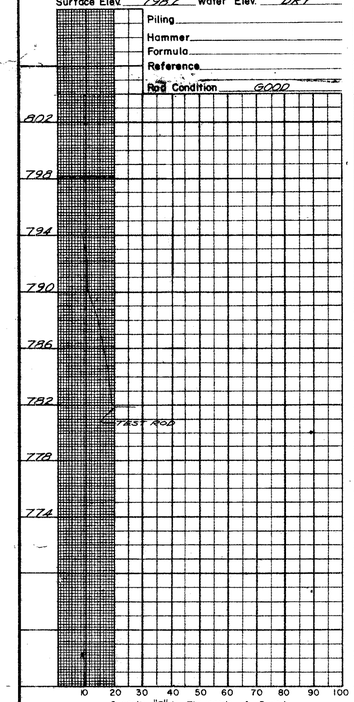
Test Location No. 7
Station & Offset 791+59.25 Lt. REAR PIER
Surface Elev. 800.8' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD



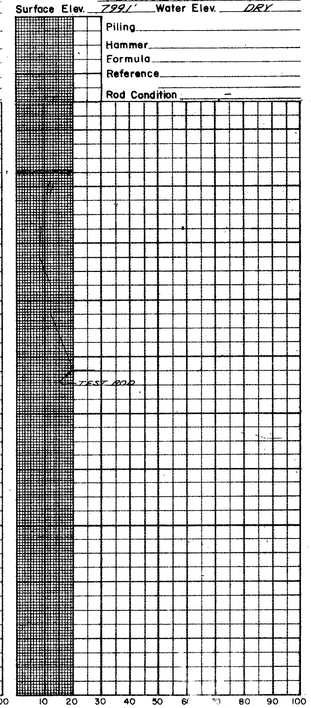
Test Location No. 8
Station & Offset 791+70.63 Lt. REAR PIER
Surface Elev. 800.4' Water Elev. DRY
HAMILTON COUNTY
HAM. 71-13.05
Piling
Hammer
Formula
Reference
Rod Condition GOOD



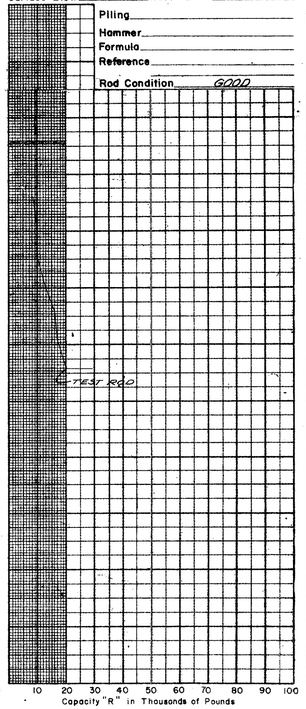
Test Location No. 9
Station & Offset 792+27.67 Rt. FORWARD PIER
Surface Elev. 798.2' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD



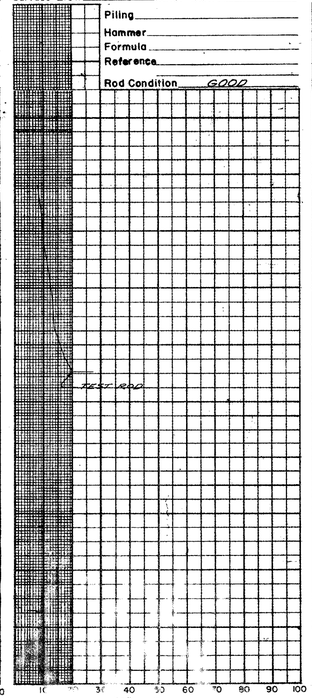
Test Location No. 10
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Surface Elev. 799.1' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition —



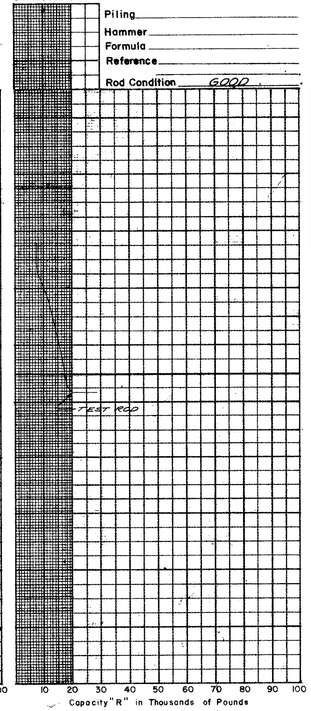
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Station & Offset 792+50.25 Lt. FORWARD PIER
Surface Elev. 800.4' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD



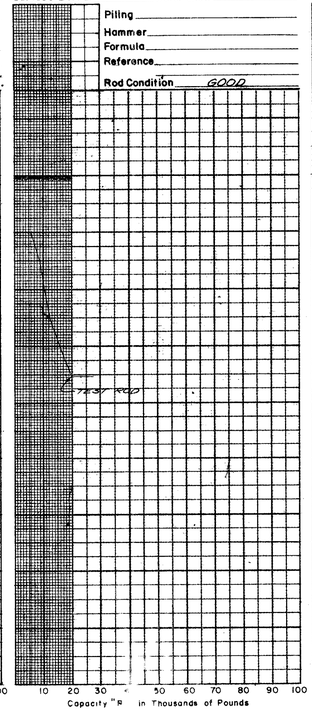
Test Location No. 12
Station & Offset 792+60.67 Lt. FORWARD PIER
Surface Elev. 801.2' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD



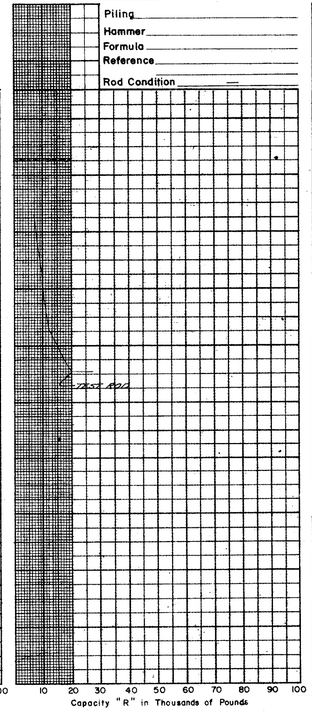
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Surface Elev. 797.2' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD



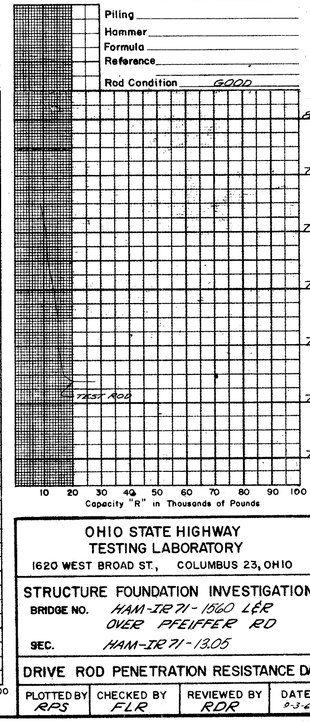
Test Location No. 14
Station & Offset 792+92.25 Rt. FORWARD ABUTMENT
Surface Elev. 797.9' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD



Test Location No. 15
Station & Offset 793+03.25 Lt. FORWARD ABUTMENT
Surface Elev. 799.2' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition —



Test Location No. 16
Station & Offset 793+12.67 Lt. FORWARD ABUTMENT
Surface Elev. 800.0' Water Elev. —
Piling
Hammer
Formula
Reference
Rod Condition GOOD



OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST., COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. HAM-IR 71-1960 LER OVER PFEIFFER RD
SEC. HAM-IR 71-13.05

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
RPS	FLR	RDR	2-3-63

HAMILTON COUNTY
HAM 71-13.05

GEOLOGY OF THE SITE

The structure site is located upon a glaciated upland plain. Moderately deep glacial deposits overlie bedrock, of Ordovician age.

EXPLORATION

The exploration consisted of two drive sample borings and six drive rod penetration tests, made between August 22 and 25, 1963.

INVESTIGATIONAL FINDINGS

The borings disclosed that the soils penetrated consisted predominantly of moist and wet, loose to very dense silty sands and sandy silts. The borings were terminated at 61-foot depth, elevations 770 and 792 feet, after penetrating more than 30 feet of material requiring more than 30 blows per foot in the standard penetration test.

The rod soundings generally met gradually increasing and somewhat erratic resistance to penetration with increase in depth and were terminated at 40 to 70-foot depths, elevations 802 to 791 feet, upon encounter with high to very high resistance, near refusal and refusal to penetration in very dense sands and silts or other similar materials, as revealed by the borings.

No free water was observed in the rod sounding holes

No test penetrated to bedrock surface.

LEGEND

- Auger Boring - Plan View.
- Press and/or Drive Sample and/or Core Boring - Plan View.
- Drive Rod Penetration Resistance - Soundings - Plan View
- Electrical Resistivity Probe - Plan View.
- *A* — Indicates Auger Boring.
- *B* — Indicates Press and/or Drive Sample and/or Core Boring.
- Electrical Resistivity Probe plotted to vertical scale only.
- *TR* — Top of Rock
- Water saturated zone.
- *TD* — Total Depth.
- Horizontal bar on log indicates the depth the sample was taken.
- *X-Y* — Figures to the right of boring log in profile view indicate the number of blows for "Standard Penetration" test. X = First 6 inches, Y = Second 6 inches
- Casing
- Resistance "R" ≤ 10,000 lbs.
- Resistance "R" ≥ 10,000 lbs.
- *1/16* — Indicates final measurement of penetration in inches.
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- Footing on pile

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GENERAL INFORMATION

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Drive rod penetration resistance tests constitute driving a 1.315- inch diameter steel rod, with a 45° cone point, into the ground, using a 122 pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface conditions may be evaluated.

Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are by means of a rotary type drill rig, employing a 2" O.D., 1-3/8 I.D. sampler, at 2-1/2 and/or 5-foot depth intervals, driven by means of a 140-pound drop-hammer, with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The Boring Log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depths of press samples, field sample number, sample description based on laboratory test results and the Casagrande A-C classification system and gradation, plasticity and moisture content determinations. Results of strength and consolidation testing appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
8"	3"	2.0mm	0.42mm	0.074mm	0.005mm	
		No 10 sieve	No 40 sieve	No 200 sieve		

NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

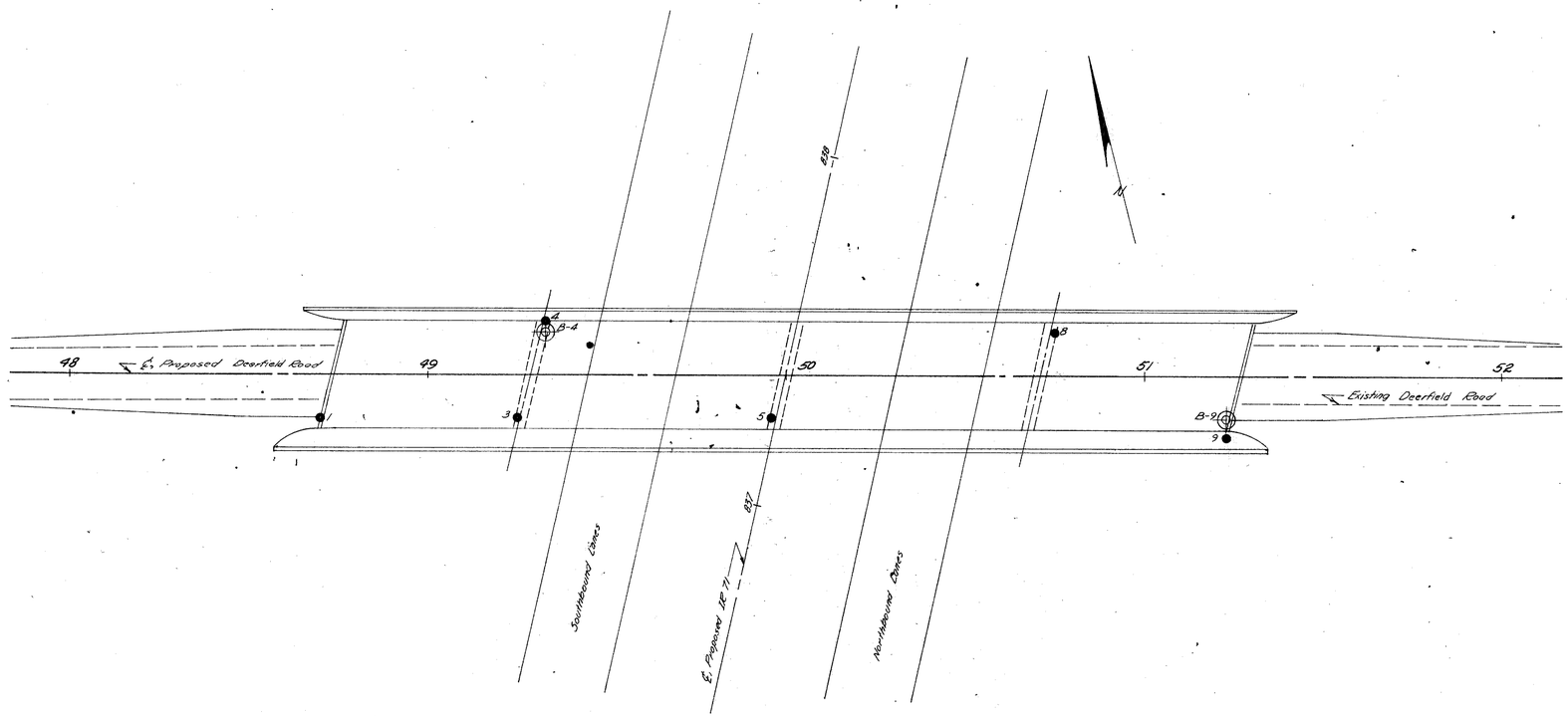
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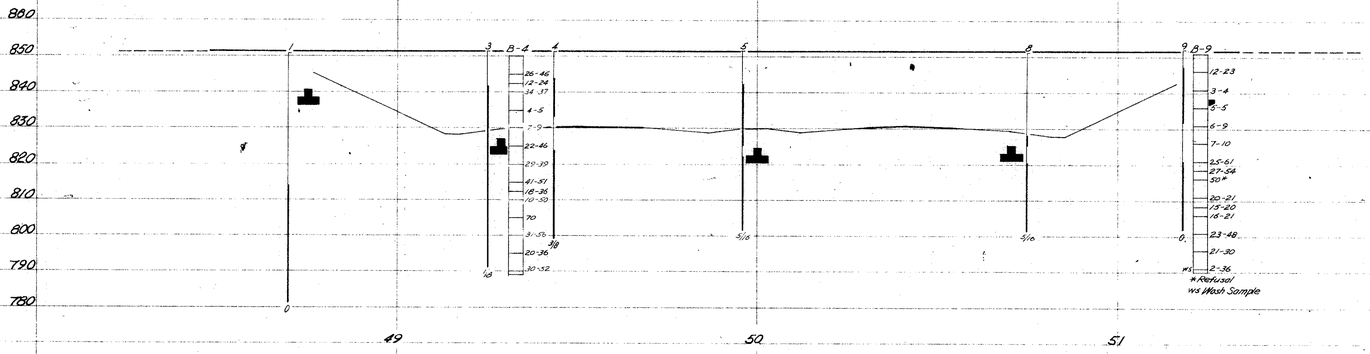
STRUCTURE FOUNDATION INVESTIGATION

BRIDGE NO. HAM-1271-1648
UNDER DEERFIELD RD
SEC. HAM-1271-13.05

CHECKED BY	REVIEWED BY	DATE
E.R.W.	E.D.R.	9-13-63

HAMILTON COUNTY
HAM 71-13.05





SCALE 1" = 20'

OHIO STATE HIGHWAY TESTING LABORATORY	
1620 WEST BROAD ST., COLUMBUS 23, OHIO	
STRUCTURE FOUNDATION INVESTIGATION	
BRIDGE NO. HAM-IR 71-16.48 UNDER DEERFIELD RD.	
SEC. HAM-IR 71-13.05	
PLAN AND PROFILE	
DRAWN BY R.L.K. & P.S.	CHECKED BY E.E.K.
REVIEWED BY R.D.F.	DATE 2-17-65

HAMILTON COUNTY
HAM 71-13.05

LOG OF BORING

Date Started 8-22-63 | Sampler Type SS | Dia. 1 3/8" | Water Elev.
Date Completed 8-27-63 | Casing: Length 51' | Dia. 3 1/2"
Boring No. B-4 | Station & Offset 49+33, 12' Lt (REAR PIER) | Surface Elev. 850.0'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
850.0	0														
	2														
845.0	4														
	6	26/46			Brown Sandy Clay	1	0	7	18	29	46	35	16	21	
842.5	8	12/24			Brown Sandy Silt	2	0	3	30	32	35	NP	NP	24	
840.0	10	34/37			Brown Sandy Silt	3	0	1	45	32	22	NP	NP	17	
	12														
	14														
835.0	16	4/5			Brown Silty Sand	4	0	2	83	5	10	NP	NP	19	
	18														
830.0	20	7/9			Brown Silty Sand	5	0	1	76	14	9	NP	NP	16	
	22														
	24														
825.0	26	22/46			Brown Silty Sand	6	0	1	66	23	10	NP	NP	14	
	28														
820.0	30														
	32	29/39			Brown Silty Gravelly Sand	7	21	2	52	19	6	NP	NP	20	
	34														
815.0	36	41/51			Brown Silty Sand	8	0	2	83	7	8	NP	NP	21	
812.5	38	18/36			Brown Silt	9	0	0	14	75	11	NP	NP	26	
810.0	40														
	42	10/50			Brown Silty Gravelly Sand	10		V	I	S	U	A	L	25	
	44														
805.0	46	70*			Brown Silty Sand	11	0	1	67	20	12	NP	NP	20	
	48														
800.0	50														
	52	31/56			Brown Silty Sand	12	0	1	79	11	9	NP	NP	21	
	54														
795.0	56	20/36			Brown Sandy Silt	13	0	0	56	36	8	NP	NP	22	
	58														
790.0	60														
789.0		30/52			Brown Silty Sand	14	0	1	62	22	15	NP	NP	22	
					BOTTOM OF BORING										

*REFUSAL

LOG OF BORING

Date Started 8-27-63 | Sampler Type SS | Dia. 1 3/8" | Water Elev.
Date Completed 8-28-63 | Casing: Length 50' | Dia. 3 1/2"
Boring No. B-9 | Station & Offset 51+23, 12' Rt (FORWARD ABUTMENT) | Surface Elev. 851.0'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
851.0	0														
	2														
	4														
846.0	6	12/23			Brown Silty Clay	1	0	4	12	33	51	38	16	24	
	8														
841.0	10	3/4			Light Brown Clayey Silt	2	0	0	7	60	33	29	9	26	
	12														
	14														
836.0	16	5/5			Brown Silty Sand	3	0	2	74	13	11	NP	NP	12	
	18														
831.0	20	6/9			Brown Silty Sand	4	0	2	83	3	12	NP	NP	20	
	22														
	24														
826.0	26	7/10			Brown Sandy Silt	5	0	0	57	32	11	NP	NP	19	
	28														
821.0	30														
	32	25/61			Brown Silty Sand	6	0	0	63	28	9	NP	NP	19	
818.5	34	27/54			Brown Silty Sand	7	0	5	79	6	10	NP	NP	19	
816.0	36	50* (0.2')			Brown Sand and Stone Fragments	8		V	I	S	U	A	L		
	38														
811.0	40														
	42	20/21			Brown Silty Sand	9	0	2	68	21	9	NP	NP	23	
808.5	44	15/20			Brown Silty Sand	10	0	1	60	28	11	NP	NP	24	
806.0	46	16/21			Brown Sandy Silt	11	0	1	46	40	13	NP	NP	24	
	48														
801.0	50														
	52	23/48			Brown Silty Sand	12	0	1	79	12	8	NP	NP	20	
	54														
796.0	56	21/30			Brown Silty Sand	13	0	0	68	20	12	NP	NP	22	
	58														
791.0	60														
790.0		2/36			Brown Sand (Wash Sample)	14		V	I	S	U	A	L		
					BOTTOM OF BORING										

*REFUSAL

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. HAM-12.71-1648
UNDER DEERFIELD RD
SEC. HAM-12.71-13.05

BORING DATA

TYPED BY	CHECKED BY	REVIEWED BY	DATE
J.B.C.	R.R.W.	E.D.R.	9-13-63

HAMILTON COUNTY
HAM 71-13.05

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

852 848 844 840 836 832 828 824 820 816 812 808 804 800 796 792 788 784 780

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 1
Station & Offset 48+70.12' RT
REAR ABUTMENT
Surface Elev. 850.7' Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 3
Station & Offset 49+25.12' RT
REAR PIER
Surface Elev. 851.2' Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 4
Station & Offset 49+33.15' LT
REAR PIER
Surface Elev. 851.2' Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 5
Station & Offset 49+96.12' RT
CENTER PIER
Surface Elev. 851.5' Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 8
Station & Offset 50+75.12' LT
FORWARD PIER
Surface Elev. 851.2' Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 9
Station & Offset 51+23.17' RT
FORWARD ABUTMENT
Surface Elev. 852.0' Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

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STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. HAM-IR 71-1648
UNDER DEERFIELD RD.
SEC. HAM-IR 71-13.05

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
RC	C.P.W.	F.D.E.	9-13-63

HAMILTON COUNTY
HAM 71-13.05

SUMMARY OF SUB SITE

The structure site is located on the glaciated dissected Lexington Peneplain, in an area where shallow glacial-derived and residual soil cover overlies interbedded shale and limestone bedrock, of Ordovician age.

EXPLORATION

The exploration consisted of two drive sample-core borings, made on February 20 and 25, 1964.

SUBSURFACE CONDITIONS

Borings disclose that shallow soil cover, comprised of stiff and very stiff, moist silty clays, overlies flat-lying bedrock surface, encountered 13 feet below ground surface, elevation 809 feet. Borings were terminated 7 feet below bedrock surface, at elevation 801 feet.

If it is the intention to found the retaining wall on bedrock, it is considered advisable that the open excavation be inspected in the field in order to insure that the supporting bed has been extended to rock throughout the entire founding area. It is further suggested that the area of the footing contact not be subjected to prolonged atmospheric exposure, and that the excavation be well drained at all times.

Unconfined compression tests on similar interbedded shale and limestone bedrock indicates a crushing strength on the order of 150 tons per square foot.

LEGEND

- Auger Boring Location - Plan View
- Press and/or Drive Sample and/or Core Boring Location - Plan View
- Drive Rod Penetration Resistance Sounding Location - Plan View
- R — Electrical Resistivity Probe Location - Plan View
- Footing / Capped Pile
- Footing on Pile
- A — Electrical Resistivity Probe - Profile
- TR — Top of Rock
- Interval of Relatively High Moisture
- TD — Total Depth
- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken
- X/Y — Figures Beside the Boring Log in Profile Indicate the Number of Blows For Standard Penetration Test.
  X = Number of Blows for First 6 Inches.
  Y = Number of Blows for Second 6 Inches.
- Drive Rod Penetration Resistance Sounding Log - Profile.
- Casing
- Resistance "R" ≤ 10,000 lbs.
- Resistance "R" > 10,000 lbs.
- Z — Indicates Final Measurement of Penetration, in Inches
- W — Indicates Free Water Elevation.
- Indicates Static Water Elevation

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved by three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value R against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and/or 5 foot depth intervals, driven by means of a 140-pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is recorded in the stratification section.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D. x 1-3/8 I.D. drive sampler, and 3" O.D. thin wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drilling rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests, and the Casagrande A-F classification system and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. Such samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
	3"	3"	2.0mm	0.42mm	0.074mm	0.005mm
			No. 10 sieve	No. 40 sieve	No. 200 sieve	

LOG OF BORING

Date Started 2-25-64 — Sampler Type SS — Dia. 1 3/8" — Water Elev.
Date Completed 2-25-64 — Casing: Length — Dia.
Boring No. B-1 — Station & Offset 258+12, 57' Rt (RETAINING WALL) — Surface Elev. 821.6'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
821.6	0														
	2														
	4														
816.6															
815.6	6	5/7			Light Brown and Gray Clay	1	0	0	0	61	39	41	21	26	
	8														
811.6	10				Brown Silty Clay with Limestone Boulders										
	12		2.8	2.2											
808.6	14				TOP OF ROCK										
	16				Shale, brownish-gray to gray, medium-firm, weathered above 15.5 feet, argillaceous, calcareous, interbedded with limestone, gray, dense, fossiliferous, finely-crystalline, (comprising 80% of the interval) in 2.5' to 6.0' intervals. Core loss 15%.										
	18		4.9	0.1											
794.6	20				BOTTOM OF BORING										

LOG OF BORING

Date Started 2-20-64 — Sampler Type SS — Dia. 1 3/8" — Water Elev.
Date Completed 2-20-64 — Casing: Length — Dia.
Boring No. B-2 — Station & Offset 259+29, 53' Rt (RETAINING WALL) — Surface Elev. 821.2'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
821.2	0														
	2														
	4														
816.2															
	6	7/11			Brown and Gray Clay	1	0	1	2	39	58	54	30	31	
	8														
811.2	10														
	12	13/30			Brown and Gray Silty Clay	2	0	1	1	42	56	40	18	19	
806.7	14	20/7			Gray and Brown Clay and Stone Fragments	3	46	7	3	21	23	36	17	21	
804.2	16		1.1	0.9	TOP OF ROCK										
	18				Shale, gray, calcareous, fissile, soft to medium-firm, with clay seams, interbedded with limestone (light-grey, fossiliferous, hard, in max. 0.3' beds, comprising about 35% of the interval). Core loss 41%.										
	20		3.0	2.0											
794.2	22				BOTTOM OF BORING										

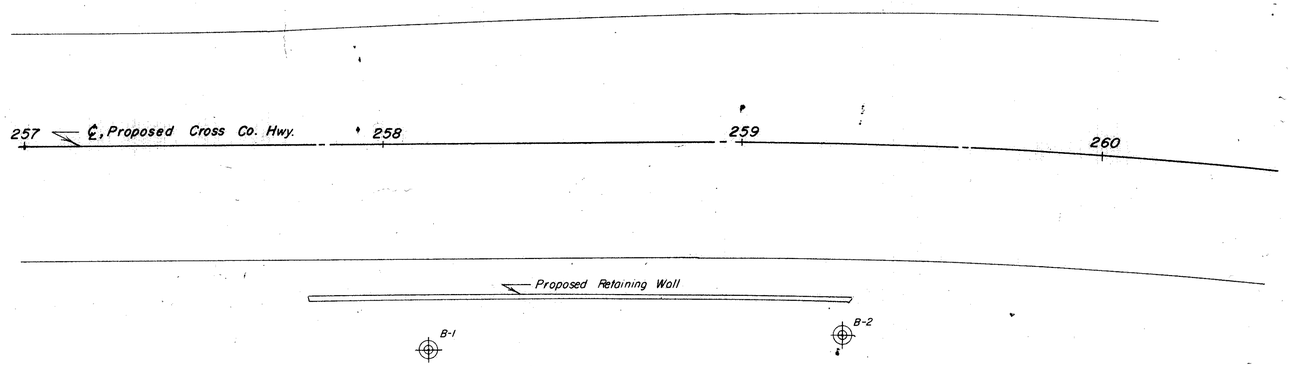
NOTE: The subsurface information shown by this subsurface investigation was prepared only for the use in designing design controls for the project. The State of Ohio does not guarantee the accuracy of this data as it is not to be construed as a part of the plans governing construction of the project.

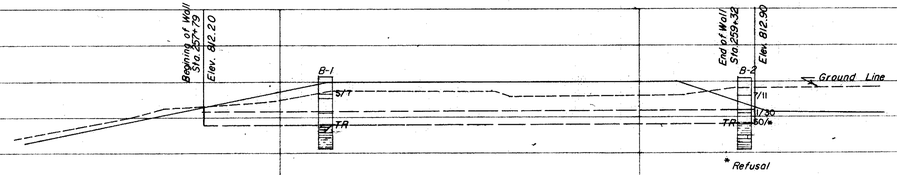
OHIO STATE HIGHWAY TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. HAM-IR71-
RETAINING WALL
VICINITY OF STA. 258+56
SEC HAM-IR 71-13.05

CHECKED BY	REVIEWED BY	DATE
R.P.W.	R.D.R.	3/23/64

HAMILTON COUNTY
HAM. 71-13.05





SCALE: 1" = 20'

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST., COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. HAM-IR 71-
RETAINING WALL
VICINITY OF STA. 258+56
SEC. HAM-IR 71-13.05

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.L.F.	R.P.W.	R.D.R.	3/23/64

HAMILTON COUNTY
HAM. 71-13.05

GEOLOGY OF THE SITE

The structure site is located upon the glaciated Lexington Peneplain, in an area where shallow soils overlie interbedded limestone and shale bedrock, of Ordovician age.

EXPLORATION

The exploration consisted of two drive sample-core borings, made between February 26 and March 3, 1964.

INVESTIGATIONAL FINDINGS

The borings disclose that bedrock surface, encountered at 18 and 22-foot depth, elevations 806 and 811 feet, is overlain by stiff dense clays and silts. An interval of limestone boulders occurs immediately overlying bedrock surface, between 11 and 13 feet below ground surface. Borings were terminated 12 feet below bedrock surface, elevations 799 and 794 feet.

If it is intention to found substructure units on bedrock, it is considered advisable that the open excavations be inspected in the field in order to insure that the excavations have been extended to rock throughout the entire founding area. It is further suggested that the area of the footing contact not be subjected to prolonged atmospheric exposure, and that the excavation be kept drained at all times.

Unconfined compression on similar interbedded shale and limestone bedrock indicates a crushing strength on the order of 150 tons per square foot.

LEGEND

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- Press and/or Drive Sample and/or Core Boring Location - Plan View
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- Electrical Resistivity Probe Location - Plan View
- Footing / Capped Pile
- Footing on Pile
- Electrical Resistivity Probe - Profile
- TR Top of Rock
- Interval of Relatively High Moisture
- TD Total Depth
- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale

- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken
- X/Y Figures Beside the Boring Log in Profile indicate the Number of Blows For Standard Penetration Test.
  X = Number of Blows for First 6 Inches.
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- Drive Rod Penetration Resistance Sounding Log Profile.
- Casing
- Resistance "R" < 10,000 lbs.
- Resistance "R" > 10,000 lbs.
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- Weathered Sandstone
- Sandstone
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- Dolomite
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- Limestone

GENERAL INFORMATION

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Drive rod penetration resistance tests constitute driving a 1.315 inch diameter steel rod, with a 45° core point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with pile performance at pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of sub-surface materials in a manner that will be readily compared with data from similar tests at other locations on the structure. From this comparison, the overall uniformity of subsurface condition may be evaluated.

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Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and/or 5 foot depth intervals, driven by means of a 140-pound drop-hammer, with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin wall press sampler. The press-sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests - two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
		2 mm (No. 10 sieve)	0.42 mm (No. 40 sieve)	0.074 mm (No. 200 sieve)	0.005 mm	

LOG OF BORING

Date Started 2-26-64
Date Completed 2-27-64
Boring No. B-1
Sampler Type SS Dia. 1 3/8"
Casing: Length — Dia. —
Station & Offset 264+35, 90' Lt (PED. OVERPASS)
Water Elev. —
Surface Elev. 828.7'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
828.7	0														
826.2	2				Mottled Brown and Gray Clay	1	0	1	2	48	49	47	24	27	
	4	8/8													
823.7	6	7/8			Mottled Brown and Gray Sandy Clay	2	11	2	10	34	43	49	28	22	
821.2	8	8/9			Brown and Gray Sandy Clay	3	11	3	12	28	46	44	23	26	
818.7	10				Brown Gravelly Silt	4	49	4	5	25	17	23	5	14	
817.7	12	23/20			Brown silty clay with few limestone fragments										
	14		3.2	0.8											
813.7	16	21/25			Brown and Gray Silty Clay	5	0	3	13	23	51	43	20	22	
810.7	18		1.3	3.7	TOP OF ROCK										
	20														
	22														
	24		3.8	1.2	Shale, gray, calcareous, medium-firm, with few clay seams, interbedded with limestone (light-gray, fossiliferous, hard, irregularly bedded in max. 0.3' beds, comprising about 30% of the interval). Core loss 23%.										
	26														
	28		3.9	1.1											
798.7	30				BOTTOM OF BORING										

LOG OF BORING

Date Started 2-28-64
Date Completed 3-3-64
Boring No. B-2
Sampler Type SS Dia. 1 3/8"
Casing: Length 15' Dia. 3 1/2"
Station & Offset 264+35, 75' Rt (PED. OVERPASS)
Water Elev. —
Surface Elev. 828.6'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
828.6	0														
	2														
823.6	4														
	6	10/14			Brown and Gray Gravelly Sandy Clay	1	17	4	15	26	38	38	19	20	
	8														
818.6	10				Brown and Gray Gravelly Sandy Silt	2	15	10	15	31	29	23	9	13	
	12	12/15													
815.1	14				No Sample Recovered - Boulders										
813.6	16														
	18				Brown Silty Clay with Limestone Boulders										
808.6	20				Grayish-Brown Gravelly Clay	3	17	4	2	28	49	38	18	19	
	22	21/50													
806.1	24				TOP OF ROCK										
	26		1.8	0.7											
	28				Shale, brownish-gray to gray, soft above 25.0', firm below, calcareous, interbedded with limestone, gray, dense fossiliferous, finely-crystalline (comprising 40% of the interval) in 0.2' to 0.4' intervals. Core loss 25%.										
	30		4.5	0.5											
	32														
	34		3.4	1.6											
793.6					BOTTOM OF BORING										

Note: The information shown by this subsurface investigation was obtained solely for the purpose of providing design criteria for the project. The State of Ohio does not guarantee the accuracy of the information shown, nor does it guarantee the accuracy of any interpretation of the information by any person using it for purposes other than those contemplated by the project.

OHIO STATE HIGHWAY
TESTING LABORATORY
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STRUCTURE FOUNDATION INVESTIGATION
PROJECT NO. HAM-IR 71-
PEDESTRIAN OVERPASS
SEC. HAM-IR 71-13.05

DRAWN BY	REVIEWED BY	DATE
R.D.R.	G.P.H.	3/23