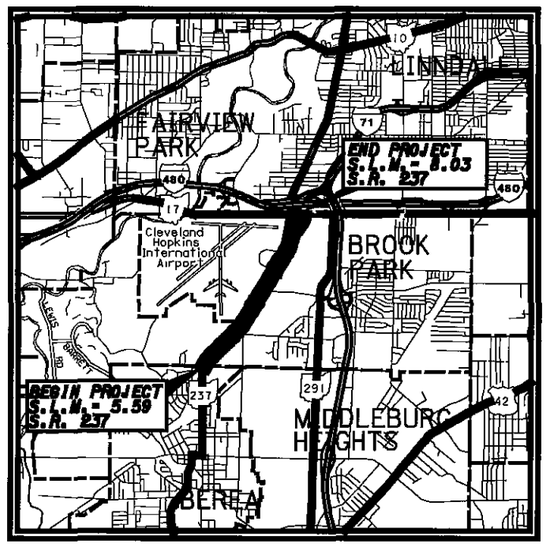
CUY - SR 237-5.59 (Cities of Brook Par
060102 PID - 24859
Dist 12 2/15/2006



LOCATION MAP

LATITUDE: N 41°24'10" LONGITUDE: W 81°50'17"

SCALE IN MILES
0 1 2 3 4

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

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

CUY-237-5.59

CITY OF BROOK PARK
CITY OF CLEVELAND
CUYAHOGA COUNTY

INDEX OF SHEETS:

PROJECT DESCRIPTION

THIS PROJECT PROVIDES FOR THE IMPROVEMENT OF SR-237 FROM THE BROOKPARK SOUTH CORP. LIMIT TO THE NORTH CORP. LINE BY RESURFACING THE ROAD AND PLACING PAVEMENT MARKINGS.

2005 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.

DESIGN EXCEPTIONS

NONE REQUIRED

PROJECT EARTH DISTURBED AREA = 1 AC.
ESTIMATED CONTRACTOR EARTH DISTURBED AREA = N/A (MAINTENANCE PROJECT)
NOTICE OF INTENT EARTH DISTURBED AREA = N/A (MAINTENANCE PROJECT)

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
GARFIELD HEIGHTS, OHIO 44125
216-581-2100

ENGINEERS SEAL:
STATE OF OHIO
LOUIS D. HAZAPIS
E-53285
REGISTERED
PROFESSIONAL ENGINEER
SIGNED: Louis D Hazapis
DATE: 11/14/05

STANDARD CONSTRUCTION DRAWINGS

BP-2.1	07-16-04	RM-3.1	04-18-03	MT-35.10	04-20-01		
BP-2.2	07-16-04			MT-95.30	07-16-04		
BP-2.5	07-28-00	DM-4.4	07-19-02	MT-98.12	04-19-02		
BP-3.1	07-16-04			MT-98.13	04-19-02		
BP-5.1	07-28-00	TC-71.10	01-21-05	MT-98.14	04-19-02		
BP-6.1	07-28-00	TC-72.20	01-21-05	MT-98.15	07-16-04		
BP-7.1	07-28-00	TC-73.10	01-19-01	MT-98.16	04-19-02		
		TC-82.10	04-19-02	MT-98.17	10-18-02		
GR-1.1	07-16-04			MT-98.18	11-18-02		
GR-2.1	01-16-04						
GR-3.1	04-18-03						
GR-4.2	04-15-05			MT-105.10	10-18-02		
GR-5.3	01-16-04			MT-105.11	10-18-02		
GR-6.1	04-18-03						

SUPPLEMENTAL SPECIFICATIONS

800	10-21-05
826	04-15-05
832	04-17-04
833	02-12-03

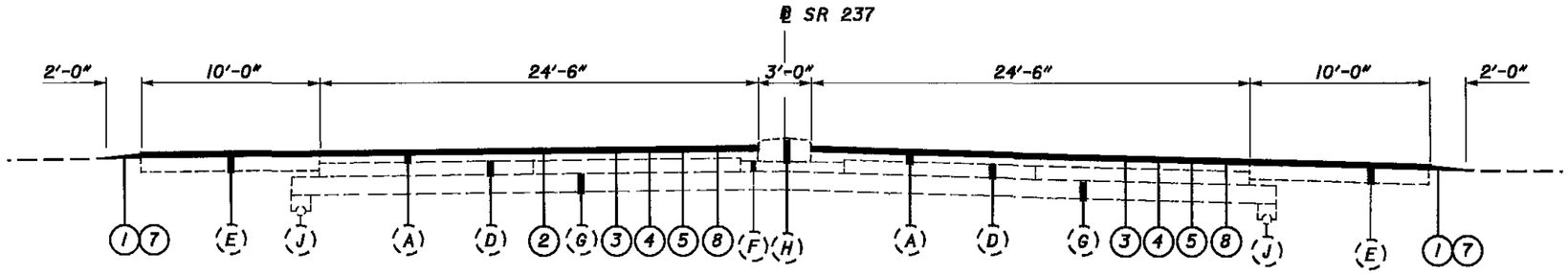
SPECIAL PROVISIONS

APPROVED: [signature]
DATE: 11-30-05 DISTRICT DEPUTY DIRECTOR

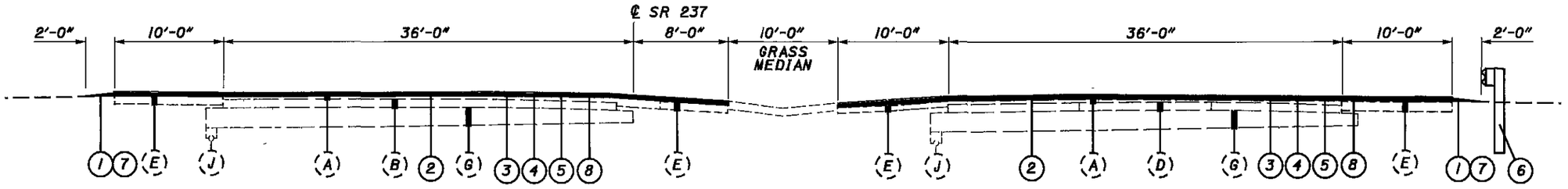
APPROVED: Gordon Proctor
DATE: 12-9-05 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. NON-FEDERAL
PID NO. 24859
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
CUY-237-5.59
1/43

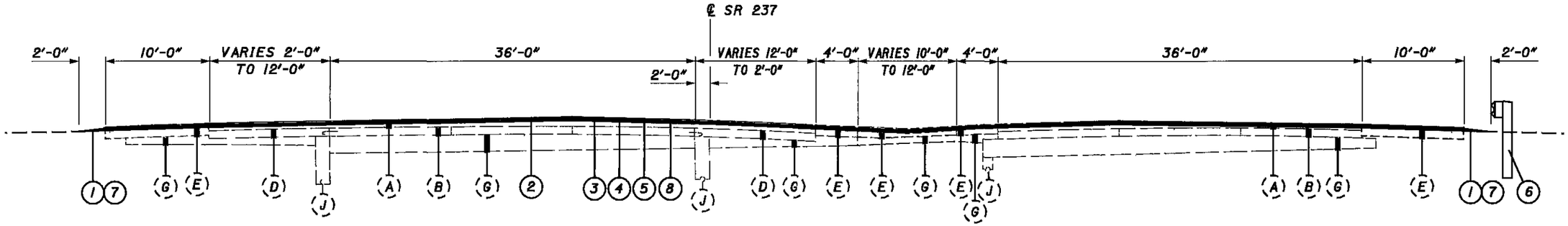
i:\PROJECTS\PID24859\dgn\24859gtra.dgn 14-NOV-2005 8:39AM gnowac



NORMAL SECTION
STA. 2+95.00 TO STA. 13+25.00
STA. 13+25.00 TO STA. 25+03.50 (STA. 25+03.50 TO STA. 25+88.50 BRIDGE LIMITS)
STA. 25+88.50 TO STA. 34+98.28 (STA. 34+98.28 TO STA. 35+07.28 RAILROAD TRACKS)
STA. 35+07.28 TO STA. 37+00.00



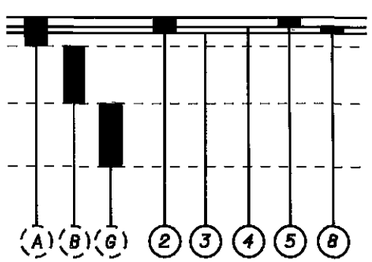
NORMAL SECTION
STA. 51+00.00 TO STA. 58+34.59



NORMAL SECTION
STA. 37+00.00 TO STA. 43+25.00
STA. 43+25.00 TO STA. 45+64.25 BACK = STA. 45+58.58 AHEAD
STA. 45+58.58 TO STA. 51+00.00

PROPOSED LEGEND

1. ITEM 209 - LINEAR GRADING
2. ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (2.5")
3. ITEM 407 - TACK COAT
4. ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE
5. ITEM 446 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1H, AS PER PLAN (1.5")
6. ITEM 606 - GUARDRAIL, TYPE 5
7. ITEM 617 - COMPACTED AGGREGATE, TYPE A, AS PER PLAN
8. ITEM 826 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, FIBER TYPE A (1")



OVERLAY DETAIL

EXISTING LEGEND

- A. ASPHALT CONCRETE (6" ±)
- B. 9" CONCRETE PAVEMENT
- C. 9" REIN. CONCRETE PAVEMENT
- D. 9" CONCRETE BASE
- E. BITUMINOUS AGGREGATE BASE
- F. AGGREGATE BASE
- G. SUBBASE
- H. CONCRETE MEDIAN
- I. CONCRETE BARRIER
- J. UNDERDRAIN
- K. GUARDRAIL
- L. COMPACTED AGGREGATE
- M. CURB, TYPE 2A

TYPICAL SECTIONS

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2
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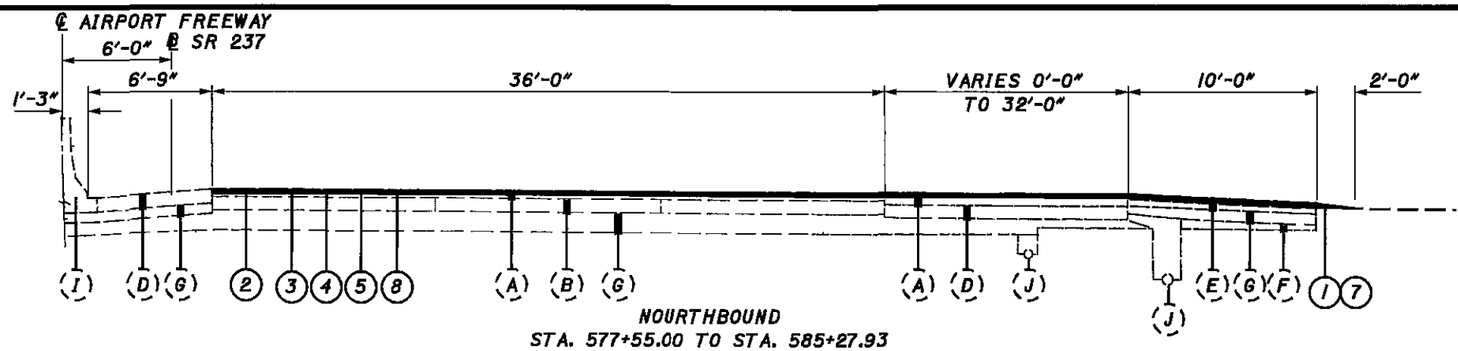
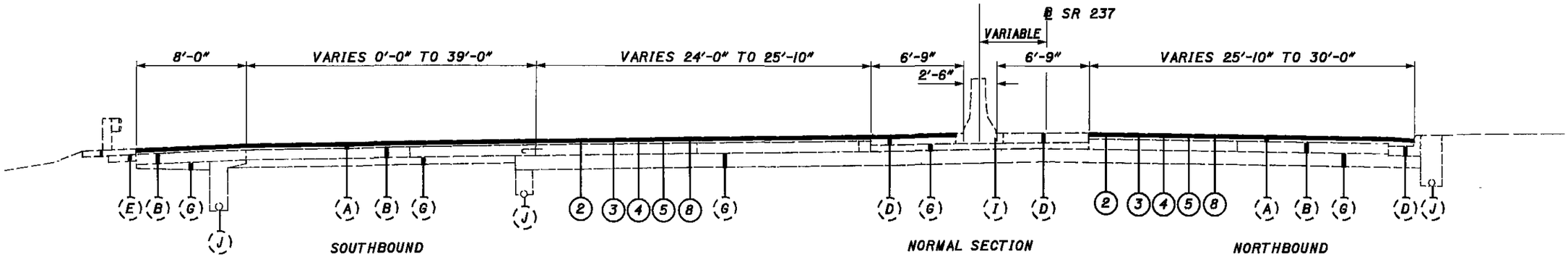


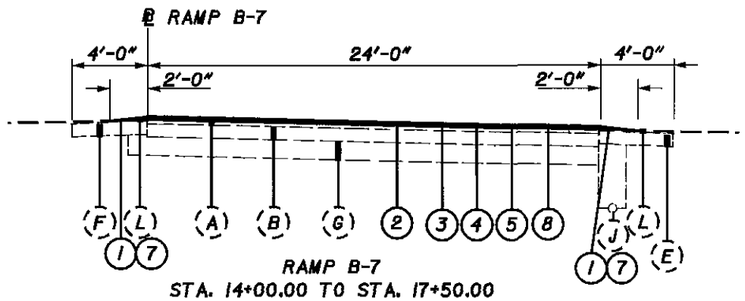
NOURTHBOUND
STA. 577+55.00 TO STA. 585+27.93



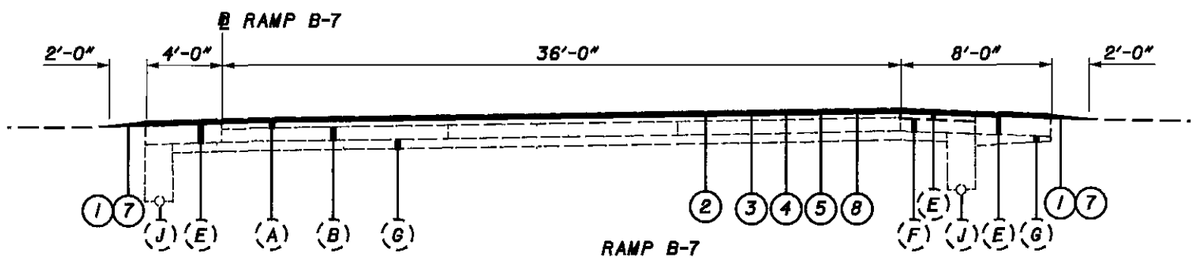
SOUTHBOUND
STA. 580+25.00 TO STA. 588+39.00

NORMAL SECTION
MEDIAN
STA. 587+04.00 TO STA. 588+39.00

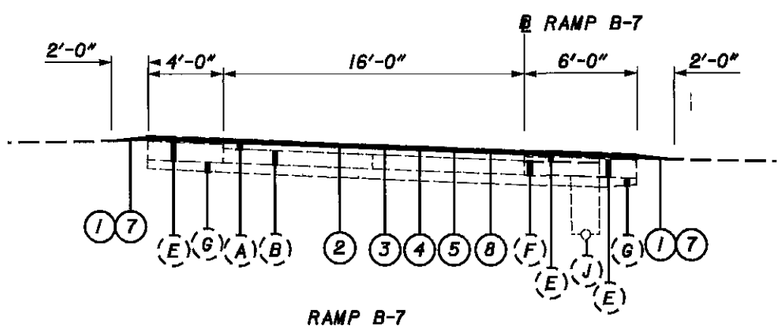
NORTHBOUND
STA. 585+27.93 TO STA. 588+39.00



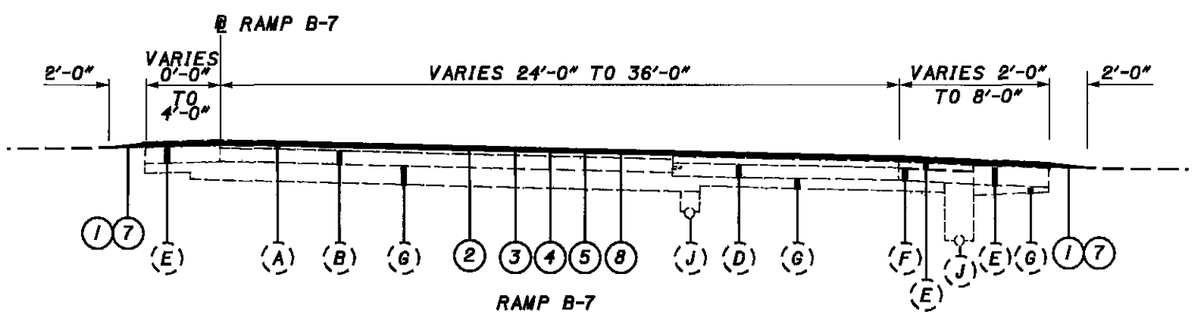
RAMP B-7
STA. 14+00.00 TO STA. 17+50.00



RAMP B-7
STA. 20+70.00 TO STA. 23+60.00



RAMP B-7
STA. 9+01.20 TO STA. 14+00.00



RAMP B-7
STA. 17+50.00 TO STA. 20+70.00

SEE SHEET 2 FOR LEGEND

TYPICAL SECTIONS

CUY-237-5.59

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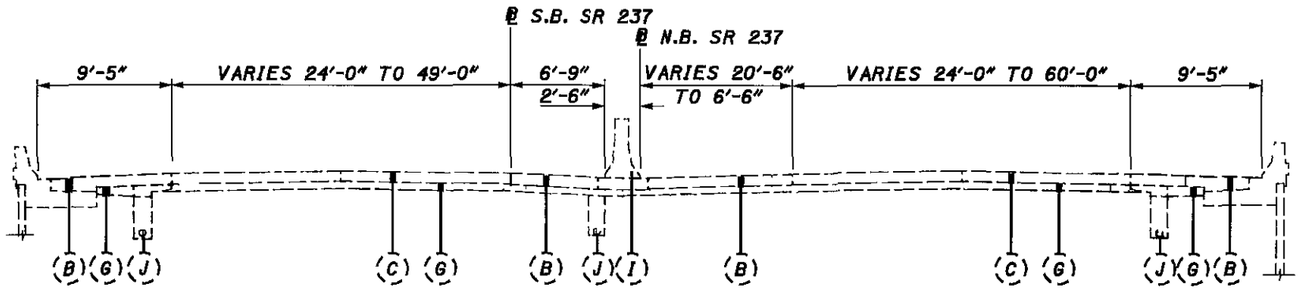
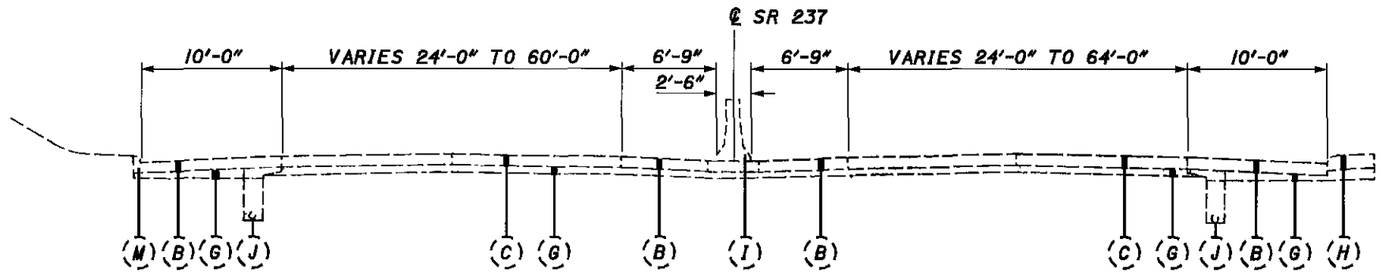


NORMAL SECTION

SOUTHBOUND STA. 58+34.59 TO STA. 68+22.76

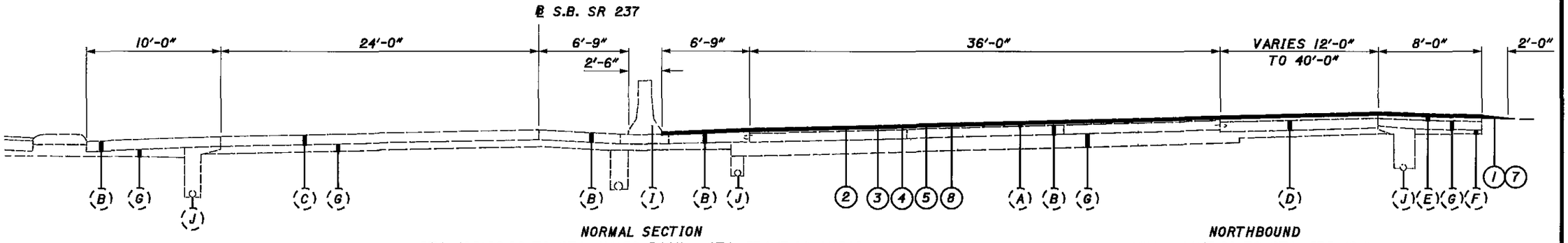
NORTHBOUND STA. 59+00.00 TO STA. 68+22.04



NORMAL SECTION

STA. 68+22.76 TO STA. 72+27.36 (STA. 72+27.36 TO STA. 73+51.02 BRIDGE LIMITS)

STA. 73+61.02 TO STA. 108+82.82

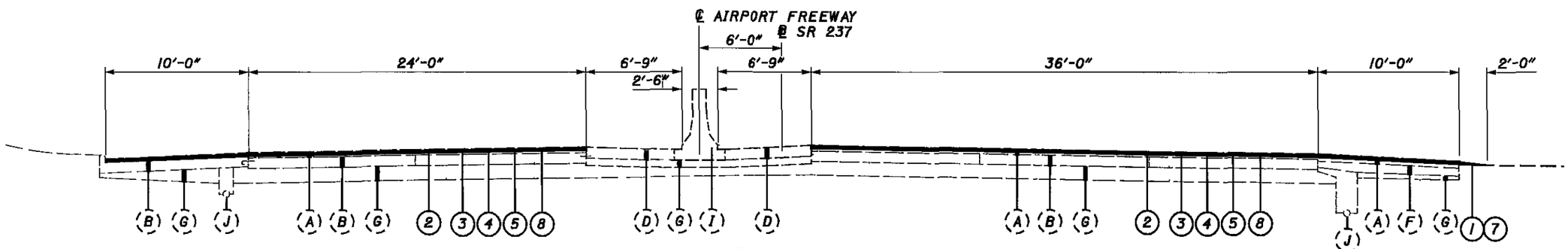


NORMAL SECTION

STA. 108+82.82 TO STA. 114+50 BACK = STA. 574+17.62 AHEAD

NORTHBOUND

STA. 574+17.62 TO STA. 575+49.92



SOUTHBOUND

STA. 574+17.62 TO STA. 580+25.00

NORMAL SECTION

STA. 576+50.00 TO STA. 587+04.00

NORTHBOUND

STA. 575+49.92 TO STA. 577+55.00

SEE SHEET 2 FOR LEGEND

TYPICAL SECTIONS

CUY-237-5.59

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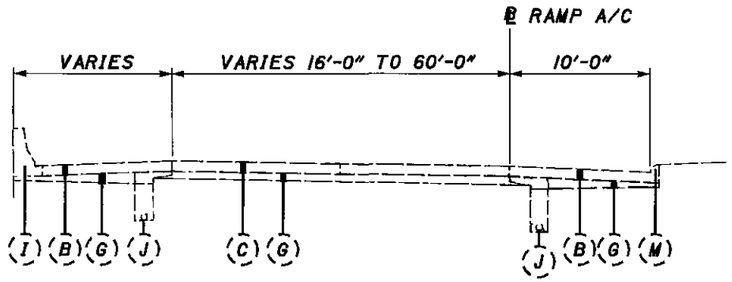
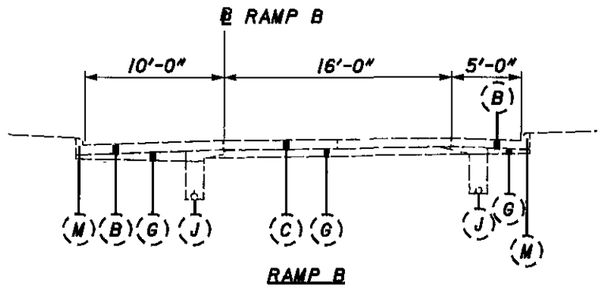
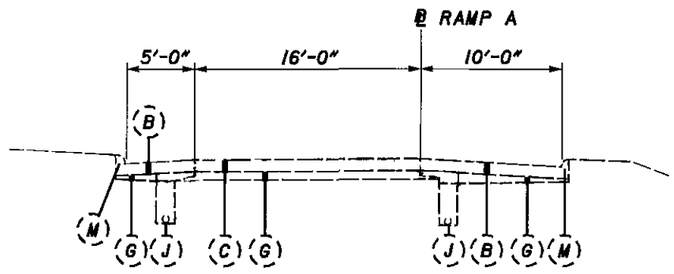


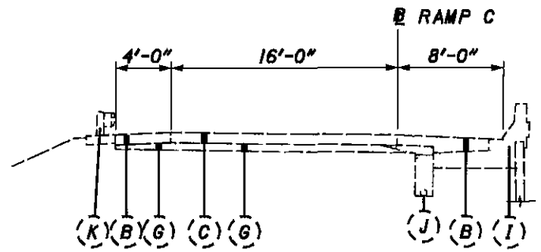
RAMP A
STA. 17+49.87 TO STA. 22+69.19
RAMP C
STA. 13+18.77 TO STA. 29+81.22



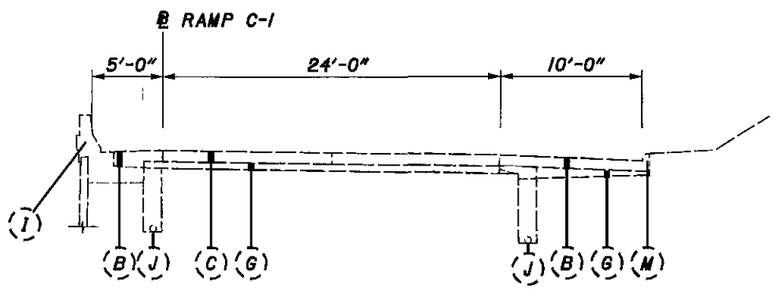
RAMP B
STA. 13+54.59 TO STA. 19+66.44



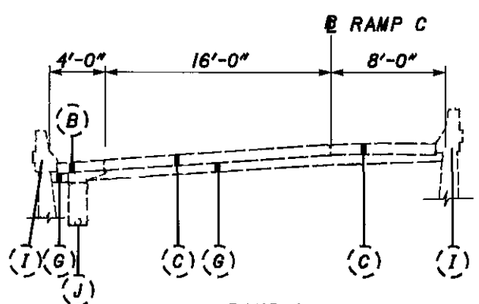
RAMP A
STA. 13+77.02 TO STA. 17+49.87



RAMP C
STA. 29+81.22 TO STA. 35+54.40



RAMP C-1
STA. 9+77.96 TO STA. 15+00.00



RAMP C
STA. 43+61.00 TO STA. 46+61.65

SEE SHEET 2 FOR LEGEND

TYPICAL SECTIONS

CUY-237-5.59

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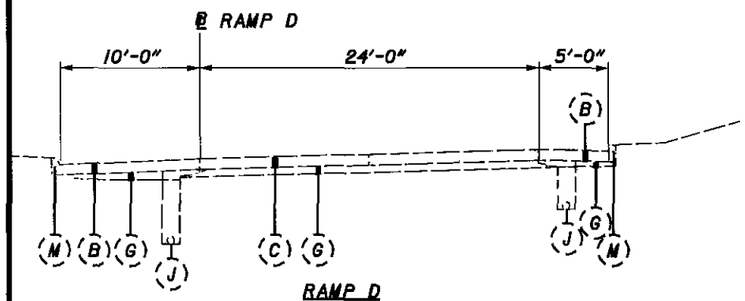
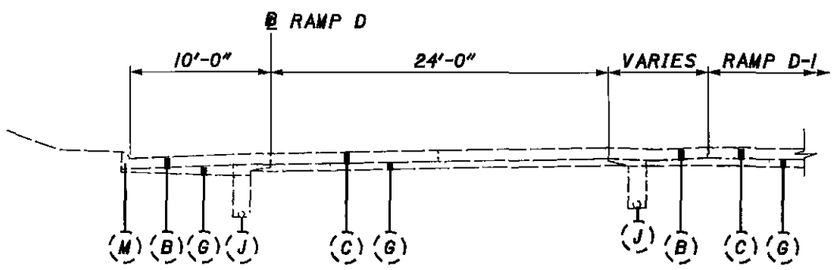
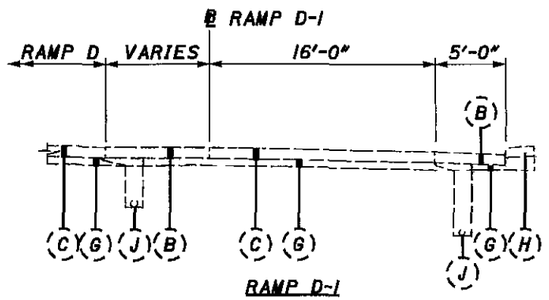
43



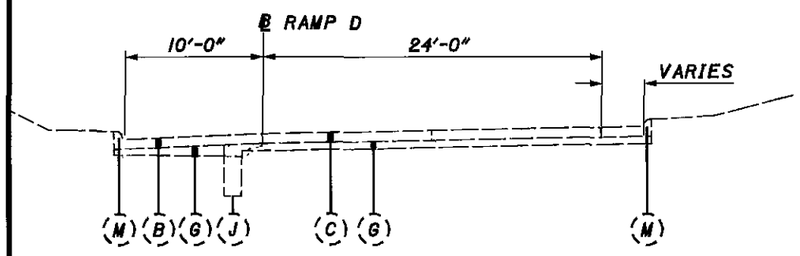
RAMP D
STA. 21+85.00 TO STA. 25+33.71



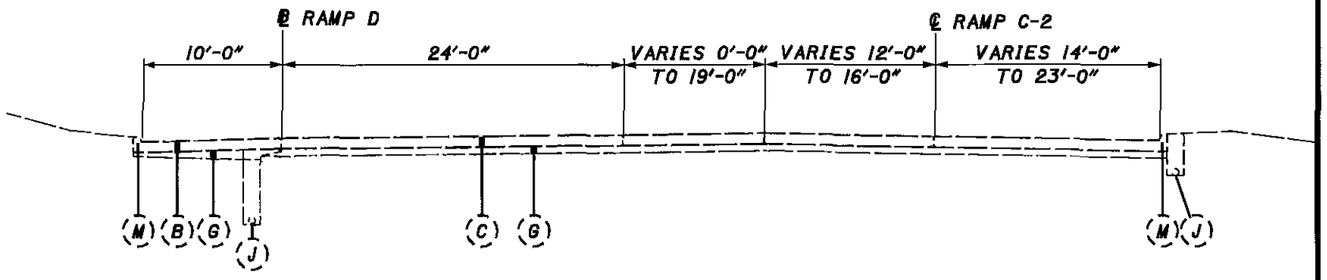
RAMP D
STA. 21+85.00 TO STA. 25+33.71



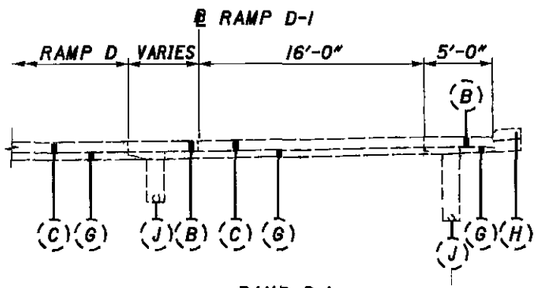
RAMP D-1
STA. 7+85.64 TO STA. 8+82.05



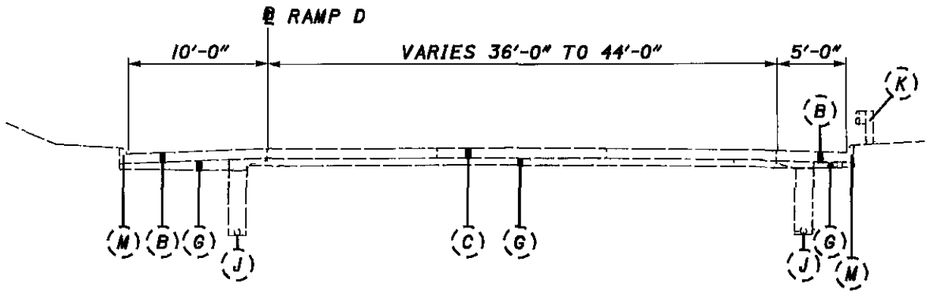
RAMP D
STA. 25+33.71 TO STA. 27+28.70



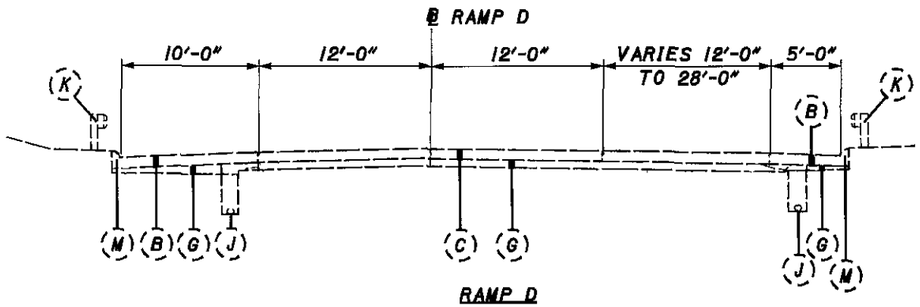
RAMP D
STA. 27+28.70 TO STA. 28+10.82



RAMP D-1
STA. 8+82.06 TO STA. 9+76.47



RAMP D
STA. 16+30.00 TO STA. 17+85.64



RAMP D
STA. 13+21.64 TO STA. 16+30.00
RAMP B
STA. 19+66.44 TO STA. 22+66.11

SEE SHEET 2 FOR LEGEND

TYPICAL SECTIONS

CUY-237-5.59

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GENERAL

PROJECT DESCRIPTION

THIS PROJECTS PROVIDES FOR THE IMPROVEMENT OF SR-237 FROM THE CITY OF BROOK PARK SOUTH CORP. LIMIT TO THE NORTH CORP. LIMIT. BY RESURFACING THE ROAD, MAKING PAVEMENT REPAIRS, AND PLACING PAVEMENT MARKINGS. THIS PROJECTS ALSO PROVIDES FOR IMPROVEMENTS TO THE EXISTING CONCRETE MEDIAN AND GUARDRAIL.

THE ALIGNMENT OF THE EXISTING PAVEMENT WILL NOT BE CHANGED. THE PROFILE OF THE PROPOSED SURFACE WILL BE SIMILAR TO THAT OF THE EXISTING PAVEMENT.

RIGHT OF WAY

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

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.

WORK LIMITS

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

ALTERNATE METHODS

IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THERE FROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED IN WRITING, BY THE DIRECTOR.

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

A TYPE B FIELD OFFICE IS REQUIRED FOR THIS PROJECT. IN ADDITION TO THE REQUIREMENTS AS DESCRIBED IN ITEM 619 OF CMS, THE FIELD OFFICE SHALL ALSO INCLUDE BROADBAND (CABLE OR DSL) INTERNET ACCESS.

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 105.08 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS IS INTENDED.

EQUIPMENT AND MATERIAL STORAGE

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

1) ANY REMOVED ITEMS SHALL NOT BE STORED ON THE RIGHT OF WAY FOR MORE THAN THIRTY DAYS.

2) THE STORAGE OF EQUIPMENT, MATERIALS, AND VEHICLES WITHIN THE HIGHWAY RIGHT OF WAY WILL BE PERMITTED. THE NUMBER OF AREAS AND EXACT LOCATIONS SHALL BE APPROVED BY THE ENGINEER.

3) ALL DISTURBED AREAS SHALL BE RETURNED TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE STATE.

STAGING AREAS

THERE ARE NO SPECIFIC AREAS GIVEN IN THE PLANS FOR THE CONTRACTOR TO USE AS A STAGING AREA(S). IF THE CONTRACTOR WANTS TO USE AN AREA(S) FOR STAGING, REGARDLESS IF IT FALLS WITHIN THE PROJECT LIMITS OR NOT, THE CONTRACTOR IS TO CONTACT JILL POWERS AT 216-584-2195 AT DISTRICT 12 IN ORDER TO APPLY FOR A PERMIT PER SECTION 107.02 OF THE CMS.

IF A PERMIT IS GRANTED, ALL CONDITIONS OF THE PERMIT SHALL BE MET IN ADDITION TO THE REQUIREMENTS OF 104.04 OF THE CMS, AT NO ADDITIONAL COST TO THE STATE. IF THE PROJECT ENGINEER DEEMS THAT ALL THE CONDITIONS OF THE PERMIT WERE NOT MET, THEN 10% OF THE CONTRACTOR BID AMOUNT FOR MOBILIZATION SHALL BE WITHHELD UNTIL ALL THE CONDITIONS OF THE PERMIT ARE SATISFIED.

UTILITY OWNERSHIP

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

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

ILLUMINATING CO.
6896 MILLER RD
BRECKSVILLE, OH 44141
(440) 546-8775

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

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

THERE ARE NO UNDERGROUND UTILITIES SHOWN ON THIS PLAN. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UNDERGROUND UTILITIES THAT EXIST UNDER OR ADJACENT TO THE WORK AREA.

EXISTING TYPICAL SECTIONS

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

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

THESE PLANS MAY BE REVIEWED AT THE

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

CALCULATED GJN
CHECKED LDH

GENERAL NOTES

CUY-237-5.59

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ROADWAY

ITEM 209 - LINEAR GRADING

THIS ITEM SHALL CONSIST OF EXCAVATING TOPSOIL AND SOIL AREAS THAT ARE HIGHER THAN THE ROADWAY ADJACENT TO THE ROADWAY, PLACING GRANULAR MATERIAL AND APPLYING HERBICIDE, ON BOTH SIDES OF THE ROAD, 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.

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

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 209 - LINEAR GRADING . . . . . 3 MI.

ITEM 202 - PAVEMENT REMOVED

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE CONCRETE PAVEMENT AND ALSO THE ADJACENT CURB AS SHOWN IN THE PLANS.

ALL EQUIPMENT, MATERIALS, AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 202 - PAVEMENT REMOVED.

ITEM 203 - EXCAVATION, AS PER PLAN

THIS ITEM SHALL BE USED FOR REMOVAL AS DETAILED IN THE PLANS AND SHALL ALSO INCLUDE THE REMOVAL AND DISPOSAL OF EXISTING WOODEN RAILROAD TIES AND STEEL SPIKES AS DETAILED.

ALL EQUIPMENT, MATERIALS, AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 203 - EXCAVATION, AS PER PLAN.

ITEM 202 - GUARDRAIL REMOVED

THIS ITEM SHALL INCLUDE BOTH STANDARD AND BARRIER TYPE RAILS INCLUDING ANCHOR ASSEMBLIES AND TERMINAL ASSEMBLIES.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN ON STANDARD CONSTRUCTION DRAWING GR-1.1. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98

SEE NOTES AND DETAILS ON SHEET 12 FOR THIS ITEM.

ITEM 606 - GUARDRAIL, TYPE 5A

SEE DETAILS ON SHEET 40 FOR THIS ITEM.

ITEM 606 - GUARDRAIL, TYPE 5

ITEM 606 - GUARDRAIL, TYPE 5, AS PER PLAN

THE LOCATION OF GUARDRAIL RUNS ARE SUBJECT TO ADJUSTMENTS TO ASSURE THAT THE PLANNED INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC. THE INTENT IS TO UPGRADE AND REPLACE GUARDRAIL, GENERALLY AT EXISTING LOCATIONS. STATIONS OF THE PROPOSED END TREATMENTS ARE APPROXIMATE. THE ENGINEER SHALL BE SATISFIED THAT ALL INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

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 BE AS DIRECTED BY THE ENGINEER. NO GUARDRAIL SHALL BE REMOVED UNTIL THE REPLACEMENT MATERIAL IS ON THE SITE AND READY FOR INSTALLATION. INSTALLATION OF THE NEW RAIL SHALL BEGIN IMMEDIATELY AFTER THE REMOVAL OPERATION HAS TAKEN PLACE. THE MAXIMUM GAP LENGTH IN ANY RAIL RUN SHALL BE 50 FEET. NO GAPS SHALL BE LEFT OPEN AT THE END OF THE WORK PERIOD. BARRELS MAY NOT BE SUBSTITUTED FOR GUARDRAIL. FAILURE TO COMPLY WITH THESE REQUIREMENTS SHALL BE DEEMED SUFFICIENT CAUSE TO ORDER WORK SUSPENDED ON THIS PROJECT UNTIL SUCH TIME THAT THE ENGINEER IS ASSURED COMPLIANCE.

THE PROPOSED GUARDRAIL TO BE PLACED ON RAMP-D SHALL USE THE EXISTING POST HOLES FROM THE EXISTING GUARDRAIL. THE CONTRACTOR MAY ERECT THE PROPOSED GUARDRAIL ON THE EXISTING POSTS, AS DIRECTED BY THE ENGINEER, IF THEY ARE SOUND AND IN GOOD CONDITION.

DRAINAGE AND EROSION CONTROL

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.

ITEM 604 - CATCH BASIN, MONUMENT BOX, OR MANHOLE RECONSTRUCTED TO GRADE

THE CONTRACTOR AND FIELD ENGINEER SHALL FIELD CHECK ALL EXISTING CATCH BASINS OR MONUMENT BOXES LOCATED WITHIN THE LIMITS OF THE THE PROJECT. ANY CATCH BASIN OR MONUMENT BOX FOUND THAT EXHIBITS SUBTANTIAL 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 604 - CATCH BASIN, RECONSTRUCTED TO GRADE . . . . . 1 EA.
ITEM 604 - INLET, RECONSTRUCTED TO GRADE . . . . . 1 EA.
ITEM 604 - MANHOLE, RECONSTRUCTED TO GRADE. . . . . 1 EA.

CASTINGS ADJUSTED TO GRADE

ALL CASTINGS SHALL BE ADJUSTED TO THE FINISHED ROADWAY ELEVATION BY THE CONTRACTOR. THE TIME BETWEEN ADJUSTING THE CASTINGS AND RESURFACING SHALL BE KEPT TO AN ABSOLUTE MINIMUM. NO ADJUSTING RINGS SHALL BE PERMITTED. WHEN PERFORMING THIS WORK, THE PAVEMENT SHALL BE SAWCUT PRIOR TO REMOVAL AND HOOKBOLTS SHALL BE USED WHERE PRACTICAL TO CONNECT EXISTING PAVEMENT TO NEW CONCRETE. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 604 - INLET ADJUSTED TO GRADE, AS PER PLAN . . . . . 3 EA.
ITEM 604 - CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN . . . 5 EA.
ITEM 604 - MANHOLE ADJUSTED TO GRADE, AS PER PLAN . . . . . 4 EA.
ITEM 638 - WATER VALUE ADJUSTED TO GRADE, AS PER PLAN . . . 9 EA.

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) 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 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.

THE CONTRACTOR SHALL NOT ORDER MATERIALS UNTIL AUTHORIZED BY THE ENGINEER AND IF NONE ARE NEEDED THE ITEM SHALL BE NON-PERFORMED.

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

ITEM - SPECIAL MISCELLANEOUS METAL . . . . . 3,000 LBS.

CALCULATED GJN
DESIGNED LDH

GENERAL NOTES

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PAVEMENT

ITEM 254 - PATCHING PLANED SURFACE

THE FOLLOWING QUANTITIES ARE FOR USE AS DIRECTED BY THE ENGINEER FOR THE PURPOSE OF PATCHING PLANED SURFACE:

ITEM 254 - PATCHING PLANED SURFACE . . . . . 9,000 SQ. YD.

PAVEMENT REPAIRS

THIS WORK ITEM IS FOR USE AS DIRECTED BY THE ENGINEER FOR THE PURPOSE OF PAVEMENT REPAIR. ALL LABOR AND MATERIAL NECESSARY TO PERFORM THIS WORK AS PER SECTION 250 OF THE CMS SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 251 AND ITEM 253.

DEPTH OF PAVEMENT REPAIR REMOVAL SHALL TYPICALLY BE 5+/-IN. DEPTH OF PARTIAL DEPTH PAVEMENT REPAIR SHALL TYPICALLY BE 2+/-IN. UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

THE INTENT OF THIS ITEM OF WORK IS TO REPAIR SEVERE OR DEEP POTHOLES, LOW AREAS AND AREAS WITH LOOSE OR MISSING ASPHALT. AREAS WHICH HAVE EXTENSIVE CRACKING BUT ARE STRUCTURALLY SOUND SHALL NOT USE THIS ITEM.

FOR ADDITIONAL NOTES, DETAILS AND QUANTITIES SEE SHEET 27.

ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN

THIS ITEM SHALL BE USED ALONG ALL THE SHOULDERS. MATERIAL SHALL BE LIMITED TO CRUSHED SLAG, CRUSHED LIMESTONE OR ASPHALT GRINDINGS. IF ASPHALT GRINDINGS ARE USED, AN ADDITIONAL MATERIAL REQUIREMENT IS THAT 100% SHALL PASS A 1" SIEVE.

THE ACTUAL DEPTH USED WILL VARY DEPENDING UPON EXISTING CONDITIONS. FOR ESTIMATING PURPOSES, AN AVERAGE DEPTH OF 1 INCHES WILL BE USED. WATER, IF NEEDED, SHALL BE APPLIED AS PER 617 AND INCLUDED UNDER ITEM 617, COMPACTED AGGREGATE, AS PER PLAN.

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

ITEM	DESCRIPTION	QUANTITY	UNIT
617	COMPACTED AGGREGATE, AS PER PLAN	100	CU.YD.
617	WATER	2	M. GAL

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN

THIS ITEM SHALL BE USED TO REMOVE THE EXISTING ASPHALT OVERLAY FULL WIDTH TO A DEPTH OF 2½ INCHES. THE PLANED ROADWAY SURFACES SHALL BE EXPOSED TO TRAFFIC FOR NO MORE THAN TWO (2) WEEKS. THE TIME LIMIT SHALL BEGIN ON THE FIRST DAY OF PLANING, AND SHALL CONTINUE BASED ON CALENDAR DAYS UNTIL COMPLETION OF THE ASPHALT CONCRETE INTERMEDIATE COURSE.

AREAS WHICH HAVE TRANSVERSE WEDGES (BUTT JOINTS) ARE TO BE REMOVED IN TWO PASSES AS REQUIRED FOR MAINTAINING TRAFFIC. NO ADDITIONAL PAYMENT SHALL BE MADE FOR THE SECOND PASS.

PRIOR TO PLANING THE PAVEMENT, THE CONTRACTOR SHALL FIELD SURVEY THE LOCATIONS OF THE EXISTING PAVEMENT MARKINGS WITHIN THE PROJECT LIMITS FOR THE PLACEMENT OF TEMPORARY MARKINGS AND PROPOSED FINAL PAVEMENT MARKINGS. A COPY OF THIS SURVEY SHALL BE GIVEN TO THE PROJECT ENGINEER. DETAILS ON PLAN SHEETS SHALL BE USED FOR REFERENCE ONLY. ALL COSTS ASSOCIATED WITH THIS SURVEY SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN.

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

THIS ITEM SHALL CONSIST OF REPLACING EXISTING PAVEMENT IN ACCORDANCE WITH ITEM 255 AND THE NOTES BELOW AND DETAILS ON SHEET 45.

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 304 - 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 FS, 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 FS, AS PER PLAN B". PAYMENT FOR THIS WORK SHALL BE MADE AT THE CONTRACT BID PRICE FOR:

ITEM	UNIT	DESCRIPTION
255	SQ.YDS.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT CLASS FS, AS PER PLAN A
255	SQ.YDS.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT CLASS FS, AS PER PLAN B
255	FT.	FULL DEPTH PAVEMENT SAWING
203	CY. YD.	EXCAVATION
304	CY. YD.	AGGREGATE BASE

FOR ESTIMATED QUANTITIES, SEE SHEET 27.

ITEM 446 - ASPHALT CONCRETE SURFACE COURSE, TYPE IH, AS PER PLAN

THE COURSE AGGREGATE FOR THIS ITEM SHALL BE LIMITED TO AIR COOLED BLAST FURNACE SLAG OR LIMESTONE, OR A BLEND OF AIR COOLED BLAST FURNACE SLAG OR LIMESTONE (THE BLEND SHALL CONSIST OF A MINIMUM OF 50 PERCENT AIR COOLED BLAST FURNACE SLAG WITH LIMESTONE COMPRISING THE REMAINING PERCENTAGE).

ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE

THERATE OF APPLICATION OF THE TACK COAT FOR INTERMEDIATE COURSE SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.05 GAL./SQ. YD. OF TACK COAT FOR INTERMEDIATE COURSE FOR ESTIMATING PURPOSES ONLY.

ITEM 407 - TACK COAT

THE RATE OF APPLICATION OF THE TACK COAT SHALL BE SUBJECT TO ADJUSTMENTS, AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.10 GAL/SQ. YD. OF TACK COAT FOR ESTIMATION PURPOSES ONLY.

ROADWAY

CURB RAMP QUANTITIES

LOCATION	NUMBER OF CURB RAMPS	202 WALK REMOVED	202 CURB REMOVED		608 CURB RAMP, AS PERP PLAN
		SQ FT	FT		SQ FT
SHELDON ROAD	2	100	24		100
TOTAL CARRIED TO THE GENERAL SUMMARY		100	24		100

GENERAL NOTES

CALCULATED GJN
CHECKED LDH

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MAINTENANCE OF TRAFFIC

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 ENGINEER, RESPONSIBLE LAW ENFORCEMENT AGENCIES, AND THE ODOT PUBLIC INFORMATION OFFICE (216-581-2333 EXT 244) INDICATING THE LOCATIONS AND DATES OF THE LANE CLOSURES AT LEAST 3 DAYS PRIOR TO THE IMPLEMENTATION OF ANY SUCH CLOSURES.

II. NIGHTTIME WORK (THE HOURS FROM SUNSET TO SUNRISE

8:00 PM - 6:00 AM)

NIGHTTIME WORK IS PERMITED.

III. RESTRICTIONS

1. ALL CLOSURES SHALL BE IN ACCORDANCE WITH THE APPLICABLE STANDARD CONSTRUCTION DRAWING(S).
2. NO LANE CLOSURES SHALL BE IMPLEMENTED OR IN PLACE ON WEEKDAYS DURING THE HOURS OF 6:00 AM TO 9:00 AM ON S.R. 237 IN THE NORTHBOUND DIRECTION AND THE HOURS OF 4:00 PM TO 7:00 PM. ON S.R. 237 IN THE SOUTHBOUND DIRECTION
3. ALL THROUGH TRAFFIC LANES SHALL BE KEPT OPEN AT ALL TIMES EXCEPT DURING HOURS OF CONSTRUCTION.

NOTWITHSTANDING THE ABOVE, NO LANE CLOSURES SHALL OCCUR DURING THE PERIOD BEGINNING AT 12:00 NOON ON THE DAY PRECEDING AND CONTINUING UNTIL NOON ON THE DAY FOLLOWING LEGAL HOLIDAYS AND HOLIDAY WEEKENDS SUCH AS MEMORIAL DAY, FOURTH OF JULY, AND LABOR DAY. FURTHERMORE, NO 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, HERINAFTER REFERED 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, FLAGGERS, SIGNING, BARRICADES, FLASHING ARROWS, ETC. SHALL BE LOCATED AS INDICATED IN THE MANUAL OR AS SHOWN IN THE STANDARD DRAWINGS. TWO-WAY TRAFFIC SHALL BE MAINTAINED ON ONE LANE AT LEAST 10' WIDE AT ALL TIMES.

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. PROTECTION OF PUBLIC

PERSONAL CARS SHALL NOT BE PARKED WITHIN THE R/W.

E. 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 MASS AS TO FIRMLY SUPPORT THE SIGNS AT THE APPROPRIATE HEIGHT. SUPPORTS SHALL BE AS SHOWN ON THE STANDARD DRAWINGS.

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 DRAWING MT-35.10 AND THE PROVISIONS SET FORTH IN THE "MANUAL" 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 "MANUAL". 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. CONES

CONES, IF UTILIZED, SHALL BE LOCATED AS SHOWN IN THE "MANUAL" AND THE STANDARD DRAWINGS.

F. FLASHERS

FLASHERS SHALL BE 12 VOLT BATTERY-OPERATED MODELS WITH 7 INCH DIAMETER YELLOW LENSES ILLUMINATED BY RAPID INTERMITTENT FLASHES OF SHORT DURATION AND SHALL BE PLACED ON ALL SIGNSAT ALL TIMES AS REQUIRED BY THE "MANUAL" AND THE STANDARD CONSTRUCTION DRAWING.

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.

NIGHT VEST

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

MAINTENANCE OF TRAFFIC CONTROL ZONES

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN THE SIGNS, DRUMS OR CONES SPECIFIED IN THE STANDARD DRAWINGS. WHEN THE CONTRACTOR IS NOTIFIED OF DEFICIENCIES HE SHALL CORRECT THE DEFICIENCIES AS SOON AS POSSIBLE.

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHT TIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIONAL PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

CALCULATED GJN CHECKED LDH

MAINTENANCE OF TRAFFIC NOTES

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MAINTENANCE OF TRAFFIC (CONT.)

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR

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

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

- WHEN DIRECTED BY THE ENGINEER.

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

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

ITEM 614 - LAW ENFORCEMENT OFFICER W/PATROL CAR . . 150 HOURS

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

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

CONSTRUCTION TRAFFIC

ALL CONSTRUCTION TRAFFIC SHALL USE ACCEPTABLE TRUCK ROUTES TO ACCESS THE CONSTRUCTION AREA. USE OF LOCAL RESIDENTIAL STREETS IS STRICTLY PROHIBITED UNLESS ALLOWED IN WRITING BY THE LOCAL ENFORCEMENT AUTHORITY.

ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC

A QUANTITY OF ITEM 614 - ASPHALT CONCRETE HAS BEEN PROVIDED TO PROTECT THE TRAFFIC FROM OBSTRUCTIONS INCLUDING, BUT NOT LIMITED TO; POTHOLES, DRIVEWAYS, INTERSECTIONS, CASTINGS AND INLETS AND TO MAINTAIN TRAFFIC OVER RUTS AND LOW AREAS WHICH ARE LEFT EXPOSED DUE TO PAVEMENT PLANING OPERATIONS. THE CASTING ELEVATIONS SHALL NOT BE GREATER THAN 2 IN. WHEN EXPOSED TO TRAFFIC. THE FOLLOWING CONTINGENCY QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614 - ASPHALT CONCRETE FOR
MAINTAINING TRAFFIC . . . . . 50 CU.YD.

TRAFFIC CONTROL

ITEM 632 - DETECTOR LOOP, AS PER PLAN

PRIOR TO PLANING THE PAVEMENT, THE CONTRACTOR SHALL FIELD SURVEY THE LOCATIONS OF THE EXISTING LOOP DETECTORS WITHIN THE PROJECT LIMITS. THE SURVEY SHALL INCLUDE THE LOCATION OF THE LOOP, SIZE OF THE LOOP, OFFSET FROM CURB AND/OR CENTERLINE AND THE LOCATION OF THE STUB. A COPY OF THIS SURVEY SHALL BE GIVEN TO THE PROJECT ENGINEER.

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

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

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

ITEM 632-DETECTOR LOOP, AS PER PLAN . . . . . 10 EACH

ESTIMATED SIZE OF EXISTING LOOPS:

2 @ 6' X 6'
1 @ 6' X 12'
2 @ 6' X 20'
5 @ 6' X 40'

WORK ZONE PAVEMENT MARKINGS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY, TO BE USED AS DIRECTED BY THE ENGINEER, TO PLACE WORK ZONE PAVEMENT MARKINGS AFTER THE CONTRACTOR HAS PLACED THE INTERMEDIATE COURSE AND AFTER THE SURFACE COURSE HAS BEEN PLACED.

ITEM 614 - WORK ZONE LANE LINE, CLASS I,
642 PAINT . . . . . 8.36 MILE
ITEM 614 - WORK ZONE CHANNELIZING LINE, CLASS I,
642 PAINT . . . . . 10,260 FT.

PERMANENT PAVEMENT MARKINGS

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

PAVEMENT MARKINGS

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

AUXILIARY MARKINGS SHALL BE LOCATED AND INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-71.10.

ITEM 630 - SIGNING MISC.: 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 CMS.

PAYMENT FOR THIS ITEM SHALL INCLUDE BUT NOT BE LIMITED TO THE COST TO FURNISH AND ERECT THE SIGN, INCLUDING DRIVE POSTS OR OTHER APPROVED METHODS OF SUPPORT, MAINTAINING THE SIGN AND REMOVAL OF THE SIGN.

THE FOLLOWING QUANTITY SHALL BE CARRIED TO THE GENERAL SUMMARY:

ITEM 630 - SIGNING MISC.: ADDITIONAL SIGNS,
GROUND MOUNTED, AS DIRECTED BY
THE ENGINEER . . . . . 200 SQ. FT.

ITEM 614 - WORK ZONE MARKING SIGNS

A QUANTITY OF 4 WORK ZONE MARKING SIGNS (4 - "NO EDGE LINES" OW-167-36) HAS BEEN CARRIED TO THE GENERAL SUMMARY.

THE CONTRACTOR SHALL ERECT THE WORK ZONE MARKING SIGNS AND PROVIDE TEMPORARY PAVEMENT MARKINGS IN ACCORDANCE WITH THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.

CALCULATED GJN
CHECKED LDH

MAINTENANCE OF TRAFFIC NOTES

CUY-237-5.59

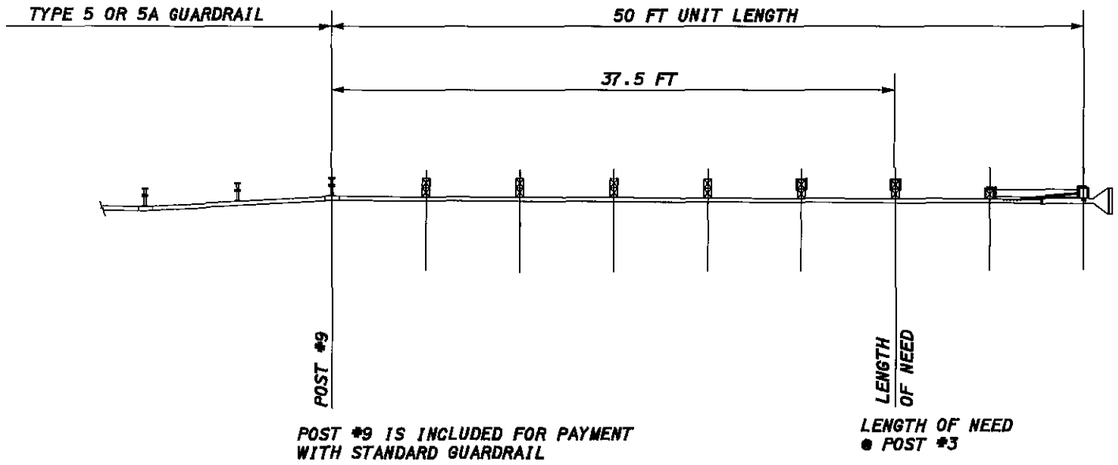
ITEM 606, ANCHOR ASSEMBLY, TYPE E-98:

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

1) THE ET-2000 (1997) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE:330.545.4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50 FT, INCLUSIVE OF TWO 25 FT LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS265M	ET-2000 (1997) PLAN, ELEVATION & SECTIONS	6/20/97	3/6/98
SS142	ET2000 PLUS 50'-0" PLAN, ELEVATION & SECTION 25'-0" RAIL, SLEEVE W/PL POSTS 1-4	4/12/00	7/31/00
SS141	ET2000 PLUS PLAN, ELEVATION & SECTION 25'-0" RAIL, HBA POSTS 1-4	2/29/00	7/31/00
SS158	ET2000 PLUS 50'-0" WITH 12'-6" PANELS & HBA POSTS 1-4 PLAN, ELEVATION & SECTION	5/22/00	7/31/00



ET-2000

2) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 2516 MALLORY LANE, STOW, OH 44224 (TELEPHONE: 330.346.0721).

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50 FT, INCLUSIVE OF FOUR 12.5 FT LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

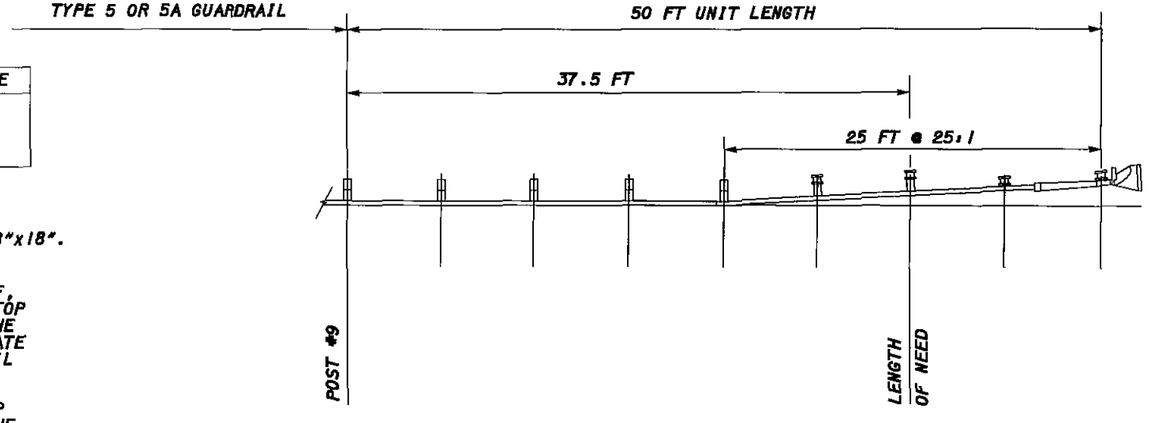
DWG. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SKT-4M	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES	12/11/97	3/6/98

THE FACE OF THE TYPE E-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18"x18". DELINEATORS SHALL COMPLY WITH STANDARD TRAFFIC DRAWING TC-61.10.

REFER TO THE MANUFACTURER'S INSTRUCTION REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4-INCHES [100 mm] ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27-3/4-INCHES [706 mm] FROM THE EDGE OF THE SHOULDER.

ON SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4-INCHES [100 mm] ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, DELINEATORS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.



SKT-350

NCHRP REPORT 350 COMPLIANCE

CALCULATED GJN CHECKED LDH

GENERAL NOTES

CUY-237-5.59

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STATION		LENGTH	RESURFACING END WIDTHS (AVG.)	RESURFACING SURFACE AREA	254	407		446	826
					PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (2.5")	TACK COAT (0.1 GAL./SQ. YD.)	TACK COAT FOR INTERMEDIATE COURSE (0.05 GAL./SQ. YD.)	ASPHALT CONCRETE SURFACE COURSE, TYPE 1H, AS PER PLAN (1.5")	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, FIBER TYPE A (1")
FROM	TO	FT.	FT.	SQ. YD.	SQ. YD.	GAL.	GAL.	CU. YD.	CU. YD.
S.R. 237 - NB / SB									
3+10.00	3+95.00	85.0	CADD	838	838.0	83.8	41.9	34.9	23.3
42+12.00	45+00.00	288.0	134	4288	4288.0	428.8	214.4	178.7	119.1
45+00.00	45+64.25	64.2	134	957	956.6	95.7	47.8	39.9	26.6
45+58.58	48+50.00	291.4	134	4339	4338.9	433.9	216.9	180.8	120.5
48+50.00	50+00.00	150.0	128	2133	2133.3	213.3	106.7	88.9	59.3
50+00.00	51+00.00	100.0	122	1356	1355.6	135.6	67.8	56.5	37.7
58+10.00	58+34.59	24.5	122	333	333.3	33.3	16.7	13.9	9.3
EASTLAND RD.									
WEST INTERSECTION		170.0	CADD	507	507.0	50.7	25.4	21.1	14.1
EAST INTERSECTION		150.0	CADD	170	170.0	17.0	8.5	7.1	4.7
S.R. 237 - NORTHBOUND									
3+95.00	16+00.00	1205.0	34.5	4619	4619.2	461.9	231.0	192.5	128.3
16+00.00	24+20.00	820.0	34.5	3143	3143.3	314.3	157.2	131.0	87.3
24+20.00	25+03.50	83.5	29.5	274	273.7	27.4	13.7	11.4	7.6
25+88.50	26+85.00	96.5	29.5	316	316.3	31.6	15.8	13.2	8.8
26+85.00	29+55.00	270.0	CADD	661	661.0	66.1	33.1	27.5	18.4
26+85.00	31+00.00	415.0	34.5	1591	1590.8	159.1	79.5	66.3	44.2
31+00.00	39+00.00	800.0	34.5	3067	3066.7	306.7	153.3	127.8	85.2
39+00.00	42+12.00	312.0	52	1803	1802.7	180.3	90.1	75.1	50.1
39+15.00	42+12.00	297.0	CADD	833	833.0	83.3	41.7	34.7	23.1
51+00.00	58+10.00	710.0	56	4418	4417.8	441.8	220.9	184.1	122.7
58+34.59	59+00.00	65.4	46	334	334.3	33.4	16.7	13.9	9.3
108+82.82	110+32.00	149.2	56	928	928.2	92.8	46.4	38.7	25.8
110+32.00	114+50.00	418.0	65.6	3048	3046.8	304.7	152.3	126.9	84.6
574+17.62	575+49.92	132.3	79.6	1170	1170.1	117.0	58.5	48.8	32.5
575+49.92	580+00.00	450.1	46	2300	2300.4	230.0	115.0	95.9	63.9
580+00.00	585+27.93	527.9	46	2698	2698.3	269.8	134.9	112.4	75.0
581+00.00	585+27.93	427.9	CADD	536	536.0	53.6	26.8	22.3	14.9
585+27.93	586+30.00	102.1	28.4	322	322.1	32.2	16.1	13.4	8.9
586+30.00	588+39.00	209.0	25.8	600	599.1	59.9	30.0	25.0	16.6
TOTAL (LEFT SIDE)					47581	4758	2380	1983	1322

STATION		LENGTH	RESURFACING END WIDTHS (AVG.)	RESURFACING SURFACE AREA	254	407		446	826
					PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (2.5")	TACK COAT (0.1 GAL./SQ. YD.)	TACK COAT FOR INTERMEDIATE COURSE (0.05 GAL./SQ. YD.)	ASPHALT CONCRETE SURFACE COURSE, TYPE 1H, AS PER PLAN (1.5")	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, FIBER TYPE A (1")
FROM	TO	FT.	FT.	SQ. YD.	SQ. YD.	GAL.	GAL.	CU. YD.	CU. YD.
S.R. 237 - SOUTHBOUND									
3+95.00	6+85.00	290.0	39.5	1273	1272.8	127.3	63.6	53.0	35.4
3+95.00	6+85.00	290.0	CADD	291	291.0	29.1	14.6	12.1	8.1
6+85.00	16+00.00	915.0	34.5	3508	3507.5	350.8	175.4	146.1	97.4
16+00.00	24+20.00	820.0	34.5	3143	3143.3	314.3	157.2	131.0	87.3
24+20.00	25+03.50	83.5	29.5	274	273.7	27.4	13.7	11.4	7.6
25+88.50	31+00.00	511.5	42.7	2430	2426.8	242.7	121.3	101.1	67.4
28+75.00	31+00.00	225.0	CADD	471	471.0	47.1	23.6	19.6	13.1
31+00.00	35+00.00	400.0	53.7	2389	2386.7	238.7	119.3	99.4	66.3
35+00.00	42+12.00	712.0	46.5	3679	3678.7	367.9	183.9	153.3	102.2
51+00.00	58+10.00	710.0	56	4418	4417.8	441.8	220.9	184.1	122.7
574+17.62	580+00.00	582.4	34	2200	2200.1	220.0	110.0	91.7	61.1
580+00.00	580+25.00	25.0	35	97	97.2	9.7	4.9	4.1	2.7
580+25.00	587+25.00	700.0	44	3422	3422.2	342.2	171.1	142.6	95.1
580+25.00	587+25.00	700.0	CADD	723	723.0	72.3	36.2	30.1	20.1
587+25.00	588+39.00	114.0	36.7	466	464.9	46.5	23.2	19.4	12.9
RAMP B-4									
444+14.67	447+28.00	313.3	41.5	1445	1444.8	144.5	72.2	60.2	40.1
RAMP B-7									
9+01.20	10+01.20	100.0	27	300	300.0	30.0	15.0	12.5	8.3
10+01.20	13+50.00	348.8	26	1008	1007.6	100.8	50.4	42.0	28.0
13+50.00	14+00.00	50.0	26	144	144.4	14.4	7.2	6.0	4.0
14+00.00	18+30.00	430.0	32	1529	1528.9	152.9	76.4	63.7	42.5
18+30.00	20+70.00	240.0	40	1067	1066.7	106.7	53.3	44.4	29.6
20+70.00	23+60.00	290.0	48	1547	1546.7	154.7	77.3	64.4	43.0
23+60.00	24+30.00	70.0	CADD	355	355.0	35.5	17.8	14.8	9.9
TOTAL (THIS SIDE)					47581	4758	2380	1983	1322
TOTAL (LEFT SIDE)					36171	3618	1809	1507	1005
TOTAL TO GENERAL SUMMARY					83,752	8376	4189	3490	2327

CALCULATED GJN
CHECKED LDH

PAVEMENT SUBSUMMARY

CUY-237-5.59

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REF NO.	SHEET NO.	STATION TO STATION	SIDE		202 GUARDRAIL REMOVED FT.		606 GUARDRAIL, TYPE 5 FT.	606 GUARDRAIL, TYPE 5A FT.	606 GUARDRAIL MISC., THRIE BEAM FT.	606 ANCHOR ASSEMBLY, TYPE T EACH	606 ANCHOR ASSEMBLY, TYPE E-98 EACH	606 BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	626 BARRIER REFLECTOR, TYPE A EACH		REMARKS
		S.R. 237													
G-1	18	STA. 17+62.5 TO STA. 19+50	RT		175		137.5				1		3		CONNECT TO EXISTING TYPE 5 GUARDRAIL
G-2	18	STA. 26+66.25 TO STA. 27+91.25	LT		125		75				1		3		CONNECT TO EXISTING BRIDGE TERMINAL
G-3	18/19	STA. 30+65 TO STA. 32+40	LT		137.5		125				1		3		CONNECT TO EXISTING TYPE 5 GUARDRAIL
G-4	19	STA. 39+75 TO STA. 41+37.5	LT		162.5		100			1	1		3		
G-5	20	STA. 51+16.25 TO STA. 52+10	RT		156.25		43.75				1	1	3		CONNECT TO EXISTING CONCRETE BARRIER
G-6	20	STA. 54+90 TO STA. 55+83.75	LT		156.25		43.75				1	1	3		CONNECT TO EXISTING CONCRETE BARRIER
G-7	21	STA. 60+27.5 TO STA. 61+52.5	RT		175		12.5		50	1	1		3		SEE SHEET 38 FOR THRIE BEAM DETAIL
G-8	22	STA. 83+75 TO STA. 85+75	RT		175		137.5			1	1		3		
G-9	22/23	STA. 106+09 TO STA. 107+34	LT		150		50	25			1		3		CONNECT TO EXISTING TYPE 5 GUARDRAIL
G-10	23	STA. 110+33.75 TO STA. 111+40	RT		156.25		56.25				1	1	3		CONNECT TO EXISTING CONCRETE BARRIER
G-11	23	STA. 30+46.5 TO STA. 33+09	LT		262.5		175	25		1	1		4		
		RAMP B-7													
G-12	23	STA. 11+02 TO STA. 12+40	RT		150										
G-13	23	STA. 11+32 TO STA. 12+82	LT		150		87.5			1	1		3		
TOTALS CARRIED TO GENERAL SUMMARY					2132		1044	50	50	5	12	3	37		

CALCULATED GJN
CHECKED LDH

GUARDRAIL SUBSUMMARY

CUY-237-5.59

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SHEET NUMBER								PARTICIPATION			ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
8	9	13	14	25	26	27		PROJ. PART.	100% CITY	100% STATE						
															ROADWAY	
					166				166		202	23000	166	SQ YD	PAVEMENT REMOVED	
				4				4			202	30600	4	SQ YD	CONCRETE MEDIAN REMOVED	
			2132		300			900	300	1232	202	38000	2432	FT	GUARDRAIL REMOVED	
	100				144				244		202	30000	244	SQ FT	WALK REMOVED	
	24								24		202	32000	24	FT	CURB REMOVED	
						25				25	203	10000	25	CU YD	EXCAVATION	
				103				103			203	10001	103	CU YD	EXCAVATION, AS PER PLAN	8
				200				200			204	10000	200	SQ YD	SUBGRADE COMPACTION	
3								2		1	209	60500	3	MILE	LINEAR GRADING	
			1044					525		519	606	13000	1044	FT	GUARDRAIL, TYPE 5	
					300				300		606	13001	300	FT	GUARDRAIL, TYPE 5, AS PER PLAN	8
			50							50	606	13050	50	FT	GUARDRAIL, TYPE 5A	
			12					5		7	606	22010	12	EACH	ANCHOR ASSEMBLY, TYPE E-98	
			5					2		3	606	26500	5	EACH	ANCHOR ASSEMBLY, TYPE T	
			3							3	606	35000	3	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE I	
			50							50	606	98000	50	FT	GUARDRAIL, MISC.: THRIE BEAM	
					144				144		608	10000	144	SQ FT	4" CONCRETE WALK	
	100								100		608	52001	100	SQ FT	CURB RAMP, AS PER PLAN	43
															DRAINAGE	
5								3		2	604	09001	5	EACH	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	8
1								1			604	09500	1	EACH	CATCH BASIN RECONSTRUCTED TO GRADE	
3								2		1	604	20601	3	EACH	INLET ADJUSTED TO GRADE, AS PER PLAN	8
1										1	604	20800	1	EACH	INLET RECONSTRUCTED TO GRADE	
4								2		2	604	34501	4	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	8
1								1			604	35500	1	EACH	MANHOLE RECONSTRUCTED TO GRADE	
3000								3000			SPECIAL	60450000	3000	POUND	MISCELLANEOUS METAL	8
9								9			638	10801	9	EACH	VALVE BOX ADJUSTED TO GRADE, AS PER PLAN	8
															PAVEMENT	
						500		300		200	251	01000	500	SQ YD	PARTIAL DEPTH PAVEMENT REPAIR	
				180	670			180	670		252	01500	850	FT	FULL DEPTH PAVEMENT SAWING	
						150		100		50	253	02000	150	CU YD	PAVEMENT REPAIR	
		83752						43,352		40,400	254	01001	83,752	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	9
	9000							4600		4400	254	01600	9000	SQ YD	PATCHING PLANED SURFACE	
						200				200	255	10101	200	SQ YD	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN A	9
						300				300	255	10101	300	SQ YD	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN B	9
						1000				1000	255	20000	1000	FT	FULL DEPTH PAVEMENT SAWING	
				56				56			301	46010	56	CU YD	ASPHALT CONCRETE BASE, PG64-28	
				34		25		34		25	304	20000	59	CU YD	AGGREGATE BASE	
		8376						4336		4040	407	10000	8376	GALLON	TACK COAT	
		4189						2169		2020	407	14000	4189	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
		3490						1806		1684	446	50001	3490	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE IH, AS PER PLAN	9
					595				595		609	12000	595	FT	COMBINATION CURB AND GUTTER, TYPE 2	
				7				7			609	72000	7	SQ YD	CONCRETE MEDIAN	
	100							70		30	617	10101	100	CU YD	COMPACTED AGGREGATE, AS PER PLAN	9
	2							1		1	617	25000	2	M GAL	WATER	
		2327						1205		1122	826	10200	2327	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, FIBER A	

CALCULATED GJN
CHECKED LDH

GENERAL SUMMARY

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I:\PROJECTS\PID24859\dgn\24859gga.dgn 14-NOV-2005 9:12AM gnowac

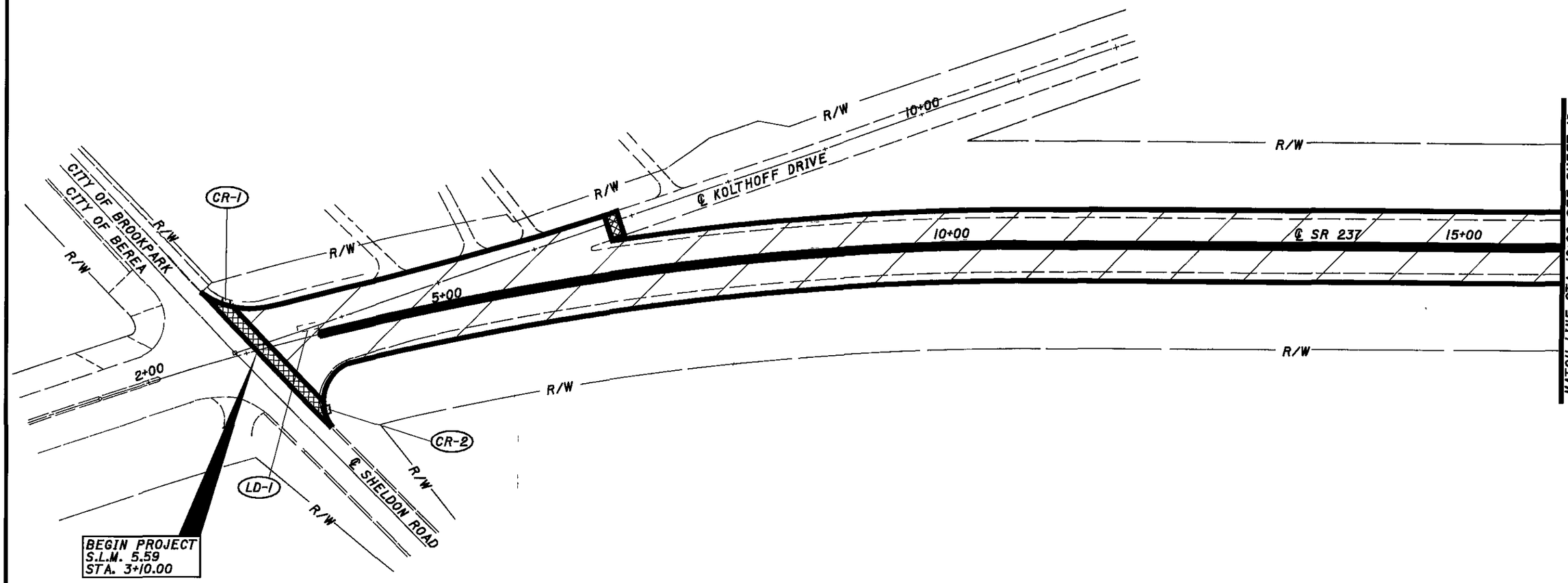
SHEET NUMBER								PARTICIPATION			ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
		11	14	26	28			PROJ. PART.	100% CITY	100% STATE						
															TRAFFIC CONTROL	
			37	4				15	4	22	626	00100	41	EACH	BARRIER REFLECTOR, TYPE A	
		200						200			630	97800	200	SQ FT	SIGNING, MISC.: ADDITIONAL SIGN, GROUND MOUNTED, AS DIRECTED BY THE ENGINEER	11
		10						9		1	632	26501	10	EACH	DETECTOR LOOP, AS PER PLAN	11
					6.02			3.67		2.35	643	00100	6.02	MILE	EDGE LINE	
					4.18			1.93		2.25	643	00200	4.18	MILE	LANE LINE	
					0.02			0.02			643	00300	0.02	MILE	CENTER LINE	
					5130			2298		2832	643	00400	5130	FT	CHANNELIZING LINE	
					400			400			643	00500	400	FT	STOP LINE	
					272			272			643	00600	272	FT	CROSSWALK LINE	
					1294			125		1169	643	00700	1294	FT	TRANSVERSE/DIAGONAL LINE	
					315			315			643	00900	315	SQ FT	ISLAND MARKING	
					25			21		4	643	01300	25	EACH	LANE ARROW	
					13			9		4	643	01400	13	EACH	WORD ON PAVEMENT, 72"	
															STRUCTURES	
															(SEE QUANTITIES ON SHEET 35/43)	
															MAINTENANCE OF TRAFFIC	
		150						150			614	11100	150	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR	
		4						4			614	12460	4	EACH	WORK ZONE MARKING SIGN	
		50						30		20	614	13000	50	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
		8.36						3.86		4.50	614	20100	8.36	MILE	WORK ZONE LANE LINE, CLASS I, 642 PAINT	
		10260						4596		5664	614	23200	10,260	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT	
											832	30000	1000	EACH	EROSION CONTROL	
											614	11000	LUMP		MAINTAINING TRAFFIC	
											619	16011	6	MONTH	FIELD OFFICE, TYPE B, AS PER PLAN	7
											623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
											624	10000	LUMP		MOBILIZATION	

CALCULATED GJN
CHECKED LDH

GENERAL SUMMARY

CUY-237-5.59

16
43



CROSS REFERENCE	
ITEM	SHEET
CURB RAMP	
SUB-SUMMARY	9
PAVEMENT MARKING	
PLAN SHEET	29
PAVEMENT CALC.	
SUB-SUMMARY	13
LOOP DETECTOR	
SUB-SUMMARY	11

PAVEMENT PLANING, ASPHALT CONCRETE

BUTT JOINT (TYP.)
SEE STD. DWG. BP-3.1 FOR ADDITIONAL DETAILS

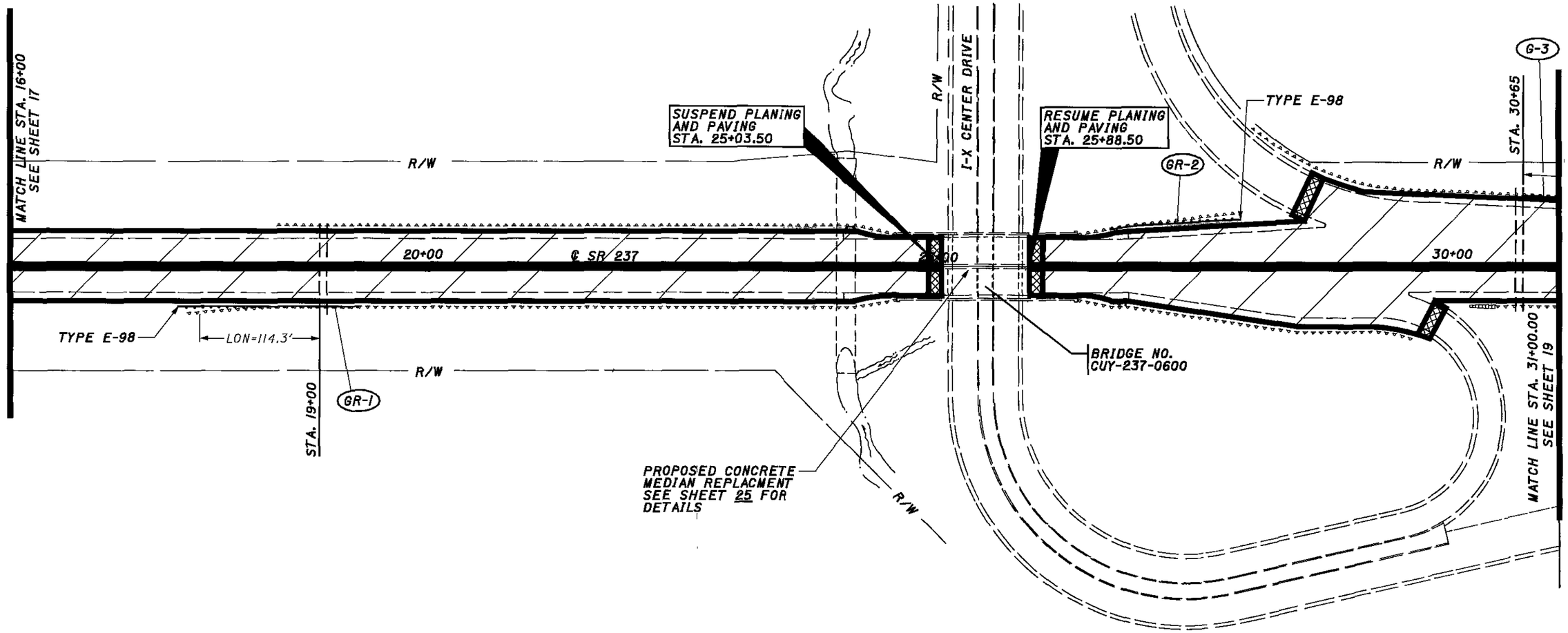
HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED GJN
CHECKED LDH

PLAN SHEET - S.R. 237
BEGIN WORK TO STA. 16+00

CUY-237-5.59

17
43



CROSS REFERENCE	
ITEM	SHEET
PAVEMENT MARKING	
PLAN SHEET	30
PAVEMENT CALC.	
SUB-SUMMARY	13
GUARDRAIL	
SUB-SUMMARY	14

PAVEMENT PLANING, ASPHALT CONCRETE

BUTT JOINT (TYP.)
SEE STD. DWG. BP-3.1 FOR ADDITIONAL DETAILS

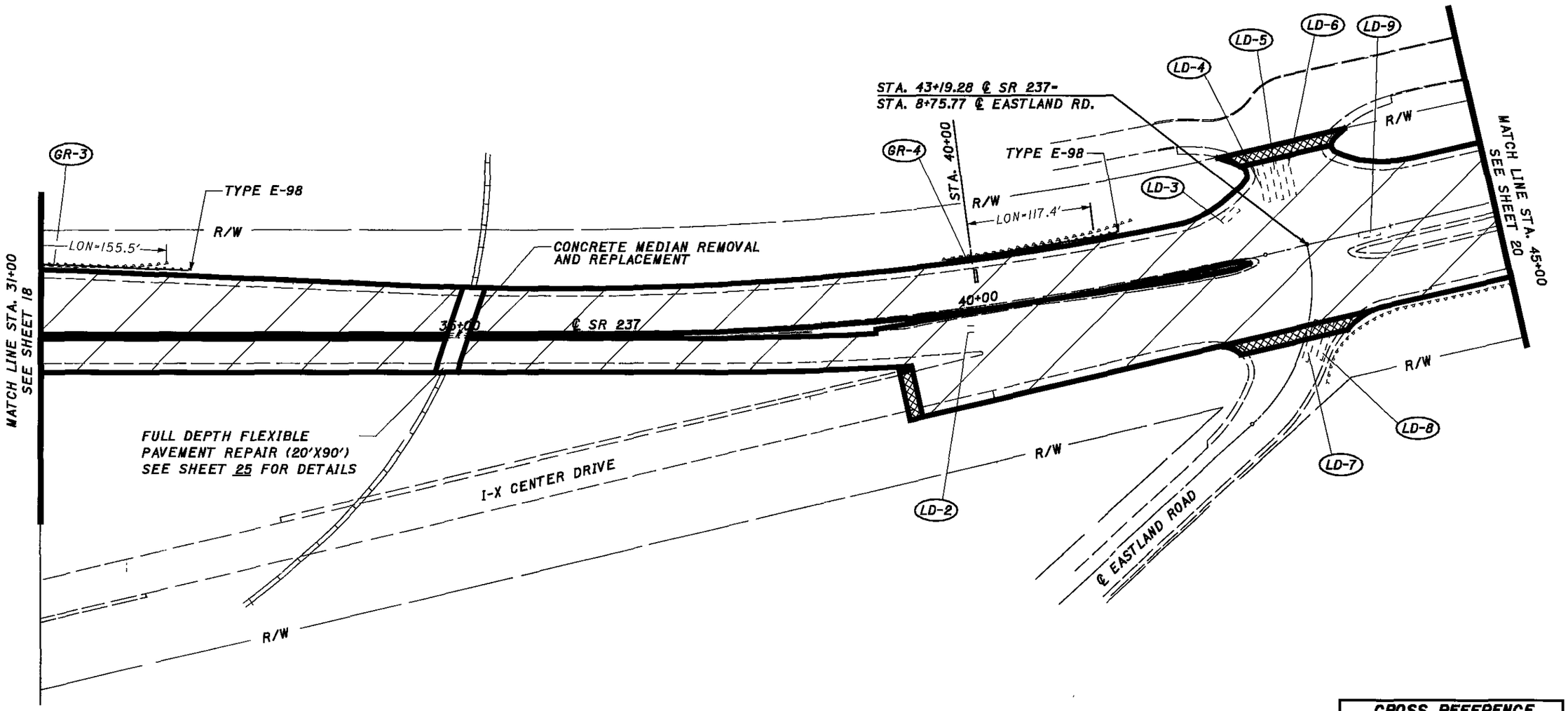
HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED G.J.N
DESIGNED L.D.H

PLAN SHEET - S.R. 237
STA. 16+00 TO STA. 31+00

CUY-237-5.59

18
43



CROSS REFERENCE	
ITEM	SHEET
PAVEMENT MARKING	
PLAN SHEET	31
PAVEMENT CALC.	
SUB-SUMMARY	13
GUARDRAIL	
SUB-SUMMARY	14
LOOP DETECTOR	
SUB-SUMMARY	11

PAVEMENT PLANING, ASPHALT CONCRETE

BUTT JOINT (TYP.)
SEE STD. DWG. BP-3.1 FOR ADDITIONAL DETAILS

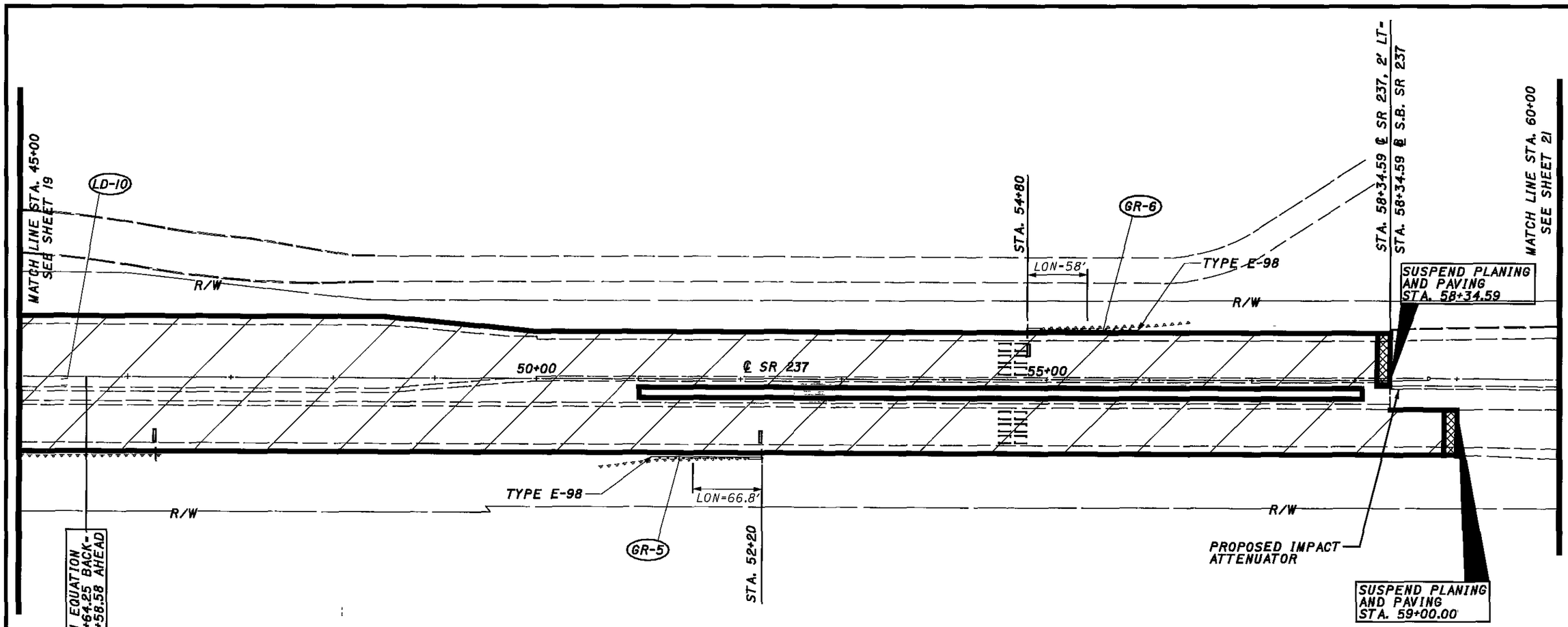
HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED GJN
CHECKED LDH

PLAN SHEET - S.R. 237
STA. 31+00 TO STA. 45+00

CUY-237-5.59

19
43



CROSS REFERENCE	
ITEM	SHEET
PAVEMENT MARKING	
PLAN SHEET	32
PAVEMENT CALC.	
SUB-SUMMARY	13
GUARDRAIL	
SUB-SUMMARY	14
LOOP DETECTOR	
SUB-SUMMARY	11

PAVEMENT PLANING, ASPHALT CONCRETE

BUTT JOINT (TYP.)
SEE STD. DWG. BP-3.1 FOR ADDITIONAL DETAILS

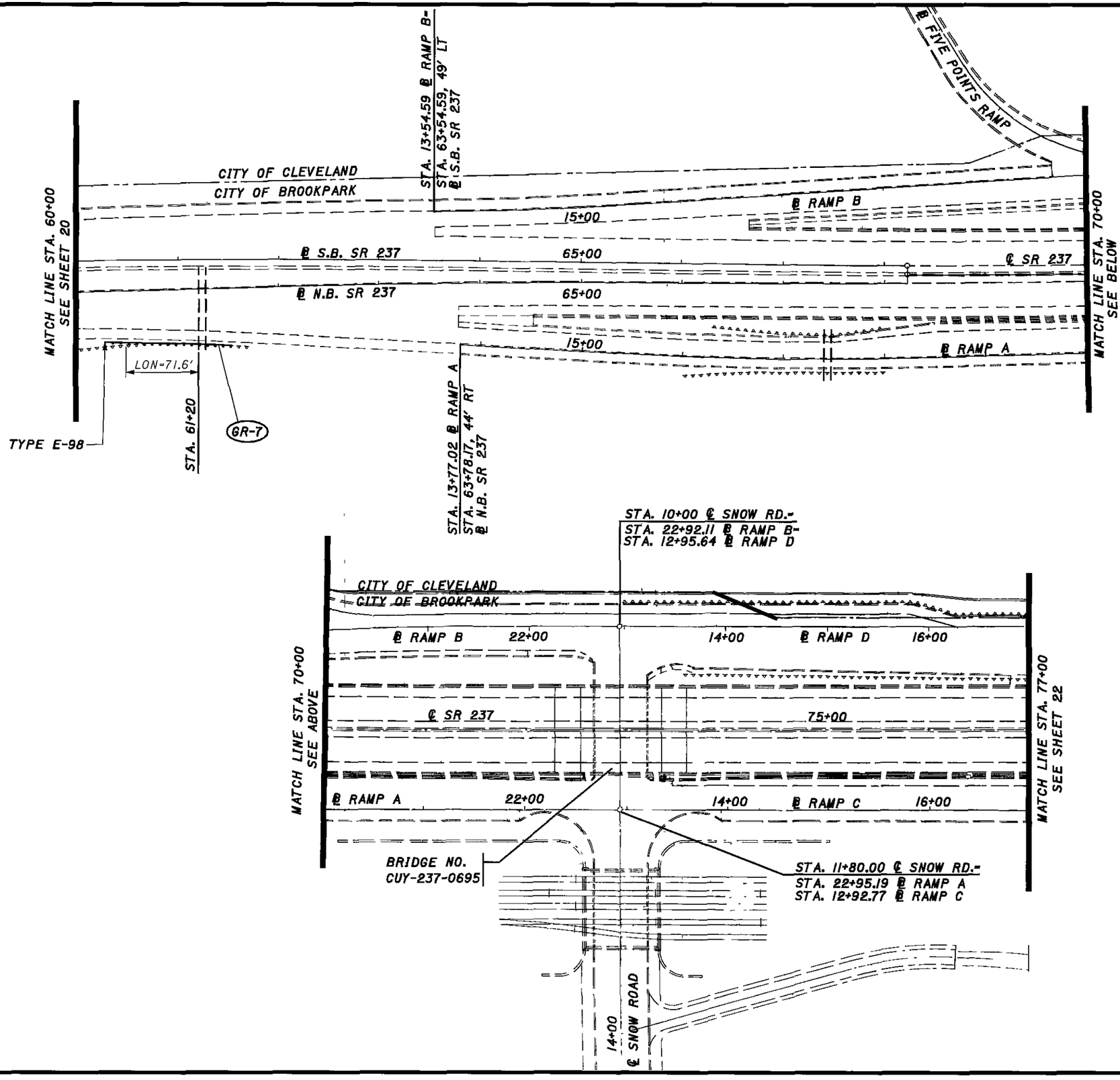
HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED G.J.N
CHECKED L.D.H

PLAN SHEET - S.R. 237
STA. 45+00 TO STA. 60+00

CUY-237-5.59

20
43



CROSS REFERENCE	
ITEM	SHEET
GUARDRAIL	
SUB-SUMMARY	14

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED GJN
CHECKED LDH

PLAN SHEET - S.R. 237
STA. 60+00 TO STA. 77+00

CUY-237-5.59

21
43

MATCH LINE STA. 77+00
SEE SHEET 21

STA. 7+85.64 ℄ RAMP D-I
STA. 17+85.64, 28' RT
℄ RAMP D

CITY OF CLEVELAND
CITY OF BROOKPARK

℄ RAMP C-2

AIRPORT SERVICE ROAD

MATCH LINE STA. 92+00
SEE BELOW

20+00 ℄ RAMP D

℄ RAMP D-I 20+00

15+00

85+00

80+00

℄ SR 237

90+00

TYPE E-98

LON=155.5'

℄ RAMP C 20+00

25+00

10+00 ℄ RAMP C-I

8+00

30+00 ℄ RAMP C

FULL DEPTH REPAIR
(6'X12')

GR-8

STA. 85+50

FULL DEPTH REPAIR
(15'X6')

STA. 5+58.83 ℄ RAMP C-I=
STA. 26+68.73, 36' LT ℄ RAMP C

FULL DEPTH REPAIR
(3'X12')

STA. 12+52.98 ℄ RAMP C-2=
STA. 25+06.17 ℄ RAMP C

MATCH LINE STA. 92+00
SEE ABOVE

CITY OF CLEVELAND
CITY OF BROOKPARK

℄ AIRPORT SERVICE ROAD

95+00

℄ SR 237

100+00

℄ RAMP C-I 14+00

℄ RAMP C 35+00

40+00

STA. 15+00.00 ℄ RAMP C-I=
STA. 95+00.00, 48' RT ℄ SR 237

STA. 106+25

GR-9

℄ RAMP F-I

LON=90'

25+00

MATCH LINE STA. 107+00
SEE SHEET 23

15+00 ℄ RAMP F

105+00

STA. 13+50.00 ℄ RAMP F=
STA. 103+50.00, 48' LT ℄ SR 237

CROSS REFERENCE	
ITEM	SHEET
GUARDRAIL SUB-SUMMARY	14

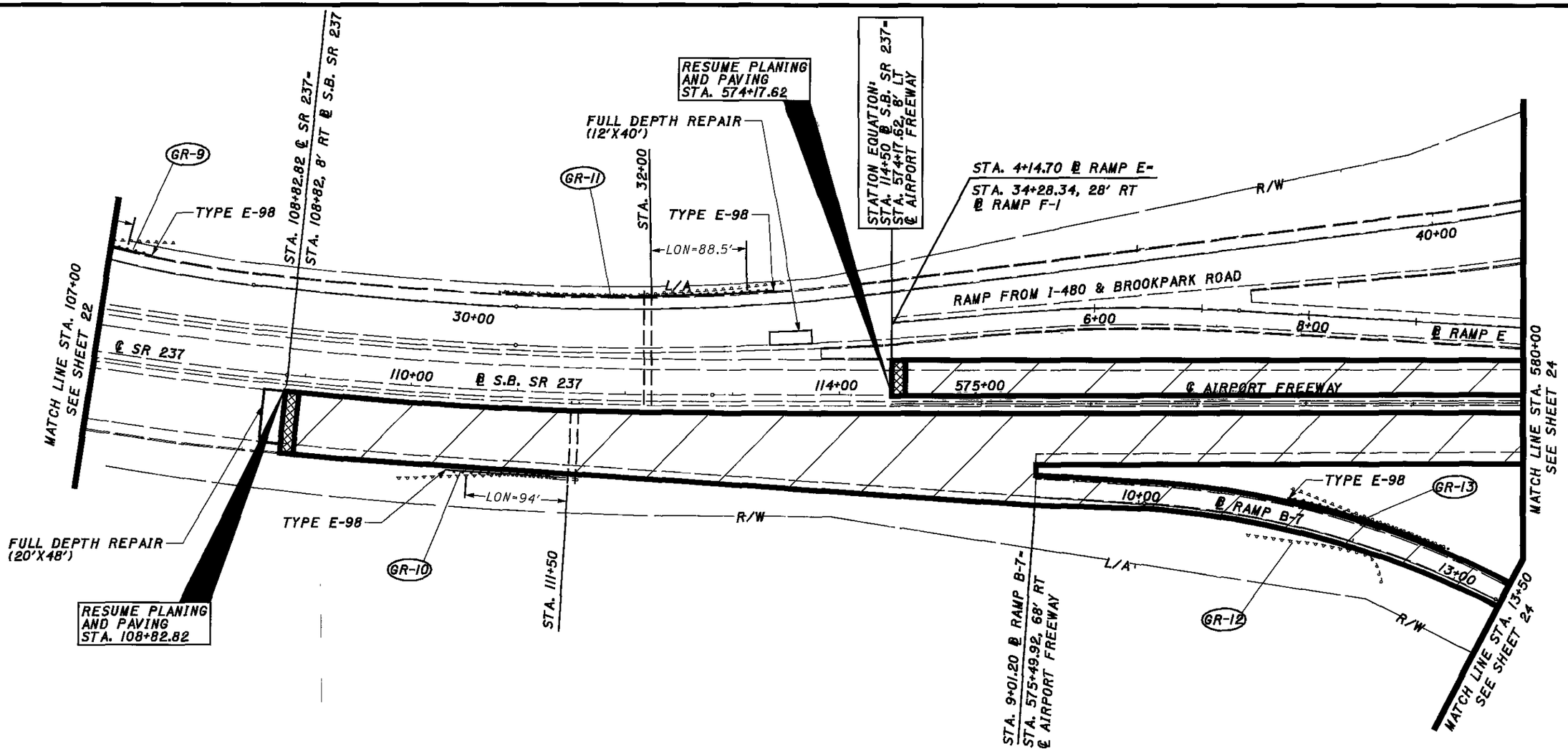
HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED GJN
CHECKED LDH

PLAN SHEET - S.R. 237
STA. 77+00 TO STA. 107+00

CUY-237-5.59

22
43



CROSS REFERENCE	
ITEM	SHEET
GUARDRAIL	
SUB-SUMMARY	14
PAVEMENT MARKING	
PLAN SHEET	33
PAVEMENT CALC.	
SUB-SUMMARY	13

PAVEMENT PLANING, ASPHALT CONCRETE

BUTT JOINT (TYP.)
SEE STD. DWG. BP-3.1 FOR ADDITIONAL DETAILS

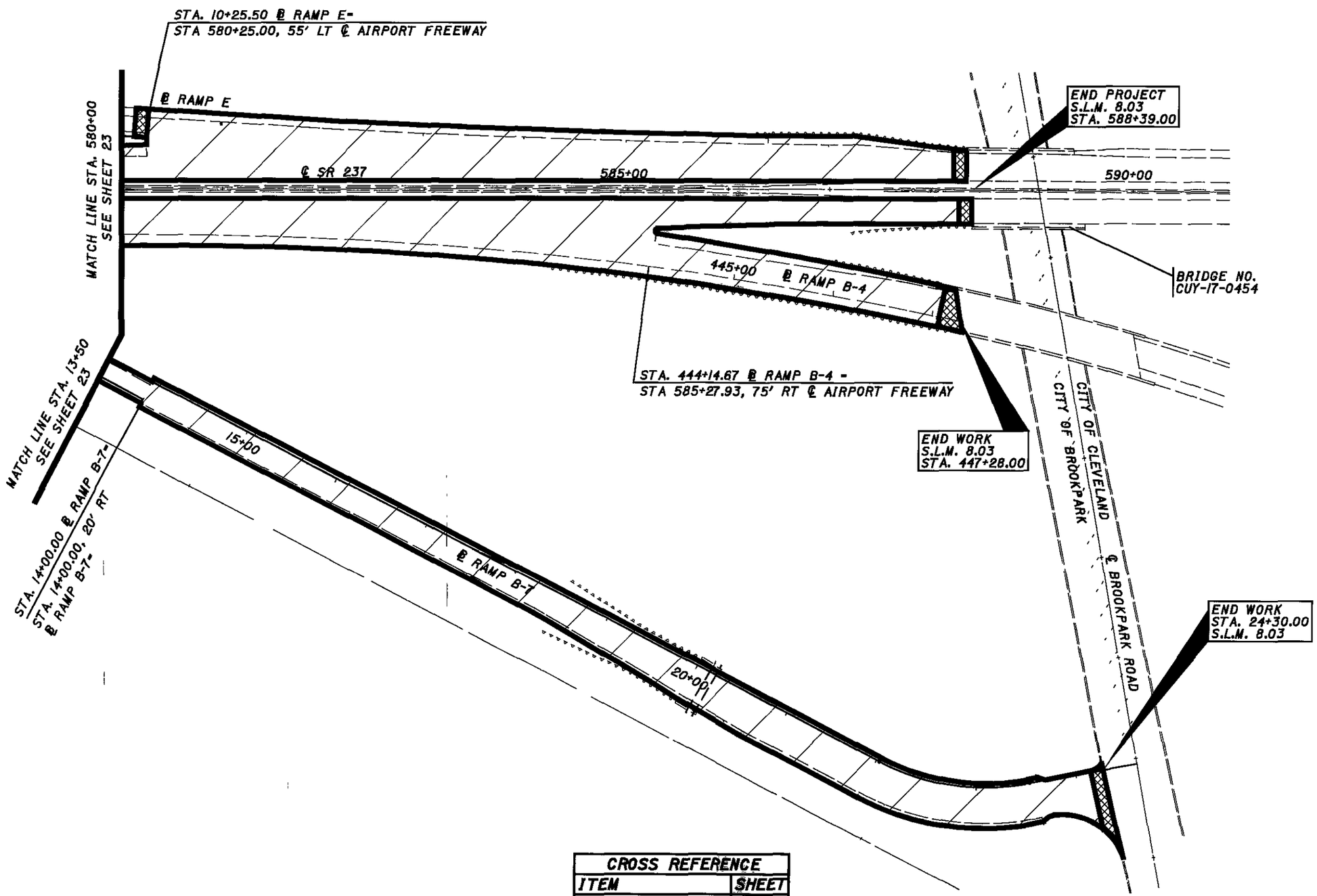
HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED GJN
CHECKED LDH

PLAN SHEET - S.R. 237
STA. 107+00 TO STA. 580+00

CUY-237-5.59

23
43



CROSS REFERENCE	
ITEM	SHEET
PAVEMENT MARKING PLAN SHEET	34
PAVEMENT CALC. SUB-SUMMARY	13

PAVEMENT PLANING, ASPHALT CONCRETE

BUTT JOINT (TYP.)
SEE STD. DWG. BP-3.1 FOR ADDITIONAL DETAILS

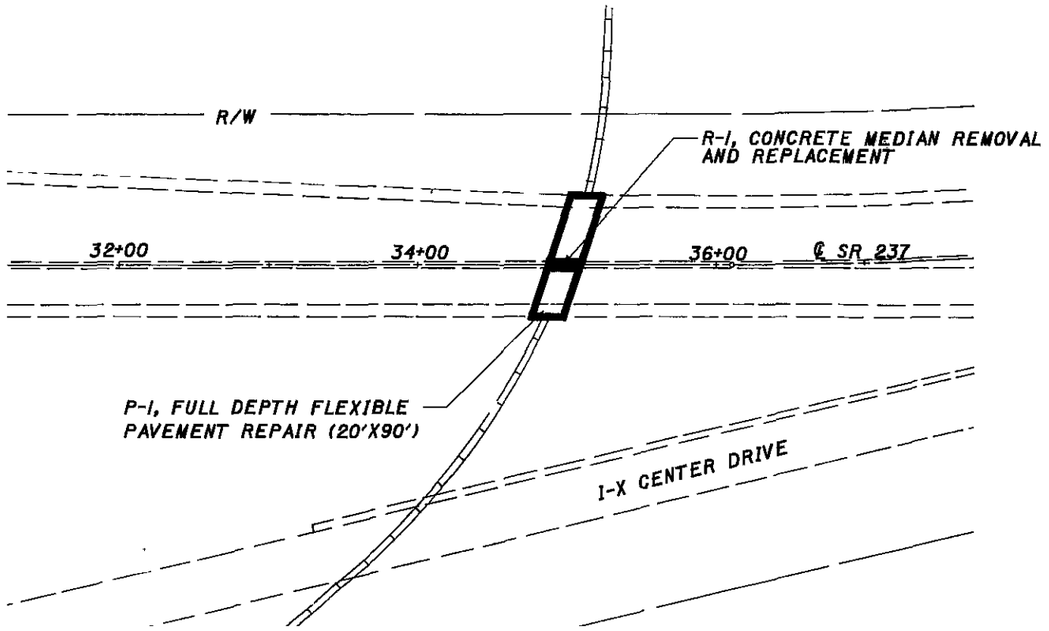
HORIZONTAL SCALE IN FEET
0 25 50 100

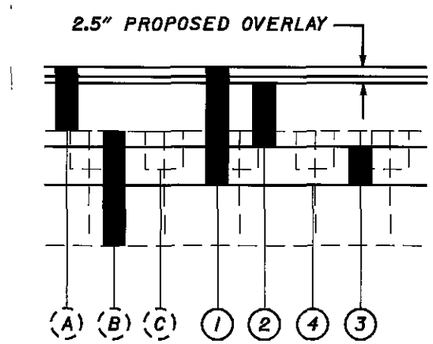
CALCULATED GJN
CHECKED LDH

PLAN SHEET - S.R. 237
STA. 580+00 TO END PROJECT

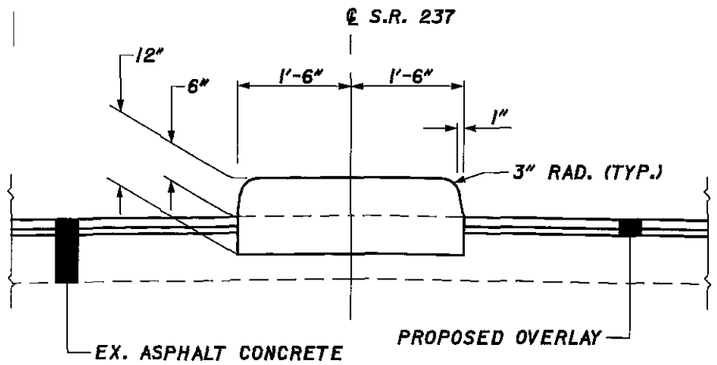
CUY-237-5.59

24
43





FULL DEPTH FLEXIBLE PAVEMENT REPAIR



CONCRETE MEDIAN DETAIL

EXISTING LEGEND

- (A) ASPHALT CONCRETE BASE (10")
- (B) RAILROAD BALLAST (1.5' ±)
- (C) WOODEN RAILROAD TIES WITH STEEL SPIKES (1' C/C)

PROPOSED LEGEND

- (1) ITEM 203 - EXCAVATION, AS PER PLAN
- (2) ITEM 301 - ASPHALT CONCRETE BASE (10")
- (3) ITEM 304 - AGGREGATE BASE (6")
- (4) ITEM 204 - SUBGRADE COMPACTION

REF NO.	LOCATION	SIDE	202 CONCRETE MEDIAN REMOVED SQ. YD.	203 EXCAVATION, AS PER PLAN CU. YD.	204 SUBGRADE COMPACTION SQ. YD.	252 FULL DEPTH PAVEMENT SAWING FT.	301 ASPHALT CONCRETE BASE, PG 64-28 CU. YD.	304 AGGREGATE BASE CU. YD.	609 CONCRETE MEDIAN SQ. YD.
P-1	STA. 35+00	℄		103	200	180	56	34	7
R-1	STA. 35+00	℄	4						
TOTALS CARRIED TO GENERAL SUMMARY			4	103	200	180	56	34	7

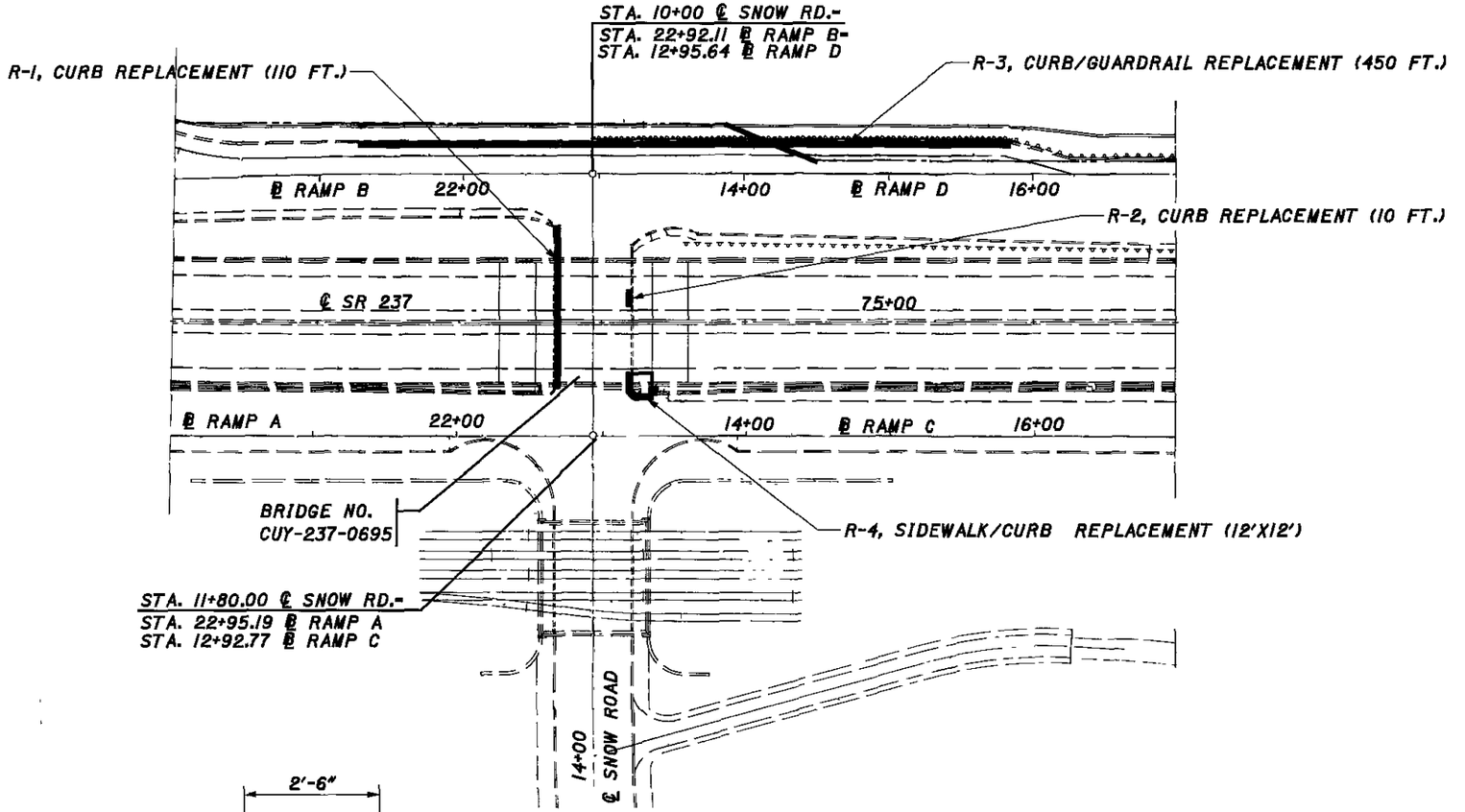
HORIZONTAL SCALE IN FEET
0 25 50 100

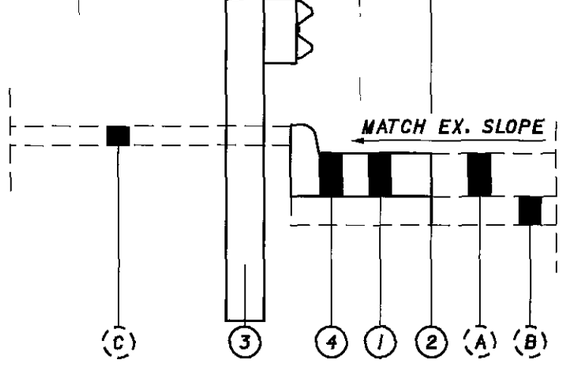
CALCULATED CJN
CHECKED LDH

CONCRETE MEDIAN DETAIL - S.R. 237 STA. 35+00

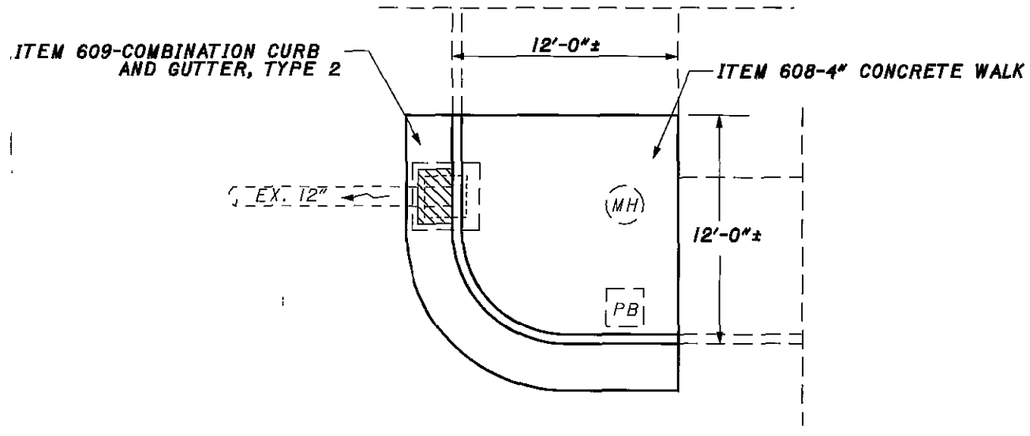
CUY-237-5.59

25/43





CURB REPLACEMENT TYPICAL SECTION



SIDEWALK REPLACEMENT PLAN VIEW

PROPOSED LEGEND

(1) ITEM 202 - PAVEMENT REMOVED, AS PER PLAN
(2) ITEM 252 - FULL DEPTH PAVEMENT SAWING
(3) ITEM 606 - GUARDRAIL, TYPE 5
(4) ITEM 609 - COMBINTION CURB AND GUTTER, TYPE 2

EXISTING LEGEND

(A) CONCRETE PAVEMENT (9")
(B) SUBBASE (8"±)
(C) CONCRETE WALK (4")

REF NO.	LOCATION	SIDE	202 PAVEMENT REMOVED SQ. YD.	202 GUARDRAIL REMOVED FT.	202 WALK REMOVED SQ. FT.	252 FULL DEPTH PAVEMENT SAWING FT.	606 GUARDRAIL, TYPE 5, AS PER PLAN FT.	608 4" CONCRETE WALK SQ. FT.	609 COMBINATION CURB AND GUTTER, TYPE 2 FT.	626 BARRIER REFLECTOR, TYPE A EACH
R-1	SNOW RD. (100% CITY)	RT	31			130			110	
R-2	SNOW RD.	LT	3			20			10	
R-3	RAMP B / RAMPD	LT	125	300		470	300		450	4
R-4	SNOW RD. / RAMPC	LT	7		144	50		144	25	
	TOTALS CARRIED TO GENERAL SUMMARY		166	300	144	670	300	144	595	4

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED GJN
CHECKED LDH

CURB/SIDEWALK REPLACMENT DETAILS
S.R. 237 AND SNOW RD.

CUY-237-5.59

26
43

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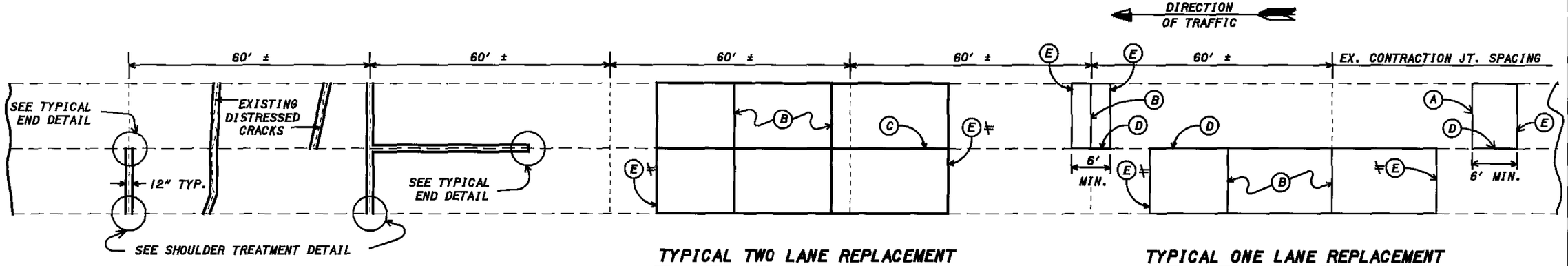
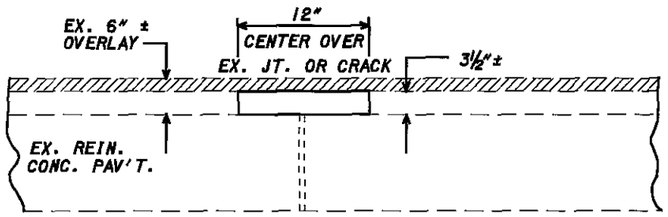


PARTIAL DEPTH JOINT OR CRACK REPAIR

TYPICAL TWO LANE REPLACEMENT

TYPICAL ONE LANE REPLACEMENT



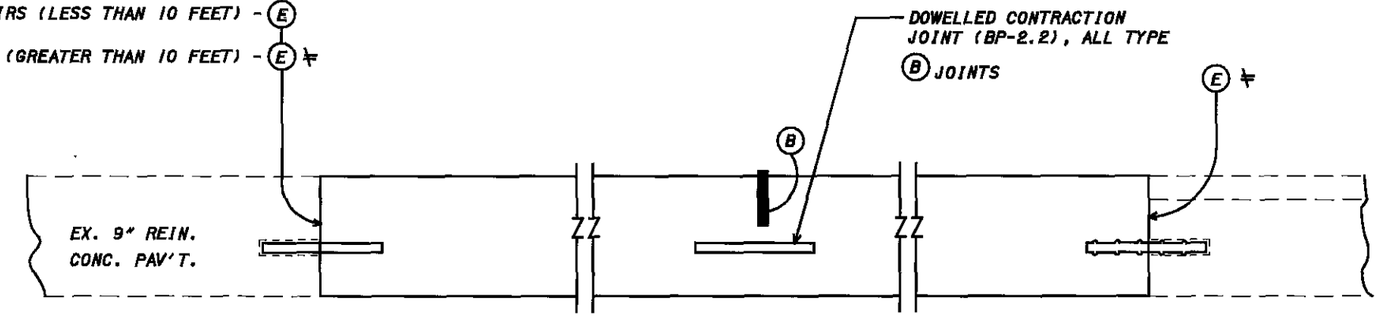
ITEM 251 - PARTIAL DEPTH PAV'T REPAIR

CRACK REPAIRS (NO JOINT WITHIN REPAIR) - (A)

JOINT REPAIRS (LESS THAN 10 FEET) - (E)

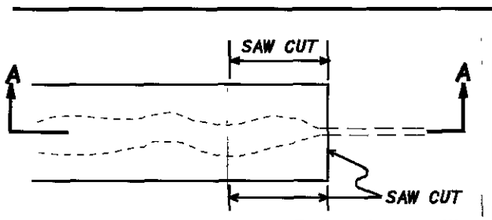
PANEL REPAIRS (GREATER THAN 10 FEET) - (E)ǂ

ǂ USE (A) JOINT IF EITHER ADJACENT (EXISTING OR PROPOSED) CONTRACTION JOINT IS FARTHER THAN 20 FEET.

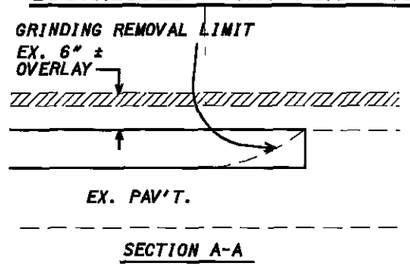


ITEM 255 - FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT

SEE GENERAL NOTES ON SHEET 9 FOR ADDITIONAL INFORMATION.



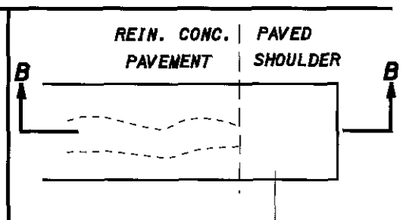
DISTRESSED JOINT-PLAN VIEW



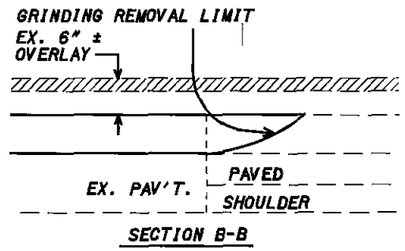
SECTION A-A

TYPICAL END DETAIL

NO SEPARATE PAYMENT WILL BE MADE FOR THESE SAW CUTS



DISTRESSED JOINT-PLAN VIEW



SECTION B-B

SHOULDER TREATMENT DETAIL

MEASURED QUANTITY SHALL NOT INCLUDE THE PAVED SHOULDER AREA

SEE GENERAL NOTES ON SHEET NO. 9 FOR ADDITIONAL INFORMATION.

ESTIMATED QUANTITY	
ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR	500 SQ. YD.
ITEM 253 - PAVEMENT REPAIR	150 CU. YD.

SEE GENERAL NOTES ON SHEET 9 FOR ADDITIONAL INFORMATION.

LEGEND

- (A) TYPE Y DOWELLED REPAIR JOINTS, AS PER BP-2.5
- (B) SAWED CONTRACTION JOINT AS PER BP-2.2, WITH DOWELS, MAX. SPACING 20' C/C FOR ONE LANE REPLACEMENTS ALIGN JOINT WITH EXISTING CRACKS IN THE ADJACENT LANE WHENEVER POSSIBLE. (EX. CRACKS OCCUR APPROX. 15' C/C)
- (C) LONGITUDINAL BUTT JOINT AS PER BP-2.1 (USING HOOK BOLTS)
- (D) TYPE D JOINT AS PER BP-2.1 FOR PATCHES 10' OR GREATER IN LENGTH
- (E) TYPE T TIED REPAIR JOINT, AS PER BP-2.5

- WEARING COURSE REMOVED

ESTIMATED QUANTITIES		
ITEM 255	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN A	200 SQ.YD.
ITEM 255	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN B	300 SQ.YD.
ITEM 255	FULL DEPTH PAVEMENT SAWING	1000 FT.
ITEM 203	EXCAVATION	25 CU. YD.
ITEM 304	AGGREGATE BASE	25 CU. YD.

* SEE SHEETS 21-23 FOR APPROXIMATE LOCATIONS OF FULL DEPTH RIGID PAVEMENT REMOVAL AND REPLACEMENT.

CALCULATED GJN CHECKED LDH

PAVEMENT REPAIR DETAILS & ESTIMATED QUANTITIES

CUY-237-5.59

SHEET NO.	STATION TO STATION	SIDE	643 EDGE LINE (WHITE) FT.	643 EDGE LINE (YELLOW) FT.	643 CENTER LINE, DOUBLE SOLID FT.	643 LANE LINE FT.	643 CHANNELIZING LINE FT.	643 TRANSVERSE/DIAGONAL LINE FT.	643 STOP LINE FT.	643 CROSSWALK LINE FT.	643 ISLAND MARKING (YELLOW) SQ. FT.	643 LANE ARROW EACH	643 WORD ON PAVEMENT, 72 INCH EACH
	S.R. 237												
29	STA. 3+10 TO STA. 16+00	RT/LT	2691	2450	30	2670	220		38	272		2	1
30	STA. 16+00 TO STA. 31+00	RT/LT	3000	3060		3070	1220	125			255		
31	STA. 31+00 TO STA. 45+00	RT/LT	2398	2632		4372	516		165		60	7	4
32	STA. 45+00 TO STA. 45+65	RT/LT	130	130		260	130					2	2
32	STA. 45+59 TO STA. 59+00	RT	1275	1275		2682	251						
32	STA. 45+59 TO STA. 58+35	LT	1341	1341		2550	251						
33	STA. 108+82 TO STA. 114+50	RT	568	568		1404	600						
33	STA. 574+17 TO STA. 580+00	RT	583	583		1164	264	500					
33	STA. 574+17 TO STA. 580+00	LT	583	583		582							
34	STA. 580+00 TO STA. 588+39	RT/LT	1714	839		2491	1136	669					
	KOLTHOFF DRIVE												
29	STA. 6+50 TO STA. 6+93	RT/LT	43	43	43				12				
	RAMP B-7												
33	STA. 9+01 TO STA. 13+50	RT/LT	449	449									
34	STA. 13+50 TO STA. 24+30	RT/LT	1025	1025		500	442		70			9	6
	RAMP B-4												
34	STA. 444+14 TO STA. 447+28	RT/LT	313	313		313							
	EASTLAND ROAD												
31	WEST INTERSECTION	RT/LT	180		40		80		70			3	
31	EAST INTERSECTION	RT/LT	180		20		20		45			2	
TOTALS CARRIED TO GENERAL SUMMARY			16473	15291	133	22058	5130	1294	400	272	315	25	13
			-6.02 MI.		-0.02 MI.	-4.18 MI.							

CALCULATED GJN
CHECKED LDH

PAVEMENT MARKING SUBSUMMARY

CUY-237-5.59

28
43

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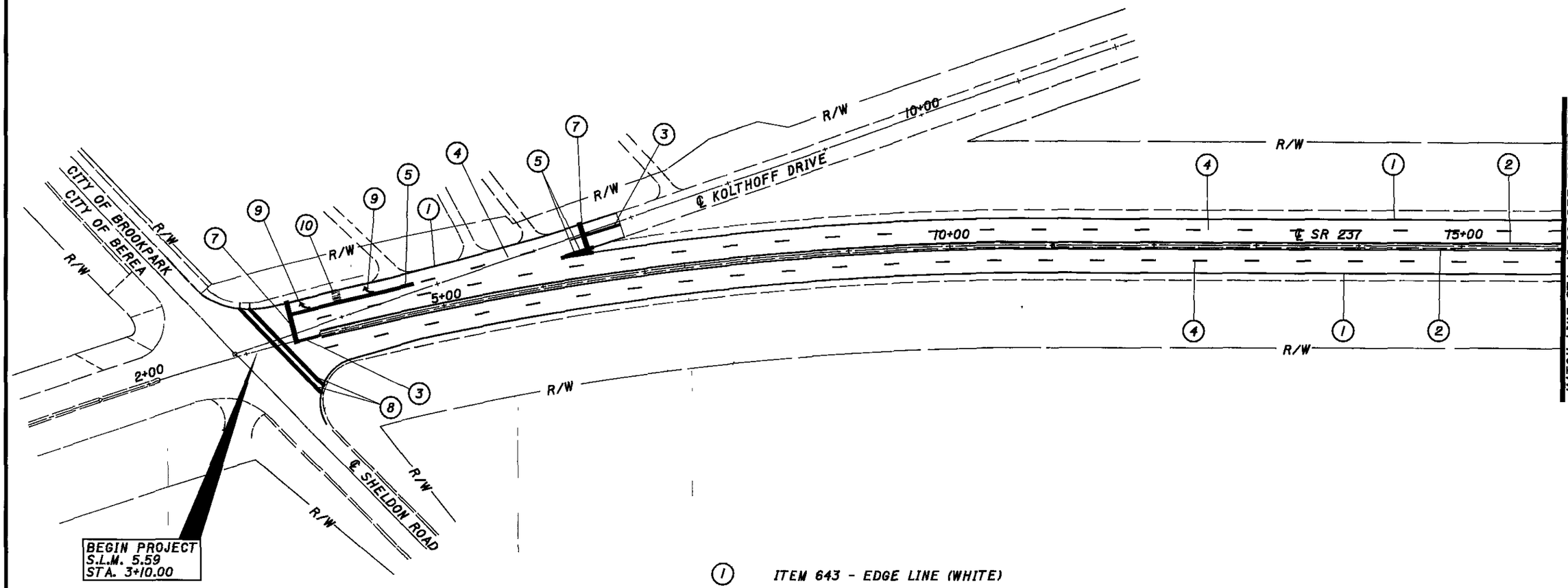


(1) ITEM 643 - EDGE LINE (WHITE)

(2) ITEM 643 - EDGE LINE (YELLOW)

(3) ITEM 643 - CENTER LINE

(4) ITEM 643 - LANE LINE

(5) ITEM 643 - CHANNELIZING LINE

(6) ITEM 643 - TRANSVERSE/DIAGONAL LINE

(7) ITEM 643 - STOP LINE

(8) ITEM 643 - CROSSWALK LINE

(9) ITEM 643 - LANE ARROW

(10) ITEM 643 - WORD ON PAVEMENT, 72 INCH

(11) ITEM 643 - ISLAND MARKING (YELLOW)

CROSS REFERENCE	
ITEM	SHEET
PAVEMENT CALC.	
PLAN SHEET	17

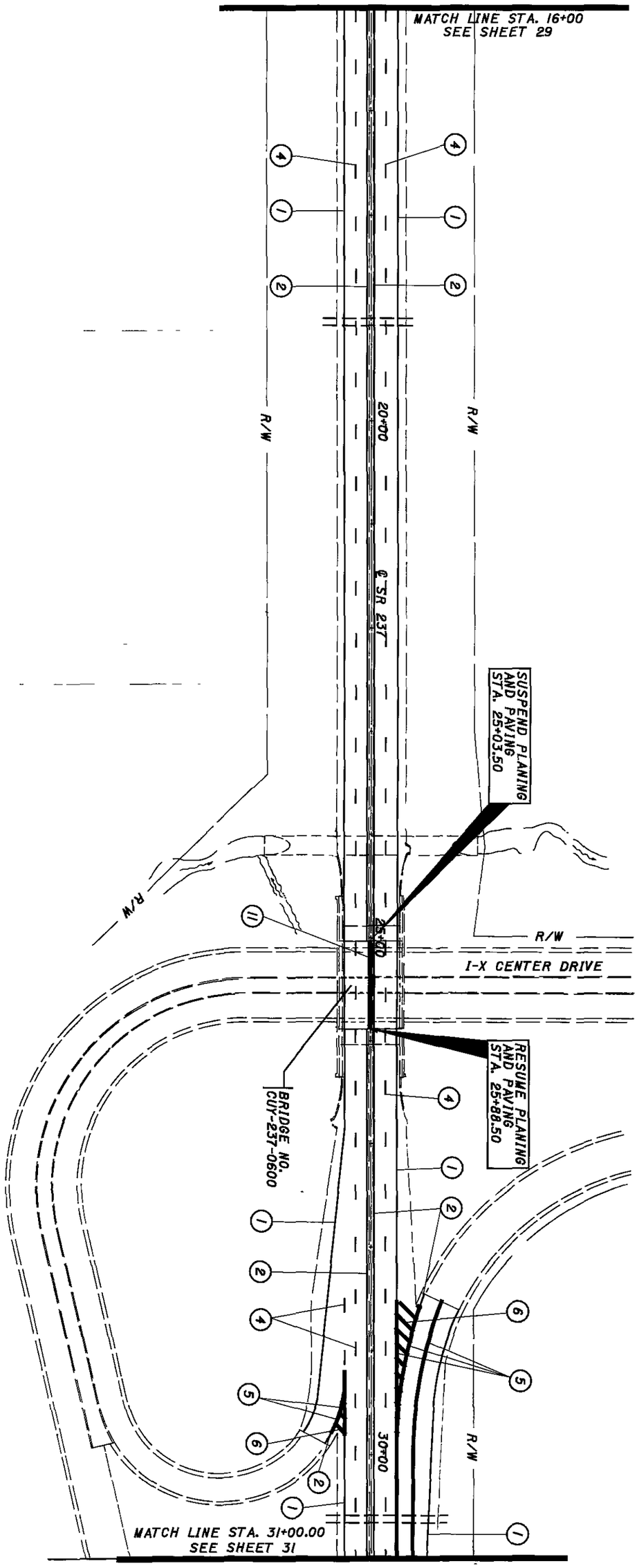
HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED GJN
CHECKED LDH

PLAN SHEET - S.R. 237
BEGIN WORK TO STA. 16+00

CUY-237-5.59

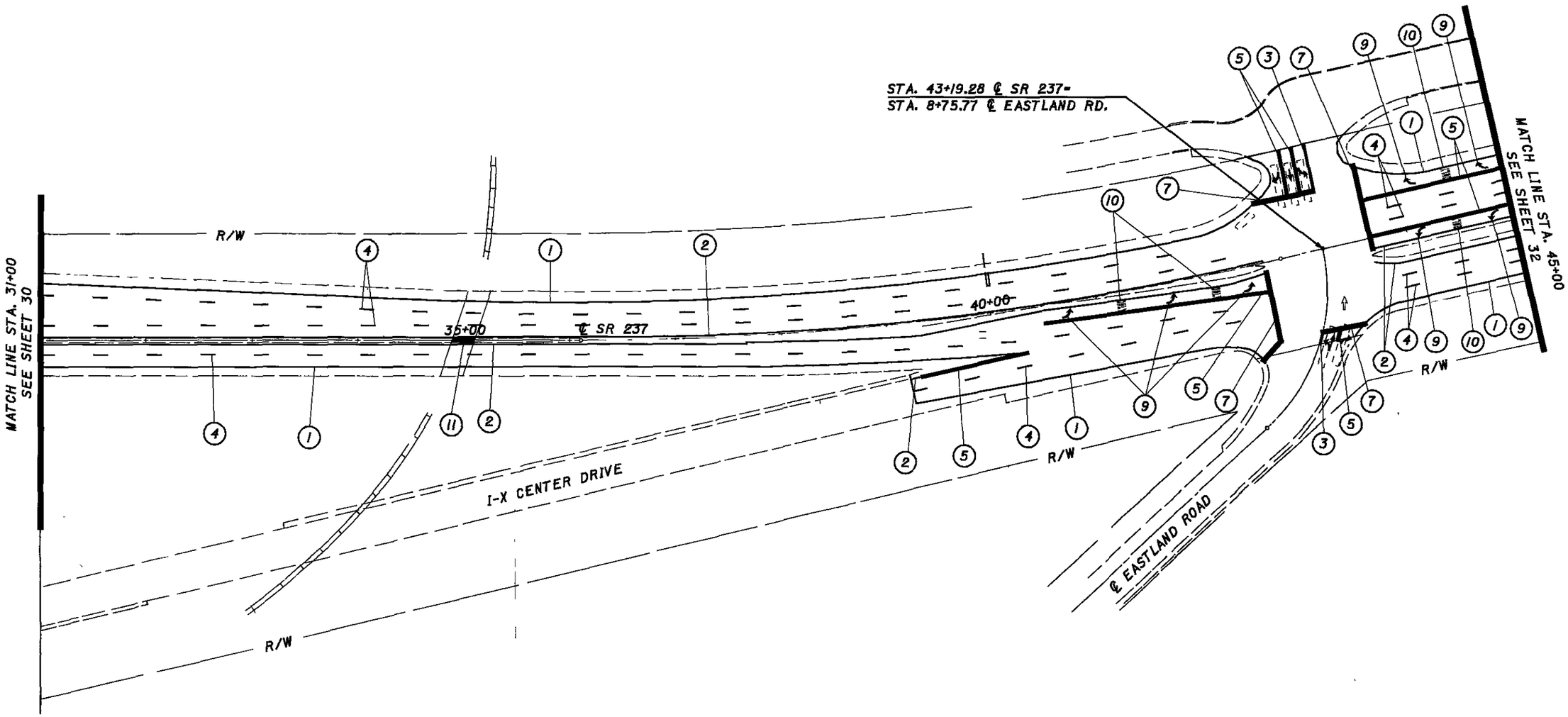
29
43



CROSS REFERENCE	
ITEM	SHEET
PAVEMENT CALC.	
PLAN SHEET	18

SEE SHEET 29 FOR PAVEMENT MARKING LEGEND

30/43	CUY-237-5.59	PLAN SHEET - S.R. 237 STA. 16+00 TO STA. 31+00	CALCULATED GJN CHECKED LDH	0 50 25 100 HORIZONTAL SCALE IN FEET



CROSS REFERENCE	
ITEM	SHEET
PAVEMENT CALC.	
PLAN SHEET	19

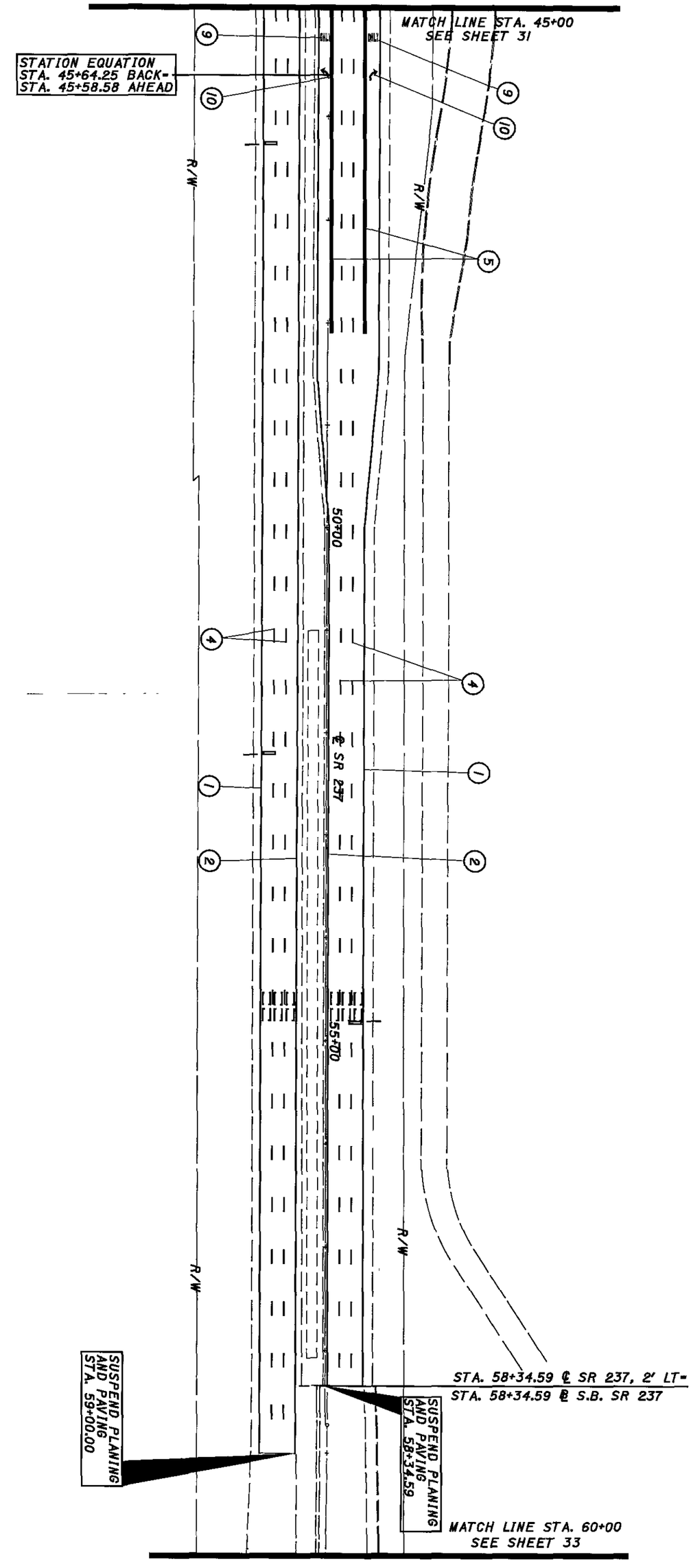
SEE SHEET 29 FOR PAVEMENT MARKING DETAILS

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED G.J.N
CHECKED L.D.H

PLAN SHEET - S.R. 237
STA. 31+00 TO STA. 45+00

CUY-237-5.59

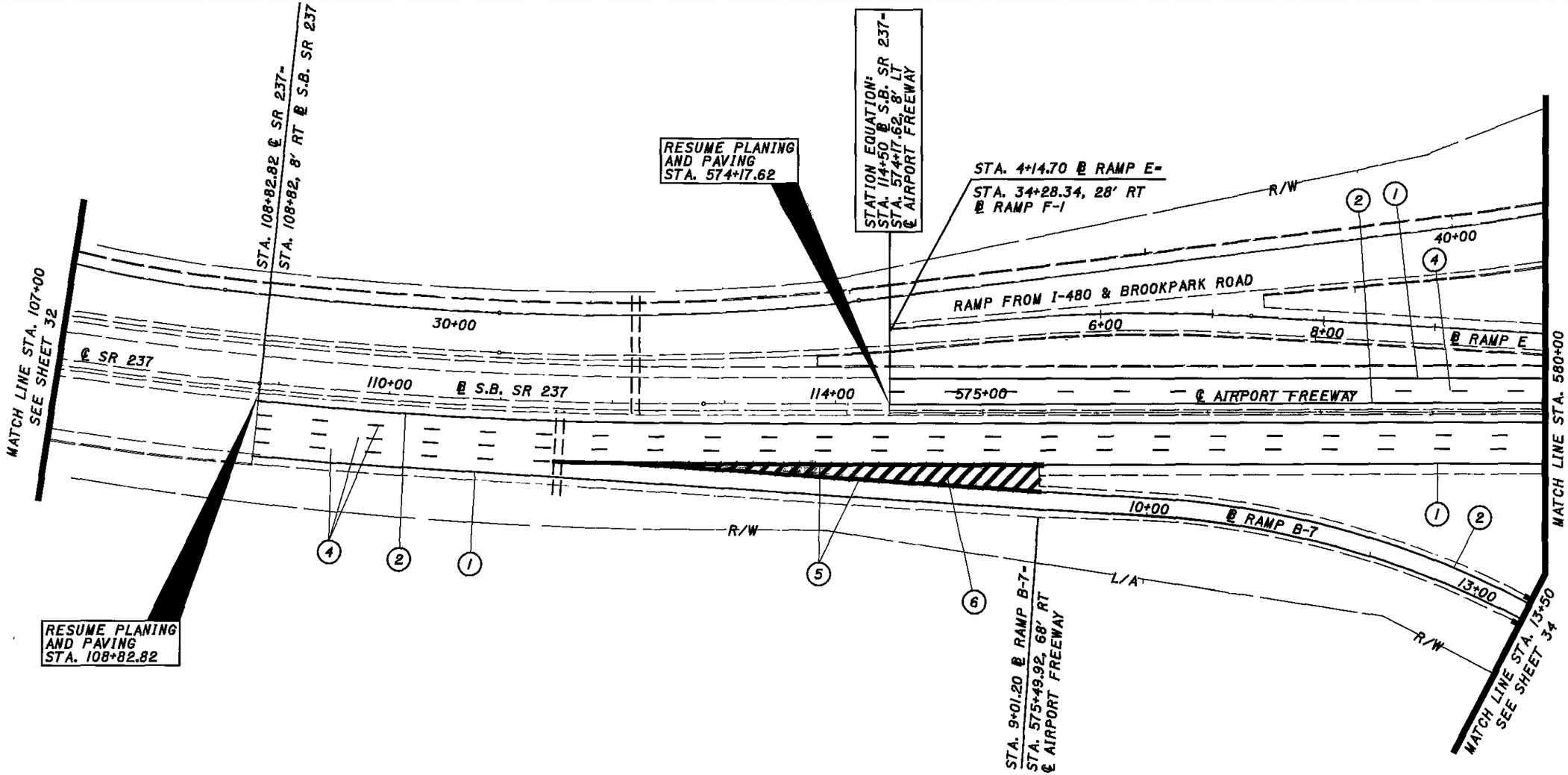
31
43



CROSS REFERENCE	
ITEM	SHEET
PAVEMENT CALC.	
PLAN SHEET	20

SEE SHEET 29 FOR PAVEMENT MARKING LEGEND

32/43	CUY-237-5.59	PLAN SHEET - S.R. 237 STA. 45+00 TO STA. 60+00	CALCULATED GJN CHECKED LDH	0 50 25 100 HORIZONTAL SCALE IN FEET



CROSS REFERENCE	
ITEM	SHEET
PAVEMENT CALC.	
PLAN SHEET	23

SEE SHEET 29 FOR PAVEMENT MARKING LEGEND

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED GJN
CHECKED LDH

PLAN SHEET - S.R. 237
STA. 107+00 TO STA. 580+00

CUY-237-5.59

33
43

STA. 10+25.50 ℄ RAMP E-
STA 580+25.00, 55' LT ℄ AIRPORT FREEWAY

℄ RAMP E

MATCH LINE STA. 580+00
SEE SHEET 33

℄ SR 237

585+00

590+00

END PROJECT
S.L.M. 8.03
STA. 588+39.00

BRIDGE NO.
CUY-17-0454

445+00 ℄ RAMP B-4

STA. 444+14.67 ℄ RAMP B-4 -
STA 585+27.93, 75' RT ℄ AIRPORT FREEWAY

END WORK
S.L.M. 8.03
STA. 447+28.00

CITY OF CLEVELAND
CITY OF BROOKPARK

MATCH LINE STA. 13+50
SEE SHEET 33

STA. 14+00.00 ℄ RAMP B-7-
STA. 14+00.00, 20' RT
℄ RAMP B-7-

15+00

℄ RAMP B-7

20+00

℄ BROOKPARK ROAD

END WORK
STA. 24+30.00
S.L.M. 8.03

CROSS REFERENCE	
ITEM	SHEET
PAVEMENT CALC.	
PLAN SHEET	24

SEE SHEET 29 FOR PAVEMENT MARKING LEGEND

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED GJN
CHECKED LDH

PLAN SHEET - S.R. 237
STA. 580+00 TO END PROJECT

CUY-237-5.59

STRUCTURE SUMMARY (CUY-237-0600)

ITEM	ITEM EXT	TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
202	11201	LUMP		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	35
509	10001	258	LB.	EPOXY COATED REINFORCING STEEL, AS PER PLAN	35
510	10000	226	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
511	34000	5	CU. YD.	CLASS S CONCRETE, SUPERSTRUCTURE	
516	14600	85	FT.	STRUCTURAL JOINT OR JOINT SEALER, MISC.: 1.5" PRECOMPRESSED EXPANSION JOINT FILLER	35

STRUCTURE NOTES

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE CONCRETE MEDIAN AS DETAILED IN THE PLANS AND ANY OTHER MISCELLANEOUS REMOVAL THAT THE ENGINEER DEEMS NECESSARY TO COMPLETE THE MEDIAN REPLACEMENT WORK. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT DAMAGE THE EXISTING DECK. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND [41 KILOGRAM] CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN

A REINFORCING STEEL LOCATOR SHALL BE USED, PRIOR TO DRILLING ANY DOWEL HOLES, TO LOCATE THE EXISTING SUPERSTRUCTURE REINFORCING STEEL. THE PROPOSED DOWEL HOLES AND REINFORCING STEEL SHALL BE PLACED AS PER THE PLAN DETAILS AND IN A LOCATION THAT DOES NOT DAMAGE THE EXISTING SUPERSTRUCTURE REINFORCING STEEL.

PAYMENT FOR THE LABOR, MATERIALS, AND INCIDENTALS OF THIS WORK IS INCLUDED IN THE BID PAY ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN.

ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC.: PRECOMPRESSED EXPANSION JOINT FILLER

DESCRIPTION: THIS WORK CONSISTS OF SEALING JOINTS USING PRECOMPRESSED EXPANSION JOINT FILLER IN ACCORDANCE WITH THESE SPECIFICATIONS, IN REASONABLY CLOSE CONFORMITY WITH THE PLANS AND MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS, AND AS DIRECTED BY THE ENGINEER. COMPLETELY COVER AND FILL THE JOINT GAP WITH THE FILLER.

MATERIALS: USE PRECOMPRESSED EXPANSION JOINT FILLER SUCH AS THE EMSEAL DSH SYSTEM OR AN APPROVED EQUAL, AS DIRECTED BY THE ENGINEER. THE EMSEAL DSH SYSTEM IS COMPRISED OF THREE COMPONENTS: 1) ACRYLIC-MODIFIED ASPHALT IMPREGNATED FOAM COMPRESSED 5-TIMES AND FACTORY COATED WITH HIGHWAY-GRADE, FUEL RESISTANT SILICONE; 2) FIELD-APPLIED EPOXY ADHESIVE PRIMER; 3) FIELD-APPLIED SILICONE CORNER BEADS. EMSEAL DSH SYSTEM CAN BE OBTAINED FROM EMSEAL JOINT SYSTEMS, LTD., 108 MILK STREET, SUITE 3, WESTBOROUGH, MA, 10581-1228. THEIR PHONE NUMBER IS (800) 526-8365. STORE AND INCORPORATE ALL MATERIAL IN THE WORK AS RECOMMENDED BY THE MANUFACTURER.

SURFACE PREPARATION: BLAST CLEAN THE FACES TO WHICH THE SEAL MUST ADHERE SO THAT IT IS FREE OF FOREIGN MATERIAL SUCH AS DIRT, DUST, GREASE, FORM RELEASE AGENTS, AND ANY OTHER MATERIAL DETRIMENTAL TO THE ADHESION OF THE SEALANT. BLASTING ABRASIVE CONTAINING MORE THAN 1% FREE SILICA IS NOT ALLOWED.

INSTALLATION: INSTALL THE JOINT FILLER ONLY WHEN THE SURFACES ARE DRY AND THE SURFACE TEMPERATURE IS ABOVE 50 DEGREES FAHRENHEIT. NEW CONCRETE MUST HAVE BEEN AIR CURED AT LEAST 7 DAYS IN GOOD DRYING WEATHER. DO NOT PROCEED WITH INSTALLATION UNDER ADVERSE WEATHER CONDITIONS. PRIME BOTH CONCRETE SURFACES ADJACENT TO THE JOINT WITH ADHESIVE AS RECOMMENDED BY THE MANUFACTURER. REMOVE THE JOINT FILLER FROM THE PACKAGING, COAT IT WITH ADHESIVE AS RECOMMENDED BY THE MANUFACTURER. REMOVE THE JOINT FILLER FROM THE PACKAGING, COAT IT WITH ADHESIVE AS RECOMMENDED BY THE MANUFACTURER, AND INSERT ITS NARROW EDGE INTO THE JOINT OPENING. THE JOINT FILLER MUST BE WEDGED IN PLACE WHILE IT RECOVERS. AT TEMPERATURES ABOVE 68 DEGREES FAHRENHEIT, THE MATERIAL WILL RECOVER WITHIN A FEW HOURS. AT TEMPERATURES BELOW 68 DEGREES FAHRENHEIT, ACCELERATE RECOVERY BY HEATING WITH AN OPEN FLAME, GAS BURNER, INFRA-RED LAMP, OR HOT AIR BLOWER. KEEP THE NUMBER OF JOINTS IN THE FILLER TO A MINIMUM. WHERE A JOINT IS REQUIRED, CREATE BY PUSHING MITERS TOGETHER AND APPLYING A THIN BEAD OF SILICONE SEALANT ALONG THE MITERED JOINT IN THE SILICONE FACING. INSTALL THE JOINT FILLER APPROXIMATELY 1/4" RECESSED FROM THE SURFACE SUCH THAT WHEN THE FIELD-APPLIED CORNER BEADS OF SILICONE ARE INSTALLED THE SYSTEM WILL BE ESSENTIALLY FLUSH WITH THE SUBSTRATE SURFACE. ONCE THE JOINT FILLER HAS FULLY EXPANDED ACROSS THE JOINT GAP, GUN AND TOOL A 1/4" x 1/4" BEAD OF SILICONE INTO EACH OF THE CORNERS FORMED AT THE SUBSTRATE-TO-BELLOWS INTERFACES.

PAYMENT FOR THE LABOR, MATERIALS, AND INSTALLATION OF THIS WORK IS INCLUDED IN THE BID PAY ITEM 516-STRUCTURAL JOINT OR JOINT SEALER, MISC.: PRECOMPRESSED EXPANSION JOINT FILLER.

DESIGN AGENCY

REVISED LDH DATE

STRUCTURE FILE NUMBER 1810235

DRAWN GJN REVISED

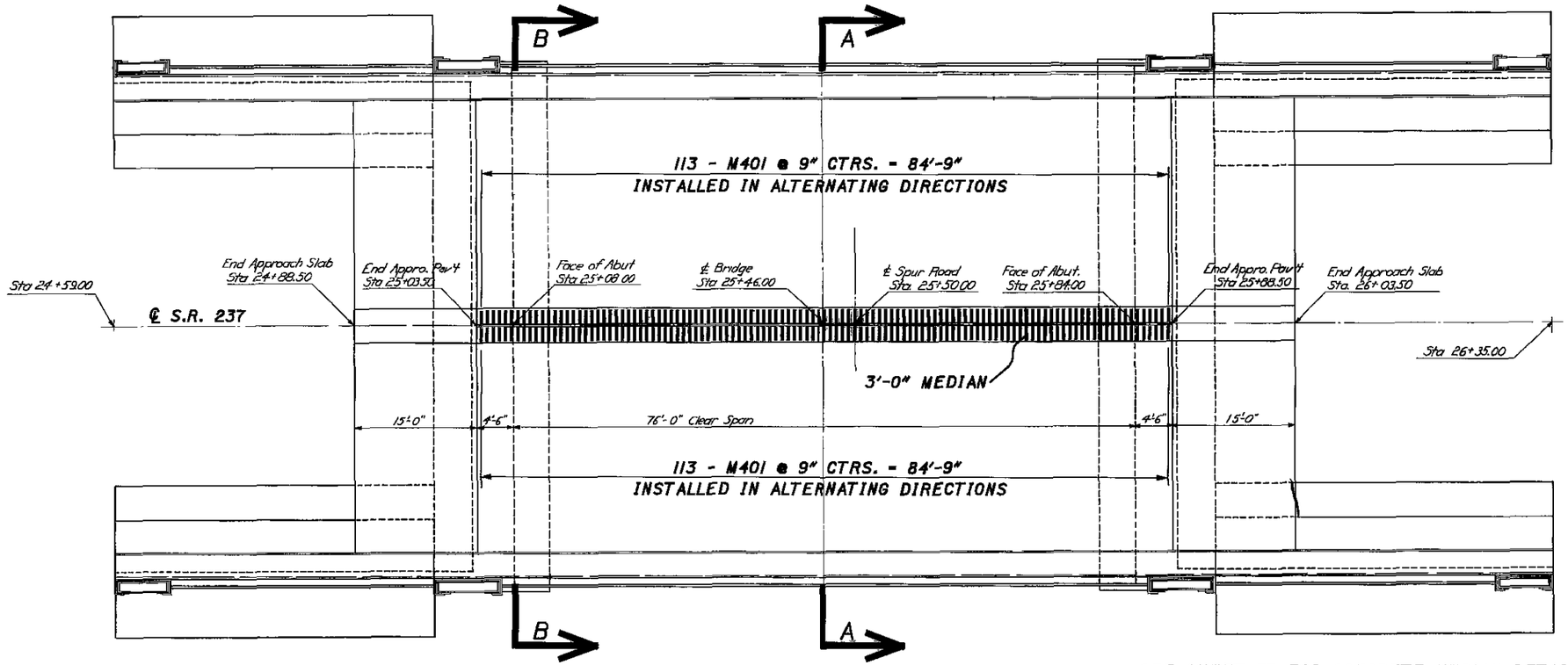
DESIGNED CHECKED

STRUCTURE DETAILS
CUY-237-0600

CUY-237-5.59

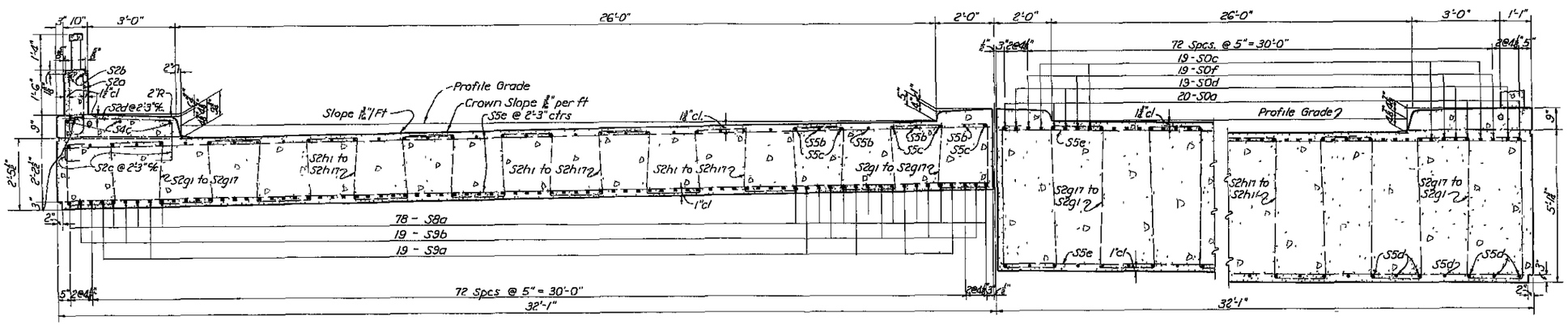
1 / 3

35 / 43



SEE SHEET 37 FOR CONCRETE MEDIAN DETAIL

PLAN VIEW



HALF SECTION A-A
AT ℄ OF BRIDGE

TRANSVERSE SECTION

HALF SECTION B-B
AT FACE OF FRAME WALL

* TRANSVERSE SECTION TAKEN FROM THE ORIGINAL CONSTRUCTION PLANS (CUY-237-6.69; 1943). THIS DETAIL IS FOR INFORMATIONAL PURPOSES ONLY AND WAS INCLUDED TO SHOW THE EXISTING REINFORCING.

DESIGN AGENCY

DESIGNED | DRAWN GJH | REVISED | DATE | CHECKED | REVISED LDH | STRUCTURE FILE NUMBER 1810235

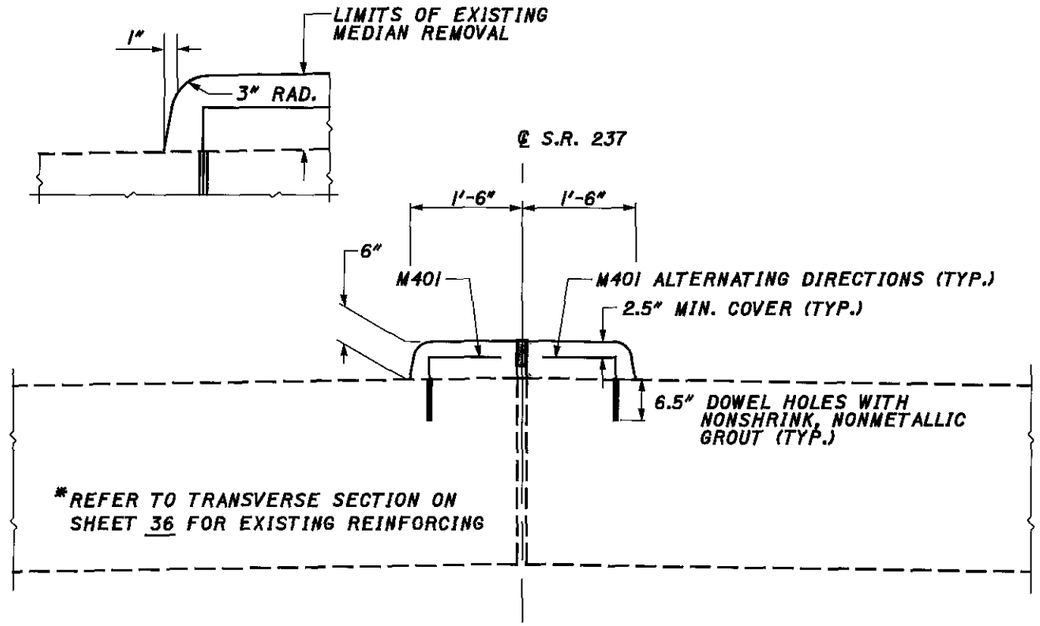
STRUCTURE DETAILS
CUY-237-0600

CUY-237-5.59

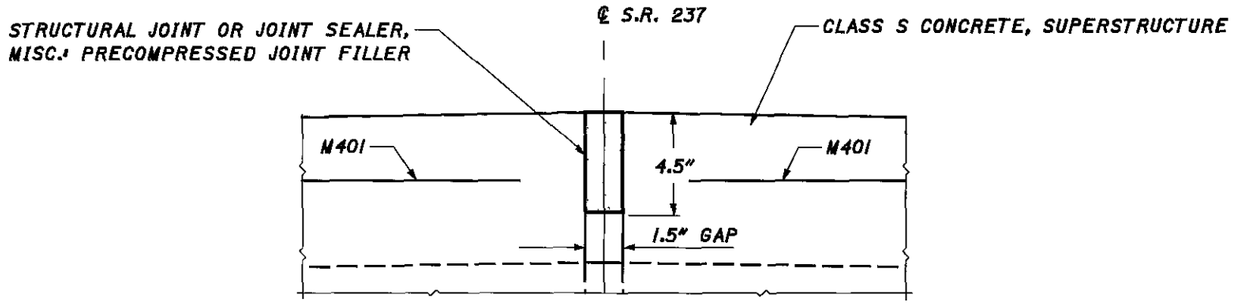
2 / 3

36 / 43

I:\PROJECTS\PID24859\dgn\24859sda.dgn 14-NOV-2005 9:20AM gnowac



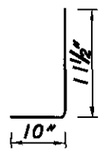
MEDIAN DETAIL



MEDIAN SEAL DETAIL

CONCRETE MEDIAN

MARK	NUMBER						LENGTH	WEIGHT
	LEFT	RIGHT				TOTAL		(LBS)
M401	213	213				226	1'-8½"	258
							TOTAL	258



M401

DESIGN AGENCY

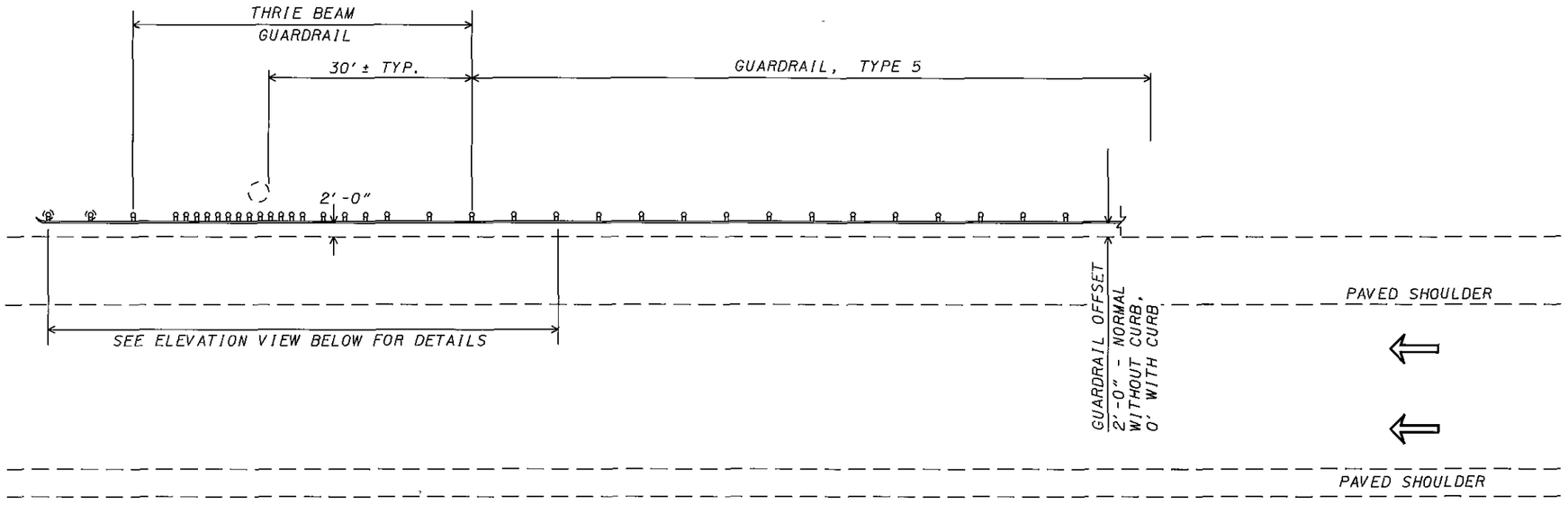
DESIGNED	DRAWN	REVIEWED	DATE
CHECKED	REVISED	LDH	STRUCTURE FILE NUMBER 1810235

STRUCTURE DETAILS
CUY-237-0600

CUY-237-5.59

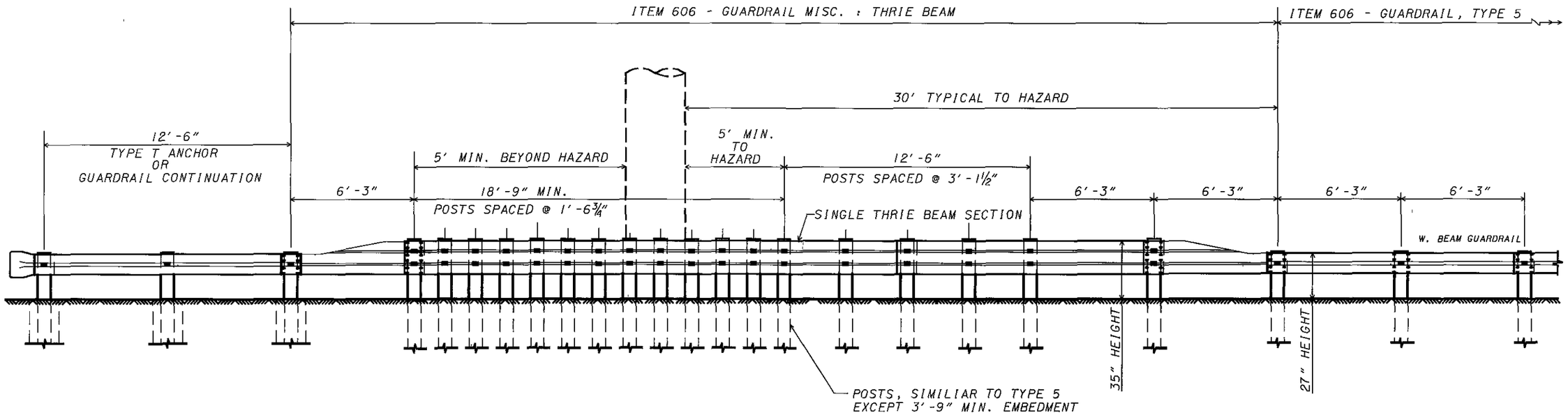
3 / 3

37 / 43



THRIE BEAM GUARDRAIL PROTECTION FOR OVERHEAD SIGN SUPPORTS OR PIERS

REQUIRED WHEN FACE OF HAZARD IS BETWEEN 3'-6" AND 2'-9" OF NORMAL GUARDRAIL OFFSET



ELEVATION VIEW

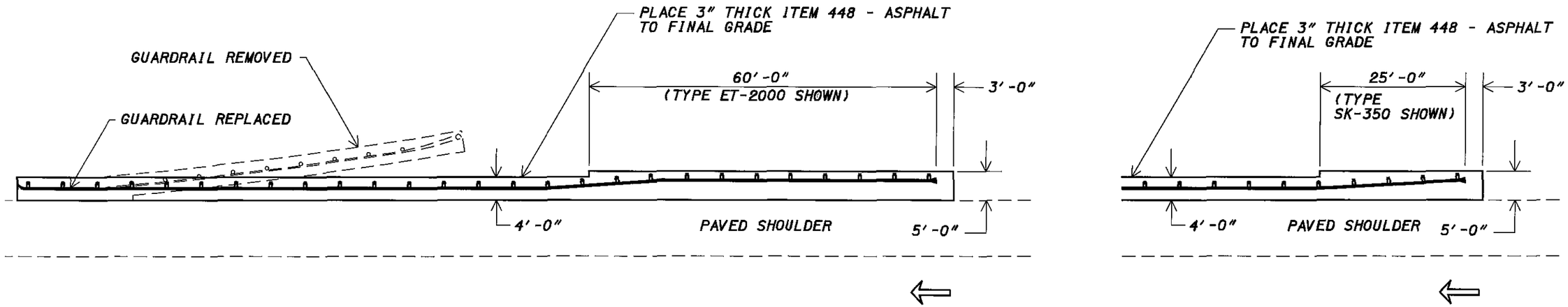
CALCULATED GJN CHECKED ENF

THRIE BEAM GUARDRAIL PROTECTION FOR OVERHEAD SIGN SUPPORTS OR PIERS

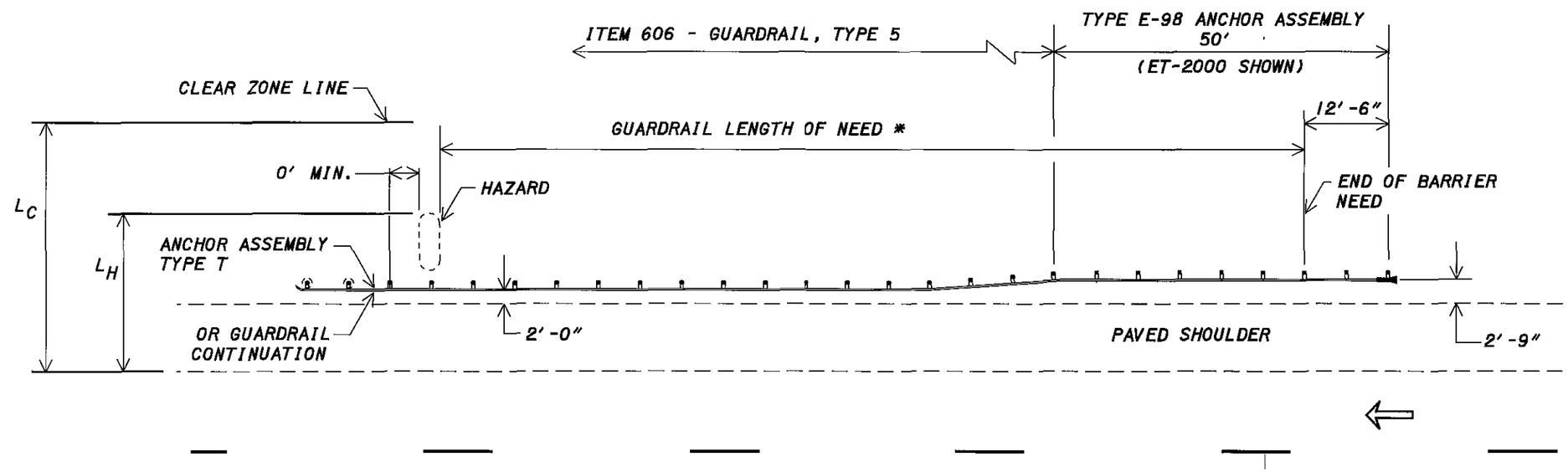
CUY-237-5.59

38/43

PLOTTED BY: gnowac
PLOTTED FROM: PROJECTS@PID24859@dgn@24859grc.dgn
PLOT SUBMITTED: 14-NOV-2005 09:20
12997GRC.DGN



ITEM 448 FOR EROSION CONTROL WITH TYPE E-98 ANCHOR ASSEMBLY



TYPICAL GUARDRAIL PROTECTION OF HAZARDS

CALCULATED GJN
CHECKED ENF

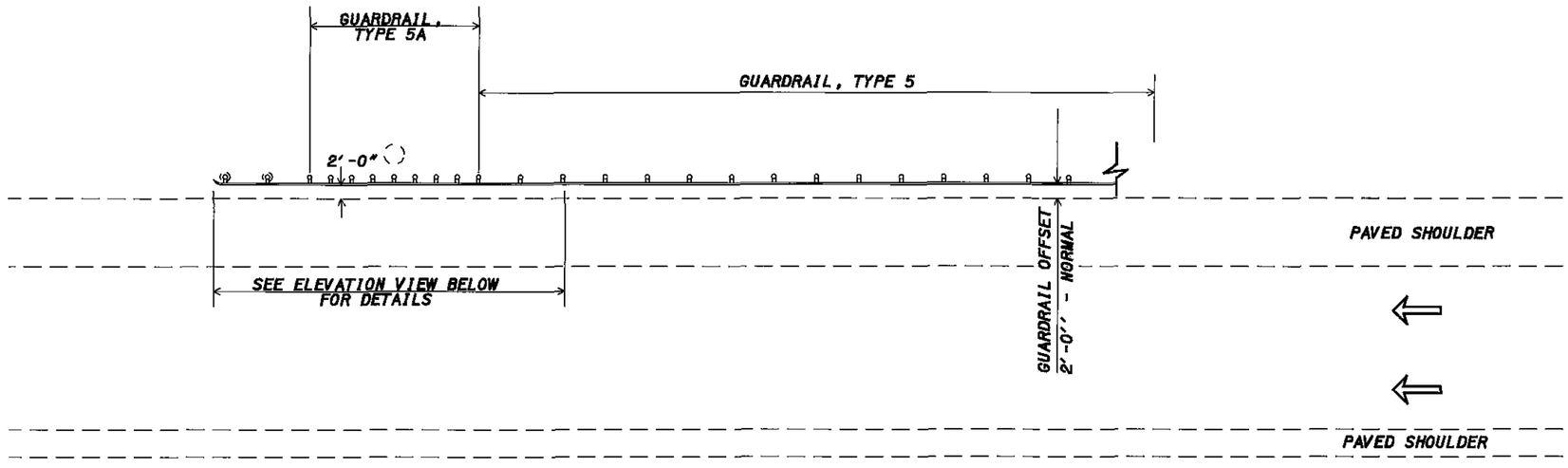
GUARDRAIL PROTECTION OF HAZARDS

GUARDRAIL

CUY-237-5.59

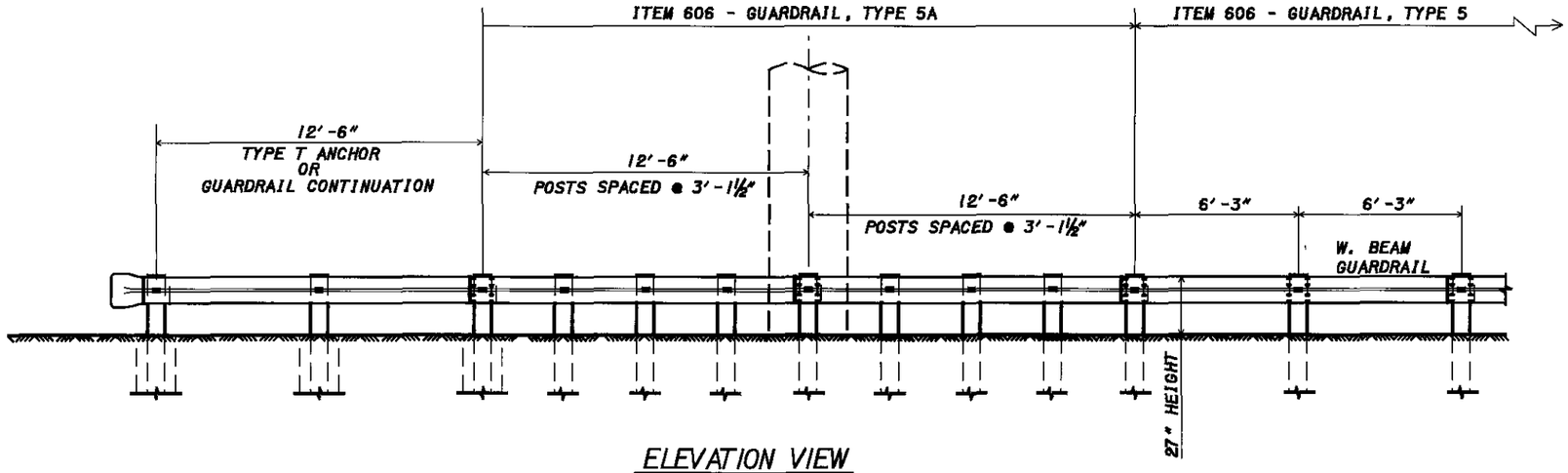
39
43

PLOTTED BY: gnowac
PLOTTED FROM: C:\PROJECTS\PID124859\Bdn\124859grb.dgn 12997GRA DGN
PLOT SUBMITTED: 14-NOV-2005 09:21

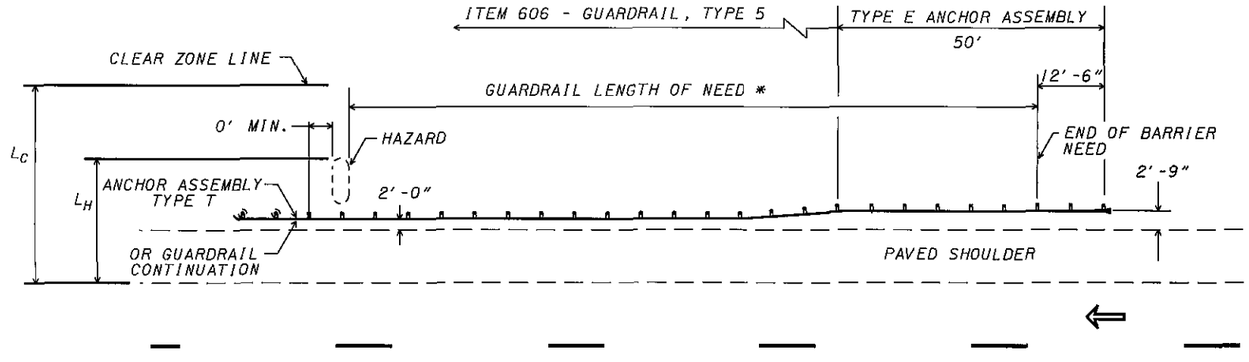


TYPE 5A GUARDRAIL PROTECTION FOR OVERHEAD SIGN SUPPORTS

REQUIRED WHEN FACE OF HAZARD IS BETWEEN 5'-6" AND 3'-6" OF FACE OF GUARDRAIL



ELEVATION VIEW

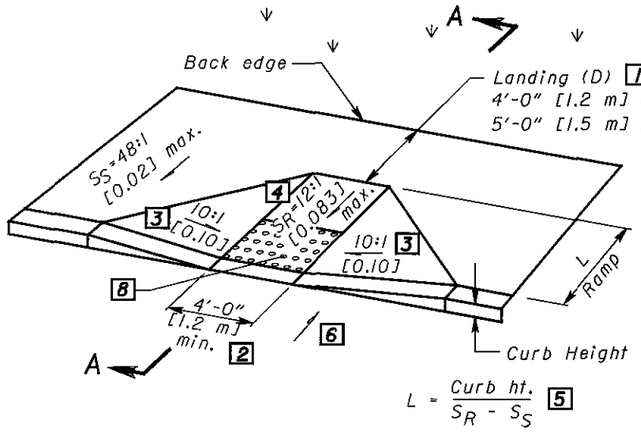


TYPICAL GUARDRAIL PROTECTION OF HAZARDS

GUARDRAIL DETAILS
TYPE 5A PROTECTION AT OVERHEAD SIGN SUPPORTS

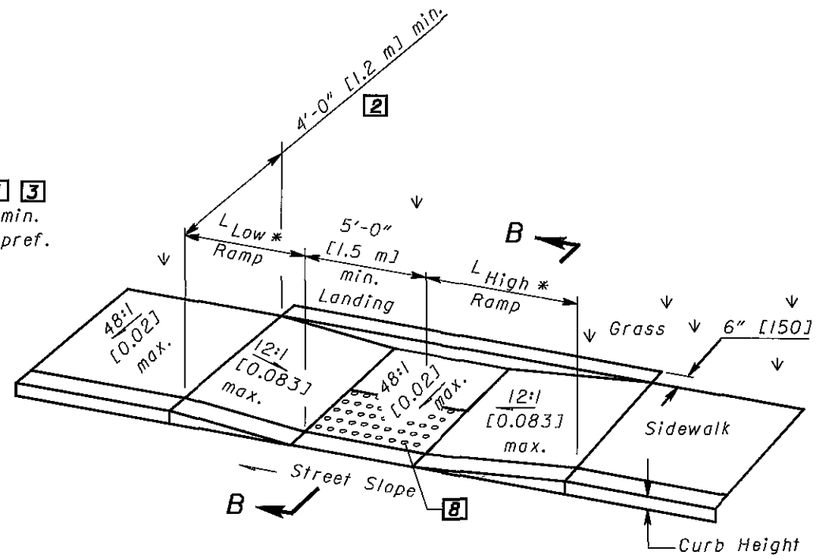
CUY-237-5.59

40
43



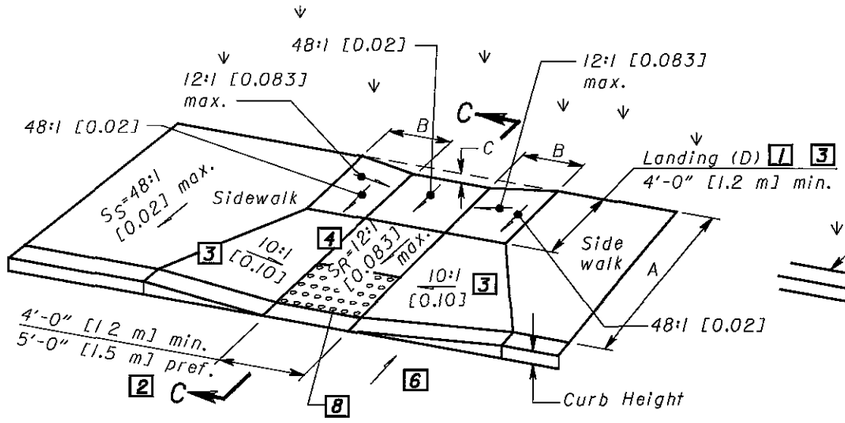
See Sht. 3/3 for SECTION A-A

PERPENDICULAR CURB RAMP DETAIL



See Sht. 3/3 for SECTION B-B

PARALLEL CURB RAMP DETAIL (DOUBLE)

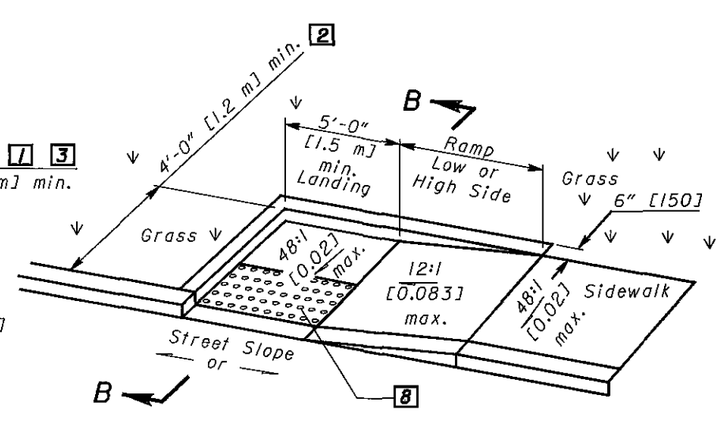


See Sht. 3/3 for SECTION C-C

COMBINED CURB RAMP DETAIL

$B = C / 0.083$

$C = [\text{Curb ht.} + A(S_S)] - [(A-D)S_R + D(0.02)]$



See Sht. 3/3 for SECTION B-B

PARALLEL CURB RAMP DETAIL (SINGLE)

Street Slope	Ramp Length @ 1"/ft [0.083]	
	$L_{LOW\ SIDE}$ *	$L_{HIGH\ SIDE}$ *
0.01	5'-5" [1.6 m]	6'-10" [2.1 m]
0.02	4'-10" [1.5 m]	7'-11" [2.4 m]
0.03	4'-5" [1.3 m]	9'-5" [2.9 m]
0.04	4'-1" [1.2 m]	11'-8" [3.6 m]
0.05	3'-9" [1.1 m]	15'-2" [4.6 m]

* Measured along the back of a 6" [150] high curb.

$$L_{HIGH} = \frac{\text{Curb ht.}}{0.083 - \text{Street Slope}}$$ 7

$$L_{LOW} = \frac{\text{Curb ht.}}{0.083 + \text{Street Slope}}$$ 7

LEGEND

1 May be reduced to 3'-0" [915] in existing sidewalks if the landing is unconstrained along the back edge.

2 May be reduced to 3'-4" [1.02 m] in existing sidewalks to better fit the walk configuration or where site conditions are restricted by narrow walks, pole foundations, drainage inlets, etc. The width may be tapered.

3 Where landing width (D) has been reduced to 3'-0" [915] the flared sides shall have a maximum slope of 12:1 [0.083].

Flared sides are not required where the edges of a curb ramp are protected by landscaping or other barriers to travel by wheel chair users or pedestrians across the edge of the curb ramp. However, if the flared sides are used in these areas, they may be of any slope.

4 The slope of the ramp toward the curb is preferred to be 12:1 [0.083] or flatter related to the horizontal, but the maximum slope shall be 12:1 [0.083] relative to the existing or proposed walk slope.

In existing sidewalks, where the maximum ramp slope (S_R) is not feasible, it may be reduced as follows:

A) 10:1 [0.10] for a max. rise of 6" [150],
B) 8:1 [0.125] for a max. rise of 3" [75],
C) 6:1 [0.167] over a max. run of 2'-0" [610] for historic areas where a flatter slope is not feasible.

5 The minimum length of a perpendicular ramp is 6' [2.0 m] from the back of a 6" [150] curb and may be increased where feasible to obtain a flatter ramp slope or to better blend with the walk configuration.

6 Gutter counter slopes at the foot of perpendicular curb ramps should not exceed 20:1 [0.05] over a distance of 2'-0" [610] from the curb.

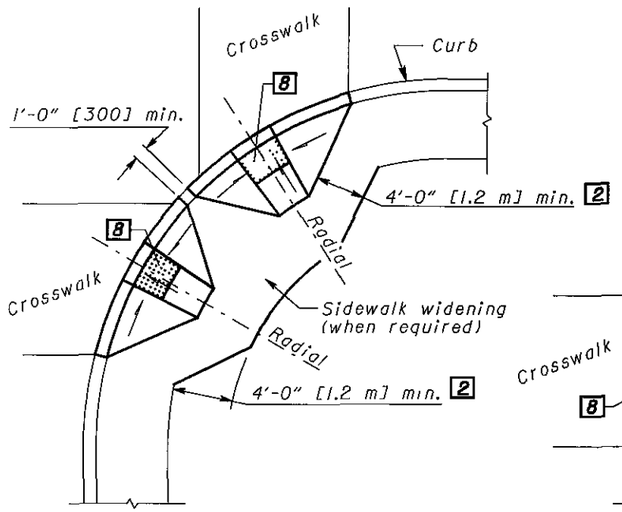
7 Dimensions derived by equation are nominal. Construct ramps to meet required slopes and existing conditions.

8 Detectable Warnings (truncated domes) are to be installed in the location shown. Dimensions of the domes are 24" [610] from the back of the curb by the width of the ramp. See NOTES on sheet 3.

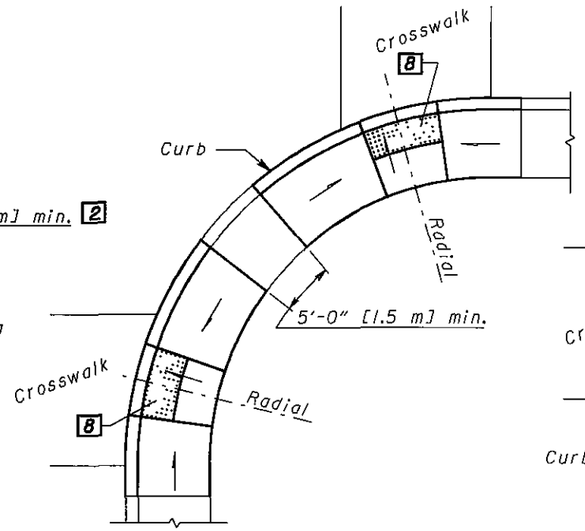
7-12-02

CURB RAMPS WITH TRUNCATED DOMES

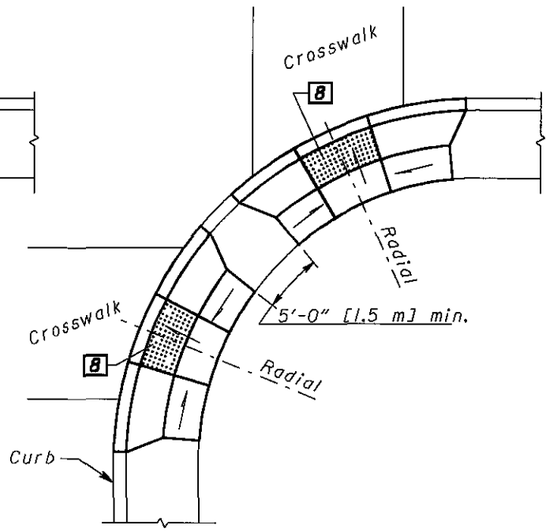
CUY-237-5.59



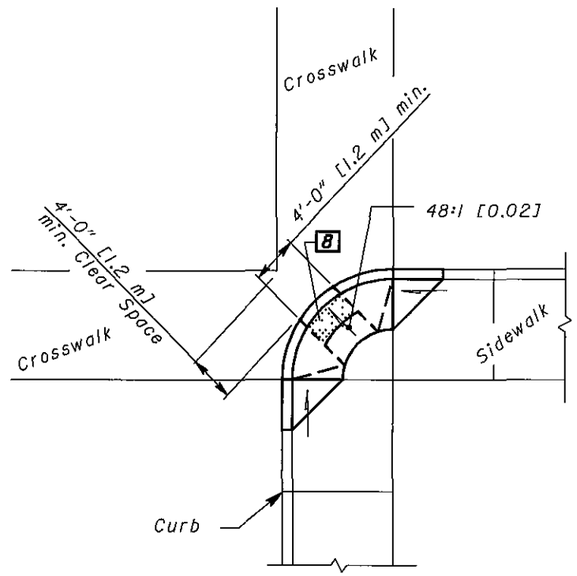
DESIGN A
PERPENDICULAR RAMP



DESIGN B
PARALLEL RAMP



DESIGN C
COMBINATION RAMP



DESIGN D
DIAGONAL RAMP

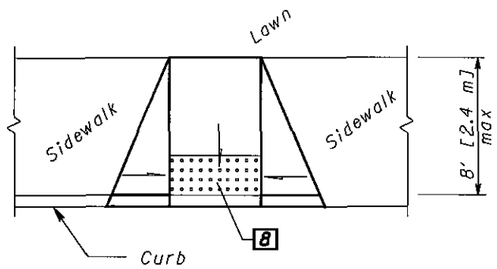
Use in existing walks only and when site constraints prohibit other designs. The diagonal ramp may be perpendcular, parallel or combination.

Avoid using where curb radii are less than 20'-0" [6.0 m].

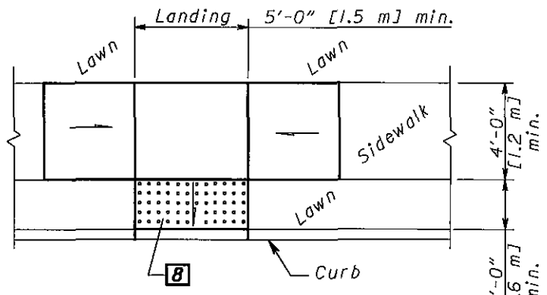
CORNER CURB RAMP DESIGNS

(See Curb Ramp Details on Sht. 1/3 for additional requirements.)

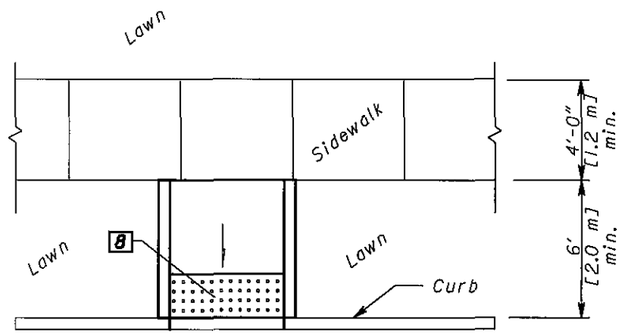
For LEGEND, See sheet 1.



DESIGN E
PERPENDICULAR RAMP



DESIGN F
PARALLEL RAMP



DESIGN G
PERPENDICULAR RAMPS
w/o FLARES

MID BLOCK CURB RAMP DESIGNS

(See Curb Ramp Details on Sht. 1/3 for additional requirements.)

7-12-02

CURB RAMPS WITH TRUNCATED DOMES

CUY-237-5.59

NOTES

SURFACE TEXTURE: *Texture of concrete surfaces shall be obtained by coarse brooming transverse to the ramp slopes and shall be rougher than adjacent walk.*

TRUNCATED DOMES: *Install detectable warnings (truncated domes) for a distance of 24" [610] from the back of the curb for the entire width of the ramp opening as shown on details on Sheet 1.*

Pavers will meet ASTM C 902 Class SX, Type I, or C 936, or C 1272 Type R.

Acceptable manufacturers and products are:

1) Whitacre-Greer Fireproofing Company, 1400 S. Mahoning Ave, Alliance, OH, 44601, (800) WG PAVER ADA Paver, 4"x8"x2-1/4", Clear Red (Rustic) #30.

2) Hanover Architectural Products, 240 Bender Rd., Hanover, PA. 17331, (717) 637-0500 Detectable Warning Paver, 12"x12"x2", or 24"x24"x2", Red or Quarry Red.

3) Endicott Clay Products, PO Box 17, Fairbury, NE, 68352, (402) 729-5804 Handicap Detectable Warning Paver, 4"x8"x2-1/4", Red Blend.

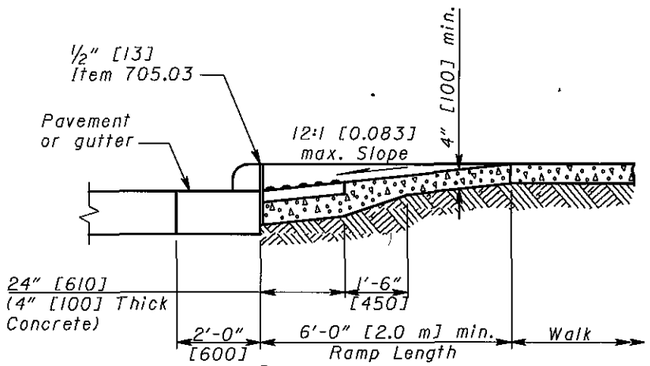
Pavers will laid on top of a 4" [100] unreinforced concrete base. Setting bed and joints to be mortared in accordance with manufacturer's instruction, or with a maximum 1/2" [13] thick bed of latex modified cement mortar. Mortar joints to a width not greater than 5/32" [4] and not less than 1/16" [1.5]. Pavers shall not be directly touching each other unless they have spacing bars.

Mortared joints are to be flush with top surface and struck so as to give a smooth surface. Pavers shall be laid such that joints are level with adjoining joints so as to provide a smooth transition from brick to brick and brick to concrete surface.

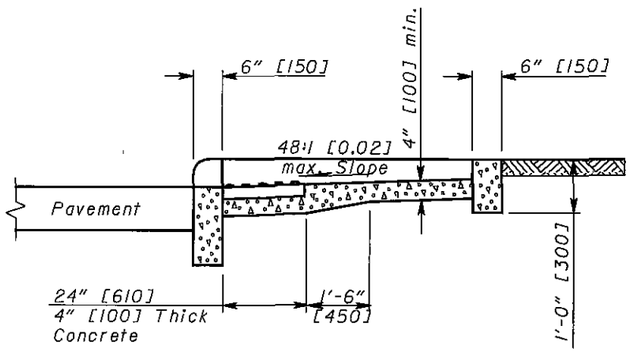
The surface of any two adjacent units should not differ by more than 1/8" [3] in height. Bricks shall be placed in a running bond pattern. Face of all brick shall be clean of cement and protected so as to avoid chipping during constructionn.

EXPANSION JOINTS: *shall be provided in the curb ramp as extensions of walk joints and consistent with Item 608.03 requirements for a new concrete walk. A 1/2" [13] Item 705.03 expansion joint filler shall be provided around the edge of ramps built in existing concrete walk. Lines shown on this drawing indicate the ramp edge and slope changes and are not necessarily joint lines.*

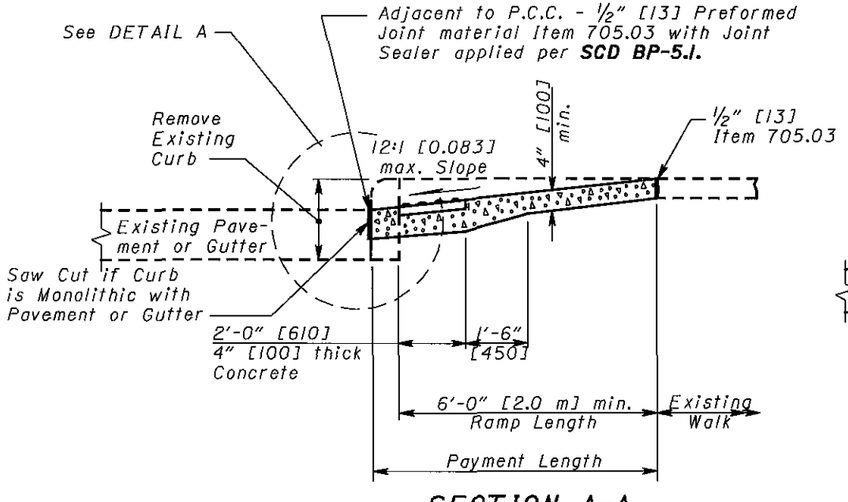
PAYMENT: *Walk and curb, Items 608 and 609, shall be measured through the curb ramp area paid for under their respective Items.* ***Item 608 - Curb Ramp, As Per Plan, Each*** *constructed in new curb and walk shall include the cost of any additional materials and installation (including truncated domes), grading, forming and finishing.* ***Item 608 - Curb Ramp. As Per Plan, Square Foot [Meter],*** *constructed in existing curb and walk shall include the cost of furnishing and installing all materials (including truncated domes), grading, forming, and finishing of the curb and walk of the curb ramp. Removal of existing curb and walk shall be paid for under Item 202.*



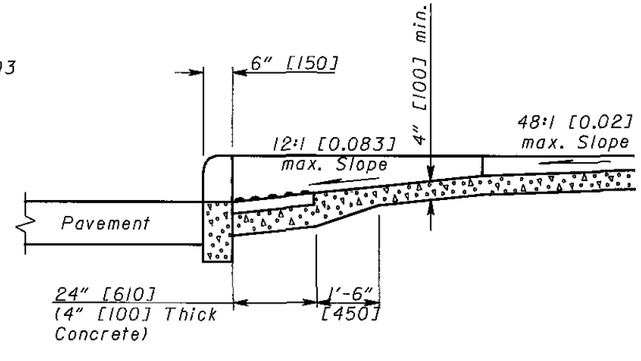
SECTION A-A
NORMAL DETAIL
See Sheet 1 of 3.
(Gutter shown)



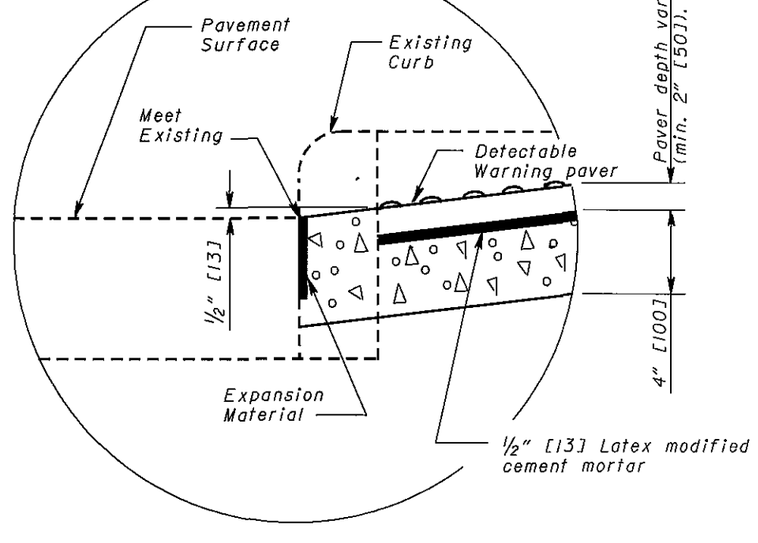
SECTION B-B
See Sheet 1 of 3.



SECTION A-A
EXISTING WALK DETAIL
See Sheet 1 of 3.



SECTION C-C
See Sheet 1 of 3.



DETAIL A

7-12-02

CURB RAMPS WITH TRUNCATED DOMES

CUY-237-5.59

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