

Terry Wilson
Proj. Supv.

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

F-51(80)

FHWA REGION	STATE	FEDERAL PROJECT
5	OHIO	

1
89

PLAN NO.
148

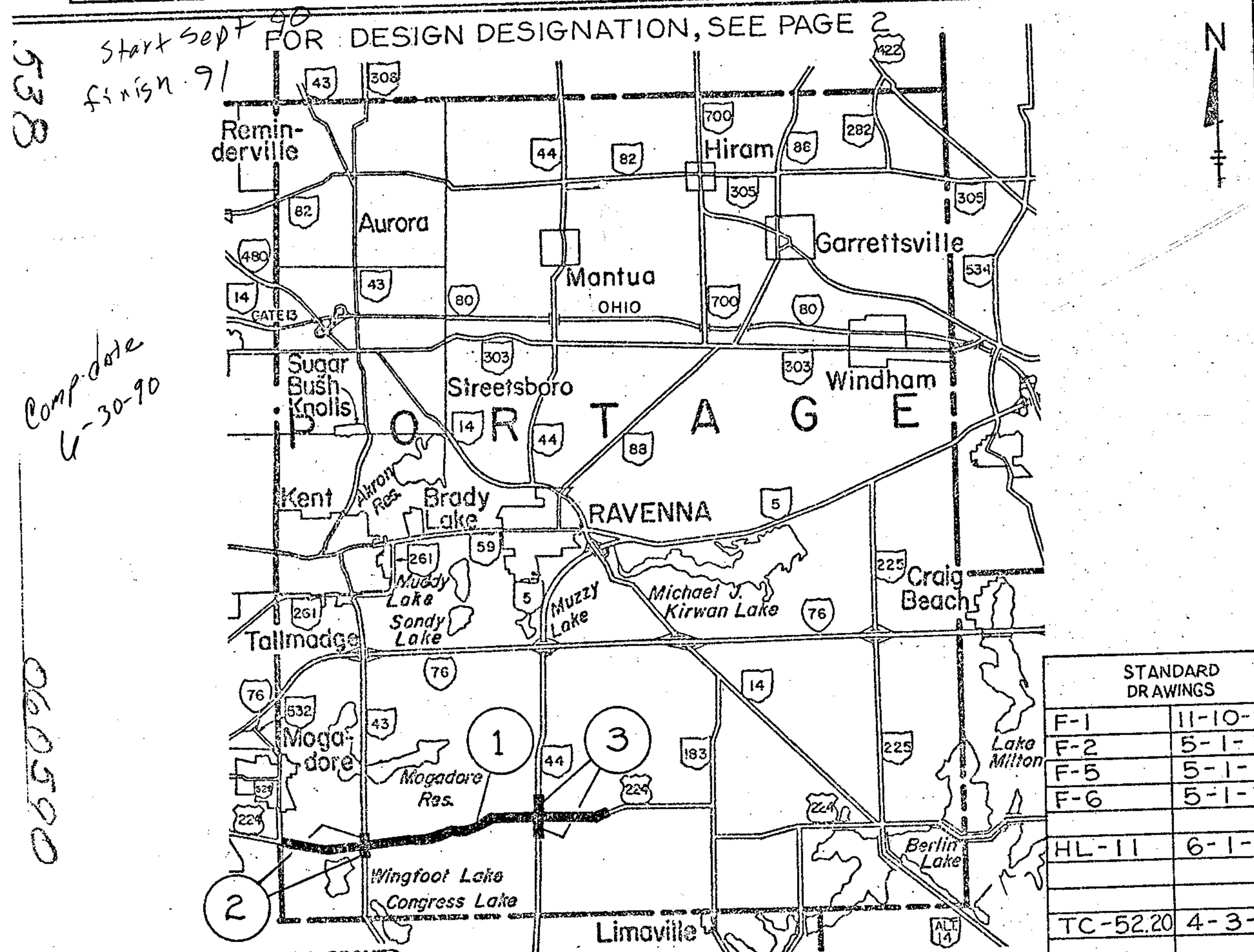
THE STANDARD 1989 SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND PROPOSAL SHALL GOVERN THESE IMPROVEMENTS.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THESE IMPROVEMENTS WILL REQUIRE THE CLOSING OF THE HIGHWAYS TO TRAFFIC ON PARTS NO. NONE AND THAT DETOURS WILL BE PROVIDED BY STATE FORCES. THE CLOSING TO TRAFFIC OF THE HIGHWAYS WILL NOT BE REQUIRED ON PARTS NO. 1, 2, 3 AND PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS INDICATED IN THE PROPOSAL.

Need cover page
POR US 224 00-000-1440

APPROVED DATE 5-10-89 William Buckley DISTRICT DEPUTY DIRECTOR OF TRANSPORTATION
APPROVED DATE 10-30-89 B.D. Franklin ENGINEER OF BRIDGES
APPROVED DATE _____ ENGINEER OF MAINTENANCE
APPROVED DATE 2-20-90 James R. Longenecker DEPUTY DIRECTOR, OPERATIONS
APPROVED DATE _____ ASSISTANT DEPUTY DIRECTOR, PROGRAM DEVELOPMENT
APPROVED DATE _____ CHIEF ENGINEER, CONSTRUCTION
APPROVED DATE _____ CHIEF ENGINEER, DESIGN
APPROVED DATE _____ ASSISTANT DIRECTOR, DEPARTMENT OF TRANSPORTATION
APPROVED DATE 2-21-90 Bernard B. Hurst DIRECTOR, DEPARTMENT OF TRANSPORTATION

STANDARD DRAWINGS				STANDARD DRAWINGS				STANDARD DRAWINGS				SUPPLEMENTAL SPECIFICATIONS			
F-1	11-10-83	BP-5	10-1-87	MT-96.25	9-9-88	847	10-17-83	MT-97.10	4-29-88	947	10-17-83	MT-99.10	11-14-86	956	6-26-78
F-2	5-1-76	BP-7	10-1-87	MT-99.20	4-29-88	825	10-2-89	TC-71.10	4-3-77	802	5-4-88	SD-1-69	6-12-69	853	6-26-78
F-5	5-1-76	BP-11	1-30-84												
F-6	5-1-76	DBR-2-73	4-10-73												
HL-11	6-1-79	GR-1	1-11-85												
		GR-2B	2-5-82												
		GR-3	1-21-85												
		GR-4	2-5-82												
TC-52.20	4-3-79	MC-1	1-11-85												
		MT-96.11	9-9-88												
		MT-96.20	9-9-88												



PORTION TO BE IMPROVED
LOCATION MAP

DESIGN DESIGNATION

POR-224-0.00-9.77

CURRENT ADT (1989)	=	8,592
DESIGN ADT (2009)	=	11,530
K	=	9%
D	=	64%
T24	=	9%
TD	=	7%

UTILITY OWNERSHIP

2
89

PLAN NO.

148

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

ADDRESS IN PLAN: OHIO EDISON Co.
76 S. MAIN STREET
AKRON, OHIO 44308
ATTN: MR. JOHN C. LEWIS, JR. DIV. ENGR.
PHONE: (216) 384-5715

THE EAST OHIO GAS Co.
2100 EASTWOOD AVENUE
AKRON, OHIO 44305
ATTN: MR. HAROLD WRIGHT DIV. ENGR.
PHONE: (216) 794-0790

OHIO BELL TELEPHONE Co.
2525 STATE ROAD
CUYAHOGA FALLS, OHIO 44223
ATTN: MR. KEN TENDER DIST. MGR.
PHONE: (216) 922-2591

DESIGN DESIGNATION & UTILITY OWNERSHIP

GENERAL NOTES

3
89

PLAN NO.
148

PROJECT LIMITS:

PAVING IS TO BEGIN AT THE RADIUS RETURNS AT THE INTERSECTION OF U.S. 224 AND S.R. 532. THE CONTRACTOR IS TO USE A BUTT JOINT FOR A SMOOTH TRANSITION BETWEEN OLD AND NEW PAVEMENT.

FIELD OFFICE:

THE CONTRACTOR SHALL PROVIDE A SUITABLE OFFICE HAVING A MINIMUM OF 300 SQ. FT. OF FLOOR SPACE. PAYMENT SHALL BE AT THE LUMP SUM PRICE BID FOR ITEM 619, FIELD OFFICE.

ESTIMATED QUANTITIES:

SPECIFIC LOCATIONS AND USAGE OF ESTIMATED QUANTITIES SET UP ON THIS PLAN TO BE USED AS DIRECTED BY THE ENGINEER SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT. ESTIMATED QUANTITIES OF MATERIAL SHALL NOT BE ORDERED FOR DELIVERY TO THE PROJECT UNLESS AUTHORIZED BY THE ENGINEER.

TRAFFIC:

TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. THE LENGTH OF RESTRICTED TRAFFIC ZONES SHALL BE KEPT TO A MINIMUM CONSISTENT WITH THE SPECIFICATION REQUIREMENTS FOR PROTECTION OF COMPLETED COURSES.

ALIGNMENT AND PROFILE:

THE WORK PROPOSED BY THIS PROJECT IS FOR THE RESURFACING OF THE EXISTING PAVEMENT. THE ALIGNMENT OF THE EXISTING PAVEMENT WILL NOT BE CHANGED, AND THE PROFILE OF THE PROPOSED SURFACE WILL BE SIMILAR TO THAT OF THE EXISTING PAVEMENT EXCEPT THAT IT WILL BE RAISED AN AMOUNT EQUAL TO THE THICKNESS OF THE RESURFACING COURSE OR COURSES SPECIFIED IN THESE PLANS.

INTERMEDIATE COURSE, SPOT LEVELING AND PATCHING:

THIS MATERIAL SHALL BE PLACED IN A SEPARATE OPERATION WHERE AND AS DIRECTED BY THE ENGINEER.

PAVED SHOULDERS:

402/403/404 ASPHALT CONCRETE FOR SHOULDERS MAY BE PLACED IN THE SAME OPERATION AS ADJACENT PAVEMENT OVERLAY.

GUARDRAIL:

THE LOG POINTS OF THE PROPOSED GUARDRAIL SHOWN ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED AND MARKED BY STAKES OR OTHER MARKS BY THE ENGINEER.

ITEM 201 CLEARING AND GRUBBING, AS PER PLAN:

THE CONTRACTOR SHALL REMOVE ALL BRUSH AND TREES 10' BEHIND GUARDRAIL. IN NON-GUARDRAIL AREAS EVERYTHING FROM EDGE OF PAVEMENT TO DITCH LINE SHALL BE REMOVED. FROM 12' BEYOND DITCH LINE EVERYTHING EXCEPT PINE TREES SHALL BE REMOVED. THE PROJECT ENGINEER SHALL PROVIDE THE FINAL DECISION ON BORDERLINE TREES AND BRUSH THAT MAY BE A SAFETY HAZARD.

ITEM 201 CLEARING AND GRUBBING, AS PER PLAN: CONTINUED

ALL STUMPS SHALL BE CUT FLUSH WITH THE GROUND AND TREATED WITH BANVIL CST, TORDON RTU OR APPROVED EQUAL. EACH SUCCESSFUL BIDDER MUST BE LICENSED BY THE OHIO DEPARTMENT OF AGRICULTURE AS A COMMERCIAL APPLICATOR AND ALL PERSONS INVOLVED IN THE ACTUAL TREATING SHALL BE LICENSED AS COMMERCIAL OPERATORS IN THE APPROPRIATE SPRAY CATEGORY.

ITEM 202 WEARING COURSE REMOVED:

ESTIMATED QUANTITIES HAVE BEEN PROVIDED AND SHALL BE USED WHERE AND AS DIRECTED BY THE ENGINEER. A QUANTITY OF WEARING COURSE REMOVED IS PROVIDED TO CONSTRUCT BUTT JOINTS AT THE ENDS OF RESURFACING. THE WEARING COURSE IS TO BE REMOVED 20' IN LENGTH ON THE MAINLINE AND 10' AT THE INTERSECTIONS.

ITEM 202 GUARDRAIL REMOVED:

GUARDRAIL, POSTS AND MISCELLANEOUS HARDWARE DESIGNATED FOR REMOVAL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 202 GUARDRAIL REMOVED.

ITEM 202 GUARDRAIL REMOVED FOR STORAGE:

GUARDRAIL, STANDARD TERMINALS, POSTS AND MISCELLANEOUS HARDWARE DESIGNATED FOR SALVAGE SHALL BE STORED ON THE PROJECT AS DIRECTED BY THE ENGINEER FOR REMOVAL BY STATE FORCES. ALL MATERIAL NOT CONSIDERED SALVAGEABLE SHALL BE DISPOSED OF BY THE CONTRACTOR AS DIRECTED. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 202 GUARDRAIL REMOVED FOR STORAGE.

ITEM 202 GUARDRAIL REMOVED FOR RE-USE:

GUARDRAIL, STANDARD TERMINALS, POSTS AND MISCELLANEOUS HARDWARE DESIGNATED FOR RE-USE SHALL BE REMOVED AND STORED FOR RE-USE AS DIRECTED BY THE ENGINEER. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 202 GUARDRAIL REMOVED FOR RE-USE.

ITEM 203 EMBANKMENT:

ALL EMBANKMENT MATERIAL SHALL BE OBTAINED FROM WITHIN THE RIGHT OF WAY AT LOCATIONS APPROVED BY THE ENGINEER. THE SEEDING OF THESE AREAS WILL BE INCLUDED IN THE BID PRICE FOR EMBANKMENT CONSTRUCTION.

ITEM 254 PAVEMENT PLANING, BITUMINOUS:

THIS WORK SHALL CONSIST OF PLANING A SIX FOOT WIDTH OF EXISTING PAVEMENT ALONG THE EXISTING CURB, TAPERED FROM 2 INCHES DEEP AT THE CURBLINE TO 0 INCHES AT 6 FEET FROM THE CURB. TRANSITIONS AT THE LIMITS OF THE PAVEMENT PLANING AREAS SHALL BE APPROXIMATELY 25' IN LENGTH AND SHALL BE ACCOMPLISHED GRADUALLY SO AS NOT TO CREATE A SUBSTANTIAL BUMP.

INTERSECTIONS:

INTERSECTIONS SHALL BE RESURFACED A MINIMUM OF 10 FT. BEYOND THE EDGELINE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ANY GRADING OR PRIME NECESSARY TO ACCOMPLISH WORK SHALL BE INCLUDED IN THE COST OF ITEM 404.

ITEM 404 ASPHALT CONCRETE AC-20 FOR DRIVEWAYS:

THIS ITEM OF WORK SHALL CONSIST OF PAVING ALL EXISTING DRIVEWAYS, 2" MIN. AGGREGATE OR 1" MIN. IMPROVED, A DISTANCE OF 10' FROM THE EDGE OF THE PAVED SHOULDER UNLESS OTHERWISE DIRECTED BY THE ENGINEER. GRADING, PRIME, TACK TOOLS, EQUIPMENT, MATERIAL AND INCIDENTALS REQUIRED TO LAYOUT AND CONSTRUCT THE DRIVEWAYS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 404 ASPHALT CONCRETE AC-20 FOR DRIVEWAYS.

ITEM 407 TACK COAT:

THE RATE OF APPLICATION OF 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT, AS DIRECTED BY THE ENGINEER. WHEN COVER AGGREGATE IS NEEDED, IT SHALL BE USED AS DIRECTED BY THE ENGINEER, AND IT SHALL BE CONSIDERED INCIDENTAL TO, AND BE INCLUDED FOR PAYMENT IN: ITEM 407 TACK COAT. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.10 GALLONS PER SQUARE YARD, OF TACK COAT FOR ESTIMATING PURPOSES ONLY. 407.04 PREPARATION OF SURFACE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL DIRT, VEGETATION, ETC. TO EXPOSE THE EXISTING PAVED SHOULDER AT NO ADDITIONAL COST TO THE STATE. THE TACK COAT OPERATION SHALL BE AS DETERMINED AT A PRE-CONSTRUCTION CONFERENCE AS PER 407.05, AND APPLICATION RATES SHALL NOT EXCEED 0.10 GAL. PER SQ. YD.

ITEM 659 SEEDING AND MULCHING:

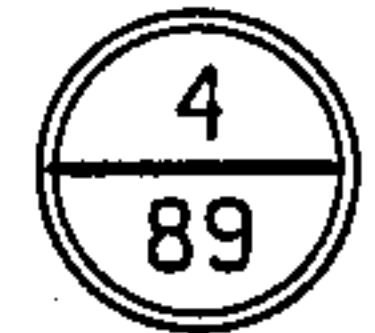
ALL AREAS SHALL BE SEEDED WITH THE MIXTURE REQUIRED FOR URBAN AREAS AS PER 659.09.

MAINTENANCE OF TRAFFIC:

TRAFFIC SHALL BE MAINTAINED ON THE EXISTING PAVEMENT WITHOUT INTERRUPTION DURING CONSTRUCTION OF THE WORK EXCEPT AS OTHERWISE APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL SET UP AND OPERATE HIS EQUIPMENT IN SUCH A MANNER THAT ENCROACHMENT UPON THE TRAVELED WIDTH OF PAVEMENT WILL BE KEPT TO A MINIMUM, AND ONLY ON ONE SIDE OF THE PAVEMENT AT ANY GIVEN TIME. THE OPEN AREA PERFORMED DUE TO GUARDRAIL REMOVAL SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH TEMPORARY GUIDE MARKERS OR BARRICADES AT ALL TIMES. WHERE EXISTING GUARDRAIL IS REMOVED, NEW GUARDRAIL SHALL BE ERECTED AS SOON AS PRACTICAL. ANY AREAS LEFT UNGUARDED OVERNIGHT SHALL BE PROTECTED BY THE USE OF BARRICADES, DRUMS, OR OTHER WARNING DEVICES SATISFACTORY TO THE ENGINEER. ALL TRAFFIC CONTROL DEVICES REQUIRED INSIDE THE WORK LIMITS, EXCEPT REGULATORY, GUIDE SIGNS, AND PAVEMENT MARKERS SHALL BE FURNISHED ERECTED AND MAINTAINED BY THE CONTRACTOR.

GENERAL NOTES

BRIDGE GENERAL NOTES



PLAN NO.
148

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND/OR FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

EXISTING STRUCTURE PLANS:

THE EXISTING STRUCTURE PLANS ARE ON FILE AND MAY BE REVIEWED AT ODOT DISTRICT 4, 705 OAKWOOD ST. RAVENNA, OHIO.

DEMOLITION OF PORTIONS OF EXISTING STRUCTURES:

REMOVAL OF PORTIONS OF EXISTING STRUCTURES AS SHOWN ON THE CONTRACT DRAWINGS SHALL CONFORM IN ALL RESPECTS TO ITEM 202 OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS SPECIFICATIONS. THE CONTRACTOR SHALL PREPARE DETAILED PROCEDURES AND PLANS FOR REMOVAL OF THE EXISTING STRUCTURE PORTIONS INCLUDING METHODS OF PROTECTING EXISTING OR RELOCATED UTILITIES AND PROTECTING THE PEDESTRIAN AND THE VEHICULAR TRAFFIC WITHIN THE LIMITS OF THE PROJECT. SUCH PLANS SHALL INCLUDE INFORMATION AS TO EQUIPMENT AND MATERIALS TO BE USED, PERSONNEL, SUPERVISION, THE HOURS OF OPERATION AND DURATION OF THE JOB. THESE PLANS SHALL BE APPROVED BY THE ENGINEER BEFORE COMMENCING ANY DEMOLITION OPERATION. THE REVIEW AND APPROVAL BY THE ENGINEER SHALL NOT RELIEVE THE CONTRACTOR OF HIS FULL RESPONSIBILITY FOR SAFE DEMOLITION OPERATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE OR INJURY TO ANY PROPERTY OR PERSON DURING THE EXECUTION OF HIS WORK, RESULTING FROM HIS METHOD OR MANNER OF PERFORMING THE WORK.

REPLACEMENT OF EXISTING REINFORCING STEEL:

ANY EXISTING REINFORCING BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND WHICH ARE MADE UNUSABLE BY THE CONTRACTOR'S CONCRETE REMOVAL OPERATIONS SHALL BE REPLACED WITH NEW STEEL AT HIS COST.

ANY EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW STEEL, WHICH SHALL BE AS PER C & M SPEC. 509 REINFORCING STEEL, GRADE 60.

ITEM 516, HORIZONTAL EXTENSIONS OF STRUCTURAL EXPANSION JOINTS, AS PER PLAN:

THE EXISTING CONCRETE BARRIER SAFETY SHAPE RESULTED IN A WIDER CLEAR ZONE WIDTH THAN THE ORIGINAL CURB AND PARAPET WALL. THIS OCCURS ON ALL STRUCTURES WITH THE NEW SAFETY SHAPE. AS A RESULT THE STRUCTURAL STEEL EXPANSION JOINTS NEED TO BE EXTENDED TRANSVERSELY TO THE FACE OF THE SAFETY SHAPE PARAPET. CURB PLATES SHALL BE INCLUDED WITH THIS PAY ITEM. THE COSTS OF LABOR, MATERIALS AND INCIDENTALS TO PERFORM THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 516, HORIZONTAL EXTENSION OF STRUCTURAL EXPANSION JOINTS, AS PER PLAN.

ITEM 517, RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP, TYPE 2 STEEL POST AND BOLTS), AS PER PLAN:

THIS ITEM SHALL BE FOR INSTALLING TYPE 2 POSTS AND ALL INCIDENTALS ON BRIDGE No. POR-224-0713 L & R, AS PER DBR-2-73. THE CONTRACTOR SHALL USE THE EXISTING GUARDRAIL AND TUBULAR BACKUP FROM THE GUARDRAIL REMOVED FOR RE-USE.

MAINTENANCE OF TRAFFIC

THE TEMPORARY TRAFFIC SIGNAL FOR THE BRIDGES AT POR-224-1.04 AND POR-224-7.13 SHALL BE PLACED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWINGS MT-96.11, MT-96.20 AND MT-96.25. A PRETIMED CONTROLLER IS NEEDED WITH THE INITIAL TIMING SHOWN BELOW. ALL LABOR, EQUIPMENT AND INCIDENTALS NEEDED TO PERFORM THIS WORK SHALL BE PAID FOR UNDER 614 MAINTENANCE OF TRAFFIC.

INITIAL TIMING SETTINGS

POR-224-1.04

Ø1G	Ø1Y	ALL RED	Ø2G	Ø2Y	ALL RED
18	4	8	18	4	8

INITIAL TIMING SETTINGS

POR-224-7.13

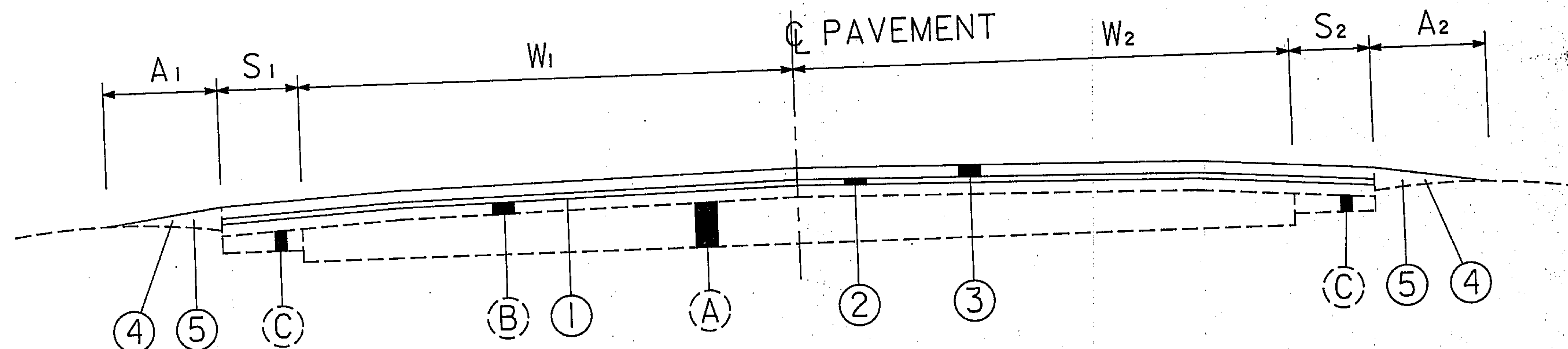
Ø1G	Ø1Y	ALL RED	Ø2G	Ø2Y	ALL RED
20	4	6	20	4	6

BRIDGE GENERAL NOTES

TYPICAL SECTION 1

5
89

PLAN NO.
148



NO SCALE

PART	FROM	TO	W ₁	W ₂	S ₁	S ₂	A ₁	A ₂
1	0.00	2.23	12'-0"	12'-0"	3'-0"	3'-0"	3'-0"	3'-0"
1	2.63	7.42	12'-0"	12'-0"	3'-0"	3'-0"	3'-0"	3'-0"
1	7.88	9.13	12'-0"	12'-0"	3'-0"	3'-0"	3'-0"	3'-0"
1	9.68	9.77	12'-0"	12'-0"	3'-0"	3'-0"	3'-0"	3'-0"
1	INTERSECTIONS		10'-0" TO 12'-0"	10'-0" TO 12'-0"	3'-0"	3'-0"	3'-0"	3'-0"
2	2.73	2.75	12'-0"	12'-0"	3'-0"	3'-0"	3'-0"	3'-0"
2	2.77	2.79	12'-0"	12'-0"	3'-0"	3'-0"	3'-0"	3'-0"
3	2.81	2.87	12'-0"	12'-0" TO 38'-0"	3'-0"	3'-0"	3'-0"	3'-0"
3	2.89	2.95	38'-0" TO 12'-0"	12'-0"	3'-0"	3'-0"	3'-0"	3'-0"

LEGEND

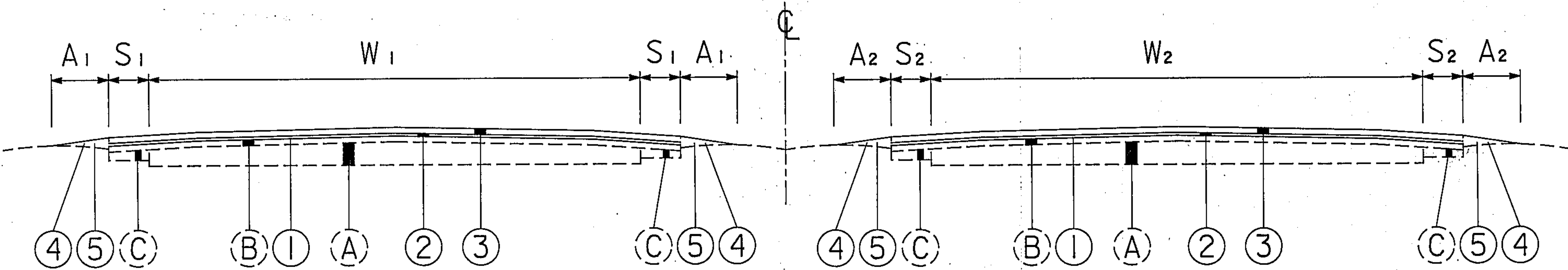
- ① 407 TACK COAT, AS PER PLAN
- ② 403 0.00" MIN. ASPHALT CONCRETE AC-20 (ESTIMATED @ 0.50 INCHES)
- ③ 404 1.00" ASPHALT CONCRETE AC-20
- ④ 203 METHOD D LINEAR GRADING (IN LOCATIONS AS DIRECTED BY THE ENGINEER.)
- ⑤ 617 2.00" AVG. COMPACTED AGGREGATE, TYPE A
- (A) EXISTING REINFORCED CONCRETE PAVEMENT
- (B) EXISTING ASPHALT PAVEMENT
- (C) EXISTING PAVED SHOULDER

TYPICAL SECTION 1

TYPICAL SECTION 2

6
89

PLAN NO.
148



NO SCALE

PART	FROM	TO	W ₁	S ₁	A ₁	W ₂	S ₂	A ₂
1	2.23	2.63	24'-0"	3'-0"	3'-0"	24'-0"	3'-0"	3'-0"
1	7.42	7.88	24'-0"	3'-0"	3'-0"	24'-0"	3'-0"	3'-0"
1	9.13	9.68	24'-0"	3'-0"	3'-0"	24'-0"	3'-0"	3'-0"

LEGEND

- ① 407 TACK COAT, AS PER PLAN

② 403 0.00" MIN. ASPHALT CONCRETE, AC-20
(ESTIMATED @ 0.50 INCHES)

③ 404 1.00" ASPHALT CONCRETE, AC-20

④ 203 METHOD D LINEAR GRADING (IN LOCATIONS AS DIRECTED)
BY THE ENGINEER.

⑤ 617 2.00" AVG. COMPACTED AGGREGATE, TYPE A
- (A) EXISTING REINFORCED CONCRETE PAVEMENT

(B) EXISTING ASPHALT PAVEMENT

(C) EXISTING PAVED SHOULDER

TYPICAL SECTION 2

ITEM 203 LINEAR GRADING METHOD D

ITEM 203 LINEAR GRADING METHOD D:

UPON COMPLETION OF THE PAVING OPERATION, THE CONTRACTOR SHALL PLACE ITEM 617 COMPACTED AGGREGATE ADJACENT TO THE PAVED BERM, NO MORE THAN 4" THICK. THE REMAINING SHOULDER WIDTH, BEYOND THE PAVED SHOULDER, SHALL BE GRADED USING A 3/4"/FT. SLOPE TO THE BREAK POINT. ALL EXCAVATED MATERIAL SHALL BE USED TO CONSTRUCT EMBANKMENTS IN CONFORMITY WITH THE TYPICAL SECTION. THE CONTRACTOR WILL NOT BE REQUIRED TO SCALP THE EXISTING FORE SLOPES PRIOR TO THE EMBANKMENT CONSTRUCTION. ANY EXCESS MATERIAL AND ALL MATERIAL DETERMINED TO BE UNSUITABLE, BY THE ENGINEER, SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. ANY DISTURBED AREAS, BEYOND THE AREA TREATED WITH ITEM 617, SHALL BE SEEDED IN ACCORDANCE WITH ITEM 659 SEEDING AND MULCHING.

THE METHOD OF MEASUREMENT, OF ITEM 203 LINEAR GRADING METHOD D, SHALL BE STATIONS, WITH ONE STATION EQUAL TO 100 LIN.FT. STATIONS SHALL BE MEASURED ALONG EACH EDGE OF PAVEMENT.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK, SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 203 LINEAR GRADING METHOD D, EXCLUDING ITEM 659 SEEDING AND MULCHING AND ITEM 617 COMPACTED AGGREGATE, WHICH SHALL BE PAID FOR SEPARATELY.

AN ESTIMATED QUANTITY OF ITEM 203 LINEAR GRADING METHOD D HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE, WHERE DIRECTED BY THE ENGINEER.

ITEM 659 SEEDING AND MULCHING:

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED TO RESTORE VEGETATIVE GROWTH TO THE AREAS DISTURBED BY THE ITEM 203 LINEAR GRADING, METHOD D. ALL AREAS SHALL BE SEEDED WITH THE MIXTURE REQUIRED FOR URBAN AREAS. ALL 659 ITEMS, WHICH HAVE BEEN PROVIDED, WERE CALCULATED BASED ON A 1'-0" WIDTH FOR EACH SIDE OF THE ROADWAY AND FOR SEEDING OF EARTHWORK AT GUARDRAIL LOCATIONS.

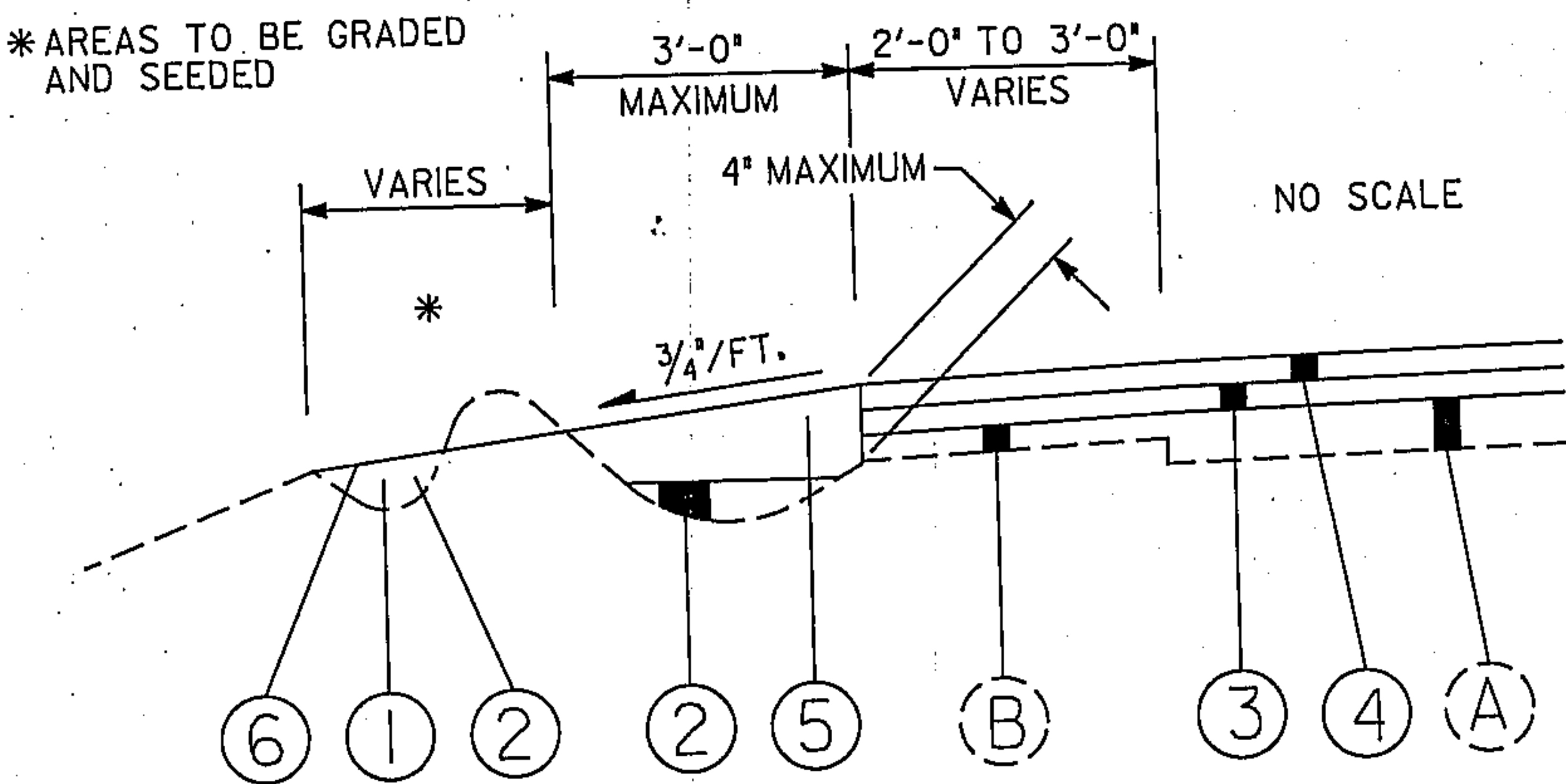
ITEM	UNIT	DESCRIPTION	PART 1
659	SQ.YDS.	SEEDING AND MULCHING	6.00
659	TONS	COMMERCIAL FERTILIZER	0.60
659	TONS	AGRICULTURAL LIMING	2.85

THE CONTRACTOR HAS THE OPTION OF USING SS-943 IN LIEU OF 659.06 MATERIAL.

** ITEM 203 EMBANKMENT:

SUITABLE EXCAVATED MATERIAL SHALL BE USED FOR THIS ITEM AND PAYMENT FOR PLACING THIS MATERIAL SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 203 METHOD D LINEAR GRADING. IF ENOUGH SUITABLE EXCAVATED MATERIAL IS NOT AVAILABLE, THE CONTRACTOR WILL BE PAID FOR THE NECESSARY QUANTITY OF ITEM 203 EMBANKMENT. AN ESTIMATED QUANTITY OF 150 CU. YDS. OF ITEM 203 EMBANKMENT SHALL BE CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

PART	ROUTE	FROM	TO
1	U.S. 224	0.00	9.77



- ① 203

** ② 203

③ 403 0.00" MIN.

④ 404 1.00"

⑤ 617 2.00" AVG.

⑥ 659

(A)

(B)
- LEGEND

METHOD D LINEAR GRADING

EMBANKMENT

ASPHALT CONCRETE, AC-20
(ESTIMATED @ 0.50" INCHES)

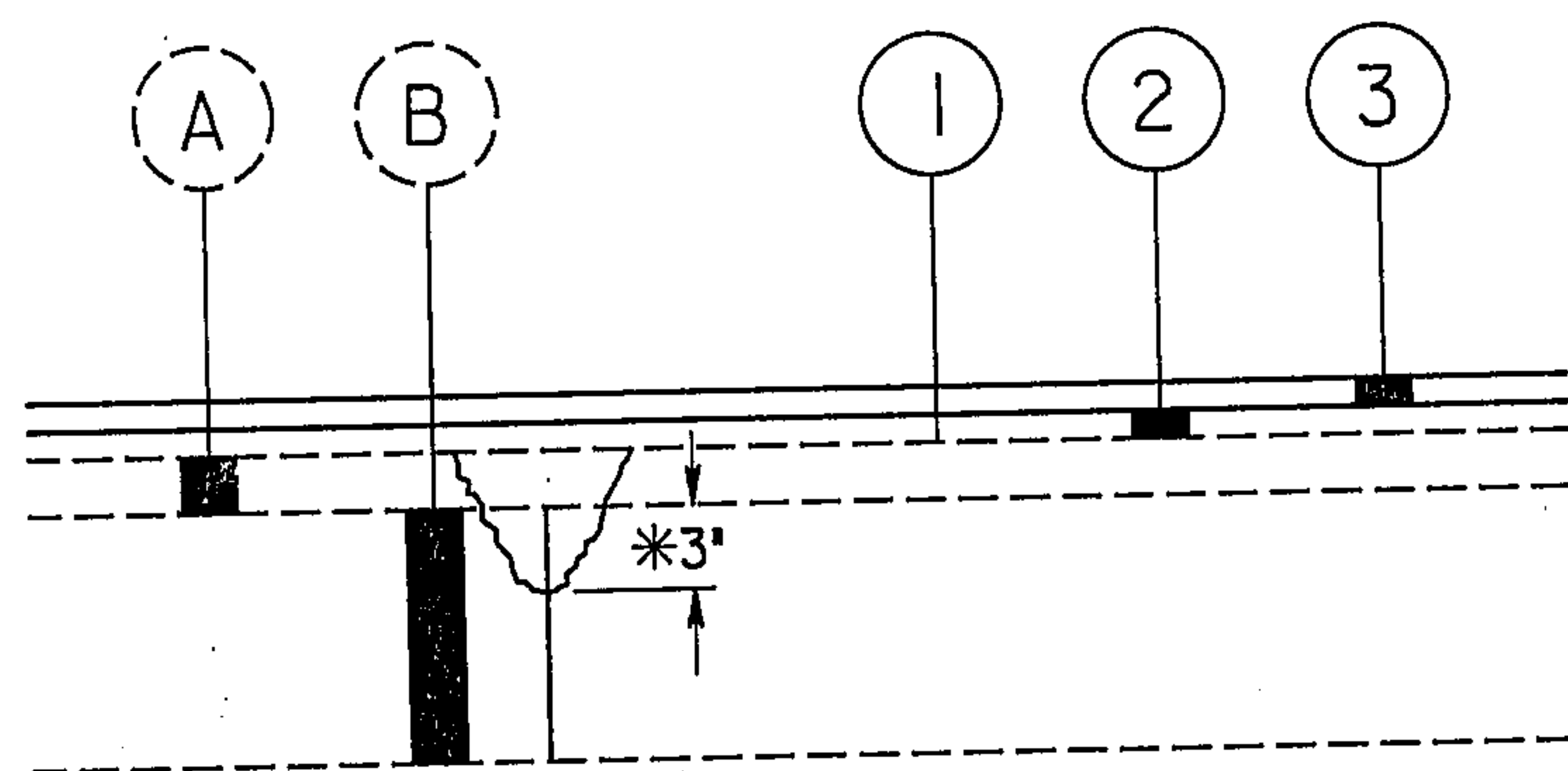
ASPHALT CONCRETE, AC-20

COMPACTED AGGREGATE, TYPE A

SEEDING AND MULCHING

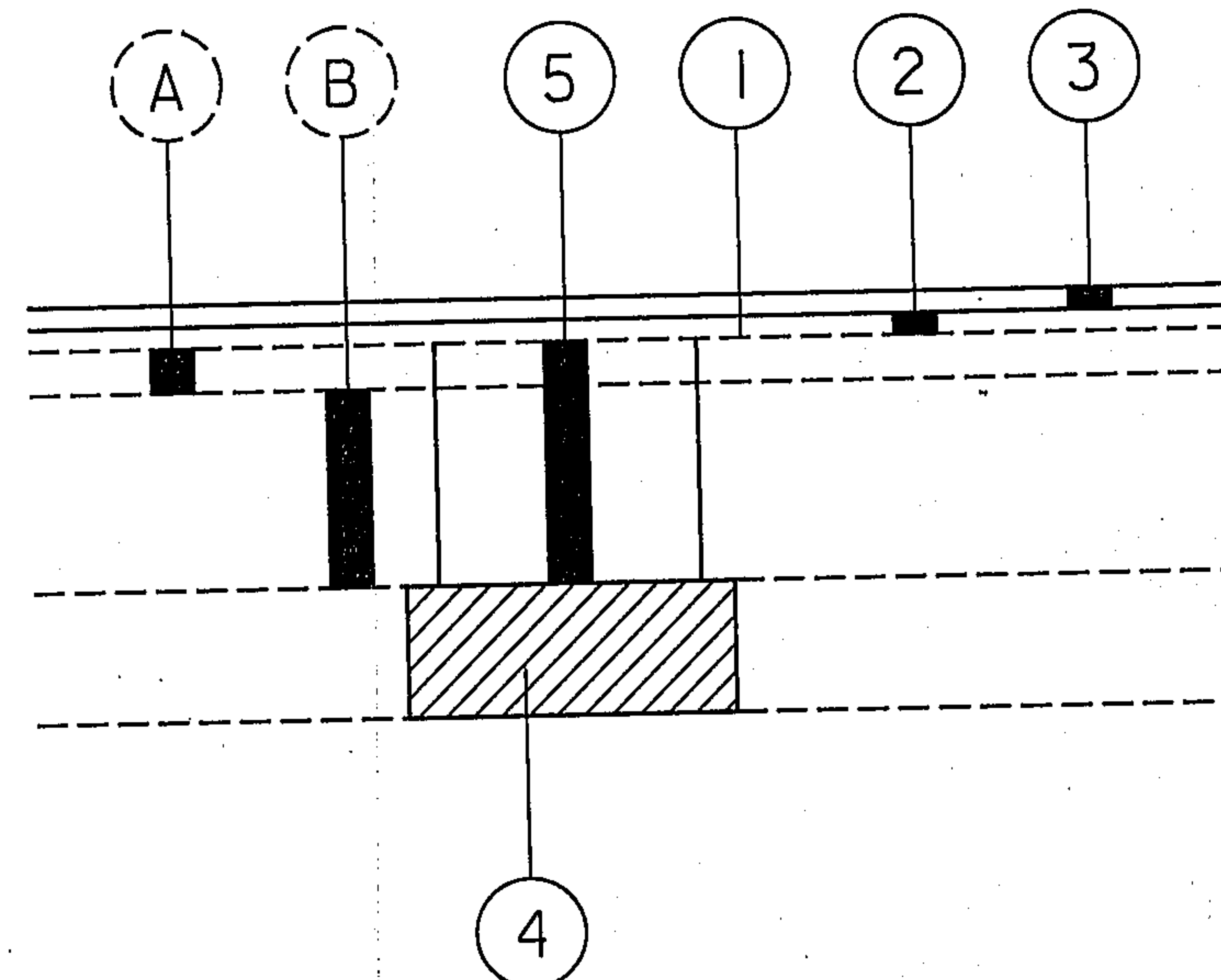
EXISTING ASP. CONC. PAVEMENT

EXISTING PAVED SHOULDER



* NO MORE THAN 3 INCHES
INTO EXISTING CONCRETE
IF GREATER THAN 3"
REPAIR SHALL BE ITEM 252

ITEM 251 - PARTIAL
DEPTH PAVEMENT REPAIR



ITEM 252 - FULL DEPTH RIGID
PAVEMENT REMOVAL AND FLEXIBLE REPLACEMENT

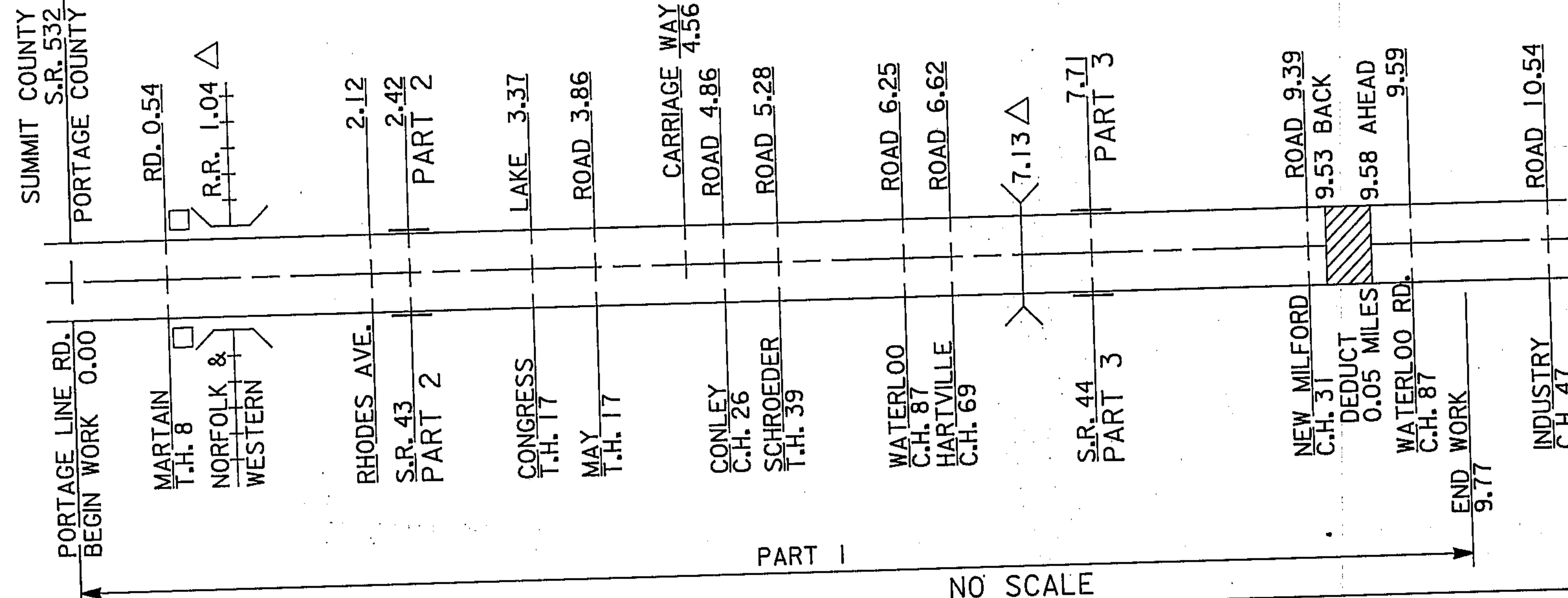
- | | | |
|-----|--------------------------------------|---|
| (1) | 407 | TACK COAT |
| (2) | 403 | 0.00" MIN. ASPHALT CONCRETE AC-20 (ESTIMATED @ 0.50 INCHES) |
| (3) | 404 | 1.00" ASPHALT CONCRETE AC-20 |
| (4) | 252 | CORRECTION OF SUB-BASE |
| (5) | 252 | PAVEMENT REPAIR USING 301 OR 400 |
| (A) | 2" EXISTING ASPHALT CONCRETE | |
| (B) | 9" EXISTING PORTLAND CEMENT CONCRETE | |

ITEM 251 & ITEM 252

ASPHALT CONCRETE

9
89

PLAN NO.
148



- ★ - SEE PAGE 17 FOR LOCATIONS
- TYPICAL 1, SEE PAGE 5
- TYPICAL 2, SEE PAGE 6
- ACTUAL FIELD MEASUREMENTS
- ** ESTIMATED AT 0.50 INCHES
- *** INTERSECTIONS, SEE PAGE 3
- **** WIDENING, LANE TAPERS, MINUS BRIDGE DECK AREAS.
- △ SEE PAGE 22, 23 FOR BRIDGE DECK TREATMENT.
- SEE SHEETS 24, 25, 26 FOR LOCATION AND DETAILS.

NO SCALE

PAVEMENT DATA

PAVEMENT DATA																			
PART	ROUTE	LOG POINT TO LOG POINT ●	LENGTH		WP FEET ●	TYPICAL	EXISTING TYPE PAVEMENT	PAVEMENT AREA SQ.YDS.	PROPOSED PAVEMENT				WEARING COURSE REMOVED SQ. YDS.	202 RAISED PAVEMENT MARKERS REMOVED FOR STORAGE EACH	202 PAVEMENT PLANING, BITUMINOUS 1.00" AVG. SQ. YDS.	609 ★ CURB, TYPE 6 LIN. FT.	825L CRACK SEALING HOT TYPE I 705.04 LBS.		
			MILES	LIN. FT.					407		ASPHALT CONCRETE								
									TACK COAT, @ 0.10 gal./s.y. GALS.		ITEM 403 **							ITEM 404	
											THICK INCHES MIN. 0.00	CU.YDS.						THICK INCHES 1.00	CU.YDS.
I	US 224	0.00 - 2.23	2.23	11774	24	1	404	31397	3140			436		872			30		
		2.23 - 2.63	0.40	2112	24	2	404	11264	1126			156		313					
		2.63 - 7.42	4.79	25291	24	1	404	67443	6744			937		1873					
		7.42 - 7.88	0.46	2429	24	2	404	12955	1296			180		360		221			
		7.88 - 9.13	1.25	6600	24	1	404	17600	1760			244		489					
		9.13 - 9.53(BK)	0.40	2112	24	2	404	11264	1126			156		313					
		9.58(AH) - 9.68	0.10	528	24	2	404	2816	282			39		78					
		9.68 - 9.77	0.09	475	24	1	404	1267	127			18		35					
								3150	315			44		88					
	***	INTERSECTIONS						1252	125			17		35					
	***	EXTRA AREAS																	
								160408	16041			2227		4456	713	766	221	30	3439
		TOTALS	9.72	51321															

48

PAVEMENT DATA

[illegible]

EXTRA AREA FOR INTERSECTIONS ASPHALT CONCRETE

PLAN NO.
148

11
89

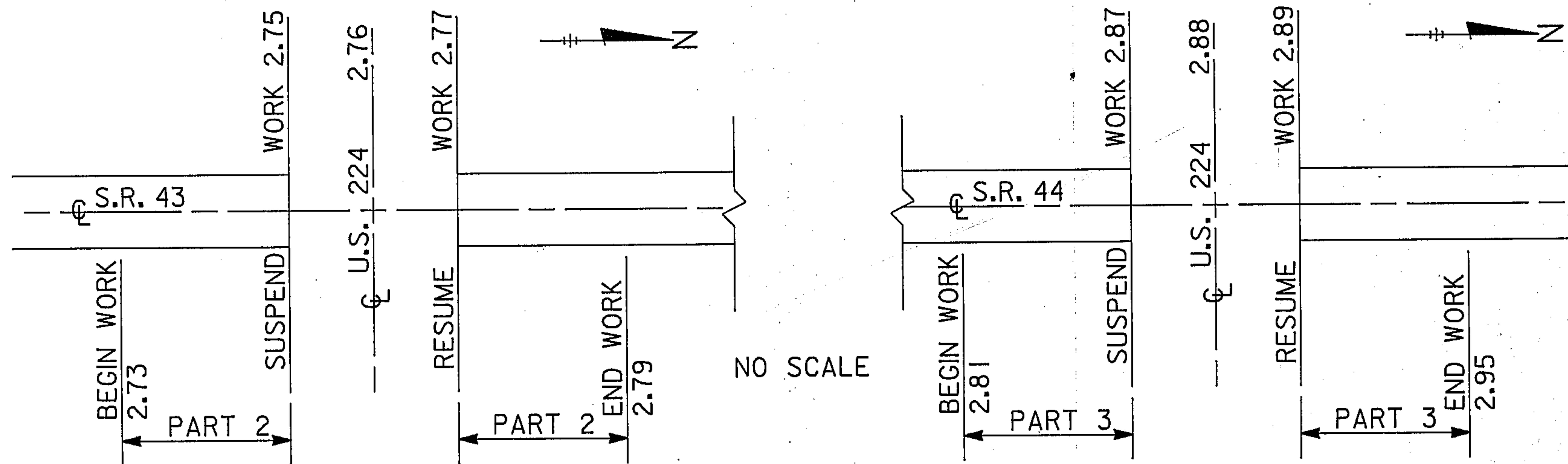
** ESTIMATED AT 0.50 INCHES

*** ESTIMATED AT 0.50 INCHES																						
P A R T	INTER- SECTING ROUTE WITH U.S. 224	SIDE OF U.S. 224	LENGTH		WP FEET	T Y P I C A L	EXISTING PAVEMENT TYPE	PAVEMENT AREA SQ.YDS.	403 **		404		407		604 MONUMENT BOX ADJUSTED TO GRADE EACH	CRACK SEALING HOT TYPE I 705.04 LBS.						* N O T E S
			MILES	LIN.FT. ⊙					ASPHALT CONCRETE		ASPHALT CONCRETE		TACK COAT									
									AVG. THICK INCHES MIN. 0.00	CU.YDS.	AVG. THICK INCHES 1.00	CU.YDS.	Bit. Matl. @ 0.10 gal./s.y. GALS.									
I	MARTIN	SOUTH	0.01	50	20		404	111		2		3	11		1							
I	MARTIN	NORTH	0.01	50	20		404	111		2		3	11									
I	RHODES	SOUTH	0.01	70	20		404	156		2		4	16									
I	RHODES	NORTH	0.01	70	20		404	156		2		4	16									
I	CONGRESS LAKE	SOUTH	0.01	70	24		404	187		3		5	19		1							
I	CONGRESS LAKE	NORTH	0.01	70	24		404	187		3		5	19									
I	MAY	SOUTH	0.02	85	20		404	189		3		5	19		1							
I	MAY	NORTH	0.01	75	20		404	167		3		5	17									
I	CARRIAGE WAY	NORTH	0.01	50	24		404	133		2		4	13									
I	CONLEY	SOUTH	0.02	90	20		404	200		3		6	20		1							
I	CONLEY	NORTH	0.02	80	20		404	178		3		5	18									
I	SCHROEDER	SOUTH	0.01	75	20		404	167		3		5	17		1							
I	SCHROEDER	NORTH	0.01	60	20		404	133		2		4	13									
I	WATERLOO	SOUTH	0.02	115	24		404	307		5		9	31		1							
I	WATERLOO	NORTH	0.07	375	24		404	1000		14		28	100									
I	HARTVILLE	SOUTH	0.06	325	20		404	722		10		20	72		1							
I	HARTVILLE	NORTH	0.06	300	20		404	667		10		19	67									
I	NEW MILFORD	SOUTH	0.01	67	20		404	149		2		4	15		1							
I	NEW MILFORD	NORTH	0.01	50	20		404	111		2		3	11									
I	WATERLOO	SOUTH	0.07	425	24		404	1133		16		31	113		1							
I	WATERLOO	NORTH	0.12	650	24		404	1733		24		48	173									
TOTAL AREA FOR INTERSECTION RADII			0.58	3202				1525		21		42	153		9	1900						
TOTAL EXTRA AREA FOR INTERSECTIONS PART I								9422		137		262	944		9	1900						

ASPHALT CONCRETE

12
89

PLAN NO.
148



⊙ ACTUAL FIELD MEASUREMENTS

* AVERAGE PAVEMENT WIDTH

PAVEMENT DATA

PART	ROUTE	LOG POINT TO LOG POINT	LENGTH		WP FEET	TYPICAL	EXISTING TYPE PAVEMENT	PAVEMENT AREA SQ.YDS.	PROPOSED PAVEMENT								202	254	825L	
			MILES	LIN. FT. ●					407		ASPHALT CONCRETE						WEARING COURSE REMOVED SQ. YDS.	PAVEMENT PLANING, BITUMINOUS 1.00' AVG. SQ. YDS.	CRACK SEALING HOT TYPE I LBS.	
									TACK COAT, @ 0.10 gal./s.y. GALS.		ITEM 403 ** THICK INCHES MIN. 0.00		ITEM 404 THICK INCHES 1.00		ITEM THICK INCHES					
2	S.R. 43	2.73 - 2.75	0.02	125	24		404	333	33			5		9			54			
2	S.R. 43	2.77 - 2.79	0.02	125	24		404	333	33			5		9			54	202		
EXTRA AREAS FOR INTERSECTION RADII								640	64			9		18						
TOTAL PART 2			0.04	250				1306	130			19		36			108	202	143	
3	S.R. 44	2.81 - 2.87	0.06	325	37*		404	1336	134			19		37			54			
		2.89 - 2.95	0.06	325	37*		404	1336	134			19		37			54	109		
EXTRA AREAS FOR INTERSECTION RADII								290	29			4		8						
TOTAL PART 3			0.12	650				2962	297			42		82			108	109	661	

* NOTES

1. ITEM 402 ASPHALT CONCRETE: PRIOR TO PLACING A BITUMINOUS MIXTURE FOR SHOULDER PAVING, THE EDGE OF THE EXISTING PAVEMENT, FOR THE FULL DEPTH OF THE TRENCH, SHALL BE COATED WITH BITUMINOUS MATERIAL IN ACCORDANCE WITH 401.12.
2. ITEM 301 BITUMINOUS AGGREGATE: MAY BE USED IN LIEU OF ITEM 402 ASPHALT CONCRETE.
3. ITEM 408 BITUMINOUS PRIME COAT: AFTER APPLICATION OF THE PRIME COAT, NO FURTHER TREATMENT SHALL BE PERFORMED UNTIL SO DIRECTED BY THE ENGINEER.
4. SHIELD: THE CONTRACTOR SHALL PROVIDE A SHIELD TO PREVENT THE SPRAYING OR DRIFTING OF LIQUID BITUMINOUS MATERIAL ONTO THE EDGE OF THE PAVEMENT OR EDGE LINES. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO 107.12 OF THE SPECIFICATIONS.

P A R T	ROUTE	LOG POINT TO LOG POINT ●	LENGTH		T Y P I C A L	PROPOSED WIDTH (FT.)				SHOULDER AREA SQ.YDS.	203	403 **		404		404		407		617				* N O T E S
			MILES	LIN.FT.		S ₁ ●	S ₂ ●	A ₁ ●	A ₂ ●		★ LINEAR GRADING METHOD 'D' ● STA.	ASPHALT CONCRETE		ASPHALT CONCRETE		ASPHALT CONCRETE		TACK COAT		COMPACTED AGGREGATE TYPE 'A' AVG. THICK INCHES 2.00 CU. YDS.				
												AVG. THICK INCHES MIN. 0.00	CU.YDS.	AVG. THICK INCHES	CU.YDS.	AVG. THICK INCHES	ASPHALT CONCRETE FOR DRIVEWAYS CU. YDS.	Blt. Matl. 0.0...0 gal./s.y. GALS.						
I	US 224	0.00-2.23	2.23	11774	1	3	3	3	3	7850			109		218				785	436				
		2.23-2.63	0.40	2112	2	6	6	6	6	2816			39		78				282	158				
		2.63-7.42	4.79	25291	1	3	3	3	3	16861			234		468				1686	937				
		7.42-7.88	0.46	2429	2	6	6	6	6	3239			45		90				324	180				
		7.88-9.13	1.25	6600	1	3	3	3	3	4400			61		122				440	244				
		9.13-9.53(BK)	0.40	2112	2	6	6	6	6	2816			39		78				282	156				
		9.58(AH)-9.68	0.10	528	2	6	6	6	6	704			10		20				71	40				
		9.68-9.77	0.09	475	1	3	3	3	3	317			5		9				32	18				
	***	0.10-9.77	9.62	7619						5079				3.00	423				508					
	TOTAL PART I		9.72	58940						44082	109		542		1506		6		4410	2169				

EXTRA AREA FOR INTERSECTIONS PAVED SHOULDERS

PLAN NO.
148

14
89

● ACTUAL FIELD MEASUREMENTS

** ESTIMATED AT 0.50 INCHES

P A R T	INTER- SECTING ROUTE WITH U.S. 224	SIDE OF U.S. 224	LENGTH		T Y P I C A L	PROPOSED WIDTH (FT.)				SHOULDER AREA SQ.YDS.	403 **		404		407		617								* N O T E S	
			MILES	LIN.FT. ⊙		S ₁ ⊙	S ₂ ⊙	A ₁ ⊙	A ₂ ⊙		ASPHALT CONCRETE		ASPHALT CONCRETE		TACK COAT		COMPACTED AGGREGATE TYPE "A" AVG. THICK INCHES 2.00 CU. YDS.									
											AVG. THICK INCHES MIN. 0.00	CU.YDS.	AVG. THICK INCHES 1.00	CU.YDS.	Bit. Matl. @ 0.110 gal./s.y. GALS.											
I	MARTIN	SOUTH	0.01	50	I	3	3	3	3	33		1		1	3		2									
I	MARTIN	NORTH	0.01	50	I	3	3	3	3	33		1		1	3		2									
I	RHODES	SOUTH	0.01	70	I	3	3	3	3	47		1		1	5		2									
I	RHODES	NORTH	0.01	70	I	3	3	3	3	47		1		1	5		2									
I	CONGRESS LAKE	SOUTH	0.01	70	I	3	3	3	3	47		1		1	5		2									
I	CONGRESS LAKE	NORTH	0.01	70	I	3	3	3	3	47		1		1	5		2									
I	MAY	SOUTH	0.02	85	I	3	3	3	3	57		1		2	6		2									
I	MAY	NORTH	0.01	75	I	3	3	3	3	50		1		1	5		2									
I	CARRIAGE WAY	NORTH	0.01	50	I	3	3	3	3	33		1		1	3		2									
I	CONLEY	SOUTH	0.02	90	I	3	3	3	3	60		1		2	6		4									
I	CONLEY	NORTH	0.02	80	I	3	3	3	3	53		1		1	5		2									
I	SCHROEDER	SOUTH	0.01	75	I	3	3	3	3	50		1		1	5		2									
I	SCHROEDER	NORTH	0.01	60	I	3	3	3	3	40		1		1	4		2									
I	WATERLOO	SOUTH	0.02	115	I	3	3	3	3	77		1		2	8		4									
I	WATERLOO	NORTH	0.07	375	I	3	3	3	3	250		4		7	25		14									
I	HARTVILLE	SOUTH	0.06	325	I	3	3	3	3	217		3		6	22		12									
I	HARTVILLE	NORTH	0.06	300	I	3	3	3	3	200		3		6	20		12									
I	NEW MILFORD	SOUTH	0.01	67	I	3	3	3	3	45		1		1	5		2									
I	NEW MILFORD	NORTH	0.01	50	I	3	3	3	3	33		1		1	3		2									
I	WATERLOO	SOUTH	0.07	425	I	3	3	3	3	283		4		8	28		16									
I	WATERLOO	NORTH	0.12	650	I	3	3	3	3	433		6		12	43		24									
TOTAL EXTRA AREA FOR INTERSECTIONS PART I										2135		36		58	214		114									

PAVED SHOULDER

15
89

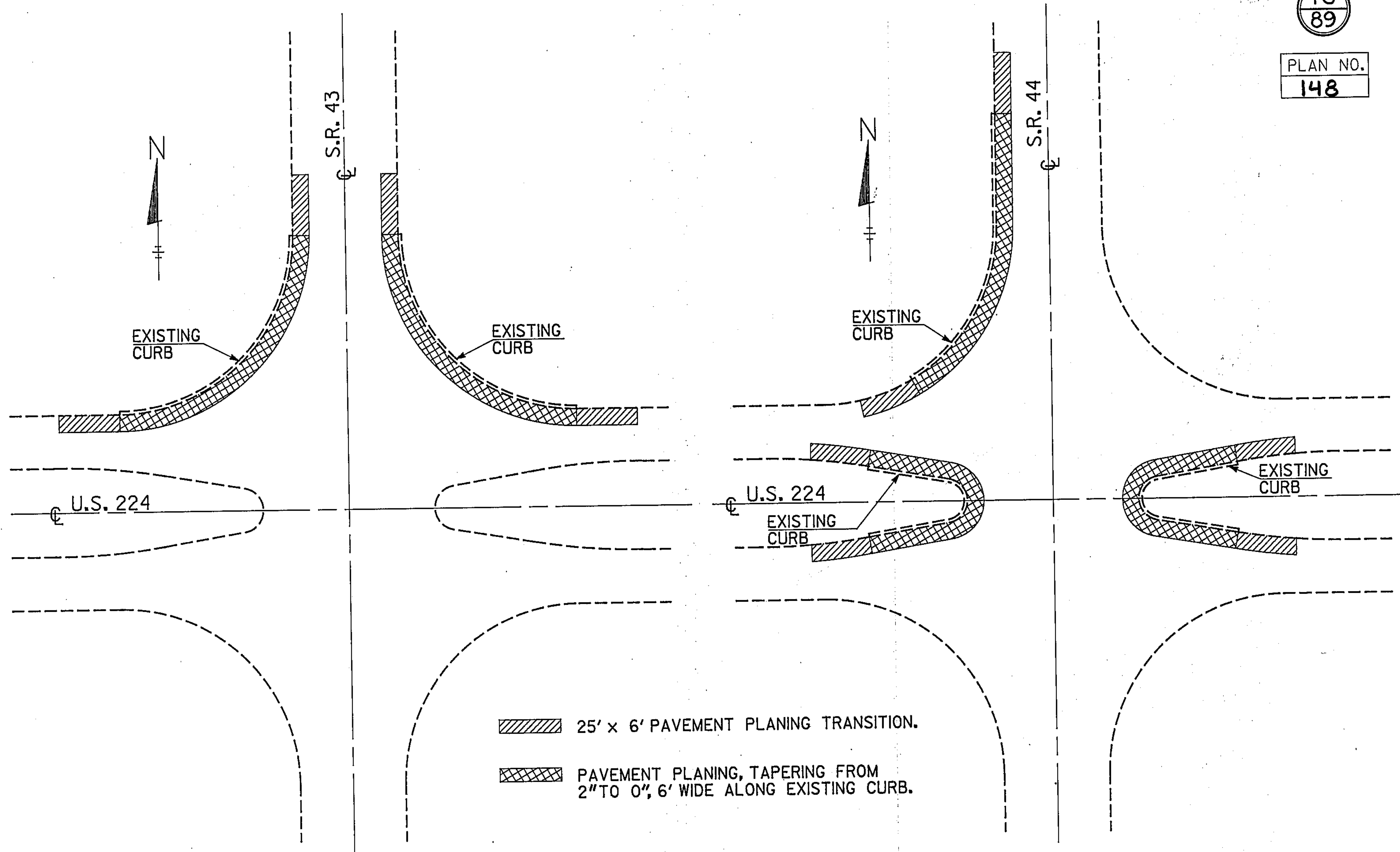
PLAN NO.
148

• NOTES

1. ITEM 402 ASPHALT CONCRETE: PRIOR TO PLACING A BITUMINOUS MIXTURE FOR SHOULDER PAVING, THE EDGE OF THE EXISTING PAVEMENT, FOR THE FULL DEPTH OF THE TRENCH, SHALL BE COATED WITH BITUMINOUS MATERIAL IN ACCORDANCE WITH 107.12.
2. ITEM 301 BITUMINOUS AGGREGATE: MAY BE USED IN LIEU OF ITEM 402 ASPHALT CONCRETE.
3. ITEM 408 BITUMINOUS PRIME COAT: AFTER APPLICATION OF THE PRIME COAT, NO FURTHER TREATMENT SHALL BE PERFORMED UNTIL SO DIRECTED BY THE ENGINEER.
4. SHIELD: THE CONTRACTOR SHALL PROVIDE A SHIELD TO PREVENT THE SPRAYING OR DRIFTING OF LIQUID BITUMINOUS MATERIAL ONTO THE EDGE OF THE PAVEMENT OR EDGE LINES. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO 107.12 OF THE SPECIFICATIONS.

⊙ ACTUAL FIELD MEASUREMENTS
** ESTIMATED AT 0.50 INCHES

P A R T	ROUTE	LOG POINT TO LOG POINT	LENGTH		T Y P I C A L	PROPOSED WIDTH (FT.)				SHOULDER AREA SQ.YDS.	403 **		404		407		617								* N O T E S
											ASPHALT CONCRETE		ASPHALT CONCRETE		TACK COAT		COMPACTED AGGREGATE TYPE 'A' AVG. THICK INCHES 2.00 CU. YDS.								
			MILES	LIN.FT. ⊙		S ₁ ⊙	S ₂ ⊙	A ₁ ⊙	A ₂ ⊙		AVG. THICK INCHES MIN. 0.00	CU.YDS.	AVG. THICK INCHES 1.00	CU.YDS.	Bit. Matl. @ 0.10 gal./s.y. GALS.										
2	SR 43	2.73-2.75	0.02	125	1	3	3	3	3	83		1		2	8		5								
2	SR 43	2.77-2.79	0.02	125	1	3	3	3	3	83		1		2	8		5								
TOTAL PART 2			0.04	250						166		2		4	16		10								
3	SR 44	2.81-2.87	0.06	325	1	3	3	3	3	217		3		6	22		12								
		2.89-2.95	0.06	325	1	3	3	3	3	217		3		6	22		12								
TOTAL PART 3			0.12	650						434		6		12	44		24								



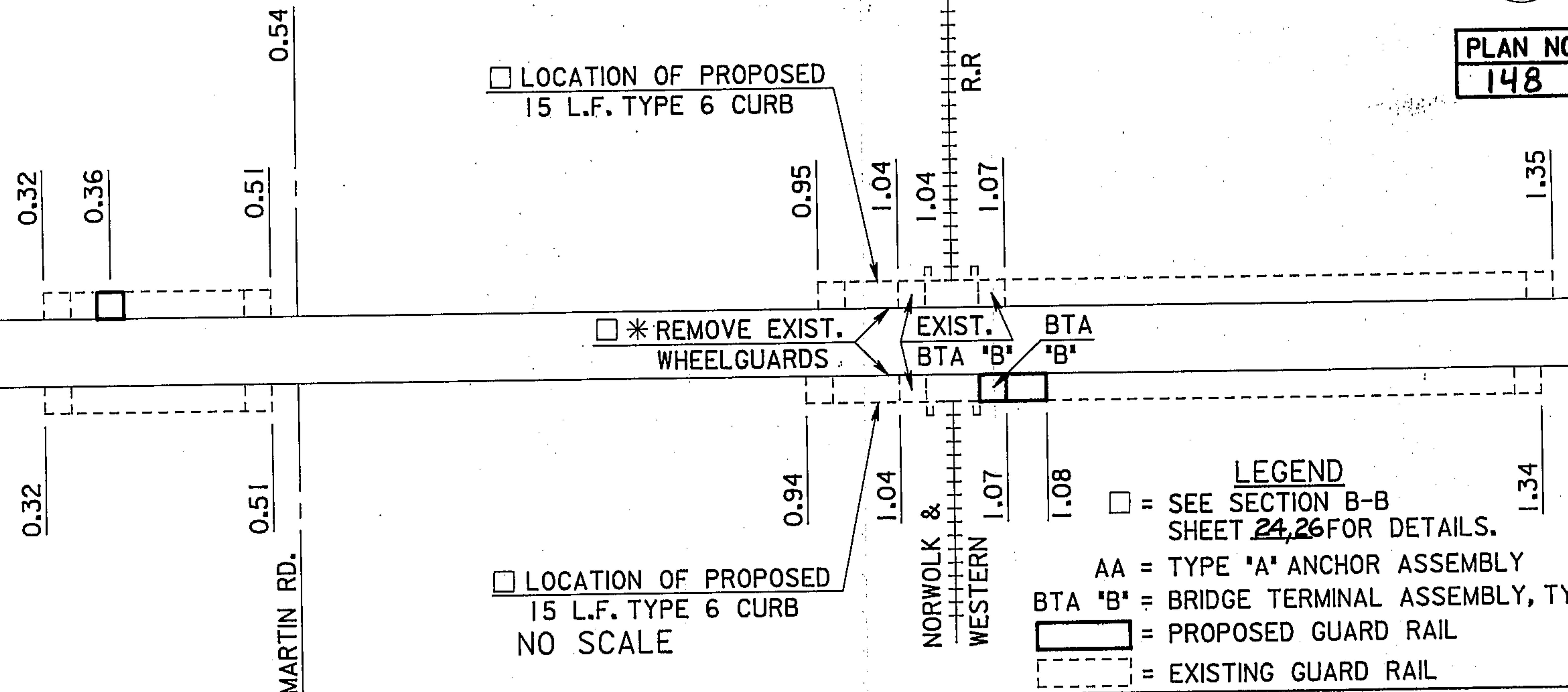
LOCATIONS OF PAVEMENT PLANING
AT EXISTING CURBS

17
89

PLAN NO.
148

SUMMIT COUNTY
S.R. 532
PORTAGE COUNTY

PORTAGE LINE RD.
0.00 BEGIN WORK



PART	ROUTE	STARTING LOG POINT	SIDE	ITEM 202 GUARDRAIL REMOVED			ITEM 606 GUARDRAIL					ANCHOR ASSEMBLY		ITEM 606	BRIDGE TERMINAL ASSEMBLIES		BRIDGE TERMINAL ASSEMBLIES		ITEM SPECIAL	
				REMOVED	FOR STORAGE	FOR RE-USE	TYPE	GUARD RAIL	REBUILT	CURVED RAIL ELEMENTS		TYPE B (GR-4B)	SINGLE RAIL TYPE A (GR-4)	ANCHOR ASSEMBLY TYPE A RECONSTRUCTED AS PER PLAN EACH	TYPE		TYPE		BERM RESHAPING	
										LENGTH	RADIUS									
I	U.S. 224	0.36	LT.	12.5			5	12.5												
I	U.S. 224	1.04	LT.	12.5*																
I	U.S. 224	1.04	RT.	12.5*																
I	U.S. 224	1.07	RT.	37.5			5	37.5							B	I			37.5	
SUB-TOTAL PART I				75				50							B	I			37.5	

ROAD
6.62



7.07

7.13

LAKE
OUTLET

7.15

7.21

7.71

7.09

7.13

CONGRESS

7.15

7.19

HARTVILLE

NO SCALE

FOR LEGEND
SEE SHEET 17.

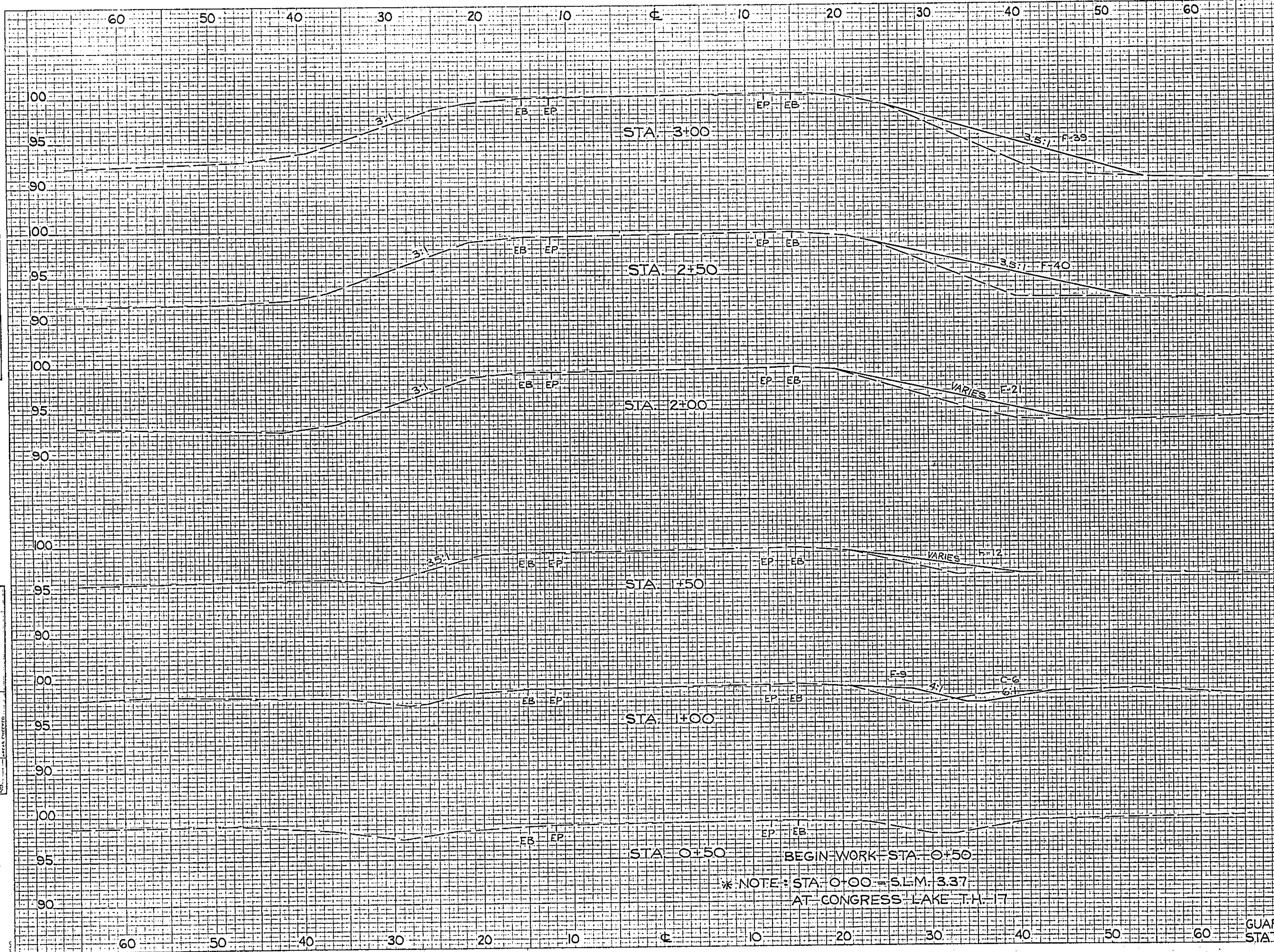
S.R. 44

* SEE BRIDGE GENERAL NOTES
TO EXPLAIN, AS PER PLAN

(PG 4)

PART	ROUTE	STARTING LOG POINT	SIDE	ITEM 202 GUARDRAIL REMOVED			ITEM 606 GUARDRAIL				ANCHOR ASSEMBLY			BRIDGE TERMINAL ASSEMBLIES		BRIDGE TERMINAL ASSEMBLIES		ITEM SPECIAL BERM RESHAPING LIN.FT.		ITEM 517 RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP, TYPE 2 STEEL POST AND BOLTS), AS PER PLAN	
				REMOVED	FOR STORAGE	FOR RE-USE	TYPE	GUARD RAIL	REBUILT	CURVED RAIL ELEMENTS		TYPE B (GR-4B)		TYPE		TYPE				DETAIL PAGE 38	LIN.FT.
				LIN.FT.	LIN.FT.	LIN.FT.		LIN.FT.	LIN.FT.	LENGTH LIN.FT.	RADIUS FT.	EACH			EACH		EACH				
I	U.S. 224	7.13	LT.			100														*	100
I	U.S. 224	7.13	RT.			100														*	100
SUB-TOTAL	PART I			100	650			50					I					37.5			
	TOTAL PART I			100	650	200		50					I	B	I			37.5			200

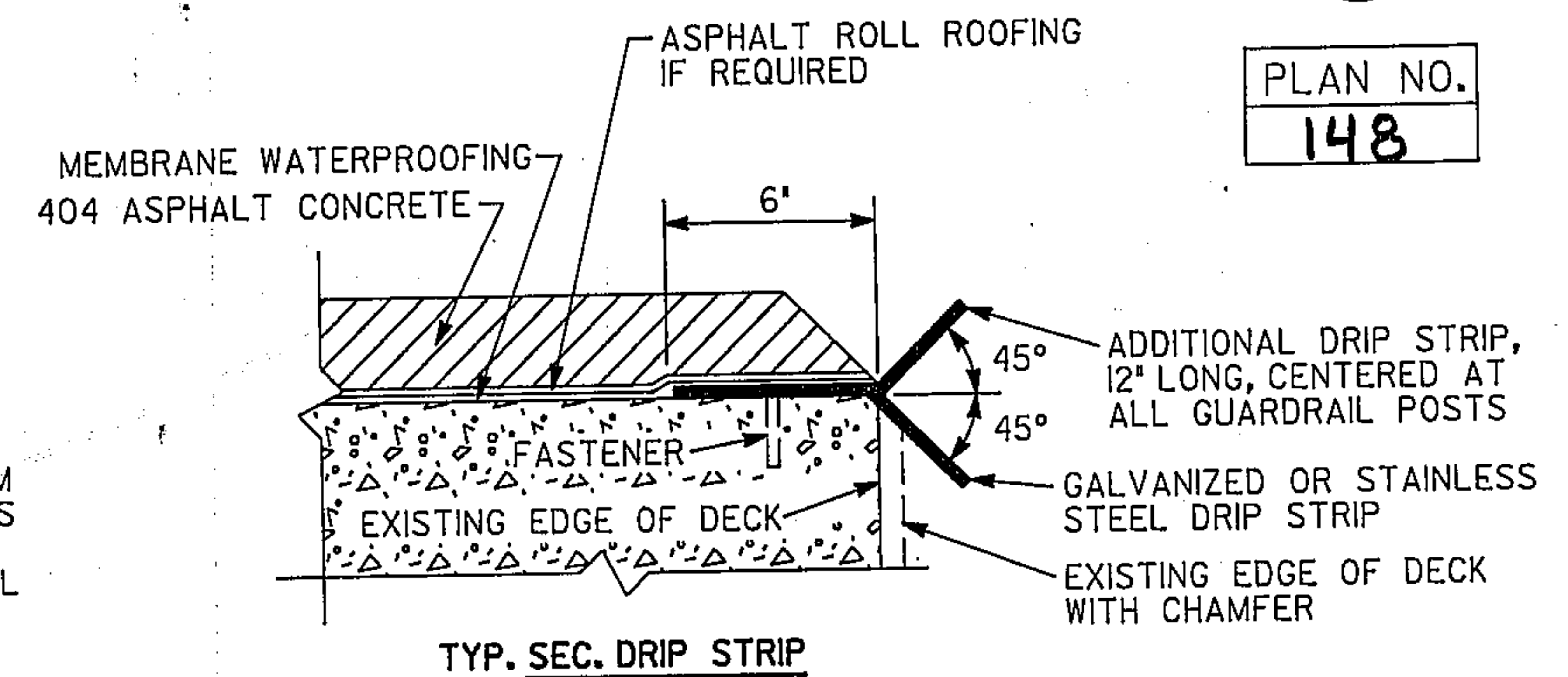
FED. RD. DIVISION	STATE	PROJECT	20
5	OHIO		89



END AREA		VOLUME		SEEDING	
CUT	FILL	EXC	EMB	L.F.	S.Y.
	39			40	
			74		222
40				40	
			57		217
21				38	
			3		189
0	12			29	
	9		17		178
6	9			34	
	6	9		94	
0	0			0	
SHEET TOTAL		15	188		900

GUARDRAIL ELIMINATION
STATION 0+50 TO 3+00

DRIP STRIP: PRIOR TO APPLYING DECK MEMBRANE WATERPROOFING, A BENT DRIP STRIP SHALL BE INSTALLED ALONG THE EDGES OF THE DECK AS SHOWN. THE STRIPS SHALL BE FASTENED AT 1'-6" C/C MAXIMUM WITH 1-1/4" X 5/32" X 1/4" (LENGTH X SHANK DIA. X HEAD DIA.) No. 10 GALVANIZED SCREWS AND EXPANSION ANCHORS, SUBJECT TO THE APPROVAL OF THE ENGINEER. THE STRIPS SHALL BE PLACED THE FULL LENGTH OF THE DECK, ENDING AT THE FACE OF THE ABUTMENT WINGWALL OR STEEL END DAM ANGLE. WHERE SPICES ARE REQUIRED A 3" (MIN.) LAP SHALL BE USED WITH A FASTENER THROUGH THE LAP. STEEL FOR GALVANIZED STRIPS SHALL BE 8" X 0.105" AND SHALL MEET THE REQUIREMENTS OF ASTM A568. GALVANIZING SHALL BE IN ACCORDANCE WITH 711.02. STAINLESS STEEL SHALL BE 20 GAUGE ASTM A167, TYPE 304, MILL FINISH. PAYMENT SHALL BE A THE UNIT PRICE BID FOR ITEM "SPECIAL STEEL DRIP STRIP (LIN. FT.), WHICH SHALL INCLUDE ALL MATERIALS, LABOR, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE ITEM.



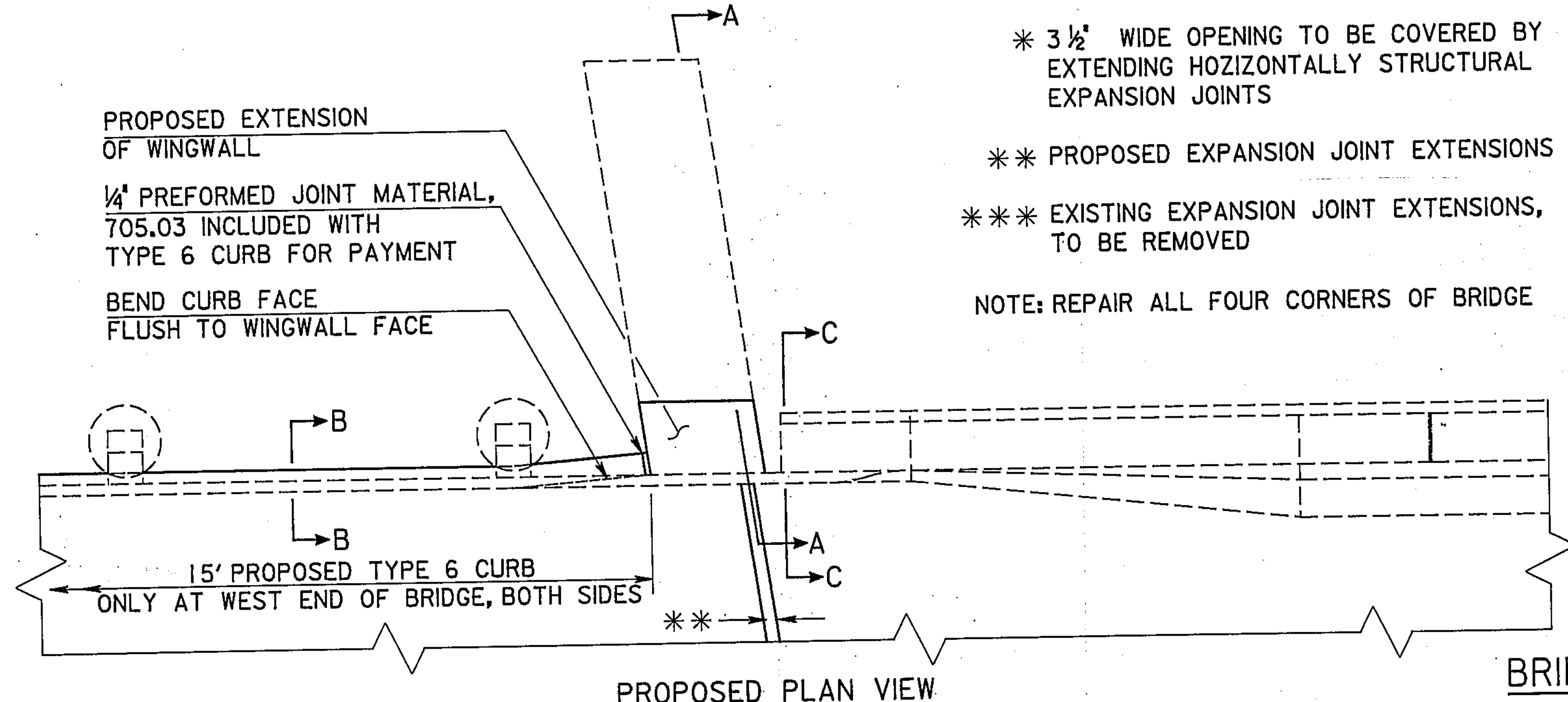
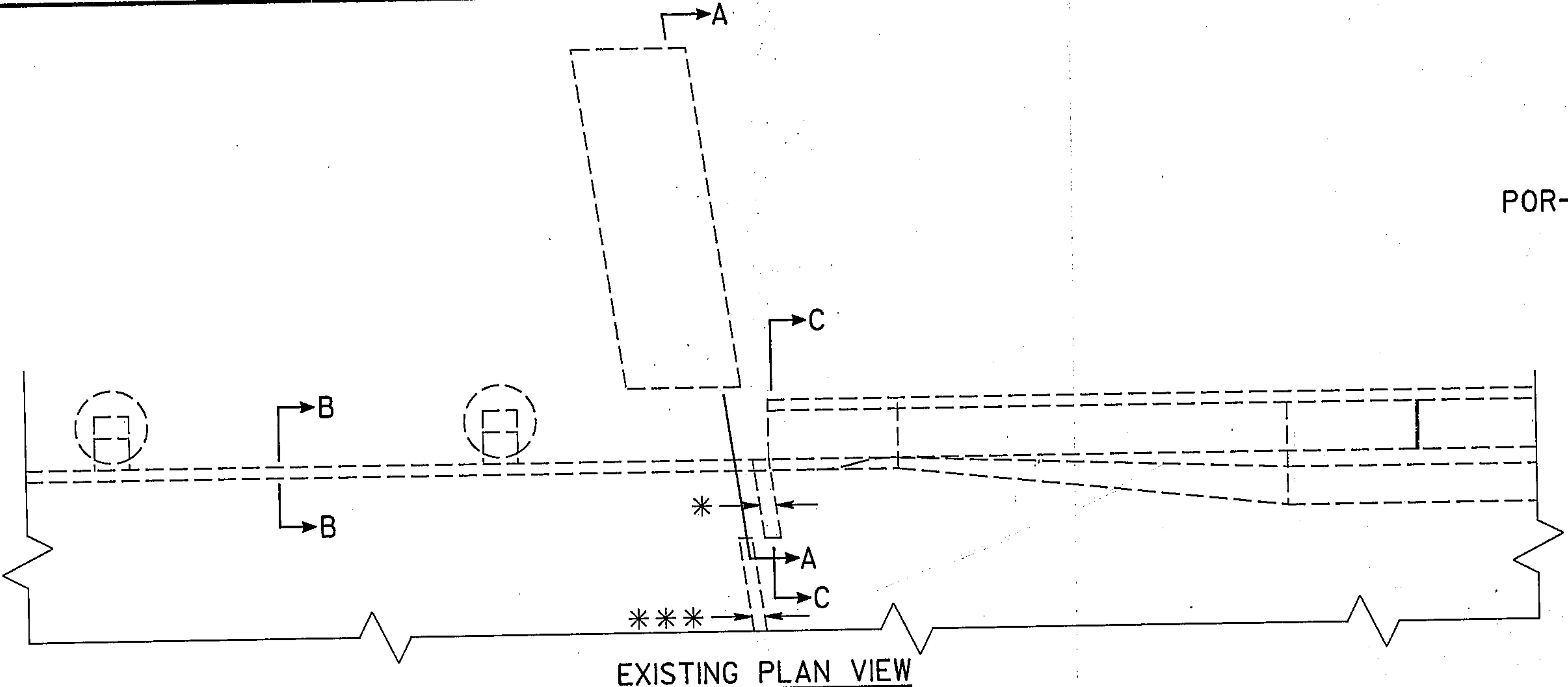
PART	COUNTY, ROUTE, BRIDGE NO.	511 CLASS "C" CONCRETE, ABUTMENT CU. YDS.	511 CLASS "S" CONCRETE, FULL DEPTH REPAIR CU. YDS.	511 CLASS "S" CONCRETE, SUPER-STRUCTURE CU. YDS.	516 VERTICAL EXTENSION OF STRUCT. EXPANSION JOINTS LIN.FT.	516 HORIZONTAL EXTENSION OF STRUCT. EXPANSION JOINTS, AS PER PLAN LIN.FT. LIN.FT.	516 JOINT SEALER HOT APPLIED 705.04 LIN.FT.	SPECIAL STEEL DRIP STRIP LIN. FT.
I	POR-224-0104	I	I		67	6 *		
I	POR-224-0713			2I			185	185
TOTAL PART I		I	I	2I	67	6	185	185

* ITEM 516, HORIZONTAL EXTENSION OF STRUCTURAL EXPANSION JOINTS, AS PER PLAN
CURB PLATES SHALL BE INCLUDED WITH ITEM 516, HORIZONTAL EXTENSION OF STRUCTURAL EXPANSION JOINTS, AS PER PLAN FOR PAYMENT. [SEE NOTE ON PAGE 4]

24
89

PLAN NO.
148

POR-224-0.00-9.77

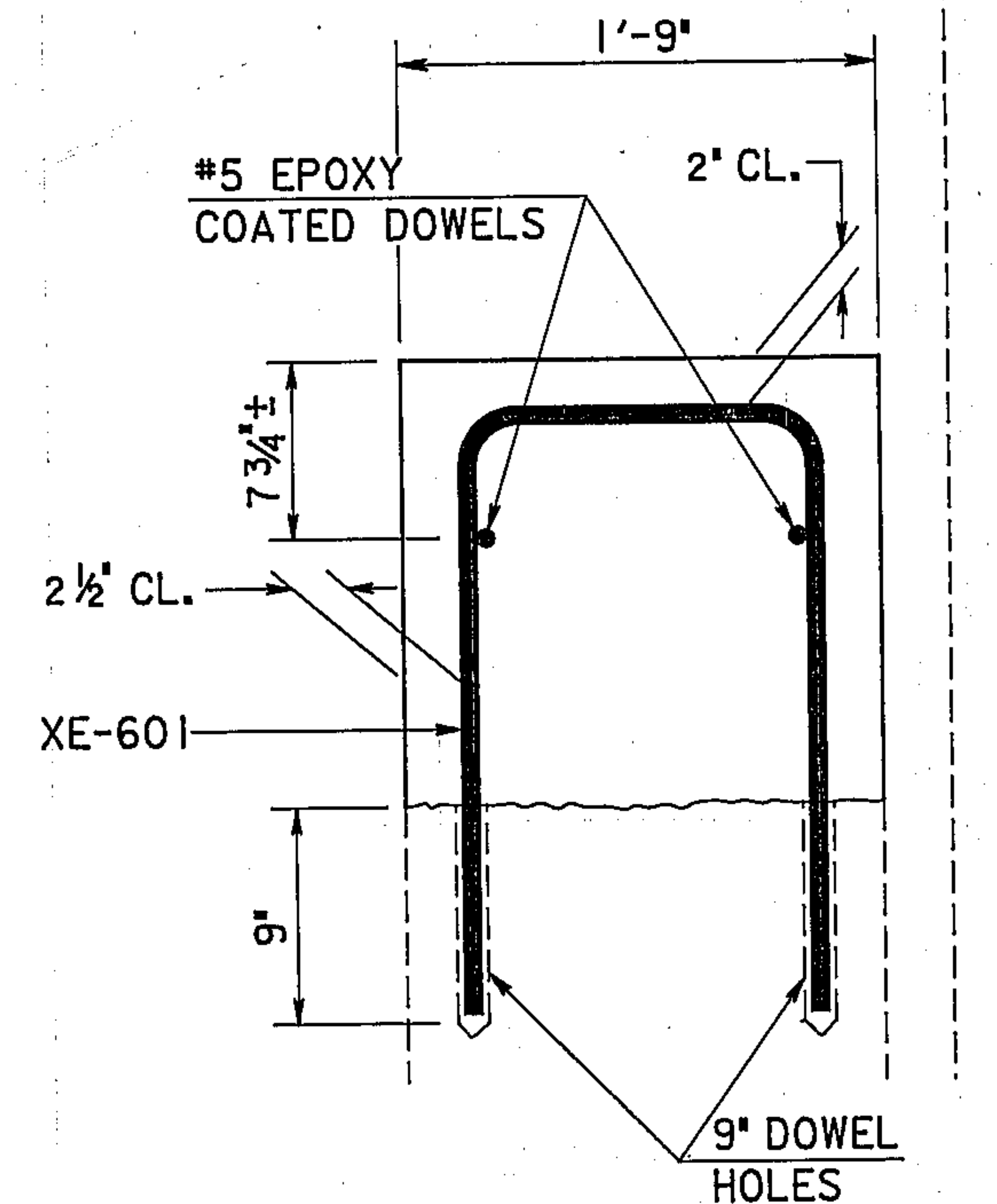
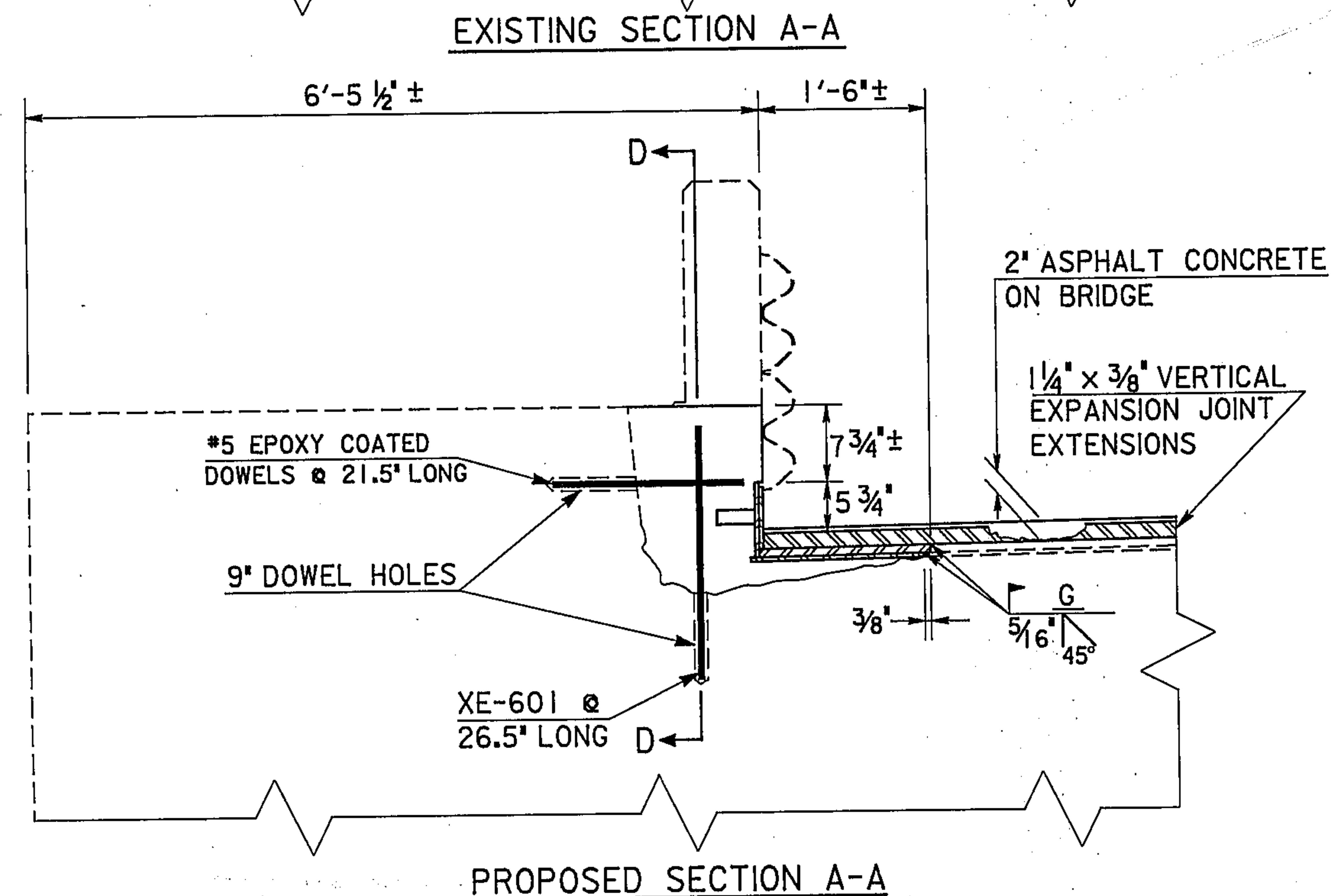
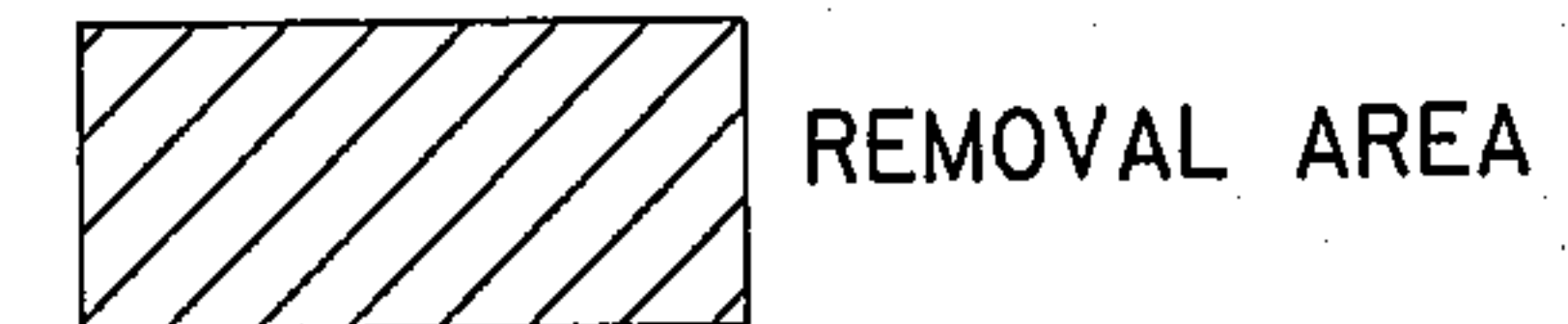
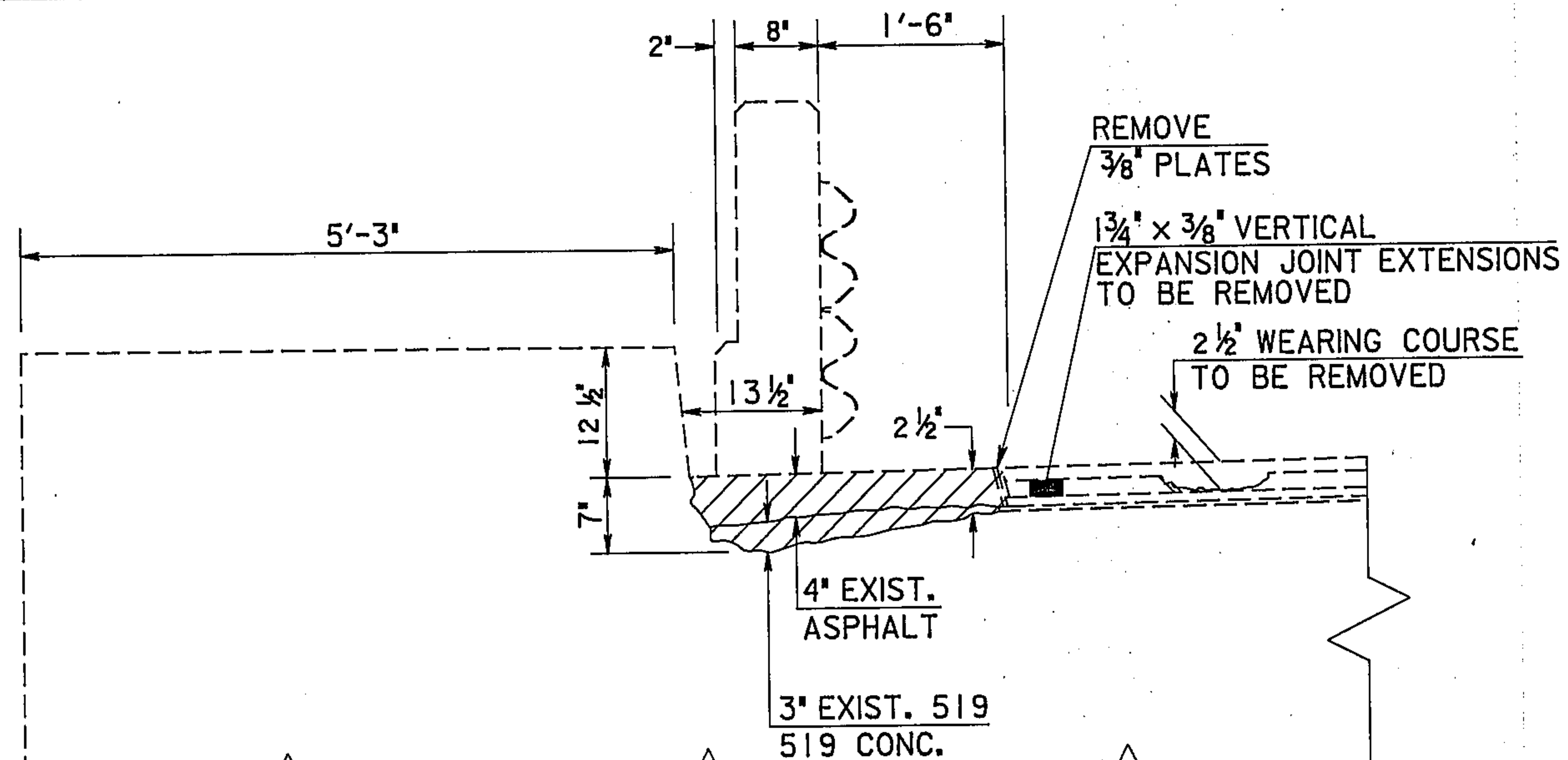


BRIDGE No. 0104

25
89

PLAN NO.
148

POR-224-0.00-9.77

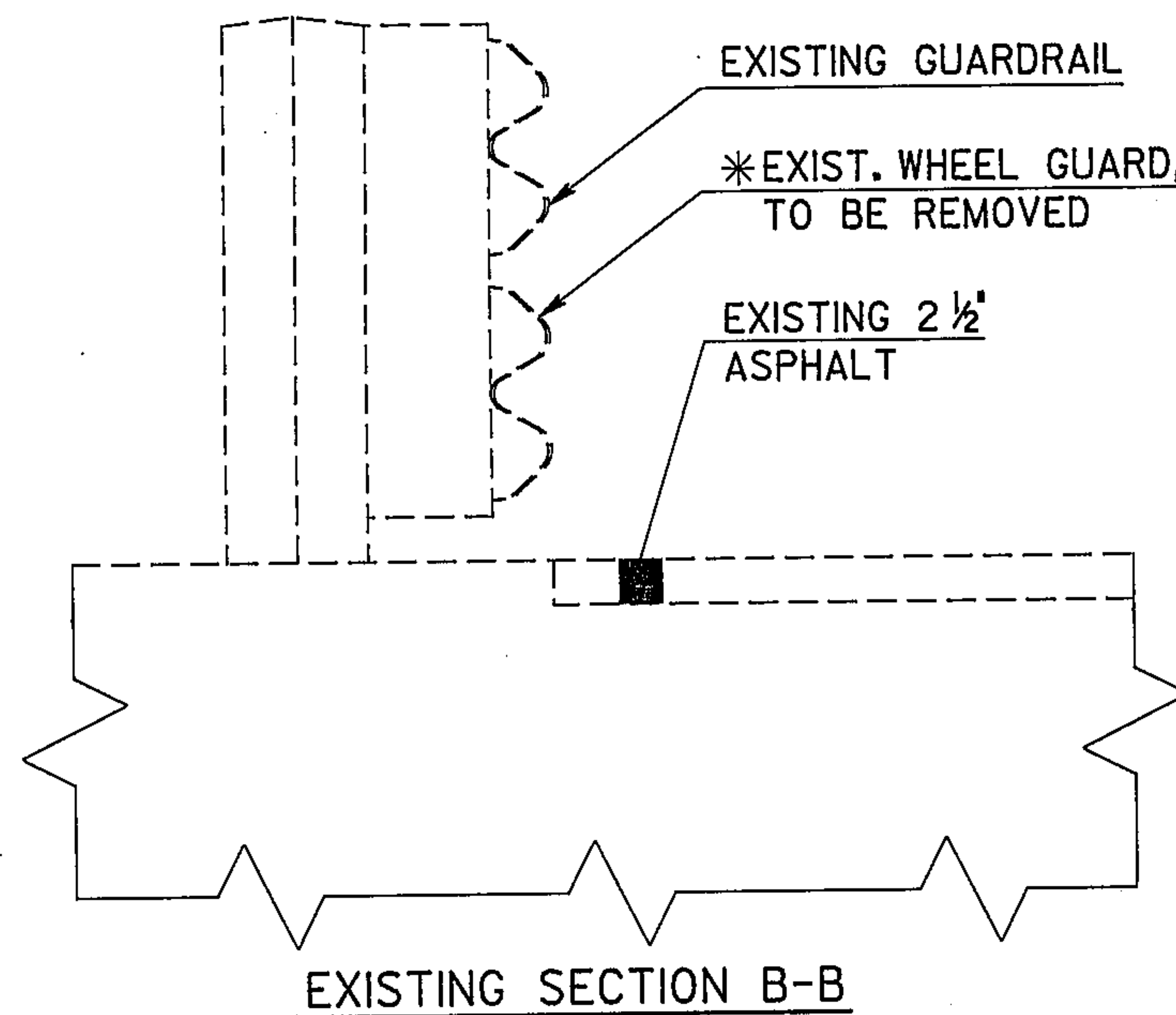


BRIDGE No. 0104

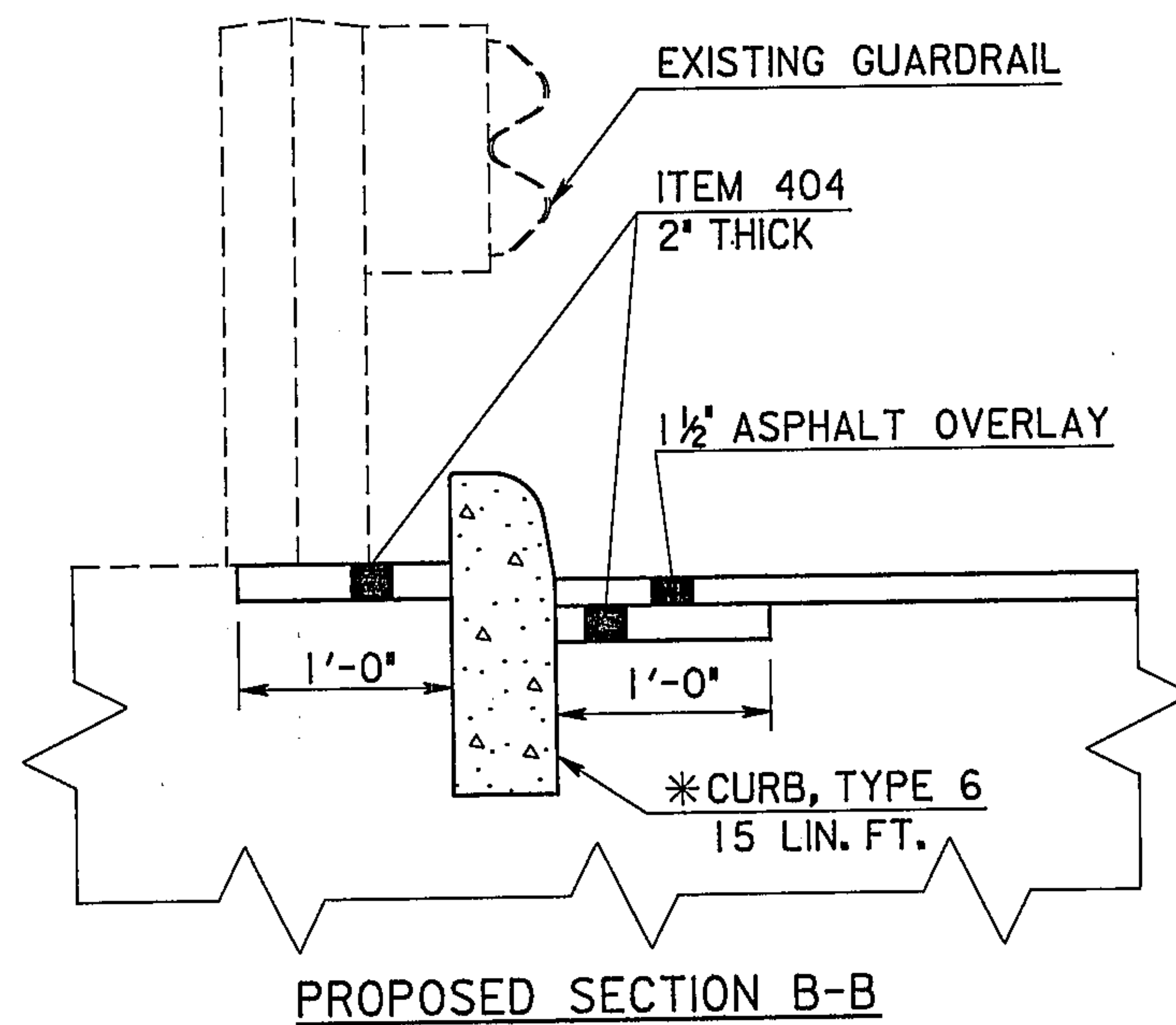
26
89

PLAN NO.
148

POR-224-0.00-9.77



* = WEST END OF BRIDGE
BOTH SIDES



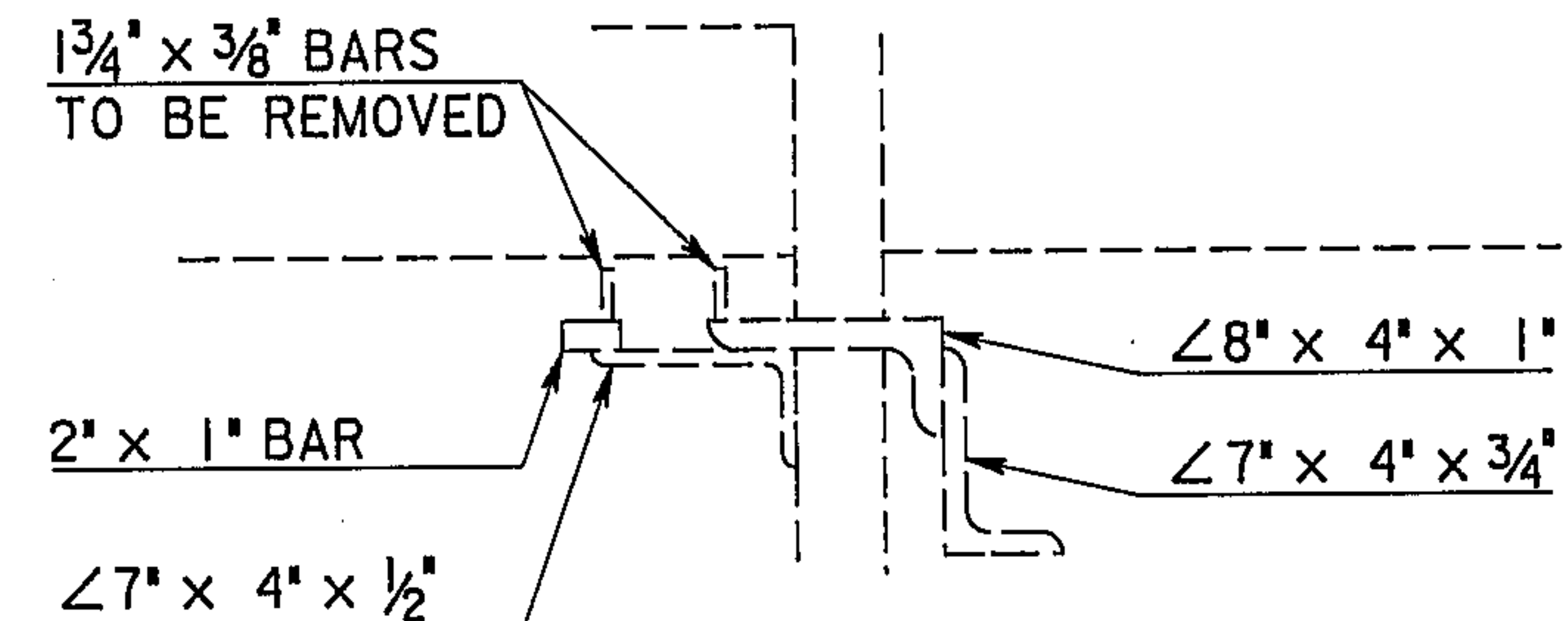
BRIDGE No. 0104
CURB DETAILS

27
89

PLAN NO.

148

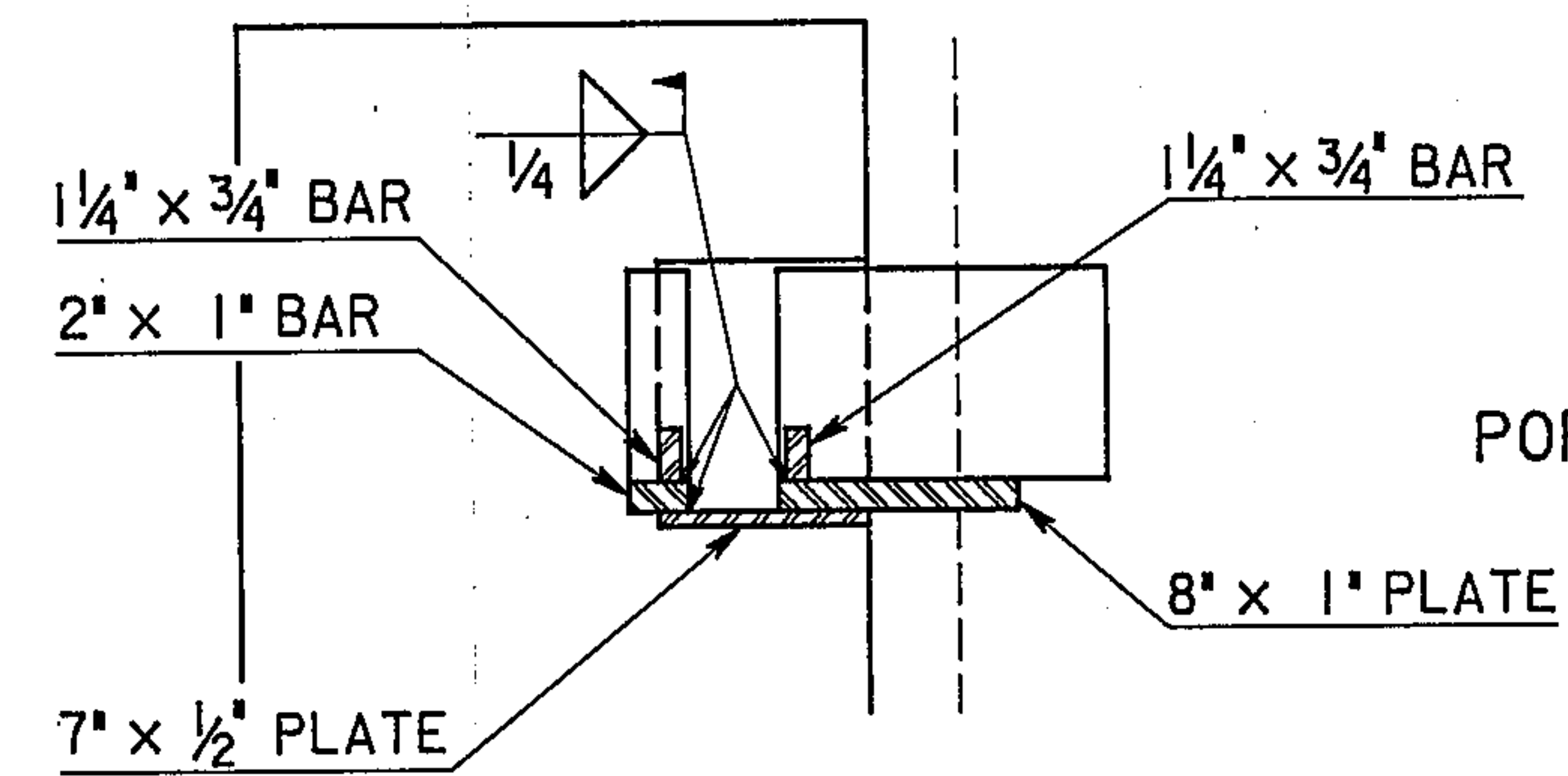
POR-224-0.00-9.77



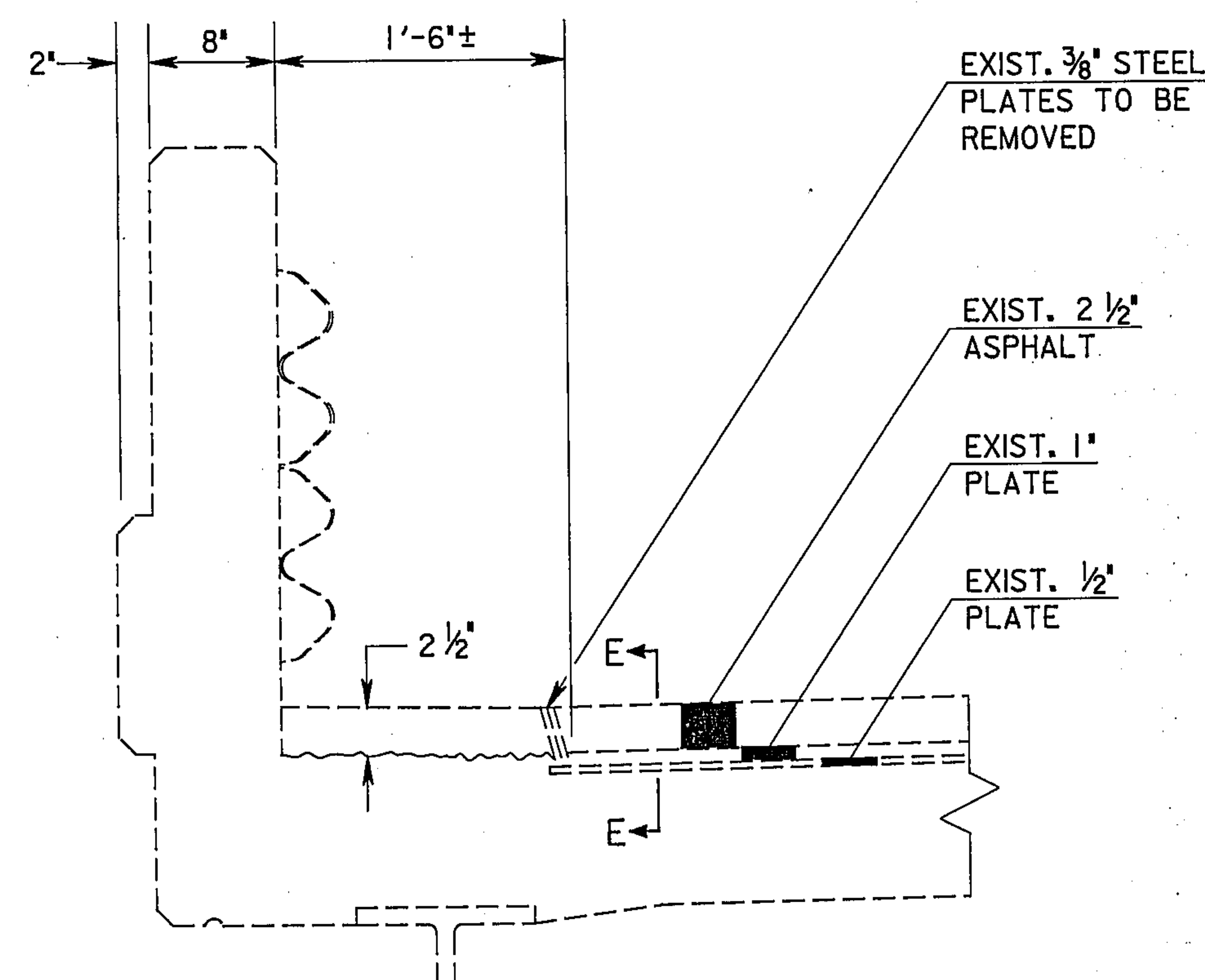
EXISTING SECTION E-E

CURB PLATE
DETAILS

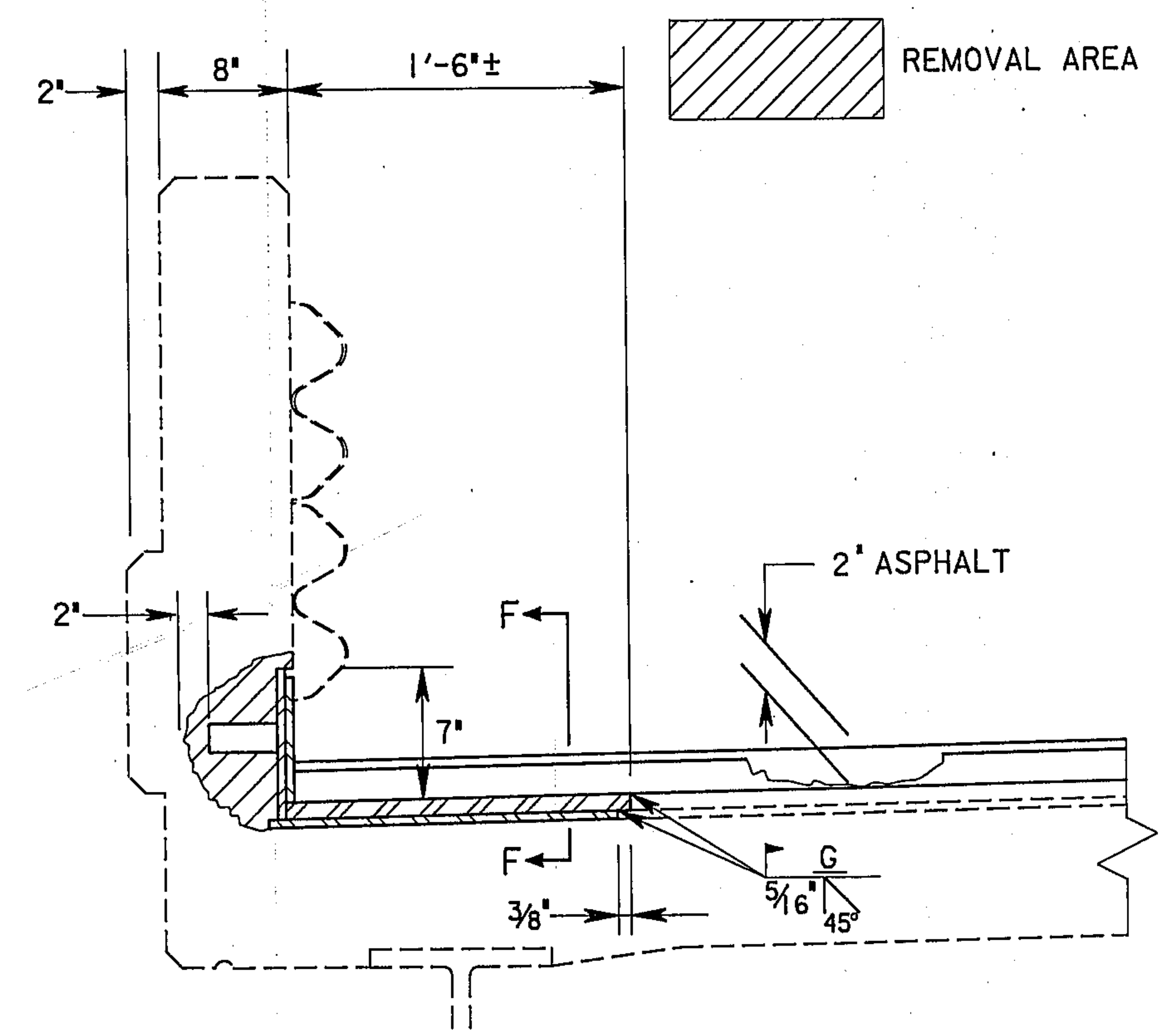
FOR ADDITIONAL DETAILS SEE STANDARD
DRAWING SD-1-69.



PROPOSED SECTION F-F



EXISTING SECTION C-C



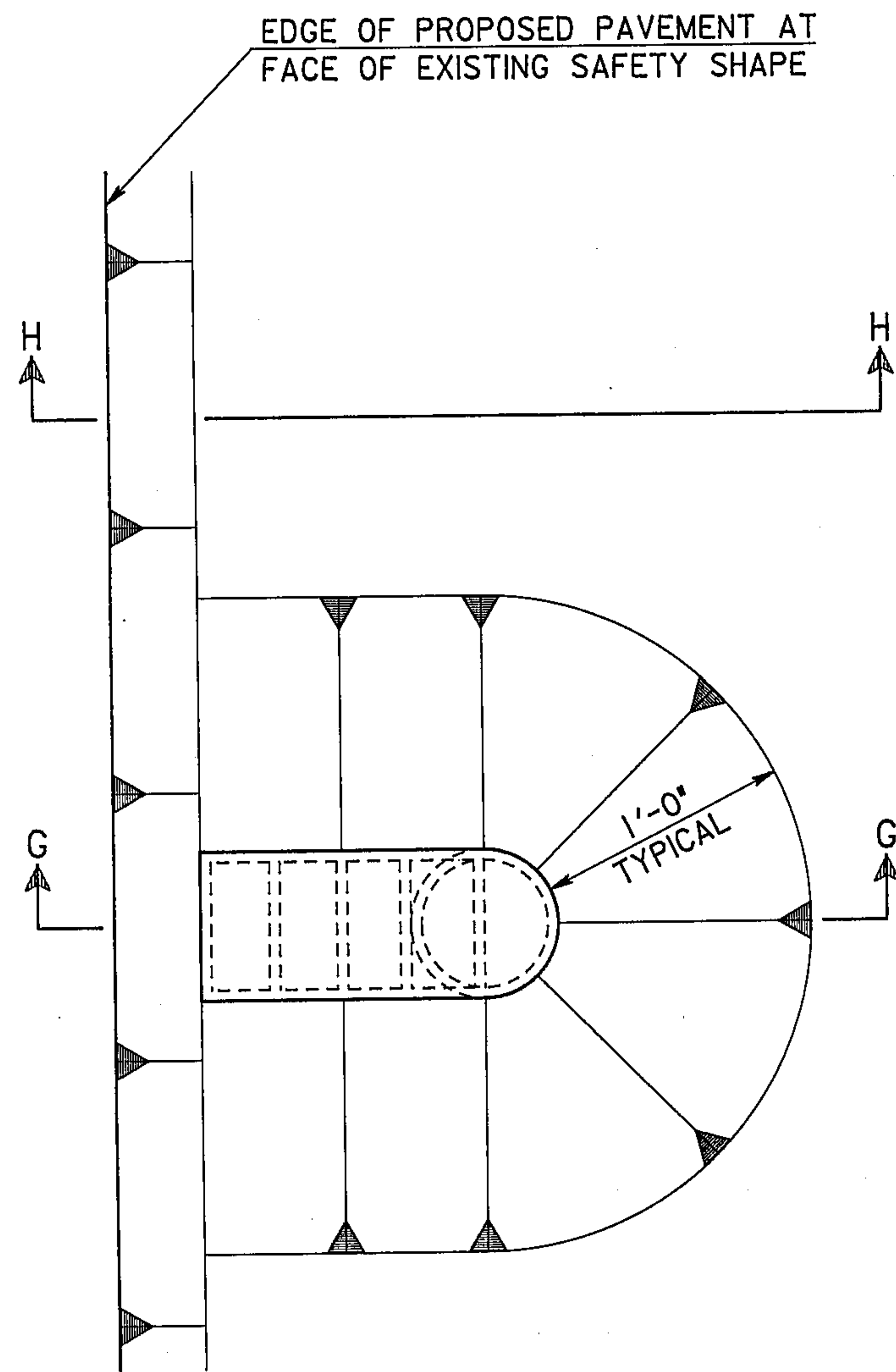
PROPOSED SECTION C-C

BRIDGE No. 0104

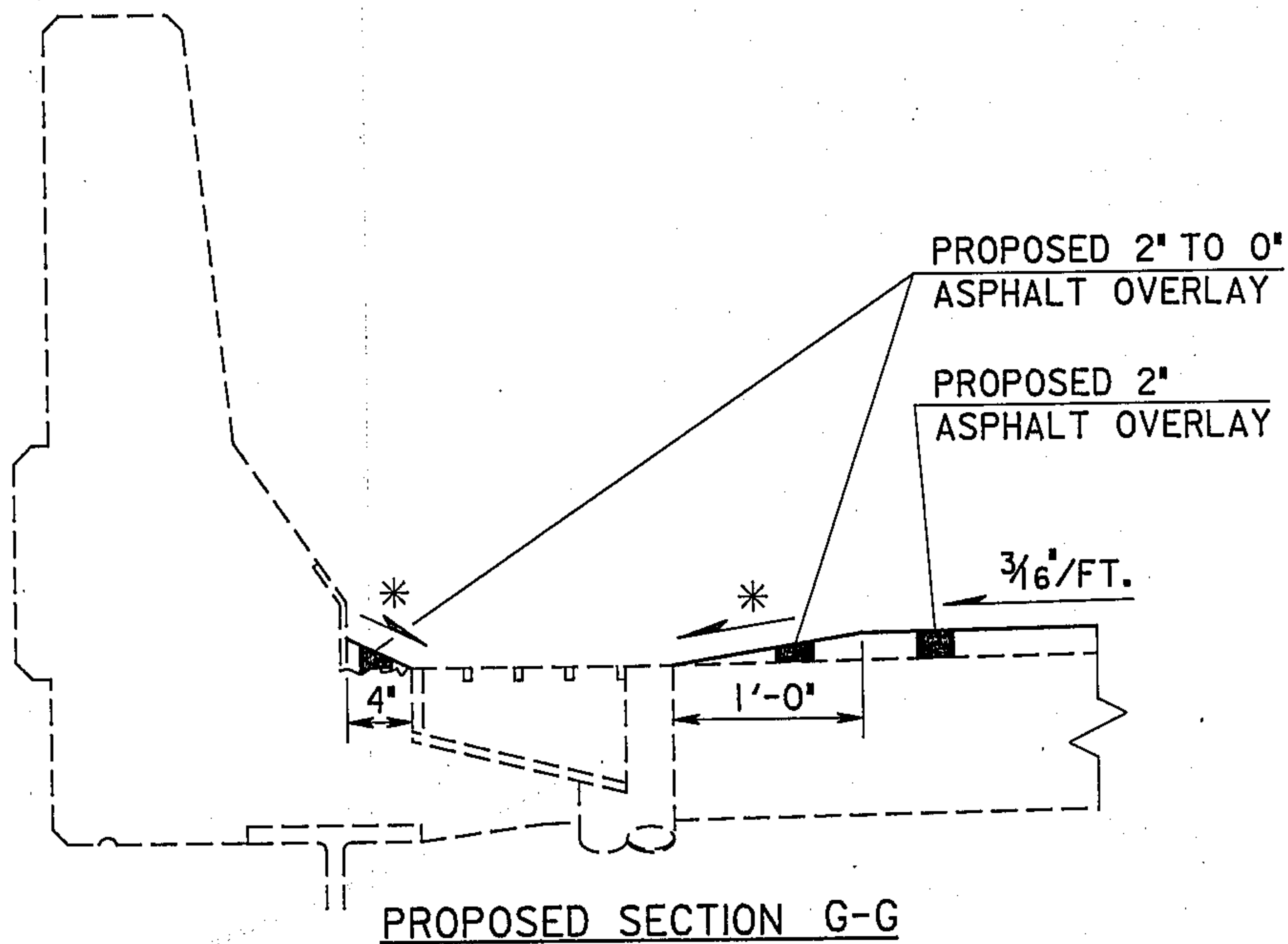
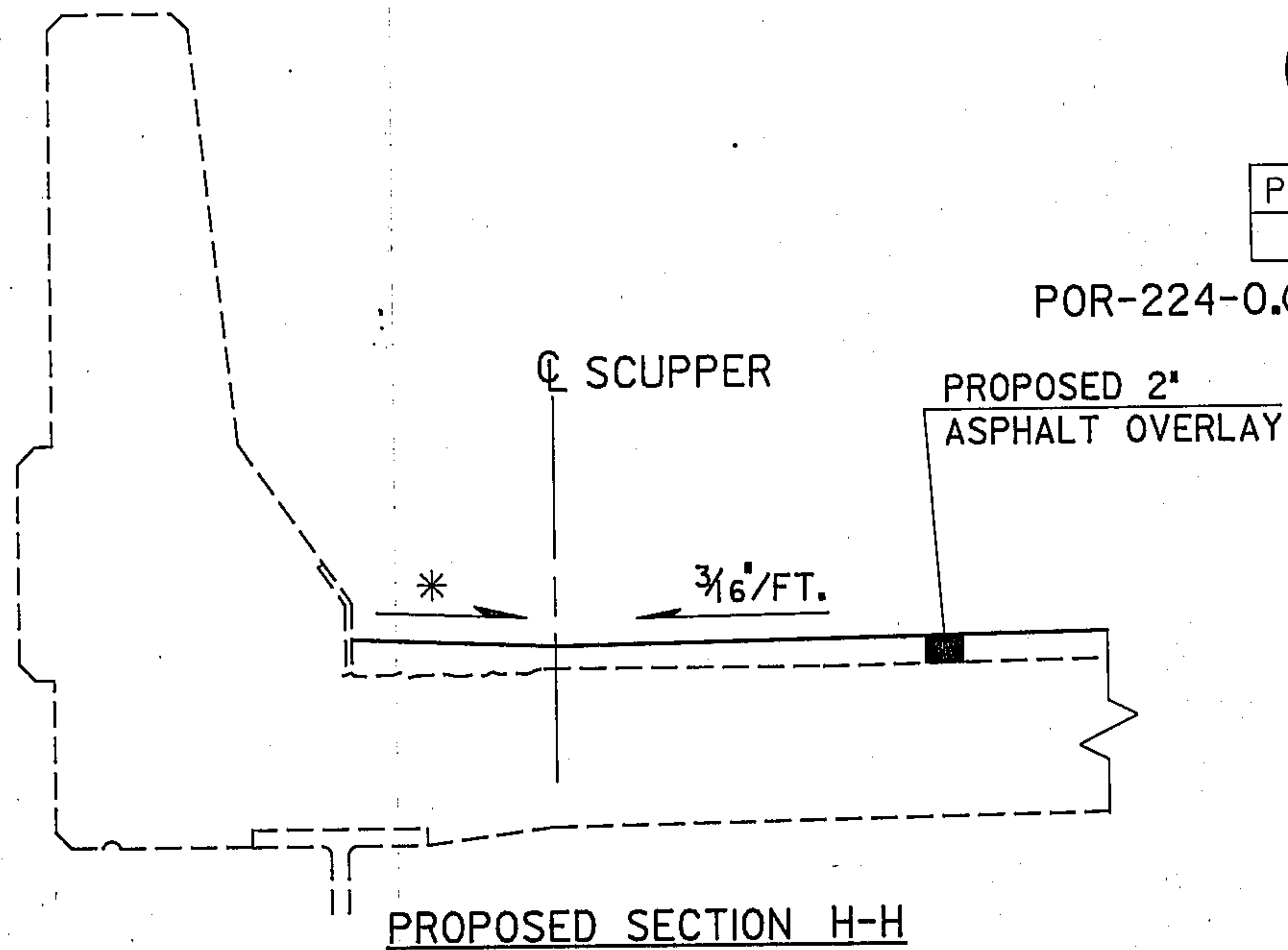
29
89

PLAN NO.
148

POR-224-0.00-9.77



TYPICAL OVERLAY DETAIL AT SCUPPERS



BRIDGE No. 0104
OVERLAY DETAILS AT SCUPPERS

* - SLOPE TO DRAIN

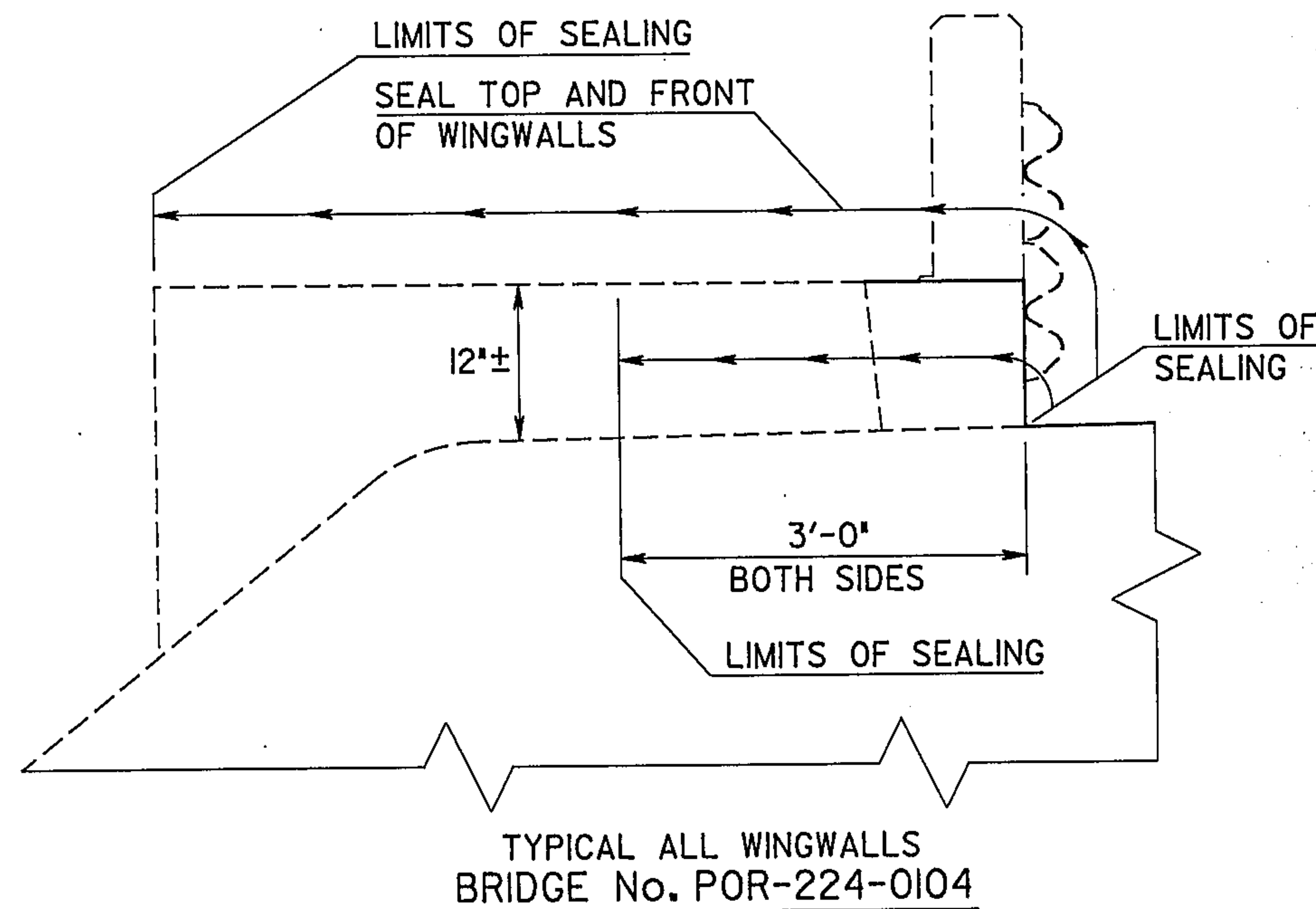
ITEM SPECIAL - SEALING OF CONCRETE SURFACES (EPOXY)

(SEE PROPOSAL NOTE)
BRIDGE No. POR-224-0104

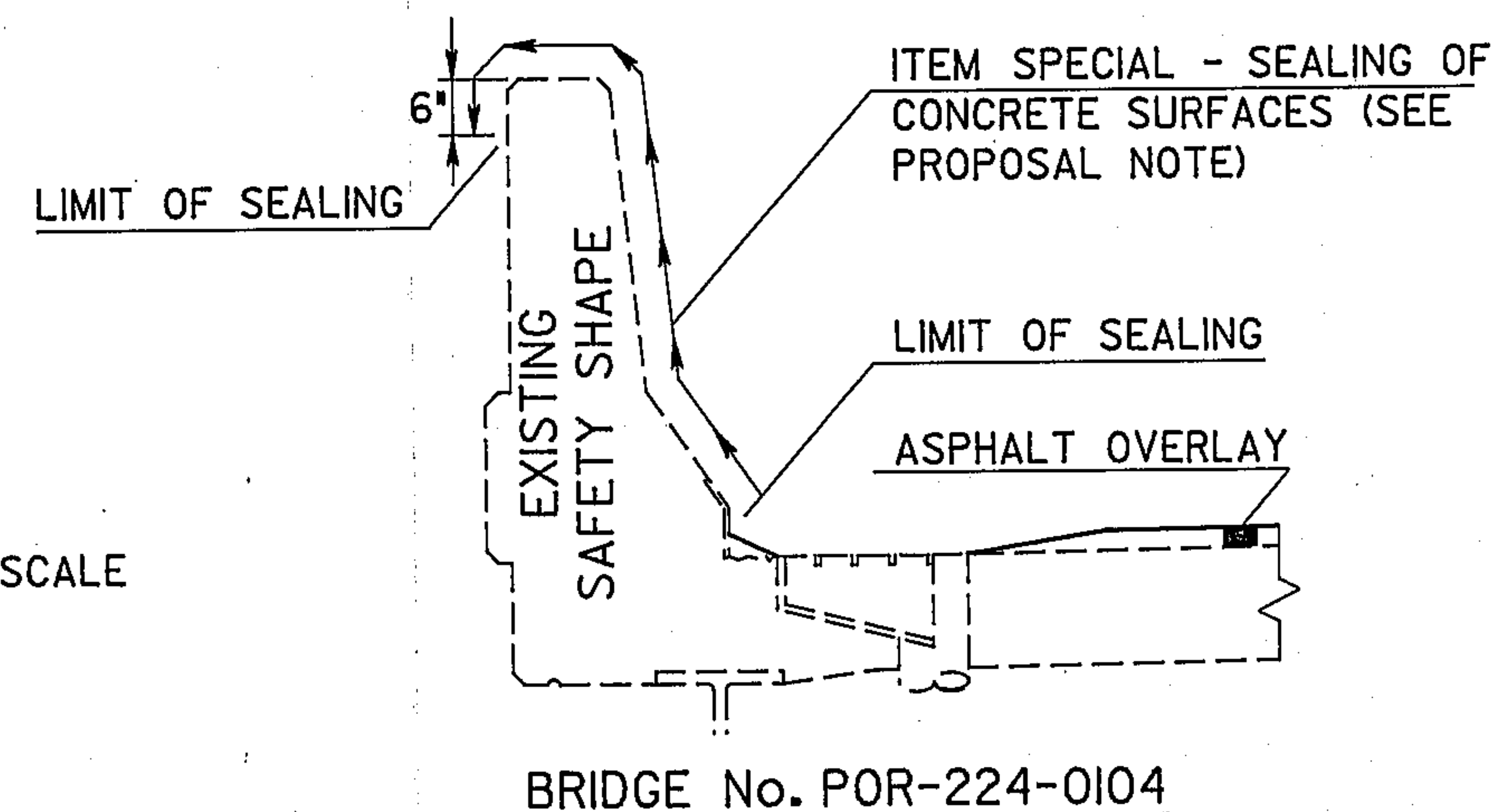
30
89

PLAN NO.
148

POR-224-0.00-9.77



NO SCALE



BRIDGE SUPERSTRUCTURE IS TO BE SEALED THE FULL LENGTH OF THE BRIDGE, INCLUDING WINGWALLS, AND THE FOUR ENDS OF BRIDGE PARAPETS TO THE LIMITS SHOWN.

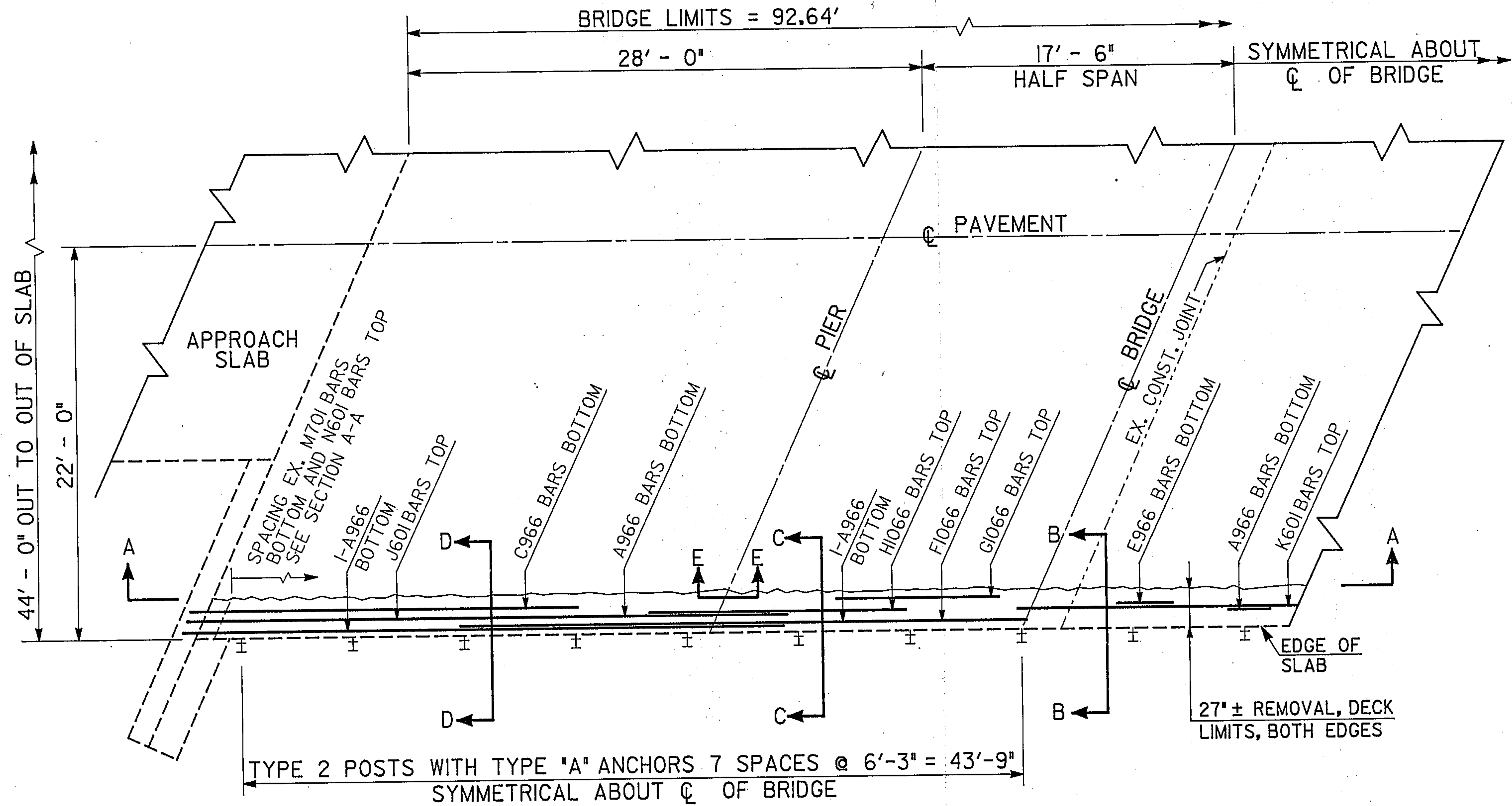
SEE NOTE IN PROPOSAL FOR COMPLETE SPECIFICATION.

PARTIAL SECTIONS OF BRIDGE SUPERSTRUCTURE
AT RIGHT ANGLE TO $\mathcal{Q}$ OF ROADWAY

ITEM SPECIAL - SEALING OF
CONCRETE SURFACES (EPOXY)
BRIDGE No. POR-224-0104

31
89

PLAN NO.
148



NOTE: FOR DETAILS OF GUARD RAIL SEE
STANDARD DRAWING DBR-2-73

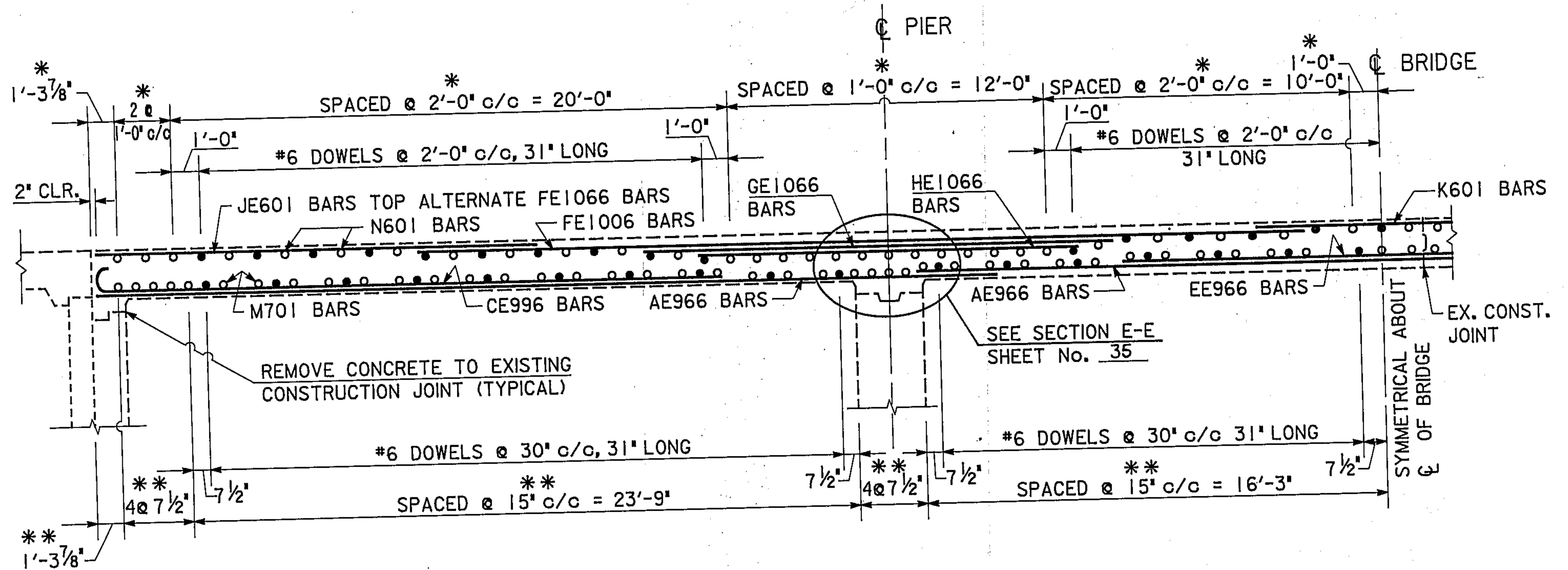
PART PLAN

LEGEND

— PROPOSED REBAR

PART PLAN

BRIDGE No. POR-224-0713



NO SCALE

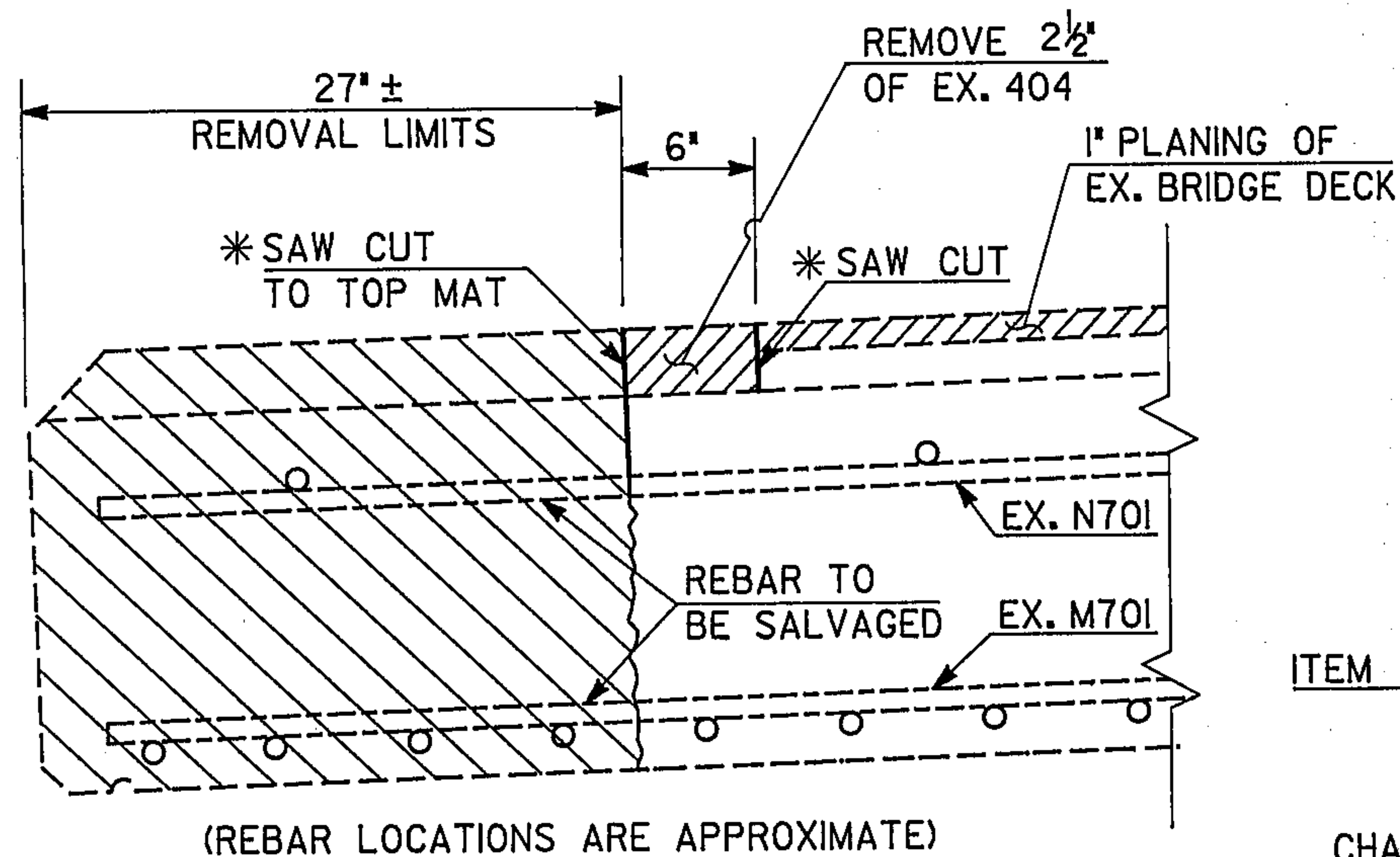
SECTION A-A

* SPACING FOR EXISTING N601 REBAR TO BE SALVAGED
 ** SPACING FOR EXISTING M701 REBAR TO BE SALVAGED

LEGEND

—●— PROPOSED REBAR
 ○ EXISTING REBAR

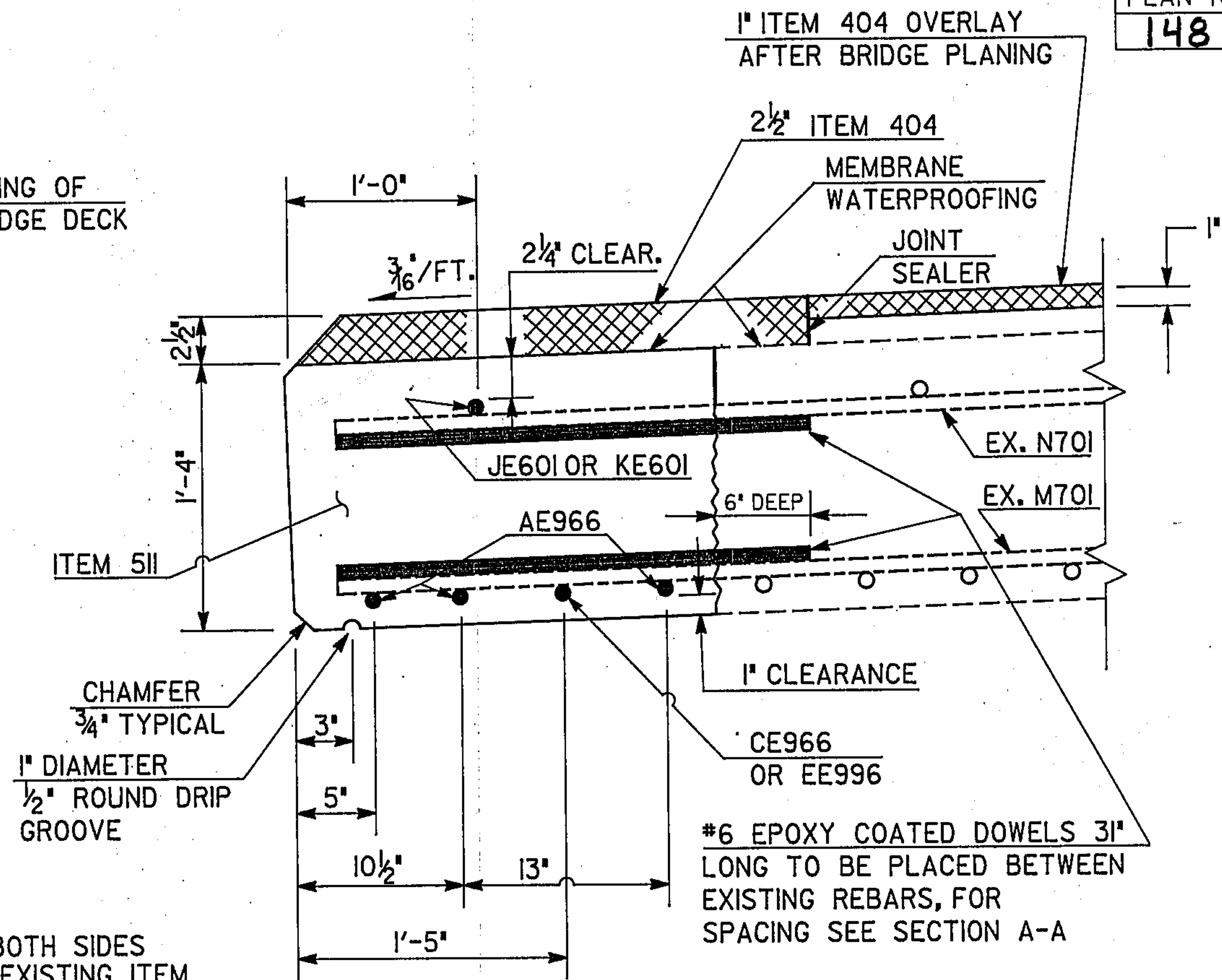
SECTION A-A
 BRIDGE No. POR-224-0713



EXISTING PARTIAL CROSS-SECTION
SECTION B-B AND D-D

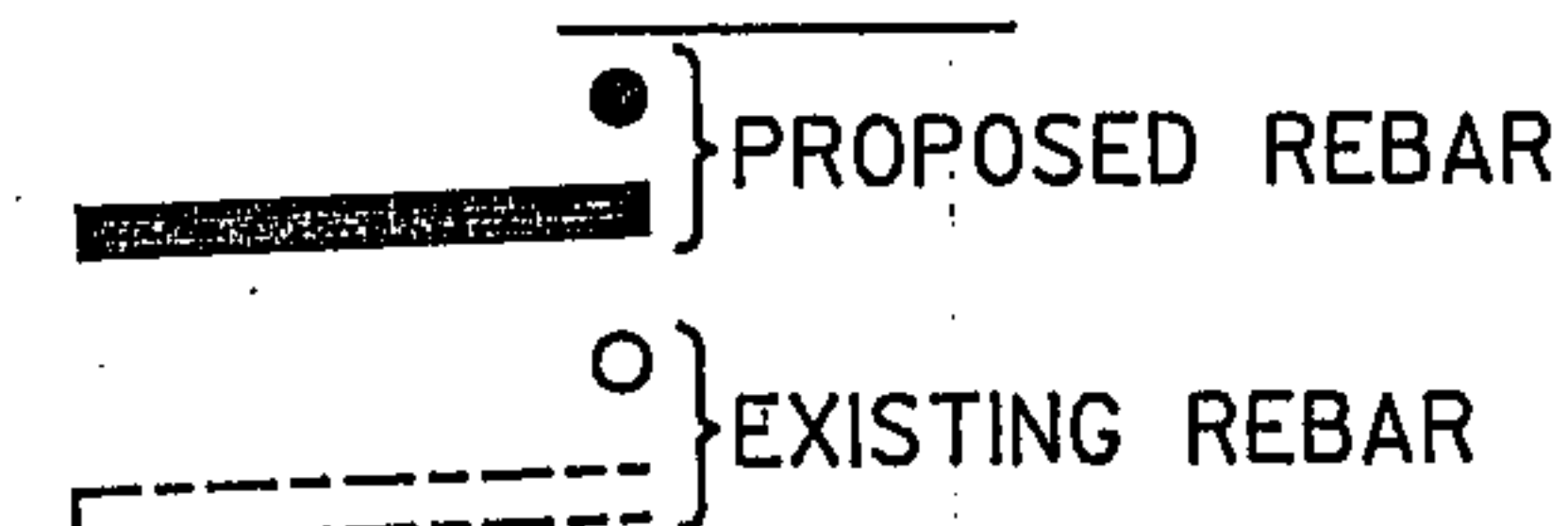
NOTES:

- 1) 27' ± FROM EDGE OF DECK, THE TOTAL LENGTH OF BRIDGE ON BOTH SIDES SAW CUT DECK TO THE TOP MAT AND REMOVE CONCRETE AND EXISTING ITEM 404 TO THE LIMITS SHOWN. ALL TRANSVERSE REBAR ARE TO BE SALVAGED. LONGITUDINAL REBAR SHALL BE REMOVED AND REPLACED IN KIND WITH EPOXY COATED REBAR. EXISTING ANCHOR BOLTS SHALL NOT BE SALVAGED. ADDITIONAL DOWELS ARE TO BE PLACED AS SHOWN IN DETAILS.
- 2) THE BRIDGE IS TO BE RECAST WITH ITEM 5II, CLASS 5 CONCRETE. TYPE 'A' ANCHOR BOLTS ARE TO BE USED (SEE STANDARD DRAWING DBR-2-73).
- 3) * SAW CUTS SHALL BE INCLUDED WITH ITEM 202 PORTIONS OF STRUCTURES REMOVED FOR PAYMENT.

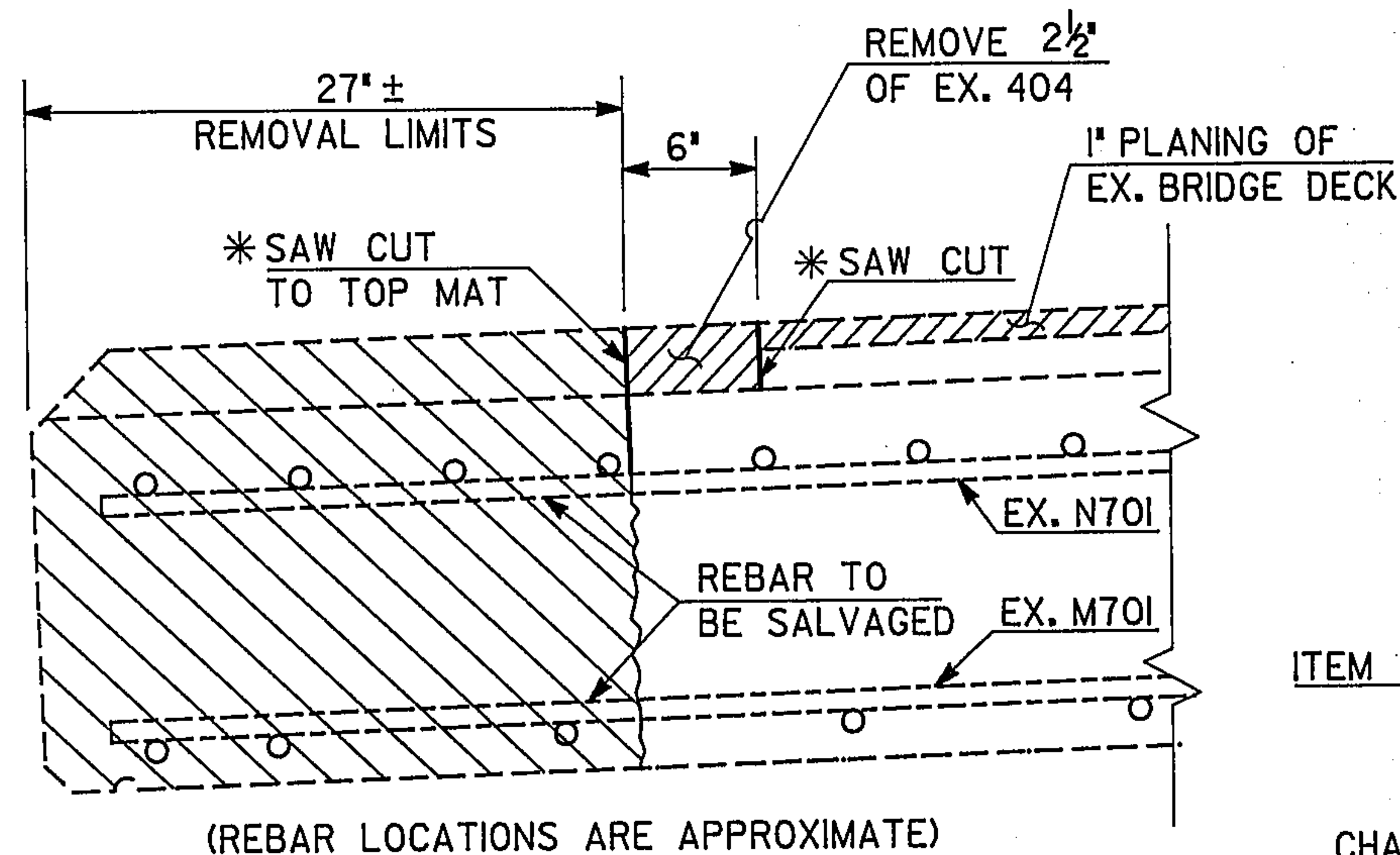


PROPOSED SECTION
SECTION B-B AND D-D

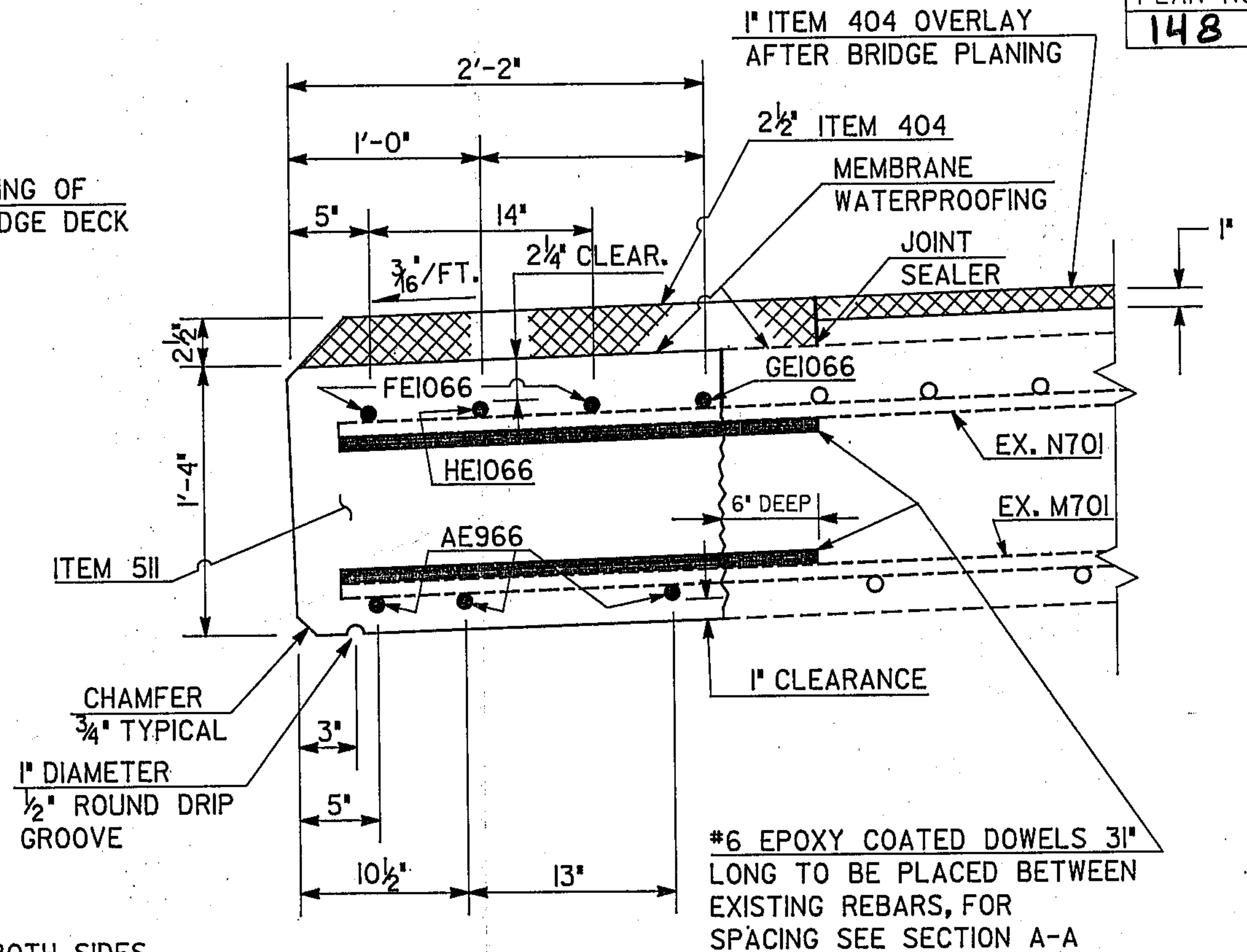
LEGEND



SECTION B-B AND D-D
BRIDGE No. POR-224-0713



EXISTING PARTIAL CROSS-SECTION
SECTION C-C



PROPOSED SECTION
SECTION C-C

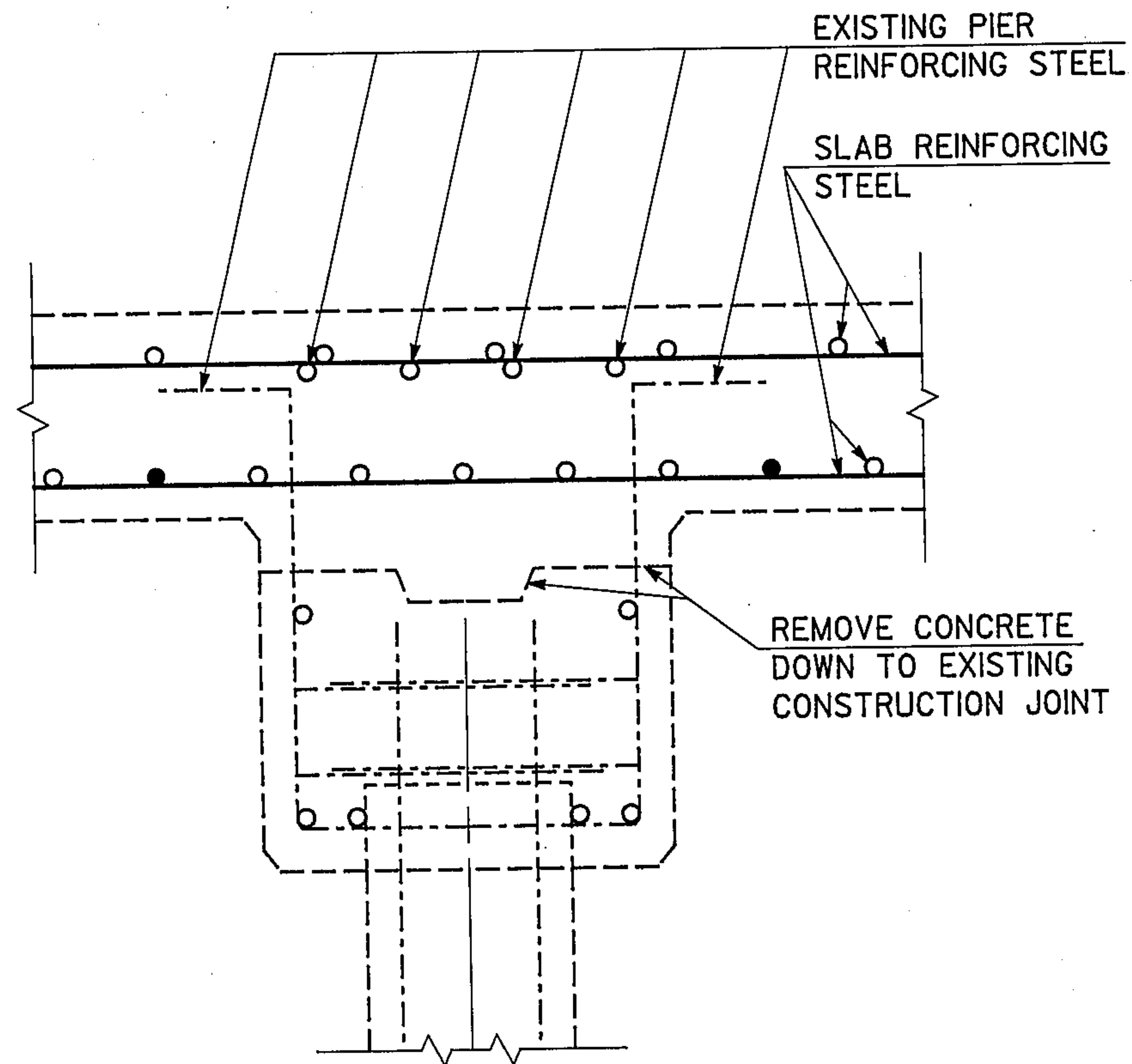
NOTES:

- 1) 27' ± FROM EDGE OF DECK, THE TOTAL LENGTH OF BRIDGE ON BOTH SIDES SAW CUT DECK TO THE TOP MAT AND REMOVE CONCRETE AND EXISTING ITEM 404 TO THE LIMITS SHOWN. ALL TRANSVERSE REBAR ARE TO BE SALVAGED. LONGITUDINAL REBAR SHALL BE REMOVED AND REPLACED IN KIND WITH EPOXY COATED REBAR. EXISTING ANCHOR BOLTS SHALL NOT BE SALVAGED. ADDITIONAL DOWELS ARE TO BE PLACED AS SHOWN IN DETAILS.
- 2) THE BRIDGE IS TO BE RECAST WITH ITEM 511, CLASS 5 CONCRETE. TYPE 'A' ANCHOR BOLTS ARE TO BE USED (SEE STANDARD DRAWING DBR-2-73).
- 3) * SAW CUTS SHALL BE INCLUDED WITH ITEM 202 PORTIONS OF STRUCTURES REMOVED FOR PAYMENT.

LEGEND

-  PROPOSED REBAR
-  EXISTING REBAR

SECTION C-C
BRIDGE No. POR-224-0713

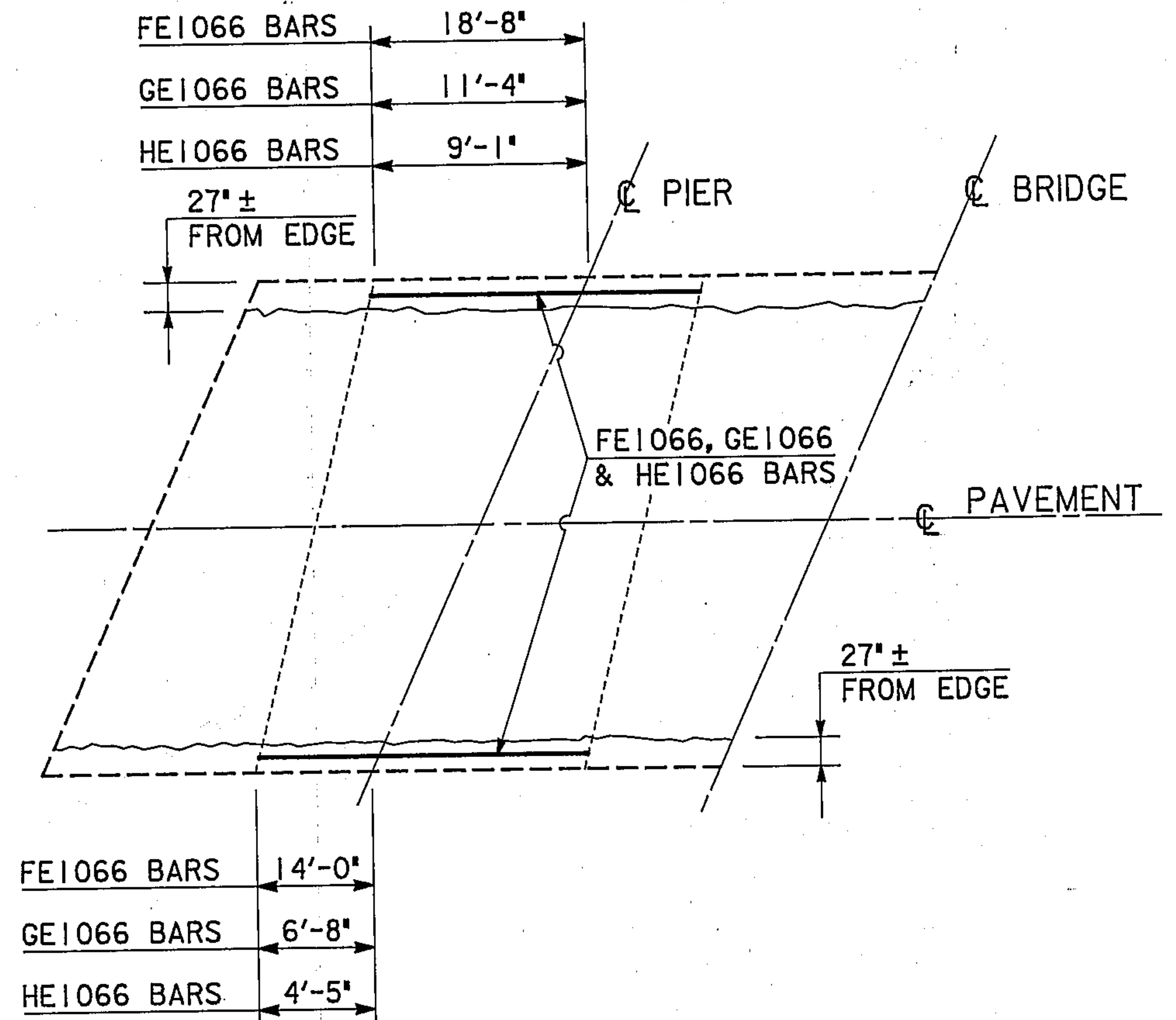


SECTION E-E
BARS OVER PIERS

NO SCALE

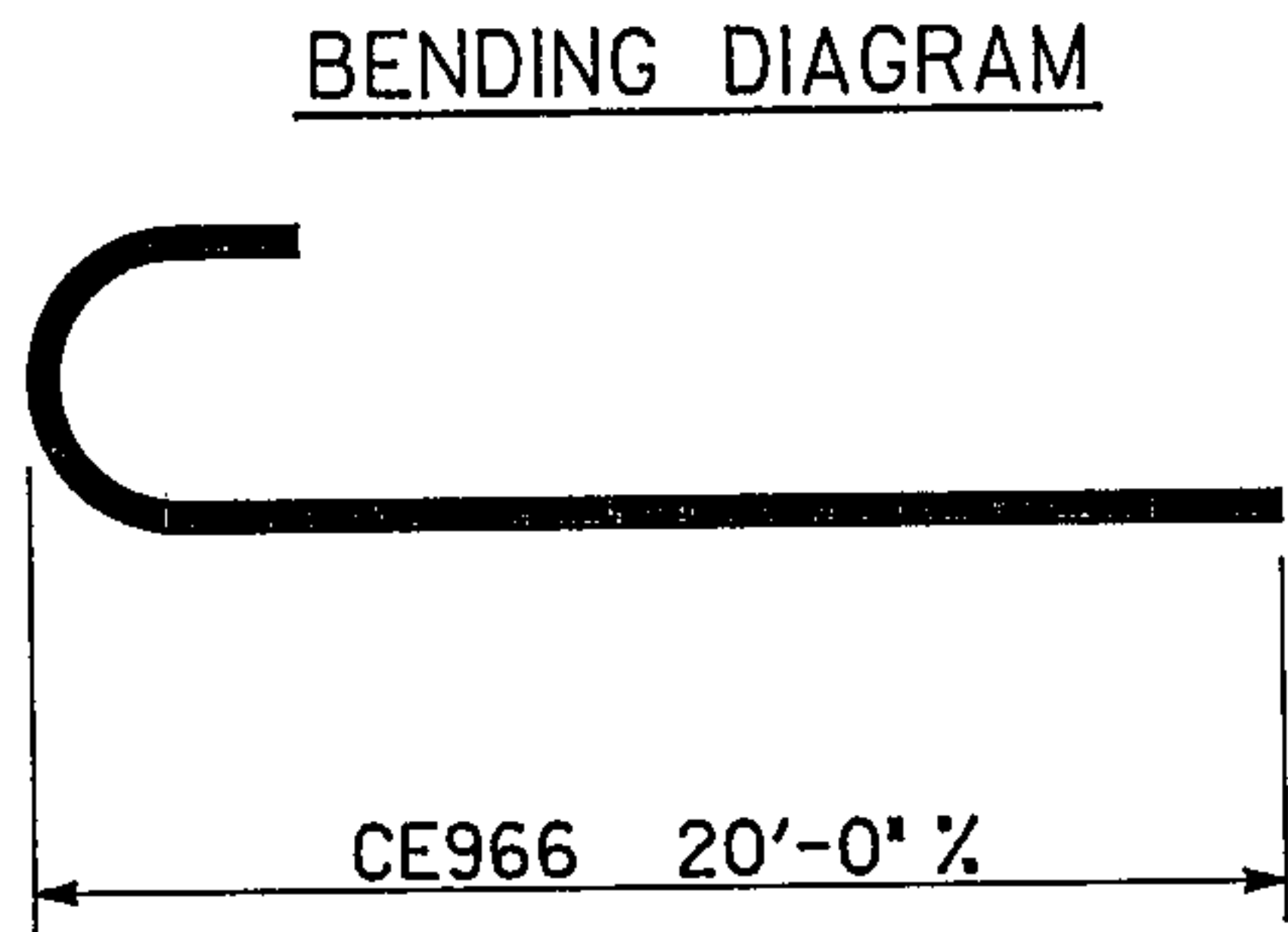
LEGEND

- } PROPOSED REBAR
- } EXISTING REBAR



PLACEMENT DIAGRAM FOR FE, GE & HE BARS
OVER PIERS

SECTION E-E AND
PLACEMENT DIAGRAM FOR FE, GE & HE BARS
BRIDGE No. POR-224-0713



509 EPOXY COATED REINFORCING STEEL & 510 DOWEL HOLES				
STEEL LIST				
STRUCTURE No, POR-224-0713				
MARK	No.	LENGTH	WEIGHT	SHAPE
AE966	24	32'-8"	2666	STRAIGHT
CE966	4	21'-3"	288	BENT
EE966	4	17'-2"	232	STRAIGHT
FE1066	8	31'-3"	1076	STRAIGHT
GE1066	4	16'-11"	292	STRAIGHT
HE1066	4	13'-6"	232	STRAIGHT
JE601	4	16'-6"	100	STRAIGHT
KE601	2	9'-0"	28	STRAIGHT
#6 DOWELS	33	2'-7"	128	STRAIGHT
TOTAL POUNDS			5042	
DOWEL HOLES 33 EACH				

BENDING DIAGRAM AND STEEL LIST

BRIDGE No. POR-224-0713

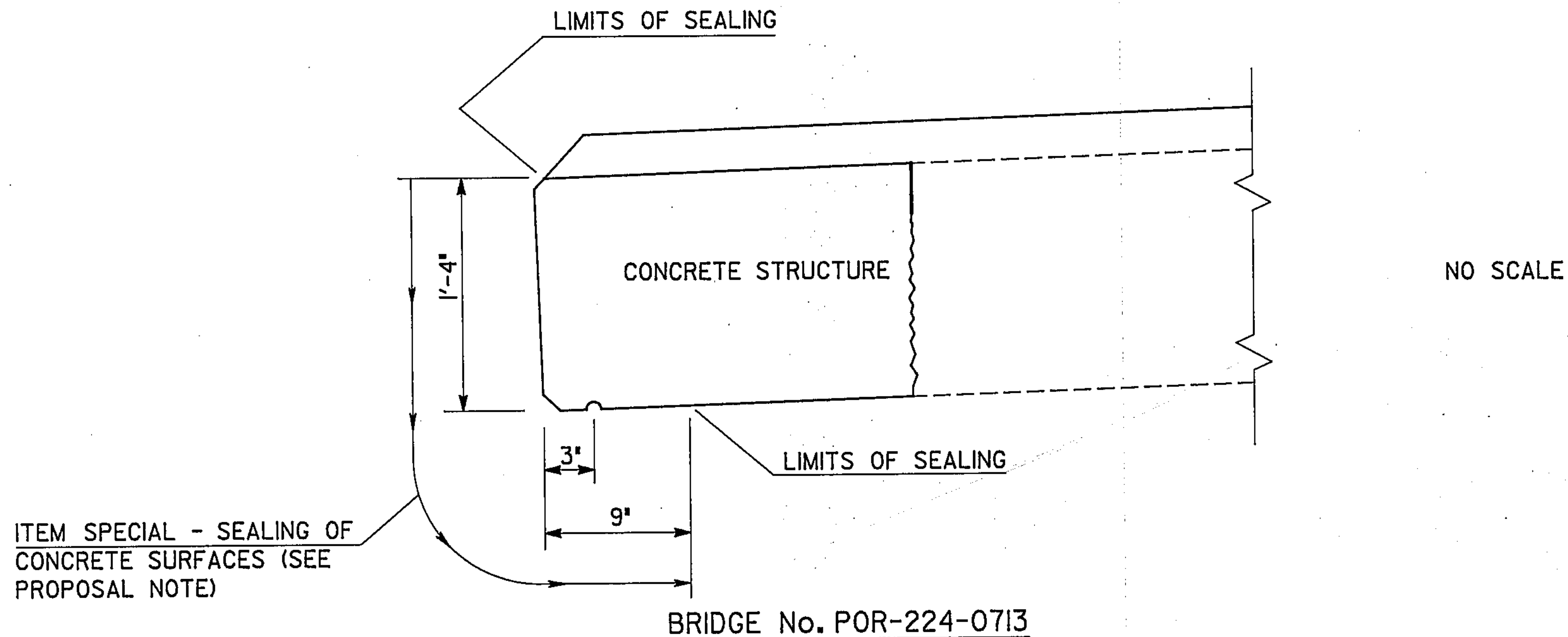
ITEM SPECIAL - SEALING OF CONCRETE SURFACES (EPOXY)

37
89

(SEE PROPOSAL NOTE)
BRIDGE No. POR-224-0713

PLAN NO.
148

POR-224-0.00-9.77



BRIDGE SUPERSTRUCTURE IS TO BE SEALED THE FULL LENGTH OF THE BRIDGE
TO THE LIMITS SHOWN.

A QUANTITY HAS BEEN ADDED TO SEAL THE TOPS OF THE FOUR WINGWALLS AT
BRIDGE No. 0713

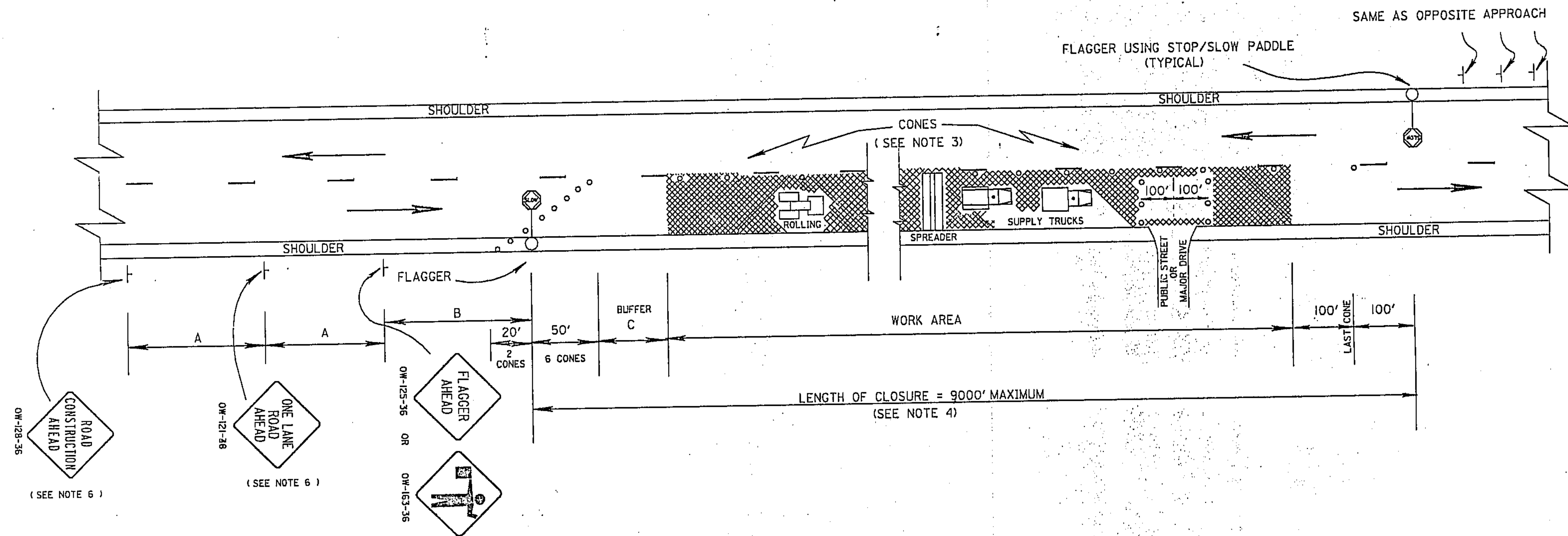
SEE NOTE IN PROPOSAL FOR COMPLETE SPECIFICATION.

PARTIAL SECTION OF BRIDGE SUPERSTRUCTURE
AT RIGHT ANGLE TO ϕ OF ROADWAY

ITEM SPECIAL - SEALING OF
CONCRETE SURFACES (EPOXY)
BRIDGE No. POR-224-0713

BRIDGE No. POR-224-0713

148



GENERAL NOTES:

1. THE LOCATION OF THE ADVANCE WARNING SIGNS SHOULD ONLY BE ADJUSTED TO PROVIDE FOR ADEQUATE SIGHT DISTANCE FOR THE EXISTING VERTICAL AND HORIZONTAL ROADWAY ALIGNMENT.
2. FLAGGERS, ONE FOR EACH DIRECTION SHALL BE USED TO CONTROL TRAFFIC CONTINUOUSLY FOR AS LONG AS A ONE LANE OPERATION IS IN EFFECT. THE FLAGGERS SHALL BE ABLE TO COMMUNICATE WITH EACH OTHER AT ALL TIMES.
3. CONES ON THE TAPERS SHALL BE PLACED AT 10' CENTER TO CENTER. CONES SHALL BE SPACED AT 200' CENTER TO CENTER PARALLEL TO THE CENTER LANE BUT 1 TO 2 FT. WITHIN THE CLOSED LANE. CONES MAY BE TEMPORARILY MOVED OFF THE ROAD IN THE IMMEDIATE VICINITY OF THE SUPPLY TRUCKS, PAVING SPREADER OR ROLLERS BUT SHALL BE IMMEDIATELY REPLACED WHEN THAT ACTIVITY HAS PASSED BY THE CONE LOCATION. CONES SHALL HAVE A MINIMUM HEIGHT OF 28 INCHES AND SHALL BE STABILIZED TO PREVENT THEM FROM BLOWING OVER. CLOSURES AT NIGHT SHALL USE DRUMS RATHER THAN CONES.
4. IT IS REQUIRED THAT THE LENGTH OF CLOSURE BE KEPT TO A MINIMUM AT ALL TIMES, AS DIRECTED BY THE ENGINEER.

WHEN THE AMBIENT TEMPERATURE EXCEEDS 80 DEGREES F, THE ENGINEER MAY INCREASE THE LENGTH OF CLOSURE TO ALLOW FOR SUFFICIENT COOLING OF NEW PAVEMENT.

4. CONT. THE ENGINEER MAY SHORTEN THE MAXIMUM ALLOWABLE LENGTH OF CLOSURE TO RELIEVE EXCESSIVE TRAFFIC BACKUPS OR TO IMPROVE TRAFFIC OPERATION.

ALL TRAFFIC CONTROL SIGNS, CONES (OR DRUMS), AND THE FLAGGER SHALL BE MOVED FORWARD AS A GROUP BEFORE THE CLOSURE REACHES THE MAXIMUM ALLOWABLE LENGTH. ONLY ONE SIDE OF THE ROAD SHALL BE CLOSED AT ANY TIME.

5. WITHIN THE LENGTH OF CLOSURE, PROVISION SHALL BE MADE TO CONTROL TRAFFIC ENTERING FROM INTERSECTING STREETS AND MAJOR DRIVES AS NECESSARY TO PREVENT WRONG WAY MOVEMENTS AND TO KEEP VEHICLES OFF OF NEW PAVEMENT NOT READY FOR TRAFFIC. AS A MINIMUM, THE CONTRACTOR SHALL:

- A) PROVIDE AN ADDITIONAL FLAGGER AT EVERY PUBLIC STREET INTERSECTION AND MAJOR DRIVEWAY AND -
- B) PLACE A ROW OF 3 CONES ACROSS THE CLOSED LANE APPROXIMATELY 100 FT. ON EACH SIDE OF AN INTERSECTION.
- C) ADDITIONAL ROWS OF 3 CONES EACH SHALL BE PLACED ACROSS THE CLOSED LANE AT A MAXIMUM SPACING OF 1000 FT. BETWEEN ROWS OF CONES.

ROWS OF CONES MAY BE MOVED OFF THE ROAD TO ALLOW PASSAGE OF ROLLERS, PAVING SPREADER OR SUPPLY TRUCKS BUT SHALL BE MOVED BACK ONTO THE ROAD WHEN THE ACTIVITY HAS PASSED.

6. THE TYPE A FLASHING WARNING LIGHTS ARE REQUIRED ON THE 'ROAD CONSTRUCTION AHEAD' (OW-128) AND THE 'ONE LANE ROAD AHEAD' (OW-121) SIGNS WHENEVER A NIGHT LANE CLOSURE IS NECESSARY.
7. TYPE C STEADY BURNING WARNING LIGHTS SHALL BE ERECTED ON EACH DRUM FOR NIGHT LANE CLOSURES.
8. ADEQUATE AREA ILLUMINATION OF EACH FLAGGER STATION SHALL BE PROVIDED AT NIGHT BY USING 150 WATT MINIMUM HIGH PRESSURE SODIUM LUMINAIRES OR 250 WATT MINIMUM MERCURY LUMINAIRES. LUMINAIRES SHALL BE LOCATED ADJACENT TO ONE FLAGGER STATION FOR EACH DIRECTION OF TRAFFIC.

DISTANCE	A	B	C
URBAN	200	350	100
RURAL	500	650	200

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE C & M SPECIFICATIONS AS WELL AS IN ACCORDANCE WITH PART 7 OF OMTCD. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS TO PROVIDE THIS METHOD OF TRAFFIC CONTROL SHALL BE INCIDENTAL TO THE LUMP SUM BID FOR 614 MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

97.IIFED	DATE
FLAGGER CLOSING 1 LANE OF A 2 LANE HIGHWAY FOR PAVING OPERATIONS WITH CONES	04/05/89
PLAN INSERT SHEET	

ITEM

820

BARRIER

REFLECTOR

SUB-SUMMARY

FED. RD.
DIVISION

STATE

PROJECT

□

OHIO

PLAN NO. 148

PLAN NO.

148



ITEM 820	SHEET TOTAL
----------	-------------

PAVEMENT MARKING SUB-SUMMARY

FED. RD. DIVISION	STATE	PROJECT
5	OHIO	

41
89

PLAN NO. 148

CO.	ROUTE	S.L.M.	FROM	S.L.M.	TO	621 QUANTITIES			PARTICIPATION	621 CENTER LINE	
						CENTER LINES MILES					REMARKS
						TOTAL	DASHED	SOLID			
POR.	U.S. 224	0.00	0.00 AT S.R. 532	2.28	BEGIN MEDIAN	2.35	2.03	0.76			
POR.	U.S. 224	2.56	END MEDIAN	7.50	BEGIN MEDIAN	5.06	4.37	2.50			
POR.	U.S. 224	7.84	END MEDIAN	9.13	END MEDIAN	1.37	1.16	0.55			
POR.	U.S. 224	9.70	END MEDIAN	9.84	0.14 MILE EAST OF MEDIAN	0.18	0.08	0.28			
						8.96	7.64	4.09			
CENTER LINE TOTAL											

CENTER LINE TOTAL						8.96	7.64	4.09		
CO.	ROUTE	S.L.M.	FROM	S.L.M.	TO	621 QUANTITIES			PARTICIPATION	621 LANE LINE
						4" LANE LINES MILES				
						TOTAL	DASHED	SOLID		REMARKS
POR.	U.S. 224	2.28	BEGIN MEDIAN	2.56	END MEDIAN	0.56	0.56			
POR.	U.S. 224	7.50	BEGIN MEDIAN	7.84	END MEDIAN	0.68	0.68			
POR.	U.S. 224	9.13	BEGIN MEDIAN	9.70	END MEDIAN	*1.04	*1.04			* 0.05 MILE EQUATION DEDUCTED
LANE LINE TOTAL						2.28	2.28			
						YELLOW EDGE LINE QUANTITIES				

CO.	ROUTE	S.L.M.	FROM	S.L.M.	TO	WHITE EDGE LINE QUANTITIES				YELLOW EDGE LINE QUANTITIES				621 EDGE LINE
						TOTAL MILES	HIGHWAY MILES	RAMP MILES	PART.	TOTAL MILES	HIGHWAY MILES	RAMP MILES	PART.	
POR.	U.S. 224	0.00	0.00 AT S.R. 532	2.28	BEGIN MEDIAN	4.46	4.46			0.56	0.56			
POR.	U.S. 224	2.28	BEGIN MEDIAN	2.56	END MEDIAN	0.56	0.56							
POR.	U.S. 224	2.56	END MEDIAN	7.50	BEGIN MEDIAN	9.88	9.88			0.68	0.68			
POR.	U.S. 224	7.50	BEGIN MEDIAN	7.84	END MEDIAN	0.68	0.68							
POR.	U.S. 224	7.84	END MEDIAN	9.13	BEGIN MEDIAN	2.58	2.58			*1.04	*1.04			*0.05 MILE EQUATION DEDUCTED
POR.	U.S. 224	9.13	BEGIN MEDIAN	9.70	END MEDIAN	*1.04	*1.04							
POR.	U.S. 224	9.70	END MEDIAN	9.84	0.14 EAST OF MEDIAN	0.28	0.28							
EDGE LINE TOTAL						19.48	19.48			2.28	2.28			

EDGE LINE TOTAL						19.48	19.48		2.26	2.26	
CO.	ROUTE	S.L.M.	FROM	S.L.M.	TO	62I QUANTITIES		PARTICIPATION	62I CHANNELIZING LINE		
						8" CHANNELIZING LINES			REMARKS		
						MILES	LIN. FT.				
POR.	US 224 & SR 43			2.42			595				
POR.	US 224 & SR 44			7.71			370				

42
89

PLAN NO. 148

[illegible]

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

43
89

CO.	ROUTE	FROM		TO		621 QUANTITIES			PARTICIPATION	621 CENTER LINE REMARKS
		S.L.M.		S.L.M.		CENTER LINES MILES				
						TOTAL	DASHED	SOLID		
POR.	S.R. 43	2.73	0.03 MILE S. OF U.S. 224	2.75	0.01 MILE S. OF U.S. 224	0.02	-	0.04		
POR.	S.R. 43	2.77	0.01 MILE N. OF U.S. 224	2.79	0.03 MILE N. OF U.S. 224	0.02	-	0.04		
POR.	S.R. 44	2.81	0.07 MILE S. OF U.S. 224	2.87	0.01 MILE S. OF U.S. 224	0.09	-	0.18		
POR.	S.R. 44	2.89	0.01 MILE N. OF U.S. 224	2.95	0.07 MILE N. OF U.S. 224	0.09	-	0.18		
CENTER LINE TOTAL						0.22	-	0.44		

[illegible]

CO.		ROUTE	S.L.M.	FROM	S.L.M.	TO	WHITE EDGE LINE QUANTITIES				YELLOW EDGE LINE QUANTITIES				621 EDGE LINE
							TOTAL MILES	HIGHWAY MILES	RAMP MILES	PART.	TOTAL MILES	HIGHWAY MILES	RAMP MILES	PART.	REMARKS
POR.		S.R. 43	2.73	0.03 MILE S. OF U.S. 224	2.75	0.01 MILE S. OF U.S. 224	0.04	0.04							
POR.		S.R. 43	2.77	0.01 MILE N. OF U.S. 224	2.79	0.03 MILE N. OF U.S. 224	0.04	0.04							
POR.		S.R. 44	2.81	0.07 MILE S. OF U.S. 224	2.87	0.01 MILE S. OF U.S. 224	0.12	0.12							
POR.		S.R. 44	2.89	0.01 MILE N. OF U.S. 224	2.95	0.07 MILE N. OF U.S. 224	0.12	0.12							
EDGE LINE TOTAL							0.32	0.32							

EDGE LINE TOTAL				SIZE		SIZE		62I CHANNELIZING LINE	
CO.	ROUTE	S.L.M.	FROM	S.L.M.	TO	62I QUANTITIES		PARTICIPATION	REMARKS
						8" CHANNELIZING LINES			
						MILES	LIN. FT.		
POR.	S.R. 44 & U.S. 224			2.90			230		
CHANNELIZING LINE TOTAL							230		

847 AUXILIARY MARKING (947.03, TYPE AI, INLAID)																			
CO.	ROUTE	S.L.M.		24" TRANSVERSE LINES		STOP LINE 24" LIN.FT.	12" CROSSWALK LINES		WORD ON PAVEMENT				LANE ARROWS		RAILROAD SYMBOL ON PAVEMENT	DOTTED LINES		PAINTED ISLAND MARKINGS	REMARKS
				WHITE LIN.FT.	YELLOW LIN.FT.		WHITE LIN.FT.	ONLY 96" EACH	SCHOOL 96" EACH	LEFT TURN EACH	RIGHT TURN EACH	THRU. EACH	COMB. EACH	WHITE LIN.FT.		YELLOW LIN.FT.			
		FROM	TO															SQ.FT.	
POR.	S.R. 43 & U.S. 224		2.76			82													
POR.	S.R. 44 & U.S. 224		2.90		228	74		2			3								
AUXILIARY MARKING TOTALS					228	156		2			3								

INITIAL PAVEMENT MARKINGS FOR RESURFACED SECTIONS GENERAL NOTES

In addition to the requirements of 621 and 847 the following shall apply:

621 and 847 Materials

The materials used on this project shall either be 621 fast dry traffic paint or 847 thermoplastic material approved by prequalification.

The Contractor shall provide storage for all materials and shall transport materials to the site where used. Glass beads shall be kept dry during storage and prior to use.

The Laboratory will furnish the names of manufacturers and code numbers from its approved list of prequalified white and yellow paint upon request.

621 and 847 Special Equipment

The Contractor's striping shall be equipped with an odometer graduated to 1/100 of a mile. The Engineer shall determine the degree of accuracy of the Contractor's odometer and establish an adjustment factor as may be required to accurately determine the pay item quantities. The Engineer shall periodically check the odometer's operation to assure maintenance to accurate measurements.

Failure of the odometer to function properly shall be cause to stop the work until the odometer is made to function properly. On short projects the Engineer may approve alternate methods to accurately measure the length of the various types of markings applied. If measurement of the work has to be done by the Department, the cost of the Department labor and equipment plus 10 percent shall be deducted from payment due the Contractor for the work. When measuring lane, edge and/or center line marking, the odometer shall be started at the first marked line and remain in operation, until the end of the section being marked, where it shall be shut off and the reading of the odometer recorded.

Electrical foot counters shall be provided and installed in the application equipment used to apply long line markings. The counters shall individually tabulate the amount of footage applied for each line, whether solid or dashed. The counters shall be a six digit type with a reset feature.

The Contractor shall use an accurate dashing mechanism, capable of being easily adjusted, to place lane or center line markings as specified in the plans or as directed by the Engineer.

Provision for the described special equipment by the Contractor shall be incidental to the application.

621 Material Quantity Measurement

The quantity of marking material or glass beads per unit of measurement will be computed by the Engineer at the end of each day's work. A day's applied mileage of less than 2 miles may be included in the next day's applied markings for the purpose of computing marking material and bead application rates.

The Contractor shall provide a calibrated measuring device acceptable to the Engineer for measuring material in the striping tanks.

The quantity of marking material used shall be determined by measuring the marking material in the tanks before and after marking material is applied. The Contractor shall cooperate with the Engineer in providing measurements whenever requested. The marking material application rate shall be determined by dividing the total gallons used by the appropriate marking length as determined from the foot counter as described within the Special Equipment Section of these notes. Any determination of pay deduction resulting from shortages in marking quantities shall be based on the measurements obtained by this method. The amount of glass beads applied will be ascertained by the Engineer by observation and from information supplied by the Contractor as to the quantity used.

847 Material Quantity Measurement

The quantity of marking material or glass beads per unit of measurement will be computed by the Engineer at the end of each day's work. A day's applied quantity of less than 100 pounds of marking material may be included in the next day's applied markings for the purpose of computing marking material and bead application rates.

The Contractor shall provide a calibrated measuring device acceptable to the Engineer for measuring material in the striping tanks.

The quantity of marking material used shall be determined by measuring the marking material before and after marking material is applied. The Contractor shall provide measurements whenever requested by the Engineer. The marking material application rate shall be determined by dividing the total pounds of thermoplastic material used by the appropriate marking length as determined from the foot counter as described within the Special Equipment Section of these notes. Any determination of pay deduction resulting from shortages in marking quantities shall be based on the measurements obtained by this method. The amount of glass beads applied shall be ascertained by the Engineer by observation and from information supplied by the Contractor as to quantity used.

INITIAL PAVEMENT MARKINGS FOR RESURFACED SECTIONS GENERAL NOTES

621 Layout and Premarking

In accordance with 621.05 the Contractor shall "T" no-passing zones in accordance with a no-passing zone log provided by the Engineer.

847 Layout and Premarking

In addition to the requirements of 847.04, premarking for auxiliary markings shall be located from schematic forms provided by the Engineer.

Markings shall not be applied over existing markings except when applying initial permanent markings over temporary markings of fast-dry paint. Temporary markings other than fast-dry paint shall be removed and the surface prepared to the satisfaction of the Engineer before permanent markings are applied.

621 and 847 Auxiliary Pavement Marking

For this project, auxiliary markings shall be defined as: Stop lines, crosswalk lines, transverse lines, railroad and school symbol markings, lane arrows, word on pavement, curb and island markings, parking lot stall markings and dotted lines except when used to extend edge lines.

847 Material Application Temperature

The Contractor shall provide a calibrated temperature sensing device which will accurately measure the temperature of the extruded thermoplastic material when it makes contact with the pavement. A temperature of 400°F to 440°F at point of application to road surface must be maintained at all times.

847 Material Application Rates

In addition to the requirements of 847 the minimum application rates shall be as follows:

Pounds Per Mile of Line	Width of Line (Inches)			
	4	8	12	24
Solid Line	2340	4680	7020	14040
Dashed Line	585	1170	1755	3510

133 Pounds Per 100 Square Feet

947.02 Thermoplastic Pavement Markings

Glass beads intermixed or dropped on 947.02 thermoplastic pavement marking material shall meet the following specification:

Sieve No.	% Retained
16	3 Max
20	5 to 20
40	65 to 95
50	0 to 5
Refractive Index:	1.50 to 1.60
Roundness:	80% Min
Coating:	Adhesion Promoting

The application rate of drop-on beads shall be a uniform 25 pounds of beads for each 100 square feet of thermoplastic material surface area.

862 Raised Pavement Markers

This Contract may include sections of roadway where plowable prismatic raised pavement markers are to be installed in the pavement. Raised pavement marker placement for a resurfaced section shall begin after the permanent pavement marking for that resurfaced section is completed and dry.

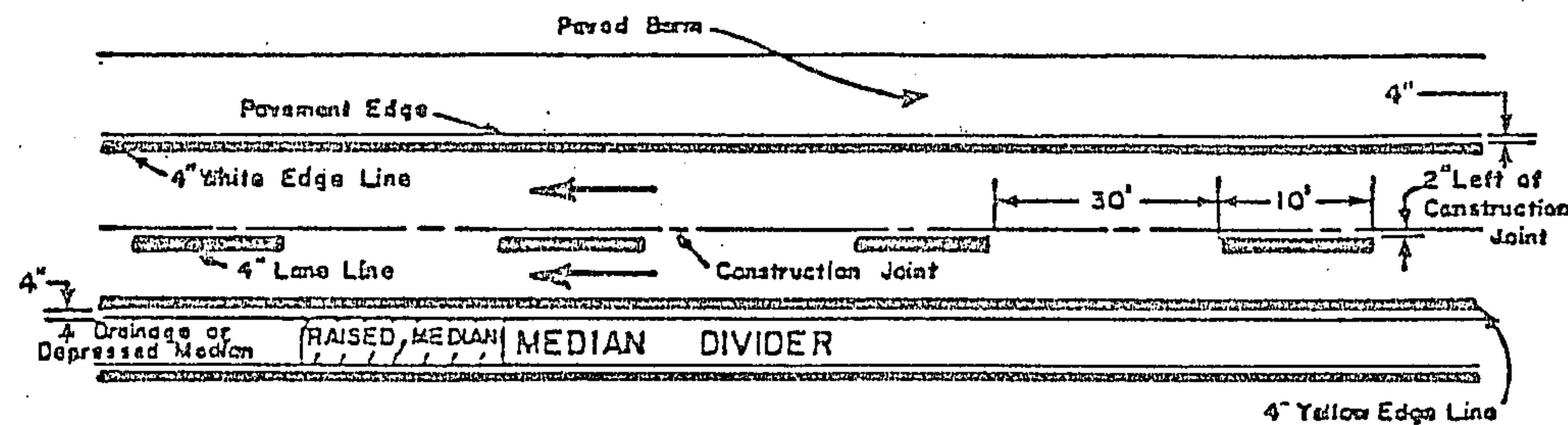
PAVEMENT MARKING TYPICAL DETAILS

FED. RD. DIV.	STATE	PROJECT	
5	OHIO		

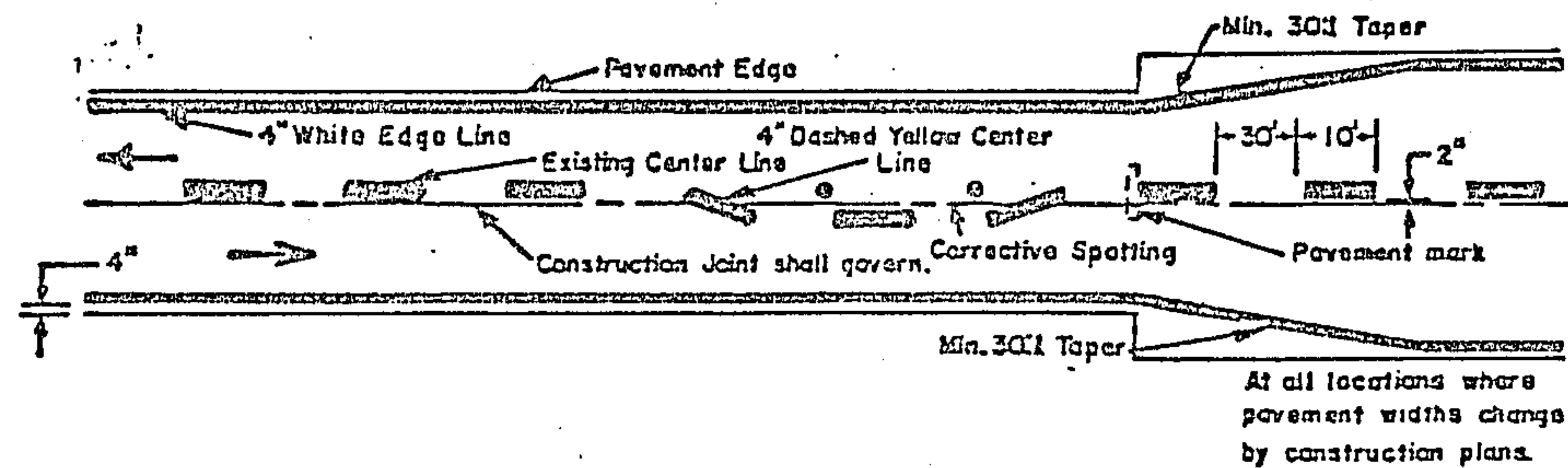
45
89

PLAN NO. 148

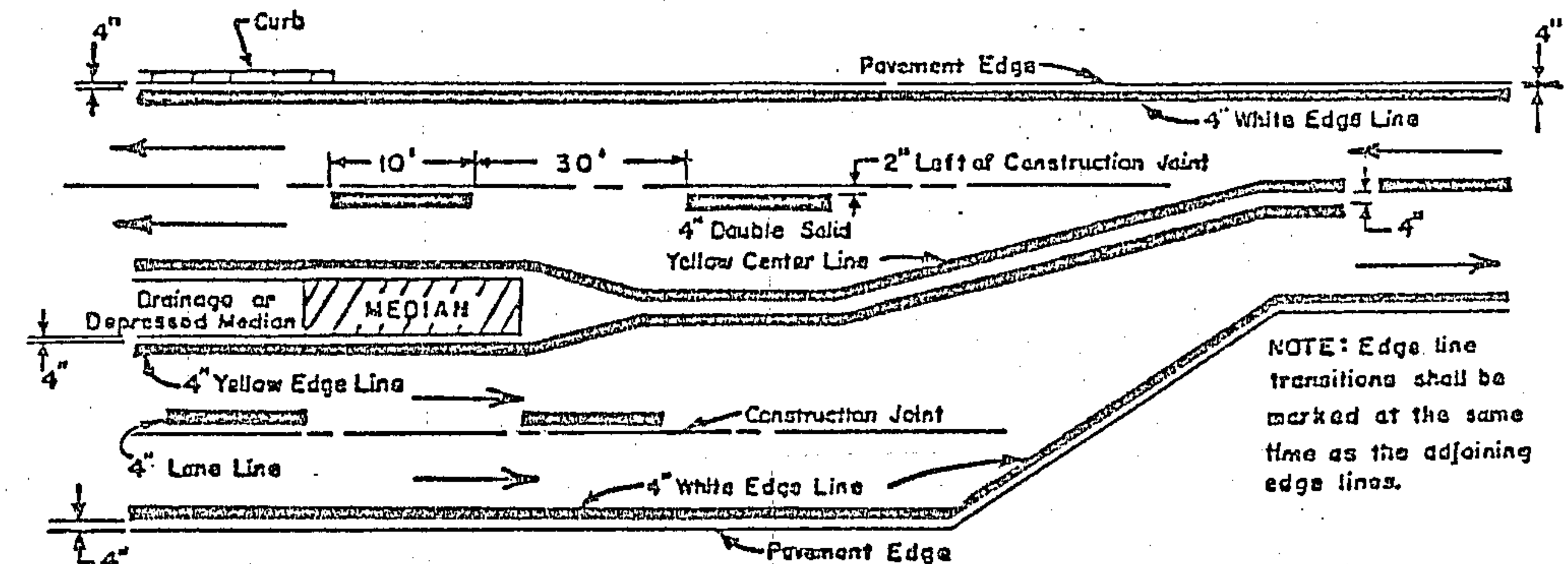
FREEWAY & EXPRESSWAY MAINLINE MARKINGS



TWO LANE MARKINGS



MULTILANE DIVIDED & UNDIVIDED HIGHWAY MARKINGS



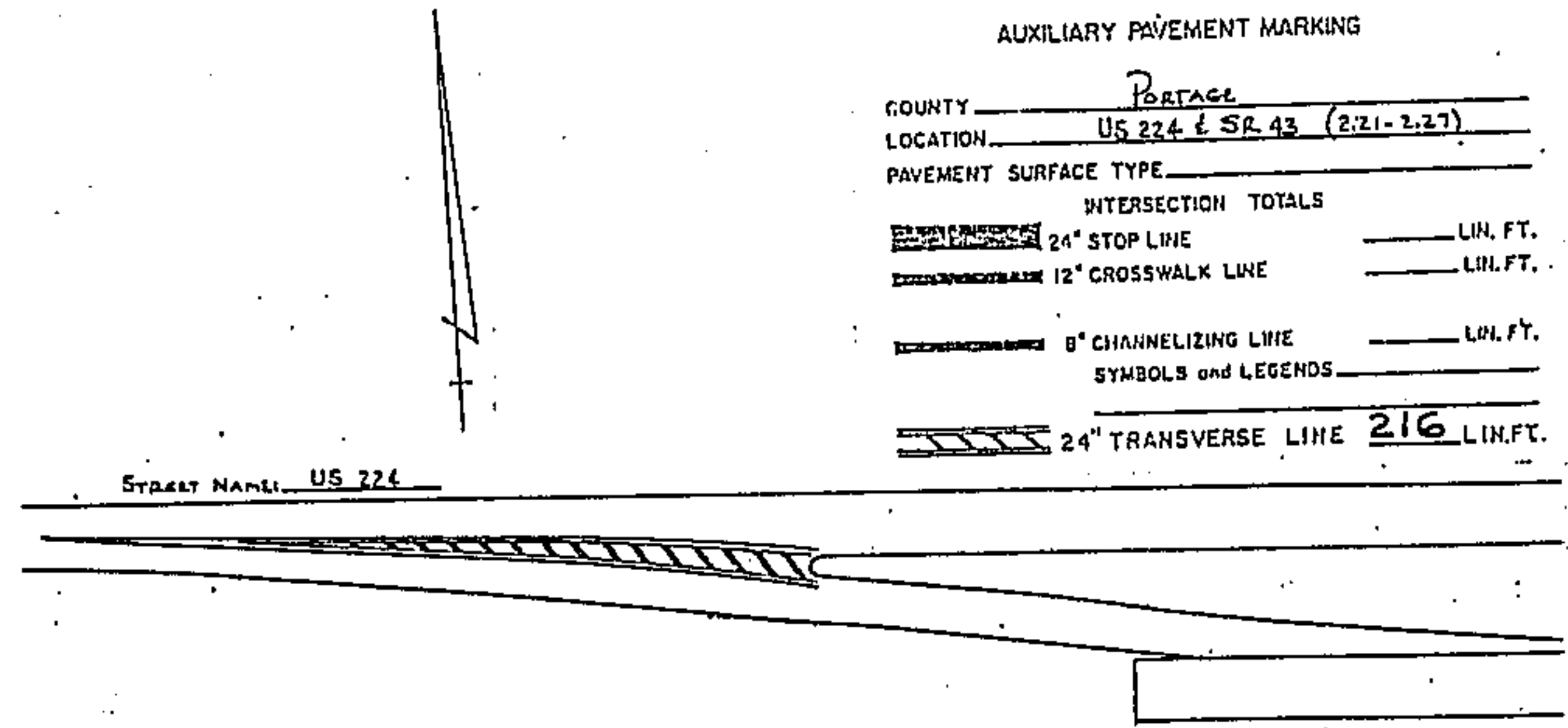
NOTES:

1. THE DISTANCE FROM THE PAVEMENT EDGE TO THE NEAR SIDE EDGE OF THE EDGELINE MAY BE INCREASED WITH THE APPROVAL OF THE ENGINEER IN ORDER TO MAINTAIN UNIFORM LANE WIDTH.
2. SEE TC 72.20 FOR PAVEMENT ENTRANCE AND EXIT RAMP TERMINALS.

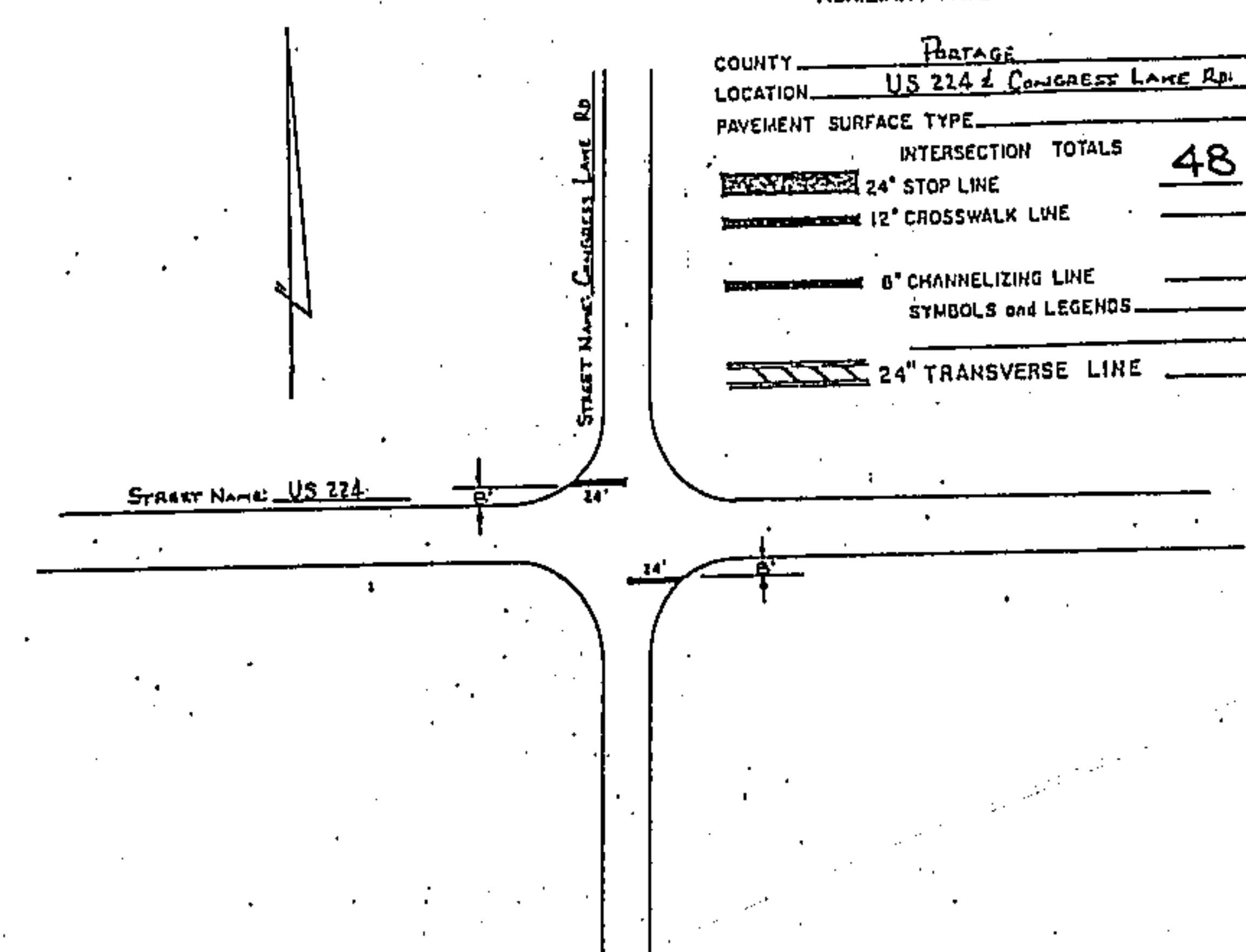
OHIO DEPARTMENT OF TRANSPORTATION	
PAVEMENT MARKING TYPICAL DETAILS	DATE 11/80
JUL. CDR.	

12/81

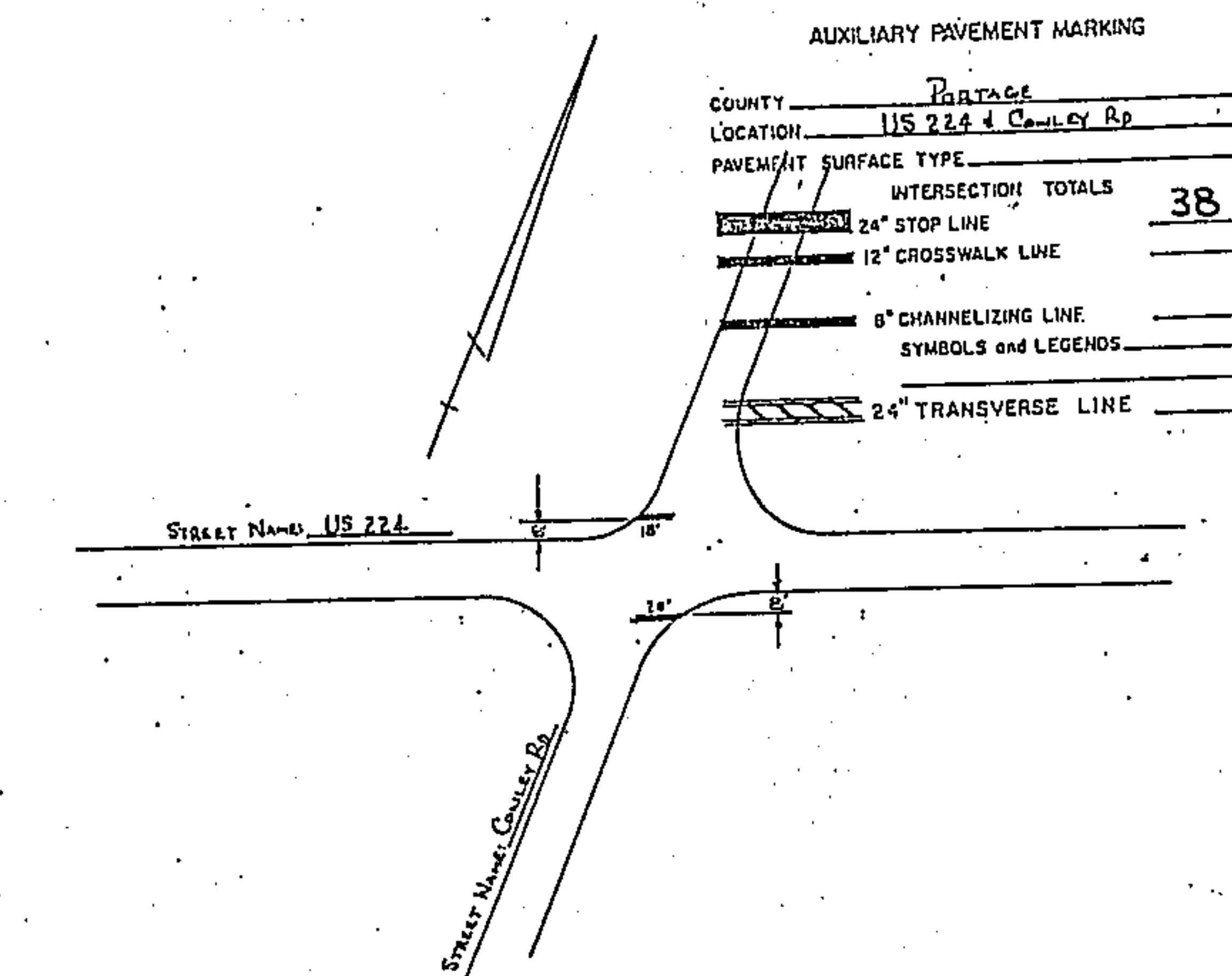
AUXILIARY PAVEMENT MARKING
COUNTY Portage
LOCATION US 224 & SR 43 (2.21-2.27)
PAVEMENT SURFACE TYPE _____
INTERSECTION TOTALS _____
24" STOP LINE _____ LIN. FT.
12" CROSSWALK LINE _____ LIN. FT.
8" CHANNELIZING LINE _____ LIN. FT.
SYMBOLS and LEGENDS _____
24" TRANSVERSE LINE 216 LIN. FT.



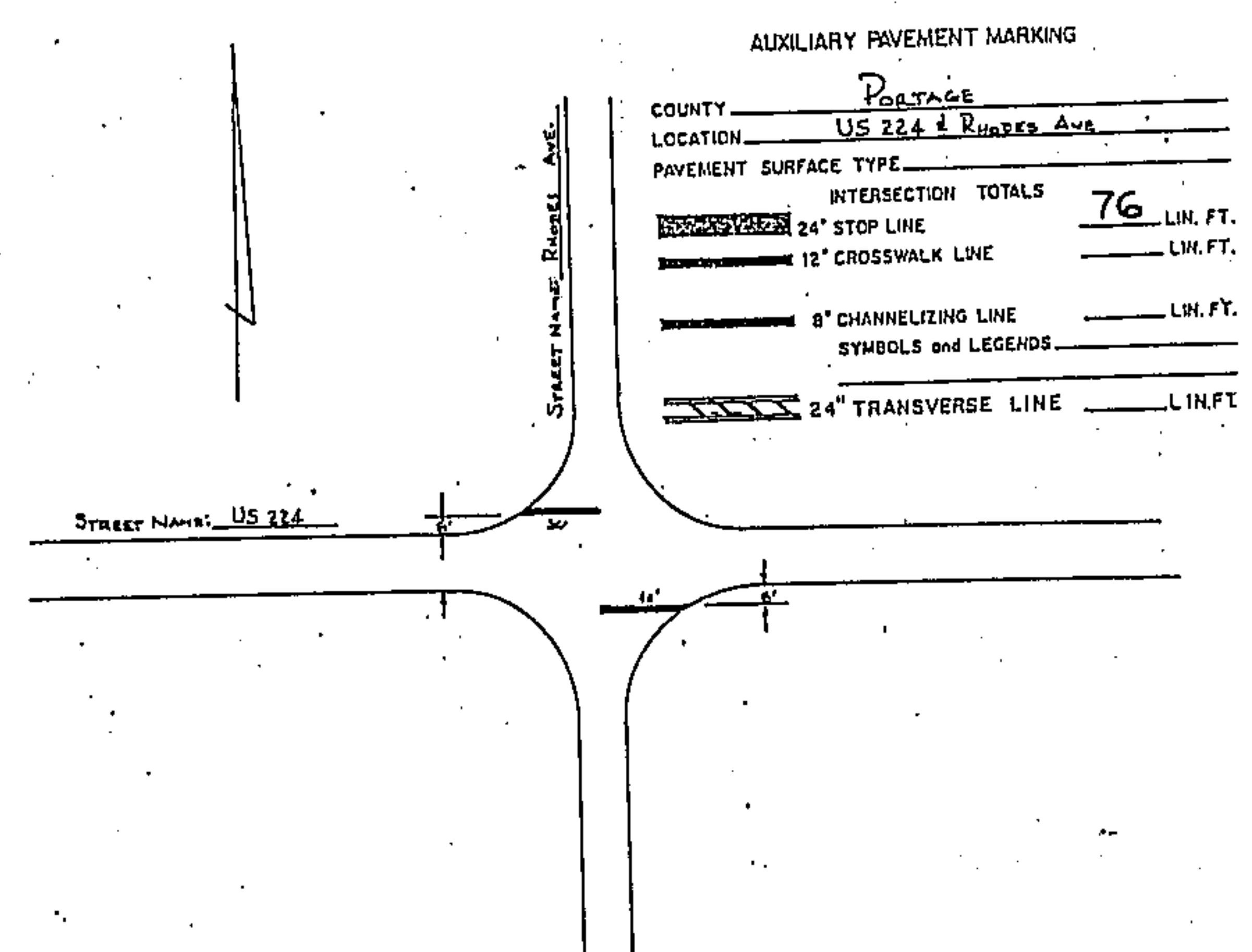
AUXILIARY PAVEMENT MARKING
COUNTY Portage
LOCATION US 224 & CONGRESS LAKE RD
PAVEMENT SURFACE TYPE _____
INTERSECTION TOTALS 48 LIN. FT.
24" STOP LINE _____ LIN. FT.
12" CROSSWALK LINE _____ LIN. FT.
8" CHANNELIZING LINE _____ LIN. FT.
SYMBOLS and LEGENDS _____
24" TRANSVERSE LINE _____ LIN. FT.



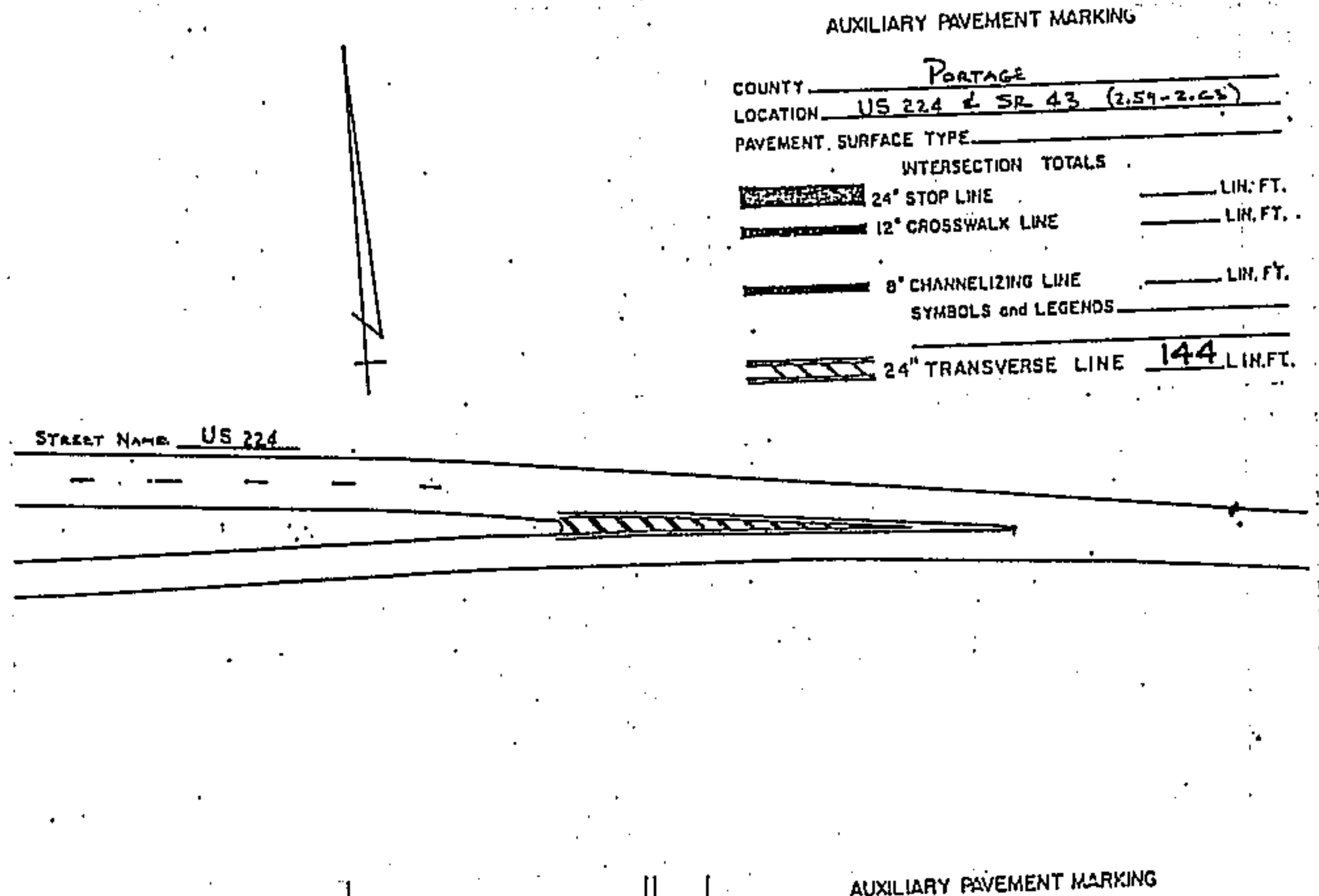
AUXILIARY PAVEMENT MARKING
COUNTY Portage
LOCATION US 224 & COWLEY RD
PAVEMENT SURFACE TYPE _____
INTERSECTION TOTALS 38 LIN. FT.
24" STOP LINE _____ LIN. FT.
12" CROSSWALK LINE _____ LIN. FT.
8" CHANNELIZING LINE _____ LIN. FT.
SYMBOLS and LEGENDS _____
24" TRANSVERSE LINE _____ LIN. FT.



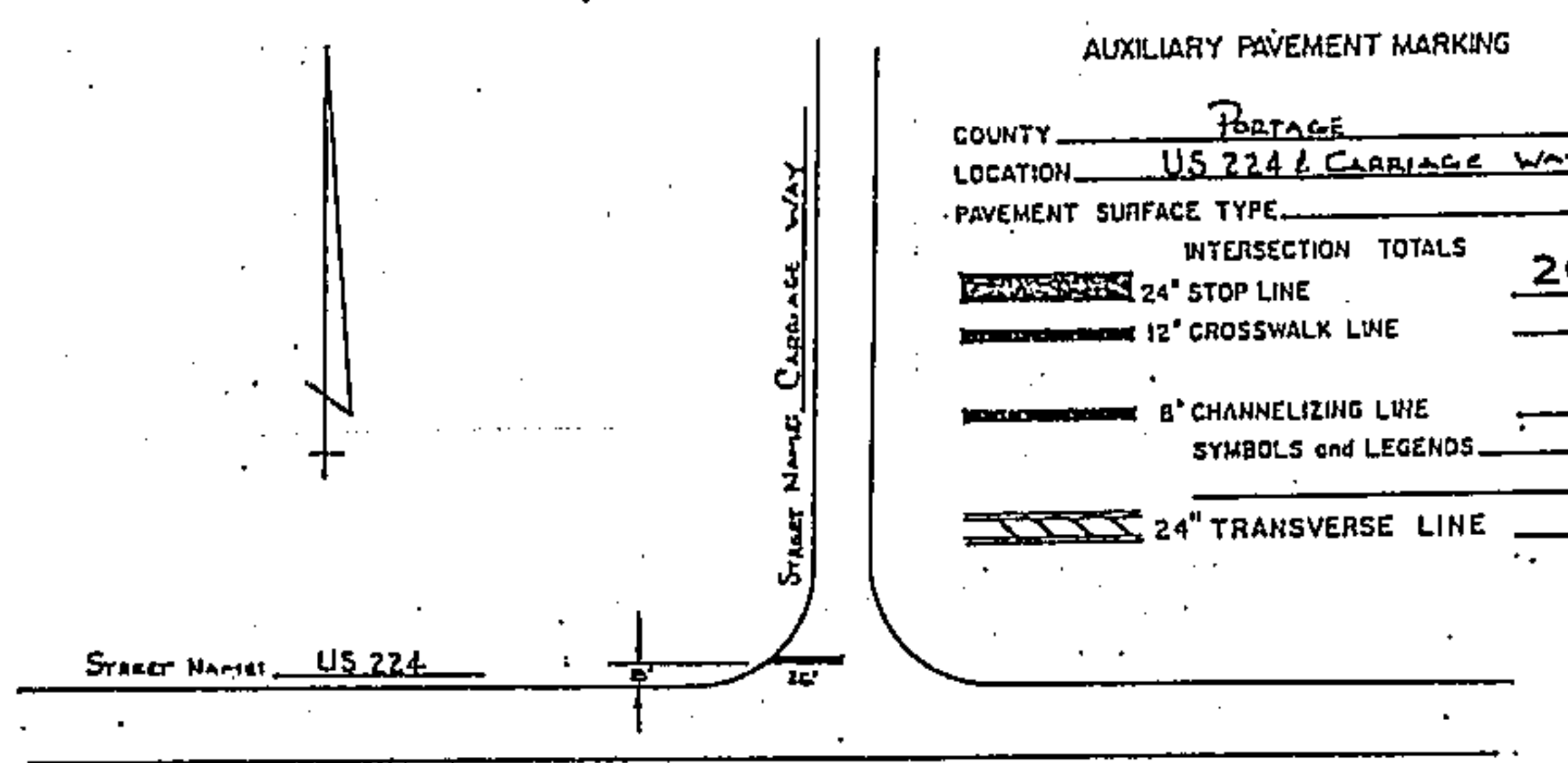
AUXILIARY PAVEMENT MARKING
COUNTY Portage
LOCATION US 224 & RUSSELL AVE
PAVEMENT SURFACE TYPE _____
INTERSECTION TOTALS 76 LIN. FT.
24" STOP LINE _____ LIN. FT.
12" CROSSWALK LINE _____ LIN. FT.
8" CHANNELIZING LINE _____ LIN. FT.
SYMBOLS and LEGENDS _____
24" TRANSVERSE LINE _____ LIN. FT.



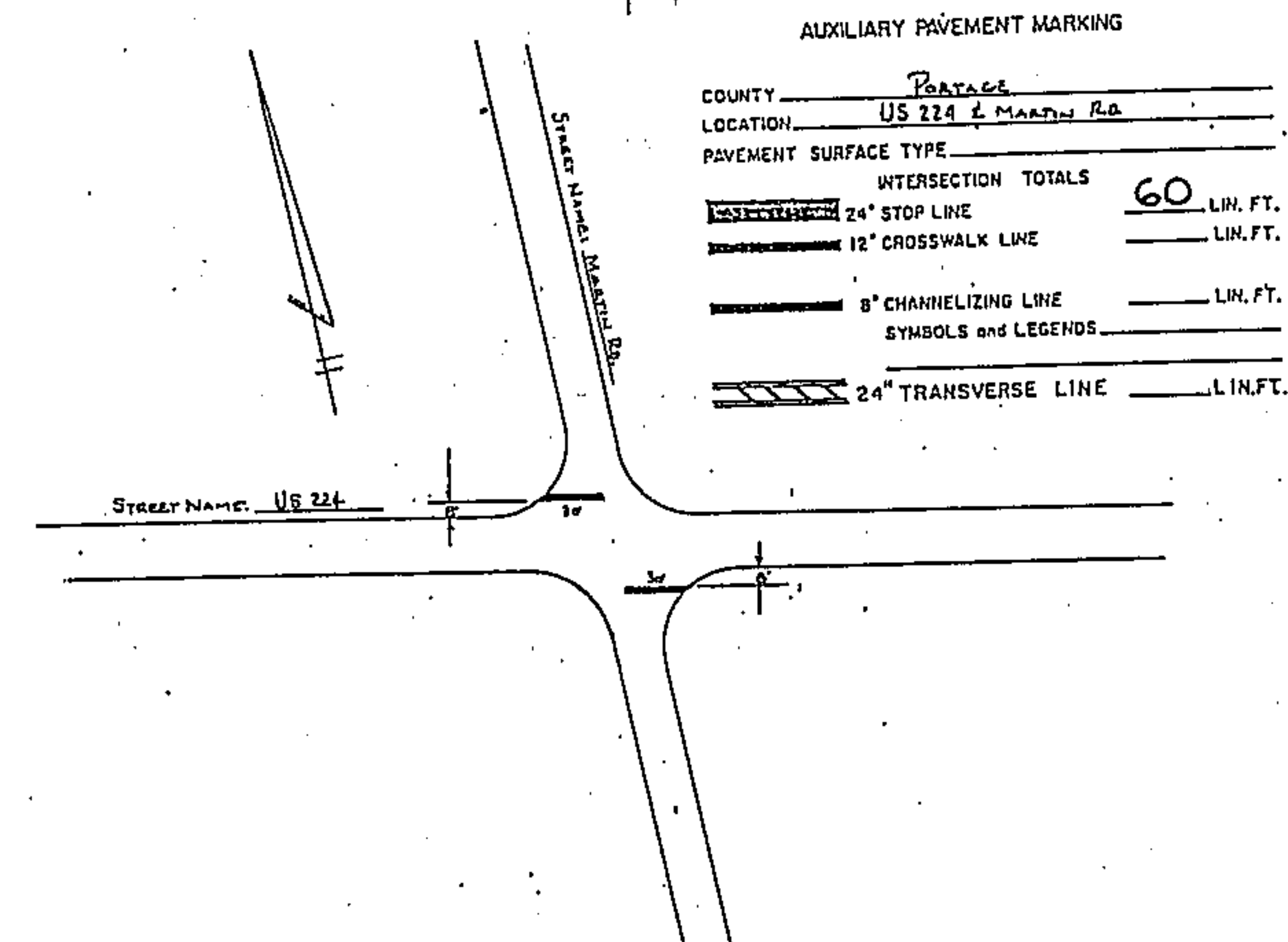
AUXILIARY PAVEMENT MARKING
COUNTY Portage
LOCATION US 224 & SR 43 (2.54-2.62)
PAVEMENT SURFACE TYPE _____
INTERSECTION TOTALS _____
24" STOP LINE _____ LIN. FT.
12" CROSSWALK LINE _____ LIN. FT.
8" CHANNELIZING LINE _____ LIN. FT.
SYMBOLS and LEGENDS _____
24" TRANSVERSE LINE 144 LIN. FT.



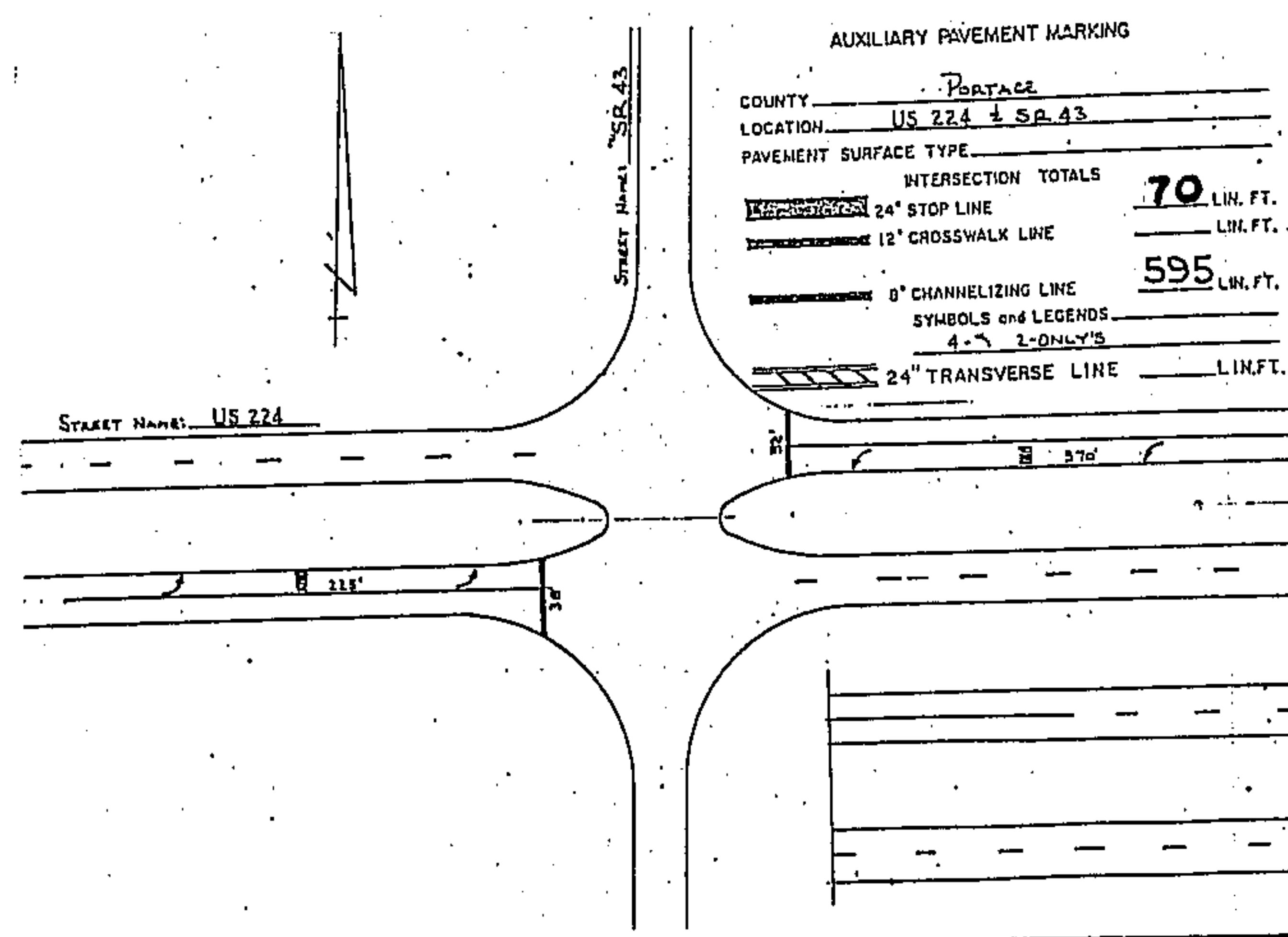
AUXILIARY PAVEMENT MARKING
COUNTY Portage
LOCATION US 224 & CARRIAGE WAY
PAVEMENT SURFACE TYPE _____
INTERSECTION TOTALS 26 LIN. FT.
24" STOP LINE _____ LIN. FT.
12" CROSSWALK LINE _____ LIN. FT.
8" CHANNELIZING LINE _____ LIN. FT.
SYMBOLS and LEGENDS _____
24" TRANSVERSE LINE _____ LIN. FT.



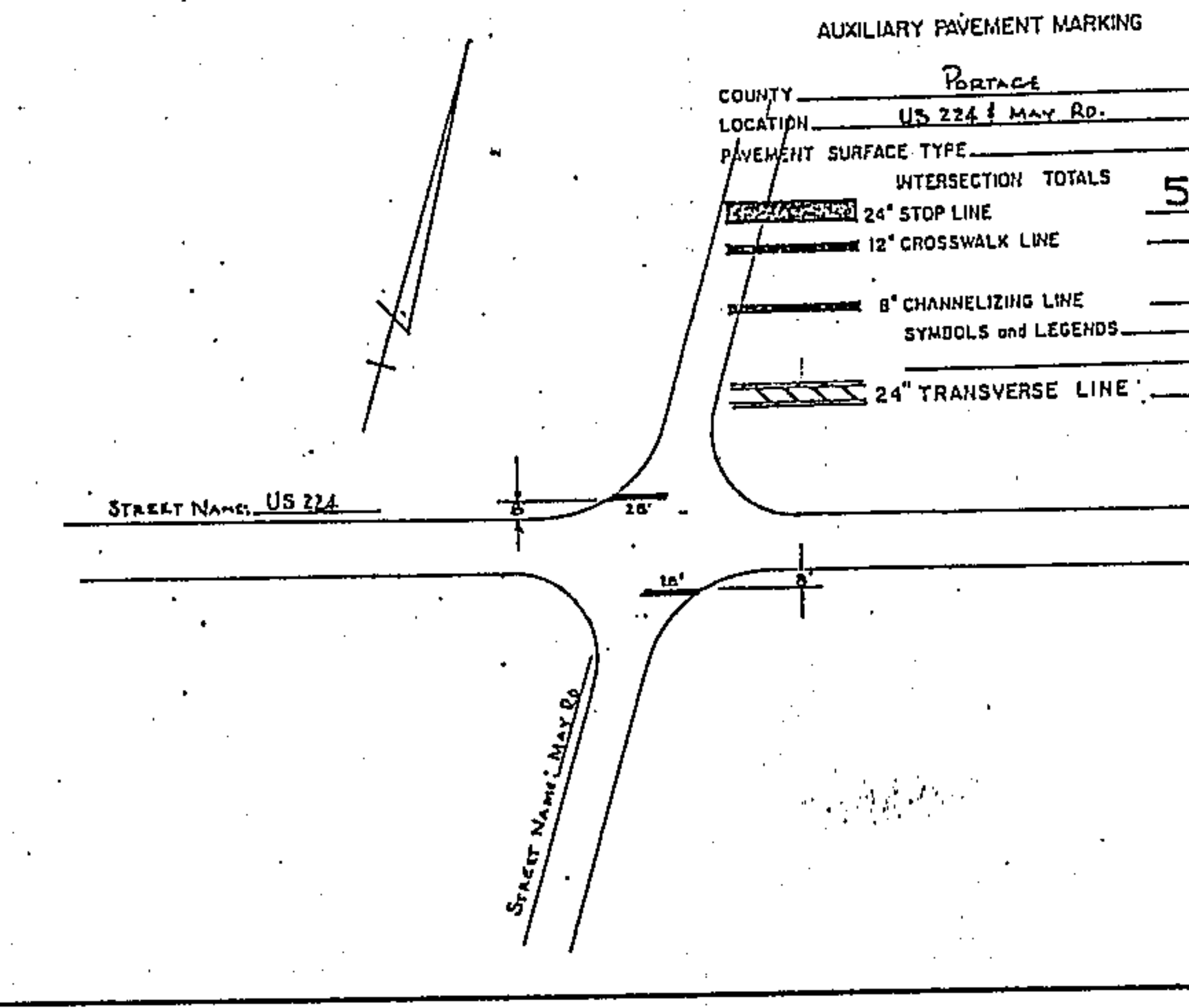
AUXILIARY PAVEMENT MARKING
COUNTY Portage
LOCATION US 224 & MARTIN RD
PAVEMENT SURFACE TYPE _____
INTERSECTION TOTALS 60 LIN. FT.
24" STOP LINE _____ LIN. FT.
12" CROSSWALK LINE _____ LIN. FT.
8" CHANNELIZING LINE _____ LIN. FT.
SYMBOLS and LEGENDS _____
24" TRANSVERSE LINE _____ LIN. FT.



AUXILIARY PAVEMENT MARKING
COUNTY Portage
LOCATION US 224 & SR 43
PAVEMENT SURFACE TYPE _____
INTERSECTION TOTALS 70 LIN. FT.
24" STOP LINE _____ LIN. FT.
12" CROSSWALK LINE _____ LIN. FT.
8" CHANNELIZING LINE _____ LIN. FT.
SYMBOLS and LEGENDS 595 LIN. FT.
4" 2-ONLY'S _____
24" TRANSVERSE LINE _____ LIN. FT.



AUXILIARY PAVEMENT MARKING
COUNTY Portage
LOCATION US 224 & MAY RD
PAVEMENT SURFACE TYPE _____
INTERSECTION TOTALS 56 LIN. FT.
24" STOP LINE _____ LIN. FT.
12" CROSSWALK LINE _____ LIN. FT.
8" CHANNELIZING LINE _____ LIN. FT.
SYMBOLS and LEGENDS _____
24" TRANSVERSE LINE _____ LIN. FT.



AUXILIARY PAVEMENT MARKING

COUNTY Portage
LOCATION US 224 & Waterloo Rd
PAVEMENT SURFACE TYPE _____
INTERSECTION TOTALS 132 LIN. FT.
24" STOP LINE _____ LIN. FT.
12" CROSSWALK LINE _____ LIN. FT.
8" CHANNELIZING LINE _____ LIN. FT.
SYMBOLS and LEGENDS _____
24" TRANSVERSE LINE _____ LIN. FT.

STREET NAME US 224

AUXILIARY PAVEMENT MARKING

COUNTY Portage
LOCATION US 224 & Waterloo Rd
PAVEMENT SURFACE TYPE _____
INTERSECTION TOTALS 100 LIN. FT.
24" STOP LINE _____ LIN. FT.
12" CROSSWALK LINE _____ LIN. FT.
8" CHANNELIZING LINE _____ LIN. FT.
SYMBOLS and LEGENDS _____
24" TRANSVERSE LINE _____ LIN. FT.

STREET NAME US 224

AUXILIARY PAVEMENT MARKING

COUNTY Portage
LOCATION US 224 & Schroeder Rd
PAVEMENT SURFACE TYPE _____
INTERSECTION TOTALS 48 LIN. FT.
24" STOP LINE _____ LIN. FT.
12" CROSSWALK LINE _____ LIN. FT.
8" CHANNELIZING LINE _____ LIN. FT.
SYMBOLS and LEGENDS _____
24" TRANSVERSE LINE _____ LIN. FT.

STREET NAME US 224

AUXILIARY PAVEMENT MARKING

COUNTY Portage
LOCATION US 224 & SR 44
PAVEMENT SURFACE TYPE _____
INTERSECTION TOTALS 70 LIN. FT.
24" STOP LINE _____ LIN. FT.
12" CROSSWALK LINE _____ LIN. FT.
8" CHANNELIZING LINE _____ LIN. FT.
SYMBOLS and LEGENDS _____
24" TRANSVERSE LINE _____ LIN. FT.

STREET NAME US 224

AUXILIARY PAVEMENT MARKING

COUNTY Portage
LOCATION US 224 & SR 44 (7.43-7.50)
PAVEMENT SURFACE TYPE _____
INTERSECTION TOTALS _____ LIN. FT.
24" STOP LINE _____ LIN. FT.
12" CROSSWALK LINE _____ LIN. FT.
8" CHANNELIZING LINE _____ LIN. FT.
SYMBOLS and LEGENDS _____
24" TRANSVERSE LINE 310 LIN. FT.

STREET NAME US 224

AUXILIARY PAVEMENT MARKING

COUNTY Portage
LOCATION US 224 & Hartsville Rd
PAVEMENT SURFACE TYPE _____
INTERSECTION TOTALS 64 LIN. FT.
24" STOP LINE _____ LIN. FT.
12" CROSSWALK LINE _____ LIN. FT.
8" CHANNELIZING LINE _____ LIN. FT.
SYMBOLS and LEGENDS _____
24" TRANSVERSE LINE _____ LIN. FT.

STREET NAME US 224

AUXILIARY PAVEMENT MARKING

COUNTY Portage
LOCATION US 224 & New Milford-Waterloo Rd
PAVEMENT SURFACE TYPE 7.70-9.74
INTERSECTION TOTALS _____ LIN. FT.
24" STOP LINE _____ LIN. FT.
12" CROSSWALK LINE _____ LIN. FT.
8" CHANNELIZING LINE _____ LIN. FT.
SYMBOLS and LEGENDS _____
24" TRANSVERSE LINE 114 LIN. FT.

STREET NAME US 224

AUXILIARY PAVEMENT MARKING

COUNTY Portage
LOCATION US 224 & New Milford Rd
PAVEMENT SURFACE TYPE _____
INTERSECTION TOTALS 36 LIN. FT.
24" STOP LINE _____ LIN. FT.
12" CROSSWALK LINE _____ LIN. FT.
8" CHANNELIZING LINE _____ LIN. FT.
SYMBOLS and LEGENDS _____
24" TRANSVERSE LINE _____ LIN. FT.

STREET NAME US 224

AUXILIARY PAVEMENT MARKING

COUNTY Portage
LOCATION US 224 & New Milford-Waterloo Rd
PAVEMENT SURFACE TYPE (9.10-9.14)
INTERSECTION TOTALS _____ LIN. FT.
24" STOP LINE _____ LIN. FT.
12" CROSSWALK LINE _____ LIN. FT.
8" CHANNELIZING LINE _____ LIN. FT.
SYMBOLS and LEGENDS _____
24" TRANSVERSE LINE 132 LIN. FT.

STREET NAME US 224

AUXILIARY PAVEMENT MARKING

COUNTY Portage
LOCATION US 224 & SR 44 (7.64-7.68)
PAVEMENT SURFACE TYPE _____
INTERSECTION TOTALS _____ LIN. FT.
24" STOP LINE _____ LIN. FT.
12" CROSSWALK LINE _____ LIN. FT.
8" CHANNELIZING LINE _____ LIN. FT.
SYMBOLS and LEGENDS _____
24" TRANSVERSE LINE 137 LIN. FT.

STREET NAME US 224

ON

COUNTY PORTAGE ROUTE 224

COUNTY Yuba ROUTE 2
Total This Route = Yellow: Solid , Yellow: Dash , White: Dash
Equivalent Yellow

Equivalent Yellow

0.90

0.80

0.70

0.60

0.50

0.40

0.30

0.20

0.10

0.00

MARTIN RD.

SR 532

PORTAGE LINE RD.

SUM Co. LINE

NORFOLK & WESTERN R/R

MM-1

0.90

0.80

0.70

0.60

0.50

0.40

0.30

0.20

0.10

2.00

SR 43

RHODES RD.

MM-2

Yellow: Solid

Dashed

Yellow: Solid _____ Dash _____ Yellow: Solid _____ Dash _____ Yellow: Solid _____ Dash _____

TOTAL YELLOW THIS PAGE: SOLID _____, DASH _____, EQUIVALENT LINE _____

① N

COUNTY PORTAGE ROUTE 224

Total This Route *Yellow: Solid _____, Yellow: Dash _____, White: Dash _____
Equivalent Yellow _____

Equivalent Yellow

MM-6

MM-4

MM-6

0.90

0.80

0.70

0.60

0.50

0.40

0.30

0.20

0.10

0.00

MAY RD

CONGRESS LAKE RD

0.90

0.80

0.70

0.60

0.50

0.40

0.30

0.20

0.10

0.00

CONLEY RD

CARRIAGE WAY

0.90

0.80

0.70

0.60

0.50

0.40

0.30

0.20

0.10

0.00

SCHROEDER RD

Yellow: Solid 0.45 Dash 0.45

Yellow: Solid 0.45 Dash 0.45

Yellow: Solid 0.45 Dash 0.45

Yellow: Solid 0.55 Dash 1.54 Yellow: Solid 0.55 Dash 1.54 Yellow: Solid 0.54 Dash 0.92
TOTAL YELLOW THIS PAGE: SOLID _____, DASH _____, EQUIVALENT LINE _____

PLAN NO.	148
----------	-----

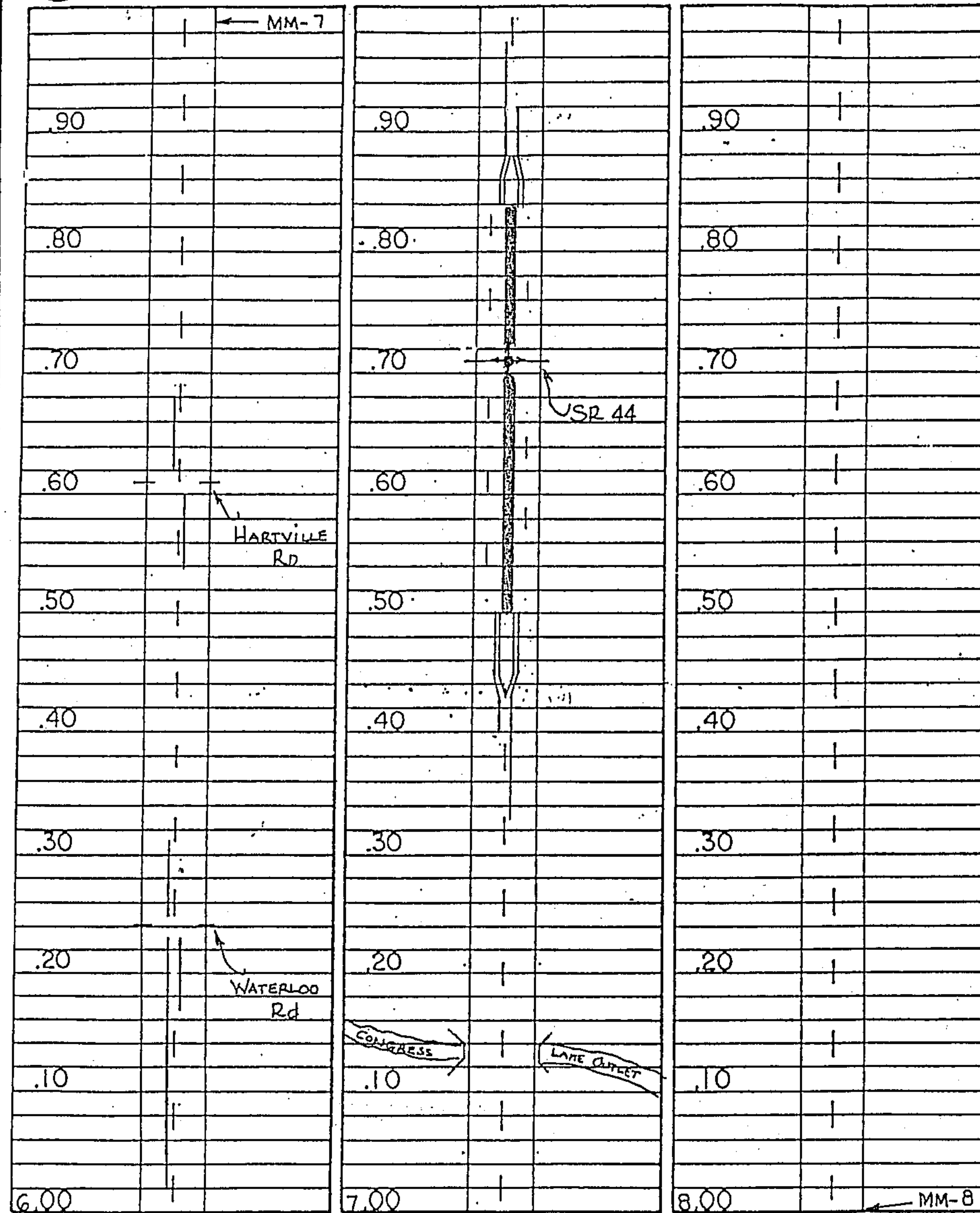
TS 54
DISTRICT 4



Center Line Log Record and Field Sheet

COUNTY PORTAGE ROUTE 224

Total This Route = Yellow: Solid _____, Yellow: Dash _____, White: Dash _____
Equivalent Yellow _____



Yellow: Solid 1.45 Dash 6.94 Yellow: Solid _____ Dash _____
TOTAL YELLOW THIS PAGE: SOLID _____ DASH _____ EQUIVALENT LINE _____

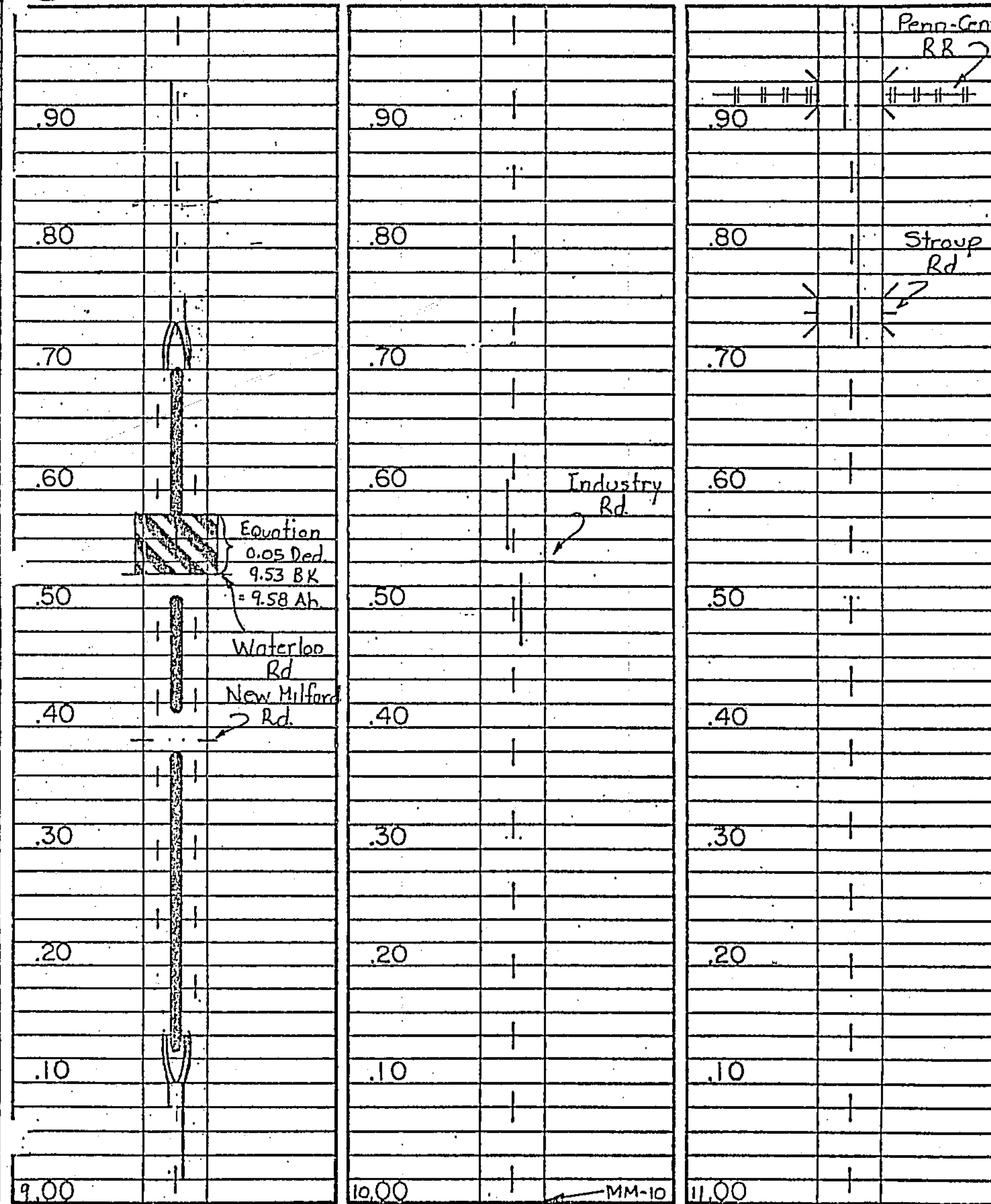
TS 54
DISTRICT 4



Center Line Log Record and Field Sheet

COUNTY Portage ROUTE 224

Total This Route = Yellow: Solid _____, Yellow: Dash _____, White: Dash _____
Equivalent Yellow _____



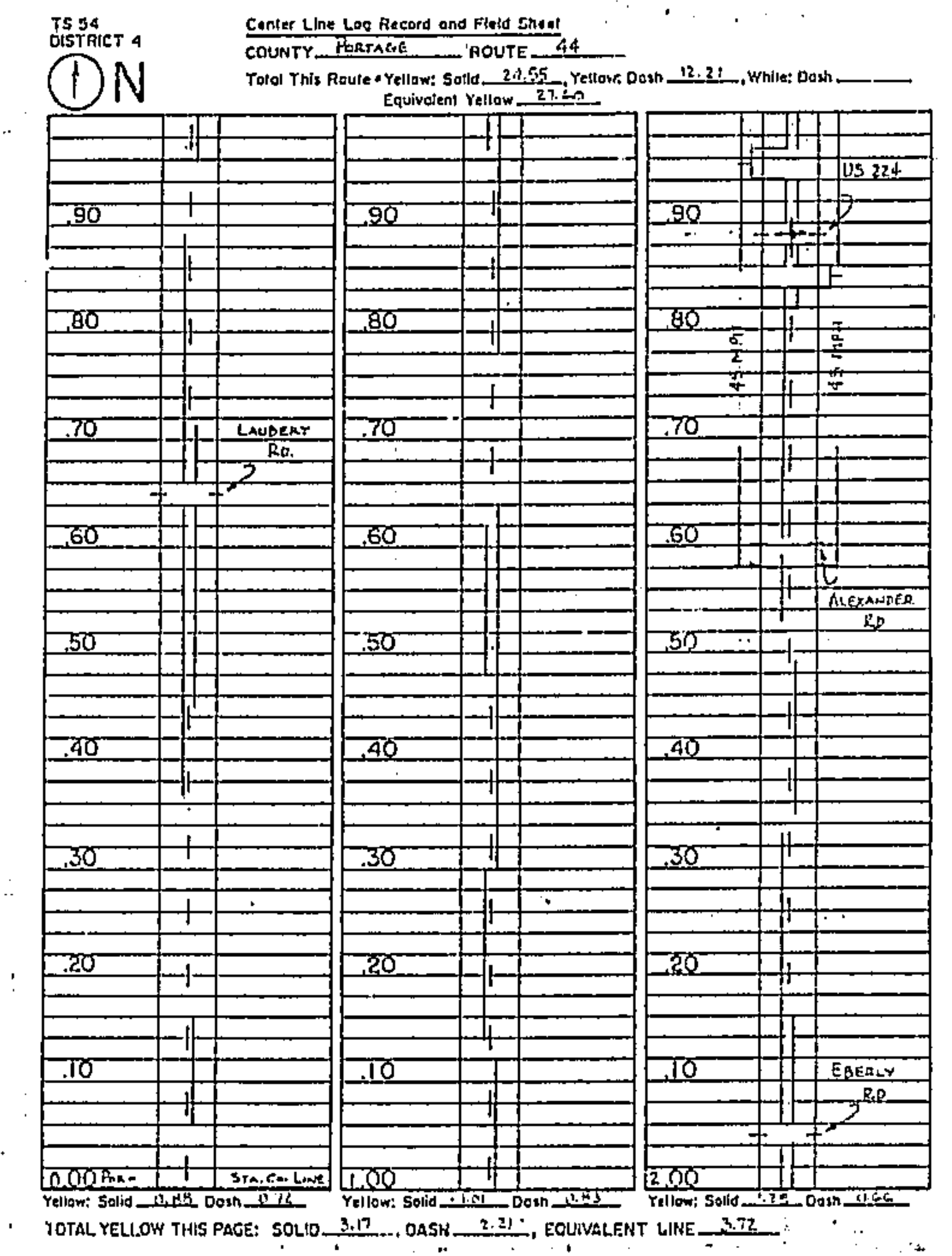
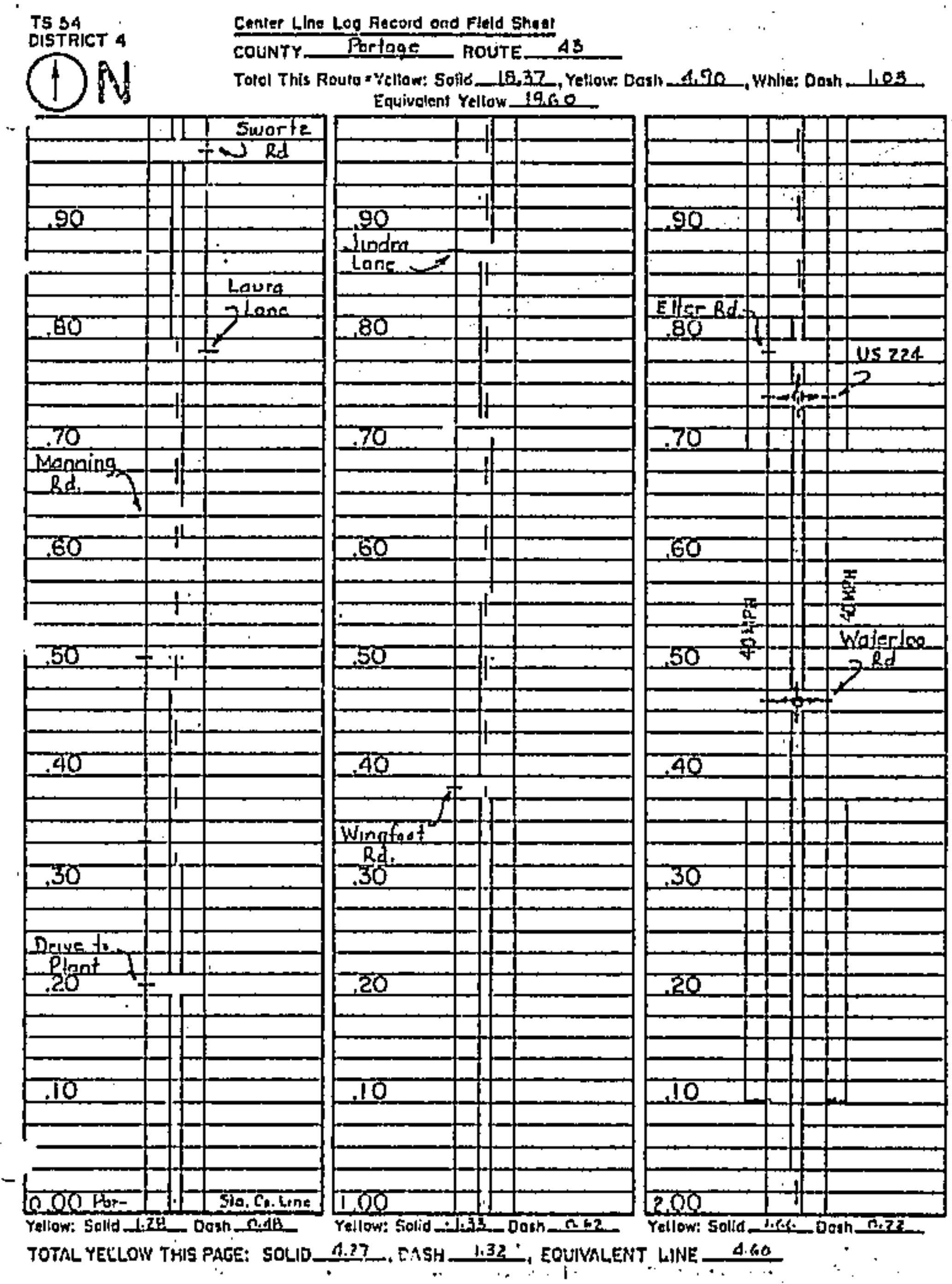
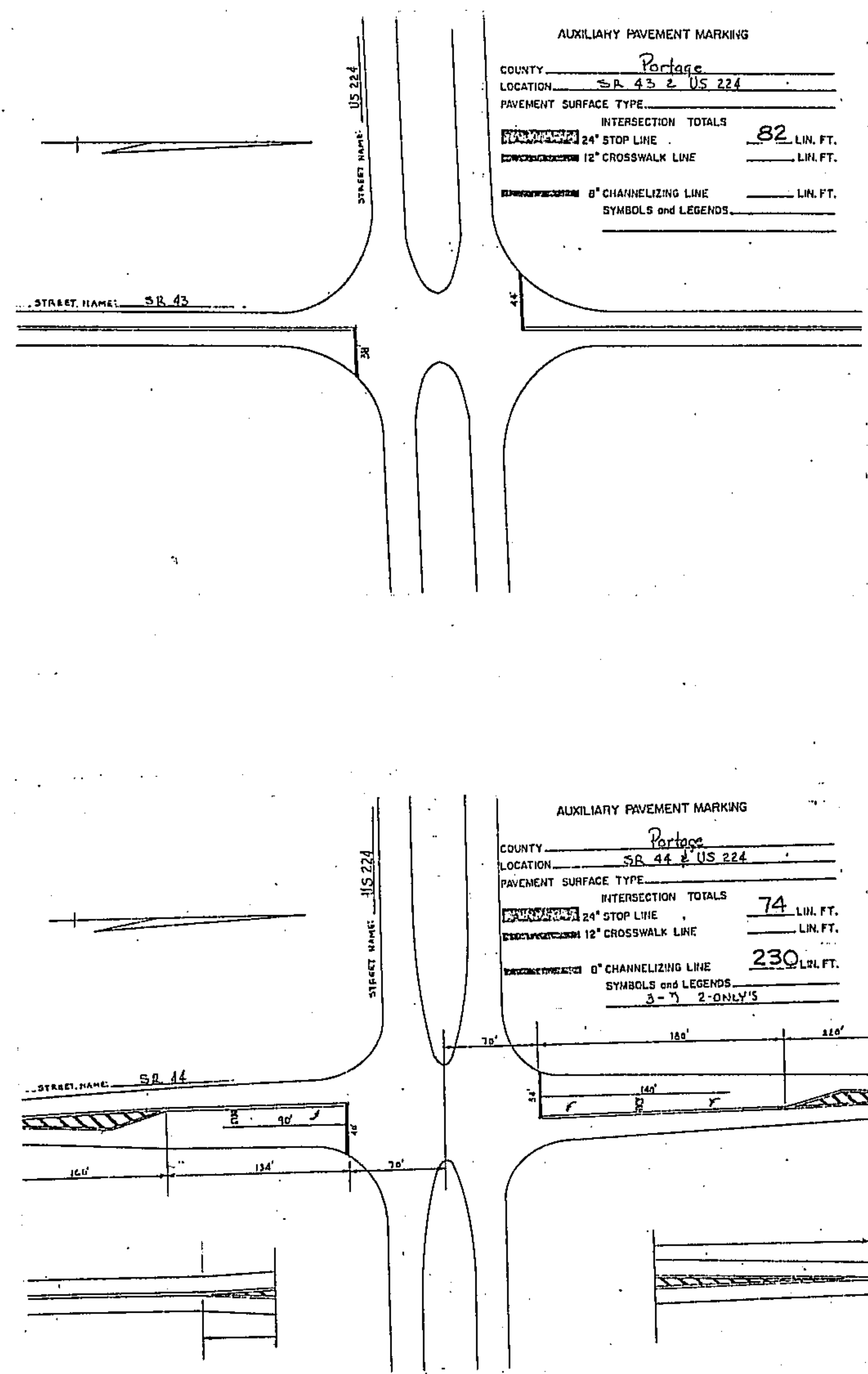
Yellow: Solid 0.64 Dash 0.32 Yellow: Solid 0.12 Dash 1.00 Yellow: Solid 0.38 Dash 0.90
TOTAL YELLOW THIS PAGE: SOLID 1.14 DASH 2.22 EQUIVALENT LINE 1.70

49
89

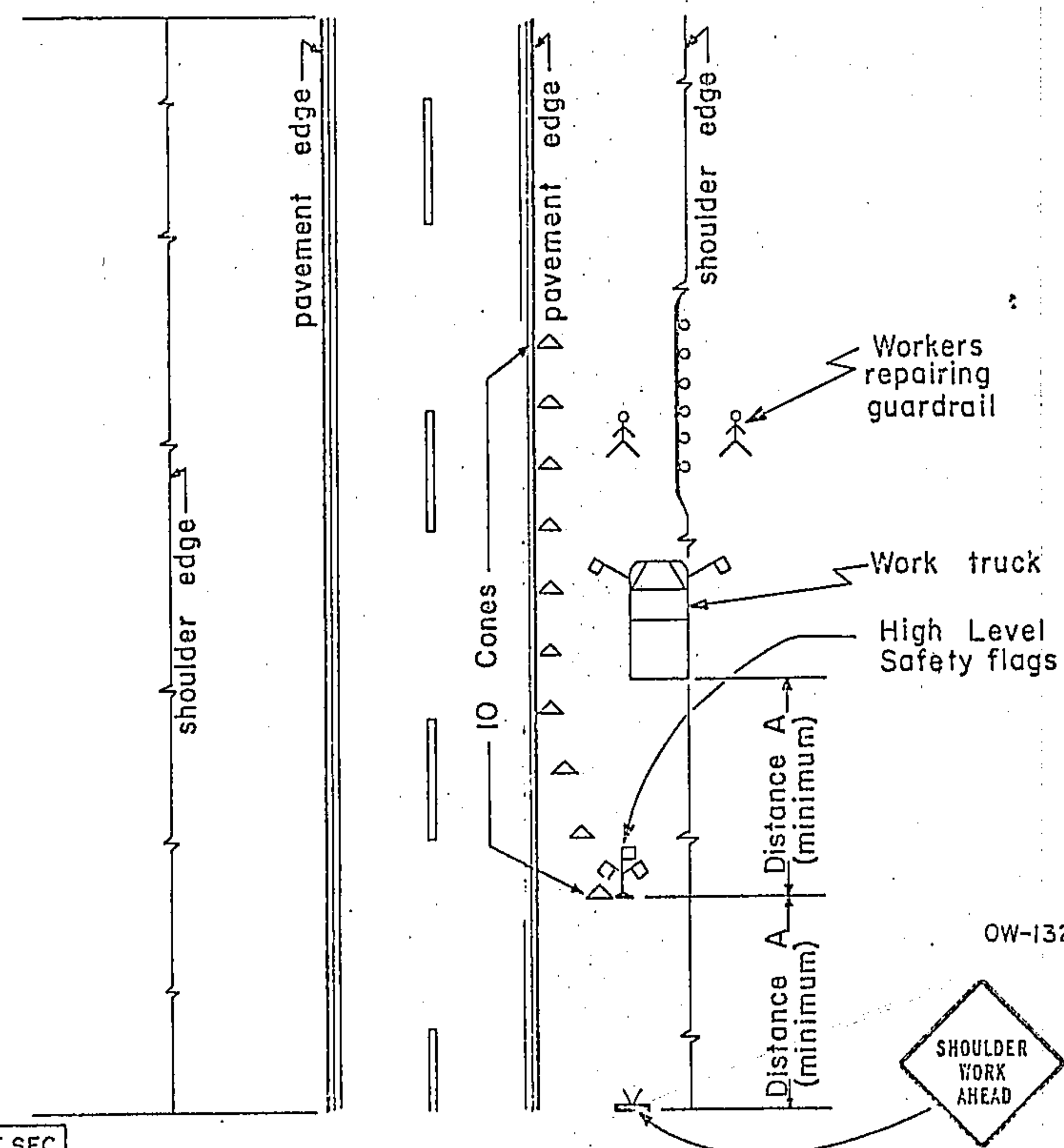
PLAN NO.
148

FHWA REGION	STATE	PROJECT NO.	FUND3
5	OHIO		

50
89



TYPICAL APPLICATIONS OF TRAFFIC CONTROL DEVICES FOR STATIONARY OPERATIONS ON THE SHOULDER



REF. SEC.
7D-16

- NOTES:
1. Space the cones at 50' maximum.
 2. For work within the median, install the same cones and signs for both directions of travel.

TYPE OF ROADWAY	DISTANCE A - ft.
Urban	200
Standard	500
Expressway	750

COMPLETED BY _____ DATE _____
CHECKED BY _____ DATE _____

PLAN NO.

148

LOCATION OF EXISTING R/W LINES:

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

FENCE GROUNDING:

ALL TYPES OF FENCE SHALL BE GROUNDED, AS PER STANDARD CONSTRUCTION DRAWING HL-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" DEEP MAY BE USED IN LIEU OF CONCRETE ENCASEMENT OF LINE POSTS LOCATED IN HIGHLY INACCESSIBLE LOCATIONS.

INTENT OF PLAN:

IT IS THE INTENT OF THIS CONTRACT THAT THE CONTRACTOR REMOVE AND REPLACE EXISTING L/A-R/W FENCE ON THE STATE HIGHWAY SYSTEM.

ITEM 607 FENCE, TYPE CLT, AND TYPE 47, AS PER PLAN

ALL FRESH CUT BRUSH SURFACES SHALL BE TREATED WITH HERBICIDE BANVEL-CST, TORDON-RHU OR 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 PRICE, PER LINEAR FOOT, OF THE PERTINENT 607 FENCE ITEM.

WHEN THE FENCE CHANGES FROM ONE TYPE TO ANOTHER THE END POSTS WILL BE LOCATED AS PER DETAIL SHEET 6I. PAYMENT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE, PER LINEAR FOOT OF THE PERTINENT 607 FENCE ITEM.

UTILITIES:

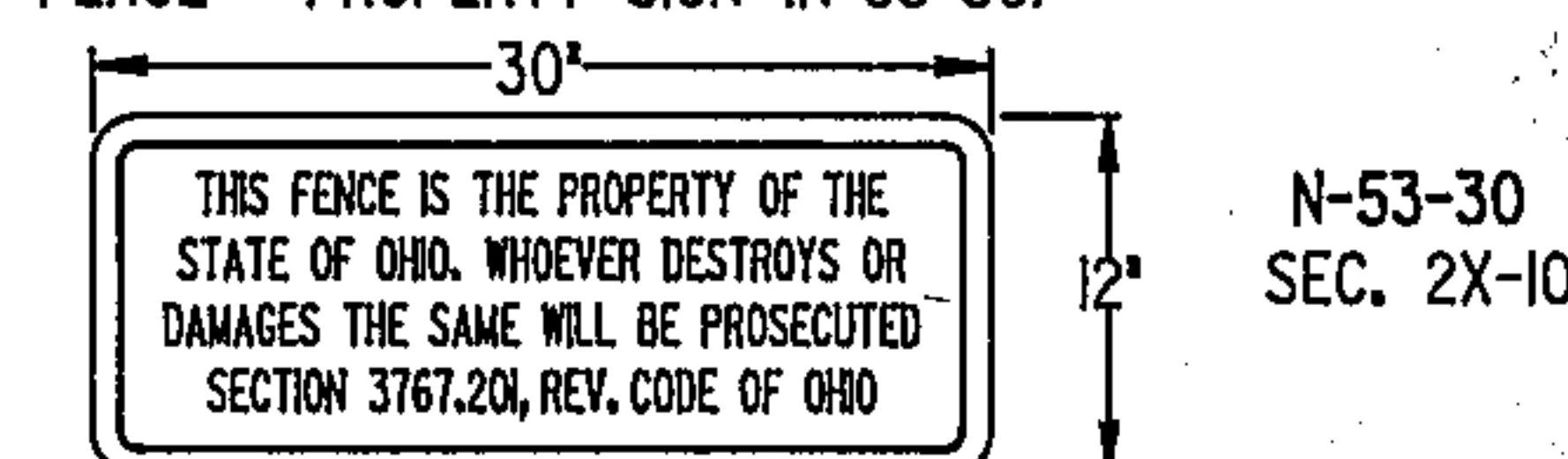
NO KNOWN UTILITIES WILL BE AFFECTED BY THIS WORK.

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 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. SEE SHEETS 62, 67, 69, 70, 72, 76, 77, 79, 80 & 84 FOR LOCATIONS OF SIGNS. A QUANTITY OF 45 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.

EXISTING & REFERENCE MONUMENTS:

95+63.44	P.T. 331+07.22	P.O.C. 26+00.00
III+00.00	351+94.59	P.T. 32+87.89
123+95.90	T.S. 352+24.50	P.C. 48+84.67
P.C. 130+28.50	S.C. 355+74.50	P.T. 58+41.81
P.T. 145+67.79	C.S. 360+32.27	P.C. 64+22.58
165+00.00	S.T. 363+82.27	P.T. 73+97.08
185+00.00	374+13.92	81+00.00
208+00.00	375+00.00	96+00.00
223+39.43	392+00.00	114+00.00
P.C. 227+27.39	T.S. 406+65.23	131+00.00
P.T. 223+50.60	S.C. 409+15.23	P.C. 148+14.62
250+00.00	C.S. 415+98.56	159+00.00
P.C. 268+14.48	S.T. 418+48.56	P.T. 169+46.12
273+40.00	425+12.62	173+79.93
P.T. 288+96.62	425+12.62(BK)=	173+79.93(BK)
298+96.23	0+00.00(AH)	0+00.00(AH)
P.C. 323+13.47	P.C. 11+61.89	

FENCE SUB-SUMMARY

[illegible]

FENCE GENERAL NOTES AND SUB-SUMMARY

FENCE SUB-SUMMARY

COMPLETED BY GHR DATE 9/12/89
CHECKED BY DATE

PLAN NO.
148

54
89

SIDE	STATION TO STATION		TYPE 47												TYPE CLT												SEE SHEET NO.
			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	FENCE TERMINALS TYPE B	GROUND ROD	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	FENCE TERMINALS TYPE B	GROUND ROD	
			L.F.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	L.F.	EACH	EACH	L.F.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
R	96+20	97+14													96									96			62
R	97+14	102+20													506									506			62
R	102+20	106+24	404									404															62
R	106+24	110+22	404									404															62
R	110+42	117+08	660	2								660															62
R	117+08	119+00													192									192			62
L	95+73	100+43													470									470			62
L	100+43	105+13													470									470			62
L	105+13	109+78													471									471			62
L	109+98	114+51													447									447			62
L	114+51	119+00													449									449			62
R	119+00	122+53													353									353			63
R	122+53	123+80													130									130			63
R	124+49	130+58													610	2								610			63
R	130+58	137+00	660									660															63
R	137+00	143+00	620									620															63
L	119+00	123+43													443									443			63
L	124+06	130+28													662	2								662			63
L	130+28	132+00	172									172															63
L	132+00	134+00	200									200															63
L	134+00	136+00	200									200															63
L	136+00	139+50	343									343															63
L	139+50	143+00	342									342															63
R	143+00	145+67	272									272															64
R	145+67	151+31	564									564															64
R	151+82	155+00	318									318															64
R	155+00	161+00	601									601															64
R	161+00	165+73	473									473															64
R	165+93	167+00	107									107															64
L	143+00	148+95	596									596															64
L	148+95	150+90	195									195															64
L	151+42	155+00	358									358															64
L	155+00	158+50	350									350															64
L	158+50	162+00	350									350															64
L	162+00	166+82	482									482															64
R	167+00	171+00	403									403															65
R	171+00	175+00	402									402															65
R	175+00	176+56	172									172															65
R	176+76	177+00	27									27															65
R	177+00	179+00	200									200															65
R	179+00	185+60	660									660															65
R	185+60	191+00	540									540															65
SUB-TOTAL			11,075	13	8	12			5			11,075			5,299	12	2	4						5,299			

FENCE SUB-SUMMARY

COMPLETED BY GHR DATE 2/19/89
CHECKED BY DATE

PLAN NO.

148

55
89

SIDE	STATION TO STATION		TYPE 47												TYPE CLT												SEE SHEET NO.
			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	FENCE TERMINALS TYPE B	GROUND ROD	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	FENCE TERMINALS TYPE B	GROUND ROD	
			L.F.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	L.F.	EACH	EACH	L.F.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
L	167+00	173+34	634									634															65
L	173+34	176+65	341									341															65
L	176+85	177+00	15									15															65
L	177+00	179+00	200									200															65
L	179+00	180+00	102									102															65
L	180+00	183+00	300									300															65
L	183+00	185+75	276									276															65
L	185+75	191+00	525									525															65
R	191+00	191+10	10									10															66
R	191+30	193+00	174									174															66
R	193+00	197+75	475									475															66
R	197+75	200+00	226									226															66
R	200+00	203+00													300									300			66
R	203+00	205+00													201									201			66
R	205+00	207+46													246									246			66
R	207+98	212+00													402									402			66
R	212+00	215+00													30									300			66
L	191+00	191+10	10									10															66
L	191+30	193+00	171									171															66
L	193+00	194+00	102									102															66
L	194+00	197+85	385									385															66
L	197+85	200+88													305									305			66
L	200+88	201+38													54									54			66
L	201+38	203+00													163									163			66
L	203+00	205+00													202									202			66
L	205+00	207+51													252									252			66
L	208+04	211+52													348									348			66
L	211+52	215+00													348									348			66
R	215+00	216+00													100									100			67
R	216+00	218+73													276									276			67
R	218+73	222+90													417									417			67
R	223+80	229+46													563	2								563			67
R	229+46	235+40													587									587			67
R	235+40	239+00													360									360			67
L	215+00	215+50													56									56			67
L	215+50	219+25													375									375			67
L	219+25	223+00													375									375			67
L	223+90	228+67													507	2								507			67
L	228+67	233+93	463									463															67
L	223+93	239+00	507									507															67
SUB TOTAL			4,916	9	9	3						4,916			6,737	12	11	4						6,737			

FENCE SUB-SUMMARY

FENCE SUB-SUMMARY

COMPLETED BY GHR DATE 9/19/89
CHECKED BY DATE

PLAN NO.
148

56
89

TYPE 47															TYPE CLT														
SIDE	STATION TO STATION		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	FENCE TERMINALS TYPE B	GROUND ROD	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	FENCE TERMINALS TYPE B	GROUND ROD	SEE SHEET NO.		
			L.F.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH		L.F.		EACH		EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH		L.F.		EACH	
R	239+00	242+00	300									300																68	
R	242+00	243+00	104									104																68	
R	243+00	246+00	301									301																68	
R	246+00	251+26	526									526																68	
R	251+26	256+52	526									526																68	
R	256+52	261+78	526									526																68	
R	261+78	263+00	22									22																68	
L	239+00	241+00	200									200																68	
L	241+00	245+00	400									400																68	
L	245+00	249+10	410									410																68	
L	249+10	251+00	191									191																68	
L	251+00	256+37	537									537																68	
L	256+37	261+74	537									537																68	
L	261+74	263+00	126									126																68	
R	263+00	267+04	404									404																69	
R	267+04	273+07													611	2									611		2	69	
R	273+69	279+85													626										626			69	
R	279+85	286+01													625										625			69	
R	286+01	287+00													100										100			69	
L	263+00	267+11	411									411																69	
L	267+11	273+11													592	2									592		2	69	
L	273+74	280+04													620										620			69	
L	280+04	286+34													620										620			69	
L	286+34	287+00													65										65			69	
R	287+00	292+18													521										521			70	
R	292+18	298+35													617										617			70	
R	299+00	305+00													600	2									600			70	
R	305+00	310+50	550									550																70	
R	310+50	311+00	50									50																70	
L	287+00	292+64													461										461			70	
L	292+64	298+93													629										629			70	
L	299+57	305+57													600	2									600			70	
L	305+57	309+79	422									422																70	
L	309+79	311+00	121									121																70	
R	311+00	316+00	500									500																71	
R	316+00	321+82	582									582																71	
R	322+02	327+00	505									505																71	
R	327+00	331+07	413									413																71	
R	331+07	335+00	393									393																71	
L	311+00	314+00	300									300																71	
L	314+00	316+00	200									200																71	
L	316+00	317+18	115									115																71	
L	317+18	317+34	18									18																71	
L	317+42	317+58	18									18																71	
L	317+58	318+00	45									45																71	
SUB TOTAL			9,753	6	9	14						9,753	2		7,287	11		6							7,287		4		

FENCE SUB-SUMMARY

COMPLETED BY GHR DATE 2/19/89
CHECKED BY DATE

PLAN NO.
148

57
89

TYPE 47															TYPE CLT														
SIDE	STATION TO STATION		FENCE	END POST ASSEMBLY	CORNER POST ASSEMBLY	INTERMEDIAT 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	FENCE TERMINALS TYPE B	GROUND ROD	FENCE	END POST ASSEMBLY	CORNER POST ASSEMBLY	INTERMEDIAT 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	FENCE TERMINALS TYPE B	GROUND ROD	SEE SHEET NO.		
																												L.F.	EACH
L	318+00	322+26	426									426																71	
L	322+46	323+13	67									67																71	
L	323+13	326+56.5	338									338																71	
L	326+56.5	330+00	338									338																71	
L	330+00	335+00	497		2							497																71	
R	335+00	335+32	32									32																72	
R	335+52	337+00	148									148																72	
R	337+00	338+00	102									102																72	
R	338+00	340+00	201									201																72	
R	340+00	345+59	559									559																72	
R	345+59	351+18	559									559																72	
R	351+85	352+24	39									39																72	
R	352+24	355+74	340									340																72	
R	355+74	359+00	308									308																72	
L	335+00	335+12	12									12																72	
L	335+72	341+16	544									544																72	
L	341+16	346+60	544									544																72	
L	346+60	352+04	548									548																72	
L	352+71	355+74	313									313																72	
L	355+74	359+00	344									344																72	
R	359+00	360+32	124									124																73	
R	360+32	363+82	358									358																73	
R	363+82	367+00	318									318																73	
R	367+00	368+00	100									100																73	
R	368+00	373+81													582	2									582			73	
R	374+42	381+00													659	2									659			73	
R	381+00	383+00	200									200																73	
L	359+00	360+32	142									142																73	
L	360+32	363+82	358									358																73	
L	363+82	367+85	403									403																73	
L	367+85	373+85													600	2									600			73	
L	347+47	381+00													653	2									653			73	
L	381+00	383+00	200									200																73	
R	383+00	387+20	420									420																74	
R	387+20	393+40	620									620																74	
R	393+60	400+20	660									660																74	
R	400+20	406+80	660									660																74	
R	406+80	407+00	20									20																74	
L	383+00	386+55	355									355																74	
L	386+55	390+00	345									345																74	
L	390+00	391+00	100									100																74	
L	391+00	393+40	240									240																74	
L	393+60	400+20	660									660																74	
L	400+20	406+80	660									660																74	
L	406+80	407+00	20									20																74	
SUB TOTAL			13,222	16	12	16						13,222			2,494	8									2,494				

FENCE SUB-SUMMARY

COMPLETED BY GHR, DATE 9/19/89
CHECKED BY DATE

PLAN NO.
148

58
89

TYPE 47															TYPE CLT														
SIDE	STATION TO STATION		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	FENCE TERMINALS TYPE B	GROUND ROD	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	FENCE TERMINALS TYPE B	GROUND ROD	SEE SHEET NO.		
R	407+00	408+65	163									163															75		
R	408+85	415+00	594									594															75		
R	415+00	419+00	393									393															75		
L	407+00	408+65	167									167															75		
L	408+85	413+00	428									428															75		
L	413+00	415+00	208									208															75		
L	415+00	415+98	105									105															75		
L	415+98	419+00	305									305															75		
R	419+00	419+53	53									53															76		
R	419+53	420+17	217									217															76		
NOTE: STA. EQN. 425+12.62 BK.=0.00 AH.																													
R	1+17W	5+45	618									618															76		
R	5+45	9+00	355									355															76		
L	419+00	421+00	200									200															76		
NOTE: STA. EQN. 425+12.62 BK.=0.00 AH.																													
L	421+00	0+37	450									450															76		
L	3+98E	4+00	170									170															76		
L	4+00	8+38	500									500															76		
L	8+38	9+00	62									62															76		
R	9+00	11+62	262									262															77		
R	11+62	14+00	238									238															77		
R	14+00	19+00													500									500			77		
R	19+00	1+75S													90									90			77		
R	1+75S	20+25													67									67			77		
R	20+25	22+00													175									175			77		
R	22+00	26+25													431									431			77		
R	26+25	32+66	642									642															77		
R	32+66	34+00	134									134															77		
L	9+00	12+75	261									261															77		
L	12+75	18+75													591									591			77		
L	18+75	1+98N													88									88			77		
L	1+98N	20+00													113									113			77		
L	20+00	25+67													561									561			77		
L	25+67	31+34													558									558			77		
L	31+34	34+00													264									264			77		
R	34+00	36+56	256									256															78		
R	36+56	39+89	333									333															78		
R	39+89	43+21	332									332															78		
R	43+21	46+40	319									319															78		
R	47+00	53+50	660									660															78		
R	53+50	58+00	459									459															78		
SUB TOTAL																													
8,884 13 5 10 8,884 3,438 7 4 2 3,438																													

FENCE SUB-SUMMARY

COMPLETED BY GHR DATE 2/19/89
CHECKED BY DATE

PLAN NO.
148

59
89

TYPE 47															TYPE CLT														
SIDE	STATION TO STATION		FENCE	END POST ASSEMBLY	CORNER POST ASSEMBLY	INTERMEDIAT 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	FENCE TERMINALS TYPE B	GROUND ROD	FENCE	END POST ASSEMBLY	CORNER POST ASSEMBLY	INTERMEDIAT 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	FENCE TERMINALS TYPE B	GROUND ROD	SEE SHEET NO.		
			L.F.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	L.F.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	L.F.	EACH	EACH		
L	34+00	37+00													300	1									300			78	
L	37+00	39+00	200	1								200															78		
L	39+00	42+00	300		1							300															78		
L	42+00	46+00	400		1							400															78		
L	46+00	47+70	170	1	1							170															78		
L	48+30	50+83	250	1								250															78		
L	50+83	57+54	660		1							660															78		
L	57+54	58+00	45			1						45															78		
R	58+00	60+01	201									201															79		
R	60+01	66+66	660			1			1			660															79		
R	66+66	73+39	660	1		1						660															79		
R	73+39	77+19													332	2					1				332			79	
R	78+25	81+25													300	2									300			79	
R	81+25	82+00	75	1								75															79		
L	58+00	64+15	615									615															79		
L	64+15	69+15	507			1						507															79		
L	69+15	74+17	575			1						575															79		
L	74+17	74+17	24	1	1							24															79		
L	74+17	77+20													322	2									322			79	
L	78+25	82+00													375	1									375			79	
R	82+00	87+85	585									585															80		
R	87+85	94+45	660			1						660															80		
R	94+45	101+05	660			1						660															80		
R	101+05	106+00	495			1						495															80		
L	82+00	85+92													392	1									392			80	
L	85+92	85+92	31	1								31															80		
L	85+92	92+52	660		1							660															80		
L	92+52	97+00	448			1						448															80		
L	97+00	99+00	200			1						200															80		
L	99+00	102+00	300			1						300															80		
L	102+00	105+00	300			1						300															80		
L	105+00	106+00	100		1							100															80		
R	106+00	107+65	165									165															81		
R	107+65	114+25	660			1		1				660															81		
R	114+25	120+85	660			1						660															81		
R	120+85	127+45	660			1		1				660															81		
R	127+45	130+00	255			1						255															81		
L	106+00	107+52	152									152															81		
L	107+52	108+85	133			1						133															81		
L	108+85	108+90	26		1							26	1														81		
L	109+05	109+25	28									28	1														81		
L	109+25	111+00	175		1							175															81		
L	111+00	112+50	150		1							150															81		
L	112+50	115+00	250		1							250															81		
L	115+00	121+60	660		1							660															81		
L	121+60	128+20	660			1						660															81		
L	128+20	130+00	180			1						180															81		
SUB TOTAL			14,595	7	12	19		2	1			14,595	2		2,021	9					1				2,021				

FENCE SUB-SUMMARY

FENCE SUB-SUMMARY

END POST LOCATION DETAIL

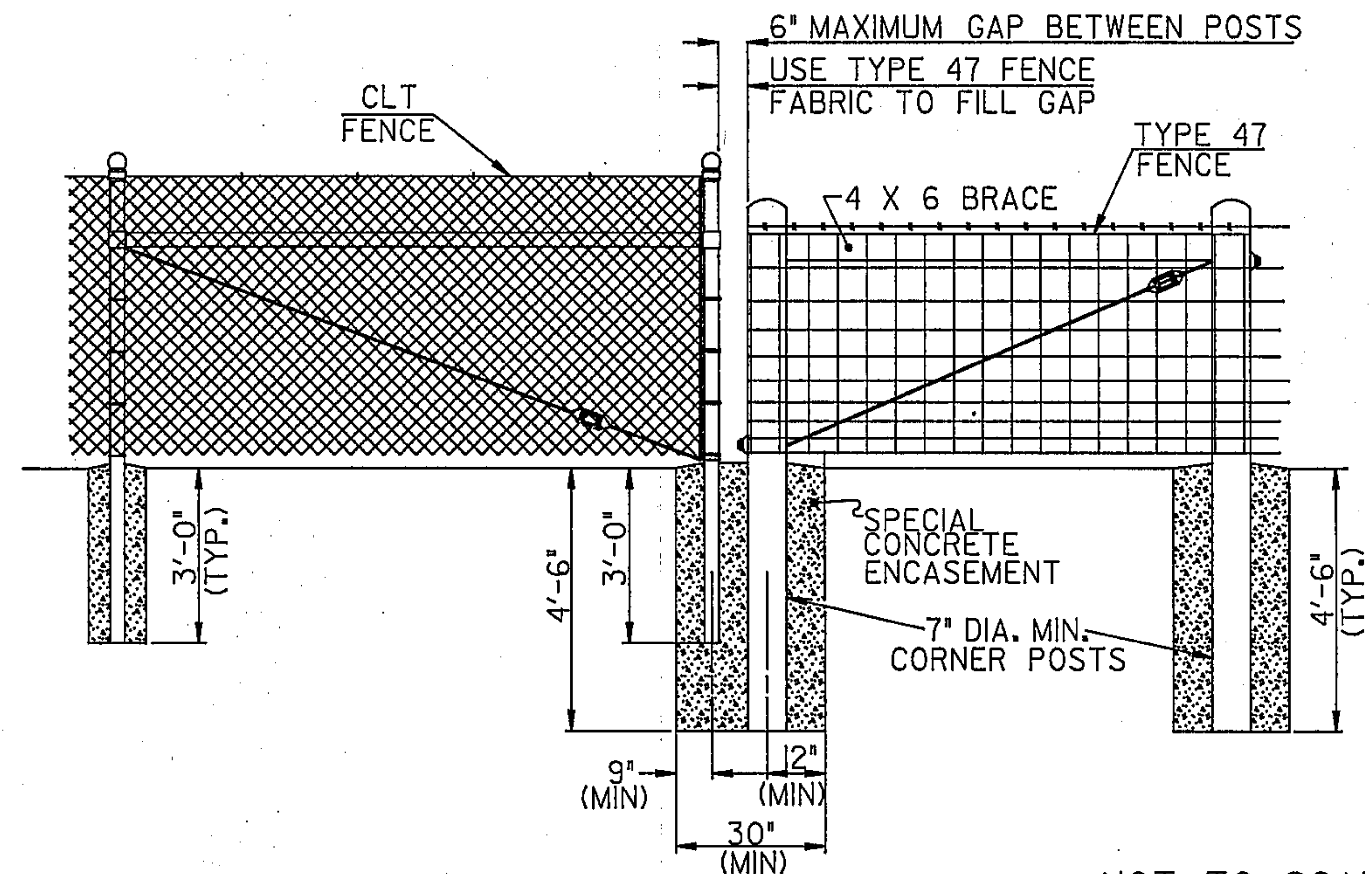
61
89

PLAN NO.
148

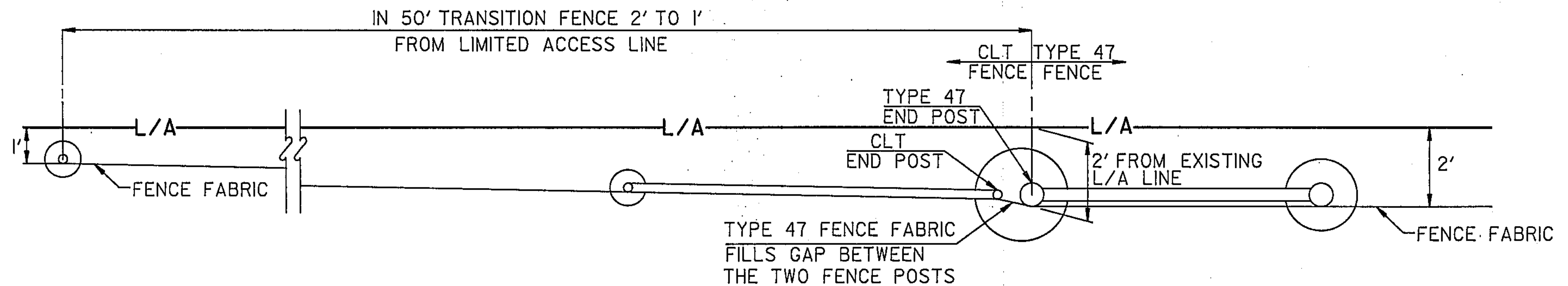
END POST LOCATION DETAIL

THE INTENT OF THIS DETAIL IS TO ELIMINATE 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.

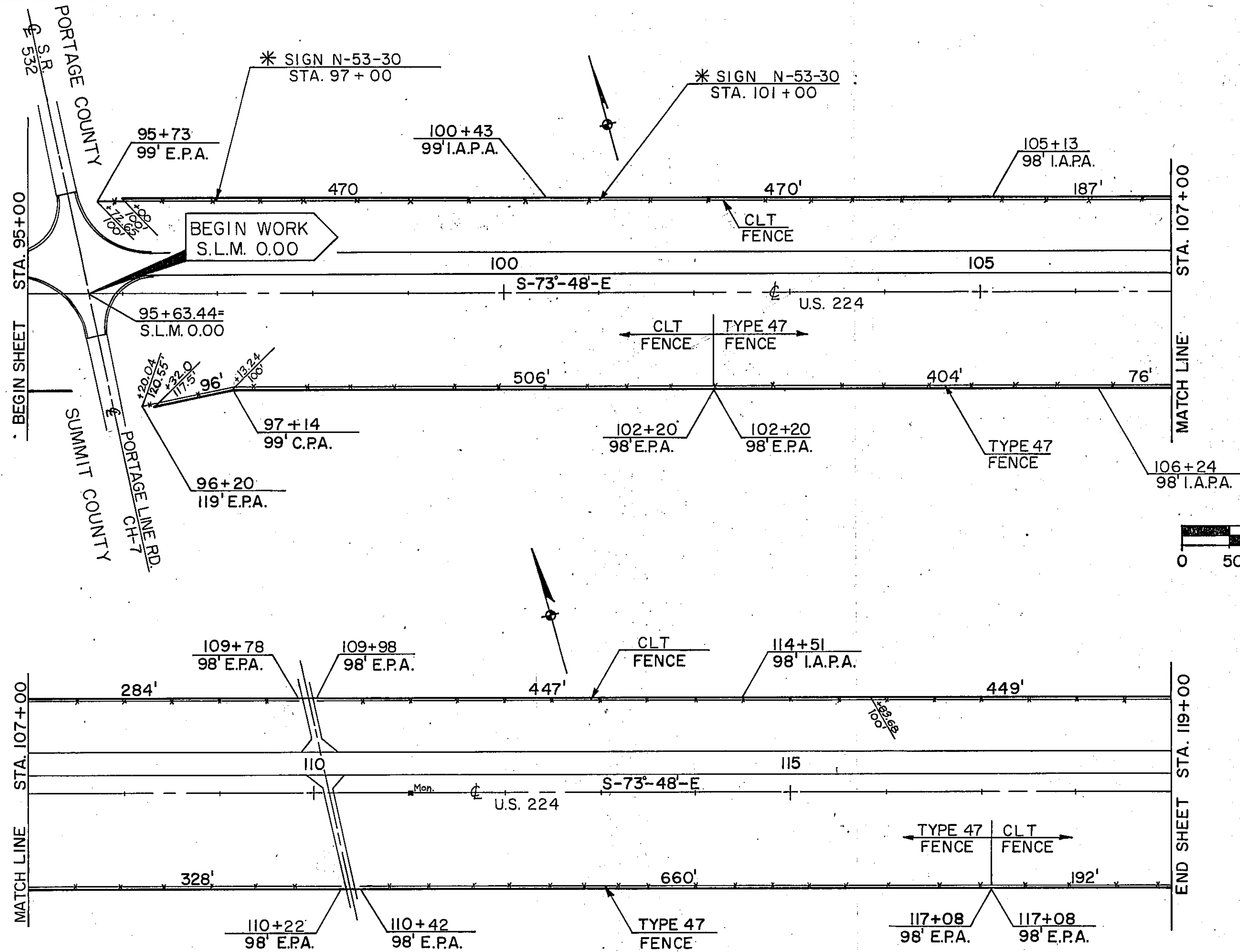
FOR DETAILS NOT SHOWN HERE
SEE STANDARD DRAWINGS F-1 & F-2



NOT TO SCALE



END POST LOCATION DETAIL

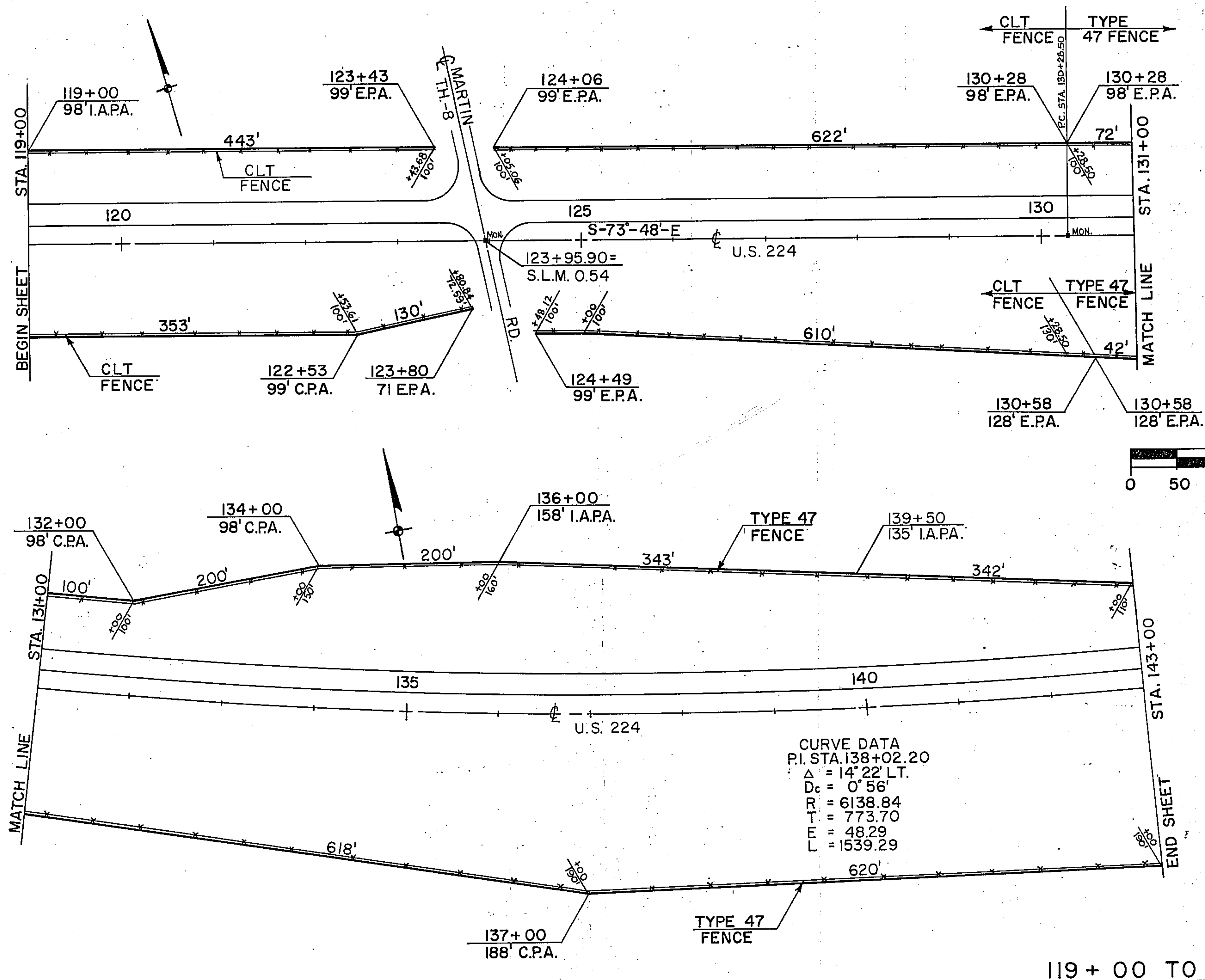


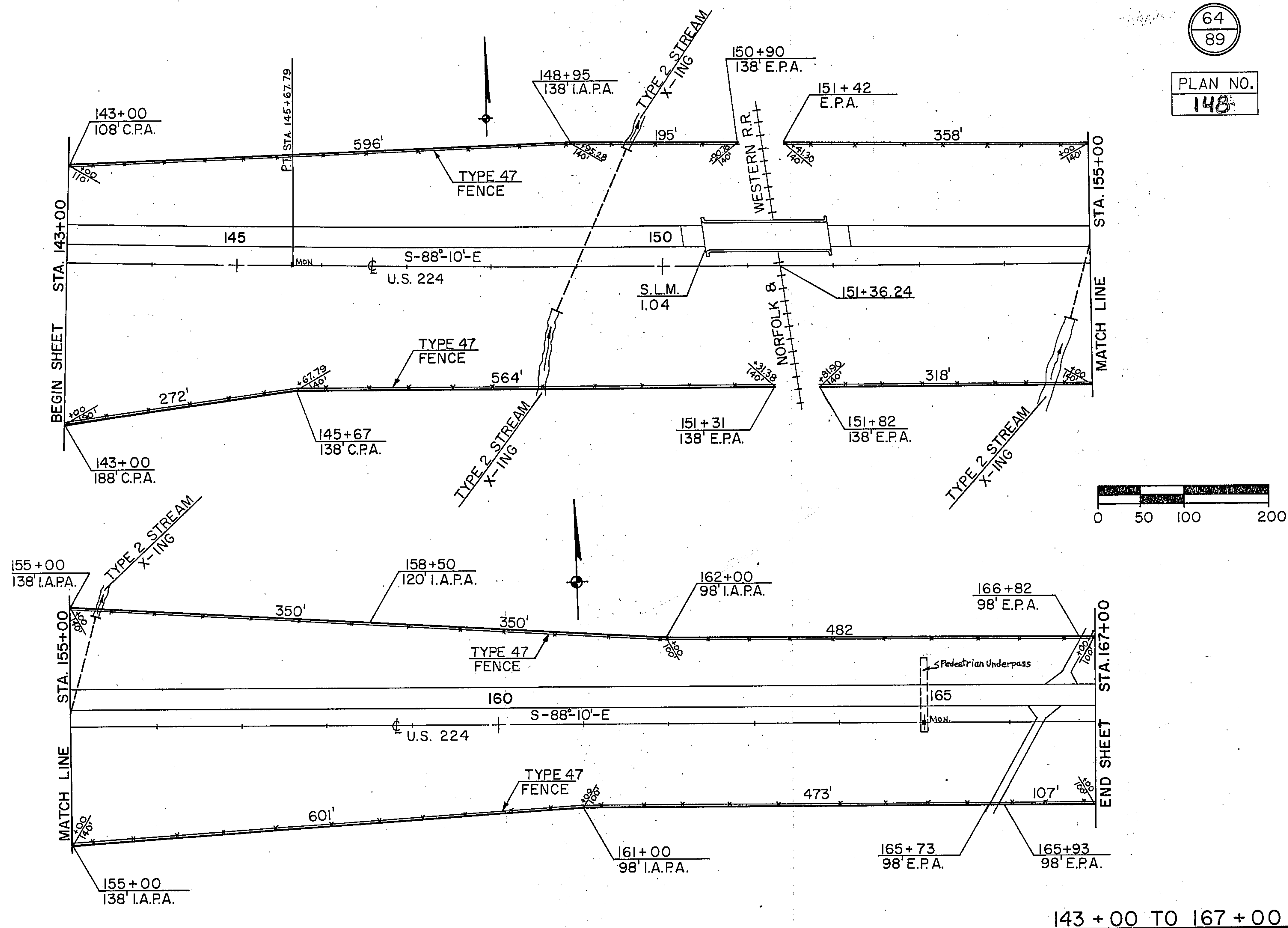
* SEE SHEET 53

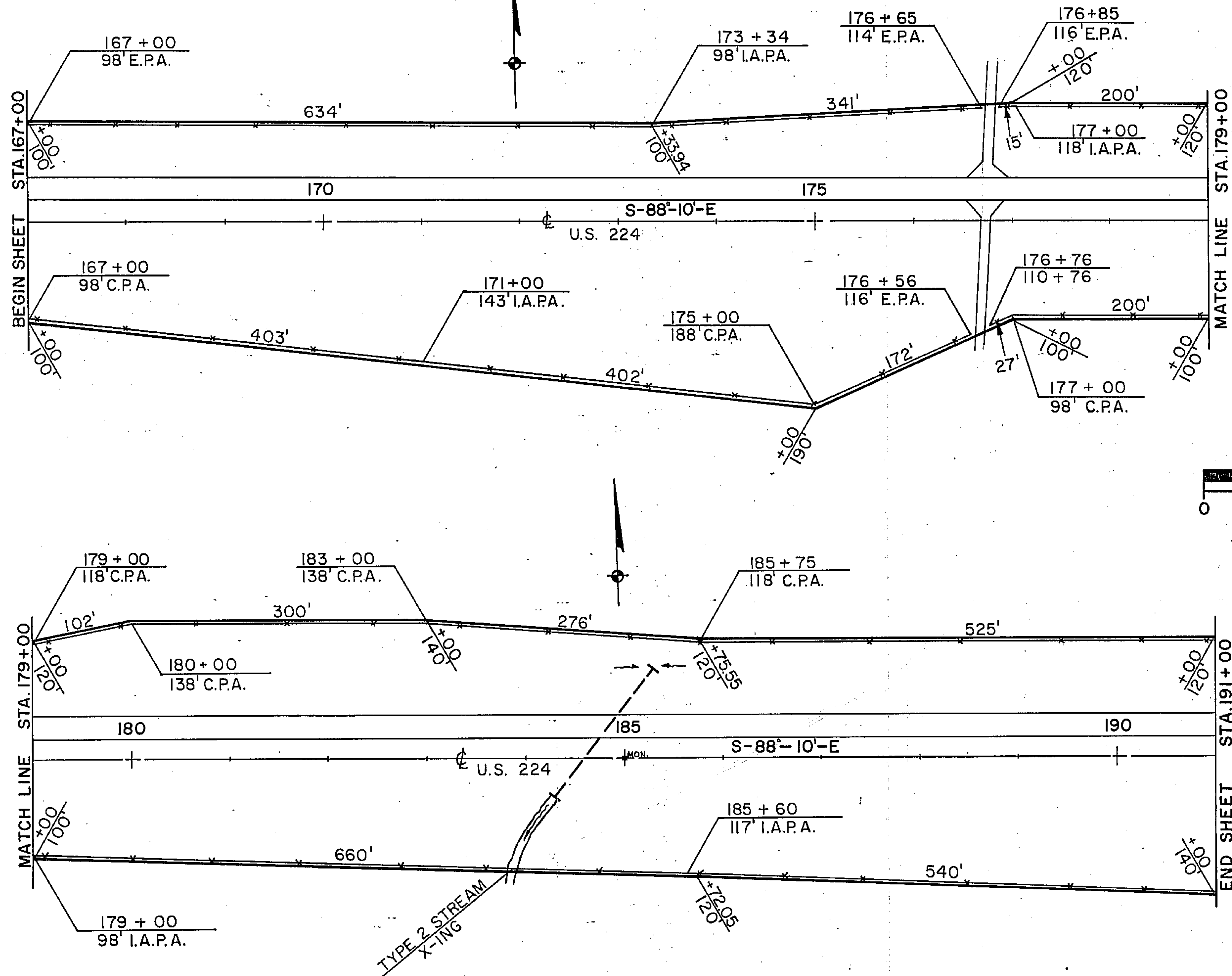
95+00 TO 119+00

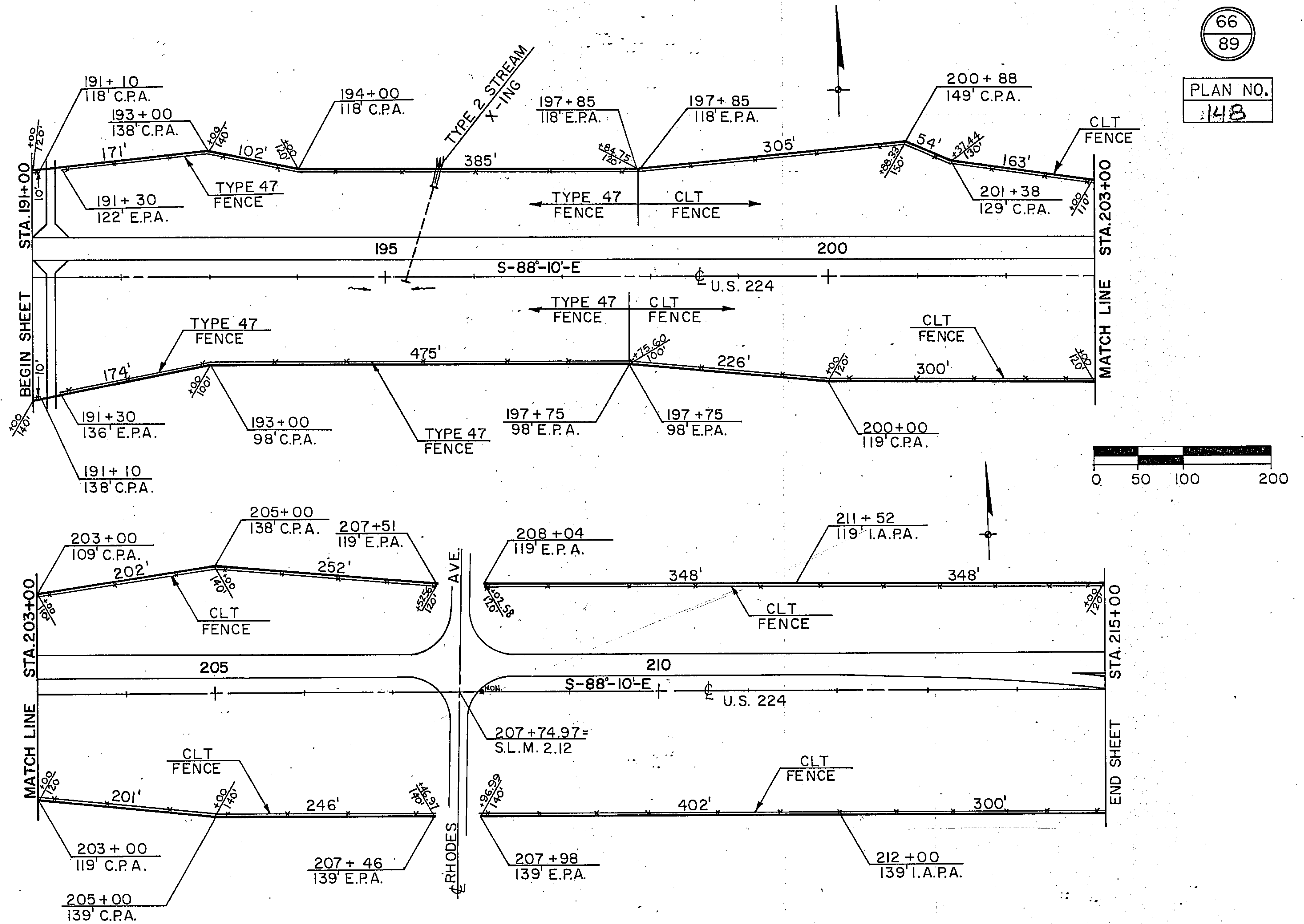
63
89

PLAN NO.
1-8



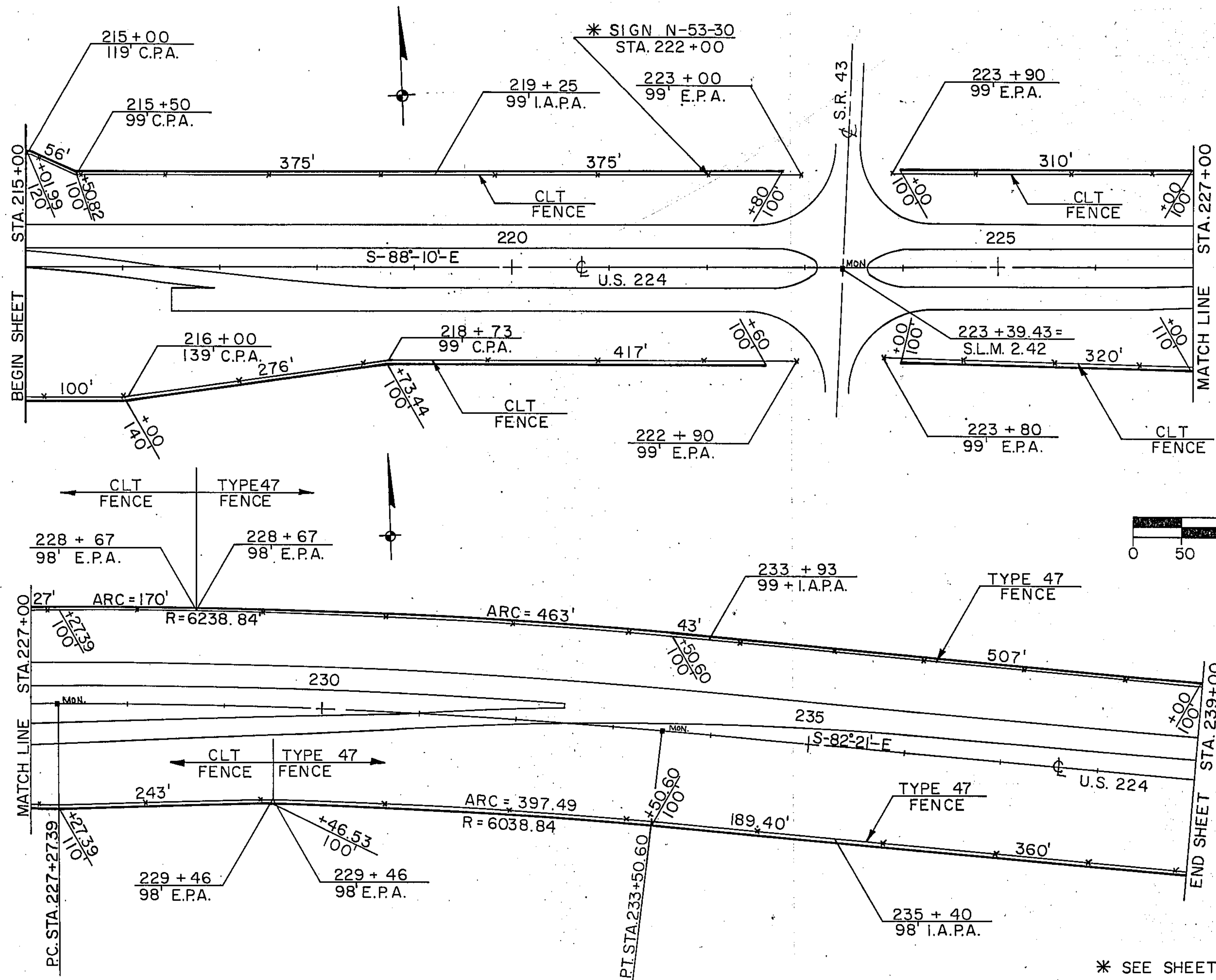






67
89

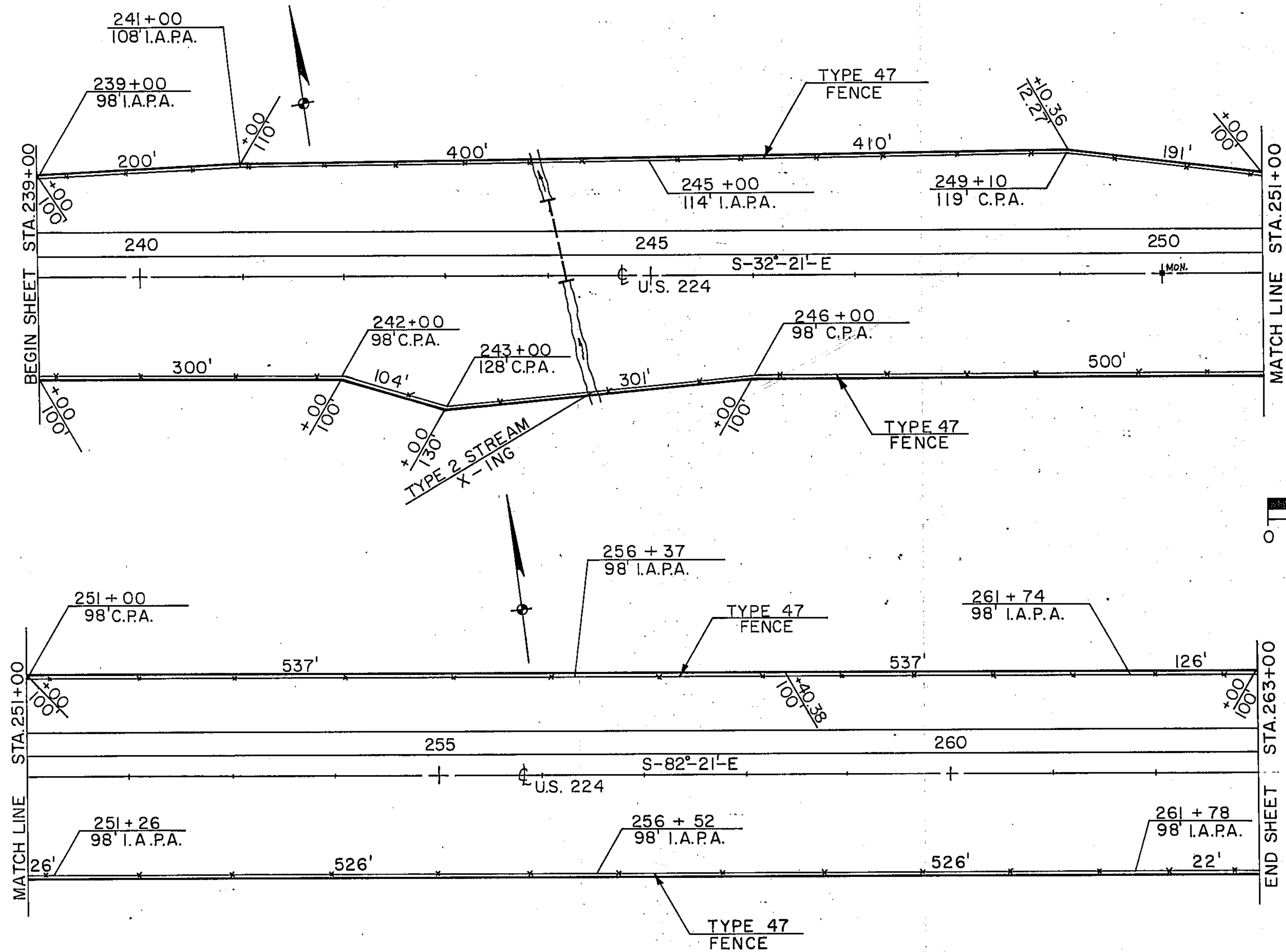
PLAN NO.
148



CURVE DATA
 P.I. STA. 230+39.27
 $\Delta = 5^\circ 49' \text{ RT.}$
 $D = 0^\circ 56'$
 $R = 6138.84$
 $T = 311.88$
 $L = 623.21$
 $E = 7.92$

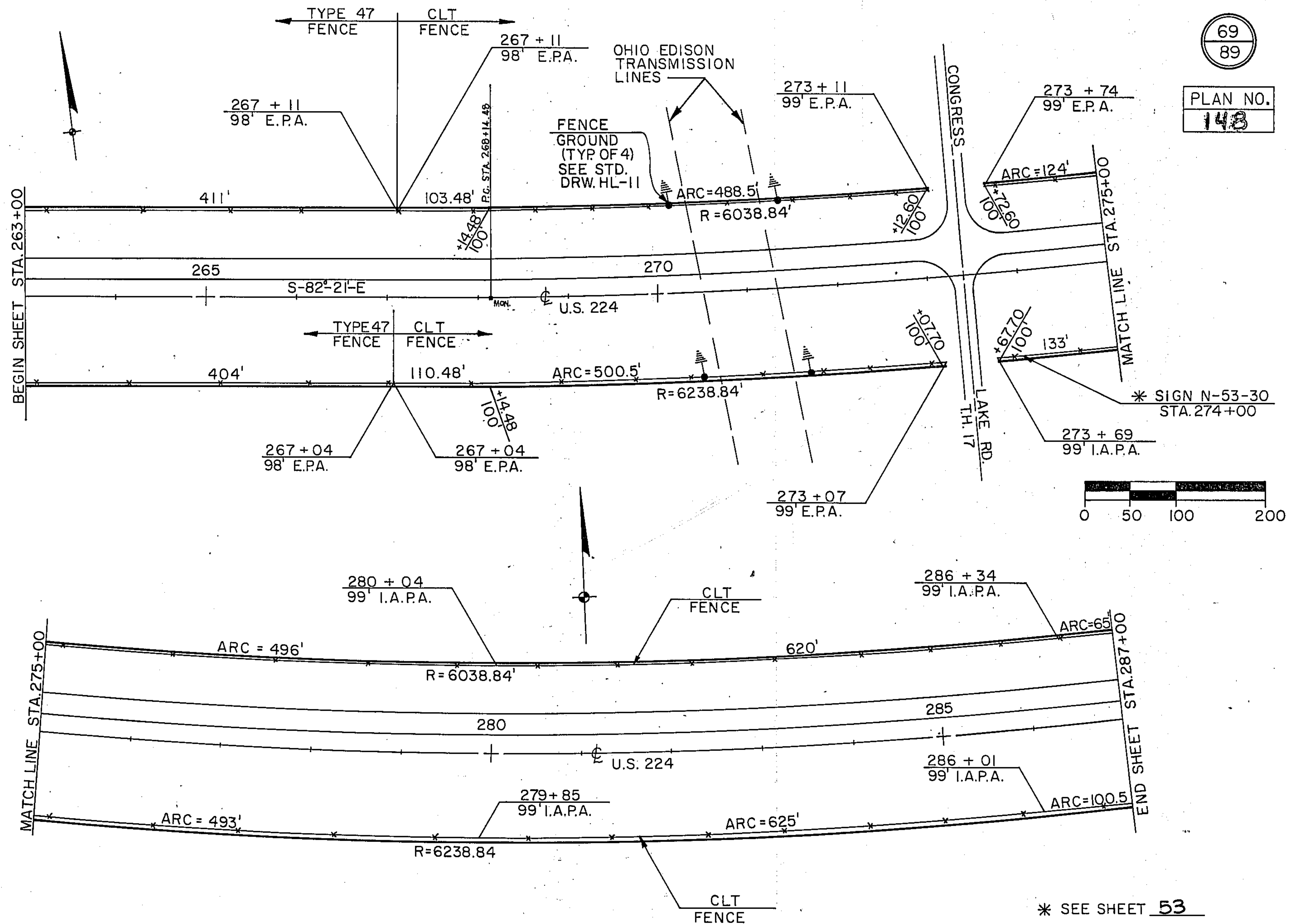
* SEE SHEET 53

215 + 00 TO 239 + 00



69
89

PLAN NO.
148

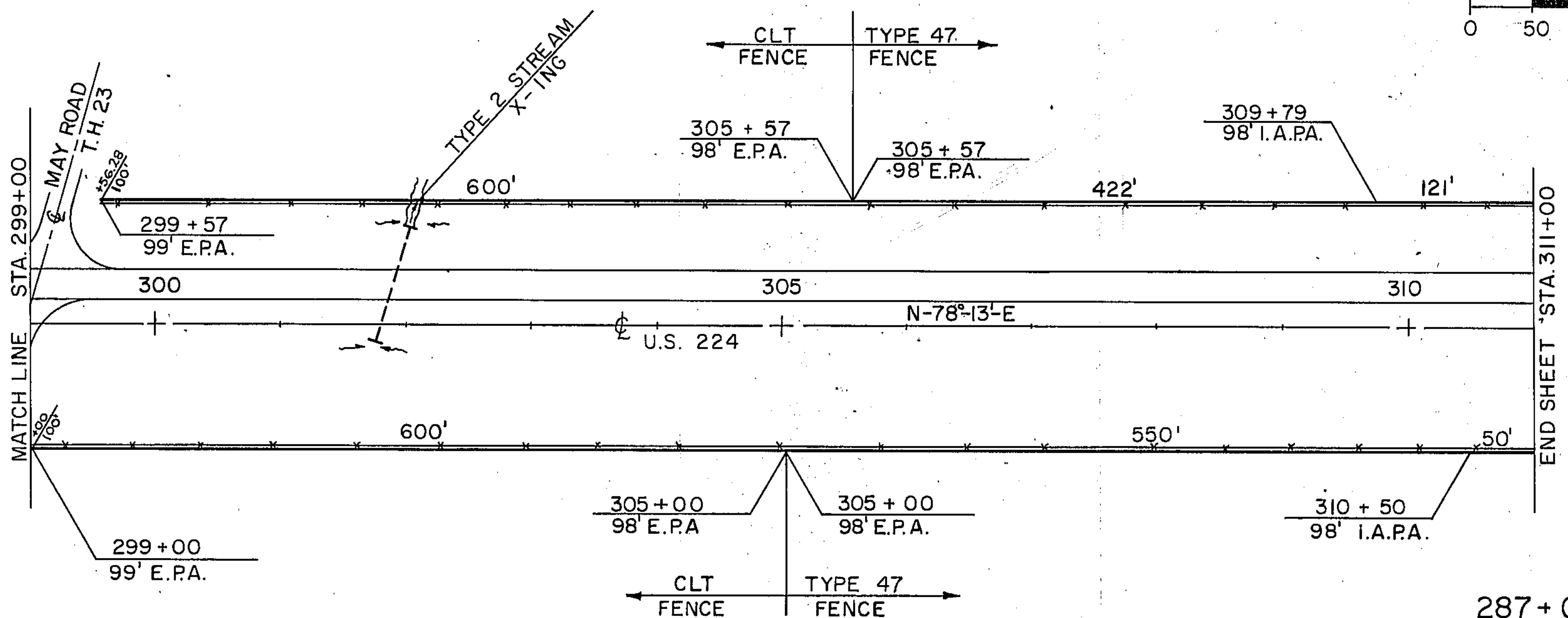
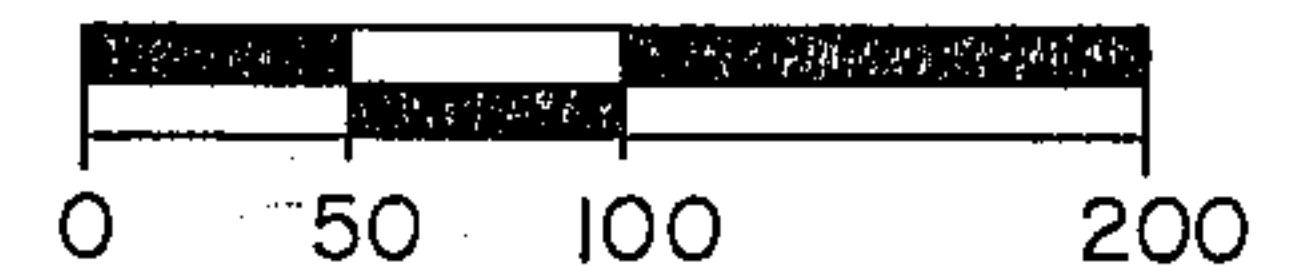
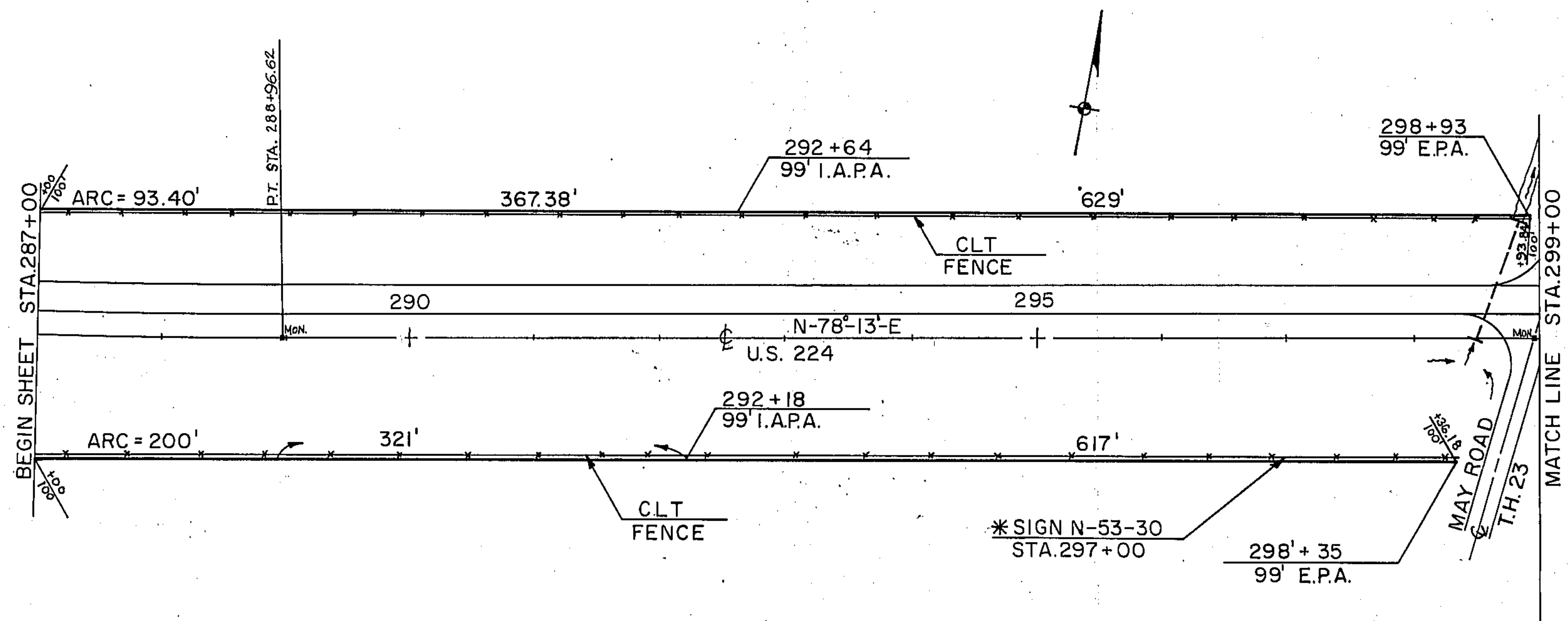


CURVE DATA
P.I. STA. 278 + 65.65
 $\Delta = 19^\circ 26' \text{ LT.}$
 $D_s = 0^\circ 56'$
 $R = 6138.84'$
 $T = 1051.17'$
 $E = 89.35'$
 $L = 2082.14'$

263 + 00 TO 287 + 00

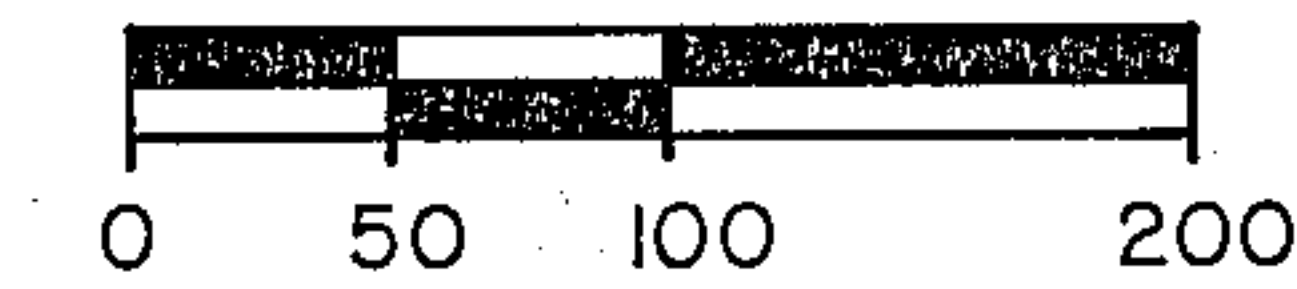
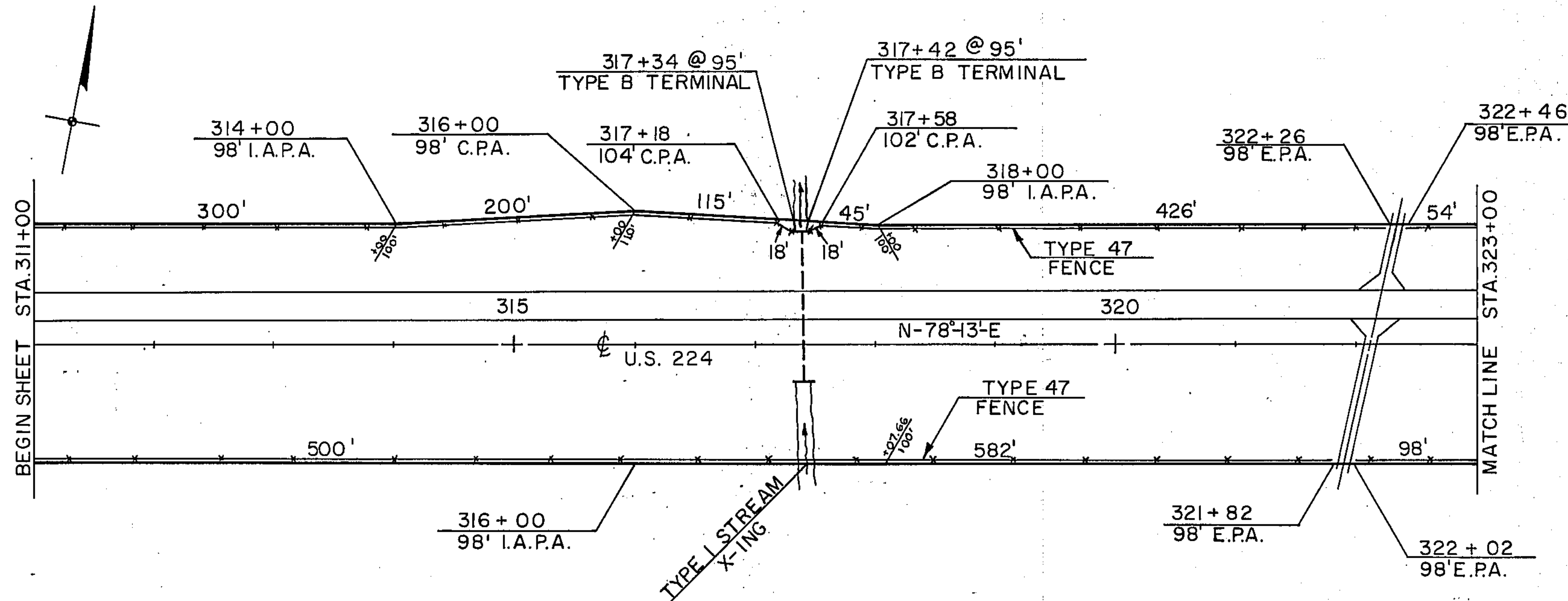
70
89

PLAN NO.
148

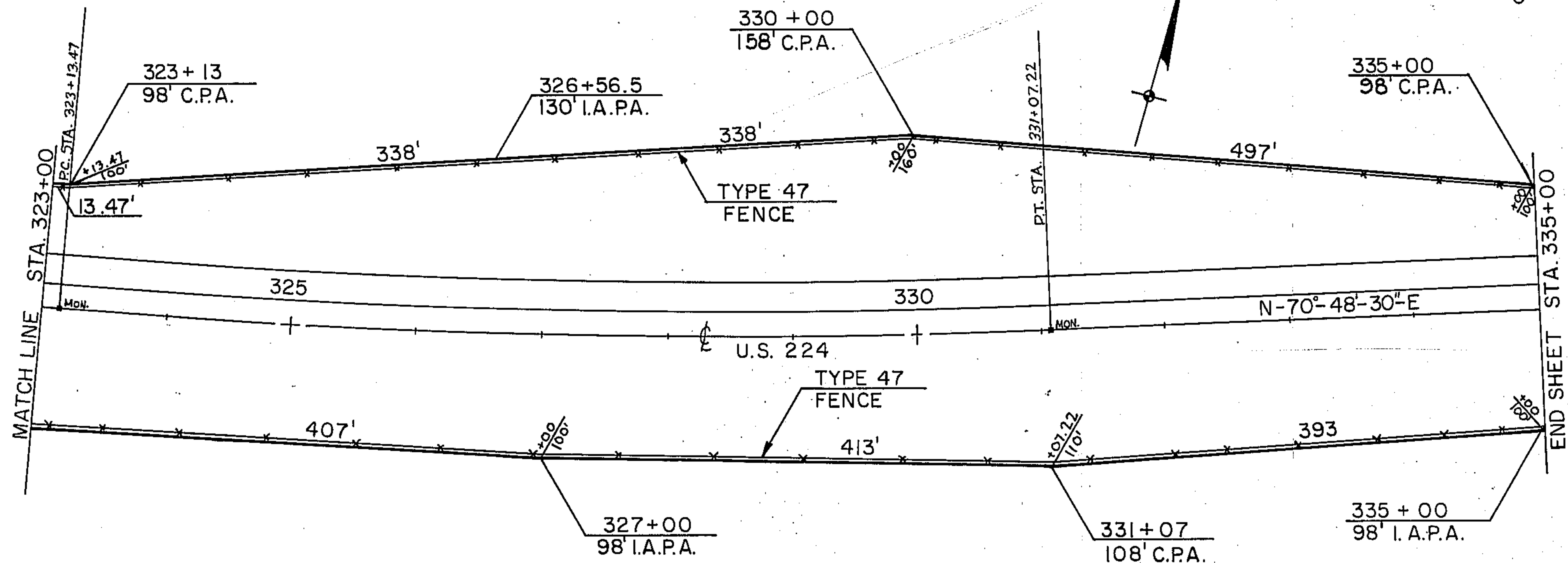


* SEE SHEET 53

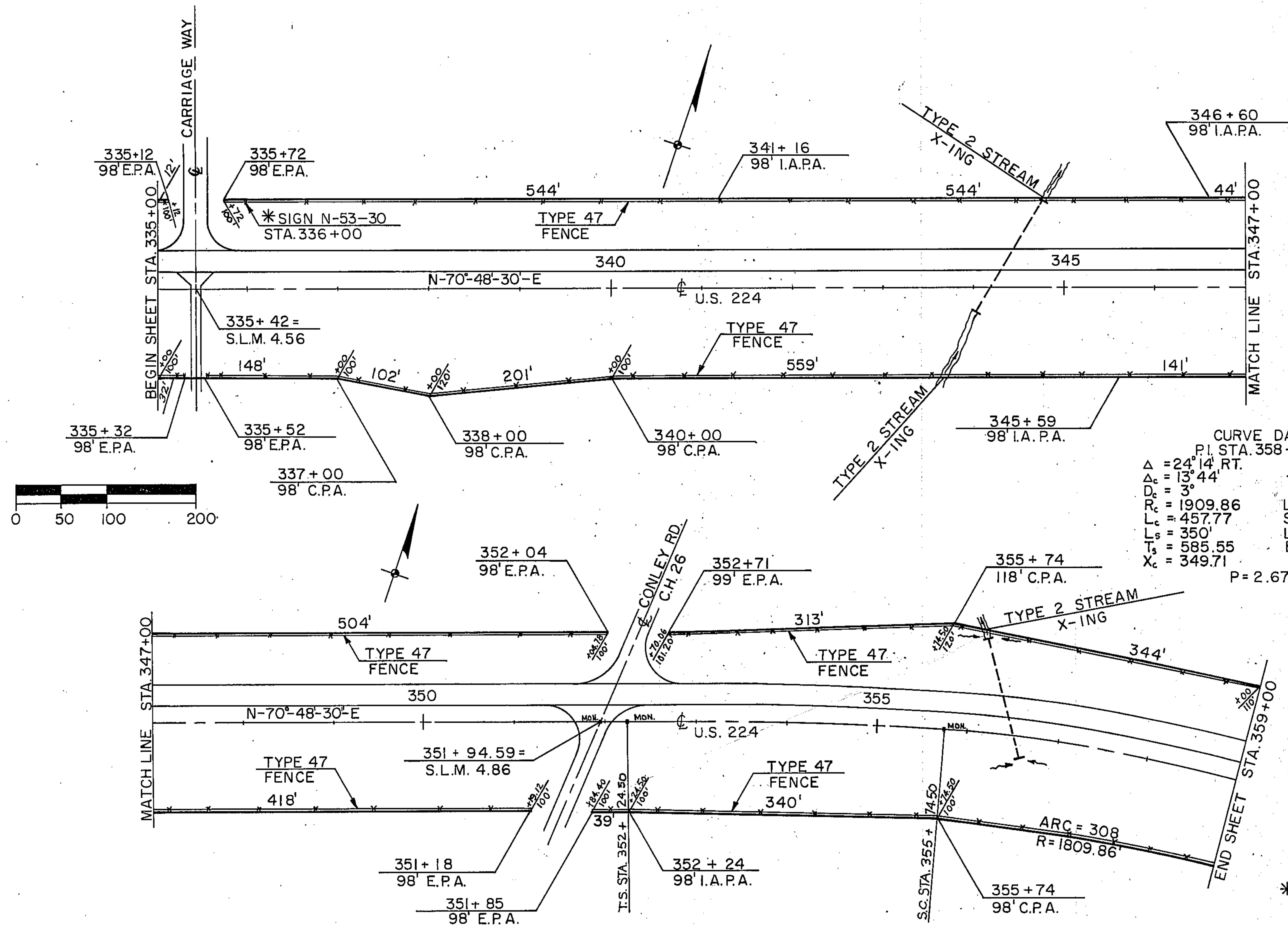
287+00 + 311+00



CURVE DATA
P.I. STA. 327+10.90
 $\Delta = 7^\circ 24' 30''$ LT.
D = 0° 56'
R = 6138.84
T = 397.43
E = 12.85
L = 793.75
P.C. = 323+13.47
P.T. = 331+07.22



311+00 TO 335+00

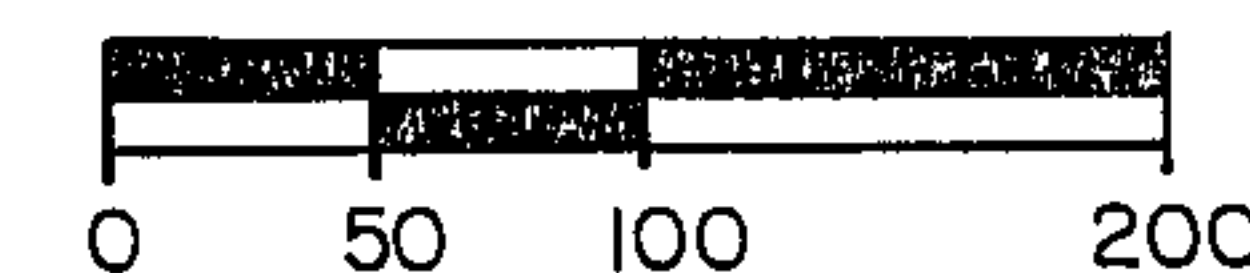
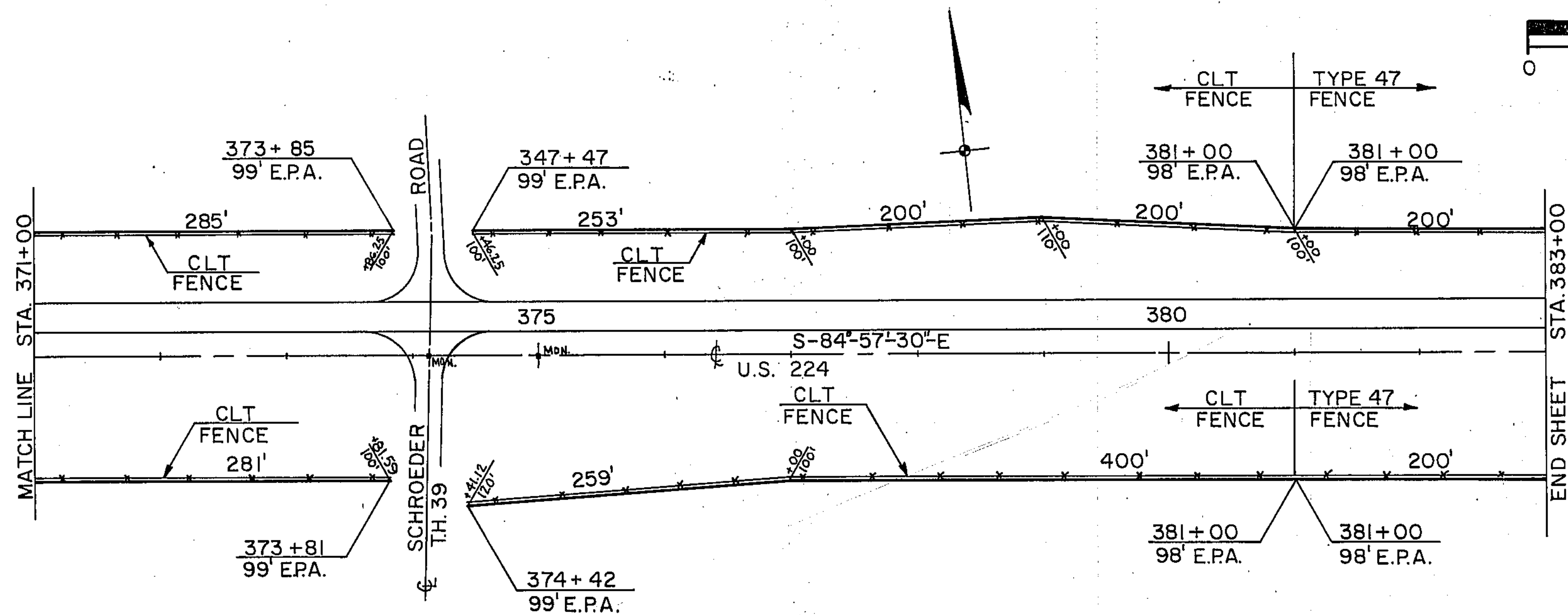
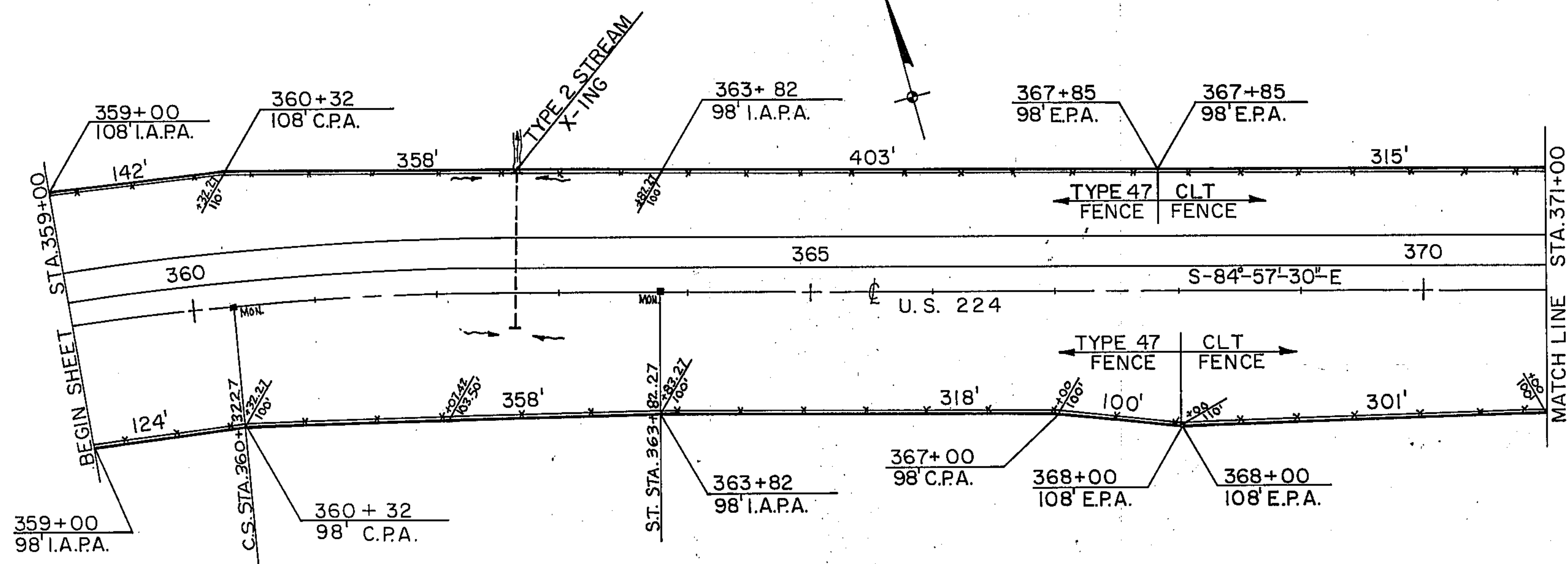


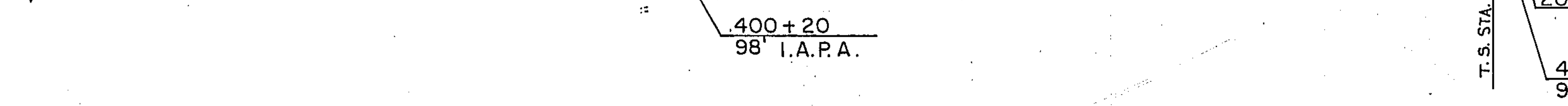
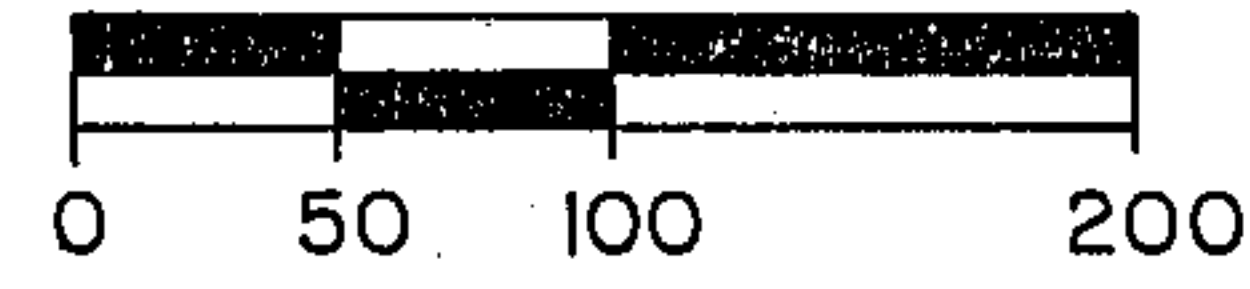
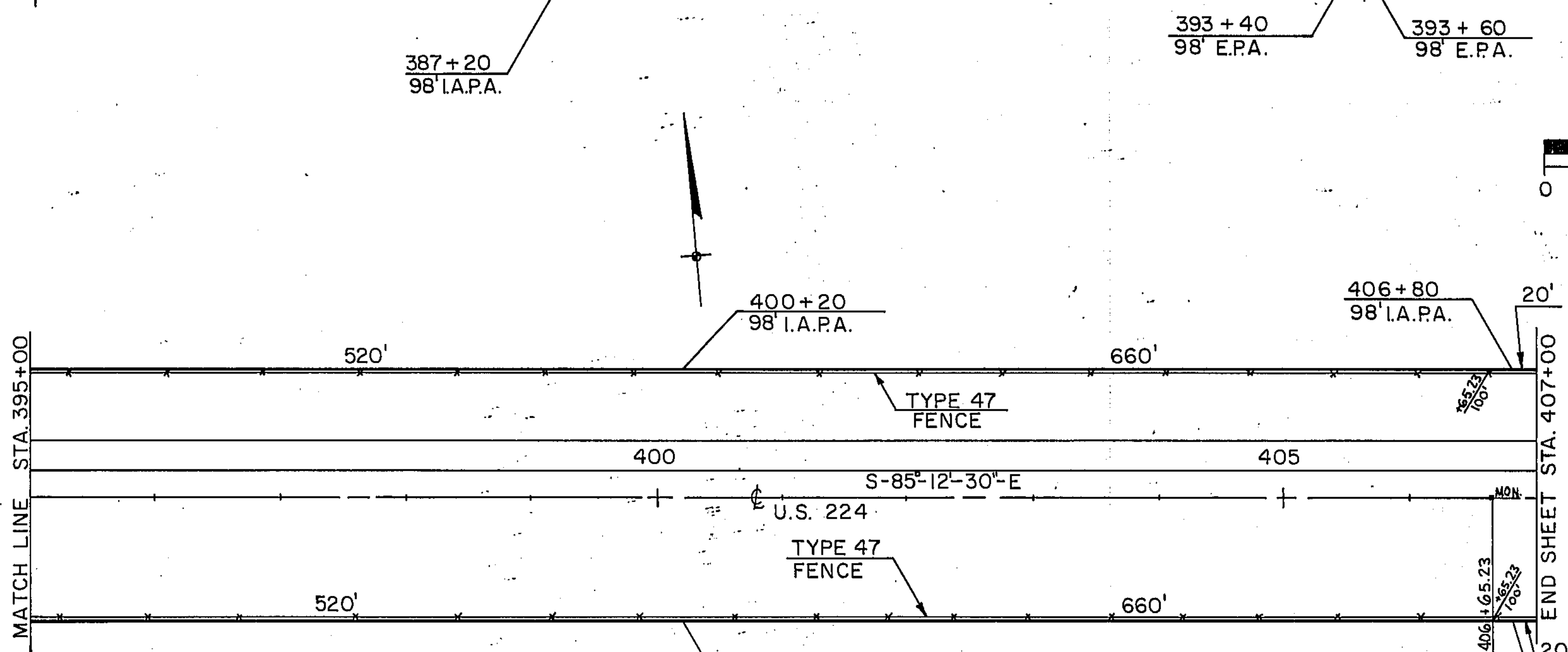
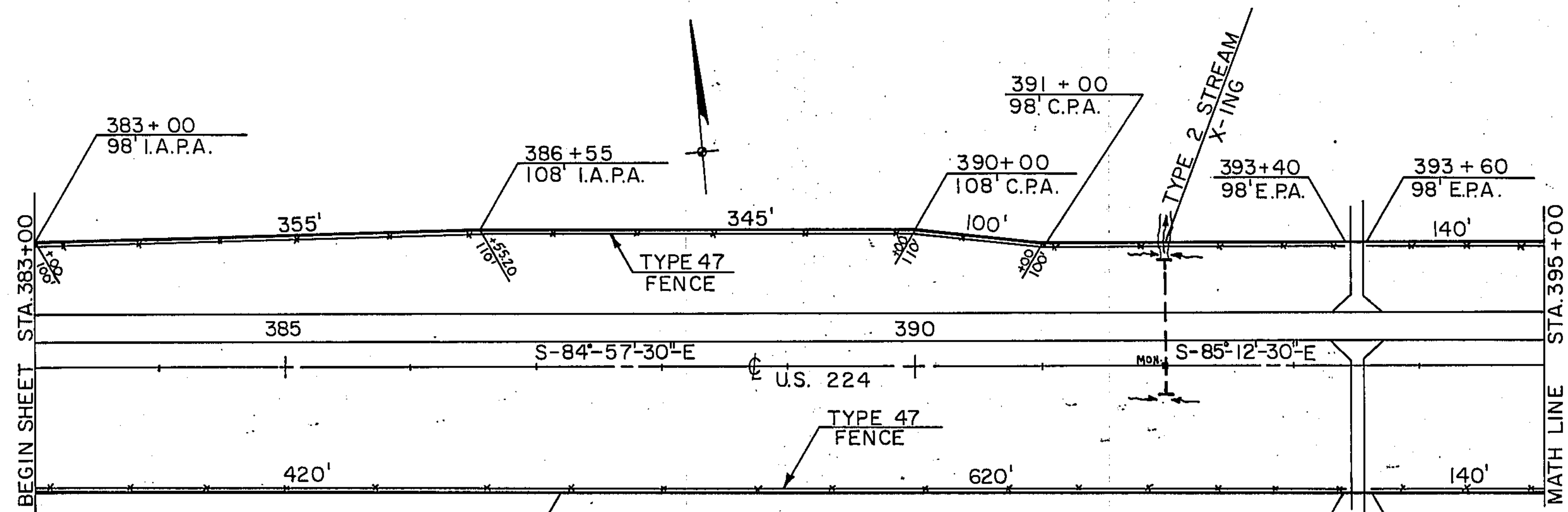
CURVE DATA

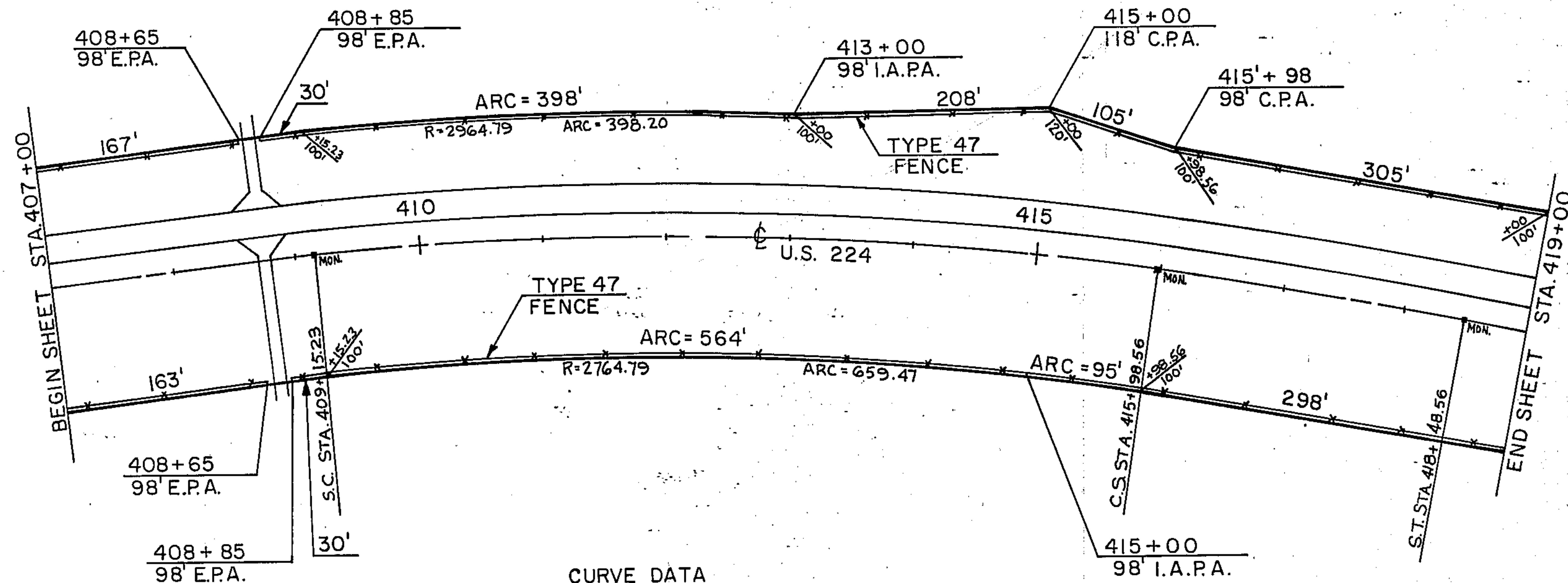
PI. STA. 358+10.05	
$\Delta = 24^{\circ}14' RT.$	$Y_c = 10.68'$
$\Delta_c = 13^{\circ}44'$	$\theta_s = 5^{\circ}15'$
$D_c = 3'$	$\phi_c = 1^{\circ}45'$
$R_c = 1909.86$	$LT = 233.44'$
$L_c = 457.77$	$ST = 116.76$
$L_s = 350'$	$LC = 349.87$
$T_s = 585.55$	$Es = 46.25$
$X_c = 349.71$	$K = 174.95$
$P = 2.67'$	

* SEE SHEET 53

335+00 TO 359+00



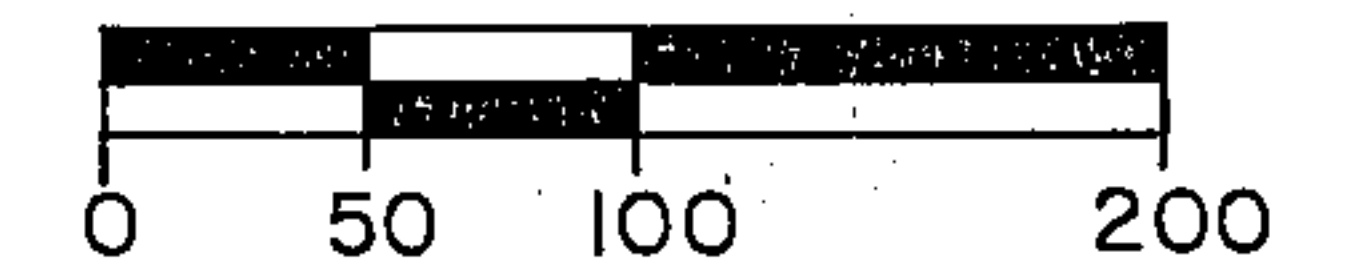




CURVE DATA
P.I. STA. 412 + 61.20

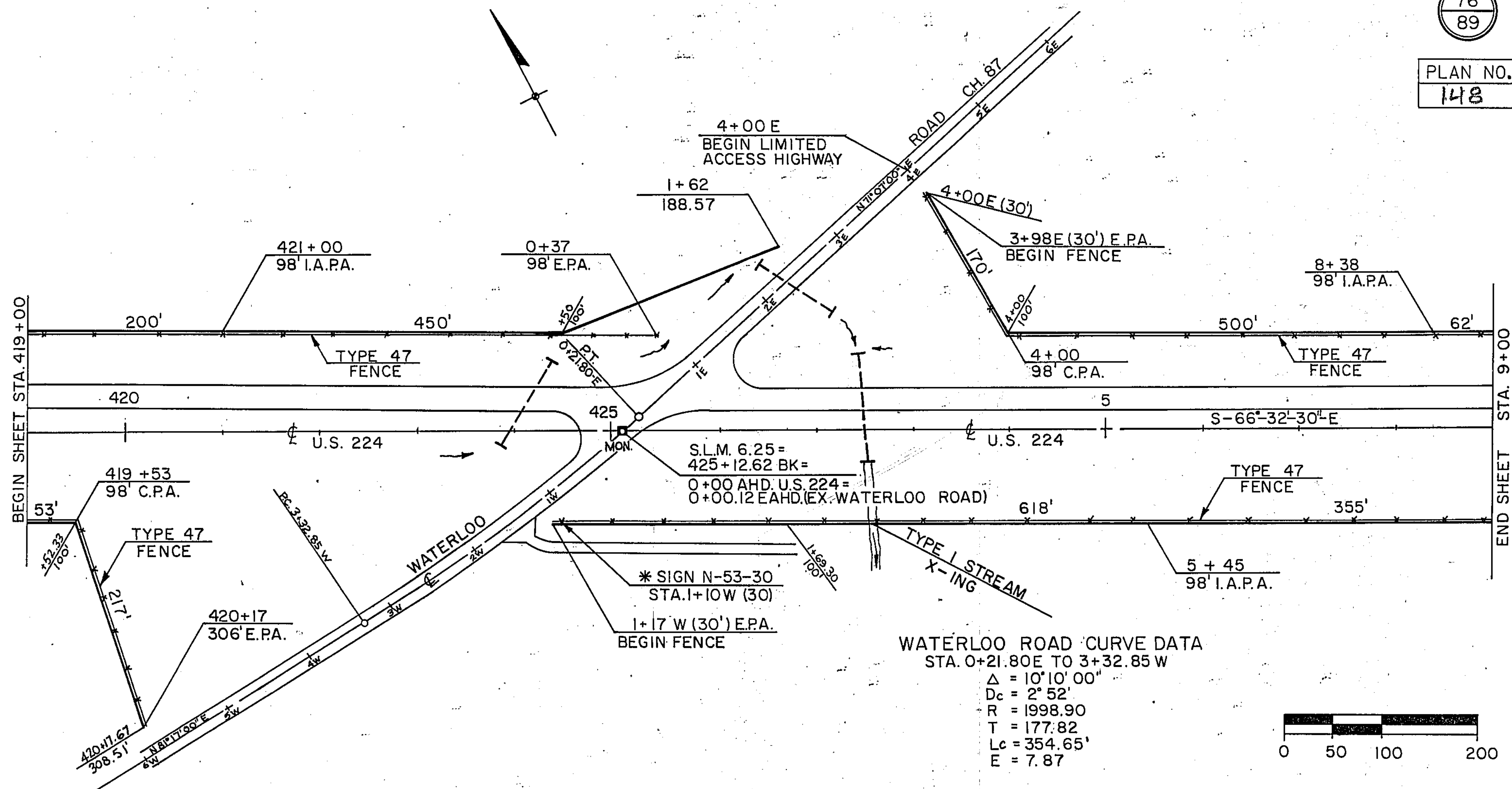
$\Delta = 18^\circ 40'$	$L_s = 250'$
$\Delta_c = 13^\circ 40'$	$T_s = 5959.97'$
$D_c = 2^\circ 0'$	$X_c = 249.95'$
$R_c = 2864.79'$	$Y_c = 3.64'$
$T.S. = 406 + 65.43$	$\theta_s = 2^\circ 30'$
$S.C. = 409 + 15.23$	$\phi = 0^\circ 50'$
$C.S. = 415 + 98.56$	$L.T. = 166.68'$
$S.T. = 418 + 48.56$	$S.T. = 83.35'$
$L_c = 683.33'$	$L.C. = 249.98'$
$E_s = 39.37'$	$K = 124.99'$

$p. = 0.91$



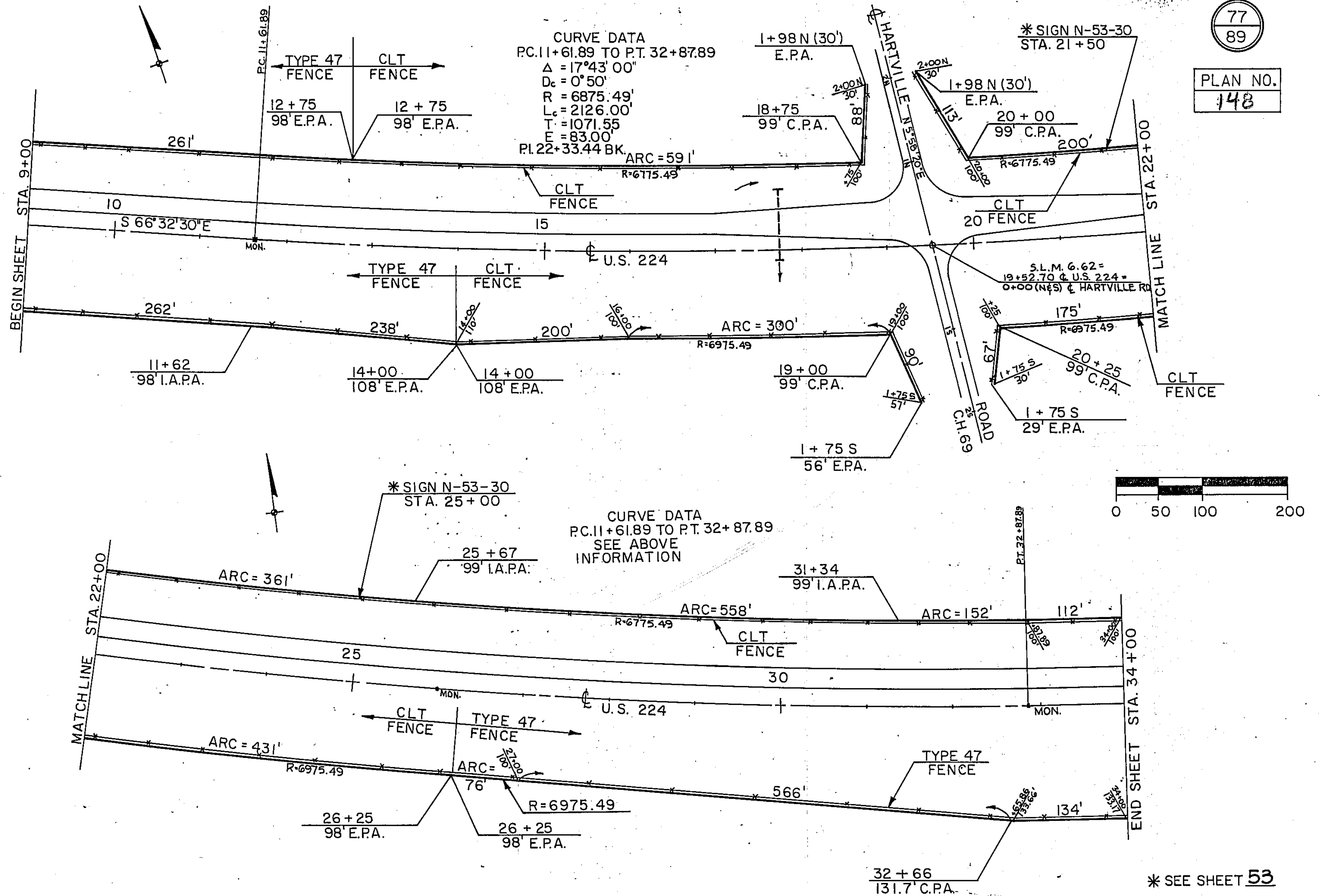
76
89

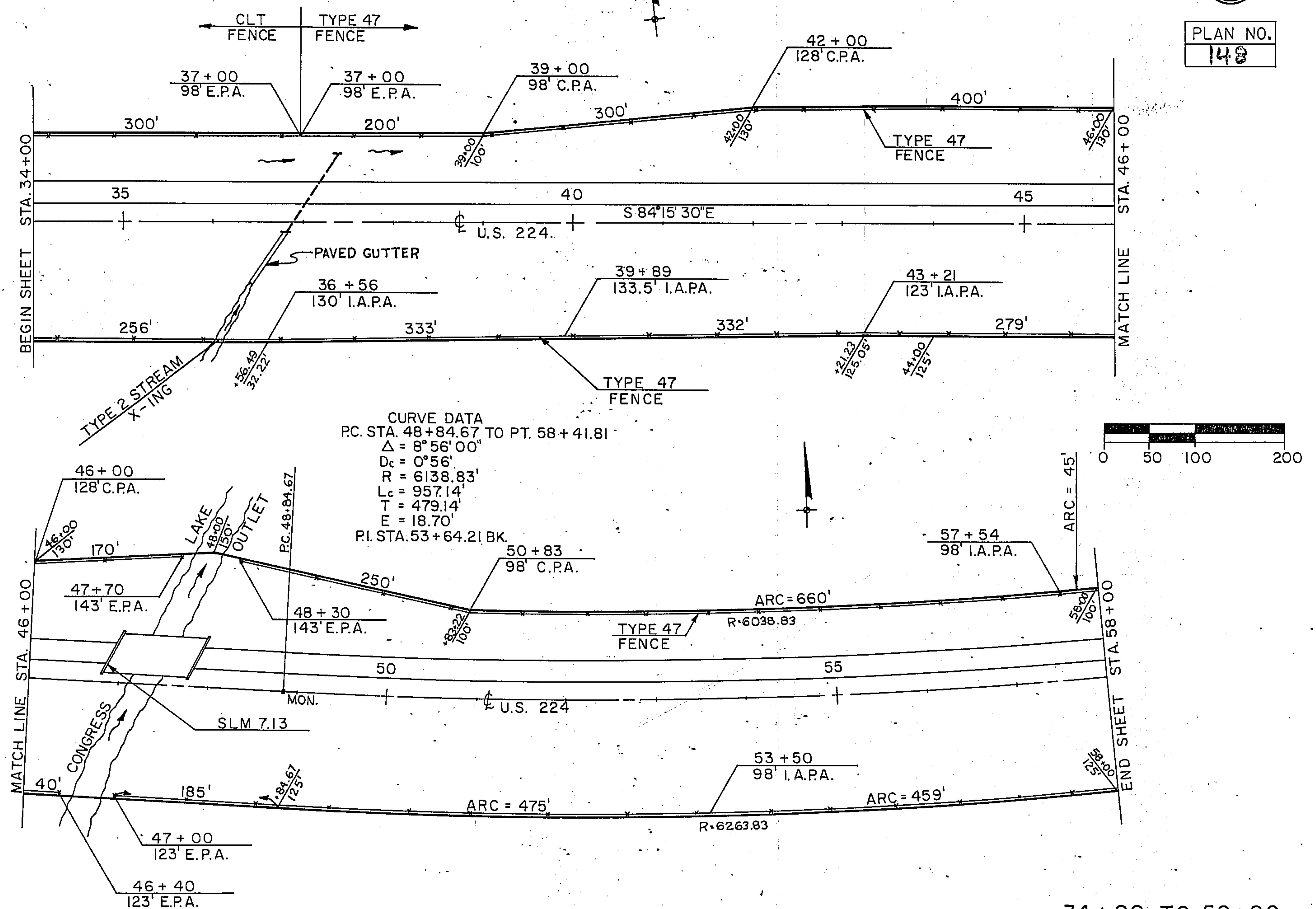
PLAN NO.
148



* SEE SHEET 53

419+00 TO 9+00

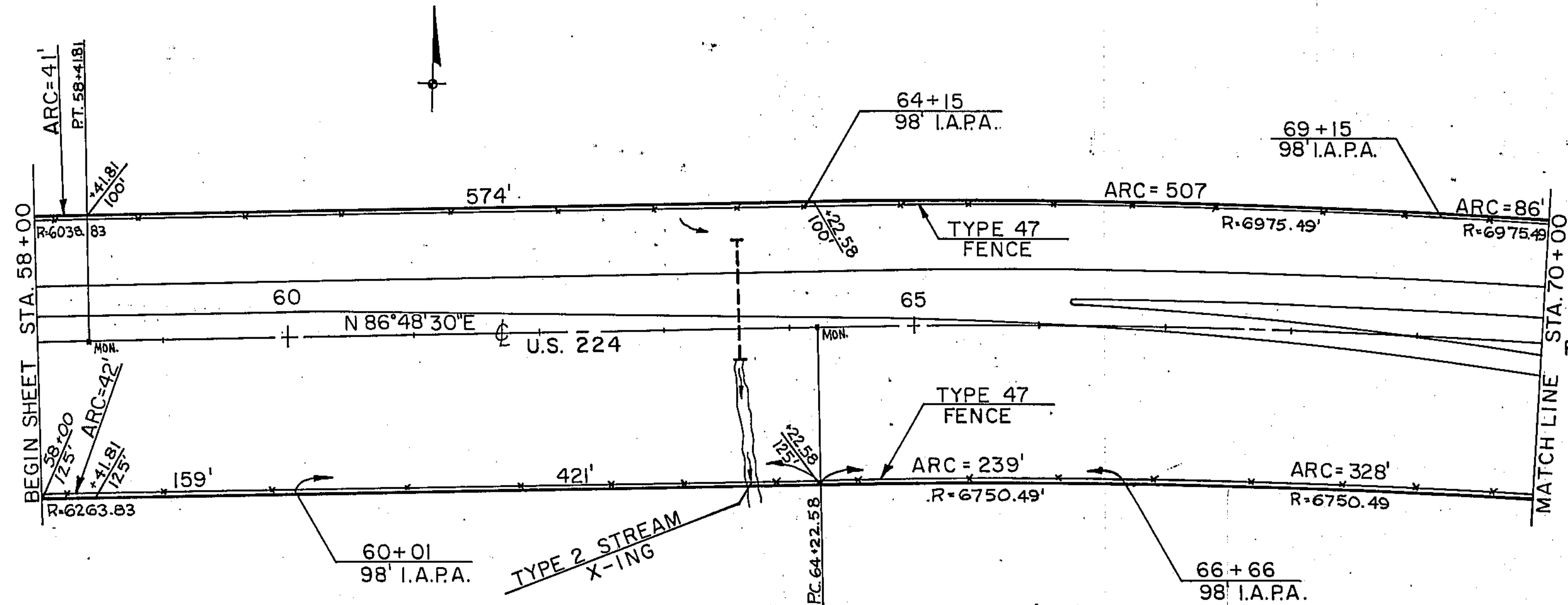




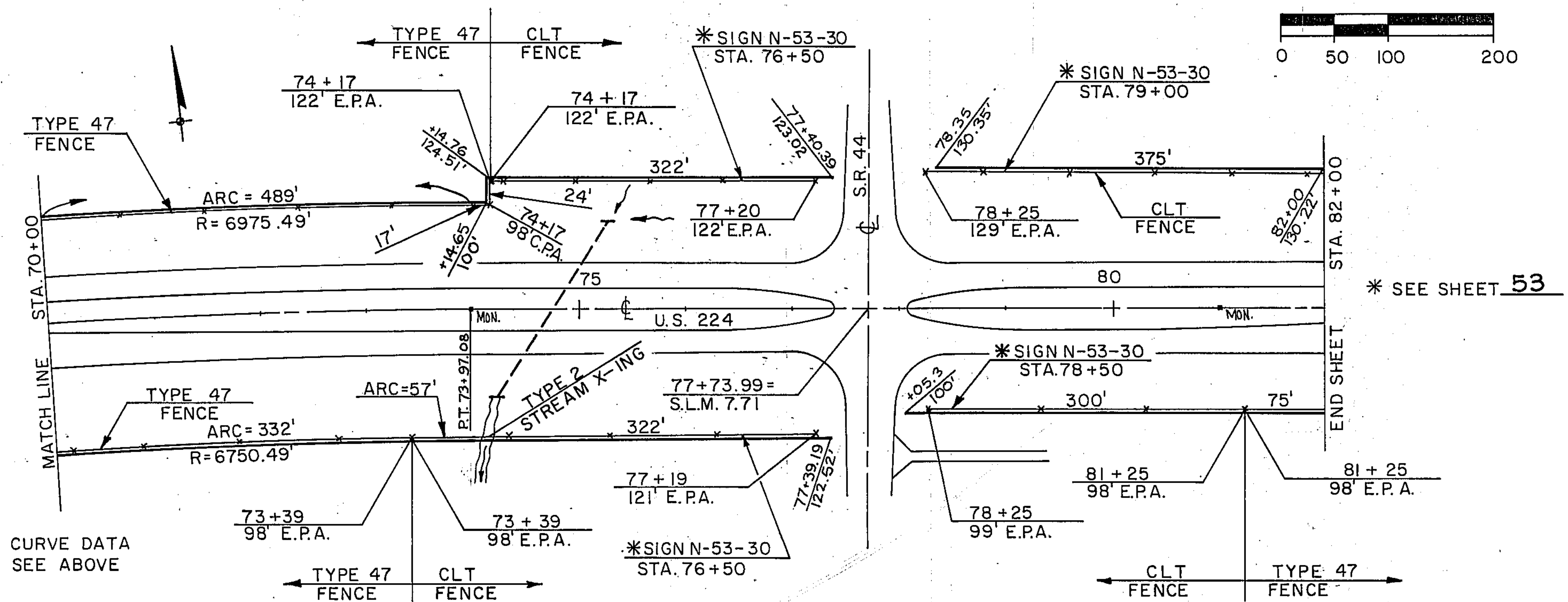
34+00 TO 58+00

79
89

PLAN NO.
148



CURVE DATA
P.C. 64+22.58 TO P.T. 73+97.05
 $\Delta = 8^\circ 07' 15''$
 $D = 0^\circ 50' 00''$
 $R = 6575.49'$
 $T = 488.07'$
 $L = 974.50'$
 $E = 17.34'$
P.I. STA. 69+10.65 BK

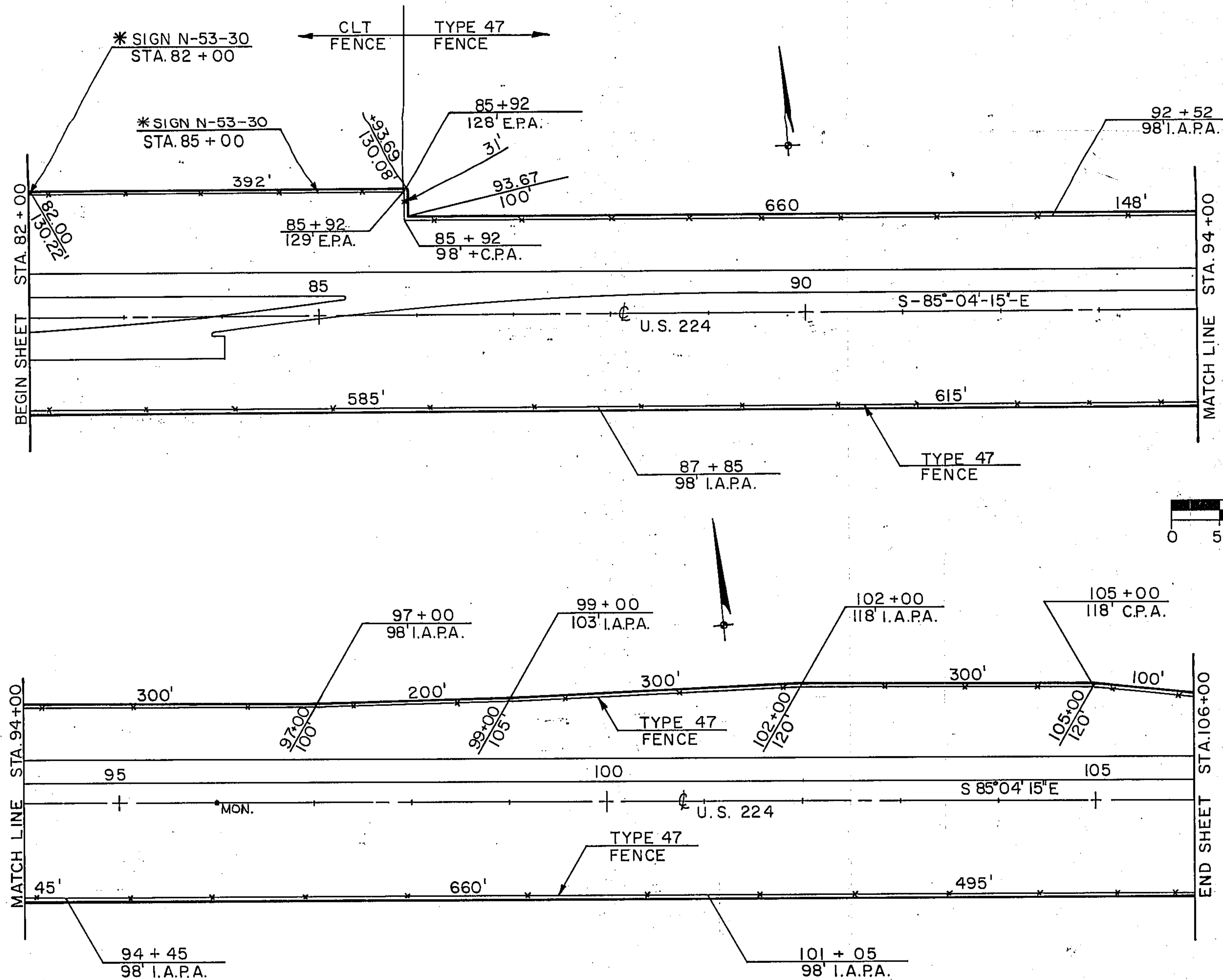


CURVE DATA
SEE ABOVE

58+00 TO 82+00

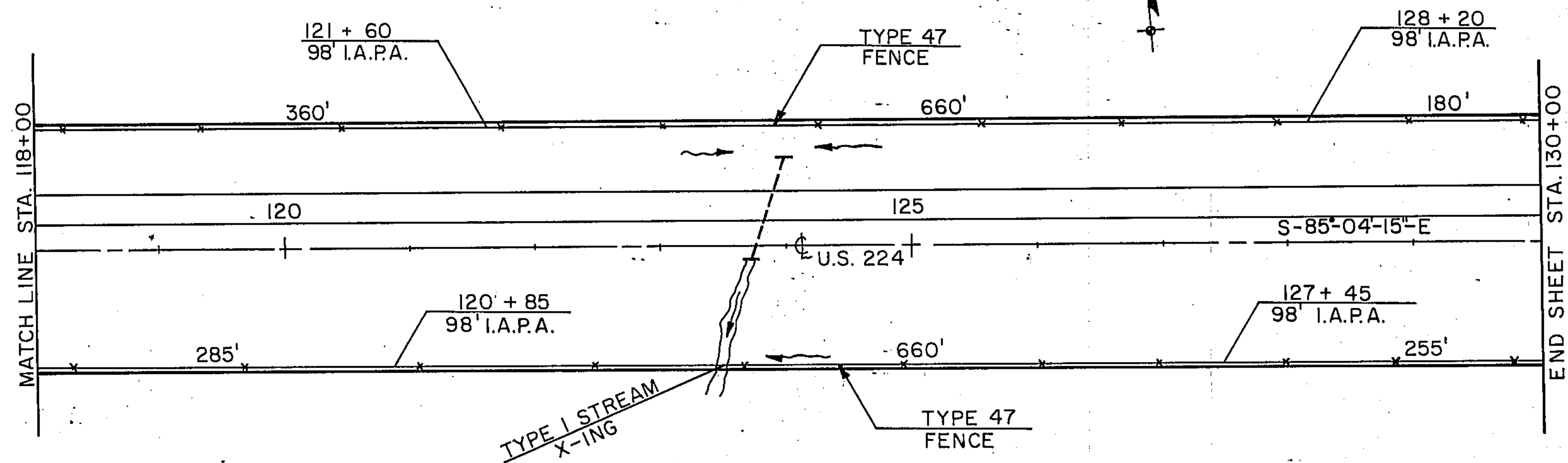
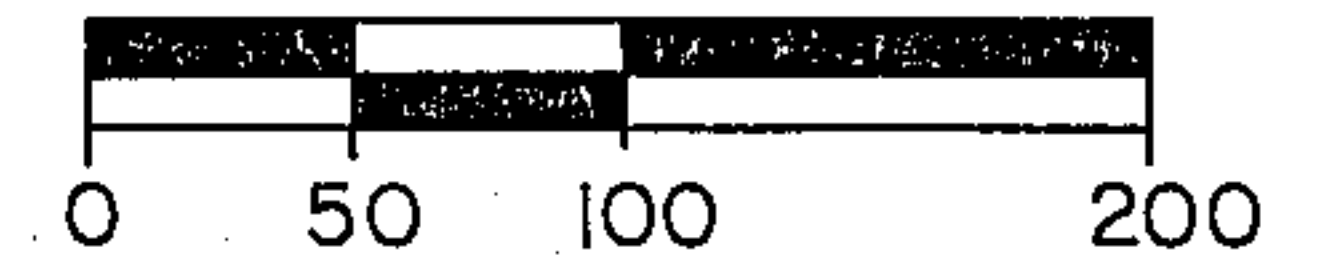
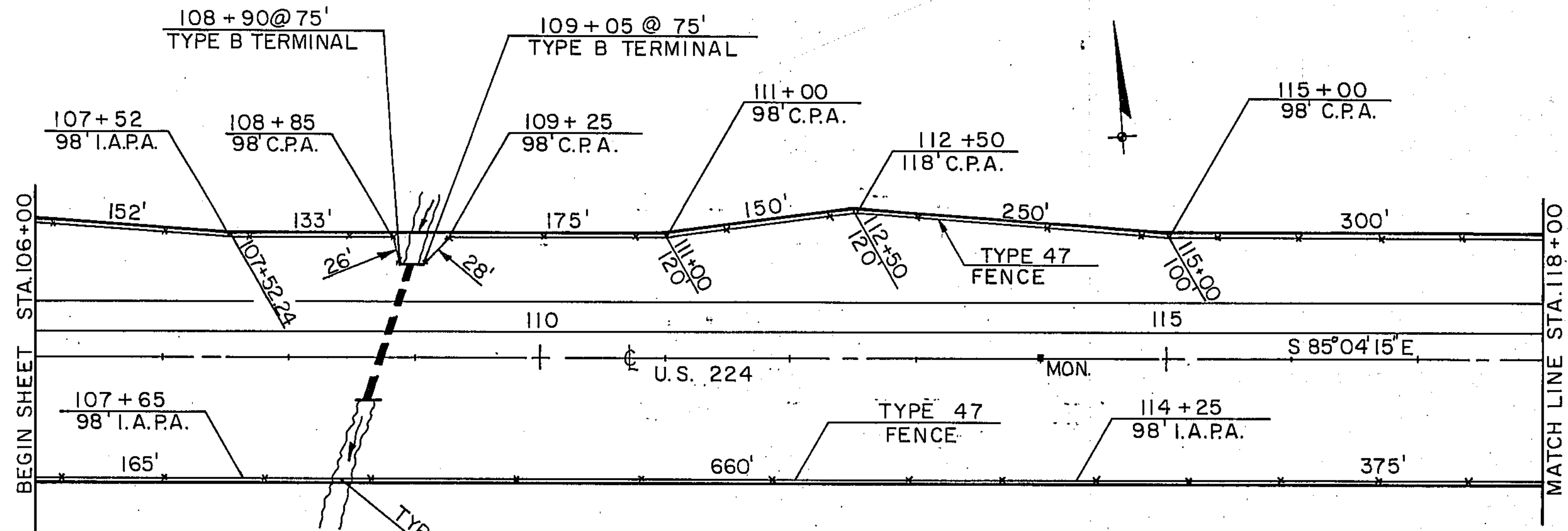
80
89

PLAN NO.
148



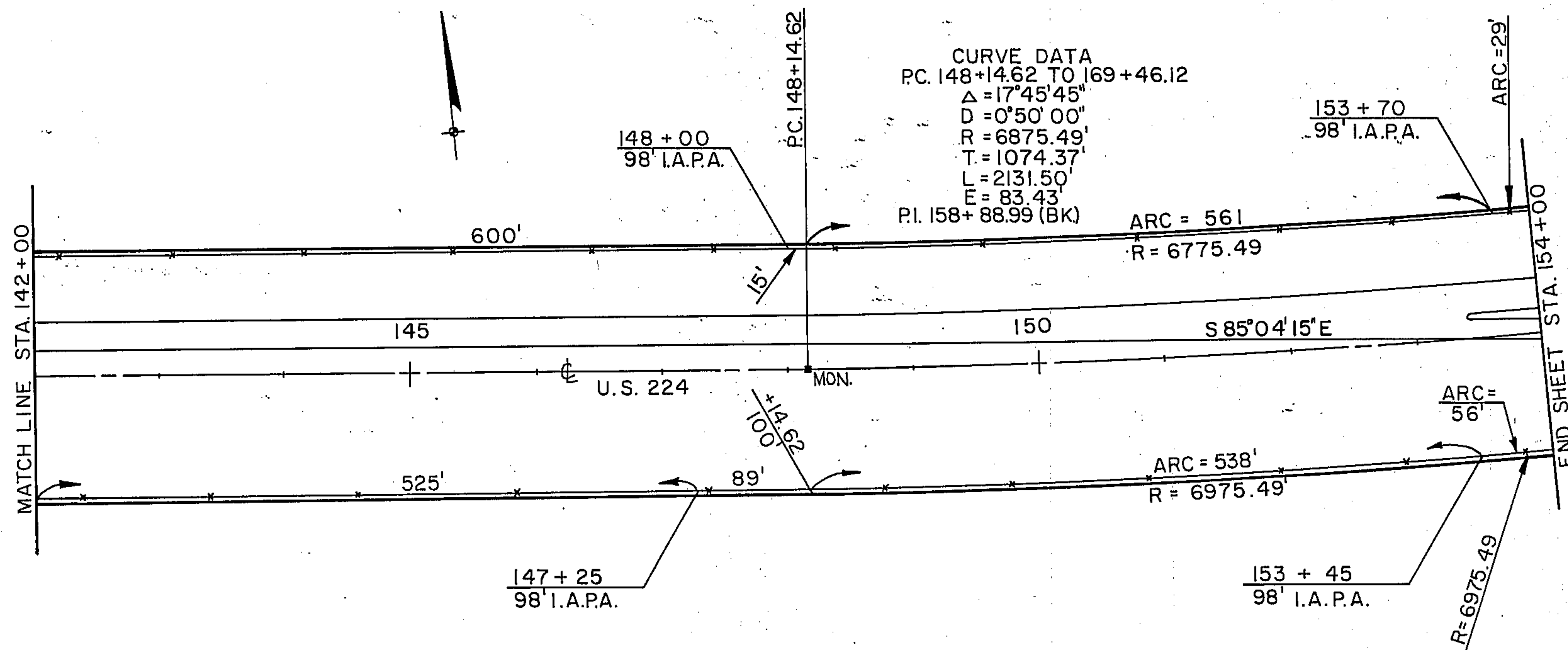
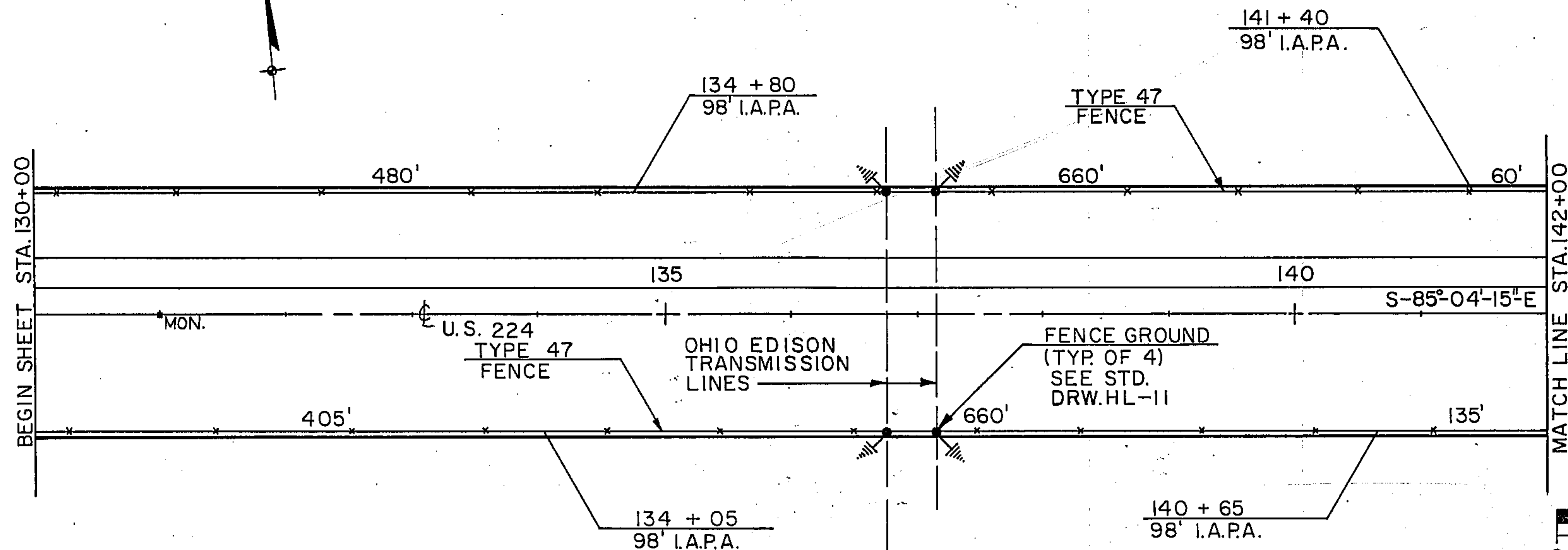
*SEE SHEET 53

82 + 00 TO 106 + 00



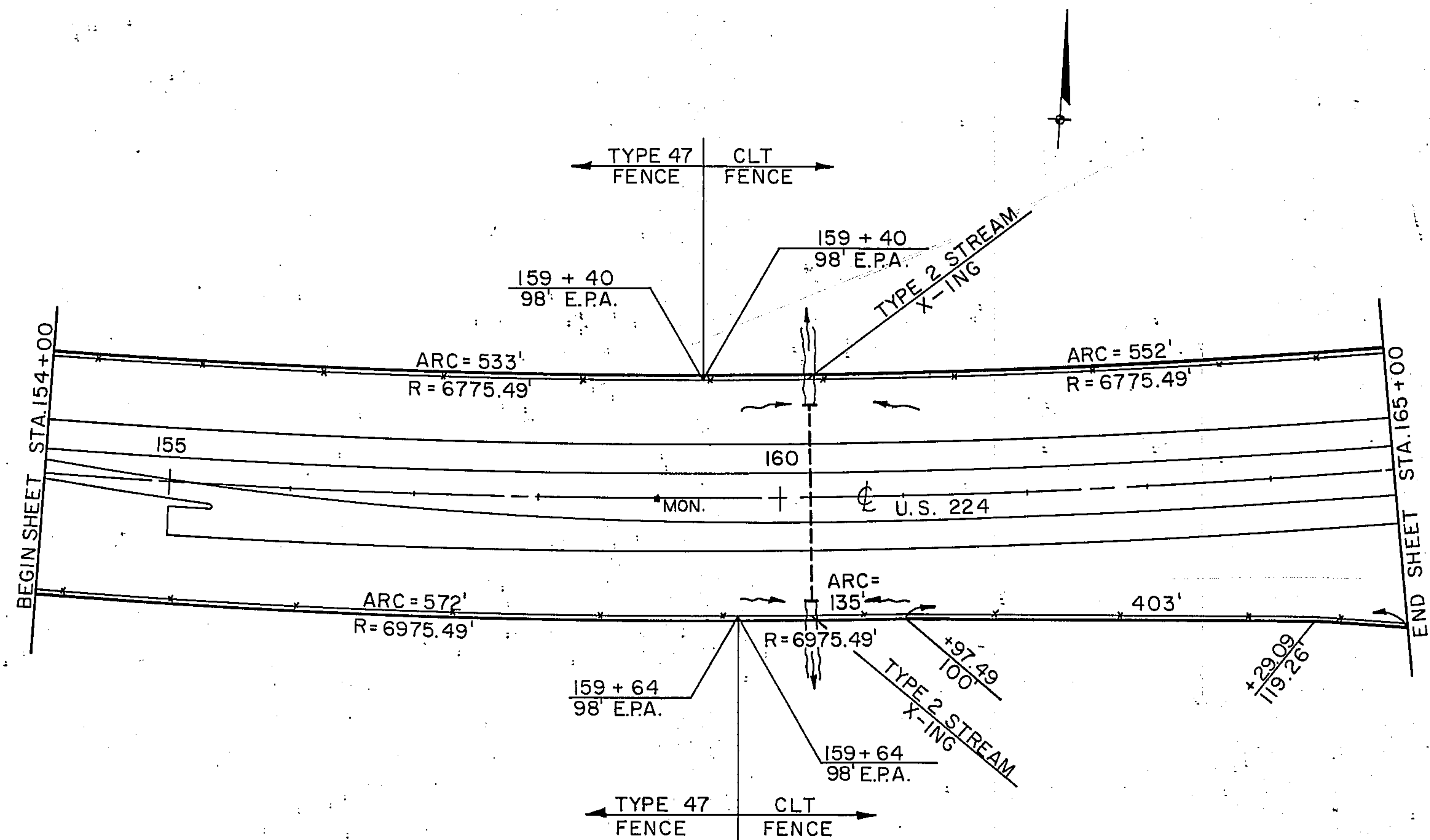
82
89

PLAN NO.
148



CURVE DATA
P.C. 148+14.62 TO 169+46.12
 $\Delta = 17^\circ 45' 45''$
 $D = 0^\circ 50' 00''$
 $R = 6875.49'$
 $T = 1074.37'$
 $L = 2131.50'$
 $E = 83.43'$
P.I. 158+88.99 (BK)

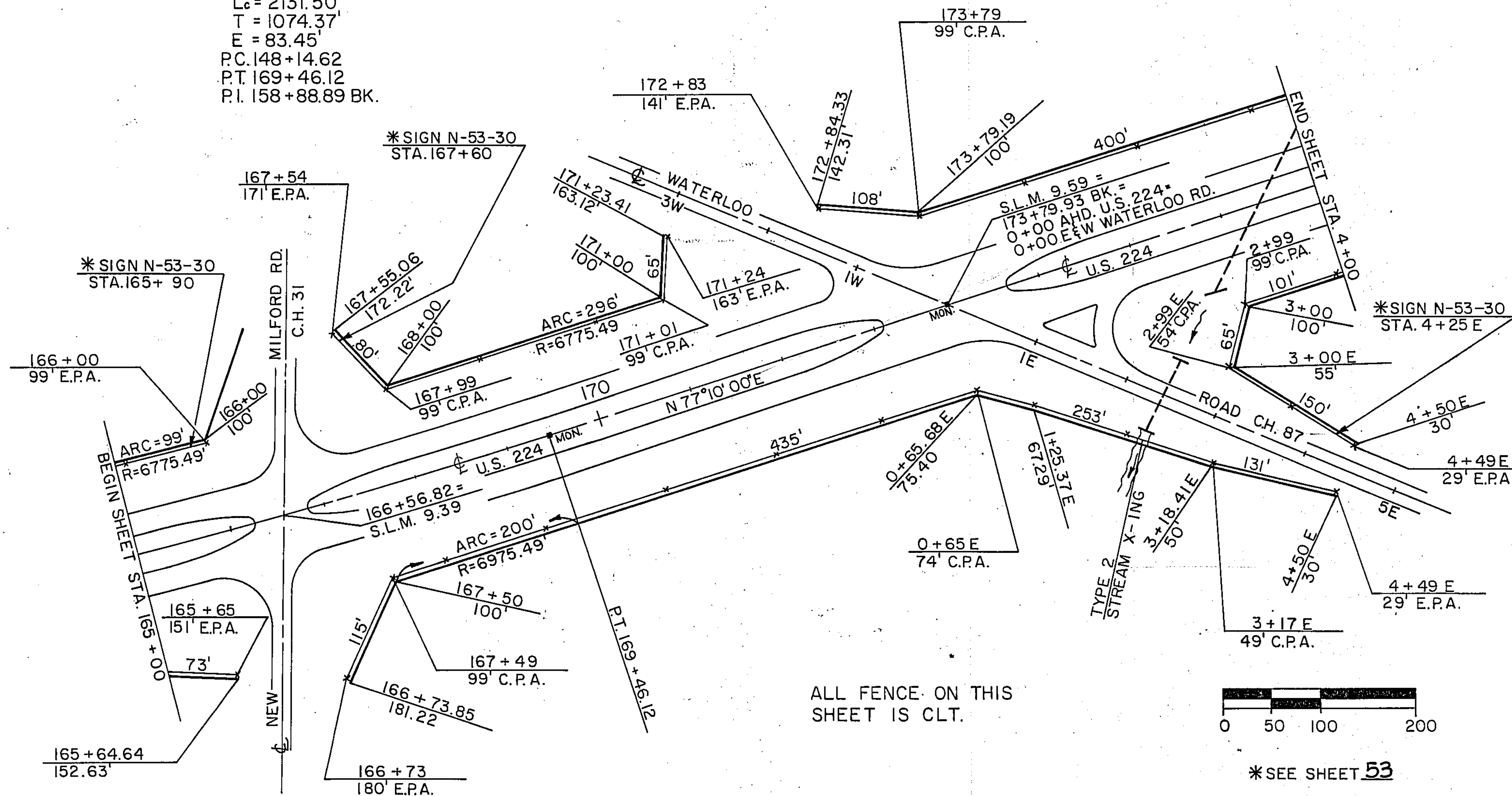
130+00 TO 154+00



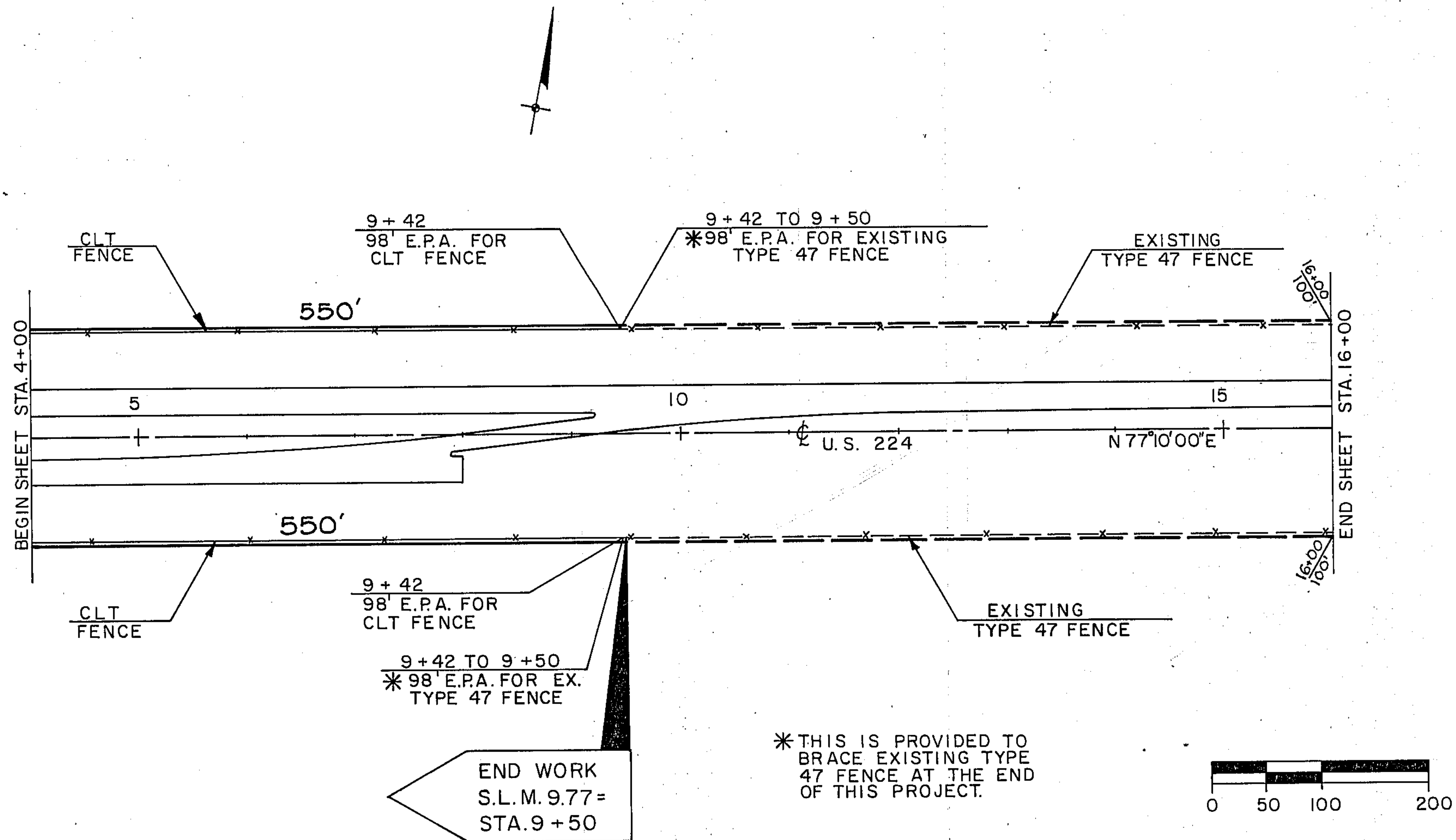
CURVE DATA
P.C. 148 + 14.62 TO P.T. 169 + 46.12
 $\Delta = 17^{\circ}45'45''$
 $D_c = 0^{\circ}50'$
 $R = 6875.49'$
 $L_c = 2131.50'$
 $T = 1074.37'$
 $E = 83.43'$
P.I. 158 + 88.99 (BK.)

154 + 00 TO 165 + 00

CURVE DATA
 $\Delta = 17^{\circ}45'45''$
 $D_c = 0^{\circ}50'$
 $R = 6875.49'$
 $L_c = 2131.50'$
 $T = 1074.37'$
 $E = 83.45'$
P.C. 148+14.62
P.T. 169+46.12
P.I. 158+88.89 BK.



165+00 TO 4+00



F 100% STATE				GENERAL SUMMARY					
ITEM	PART 1	PART 2	PART 3		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
201	LUMP				201		LUMP	LUMP	CLEARING AND GRUBBING, AS PER PLAN
202	1251	108	108		202		1467	SQ.YD.	WEARING COURSE REMOVED
202	766				202		766	EACH	RAISED PAVEMENT MARKERS REMOVED FOR STORAGE
202	22				202		22	CU.YD.	PORTIONS OF STRUCTURES REMOVED
202	61				202		61	LIN.FT.	REMOVAL OF EXISTING EXPANSION JOINT EXTENSIONS
202	100				202		100	LIN.FT.	GUARDRAIL REMOVED
202	650				202		650	LIN.FT.	GUARDRAIL REMOVED FOR STORAGE
202	200				202		200	LIN.FT.	GUARDRAIL REMOVED FOR RE-USE
202	100084				202		100084	LIN.FT.	FENCE REMOVED
203	15				203		15	CU.YD.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
203	496				203		496	CU.YD.	EMBANKMENT
203	109				203		109	STATION	LINEAR GRADING, METHOD "D"
251	1366				251		1366	SQ.YD.	PARTIAL DEPTH PAVEMENT REPAIR
252	396				252		396	SQ.YD.	FULL DEPTH RIGID PAVEMENT REMOVAL AND FLEXIBLE REPLACEMENT
252	264				252		264	LIN.FT.	FULL DEPTH PAVEMENT SAWING
254	770	202	109		254		1081	SQ.YD.	PAVEMENT PLANING, BITUMINOUS
403	2942	21	48		403		3011	CU.YD.	ASPHALT CONCRETE, AC-20
404	6324	40	94		404		6458	CU.YD.	ASPHALT CONCRETE, AC-20
404	6				404		6	CU.YD.	ASPHALT CONCRETE, AC-20 (DRIVEWAYS)
407	21706	146	341		407		22193	GAL.	TACK COAT

GENERAL SUMMARY									
ITEM	PART 1	PART 2	PART 3		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
509	5091				509		5091	POUND	EPOXY COATED REINFORCING STEEL
510	49				510		49	EACH	DOWEL HOLES
511	1				511		1	CU. YD.	CLASS 'C' CONCRETE, ABUTMENT
511	21				511		21	CU. YD.	CLASS 'S' CONCRETE. SUPERSTRUCTURE
511	1				511		1	CU. YD.	CLASS 'S' CONCRETE. FULL DEPTH REPAIR
512	517				512		517	SQ. YD.	TYPE 'D' WATERPROOFING
516	67				516		67	LIN. FT.	VERTICAL EXTENSION OF STRUCTURAL EXPANSION JOINTS
516	6				516		6	LIN. FT.	HORIZONTAL EXTENSION OF STRUCTURAL EXPANSION JOINTS, AS PER PLAN
516	185				516		185	LIN. FT.	JOINT SEALER, HOT APPLIED, 705.04
517	200				517		200	LIN. FT.	RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP, TYPE 2 STEEL POST AND BOLTS), AS PER PLAN
519	500				519		500	SQ. FT.	PATCHING CONCRETE STRUCTURES
601	45				601		45	CU. YD.	DUMPED ROCK FILL, TYPE 'D'
604	9				604		9	EACH	MONUMENT BOXES ADJUSTED TO GRADE
605	165				605		165	LIN. FT.	AGGREGATE DRAINS

F

GENERAL SUMMARY

ITEM	PART 1	PART 2	PART 3		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
606	50				606		50	LIN.FT.	GUARDRAIL, TYPE 5
606	1				606		1	EACH	ANCHOR ASSEMBLY, ~~TYPE A~~ TYPE "A"
606	1				606		1	EACH	BRIDGE TERMINAL ASSEMBLY, ~~TYPE B~~ TYPE "B"
607	31721				607		31721	LIN.FT.	FENCE, TYPE CLT, AS PER PLAN
607	68363				607		68363	LIN.FT.	FENCE, TYPE 47, AS PER PLAN
609	30				609		30	LIN.FT.	CURB, TYPE 6
614	8.86	0.04	0.18		614		9.08	MILE	TEMPORARY CENTER LINES, CLASS II
614	2.28				614		2.28	MILE	TEMPORARY LANE LINES, CLASS II
614		82	74		614		156	LIN.FT.	TEMPORARY STOP LINES, CLASS I
614			230		614		230	LIN.FT.	TEMPORARY CHANNELIZING LINES, CLASS I
614	13	2	2		614		17	EACH	WORK ZONE MARKING SIGNS
617	22.83	10	24		617		2317	CU. YD.	COMPACTED AGGREGATE, TYPE "A"
621	19.48	0.08	0.24		621		19.8	MILE	EDGE LINES
621	2.28				621		2.28	MILE	LANE LINES
621	8.96	0.04	0.18		621		9.18	MILE	CENTER LINES
621	965		230		621		1195	LIN.FT.	CHANNELIZING LINES
625	8				625		8	EACH	GROUND ROD
659	6100				659		6100	SQ. YD.	SEEDING AND MULCHING
659	0.60				659		0.60	TON	COMMERCIAL FERTILIZER
659	2.85				659		2.85	TON	AGRICULTURAL LIMING
630	45				630		45	SQ.FT.	SIGNS, FLAT SHEET, AS PER PLAN

X NON FEDERAL PARTICIPATION

FA2:[20,7] P02240104.DGN