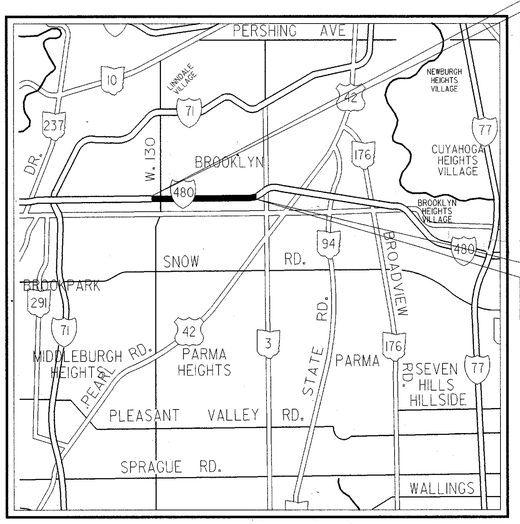
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

CUY-480-10.38

CITY OF CLEVELAND
CITY OF BROOKLYN
CUYAHOGA COUNTY



LOCATION MAP

SCALE IN MILES
0 1 2 3 4

PORTION TO BE IMPROVED
STATE & FEDERAL ROUTES
OTHER ROADS

DESIGN DESIGNATION

CURRENT ADT (1996)	114470
DESIGN YEAR ADT (2016)	137360
DESIGN HOURLY VOLUME (2016)	12362
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	8%
DESIGN SPEED	60 MPH
LEGAL SPEED	60 MPH

DESIGN FUNCTIONAL CLASSIFICATION - URBAN INTERSTATE

DESIGN EXCEPTIONS:

INDEX OF SHEETS:

SHEETS 113-115 NOT USED

PROJECT DESCRIPTION:

THIS PROJECT SHALL CONSIST OF MAJOR ROAD REHABILITATION OF IR-480 FROM WEST 130th STREET TO IDLEWOOD DRIVE. WORK SHALL ALSO INCLUDE APPROXIMATELY 5000 FT. OF PAVEMENT REPLACEMENT TO MAINTAIN EXISTING PROFILE. ITEMS INCLUDED SHALL BE CRACKING AND SEATING PLAIN CONCRETE, ASPHALT OVERLAY, GUARDRAIL, AND DRAINAGE.

LIMITED ACCESS

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

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.

APPROVED _____
DATE 4/28/97 DISTRICT DEPUTY DIRECTOR

FEDERAL PROJECT NO. IM-480-4(89)
PID NO. 13000
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVMENT NONE
CUYAHOGA COUNTY CUY-480-10.38
1 / 134

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 12
PRODUCTION

STANDARD CONSTRUCTION DRAWINGS

									SUPPLEMENTAL SPECIFICATIONS
BP-2.5	02-21-92	MC-4	07-26-76	TC-22.20	09-01-92				
BP-3.1	02-21-92	MC-9.1	10-30-92	TC-35.10	08-29-84				
BP-5.1	10-28-94	MC-9.3	10-30-92	TC-41.10	08-29-84				SPECIAL PROVISIONS-6/4/97
CB-6	05-01-79	MC-9.4		TC-41.20	07-01-92				
DM-1.1M	06-30-95	MC-11	08-01-78	TC-52.10	04-03-79				
DM-1.2M	06-30-95			TC-52.20	04-03-79				
GR-1.1	05-06-91	MT-95.30	10-10-88	TC-65.10	07-07-95				
GR-1.2	10-30-92	MT-95.40	10-01-92	TC-65.11	07-07-95				
GR-1.3	02-21-92	MT-98.13	06-24-93	TC-71.10	09-10-91				
GR-2.1	05-06-91	MT-98.14	06-24-93	TC-72.20	02-26-82				
GR-3.1	05-06-91	MT-98.16	06-24-93	TC-82.10	08-29-84				
GR-3.2	05-06-91	MT-99.10	11-14-86						
GR-4.2	05-06-91	MT-99.20	04-29-88						
		MT-102.10	08-25-89						
I-2A	12-18-84	MT-105.10	07-01-92						
I-3A&B	04-01-80	MT-105.11	07-01-92						

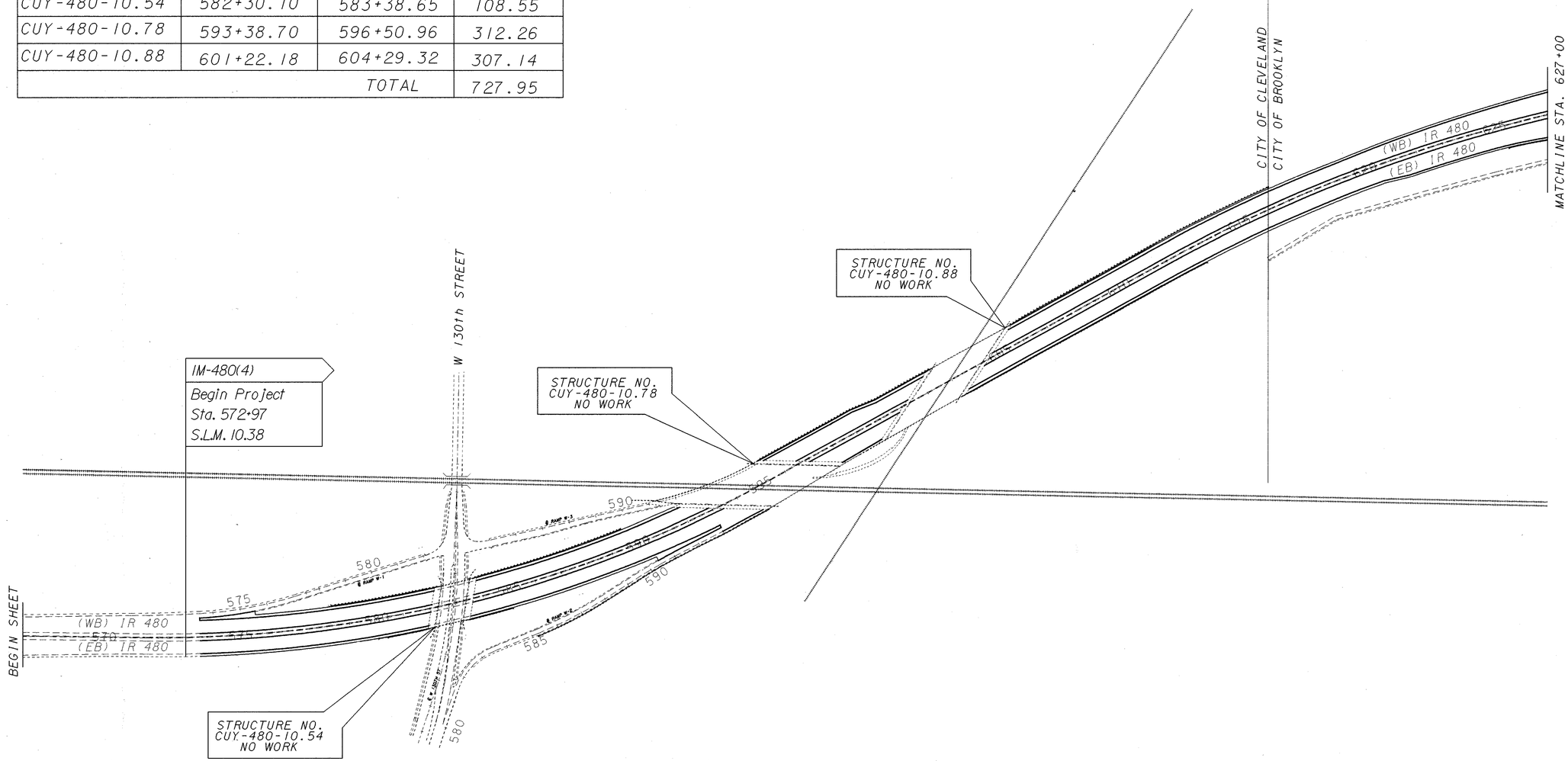
UNDER AUTHORITY OF SECTION 4511.21, DIVISION (I) OF THE REVISED CODE OF OHIO, THE REVISED PRIMA FACIE SPEED LIMITS AS INDICATED HEREIN ARE DETERMINED TO BE REASONABLE AND SAFE, AND ARE HEREBY EASTABLISHED FOR THE DURATION OF THIS PROJECT. THE PRIMA FACIE SPEED LIMIT OR LIMITS HEREBY ESTABLISHED SHALL BECOME EFFECTIVE WHEN APPROPRIATE SIGNS GIVING NOTICE THEREOF ARE ERECTED.

APPROVED _____
DATE 4-28-97 DIRECTOR, DEPARTMENT OF TRANSPORTATION

DEDUCTIONS FOR STRUCTURES			
BRIDGE NUMBER	STATION		LENGTH (FT.)
	SUSPEND	RESUME	
CUY-480-10.54	582+30.10	583+38.65	108.55
CUY-480-10.78	593+38.70	596+50.96	312.26
CUY-480-10.88	601+22.18	604+29.32	307.14
		TOTAL	727.95

℄ IR-480 CURVE DATA

△=44°06'29"
R=5729.58'
T=2321.19'
D=01°00'00"
L=4410.81'
P.C.=STA. 611+43.51
P.T.=STA. 655+54.32



℄ IR-480 CURVE DATA

△=29°46'15"
R=4583.66'
T=1218.37'
D=1°15'00"
L=2381.67'
P.C.=STA. 571+52.74
P.T.=STA. 595+34.41

SCALE IN FEET 0 200 400

DRAWN KAS
REVISED XXX
CALCULATED KAS
CHECKED ENF

SCHEMATIC PLAN
IR-480
STA. 572+97 TO STA. 627+00

CUYAHOGA COUNTY
CUY-480-10.38

2
134

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PLOTTED FROM: i:\users\lhazapis\pid13000\13000gsa.dgn
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℄ IR-480 CURVE DATA

Δ= 44°06'29"
R=5729.58'
T=2321.19'
D=01°00'00"
L=4410.81'
P.C.=STA. 611+43.51
P.T.=STA. 655+54.32

DEDUCTIONS FOR STRUCTURES

BRIDGE NUMBER	STATION		LENGTH (FT.)
	SUSPEND	RESUME	
CUY-480-11.69	643+18.36	644+31.62	113.26
		TOTAL	113.26

SCHEMATIC PLAN
IR-480
STA. 627+00 TO STA. 685+00

CUYAHOGA COUNTY
CUY-480-10.38

CALCULATED KAS
CHECKED ENF.
DRAWN KAS
REVISED XXX

SCALE IN FEET 0 200 400

3
134

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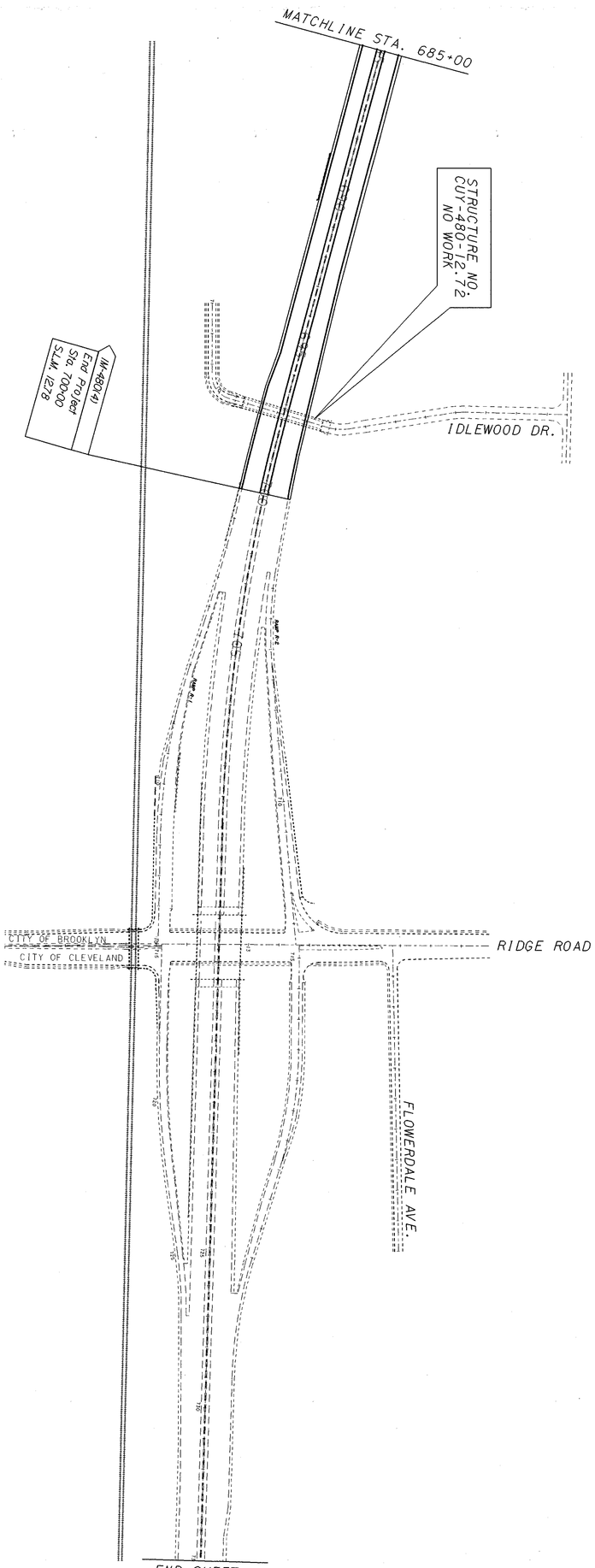
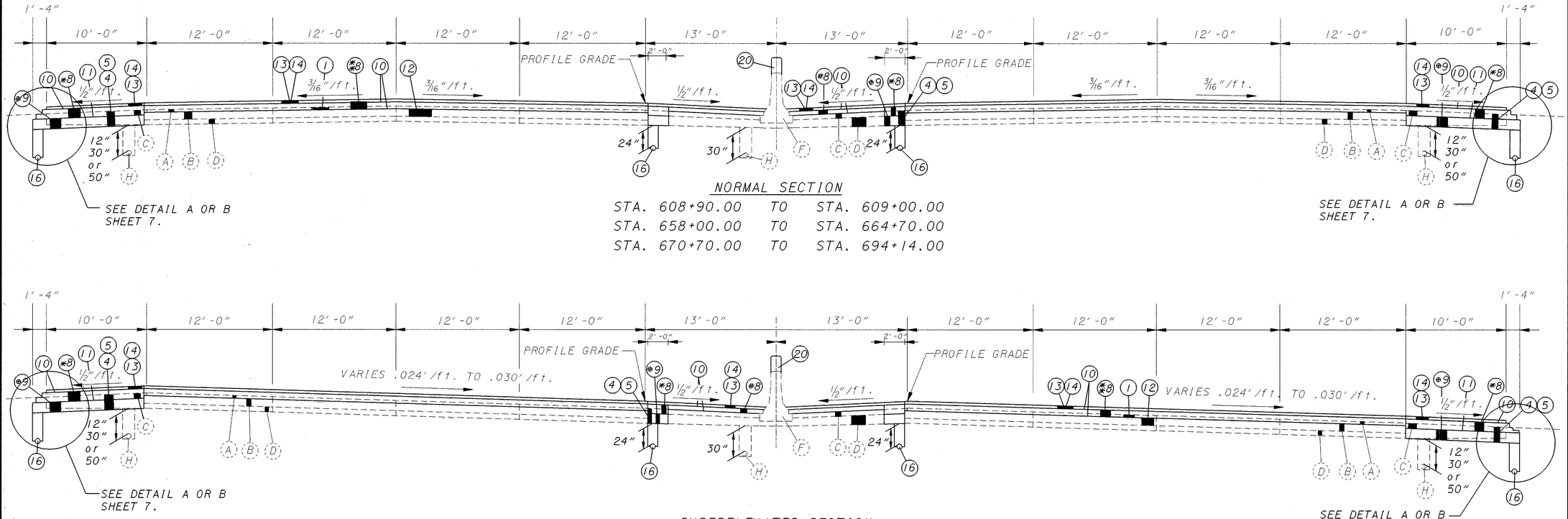


134 / 4	CUYAHOGA COUNTY CUY-480-10.38	SCHEMATIC PLAN IR-480 STA. 685+00 TO STA. 698+50	CALCULATED KAS	DRAWN KAS	0 200 400 SCALE IN FEET	N
			CHECKED ENF	REVISED XXX		



NORMAL SECTION

STA. 608+90.00 TO STA. 609+00.00
STA. 658+00.00 TO STA. 664+70.00
STA. 670+70.00 TO STA. 694+14.00

SUPERELEVATED SECTION

STA. 609+00.00 TO STA. 636+36.00
STA. 647+90.00 TO STA. 658+00.00

*(11") BITUMINOUS AGGREGATE BASE, (8" MAX LIFTS)

**(8") BITUMINOUS AGGREGATE BASE, (2-4" LIFTS)

#(5") BITUMINOUS AGGREGATE BASE

@(12") AGGREGATE BASE

@(10¼") BITUMINOUS AGGREGATE BASE, (5" AND 5¼" LIFTS)

EXISTING LEGEND

- (A) 3" ASPHALT CONCRETE
- (B) 9" CONCRETE BASE
- (C) 6" BITUMINOUS AGGREGATE BASE, AC-20
- (D) SUBBASE
- (E) GUARDRAIL TYPE 5
- (F) CONCRETE BARRIER, TYPE B-50
- (G) ASPHALT CONCRETE CURB
- (H) 6" SHALLOW UNDERDRAIN
- (I) 3" BITUMINOUS AGGREGATE BASE
- (J) 9" REINFORCED CONCRETE

PROPOSED LEGEND

(1)	ITEM-202	WEARING COURSE REMOVED, AS PER PLAN
(2)	ITEM-202	PAVEMENT REMOVED
(3)	ITEM-202	BASE REMOVED
(4)	ITEM-203	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
(5)	ITEM-203	SUBGRADE COMPACTION
(6)	ITEM-203	EMBANKMENT, AS PER PLAN
(7)	ITEM-203	LINEAR GRADING
(8)	ITEM-302	BITUMINOUS AGGREGATE BASE AC-20, AS PER PLAN
(9)	ITEM-304	AGGREGATE BASE, AS PER PLAN
(10)	ITEM-407	TACK COAT
(11)	ITEM-408	BITUMINOUS PRIME COAT
(12)	ITEM-451	CRACK AND SEAT
(13)	ITEM-446	1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, AC-20, AS PER PLAN
(14)	ITEM-446	2" ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 2, AC-20
	ITEM-407	TACK COAT FOR INTERMEDIATE COURSE
(15)	ITEM-448	ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, AS PER PLAN
(16)	ITEM-605	6" UNDERDRAIN, 707.15, AS PER PLAN, SHALLOW 24" COVER; UNCLASSIFIED ROCK CUT, SEE DRAINAGE PLAN SHEETS.
(17)	ITEM-606	GUARDRAIL, TYPE 5
(18)	ITEM-609	ASPHALT CONCRETE CURB, TYPE 1
(19)	ITEM-622	CONCRETE BARRIER, TYPE B-50
(20)	ITEM-622	GLARE SCREEN (18")
(21)	ITEM-659	SEEDING AND MULCHING

FOR MEDIAN UNDERDRAIN OUTLET DETAILS SEE SHEETS 62-63.
FOR GRADING DETAILS SEE SHEET 7.

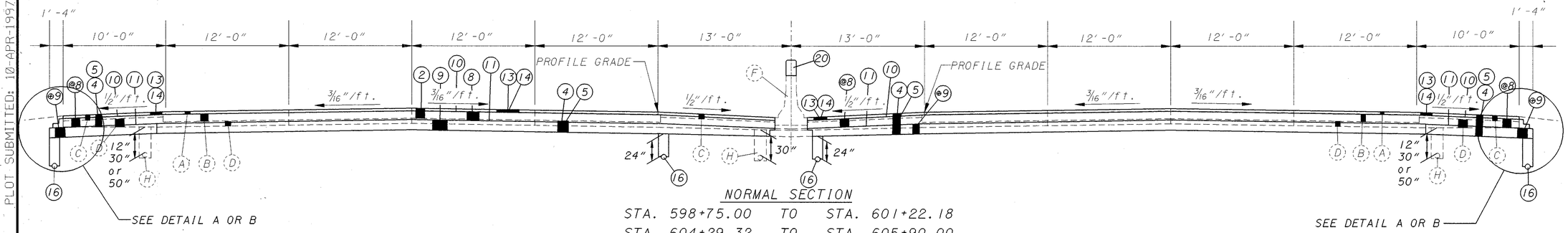
SCALE IN FEET 0 5 10

CALCULATED KAS CHECKED ENF

CRACK AND SEAT TYPICAL SECTIONS IR-480

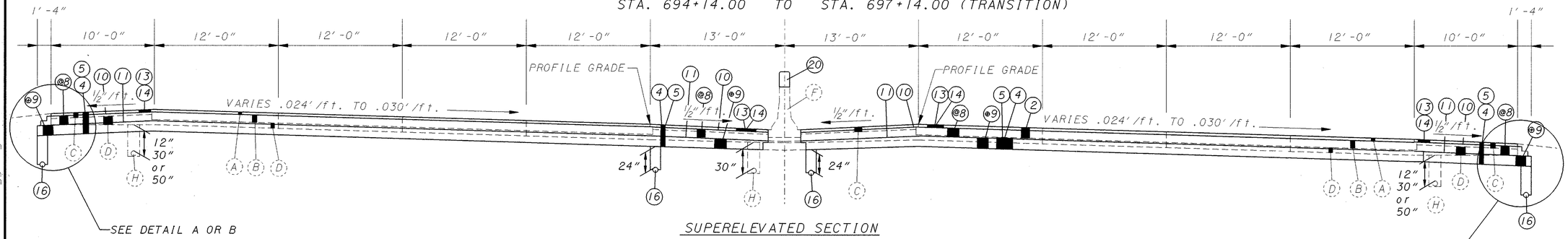
CUYAHOGA COUNTY CUY-480-10.38

5 / 134



NORMAL SECTION

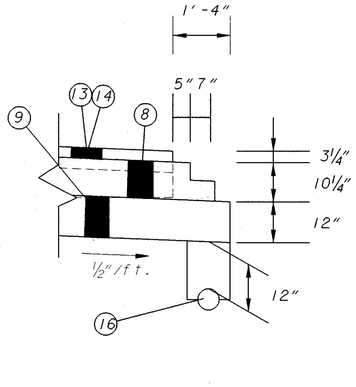
STA. 598+75.00 TO STA. 601+22.18
STA. 604+29.32 TO STA. 605+90.00
STA. 605+90.00 TO STA. 608+90.00 (TRANSITION)
STA. 664+70.00 TO STA. 670+70.00 (TRANSITION)
STA. 694+14.00 TO STA. 697+14.00 (TRANSITION)



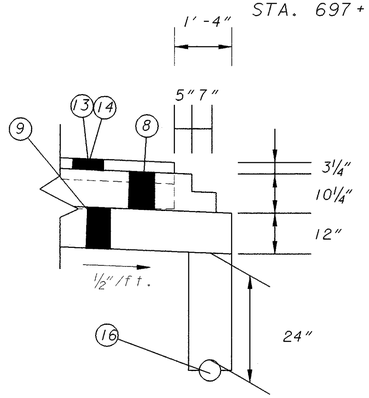
SUPERELEVATED SECTION

STA. 573+50.00 TO STA. 582+30.10
STA. 583+38.65 TO STA. 593+38.70
STA. 596+50.96 TO STA. 598+75.00
STA. 636+36.00 TO STA. 639+36.00 (TRANSITION)
STA. 639+36.00 TO STA. 643+18.36
STA. 644+31.62 TO STA. 644+90.00
STA. 644+90.00 TO STA. 647+90.00 (TRANSITION)
STA. 697+14.00 TO STA. 700+00.00

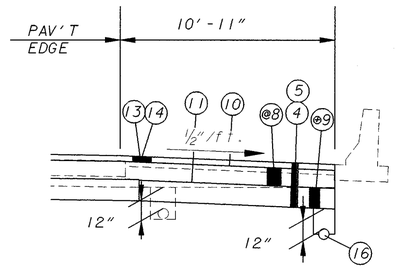
* (11") BITUMINOUS AGGREGATE BASE, (8" MAX LIFTS)
** (8") BITUMINOUS AGGREGATE BASE, (2-4" LIFTS)
\# (5") BITUMINOUS AGGREGATE BASE
⊛ (12") AGGREGATE BASE
@ (10¼") BITUMINOUS AGGREGATE BASE, (5"AND 5¼" LIFTS)



DETAIL A; ROCK CUT UNDERDRAIN (6")
(NO SCALE)

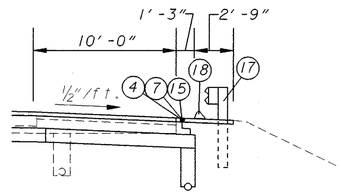


DETAIL B; SHALLOW PIPE UNDERDRAIN (6")
(NO SCALE)



SHOULDER DETAIL
(NO SCALE)

STA. 639+00.0 TO STA. 642+18.5 (RT.)
STA. 638+52.8 TO STA. 643+51.4 (LT.)



SHOULDER DETAIL
WITH GUARDRAIL AND
ASPHALT CURB

FOR ASPHALT CURB LOCATIONS SEE SHEET ____
ALL OTHER LOCATIONS WITH GUARDRAIL ARE
BUILT WITHOUT THE ASPHALT CURB.

FOR LEGEND SEE SHEET 5.

SCALE IN FEET 0 5 10

CALCULATED KAS
CHECKED ENF

FULL DEPTH FLEXIBLE TYPICAL SECTIONS IR-480

CUYAHOGA COUNTY
CUY-480-10.38

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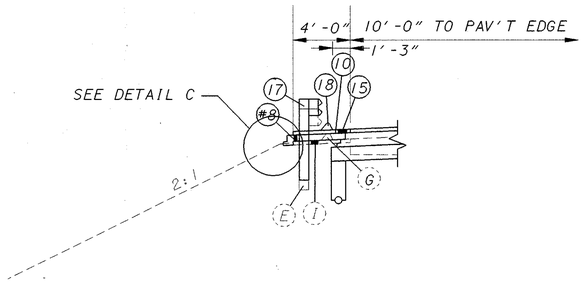
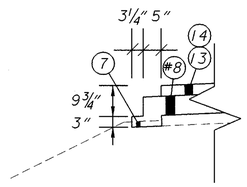
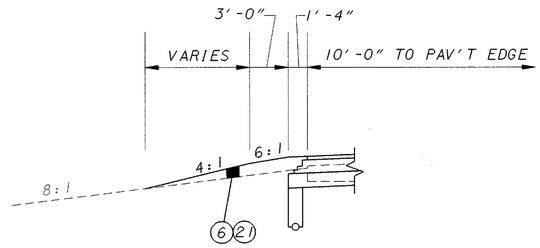


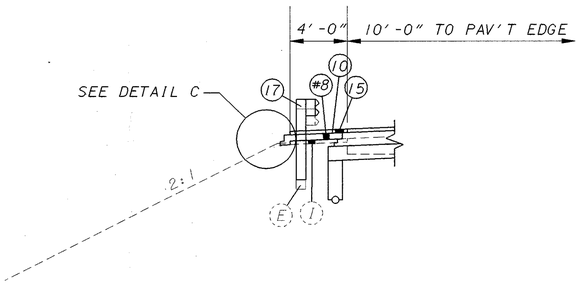
SHOULDER DETAIL WITH GUARDRAIL



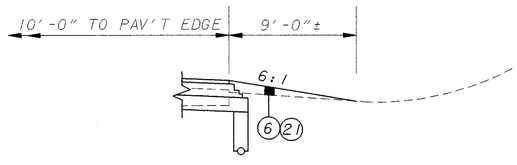
DETAIL C
(NO SCALE)



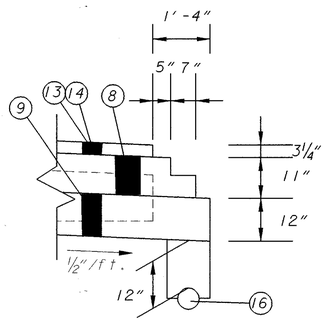
SHOULDER DETAIL WITHOUT GUARDRAIL



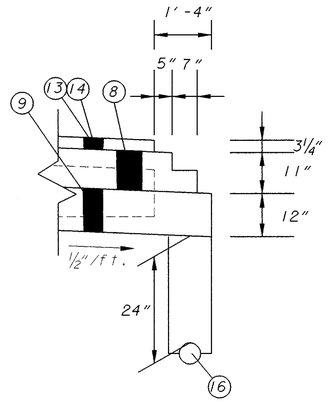
SHOULDER DETAIL WITH GUARDRAIL



CUT SECTION



DETAIL A; ROCK CUT UNDERDRAIN (6")



DETAIL B; SHALLOW PIPE UNDERDRAIN (6")

FOR LEGEND SEE SHEET 5.

NO SCALE

CALCULATED KAS
CHECKED ENF

TYPICAL SECTIONS
IR-480

CUYAHOGA COUNTY
CUY-480-10.38

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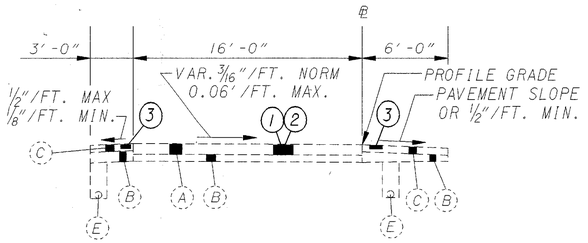
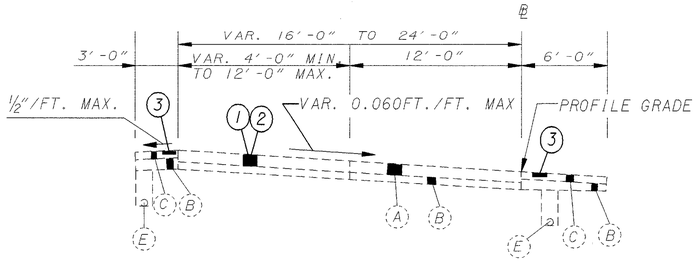
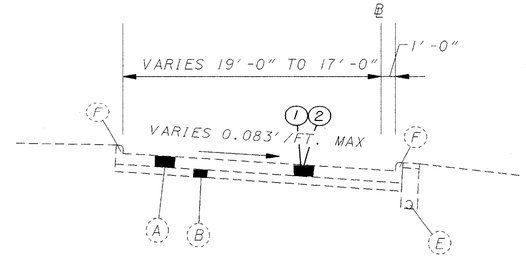


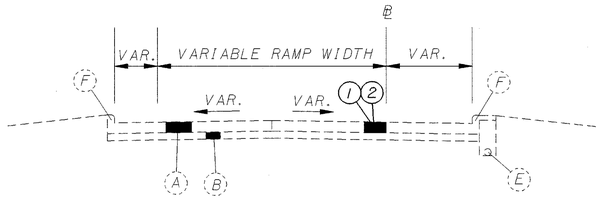
STA. 573+50.00 TO STA. 582+04.50 RAMP W-1
STA. 582+52.48 TO STA. 584+75.00 RAMP W-2
STA. 588+50.00 TO STA. 592+54.55 RAMP W-2
STA. 588+60.00 TO STA. 591+35.50 RAMP W-3
STA. 630+00.00 TO STA. 637+77.37 RAMP T-1
STA. 628+42.99 TO STA. 636+00.00 RAMP T-2
STA. 642+94.50 TO STA. 648+72.99 RAMP T-3
STA. 641+81.53 TO STA. 651+00.00 RAMP T-4



STA. 585+04.00 TO STA. 588+60.00 RAMP W-3
STA. 638+39.40 TO STA. 639+05.69 RAMP T-2
STA. 638+70.45 TO STA. 639+04.75 RAMP T-3

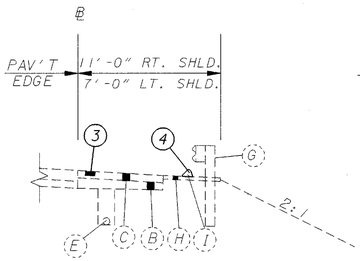


STA. 581+52.48 TO STA. 582+52.48 RAMP W-2

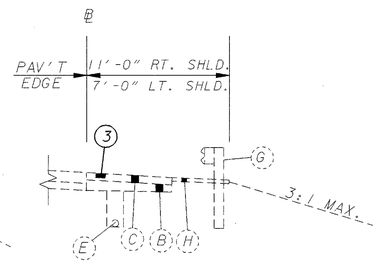


RAMP INTERSECTION DETAIL

STA. 582+04.50 TO STA. 582+81.00 RAMP W-1
STA. 584+07.20 TO STA. 585+04.00 RAMP W-3
STA. 637+77.37 TO STA. 638+66.30 RAMP T-1
STA. 639+06.69 TO STA. 639+79.30 RAMP T-2
STA. 637+92.50 TO STA. 638+70.46 RAMP T-3
STA. 640+85.30 TO STA. 641+81.53 RAMP T-4

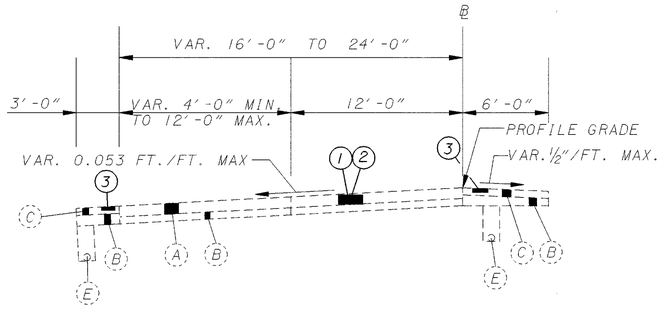


CURBED SHOULDER DETAIL



SHOULDER DETAIL WITH GUARDRAIL

STA. 584+75.00 TO STA. 588+50.00 RAMP W-2
STA. 592+54.55 TO STA. 593+00.00 RAMP W-2
STA. 629+00.00 TO STA. 630+00.00 RAMP T-1
STA. 635+00.00 TO STA. 636+65.76 RAMP T-2
STA. 642+63.19 TO STA. 642+94.50 RAMP T-3



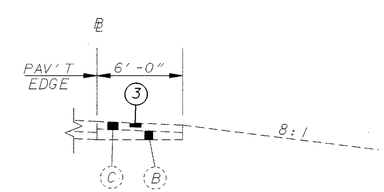
STA. 636+65.76 TO STA. 638+39.40 RAMP T-2
STA. 639+04.75 TO STA. 642+63.19 RAMP T-3

EXISTING LEGEND

- (A) REINFORCED CONCRETE PAVEMENT
- (B) SUBBASE
- (C) 6" BITUMINOUS AGGREGATE BASE
- (D) AGGREGATE BASE
- (E) 6" SHALLOW UNDERDRAIN
- (F) 6"X7" INTEGRAL CURB
- (G) GUARDRAIL TYPE 5
- (H) 3" BITUMINOUS AGGREGATE BASE
- (I) ASHALT CONCRETE CURB, TYPE I

PROPOSED LEGEND

(1)	ITEM-255	FULL DEPTH RIGID REPLACEMENTAND RIGID REPLACEMENT
(2)	ITEM-255	FULL DEPTH PAVEMENT SAWING
(3)	ITEM-251	PARTIAL DEPTH PAVEMENT REPAIR
(4)	ITEM-609	ASPHALT CONCRETE CURB, TYPE I



SHOULDER DETAIL WITHOUT GUARDRAIL

SCALE IN FEET
0 5 10

CALCULATED KAS
CHECKED ENF

TYPICAL SECTIONS
TR-480

CUYAHOGA COUNTY
CUY-480-10.38

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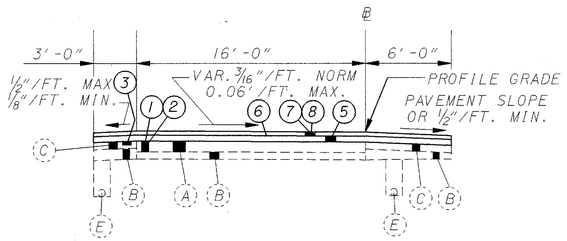
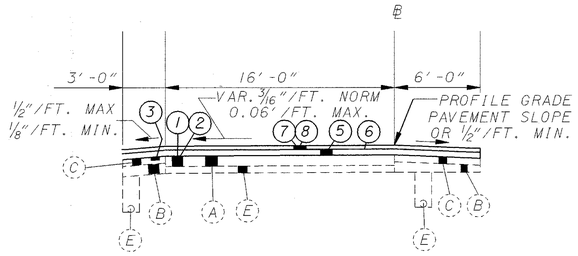


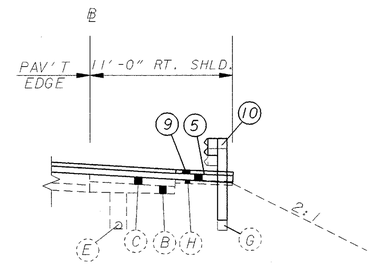
STA. 630+00.00 TO STA. 633+80.00 RAMP T-1
STA. 628+42.99 TO STA. 630+42.99 RAMP T-2
STA. 642+94.50 TO STA. 648+72.99 RAMP T-3
STA. 647+14.00 TO STA. 651+00.00 RAMP T-4



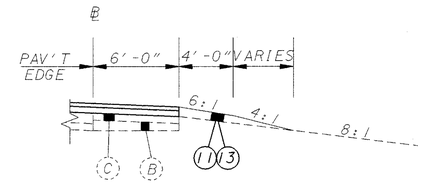
STA. 629+00.00 TO STA. 630+00.00 RAMP T-1

EXISTING LEGEND

A	REINFORCED CONCRETE PAVEMENT
B	SUBBASE
C	6" BITUMINOUS AGGREGATE BASE
D	AGGREGATE BASE
E	6" SHALLOW UNDERDRAIN
F	6"X7" INTEGRAL CURB
G	GUARDRAIL TYPE 5
H	3" BITUMINOUS AGGREGATE BASE
I	ASPHALT CONCRETE CURB, TYPE I



SHOULDER DETAIL WITH GUARDRAIL



SHOULDER DETAIL WITHOUT GUARDRAIL

PROPOSED LEGEND

1	ITEM-255	FULL DEPTH RIGID REPLACEMENTAND RIGID REPLACEMENT
2	ITEM-255	FULL DEPTH PAVEMENT SAWING
3	ITEM-251	PARTIAL DEPTH PAVEMENT REPAIR
4	ITEM-609	ASPHALT CONCRETE CURB, TYPE I
5	ITEM-302	BITUMINOUS AGGREGATE BASE AC-20, AS PER PLAN (VARIES FROM 5" TO 2")
6	ITEM-407	TACK COAT
7	ITEM-446	1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, AC-20, AS PERPLAN
8	ITEM-446	2" ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 2, AC-20
	ITEM-407	TACK COAT FOR INTERMEDIATE COURSE
9	ITEM-448	ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPEI, UNDER GUARDRAIL, AS PER PLAN
10	ITEM-606	GUARDRAIL, TYPE 5
11	ITEM-203	EMBANKMENT
12	ITEM-203	LINEAR GRADING
13	ITEM-659	SEEDING AND MULCHING

SCALE IN FEET
0 5 10
CALCULATED KAS
CHECKED ENF

TYPICAL SECTIONS
TR-480

CUYAHOGA COUNTY
CUY-480-10.38

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CALCULATED KAS | CHECKED ENF

PROJECT DESCRIPTION

THIS PROJECT SHALL CONSIST OF MAJOR ROAD REHABILITATION OF IR-480 FROM WEST 130th STREET TO IDLEWOOD DRIVE. WORK SHALL ALSO INCLUDE APPROXIMATELY 5000 FT. OF PAVEMENT REPLACEMENT TO MAINTAIN EXISTING PROFILE. ITEMS INCLUDED SHALL BE CRACKING AND SEATING PLAIN CONCRETE, ASPHALT OVERLAY, GUARDRAIL, AND DRAINAGE.

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 TWELVE OFFICES, 5500 TRANSPORTATION BLVD., GARFIELD HEIGHTS, OHIO 44125.

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.

UTILITY OWNERSHIP

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

CLEVELAND ELECTRIC ILLUMINATING CO.
3601 RIDGE ROAD
CLEVELAND, OHIO 44102
ATTN: FRANK DIBBS
(216) 634-7303 (216)634-7266

EAST OHIO GAS
1201 EAST 55th STREET
CLEVELAND, OHIO 44103
ATTN: PAUL ARENDASH
(216) 736-6675
FAX: 736-6780

AMERICAN TELEPHONE & TELEGRAPH
3833 WEYMOUTH ROAD
MEDINA, OHIO 44256
ATTN: PAT HARRIS
(330)723-9135

CITY OF CLEVELAND
DIVISION OF WATER
POLLUTION CONTROL
12302 KIRBY RAOD
CLEVELAND, OHIO 44108
ATTN: RACHID ZOGHAIB
(216)664-2786

CITY OF CLEVELAND WATER DEPARTMENT
1201 LAKESIDE AVE.
CLEVELAND, OHIO 44114
ATTN: DON TREBAR
(216)644-2444
FAX:664-2378

CUYAHOGA COUNTY SANITARY
ENGINEER'S OFFICE
6100 WEST CANAL RAOD
VALLEY VIEW, OHIO 44125
ATTN: RUTH LANGSNER
(216)443-8204
FAX:443-8236

CLEVELAND PUBLIC POWER
1300 LAKESIDE AVE.
CLEVELAND, OHIO 44114
ATTN: DALE TURKOVICH EXT. 115
(216)664-4245
FAX:664-2777

BP OIL
4421 BRADLEY ROAD
CLEVELAND, OHIO 44109
ATTN: TOM COYNE
(216)586-2050

COX CABLE
12221 PLAZA DR.
MIDDLEBURG HEIGHTS, OHIO 44130
(216) 676-8300

MFS NETWORK TECHNOLOGIES
5405 VALLEY BELT ROAD
UNIT B
INDEPENDENCE, OHIO 44131
ATTN: RICHARD SWITALSKI
(216)881-6600
FAX:881-2738

ICG ACCESS INC.
6060 ROCKSIDE WOODS
INDEPENDENCE, OHIO 44131
ATTN: ED DUDEK
(216)447-0660 EXT. 222
FAX:447-0666

AMERITECH
13630 LORAIN AVE. 4th FLOOR
CLEVELAND, OHIO 44111
ATTN: SHELLY ARMSTRONG
(216)476-6142
FAX:476-6142

BUCKEYE PIPELINE CO.
5002 BUCKEYE ROAD
EMMAUS, PA 18049
ATTN: BILL SERRA
(610)770-5215

CABLEVISION
14300 SOUTH INDUSTRIAL
MAPLE HEIGHTS, OHIO 44137
RANDY WELLS: (216)663-4004
KIP EIGER: (216)663-4003
FAX:581-3262

NEORSD
3826 EUCLID AVE.
CLEVELAND, OHIO 44115-2504
ATTN: GORDY GOLDEN
(216)351-6030
FAX:351-2757

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.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS; JACK HAMMERS, HOE RAMS, AND PAVEMENT BREAKERS SHALL NOT BE OPERATED BETWEEN THE HOURS OF 9:00 PM AND 5:00 AM. IN ADDITION, ANY SUCH DEVICE SHALL NOT BE OPERATED AT ANY TIME IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

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.

ITEM 203 - EMBANKMENT, AS PER PLAN

THE METHOD OF MEASUREMENT FOR THIS ITEM SHALL BE BY CALCULATIONS BASED UPON TYPICAL SECTIONS.

THE TOP 3 INCHES OF EMBANKMENT SHALL CONSIST OF LOOSE, FRIABLE, LOAMY SOIL WITHOUT THE ADMIXTURE OF REFUSE OR STONE GREATER THAN 1 INCH. THE SOIL SHALL BE CAPABLE OF SUPPORTING VEGETATION.

ITEM 203 - LINEAR GRADING, AS PER PLAN

THIS ITEM SHALL CONSIST OF EXCAVATING TOPSOIL, PLACING GRANULAR MATERIAL AND APPLYING HERBICIDE AS SPECIFIED IN THE PLANS AND IN ACCORDANCE WITH THE FOLLOWING:

ALL COLLECTED DEBRIS AND TOPSOIL, INCLUDING RHIZOMES, ROOTS AND OTHER VEGETATIVE PLANT MATERIAL SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN SECTION 203.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

ANY REMOVAL OF THE ABOVE ITEMS WHICH EXTEND BELOW THE PROPOSED SUBGRADE SHALL BE REPLACED WITH COMPACTABLE GRANULAR MATERIAL CONFORMING TO 203.02 AND SHALL BE PLACED TO GRADE AS DETAILED ON THE TYPICAL SECTIONS OR AS APPROVED BY THE ENGINEER.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 203-LINEAR GRADING.

ITEM 203-LINEAR GRADING, AS PER PLAN 60 STATIONS

GENERAL NOTES

CUYAHOGA COUNTY
CUY-480-10.38

448, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, PG 64-22 (UNDER GUARDRAIL), AS PER PLAN.

PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 448 TO THE DEPTH SPECIFIED USING ONE OF THE FOLLOWING METHODS:

METHOD A:
1) SET GUARDRAIL POSTS
2) PLACE ITEM 448

METHOD B:
1) PLACE ITEM 448
2) BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED)
3) SET GUARDRAIL POSTS
4) PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE A BITUMINOUS CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 448, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I (UNDER GUARDRAIL) AS PER PLAN.

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

ITEM 448-ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, PG 64-22, UNDER GUARDRAIL, AS PER PLAN . . . . . 231 CU. YDS.

LOCATION OF GUARDRAIL

THE LOCATIONS OF GUARDRAIL RUNS, AS SHOWN IN THESE PLANS, ARE SUBJECT TO ADJUSTMENT PRIOR TO FINAL ACCEPTANCE. THE ENGINEER SHALL BE SATISFIED THAT ALL INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

ITEM 619 - FIELD OFFICE, TYPE C, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS STATED IN THE SPECIFICATIONS, THE FOLLOWING EQUIPEMENT SHALL BE INCLUDED FOR PAYMENT UNDER THIS ITEM:

A. PLAIN PAPER FAX MACHINE WITH A DEDICATED PHONE LINE.

FASTENING OF BRIDGE TERMINAL ASSEMBLIES

BRIDGE TERMINAL ASSEMBLIES WHICH ARE FASTENED TO THE EXISTING CONCRETE PARAPETS SHALL BE ATTACHED BY MEANS OF TROUGH BOLTS. EXPANSION ANCHOR BOLTS WILL NOT BE PERMITTED.

THIS ITEM REQUIRES THE USE OF POLYESTER RESIN ANCHORS WITH FEMALE THREADED INSERTS (10 INCH LONG) TO ACCEPT 7/8" DIAMETER BOLTS WHEN THRU BOLTS CANNOT BE USED.

ITEM 606, ANCHOR ASSEMBLY, TYPE E

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING AN ET-2000, OPTION "B" GUARDRAIL END TERMINAL AS MANUFACTURED BY SYRO STEEL COMPANY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 216-545-4373).

THE ANCHOR ASSEMBLY SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURER'S CURRENT SPECIFICATIONS AND AT THE LOCATIONS SHOWN IN THE PLANS.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE CONTRACT PRICE FOR 606, EACH, ANCHOR ASSEMBLY, TYPE E. PAYMENT SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT THE 25' LONG ANCHOR ASSEMBLY, INCLUDING ALL RELATED HARDWARE, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER TO INSTALL A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY. THIS ITEM SHALL ALSO INCLUDE PAYMENT OVER AND ABOVE THE COST OF STANDARD TYPE 5 GUARDRAIL FOR INSTALLING TYPE I BREAKAWAY POSTS PER STANDARD CONSTRUCTION DRAWING GR-1.3 AT THE FOLLOWING LOCATIONS: 1) AT THE POINT WHERE THE ANCHOR ASSEMBLY AND THE GUARDRAIL RUN MEET; AND 2) AT THE NEXT THREE (3) POST LOCATIONS INTO THE GUARDRAIL RUN.

TYPE 5 GUARDRAIL POST SPACING

WHEN THE OFFSET BETWEEN THE FACE OF THE GUARDRAIL AND BRIDGE PIERS, MAJOR SIGNS, SIGN SUPPORTS, OR OTHER FIXED OBSTACLES IS LESS THAN 5 FT.- 6 INCHES, THE GUARDRAIL SHALL BE STIFFENED BY PROVIDING 3 FT.-1.5 INCH POST SPACING FROM 12.5 FEET IN ADVANCE OF THE OBSTRUCTION TO ITS END, AS PER STD. DRAWING GR-2.1

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

ITEM 606 - GUARDRAIL, TYPE 5A ..... 200 L.F.

SEQUENCE OF OPERATIONS FOR GUARDRAIL INSTALLATIONS

1. COMPLETE SHOULDER CONSTRUCTION
2. REMOVE EXISTING GUARDRAIL (INSTALL TEMPORARY CONCRETE BARRIER AT HAZARDS-SEE PUBLIC SAFETY NOTE).
3. INSTALL GUARDRAIL AND CONSTRUCT STRIP OF ITEM 448 AS PER METHOD A OR B.

PROGRESS SCHEDULE (CRITICAL PATH METHOD)

THE PRE-CONSTRUCTION MEETING SHALL BE HELD NO LATER THAN 30 CALENDAR DAYS AFTER THE CONTRACT IS SIGNED. THE CONTRACTOR SHALL SUBMIT THEIR PROPOSED CPM SCHEDULE AT THE PRE-CONSTRUCTION MEETING FOR REVIEW BY THE CONSTRUCTION ENGINEER. WRITTEN COMMENTS REGARDING THE CPM SCHEDULE WILL BE FORWARDED TO THE CONTRACTOR BY THE CONSTRUCTION ENGINEER WITHIN 14 CALENDAR DAYS AFTER THE PRE-CONSTRUCTION MEETING.

A FINAL CPM SCHEDULE SHALL BE SUBMITTED TO THE CONSTRUCTION ENGINEER WITHIN 30 CALENDAR DAYS FROM THE DATE OF THE PRE-CONSTRUCTION MEETING BUT AT LEAST SEVEN (7) CALENDAR DAYS PRIOR TO THE DATE DESIGNATED AS THE STARTING DATE IN THE CPM SCHEDULE. THE SCHEDULE SHALL BE SIGNED AND DATED BY THE PRIME CONTRACTOR AND NAMED SUBCONTRACTORS.

ADJUSTMENTS IN CONTRACT TIME

TIME EXTENSIONS WILL ONLY BE CONSIDERED WHEN CONTROLLING ITEMS OF WORK ON THE APPROVED CPM SCHEDULE ARE AFFECTED DUE TO NO FAULT OF THE CONTRACTOR.

WHEN ADDITIONAL WORK IS REQUIRED, TIME EXTENSIONS WILL ONLY BE GRANTED FOR CONTROLLING ITEMS ON THE CPM SCHEDULE.

PROJECT PROGRESS MEETINGS

PROGRESS MEETINGS WILL BE HELD EVERY FOUR (4) WEEKS AT THE PROJECT OFFICE, OR OTHER LOCATION DESIGNATED BY THE CONSTRUCTION ENGINEER AND ATTENDED BY O.D.O.T. AND CONTRACTOR DECISION-MAKING PERSONNEL.

THE PURPOSE OF THESE MEETINGS WILL BE TO DISCUSS CRITICAL OPERATIONS AND POTENTIAL PROBLEMS. THE CONTRACTOR WILL CONFIRM THE NUMBER AND DURATION OF WORK SHIFTS, NUMBER OF WORK CREWS, AND SPECIFIC PORTIONS OF THE WORK TO BE PERFORMED DURING THE FOLLOWING WEEKS.

THESE MEETINGS CAN ONLY BE WAIVED BY THE CONSTRUCTION ENGINEER.

CALCULATED KAS
CHECKED ENF

ROADWAY GENERAL NOTES

CUYAHOGA COUNTY
CUY-480-10.38

11
134

CALCULATED KAS
CHECKED ENF

PAVEMENT GENERAL NOTES

ALIGNMENT AND PROFILE

THE WORK PROPOSED BY THIS PROJECT IS FOR THE RESURFACING OF THE EXISTING PAVEMENT. THE PROFILE OF THE PROPOSED SURFACE WILL BE APPROXIMATELY 8¼ INCHES ABOVE THAT OF THE EXISTING PAVEMENT, EXCEPT WHERE OTHERWISE SHOWN IN THE PLANS.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND CONSTRUCTING THE FULL PAVEMENT WIDTH IN STAGES, EXTREME CARE SHALL BE TAKEN TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LONGITUDINAL JOINTS SHALL BE LAPPED AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

ITEM 254 - PAVEMENT PLANING, PORTLAND CEMENT CONCRETE

THIS ITEM SHALL CONSIST OF CHIPPING THE EXISTING CONCRETE PAVEMENT AS DETAILED AND DESCRIBED ON SHEET NO. 53, AND AS DIRECTED BY THE ENGINEER. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 254 - PAVEMENT PLANING, PORTLAND CEMENT CONCRETE.....107 SQ.YD.

ITEM 254 - PAVEMENT PLANING, BITUMINOUS

THIS ITEM SHALL CONSIST OF REMOVING EXISTING ASPHALT OVERLAY AS DETAILED ON SHEET **72**, AND AS DIRECTED BY THE ENGINEER.

FOR ESTIMATED QUANTITIES SEE SHEET 16.

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR:

AN ESTIMATED QUANTITY OF 500 CU.YD. HAS BEEN PROVIDED, AND SHALL BE USED AS DIRECTED BY THE ENGINEER TO REPAIR THE RAMP SHOULDERS WITHIN THE LIMITS OF THE PROJECT,(RAMPS W-1, W-2, W-3, T-1, T-2, T-3, AND T-4). DEPTH OF REMOVAL SHALL TYPICALLY BE 3 INCHES UNLESS OTHERWISE SPECIFIED.

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

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR 500 CU.YD.

ITEM 252 - FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN A
ITEM 255 - FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN B

THIS ITEM SHALL CONSIST OF REPLACING EXISTING PAVEMENT IN ACCORDANCE WITH ITEM 255 AND THE NOTES BELOW. PAYMENT SHALL BE MADE FOR "CLASS C" ALTHOUGH THE CONTRACTOR MAY USE EITHER , "CLASS MS", "CLASS S", OR "CLASS C".

EXISTING CONCRETE PAVEMENT THICKNESS MAY VARY FROM THAT SHOWN ON THE TYPICAL SECTIONS BY PLUS TWO INCHES OR MINUS ONE INCH. NO ADJUSTMENT IN PAYMENT FOR THIS ITEM SHALL BE MADE PROVIDING THAT THE AVERAGE PAVEMENT THICKNESS IS WITHIN ON HALF INCH OF THE THICKNESS SHOWN ON THE TYPICAL SECTIONS. ADDITIONAL COMPENSATION SHALL BE MADE BY CHANGE ORDER FOR THE MATERIAL COST OF CONCRETE ONLY WHEN THE AVERAGE THICKNESS EXCEEDS THE ONE HALF INCH MAXIMUM TOLERANCE ABOVE. THE VOLUME OF ADDITIONAL CONCRETE PAID FOR SHALL BE BASED UPON THE AMOUNT OF CONCRETE ABOVE THE ONE HALF INCH TOLERANCE LIMIT.

IF, AFTER REMOVAL OF THE RIGID PAVEMENT THE ENGINEER DETERMINES THAT THE SUBBASE OR SUBGRADE HAS FAILED OR IS PUMPING. HE SHALL DIRECT THE CONTRACTOR TO EXCAVATE THE UNSUITABLE MATERIAL AND REPLACE IT WITH COMPACTED 304 AGGREGATE. QUANTITIES OF ITEM 203 - EXCAVATION AND ITEM - AGGREGATE BASE HAVE BEEN PROVIDED TO REPAIR SAID FAILED SUBBASE OR SUBGRADE AREAS.

PAVEMENT REPAIR LESS THAN OR EQUAL TO TEN (10) FEET IN LENGTH SHALL BE PAID FOR UNDER "FULL DEPTH RIGID PAVEMENT REMOVAL AND REPLACEMENT, CLASS C, AS PER PLAN, A". PAVEMENT REPAIRS GREATER THAN TEN (10) FEET IN LENGTH SHALL BE PAID FOR UNDER "FULL DEPTH RIGID PAVEMENT REMOVAL AND REPLACEMENT, CLASS C, AS PER PLAN, B"

PAYMENT FOR THIS WORK SHALL BE MADE AT THE CONTRACT BID PRICE FOR:

ITEM	UNIT	DESCRIPTION
203	CU.YDS.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
304	CU.YDS.	AGGREGATE BASE, AS PER PLAN
255	SQ.YDS.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT CLASS C, AS PER PLAN A
255	SQ.YDS.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT CLASS C, AS PER PLAN B
255	LIN.FT.	FULL DEPTH PAVEMENT SAWING

FOR ESTIMATED QUANTITIES, SEE SHEET 50.

CUYAHOGA COUNTY
CUY-480-10.38

CALCULATED KAS
CHECKED ENF

PAVEMENT GENERAL NOTES

CUYAHOGA COUNTY
CUY-480-10.38

ITEM 304 AGGREGATE BASE, AS PER PLAN

THE ONLY SLAG MATERIAL 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 MATERIAL OR BLENDED MATERIALS SHALL MEET THE REQUIREMENTS OF 304.02.

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

ITEM 623 - CONSTRUCTION LAYOUT STAKES, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ITEM 623, THE CONTRACTOR SHALL PROVIDE FIELD SURVEY FOR ALL ASPHALT TRANSITIONS. (SEE SHEET NO.). SAID SURVEY SHALL CONSIST OF EXISTING ELEVATIONS, AND ELEVATIONS AS NECESSARY BETWEEN THE VARIOUS COURSES. SURVEY SHALL BE TAKEN ALONG EACH EDGE LINE AND LANE LINE AND SHALL BE TAKEN EVERY 25 FEET.

SOLID ROCK AND FRACTURED ROCK EXCAVATION

THE CONTRACTOR SHALL NOTE THAT ROCK WAS ENCOUNTERED AT THE SUBGRADE LEVEL DURING THE ORIGINAL CONSTRUCTION OF THIS FREEWAY, MAINLY BETWEEN TIEDEMAN ROAD (STA 635+00) AND RIDGE ROAD (STA 700+00-PROJECT LIMIT). THE ORIGINAL SOIL BORINGS FOR PROJECT 783-83 (CUY-480-10.39) MAY BE REVIEWED AT THE OHIO DEPARTMENT TRANSPORTATION, DISTRICT TWELVE OFFICES, 5500 TRANSPORTATION BLVD., GARFIELD HEIGHTS, OHIO 44125, DURING NORMAL BUSINESS HOURS.

BECAUSE OF THE POTENTIAL FOR ROCK EXCAVATION, A CONTINGENCY QUANTITY OF ITEM 203 - EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION, AS PER PLAN (ROCK EXCAVATION) HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER. THIS QUANTITY SHALL ONLY BE USED FOR EXCAVATING SOLID ROCK. FRACTURED ROCK ENCOUNTERED DURING EXCAVATION SHALL NOT BE CONSIDERED AS PART OF THIS PAY ITEM. FRACTURED ROCK SHALL BE REMOVED AND PAID FOR UNDER THE NORMAL BID ITEM 203-EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION. THE PROJECT ENGINEER SHALL MAKE THE FINAL DETERMINATION AS TO WHAT CONSTITUTES FRACTURED ROCK.

ONCE THE ORIGINAL SUBGRADE ELEVATION HAS BEEN REACHED, THE PROJECT ENGINEER SHALL EXAMINE THE COMPOSITION OF THE EXISTING SUBGRADE MATERIAL. LARGE PIECES OF FRACTURED ROCK AT THE SUBGRADE LEVEL, AS DETERMINED BY THE ENGINEER, SHALL BE REMOVED TO A MAXIMUM DEPTH OF 18 INCHES BELOW THE PROPOSED SUBGRADE ELEVATION. PAYMENT FOR THIS WORK SHALL BE MADE AT THE UNIT BID PRICE FOR ITEM 203 - EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION. IF SOLID ROCK IS ENCOUNTERED WITHIN THESE 18 INCHES, THE CONTRACTOR, PER SECTION 203.04 (b) OF THE CMS, SHALL EXCAVATE THE SOLID ROCK TO A MINIMUM OF 18 INCHES BELOW THE PROPOSED SUBGRADE. PAYMENT FOR THIS ADDITIONAL EXCAVATION OF SOLID ROCK SHALL BE MADE AT THE UNIT BID PRICE FOR ITEM 203-EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION, AS PER PLAN (ROCK EXCAVATION). PRIOR TO ANY ROCK EXCAVATION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF THE LOCATIONS AND ELEVATIONS OF THE EXISTING TOP OF ROCK. THE ENGINEER WILL THEN DETERMINE THE MINIMUM DEPTHS OF ROCK EXCAVATION BASED ON THIS INFORMATION. PAYMENT FOR ANY ADDITIONAL SURVEY WORK BY THE CONTRACTOR TO DETERMINE ELEVATIONS OF THE TOP AND BOTTOM OF THE ROCK EXCAVATION, AS DIRECTED BY THE ENGINEER, SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 203 - EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION, AS PER PLAN (ROCK EXCAVATION). THE CONTRACTOR SHALL NOTE THAT A COMBINATION OF BOTH EXCAVATION BID ITEMS MAY BE REQUIRED TO MEET THE REQUIREMENT OF THIS NOTE AND SECTION 203 OF THE CMS.

ANY ADDITIONAL EXCAVATION BEYOND THE PROPOSED SUBGRADE ELEVATION SHALL BE FILLED WITH ITEM 203-EMBANKMENT USING GRANULAR MATERIAL QUANTITY OF ITEM 203-EMBANKMENT USING GRANULAR MATERIAL HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS PURPOSE.

IF ITEM 203-EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION, AS PER PLAN (ROCK EXCAVATION) IS USED IN AREAS WHERE ITEM 203-EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION HAS BEEN SPECIFIED IN THE PLANS, THE QUANTITY OF ITEM 203-EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION SHALL BE NON-PERFORMED.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 203-EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	5,000 C.Y.
ITEM 203-EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION, AS PER PLAN (ROCK EXCAVATION)	25,000 C.Y.
ITEM 203-EMBANKMENT USING GRANULAR MATERIAL	20,000 C.Y.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEMS.

CROSSING EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEM.

ITEM 604-CATCH BASINS, ADJUSTED TO GRADE, AS PER PLAN
ITEM 604-INLETS, ADJUSTED TO GRADE, AS PER PLAN

ALL CASTINGS, EXCEPT THOSE OWNED BY PRIVATE COMPANIES SHALL BE ADJUSTED BY THE CONTRACTOR. THE TIME BETWEEN ADJUSTING THE CASTINGS AND RESURFACING SHALL BE AN ABSOLUTE MINIMUM. ADJUSTING RINGS SHALL NOT BE USED.

MEDIAN INLET ADJUSTMENT SHALL BE COMPLETED AS SHOWN ON SHEET NO. .

THE ESTIMATED QUANTITIES FOR THE ABOVE MENTIONED WORK ARE AS FOLLOWS:

ITEM 604-CATCH BASINS, ADJUSTED TO GRADE,... 2 EA.
AS PER PLAN
ITEM 604-INLETS, ADJUSTED TO GRADE, ...12 EA.
AS PER PLAN

ITEM 604 - MANHOLES, CATCH BASINS, OR CURB INLETS RECONSTRUCTED TO GRADE

THE CONTRACTOR AND FIELD ENGINEER SHALL FIELD CHECK ALL EXISTING MANHOLES, CATCH BASINS, OR CURB INLETS LOCATED WITHIN THE LIMITS OF THE PROJECT. ANY MANHOLE, CATCH BASIN, OF CURB INLET FOUND THAT EXHIBITS SUBSTANTIAL DETERIORATION AND REQUIRES MORE WORK THAN IS SPECIFIED UNDER CASTINGS ADJUSTED TO GRADE, SHALL BE RECONSTRUCTED TO GRADE AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM	DESCRIPTION	QUANTITY	UNIT
604	CATCH BASIN, RECONSTRUCTED TO GRADE	1	EACH
604	MANHOLE, RECONSTRUCTED TO GRADE	1	EACH
604	INLET, RECONSTRUCTED TO GRADE	1	EACH

ITEM SPECIAL - PRECAST REINFORCED CONCRETE OUTLET

A PRECAST REINFORCED CONCRETE OUTLET SHALL BE NECESSARY AT ALL UNDERDRAIN OUTLET LOCATIONS NOT FLOWING INTO AN APPURTENANCE. THIS INSTALLATION SHALL BE PER STANDARD DRAWING DM-1.1M. ALL DIMENSIONS IN STANDARD DRAWING DM-1.1M SHOWN IN METRIC UNITS SHALL BE CONVERTED TO ENGLISH UNITS.

ITEM 605 - UNDERDRAIN

CONNECTIONS TO EXISTING UNDERDRAINS

WHEN THE EXISTING AND PROPOSED UNDERDRAINS OUTLET AT THE SAME LOCATION AND IN THE SAME DRAINAGE STRUCTURE, THE TWO UNDERDRAINS SHALL BE CONNECTED TOGETHER AND OUTLET INTO THE EXISTING HOLE. SEE MISCELLANEOUS DRAINAGE DETAILS FOR TYPES OF CONNECTIONS.

THE EXISTING AND PROPOSED UNDERDRAINS SHALL BE LATERALLY CONNECTED USING UNDERDRAIN MATERIAL AND ANY BENDS AND BRANCHES NECESSARY TO MAKE THESE CONNECTIONS. THE BRANCHES AND BENDS SHALL BE INCLUDED IN UNIT BID PRICE FOR ITEM 605 - UNDERDRAIN.

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

ITEM 605 - SHALLOW PIPE UNDERDRAIN .....800 LIN.FT.

PLACEMENT OF PROPOSED UNDERDRAINS

THE FLOWLINE ELEVATIONS AS SHOWN IN THE PLANS ARE APPROXIMATE. THE PROPOSED UNDERDRAINS SHALL BE PLACED AT THE MINIMUM DEPTH OF 24" FOR SHALLOW PIPE UNDERDRAINS AS SHOWN IN THE TYPICAL SECTIONS. THE UNCLASSIFIED UNDERDRAINS SHALL BE PLACED AS PER THE PLAN ELEVATIONS.

CONTINGENCY QUANTITIES

AT THE LOCATIONS SHOWN IN THE UNDERDRAIN SUB-SUMMARY, THE PROPOSED UNDERDRAIN IS CONNECTED TO AN EXISTING 6" CONDUIT RUNNING UNDER THE ROADWAY. THE EXISTING 6" CONDUIT MAY BE NON-FUNCTIONAL. IF THAT IS THE CASE, THE FOLLOWING ESTIMATED QUANTITIES SHALL BE USED AS DIRECTED BY THE ENGINEER TO ESTABLISH FLOW:

ITEM 603 - 6" CONDUIT, TYPE B.....376 LIN. FT.
ITEM 603 - CONDUIT BORED OR JACKED: 6" TYPE B..376 LIN. FT.

ROCK CUT UNDERDRAIN

THIS ITEM SHALL BE USED WHENEVER ROCK IS ENCOUNTERED AT PROPOSED UNDERDRAIN LOCATIONS. THE PROPOSED 6" SHALLOW PIPE UNDERDRAIN SHALL BE NON-PERFORMED AND INSTEAD A 6" ROCK CUT UNDERDRAIN SHALL BE PLACED AND PAID FOR AT THE UNIT BID PRICE FOR ITEM 605 - 6" ROCK CUT UNDERDRAIN. THE 6" ROCK CUT UNDERDRAIN SHALL BE PLACED AT A DEPTH OF 12" AS SHOWN IN THE TYPICAL SECTION.

IF THE PROPOSED ROCK CUT UNDERDRAIN IS PLACED ABOVE THE EXISTING UNDERDRAIN, THE TWO UNDERDRAINS SHALL BE CONNECTED USING WHATEVER BENDS OR BRANCHES NECESSARY AT THE OUTLET. THE COST FOR THE BENDS OR BRANCHES SHALL BE INCLUDED IN THE COST OF THE UNDERDRAIN.

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

ITEM 605 - 6" ROCK CUT UNDERDRAIN.....22000 LIN. FT.

CALCULATED KAS
CHECKED ENF

DRAINAGE GENERAL NOTES

CUYAHOGA COUNTY
CUY-480-10.38

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 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.

SPECIAL, MISCELLANEOUS METAL 3000 LB.

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.

WATERING AND MOWING PERMANENT SEEDED AREAS

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER TO PROMOTE GROWTH AND TO CARE FOR PERMANENT SEEDED AREAS PER 659.09:

659, WATER	10 M. GAL.
659, MOWING	27 M SQ. FT.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES:

207, TEMPORARY SEEDING AND MULCHING	2049 SQ. YD.
207, STRAW OR HAY BALES	250 EACH
659, MOWING	27 M SQ. FT.
659, COMMERCIAL FERTILIZER	1 TON
659, REPAIR SEEDING AND MULCHING	600 SQ. YD.
659, WATER	5 M GAL.

CALCULATED KAS
CHECKED ENF

DRAINAGE/EROSION CONTROL GENERAL NOTES

CUYAHOGA COUNTY
CUY-480-10.38

15
134

PLOT SUBMITTED: 12-APR-1997 13:17

PLOTTED BY: ksarli
PLOTTED FROM: i:\users\lhazapis\pid13000\gennotes\13000GNG.dgn

CALCULATED BK
CHECKED ENF

ITEM SPECIAL MAINTAIN EXISTING LIGHTING

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND WHICH ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF ANY EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF THE STATE, THE MAINTAINING AGENCY, AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED. DURING THIS INSPECTION, A WRITTEN RECORD OF THE CONDITION OF THE EXISTING LIGHTING SHALL BE MADE BY THE STATE REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT IN WORKING ORDER, INDIVIDUAL POLES WHICH ARE NOT STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF THE STATE, THE MAINTAINING AGENCY, AND THE CONTRACTOR.

IF, AS A RESULT OF THIS INSPECTION, IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT MADE AND SIGNED AS OUTLINED HEREIN.

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL BE TURNED OVER TO THE CONTRACTOR WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS.

REPLACEMENT OF KNOCKED DOWN UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCKED DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY ON A UNIT BASIS.

SHOULD THE CONTRACTOR DESIRE THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL THEN BE RESPONSIBLE FOR ADEQUATE TEMPORARY LIGHTING THAT PORTION OF THE EXISTING ROADWAY AFFECTED BY THE REMOVAL OF THE EXISTING LIGHTING. ****TEMPORARY LIGHTING TO MAINTAIN THE CONVENTIONAL CENTERLINE LIGHTS WHILE REPLACING THE MEDIAN INLETS BETWEEN STA 607+60 AND STA 691+95 IS NOT REQUIRED PROVIDING THAT THE EXISTING OUTSIDE LIGHTS IN THE THIS AREA ARE OPERATIONAL. THIS WAIVER OF THE REQUIREMENTS TO MAINTAIN EXISTING LIGHTING SHALL APPLY FOR A PERIOD NOT TO EXCEED 90 DAYS.****

PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR SETS OF THE TEMPORARY LIGHTING PLAN TO THE DIRECTOR FOR REVIEW AND APPROVAL.

THIS PLAN SHALL SHOW LOCATION OF POLES, LENGTH OF BRACKET ARMS, STYLE OF LUMINAIRES, MOUNTING HEIGHT, WIRING METHODS, AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.0 FOOTCANDLES WITH AN AVERAGE TO MINIMUM UNIFORMITY NOT TO EXCEED 4:1. MOUNTING HEIGHT FOR TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 27 FEET AND MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FEET. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "B" FOR STRENGTH REQUIREMENTS AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA. IF BREAKAWAY POLES ARE USED TO MEET THESE CRITERIA, THEN UNDERGROUND WIRING SHALL BE USED. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING.

ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. WHEN NO LONGER NEEDED, THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE MAINTAINING AGENCY WILL PAY FOR ELECTRICAL ENERGY CONSUMED BY EXISTING POWER SERVICES AND BY PROPOSED PERMANENT POWER SERVICES AFTER ACCEPTANCE. THE CONTRACTOR WILL PAY FOR ELECTRICAL ENERGY, INSTALLATION, REMOVAL, AND MAINTENANCE OF ANY TEMPORARY POWER SERVICES.

THE LUMP SUM PRICE BID FOR ITEM SPECIAL - "MAINTAIN EXISTING LIGHTING" SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS, AND INCIDENTALS NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN.

ITEM 202 - DISCONNECT EXISTING CIRCUIT, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF THE DISCONNECTION OF AN EXISTING LIGHT CIRCUIT AT A POLE BOX OR A LIGHT POLE OR JUNCTION BOX.

DISCONNECTION AT A PULL BOX SHALL INVOLVE CUTTING THE EXISTING CIRCUIT AND REMOVING ALL SPLICE KITS. ANY CABLE THAT IS TO BE ABANDONED SHALL BE TERMINATED IN A MANNER SUCH THAT NO CABLE IS LEFT REMAINING IN THE PULL BOX.

DISCONNECTION AT A LIGHT SHALL INVOLVE THE REMOVAL OF THE PART OF CABLE THAT IS TO BE ABANDONED FROM THE POLE. THOSE ENDS OF THE CONNECTOR KITS FROM WHICH THE ABANDONED CABLE IS REMOVED SHALL BE PLUGGED AND TAPED.

DISCONNECTION AT A MEDIAN JUNCTION BOX OR AT A MEDIAN MOUNTED LIGHT POLE SHALL INVOLVE THE CUTTING OF THE EXISTING CIRCUIT(S) AND THE REMOVING OF ALL CONNECTOR KITS.

ANY CABLE THAT IS TO BE REUSED IN A PULL BOX OR LIGHT POLE OR JUNCTION BOX SHALL BE CUT IN A MANNER SO THAT THERE IS SUFFICIENT LENGTH OF CABLE LEFT FOR RECONNECTION. CABLE SPLICE KITS AND CONNECTOR KITS WILL BE PAID FOR RESPECTIVELY UNDER EACH ITEM 625.

A CIRCUIT MAY REQUIRE CUTTING AND/OR DISCONNECTING AT VARIOUS LOCATIONS ALONG THE CIRCUIT WHETHER AT A LIGHT POLE, JUNCTION BOX OR PULL BOX. WHEN A CIRCUIT IS INITIALLY DISCONNECTED, PAYMENT FOR DISCONNECTION OF THAT CIRCUIT SHALL INCLUDE ALL OTHER DISCONNECTIONS AT VARIOUS LOCATIONS WITHIN THAT PARTICULAR CIRCUIT.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH ITEM 202 "DISCONNECT EXISTING CIRCUIT, AS PER PLAN" AND SHALL BE FULL COMPENSATION INCLUDING ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THE WORK.

ITEM 625 CONDUIT CLEANED AND CABLES REMOVED, AS PER PLAN

THIS ITEM OF WORK CONSISTS OF LOCATING AND CLEANING AN EXISTING CONDUIT OF ALL EXISTING CABLES, MUD AND DEBRIS SO THAT NEW CABLES MAY BE INSTALLED. INCIDENTAL TO THE CLEANING IS THE INSTALLATION OF BUSHINGS AND/OR COUPLINGS ON THE ENDS OF THE EXISTING CONDUIT AS REQUIRED. MATERIALS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF THE JOB SITE. DISTURBED AREAS SHALL BE PROPERLY RESTORED.

PAYMENT WILL BE MADE FOR EACH LINEAR FT. OF ITEM 625 "CONDUIT CLEANED AND CABLES REMOVED, AS PER PLAN" AND SHALL BE FULL COMPENSATION INCLUDING ALL MATERIALS, LABOR AND INCIDENTALS REQUIRED TO COMPLETE THE WORK IN A SATISFACTORY, WORKMAN-LIKE MANNER.

CONNECTIONS OF EXISTING LIGHTS TO NEW LIGHTING CIRCUIT CABLES

EXISTING LIGHTS SHALL BE CONNECTED TO THE NEW LIGHTING CIRCUIT CABLES. PAYMENT OF THIS WORK IS INCIDENTAL TO THE UNIT PRICE BID FOR EACH ITEM 625 CABLE SPLICING KIT IN PULL BOXES OR EACH ITEM 625 CONNECTOR KIT IN JUNCTION BOXES.

LIGHTING PLANS FOR EXISTING LIGHTING

THE LIGHTING PLANS (CUY-480-10.38, PROJECT 783-83) FOR THE EXISTING LIGHTING ARE ON FILE AT ODOT DISTRICT 12, GARFIELD HEIGHTS. THE EXISTING MEDIAN LIGHTING HAS A 480 VOLT - TWO WIRE SECONDARY SERVICE - ONE SIDED GROUNDED AND SUPPLIED FROM THE CLEVELAND ILLUMINATING COMPANY.

LIGHTING - REMOVAL AND REPLACEMENT OF CABLE

MEDIAN INLET BEING REPLACED (LOCATION)	LIGHTING CABLE BEING REMOVED & REPLACED (LOCATION)		LENGTH	CIRCUIT EFFECTED (2 CABLES PER CIRCUIT)	202	625			
	FROM	TO	FT.	FT.	DISCONNECT EXISTING CIRCUIT, AS PER PLAN EACH	CONNECTOR KIT TYPE V EACH	CONNECTOR KIT TYPE VII C EACH	NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE L.F.	CONDUIT CLENED AND AND CABLES REMOVED (AS PER PLAN) L.F.
610+50	607+60 T5	610+65 S5	305	T & S	2	4	4	1260	305
619+50	616+75 J1	619+80 K1	305	J	1	2	2	630	305
623+00	622+85 J2	625+90 K2	305	J & K	1	4	4	1260	305
628+25	626+70 PB	629+00 J3	230	J & K		4	4	960	230
635+00	632+10 K3	635+20 J4	310	J & K		4	4	1280	310
658+00	657+45 M2	660+50 N2	305	N & M	2	2	2	1260	305
662+00	660+50 N2	663+50 PB	300	N & M		4	4	1240	300
673+00	672+85 N4	676+00 M5	315	N & M		4	4	1300	315
682+50	682+35 M6	685+55 N6	320	N & M		4	4	1320	320
690+75	690+10 PB	691+95 N7	185	N & M		4	4	780	185
TOTALS			2880		6	36	36	11290	2880

LIGHTING NOTES

CUYAHOGA COUNTY
CUY-480-10.38

15A
134

SUMMARY OF RESURFACING QUANTITIES

SHEET	MAINLINE PAVEMENT TREATMENT		SPEC CRACKING AND SEATING PLAIN CONCRETE PAVEMENT	254 PAVEMENT PLANING, BITUMINOUS	446 ASPHALT CONCRETE SURFACE COURSE	446 ASPHALT CONCRETE INTERMEDIATE COURSE *	302 BITUMINOUS AGGREGATE BASE	304 AGGREGATE BASE	407 TACK COAT FOR INTERMEDIATE COURSE *	407 TACK COAT *	408 BITUMINOUS ** PRIME COAT
			S.Y.	S.Y.	C.Y.	C.Y.	C.Y.	C.Y.	GAL	GAL	GAL
	MEDIAN SHOULDER EAST & WESTBOUND										
GCC	CRACK & SEAT				611.2	977.8	2423.8		1760.2	3505.2	
GCC	FULL DEPTH REPLACMENT				267.4	427.2	2190.6	2351.2	769.6	1539.2	2969.6
GCC	APPROACH SLABS				18.0	24.6			32.2	32.2	
	MAINLINE EAST & WESTBOUND										
GCE	CRACK & SEAT		78160		2700.6	4321.1	17284.5		7777.9	23334.1	
GCE	FULL DEPTH REPLACMENT				1192.9	1908.5	9782.0	11451.9	3435.7	6871.3	13742.3
GCE	APPROACH SLABS				80.3	113.0			231.5	231.5	
	OUTSIDE SHOULDER EAST & WESTBOUND										
GCG	CRACK & SEAT				507.8	812.6	4817.8	5519.9	1462.2	3153.6	6623.7
GCG	FULL DEPTH REPLACMENT				226.6	363.0	1859.6	2177.2	653.0	1371.8	2866.6
GCG	APPROACH SLABS				15.0	20.8			42.0	42.0	
GCK	***TRANSITIONS***			27530.2	1733.1	1769.5	8346.7	9374.8	4990.9	7747.4	9857.2
GCL	***RAMP FEATHERS***			333.2	112.9	133.2	176.3		292.8	364.4	
GCL	***PAVEMENT REPAIR-MEDIAN***						581.0	995.9			1195.1
	UNDERDRAIN INSTALLATION										
	TOTALS		78,160	27,864	7,466	10,872	47,463	31,871	21,448	48,193	37,255

* 0.1 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY
** 0.4 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY

SUMMARY OF EXCAVATION QUANTITIES

SHEET	AREA		203 SUBGRADE COMPACTION	203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
			S.Y.	C.Y.
	MEDIAN SHOULDER			
GCN	EASTBOUND		5913	3990
GCN	WESTBOUND		5913	3990
	MAINLINE PAVEMENT		26910	9210
GCO	EASTBOUND		27065	9261
GCO	WESTBOUND			
	OUTSIDE SHOULDER			
GCP	EASTBOUND		14196	8149
GCP	WESTBOUND		14085	8070
	TOTALS		94,082	42,670

CALCULATED DRL
CHECKED ENF

MISCELLANEOUS QUANTITIES

CUYAHOGA COUNTY
CUY-480-10.38

16
134

RESURFACING QUANTITIES

SIDE	LOCATION STA	LOCATION STA	LENGTH (FEET)	AVERAGE WIDTH (FEET)	AREA (S.Y.)	MAINLINE PAVEMENT TREATMENT	DEPTH	CRACK & SEAT AREAS 446 ASPHALT CONCRETE SURFACE COURSE 1.25" (C.Y.)	407 TACK COAT FOR INTERMEDIATE COURSE * (GAL)	446 ASPHALT CONCRETE INTERMEDIATE COURSE 2.00" (C.Y.)	407 TACK COAT * (FOR 2-302 LIFTS) (GAL)	302 BITUMINOUS AGGREGATE BASE 8.00" (C.Y.)	407 TACK COAT * (GAL)	FULL DEPTH REPLACEMENT AREAS 446 ASPHALT CONCRETE SURFACE COURSE 1.25" (C.Y.)	407 TACK COAT FOR INTERMEDIATE COURSE * (GAL)	446 ASPHALT CONCRETE INTERMEDIATE COURSE 2.00" (C.Y.)	407 TACK COAT * (FOR 2-302 LIFTS) (GAL)	302 BITUMINOUS AGGREGATE BASE 10.25" (C.Y.)	408 BITUMINOUS ** PRIME COAT (GAL)	304 AGGREGATE BASE 12.00" (C.Y.)	APPROACH SLABS 446 ASPHALT CONCRETE SURFACE COURSE 1.25" (C.Y.)	407 TACK COAT FOR INTERMEDIATE COURSE * (GAL)	446 ASPHALT CONCRETE INTERMEDIATE COURSE 1.75" (C.Y.)	407 TACK COAT * (GAL)
MAINLINE	**PAVEMENT**																								
I480-EB	573+50.00	582+00.10	850.1	48	4533.9	FULL DEPTH								157.4	453.4	251.9	906.8	1290.9	1813.5	1511.3				
I480-EB	582+00.10	582+30.10	30	48	160.0	APPROACH SLABS															5.6	16.0	7.8	16.0
I480-EB	582+30.10	583+38.65	CUY-480-1054 (I-480 OVER W 130TH ST)																					
I480-EB	583+38.65	583+68.65	30	48	160.0	APPROACH SLAB															5.6	16.0	7.8	16.0
I480-EB	583+68.65	593+13.70	945.0	48	5040.3	FULL DEPTH								175.0	504.0	280.0	1008.1	1435.1	2016.1	1680.1				
I480-EB	593+13.70	593+38.70	25	48	133.3	APPROACH SLAB															4.6	13.3	6.5	13.3
I480-EB	593+38.70	596+50.96	CUY-480-1078 (I-480 OVER CONRAIL)																					
I480-EB	596+50.96	596+75.96	25	48	133.3	APPROACH SLAB															4.6	13.3	6.5	13.3
I480-EB	596+75.96	600+97.18	421.2	48	2246.5	FULL DEPTH								78.0	224.7	124.8	449.3	639.6	898.6	748.8				
I480-EB	600+97.18	601+22.18	25	48	133.3	APPROACH SLAB															4.6	13.3	6.5	13.3
I480-EB	601+22.18	604+29.32	CUY-480-1088 (I-480 OVER B&O RAILROAD)																					
I480-EB	604+29.32	604+54.32	25	48	133.3	APPROACH SLAB															4.6	13.3	6.5	13.3
I480-EB	604+54.32	605+90.00	135.68	48	723.6	FULL DEPTH								25.1	72.4	40.2	144.7	206.0	289.5	241.2				
I480-EB	605+90.00	608+90.00	300	48	1600.0	TRANSITION	SEE TRANSITION CALCULATIONS																	
I480-EB	608+90.00	636+36.00	2746	48	14645.3	CRACK & SEAT		508.5	1464.5	813.6	2929.1	3254.5	1464.5											
I480-EB	636+36.00	639+36.00	300	48	1600.0	TRANSITION	SEE TRANSITION CALCULATIONS																	
I480-EB	639+36.00	643+02.00	366	48	1952.0	FULL DEPTH								67.8	195.2	108.4	390.4	555.8	780.8	650.7				
I480-EB	642+98.36	643+18.36	20	48	106.7	APPROACH SLAB															3.7	10.7	5.2	10.7
I480-EB	643+18.36	644+31.62	CUY-480-1169 (I-480 OVER BIG CREEK)																					
I480-EB	644+31.62	644+56.62	25	48	133.3	APPROACH SLAB															4.6	13.3	6.5	13.3
I480-EB	644+56.62	644+90.00	33.4	48	178.0	FULL DEPTH								6.2	17.8	9.9	35.6	50.7	71.2	59.3				
I480-EB	644+90.00	647+90.00	300	48	1600.0	TRANSITION	SEE TRANSITION CALCULATIONS																	
I480-EB	647+90.00	664+70.00	1680	48	8960.0	CRACK & SEAT		311.1	896.0	497.8	1792.0	1991.1	896.0											
I480-EB	664+70.00	667+70.00	300	48	1600.0	TRANSITION	SEE TRANSITION CALCULATIONS																	
I480-EB	667+70.00	670+70.00	300	48	1600.0	TRANSITION	SEE TRANSITION CALCULATIONS																	
I480-EB	670+70.00	694+14.00	2344	48	12501.3	CRACK & SEAT		434.1	1250.1	694.5	2500.3	2778.1	1250.1											
I480-EB	694+14.00	697+14.00	300	48	1600.0	TRANSITION	SEE TRANSITION CALCULATIONS																	
I480-EB	697+14.00	700+00.00	286	48	1525.3	FULL DEPTH								53.0	152.5	84.7	305.1	434.3	610.1	508.4				
RAMP W-2	593+00.00	594+50.00	RAMP-SCL		361.3	FULL DEPTH								12.5	36.1	20.1	72.3	102.9	144.5	120.4				
RAMP W-2	594+50.00	594+75.00	RAMP-SCL		44.4	APPROACH SLAB															1.5	4.4	2.2	4.4
RAMP W-2	594+75.00	597+66.00	CUY-480-1078 (I-480 OVER CONRAIL)																					
RAMP W-2	597+66.00	597+91.00	RAMP-SCL		33.3	APPROACH SLAB															1.2	3.3	1.6	3.3
RAMP W-2	597+91.00	599+70.00	RAMP-SCL		200.0	FULL DEPTH								6.9	20.0	11.1	40.0	56.9	80.0	66.7				
RAMP W-2	599+70.00	599+95.00	RAMP-SCL		20.8	APPROACH SLAB															0.7	2.1	1.0	2.1
RAMP W-2	599+95.00	603+30.00	CUY-480-1088 (I-480 OVER B&O RAILROAD)																					
RAMP T-2	620+49.66	628+43.00	RAMP SCL & GORE		1416.0	CRACK & SEAT		49.2	141.6	78.7	283.2	314.7	141.6											
RAMP T-4	651+00.00	661+00.00	RAMP-SCL		1308.9	CRACK & SEAT		45.4	130.9	72.7	261.8	290.9	130.9											
RAMP R-1	695+39.39	697+15.00	RAMP-SCL		169.3	TRANSITION	SEE TRANSITION CALCULATIONS																	
RAMP R-1	697+15.00	700+00.00	RAMP-SCL		380.0	FULL DEPTH								13.2	38.0	21.1	76.0	108.2	152.0	126.7				
						SHEET TOTALS		1,348.3	3,883.1	2,157.3	7,766.4	8,629.3	3,883.1	595.1	1,714.1	952.2	3,428.3	4,880.4	6,856.3	5,713.6	41.3	119.0	58.1	119.0

* 0.1 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY
** 0.4 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY

QUANTITIES CARRIED TO SHEET 18

CALCULATED DRL
CHECKED ENF

RESURFACING QUANTITY SHEET

CUYAHOGA COUNTY
CUY-480-10.38

PLOTTED BY: ksarli
PLOTTED FROM: i:\users\lhazapis\pid13000\13000qce.d
PLOT SUBMITTED: 11-APR-1997 09:57
13000QCE.DGN

CALCULATED DRL
CHECKED ENF

RESURFACING QUANTITY SHEET

CUYAHOGA COUNTY
CUY-480-10.38

SIDE	LOCATION STA	LOCATION STA	LENGTH	AVERAGE WIDTH	AREA	MAINLINE PAVEMENT TREATMENT		CRACK & SEAT AREAS 446 ASPHALT CONCRETE SURFACE COURSE 1.25"	407 TACK COAT FOR INTERMEDIATE COURSE	446 ASPHALT CONCRETE INTERMEDIATE COURSE 2.00"	407 TACK COAT (FOR 2-302 LIFTS)	302 BITUMINOUS AGGREGATE BASE 8.00"	407 TACK COAT		FULL DEPTH REPLACEMENT AREAS 446 ASPHALT CONCRETE SURFACE COURSE 1.25"	407 TACK COAT FOR INTERMEDIATE COURSE	446 ASPHALT CONCRETE INTERMEDIATE COURSE 2.00"	407 TACK COAT (FOR 2-302 LIFTS)	302 BITUMINOUS AGGREGATE BASE 10.25"	408 BITUMINOUS PRIME COAT	304 AGGREGATE BASE 12.00"		APPROACH SLABS 446 ASPHALT CONCRETE SURFACE COURSE 1.25"	407 TACK COAT FOR INTERMEDIATE COURSE	446 ASPHALT CONCRETE INTERMEDIATE COURSE 1.75"	407 TACK COAT
				(FEET)	(S.Y.)			(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(GAL)		(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)		(C.Y.)	(GAL)	(C.Y.)	(GAL)
MAINLINE PAVEMENT																										
1480-WB	573+50.00	582+00.14	850.14	48	4534.1	FULL DEPTH									157.4	453.4	251.9	906.8	1291.0	1813.6	1511.4					
1480-WB	582+00.14	582+30.14	30	48	160.0	APPROACH SLABS																	5.6	16.0	7.8	16.0
1480-WB	582+30.14	583+38.60	CUY-480-1054 (I-480 OVER W 130TH ST)																							
1480-WB	583+38.60	583+68.60	30	48	160.0	APPROACH SLAB																	5.6	16.0	7.8	16.0
1480-WB	583+68.60	593+13.70	945.1	48	5040.5	FULL DEPTH									175.0	504.1	280.0	1008.1	1435.2	2016.2	1680.2					
1480-WB	593+13.70	593+38.70	25	48	133.3	APPROACH SLAB																	4.6	13.3	6.5	13.3
1480-WB	593+38.70	596+50.96	CUY-480-1078 (I-480 OVER CONRAIL)																							
1480-WB	596+50.96	596+75.96	25	48	133.3	APPROACH SLAB																	4.6	13.3	6.5	13.3
1480-WB	596+75.96	600+97.18	421.2	48	2246.5	FULL DEPTH									78.0	224.7	124.8	449.3	639.6	898.6	748.8					
1480-WB	600+97.18	601+22.18	25	48	133.3	APPROACH SLAB																	4.6	13.3	6.5	13.3
1480-WB	601+22.18	604+29.32	CUY-480-1088 (I-480 OVER B&O RAILROAD)																							
1480-WB	604+29.32	604+54.32	25	48	133.3	APPROACH SLAB																	4.6	13.3	6.5	13.3
1480-WB	604+54.32	605+90.00	135.68	48	723.6	FULL DEPTH									25.1	72.4	40.2	144.7	206.0	289.5	241.2					
1480-WB	605+90.00	608+90.00	300	48	1600.0	TRANSITION	SEE TRANSITION CALCULATIONS																			
1480-WB	608+90.00	636+36.00	2746	48	14645.3	CRACK & SEAT		508.5	1464.5	813.6	2929.1	3254.5	1464.5													
1480-WB	636+36.00	639+36.00	300	48	1600.0	TRANSITION	SEE TRANSITION CALCULATIONS																			
1480-WB	639+36.00	643+02.00	366	48	1952.0	FULL DEPTH									67.8	195.2	108.4	390.4	555.8	780.8	650.7					
1480-WB	642+98.36	643+18.36	20	48	106.7	APPROACH SLAB																	3.7	10.7	5.2	10.7
1480-WB	643+18.36	644+31.62	CUY-480-1169 (I-480 OVER BIG CREEK)																							
1480-WB	644+31.62	644+56.62	25	48	133.3	APPROACH SLAB																	4.6	13.3	6.5	13.3
1480-WB	644+56.62	644+90.00	33.4	48	178.0	FULL DEPTH									6.2	17.8	9.9	35.6	50.7	71.2	59.3					
1480-WB	644+90.00	647+90.00	300	48	1600.0	TRANSITION	SEE TRANSITION CALCULATIONS																			
1480-WB	647+90.00	664+70.00	1680	48	8960.0	CRACK & SEAT		311.1	896.0	497.8	1792.0	1991.1	896.0													
1480-WB	664+70.00	667+70.00	300	48	1600.0	TRANSITION	SEE TRANSITION CALCULATIONS																			
1480-WB	667+70.00	670+70.00	300	48	1600.0	TRANSITION	SEE TRANSITION CALCULATIONS																			
1480-WB	670+70.00	694+14.00	2344	48	12501.3	CRACK & SEAT		434.1	1250.1	694.5	2500.3	2778.1	1250.1													
1480-WB	694+14.00	697+14.00	300	48	1600.0	TRANSITION	SEE TRANSITION CALCULATIONS																			
1480-WB	697+14.00	700+00.00	286	48	1525.3	FULL DEPTH									53.0	152.5	84.7	305.1	434.3	610.1	508.4					
RAMP W-3	595+30.00	595+63.00	RAMP-SCL		33.3	APPROACH SLAB																	1.2	3.3	1.6	3.3
RAMP W-3	595+63.00	600+17.32	RAMP-SCL		540.0	FULL DEPTH									18.8	54.0	30.0	108.0	153.8	216.0	180.0					
RAMP T-1	619+00.00	629+00.00	RAMP-SCL		1406.6	CRACK & SEAT		48.8	140.7	78.1	281.3	312.6	140.7													
RAMP T-3	648+73.00	656+76.90	RAMP-SCL		1388.9	CRACK & SEAT		48.2	138.9	77.2	277.8	308.6	138.9													
RAMP R-2	692+50.00	693+30.00	RAMP-SCL		17.8	CRACK & SEAT		0.6	1.8	1.0	3.6	4.0	1.8													
RAMP R-2	693+30.00	694+14.00	RAMP-SCL		28.3	CRACK & SEAT		1.0	2.8	1.6	5.7	6.3	2.8													
RAMP R-2	694+14.00	697+14.00	RAMP-SCL		250.0	TRANSITION	SEE TRANSITION CALCULATIONS																			
RAMP R-2	697+14.00	700+00.00	RAMP-SCL		475.0	FULL DEPTH									16.5	47.5	26.4	95.0	135.2	190.0	158.3					
						SHEET TOTALS		1,352.3	3,894.8	2,163.8	7,789.8	8,655.2	3894.8		597.8	1,721.6	956.3	3,443.0	4,901.6	6,886.0	5,738.3		39.1	112.5	54.9	112.5
						TOTALS FROM SHEET GCD		1,348.3	3,883.1	2,157.3	7,766.4	8,629.3	3,883.1		595.1	1,714.1	952.2	3,428.3	4,880.4	6,856.3	5,713.6		41.3	119.0	58.1	119.0
						SHEET TOTALS		2,700.6	7,777.9	4,321.1	15,556.2	17,284.5	7,777.9		1,192.9	3,435.7	1,908.5	6,871.3	9,782.0	13,742.3	11,451.9		80.4	231.5	113.0	231.5

* 0.1 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY
** 0.4 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY

QUANTITIES CARRIED TO SHEET 16

23,334.1

LOCATION			LENGTH	ITEM 446 AVERAGE WIDTH	ITEM 302 AVERAGE WIDTH	ITEM 304 AVERAGE WIDTH	ITEM 446 AVERAGE AREA	ITEM 302 AVERAGE AREA	ITEM 304 AVERAGE AREA	MAINLINE PAVEMENT TREATMENT	CRACK & SEAT AREA						FULL DEPTH REPLACEMENT AREAS							APPROACH SLABS			
											446	407	446	407	302	407	446	407	446	407	302	408	304	446	407	446	407
											ASPHALT CONCRETE SURFACE COURSE	TACK COAT FOR INTERMEDIATE COURSE *	ASPHALT CONCRETE INTERMEDIATE COURSE	TACK COAT * (FOR 2-302 LIFTS)	BITUMINOUS AGGREGATE BASE	TACK COAT *	ASPHALT CONCRETE SURFACE COURSE	TACK COAT FOR INTERMEDIATE COURSE *	ASPHALT CONCRETE INTERMEDIATE COURSE	TACK COAT (FOR 2-302 LIFTS)	BITUMINOUS AGGREGATE BASE	BITUMINOUS ** PRIME COAT	AGGREGATE BASE	ASPHALT CONCRETE SURFACE COURSE	TACK COAT FOR INTERMEDIATE COURSE *	ASPHALT CONCRETE INTERMEDIATE COURSE	TACK COAT *
											1.25"		2.00"		8.00"		1.25"		2.00"		10.25"		12.00"	1.25"		1.75"	
	STA	STA	(FEET)	(FEET)	(FEET)	(FEET)	(S.Y.)	(S.Y.)	(S.Y.)		(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(C.Y.)	(GAL)	(C.Y.)	(GAL)
MAINLINE	MEDIAN SHOULDER																										
1480-EB	573+50.00	582+00.10	850.1	11.40	11.40	11.00	1076.8	1076.8	1039.0	FULL DEPTH							37.4	107.7	59.8	215.4	306.6	415.6	329.0				
1480-EB	582+00.10	582+30.10	30.0	11.40			38.0			APPROACH SLABS														1.3	3.8	1.8	3.8
1480-EB	582+30.1	583+38.7	CUY-480-1054 (I480 OVER W 130TH ST)																								
1480-EB	583+38.65	583+68.65	30.0	11.40			38.0			APPROACH SLAB														1.3	3.8	1.8	3.8
1480-EB	583+68.65	593+13.70	945.0	11.40	11.40	11.00	1197.1	1197.1	1155.1	FULL DEPTH							41.6	119.7	66.5	239.4	340.8	462.0	365.8				
1480-EB	593+13.70	593+38.70	25.0	11.40			31.7			APPROACH SLAB														1.1	3.2	1.5	3.2
1480-EB	593+38.7	596+51.0	CUY-480-1078 (I-480 OVER CONRAIL)																								
1480-EB	596+50.96	596+75.96	25.0	11.40			31.7			APPROACH SLAB														1.1	3.2	1.5	3.2
1480-EB	596+75.96	600+97.18	421.2	11.40	11.40	11.00	533.5	533.5	514.8	FULL DEPTH							18.5	53.4	29.6	106.7	151.9	205.9	163.0				
1480-EB	600+97.18	601+22.18	25.0	11.40			31.7			APPROACH SLAB														1.1	3.2	1.5	3.2
1480-EB	601+22.2	604+29.3	CUY-480-1088 (I-480 OVER B&O RAILROAD)																								
1480-EB	604+29.32	604+54.32	25.0	11.40			31.7			APPROACH SLAB														1.1	3.2	1.5	3.2
1480-EB	604+54.32	605+90.00	135.7	11.40	11.40	11.00	171.9	171.9	165.8	FULL DEPTH							6.0	17.2	9.5	34.4	48.9	66.3	52.5				
1480-EB	605+90.00	608+90.00	300.0	11.55			385.0			TRANSITION																	
1480-EB	608+90.00	636+36.00	2746.0	11.70	11.60		3569.8	3539.3		CRACK & SEAT	124.0	357.0	198.3	357.0	491.6	353.9											
1480-EB	636+36.00	639+36.00	300.0	11.55			385.0			TRANSITION																	
1480-EB	639+36.00	643+02.00	366.0	11.40	11.40	11.00	463.6	463.6	447.3	FULL DEPTH								46.4	25.8	92.7	132.0	178.9	141.7				
1480-EB	642+98.36	643+18.36	20.0	11.40	10.79		25.3			APPROACH SLAB														0.9	2.5	1.2	2.5
1480-EB	643+18.4	644+31.6	CUY-480-1169 (I-480 OVER BIG CREEK)																								
1480-EB	644+31.62	644+56.62	25.0	11.40			31.7			APPROACH SLAB														1.1	3.2	1.5	3.2
1480-EB	644+56.62	644+90.00	33.4	11.40	11.40	11.00	42.3	42.3	40.8	FULL DEPTH								4.2	2.3	8.5	12.0	16.3	12.9				
1480-EB	644+90.00	647+90.00	300.0	11.55			385.0			TRANSITION																	
1480-EB	647+90.00	664+70.00	1680.0	11.70	11.60		2184.0	2165.3		CRACK & SEAT	75.8	218.4	121.3	218.4	300.7	216.5											
1480-EB	664+70.00	667+70.00	300.0	11.55			385.0			TRANSITION																	
1480-EB	667+70.00	670+70.00	300.0	11.55			385.0			TRANSITION																	
1480-EB	670+70.00	694+14.00	2344.0	11.70	11.60		3047.2	3021.2		CRACK & SEAT	105.8	304.7	169.3	304.7	419.6	302.1											
1480-EB	694+14.00	697+14.00	300.0	11.55			385.0			TRANSITION																	
1480-EB	697+14.00	700+00.00	286.0	11.40	11.40	11.00	362.3	362.3	349.6	FULL DEPTH								36.2	20.1	72.5	103.1	139.8	110.7				
										SHEET TOTALS	305.6	880.1	488.9	880.1	1,211.9	872.5	133.7	103.5	213.6	769.6	1,095.3	1,484.8	1,175.6	9.0	26.1	12.3	26.1

* 0.1 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY
** 0.4 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY

QUANTITIES CARRIED TO SHEET 20.

CALCULATED DRL
CHECKED ENF

RESURFACING QUANTITY SHEET

CUYAHOGA COUNTY
CUY-480-10.38

LOCATION			LENGTH	ITEM 446 AVERAGE WIDTH	ITEM 302 AVERAGE WIDTH	ITEM 304 AVERAGE WIDTH	ITEM 446 AVERAGE AREA	ITEM 302 AVERAGE AREA	ITEM 304 AVERAGE AREA	MAINLINE PAVEMENT TREATMENT	CRACK & SEAT AREA						FULL DEPTH REPLACEMENT AREAS							APPROACH SLABS			
											446	407	446	407	302	407	446	407	446	407	302	408	304	446	407	446	407
											ASPHALT CONCRETE SURFACE COURSE	TACK COAT FOR INTERMEDIATE COURSE *	ASPHALT CONCRETE INTERMEDIATE COURSE	TACK COAT * (FOR 2-302 LIFTS)	BITUMINOUS AGGREGATE BASE	TACK COAT *	ASPHALT CONCRETE SURFACE COURSE	TACK COAT FOR INTERMEDIATE COURSE	ASPHALT CONCRETE INTERMEDIATE COURSE	TACK COAT (FOR 2-302 LIFTS)	BITUMINOUS AGGREGATE BASE	BITUMINOUS ** PRIME COAT	AGGREGATE BASE	ASPHALT CONCRETE SURFACE COURSE	TACK COAT FOR INTERMEDIATE COURSE *	ASPHALT CONCRETE INTERMEDIATE COURSE	TACK COAT *
											1.25"		2.00"		5.00"		1.25"		2.00"		10.25"		11.00"	1.25"		1.75"	
	STA	STA	(FEET)	(FEET)	(FEET)	(FEET)	(S.Y.)	(S.Y.)	(S.Y.)		(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(C.Y.)	(GAL)	(C.Y.)	(GAL)
MAINLINE MEDIAN SHOULDER																											
1480-WB	573+50.00	582+00.14	850.1	11.40	11.40	11.00	1076.8	1076.8	1039.1	FULL DEPTH							37.4	107.7	59.8	215.4	306.6	415.6	329.0				
1480-WB	582+00.14	582+30.14	30.0	11.40			38.0			APPROACH SLABS														1.3	3.8	1.8	3.8
1480-WB	582+30.1	583+38.6	CUY-480-1054 (I-480 OVER W 130TH ST)																								
1480-WB	583+38.60	583+68.60	30.0	11.40			38.0			APPROACH SLAB														1.3	3.8	1.8	3.8
1480-WB	583+68.60	593+13.70	945.1	11.40	11.40	11.00	1197.1	1197.1	1155.1	FULL DEPTH							41.6	119.7	66.5	239.4	340.8	462.0	365.8				
1480-WB	593+13.70	593+38.70	25.0	11.40			31.7			APPROACH SLAB														1.1	3.2	1.5	3.2
1480-WB	593+38.7	596+51.0	CUY-480-1078 (I-480 OVER CONRAIL)																								
1480-WB	596+50.96	596+75.96	25.0	11.40			31.7			APPROACH SLAB														1.1	3.2	1.5	3.2
1480-WB	596+75.96	600+97.18	421.2	11.40	11.40	11.00	533.5	533.5	514.8	FULL DEPTH							18.5	53.4	29.6	106.7	151.9	205.9	163.0				
1480-WB	600+97.18	601+22.18	25.0	11.40			31.7			APPROACH SLAB														1.1	3.2	1.5	3.2
1480-WB	601+22.2	604+29.3	CUY-480-1088 (I-480 OVER B&O RAILROAD)																								
1480-WB	604+29.32	604+54.32	25.0	11.40			31.7			APPROACH SLAB														1.1	3.2	1.5	3.2
1480-WB	604+54.32	605+90.00	135.7	11.40	11.40	11.00	171.9	171.9	165.8	FULL DEPTH							6.0	17.2	9.5	34.4	48.9	66.3	52.5				
1480-WB	605+90.00	608+90.00	300.0	11.55			385.0			TRANSITION																	
1480-WB	608+90.00	636+36.00	2746.0	11.70	11.60		3569.8	3539.3		CRACK & SEAT	124.0	357.0	198.3	357.0	491.6	353.9											
1480-WB	636+36.00	639+36.00	300.0	11.55			385.0			TRANSITION																	
1480-WB	639+36.00	643+02.00	366.0	11.40	11.40	11.00	463.6	463.6	447.3	FULL DEPTH							16.1	46.4	25.8	92.7	132.0	178.9	141.7				
1480-WB	642+98.36	643+18.36	20.0	11.40	10.79		25.3			APPROACH SLAB														0.9	2.5	1.2	2.5
1480-WB	643+18.4	644+31.6	CUY-480-1169 (I-480 OVER BIG CREEK)																								
1480-WB	644+31.62	644+56.62	25.0	11.40			31.7			APPROACH SLAB														1.1	3.2	1.5	3.2
1480-WB	644+56.62	644+90.00	33.4	11.40	11.40	11.00	42.3	42.3	40.8	FULL DEPTH							1.5	4.2	2.3	8.5	12.0	16.3	12.9				
1480-WB	644+90.00	647+90.00	300.0	11.55			385.0			TRANSITION																	
1480-WB	647+90.00	664+70.00	1680.0	11.70	11.60		2184.0	2165.3		CRACK & SEAT	75.8	218.4	121.3	218.4	300.7	216.5											
1480-WB	664+70.00	667+70.00	300.0	11.55			385.0			TRANSITION																	
1480-WB	667+70.00	670+70.00	300.0	11.55			385.0			TRANSITION																	
1480-WB	670+70.00	694+14.00	2344.0	11.70	11.60		3047.2	3021.2		CRACK & SEAT	105.8	304.7	169.3	304.7	419.6	302.1											
1480-WB	694+14.00	697+14.00	300.0	11.55			385.0			TRANSITION																	
1480-WB	697+14.00	700+00.00	286.0	11.40	11.40	11.00	362.3	362.3	349.6	FULL DEPTH							12.6	36.2	20.1	72.5	103.1	139.8	110.7				
										SHEET TOTALS	305.6	880.1	488.9	880.1	1211.9	872.5	133.7	384.8	213.6	769.6	1095.3	1484.8	1175.6	9.0	26.1	12.3	26.1
										TOTALS FROM SHEET 19	305.6	880.1	488.9	880.1	1211.9	872.5	133.7	384.8	213.6	769.6	1095.3	1484.8	1175.6	9.0	26.1	12.3	26.1
										GRAND TOTALS	611.2	1760.2	977.8	1760.2	2423.8	1745.0	267.4	769.6	427.2	1539.2	2190.6	2969.6	2351.2	18.0	32.2	**52.2**	32.2

* 0.1 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY
** 0.4 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY

QUANTITIES CARRIED TO SHEET 16 — 3505.2

PLOTTED BY: ksarli
PLOTTED FROM: i:\users\lhazapis\pid13000\13000gcc.dgn
PLOT SUBMITTED: 11-APR-1997 09:55
13000GCC.DGN

CALCULATED DRL
CHECKED ENF

RESURFACING QUANTITY SHEET

CUYAHOGA COUNTY
CUY-480-10.38

SIDE	LOCATION STA	LOCATION STA	LENGTH (FEET)	ITEM 446 AVERAGE WIDTH (FEET)	ITEM 302 AVERAGE WIDTH (FEET)	ITEM 304 AVERAGE WIDTH (FEET)	ITEM 446 AVERAGE AREA (S.Y.)	ITEM 302 AVERAGE AREA (S.Y.)	ITEM 304 AVERAGE AREA (S.Y.)	MAINLINE PAVEMENT TREATMENT	CRACK & SEAT AREAS 446 ASPHALT CONCRETE SURFACE COURSE DEPTH 1.25" (C.Y.)	446 TACK COAT FOR INTERMEDIATE COURSE * (GAL)	407 ASPHALT CONCRETE INTERMEDIATE COURSE 2.00" (C.Y.)	407 TACK COAT * (FOR 2-302 LIFTS) (GAL)	302 BITUMINOUS AGGREGATE BASE 11.00" (C.Y.)	408 BITUMINOUS ** PRIME COAT (GAL)	304 AGGREGATE BASE 12.00" (C.Y.)	FULL DEPTH REPLACEMENT AREAS 446 ASPHALT CONCRETE SURFACE COURSE 1.25" (C.Y.)	446 TACK COAT FOR INTERMEDIATE COURSE * (GAL)	407 ASPHALT CONCRETE INTERMEDIATE COURSE 2.00" (C.Y.)	407 TACK COAT * (FOR 2-302 LIFTS) (GAL)	302 BITUMINOUS AGGREGATE BASE 10.25" (C.Y.)	408 BITUMINOUS ** PRIME COAT (GAL)	304 AGGREGATE BASE 12.00" (C.Y.)	APPROACH SLABS 446 ASPHALT CONCRETE SURFACE COURSE 1.25" (C.Y.)	407 TACK COAT FOR INTERMEDIATE COURSE * (GAL)	446 ASPHALT CONCRETE INTERMEDIATE COURSE 1.75" (C.Y.)	407 TACK COAT * (GAL)
OUTSIDE SHOULDER																											
1480-EB	573+50.00	581+75.00	825.0	10.00	10.72	11.33	916.7	982.7	1038.9	FULL DEPTH								31.8	91.7	50.9	196.5	261.0	415.6	305.6				
1480-EB	581+75.00	582+05.00	30.0	10.00			33.3			APPROACH SLABS															1.2	3.3	1.6	3.3
1480-EB	582+05.0	583+13.0	CUY-480-10.54 (I-480 OVER W 130TH ST)																									
1480-EB	583+13.00	583+43.00	30.0	10.00			33.3			APPROACH SLAB															1.2	3.3	1.6	3.3
1480-EB	583+43.00	590+44.50	701.5	10.00	10.72	11.33	779.4	835.6	883.4	FULL DEPTH								27.1	77.9	43.3	167.1	221.9	353.3	259.8				
1480-EB	590+44.50	594+68.00	SEE RAMP W-2							FULL DEPTH																		
1480-EB	594+93.00	597+81.00	CUY-480-10.78 (I-480 OVER CONRAIL)																									
1480-EB	597+81.00	599+76.00	SEE RAMP W-2							APPROACH SLAB																		
1480-EB	599+76.0	603+00.0	CUY-480-10.88 (I-480 OVER B&O RAILROAD)																									
1480-EB	603+00.00	603+25.00	25.0	10.00			27.8			APPROACH SLAB															1.0	2.8	1.4	2.8
1480-EB	603+25.00	605+90.00	265.0	10.00	10.72	11.33	294.4	315.6	333.7	FULL DEPTH								10.2	29.4	16.4	63.1	83.8	133.5	98.1				
1480-EB	605+90.00	608+90.00	300.0	10.00	10.79	11.33	333.3	359.6	377.8	TRANSITION	SEE TRANSITION CALCULATIONS																	
1480-EB	608+90.00	620+49.66	1159.7	10.00	10.79	11.33	1288.5	1390.0	1460.3	CRACK & SEAT	44.7	128.9	71.6	278.0	424.7	584.1	486.8											
1480-EB	620+49.66	628+43.00	SEE RAMP T-2							CRACK & SEAT																		
1480-EB	628+43.00	636+36.00	793.0	10.00	10.79	11.33	881.1	950.5	998.6	CRACK & SEAT	30.6	88.1	49.0	190.1	290.4	399.4	332.9											
1480-EB	636+36.00	639+00.00	264.0	10.00	10.79	11.33	293.3	316.4	332.4	TRANSITION	SEE TRANSITION CALCULATIONS																	
1480-EB	639+00.00	639+36.00	36.0	10.92	10.92	10.92	43.7	43.7	43.7	TRANSITION	SEE TRANSITION CALCULATIONS																	
1480-EB	639+36.00	643+02.00	366.0	10.92	10.92	10.92	444.1	444.1	444.1	FULL DEPTH								15.4	44.4	24.7	88.8	126.4	177.6	148.0				
1480-EB	642+66.00	642+86.00	20.0	10.92	10.92		24.3			APPROACH SLAB															0.8	2.4	1.2	2.4
1480-EB	642+86.0	643+99.0	CUY-480-11.69 (I-480 OVER BIG CREEK)																									
1480-EB	643+99.00	644+24.00	25.0	10.00			27.8			APPROACH SLAB															1.0	2.8	1.4	2.8
1480-EB	644+24.00	644+90.00	66.0	10.00	10.72	11.33	73.3	78.6	83.1	FULL DEPTH								2.5	7.3	4.1	15.7	20.9	33.2	24.4				
1480-EB	644+90.00	647+90.00	300.0	10.00	10.79	11.33	333.3	359.6	377.8	TRANSITION	SEE TRANSITION CALCULATIONS																	
1480-EB	647+90.00	649+10.00	120.0	10.00	10.79	11.33	133.3	143.8	151.1	CRACK & SEAT	4.6	13.3	7.4	28.8	44.0	60.4	50.4											
1480-EB	649+10.00	661+00.00	SEE RAMP T-4							CRACK & SEAT																		
1480-EB	661+00.00	664+70.00	370.0	10.00	10.79	11.33	411.1	443.5	465.9	CRACK & SEAT	14.3	41.1	22.8	88.7	135.5	186.4	155.3											
1480-EB	664+70.00	667+70.00	300.0	10.00	10.79	11.33	333.3	359.6	377.8	TRANSITION	SEE TRANSITION CALCULATIONS																	
1480-EB	667+70.00	670+70.00	300.0	10.00	10.79	11.33	333.3	359.6	377.8	TRANSITION	SEE TRANSITION CALCULATIONS																	
1480-EB	670+70.00	694+14.00	2344.0	10.00	10.79	11.33	2604.4	2809.6	2951.7	CRACK & SEAT	90.4	260.4	144.7	561.9	858.5	1180.7	983.9											
1480-EB	694+14.00	695+39.39	125.4	10.00	10.79	11.33	139.3	150.3	157.9	TRANSITION	SEE TRANSITION CALCULATIONS																	
1480-EB	695+39.39	700+00.00	SEE RAMP R-1																									
RAMP W-2	590+44.50	593+00.00	GORE-(CADD AREA)				430.9	430.9	430.9	FULL DEPTH								15.0	43.1	23.9	86.2	122.7	172.4	143.6				
RAMP W-2	593+00.00	594+15.00	115.0	8.00	8.72	9.33	102.2	111.4	119.2	FULL DEPTH								3.5	10.2	5.7	22.3	29.1	47.7	34.1				
RAMP W-2	594+15.00	594+68.00	53.0	6.50	7.22	7.83	38.3	42.5	46.1	FULL DEPTH								1.3	3.8	2.1	8.5	10.9	18.4	12.8				
RAMP W-2	594+68.00	594+93.00	25.0	5	5	5	13.9	13.9	13.9	APPROACH SLAB															0.5	1.4	0.7	1.4
RAMP W-2	594+93.00	597+81.00	CUY-480-10.78 (I-480 OVER CONRAIL)																									
RAMP W-2	597+81.00	598+06.00	25.0	5	5	5	13.9	13.9	13.9	APPROACH SLAB															0.5	1.4	0.7	1.4
RAMP W-2	598+06.00	599+51.00	145.0	6.5	6.5	6.5	104.7	104.7	104.7	FULL DEPTH								3.6	10.5	5.8	20.9	29.8	41.9	34.9				
RAMP W-2	599+51.00	599+76.00	25.0	8	8	8	22.2	22.2	22.2	APPROACH SLAB															0.8	2.2	1.1	2.2
RAMP W-2	599+76.0	603+00.0	CUY-480-10.88 (I-480 OVER B&O RAILROAD)																									
RAMP T-2	620+49.66	628+43.0	793.3	10.00	10.79	11.33	881.5	950.9	999.0	CRACK & SEAT	30.6	88.1	49.0	190.2	290.6	399.6	333.0											
RAMP T-4	649+10.00	651+00.00	GORE-(CADD AREA)				290.9	290.9	290.9	CRACK & SEAT	10.1	29.1	16.2	58.2	88.9	116.4	97.0											
RAMP T-4	651+00.00	661+00.00	1000.0	8.00	8.79	9.33	888.9	976.4	1037.0	CRACK & SEAT	30.9	88.9	49.4	195.3	298.4	414.8	345.7											
RAMP R-1	695+39.39	697+15.00	175.6	8.00	8.79	9.33	156.1	171.5	182.1	TRANSITION	SEE TRANSITION CALCULATIONS																	
RAMP R-1	697+15.00	700+00.00	285.0	8.00	8.79	9.33	253.3	278.3	295.6	FULL DEPTH								8.8	25.3	14.1	55.7	72.1	118.2	84.4				
										SHEET TOTALS	256.2	737.9	410.1	1,591.2	2,431.0	3341.8	2,785.0	119.2	343.6	191.0	724.8	978.6	1,511.8	1,145.7	7.0	19.6	9.7	19.6

* 0.1 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY
** 0.4 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY

QUANTITIES CARRIED TO SHEET 22

CALCULATED DRL
CHECKED ENF

RESURFACING QUANTITY SHEET

CUYAHOGA COUNTY
CUY-480-10.38

SIDE	LOCATION STA	LOCATION STA	LENGTH (FEET)	ITEM 446 AVERAGE WIDTH (FEET)	ITEM 302 AVERAGE WIDTH (FEET)	ITEM 304 AVERAGE WIDTH (FEET)	ITEM 446 AVERAGE AREA (S.Y.)	ITEM 302 AVERAGE AREA (S.Y.)	ITEM 304 AVERAGE AREA (S.Y.)	MAINLINE PAVEMENT TREATMENT
										DEPTH
OUTSIDE SHOULDER										
I480-WB	575+55.00	582+22.00	667.0	10.00	10.72	11.33	741.1	794.5	839.9	FULL DEPTH
I480-WB	582+22.00	582+52.00	30.0	10.00			33.3			APPROACH SLABS
I480-WB	582+52.0	583+60.0	CUY-480-1054 (I-480 OVER W 130TH ST)							
I480-WB	583+60.00	583+90.00	30.0	10.00			33.3			APPROACH SLAB
I480-WB	583+90.00	591+91.00	801.0	10.00	10.72	11.33	890.0	954.1	1008.7	FULL DEPTH
I480-WB	591+91.00	592+16.00	25.0	10.00			27.8			APPROACH SLAB
I480-WB	592+16.0	595+21.0	CUY-480-1078 (I-480 OVER CONRAIL)							
I480-WB	595+21.00	600+17.32	SEE RAMP W-3							
I480-WB	600+17.32	602+53.00	235.7	10.00	10.72	11.33	261.9	280.7	296.8	FULL DEPTH
I480-WB	602+28.00	602+53.00	25.0	10.00			27.8			APPROACH SLAB
I480-WB	602+53.0	605+58.0	CUY-480-1088 (I-480 OVER B&O RAILROAD)							
I480-WB	605+58.00	605+83.00	25.0	10.00			27.8			APPROACH SLAB
I480-WB	605+83.00	605+90.00	7.0	10.00	10.72	11.33	7.8	8.3	8.8	FULL DEPTH
I480-WB	605+90.00	608+90.00	300.0	10.00	10.79	11.33	333.3	359.6	377.8	TRANSITION
I480-WB	608+90.00	619+00.00	1010.0	10.00	10.79	11.33	1122.2	1210.6	1271.8	CRACK & SEAT
I480-WB	619+00.00	631+75.00	SEE RAMP T-1							CRACK & SEAT
I480-WB	631+75.00	636+36.00	461.0	10.00	10.79	11.33	512.2	552.6	580.5	CRACK & SEAT
I480-WB	636+36.00	638+50.00	214.0	10.00	10.79	11.33	237.8	256.5	269.5	TRANSITION
I480-WB	638+50.00	639+36.00	86.0	10.92	10.92	10.92	104.3	104.3	104.3	TRANSITION
I480-WB	639+36.00	643+02.00	366.0	10.92	10.92	10.92	444.1	444.1	444.1	FULL DEPTH
I480-WB	643+31.00	643+51.00	20.0	10.92	10.92		24.3			APPROACH SLAB
I480-WB	643+51.0	644+64.0	CUY-480-1169 (I-480 OVER BIG CREEK)							
I480-WB	644+64.00	644+89.00	25.0	10.00			27.8			APPROACH SLAB
I480-WB	644+89.00	644+90.00	1.0	10.00	10.72	11.33	1.1	1.2	1.3	FULL DEPTH
I480-WB	644+90.00	647+90.00	300.0	10.00	10.79	11.33	333.3	359.6	377.8	TRANSITION
I480-WB	647+90.00	648+73.00	83.0	10.00	10.79	11.33	92.2	99.5	104.5	CRACK & SEAT
I480-WB	648+73.00	656+76.90	SEE RAMP T-3							CRACK & SEAT
I480-WB	656+76.90	664+70.00	793.1	10.00	10.79	11.33	881.2	950.7	998.7	CRACK & SEAT
I480-WB	664+70.00	667+70.00	300.0	10.00	10.79	11.33	333.3	359.6	377.8	TRANSITION
I480-WB	667+70.00	670+70.00	300.0	10.00	10.79	11.33	333.3	359.6	377.8	TRANSITION
I480-WB	670+70.00	692+50.00	2180.0	10.00	10.79	11.33	2422.2	2613.1	2745.2	CRACK & SEAT
I480-WB	692+50.00	700+00.00	SEE RAMP R-2							
RAMP W-1	573+50.00	575+55.00	GORE-(CADD AREA)				338.1	338.1	338.1	FULL DEPTH
RAMP W-3	595+21.00	595+46.00	25.0	8.00			22.2			APPROACH SLAB
RAMP W-3	595+46.00	600+17.32	471.3	8.00	8.00	8.00	419.0	419.0	419.0	FULL DEPTH
RAMP T-1	619+00.00	629+00.00	1000.0	8.00	8.79	9.33	888.9	976.4	1036.7	CRACK & SEAT
RAMP T-1	629+00.00	631+75.00	GORE-(CADD AREA)				451.8	451.8	451.8	CRACK & SEAT
RAMP T-3	648+73.00	655+76.90	703.9	8.00	8.79	9.33	625.7	687.3	729.7	CRACK & SEAT
RAMP T-3	655+76.90	656+76.90	100.0	9.00	9.79	10.33	100.0	108.8	114.8	CRACK & SEAT
RAMP R-2	692+50.00	694+15.00	165.0	8.00	8.79	9.33	146.7	161.1	171.1	CRACK & SEAT
RAMP R-2	694+15.00	697+15.00	300.0	8.00	8.79	9.33	266.7	292.9	311.1	TRANSITION
RAMP R-2	697+15.00	700+00.00	285.0	8.00	8.72	10.33	253.3	276.1	327.2	FULL DEPTH
										SHEET TOTALS
										TOTALS FROM SHEET GCG
										GRAND TOTALS

CRACK & SEAT AREAS							FULL DEPTH REPLACEMENT AREAS							APPROACH SLABS			
446	407	446	407	302	408	304	446	407	446	407	302	408	304	446	407	446	407
ASPHALT CONCRETE SURFACE COURSE	TACK COAT FOR INTERMEDIATE COURSE *	ASPHALT CONCRETE INTERMEDIATE COURSE	TACK COAT * (FOR 2-302 LIFTS)	BITUMINOUS AGGREGATE BASE	BITUMINOUS ** PRIME COAT	AGGREGATE BASE	ASPHALT CONCRETE SURFACE COURSE	TACK COAT FOR INTERMEDIATE COURSE *	ASPHALT CONCRETE INTERMEDIATE COURSE	TACK COAT * (FOR 2-302 LIFTS)	BITUMINOUS AGGREGATE BASE	BITUMINOUS ** PRIME COAT	AGGREGATE BASE	ASPHALT CONCRETE SURFACE COURSE	TACK COAT FOR INTERMEDIATE COURSE *	ASPHALT CONCRETE INTERMEDIATE COURSE	TACK COAT *
1.25"		2.00"		11.00"		12.00"	1.25"		2.00"		10.25"		12.00"	1.25"		1.75"	
(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(C.Y.)	(GAL)	(C.Y.)	(GAL)
							25.7	74.1	41.2	158.9	211.0	336.0	247.0				
														1.2	3.3	1.6	3.3
														1.2	3.3	1.6	3.3
							30.9	89.0	49.4	190.8	253.4	403.5	296.7				
														1.0	2.8	1.4	2.8
														1.0	2.8	1.4	2.8
														1.0	2.8	1.4	2.8
							0.3	0.8	0.4	1.7	2.2	3.5	2.6				
SEE TRANSITION CALCULATIONS																	
39.0	112.2	62.3	242.1	369.9	508.7	423.9											
17.8	51.2	28.5	110.5	168.8	232.2	193.5											
SEE TRANSITION CALCULATIONS																	
SEE TRANSITION CALCULATIONS																	
							15.4	44.4	24.7	88.8	126.4	177.6	148.0				
														0.8	2.4	1.2	2.4
														1.0	2.8	1.4	2.8
SEE TRANSITION CALCULATIONS							0.1	0.1	0.1	0.2	0.3	0.5	0.4				
3.2	9.2	5.1	19.9	30.4	41.8	34.8											
30.6	88.1	49.0	190.1	290.5	399.5	332.9											
SEE TRANSITION CALCULATIONS																	
SEE TRANSITION CALCULATIONS																	
84.1	242.2	134.6	522.6	798.4	1098.1	915.1											
							11.7	33.8	18.8	67.6	96.3	135.2	112.7				
														0.8	2.2	1.1	2.2
							14.5	41.9	23.3	83.8	119.3	167.6	139.7				
30.9	88.9	49.4	195.3	298.4	414.7	345.6											
15.7	45.2	25.1	90.4	138.0	180.7	150.6											
21.7	62.6	34.8	137.5	210.0	291.9	243.2											
3.5	10.0	5.6	21.8	33.2	45.9	38.3											
5.1	14.7	8.1	32.2	49.2	68.4	57.0											
SEE TRANSITION CALCULATIONS																	
							8.8	25.3	14.1	55.2	72.1	130.9	84.4				
251.6	724.3	402.5	1,562.4	2,386.8	3,281.9	2,734.9	107.4	309.4	172.0	647.0	881.0	1,354.8	1,031.5	8.0	22.4	11.1	22.4
256.2	737.9	410.1	1,591.2	2,431.0	3,341.8	2,785.0	119.2	343.6	191.0	724.8	978.6	1,511.8	1,145.7	7.0	19.6	9.7	19.6
507.8	1,462.2	812.6	3,153.6	4,817.8	6,623.7	5,519.9	226.6	653.0	363.0	1,371.8	1,859.6	2,866.6	2,177.2	15.0	42.0	20.8	42.0

* 0.1 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY
** 0.4 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY

QUANTITIES CARRIED TO SHEET 16

CALCULATED DRL
CHECKED ENF

RESURFACING QUANTITY SHEET

CUYAHOGA COUNTY
CUY-480-10.38

LOCATION		LENGTH	ITEM 254 AVERAGE WIDTH	ITEM 446 AVERAGE WIDTH	ITEM 302 COURSE #2 AVERAGE WIDTH	ITEM 302 COURSE #1 AVERAGE WIDTH	ITEM 304 AVERAGE WIDTH	ITEM 254 AVERAGE AREA	ITEM 446 AVERAGE AREA	ITEM 302 COURSE #2 AVERAGE AREA	ITEM 302 COURSE #1 AVERAGE AREA	ITEM 304 AVERAGE AREA	TRANSITION AREAS													
															254	446	407	446	407	302	407	302	408	304				
															PAVEMENT PLANING, BITUMINOUS	ASPHALT CONCRETE SURFACE COURSE	TACK COAT FOR INTERMEDIATE COURSE *	ASPHALT CONCRETE INTERMEDIATE COURSE	TACK COAT *	BITUMINOUS AGGREGATE BASE	TACK COAT *	BITUMINOUS AGGREGATE BASE	BITUMINOUS ** PRIME COAT	AGGREGATE BASE 12.00"				
STA	STA	(FEET)	(FEET)	(FEET)	(FEET)	(FEET)	(FEET)	(S.Y.)	(S.Y.)	(S.Y.)	(S.Y.)	(S.Y.)			(S.Y.)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)				
TRANSITION FROM FULL DEPTH REPLACEMENT TO CRACK & SEAT (EASTBOUND AND WESTBOUND-EASTBOUND QUANTITIES SHOWN-WESTBOUND QUANTITIES IDENTICAL)																										
DETAIL A																										
605+90.00	606+54.80	64.8		69.55	69.8	70.4	70.33		500.8	502.6	506.9	506.4				17.4	50.1	27.8	50.1	69.8	50.3	68.6	202.8	168.8				
606+54.80	606+81.70	26.9		69.55	69.8	70.4	70.33		207.9	208.6	210.4	210.2				7.2	20.8	11.5	20.8	26.7	20.9	26.3	84.2	70.1				
606+81.70	607+28.90	47.2		69.55	69.8	70.4	70.33		364.8	366.1	369.2	368.8				12.7	36.5	10.1	36.5	42.7	36.6	46.2	147.7	122.9				
607+28.90	607+65.00	36.1		69.55	69.8	70.4	70.33		279.0	280.0	282.4	282.1				9.7	27.9			28.0	28.0	35.3	113.0	94.0				
607+65.00	608+90.00	125		69.55	69.8	70.4	70.33		966.0	969.4	977.8	976.8								80.8	96.9	122.2	391.1	325.6				
DETAIL B																										
605+90.00	607+23.80	133.8		69.55	69.8	70.4	70.33		1034.0	1037.7	1046.6	1045.6														
607+23.80	607+54.80	31	69.55	69.55	69.8	70.4	70.33	239.6	239.6	240.4	242.5	242.2			239.6					16.7	24.0					
607+54.80	608+85.00	130.2	69.55	69.55	69.8	70.4	70.33	1006.2	1006.2	1009.8	1018.5	1017.4			1006.2					127.1	101.0					
608+85.00	608+90.00	5		69.55	69.8	70.4	70.33		38.6	38.8	39.1	39.1								4.3	3.9					
DETAIL C																										
605+90.00	606+65.00	75		69.55	69.8	70.4	70.33		579.6	581.7	586.7	586.1														
606+65.00	607+25.00	60	69.55	69.55	69.8	70.4	70.33	463.7	463.7	465.3	469.3	468.9			463.7			25.8	46.4							
607+25.00	608+90.00	165		69.55	69.8	70.4	70.33		1275.1	1279.7	1290.7	1289.4						70.8	127.5							
DETAIL D																										
605+90.00	606+65.00	75	69.55	69.55	69.8	70.4	70.33	579.6	579.6	581.7	586.7	586.1			579.6	20.1	58.0									
606+65.00	608+90.00	225		69.55	69.8	70.4	70.33		1738.8	1745.0	1760.0	1758.3				60.4	173.9									
EASTBOUND & WESTBOUND TOTALS															4,578.2	255.0	734.4	292.0	562.6	792.2	723.2	597.2	1,877.6	1,562.8		
TRANSITION FROM FULL DEPTH REPLACEMENT TO CRACK & SEAT (EASTBOUND ONLY)																										
DETAIL A																										
636+36.00	637+61.00	125		69.55	69.8	70.4	70.33		966.0	969.4	977.8	976.8				33.5	96.6			80.8	96.9	122.2	391.1	325.6				
637+61.00	637+97.10	36.1		69.55	69.8	70.4	70.33		279.0	280.0	282.4	282.1				9.7	27.9			27.9	28.0	35.3	113.0	94.0				
637+97.10	638+44.30	47.2		69.55	69.8	70.4	70.33		364.8	366.1	369.2	368.8				12.7	36.5	10.1	36.5	42.4	36.6	46.2	147.7	122.9				
638+44.30	638+71.20	26.9		69.55	69.8	70.4	70.33		207.9	208.6	210.4	210.2				7.2	20.8	11.5	20.8	26.6	20.9	26.3	84.2	70.1				
638+71.20	639+00.00	28.8		69.55	69.8	70.4	70.33		222.6	223.4	225.3	225.1				7.7	22.3	12.4	22.3	31.0	22.3	29.2	90.1	75.0				
639+00.00	639+36.00	36		70.47	70.42	70.42	69.91		281.9	281.7	281.7	279.6				9.8	28.2	15.7	28.2	39.1	28.2	39.4	112.7	93.2				
DETAIL B																										
636+36.00	636+41.00	5		69.55	69.8	70.4	70.33		38.6	38.8	39.1	39.1								4.3	3.9					
636+41.00	637+71.20	130.2	69.55	69.55	69.8	70.4	70.33	1006.2	1006.2	1009.8	1018.5	1017.4			1006.2					127.1	101.0					
637+71.20	638+02.20	31	70.42	70.47	70.42	70.42	69.91	242.6	242.7	242.6	242.6	240.8			242.6					16.8	24.3					
638+02.20	639+36.00	133.8		70.47	70.42	70.42	69.91		1047.7	1046.9	1046.9	1039.3														
DETAIL C																										
636+36.00	638+01.00	165		69.55	69.8	70.4	70.33		1275.1	1279.7	1290.7	1289.4						70.8	127.5							
638+01.00	638+61.00	60	69.55	69.55	69.8	70.4	70.33	463.7	463.7	465.3	469.3	468.9			463.7			25.8	46.4							
638+61.00	639+00.00	39		69.55	69.8	70.4	70.33		301.4	302.5	305.1	304.8						16.7	30.1							
639+00.00	639+36.00	36		70.47	70.42	70.42	69.91		281.9	281.7	281.7	279.6														
DETAIL D																										
636+36.00	638+61.00	225		69.55	69.8	70.4	70.33		1738.8	1745.0	1760.0	1758.3				60.4	173.9									
638+61.00	639+00.00	39	69.55	69.55	69.8	70.4	70.33	301.4	301.4	302.5	305.1	304.8			301.4	10.5	30.1									
639+00.00	639+36.00	36	70.47	70.47	70.42	70.42	69.91	281.9	281.9	281.7	281.7	279.6			281.9	9.8	28.2									
EASTBOUND ONLY TOTALS															2,295.8	161.3	464.5	163.0	311.8	396.0	362.1	298.6	938.8	780.8		
SHEET TOTALS															6,874.0	416.3	1198.9	455.0	874.4	1,188.2	1,085.3	895.8	2,816.4	2,343.6		

* 0.1 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY
** 0.4 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY

QUANTITIES CARRIED TO SHEET 26'

QUANTITIES BASED ON TRANSITION DETAILS LABELED "MODIFIED FOR WINTER TRAFFIC"

CALCULATED DRL
CHECKED ENF

RESURFACING QUANTITY SHEET

CUYAHOGA COUNTY
CUY-480-10.38

CALCULATED DRL
CHECKED ENF

														TRANSITION AREAS															
																254	446	407	446	407	302	407	302	408	304				
LOCATION		LENGTH	ITEM 254 AVERAGE WIDTH	ITEM 446 AVERAGE WIDTH	ITEM 302 COURSE #2 AVERAGE WIDTH	ITEM 302 COURSE #1 AVERAGE WIDTH	ITEM 304 AVERAGE WIDTH	ITEM 254 AVERAGE AREA	ITEM 446 AVERAGE AREA	ITEM 302 COURSE #2 AVERAGE AREA	ITEM 302 COURSE #1 AVERAGE AREA	ITEM 304 AVERAGE AREA			PAVEMENT PLANING, BITUMINOUS	ASPHALT CONCRETE SURFACE COURSE	TACK COAT FOR INTERMEDIATE COURSE *	ASPHALT CONCRETE INTERMEDIATE COURSE	TACK COAT *	BITUMINOUS AGGREGATE BASE	TACK COAT *	BITUMINOUS AGGREGATE BASE	BITUMINOUS ** PRIME COAT	AGGREGATE BASE 12.00"				
STA	STA	(FEET)	(FEET)	(FEET)	(FEET)	(FEET)	(FEET)	(S.Y.)	(S.Y.)	(S.Y.)	(S.Y.)	(S.Y.)			(S.Y.)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)				
TRANSITION FROM FULL DEPTH REPLACEMENT TO CRACK & SEAT (WESTBOUND ONLY)																													
DETAIL A																													
636+36.00	637+61.00	125		69.55	69.8	70.4	70.33		966.0	969.4	977.8	976.8				33.5	96.6				80.8	96.9	122.2	391.1	325.6				
637+61.00	637+97.10	36.1		69.55	69.8	70.4	70.33		279.0	280.0	282.4	282.1				9.7	27.9				27.9	28.0	35.3	113.0	94.0				
637+97.10	638+44.30	47.2		69.55	69.8	70.4	70.33		364.8	366.1	369.2	368.8				12.7	36.5		10.1	36.5	42.4	36.6	46.2	147.7	122.9				
638+44.30	638+52.80	8.5		69.55	69.8	70.4	70.33		65.7	65.9	66.5	66.4				2.3	6.6		3.6	6.6	7.9	6.6	8.3	26.6	22.1				
638+52.80	638+71.20	18.4		70.47	70.42	70.42	69.91		144.1	144.0	144.0	142.9				5.0	14.4		8.0	14.4	18.9	14.4	18.0	57.6	47.6				
638+71.20	639+36.00	64.8		70.47	70.42	70.42	69.91		507.4	507.0	507.0	503.4				17.6	50.7		28.2	50.7	70.4	50.7	71.0	202.8	167.8				
DETAIL B																													
636+36.00	636+41.00	5		69.55	69.8	70.4	70.33		38.6	38.8	39.1	39.1									4.3	3.9							
636+41.00	637+71.20	130.2	69.55	69.55	69.8	70.4	70.33	1006.2	1006.2	1009.8	1018.5	1017.4				1006.2					127.1	101.0							
637+71.20	638+02.20	31	70.42	70.47	70.42	70.42	69.91	242.6	242.7	242.6	242.6	240.8				242.6					16.8	24.3							
638+02.20	639+36.00	133.8		70.47	70.42	70.42	69.91		1047.7	1046.9	1046.9	1039.3																	
DETAIL C																													
636+36.00	638+01.00	165		69.55	69.8	70.4	70.33		1275.1	1279.7	1290.7	1289.4							70.8	127.5									
638+01.00	638+52.80	51.8	69.55	69.55	69.8	70.4	70.33	400.3	400.3	401.7	405.2	404.8				400.3			22.2	40.0									
638+52.80	638+61.00	8.2	70.47	70.47	70.42	70.42	69.91	64.2	64.2	64.2	64.2	63.7				64.2			3.6	6.4									
638+61.00	639+36.00	75		70.47	70.42	70.42	69.91		587.3	586.8	586.8	582.6																	
DETAIL D																													
636+36.00	638+52.80	216.8		69.55	69.8	70.4	70.33		1675.4	1681.4	1695.9	1694.2					58.2	167.5											
638+52.80	638+61.00	8.2		69.55	69.8	70.4	70.33		63.4	63.6	64.1	64.1					2.2	6.3											
638+61.00	639+36.00	75	70.47	70.47	70.42	70.42	69.91	587.3	587.3	586.8	586.8	582.6				587.3	20.4	58.7											
									WESTBOUND ONLY TOTALS							2,300.6	161.6	465.2	146.5	282.1	396.5	362.4	301.0	938.8	780.0				
TRANSITION FROM FULL DEPTH REPLACEMENT TO CRACK AND SEAT (EASTBOUND AND WESTBOUND-EASTBOUND QUANTITIES SHOWN-WESTBOUND QUANTITES IDENTICAL)																													
DETAIL A																													
644+90.00	645+54.80	64.8		69.55	69.8	70.4	70.33		500.8	502.6	506.9	506.4					17.4	50.1	27.8	50.1	69.8	50.3	68.6	202.8	168.8				
645+54.80	645+81.70	26.9		69.55	69.8	70.4	70.33		207.9	208.6	210.4	210.2					7.2	20.8	11.5	20.8	26.7	20.9	26.3	84.2	70.1				
645+81.70	646+28.90	47.2		69.55	69.8	70.4	70.33		364.8	366.1	369.2	368.8					12.7	36.5	10.1	36.5	42.7	36.6	46.2	147.7	122.9				
646+28.90	646+65.00	36.1		69.55	69.8	70.4	70.33		279.0	280.0	282.4	282.1					9.7	27.9			28.0	28.0	35.3	113.0	94.0				
646+65.00	647+90.00	125		69.55	69.8	70.4	70.33		966.0	969.4	977.8	976.8									80.8	96.9	122.2	391.1	325.6				
DETAIL B																													
644+90.00	646+23.80	133.8		69.55	69.8	70.4	70.33		1034.0	1037.7	1046.6	1045.6																	
646+23.80	646+54.80	31	69.55	69.55	69.8	70.4	70.33	239.6	239.6	240.4	242.5	242.2				239.6					16.7	24.0							
646+54.80	647+85.00	130.2	69.55	69.55	69.8	70.4	70.33	1006.2	1006.2	1009.8	1018.5	1017.4				1006.2					127.1	101.0							
647+85.00	647+90.00	5		69.55	69.8	70.4	70.33		38.6	38.8	39.1	39.1									4.3	3.9							
DETAIL C																													
644+90.00	645+65.00	75		69.55	69.8	70.4	70.33		579.6	581.7	586.7	586.1																	
645+65.00	646+25.00	60	69.55	69.55	69.8	70.4	70.33	463.7	463.7	465.3	469.3	468.9				463.7			25.8	46.4									
646+25.00	647+90.00	165		69.55	69.8	70.4	70.33		1275.1	1279.7	1290.7	1289.4							70.8	127.5									
DETAIL D																													
644+90.00	645+65.00	75	69.55	69.55	69.8	70.4	70.33	579.6	579.6	581.7	586.7	586.1				579.6	20.1	58.0											
645+65.00	647+90.00	225		69.55	69.8	70.4	70.33		1738.8	1745.0	1760.0	1758.3					60.4	173.9											
									EASTBOUND & WESTBOUND TOTALS							4,578.2	255.0	734.4	292.0	562.6	792.2	723.2	597.2	1,877.6	1,562.8				
											SHEET TOTALS					6,878.8	416.6	1,199.6	438.5	844.7	1,188.7	1,085.6	898.2	2,816.4	2,342.8				

* 0.1 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY
** 0.4 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY

QUANTITIES CARRIED TO SHEET 26

QUANTITIES BASED ON TRANSITION DETAILS LABELED "MODIFIED FOR WINTER TRAFFIC"

RESURFACING QUANTITY SHEET

CUYAHOGA COUNTY
CUY-480-10.38

LOCATION		LENGTH	ITEM 254 AVERAGE WIDTH	ITEM 446 AVERAGE WIDTH	ITEM 302 COURSE #2 AVERAGE WIDTH	ITEM 302 COURSE #1 AVERAGE WIDTH	ITEM 304 AVERAGE WIDTH	ITEM 254 AVERAGE AREA	ITEM 446 AVERAGE AREA	ITEM 302 COURSE #2 AVERAGE AREA	ITEM 302 COURSE #1 AVERAGE AREA	ITEM 304 AVERAGE AREA	TRANSITION AREAS		254	446	407	446	407	302	407	302	408	304				
															PAVEMENT PLANING, BITUMINOUS	ASPHALT CONCRETE SURFACE COURSE	TACK COAT FOR INTERMEDIATE COURSE *	ASPHALT CONCRETE INTERMEDIATE COURSE	TACK COAT *	BITUMINOUS AGGREGATE BASE	TACK COAT *	BITUMINOUS AGGREGATE BASE	BITUMINOUS ** PRIME COAT	AGGREGATE BASE 12.00"				
STA	STA	(FEET)	(FEET)	(FEET)	(FEET)	(FEET)	(FEET)	(S.Y.)	(S.Y.)	(S.Y.)	(S.Y.)	(S.Y.)			(S.Y.)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)				
TRANSITION FROM FULL DEPTH REPLACEMENT TO CRACK & SEAT (EASTBOUND & WESTBOUND-EASTBOUND QUANTITIES SHOWN-WESTBOUND QUANTITIES IDENTICAL)																												
DETAIL A																												
664+70.00	665+95.00	125		69.55	69.8	70.4	70.33		966.0	969.4	977.8	976.8				33.5	96.6				80.8	96.9	122.2	391.1	325.6				
665+95.00	666+31.10	36.1		69.55	69.8	70.4	70.33		279.0	280.0	282.4	282.1				9.7	27.9				27.9	28.0	35.3	113.0	94.0				
666+31.10	666+78.30	47.2		69.55	69.8	70.4	70.33		364.8	366.1	369.2	368.8				12.7	36.5	10.1	36.5	42.4	36.6	46.2	147.7	122.9				
666+78.30	667+05.20	26.9		69.55	69.8	70.4	70.33		207.9	208.6	210.4	210.2				7.2	20.8	11.5	20.8	26.6	20.9	26.3	84.2	70.1				
667+05.20	667+70.00	64.8		69.55	69.8	70.4	70.33		500.8	502.6	506.9	506.4				17.4	50.1	27.8	50.1	69.8	50.3	71.0	202.8	168.8				
DETAIL B																												
664+70.00	664+75.00	5		69.55	69.8	70.4	70.33		38.6	38.8	39.1	39.1								4.3	3.9							
664+75.00	666+05.20	130.2	69.55	69.55	69.8	70.4	70.33	1006.2	1006.2	1009.8	1018.5	1017.4			1006.2					127.1	101.0							
666+05.20	666+36.20	31	70.42	69.55	69.8	70.4	70.33	242.6	239.6	240.4	242.5	242.2			242.6					16.7	24.0							
666+36.20	667+70.00	133.8		69.55	69.8	70.4	70.33		1034.0	1037.7	1046.6	1045.6																
DETAIL C																												
664+70.00	666+35.00	165		69.55	69.8	70.4	70.33		1275.1	1279.7	1290.7	1289.4						70.8	127.5									
666+35.00	666+95.00	60	69.55	69.55	69.8	70.4	70.33	463.7	463.7	465.3	469.3	468.9			463.7			25.8	46.4									
666+95.00	667+70.00	75		70.47	70.42	70.42	69.91		587.3	586.8	586.8	582.6																
DETAIL D																												
664+70.00	666+95.00	225		69.55	69.8	70.4	70.33		1738.8	1745.0	1760.0	1758.3				60.4	173.9											
666+95.00	667+70.00	75	70.47	70.47	70.42	70.42	69.91	587.3	587.3	586.8	586.8	582.6			587.3	20.4	58.7											
EASTBOUND & WESTBOUND TOTALS															4,599.6	322.6	929.0	292.0	562.6	791.2	723.2	602.0	1,877.6	1,562.8				
TRANSITION FROM FULL DEPTH REPLACEMENT TO CRACK & SEAT (EASTBOUND AND WESTBOUND-EASTBOUND QUANTITIES SHOWN-WESTBOUND QUANTITIES IDENTICAL)																												
DETAIL A																												
667+70.00	668+34.80	64.8		69.55	69.8	70.4	70.33		500.8	502.6	506.9	506.4				17.4	50.1	27.8	50.1	69.8	50.3	68.6	202.8	168.8				
668+34.80	668+61.70	26.9		69.55	69.8	70.4	70.33		207.9	208.6	210.4	210.2				7.2	20.8	11.5	20.8	26.7	20.9	26.3	84.2	70.1				
668+61.70	669+08.90	47.2		69.55	69.8	70.4	70.33		364.8	366.1	369.2	368.8				12.7	36.5	10.1	36.5	42.7	36.6	46.2	147.7	122.9				
669+08.90	669+45.00	36.1		69.55	69.8	70.4	70.33		279.0	280.0	282.4	282.1				9.7	27.9			28.0	28.0	35.3	113.0	94.0				
669+45.00	670+70.00	125		69.55	69.8	70.4	70.33		966.0	969.4	977.8	976.8								80.8	96.9	122.2	391.1	325.6				
DETAIL B																												
667+70.00	669+03.80	133.8		69.55	69.8	70.4	70.33		1034.0	1037.7	1046.6	1045.6																
669+03.80	669+34.80	31	69.55	69.55	69.8	70.4	70.33	239.6	239.6	240.4	242.5	242.2			239.6					16.7	24.0							
669+34.80	670+65.00	130.2	69.55	69.55	69.8	70.4	70.33	1006.2	1006.2	1009.8	1018.5	1017.4			1006.2					127.1	101.0							
670+65.00	670+70.00	5		69.55	69.8	70.4	70.33		38.6	38.8	39.1	39.1								4.3	3.9							
DETAIL C																												
667+70.00	668+45.00	75		69.55	69.8	70.4	70.33		579.6	581.7	586.7	586.1																
668+45.00	669+05.00	60	69.55	69.55	69.8	70.4	70.33	463.7	463.7	465.3	469.3	468.9			463.7			25.8	46.4									
669+05.00	670+70.00	165		69.55	69.8	70.4	70.33		1275.1	1279.7	1290.7	1289.4						70.8	127.5									
DETAIL D																												
667+70.00	668+45.00	75	69.55	69.55	69.8	70.4	70.33	579.6	579.6	581.7	586.7	586.1			579.6	20.1	58.0											
668+45.00	670+70.00	225		69.55	69.8	70.4	70.33		1738.8	1745.0	1760.0	1758.3				60.4	173.9											
EASTBOUND & WESTBOUND TOTALS															4,578.2	255.0	734.4	292.0	562.6	792.2	723.2	597.2	1,877.6	1,562.8				
SHEET TOTALS															9,177.8	577.6	1,663.4	584.0	1,125.2	1,583.4	1,446.4	1,199.2	3,755.2	3,125.6				

* 0.1 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY
** 0.4 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY

QUANTITIES CARRIED TO SHEET 26

QUANTITIES BASED ON TRANSITION DETAILS LABELED "MODIFIED FOR WINTER TRAFFIC"

CALCULATED DRL
CHECKED ENF

RESURFACING QUANTITY SHEET

CUYAHOGA COUNTY
CUY-480-10.38

LOCATION		LENGTH	ITEM 254 AVERAGE WIDTH	ITEM 446 AVERAGE WIDTH	ITEM 302 COURSE #2 AVERAGE WIDTH	ITEM 302 COURSE #1 AVERAGE WIDTH	ITEM 304 AVERAGE WIDTH	ITEM 254 AVERAGE AREA	ITEM 446 AVERAGE AREA	ITEM 302 COURSE #2 AVERAGE AREA	ITEM 302 COURSE #1 AVERAGE AREA	ITEM 304 AVERAGE AREA	TRANSITION AREAS														
															254	446	407	446	407	302	407	302	408	304				
															PAVEMENT PLANING, BITUMINOUS	ASPHALT CONCRETE SURFACE COURSE	TACK COAT FOR INTERMEDIATE COURSE *	ASPHALT CONCRETE INTERMEDIATE COURSE	TACK COAT *	BITUMINOUS AGGREGATE BASE	TACK COAT *	BITUMINOUS AGGREGATE BASE	BITUMINOUS ** PRIME COAT	AGGREGATE BASE 12.00"				
STA	STA	(FEET)	(FEET)	(FEET)	(FEET)	(FEET)	(FEET)	(S.Y.)	(S.Y.)	(S.Y.)	(S.Y.)	(S.Y.)			(S.Y.)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)				
TRANSITION FROM FULL DEPTH REPLACEMENT TO CRACK & SEAT (EASTBOUND & WESTBOUND-EASTBOUND QUANTITIES SHOWN-WESTBOUND QUANTITIES IDENTICAL)																												
DETAIL A																												
694+14.00	695+39.00	125		69.55	69.8	70.4	70.33		966.0	969.4	977.8	976.8				33.5	96.6			80.8	96.9	122.2	97.8	325.6				
695+39.00	695+75.10	36.1		69.55	69.8	70.4	70.33		279.0	280.0	282.4	282.1				9.7	27.9			27.9	28.0	35.3	28.2	94.0				
695+75.10	696+22.30	47.2		69.55	69.8	70.4	70.33		364.8	366.1	369.2	368.8				12.7	36.5	10.1	36.5	42.4	36.6	46.2	36.9	122.9				
696+22.30	696+49.20	26.9		69.55	69.8	70.4	70.33		207.9	208.6	210.4	210.2				7.2	20.8	11.5	20.8	26.6	20.9	26.3	21.0	70.1				
696+49.20	697+14.00	64.8		69.55	69.8	70.4	70.33		500.8	502.6	506.9	506.4				17.4	50.1	27.8	50.1	69.8	50.3	71.0	50.7	168.8				
DETAIL B																												
694+14.00	694+19.00	5	69.55	69.55	69.8	70.4	70.33		38.6	38.8	39.1	39.1								4.3	3.9							
694+19.00	695+49.20	130.2	70.42	69.55	69.8	70.4	70.33	1006.2	1006.2	1009.8	1018.5	1017.4			1006.2					127.1	101.0							
695+49.20	695+80.20	31		69.55	69.8	70.4	70.33	242.6	239.6	240.4	242.5	242.2			242.6					16.7	24.0							
695+80.20	697+14.00	133.8		69.55	69.8	70.4	70.33		1034.0	1037.7	1046.6	1045.6																
DETAIL C																												
694+14.00	695+79.00	165	69.55	69.55	69.8	70.4	70.33		1275.1	1279.7	1290.7	1289.4						70.8	127.5									
695+79.00	696+39.00	60		69.55	69.8	70.4	70.33	463.7	463.7	465.3	469.3	468.9			463.7			25.8	46.4									
696+39.00	697+14.00	75		70.47	70.42	70.42	69.91		587.3	586.8	586.8	582.6																
DETAIL D																												
694+14.00	696+39.00	225	70.47	69.55	69.8	70.4	70.33		1738.8	1745.0	1760.0	1758.3				60.4	173.9											
696+39.00	697+14.00	75		70.47	70.42	70.42	69.91	587.3	587.3	586.8	586.8	582.6			587.3	20.4	58.7											
											TOTALS THIS SHEET				4,599.6	322.6	929.0	292.0	562.6	791.2	723.2	602.0	469.2	1,562.8				
											TOTALS FROM SHEET 23				6,874.0	416.3	1,198.9	455.0	874.4	1,188.2	1,085.3	895.8	2,816.4	2,343.6				
											TOTALS FROM SHEET 24				6,878.8	416.6	1,199.6	438.5	844.7	1,188.7	1,085.6	898.2	2,816.4	2,342.8				
											TOTALS FROM SHEET 25				9,177.8	577.6	1,663.4	584.0	1,125.2	1,583.4	1,446.4	1,199.2	3,755.2	3,125.6				
											GRAND TOTALS				27,530.2	1,733.1	4,990.9	1,769.5	3,406.9	4,751.5	4,340.5	3,595.2	9,857.2	9,374.8				

7747.4 8346.7

* 0.1 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY
** 0.4 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY

QUANTITIES CARRIED TO SHEET 16

QUANTITIES BASED ON TRANSITION DETAILS LABELED "MODIFIED FOR WINTER TRAFFIC"

CALCULATED DRL
CHECKED ENF

RESURFACING QUANTITY SHEET

CUYAHOGA COUNTY
CUY-480-10.38

LOCATION			LENGTH	AVERAGE WIDTH	AVERAGE AREA	AVERAGE DEPTH					RAMP FEATHERS																	
											254	446	446	407	446	407	302	407										
						AVERAGE DEPTH (SURFACE)	AVERAGE DEPTH (INTERMEDIATE)	AVERAGE DEPTH (302 BIT AGG BASE)			PAVEMENT PLANING, BITUMINOUS	ASPHALT CONCRETE SURFACE COURSE (WEDGES)	ASPHALT CONCRETE SURFACE COURSE	TACK COAT FOR INTERMEDIATE COURSE *	ASPHALT CONCRETE INTERMEDIATE COURSE	TACK COAT *	BITUMINOUS AGGREGATE BASE	TACK COAT *										
ROADWAY	STA	STA	(FEET)	FEET	(S.Y.)	(IN)	(IN)	(IN)			(S.Y.)	(C.Y.)	(C.Y.)	(GAL)	(C.Y.)	(GAL)	(C.Y.)	(GAL)										
EASTBOUND RAMP FEATHER																												
RAMP T-2	628+43.00	629+16.00	73	25	202.8	1.25	2.00	3.50					7.0	20.3	11.3	20.3	19.7	20.3										
RAMP T-2	629+16.00	629+71.00	55	25	152.8	1.25	2.88					2.9	2.4	15.3	12.2	15.3												
RAMP T-2	629+71.00	630+13.00	42	25	116.7	2.13						2.1	4.8	11.7														
RAMP T-2	630+13.00	630+43.00	30	25	83.3	1.25					83.3		2.9	8.3														
RAMP T-4	647+10.00	647+40.00	30	25	83.3	1.25					83.3		2.9	8.3														
RAMP T-4	647+40.00	647+82.00	42	25	116.7	2.13						2.1	4.8	11.7														
RAMP T-4	647+82.00	648+37.00	55	25	152.8	1.25	2.88					2.9	2.4	15.3	12.2	15.3												
RAMP T-4	648+37.00	649+10.00	73	25	202.8	1.25	2.00	3.50					7.0	20.3	11.3	20.3	19.7	20.3										
WESTBOUND RAMP FEATHER																												
RAMP T-1	629+00.00	631+00.00	200	23	511.1	1.25	2.00	5.00					17.7	51.1	28.4	51.1	71.0	51.1										
RAMP T-1	631+00.00	631+75.00	75	22	183.3	1.25	2.00	5.00					6.4	18.3	10.2	18.3	25.5	18.3										
RAMP T-1	631+75.00	632+48.00	73	25	202.8	1.25	2.00	3.50					7.0	20.3	11.3	20.3	19.7	20.3										
RAMP T-1	632+48.00	633+03.00	55	25	152.8	1.25	2.88					2.9	2.4	15.3	12.2	15.3												
RAMP T-1	633+03.00	633+45.00	42	25	116.7	2.13						2.1	4.8	11.7														
RAMP T-1	633+45.00	633+75.00	30	25	83.3	1.25					83.3		2.9	8.3														
RAMP T-3	646+73.00	647+03.00	30	25	83.3	1.25					83.3		2.9	8.3														
RAMP T-3	647+03.00	647+45.00	42	25	116.7	2.13						2.1	4.8	11.7														
RAMP T-3	647+45.00	648+00.00	55	25	152.8	1.25	2.88					2.9	2.4	15.3	12.2	15.3												
RAMP T-3	648+00.00	648+73.00	73	26.3	213.3	1.25	2.00	3.50					7.4	21.3	11.9	21.3	20.7	21.3										
		SHEET TOTALS									333.2	20.0	92.9	292.8	133.2	212.8	176.3	151.6										
												112.9					364.4											

LOCATION			EASTBOUND LENGTH	WESTBOUND LENGTH	TOTAL LENGTH	AREA	TRENCH WIDTH	DEPTH (ITEM 302) #	DEPTH (ITEM 304)	MAINLINE PAVEMENT TREATMENT		302	408	304		
												BITUMINOUS AGGREGATE BASE	BITUMINOUS ** PRIME COAT	AGGREGATE BASE		
	STA	STA	(FEET)	(FEET)	(FEET)	(S.Y.)	(FEET)	(IN)	(IN)			(C.Y.)	(GAL)	(C.Y.)		
PAVEMENT REPAIR-MEDIAN UNDERDRAIN INSTALLATION																
1480 EB & WB	608+90.00	636+36.00	2746.0	2746.0	5492.0	1220.4	2.00	7.0	12.0	CRACK & SEAT		237.3	488.2	406.8		
1480 EB & WB	647+90.00	662+00.00	1410.0	1410.0	2820.0	626.7	2.00	7.0	12.0	CRACK & SEAT		121.9	250.7	208.9		
1480 EB & WB	662+48.00	664+70.00	222.0	222.0	444.0	98.7	2.00	7.0	12.0	CRACK & SEAT		19.2	39.5	32.9		
1480 EB & WB	670+70.00	694+14.00	2344.0	2344.0	4688.0	1041.8	2.00	7.0	12.0	CRACK & SEAT		202.6	416.7	347.3		
										SHEET TOTALS		581.0	1195.1	995.9		

* 0.1 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY
** 0.4 GAL/S.Y. FOR ESTIMATING PURPOSES ONLY

\# REMAINING ITEM 302 DEPTH COVERED BY THE MEDIAN SHOULDER QUANTITY CALCULATIONS

QUANTITIES CARRIED TO SHEET 16

CALCULATED DRL
CHECKED ENF

RESURFACING QUANTITY SHEET

CUYAHOGA COUNTY
CUY-480-10.38

EXCAVATION QUANTITIES

	STA	STA	LENGTH (FEET)	AVERAGE WIDTH (FEET)	AVERAGE AREA (S.Y.)	AVERAGE DEPTH (FEET)	MAINLINE PAVEMENT TREATMENT	203 SUBGRADE COMPACTION (S.Y.)	203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION (C.Y.)
MEDIAN	SHOULDER								
1480-EB	573+50.00	582+00.10	850.1	11.00	1039.0	2.13	FULL DEPTH	1039.0	736.0
1480-EB	582+00.10	582+30.10	30.0				APPROACH SLABS		
1480-EB	582+30.1	583+38.7	CUY-480-1054 (I-480 OVER W 130TH ST)						
1480-EB	583+38.65	583+68.65	30.0				APPROACH SLAB		
1480-EB	583+68.65	593+13.70	945.0	11.00	1155.1	2.13	FULL DEPTH	1155.1	818.2
1480-EB	593+13.70	593+38.70	25.0				APPROACH SLAB		
1480-EB	593+38.7	596+51.0	CUY-480-1078 (I-480 OVER CONRAIL)						
1480-EB	596+50.96	596+75.96	25.0				APPROACH SLAB		
1480-EB	596+75.96	600+97.18	421.2	11.00	514.8	2.13	FULL DEPTH	514.8	364.7
1480-EB	600+97.18	601+22.18	25.0				APPROACH SLAB		
1480-EB	601+22.2	604+29.3	CUY-480-1088 (I-480 OVER B&O RAILROAD)						
1480-EB	604+29.32	604+54.32	25.0				APPROACH SLAB		
1480-EB	604+54.32	605+90.00	135.7	11.00	165.8	2.13	FULL DEPTH	165.8	117.5
1480-EB	605+90.00	608+90.00	300.0	11.00	366.7	1.86	TRANSITION	366.7	226.7
1480-EB	608+90.00	636+36.00	2746.0				CRACK & SEAT		
1480-EB	636+36.00	639+36.00	300.0	11.00	366.7	1.86	TRANSITION	366.7	226.7
1480-EB	639+36.00	643+02.00	366.0	11.00	447.3	2.13	FULL DEPTH	447.3	316.9
1480-EB	642+98.36	643+18.36	20.0				APPROACH SLAB		
1480-EB	643+18.4	644+31.6	CUY-480-1169 (I-480 OVER BIG CREEK)						
1480-EB	644+31.62	644+56.62	25.0				APPROACH SLAB		
1480-EB	644+56.62	644+90.00	33.4	11.00	40.8	2.13	FULL DEPTH	40.8	28.9
1480-EB	644+90.00	647+90.00	300.0	11.00	366.7	1.86	TRANSITION	366.7	226.7
1480-EB	647+90.00	664+70.00	1680.0				CRACK & SEAT		
1480-EB	664+70.00	667+70.00	300.0	11.00	366.7	1.86	TRANSITION	366.7	226.7
1480-EB	667+70.00	670+70.00	300.0	11.00	366.7	1.86	TRANSITION	366.7	226.7
1480-EB	670+70.00	694+14.00	2344.0				CRACK & SEAT		
1480-EB	694+14.00	697+14.00	300.0	11.00	366.7	1.86	TRANSITION	366.7	226.7
1480-EB	697+14.00	700+00.00	286.0	11.00	349.6	2.13	FULL DEPTH	349.6	247.6
TOTALS								5,913	3,990

QUANTITIES CARRIED TO SHEET 16

EXCAVATION QUANTITIES

	STA	STA	LENGTH (FEET)	AVERAGE WIDTH (FEET)	AVERAGE AREA (S.Y.)	AVERAGE DEPTH (FEET)	MAINLINE PAVEMENT TREATMENT	203 SUBGRADE COMPACTION (S.Y.)	203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION (C.Y.)
MEDIAN	SHOULDER								
1480-WB	573+50.00	582+00.14	850.1	11.00	1039.1	2.13	FULL DEPTH	1039.1	736.0
1480-WB	582+00.14	582+30.14	30.0				APPROACH SLABS		
1480-WB	582+30.1	583+38.6	CUY-480-1054 (I-480 OVER W 130TH ST)						
1480-WB	583+38.60	583+68.60	30.0				APPROACH SLAB		
1480-WB	583+68.60	593+13.70	945.1	11.00	1155.1	2.13	FULL DEPTH	1155.1	818.2
1480-WB	593+13.70	593+38.70	25.0				APPROACH SLAB		
1480-WB	593+38.7	596+51.0	CUY-480-1078 (I-480 OVER CONRAIL)						
1480-WB	596+50.96	596+75.96	25.0				APPROACH SLAB		
1480-WB	596+75.96	600+97.18	421.2	11.00	514.8	2.13	FULL DEPTH	514.8	364.7
1480-WB	600+97.18	601+22.18	25.0				APPROACH SLAB		
1480-WB	601+22.2	604+29.3	CUY-480-1088 (I-480 OVER B&O RAILROAD)						
1480-WB	604+29.32	604+54.32	25.0				APPROACH SLAB		
1480-WB	604+54.32	605+90.00	135.7	11.00	165.8	2.13	FULL DEPTH	165.8	117.5
1480-WB	605+90.00	608+90.00	300.0	11.00	366.7	1.86	TRANSITION	366.7	226.7
1480-WB	608+90.00	636+36.00	2746.0				CRACK & SEAT		
1480-WB	636+36.00	639+36.00	300.0	11.00	366.7	1.86	TRANSITION	366.7	226.7
1480-WB	639+36.00	643+02.00	366.0	11.00	447.3	2.13	FULL DEPTH	447.3	316.9
1480-WB	642+98.36	643+18.36	20.0				APPROACH SLAB		
1480-WB	643+18.4	644+31.6	CUY-480-1169 (I-480 OVER BIG CREEK)						
1480-WB	644+31.62	644+56.62	25.0				APPROACH SLAB		
1480-WB	644+56.62	644+90.00	33.4	11.00	40.8	2.13	FULL DEPTH	40.8	28.9
1480-WB	644+90.00	647+90.00	300.0	11.00	366.7	1.86	TRANSITION	366.7	226.7
1480-WB	647+90.00	664+70.00	1680.0				CRACK & SEAT		
1480-WB	664+70.00	667+70.00	300.0	11.00	366.7	1.86	TRANSITION	366.7	226.7
1480-WB	667+70.00	670+70.00	300.0	11.00	366.7	1.86	TRANSITION	366.7	226.7
1480-WB	670+70.00	694+14.00	2344.0				CRACK & SEAT		
1480-WB	694+14.00	697+14.00	300.0	11.00	366.7	1.86	TRANSITION	366.7	226.7
1480-WB	697+14.00	700+00.00	286.0	11.00	349.6	2.13	FULL DEPTH	349.6	247.6
TOTALS								5,913	3,990

CALCULATED DRL
CHECKED ENF

MISCELLANEOUS QUANTITIES

CUYAHOGA COUNTY
CUY-480-10.38

28
134

EXCAVATION QUANTITIES

	STA	STA	LENGTH (FEET)	AVERAGE WIDTH (FEET)	AVERAGE AREA S.Y.	AVERAGE DEPTH (FT)	MAINLINE PAVEMENT TREATMENT	203 SUBGRADE COMPACTION (S.Y.)	203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION (C.Y.)
MAINLINE PAVEMENT									
1480-EB	573+50.00	582+00.10	850.1	48	4533.9	1.13	FULL DEPTH	4533.9	1700.2
1480-EB	582+00.10	582+30.10	30	48	160.0		APPROACH SLABS		
1480-EB	582+30.10	583+38.65	**CUY-480-1054 (I-480 OVER W 130TH ST)**						
1480-EB	583+38.65	583+68.65	30	48	160.0		APPROACH SLAB		
1480-EB	583+68.65	593+13.70	945.0	48	5040.3	1.13	FULL DEPTH	5040.3	1890.1
1480-EB	593+13.70	593+38.70	25	48	133.3		APPROACH SLAB		
1480-EB	593+38.70	596+50.96	**CUY-480-1078 (I-480 OVER CONRAIL)**						
1480-EB	596+50.96	596+75.96	25	48	133.3		APPROACH SLAB		
1480-EB	596+75.96	600+97.18	421.2	48	2246.5	1.13	FULL DEPTH	2246.5	842.4
1480-EB	600+97.18	601+22.18	25	48	133.3		APPROACH SLAB		
1480-EB	601+22.18	604+29.32	**CUY-480-1088 (I-480 OVER B&O RAILROAD)**						
1480-EB	604+29.32	604+54.32	25	48	133.3		APPROACH SLAB		
1480-EB	604+54.32	605+90.00	135.7	48	723.6	1.13	FULL DEPTH	723.6	271.4
1480-EB	605+90.00	608+90.00	300	48	1600.0	0.85	TRANSITION	1600.0	455.6
1480-EB	608+90.00	636+36.00	2746	48	14645.3		CRACK & SEAT		
1480-EB	636+36.00	639+36.00	300	48	1600.0	0.85	TRANSITION	1600.0	455.6
1480-EB	639+36.00	643+02.00	366	48	1952.0	1.13	FULL DEPTH	1952.0	732.0
1480-EB	642+98.36	643+18.36	20	48	106.7		APPROACH SLAB		
1480-EB	643+18.36	644+31.62	**CUY-480-1169 (I-480 OVER BIG CREEK)**						
1480-EB	644+31.62	644+56.62	25	48	133.3		APPROACH SLAB		
1480-EB	644+56.62	644+90.00	33.4	48	178.0	1.13	FULL DEPTH	178.0	66.8
1480-EB	644+90.00	647+90.00	300	48	1600.0	0.85	TRANSITION	1600.0	455.6
1480-EB	647+90.00	664+70.00	1680	48	8960.0		CRACK & SEAT		
1480-EB	664+70.00	667+70.00	300	48	1600.0	0.85	TRANSITION	1600.0	455.6
1480-EB	667+70.00	670+70.00	300	48	1600.0	0.85	TRANSITION	1600.0	455.6
1480-EB	670+70.00	694+14.00	2344	48	12501.3		CRACK & SEAT		
1480-EB	694+14.00	697+14.00	300	48	1600.0	0.85	TRANSITION	1600.0	455.6
1480-EB	697+14.00	700+00.00	286	48	1525.3	1.13	FULL DEPTH	1525.3	572.0
RAMP W-2	593+00.00	594+50.00	RAMP-SCL		361.3	1.13	FULL DEPTH	361.3	135.5
RAMP W-2	594+50.00	594+75.00	RAMP-SCL		44.4		APPROACH SLAB		
RAMP W-2	594+75.00	597+66.00	**CUY-480-1078 (I-480 OVER CONRAIL)**						
RAMP W-2	597+66.00	597+91.00	RAMP-SCL		33.3		APPROACH SLAB		
RAMP W-2	597+91.00	599+70.00	RAMP-SCL		200.0	1.13	FULL DEPTH	200.0	75.0
RAMP W-2	599+70.00	599+95.00	RAMP-SCL		20.8		APPROACH SLAB		
RAMP W-2	599+95.00	603+30.00	**CUY-480-1088 (I-480 OVER B&O RAILROAD)**						
RAMP T-2	620+49.66	628+43.00	RAMP-SCL & GORE			1416	CRACK & SEAT		
RAMP T-4	651+00.00	661+00.00	RAMP-SCL			1309	CRACK & SEAT		
RAMP R-1	695+39.39	697+15.00	RAMP-SCL		169.3	0.85	TRANSITION	169.3	48.2
RAMP R-1	697+15.00	700+00.00	RAMP-SCL		380.0	1.13	FULL DEPTH	380.0	142.5
TOTALS								26,910	9,210

QUANTITIES CARRIED TO SHEET 16

EXCAVATION QUANTITIES

	STA	STA	LENGTH (FEET)	AVERAGE WIDTH (FEET)	AVERAGE AREA (S.Y.)	AVERAGE DEPTH (FEET)	MAINLINE PAVEMENT TREATMENT	203 SUBGRADE COMPACTION (S.Y.)	203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION (C.Y.)
MAINLINE PAVEMENT									
1480-WB	573+50.00	582+00.14	850.14	48	4534.1	1.13	FULL DEPTH	4534.1	1700.3
1480-WB	582+00.14	582+30.14	30	48	160.0		APPROACH SLABS		
1480-WB	582+30.14	583+38.60	**CUY-480-1054 (I-480 OVER W 130TH ST)**						
1480-WB	583+38.60	583+68.60	30	48	160.0		APPROACH SLAB		
1480-WB	583+68.60	593+13.70	945.1	48	5040.5	1.13	FULL DEPTH	5040.5	1890.2
1480-WB	593+13.70	593+38.70	25	48	133.3		APPROACH SLAB		
1480-WB	593+38.70	596+50.96	**CUY-480-1078 (I-480 OVER CONRAIL)**						
1480-WB	596+50.96	596+75.96	25	48	133.3		APPROACH SLAB		
1480-WB	596+75.96	600+97.18	421.2	48	2246.5	1.13	FULL DEPTH	2246.5	842.4
1480-WB	600+97.18	601+22.18	25	48	133.3		APPROACH SLAB		
1480-WB	601+22.18	604+29.32	**CUY-480-1088 (I-480 OVER B&O RAILROAD)**						
1480-WB	604+29.32	604+54.32	25	48	133.3		APPROACH SLAB		
1480-WB	604+54.32	605+90.00	135.7	48	723.6	1.13	FULL DEPTH	723.6	271.4
1480-WB	605+90.00	608+90.00	300	48	1600.0	0.85	TRANSITION	1600.0	455.6
1480-WB	608+90.00	636+36.00	2746	48	14645.3		CRACK & SEAT		
1480-WB	636+36.00	639+36.00	300	48	1600.0	0.85	TRANSITION	1600.0	455.6
1480-WB	639+36.00	643+02.00	366	48	1952.0	1.13	FULL DEPTH	1952.0	732.0
1480-WB	642+98.36	643+18.36	20	48	106.7		APPROACH SLAB		
1480-WB	643+18.36	644+31.62	**CUY-480-1169 (I-480 OVER BIG CREEK)**						
1480-WB	644+31.62	644+56.62	25	48	133.3		APPROACH SLAB		
1480-WB	644+56.62	644+90.00	33.4	48	178.0	1.13	FULL DEPTH	178.0	66.8
1480-WB	644+90.00	647+90.00	300	48	1600.0	0.85	TRANSITION	1600.0	455.6
1480-WB	647+90.00	664+70.00	1680	48	8960.0		CRACK & SEAT		
1480-WB	664+70.00	667+70.00	300	48	1600.0	0.85	TRANSITION	1600.0	455.6
1480-WB	667+70.00	670+70.00	300	48	1600.0	0.85	TRANSITION	1600.0	455.6
1480-WB	670+70.00	694+14.00	2344	48	12501.3		CRACK & SEAT		
1480-WB	694+14.00	697+14.00	300	48	1600.0	0.85	TRANSITION	1600.0	455.6
1480-WB	697+14.00	700+00.00	286	48	1525.3	1.13	FULL DEPTH	1525.3	572.0
RAMP W-3	595+30.00	595+63.00	RAMP-SCL		33.3		APPROACH SLAB		
RAMP W-3	595+63.00	600+17.32	RAMP-SCL		540.0	1.13	FULL DEPTH	540.0	202.5
RAMP T-1	619+00.00	629+00.00	RAMP-SCL		1406.6		CRACK & SEAT		
RAMP T-3	648+73.00	656+76.90	RAMP-SCL & GORE		1388.9		CRACK & SEAT		
RAMP R-2	692+50.00	693+30.00	RAMP-SCL		17.8		CRACK & SEAT		
RAMP R-2	693+30.00	694+14.00	RAMP-SCL		28.3		CRACK & SEAT		
RAMP R-2	694+14.00	697+14.00	RAMP-SCL		250.0	0.85	TRANSITION	250.0	71.2
RAMP R-2	697+14.00	700+00.00	RAMP-SCL		475.0	1.13	FULL DEPTH	475.0	178.1
TOTALS								27,065	9,261

CALCULATED DRL
CHECKED ENF

MISCELLANEOUS QUANTITIES

CUYAHOGA COUNTY
CUY-480-10.38

29
134

PLOT SUBMITTED: 11-APR-1997 10:06
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EXCAVATION QUANTITIES

	STA	STA	LENGTH (FEET)	AVERAGE WIDTH (FEET)	AVERAGE AREA (S.Y.)	AVERAGE DEPTH (FEET)	MAINLINE PAVEMENT TREATMENT	203 SUBGRADE COMPACTION (S.Y.)	203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION (C.Y.)
OUTSIDE	SHOULDER								
1480-EB	573+50.00	581+75.00	825.0	11.33	1038.9	2.13	FULL DEPTH	1038.9	735.9
1480-EB	581+75.00	582+05.00	30.0				APPROACH SLABS		
1480-EB	582+05.0	583+13.0	**CUY-480-1054 (I-480 OVER W 130TH ST)**						
1480-EB	583+13.00	583+43.00	30.0				APPROACH SLAB		
1480-EB	583+43.00	590+44.50	701.5	11.33	883.4	2.13	FULL DEPTH	883.4	625.7
1480-EB	590+44.50	594+68.00	SEE RAMP W-2				FULL DEPTH		
1480-EB	594+93.00	597+81.00	**CUY-480-1078 (I-480 OVER CONRAIL)**						
1480-EB	597+81.00	599+76.00	SEE RAMP W-2				APPROACH SLAB		
1480-EB	599+76.0	603+00.0	**CUY-480-1088 (I-480 OVER B&O RAILROAD)**						
1480-EB	603+00.00	603+25.00	25.0				APPROACH SLAB		
1480-EB	603+25.00	605+90.00	265.0	11.33	333.7	2.13	FULL DEPTH	333.7	236.4
1480-EB	605+90.00	608+90.00	300.0	11.33	377.8	1.86	TRANSITION	377.8	233.6
1480-EB	608+90.00	620+49.66	1159.7	11.33	1460.3	1.5	CRACK & SEAT	1460.3	730.2
1480-EB	620+49.66	628+43.00	SEE RAMP T-2				CRACK & SEAT		
1480-EB	628+43.00	636+36.00	793.0	11.33	998.6	1.5	CRACK & SEAT	998.6	499.3
1480-EB	636+36.00	639+00.00	264.0	11.33	332.4	1.86	TRANSITION	332.4	205.6
1480-EB	639+00.00	639+36.00	36.0	10.92	43.7	1.86	TRANSITION	43.7	27.0
1480-EB	639+36.00	643+02.00	366.0	10.92	444.1	2.13	FULL DEPTH	444.1	314.6
1480-EB	642+66.00	642+86.00	20.0				APPROACH SLAB		
1480-EB	642+86.0	643+99.0	**CUY-480-1169 (I-480 OVER BIG CREEK)**						
1480-EB	643+99.00	644+24.00	25.0				APPROACH SLAB		
1480-EB	644+24.00	644+90.00	66.0	11.33	83.1	2.13	FULL DEPTH	83.1	58.9
1480-EB	644+90.00	647+90.00	300.0	11.33	377.8	1.86	TRANSITION	377.8	233.6
1480-EB	647+90.00	649+10.00	120.0	11.33	151.1	1.5	CRACK & SEAT	151.1	75.6
1480-EB	649+10.00	661+00.00	SEE RAMP T-4				CRACK & SEAT		
1480-EB	661+00.00	664+70.00	370.0	11.33	465.9	1.5	CRACK & SEAT	465.9	233.0
1480-EB	664+70.00	667+70.00	300.0	11.33	377.8	1.86	TRANSITION	377.8	233.6
1480-EB	667+70.00	670+70.00	300.0	11.33	377.8	1.86	TRANSITION	377.8	233.6
1480-EB	670+70.00	694+14.00	2344.0	11.33	2951.7	1.5	CRACK & SEAT	2951.7	1475.8
1480-EB	694+14.00	695+39.39	125.4	11.33	157.9	1.86	TRANSITION	157.9	97.6
1480-EB	695+39.39	700+00.00	SEE RAMP R-1						
RAMP W-2	590+44.50	593+00.00	GORE-(CADD AREA)		430.9	2.13	FULL DEPTH	430.9	305.2
RAMP W-2	593+00.00	594+15.00	115.0	9.33	119.2	2.13	FULL DEPTH	119.2	84.4
RAMP W-2	594+15.00	594+68.00	53.0	7.83	46.1	2.13	FULL DEPTH	46.1	32.7
RAMP W-2	594+68.00	594+93.00	25.0	5	13.9		APPROACH SLAB		
RAMP W-2	594+93.00	597+81.00	**CUY-480-1078 (I-480 OVER CONRAIL)**						
RAMP W-2	597+81.00	598+06.00	25.0	5	13.9		APPROACH SLAB		
RAMP W-2	598+06.00	599+51.00	145.0	6.5	104.7	2.13	FULL DEPTH	104.7	74.2
RAMP W-2	599+51.00	599+76.00	25.0	8	22.2		APPROACH SLAB		
RAMP W-2	599+76.0	603+00.0	**CUY-480-1088 (I-480 OVER B&O RAILROAD)**						
RAMP T-2	620+49.66	621+49.7	100.0	10.33	114.8	1.5	CRACK & SEAT	114.8	57.4
RAMP T-2	621+49.66	628+43.0	693.3	9.33	718.8	1.5	CRACK & SEAT	718.8	359.4
RAMP T-4	649+10.00	651+00.00	GORE-(CADD AREA)		290.9	1.5	CRACK & SEAT	290.9	145.4
RAMP T-4	651+00.00	661+00.00	1000.0	9.33	1037.0	1.5	CRACK & SEAT	1037.0	518.5
RAMP R-1	695+39.39	697+15.00	175.6	9.33	182.1	1.86	TRANSITION	182.1	112.6
RAMP R-1	697+15.00	700+00.00	285.0	9.33	295.6	2.13	FULL DEPTH	295.6	209.4
TOTALS								14,196	8,149

QUANTITIES CARRIED TO SHEET 16.

EXCAVATION QUANTITIES

	STA	STA	LENGTH (FEET)	AVERAGE WIDTH (FEET)	AVERAGE AREA (S.Y.)	AVERAGE DEPTH (FEET)	MAINLINE PAVEMENT TREATMENT	203 SUBGRADE COMPACTION (S.Y.)	203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION (C.Y.)
OUTSIDE	SHOULDER								
1480-WB	575+55.00	582+22.00	667.0	11.33	839.9	2.13	FULL DEPTH	839.9	594.9
1480-WB	582+22.00	582+52.00	30.0				APPROACH SLABS		
1480-WB	582+52.0	583+60.0	**CUY-480-1054 (I-480 OVER W 130TH ST)**						
1480-WB	583+60.00	583+90.00	30.0				APPROACH SLAB		
1480-WB	583+90.00	591+91.00	801.0	11.33	1008.7	2.13	FULL DEPTH	1008.7	714.5
1480-WB	591+91.00	592+16.00	25.0				APPROACH SLAB		
1480-WB	592+16.0	595+21.0	**CUY-480-1078 (I-480 OVER CONRAIL)**						
1480-WB	595+21.00	600+17.32	SEE RAMP W-3						
1480-WB	600+17.32	602+53.00	235.7	11.33	296.8	2.13	FULL DEPTH	296.8	210.2
1480-WB	602+28.00	602+53.00	25.0				APPROACH SLAB		
1480-WB	602+53.0	605+58.0	**CUY-480-1088 (I-480 OVER B&O RAILROAD)**						
1480-WB	605+58.00	605+83.00	25.0				APPROACH SLAB		
1480-WB	605+83.00	605+90.00	7.0	11.33	8.8	2.13	FULL DEPTH	8.8	6.2
1480-WB	605+90.00	608+90.00	300.0	11.33	377.8	1.86	TRANSITION	377.8	233.6
1480-WB	608+90.00	619+00.00	1010.0	11.33	1271.8	1.5	CRACK & SEAT	1271.8	635.9
1480-WB	619+00.00	631+75.00	SEE RAMP T-1				CRACK & SEAT		
1480-WB	631+75.00	636+36.00	461.0	11.33	580.5	1.5	CRACK & SEAT	580.5	290.3
1480-WB	636+36.00	638+50.00	214.0	11.33	269.5	1.86	TRANSITION	269.5	166.6
1480-WB	638+50.00	639+36.00	86.0	10.92	104.3	1.86	TRANSITION	104.3	64.5
1480-WB	639+36.00	643+02.00	366.0	10.92	444.1	2.13	FULL DEPTH	444.1	314.6
1480-WB	643+31.00	643+51.00	20.0				APPROACH SLAB		
1480-WB	643+51.0	644+64.0	**CUY-480-1169 (I-480 OVER BIG CREEK)**						
1480-WB	644+64.00	644+89.00	25.0				APPROACH SLAB		
1480-WB	644+89.00	644+90.00	1.0	11.33	1.3	2.13	FULL DEPTH	1.3	0.9
1480-WB	644+90.00	647+90.00	300.0	11.33	377.8	1.86	TRANSITION	377.8	233.6
1480-WB	647+90.00	648+73.00	83.0	11.33	104.5	1.5	CRACK & SEAT	104.5	52.3
1480-WB	648+73.00	656+76.90	SEE RAMP T-3				CRACK & SEAT		
1480-WB	656+76.90	664+70.00	793.1	11.33	998.7	1.5	CRACK & SEAT	998.7	499.4
1480-WB	664+70.00	667+70.00	300.0	11.33	377.8	1.86	TRANSITION	377.8	233.6
1480-WB	667+70.00	670+70.00	300.0	11.33	377.8	1.86	TRANSITION	377.8	233.6
1480-WB	670+70.00	692+50.00	2180.0	11.33	2745.2	1.5	CRACK & SEAT	2745.2	1372.6
1480-WB	692+50.00	700+00.00	SEE RAMP R-2						
RAMP W-1	573+50.00	575+55.00	GORE-(CADD AREA)		338.1	2.13	FULL DEPTH	338.1	239.5
RAMP W-3	595+21.00	595+46.00	25.0				APPROACH SLAB		
RAMP W-3	595+46.00	600+17.32	471.3	8.00	419.0	2.13	FULL DEPTH	419.0	296.8
RAMP T-1	619+00.00	629+00.00	1000.0	9.33	1036.7	1.5	CRACK & SEAT	1036.7	518.3
RAMP T-1	629+00.00	631+75.00	GORE-(CADD AREA)		451.8	1.5	CRACK & SEAT	451.8	225.9
RAMP T-3	648+73.00	655+76.90	703.9	9.33	729.7	1.5	CRACK & SEAT	729.7	364.9
RAMP T-3	655+76.90	656+76.90	100.0	10.33	114.8	1.5	CRACK & SEAT	114.8	57.4
RAMP R-2	692+50.00	694+15.00	165.0	9.33	171.1	1.5	CRACK & SEAT	171.1	85.5
RAMP R-2	694+15.00	697+15.00	300.0	9.33	311.1	1.86	TRANSITION	311.1	192.4
RAMP R-2	697+15.00	700+00.00	285.0	10.33	327.2	2.13	FULL DEPTH	327.2	231.8
TOTALS								14,085	8,070

CALCULATED DRL
CHECKED ENF

MISCELLANEOUS QUANTITIES

CUYAHOGA COUNTY
CUY-480-10.38

30
134

PLOTTED BY: ksari
PLOTTED FROM: i:\users\hazapis\pid13000\13000gcp.d
13000GCP.DGN
PLOT SUBMITTED: 11-APR-1997 10:06

PAVEMENT REMOVED AND WEARING COURSE REMOVED

LOCATION FROM	LOCATION TO	SIDE	LENGTH	END WIDTH	202 PAVEMENT REMOVED	202 WEARING COURSE REMOVED	
			LIN. FT.	LIN. FT.	SQ.YD.	SQ.YD.	
IR-480							
573+50	581+91.52	WB	841.52	48.5	4534.8		
581+91.52	582+16.52	WB	25.00	69.5		193.1	
583+25.53	583+50.53	WB	25.00	69.5		193.1	
583+50.53	593+74.44	WB	1023.92	48.5	5517.8		
SPEED CHANGE LANE							
593+00	594+57.13	WB	157.13	22.5	392.8		
IR-480							
593+74.44	593+99.44	WB	25.00	85.5		237.5	
597+11.70	597+36.70	WB	25.00	78.5		218.1	
597+36.70	600+29.91	WB	293.21	58.9	1919.4		
600+29.91	600+54.91	WB	25.00	71.5		198.6	
603+56.37	603+81.37	WB	25.00	65.5		181.9	
603+81.37	608+90	WB	508.63	57.3	3235.5		
608+90	620+49.66	WB	1159.66	48.5		6249.3	
620+49.66	621+49.66	WB	100.00	54.5		605.6	
621+49.66	628+49.66	WB	700.00	73.5		5716.7	
628+49.66	636+36	WB	786.34	48.5		4237.5	
636+36	642+76.81	WB	640.81	48.5	3453.2		
642+76.81	643+01.81	WB	25.00	69.5		193.1	
643+99.21	644+24.21	WB	25.00	69.5		193.1	
644+24.21	647+90	WB	365.79	48.5	1971.2		
647+90	664+70	WB	1680.00	48.5		9053.3	
SPEED CHANGE LANE							
649+14	661+00	WB	1186.00	19.5		2569.7	
IR-480							
664+70	670+70	WB	600.00	48.5	3233.3		
670+70	694+14	WB	2344.00	48.5		12631.6	
694+14	695+39.39	WB	125.39	48.5	675.7		
695+39.39	696+39.39	WB	100.00	54.5	605.6		
696+39.39	700+00	WB	100.00	60.5	2424.1		
573+50	582+16.04	EB	866.04	48.5	4667.0		
582+16.04	582+41.04	EB	25.00	69.5		193.1	
583+49.65	583+74.65	EB	25.00	69.5		193.1	
583+74.65	592+50.39	EB	875.74	48.5	4719.3		
592+50.39	592+75.39	EB	25.00	70.0		194.4	
595+87.65	596+12.65	EB	25.00	78.5		218.1	
596+12.65	599+17.32	EB	304.67	60.5	2048.0		
599+17.32	600+17.32	EB	100.00	54.5	605.6		
600+17.32	601+67.29	EB	149.97	48.5	808.2		
601+67.29	601+92.29	EB	25.00	69.5		193.1	
604+99.63	605+24.63	EB	25.00	69.5		193.1	
TOTALS					40811.5	43857.1	

PAVEMENT REMOVED AND WEARING COURSE REMOVED

LOCATION FROM	LOCATION TO	SIDE	LENGTH	END WIDTH	202 PAVEMENT REMOVED	202 WEARING COURSE REMOVED	
			LIN. FT.	LIN. FT.	SQ.YD.	SQ.YD.	
IR-480							
605+24.63	608+90	EB	365.37	48.5	1968.9		
608+90	619+00	EB	1010.00	48.5		5442.8	
619+00	629+00	EB	1000.00	61.0		6777.8	
IR-480							
629+00	636+36	EB	736.00	48.5		3966.2	
636+36	643+10.61	EB	674.61	48.5	3635.4		
643+10.61	643+35.61	EB	25.00	69.5		193.1	
644+48.87	644+73.87	EB	25.00	69.5		193.1	
644+73.87	647+90	EB	316.13	48.5	1703.6		
647+90	648+76.90	EB	86.90	48.5		468.3	
648+76.90	655+76.90	EB	700.00	74.0		5755.6	
655+76.90	656+76.90	EB	100.00	54.5		605.6	
656+76.90	664+70	EB	793.10	48.5		4273.9	
664+70	670+70	EB	600.00	48.5	3233.3		
670+70	692+50	EB	2180.00	48.5		11747.8	
692+50	694+14	EB	164.00	50.6		921.1	
694+14	700+00	EB	586.00	59.93	3901.8		
TOTALS					14443.0	40309.3	

CALCULATED LGM
CHECKED ENF

PAVEMENT SUB-SUMMARY

CUYAHOGA COUNTY
CUY-71-10.38

31
134

PLOTTED BY: ksarli
PLOTTED FROM: i:\users\lhazapis\pid13000\13000qbad
PLOT SUBMITTED: 11-APR-1997 10:09
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FOR CONCRETE BARRIER DETAILS SEE SHEETS (XX-XX)

GUARDRAIL AND RELATED QUANTITIES

SHEET NO.	REFERENCE NO.	EXISTING LOCATIONS FROM	EXISTING LOCATIONS TO	PROPOSED LOCATIONS FROM	PROPOSED LOCATIONS TO	LOCATION	SIDE		202 GUARDRAIL REMOVED L.F.		606 GUARDRAIL, TYPE 5 L.F.	GUARDRAIL, TYPE 5A L.F.	GUARDRAIL, MISC. THRIE BEAM L.F.	GUARDRAIL TYPE 5 BARRIER DESIGN L.F.	ANCHOR ASSEMBLY, TYPE E EA.	ANCHOR ASSEMBLY, TYPE T EA.	BRIDGE TERMINAL ASSEMBLY, TYPE I EA.	BRIDGE TERMINAL ASSEMBLY, TYPE 2, AS PER PLAN EA.	BRIDGE TERMINAL ASSEMBLY, TYPE 3, AS PER PLAN EA.	BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN EA.	622 PORTABLE CONCRETE BARRIER, 32" AS PER PLAN L.F.	CONCRETE BARRIER, AS PER PLAN L.F.	CONCRETE BARRIER, TYPE D, AS PER PLAN L.F.	203 LINEAR GRADING L.F.	448 ASPHALT CONCRETE INTERMEDIATE COURSE TYPE 1, (UNDER GUARDRAIL) AS PER PLAN C.Y.	SPEC. IMPACT ATTENUATOR TYPE I L.F.
GPB	G-1	578+35	582+44.9	578+44.9	582+44.9	WB	LT		410		400					1		1							400		
GPB	G-2	580+01	581+98.7	580+36.2	581+86.2	EB	RT		198		125				1		1								125		
GPB	G-3	583+68.9	587+50	583+68.9	589+56.4	WB	LT		381.1		562.5				1		1								562.5		
GPB	G-4	583+18.6	584+67	583+18.6	584+81.1	EB	RT		149		150					1		1							150		
GPB	G-5	586+35	590+00	585+25	590+00	W-2	RT		365		450				1										450		
GPC	G-6	590+00	594+87.5	590+00	594+87.5	W-2	RT		488		487.5						1								487.5		
GPC	G-7	595+23	602+49.9	595+23	602+49.9	WB	LT		727		727						1	1							727		
GPC	G-8	603+01.2	613+20.2	603+01.2	613+26.2	EB	RT		1019		1012.5					1		1							1012.5		
GPC	G-9	605+70.7	613+52.2	605+70.7	616+45.7	WB	LT		781.5		1050				1		1								1050		
GPE	G-10	625+35	627+10	625+22.5	626+85	EB	RT		175			125			1	1									125		
	G-11	644+65.7	646+53.2	644+65.7	646+15.7	WB	LT		187.5		125				1		1								125		
GPG	G-12	643+99.4	644+49.4	643+99.4	644+49.4	EB	RT		50		37.5					1		1							37.5		
GPG	G-13	649+90	651+65	644+97	651+84.5	WB	LT		175		525	137.5			1		1								662.5		
GPJ	G-14	688+75	690+15	688+75	690+25	EB	RT		140			112.5			1	1									112.5		
TOTALS									5246.1		5652	375			8	6	7	5							6027		

CALCULATED KAS
CHECKED DRL

BARRIER AND GUARDRAIL QUANTITIES

CUYAHOGA COUNTY
CUY-480-10.38

EARTHWORK QUANTITIES

STATION TO	STATION FROM	SIDE	203 EMBANKMENT C.Y.	659 SEEDING AND MULCHING S.Y.
613+26	616+00	RT.	66.1	304.4
616+00	625+22	RT.	120.5	922.0
616+45	631+80	LT.	213.8	1635.0
628+43	636+36	RT.	103.7	793.0
629+00	630+80	RAMP T-1	22.9	180.0
631+80	636+36	LT.	59.6	456.0
637+26	639+00	RT.	25.5	174.0
647+90	648+73	LT.	10.9	83.0
647+90	649+14	RT.	16.2	124.0
649+20	651+00	RAMP T-4	22.9	180.0
651+00	664+70	RT.	179.1	1370.0
651+85	664+70	LT.	168.1	1285.0
670+70	688+75	RT.	236.0	1805.0
670+70	694+14	LT.	306.5	2344.0
690+25	694+14	RT.	50.9	389.0
TOTALS			1602.7	12044.4

ASPHALT CURB QUANTITIES

REFERENCE	STATION TO	STATION FROM	SIDE	609 ASPHALT CONCRETE CURB, TYPE 1 LIN.FT.
1-C	578+97.0	582+18.9	WB	321.9
2-C	583+94.9	585+97.5	WB	202.6
3-C	595+53.0	600+16.0	WB	463.0
4-C	600+17.3	602+23.9	WB	196.7
5-C	603+27.2	613+03.0	EB	975.8
6-C	605+96.7	612+03.0	WB	606.3
TOTALS				2766.3

ITEM 659 - COMMERCIAL FERTILIZER

$$(12044.4)\ S.Y. \times \frac{9\ S.F.}{S.Y.} \times \frac{20\ LBS.}{1000\ S.F.} \times \frac{TON}{2000\ LBS.} = 1\ TONS$$

CALCULATED KAS
CHECKED ENF

MISCELLANEOUS QUANTITIES

CUYAHOGA COUNTY
CUY-480-10.38

33
134

* SEE UNDERDRAIN GENERAL NOTE
FOR CONTINGENCY QUANTITIES.

DRAINAGE QUANTITIES

REF. NO.	LOCATION	SIDE	STATION FROM	STATION TO	605 6" SHALLOW PIPE UNDERDRAIN	605 6" UNCLASSIFIED PIPE UNDERDRAIN		603 6'' CONDUIT TYPE F	*TO EXISTING CONDUIT	TO EXISTING CATCH BASIN, MANHOLE, ETC...	604 PRE-CAST REINFORCED CONCRETE OUTLET
					LIN. FT.	LIN. FT.		LIN. FT.			EACH
1-UD	480-EB	MED.	573+60	574+43	83			10		YES	
1A-UD	480-EB	MED.	574+50	582+04	754			10		YES	
2-UD	480-WB	MED.	573+60	574+55	95			10	YES		
2A-UD	480-WB	MED.	574+50	581+95	745			10		YES	
3-UD	480-WB	RT.	573+60	578+95	535			10		YES	
4-UD	480-WB	RT.	579+00	582+08	308			10		YES	
5-UD	480-WB	RT.	583+90	591+66	776			10			
6-UD	480-WB	MED.	583+75	592+92	877	40		10		YES	
7-UD	480-EB	MED.	583+65	594+96	81	40		10		YES	
7A-UD	480-EB	MED.	585+00	593+10	810			10		YES	
8-UD	480-WB	RT.	595+64	597+75	211			10		YES	
9-UD	480-WB	RT.	597+75	602+11	436			10		YES	
10-UD	480-WB	MED.	596+87	600+60	373			10		YES	
11-UD	480-EB	MED.	597+20	600+60	340			10		YES	
12-UD	480-EB	RT.	598+16	599+29	113			10		YES	
13-UD	480-WB	RT.	605+92	609+50	358			12			1
14-UD	480-WB	MED.	604+84	610+50	566			10		YES	
15-UD	480-EB	MED.	604+35	610+50	615			10		YES	
16-UD	480-EB	RT.	603+38	611+00	762			12			1
17-UD	480-EB	RT.	611+04	613+00	196			10		YES	
17A-UD	480-EB	RT.	613+05	619+25	633			10		YES	
18-UD	480-EB	MED.	610+57	619+25	868			10		YES	
19-UD	480-EB	MED.	610+57	619+25	868			10		YES	
20-UD	480-WB	RT.	618+50	623+00	465			10		YES	
21-UD	480-WB	MED.	619+32	623+00	368			10		YES	
22-UD	480-EB	MED.	619+32	623+00	368			10		YES	
23-UD	480-EB	RT.	619+28	623+00	385			10		YES	
24-UD	480-WB	RT.	623+04	628+25	535			10		YES	
25-UD	480-EB	MED.	623+97	628+25	428			10		YES	
26-UD	480-WB	MED.	623+97	628+25	428			10		YES	
27-UD	480-WB	RT.	622+04	632+75 RAMP T-1	1080			10		YES	
27A-UD	480-WB	RT.	629+00	635+00	600			10		YES	
28-UD	480-EB	RT.	628+28	630+50 RAMP T-2	230			10		YES	
29-UD	480-EB	RT.	628+52	635+00	660			10		YES	
30-UD	480-EB	MED.	628+32	635+00	668			10		YES	
31-UD	480-WB	MED.	628+32	635+00	668			10		YES	
32-UD	480-WB	RT.	635+00	638+75	375				YES		
33-UD	480-WB	MED.	635+97	638+75	278			10		YES	
34-UD	480-EB	MED.	635+97	638+75	278			10		YES	
35-UD	480-EB	RT.	635+03	638+75	400			10		YES	
36-UD	480-EB	RT.	638+78	640+62.5		187.5		10		YES	
37-UD	480-EB	MED.	638+80	640+62.5	182.5			10		YES	
38-UD	480-WB	MED.	638+80	640+62.5	182.5			10		YES	
39-UD	480-EB	RT.	640+62.5	642+75		212.5		10		YES	
40-UD	480-EB	MED.	640+62.5	642+88	225.5			10		YES	
(LEFT SIDE)					20207.5	480		444			2

DRAINAGE QUANTITIES

REF. NO.	LOCATION	SIDE	STATION FROM	STATION TO	605 6" SHALLOW PIPE UNDERDRAIN	605 6" UNCLASSIFIED PIPE UNDERDRAIN		603 6'' CONDUIT TYPE F	*TO EXISTING CONDUIT	TO EXISTING CATCH BASIN, MANHOLE, ETC...	604 PRE-CAST REINFORCED CONCRETE OUTLET
					LIN. FT.	LIN. FT.		LIN. FT.			EACH
41-UD	480-WB	MED.	640+62.5	642+98	235.5			10		YES	
42-UD	480-EB	RT.	644+50	651+00	650	100		15			1
43-UD	480-EB	MED.	645+00	650+00	500			10		YES	
44-UD	480-WB	MED.	645+00	650+00	500			10		YES	
45-UD	480-EB	MED.	650+04	658+00	796			10		YES	
46-UD	480-WB	MED.	650+04	658+00	796			10		YES	
47-UD	480-EB	RT.	648+25 RAMP T-4	650+75	255			10		YES	
48-UD	480-EB	RT.	650+78	654+50	385			10		YES	
49-UD	480-EB	RT.	654+56	656+50		205		10		YES	
49A-UD	480-EB	RT.	656+50	658+00		150		10		YES	
50-UD	480-WB	RT.	649+00 RAMP T-3	651+25		225		10		YES	
51-UD	480-WB	RT.	651+28	654+50	330			10		YES	
52-UD	480-WB	RT.	654+54	653+00	365			10		YES	
53-UD	480-WB	RT.	658+04	662+00	411			10		YES	
54-UD	480-WB	MED.	658+04	662+00	396			10		YES	
55-UD	480-EB	MED.	658+04	662+00	396			10		YES	
56-UD	480-EB	RT.	658+04	662+00	411			10		YES	
57-UD	480-WB	RT.	662+48	666+71	428			10		YES	
58-UD	480-WB	MED.	662+48	666+67	419			10	YES		
59-UD	480-EB	MED.	662+48	666+67	419			10	YES		
60-UD	480-EB	RT.	662+48	666+71	423			10	YES		
61-UD	480-EB	RT.	666+75	673+00	640			10		YES	
62-UD	480-EB	MED.	666+75	673+00	625			10		YES	
63-UD	480-WB	MED.	666+75	673+00	625			10		YES	
64-UD	480-WB	RT.	666+75	673+00	640			10		YES	
65-UD	480-WB	RT.	673+00	676+96	411			10		YES	
66-UD	480-WB	MED.	673+00	682+44	944			10		YES	
67-UD	480-EB	MED.	673+00	682+44	944			10		YES	
68-UD	480-EB	RT.	673+00	676+96	411			10		YES	
69-UD	480-EB	RT.	677+00	682+46	561			10		YES	
70-UD	480-WB	RT.	677+00	682+46	561			10		YES	
71-UD	480-EB	RT.	682+50	690+75	840			10		YES	
72-UD	480-EB	MED.	682+50	690+75	825			10		YES	
73-UD	480-WB	MED.	682+50	690+75	825			10		YES	
74-UD	480-WB	RT.	682+50	685+00	265			10		YES	
75-UD	480-WB	RT.	685+00	690+75	590			10		YES	
76-UD	480-WB	RT.	690+75	698+17	757			10		YES	
77-UD	480-WB	MED.	690+75	698+17	742			10		YES	
78-UD	480-EB	MED.	690+75	698+17	742			10		YES	
79-UD	480-EB	RT.	690+75	698+17	757			10		YES	
		SUB-TOTAL (RIGHT SIDE)			18730.5	680		405			1
		SUB-TOTAL (LEFT SIDE)			20207.5	480		444			2
TOTAL					38938	1149		849			3

CALCULATED LGM
CHECKED KAS

DRAINAGE QUANTITIES

CUYAHOGA COUNTY
CUY-480-10.38

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PLOT SUBMITTED: 11-APR-1997 10:08
PLOTTED BY: ksarli
PLOTTED FROM: i:\users\lhazapis\pid13000\13000dsa.d
13000DSA.DGN

PLOT SUBMITTED: 29-MAY-1997 14:28

SHEET NUMBER																ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
10	11	12	13	14	15	16	31	32	33	34	48	49	50	52	121B						
																				ROADWAY	
																201	11000		LUMP	CLEARING AND GRUBBING	
							55255									202	23000	55255	SQ.YD.	PAVEMENT REMOVED	
							84202									202	23500	84202	SQ.YD.	WEARING COURSE REMOVED	
			5000			42670					124		133			203	12000	47927	CU.YD	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	
			25000													203	12001	25000	CU.YD.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION, AS PER PLAN (ROCK EXCAVATION)	13
									1603							203	20001	1603	CU.YD.	EMBANKMENT, AS PER PLAN	10
			20000													203	21000	20000	CU.YD.	EMBANKMENT USING GRANULAR MATERIAL	
						94082					240					203	50000	94322	SQ.YD.	SUBGRADE COMPACTION	
60																203	60001	60	STATION	LINEAR GRADING, AS PER PLAN	10
								5652								606	13000	5652	LIN.FT.	GUARDRAIL, TYPE 5	
	200							375								606	13050	575	LIN.FT.	GUARDRAIL, TYPE 5A	
								6								606	26500	6	EACH	ANCHOR ASSEMBLY, TYPE T	
								8								606	26100	8	EACH	ANCHOR ASSEMBLY, TYPE E	
								7								606	35000	7	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1	
								5								606	35100	5	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 2	
														11624		622	80000	11624	LIN.FT.	GLARE SCREEN	
																				EROSION CONTROL	
					2049											207	10000	2049	SQ.YD.	TEMPORARY SEEDING AND MULCHING	
					250											207	70000	250	EACH	STRAW OR HAY BALES	
					12044											659	10000	12044	SQ.YD.	SEEDING AND MULCHING	
					600											659	14000	600	SQ.YD.	REPAIR SEEDING AND MULCHING	
					1											659	20000	2	TON	COMERCIAL FERTILIZER	
					15											659	35000	15	M.GAL.	WATER	
					54											659	40000	54	M.SQ.FT.	MOWING	
																				DRAINAGE	
															100	603	00400	100	LIN.FT.	4" CONDUIT, TYPE E	
			376													603	00900	376	LIN.FT.	6" CONDUIT, TYPE B	
									849							603	01500	849	LIN.FT.	6" CONDUIT, TYPE F	
			376													603	96600	376	LIN.FT.	CONDUIT BORED OR JACKED: 6" TYPE B	
			2													604	09001	2	EACH	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	14
			1													604	09501	1	EACH	CATCH BASIN RECONSTRUCTED TO GRADE, AS PER PLAN	14
												1				604	17901	1	EACH	INLET, NO. 2-A-8, AS PER PLAN	49
												1				604	18701	1	EACH	INLET, NO. 2-A-12, AS PER PLAN	49
											12					604	20601	12	EACH	INLET ADJUSTED TO GRADE, AS PER PLAN	48
			1													604	20801	1	EACH	INLET RECONSTRUCTED TO GRADE, AS PER PLAN	14
			1													604	35501	1	EACH	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN	14
									3							604	36600	3	EACH	PRECAST REINFORCED CONCRETE OUTLET	
					3000											SPEC	60450000	3000	POUND	MISCELLANEOUS METAL	15
			800						38938							605	11100	39738	LIN.FT.	6" SHALLOW PIPE UNDERDRAIN	
									1149							605	13300	1149	LIN.FT.	6" UNCLASSIFIED PIPE UNDERDRAIN	
			22000													605	13500	22000	LIN.FT.	6" ROCK CUT PIPE UNDERDRAIN	

CALCULATED KAS

CHECKED ENF

GENERAL SUMMARY

CUYAHOGA COUNTY
CUY-480-10.38

35
134

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PLOTTED FROM: i:\users\lhazapis\pid13000\summary\13

10	11	12	13	14	15A	16	31	32	33	34	48	49	50	52	53	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
																				PAVEMENT	
		500														251	01000	500	SQ.YD.	PARTIAL DEPTH PAVEMENT REPAIR	
						27864										254	01000	27864	SQ.YD.	PAVEMENT PLANING BITUMINOUS	
		107														254	01010	107	SQ.YD.	PAVEMENT PLANING, PORTLAND CEMENT CONCRETE	
													800			255	10001	800	SQ.YD.	FULL DEPTH RIGID REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN, A	12
													800			255	10001	800	SQ.YD.	FULL DEPTH RIGID REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN, B	12
													3200			255	20000	3200	LIN.FT.	FULL DEPTH PAVEMENT SAWING	
						31871					80		133			304	20001	32084	CU.YD.	AGGREGATE BASE, AS PER PLAN	13
						37255					100					408	10000	37355	GALLON	BITUMINOUS PRIME COAT	
						65801					96					SPEC	69090000	65897	CU.YD.	ASPHALT CONCRETE MISC.: ASPHALT CONCRETE WITH WARRANTY	13
	231															448	47081	231	CU.YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE1, UNDER GUARDRAIL, PG64-22, AS PER PLAN	11
						78160										SPEC	45217500	78160	SQ.YD.	CRACK AND SEAT EXISTING PLAIN CONCRETE PAVEMENT	
									2767							609	10000	2767	LIN.FT.	ASPHALT CONCRET CURB, TYPE 1, AC-20	
																				LIGHTING	
					6											202	75801	6	EACH	DISCONNECT EXISTING CIRCUIT, AS PER PLAN	15A
					36											625	00800	36	EACH	CONNECTOR KIT, TYPE V	
					36											625	01100	36	EACH	CONNECTOR KIT, TYPE VII C	
					11290											625	23200	11290	LIN.FT.	NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE	
					2880											625	25911	2880	LIN.FT.	CONDUIT CLEANED AND CABLES REMOVED, AS PER PLAN	15A
					LUMP											SPEC	62540000		LUMP	MAINTAIN EXISTING LIGHTING	15A
																614	11000		LUMP	MAINTENANCE OF TRAFFIC	
																619	15021		LUMP	FIELD OFFICE, TYPE C, AS PER PLAN	11
																SPEC	61925010		LUMP	COMPUTER EQUIPMENT FOR TYPE C OFFICE	
																623	10001		LUMP	CONSTRUCTION LAYOUT STAKES, AS PER PLAN	13
																624	10000		LUMP	MOBILIZATION	
																				TRAFFIC CONTROL SEE SHEETS 119 TO 121A FOR QUANTITIES	

CALCULATED KAS
CHECKED ENF

GENERAL SUMMARY

CUYAHOGA COUNTY
CUY-480-10.38

PLOT SUBMITTED: 14-APR-1997 10:12

℄ IR-480 CURVE DATA

Δ=44°06'29"
R=5729.58'
T=2321.19'
D=01°00'00"
L=4410.81'
P.C.=STA. 611+43.51
P.T.=STA. 655+54.32

IM-480(4)
Begin Project
Sta. 572+97
S.L.M. 10.38

STRUCTURE NO. CUY-480-10.78 NO WORK

STRUCTURE NO. CUY-480-10.88 NO WORK

STA. 605+90 PAVEMENT BEGIN TRANSITION DETAIL

STA. 608+90 END TRANSITION & SEAT BEGIN CRACK

CITY OF CLEVELAND
CITY OF BROOKLYN

MATCHLINE STA. 627+00

(WB) IR 480
(EB) IR 480

BEGIN SHEET

STA. 573+50 BEGIN FULL DEPTH PAVEMENT REPLACEMENT

STRUCTURE NO. CUY-480-10.54 NO WORK

℄ IR-480 CURVE DATA

Δ= 29°46'15"
R=4583.66'
T=1218.37'
D=1°15'00"
L=2381.67'
P.C.=STA. 571+52.74
P.T.=STA. 595+34.41

LEGEND

- FULL DEPTH PAVEMENT REPLACEMENT
- PAVEMENT TRANSITION
- CRACK & SEAT

SCALE IN FEET

CALCULATED KAS
DRAWN KAS
CHECKED ENF
REVISED

SCHEMATIC PAVEMENT PLAN
IR-480
STA. 572+97 TO STA. 627+00

CUYAHOGA COUNTY
CUY-480-10.38

37
134

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13000QSD.DGN

PLOTTED BY: ksarl1
PLOTTED FROM: i:\users\lhazapis\pid13000\13000gse.d
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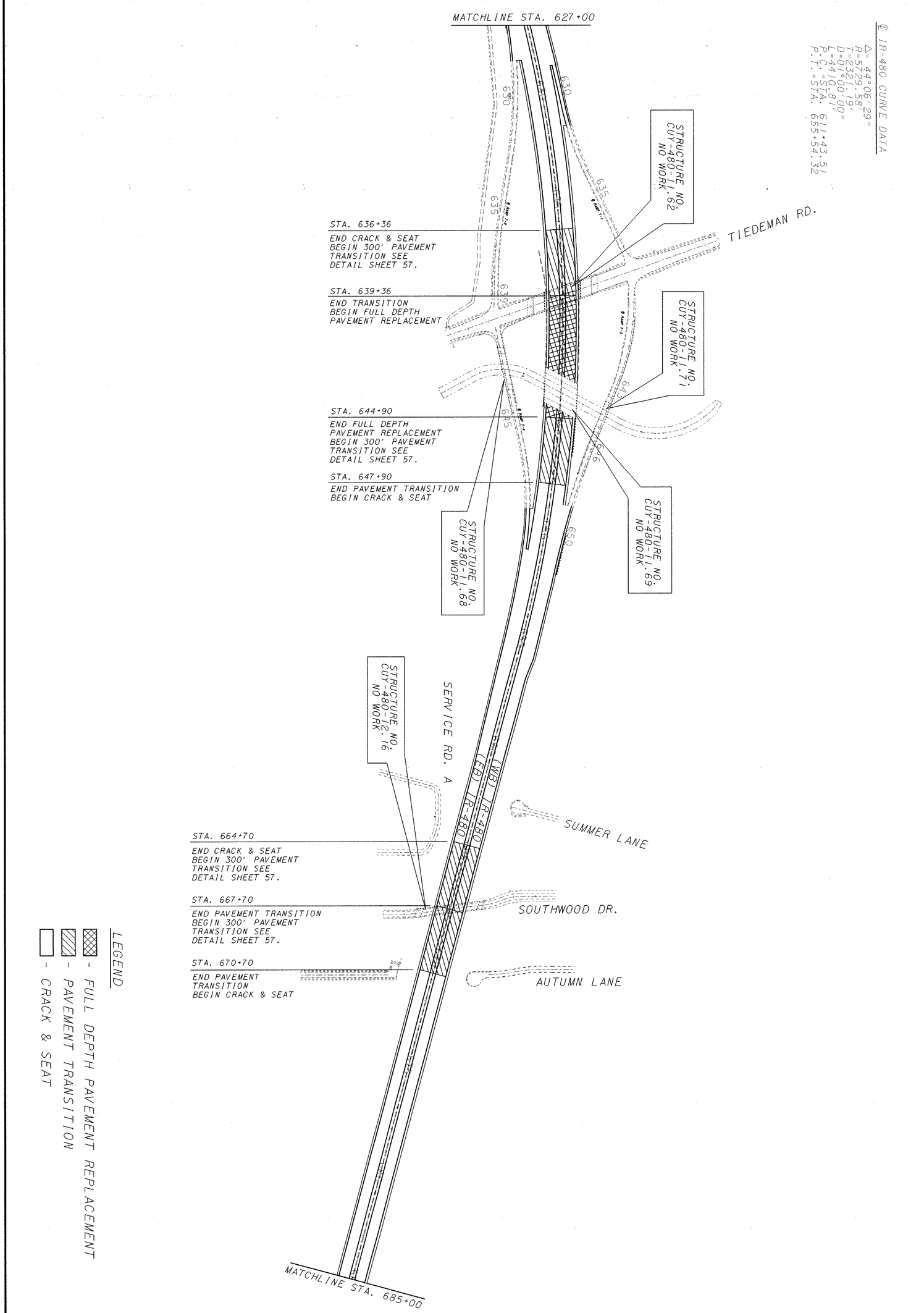

38/134	CUYAHOGA COUNTY CUY-480-10.38	SCHEMATIC PAVEMENT PLAN IR-480 STA. 627+00 TO STA. 685+00	CALCULATED KAS CHECKED ENF	DRAWN KAS REVISED	0 200 400 SCALE IN FEET	N

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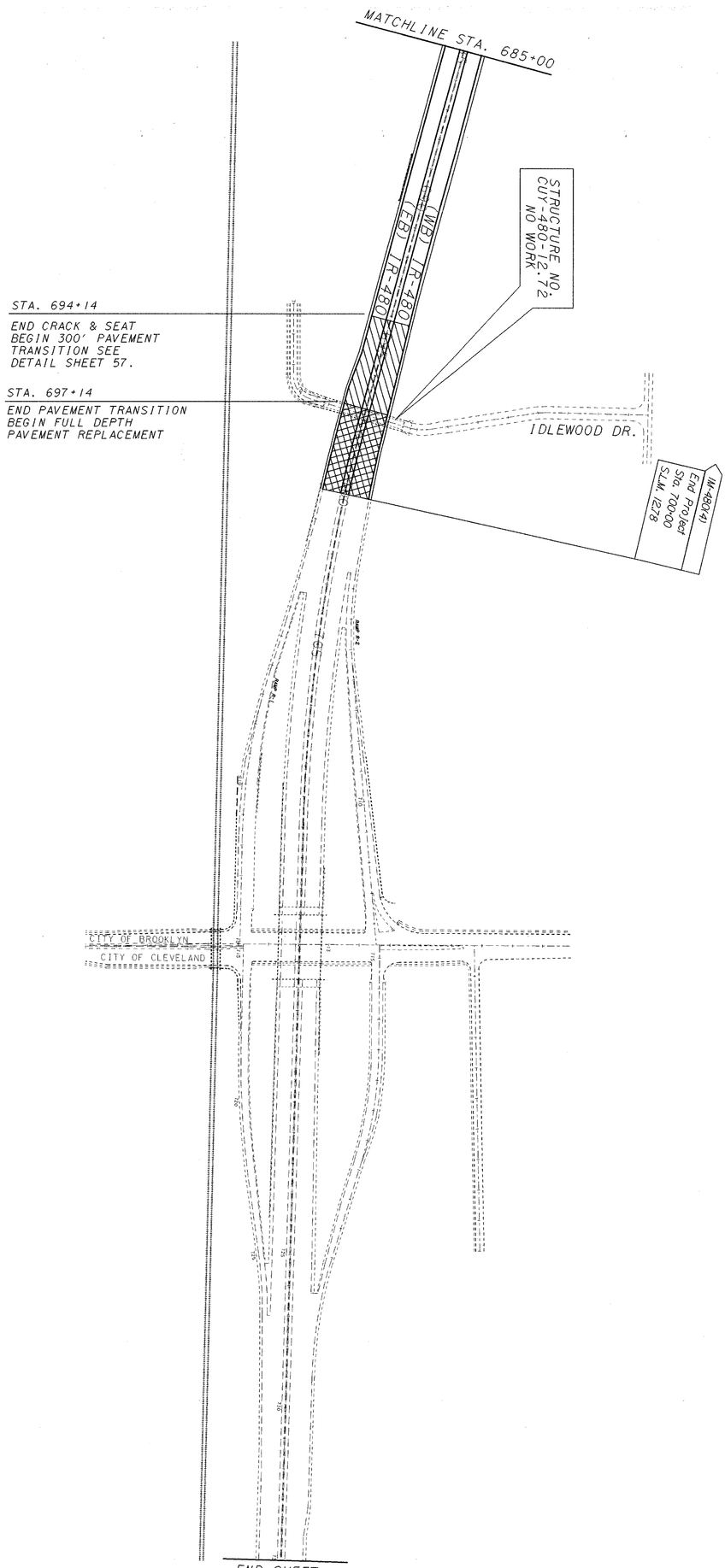


LEGEND

- FULL DEPTH PAVEMENT REPLACEMENT
- PAVEMENT TRANSITION
- CRACK & SEAT

39/134

CUYAHOGA COUNTY
CUY-480-10.38

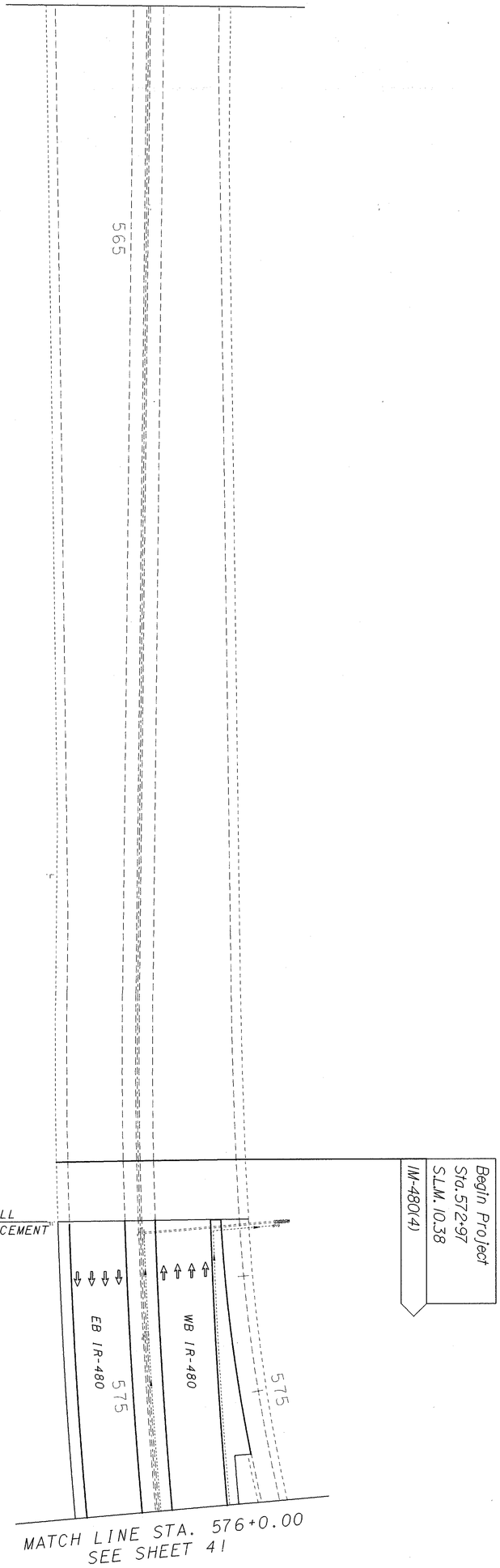
SCHEMATIC PAVEMENT PLAN
IR-480
STA. 685+00 TO STA. 698+50

CALCULATED	DRAWN
KAS	KAS
CHECKED	REVISED
ENF	

0 200 400
SCALE IN FEET

N

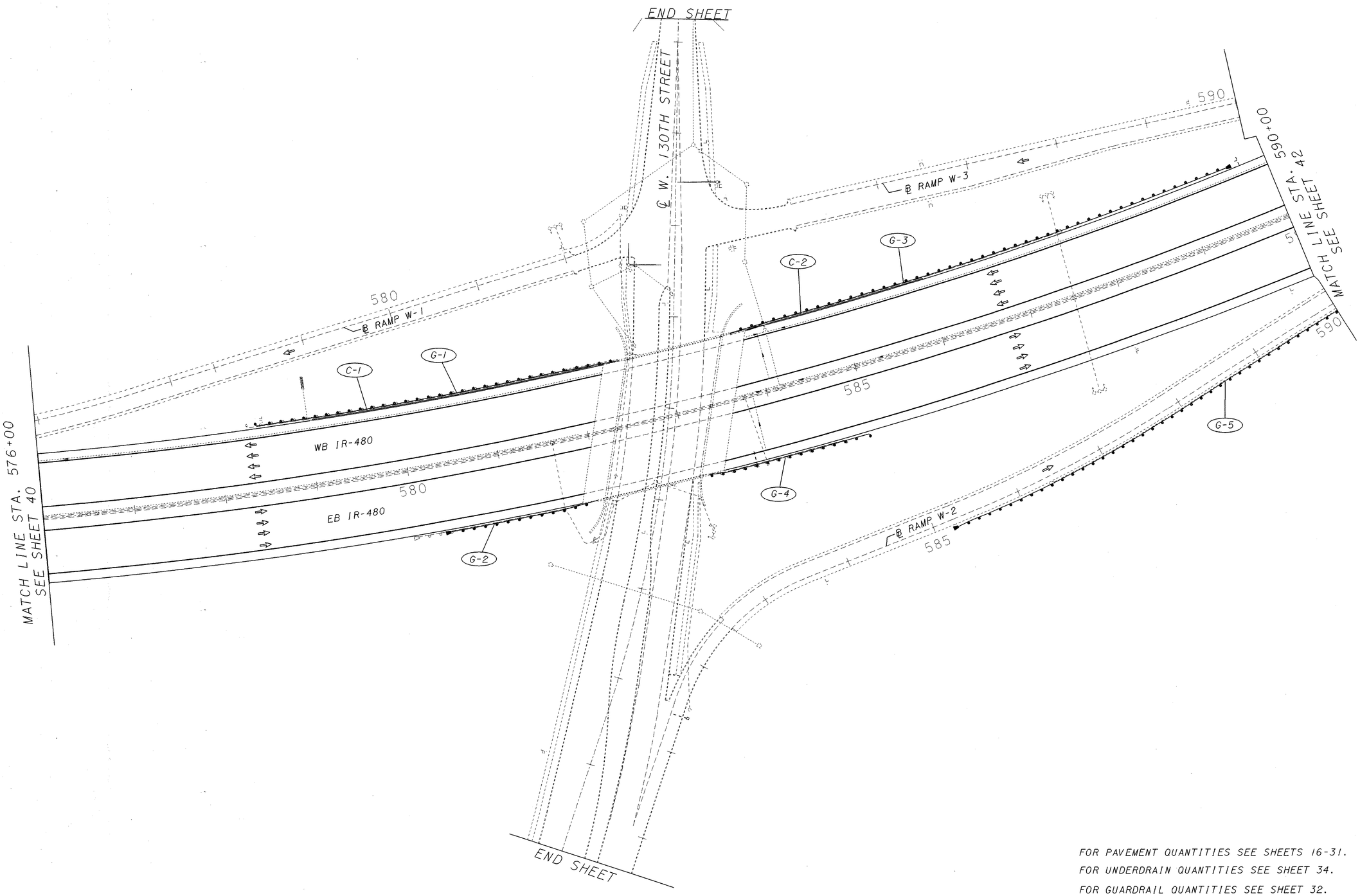
END SHEET
STA. 563+0.00



MATCH LINE STA. 576+0.00
SEE SHEET 41

FOR PAVEMENT QUANTITIES SEE SHEETS 16-31.
FOR UNDERDRAIN QUANTITIES SEE SHEET 34.

40 / 134	CUYAHOGA COUNTY CUY-480-10.38	PLAN SHEET IR-480 STA. 573+50 TO STA. 576+00	CALCULATED KAS	DRAWN KAS	0 50 100 SCALE IN FEET	N
			CHECKED ENF	REVISED		



FOR PAVEMENT QUANTITIES SEE SHEETS 16-31.
FOR UNDERDRAIN QUANTITIES SEE SHEET 34.
FOR GUARDRAIL QUANTITIES SEE SHEET 32.
FOR ASPHALT CURB QUANTITIES SEE SHEET 33.

SCALE IN FEET
0 50 100

DRAWN KAS
REVISED
CALCULATED KAS
CHECKED ENF

PLAN SHEET
IR-480
STA. 576+00 TO STA. 590+00

CUYAHOGA COUNTY
CUY-480-10.38

41
134

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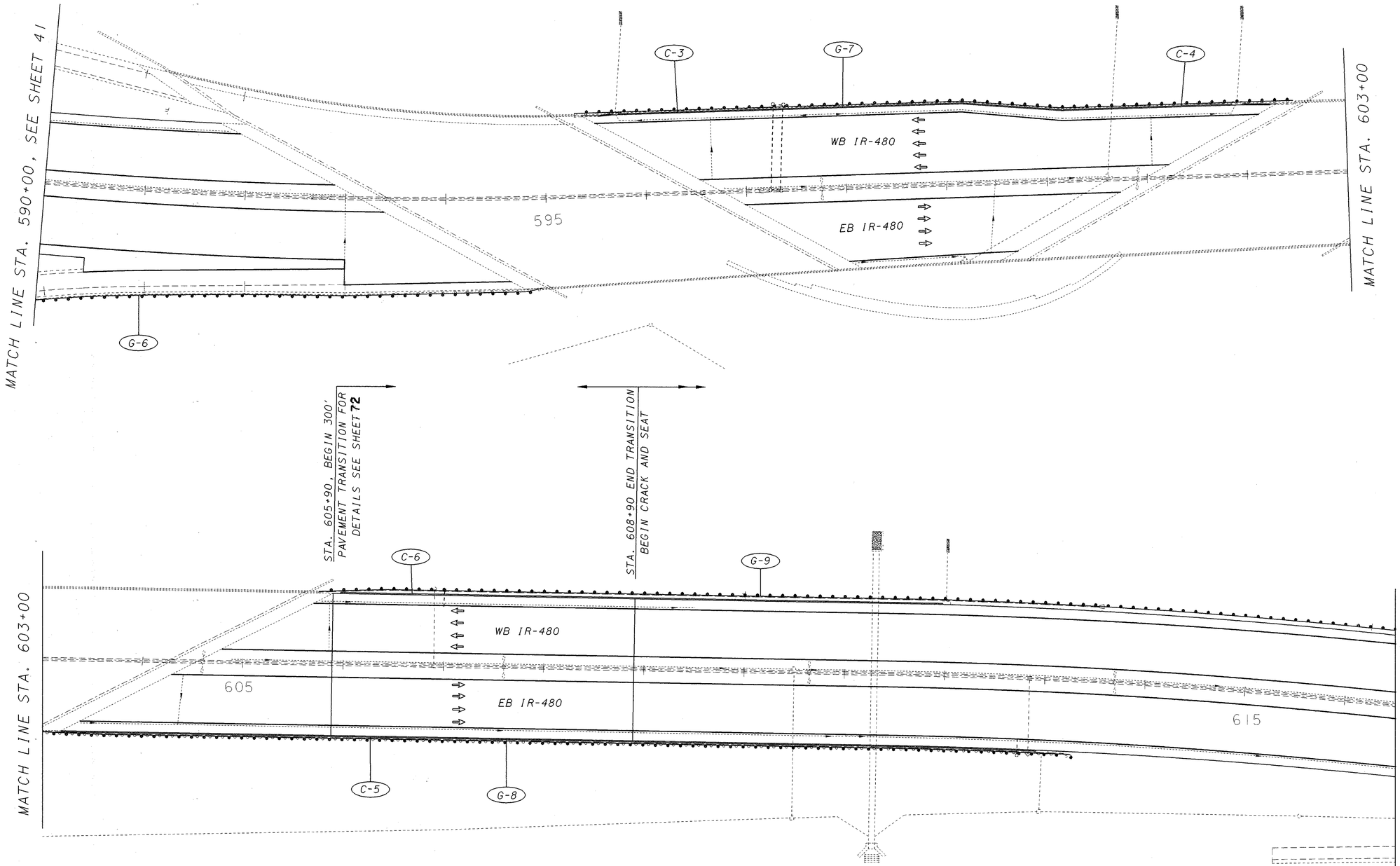

FOR PAVEMENT QUANTITIES SEE SHEETS 16-31.
FOR UNDERDRAIN QUANTITIES SEE SHEET 34.
FOR GUARDRAIL QUANTITIES SEE SHEET 32.
FOR EMBANKMENT LIMITS AND QUANTITIES SEE SHEET 33.
FOR ASPHALT CURB QUANTITIES SEE SHEET 33.

CALCULATED KAS
CHECKED ENF
DRAWN KAS
REVISED

0 50 100
SCALE IN FEET

PLAN SHEET
IR-480
590+00 TO STA. 616+50

CUYAHOGA COUNTY
CUY-480-10.38

42
134

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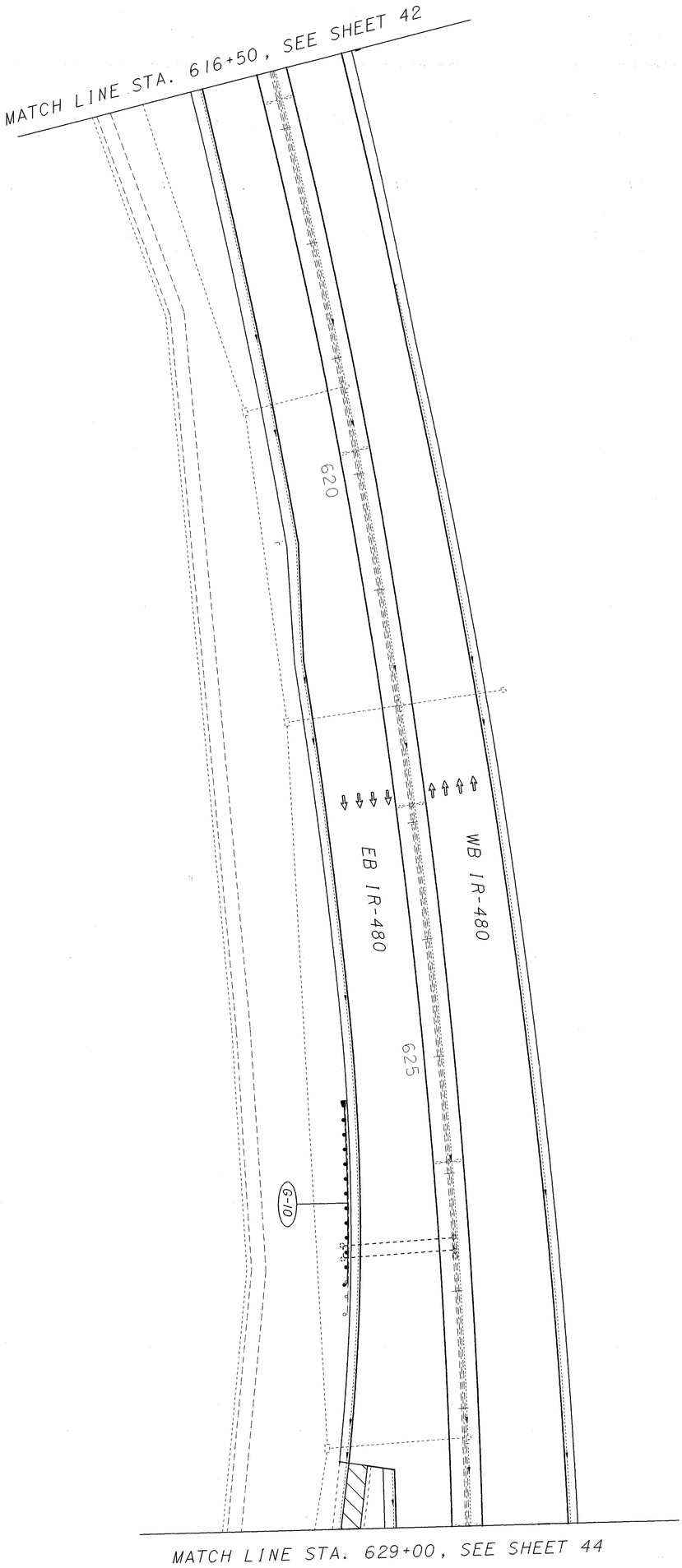

RAMP FEATHER SEE SHEET 53 FOR DETAILS.

FOR PAVEMENT QUANTITIES SEE SHEETS 16-31.

FOR UNDERDRAIN QUANTITIES SEE SHEET 34.

FOR GUARDRAIL QUANTITIES SEE SHEET 32.

FOR EMBANKMENT LIMITS AND QUANTITIES SEE SHEET 33.

43 / 134	CUYAHOGA COUNTY CUY-480-10.38	PLAN SHEET IR-480 STA. 616+50 TO STA. 629+00	CALCULATED KAS	DRAWN KAS	0 50 100 SCALE IN FEET
			CHECKED ENF	REVISED	

RAMP FEATHER SEE SHEET 53 FOR DETAILS.

FOR PAVEMENT QUANTITIES SEE SHEETS 16-31.

FOR UNDERDRAIN QUANTITIES SEE SHEET 34.

FOR GUARDRAIL QUANTITIES SEE SHEET 32.

FOR EMBANKMENT LIMITS AND QUANTITIES SEE SHEET 33.

N

0 50 100 SCALE IN FEET

CALCULATED	DRAWN	REVISED
KAS	KAS	
CHECKED		
ENF		

PLAN SHEET
IR-480
STA. 629+00 TO STA. 642+00

CUYAHOGA COUNTY
CUY-480-10.38

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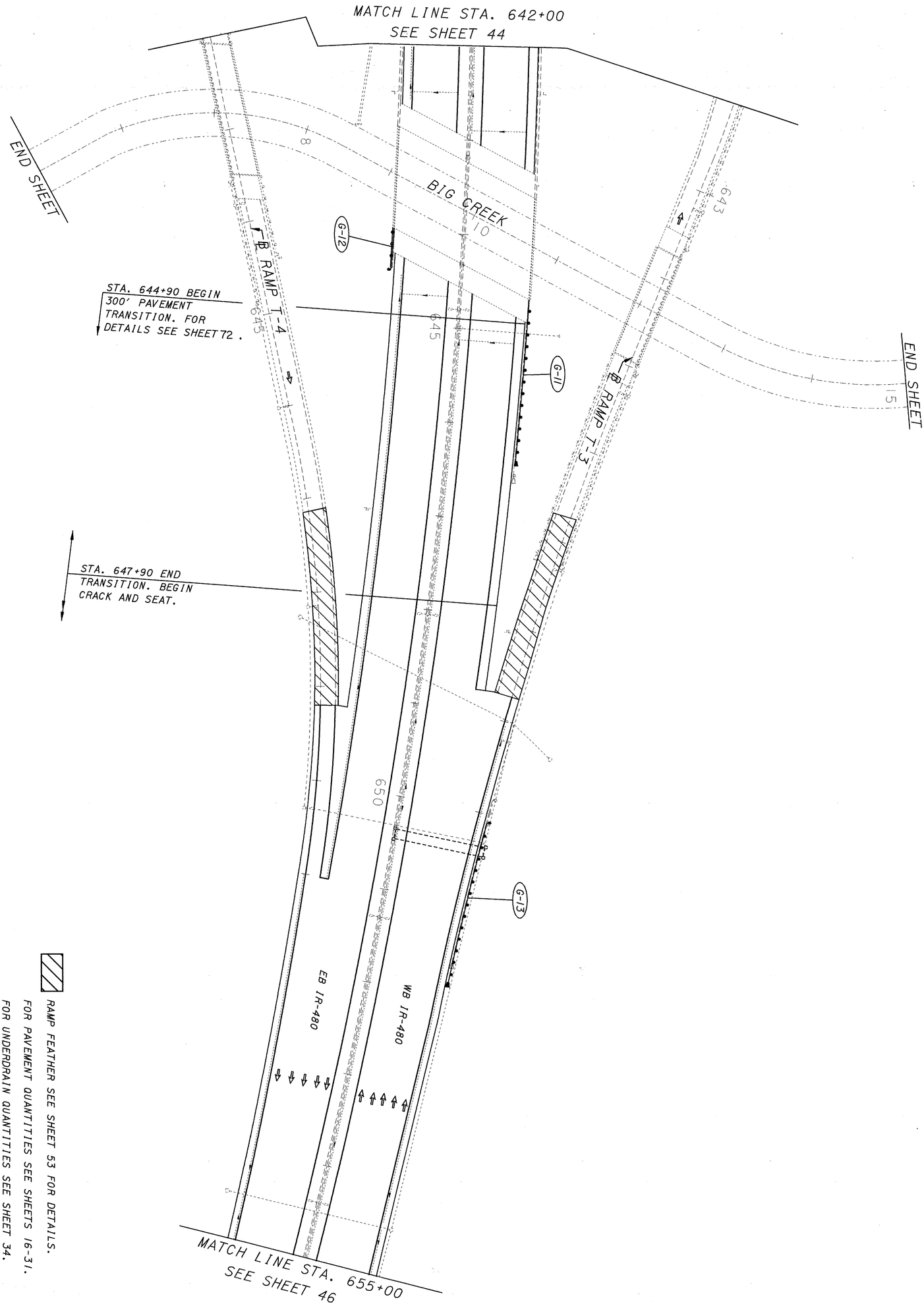


RAMP FEATHER SEE SHEET 53 FOR DETAILS.

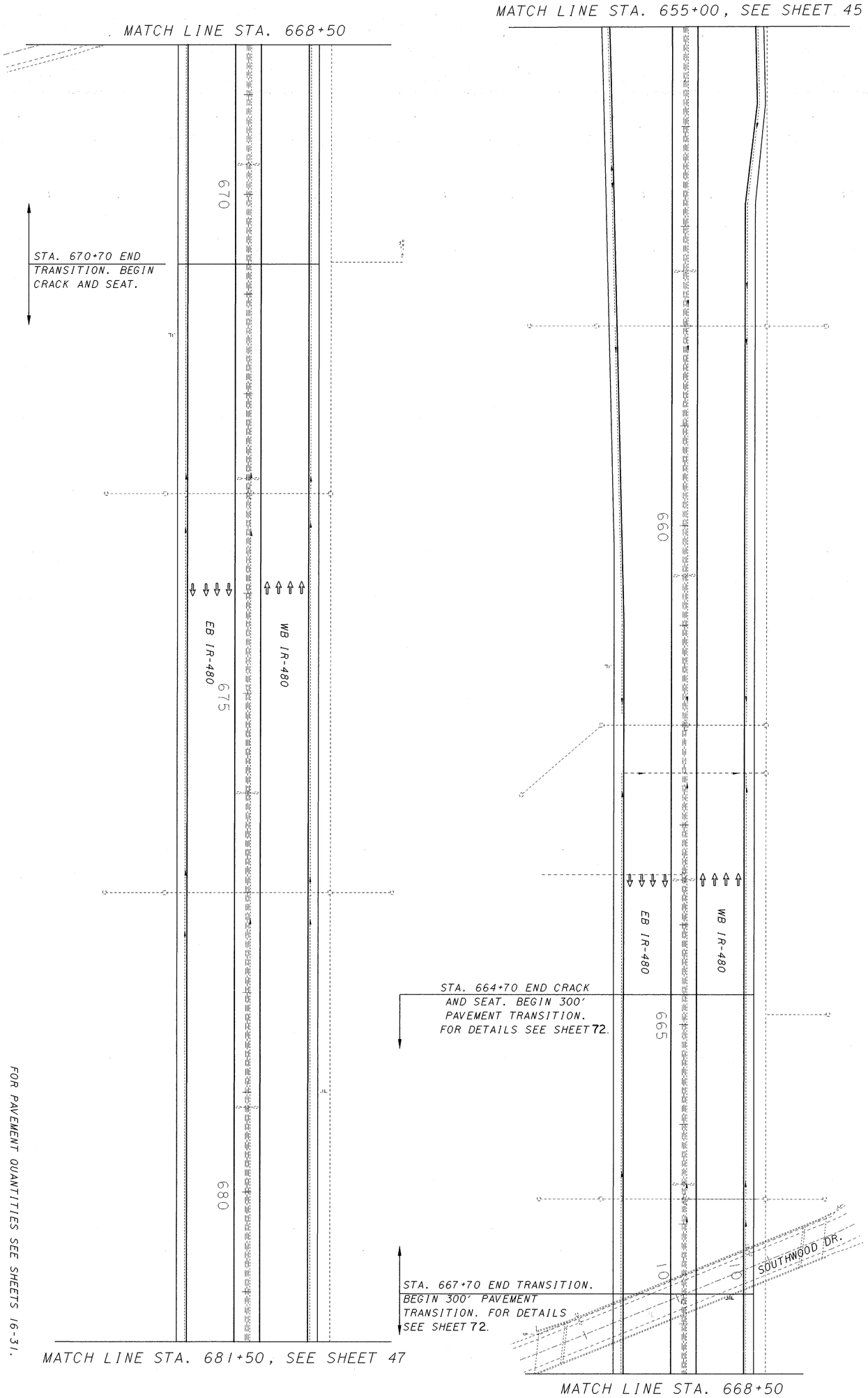
FOR PAVEMENT QUANTITIES SEE SHEETS 16-31.

FOR UNDERDRAIN QUANTITIES SEE SHEET 34.

FOR GUARDRAIL QUANTITIES SEE SHEET 32.

FOR EMBANKMENT LIMITS AND QUANTITIES SEE SHEET 33.

45/134	CUYAHOGA COUNTY CUY-480-10.38	PLAN SHEET IR-480 STA.642+00 TO STA. 655+00	CALCULATED KAS / CHECKED ENF	DRAWN KAS / REVISED	0 50 100 SCALE IN FEET



FOR PAVEMENT QUANTITIES SEE SHEETS 16-31.
FOR UNDERDRAIN QUANTITIES SEE SHEET 34.
FOR EMBANKMENT LIMITS AND QUANTITIES SEE SHEET 33.

134 / 46	CUYAHOGA COUNTY CUY-480-10.38	PLAN SHEET IR-480 STA. 655+00 TO STA. 681+50	CALCULATED KAS CHECKED ENF	DRAWN KAS REVISED	0 50 100 SCALE IN FEET

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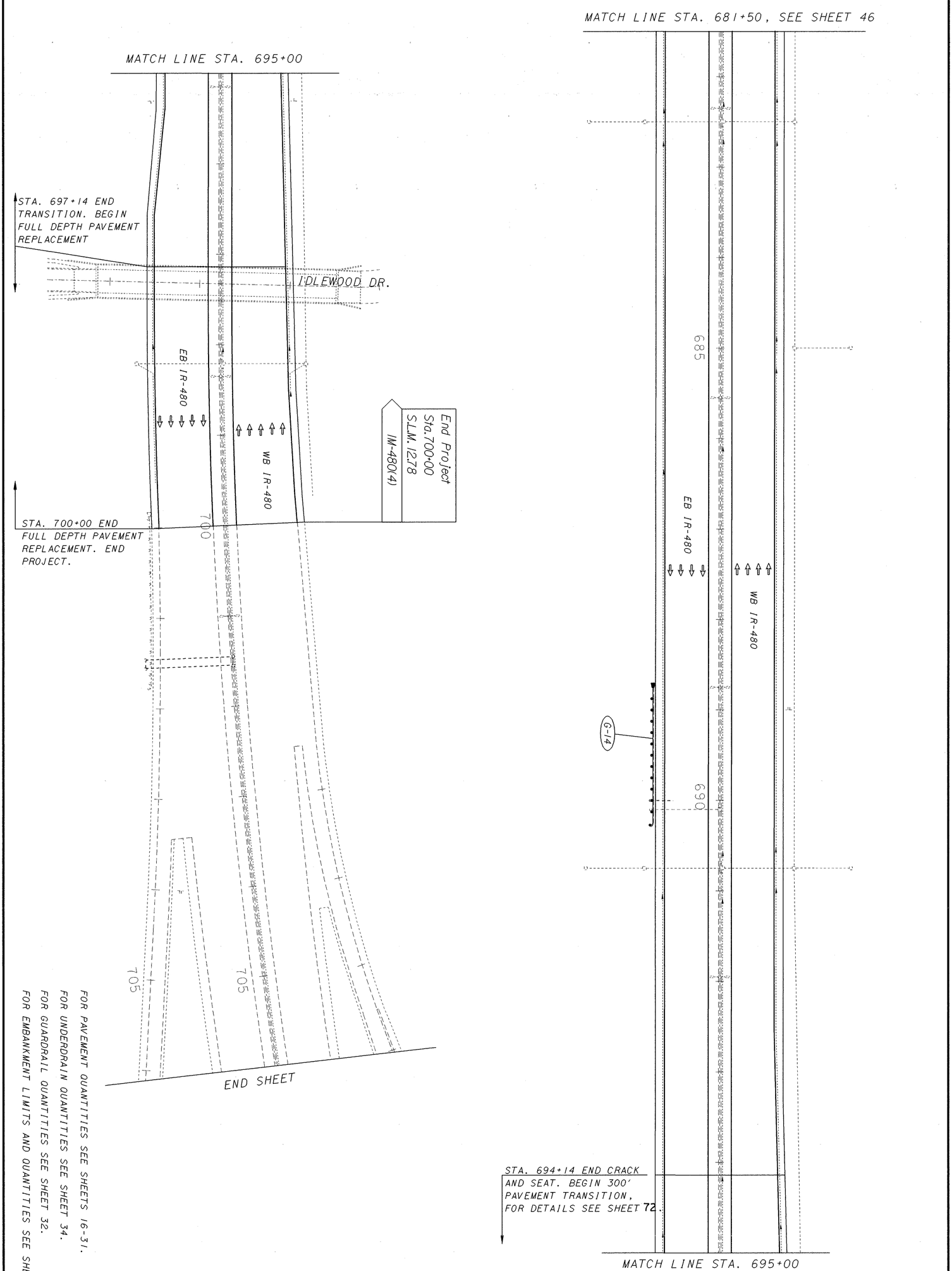
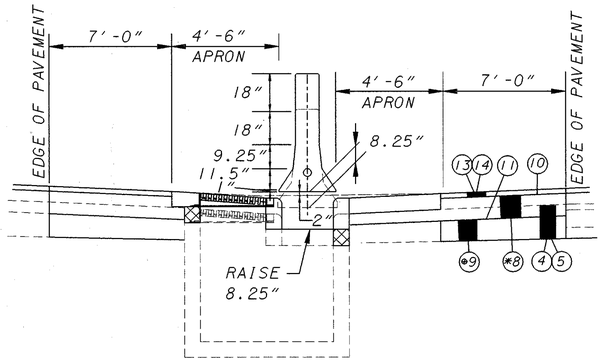
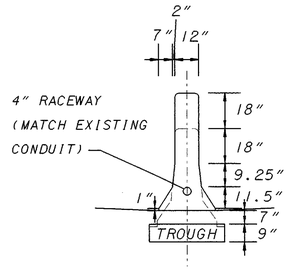


FOR PAVEMENT QUANTITIES SEE SHEETS 16-31.
FOR UNDERDRAIN QUANTITIES SEE SHEET 34.
FOR GUARDRAIL QUANTITIES SEE SHEET 32.
FOR EMBANKMENT LIMITS AND QUANTITIES SEE SHEET 33.

47 / 134	CUYAHOGA COUNTY CUY-480-10.30	PLAN SHEET IR-480 STA. 681+50 TO STA. 700+00	CALCULATED KAS	DRAWN KAS	0 50 100 SCALE IN FEET	N
			CHECKED ENF	REVISED		

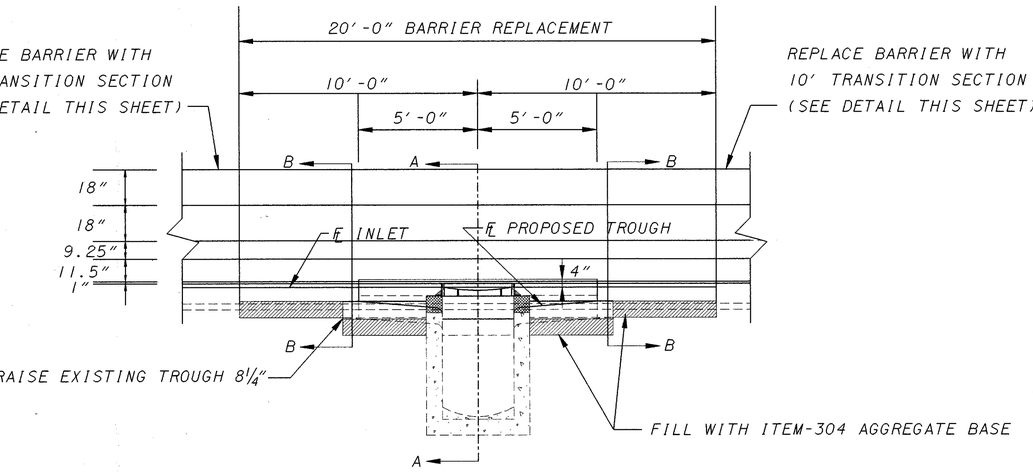


SECTION A-A

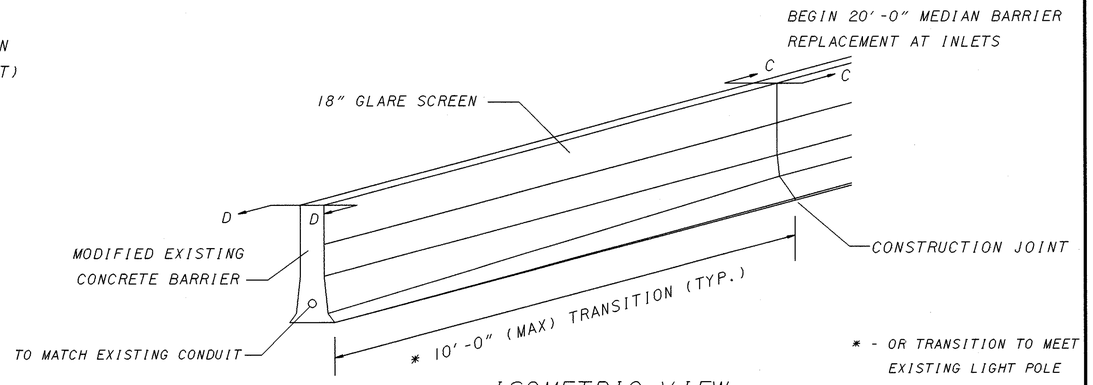


SECTION B-B

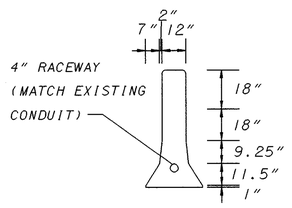
BARRIER MEDIAN ADJUSTMENT AND SHOULDER REPLACEMENT													
				203		302	304	446		407		408	604
REFERENCE NO.	LOCATION	LENGTH	AVERAGE PAVEMENT WIDTH	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	SUBGRADE COMPACTION	BITUMINOUS AGGREGATE BASE	AGGREGATE BASE (AS PER PLAN)	1½″ ASPHALT CONCRETE SURFACE COURSE,	2″ ASPHALT CONCRETE INTERMEDIATE COURSE	TACK COAT	TACK COAT FOR INTERMEDIATE COURSE	BITUMINOUS PRIME COAT	INLET ADJUSTED TO GRADE, AS PER PLAN
		FT.	FT.	C.Y.	S.Y.	C.Y.	C.Y.	C.Y.	C.Y.	GAL.	GAL.	GAL.	EACH
1-1	STA. 610+50	40	11.25	12.4	24	7.2	8	0.9	1.46	5	2.6	10	1
1-2	STA. 619+25	40	11.25	12.4	24	7.2	8	0.9	1.46	5	2.6	10	1
1-3	STA. 623+00	40	11.25	12.4	24	7.2	8	0.9	1.46	5	2.6	10	1
1-4	STA. 628+25	40	11.25	12.4	24	7.2	8	0.9	1.46	5	2.6	10	1
1-5	STA. 635+00	40	11.25	12.4	24	7.2	8	0.9	1.46	5	2.6	10	1
1-6	STA. 658+00	40	11.25	12.4	24	7.2	8	0.9	1.46	5	2.6	10	1
1-7	STA. 662+00	40	11.25	12.4	24	7.2	8	0.9	1.46	5	2.6	10	1
1-8	STA. 673+00	40	11.25	12.4	24	7.2	8	0.9	1.46	5	2.6	10	1
1-9	STA. 682+50	40	11.25	12.4	24	7.2	8	0.9	1.46	5	2.6	10	1
1-10	STA. 690+75	40	11.25	12.4	24	7.2	8	0.9	1.46	5	2.6	10	1
TOTALS				124	240	72	80	9	14.6	50	26	100	10



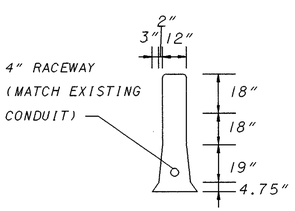
ELEVATION VIEW



ISOMETRIC VIEW



SECTION C-C



SECTION D-D

WORK REQUIRED

1. REMOVE 40′ OF EXISTING CONCRETE BARRIER & EXISTING CONCRETE APRONS AS SHOWN.
2. ADJUST INLET CASTING AND TROUGH TO GRADE.
3. REPLACE 40′ OF CONCRETE TRANSITION AND BARRIER AS SHOWN.
4. STEEL REINFORCING, OTHER DETAILS AND NOTES TO BE AS SHOWN ON STD. DWG. 1-3A & B.
5. PAYMENT FOR ALL MATERIAL, LABOR AND EQUIPMENT NECESSARY TO COMPLETE THE WORK LISTED ON THIS SHEET, (EXCEPT FOR SHOULDER REPLACEMENT ITEMS), SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 604-INLET ADJUSTED TO GRADE, AS PER PLAN.

FOR LEGEND SEE SHEET 5.

NO SCALE

CALCULATED KAS
CHECKED ENF

BARRIER MEDIAN INLET DETAILS

CUYAHOGA COUNTY
CUY-480-10.38

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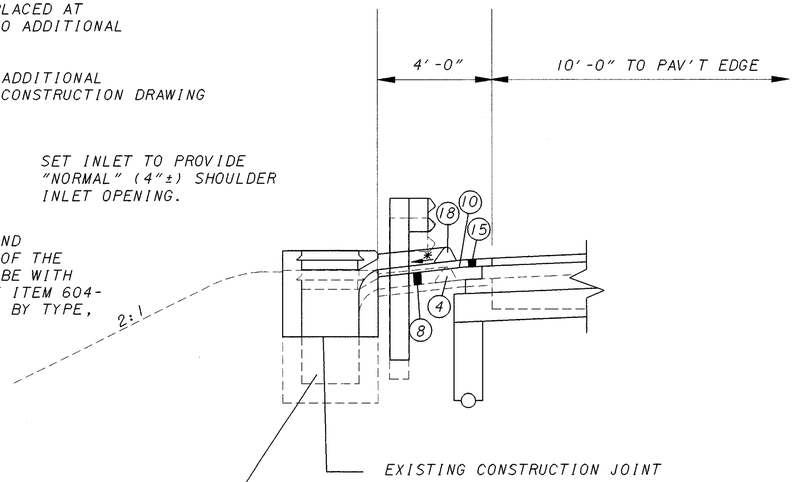
NOTES: IF NO EXISTING CONSTRUCTION JOINT, CONTRACTOR MAY MAKE A CLEAN CUT BELOW THE TROUGH AS NECESSARY.

INLET BASIN MAY BE REPLACED AT CONTRACTOR'S OPTION. NO ADDITIONAL PAYMENT SHALL BE MADE.

FOR REINFORCEMENT AND ADDITIONAL DETAILS, SEE STANDARD CONSTRUCTION DRAWING I-2A.



ITEM 604-PAVED SHOULDER INLET, BY TYPE, AS PER PLAN
NO SCALE

PAVED SHOULDER INLET REPLACEMENT TABLE

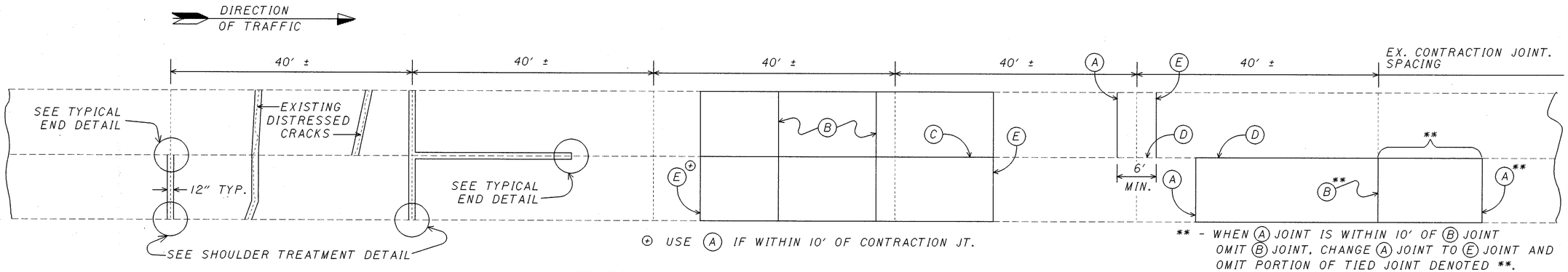
STATION	REF. NO.	SHEET NO.	604 PAVED SHOULDER INLET, BY TYPE, AS PER PLAN			
			2-A-6	2-A-8	2-A-10	2-A-12
612+00 (LT.)	I-11			1		
613+00 (LT.)	I-12					1
TOTAL CARRIED TO GENERAL SUMMARY				1		1

FOR LEGEND SEE SHEET 5.

DRAWN KAS | REVISED
CALCULATED KAS | CHECKED ENF

MISCELLANEOUS DETAILS

CUYAHOGA COUNTY
CUY-480-10.38

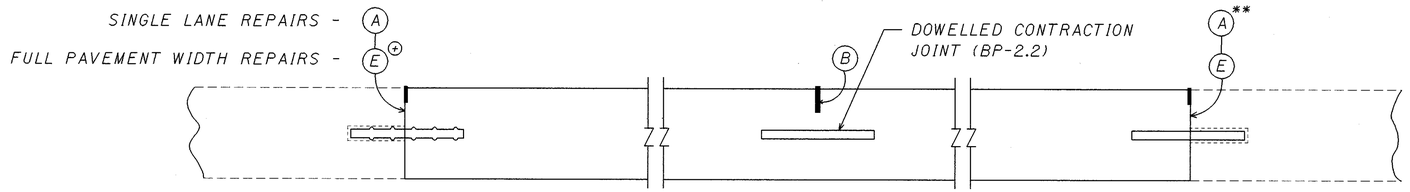


⊕ USE (A) IF WITHIN 10' OF CONTRACTION JT.

** - WHEN (A) JOINT IS WITHIN 10' OF (B) JOINT OMIT (B) JOINT, CHANGE (A) JOINT TO (E) JOINT AND OMIT PORTION OF TIED JOINT DENOTED **.

TYPICAL FULL PAVEMENT WIDTH REPLACEMENT

TYPICAL ONE LANE REPLACEMENT



ITEM 255 - FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT

SEE GENERAL NOTES ON SHEET 12 FOR ADDITIONAL INFORMATION.

ESTIMATED QUANTITIES *		
ITEM 255	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C AS PER PLAN A	800 SQ.YDS.
ITEM 255	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C AS PER PLAN B	800SQ.YDS.
ITEM 255	FULL DEPTH PAVEMENT SAWING	3200 LIN.FT.
ITEM 203	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	133 CU.YDS.
ITEM 304	AGGREGATE BASE, AS PER PLAN	133 CU.YDS.

LEGEND

(A) TYPE T TIED REPAIR JOINT, AS PER BP-2.5

(B) SAWED AND DOWELED CONTRACTION JOINT AS PER BP-2.2 MAX. SPACING 20' C/C FOR FULL PAVEMENT WIDTH LANE REPAIRS

(C) LONGITUDINAL BUTT JOINT AS PER BP-2.1

(D) LONGITUDINAL JOINTS AS PER BP-2.1 FOR PATCHES 10' OR GREATER IN LENGTH

(E) TYPE Y DOWELED REPAIR JOINTS, AS PER BP-2.5

* QUANTITY ESTIMATES ARE BASED ON VISUAL INSPECTION. AN ADDITIONAL 25% WAS ADDED TO THE REPAIR AREA TO COMPENSATE FOR ANY ROADWAY DETERIORATION THAT MAY OCCUR BETWEEN THE TIME OF PLAN PREPARATION AND ACTUAL CONSTRUCTION.

VISUAL SURVEY DATE - 01-15-97

EXISTING PORTLAND CEMENT CONCRETE SURFACE AREA = 16618 SQ.YDS.

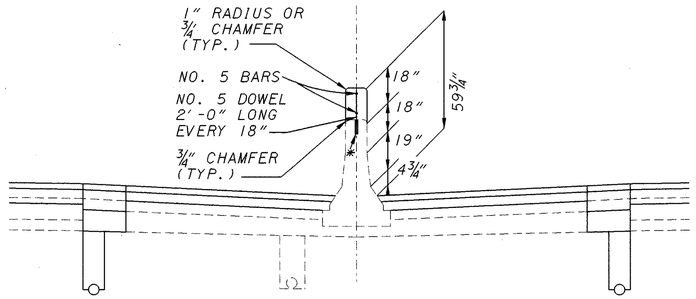
CALCULATED | CHECKED

PAVEMENT REPAIR DETAILS

CUYAHOGA COUNTY
CUY-480-10.38

50
134

ITEM 622 - CONCRETE GLARE SCREEN, AS PER PLAN



PROPOSED GLARE SCREEN

TYPICAL SECTION
STA. 573+50 TO STA. 700+00

* - GROUT PROPOSED REINFORCING BARS INTO HOLES DRILLED INTO EXISTING CONCRETE IN ACCORDANCE WITH 1997 CONSTRUCTION AND MATERIAL SPECIFICATIONS. HOLES SHALL HAVE A MAXIMUM DIAMETER OF 1" AND SHALL BE 8" DEEP. (OPTIONAL)

NOTES:

HORIZONTAL REINFORCING BARS SHALL NOT EXTEND THROUGH THE EXPANSION JOINT. CLEARANCES BETWEEN EXPANSION JOINTS AND VERTICAL REINFORCING BARS SHALL BE A MINIMUM OF 2½" UNLESS OTHERWISE NOTED. ALSO ALL OTHER BARS SHALL MAINTAIN A 2" MINIMUM CLEARANCE FROM THE OUTSIDE EDGE OF BARRIER. VERTICAL BARS SHALL BE PLACED WITH 4' OR LESS SPACING BETWEEN BARS.
REFER TO STANDARD DRAWINGS MC-9.3 AND MC-9.4 FOR FURTHER DETAILS AND ADDITIONAL NOTES.

STATION MARKINGS AS PER MC-9.3 AND MC-9.4 SHALL BE INCLUDED UNDER THIS ITEM OF WORK.

ALL LABOR AND MATERIALS DESCRIBED AND DETAILED ON THE CONCRETE BARRIER SHEETS SHALL BE INCLUDED IN THE OVERALL COST OF ITEM 622 CONCRETE GLARE SCREEN, AS PER PLAN .

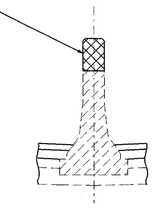
GLARE SCREENS SHALL NOT BE REQUIRED BETWEEN PIERS.

ITEM 622 - CONCRETE GLARE SCREEN, AS PER PLAN
LIMITS:
FROM STA. 573+50 TO STA. 700+00 = 12650 FT.
DEDUCTIONS:
LIGHT POLES AND/OR SIGN SUPPORTS AND/OR PIERS = -186 FT.
BRIDGES = -840 FT.
TOTAL: = 11624 FT.

PREFORMED EXPANSION JOINT FILLER IN THE BARRIER EXPANSION JOINTS SHALL BE ¾" MIN., IN ACCORDANCE WITH 705.03. ¾" P.E.J.F. IS ALSO REQUIRED AROUND EACH MEDIAN INLET .

PROPOSED EXPANSION JOINTS SHALL BE MATCHED FLUSHED WITH THE EXISTING EXPANSION JOINTS.

▨ - EXISTING EXPANSION JOINT



SECTION THRU EXISTING EXPANSION JOINT

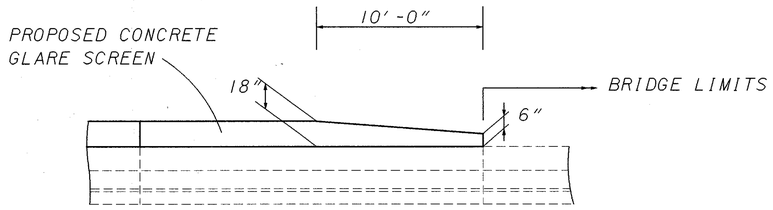
NO SCALE

DRAWN KAS
REVISED

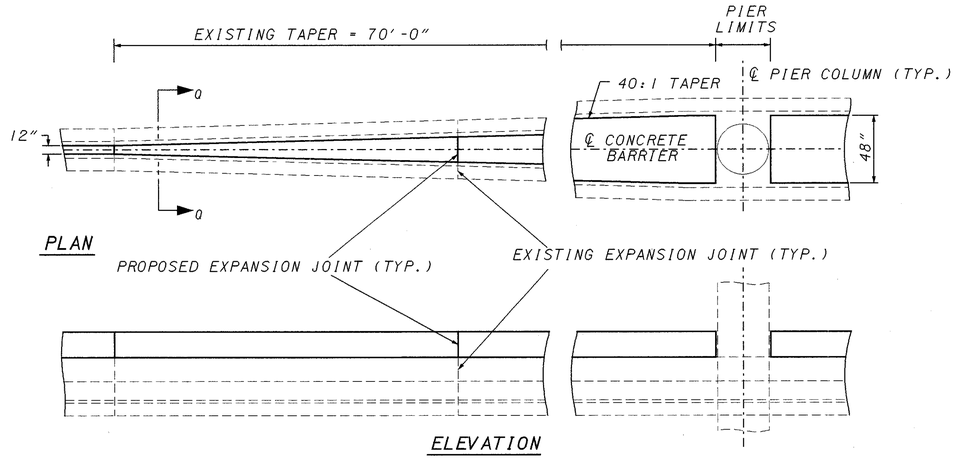
CALCULATED KAS
CHECKED ENF

CONCRETE GLARE SCREEN DETAILS

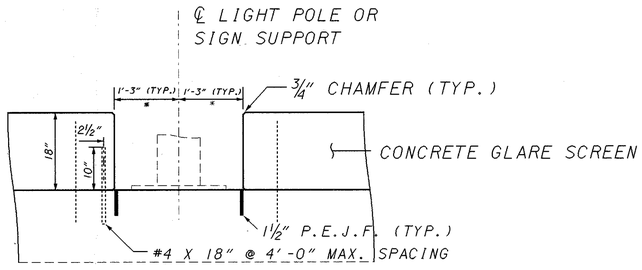
CUYAHOGA COUNTY
CUY-480-10.38



ELEVATION VIEW FOR TREATMENT AT STRUCTURES



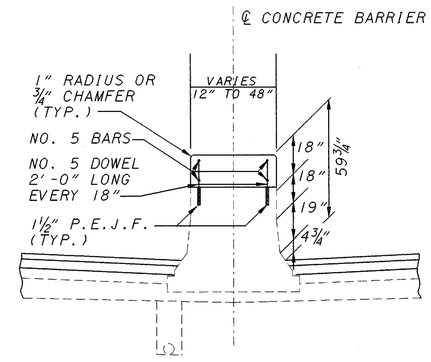
ITEM 622 - CONCRETE GLARE SCREEN, AS PER PLAN



GLARE SCREEN GAP FOR LIGHT POLE OR SIGN SUPPORT

* - OR WIDER TO EXTEND TO SUPPORT FOUNDATION EXPANSION JOINT

NOTE: SWITCH FROM ONE SET OF VERTICAL & HORIZONTAL BARS UP TO TWO SETS OF VERTICAL & HORIZONTAL BARS (ONE ON EACH SIDE OF GLARE SCREEN WHEN THE GLARE SCREEN WIDTH EXCEEDS 2'-0". THIS APPLIES TO ALL GLARE SCREEN WIDTH TRANSITIONS).



SECTION Q-Q
PROPOSED GLARE SCREEN

NO SCALE

DRAWN KAS
REVISED
CALCULATED KAS
CHECKED ENF

CONCRETE GLARE SCREEN DETAILS

CUYAHOGA COUNTY
CUY-480-10.38

52
134

PLOTTED BY: ksarli
PLOTTED FROM: i:\users\lhazapis\pid13000\13000gme.d
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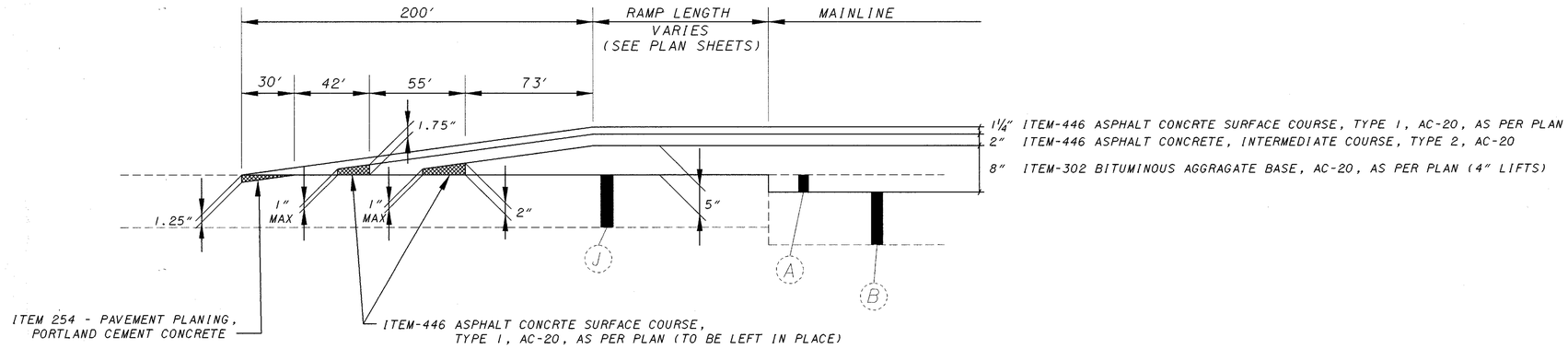
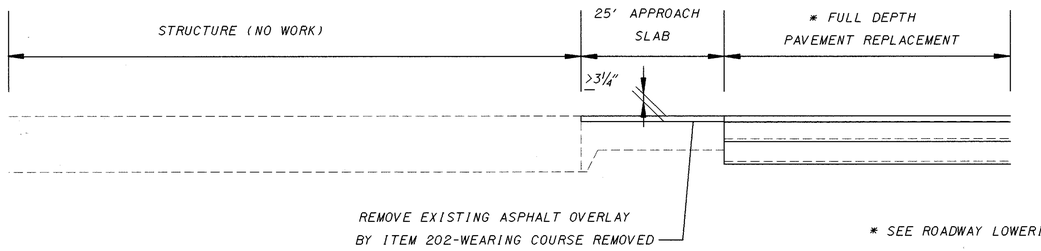
13000GME.DGN



RAMP FEATHER



APPROACH SLAB TREATMENT

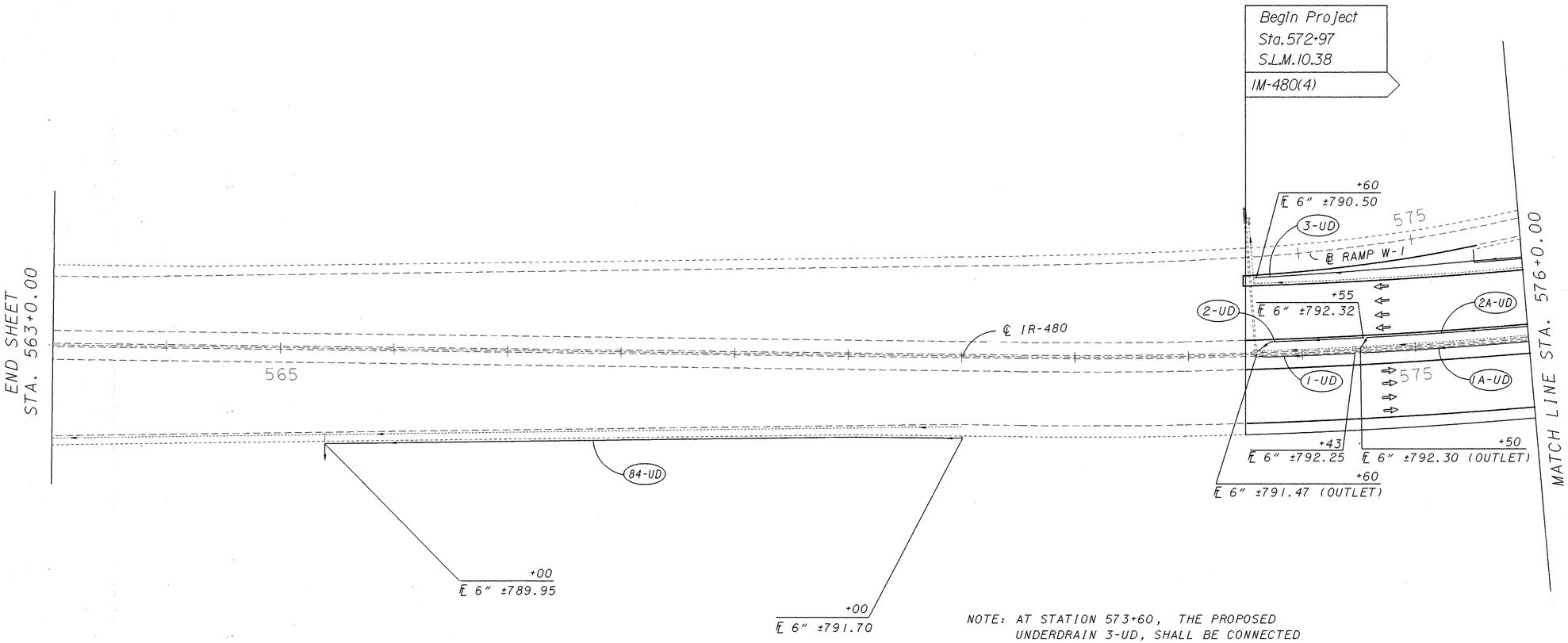
FOR LEGEND SEE SHEET 5.

CALCULATED KAS
CHECKED ENF.

MISCELLANEOUS DETAILS

CUYAHOGA COUNTY
CUY-480-10.38

53
134



NOTE: AT STATION 573+60, THE PROPOSED UNDERDRAIN 3-UD, SHALL BE CONNECTED TO THE EXISTING CONDUIT. SEE THE UNDERDRAIN GENERAL NOTE FOR CONTINGENCY QUANTITIES IF THE EXISTING CONDUIT IS FOUND TO BE PLUGGED OR IN DISREPAIR.

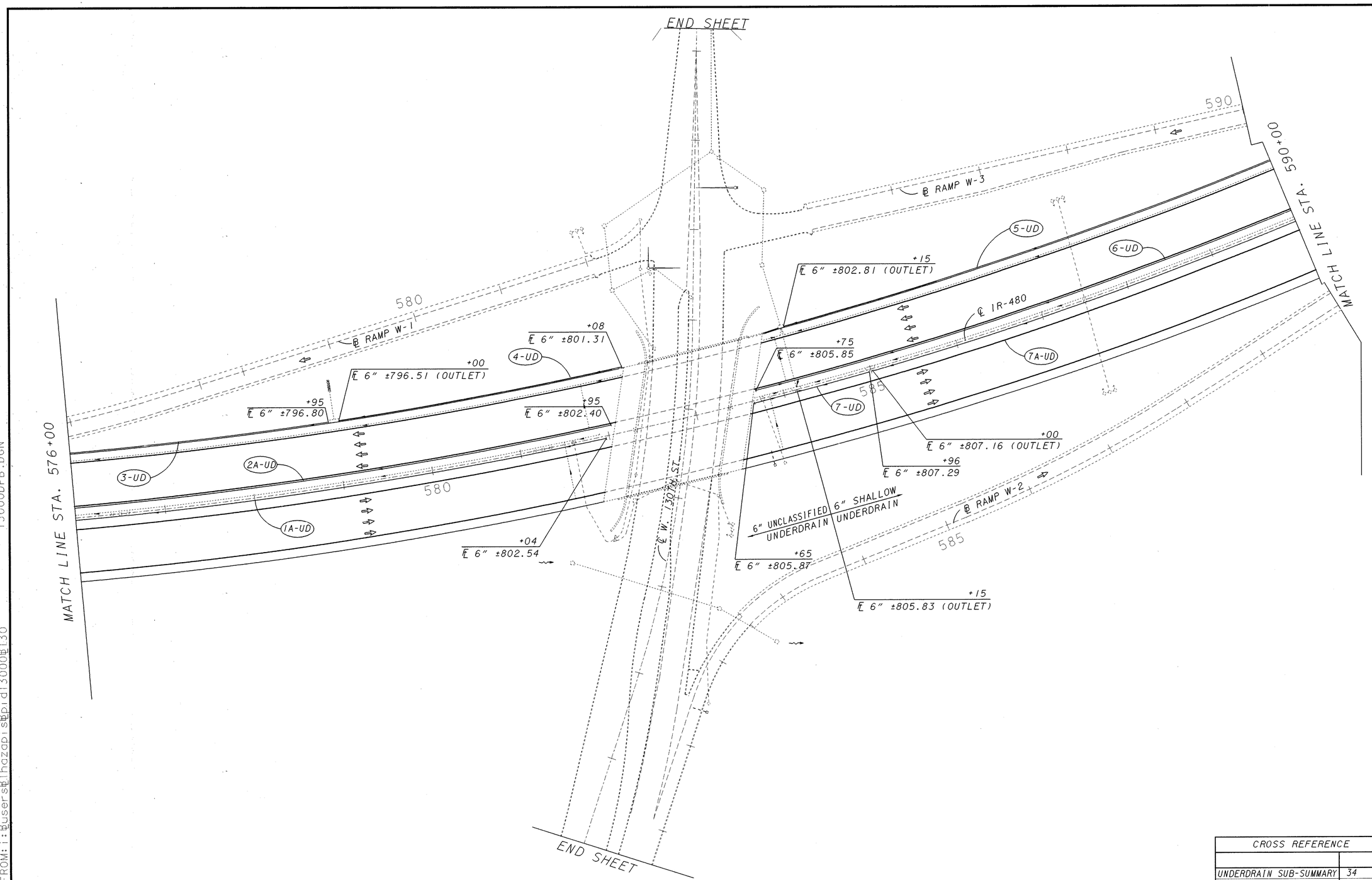
CROSS REFERENCE	
UNDERDRAIN SUB-SUMMARY	34
DRAINAGE DETAILS	62-65

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LGM | DRAWN KAS | REVISED LGM
CHECKED ENF

DRAINAGE PLAN SHEET
IR-480
563+00 TO STA. 576+00
STA. 563+00 TO STA. 576+00

CUYAHOGA COUNTY
CUY-480-10.38



HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED	DRAWN	REVISED
LGM	KAS	LGM
CHECKED		
ENF		

DRAINAGE PLAN SHEET
IR-480
STA. 576+00 TO STA. 590+00

CUYAHOGA COUNTY
CUY-480-10.38

CROSS REFERENCE	
UNDERDRAIN SUB-SUMMARY	34
DRAINAGE DETAILS	62-65

55
134

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PLOTTED FROM:i:\users\lhazapis\pid13000\130
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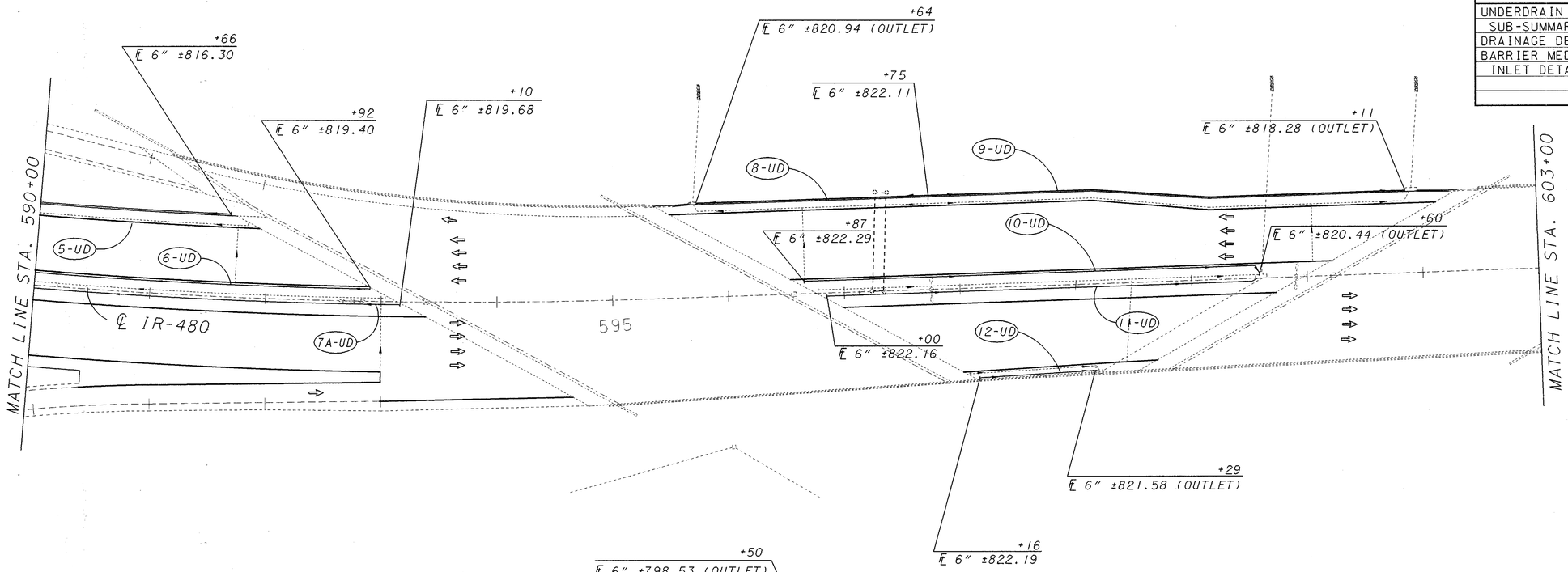
CROSS REFERENCE	
UNDERDRAIN	34
SUB-SUMMARY	
DRAINAGE DETAILS	62-65
BARRIER MEDIAN	48
INLET DETAILS	



N

HORIZONTAL SCALE IN FEET
0 25 50 100

DRAWN	REVISED
KAS	LGM
CALCULATED	CHECKED
LGM	ENF

DRAINAGE PLAN SHEET
IR-480
STA. 590+00 TO STA. 616+50

CUYAHOGA COUNTY
CUY-480-10.38

56
134

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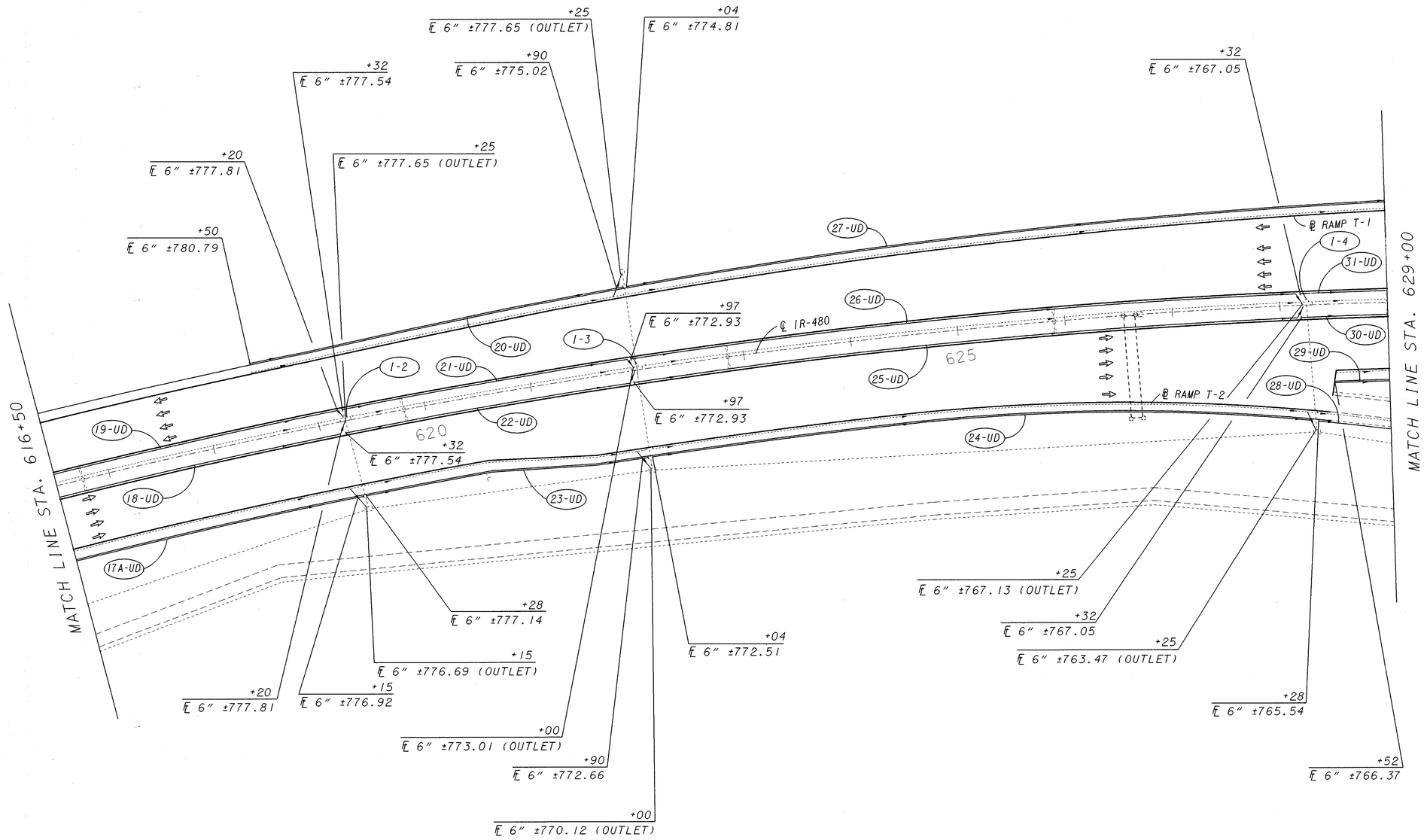

CROSS REFERENCE	
UNDERDRAIN	34
SUB-SUMMARY	
DRAINAGE DETAILS	62-65
BARRIER MEDIAN	48
INLET DETAILS	

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LGM
CHECKED ENF
DRAWN KAS
REVISED LGM

DRAINAGE PLAN SHEET
IR-480
STA. 616+50 TO STA. 629+00

CUYAHOGA COUNTY
CUY-480-10.38

57
134

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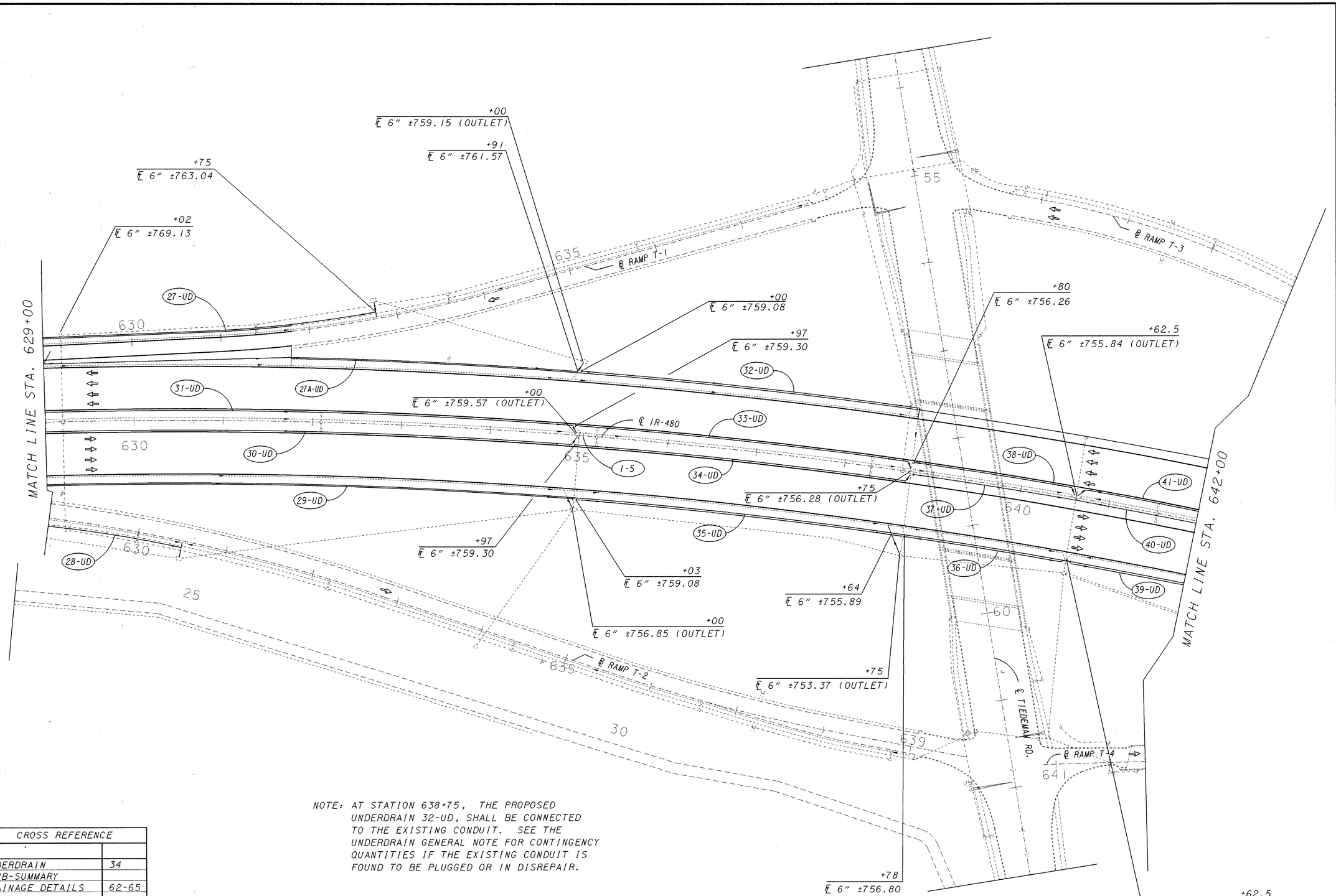

NOTE: AT STATION 638+75, THE PROPOSED UNDERDRAIN 32-UD, SHALL BE CONNECTED TO THE EXISTING CONDUIT. SEE THE UNDERDRAIN GENERAL NOTE FOR CONTINGENCY QUANTITIES IF THE EXISTING CONDUIT IS FOUND TO BE PLUGGED OR IN DISREPAIR.

CROSS REFERENCE	
UNDERDRAIN	34
SUB-SUMMARY	
DRAINAGE DETAILS	62-65

HORIZONTAL SCALE IN FEET
0 25 50 100

DRAWN KAS
REVISED LGM
CALCULATED LGM
CHECKED ENF

DRAINAGE PLAN SHEET
IR-480
STA. 629+00 TO STA. 642+00

CUYAHOGA COUNTY
CUY-480-10.38

58
134

CROSS REFERENCE	
UNDERDRAIN	34
SUB-SUMMARY	
DRAINAGE DETAILS	62-65

HORIZONTAL SCALE IN FEET
0 25 50 100

DRAWN KAS
REVISED LGM
CALCULATED LGM
CHECKED ENF

DRAINAGE PLAN SHEET
IR-480
STA. 624+00 TO STA. 655+00

CUYAHOGA COUNTY
CUY-480-10.38

59
134

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PLOTTED FROM:I:\Users\lhazapi\pid13000\130
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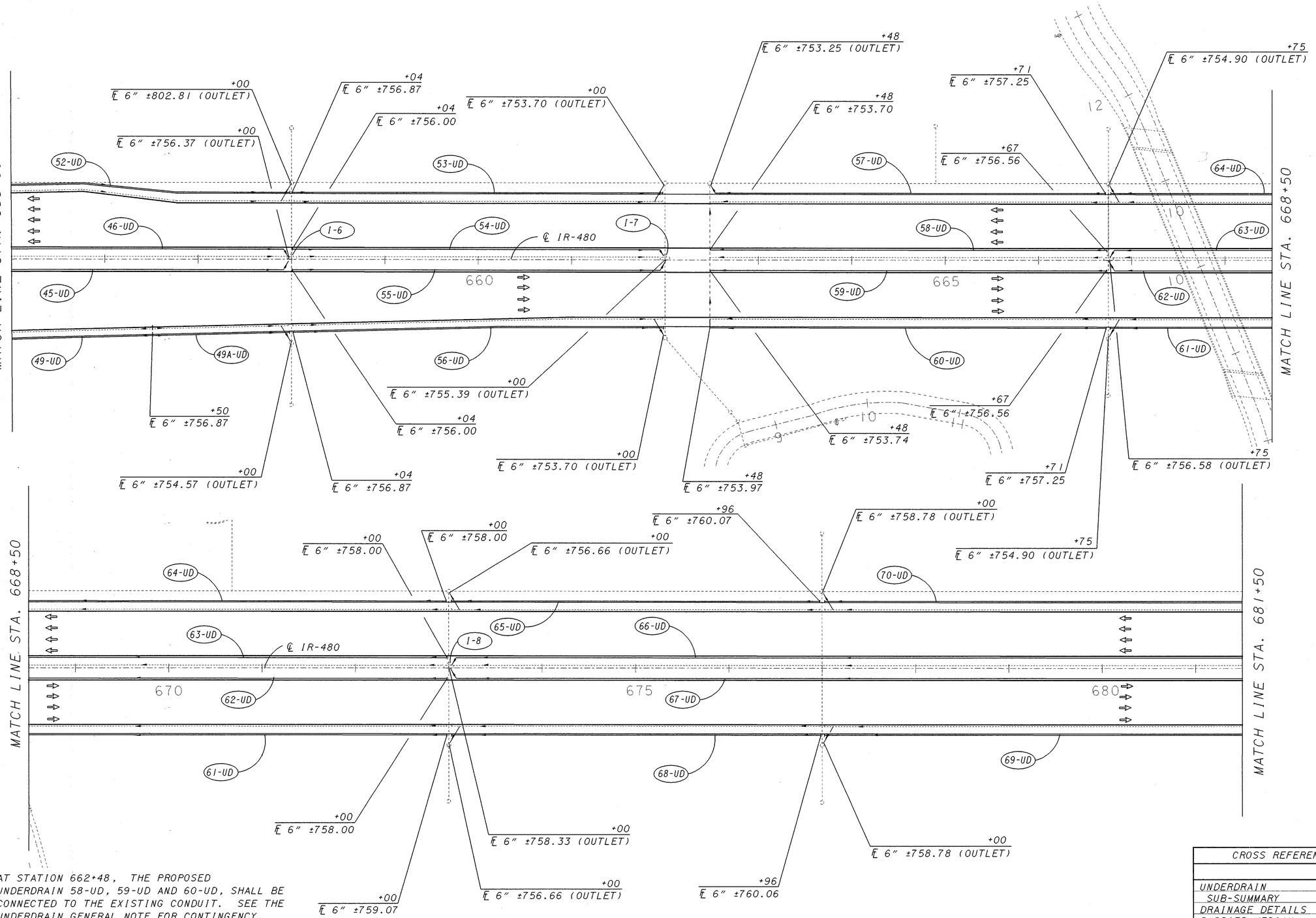


NOTE: AT STATION 662+48, THE PROPOSED UNDERDRAIN 58-UD, 59-UD AND 60-UD, SHALL BE CONNECTED TO THE EXISTING CONDUIT. SEE THE UNDERDRAIN GENERAL NOTE FOR CONTINGENCY QUANTITIES IF THE EXISTING CONDUIT IS FOUND TO BE PLUGGED OR IN DISREPAIR.

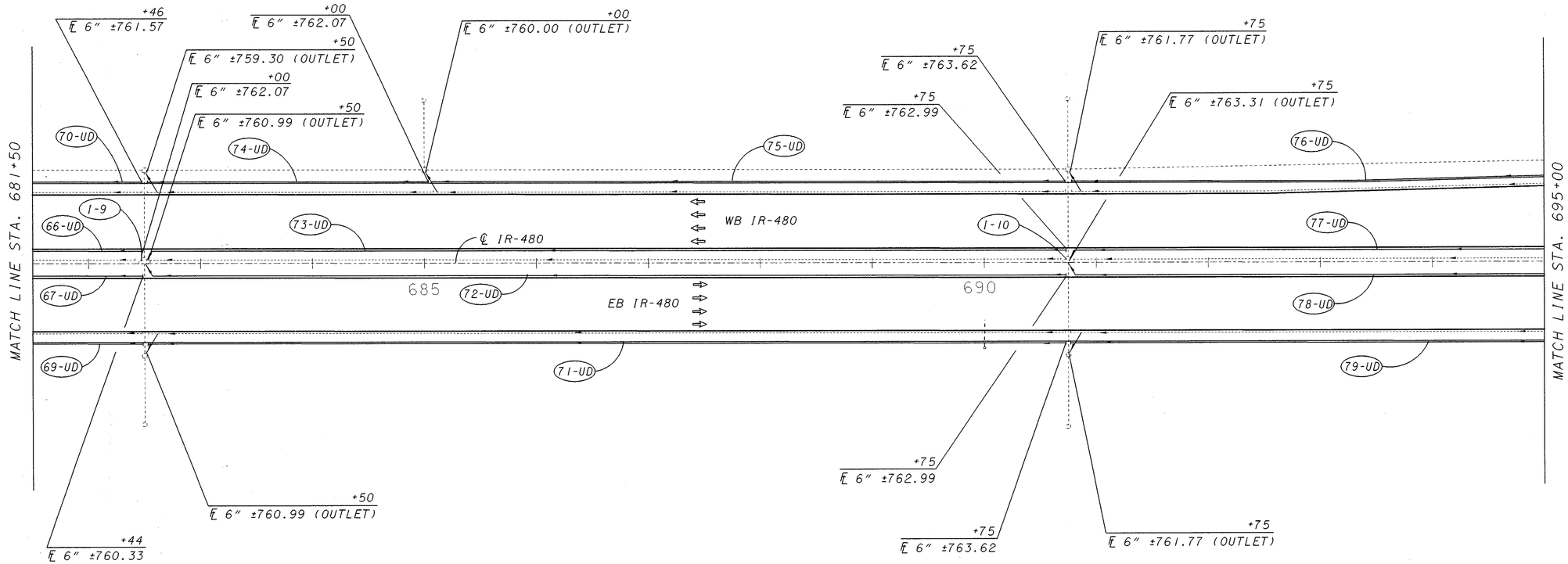
CROSS REFERENCE	
UNDERDRAIN	34
SUB-SUMMARY	
DRAINAGE DETAILS	62-65
BARRIER MEDIAN	48
INLET DETAILS	

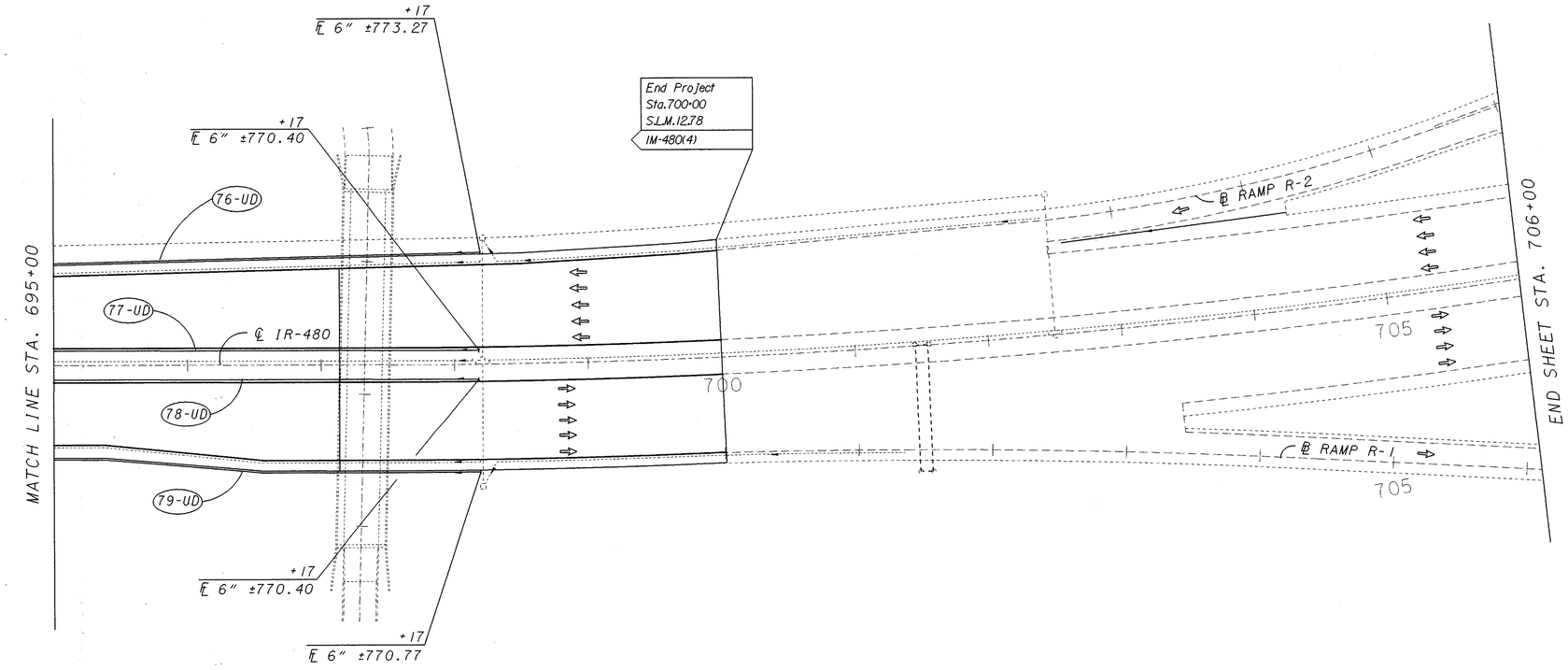
SCALE IN FEET 0 50 100

DRAWN KAS | REVISED LGM
CALCULATED LGM | CHECKED ENF

DRAINAGE PLAN SHEET
IR-480
STA. 655+00 TO STA. 681+50

CUYAHOGA COUNTY
CUY-480-10.38





CROSS REFERENCE	
UNDERDRAIN	34
SUB-SUMMARY	
DRAINAGE DETAILS	62-65
BARRIER MEDIAN	48
INLET DETAILS	

SCALE IN FEET 0 50 100

DRAWN KAS
REVISED LGM
CALCULATED LGM
CHECKED ENF

DRAINAGE PLAN SHEET
IR-480
STA. 681+50 TO STA. 700+82.8

CUYAHOGA COUNTY
CUY-480-10.38

61
134

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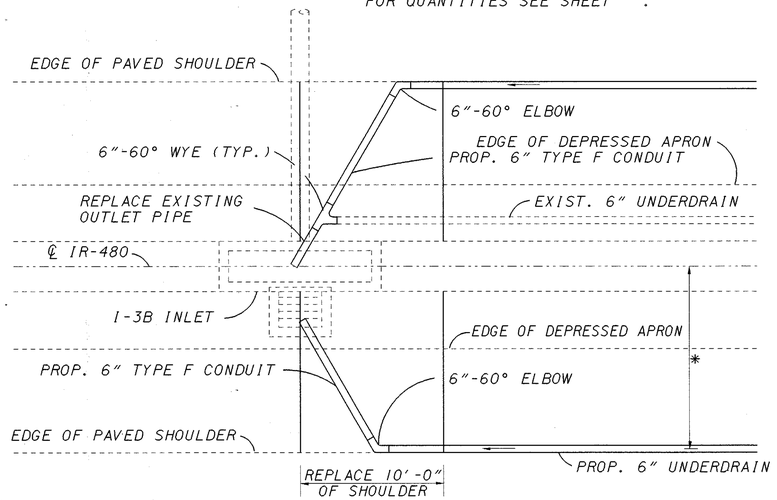
PLOTTED BY: ksarli
PLOTTED FROM: i:\users\lhazeas\pid13000\13000dpj.dgn
13000DPJ.DGN
i:\users\lhazeas\pid13000\13000dpj.id

* SEE TYPICAL SECTION FOR OFFSET. IF OFFSET IS 2'-7" FROM CENTERLINE IR-480 THEN OMIT 6"-60° ELBOW ON THE GRATE SIDE OF THE INLET.

NOTE:
REPLACE 10' OF SHOULDER AT MEDIAN INLET LOCATIONS.

FOR QUANTITIES SEE SHEET .

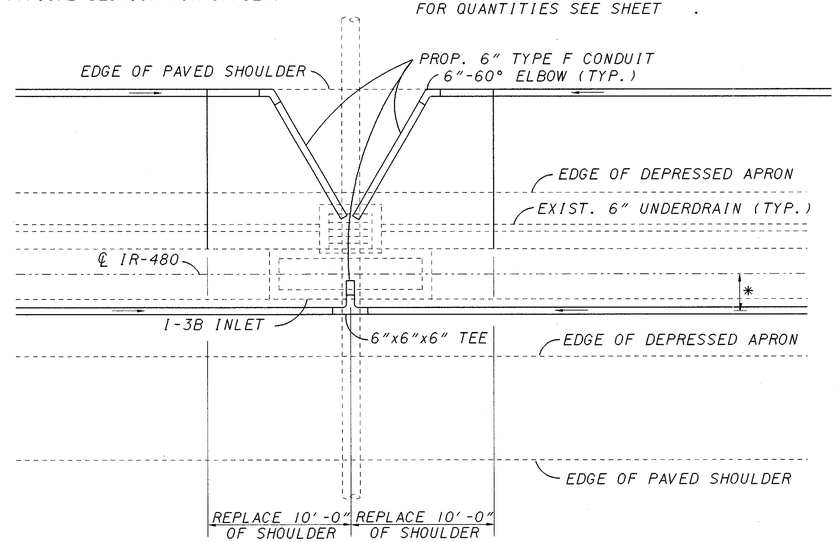


UNDERDRAIN OUTLET DETAIL "A1"

* SEE TYPICAL SECTION FOR OFFSET.

NOTE:
REPLACE 10' OF SHOULDER AT MEDIAN INLET LOCATIONS.

FOR QUANTITIES SEE SHEET .

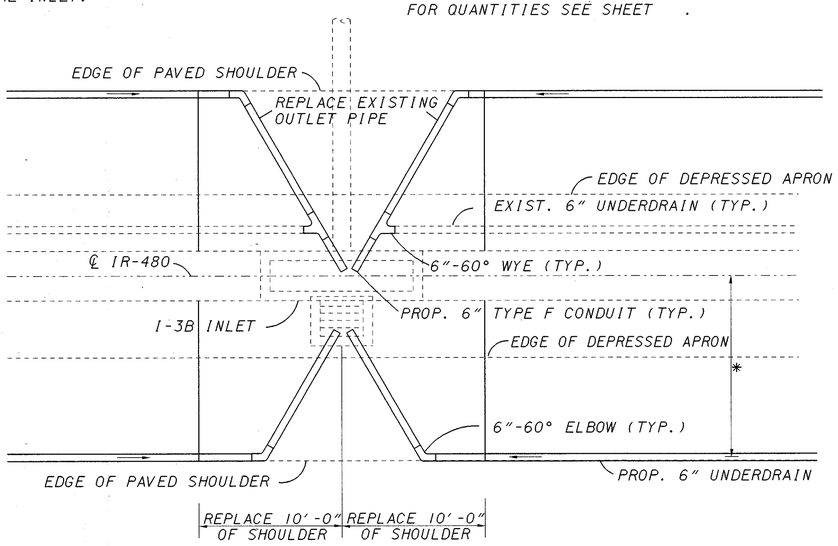


UNDERDRAIN OUTLET DETAIL "A3"

* SEE TYPICAL SECTION FOR OFFSET. IF OFFSET IS 2'-7" FROM CENTERLINE IR-480 THEN OMIT 6"-60° ELBOW ON THE GRATE SIDE OF THE INLET.

NOTE:
REPLACE 10' OF SHOULDER AT MEDIAN INLET LOCATIONS.

FOR QUANTITIES SEE SHEET .

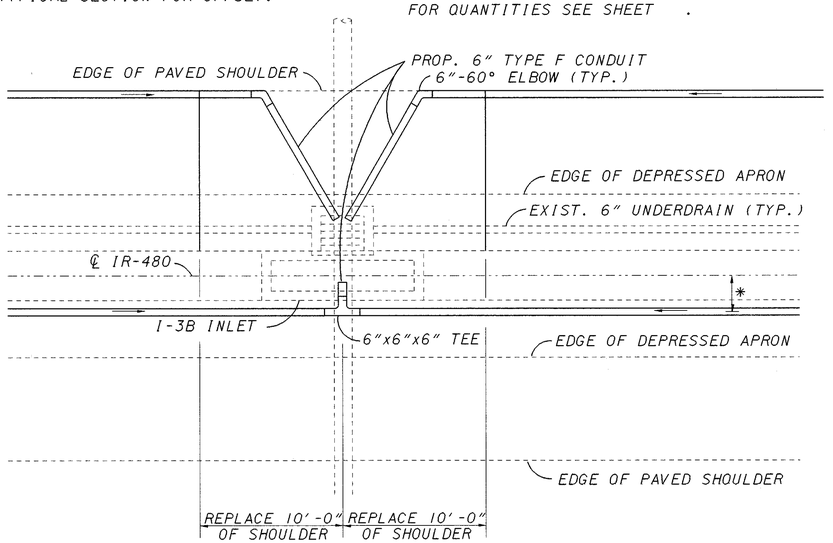


UNDERDRAIN OUTLET DETAIL "A2"

* SEE TYPICAL SECTION FOR OFFSET.

NOTE:
REPLACE 10' OF SHOULDER AT MEDIAN INLET LOCATIONS.

FOR QUANTITIES SEE SHEET .



UNDERDRAIN OUTLET DETAIL "A4"

SCALE IN FEET
0 50 100

CALCULATED	DRAWN	REVISED
LGM	KAS	LGM
CHECKED		
ENF		

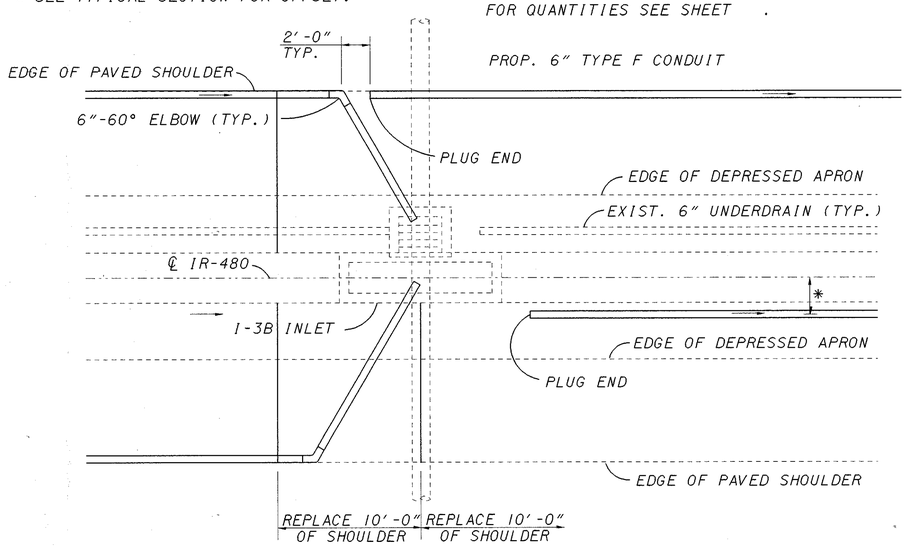
DRAINAGE DETAIL SHEET
IR-480

CUYAHOGA COUNTY
CUY-480-10.38

NOTE:
REPLACE 10' OF SHOULDER AT MEDIAN INLET LOCATIONS.

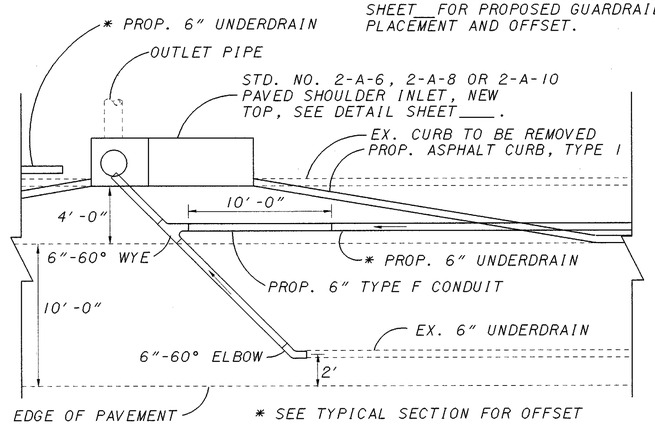
FOR QUANTITIES SEE SHEET .

* SEE TYPICAL SECTION FOR OFFSET.



UNDERDRAIN OUTLET DETAIL "A4"

SEE PAVED SHOULDER INLET DETAIL SHEET__ FOR PROPOSED GUARDRAIL PLACEMENT AND OFFSET.

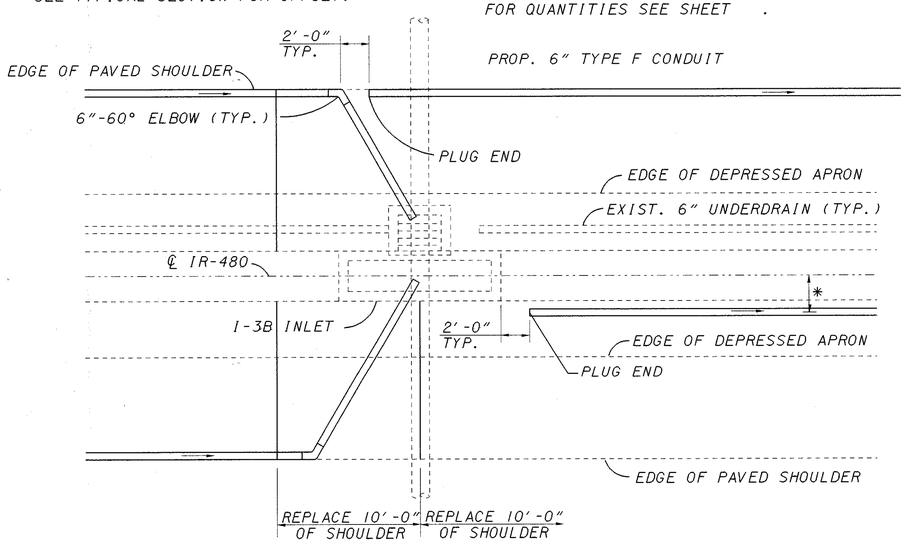


UNDERDRAIN OUTLET DETAIL "B"

NOTE:
REPLACE 10' OF SHOULDER AT MEDIAN INLET LOCATIONS.

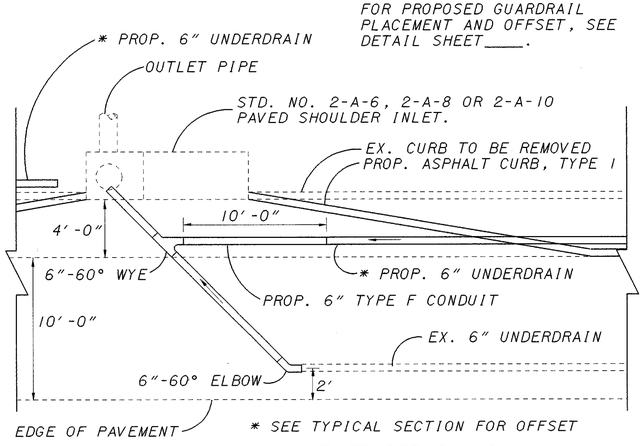
FOR QUANTITIES SEE SHEET .

* SEE TYPICAL SECTION FOR OFFSET.



UNDERDRAIN OUTLET DETAIL "A5"

FOR PROPOSED GUARDRAIL PLACEMENT AND OFFSET, SEE DETAIL SHEET____.



UNDERDRAIN OUTLET DETAIL "C"

SCALE IN FEET 0 50 100

DRAWN KAS REVISED LGM

CALCULATED LGM CHECKED ENF

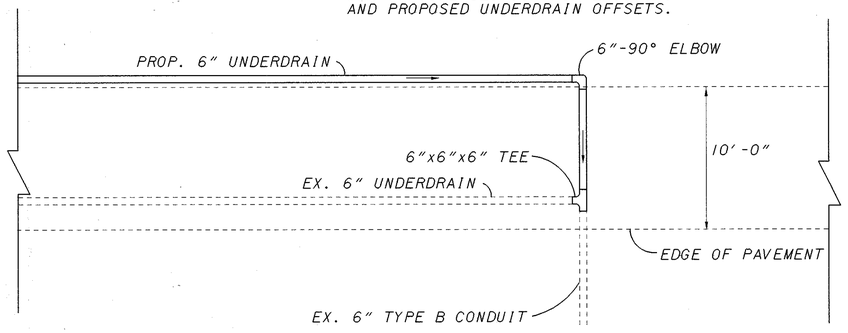
DRAINAGE DETAIL SHEET IR-480

CUYAHOGA COUNTY CUY-480-10.38

63 134

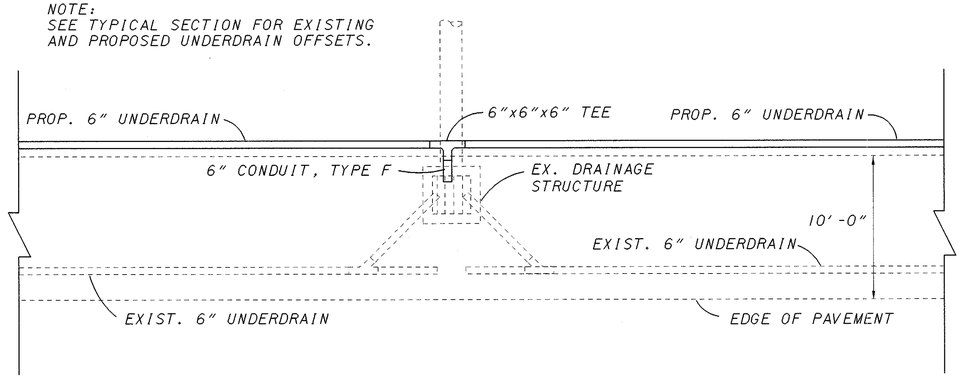
PLOTTED BY: ksarli
PLOTTED FROM: i:\users\lhazapis\pid13000\13000dda.d
13000DDA.DGN
PLOT SUBMITTED: 11-APR-1997 16:12

NOTE:
SEE TYPICAL SECTION FOR EXISTING
AND PROPOSED UNDERDRAIN OFFSETS.

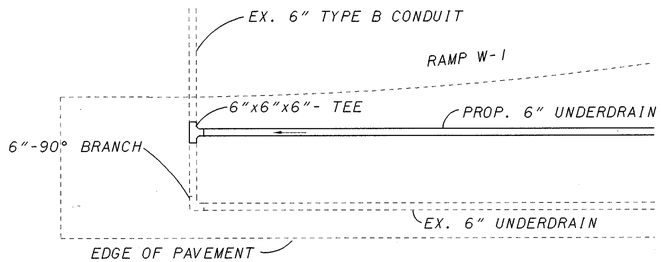


UNDERDRAIN CONNECTION AT STA. 638+75, STA. 662+48, STA. 708+00

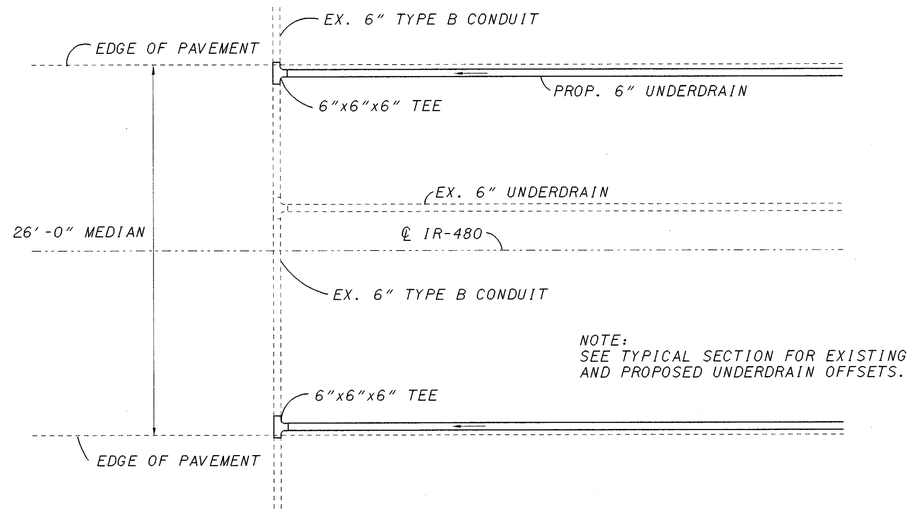
NOTE:
SEE TYPICAL SECTION FOR EXISTING
AND PROPOSED UNDERDRAIN OFFSETS.



UNDERDRAIN OUTLET DETAIL "H"



UNDERDRAIN CONNECTION AT STA. 573+60, 702+60, 703+45



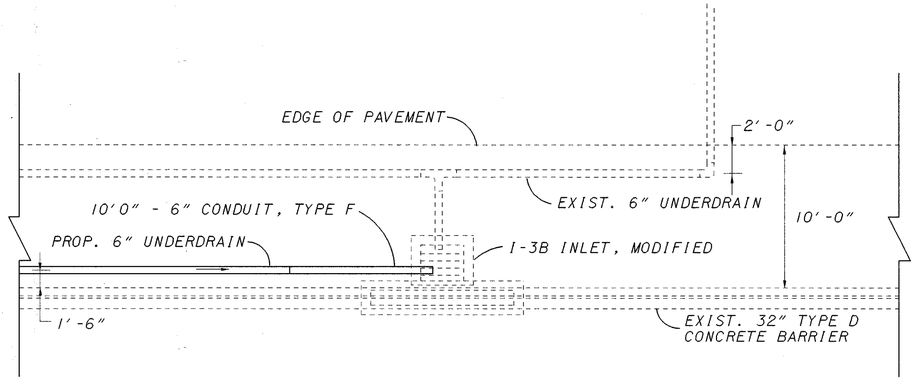
UNDERDRAIN CONNECTION AT STA. 662+48

SCALE IN FEET
0 50 100

DRAWN KAS
REVISED LGM
CALCULATED LGM
CHECKED ENF

DRAINAGE DETAIL SHEET
IR-480

CUYAHOGA COUNTY
CUY-480-10.38

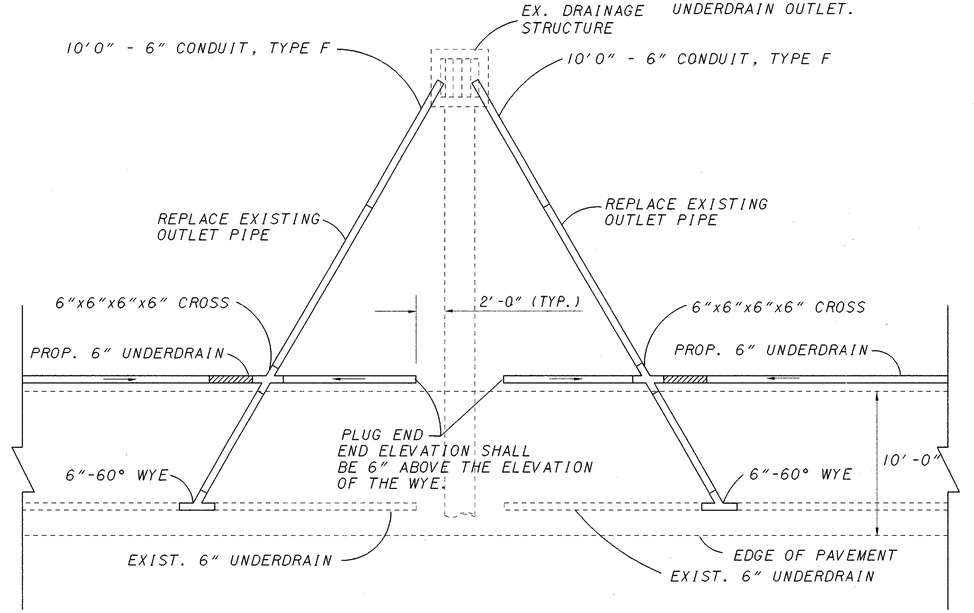


UNDERDRAIN OUTLET DETAIL "D"
(STA. 599+29 E.B. IR-480 RT.)

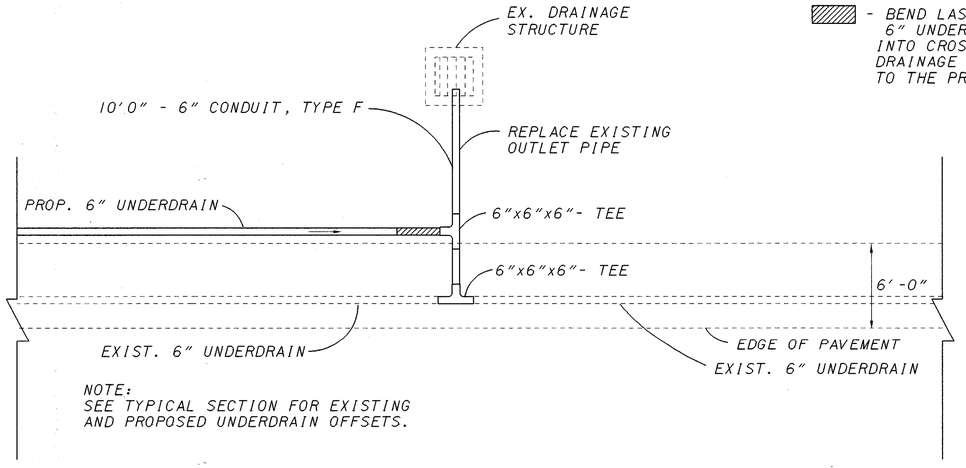
NOTE:

1) SEE TYPICAL SECTION FOR PROPOSED UNDERDRAIN OFFSET.

2) TWO UNDERDRAIN OUTLETS IN A SAG CONDITION. FOR A NON-SAG CONDITION THERE WILL ONLY BE ONE UNDERDRAIN OUTLET.



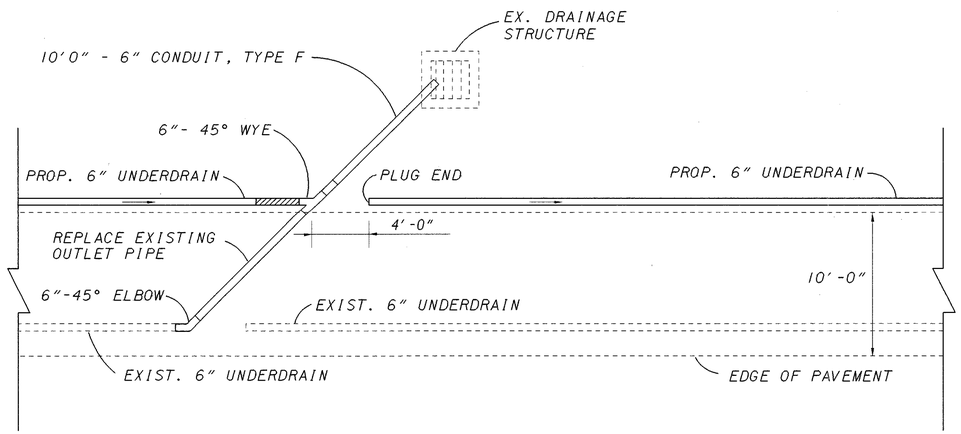
UNDERDRAIN OUTLET DETAIL "E"



▨ - BEND LAST 3 FEET OF PROPOSED 6" UNDERDRAIN TO MAKE CONNECTION INTO CROSS AND TO ENSURE POSITIVE DRAINAGE FROM THE EXISTING UNDERDRAIN TO THE PROPOSED UNDERDRAIN.

NOTE:
SEE TYPICAL SECTION FOR EXISTING AND PROPOSED UNDERDRAIN OFFSETS.

UNDERDRAIN OUTLET DETAIL "F"



UNDERDRAIN OUTLET DETAIL "G"

SCALE IN FEET 0 50 100

DRAWN	REVISED
KAS	LGM
CALCULATED	CHECKED
LGM	KAS

DRAINAGE DETAIL SHEET
IR-480

CUYAHOGA COUNTY
CUY-480-10.38

CALCULATED DRL
CHECKED ENF

MAINTAINING VEHICULAR TRAFFIC

GENERAL PROVISIONS

1. NO ESTABLISHMENT OF LANE RESTRICTIONS SHALL OCCUR WITHOUT LAW ENFORCEMENT PERSONNEL AT EACH LOCATION TO DIRECT TRAFFIC.

2. 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 IN WRITING TWO (2) WEEKS IN ADVANCE OF HIS DETAILED PLANS.

3. TRAFFIC CONTROL DEVICES SHALL BE SET UP PRIOR TO THE START OF CONSTRUCTION, AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SUCH 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 THE STAGE IN PROGRESS. ALL SIGNS WITH MESSAGES WHICH DO NOT APPLY DURING A CERTAIN PERIOD SHALL BE COMPLETELY COVERED OR SET ASIDE OUT OF THE VIEW OF TRAFFIC.

4. THE FINAL ROADWAY PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS SHALL BE ACCOMPLISHED AS FOLLOWS:

   THE CONTRACTOR SHALL PROVIDE TWO (2) TRAILING VEHICLES AS PER MT-99.20 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 USEABLE SHOULDER IS AVAILABLE. 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.

5. ALL TRAFFIC MAINTENANCE SHALL BE IN ACCORDANCE WITH THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".

6. ALL LABOR, MATERIALS, EQUIPMENT AND ANY INCIDENTALS "REQUIRED TO COMPLETE THE WORK AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614-MAINTAINING TRAFFIC, UNLESS MENTIONED OTHERWISE IN THE PLANS.

ITEM 614 - MAINTAINING TRAFFIC

GENERALLY THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS AS TO MAKE THE PROPOSED REPAIR WITH A MINIMUM OF HAZARD, DELAY AND INCONVENIENCE TO THE MOTORISTS USING THE HIGHWAY AFFECTED BY THE WORK DONE UNDER THIS CONTRACT: FURTHERMORE, IN ADDITION TO THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, THE FOLLOWING SPECIFIC PROVISIONS ARE MANDATORY.

I. NOTIFICATION

SINCE FUNCTIONAL TRAFFIC CONTROL IS A MAJOR CONCERN ON THIS PROJECT, IT IS ESSENTIAL THAT THE MOTORING PUBLIC BE ADEQUATELY FOREWARNED OF FUTURE LANE CLOSURES AND TRAFFIC CONSTRICTIONS. THEREFORE, THE CONTRACTOR SHALL SUBMIT A WRITTEN SCHEDULE TO THE OHIO DEPARTMENT OF TRANSPORTATION INDICATING THE LOCATIONS AND DATES OF THE LANE CLOSURES AT LEAST 3 DAYS PRIOR TO THE IMPLEMENTATION OF ANY SUCH CLOSURES.

THE CONTRACTOR SHALL ALSO NOTIFY RESPONSIBLE LAW ENFORCEMENT AGENCIES AND THE DISTRICT 12 PUBLIC INFORMATION OFFICE (216-581-2333 X244) AT LEAST 3 DAYS PRIOR TO ANY SCHEDULED DISRUPTION OR CHANGE IN TRAFFIC PATTERNS.

II. NIGHTTIME WORK (7:00 PM TO 6:00 A.M.)

NIGHTTIME 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.

III. RESTRICTIONS

1. ALL CLOSURES SHALL BE AS SHOWN ON THE MAINTENANCE OF TRAFFIC SHEETS.

2. EXIT AND ENTRANCE RAMP LANES SHALL REMAIN OPEN AT ALL TIMES EXCEPT AS NOTED IN THE MAINTENANCE OF TRAFFIC PLANS.

NOTWITHSTANDING THE ABOVE, NO ADDITIONAL TEMPORARY LANE CLOSURES SHALL OCCUR DURING THE PERIOD BEGINNING AT 12:00 NOON ON THE DAY PRECEDING AND CONTINUING UNTIL 12:00 NOON ON THE DAY FOLLOWING LEGAL HOLIDAYS AND HOLIDAY WEEKENDS SUCH AS MEMORIAL DAY, FOURTH OF JULY, AND LABOR DAY. FURTHERMORE, NO ADDITIONAL LANE CLOSURES SHALL BE IMPLEMENTED OR IN PLACE DURING INCREASED TRAFFIC VOLUMES CAUSED BY SPECIAL EVENTS OR WHEN THE ENGINEER DEEMS THE CLIMATOLOGICAL CONDITIONS TOO HAZARDOUS.

IV. MAINTENANCE OF TRAFFIC SYSTEMS

A. WHEN REQUIRED

WHENEVER ANY PART OF THE TRAVELED SURFACE IS BEING WORKED UPON OR IS OTHERWISE NOT SUITABLE FOR SAFE AND CONVENIENT USE BY VEHICLES, TRAFFIC CONTROL DEVICES SUFFICIENT TO PROTECT SUCH AREAS TO ASSURE THE SAFE AND CONVENIENT PASSAGE OF VEHICULAR TRAFFIC SHALL BE INSTALLED AND MAINTAINED. SUCH TRAFFIC CONTROL DEVICES AND THE MANNER IN WHICH THEY ARE USED SHALL BE CONSISTENT WITH THESE PLANS AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, HEREINAFTER REFERRED TO AS THE "MANUAL". THE TRAFFIC CONTROL DEVICE SYSTEM SHALL CONSTITUTE THE MINIMUM PROVISIONS FOR TRAFFIC CONTROL FOR EACH PARTICULAR SITUATION. WHENEVER THE ENGINEER DEEMS IT NECESSARY ESPECIALLY WHERE A GRADE, CURVE, OR MERGE CONDITIONS EXISTS, HE MAY DIRECT THAT ADDITIONAL OR ALTERNATIVE DEVICES BE USED.

B. CONDITIONS

DURING ALL PARTS OF THIS PROJECT, SIGNING, BARRICADES, FLASHING ARROWS, ETC. SHALL BE LOCATED AS INDICATED IN THE MANUAL OR AS SHOWN ON THE MAINTENANCE OF TRAFFIC PLAN SHEETS. THE NUMBER OF LANES AND THE MINIMUM LANE WIDTHS MAINTAINED SHALL BE AS INDICATED ON THESE SHEETS

C. ADVANCE WARNING SIGNS

ALL ADVANCE WARNING SIGNS FOR ANY CONDITION WHICH RESTRICTS TRAFFIC SHALL BE ERECTED BEFORE ANY SUCH RESTRICTION IS PUT INTO EFFECT. ALL SUCH SIGNS SHALL BE COVERED OR REMOVED FROM THE VIEW OF TRAFFIC WHENEVER THEY ARE NOT APPLICABLE.

D. FAILURE TO COMPLY

IF THERE IS ANY FAILURE TO COMPLY WITH PROVISIONS FOR TRAFFIC CONTROL SET OUT IN THESE PLANS AND NOTES, OR WITH THE PROVISIONS OF THE "MANUAL", THE HIGHWAY IN THE VICINITY OF THE WORK AREA SHALL NOT BE CONSIDERED IN A CONDITION FOR THE SAFE AND CONVENIENT USE BY THE TRAVELING PUBLIC. ANY FAILURE TO KEEP THE HIGHWAY, IN THE VICINITY OF THE WORK AREA, IN A CONDITION FOR THE SAFE AND CONVENIENT USE BY THE TRAVELING PUBLIC SHALL BE CONSIDERED A BREACH OF THIS CONTRACT. WORK SHALL BE SUSPENDED UNTIL THE CONTRACTOR COMPLIES WITH THE PROVISIONS OF THE AFOREMENTIONED ITEMS.

V. MAINTENANCE OF TRAFFIC MATERIALS

A. SIGNS

SIGN DIMENSIONS AND SPECIFICATIONS, INCLUDING LETTER SIZES SHALL BE AS PROVIDED IN THE "MANUAL", OR IN 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.

B. SIGN SUPPORTS

SIGN SUPPORTS SHALL BE OF SUFFICIENT SIZE AND HEIGHT AS TO SUPPORT THE SIGNS AT THE APPROPRIATE HEIGHT. SUPPORTS SHALL BE ADEQUATE IN MASS AND STABILITY TO PREVENT THE SIGNS FROM BEING BLOWN OVER BY WIND OR VEHICULAR GENERATED AIR TURBULENCE.

C. FLASHING ARROWS

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 CONSTRUCTION DRAWING TC-35.10 AND THE PROVISIONS SET FORTH IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR ALL INFORMATION REGARDING FURNISHING, MAINTAINING, AND USE OF FLASHING ARROW BARRICADES. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614-MAINTAINING TRAFFIC.

D. DRUMS

DRUMS SHALL BE IN ACCORDANCE WITH PERTINENT SECTIONS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. 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.

E. FLASHERS

FLASHERS SHALL BE 12 VOLT BATTERY-OPERATED MODELS WITH 7 INCH DIAMETER YELLOW LENSES ILLUMINATED BY RAPID INTERMITTENT FLASHERS OF SHORT DURATION AND SHALL BE PLACED ON ALL SIGNS AT ALL TIMES.

F. SMALL BARRICADES

TYPE II BARRICADES MAY BE USED IN PLACE OF DRUMS TO CLOSE LANES WHERE REQUIRED FOR NIGHT-TIME RESURFACING. THESE BARRICADES SHALL BE AT LEAST 36" HIGH AND 12" WIDE. THE PANEL SHALL CONSIST OF ALTERNATING ORANGE AND WHITE REFLECTORIZED 6" WIDE STRIPS. THIS PANEL SHALL BE AT LEAST 12" WIDE AND 36" HIGH. THE BARRICADE SHALL BE SELF-BALLASTING AND SHALL BE OF SUFFICIENT STABILITY SO THAT WIND OR TRAFFIC AIR TURBULENCE WILL NOT UPSET THEM.

VI. PAYMENT

PAYMENT FOR PROVIDING, ERECTING, MAINTAINING AND REMOVING TEMPORARY MAINTENANCE OF TRAFFIC CONTROL DEVICES SHALL BE MADE UNDER THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

MAINTENANCE OF TRAFFIC NOTES

CUYAHOGA COUNTY
CUY-480-10.38

MAINTENANCE OF TRAFFIC

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT AND/OR SHOULDERS.

ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC BETWEEN NOVEMBER 15 AND APRIL 15. NOVEMBER 15 SHALL BE CONSIDERED TO CONSTITUTE AN INTERIM COMPLETION DATE AND LIQUIDATED DAMAGES SHALL BE ASSESSED IN ACCORDANCE WITH 108.07 FOR EACH CALENDAR DAY THAT ALL LANES ARE NOT OPEN AND AVAILABLE TO TRAFFIC.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AS SHOWN IN THE PLANS UNLESS REVISED WITH THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

614, BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC 500 C.Y.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

SEQUENCE OF CONSTRUCTION

THE CONTRACTOR SHALL FOLLOW THE SEQUENCE OF CONSTRUCTION (IN NUMERICAL ORDER) AS DESCRIBED HEREIN.

PHASE IA & B

PAVEMENT REPLACEMENT/SHOULDER WORK/UNDERDRAINS

MAINTAIN 3 LANES OF TRAFFIC ON THE LEFT SHOULDER AND PAVEMENT OF I-480. CLOSE THE RIGHT 2 LANES AND SHOULDER OF I-480.

PERFORM FULL DEPTH REPLACEMENT OPERATIONS, AND TRANSITION WORK, ON THE AREAS SHOWN IN THE MAINTENANCE OF TRAFFIC (MOT) PLANS. INSTALL UNDERDRAINS AND REPLACE THE OUTSIDE SHOULDER. CONTRACTOR SHALL ADJUST 302 LIFT THICKNESS IN CRACKING AND SEATING AREAS TO MEET EXISTING PAVEMENT SURFACE. FULL DEPTH/TRANSITION PAVEMENT WORK SHALL INCLUDE ALL WORK FROM SUB-GRADE UP TO AND INCLUDING THE 446 INTERMEDIATE COURSE.

SEE SHEETS 79-88 FOR DETAILS.

PHASE II

PAVEMENT REPLACEMENT/SHOULDER WORK/UNDERDRAINS

MAINTAIN 3 LANES OF TRAFFIC ON THE RIGHT SHOULDER AND PAVEMENT OF I-480. CLOSE THE LEFT 2 LANES AND SHOULDER OF I-480.

PERFORM FULL DEPTH REPLACEMENT OPERATIONS, AND TRANSITION WORK, ON THE AREAS SHOWN IN THE MAINTENANCE OF TRAFFIC (MOT) PLANS. INSTALL UNDERDRAINS AND REPLACE THE INSIDE SHOULDER. CONTRACTOR SHALL ADJUST SHOULDER 302 LIFT THICKNESS IN CRACKING AND SEATING AREAS TO MEET ADJACENT EXISTING PAVEMENT SURFACES. FULL DEPTH/TRANSITION PAVEMENT WORK SHALL INCLUDE ALL WORK FROM SUB-GRADE UP TO AND INCLUDING THE 446 INTERMEDIATE COURSE. THE FINAL 446 SURFACE COURSE IN THE FULL DEPTH/TRANSITION AREAS SHALL BE PLACED FULL-WIDTH AT THE END OF PHASE II (*). SEE ROADWAY LOWERING DETAILS ON SHEET 72 FOR TRANSITION AREA ASPHALT WORK.

* IF ALL WORK IS TO BE PERFORMED IN ONE (1) CONSTRUCTION SEASON, THE SURFACE COURSE MAY BE PERFORMED IN PHASE VIII.

PHASE II (CONTINUED)

TEMPORARY PAVEMENT MARKINGS (642 PAINT) SHALL BE PLACED IN THEIR FINAL PERMANENT LOCATIONS, AND ALL 4 LANES OF I-480 SHALL BE AVAILABLE TO TRAFFIC AT THE COMPLETION OF THE 446 SURFACE COURSE. IT IS ANTICIPATED THAT THE CONTRACTOR WILL HAVE TO SUSPEND WORK AT THE COMPLETION OF PHASE II BECAUSE OF THE END OF THE CONSTRUCTION SEASON

SEE SHEETS 89-96 FOR DETAILS.

PHASE IIIA & B

CRACKING AND SEATING/4" 302

MAINTAIN 3 LANES OF TRAFFIC ON THE LEFT SHOULDER AND PAVEMENT OF I-480. CLOSE THE RIGHT 2 LANES AND SHOULDER OF I-480.

ONCE PHASE III WORK BEGINS, PHASED CONSTRUCTION SHALL BE COMPLETED THROUGH PHASE VI. PHASE III WORK SHALL NOT BEGIN IF CONSTRUCTION CANNOT BE COMPLETED THROUGH PHASE VI PRIOR TO WINTER.

PERFORM CRACK AND SEAT OPERATIONS IN THE AREAS SHOWN ON THE MOT PLANS. PLACE THE FIRST 4" LIFT OF 302 IN THE AREA OF THE CRACKING AND SEATING OPERATIONS.

SEE SHEETS 97-105 FOR DETAILS.

PHASE IV

CRACKING AND SEATING/4" 302

MAINTAIN 3 LANES OF TRAFFIC ON THE RIGHT SHOULDER AND PAVEMENT OF I-480. CLOSE THE LEFT 2 LANES AND SHOULDER OF I-480. UPON COMPLETION OF THE PHASE IV PAVEMENT WORK, TEMPORARY PAVEMENT MARKINGS (642 PAINT) SHALL BE INSTALLED IN THEIR FINAL PERMANENT LOCATIONS (SEE TRAFFIC CONTROL PLANS).

PERFORM CRACK AND SEAT OPERATIONS IN THE AREAS SHOWN ON THE MOT PLANS. PLACE THE FIRST 4" LIFT OF 302 IN THE AREA OF THE CRACKING AND SEATING OPERATIONS.

SEE SHEETS 106-112 FOR DETAILS.

PHASE V

NIGHTTIME FULL WIDTH PAVING - 4" 302

NIGHTTIME FULL WIDTH PAVING. PLACE 4" LIFT OF 302. SEE ROADWAY LOWERING DETAIL 'B' ON SHEET 72 FOR PAVING DETAILS IN TRANSITION AREAS. THE CONTRACTOR SHALL CHOOSE WORK LENGTHS SUCH THAT FULL WIDTH PAVING CAN BE ACCOMPLISHED EACH NIGHT. NO LONGITUDINAL ELEVATION DIFFERENCE SHALL EXIST WHEN I-480 IS RE-OPENED TO TRAFFIC AT THE END OF EACH WORK NIGHT.

AT THE END OF EACH WORK NIGHT AND PRIOR TO RE-OPENING I-480 TO TRAFFIC, TEMPORARY PAVEMENT MARKINGS (642 PAINT) SHALL BE PLACED AS SHOWN ON SHEET 71. THE 302 LAYER SHALL BE TRANSITIONED FROM 4" TO 2". A RAMP OF 614-BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC SHALL BE USED TO COMPLETE THE TRANSITION TO THE EXISTING PHASE IV PAVEMENT SURFACE. ALL ASPHALT TRANSITIONS SHALL BE PLACED ACCORDING TO THE APPLICABLE STANDARD CONSTRUCTION DRAWING(S). ALL 4 LANES OF I-480 SHALL BE AVAILABLE TO TRAFFIC AS PHASE V WORK IS COMPLETED IN EACH DIRECTION. THE RIGHT SHOULDER SHALL REMAIN CLOSED.

A MINIMUN OF 1 LANE OF TRAFFIC SHALL BE MAINTAINED ON I-480. ALL LANE CLOSURES SHALL BE PLACED DURING PERMITTED TEMPORARY LANE CLOSURE TIMES AS SHOWN ON SHEET 69A. LANE CLOSURES SHALL BE IN ACCORDANCE WITH THE APPLICABLE STANDARD CONSTRUCTION DRAWING(S). CLOSE THE RIGHT SHOULDER USING DRUMS @ 50' C/C SPACING. 25' C/C DRUM SPACING SHALL BE USED IN FRONT OF GUARDRAIL.

PHASE VI

NIGHTTIME FULL WIDTH PAVING - 2" 446

NIGHTTIME FULL WIDTH PAVING. PLACE 2" LIFT OF 446. SEE ROADWAY LOWERING DETAIL 'C' ON SHEET 72 FOR PAVING DETAILS IN TRANSITION AREAS.

THE CONTRACTOR SHALL CHOOSE WORK LENGTHS SUCH THAT FULL WIDTH PAVING CAN BE ACCOMPLISHED EACH NIGHT. NO LONGITUDINAL ELEVATION DIFFERENCE SHALL EXIST WHEN I-480 IS RE-OPENED TO TRAFFIC AT THE END OF EACH WORK NIGHT.

AT THE END OF EACH WORK NIGHT AND PRIOR TO RE-OPENING I-480 TO TRAFFIC, TEMPORARY PAVEMENT MARKINGS (642 PAINT) SHALL BE PLACED AS SHOWN ON SHEET 71. A RAMP OF 614-BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC SHALL BE USED TO TRANSITION FROM THE 2"-446 TO THE EXISTING PHASE V PAVEMENT SURFACE. ALL ASPHALT TRANSITIONS SHALL BE PLACED ACCORDING TO THE APPLICABLE STANDARD CONSTRUCTION DRAWING(S).

A MINIMUM OF 1 LANE OF TRAFFIC SHALL BE MAINTAINED ON I-480. ALL LANE CLOSURES SHALL BE PLACED DURING PERMITTED TEMPORARY LANE CLOSURE TIMES AS SHOWN ON SHEET 69A. MAINTAIN 1 LANE OF TRAFFIC ON I-480. LANE CLOSURES SHALL BE ACCORDING THE APPLICABLE STANDARD CONSTRUCTION DRAWINGS. MAINTAIN THE RIGHT SHOULDER CLOSURE ESTABLISHED IN PHASE V.

PHASE VII

DRAINAGE/GUARDRAIL ADJUSTMENTS

ADJUST THE DRAINAGE STRUCTURES AND GUARDRAIL TO GRADE. REPLACE DESIGNATED MEDIAN INLETS (SEE PLAN SHEETS).

MAINTAIN 3 LANES OF TRAFFIC ON I-480. CLOSE THE LEFT LANE AND SHOULDER. RE-OPEN ALL LANES AND SHOULDERS TO TRAFFIC AFTER ADJUSTMENTS TO GRADE ARE COMPLETE.

PHASE VIII

NIGHTTIME PAVING - 1 1/4" 446

PLACE 1 1/4" 446 WEARING COURSE. PERFORM PAVING OPERATIONS ON ONE DIRECTION OF I-480 AT A TIME. SEE ROADWAY LOWERING DETAIL 'D' ON SHEET 72 FOR PAVING OPERATIONS IN TRANSITION AREAS.

A MINIMUM OF 1 LANE OF TRAFFIC SHALL BE MAINTAINED ON I-480. ALL LANE CLOSURES SHALL BE PLACED DURING PERMITTED LANE CLOSURE TIMES AS SHOWN ON SHEET 69A. LANE CLOSURES SHALL BE IN ACCORDANCE WITH THE APPLICABLE STANDARD CONSTRUCTION DRAWING(S).

CONTRACTOR SHALL CHOOSE WORK LENGTHS SUCH THAT FULL WIDTH PAVING CAN BE ACCOMPLISHED WITHIN 48 HOURS.

CALCULATED JEL
CHECKED ENF

MAINTENANCE OF TRAFFIC NOTES

CUYAHOGA COUNTY
CUY-480-10.38

CLOSURE OF TIEDEMAN ROAD EXIT RAMPS

CERTAIN OPERATIONS (I.E. CRACKING AND SEATING) CALLED FOR IN THESE PLANS MAY REQUIRE THE TEMPORARY CLOSURE OF THE TIEDEMAN ROAD EXIT RAMPS.

WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY CLOSE THE TIEDEMAN ROAD EXIT RAMPS.

THE FOLLOWING RESTRICTIONS SHALL APPLY:
-ONLY ONE EXIT RAMP SHALL BE CLOSED AT ANY ONE TIME.
-TEMPORARY CLOSURES SHALL BE PERMITTED DURING WEEKENDS, 8 PM FRIDAY TO 6 AM MONDAY.

THE CONTRACTOR SHALL PROVIDE THE FOLLOWING WITH A WRITTEN, 7 DAY ADVANCE NOTICE OF PLANNED RAMP CLOSURES:
-ODOT PUBLIC INFORMATION OFFICE.
-CLEVELAND AND BROOKPARK POLICE AND FIRE DEPARTMENTS.

FAILURE TO COMPLY WITH THE TIME LIMITATION WILL RESULT IN THE ASSESSMENT OF LIQUIDATED DAMAGES ACCORDING TO SECTION 108.07 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS. THE CONTRACTOR SHALL SCHEDULE HIS WORK AND INCREASE HIS STAFFING TO INSURE THAT ALL PHASED WORK WILL BE COMPLETED IN THE SHORTEST POSSIBLE TIME.

AT THE DIRECTION OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE USED TO WARN MOTORISTS OF THE IMPENDING RAMP CLOSURE.

ADDITIONAL LANE CLOSURES

WITH THE APPROVAL OF THE ENGINEER, LANE CLOSURES IN ADDITION TO THOSE SHOWN IN THE MOT PLANS ARE PERMITTED. ADDITIONAL LANE CLOSURES SHALL BE ACCORDING TO THE "PERMITTED SHORT TERM LANE CLOSURE TIMES" TABLE SHOWN ON SHEET 69A.

PLACING PORTABLE CONCRETE BARRIER

WHEN PLACING OR REMOVING PCB THE ADJACENT LANE SHALL BE CLOSED WHEN POSSIBLE.

WORK ZONE SHOULDER DROP-OFFS

TRAFFIC WILL NOT BE ALLOWED TO TRAVEL WITHIN 3 FEET OF THE FOLLOWING DROP-OFF CONDITIONS:

DROP-OFFS GREATER THAN 12 INCHES DURING DAYLIGHT
DROP-OFFS GREATER THAN 5 INCHES ALL OTHER TIMES

A WEDGE TREATMENT MAY BE USED TO ELIMINATE THE DROP-OFF CONDITION. THE WEDGE WILL HAVE A 3:1 SLOPE AND BE OF UNYIELDING MATERIAL.

WHEN TRAFFIC MUST TRAVEL ON A SHOULDER THE MATERIAL ON THE OUTSIDE EDGE OF THE SHOULDER SHALL BE BROUGHT UP TO GRADE WITH ITEM 617. 617 MATERIAL SHALL NOT BE USED AS BACKFILL MATERIAL.

THE COST OF PERFORMING THIS WORK SHALL BE INCLUDED FOR PAYMENT IN THE LUMP SUM BID FOR ITEM 614-MAINTAINING TRAFFIC.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER AND CALCIUM CHLORIDE FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

616, WATER . . . . . 10 MGAL
616, CALCIUM CHLORIDE . . . . . 1 TON

302 WINTER RESTRICTIONS

302 ASPHALT SHALL NOT BE EXPOSED TO TRAFFIC DURING THE WINTER. IF IT WILL NOT BE POSSIBLE TO PLACE THE INTERMEDIATE COURSE PRIOR TO WINTER, THE CONTRACTOR SHALL USE 301 IN LIEU OF 302 FOR THE FINAL LIFT PLACED BEFORE WINTER IN THE SHOULDER AREA ONLY. 301 SHALL NOT BE SUBSTITUTED FOR 302 IN PHASES III AND IV.

THIS MATERIAL CHANGE SHALL NOT RESULT IN A CLAIM BY THE CONTRACTOR FOR ADDITIONAL FUNDS FROM THE STATE. PAYMENT FOR ANY 301 SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR ASPHALT.

ITEM SPECIAL - MISC.: RUMBLE STRIPS

RUMBLE STRIPS SHALL BE PLACED TO WARN MOTORIST OF THE CONSTRUCTION ZONE AND TO REDUCE SPEED. THE RUMBLE STRIPS WILL BE PLACED AS DIRECTED BY THE ENGINEER.

THE RUMBLE STRIPS SHALL BE 4 INCHES. WIDE AND 250 MILS THICK IN PLACE AND SHALL TRAVERSE THE TOTAL LANE WIDTH. THERE WILL BE TWO SECTIONS OF RUMBLE STRIPS. THE RUMBLE STRIPS MAY HAVE TO BE PLACED ACROSS TWO, THREE OR FOUR LANES OF TRAFFIC.

THE FIRST SECTION WILL START AT A LOCATION DIRECTED BY THE ENGINEER, GENERALLY IN ADVANCE OF THE FIRST LANE CLOSURE. THERE WILL BE 10 TRANSVERSE STRIPS AT 6 FT. C/C. THE SECOND SECTION WILL START APPROXIMATELY 90 FT. BEYOND THE FIRST SET. THE SECOND SET WILL CONSIST OF 10 TRANSVERSE STRIPS AT 4.5 FT. C/C SPACING.

THE RUMBLE STRIPS SHALL BE REMOVED WHEN THEY ARE NO LONGER NEEDED, AS DETERMINED BY THE ENGINEER, MATERIAL USED FOR THE RUMBLE STRIPS SHALL BE PREFORMED THERMOPLASTIC MATERIAL CALLED PREMARK, MANUFACTURED BY FLINT TRADING, INC. THOMASVILLE, NC 27360 PHONE (910)475-6600 OR AN APPROVED EQUAL. THE MANUFACTURERS RECOMMENDATIONS MUST BE FOLLOWED FOR INSTALLATION. THE PREMARK STRIPS ARE 125 MILS THICK. THE PREMARK STRIPS WILL HAVE TO BE DOUBLED IN ORDER TO MEET THE THICKNESS REQUIREMENT.

THIS ITEM WILL BE PAID FOR BY THE LINEAR FOOT AT 250 MIL THICKNESS. THIS WILL INCLUDE ALL LABOR MATERIALS AND EQUIPMENT FOR THE INSTALLATION, MAINTENANCE AND REMOVAL OF THE RUMBLE STRIPS. SHORT TERM LANE CLOSURES WILL HAVE TO BE IN PLACE FOR THE RUMBLE STRIPS TO BE PLACED.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED FOR THIS WORK:

FIRST CONSTRUCTION SEASON . . . . . 1950 FEET
SECOND CONSTRUCTION SEASON . . . . . 1950 FEET

TOTAL ESTIMATED QUANTITY:
ITEM SPECIAL-MISC.: RUMBLE STRIPS . . . . . 3900 FEET

CONSTRUCTION ZONE FINES DOUBLED SIGNS

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, COVER DURING SUSPENSION OF WORK, AND SUBSEQUENTLY REMOVE FINES DOUBLED SIGNS, R-180-48. THE SIGNS SHALL BE DUAL MOUNTED PAST THE ROAD CONSTRUCTION AHEAD SIGNS APPROXIMATELY 500 FT. OR AS DIRECTED BY THE ENGINEER. THE SIGNS SHALL BE INSTALLED ON ALL FREEWAYS LEADING INTO THE PROJECT. SIGNS SHALL BE POSTED ON ALL ENTRANCE RAMPS ENTERING THE PROJECT ON THE RIGHT SIDE ONLY.

THE FOLLOWING QUANTITY OF SIGNS WILL BE PROVIDED.

ITEM 614-DOUBLED FINES IN WORK ZONE SIGN,
AS PER PLAN . . . . . 8 EACH

WORKSITE TRAFFIC SUPERVISOR

THE CONTRACTOR SHALL EMPLOY (OTHER THAN THE SUPERINTENDENT) AND SUBJECT TO THE APPROVAL OF THE ENGINEER AN AMERICAN TRAFFIC SAFETY SERVICE ASSOCIATION (A.T.S.S.A. PHONE NO. 1-800-272-8772) CERTIFIED WORKSITE TRAFFIC SUPERVISOR (WTS) FOR THE PURPOSE OF MONITORING AND CORRECTING ANY TRAFFIC CONTROL DEFICIENCIES IN THE WORK ZONE. THE WTS SHALL OVERSEE ALL OPERATIONS THAT AFFECT THE MOVEMENT OF VEHICULAR AND PEDESTRIAN TRAFFIC THROUGH THE WORK ZONE.

THE WTS SHALL BE PRESENT WHEN THE CONTRACTOR OR SUBCONTRACTOR INSTALLS A TRAFFIC RESTRICTION, LANE CLOSURE ETC. AFTER THE LANE CLOSURE IS IN PLACE HE SHALL MAKE SURE ALL TRAFFIC CONTROL ITEMS ARE FUNCTIONING PROPERLY. TRAFFIC CONTROL WILL BE THE WTS ONLY JOB DUTY DURING IMPLEMENTATION OF ZONES OR SHORT TERM ZONES.THE WTS SHALL HAVE THE AUTHORITY TO HAVE THE DEFICIENCIES CORRECTED AS SOON AS POSSIBLE. THE WTS SHALL PROVIDE THE PROJECT ENGINEER A SKETCH OF THE (TCP) TRAFFIC CONTROL PLAN EVERY DAY THERE IS TO BE A SHORT TERM TRAFFIC RESTRICTION, LANE CLOSURE ETC. THIS TCP SHALL SHOW HOW THE PERMANENT ZONES ARE TO BE IMPLEMENTED.

DAILY, INCLUDING WEEKENDS AND HOLIDAYS THE WTS SHALL SPEND A MINIMUM OF ONE HOUR REVIEWING AND MAINTAINING THE WORK ZONE. THESE HOURS MAY BE ADJUSTED BY THE ENGINEER BUT MUST BE PERFORMED ONCE A DAY DURING THE CONSTRUCTION SEASONS. THE HOURS MAY BE REDUCED DURING THE WINTER CONSTRUCTION SEASON IF DIRECTED BY THE ENGINEER. THE WTS SHALL INSPECT THE WORK ZONE AT THE BEGINNING AND END OF EACH WORK DAY AND ONE TIME PER WEEK DURING THE HOURS OF DARKNESS.

A RECORD OF EACH DAY'S REVIEW SHALL BE GIVEN TO THE PROJECT ENGINEER THE FOLLOWING WORKDAY, IN WRITING AND SHALL INCLUDE: TRAFFIC CONTROL DEVICE CONDITION, PLACEMENT, VISIBILITY, TRAFFIC FLOW CONDITIONS, INCIDENTS, CONGESTION POINTS, ADEQUACY OF ADVANCED WARNING SIGNS BEYOND THE PROJECT LIMITS, INTERACTION OF WORK VEHICLES WITH TRAFFIC, PROPER STORAGE OF MATERIALS AND EQUIPMENT, ETC. THE RECORD OF REVIEW SHALL BE GIVEN TO THE PROJECT ENGINEER DAILY IN WRITING AND SHALL INCLUDE A RECORD OF DEFICIENCIES AND RESOLUTIONS OF THE DEFICIENCIES.

THE WTS SHALL BE AVAILABLE ON A 24-HOUR BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. A 24-HOUR PHONE NUMBER SHALL BE MADE AVAILABLE TO THE PROJECT ENGINEER IN ORDER TO CONTACT THE WTS. THE WTS SHALL HAVE A PAGER AND THE PHONE NUMBER PROVIDED TO THE PROJECT ENGINEER.

FAILURE OF THE CONTRACTOR TO COMPLY WITH ANY OF THE ABOVE, SHALL CONSTITUTE CAUSE FOR THE PROJECT ENGINEER TO DEDUCT $500.00 PER DAY FROM MONEY DUE THE CONTRACTOR NOT AS A PENALTY BUT AS A LIQUIDATED DAMAGE.

PAYMENT FOR THE WTS SHALL BE INCLUDED UNDER THE LUMP SUM ITEM 614 MAINTAINING TRAFFIC.

NIGHT VESTS

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.

CALCULATED JEL
CHECKED ENF

MAINTENANCE OF TRAFFIC NOTES

CUYAHOGA COUNTY
CUY-480-10.38

CALCULATED JEL
CHECKED ENF

MAINTENANCE OF TRAFFIC NOTES

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 ENTER 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.

PORTABLE CHANGEABLE MESSAGE SIGNS

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 II 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.

OPTION 1
THE CONTRACTOR SHALL PROVIDED THE ENGINEER WITH A LAP TOP COMPUTER PLUS INTERNAL MODEM TO CONTROL THE PCMS REMOTELY. THE LAPTOP SHALL BE INSURED AGAINST THEFT.

OPTION 2
THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER THE SOFTWARE NECESSARY TO CONTROL THE PCMS REMOTELY.

OPTION 3
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 OF TIMES WHEN NOT IN USE. NO PAYMENT WILL BE MADE FOR THESE TIMES (EX. WINTER MONTHS).

PAYMENT:
THERE SHALL BE 2 - CLASS II PCMS AT 12 MONTHS EACH.

ITEM 614-PORTABLE CHANGEABLE
MESSAGE SIGN, AS PER PLAN . . . . 24 SIGN MONTHS

STOPPING TRAFFIC ON A FREEWAY

FULL STOPPAGE OF TRAFFIC SHALL ONLY OCCUR WITH THE PERMISSION OF THE ENGINEER AND ONLY BETWEEN 12:01AM AND 6:00 AM.

ANY TIME TRAFFIC MUST BE COMPLETELY STOPPED ON A FREEWAY OR INTERSTATE IT SHALL BE DONE IN THE FOLLOWING MANNER: THE COMPLETE TRAFFIC STOPPAGE ON ALL LANES OF ANY DIRECTIONAL ROADWAY SHALL BE NO MORE THAN 10 MINUTES IN ANY ONE CONSECUTIVE 30 MINUTE PERIOD.

A MINIMUM OF TWO (2) LAW ENFORCEMENT OFFICERS (L.E.O.) WITH PATROL VEHICLES SHALL BE USED TO PACE MOTORISTS TO A STOP. THERE SHALL BE ONE L.E.O. FOR EACH LANE ON THE FREEWAY.

AFTER TRAFFIC HAS BEEN SLOWED, ONE (1) PATROL VEHICLE SHALL TRAVEL ALONG THE ROADWAY SHOULDER 500 FEET BEHIND THE BACK UP OF STOPPED VEHICLES. WHERE STOPPAGE OCCURS IN THE VICINITY OF FREEWAY ENTRANCES, THE CONTRACTOR SHALL PLACE FLAGMEN ON THE RAMPS TO STOP TRAFFIC. PATROL VEHICLES SHALL HAVE FLASHING BEACONS.

TO PROVIDED ADEQUATE VISIBILITY TO APPROACHING MOTORIST THE CONTRACTOR SHALL ERECT AND MAINTAIN "ROADWORK AHEAD", "PREPARE TO STOP", AND "STOP AHEAD" SIGNS WITH TWO FLASHING TWELVE INCH (12) TRAFFIC SIGNAL HEADS IN ACCORDANCE WITH 632.05. THESE SIGNS SHALL BE ILLUMINATED DURING NIGHT OPERATIONS AND SHALL BE 48 INCH BY 48 INCH SIGNS. PATROL VEHICLES AND SIGNS SHALL BE LOCATED IN ACCORDANCE WITH THE SKETCH BELOW. FLARES MAY BE SUBSTITUTED FOR THE FLASHING 12 INCH SIGNAL HEADS. THERE SHALL BE 2 FLARES AT EACH SIGN ON BOTH SIDES ON THE ROADWAY. THE FLARES SHALL BE REPLACED IF THEY BURN OUT.

A PORTABLE CHANGEABLE MESSAGE SIGN, TYPE TO BE ON ODOT'S PRE-APPROVED LIST, SHALL BE PLACED 1.5 MILES TO 2 MILES IN ADVANCE OF THE CLOSURE OR AS DIRECTED BY THE ENGINEER.

ITEM SPECIAL - ROADWAY, MISC.: TOW TRUCK SERVICE

THE CONTRACTOR SHALL PROVIDE A TOW SERVICE FOR ANY DISABLED VEHICLE WITHIN THE ROADWAY THAT AFFECTS THE FLOW OF TRAFFIC DURING ANY TEMPORARY OR PERMANENT LANE(S) CLOSURE. THE INTENT IS TO REMOVE THE DISABLED VEHICLE TO A LOCATION OFF THE TRAVELED WAY.

THE TOW TRUCKS SHALL BE CAPABLE OF HANDLING A GROSS WEIGHT OF 18,000 POUNDS. EACH TRUCK SHALL BE EQUIPPED WITH AN AMBER CAB MOUNTED FLASHING LIGHT, TWO-WAY RADIO, TOW RIG, CUSHIONED BUMPER, AND REAR PINTLE HOOKS. FOR LARGE DISABLED TRUCKS, THE CONTRACTOR SHALL PROVIDE MORE THAN ONE TOW TRUCK, AS NEEDED. TOWING SHALL BE PROVIDED TO REMOVE DISABLED VEHICLES FROM WITHIN THE ROADWAY TO ANOTHER LOCATION OFF THE TRAVELED WAY. THIS SERVICE SHALL BE PROVIDED AT NO CHARGE TO THE OPERATORS OF THE DISABLED VEHICLES. THE OPERATORS OF THE DISABLED VEHICLES SHALL FILL OUT A FORM PROVIDED BY ODOT. THIS FORM SHALL BE SUBMITTED TO ODOT FOR PAYMENT OF THE TOW. ANY ADDITIONAL TOWING TO AN OFFSITE LOCATION SHALL BE ARRANGED BY THE POLICE OR MOTORIST, BUT SHALL NOT BE PART OF THE WORK REQUIRED UNDER THIS CONTRACT.

THE TOW TRUCK MAY BE CALLED TO THE SCENE BY THE POLICE, CONTRACTOR, ENGINEER OR DESIGNATED ENGINEER'S OR CONTRACTOR'S REPRESENTATIVES. THE TOW TRUCK MUST RESPOND AND ARRIVE AT THE SCENE OF THE DISABLED VEHICLE NO LATER THAN TEN MINUTES AFTER THE RECEIPT OF THE CALL. IF THE TOW TRUCK CANNOT ARRIVE IN TEN MINUTES AS DEEMED BY THE PROJECT ENGINEER, THIS REQUIREMENT MAY BE WAIVED. MUST PROVIDE TEN MINUTES RESPONSE SERVICE EVEN THOUGH THERE MIGHT BE MULTIPLE DISABLED VEHICLES AT DIFFERENT LOCATIONS WITHIN THE LIMITS OF WORK. IN THE CASE OF SERIOUS VEHICULAR ACCIDENTS, THE TOW TRUCK MUST NOT REMOVE THE DISABLED VEHICLES(S) UNTIL AUTHORIZED BY THE POLICE OR THE ENGINEER.

ITEM SPECIAL - ROADWAY, MISC.: TOW TRUCK SERVICE (CONTINUED)

THE CONTRACTOR SHALL NOT LET ANY VEHICLE REMAIN IN THE TRAVELED WAY FOR 30 MINUTES WITHOUT NOTIFYING THE TOWING SERVICE. IF THE TOWING SERVICE IS NOT NOTIFIED IN 30 MINUTES, THE CONTRACTOR SHALL ONLY BE PAID FOR ONE HALF OF THE TOW TRUCK SERVICE UNIT PRICE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE REPRESENTATIVES TO ENSURE THE TOWING SERVICE RESPONDS WITHIN THESE GUIDELINES. THE TOWING SERVICE SHALL RESPOND TO ANY VEHICLE WITHIN THE WORK LIMITS OF THE FIRST ADVANCED WARNING SIGNS ON THE PROJECT.

THE CONTRACTOR SHALL PROVIDE THE PHONE NUMBERS OF THE TOW TRUCK SERVICE TO THE POLICE AND ENGINEER AS SOON AS THEY BECOME AVAILABLE.

TOW TRUCK SERVICE SHALL BE MEASURED BY THE NUMBER OF TOWS THAT THE TOW TRUCK SERVICE ACTUALLY PERFORMS. THE RELOCATION OF EACH VEHICLE OFF THE TRAVELED WAY, WHETHER BY TOWING OR PUSHING, SHALL BE COUNTED AS A TOW. IF TOWING IS PERFORMED BY MORE THAN ONE TOW TRUCK (AS NEEDED TO REMOVE HEAVY VEHICLES) MEASUREMENT WILL BE MADE PER EACH TOW TRUCK.

PAYMENT FOR TOW TRUCK SERVICE WILL BE MADE AT THE CONTRACT UNIT PRICE PER EACH TOW. THIS PRICE SHALL BE FULL COMPENSATION FOR FURNISHING THE TOW TRUCK, OPERATOR, TOOLS, EQUIPMENT, INSURANCE AND ALL OTHER MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

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

ITEM SPECIAL - ROADWAY, MISC.:
TOW TRUCK SERVICE (AUTO) . . . . . 60 EACH
ITEM SPECIAL - ROADWAY, MISC.:
TOW TRUCK SERVICE (COMMERCIAL) . . 30 EACH

ITEM SPECIAL-ADDITIONAL SIGNS, GROUND MOUNTED, AS DIRECTED BY THE ENGINEER

WHEN ADDITIONAL SIGNING IS NEEDED TO MAINTAIN TRAFFIC THE CONTRACTOR SHALL FURNISH THE SIGN OR SIGNS AS DIRECTED BY THE ENGINEER. THESE SIGNS SHALL BE GROUND MOUNTED AND MEET ALL THE SPECIFICATIONS OF THE PLAN, PROPOSAL AND CURRENT YEAR STATE OF OHIO, DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS.

PAYMENT FOR THIS ITEM SHALL INCLUDE, BUT NOT BE LIMITED TO THE COST TO FURNISH, ERECT (INCLUDING DRIVE POSTS OR OTHER APPROVED METHOD OF SUPPORT), MAINTAIN AND REMOVE THE SIGN.

PAYMENT SHALL BE BY THE SQUARE FOOT.

ITEM SPECIAL-ADDITIONAL SIGNS, GROUND MOUNTED,
AS DIRECTED BY THE ENGINEER . . 1000 SQ. FT.

GUARDRAIL REPLACEMENT

NO HAZARD SHALL BE LEFT UNPROTECTED EXCEPT FOR THE ACTUAL TIME NECESSARY TO REMOVE THE EXISTING GUARDRAIL, PREPARE THE SITE, AND INSTALL NEW GUARDRAIL IN A CONTINUOUS OPERATION. THE REMOVAL OF ALL GUARDRAIL SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER. NO GUARDRAIL SHALL BE REMOVED UNTIL THE REPLACEMENT MATERIAL IS ON THE SITE, READY FOR INSTALLATION. FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE DEEMED SUFFICIENT CAUSE TO ORDER WORK SUSPENDED UNTIL SUCH TIME AS THE ENGINEER IS ASSURED OF COMPLIANCE.

CUYAHOGA COUNTY
CUY-480-10.38

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ITEM SPECIAL - REPLACEMENT SIGN

FLAT SHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE USED BUT IN GOOD CONDITION SUBJECT TO APPROVAL BY THE ENGINEER.

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER SQUARE FOOT FOR ITEM SPECIAL, REPLACEMENT SIGN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

AN ESTIMATED QUANTITY OF 100 SQUARE FEET HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM SPECIAL - REPLACEMENT DRUM

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATION AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM SPECIAL, REPLACEMENT DRUM, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF 100 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 614 - WORK ZONE SPEED LIMIT SIGN

THE CONTRACTOR SHALL FURNISH, INSTALL , MAINTAIN, COVER DURING SUSPENSION OF WORK, AND SUBSEQUENTLY REMOVE WORK ZONE SPEED LIMIT SIGNS AND SUPPORTS (R-10-48) (45 MPH) WITHIN THE WORK LIMITS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS.

THE CONTRACTOR SHALL COVER OR REMOVE ANY EXISTING SPEED LIMIT OR MINIMUM SPEED SIGNS WITHIN THE REDUCED SPEED ZONE. THESE SIGNS SHALL BE RESTORED DURING SUSPENSION OR TERMINATION OF THE REDUCED SPEED LIMIT. THE EXPENSE OF COVERING OR REMOVAL AND RESTORATION OF EXISTING SPEED LIMIT OR MINIMUM SPEED SIGNS SHALL BE INCLUDED IN THE PAY ITEM FOR THE WORK ZONE SPEED LIMIT SIGNS.

THE WORK ZONE SPEED LIMIT SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN 4 HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN 4 HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTION, OR SOONER AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL ERECT A WORK ZONE SPEED LIMIT SIGN IN ADVANCE OF ANY LANE RESTRICTION EXPECTED TO LAST AT LEAST 30 DAYS, OR AS DIRECTED BY THE ENGINEER. THE SIGN SHALL BE MOUNTED ON BOTH SIDES OF DIVIDED HIGHWAYS, 500 FEET IN ADVANCE OF THE LANE REDUCTION TAPER. THE SIGN SHALL BE MOUNTED ON THE RIGHT SIDE , 250 FEET IN ADVANCE OF THE LANE REDUCTION TAPER ON UNDIVIDED HIGHWAYS. THE SIGN SHALL BE REPEATED, ON THE SIDE NEAREST TRAFFIC, EVERY 1 MILE FOR 55 MPH ZONES AND EVERY 1/2 MILE FOR 45 MPH ZONES. THESE SIGNS SHALL ALSO BE ERECTED IMMEDIATELY AFTER EACH OPEN ENTRANCE RAMP WITHIN THE ZONE. A SIGN TO INDICATE THE RESUMPTION OF THE STATUTORY SPEED LIMIT SHALL BE ERECTED AT THE END OF ANY REDUCED SPEED ZONE. THIS SIGN SHALL BE AND R-8A.

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED BUT GOOD CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE REFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF 730.19 AND U.S. DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION FOR TYPE III-C SHEETING, FP-85. WORK ZONE SPEED LIMIT SIGNS SHALL BE MOUNTED ON TWO (2) ITEM 630 GROUND MOUNTED SUPPORTS, NO. 4 POSTS.

ITEM 614 - WORK ZONE SPEED LIMIT SIGN (CONTINUED)

WORK ZONE SPEED LIMIT SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGNS AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION WITHIN THE PROJECT DUE TO CHANGES IN THE SPEED ZONE DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE IN PLACE, WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVING THE SIGNS AND SUPPORTS.

ITEM 614-WORK ZONE SPEED LIMIT SIGN . . . . . 10 EACH

ITEM 614-LAW ENFORCEMENT OFFICER WITH PATROL CAR

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

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

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 B 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.

THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES WITH:

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 SPECIAL-LAW ENFORCEMENT OFFICER WITH PATROL CAR. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614-LAW ENFORCEMENT OFFICER WITH PATROL CAR . . . 100 HOURS

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

ITEM 614 - TEMPORARY IMPACT ATTENUATORS

TEMPORARY IMPACT ATTENUATORS SHALL BE INSTALLED AT THE LOCATIONS SHOWN IN THE MOT PLANS. TEMPORARY IMPACT ATTENUATORS SHALL BE A QUARDGUARD TYPE QZ2406G AS MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., ONE EAST WACKER DR., CHICAGO, IL 60601 (312) 467-6750, OR AN APPROVED EQUAL. INSTALLATION SHALL BE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614-TEMPORARY IMPACT ATTENUATOR . . . . . 2 EACH

TEMPORARY PAVEMENT MARKINGS

THE FOLLOWING QUANTITIES ARE PROVIDED FOR PAVEMENT MARKING OPERATIONS REQUIRED BETWEEN ASPHALT OVERLAYS:

ITEM 614-TEMPORARY LANE LINE, CLASS I, 642 PAINT . . 59.17 MILE
ITEM 614-TEMPORARY LANE LINE, CLASS II . . . . . 7.60 MILE
ITEM 614-TEMPORARY EDGE LINE, CLASS I, 642 PAINT . . . 47 MILE
ITEM 614-TEMPORARY CHANNELIZING LINE, CLASS I,
642 PAINT . . . . . 8260 LIN. FT.
ITEM 614-TEMPORARY GORE MARKING, CLASS II . . . . 1200 LIN. FT.

PUBLIC SAFETY NOTE

THE PERIOD OF TIME THAT A HAZARD IS LEFT UNPROTECTED BY THE REMOVAL OF GUARDRAIL SHALL BE HELD TO AN ABSOLUTE MINIMUM AND IN NO CASE SHALL SUCH A PERIOD BE LONGER THAN ONE WORKING DAY, THE ENTIRE RUN OF GUARDRAIL CONSTRUCTION IS NOT COMPLETE THE FOLLOWING SHALL APPLY:

A. IN AREAS WHERE EXISTING GUARDRAIL HAS BEEN REMOVED OR THE GUARDRAIL IS IN A PARTIAL STAGE OF COMPLETION, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN DRUMS WITHIN THE LIMITS OF THE UNPROTECTED AREA. THE DRUMS SHALL BE PLACED AT 50' INTERVALS AND OFFSET AT LEAST TWO FEET FROM THE EDGE OF THE TRAVELED ROADWAY AND IN CLOSE PROXIMITY TO THE CONSTRUCTION. THE APPROACH END OF A PARTIALLY COMPLETED RUN OF GUARDRAIL SHALL BE FASTENED AT GROUND LEVEL TO A DRUM.

B. IF THE EXISTING GUARDRAIL IS FOR THE PROTECTION OF AN OBSTACLE (I.E. SIGN SUPPORT, BRIDGE PARAPET,ETC.) THE CONTRACTOR SHALL ERECT CONCRETE BARRIER IN THE DIRECTION OF TRAFFIC. THE REQUIREMENTS OF PARAGRAPH "A" SHALL APPLY TO THE REMAINING GUARDRAIL WITHIN THE RUN. PORTABLE BARRIER SHALL BE FLARED AT A 13:1 TAPER RATE AND SHALL INCLUDE A TEMPORARY END TERMINAL AS PER MC-9.2.

C. THE REQUIREMENTS STATED IN "A" SHALL APPLY FOR A PERIOD NOT TO EXCEED ONE WEEK. WHERE THE REBUILDING OR CONSTRUCTION OF ANY RUN OF GUARDRAIL CANNOT BE ACCOMPLISHED WITHIN ONE WEEK, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN PORTABLE CONCRETE BARRIER IN THE INTERIM TIME IT TAKES TO COMPLETE THE WORK. THE APPROACH END OF THE PORTABLE CONCRETE BARRIER SHALL BE FLARED 10 FT.(130' AT 13:1 TAPER) AND SHALL INCLUDE A TEMPORARY END TERMINAL AS PER MC-9.2. IN ADDITION, A TYPE II BARRICADE WITH A TYPE B (HIGH INTENSITY FLASHER) WARNING LIGHT SHALL BE PLACED IN FRO NT OF THIS INITIAL SECTION OF PORTABLE CONCRETE BARRIERS TO P ROVIDE FOREWARNING TO THE APPROACHING TRAFFIC.

D. WHEN THE LANE ADJACENT TO THE GUARDRAIL IS CLOSED TO TRAFFIC, THE PROVISIONS OF PARAGRAPH "A" ABOVE SHALL APPLY AFTER 1 DAY, THE PROVISIONS OF PARAGRAPH "B" SHALL APPLY AFTER 5 DAYS, AND THE PROVISIONS OF PARAGRAPH "C" SHALL APPLY AFTER 15 DAYS.

THE TERM "GUARDRAIL" AS USED HEREIN SHALL BE UNDERSTOOD TO COVER ALL TYPES OF GUARDRAIL, EXISTING OR PROPOSED FOR THE PROJECT, INCLUDING BARRIER DESIGN GUARDRAIL.

THE COST OF COMPLYING WITH THESE SAFETY PROCEDURES SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC.

PERMITTED SHORT TERM LANE CLOSURE TIMES

CUY-480-10.38

LOCATION	DIR	LANES	WEEKDAYS			WEEKENDS		
			1 LANE CLOSED	2 LANES CLOSED	3 LANES CLOSED	1 LANE CLOSED	2 LANES CLOSED	3 LANES CLOSED
I-480 WITHIN PROJECT LIMITS (I-71 SPUR TO SR 17)	EB	4	10 AM TO 3 PM 6:30 PM TO 7 AM	8 PM TO 6 AM	12 MID TO 6 AM	7 PM FRI TO 6 AM MON	11 PM FRI TO 11 AM SAT 8 PM SAT TO 12 NOON SUN 8 PM SUN TO 6 AM MON	12 MID TO 7 AM
I-480 WITHIN PROJECT LIMITS (I-71 SPUR TO SR 17)	WB	4	9 AM TO 3 PM 6:30 PM TO 7 AM	7:30 PM TO 6 AM	12 MID TO 6 AM	7:30 PM FRI TO 6 AM MON	11 PM FRI TO 11 AM SAT 6 PM SAT TO 1 PM SUN 6 PM SUN TO 6 AM MON	12 MID TO 7 AM

LIQUIDATED DAMAGES, SHORT TERM LANE CLOSURES.

OPERATIONS WHICH REQUIRE ADDITIONAL LANE CLOSURES SHALL BE RESTRICTED TO THE HOURS NOTED IN THE "PERMITTED SHORT TERM LANE CLOSURE TIMES" TABLE ABOVE.

THE ONLY TIME THE ABOVE HOURS MAY BE EXTENDED IS ON SATURDAY OR SUNDAY MORNING WHEN NO SPECIAL EVENT OR HOLIDAY IS OCCURRING. THE CONTRACTOR MAY CONTINUE TO KEEP LANE(S) CLOSED UNTIL SUCH TIME THAT TRAFFIC HAS BACKED UP ONE HALF MILE OR AT SUCH TIMES THE ENGINEER DETERMINES THAT ADDITIONAL LANES MUST BE OPENED TO NORMAL TRAFFIC. AT THAT TIME, THE CONTRACTOR WILL HAVE FIFTEEN (15) MINUTES TO RE-OPEN THE LANE(S). THE ENGINEER SHALL DETERMINE THE NUMBER OF LANE(S) THAT MUST BE OPENED TO TRAFFIC.

IF THE LANE(S) ARE NOT OPEN TO TRAFFIC IN FIFTEEN (15) MINUTES, LIQUIDATED DAMAGES SHALL APPLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BE AWARE OF THE BACKUP SO THAT WHEN THE ENGINEER NOTIFIES THE CONTRACTOR TO OPEN LANE(S), THE CONTRACTOR CAN DO SO. IN NO OTHER CASE MAY THESE HOURS BE EXTENDED.

THESE TIME LIMITATIONS SHALL NOT BE REVISED WITHOUT PRIOR WRITTEN APPROVAL FROM BOTH THE DISTRICT CONSTRUCTION ENGINEER AND THE DISTRICT PRODUCTION ENGINEER.

ANY DELAY IN EFFECTING THE ADDITIONAL LANE CLOSURE FOR NIGHTTIME OPERATIONS SHALL NOT BE SUFFICIENT CAUSE FOR ANY VIOLATION OF THE PERMITTED LANE CLOSURE TIMES.

LIQUIDATED DAMAGES IN THE AMOUNT OF:

$45.00 PER MINUTE FOR 1 LANE CLOSURE
$90.00 PER MINUTE FOR 2 LANE CLOSURE
$90.00 PER MINUTE PER LANE FOR 3 LANE CLOSURE

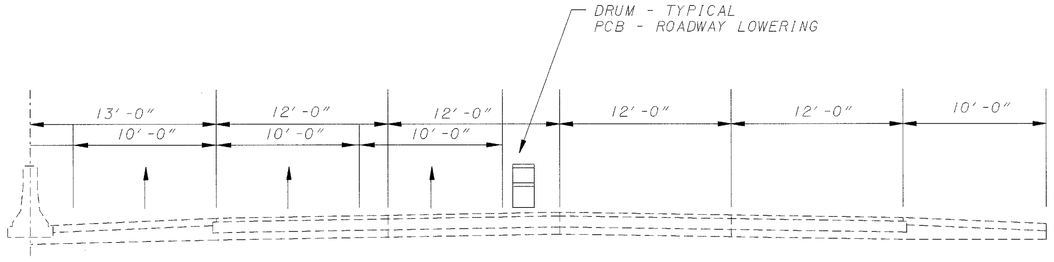
SHALL BE ASSESSED FOR ANY VIOLATION OF THE PERMITTED SHORT TERM LANE CLOSURES.

THESE DAMAGES SHALL BE ASSESSED INDIVIDUALLY AND WILL BE CUMULATIVE FOR EACH DIRECTION WHICH DOES NOT RE-OPEN TO TRAFFIC ON TIME. (THIS COULD RESULT IN SEVERAL ASSESSMENTS IN THE SAME DAY) THE FULL AMOUNT OF THE LIQUIDATED DAMAGES SHALL BE ASSESSED FOR EACH VIOLATION.

CALCULATED DRL
CHECKED ENF

MAINTENANCE OF TRAFFIC NOTES

CUYAHOGA COUNTY
CUY-480-10.38

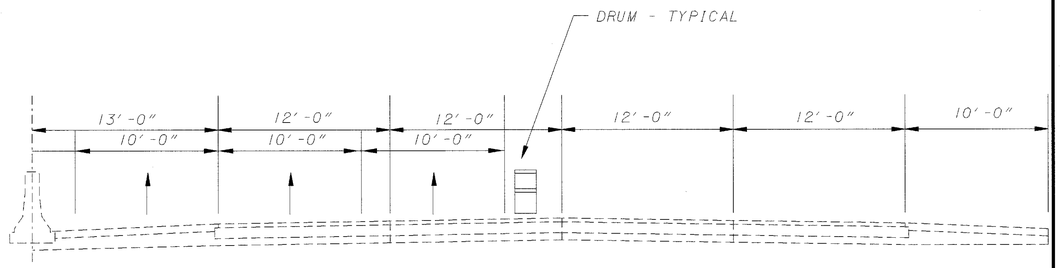


PHASE IA & B

PAVEMENT REPLACEMENT/SHOULDER WORK/UNDERDRAINS

- REMOVE EXISTING ASPHALT AND CONCRETE PAVEMENT
- EXCAVATE AND INSTALL UNDERDRAINS
- PERFORM WORK IN TRANSITION AREAS AS SHOWN ON ROAD LOWERING DETAILS ON SHEET 72.

- PERFORM OPERATIONS ABOVE ON OTHER SIDE OF ℄
- SEE MOT PLAN SHEETS FOR LIMITS OF ROADWAY LOWERING AND TOTAL PAVEMENT REPLACEMENT.

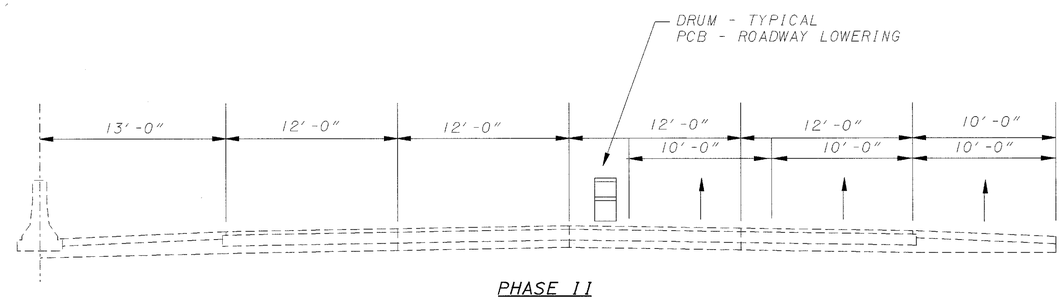


PHASE IIIA & B

CRACKING AND SEATING/4" 302

- REMOVE EXISTING ASPHALT WEARING SURFACE.
- CRACK AND SEAT EXISTING CONCRETE PAVEMENT
- PAVE 1ST 4" COURSE OF 302 WITHIN CRACK AND SEAT WORK ZONE
- PERFORM WORK IN TRANSITION AREAS AS SHOWN ON ROAD LOWERING DETAILS ON SHEET 72.

- PERFORM OPERATIONS ABOVE ON OTHER SIDE OF ℄
- SEE MOT PLAN SHEETS FOR LIMITS OF ROADWAY LOWERING AND TOTAL PAVEMENT REPLACEMENT.

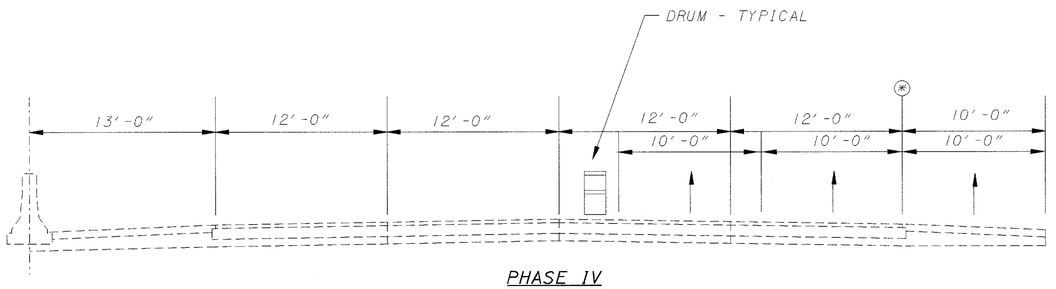


PHASE II

PAVEMENT REPLACEMENT/SHOULDER WORK/UNDERDRAINS

- REMOVE EXISTING ASPHALT AND CONCRETE PAVEMENT
- EXCAVATE AND INSTALL UNDERDRAINS
- PERFORM WORK IN TRANSITION AREAS AS SHOWN ON ROAD LOWERING DETAILS ON SHEET 72.

- PERFORM OPERATIONS ABOVE ON OTHER SIDE OF ℄
- SEE MOT PLAN SHEETS FOR LIMITS OF ROADWAY LOWERING AND TOTAL PAVEMENT REPLACEMENT.



PHASE IV

CRACKING AND SEATING/4" 302

- REMOVE EXISTING ASPHALT WEARING SURFACE.
- CRACK AND SEAT EXISTING CONCRETE PAVEMENT
- PAVE 1ST 4" COURSE OF 302 WITHIN CRACK AND SEAT WORK ZONE
- PERFORM WORK IN TRANSITION AREAS AS SHOWN ON ROAD LOWERING DETAILS ON SHEET 72.

- PERFORM OPERATIONS ABOVE ON OTHER SIDE OF ℄
- SEE MOT PLAN SHEETS FOR LIMITS OF ROADWAY LOWERING AND TOTAL PAVEMENT REPLACEMENT.

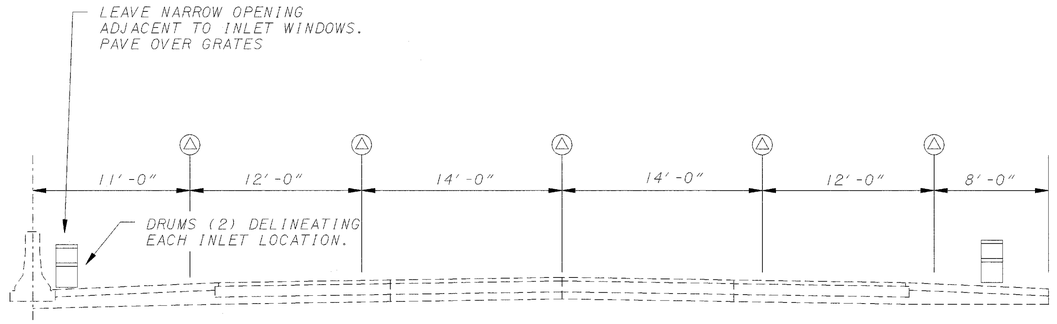
(*) RIGHT LANE LINE MUST BE RELOCATED 2' RIGHT OF THE EDGE OF PAVEMENT PRIOR TO IMPLEMENTING PHASE V.

CALCULATED JEL
CHECKED ENF

MAINTENANCE OF TRAFFIC
TYPICAL SECTIONS
IR-480

CUYAHOGA COUNTY
CUY-480-10.38

(+) HALF WIDTH AT A TIME.
NO LONGITUDINAL DIFFFERENCE
IN ELEVATION SHALL EXIST WHEN
RE-OPENING TO TRAFFIC.

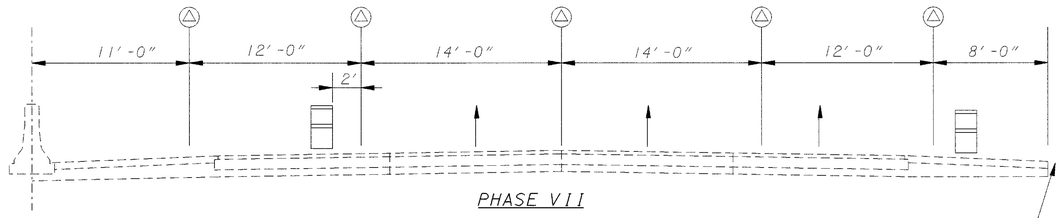


PHASE V

NIGHTTIME FULL WIDTH PAVING - 4" 302 (+)

- 4" - 302 (TRANSITIONS AS PER DETAILS ON SHEET 72)
- CLOSE RIGHT SHOULDER WITH DRUMS AT 50' C/C. (USE 25' C/C DRUM SPACING IN FRONT OF GUARDRAIL)

(△) TEMPORARY PAVEMENT MARKING LOCATIONS



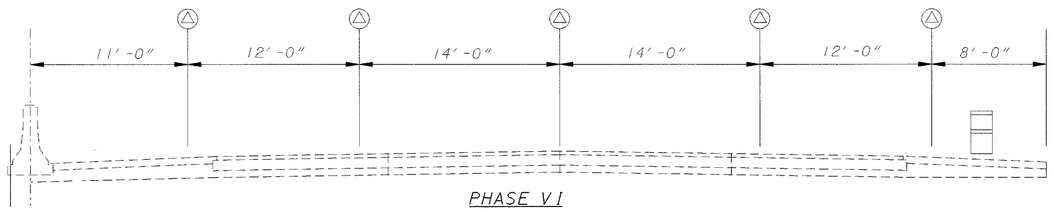
PHASE VII

DRAINAGE / GUARDRAIL ADJUSTMENTS

- CLOSE LEFT LANE IN EACH DIRECTION
- REPLACE MEDIAN INLETS
- REMOVE GUARDRAIL, ADD ASPHALT, RE-GRADE WHEN NECESSARY REPLACE GUARDRAIL (SEE GUARDRAIL REPLACEMENT NOTE), RE-OPEN RIGHT SHOULDER
- REOPEN ALL LANES AND LEFT SHOULDER

(△) TEMPORARY PAVEMENT MARKING LOCATIONS

(+) HALF WIDTH AT A TIME.
NO LONGITUDINAL DIFFFERENCE
IN ELEVATION SHALL EXIST WHEN
RE-OPENING TO TRAFFIC.

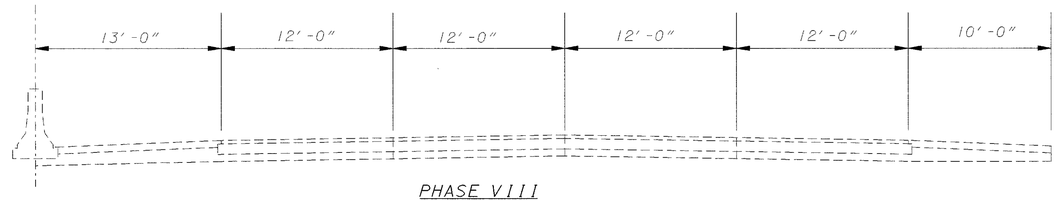


PHASE VI

NIGHTTIME FULL WIDTH PAVING - 2" 446 (+)

- 2" - 446 (TRANSITIONS AS PER DETAILS ON SHEET 72)
- MAINTAIN SHOULDER CLOSURES

(△) TEMPORARY PAVEMENT MARKING LOCATIONS



PHASE VIII

NIGHTTIME PAVING - 1.25" 446

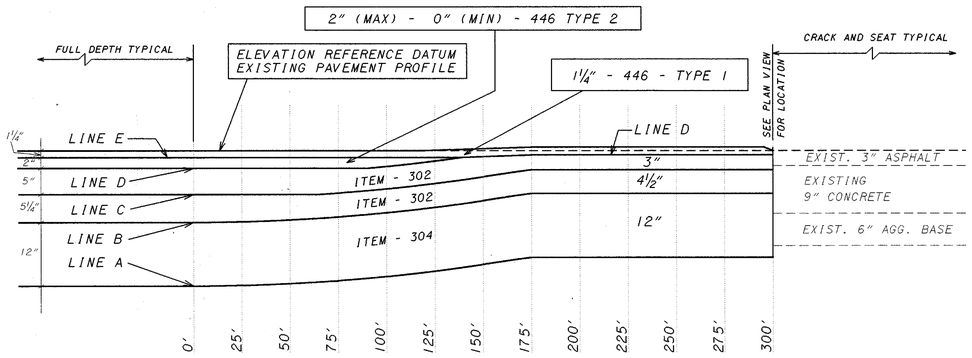
- 1¼" - 446 (TRANSITIONS AS PER DETAILS ON SHEET 72)

(TEMPORARY PAVEMENT MARKINGS IN FINAL LOCATIONS PER TRAFFIC CONTROL PLAN SHEETS.)

CALCULATED JEL
CHECKED ENF

MAINTENANCE OF TRAFFIC
TYPICAL SECTIONS
IR-480

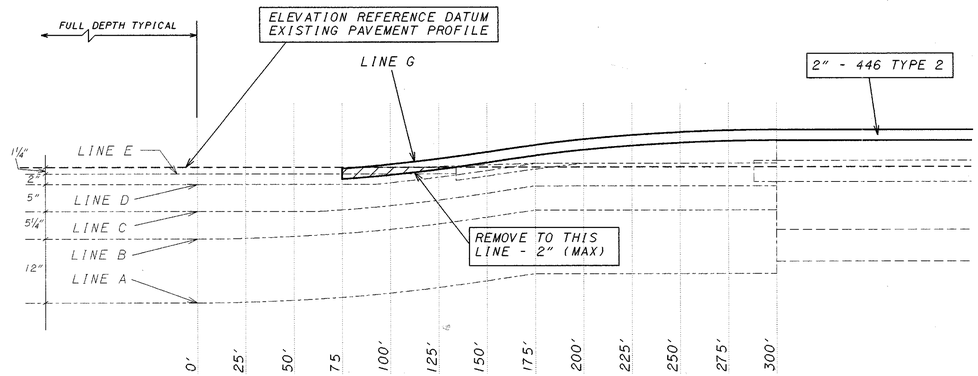
CUYAHOGA COUNTY
CUY-480-10.38



ELEVATION DIFFERENCE FROM REFERENCE DATUM													
LINE E	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	---	---	---	---	---	---	---
LINE D	-0.27	-0.27	-0.27	-0.27	-0.24	-0.15	-0.08	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06
LINE C	-0.69	-0.69	-0.69	-0.66	-0.60	-0.51	-0.41	-0.31	-0.31	-0.31	-0.31	-0.31	-0.31
LINE B	-1.12	-1.11	-1.08	-1.03	-0.97	-0.88	-0.78	-0.69	-0.69	-0.69	-0.69	-0.69	-0.69
LINE A	-2.12	-2.11	-2.08	-2.03	-1.97	-1.88	-1.78	-1.69	-1.69	-1.69	-1.69	-1.69	-1.69
STATION	0'	25'	50'	75'	100'	125'	150'	175'	200'	225'	250'	275'	300'

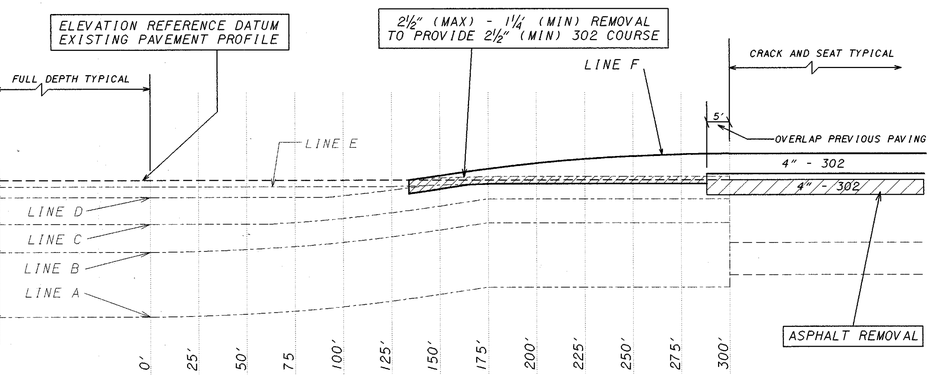
FULL DEPTH REPLACEMENT - TRANSITION
DETAIL "A"

MODIFIED FOR WINTER TRAFFIC



ELEVATION DIFFERENCE FROM REFERENCE DATUM													
LINE G	---	---	---	0.00	-0.05	-0.14	-0.24	-0.35	-0.44	-0.50	-0.55	-0.58	-0.59
STATION	0'	25'	50'	75'	100'	125'	150'	175'	200'	225'	250'	275'	300'

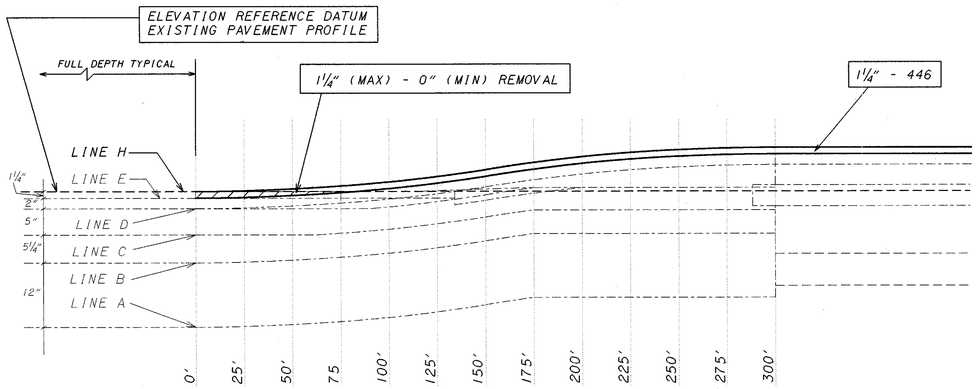
FULL DEPTH REPLACEMENT - TRANSITION
DETAIL "C"



LINE F	0.00	0.00	0.00	0.00	0.00	0.00	-0.07	-0.18	-0.27	-0.33	-0.38	-0.41	-0.42
STATION	0'	25'	50'	75'	100'	125'	150'	175'	200'	225'	250'	275'	300'
ELEVATION DIFFERENCE FROM REFERENCE DATUM													

FULL DEPTH REPLACEMENT - TRANSITION
DETAIL "B"

MODIFIED FOR WINTER TRAFFIC



LINE H	0.00	-0.01	-0.04	-0.09	-0.15	-0.24	-0.34	-0.45	-0.54	-0.60	-0.65	-0.68	-0.69
STATION	0'	25'	50'	75'	100'	125'	150'	175'	200'	225'	250'	275'	300'
ELEVATION DIFFERENCE FROM REFERENCE DATUM													

FULL DEPTH REPLACEMENT - TRANSITION
DETAIL "D"

NO SCALE

DRAWN	REVISED
CJZ	
CALCULATED	CHECKED
ENF	ENF

PAVEMENT DETAILS
I-480
PAVEMENT TRANSITIONS
MODIFICATIONS REQUIRED FOR WINTER EXPOSURE

CUYAHOGA COUNTY
CUY-480-10.38

SHEET NUMBER																ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
				66	67	68	69			74	75	76	77								
																				MAINTENANCE OF TRAFFIC	
614							100									614	E11100	100	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR	
614							2									614	E12350	2	EACH	TEMPORARY IMPACT ATTENUATOR	
614						10										614	E12470	10	EACH	WORK ZONE SPEED LIMIT SIGN	68
614					8											614	E12481	8	EACH	DOUBLED FINES IN WORK ZONE SIGN, AS PER PLAN	67
SPEC						100										SPEC	614E12500	100	SQ FT	REPLACEMENT SIGN	68
SPEC						100										SPEC	614E12600	100	EACH	REPLACEMENT DRUM	68
614				500												614	E13000	500	CU. YD.	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC	
614													649			614	E13300	649	EACH	BARRIER REFLECTOR, TYPE B	
614					24											614	E18600	24	SIGN MNTH.	PORTABLE CHANGEABLE MESSAGE SIGN	67
614							59.17			4.80	2.20	5.06	1.80			614	E20100	73.03	MILE	TEMPORARY LANE LINE, CLASS I, 642 PAINT	
614										1.87	4.52	3.49	6.60			614	E20200	16.48	MILE	TEMPORARY LANE LINE, CLASS I, 740.06, TYPE I	
614							7.60									614	E20400	7.60	MILE	TEMPORARY LANE LINE, CLASS II	
614							47			5.64	3.53	5.73	2.32			614	E22100	64.56	MILE	TEMPORARY EDGE LINE, CLASS I, 642 PAINT	
614										9.07	9.36	7.52	9.02			614	E22200	34.97	MILE	TEMPORARY EDGE LINE, CLASS I, 740.06, TYPE I	
614							8260			600		241				614	E23200	9101	LIN FT	TEMPORARY CHANNELIZING LINE, CLASS I, 642 PAINT	
614										16990	18162	12519	9764			614	E23400	57435	LIN FT	TEMPORARY CHANNELIZING LINE, CLASS I, 740.06, TYPE I	
614												2000				614	E24200	2000	LIN FT	TEMPORARY DOTTED LINE, CLASS I, 642 PAINT	
614										5079	3671	1300	3207			614	E24400	13257	LIN FT	TEMPORARY DOTTED LINE, CLASS I, 740.06, TYPE I	
614							1200									614	E28000	1200	LIN FT	TEMPORARY GORE MARKING, CLASS II	
616					10											616	E10000	10	M.GAL.	WATER	
616					1											616	E20000	1	TON	CALCIUM CHLORIDE	
622													32480			622	E40020	32,480	LIN FT	PORTABLE CONCRETE BARRIER, 32"	
SPEC						60										SPEC	690E98000	60	EACH	MISC.: TOW TRUCK SERVICE (AUTO)	68
SPEC						30										SPEC	690E98000	30	EACH	MISC.: TOW TRUCK SERVICE (COMMERCIAL)	68
SPEC					3900											SPEC	690E98100	3,900	LIN FT	MISC.: RUMBLE STRIPS	67
SPEC						500										SPEC	690E98200	500	SQ FT	MISC.: ADDITIONAL SIGNS, GROUND MOUNTED, AS DIRECTED BY THE ENGINEER	68

CALCULATED JEL

CHECKED

MAINTENANCE OF TRAFFIC GENERAL SUMMARY

CUYAHOGA COUNTY
CUY-480-10.38

73
134

PLOT SUBMITTED: 13-APR-1997 11:12

PLOTTED BY: dlastovk
PLOTTED FROM: i:\users\lhazapis\pid13000\summary\13000GGB.dgn

PHASE I - ESTIMATED TEMPORARY PAVEMENT MARKINGS

LOCATION				A	B	C	D	E	F	G	H	I	J	PCB
				614	614	614	614	614	614	614	614	614	614	622
SIDE	STA	STA	PHASE	TEMPORARY EDGE LINES, 642 PAINT (WHITE)	TEMPORARY EDGE LINE, 642 PAINT (YELLOW)	TEMPORARY CHANNELIZING LINE, 642 PAINT	TEMPORARY LANE LINE, 642 PAINT	TEMPORARY DOTTED LINE, 642 PAINT	TEMPORARY EDGE LINE, 740.06, TYPE 1 (WHITE)	TEMPORARY EDGE LINE, 740.06, TYPE 1 (YELLOW)	TEMPORARY CHANNELIZING LINE, 740.06, TYPE 1	TEMPORARY LANE LINE, 740.06, TYPE 1	TEMPORARY DOTTED LINE, 740.06, TYPE 1	PORTABLE CONCRETE BARRIER, 32"
				L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.
1480-EB	554+45	561+65	1						720					
1480-EB	561+65	563+65	1						200	200	400			
1480-EB	563+65	567+65	1						400	400	800		400	
1480-EB	567+65	574+15	1						650	650	1300			
1480-EB	574+15	582+20	1	805	805		1610							
1480-EB	582+20	583+35	1						115	115		230		
1480-EB	583+35	593+60	1	1025	1025		2050							
1480-EB	593+60	598+00	1						440	440		880		
1480-EB	598+00	601+95	1						395	395		790	395	
1480-EB	601+95	607+40	1						545	545		1090		
1480-EB	607+40	612+60	1						520	520	1040			
1480-EB	612+60	623+50	1		1090		1090		1090					
1480-EB	623+50	625+73	1		223		223		223				223	
1480-EB	625+73	631+66	1		593		593		593					
1480-EB	631+66	636+86	1		520				520		1040			
1480-EB	636+86	643+20	1	634	634		1268							
1480-EB	643+20	644+30	1						110	110		220		
1480-EB	644+30	647+90	1	360	360		720							
1480-EB	647+90	655+90	1		800		800		800			800		
1480-EB	655+90	659+90	1		400		400		400			400	400	
1480-EB	659+90	664+70	1		480		480		480			480		
1480-EB	664+70	669+20	1	450	450		900							
1480-EB	669+20	670+70	1	150	150	300								
1480-EB	670+70	674+40	1						370	370	740			
1480-EB	674+40	689+44	1		1504		1504		1504					
1480-EB	689+44	694+64	1		520				520		1040			
1480-EB	694+64	700+00	1	536	536		1072							
1480-EB	700+00	701+95	1						195	195		390	195	
1480-EB	701+95	713+60	1						1165	1165	2330			
1480-WB	563+55	574+15	1						1060	1060	2120			
1480-WB	574+15	582+35	1	820	820		1640							
1480-WB	582+35	583+50	1						115	115		230		
1480-WB	583+50	593+00	1	950	950		1900							
1480-WB	593+00	599+75	1						675	675		1350		
1480-WB	599+75	602+95	1						320	320		640	320	
1480-WB	602+95	605+00	1						205	205		410		
1480-WB	605+00	608+40	1		340				340			680		
1480-WB	608+40	613+60	1		520				520		1040			
1480-WB	613+60	619+72	1		612		612		612					
1480-WB	619+72	623+88	1		416		416		416				416	
1480-WB	623+88	632+66	1		878		878		878					
1480-WB	632+66	636+36	1		370				370		740			
1480-WB	636+36	637+86	1	150	150	300								
1480-WB	637+86	643+30	1	544	544		1088							
1480-WB	643+30	644+45	1						115	115		230		
1480-WB	644+45	647+90	1	345	345		690							
1480-WB	647+90	652+54	1		464		464		464			464		
1480-WB	652+54	654+54	1		200		200		200				200	
1480-WB	654+54	664+70	1		1016		1016		1016				1016	
1480-WB	664+70	670+20	1	550	550		1100							
1480-WB	670+20	670+70	1	50	50						100			
1480-WB	670+70	675+40	1		470				470		940			
1480-WB	675+40	690+44	1		1504		1504		1504					
1480-WB	690+44	694+14	1		370				370		740			
1480-WB	694+14	694+64	1		50		50				100			
1480-WB	694+64	700+00	1	536	536		1072							
SUB-TOTALS TABLE A				7905	21245	600	25340		21605	7595	14470	9284	3565	

PHASE I - ESTIMATED TEMPORARY PAVEMENT MARKINGS

LOCATION				A	B	C	D	E	F	G	H	I	J	PCB
				614	614	614	614	614	614	614	614	614	614	622
SIDE	STA	STA	PHASE	TEMPORARY EDGE LINES, 642 PAINT (WHITE)	TEMPORARY EDGE LINE, 642 PAINT (YELLOW)	TEMPORARY CHANNELIZING LINE, 642 PAINT	TEMPORARY LANE LINE, 642 PAINT	TEMPORARY DOTTED LINE, 642 PAINT	TEMPORARY EDGE LINE, 740.06, TYPE 1 (WHITE)	TEMPORARY EDGE LINE, 740.06, TYPE 1 (YELLOW)	TEMPORARY CHANNELIZING LINE, 740.06, TYPE 1	TEMPORARY LANE LINE, 740.06, TYPE 1	TEMPORARY DOTTED LINE, 740.06, TYPE 1	PORTABLE CONCRETE BARRIER, 32"
				L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.
1480-WB	700+00	700+25	1						25	25		50		
1480-WB	700+25	701+70	1						145	145		290	145	
1480-WB	701+70	703+00	1						130	130		260		
1480-WB	703+00	715+60	1						1260	1260	2520			
1480-WB	715+60	722+80	1						720					
RAMP W-1	563+55	575+58	1						1203					
RAMP W-1	575+58	577+18	1							160				
RAMP W-2	588+16	594+52	1						636	636				
RAMP W-2	594+52	598+00	1						696					
RAMP W-3	591+00	596+30	1						530	530				
RAMP W-3	596+30	599+75	1						690					
RAMP T-1	623+88	629+00	1						1024					
RAMP T-1	629+00	633+38	1						438	438				
RAMP T-2	625+50	628+50	1						600					
RAMP T-3	648+50	652+54	1						808					
RAMP T-4	647+60	649+20	1	160						160				
RAMP T-4	649+20	651+00	1	180						180				
RAMP T-4	651+00	653+80	1	280					280					
RAMP T-4	653+80	655+90	1						420					
RAMP R-1	701+95	703+50	1						310					
RAMP R-2	701+70	706+06	1						872					
1480 - EB	592+40	596+39	1B						399				399	
1480 - EB	598+00	601+95	1B						395					
1480 - EB	651+35	655+35	1B						400				400	
1480 - EB	655+90	659+90	1B						400					
1480 - WB	594+00	596+00	1B						200				200	
1480 - WB	599+75	602+95	1B						320					
1480 - WB	626+00	629+70	1B						370				370	
1480 - WB	619+72	623+88	1B						416					
RAMP W-2	590+20	592+40	1B						440					
RAMP W-3	592+00	594+00	1B						400					
RAMP T-1	629+70	632+10	1B						480					
SUB-TOTALS (TABLE B)				620					15007	3664	2520	600	1514	
SUB-TOTALS (TABLE A)				7905	21245	600	25340		21605	7595	14470	9284	3565	
SHEET TOTALS				8525	21245	600	25340		36612	11259	16990	9884	5079	
				5.64 MILE			4.80 MILE		9.07 MILE			1.87 MILE		

QUANTITIES CARRIED TO SHEET 73

CALCULATED DRL
CHECKED JEL

TEMPORARY PAVEMENT MARKING QUANTITIES

CUYAHOGA COUNTY
CUY-480-10.38

74
134

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13000MSA.DGN

PHASE II - ESTIMATED TEMPORARY PAVEMENT MARKINGS

LOCATION				A	B	C	D	E	F	G	H	I	J	PCB
				614	614	614	614	614	614	614	614	614	614	
SIDE	STA	STA	PHASE	TEMPORARY EDGE LINES, 642 PAINT (WHITE)	TEMPORARY EDGE LINE, 642 PAINT (YELLOW)	TEMPORARY CHANNELIZING LINE, 642 PAINT	TEMPORARY LANE LINE, 642 PAINT	TEMPORARY DOTTED LINE, 642 PAINT	TEMPORARY EDGE LINE, 740.06, TYPE 1 (WHITE)	TEMPORARY EDGE LINE, 740.06, TYPE 1 (YELLOW)	TEMPORARY CHANNELIZING LINE, 740.06, TYPE 1	TEMPORARY LANE LINE, 740.06, TYPE 1	TEMPORARY DOTTED LINE, 740.06, TYPE 1	
				L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	
				A			D		F	G	H	I	J	
1480-EB	554+45	561+65	2						720	720		720		
1480-EB	561+65	565+39	2						374	374	748			
1480-EB	565+39	570+00	2						461	461	922		461	
1480-EB	570+00	573+50	2						350	350	700			
1480-EB	573+50	582+00	2	850			850			850		850		
1480-EB	582+00	583+60	2						160	160		320		
1480-EB	583+60	592+97	2	937			937			937		937		
1480-EB	592+97	596+97	2						400	400		800	400	
1480-EB	596+97	606+40	2						943	943		1886		
1480-EB	606+40	612+60	2						620	620	1240			
1480-EB	612+60	620+50	2	790			790			790				
1480-EB	620+50	624+83	2	433						433		433		
1480-EB	624+83	627+45	2	262						262		262	262	
1480-EB	627+45	628+50	2						105	105		105		
1480-EB	628+50	631+66	2	316			316			316				
1480-EB	631+66	636+86	2	520						520	1040			
1480-EB	636+86	642+90	2	604						604		1208		
1480-EB	642+90	644+10	2						120	120		240		
1480-EB	644+10	649+20	2	510						510		1020		
1480-EB	649+20	650+54	2						134	134		268		
1480-EB	650+54	654+72	2						418	418		836	418	
1480-EB	654+72	657+05	2						233	233		466		
1480-EB	657+05	661+00	2						395	395		790		
1480-EB	661+00	669+20	2	820			820			820		820		
1480-EB	669+20	674+40	2	520						520	1040			
1480-EB	674+40	689+44	2	1504			1504			1504				
1480-EB	689+44	694+64	2	520						520	1040			
1480-EB	694+64	700+00	2	536						536		1072		
1480-EB	700+00	702+48	2						248	248		496	248	
1480-EB	702+48	713+60	2						1112	1112	2224			
1480-WB	563+55	569+15	2						560	560	1120			
1480-WB	569+15	573+15	2						400	400	800		400	
1480-WB	573+15	575+15	2						200	200	400			
1480-WB	575+15	582+50	2	735			735			735		735		
1480-WB	582+50	583+60	2						110	110		220		
1480-WB	583+60	592+00	2	840			840			840		840		
1480-WB	592+00	592+42	2						42	42		84		
1480-WB	592+42	593+56	2						114	114	228		114	
1480-WB	593+56	605+90	2						1234	1234		2468		
1480-WB	605+90	607+40	2	150			150			150		150		
1480-WB	607+40	613+60	2	620						620	1240			
1480-WB	613+60	618+00	2	440			440			440				
1480-WB	618+00	623+01	2						501	501		501		
1480-WB	623+01	629+00	2	599						599		599	599	
1480-WB	629+00	631+78	2						278	278		278		
1480-WB	631+78	632+66	2	88			88			88		88		
1480-WB	632+66	637+86	2	520						520	1040			
1480-WB	637+86	643+50	2	564			564			564		564		
SUB-TOTALS TABLE A				13678			8034		10232	23910	13782	20056	2902	

PHASE II - ESTIMATED TEMPORARY PAVEMENT MARKINGS

LOCATION				A	B	C	D	E	F	G	H	I	J	
				614	614	614	614	614	614	614	614	614	614	
SIDE	STA	STA	PHASE	TEMPORARY EDGE LINES, 642 PAINT (WHITE)	TEMPORARY EDGE LINE, 642 PAINT (YELLOW)	TEMPORARY CHANNELIZING LINE, 642 PAINT	TEMPORARY LANE LINE, 642 PAINT	TEMPORARY DOTTED LINE, 642 PAINT	TEMPORARY EDGE LINE, 740.06, TYPE 1 (WHITE)	TEMPORARY EDGE LINE, 740.06, TYPE 1 (YELLOW)	TEMPORARY CHANNELIZING LINE, 740.06, TYPE 1	TEMPORARY LANE LINE, 740.06, TYPE 1	TEMPORARY DOTTED LINE, 740.06, TYPE 1	
				L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	
1480-WB	643+50	644+60	2						110	110		220		
1480-WB	644+60	648+70	2	410			410			410		410		
1480-WB	648+70	649+61	2						91	91		182		
1480-WB	649+61	653+55	2	394						394		394	394	
1480-WB	653+55	670+20	2	1665			1665			1665		1665		
1480-WB	670+20	675+30	2	510						510	1020			
1480-WB	675+30	690+44	2	1514			1514			1514				
1480-WB	690+44	695+64	2						520	520	1040			
1480-WB	695+64	696+50	2						86	86		172		
1480-WB	696+50	700+25	2						375	375		750	375	
1480-WB	700+25	711+85	2						1160	1160	2320			
1480-WB	711+85	719+50	2							765				
RAMP W-1	573+15	575+50	2						470					
RAMP W-1	575+50	577+75	2						225	225				
RAMP W-2	588+80	590+40	2						160	160				
RAMP W-2	590+40	592+97	2						514					
RAMP W-3	591+40	592+42	2						204					
RAMP T-1	629+00	631+78	2	278					278					
RAMP T-1	631+78	633+38	2						160	160				
RAMP T-2	627+45	628+45	2	100					100					
RAMP T-3	648+40	648+70	2						30					
RAMP T-3	648+70	649+61	2	91					91					
RAMP T-4	647+60	649+20	2						160	160				
RAMP T-4	649+20	650+54	2						268					
RAMP W 139TH	560+00	565+39	2						539					
RAMP R-1	702+48	703+80	2						264					
RAMP R-2	700+25	704+28	2						806					
RAMP R-2	704+28	705+88	2						160	160				
SUB-TOTALS (TABLE B)				4962			3589		6771	8465	4380	3793	769	
SUB-TOTALS (TABLE A)				13678			8034		10232	23910	13782	20056	2902	
SHEET TOTALS				18640			11623		17003	32375	18162	23849	3671	
				3.53 MILE			2.20 MILE		9.36 MILE			4.52 MILE		

QUANTITIES CARRIED TO SHEET 73

CALCULATED DRL
CHECKED JEL

TEMPORARY PAVEMENT MARKING QUANTITIES

CUYAHOGA COUNTY
CUY-480-10.38

PHASE III - ESTIMATED TEMPORARY PAVEMENT MARKINGS

LOCATION				A	B	C	D	E	F	G	H	I	J	PCB
				614	614	614	614	614	614	614	614	614	614	622
SIDE	STA	STA	PHASE	TEMPORARY EDGE LINES, 642 PAINT (WHITE)	TEMPORARY EDGE LINE, 642 PAINT (YELLOW)	TEMPORARY CHANNELIZING LINE, 642 PAINT	TEMPORARY LANE LINE, 642 PAINT	TEMPORARY DOTTED LINE, 642 PAINT	TEMPORARY EDGE LINE, 740.06, TYPE I (WHITE)	TEMPORARY EDGE LINE, 740.06, TYPE I (YELLOW)	TEMPORARY CHANNELIZING LINE, 740.06, TYPE I	TEMPORARY LANE LINE, 740.06, TYPE I	TEMPORARY DOTTED LINE, 740.06, TYPE I	PORTABLE CONCRETE BARRIER, 32"
				L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.
1480-EB	571+70	578+00	3A						630					
1480-EB	578+00	591+50	3A						1350	1350	2700			
1480-EB	591+50	598+00	3A						650	650		1300		
1480-EB	598+00	601+95	3A						395	395		790	395	
1480-EB	601+95	608+90	3A						695	695		1390		
1480-EB	608+90	623+50	3A	1460	1460		2920							
1480-EB	623+50	625+50	3A	200				200						
1480-EB	625+50	636+36	3A	1086	1086		2172							
1480-EB	636+36	647+90	3A						1154	1154		2308		
1480-EB	647+90	655+90	3A	800	800		1600							
1480-EB	655+90	659+90	3A	400	400		800	400						
1480-EB	659+90	664+70	3A	480	480		960							
1480-EB	664+70	670+70	3A						600	600		1200		
1480-EB	670+70	694+14	3A	2344	2344		4688							
1480-EB	694+14	700+10	3A						596	596	1192			
1480-EB	700+10	701+95	3A						185	185		370	185	
1480-EB	701+95	713+60	3A						1165	1165	2330			
1480-EB	713+60	714+10	3A						50					
1480-WB	579+40	579+90	3A						50					
1480-WB	579+90	592+50	3A						1260	1260	2520			
1480-WB	592+50	599+75	3A						725	725		1450		
1480-WB	599+75	602+95	3A						320	320		640	320	
1480-WB	602+95	608+90	3A						595	595		1190		
1480-WB	608+90	619+72	3A	1082	1082		2164							
1480-WB	619+72	623+72	3A	400	400		800	400						
1480-WB	623+72	636+36	3A	1264	1264		2528		1264	1264		2528		
1480-WB	636+36	647+90	3A						1154	1154		2308		
1480-WB	647+90	652+54	3A	464	464		928							
1480-WB	652+54	654+54	3A	200	200		400	200						
1480-WB	654+54	664+70	3A	1016	1016		2032							
1480-WB	664+70	670+70	3A						600	600		1200		
1480-WB	670+70	694+14	3A	2344	2344		4688							
1480-WB	694+14	698+00	3A						386	386		772		
1480-WB	698+00	702+00	3A						400	400		800	400	
1480-WB	702+00	703+00	3A											
1480-WB	703+00	715+60	3A						1260	1260	2520			
1480-WB	715+60	722+80	3A						720					
SUB-TOTALS TABLE A				13540	13340		26680	1200	16204	14754	11262	18246	1300	

PHASE III - ESTIMATED TEMPORARY PAVEMENT MARKINGS

LOCATION				A	B	C	D	E	F	G	H	I	J	PCB
				614	614	614	614	614	614	614	614	614	614	622
SIDE	STA	STA	PHASE	TEMPORARY EDGE LINES, 642 PAINT (WHITE)	TEMPORARY EDGE LINE, 642 PAINT (YELLOW)	TEMPORARY CHANNELIZING LINE, 642 PAINT	TEMPORARY LANE LINE, 642 PAINT	TEMPORARY DOTTED LINE, 642 PAINT	TEMPORARY EDGE LINE, 740.06, TYPE I (WHITE)	TEMPORARY EDGE LINE, 740.06, TYPE I (YELLOW)	TEMPORARY CHANNELIZING LINE, 740.06, TYPE I	TEMPORARY LANE LINE, 740.06, TYPE I	TEMPORARY DOTTED LINE, 740.06, TYPE I	PORTABLE CONCRETE BARRIER, 32"
				L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.
RAMP W-2	588+16	595+41	3A	725						725				
RAMP W-2	595+41	596+73	3A						132	132				
RAMP W-2	596+73	598+00	3A						127		127			
RAMP W-3	591+00	598+00	3A						700	700				
RAMP W-3	598+00	599+75	3A						175		175			
RAMP T-1	623+72	624+87	3A						115		115			
RAMP T-1	624+87	625+86	3A						99		99			
RAMP T-1	625+86	633+38	3A						752	752				
RAMP T-1	631+75	635+00	3A						325	325				
RAMP T-2	625+50	628+50	3A						300		300			
RAMP T-3	648+50	650+50	3A						200		200			
RAMP T-3	650+50	652+54	3A						204	204				
RAMP T-4	647+60	653+80	3A	620						620				
RAMP T-4	653+80	654+75	3A						95	95				
RAMP T-4	654+75	655+90	3A						115		115			
RAMP R-1	701+95	703+50	3A						155			155		
RAMP R-2	702+18	703+44	3A						126		126			
RAMP R-2	703+44	706+06	3A						262	262				
1480-EB	651+35	655+35	3B	400				400						
1480-EB	655+35	659+90	3B	455										
1480-WB	619+72	625+88	3B	616										
1480-WB	625+88	629+88	3B	400				400						
RAMP T-1	629+88	631+02	3B			114								
	631+02	633+70	3B						268	268				
RAMP T-4	647+60	650+08	3B						248	248				
	650+08	651+35	3B	127		127								
SUB-TOTALS (TABLE B)				3343		241		800	4398	4331	1257	155		
SUB-TOTALS (TABLE A)				13540	13340		26680	1200	16204	14754	11262	18246	1300	
SHEET TOTALS				16883	13340	241	26680	2000	20602	19085	12519	18401	1300	
				3.20 MILE			5.06 MILE		7.52 MILE			3.49 MILE		

QUANTITIES CARRIED TO SHEET 73

CALCULATED DRL
CHECKED JEL

TEMPORARY PAVEMENT MARKING QUANTITIES

CUYAHOGA COUNTY
CUY-480-10.38

PHASE IV - ESTIMATED TEMPORARY PAVEMENT MARKINGS

LOCATION				A	B	C	D	E	F	G	H	I	J	
				614	614	614	614	614	614	614	614	614	614	
SIDE	STA	STA	PHASE	TEMPORARY EDGE LINES, 642 PAINT (WHITE)	TEMPORARY EDGE LINE, 642 PAINT (YELLOW)	TEMPORARY CHANNELIZING LINE, 642 PAINT	TEMPORARY LANE LINE, 642 PAINT	TEMPORARY DOTTED LINE, 642 PAINT	TEMPORARY EDGE LINE, 740.06, TYPE 1 (WHITE)	TEMPORARY EDGE LINE, 740.06, TYPE 1 (YELLOW)	TEMPORARY CHANNELIZING LINE, 740.06, TYPE 1	TEMPORARY LANE LINE, 740.06, TYPE 1	TEMPORARY DOTTED LINE, 740.06, TYPE 1	
				L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	
1480-EB	571+70	578+90	4							720				
1480-EB	578+90	591+50	4						1260	1260	2520			
1480-EB	591+50	592+97	4						147	147		294		
1480-EB	592+97	596+97	4						400	400		800	400	
1480-EB	596+97	605+90	4						893	893		1786		
1480-EB	605+90	608+90	4						300	300		600		
1480-EB	608+90	620+50	4	1160			1160			1160		1160		
1480-EB	620+50	624+50	4	400						400		800		
1480-EB	624+50	627+45	4	295						295		590	295	
1480-EB	627+45	628+50	4						105	105		210		
1480-EB	628+50	636+36	4	786			786			786		786		
1480-EB	636+36	647+90	4						1154	1154		2308		
1480-EB	647+90	650+54	4	264			264			264		264		
1480-EB	650+54	657+00	4						646	646		1292	646	
1480-EB	657+00	660+00	4						300	300		600		
1480-EB	660+00	664+70	4	470			470			470		470		
1480-EB	664+70	670+70	4						600	600		1200		
1480-EB	670+70	694+14	4	2344			2344			2344		2344		
1480-EB	694+14	697+14	4						300	300		600		
1480-EB	697+14	700+00	4						286	286		572		
1480-EB	700+00	702+50	4						250	250		500	250	
1480-EB	702+50	713+60	4						1110	1110	2220			
1480-WB	579+90	592+42	4						1252	1252	2504			
1480-WB	592+42	594+56	4						214	214		428	214	
1480-WB	594+56	605+90	4						1134	1134		2268		
1480-WB	605+90	608+90	4						300	300		600		
1480-WB	608+90	620+00	4	1110			1110			1110		1110		
1480-WB	620+00	623+01	4						301	301		602		
1480-WB	623+01	629+00	4	599						599		1198	599	
1480-WB	629+00	631+78	4						278	278		556		
1480-WB	631+78	636+36	4	458			458			458		458		
1480-WB	636+36	649+60	4						1324	1324		2648		
1480-WB	649+60	653+55	4	395						395		790	395	
1480-WB	653+55	657+00	4	345						345		690		
1480-WB	657+00	664+70	4	770			770			770		770		
1480-WB	664+70	670+70	4						600	600		1200		
1480-WB	670+70	692+00	4	2130			2130			2130		2130		
1480-WB	692+00	696+50	4						450	450		900		
1480-WB	696+50	700+58	4						408	408		816	408	
1480-WB	700+58	703+00	4						242	242		484		
1480-WB	703+00	715+60	4						1260	1260	2520			
1480-WB	715+60	722+80	4							720				
SUB-TOTALS TABLE A				11526			9492		15514	28480	9764	34824	3207	

QUANTITIES CARRIED TO SHEET 73

PHASE IV - ESTIMATED TEMPORARY PAVEMENT MARKINGS

LOCATION				A	B	C	D	E	F	G	H	I	J	
				614	614	614	614	614	614	614	614	614	614	
SIDE	STA	STA	PHASE	TEMPORARY EDGE LINES, 642 PAINT (WHITE)	TEMPORARY EDGE LINE, 642 PAINT (YELLOW)	TEMPORARY CHANNELIZING LINE, 642 PAINT	TEMPORARY LANE LINE, 642 PAINT	TEMPORARY DOTTED LINE, 642 PAINT	TEMPORARY EDGE LINE, 740.06, TYPE 1 (WHITE)	TEMPORARY EDGE LINE, 740.06, TYPE 1 (YELLOW)	TEMPORARY CHANNELIZING LINE, 740.06, TYPE 1	TEMPORARY LANE LINE, 740.06, TYPE 1	TEMPORARY DOTTED LINE, 740.06, TYPE 1	
				L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	
RAMP W-2	588+80	591+50	4						270	270				
RAMP W-2	591+50	592+97	4						294					
RAMP W-3	591+40	592+42	4						204					
RAMP T-1	629+00	631+78	4	278					278					
RAMP T-1	631+78	633+38	4						160	160				
RAMP T-2	627+45	628+45	4	200										
RAMP T-3	648+40	648+70	4							30				
RAMP T-3	648+70	649+60	4	90					90					
RAMP T-4	647+60	649+20	4						160	160				
RAMP T-4	649+20	650+54	4	134					134					
RAMP R-1	702+50	703+80	4						260					
RAMP R-2	700+25	704+28	4						806					
RAMP R-2	704+28	705+88	4						160	160				
SUB-TOTALS (TABLE B)				702					2816	780				
SUB-TOTALS (TABLE A)				11526			9492		15514	28480	9764	34824	3207	
SHEET TOTALS				12228			9492		18330	29260	9764	34824	3207	
				2.32 MILE			1.80 MILE		9.02 MILE			6.60 MILE		

SIDE	FROM	TO	PHASE	622 PORTABLE CONCRETE BARRIER, 32"	614 BARRIER REFLECTOR, TYPE B
				LIN FT	EACH
1480-EB	568+37	594+57	PHASE 1	2620	52
1480-EB	631+70	648+00	PHASE 1	1630	33
1480-EB	660+10	670+80	PHASE 1	1070	21
1480-EB	689+50	700+10	PHASE 1	1060	21
1480-WB	573+40	596+40	PHASE 1	2300	46
1480-WB	636+26	650+06	PHASE 1	1380	28
1480-WB	664+60	675+30	PHASE 1	1070	21
1480-WB	694+04	702+54	PHASE 1	850	17
RAMP W-2	589+76	594+56	PHASE 1	480	10
RAMP W-3	592+50	593+40	PHASE 1	90	2
RAMP T-1	628+90	632+40	PHASE 1	350	7
RAMP T-3	648+40	649+60	PHASE 1	120	2
RAMP T-4	648+80	651+10	PHASE 1	230	5
RAMP R-2	702+50	703+40	PHASE 1	90	2
SUB-TOTALS (TABLE C)				13340	267

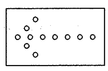
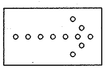
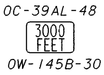
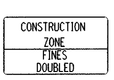
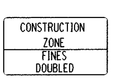
SIDE	FROM	TO	PHASE	622 PORTABLE CONCRETE BARRIER, 32"	614 BARRIER REFLECTOR, TYPE B
				LIN FT	EACH
1480-EB	591+00	609+00	PHASE 1B	1800	36
1480-WB	595+70	613+80	PHASE 1B	1810	36
1480-EB	568+90	609+00	PHASE 2	4010	80
1480-EB	631+76	648+06	PHASE 2	1630	33
1480-EB	660+10	670+80	PHASE 2	1070	21
1480-EB	689+54	700+04	PHASE 2	1050	21
1480-WB	573+40	613+50	PHASE 2	4010	80
1480-WB	636+26	652+56	PHASE 2	1630	33
1480-WB	664+60	675+30	PHASE 2	1070	21
1480-WB	694+04	704+64	PHASE 2	1060	21
SUB-TOTALS (TABLE D)				19140	382
SUB-TOTALS (TABLE C)				13340	267
TOTALS				32480	649

CALCULATED DRL
CHECKED JEL

TEMPORARY PAVEMENT MARKING QUANTITIES

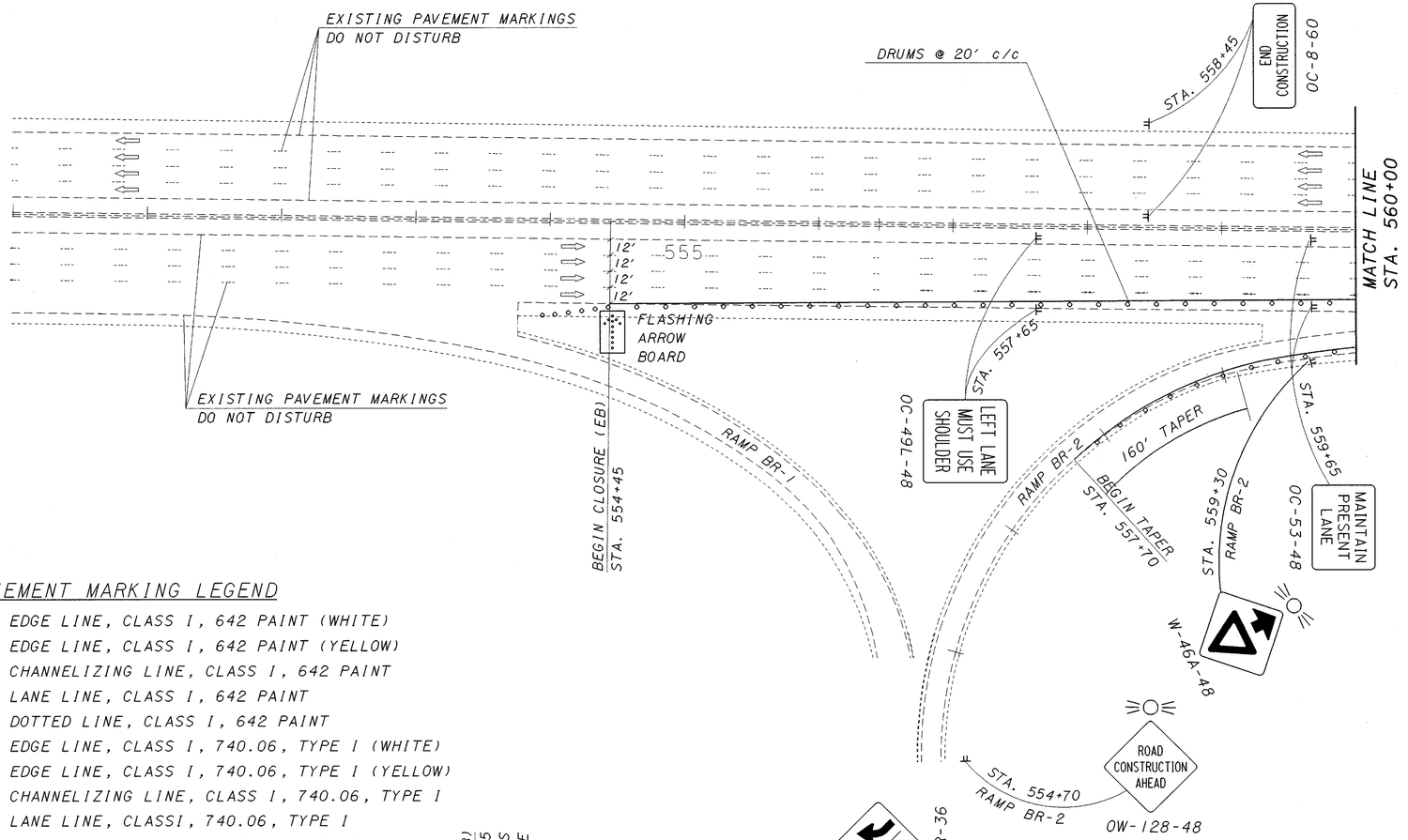
CUYAHOGA COUNTY
CUY-480-10.38

77
134

*LOCATION			SIGN	
EASTBOUND	EASTBOUND	WESTBOUND	PHASE I, III	PHASE II, IV
PHASE III,IV	PHASE I, II	PHASE I,II II, IV		
STA. 571+70	STA. 554+45	STA. 722+80	 FLASHING ARROW BOARD	 FLASHING ARROW BOARD
STA. 564+20	STA. 546+95	STA. 730+30	 OW-60C-48	 OW-60D-48
STA. 556+70	STA. 539+45	STA. 737+80	 OW-122-48	 OW-123-48
STA. 550+25	STA. 533+00	STA. 745+30	 R-10-48	 R-10-48
STA. 541+70	STA. 524+45	STA. 752+80	 R-11A-48	 R-11A-48
STA. 537+95	STA. 520+70	STA. 756+55	 OC-39AR-48  OW-145B-30	 OC-39AL-48  OW-145B-30
STA. 534+40	STA. 517+15	STA. 764+05	 OW-128-48  OW-145B-30	 OW-128-48  OW-145B-30
STA. 526+70	STA. 509+45	STA. 771+55	 R-180-48	 R-180-48
STA. 466+10	STA. 448+85	STA. 828+40	 OW-166-48	 OW-166-48
STA. 458+60	STA. 441+35	STA. 835+90	 OW-122-48  OW-145A-30	 OW-123-48  OW-145A-30
STA. 451+10	STA. 433+85	STA. 843+40	 OW-128-48	 OW-128-48

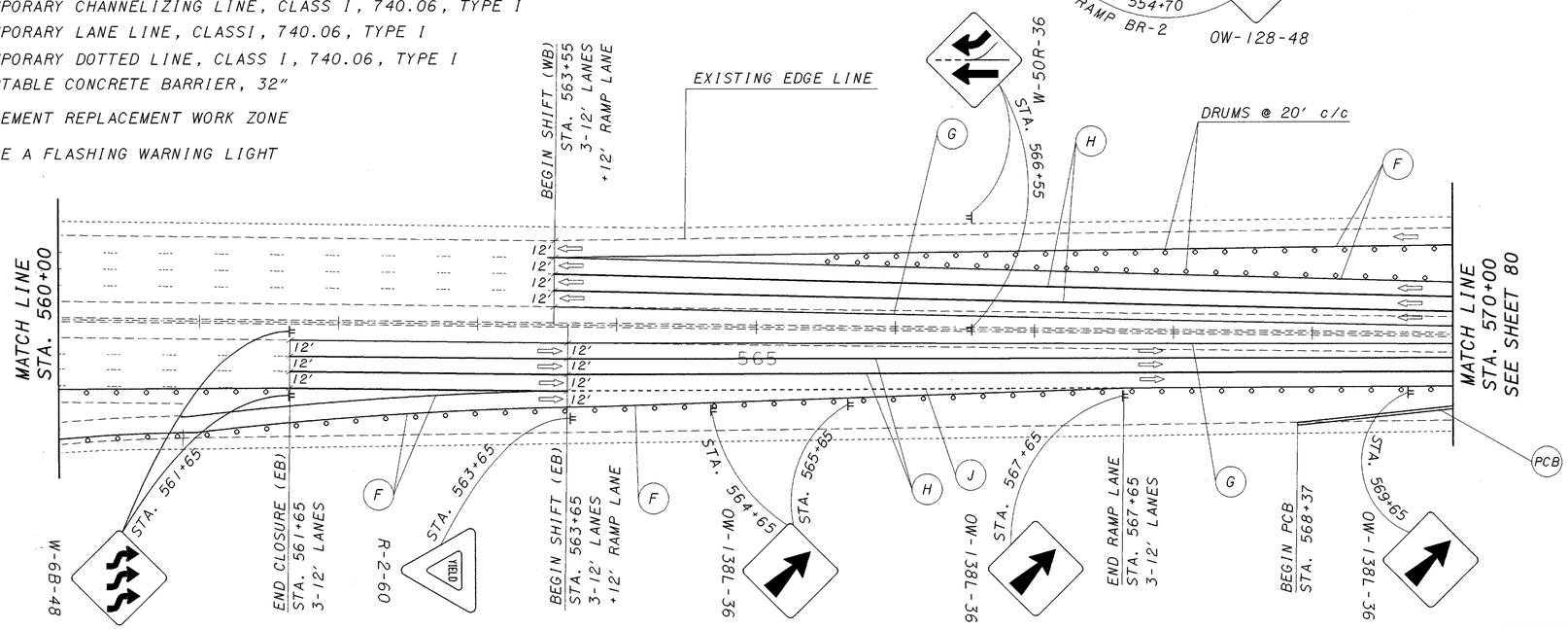
* FIELD ADJUSTMENTS MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER.

SEE SHEET 78 FOR ADVANCE WARNING SIGNS



TEMPORARY PAVEMENT MARKING LEGEND

- (A) - TEMPORARY EDGE LINE, CLASS I, 642 PAINT (WHITE)
- (B) - TEMPORARY EDGE LINE, CLASS I, 642 PAINT (YELLOW)
- (C) - TEMPORARY CHANNELIZING LINE, CLASS I, 642 PAINT
- (D) - TEMPORARY LANE LINE, CLASS I, 642 PAINT
- (E) - TEMPORARY DOTTED LINE, CLASS I, 642 PAINT
- (F) - TEMPORARY EDGE LINE, CLASS I, 740.06, TYPE I (WHITE)
- (G) - TEMPORARY EDGE LINE, CLASS I, 740.06, TYPE I (YELLOW)
- (H) - TEMPORARY CHANNELIZING LINE, CLASS I, 740.06, TYPE I
- (I) - TEMPORARY LANE LINE, CLASSI, 740.06, TYPE I
- (J) - TEMPORARY DOTTED LINE, CLASS I, 740.06, TYPE I
- (PCB) - PORTABLE CONCRETE BARRIER, 32"
- - PAVEMENT REPLACEMENT WORK ZONE
- - TYPE A FLASHING WARNING LIGHT



MAINTENANCE OF TRAFFIC - PHASE I
PAVEMENT REPLACEMENT
STA. 550+00 TO STA. 570+00

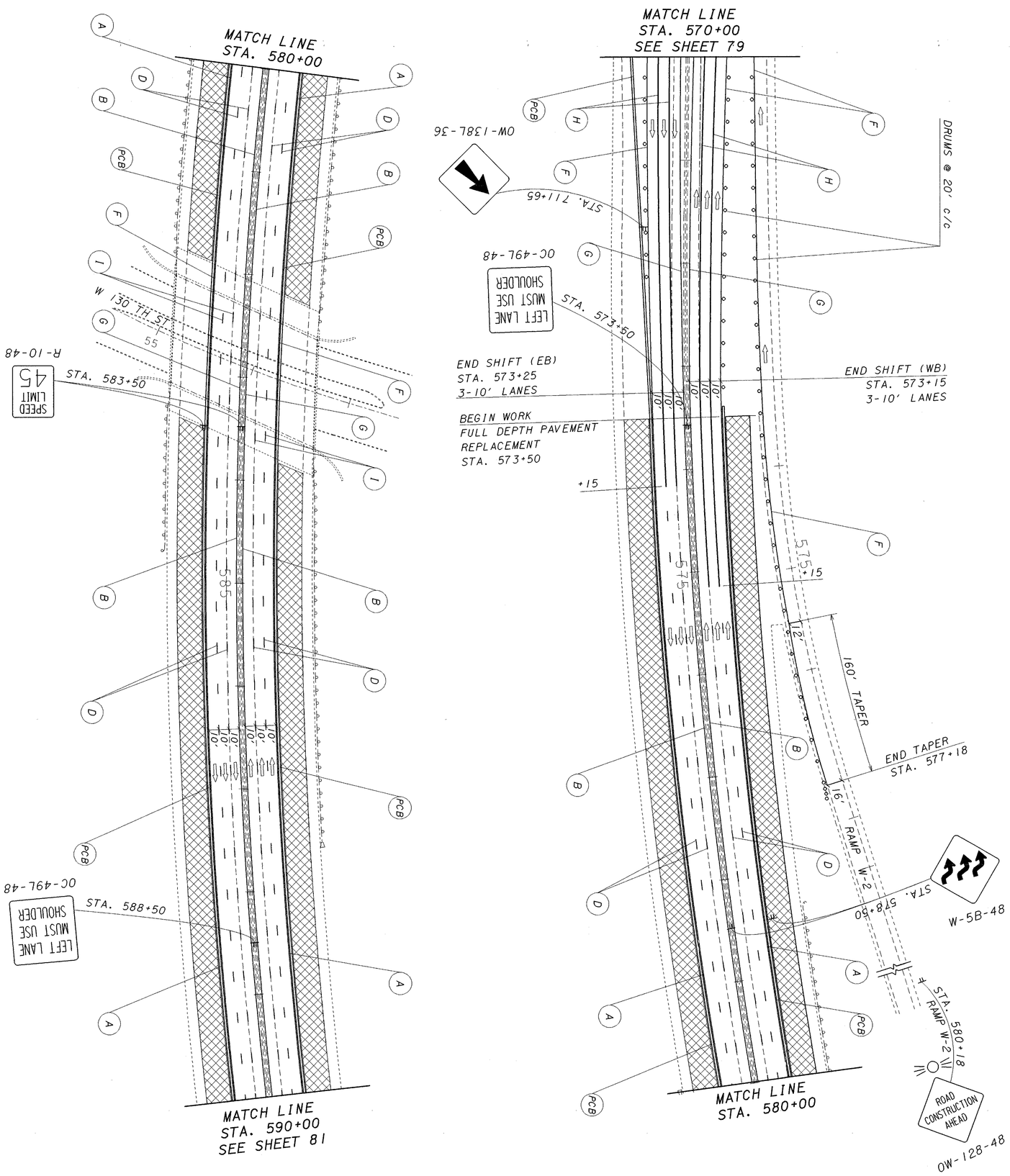
CUYAHOGA COUNTY
CUY-480-10.38

79
134

CALCULATED JEL
CHECKED ENF
DRAWN
REVISED

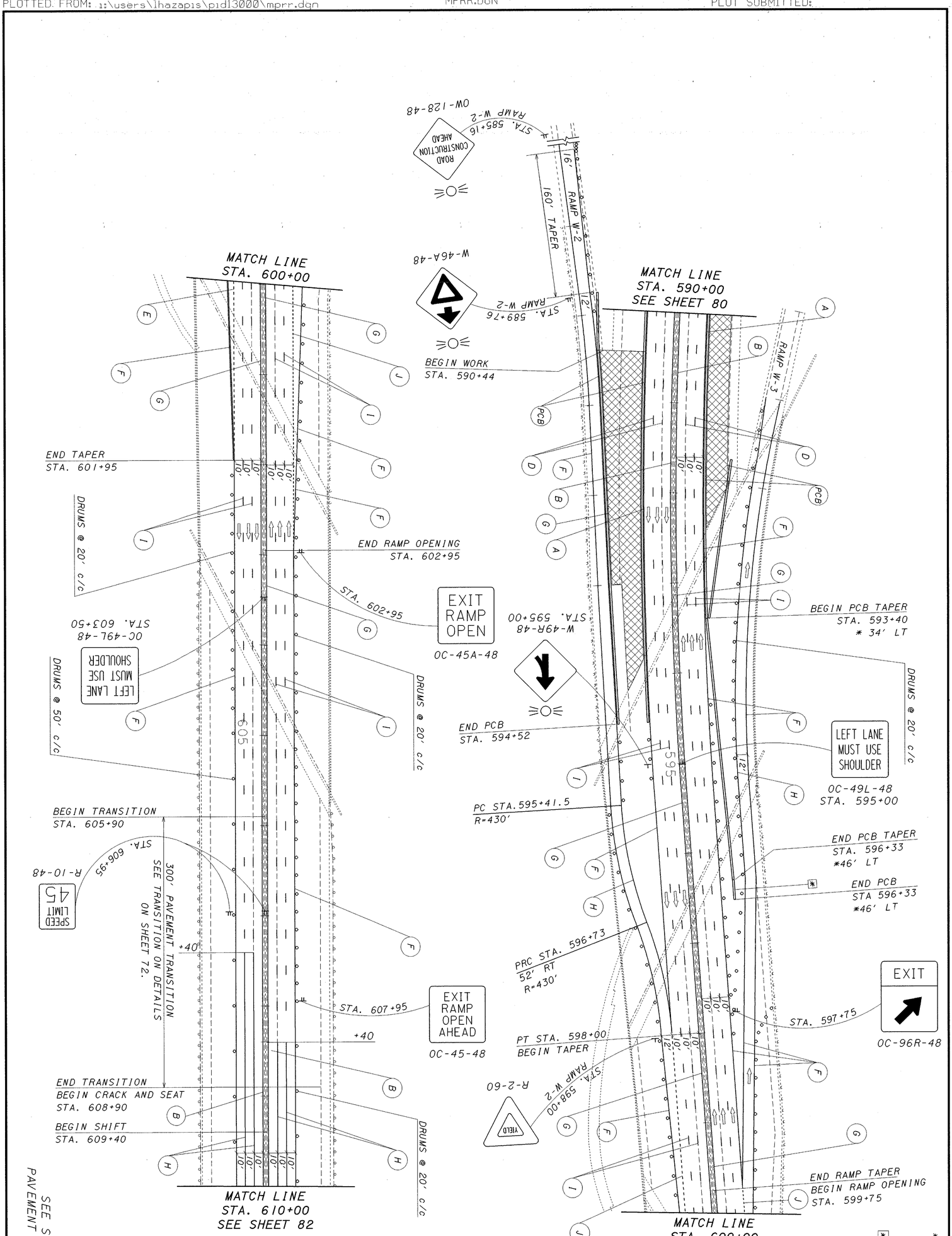
SCALE IN FEET
0 50 100

PLOTTED BY: jlorincz
PLOTTED FROM: i:\users\lhazapis\pid13000\mpbb.dgn
MPBB.DGN
PLOT SUBMITTED: 13-APR-1997 09:46

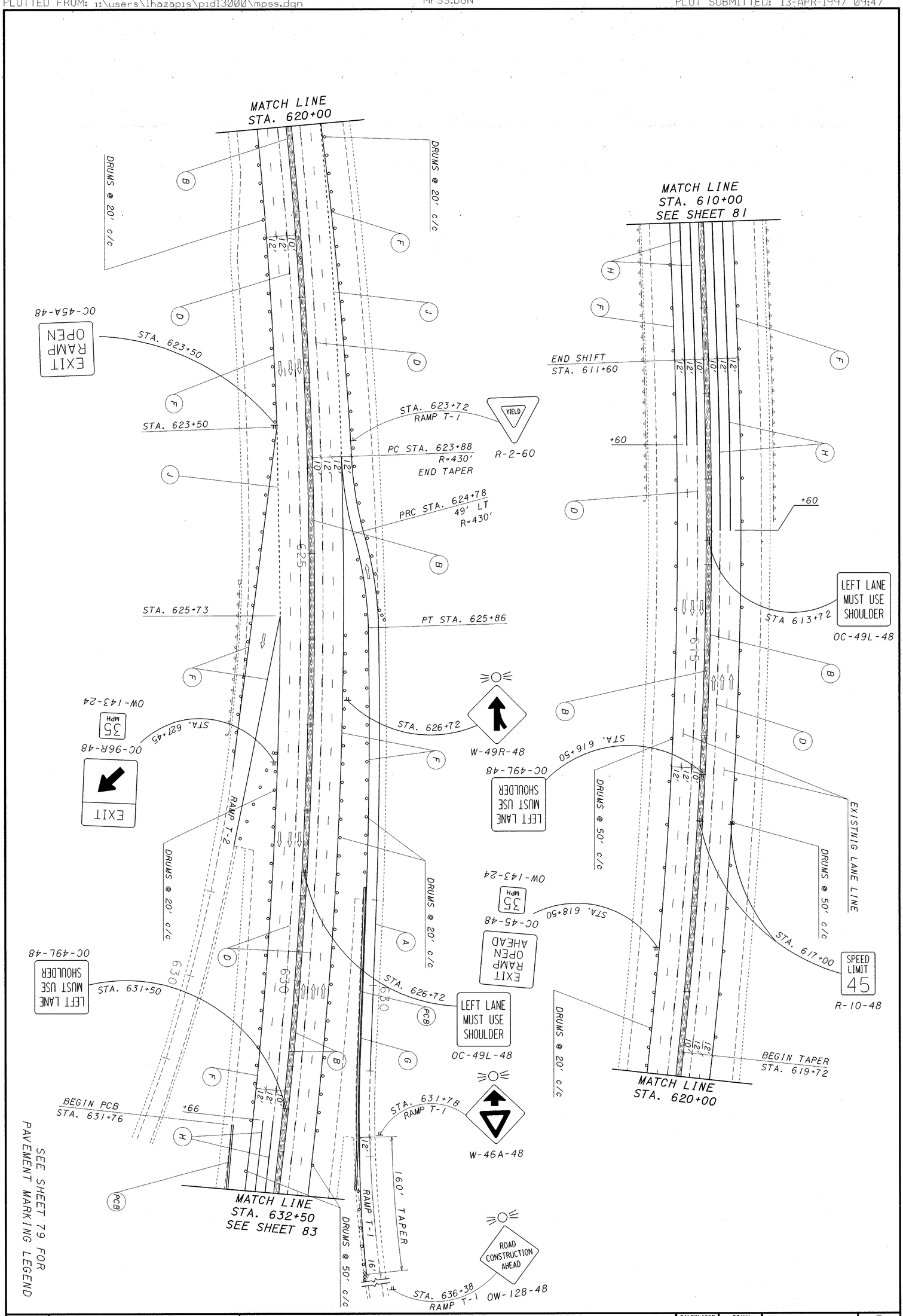


SEE SHEET 79 FOR PAVEMENT MARKING LEGEND

80 / 134	CUYAHOGA COUNTY CUY-480-10.38	MAINTENANCE OF TRAFFIC - PHASE I PAVEMENT REPLACEMENT STA. 570+00 TO STA. 590+00	CALCULATED JEL CHECKED ENF	DRAWN REVISED	0 50 100 SCALE IN FEET	



81 / 134	CUYAHOGA COUNTY CUY-480-10.38	MAINTENANCE OF TRAFFIC - PHASE 1A PAVEMENT REPLACEMENT STA. 590+00 TO STA. 610+00	CALCULATED JEL CHECKED ENF	DRAWN REVISED	0 50 100 SCALE IN FEET



82 / 134	CUYAHOGA COUNTY CUY-480-10.38	MAINTENANCE OF TRAFFIC - PHASE 1A PAVEMENT REPLACEMENT STA. 610+00 TO STA. 632+50	CALCULATED JEL CHECKED ENF	DRAWN REVISED	0 50 100 SCALE IN FEET

MAINTENANCE OF TRAFFIC - PHASE 1
PAVEMENT REPLACEMENT
STA. 632+50 TO STA. 657+50

CALCULATED JEL
CHECKED ENF
DRAWN
REVISED

SCALE IN FEET
0 50 100

CUYAHOGA COUNTY
CUY-480-10.38

83
134

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MPUU.DGN
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EXIT RAMP OPEN
OC-45A-48
35 MPH
W-143-24
DRUMS @ 20' C/C
STA. 658+00
DRUMS @ 50' c/c
MATCH LINE STA. 657+50 SEE SHEET 83
660
665
10'
17:1
DRUMS @ 20' c/c
BEGIN PCB STA. 660+10
STA. 660+90
R-10-48
SPEED LIMIT 45
STA. 664+00
OC-49L-48
LEFT LANE MUST USE SHOULDER
PCB
END CRACK AND SEAT
BEGIN TRANSITION
STA. 664+70
300' TRANSITION
SEE TRANSITION DETAIL
ON SHEET 72.
SOUTHWOOD DRIVE
END TRANSITION
BEGIN TRANSITION
STA. 667+70
+20
MATCH LINE STA. 670+00
LEFT LANE MUST USE SHOULDER
OC-49L-48
STA. 670+25
END TAPER
STA. 659+90
END PCB
STA. 675+30
+40
EXISTING LANE LINE
12'
675
680
END TRANSITION
BEGIN CRACK AND SEAT
STA. 670+70
BEGIN SHIFT
STA. 671+20
END SHIFT
STA. 673+40
STA. 679+00
MATCH LINE STA. 682+50 SEE SHEET 85
SEE SHETT 79 FOR PAVEMENT MARKING LEGEND

MAINTENANCE OF TRAFFIC - PHASE I
PAVEMENT REPLACEMENT
STA. 657+50 TO STA. 682+50

CUYAHOGA COUNTY
CUY-480-10.38

CALCULATED JEL
CHECKED ENF
DRAWN
REVISED

SCALE IN FEET
0 50 100

84
134

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PLOTTED FROM: i:\users\lhazapis\pid13000\mpff.dgn
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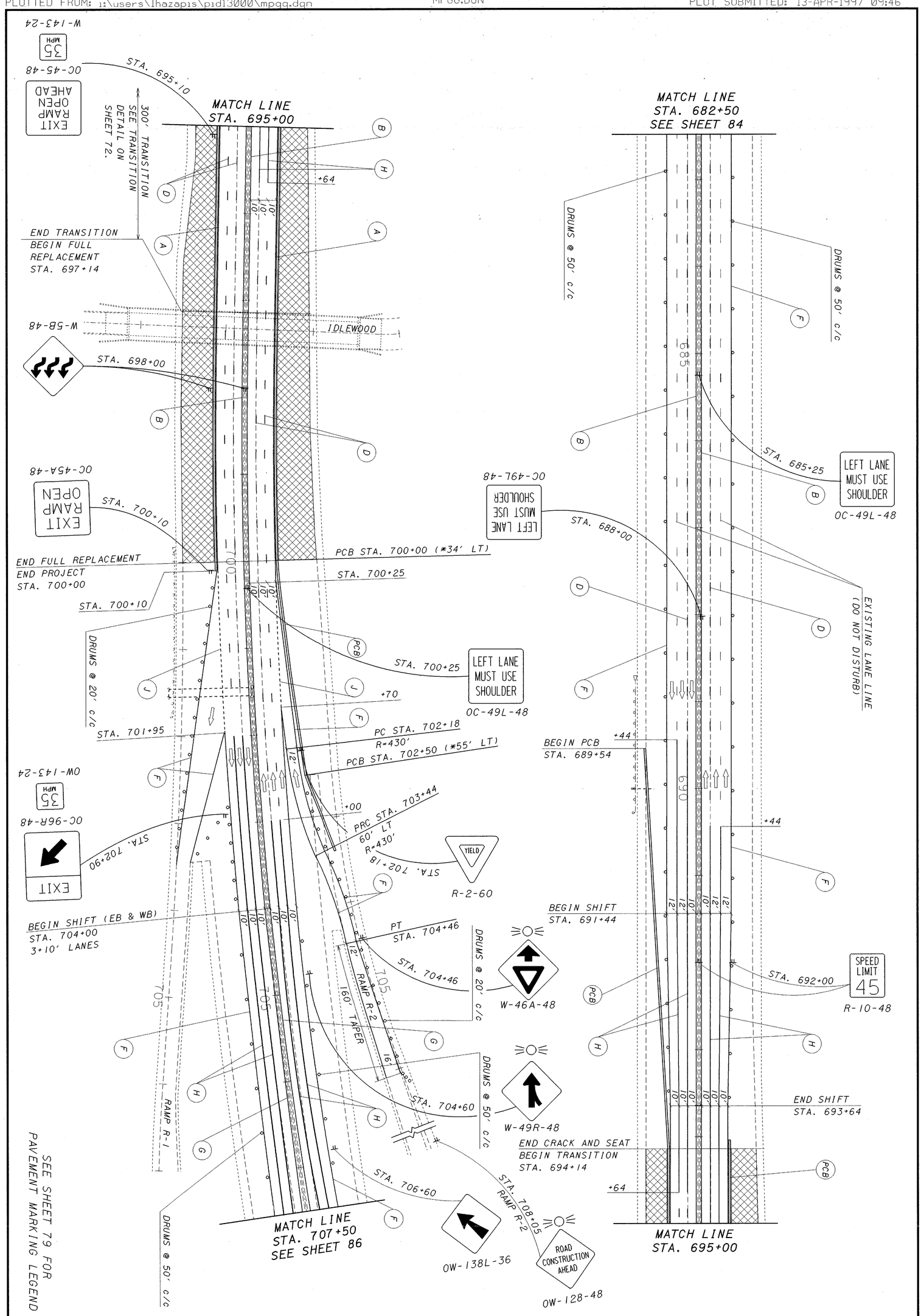
MPFF.DGN

PLOTTED BY: jlorincz
PLOTTED FROM: i:\users\lhazapis\pid13000\mpgg.dgn
MPGG.DGN
PLOT SUBMITTED: 13-APR-1997 09:46



85 / 134	CUYAHOGA COUNTY CUY-480-10.38	MAINTENANCE OF TRAFFIC - PHASE I PAVEMENT REPLACEMENT STA. 682+50 TO STA. 707+50	CALCULATED JEL CHECKED ENF	DRAWN REVISED	0 50 100 SCALE IN FEET

PLOTTED BY: jlorincz
PLOTTED FROM: i:\users\lhazapis\pid13000\mphh.dgn
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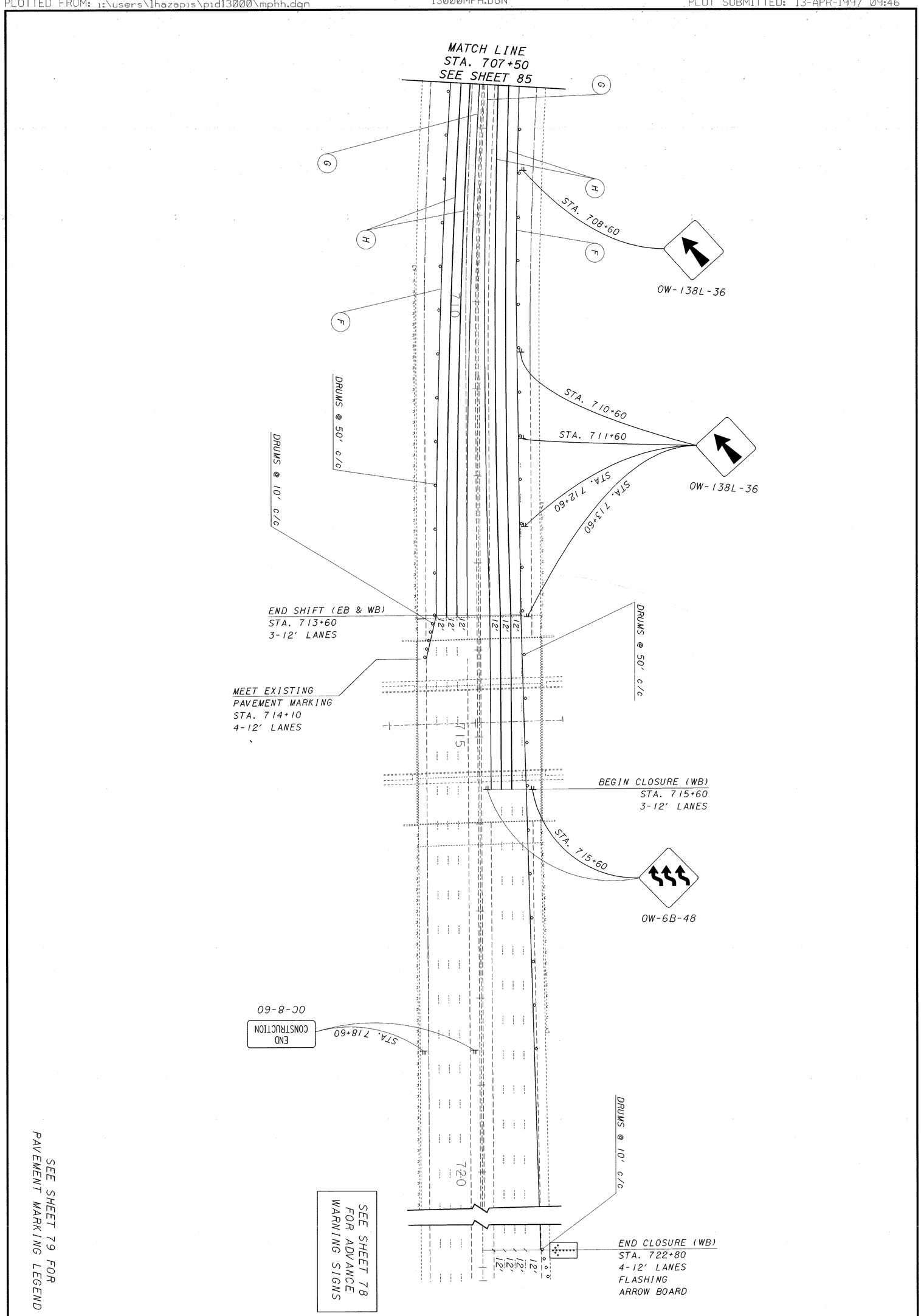
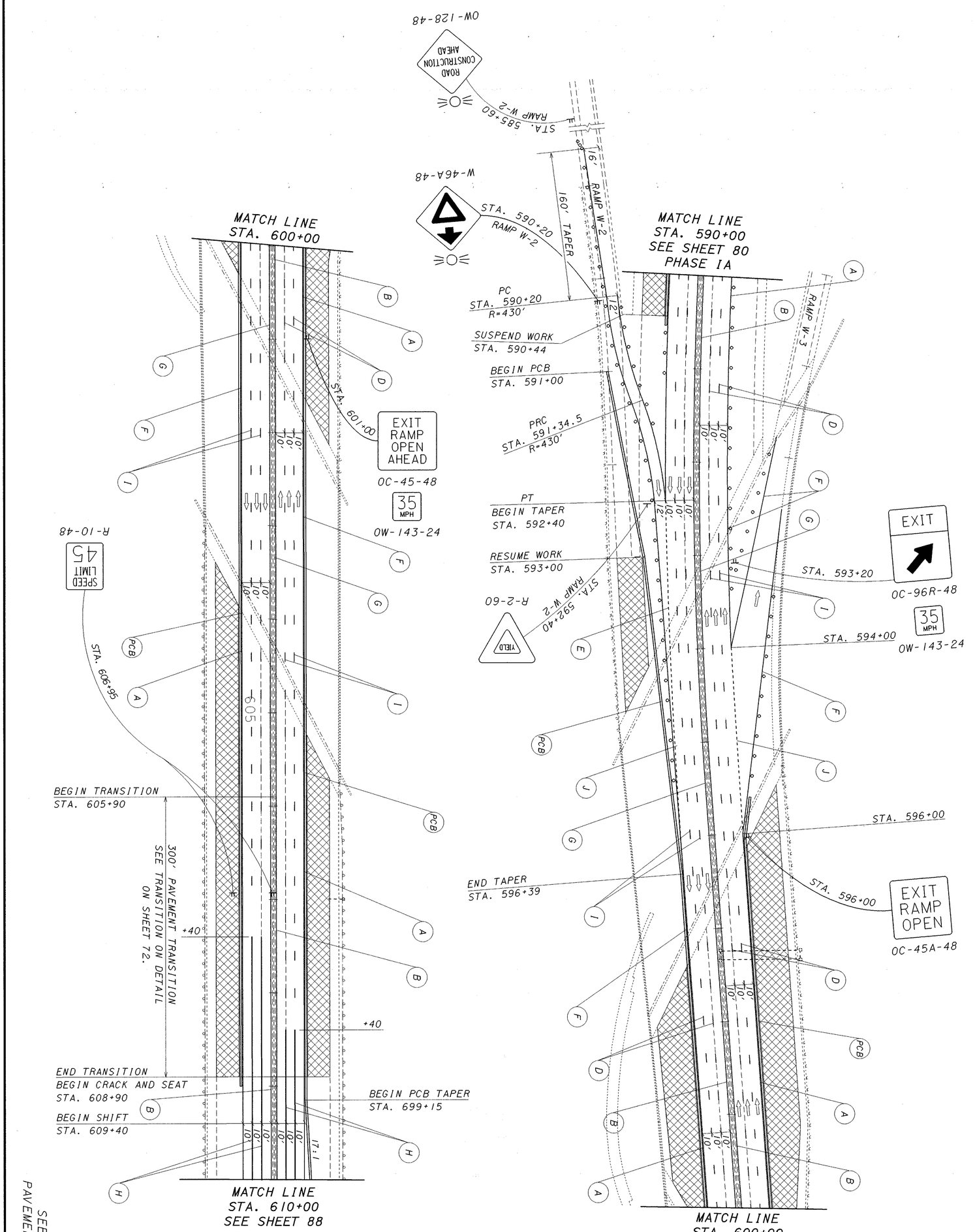
PLOT SUBMITTED: 13-APR-1997 09:46



86 / 134	CUYAHOGA COUNTY CUY-480-10.38	MAINTENANCE OF TRAFFIC - PHASE I PAVEMENT REPLACEMENT STA. 707+50 TO STA. 720+00	CALCULATED JEL CHECKED ENF	DRAWN REVISED	0 50 100 SCALE IN FEET



87 / 134	CUYAHOGA COUNTY CUY-480-10.38	MAINTENANCE OF TRAFFIC - PHASE 1B PAVEMENT REPLACEMENT STA. 590+00 TO STA. 610+00	CALCULATED JEL CHECKED ENF	DRAWN REVISED	0 50 100 SCALE IN FEET

SEE SHEET 79 FOR
PAVEMENT MARKING LEGEND

MAINTENANCE OF TRAFFIC - PHASE 1B
PAVEMENT REPLACEMENT
STA. 610+00 TO STA. 632+50

CUYAHOGA COUNTY
CUY-480-10.38

CALCULATED JEL
CHECKED ENF
DRAWN
REVISED

0 50 100
SCALE IN FEET

88
134

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PLOT SUBMITTED: 13-APR-1997 09:46

SEE SHEET 78
FOR ADVANCE
WARNING SIGNS

5 DRUMS @ 10' c/c

FLASHING
ARROW BOARD

END
CONSTRUCTION
OC-8-60

STA. 568+45

555

MATCH LINE
STA. 560+00

EXISTING PAVEMENT MARKINGS
DO NOT DISTURB

BEGIN CLOSURE (EB)
STA. 554+45
4-12' LANES

RAMP BR-1

RAMP BR-2

F

G

I

DRUMS @ 50' c/c

SEE SHEET 79 FOR
PAVEMENT MARKING LEGEND

ROAD
CONSTRUCTION
AHEAD
OW-128-48

MEET EXISTING
PAVEMENT MARKINGS
4-12' LANES

BEGIN SHIFT (WB)
STA. 563+55
3-12' LANES

5 DRUMS
@ 10' c/c

DRUMS @ 50' c/c

DRUMS @ 20' c/c

STA. 569+15

DRUMS @ 50' c/c

MATCH LINE
STA. 560+00

565

12'
12'
12'
12'
12'
12'
12'
12'

10.8'
10.8'
10.8'

MATCH LINE
STA. 570+00
SEE SHEET 90

16'

EXISTING LANE LINES
TO BE REMOVED

EXISTING LANE LINES
DO NOT DISTURB

W-46A-36

END CLOSURE (EB)
STA. 561+65
3-12' LANES

OW-138R-36

STA. 563+39

BEGIN SHIFT (EB)
STA. 563+65
3-12' LANES

R-2-60

STA. 565+39

YIELD

BEGIN RAMP TRAFFIC
STA. 565+39

STA. 564+65

OW-138R-36

STA. 565+65

BEGIN PCB
STA. 568+90

PCB

END RAMP TRAFFIC
STA 570+00

OW-138R-36

SCALE IN FEET
0 50 100

CALCULATED JEL
DRAWN
CHECKED ENF
REVISED

MAINTENANCE OF TRAFFIC - PHASE II
FULL DEPTH REPLACEMENT
STA. 550+00 TO STA. 570+00

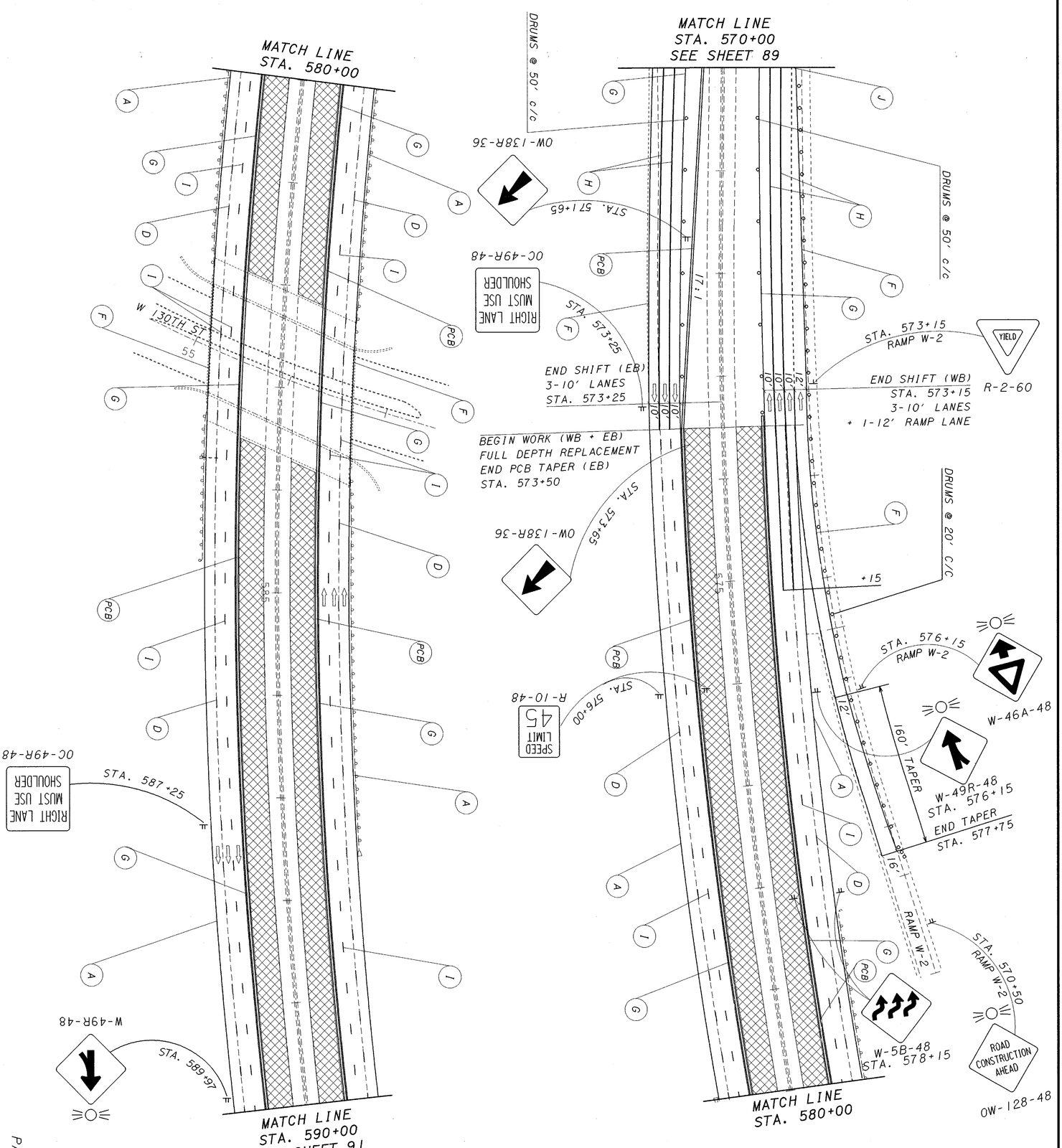
CUYAHOGA COUNTY
CUY-480-10.38

89
134

PLOT SUBMITTED:

PLOTTED BY: jlorincz
PLOTTED FROM: i:\users\lhazapis\pid13000\mp11.dgn

MP11.DGN



SEE SHEET 79 FOR
PAVEMENT MARKING LEGEND

90 / 134	CUYAHOGA COUNTY CUY-480-10.38	MAINTENANCE OF TRAFFIC - PHASE II PAVEMENT REPLACEMENT STA. 570+00 TO STA. 590+00	CALCULATED JEL CHECKED ENF	DRAWN REVISED	0 50 100 SCALE IN FEET

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PLOTTED FROM: i:\users\lhazapis\pid13000\mpkk.dgn
MPKK.DGN
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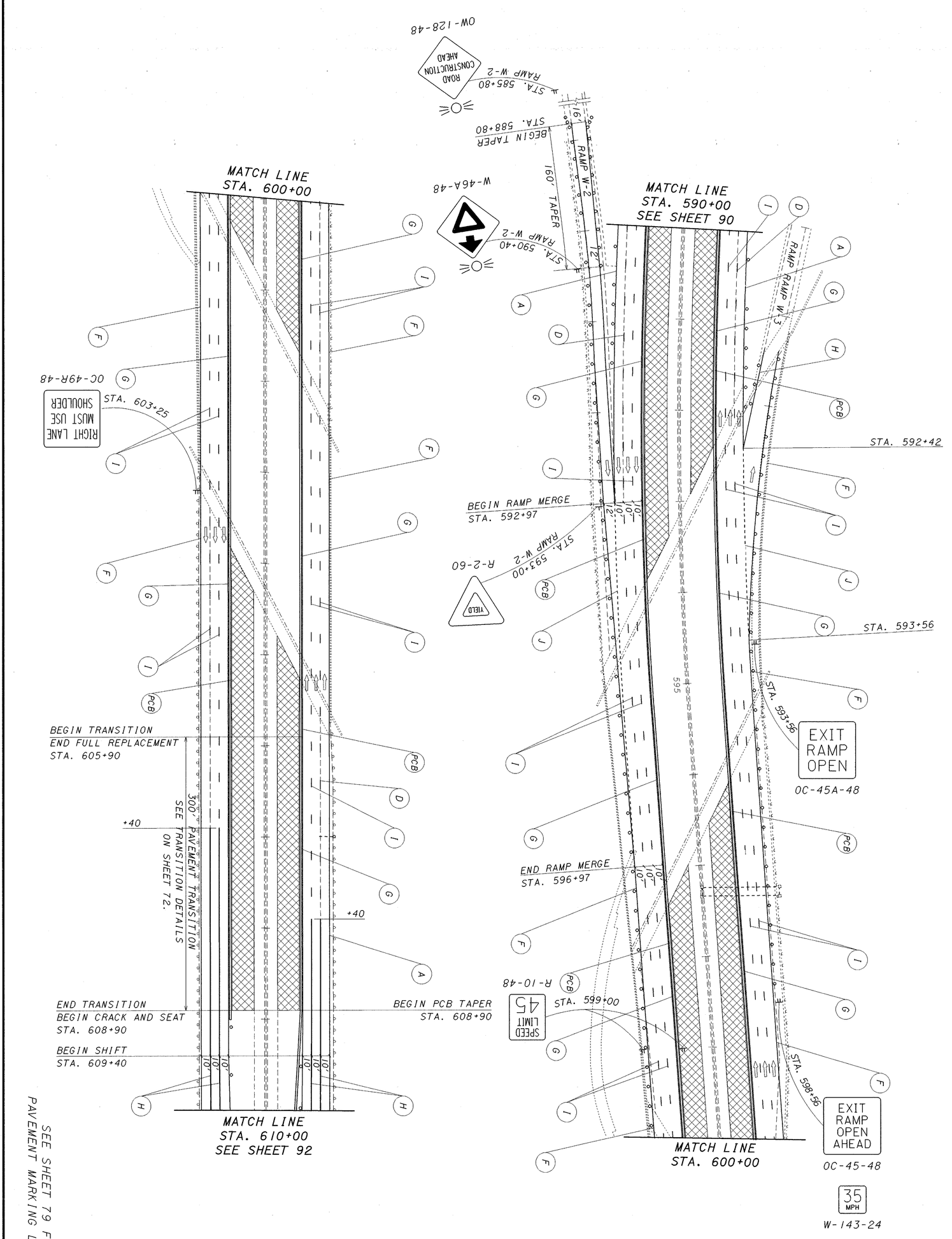
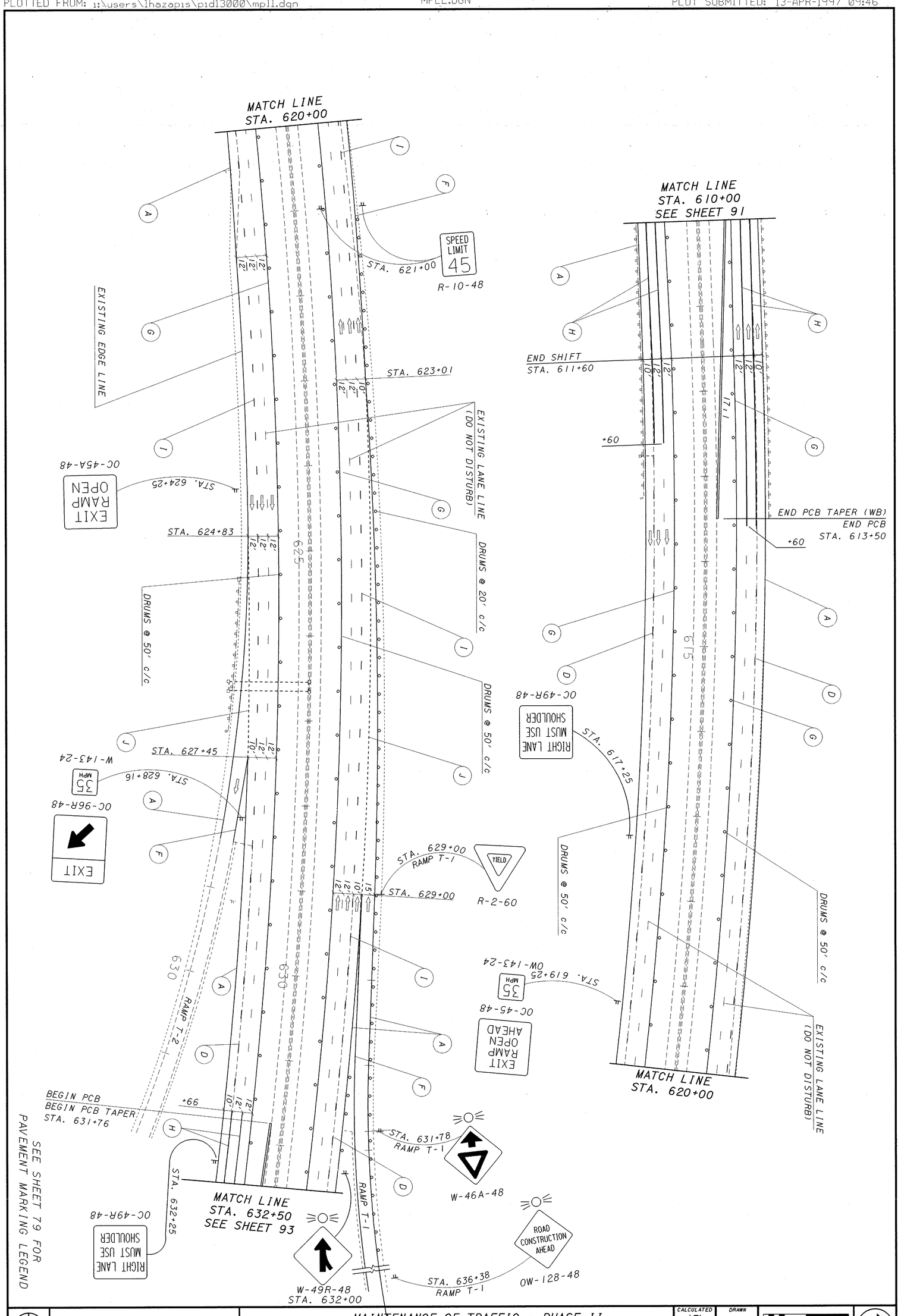


91 / 134	CUYAHOGA COUNTY CUY-480-10.38	MAINTENANCE OF TRAFFIC - PHASE II PAVEMENT REPLACEMENT STA. 590+00 TO STA. 610+00	CALCULATED JEL CHECKED ENF	DRAWN REVISED	0 50 100 SCALE IN FEET



92 / 134	CUYAHOGA COUNTY CUY-480-10.38	MAINTENANCE OF TRAFFIC - PHASE II PAVEMENT REPLACEMENT STA. 610+00 TO STA. 632+50	CALCULATED JEL CHECKED ENF	DRAWN REVISED	0 50 100 SCALE IN FEET

PLOTTED BY: jlorincz
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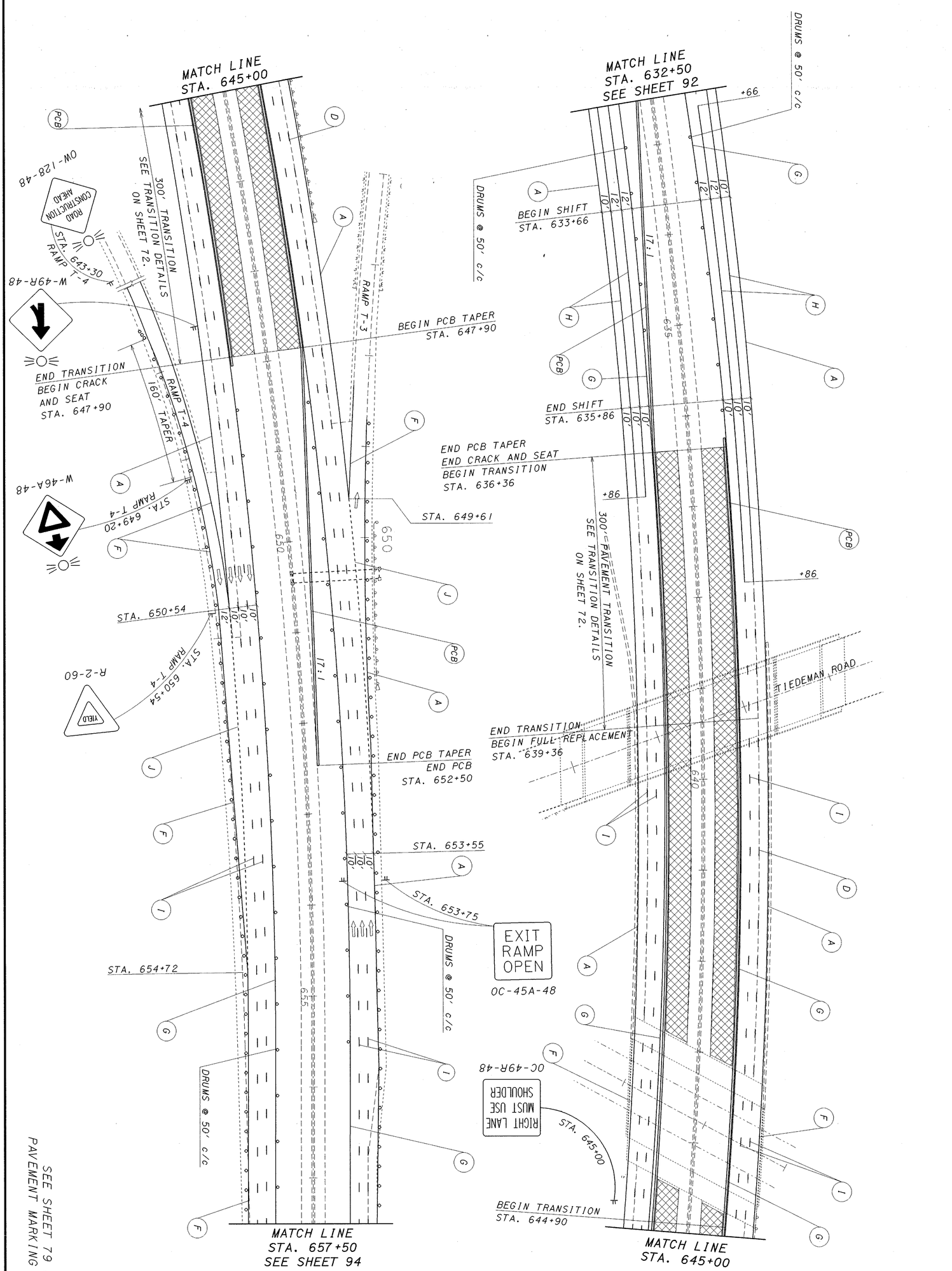
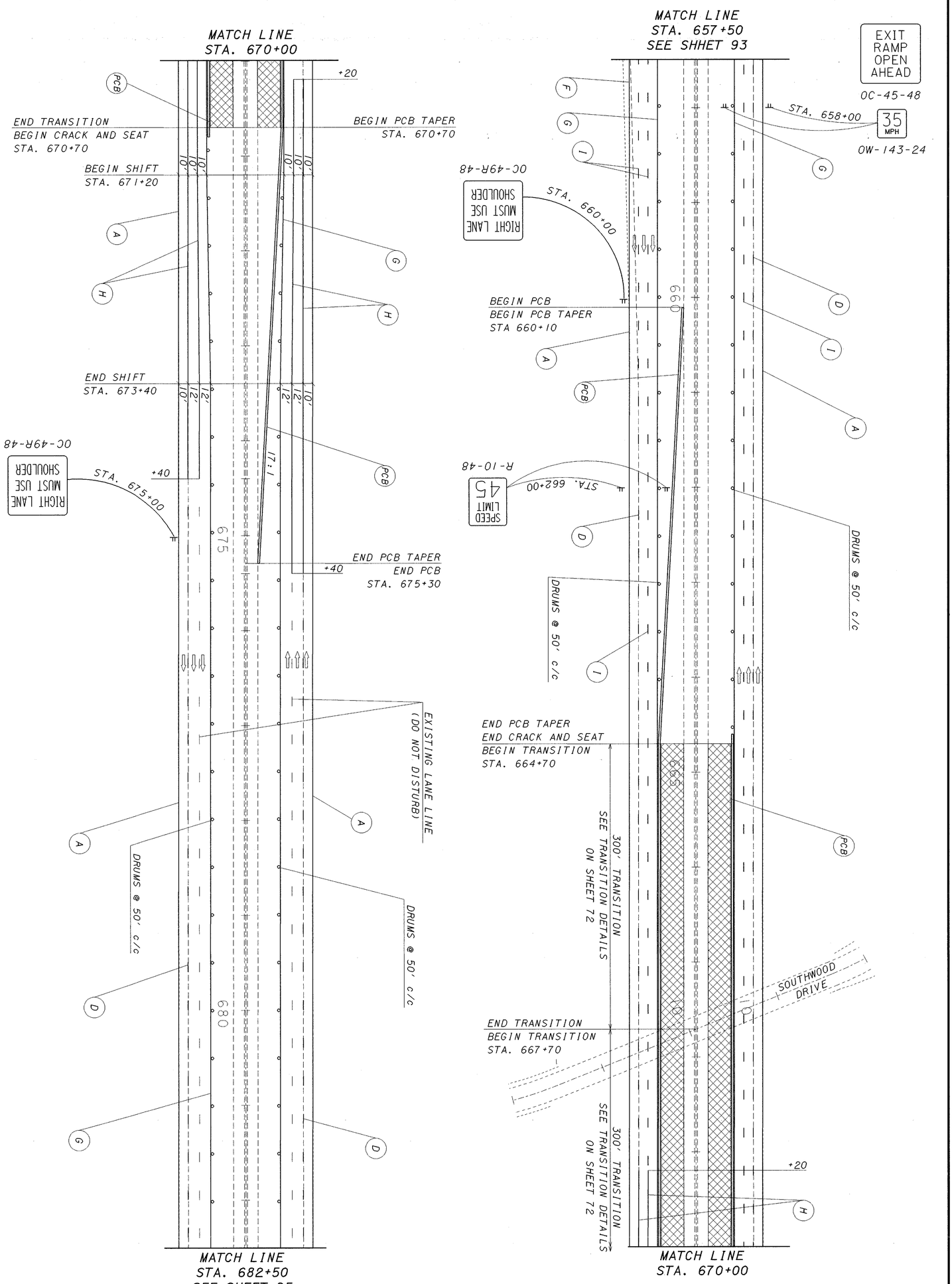


93 / 134	CUYAHOGA COUNTY CUY-480-10.38	MAINTENANCE OF TRAFFIC - PHASE II PAVEMENT REPLACEMENT STA. 632+50 TO STA. 657+50	CALCULATED JEL CHECKED ENF	DRAWN REVISED	0 50 100 SCALE IN FEET



94 / 134	CUYAHOGA COUNTY CUY-480-10.38	MAINTENANCE OF TRAFFIC - PHASE II PAVEMENT REPLACEMENT STA. 657+50 TO STA. 682+50	CALCULATED JEL CHECKED ENF	DRAWN REVISED	0 50 100 SCALE IN FEET

MAINTENANCE OF TRAFFIC - PHASE II
PAVEMENT REPLACEMENT
STA. 682+50 TO STA. 707+50

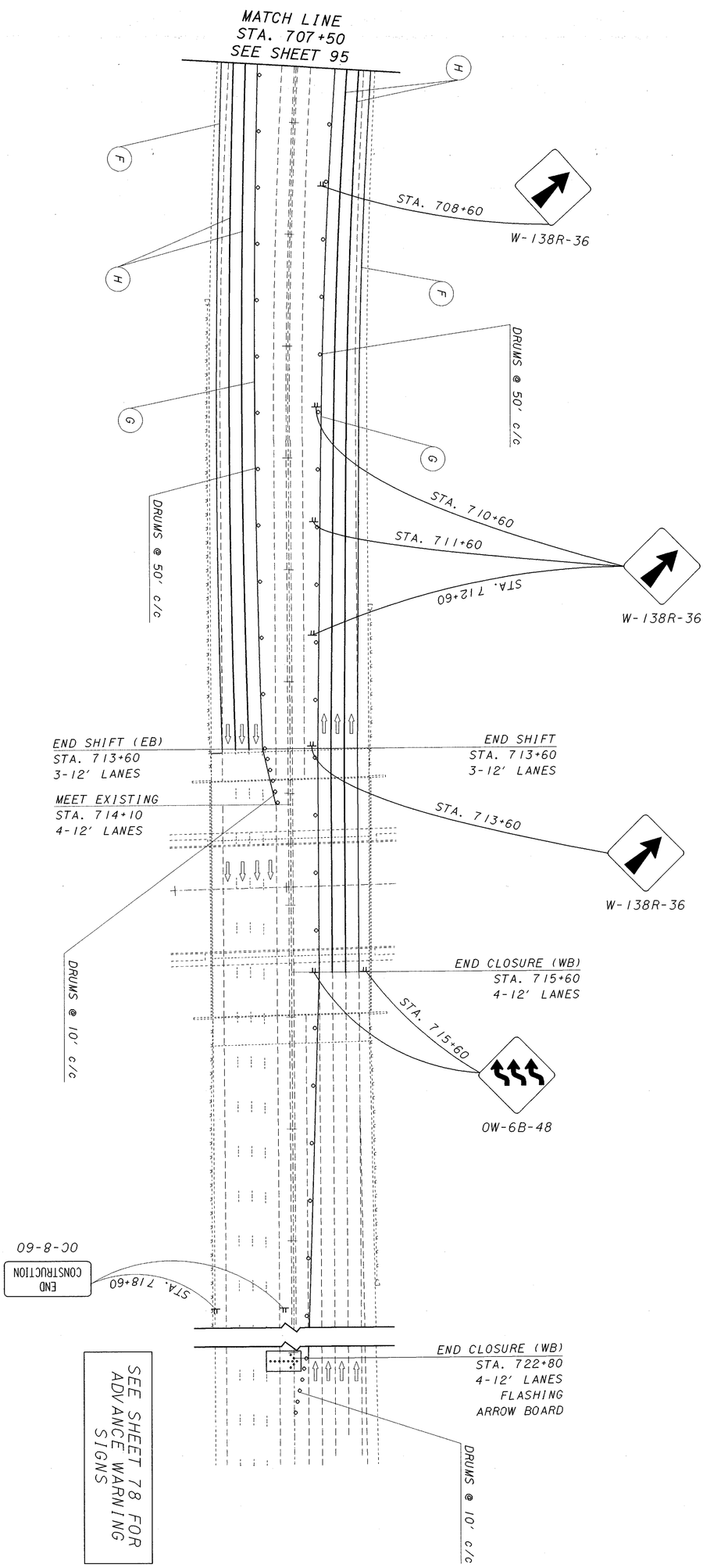
CUYAHOGA COUNTY
CUY-480-10.38

CALCULATED JEL
CHECKED ENF
DRAWN
REVISED

0 50 100
SCALE IN FEET

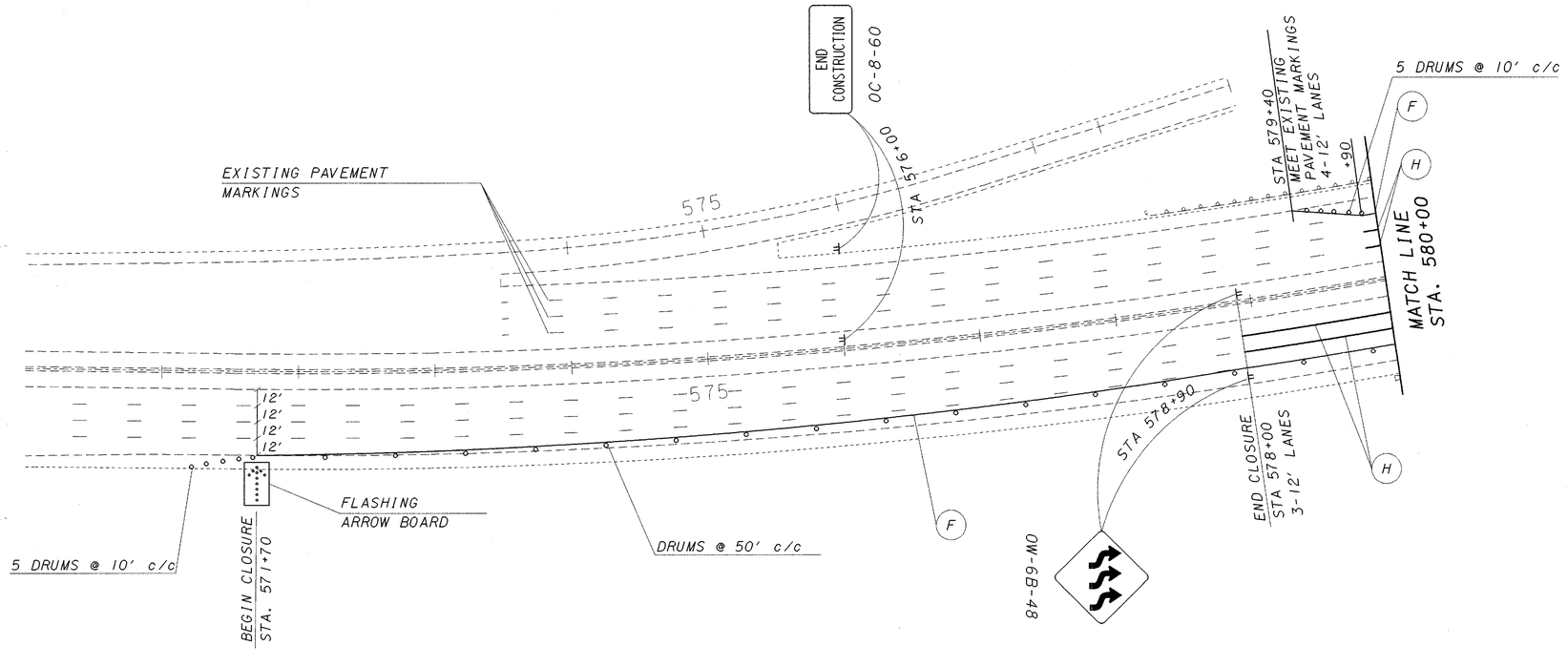
95
134

PLOTTED BY: jlorincz
PLOTTED FROM: i:\users\lhazeps\pid13000\mppp.dgn
PLOT SUBMITTED: 13-APR-1997 09:47
MPPP.DGN



96 / 134	CUYAHOGA COUNTY CUY-480-10.38	MAINTENANCE OF TRAFFIC - PHASE II PAVEMENT REPLACEMENT STA. 707+50 TO STA. 720+00	CALCULATED JEL CHECKED ENF	DRAWN REVISED	0 50 100 SCALE IN FEET

SEE SHEET 78
FOR ADVANCE
WARNING SIGNS



SEE SHEET 79 FOR
PAVEMENT MARKING LEGEND

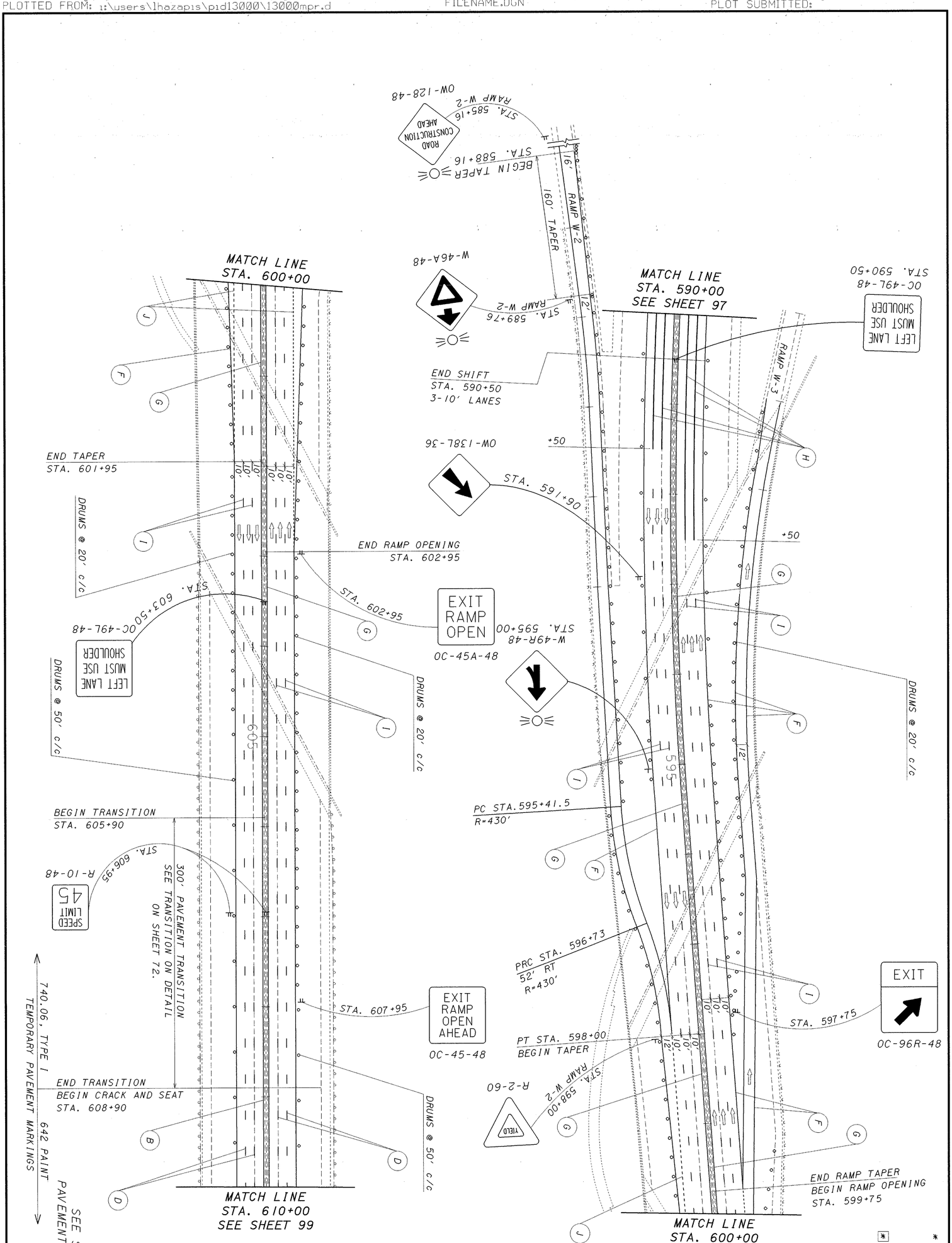
SCALE IN FEET
0 50 100

CALCULATED JEL
CHECKED ENF
DRAWN
REVISED

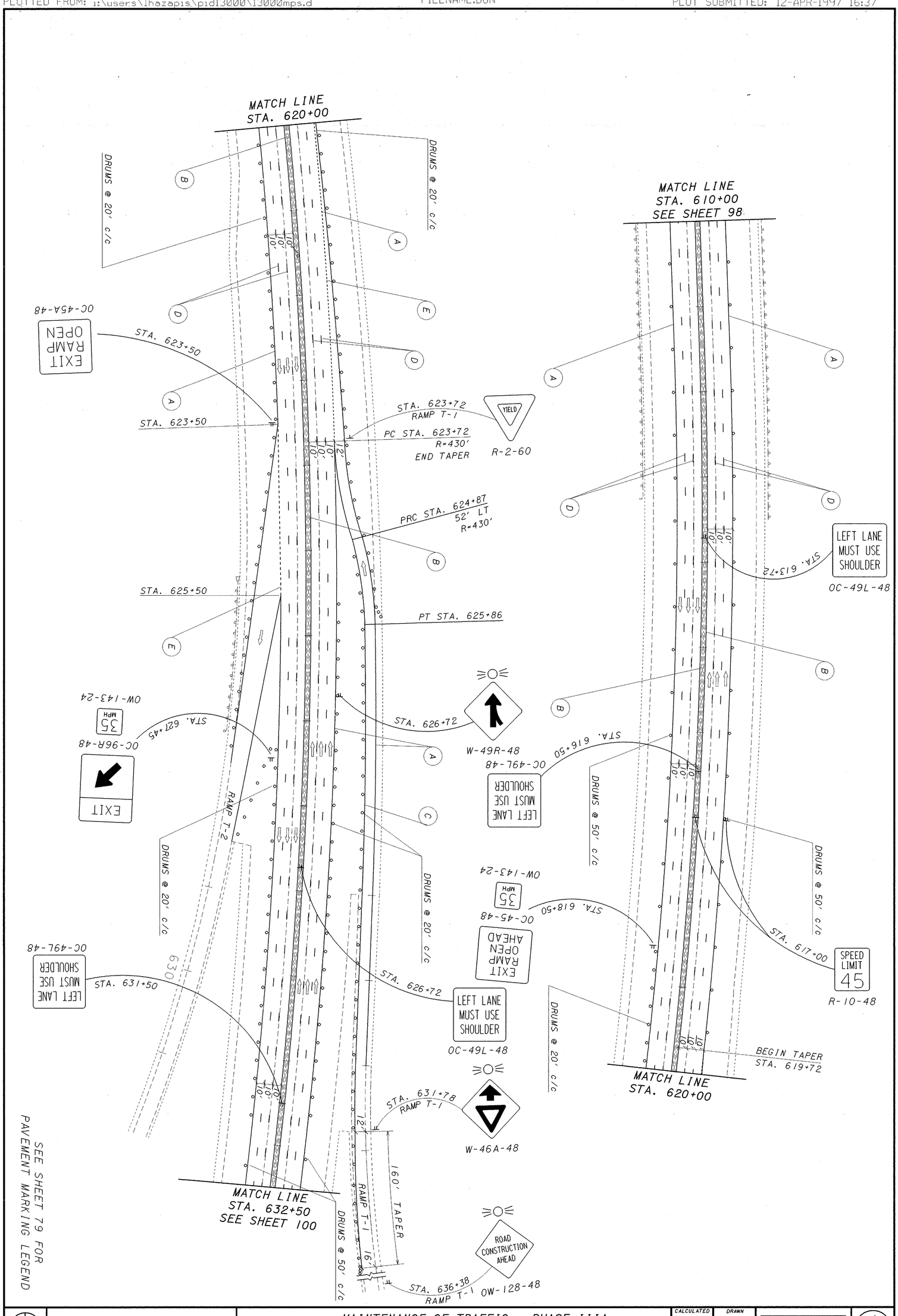
MAINTENANCE OF TRAFFIC - PHASE III
CRACKING AND SEATING
STA. 570+00 TO STA. 590+00

CUYAHOGA COUNTY
CUY-480-10.38

97
134



98/134	CUYAHOGA COUNTY CUY-480-10.38	MAINTENANCE OF TRAFFIC - PHASE III CRACKING AND SEATING STA. 590+00 TO STA. 610+00	CALCULATED JEL CHECKED ENF	DRAWN REVISED	0 50 100 SCALE IN FEET



99/134	CUYAHOGA COUNTY CUY-480-10.38	MAINTENANCE OF TRAFFIC - PHASE IIIA CRACKING AND SEATING STA. 610+00 TO STA. 632+50	CALCULATED JEL CHECKED ENF	DRAWN REVISED	0 50 100 SCALE IN FEET

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PLOTTED FROM: i:\users\lhazapis\pid13000\13000mpu.d
FILENAME.DGN
PLOT SUBMITTED: 14-APR-1997 07:16

MAINTENANCE OF TRAFFIC - PHASE IIIA
CRACKING AND SEATING
STA. 632+50 TO STA. 657+50

CALCULATED JEL
CHECKED ENF
DRAWN
REVISED

SCALE IN FEET
0 50 100

CUYAHOGA COUNTY
CUY-480-10.38

100
134

TEMPORARY PAVEMENT MARKINGS
642 PAINT 740.06, TYPE I

DRUMS @ 50' c/c

MATCH LINE
STA. 632+50
SEE SHEET 99

END CRACK AND SEAT
BEGIN TRANSITION
STA. 636+36

300' PAVEMENT TRANSITION
SEE TRANSITION DETAIL
ON SHEET 72.

TIEDEMAN ROAD

END TRANSITION
BEGIN FULL REPLACEMENT
STA. 639+36

LEFT LANE MUST USE SHOULDER
OC-49L-48

STA. 641+50

MATCH LINE
STA. 645+00

BEGIN TRANSITION
STA. 644+90

LEFT LANE MUST USE SHOULDER
OC-49L-48

STA. 656+50

DRUMS @ 20' c/c

EXIT RAMP OPEN
OC-45A-48

STA. 654+54

W-143-24

35 MPH

EXIT
OC-96R-48

STA. 652+54

STA. 651+00

650

RAMP T-3

MATCH LINE
STA. 645+00
SEE SHEET 99

STA. 646+50

300' TRANSITION
SEE TRANSITION DETAIL
ON SHEET 72.

RAMP T-4 16'

160' TAPER

12'

STA. 649+20
RAMP T-4

OW-46A-48

STA. 644+60
RAMP T-4

ROAD CONSTRUCTION AHEAD
OW-128-48

PCB

LEFT LANE MUST USE SHOULDER
OC-49L-48

END TRANSITION
BEGIN CRACK AND SEAT
STA. 647+90

740.06, TYPE I
TEMPORARY

642 PAINT
PAVEMENT MARKINGS

W-49R-48

STA. 652+90

DRUMS @ 20' C/C

PC STA. 653+80
R=430'

PRC STA 654+75
*51' RT
R=430'

STA. 655+90
RAMP T-4

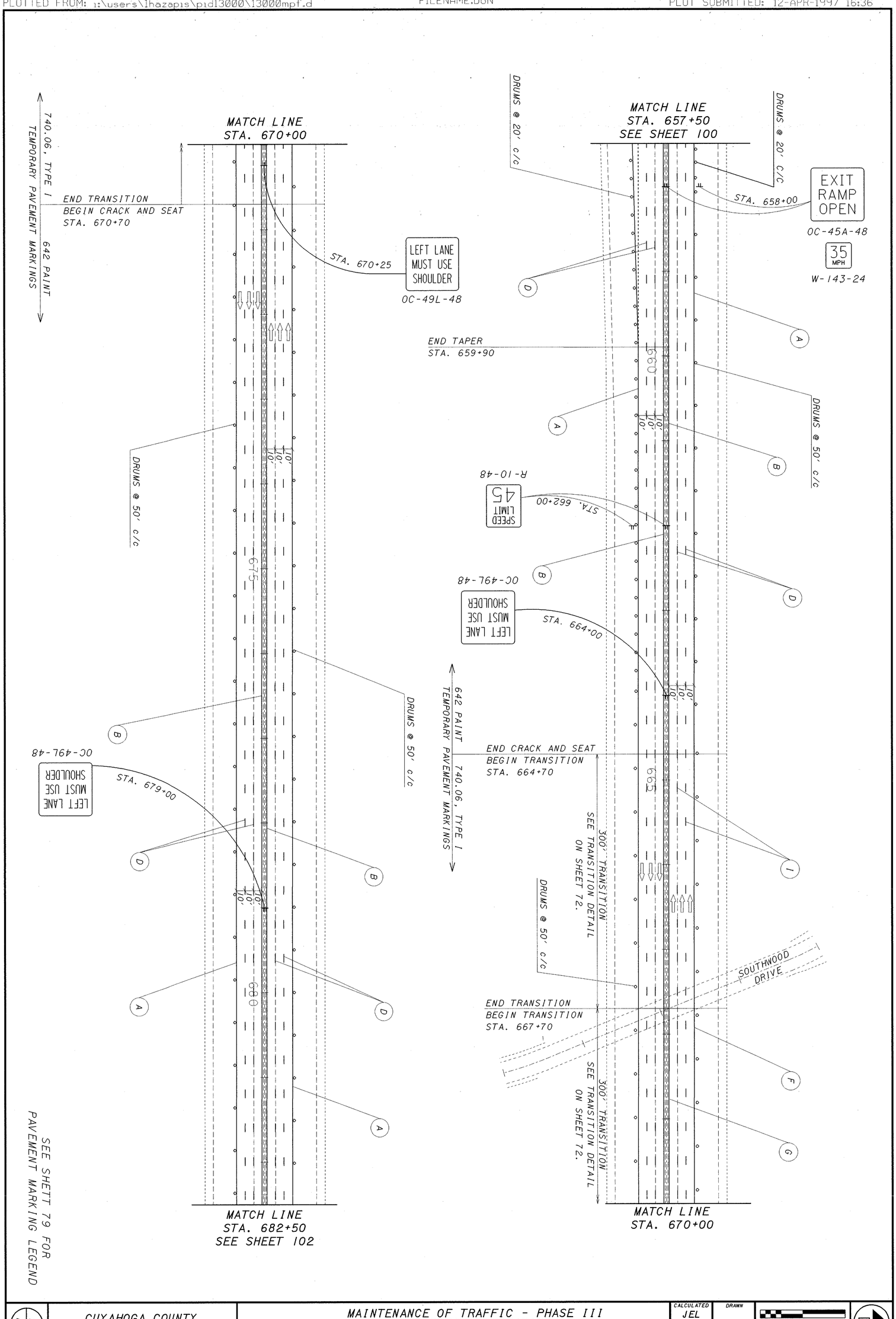
YIELD
R-2-60

PT
BEGIN TAPER
STA. 655+90

MATCH LINE
STA. 657+50
SEE SHEET 33

* - MEASURED FROM 480 ℄
TO FRONT FACE OF BARRIER

SEE SHEET 79 FOR
PAVEMENT MARKING LEGEND



101 / 134	CUYAHOGA COUNTY CUY-480-10.38	MAINTENANCE OF TRAFFIC - PHASE III CRACKING AND SEATING STA. 657+50 TO STA. 682+50	CALCULATED JEL CHECKED ENF	DRAWN REVISED	0 50 100 SCALE IN FEET

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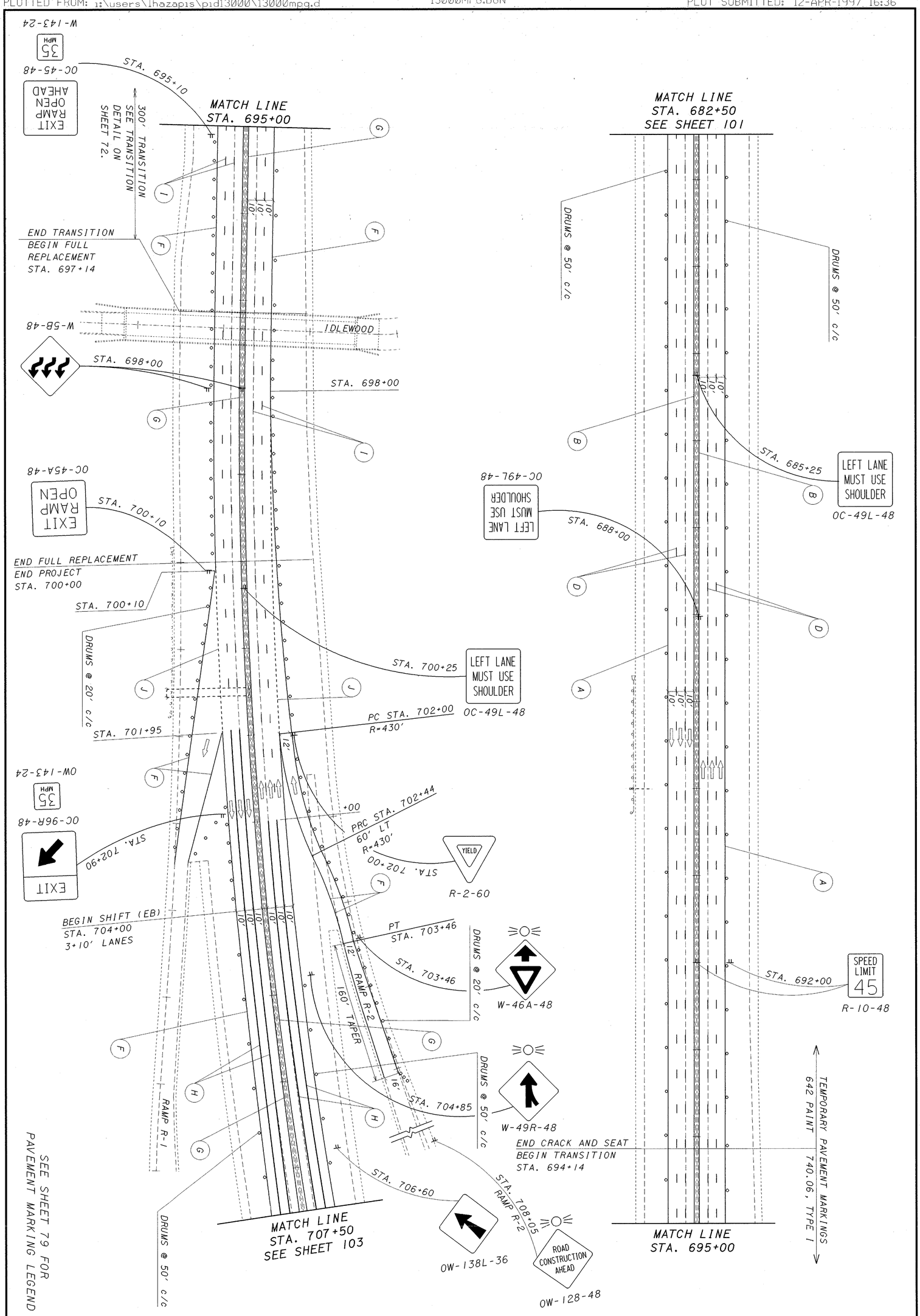

102 / 134	CUYAHOGA COUNTY CUY-480-10.38	MAINTENANCE OF TRAFFIC - PHASE III CRACKING AND SEATING STA. 682+50 TO STA. 707+50	CALCULATED JEL CHECKED ENF	DRAWN REVISED	0 50 100 SCALE IN FEET

SEE SHEET 78
FOR ADVANCE
WARNING SIGNS

SEE SHEET 79 FOR
PAVEMENT MARKING LEGEND

SCALE IN FEET
0 50 100

CALCULATED JEL
CHECKED ENF
DRAWN
REVISED

MAINTENANCE OF TRAFFIC - PHASE III
CRACKING AND SEATING
STA. 707+50 TO STA. 720+00

CUYAHOGA COUNTY
CUY-480-10.38

103
134

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MATCH LINE
STA. 610+00
SEE SHEET 98

LEFT LANE MUST USE SHOULDER
OC-49L-48
STA. 610+72

DRUMS @ 50' c/c
STA. 617+00

SPEED LIMIT 45
R-10-48

DRUMS @ 50' c/c
LEFT LANE MUST USE SHOULDER
OC-49L-48
STA. 616+50

W-143-24
35 MPH

EXIT RAMP OPEN AHEAD
OC-45-48

STA. 618+50

DRUMS @ 20' c/c

MATCH LINE
STA. 620+00

BEGIN TAPER
STA. 625+88

YIELD
R-2-60
STA. 629+88
RAMP T-1

PT STA. 629+88
R=430'
END TAPER

W-46A-48

PRC STA. 631+02
60.2' LT
R=430'

STA. 632+10
RAMP T-1

PT STA. 632+10

160' TAPER

ROAD CONSTRUCTION AHEAD
OW-128-48
STA. 626+70
RAMP T-1

DRUMS @ 50' c/c

DRUMS @ 20' c/c

MATCH LINE
STA. 620+00

MATCH LINE
STA. 632+50
SEE SHEET 105

RAMP T-2

630

DRUMS @ 20' c/c

STA. 623+50

EXIT RAMP OPEN
OC-45A-48

STA. 623+50

STA. 625+50

STA. 627+25

W-143-24
35 MPH

EXIT
OC-96R-48

SEE SHEET 79 FOR
PAVEMENT MARKING LEGEND

MAINTENANCE OF TRAFFIC - PHASE 111B
CRACKING AND SEATING
STA. 610+00 TO STA. 632+50

CUYAHOGA COUNTY
CUY-480-10.38

CALCULATED JEL
CHECKED ENF
DRAWN
REVISED

SCALE IN FEET
0 50 100

MAINTENANCE OF TRAFFIC - PHASE 111B
CRACKING AND SEATING
STA. 632+50 TO STA. 657+50

CUYAHOGA COUNTY
CUY-480-10.38

105
134

CALCULATED JEL
CHECKED ENF
DRAWN
REVISED

SCALE IN FEET
0 50 100

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SEE SHEET 78 FOR ADVANCE WARNING SIGNS

SEE SHEET 79 FOR PAVEMENT MARKING LEGEND

SCALE IN FEET
0 50 100

CALCULATED JEL
CHECKED ENF
DRAWN
REVISED

MAINTENANCE OF TRAFFIC - PHASE IV
CRACKING AND SEATING
STA. 570+00 TO STA. 590+00

CUYAHOGA COUNTY
CUY-480-10.38

106
134

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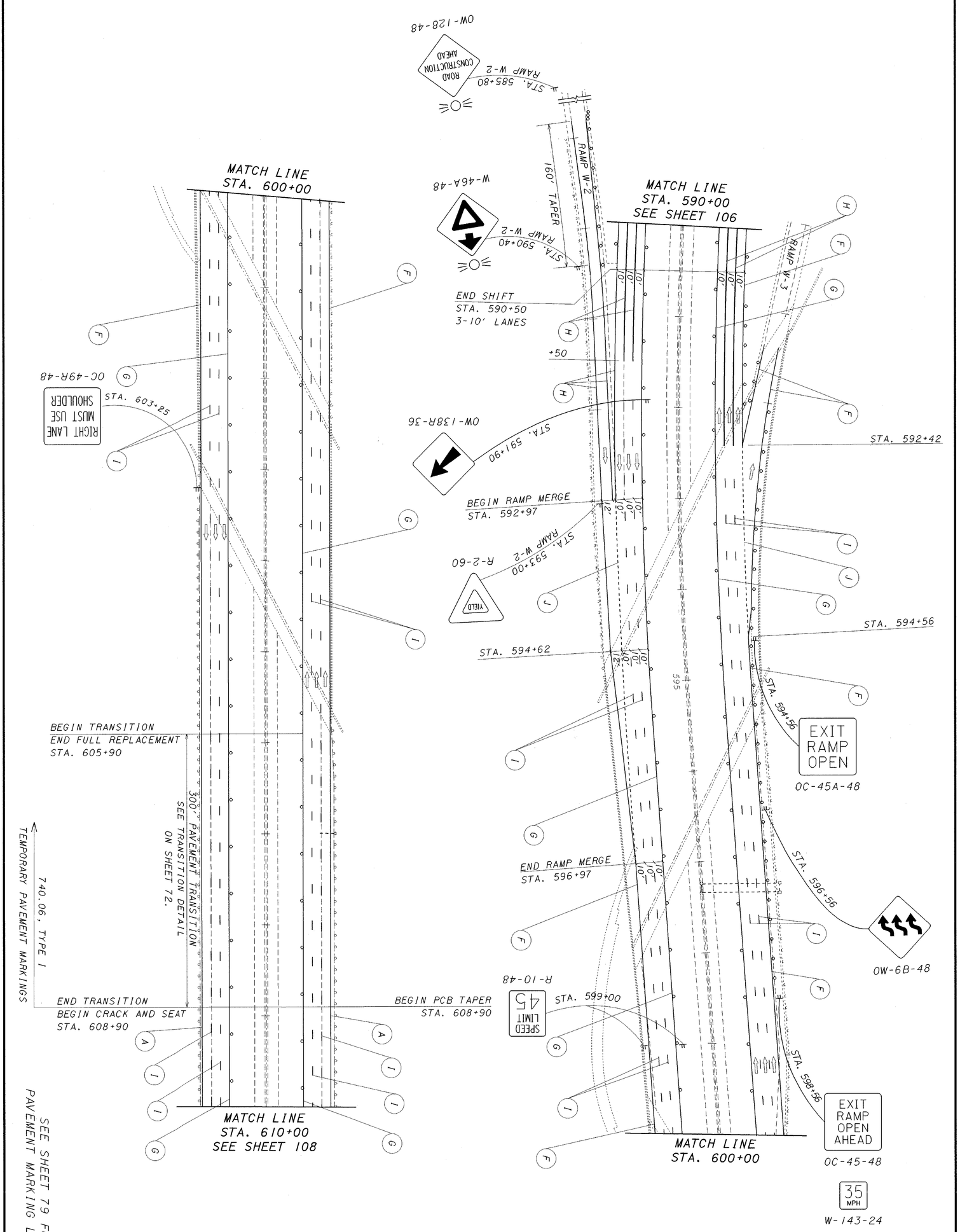

107 / 134	CUYAHOGA COUNTY CUY-480-10.38	MAINTENANCE OF TRAFFIC - PHASE IV CRACKING AND SEATING STA. 590+00 TO STA. 610+00	CALCULATED JEL CHECKED ENF	DRAWN REVISED	0 50 100 SCALE IN FEET

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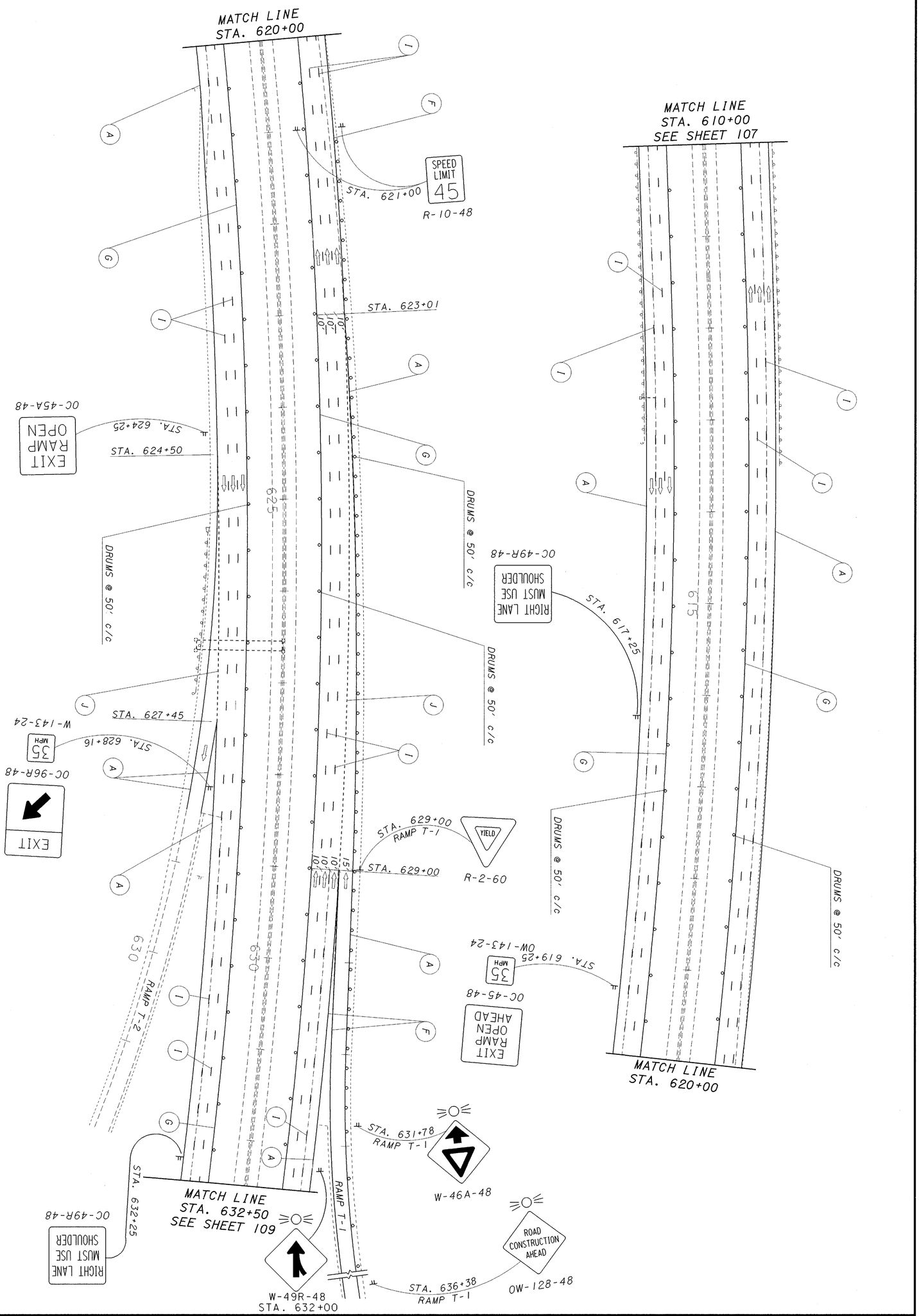
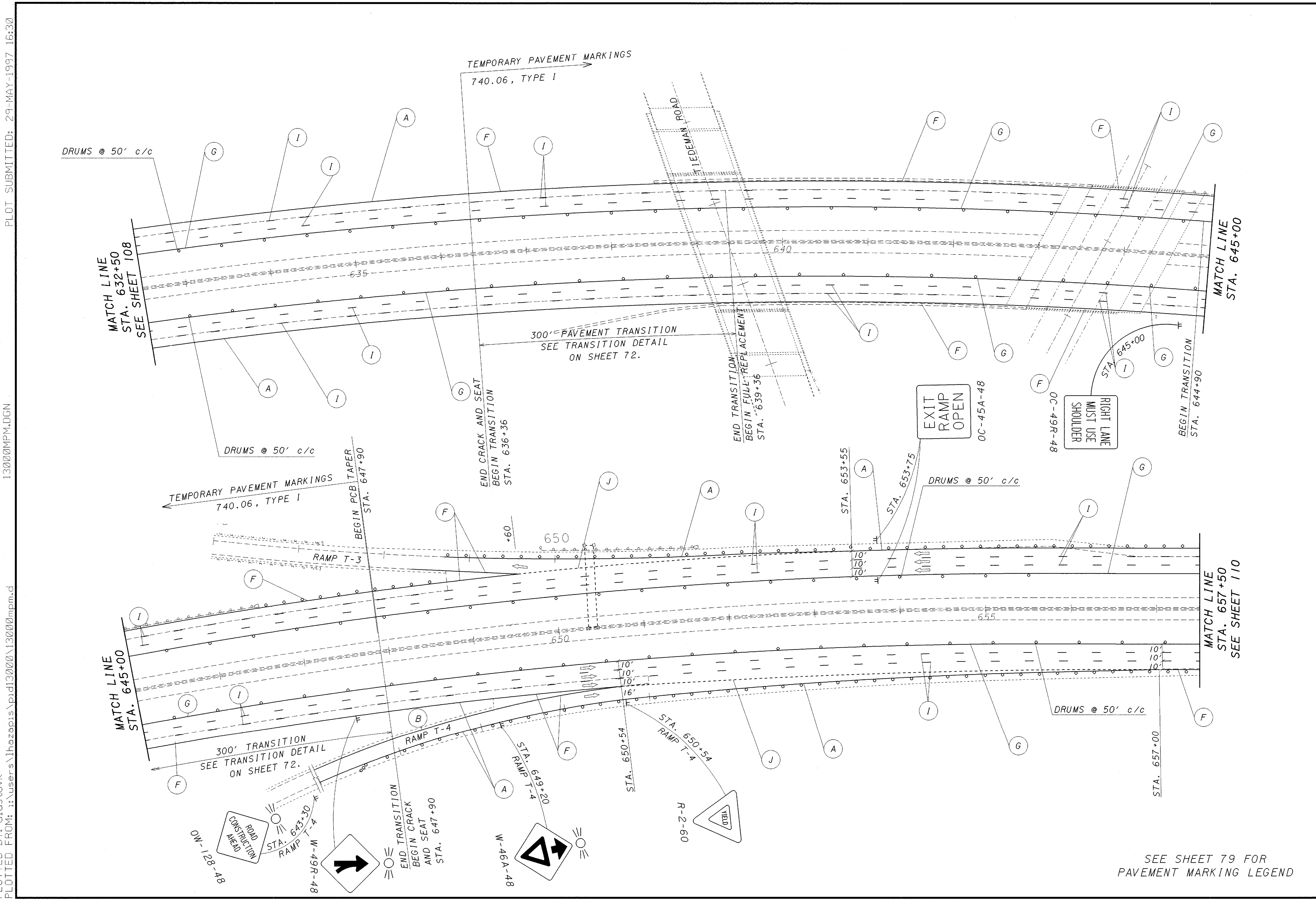


108/134	CUYAHOGA COUNTY CUY-480-10.38	MAINTENANCE OF TRAFFIC - PHASE IV CRACKING AND SEATING STA. 610+00 TO STA. 632+50	CALCULATED JEL	DRAWN	0 50 100 SCALE IN FEET
			CHECKED ENF	REVISED	



SEE SHEET 79 FOR
PAVEMENT MARKING LEGEND

SCALE IN FEET 0 50 100

CALCULATED JEL
CHECKED ENF
DRAWN
REVISED

MAINTENANCE OF TRAFFIC - PHASE IV
CRACKING AND SEATING
STA. 632+50 TO STA. 657+50

CUYAHOGA COUNTY
CUY-480-10.38

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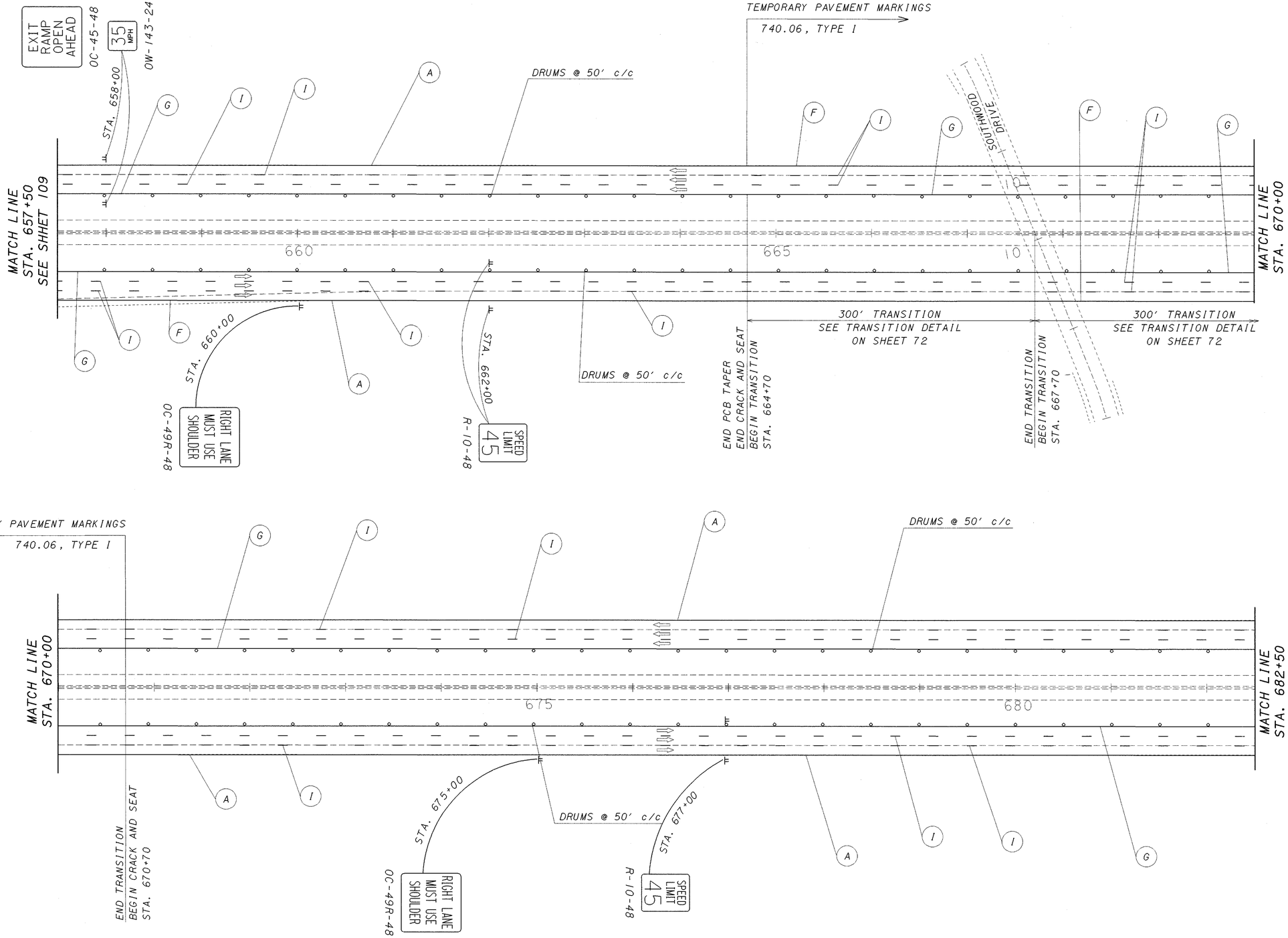

SEE SHEET 79 FOR
PAVEMENT MARKING LEGEND

MAINTENANCE OF TRAFFIC - PHASE IV
CRACKING AND SEATING
STA. 657+50 TO STA. 682+50

CUYAHOGA COUNTY
CUY-480-10.38

CALCULATED JEL
CHECKED ENF
DRAWN
REVISED

0 50 100
SCALE IN FEET

110
134

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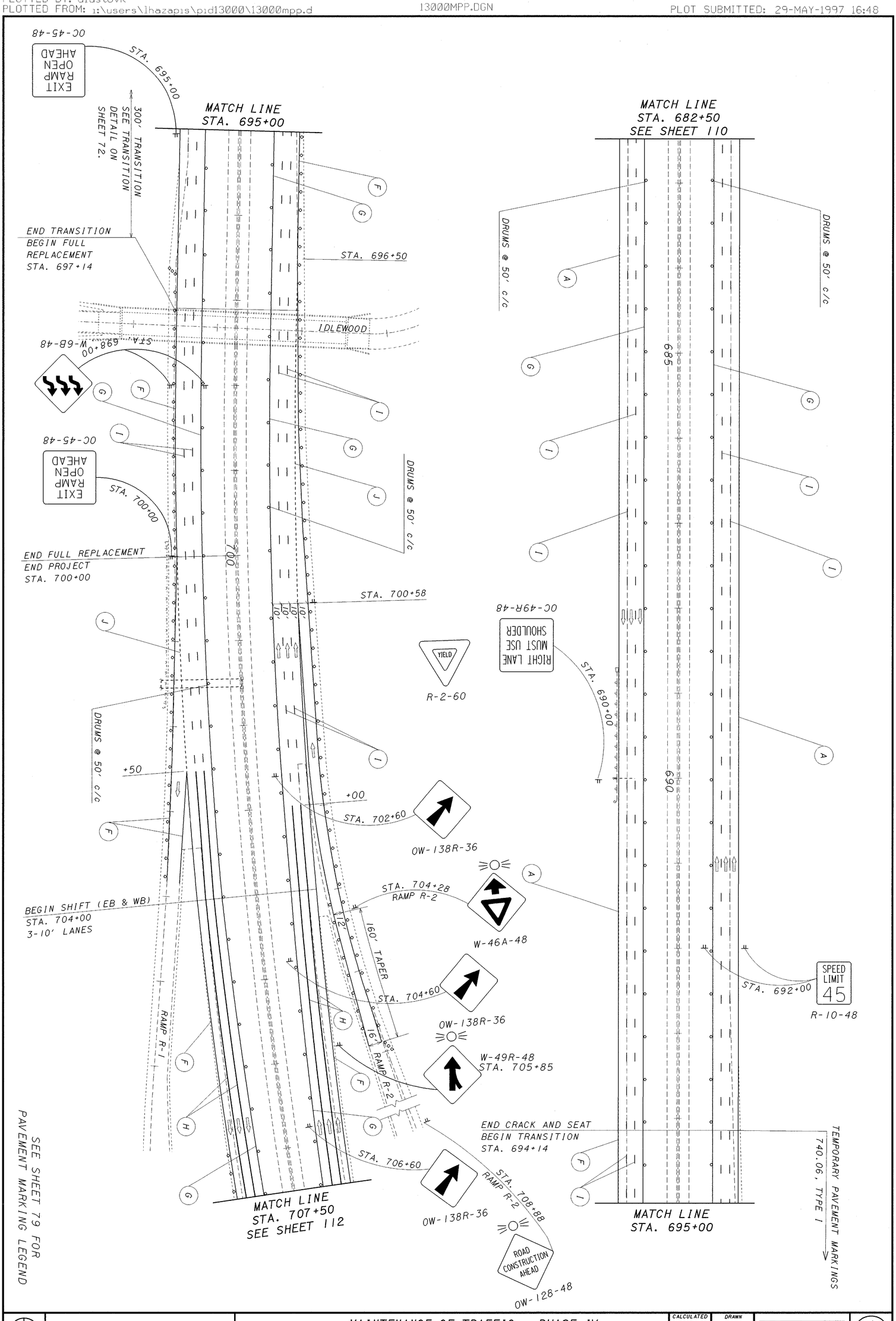

111/134	CUYAHOGA COUNTY CUY-480-10.38	MAINTENANCE OF TRAFFIC - PHASE IV CRACKING AND SEATING STA. 682+50 TO STA. 707+50	CALCULATED JEL CHECKED ENF	DRAWN REVISED	0 50 100 SCALE IN FEET

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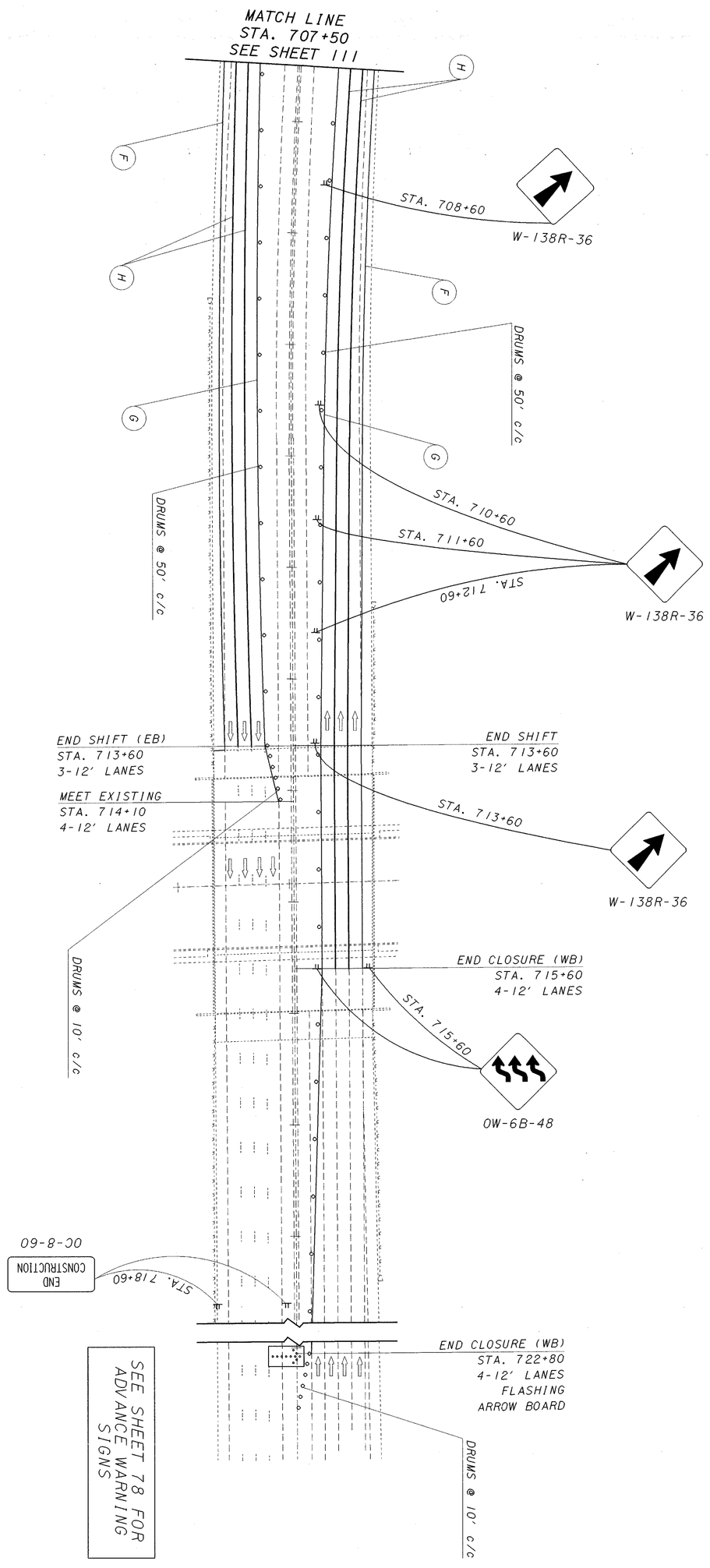

112/134	CUYAHOGA COUNTY CUY-480-10.38	MAINTENANCE OF TRAFFIC - PHASE IV CRACKING AND SEATING STA. 707+50 TO STA. 720+00	CALCULATED JEL	DRAWN	0 50 100 SCALE IN FEET	N
			CHECKED ENF	REVISED		

TRAFFIC CONTROL

FORMER CONSTRUCTION PLANS

FOR EXISTING SIGNING DETAILS, REFER TO APPLICABLE PLANS LISTED BELOW:

COUNTY, ROUTE AND SECTION	PROJECT NO.
CUY-480-10.39	783-83

COPIES OF THESE PLANS ARE AVAILABLE FOR REFERENCE THROUGH DISTRICT 12 OF THE OHIO DEPARTMENT OF TRANSPORTATION.

TRAFFIC CONTROL STANDARD DRAWINGS

REFERENCES TO SUPPLEMENTAL SPECIFICATIONS 857, 861, 957, 958, AND 961 ON TRAFFIC CONTROL STANDARD CONSTRUCTION DRAWINGS IN THESE PLANS SHALL BE CONSIDERED TO READ AS RESPECTIVE REFERENCES TO ITEMS 630, 631, 730, 731,733, AND 733.

ITEM SPECIAL - PAVEMENT MARKING MISC.: EPOXY

DESCRIPTION

THIS WORK SHALL CONSIST OF FURNISHING AND APPLYING EPOXY PAVEMENT MARKINGS IN ACCORDANCE WITH 641, 740, AND THE ADDITIONAL REQUIREMENTS DESCRIBED HEREIN.

EQUIPMENT

EQUIPMENT FOR APPLYING THE EPOXY PAVEMENT MARKING SHALL BE CAPABLE OF MIXING THE COMPONENTS IN PROPORTIONS RECOMMENDED BY THE MANUFACTURER AND APPLYING GLASS BEADS AT THE TIME OF LINE PLACEMENT. THE MARKING EQUIPMENT SHALL BE CAPABLE OF APPLYING EPOXY MATERIAL AT THE SPECIFIED THICKNESS. THE CONTRACTOR SHALL PROVIDE A CALIBRATED MEASURING DEVICE ACCEPTABLE TO THE ENGINEER TO MEASURE THE EPOXY RESIN IN THE STRIPER TANKS.

IN GENERAL, THE APPLICATION EQUIPMENT SHALL BE MOBILE, TRUCK MOUNTED AND SELF CONTAINED PAVEMENT MARKING MACHINE, SPECIFICALLY DESIGNED TO APPLY RESIN MATERIALS AND REFLECTIVE GLASS SPHERES IN CONTINUOUS AND SKIP-LINE PATTERNS. THE APPLICATION EQUIPMENT SHALL BE MANEUVERABLE TO THE EXTENT THAT THE STRAIGHT LINES CAN BE FOLLOWED AND NORMAL CURVES CAN BE MADE IN A TRUE ARC. IN ADDITION, THE TRUCK MOUNTED UNIT SHALL BE PROVIDED WITH ACCESSORIES TO ALLOW FOR MARKING OF STOP LINES, TRANSVERSE LINES, DOTTED LINES, LEGENDS, SYMBOLS, CROSSWALKS, AND OTHER SPECIAL PATTERNS.

THE ENGINEER AND THE MATERIAL MANUFACTURER TOGETHER MAY APPROVE THE USE OF A PORTABLE APPLICATOR IN LIEU OF TRUCK MOUNTED ACCESSORIES FOR USE IN APPLYING SPECIAL MARKING ONLY, PROVIDED SUCH EQUIPMENT CAN DEMONSTRATE SATISFACTORY APPLICATION OF REFLECTORIZED MARKINGS WITH THESE SPECIFICATIONS:

THE MOBILE APPLICATOR SHALL INCLUDE THE FOLLOWING FEATURES:

1. THE MOBILE APPLICATOR SHALL PROVIDE INDIVIDUAL MATERIAL RESERVOIRS, OR SPACE, FOR STORAGE OF PART A AND PART B OF THE RESIN COMPOSITION.
2. THE APPLICATOR SHALL BE EQUIPPED WITH HEATING EQUIPMENT OF THE SUFFICIENT CAPACITY TO MAINTAIN THE INDIVIDUAL RESIN COMPONENTS AT THE MANUFACTURER'S RECOMMENDED TEMPERATURE AND PRODUCE THE REQUIRED AMOUNT OF HEAT AT THE MIXING HEAD & GUN TIP AND MAINTAIN THOSE TEMPERATURES WITH THE TOLERANCES RECOMMENDED BY THE RESIN MANUFACTURER FOR SPRAY APPLICATION.
3. THE APPLICATOR SHALL BE EQUIPPED WITH ADEQUATE INDIVIDUAL TANKS FOR STORAGE AND DISPENSING OF SIZE I AND SIZE II GLASS SPHERES AND BLACK AGGREGATE.
4. THE APPLICATOR SHALL BE EQUIPPED WITH INDIVIDUAL DISPENSERS FOR THE SIMULTANEOUS APPLICATION OF SIZE I AND SIZE II GLASS SPHERES RESPECTIVELY. EACH DISPENSER SHALL BE CAPABLE OF APPLYING SPHERES AT A MINIMUM RATE OF 20 LBS. PER GALLON OF THE RESIN COMPOSITION. THE APPLIED COMBINED TOTAL OF BOTH TYPES OF BEADS SHOULD BE OF MINIMUM OF 25 LBS. PER GALLON (12 TO 13 LBS OF EACH TYPE).
5. THE APPLICATOR SHALL BE EQUIPPED WITH INDIVIDUAL METERING DEVICES OR PRESSURE GAUGES, ON THE PROPORTIONING PUMPS (ONE INDICATOR PER PUMP) AS WELL AS STOKE COUNTERS TO MONITOR GALLON USAGE. ALL SUCH DEVICES SHALL BE VISIBLE TO THE ENGINEER.
6. THE APPLICATOR SHALL BE EQUIPPED WITH ALL NECESSARY SPRAY EQUIPMENT, MIXERS, COMPRESSORS AND OTHER APPURTENANCES TO ALLOW FOR THE PLACEMENT OF REFLECTORIZED PAVEMENT MARKING SYSTEM IN A SIMULTANEOUS SEQUENCE OF OPERATIONS.
7. EACH APPLICATION MUST HAVE A MINIMUM OF A 24" LONG STATIC MIXER UNIT AS MANUFACTURED BY KENICS COMPANY OR EQUAL FOR PROPER MIXING OF THE TWO COMPONENTS.
8. EACH MOBILE APPLICATOR MUST BE EQUIPPED WITH A COMPLETELY ENCLOSED FLUSH AND PURGE SYSTEM TO CLEAN THE LINES AND THE GUNS WITHOUT EXUDING ANY OF THE SOLUTION INTO THE ENVIRONMENT.

APPLICATION/ PAVEMENT PREPARATION

CLEAN THE SURFACE TO REMOVE ALL DEBRIS, LAITANCE AND ANY OTHER CONTAMINANTS THAT MAY HINDER THE ADHESION OF THE SYSTEM TO THE SURFACE.

THE NEW SURFACE SHALL BE TREATED TO EXPOSE THE AGGREGATE WHICH WILL PROMOTE A STRONG BOND BETWEEN THE PAVEMENT AND THE PAVEMENT MARKING MATERIAL. WHENEVER GRINDING SCARIFYING, SANDBLASTING, SHOTBLASTING OR OTHER OPERATIONS ARE PERFORMED, THE DEBRIS GENERATED MUST BE CONTAINED THROUGH VACUMN TYPE EQUIPMENT OR EQUIVALENT AND THE WORK SHALL BE CONDUCTED IN SUCH A MANNER THAT THE FINISHED PAVEMENT SURFACE IS NOT DAMAGED OR LEFT IN A PATTERN THAT WILL MISLEAD OR MISDIRECT THE MOTORIST. WHEN THESE OPERATIONS ARE COMPLETED, THE PAVEMENT SURFACE SHALL FIRST BE POWER BROOMED AND THEN BLOWN OFF WITH COMPRESSED AIR TO REMOVE RESIDUE AND DEBRIS RESULTING FROM THE CLEANING WORK. ALL SUCH DEBRIS MUST BE PROPERLY CONTAINED, ESPECIALLY WHEN WHEN REMOVING YELLOW PAINT LINES, AND DISPOSED OF IN THE APPROPRIATE MANNER.

REMOVAL AND CLEANING WORK SHALL BE CONDUCTED IN SUCH A MANNER AS TO CONTROL AND MINIMIZE AIRBORNE DUST, AND SIMILAR DEBRIS SO AS TO PREVENT A HAZARD TO MOTOR VEHICLE OPERATION OR NUISANCE TO PROPERTY.

CARE SHALL BE TAKEN ON BITUMINOUS AND PORTLAND CEMENT CONCRETE SURFACES WHEN PERFORMING REMOVAL AND CLEANING WORK TO PREVENT DAMAGE TO TRANSVERSE AND LONGITUDINAL JOINT SEALERS.

LIMITS OF WORK

CLEANING AND SURFACE PREPARATION WORK SHALL BE CONFINED TO THE SURFACE AREA SPECIFIED FOR THE APPLICATION OF THE PAVEMENT MARKING MATERIALS; OR THE SURFACE AREA OF EXISTING PAVEMENT MARKINGS THAT ARE SPECIFIED FOR REMOVAL ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

SURFACE PREPARATION WORK INCLUDES CLEANING FOR LINES WHICH INCLUDES: SOLID LINES, BROKEN LINES, CHANNELIZING LINES, TRANSVERSE LINES, STOP LINES, DOTTED LINES AND BARRIER LINES.

WHEN LINES ARE CLEANED, THE AREA OF PREPARATION WILL BE A WIDTH OF THE NEW PAVEMENT MARKING, OR EXISTING LINE, PLUS 1" ON EACH SIDE. NO NEW MARKING LINE SHALL BE APPLIED ON ANY PAVEMENT THAT HAS NOT BEEN PROPERLY PREPARED AS PER THIS SPECIFICATION.

REMOVAL OF EXISTING PAVEMENT MARKINGS

EXISTING PAVEMENT MARKINGS SHALL BE CLEANED FOR THE PURPOSE OF:

A. PREPARING THE PAVEMENT SURFACE FOR THE APPLICATION OF NEW PAVEMENT MARKING IN THE SAME LOCATION AS THE EXISTING MARKINGS. (EITHER TEMPORARY OR PERMANENT)

B. TO REMOVE EXISTING MARKINGS THAT ARE IN GOOD CONDITION WHICH, IF ALLOWED TO REMAIN, WILL INTERFERE WITH OR OTHERWISE CONFLICT WITH NEWLY APPLIED MARKING PATTERNS.

C. PAVEMENT SHALL BE CLEANED TO THE EXTENT THAT 95% TO 100% OF THE EXISTING MARKING IS REMOVED. REMOVAL OPERATIONS SHALL BE CONDUCTED IN SUCH A MANNER THAT NO MORE THAN MODERATE COLOR AND/OR SURFACE TEXTURE CHANGE RESULTS ON THE SURROUNDING PAVEMENT SURFACE.

D. THE DETERMINATION OF ACCEPTABLE REMOVAL WILL BE MADE BY JUDGEMENT OF THE ENGINEER AND WILL BE GUIDED BY THE DEPARTMENT'S PICTORIAL STANDARDS OF ACCEPTABLE MARKING REMOVAL. PICTORIAL STANDARDS ARE AVAILABLE.

APPLICATION

EPOXY MARKING MATERIAL SHALL ONLY BE APPLIED WHEN THE SURFACE IS CLEAN AND DRY AND THE PAVEMENT AND AIR TEMPERATURES ARE ABOVE 50 DEGREES F. THE CONTRACTOR SHALL TRANSFER THE ENTIRE CONTENTS OF EACH MATERIAL CONTAINER TO THE STRIPER TANKS. THE MATERIAL SHALL BE THOROUGHLY MIXED AT ALL TIMES DURING APPLICATION. EPOXY MARKING MATERIAL, PLUS RESIN, SHALL BE APPLIED UNIFORMLY TO THE SURFACE TO BE MARKED AT THE FOLLOWING RATES:

GALLONS PER MILE OF LINE	WIDTH OF LINE (INCHES) (THICKNESS OF 20 MILS)				
	4	6	8	12	24
SOLID LINE	22	33	44	66	132
DASHED LINE	5.5	8.5	11	17	34
DOTTED LINE	7.3	11	14.6	22	44
SYMBOLS, WORDS	1 GAL. PER 80 SQ.FT.				

THINNING SHALL NOT BE PERMITTED

GLASS BEADS SHALL BE APPLIED TO THE UNCURED EPOXY MATERIAL IN SUFFICIENT QUANTITY SO THAT THE BEADS COMPLETELY FILL THE EPOXY FILM FROM THE FILM-PAVEMENT INTERFACE TO THE TOP SURFACE OF THE FILM TO THE EXTENT THAT THERE ARE LOOSE BEADS ON THE SURFACE OF THE UNCURED LINE. THE RATE OF APPLICATION SHALL NOT BE LESS THAN 25 LBS.(3 KG) OF GLASS BEADS PER GALLON (LITER) OF EPOXY MATERIAL APPLIED.

DRAWN DRL | REVISED
CALCULATED DRL | CHECKED ENF

TRAFFIC CONTROL NOTES

CUYAHOGA COUNTY
CUY-480-10.38

APPLICATION (CONTINUED)

IF THE EPOXY MARKING DOES NOT DRY TO A NO-TRACKING CONDITION CONSISTENTLY AND SHOWS A CYCLICAL SOFT SPOT, THE CONTRACTOR SHALL CEASE THE MARKING APPLICATION UNTIL THE PROBLEM IS CORRECTED.

CERTIFICATION OF COMPLIANCE

THE MANUFACTURER SHALL FURNISH A NOTARIZED CERTIFICATION THAT THE MATERIAL COMPLIES WITH THE PROVISIONS OF THIS SPECIFICATION. IT SHALL NOT BE INFERRED THAT THE PROVISIONS OF A CERTIFICATION OF COMPLIANCE WAIVES STATE INSPECTION, SAMPLING OR TESTING.

LABORATORY SAMPLES

PROMPTLY AFTER EXECUTION OF THIS CONTRACT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF THE SOURCES OF MATERIAL HE EXPECTS TO USE. THE MATERIAL MANUFACTURER SHALL FURNISH SAMPLES OF THE EPOXY MATERIALS, AS MAY BE REQUIRED BY THE ENGINEER, A MINIMUM OF TEN DAYS BEFORE THE DATE OF INTENDED USE OF THESE MATERIALS.

INFRARED SPECTRA

A COPY OF THE INFRARED SPECTRA OF EACH COMPONENT ON EACH LOT NUMBER SHALL BE SUPPLIED BY THE MANUFACTURER ALONG WITH CERTIFICATION PAPERS. THIS INFRARED SPECTRA WILL BE ON RECORD WITH THE OHIO DEPARTMENT OF TRANSPORTATION TO SERVE AS A QUALITY CONTROL MEASURE FOR THE FUTURE SUPPLY OF THIS SYSTEM TO THE STATE.

QUALIFYING A MANUFACTURER

THE MANUFACTURER MUST HAVE EXPERTISE REINFORCED WITH HISTORY IN THIS PARTICULAR FIELD TO QUALIFY SUCH AS:

1. PROOF OF SUCCESSFUL INSTALLATIONS OF AT LEAST 4 YEARS (4 PLOWING SEASONS), COVERING A MINIMUM OF 200,000 LIN. FT. IN THIS STATE WHERE THIS PROJECT IS TO BE BID, WITH RETROREFLECTIVITY NUMBERS EXCEEDING 150 ON WHITE AND 100 ON YELLOW, UTILIZING MICROLUX 12 OR EQUIVALENT
2. AMPLE PRODUCTION CAPACITY
3. PROPER FACILITY
4. COMPLIANCE WITH EPA REGULATIONS
5. A VERIFIABLE QUALITY CONTROL PROGRAM
6. MUST HAVE COMPLETED AND PASSED THE SERVICE TEST IN ACCORDANCE WITH SUPPLEMENT 1047

QUALIFYING A CONTRACTOR

IN ORDER FOR AN INSTALLER OF SUCH PAVEMENT MARKING MATERIAL TO BE APPROVED, THE FOLLOWING DOCUMENT MUST BE SUBMITTED:

A CERTIFICATE FROM A PRE-APPROVED MANUFACTURER OF SUCH EPOXY PAVEMENT MARKING MATERIALS, CERTIFYING THAT SUCH A CONTRACTOR HAS FUNCTIONAL, APPROPRIATE EQUIPMENT TO INSTALL THE EPOXY PAVEMENT MATERIAL STATED WITH THE TECHNOLOGY IN THIS SPECIFICATION AND HE HAS AND CONTINUES TO BE SUCCESSFUL AT PERFORMING THIS TYPE OF WORK.

MATERIALS

MATERIAL SUPPLIED SHALL BE A 2 PART HYBRIDIZED POLYMER SYSTEM CAPABLE OF BEING APPLIED AT AMBIENT TEMPERATURES DOWN TO 50 DEGREES F. THE MATERIAL SHALL BE CAPABLE OF RETAINING REFLECTIVE GLASS BEADS OF THE DROP-ON OR SPRAY-ON TYPE.

THE EPOXY SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:

1. GENERAL

   THE EPOXY SHALL BE FORMULATED AS A LONG LIFE PAVEMENT MARKING SYSTEM FREE OF ANY PEROXIDES, AND/OR TMPTA (TRI-METHYLOL PROPANE TRI-ACRYLATE) AND OTHER SUCH MULTI-FUNCTIONAL MONOMERS. THE EPOXY SHOULD BE DESIGNED TO PROVIDE A SIMPLE VOLUMETRIC MIXING RATIO OF ITS COMPONENTS SUCH AS 2:1.

2. VISCOSITY

   THE VISCOSITY OF THE PART "A" WHITE SHALL BE BETWEEN 19,000 AND 20,000 CP AND PART "A" YELLOW SHALL BE BETWEEN 25,000 AND 26,000 CP. THE VISCOSITY OF PART "B" SHALL BE BETWEEN 1,950 AND 2,050 CP. AT THE POINT OF APPLICATION, THE VISCOSITIES SHALL BE WITHIN 10% OF EACH OTHER.

3. WEIGHT

   THE WEIGHT OF PART "A" WHITE 11.8 LBS/GAL ±0.2 LBS/GAL AND YELLOW AT 12.8 LBS/GAL ±0.2 LBS/GAL. THE WEIGHT OF PART "B" SHALL BE 9.6 LBS/GAL ±0.2 LBS/GAL.

4. EPOXIDE NUMBER

   THE EPOXIDE NUMBER OF THE MATERIAL SHALL BE 0.51 ±0.05 AS DETERMINED BY ASTM D-1652 FOR BOTH WHITE AND YELLOW COMPONENT "A" ON A PIGMENT FREE BASIS.

5. AMINE NUMBER

   THE AMINE NUMBER OF THE CURING AGENT (COMPONENT B) SHALL BE 375 ±50 AS PER ASTM D-2074.

6. TOXICITY

   UPON HEATING TO APPLICATION TEMPERATURE, THE MATERIAL SHALL NOT EXUDE FUMES WHICH ARE TOXIC OR INJURIOUS TO PERSONS OR PROPERTY. UPON CURING, THE MATERIALS SHOULD BE COMPLETELY INERT WITH ALL COMPONENTS FULLY REACTED AND ENVIRONMENTALLY SAFE.

7. DRYING TIME (LABORATORY):

   THE EPOXY PAVEMENT MARKING MATERIAL WHEN MIXED IN THE PROPER RATIO AND APPLIED AT THE APPROXIMATE PRESCRIBED WET FILM THICKNESS AT 75 DEGREES F ±2 DEGREES F AND WITH PROPER SATURATION OF GLASS SPHERES SHALL EXHIBIT NO TRACKING TIME WHEN TESTED 40-45 MIN. ACCORDING TO ASTM D-711.

8. DRYING TIME (FIELD):

   THE PAVEMENT MARKING MATERIAL SHALL HAVE A SETTING TIME TO A NO-TRACKING CONDITION OF NOT MORE THAN 35 MINUTES AT 75 DEGREES F ±2 DEGREES F. THE LINE MUST BE PROTECTED FROM TRACKING DURING THE SETTING PERIOD BY CONING OFF THE LINE FROM TRAFFIC OR BY USING A CONVOY OF VEHICLES TO TRAFFIC FROM CROSSING THE WET LINE OR WITH A SATURATION OF GLASS BEADS ON THE WET LINE TO PREVENT TRACKING.

9. CURING

   THE EPOXY SHALL BE CAPABLE OF FULLY CURING UNDER A CONSTANT SURFACE TEMPERATURE OF 45 DEGREES F OR ABOVE.

10. ADHESION TO PAVEMENT (CONCRETE AND ASPHALT)

    THE CURED PAVEMENT MARKING MATERIALS, WHEN TESTED ACCORDING TO ACI METHOD 503, SHALL HAVE SUCH A HIGHER DEGREE OF ADHESION TO THE SPECIFIED CONCRETE (COMPRESSIVE STRENGTH, 4,000 PSI MIN.) OR ASPHALT SURFACE SUCH THAT THERE SHALL BE 100% CONCRETE FAILURE IN THE PERFORMANCE OF THIS TEST. THE PREPARED SPECIMENS SHALL BE CONDITIONED AT ROOM TEMPERATURE (75 DEGREES F ± 2 DEGREES F) FOR A MINIMUM OF 24 HOURS AND A MAXIMUM OF 72 HOURS PRIOR TO THE PERFORMANCE OF THE TESTS INDICATED.

11. HARDNESS

    THE PAVEMENT MARKING MATERIAL, WHEN TESTED ACCORDING TO ASTM D-224-75, SHALL HAVE A SHORE D HARDNESS BETWEEN 70 AND 90. SAMPLES SHALL BE ALLOWED TO CURE AT ROOM TEMPERATURE FOR A MINIMUM OF 24 HOURS AND A MAXIMUM OF 72 HOURS PRIOR TO PERFORMING THE INDICATED TEST.

12. TENSILE STRENGTH

    WHEN TESTED ACCORDING TO ASTM D-638, THE EPOXY PAVEMENT MARKING MATERIAL SHALL HAVE A TENSILE STRENGTH OF NOT LESS THAN 5,000 POUNDS PER SQUARE INCH. THE TYPE IV SPECIMENS SHALL BE CAST IN A SUITABLE MOLD AND PULLED AT A RATE OF 0.25 INCHES PER MINUTE BY A SUITABLE DYNAMIC TESTING MACHINE. THE SAMPLES SHALL BE ALLOWED TO CURE AT ROOM TEMPERATURE FOR A MINIMUM OF 72 HOURS BEFORE PERFORMING THE INDICATED TESTS.

13. COMPRESSIVE STRENGTH

    WHEN TESTED ACCORDING ASTM D-695, THE EPOXY PAVEMENT MARKING MATERIAL SHALL HAVE A COMPRESSIVE STRENGTH OF NOT LESS THAN 12,000 POUNDS PER SQUARE INCH. THE CAST SAMPLE SHALL BE CONDITIONED AT ROOM TEMPERATURE FOR A MINIMUM OF 72 HOURS BEFORE PERFORMING THE INDICATED TESTS. THE RATE OF COMPRESSION OF THESE SAMPLES SHALL BE NO MORE THAN 0.25 INCHES PER MINUTE.

14. ABRASION RESISTANCE

    THE ABRASION RESISTANCE SHALL BE EVALUATED ON A TABER ABRADER WITH A 1000 GRAM LOAD AND CS-17 WHEELS. THE DURATION OF THE TEST SHALL BE 1000 CYCLES. THE WEAR INDEX SHALL BE CALCULATED BASED ON ASTM TEST METHOD C-501 AND THE WEAR INDEX FOR THE CATALYZED MATERIAL SHALL NOT BE MORE THAN 100 MG. THE TESTS SHALL BE RUN ON CURED SAMPLES OF MATERIAL WHICH HAVE BEEN APPLIED AT A FILM THICKNESS OF 20 ±0.5 MIL TO CODE S-16 STAINLESS PLATES. THE SAMPLES SHALL BE ALLOWED TO CURE AT 75 DEGREES F ±2 DEGREES F FOR A MINIMUM OF 24 HOURS AND A MAXIMUM OF 72 HOURS PRIOR TO PERFORMING THE INDICATED TESTS.

15. IMPACT STRENGTH

    SAMPLE PREPARATION: PROPERLY MIXED MATERIAL SHALL BE APPLIED ON A MINIMUM OF 28 DAY OLD CLEAN CONCRETE AND SHALL BE ALLOWED TO CURE FOR 72 HOURS AT 75 DEGREES F ±2 DEGREES F. FILM THICKNESS OF THE MATERIAL SHALL BE AT THE APPROPRIATELY PRESCRIBED THICKNESS.

    TESTING: AT A TEMPERATURE OF 75 DEGREES F ±2 DEGREES F(25 DEGREES C), A 2 LB. ROUND STEEL BALL SHALL BE DROPPED FROM A HEIGHT OF 4 FT. ON THE CURED SAMPLE. NO CRACKING OR CHIPPING OF THE MATERIAL SHALL TAKE PLACE.

DRAWN DRL | REVISED
CALCULATED DRL | CHECKED ENF

TRAFFIC CONTROL NOTES

CUYAHOGA COUNTY
CUY-480-10.38

16. COLOR

THE MIXED HYBRIDIZED POLYMER COMPOUND, BOTH WHITE AND YELLOW, MUST BE APPLIED TO 2 SETS OF 3" X 6" ALUMINUM PANELS AT 20 ± 1 MIL IN THICKNESS, ONE SET WITH NO GLASS SPHERES AND ONE SET WITH GLASS SPHERES AS SPECIFIED IN THIS SPECIFICATION SECTION 633.03.04, PARAGRAPH B (MUST ENSURE 50/50 DISTRIBUTION OF SIZE I AND SIZE II SPHERES FOR THIS WILL IMPACT THE RESULTS OF THIS TEST) AND EXPOSE THE PREPARED SAMPLES IN A Q.U.V. ENVIRONMENTAL TESTING CHAMBER, AS DESCRIBED IN ASTM G-53, AND THEY SHALL CONFORM TO THE FOLLOWING REQUIREMENTS. THE TEST SHALL BE CONDUCTED FOR 75 HOURS AT 122 DEGREES F, 4 HOURS HUMIDITY AND 4 HOURS U.V., IN ALTERNATING CYCLES. THE PREPARED PANELS SHALL BE CURED AT 77 DEGREES F FOR 72 HOURS PRIOR TO EXPOSURE. THE COLOR OF THE WHITE EPOXY MATERIAL SHALL NOT BE DARKER THAN FEDERAL STANDARD NO. 595A-17855. THE COLOR OF THE YELLOW EPOXY MATERIAL SHALL BE REASONABLY CLOSE TO FEDERAL STANDARD

17. ACCELERATED LIFE CYCLE AGING TEST

THE MATERIAL MUST NOT SHOW ANY EVIDENCE OF BLISTERING, BUBBLING, OR DELAMINATING WHEN SUBMITTED TO TEST METHOD ATR-931. INDEPENDENT TEST LABORATORIES SUCH AS PSI CAN BE CONTACTED TO PERFORM ATR-931. CLEVELAND OFFICE: (216) 447-1335, CONTACT JIM McCUE.

REFLECTIVE MEDIA

BOTH SIZE I AND SIZE II REFLECTIVE GLASS SPHERES SHALL BE SIMULTANEOUSLY DISPENSED THROUGH INDIVIDUAL DISPENSING GUNS ON THE WET MATERIAL RESPECTIVELY AND THE COMBINED APPLICATION OF BOTH SIZES SHALL BE AT A MINIMUM RATE OF 25 LBS/GAL WITH EACH SIZE RANGING BETWEEN 12-13 LBS/GAL AND THE BEADS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

THE GLASS SPHERES SHALL BE COLORLESS, CLEAN TRANSPARENT, FREE FROM MILKINESS OR EXCESSIVE AIR BUBBLES, AND ESSENTIALLY CLEAN FROM SURFACE SCARRING OR SCRATCHING.

SIZE I AND SIZE II GLASS BEADS SHALL BE SPHERICAL IN SHAPE AND AT LEAST 70% SHALL BE TRUE SPHERES. SIZE I SPHERES SHALL BE TESTED FOR ROUNDNESS ACCORDING TO THE PROCEDURAL DIRECTIVES OF THE MATERIALS BUREAU. SIZE II SPHERES SHALL BE TESTED IN ACCORDANCE WITH ASTM D-1155.

THE REFRACTIVE INDEX OF THE SPHERES SHALL BE A MINIMUM OF 1.50 AS DETERMINED BY THE LIQUID IMMERSION METHOD AT 75 DEGREES F. THE SILICA CONTENT OF THE GLASS SPHERES SHALL NOT BE LESS THAN 60%.

SIZE I GLASS SPHERES SHALL BE COATED WITH SILANE TYPE ADHERENCE COATING TO ENHANCE ITS EMBEDMENT AND ADHERENCE TO APPLIED BINDER MATERIAL FILM. THE COATED BEADS SHALL EMIT A YELLOW-GREEN FLUORESCENCE WHEN TESTED BY THE DANSYL CHLORIDE TEST PROCEDURE. SIZE II GLASS SPHERES SHALL BE TREATED WITH A MOISTURE PROOF COATING. GLASS BEADS SHALL SHOW NO TENDENCY TO ABSORB MOISTURE IN STORAGE AND SHALL REMAIN FREE OF CLUSTERS AND LUMPS. THEY SHALL FLOW FREELY FROM DISPENSING EQUIPMENT AT ANY TIME WHEN ATMOSPHERIC CONDITIONS ARE SATISFACTORY FOR MARKING OPERATIONS. THE MOISTURE RESISTANCE OF THE GLASS SPHERE SHALL BE DETERMINED ON THE BASIS OF THE FOLLOWING TEST: PLACE 2 LBS OF SPHERES IN A WASHED COTTON BAG HAVING A THREAD COUNT OF 50 PER SQUARE INCH(WARP AND WOOF) AND IMMERSE THE BAG IN A CONTAINER OF WATER FOR 30 SECONDS. REMOVE THE BAG AND FORCE EXCESS WATER FROM THE SAMPLE BY SQUEEZING THE BAG. SUSPEND AND ALLOW THE BAG TO DRAIN FOR 2 HOURS AT ROOM TEMPERATURE (70-72 DEGREES F). THEN MIX THE SAMPLE IN THE BAG SHAKING THOROUGHLY. TRANSFER A SAMPLE SLOWLY TO A CLEAN, DRY GLASS FUNNEL HAVING A STEM 4 INCHES IN LENGTH WITH A 3/8 INCH INSIDE DIAMETER STEM ENTRANCE OPENING AN A MINIMUM EXIT OPENING OF 1/4 INCH. THE ENTIRE SAMPLE SHALL FLOW FREELY THROUGH THE FUNNEL. IF THE BEADS CLOG WHEN FIRST INTRODUCED, THEN IT IS PERMISSIBLE TO LIGHTLY TAP THE FUNNEL TO INITIATE FLOW.

IN ADDITION TO THE REQUIREMENTS OF 740.10, THE FOLLOWING SHALL APPLY:

INSPECTION SHALL BE DONE AT THE PROJECT SITE. RANDOM SAMPLES SHALL BE OBTAINED FROM THE MATERIAL DELIVERED TO THE PROJECT SITE OR AT OTHER LOCATIONS DESIGNATED BY THE LABORATORY.

GLASS BEADS FOR EPOXY MARKINGS SHALL HAVE THE FOLLOWING GRADATION WHEN TESTED IN ACCORDANCE WITH ASTM D-1214.

SIZE I			SIZE II		
U.S. STD. SIEVE NO.	% RETAINED	% PASSING	U.S. STD. SIEVE NO.	% RETAINED	% PASSING
10	0	100	20	0-5	95-100
12	0-5	95-100	30	5-20	80-95
14	5-20	80-95	50	30-75	9-42
16	40-80	10-40	80	9-32	0-10
18	10-40	0-5	100	0-5	-
20	0-5	0-2	PAN	0-2	-
PAN	0-2				

PERFORMANCE REQUIREMENTS

THE SYSTEM SHALL PROVIDE EFFECTIVE DELINEATION ON CONCRETE AS WELL AS ASPHALT FOR THE SPECIFIED PERIOD AND PROVIDE THE FOLLOWING INITIAL RETROREFLECTIVITY REQUIREMENTS:

	SPECIFIC LUMINAIRE (MILLICANDELAS/ SQ.FT./FT. CANDLE)-MICROLUX 12
WHITE LINE, SYMBOLS AND LEGENDS	250 MIN.
YELLOW LINE	175 MIN.

RE-APPLYING

THE RE-APPLICATION SHALL BE APPLIED OVER THE EXISTING BINDER WITH THE PROPER SURFACE PREPARATION AS STATED IN 641.05. THE RATES OF RE-APPLICATION SHALL BE AS FOLLOWS:

LINE WIDTH	WET FILM THICKNESS	BINDER	REFLECTORIZED SPHERES
4"	10 MILS	481 FT./GAL. 10.97 GAL./MILE	25 LBS./GAL. 274.25 LBS./MILE

METHOD OF MEASUREMENT

IN ADDITION TO THE REQUIREMENTS OF 641.12, THE FOLLOWING SHALL APPLY:

A. THE CONTRACTOR MUST SUBMIT CERTIFIED DOCUMENTS FROM THE MANUFACTURER OF THE AMOUNT OF GALLONS AND POUNDS OF BEADS SHIPPED FOR A PARTICULAR PROJECT.

B. IN THE FIELD, THE CONTRACTOR SHALL FURNISH A CALIBRATED MEASURING DEVICE TO BE USED TO MEASURE THE QUANTITY OF MATERIAL USED SUCH AS STROKE COUNTERS MOUNTED ON THE DISPENSING PUMPS. STROKE COUNTER READINGS MUST BE TAKEN AT THE BEGINNING AND END OF EACH DAY BY THE STATE AUTHORIZED INSPECTOR. CAUTION MUST BE TAKEN WHILE RECIRCULATING THE MATERIAL TO TURN OFF THE STROKE COUNTER ON THE PUMP. (USING "DIPPING THE TANK" METHOD AS THE ONLY MEASURE IS NOT SUFFICIENT)

C. THE RATE OF APPLICATION OF MATERIALS SHALL BE VERIFIED BY COMPARING THE AMOUNT OF MATERIAL USED WITH THE COMPUTED AMOUNT NEEDED FOR EACH SECTION. WHERE SHORT SECTIONS ARE INVOLVED AND IT IS NOT PRACTICAL OR FEASIBLE TO DETERMINE THE QUANTITIES USED ON EACH AND EVERY SHORT SECTION, SUCH SECTIONS MAY BY AGREEMENT BETWEEN THE ENGINEER AND CONTRACTOR, BE GROUPED TOGETHER TO VERIFY THE QUANTITIES USED.

D. CONTRACT PRICE ADJUSTMENT FOR EACH SECTION WILL BE BASED ON THE FOLLOWING PERCENT OF BINDER AND BEADS USED FOR EACH SECTION VERSUS THE CALCULATED QUANTITIES, WITH PAYMENT DETERMINED USING THE LOW BAND IF THERE IS A DIFFERENT BAND FOR BEADS AND BINDER. WHERE SHORT SECTIONS ARE GROUPED TOGETHER FOR VERIFICATION OF QUANTITIES, THE BAND DETERMINED ON THE BASIS OF A SINGLE RATE APPLICATION SHALL APPLY TO ALL SECTIONS OF THE GROUP

100% TO 95%	BAND 1
94.9% TO 90%	BAND 2
89.9% TO 80%	BAND 3
79.9% AND LESS	BAND 4

BASIS OF PAYMENT

THE UNIT BID PRICE FOR EACH ITEM SHALL INCLUDE ALL OF THE PAVEMENT PREPARATION WORK REQUIRED, INCLUDING THE REMOVAL OF EXISTING PAVEMENT MARKINGS.

FOR THE NUMBER MILES OF LINE APPLIED, GROUPED INTO EACH BAND, THE CONTRACTOR WILL BE PAID THE CONTRACT PRICE, ADJUSTED IN ACCORD WITH THE FOLLOWING SCHEDULE:

BAND 1	100% OF CONTRACT UNIT PRICE
BAND 2	90% OF CONTRACT UNIT PRICE
BAND 3	80% OF CONTRACT UNIT PRICE
BAND 4	RE-APPLY

PAYMENT WILL BE MADE FOR:

ITEM	UNIT	DESCRIPTION
SPEC	MILE	PAVEMENT MARKING MISC: EPOXY EDGE LINE
SPEC	MILE	PAVEMENT MARKING MISC: EPOXY LANE LINE
SPEC	LIN FT	PAVEMENT MARKING MISC: EPOXY CHANNELIZING LINE
SPEC	LIN FT	PAVEMENT MARKING MISC: EPOXY TRANSVERSE LINE

DRAWN DRL | REVISED
CALCULATED DRL | CHECKED ENF

TRAFFIC CONTROL NOTES

CUYAHOGA COUNTY
CUY-480-10.38

CALCULATED DRL
CHECKED ACB

ITEM 202 - RAISED PAVEMENT MARKER 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 OF MARKERS CLEARLY MARKED) AND THEN DELIVERED TO THE ODOT WARRENSVILLE YARD-25609 EMERY ROAD, WARRENSVILLE HEIGHTS, OHIO 44128 (SR 175 AT INTERSECTION OF I-271 AND EMERY ROAD.), 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.

ITEM 202 - RAISED PAVEMENT MARKER REMOVED FOR STORAGE, AS PER PLAN ..... 1000 EACH

MATERIAL SUPPLIED BY THE DEPARTMENT

ALL MATERIALS ON THIS PROJECT ARE TO BE CONTRACTOR FURNISHED EXCEPT THAT THE DEPARTMENT SHALL SUPPLY TO THE CONTRACTOR RPM MATERIALS IN THE QUANTITIES SHOWN HEREIN. PAY ITEMS FOR THE DEPARTMENT SUPPLIED MATERIALS SHALL BE INDICATED AS "INSTALLATION ONLY". THE QUANTITY AND TYPE OF DEPARTMENT SUPPLIED MATERIALS ARE SHOWN ON THIS SHEET.

THE CONTRACTOR WILL BE INFORMED AT THE PRE-CONSTRUCTION CONFERENCE OF THE LOCATION OF THE DEPARTMENT SUPPLIED MATERIAL. WHEN SPECIFIED, ADDITIONAL RPM MATERIALS WILL BE STORED WITHIN THE DISTRICT FOR USE ON THIS PROJECT. 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. AN AUTHORIZATION FOR PICKUP FORM WILL BE FURNISHED BY THE DISTRICT CONSTRUCTION ADMINISTRATOR TO THE CONTRACTOR AT THE PRE-CONSTRUCTION CONFERENCE. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND/OR THE PARTIES LISTED ON THE AUTHORIZATION FORM (DEPENDENT ON THE STORAGE LOCATION OF THE MATERIALS) IN WRITING, AT LEAST FIVE (5) CALENDER DAYS PRIOR TO PICK UP OF DEPARTMENT SUPPLIED MATERIALS. THE CONTRACTOR SHALL STORE THEM 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.

RETROREFLECTOR REPLACEMENT

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER TO REPLACE RETROREFLECTORS WHICH WERE REMOVED IN THE LANE CLOSURE AREAS WHICH WERE BEYOND THE RESURFACING LIMITS AND TO INSTALL (OR REPLACE) THE PROPER COLOR REFLECTOR(S) INTO DEPARTMENT SUPPLIED CASTINGS. THE RETROREFLECTORS IN THE DEPARTMENT SUPPLIED CASTINGS ONLY NEED TO BE REPLACED IF THE COLOR IN THE CASTING CONFLICTS WITH THE COLOR SPECIFIED FOR THE RPM'S LOCATION.

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... 1000 EACH

Material Furnished by the Department (Installation Only)

ITEM 621 - RAISED PAVEMENT MARKER, INSTALLATION ONLY

ROADWAY	LOCATION		RELATED PAVEMENT MARKING	INTERVAL	ONE WAY REFLECTORS		TWO WAY REFLECTORS			
	FROM	TO		FEET	WHITE	YELLOW	W/R	Y/R	W/W	Y/Y
I480 - EB	556+45	714+40	LANE LINE	120	294					
I480 - WB	563+50	717+05	LANE LINE	120	294					
RAMP W-1	572+30	573+50	CHAN LINE	40			4			
RAMP W-1	573+50	578+00	EDGE LINE	80				6		
RAMP W-2	587+40	593+00	EDGE LINE	80				7		
RAMP W-2	593+00	594+20	CHAN LINE	40			4			
RAMP W-3	590+00	591+60	EDGE LINE	80	ON STRUCTURE					
RAMP W-3	591+60	594+00	CHAN LINE	40	ON STRUCTURE					
RAMP T-1	627+50	629+00	CHAN LINE	40			5			
RAMP T-1	629+00	635+00	EDGE LINE	80				7		
RAMP T-2	626+00	628+43	CHAN LINE	40			14			
RAMP T-2	628+43	631+50	EDGE LINE	80				4		
RAMP T-3	645+70	648+73	EDGE LINE	80				4		
RAMP T-3	648+73	650+85	CHAN LINE	40			12			
RAMP T-4	646+15	651+00	EDGE LINE	80				6		
RAMP T-4	651+00	652+20	CHAN LINE	40			4			
RAMP W139th	558+00	560+88	EDGE LINE	80	OUTSIDE	PAVEMENT	LIMITS			
RAMP W139th	560+88	562+08	CHAN LINE	40	OUTSIDE	PAVEMENT	LIMITS			
RAMP R-1	701+15	703+40	CHAN LINE	40	OUTSIDE	PAVEMENT	LIMITS			
RAMP R-1	703+40	705+00	EDGE LINE	80	OUTSIDE	PAVEMENT	LIMITS			
RAMP R-2	701+30	702+50	CHAN LINE	40	OUTSIDE	PAVEMENT	LIMITS			
RAMP R-2	702+50	707+00	EDGE LINE	80	OUTSIDE	PAVEMENT	LIMITS			
TOTALS					588		43	34		
					588		77			
					665					

RAISED PAVEMENT MARKER QUANTITIES

CUYAHOGA COUNTY
CUY-480-10.38

CALCULATED DRL
CHECKED ACB

EPOXY PAVEMENT MARKINGS

REFERENCE NO.		LOCATION			SPEC	SPEC	SPEC
		ROADWAY	FROM STATION	TO STATION	EDGE LINE (WHITE)	EDGE LINE (YELLOW)	LANE LINE
					LIN FT	LIN FT	LIN FT
		1480 - EB	554+45	560+88	643	643	1929
		1480 - EB	560+88	564+50		362	1086
		1480 - EB	564+50	573+00	850	850	2550
		1480 - EB	573+00	590+45	1745	1745	5235
		1480 - EB	590+45	595+70		525	1575
		1480 - EB	595+70	623+75	2805	2805	8415
		1480 - EB	623+75	628+43		468	1404
		1480 - EB	628+43	649+10	2067	2067	6201
		1480 - EB	649+10	654+60		550	1650
		1480 - EB	654+60	698+80	4420	4420	13260
		1480 - EB	698+80	703+40		460	1380
		1480 - EB	703+40	714+10	1070	1070	3210
		1480 - WB	563+55	569+90	635	635	1905
		1480 - WB	569+90	575+55		565	1695
		1480 - WB	575+55	591+60	1605	1605	4815
		1480 - WB	591+60	596+50		490	1470
		1480 - WB	596+50	625+40	2890	2890	8670
		1480 - WB	625+40	631+75		635	1905
		1480 - WB	631+75	648+73	1698	1698	5094
		1480 - WB	648+73	653+31		458	1374
		1480 - WB	653+31	722+80	6949	6949	20847
TOTALS					27,377	31,890	95,670
					11.23 MILES		18.12 MI

QUANTITIES CARRIED TO SHEET 121

TRAFFIC CONTROL QUANTITIES
PAVEMENT MARKINGS

CUYAHOGA COUNTY
CUY-480-10.38

CALCULATED DRL
CHECKED ACB

TRAFFIC CONTROL QUANTITIES
PAVEMENT MARKINGS

CUYAHOGA COUNTY
CUY-480-10.38

EPOXY PAVEMENT MARKINGS

REFERENCE NO.		LOCATION ROADWAY	FROM STATION	TO STATION	SPEC EDGE LINE (WHITE) LIN FT	SPEC EDGE LINE (YELLOW) LIN FT	SPEC LANE LINE LIN FT	SPEC CHANNELIZING LINE LIN FT	SPEC STOP LINE LIN FT	SPEC CROSSWALK LINE LIN FT	SPEC TRANSVERSE LINE (WHITE) LIN FT
		RAMP W-1	569+90	572+30	240		240				
		RAMP W-1	572+30	573+50	240			120			
		RAMP W-1	573+50	575+55	410	205					
		RAMP W-1	575+55	578+00	245	245					
		RAMP W-2	587+40	590+45	305	305					
		RAMP W-2	590+45	593+00	510	255					
		RAMP W-2	593+00	594+20	240			120			
		RAMP W-2	594+20	595+70	150		150				
		RAMP W-3	590+00	591+60	160	160					
		RAMP W-3	591+60	594+00	240			480			160
		RAMP W-3	594+00	596+50	250		250				
		RAMP T-1	625+40	627+50	210		210				
		RAMP T-1	627+50	629+00	300			150			
		RAMP T-1	629+00	631+75	550	275					
		RAMP T-1	631+75	635+00	325	325					
		RAMP T-2	623+75	626+00	225		225				
		RAMP T-2	626+00	628+43	243			486			220
		RAMP T-2	628+43	631+50	307	307					
		RAMP T-3	645+70	648+73	303	303					
		RAMP T-3	648+73	650+85	212			424			205
		RAMP T-3	650+85	653+31	246		246				
		RAMP T-4	646+15	649+10	295	295					
		RAMP T-4	649+10	651+00	380	190					
		RAMP T-4	651+00	652+20	240			120			
		RAMP T-4	652+20	654+60	240		240				
		RAMP W 139	558+00	560+88	288	288					
		RAMP W 139	560+88	562+08	240			120			
		RAMP W 139	562+08	564+50	242		242				
		RAMP R-1	698+80	701+15	235		235				
		RAMP R-1	701+15	703+40	225			450			218
		RAMP R-1	703+40	707+00	360	360					
		RAMP R-2	698+90	701+30	240		240				
		RAMP R-2	701+30	702+50	240			120			
		RAMP R-2	702+50	704+35	370	185					
		RAMP R-2	704+35	705+00	65	65					
TOTALS (THIS SHEET)					9,571	3,763	2,278	2,590			803
TOTALS SHEET 120					27,377	31,890	95,670	--			--
TOTALS					36,948	35,653	97,948	2,590			803
					13.75	MILES	18.55 MI				

QUANTITIES CARRIED TO SHEET 121A

SHEET NUMBER																	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
119	120	121		121B																		
																					TRAFFIC CONTROL	
1000																	202	54101	1000	EACH	RAISED PAVEMENT MARKERS REMOVED FOR STORAGE, AS PER PLAN	119
665																	621	00200	665	EACH	RAISED PAVEMENT MARKERS, INSTALLATION ONLY	
1000																	621	00300	1000	EACH	PRISMATIC RETROREFLECTOR	
				32													625	25500	32	LIN.FT.	CONDUIT, 3", 713.04	
				32													625	29000	32	LIN.FT.	TRENCH	
				4													625	30700	4	EACH	PULLBOX, 713.08, 18"	
				16													632	26500	16	EACH	DETECTOR LOOP	
				608													632	65200	608	LIN.FT.	LOOP DETECTOR LEAD-IN CABLE	
	11.23	2.52															SPEC	69080000	13.75	MILES	PAVEMENT MARKINGS, MISC.: EPOXY EDGE LINE	116-118
	18.12	0.43															SPEC	69080000	18.55	MILES	PAVEMENT MARKINGS, MISC.: EPOXY LANE LINE	116-118
		2590															SPEC	69080010	2590	LIN.FT.	PAVEMENT MARKINGS, MISC.: EPOXY CHANNELIZING LINE	116-118
		803															SPEC	69080010	803	LIN.FT.	PAVEMENT MARKINGS, MISC.: EPOXY TRANSVERSE LINE	116-118

CALCULATED DRL
CHECKED ACB

TRAFFIC CONTROL GENERAL SUMMARY

CUYAHOGA COUNTY
CUY-480-10.38

121A
134

PLOT SUBMITTED: 29-MAY-1997 16:49
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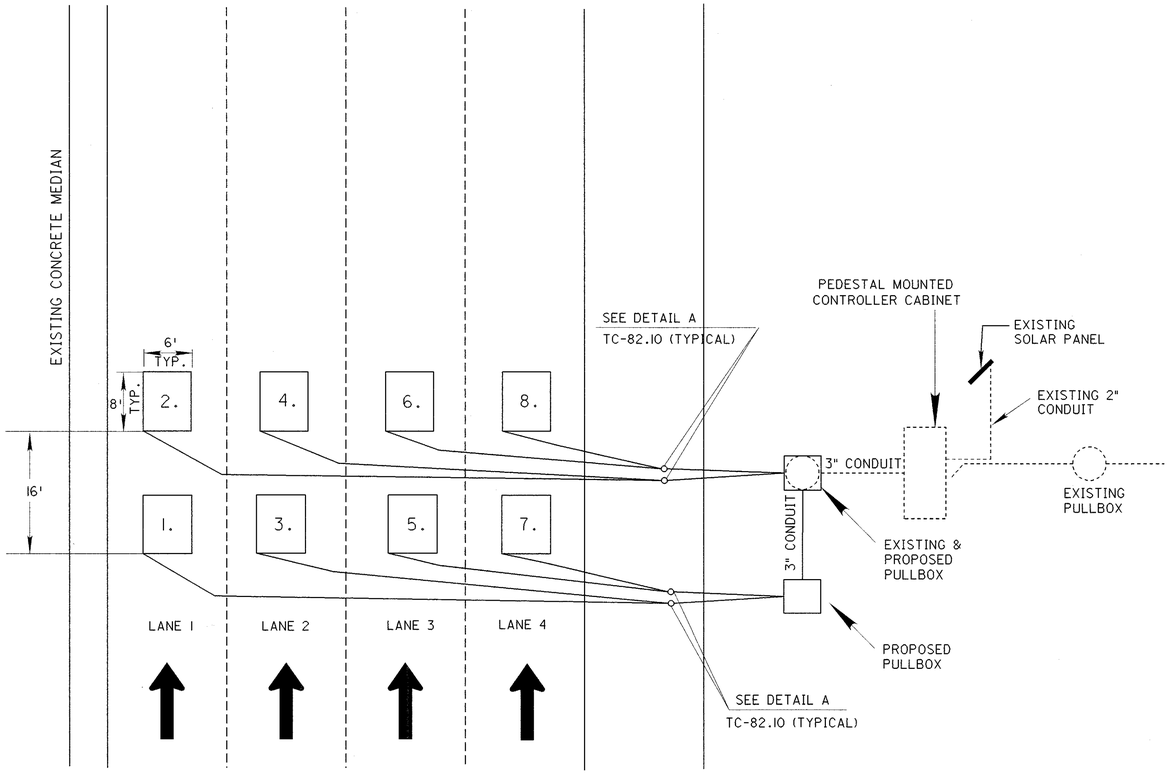

AUTOMATIC TRAFFIC RECORDER INSTALLATION

8 LANE SECTION

OPPOSITE DIRECTION TO BE THE SAME

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
603	00400	100	LIN. FT.	4" CONDUIT, TYPE E
625	25500	32	LIN. FT.	CONDUIT, 3", 713.04
625	29000	32	LIN. FT.	TRENCH
625	30700	4	EACH	PULLBOX, 713.08, 18"
632	65200	608	LIN. FT.	LOOP DETECTOR LEAD-IN CABLE
632	26500	16	EACH	DETECTOR LOOP

1. ALL LOOPS SHALL BE 6' X 8'. LOOPS SHALL BE SPACED 16'0" FROM LEADING EDGE TO LEADING EDGE. INSTALLATION OF LOOPS SHALL CONFORM TO TC-82.10.

2. CABLE AND WIRE SHALL BE IDENTIFIED IN ACCORDANCE WITH 632.04. IDENTIFICATION SHALL INCLUDE THE LANE NUMBER AND LOOP NUMBER AS SHOWN. IDENTIFICATION TAGS ARE REQUIRED AT BOTH THE PULLBOX AND CONTROLLER.

3. ADJACENT LOOPS (TRANSVERSE AND LONGITUDINAL) SHALL BE INSTALLED IN OPPOSITE DIRECTIONS, i.e., LANE 1, LOOP 1 AND LANE 2, LOOP 4 CLOCKWISE; LANE 1, LOOP 2 AND LANE 2, LOOP 3 COUNTERCLOCKWISE. EACH LOOP SHALL HAVE A SEPARATE LEAD-IN CABLE ROUTED TO THE CONTROLLER CABINET AND TAGGED AS NOTED ABOVE.

4. REFFERENCE IS MADE TO STANDARD DRAWING HL-30.11 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 25'.

5. ALL ITEMS SHALL CONFORM TO C&M SPECIFICATIONS 625, 713, 632, 732, 633 AND 733, UNLESS OTHERWISE SPECIFIED.

7. LOOPS SHALL BE CUT IN THE FINAL ASPHALT COURSE. THEY SHALL NOT BE INSTALLED BETWEEN THE INTERMEDIATE AND FINAL COURSES.

8. 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.

APPROXIMATE EXISTING LOCATIONS:

EB STA 669+00± (EAST OF SOUTHWOOD DRIVE)
WB STA 690+50± (WEST OF IDLEWOOD DRIVE)

AUTOMATIC TRAFFIC RECORDER PLAN INSERT SHEET

CUYAHOGA COUNTY
CUY-480-10.38

1218
134

PLOTTED BY: ksarli
PLOTTED FROM: i:\users\lhazapis\pid13000\13000tpb.d
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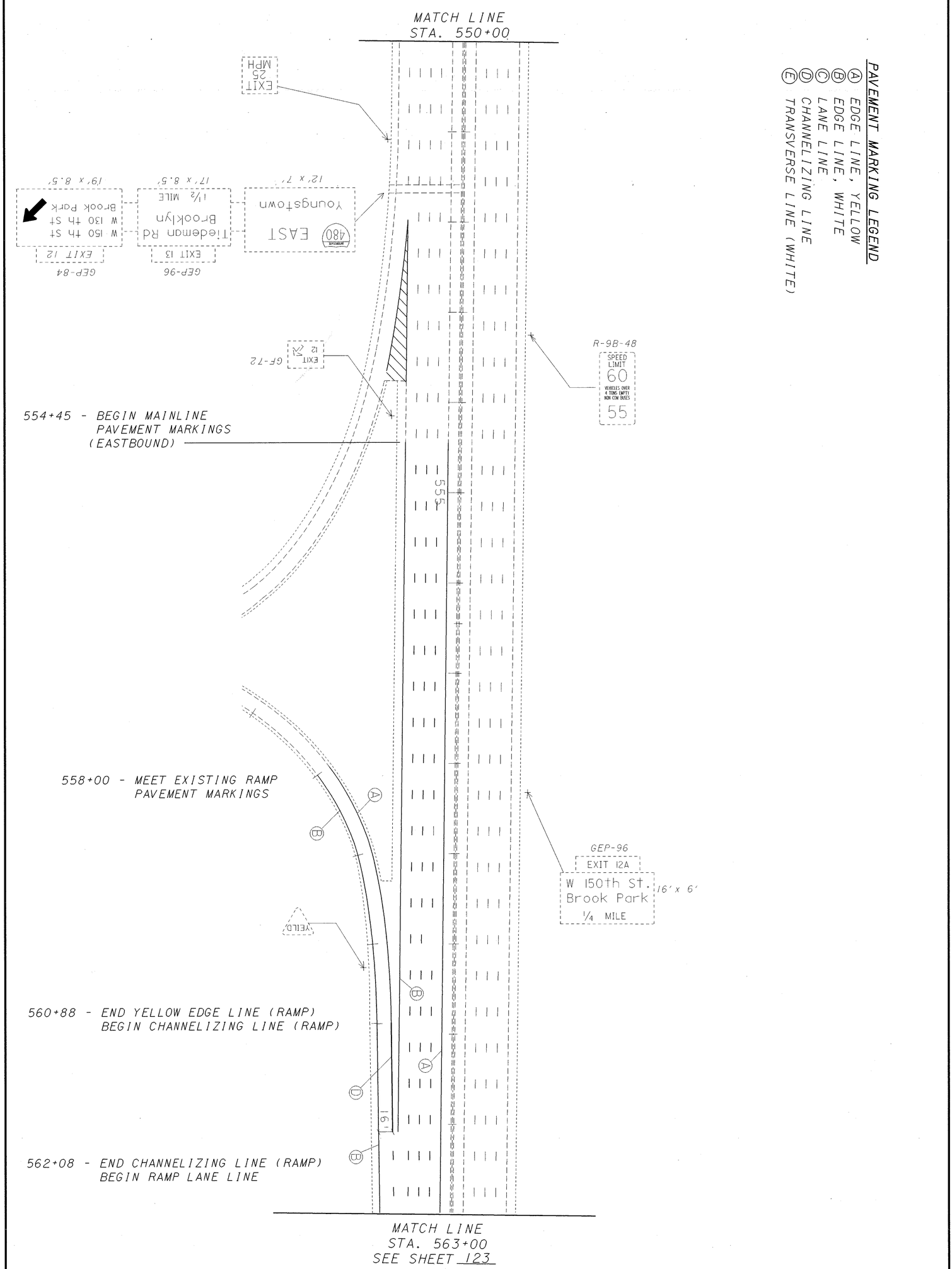
PLOT SUBMITTED: 12-APR-1997 12:07



PAVEMENT MARKING LEGEND

- (A) EDGE LINE, YELLOW
- (B) EDGE LINE, WHITE
- (C) LANE LINE
- (D) CHANNELIZING LINE
- (E) TRANSVERSE LINE (WHITE)

122/134	CUYAHOGA COUNTY CUY-480-10.38	TRAFFIC CONTROL PLAN SHEET IR-480 STA. 550+00 TO 563+00	CALCULATED DRL CHECKED ACB	0 50 100 HORIZONTAL SCALE IN FEET

PLOTTED BY: ksarli
PLOTTED FROM: i:\users\lhazapis\pid13000\13000tpc.d
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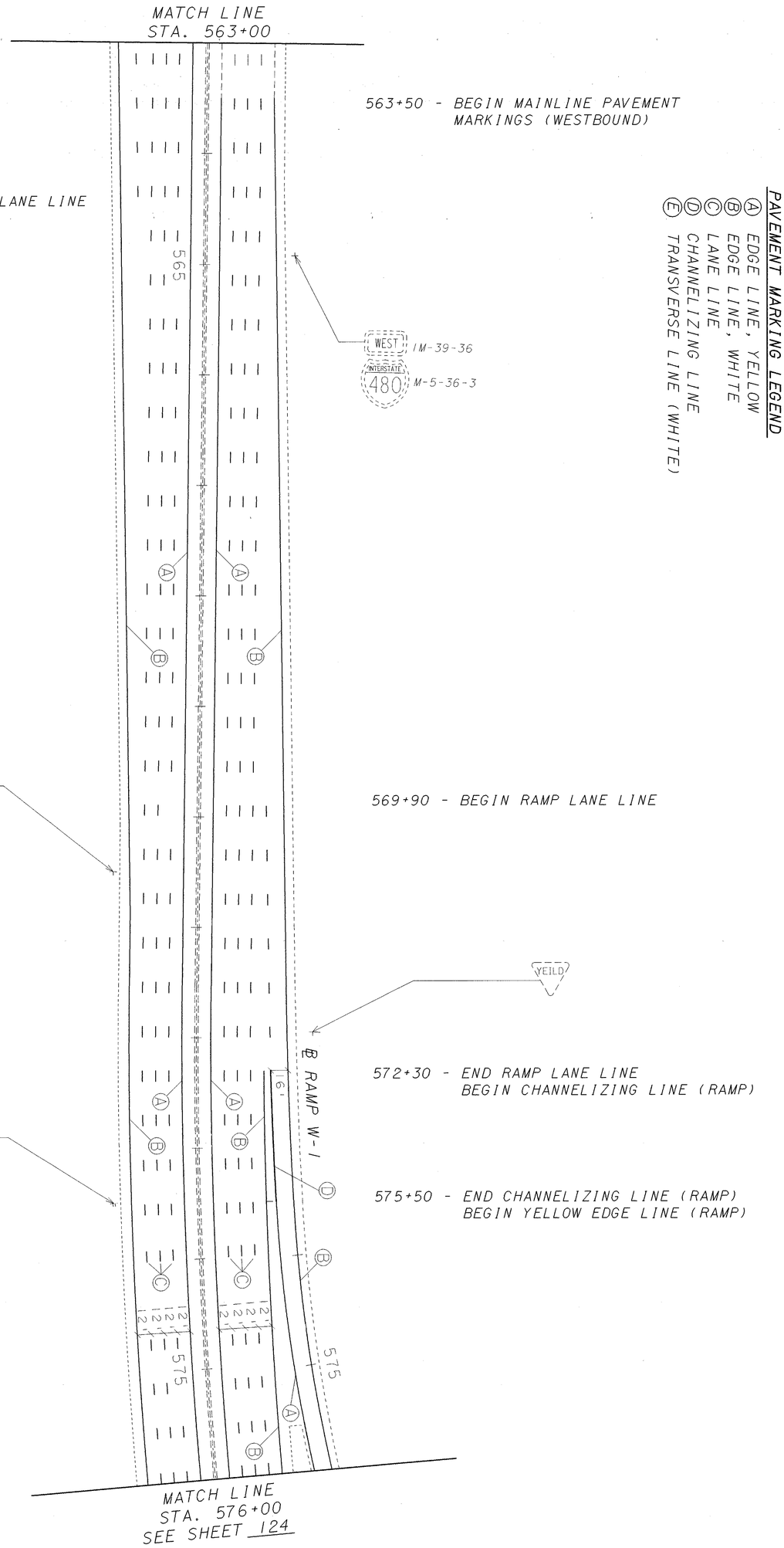

123/134	CUYAHOGA COUNTY CUY-480-10.38	TRAFFIC CONTROL PLAN SHEET IR-480 STA. 563+00 TO 576+00	CALCULATED DRL CHECKED ACB	HORIZONTAL SCALE IN FEET (0, 50, 100)

PLOTTED BY: ksarli
PLOTTED FROM: i:\users\lhazapis\pid13000\13000tpd.d
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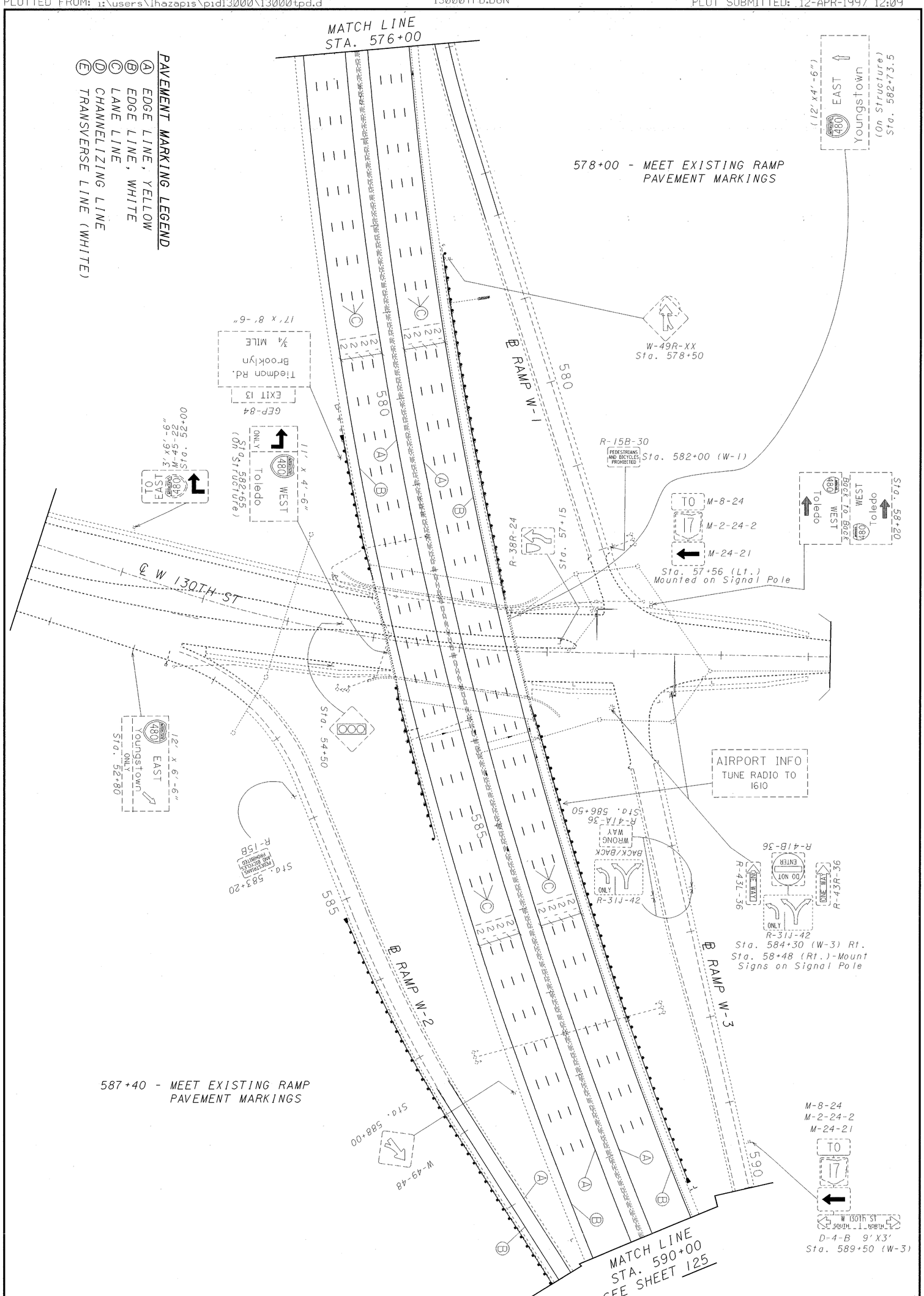

124/134	CUYAHOGA COUNTY CUY-480-10.38	TRAFFIC CONTROL PLAN SHEET IR-480 STA. 576+00 TO 590+00	CALCULATED DRL CHECKED ACB	0 50 100 HORIZONTAL SCALE IN FEET

PLOTTED BY: ksarli
PLOTTED FROM: i:\users\lhazapis\pid13000\13000tpe.d
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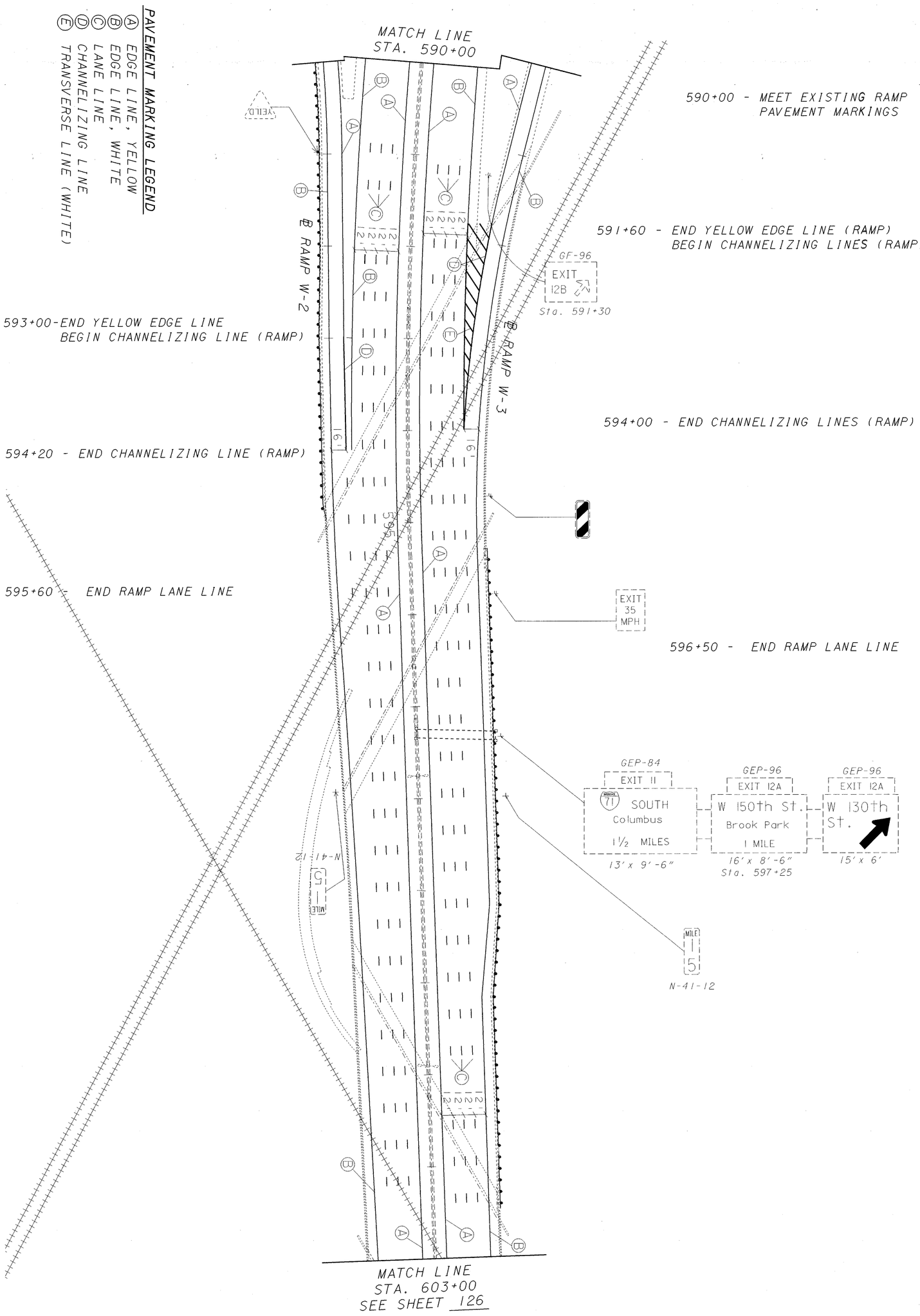

125 / 134	CUYAHOGA COUNTY CUY-480-10.38	TRAFFIC CONTROL PLAN SHEET IR-480 STA. 590+00 TO 603+00	CALCULATED DRL CHECKED ACB	0 50 100 HORIZONTAL SCALE IN FEET

PLOTTED BY: ksarli
PLOTTED FROM: i:\users\lhazapis\pid13000\13000tpf.d
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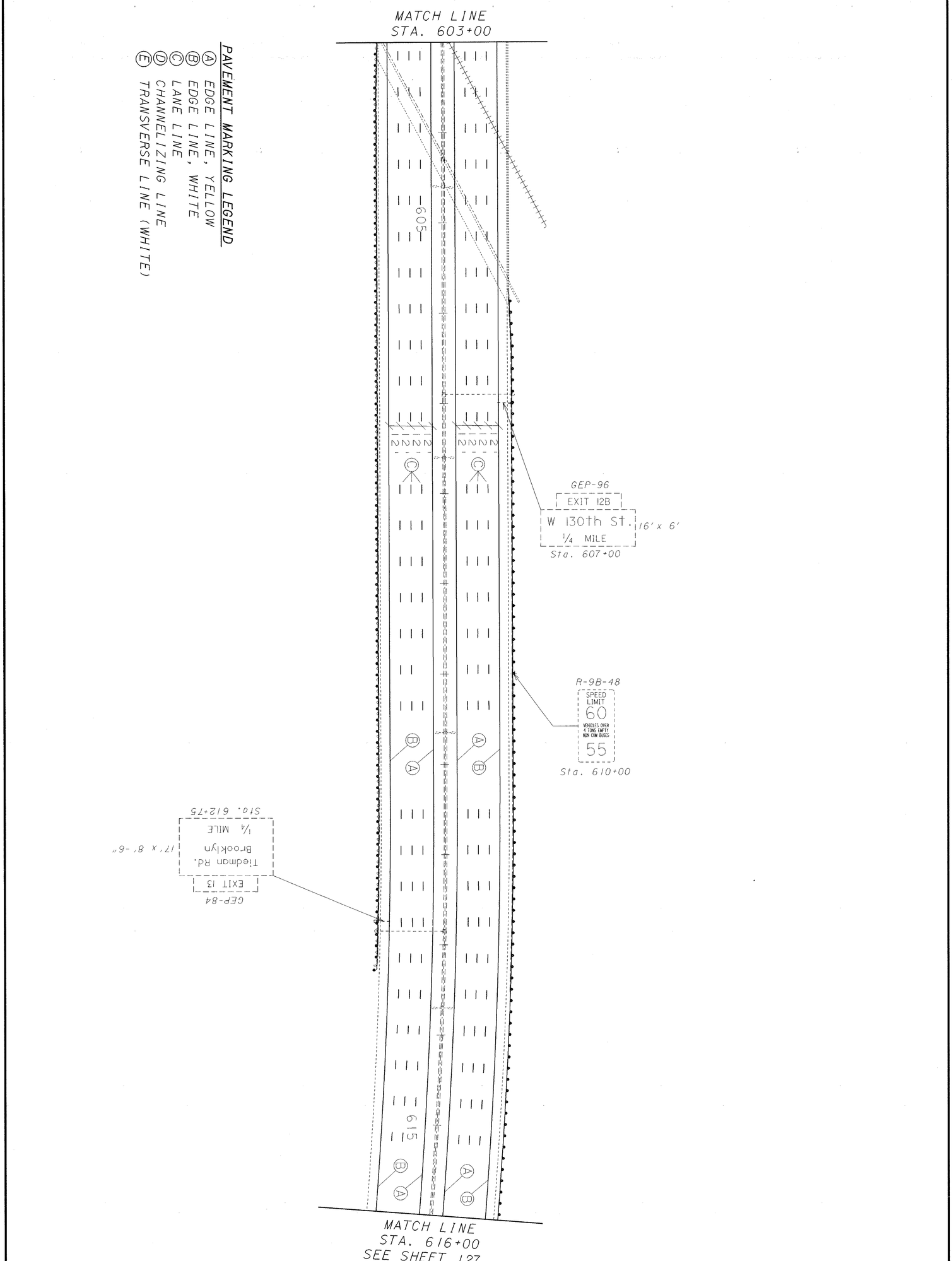

126 of 134	CUYAHOGA COUNTY CUY-480-10.38	TRAFFIC CONTROL PLAN SHEET IR-480 STA. 603+00 TO 616+00	CALCULATED DRL CHECKED ACB	0 50 100 HORIZONTAL SCALE IN FEET	N

PLOTTED BY: ksarli
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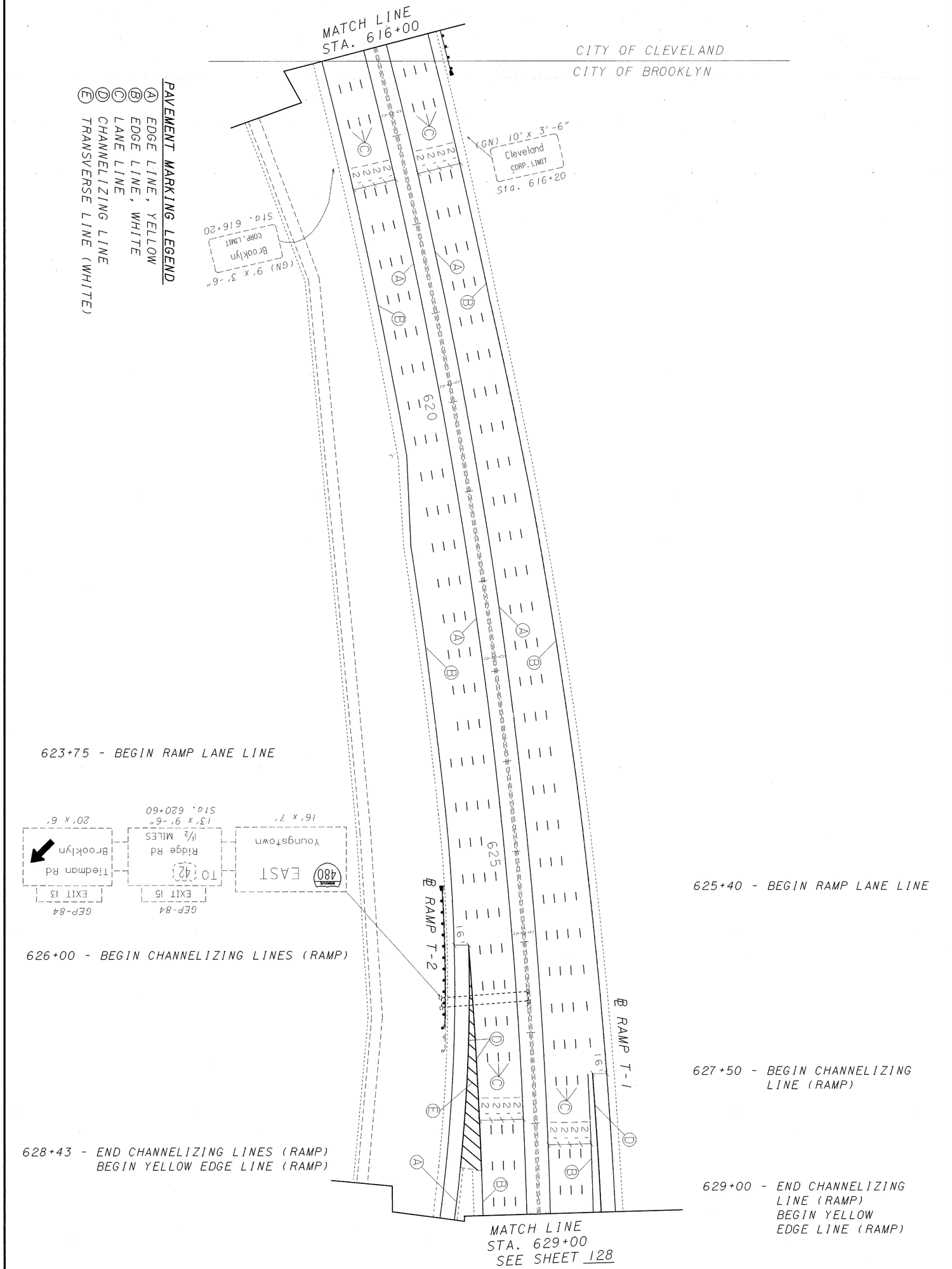
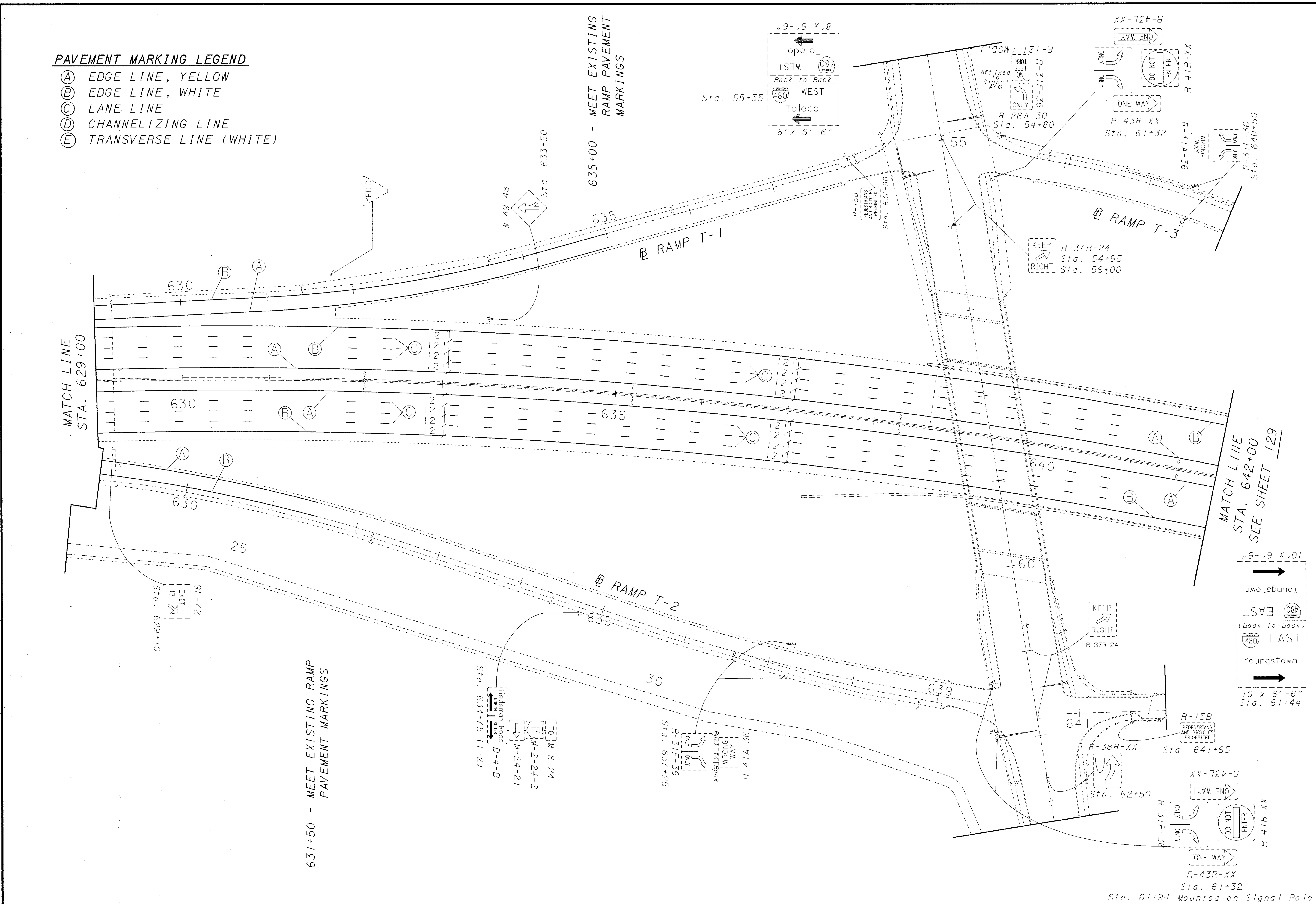


127 / 134	CUYAHOGA COUNTY CUY-480-10.38	TRAFFIC CONTROL PLAN SHEET IR-480 STA. 616+00 TO 629+00	CALCULATED DRL CHECKED ACB	0 50 100 HORIZONTAL SCALE IN FEET



PAVEMENT MARKING LEGEND
(A) EDGE LINE, YELLOW
(B) EDGE LINE, WHITE
(C) LANE LINE
(D) CHANNELIZING LINE
(E) TRANSVERSE LINE (WHITE)
635+00 - MEET EXISTING RAMP PAVEMENT MARKINGS
631+50 - MEET EXISTING RAMP PAVEMENT MARKINGS
MATCH LINE STA. 629+00
MATCH LINE STA. 642+00 SEE SHEET 129
℄ RAMP T-1
℄ RAMP T-2
℄ RAMP T-3
YEILD
W-49-48
Sta. 633+50
Sta. 55+35
Back to Back
480 WEST Toledo
8' x 6'-6"
R-15B
PEDESTRIANS AND BICYCLES PROHIBITED
Sta. 637+90
R-121 (MOD.)
Affixed to Signal Arm
LEFT TURN ON ONLY
R-31F-36
R-26A-30
Sta. 54+80
R-43L-XX
ONE WAY
DO NOT ENTER
R-41B-XX
R-43R-XX
Sta. 61+32
R-41A-36
WRONG WAY
R-31F-36
Sta. 640+50
KEEP RIGHT
R-37R-24
Sta. 54+95
Sta. 56+00
10' x 6'-6"
480 EAST Youngstown
Back to Back
Sta. 61+44
R-37R-24
R-15B
PEDESTRIANS AND BICYCLES PROHIBITED
Sta. 641+65
R-38R-XX
Sta. 62+50
R-43L-XX
R-31F-36
R-41B-XX
R-43R-XX
Sta. 61+32
Sta. 61+94 Mounted on Signal Pole
GF-72
EXIT 13
Sta. 629+10
Sta. 634+75 (T-2)
Tiedeman Road NORTH SOUTH
D-4-B
M-24-21
M-2-24-2
M-8-24
TO
Sta. 637+25
R-31F-36
Back to Back
R-41A-36
WRONG WAY
630
635
640
641
639
25
30
55
60

N

HORIZONTAL SCALE IN FEET

0 50 100

CALCULATED DRL

CHECKED ACB

TRAFFIC CONTROL PLAN SHEET IR-480

STA. 629+00 TO 642+00

CUYAHOGA COUNTY

CUY-480-10.38

PLOT SUBMITTED: 12-APR-1997 13:49

13000tph.dgn

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PLOTTED BY: ksarli
PLOTTED FROM: i:\users\lhazapis\pid13000\13000tp1.d
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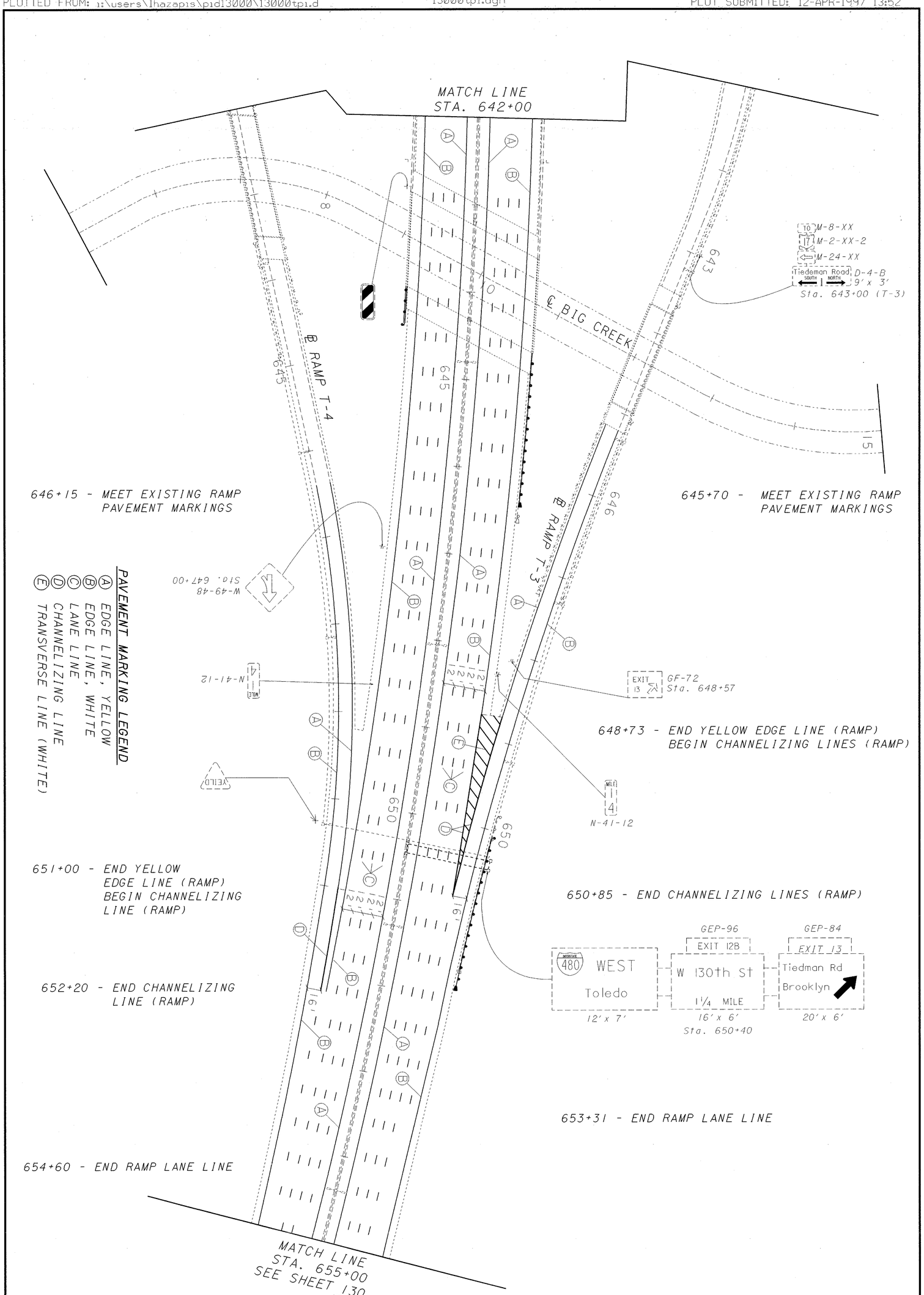

129/134	CUYAHOGA COUNTY CUY-480-10.38	TRAFFIC CONTROL PLAN SHEET IR-480 STA. 642+00 TO 655+00	CALCULATED DRL CHECKED ACB	HORIZONTAL SCALE IN FEET (0, 50, 100)

PLOTTED BY: ksarli
PLOTTED FROM: i:\users\lhazapis\pid13000\13000tpj.d
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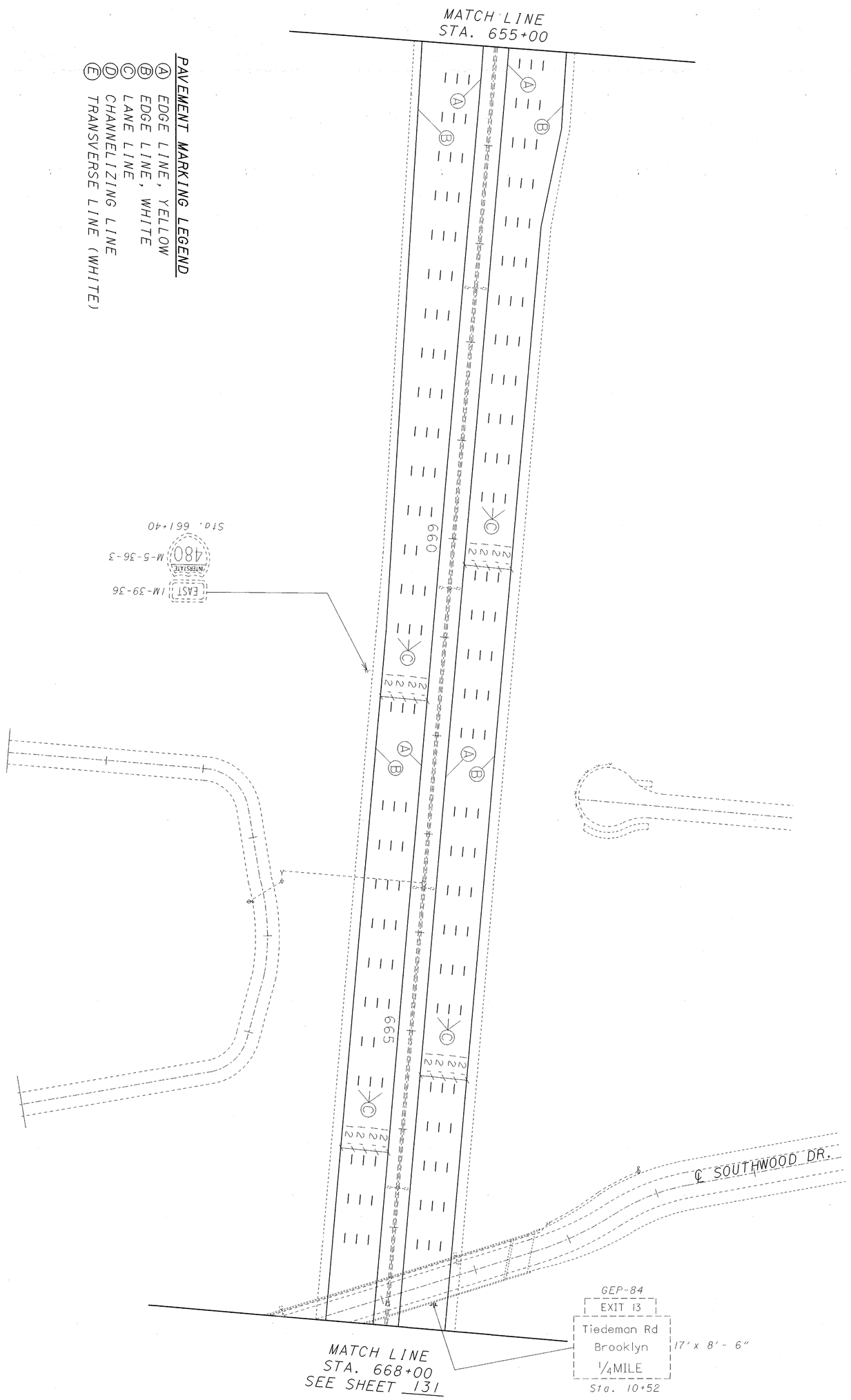

130 / 134	CUYAHOGA COUNTY CUY-480-10.38	TRAFFIC CONTROL PLAN SHEET IR-480 STA. 655+00 TO 668+00	CALCULATED DRL CHECKED ACB	0 50 100 HORIZONTAL SCALE IN FEET	N

PLOTTED BY: ksarli
PLOTTED FROM: i:\users\lhazapis\pid13000\13000tpk.d
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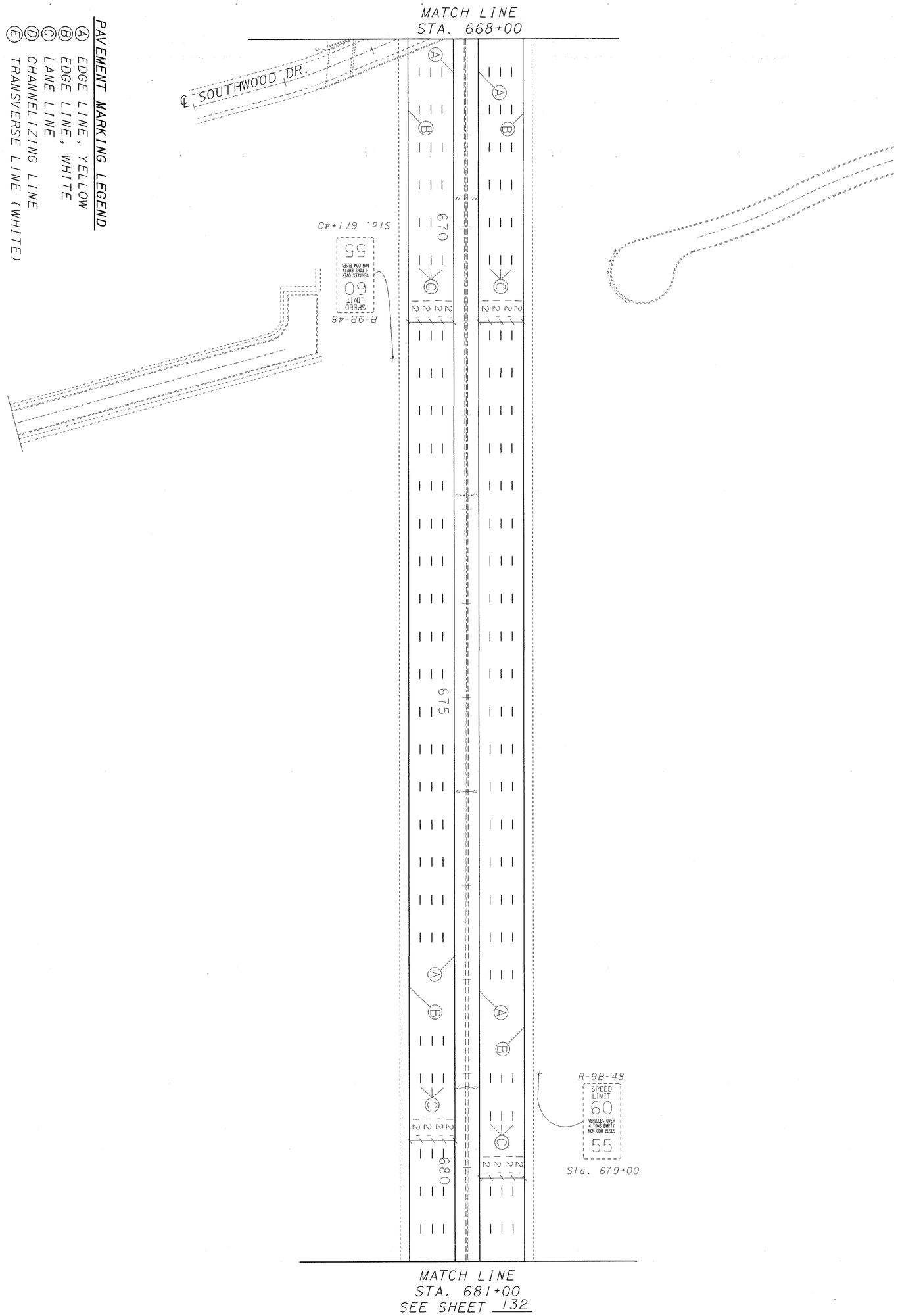


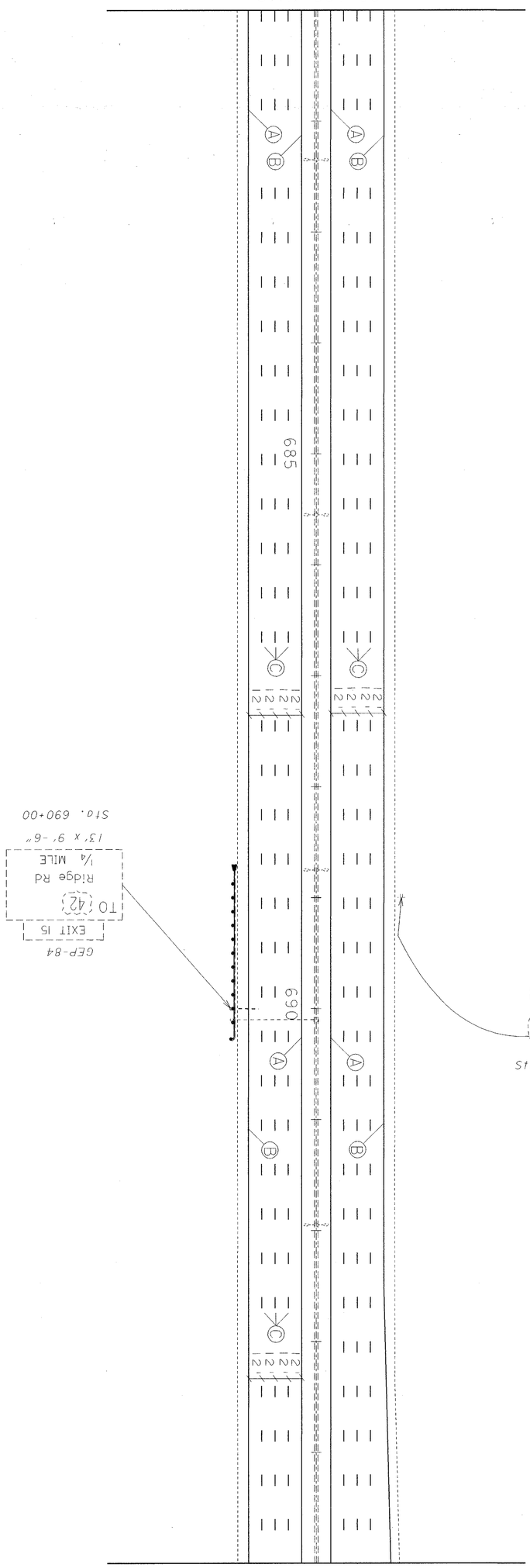
131 / 134	CUYAHOGA COUNTY CUY-480-10.38	TRAFFIC CONTROL PLAN SHEET IR-480 STA. 668+00 TO 681+00	CALCULATED DRL CHECKED ACB	0 50 100 HORIZONTAL SCALE IN FEET	N

PLOTTED BY: ksarli
PLOTTED FROM: i:\users\lhazapis\pid13000\13000tpl.d
13000tpl.dgn
PLOT SUBMITTED: 12-APR-1997 13:57

MATCH LINE
STA. 681+00

PAVEMENT MARKING LEGEND

- (A) EDGE LINE, YELLOW
- (B) EDGE LINE, WHITE
- (C) LANE LINE
- (D) CHANNELIZING LINE
- (E) TRANSVERSE LINE (WHITE)



GEP-84
EXIT 15
TO (42)
Ridge Rd
¼ MILE
13'x 9'-6"
Sta. 690+00

WEST
INTERSTATE
480
I/M-40-36
M-5-36-3
Sta. 689+00

MATCH LINE
STA. 695+00
SEE SHEET 133

132/134	CUYAHOGA COUNTY CUY-480-10.38	TRAFFIC CONTROL PLAN SHEET IR-480 STA. 681+00 TO 695+00	CALCULATED DRL CHECKED ACB	0 50 100 HORIZONTAL SCALE IN FEET

PLOTTED BY: ksarli
PLOTTED FROM: i:\users\lhazapis\pid13000\13000tpm.d
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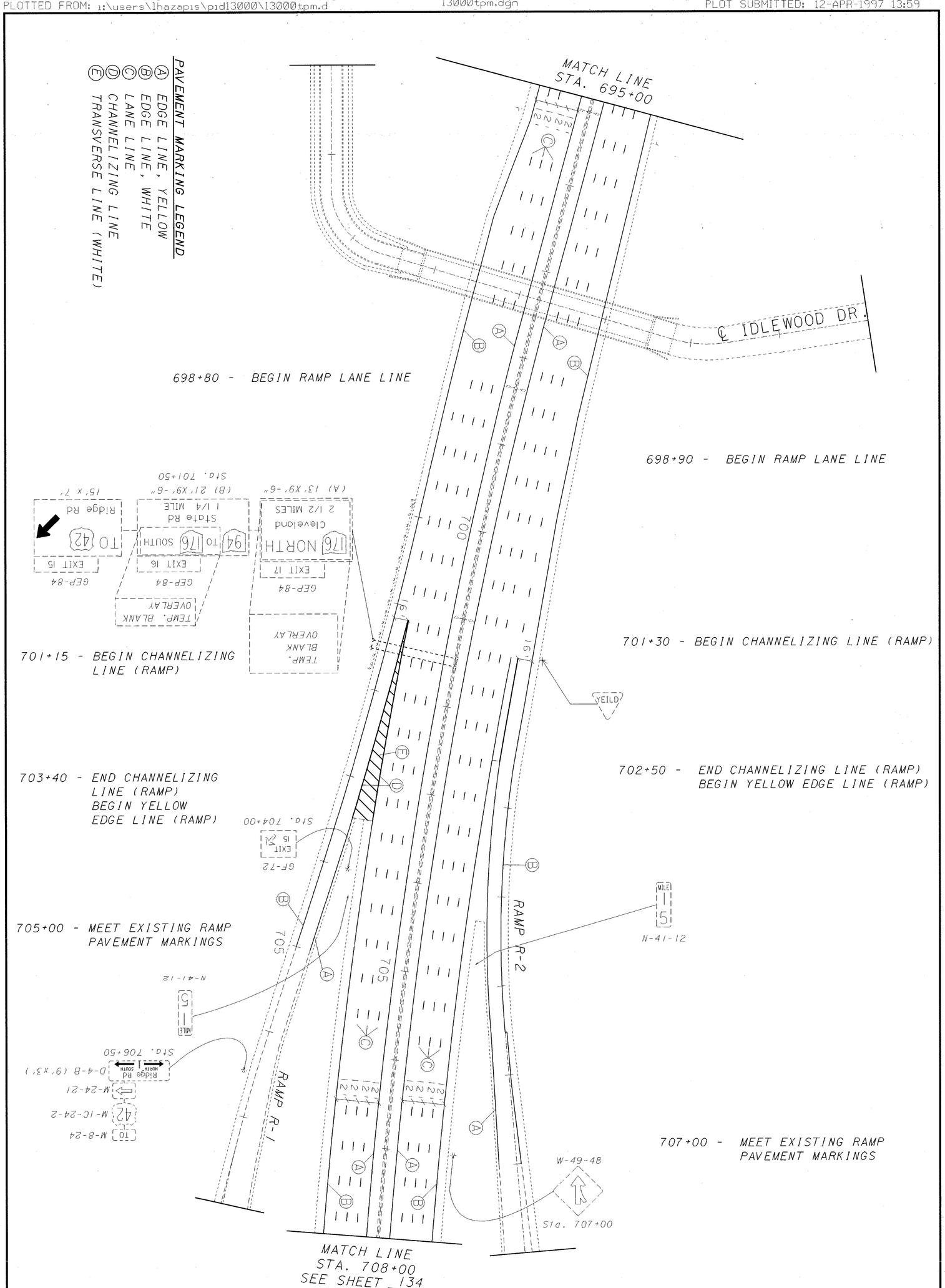
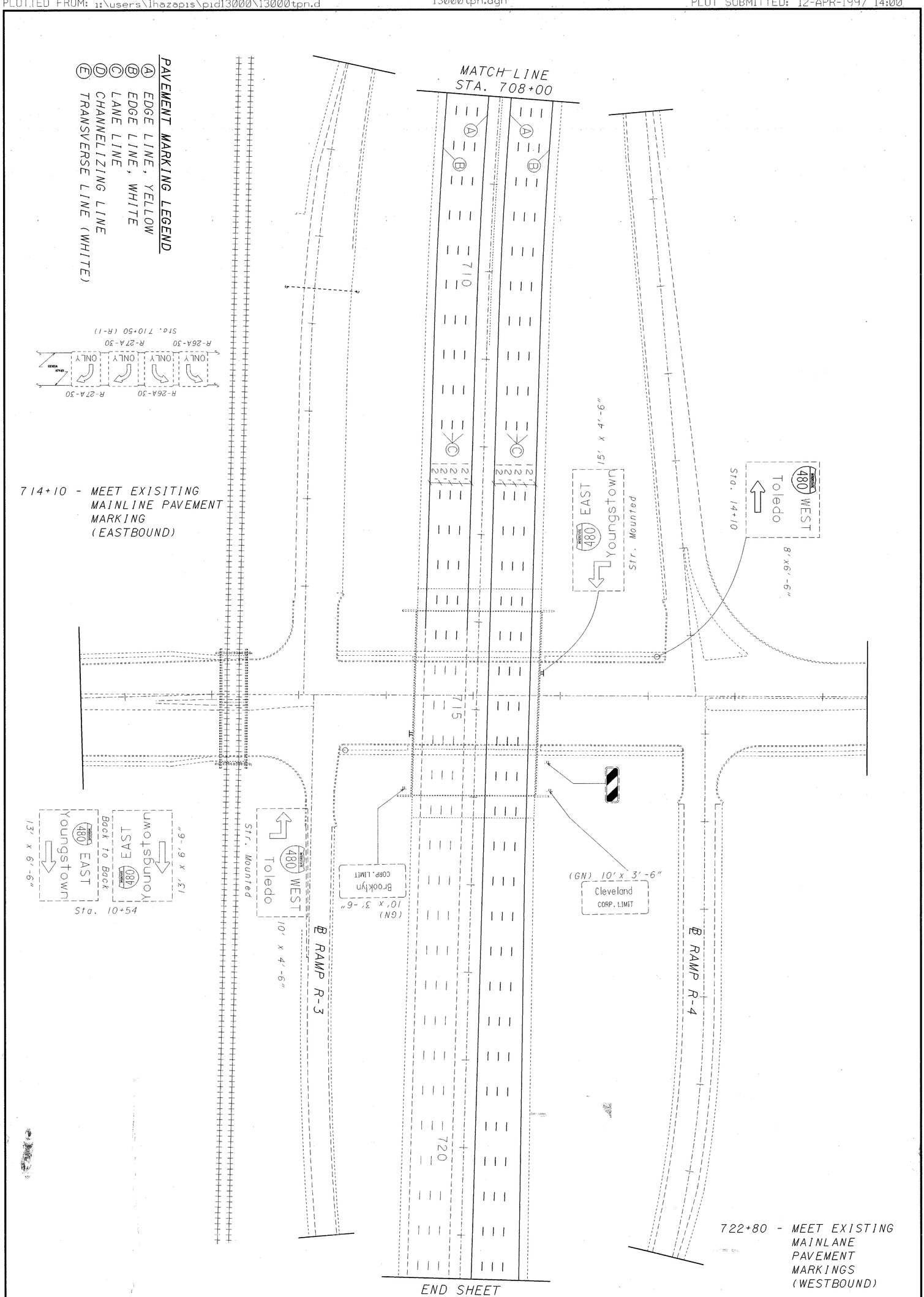


133 / 134	CUYAHOGA COUNTY CUY-480-10.38	TRAFFIC CONTROL PLAN SHEET IR-480 STA. 695+00 TO 708+00	CALCULATED DRL / CHECKED ACB	HORIZONTAL SCALE IN FEET (0, 50, 100)

PLOTTED BY: ksarli
PLOTTED FROM: i:\users\lhazapis\pid13000\13000tpn.d
13000tpn.dgn
PLOT SUBMITTED: 12-APR-1997 14:00



134/134	CUYAHOGA COUNTY CUY-480-10.38	TRAFFIC CONTROL PLAN SHEET IR-480 STA. 708+00 TO 721+50	CALCULATED DRL CHECKED ACB	0 50 100 HORIZONTAL SCALE IN FEET