

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

CUY-90-23.93

CITY OF CLEVELAND  
CITY OF EUCLID  
VILLAGE OF BRATENAHL  
CUYAHOGA COUNTY

PROJECT DESCRIPTION

THIS PROJECT PROVIDES FOR THE RESURFACING OF MAINLINE IR 90 FROM SR-283, LAKESHORE BLVD. TO BRIDGE CUY-90-2969 (R&L) AND SR-2 FROM IR-90 & SR-2 SPLIT TO THE LAKE COUNTY LINE ALONG WITH MARGINAL ROADS. WORK ITEMS INCLUDE RESURFACING, PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS.

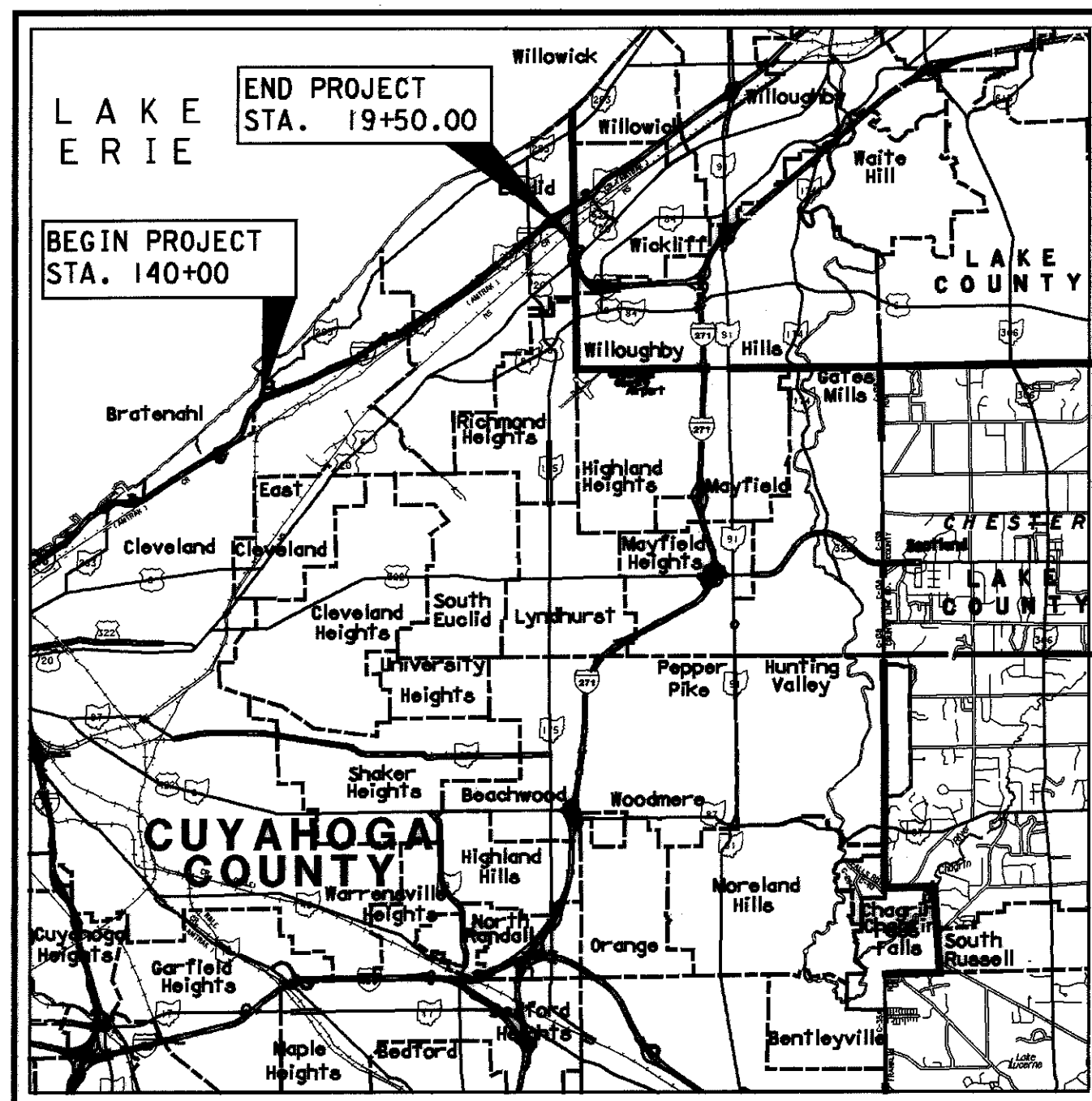
LIMITED ACCESS

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

1997 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH IN THE PLANS AND ESTIMATES.



PORTION TO BE IMPROVED: \_\_\_\_\_  
INTERSTATE & DIVIDED HIGHWAY: \_\_\_\_\_  
UNDIVIDED STATE & FEDERAL ROUTES: \_\_\_\_\_  
OTHER ROADS: \_\_\_\_\_

DESIGN DESIGNATION

CURRENT ADT (1999) ..... 117,510  
DESIGN YEAR ADT (2009) ..... 136,010  
DESIGN HOURLY VOLUME (2009) ..... 12,921  
DIRECTIONAL DISTRIBUTION ..... 54%  
TRUCKS (24 HOUR B&C) ..... 8%  
DESIGN SPEED ..... 65 MPH  
LEGAL SPEED ..... 60 MPH

DESIGN FUNCTIONAL CLASSIFICATION - URBAN INTERSTATE

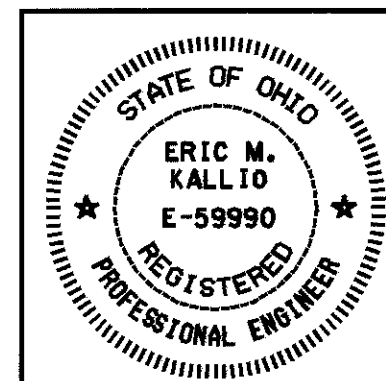
DESIGN EXCEPTIONS : NONE

INDEX OF SHEETS:

TITLE SHEET . . . . . 1  
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**UNDERGROUND UTILITIES**  
TWO WORKING DAYS  
**BEFORE YOU DIG**  
CALL 1-800-362-2764 (TOLL FREE)  
OHIO UTILITIES PROTECTION SERVICE  
NON-MEMBERS  
MUST BE CALLED DIRECTLY

PLAN PREPARED BY:  
OHIO  
DEPARTMENT OF TRANSPORTATION  
DISTRICT TWELVE  
PRODUCTION



STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS			
BP-2.1M	04/08/97	HL-30.11M	03/31/95	TC-65.10M	11/01/95	MT-35.10M 01/30/95	MT-99.20M 01/30/95	806	09/09/97
BP-2.2M	10/21/97	HL-30.21M	05/01/95	TC-65.11M	11/01/95	MT-35.11M 01/30/95			
BP-2.5M	04/08/97	HL-30.22M	03/31/95				MT-101.60M 04/25/94	828	07/28/98
				TC-71.10M	09/01/93	MT-95.30M 04/25/94			
BP-3.1M	10/28/94	TC-41.10M	03/31/94	TC-72.20M	09/01/93		MT-105.10M 04/25/94	830	10/21/98
		TC-41.20M	07/01/94			MT-98.12M 06/24/93	MT-105.11M 04/25/94		
BP-5.1M	10/28/94	TC-41.50M	07/01/94	TC-82.10M	01/19/99	MT-98.13M 06/24/93		887	08/10/99
		TC-42.20M	03/31/94			MT-98.14M 06/24/93			
BP-7.1M	10/28/94					MT-98.15M 06/24/93		932	10/02/96
		TC-52.10M	07/29/94			MT-98.16M 06/24/93			
CB-2.1M	07/12/95	TC-52.20M	07/29/94			MT-98.17M 04/25/94			
						MT-98.18M 04/25/94			

SPECIAL PROVISIONS

APPROVED *David J. [Signature]*  
DATE 12-01-99 DISTRICT DEPUTY DIRECTOR

APPROVED *Jordan Proctor [Signature]*  
DATE 10-25-99 DIRECTOR, DEPARTMENT OF TRANSPORTATION

PLOT SUBMITTED: \$\$\$\$SYTIME\$\$\$\$  
 CUY-90-23.93  
 000263  
 DIST 12  
 PLOT BY: \$\$\$\$USERNAME\$\$\$\$  
 PLOTTED FROM: \$\$\$\$DGN\$SPEC\$\$\$\$  
 PLOT # 18730  
 05/24/00

FEDERAL PROJECT NO. TE21 G000 (050)  
 PID NO. 18730  
 CONSTRUCTION PROJECT NO. CUY-90-23.93  
 RAILROAD INVOLVEMENT NONE  
 CUYAHOGA COUNTY CUY-90-23.93  
 1/79

PLOT SUBMITTED: 12-OCT-1999 12:36  
 187300BA.DGN  
 187300BA.dgn  
 PLOTTED BY: fkenopka  
 PLOTTED FROM: I:\PROJECTS\187300BA.dgn\187300ba.dgn

**CURVE DATA:**  
 P.I. STA. = 137+11.67  
 $\Delta = 27^\circ 57' 39''$  (RT)  
 DC =  $1^\circ 45' 27''$   
 R = 3260.18'  
 Ls = 400.00'  
 Os =  $3^\circ 30' 54''$   
 LT = 199.88'  
 ST = 133.41'  
 T = 811.67'  
 L = 1591.00'  
 E = 99.52'

**CURVE DATA:**  
 P.I. STA. = 123+08.83  
 $\Delta = 20^\circ 55' 36''$  (RT)  
 DC =  $1^\circ 45' 00''$   
 R = 3274.05'  
 T = 604.64'  
 L = 1195.81'  
 E = 55.36'

BRIDGE NO.  
 CUY-90-2393  
 NO WORK  
 VERTICAL CLEARANCE  
 W. B. E. B.  
 EXIST. 14'-7" 19'-2"  
 PROP. 14'-7" 19'-2"

BEGIN PROJECT  
 STA. 140+00.00  
 SLM 23.93  
 TE21 6000 (050)

BRIDGE NO.  
 CUY-90-2413 (L&R)  
 NO WORK

**CURVE DATA:**  
 P.I. STA. = 181+72.56  
 $\Delta = 6^\circ 58' 18''$  (LT)  
 DC =  $0^\circ 28' 00''$   
 R = 12,277.67'  
 T = 747.89'  
 L = 1493.93'  
 E = 22.76'

BRIDGE NO.  
 CUY-90-2465 (L&R)  
 NO WORK

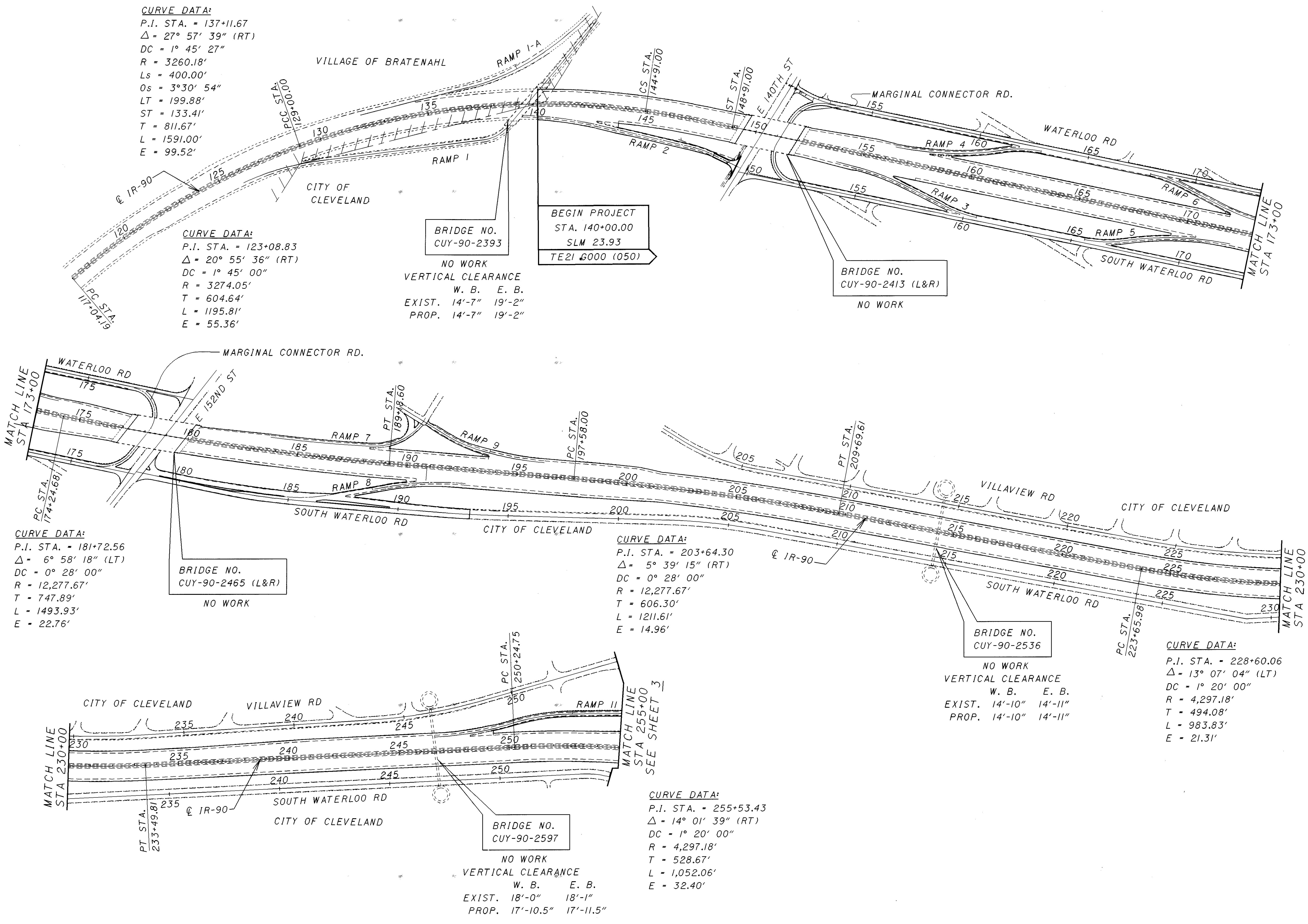
**CURVE DATA:**  
 P.I. STA. = 203+64.30  
 $\Delta = 5^\circ 39' 15''$  (RT)  
 DC =  $0^\circ 28' 00''$   
 R = 12,277.67'  
 T = 606.30'  
 L = 1211.61'  
 E = 14.96'

BRIDGE NO.  
 CUY-90-2536  
 NO WORK  
 VERTICAL CLEARANCE  
 W. B. E. B.  
 EXIST. 14'-10" 14'-11"  
 PROP. 14'-10" 14'-11"

**CURVE DATA:**  
 P.I. STA. = 228+60.06  
 $\Delta = 13^\circ 07' 04''$  (LT)  
 DC =  $1^\circ 20' 00''$   
 R = 4,297.18'  
 T = 494.08'  
 L = 983.83'  
 E = 21.31'

BRIDGE NO.  
 CUY-90-2597  
 NO WORK  
 VERTICAL CLEARANCE  
 W. B. E. B.  
 EXIST. 18'-0" 18'-1"  
 PROP. 17'-10.5" 17'-11.5"

**CURVE DATA:**  
 P.I. STA. = 255+53.43  
 $\Delta = 14^\circ 01' 39''$  (RT)  
 DC =  $1^\circ 20' 00''$   
 R = 4,297.18'  
 T = 528.67'  
 L = 1,052.06'  
 E = 32.40'



**SCHEMATIC PLAN**  
**STA 140+00.00 TO STA 255+00.00**

**CUY-90-23.93**

CALCULATED  
EMK

CHECKED  
ENF

SCALE IN FEET

2  
79

PLOT SUBMITTED: 12-OCT-1999 12:36

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PLOTTED FROM: I:\PROJECTS\18730\18730.dgn\18730gbb.dgn

**CURVE DATA:**

P.I. STA. = 255+53.43  
 $\Delta = 14^\circ 01' 39''$  (RT)  
DC = 1° 20' 00"  
R = 4,297.18'  
T = 528.67'  
L = 1,052.06'  
E = 32.40'

**CURVE DATA:**

P.I. STA. = 276+02.32  
 $\Delta = 13^\circ 50' 57''$  (RT)  
DC = 1° 20' 00"  
R = 4,297.18'  
T = 521.89'  
L = 1,038.69'  
E = 31.58'

**CURVE DATA:**

P.I. STA. = 297+98.78  
 $\Delta = 5^\circ 57' 44''$  (RT)  
DC = 0° 44' 43"  
R = 7,687.84'  
T = 400.37'  
L = 800.02'  
E = 10.42'

**CURVE DATA:**

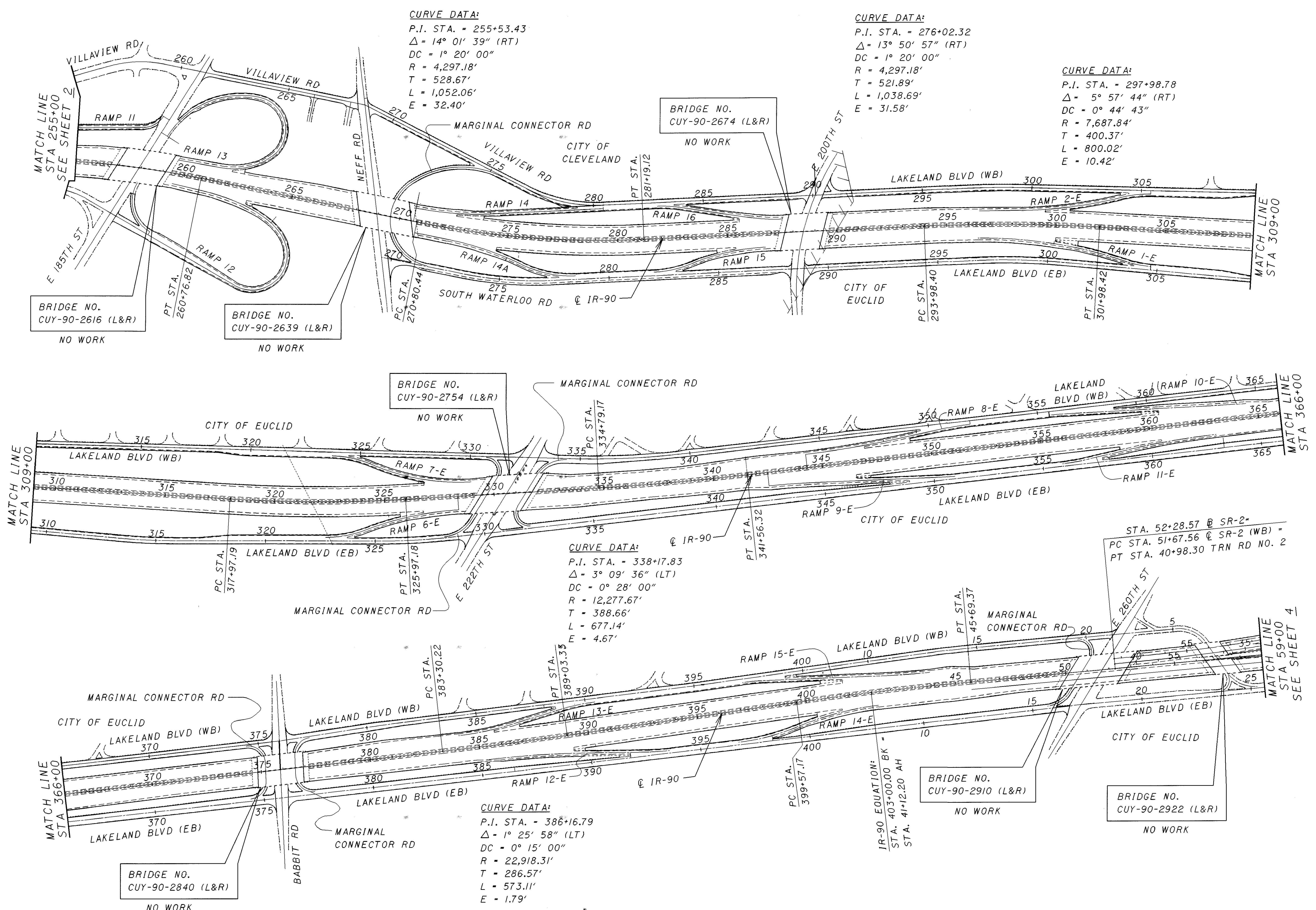
P.I. STA. = 338+17.83  
 $\Delta = 3^\circ 09' 36''$  (LT)  
DC = 0° 28' 00"  
R = 12,277.67'  
T = 388.66'  
L = 677.14'  
E = 4.67'

**CURVE DATA:**

P.I. STA. = 386+16.79  
 $\Delta = 1^\circ 25' 58''$  (LT)  
DC = 0° 15' 00"  
R = 22,918.31'  
T = 286.57'  
L = 573.11'  
E = 1.79'

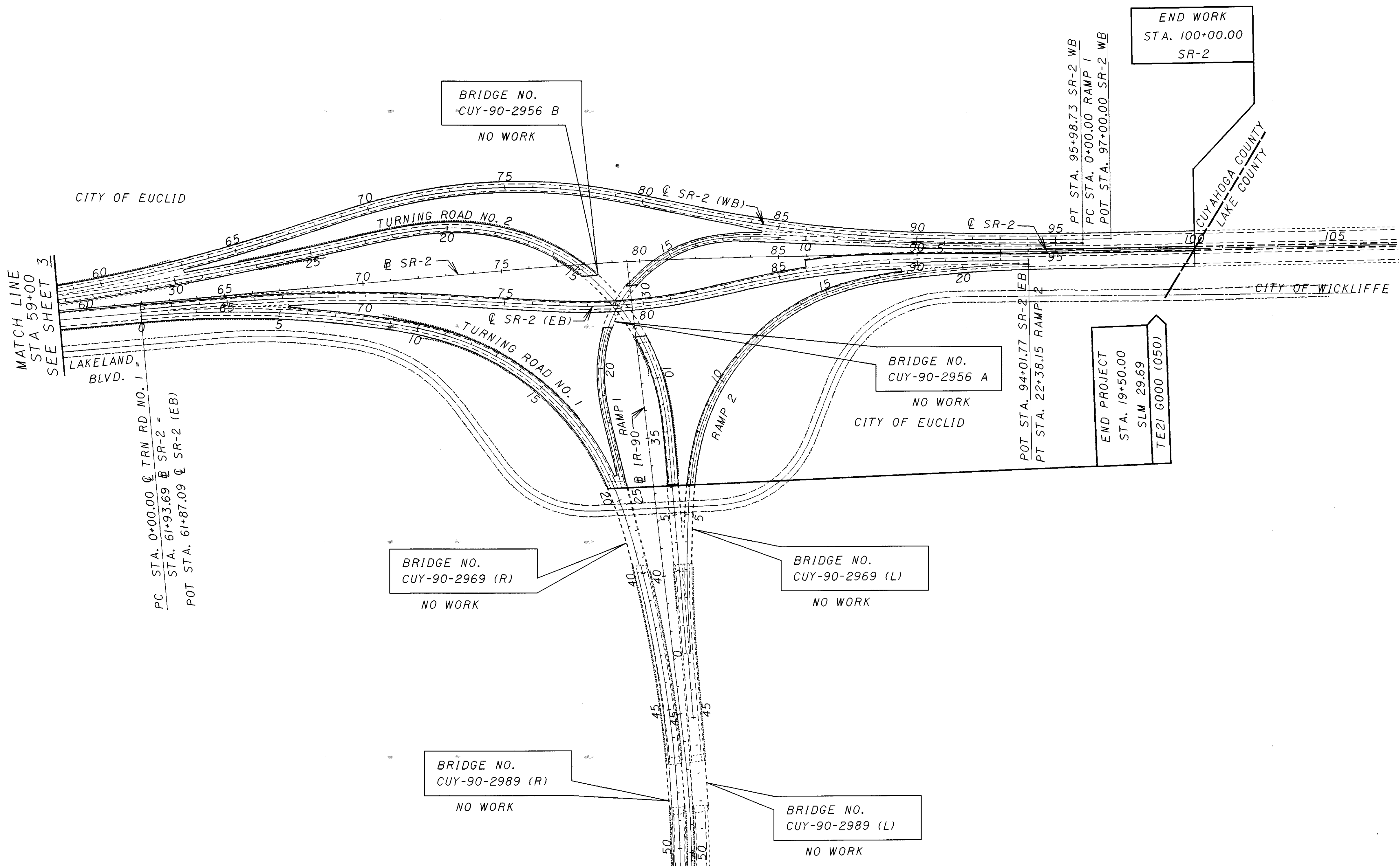
IR-90 EQUATION:  
STA: 403+00.00 BK =  
STA: 41+12.20 AH

STA. 52+28.57 @ SR-2 =  
PC STA. 51+67.56 @ SR-2 (WB) =  
PT STA. 40+98.30 TRN RD NO. 2



CALCULATED E.M.K. CHECKED ENF.  
**SCHEMATIC PLAN**  
**STA 255+00.00 TO STA 59+00.00**

**CUY-90-23.93**  
3  
79



CALCULATED  
EMK

CHECKED  
ENF

SCALE IN FEET  
0 100 200 400

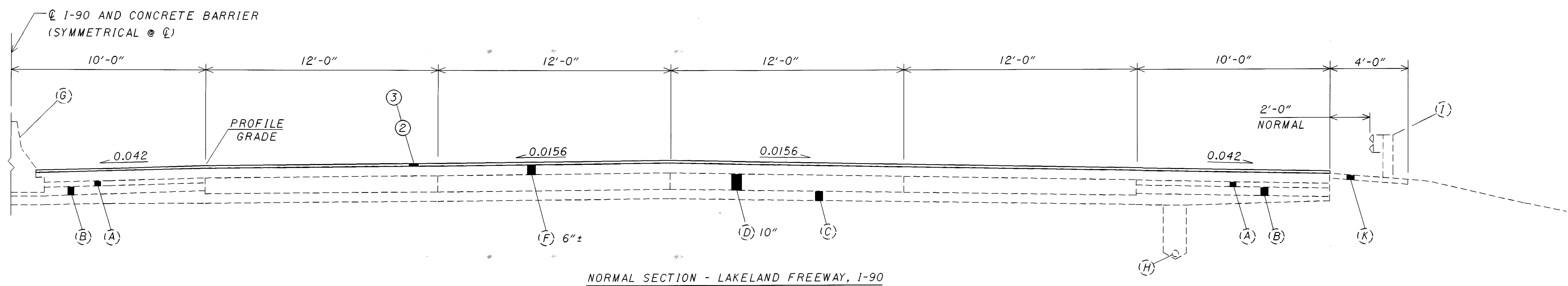
**SCHEMATIC PLAN**  
**STA 59+00.00 TO STA 19+50.00**

**CUY-90-23.93**

PLOT SUBMITTED: 12-OCT-1999 12:37

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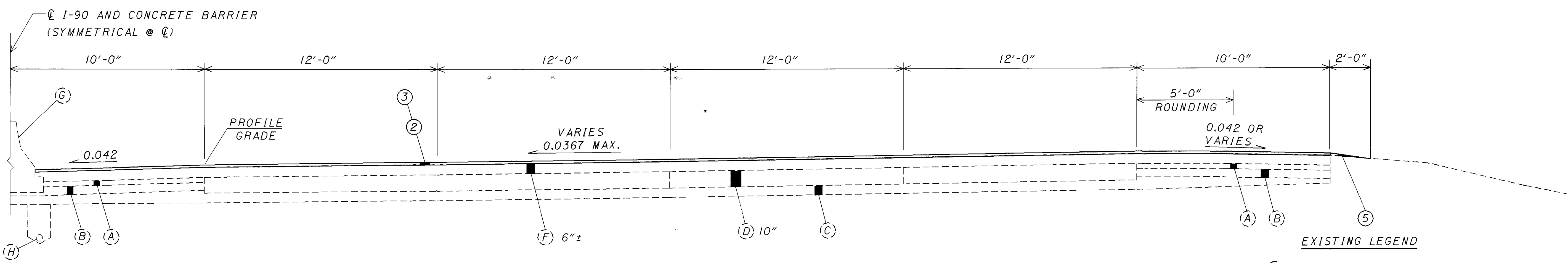


NORMAL SECTION - LAKELAND FREEWAY, I-90

STA. 149+00.00 TO STA. 149+18.06  
BRIDGE NO. CUY-90-2413 (L&R)  
STA. 152+15.84 TO STA. 176+96.48  
BRIDGE NO. CUY-90-2465 (L&R)  
STA. 180+11.60 TO STA. 219+75.00  
STA. 236+50.00 TO STA. 246+25.00

STA. 284+25.00 TO STA. 287+36.21  
BRIDGE NO. CUY-90-2674 (L&R)  
STA. 289+63.89 TO STA. 291+50.00  
STA. 304+25.00 TO STA. 315+50.00  
STA. 328+50.00 TO STA. 329+15.98  
BRIDGE NO. CUY-90-2754 (L&R)

STA. 331+97.46 TO STA. 374+59.47  
BRIDGE NO. CUY-90-2840 (L&R)  
STA. 377+19.97 TO STA. 403+00.00 BK+  
STA. 41+20.00 AH TO STA. 49+92.48  
BRIDGE NO. CUY-90-2910 (L&R)  
STA. 53+08.78 TO STA. 56+17.13  
BRIDGE NO. CUY-90-2922 (L&R)



SUPERELEVATED SECTION - LAKELAND FREEWAY, I-90

STA. 140+00.00 TO STA. 149+00.00  
STA. 219+75.00 TO STA. 236+50.00  
STA. 246+25.00 TO STA. 256+59.23  
BRIDGE NO. CUY-90-2616 (L&R)  
STA. 259+33.69 TO STA. 264+25.00

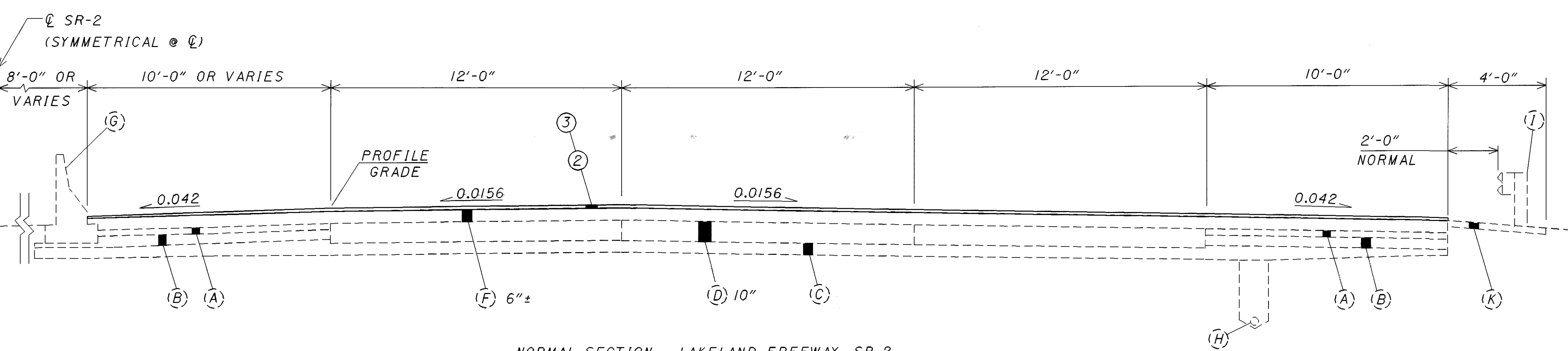
STA. 264+25.00 TO STA. 267+84.09  
BRIDGE NO. CUY-90-2639 (L&R)  
STA. 270+78.81 TO STA. 284+25.00  
STA. 291+50.00 TO STA. 304+25.00  
STA. 315+50.00 TO STA. 328+50.00

EXISTING LEGEND

- (A) BITUMINOUS AGGREGATE BASE
- (B) AGGREGATE BASE
- (C) SUBBASE
- (D) REINFORCED CONCRETE PAVEMENT
- (E) CONCRETE BASE
- (F) ASPHALT OVERLAY
- (G) CONCRETE MEDIAN
- (H) UNDERDRAIN
- (I) GUARDRAIL
- (J) CONCRETE CURB
- (K) ASPHALT UNDER GUARDRAIL
- (L) BRICK
- (M) CONCRETE MEDIAN

PROPOSED LEGEND

- (1) ITEM 254 - PAVEMENT PLANING, BITUMINOUS (1-1/4" TYPICAL)
- (2) ITEM 407 - TACK COAT (0.10 GAL/SY)
- (3) ITEM 446 - 1-1/2" ASPHALT CONCRETE, SURFACE COURSE, TYPE IH, AS PER PLAN
- (4) ITEM 446 - 1-1/4" ASPHALT CONCRETE, SURFACE COURSE, TYPE IH, AS PER PLAN
- (5) ITEM 617 - COMPACTED AGGREGATE, TYPE A, AS PER PLAN



NORMAL SECTION - LAKELAND FREEWAY, SR-2

STA. 57+60.00 TO STA. 67+22.00, EB  
STA. 56+63.00 TO STA. 63+00.00, WB

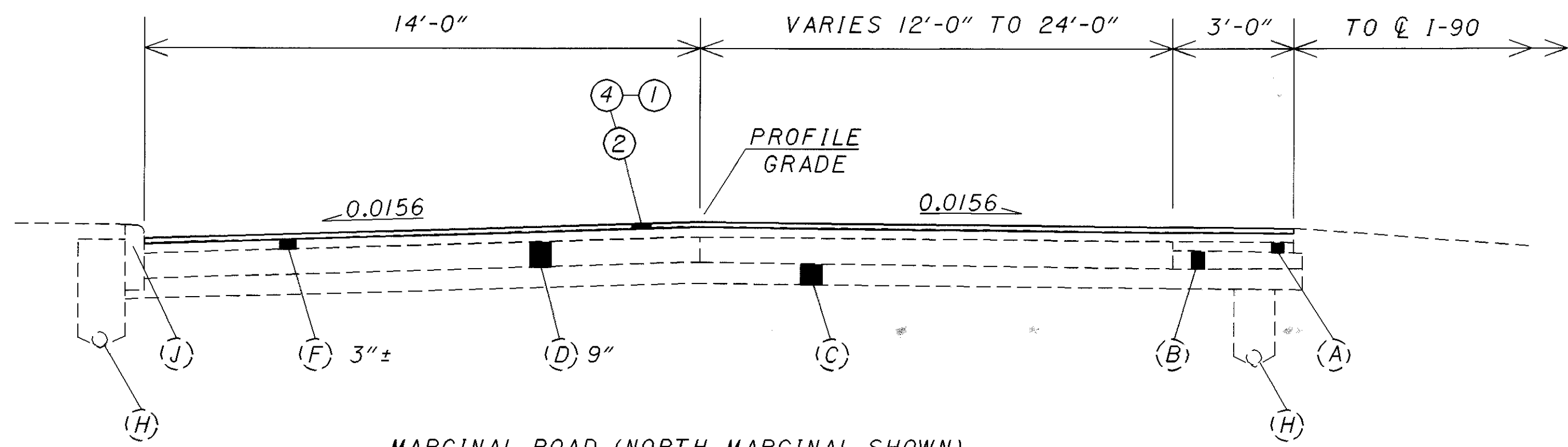
STA. 89+44 ± TO STA. 100+00.00, EB  
STA. 84+41.20 TO STA. 100+00.00, WB

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CALCULATED  
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 CHECKED  
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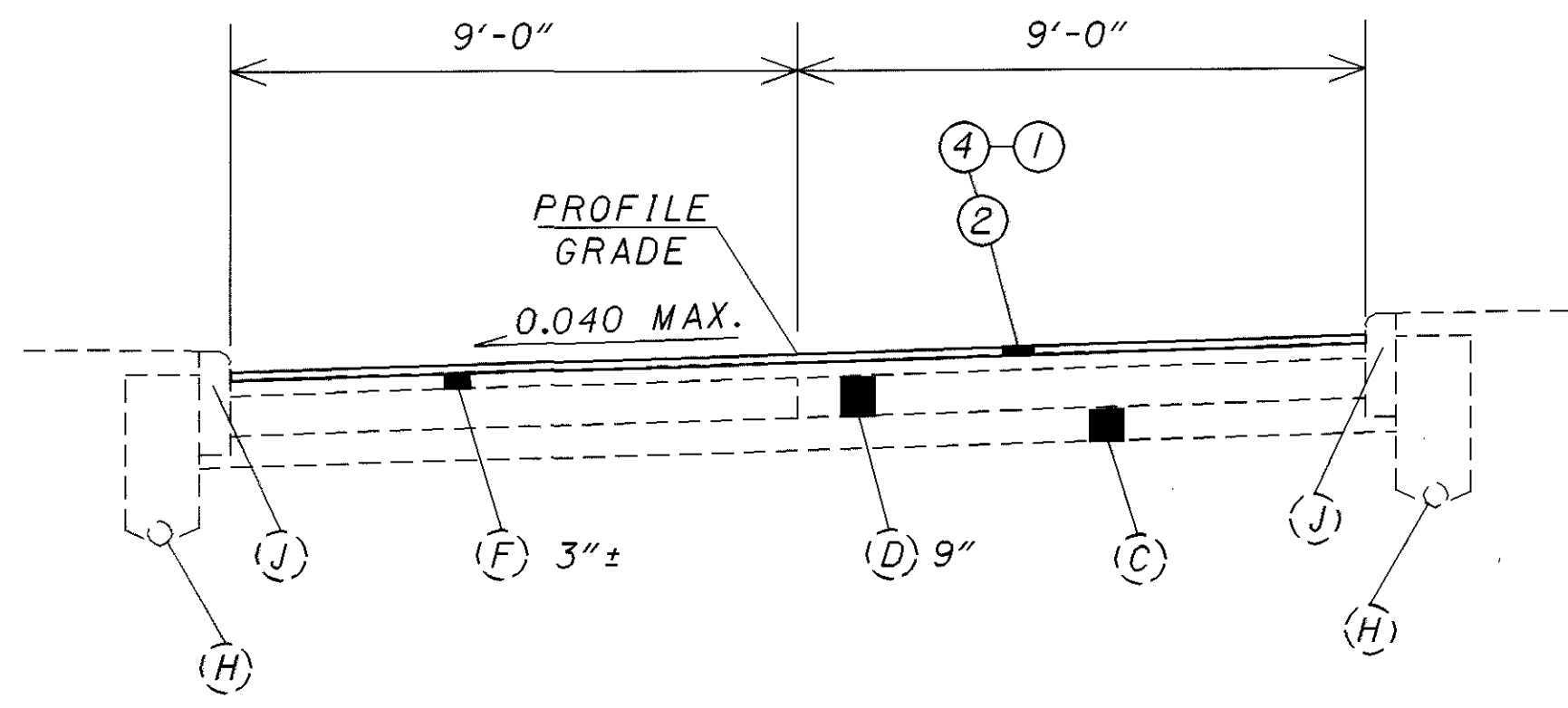
**TYPICAL SECTIONS**

**CUY-90-23.93**



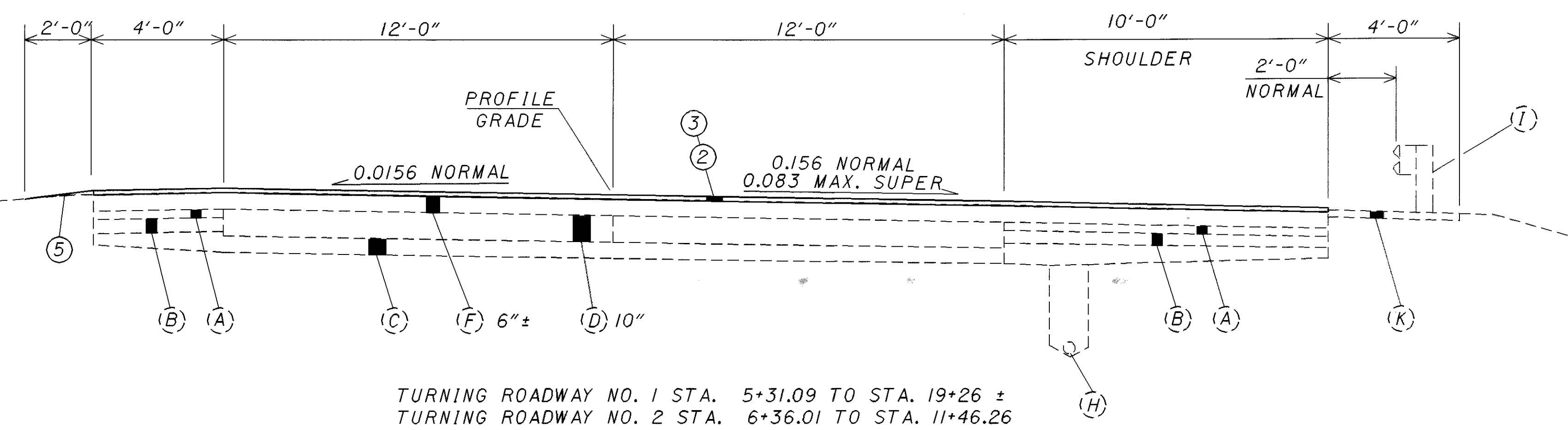
**MARGINAL ROAD (NORTH MARGINAL SHOWN)**

WATERLOO ROAD, STA. 151+09.34 TO STA. 179+85.93  
 S. WATERLOO RD., STA. 149+59.16 TO STA. 177+93.20  
 VILLAVIEW ROAD, STA. 271+80.78 TO STA. 288+15.84  
 LAKELAND BLVD. (EB) STA. 269+20.42 TO STA. 289+48.75  
 LAKELAND BLVD. (WB) STA. 291+33.90 TO STA. 330+49.70

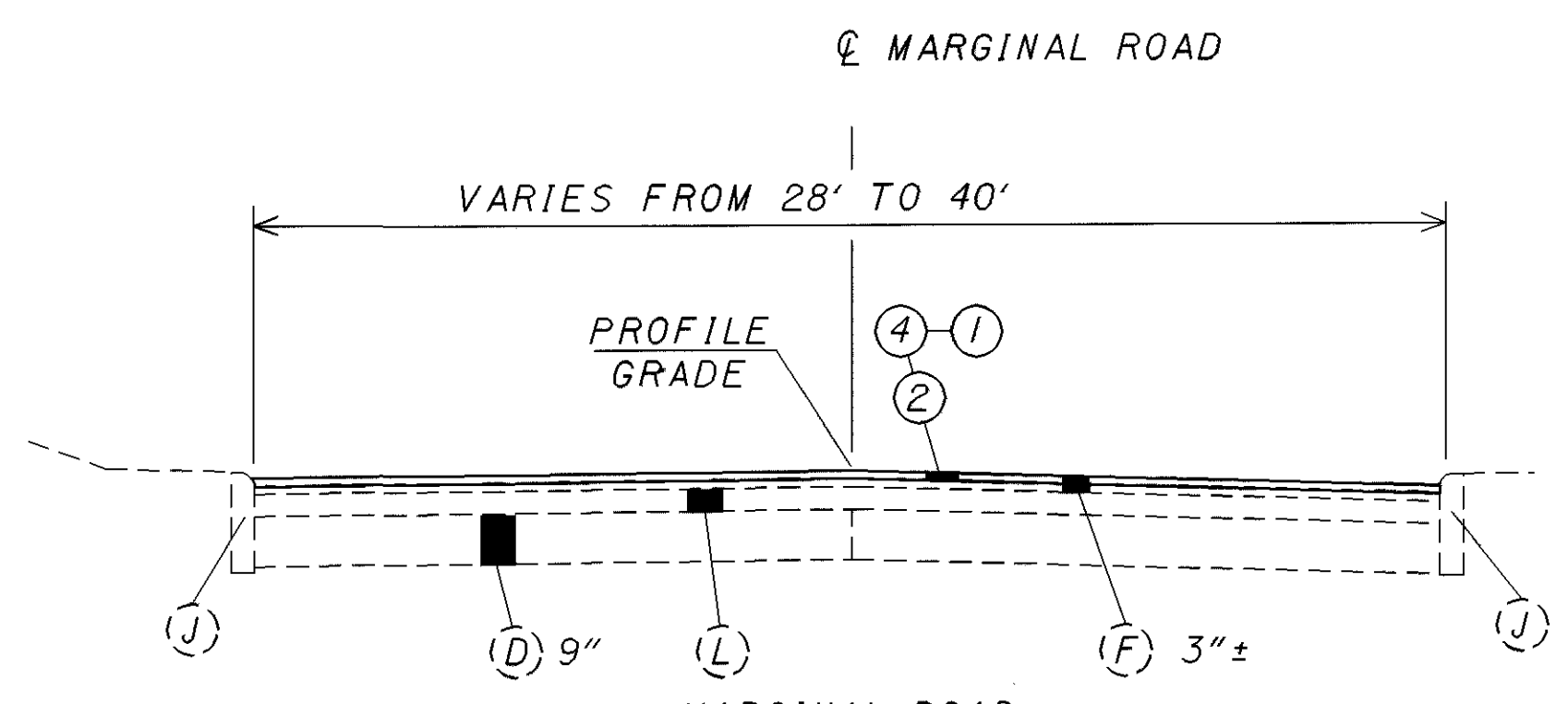


**MARGINAL CONNECTOR ROAD**

E. 140TH ST.      E. 200TH ST.  
 E. 152ND ST.      BABBIT RD.  
 NEFF RD.      E. 260TH ST.

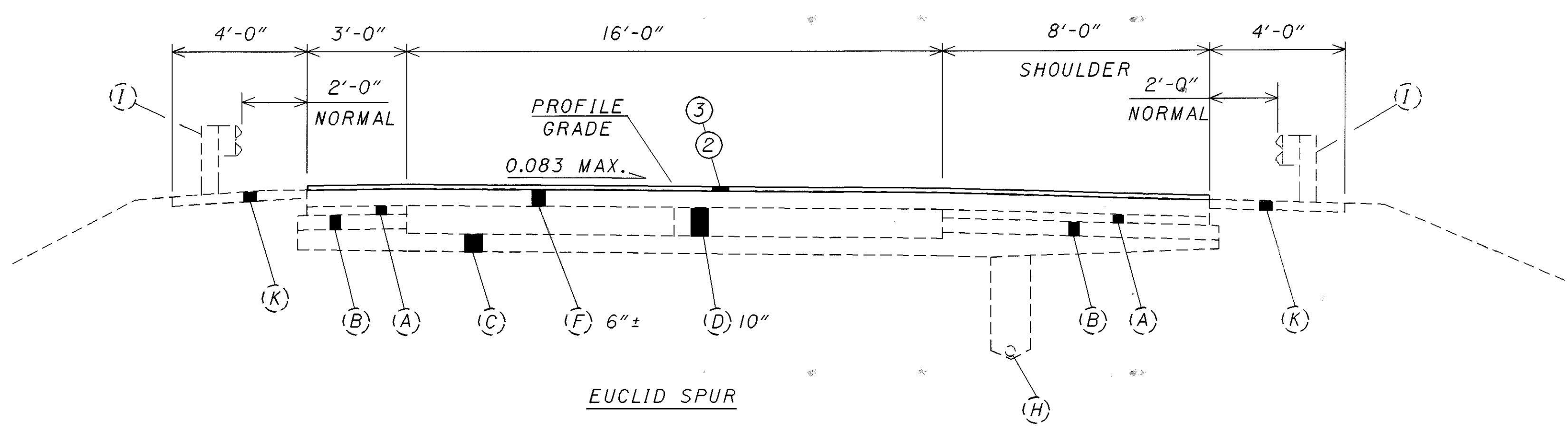


TURNING ROADWAY NO. 1 STA. 5+31.09 TO STA. 19+26 ±  
 TURNING ROADWAY NO. 2 STA. 6+36.01 TO STA. 11+46.26  
 STA. 14+72.81 TO STA. 29+46 ±  
 LAKELAND FREEWAY, EB STA. 67+21.32 TO STA. 89+44 ±  
 LAKELAND FREEWAY, WB STA. 63+17 ± TO STA. 84+41.20



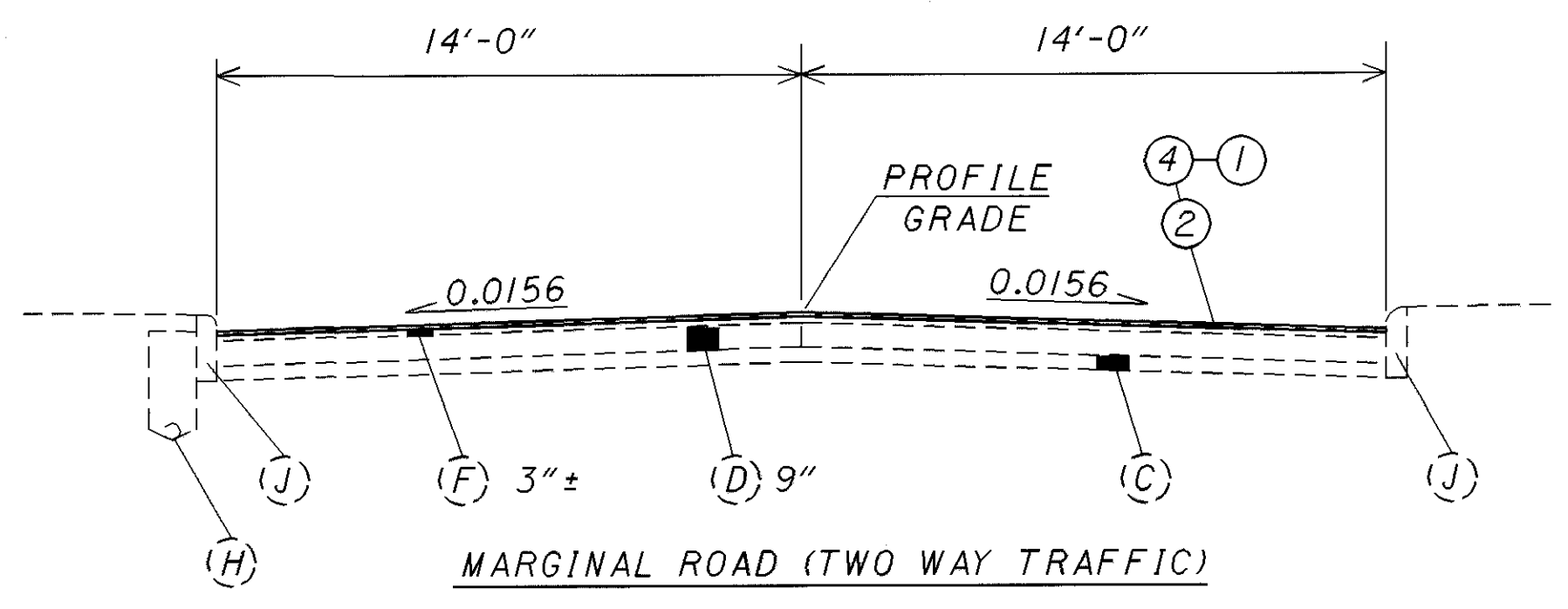
**MARGINAL ROAD**

LAKELAND BLVD. (EB) STA. 332+09.42 TO STA. 374+47.81  
 STA. 377+33.55 TO STA. 403+00.00 BK =  
 STA. 7+78.49 AH TO STA. 15+72.38  
 LAKELAND BLVD. (WB) STA. 334+22.79 TO STA. 374+44.37  
 STA. 377+35.00 TO STA. 402+99.55 BK =  
 STA. 9+99.55 AH TO STA. 19+63.62



**EUCLID SPUR**

RAMP NO. 1 STA. 11+60.20 TO STA. 16+50.67  
 STA. 18+78.00 TO STA. 24+18.58  
 RAMP NO. 2 STA. 6+29.86 TO STA. 17+79.82

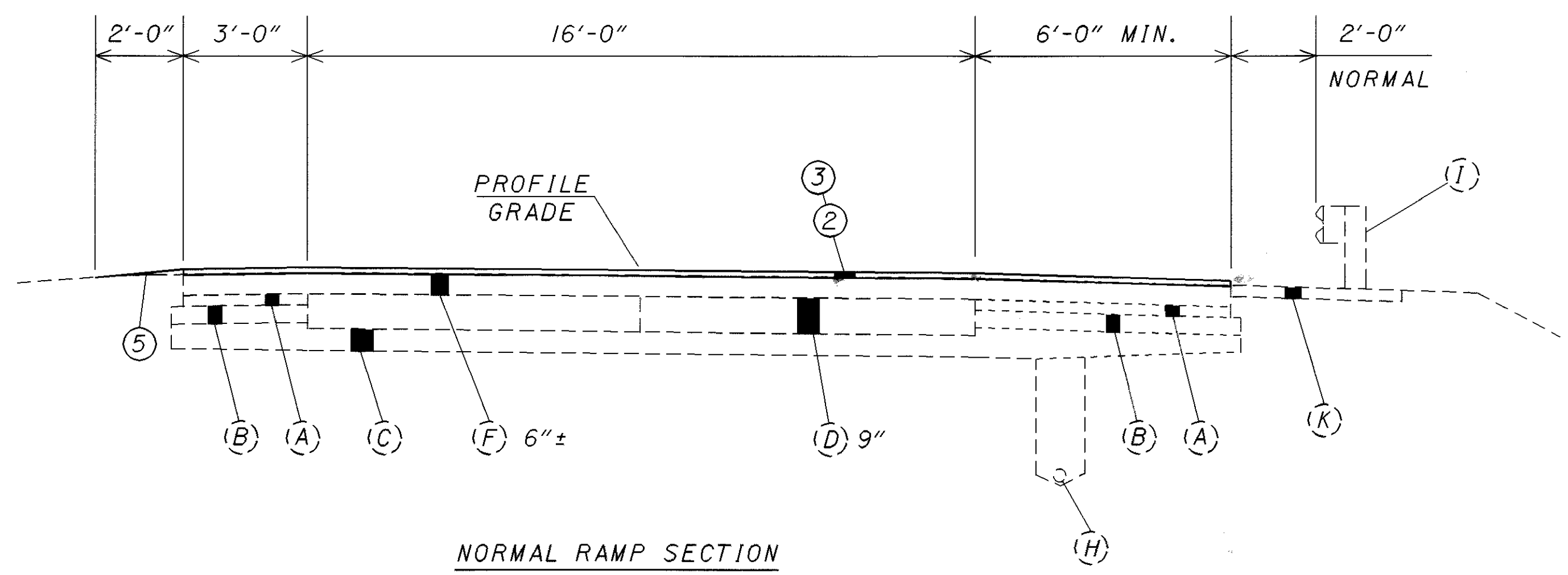
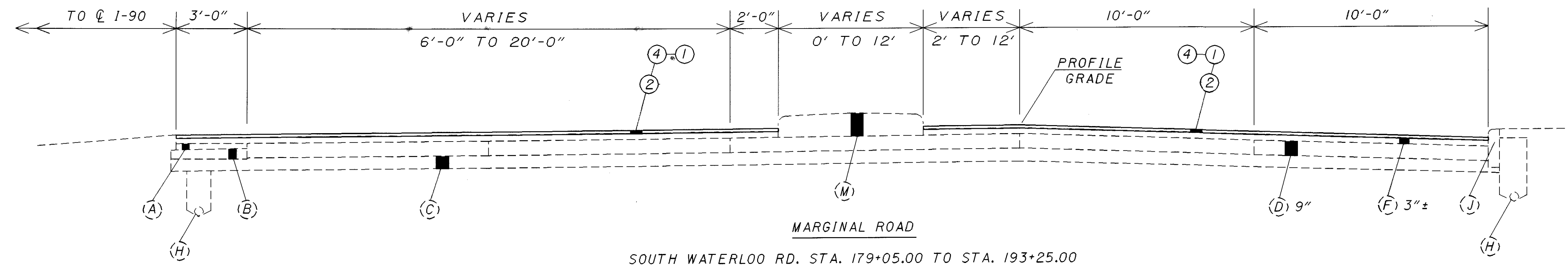


**MARGINAL ROAD (TWO WAY TRAFFIC)**

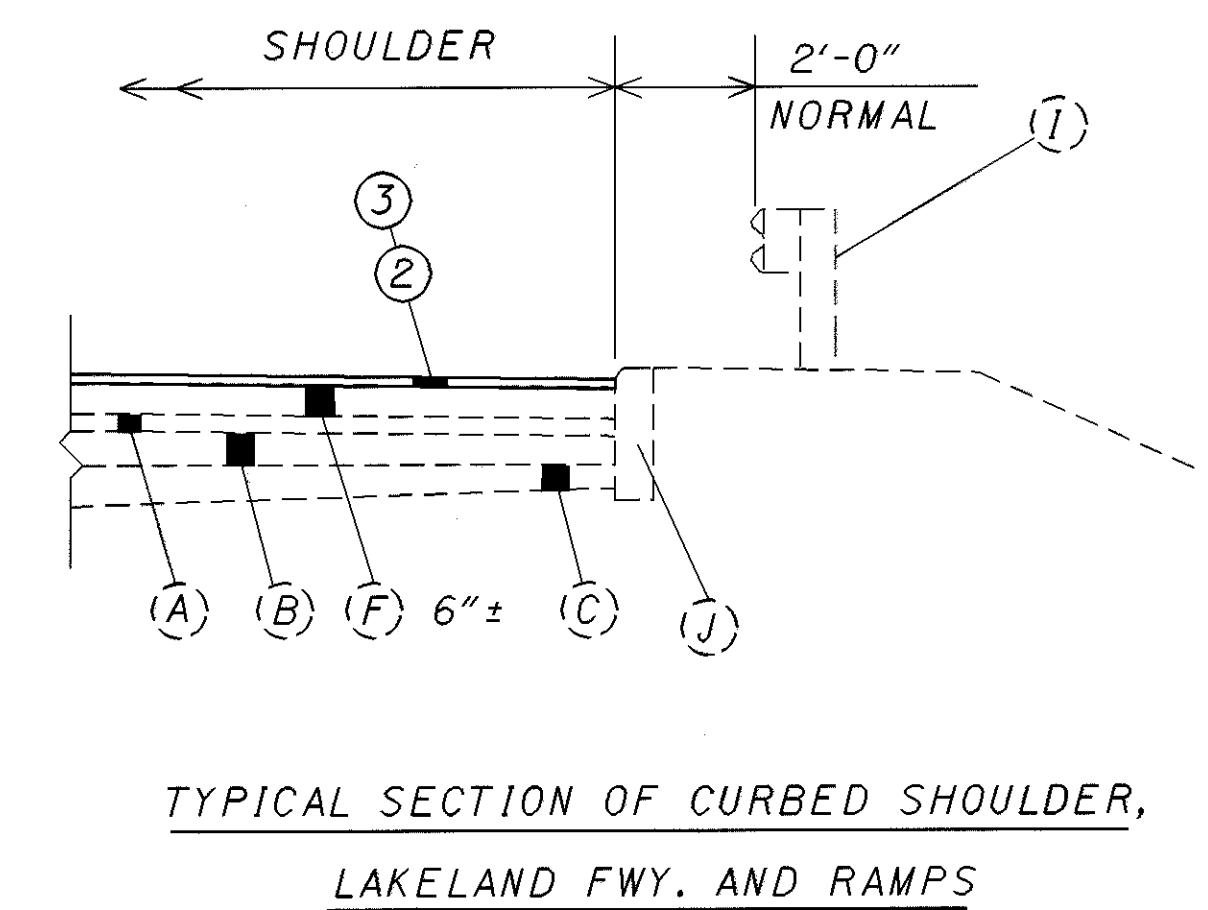
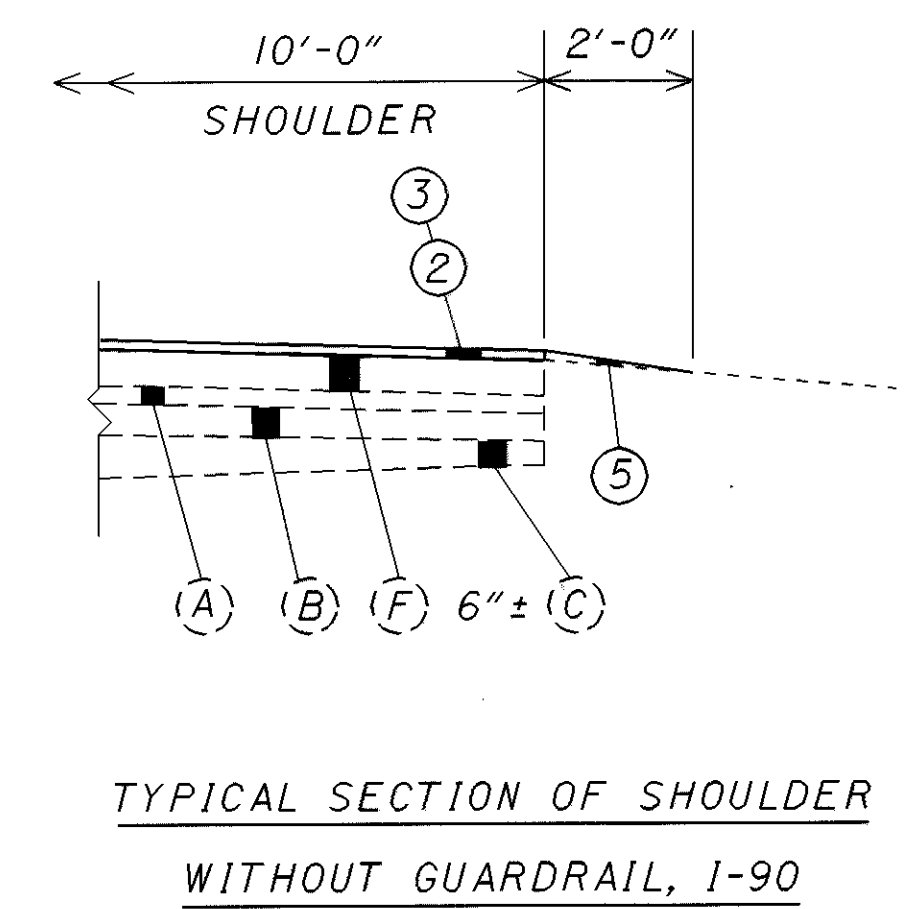
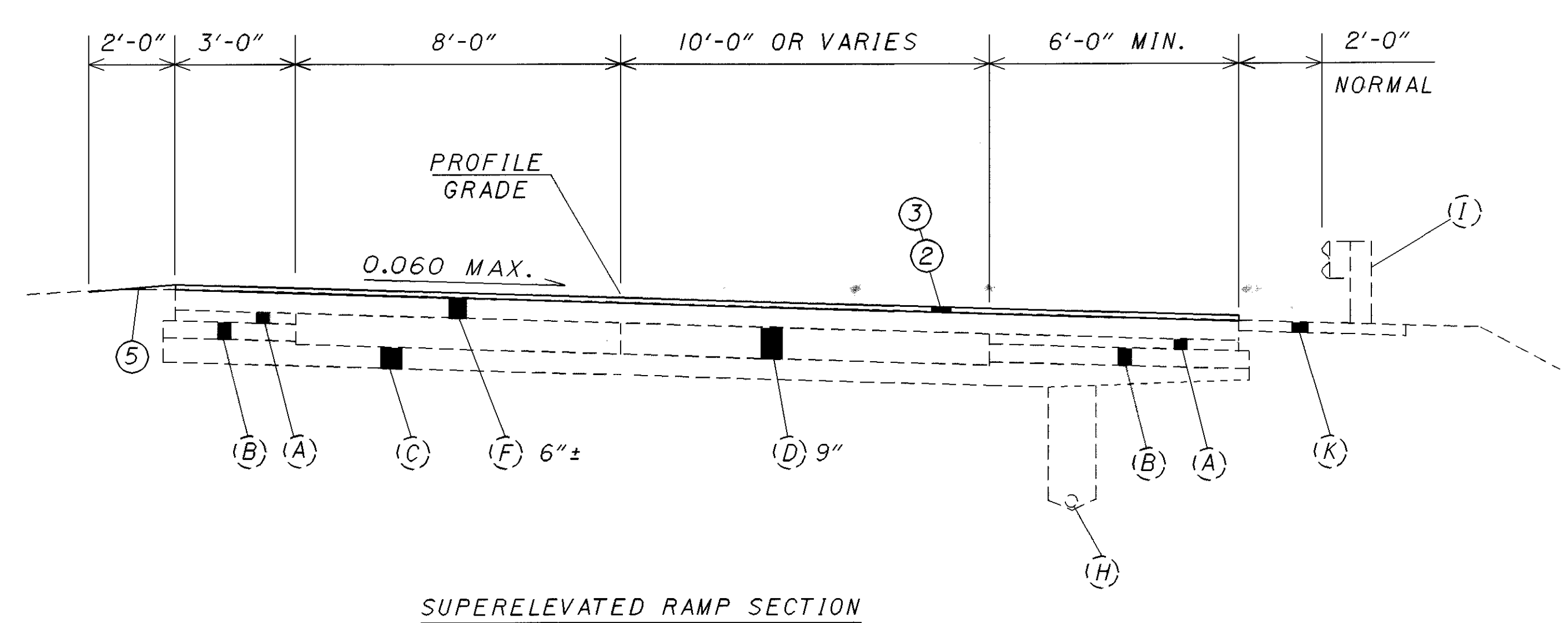
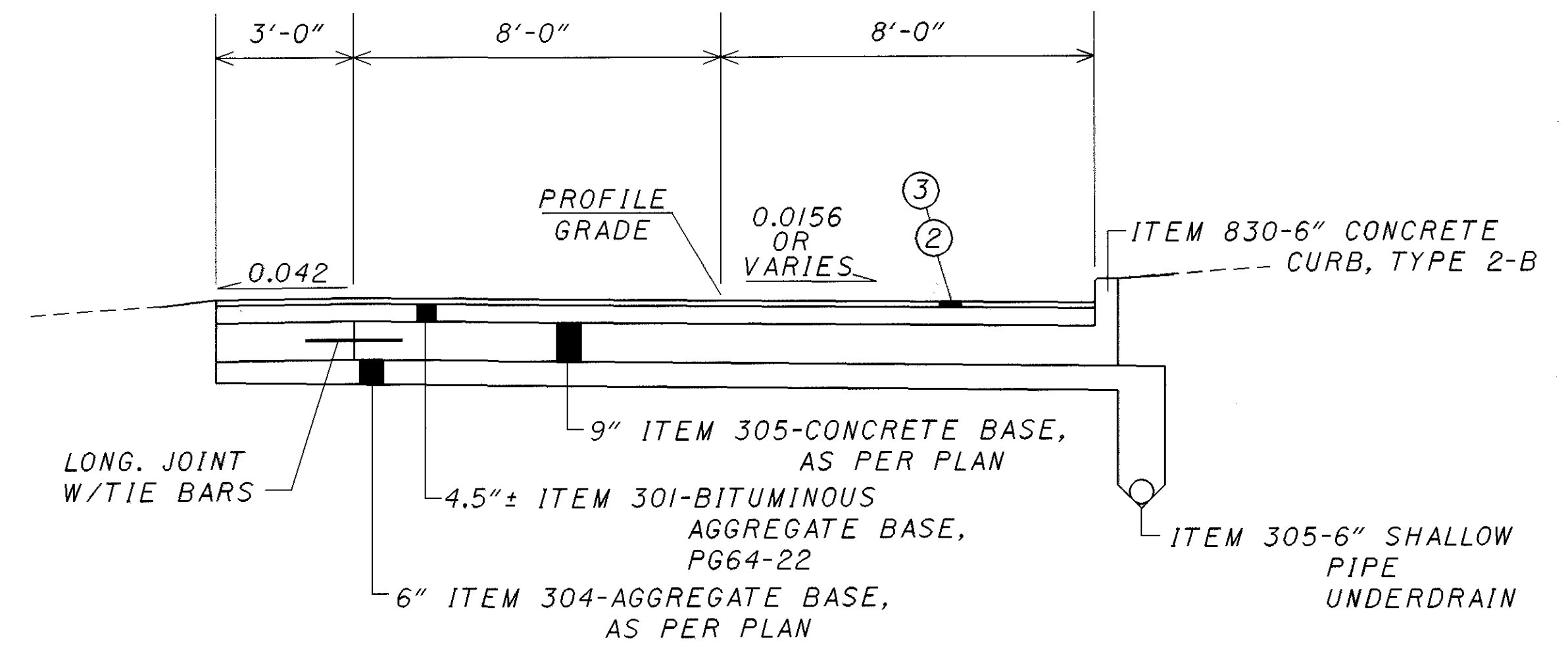
VILLAVIEW ROAD STA. 261+57.87 TO STA. 267+51.71

SEE SHEET NO. 5 FOR LEGEND

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 PLOTTED FROM: I:\PROJECTS\18730\18730.dgn  
 18730GYA.DGN  
 12-OCT-1999 12:38



RAMP 2	RAMP 11	RAMP 1E	RAMP 10E
RAMP 3	RAMP 12	RAMP 2E	RAMP 11E
RAMP 4	RAMP 13	RAMP 6E	RAMP 12E
RAMP 5	RAMP 14	RAMP 7E	RAMP 13E
RAMP 6	RAMP 14A	RAMP 8E	RAMP 14E
RAMP 7	RAMP 15	RAMP 9E	RAMP 15E
RAMP 8			
RAMP 9			



SEE SHEET NO. 5 FOR LEGEND

PLOT SUBMITTED: 12-OCT-1999 12:39

18730GNA.DGN

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# GENERAL

## PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE RESURFACING OF IR 90 AND SR 2 AT THE LOCATIONS DETAILED IN THE PLANS. BRIDGE APPROACH LEVELING, PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS ARE ALSO INCLUDED.

## RIGHT OF WAY

ALL WORK SHALL BE PERFORMED WITHIN THE EXISTING RIGHT OF WAY OR EASEMENTS.

## EXISTING TYPICAL SECTIONS

EXISTING TYPICAL SECTIONS HAVE BEEN TAKEN FROM THE RECORDS AND ARE BELIEVED TO REPRESENT THE EXISTING PAVEMENT, BUT THE STATE OF OHIO DOES NOT GUARANTEE THE ACCURACY OF THE SAME.

FOR FURTHER INFORMATION IN REGARD TO THE EXISTING TYPICAL SECTIONS, THE CONTRACTOR SHALL REFER TO THE PREVIOUS CONSTRUCTION PLANS.

THESE PLANS MAY BE REVIEWED AT THE

OHIO DEPARTMENT TRANSPORTATION  
DISTRICT 12 OFFICE  
5500 TRANSPORTATION BOULEVARD  
GARFIELD HEIGHTS, OHIO 44125

## CONVERSION OF METRIC STANDARD DRAWINGS

THE METRIC STANDARD DRAWINGS REFERENCED IN THIS PLAN SHALL BE CONVERTED TO ENGLISH UNITS USING THE SI (METRIC) TO ENGLISH CONVERSION FACTORS PROVIDED IN SECTION 109.011 OF THE 1997 CONSTRUCTION AND MATERIALS SPECIFICATIONS. THE APPENDIX OF ASTM E 380 SHALL BE UTILIZED FOR ANY ADDITIONAL CONVERSION FACTORS REQUIRED. CONVERSIONS SHALL BE APPROPRIATELY PRECISE AND SHALL REFLECT STANDARD INDUSTRY ENGLISH VALUES WHERE SUITABLE.

## CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

## COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL COOPERATE AND COORDINATE HIS/HER OPERATIONS WITH THE CONTRACTORS ON OTHER PROJECTS THAT MAY BE IN FORCE DURING THE LIFE OF THE CONTRACT. NO WAIVER OF ANY PROVISIONS OF 105.07 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS IS INTENDED.

## EQUIPMENT AND MATERIAL STORAGE

IN ORDER TO PROVIDE FOR THE SAFETY OF THE TRAVELING PUBLIC THE CONTRACTOR'S ATTENTION IS DIRECTED TO 614.03. IN ADDITION THE FOLLOWING PROVISIONS SHALL APPLY:

- 1) ANY REMOVED ITEMS SHALL NOT BE STORED ON THE RIGHT OF WAY FOR MORE THAN THIRTY DAYS.
- 2) THE STORAGE OF EQUIPMENT, MATERIALS, AND VEHICLES WITHIN THE HIGHWAY RIGHT OF WAY WILL BE PERMITTED. THE NUMBER OF AREAS AND EXACT LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
- 3) ALL DISTURBED AREAS SHALL BE RETURNED TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE STATE.

## WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

## ITEM 806 - FIELD OFFICE, TYPE B

A TYPE B FIELD OFFICE IS REQUIRED FOR THIS PROJECT.

## UTILITY OWNERSHIP

THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT. THE OHIO DEPARTMENT OF TRANSPORTATION HAS USED THE BEST AVAILABLE INFORMATION TO DETERMINE THE UTILITY COMPANIES SERVING THIS AREA, BUT CANNOT GUARANTEE THE UTILITY COMPANY LIST IS COMPLETE.

OHIO DEPARTMENT OF  
TRANSPORTATION  
5500 TRANSPORTATION BLVD.  
GARFIELD HEIGHTS, OHIO 44125  
(216) 581-2100

AMERITECH  
13630 LORAIN AVE. 4TH FLOOR  
CLEVELAND, OH 44111  
(216) 476-6142

CUYAHOGA COUNTY SANITARY  
ENGINEER  
6100 WEST CANAL RD.  
VALLEY VIEW, OH 44125  
(216) 443-8202

CITY OF CLEVELAND  
DIVISION OF WATER  
1201 LAKESIDE AVE.  
CLEVELAND, OH 44114  
(216) 664-2444

EAST OHIO GAS CO.  
1201 E. 55TH ST  
CLEVELAND, OH 44103  
(216) 736-6675

CITY OF CLEVELAND  
CLEVELAND PUBLIC POWER (MELP)  
1300 LAKESIDE AVE.  
CLEVELAND, OH 44114  
(216) 664-4245, EXT. 115

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GENERAL NOTES

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PLOT SUBMITTED: 12-OCT-1999 12:39  
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## ROADWAY

### ITEM 202 - RAISED PAVEMENT MARKERS REMOVED FOR STORAGE, AS PER PLAN

RAISED PAVEMENT MARKERS SHALL BE REMOVED FROM THE ROADWAY IN A MANNER THAT PREVENTS DAMAGE TO THE CASTINGS. REMOVED MARKERS SHALL BE COLLECTED, STORED IN 55 GALLON DRUMS (WITH AMOUNT CLEARLY MARKED) AND THEN DELIVERED TO THE ODOT WARRENSVILLE YARD, 25609 EMERY RD., WARRENSVILLE HTS., OHIO 44128 (SR 175 AT INTERSECTION OF 1-271 AND EMERY RD.), BY THE CONTRACTOR, AS DIRECTED BY THE ENGINEER. THE PROJECT ENGINEER SHALL GIVE THE WARRENSVILLE TRAFFIC DEPARTMENT (292-5801) 48 HOUR NOTICE PRIOR TO ANY DELIVERIES. THE PROJECT ENGINEER SHALL BE RESPONSIBLE FOR FURNISHING ALL NECESSARY TRANSFER/RECEIVING DOCUMENTATION TO THE YARD. ALL COSTS ASSOCIATED WITH THE REMOVAL, STORAGE AND DELIVERY OF THESE MARKERS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 202 - RAISED PAVEMENT MARKERS REMOVED FOR STORAGE, AS PER PLAN.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED THROUGHOUT THIS PROJECT:

ITEM 202-RAISED PAVEMENT MARKERS REMOVED  
FOR STORAGE, AS PER PLAN.....2100 EA.

### ITEM 304 - AGGREGATE BASE, AS PER PLAN

THE ONLY SLAG MATERIALS PERMITTED FOR THIS ITEM SHALL BE CRUSHED AIR-COOLED BLAST FURNACE SLAG, A MIXTURE OF CRUSHED AND GRANULATED SLAGS, OR OPEN HEARTH SLAG FROM APPROVED SOURCES ON FILE AT THE LABORATORY.

ALL MATERIALS OR BLENDED MATERIALS SHALL MEET THE GRADATION REQUIREMENTS OF 304.02.

ANY GRANULATED SLAG MATERIAL USED SHALL MEET THESE GRADATION REQUIREMENTS IN LIEU OF 703.08

### ITEM 305 - CONCRETE BASE, AS PER PLAN

IN ADDITION TO THE REQUIRMENTS OF 305.01, LOAD TRANSFER DEVICES ARE REQUIRED AT ALL TRANSVERSE CONTRACTION, CONSTRUCTION, AND EXPANSION JOINTS.

WHERE PROPOSED 305 BASE PAVEMENT IS TIED LONGITUDINALLY TO EXISTING PAVEMENT, TRANSVERSE JOINT SPACING AS REQUIRED IN BP-2.2M SHALL BE WAIVED. TRANSVERSE JOINTS SHALL BE LOCATED IN THE PROPOSED 305 BASE PAVEMENT AT ALL EXISTING TRANSVERSE JOINTS TO REMAIN AND ALL PROPOSED TYPE Y OR TYPE T JOINTS. JOINTS SHALL BE CONSTRUCTED TO FORM A CONTINUOUS LINE IN THE SAME ALIGNMENT AS THE TRANSVERSE JOINT IN THE ADJACENT EXISTING PAVEMENT.

WHERE PROPOSED 305 BASE PAVEMENT IS NOT TIED LONGITUDINALLY TO EXISTING PAVEMENT, JOINT SPACING IN THE PROPOSED 305 BASE SHALL BE IN ACCORDANCE WITH THE APPLICABLE STANDARD DRAWING.

## DRAINAGE AND EROSION CONTROL

### ITEM 659 - SEEDING AND MULCHING

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL ADJACENT TO REALIGNED RAMP 2.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY :

ITEM 659 - SEEDING AND MULCHING . . . . . 300 SQ YD

### ITEM SPECIAL - MISCELLANEOUS METAL

EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE AND STRENGTH (HEAVY OR LIGHT DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. ALL MATERIALS SHALL MEET ITEM 604 OF THE SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATION 932 AND SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

ITEM SPECIAL - MISCELLANEOUS METAL . . . . . 5000 LBS.

THE CONTRACTOR IS CAUTIONED TO USE EXTREME CARE IN THE REMOVAL, STORAGE AND REPLACEMENT OF ALL EXISTING CASTINGS. CASTINGS DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH THE PROPER NEW CASTINGS AT THE EXPENSE OF THE CONTRACTOR.

## PAVEMENT

### ITEM 254 - PATCHING PLANED SURFACE

THIS ITEM OF WORK SHALL INCLUDE PATCHING PLANED SURFACES AFTER THE ASPHALT PAVEMENT HAS BEEN PLANED.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 254 - PATCHING PLANED SURFACE . . . . . 10000 SQ YD

### LONGITUDINAL JOINTS

LONGITUDINAL JOINTS BETWEEN A PAVEMENT LANE AND ADJOINING BERM OR SPEED CHANGE LANE, AND BETWEEN A SPEED CHANGE LANE AND THE ADJOINING BERM SHALL BE MADE THE SAME DAY. EXCEPT WHERE PHASE CONSTRUCTION IS SPECIFIED, ALL LONGITUDINAL JOINTS SHALL BE HOT. LONGITUDINAL JOINT LOCATIONS SHALL BE AS APPROVED BY THE ENGINEER. EACH RAMP SHALL HAVE ONLY ONE LONGITUDINAL COLD JOINT LOCATED APPROXIMATELY HALFWAY ACROSS THE RAMP.

### ALIGNMENT AND PROFILE

THE WORK PROPOSED BY THIS PROJECT IS FOR THE RE-SURFACING OF THE EXISTING PAVEMENT. THE PROFILE OF THE PROPOSED SURFACE WILL BE 1-1/2" ABOVE THAT OF THE EXISTING 1R-90 AND RAMP PAVEMENT, EXCEPT WHERE OTHERWISE SHOWN IN THE PLANS. THE PROFILE OF THE MARGINAL ROADS SHALL MATCH THE EXISTING.

### ITEM 407 - TACK COAT

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.10 GALLONS PER SQUARE YARD OF TACK COAT FOR ESTIMATING PURPOSES ONLY.

### ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR

THIS WORK SHALL BE PERFORMED PRIOR TO RESURFACING. THE QUANTITIES PROVIDED ARE TO REPAIR UNSOUND OR COLD-PATCH AREAS OR POP-OUTS

THE FOLLOWING ESTIMATED QUANTITIES ARE INCLUDED TO PERFORM THIS WORK AS DIRECTED BY THE ENGINEER:

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR . . . . . 5000 SQ YD

### ITEM 446-ASPHALT CONCRETE SURFACE COURSE, TYPE 1H, AS PER PLAN

THE GRADATION FOR THIS ITEM SHALL BE AS PER 441.02, TABLE A, TYPE 1 SURFACE, MEDIUM. ALL OTHER SPECIFICATIONS SHALL BE AS PER TYPE 1H. COARSE AGGREGATE FOR THIS ITEM SHALL BE LIMITED TO AIR COOLED BLAST FURNACE SLAG OR LIMESTONE.

### ITEM 617 - COMPACTED AGGREGATE, TYPE A, AS PER PLAN

THIS ITEM SHALL BE USED ALONG ALL SHOULDERS WHEN SHOWN ON THE TYPICAL SECTIONS. MATERIAL FOR THIS ITEM SHALL BE LIMITED TO CRUSHED SLAG, CRUSHED LIMESTONE OR ASPHALT GRINDINGS. IF ASPHALT GRINDINGS ARE USED THE ONLY MATERIAL REQUIREMENT IS THAT 100% SHALL PASS A 1 INCH SIEVE. ALL COSTS OF EXCAVATION OR EMBANKMENT NECESSARY TO CONSTRUCT THIS ITEM AND PROVIDE POSITIVE DRAINAGE ARE INCLUDED IN THIS ITEM.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS OUTLINED ABOVE:

ITEM 617-COMPACTED AGGREGATE, TYPE A,  
AS PER PLAN . . . . . 1000 C.Y.

### ITEM 623 - CONSTRUCTION LAYOUT STAKES, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 623, THIS ITEM SHALL BE USED TO PROVIDE THE SURVEY OF THE ASPHALT BRIDGE TRANSITIONS AS REQUIRED BY THE NOTES ON SHEET 46.

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GENERAL NOTES

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# SCHEDULE OF THRU LANES TO BE MAINTAINED

GENERAL

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THRU VEHICULAR ACCESS IN BOTH DIRECTIONS AT ALL TIMES THROUGHOUT THE PROJECT AREA. THE PROJECT SHALL BE CONSTRUCTED IN PHASES IN ORDER TO MINIMIZE TRAFFIC DISRUPTION AND INCONVENIENCE TO THE GENERAL PUBLIC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL EQUIPMENT, MATERIALS AND MANPOWER NEEDED TO ADEQUATELY MAINTAIN TRAFFIC AS PROVIDED FOR IN THE PLANS AND SPECIFICATIONS.

THE CONTRACTOR IS REMINDED THAT, IN THE CONDUCT OF THIS PROJECT, HIS SEQUENCE OF OPERATIONS SHALL BE PLANNED IN SUCH A WAY AS TO MINIMIZE THE NUMBER OF LANE REDUCTIONS AND/OR LANE WIDTH REDUCTIONS REQUIRED TO MAINTAIN TRAFFIC THROUGH THE PROJECT.

PERMITTED LANE CLOSURES SHALL BE AS SHOWN ON THE "SCHEDULE OF THRU LANES TO BE MAINTAINED TABLE." THE TIME LIMITS SHOWN IN THIS TABLE SHALL BE ADHERED TO OR LIQUIDATED DAMAGES WILL BE ASSESSED.

OCTOBER 15TH SHALL BE CONSIDERED TO CONSTITUTE AN INTERIM COMPLETION DATE AND LIQUIDATED DAMAGES SHALL BE ASSESSED IN ACCORDANCE WITH 108.07 FOR EACH CALENDAR DAY UNTIL THE RE-SURFACING IS COMPLETED.

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY-WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA-WIDE.

SHOULD THE CONTRACTOR FAIL TO MEET THIS REQUIREMENT THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES IN ACCORDANCE WITH 108.07 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

LIQUIDATED DAMAGES/SHORT TERM LANE CLOSURES

SHORT TERM LANE CLOSURES ARE THOSE WHICH ARE PERMITTED BY THE "SCHEDULE OF THRU LANES TO BE MAINTAINED" TABLE.

THESE TIMES SHALL NOT BE REVISED WITHOUT PRIOR APPROVAL FROM THE DISTRICT 12 WORK ZONE TRAFFIC CONTROL ENGINEER.

SHORT TERM LIQUIDATED DAMAGES SHALL ALSO BE ASSESSED WHEN A RAMP CLOSURE IS VIOLATED.

IF SHORT TERM LANE CLOSURES ARE IN PLACE OUTSIDE THE SPECIFIED TIMES, LIQUIDATED DAMAGES IN THE AMOUNT OF \$ 10.00 PER MINUTE SHALL BE ASSESSED THE CONTRACTOR FOR EACH MINUTE THE LANE REMAINS CLOSED.

SHORT TERM LANE CLOSURES SHALL ONLY BE IMPLEMENTED WHEN WORK IS BEING CONTINUOUSLY PERFORMED. THE CLOSURE SHALL BE REMOVED AS SOON AS POSSIBLE AFTER WORK HAS STOPPED.

NIGHT VEST

ALL OF THE CONTRACTORS AND SUB-CONTRACTORS PERSONNEL WORKING DURING THE HOURS OF DARKNESS SHALL WEAR A 100% SILVER REFLECTIVE SAFETY VEST. THE SAFETY VEST SHALL BE PROVIDED BY THE CONTRACTOR. THE VEST MAY HAVE SEVERAL LIME OR ORANGE STRIPES ON IT.

N.A. = NOT APPLICABLE

⊕ - SEE "RAMP CLOSURE FOR RESURFACING" GENERAL NOTE

ROAD	LANE REDUCTIONS			PERMITTED RAMP CLOSURES			HALF WIDTH RAMP PAVING
	1 LANE CLOSURE	2 LANE CLOSURE	3 LANE CLOSURE	YES/NO	SHORT TERM CLOSURE ⊕		
					WEEKDAYS	WEEKENDS	
IR 90 STA 139+25 TO STA 62+00 (4 LANES, EB)	WEEKDAY 7:00 PM-3:00 PM	WEEKDAY 10:00 AM-2:00 PM 10:00 PM-6:00 AM	WEEKDAY 12:01 AM-5:00 AM				
	WEEKEND 10:00 PM FRI. - 6:00 AM MON.	WEEKEND 12:01 AM SAT. & SUN. 12:01 PM SAT. & SUN.	WEEKEND 12:01 AM-5:00 AM				
IR 90 STA 139+25 TO STA 62+00 (4 LANES, WB)	WEEKDAY 9:00 AM-6:00 AM	WEEKDAY 10:00 AM-2:00 PM 10:00 PM-6:00 AM	WEEKDAY 12:01 AM-5:00 AM				
	WEEKEND 10:00 PM FRI. - 6:00 AM MON.	WEEKEND 12:01 AM SAT. & SUN. 12:01 PM SAT. & SUN.	WEEKEND 12:01 AM-5:00 AM				
TURNING ROAD NO. 1 & SR-2 (EB) (2 LANES)	WEEKDAY 7:00 PM-6:00 AM	NA	NA				
	WEEKEND 10:00 PM FRI. - 6:00 AM MON.						
TURNING ROAD NO. 2 & SR-2 (WB) (2 LANES)	WEEKDAY 7:00 PM-6:00 AM	NA	NA				
	WEEKEND 10:00 PM FRI. - 6:00 AM MON.						
MARGINAL ROADS (EB & WB) (2 LANES)	WEEKDAY 7:00 PM-6:00 AM	NA	NA				
	WEEKEND 10:00 PM FRI. - 6:00 AM MON.						
RAMP 1 & RAMP 2 (EUCLID SPUR) (1 LANE)	NA	NA	NA	NO	NA	NA	7:00 PM-6:00 AM
MARGINAL CONNECTOR ROADS (1 LANE)	NA	NA	NA	NO	NA	NA	7:00 PM-6:00 AM
RAMP 2 (1 LANE)	NA	NA	NA	YES (SEE RAMP 2 CLOSURE NOTE)	10:00 PM-5:30 AM	2:00 AM SAT&SUN- 6:00 AM SAT&SUN	7:00 PM-6:00 AM
ALL OTHER RAMPS (1 LANE) ⊕	NA	NA	NA	YES	10:00 PM-5:30 AM	2:00 AM SAT&SUN- 6:00 AM SAT&SUN	7:00 PM-6:00 AM

RAMP 2 CLOSURE

RAMP 2 SHALL BE CLOSED AND DETOURED AS SHOWN ON SHEET 13 TO PERFORM THE RAMP RE-ALIGNMENT. THE RAMP CAN BE CLOSED A MAXIMUM OF 30 DAYS, TO PERFORM THE REQUIRED RE-CONSTRUCTION. BEFORE THE RAMP CAN RE-OPEN, ALL WORK MUST BE COMPLETED EXCEPT THE ASPHALT CONCRETE SURFACE COURSE. ALL COSTS FOR THE TEMPORARY SIGNS FOR THE DETOUR, INCLUDING ERECTING AND REMOVAL, AND ADDITIONAL DRUMS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC.

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MAINTENANCE OF TRAFFIC NOTES

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PLOT SUBMITTED: 12-OCT-1999 12:40

GENERAL PROVISIONS

1. THE CONTRACTOR SHALL NOTIFY THE ENGINEER, THE RESPONSIBLE LAW ENFORCEMENT AGENCY AND THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 12 PUBLIC INFORMATION OFFICER ( (216) 581-2333, EXT. 244) NOT LESS THAN TWENTY-FOUR (24) HOURS PRIOR TO A SCHEDULED DISRUPTION OF TRAFFIC.
2. NIGHTTIME (10:00 PM TO 6:00 AM) WORK SHALL BE PERMITTED IN ACCORDANCE WITH THESE PLANS AND NOTES. THE CONTRACTOR SHALL PROVIDE FLOOD LIGHTING OF THE WORK AREA IN ORDER TO ASSURE THE SAFEST CONDITIONS DURING NIGHTTIME WORK. A LIGHTING PLAN FOR NIGHTTIME OPERATIONS SHALL BE PRESENTED TO AND APPROVED BY THE ENGINEER.
3. THE CONTRACTOR SHALL FURNISH, ERECT AND MAINTAIN ALL NEW WARNING AND INFORMATION SIGNS NECESSARY FOR MAINTAINING TRAFFIC. THE CONTRACTOR SHALL DETERMINE WHAT SIGNS ARE NEEDED AND ADVISE THE ENGINEER TWO (2) WEEKS IN ADVANCE OF HIS DETAILED PLANS.  
  
SEE THE OMTCD AND STANDARD CONSTRUCTION DRAWINGS FOR THE MINIMUM SIGNAGE REQUIRED.
4. TRAFFIC CONTROL DEVICES SHALL BE SET UP PRIOR TO THE START OF CONSTRUCTION, AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SPECIAL CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS THEY ARE NEEDED AND SHALL BE IMMEDIATELY REMOVED THEREAFTER. WHERE OPERATIONS ARE PERFORMED IN STAGES, THERE SHALL BE IN PLACE ONLY THOSE DEVICES THAT APPLY TO THE CONDITION PRESENT DURING STAGE IN PROGRESS. ALL SIGNS WITH MESSAGES WHICH DO NOT APPLY DURING A CERTAIN PERIOD SHALL BE COVERED OR SET ASIDE OUT OF THE VIEW OF TRAFFIC.
5. PLACEMENT OF FINAL ROADWAY PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE "SCHEDULE OF THRU LANES TO BE MAINTAINED" DESCRIBED ON SHEET NO. 10.  
  
THE CONTRACTOR SHALL PROVIDE TWO (2) TRAILING VEHICLES AS PER MT-99.20M FOLLOWING THE PAVEMENT MARKING EQUIPMENT. THE TWO (2) TRAILING VEHICLES SHALL TRAVEL 500 FEET APART WITH THE REMOTE VEHICLE TRAVELING ON THE SHOULDER (LEFT OR RIGHT AS APPLICABLE) WHERE USABLE SHOULDER IS AVAILABLE. THE FIRST TRAIL VEHICLE IN A TRAFFIC LANE SHALL BE EQUIPPED WITH A TRUCK MOUNTED ATTENUATOR MEETING NCHRP 350 REQUIREMENTS. THE INTERMEDIATE TRAILING VEHICLE SHALL TRAVEL IN THE CLOSED LANE 500 FEET BEHIND THE PAVEMENT MARKING EQUIPMENT. THE POLICE CRUISER SHALL TRAVEL 500 TO 1000 FEET BEHIND THE REMOTE TRAILING VEHICLE. EACH TRAILING VEHICLE SHALL HAVE A YELLOW FLASHING BEACON PLUS 48" MIN. ORANGE AND BLACK CONSTRUCTION WARNING SIGNS MOUNTED ON THE BACK FACING TRAFFIC WITH STANDARD TYPE MESSAGES ADVISING MOTORISTS OF THE WORK AHEAD, ADVISORY WARNING SPEED AND WHICH LANE IS CLOSED.
6. WHENEVER A TOTAL CLOSURE IS IMPLEMENTED, THE CONTRACTOR SHALL PROVIDE A PORTABLE CHANGEABLE MESSAGE SIGN, TYPE FROM ODOT'S PRE-APPROVED LIST. IT SHALL BE PLACED 1.5 MILES TO 2 MILES IN ADVANCE OF THE CLOSURE OR AS DIRECTED BY THE ENGINEER.
7. FOR ANY OPERATION NOT SPECIFICALLY MENTIONED IN THESE PLANS, THE TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".
8. NO STOPPAGE OF TRAFFIC SHALL OCCUR WITHOUT LAW ENFORCEMENT PERSONNEL AT EACH LOCATION TO DIRECT TRAFFIC.

GENERAL PROVISIONS (CONT.)

9. ALL LABOR, MATERIALS, EQUIPMENT AND ANY INCIDENTALS REQUIRED TO COMPLETE THE WORK AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.
- HOLIDAY TRAFFIC
- NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC BEGINNING AT 12:01 PM FRIDAY PRECEDING LABOR OR MEMORIAL DAY UNTIL 6:00 AM TUESDAY AFTER MEMORIAL OR LABOR DAY. NO WORK SHALL BE PERFORMED FROM 6:00 PM JULY 3 TO 6:00 AM JULY 5.
- ITEM 614 - BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC
- THIS ITEM SHALL BE USED TO PROVIDED TEMPORARY ASPHALT RAMPS FOR TRANSVERSE DISCONTINUITIES. RAMPING SHALL BE PLACED AT THE RATE OF 1" PER 10 FT.
- TEMPORARY ASPHALT RAMPS SHALL BE REMOVED AS PART OF THIS ITEM.
- ITEM 614 - BITUMINOUS CONCRETE  
FOR MAINTAINING TRAFFIC . . . . . 100 CU. YD.
- ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN
- THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, AND REMOVE WHEN NO LONGER NEEDED A PORTABLE CHANGEABLE MESSAGE SIGN (S). THE PCMS SHALL BE OF THE TYPE SHOWN ON THE LIST OF APPROVED PCMS MAINTAINED BY THE DIRECTOR. THE PCMS SHALL BE A CLASS I OR II TYPE UNIT.
- THE PORTABLE CHANGEABLE MESSAGE SIGN SHALL BE MOUNTED ON A TRAILER. THE LOCATION OF THE PCMS SHALL BE AS DIRECTED BY THE ENGINEER. THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS.
- THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE LINK WHICH WILL ALLOW REMOTE SIGN ACTIVATION, DEACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES.
- THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER THE SOFTWARE NECESSARY TO CONTROL THE PCMS REMOTELY.
- THE PCMS SHALL BE EQUIPPED WITH A MYRIAD SAFETY BEAM OR AN APPROVED EQUAL AS DETERMINED BY THE ENGINEER. THE MYRIAD SAFETY BEAM SENDS OUT A SIGNAL THAT ACTIVATES RADAR DETECTORS. THE BEAM IS APPROVED BY THE F.C.C. THE MYRIAD SAFETY BEAM SHALL USE THE SAME POWER SUPPLY AS THE PCMS. THE MYRIAD SAFETY BEAM SHALL BE ABLE TO BE ACTIVATED WITH THE PCMS RUNNING OR NOT. THE MYRIAD SAFETY BEAM IS DISTRIBUTED BY THE TRIPLEX GROUP, INC. P.O. BOX 428. NEW HOPE, PA. 18938. PHONE (215) 862-5077.
- AT THE DIRECTION OF THE ENGINEER THE PCMS MAY BE REMOVED FOR PERIODS OR TIMES WHEN NOT IN USE. NO PAYMENT WILL BE MADE FOR THESE TIMES (EX. WINTER MONTHS).
- THERE SHALL BE TWO CLASS I OR II CHANGEABLE MESSAGE SIGN AT 4 MONTHS EACH.
- ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN,  
AS PER PLAN . . . . . 8 SIGN-MONTHS

TRAFFIC CONTROL MATERIALS

- A. SIGNS  
  
SIGN DIMENSIONS AND SPECIFICATIONS, INCLUDING LETTER SIZES, SHALL BE AS PROVIDED IN THE "MANUAL", OR IN SIGN DESIGN DRAWINGS PROVIDED BY THE DEPARTMENT OF TRANSPORTATION. THE SIGNS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER PRIOR TO THE START OF THE PROJECT.  
  
ALL SIGNS SHALL HAVE A REFLECTORIZED BACKGROUND OF REFLECTIVE MATERIALS AS DESCRIBED IN THE "MANUAL".
- B. SIGN SUPPORTS  
  
TEMPORARY SIGN SUPPORTS SHALL BE AS SHOWN ON MT-105.10M AND MT-105.11M.
- C. DRUMS  
  
DRUMS SHALL BE IN ACCORDANCE WITH PERTINENT SECTIONS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. ALL PERMANENT LANE CLOSURES SHALL BE DELINEATED WITH DRUMS SPACED AT 50 FEET CENTER TO CENTER. ALL COSTS FOR INSTALLING, MAINTAINING AND SUBSEQUENT REMOVAL OF SAID DRUMS SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614, MAINTAINING TRAFFIC.
- D. SMALL BARRICADES  
  
TYPE II BARRICADES MAY BE USED INSTEAD OF DRUMS TO CLOSE LANES WHERE REQUIRED FOR RESURFACING. THESE SHALL BE AT LEAST 36" HIGH AND 12" WIDE. NEAR THE TOP OF THE BARRICADE THERE SHALL BE A PANEL WITH ALTERNATE ORANGE AND REFLECTORIZED WHITE 6" WIDE STRIPS. THIS PANEL SHALL BE AT LEAST 12" WIDE AND 24" HIGH. THE BARRICADE SHALL BE OF SUFFICIENT STABILITY SO THAT WIND OR TRAFFIC AIR TURBULENCE WILL NOT UPSET THEM. BARRICADES SHALL BE IN ACCORDANCE WITH PERTINENT SECTIONS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.  
  
BARRICADES SHALL BE USED DURING NIGHT TIME HOURS ONLY.
- E. LIGHTING DEVICES  
  
FLASHERS SHALL BE 12 VOLT BATTERY OPERATED MODELS WITH 7 INCH DIAMETER YELLOW LENSES ILLUMINATED BY RAPID INTERMITTENT FLASHES OF SHORT DURATION AND SHALL BE PLACED ON ALL SIGNS AT ALL TIMES.  
  
CONTINUOUS BURN LIGHTS SHALL BE 12 VOLT BATTERY OPERATED MODELS WITH MINIMUM 7 INCH DIAMETER YELLOW LENSES.
- F. FLASHING ARROW BARRICADE  
  
WHENEVER ANY PART OF THE TRAVELED SURFACE IS CLOSED. THE MOTORIST SHALL BE WARNED AND DIVERTED BY THE CONTRACTOR THROUGH THE USE OF ONE FLASHING ARROW BARRICADE FOR EACH LANE CLOSED. THE CONTRACTOR SHALL REFER TO STANDARD DRAWING MT-35.10M & MT-35.11M AND THE PROVISION SET FORTH IN OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS FOR ALL INFORMATION REGARDING FURNISHING, MAINTAINING, AND USE OF FLASHING ARROW BARRICADES. IF THE FLASHING ARROW BARRICADE IS WITHIN 300 FT OF A RESIDENCE OR ON A SURFACE STREET, A SOLAR POWERED FLASHING ARROW BARRICADE SHALL BE USED. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.

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MAINTENANCE OF TRAFFIC NOTES

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PLOT SUBMITTED: 12-OCT-1999 12:40  
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CONTRACTOR'S EQUIPMENT - OPERATION AND STORAGE

VEHICLES AND EQUIPMENT SHALL ALWAYS MOVE WITH, AND NOT ACROSS OR AGAINST THE FLOW OF TRAFFIC. VEHICLES AND OTHER EQUIPMENT SHALL NOT PARK OR STOP EXCEPT WITHIN DESIGNATED WORK AREAS; AND SHALL NOT ENTER AND LEAVE WORK AREAS IN A MANNER WHICH WILL BE HAZARDOUS TO, OR INTERFERE WITH THE NORMAL TRAFFIC FLOW. PERSONAL VEHICLES WILL NOT BE PERMITTED TO PARK WITHIN THE RIGHT-OF-WAY EXCEPT IN SPECIFIC AREAS DESIGNATED BY THE ENGINEER.

EQUIPMENT, VEHICLES AND MATERIALS SHALL NOT BE STORED OR PARKED WITHIN 30 FEET OF THE TRAVELED WAY UNLESS 6 FEET BEHIND PCB OR GUARDRAIL.

ALL WORK VEHICLES AND EQUIPMENT THAT ENTERS THE WORK ZONE MORE THAN ONCE A DAY MUST BE EQUIPPED WITH AT LEAST ONE FLASHING, ROTATING, OR OSCILLATING AMBER LIGHT THAT IS VISIBLE IN ALL DIRECTIONS OF TRAFFIC FOR AT LEAST ONE QUARTER OF A MILE, DAY OR NIGHT.

MAINTENANCE OF TRAFFIC CONTROL ZONES

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN THE SIGNS, DRUMS AND TEMPORARY PAVEMENT MARKINGS AT THE LOCATIONS DETAILED IN THE PLANS OR SPECIFIED IN THE STANDARD DRAWINGS. WHEN THE CONTRACTOR IS NOTIFIED OF DEFICIENCIES HE SHALL CORRECT THE DEFICIENCIES AS SOON AS POSSIBLE, PREFERABLY WITHIN 12 HOURS AND NO LATER THAN 24 HOURS. IF ANY NOTED DEFICIENCIES ARE NOT CORRECTED WITHIN 24 HOURS THE ENGINEER SHALL DEDUCT ONE DAY PAY FOR ITEM 614 - MAINTAINING TRAFFIC, NOT AS A PENALTY BUT AS LIQUIDATED DAMAGES. THE CONTRACTOR SHALL BE SUBJECT TO THESE LIQUIDATED DAMAGES FOR EACH AND EVERY DAY THAT THESE PROVISIONS ARE NOT MET. ALL COSTS FOR MAINTAINING THE WORK ZONES AS DESCRIBED ABOVE SHALL BE INCLUDED UNDER ITEM 614 - MAINTAINING TRAFFIC.

SIGNAGE

ADVANCE WARNING SIGN GROUPS AS PER STANDARD DRAWINGS MT-95.30M, MT-98.12M, MT-98.13M, MT-98.14M, MT-98.15M, MT-98.16M, MT-98.17M, AND MT-98.18M SHALL BE INSTALLED, PAYMENT FOR THESE SIGNS SHALL BE UNDER ITEM 614 - MAINTAINING TRAFFIC.

SUSPENSION OF WORK

IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AS SET FORTH IN THESE PLANS OR WITH PROVISIONS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, THE ENGINEER SHALL SUSPEND WORK UNTIL THE CONTRACTOR COMPLIES WITH THE NECESSARY REQUIREMENTS.

TRAFFIC CONTROL AND SEQUENCE OF ASPHALT CONCRETE WORK

ALL ASPHALT CONCRETE OPERATIONS SHALL BE CONDUCTED IN A MANNER THAT WILL ASSURE MINIMUM DANGER AND INCONVENIENCE TO THE HIGHWAY USERS. THE PROCEDURE FOR INSTALLATION OF ANY ASPHALT LAYER SHALL BE SUCH THAT NO GREATER THAN 1-1/2 INCH DISCONTINUITY IN THE ELEVATION OF THE TRAVELED SURFACE SHALL BE EXPOSED TO TRAFFIC.

THE CONTRACTOR SHALL SCHEDULE HIS OPERATIONS SUCH THAT ALL HALF-WIDTH OVERLAYS ARE NOT EXPOSED TO TRAFFIC FOR MORE THAN 24 HOURS.

WHENEVER TRAFFIC IS SUBJECTED TO HALF-WIDTH OVERLAYS PRIOR TO COMPLETING THE ASPHALT COURSE, THE CONTRACTOR SHALL PROVIDE OW-171-48 AND OW-P-171-24 SIGNS (DUAL SIGN INSTALLATION). PLACEMENT SHALL BE AS DIRECTED BY THE ENGINEER AND INCLUDED IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.

TRAFFIC MUST BE MAINTAINED AT ALL TIMES IN BOTH DIRECTIONS IN ACCORDANCE WITH THE "SCHEDULE OF THRU LANES TO BE MAINTAINED".

WHENEVER ANY PART OF THE TRAVELED SURFACE IS CLOSED, THE MOTORISTS SHALL BE WARNED AND DIVERTED BY THE CONTRACTOR THROUGH THE USE OF A FLASHING ARROW, IN ADDITION TO THOSE PROVISIONS SET FORTH IN THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".

RAMP CLOSURES FOR REPAIRS OR RESURFACING

THE CONTRACTOR MAY CLOSE ONE RAMP AT A TIME FOR REPAIRS OR RESURFACING. THE CLOSURES SHALL BE LIMITED TO THE HOURS SHOWN IN THE "SCHEDULE OF THRU LANES TO BE MAINTAINED" TABLE. THE MOTORING PUBLIC SHALL BE GIVEN ADVANCE WARNING OF CLOSURES AT LEAST 72 HOURS IN ADVANCE THROUGH THE USE OF EITHER A GROUND MOUNTED FLAT SHEET SIGN OR A PORTABLE CHANGEABLE MESSAGE SIGN. A LEO WITH PATROL CAR (PAID FOR SEPARATELY) SHALL BE USED FOR EACH RAMP CLOSURE AND BE PRESENT FOR THE ENTIRE CLOSURE TIME.

FREEWAY ENTRANCE RAMPS SHALL BE CLOSED WITH A PCMS SUGGESTING A RECOMMENDED DETOUR.

FREEWAY EXIT RAMPS SHALL BE CLOSED WITH A PCMS ROUTING TRAFFIC TO THE NEXT EXIT AND A SECOND PCMS INDICATING A U-TURN AT THAT EXIT (UNLESS DIRECTED DIFFERENTLY BY THE ENGINEER).

FOR CLOSURES ONE OR TWO PCMS UNITS MAY BE NEEDED. THESE UNITS SHALL BE PAID FOR UNDER ITEM 614 - MAINTAINING TRAFFIC.

TEMPORARY PAVEMENT MARKINGS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY, TO BE USED AS DIRECTED BY THE ENGINEER, TO PLACE TEMPORARY PAVEMENT MARKINGS AFTER THE CONTRACTOR HAS PLANNED THE MARGINALS AND PLACED THE PROPOSED OVERLAY ON THE MARGINALS, RAMPS AND MAINLINE

ITEM 614 - TEMPORARY EDGE LINE, CLASS 1, 642 PAINT . . . 40.68 MILE  
ITEM 614 - TEMPORARY LANE LINE, CLASS 1, 642 PAINT . . . 51.87 MILE  
ITEM 614 - TEMPORARY CHANNELIZING LINE, CLASS 1,  
642 PAINT . . . . . 20,000 L. F.

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR

IN ADDITION TO THE REQUIREMENTS OF ITEM 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER AND OFFICIAL PATROL CAR WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

- FOR TOTAL CLOSURES OF EXIT RAMPS.
- WHEN DIRECTED BY THE ENGINEER.

LAW ENFORCEMENT OFFICERS (L.E.O.'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE.

LAW ENFORCEMENT OFFICERS WITH PATROL CAR REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614 - LAW ENFORCEMENT OFFICER W/PATROL CAR . . . 80 HOURS

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

IF THE CONTRACTOR WISHES TO UTILIZE LEO'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, HE MAY DO SO AT HIS OWN EXPENSE.

ITEM 614 - TEMPORARY PAVEMENT MARKINGS (RESURFACING)

TEMPORARY MARKINGS SHALL BE PLACED AT THE LOCATIONS OF THE PERMANENT MARKINGS AS SHOWN IN THE TRAFFIC CONTROL PLANS.

THIS ITEM SHALL BE USED AFTER THE OVERLAY IS PLACED. THE ESTIMATED QUANTITIES FOR THIS WORK ARE SHOWN ON THE GENERAL SUMMARY.

PERMANENT PAVEMENT MARKINGS

AFTER PLACING THE SURFACE COURSE, THE CONTRACTOR MAY PLACE PERMANENT PAVEMENT MARKINGS AT LOCATIONS SHOWN IN THE TYPICALS AND THE TRAFFIC CONTROL SHEETS INSTEAD OF PLACING TEMPORARY PAVEMENT MARKINGS, WHICH SHALL BE NON-PERFORMED AT THESE LOCATIONS.

CALCULATED  
EMK  
CHECKED  
LDH

MAINTENANCE OF TRAFFIC NOTES

CUY-90-23.93



PLOT SUBMITTED: 12-OCT-1999 12:42

18730GSA.DGN

PLOTTED BY: fkonopka  
 PLOTTED FROM: PROJECTS\B\18730\B\dgn\18730gsa.dgn

### RESURFACING QUANTITIES

LOCATION		LENGTH	WIDTH	AREA	AREA	407 TACK COAT (0.10 GAL/SY)	446 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1H, AS PER PLAN
FROM	TO	LIN FT	LIN FT	SQ FT	SQ YDS	GAL	CU YD
EASTBOUND I-90							
139+60.00	140+00.00	40.00	CAD	2707.3	301	30	13
140+00.00	142+75.00	275.00	CAD	22351.2	2483	248	103
142+75.00	149+43.06	668.06	66.75	44593.0	4955	495	206
149+43.06	151+90.84		BR. NO. CUY-90-24.13 OVER E. 140 ST.				
151+90.84	152+35.00	44.16	66.75	2947.7	328	33	14
152+35.00	156+53.06	418.06	CAD	32452.7	3606	361	150
156+53.06	170+51.70	1398.64	66.75	93359.2	10373	1037	432
170+51.70	173+50.00	298.30	CAD	23323.3	2591	259	108
173+50.00	176+50.00	300.00	CAD	21713.9	2413	241	101
176+50.00	177+21.48	71.48	66.75	4771.3	530	53	22
177+21.48	179+86.60		BR. NO. CUY-90-24.65 OVER E. 152 ST.				
179+86.60	190+03.50	1016.90	66.75	67878.1	7542	754	314
190+03.50	192+69.03	265.53	CAD	22877.1	2542	254	106
192+69.03	198+00.00	530.97	78.75	41813.9	4646	465	194
198+00.00	201+50.00	350.00	CAD	25674.9	2853	285	119
201+50.00	256+84.23	5534.23	66.75	369409.9	41046	4105	1710
256+84.23	259+08.69		BR. NO. CUY-90-26.16 OVER E. 185 ST.				
259+08.69	259+58.00	49.31	66.75	3291.4	366	37	15
259+58.00	263+00.00	342.00	CAD	26714.6	2968	297	124
263+00.00	268+09.09	509.09	66.75	33981.8	3776	378	157
268+09.09	270+53.81		BR. NO. CUY-90-26.39 OVER NEFF RD.				
270+53.81	274+55.00	401.19	CAD	30424.7	3381	338	141
274+55.00	284+50.00	995.00	66.75	66416.3	7380	738	307
284+50.00	287+65.36	315.36	CAD	26488.6	2943	294	123
287+65.36	289+35.26		BR. NO. CUY-90-26.74 OVER 200 ST.				
289+35.26	289+98.78	63.52	CAD	5019.0	558	56	23
289+98.78	296+42.50	643.72	78.75	50693.0	5633	563	235
296+42.50	300+00.00	357.50	CAD	30674.1	3408	341	142
300+00.00	325+69.00	2569.00	66.75	171480.8	19053	1905	794
325+69.00	329+40.98	371.98	CAD	31387.7	3488	349	145
329+40.98	331+72.46		BR. NO. CUY-90-27.54 OVER E. 222 ST.				
331+72.46	333+75.00	202.54	78.75	15950.0	1772	177	74
333+75.00	337+25.00	350.00	CAD	25287.9	2810	281	117
337+25.00	341+50.00	425.00	66.75	28368.8	3152	315	131
341+50.00	342+50.00	100.00	CAD	7227.7	803	80	33
342+50.00	346+50.00	400.00	CAD	35187.5	3910	391	163
346+50.00	358+56.00	1206.00	66.75	80500.5	8945	894	373
358+56.00	362+92.46	436.46	CAD	36770.1	4086	409	170
362+92.46	366+00.00	307.54	78.75	24218.8	2691	269	112
366+00.00	370+99.92	499.92	CAD	35038.4	3893	389	162
370+99.92	374+84.47	384.55	66.75	25668.7	2852	285	119
374+84.47	376+92.97		BR. NO. CUY-90-28.40 OVER BABBIT RD.				
376+92.97	384+25.00	732.03	66.75	48863.0	5429	543	226
384+25.00	385+25.00	100.00	CAD	6738.0	749	75	31
385+25.00	389+25.00	400.00	CAD	32841.7	3649	365	152
389+25.00	400+43.00	1118.00	66.75	74626.5	8292	829	345
400+43.00	403+00.00	257.00	CAD	22562.2	2507	251	104
STATION EQUATION - 403+00 BK = 41+12 AH							
41+12.20	44+87.20	375.00	78.75	29531.3	3281	328	137
44+87.20	47+87.20	300.00	CAD	21838.2	2426	243	101
47+87.20	50+17.48	230.28	66.75	15371.2	1708	171	71
50+17.48	52+83.78		BR. NO. CUY-90-29.10 OVER E. 260 ST.				
52+83.78	56+61.76	377.98	66.75	25230.2	2803	280	117
56+61.76	57+77.50		BR. NO. CUY-90-29.22 OVER E. 260 MARGINAL CONNECTOR				
57+77.50	61+93.70	416.20	66.75	27781.3	3087	309	129
STATION EQUATION - 61+93.7(IR-90)E.B. =							
61+87.09(SR-2)E.B.							
SUB-TOTAL COLUMN I						20801	8667

### RESURFACING QUANTITIES

LOCATION		LENGTH	WIDTH	AREA	AREA	407 TACK COAT (0.10 GAL/SY)	446 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1H, AS PER PLAN
FROM	TO	LIN FT	LIN FT	SQ FT	SQ YDS	GAL	CU YD
EASTBOUND SR-2							
67+71.50	68+41.32	69.82	CAD	3129.8	348	35	14
68+41.32	86+00.00	1758.68	39.00	68588.5	7621	762	318
86+00.00	89+44.00	344.00	CAD	20674.2	2297	230	96
89+44.00	94+01.77	457.77	CAD	32261.0	3585	358	149
94+01.77	100+00.00	598.23	56.00	33500.9	3722	372	155
SR-2 EASTBOUND - END WORK							
EASTBOUND I-90							
STATION EQUATION - 61+87.09(SR-2)E.B. = 0+00 TURNING ROADWAY #1 (IR-90 E.B.)							
TURNING ROADWAY #1 (IR-90 E.B.)							
0+00	5+82.00	582.00	CAD	46520.3	5169	517	215
5+82.00	7+50.00	168.00	CAD	6853.3	761	76	32
7+50.00	19+55.90	1205.90	39.00	47030.1	5226	523	218
BR. NO. CUY-90-29.69 (R)							
IR-90 EASTBOUND - END PROJECT							
WESTBOUND I-90							
139+60.00	140+00.00	40.00	66.75	2670.0	297	30	12
140+00.00	149+43.06	943.06	66.75	62949.3	6994	699	291
149+43.06	151+90.84		BR. NO. CUY-90-24.13 OVER E. 140 ST.				
151+90.84	152+35.00	59.16	66.75	3948.9	439	44	18
152+35.00	155+50.00	300.00	CAD	21799.3	2422	242	101
155+50.00	159+03.50	353.50	CAD	28833.6	3204	320	133
159+03.50	171+82.94	1279.44	66.75	85402.6	9489	949	395
171+82.94	174+75.00	292.06	CAD	23373.9	2597	260	108
174+75.00	177+21.48	246.48	CAD	17653.9	1962	196	82
177+21.48	179+86.60		BR. NO. CUY-90-24.65 OVER E. 152 ST.				
179+86.60	180+50.00	63.40	66.75	4232.0	470	47	20
180+50.00	183+50.00	300.00	CAD	20673.8	2297	230	96
183+50.00	189+13.50	563.50	CAD	44608.6	4957	496	207
189+13.50	193+64.49	450.99	66.75	30103.6	3345	334	139
193+64.49	196+19.30	254.81	CAD	21961.0	2440	244	102
196+19.30	200+50.00	430.70	78.75	33917.6	3769	377	157
200+50.00	201+50.00	100.00	CAD	7301.0	811	81	34
201+50.00	235+75.08	3425.08	66.75	228624.1	25403	2540	1058
235+75.08	240+75.00	499.92	CAD	36370.2	4041	404	168
240+75.00	246+65.66	590.66	78.75	46514.5	5168	517	215
246+65.66	249+31.00	265.34	CAD	23014.2	2557	256	107
249+31.00	253+10.00	379.00	66.75	25298.3	2811	281	117
253+10.00	256+10.00	300.00	CAD	21477.4	2386	239	99
256+10.00	256+84.23	74.23	78.75	5845.6	650	65	27
256+84.23	259+08.69		BR. NO. CUY-90-26.16 OVER E. 185 ST.				
259+08.69	262+66.00	357.31	CAD	29784.0	3309	331	138
TOTAL THIS TABLE						12055	5023
SUB-TOTAL COLUMN I						20801	8667
TOTALS CARRIED TO GENERAL SUMMARY:						32856	13690

RESURFACING QUANTITIES

CUY-90-23.93

CALCULATED  
JAG  
CHECKED  
EMK

PLOT SUBMITTED: 12-OCT-1999 12:42

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### RESURFACING QUANTITIES

LOCATION		LENGTH	WIDTH	AREA	AREA*	407 TACK COAT (0.10 GAL/SY)	446 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1H, AS PER PLAN
FROM	TO	LIN FT	LIN FT	SQ FT	SQ YDS	GAL	CU YD
WESTBOUND I-90 (CONT'D)							
262+66.00	263+10.00	44.00	66.75	2937.0	326	33	14
263+10.00	266+10.00	300.00	CAD	21825.0	2425	243	101
266+10.00	268+09.09	199.09	78.75	15678.3	1742	174	73
268+09.09	270+53.81			BR. NO. CUY-90-26.39 OVER NEFF RD.			
270+53.81	273+81.00	327.19	CAD	27748.0	3083	308	128
273+81.00	285+57.49	1176.49	66.75	78530.7	8726	873	364
285+57.49	287+65.36	207.87	CAD	17847.5	1985	198	83
287+65.36	289+35.26			BR. NO. CUY-90-26.74 OVER 200 ST.			
289+35.26	298+44.54	909.28	78.75	71605.8	7956	796	332
298+44.54	300+72.00	227.46	CAD	19639.0	2182	218	91
300+72.00	326+84.29	2612.29	66.75	174370.4	19374	1937	807
326+84.29	329+00.00	215.71	CAD	17725.8	1970	197	82
329+00.00	329+40.98	40.98	78.75	3227.2	359	36	15
329+40.98	331+72.46			BR. NO. CUY-90-27.54 OVER E. 222 ST.			
331+72.46	332+50.00	77.54	78.75	6106.3	678	68	28
332+50.00	333+50.00	100.00	CAD	7282.2	809	81	34
333+50.00	338+50.00	500.00	66.75	33375.0	3708	371	155
338+50.00	342+00.00	350.00	CAD	25672.9	2853	285	119
342+00.00	344+37.46	237.46	78.75	18700.0	2078	208	87
344+37.46	349+11.00	473.54	CAD	39964.9	4444	444	185
349+11.00	360+50.00	1139.00	66.75	76028.3	8448	845	352
360+50.00	364+50.00	400.00	CAD	35912.1	3990	399	166
364+50.00	365+50.00	100.00	CAD	7275.0	808	81	34
365+50.00	374+84.47	934.47	66.75	62375.9	6931	693	289
374+84.47	376+92.97			BR. NO. CUY-90-28.40 OVER BABBIT RD.			
376+92.97	377+25.00	32.03	66.75	2138.0	238	24	10
377+25.00	380+75.00	350.00	CAD	25464.6	2829	283	118
380+75.00	384+10.07	335.07	78.75	26386.8	2932	293	122
384+10.07	386+93.00	282.93	CAD	23584.8	2621	262	109
386+93.00	401+75.00	1482.00	66.75	98923.5	10992	1099	458
401+75.00	403+00.00	125.00	CAD	11551.4	1283	128	53
STATION EQUATION - 403+00 BK = 41+12 AH							
41+12.20	43+87.20	275.00	CAD	21776.1	2420	242	101
43+87.20	44+87.20	100.00	CAD	7555.0	839	84	35
44+87.20	48+27.79	340.59	CAD	23193.1	2577	258	107
48+27.79	50+17.48	189.69	66.75	12661.8	1407	141	59
BR. NO. CUY-90-29.10 OVER E. 260 ST.							
BEGIN TURNING ROADWAY #2 (IR-90 W.B.)							
37+01.08	40+43.10	342.02	CAD	24126.4	2681	268	112
BR. NO. CUY-90-29.22 OVER E. 260 ST. MARGINAL CONNECTOR							
29+46.00	35+87.69	641.69	CAD	49663.2	5518	552	230
TURNING ROADWAY #2 (IR-90 W.B.)							
14+72.81	29+46.00	1473.19	39.00	57454.4	6384	638	266
BR. NO. CUY-90-29.56 OVER SR-2 (E.B.)							
6+11.01	11+61.26	550.25	39.00	21459.8	2384	238	99
BR. NO. CUY-90-29.69 (L)							
IR-90 WESTBOUND - END PROJECT							
SR-2 WESTBOUND							
63+16.10	83+25.00	2008.90	39.00	78347.1	8705	871	363
83+25.00	84+41.20	116.20	CAD	4850.9	539	54	22
84+41.20	88+97.40	456.20	CAD	30596.5	3400	340	142
88+97.40	100+00.00	1102.60	56.00	61745.6	6861	686	286
SR-2 WESTBOUND - END WORK							
SUB-TOTAL COLUMN I						14948	6228

### RESURFACING QUANTITIES

LOCATION		LENGTH	WIDTH	AREA	AREA*	407 TACK COAT (0.10 GAL/SY)	446 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1H, AS PER PLAN
FROM	TO	LIN FT	LIN FT	SQ FT	SQ YDS	GAL	CU YD
EUCLID SPUR - RAMP 2 (IR-90 WESTBOUND TO SR-2 EASTBOUND)							
BR. NO. CUY-90-29.69 (L) OVER LAKELAND BLVD.							
6+04.86	17+25.00	1120.14	30.00	33604.2	3734	373	156
17+25.00	17+82.20	57.20	CAD	1600.1	178	18	7
EUCLID SPUR - RAMP 1 (WESTBOUND SR-2 TO IR-90 EASTBOUND)							
11+60.20	12+75.00	114.80	CAD	3579.6	398	40	17
12+75.00	16+75.67	400.67	28.00	11218.8	1247	125	52
16+75.68	18+53.00			BR. NO. CUY-90-29.56 OVER SR-2 EASTBOUND			
18+53.00	23+83.00	530.00	28.00	14840.0	1649	165	69
23+83.00	24+43.58	60.58	CAD	1817.4	202	20	8
BR. NO. CUY-90-29.69 (L) OVER LAKELAND BLVD.							
IR-90 EASTBOUND - END PROJECT							
RAMP 2							
0+00	0+37.5	37.50	CAD	1335.5	148	15	6
0+37.5	1+00.00	62.50	CAD	1726.4	192	19	8
1+00.00	4+39.24	339.24	27.00	9159.5	1018	102	42
4+39.24	5+50.00	110.76	CAD	2531.1	281	28	12
5+50.00	6+21.88	71.88	19.00	1365.7	152	15	6
6+21.88	6+65.70	43.82	CAD	1809.0	201	20	8
RAMP 3							
2+66.44	3+66.44	100.00	CAD	2541.2	282	28	12
3+66.44	5+11.24	144.80	25.00	3620.0	402	40	17
5+11.24	5+51.25	40.01	25.00	1000.2	111	11	5*
RAMP 4							
2+68.30	4+91.15	222.85	25.00	5571.3	619	62	26
4+91.15	5+31.15	40.00	25.00	1365.7	152	15	6*
RAMP 5							
1+23.00	1+63.00	40.00	25.00	1000.0	111	11	5*
1+63.00	3+93.00	230.00	25.00	5750.0	639	64	27
3+93.00	5+04.92	111.92	CAD	2783.7	309	31	13
RAMP 6							
1+29.82	1+69.82	40.00	25.00	1000.0	111	11	5*
1+69.82	3+81.50	211.68	25.00	5292.0	588	59	24
3+81.50	4+05.40	23.90	CAD	796.1	88	9	4
RAMP 7							
5+39.80	5+80.00	40.20	25.00	1005.0	112	11	5
5+80.00	6+00.00	20.00	CAD	415.5	46	5	2
6+00.00	7+05.11	105.11	16.00	1681.8	187	19	8
7+05.11	7+13.00	7.89	CAD	161.4	18	2	1
6+00 LEFT	7+11.2 LEFT	111.20	CAD	2244.9	249	25	10
RAMP 8							
3+18.00	3+58.00	40.00	25.00	1000.0	111	11	5*
3+58.00	5+57.30	199.30	25.00	4982.5	554	55	23
TOTAL THIS TABLE						1409	1409
SUB-TOTAL COLUMN I						14948	6228
TOTALS CARRIED TO GENERAL SUMMARY:						16357	7637

\* - OVERLAY THICKNESS VARIES FROM 1 1/2" TO 1 1/4"

RESURFACING QUANTITIES

CUY-90-23.93

PLOT SUBMITTED: 12-OCT-1999 12:44

18730GSA.DGN

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### RESURFACING QUANTITIES

LOCATION		LENGTH	WIDTH	AREA	AREA	407	446	
FROM	TO	LIN FT	LIN FT	SQ FT	SQ YDS	TACK COAT (0.10 GAL/SY) GAL	1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1H, AS PER PLAN CU YD	
RAMP 9								
0+24.84	0+74.84	50.00	CAD	1115.2	124	12	5	
0+74.84	2+31.48	156.64	27.00	4229.3	470	47	20	
2+31.48	3+06.00	74.52	CAD	2093.4	233	23	10	
3+06.00	3+31.50	25.50	CAD	948.5	105	11	4	
RAMP 11								
2+65.20	3+58.89	93.69	CAD	2241.5	249	25	10	
3+58.89	11+55.01	796.12	27.00	21495.2	2388	239	100	
11+55.01	12+18.15	63.14	CAD	1331.7	148	15	6	
RAMP 12								
3+47.86	4+90.66	142.80	CAD	4218.4	469	47	20	
4+90.66	10+02.13	511.47	29.00	14832.6	1648	165	69	
10+02.13	13+00.00	297.87	CAD	11867.8	1319	132	55	
13+00.00	14+00.00	100.00	53.95	5395.0	599	60	25	
14+00.00	14+51.24	51.24	CAD	2556.0	284	28	12	
14+51.24	15+08.69	57.45	CAD	2843.4	316	32	13	
RAMP 12 (LEFT)								
15+08.69	16+20.00	111.31	CAD	4302.1	478	48	20	
RAMP 12 (RIGHT)								
0+55.15	2+02.51	147.36	18.00	2652.5	295	29	12	
RAMP 13								
3+07.60	3+50.77	43.17	CAD	1011.4	112*	11	5	
3+50.77	4+42.42	91.65	CAD	2234.8	248	25	10	
4+42.42	7+92.28	349.86	27.00	9446.2	1050	105	44	
7+92.28	8+38.93	46.65	CAD	1202.0	134	13	6	
8+38.93	10+75.00	236.07	25.00	5901.7	656	66	27	
10+75.00	11+25.00	50.00	CAD	1132.1	126	13	5	
11+25.00	11+86.17	61.17	16.00	978.7	109	11	5	
RAMP 14								
3+11.30	3+87.08	75.78	CAD	1818.6	202	20	8	
3+87.08	6+77.00	289.92	25.00	7248.0	805	81	34	
6+77.00	7+17.00	40.00	25.00	1000.0	111	11	5*	
RAMP 14A								
3+78.76	4+78.76	100.00	CAD	2671.4	297	30	12	
4+78.76	5+94.30	115.54	25.00	2888.5	321	32	13	
5+94.30	6+34.30	40.00	25.00	1000.0	111	11	5*	
RAMP 15								
1+30.56	1+70.56	40.00	25.00	1000.0	111	11	5*	
1+70.56	1+87.71	17.15	CAD	428.6	48	5	2	
1+87.71	3+24.00	136.29	CAD	2678.9	298	30	12	
RAMP 16								
1+30.70	1+70.70	40.00	25.00	1000.0	111	11	5*	
1+70.70	2+79.80	109.10	25.00	2727.5	303	30	13	
2+79.80	3+79.80	100.00	CAD	2877.6	320	32	13	
SUB-TOTAL COLUMN I						1460	608	*

### RESURFACING QUANTITIES

LOCATION		LENGTH	WIDTH	AREA	AREA	407	446	
FROM	TO	LIN FT	LIN FT	SQ FT	SQ YDS	TACK COAT (0.10 GAL/SY) GAL	1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1H, AS PER PLAN CU YD	
RAMP 1E								
3+53.31	4+53.31	100.00	CAD	4023.8	447	45	19	
4+53.31	6+34.97	181.66	25.00	4541.5	505	50	21	
6+34.97	6+74.97	40.00	25.00	1000.0	111	11	5*	
RAMP 2E								
4+25.20	5+02.11	76.91	CAD	1920.5	213	21	9	
5+02.11	6+11.59	109.48	25.00	2737.0	304	30	13	
6+11.59	6+51.59	40.00	25.00	1000.0	111	11	5*	
RAMP 6E								
1+31.64	1+71.64	40.00	25.00	1000.0	111	11	5*	
1+71.64	2+62.36	90.72	25.00	2268.0	252	25	10	
2+62.36	3+55.50	93.14	CAD	3042.4	338	34	14	
RAMP 7E								
1+25.78	1+65.78	40.00	25.00	1000.0	111	11	5*	
1+65.78	3+36.61	170.83	25.00	4270.8	475	47	20	
3+36.61	4+36.61	100.00	CAD	2763.8	307	31	13	
RAMP 8E								
4+79.90	4+95.00	15.10	25.00	377.5	42	4	2	
4+95.00	5+35.00	40.00	25.00	1000.0	111	11	5*	
RAMP 9E								
3+99.67	4+83.00	83.33	CAD	2761.1	307	31	13	
4+83.00	6+00.00	117.00	25.00	2925.0	325	33	14	
6+00.00	6+40.00	40.00	25.00	1000.0	111	11	5*	
RAMP 10E								
2+95.00	3+35.00	40.00	25.00	1000.0	111	11	5*	
3+35.00	4+10.00	75.00	25.00	1875.0	208	21	9	
4+10.00	4+99.24	89.24	CAD	3100.7	345	34	14	
RAMP 11E								
1+82.00	2+22.00	40.00	25.00	1000.0	111	11	5*	
2+22.00	2+71.00	49.00	25.00	1225.0	136	14	6	
RAMP 12E								
4+00.31	4+66.00	65.69	CAD	2102.9	234	23	10	
4+66.00	6+17.00	151.00	25.00	3775.0	419	42	17	
6+17.00	6+57.00	40.00	25.00	1000.0	111	11	5*	
RAMP 13E								
2+81.90	3+64.03	82.13	CAD	2053.6	228	23	10	
3+64.03	4+22.00	57.97	25.00	1449.2	161	16	7	
4+22.00	4+62.00	40.00	25.00	1000.0	111	11	5*	
RAMP 14E								
1+55.00	1+95.00	40.00	25.00	1000.0	111	11	5*	
1+95.00	2+54.70	59.70	CAD	1556.5	173	17	7	
2+54.77	2+95.40	40.63	25.00	1015.7	113	11	5	
2+95.36	3+80.50	85.14	CAD	2212.8	246	25	10	
RAMP 15E								
1+94.00	2+34.00	40.00	25.00	1000.0	111	11	5*	
2+34.00	3+72.00	138.00	25.00	3450.0	383	38	16	
3+72.00	4+54.81	82.81	CAD	2172.7	241	24	10	
TOTAL THIS TABLE						774	322	
SUB-TOTAL COLUMN I						1460	608	
TOTALS CARRIED TO GENERAL SUMMARY:						2234	930	

\* - OVERLAY THICKNESS VARIES FROM 1 1/2" TO 1 1/4"

RESURFACING QUANTITIES

CUY-90-23.93



PLOT SUBMITTED: 12-OCT-1999 12:44

18730GSA.DGN

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RESURFACING QUANTITIES

LOCATION		LENGTH	WIDTH	AREA	AREA	254 PAVEMENT PLANING, BITUMINOUS (1/4")	407 TACK COAT (0.10 GAL/SY)	446 1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1H, AS PER PLAN
FROM	TO	LIN FT	LIN FT	SQ FT	SQ YDS	SQ YDS	GAL	CU YD
MARGINAL ROADS								
E.B. SOUTH WATERLOO RD.								
149+90.00	150+65.00	75.00	CAD	2294.6	255	255	25	9
150+65.00	151+56.13	91.13	18.00	1640.3	182	182	18	6
151+56.13	152+42.51	86.38	CAD	2591.1	288	288	29	10
152+42.51	154+33.56	191.05	29.00	5540.4	616	616	62	21
154+33.56	154+58.56	25.00	CAD	750.0	83	83	8	3
154+58.56	159+24.00	465.44	29.00	13497.8	1500	1500	150	52
159+24.00	160+59.28	135.28	CAD	3015.1	335	335	34	12
160+59.28	165+60.00	500.72	41.00	20529.5	2281	2281	228	79
165+60.00	166+93.30	133.30	CAD	6184.0	687	687	69	24
166+93.30	172+57.79	564.49	29.00	16370.2	1819	1819	182	63
172+57.79	174+26.46	168.67	CAD	5060.7	562	562	56	20
174+26.46	175+86.62	160.16	29.00	4644.6	516	516	52	18
175+86.62	176+11.62	25.40	CAD	712.5	79	79	8	3
176+11.62	176+23.59	11.97	28.00	335.2	37	37	4	1
176+23.59	177+62.00	138.41	CAD	5325.0	592	592	59	21
MARGINAL CONNECTOR (I-90 STA 151+00)								
0+00	2+02.67-S	202.67	19.00	3850.7	428	428	43	15
0+00	2+14.59-N	214.59	19.00	4077.2	453	453	45	16
WATERLOO RD.								
151+37.00	151+57.19	20.19	CAD	621.3	69	69	7	2
151+57.19	152+26.29	69.10	CAD	1896.0	211	211	21	7
152+26.29	153+25.94	99.65	CAD	3360.6	373	373	37	13
153+25.94	161+11.40	785.46	29.00	22778.3	2531	2531	253	88
161+11.40	161+36.40	25.00	CAD	758.4	84	84	8	3
161+36.40	162+80.07	143.67	CAD	6734.9	748	748	75	26
162+80.07	167+92.63	512.56	41.00	21015.0	2335	2335	233	81
167+92.63	169+25.00	132.37	CAD	6120.7	680	680	68	24
169+25.00	170+53.92	128.92	29.00	3738.7	415	415	42	14
170+53.92	170+78.92	25.00	CAD	749.9	83	83	8	3
170+78.92	176+85.91	606.99	29.00	17602.7	1956	1956	196	68
176+85.91	177+11.42	25.51	CAD	714.3	79	79	8	3
177+11.42	177+19.54	8.12	28.00	227.4	25	25	3	1
177+19.54	177+72.29	52.75	CAD	1645.6	183	183	18	6
177+72.29	179+00.12	127.83	18.00	2300.9	256	256	26	9
179+00.12	179+55.00	54.88	CAD	2652.8	295	295	29	10
MARGINAL CONNECTOR (I-90 STA 178+13)								
0+00	2+09.88-S	209.88	19.00	3987.7	443	443	44	15
0+00	1+96.64-N	196.64	19.00	3736.2	415	415	42	14
SOUTH WATERLOO RD.								
178+30.00	179+05.00	75.00	CAD	4929.1	548	548	55	19
179+05.00	180+32.10	127.10	CAD	6009.8	668	668	67	23
180+32.10	183+32.10	300.00	CAD	14848.4	1650	1650	165	57
183+32.10	184+82.10	150.00	CAD	8507.8	945	945	95	33
184+82.10	188+00.00	317.90	CAD	20866.4	2318	2318	232	81
188+00.00	193+25.00	525.00	CAD	25623.9	2847	2847	285	99
SUB-TOTAL COLUMN I						30872	3087	1072

RESURFACING QUANTITIES

LOCATION		LENGTH	WIDTH	AREA	AREA	254 PAVEMENT PLANING, BITUMINOUS (1/4")	407 TACK COAT (0.10 GAL/SY)	446 1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1H, AS PER PLAN
FROM	TO	LIN FT	LIN FT	SQ FT	SQ YDS	SQ YDS	GAL	CU YD
VILLAVIEW RD.								
261+12.00	261+57.86	45.86	CAD	1943.4	216	216	22	7
261+57.86	267+51.71	593.85	28.00	16627.8	1848	1848	185	64
267+51.71	268+23.70	71.99	CAD	3953.5	439	439	44	15
268+23.70	269+45.42	73.92	CAD	2482.6	276	276	28	10
269+45.42	274+00.00	454.58	29.00	13182.8	1465	1465	146	51
274+00.00	275+62.70	162.70	CAD	5996.4	666	666	67	23
275+62.70	279+09.35	346.65	29.00	10052.9	1117	1117	112	39
279+09.35	280+45.17	135.82	CAD	6212.0	690	690	69	24
280+45.17	282+90.00	244.83	41.00	10038.0	1115	1115	112	39
282+90.00	284+22.00	132.00	CAD	6116.8	680	680	68	24
284+22.00	289+13.99	491.99	29.00	14267.7	1585	1585	159	55
289+13.99	289+85.00	71.01	CAD	3167.9	352	352	35	12
MARGINAL CONNECTOR (I-90 STA 269+50)								
0+74.97	7+73.00	698.00	18.00	12564.0	1396	1396	140	48
SOUTH WATERLOO RD.								
269+84.00	271+80.78	196.78	CAD	6428.1	714	714	71	25
271+80.78	277+16.00	535.22	35.00	18732.7	2081	2081	208	72
277+16.00	278+49.17	133.17	CAD	6944.0	772	772	77	27
278+49.17	282+06.40	357.23	47.00	16789.8	1866	1866	187	65
282+06.40	283+39.00	132.60	CAD	6945.9	772	772	77	27
283+39.00	287+36.06	397.06	35.00	13897.1	1544	1544	154	54
287+36.06	288+31.50	95.44	CAD	3181.4	353	353	35	12
E.B. LAKELAND BLVD.								
288+88.50	289+69.17	80.67	CAD	3428.3	381	381	38	13
289+69.17	303+41.20	1372.03	29.00	39788.9	4421	4421	442	154
303+41.20	304+70.73	129.53	CAD	5973.9	664	664	66	23
304+70.73	308+00.00	329.27	41.00	13500.1	1500	1500	150	52
308+00.00	309+20.00	120.00	CAD	4201.8	467	467	47	16
309+20.00	317+00.00	780.00	29.00	22620.0	2513	2513	251	87
317+00.00	318+50.00	150.00	CAD	5250.0	583	583	58	20
318+50.00	322+73.71	423.71	41.00	17372.1	1930	1930	193	67
322+73.71	324+07.00	133.29	CAD	6197.0	689	689	69	24
324+07.00	327+92.33	385.33	29.00	11174.6	1242	1242	124	43
327+92.33	329+34.00	141.67	CAD	5046.7	561	561	56	19
MARGINAL CONNECTOR (I-90 STA 329+00)								
0+87.34	4+50.36	363.00	18.00	6534.0	726	726	73	25
MARGINAL CONNECTOR (I-90 STA 331+46)								
0+31.93	3+72.40	340.47	18.00	6128.5	681	681	68	24
W.B. LAKELAND BLVD.								
290+46.00	291+33.93	87.93	CAD	3491.9	388	388	39	13
291+33.93	304+05.00	1271.07	29.00	36861.0	4096	4096	410	142
304+05.00	305+42.79	137.79	CAD	6475.2	719	719	72	25
305+42.79	308+80.00	337.21	41.00	13825.6	1536	1536	154	53
308+80.00	310+10.00	130.00	CAD	4551.7	506	506	51	18
310+10.00	318+50.00	840.00	29.00	24360.0	2707	2707	271	94
318+50.00	319+70.00	120.00	CAD	4200.6	467	467	47	16
319+70.00	323+70.20	400.20	41.00	16408.2	1823	1823	182	63
323+70.20	324+98.00	127.80	CAD	5868.8	652	652	65	23
324+98.00	330+49.66	551.66	29.00	15998.1	1778	1778	178	62
330+49.66	332+19.50	169.84	CAD	5796.8	644	644	64	22
TOTAL THIS TABLE						51620	5162	1792
SUB-TOTAL COLUMN I						30872	3087	1072
TOTALS CARRIED TO GENERAL SUMMARY:						82492	8249	2864

CALCULATED  
JAG  
CHECKED  
EMK

RESURFACING QUANTITIES

CUY-90-23.93

PLOT SUBMITTED: 12-OCT-1999 12:44

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RESURFACING QUANTITIES

LOCATION		LENGTH	WIDTH	AREA	AREA	254 PAVEMENT PLANING, BITUMINOUS (1 1/4")	407 TACK COAT (0.10 GAL/SY)	446 1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1H, AS PER PLAN
FROM	TO	LIN FT	LIN FT	SQ FT	SQ YDS	SQ YDS	GAL	CU YD
E.B. LAKELAND BLVD.								
330+39.00	332+09.36	170.36	CAD	5772.6	641	641	64	22
332+09.36	343+70.00	1160.64	40.00	46425.6	5158	5158	516	179
343+70.00	346+37.00	267.00	CAD	9802.2	1089	1089	109	38
346+37.00	348+87.57	250.57	CAD	7595.4	844	844	84	29
348+87.57	350+96.59	209.02	CAD	10073.9	1119	1119	112	39
350+96.59	355+88.81	492.22	43.00	21165.5	2352	2352	235	82
355+88.81	357+71.80	182.99	CAD	8816.4	980	980	98	34
357+71.80	363+30.00	558.20	CAD	18526.9	2059	2059	206	71
363+30.00	367+56.65	426.65	40.00	17066.0	1896	1896	190	66
367+56.65	374+38.00	681.35	CAD	28819.0	3202	3202	320	111
374+38.00	375+45.00	107.00	CAD	5136.7	571	571	57	20
376+14.00	377+33.56	119.56	CAD	5442.5	605	605	60	21
377+33.56	386+48.17	914.61	40.00	36584.4	4065	4065	406	141
386+48.17	391+79.50	531.33	CAD	17721.5	1969	1969	197	68
391+79.50	393+58.63	179.13	CAD	8545.3	949	949	95	33
393+58.63	396+74.00	315.37	43.00	13560.9	1507	1507	151	52
396+74.00	398+30.00	156.00	CAD	7293.5	810	810	81	28
398+30.00	398+55.00	25.00	CAD	722.4	80	80	8	3
398+55.00	399+30.00	75.00	28.00	2100.0	233	233	23	8
399+30.00	403+00.00	370.00	CAD	12046.9	1339	1339	134	46
STA.EQU. 403+00 BK=7+78.49 AH								
7+78.49	8+74.00	95.51	CAD	3650.2	406	406	41	14
8+74.00	15+68.98	694.98	40.00	27799.2	3089	3089	309	107
15+68.98	16+69.00	100.02	CAD	3145.3	349	349	35	12
W.B. LAKELAND BLVD.								
333+08.80	334+38.34	129.54	CAD	5713.7	635	635	63	22
334+38.34	336+05.00	166.66	35.00	5833.1	648	648	65	23
336+05.00	337+75.96	170.96	CAD	5319.6	591	591	59	21
337+75.96	342+49.22	473.26	28.00	13251.3	1472	1472	147	51
STA.EQU. 342+49.22 BK=341+56.31 AH								
341+56.31	349+63.30	806.99	28.00	22595.7	2511	2511	251	87
349+63.30	351+90.55	227.25	CAD	11045.0	1227	1227	123	43
351+90.55	355+52.47	361.92	41.00	14838.7	1649	1649	165	57
355+52.47	358+47.90	295.43	CAD	14205.3	1578	1578	158	55
358+47.90	374+44.40	1596.50	32.00	51088.0	5676	5676	568	197
374+44.40	375+60.00	115.60	CAD	3924.3	436	436	44	15
MARGINAL CONNECTOR (I-90 STA 375+00)								
0+59.06	2+75.93	216.87	18.00	3903.7	434	434	43	15
MARGINAL CONNECTOR (I-90 STA 377+00)								
0+56.5	2+75.92	216.42	18.00	3895.6	433	433	43	15
W.B. LAKELAND BLVD.								
376+30.00	377+35.80	105.80	CAD	4368.7	485	485	49	17
377+35.80	380+02.43	266.63	35.00	9332.0	1037	1037	104	36
380+02.43	381+53.60	151.17	CAD	4862.3	540	540	54	19
381+53.60	388+45.10	691.50	28.00	19362.0	2151	2151	215	75
388+45.10	388+64.80	19.70	CAD	566.1	63	63	6	2
388+64.80	390+44.94	180.14	CAD	8421.9	936	936	94	32
390+44.94	397+21.20	676.26	41.00	27726.7	3081	3081	308	107
397+21.20	399+07.00	185.80	CAD	9106.7	1012	1012	101	35
399+07.00	402+99.55	392.55	28.00	10991.4	1221	1221	122	42
STA.EQU. 402+99.55 BK=9+99.55 AH								
9+99.55	19+61.40	961.85	28.00	26931.8	2992	2992	299	104
19+61.40	21+24.00	162.60	CAD	4925.1	547	547	55	19
MARGINAL CONNECTOR (I-90 STA 50+75)								
0+38.68	3+82.91	344.23	18.00	6196.1	688	688	69	24
SUB-TOTAL COLUMN I						67357	6736	2339

RESURFACING QUANTITIES

LOCATION		LENGTH	WIDTH	AREA	AREA	254 PAVEMENT PLANING, BITUMINOUS (1 1/4")	407 TACK COAT (0.10 GAL/SY)	446 1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1H, AS PER PLAN
FROM	TO	LIN FT	LIN FT	SQ FT	SQ YDS	SQ YDS	GAL	CU YD
TOTAL THIS TABLE								
SUB-TOTAL COLUMN I						67357	6736	2339
TOTALS CARRIED TO GENERAL SUMMARY:						67357	6736	2339

CALCULATED  
JAG  
CHECKED  
EMK

RESURFACING QUANTITIES

CUY-90-23.93



PLOT SUBMITTED: 27-JAN-2000 10:03

18730GGA.DGN

PLOTTED BY: fkonopka  
PLOTTED FROM: I:\PROJECTS\18730\18730.dgn\18730GGA.dgn

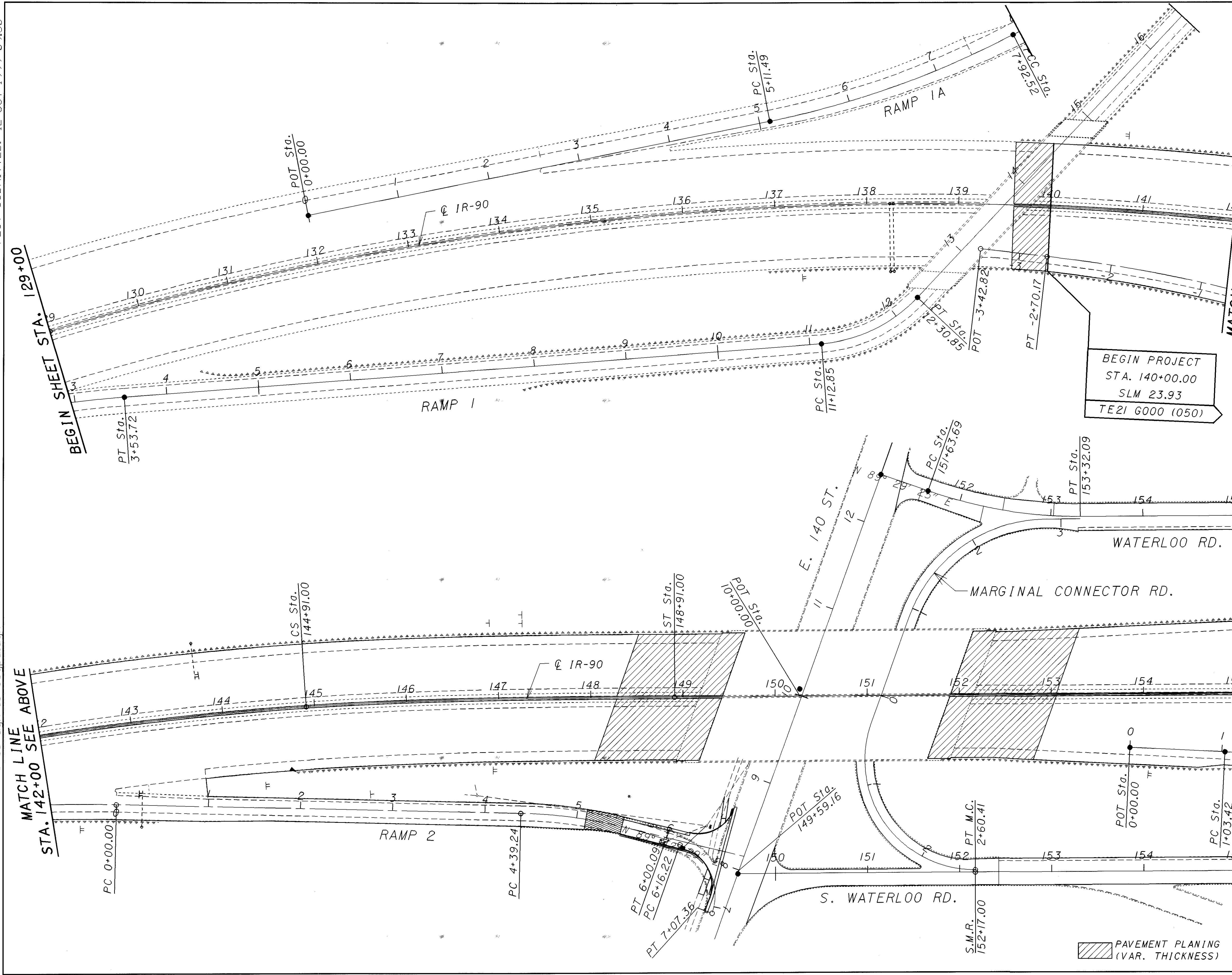
SHEET NUMBER											ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
9	14	15	16	17	18	19	44	47	57							
											<b>ROADWAY</b>					
											201	11000	LUMP		CLEARING AND GRUBBING	
							214				202	23000	214	SQ. YD.	PAVEMENT REMOVED	
							528				202	30000	528	SQ. FT.	WALK REMOVED	
							275				202	32000	275	LIN FT	CURB REMOVED	
							52				202	35100	52	LIN FT	PIPE REMOVED, 24" AND UNDER	
2100											202	54101	2100	EACH	RAISED PAVEMENT MARKER REMOVED FOR STORAGE, AS PER PLAN	9
							1				202	58100	1	EACH	CATCH BASIN REMOVED	
							204				203	12000	204	CU. YD.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	
							22				203	20000	22	CU. YD.	EMBANKMENT	
							327				203	50000	327	SQ. YD.	SUBGRADE COMPACTION	
							378				608	10000	378	SQ. FT.	4" CONCRETE WALK	
							2				608	51000	2	EACH	CURB RAMP, TYPE 2	
											<b>PAVEMENT</b>					
5000											251	01000	5000	SQ. YD.	PARTIAL DEPTH PAVEMENT REPAIR	
					82492	67357	43987	39	473		254	01000	194348	SQ. YD.	PAVEMENT PLANING, BITUMINOUS	
10000											254	01600	10000	SQ. YD.	PATCHING PLANED SURFACE	
							128				255	20000	128	LIN FT	FULL DEPTH PAVEMENT SAWING	
							41				301	46000	41	CU. YD.	BITUMINOUS AGGREGATE BASE, PG64-22	
							55				304	20001	55	CU. YD.	AGGREGATE BASE, AS PER PLAN	9
							327				305	13001	327	SQ. YD.	9" CONCRETE BASE, AS PER PLAN	9
		32856	16357	2234	8249	6736					407	10000	66432	GALS	TACK COAT	
		13690	7637	930	2864	2339					446	50001	27460	CU. YD.	ASPHALT CONCRETE, SURFACE COURSE, TYPE 1H, AS PER PLAN	9
1000											617	10101	1000	CU. YD.	COMPACTED AGGREGATE, TYPE A, AS PER PLAN	9
							211				830	16000	211	LIN FT	CONCRETE CURB, TYPE 2-B	
											<b>DRAINAGE</b>					
										40	603	00400	40	LIN FT	4" CONDUIT, TYPE E	
							10				603	01500	10	LIN FT	6" CONDUIT, TYPE F, 707.41 NON-PERFORATED, ASTM 3034 SDR 35, 707.42 OR 707.33	
							32				603	04400	32	LIN FT	12" CONDUIT, TYPE B	
							1				604	00400	1	EACH	CATCH BASIN, NO. 3	
							1				604	35500	1	EACH	MANHOLE RECONSTRUCTED TO GRADE, WATER	
							1				604	35500	1	EACH	MANHOLE RECONSTRUCTED TO GRADE, SANITARY	
							1				604	35501	1	EACH	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN (ELECTRICAL)	47A
5000											SPECIAL	60450000	5000	POUND	MISCELLANEOUS METAL	9
							85				605	11100	85	LIN FT	6" SHALLOW PIPE UNDERDRAIN	
											<b>EROSION CONTROL</b>					
300											659	10000	300	SO YD	SEEDING AND MULCHING	

GENERAL SUMMARY

CUY-90-23.93



PLOTTED BY: fkonopka  
 PLOTTED FROM: I:\PROJECTS\18730\18730.dgn  
 18730GPA.DGN  
 PLOT SUBMITTED: 12-OCT-1999 09:30



BEGIN PROJECT  
 STA. 140+00.00  
 SLM 23.93  
 TE21 6000 (050)

MATCH LINE STA. 142+00  
 SEE BELOW

MATCH LINE STA. 142+00  
 SEE ABOVE

MATCH LINE STA. 155+00  
 SEE SHEET 23

CROSS REFERENCE	
ITEM	SHEET
RESURFACING QTY	14-18
TRAFFIC CONTROL	58
ASPH. TRANS. DETAIL	46
RAMP 2 DETAILS	44-45

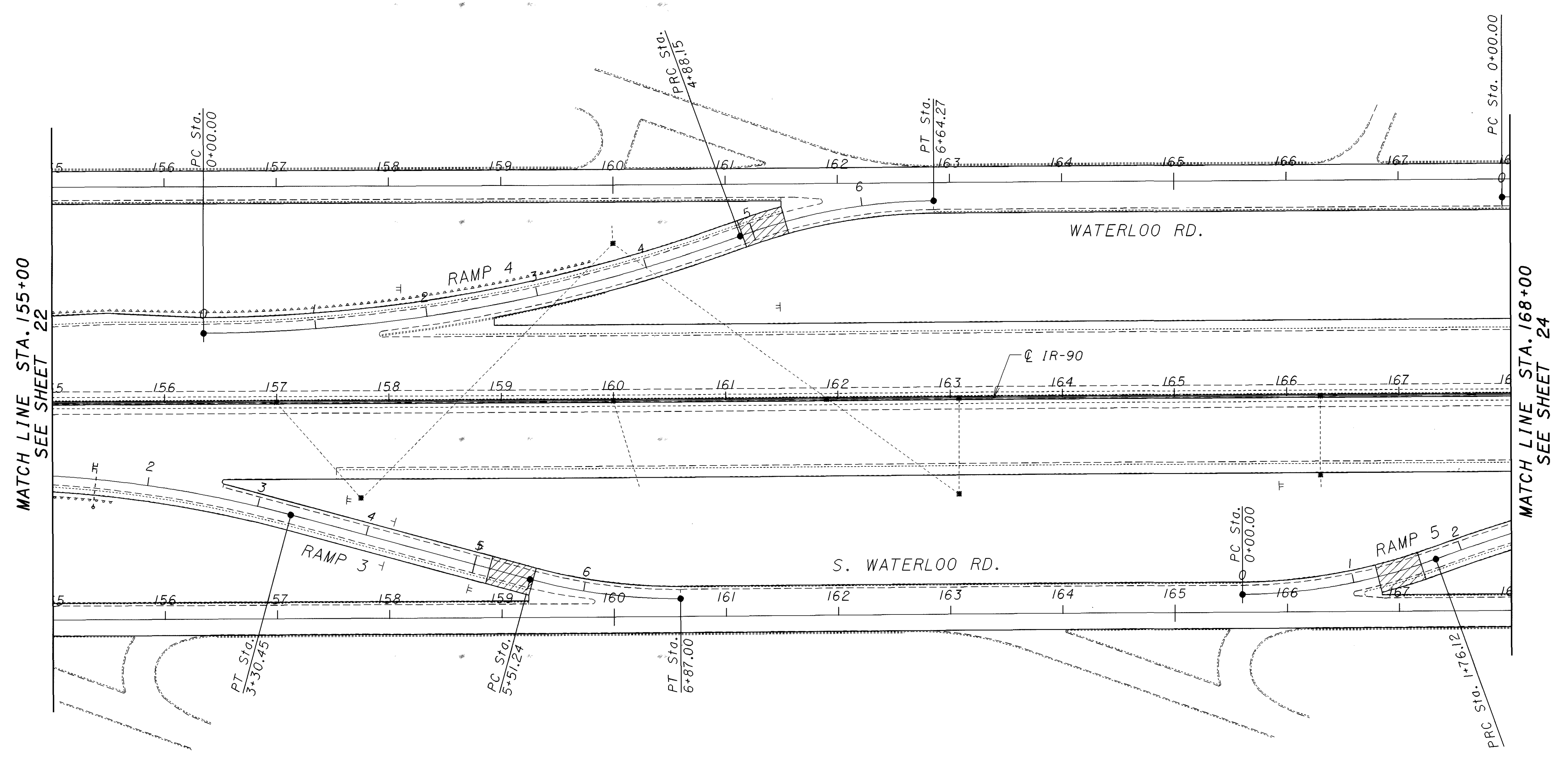
PAVEMENT PLANING  
 (VAR. THICKNESS)

CALCULATED  
 EMK  
 CHECKED  
 LDH

SCALE IN FEET

**PLAN SHEET - I.R. 90**  
**STA. 129+00 TO STA. 155+00**

PLOTTED BY: fkonopka  
 PLOTTED FROM: I:\PROJECTS\F18730\18730gp.b.dgn  
 18730GPB.DGN  
 PLOT SUBMITTED: 12-OCT-1999 09:31



CROSS REFERENCE	
ITEM	SHEET
RESURFACING QTY	14-18
TRAFFIC CONTROL	59
ASPH. TRANS. DETAIL	46

PAVEMENT PLANNING (VAR. THICKNESS)

CALCULATED  
EMK

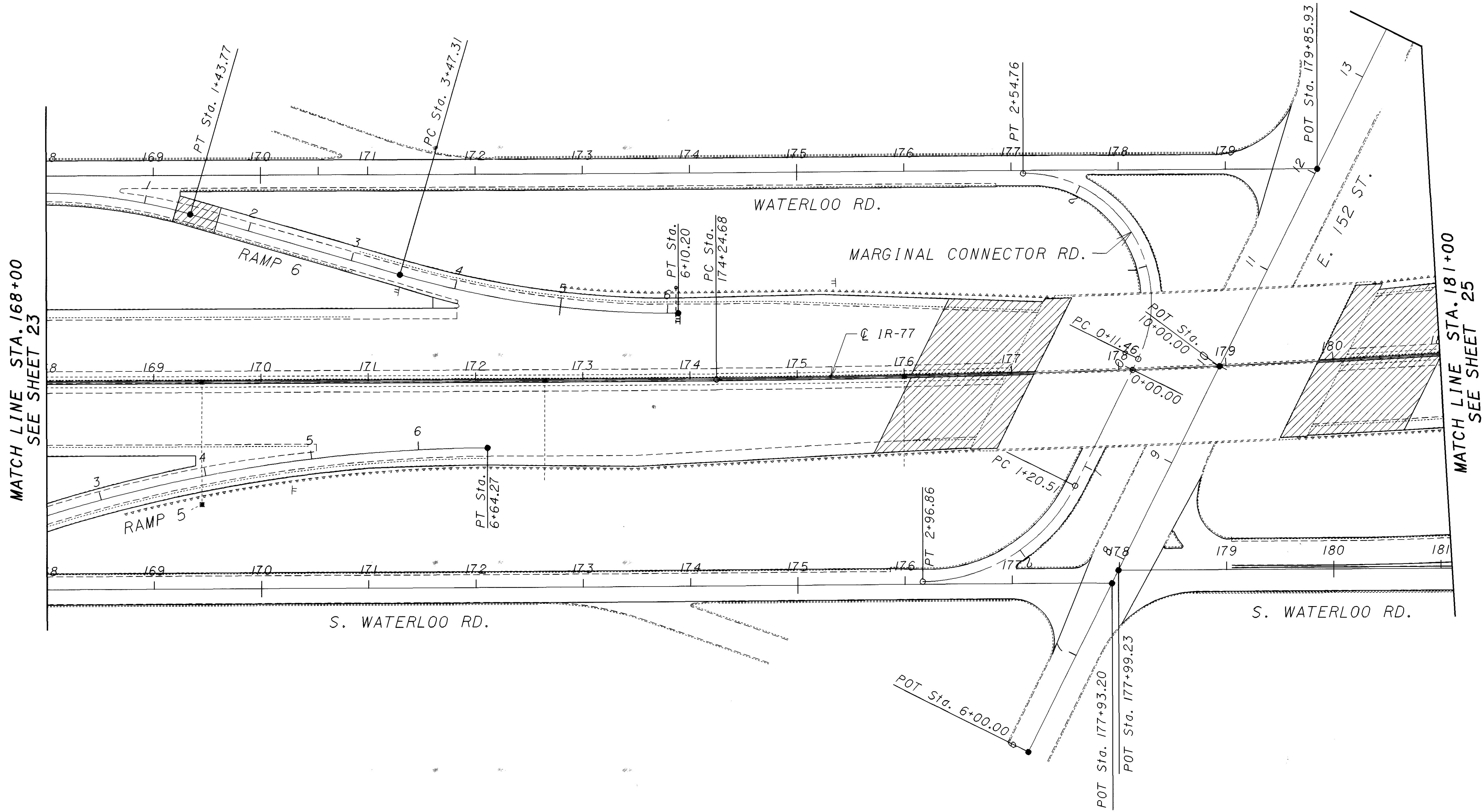
CHECKED  
LDH

SCALE IN FEET

**PLAN SHEET - I.R. 90**  
**STA. 155+00 TO STA. 168+00**

**CUY-90-23.93**

23  
79



PAVEMENT PLANING  
 (VAR. THICKNESS)

CROSS REFERENCE	
ITEM	SHEET
RESURFACING QTY	14-18
TRAFFIC CONTROL	60
ASPH. TRANS. DETAIL	46

CALCULATED  
EMK

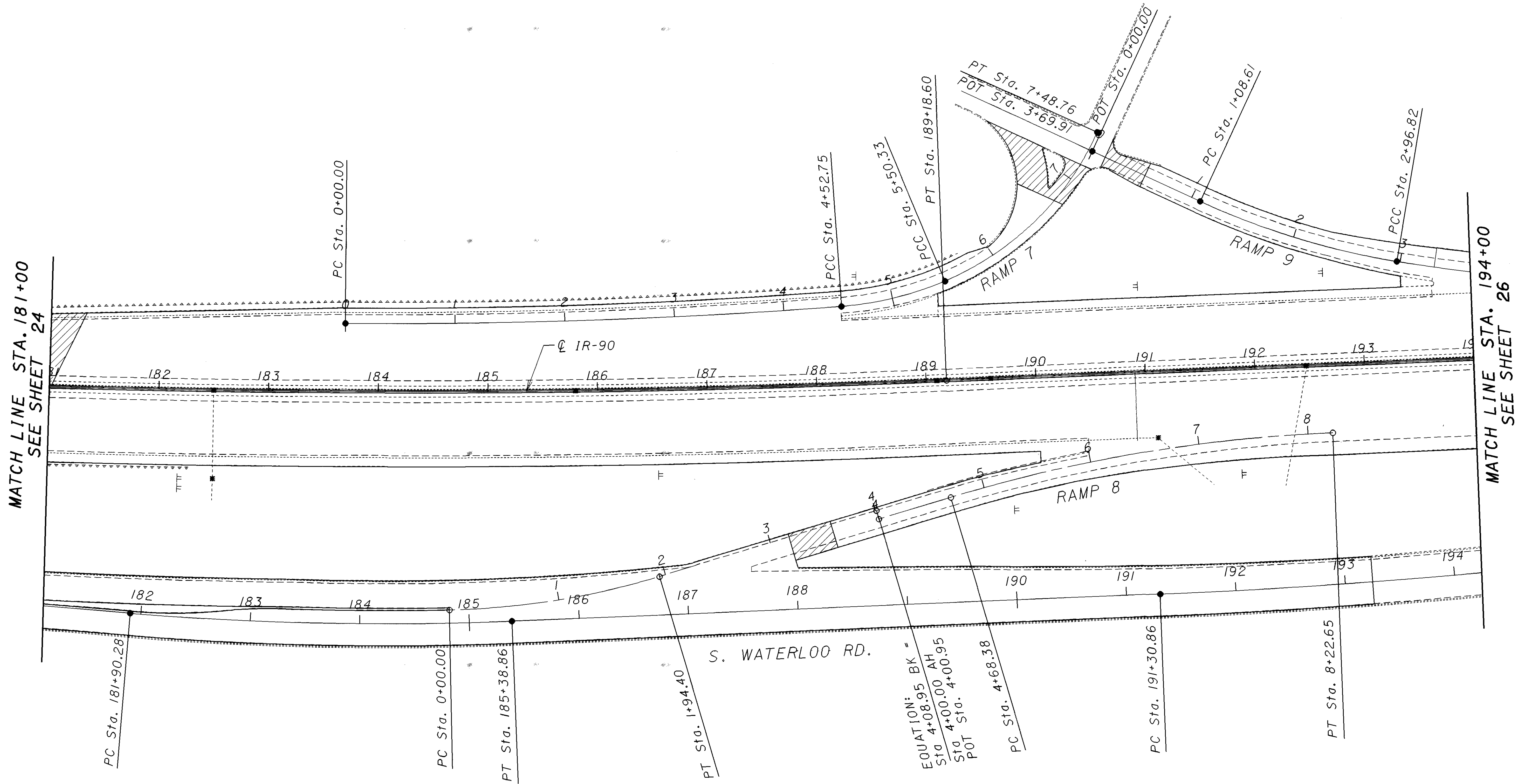
CHECKED  
LDH

SCALE IN FEET

PLAN SHEET - I.R. 90  
 STA. 168+00 TO STA. 181+00

CUY-90-23.93





MATCH LINE STA. 181+00  
 SEE SHEET 24

MATCH LINE STA. 194+00  
 SEE SHEET 26

PAVEMENT PLANING  
 (VAR. THICKNESS)

CROSS REFERENCE	
ITEM	SHEET
RESURFACING QTY	14-18
TRAFFIC CONTROL	61
ASPH. TRANS. DETAIL	46

CALCULATED  
EMK

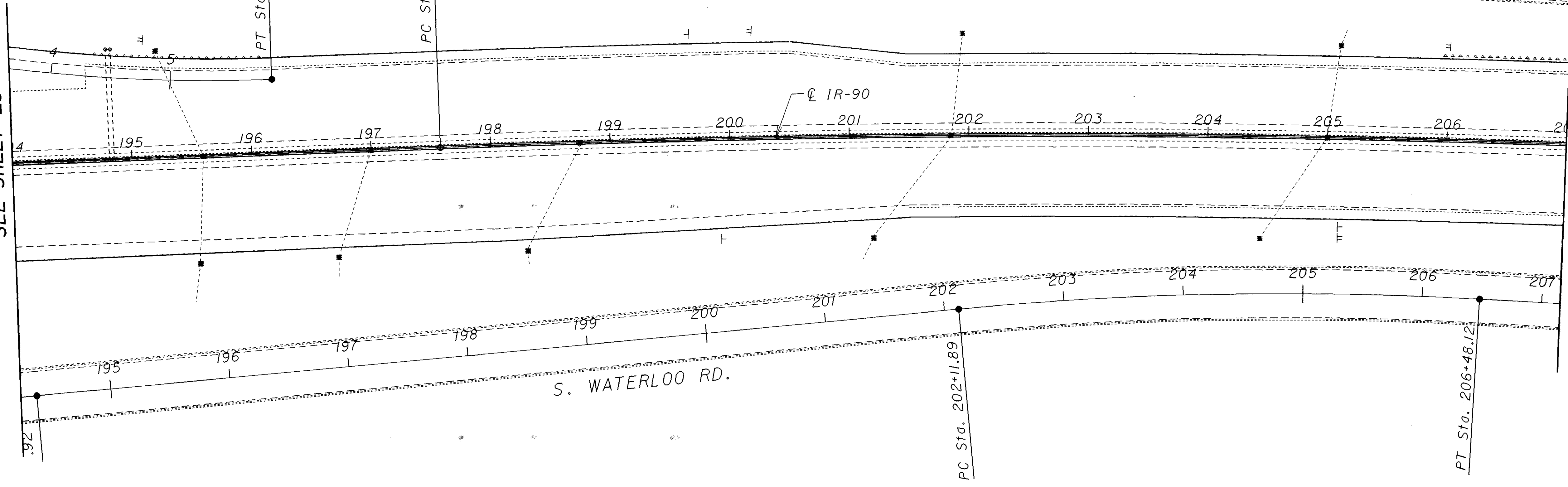
CHECKED  
LDH

SCALE: 1" = 100 FEET

PLAN SHEET - I.R. 90  
 STA. 181+00 TO STA. 194+00

CUY-90-23.93

MATCH LINE STA. 194+00  
 SEE SHEET 25



MATCH LINE STA. 207+00  
 SEE SHEET 27

CROSS REFERENCE	
ITEM	SHEET
RESURFACING QTY	14-18
TRAFFIC CONTROL	62
ASPH. TRANS. DETAIL	46

CALCULATED  
 EMK

CHECKED  
 LDH

SCALE 1" = 100 FEET

**PLAN SHEET - I.R. 90**  
**STA. 194+00 TO STA. 207+00**

**CUY-90-23.93**

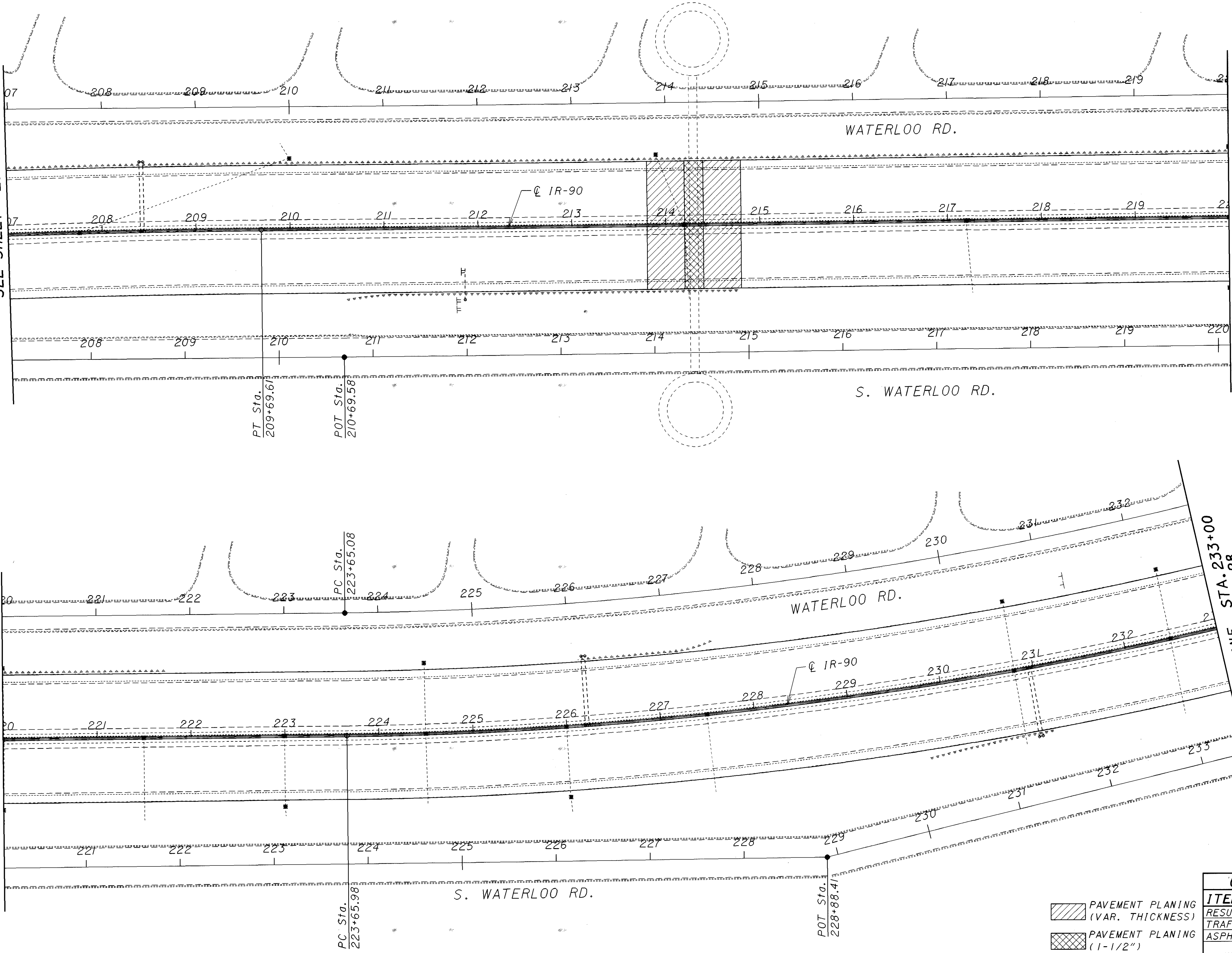
PLOTTED BY: fkonopka  
 PLOTTED FROM: I:\PROJECTS\18730\18730.dgn  
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 PLOT SUBMITTED: 12-OCT-1999 09:34

MATCH LINE STA. 207+00  
SEE SHEET 26

MATCH LINE STA. 220+00  
SEE ABOVE

MATCH LINE STA. 220+00  
SEE BELOW

MATCH LINE STA. 233+00  
SEE SHEET 28



- PAVEMENT PLANING (VAR. THICKNESS)
- PAVEMENT PLANING (1-1/2")

CROSS REFERENCE	
ITEM	SHEET
RESURFACING QTY	14-18
TRAFFIC CONTROL	63
ASP. TRANS. DETAIL	46

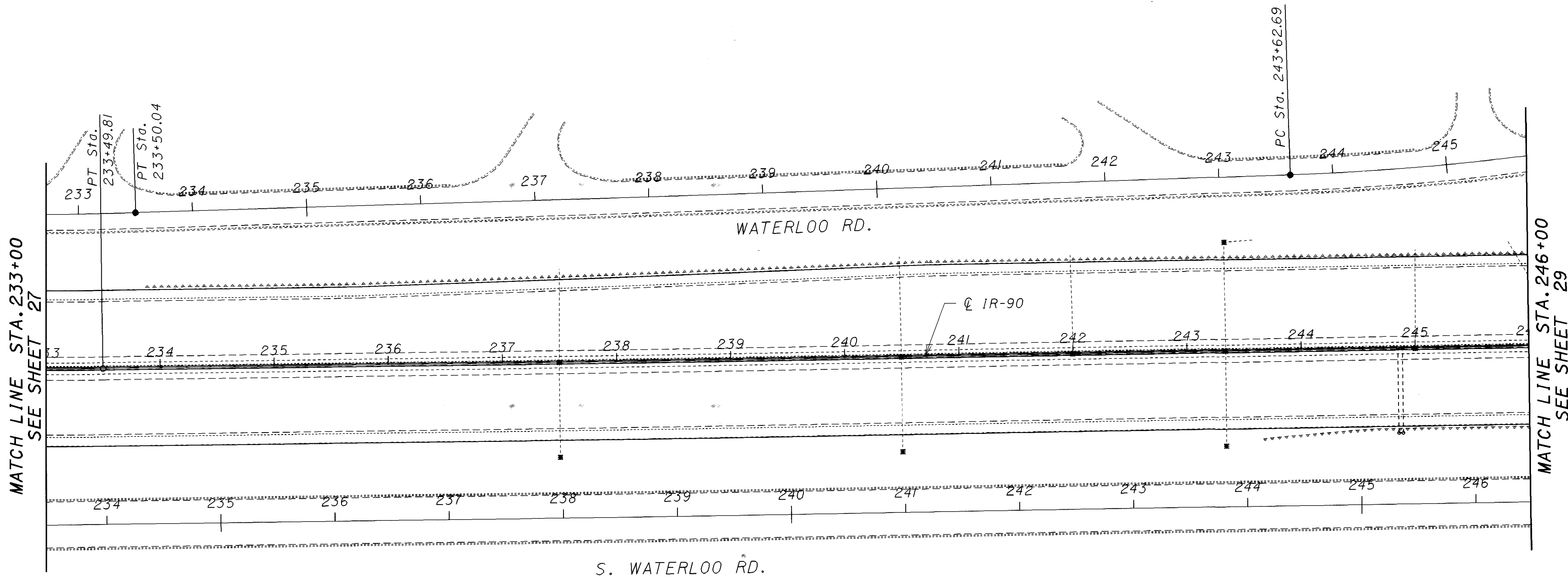
CALCULATED  
EMK

CHECKED  
LDH

SCALE IN FEET

**PLAN SHEET - I.R. 90**  
**STA. 207+00 TO STA. 233+00**

**CUY-90-23.93**



CROSS REFERENCE	
ITEM	SHEET
RESURFACING QTY	14-18
TRAFFIC CONTROL	64
ASPH. TRANS. DETAIL	46

CALCULATED  
EMK

CHECKED  
LDH

SCALE IN FEET

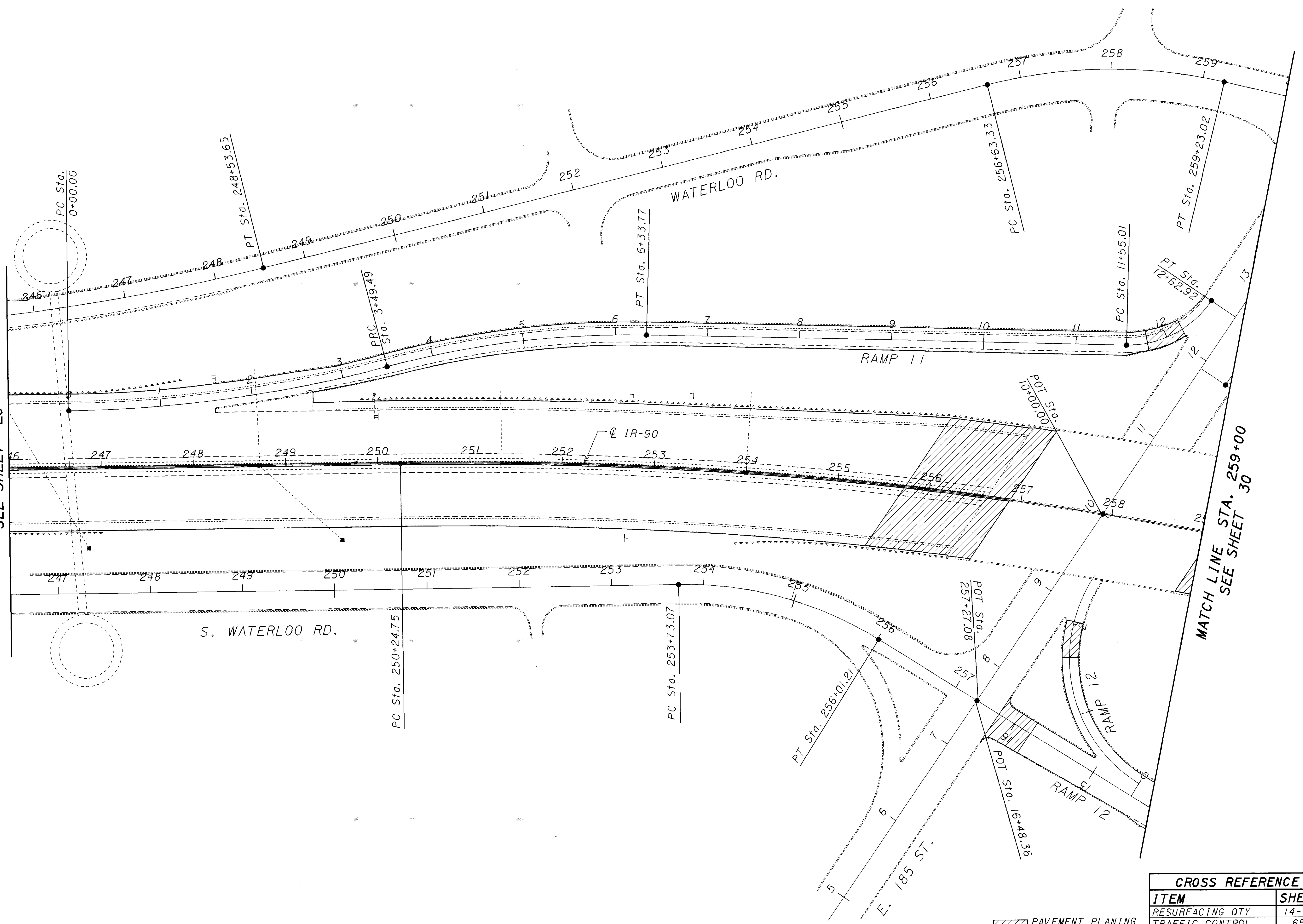
**PLAN SHEET - I.R. 90**  
**STA. 233+00 TO STA. 246+00**

**CUY-90-23.93**

PLOTTED BY: f.konopka  
 PLOTTED FROM: I:\PROJECTS\F1d18730\dgn\18730gph.dgn  
 18730GPH.DGN  
 PLOT SUBMITTED: 12-OCT-1999 09:36

MATCH LINE STA. 246+00  
 SEE SHEET 28

MATCH LINE STA. 259+00  
 SEE SHEET 30



CROSS REFERENCE	
ITEM	SHEET
RESURFACING QTY	14-18
TRAFFIC CONTROL	65
ASPH. TRANS. DETAIL	46

PAVEMENT PLANING  
 (VAR. THICKNESS)

CALCULATED  
 EMK  
 CHECKED  
 LDH

SCALE IN FEET

PLAN SHEET - I.R. 90  
 STA. 246+00 TO STA. 259+00

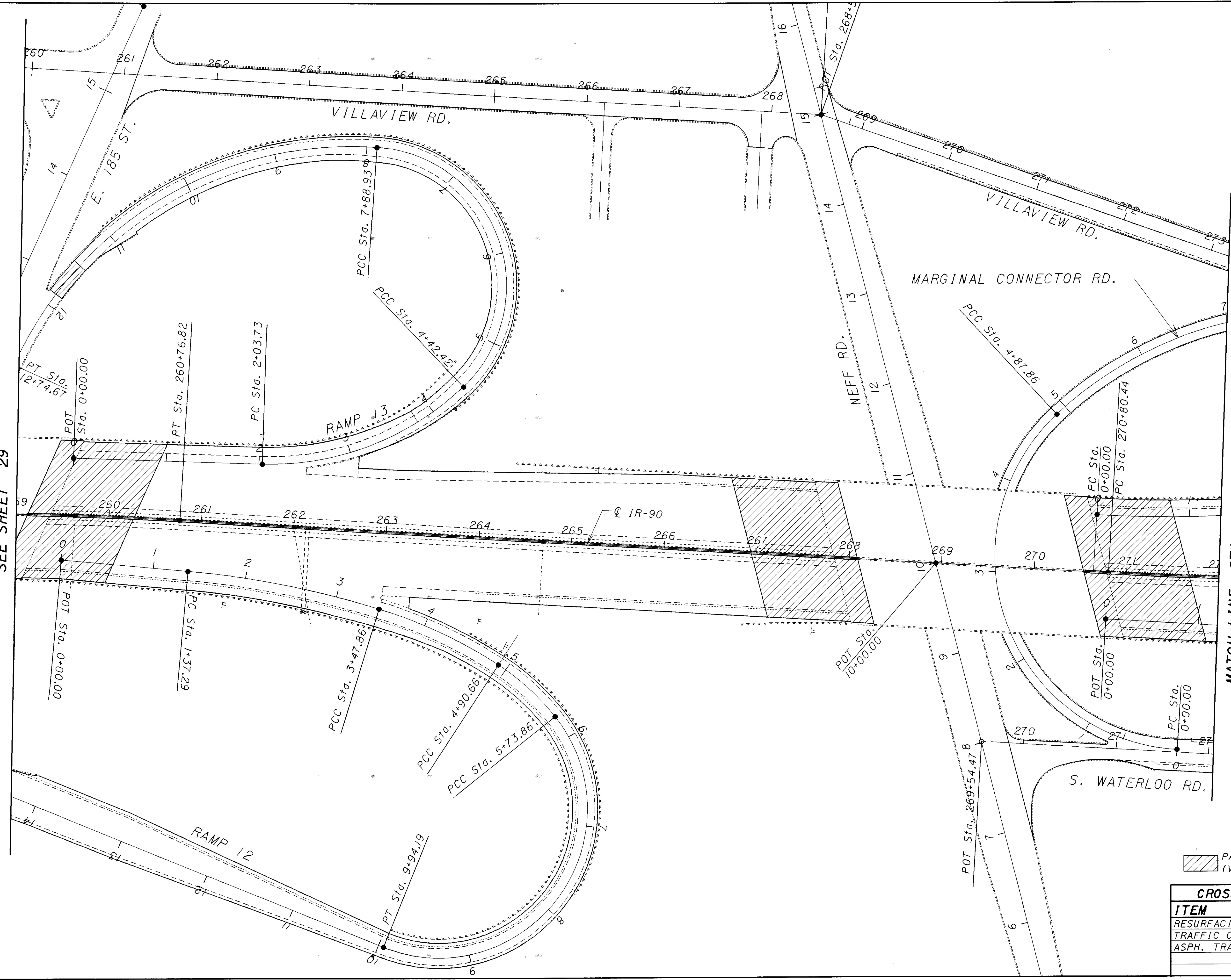
CUY-90-23.93

29  
 79

PLOTTED BY: fkonopka  
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 PLOT SUBMITTED: 12-OCT-1999 09:36

MATCH LINE STA. 259+00  
 SEE SHEET 29

MATCH LINE STA. 272+00  
 SEE SHEET 31



PAVEMENT PLANING  
 (VAR. THICKNESS)

CROSS REFERENCE	
ITEM	SHEET
RESURFACING QTY	14-18
TRAFFIC CONTROL	66
ASPH. TRANS. DETAIL	46

CALCULATED  
EMK

CHECKED  
LDH

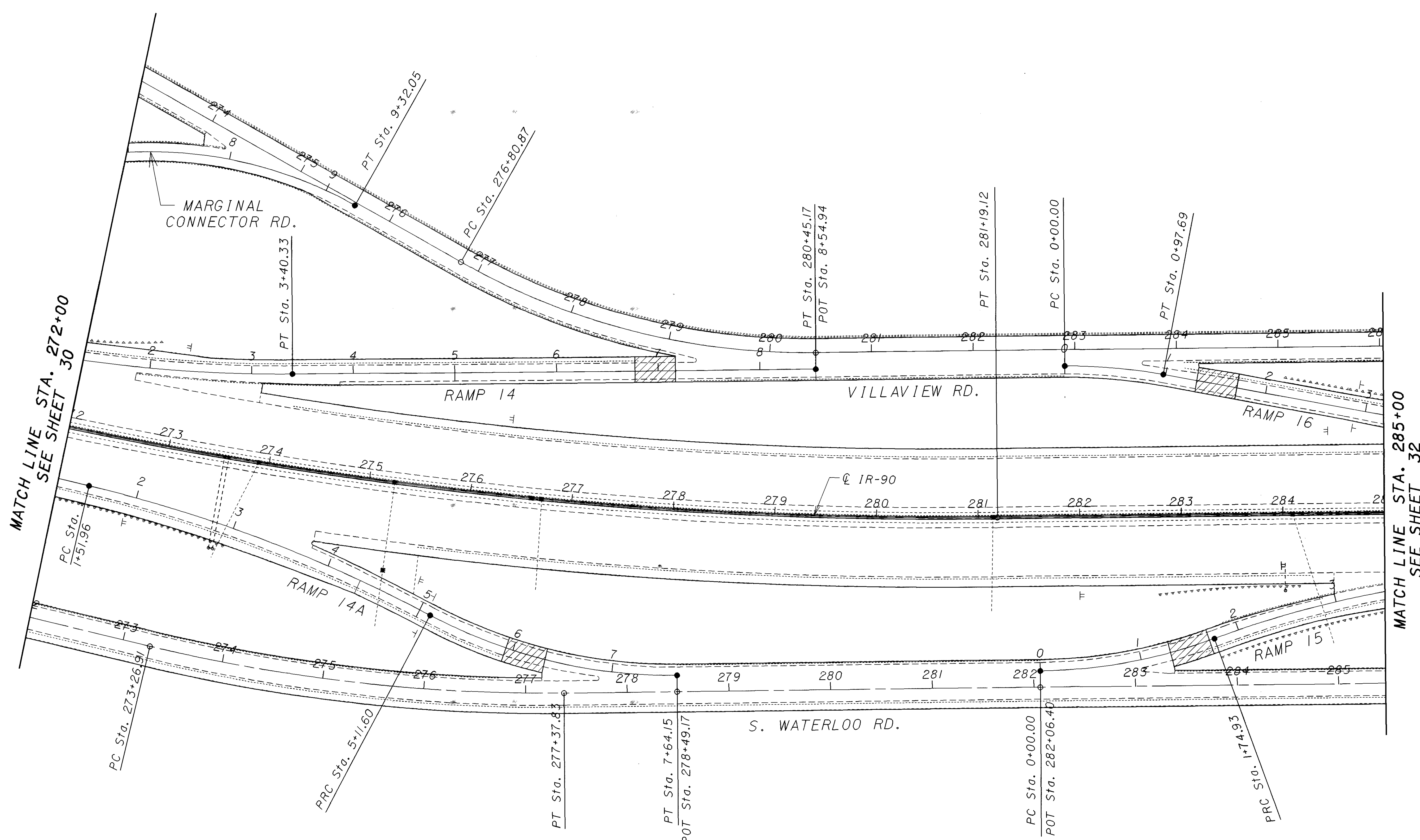
SCALE IN FEET

PLAN SHEET - I.R. 90  
 STA. 259+00 TO STA. 272+00

CUY-90-23.93

30  
 79

PLOTTED BY: fkonopka  
 PLOTTED FROM: I:\PROJECTS\18730\18730.dgn  
 18730GPJ.DGN  
 18730GPJ.DGN  
 PLOT SUBMITTED: 12-OCT-1999 09:37



PAVEMENT PLANING  
 (VAR. THICKNESS)

CROSS REFERENCE	
ITEM	SHEET
RESURFACING QTY	14-18
TRAFFIC CONTROL	67
ASPH. TRANS. DETAIL	46

**PLAN SHEET - I.R. 90**  
**STA. 272+00 TO STA. 285+00**

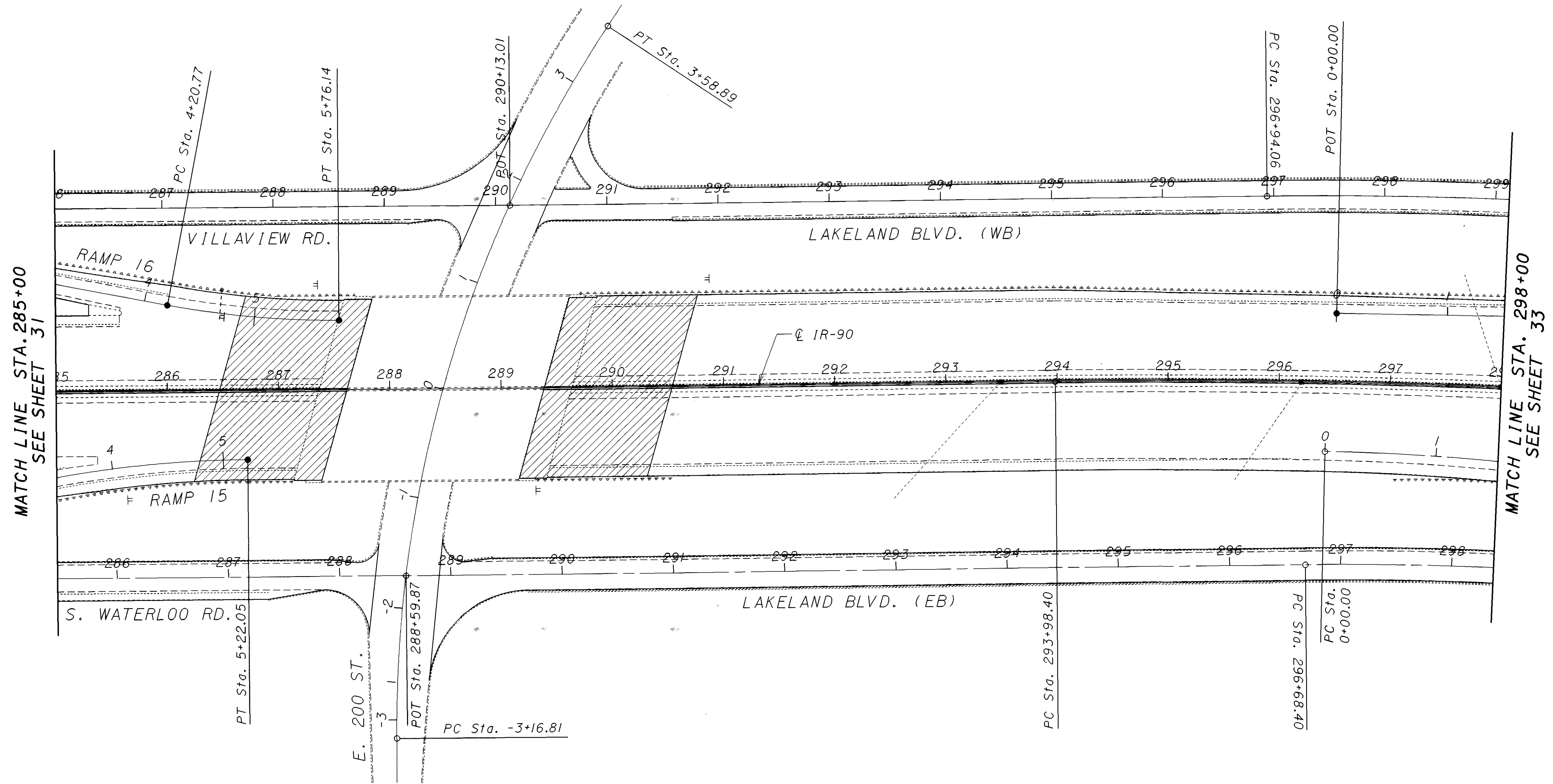
**CUY-90-23.93**

31  
79

CALCULATED  
EMK  
CHECKED  
LDH

SCALE IN FEET  
0 50 100

PLOTTED BY: fkonopka  
 PLOTTED FROM: I:\PROJECTS\18730\18730.dgn  
 18730GPK.DGN  
 PLOT SUBMITTED: 12-OCT-1999 09:38



PAVEMENT PLANING (VAR. THICKNESS)

CROSS REFERENCE	
ITEM	SHEET
RESURFACING QTY	14-18
TRAFFIC CONTROL	68
ASPH. TRANS. DETAIL	46

CALCULATED  
EMK

CHECKED  
LDH

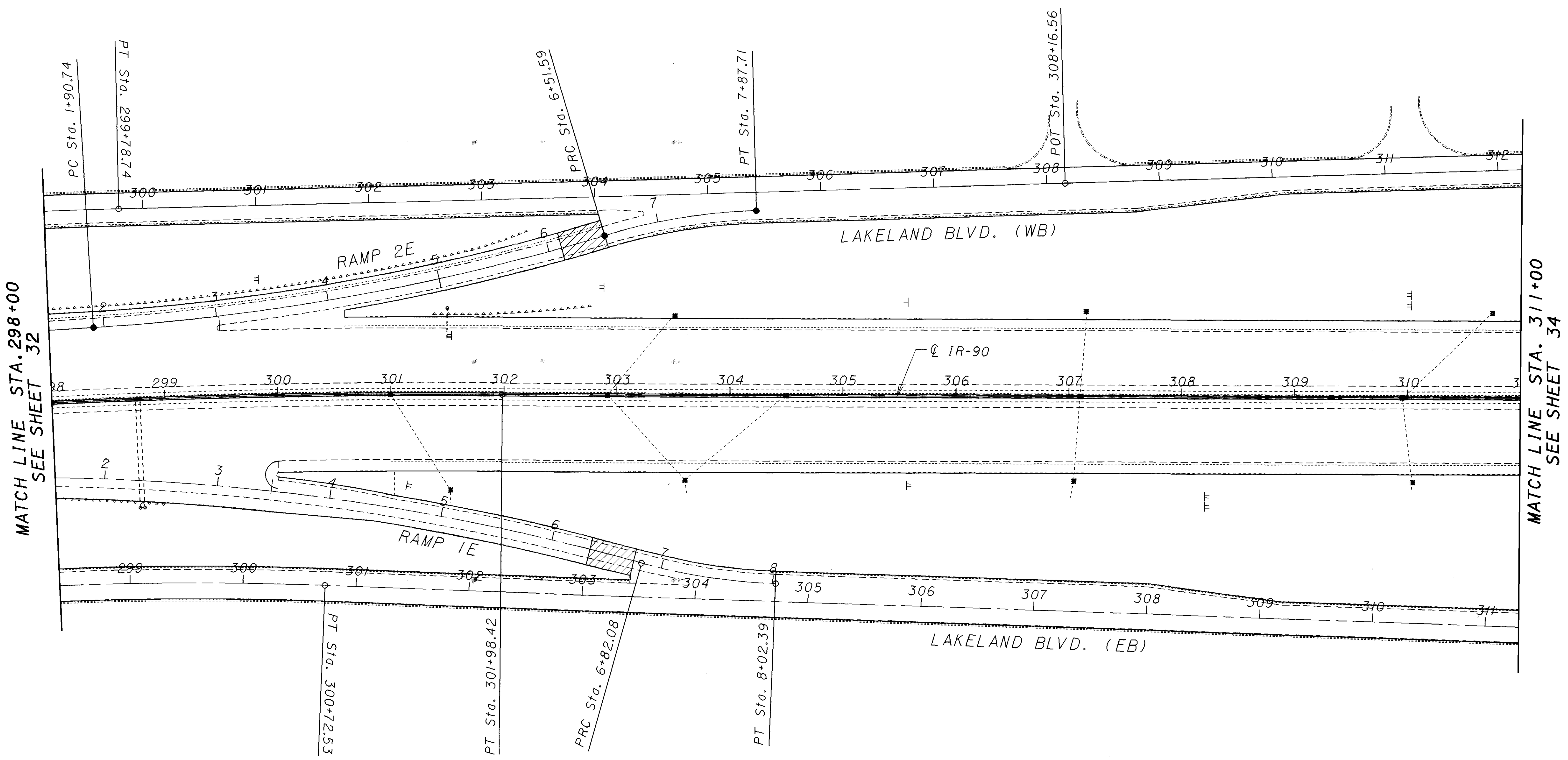
SCALE IN FEET

**PLAN SHEET - I.R. 90**  
**STA. 285+00 TO STA. 298+00**

**CUY-90-23.93**

32  
79





PAVEMENT PLANING (VAR. THICKNESS)

CROSS REFERENCE	
ITEM	SHEET
RESURFACING QTY	14-18
TRAFFIC CONTROL	69
ASPH. TRANS. DETAIL	46

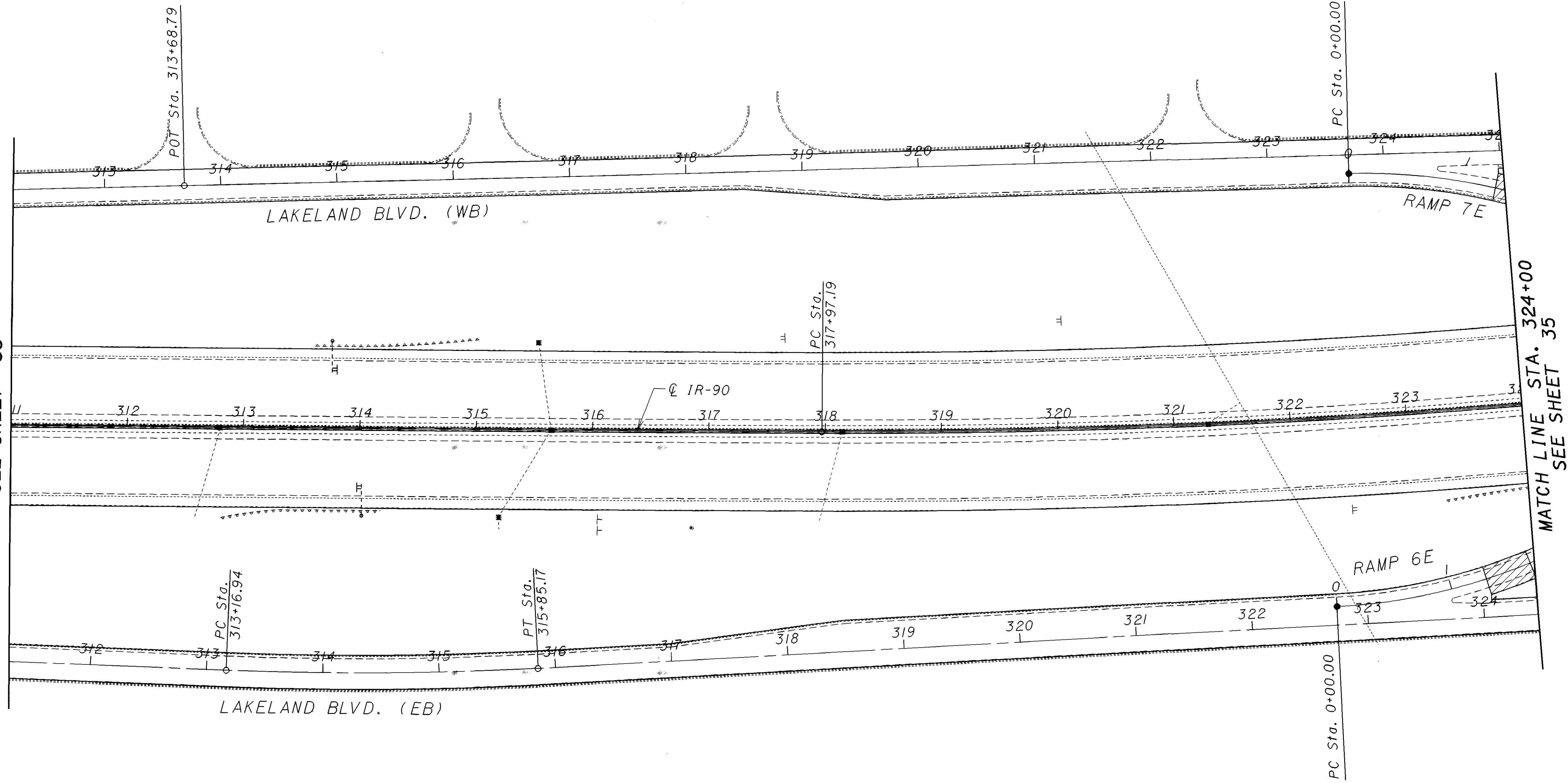
CALCULATED  
EMK

CHECKED  
LDH

SCALE IN FEET

**PLAN SHEET - I.R. 90**  
**STA. 298+00 TO STA. 311+00**

MATCH LINE STA. 311+00  
 SEE SHEET 33



MATCH LINE STA. 324+00  
 SEE SHEET 35

PAVEMENT PLANING  
 (VAR. THICKNESS)

CROSS REFERENCE	
ITEM	SHEET
RESURFACING QTY	14-18
TRAFFIC CONTROL	70
ASPH. TRANS. DETAIL	46

CALCULATED  
 EMK

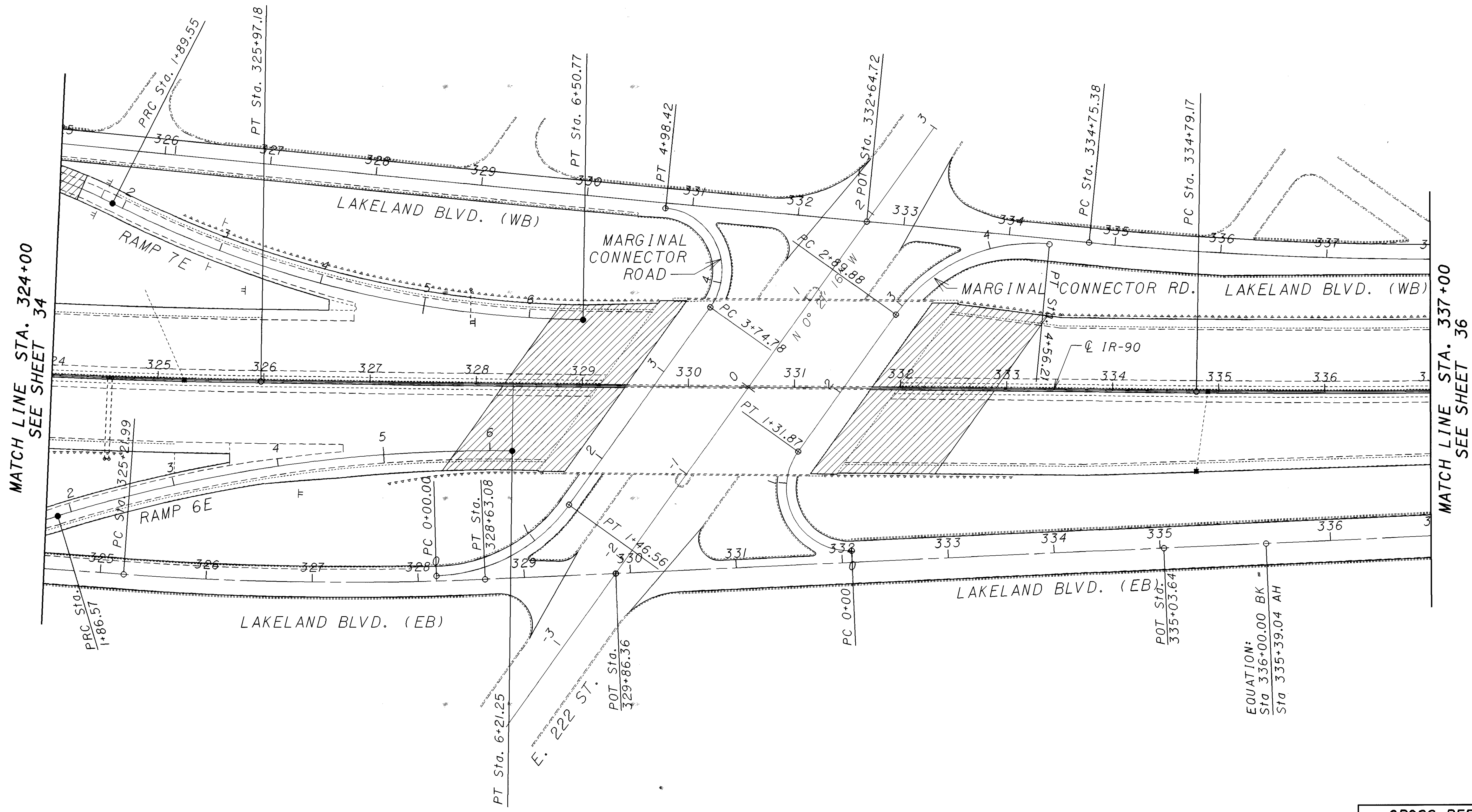
CHECKED  
 LDH

SCALE IN FEET

PLAN SHEET - I.R. 90  
 STA. 311+00 TO STA. 324+00

CUY-90-23.93

PLOTTED BY: fkonopka  
 PLOTTED FROM: I:\PROJECTS\18730\18730.dgn  
 18730GPN.DGN  
 PLOT SUBMITTED: 12-OCT-1999 09:39



MATCH LINE STA. 324+00  
 SEE SHEET 34

MATCH LINE STA. 337+00  
 SEE SHEET 36

PAVEMENT PLANING  
 (VAR. THICKNESS)

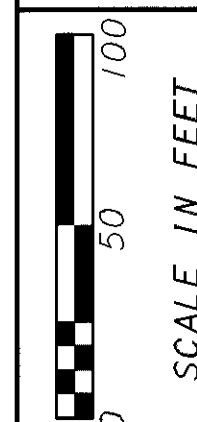
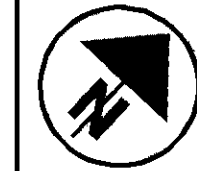
CROSS REFERENCE	
ITEM	SHEET
RESURFACING QTY	14-18
TRAFFIC CONTROL	71
ASPH. TRANS. DETAIL	46

CALCULATED  
 EMK  
 CHECKED  
 LDH

SCALE: 1" = 100 FEET

PLAN SHEET - I.R. 90  
 STA. 324+00 TO STA. 337+00

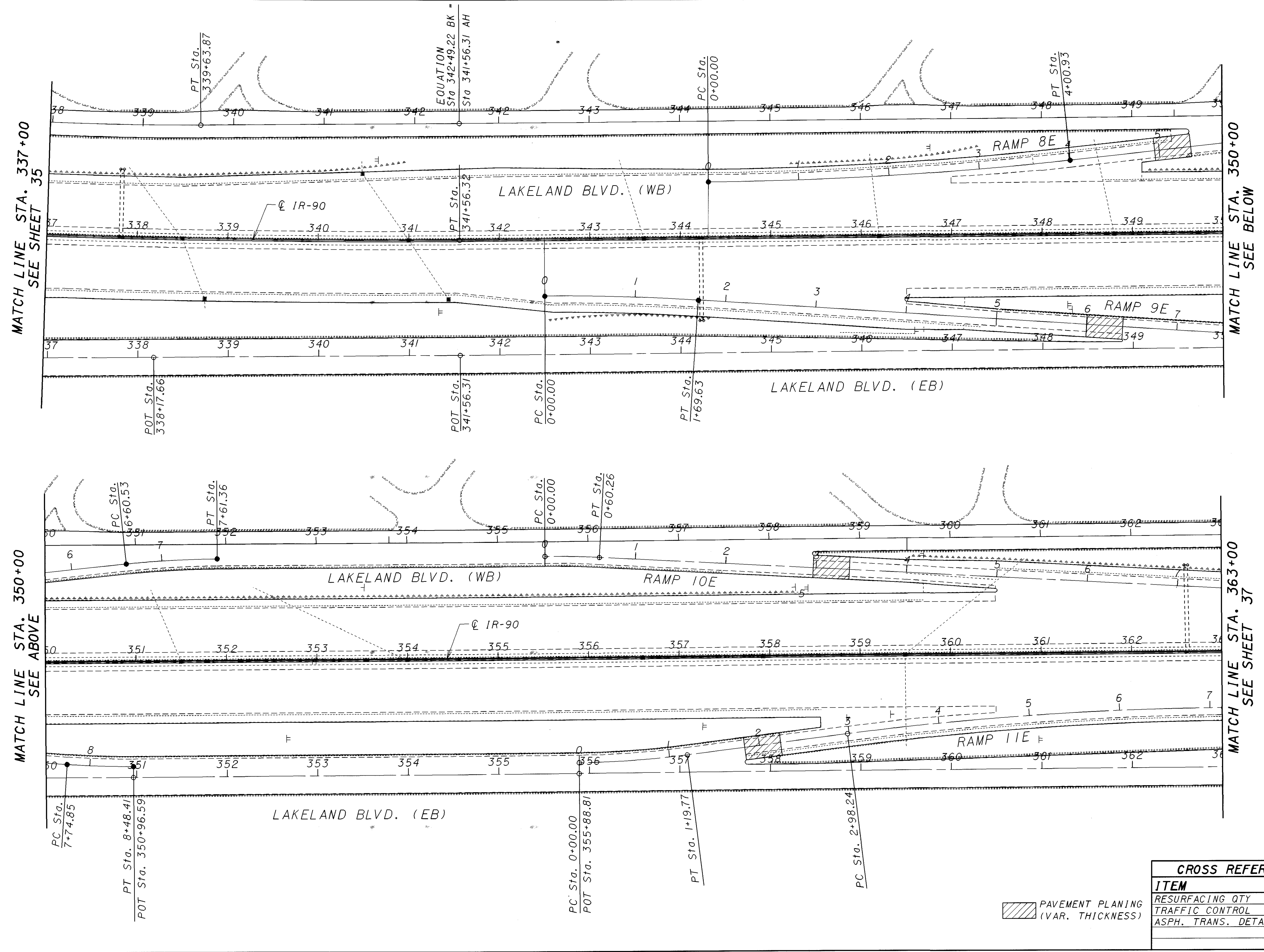
CUY-90-23.93



CALCULATED  
EMK  
CHECKED  
LDH

PLAN SHEET - I.R. 90  
STA. 337+00 TO STA. 363+00

CUY-90-23.93



MATCH LINE STA. 337+00  
SEE SHEET 35

MATCH LINE STA. 350+00  
SEE BELOW

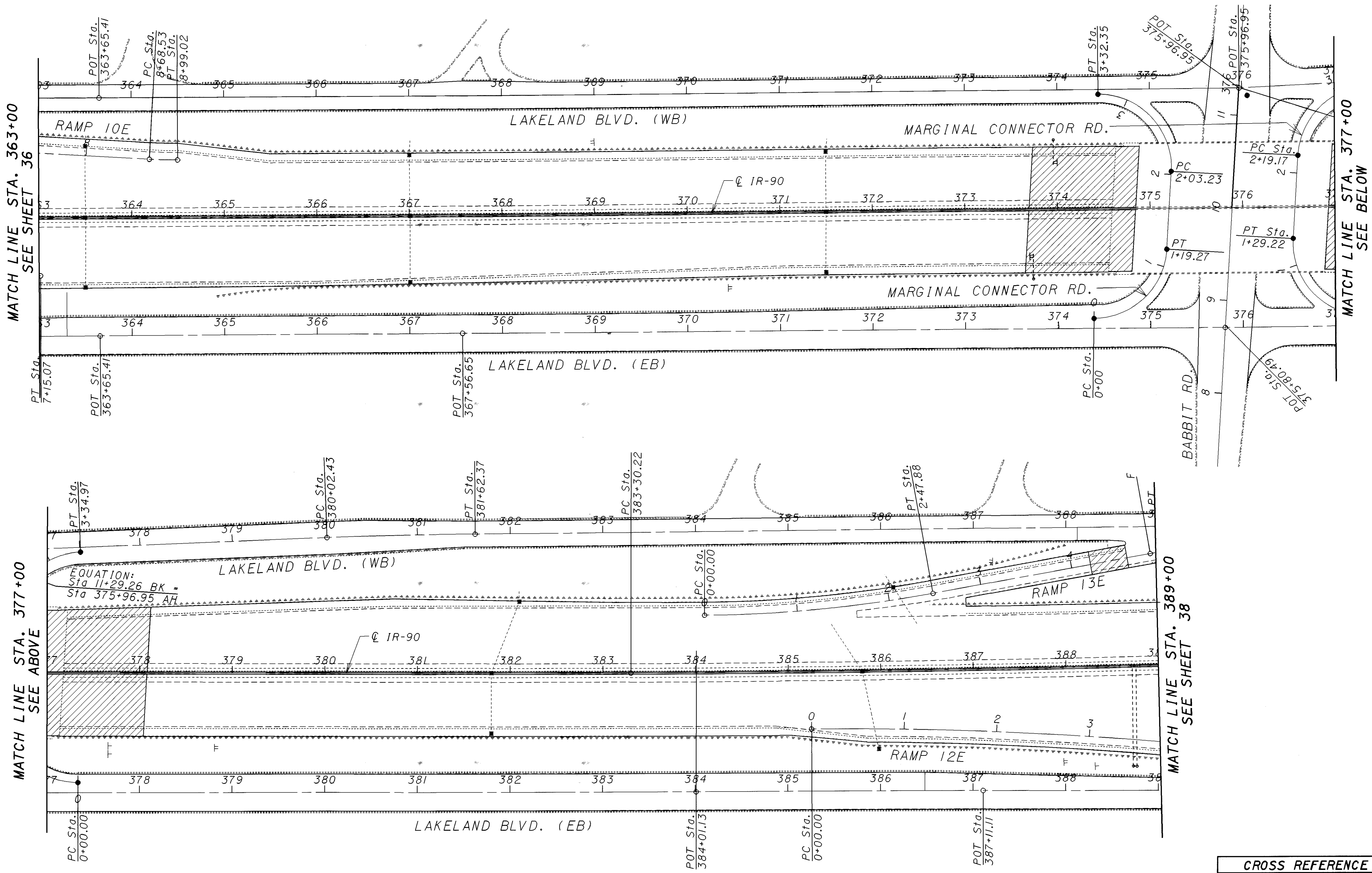
MATCH LINE STA. 350+00  
SEE ABOVE

MATCH LINE STA. 363+00  
SEE SHEET 37

PAVEMENT PLANING  
(VAR. THICKNESS)

CROSS REFERENCE	
ITEM	SHEET
RESURFACING QTY	14-18
TRAFFIC CONTROL	72
ASPH. TRANS. DETAIL	46

PLOTTED BY: fkonopka  
 PLOTTED FROM: I:\PROJECTS\18730\18730.dgn  
 18730GPGQ.DGN  
 18730GPGQ.DGN  
 PLOT SUBMITTED: 12-OCT-1999 09:40



PAVEMENT PLANING (VAR. THICKNESS)

CROSS REFERENCE	
ITEM	SHEET
RESURFACING QTY	14-18
TRAFFIC CONTROL	73
ASPH. TRANS. DETAIL	46

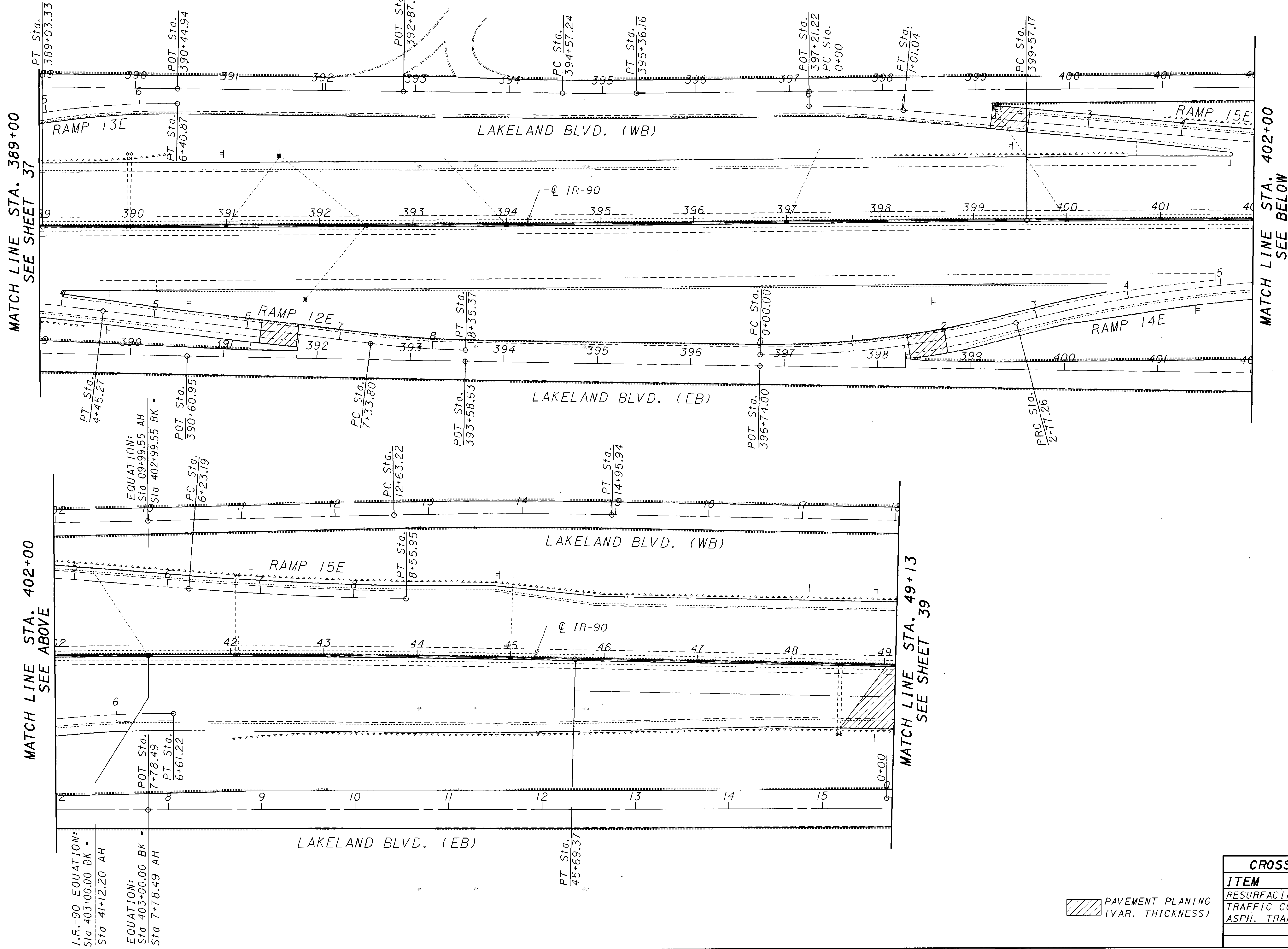
**PLAN SHEET - I.R. 90**  
**STA. 363+00 TO STA. 389+00**

**CUY-90-23.93**

CALCULATED EMK  
 CHECKED LDH

SCALE: 1" = 100 FEET

37  
 79



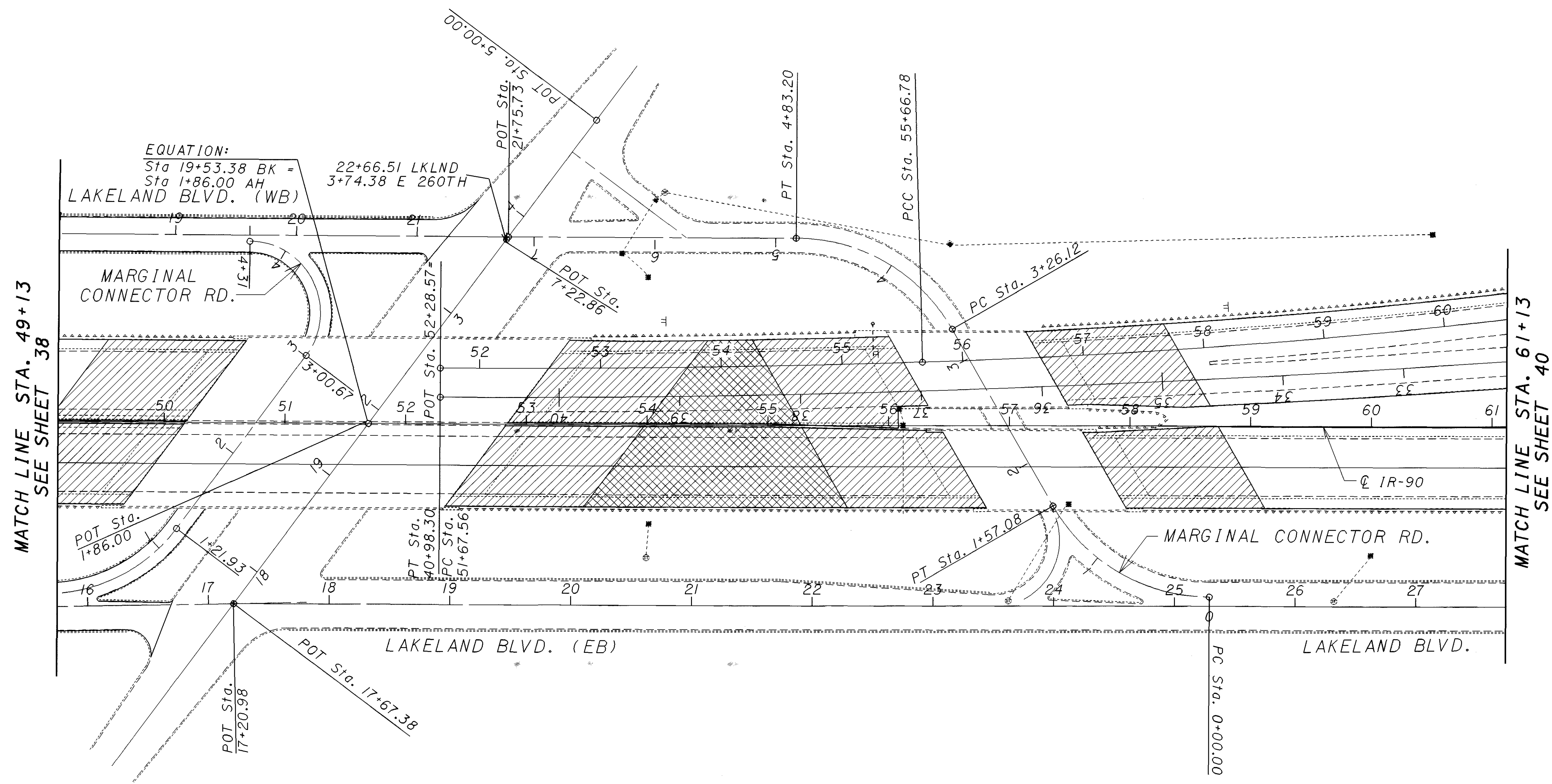
CROSS REFERENCE	
ITEM	SHEET
RESURFACING QTY	14-18
TRAFFIC CONTROL	74
ASPH. TRANS. DETAIL	46

PAVEMENT PLANING (VAR. THICKNESS)



PLAN SHEET - I.R. 90  
 STA. 389+00 TO STA. 49+13

PLOTTED BY: f.konopka  
 PLOTTED FROM: I:\PROJECTS\18730\18730.dgn  
 18730GPS.DGN  
 PLOT SUBMITTED: 12-OCT-1999 09:41



MATCH LINE STA. 49+13  
SEE SHEET 38

MATCH LINE STA. 61+13  
SEE SHEET 40

- PAVEMENT PLANING (VAR. THICKNESS)
- PAVEMENT PLANING (1-1/2")

CROSS REFERENCE	
ITEM	SHEET
RESURFACING QTY	14-18
TRAFFIC CONTROL	75
ASPH. TRANS. DETAIL	46

CALCULATED  
EMK

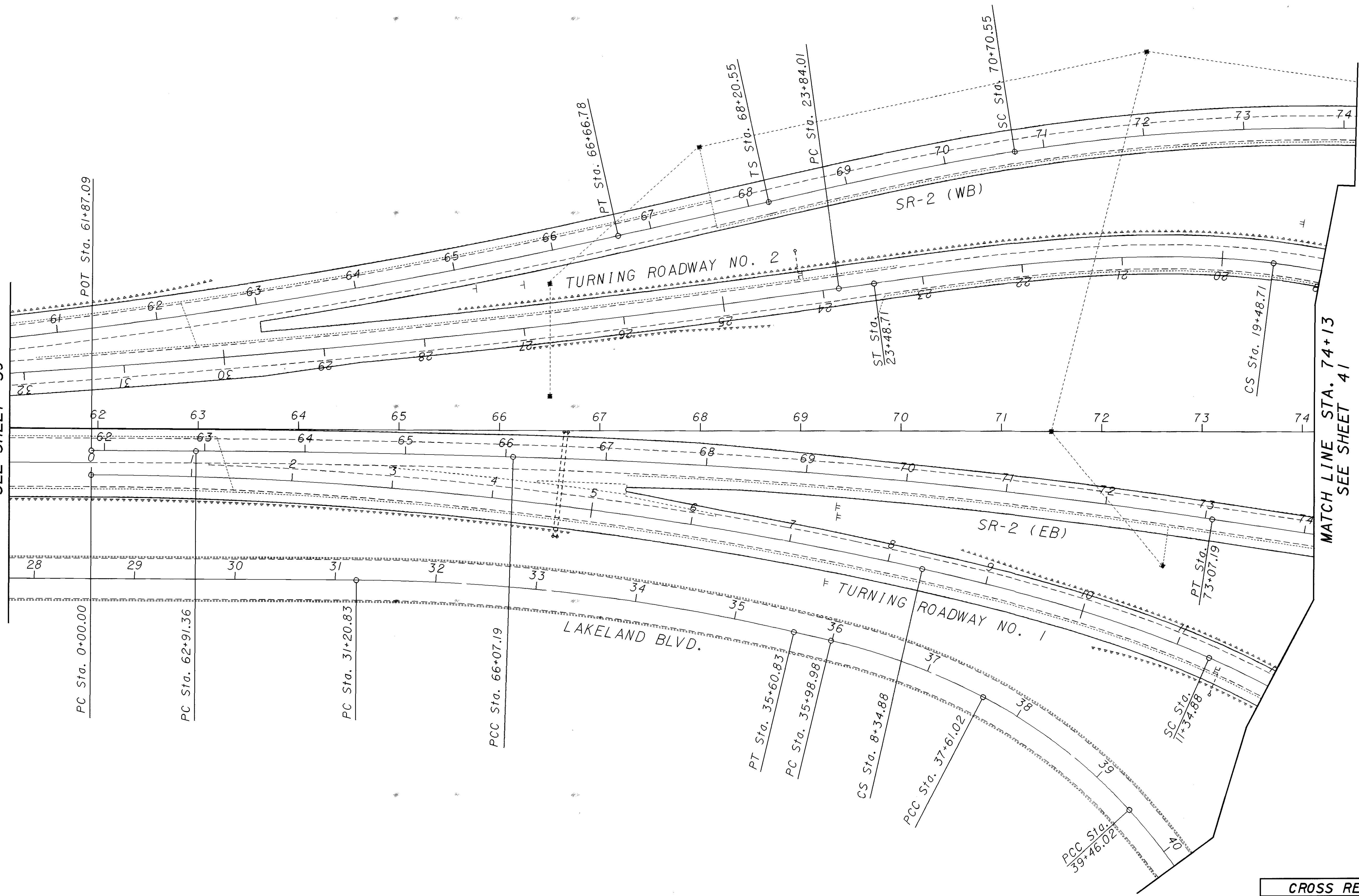
CHECKED  
LDH

SCALE: 1" = 100'

**PLAN SHEET**  
**STA. 49+13 TO STA. 61+13**

MATCH LINE STA. 61+13  
SEE SHEET 39

MATCH LINE STA. 74+13  
SEE SHEET 41



CROSS REFERENCE	
ITEM	SHEET
RESURFACING QTY	14-18
TRAFFIC CONTROL	76
ASPH. TRANS. DETAIL	46

CALCULATED  
EMK

CHECKED  
LDH

SCALE: 1" = 100 FEET

**PLAN SHEET**  
**STA. 61+13 TO STA. 74+13**

**CUY-90-23.93**

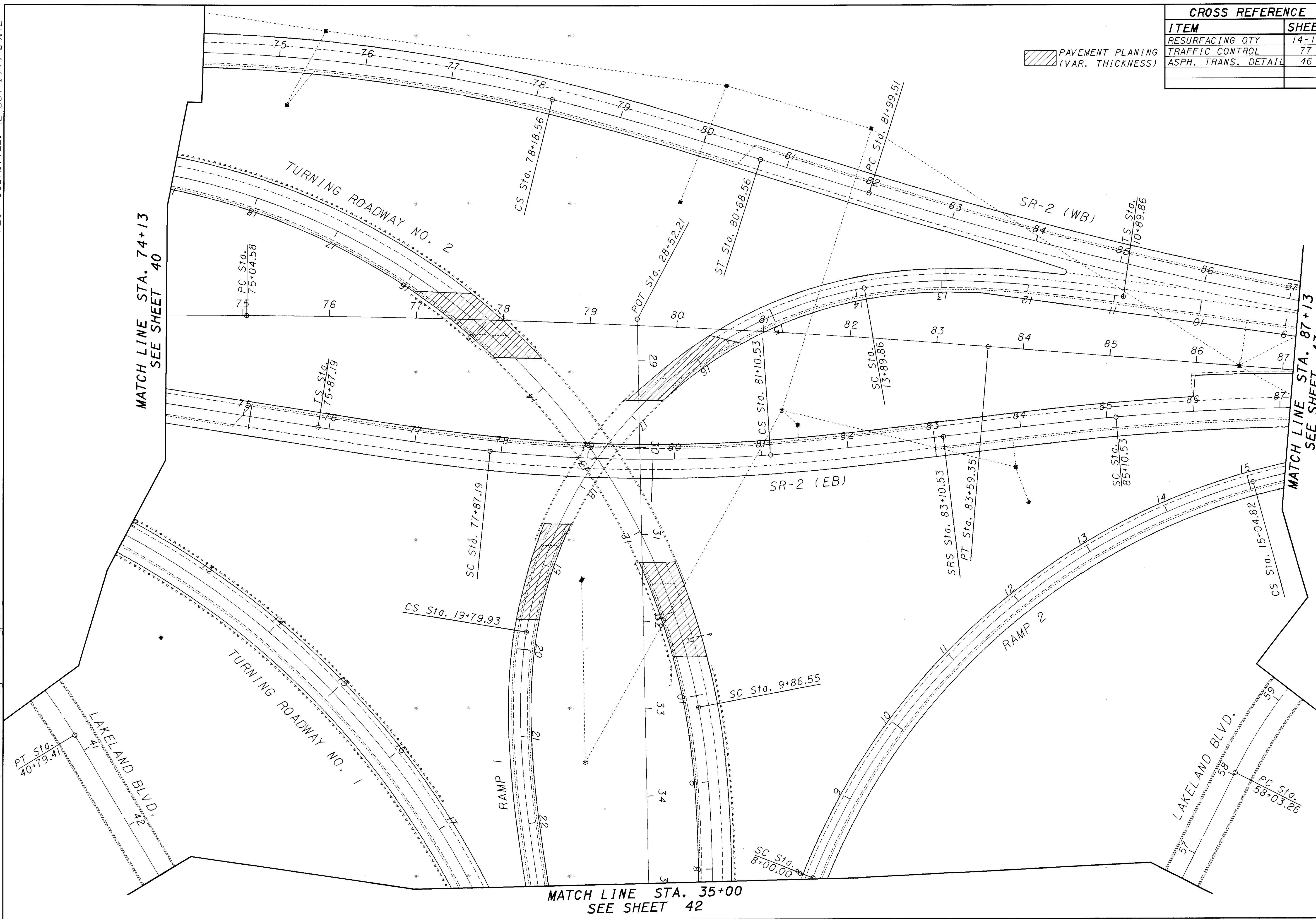
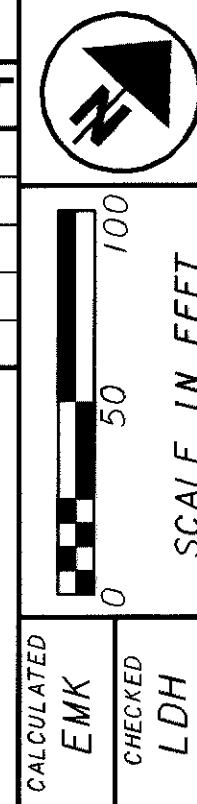
40  
79



PLOTTED BY: fkonopka  
 PLOTTED FROM: I:\PROJECTS\187300\187300.dgn  
 187300gppu.dgn  
 187300gppu.dgn  
 PLOT SUBMITTED: 12-OCT-1999 09:42

CROSS REFERENCE	
ITEM	SHEET
RESURFACING QTY	14-18
TRAFFIC CONTROL	77
ASPH. TRANS. DETAIL	46

PAVEMENT PLANING  
 (VAR. THICKNESS)



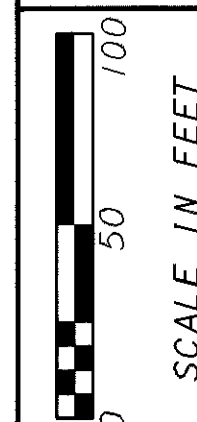
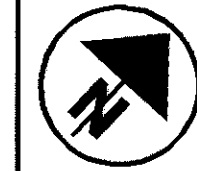
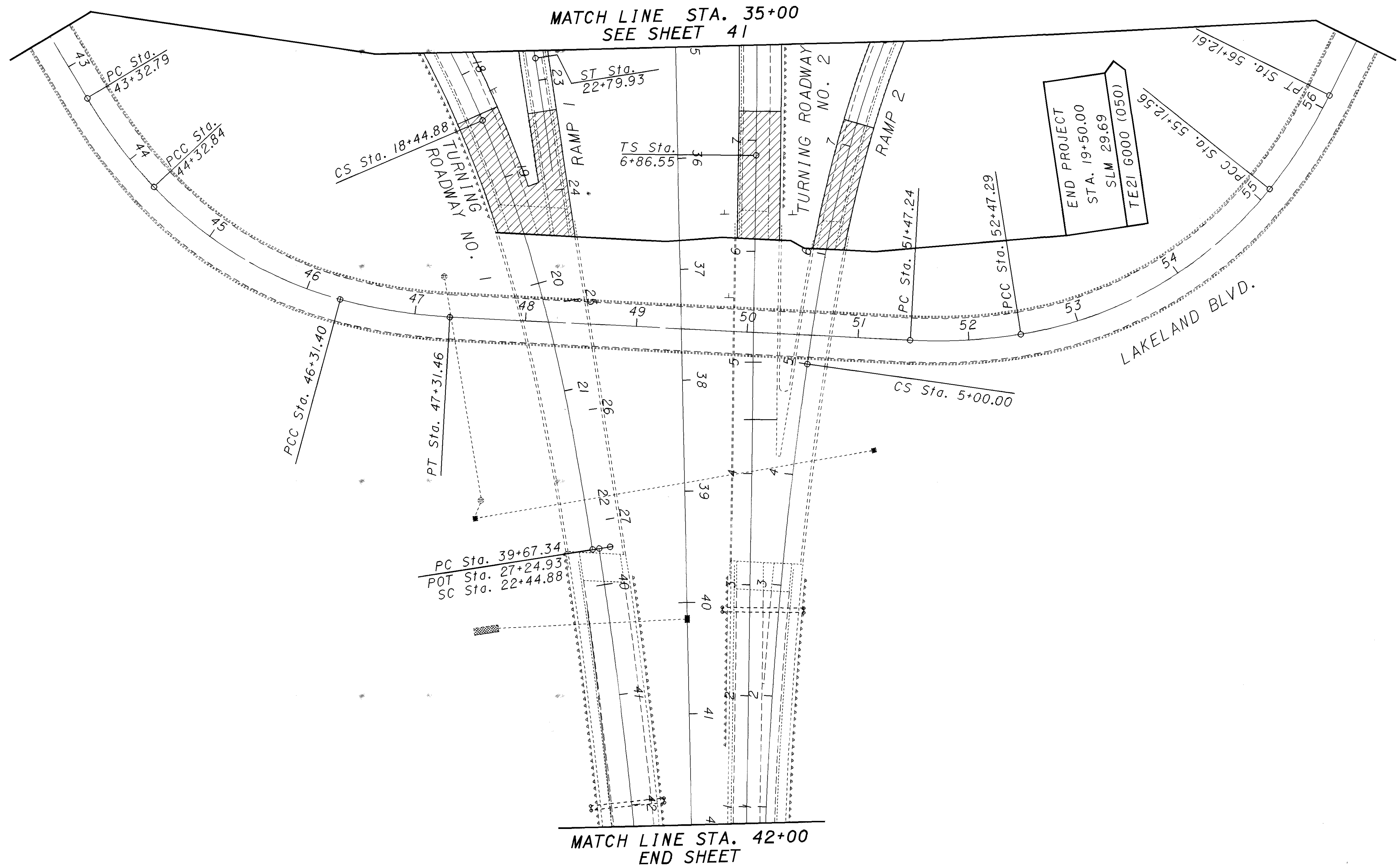
MATCH LINE STA. 74+13  
 SEE SHEET 40

MATCH LINE STA. 87+13  
 SEE SHEET 43

MATCH LINE STA. 35+00  
 SEE SHEET 42

PLAN SHEET  
 STA. 74+13 TO STA. 87+13

CUY-90-23.93



CALCULATED  
EMK  
CHECKED  
LDH

**PLAN SHEET**  
**STA. 35+00 TO STA. 42+00**

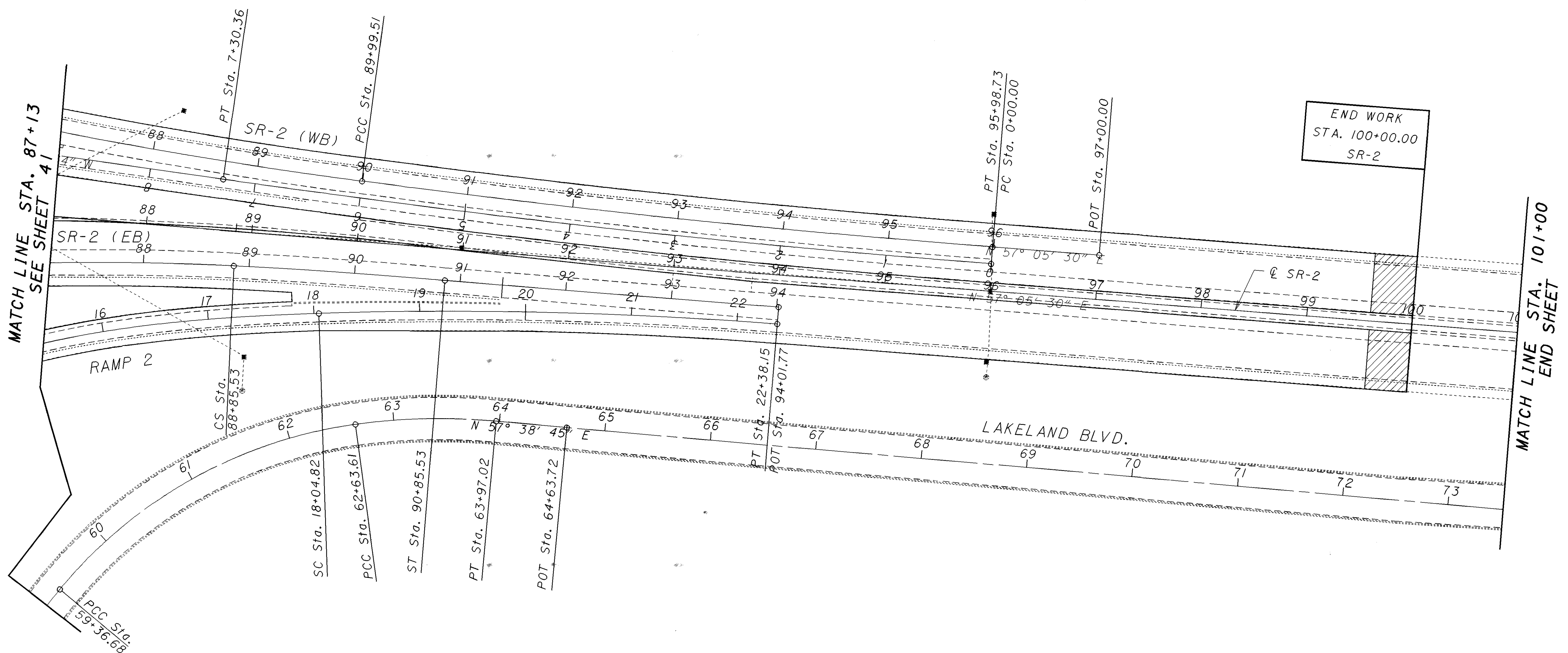
**CUY-90-23.93**

42  
79

CROSS REFERENCE	
ITEM	SHEET
RESURFACING QTY	14-18
TRAFFIC CONTROL	78
ASPH. TRANS. DETAIL	46

PAVEMENT PLANING  
(VAR. THICKNESS)

PLOTTED BY: fkonopka  
 PLOTTED FROM: I:\PROJECTS\18730\18730.dgn  
 18730GPW.DGN  
 18730GPW.dgn  
 PLOT SUBMITTED: 12-OCT-1999 09:43



PAVEMENT PLANING  
 (VAR. THICKNESS)

CROSS REFERENCE	
ITEM	SHEET
RESURFACING QTY	14-18
TRAFFIC CONTROL	79
ASPH. TRANS. DETAIL	46

CALCULATED  
EMK

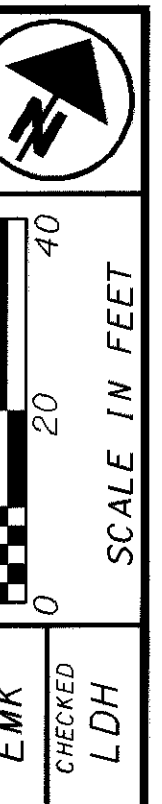
CHECKED  
LDH

SCALE IN FEET

**PLAN SHEET**  
**STA. 87+13 TO STA. 101+00**

**CUY-90-23.93**

43  
79



**EXISTING CURVE DATA**

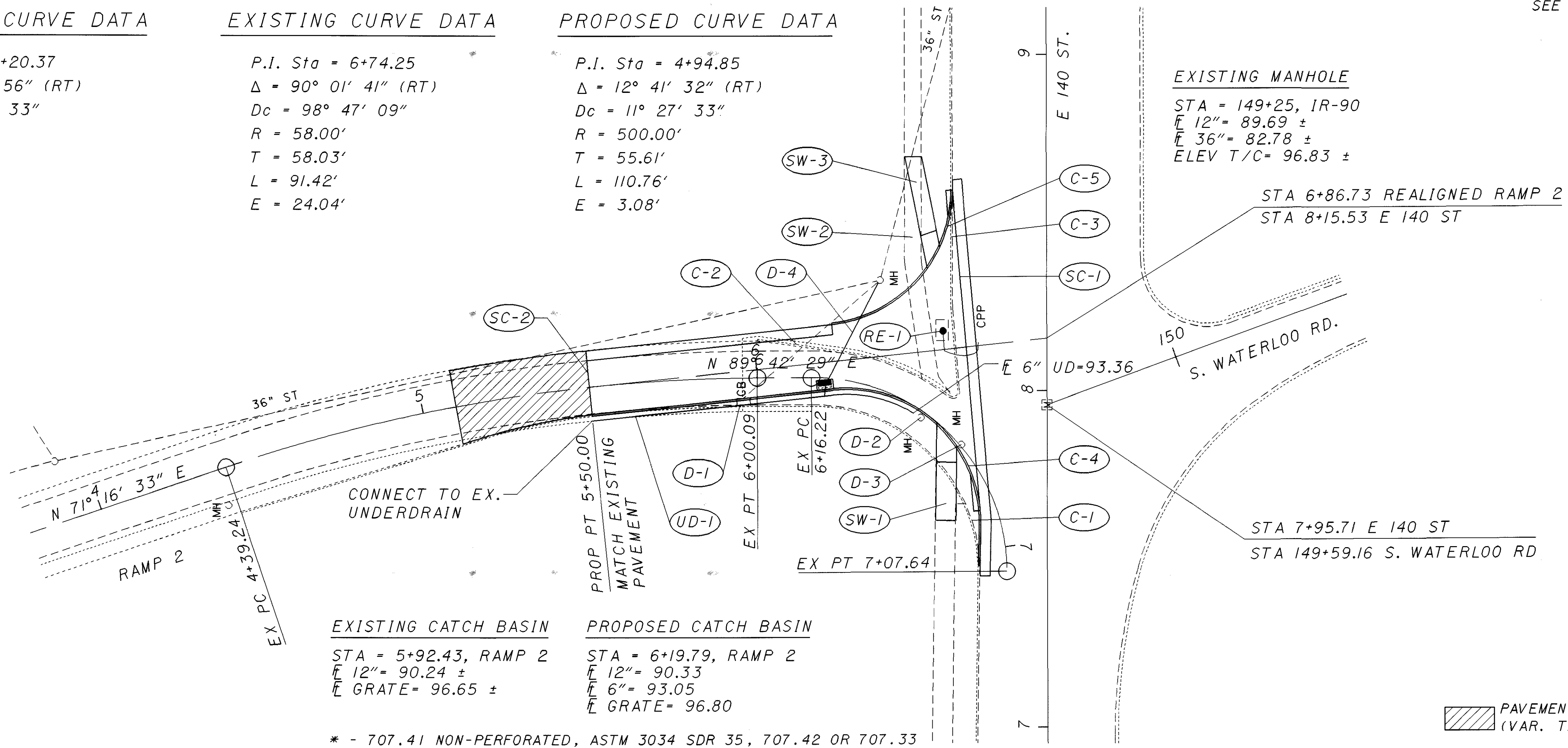
P.I. Sta = 5+20.37  
 $\Delta = 18^\circ 25' 56''$  (RT)  
 $D_c = 11^\circ 27' 33''$   
 $R = 500.00'$   
 $T = 81.13'$   
 $L = 160.85'$   
 $E = 6.54'$

**EXISTING CURVE DATA**

P.I. Sta = 6+74.25  
 $\Delta = 90^\circ 01' 41''$  (RT)  
 $D_c = 98^\circ 47' 09''$   
 $R = 58.00'$   
 $T = 58.03'$   
 $L = 91.42'$   
 $E = 24.04'$

**PROPOSED CURVE DATA**

P.I. Sta = 4+94.85  
 $\Delta = 12^\circ 41' 32''$  (RT)  
 $D_c = 11^\circ 27' 33''$   
 $R = 500.00'$   
 $T = 55.61'$   
 $L = 110.76'$   
 $E = 3.08'$



**EXISTING MANHOLE**  
 STA = 149+25, IR-90  
 $F 12'' = 89.69 \pm$   
 $F 36'' = 82.78 \pm$   
 $ELEV T/C = 96.83 \pm$

**EXISTING CATCH BASIN**  
 STA = 5+92.43, RAMP 2  
 $F 12'' = 90.24 \pm$   
 $F 6'' = 96.65 \pm$

**PROPOSED CATCH BASIN**  
 STA = 6+19.79, RAMP 2  
 $F 12'' = 90.33$   
 $F 6'' = 93.05$   
 $F GRATE = 96.80$

\* - 707.41 NON-PERFORATED, ASTM 3034 SDR 35, 707.42 OR 707.33

PAVEMENT PLANING (VAR. THICKNESS)

**ESTIMATED QUANTITIES**

REFERENCE	STATION		SIDE	ESTIMATED QUANTITIES																						
				202	202	202	202	202	203	203	203	254	255	304	305	301	603	603	604	604	604	604	605	608	608	830
				WALK REMOVED	CURB REMOVED	PAVEMENT REMOVED	PIPE REMOVED, 24" AND UNDER	CATCH BASIN REMOVED	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	EMBANKMENT	SUBGRADE COMPACTION	PAVEMENT PLANING, BITUMINOUS	FULL DEPTH PAVEMENT SAWING	AGGREGATE BASE AS PER PLAN	9" CONCRETE BASE, AS PER PLAN	BITUMINOUS AGGREGATE BASE, PG64-22	6" CONDUIT, TYPE F *	12" CONDUIT, TYPE B	CATCH BASIN, NO. 3	MANHOLE RECONSTRUCTED TO GRADE, SAN.	MANHOLE RECONSTRUCTED TO GRADE, WATER	MANHOLE RECONSTRUCTED TO GRADE, (ELECTRIC)	6" SHALLOW PIPE UNDERDRAIN	CONCRETE WALK	CURB RAMP, TYPE 2	CONCRETE CURB, TYPE 2-B
FROM	TO	S. F.	L. F.	S. Y.	L. F.	EACH	C. Y.	C. Y.	S. Y.	S. Y.	L. F.	C. Y.	S. Y.	C. Y.	L. F.	L. F.	EACH	EACH	EACH	EACH	L. F.	S. F.	EACH	L. F.		
SW-1	7+62, E 140 ST	7+91, E 140 ST	LT	102																						
SW-2	7+99, E 140 ST	8+70, E 140 ST	LT	426																						
SW-3	8+36, E 140 ST	8+70, E 140 ST	LT																							
C-1	5+50, RAMP 2	7+48, E 140 ST	R&L		143																					
C-2	6+01, RAMP 2	6+71, RAMP 2	LT		70																					
C-3	7+98, E 140 ST	8+60, E 140 ST	LT		62																					
	7+45, E 140 ST	8+63, E 140 ST	LT																							
SC-1	7+48, E 140 ST	8+60, E 140 ST	LT																							
SC-2	5+50, RAMP 2		R&L																							
C-4	5+50, RAMP 2	7+48, E 140 ST	R&L																							
C-5	6+23.70, RAMP 2	8+60, E 140 ST	LT																							
RE-1	6+56, RAMP 2		LT																							
D-1	5+92, RAMP 2		RT			52	1																			
D-2	6+47, RAMP 2		RT																							
D-3	6+58, RAMP 2		RT																							
D-4	6+19.79, RAMP 2		R&L																							
	5+50, RAMP 2	6+62.50, RAMP 2	R&L			200			200	22																
	7+98, E 140 ST	8+60, E 140 ST	LT			14			4																	
	5+50, RAMP 2	6+23.70, RAMP 2	R&L								160															
	6+23.70, RAMP 2	6+62.70, RAMP 2	R&L								167															
UD-1	5+50, RAMP 2	6+45, RAMP 2	RT																							
TOTALS TO GENERAL SUMMARY				528	275	214	52	1	204	22	327	39	128	55	327	41	10	32	1	1	1	1	85	378	2	211

PLOT SUBMITTED: 12-OCT-1999 12:49

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RAMP 2 REALIGNMENT DETAIL

CUY-90-23.93

PLOT SUBMITTED: 12-OCT-1999 12:49

18730GMC.DGN

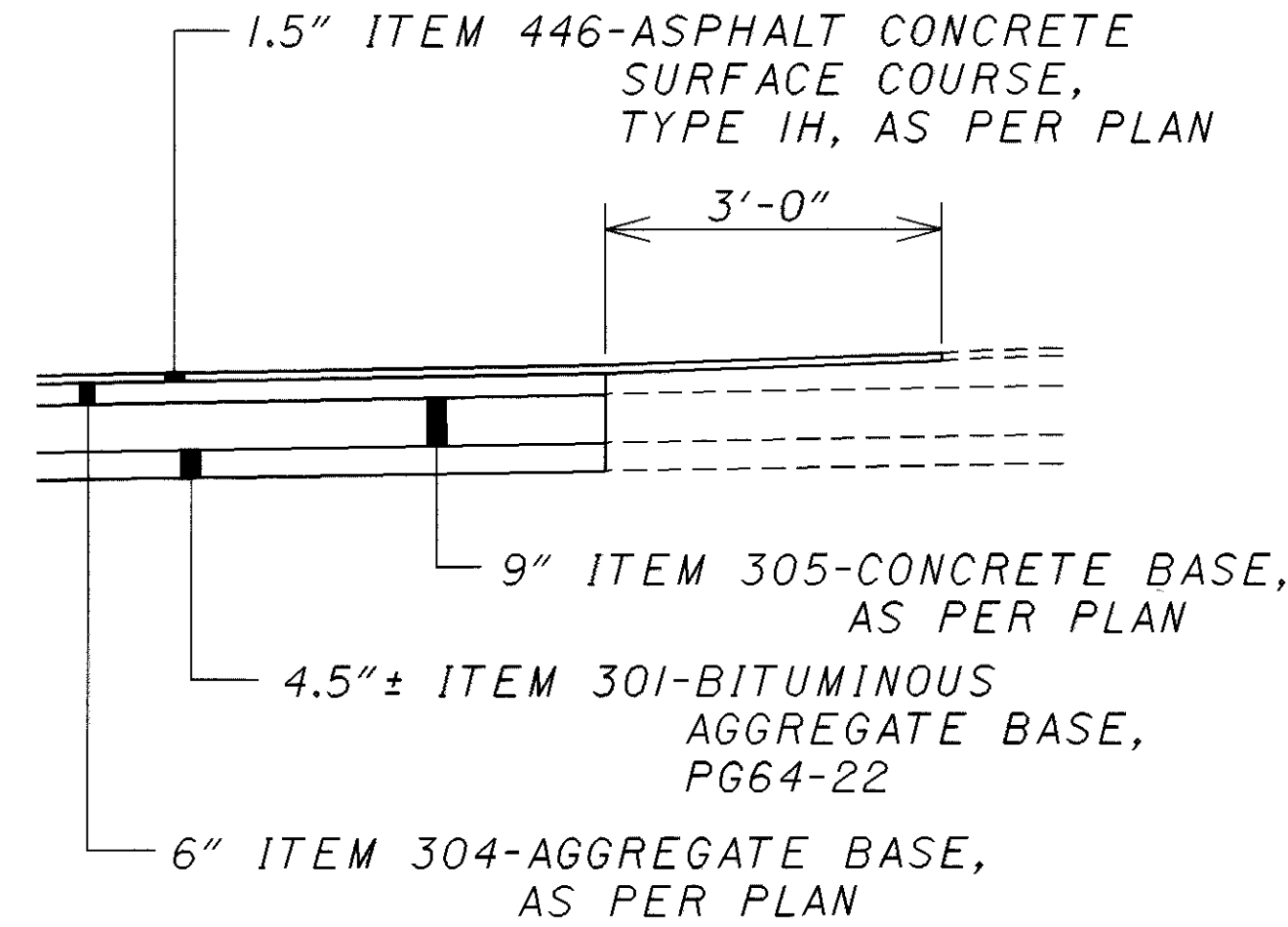
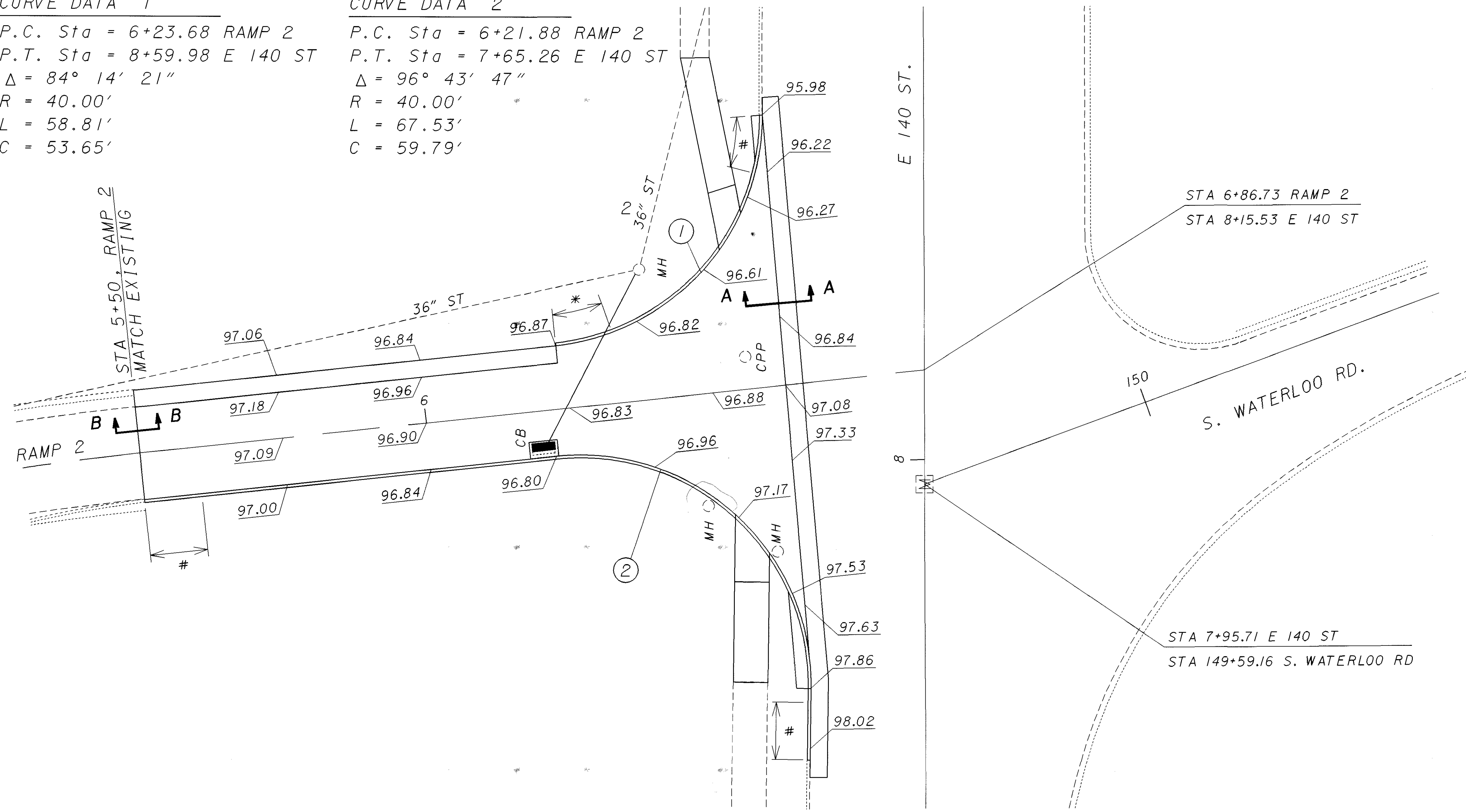
PLOTTED BY: fkonopka  
PLOTTED FROM: PROJECTS\PI\18730R\dgn\18730gmc.dgn

CURVE DATA 1

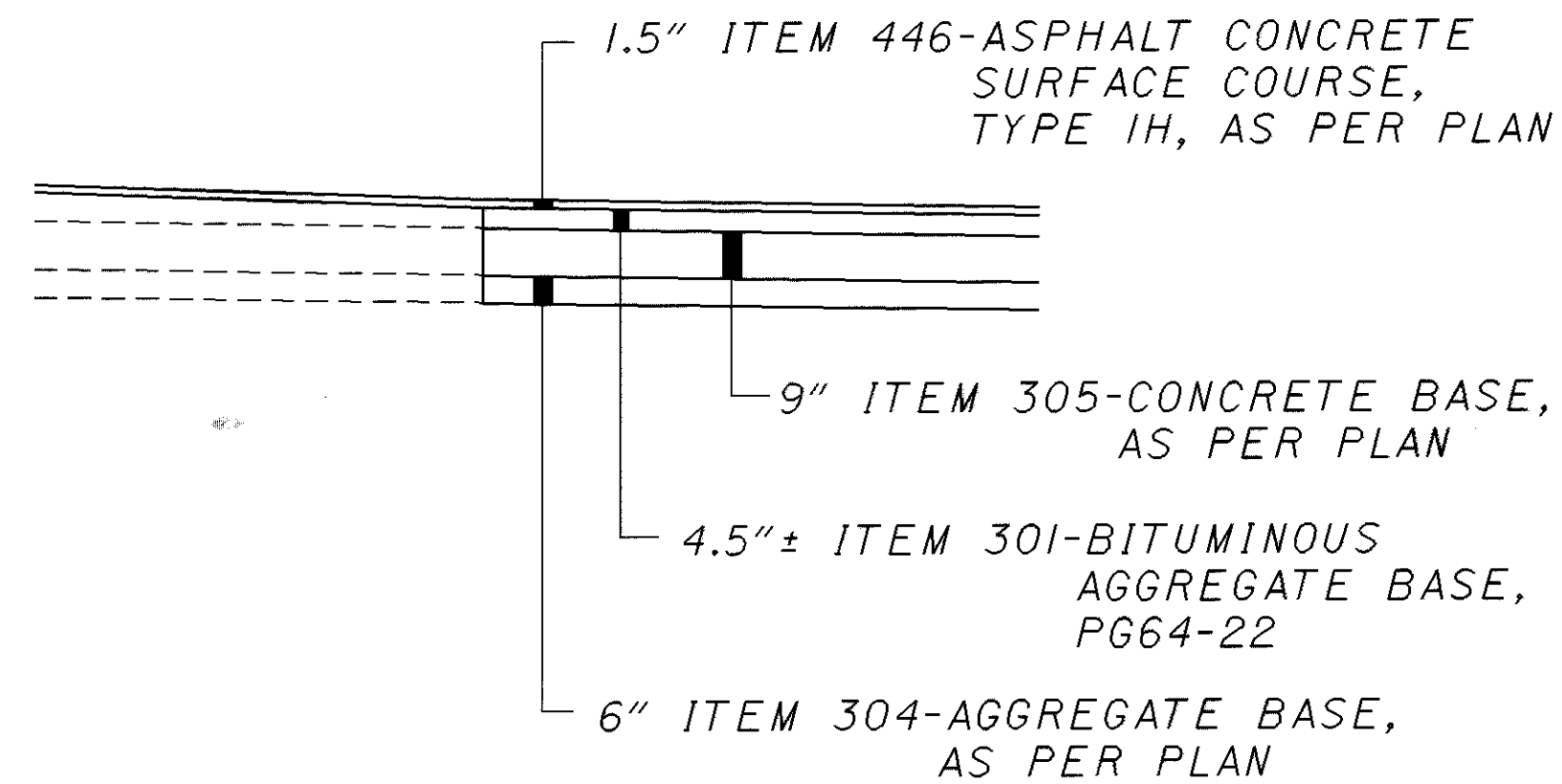
P.C. Sta = 6+23.68 RAMP 2  
P.T. Sta = 8+59.98 E 140 ST  
 $\Delta = 84^\circ 14' 21''$   
R = 40.00'  
L = 58.81'  
C = 53.65'

CURVE DATA 2

P.C. Sta = 6+21.88 RAMP 2  
P.T. Sta = 7+65.26 E 140 ST  
 $\Delta = 96^\circ 43' 47''$   
R = 40.00'  
L = 67.53'  
C = 59.79'



SECTION A-A



SECTION B-B

NOTE: REFERENCE ELEVATION AT BM NAIL IN POLE AT S.E. CORNER OF E 140th ST & S. WATERLOO. ELEVATION = 100.00

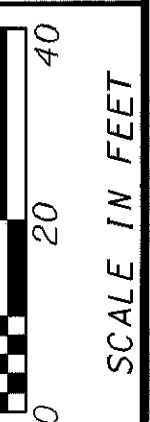
NOTE: ALL ELEVATIONS SHOWN TO TOP OF PROPOSED OVERLAY

NOTE: ELEVATIONS SHOWN AT QUARTER POINTS ALONG RADIUS

\* - VARY CURB HEIGHT FROM 6" TO 0" IN 10'-0"

# - MATCH EXISTING CURB HEIGHT AND SHAPE IN 10'-0"

SEE SHEET 44 FOR ADDITIONAL DETAILS



CALCULATED  
EMK  
CHECKED  
LDH  
SCALE IN FEET

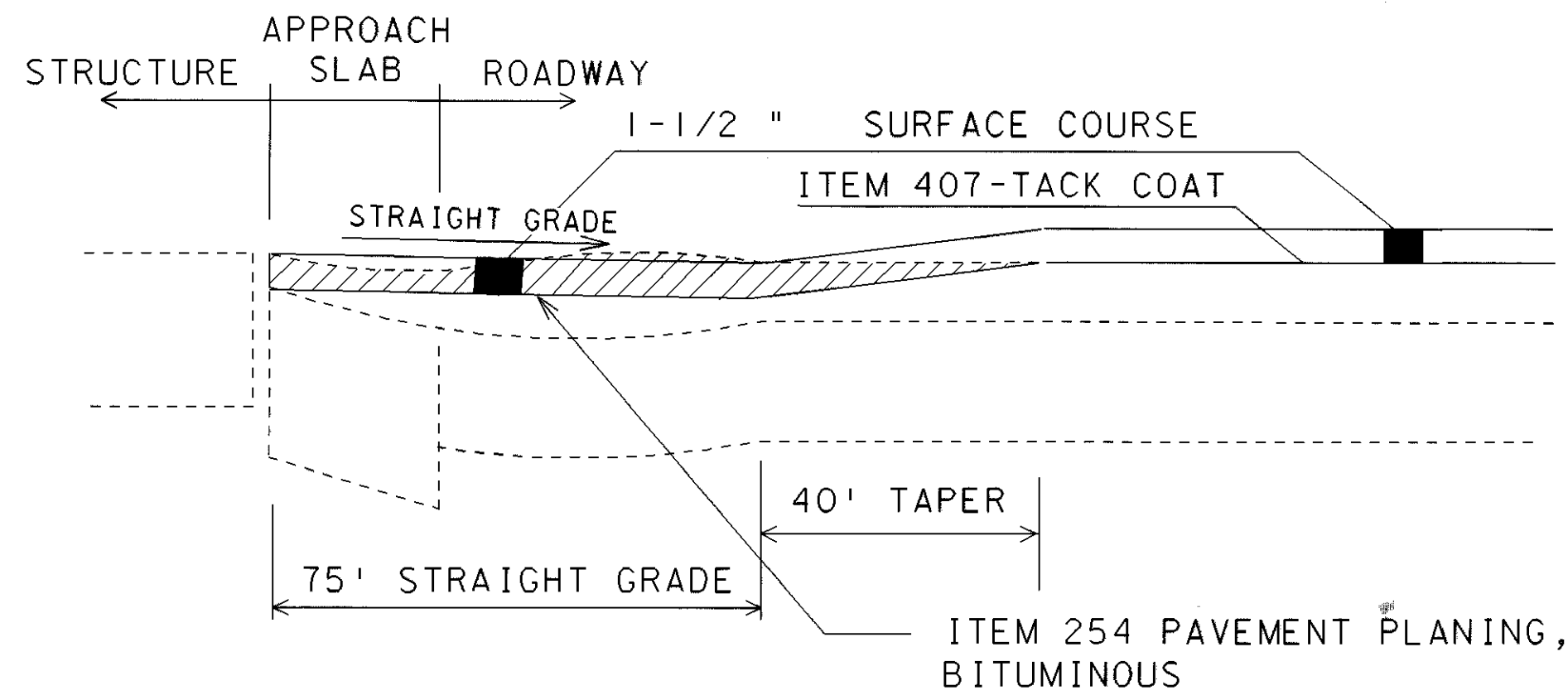
**RAMP 2 REALIGNMENT DETAIL**

**CUY-90-23.93**

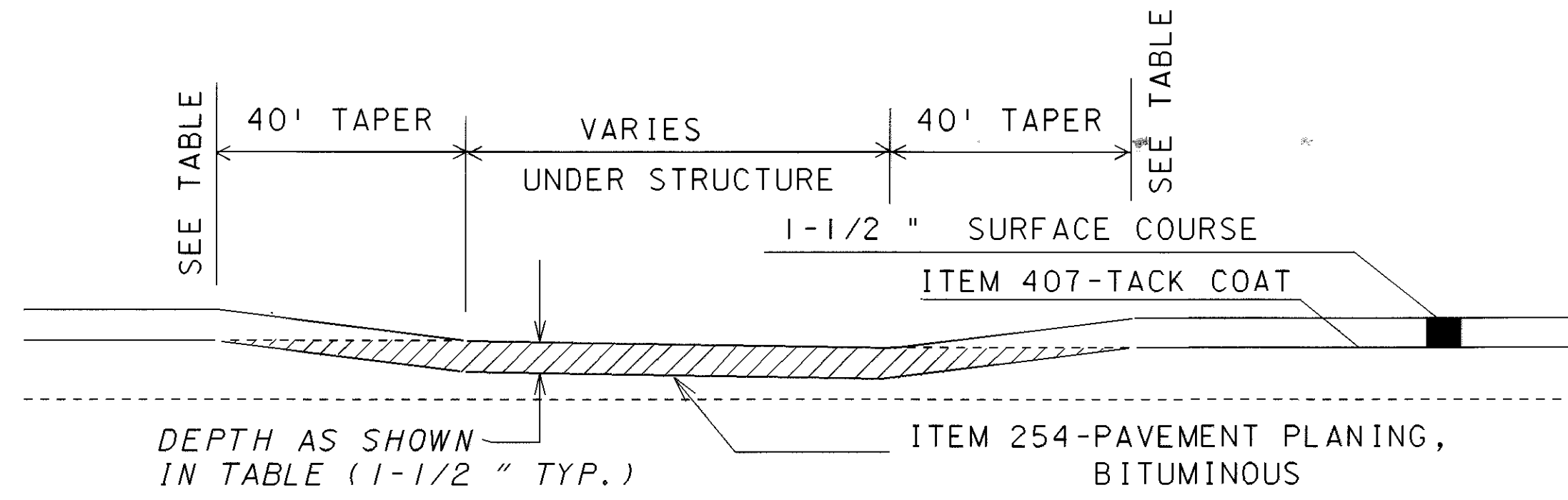
PLOT SUBMITTED: 12-OCT-1999 12:50

18730GMA.DGN

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 PLOTTED FROM: PROJECTS\p1\18730\18730gma.dgn



**BRIDGE APPROACH TAPERS**

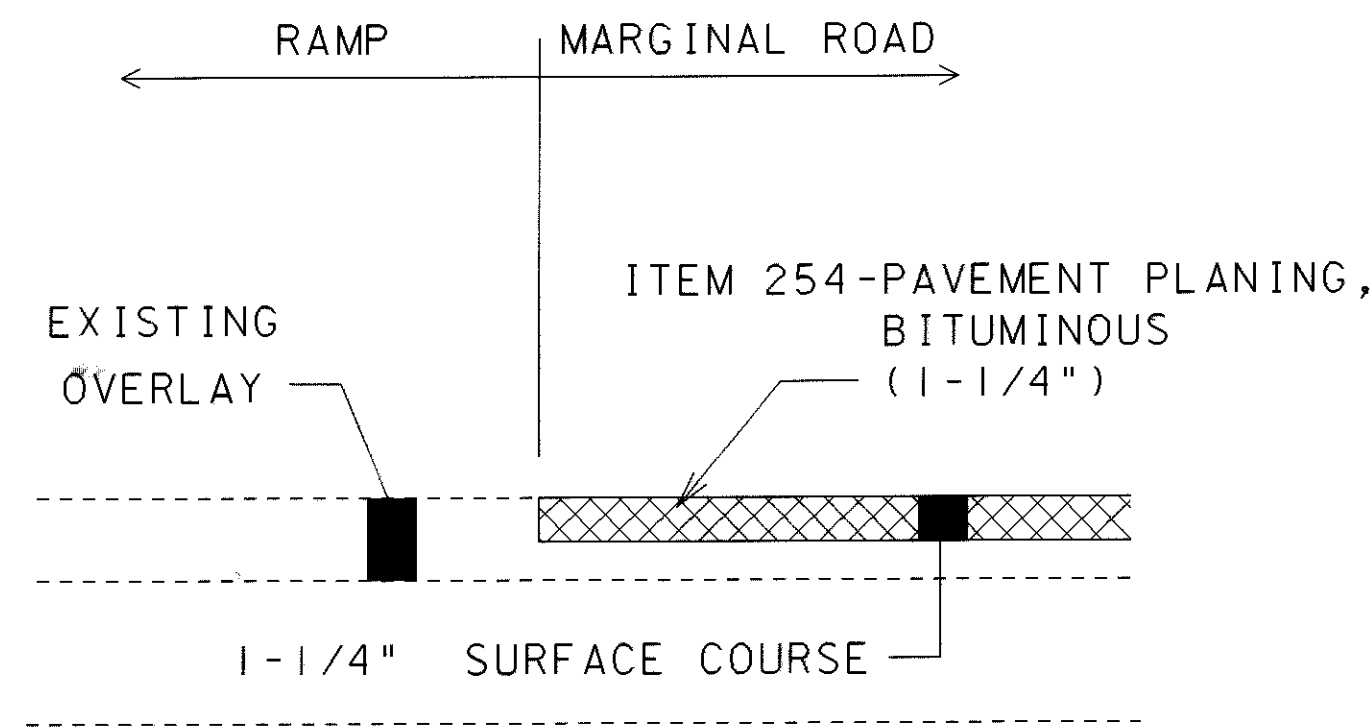


**PLANING UNDER OVERHEAD STRUCTURES  
 (LESS THAN 16' VERTICAL CLEARANCE)**

**METHOD TO PROVIDE SMOOTH BRIDGE APPROACHES**

THE PROCEDURE TO CORRECT UNEVEN BRIDGE APPROACHES IS AS FOLLOWS:

- A. DETERMINE FINAL GRADE LINE BY EXTENDING A STRAIGHT LINE FROM THE TOP OF THE BRIDGE END DAM JOINT TO A POINT 75' AWAY ON THE TOP OF EXISTING RESURFACING. THIS SHALL BE DONE AT EACH EDGE OF THE MILLING MACHINE.
- B. REMOVE ASPHALT CONCRETE EXACTLY 1-1/2" BELOW THE FINAL GRADE AND REMOVE AN ADDITIONAL 40' OF ASPHALT CONCRETE AS SHOWN IN THE DETAIL. THE MILLING MACHINE MUST BE CAPABLE OF FOLLOWING THE STRING LINE TO ESTABLISH THE EXACT REMOVAL LIMIT.
- C. PLACE ITEM 407 - TACK COAT AND ITEM 446 - ASPHALT CONCRETE, TO DESIRED GRADE. THE PAVING MACHINE MUST FOLLOW THE STRINGLINE GRADE AT EACH EDGE OF THE PAVER.
- D. SURVEY TRANSITION TO VERIFY THAT THE REPAIR IS WITHIN THE ALLOWABLE TOLERANCE.



**BUTT JOINT DETAIL**

MARGINAL ROADS AT CROSS STREETS

**LEVELING OF EXISTING ASPHALT TRANSITIONS**

STRAIGHT GRADE - THE ASPHALT TRANSITIONS SHALL BE CONSIDERED UNACCEPTABLE IF THE FINAL GRADE VARIES FROM THE DESIRED STRAIGHT GRADE BY GREATER THAN 0.02 FEET ANYWHERE THROUGHOUT THE LENGTH OF THE 75' TRANSITION. THIS TOLERANCE SHALL BE MEASURED EVERY 10 FEET ALONG THE TRANSITION PLUS AN ADDITIONAL MEASUREMENT AT 5 FEET FROM THE BRIDGE EXPANSION JOINT.

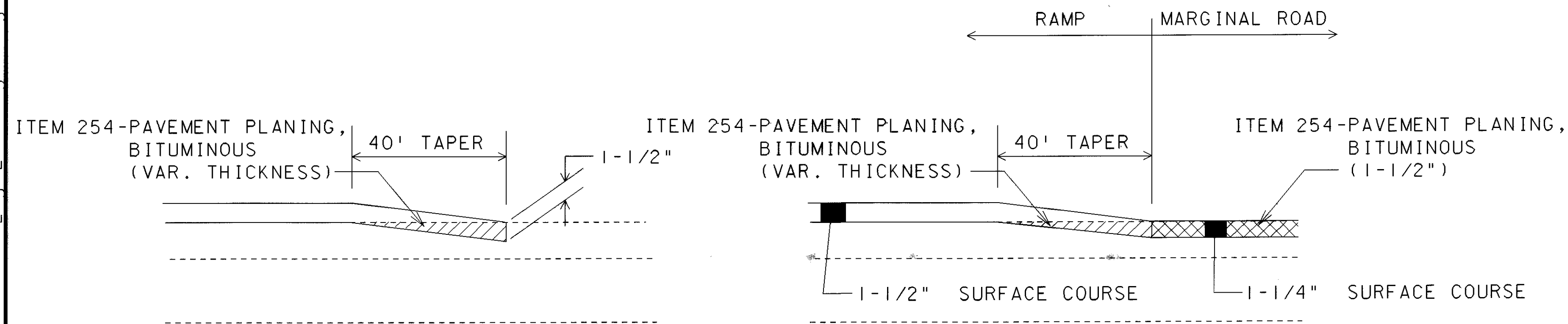
PAYMENT FOR ITEMS 254 AND 446 (WITHIN 75 FT.) SHALL NOT BE MADE UNTIL AFTER A SURVEY HAS BEEN MADE SHOWING THAT THE TOLERANCES HAVE BEEN MET. THE SURVEY SHALL BE PERFORMED BY THE CONTRACTOR PRIOR TO OPENING THE ROAD TO TRAFFIC. THIS INFORMATION SHALL BE IMMEDIATELY SUPPLIED TO THE PROJECT ENGINEER.

ALL UNACCEPTABLE ASPHALT TRANSITION AREAS SHALL BE REPAIRED AND RESURVEYED AT THE CONTRACTORS EXPENSE. THE REPAIR METHOD SHALL BE AS PER THE ORIGINAL MILL AND FILL APPROACH LEVELING SEQUENCE.

MILLING SHALL NOT PRECEDE THE PLACEMENT OF THE ASPHALT CONCRETE BY MORE THAN 48 HOURS. PREFERABLY, THESE ITEMS OF WORK SHALL BE PERFORMED DURING THE SAME CLOSURE.

IF THE 446 SURFACE COURSE IS NOT PLACED PRIOR TO OPENING TO TRAFFIC THE FOLLOWING SHALL BE DONE AT THE CONTRACTOR'S EXPENSE:

PROVIDE TEMPORARY ASPHALT RAMPS AT A RATE NOT TO EXCEED 1" IN 10'. INSTALL TEMPORARY LANE AND EDGE LINES.



**PAVEMENT FEATHER DETAIL**

STA. 139+60.00 TO STA. 140+00.00, IR-90, EB & WB  
 STA. 99+60.00 TO STA. 100+00.00, SR-2, EB & WB

**PAVEMENT FEATHER DETAIL**

RAMP TERMINI AT MARGINAL ROADS

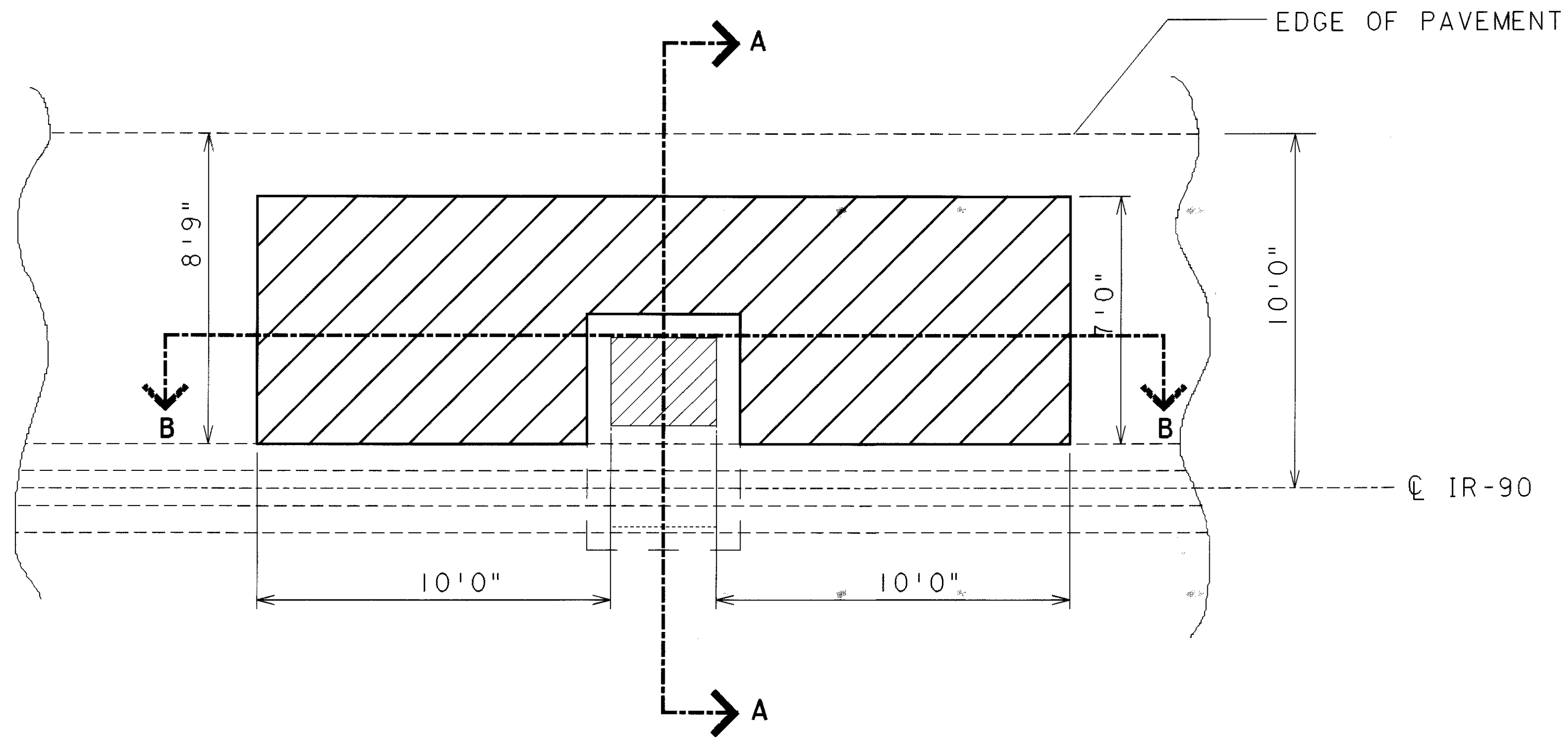
ASPHALT TRANSITION DETAILS

CUY-90-23.93

PLOT SUBMITTED: 12-OCT-1999 12:50

18730CMB.DGN

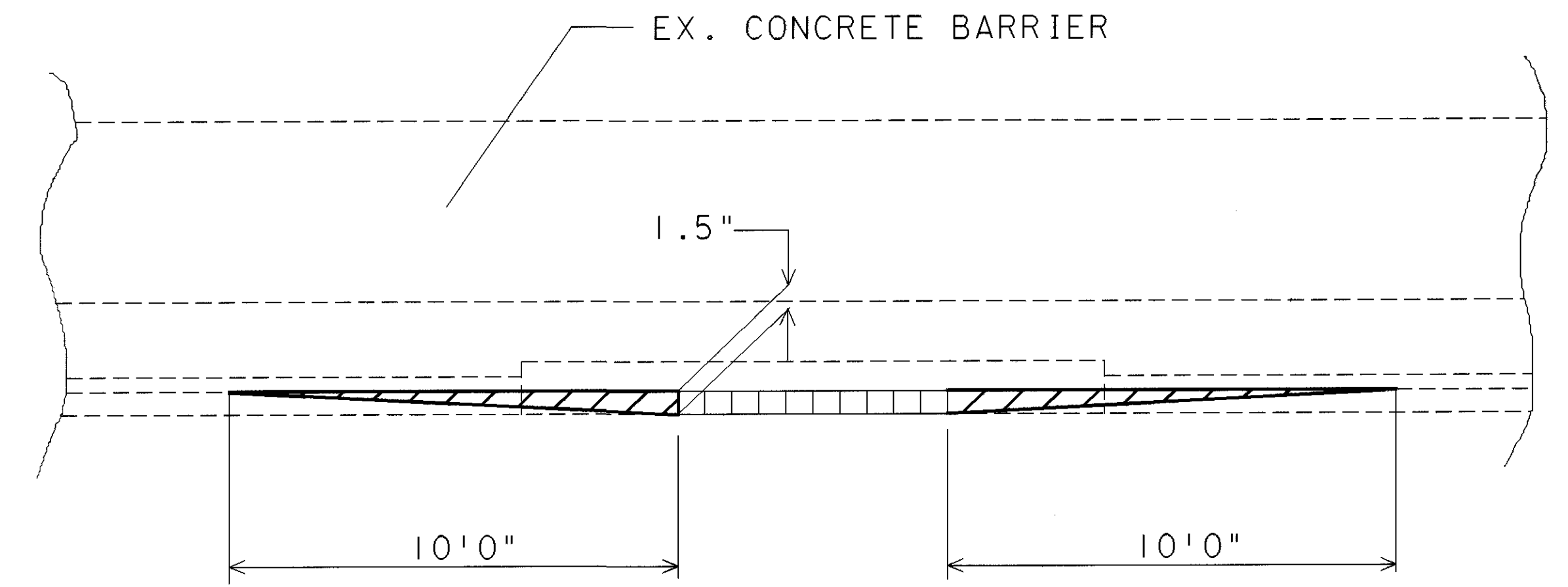
PLOTTED BY: fkonopka  
PLOTTED FROM: PROJECTS\PI\18730B.dgn



PLAN VIEW

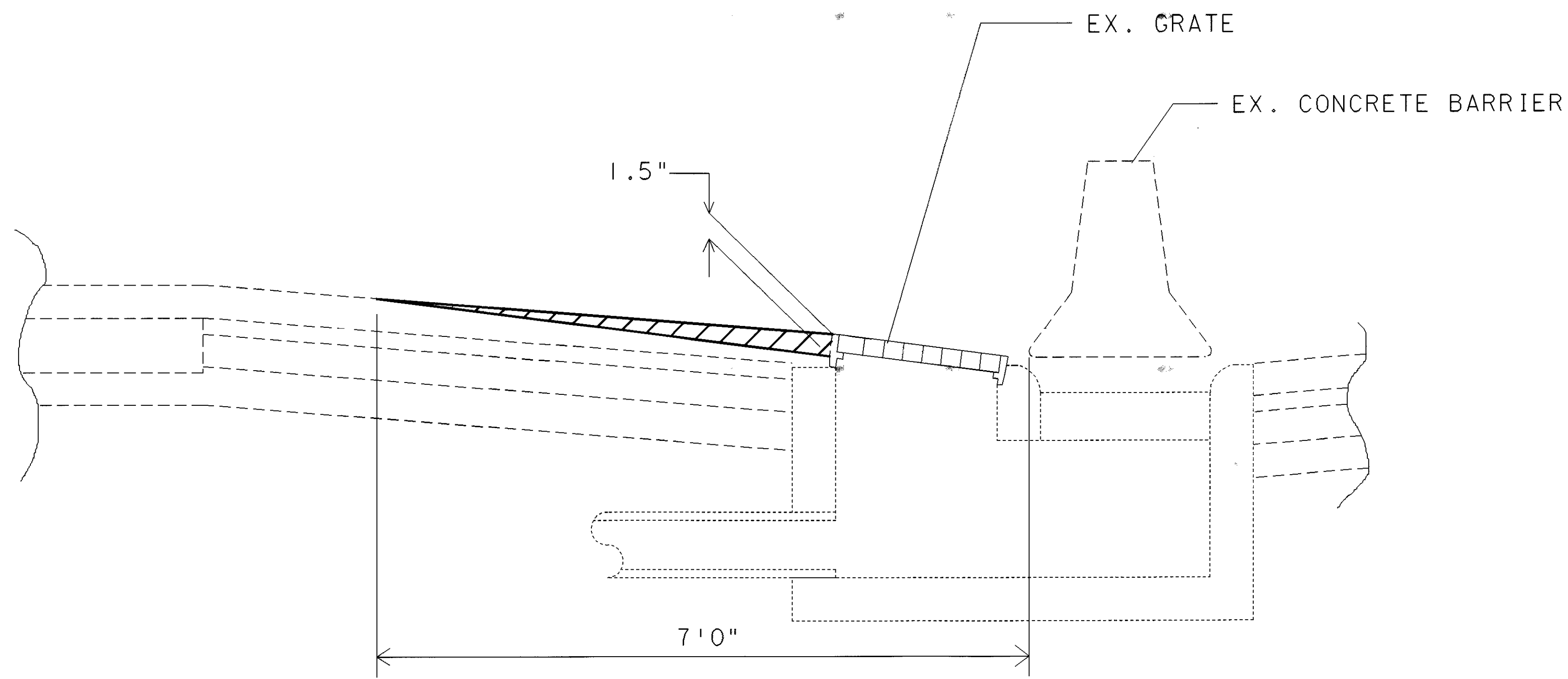
THE FOLLOWING ESTIMATED QUANTITIES SHALL BE USED TO PERFORM PAVEMENT PLANING AS DETAILED (THERE ARE AN ESTIMATED 88 MEDIAN INLETS WITH GRATES).

ITEM 254 - PAVEMENT PLANING, BITUMINOUS.....473 S.Y.



SECTION B-B

(NOT TO SCALE)



SECTION A-A

(NOT TO SCALE)

- ITEM 254 - PAVEMENT PLANING, BITUMINOUS

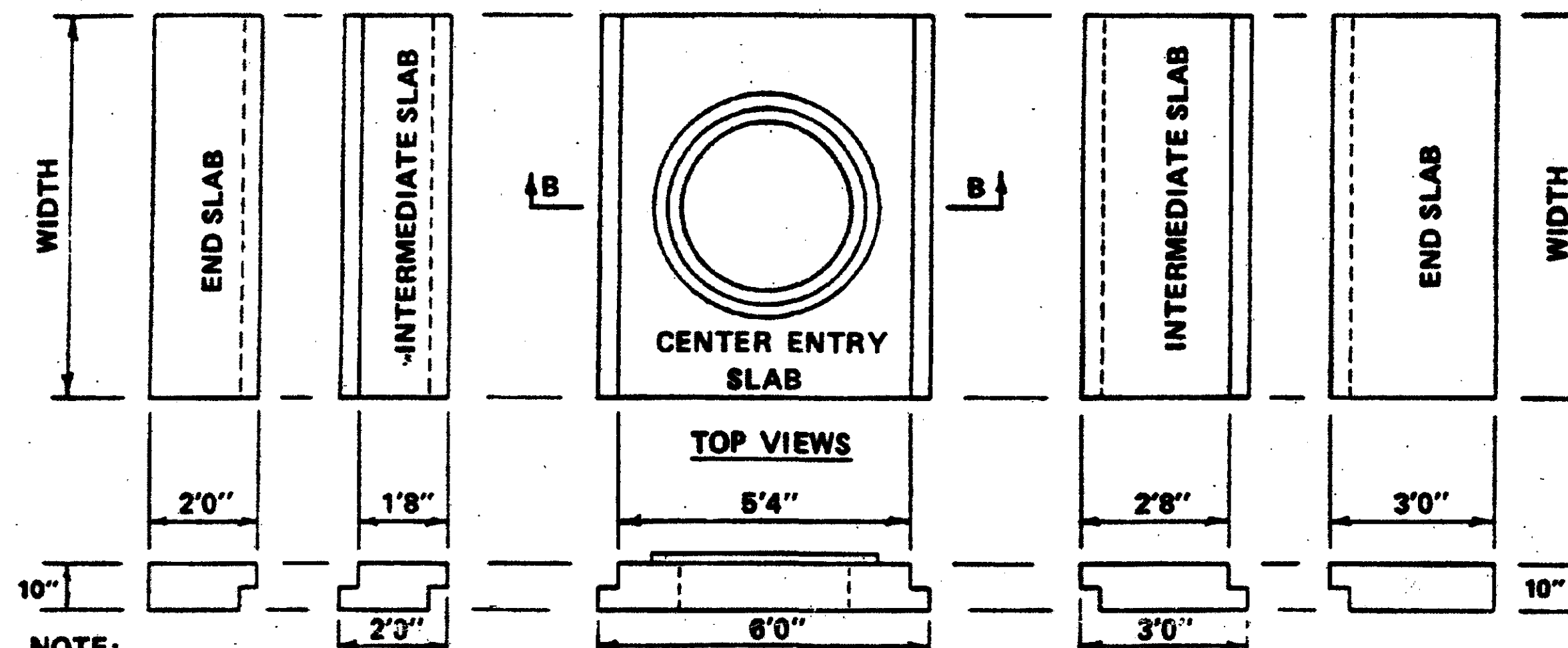
ITEM 604 - MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN (ELECTRIC)

THIS ITEM SHALL INCLUDE REMOVAL THE EXISTING MANHOLE RISER TO THE TOP OF THE EXISTING VAULT AND DISPOSAL AS PER 202.08.

THE CONTRACTOR SHALL PLACE A NEW PRECAST ROOF SLAB (AS DETAILED ON THIS SHEET) ON TOP OF THE EXISTING VAULT ROOF AND PROVIDE A NEW ROUND RISER ALONG WITH A MANHOLE COVER PER THE CLEVELAND PUBLIC POWER SPECIFICATIONS.

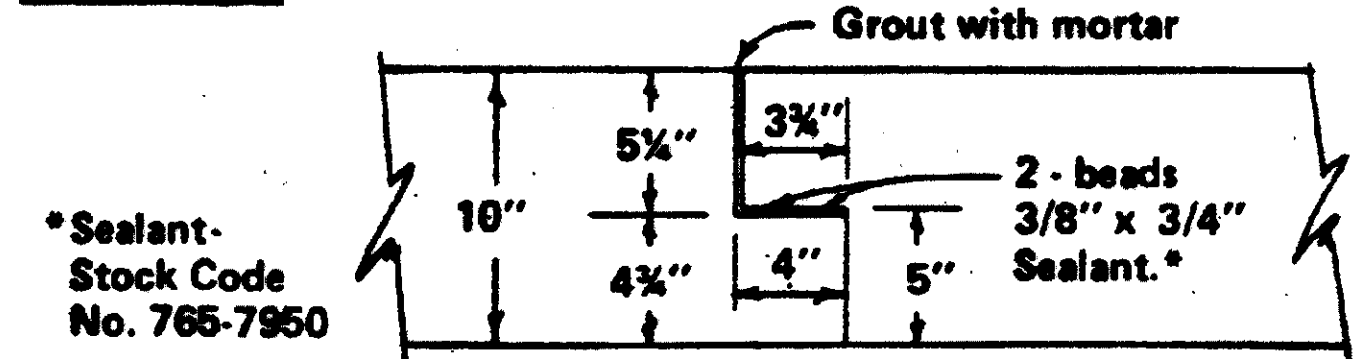
ALL COSTS ASSOCIATED WITH THE REMOVAL OF EXISTING RISER, PROPOSED ROOF SLAB, RISER AND MANHOLE COVER, TOOLS, EQUIPMENT, LABOR AND INCIDENTAL MATERIALS TO PERFORM THE WORK AS OUTLINED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 604 - MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN (ELECTRIC).

**7' TO 10' WIDE x 10" THICK ROOF SLABS**

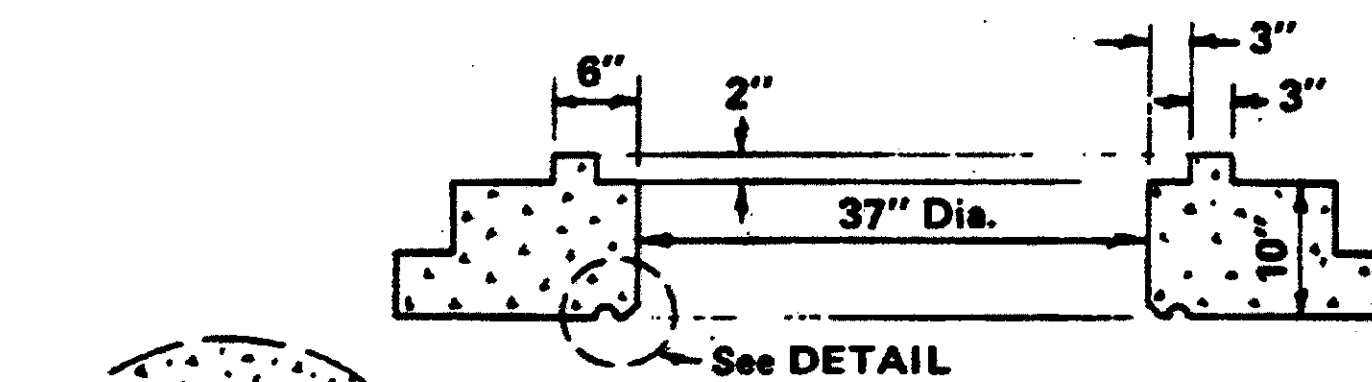


**NOTE:**  
Each slab has 4 - lifting irons.

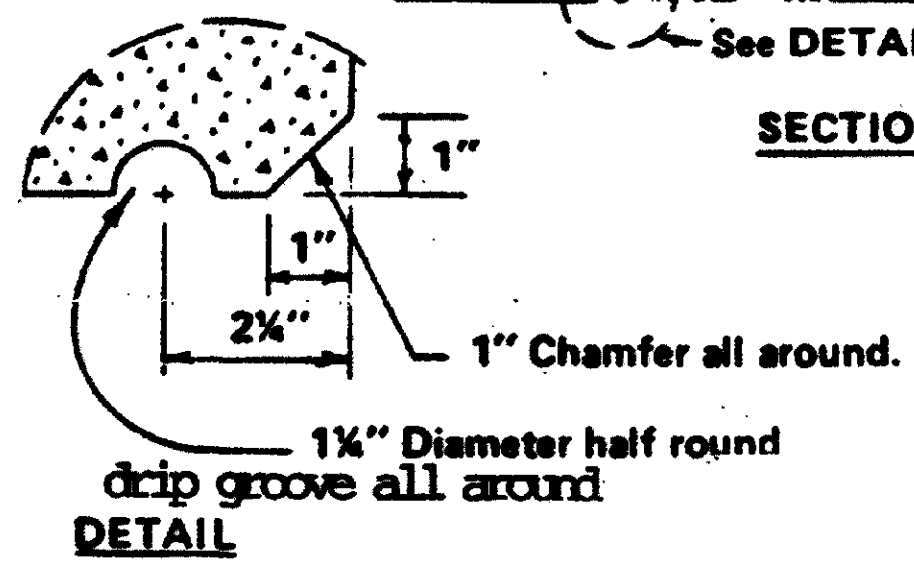
NORWALK CATALOG NO.	WEIGHT	C.E.I. CO. STOCK CODE NO.
7-6-10-C	4100 #	765-7109
7-1-10-I	1470 #	765-7117
7-1-10-E	1610 #	765-7125
7-2-10-I	2345 #	765-7133
7-2-10-E	2485 #	765-7141
8-6-10-C	4810 #	765-7208
8-1-10-I	1680 #	765-7216
8-1-10-E	1840 #	765-7224
8-2-10-I	2680 #	765-7232
8-2-10-E	2840 #	765-7240
9-6-10-C	5520 #	765-730X
9-1-10-I	1890 #	765-731X
9-1-10-E	2070 #	765-732X
9-2-10-I	3015 #	765-733X
9-2-10-E	3195 #	765-734X
10-6-10-C	6230 #	765-7372
10-1-10-I	* 2100 #	765-7380
10-1-10-E	2300 #	765-7398
10-2-10-I	3350 #	765-7406
10-2-10-E	3550 #	765-7414



**JOINT DETAIL (TYPICAL)**



**SECTION B - B**



**DETAIL**

KEY TO NORWALK CATALOG NUMBERS			
WIDTH - LENGTH - THICKNESS - POSITION			
7 = 7'	6 = 5' - 4"	10 = 10"	C = Center Entry
8 = 8'	1 = 1' - 8"	10 = 10"	I = Intermediate
9 = 9'	2 = 2' - 8"		
10 = 10'	1 = 2' - 0"	10 = 10"	E = End
	2 = 3' - 0"		

PRECAST ROOF SLABS (7' to 10' WIDE)		
DRAWN BY:	SCALE	DRAWING NUMBER
T. Jackson		
CHECKED BY: ---	DATE 2-8-95	SCU-25C



PLOT SUBMITTED: 27-JAN-2000 10:04

18730TNA.DGN

PLOTTED BY: fkonopka  
PLOTTED FROM: I:\PROJECTS\18730\18730\dgn\18730tna.dgn

# TRAFFIC CONTROL

## RAISED PAVEMENT MARKERS

### MATERIALS SUPPLIED BY THE DEPARTMENT

FOR THIS PROJECT THE RPM CASTINGS SUPPLIED BY ODOT WILL COME WITH REFLECTORS ATTACHED.

ALL MATERIALS ARE TO BE CONTRACTOR FURNISHED, EXCEPT THAT THE DEPARTMENT SHALL SUPPLY RPM MATERIALS IN THE QUANTITIES SHOWN HEREIN TO THE CONTRACTOR. PAY ITEMS FOR THE DEPARTMENT SUPPLIED MATERIALS SHALL BE INDICATED AS "INSTALLATION ONLY". THE TYPE OF DEPARTMENT SUPPLIED MATERIAL SHALL BE RAISED PAVEMENT MARKER CASTINGS.

THE CONTRACTOR SHALL PICK UP THE DEPARTMENT SUPPLIED RPM MATERIALS AT THE OPI WAREHOUSE IN COLUMBUS, OHIO. (SEE SUPPLEMENT 1082)

THE CONTRACTOR SHALL PICK UP DEPARTMENT SUPPLIED RPM MATERIALS AT THE SPECIFIED LOCATION(S) FOR TRANSPORT TO THE WORK SITE OR TO THE CONTRACTOR'S STORAGE FACILITY. THE RECYCLED RAISED PAVEMENT MARKER (RPM) AUTHORIZATION FORM IS TO BE SIGNED BY THE DISTRICT CONSTRUCTION ENGINEER PRIOR TO PICK UP OF THE RPMS. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND / OR THE PARTIES LISTED ON THE AUTHORIZATION FORM IN WRITING AT LEAST FIVE (5) CALENDAR DAYS PRIOR TO PICK UP OF THE DEPARTMENT SUPPLIED MATERIALS. THE CONTRACTOR SHALL STORE THE RPMS WITHOUT DAMAGE OR CONTAMINATION WITH FOREIGN MATTER. A DEDUCTION IN THE AMOUNT OF THE ACTUAL COST TO THE DEPARTMENT SHALL BE MADE FOR MATERIALS DAMAGED BY THE CONTRACTOR OR FOR CASTINGS RECEIVED BY THE CONTRACTOR WHICH WERE NOT INSTALLED AND WERE NOT RETURNED TO THE DEPARTMENT.

### RETURN OF NON-PERFORMED RAISED PAVEMENT MARKER MATERIALS SUPPLIED BY THE DEPARTMENT

RAISED PAVEMENT MARKER MATERIALS SUPPLIED BY THE DEPARTMENT, THAT ARE NON-PERFORMED SHALL BE CAREFULLY REPACKED OR PACKED IN THE BOXES IN THE SAME STYLE AND QUANTITY AS ORIGINALLY RECEIVED FROM THE DEPARTMENT. CASTING STYLES SHALL NOT BE MIXED WITHIN ANY ONE CONTAINER. THE CONTRACTOR SHALL CLEARLY MARK ON THE OUTSIDE OF EACH CONTAINER THE STYLE OF CASTING. BOXES SHALL BE PLACED ON SKIDS OR PALLETS IN THE SAME STYLE (LOW PROFILE OR CONVENTIONAL, REFLECTORISED OR NON REFLECTORISED) AND NO MORE THAN 420 RPMS (OR 21 BOXES) ON ONE SKID.

ONLY USE THE BOXES SUPPLIED BY THE RAISED PAVEMENT MARKER RECYCLER. BOXES MUST BE MARKED WITH THE RECYCLER'S PART OR CATALOG NUMBER AND THE PROJECT NUMBER. THE RECYCLER'S CATALOG OR PART NUMBERS MAY BE OBTAINED FROM THE OFFICE OF TRAFFIC ENGINEERING IN COLUMBUS, OHIO OR FROM THE RECYCLER. BOXES NOT MARKED WITH THE PROPER RECYCLER'S CATALOG OR PART NUMBERS, AND THE DEPARTMENT'S PROJECT NUMBER WILL NOT BE ACCEPTED AT THE RECYCLER'S WAREHOUSE.

NON PERFORMED MATERIALS WILL BE RETURNED TO THE LOCATION AS SPECIFIED BY THE DISTRICT CONSTRUCTION ENGINEER WITHIN 30 DAYS OF THE COMPLETION OF THE PROJECT.

THE ABOVE WORK INCLUDING ALL LABOR, EQUIPMENT AND MATERIAL NEEDED TO PERFORM THE WORK, SHALL BE CONSIDERED INCIDENTAL TO THE RESPECTIVE PAY ITEM.

IF THE DEPARTMENT HAS TO REPACKAGE THE RPMS CORRECTLY, THE CONTRACTOR WILL BE ASSESSED THE ACTUAL COST FOR REPACKAGING THE MATERIALS BY THE DEPARTMENT'S FORCES.

### LOADING OF MATERIALS SUPPLIED BY THE DEPARTMENT AT THE RECYCLER'S WAREHOUSE

TRUCKS SHALL HAVE A LOADING HEIGHT OF 48 INCHES AND BE ABLE TO BACK UP FLUSH TO THE LOADING DOCK.

TRUCKS SHALL NOT HAVE ANY OBSTRUCTIONS OR PROTRUSIONS THAT PREVENT THE LOADING BY A STANDARD FORKLIFT OR LIFT TRUCK.

SEMI TRUCKS OR 20 FOOT COMMERCIAL TRUCKS ARE THE MOST APPROPRIATE TRUCKS FOR LOADS IN EXCESS OF 4 PALLETS (ONE PALLET = 21 BOXES = 2100 LBS).

STAKE BODY TRUCKS ARE APPROPRIATE TO LOAD LESS THAN 4 PALLETS, PROVIDED THE TRUCK IS RATED FOR THE LOAD AND THE LOAD CAN BE SAFELY SECURED FOR TRANSPORT BY CHAINING OR STRAPPING DOWN AS NEEDED.

PICKUP TRUCKS ARE APPROPRIATE FOR LOADS OF APPROXIMATELY ONE PALLET, PROVIDED THE PICKUP TRUCK IS RATED FOR THE LOAD AND THE LOAD CAN BE SAFELY SECURED FOR TRANSPORT.

DUMP TRUCKS, TILT BED TRUCKS, AND NON COMMERCIAL MOVING VANS WILL NOT BE LOADED BY THE RECYCLERS WAREHOUSE.

THE WAREHOUSE SUPERVISOR WILL REFUSE TO LOAD ANY TRUCK THAT IS UNSAFE TO LOAD OR UNSUITABLE FOR THE LOAD BEING PLACED ON THE TRUCK.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY. THE CONTRACTOR SHALL INSTALL RECYCLED RAISED PAVEMENT MARKERS WITH PRISMATIC REFLECTORS:

ITEM 621-RAISED PAVEMENT MARKER, INSTALLATION ONLY . . . . . 1978 EACH

### RETROREFLECTOR REPLACEMENT

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER TO REPLACE THE RETROREFLECTORS IN THE RPM CASTINGS THAT ARE ON THE BRIDGE DECKS WITHIN THE PROJECT LIMITS.

THIS ITEM SHALL INCLUDE THE COST OF REMOVING THE RETROREFLECTOR AND REPLACING IT WITH A CONTRACTOR SUPPLIED REFLECTOR OF THE REQUIRED COLOR.

ITEM 621-PRISMATIC RETROREFLECTOR, AS PER PLAN . . . 25 EACH

### RAISED PAVEMENT MARKERS ON STRUCTURES

RAISED PAVEMENT MARKER CASTINGS SHALL NOT BE REMOVED AND REPLACED ON STRUCTURES.

### ENTRANCE AND EXIT MARKINGS

THE ENTRANCE AND EXIT PAVEMENT MARKINGS SHALL BE LOCATED AND INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-72.20M. PLAN DETAILS SHOWING GORE LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM AS MANY MEASUREMENTS AS NEEDED TO DETERMINE THE CORRECT LOCATION OF THE MARKINGS.

### RAISED PAVEMENT MARKER SPACING

THE RAISED PAVEMENT MARKER SPACING SHALL BE 120 FEET (36 m) AS PER STANDARD DRAWING TC-65.10M.

### LOOP DETECTORS

AN ESTIMATED QUANTITY OF ITEM 632-DETECTOR LOOP, AS PER PLAN B HAS BEEN PROVIDED AS A CONTINGENCY WHEN WIRE IS CUT, BROKEN, OR DESTROYED DUE TO PAVEMENT REPAIR OR BUTT JOINT OPERATIONS.

NEW LOOP DETECTORS SHALL BE PLACED AT THE SAME LOCATIONS AND SAME SIZE AS THE EXISTING. THE LOOP DETECTOR WIRE SHALL BE REPLACED TO THE PULL BOX OR POLE, WHICHEVER IS APPLICABLE, UNDER ITEM 632 AND TC-82.10M. THE NEW CABLE SPLICE KITS SHALL BE INCLUDED IN THIS PAY ITEM.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 632-DETECTOR LOOP, AS PER PLAN B . . . . . 9 EACH

REF. #	LOCATION	SHT. #	SIZE	# OF TURNS
L-1	S. WATERLOO RD.	61	6' x 30'	2
L-2	LAKELAND BLVD (EB)	71	6' x 15'	2
L-3	LAKELAND BLVD (EB)	71	4' x 30'	2
L-4	LAKELAND BLVD (EB)	73	6' x 18'	2
L-5	LAKELAND BLVD (EB)	75	6' x 18'	2
* L-6	S. WATERLOO RD.	68	6' x 18'	2
* L-7	LAKELAND BLVD (WB)	68	6' x 18'	2
* L-8	LAKELAND BLVD (WB)	71	6' x 18'	2
* L-9	LAKELAND BLVD (WB)	73	6' x 18'	2

\* TO BE USED AS DIRECTED BY THE ENGINEER. NOT VISIBLE DURING FIELD REVIEW.

CALCULATED  
EMK  
CHECKED  
LDH

TRAFFIC CONTROL GENERAL NOTES

GUY-90-23.93

PLOT SUBMITTED: 27-JAN-2000 10:04

18730TNA.DGN

PLOTTED BY: fkonopka  
 PLOTTED FROM: I:\PROJECTS\18730\dgn\18730tna.dgn

# TRAFFIC CONTROL

## ITEM 603 - 4 INCH CONDUIT, TYPE E

THIS ITEM SHALL CONSIST OF TRENCHING, FURNISHING MATERIALS AND INSTALLING A 4 INCH CONDUIT TYPE E UNDERDRAIN, AT NEW PULL BOXES, AS DIRECTED BY THE ENGINEER. REFERENCES MADE TO STANDARD DRAWING HL-30.11M FOR DETAILS OF DRAINING PULL BOXES.

ON FLAT GROUND, A MINIMUM OF 20 FEET OF CONDUIT SHALL BE INSTALLED TO DRAIN THE PULL BOX.

PAYMENT WILL BE MADE AT CONTRACT UNIT PRICE PER LINEAR FOOT.

## ITEM 632 - DETECTOR LOOP, AS PER PLAN A

IN ADDITION TO THE REQUIREMENTS OF 632.10, THE CONTRACTOR SHALL PROVIDE A POSITIVE AND EFFECTIVE MEANS FOR REMOVAL OF SOLID RESIDUE RESULTING FROM THE DRY BLADE CUTTING OF LOOP DETECTOR SLOTS IN THE PAVEMENT. THE RESIDUE SHALL BE REMOVED BY VACUUM OR OTHER EFFECTIVE MEANS, BEFORE IT IS BLOWN BY TRAFFIC ACTION OR WIND. THE LOOP SHALL BE CUT TO A FOUR (4) INCH DEPTH AS SHOWN ON SHEET 56.

PAYMENT WILL BE MADE AT CONTRACT UNIT PRICE PER EACH.

## ITEM 622 - GLARE SCREEN

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND ERECTING A GLARE SCREEN, NON-REFLECTIVE, ALONG THE TOP OF THE 1R-90 MEDIAN BARRIER FROM STA 140+00 ± TO STA 56+00 ±.

THE GLARE SCREEN SHALL BE 24 INCHES ABOVE THE TOP OF THE EXISTING BARRIER AND BE SECURELY AND NEATLY ATTACHED TO THE BARRIER. THE BLADES SHALL BE DESIGNED USING A 20 DEGREE CUT OFF ANGLE MEASURED RELATIVE TO THE CENTER LINE OF THE BARRIER.

THE CONTRACTOR SHALL FURNISH ALL NECESSARY MECHANICAL ATTACHMENT HARDWARE (INCLUDING BOLTS, PLATES, SPACERS AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

THE MANUFACTURER SHALL BE CARSONITE INTERNATIONAL, 10 BOB GIFFORD BLVD, EARLY BRANCH, SC 29916, (TEL: 800-648-7916) OR AN APPROVED EQUAL.

GLARE SCREEN, COMPLETE IN PLACE, WILL BE PAID FOR AT THE UNIT PRICE PER LINEAR FOOT, FOR ITEM 622 - GLARE SCREEN.

THE FOLLOWING ESTIMATED QUANTITY IS INCLUDED IN THE GENERAL SUMMARY TO BE USED AS OUTLINED ABOVE:

ITEM 622 - GLARE SCREEN . . . . . 27100 LIN. FT.

REFERENCE	STATION	SIDE	ESTIMATED SIGN QUANTITIES							
			630							
			GROUND MOUNTED SUPPORT, NO 3 POST	ONE WAY SUPPORT, NO 3 POST	SIGN, FLATSHEET, TYPE G	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF GROUND MOUNTED BEAM SUPPORT AND DISPOSAL	
L F	L F	S F	EACH	EACH	EACH	EACH				
S-1	5+50, RAMP 2	LT				1			2	
S-2	5+75, RAMP 2	RT	15				2	1		
S-3	5+75, RAMP 2	LT	15				2	1		
S-4	6+45, RAMP 2	RT	15	16		1	4	1		
S-5	6+45, RAMP 2	LT	15	16	9	1	3	1		
TOTALS TO GENERAL SUMMARY			60	32	9	3	11	4	2	

CALCULATED  
EMK  
CHECKED  
LDH

TRAFFIC CONTROL GENERAL NOTES

CUY-90-23.93

I:\PROJECTS\PI\8730\dgn\87301sa.dgn 27-JAN-2000 10:05AM fkonopka

LOCATION	STATION		887					828	621			
			EDGE LINES		LANE LINES	CHANNELIZING LINES	TRANSVERSE LINES (WHITE)	RAISED PAVEMENT MARKER, INSTALLATION ONLY				
			WHITE	YELLOW				W	Y	W/R	Y/R	
FROM	TO	LIN. FT.	LIN. FT.	LIN. FT.	GORE	LIN. FT.	LIN. FT.	EACH				
IR-90 EB	139+60.00	141+45.00	185	185	555			4				
	141+45.00	143+75.00	230	230	690	460		6		12	6	
	143+75.00	154+55.00	1080	1080	3240			27				
	154+55.00	155+45.00	90	90	360			3				
	155+45.00	156+55.00	110	110	330	220		3		6	5	
	156+55.00	170+20.00	1365	1365	4095			34				
	170+20.00	171+75.00	310	155	465	155		4		4	5	
	171+75.00	172+75.00	100	100	400			3				
	172+75.00	190+75.00	1800	1800	5400			45				
	190+75.00	191+45.00	140	70	210	70		3		2	6	
	191+45.00	194+50.00	305	305	1220			10				
	194+50.00	262+15.00	6765	6765	20295			169				
	262+15.00	263+00.00	85	85	255	170		3		5	15	
	263+00.00	273+75.00	1075	1075	3225			27				
	273+75.00	274+55.00	80	80	240	160		3		5	4	
	274+55.00	285+10.00	1055	1055	3165			26				
	285+10.00	286+40.00	260	130	390	130		3		4	4	
	286+40.00	298+25.00	1185	1185	4740			40				
	298+25.00	300+00.00	175	175	525	350		4		8	5	
	300+00.00	326+45.00	2645	2645	7935			66				
	326+45.00	327+85.00	280	140	420	140		3		4	4	
	327+85.00	331+25.00	340	340	1360			11				
	331+25.00	343+15.00	1190	1190	3570			30				
	343+15.00	343+90.00	75	75	300			2				
	343+90.00	347+50.00	360	360	1080	720		9		18	4	
	347+50.00	360+00.00	1250	1250	3750			31				
	360+00.00	361+35.00	270	135	405	135		3		3	4	
	361+35.00	365+95.00	460	460	1840			15				
	365+95.00	386+60.00	2065	2065	6195			52				
	386+60.00	387+95.00	135	135	540			5				
	387+95.00	389+25.00	130	130	390	260		3		7	5	
	389+25.00	401+60.00	1235	1235	3705			31				
403+00 BK	401+60.00	403+00.00	280	140	420	140		4		4	5	
STA EQUATION												
41+12.20 AH	41+12.20	43+40.00	228	228	912			8				
	43+40.00	55+00.00	1160	1160	3480			29				
	55+00.00	62+25.00	725	725	1450	725		30				
SR-2 EB	62+25.00	67+20.00	495	495	990	990		8		25		
	67+20.00	89+40.00	2220	2220	2220			19				
	89+40.00	93+80.00	880	440	440	440		4		11		
	93+80.00	100+00.00	620	620	1240			10				
TOTAL (LEFT COLUMN)			33438	32228	92442	4540	725	2315	790	118	72	

LOCATION	STATION		887					828	621			
			EDGE LINES		LANE LINES	CHANNELIZING LINES	TRANSVERSE LINES (WHITE)	RAISED PAVEMENT MARKER, INSTALLATION ONLY				
			WHITE	YELLOW				W	Y	W/R	Y/R	
FROM	TO	LIN. FT.	LIN. FT.	LIN. FT.	GORE	LIN. FT.	LIN. FT.	EACH				
IR-90 WB	139+60.00	156+75.00	1715	1715	5145			42				
	156+75.00	157+40.00	65	65	260			2				
	157+40.00	158+25.00	170	85	255	85		2		2	5	
	158+25.00	171+85.00	1360	1360	4080			34				
	171+85.00	172+60.00	75	75	225	150		3		4	4	
	172+60.00	173+70.00	110	110	440			4				
	173+70.00	174+75.00	105	105	315			2				
	174+75.00	185+50.00	1075	1075	3225			27				
	185+50.00	186+60.00	110	110	440			3				
	186+60.00	188+65.00	410	205	615	205		6		5	3	
	188+65.00	193+65.00	500	500	1500			13				
	193+65.00	194+90.00	125	125	375	250		3		6	4	
	194+90.00	198+10.00	320	320	1280			11				
	198+10.00	244+25.00	4615	4615	13845			115				
	244+25.00	247+40.00	315	315	1260			11				
	247+40.00	248+55.00	230	115	345	115		3		3	12	
	248+55.00	258+75.00	1020	1020	3060			26				
	258+75.00	261+45.00	270	270	1080			9				
	261+45.00	262+25.00	160	80	240	80		3		2	11	
	262+25.00	268+65.00	640	640	1920			16				
	268+65.00	271+50.00	285	285	1140			10				
	271+50.00	272+90.00	280	140	420	140		4		4	7	
	272+90.00	285+55.00	1265	1265	3795			32				
	285+55.00	286+35.00	80	80	240	160		3		4	3	
	286+35.00	298+85.00	1250	1250	5000			42				
	298+85.00	299+85.00	200	100	300	100		3		3	4	
	299+85.00	326+85.00	2700	2700	8100			68				
	326+85.00	327+85.00	100	100	300	200		3		5	4	
	327+85.00	330+20.00	235	235	940			8				
	330+20.00	344+35.00	1415	1415	4245			35				
	344+35.00	346+10.00	175	175	700			6				
	346+10.00	347+55.00	290	145	435	145		4		4	4	
	347+55.00	360+50.00	1295	1295	3885			32				
	360+50.00	362+65.00	215	215	645	430		6		10	4	
	362+65.00	363+55.00	90	90	360			3				
	363+55.00	382+10.00	1855	1855	5565			46				
	382+10.00	384+30.00	220	220	880			8				
	384+30.00	385+75.00	290	145	435	145		3		4	5	
	385+75.00	401+75.00	1600	1600	4800			40				
TOTAL (THIS COLUMN)			27230	26215	82090	2205	0	675	691	56	70	
TOTAL (LEFT COLUMN)			33438	32228	92442	4540	725	2315	790	118	72	
SHEET TOTALS			= 22.56 MILE		=33.06 MILE	7,470	2,990	1,797				

CALCULATED JL  
CHECKED EMK  
PAVEMENT MARKING/RAISED PAVEMENT MARKER  
SUB-SUMMARY

CUY-90-23.93

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LOCATION	STATION		887					828					887	621			
			EDGE LINES		LANE LINES	CHANNELIZING LINES		STOP LINES	CROSSWALK LINES	TRANSVERSE LINES (WHITE)	LANE ARROWS	WORD ON PAVEMENT 96"	SOLID DOUBLE YELLOW CENTERLINE	RAISED PAVEMENT MARKER INSTALLATION ONLY			
			WHITE	YELLOW		GORE	*							W	Y	W/R	Y/R
FROM	TO	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	LIN. FT.	EACH				
403+00 BK	401+75.00	403+00.00	125	125	125	250							3		6	4	
STA EQUATION																	
41+12.20 AH	41+12.20	41+50.00	38	38	114	76							5				
	41+50.00	43+00.00	150	150	600								23				
52+28.57 BK	43+00.00	52+28.57	929	929	2787								10				
STA EQUATION													8		13		
51+67.56 AH	51+67.56	55+65.00	397	397	1192								20				
	55+65.00	60+70.00	505	505	1010	1010							3		17		
SR-2 WB	60+70.00	84+35.00	2365	2365	2365								26				
	84+35.00	87+70.00	335	335	335	670				475			10				
	87+70.00	93+85.00	615	615	615		615						12				
	93+85.00	100+00.00	615	615	1230								21				
TURNING ROAD 1	5+30.00	19+50.00	1420	1420	1420												
TURNING ROAD 2	6+10.00	31+85.00	2575	2575	2575												
RAMP 1(@ SPUR)	11+60.00	24+15.00	1255	1255													
RAMP 2(@ SPUR)	6+30.00	17+75.00	1145	1145													
RAMP 2	1+00.00	6+50.00	550	550				30	70								
RAMP 3	2+65.00	5+50.00	285	285													
RAMP 4	1+90.00	5+30.00	340	340													
RAMP 5	1+25.00	4+75.00	350	350													
RAMP 6	1+30.00	4+05.00	275	275													
RAMP 7	4+90.00	7+20.00	230	230													
RAMP 8	3+20.00	6+30.00	310	310													
RAMP 9	0+00.00	3+30.00	330	330				16									
RAMP 11	1+90.00	12+30.00	1040	1040													
RAMP 12	3+50.00	11+35.00	785	785													
	11+35.00	13+00.00	165	165	165						2	1					
	13+00.00	14+50.00	150	150							1						
	14+50.00	14+85.00	35														
	14+85.00	15+10.00				50	50			5							
	15+10.00	16+10.00					200	40	80		3	3					
RAMP 13	2+65.00	11+85.00	920	920													
RAMP 14	2+25.00	7+15.00	490	490													
RAMP 14-A	3+80.00	6+35.00	255	255													
RAMP 15	1+30.00	3+60.00	230	230													
RAMP 16	1+31.00	3+80.00	249	249													
RAMP 1-E	3+55.00	6+75.00	320	320													
RAMP 2-E	3+40.00	6+50.00	310	310													
<b>SHEET TOTALS</b>			20088	20053	14533	2056	1235	86	150	480	6	4	141		36	4	
			= 7.60 MILE	=2.75 MILE		3,291									181		

CALCULATED  
JL  
CHECKED  
EMK

PAVEMENT MARKING / RAISED PAVEMENT MARKER SUB-SUMMARY

CUY-90-23.93

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LOCATION	STATION		887					828					887	621	
			EDGE LINES		LANE LINES	CHANNELIZING LINES		STOP LINES	CROSSWALK LINES	TRANSVERSE LINES (WHITE)	LANE ARROWS	WORD ON PAVEMENT 96"	SOLID DOUBLE YELLOW CENTERLINE	RAISED PAVEMENT MARKER, INSTALLATION ONLY	
			WHITE	YELLOW		GORE	*							WHITE	YELLOW
FROM	TO	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	LIN. FT.	EACH	EACH	
RAMP 6-E	1+30.00	4+30.00	300	300											
RAMP 7-E	1+25.00	4+20.00	305	305											
RAMP 8-E	3+20.00	5+15.00	195	195											
RAMP 9-E	5+00.00	6+40.00	140	140											
RAMP 10-E	2+95.00	5+00.00	205	205											
RAMP 11-E	1+85.00	4+15.00	230	230											
RAMP 12-E	4+00.00	6+55.00	255	255											
RAMP 13-E	1+65.00	4+60.00	295	295											
RAMP 14-E	1+65.00	4+95.00	330	330											
RAMP 15-E	1+95.00	4+55.00	260	260											
WATERLOO RD.	151+25.00							26	58						
	151+35.00	152+40.00							105						
	152+40.00	152+95.00			55										
	152+95.00	161+50.00		855	855										
	161+50.00	162+00.00		50	50	100				30					
	162+00.00	168+25.00		625	1250										
	168+25.00	169+25.00		100	100	200									
	169+25.00	177+15.00		790	790										
	177+15.00	177+75.00				120									
	179+30.00									100					
VILLAVIEW RD.	261+25.00							20	104						
	261+35.00	268+05.00										670			
	268+15.00							28	136						
	268+85.00							38	90						
	268+95.00	271+95.00							300		8	3			
	271+95.00	274+00.00		205	205										
	274+00.00	275+60.00			160										
	275+60.00	279+10.00		350	350										
	279+10.00	279+45.00		35	35	70				10					
	279+45.00	283+45.00		400	800										
	283+45.00	284+20.00		75	75	150									
	284+20.00	289+75.00		555	555										
	289+75.00									125					
LAKELAND BLVD. (WB)	290+50.00							40	110						
	290+60.00	292+75.00		215			215				3	2			
	292+75.00	304+00.00		1125	1125										
	304+00.00	304+55.00		55	55	110									
	304+55.00	306+55.00		200	400										
	306+55.00	321+65.00		1510	1510										
	321+65.00	324+05.00		240	480										
	324+05.00	325+00.00		95	95	190									
<b>SHEET TOTALS</b>			2515	9995	8945	940	620	152	723	80	11	5	670		
			= 2.37 MILE		=1.69 MILE	1,560							=0.13 MILE		

CALCULATED  
JL  
CHECKED  
EMK

PAVEMENT MARKING/RAISED PAVEMENT MARKER  
SUB-SUMMARY

CUY-90-23.93

I:\PROJECTS\18730\dgn\187301sa.dgn 12-OCT-1999 12:53PM fkonopka

LOCATION	STATION		887					828					887	621		
			EDGE LINES		LANE LINES	CHANNELIZING LINES		STOP LINES	CROSSWALK LINES	TRANSVERSE LINES (WHITE)	LANE ARROWS	WORD ON PAVEMENT 96"	SOLID DOUBLE YELLOW CENTERLINE	RAISED PAVEMENT MARKER, INSTALLATION ONLY		
			WHITE	YELLOW		GORE	*							WHITE	YELLOW	
FROM	TO	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	LIN. FT.	EACH	EACH	
LAKELAND BLVD. (WB)	325+00.00	330+75.00		575	575											
	330+75.00	332+00.00			125											
	332+10.00								119							
	333+10.00								51	115						
	333+20.00	333+75.00				110	55			25		2				
	333+75.00	336+10.00					470					5	3			
	336+10.00	349+45.00			1335											
	349+45.00	350+80.00		135	135	270				100						
	350+80.00	356+85.00		605	1210											
	356+85.00	358+50.00		165	165	330										
	358+50.00	375+50.00			1700											
	375+60.00								100							
	376+35.00								31	100						
	376+45.00	376+95.00				100	50			35		1				
	376+95.00	379+35.00					480					3	2			
	379+35.00	388+60.00			925											
	388+60.00	389+40.00		80	80	160				50						
	389+40.00	390+20.00		80	80		80									
	390+20.00	398+30.00		810	1620											
	398+30.00	399+20.00		90	90	180										
402+99.55 BK STA EQUATION	399+20.00	402+99.55			380											
9+99.55 AH	9+99.55	21+10.00			1110											
	21+20.00									79						
S. WATERLOO RD.	150+05.00									64						
	151+55.00	152+10.00						55								
	152+10.00	159+25.00		715	715											
	159+25.00	160+40.00		115	115	230										
	160+40.00	166+25.00		585	1170											
	166+25.00	166+85.00		60	60	120				30						
	166+85.00	176+25.00		940	940											
	176+25.00	177+60.00			135											
	177+70.00								51	121						
	178+30.00								45	164						
	178+40.00	179+05.00		65	65	100	15			20		2		65		
	179+05.00	180+30.00	125		125		125					2	2			
	180+30.00	183+30.00	300		600											
	183+30.00	184+80.00	150		300		150	10				2	1			
	184+80.00	186+25.00	145		145	145		22								
	186+25.00	187+05.00	80													
	187+05.00	187+45.00		40												
	187+45.00	188+05.00		60		120				45						
	188+05.00	188+55.00	55		110		55	31				1	1	55		
<b>SHEET TOTALS</b>			855	5120	14010	1865	1535	241	862	305		18	9	120		
			= 1.13 MILE		=2.65 MILE	3,400								=0.02 MILE		

CALCULATED  
JL  
CHECKED  
EMK

PAVEMENT MARKING / RAISED PAVEMENT MARKER  
SUB-SUMMARY

CUY-90-23.93

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LOCATION	STATION		887					828					887	621		
			EDGE LINES		LANE LINES	CHANNELIZING LINES		STOP LINES	CROSSWALK LINES	TRANSVERSE LINES (WHITE)	TRANSVERSE LINES (YELLOW)	LANE ARROWS	WORD ON PAVEMENT 96"	SOLID DOUBLE YELLOW CENTERLINE	RAISED PAVEMENT MARKER, INSTALLATION ONLY	
			WHITE	YELLOW		GORE	*								WHITE	YELLOW
			FROM	TO	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	LIN. FT.	EACH
S. WATERLOO RD.	188+55.00	188+75.00	20		40								20			
	188+75.00	190+70.00	195		390					75			390			
	190+70.00	192+95.00	225		450								225			
	269+90.00								140							
	270+90.00	271+65.00	75				75									
	271+65.00	272+40.00	75	75			75									
	272+40.00	277+15.00	475	475	475											
	277+15.00	278+00.00	85	85	85	170										
	278+00.00	282+90.00	490	490	980											
		282+90.00	283+40.00	50	50	50	100				30					
	283+40.00	288+30.00	490	490	490											
288+40.00								39	109							
LAKELAND BLVD. (EB)	289+00.00								128							
	289+00.00	303+40.00		1440	1440											
	303+40.00	304+20.00		80	80	160										
	304+20.00	306+45.00		225	450											
	306+45.00	321+15.00		1470	1470											
	321+15.00	323+60.00		245	490											
	323+60.00	324+00.00		40	40	80				20						
	324+00.00	328+05.00		405	405											
	328+05.00	329+20.00						115				1	1			
	329+30.00							50	115							
	330+40.00								135							
	330+45.00	331+75.00			130											
	331+75.00	332+45.00			70		70									
	332+45.00	342+20.00			1950											
	342+20.00	343+70.00			150											
	343+70.00	348+85.00			515						235		515			
	348+85.00	350+05.00		120	120	240										
	350+05.00	356+85.00		680	1360											
	356+85.00	357+70.00		85	85	170				45						
	357+70.00	362+05.00			435											
	362+05.00	372+85.00			2160											
	372+85.00	374+75.00					570					8	5			
	374+75.00	375+35.00				120	120			30		3				
	375+45.00							48	117							
	376+20.00								111							
	376+20.00	378+15.00			195		145									
	378+15.00	385+35.00			1440											
	385+35.00	391+80.00			645											
	391+80.00	393+05.00		125	125	250										
	393+05.00	397+85.00		480	960											
	397+85.00	398+30.00		45	45	90				10						
403+00 BK	398+30.00	403+00.00			470											
STA EQUATION																
7+78.49 AH	7+78.49	8+90.00			112											
	8+90.00	14+85.00			1190											
	14+85.00	16+75.00					380									
	16+75.00							55	130							
<b>SHEET TOTALS</b>			2180	7105	19492	1380	1550	192	985	135	310	12	6	1150		
			= 1.76 MILE	=3.69 MILE		2,930				445				=0.22 MILE		

PAVEMENT MARKING/RAISED PAVEMENT MARKER SUB-SUMMARY

CUY-90-23.93

CALCULATED  
JL  
CHECKED  
EMK

# Material Furnished by the Department Installation Only

CALCULATED  
EMK  
CHECKED  
LDH

**MATERIALS SUPPLIED BY THE DEPARTMENT**

**CUY-90-23.93**

55  
79

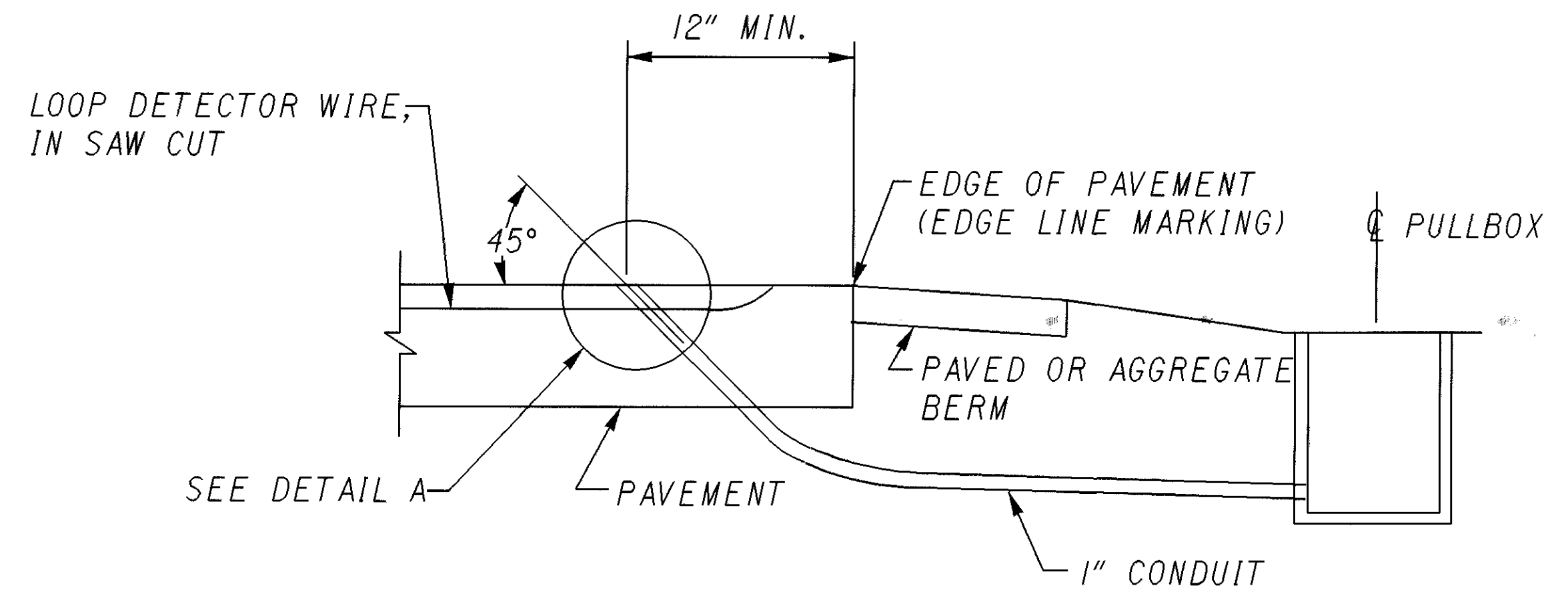
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18730TDA.DGN  
PLOTTED BY: fkonopka  
PLOTTED FROM: I:\PROJECTS\18730\dgn\18730tda.dgn

Description	One-Way White		One-Way Yellow		Two-Way White		Two-Way Yellow		Two-Way White-Red		Two-Way Yellow-Red	
	Cols.	Dist.	Cols.	Dist.	Cols.	Dist.	Cols.	Dist.	Cols.	Dist.	Cols.	Dist.
Raised Pavement Marker, Installation Only	1622								210		146	
<b>Total By Color</b>	<b>1622</b>								<b>210</b>		<b>146</b>	

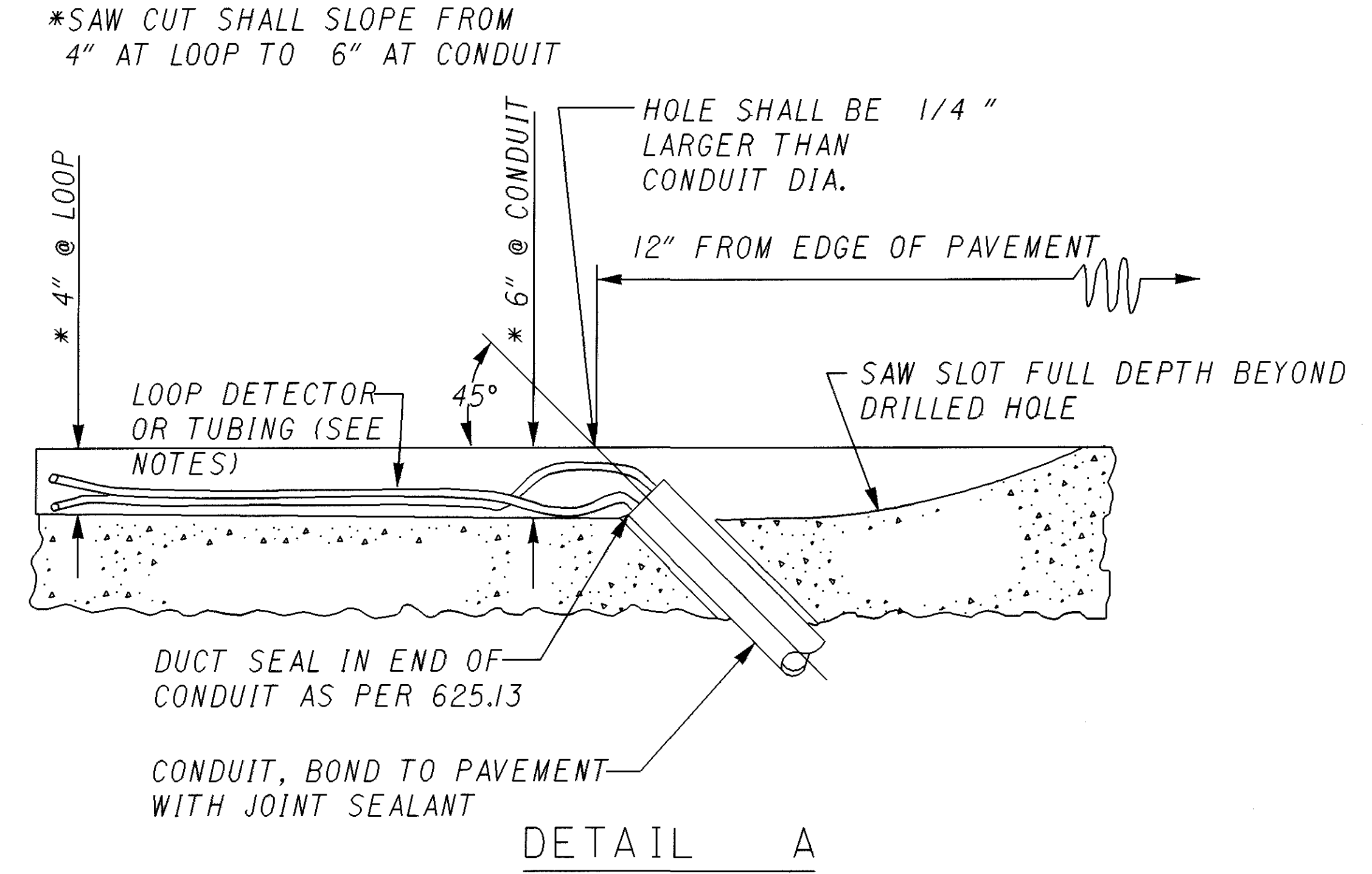
	Total	Number of Conventional High Profile	Number of Tapered Low Profile	District Stored	Columbus Stored
Raised Pavement Marker, Installation Only	<u>1978</u>	<u>1978</u>	_____	_____	<u>1978</u>
Raised Pavement Marker Casting, Installation Only	_____	_____	_____	_____	_____
Prismatic Retro-Reflectors	_____	_____	_____	_____	_____
Raised Pavement Marker Misc.: Replacement of Raised Pavement Marker	_____	_____	_____	_____	_____



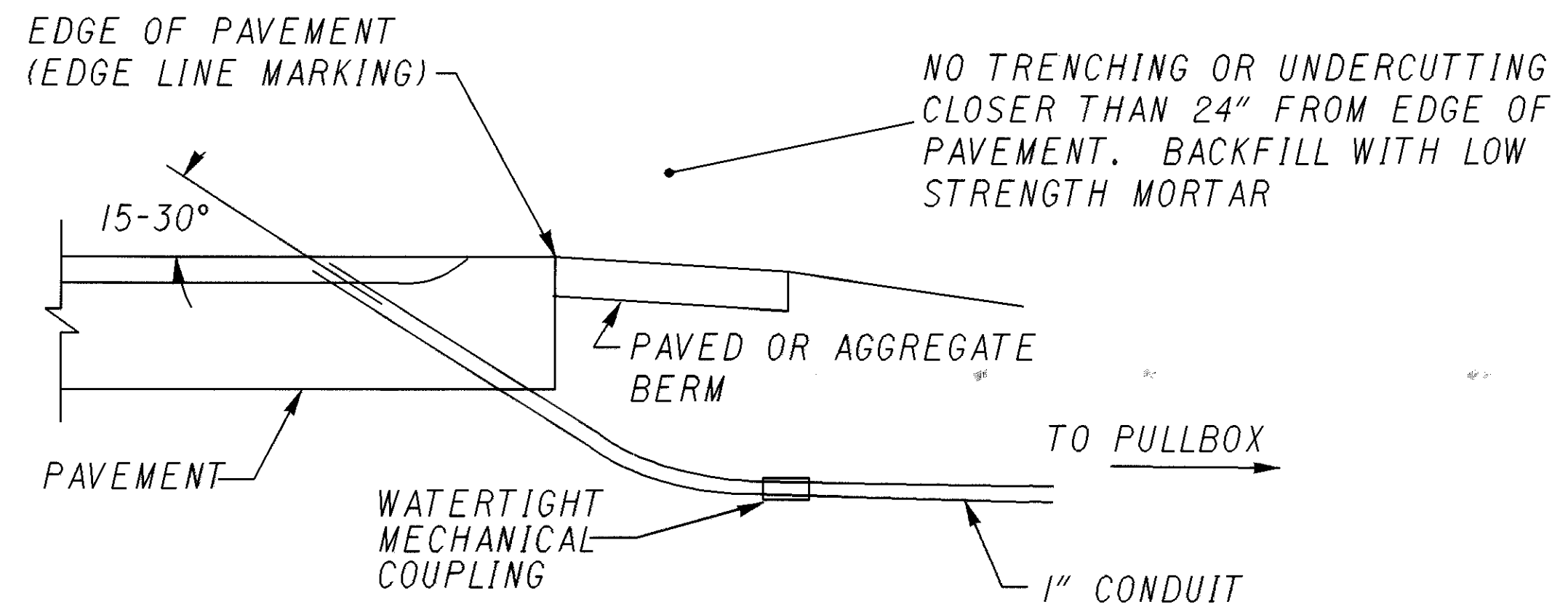
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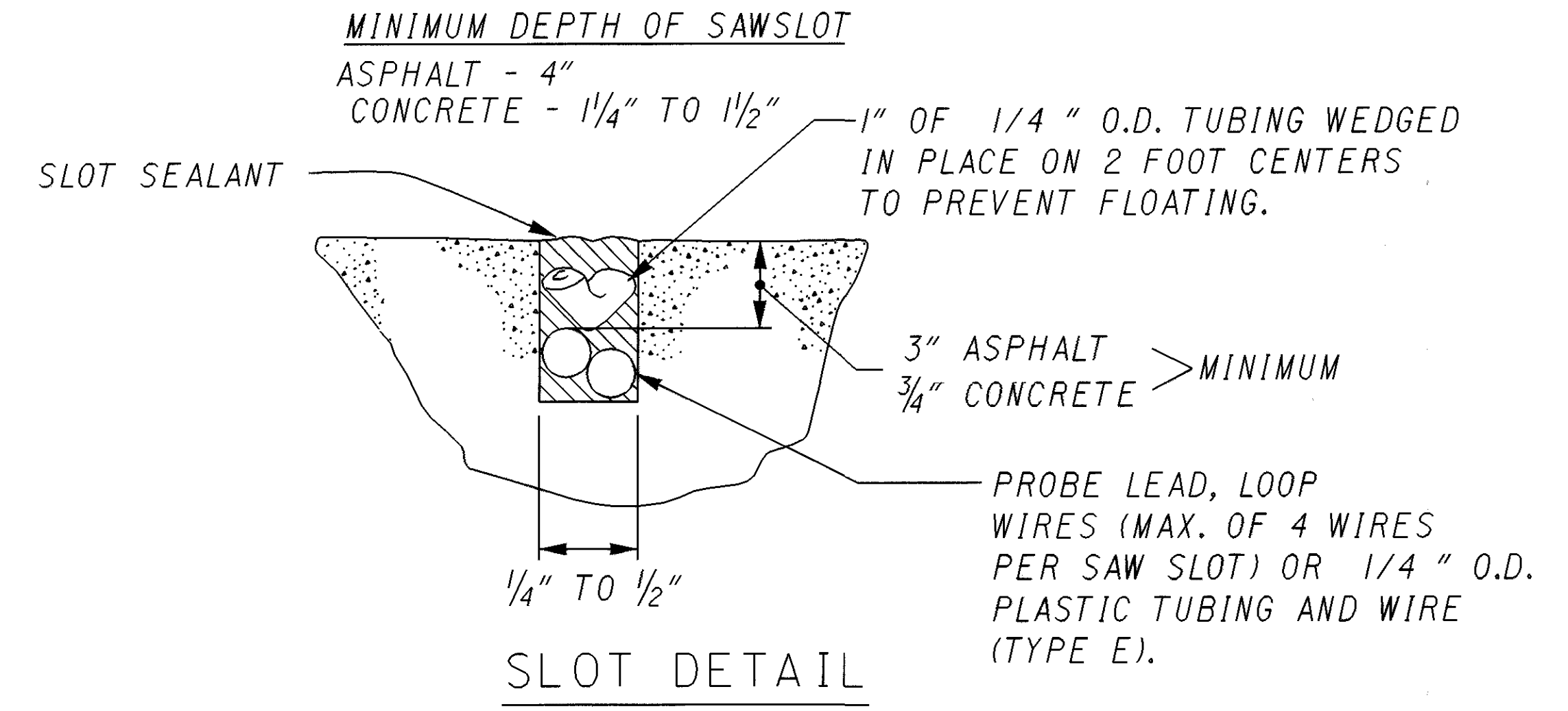
DRILLED HOLE LOCATION DETAIL WITH PAVED OR AGGREGATE BERM



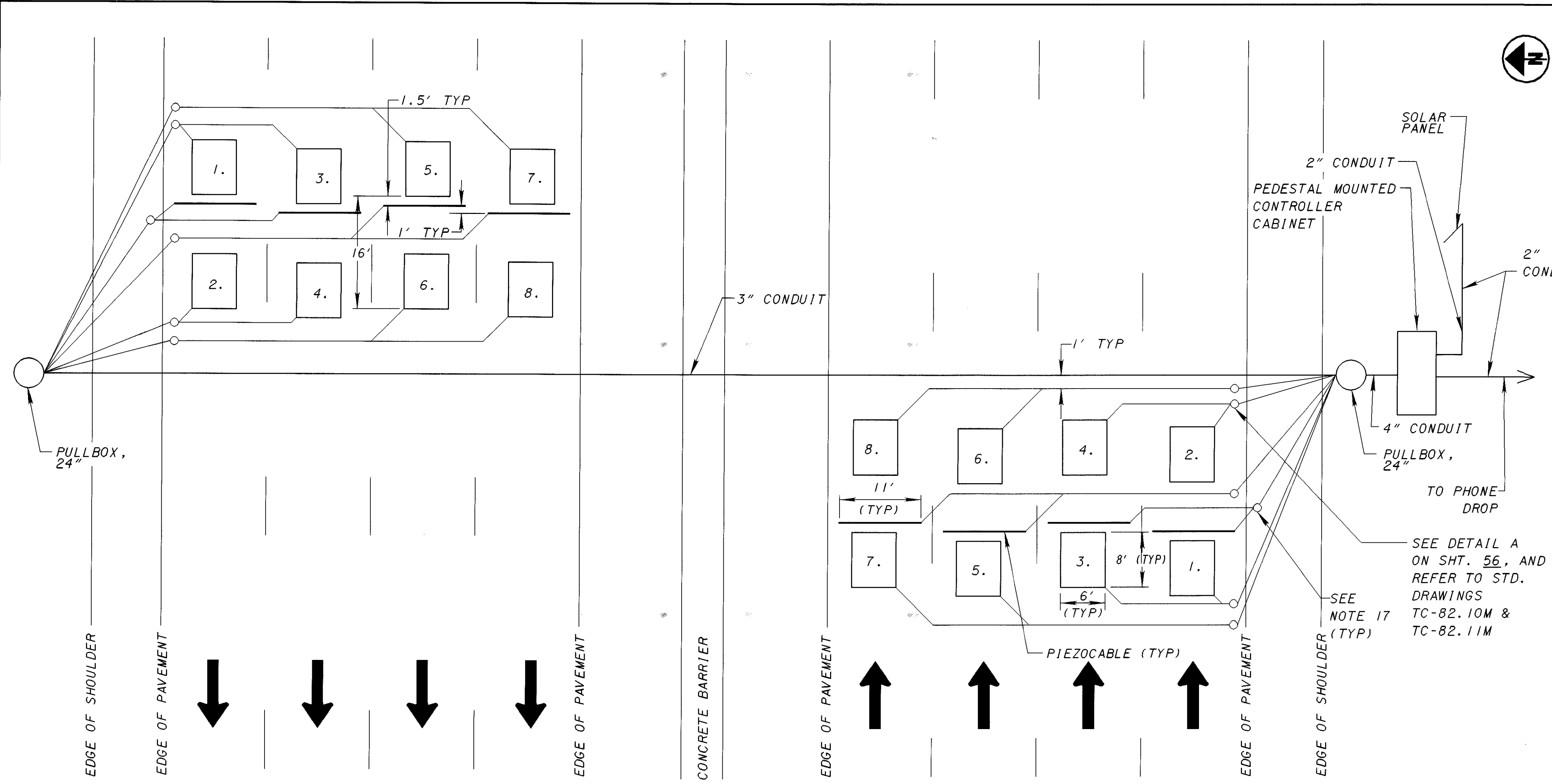
DETAIL A



ALTERNATE METHOD OF CONDUIT INSTALLATION



SLOT DETAIL



NOTES (CONT.)

5. ADJACENT LOOPS (TRANSVERSE AND LONGITUDINAL) SHALL BE INSTALLED IN OPPOSITE DIRECTIONS, I.E., LOOP 1 AND LOOP 4, CLOCKWISE, LOOP 2 AND LOOP 3 COUNTER-CLOCKWISE. EACH LOOP SHALL HAVE A SEPERATE LEAD-IN CABLE ROUTED TO THE CONTROLLER CABINET AND TAGGED. EACH PIEZOCABLE LEAD-IN CABLE SHALL BE TAGGED ALSO.
6. REFERENCE IS MADE TO STANDARD DRAWING HL-30.11M FOR DETAILS OF DRAINING PULLBOXES. UNDERDRAINS FOR PULLBOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 20'. AN ESTIMATED QUANTITY OF ITEM 603, 4" CONDUIT TYPE E IS INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE.
7. FIVE (5) WORKING DAYS PRIOR TO THE SCHEDULED INSTALLATION, THE CONTRACTOR SHALL CONTACT OFFICE OF TECH. SERVICES AT 614-466-3727.
8. ALL ITEMS SHALL CONFORM TO C&M SPECIFICATIONS 625, 713, 632, 732, 633 AND 733, UNLESS OTHERWISE SPECIFIED.
9. THE CONTROLLER WORK PAD SHALL BE 3 FT BY 4 FT BY 4 INCHES DEEP AND SHALL BE LEVEL.
10. LOOPS AND PIEZOCABLES SHALL BE CUT IN THE ASPHALT SURFACE COURSE. THEY SHALL NOT BE INSTALLED BETWEEN THE INTERMEDIATE AND SURFACE COURSES.
11. PIEZOCABLES SHALL BE INSTALLED WHEN THE TEMP. IS ABOVE 60 DEGREES FAHRENHEIT, OR SPECIAL PROVISION MADE TO ENSURE CURING OF EPOXY TAKES PLACE.
12. THE SOLAR PANEL SHALL BE INSTALLED WITH 2" RIGID CONDUIT MOUNTED IN CONCRETE BASE WITH PANEL BEING AT A MIN. HEIGHT ABOVE GROUND LEVEL OF 15'. SOLAR PANEL OUTPUT CABLE SHALL BE SECURED AND ROUTED TO THE INSIDE OF THE CABINET FOR CONNECTION TO TERMINAL BLOCK. SOLAR PANEL SHALL BE MOUNTED AT A 45° ANGLE FACING SOUTH AND WITHIN 2 FT OF THE CONTROLLER CABINET.
13. SOLAR PANEL SHALL BE A SOLAREX MODEL VLX 53 (53 WATTS) OR AN APPROVED EQUAL WITH MOUNTING HARDWARE AND CABLES.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND TESTING THE PHONE DROP INSIDE OF THE CONTROLLER CABINET. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHARGES INCURRED PRIOR TO THE TRANSFER OF THE TELEPHONE ACCOUNT. THE CONTRACTOR SHALL COORDINATE WITH ODOT, TELECOMMUNICATIONS, MR. MIKE WIGGINS (614-466-4442) TO TRANSFER THE TELEPHONE ACCOUNT AND THE BILLING RESPONSIBILITY FROM THE CONTRACTOR TO ODOT. PAYMENT WILL BE AT THE CONTRACT UNIT PRICE PER EACH ITEM 632 PHONE DROP AND SHALL INCLUDE ALL LABOR, MATERIAL, TOOLS AND EQUIPMENT FOR EACH INSTALLATION.
15. ALL SENSORS ARE TO BE TESTED BY O.D.O.T. PERSONNEL AFTER THE INSTALLATION IS COMPLETE SO AS TO VERIFY THAT THE STATION IS UP AND OPERATING PROPERLY. IF THE ELECTRONIC EQUIPMENT DOES NOT PERFORM PROPERLY BECAUSE OF A POORLY INSTALLED SENSOR, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF THE FAULTY SENSOR, AS SOON AS POSSIBLE AT HIS OWN COST.
16. THE CONTROLLER CABINET SHALL BE PLACED 30' FROM THE EDGE OF PAVEMENT, 6.5' BEHIND GUARDRAIL OR AS DIRECTED BY THE ENGINEER.
17. THE DRILLED CONDUIT HOLE FOR THE PIEZOCABLE SHALL BE AS PER TC-82.10M AND TC-82.11M EXCEPT THAT THE HOLE SHALL BE LOCATED ONE FOOT OUTSIDE THE EDGE OF PAVEMENT, EVEN IF THE SHOULDER COMPOSITION IS DIFFERENT FROM THE ROADWAY.
18. THE CONTRACTOR SHALL NOT SAW THE PAVEMENT OVER THE JACKED OR DRILLED CONDUIT OR SAW THE PAVEMENT ACROSS THE JACKED OR DRILLED CONDUIT.

LOCATION

IR-90, 1450' ± WEST OF E 222nd ST  
 AT STA. 315+00±, OR AS DIRECTED  
 BY THE ENGINEER

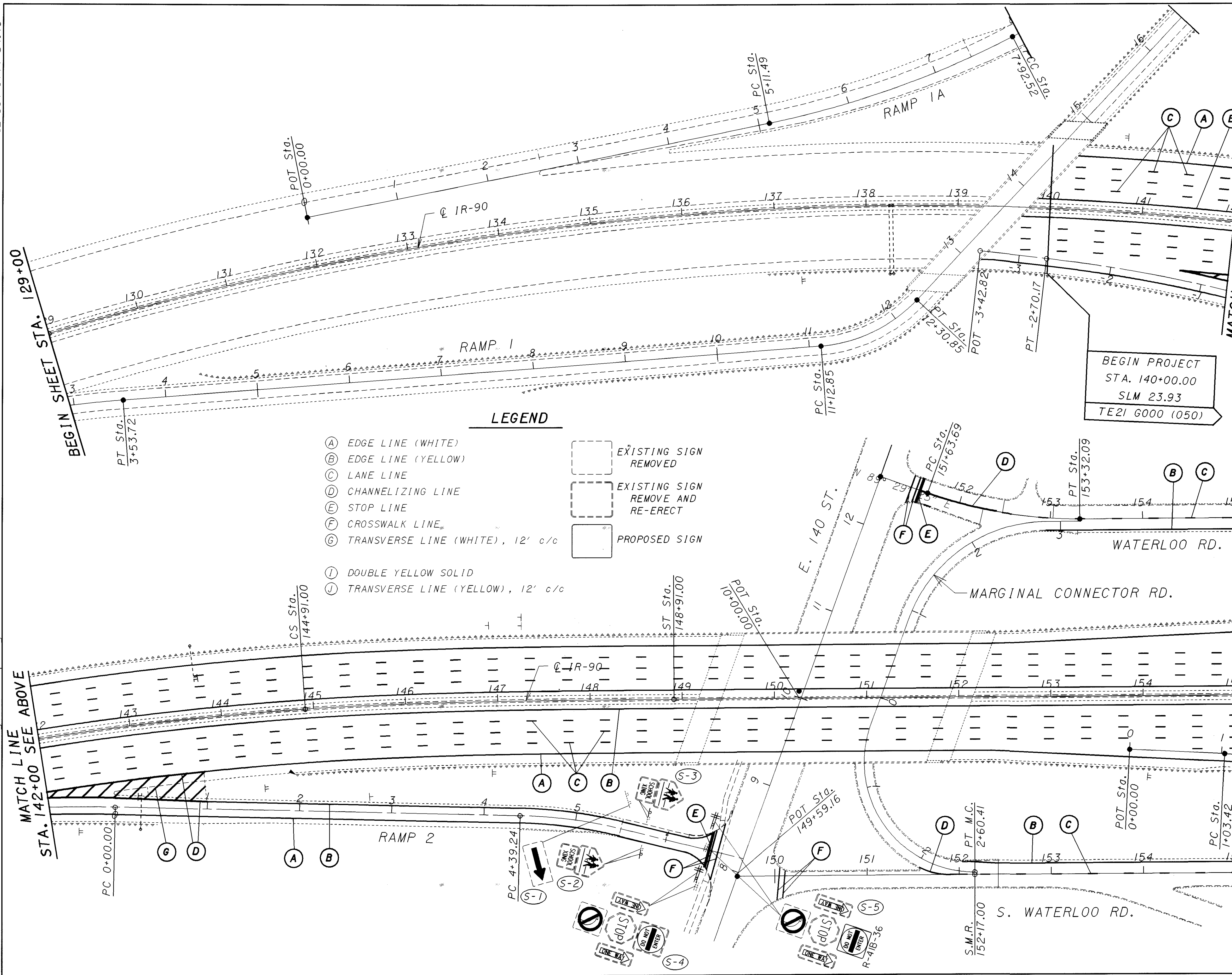
AUTOMATIC TRAFFIC RECORDER INSTALLATION  
 8 LANE SECTION

NOTES

1. ALL LOOPS SHALL BE 6' X 8'. LOOPS SHALL BE SPACED 16' FROM LEADING EDGE TO LEADING EDGE. INSTALLATION OF LOOPS SHALL CONFORM TO TC-82.10M AND TC-82.11M EXCEPT THAT LOOPS SHALL BE INSTALLED WITH FOUR (4) TURNS AND CUT AS PER SHEET 56.
2. THE PIEZOCABLE AXLE SENSOR SHALL BE MADE BY MEASUREMENT SPECIALTIES ROADTAX BRASS LINGUINI [BL] CLASS 1 AXLE SENSOR OR EQUIVALENT. THE 11 FOOT SENSOR SHALL BE CENTERED IN THE 12 FOOT LANE. PAYMENT WILL BE AT THE CONTRACT UNIT PRICE PER EACH ITEM SIGNALIZATION, MISC.: PIEZOCABLE AXLE SENSOR, CLASS 1 (11' IN LENGTH) AND SHALL INCLUDE THE LEAD IN CABLE, ALL MATERIAL, LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY FOR EACH INSTALLATION, IN PLACE COMPLETE AND ACCEPTED.  
  
 THE PIEZOCABLE LEADIN CABLE SHALL BE PURCHASED AT DIFFERENT LENGTHS AS PART OF THE SENSOR AND SHALL NOT BE SPLICED. INCLUDED IN THIS ITEM SHALL BE THE PAVEMENT CUTTING OF SLOTS, APPLICATION OF SEALANT, CONDUIT AND DRILLING.
3. THE ALUMINUM CONTROLLER CABINET SHALL BE A PEDESTAL MOUNTED NEMA SIZE 3.
4. CABLE AND WIRE SHALL BE IDENTIFIED IN ACCORDANCE WITH 632.04. IDENTIFICATION SHALL INCLUDE THE DIRECTION OF TRAVEL (I.E. NB, WB) AND THE LOOP NUMBER AS SHOWN. EACH CABLE AND WIRE SHALL HAVE 5' COILED IN THE CONTROLLER CABINET FOR CONNECTION TO THE DATA COLLECTION SYSTEM.

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
603	00400	40	LIN.FT.	4" CONDUIT, TYPE E
625	25400	100	LIN.FT.	CONDUIT, 2", 713.04
625	25600	17	LIN.FT.	CONDUIT, 4", 713.04
625	25900	146	LIN.FT.	CONDUIT, JACKED OR DRILLED, 3"
625	29000	117	LIN.FT.	TRENCH
625	30706	2	EACH	PULL BOX, 713.08, 24"
625	32000	1	EACH	GROUND ROD
632	26501	16	EACH	DETECTOR LOOP, AS PER PLAN A
632	63000	1	EACH	PHONE DROP
632	64020	1	EACH	PEDESTAL FOUNDATION
632	65200	1690	LIN.FT.	LOOP DETECTOR LEAD-IN CABLE
632	89800	1	EACH	PEDESTAL, 3' TRANSFORMER BASE
632	90400	8	EACH	SIGNALIZATION, MISC.: PIEZOCABLE AXLE SENSOR, CLASS 1 (11' IN LENGTH)
633	65001	1	EACH	CABINET WITHOUT CONTROLLER, AS PER PLAN, PREWIRED
633	70500	12	SQ. FT.	CONTROLLER WORK PAD
633	99000	1	EACH	CONTROLLER ITEM, MISC.: SOLAR PANEL

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 18730TPA.DGN  
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**LEGEND**

- (A) EDGE LINE (WHITE)
- (B) EDGE LINE (YELLOW)
- (C) LANE LINE
- (D) CHANNELIZING LINE
- (E) STOP LINE
- (F) CROSSWALK LINE
- (G) TRANSVERSE LINE (WHITE), 12' c/c
- (I) DOUBLE YELLOW SOLID
- (J) TRANSVERSE LINE (YELLOW), 12' c/c
- [Dashed Box] EXISTING SIGN REMOVED
- [Dashed Box with Arrow] EXISTING SIGN REMOVE AND RE-ERECT
- [Solid Box] PROPOSED SIGN

MATCH LINE STA. 142+00  
 SEE BELOW

MATCH LINE STA. 155+00  
 SEE SHEET 59

BEGIN PROJECT  
 STA. 140+00.00  
 SLM 23.93  
 TE21 G000 (050)

CROSS REFERENCE	
ITEM	SHEET
PLAN SHEET	22
PVMT. MARKING QTYS.	50-54
SIGN QUANTITIES	49

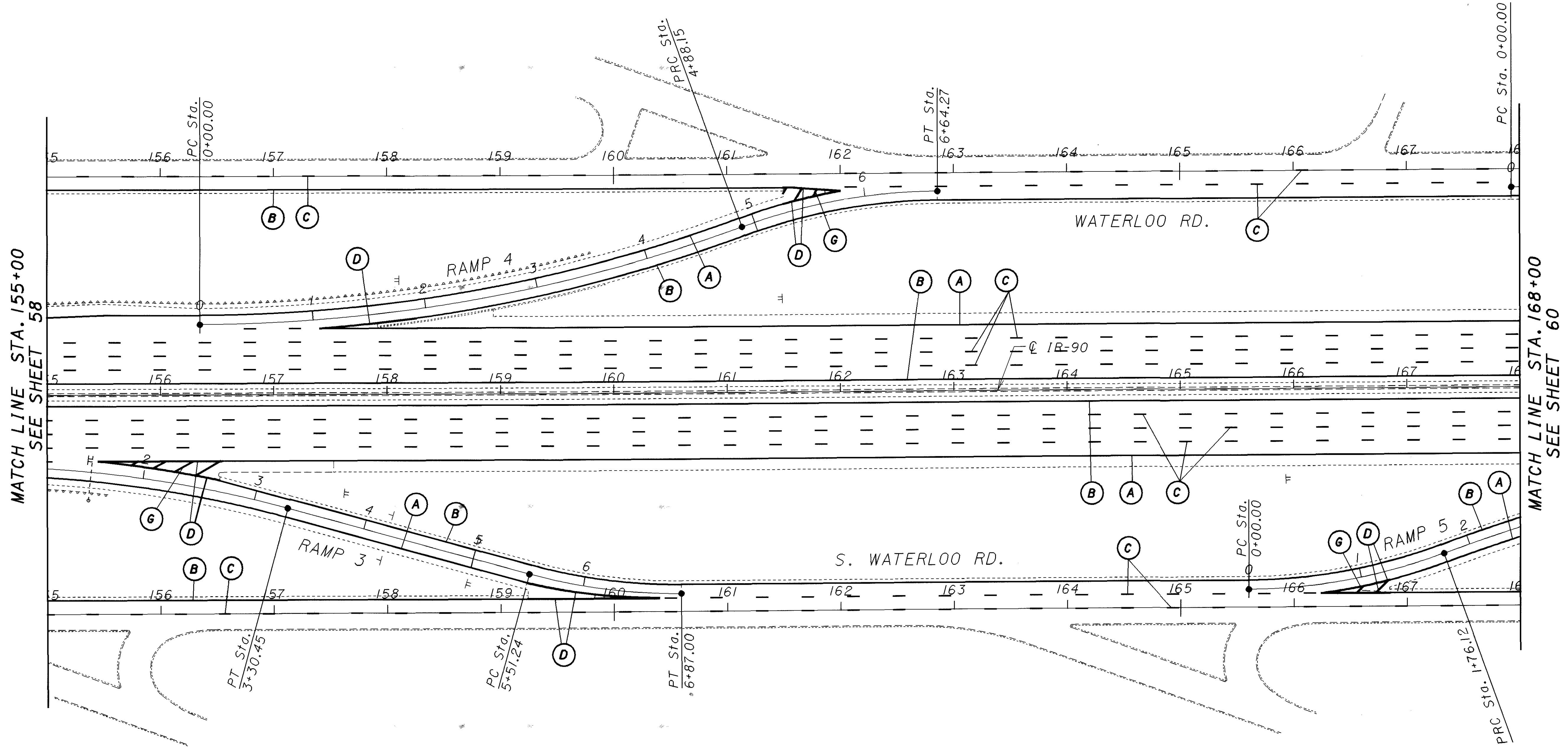
CUY-90-23.93

PAVEMENT MARKING LAYOUT - I.R. 90  
 STA. 129+00 TO STA. 155+00

SCALE IN FEET

CALCULATED EMK  
 CHECKED LDH

58  
 79



CROSS REFERENCE	
ITEM	SHEET
LEGEND	58
PLAN SHEET	23
PVMT. MARKING QTYS.	50-54

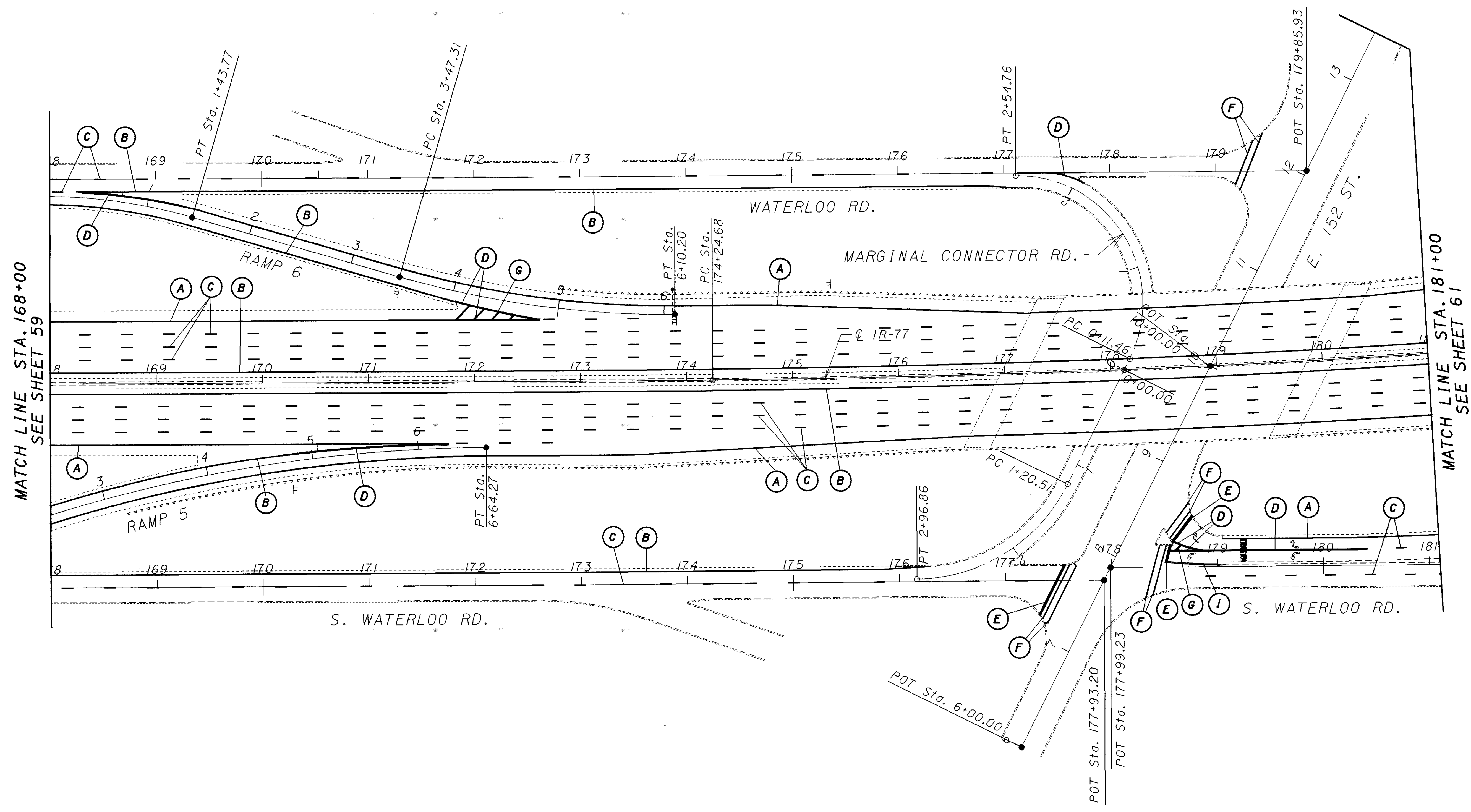
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EMK

CHECKED  
LDH

SCALE IN FEET

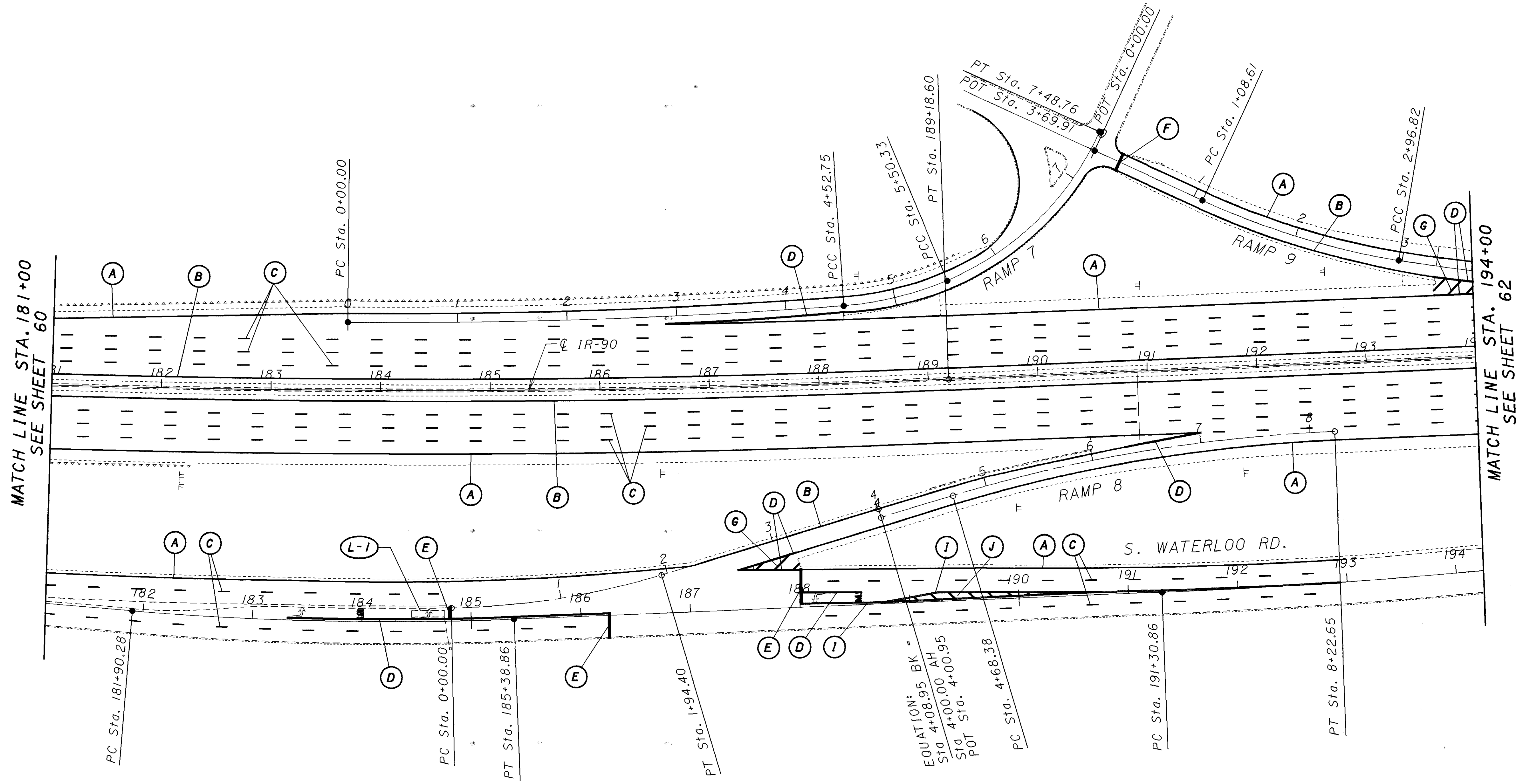
**PAVEMENT MARKING LAYOUT - I.R. 90**  
**STA. 155+00 TO STA. 168+00**

**CUY-90-23.93**



CROSS REFERENCE	
ITEM	SHEET
LEGEND	58
PLAN SHEET	24
PVMT. MARKING QTYS.	50-54

CALCULATED EMK  
 CHECKED LDH  
**PAVEMENT MARKING LAYOUT - I.R. 90**  
**STA. 168+00 TO STA. 181+00**  
**CUY-90-23.93**  
 60  
 79



CROSS REFERENCE	
ITEM	SHEET
LEGEND	58
PLAN SHEET	25
PVMT. MARKING QTYS.	50-54

CALCULATED  
EMK

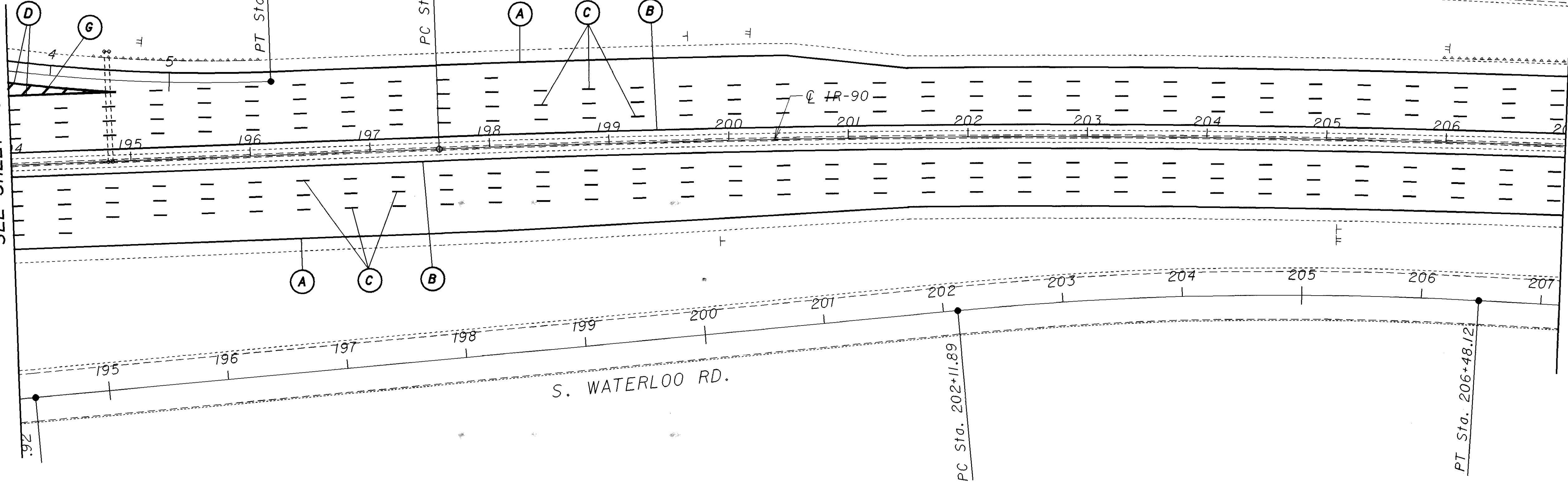
CHECKED  
LDH

SCALE IN FEET

**PAVEMENT MARKING LAYOUT - I.R. 90**  
**STA. 181+00 TO STA. 194+00**

**CUY-90-23.93**

MATCH LINE STA. 194+00  
 SEE SHEET 61



CROSS REFERENCE	
ITEM	SHEET
LEGEND	58
PLAN SHEET	26
PVMT. MARKING QTYS.	50-54

CUY-90-23.93

PAVEMENT MARKING LAYOUT - I.R. 90  
 STA. 194+00 TO STA. 207+00

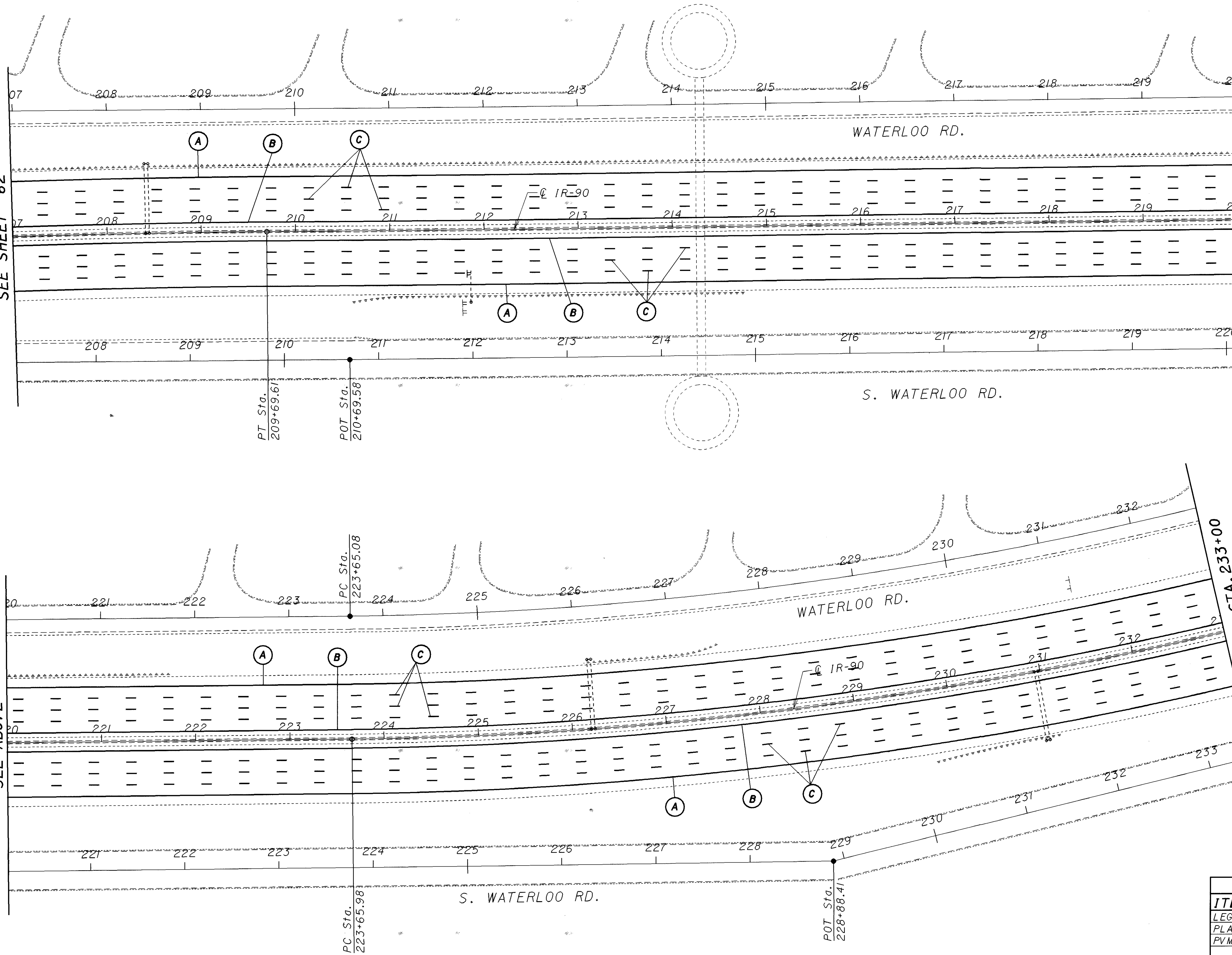
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EMK

CHECKED  
LDH

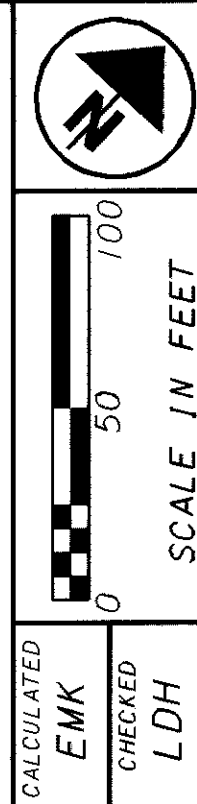
SCALE IN FEET

MATCH LINE STA. 207+00  
 SEE SHEET 62

MATCH LINE STA. 220+00  
 SEE ABOVE



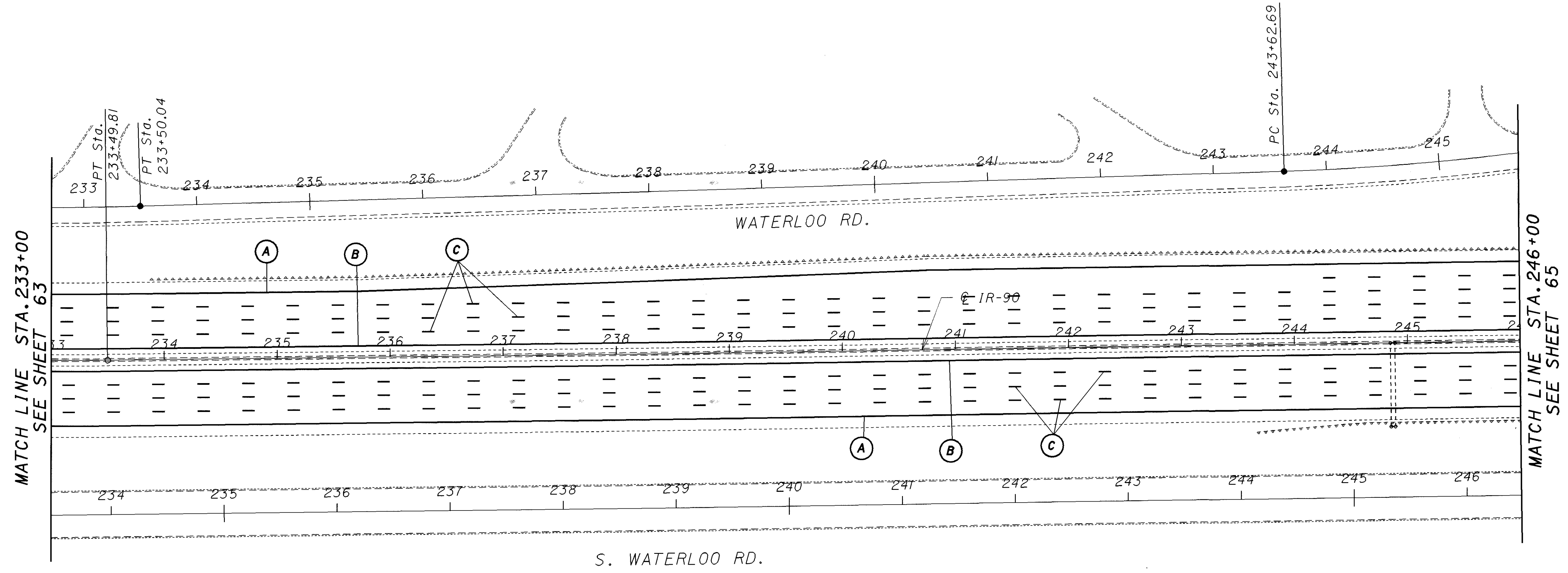
CROSS REFERENCE	
ITEM	SHEET
LEGEND	58
PLAN SHEET	27
PVMT. MARKING QTYS.	50-54



PAVEMENT MARKING LAYOUT - I.R. 90  
 STA. 207+00 TO STA. 233+00

CUY-90-23.93





MATCH LINE STA. 233+00  
 SEE SHEET 63

MATCH LINE STA. 246+00  
 SEE SHEET 65

CROSS REFERENCE	
ITEM	SHEET
LEGEND	58
PLAN SHEET	28
PVMT. MARKING QTYS.	50-54

CALCULATED  
EMK

CHECKED  
LDH

SCALE: 1 IN FEET

PAVEMENT MARKING LAYOUT - I.R. 90  
 STA. 233+00 TO STA. 246+00

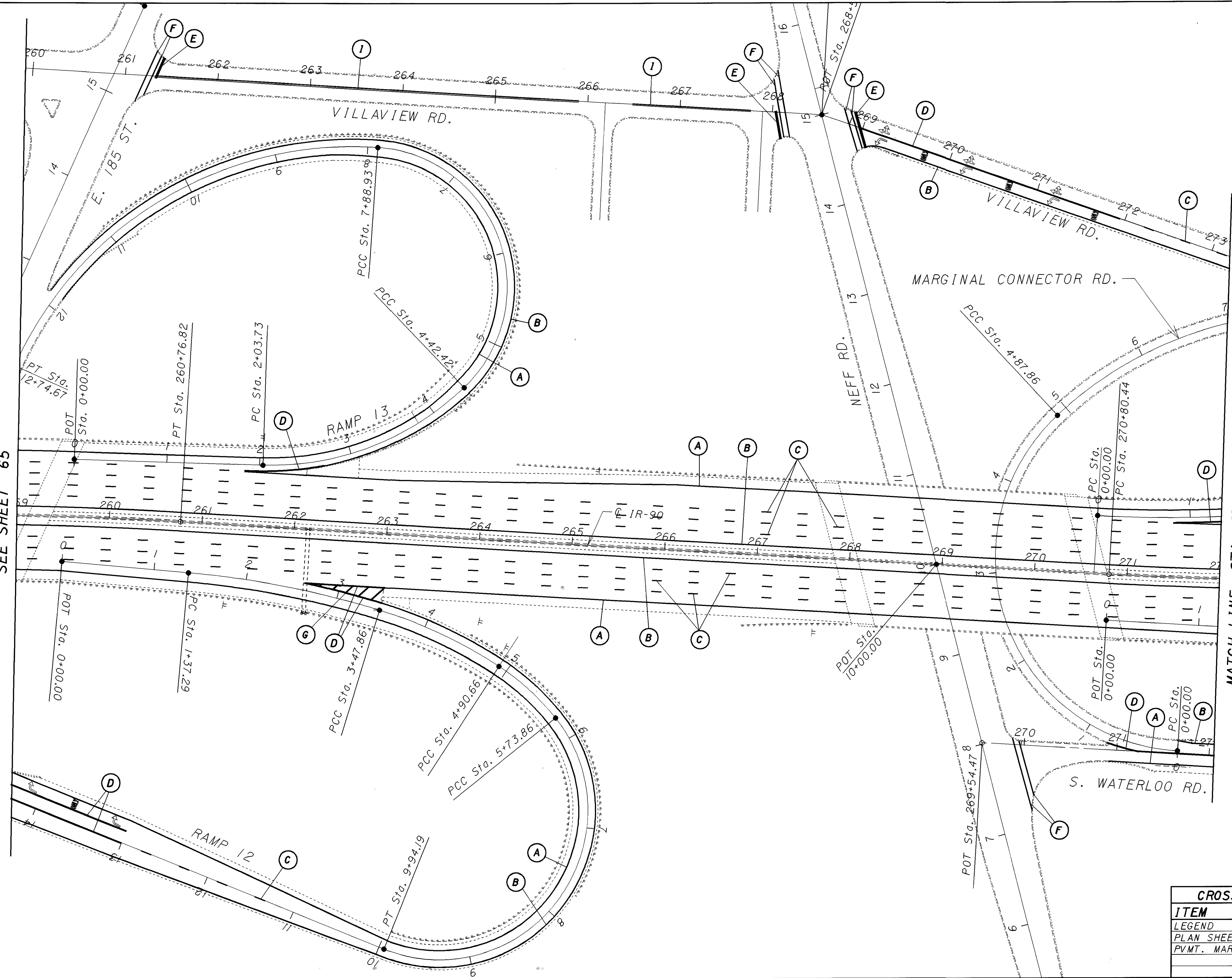
CUY-90-23.93

64  
79



MATCH LINE STA. 259+00  
 SEE SHEET 65

MATCH LINE STA. 272+00  
 SEE SHEET 67



CROSS REFERENCE	
ITEM	SHEET
LEGEND	58
PLAN SHEET	30
PVMT. MARKING QTYS.	50-54

CALCULATED  
EMK

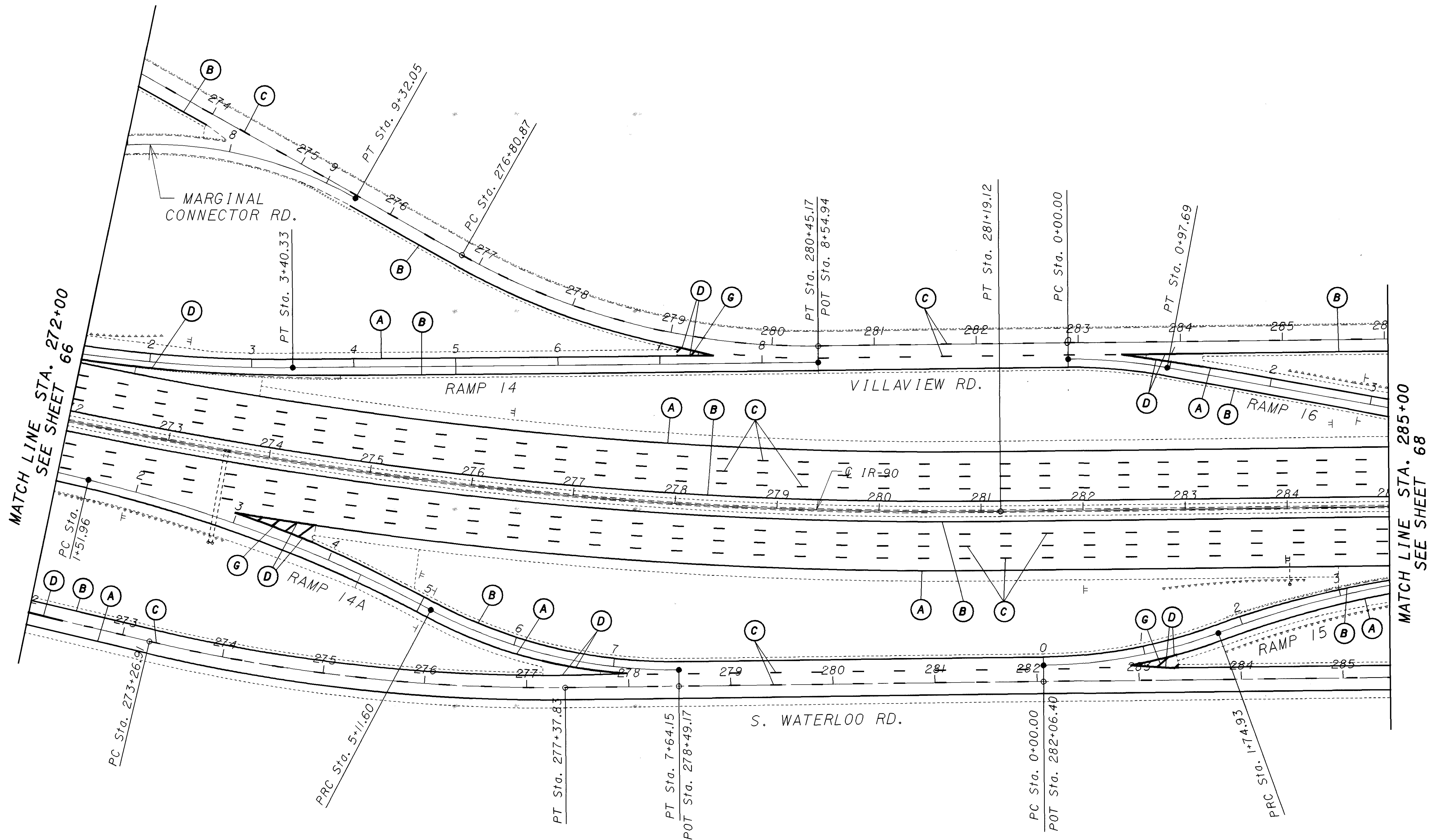
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LDH

SCALE IN FEET

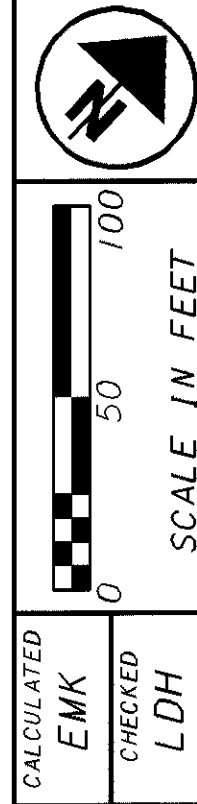
**PAVEMENT MARKING LAYOUT - I.R. 90**  
**STA. 259+00 TO STA. 272+00**

**CUY-90-23.93**

66  
79

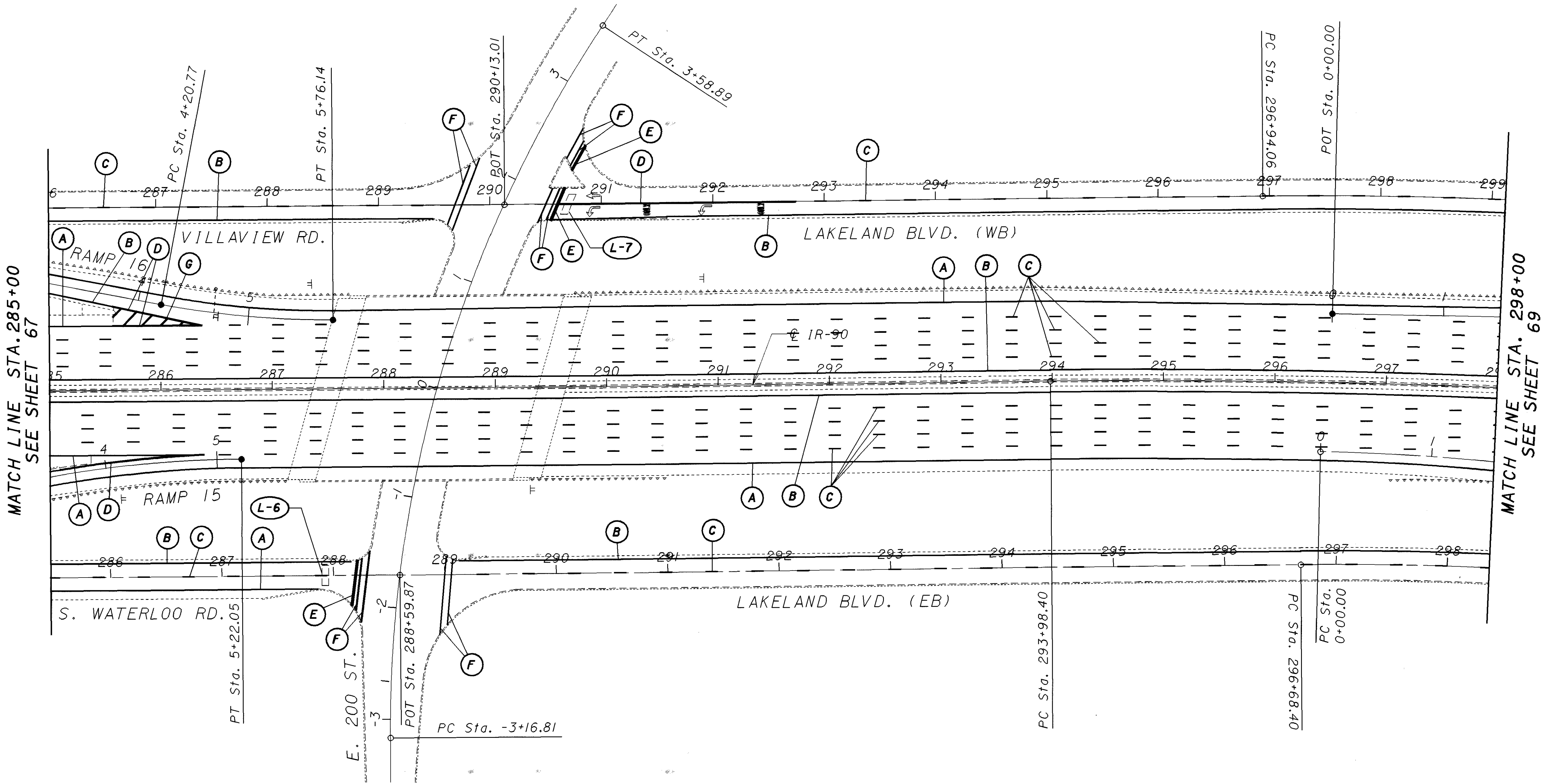


CROSS REFERENCE	
ITEM	SHEET
LEGEND	58
PLAN SHEET	31
PVMT. MARKING QTYS.	50-54

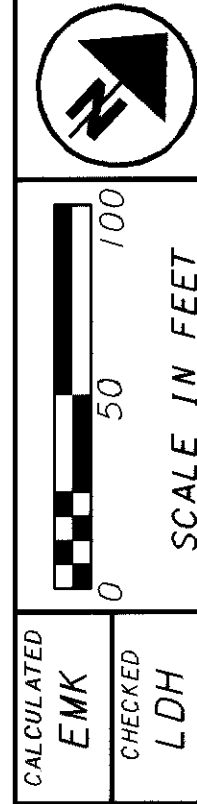


**PAVEMENT MARKING LAYOUT - I.R. 90**  
**STA. 272+00 TO STA. 285+00**

**CUY-90-23.93**

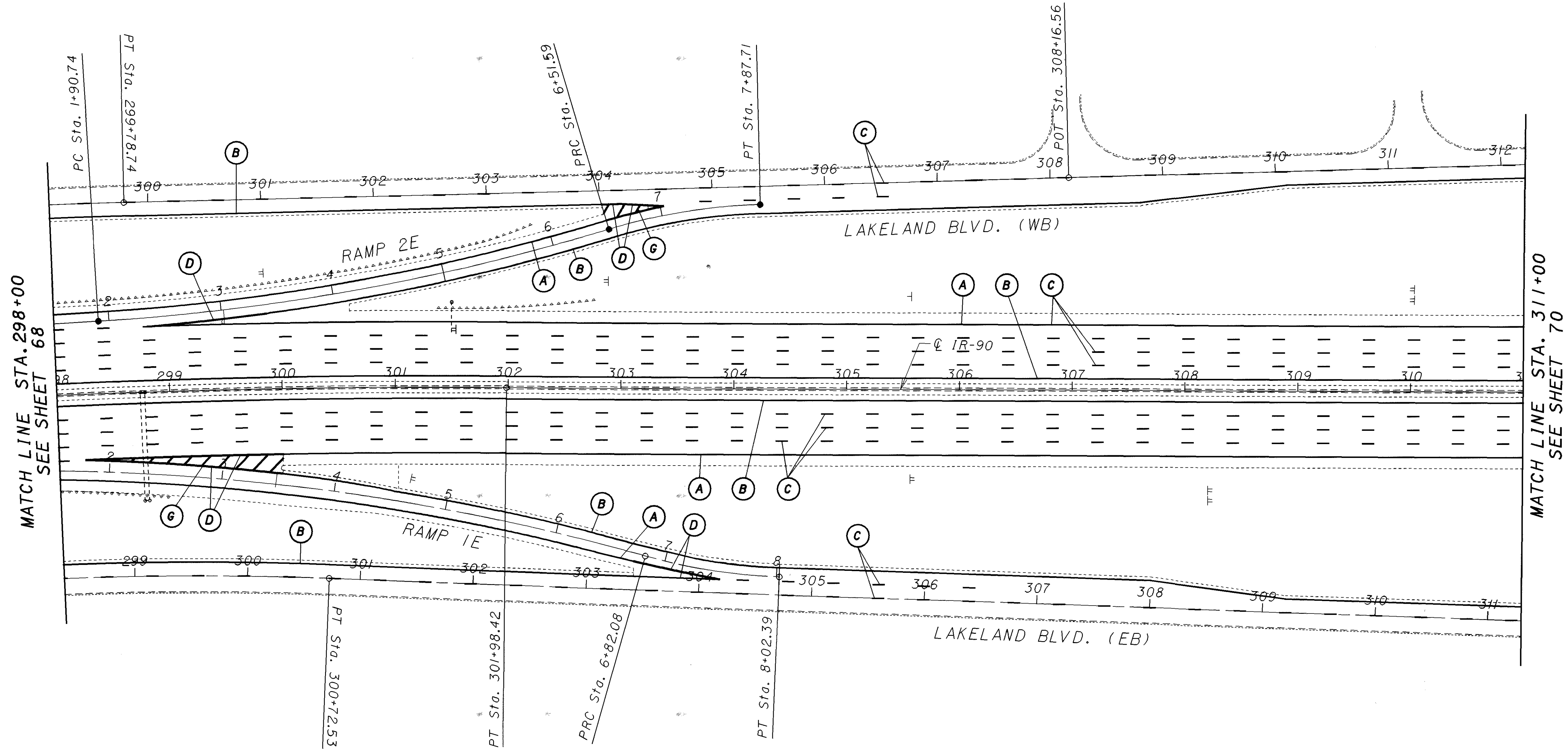


CROSS REFERENCE	
ITEM	SHEET
LEGEND	58
PLAN SHEET	32
PVMT. MARKING QTYS.	50-54



PAVEMENT MARKING LAYOUT - I.R. 90  
 STA. 285+00 TO STA. 298+00

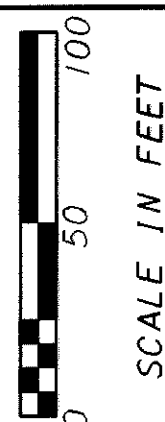
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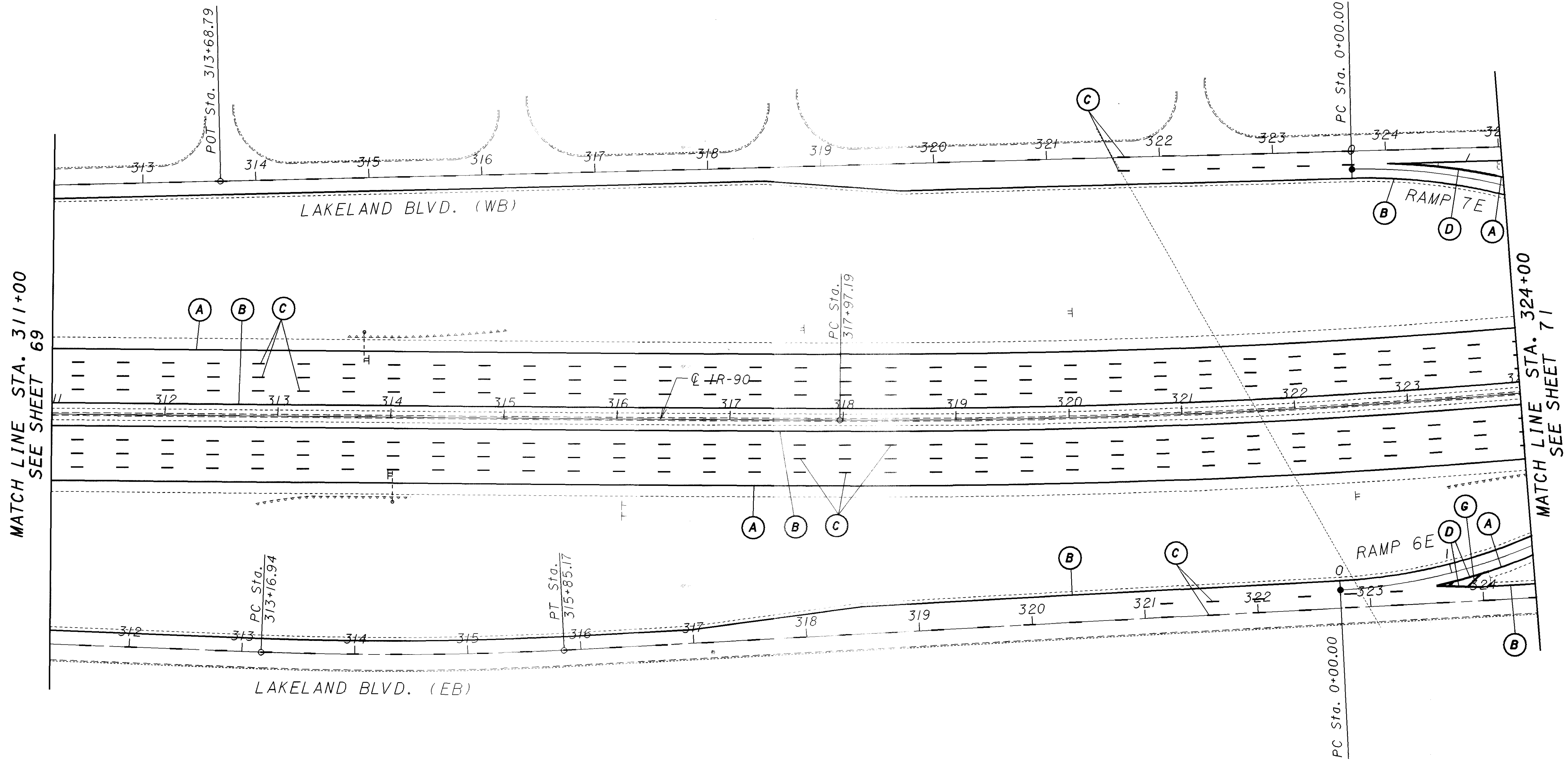


CROSS REFERENCE	
ITEM	SHEET
LEGEND	58
PLAN SHEET	33
PVMT. MARKING QTYS.	50-54

CALCULATED  
 EMK  
 CHECKED  
 LDH

**PAVEMENT MARKING LAYOUT - I.R. 90**  
**STA. 298+00 TO STA. 311+00**





MATCH LINE STA. 311+00  
 SEE SHEET 69

MATCH LINE STA. 324+00  
 SEE SHEET 71

CROSS REFERENCE	
ITEM	SHEET
LEGEND	58
PLAN SHEET	34
PVMT. MARKING QTYS.	50-54

CALCULATED  
EMK

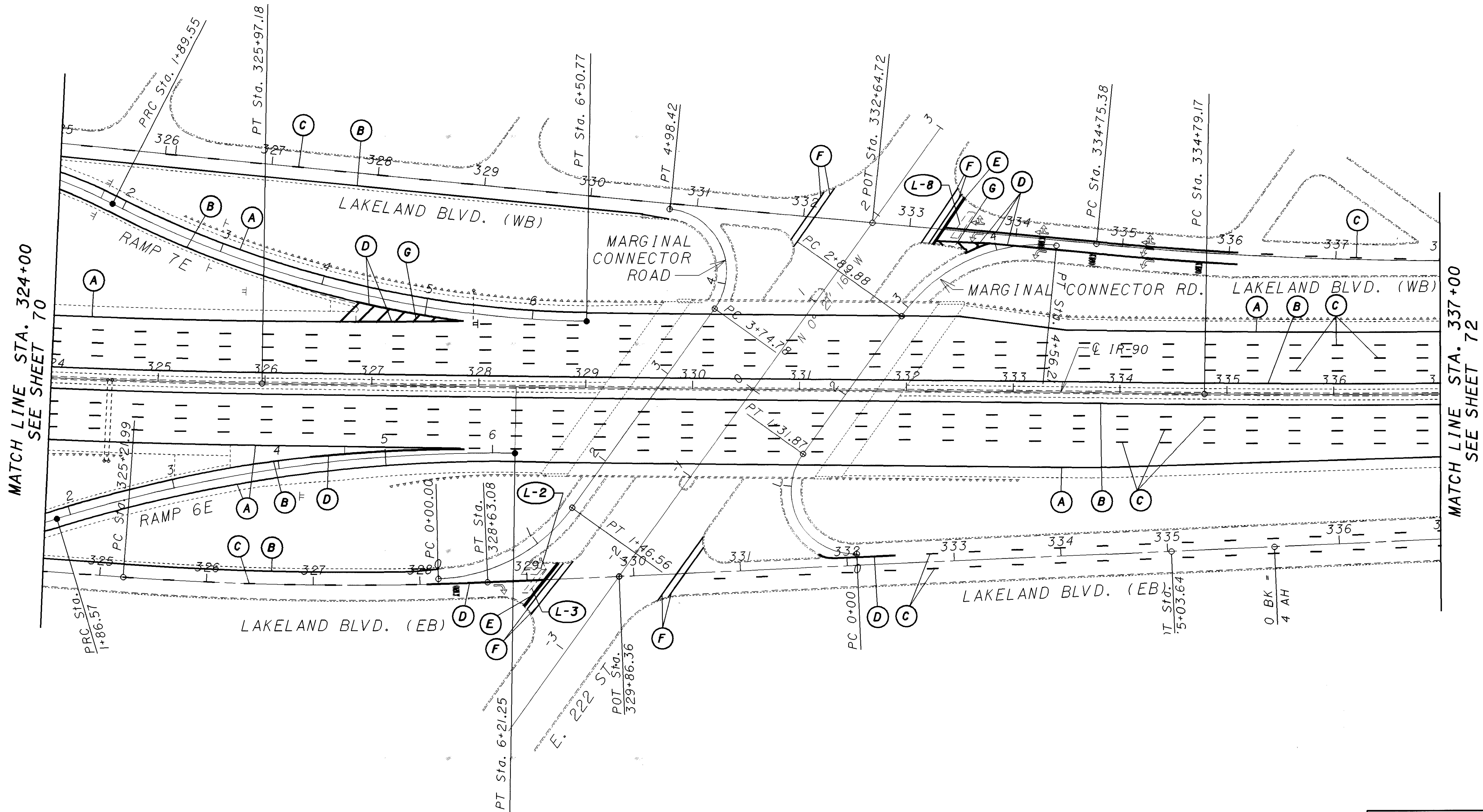
CHECKED  
LDH

SCALE IN FEET

**PAVEMENT MARKING LAYOUT - I.R. 90**  
**STA. 311+00 TO STA. 324+00**

**CUY-90-23.93**

70  
79



MATCH LINE STA. 324+00  
SEE SHEET 70

MATCH LINE STA. 337+00  
SEE SHEET 72

CROSS REFERENCE	
ITEM	SHEET
LEGEND	58
PLAN SHEET	35
PVMT. MARKING QTYS.	50-54

CALCULATED  
EMK

CHECKED  
LDH

SCALE: 1" = 100 FEET

**PAVEMENT MARKING LAYOUT - I.R. 90**  
**STA. 324+00 TO STA. 337+00**

**CUY-90-23.93**

71  
79



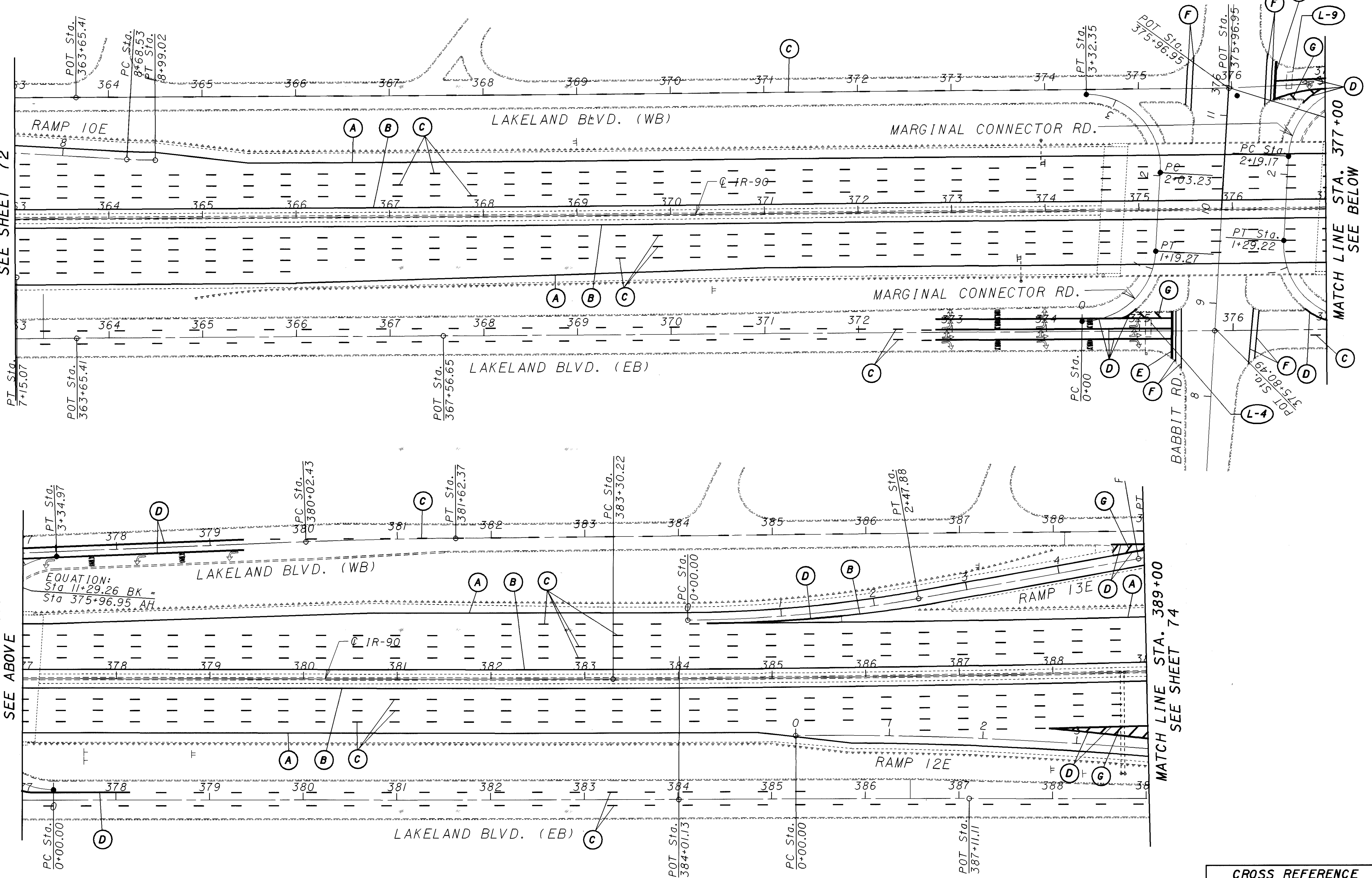


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 PLOT SUBMITTED: 12-OCT-1999 09:51

MATCH LINE STA. 363+00  
 SEE SHEET 72

MATCH LINE STA. 377+00  
 SEE ABOVE

MATCH LINE STA. 389+00  
 SEE SHEET 74



CROSS REFERENCE	
ITEM	SHEET
LEGEND	58
PLAN SHEET	37
PVMT. MARKING QTYS.	50-54

**PAVEMENT MARKING LAYOUT - I.R. 90**

**STA. 363+00 TO STA. 389+00**

**CUY-90-23.93**

CALCULATED  
EMK

CHECKED  
LDH

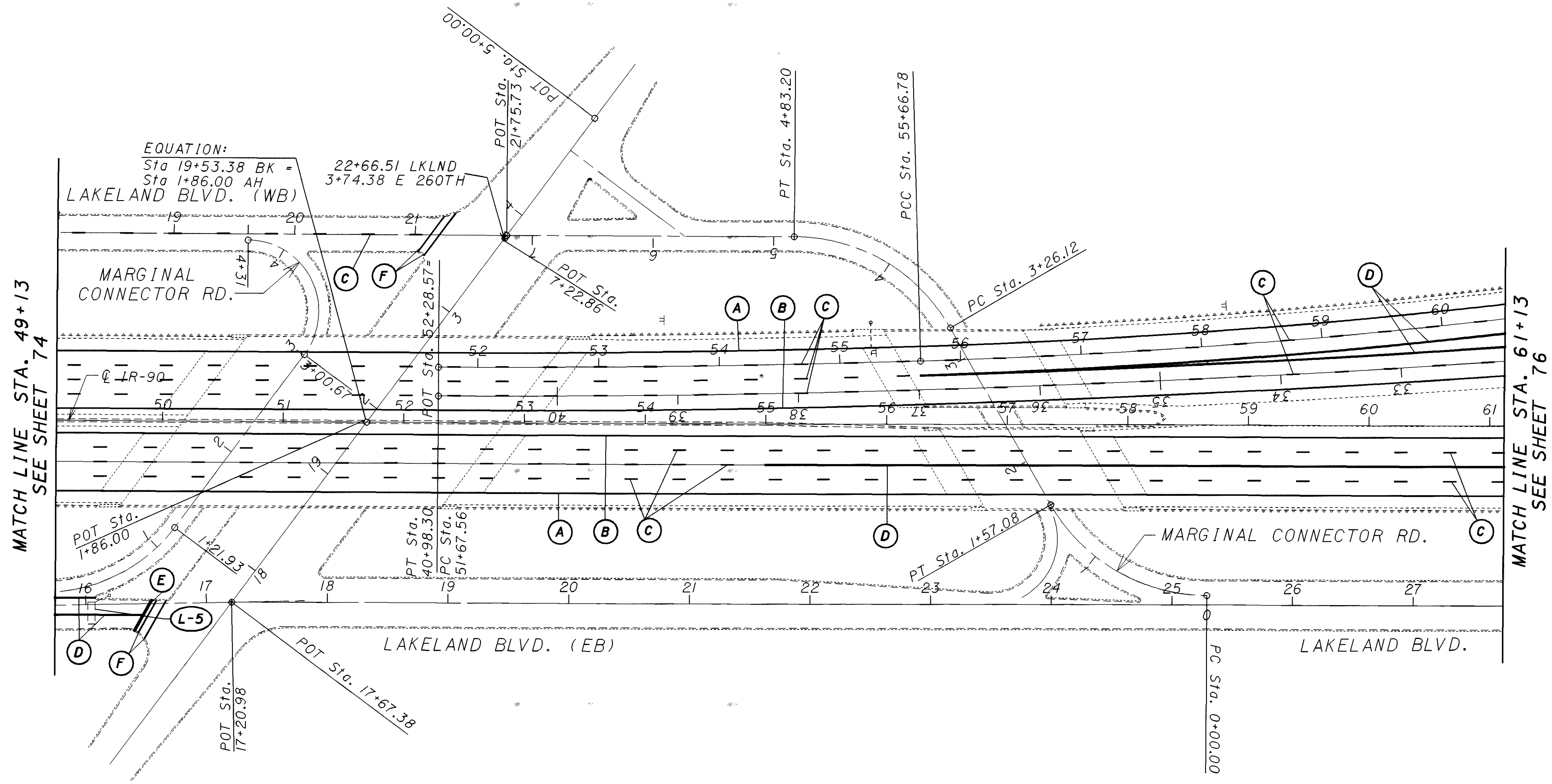
SCALE 1" = 40'

SCALE 1" = 100'

73

79





EQUATION:  
 Sta 19+53.38 BK = 22+66.51 LKND  
 Sta 1+86.00 AH = 3+74.38 E 260TH

MATCH LINE STA. 49+13  
 SEE SHEET 74

MATCH LINE STA. 61+13  
 SEE SHEET 76

CROSS REFERENCE	
ITEM	SHEET
LEGEND	58
PLAN SHEET	39
PVMT. MARKING QTYS.	50-54
	75
	79

CALCULATED  
EMK

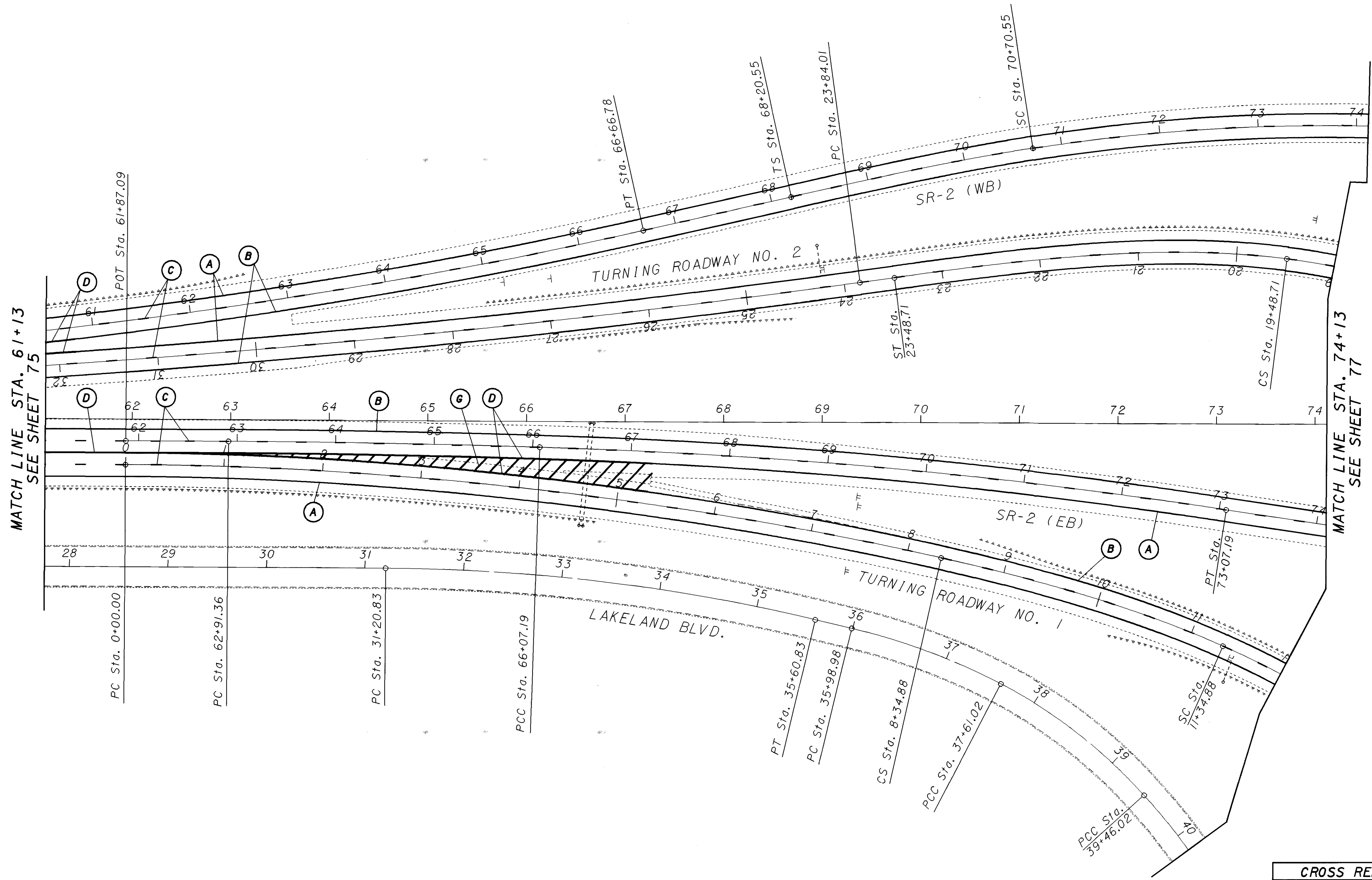
CHECKED  
LDH

SCALE IN FEET

**PAVEMENT MARKING LAYOUT**  
**STA. 49+13 TO STA. 61+13**

**CUY-90-23.93**

75  
79



CROSS REFERENCE	
ITEM	SHEET
LEGEND	58
PLAN SHEET	40
PVMT. MARKING QTYS.	50-54

CALCULATED  
EMK

CHECKED  
LDH

SCALE: 1 IN FEET = 100 FEET

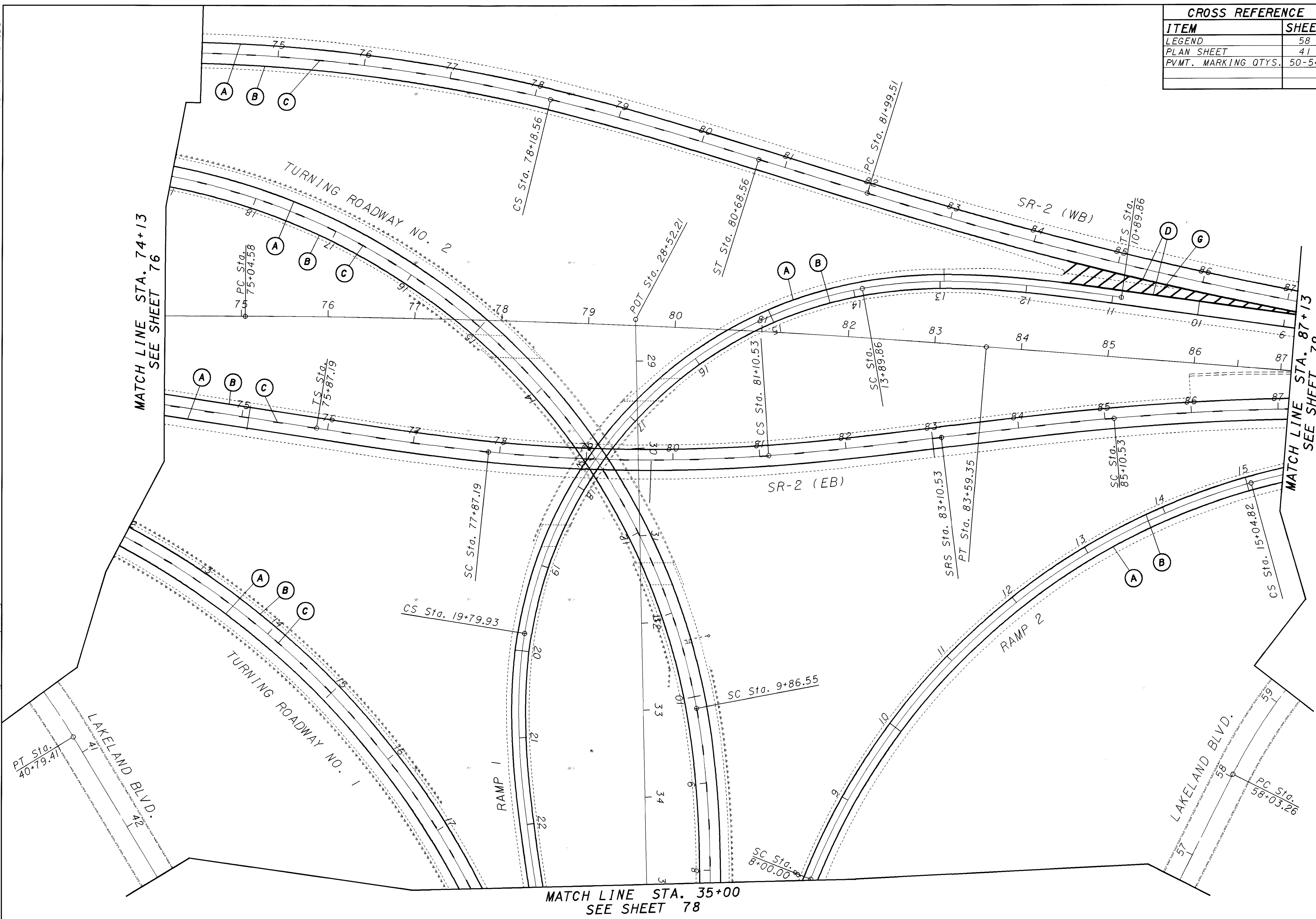
**PAVEMENT MARKING LAYOUT**  
**STA. 61+13 TO STA. 74+13**

**CUY-90-23.93**

PLOTTED BY: fkonopka  
 PLOTTED FROM: I:\PROJECTS\18730\18730.dgn  
 18730TPU.DGN  
 PLOT SUBMITTED: 12-OCT-1999 09:53

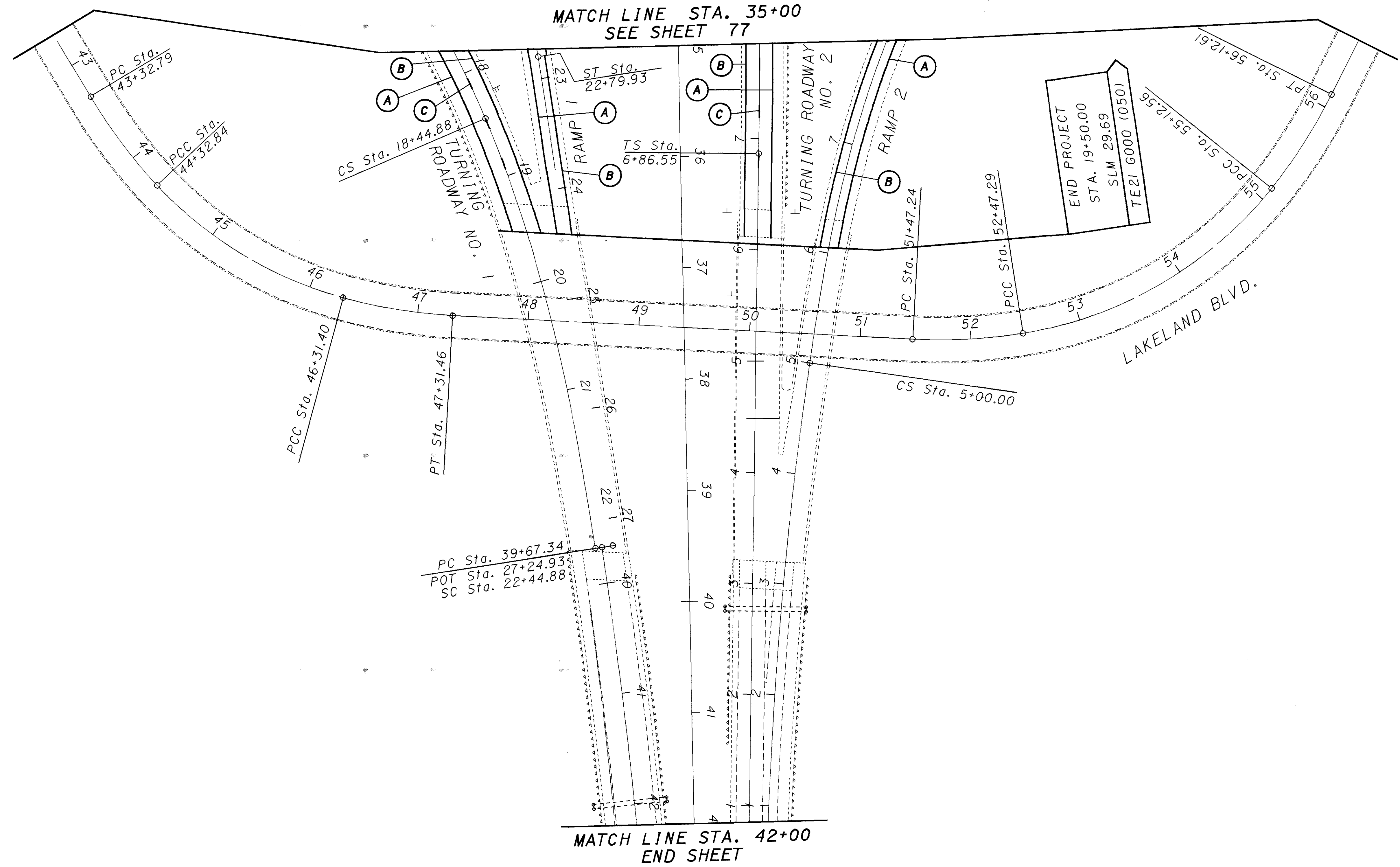
CROSS REFERENCE	
ITEM	SHEET
LEGEND	58
PLAN SHEET	41
PVMT. MARKING QTYS.	50-54

SCALE IN FEET  
 0 50 100  
 CALCULATED EMK  
 CHECKED LDH



**PAVEMENT MARKING LAYOUT  
 STA. 74+13 TO STA. 87+13**

**CUY-90-23.93**



MATCH LINE STA. 35+00  
SEE SHEET 77

MATCH LINE STA. 42+00  
END SHEET

CROSS REFERENCE	
ITEM	SHEET
LEGEND	58
PLAN SHEET	42
PVMT. MARKING QTYS.	50-54

CALCULATED  
EMK

CHECKED  
LDH

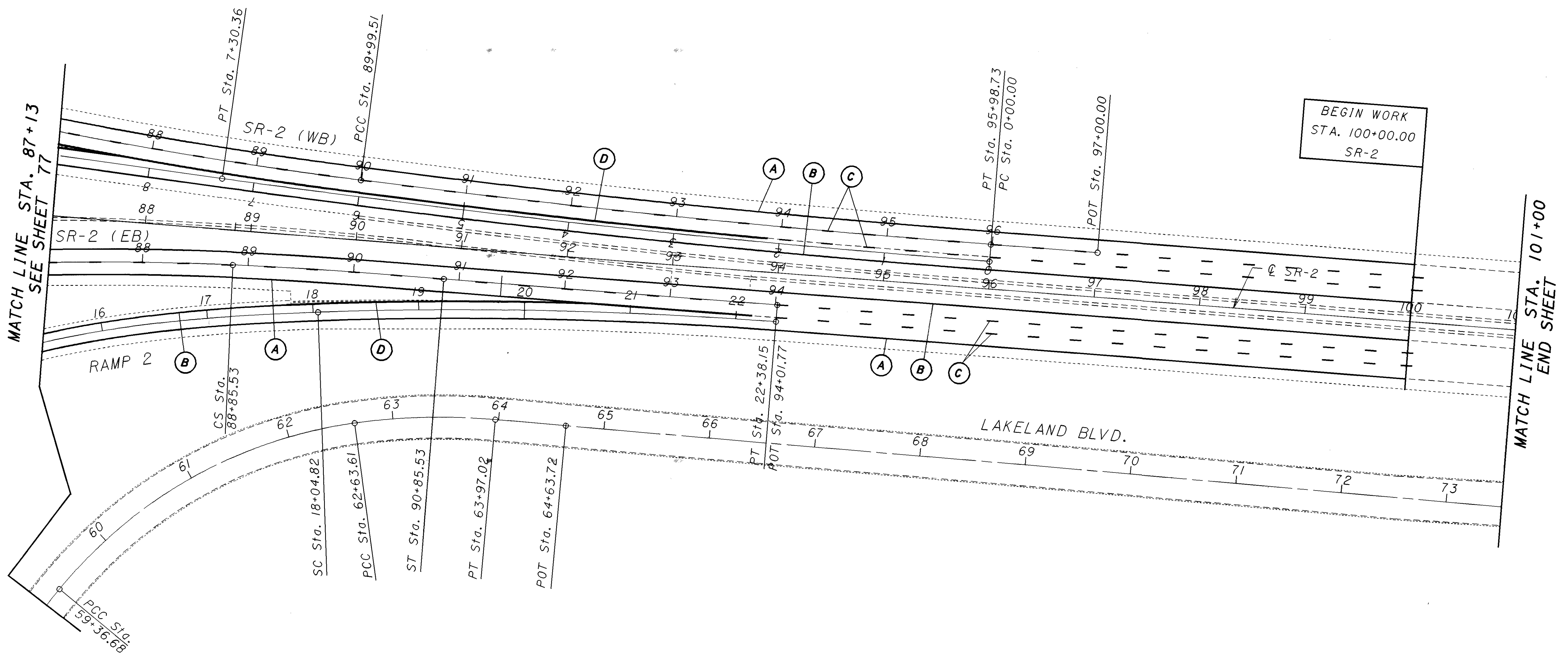
SCALE IN FEET

**PAVEMENT MARKING LAYOUT**  
**STA. 35+00 TO STA. 42+00**

**CUY-90-23.93**

78

79



CROSS REFERENCE	
ITEM	SHEET
LEGEND	58
PLAN SHEET	43
PVMT. MARKING QTYS.	50-54

CALCULATED  
EMK

CHECKED  
LDH

SCALE: 1 IN FEET

**PAVEMENT MARKING LAYOUT**  
**STA. 87+13 TO STA. 101+00**

**CUY-90-23.93**