

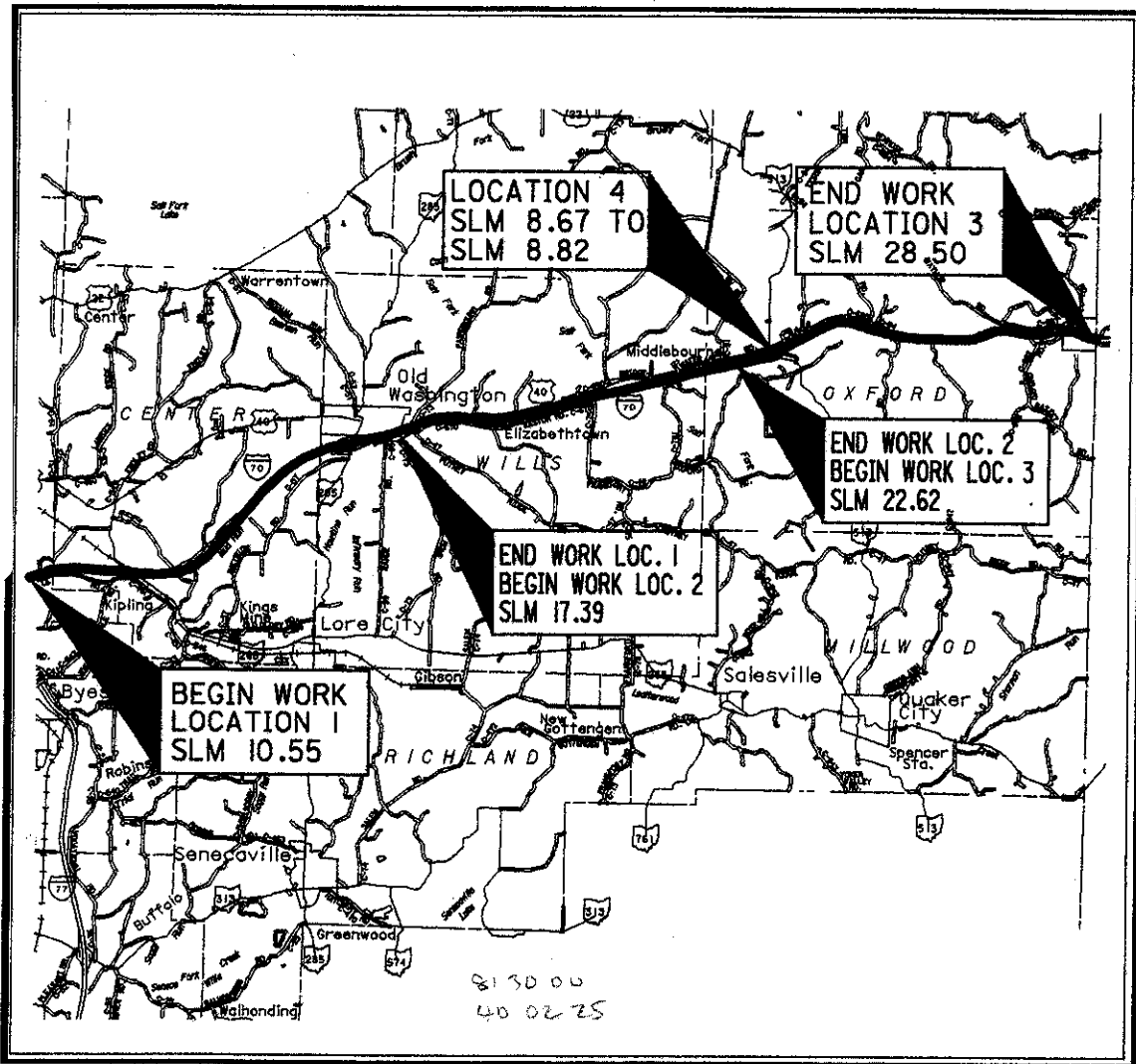
# OHIO DEPARTMENT OF TRANSPORTATION

PLAN NO. \_\_\_\_\_

**PROJECT DESCRIPTION:**

IMPROVING 17.95 MILES EASTBOUND AND WESTBOUND OF IR-70 IN GUERNSEY COUNTY BY PLANING AND RESURFACING MAINLINE AND CONCRETE REPAIR IN REST AREA AND AT SR 513.

## LOCATION MAP



LOCATION NO.	COUNTY	ROUTE	SECTIONS	PROJECT TERMINI		NET LENGTH MILES	CITY/VILLAGE
				BEGIN	END		
1	GUE	IR-70	(10.54 - 16.99)	10.55	17.39	6.84	OLD WASHINGTON
2	GUE	IR-70	(17.39)	17.39	22.62	5.23	OLD WASHINGTON
3	GUE	IR-70	(17.39)(27.97)	22.62	28.50	5.88	
4	GUE	SR 513	(8.20)	8.67	8.82	0.15	

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### 1997 SPECIFICATIONS

THE STANDARD 1997 SPECIFICATIONS OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND THE PROPOSAL SHALL GOVERN THESE IMPROVEMENTS.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THESE IMPROVEMENTS WILL NOT REQUIRE THE CLOSING OF THE HIGHWAY AND PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS INDICATED IN THE PROPOSAL.

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

APPROVED Michael D. Cope / aec

DATE 2/11/99 DISTRICT DEPUTY DIRECTOR

APPROVED Gordon Proctor / pd

DATE 2-17-99 DIRECTOR, DEPARTMENT OF TRANSPORTATION

DESIGN DESIGNATION	IR 70
CURRENT ADT (1999)	25500
DESIGN YEAR ADT (2011)	33300
DESIGN HOURLY VOLUME (2011)	3300
DIRECTIONAL DISTRIBUTION	50%
TRUCKS	34%
DESIGN SPEED	70 MPH
LEGAL SPEED	65 MPH

**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

STANDARD DRAWINGS	
BP-2.5	2-21-92
BP-3.1	2-21-92
MT-97.10	4-29-88
MT-97.11	10-4-89
MT-95.30	10-10-88
MT-98.12	6-24-93
MT-98.13	6-24-93
MT-98.14	6-24-93
MT-98.15	6-24-93

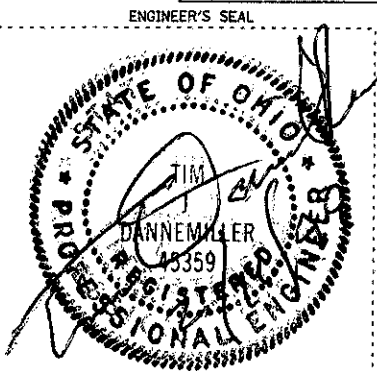
STANDARD DRAWINGS	
MT-98.16	6-24-93
MT-99.20	4-29-89
MT-105.10	7-1-92
MT-105.11	7-1-92
TC-35.10	8-29-84
TC-65.10	7-7-95
TC-65.11	7-7-95
TC-71.20	9-10-91
TC-72.20	2-26-82

STANDARD DRAWINGS	
GR-1.1	5.6-91
GR-1.2	10-30-92
GR-1.3	2-21-92
GR-2.1	5.6-91
GR-4.1	5.6-91
GR-4.2	5.6-91
GR-4.3	2-21-92
GR-5.1	10-30-92
GR-5.2	10-30-92
GR-5.3	10-30-92

SUPPLEMENTAL SPECIFICATIONS	
802	3-23-95
1082	1-6-98

SPECIAL PROVISIONS

PLAN PREPARED BY:  
**D5**  
District  
Production



GUE-70-10.55/SR 513  
 990318  
 DIST. 05  
 PID # 16813  
 05-12-99

66-6-2 SLM 10000109

FEDERAL PROJECT NO. \_\_\_\_\_  
 PID NO. 16813  
 CONSTRUCTION PROJECT NO. \_\_\_\_\_  
 TITLE SHEET  
 GUE-70-10.55  
 30

# GENERAL NOTES

CALCULATED  
LIME  
CHECKED  
TJD

GENERAL NOTES

GUE-70-10.55

2/30

## WORK LIMITS

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

## 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.

## ITEM 407 TACK COAT

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.075 GALLONS PER SQUARE YARD OF TACK COAT FOR ESTIMATING PURPOSES ONLY.

## ITEM 407 TACK COAT FOR INTERMEDIATE COURSE

THE RATE OF APPLICATION OF THE 407 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 GALLONS PER SQUARE YARD OF TACK COAT FOR ESTIMATING PURPOSES ONLY.

## PROFILE AND ALIGNMENT

THE PROPOSED PAVEMENT RESURFACING SHALL FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT.

## WATER REMOVED FROM PLANED SURFACE

ALL WATER WHICH HAS ACCUMULATED ON THE PLANED SURFACE SHALL BE REMOVED TO THE SATISFACTION OF THE ENGINEER PRIOR TO RESURFACING. THIS SHALL BE THE CONTRACTORS RESPONSIBILITY AND IS PAID FOR UNDER ITEM 254 PAVEMENT PLANING BITUMINIOUS.

## BUTT JOINT

A BUTT JOINT IS REQUIRED AT THE BEGINNING AND AT THE END OF THE PROJECT AS PER SCD BP-3.1, 2-21-92.

## 617 COMPACTED AGGREGATE, TYPE A

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER TO BRING EXISTING AGGREGATE SHOULDERS EVEN WITH PAVED SHOULDERS.

LOCATION 1 - 1785 CU.YD.  
LOCATION 3 - 1533 CU.YD.

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

REMOVAL OF RAISED PAVEMENT MARKERS SHALL CONFORM WITH SECTION NO. 202.071 IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS MANUAL EXCEPT FOR THE FOLLOWING:

AFTER PAVEMENT MARKERS HAVE BEEN REMOVED BY THE CONTRACTOR, HE WILL THEN BE RESPONSIBLE TO TAKE THE REMOVED MARKERS TO A STATE GARAGE THAT WILL BE DESIGNATED BY THE ENGINEER. THE PROJECT ENGINEER SHALL GIVE THE HIGHWAY MANAGEMENT ADMINISTRATOR 24 HOUR NOTICE PRIOR TO DELIVERY AND THE PROJECT ENGINEER SHALL BE RESPONSIBLE FOR FURNISHING ALL NECESSARY TRANSFER DOCUMENTATION WITH ALL DELIVERIES. PAYMENT FOR ALL WORK DESCRIBED ABOVE SHALL BE PAID FOR UNDER ITEM 202 RAISED PAVEMENT MARKERS REMOVED FOR STORAGE, AS PER PLAN.

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

LOCATION 1 - 1054 EACH

LOCATION 2 - 738 EACH

LOCATION 3 - 951 EACH

## ITEM 614 WORK ZONE MARKING SIGN

A QUANTITY OF WORK ZONE MARKING SIGNS HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

## ITEM 614 WORK ZONE MARKING SIGN

LOCATION 1 - 10 EACH

LOCATION 2 - 10 EACH

LOCATION 3 - 4 EACH

## FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN

PLAN INTENT IS NOT TO DO EXTENSIVE JOINT REPAIR BUT ONLY TO REPAIR THOSE JOINTS WHICH ARE EXTREMELY BAD ON THE MAINLINE AND IN THE REST AREA IN LOCATION 2. IN LOCATION 3, BAD JOINTS SHALL BE REPLACED ON RAMPS AT SR 513. ALSO A LARGE AREA ON SR 513(SEE SHEET 24) SHALL BE REPLACED, THE COST OF FULL DEPTH PAVEMENT SAWING, ALL MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 255 FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN. THE CONCRETE IS ASSUMED TO BE 9" THICK EXCEPT WHERE IT IS EVIDENT THAT PREVIOUS REPAIRS HAVE BEEN MADE. ALL AREAS FOR REPAIR AND TYPE OF REPAIR SHALL BE DESIGNATED BY THE PROJECT ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY.

## ITEM 255 FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN

LOCATION 2 - 150 SQ.YD. (REST AREA)

800 SQ.YD. (MAINLINE JOINTS)

LOCATION 3 - SEE SHEET 24

G0700001.MGN 2-11-99

# GENERAL NOTES

CALCULATED  
LME  
CHECKED  
TJD

## WORK RESTRICTIONS AND LANE CLOSURES

AT LEAST ONE LANE OF TRAFFIC SHALL BE MAINTAINED EASTBOUND AND WESTBOUND AT ALL TIMES. NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

MEMORIAL DAY, FOURTH OF JULY, LABOR DAY AND THANKSGIVING  
THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

<u>DAY OF THE WEEK</u>	<u>TIME ALL LANES MUST BE OPEN TO TRAFFIC</u>
SUNDAY	12:00N FRIDAY THROUGH 12:00N MONDAY
MONDAY	12:00N FRIDAY THROUGH 12:00N TUESDAY
TUESDAY	12:00N MONDAY THROUGH 12:00N WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 12:00N THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 12:00N MONDAY
FRIDAY	12:00N THURSDAY THROUGH 12:00N MONDAY
SATURDAY	12:00N FRIDAY THROUGH 12:00N MONDAY

AREAS THAT ARE PLANED SHALL NOT BE OPENED TO TRAFFIC. ALL PLANED AREAS MUST BE INLAID WITH PROPOSED COURSE OF ITEM ASPHALT CONCRETE AND HAVE TEMPORARY OR PERMANENT PAVEMENT MARKINGS IN PLACE PRIOR TO BEING OPENED TO TRAFFIC. AT NO TIME SHALL ANY ONE LANE CLOSURE EXCEED 7 MILES IN LENGTH. AT NO TIME SHALL WORK BE DONE CONCURRENTLY IN SEPERATE "LOCATIONS" (AS SPECIFIED ON TITLE SHEET) ON THE MAINLINE. OVERNIGHT CLOSURES MUST MEET SPECIFICATIONS AS OUTLINED IN THE CONSTRUCTION AND MAINTENANCE OPERATIONS SECTION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. THE FINAL PAVEMENT MARKINGS SHALL BE PLACED AFTER ALL OTHER WORK IS COMPLETED.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THE PURPOSES DESCRIBED ABOVE:

**ITEM 614 MAINTAINING      LUMP SUM**

## ITEM 614 TEMPORARY EDGE/LANE LINE

THE FOLLOWING ESTIMATED QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY FOR THE PURPOSE OF MAINTAINING TRAFFIC DURING CONSTRUCTION.

<b>LOCATION 1:</b>	
TEMPORARY EDGE LINE	29.12 MILE
TEMPORARY LANE LINE	13.85
<b>LOCATION 2:</b>	
TEMPORARY EDGE LINE	41.84 MILE
TEMPORARY LANE LINE	10.52
<b>LOCATION 3:</b>	
TEMPORARY EDGE LINE	23.52 MILE
TEMPORARY LANE LINE	11.97

## ITEM 614, WORK ZONE SPEED LIMIT SIGN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, COVER DURING SUSPENSION OF WORK, AND SUBSEQUENTLY REMOVE WORK ZONE SPEED LIMIT SIGNS AND SUPPORTS (R-10-48) (55MPH) WITHIN THE WORK LIMITS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS.

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

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

THE CONTRACTOR SHALL ERECT A WORK ZONE SPEED LIMIT SIGN IN ADVANCE OF ANY LANE RESTRICTION. ENGINEER. THE SIGN SHALL BE MOUNTED ON BOTH SIDES OF DIVIDED HIGHWAYS, 500 FEET IN ADVANCE OF THE LANE REDUCTION TAPER. THE SIGN SHALL BE REPEATED, ON THE SIDE NEAREST TRAFFIC, EVERY 1 MILE FOR 55 MPH ZONES. THESE SIGNS SHALL ALSO BE ERECTED IMMEDIATELY AFTER EACH OPEN ENTRANCE RAMP WITHIN THE ZONE. A SIGN TO INDICATE THE RESUMPTION OF THE STATUTORY SPEED LIMIT SHALL BE ERECTED AT THE END OF ANY REDUCED SPEED ZONE. THIS SIGN SHALL BE AN R-10-48 (65 MPH).

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED BUT GOOD CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE REFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF 730.19 AND U.S. DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION FOR TYPE III-C SHEETING, FP-85. WORK ZONE SPEED LIMIT SIGNS SHALL BE MOUNTED ON TWO(2) ITEM 630 GROUND MOUNTED SUPPORTS, NO. 3 POSTS.

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

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

ITEM 614 WORK ZONE SPEED LIMIT SIGN	32 EACH - LOCATION 1
	24 EACH - LOCATION 2
	28 EACH - LOCATION 3

GENERAL NOTES

GUE-70-10.55

3  
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G0700003.MGN 2-9-99

**ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN,  
AS PER PLAN**

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED. A CHANGEABLE MESSAGE SIGN, ON SITE, FOR THE DURATION OF THE PROJECT. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR. THE LIST CURRENTLY CONTAINS CLASS III AND II UNITS WITHIN MINIMUM LEGIBILITY DISTANCES OF 650' AND 850' RESPECTIVELY.

EACH SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO DIM THE SIGN DURING DARKNESS AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLE-SHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY.

THE LOCATIONS FOR THOSE UNITS SHALL BE AS DIRECTED BY THE PROJECT ENGINEER. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE PROJECT ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE PROJECT ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS WILL BE OFF, FACING AWAY FROM ALL TRAFFIC AND SHALL DISPLAY ONE OR MORE HIGH INTENSITY YELLOW REFLECTIVE SHEETING SURFACES OF A 9" BY 15" MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLE-SHOOT THE UNIT AND TO REVISE MESSAGES IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PREPROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PREPROGAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ONBOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED, BUT NORMALLY, NOT MORE THAN TWO-MESSAGE PHASES SHOULD BE EMPLOYED, ALTHOUGH THREE-PHASES MAY BE USED IN UNUSUAL CONDITIONS. THE PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST ONCE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERANT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 614.03 (C) THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC AND THE ENTIRE COST TO CONTROL TRAFFIC ACCRUED BY THE DEPARTMENT WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE TO THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24 HOURS PER DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PROJECT.

THE REQUIREMENT TO FURNISH, INSTALL, MAINTAIN, AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESOPONSIBILITIES AS OUTLINED IN 104.04.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE BID FOR ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN, SIGN-MONTH AND SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE, AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

THIS PROJECT SHALL REQUIRE 6 SIX() ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN.

ALL WORK SHALL BE COMPLETED ON ONE PART BEFORE THE SIGNS ARE MOVED AND UTILIZED ON THE OTHER SECTION OF INTERSTATE.

THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO PERFORM THE WORK AS DESCRIBED ABOVE.

**ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN  
18 SIGN-MONTH**

**ITEM SPECIAL, REPLACEMENT DRUM**

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW. DRUMS DAMAGED DUE TO CONTRACTOR NEGLIGENCE OR IMPROPER SET-UP AND REMOVAL OF TRAFFIC CONTROL SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

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

**AN ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.**

- LOCATION 1 - 15 EACH
- LOCATION 2 - 20 EACH
- LOCATION 3 - 15 EACH

G0700002.MGN 2-2-99

# GENERAL NOTES

CALCULATED  
LME  
CHECKED  
TJD

## ITEM SPECIAL, LAW ENFORCEMENT OFFICER (WITH PATROL CAR)

IN ADDITION TO THE REQUIREMENTS OF 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER (AND 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 POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.

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

DURING A TRAFFIC SIGNAL INSTALLATION

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 FOR THESE SERVICES WITH: THE OHIO HIGHWAY PATROL  
660 E. MAIN ST., COLUMBUS, OH. TELEPHONE:(614) 466-2660

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

ITEM SPECIAL, LAW ENFORCEMENT OFFICER WITH  
PATROL CAR      LOCATION 1 - 40 HOURS  
                            LOCATION 2 - 40 HOURS  
                            LOCATION 3 - 40 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. PAYMENT FOR THE EXCESS ABOVE THE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614 MAINTAINING TRAFFIC.

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

ALL REQUIREMENTS OF ITEM 446 ASPHALT CONCRETE SURFACE COURSE, TYPE IH SHALL APPLY EXCEPT THAT THE COARSE AGGREGATE RETAINED ON THE 4.75mm (NO. 4) SIEVE SHALL HAVE A MINIMUM OF 100 PERCENT MECHANICALLY CRUSHED PARTICLES AND THE ASPHALT BINDER SHALL BE PG 76-22.

## ITEM 446 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 76-22, AS PER PLAN

ALL REQUIREMENTS OF ITEM 446 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 PG 76-22 SHALL APPLY EXCEPT THAT A MINIMUM OF 50% OF THE VIRGIN FINE AGGREGATE SHALL BE SAND MANUFACTURED FROM STONE, GRAVEL OR AIR-COOLED SLAG. IF THE SAND IS MANUFACTURED FROM GRAVEL, IT SHALL BE CRUSHED FROM GRAVEL MATERIAL RETAINED ON THE 9.5mm (3/8 INCH) SIEVE.

## ITEM 608 5" CONCRETE WALK

A PORTION OF CONCRETE WALK IN THE EASTBOUND REST AREA SHALL BE REMOVED AND REPLACED. THERE IS APPROXIMATELY 40 SQ.FT. OF WALK WHICH HAS HEAVED UP AND SHALL BE REPLACED. THE FOLLOWING ESTIMATED QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY TO COMPLETE THE WORK DESCRIBED ABOVE.

ITEM 202 WALK REMOVED      40 SQ.FT.  
ITEM 202 CURB REMOVED      10 LIN.FT.  
ITEM 608 5" CONCRETE WALK      40 SQ.FT.  
ITEM 609 CURB, TYPE 6      10 LIN.FT.

## RUMBLE STRIPS ON SHOULDERS

RUMBLE STRIPS SHALL BE PLACED ON THE MAINLINE SHOULDERS IN ALL THREE PLAN LOCATIONS AS PER STANDARD CONSTRUCTION DRAWINGS BP-9.1M, 12-18-98 AND BP-9.2M, 12-18-96. ALL SPECIFICATIONS OF ITEM 618 IN THE CMS MANUAL SHALL APPLY AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONVERT THE ABOVE MENTIONED SCD TO ENGLISH UNITS (WITH ENGINEER'S APPROVAL). PAYMENT FOR THE WORK DESCRIBED ABOVE SHALL BE AS FOLLOWS:

ITEM 618 RUMBLE STRIPS, TYPE 1  
LOCATION 2 - 20.92 MILE

ITEM 618 RUMBLE STRIPS, TYPE 2  
LOCATION 1 - 27.36 MILE  
LOCATION 3 - 23.52 MILE

GENERAL NOTES

GUE-70-10.55

5  
30

GENERAL NOTES

CALCULATED L.M.E. CHECKED TJD  
GENERAL NOTES  
GUE-70-10.55  
5A/30

WORK ZONE INSPECTIONS

THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL, OTHER THAN THE SUPERINTENDENT AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO INSPECT ALL TRAFFIC CONTROL DEVICES IN THE WORK ZONE AT THE BEGINNING AND AT THE END OF EACH WORK DAY, DAILY, A RECORD OF THE REVIEW SHALL BE GIVEN TO THE PROJECT ENGINEER, IN WRITING, AND SHALL INCLUDE A RECORD OF THE THE DEFICIENCIES AND RESOLUTION OF THE DEFICIENCIES. A MINIMUM OF TWO REVIEWS EACH WEEK SHALL BE PERFORMED ON A SATURDAY OR SUNDAY NIGHT.

THE FOLLOWING ITEMS SHALL BE INCLUDED IN EACH REVIEW:

TRAFFIC CONTROL DEVICE CONDITIONS, PLACEMENT, VISIBILITY, TRAFFIC FLOW CONDITIONS, INCIDENTS, CONGESTION POINTS, DELAYS, INTERACTION OR WORK VEHICLES AND TRAFFIC, EVIDENCE OF ACCIDENTS, PROPER STORAGE OF MATERIALS AND EQUIPMENT, CONFORMANCE WITH THE TRAFFIC CONTROL PLAN, ADEQUACY OF THE TRAFFIC CONTROL PLAN, CONFLICTING OR NON-CONFORMING PAVEMENT MARKINGS.

THE DESIGNATED INDIVIDUAL OR A QUALIFIED REPRESENTATIVE SHALL ALSO BE AVAILABLE ON AN AROUND-THE-CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGES OR MISSING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS NAMES AND PHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER AT THE PRE-CONSTRUCTION MEETING.

THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 MAINTAINING TRAFFIC.

ITEM 614 DOUBLED FINES IN WORK ZONES SIGN

SIGNS SHALL BE ERECTED AS DEFINED BY RULE 5501:2-10-02. THE SIGNS SHALL BE COVERED OR REMOVED WHEN THE CONSTRUCTION ZONE IS DISCONTINUED FOR 30 DAYS OR MORE.

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

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE, IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTION, MAINTENANCE, COVERING DURING SUSPENSION OF WORK AND REMOVAL OF THE SIGN AND SUPPORT.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO PERFORM THE WORK AS DESCRIBED ABOVE.

- ITEM 614 DOUBLED FINES IN WORK ZONE SIGN 6 EACH (LOCATION 1)
6 EACH (LOCATION 2)
6 EACH (LOCATION 3)

MEDIAN U-TURN OPENINGS

THE FOLLOWING QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY FOR THE PURPOSE OF PAVING MEDIAN U-TURN OPENINGS WITHIN THE LIMITS OF THE PROJECT.

Table with 7 columns: LOCATION, APPROX. SLM, AREA SQ.YD., TACK COAT (0.075 GAL/S.Y. GALLON), TACK COAT FOR INTERM. COURSE (0.05 GAL/S.Y. GALLON), 446 ASPHALT CONCRETE INTERM. COURSE, TYPE 2, PG76-22 AS PER PLAN (1.75" AVG. THICKNESS) CU.YD., 446 ASPHALT CONCRETE SURFACE COURSE, TYPE IH, AS PER PLAN (1.5" AVG. THICKNESS) CU.YD. Rows include locations 1, 2, and 3 with totals for each.

ITEM 638 WATER WORK, MISC.: INSPECTION HOLES

Located at SLM 14.10 westbound, there exists approximately 48 inspection holes (4" diameter PVC Pipe). After planing 3" of asphalt as called out in the plan, these inspection holes will need to be repaired. This will be done by cleaning out the tubes and repairing /replacing the tubes with a 4" diameter galvanized metal pipe with threads and cover. Actual material to be used and installation details shall be approved by the Engineer. The top of the cover shall be placed 1/4" below proposed finished grade and shall be able to be screwed on and off so as to allow inspection. Holes are approximately 22" deep. Metal pipe shall extend to the top of concrete slab (approximately 8" of asphalt above concrete slab in this area). This may require boring out the PVC pipe above the concrete slab to allow placement of the galvanized

All material, labor, and equipment required to accomplish the above work shall be covered under Item 638 Water Work, Misc.: Inspection Holes LUMP NOTE: EXTREME CARE SHALL BE UTILIZED WHILE MOVING EQUIPMENT IN THIS AREA SO AS NOT TO DAMAGE EXISTING PIEZOMETER MONITORS. ENGINEER SHALL CLEARLY MARK EACH MONITOR WITH A DELINEATOR BEFORE CONTRACTOR ENTERS AREA.

# GENERAL NOTES

CALCULATED  
LME  
CHECKED  
TJD

GENERAL NOTES

GUE-70-10.55

5B  
30

## SEQUENCE OF OPERATIONS

This project is divided into three phases. Phase 1 starts at SLM 10.55 and goes to SLM 17.39. Phase 2 starts at SLM 17.39 and goes to SLM 22.62. Phase 3 starts at SLM 22.62 and goes to SLM 28.50.

Phase 1 and 3 have two steps each. Step 1 consists of milling a 14' wide by 3.25" deep section of asphalt in the passing lane. The Type 2 Intermediate Course (14' by 1.75") shall then be laid followed by the Type IH Surface Course (13' by 1.5"). Step 2 consists of milling a 12' wide by 3.25" deep section of asphalt in the driving lane. The Type 2 Intermediate Course (12' by 1.75") shall then be laid followed by the Type IH Surface Course (13' by 1.5"). The Type 2 Rumble Strips shall be cut into the pavement while that adjacent lane of traffic is still closed to traffic unless otherwise directed by the Engineer. Phase 1 and 3 shall both be completed before Phase 2 is started. Work Zone Speed Limit Signs shall be erected and removed as required on sheet 3/30 with the understanding that each Phase is a separate Work Zone.

Phase 2 has four steps. Step 1 consists of milling and filling a 14' wide by 3.5" deep section with Type 30 Bituminous Aggregate Base in the passing lane. Step 2 consists of milling and filling a 12' wide by 3.5" deep section with Type 30 Bituminous Aggregate Base in the driving lane. Two courses of Type 2 Intermediate Course (each course 1.75" thick for a total thickness of 3.5") may then be laid on the driving lane and shoulder (22' wide for first course, 21' wide for second course). Step 3 consists of placing two courses of Type 2 Intermediate Course (each course 1.75" thick for a total thickness of 3.5") on the passing lane and shoulder (16' wide for first course, 17' wide for second course). Final course (16' by 1.5") of Type IH Surface Course may then be laid on the passing lane and shoulder. Step 4 consists of placing the final course (22' by 1.5") of Type IH Surface Course on the driving lane and the shoulder.

All temporary or permanent edge/lane lines must be in place before opening traffic up to traffic. All work and traffic control devices shall be in accordance with 614 and other applicable portions of the Specifications, as well as the Ohio Manual of Uniform Traffic Control Devices. Payment for all labor, equipment and material as described above shall be included in the Lump Sum contract price for 614, Maintaining Traffic, unless separately itemized in the plan.

G0700005b.MGN 2-9-99

# RPM General Notes

## Materials Supplied by The Department

All materials are to be Contractor furnished, except that the Department shall supply RPM materials in the quantities shown herein to the Contractor. Pay items for the Department supplied materials shall be indicated as "Installation Only". The quantity and type of Department supplied materials are shown on sheet 25 of this plan.

The Contractor shall pick up the department supplied RPM materials at the direction of the Project Engineer.

For some projects having quantities of less than 20 RPMs, the contractor may pick up RPM materials at the District Offices. Quantities over 20 RPMs will be picked up at the Recycler's Warehouse or as arranged with the District. The Contractor shall pick up Department supplied RPM materials at the specified location(s) for transport to the work site or to the Contractor's storage facility. The Recycled Raised Pavement Marker (RPM) Authorization Form is to be signed by the District Construction Engineer prior to pick up of the RPMs. The Contractor shall notify the District and / or the parties listed on the authorization form in writing at least five (5) calendar days prior to pick up of the department supplied materials. The contractor shall store the RPMs without damage or contamination with foreign matter. A deduction in the amount of the actual cost to the Department shall be made for materials damaged by the Contractor or for castings received by the Contractor which were not installed and were not returned to the Department.

## Return of Non-performed Raised Pavement Marker Materials Supplied by the Department

Raised Pavement Marker Materials Supplied by the Department, that are non-performed shall be carefully repacked or packed in the boxes in the same style and quantity as originally received from the Department. Casting styles shall not be mixed within any one container. The Contractor shall clearly mark on the outside of each container, the color of the prismatic retro-reflector, the style of casting. Boxes shall be placed on skids or pallets in the same style (Low Profile or Conventional, reflectorised or non reflectorised) and no more than 420 RPMs (or 21 Boxes) on one skid.

Only use the boxes supplied by the Raised Pavement Marker Recycler. Boxes must be marked with the recycler's part or catalog number and the project number. The recycler's catalog or part numbers may be obtained from the Office of Traffic Engineering in Columbus, Ohio or from the recycler. Boxes not marked with the proper recycler's catalog or part numbers, and the department's project number will not be accepted at the recycler's warehouse. Non Performed Materials will be returned to the location as specified by the District Construction Engineer within 30 Days of the completion of the project.

The above work including all labor, equipment and material needed to perform the work, shall be considered incidental to the respective pay item.

If the department has to repackage the RPMs correctly, the Contractor will be assessed the actual cost for repackaging the Materials by the Department's Forces.

## Loading of Materials Supplied by the Department at the Recycler's Warehouse

Trucks shall have a loading height of 48 inches and be able to back up flush to the loading dock.

Trucks shall not have any obstructions or protrusions that prevent the loading by a standard forklift or lift truck.

Semi trucks or 20 foot commercial trucks are the most appropriate trucks for loads in excess of 4 pallets (one pallet = 21 boxes = 2000 LBS).

Stake body trucks are appropriate to load less than 4 pallets, provided the truck is rated for the load and the load can be safely secured for transport by chaining or strapping down as needed.

Pickup trucks are appropriate for loads of approximately one pallet, provided the pickup truck is rated for the load and the load can be safely secured for transport.

Dump trucks, tilt bed trucks, and non commercial moving vans will not be loaded by the recyclers warehouse.

The warehouse supervisor will refuse to load any truck that is unsafe to load or unsuitable for the load being placed on the truck.

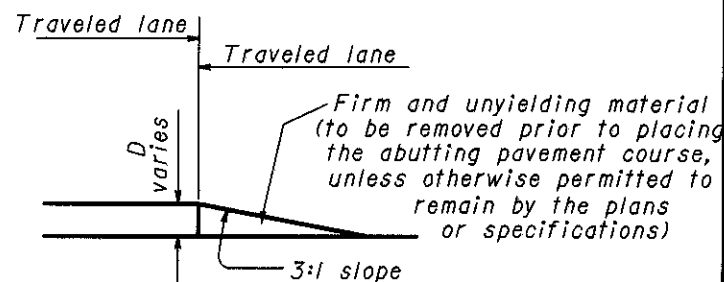


### GENERAL NOTES

- It is intended that this drawing be used for treatment of drop-offs that develop during construction operations, and that are not otherwise provided for in the construction plans. Where the plans do not provide specific items for labor, equipment, or materials to implement the drop-off treatments specified hereon, they shall be included for payment in the lump sum bid for Item 614 - Maintaining Traffic.
- While the need for certain advisory signing is noted hereon, it is not intended that this be indicative of all signing that may be required to advise or warn motorists, and all requirements of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) must be fulfilled.
- In urban or otherwise heavily developed areas where pedestrians and/or bicyclists may be present in significant numbers, additional signing and protective measures other than those shown hereon may be required.
- The drop-off treatment selected for use at any given location shall be as appropriate for the prevailing conditions at the site.
- Where concrete barrier is specified, it shall be in accordance with Standard Construction Drawing MC-9.2 and Item 622.
- When drums are specified for a dropoff condition, a minimum number of four drums shall be used. Spacing shall be as indicated in the plans or as specified in the OMUTCD.
- When OW-151 (Low Shoulder) signs or OW-171 (Uneven Lanes) and OWP-171 signs are required, they shall be placed 750' in advance of the condition, on all intersecting entrance ramps within the limits of the condition and immediately beyond all intersecting roadways within the limits of the condition. When the dropoff condition extends more than one-half mile, additional signs should be erected at intervals of one mile or less.
- For locations, such as at ramps, lane shifts, lane closures, etc., where traffic is required to negotiate any difference in elevation between pavements, a 3:1 slope treatment similar to the Optional Wedge Treatment shall be provided.
- Portable concrete barrier shall be placed on the same level as the traffic surface and shall not encroach on lane width(s) designated as the minimum required for traffic use. Where drums are used, and their presence would reduce traveled lane widths to less than 10', drums may be placed on the opposite level from that of traffic provided the dropoff depth does not exceed 5" and approval is granted by the Project Engineer.
- Pavement Repairs (or similar work):
  - Lengths greater than 60 feet - utilize appropriate treatment from Condition I.
  - Lengths of 60 feet or less - repairs shall be effected in accordance with 255.08. Drums may be used as a separator adjacent to the traveled lane.

### OPTIONAL WEDGE TREATMENT (MILLING OR RESURFACING)

- This treatment may be used when permitted for Condition I only.
- OW-171 and OWP-171 signs required.

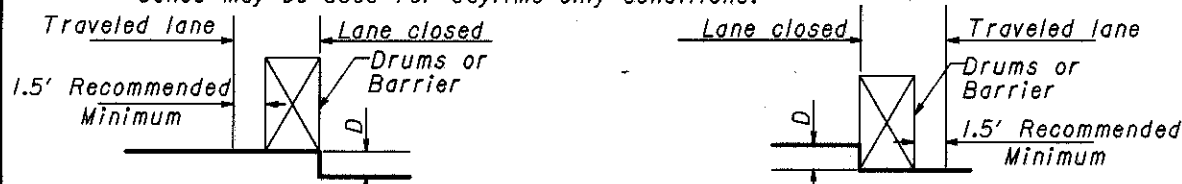


### CONDITION I DROPOFFS BETWEEN TRAVELED LANES

- These treatments are to be used for resurfacing, pavement planing, excavation, etc. between or within traveled lanes.

D (In.)	Treatment
≤ 1/2	Erect OW-171 and OWP-171 signs.
> 1/2 - 3	1) Lane closure utilizing drums* as shown below OR 2) Optional Wedge Treatment
> 3 - 5	Lane closure utilizing drums as shown below.
> 5	Lane closure utilizing portable concrete barrier as shown below.

\*Cones may be used for daytime only conditions.

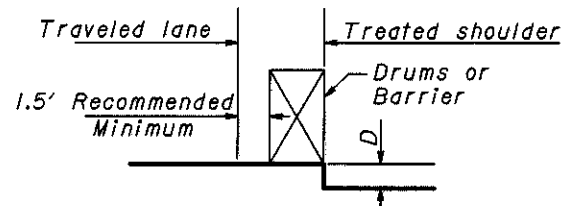


### CONDITION II DROPOFFS WITHIN GRADED SHOULDER AREA

- The treatments indicated below are for use in conjunction with resurfacing, planing, or excavations within the graded shoulder area.
- The graded shoulder area is that flat or gradually sloping area between the edge of a normally traveled lane and the more steeply sloping ditch foreslope or embankment slope. Its surface may be soil or turf, and/or it may be inclusive of a "treated" area (improved with aggregates, asphaltic materials, or concrete). For the purposes herein, its maximum width shall be considered to be twelve (12) feet.

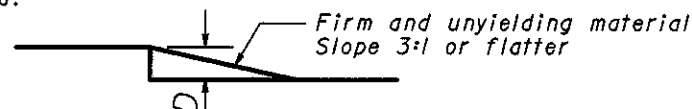
D (In.)	Treatment
≤ 1/2	1) If edgelines are present, no treatment necessary OR 2) Erect OW-171 and OWP-171 signs.
> 1/2 - 5	1) If min. lane width requirements can be met, maintain lanes utilizing drums as shown below OR 2) If min. lane width requirements cannot be met, close adjacent lane utilizing drums OR 3) Optional Shoulder Treatment.
> 5 - 12 Daylight only	If min. lane width requirements can be met, maintain lanes utilizing drums as shown below.
> 5 - 24	1) If min. lane width requirements can be met, maintain lanes utilizing portable concrete barrier as shown below. OR 2) If min. lane width requirements cannot be met, close adjacent lane utilizing drums.
> 24	Lane closure utilizing portable concrete barrier as shown below.

\*Minimum lane widths shall be 10' unless otherwise specified in the plans.



### OPTIONAL SHOULDER TREATMENT

- This treatment may not be used within a bituminous shoulder where a hot longitudinal joint per 401.15 is required.
- OW-151 signs required.



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7/30

### CONDITION III

#### DROPOFFS BEYOND GRADED SHOULDER OR BACK OF CURB

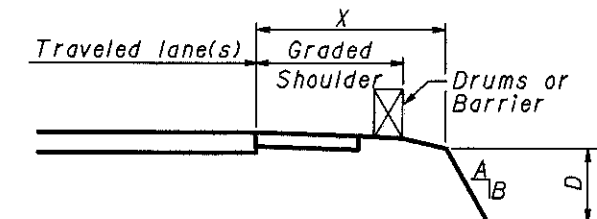
- See Note 2 under Condition II.
- Use Chart A or B below, as applicable.

### CHART A

USE FOR: 1. Uncurbed Facilities.

2. Curbed Facilities, where:

- Curbs are less than 6" in height.
- Curbs are 6" or greater in height and the legal speed is greater than 40 mph.

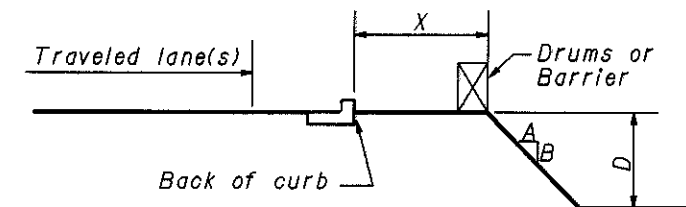


X (Ft.)	D (In.)	A/B	Treatment Required	
			Day	Night
0-4	Any	Any	(a)	(a)
4-30	Any	3:1 or Flatter	None	None
4-12	< 3	Steeper than 3:1	None	None
4-12	> 3 - < 12	Steeper than 3:1	Drums	Drums
4-12	> 12	Steeper than 3:1	Drums	Barrier
> 12 - 20	< 12	Steeper than 3:1	None	None
> 12 - 20	> 12 - < 24	Steeper than 3:1	Drums	Drums
> 12 - 20	> 24	Steeper than 3:1	Drums	Barrier
> 20 - 30	< 24	Steeper than 3:1	None	Drums
> 20 - 30	> 24	Steeper than 3:1	Drums	Barrier
> 30	Any	Any	None	None

(a) Use treatment specified under Condition II.

### CHART B

USE FOR: Curbed facilities, where the curb is 6" or greater in height and the legal speed is 40 mph or less.



X (Ft.)	D (In.)	A/B	Treatment Required	
			Day	Night
0-10	< 12	Any	None	Drums
0-10	> 12	Any	Drums	Drums
> 10	Any	Any	None	None

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF LOCATION AND DESIGN

### DROPOFFS IN WORK ZONES

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

DROPOFF.DGN 2-2-99

# TYPICALS - LOCATIONS 1 & 3

CALCULATED  
L.M.E.  
CHECKED  
T.J.D.

## ITEM 254 PAVEMENT PLANING, BITUMINOUS, AS PER PLAN

PAVEMENT PLANING AT LOCATIONS 1 & 3 (SLM 10.55 - 17.39) (SLM 22.62 - 28.50) SHALL BE 26' WIDE, 1 (ONE) FOOT OUTSIDE EACH EDGE LINE, AND 3.25" IN DEPTH. PLANING SHALL BE PERFORMED SUCH THAT THE ROADWAY IS SLOPED 0.0156 FT/FT FROM LANE LINE (CENTER OF ROADWAY). AFTER PLANING, THE ROADWAY SHALL BE INLAID WITH 1.75" ITEM 446 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 76-22, AS PER PLAN AND 1.5" ITEM 446 ASPHALT CONCRETE SURFACE COURSE, TYPE IH, AS PER PLAN.

SEE SHEET 16 FOR PLANING QUANTITY.

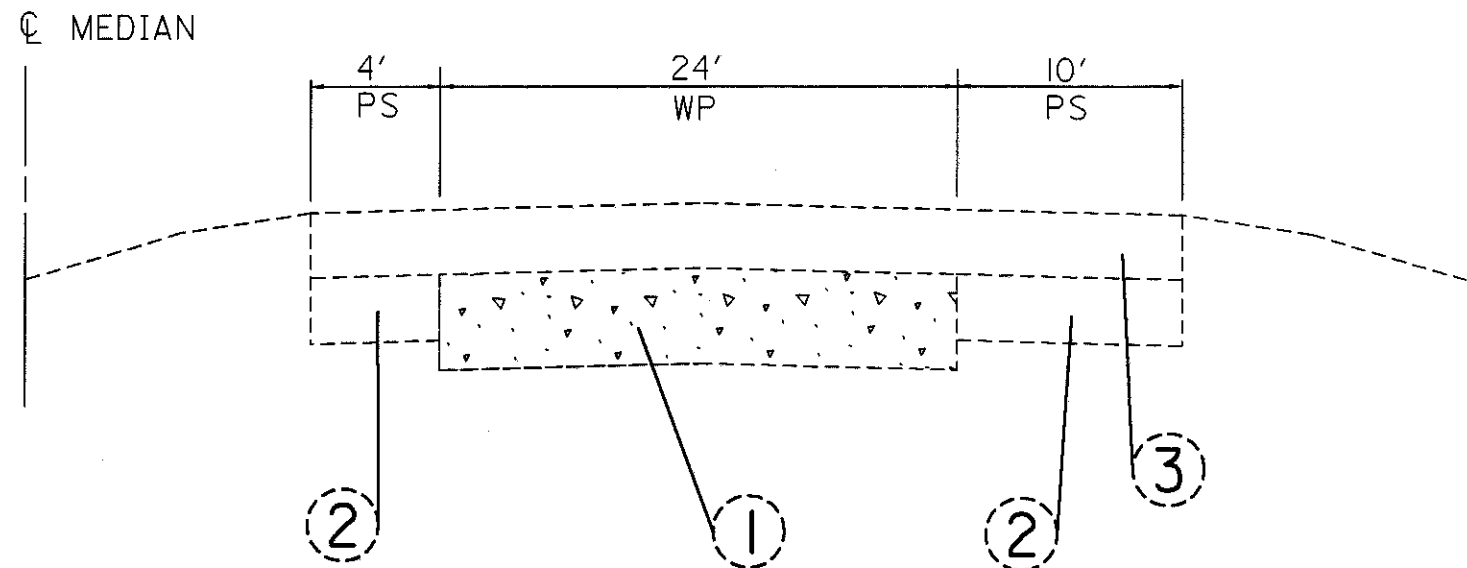
### LEGEND:

WP = WIDTH OF PAVEMENT  
PS = PAVED SHOULDER

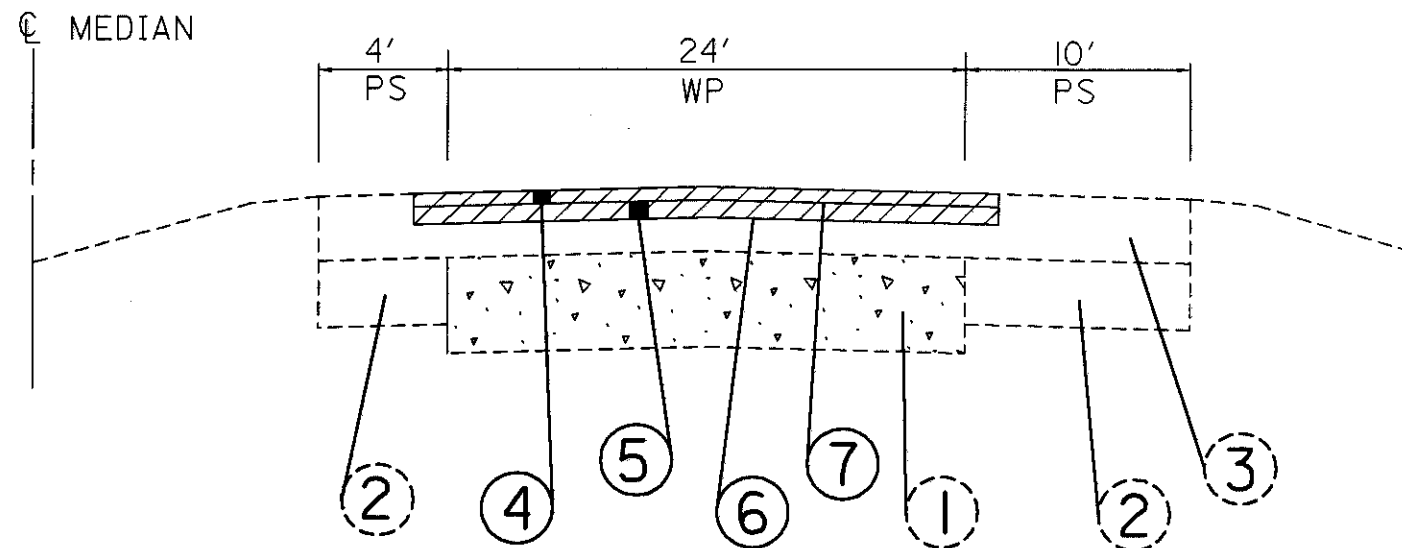
- ① 9" REINFORCED CONCRETE
- ② 6" BITUMINOUS CONCRETE
- ③ 7" ASPHALT CONCRETE
- ④ 1.5" 446 ASPHALT CONCRETE SURFACE COURSE, TYPE IH, AS PER PLAN
- ⑤ 1.75" 446 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 76-22, AS PER PLAN
- ⑥ 407 TACK COAT @ 0.075 GAL/SQ.YD.
- ⑦ 407 TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL/SQ.YD.

 PAVEMENT PLANING (SEE NOTE ABOVE)

## EXISTING TYPICAL (I)



## PROPOSED TYPICAL (I)



TYPICALS - LOCATIONS 1 & 3

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# TYPICALS - LOCATION 2

## ITEM 254 PAVEMENT PLANING, BITUMINOUS, AS PER PLAN

PAVEMENT PLANING AT LOCATION 2 (SLM 17.39 - 22.62) SHALL BE 26' WIDE, 1 (ONE) FOOT OUTSIDE EACH EDGE LINE, AND ±3.5" IN DEPTH (PLANE TO CONCRETE BASE). AFTER PLANING, THE ROADWAY SHALL BE INLAID WITH 3.5" ITEM 301 BITUMINOUS AGGREGATE BASE, PG 64-22. THE ENTIRE ROADWAY, INCLUDING PAVED SHOULDERS, SHALL THEN BE OVERLAID WITH 3.5" ITEM 446 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 76-22, AS PER PLAN AND 1.5" ITEM 446 ASPHALT CONCRETE SURFACE COURSE, TYPE IH, AS PER PLAN.

SEE SHEET 16 FOR PLANING QUANTITY.

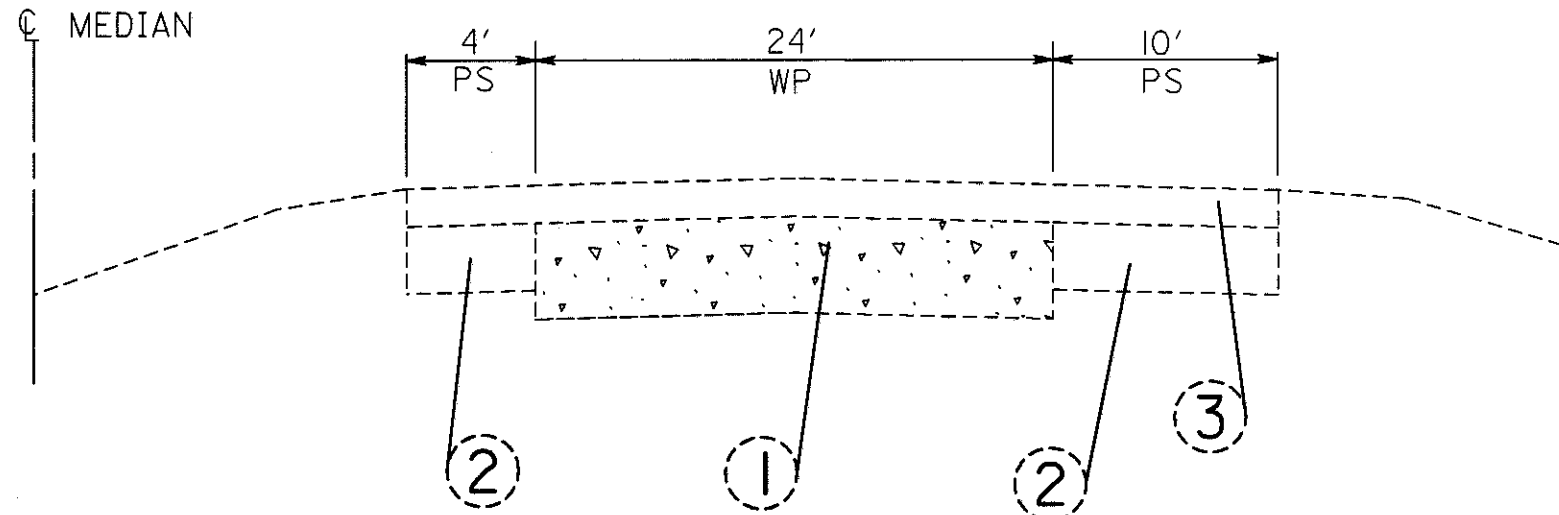
### LEGEND:

WP = WIDTH OF PAVEMENT  
PS = PAVED SHOULDER

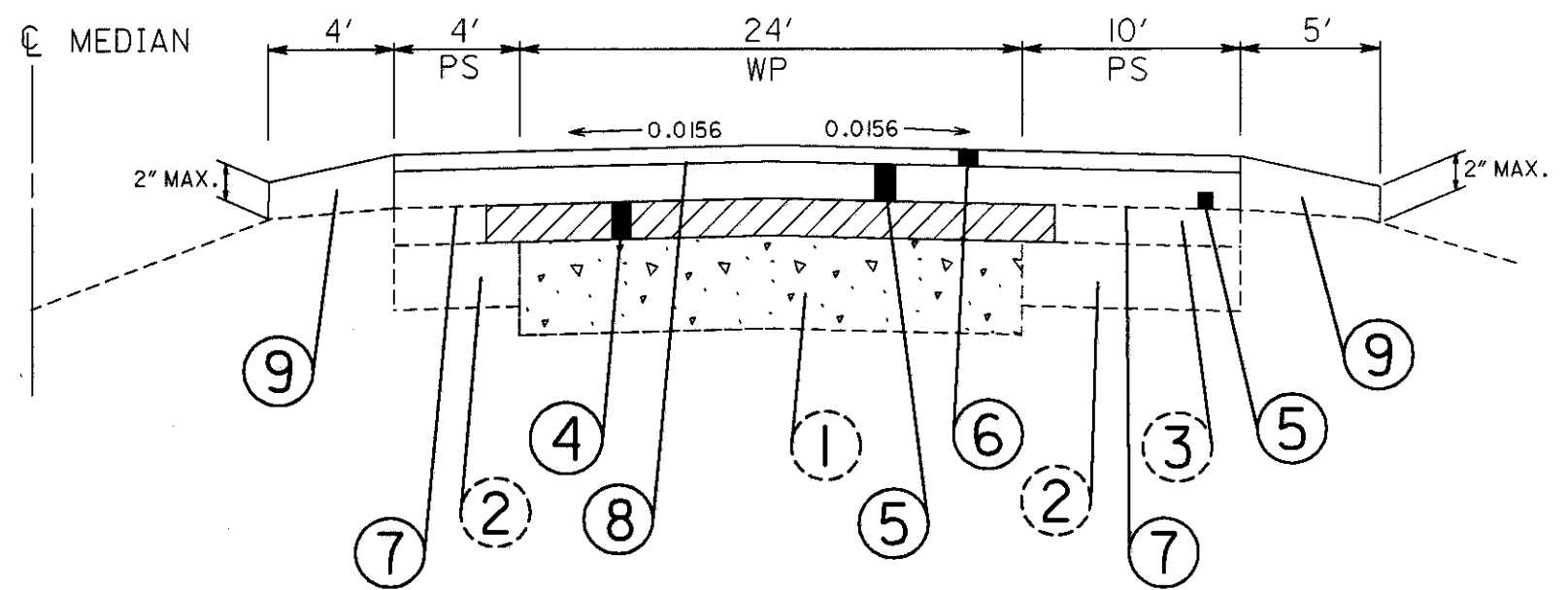
- ① EXISTING 9" REINFORCED CONCRETE
- ② EXISTING 6" BITUMINOUS CONCRETE
- ③ EXISTING 3 1/2" ASPHALT CONCRETE
- ④ 3.5" - 301 BITUMINOUS AGGREGATE BASE, PG 64-22
- ⑤ 3.5" - 446 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 76-22, AS PER PLAN
- ⑥ 1.5" - 446 ASPHALT CONCRETE SURFACE COURSE, TYPE IH, AS PER PLAN
- ⑦ 407 TACK COAT @ 0.075 GAL/SQ.YD.
- ⑧ 407 TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL/SQ.YD.
- ⑨ 3.5"(AVG.) - 304 AGGREGATE BASE

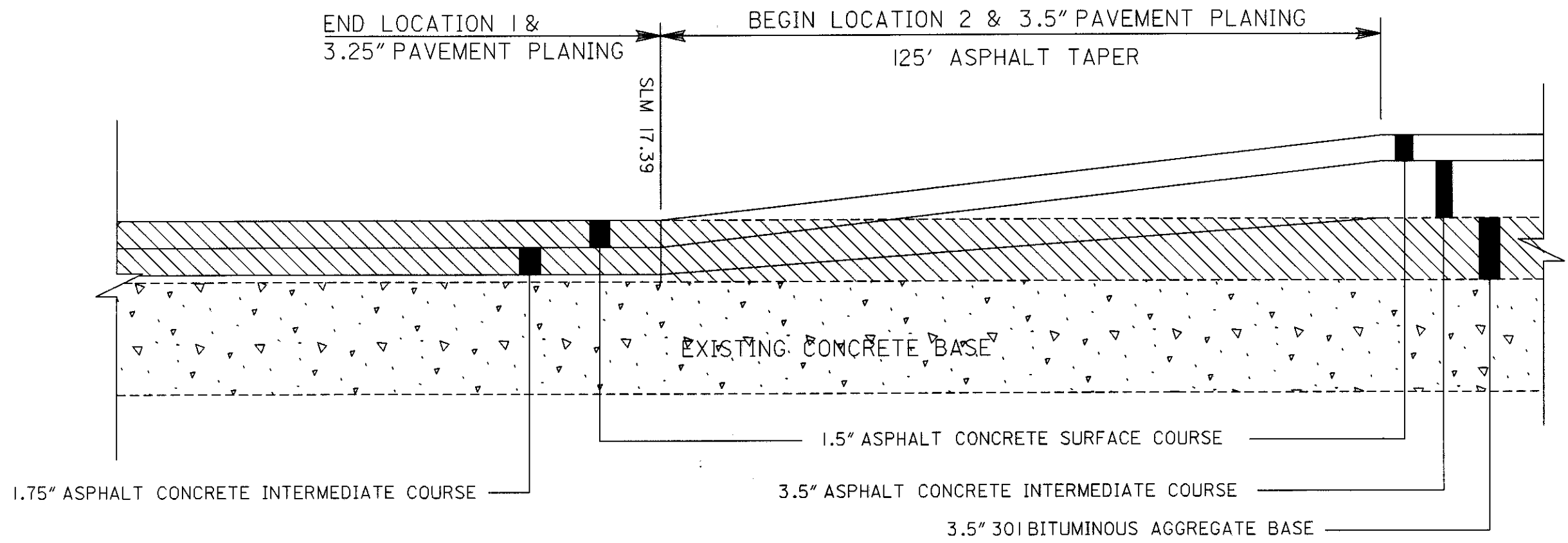
 PAVEMENT PLANING (SEE NOTE ABOVE)

### EXISTING TYPICAL (2)

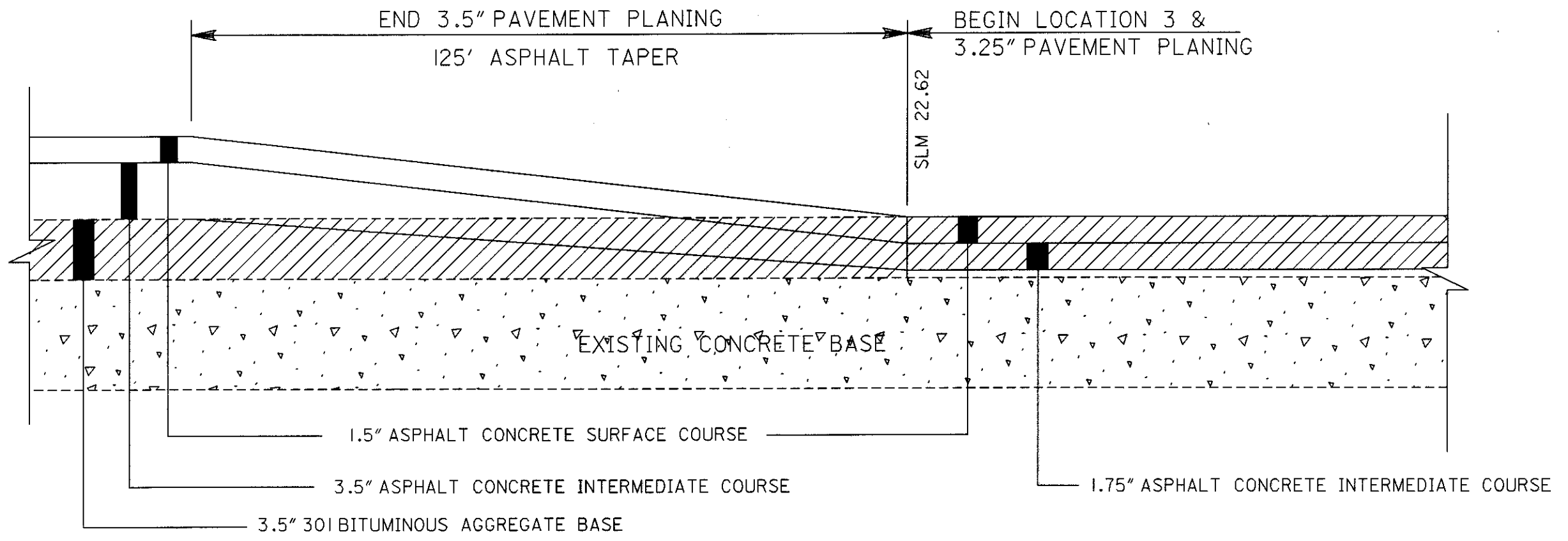


### PROPOSED TYPICAL (2)



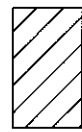


 PAVEMENT PLANING BITUMINOUS

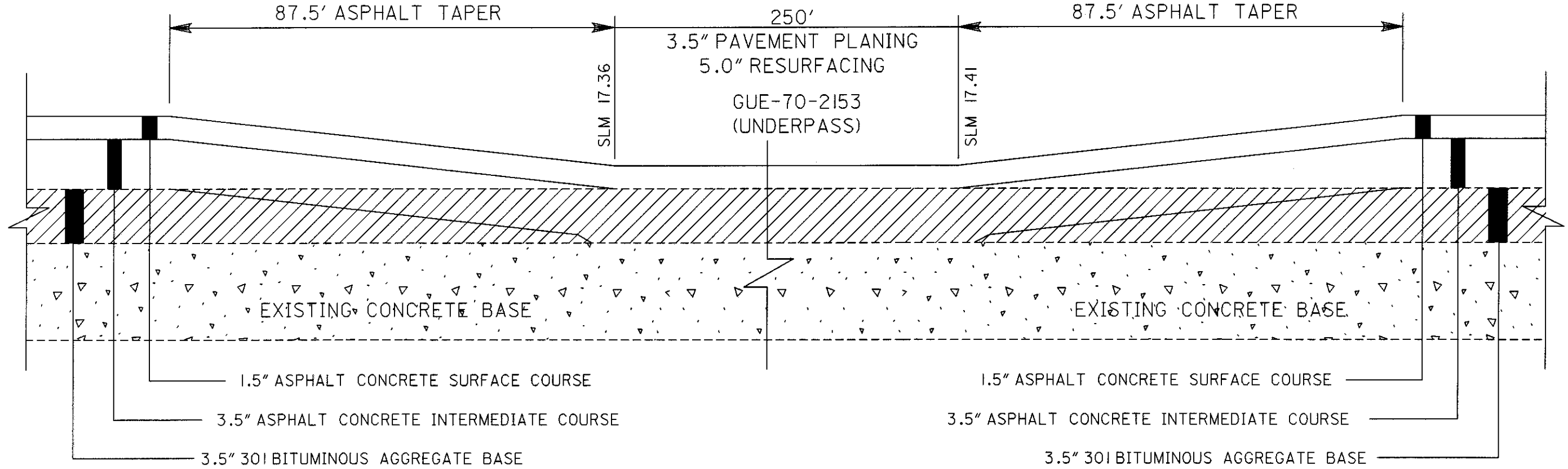


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LOCATION 2 DETAIL  
GUE-70-2153 (UNDERPASS)



PAVEMENT PLANING BITUMINOUS



# GENERAL NOTES

PLAN NO.

CALCULATED  
LME  
CHECKED  
TJD

## UNDERGROUND UTILITIES

THERE ARE LOCATIONS WHERE UNDERGROUND UTILITIES MAY CONFLICT WITH GUARDRAIL CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES BEFORE WORK BEGINS SO THAT THE COMPANIES CAN LOCATE AND MARK THE LOCATIONS OF THEIR FACILITIES BEFORE ANY EXCAVATION OR POST DRIVING BEGINS.

## PUBLIC SAFETY

BEFORE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE NAMES AND TELEPHONE NUMBERS OF PERSONS WHO CAN BE CONTACTED 24 HOURS A DAY BY THE OHIO DEPARTMENT OF TRANSPORTATION AND ALL INTERESTED POLICE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING CONTROL DEVICES NECESSARY TO MAINTAIN SAFETY TO THE TRAVELING MOTORIST.

NO HAZARD SHALL BE LEFT WITHOUT GUARDRAIL EXCEPT FOR THE MINIMUM TIME NECESSARY FOR REMOVAL, GRADING AND REINSTALLATION. THE PERMANENT GUARDRAIL SHALL BE ERECTED AND THE TYPE A ANCHOR ASSEMBLIES SHALL BE HELD RIGIDLY IN PLACE AT THE GROUND SURFACE PRIOR TO PERMANENT ATTACHMENT AT THE CONCRETE ANCHOR, IN A MANNER ACCEPTABLE TO THE ENGINEER.

BERM RESHAPING AND GUARDRAIL REMOVAL AND CONSTRUCTION SHALL NOT PROCEED SIMULTANEOUSLY ON BOTH THE LEFT AND RIGHT SHOULDERS OF THE ROADWAY. THE OPEN AREA DUE TO GUARDRAIL REMOVAL SHALL BE ADEQUATELY MAINTAINED AND PROTECTED AT ALL TIMES WITH TEMPORARY DRUMS OR BARRICADES AND OTHER WARNING DEVICES SATISFACTORY TO THE ENGINEER. NO OPEN AREAS DUE TO GUARDRAIL REMOVAL SHALL BE PERMITTED AFTER EACH WORK DAY IS COMPLETED.

## PROTECTION OF INCOMPLETED WORK

ANY HAZARD DURING NON-WORKING HOURS SHALL BE ADEQUATELY PROTECTED WITH DRUMS OR BARRICADES, OR AS DIRECTED BY THE ENGINEER. PAYMENT FOR ANY SUCH WORK REQUIRED WILL BE CONSIDERED AS INCIDENTAL AND INCLUDED IN THE GUARDRAIL REPAIR ITEM.

## GUARDRAIL POST AND POST HOLES

ALL HOLES REMAINING AFTER REMOVAL OF GUARDRAIL POSTS OR GUARD POSTS SHALL BE FILLED WITH EITHER GRANULAR MATERIAL, EXCESS MATERIAL RESULTING FROM GUARDRAIL CONSTRUCTION OR EXCESS MATERIAL FROM BERM RESHAPING. FILL MATERIAL CONTAINING SOD SHALL NOT BE USED. ALL FILL MATERIAL SHALL BE APPROVED BY THE ENGINEER. MATERIAL PLACED IN HOLES SHALL BE THOROUGHLY COMPACTED AND LEVELED OFF AS DIRECTED BY THE ENGINEER. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPLICABLE GUARDRAIL ITEM.

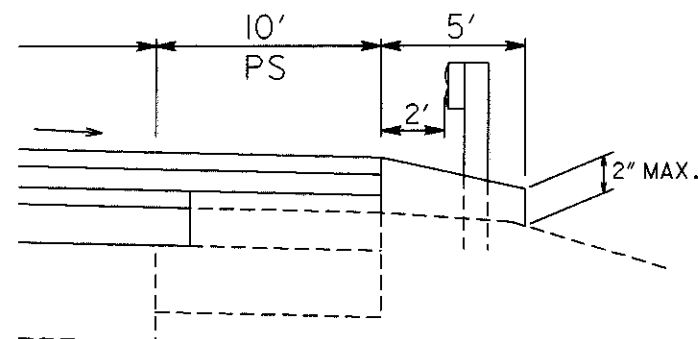
## ITEM 606 GUARDRAIL

ALL MATERIAL EXCAVATED FOR POST HOLES OR CONCRETE ANCHORS SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH 203.05 OF THE SPECIFICATIONS AND AREA NEATLY RESTORED. THE COST OF THIS IS TO BE INCLUDED IN THE APPROPRIATE GUARDRAIL BID ITEM. THE LOCATIONS OF GUARDRAIL RUNS AS SHOWN IN THESE PLANS ARE SUBJECT TO ADJUSTMENT TO ASSURE THAT THE PLANNED INSTALLATION WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

## ITEM SPECIAL BERM RESHAPING

AT SOME LOCATIONS OF GUARDRAIL REPLACEMENT, BERMS SHALL BE RESHAPED AT THE DIRECTION OF THE ENGINEER. ANY NECESSARY EXCAVATION AS A RESULT OF BERM RESHAPING SHALL BE INCLUDED IN THE CONTRACT PRICE BID PER FOOT FOR ITEM SPECIAL, BERM RESHAPING.

A CONTINGENCY QUANTITY 1000 FEET HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR BERM RESHAPING AS DIRECTED BY THE ENGINEER.



TYPICAL GUARDRAIL PLACEMENT

IRGRGNI.DGN 2-1-99

GUARDRAIL NOTES

GUE-70-10.55

12/30

# GENERAL NOTES

PLAN NO.

## 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 SYRO, INC.,  
1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50' INCLUSIVE OF TWO 25' LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS DETAILED ON THE PREAPPROVED SHOP DRAWING # SS265M, DATED 6-20-98. ODOT APPROVAL DATE 3-6-98. DRAWING NAME, ET-2000(1997) PLAN, ELEVATION & SECTIONS.

- 2) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC.,  
7631 NEW CASTLE DRIVE, FRANKFORT, IL 60423 (TELEPHONE: 815-464-5917)

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50' INCLUSIVE OF FOUR 12.5' LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS DETAILED ON THE PREAPPROVED SHOP DRAWING # SKT-4M, DATED 12-11-97. ODOT APPROVAL DATE 3-6-98. DRAWING NAME, SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES.

A TYPE C DELINEATOR SHALL BE INSTALLED AT THE HEAD OF ALL TYPE E-98 UNITS LOCATED ON THE RIGHT SIDE OF THE THROUGH ROADWAY. A TYPE D DELINEATOR SHALL BE INSTALLED AT THE HEAD OF ALL TYPE E-98 UNITS LOCATED ON THE LEFT SIDE OF THE THROUGH ROADWAY. DELINEATORS SHALL COMPLY WITH STANDARD TRAFFIC DRAWING TC-61.10M.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT BID PRICE 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 SEPERATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

## ITEM 203 EMBANKMENT, AS PER PLAN

A CONTINGENCY QUANTITY OF EMBANKMENT HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER AT THE LOCATIONS SPECIFIED IN THE PLAN OR AT OTHER LOCATIONS SPECIFIED BY THE ENGINEER TO CREATE AN ACCEPTABLE SLOPE AS PER SCD GR-4.3 FOR THE PLACEMENT OF A B-98 ANCHOR ASSEMBLY. SEEDING AND MULCHING OF NEW EMBANKMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203 EMBANKMENT, AS PER PLAN.

ITEM 203 EMBANKMENT, AS PER PLAN 200 CU.YARD (LOCATION 2)

## ITEM 606 ANCHOR ASSEMBLY, TYPE B-98

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

- 1) SRT-350, GUARDRAIL END  
TERMINAL AS MANUFACTURED BY ; "SYRO INC., 1170 N. STATE STREET, GIRARD, OH 44420".  
TELEPHONE 330-545-4373

THE LENGTH OF THE SRT-350 SYSTEM IS CONSIDERED TO BE 37.5', INCLUSIVE OF THREE 12.5' LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON PRE-APPROVED SHOP DRAWING NUMBER SS425M, DATED 6-21-97. ODOT APPROVAL DATE 3-6-98

- 2) THE FLEAT-350 MANUFACTURED BY ROAD SYSTEMS, INC. 7631 NEW CASTLE DRIVE,  
FRANKFORT, IL 60423 (TELEPHONE: 815-464-5917)

THE LENGTH OF THE FLEAT-350 SYSTEM IS CONSIDERED TO BE 37.5', INCLUSIVE OF THREE 12.5' LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON PRE-APPROVED SHOP DRAWING NUMBER FLT-M, DATED 4-16-98. ODOT APPROVAL DATE 7-31-98.

GRADING SHALL BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING GR-4.3.

THE FACE OF THE TYPE B-98 IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19: APPROX. 36"W X 12"H FOR SRT-350 AND 14"W X 20"H FOR THE FLEAT.

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

## ITEM 202 GUARDRAIL REMOVED FOR STORAGE, AS PER PLAN

THIS ITEM SHALL CONSIST OF REMOVING GUARDRAIL, DISASSEMBLING GUARDRAIL PANELS AND DELIVERING PANELS, POSTS AND END TERMINAL ASSEMBLIES (AS SPECIFIED BELOW) TO THE LOCATIONS LISTED BELOW. THE PROJECT ENGINEER SHALL INSPECT ALL GUARDRAIL ELEMENTS BEFORE BEING DELIVERED (THE INTENT IS TO SEND ONLY THE BEST PANELS AND POST TO THE COUNTIES). A 24 HOUR NOTICE SHALL BE GIVEN PRIOR TO DELIVERING ANY GUARDRAIL, O.D.O.T. WILL PROVIDE LOADER AND PERSONNEL TO UNLOAD GUARDRAIL UPON ARRIVAL AT SPECIFIED LOCATIONS. ONLY THOSE QUANTITIES ACTUALLY DELIVERED TO THE LOCATIONS BELOW SHALL BE PAID FOR UNDER ITEM 202 GUARDRAIL REMOVED FOR STORAGE, AS PER PLAN. THE FOLLOWING QUANTITIES SHALL BE DEDUCTED FROM THE GUARDRAIL REMOVED TOTAL ON SHEET 15.

QUANTITIES AND DELIVERY SIGHTS:

- COS. CO. (MAIN GARAGE) - 2000' (160 PANELS)
- FAI. CO. (BALTIMORE OUTPOST) - 3000' (240 PANELS), 3 TYPE E ANCHOR ASSEMBLIES
- KNO. CO. (MAIN GARAGE) - 1250' (100 PANELS)
- LIC. CO. (DISTRICT OFFICE) - 4000' (320 PANELS), 5 TYPE E ANCHOR ASSEMBLIES, 500 POST
- MUS. CO. (MAIN GARAGE) - 2000' (160 PANELS), 5 TYPE E ANCHOR ASSEMBLIES
- PER. CO. (MAIN GARAGE) - 3000' (240 PANELS)

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT BID PRICE FOR ITEM 202 GUARDRAIL REMOVED FOR STORAGE, AS PER PLAN 15250 LIN.FT.

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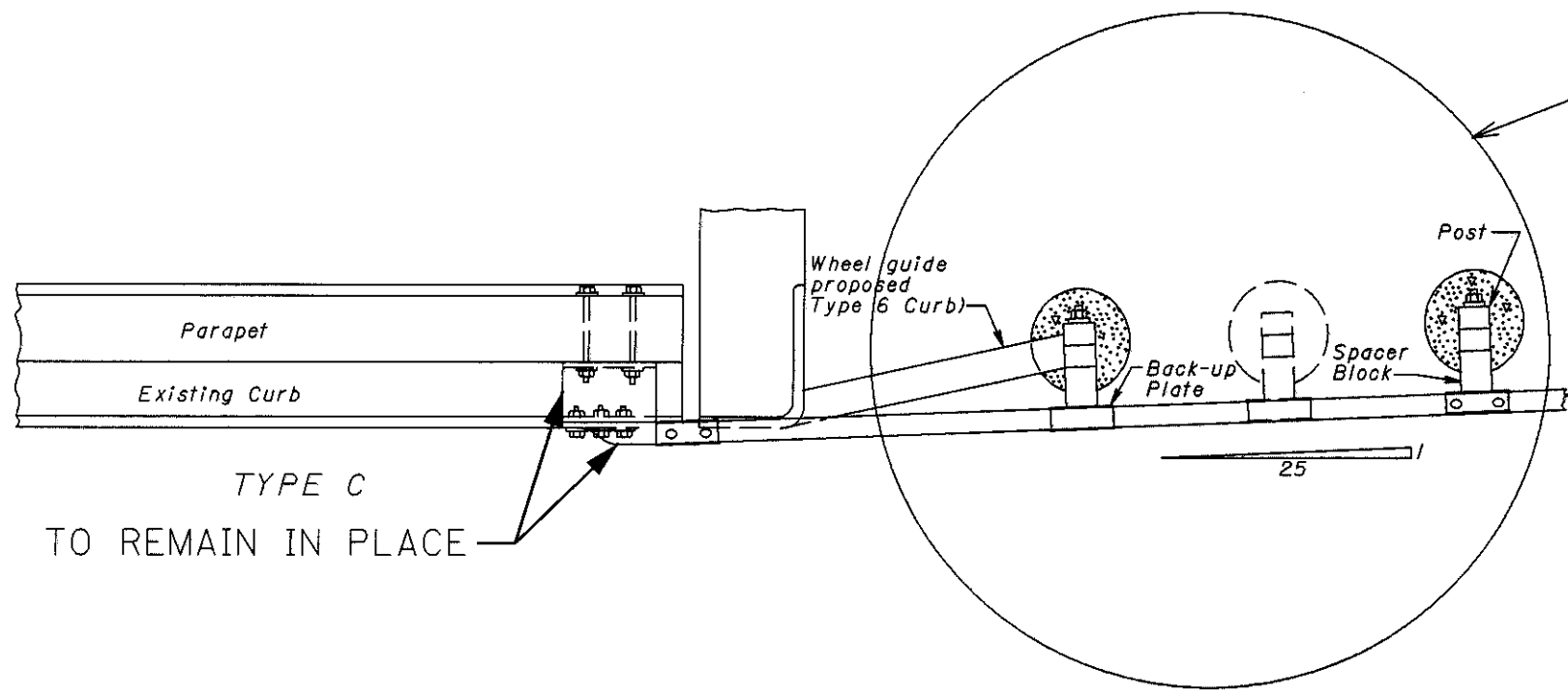
GUARDRAIL NOTES

GUE-70-10.55

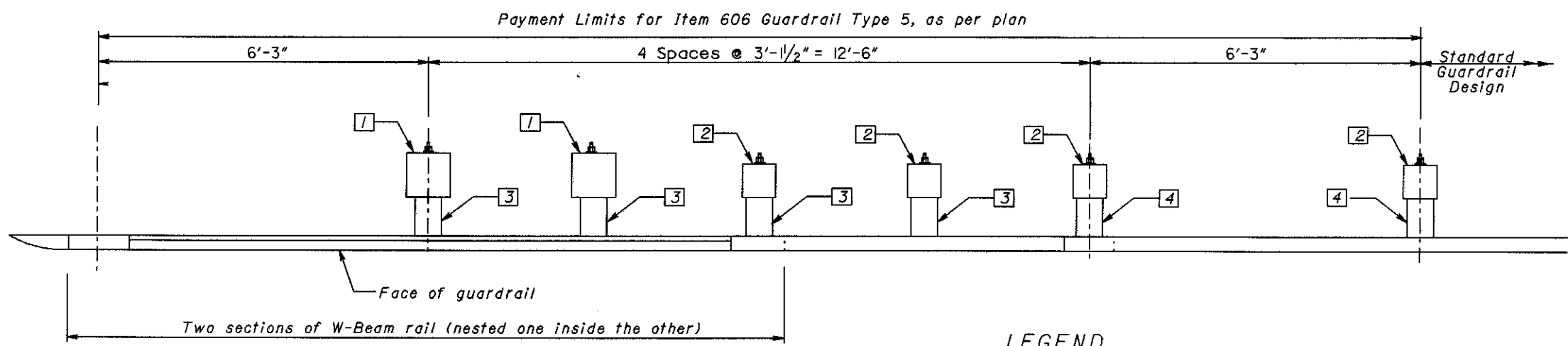
13/30

CALCULATED  
LME  
CREATED  
MLN

EXISTING RAIL AND POST TO BE REMOVED AND REPLACED AS SHOWN BELOW



TYPE C  
TO REMAIN IN PLACE



PLAN

LEGEND

- 1 10" x 10" wood post
- 2 8" x 8" wood post
- 3 6" x 8" x 22 1/2" wood blackout (Typ.)
- 4 6" x 8" x 14" mm wood blackout (Typ.)

NOTES

GENERAL:

For additional details, see SCD's GR-1.1, GR-1.2 and other drawings pertaining to the design of specific guardrail types.

APPLICATION:

The above detailed treatment shall be used at the approach end of 6 (six) bridges with Location 2 of the plan: 1847 L/R, 2042 L/R and 2081 L/R.

POSTS:

GENERAL - Posts may be set in drilled holes or driven to grade.

WOOD POSTS - shall be square sawed pressure treated wood as per CMS 710.14 and fabricated with square ends. Bolt holes shall be bored and tops of posts trimmed, if required, after posts are set.

PAYMENT:

Payment for Item 606 Guardrail, Type 5, As Per Plan shall include the extra cost, in excess of normal guardrail cost, for additional and different type posts and blockouts, nested W-Beam sections, different bolts, hex nuts, washers, and other hardware.

The following quantities have been carried to the General Summary

- ITEM 202 GUARDRAIL REMOVED 300 LIN.FT.
- ITEM 606 GUARDRAIL, TYPE 5, AS PER PLAN 300 LIN.FT.



LOCATION	COUNTY	APPROX. LOCATION #		SIDE	202-ITEMS REMOVED					606										622	626													
		FROM S.L.M.	TO S.L.M.		GUARDRAIL FEET	GUARDRAIL, B.D., FEET	ANCHOR ASSEMBLY,			B.T.A. EACH	GUARDRAIL, TYPE 5 FEET	GUARDRAIL, B.D., TYPE 5 FEET	ANCHOR ASSEMBLY, TYPE ( )					BRIDGE TERMINAL ASSEMBLY, TYPE ( )			CONCRETE BARRIER TYPE D	BARRIER REFLECTORS, TYPE ( )												
							TYPE A EACH	TYPE A, B.D. EACH	TYPE E EACH				A	A B.D.	B-98	E	T	I	2	D		A	B	A2	B2									
2	GUE	EASTBOUND IR 70																																
				↑	17.57		RT	300																										
					18.17		RT	550																										
					18.47		RT	237.5																										
					18.47		MED.	25	100																									
					18.97		RT	900																										
					20.17		RT	6150																										
					20.37		MED.	50	100																									
					20.77		MED.	12.5	87.5																									
					21.47		MED.	475																										
2			21.77		RT	1400																												
3			23.27		MED.	475																												
3	EXIT RAMP TO SR 513			LT/RT	1562.5																													
3	ENTRANCE RAMP FROM SR 513			LT/RT	1012.5																													
WESTBOUND IR 70																																		
3			22.77		RT	150																												
3	EXIT RAMP TO SR 513			LT/RT	825																													
3	ENTRANCE RAMP FROM SR 513			LT	475																													
2	GUE																																	
				↑	21.97		RT	775																										
					21.37		RT	6775																										
					20.87		MED.	25	100																									
					20.57		MED.	25	100																									
					19.67		RT	875																										
					19.27		RT	987.5																										
					18.67		RT	2025																										
					18.57		MED.	62.5	100																									
					17.87		RT	825																										
2			17.57		RT	625																												
		DEDUCTION FROM SHEET 13				15250																												
GUE		IR 70 TOTALS				12350	587.5	20	10	13		27600.0			10	16		17							311									

IR 70 GUARDRAIL SUB-SUMMARY

GUE-70-10.55

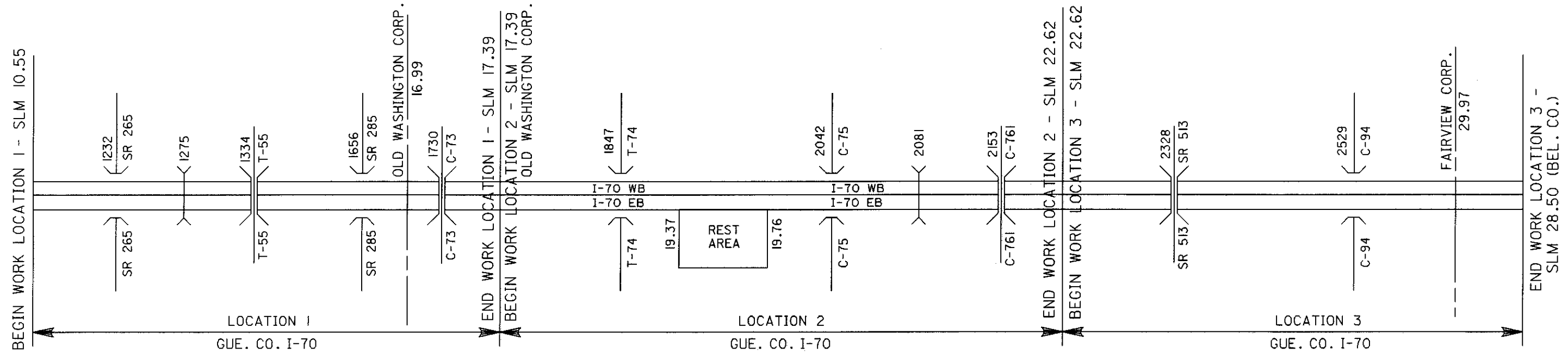
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# ALL PROPOSED GUARDRAIL SHALL BEGIN AND END AT THE SAME (APPROX.) LOCATIONS AS THE EXISTING GUARDRAIL.

NOTE:  
ALL COUNTY S.L.M. HAVE BEEN FIELD MEASURED AND ALL LOCATIONS SHALL BE VERIFIED BY THE PROJECT ENGINEER BEFORE WORK IS DONE AT ANY LOCATION.

NOTE:  
A.A. = ANCHOR ASSEMBLY  
B.T.A. = BRIDGE TERMINAL ASSEMBLY  
B.D. = BARRIER DESIGN

# ASPHALT CONCRETE



\* QUANTITY BASED ON 26' PAVEMENT WIDTH,  
SEE TYPICAL ON SHEET XX.

DEDUCTIONS (I) BRIDGE LENGTH X PAVEMENT WIDTH										PAVEMENT DATA												
LOCATION	COUNTY	ROUTE	LOG POINT TO LOG POINT	LENGTH		WP FEET	TYPICAL	EXISTING PAVEMENT TYPE	PAVEMENT AREA SQ.YD.	254 PAVEMENT PLANING, BITUMINOUS, AS PER PLAN SQ.YD.	PROPOSED PAVEMENT										617 COMPACTED AGGREGATE, TYPE A CU.YD.	
				MILE	FEET						ITEM 407		ITEM 301		ITEM 446 ASPHALT CONCRETE							
										TACK COAT @ 0.075 GAL/S.Y.	TACK COAT FOR INTERMEDIATE @ 0.05 GAL/S.Y.	THICK AVG. INCH	BITUMINOUS AGGREGATE BASE, PG 64-22 CU.YD.	THICK AVG. INCH	INTERMEDIATE COURSE, TYPE 2 AS PER PLAN PG 76-22 CU.YD.	THICK AVG. INCH	SURFACE COURSE, TYPE IH, AS PER PLAN CU.YD.	THICK AVG. INCH	INTERMEDIATE COURSE, TYPE 2 PG 64-28 CU.YD.	THICK AVG. INCH	SURFACE COURSE, TYPE IH CU.YD.	
1	GUE	IR 70	EASTBOUND																			
			10.55-17.39	6.84	36115	26	1	446	104332	104332	7825	5217			1.75	5071.69	1.5	4347.17				
			WESTBOUND																			
			10.55-17.39	6.84	36115	26	1	446	104332	104332	7825	5217			1.75	5071.69	1.5	4347.17				
			BRIDGE DEDUCTIONS()						(3109)	(3109)	(233)	(155)				(151.13)		(129.54)				
			EXTRA TACK COAT FOR LONGITUDINAL JOINT @ 0.25 GAL/S.Y.								543											
1	GUE	IR 70	TOTALS						205555	15960	10279				9992.25		8564.8					
2	GUE	IR 70	EASTBOUND																			
			17.39-22.62	5.23	27614	24	2	446	73637	*79774	5523	3682	3.5	*7755.81	3.5	7159.15	1.5	3068.21				
			WESTBOUND																			
			17.39-22.62	5.23	27614	24	2	446	73637	*79774	5523	3682	3.5	*7755.81	3.5	7159.15	1.5	3068.21				
			BRIDGE DEDUCTIONS()						(2496)	(2496)	(187)	(125)		(346.67)		(121.33)		(104.0)				
			EXTRA TACK COAT FOR LONGITUDINAL JOINT @ 0.25 GAL/S.Y.								414											
2	GUE	IR 70	TOTALS						157052	11273	7239		15164.95		14196.97		6032.42					
3	GUE	IR 70	EASTBOUND																			
			22.62-28.50	5.88	31046	26	1	446	89688	89688	6727	4484			1.75	4359.83	1.5	3737.00				
			WESTBOUND																			
			22.62-28.50	5.88	31046	26	1	446	89688	89688	6727	4484			1.75	4359.83	1.5	3737.00				
			BRIDGE DEDUCTIONS()						(864)	(864)	(65)	(43)				(42.0)		(36.0)				
			EXTRA TACK COAT FOR LONGITUDINAL JOINT @ 0.25 GAL/S.Y.								466											
3	GUE	IR 70	TOTALS						178512	13855	8925				8677.66		7438.00					
4	GUE	SR 513	8.67-8.71	0.05	264	20		404	587	*720	44	29			1.75	28.53	1.5	*30.00				

\* INCLUDES APPROACH SLAB AREAS GUE-70-2328

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CALCULATED  
LME  
CHECKED  
TJD

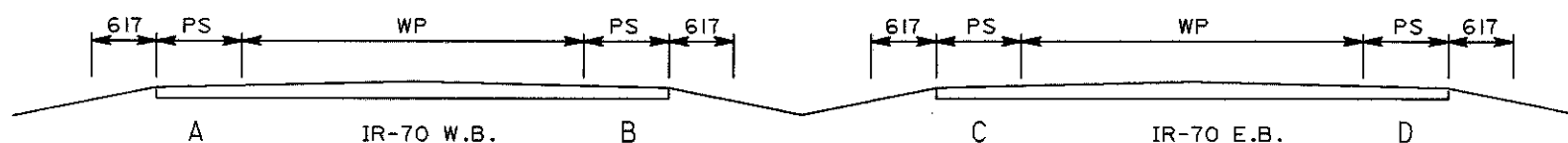
ASPHALT CONCRETE

GUE-70-10.55

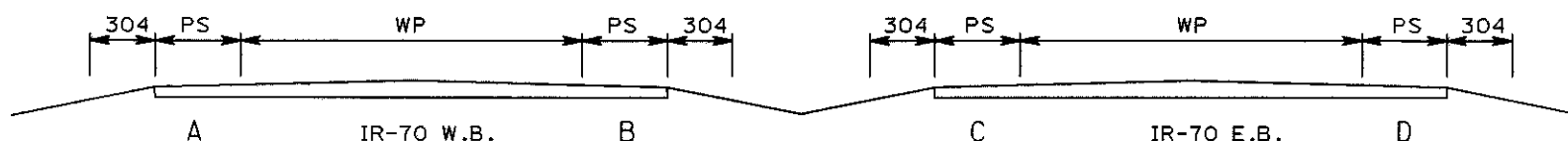
16  
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PLAN NO.

### TYPICAL 1



### TYPICAL 2



DEDUCTIONS ( )

PAVED SHOULDER DATA

LOCATION		ROUTE	LENGTH		TYPICAL	PROPOSED WIDTH (feet)				SHOULDER AREA SQ.YD.	446 ASPHALT CONCRETE				407		304		617		
											THICK	INTERMEDIATE COURSE, TYPE 2, PG 76-22, AS PER PLAN	THICK	SURFACE COURSE, TYPE IH, AS PER PLAN	TACK COAT @ 0.075 GAL/SQ.YD.	TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL/SQ.YD.	THICK	AGGREGATE BASE (FOR MAINLINE SHOULDERS) SEE TYP. 2 SHEET 9 FOR WIDTHS	THICK	COMPACTED AGGREGATE TYPE A 4' WIDTH	SHOULDER PREPARATION
						INCH	CU.YD.	INCH	CU.YD.		GALLON	GALLON	INCH	CU.YD.	INCH	CU.YD.	SQ.YD.				
		LOG POINT TO LOG POINT	MILE	FEET		A	B	C	D												
2	IR 70	17.39-22.62	5.23	27614	2	10	4	4	10	85910	3.5	8352.36	1.5	3579.6	6443	4296	3.5	5369		55228	

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PAVED SHOULDERS

GUE-70-10.55

CALCULATED  
LME  
CHECKED  
TJD

BRIDGE DEDUCTIONS (BRIDGE LENGTH X PAVEMENT WIDTH)  
 APPROACH SLABS ADDED TO LENGTH FOR CALCULATION PURPOSES

LOCATION 1

GUE-70-1232 L/R: 2(178' X 24' / 9) = 949 SQ.YD.  
 GUE-70-1275 L/R: 2(222' X 24' / 9) = 1184 SQ.YD.  
 GUE-70-1656 L/R: 2(183' X 24' / 9) = 976 SQ.YD.  
 3109 SQ.YD.

LOCATION 2

GUE-70-1847 L/R: 2(156' X 24' / 9) = 832 SQ.YD.  
 GUE-70-2042 L/R: 2(156' X 24' / 9) = 832 SQ.YD.  
 GUE-70-2081 L/R: 2(156' X 24' / 9) = 832 SQ.YD.  
 2496 SQ.YD.

LOCATION 3

GUE-70-2529 L/R: 2(162' X 24' / 9) = 864 SQ.YD.

- # APPROACH SLABS ONLY
- \* APPROACH SLAB AREAS INCLUDED

DEDUCTIONS CARRIED TO SHEET 16.

BRIDGE DECK DATA

LOCATION	COUNTY, ROUTE, BRIDGE NO.	LENGTH (BRIDGE LIMITS)	WIDTH	BRIDGE DECK AREA	202	BRIDGE DECK REPAIR			SPECIAL			516	446 ASPHALT CONCRETE		407	
					WEARING COURSE REMOVED	<input type="checkbox"/> SS-845 LATEX MODIFIED CONCRETE <input type="checkbox"/> SS-850 DENSE CONCRETE			PATCHING CONCRETE BRIDGE DECK, TYPE B	STEEL DRIP STRIP	DECK WATERPROOFING		VERT. EXT. OF STR. EXP. JOINTS	THICK (AVG.)	SURFACE COURSE, TYPE I, PG 76-22, AS PER PLAN	TACK COAT, 702.13 @ 0.075 GAL/S.Y.
					VARIABLE DEPTH	----" THICK OVERLAY	VARIABLE THICKNESS OVERLAY	FULL-DEPTH REPAIR			MEMBRANE WATERPROOFING SHEET TYPE I	MEMBRANE WATERPROOFING				
FEET	FEET	SQ.YD.	SQ.YD.	SQ.YD.	CU.YD.	CU.YD.	SQ.YD.	SQ.YD.	SQ.YD.	SQ.YD.	FEET	INCH	CU.YD.	GALLON		
1	GUE-70-1232L	128	33.5	476.4	#186	SKIP - SEE DETAIL 1							1.5	7.8	14	
	GUE-70-1232R	128	33.5	476.4	#186	SKIP - SEE DETAIL 1							1.5	7.8	14	
	GUE-70-1275L	172	41	783.6	#228	SKIP - SEE DETAIL 1							1.5	9.5	17	
	GUE-70-1275R	172	41	783.6	#228	SKIP - SEE DETAIL 1							1.5	9.5	17	
	GUE-70-1656L	133	41	605.9	#228	SKIP - SEE DETAIL 1							1.5	9.5	17	
	GUE-70-1656R	133	41	605.9	#228	SKIP - SEE DETAIL 1							1.5	9.5	17	
	TOTALS				1284									53.6	96	
2	GUE-70-1847L	106	39.7	467.6	*688	SEE DETAIL 2							1.5	28.7	52	
	GUE-70-1847R	106	39.7	467.6	*688	SEE DETAIL 2							1.5	28.7	52	
	GUE-70-2042L	106	39.7	467.6	*688	SEE DETAIL 2							1.5	28.7	52	
	GUE-70-2042R	106	39.7	467.6	*688	SEE DETAIL 2							1.5	28.7	52	
	GUE-70-2081L	106	39.7	467.6	*688	SEE DETAIL 2							1.5	28.7	52	
	GUE-70-2081R	106	39.7	467.6	*688	SEE DETAIL 2							1.5	28.7	52	
	TOTALS				1376									172.2	312	
3	GUE-70-2529L	112	41	510.2	#228	SKIP - SEE DETAIL 1							1.5	9.5	17	
	GUE-70-2529R	112	41	510.2	#228	SKIP - SEE DETAIL 1							1.5	9.5	17	
	TOTALS				456									19.0	34	

QUANTITIES FOR APPROACH SLABS ONLY

QUANTITIES FOR APPROACH SLABS ONLY

QUANTITIES CARRIED TO GENERAL SUMMARY

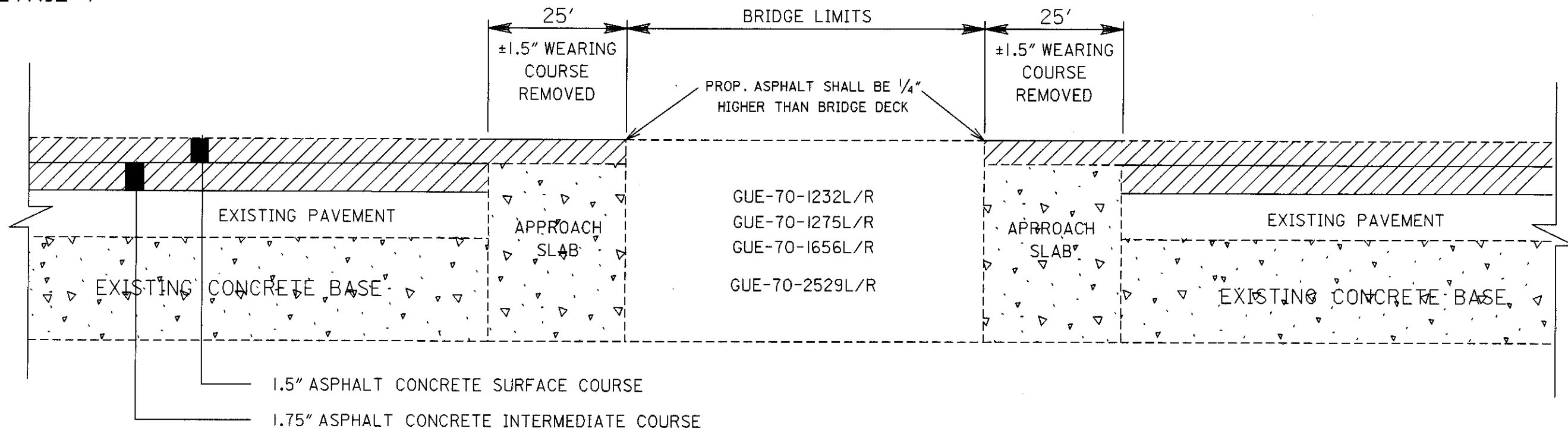
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CALCULATED  
LME  
CHECKED  
TJD

BRIDGE DECK TREATMENT

GUE-70-10.55

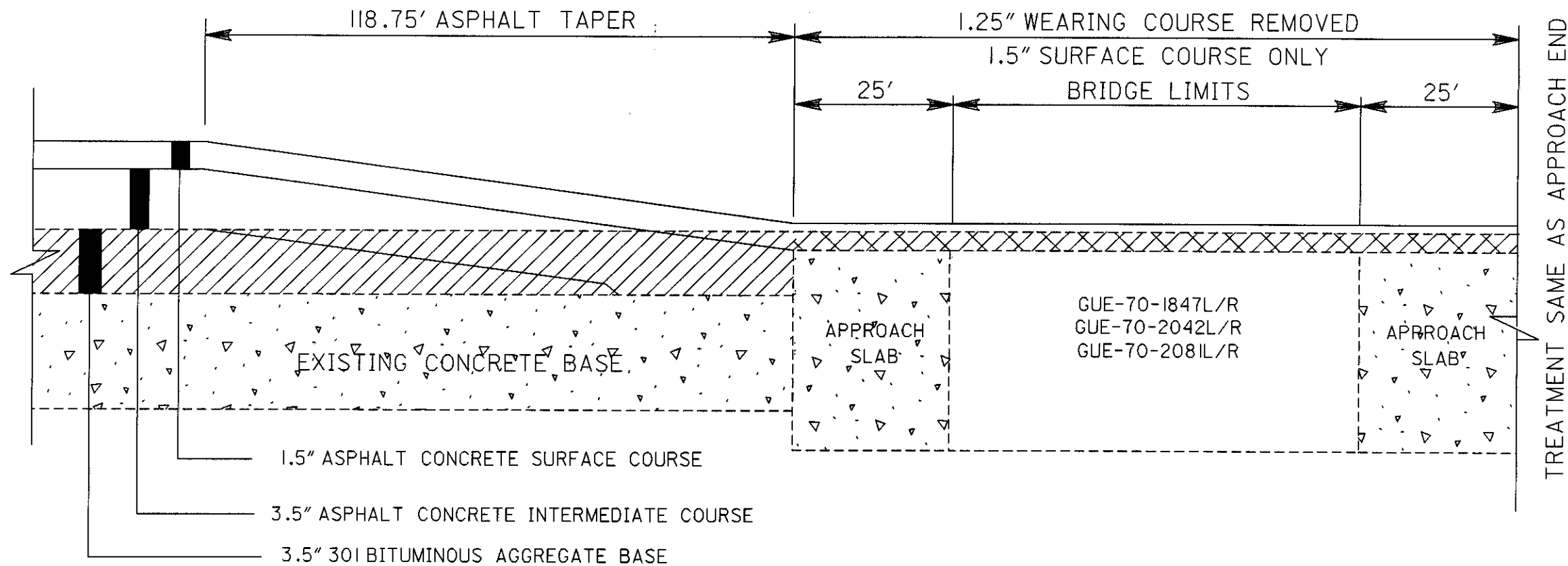
DETAIL 1



-  PAVEMENT PLANING BITUMINOUS
-  WEARING COURSE REMOVED

NOTE:  
IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ASPHALT THICKNESS ON BRIDGES AND APPROACH SLABS WITH WEARING COURSE REMOVED, THE INTENT IS TO REMOVE ASPHALT COMPLETELY FROM BRIDGE DECK AND APPROACH SLABS AS SHOWN. CARE SHALL BE TAKEN NOT TO DAMAGE UNDERLYING CONCRETE.

DETAIL 2



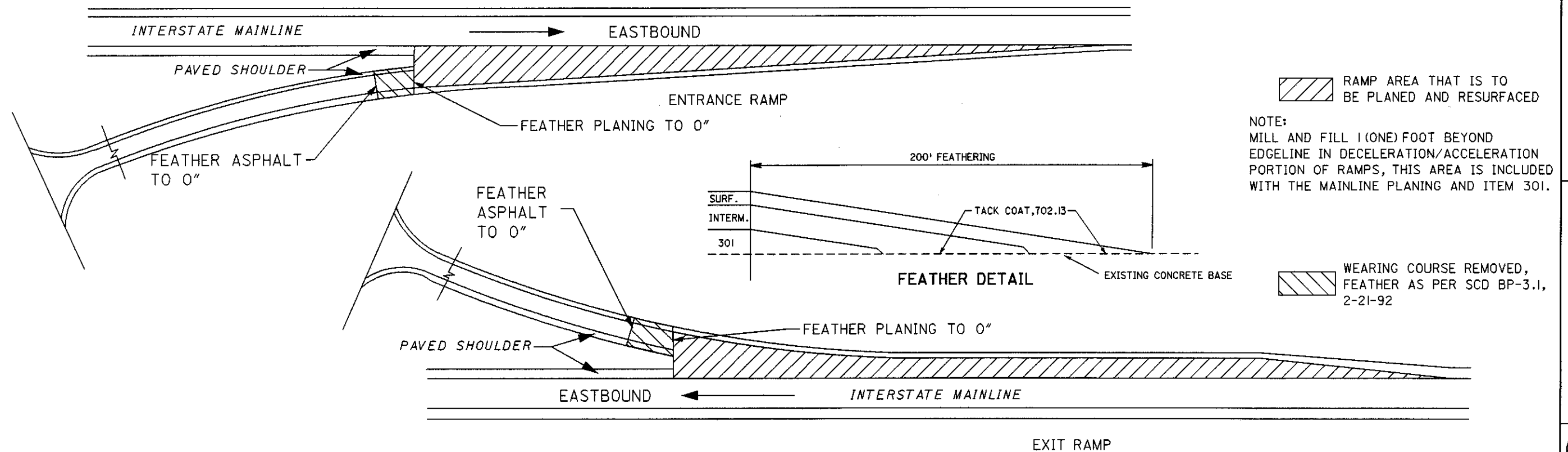
# TREATMENT AT REST AREA

PLAN NO.  

# ALL AREAS TAKEN FROM PREVIOUS CONSTRUCTION PLANS

( ) = AVERAGE

LOCATION	ROUTE	LOG POINT TO LOG POINT	DESCRIPTION	AREA IN SQ.YDS.	PROPOSED ITEMS											
					407			301		446 ASPHALT CONCRETE			254	202		
					TACK COAT @ 0.075 GAL/S.Y.	TACK COAT, 702.13 @ 0.075 GAL/S.Y.	TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL/S.Y.	THICK	BITUMINOUS AGGREGATE BASE, PG 64-22	THICK	INTERMEDIATE COURSE, TYPE 2, PG 76-22, AS PER PLAN	THICK	SURFACE COURSE, TYPE IH, AS PER PLAN	PAVEMENT PLANING, BITUMINOUS (3.5" AVG.)	EXISTING SURFACE	WEARING COURSE REMOVED (FOR FEATHER AREA)
GALLON	GALLON	GALLON	INCH	CU.YD.	INCH	CU.YD.	INCH	CU.YD.	SQ.YD.	SQ.YD.	SQ.YD.					
2	IR 70	GUE. CO.	DECELERATION RAMP @ REST AREA	#1600	120		80	3.5	155.56	1.75	77.78	1.5	66.67	1600	448	
			ACCELERATION RAMP @ REST AREA	#1600	120		80	3.5	155.56	1.75	77.78	1.5	66.67	1600	448	
			FEATHER @ DECELERATION RAMP (200')	356		11	14	(1.75)	7.56	(1.75)	15.12	1.25	12.36		448	176
			FEATHER @ ACCELERATION RAMP (200')	356		11	14	(1.75)	7.56	(1.75)	15.12	1.25	12.36		448	153
2	IR 70	TOTALS			240	22	188		326.24		185.80		158.06	3200		329



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CALCULATED  
LME  
CHECKED  
TJD

TREATMENT AT REST AREA

GUE-70-10.55

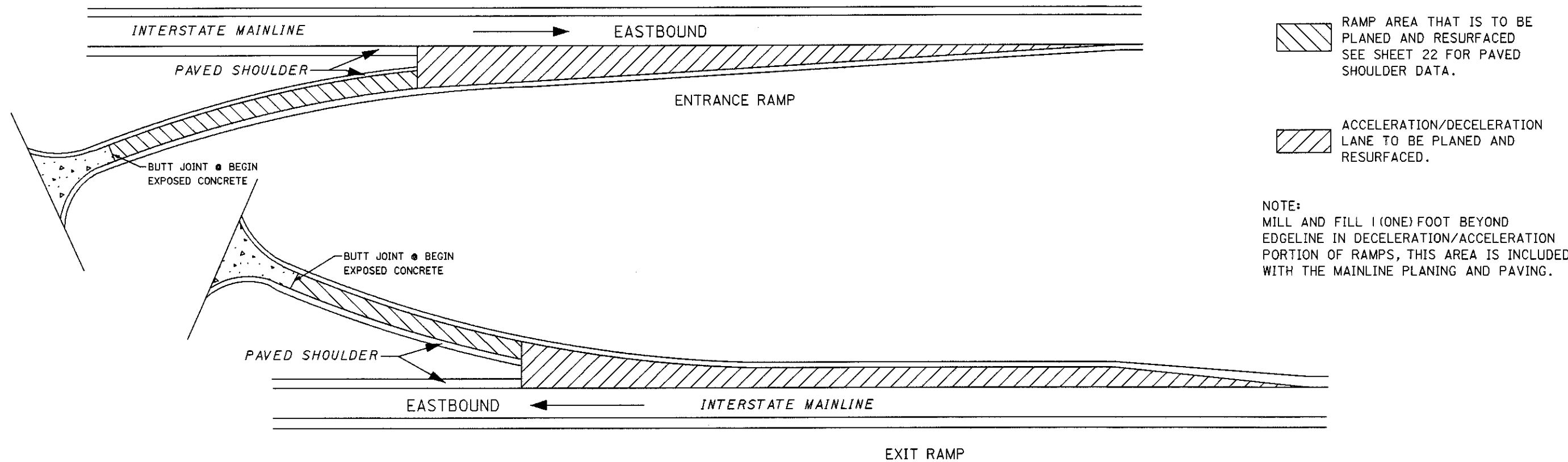
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# TREATMENT AT SR 285

ALL AREAS CALCULATED FROM PREVIOUS CONSTRUCTION PLANS

( ) = AVERAGE

LOCATION	ROUTE	LOG POINT TO LOG POINT	DESCRIPTION	AREA IN SQ.YDS.	PROPOSED ITEMS									
					407			446 ASPHALT CONCRETE				254	EXISTING SURFACE	202
					TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL/S.Y.	TACK COAT @ 0.075 GAL/S.Y.	TACK COAT, 702.13 @ 0.075 GAL/S.Y.	THICK	INTERMEDIATE COURSE, TYPE 2, PG 76-22, AS PER PLAN	THICK	SURFACE COURSE, TYPE 1H, AS PER PLAN	PAVEMENT PLANING, BITUMINOUS (1.75" AVG.)		WEARING COURSE REMOVED (FOR FEATHER AREA)
					GALLON	GALLON	GALLON	INCH	CU.YD.	INCH	CU.YD.	SQ.YD.	SQ.YD.	
I	IR 70	EASTBOUND	DECELERATION LANE	1970	98	148		1.75	95.76	1.25	68.40	1970	446	
			OFF RAMP TO SR 285	1337	67	100		1.75	64.99	1.25	46.42	1337	446	
			ON RAMP FROM SR 285	1175	59	88		1.75	57.12	1.25	40.80	1175	446	
			ACCELERATION LANE	2537	127	190		1.75	123.33	1.25	88.09	2537	446	
		WESTBOUND	DECELERATION LANE	1614	81	121		1.75	78.46	1.25	56.04	1614	446	
			OFF RAMP TO SR 285	1430	72	107		1.75	69.51	1.25	49.65	1430	446	
			ON RAMP FROM SR 285	1375	69	103		1.75	66.84	1.25	47.74	1375	446	
			ACCELERATION LANE	2222	111	167		1.75	108.01	1.25	77.15	2222	446	
I	IR 70		TOTALS		684	1024			664.02		474.29	13660		



G0700003.MEA 1-15-99

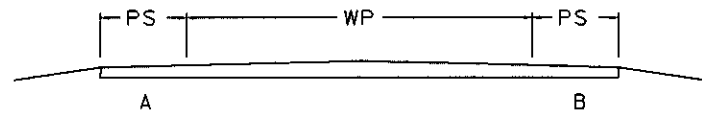
TREATMENT AT SR 285

GUE-70-10.55

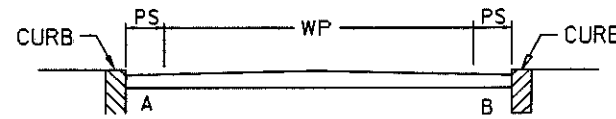
CALCULATED  
LME  
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TJD

PAVED SHOULDERS ON RAMPS

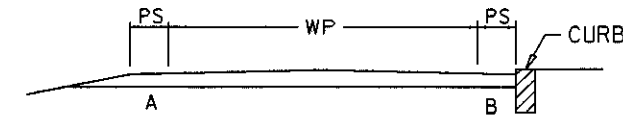
TYPICAL 1



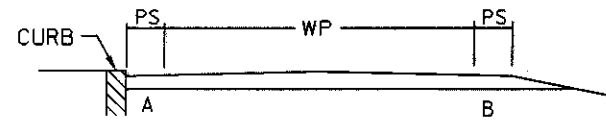
TYPICAL 2



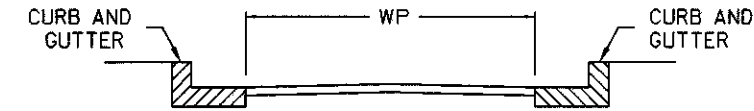
TYPICAL 3



TYPICAL 4



TYPICAL 5



PAVED SHOULDER DATA

LOCATION	ROUTE	DESCRIPTION	LENGTH (FEET)		TYPICAL	PROPOSED WIDTH (FEET)		SHOULDER AREA SQ.YD.	407		446				254	617		NOTES
			A	B		TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL/S.Y.	TACK COAT @ 0.075 GAL/S.Y.		ASPHALT CONCRETE		PAVEMENT PLANING, BITUMINOUS (1.75" AVG. DEPTH) SQ.YD.	AVG. THICK INCHES	COMPACTED AGGREGATE TYPE A 2' WIDE TO BACK UP PAVED SHOULDER CU.YD.					
						GALLON	GALLON		THICK INCH	INTERMEDIATE COURSE, TYPE 2, PG 76-22, AS PER PLAN CU.YD.				THICK INCH	SURFACE COURSE, TYPE 1H, AS PER PLAN CU.YD.			
I	IR 70	EASTBOUND																
		OFF RAMP TO SR 285	746	746	1	3	6	746	37	56	1.75	36.26	1.25	25.90	746	2	18	
		ON RAMP FROM SR 285	661	661	1	3	6	661	33	50	1.75	32.13	1.25	22.95	661	2	16	
		WESTBOUND																
		OFF RAMP TO SR 285	798	798	1	3	6	798	40	60	1.75	38.79	1.25	27.71	798	2	20	
		ON RAMP FROM SR 285	763	763	1	3	6	763	38	57	1.75	37.09	1.25	26.49	763	2	19	
		TOTALS							148	117		75.88		54.20	1561		39	

G0700005.MPS 2-9-99

QUANTITIES CARRIED TO THE GENERAL SUMMARY

PAVED SHOULDERS ON RAMPS

GUE-70-10.55



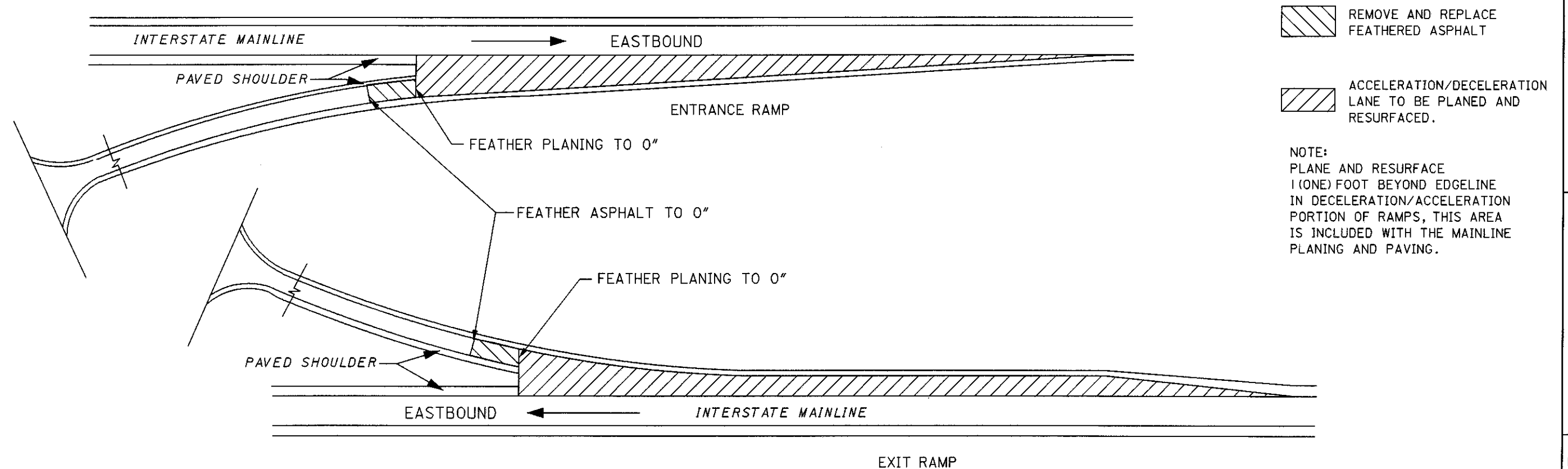
# TREATMENT AT SR 513

ALL AREAS TAKEN FROM PREVIOUS CONSTRUCTION PLANS

() = AVERAGE

# EXISTING FEATHERED AREA

LOCATION	ROUTE	LOG POINT TO LOG POINT	DESCRIPTION	AREA IN SQ.YDS.	PROPOSED ITEMS									
					407			446 ASPHALT CONCRETE				254	EXISTING SURFACE	202
					TACK COAT @ 0.075 GAL/S.Y.	TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL/S.Y.	TACK COAT, 702.13 @ 0.075 GAL/S.Y.	THICK	INTERMEDIATE COURSE, TYPE 2, PG 76-22, AS PER PLAN	THICK	SURFACE COURSE, TYPE IH, AS PER PLAN	PAVEMENT PLANING, BITUMINOUS (3.25" AVG.)		WEARING COURSE REMOVED (FOR FEATHER AREA)
GALLON	GALLON	GALLON	INCH	CU.YD.	INCH	CU.YD.	SQ.YD.	SQ.YD.						
3	IR 70	EASTBOUND	DECELERATION LANE	1600	120	80		1.75	77.78	1.25	55.56	1600	446	
			ACCELERATION LANE	2000	150	100		1.75	97.22	1.25	69.44	2000	446	
		FEATHERING AT EXIT RAMP (75')	178						(1.75)	8.65				#100
		FEATHERING AT ENTRANCE RAMP (75')	178						(1.75)	8.65				#100
	WESTBOUND	DECELERATION LANE	1570	118	78		1.75	76.32	1.25	54.51	1570	446		
		ACCELERATION LANE	1666	125	83		1.75	80.99	1.25	57.85	1666	446		
		FEATHERING AT EXIT RAMP (75')	178						(1.75)	8.65				#100
		FEATHERING AT ENTRANCE RAMP (75')	178						(1.75)	8.65				#100
3	IR 70		TOTALS		513	341	52		332.31		271.96	6836		400



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CALCULATED  
LME  
CHECKED  
TJD

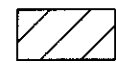
TREATMENT AT SR 513

GUE-70-10.55

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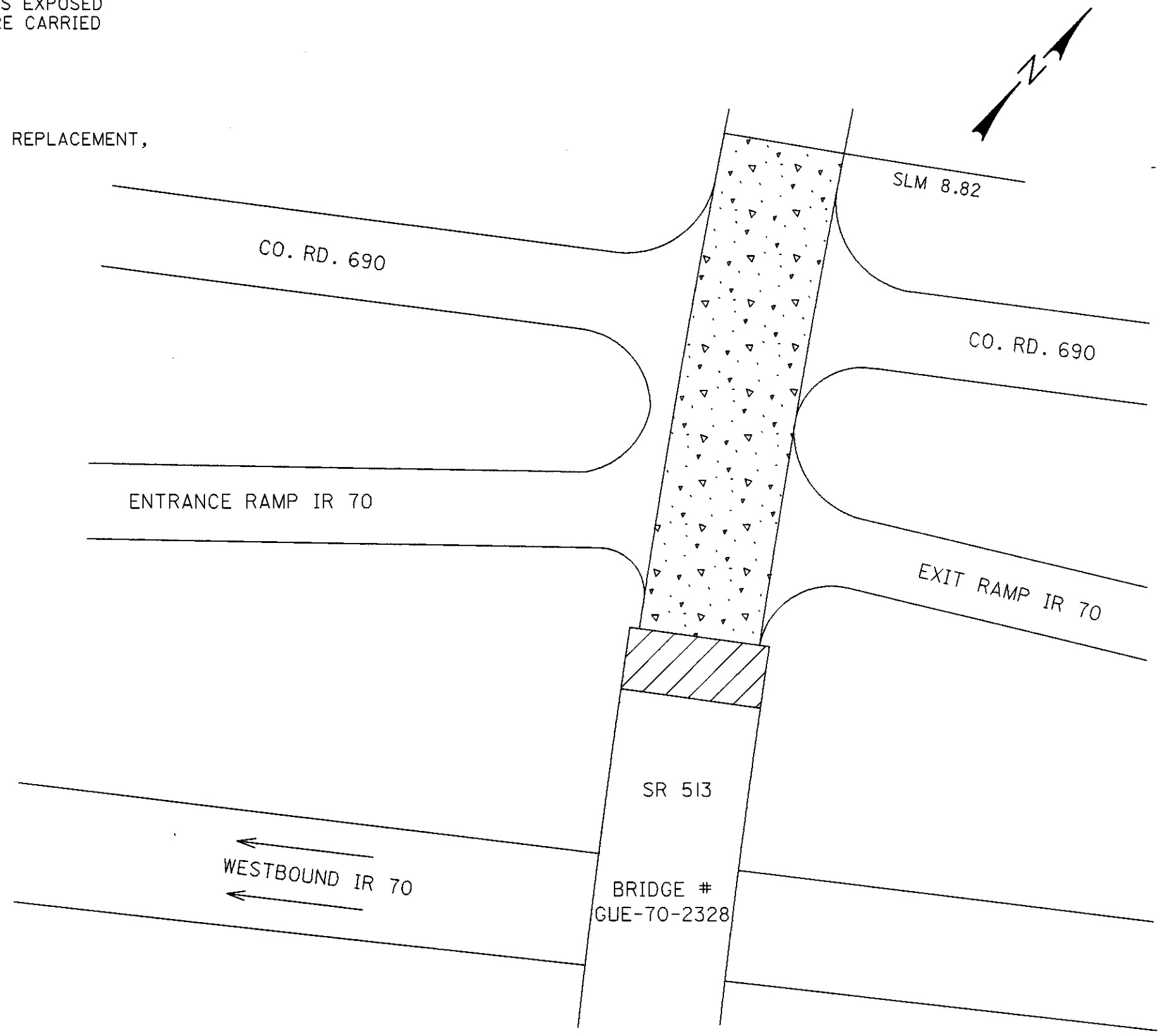


WEARING COURSE REMOVED SHALL BE PERFORMED IN THIS AREA, AFTER WHICH THE CONCRETE SHALL BE EVALUATED TO DETERMINE THE EXTENT OF CONCRETE REPLACEMENT. THE ASPHALT SHALL ALSO BE REMOVED FROM THE RAMP APPROACH AREAS. THE INTENT IS TO LEAVE THE CONCRETE IN THE ABOVE MENTIONED AREAS EXPOSED (UNPAVED). THE FOLLOWING ESTIMATED QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY  
 AREA: 229.4' X 24' = 612 SQ.YD. (MAINLINE SR 513)  
 RAMP APPROACH AREAS (4): 630 SQ.YD.



ASPHALT SHALL BE REMOVED AND REPLACED ON APPROACH SLAB AVG. DEPTH 1.5". QUANTITIES SHOWN ON SHEET 16.

ITEM 202 WEARING COURSE REMOVED 1242 SQ.YD.  
 ITEM 255 FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN 500 SQ.YD. (MAINLINE)  
 250 SQ.YD. (RAMPS)  
 TOTAL = 750 SQ.YD.



G0700003.CMD 2-1-99

TREATMENT AT SR 513

GUE-70-10.55

CALC. BY SAB  
DATE 01-14-99

CHKD. BY \_\_\_\_\_  
DATE \_\_\_\_\_

# LOCATION SUB-SUMMARY

DETAIL	
1	TAPERED ACCELERATION LANE
2	DECELERATION LANE
3	MULTILANE DIVIDED/ CONTROLLED ACCESS

DETAIL	
4	4 LANE DIVIDED TO 2 LANE TRANSITION
5	4 LANE UNDIVIDED TO 2 LANE TRANSITION
6	ONE LANE BRIDGE
7	STOP APPROACH
8	THRU APPROACH
9	TWO WAY LEFT TURN LANE

DETAIL	
10	APPROACH W/LT. TURN LANE
11	HORIZONTAL CURVE 40' (NOTE 2)
12	HORIZONTAL CURVE ALT. (NOTE 3)
GAP	CENTERLINE AT 80' TYP.

LOCATION NUMBER	LOCATION						DETAIL	ITEM QUANTITIES			PRISMATIC RETRO-REFLECTOR	PRISMATIC RETRO-REFLECTOR COLORS					REMARKS	
	COUNTY	ROUTE	STRAIGHT LINE KILOMETERS		S.L.M. MILES			INSTALLATION ONLY				ONE-WAY		TWO-WAY				
			FROM	TO	FROM	TO		RPM	RPM CASTING	PRISMATIC RETRO-REFLECTOR		WHITE	YELLOW	YELLOW/YELLOW	WHITE/RED	YELLOW/RED		
	GUE	IR 70	EB			10.55		17.39	3	301					301			
		RAMP					2	29							17	12		OFF RAMP TO SR 285
		RAMP					1	30							19	11		ON RAMP FROM SR 285
GUE	IR 70	WB			10.55	17.39	3	301				301						
		RAMP					2	30							19	11		OFF RAMP TO SR 285
		RAMP					1	24							12	12		ON RAMP FROM SR 285
TOTAL LOCATION 1									715			602		67	46			
GUE	IR 70	EB			17.39	22.62	3	230				230						
		RAMP					2	24							17	7		OFF RAMP TO REST AREA
		RAMP					1	11							5	6		ON RAMP FROM REST AREA
		IR 70	WB		17.39	22.62	3	230				230						
TOTAL LOCATION 2									495			460		22	13			
GUE	IR 70	EB			22.62	28.50	3	259				259						
		RAMP					2	31							15	16		OFF RAMP TO SR 513
		RAMP					1	20							5	15		ON RAMP FROM SR 513
		RAMP					2	30							17	13		OFF RAMP TO CR 114
		IR 70	WB		22.62	28.50	3	259				259						
		RAMP					2	24							13	11		OFF RAMP TO SR 513
		RAMP					1	16							5	11		ON RAMP FROM SR 513
		RAMP					1	19							5	14		ON RAMP FROM CR 114
TOTAL LOCATION 3									658			518		60	80			

G0700001.RPM 1-15-99

CALCULATED  
SAB  
CHECKED  
LINE

RPM LOCATION SUB-SUMMARY

GUE-70-10.55

25/30

### ITEM 644 EDGE LINE SUB-SUMMARY

LOCATION	CO.	ROUTE	S.L.M.		WHITE EDGE LINE QU.			YELLOW EDGE LINE QU.			PARTICIPATION TYPE				EDGE LINE TOTAL MILES	REMARKS
			FROM	TO	TOTAL MILES	HIGHWAY	RAMP	TOTAL MILES	HIGHWAY	RAMP	IRG	FG	RSG	NON FED STATE		
1	GUE	IR 70 EB	10.55	17.39	7.40	6.84	0.56	7.19	6.84	0.35					14.59	SR 285 ON/OFF RAMPS
		IR 70 WB	10.55	17.39	7.34	6.84	0.50	7.19	6.84	0.35					14.53	SR 285 ON/OFF RAMPS
TOTAL LOCATION 1					14.74	13.68	1.06	14.38	13.68	0.70					29.12	
2	GUE	IR 70 EB	17.39	22.62	5.23	5.23		5.23	5.23						10.46	
		IR 70 WB	17.39	22.62	5.23	5.23		5.23	5.23						10.46	
TOTAL LOCATION 2					10.46	10.46		10.46	10.46						20.92	
3	GUE	IR 70 EB	22.62	28.50	5.88	5.88		5.88	5.88						11.76	
		IR 70 WB	22.62	28.50	5.88	5.88		5.88	5.88						11.76	
TOTAL LOCATION 3					11.76	11.76		11.76	11.76						23.52	
4	GUE	SR 513	8.67	8.82	0.30	0.30									0.30	

### CENTER LINE SUB-SUMMARY

QUANTITIES INCLUDE CL AROUND OUTSIDE OF PAINTED ISLAND

LOCATION	CO.	ROUTE	S.L.M.		CENTER LINES QUANTITIES		PARTICIPATION TYPE				TOTAL CENTER LINE MILES	REMARKS	
			FROM	TO	TOTAL MILES	EQUIVALENT SOLID LINE	IRG	FG	RSG	NON FED STATE			
4	GUE	SR 513	8.67	8.82	0.15	0.30						0.15	

**ITEM 644 LANE LINE**  
**ITEM 644 AUXILIARY MARKINGS**

PLAN NO.

LOCATION	CO.	ROUTE	S.L.M.		QUANTITIES			AUXILIARY MARKINGS				PARTICIPATION TYPE	REMARKS
					TOTAL MILES	4" LANE LINES		CHANNELIZING LINE LIN.FT.	TRANSVERSE LINE LIN.FT.	STOP LINE LIN.FT.	LANE ARROW EACH		
			FROM	TO		DASHED	SOLID					FG	
1	GUE	IR 70 EB	10.55	17.39	6.93	6.93							
		TOTAL INCLUDES DASHES AT SR 285											
		DECELERATION RAMP AT SR 285					608	244	110	1			
		ACCELERATION RAMP AT SR 285					753						
	GUE	IR 70 WB	10.55	17.39	6.92	6.92							
		TOTAL INCLUDES DASHES AT SR 285											
		DECELERATION RAMP AT SR 285					748	204	91	1			
		ACCELERATION RAMP AT SR 285					487						
		TOTAL LOCATION 1			13.85	13.85	2596	448	201	2			
2	GUE	IR 70 EB	17.39	22.62	5.29	5.29							
		TOTAL INCLUDES DASHES AT REAST AREA											
		DECELERATION RAMP AT REST AREA					627	232					
		ACCELERATION RAMP AT REST AREA					187						
	GUE	IR 70 WB	17.39	22.62	5.23	5.23							
		TOTAL LOCATION 2			10.52	10.52	814	232					
3	GUE	IR 70 EB	22.62	28.50	5.99	5.99							
		TOTAL INCLUDES DASHES AT SR 513 & CR 114 OFF											
		DECELERATION RAMP AT SR 513					522	183	58	1			
		ACCELERATION RAMP AT SR 513					210						
		DECELERATION RAMP AT CR 114					647	342	78	1			
	GUE	IR 70 WB	22.62	28.50	5.98	5.98							
		TOTAL INCLUDES DASHES AT SR 513 & CR 114 ON											
		DECELERATION RAMP AT SR 513					477	207	62	1			
		ACCELERATION RAMP AT SR 513					194						
		ACCELERATION RAMP AT CR 114					184						
		TOTAL LOCATION 3			11.97	11.97	2234	732	198	3			

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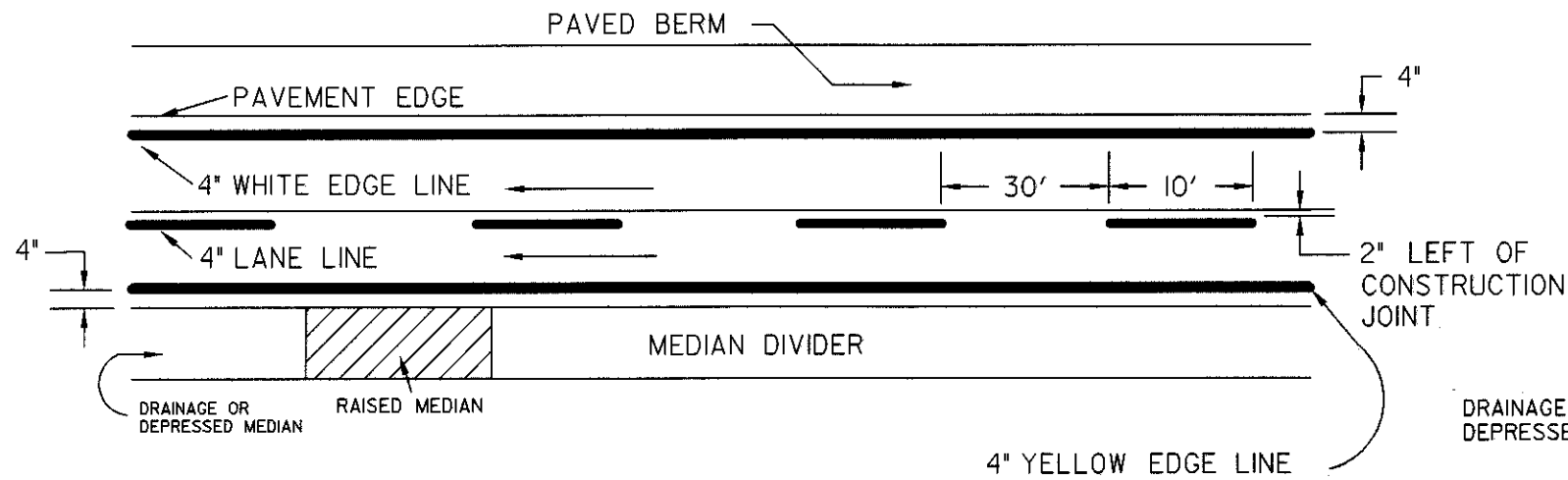
LANE LINE SUB-SUMMARY AND AUXILIARY MARKINGS

GUE-70-10.55

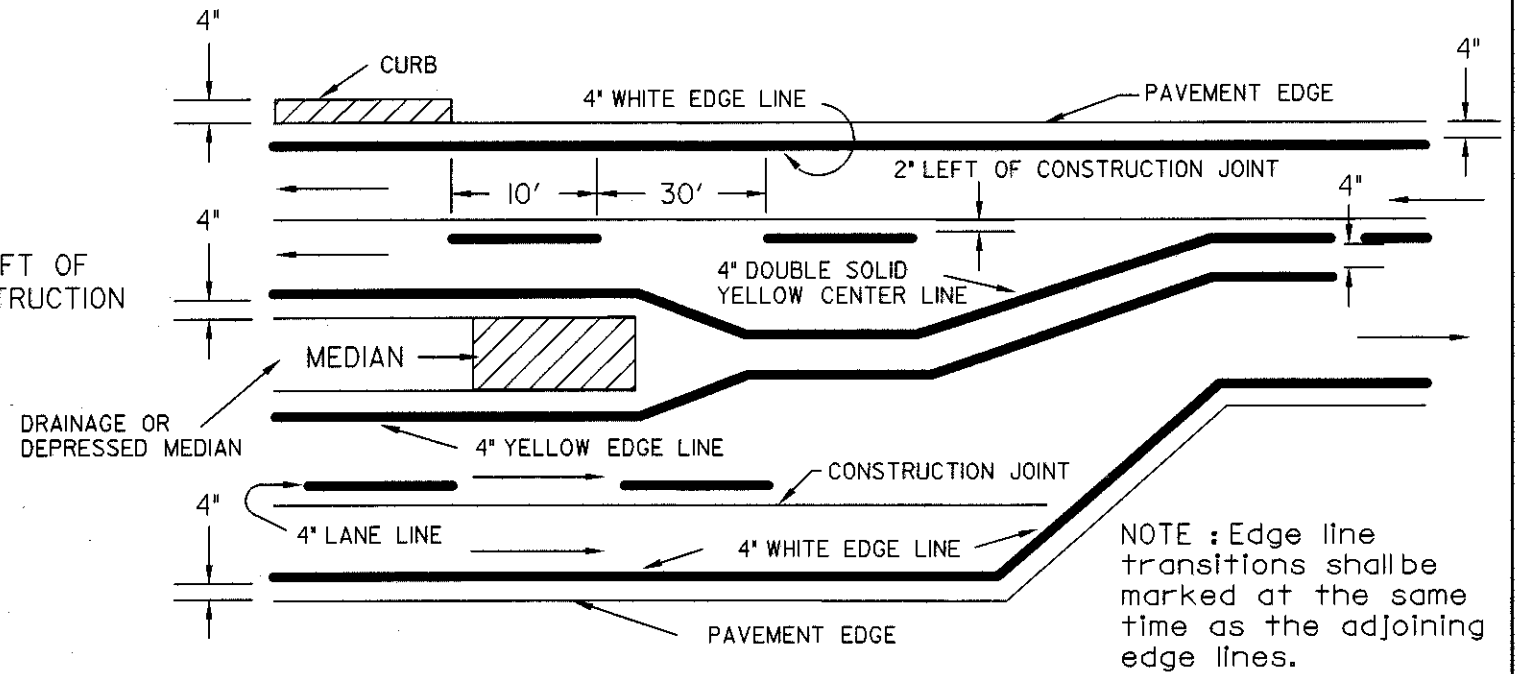
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CALCULATED  
606  
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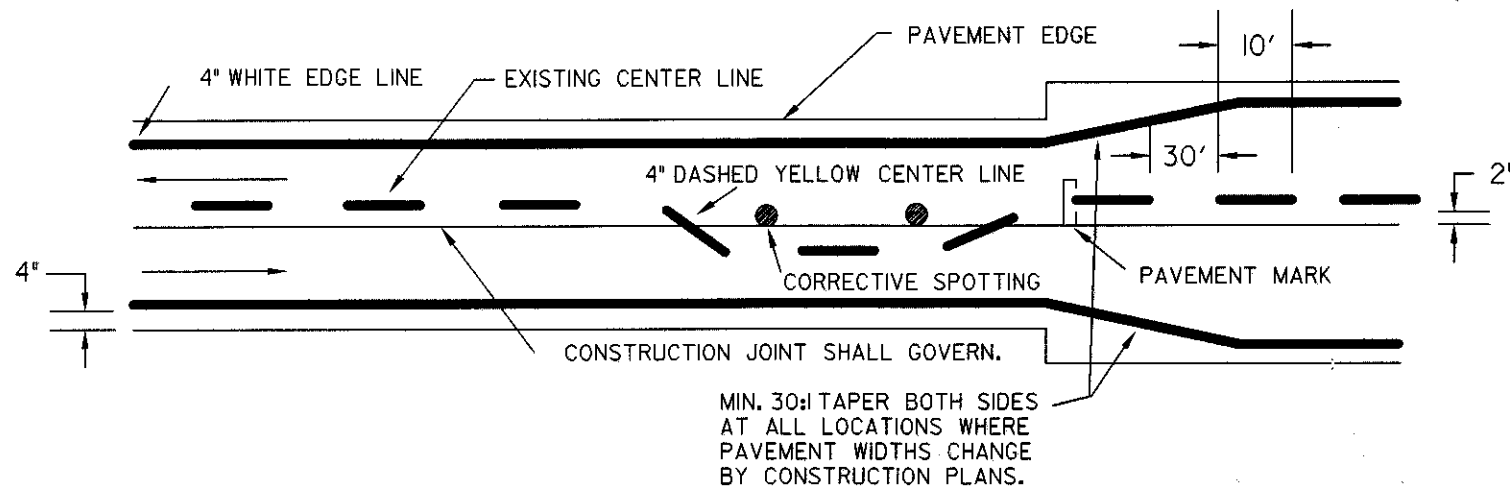
FREEWAY & EXPRESSWAY MAINLINE MARKINGS



MULTILANE DIVIDED & UNDIVIDED HIGHWAY MARKINGS



TWO LANE MARKINGS



NOTES:

1. The distance from the pavement edge to the nearside edge of the edgeline may be increased with the approval of the engineer in order to maintain uniform lane width.
2. See TC-72.20 for entrance and exit ramp markings.
3. The cycle length for dashed lines shall be 40 feet plus or minus 6 inches. The minimum length of dash shall be sufficiently long to maintain a 3:1 ratio between length of gap and length of dash.

Ohio Department of Transportation

Pavement Marking  
Typical Details

DATE  
11-80  
9-86  
9-91

# GENERAL SUMMARY

LOCATION 1		LOCATION 2		LOCATION 3		LOCATION 4		ITEM	ITEM EXT. NO.	GRAND TOTAL LOCATIONS 1,2,3&4	UNIT	DESCRIPTION
SHEET NO.'S	TOTALS	SHEET NO.'S	TOTALS	SHEET NO.'S	TOTALS	SHEET NO.'S	TOTALS					
18	1284	18,20	1705	18,23,24	2098			202	23500	5087	SQ.YD.	WEARING COURSE REMOVED
		5	40					202	30000	40	SQ.FT.	WALK REMOVED
		5	10					202	32000	10	LIN.FT.	CURB REMOVED
		14,15	15350					202	38000	15350	LIN.FT.	GUARDRAIL REMOVED
		13	15250					202	38101	15250	LIN.FT.	GUARDRAIL REMOVED FOR STORAGE, AS PER PLAN
		15	587.5					202	38300	587.5	LIN.FT.	GUARDRAIL REMOVED, BARRIER DESIGN
		15	43					202	42206	43	EACH	ANCHOR ASSEMBLY REMOVED
2	1054	2	738	2	951			202	54101	2743	EACH	RAISED PAVEMENT MARKER REMOVED FOR STORAGE, AS PER PLAN
		13	200					203	20001	200	CU.YD.	EMBANKMENT, AS PER PLAN
16,21,22	220776	16,20	160252	16,23	185348	16	720	254	01000	567096	SQ.YD.	PAVEMENT PLANING, BITUMINOUS
		2	950	24	750			255	10101	1700	SQ.YD.	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN
		16,20	15491.19					301	46000	15491.19	CU.YD.	BITUMINOUS AGGREGATE BASE, PG64-22
		17	5369					304	20000	5369	CU.YD.	AGGREGATE BASE
5A,16,21,22	17243	5A,16,17,20	18070	5A,16,23	14467	16	44	407	10000	49780	GALLON	TACK COAT
18	96	18,20	334	18,23	86			407	13900	516	GALLON	TACK COAT, 702.13
16,21,22	11111	5A,16,17,20	11799	16,23	9266	16	29	407	14000	32205	GALLON	TACK COAT FOR INTERMEDIATE COURSE
16,21,22	10656.27	5A,16,17,20	22809.41	16,23	9009.97	16	28.53	446	46031	42504.18	CU.YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, TYP 2, PG76-22, AS PER PLAN
5A,16,18,20,22	9226.02	5A,16,17,18,20	10005.94	5A,16,18,23	7783.54	16	30.00	446	50001	27015.50	CU.YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE IH, AS PER PLAN
		15	27600					606	13000	27600	LIN. FT.	GUARDRAIL, TYPE 5
		14	300					606	13001	300	LIN. FT.	GUARDRAIL, TYPE 5, AS PER PLAN
		15	10					606	25500	10	EACH	ANCHOR ASSEMBLY, BARRIER DESIGN, TYPE A
		15	16					606	22000	16	EACH	ANCHOR ASSEMBLY, TYPE B-98
		15	17					606	26500	17	EACH	ANCHOR ASSEMBLY, TYPE T

G0700001.MGS 2-11-99

GENERAL SUMMARY

GUE-70-10.55

# GENERAL SUMMARY

CALCULATED  
 LIME  
 CHECKED  
 TJD

LOCATION 1		LOCATION 2		LOCATION 3		LOCATION 4		ITEM	ITEM EXT. NO.	GRAND TOTAL LOCATIONS 1,2,3&4	UNIT	DESCRIPTION
SHEET NO.'S	TOTALS	SHEET NO.'S	TOTALS	SHEET NO.'S	TOTALS	SHEET NO.'S	TOTALS					
		5	40					608	12000	40	SQ.FT.	5" CONCRETE WALK
		5	10					609	26000	10	LIN.FT.	CURB, TYPE 6
5	40	5	40	5	40			614	11100	120	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR
4	15	4	20	4	15			SPECIAL	61412600	50	EACH	REPLACEMENT DRUM
2	10	2	10	2	4			614	12460	24	EACH	WORK ZONE MARKING SIGNS
3	32	3	24	3	28			614	12470	84	EACH	WORK ZONE SPEED LIMIT SIGN
5A	6	5A	6	5A	6			614	12480	18	EACH	DOUBLE FINES IN WORK ZONE SIGN
4	6	4	6	4	6			614	18601	18	SIGN MNTH	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN
3	13.85	3	10.52	3	11.97			614	20400	36.34	MILE	TEMPORARY LANE LINE, CLASS II
3	29.12	3	41.84	3	23.52			614	22000	94.48	MILE	TEMPORARY EDGE LINE, CLASS I
2,22	1824			2	1533			617	10100	3357	CU.YD.	COMPACTED AGGREGATE, TYPE A
		17	55228					617	20000	55228	SQ.YD.	SHOULDER PREPERATION
		5	20.92					618	40500	20.92	MILE	RUMBLE STRIPS, TYPE 1
5	27.36			5	23.52			618	40600	50.88	MILE	RUMBLE STRIPS, TYPE 2(ASPHALT)
25	715	25	495	25	658			621	00200	1868	EACH	RAISED PAVEMENT MARKER, INSTALLATION ONLY
		11	311					626	00100	311	EACH	BARRIER REFLECTOR, TYPE A
								638	98100		LUMP	WATER WORK, MISC.: INSPECTION HOLES
26	29.12	26	20.92	26	23.52	26	0.30	644	00100	73.86	MILE	EDGE LINE
27	13.85	27	10.52	27	11.97			644	00200	36.34	MILE	LANE LINE
						26	0.15	644	00300	0.15	MILE	CENTER LINE
27	2596	27	814	27	2234			644	00400	5644	LIN.FT.	CHANNELIZING LINE
27	201			27	198			644	00500	399	LIN.FT.	STOP LINE
27	448	27	232	27	732			644	00700	1412	LIN.FT.	TRANSVERSE LINE
27	2			27	3			644	01300	5	EACH	LANE ARROW
								614	11000		LUMP	MAINTAINING TRAFFIC
								623	10000		LUMP	CONSTRUCTION LAYOUT STAKES
								624	10000		LUMP	MOBILIZATION
								806	16010	4	MONTH	FIELD OFFICE, TYPE B

G070002.MGS 2-11-99

GENERAL SUMMARY

GUE-70-10.55

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