MICROFILMED
FEB 16 1995

DESIGN DESIGNATION

CURRENT A.D.T. (1991)	=	5988
DESIGN YEAR A.D.T. (2011)	=	7770
D.H.V.	=	777
D	=	55%
T	=	12%
DESIGN SPEED	=	70 MPH
LEGAL SPEED	=	55 MPH

P.I.D. 8016
STATE No. 047140

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
STA-21-12.39, WAY-21-0.00

PERRY, JACKSON & LAWRENCE TOWNSHIP
STARK COUNTY
CHIPPEWA TOWNSHIP
WAYNE COUNTY

NH-48(14)	OHIO FHWA REGION 5 FEDERAL PROJECT	1 / 42

STA-21-12.39
WAY-21-0.00
LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE REVISED CODE OF OHIO.

CONVENTIONAL SIGNS

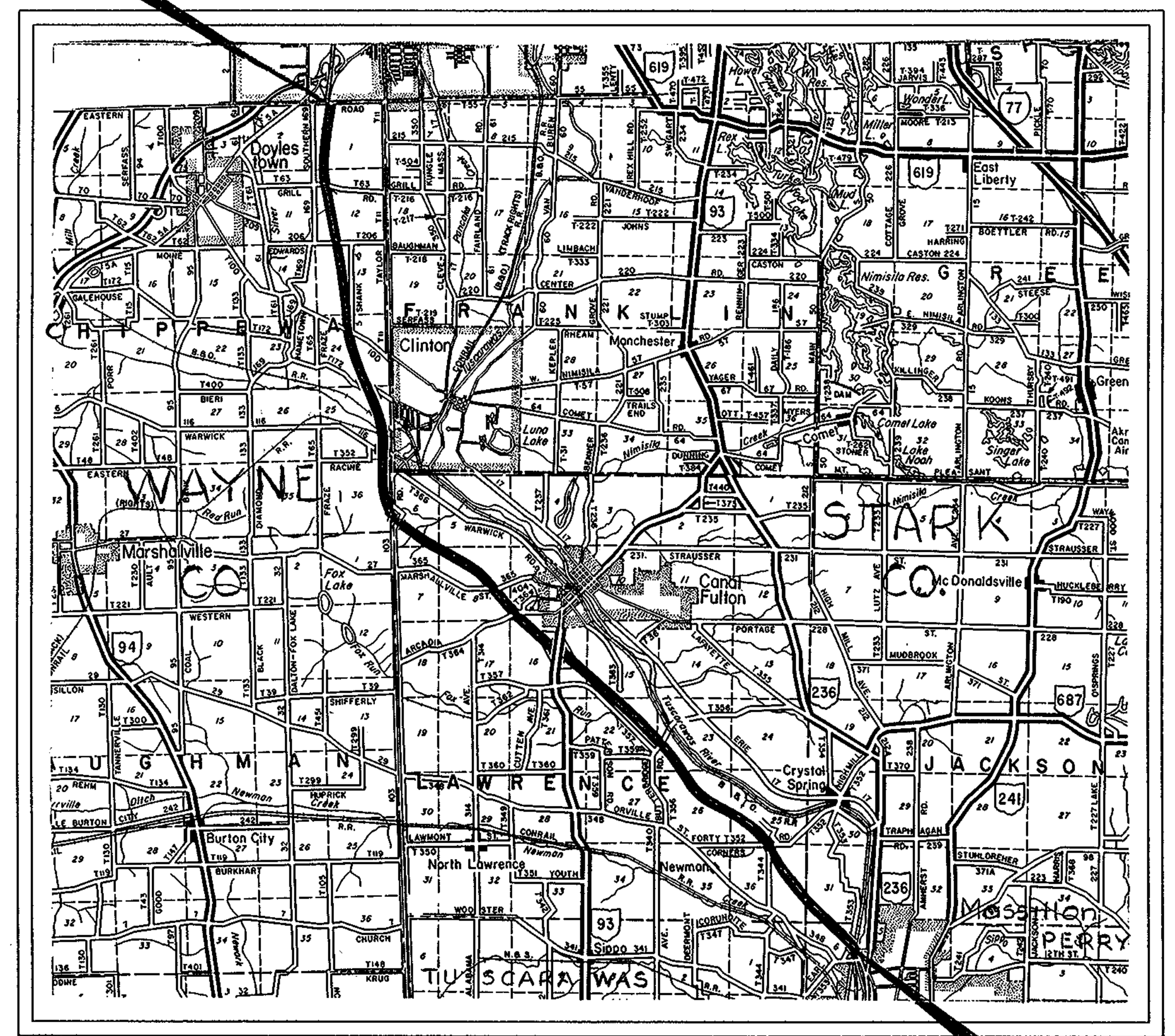
County Line
Township Line
Section Line
Corporation Line or
Fence Line(existing) -x—x- (proposed)
Center Line 352 353
Trees, Stumps, (to be removed)
Utility Poles: Telephone, Power, Light

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

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

END WORK
STA. 311+51.77



BEGIN WORK
STA. 653+49

LOCATION MAP
SCALE IN MILES
0 1 2 3 4 5 6 7 8

Portion to be improved
State & Federal Routes
Other Roads

1991 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.

Approved David R. Dreger
Date 11-26-91 District Deputy Director of Transportation

LINE DATA

BEGIN WORK = STA. 653+49

EQUATION: STA. 918+94.58 BACK =
STA. 917+27.29 AHEAD

EQUATION: STA. 1129+94.09 BACK =
STA. 0+12.64 AHEAD

END WORK = STA. 311+51.77

LENGTH OF WORK = 78,951.51 L.F. OR 14.953 MILES

LENGTH OF PROJECT = .000 L.F. OR .000 MILES

SCALES

Plan 0 25 50 100

SUPPLEMENTAL SPECIFICATIONS

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

F-1	11-10-83					
F-2	5-1-76					
F-3	5-1-76					
F-5	5-1-76					
F-6	5-1-76					
HL-50.11	5-1-87					

Approved George L. Butz
Date 2/27/92 Deputy Director, Planning and Design

Approved Jerry Wray
Date 2-27-92 Director, Department of Transportation

C.A.P.

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

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED:

DIVISION ADMINISTRATOR DATE

Project : STA-21-12.39, WAY-21-0.00
Date of Letting ____, 19__ Contract No.____

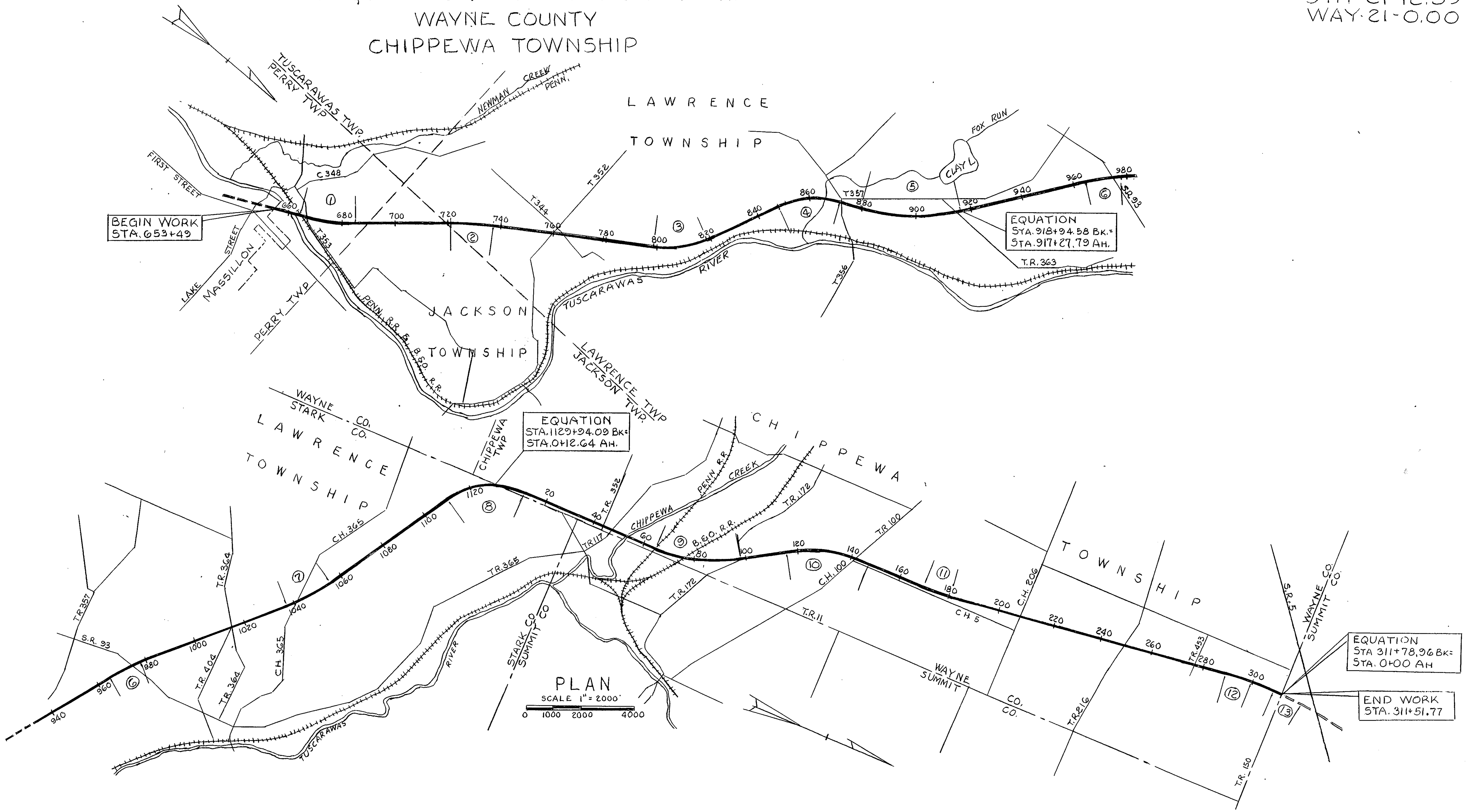
ZFAI:[20.3]ST021120I.DGN

OHIO	2
FHWA REGION 5	42
FEDERAL PROJECT	

LOCATION PLAN U.S. 21

STARK COUNTY
PERRY, JACKSON & LAWRENCE TOWNSHIPS
WAYNE COUNTY
CHIPPEWA TOWNSHIP

STA-21-12.39
WAY-21-0.00



CURVE No. 1
Δ = 15° 20'-30" LT.
D = 0° 45'-00"
R = 7639.44'
T = 1028.93'
L = 2045.56'
E = 65.98'
P.C. = 664+56.20
P.I. = 674+85.13
P.T. = 685+01.76

CURVE No. 2
Δ = 8° 06'-20" RT
D = 0° 30'
R = 11,459.16
T = 811.91
L = 1621.11
E = 28.73
P.C. = 721+08.33
P.I = 729+20.24
P.T = 737+29.44

CURVE No. 3
Δ = 32° 39' LT
Δc = 26° 39'
Dc = 2° 00'
Rc = 2864.94
Lc = 1332.50
Ls = 300.00
Ts = 989.49
Xc = 299.96
Yc = 5.24
Θs = 3° 00
L.T. = 200.03
S.T. = 100.03
L.C. = 299.96
Es = 121.72
K = 149.99
p = 1.31
T.S. = 799+07.55
S.C. = 802+07.55
P.I = 808+97.04
C.S = 815+40.05
S.T = 818+40.05

CURVE No. 4
Δ = 41° 00 RT
Δc = 35° 00
Dc = 2° 00
Rc = 2864.94
Lc = 1750'
Ls = 300.00
Ts = 1221.57
Xc = 299.92
Yc = 5.24
Θs = 3° 00
L.T. = 200.03
S.T. = 100.03
L.C. = 299.96
E.s. = 418.02
K = 149.99
p = 1.31
T.S = 848+01.48
S.C. = 851+01.48
P.I = 860+23.05
C.S. = 868+51.48
S.T. = 871+51.48

CURVE No. 5
Δ = 29° 30'-24" LT
D = 0° 45'-00"
R = 7639.44
T = 2011.77
L = 3934.22
E = 260.45
P.C. = 879+60.36
P.I = 899+72.13
P.T. = 918+94.58 BK= 917+27.79 AH

CURVE No. 6
Δ = 9° 54'-30" RT
D = 0° 45'-00"
R = 7639.44'
T = 662.21
L = 1321.11
E = 28.65
P.C. = 964+52.73
P.I. = 971+14.94
P.T. = 977+73.84

CURVE No 7
Δ = 14° 16'-35" LT
D = 0° 45'-00"
R = 7639.44
T = 956.72
L = 1903.52
E = 61.07
P.C. = 1037+49.30
P.I. = 1047+06.02
P.T. = 1056+52.82

CURVE No. 8
Δ = 58° 22'-00" RT
Δc = 52° 22'-00"
Dc = 2° 00'-00"
Rc = 2864.79
Lc = 2618.34
Ls = 300.00
Ts = 1750.70
Xc = 299.92
Yc = 5.24
Θs = 3° 00
L.T. = 200.03
S.T = 100.03
L.C = 299.96
Es = 418.02
K = 149.99
p = 1.31
T.S. = 1109+18.69
S.C. = 1112+18.69
P.I = 1126+69.38
C.S = 1138+37.03 BK= 8+55.58 AH
S.T. = 1141+37.03 BK= 11+55.58 AH

CURVE No 9
Δ = 31° 35'-50
D = 1° 00'-00"
R = 5729.58
T = 1621.16
L = 3159.72
E = 224.93
P.C. 65+33.86
P.I. = 81+55.02
P.T. = 96+93.58

CURVE No. 10
Δ = 31° 51'-38" LT
D = 1° 00'-00"
R = 5729.58
T = 1635.39
L = 3186.06
E = 228.82
P.C. = 115+71.31
P.I. = 132+06.70
P.T. = 147+57.37

CURVE No 11
Δ = 8° 03'-30" LT
D = 0° 45'-00"
R = 7639.44
T = 538.11
L = 1074.44
E = 18.93
P.C. = 169+98.32
P.I. = 175+36.43
P.T. = 180+72.76

CURVE No 12
Δ = 6° 01'-30" RT
D = 0° 45'-00
R = 7639.44
T = 402.04
L = 803.33
E = 10.58
P.C. = 288+85.65
P.I = 292+87.69
P.T. = 296+88.98

CURVE No 13
Δ = 10° 49'-23" RT
D = 0°-45'-00
R = 7639.44
T = 723.69
L = 1443.01
E = 34.20
P.C. = 308+00.39
P.I. = 315+24.08
P.T. = 10+64.50

528649

LOCATION PLAN

GENERAL NOTES AND SUMMARY

LOCATION OF EXISTING R/W LINES:

PAYMENT FOR ALL WORK NECESSARY TO LOCATE THE EXISTING R/W LINES SHALL BE INCLUDED IN THE PRICE FOR ITEM 623 CONSTRUCTION LAYOUT STAKES.

FENCE GROUNDING:

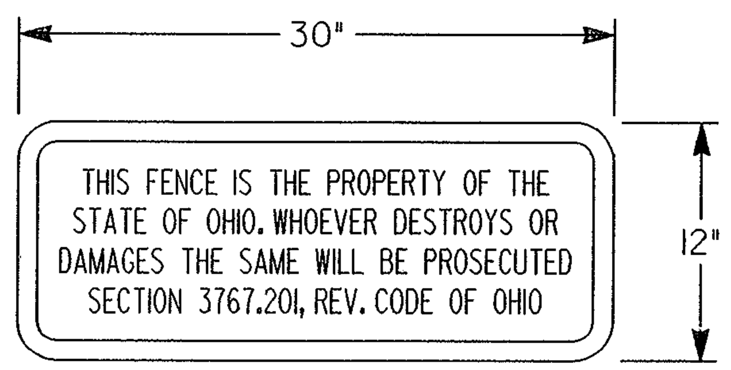
ALL TYPES OF FENCE SHALL BE GROUNDED, AS PER STANDARD CONSTRUCTION DRAWING HL-50.11, WHEN A POWER LINE PASSES OVER THE FENCE OR A PARALLEL POWER LINE EASEMENT IS WITHIN FIFTY (50) FEET OF THE FENCE.

ITEM 607 FENCE, TYPE 47, AS PER PLAN:

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

ITEM 630 SIGNS, FLAT SHEET, AS PER PLAN:

FENCE - PROPERTY SIGN (N-53-30)



THIS SIGN IS USED AT LOCATIONS SHOWN ON THE FENCING LINE SHEETS. THESE ARE LOCATIONS 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.

A QUANTITY OF 60 SQ.FT. OF ITEM 630 SIGNS, FLAT SHEET, AS PER PLAN HAS BEEN CARRIED TO THE GENERAL SUMMARY. ALL LABOR, MATERIAL, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE SIGN AND INSTALLATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

EQUIPMENT STORAGE:

FOR SAFETY PURPOSES, NO MATERIAL OR EQUIPMENT SHALL BE STORED OR PARKED IN THE MEDIAN OR WITHIN FIFTY (50) FEET OF THE OUTSIDE EDGE OF PAVEMENT UNLESS BEHIND GUARDRAIL.

ITEM 201 CLEARING AND GRUBBING, AS PER PLAN:

IN ADDITION TO THE REQUIREMENTS OF 607.03, ALL FRESH CUT SURFACES SHALL BE TREATED WITH A HERBICIDE SUCH AS BANVEL-CST OR TORDON-RTU. THE AREA TO BE CLEARED AND TREATED SHALL BE ONE FOOT ON EACH SIDE OF THE PROPOSED FENCE AND THE APPLICATION RATE SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ONLY PROPERLY LICENSED PERSONNEL SHALL APPLY HERBICIDES AS REQUIRED BY THE OHIO REVISED CODE. ALL TREES, STUMPS, BRUSH, ETC. TO BE REMOVED SHALL BE CUT OFF AT GROUND LEVEL AND THE CUT SHALL BE PARALLEL TO THE GROUND.

PAYMENT FOR THE ABOVE SHALL BE MADE AT THE CONTRACT PRICE FOR ITEM 201 CLEARING AND GRUBBING, AS PER PLAN.

FENCE TYPE CHANGE CONNECTION:

WHEN THE FENCE CHANGES FROM ONE TYPE TO ANOTHER THE END POSTS WILL BE LOCATED AS PER DETAIL SHEET 8. PAYMENT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE, PER LINEAR FOOT OF THE PERTINENT 607 FENCE ITEM.

PROJECT STATIONING:

THE PROJECT STATIONING SHOWN ON THIS PLAN IS NO LONGER PHYSICALLY VISIBLE DUE TO RESURFACING. THE PROJECT STATIONING MAY BE REESTABLISHED FROM CENTERLINE CURVE DATA SHOWN ON SHEET No. 2.

ORIGINAL CONSTRUCTION PLANS:

COPIES OF THE ORIGINAL CONSTRUCTION PLANS ARE ON FILE IN THE DISTRICT FOUR OFFICE LOCATED AT 705 OAKWOOD ST. RAVENNA, OHIO 44266.

THIS PROJECT INCLUDES CONSTRUCTION PROJECTS:

STA-21-12.39
STA-21-11.49
WAY-21-0.00
SUM-21-0.00
STA-21-17.80

FIELD OFFICE:

BECAUSE OF THE NATURE OF THIS PROJECT, NO FIELD OFFICE IS REQUIRED.

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 A FIVE (5) WORKING DAY TIME SPAN THAT AN AREA IS LEFT UNPROTECTED BY R/W FENCE.

UTILITY OWNERSHIP

OHIO EDISON
76 S. MAIN ST.
AKRON, OHIO 44308
ATTN: BENJAMIN McCOY
PHONE: 216-384-5715

OHIO POWER
301 CLEVELAND AVE.
P.O.BOX 400
CANTON, OHIO 44701
ATTN: JOHN SCHRADE JR.
PHONE: 216-438-7040

EAST OHIO GAS CO.
4725 SOUTHWAY, S.W.
CANTON, OHIO 44706
ATTN: MARK MESSERSMITH
PHONE: 216-478-3140

OHIO BELL
2525 STATE RD.
CUYAHOGA FALLS, OHIO 44223
ATTN: LYNN KAVAN
PHONE: 216-922-2476

BP OIL CO.
4421 BRADLEY RD.
CLEVELAND, OHIO 44109
ATTN: FRANK CANNON
PHONE: 216-351-2212

ARCO PIPELINE
359 SINCLAIR ST.
P.O.BOX 8225
TOLEDO, OHIO 43606
ATTN: RONALD C. WEAKS
PHONE: 419-698-8218

UNDERGROUND UTILITIES (SHOWN IN PART):

THE LOCATIONS OF CERTAIN UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SEC. 153.64 O.R.C. THESE UTILITIES ARE SHOWN WHERE CONFLICTS OCCUR OR MAY OCCUR WITH THE PROPOSED PROJECT CONSTRUCTION. THE ABOVE LIST OF ALL UTILITY OWNERS IS PROVIDED TO THE CONTRACTOR AND THE PROJECT ENGINEER FOR NOTIFICATION OF UTILITY OWNERS.

FENCE REMOVED

IT IS INTENDED TO REMOVE EXISTING FENCE AND INSTALL NEW FENCE IN A CONTINUOUS OPERATION. A MAXIMUM OF 2,000 FEET OF EXISTING FENCE MAY BE REMOVED PRIOR TO INSTALLATION OF NEW FENCE. THE REMOVAL OF ALL FENCE SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER. NO FENCE SHALL BE REMOVED UNTIL REPLACEMENT MATERIAL IS ON THE SITE, READY FOR INSTALLATION. FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE DEEMED SUFFICIENT CAUSE TO ORDER WORK SUSPENDED ON THIS PROJECT UNTIL SUCH TIME THAT THE ENGINEER IS ASSURED OF SAID COMPLIANCE.

FENCE SUMMARY

ITEM	SHEET NUMBER					ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
	4	5	6	7	7A					
202	39573	50095	38903	25070		202	75000	153641	LIN.FT.	FENCE REMOVED
607	35706	45122	34755	9072	3180	607	15001	127862	LIN.FT.	FENCE, TYPE 47, AS PER PLAN
607	3707	4372	4068	15976		607	23001	28123	LIN.FT.	FENCE, TYPE CLT, AS PER PLAN
625	2	12	39	13		625	32000	66	EACH	GROUND ROD

GENERAL SUMMARY

ITEM	SHEET NUMBER				ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
			3						
201			LUMP		201	11001	LUMP		CLEARING AND GRUBBING, AS PER PLAN
202			153641		202	75000	153641	LIN.FT.	FENCE REMOVED
607			127862		607	15001	127862	LIN.FT.	FENCE, TYPE 47, AS PER PLAN
607			28123		607	23001	28123	LIN.FT.	FENCE, TYPE CLT, AS PER PLAN
625			66		625	32000	66	EACH	GROUND ROD
630			60		630	80101	60	SQ.FT.	SIGN, FLAT SHEET, AS PER PLAN
614			LUMP		614	11000	LUMP		MAINTAINING TRAFFIC
623			LUMP		623	10000	LUMP		CONSTRUCTION LAYOUT STAKES
624			LUMP		624	10000	LUMP		MOBILIZATION

FENCE SUB-SUMMARY

SIDE	STATION	TO STATION	TYPE 47: FENCE	TYPE 47: END POST ASSEMBLY	TYPE 47: CORNER POST ASSEMBLY	TYPE 47: INTERMEDIATE ANCHOR POST ASSEMBLY	TYPE 47: ABUTMENT CONNECTION	TYPE 47: STREAM CROSSING TYPE 1	TYPE 47: STREAM CROSSING TYPE 2	TYPE 47: STREAM CROSSING TYPE 3	TYPE 47: STREAM CROSSING TYPE 4	TYPE 47: ITEM 202 FENCE REMOVED	TYPE 47: 625 GROUND ROD	TYPE 47: SIGN N-53-30	TYPE CLT: FENCE	TYPE CLT: END POST ASSEMBLY	TYPE CLT: CORNER POST ASSEMBLY	TYPE CLT: INTERMEDIATE ANCHOR POST ASSEMBLY	TYPE CLT: ABUTMENT CONNECTION	TYPE CLT: STREAM CROSSING TYPE 1	TYPE CLT: STREAM CROSSING TYPE 2	TYPE CLT: STREAM CROSSING TYPE 3	TYPE CLT: STREAM CROSSING TYPE 4	TYPE CLT: ITEM 202 FENCE REMOVED	TYPE CLT: 625 GROUND ROD	TYPE CLT: SIGN N-53-30	SEE SHEET No.
			L.F.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	L.F.			L.F.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	L.F.			
L	654+78	658+40	362	2								362		2													9
L	664+05	666+00	144	1								195															9
R	653+49	661+15	766	2		1						766															9
L	666+00	678+00	1200			3						1200	1														9
R	666+90	678+00	1110		4							1110	1														9
L	678+00	690+00	1200			3						1200															10
R	678+00	690+00	1200			3						1200															10
L	690+00	702+00	1200			2						1200															10
R	690+00	702+00	1200			2						1200															10
L	702+00	714+00	1200			2						1200															11
R	702+00	714+00	1200			2						1200															11
L	714+00	726+00	1200			2						1200															11
R	714+00	726+00	1200			2				1		1200															11
L	726+00	738+00	1200			3						1200															12
R	726+00	732+00	600	1		1						600															12
R	732+00	738+00													600			1						600			12
L	738+00	739+40	140		1							140															12
L	739+40	739+08	48		1							48															12
L	739+08	739+08	8		1							8															12
L	739+08	739+24	16	1								16															12
L	739+44	739+62	18	1	1							18															12
L	739+62	739+85	48		1							48															12
L	739+85	750+00	1015			1						1015															12
R	738+00	739+24	124	1								124															12
R	739+24	739+24	33		1							33															12
R	739+24	739+29	10	1								10															12
R	739+39	739+44	10	1	1							10															12
R	739+44	739+44	33		1							33															12
R	739+44	750+00													1056			1						1056			12
L	750+00	756+00	600	1		1				1		600		1													13
L	756+00	760+22													360	1								422			13
L	761+47	762+00													53	1								53			13
R	750+00	758+44													808	1								844			13
R	759+70	762+00													230	1								230		1	13
L	762+00	766+00													400	1								400			13
L	766+00	774+00	800			2						800															13
R	762+00	764+00													200	1								200			13
R	764+00	774+00	1000			2						1000															13
L	774+00	786+00	1200			2				1		1200															14
R	774+00	786+00	1200		1	2						1200															14
L	786+00	798+00	1207		2	1			1	1		1207															14
R	786+00	798+00	1202		1	1			1			1202															14
L	798+00	810+00	1209		1	3						1209															15
R	798+00	810+00	1201			4						1201															15
L	810+00	822+00	1202			3						1202															15
R	810+00	822+00	1200			3			1			1200															15
L	822+00	834+00	1200			4						1200															16
R	822+00	834+06	1200		1	3			1	1		1206															16
L	834+00	846+05	1200		1	2						1205															16
R	834+00	846+00	1200			3				1		1200															16
L	846+00	858+00	1200			4			2			1200															17
R	846+00	858+00	1200			4			1			1200															17
SUB TOTAL			35717	12	19	71			7	6		35768	2	3	3707	6		3						3805		1	
TOTAL																											

FENCE SUB-SUMMARY

SIDE	STATION	TO STATION	TYPE 47 FENCE (L.F.)	TYPE 47 END POST ASSEMBLY (EACH)	TYPE 47 CORNER POST ASSEMBLY (EACH)	TYPE 47 INTERMEDIATE ANCHOR POST ASSEMBLY (EACH)	TYPE 47 ABUTMENT CONNECTION (EACH)	TYPE 47 STREAM CROSSING TYPE 1 (EACH)	TYPE 47 STREAM CROSSING TYPE 2 (EACH)	TYPE 47 STREAM CROSSING TYPE 3 (EACH)	TYPE 47 STREAM CROSSING TYPE 4 (EACH)	TYPE 47 ITEM 202 FENCE REMOVED (L.F.)	TYPE 47 G25 GROUND ROD	TYPE 47 SIGN N-53-30	TYPE CLT FENCE (L.F.)	TYPE CLT END POST ASSEMBLY (EACH)	TYPE CLT CORNER POST ASSEMBLY (EACH)	TYPE CLT INTERMEDIATE ANCHOR POST ASSEMBLY (EACH)	TYPE CLT ABUTMENT CONNECTION (EACH)	TYPE CLT STREAM CROSSING TYPE 1 (EACH)	TYPE CLT STREAM CROSSING TYPE 2 (EACH)	TYPE CLT STREAM CROSSING TYPE 3 (EACH)	TYPE CLT STREAM CROSSING TYPE 4 (EACH)	TYPE CLT ITEM 202 FENCE REMOVED (L.F.)	TYPE CLT G25 GROUND ROD	TYPE CLT SIGN N-53-30	SEE SHEET No.
L	858+00	870+00	1100		2	3						1127															17
R	858+00	870+00	1100		2	3			1			1127															17
L	870+00	871+44	144	1								144	1	1													18
L	872+28	882+00													972	1		2						972			18
R	870+00	872+51	235	1								251	1														18
R	872+94	882+00	906	1		2				1		906															18
L	882+00	894+00													1200			4						1200			18
R	882+00	894+00	1200			4						1200															18
L	894+00	906+00													1200			4						1200			19
R	894+00	906+00	1200		1	4						1200															19
L	906+00	907+00													100	1								100			19
L	907+00	918+00	1267			4						1267	1														19
R	906+00	918+00	1367			5						1367	1														19
L	918+00	930+00	1200			2						1200															20
R	918+00	930+00	1200			2						1200															20
L	930+00	942+00	1200			3			1			1200															20
R	930+00	942+00	1200			3						1200															20
L	942+00	954+00	1200			2			1			1200															21
R	942+00	954+00	1200			2						1200															21
L	954+00	966+00	1200			3			1			1200															21
R	954+00	966+00	1200			3						1200															21
L	966+00	972+20.34	658	1		1						658	1														22
L	973+56.26	978+00	480	1		1						480															22
R	966+00	975+80.67	981	1		2						981	1	1													22
R	976+87.34	978+00	118	1								118		1													22
L	978+00	990+00	1210	1		2						1210		1													23
R	978+00	990+00	1215	1		2						1215		1													23
L	990+00	1002+00	1200			2						1200															23
R	990+00	1002+00	1200			2						1200															23
L	1002+00	1013+40	1140	1		2						1140	1	1													24
R	1002+00	1011+85	985	1		2						985	1														24
R	1013+35	1014+00	65	1								22		1													24
L	1015+00	1026+00	1100	1		2						1100															24
R	1014+00	1023+00													900	1		1			2			900			24
R	1023+00	1026+00	300									300															24
L	1026+00	1038+00	1200			3						1200		2													25
R	1026+00	1038+00	1200			3				1		1200															25
L	1038+00	1042+00	400	1								400	1														25
L	1044+75	1050+00	525	1		1						525															25
R	1038+00	1041+00	300	1								300	1														25
R	1043+00	1050+00	702	1	1	2				1		702	1														25
L	1050+00	1062+00	1200			2						1200	1														26
R	1050+00	1062+00	1200			2						1200															26
L	1062+00	1074+00	1200			2						1200															26
R	1062+00	1074+00	1200			3						1200															26
L	1074+00	1081+75	775			2						775															27
R	1074+00	1081+75	775			1						780															27
L	1098+00	1110+00	1224		2	2				1		1224															27
R	1098+00	1110+00	1200		1	4			1			1200															27
L	1081+75	1098+00	1625			3						1892															28
R	1081+75	1098+00	1625			3						1927															28
SUB TOTAL			45138	17	9	96			5	4		45723	12	9	4372	3		11			2			4372			
TOTAL																											

FENCE SUB-SUMMARY

F.H.W.A. REGION	STATE	PROJECT NO.	FUNDS	
5	OHIO			6 / 42

STA-21-12.39
WAY-21-0.00

SIDE	STATION	TO STATION	TYPE 47 FENCE L.F.	TYPE 47 END POST ASSEMBLY EACH	TYPE 47 CORNER POST ASSEMBLY EACH	TYPE 47 INTERMEDIATE ANCHOR POST ASSEMBLY EACH	TYPE 47 ABUTMENT CONNECTION EACH	TYPE 47 STREAM CROSSING TYPE 1 EACH	TYPE 47 STREAM CROSSING TYPE 2 EACH	TYPE 47 STREAM CROSSING TYPE 3 EACH	TYPE 47 STREAM CROSSING TYPE 4 EACH	TYPE 47 ITEM 202 FENCE REMOVED L.F.	TYPE 47 625 GROUND ROD	TYPE 47 SIGN N-53-30	TYPE CLT FENCE L.F.	TYPE CLT END POST ASSEMBLY EACH	TYPE CLT CORNER POST ASSEMBLY EACH	TYPE CLT INTERMEDIATE ANCHOR POST ASSEMBLY EACH	TYPE CLT ABUTMENT CONNECTION EACH	TYPE CLT STREAM CROSSING TYPE 1 EACH	TYPE CLT STREAM CROSSING TYPE 2 EACH	TYPE CLT STREAM CROSSING TYPE 3 EACH	TYPE CLT STREAM CROSSING TYPE 4 EACH	TYPE CLT ITEM 202 FENCE REMOVED L.F.	TYPE CLT 625 GROUND ROD	TYPE CLT SIGN N-53-30	SEE SHEET No.
L	1110+00	1122+00	1200			4						1200															29
R	1110+00	1122+00	1200			3			2			1200															29
L	1122+00	1123+45	145		1							145															29
L	1124+15	4+00	966		1	3						966	3														29
R	1122+00	1125+28	328		1							328															29
R	1126+08	4+00	773		1	3						773															29
L	4+00	16+00	1200			3						1200	2														30
R	4+00	16+00	1200			2						1200	3	1													30
L	16+00	28+00	1200			2						1200															30
R	16+00	27+95	1195		1	3						1195	4														30
L	28+00	40+00	1250		4	1						1250															31
R	27+95	40+00	1209		1	2						1209															31
L	40+00	43+32.86	333	1								333															31
L	43+32.86	47+45.47													377	1								413			31
L	48+34	51+00	266	2								266	1														31
R	40+00	46+10	610	1		1						610															31
R	47+19	50+15	296		2							296	1														31
R	51+24	52+00	76		1							76															31
L	52+40	64+00	1160		2	2						1160															32
R	52+00	64+00	1200			2						1200															32
L	64+00	66+12.60	213		1	1						213															32
L	67+52.72	76+00	847		1	2				1		847															32
R	64+00	65+43.84	144		1							144															32
R	66+78.94	72+85.33	607		1	1						607															32
R	75+01.22	76+00	99		1							99															32
L	76+00	76+88.78	89		1							89															33
L	80+07.53	88+00	793		1	2						793															33
R	76+00	88+00	1200			3						1200															33
L	88+00	98+33.27	1033		1	3			1			1033															33
L	99+21.25	100+00	35		1							79	1														33
R	88+00	89+00	100	1								100															33
R	89+00	94+38.04													538		1	1						538			33
R	95+75.28	100+00	425		1	1						425															33
L	100+00	112+00	1200			3						1200	2														34
R	100+00	112+00	1207		1	2						1207	2														34
L	112+00	124+00	1200			4						1200															34
R	112+00	124+00	1200			3						1200															34
L	124+00	136+00	1200			4						1200															35
R	124+00	136+00	1200			4						1200															35
L	136+00	139+00	300	1								300	2														35
L	139+00	142+23.26													323	1								323	2		35
L	144+98.25	148+00													402	2								402			35
R	136+00	137+00	100	1								100															35
R	137+00	140+73.35													373	1								373	2		35
R	141+88.91	148+00	611	1		2						611	1														35
L	148+00	160+00	1200	1		2						1200															36
R	148+00	160+00	1200			2						1200															36
L	160+00	172+00	1200			2						1200	4														36
R	160+00	172+00	1200			3						1200															36
L	172+00	173+45	145	1								145	4	1													37
L	173+45	184+00													1055			2						1055	1	1	37
R	172+00	174+00	200	1								200	1														37
R	174+00	184+00													1000		2	1						1000	3	1	37
SUB TOTAL			34755	11	26	75			3	1		34799	31	2	4068	5	3	4						4104	8	2	
TOTAL																											

ZFAI:[20,3]ST021233.DGN

FENCE SUB-SUMMARY

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

STA-21-12.39
WAY-21-0.00

SIDE	STATION	TO STATION	TYPE 47 FENCE	TYPE 47 END POST ASSEMBLY	TYPE 47 CORNER POST ASSEMBLY	TYPE 47 INTERMEDIATE ANCHOR POST ASSEMBLY	TYPE 47 ABUTMENT CONNECTION	TYPE 47 STREAM CROSSING TYPE 1	TYPE 47 STREAM CROSSING TYPE 2	TYPE 47 STREAM CROSSING TYPE 3	TYPE 47 STREAM CROSSING TYPE 4	TYPE 47 ITEM 202 FENCE REMOVED	TYPE 47 G25 GROUND. ROD	TYPE 47 SIGN N-53-30	TYPE CLT FENCE	TYPE CLT END POST ASSEMBLY	TYPE CLT CORNER POST ASSEMBLY	TYPE CLT INTERMEDIATE ANCHOR POST ASSEMBLY	TYPE CLT ABUTMENT CONNECTION	TYPE CLT STREAM CROSSING TYPE 1	TYPE CLT STREAM CROSSING TYPE 2	TYPE CLT STREAM CROSSING TYPE 3	TYPE CLT STREAM CROSSING TYPE 4	TYPE CLT ITEM 202 FENCE REMOVED	TYPE CLT G25 GROUND ROD	TYPE CLT SIGN N-53-30	SEE SHEET No.
			L.F.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	L.F.			L.F.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	L.F.			
L	184+00	196+00													1200			3						1200			37
R	184+00	196+00													1200			3						1200			37
L	196+00	207+72.12													1172	1		2				1		1172		1	38
R	196+00	207+40.61													1141	1		2						1172			38
L	208+32.58	212+00													368	2								368	1		38
L	212+00	220+00	800			1						800															38
R	208+01.09	218+00													999	2		1						999	4		38
R	218+00	220+00	200									200															38
L	220+00	232+00	1200			2						1200															39
R	220+00	232+00	1200			2						1200															39
L	232+00	243+00	1100	1		2						1100	2														39
L	243+00	244+00													100									100			39
R	232+00	243+00	1100	1		2						1100	2														39
R	243+00	244+00													100									100			39
L	244+00	248+50													450	1								450	1	1	40
L	250+30	254+00													370	2								370			40
L	254+00	256+00	200									200															40
R	244+00	247+57.21													357	1								357	1		40
R	249+28.65	256+00	672	1		1						672		1													40
L	256+00	268+00	1200			3						1200															40
R	256+00	262+00	600	1		1						600															40
R	262+00	268+00													600			1						600			40
L	268+00	276+00	800	1		1						800															41
L	276+00	280+00													400									400	1		41
R	268+00	280+00													1231		2	2						1231	1	1	41
L	280+00	292+00													1200			3						1200			41
R	280+00	292+00													1200			3						1200			41
L	292+00	304+00													1200			4						1200			42
R	292+00	304+00													1200			4						1200			42
L	304+00	311+26.51													727	1		2						727		1	42
R	304+00	311+51.77													752	1		2						752		1	42
SUB TOTAL			9072	5		15						9072	4	1	15967	12	2	32				1		15998	9	5	
TOTAL																											

FENCE SUB-SUMMARY

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

7A / 42

STA-21-12.39
WAY-21-0.00

SIDE	STATION	TO STATION	TYPE 47 FENCE	END POST ASSEMBLY	CORNER POST ASSEMBLY	INTERMEDIATE ANCHOR POST ASSEMBLY	ABUTMENT CONNECTION	STREAM CROSSING TYPE 1	STREAM CROSSING TYPE 2	STREAM CROSSING TYPE 3	STREAM CROSSING TYPE 4	ITEM 202 FENCE REMOVED	ELECTRICAL GROUNDING REQUIRED	BRIDGE CONNECTION	SEE SHEET No.
			L.F.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	L.F.		EACH	
L	867+62	867+62	60											1	17
L	868+33	868+33	60											1	17
R	867+62	867+62	60											1	17
R	868+74	868+74	60											1	17
L	1123+45	1123+75	30											1	29
L	1124+04	1124+15	15											1	29
R	1125+28	1125+34	15											1	29
R	1125+80	1126+08	40											1	29
L	46+75	47+10	88											1	31
L	48+10	48+34	84											1	31
R	46+10	46+34	110											1	31
R	47+19	47+66	117											1	31
L	50+25	51+00	120											1	31
L	52+40	52+76	100											1	32
R	49+95	50+15	108											1	31
R	51+24	52+43	153											1	31-32
L	65+84	65+12.60	114											1	32
L	67+42	67+52.72	115											1	32
R	65+43.84	65+63	106											1	32
R	66+78.94	67+20	112											1	32
L	75+12	76+88.78	212											1	32-33
L	78+48	80+07.53	184											1	33
R	72+85.33	74+14	198											1	32
R	75+01.22	77+25	290											1	32-33
L	96+77	98+33.27	185											1	33
L	98+78	99+65	137											1	33
R	94+38.04	95+36	125											1	33
R	95+75.28	97+39	182											1	33
SUB TOTAL			3180											28	
TOTAL															

TYPE CLT FENCE	END POST ASSEMBLY	CORNER POST ASSEMBLY	INTERMEDIATE ANCHOR POST ASSEMBLY	ABUTMENT CONNECTION	STREAM CROSSING TYPE 1	STREAM CROSSING TYPE 2	STREAM CROSSING TYPE 3	STREAM CROSSING TYPE 4	ITEM 202 FENCE REMOVED	ELECTRICAL GROUNDING REQUIRED
L.F.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	L.F.	

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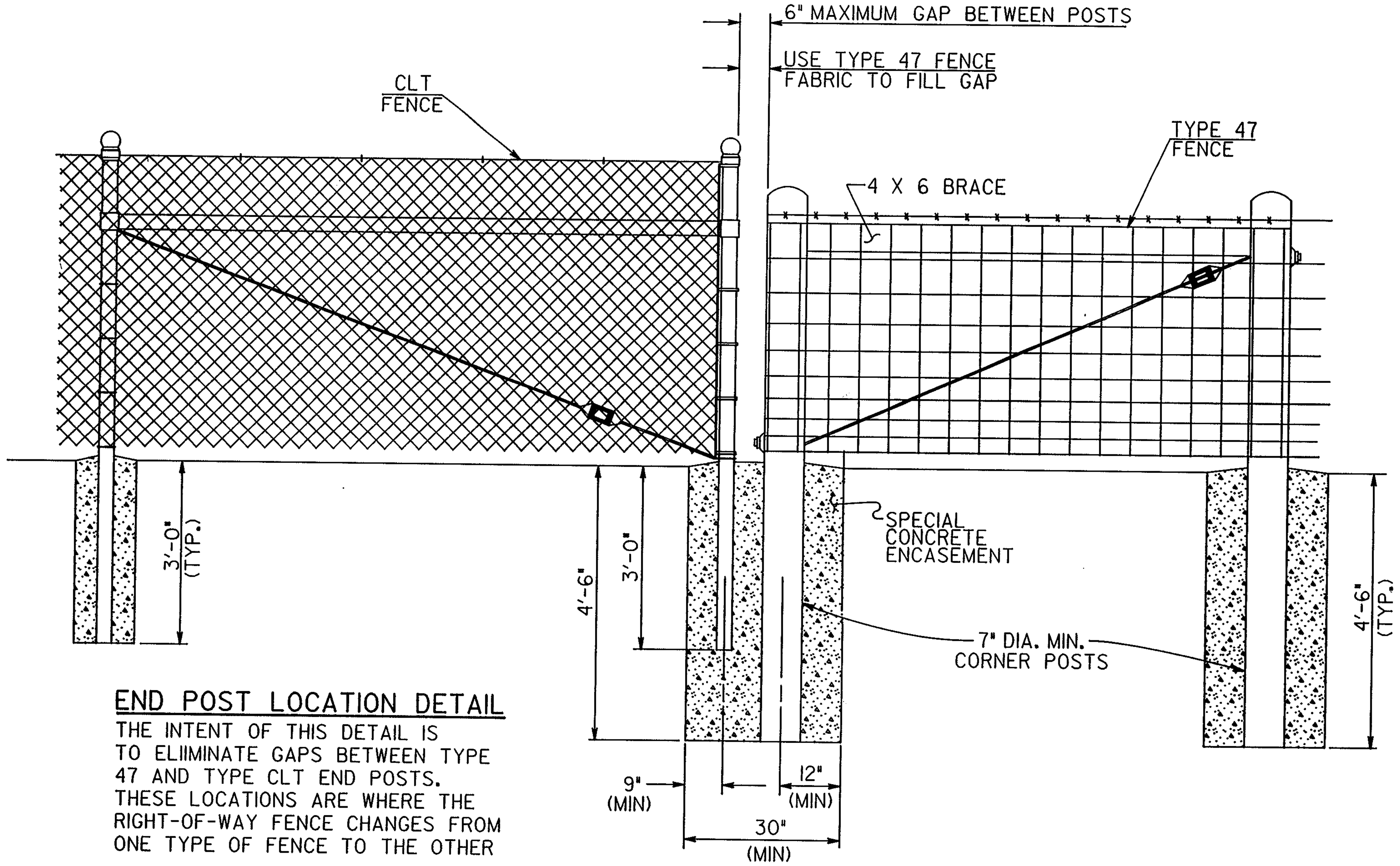
END POST LOCATION DETAIL

F.H.W.A. REGION	STATE	PROJECT NO.	FUNDS	
5	OHIO			8/42

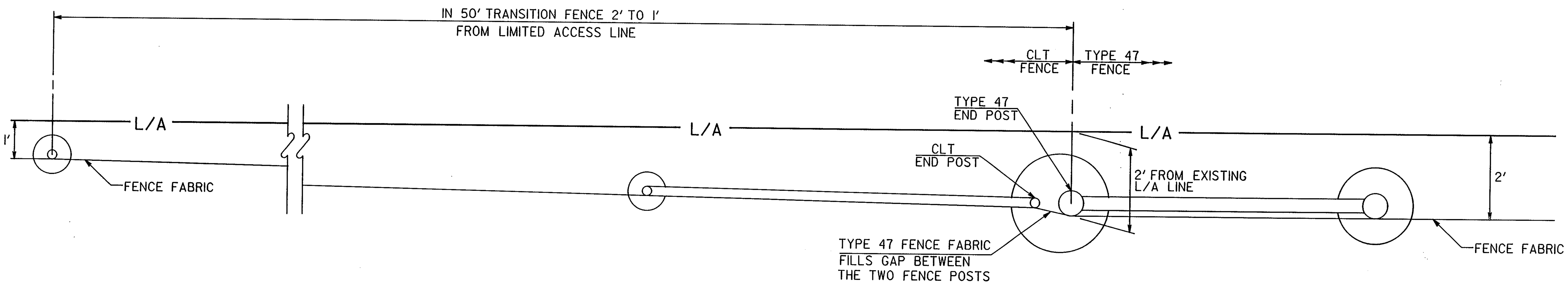
STA-21-12.39
WAY-21-0.00



END POST LOCATION DETAIL
THE INTENT OF THIS DETAIL IS TO ELIIMINATE GAPS BETWEEN TYPE 47 AND TYPE CLT END POSTS. THESE LOCATIONS ARE WHERE THE RIGHT-OF-WAY FENCE CHANGES FROM ONE TYPE OF FENCE TO THE OTHER

FOR DETAILS NOT SHOWN HERE SEE STANDARD DRAWINGS F-1 & F-2

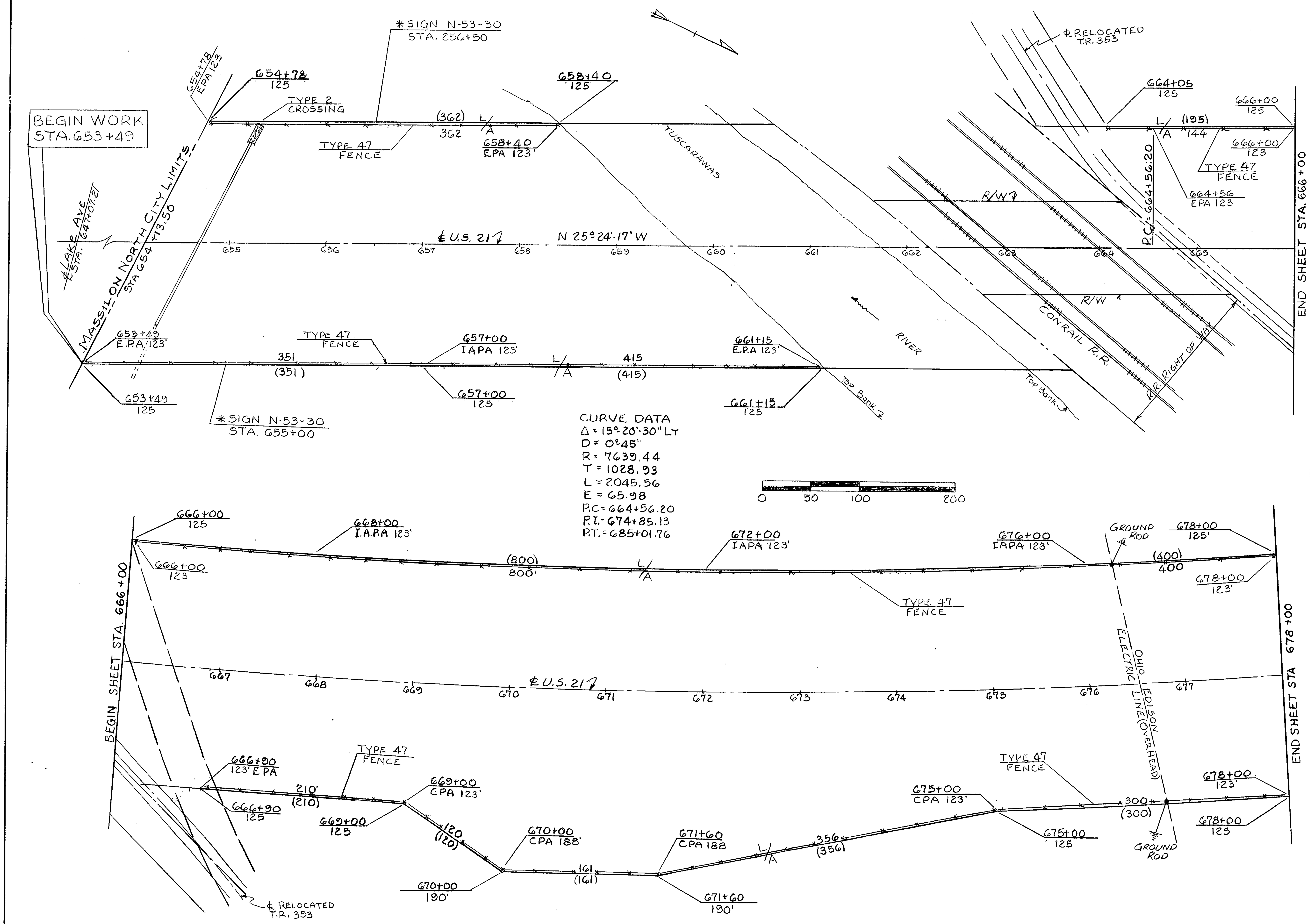
NOT TO SCALE



ZFA£20,113 FENCE.DGN

OHIO	9/42
FHWA REGION 5	
FEDERAL PROJECT	

STA-21-12.39
WAY-21-0.00



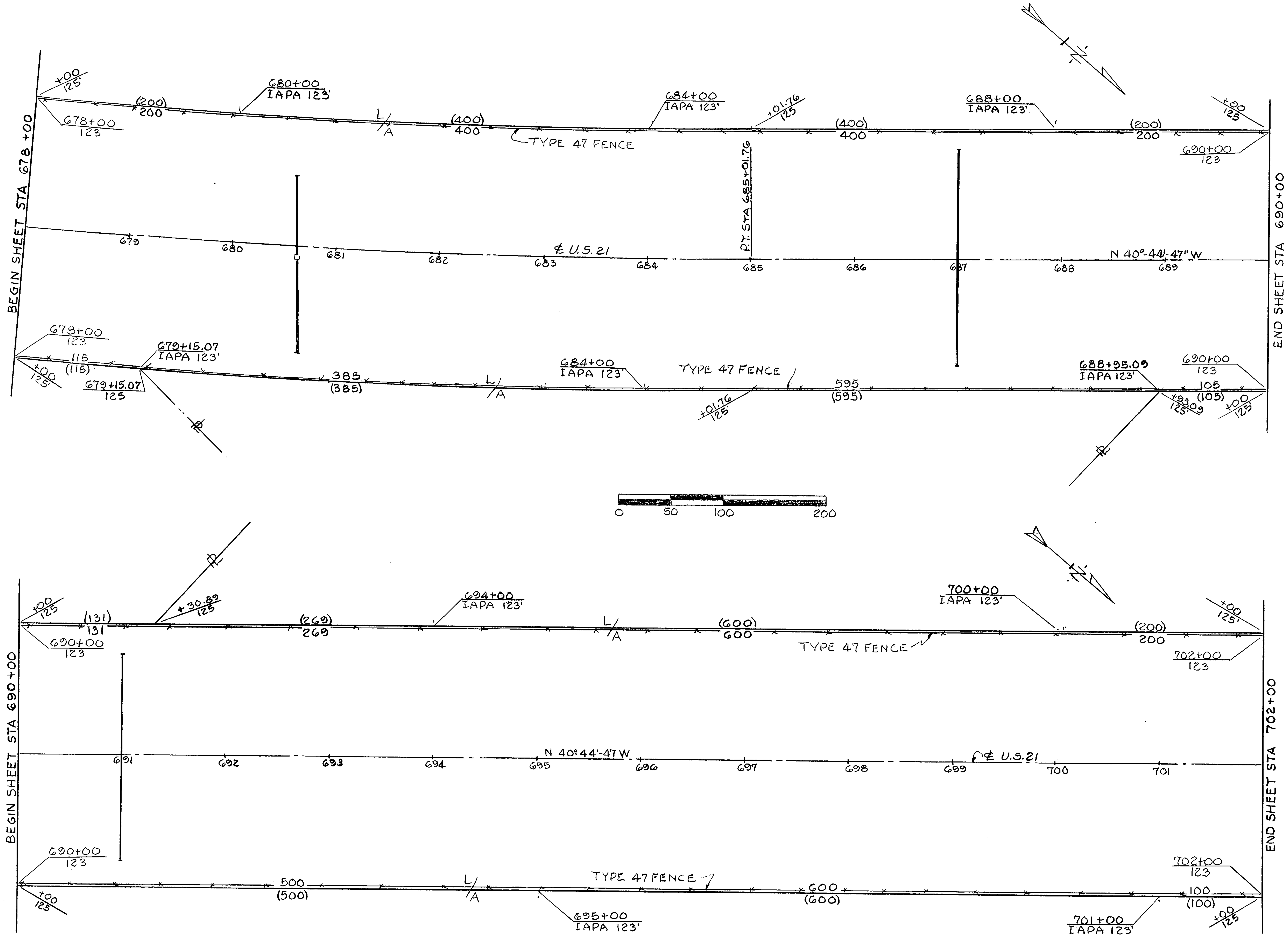
NOTE ( ) DENOTES LENGTH OF EXISTING FENCE TO BE REMOVED

*SEE SHEET No. 8

STA. 653+49 TO STA 678+00

OHIO	10
FHWA REGION 5	42
FEDERAL PROJECT	

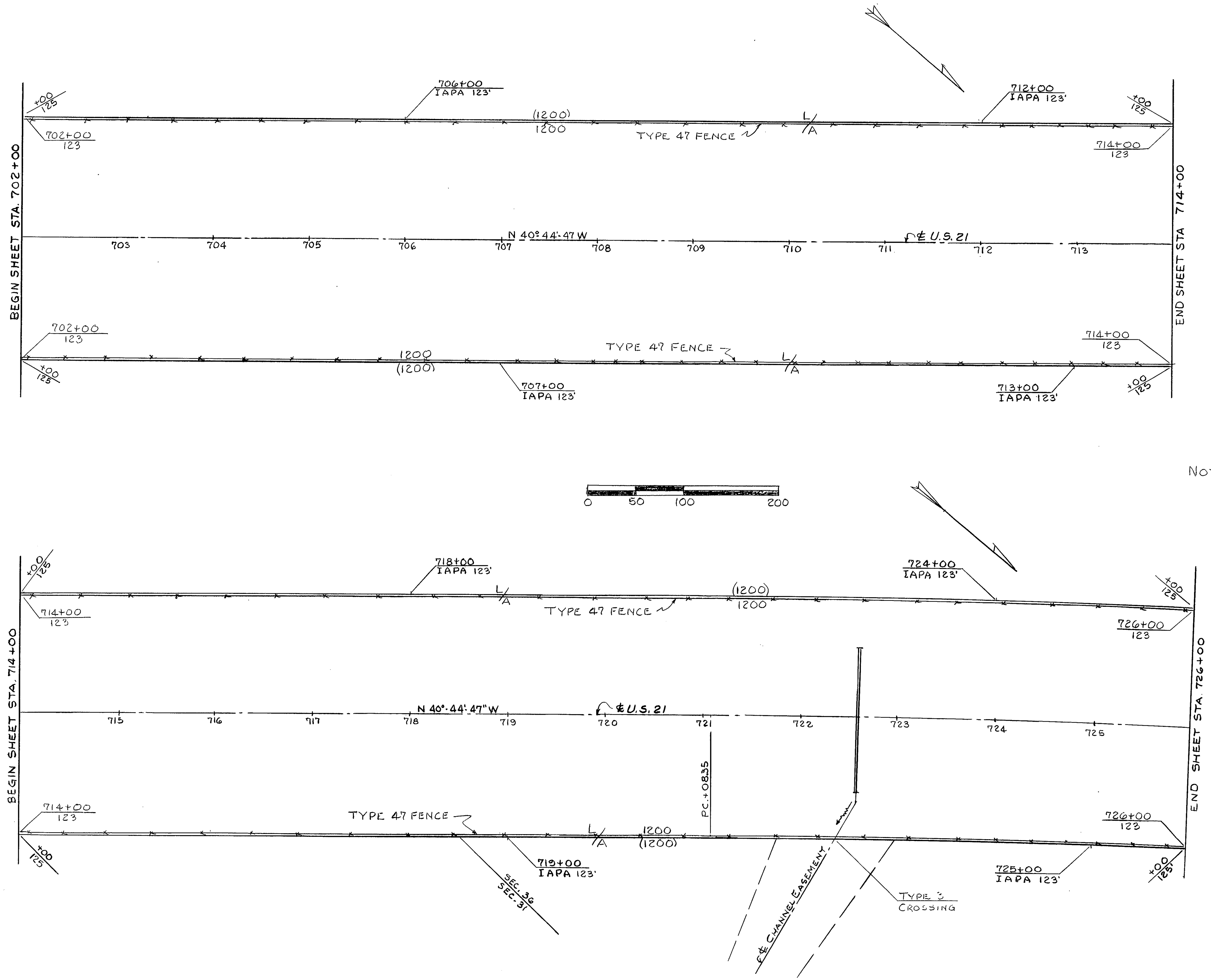
STA- 21-12.39
WAY- 21-0.00



NOTE ( ) DENOTES LENGTH OF EXISTING FENCE TO BE REMOVED

STA. 678+00 TO STA. 702+00

STA. 21-12.39
WAY. 21-0.00

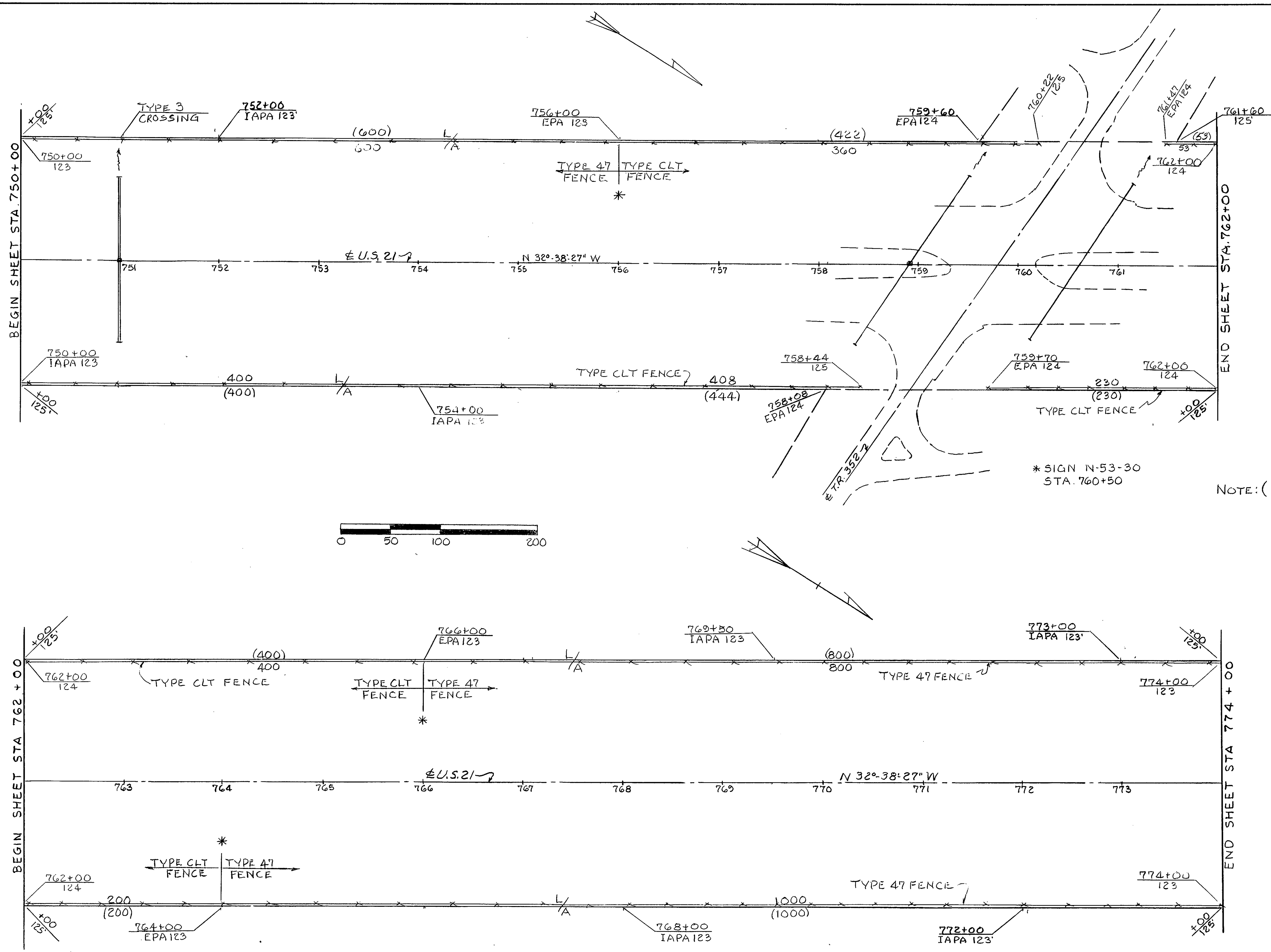


NOTE ( ) DENOTES LENGTH OF EXISTING FENCE TO BE REMOVED

STA. 726+00 TO STA. 750+00

OHIO	13
FHWA REGION 5	42
FEDERAL PROJECT	

STA. 21-12.39
WAY. 21-0.00



NOTE: ( ) DENOTES LENGTH OF EXISTING FENCE TO BE REMOVED

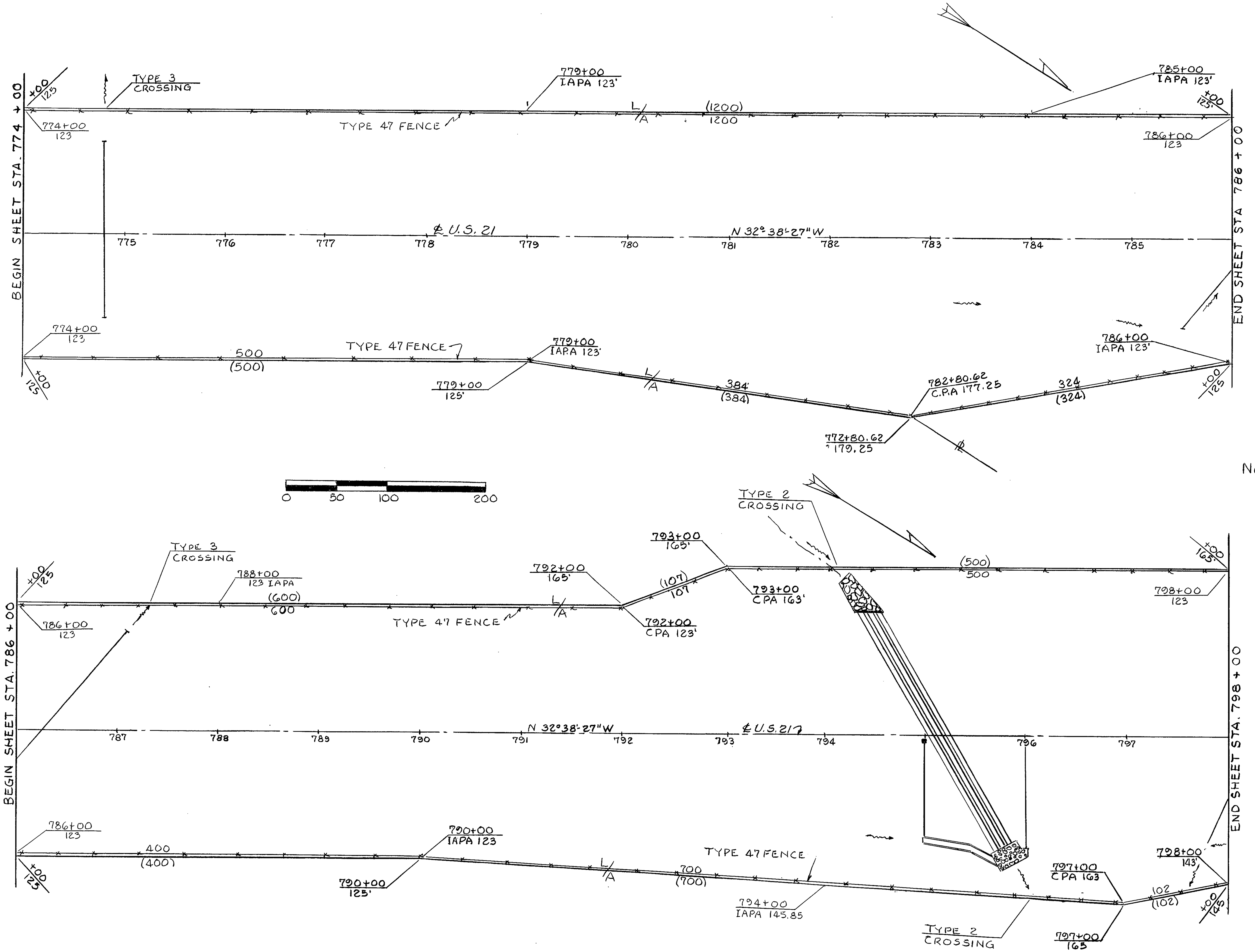
*SEE SHEET No. 8

STA. 750+00 TO STA. 774+00

OHIO	
FHWA REGION	5
FEDERAL PROJECT	

14
42

STA. 21-12.39
WAY. 21-0.00



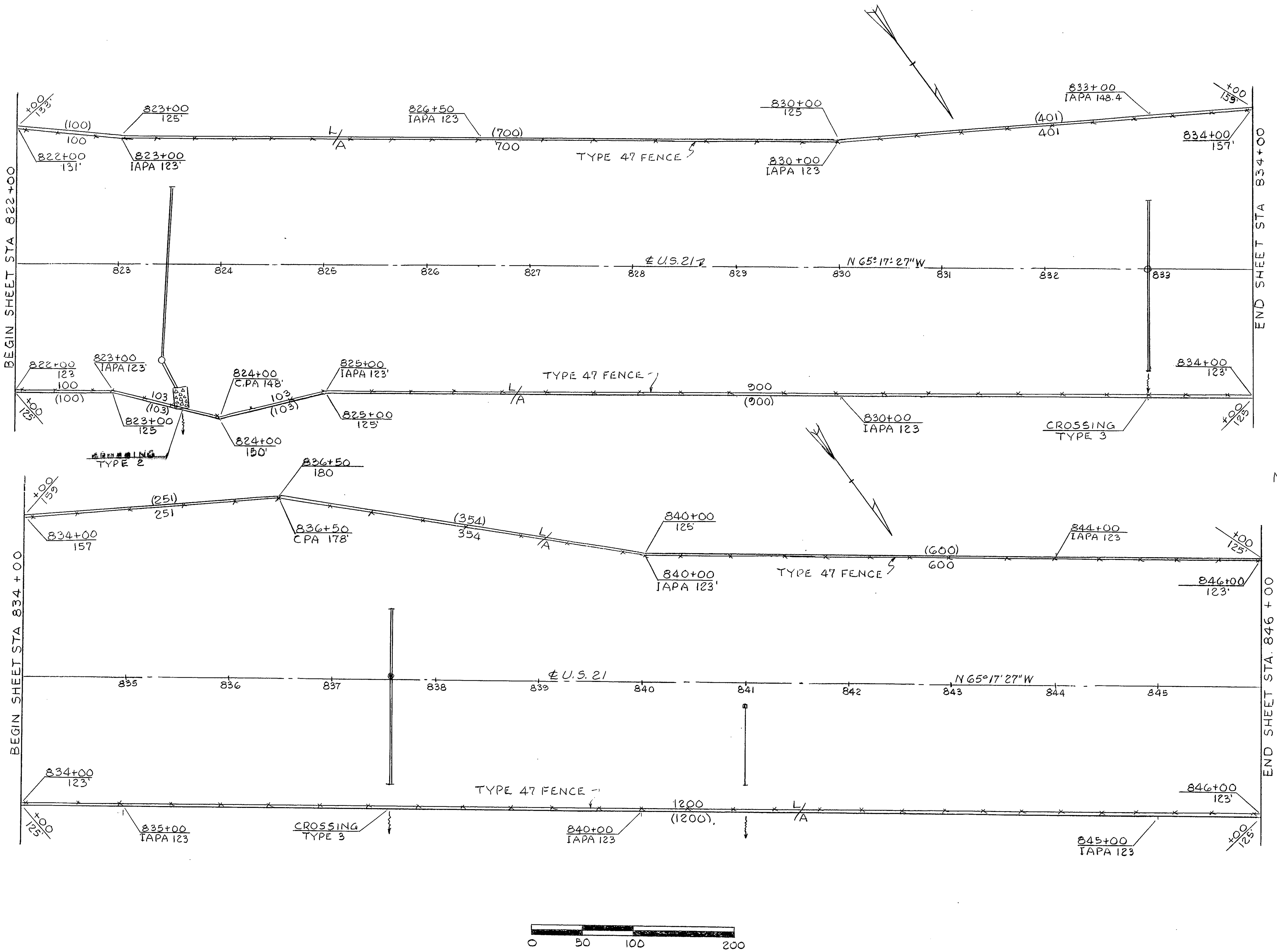
NOTE ( ) DENOTES LENGTH OF EXISTING FENCE TO BE REMOVED

STA. 774+00 TO 798+00

STA. 798+00 TO STA. 822+00

OHIO	16
FHWA REGION 5	42
FEDERAL PROJECT	

STA. 21-12.39
WAY. 21-0.00

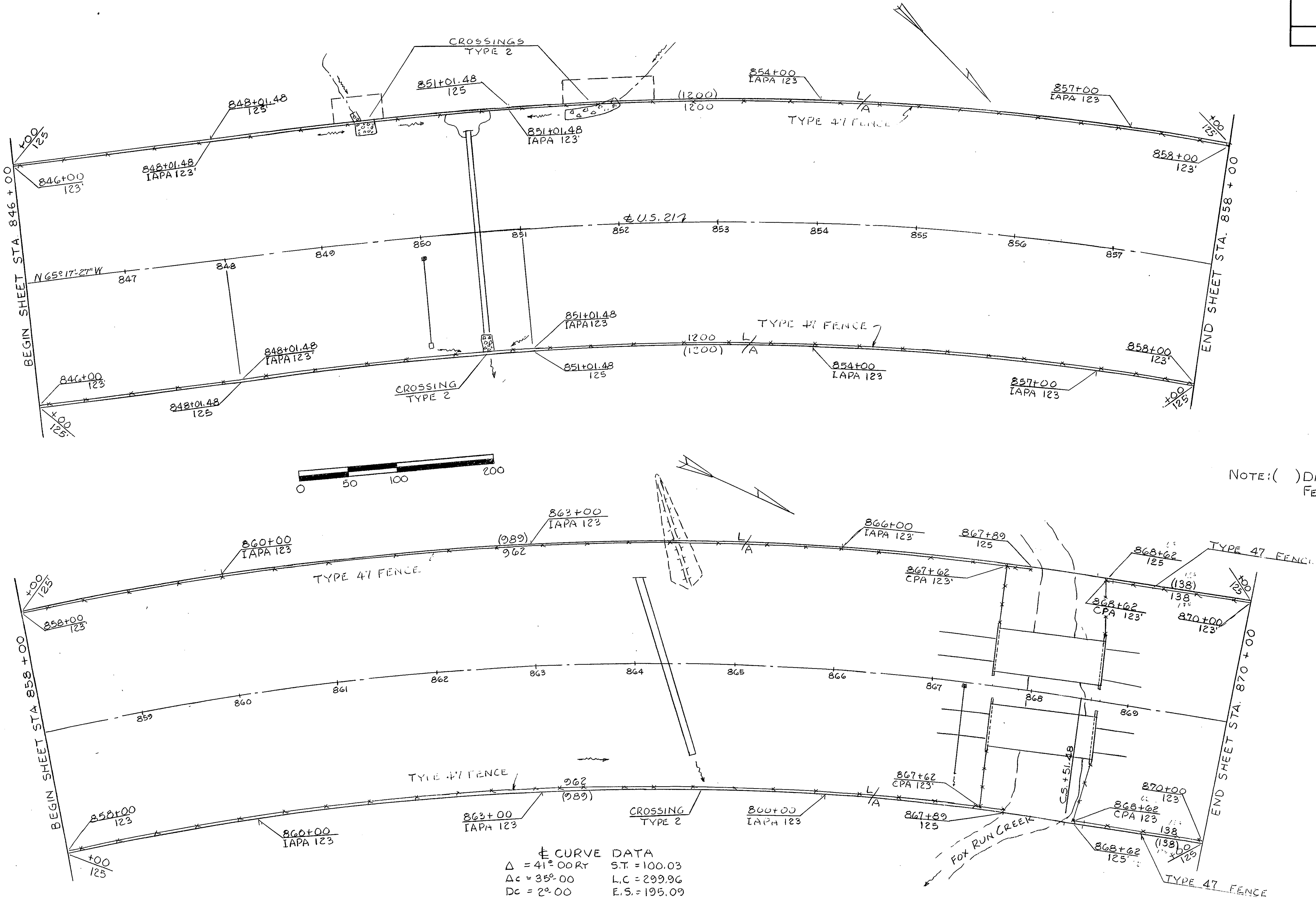


NOTE: ( ) DENOTES LENGTH OF EXISTING FENCE TO BE REMOVED

STA. 822+00 TO STA. 846+00

OHIO	17/42
FHWA REGION 5	
FEDERAL PROJECT	

STA. 21-12.39
WAY: 21-0.00



NOTE: ( ) DENOTES LENGTH OF EXISTING FENCE TO BE REMOVED

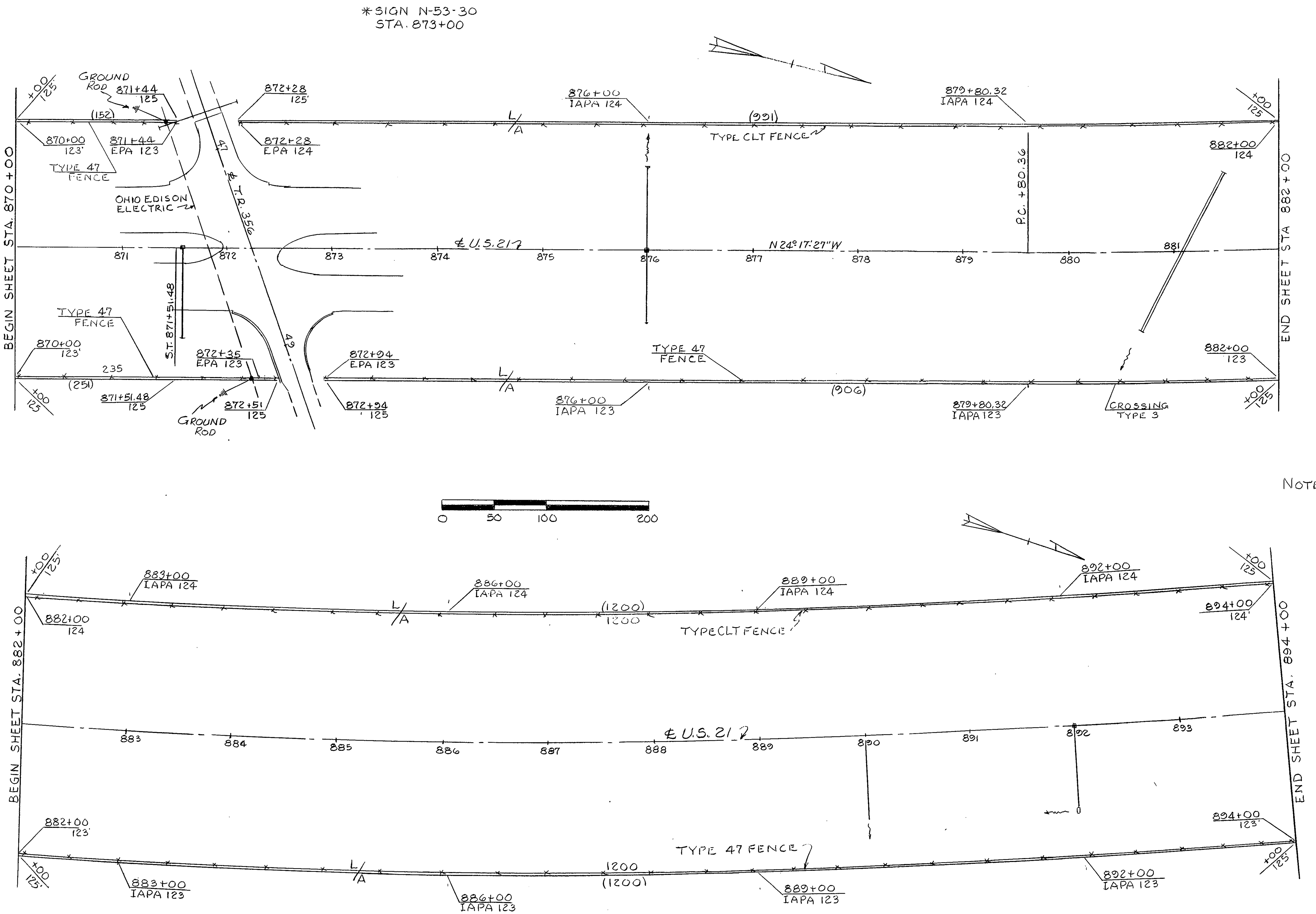
℄ CURVE DATA

Δ = 41°-00 RT	S.T. = 100.03
Δc = 35°-00	L.C = 299.96
Dc = 2°-00	E.S. = 195.09
Rc = 2864.79	K = 149.99
Lc = 1750.00	P = 1.31
Ls = 300.00	T.S. = 848+01.48
Ts = 1221.57	S.C. = 851+01.48
Xc = 299.92	P.I = 860+23.05
Yc = 5.24	C.S = 868+51.48
Qs = 3°00	S.T = 871+51.48
L.T. = 200.03	

STA 846+00 TO STA 870+00

OHIO	18/42
FHWA REGION 5	
FEDERAL PROJECT	

STA. 21-12.39
WAY. 21-0.00



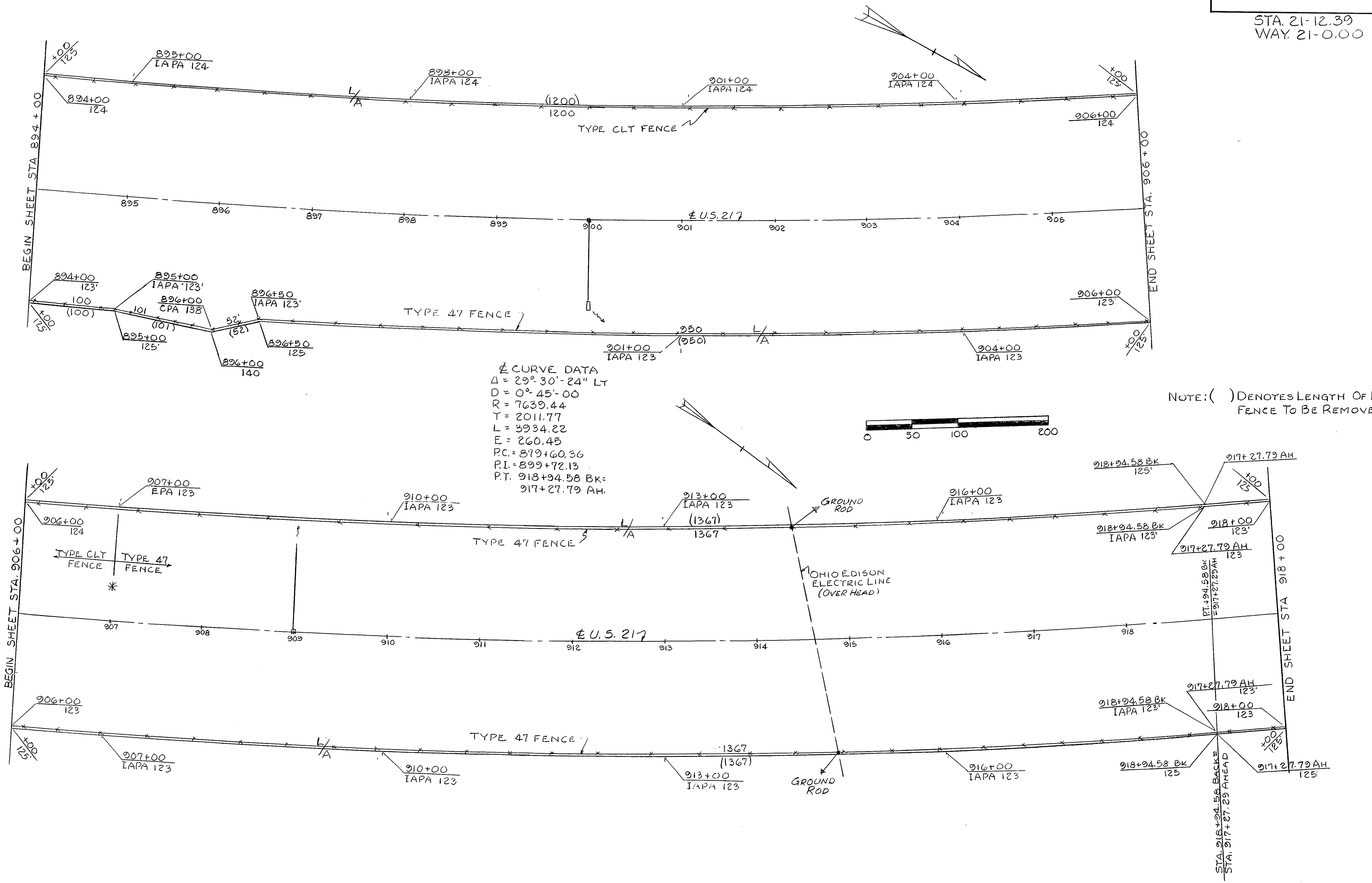
NOTE: ( ) DENOTES LENGTH OF EXISTING FENCE TO BE REMOVED

*SEE SHEET No. 8

STA. 870+00 TO STA. 894+00

OHIO	19 / 42
FHWA REGION 5	
FEDERAL PROJECT	

STA. 21-12.39
WAY. 21-0.00



℄ CURVE DATA
Δ = 29°-30'-24" LT
D = 0°-45'-00
R = 7639.44
T = 2011.77
L = 3934.22
E = 260.45
P.C. = 879+60.36
P.I. = 899+72.13
P.T. 918+94.58 BK = 917+27.79 AH.

NOTE: ( ) DENOTES LENGTH OF EXISTING FENCE TO BE REMOVED

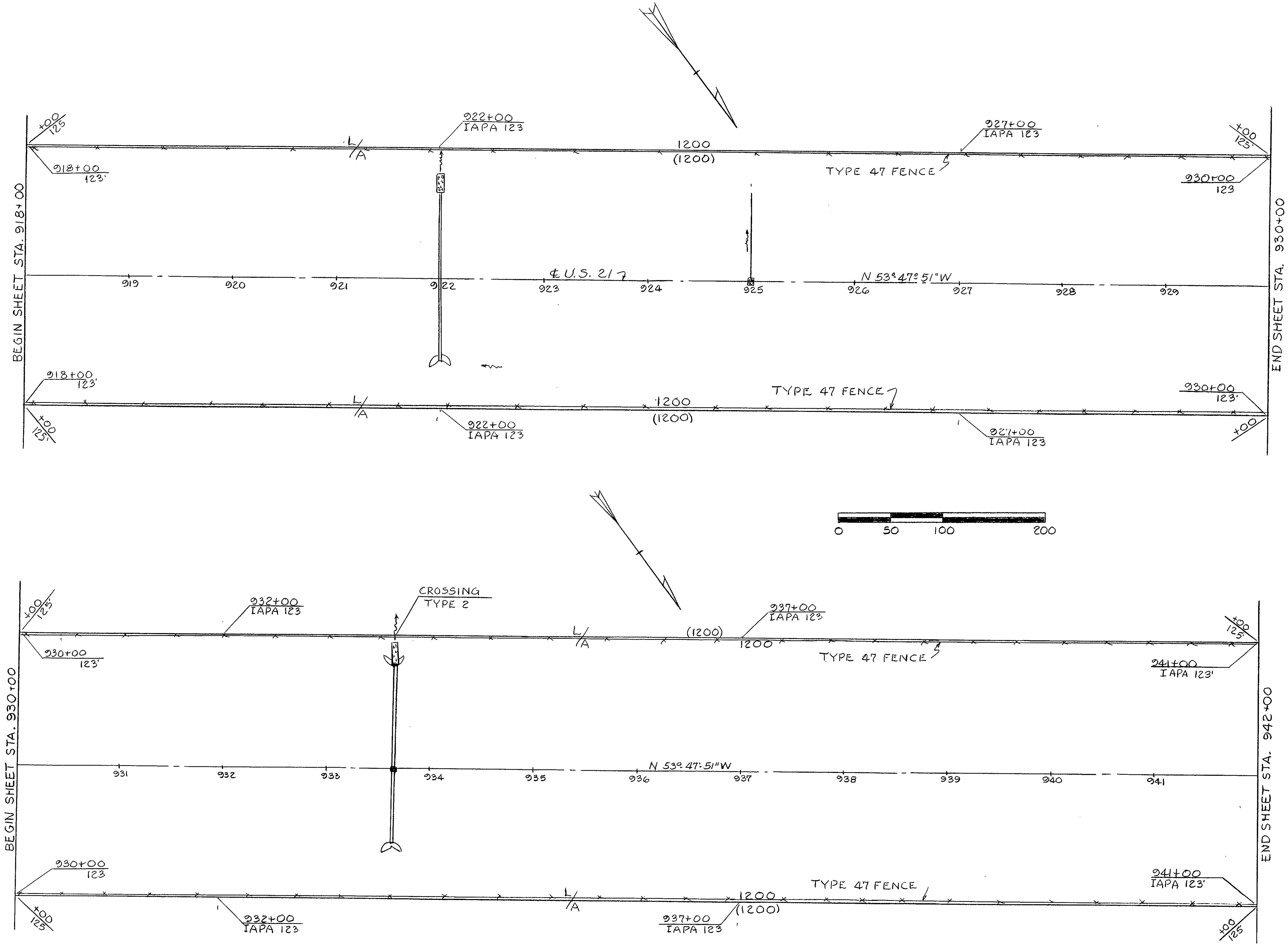
*SEE SHEET No 8

STA. 894+00 TO STA. 918+00

OHIO	
FHWA REGION	5
FEDERAL PROJECT	

20
42

STA. 21-12.39
WAY. 21-0.00

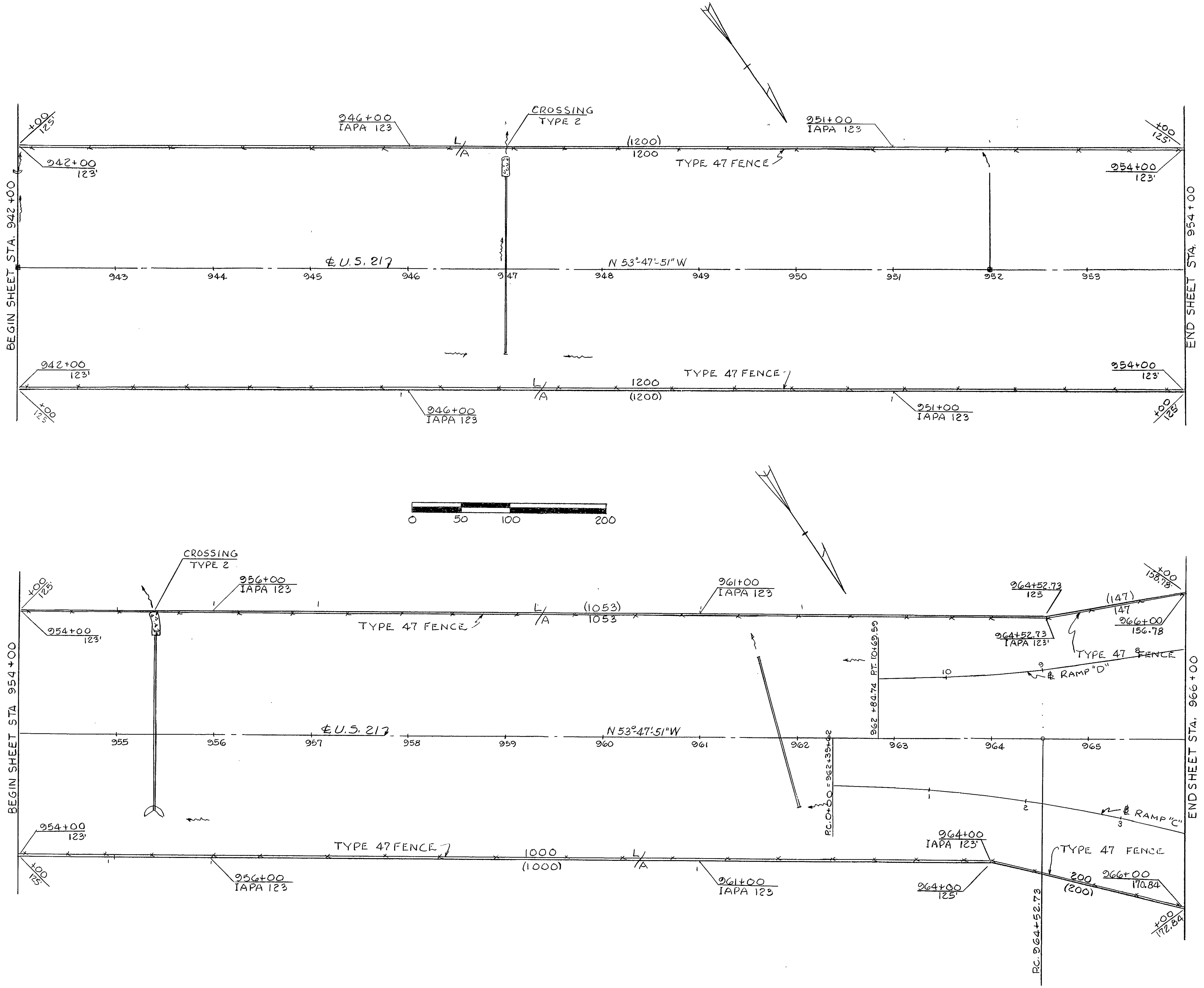


NOTE: ( ) DENOTES LENGTH OF EXISTING FENCE TO BE REMOVED

STA. 918+00 TO STA. 942+00

OHIO	21/42
FHWA REGION 5	
FEDERAL PROJECT	

STA. 21-12.39
WAY. 21-0.00

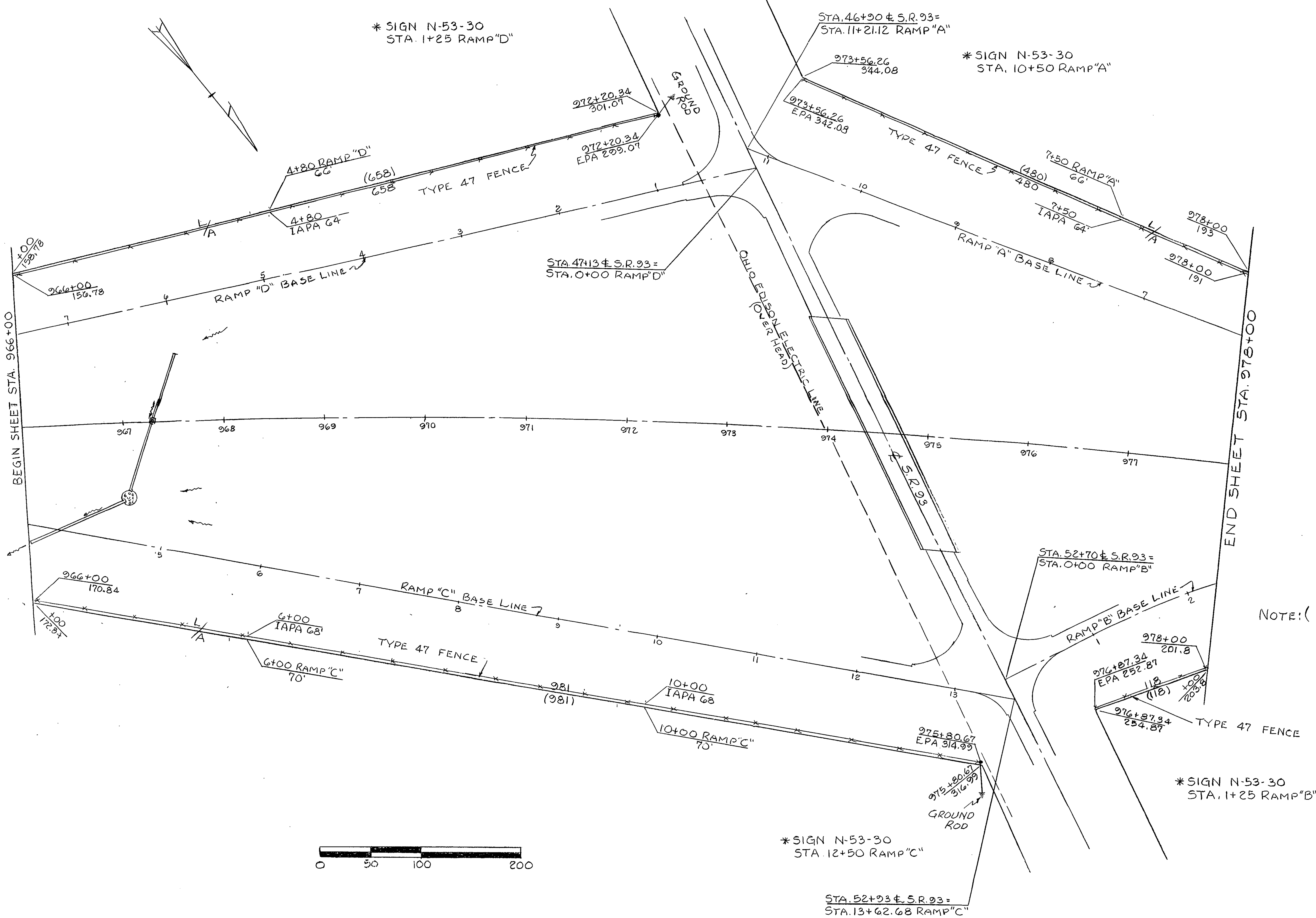


NOTE: ( ) DENOTES LENGTH OF EXISTING FENCE TO BE REMOVED

STA. 942+00 TO STA. 966+00

OHIO	22/42
FHWA REGION 5	
FEDERAL PROJECT	

STA. 21-12.39
WAY. 21-0.00

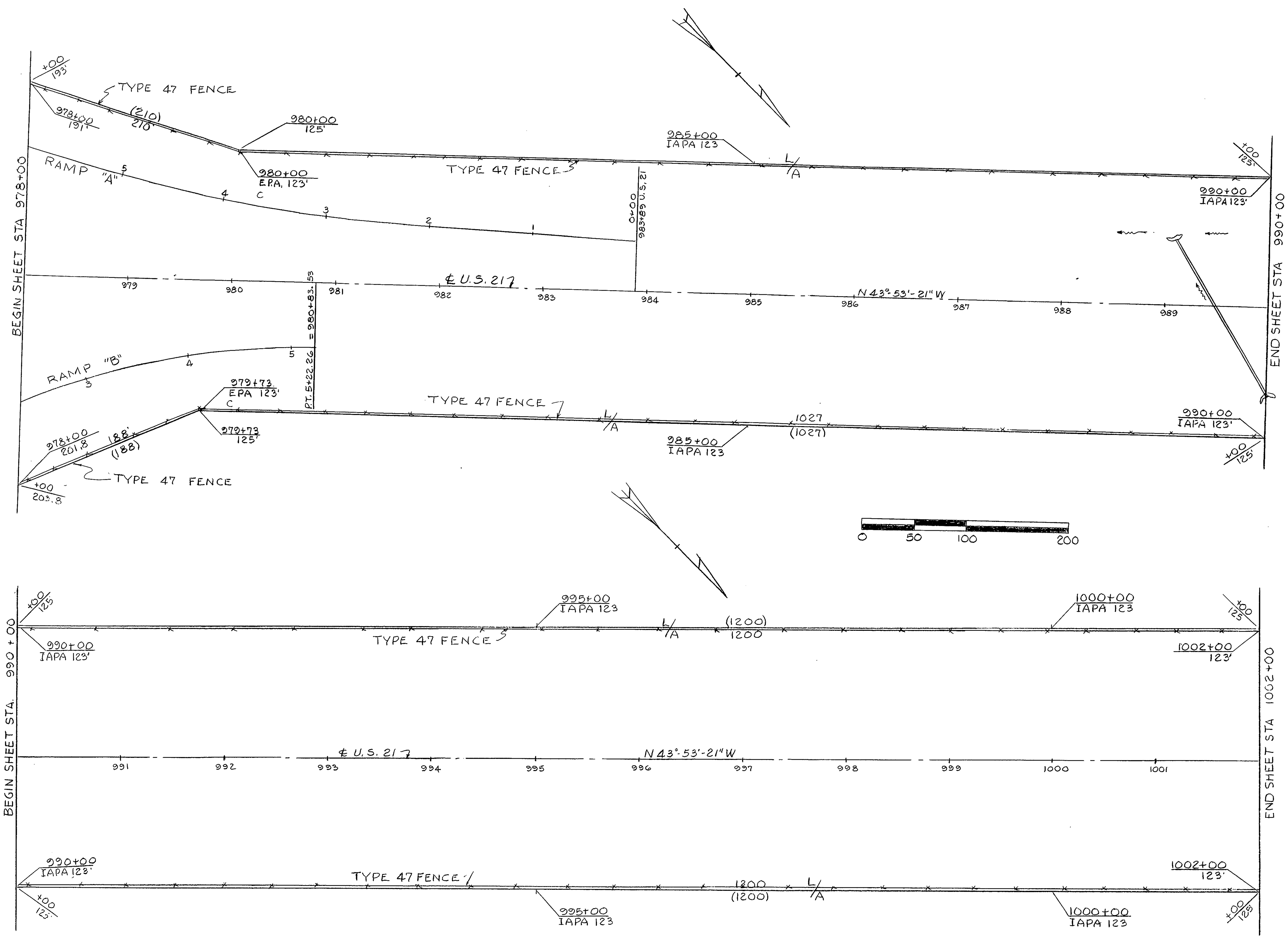


NOTE: ( ) DENOTES LENGTH OF EXISTING FENCE TO BE REMOVED

STA. 966+00 TO STA 978+00

OHIO	23/42
FHWA REGION 5	
FEDERAL PROJECT	

STA. 21-12.39
WAY. 21-0.00

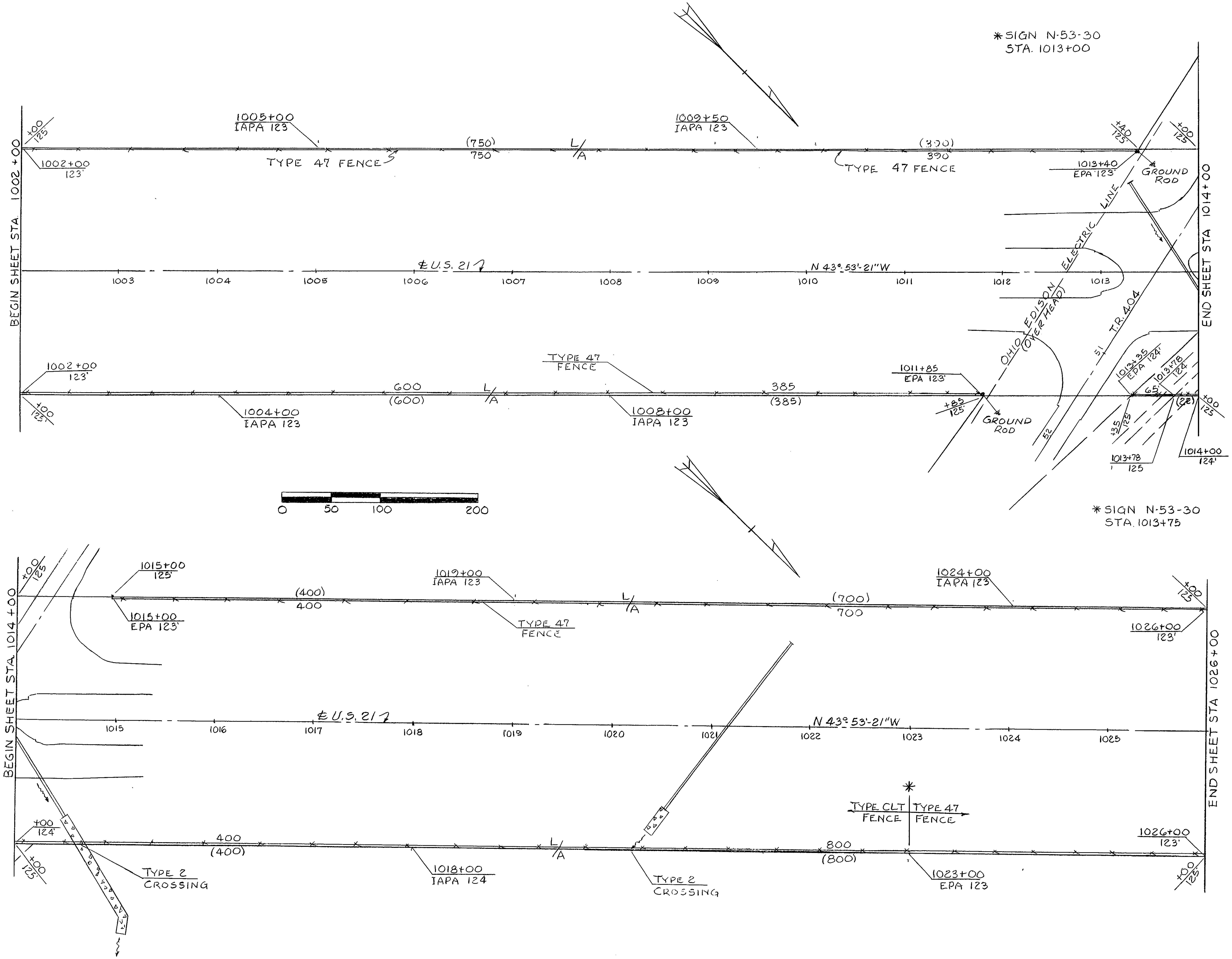


NOTE: ( ) DENOTES LENGTH OF EXISTING FENCE TO BE REMOVED

STA. 973+00 TO STA. 1002+00

OHIO	24
FHWA REGION 5	42
FEDERAL PROJECT	

STA. 21-12.39
WAY. 21-0.00



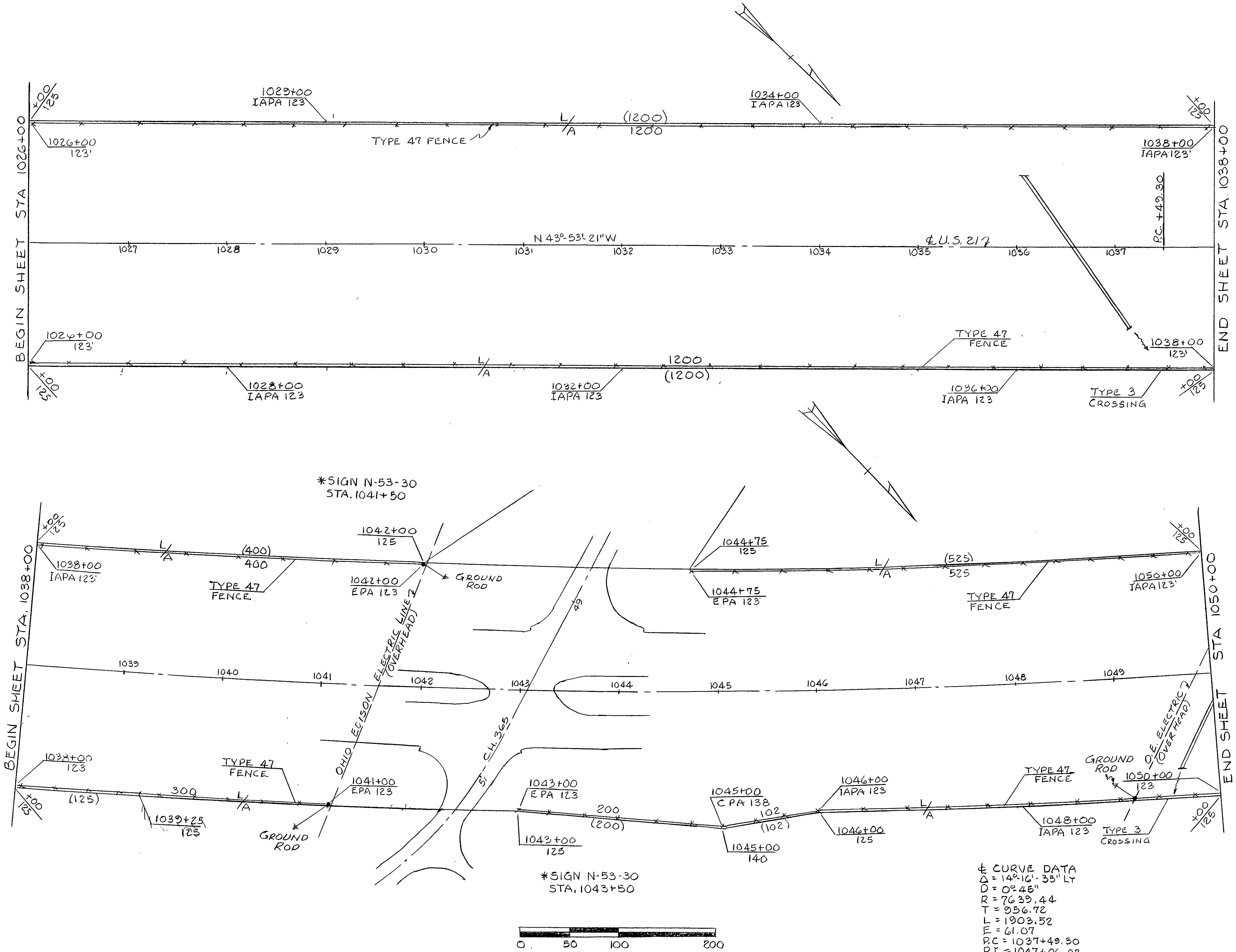
NOTE: ( ) DENOTES LENGTH OF EXISTING FENCE TO BE REMOVED

*SEE SHEET No. 8

STA. 1002+00 TO STA. 1026+00

	OHIO	25/42
	FHWA REGION 5	
	FEDERAL PROJECT	

STA. 21-12.39
WAY. 21-0.00



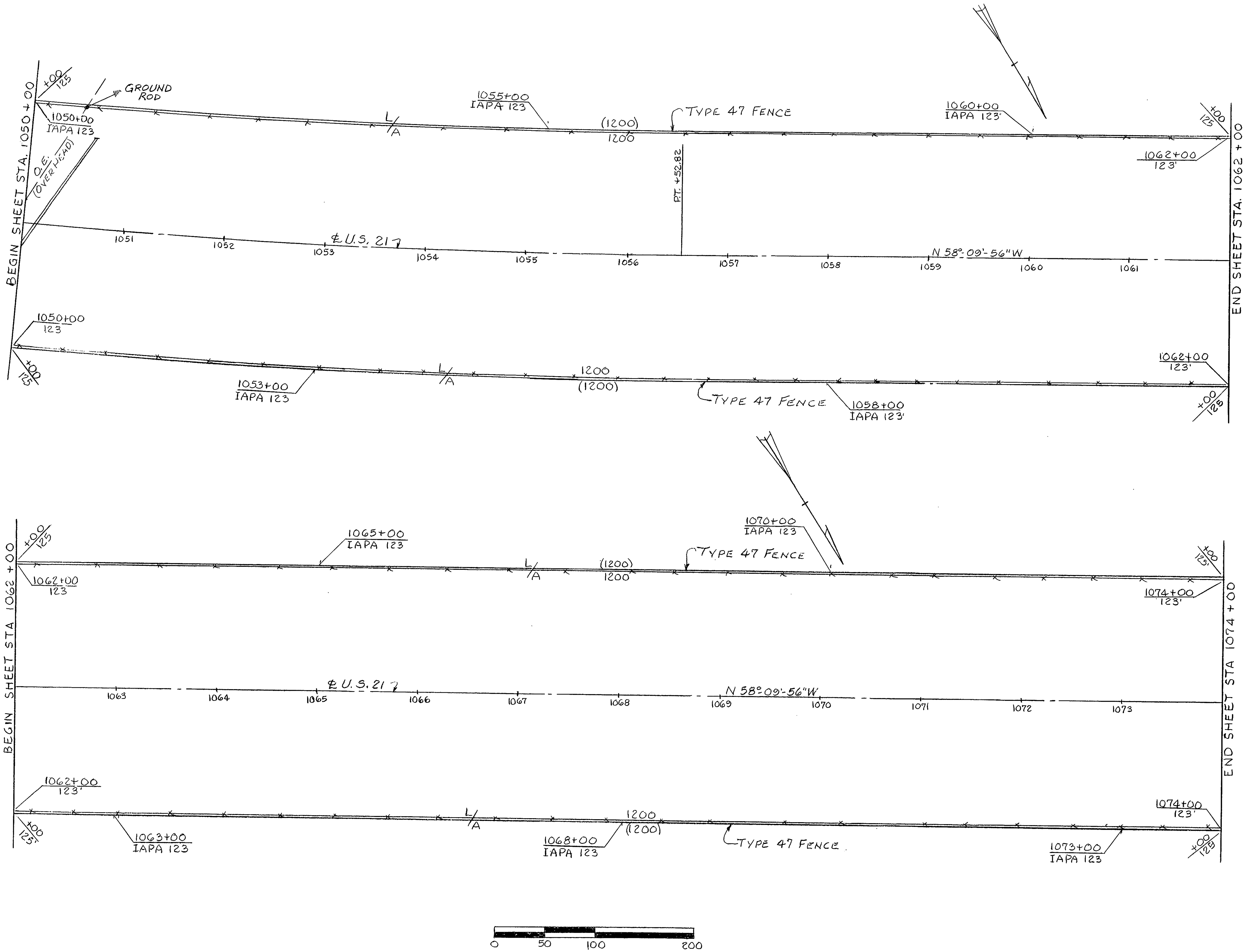
℄ CURVE DATA
Δ = 14°-16'-33" LT
D = 0°-45'
R = 7639.44
T = 956.72
L = 1903.52
E = 61.07
P.C. = 1037+49.30
P.I. = 1047+06.02
P.T. = 1056+52.82

NOTE: ( ) DENOTES LENGTH OF EXISTING FENCE TO BE REMOVED

STA. 1026+00 TO STA 1050+00

OHIO	26/42
FHWA REGION 5	
FEDERAL PROJECT	

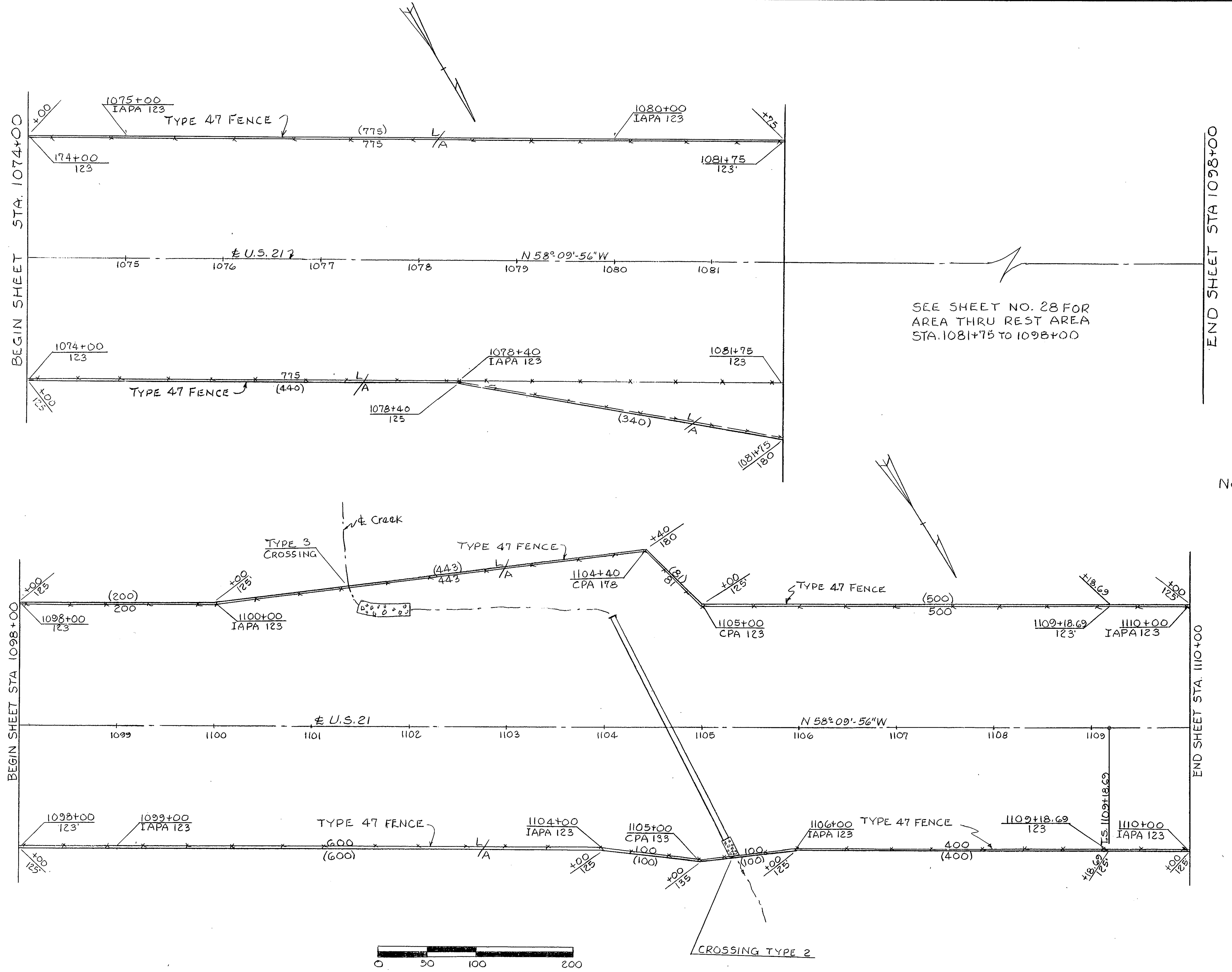
STA. 21-12.39
WAY. 21-0.00



NOTE: ( ) DENOTES LENGTH OF EXISTING FENCE TO BE REMOVED

OHIO	27/42
FHWA REGION 5	
FEDERAL PROJECT	

STA. 21-12.39
WAY. 21-0.00



NOTE: ( ) DENOTES LENGTH OF EXISTING FENCE TO BE REMOVED

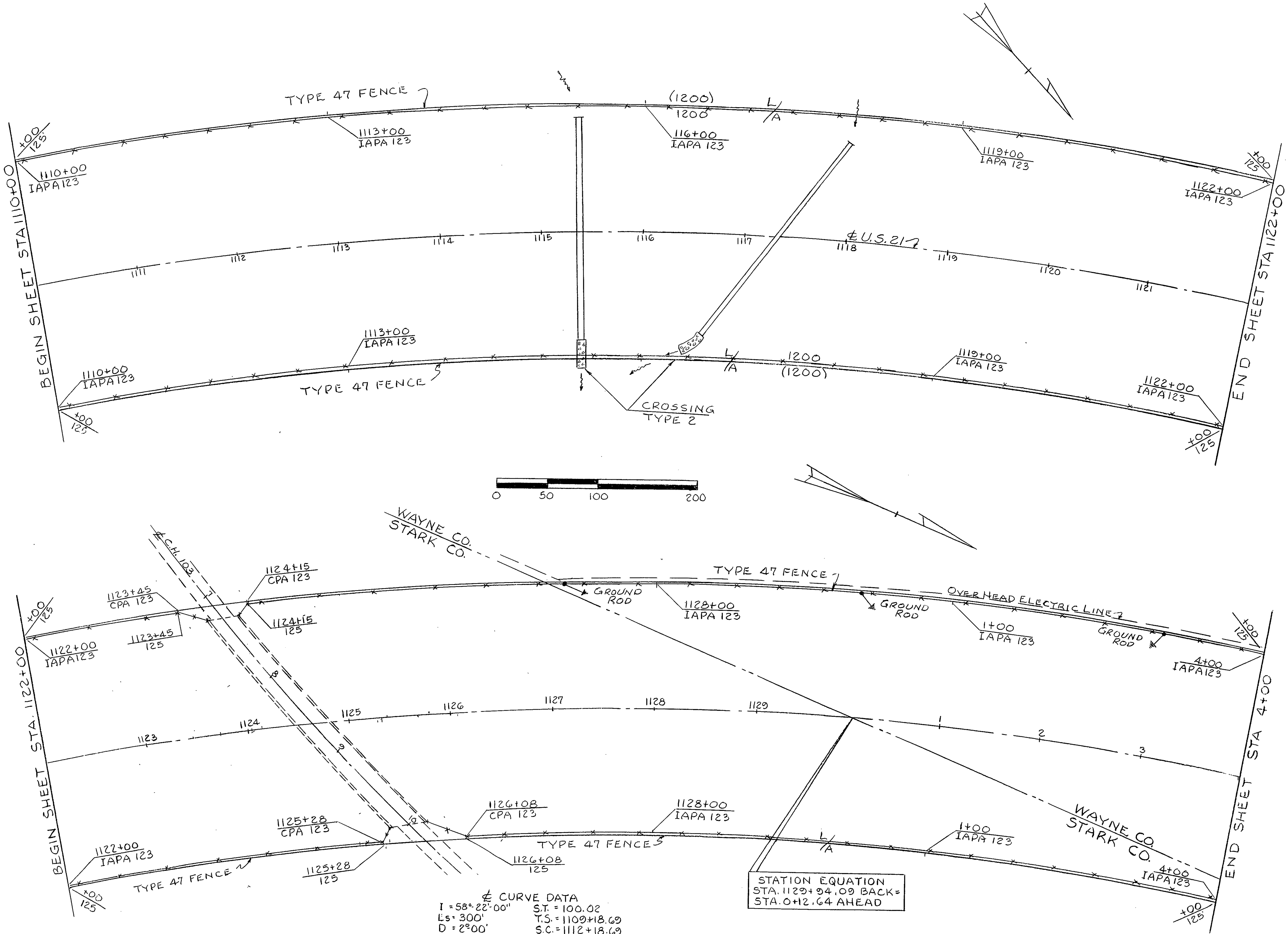
STA.1074+00 TO STA 1081+75 — STA 1098+00 TO STA 1110+00

STA. 21-12.39
WAY. 21-0.00

STA. 1081+75 to STA. 1098+00

OHIO	29/42
FHWA REGION 5	
FEDERAL PROJECT	

STA. 21-12.39
WAY. 21-0.00



NOTE: ( ) DENOTES LENGTH OF EXISTING FENCE TO BE REMOVED

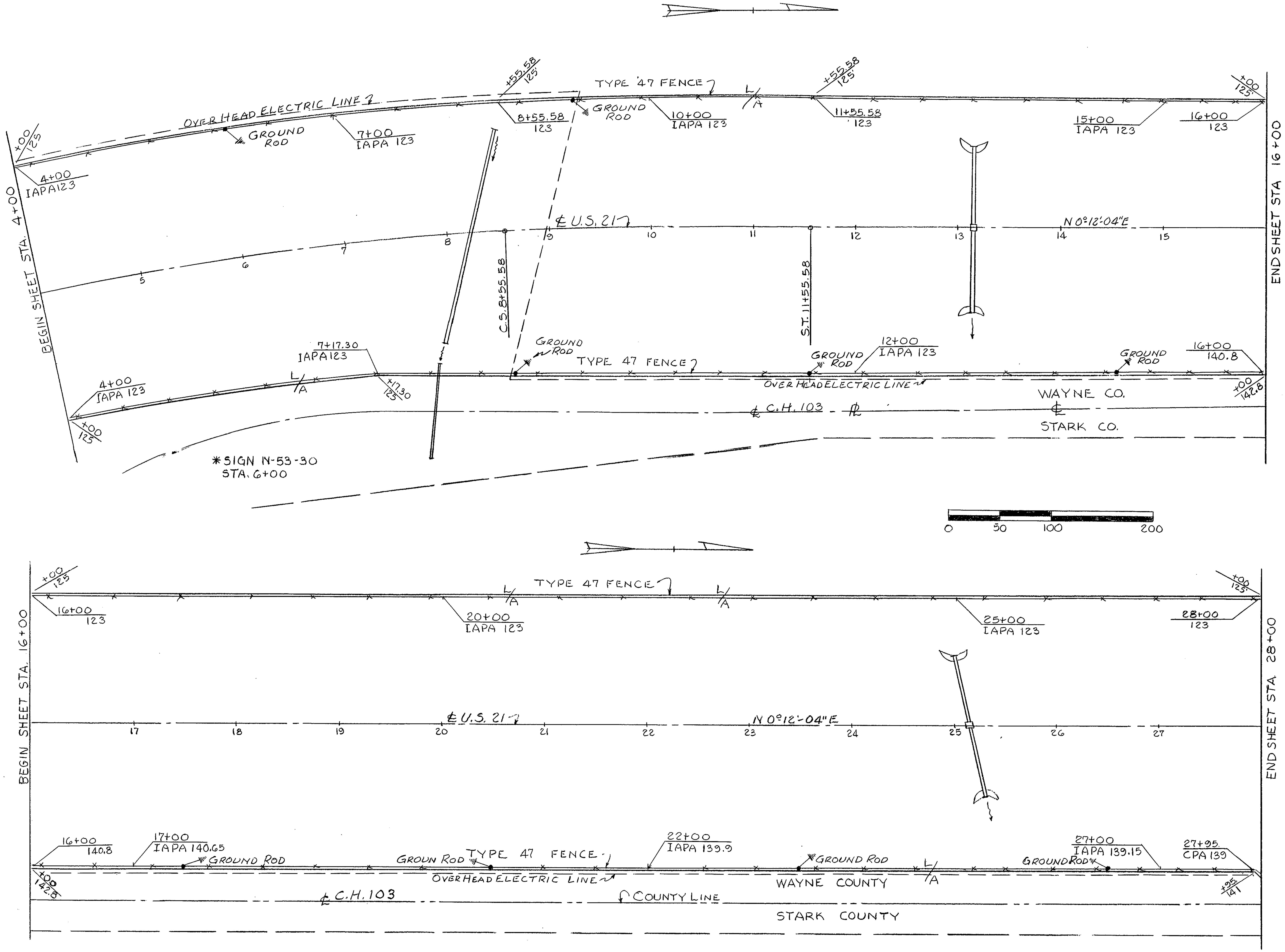
℄ CURVE DATA

I = 58°-22'-00"	S.T. = 100.02
Ls = 300'	T.S. = 1109+18.69
D = 2°00'	S.C. = 1112+18.69
S = 3°00	P.I. = 1126+69.38
Δc = 52°-22'-00"	C.S. = 8+55.58
Ts = 1750.69'	S.T. = 11+55.58
Lc = 2818.34'	
R = 2864.78'	
L.T. = 418.01'	

STA. 1110+00 TO STA. 4+00

OHIO	FHWA REGION 5	FEDERAL PROJECT

STA. 21-12.39
WAY 21-0.00

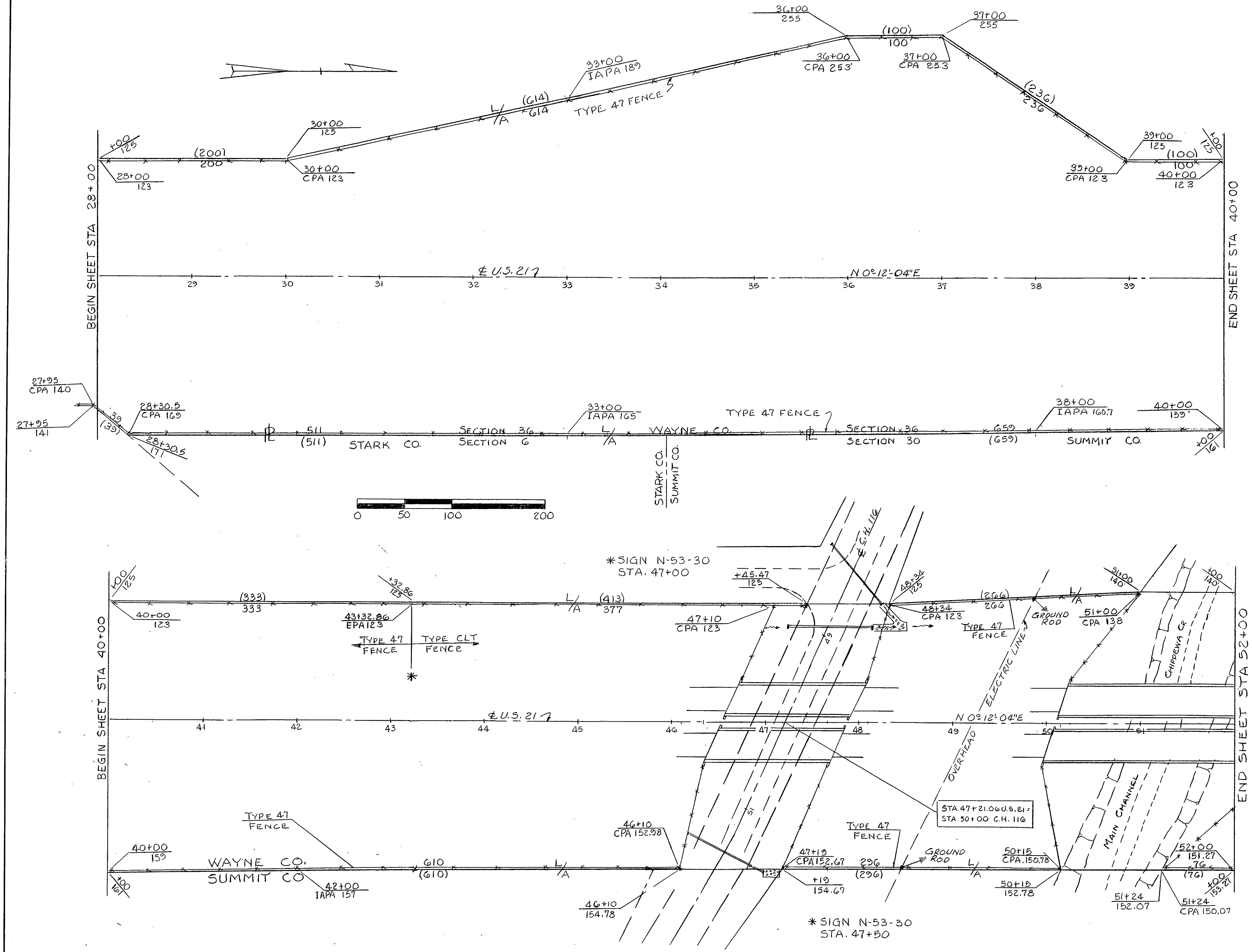


NOTE: ( ) DENOTES LENGTH OF EXISTING FENCE TO BE REMOVED

STA. 4+00 TO STA. 28+00

	OHIO	31 / 42
	FHWA REGION 5	
	FEDERAL PROJECT	

STA 21-12.39
WAY 21-0.00



NOTE: ( ) DENOTES LENGTH OF EXISTING FENCE TO BE REMOVED

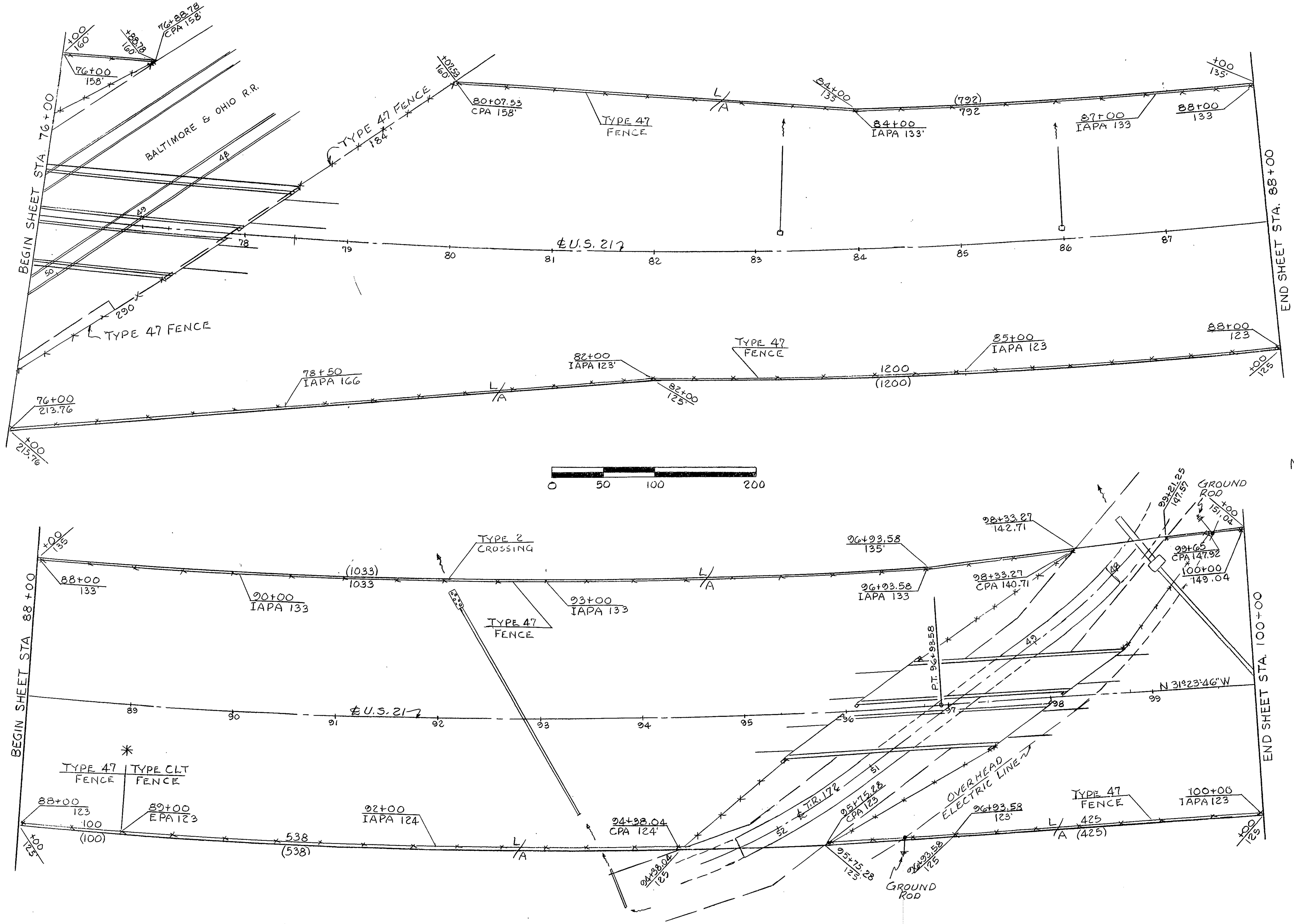
*SEE SHEET No. 8

STA. 28+00 TO STA. 52+00

STA. 52+00 TO STA. 76+00

OHIO	33/42
FHWA REGION 5	
FEDERAL PROJECT	

STA. 21-12.39
WAY. 21-0.00

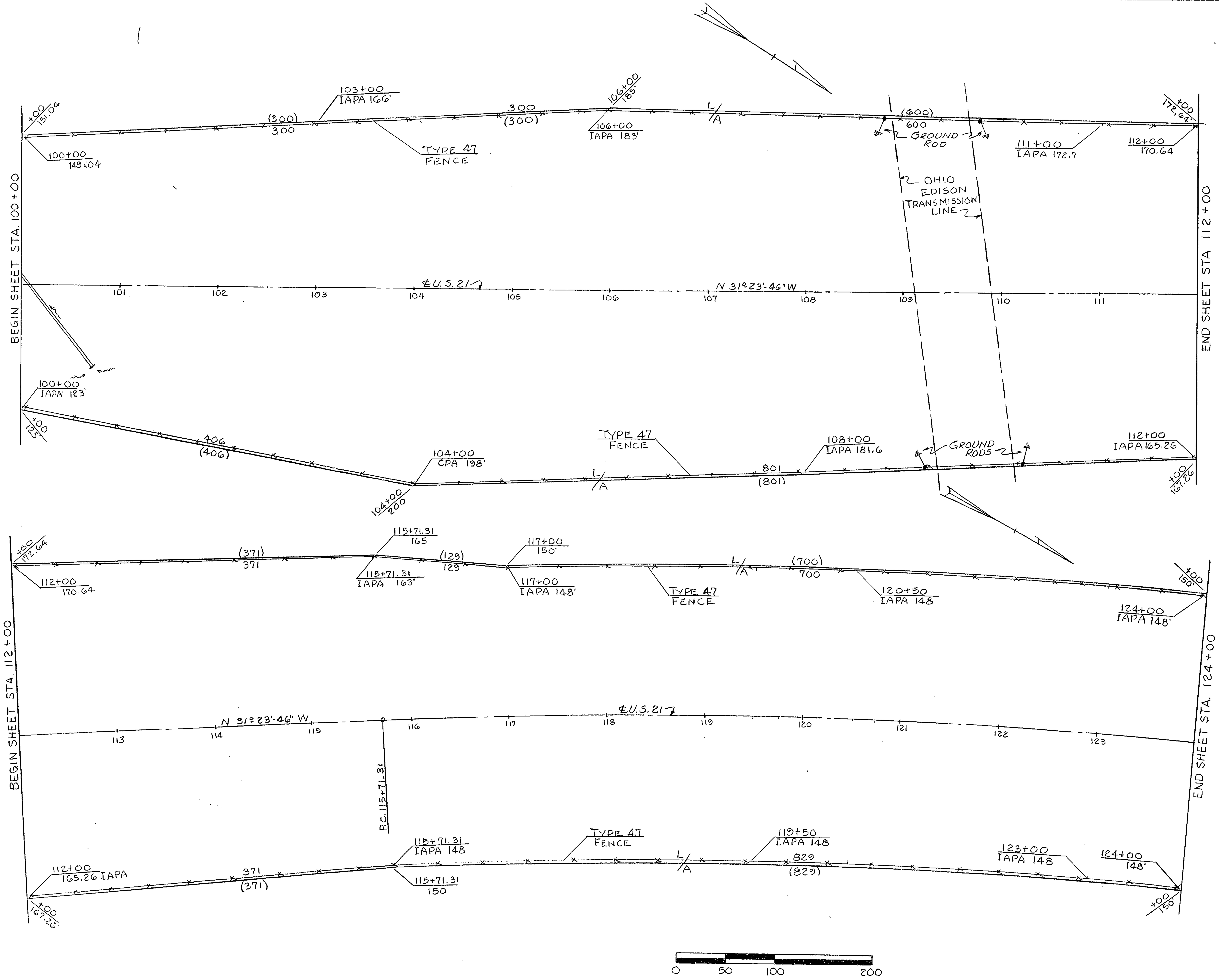


NOTE: ( ) DENOTES LENGTH OF EXISTING FENCE TO BE REMOVED

*SEE SHEET No 8

STA. 76+00 TO STA. 100+00

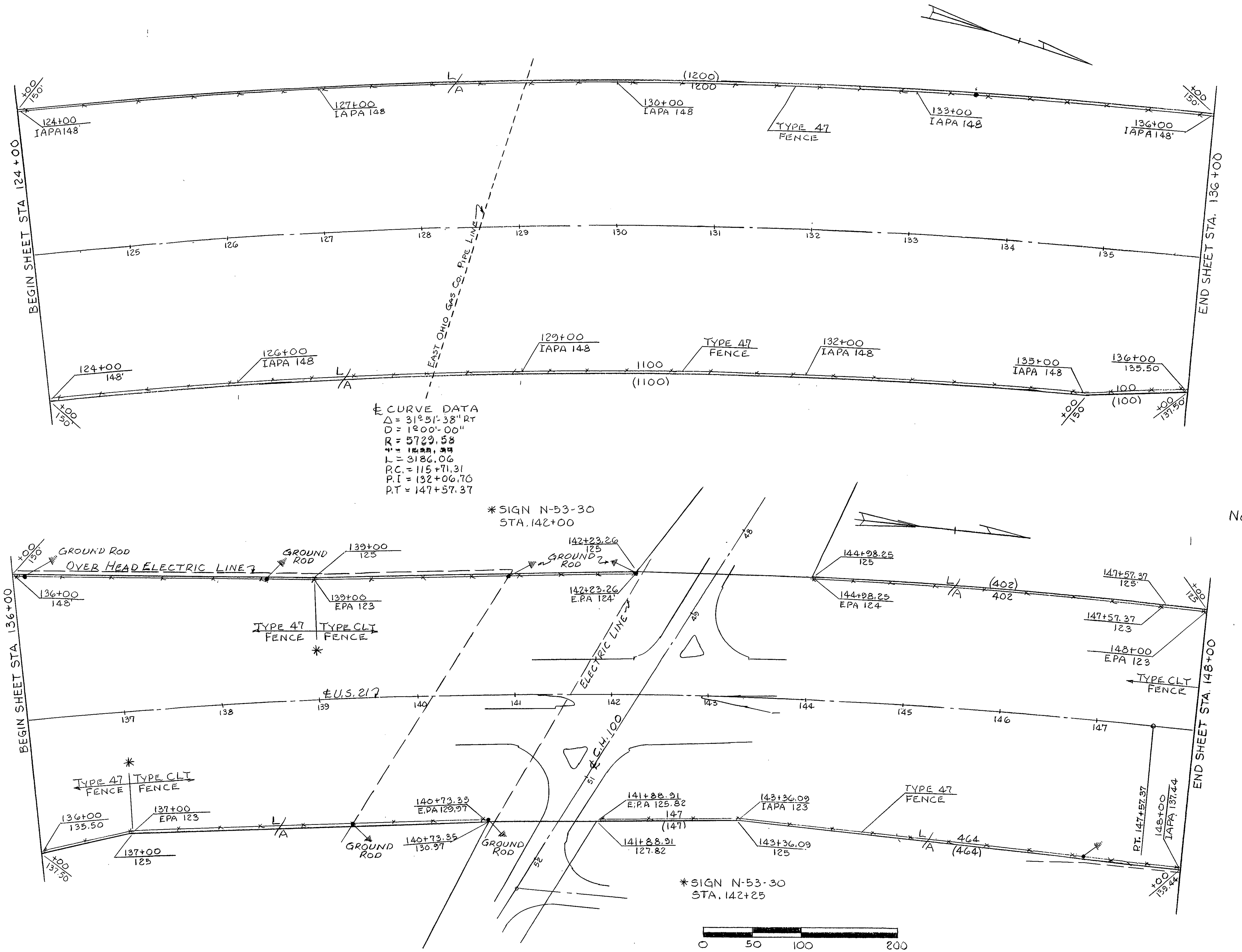
STA. 21-12.39
WAY. 21-0.00



Note: ( ) Denotes Length Of Existing Fence To Be Removed

OHIO	35 / 42
FHWA REGION 5	
FEDERAL PROJECT	

STA. 21-12.39
WAY. 21-0.00



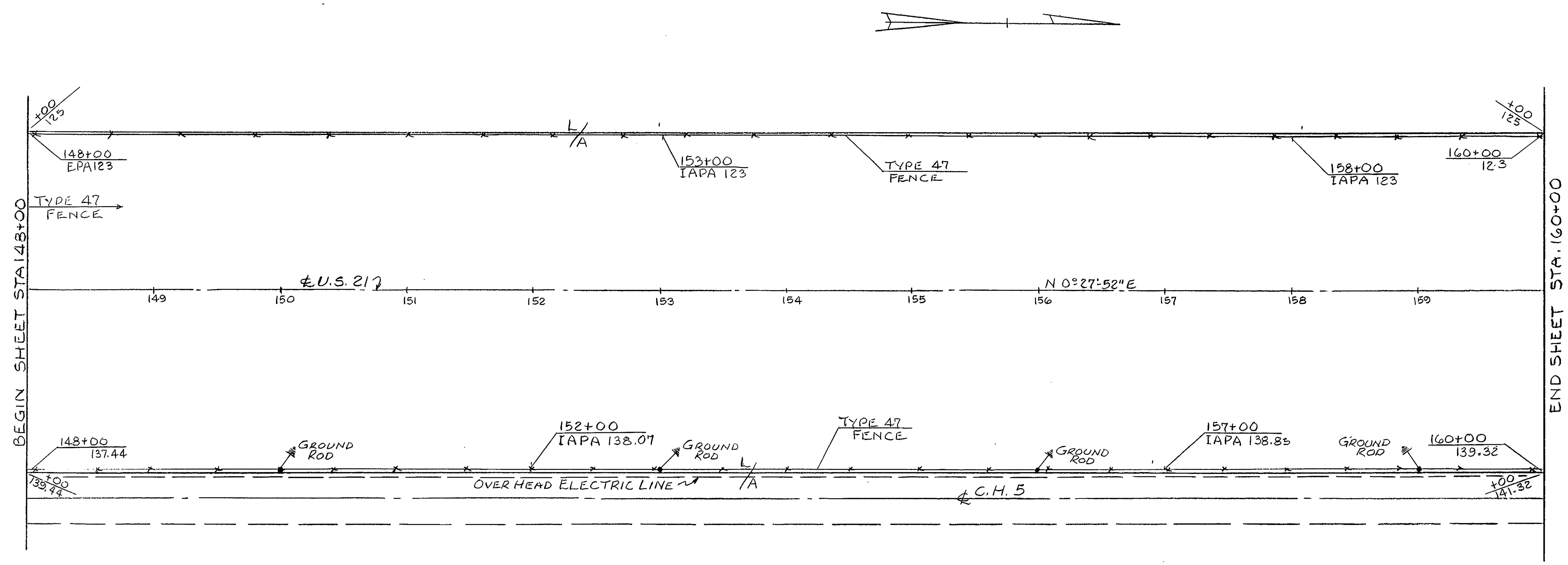
NOTE: ( ) DENOTES LENGTH OF EXISTING FENCE TO BE REMOVED

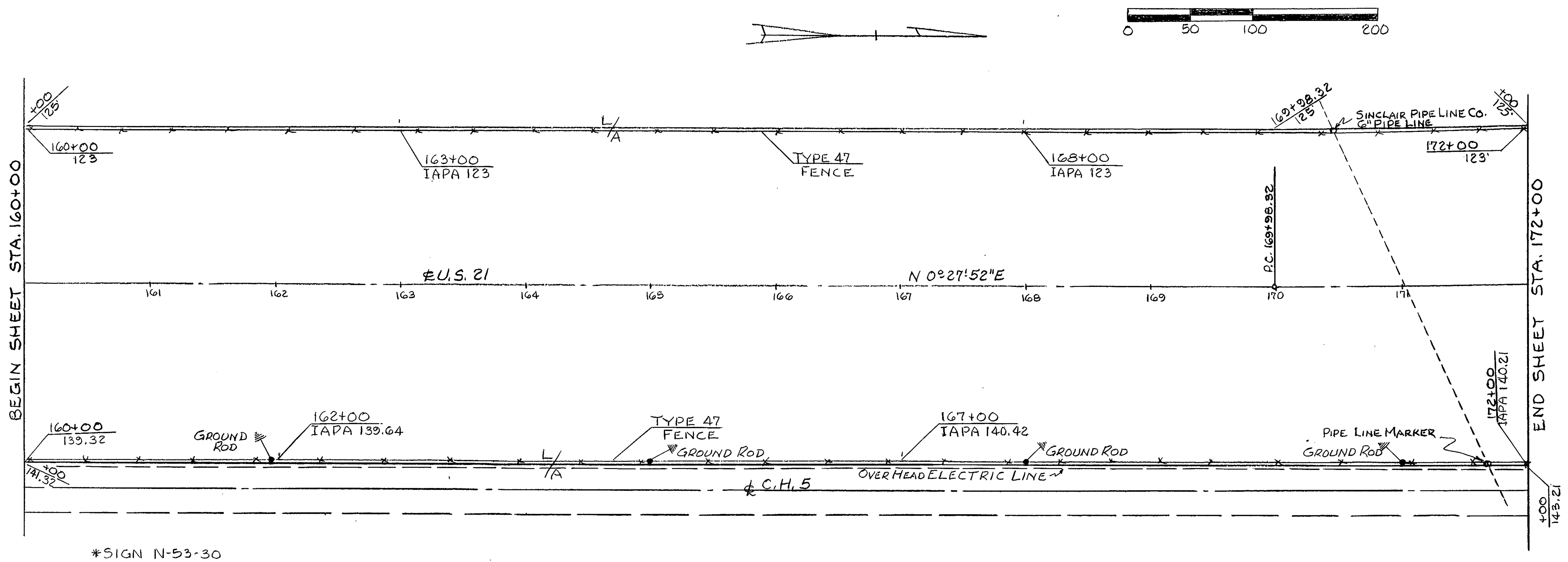
*SEE SHEET No 8

STA. 124+00 TO STA. 148+00

OHIO	36
FHWA REGION 5	42
FEDERAL PROJECT	

STA. 21-12.39
WAY. 21-0.00

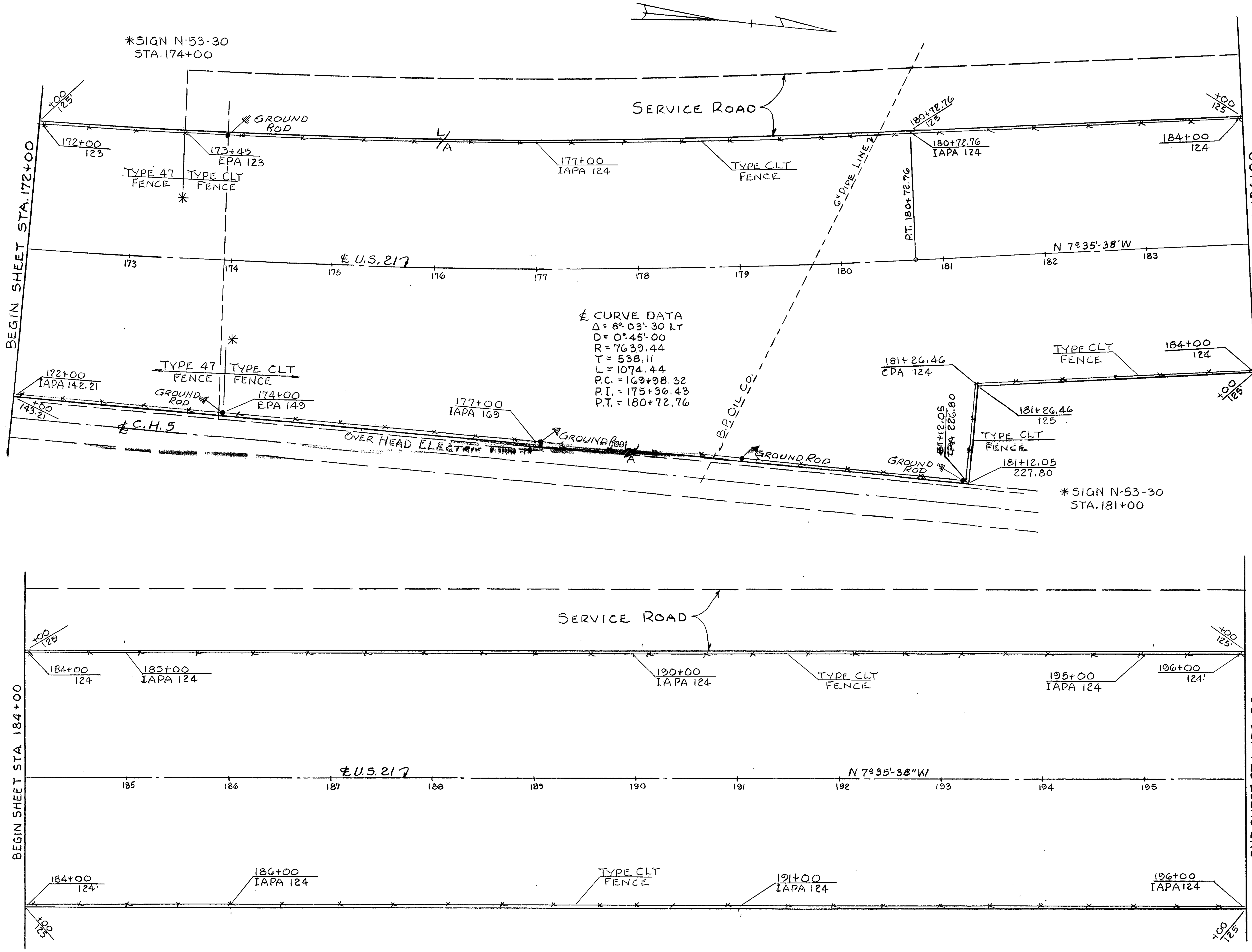




*SIGN N-53-30
STA. 161+00

STA. 148+00 TO STA. 172+00

STA. 21-12.39
WAY. 21-0.00

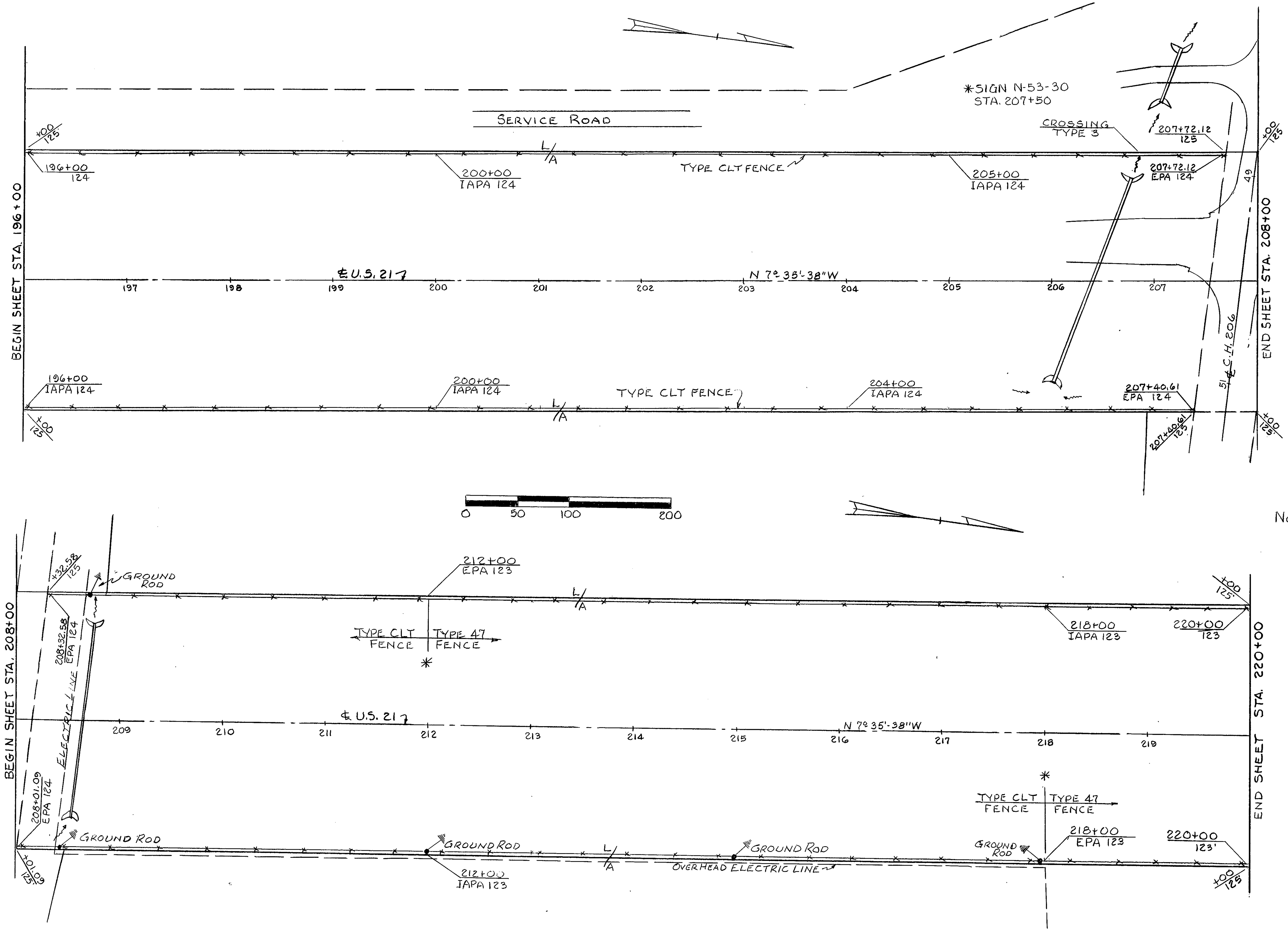


*SEE SHEET No. 8

STA. 172+00 TO STA. 196+00

OHIO	38	42
FHWA REGION 5		
FEDERAL PROJECT		

STA. 21-12.39
WAY. 21-0.00



Note: ( ) Denotes Length Of Existing Fence To Be Removed

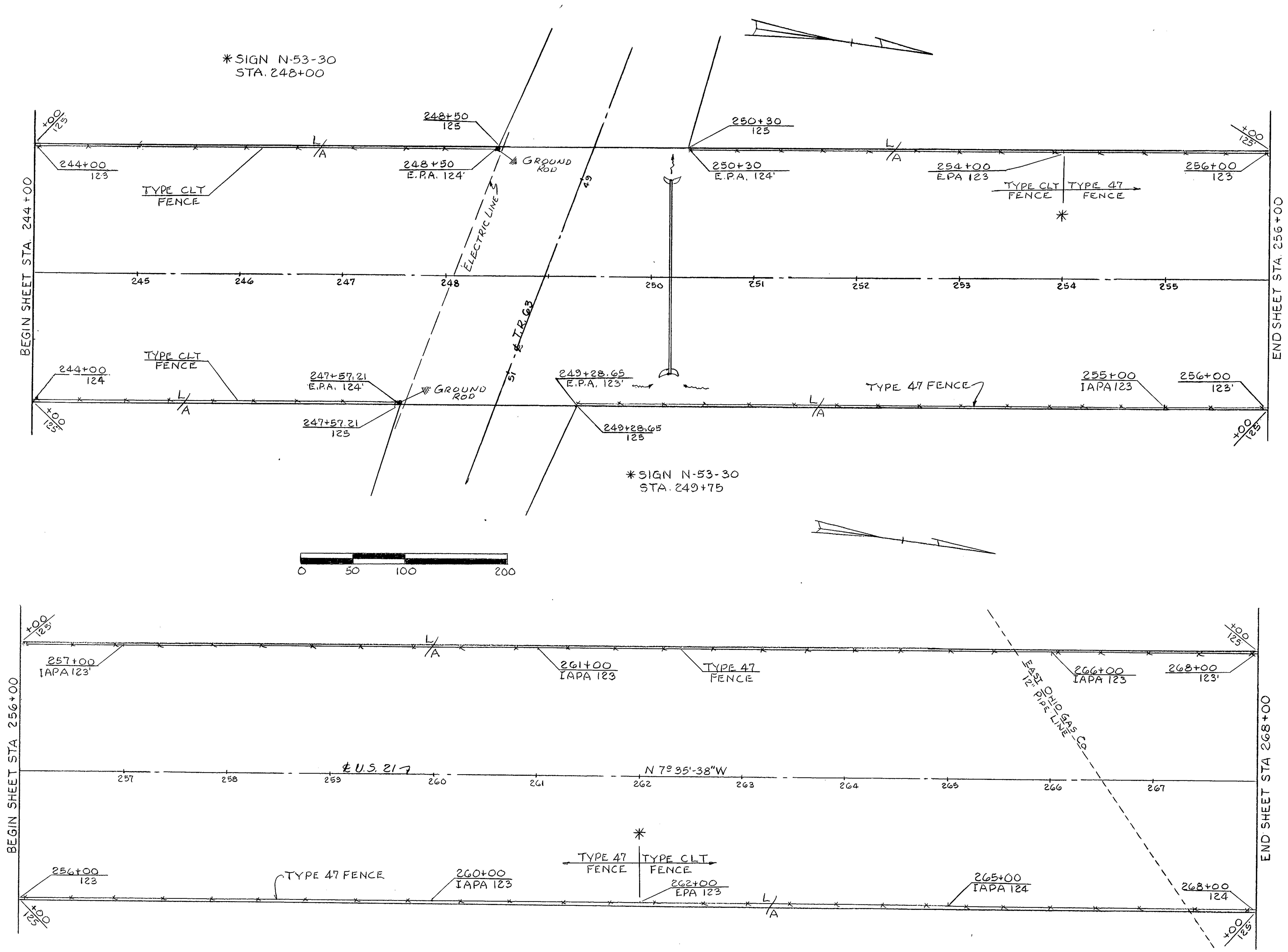
*SEE SHEET No. 8

STA. 196+00 TO STA. 220+00

STA. 220+00 TO STA. 244+00

	OHIO	40/42
	FHWA REGION 5	
	FEDERAL PROJECT	

STA. 21-12.39
WAY. 21-0.00



NOTE: ( ) DENOTES LENGTH OF EXISTING FENCE TO BE REMOVED

*SEE SHEET No. 8.

STA. 268+00 TO STA. 292+00

OHIO	42/42
FHWA REGION 5	
FEDERAL PROJECT	

STA. 21-12.39
WAY. 21-0.00

STA. 292+00 TO STA. 4+00