MICROFILMED
JAN 25 1995

SUM-277/224-0.00/10.22	OHIO
SUM-76-5.60	FHWA REGION 5

1/28

NH-277-6 (10)

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
SUM-277/224-0.00/10.22
SUM-76-5.60

CITY OF AKRON - BARBERTON - CONVENTRY TOWNSHIP
SUMMIT COUNTY

DESIGN DESIGNATION

CURRENT A.D.T. (1992)	=	41279
DESIGN YEAR A.D.T. (2012)	=	50694
D.H.V.	=	5069
D	=	50%
T	=	5%
V DESIGN	=	60 MPH
LEGAL	=	55 MPH
FUNCTIONAL CLASSIFICATION	=	URBAN INTERSTATE

DESIGN EXCEPTIONS: APPROVAL DATE
NONE

CONVENTIONAL SIGNS

County Line
Township Line
Section Line
Corporation Line or
Fence Line (existing) -x-x- (proposed) -x-x-
Center Line 352 353
Trees, Stumps (to be removed)
Utility Poles: Telephone, Power, Light

Limited Access (only) LA
Right of Way (only) RW
Limited Access & Right of Way LA & RW
Existing Right of Way
Property Line (in existing fence)
Railroad or
Guardrail (existing) (proposed)

INDEX OF SHEETS

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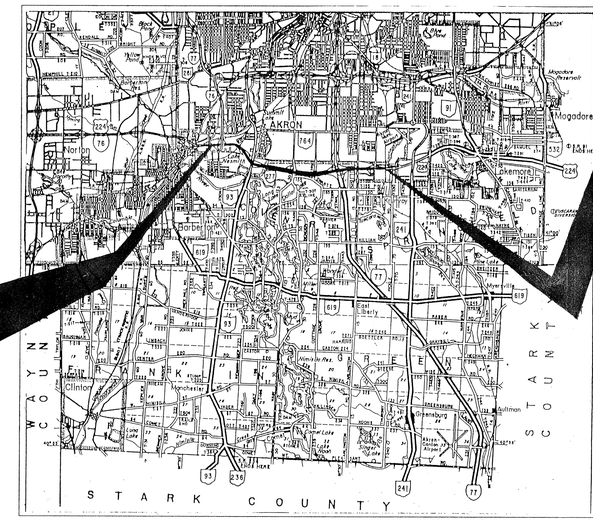


LOCATION MAP

SCALE IN MILES

UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
Call...800-362-2764 (Toll free)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

Portion to be improved
State & Federal Routes
Other Roads

LIMITED ACCESS

This improvement 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, Revised Code of Ohio, and is especially designed for through traffic.

1993 SPECIFICATIONS

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

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

LINE DATA

PROJECT LIMITS = 0.00 LIN. FT. OR 0.00 MILES

BEGIN WORK: STA 59+05.19 (SUM-277)
STATION EQUATION: STA. 228+00 (BACK)
*LENGTH OF WORK = 16894.81 LIN. FT.
STATION EQUATION: STA. 222+59.78 (AHEAD)
END WORK: STA. 318+40.33
*LENGTH OF WORK = 9580.55 LIN. FT.
ADD WORK: STA. 469+05.50 (I-77)
END WORK: STA. 487+77 (I-77)
*LENGTH OF WORK = 1871.50 LIN. FT.
ADD WORK: STA. 2+49 (CENTRAL AVE.)
END WORK: STA. 4+20 (CENTRAL AVE.)
*LENGTH OF WORK = 172 LIN. FT.

*TOTAL LENGTH OF WORK
16894.81 + 9580.55 + 1871.50 + 172 = 28518.86 LIN. FT. OR 5.4013 MILES

SCALES

Plan 0 25 50 100

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS					
F-1	11-10-83				
F-3	5-1-76				
F-5	5-1-76				
F-6	5-1-76				
HL-50.11	5-1-87				

Approved David R Dreger
Date 11-13-92 District Deputy Director of Transportation

Approved Christopher L. Runyan
Date 3-15-93 Deputy Director, Planning and Design

Approved Jerry Wray
Date 3-15-93 Director, Department of Transportation

Plan Prepared By :
Location and Design Department
OHIO Department of Transportation
District 4

Project : SUM-277/224-0.00/10.22
Date of Letting _____, 19__ Contract No._____

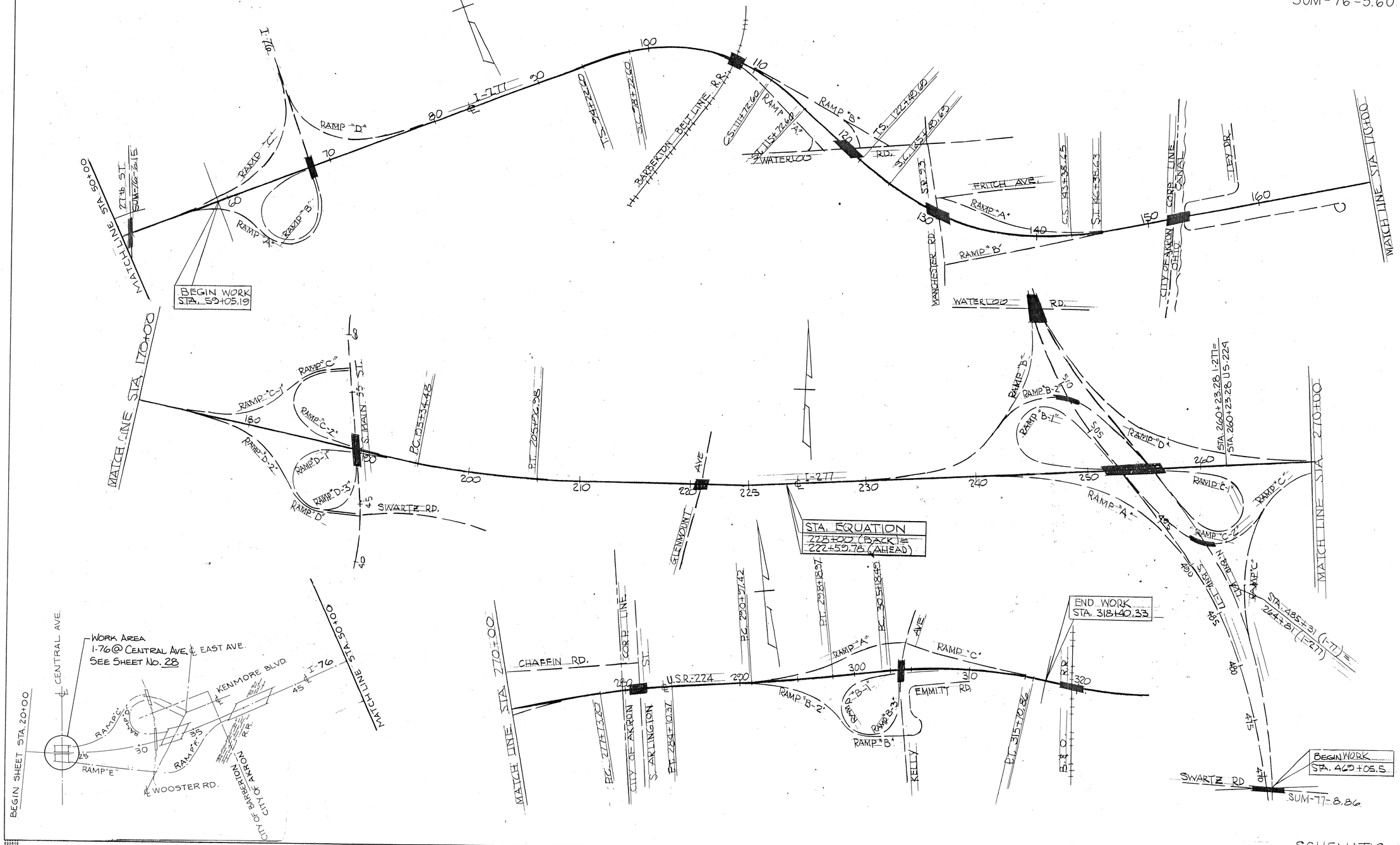
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED:
DIVISION ADMINISTRATOR DATE

SU277001.DGN

SUM-277/224-0.00/10.22
SUM-76-5.60

SCHEMATIC PLAN

0 200 400 800



SCHEMATIC PLAN

FENCE GENERAL NOTES & GENERAL SUMMARY

SUM-277/224-0.00/10.22
SUM-76-5.60

FENCE GROUNDING:

ALL TYPES OF FENCE SHALL BE GROUNDED, AS PER STANDARD CONSTRUCTION DRAWING HC-50.11. WHEN A POWER LINE PASSES OVER THE FENCE OR A PARALLEL POWER LINE EASEMENT IS WITHIN FIFTY (50) FEET OF THE FENCE. PAYMENT SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 625 GROUND ROD.

LINE POST ANCHOR ALTERNATES:

WHEN AND AS DIRECTED BY THE ENGINEER, EITHER STEEL DRIVE ANCHORS OR LONGER POSTS DRIVEN 48 INCHES DEEP MAY BE USED IN LIEU OF CONCRETE ENCASEMENT OF LINE POSTS LOCATED IN HIGHLY INACCESSIBLE LOCATIONS.

ITEM 607 FENCE, TYPE CLT, AS PER PLAN:

ALL FRESH CUT BRUSH SURFACES SHALL BE TREATED WITH HERBICIDE BANVEL-CST, TORDON-RHU OR APPROVED EQUAL. THE TREATED AREA SHALL BE ONE FOOT TO EITHER SIDE OF THE PROPOSED FENCE AND THE APPLICATION RATE SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. PAYMENT SHALL BE INCLUDED IN THE CONTRACT UNIT BID PRICE, PER LINEAL FOOT, OF THE PERTINENT 607 FENCE ITEM. ONLY PROPERLY LICENSED PERSONNEL SHALL APPLY HERBICIDES AS REQUIRED BY THE OHIO REVISED CODE.

UTILITIES:

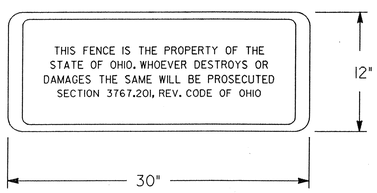
NO KNOWN UTILITIES WILL BE AFFECTED BY THIS WORK.

FENCE REMOVED:

AN ESTIMATED QUANTITY OF ITEM 202 FENCE REMOVED HAS BEEN CARRIED TO THE GENERAL SUMMARY. ALL EXISTING FENCE, POSTS AND HARDWARE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.

ITEM 630 SIGN, FLAT SHEET, AS PER PLAN:

FENCE - PROPERTY SIGN (N-53-30)



N-53-30
SEC. 2X-10

THIS SIGN IS USED AT LOCATIONS TO BE DETERMINED IN THE FIELD WHERE DIFFICULTY HAS BEEN ENCOUNTERED IN MAINTAINING THE FENCE DESIGNATING THE RIGHT-OF-WAY OF THIS LIMITED ACCESS HIGHWAY. THE SIGN SHALL BE ATTACHED TO THE TOP STRAND OF THE FENCE AND FACING THE PROPERTY OWNER AND AWAY FROM THE ROAD. THIS SIGN SHALL HAVE A BLACK LEGEND ON A WHITE BACKGROUND. THE SIGNS ARE TO BE ATTACHED USING 4 GALVANIZED STEEL TIE WIRES AS PER SPEC. 710.03. ONE IN EACH CORNER TWO INCHES FROM THE OUTSIDE EDGE. AN ESTIMATED QUANTITY OF 50 SQ.FT. OF ITEM 630 SIGN, FLAT SHEET, AS PER PLAN HAS BEEN CARRIED TO THE GENERAL SUMMARY. ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE SIGN INSTALLATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

PREVIOUS RIGHT OF WAY PLANS:

THE ORIGINAL RIGHT OF WAY PLANS ARE AVAILABLE FOR REFERENCE BY CONTACTING THE DISTRICT 4 OFFICE IN RAVENNA, OHIO.

WORK RESTRICTIONS:

IN ALL AREAS WHERE THE EXISTING R/W FENCE IS STANDING AT THE TIME THE CONTRACTOR BEGINS WORK, THERE SHALL BE NO MORE THAN FIVE (5) WORKING DAYS TIME SPAN THAT AN AREA IS LEFT UNPROTECTED BY R/W FENCE.

UTILITY OWNERSHIP:

THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THE PROJECT:

OHIO EDISON COMPANY
76 SOUTH MAIN ST.
AKRON, OHIO 44308
ATTN: PAUL SEVERYN - DIV. ENGR.
PHONE: 216-384-4702

OHIO BELL TELEPHONE COMPANY
2525 STATE RD.
CUYAHOGA FALLS, OHIO 44223
ATTN: LYNN A. KAVAN - ENGR. MGR.
PHONE: 216-922-2476

EAST OHIO GAS COMPANY
2100 EASTWOOD AVE.
AKRON, OHIO 44305
ATTN: HAROLD WRIGHT - DIV. ENGR.
PHONE: 216-798-7140

BUREAU OF WATER - CITY OF AKRON
65 SOUTH HIGH ST.
AKRON, OHIO 44308
ATTN: FRED DEBELLIS - UTILITY ENGR.
PHONE: 216-375-2690

WARNER CABLE TV OF AKRON
1655 BRITTAIN RD.
AKRON, OHIO 44310
ATTN: BOB NYITRAY - OPER. MGR.
PHONE: 216-633-0142

CITY OF AKRON COMMUNICATIONS DIVISION
1055 HOME AVE.
AKRON, OHIO 44310
PHONE: 216-375-2670

MONUMENTS:

THE FOLLOWING IS A LIST OF EXISTING CENTERLINE MONUMENT LOCATIONS. THESE MONUMENTS SHALL BE USED, IF NECESSARY, TO ESTABLISH CENTERLINE OF RIGHT-OF-WAY FOR FENCE LAYOUT.

THE FOLLOWING MONUMENTS ARE LOCATED ON I-277 & U.S.R. 224:

STATION	LOCATION	STATION	LOCATION
65+00	P.O.T.	200+67.26	P.I.
75+00	P.O.T.	205+96.98	P.T.
85+00	P.O.T.	213+50	P.O.T.
98+22.60	P.C.C.	219+19.49	P.C.
111+72.60	P.C.C.	223+49.46	P.I.
115+72.60	P.O.T.	227+79.07	P.T.
122+49.96	P.O.T.	239+00	P.O.T.
125+49.96	P.C.C.	267+00	P.O.T.
134+44.29	M.O.	277+73.20	P.C.
143+38.63	P.C.C.	284+10.37	P.T.
146+38.63	P.O.T.	290+97.42	P.C.
155+00	P.O.T.	298+13.97	P.T.
165+00	P.O.T.	303+18.49	P.C.
175+00	P.O.T.	309+44.68	M.O.
185+00	P.O.T.	315+70.86	P.T.
195+34.48	P.C.		

THE FOLLOWING MONUMENTS ARE LOCATED ON I-77:

STATION	LOCATION
472+26.33	P.C.
472+26.33	℄ OF I-77 S.B. AT P.C.
474+88.64	℄ OF I-77 N.B. AT P.C.
482+93.20	℄ OF I-77 S.B. AT P.I.
485+55.51	℄ OF I-77 N.B. AT P.I.
493+09.28	℄ OF I-77 S.B. AT P.T.
495+71.59	℄ OF I-77 N.B. AT P.T.
499+99.60	℄ OF I-77 N.B. AT P.O.T.
500+69.09	℄ OF I-77 S.B. AT P.O.T.
502+03.54	℄ OF I-77 S.B. AT T.S.
506+66.75	℄ OF I-77 N.B. AT T.S.

FENCE GENERAL SUMMARY

SHEET NUMBER 3	SHEET NUMBER 4	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
						ROADWAY
	56960	202	75000	56960	LIN.FT.	FENCE REMOVED
	60416	607	23001	60416	LIN.FT.	FENCE, TYPE CLT, AS PER PLAN
	16	625	32000	16	EACH	GROUND ROD
50		630	80101	50	SQ.FT.	SIGN, FLAT SHEET, AS PER PLAN
		614	11000	LUMP		MAINTAINING TRAFFIC
		619	15000	LUMP		FIELD OFFICE, TYPE A
		623	10000	LUMP		CONSTRUCTION LAYOUT STAKES
		624	10000	LUMP		MOBILIZATION

FENCE SUB-SUMMARY

F.H.W.A. REGION	STATE	PROJECT NO.	FUNDS
5	OHIO		

SUM-277/224-0.00/10.22
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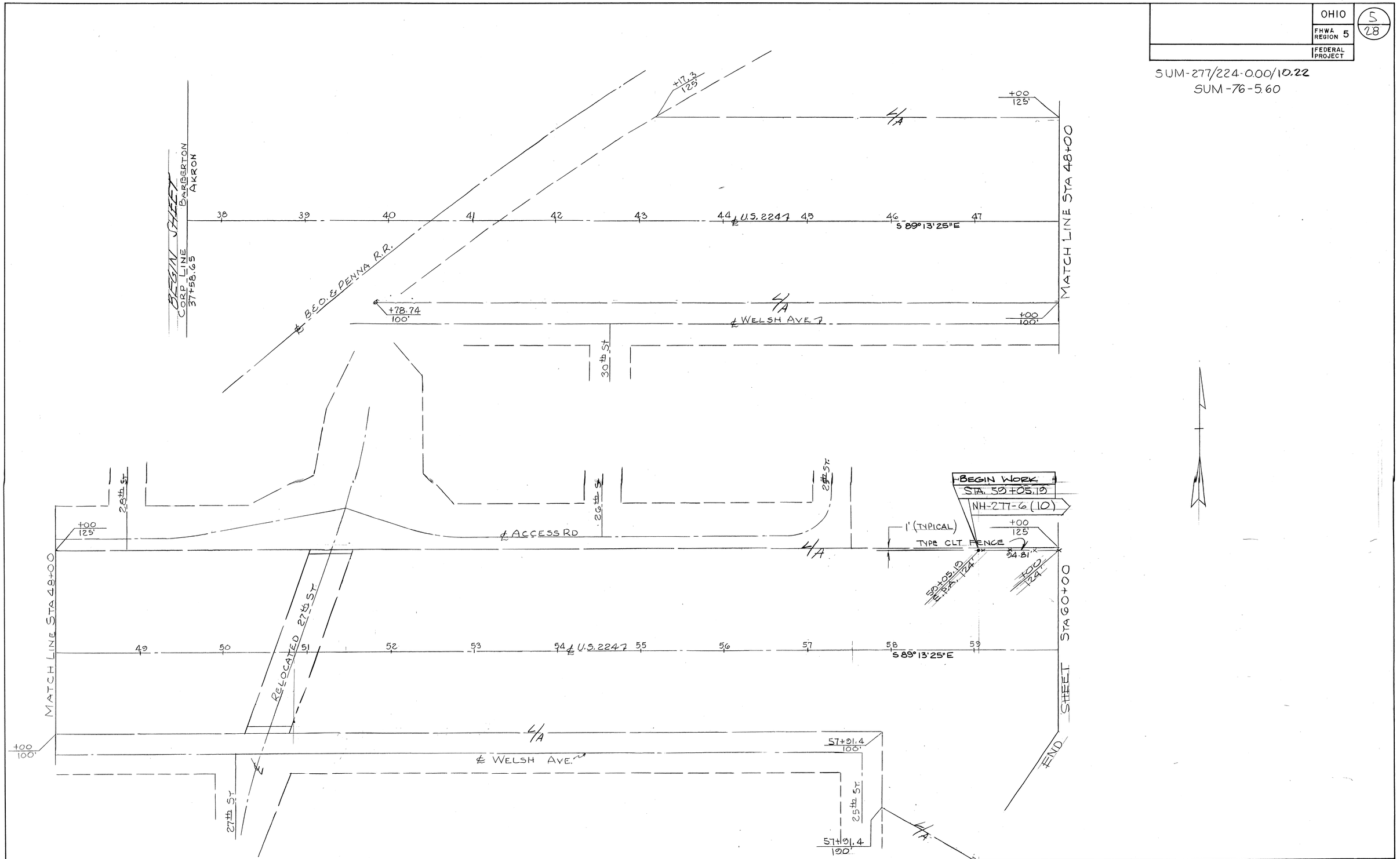
SIDE	STATION TO STATION		TYPE CLT															SEE SHEET No.
			FENCE	END POST ASSEMBLY	CORNER POST ASSEMBLY	INTERMEDIATE ANCHOR POST ASSEMBLY	ABUTMENT CONNECTION	STREAM CROSSING TYPE 2	STREAM CROSSING TYPE 3		ITEM 202 FENCE REMOVED		ITEM 625 GROUND ROD					
			L.F.	EACH	EACH	EACH	EACH	EACH	EACH		L.F.		EACH					
L	59+05.19	60+00	95	1							95							5
L	60+00	75+00	1795	2	2						842							6
R	60+00	74+00	2151		8	1					1187							7
L&R	74+00	84+00	1926		2	2					1926							8
L&R	84+00	108+00	4922		4	9	2				4922							9
L&R	108+00	121+01.32	2668	2	4	5	2				2668							10
L&R	121+01.32	130+00	2006	2	6	1	3	1	1		2006							11
L&R	130+00	145+00	3655	3	11		5				3655							12
L&R	145+00	160+00	2816		8	1	4				2816							13
L&R	160+00	180+00	4051		4	9	4				2491		4					14
R	180+00	195+00	1786	1	1	3	1				1786							15
L	180+00	195+00	1442	1	3	1	1		1		1442		1					16
L&R	195+00	225+00	5948	4	14	5	4		2		5948		7					17
L&R	225+00	235+00	3099		2	5					3099		2					18
L&R	235+00	250+00	2389		3	3					2389							19
L&R	250+00	265+00	1427		4	2					1427							20
L&R	265+00	280+00	3165		3	9					3165							21
L&R	486+00 *	497+00 *	1908		7	4					1908							22
*= I-77 INTERCHANGE (SOUTH)																		
L&R	508+00**	517+00**	1813	2		7					1813							23
**= I-77 INTERCHANGE (NORTH)																		
L&R	469+00 *	486+00 *	3425			12	2				3425							24
*= I-77 INTERCHANGE (SOUTH)																		
L&R	280+00	296+00	3137		6	4	4				3137							25
L&R	296+00	306+00	2534	4	3	3					2534							26
L&R	306+00	318+48.23	2193	1	2	2	1				2193							27
CENTRAL AVENUE UNDER I-76																		
L	2+49	2+70	21		2	3					36		1					28
L	3+76	4+20	44		2	4					50		1					28
TOTAL			60416	23	101	95	33	1	4		56960		16					

NOTE: Item 202 Fenced Removed and item 625 Ground Rod shall be paid for separately, all others listed above should be for information only and being paid for under item 607 Fence, Type CLT, As per Plan.

OHIO	5 / 28
FHWA REGION 5	
FEDERAL PROJECT	

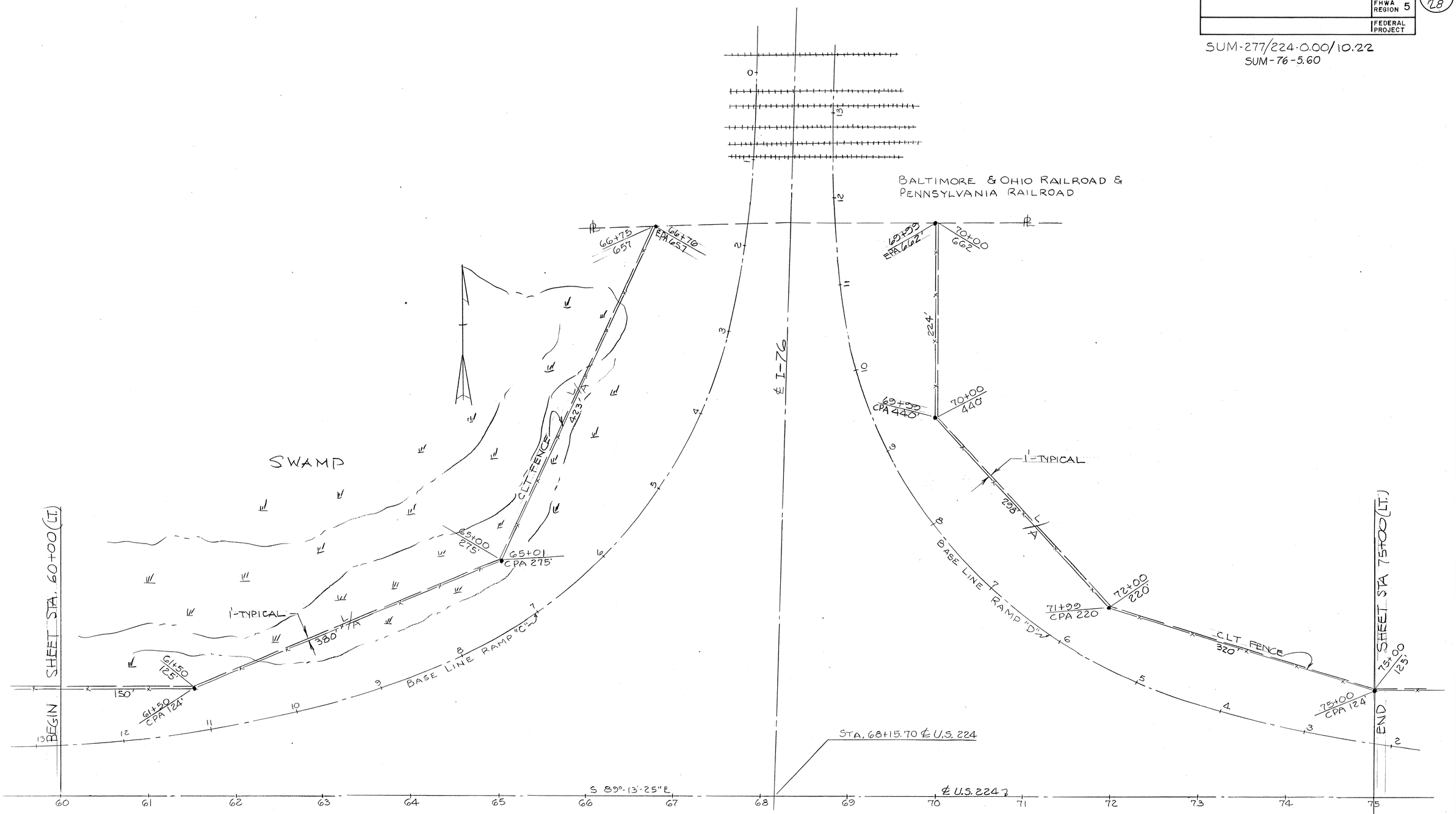
SUM-277/224-0.00/10.22
SUM-76-5.60



STA. 37+58.65 TO STA 60+00

OHIO	6
FHWA REGION 5	28
FEDERAL PROJECT	

SUM-277/224-0.00/10.22
SUM-76-5.60

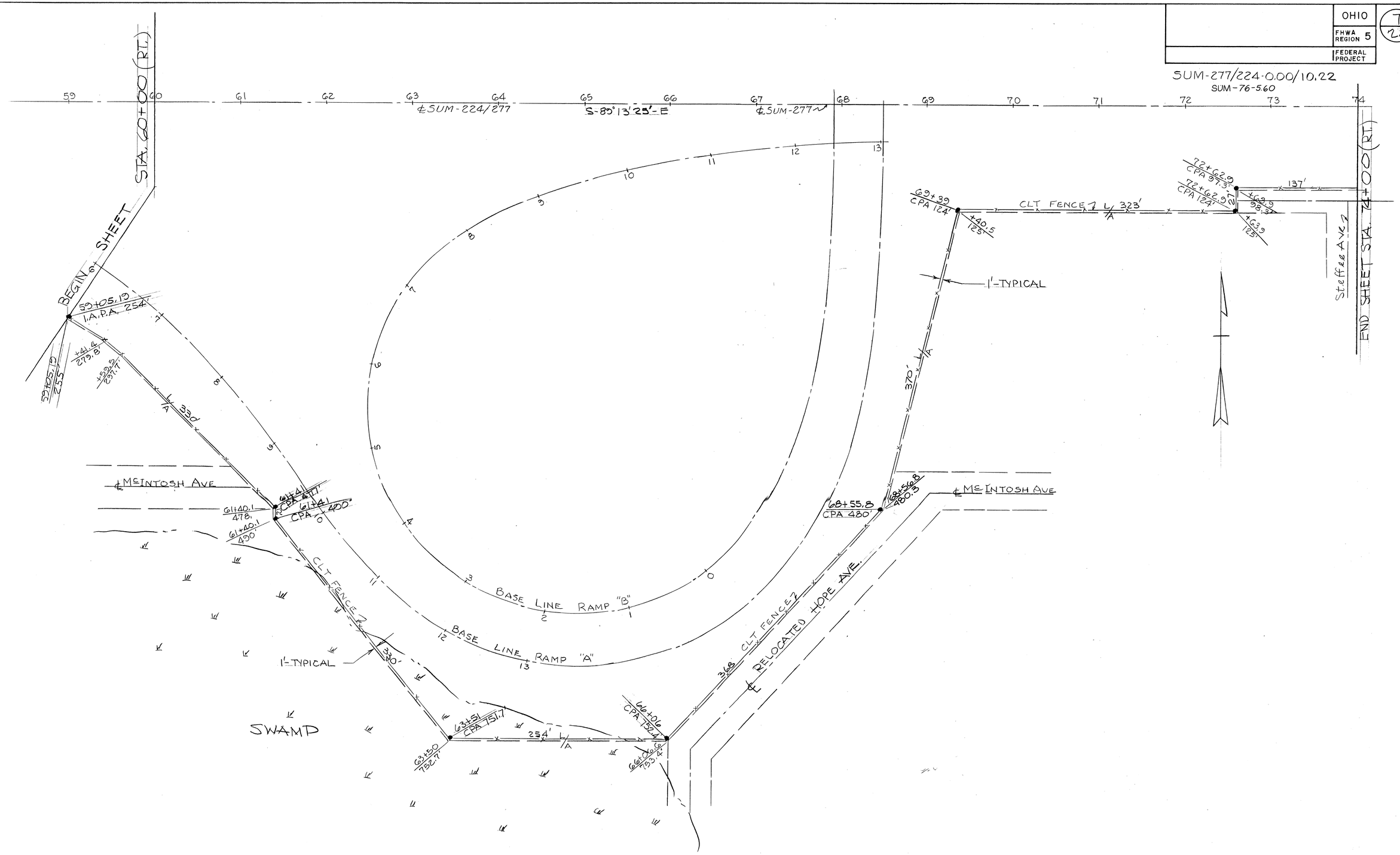


(LT.) STA. 60+00 To STA. 75+00

I-76 INTERCHANGE (NORTH)

520649

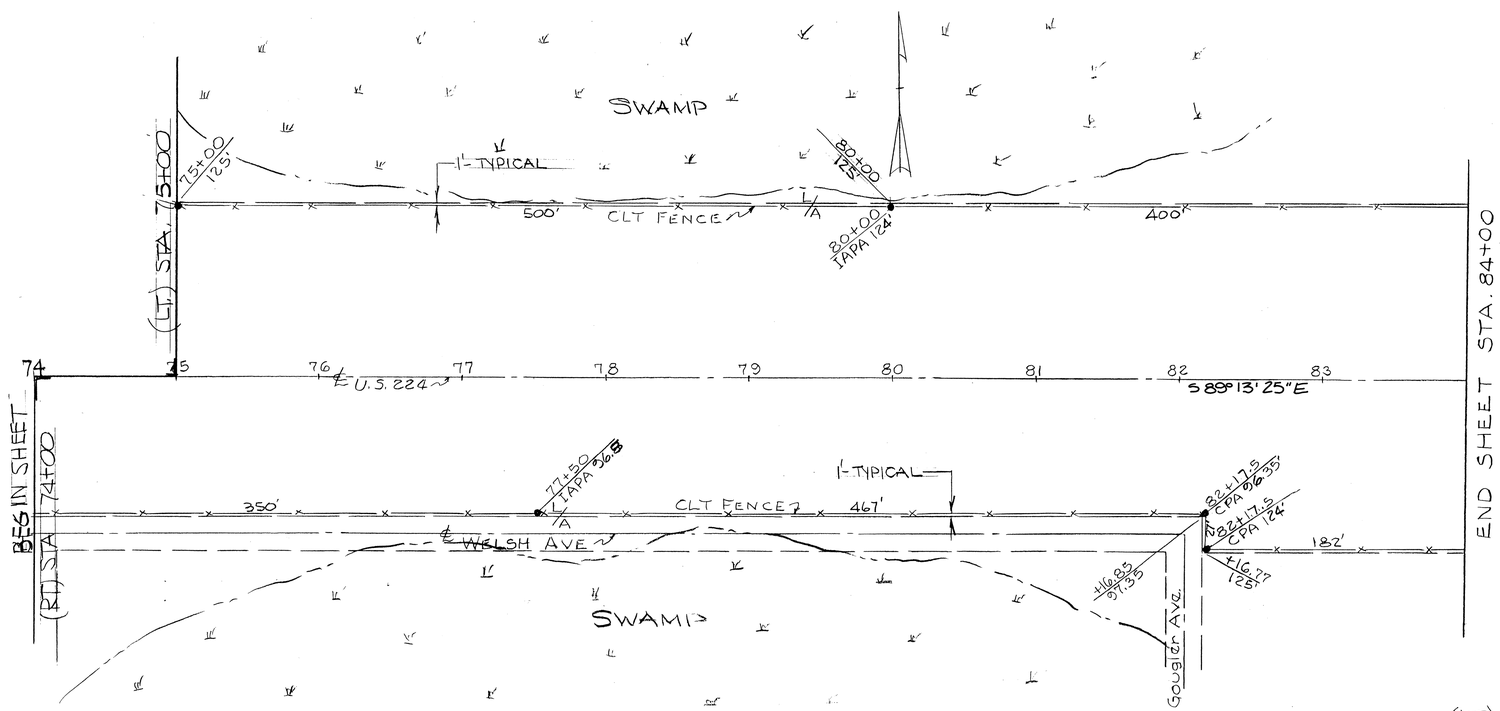
SUM-277/224-0.00/10.22
SUM-76-5.60



(RT.) STA. 60+00 To STA. 74+00

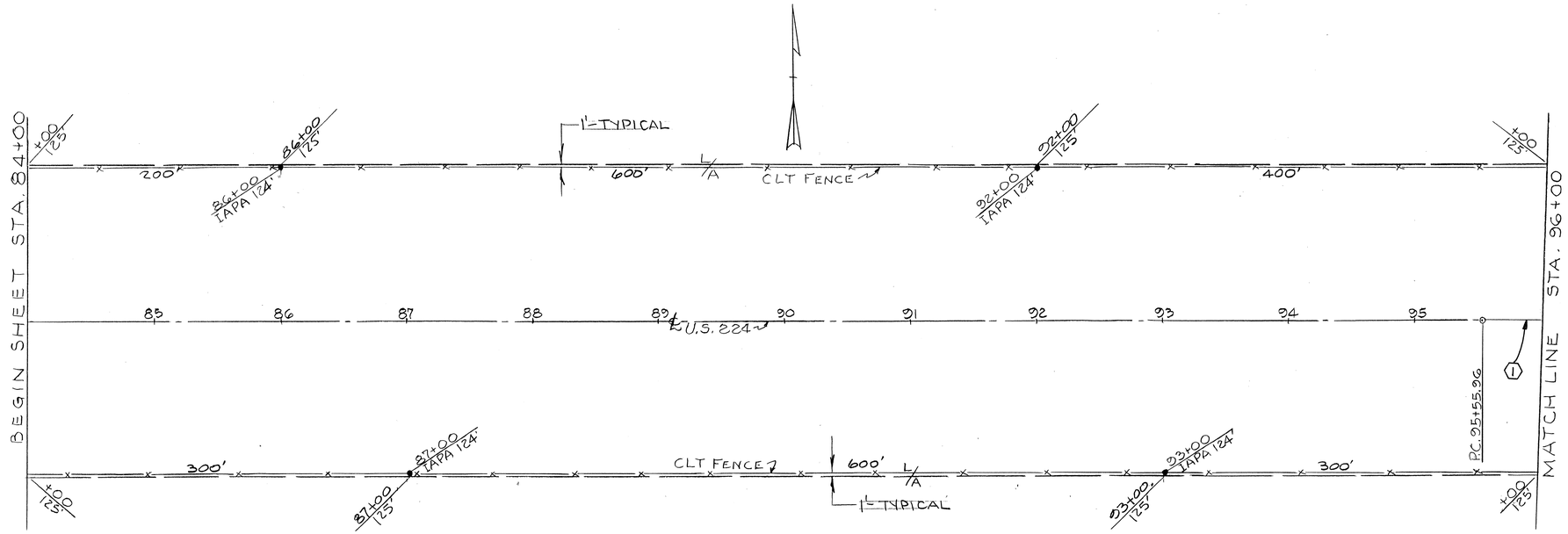
I-76 INTERCHANGE (SOUTH)

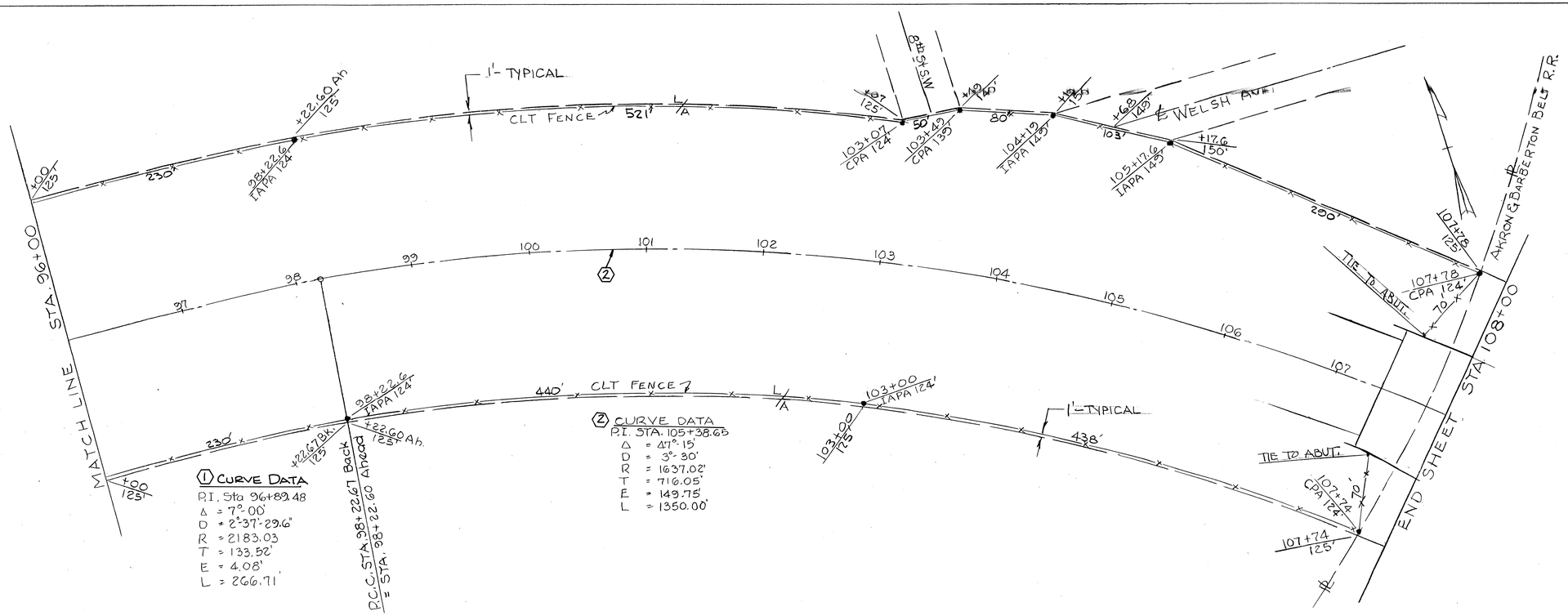
SUM-277/224-0.00/10.22
SUM-76-5.60



(LT.) STA 75+00 To STA 84+00
(RT.) STA. 74+00 TO STA. 84+00

SUM-277/224-0.00/10.22
SUM-76-5.60

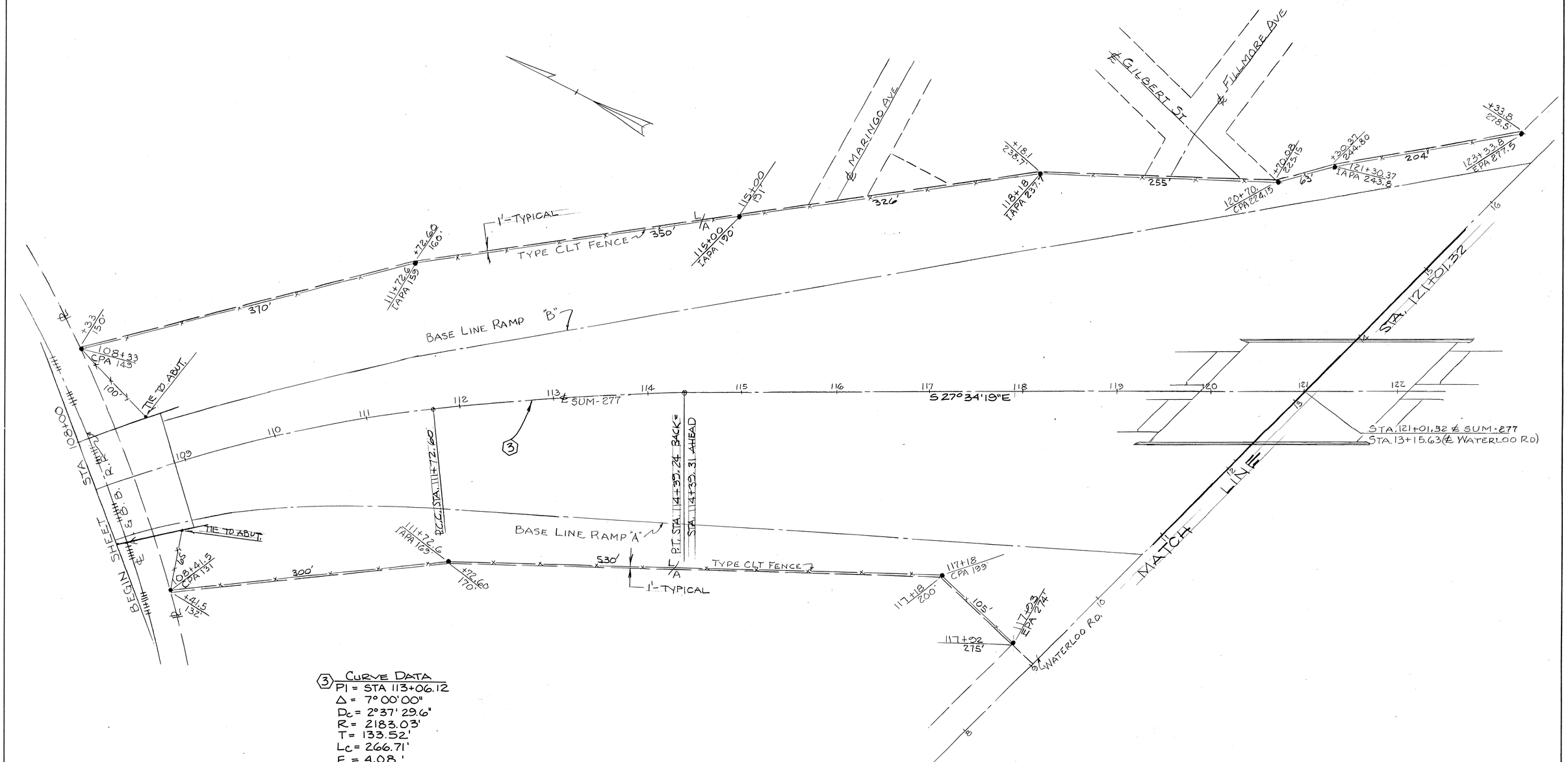




STA. 84+00 TO STA. 108+00

SUM-277/224-0.00/10.22

SUM-76-5.60



③ CURVE DATA

PI = STA 113+06.12
Δ = 7° 00' 00"
D_c = 2° 37' 29.6"
R = 2183.03'
T = 133.52'
Lc = 266.71'
E = 4.08'

STA. 108+00 TO STA. 121+01.32

OHIO	11
FHWA REGION 5	28
FEDERAL PROJECT	

SUM-277/224-0.00/10.22
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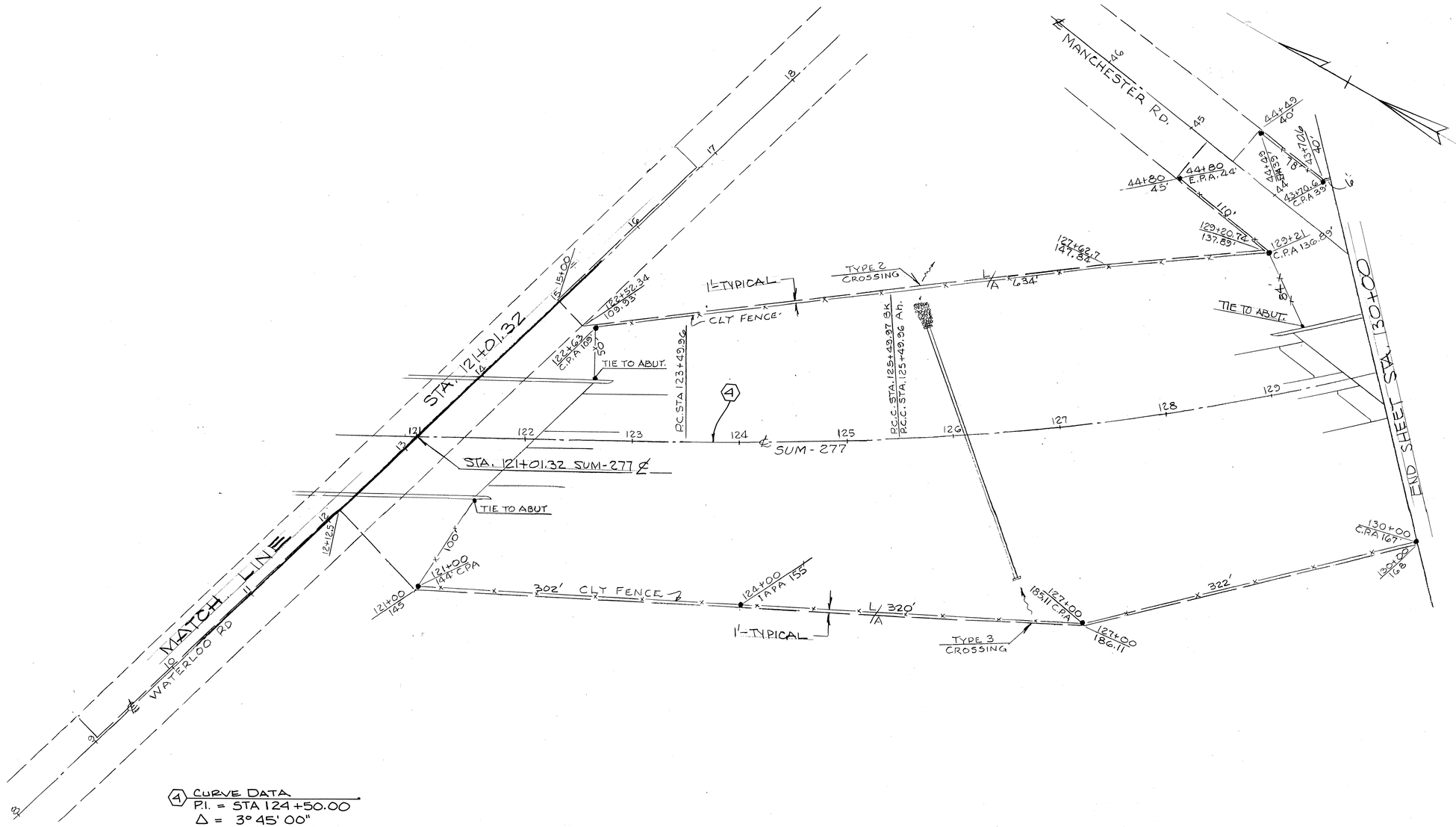

④ CURVE DATA
P.I. = STA 124+50.00
Δ = 3° 45' 00"
D_c = 1° 52' 29.7"
R = 3055.91'
T = 100.04'
L_c = 200.01
E = 1.64'

STA. 121+01.32 TO STA. 130+00

SUM-277/224-0.00/10.22
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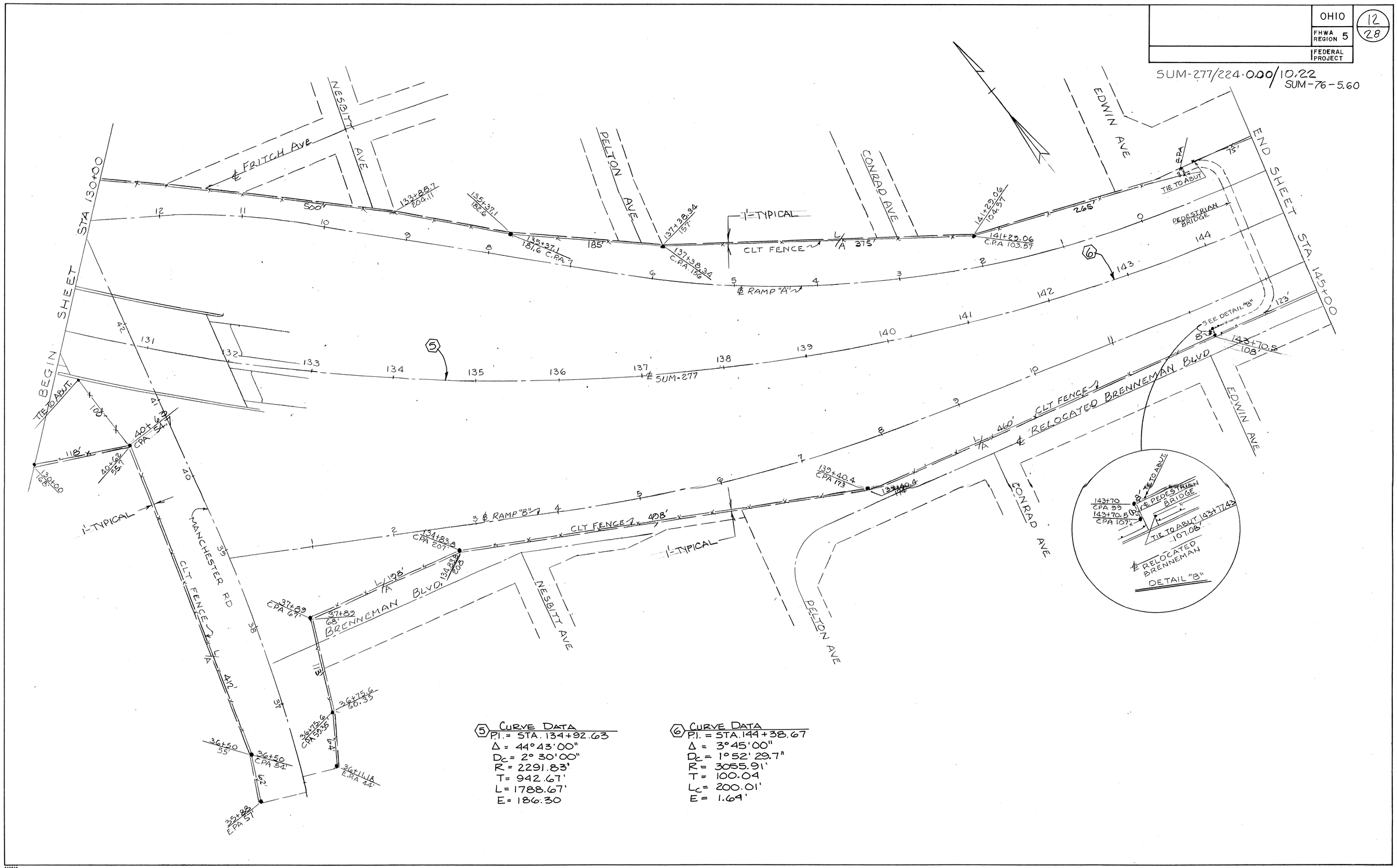


(5) CURVE DATA

P.I. = STA. 134+92.63
Δ = 44°43'00"
D_c = 2° 30'00"
R = 2291.83'
T = 942.67'
L = 1788.67'
E = 186.30

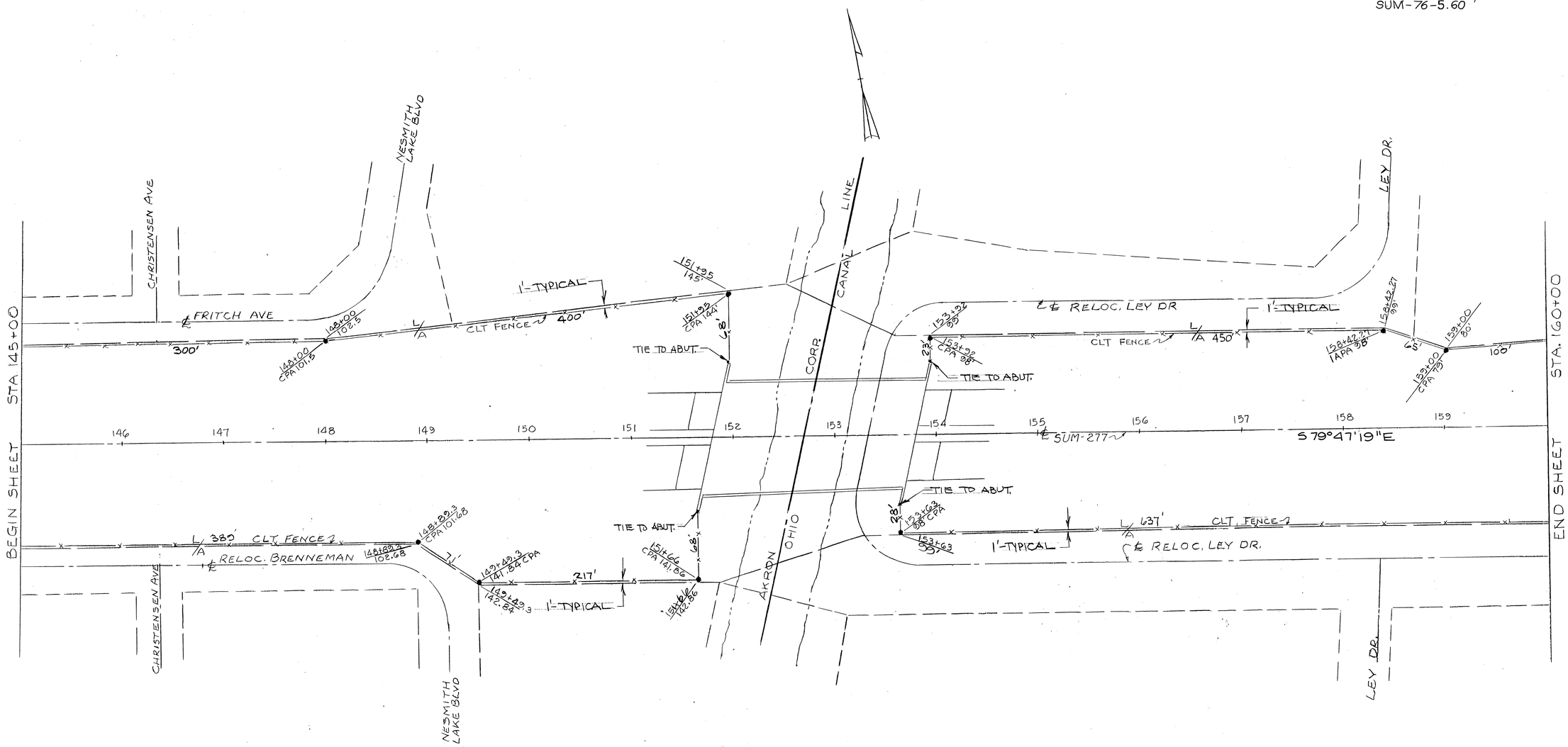
(6) CURVE DATA

P.I. = STA. 144+38.67
Δ = 3°45'00"
D_c = 1° 52' 29.7"
R = 3055.91'
T = 100.04
L_c = 200.01'
E = 1.64'

STA. 130+00 TO STA. 145+00

OHIO	13
FHWA REGION 5	28
FEDERAL PROJECT	

SUM-277/224-0.00/10.22
SUM-76-5.60



STA 145+00 TO STA. 160+00

OHIO	14 / 28
FHWA REGION 5	
FEDERAL PROJECT	

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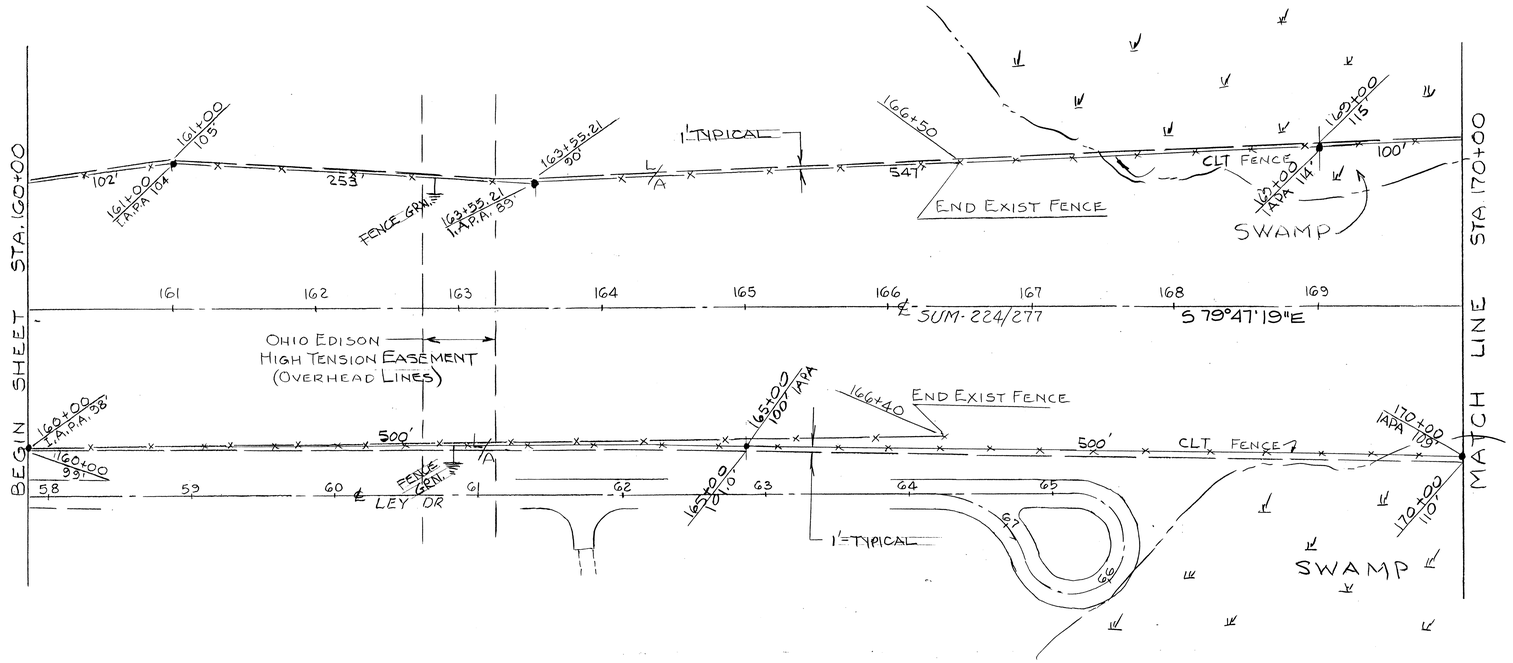
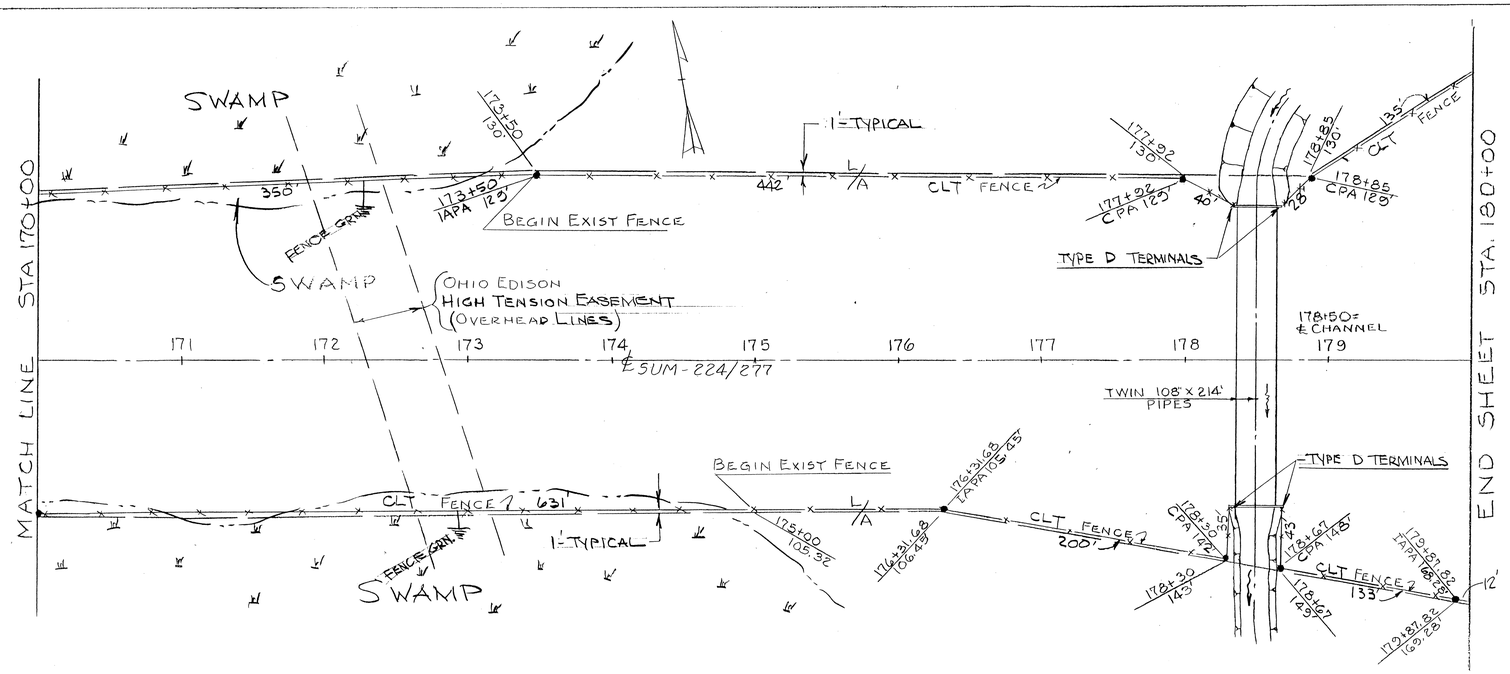


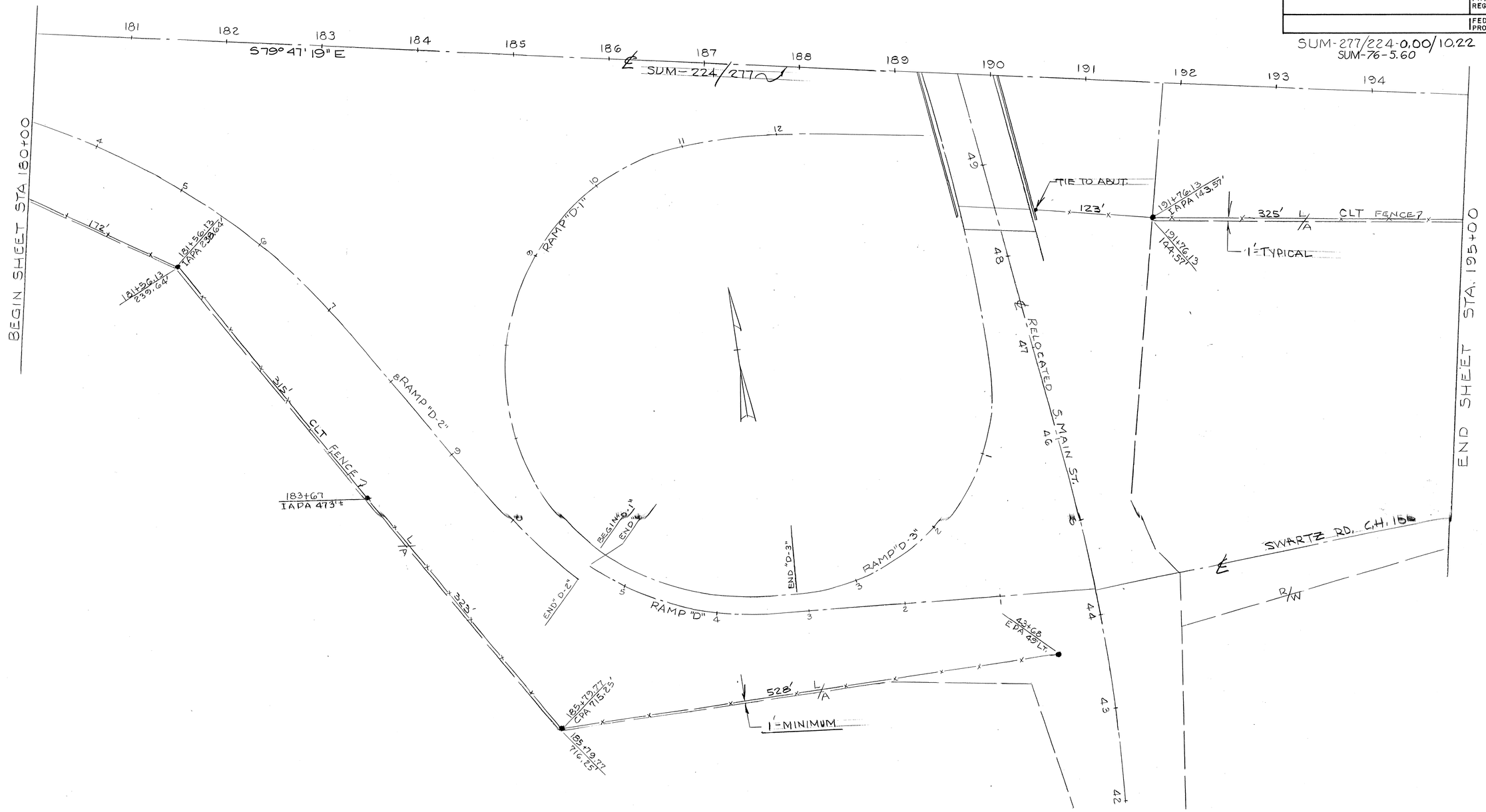
NOTE:

NEW FENCE TO BE CARRIED THROUGH THE SWAMP AREA



STA. 160+00 TO STA. 180+00

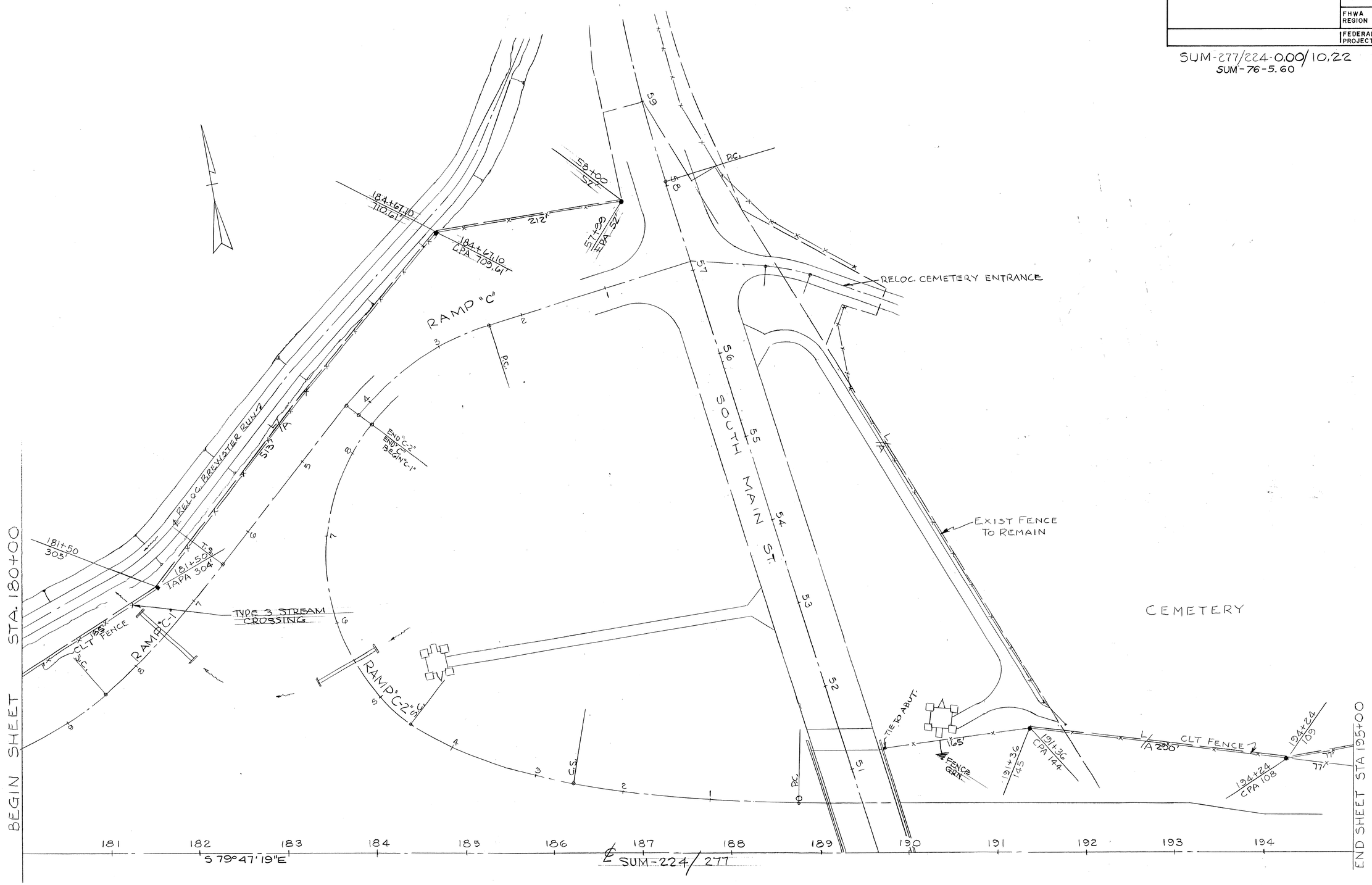
SUM-277/224-0.00/10.22
SUM-76-5.60



INTERCHANGE (SOUTH HALF)
STA. 180+00 TO STA. 195+00

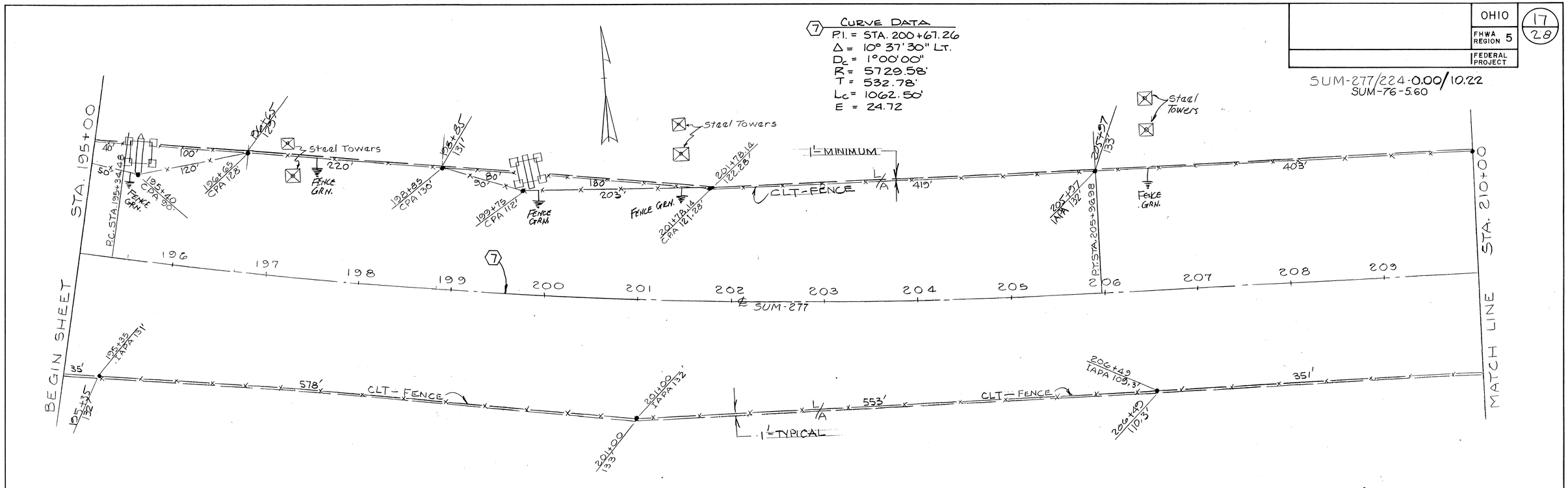
OHIO	16
FHWA REGION 5	28
FEDERAL PROJECT	

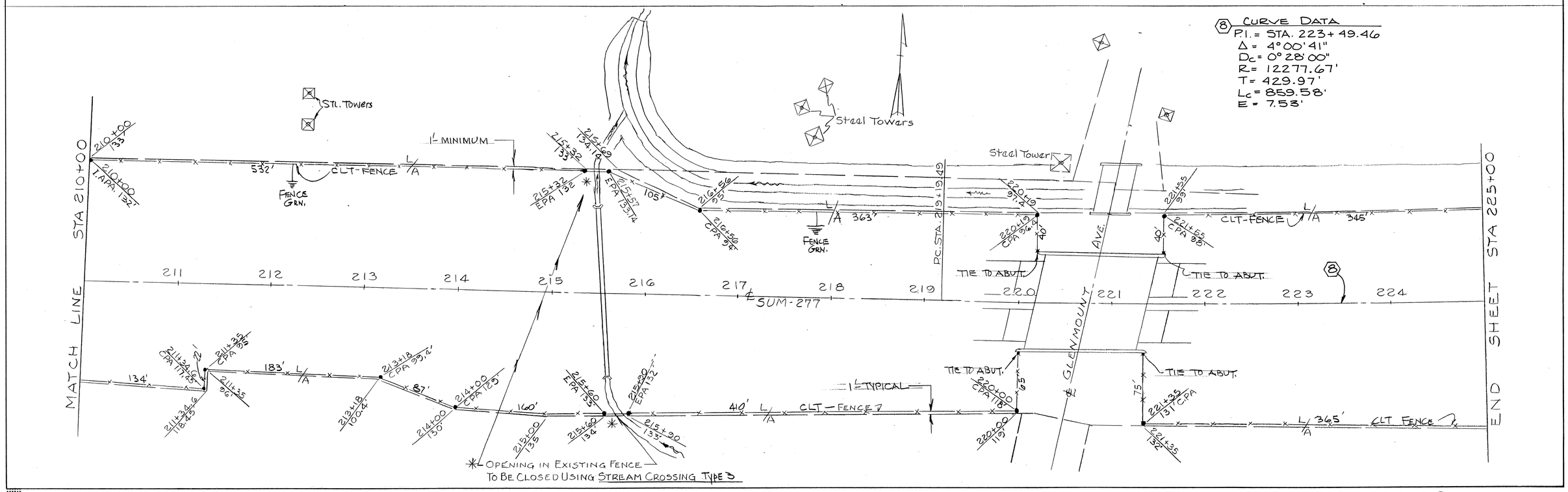
SUM-277/224-0.00/10.22
SUM-76-5.60



INTERCHANGE (NORTH HALF)
STA. 180+00 to STA. 195+00

SUM-277/224-0.00/10.22
SUM-76-5.60

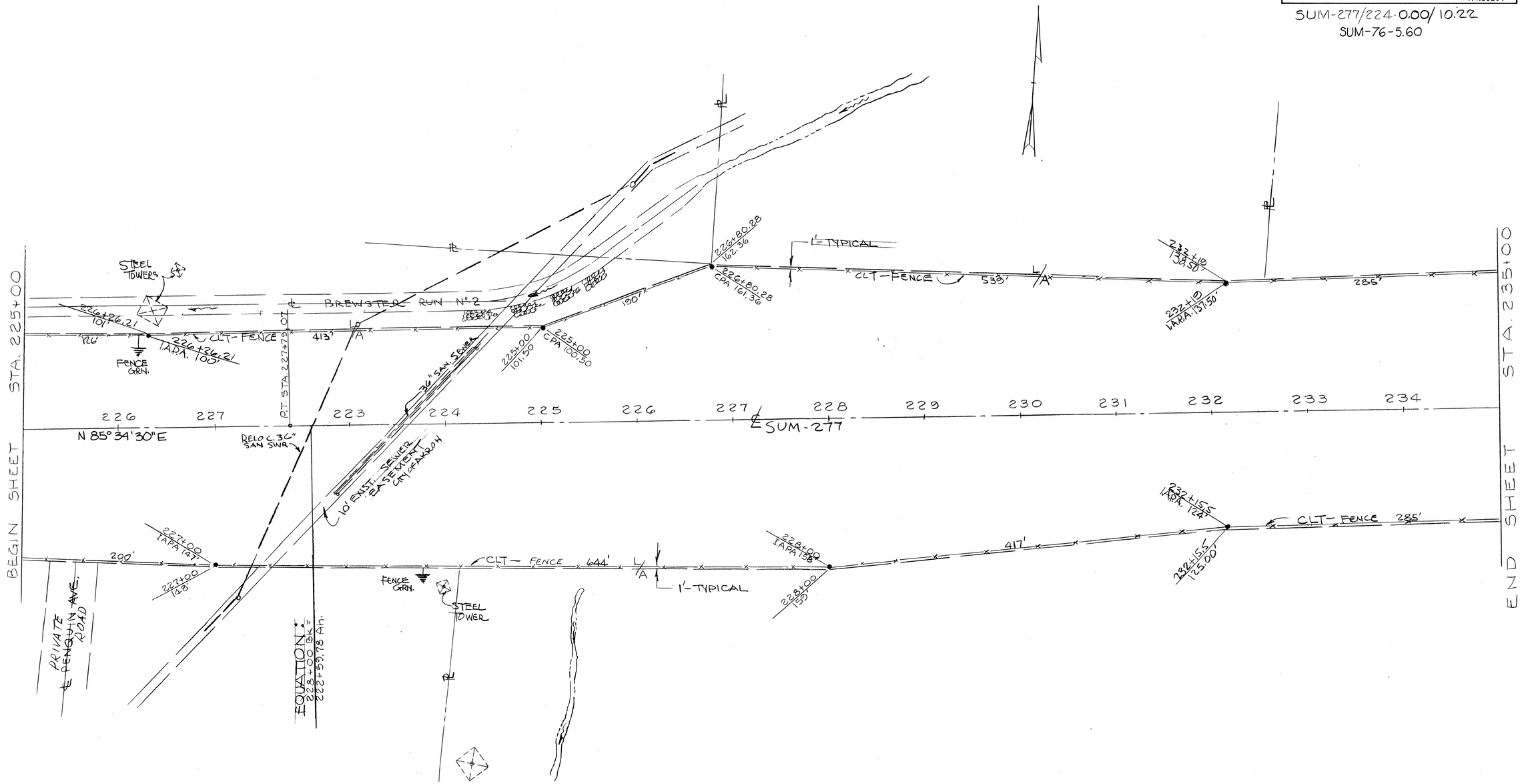




STA. 195+00 TO STA. 225+00

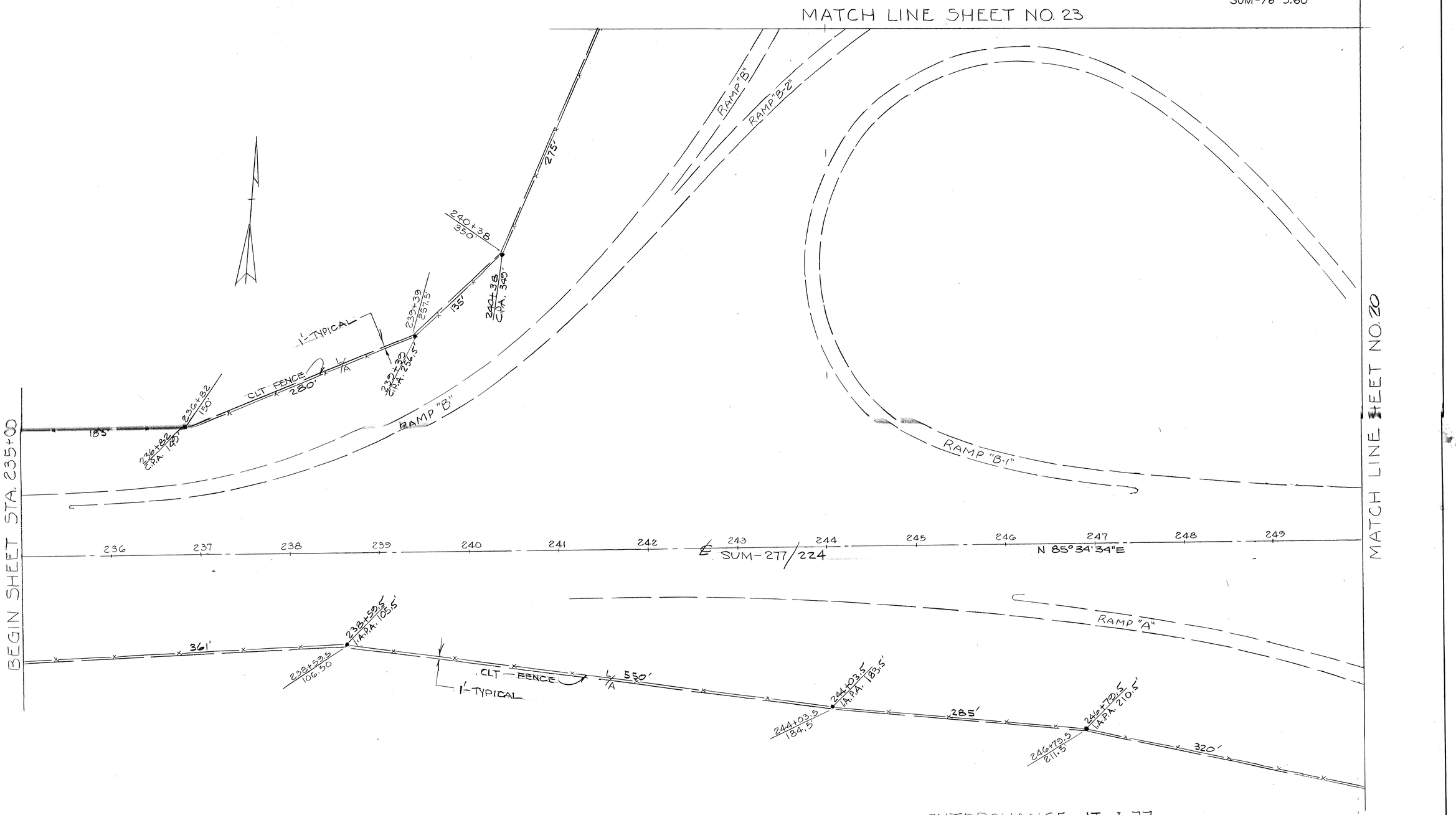
OHIO	18
FHWA REGION 5	28
FEDERAL PROJECT	

SUM-277/224-0.00/10.22
SUM-76-5.60



STA. 225+00 TO STA 235+00

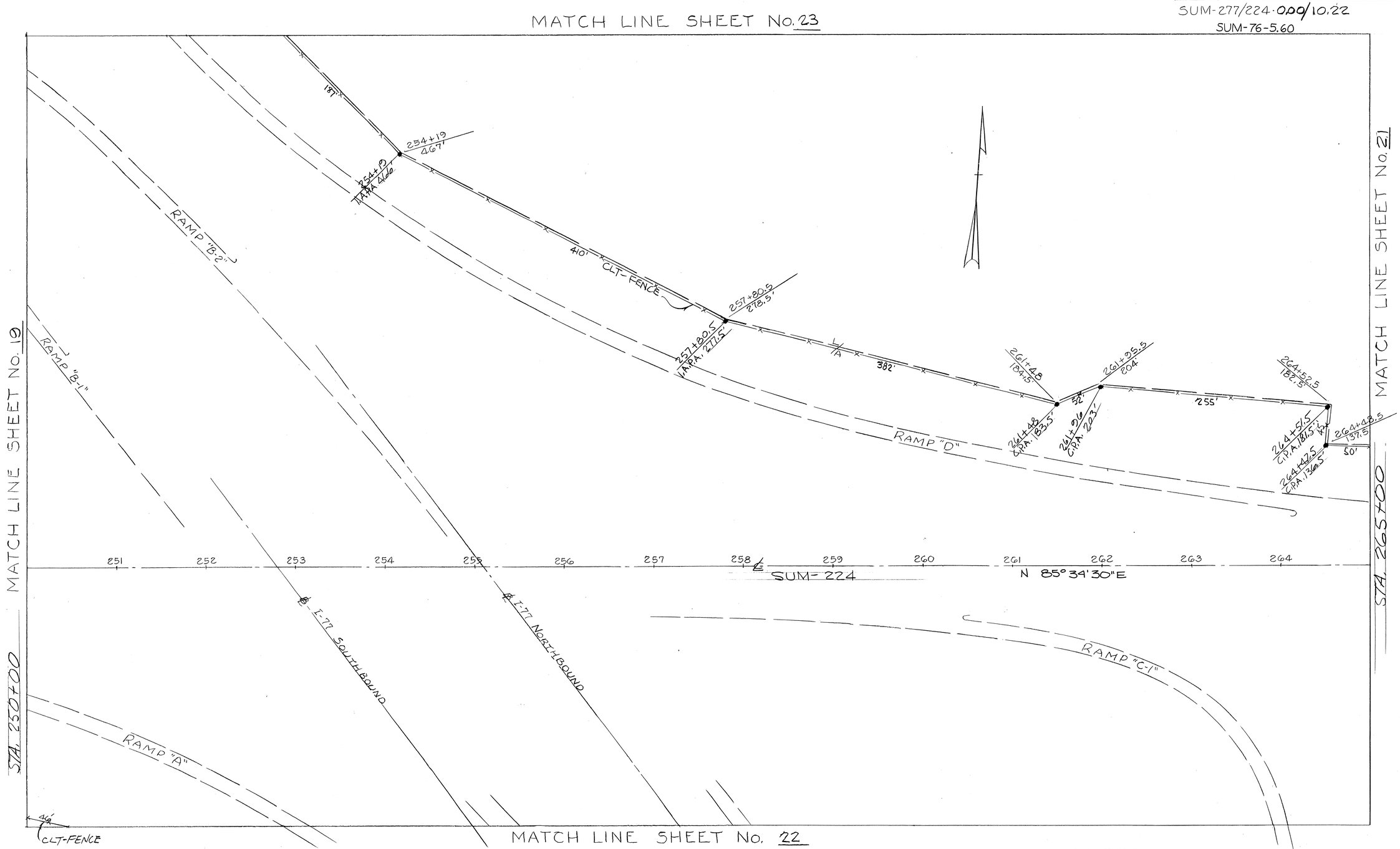
SUM-277/224-0.00/ 10.22
SUM-76-5.60



INTERCHANGE AT I-77
STA. 235+00 TO STA. 250+00

OHIO	20/28
FHWA REGION 5	
FEDERAL PROJECT	

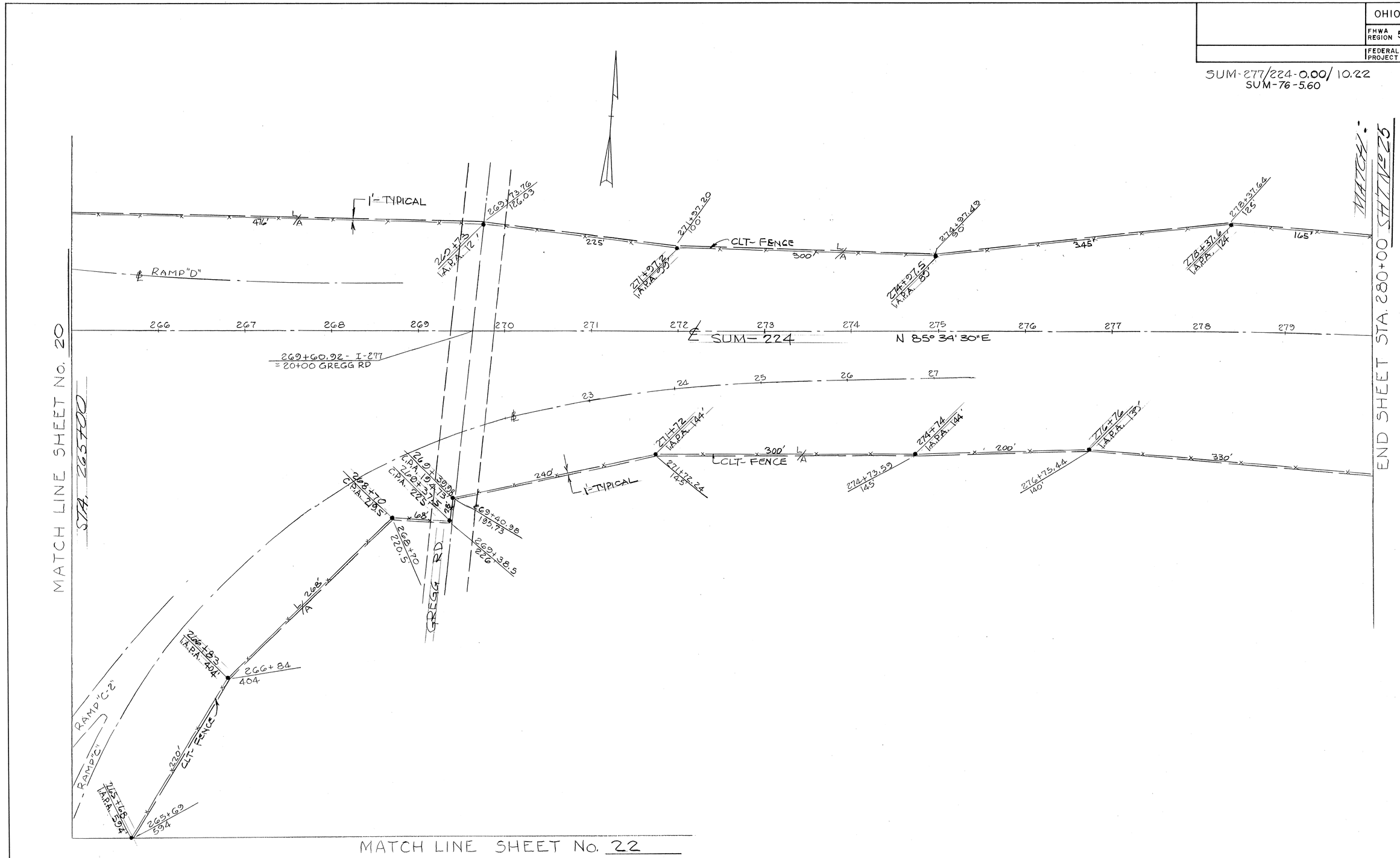
SUM-277/224-0.00/10.22
SUM-76-5.60



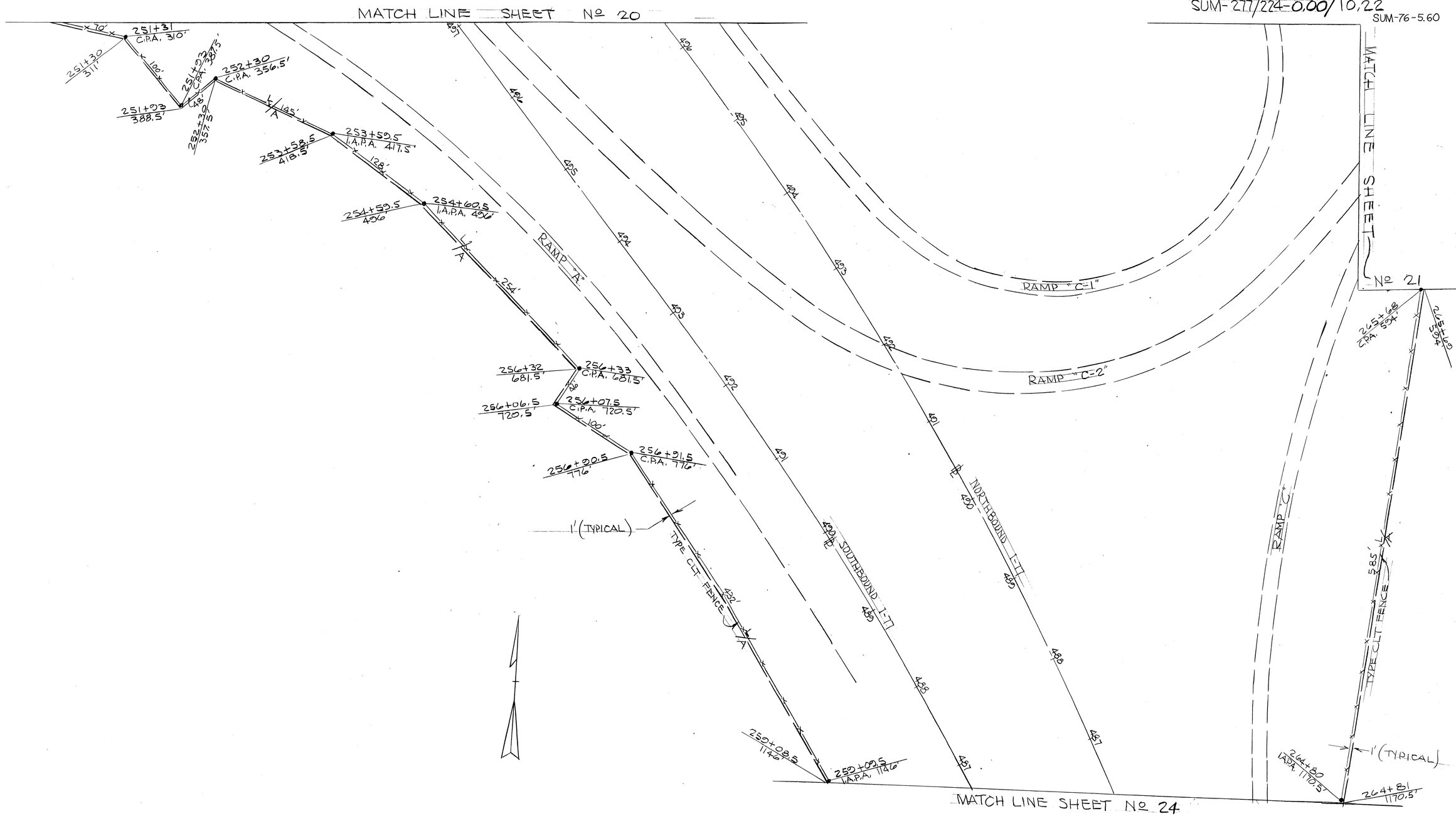
INTERCHANGE AT I-77
STA. 250+00 TO STA. 265+00

OHIO	21
FHWA REGION 5	28
FEDERAL PROJECT	

SUM-277/224-0.00/10.22
SUM-76-5.60



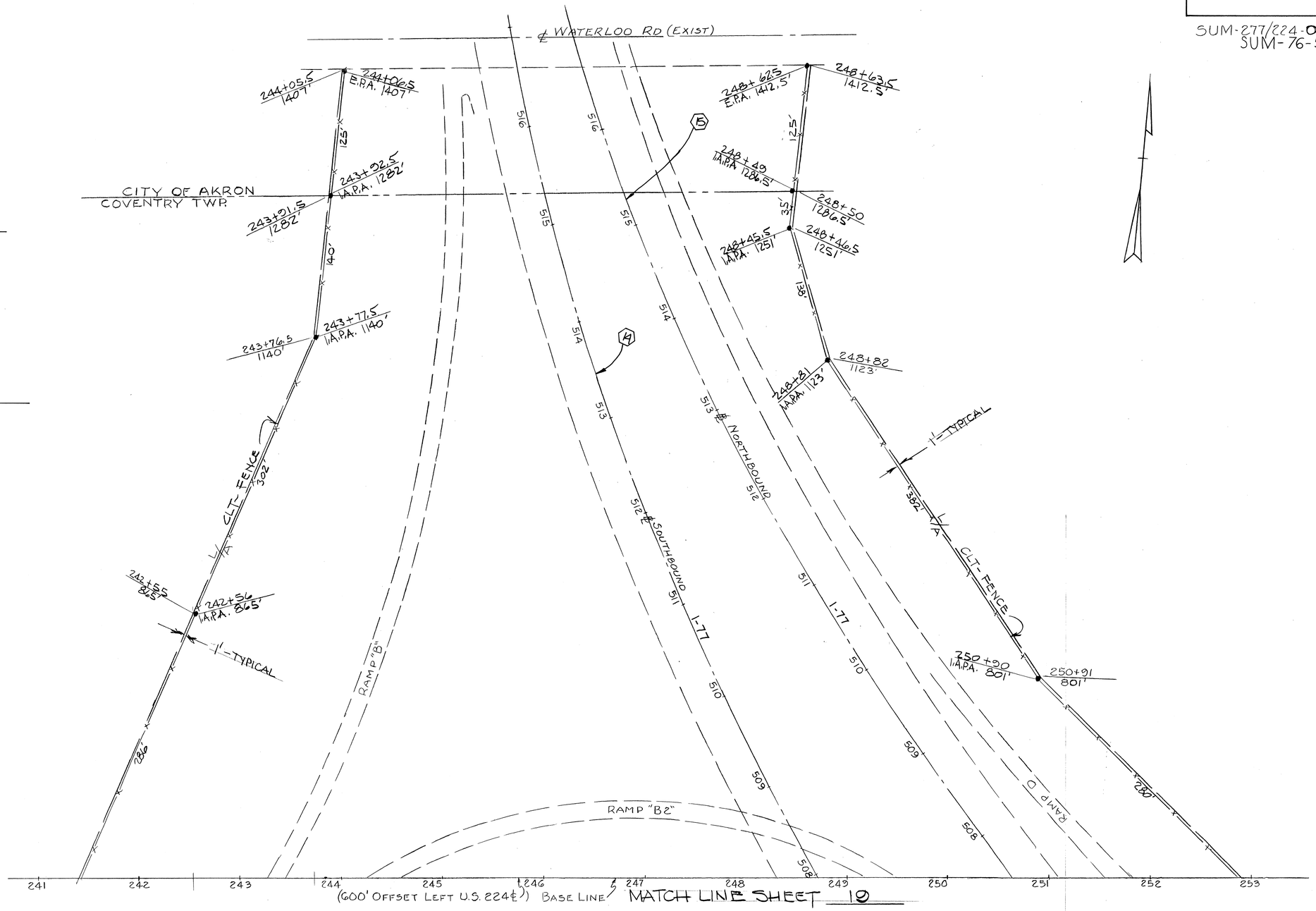
STA. 265+00 TO STA. 280+00



I-77 & I-277 INTERCHANGE (SOUTH LEG)

OHIO	23/28
FHWA REGION 5	
FEDERAL PROJECT	

SUM-277/224-0.00/10.22
SUM-76-5.60

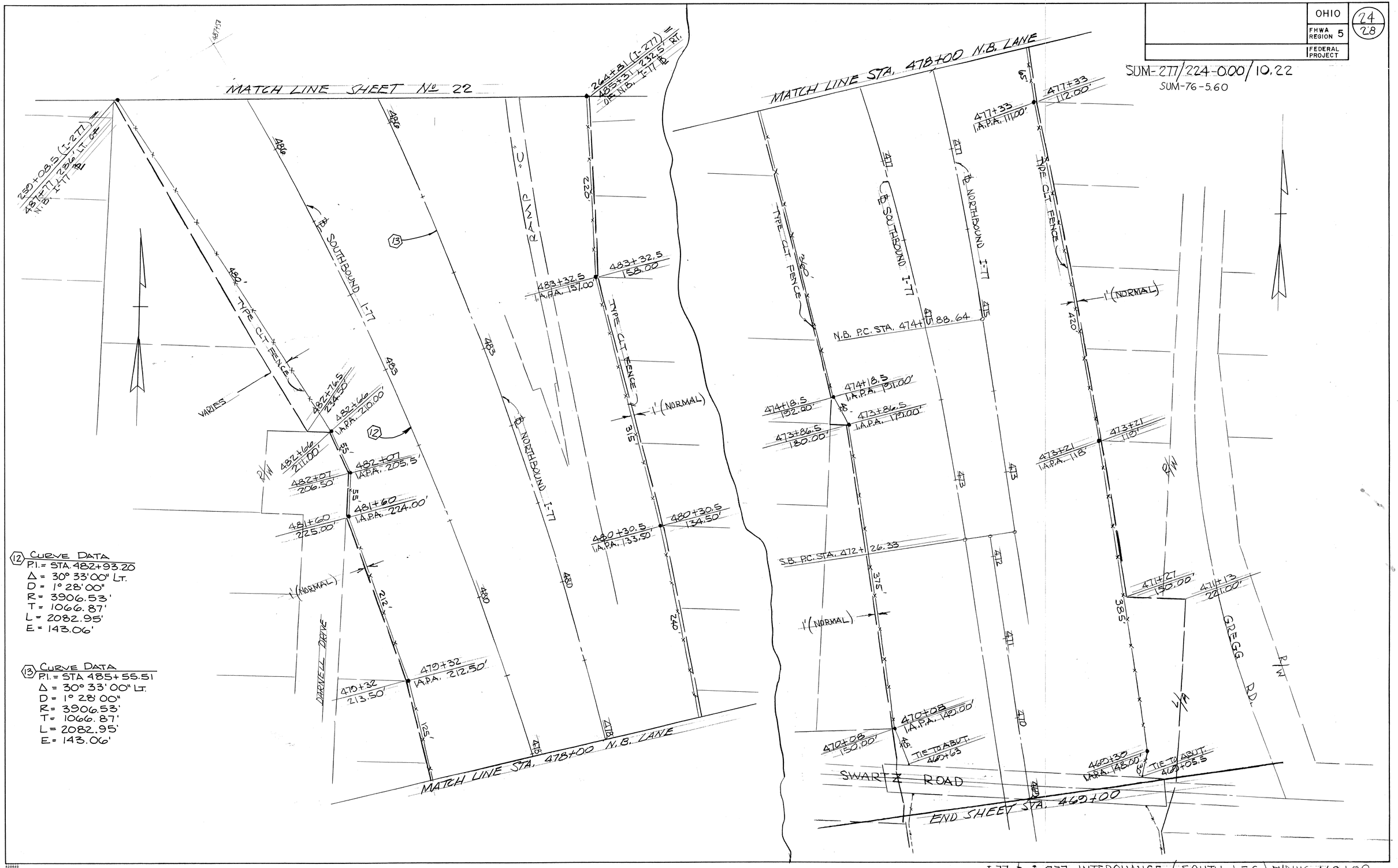


(14) CURVE DATA
P.I. = STA. 515+03.13
Δ = 41° 58' 00' RT.
D = 2°00'00"
L_S = 400'
R = 2864.79'
θ_S = 4° 00'
P = 2.32'
K = 199.97
L.T. = 266.73'
S.T. = 133.40

(15) CURVE DATA
P.I. = STA. 517+45.80
Δ = 41° 58' 00" RT.
D = 2° 30' 00"
L_S = 400'
R = 2291.83'
θ_S = 5° 00'
P = 2.91'
K = 199.95'
LT. = 266.77'
ST. = 133.43'
LC = 399.86'

I-77 & I-277 INTERCHANGE (NORTH LEG)

SUM-277/224-0.00/10.22
SUM-76-5.60



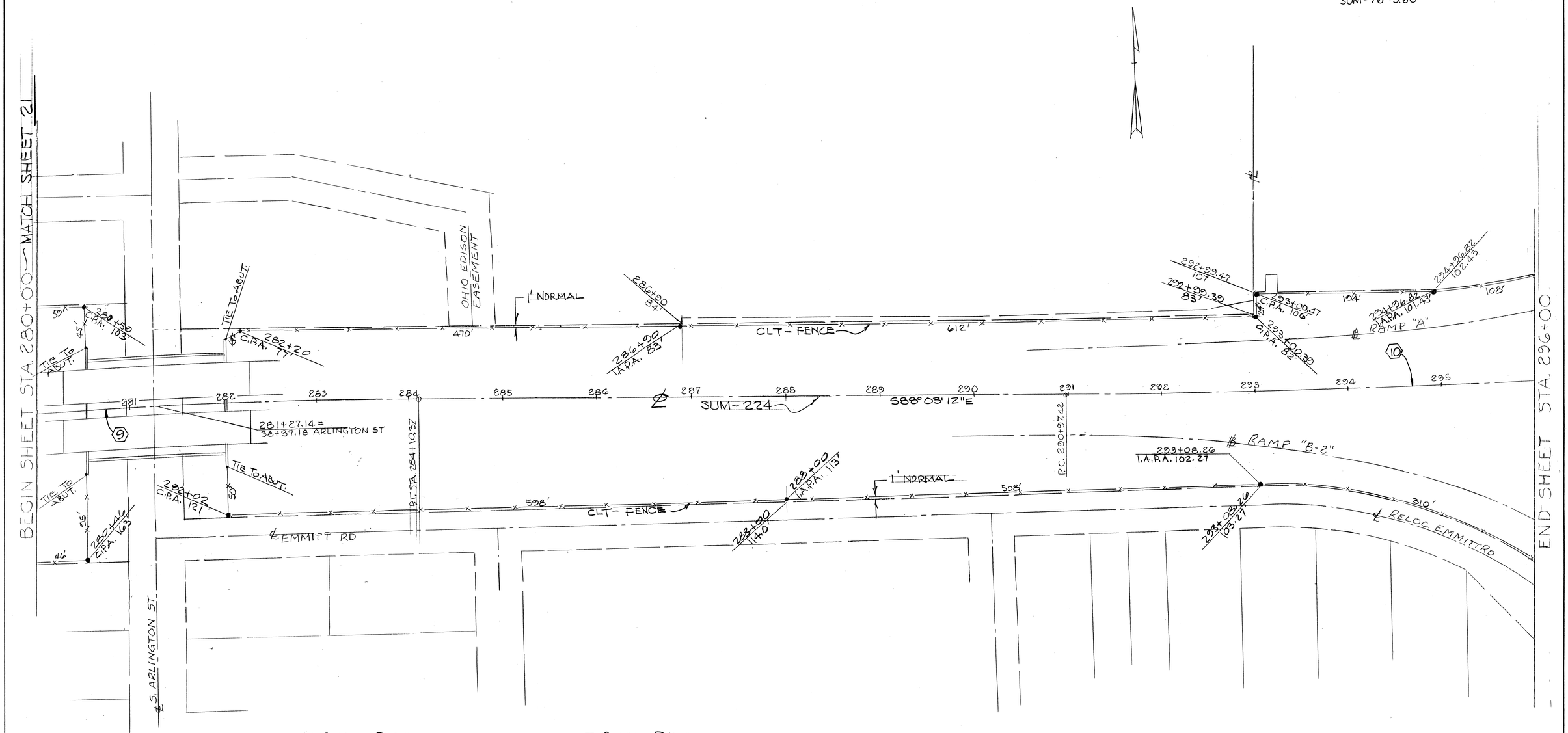
(12) CURVE DATA
P.I. = STA. 482+93.20
Δ = 30° 33' 00" LT.
D = 1° 28' 00"
R = 3906.53'
T = 1066.87'
L = 2082.95'
E = 143.06'

(13) CURVE DATA
P.I. = STA 485+55.51
Δ = 30° 33' 00" LT.
D = 1° 28' 00"
R = 3906.53'
T = 1066.87'
L = 2082.95'
E = 143.06'

I-77 & I-277 INTERCHANGE (SOUTH LEG) ENDING 469+00

OHIO	25
FHWA REGION 5	28
FEDERAL PROJECT	

SUM-277/224-0.00/10.22
SUM-76-5.60



(9) CURVE DATA

P.I. = STA. 280+92.11
Δ = 6° 22' 18" Rt.
D_c = 1° 00' 00"
R = 5729.58'
T = 318.91'
L_c = 637.77'
E = 8.87'

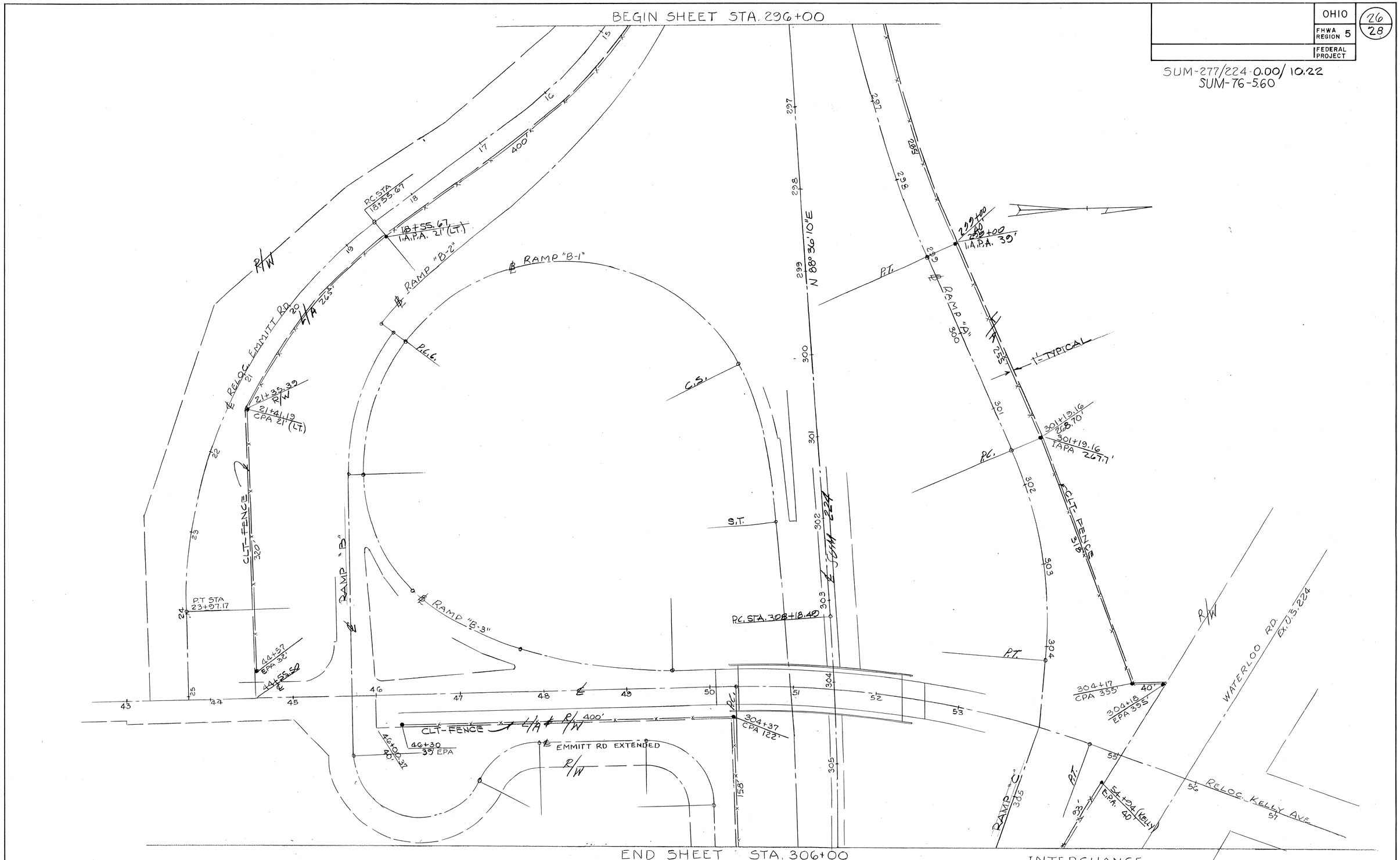
(10) CURVE DATA

P.I. = STA. 294+55.80
Δ = 3° 20' 38" Lt.
D_c = 0° 28' 00"
R = 12277.67'
T = 358.37'
L_c = 716.55'
E = 5.23'

STA. 280+00 TO STA 296+00

OHIO	26/28
FHWA REGION 5	
FEDERAL PROJECT	

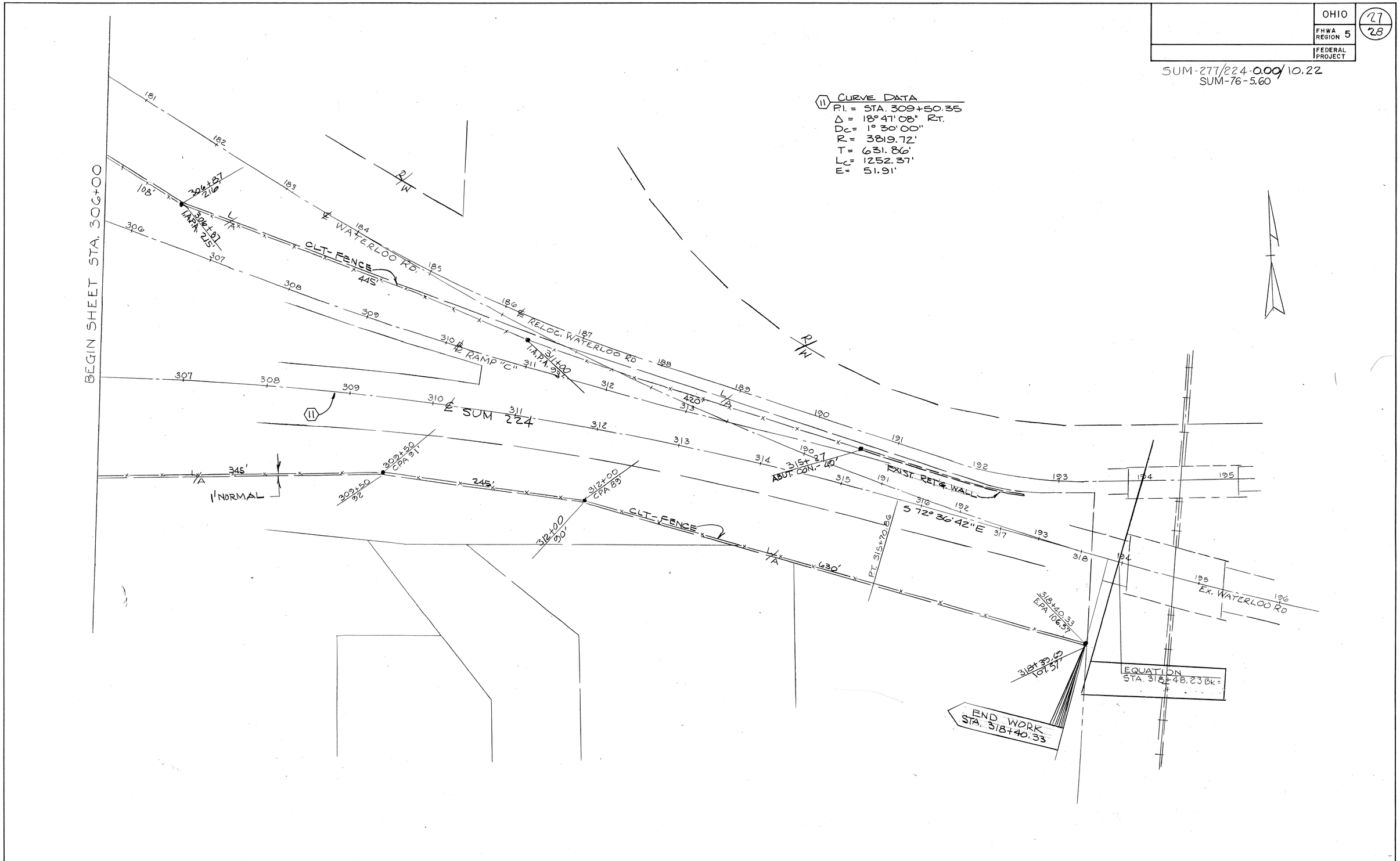
SUM-277/224-0.00/ 10.22
SUM-76-5.60



INTERCHANGE
STA. 296+00 TO STA. 306+00

OHIO	27 / 28
FHWA REGION 5	
FEDERAL PROJECT	

SUM-277/224-0.00/10.22
SUM-76-5.60

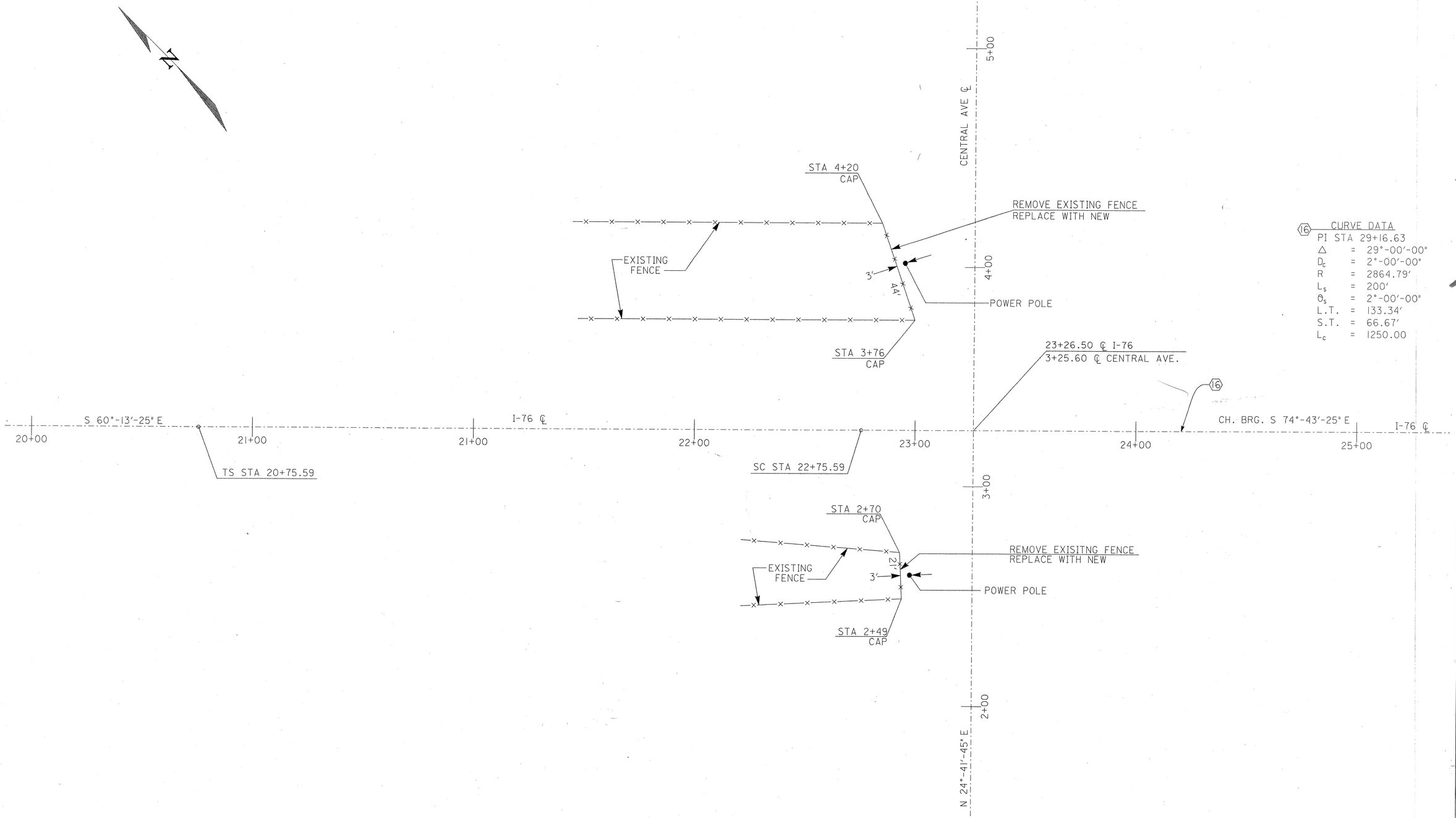


STA. 306+00 TO STA. 318+40.33

F.H.W.A. REGION	STATE	PROJECT NO.	FUNDS
5	OHIO		

28
28

SUM-277/224-0.00/10.22
SUM-76-5.60



16 CURVE DATA

PI STA		29+16.63
Δ	=	29°-00'-00"
D_c	=	2°-00'-00"
R	=	2864.79'
L_s	=	200'
θ_s	=	2°-00'-00"
L.T.	=	133.34'
S.T.	=	66.67'
L_c	=	1250.00

SEE SHEET 4 FOR QUANTITIES

PZ, 11/13/92

FILENAME: SU765632.DGN

I-76 AND CENTRAL AVE

SUM-277/224-0.00/10.22 SUM-76-5.60 28/28 I-76 224 SUM