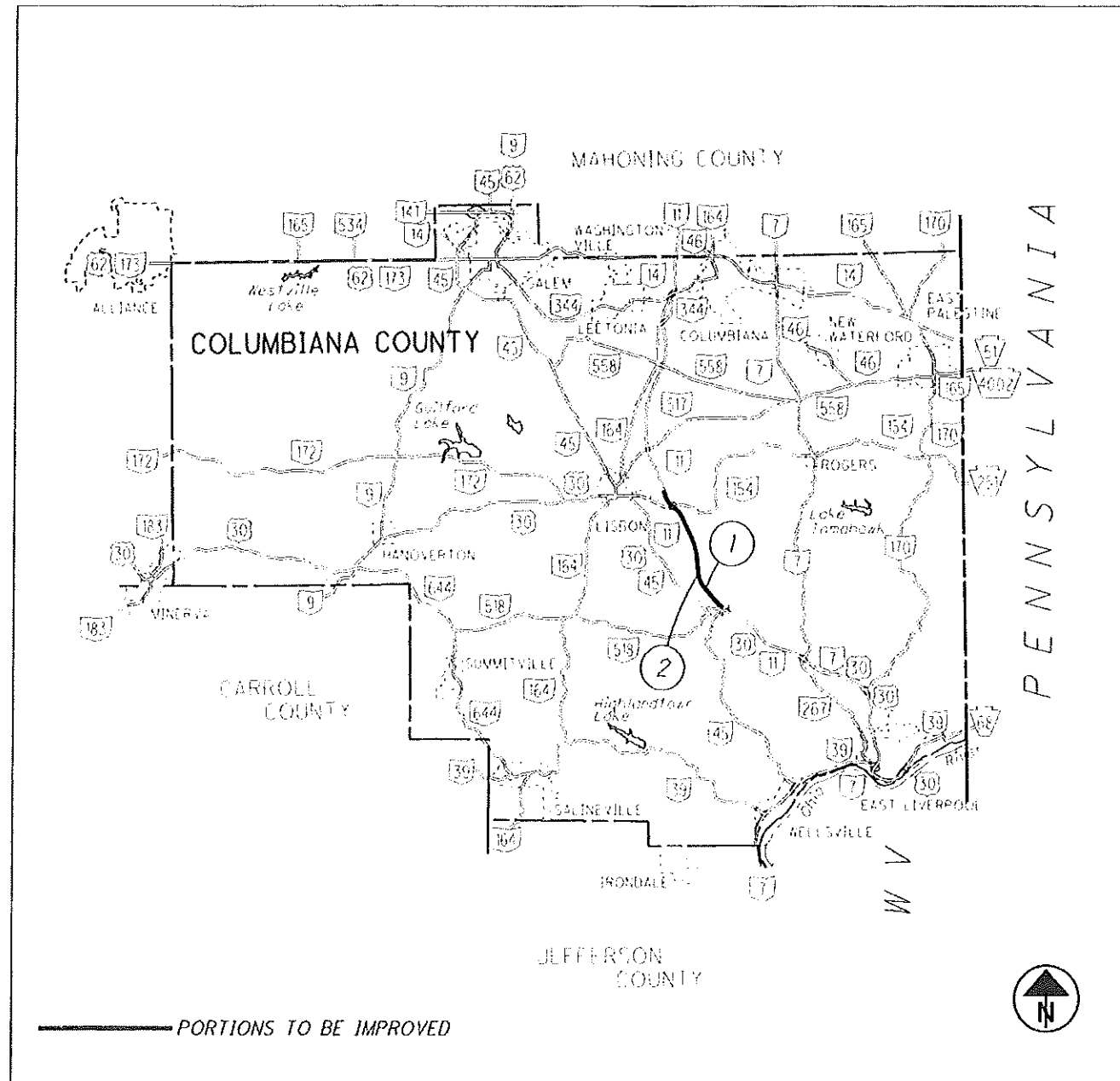


STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

COL-11-11.14
421 4-LANE MICROSURFACING
441 RAMP RESURFACING



PART	COUNTY	ROUTE	SECTIONS	PROJECT TERMINI		NET LENGTH MILES	
				BEGIN	END		
1	COL	S.R. 11	11.14	11.14	15.99	4.85	NORTHBOUND LANES
2	COL	S.R. 11	11.14	11.14	15.99	4.85	SOUTHBOUND LANES
PROJECT EARTH DISTURBED AREA = N/A (MAINTENANCE PROJECT) ESTIMATED CONTRACTOR EARTH DISTURBED AREA = N/A (MAINTENANCE PROJECT) NOTICE OF INTENT EARTH DISTURBED AREA = N/A (MAINTENANCE PROJECT) SEE SHEET 2 FOR DESIGN DESIGNATION							

LIMITED ACCESS

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

2016 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THESE IMPROVEMENTS WILL NOT REQUIRE THE CLOSING OF THE HIGHWAYS TO TRAFFIC AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED DATE 7/20/17

Lloyd V. MacAdam/gpb
DISTRICT DEPUTY DIRECTOR

APPROVED DATE 7-26-17

James Whaley
DIRECTOR, DEPARTMENT OF TRANSPORTATION

LOCATION MAP

LATITUDE: N 40° 44' 35" LONGITUDE: W 80° 42' 40"

UNDERGROUND UTILITIES
CONTACT BOTH SERVICES TWO WORKING DAYS
BEFORE YOU DIG.

OHIO
Utilities Protection
SERVICE
(Non-members must be called directly)
OIL & GAS PRODUCERS
UNDERGROUND PROTECTION SERVICE
1-800-826-0988



PLAN PREPARED BY:
ODOT DISTRICT II

STANDARD CONSTRUCTION DRAWINGS

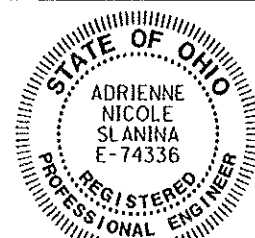
BP-3.1	7-18-14	MT-95.30	7-15-16	TC-41.20	10-18-13
		MT-98.10	1-20-17	TC-42.20	10-18-13
		MT-98.11	1-20-17	TC-52.10	10-18-13
		MT-98.20	7-18-14	TC-52.20	7-15-16
DM-4.3	1-15-16	MT-98.22	1-20-17	TC-65.10	1-17-14
DM-4.4	1-15-16	MT-98.28	1-20-17	TC-65.11	7-15-16
		MT-99.20	7-19-13	TC-72.20	7-15-16
		MT-101.90	7-17-15		
		MT-104.10	10-16-15		
		MT-105.10	7-19-13		

SUPPLEMENTAL
SPECIFICATIONS

800-16	7-21-17
808	1-20-17
821	4-20-12
832	1-17-14
908	1-29-16
921	4-20-12

SPECIAL
PROVISIONS

ENGINEER'S SEAL:



SIGNED: Adrienne H. Slanina
DATE: 7/19/17

INDEX OF SHEETS

TITLE SHEET	1
SCHEMATIC PLAN	2-4
TYPICAL SECTIONS	5
GENERAL NOTES	6
MAINTENANCE OF TRAFFIC	7-9
GENERAL SUMMARY	10
PAVEMENT DATA	11
SHOULDER DATA	12
SAFETY EDGE DETAILS	13
PAVEMENT REPAIR DETAILS	14
TRAFFIC CONTROL SUBSUMMARY	15
TRAFFIC CONTROL PLAN	16

FEDERAL PROJECT NO.
E170(349)

PID NO.
102371

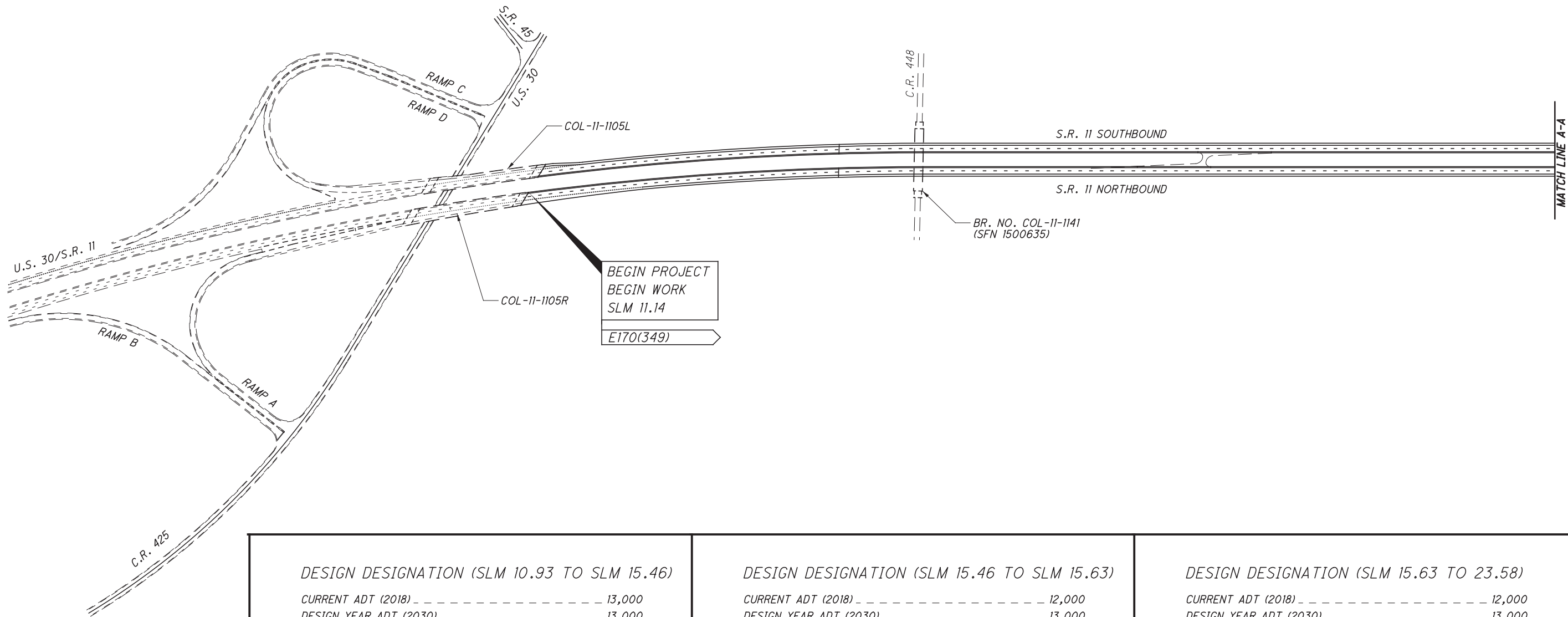
CONSTRUCTION PROJECT NO.
-

RAILROAD INVOLVEMENT
NONE

COL-11-11.14

1
16

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NOTE:
1. THERE ARE NO EXISTING LANDSCAPED AREAS WITHIN THE WORK LIMITS.

CALCULATED

MVC

CHECKED

ANS

0

200

400

HORIZONTAL

SCALE IN FEET

SCHEMATIC PLAN

COL-11-11.14

DESIGN DESIGNATION (SLM 10.93 TO SLM 15.46)

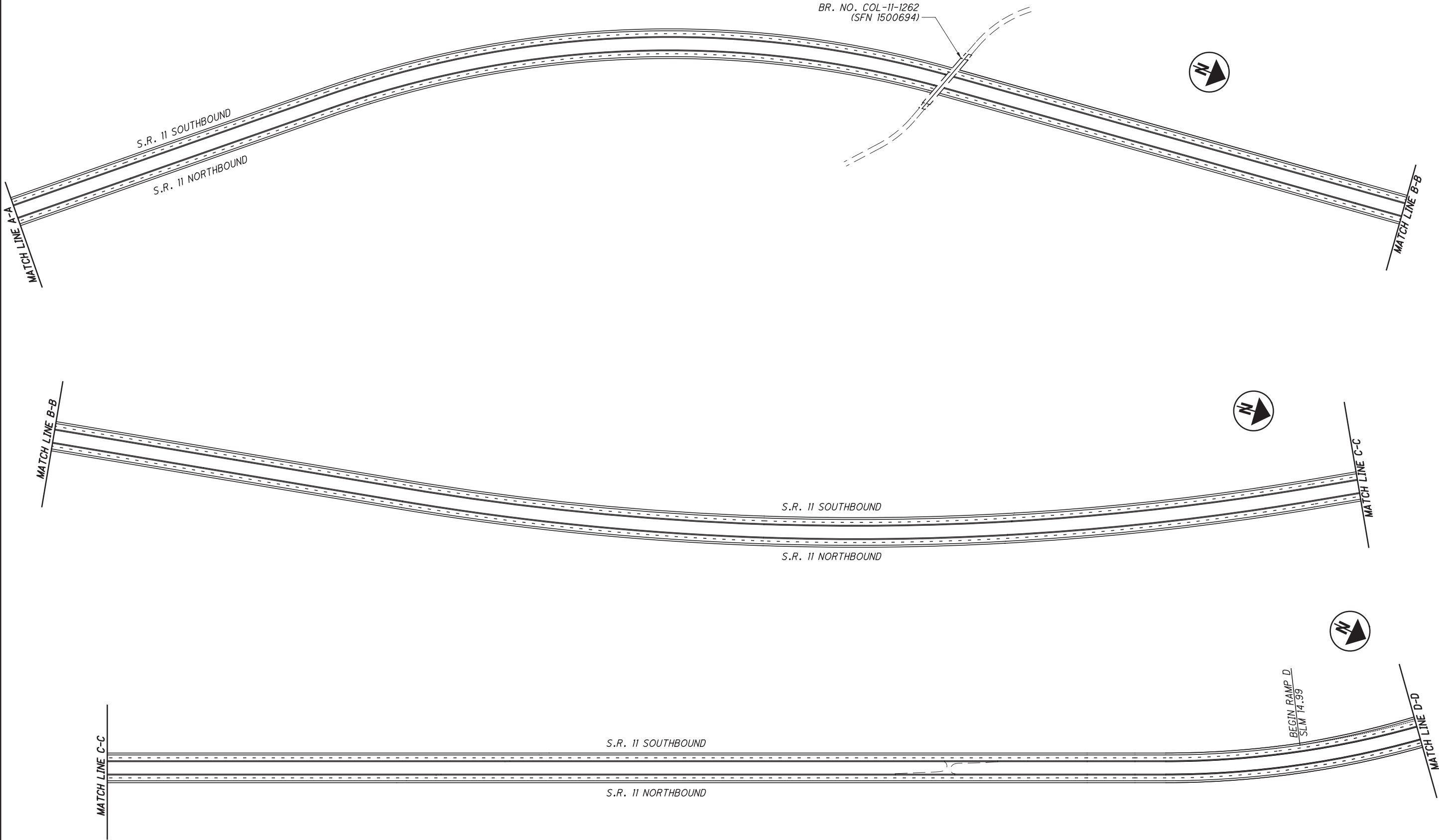
CURRENT ADT (2018)	13,000
DESIGN YEAR ADT (2030)	13,000
DESIGN HOURLY VOLUME (2030)	1,200
DIRECTIONAL DISTRIBUTION	53%
TRUCKS (24 HOUR B&C)	10%
DESIGN SPEED	70 MPH
LEGAL SPEED	70 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
RURAL FREEWAY AND EXPRESSWAY	
NHS PROJECT	YES

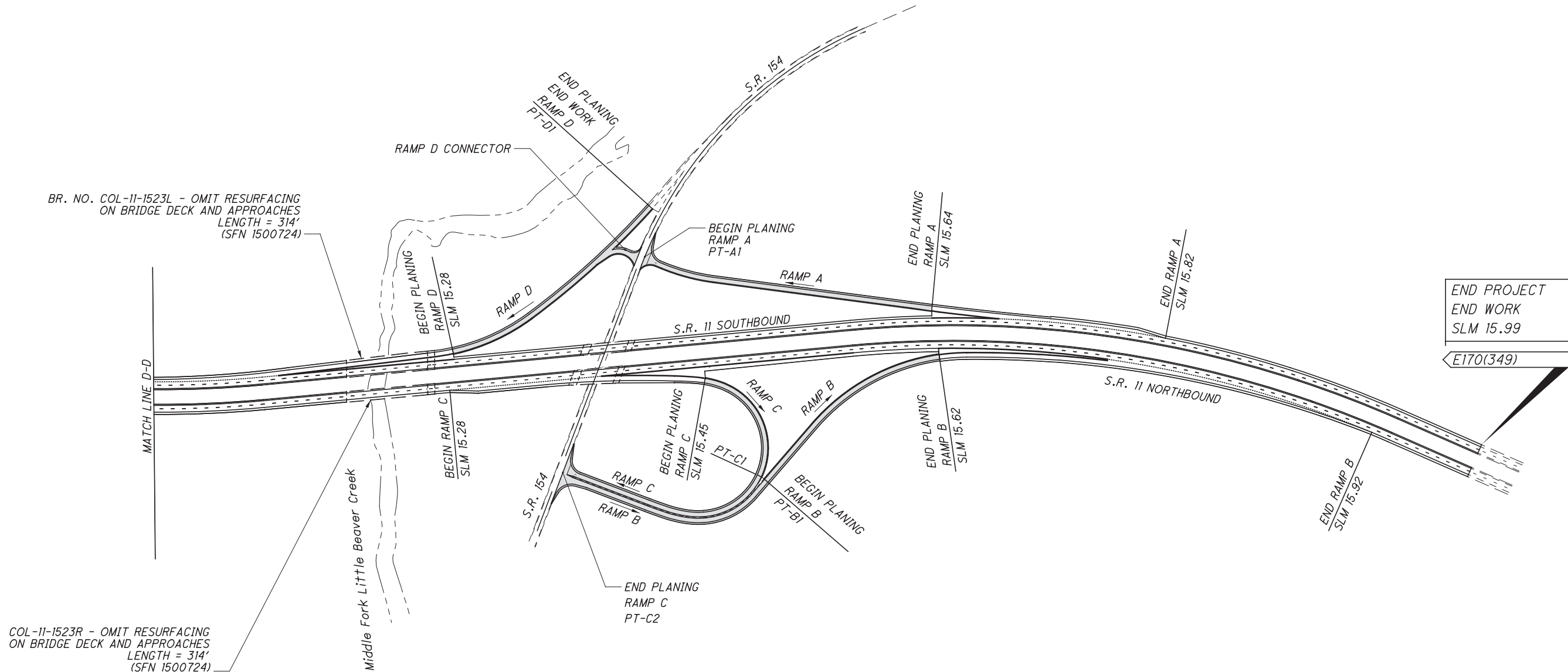
DESIGN DESIGNATION (SLM 15.46 TO SLM 15.63)

CURRENT ADT (2018)	12,000
DESIGN YEAR ADT (2030)	13,000
DESIGN HOURLY VOLUME (2030)	1,300
DIRECTIONAL DISTRIBUTION	51%
TRUCKS (24 HOUR B&C)	8%
DESIGN SPEED	70 MPH
LEGAL SPEED	70 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
RURAL FREEWAY AND EXPRESSWAY	
NHS PROJECT	YES

DESIGN DESIGNATION (SLM 15.63 TO 23.58)

CURRENT ADT (2018)	12,000
DESIGN YEAR ADT (2030)	13,000
DESIGN HOURLY VOLUME (2030)	1,300
DIRECTIONAL DISTRIBUTION	52%
TRUCKS (24 HOUR B&C)	8%
DESIGN SPEED	70 MPH
LEGAL SPEED	70 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
RURAL FREEWAY AND EXPRESSWAY	
NHS PROJECT	YES

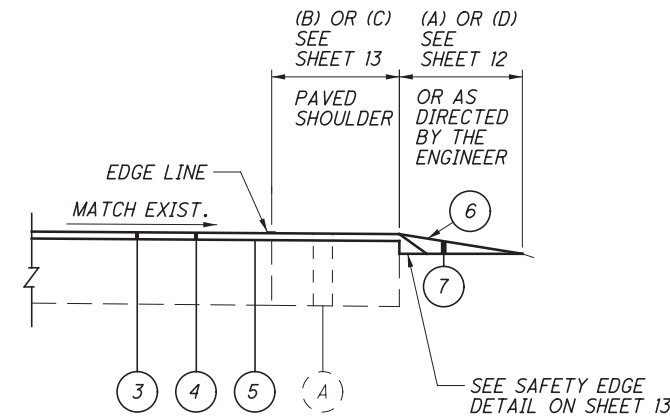
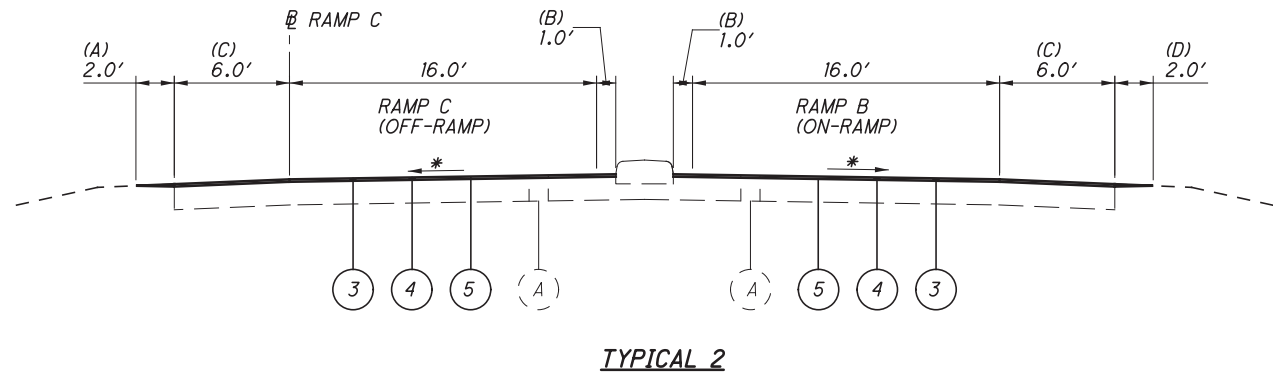
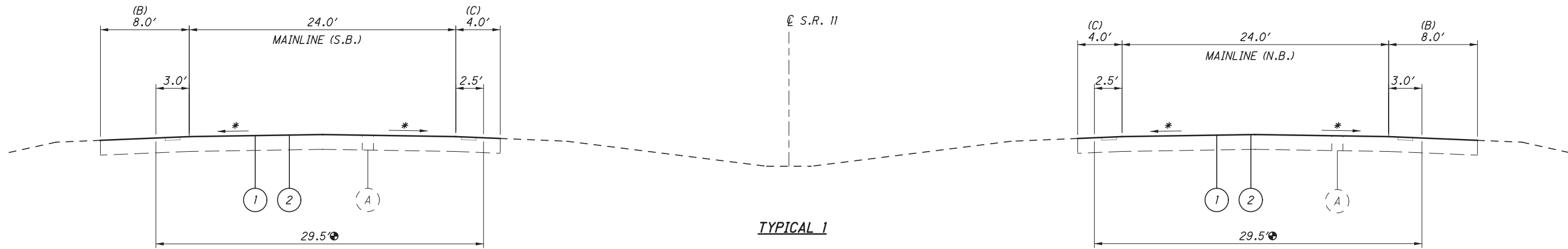




LEGEND

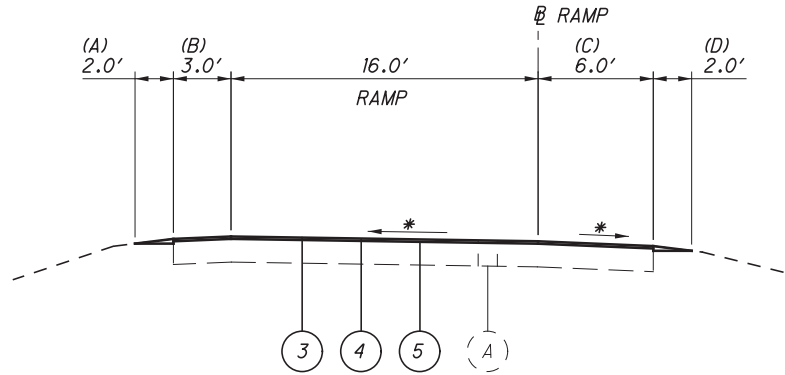
ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE

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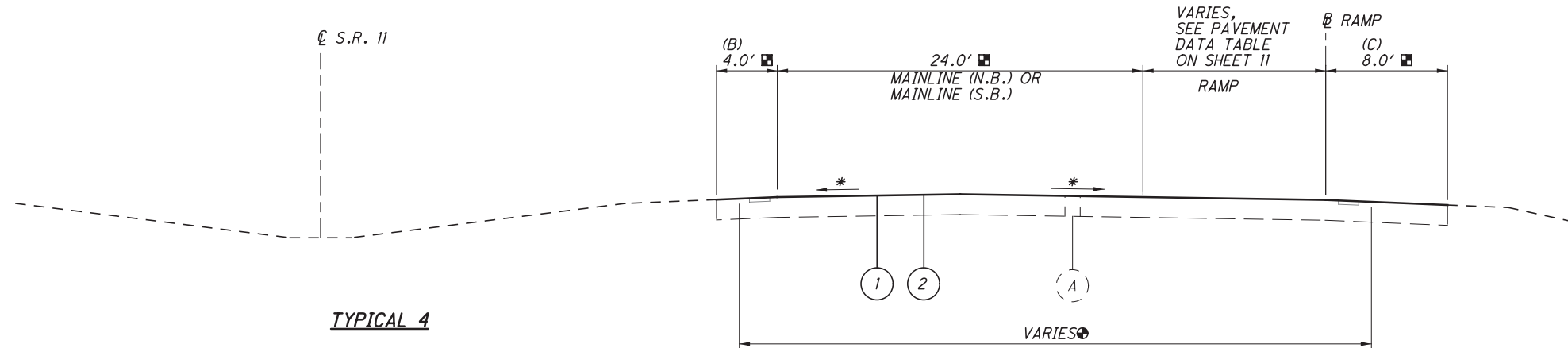


NOTES:

1. * MAINTAIN EXISTING CROSS-SLOPE.
2. LIMITS OF ITEM 421 - MICROSURFACING, LEVELING COURSE, AS PER PLAN.
3. QUANTITIES CARRIED WITH TYPICAL 1.
4. (A), (B), (C), & (D) SEE SHOULDER DATA ON SHEET 12.



TYPICAL 3



TYPICAL 4

LEGEND

- 1 — ITEM 421 - MICROSURFACING, SURFACE COURSE, AS PER PLAN
- 2 — ITEM 421 - MICROSURFACING, LEVELING COURSE, AS PER PLAN
- 3 — ITEM 441 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), AS PER PLAN, (PG70-22M)
- 4 — ITEM 254 - 1 1/2" PAVEMENT PLANING, ASPHALT CONCRETE
- 5 — ITEM 407 - TACK COAT (0.085 GAL/S.Y.)
- 6 — ITEM 408 - PRIME COAT, AS PER PLAN
- 7 — ITEM 617 - COMPACTED AGGREGATE
- (A) — EXISTING ASPHALT CONCRETE PAVEMENT

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UTILITIES

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.

PROFILE AND ALIGNMENT

PLACE THE PROPOSED PAVEMENT TO FOLLOW THE PROFILE AND ALIGNMENT OF THE EXISTING PAVEMENT. PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY AS SHOWN ON THE TYPICAL SECTIONS.

ITEM 421 - MICROSURFACING, SURFACE COURSE, AS PER PLAN
ITEM 421 - MICROSURFACING, LEVELING COURSE, AS PER PLAN

ALL REQUIREMENTS OF ITEM 421 APPLY. APPLY A LEVELING COURSE AND A SURFACE COURSE AT A TOTAL APPLICATION RATE OF 32 LBS OF DRY AGGREGATE WEIGHT PER SQUARE YARD. IN ADDITION, SUPPLY A BLEND OF A MINIMUM OF 50% IGNEOUS DIABASE TRAP ROCK AND A MAXIMUM OF 50% LIMESTONE AGGREGATE FROM APPROVED SOURCES (SEE PARAGRAPH BELOW) FOR USE AS AGGREGATE IN THIS ITEM. USE A CONTINUOUS FRONT FEED MACHINE ONLY. TRUCK MOUNT MACHINES ARE NOT PERMITTED.

FOLLOW SPECIFICATION 703.05 EXCEPT DO NOT USE LIMESTONE AGGREGATE FROM A SOURCE DESIGNATED "SR" OR "SRH" ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) FOR THIS ITEM.

REMOVE EXISTING LONGITUDINAL PAVEMENT MARKINGS.

OMIT THIS ITEM ON STRUCTURES WITH CONCRETE WEARING SURFACE.

APPLY THE LEVELING COURSE OVER THE TRAVEL LANES AND RAMPS AS DETAILED ON THE TYPICAL SECTION ON SHEET 5.

THE CONTRACTOR IS RESPONSIBLE FOR COVERING ANY CASTINGS SO THE MICROSURFACING WILL NOT COVER THE CASTINGS (MONUMENT BOXES, MANHOLES, ETC.)

ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448),
AS PER PLAN (PG70-22M)

THE CONTRACTOR SHALL FOLLOW THE SPECIFICATIONS OF CMS 703.05, EXCEPT DO NOT USE COARSE AGGREGATE FROM A SOURCE DESIGNATED "SR" OR "SRH" AS DEFINED BY THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM OF WORK.

ITEM 201 - CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING.

ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

WINDOW CONTRACT TABLE

USE THE FOLLOWING TABLE AS REFERRED TO IN THE PROPOSAL:

DESCRIPTION OF CRITICAL WORK	CALENDAR DAYS TO COMPLETE
ALL WORK ON S.R. 11 AND RAMPS	91 DAYS

ITEM 617 - COMPACTED AGGREGATE

GRADED SHOULDERS SHALL BE RESHAPED AS PER THE REQUIREMENTS OF ITEM 617, COMPACTED AGGREGATE. GRINDINGS MAY BE USED IN LIEU OF ITEM 617, COMPACTED AGGREGATE. THE COST FOR STORING THE GRINDINGS ON THE PROJECT AND PLACING THE GRINDINGS SHALL ALSO BE INCLUDED IN THIS ITEM.

ITEM 617 - SHOULDER PREPARATION

THIS ITEM OF WORK SHALL BE PERFORMED IN ACCORDANCE WITH CMS "ITEM 617 - RECONDITIONING SHOULDERS" WITH SPECIAL ATTENTION GIVEN TO SECTION 617.04. THE CONTRACTOR SHALL PREPARE THE SHOULDERS REASONABLY CLOSE IN CONFORMITY WITH THE DETAILS AND TYPICAL SECTIONS SHOWN IN THE PLANS, OR AS ESTABLISHED BY THE ENGINEER.

SHIELD

THE CONTRACTOR SHALL PROVIDE A SHIELD TO PREVENT THE SPRAYING OR DRIFTING OF LIQUID BITUMINOUS MATERIAL ONTO THE EDGE OF THE PAVEMENT OR EDGELINE. THE CONTRACTOR SHALL ADHERE TO THE PROVISIONS SET FORTH IN CMS 107.10 CONCERNING THE PROTECTION AND RESTORATION OF ALL PUBLIC AND PRIVATE PROPERTY IMPACTED BY CONSTRUCTION OPERATIONS.

ITEM 408 - PRIME COAT, AS PER PLAN

THIS ITEM OF WORK SHALL BE PERFORMED IN ACCORDANCE WITH CMS "ITEM 408 - PRIME COAT," EXCEPT THE CONTRACTOR SHALL APPLY "MC-70" AT A RATE OF 0.4 GALLONS PER SQUARE YARD, OR AS DETERMINED BY THE ENGINEER, TO THE COMPLETED COMPACTED AGGREGATE SHOULDER, AS PER PLAN.

ITEM 646 - EPOXY PAVEMENT MARKINGS

THE CONTRACTOR SHALL REPLACE THE EXISTING PAVEMENT MARKINGS WITHIN THE PROJECT LIMITS WITH NEW PAVEMENT MARKINGS AT THE SAME LOCATIONS AS PER CMS 641.06. SEE STANDARD DRAWING TC-71.10 FOR PAVEMENT MARKING DETAILS.

SURFACE COURSE COMPLETION REQUIREMENTS

ANY GIVEN LENGTH OF WORK ON WHICH RESURFACING OPERATIONS HAVE BEEN STARTED IN A CONSTRUCTION SEASON SHALL HAVE THE SURFACE COURSE PLACED THAT SAME SEASON.

ITEM 209 - PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN

THIS ITEM OF WORK CONSISTS OF PREPARING THE SHOULDER TO ACCEPT THE SAFETY EDGE. THE PREPARATION SHALL BE CONSISTENT IN BOTH THICKNESS AND WIDTH.

PRIOR TO PAVING THE SAFETY EDGE, THE CONTRACTOR SHALL GRADE AN AREA 10 INCHES WIDE BEGINNING AT THE EDGE OF THE PAVED ROADWAY TO PROVIDE A LEVEL SURFACE FREE FROM VEGETATION FOR CONSTRUCTION OF THE SAFETY EDGE. THE CONTRACTOR SHALL EXCAVATE THE GRADED AREA TO A DEPTH NECESSARY TO CONSTRUCT THE SAFETY EDGE, AND COMPACT THE GRADED SHOULDER ACCORDING TO CMS 617.05, OR AS DIRECTED BY THE ENGINEER.

PREVIOUS CONSTRUCTION PLANS

THE FOLLOWING PREVIOUS CONSTRUCTION PLANS, WHICH SHOW THE ORIGINAL ALIGNMENT AND PROFILE, ARE AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 11 OFFICE:

COL-11-10.22 ORIGINAL CONSTRUCTION PLAN, 1967
COL-11-11.17 4-LANE RESURFACING PLAN, 2010

THESE EXISTING PLANS CAN ALSO BE DOWNLOADED FROM THE FOLLWING FTP SITE:
FTP://FTP.DOT.STATE.OH.US/PUB/CONTRACTS/ATTACH

COORDINATION OF RESURFACING AND PLANING OPERATIONS

ONCE THE PAVEMENT PLANING OPERATIONS HAVE COMMENCED, THE CONTRACTOR SHALL PLANE CONTINUOUSLY UNTIL ALL ELEMENTS OF WORK ASSOCIATED WITH THE PAVEMENT PLANING OPERATIONS ARE CONCLUDED. THE PAVEMENT PLANING OPERATIONS SHALL BE COMPLETED IN A TIMELY MANNER, OR AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR MUST BEGIN PAVING OPERATIONS NO LATER THAN 4 DAYS AFTER THE START OF THE PAVEMENT PLANING.

IF ASPHALT CONCRETE IS TO BE APPLIED DIRECTLY ONTO PORTLAND CEMENT, CONCRETE, OR BRICK PAVEMENT, THE CONTRACTOR SHALL TACK THE EXISTING PAVEMENT WITH RUBBERIZED ASPHALT EMULSION CONFORMING TO CMS 702.13.

ALL GRINDINGS SHALL BECOME THE PROPERTY OF THE CONTRACTOR EXCEPT FOR WHAT MAY BE USED FOR SHOULDER MATERIAL INDICATED IN ITEM 617 - COMPACTED AGGREGATE.

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ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN

THE CONTRACTOR SHALL MAINTAIN TRAFFIC AT ALL TIMES IN ACCORDANCE WITH THE REQUIREMENTS OF CMS ITEM 614, THESE MAINTENANCE OF TRAFFIC NOTES AND DETAILS, THE STANDARD CONSTRUCTION DRAWINGS, AND THE TRAFFIC CONTROL DETAILS DESCRIBED IN THESE PLANS.

THE MINIMUM LANE WIDTH FOR TRAFFIC CONTROL SHALL BE 11 FEET AT ALL TIMES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ORGANIZE HIS WORK IN SUCH A MANNER TO PROVIDE THE MOST SAFETY WITH THE LEAST INCONVENIENCE TO THE TRAVELING PUBLIC.

THE CONTRACTOR IS RESPONSIBLE FOR DESIGNING THE MAINTENANCE OF TRAFFIC SCHEME. THE CONTRACTOR SHALL SUBMIT, IN WRITING, THIS MAINTENANCE OF TRAFFIC SCHEME AND A SCHEDULE OF OPERATIONS TO THE ENGINEER AND RECEIVE APPROVAL BEFORE WORK IS STARTED ON THE PROJECT.

ANY OPEN PAVEMENT TRENCH OR DROPOFF SHALL BE ADEQUATELY MAINTAINED AND PROTECTED. THE PROTECTION USED SHALL MEET THE REQUIREMENTS OF STANDARD CONSTRUCTION DRAWING MT-101.90.

UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE PERMITTED TO HAVE WORK ZONES WHICH ALTERNATELY CLOSE BOTH THE PASSING AND TRAVEL LANE UNLESS THE DISTANCE BETWEEN THE LANE RESTRICTIONS EXCEEDS 2 MILES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SMOOTH AND ORDERLY FLOW OF TRAFFIC THROUGH THE PROJECT AREA 24 HOURS PER DAY FOR THE DURATION OF THE PROJECT. THIS CONSISTS OF NOTIFYING THE OHIO STATE PATROL AFTER ENCOUNTERING ANY ACCIDENTS OR DISABLED VEHICLES OR OBJECTS HINDERING THE FLOW OF TRAFFIC.

THE CONTRACTOR SHALL DESIGNATE TO THE ENGINEER A PERSON RESPONSIBLE FOR MAINTENANCE OF TRAFFIC CONTROL DURING NON-WORK HOURS WHO SHALL BE AVAILABLE WITHIN (30) MINUTES AFTER NOTIFICATION.

PAYMENT FOR PROVIDING WATCHMEN, FURNISHING, ERECTING, MAINTAINING AND REMOVING SIGNS, CONES, MARKERS, PORTABLE CONCRETE BARRIER, BARRIER REFLECTORS, OBJECT MARKERS, WORK ZONE IMPACT ATTENUATORS, SPECIAL LIGHTING, FLOODLIGHTING WORK ZONE PAVEMENT MARKINGS, WORK ZONE RAISED PAVEMENT MARKERS, ECT., SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC, AS PER PLAN.

UNLESS THE ENGINEER DEEMS IT PHYSICALLY IMPOSSIBLE, ALL CONSTRUCTION EQUIPMENT SHALL EXIT ALL WORK ZONES FROM THE DOWNSTREAM END OF THE WORK ZONE OR BY INTERCHANGE RAMPS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE PERMITTED TO DIRECTLY TRANSPORT OR OPERATE ANY EQUIPMENT ACROSS THE OPEN LANES OF THE ROADWAY.

THE MICROSURFACING, PLANING, AND RESURFACING OPERATIONS WILL PROCEED CONTINUOUSLY A MINIMUM OF FIVE (5) DAYS PER WEEK, WEATHER PERMITTING. 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

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF THE WEEK	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY
THURSDAY (THANKSGIVING ONLY)	6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN (CONTINUED)

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$50 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

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

WHEN RAISED PAVEMENT MARKERS ARE TO BE INSTALLED, THE REQUIRED LANE CLOSURE SHALL REMAIN IN EFFECT UNTIL THE EPOXY IS DRY AND ALL FOREIGN MATTER OR DEBRIS CREATED BY THE INSTALLATION OF THE RPM CASTING IS REMOVED FROM THE ROADWAY.

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

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE OFFICE OF COMMUNICATIONS. THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTICE TO OFFICE OF COMMUNICATIONS TIME TABLE		
ITEM	DURATION OF CLOSURE	NOTICE DUE TO OFFICE OF COMMUNICATIONS
RAMP & ROAD CLOSURES	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	2 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTICE TO OFFICE OF COMMUNICATIONS TIME TABLE.

MOVEMENT OF DRUMS

THE ROW OF DRUMS ALONG A CLOSED LANE SHALL BE MOVED OUT OF THE OPEN LANE ONTO THE NEW PAVEMENT AS SOON AS PAVING OPERATIONS PERMIT.

CONTRACTOR'S EQUIPMENT - OPERATION AND STORAGE

IN ADDITION TO THE REQUIREMENTS OF SECTION 614.03 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS THE FOLLOWING SHALL APPLY. THE CONTRACTOR'S EQUIPMENT SHALL BE OPERATED IN THE DIRECTION OF TRAFFIC WHERE PRACTICAL. A FLAGGER SHALL BE USED WHERE THE CONTRACTOR'S EQUIPMENT MUST MERGE WITH THE TRAFFIC STREAM. THE CONTRACTOR'S VEHICLES AND EQUIPMENT SHALL BE EQUIPPED WITH AT LEAST ONE AMBER FLASHING LIGHT.

EQUIPMENT MAY BE PARKED IN AREAS ALONG THE HIGHWAY, THIRTY FEET (30') FROM THE EDGE OF TRAVELED HIGHWAY UNLESS BEHIND GUARDRAIL, WHEN VARIOUS OPERATIONS ARE SCHEDULED TO CONTINUE THE NEXT WORKDAY. ON WEEKENDS OR AT OTHER TIMES OF SUSPENSION OF WORK, THE EQUIPMENT SHALL BE STORED AT A STORAGE AREA REMOVED FROM THE STATE ROUTE RIGHT OF WAY. NO EQUIPMENT SHALL BE PARKED IN THE MEDIAN OF THE HIGHWAY. ADEQUATE BARRICADES AND LIGHT SHALL BE PLACED ON THE PAVEMENT SIDE OF THE EQUIPMENT TO IDENTIFY THE LIMITS OF THE EQUIPMENT. ALL OTHER EQUIPMENT, INCLUDING PRIVATE VEHICLES, SHALL BE STORED AT THE APPROVED CONTRACTOR'S STORAGE AREA.

ITEM 614 - 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.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, 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.

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

ITEM 614 - REPLACEMENT DRUM ----- 10 EACH

ITEM 614 - WORK ZONE PAVEMENT MARKINGS, CLASS III, 642 PAINT
ITEM 614 - WORK ZONE MARKING SIGNS

THE CONTRACTOR SHALL INSTALL ITEM 614 - WORK ZONE EDGE LINE, CLASS III, 642 PAINT PRIOR TO OPENING THE LANE TO TRAFFIC, OR WHEN THE EXISTING MARKINGS HAVE BEEN COVERED OR DAMAGED, AS PER CMS 614.11.

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

01/NHS/PV
(PART 1) ITEM 614 - WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT --32.10 MILE
(PART 2) ITEM 614 - WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT --31.56 MILE
USE: 63.66 MILE

(PART 1) ITEM 614 - WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT --14.55 MILE
(PART 2) ITEM 614 - WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT --14.55 MILE
USE: 29.10 MILE

(PART 1) ITEM 614 - WORK ZONE STOP LINE, CLASS III, 642 PAINT----- 84 FT
(PART 2) ITEM 614 - WORK ZONE STOP LINE, CLASS III, 642 PAINT-----104 FT
USE: 188 FT

(PART 1) ITEM 614 - WORK ZONE CHANNELIZING LINE, CLASS III, 12",----- 5,805 FT
642 PAINT
(PART 2) ITEM 614 - WORK ZONE CHANNELIZING LINE, CLASS III, 12",----- 5,175 FT
642 PAINT
USE: 10,980 FT

WORK ZONE RAISED PAVEMENT MARKERS CANNOT BE USED TO SIMULATE (REPLACE) ANY TYPE OF WORK ZONE PAVEMENT MARKING.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR WORK ZONE SIGNS:

ITEM 614, WORK ZONE MARKING SIGN (W8-11-48 OR W8-H12a-48) - - - 12 EACH

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ITEM 614 – LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

WHEN LAW ENFORCEMENT OFFICERS (LEOS) ARE USED AS A SPEED CONTROL MEASURE IN STATIONARY WORK ZONES, THEY SHALL BE USED AS SHOWN IN THESE PLANS. LEOS CAN BE USED IN THE FORM OF: STATIONARY PATROL CAR, CIRCULATING PATROL CAR, AND/OR AIR ENFORCEMENT IN COMBINATION WITH GROUND PATROL CAR.

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

FOR LANE CLOSURES:

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

DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT, SHORT DURATION CLOSURE OF A MULTI-LANE DIVIDED HIGHWAY AS INDICATED ON THE PLAN INSERT SHEET OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

WHEN CONSTRUCTION VEHICLES ARE ENTERING/EXITING THE ZONE DIRECTLY FROM/INTO AN OPEN LANE OF TRAFFIC. IF A LANE HAS BEEN CLOSED TO PROVIDE AN ACCELERATION/DECELERATION LANE FOR THE VEHICLE, THE LEO WILL NOT BE REQUIRED.

IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST’S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEO’S DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (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) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614 – LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE--- 40 HOURS

ITEM 614 – LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS (CONTINUED)

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

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614 – LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ITEM 614 – REPLACEMENT SIGN

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

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT SIGN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

AN ESTIMATED QUANTITY OF 3 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

WORK ZONE INCREASED PENALTIES SIGN (R11-H5A)

R11-H5A-48 SIGNS SHALL BE FURNISHED, ERECTED, AND MAINTAINED IN GOOD CONDITION AND/OR REPLACED AS NECESSARY AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. SIGNS SHALL BE MOUNTED AT THE APPROPRIATE OFFSETS AND ELEVATIONS AS PRESCRIBED BY THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THEY SHALL BE MAINTAINED ON SUPPORTS MEETING CURRENT SAFETY CRITERIA.

THE SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTIONS, OR SOONER AS DIRECTED BY THE ENGINEER. TEMPORARY SIGN COVERING AND UNCOVERING DUE TO TEMPORARY LANE RESTORATIONS SHALL BE GUIDED BY THE FOUR-HOUR LIMITATIONS STATED ABOVE. SUCH LANE RESTORATIONS SHOULD BE EXPECTED TO REMAIN IN EFFECT FOR 30 OR MORE CONSECUTIVE CALENDAR DAYS, SUCH AS DURING WINTER SHUTDOWNS.

THE SIGNS ON THE MAINLINE SHALL BE DUAL MOUNTED UNLESS NOT PHYSICALLY POSSIBLE. THE FIRST SIGN SHALL BE PLACED BETWEEN THE ROAD WORK AHEAD (W20-1)SIGN AND THE NEXT SIGN IN THE SEQUENCE. SIGNS SHALL BE ERECTED ON EACH ENTRANCE RAMP AND EVERY 2 MILES THROUGH THE CONSTRUCTION WORK LIMITS. SIGNS ON THE MAINLINE SHALL BE R11-H5A-48. SIGNS USED ON THE RAMPS SHALL BE R11-H5A-24. R11-H5A-24 SIGNS MAY BE USED IN THE MEDIAN IN LIEU OF R11-H5A-48 SIGNS IF IT IS NOT PHYSICALLY POSSIBLE TO PROVIDE R11-H5A-48 SIGNS IN THE MEDIAN.

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED, BUT GOOD, CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE RETROREFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF C&MS 730.19.

WORK ZONE INCREASED PENALTIES 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 RE-ERECTED 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, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVAL OF THE SIGN AND SUPPORT.

ITEM 614 – WORK ZONE INCREASED PENALTIES SIGN ----- 16 EACH

ITEM 614 – WORK ZONE SPEED ZONES (WZSZS)

THE FOLLOWING WORK ZONE SPEED ZONE (WZSZ) SPEED LIMIT REVISION(S) HAVE BEEN APPROVED FOR USE ON THIS PROJECT WHEN WORK ZONE CONDITIONS AND FACTORS ARE MET AS DESCRIBED BELOW:

REVISION NUMBER	COUNTY & ROUTE	DIRECTION
WZ-60481	COL-11	N.B. & S.B.

POTENTIAL WZSZ LOCATIONS SHALL HAVE AN ORIGINAL (PRE-CONSTRUCTION) POSTED SPEED LIMIT OF >=55 MPH, A QUALIFYING WORK ZONE CONDITION OF AT LEAST 0.5 MILE IN LENGTH, AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS, AND A WORK ZONE CONDITION IN PLACE THAT REDUCES THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS (I.E., LANE CLOSURE, LANE SHIFT, CROSSOVER, CONTRAFLOW AND/OR SHOULDER CLOSURE). THE LENGTH OF THE WORK ZONE CONDITION IS MEASURED FROM THE BEGINNING OF THE TAPER FOR THE SUBJECT WORK ZONE CONDITION IMPACTING THE TRAVEL LANES AND/OR SHOULDER TO THE END OF THE DOWNSTREAM TAPER, WHERE DRIVERS ARE RETURNED TO TYPICAL ALIGNMENT. AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS IS REQUIRED TO BALANCE THE ADDITIONAL EXPOSURE CREATED BY INSTALLING AND REMOVING WZSZ SIGNING WITH THE TIME NEEDED TO COMPLETE THE WORK.

IF THE WORK ZONE MEETS THESE MINIMUM CRITERIA, IT SHALL BE ANALYZED FURTHER USING TABLE 1 BELOW TO DETERMINE IF AND WHEN IT QUALIFIES FOR A SPEED LIMIT REDUCTION. DEPENDING ON THE ORIGINAL POSTED SPEED LIMIT, THE TYPE OF TEMPORARY TRAFFIC CONTROL USED, AND WHETHER OR NOT WORKERS ARE PRESENT, A WARRANTED WZSZ WILL VARY IN THE APPROVED SPEED LIMIT TO BE POSTED OVER TIME.

C&MS ITEM 614, PARAGRAPH 614.02(B), INDICATES THAT TWO DIRECTIONS OF A DIVIDED HIGHWAY ARE CONSIDERED SEPARATE HIGHWAY SECTIONS. THEREFORE, IF THE WORK ON A MULTI-LANE DIVIDED HIGHWAY IS LIMITED TO ONLY ONE DIRECTION, A SPEED LIMIT REDUCTION IN THE DIRECTION OF THE WORK DOES NOT AUTOMATICALLY CONSTITUTE A SPEED LIMIT REDUCTION IN THE OPPOSITE DIRECTION. EACH DIRECTION SHALL BE ANALYZED INDEPENDENTLY FROM EACH OTHER.

ALL WZSZS FLUCTUATE BETWEEN TWO APPROVED REDUCED SPEED LIMITS OR BETWEEN AN APPROVED REDUCED SPEED LIMIT AND THE ORIGINAL POSTED SPEED LIMIT. ONLY ONE OF TWO SIGNING STRATEGIES SHALL BE USED TO IMPLEMENT A WZSZ.

WZSZS USING DSL SIGN ASSEMBLIES SHALL BE IN ACCORDANCE WITH THIS NOTE, APPROVED LIST, SUPPLEMENTAL SPECIFICATION (SS) 808 AND 908, AND TRAFFIC SCD MT-104.10.

WHEN LOOKING UP THE WARRANTED WORK ZONE SPEED LIMITS, ALWAYS USE THE ORIGINAL, PRE-CONSTRUCTION, POSTED SPEED LIMIT. DO NOT USE A PRIOR OR CURRENT WORK ZONE SPEED LIMIT AS A LOOK UP VALUE IN THE TABLE. POSITIVE PROTECTION IS GENERALLY REGARDED AS PORTABLE BARRIER OR OTHER RIGID BARRIER IN USE ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WITHOUT POSITIVE PROTECTION IS GENERALLY REGARDED AS USING DRUMS, CONES, SHADOW VEHICLE, ETC., ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WORKERS ARE CONSIDERED AS BEING PRESENT WHEN ON-SITE, WORKING WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WHEN THE WORK ZONE CONDITION REDUCING THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS IS REMOVED, THE SPEED LIMIT DISPLAYED SHALL RETURN TO THE ORIGINAL POSTED SPEED LIMIT.

TABLE 1: WARRANTED WORK ZONE SPEED LIMITS (MPH) FOR WORK ZONES ON HIGH-SPEED (>=55 MPH) MULTI-LANE HIGHWAYS

ORIGINAL POSTED SPEED LIMIT	WITH POSITIVE PROTECTION		WITHOUT POSITIVE PROTECTION	
	WORKERS PRESENT	WORKERS NOT PRESENT	WORKERS PRESENT	WORKERS NOT PRESENT
70	60	65	55	65
65	55	60	50	60
60	55	60	50	60
55	50	55	45	55

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

ITEM 614 – DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY [ASSUMING 12 DSL SIGN ASSEMBLIES FOR 2 MONTHS] – – – 24 SIGN MONTH

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 THROUGHOUT THE WORKSITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE 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, AS PER PLAN.

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PAVEMENT DATA - S.R. 11 (NORTHBOUND, SOUTHBOUND, & INTERCHANGE)																				
PART	COUNTY	ROUTE	LOG POINT TO LOG POINT (STRAIGHT LINE MILEAGE)		MILE	DEDUCTIONS FOR BRIDGES	FEET (WITH DEDUCTIONS)	WIDTH OF PAVEMENT	TYPICAL	EXISTING PAVEMENT TYPE	PAVEMENT AREA	PROPOSED PAVEMENT TREATMENT								
												254		407	421			441		FUNDING
												PAVEMENT PLANING, ASPHALT CONCRETE		TACK COAT	MICROSURFACING, SURFACE COURSE, AS PER PLAN	MICROSURFACING, LEVELING COURSE, AS PER PLAN	IN.	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, (PG70-22M)		
																			1 1/2"	
			FROM	TO		FT.		FT.			SQ. YD.	SQ. YD.		GAL.	SQ. YD.	SQ. YD.		CU. YD.		
1	COL	S.R. 11 - N.B.	11.14	15.99	4.85		25,608	24	1	ASPHALT	68,288				68,288	68,288				
1		BR. NO. COL-11-1523R			(0.06)	314	(314)	24	1	ASPHALT	(837)				(837)	(837)				
1		BR. NO. COL-11-1538R			(0.03)	181	(181)	24	1	ASPHALT	(483)				(483)	(483)				
1		RAMP B	PT-B1	15.62	0.15		773	16	3	ASPHALT	1,374	1,374		117			1 1/2	57		
1			15.62	15.92	0.30		1,570	0-38 [TJ]	4	ASPHALT	3,314				3,314	3,314				
1		RAMP C	15.28	15.30	0.02		100	0-12 [TJ]	4	ASPHALT	67				67	67				
1			15.30	15.45	0.15		805	12-58 [TJ]	4	ASPHALT	3,131				3,131	3,131				
1			15.45	PT-C1	0.08		440	16	3	ASPHALT	782	782		66			1 1/2	33		
1		RAMP B/C	PT-C1	PT-C2	0.14		765	32	2	ASPHALT	2,720	2,720		231			1 1/2	113		
1		BR. NO. COL-11-1538R			(0.03)	181	(181)	15-25 [TJ]	4	ASPHALT	(402)				(402)	(402)				
SUB-TOTALS: PART 1												4,876		414	73,078	73,078		203		
2	COL	S.R. 11 - S.B.	11.14	15.99	4.85		25,608	24	1	ASPHALT	68,288				68,288	68,288				
2		BR. NO. COL-11-1523L			(0.06)	314	(314)	24	1	ASPHALT	(837)				(837)	(837)				
2		BR. NO. COL-11-1538L			(0.03)	181	(181)	24	1	ASPHALT	(483)				(483)	(483)				
2		RAMP A	PT-A1	15.64	0.20		1,040	16	3		1,849	1,849		157			1 1/2	77		
2			15.64	15.72	0.08		425	45-12 [TJ]	4		1,346				1,346	1,346				
2			15.72	15.78	0.06		315	12	4		420				420	420				
2			15.78	15.80	0.02		100	12-0 [TJ]	4		67				67	67				
2		RAMP D	14.99	15.28	0.29		1,550	0-36 [TJ]	4		3,100				3,100	3,100				
2			15.28	PT-D1	0.17		880	16	3		1,564	1,564		133			1 1/2	65		
2		BR. NO. COL-11-1523L			(0.06)	314	(314)	23-31 [TJ]	4	ASPHALT	(942)				(942)	(942)				
2		RAMP D CONN.			0.02		100	16	3		178	178		15			1 1/2	7		
SUB-TOTALS: PART 2												3,591		305	70,959	70,959		149		
TOTALS (CARRIED TO GENERAL SUMMARY)												8,467		719	144,037	144,037		352		01/ NHS/ PV

- NOTES
- FOR TYPICAL SECTIONS, SEE SHEET 5.
 - [TJ] = TAPER OR TRANSITION
 - FOR RAMP 'PT.' LOCATIONS, SEE SCHEMATIC PLAN SHEET 4.

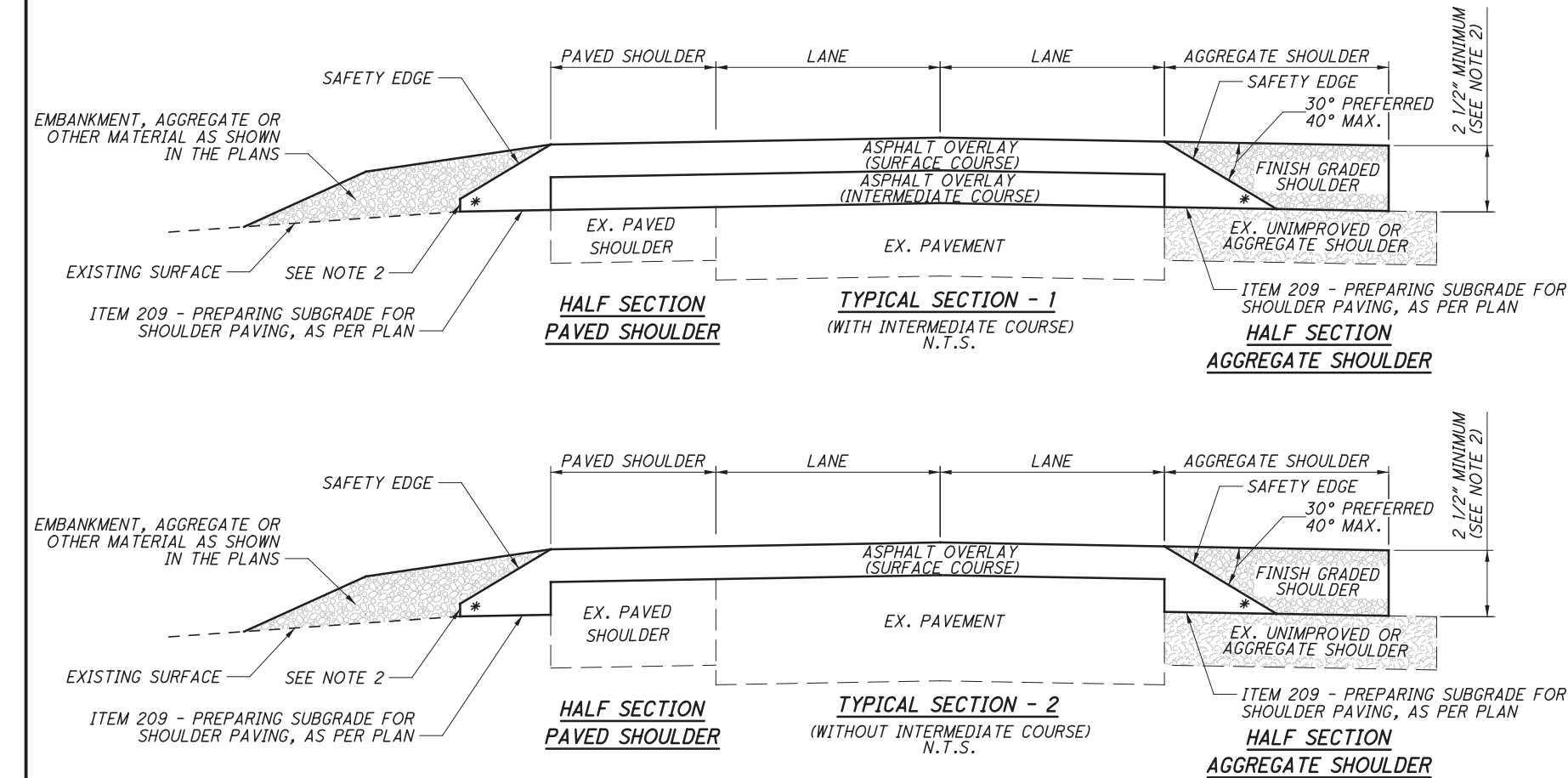
PAVEMENT DATA

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**ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448),
AS PER PLAN, (PG70-22M)**

(PART 1)
(RAMP B)
 $0.038 \text{ S.F.} \times [(0.16 \text{ MILE} \times 5280 \times 2 \text{ SIDES})] \div 27 = 2 \text{ CU. YD.}$
(RAMP C)
 $0.038 \text{ S.F.} \times [(0.28 \text{ MILE} \times 5280 \times 2 \text{ SIDES})] \div 27 = 4 \text{ CU. YD.}$
(PART 2)
(RAMP A)
 $0.038 \text{ S.F.} \times [(0.20 \text{ MILE} \times 5280 \times 2 \text{ SIDES})] \div 27 = 3 \text{ CU. YD.}$
(RAMP D & D CONNECTOR)
 $0.038 \text{ S.F.} \times [(0.20 \text{ MILE} \times 5280 \times 2 \text{ SIDES})] \div 27 = 3 \text{ CU. YD.}$

TOTAL USE: 12 CU. YD. (01/NHS/PV)

(TOTALS CARRIED TO THE GENERAL SUMMARY)

SAFETY EDGE NOTES

IN ADDITION TO THE REQUIREMENTS OF 401.12, ATTACH A DEVICE TO THE SCREED OF THE PAVER THAT CONFINES THE MATERIAL AT THE END GATE AND EXTRUDES THE ASPHALT MATERIAL IN SUCH A WAY THAT RESULTS IN A COMPACTED WEDGE SHAPE PAVEMENT EDGE OF APPROXIMATELY 30 DEGREES (NOT STEEPER THAN 40 DEGREES). ENSURE THE DEVICE MAINTAINS CONTACT WITH THE EXISTING SURFACE, AND ALLOW FOR AUTOMATIC TRANSITION TO CROSS ROADS, DRIVEWAYS AND OBSTRUCTIONS. DO NOT USE CONVENTIONAL SINGLE PLATE STRIKE OFF.

CONSTRUCTION OF SAFETY EDGE CAN BE OMITTED AT LOCATIONS WHERE EXISTING WIDTH OF GRADED SHOULDER OR BERM IS LESS THAN 12 INCHES. PROJECTS WITH VARYING CONDITIONS SHOULD USE SAFETY EDGE WHERE POSSIBLE. PLAN PREPARATION HAS MADE EVERY REASONABLE ATTEMPT TO IDENTIFY POSSIBLE SAFETY EDGE LOCATIONS.

USE THE TRANSTECH SHOULDER WEDGE MAKER, THE CARLSON SAFETY EDGE END GATE, THE ADVANT-EDGER, THE RAMP CHAMP SERIES II WITH SAFETY EDGE SHOE, THE TROXLER SAFE-T-SLOPE, OR A SIMILAR APPROVED-EQUAL DEVICE THAT PRODUCES THE SAME WEDGE CONSOLIDATION RESULTS. CONTACT INFORMATION FOR THESE WEDGE SHAPE COMPACTION DEVICES IS THE FOLLOWING:

TRANSTECH SYSTEMS, INC.
1594 STATE STREET
SCHENECTADY, NY 12304
1-800-724-6306
WWW.TRANSTECHSYS.COM

ADVANT-EDGE PAVING EQUIPMENT LLC
33 OLD NISKAYUNA ROAD
LOUDENVILLE, NY 12211
814-422-3343
WWW.ADVANTEDGEPAVING.COM

CARLSON SAFETY EDGE END GATE
18425 50TH AVENUE EAST
TACOMA, WA 98446
253-278-9426
WWW.CARLSONPAVINGPRODUCTS.COM

TROXLER ELECTRONIC LABORATORIES, INC.
P.O. BOX 12057
3008 E. CORNWALLIS RD.
RESEARCH TRIANGLE PARK, NC 27709
1-877-TROXLER (876-9537)
WWW.TROXLERLABS.COM/PRODUCTS/PAVING.PHP

IF ELECTING TO USE A SIMILAR DEVICE, PROVIDE PROOF THAT THE DEVICE HAS BEEN USED ON PREVIOUS PROJECTS WITH ACCEPTABLE RESULTS OR CONSTRUCT A TEST SECTION PRIOR TO THE BEGINNING OF WORK AND DEMONSTRATE WEDGE COMPACTION TO THE SATISFACTION OF THE ENGINEER. SHORT SECTIONS OF HANDWORK WILL BE ALLOWED WHEN NECESSARY FOR TRANSITIONS AND TURNOUTS OR OTHERWISE AUTHORIZED BY THE ENGINEER.

IN ADDITION TO THE REQUIREMENTS OF 401.16, MAKE THE FIRST ROLLER PASS 8 TO 12 INCHES AWAY FROM TAPERED EDGE. DO NOT ROLL THE TAPER.

NOTES:

- THE SAFETY EDGE SHALL BE CONSTRUCTED ON THE OUTSIDE EDGES OF THE PAVED ROADWAY, (EDGE OF TRAVEL LANE, OR EDGE OF PAVED SHOULDER) UNLESS OTHERWISE NOTED IN THE PLANS, OR AS DIRECTED BY THE ENGINEER. SUCH AREAS OF EXCLUSION INCLUDE:
 - AREAS WHERE THE FORESLOPE/EMBANKMENT OR GROUND SURFACE HAS A STEEPER SLOPE THAN THE SAFETY EDGE.
 - AREAS WHERE CURB AND GUTTER HAVE BEEN OR WILL BE PLACED AS THE SAFETY EDGE.THESE CONDITIONS MAY EXIST FOR A PORTION OF THE ROAD BEING PAVED, THUS THE SAFETY EDGE SHOULD BE CONSIDERED FOR USE ON THE REMAINDER OF THE ROAD.
- CONSTRUCT THE SAFETY EDGE THE FULL THICKNESS OF THE ASPHALT CONCRETE OVERLAY, OR 2 1/2", WHICHEVER IS GREATER, BUT NOT TO EXCEED THE MAXIMUM SAFETY EDGE THICKNESS OF 6". FOR THICKNESSES GREATER THAN 6", CONSTRUCT A NEAR-VERTICAL FACE BELOW THE SAFETY EDGE.
- IN AREAS WHERE SAFETY EDGE IS TO BE APPLIED, AND PRIOR TO COMMENCING PAVING OPERATIONS, PREPARE THE SHOULDER MATERIAL AS PER CMS 209.06 - PREPARING SUBGRADE FOR SHOULDER PAVING, TO PROVIDE A FOUNDATION THAT WILL SUPPORT THE PLACEMENT OF THE SAFETY EDGE.
- * 40° MAX.
- THE AVERAGE OF 0.038 SQ. FT. IS BASED ON A TOTAL ASPHALT OVERLAY THICKNESS OF 2 1/2" AND A 30° ANGLE FOR THE SAFETY EDGE.
- THE AVERAGE OF 0.054 SQ. FT. IS BASED ON A TOTAL ASPHALT OVERLAY THICKNESS OF 3" AND A 30° ANGLE FOR THE SAFETY EDGE.
- AFTER THE PAVED LAYER, OR OVERLAY HAS BEEN PLACED, THE SHOULDER, OR BACKING MATERIAL SHALL TO BE GRADED BACK FLUSH WITH THE PAVED SURFACE.

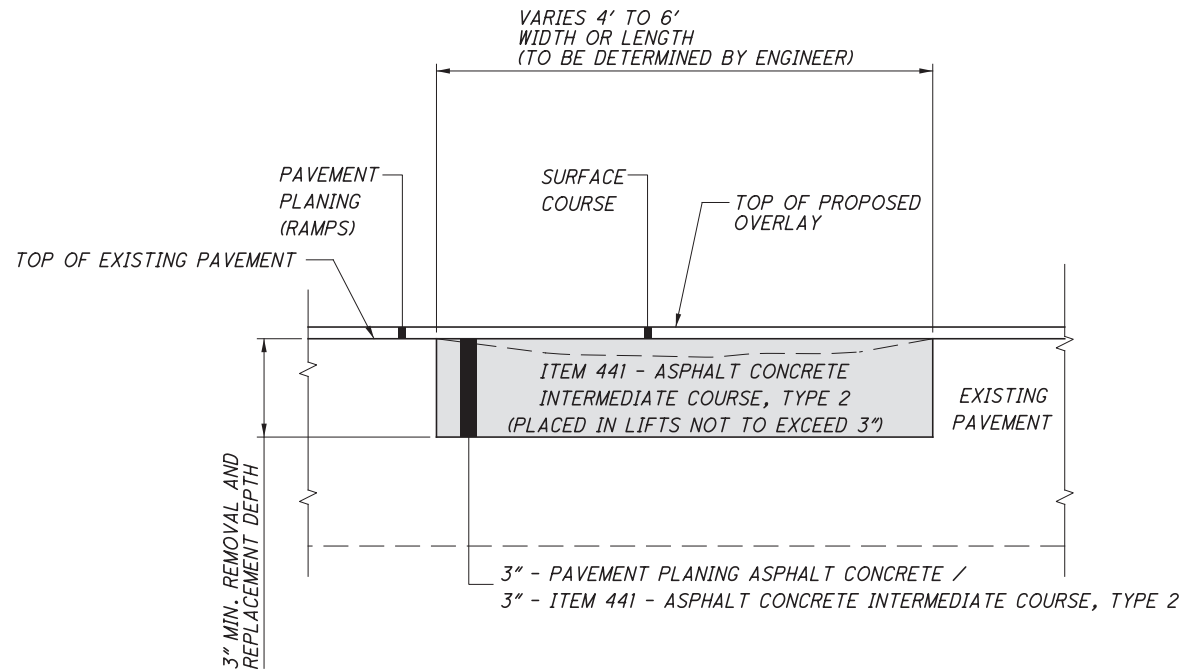
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SAFETY EDGE DETAILS

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PARTIAL DEPTH PAVEMENT REPAIR TYPICAL

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (441)

THIS ITEM OF WORK SHALL CONFORM TO THE SPECIFICATIONS OF ITEM 251 USING ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 FOR THE PAVEMENT LIFTS. A FINAL FIELD REVIEW WILL BE PERFORMED BY ODOT, AND THE FINAL REPAIR LOCATIONS WILL BE PROVIDED TO THE CONTRACTOR PRIOR TO CONSTRUCTION. THE ESTIMATED QUANTITY PROVIDED WITH THIS DETAIL SHALL BE CONSIDERED APPROXIMATE.

ALL PARTIAL DEPTH REPAIRS SHALL BE COMPLETED PRIOR TO COMMENCING PAVING OPERATIONS.

THIS ESTIMATED QUANTITY SHALL BE USED AS DIRECTED BY THE ENGINEER. THE ENGINEER WILL DETERMINE AND MARK THE SIZE AND LOCATION OF EACH PAVEMENT REPAIR. FINAL PAYMENT FOR THIS ITEM OF WORK SHALL BE FOR THE ACCEPTED QUANTITY COMPLETED, AND IN PLACE.

ESTIMATED QUANTITIES

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (441) - 75 CU YD

(TOTALS CARRIED TO GENERAL SUMMARY)

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TRAFFIC CONTROL SUBSUMMARY																											
PART	SHEET NO.	COUNTY	ROUTE	LOG POINT TO LOG POINT (STRAIGHT LINE MILEAGE)		LANE OR RAMP	SIDE OF LANE OR RAMP	621					646									FUNDING					
								RPM				RAISED PAVEMENT MARKER REMOVED	EDGE LINE, 6" (YELLOW)	EDGE LINE, 6" (WHITE)	LANE LINE, 6"	CHANNELIZING LINE, 12"	STOP LINE	LANE ARROW	DOTTED LINE, 6"	REMOVAL OF PAVEMENT MARKINGS	REMOVAL OF PAVEMENT MARKINGS						
									2-WAY	2-WAY	1-WAY																
				SPACING	YELLOW/ RED			WHITE/RED	WHITE	FT.	EACH												EACH	EACH	EACH	MILE	MILE
1		COL	S.R. 11	11.14	15.99	NORTH BOUND	LT. LANE RT.	120			214	214	4.85		4.85						4.85						
1		COL	U.S. 30 INTERCHANGE			RAMP A												450	450								
1		COL	S.R. 154 INTERCHANGE			RAMP B	LT. RT. GORE	80 40	20 31		20 31	0.29						980	980								
	RAMP C						LT. RT. GORE	80 40	16 19		16 19	0.23		0.39				545	545	735							
						16											42	1									
	SUB-TOTALS PART 1									36	50	214	300	5.37	5.83	4.85	1,935	42	1	1,975	3,910	14.55					
	2						COL	S.R. 11	11.14	15.99	SOUTH BOUND	LT. LANE RT.	120			214	214	4.85		4.85					4.85		
2		COL	U.S. 30 INTERCHANGE			RAMP D												140	140								
2		COL	S.R. 154 INTERCHANGE			RAMP A	LT. RT. GORE	80 40	14 13		14 13	0.20		0.36				600	600								
	RAMP D						LT. RT. GORE	80 40	12 32		12 32	0.17		0.46				940	940								
						RAMP D CONN.	LT. RT.	80	3			3	0.02		0.02												
	SUB-TOTALS PART 2									29	45	214	288	5.24	5.69	4.85	1,725	52	1	1,680	3,405	14.55					
	TOTALS (CARRIED TO GENERAL SUMMARY)								588			588	22.13		9.70	3,660	94	2	3,655	7,315	29.10	01/ NHS/ PV					
	NOTES: FOR FREEWAY AND EXPRESSWAY ENTRANCE AND EXIT RAMP PAVEMENT MARKING DETAILS, SEE SCD TC-72.20.																										

COL-11-11.14

15
16

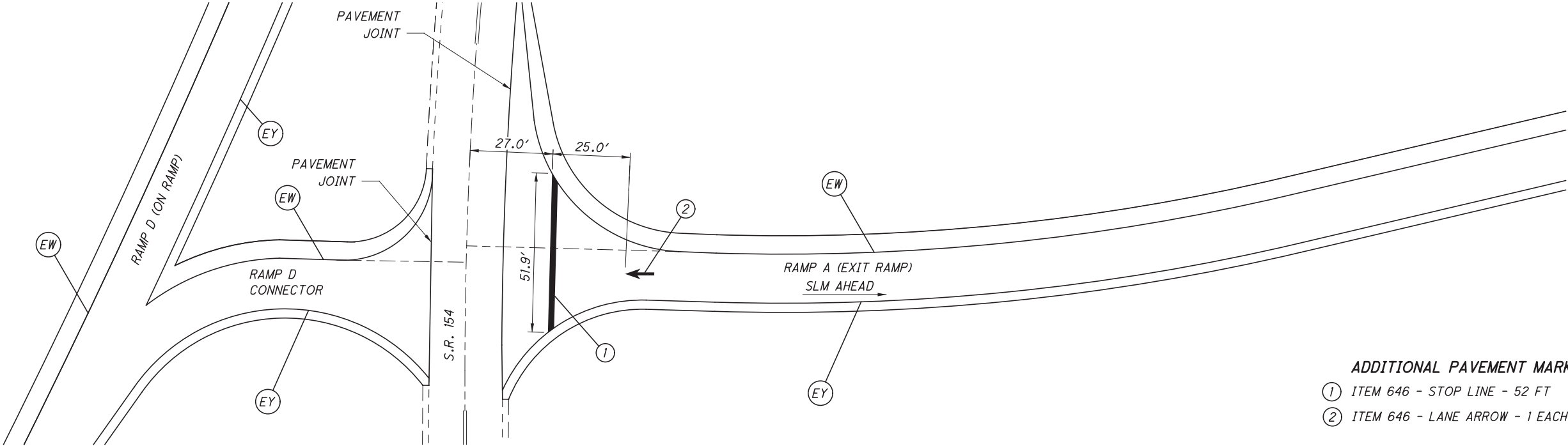
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TRAFFIC CONTROL SUBSUMMARY

COL-11-11.14

15
16

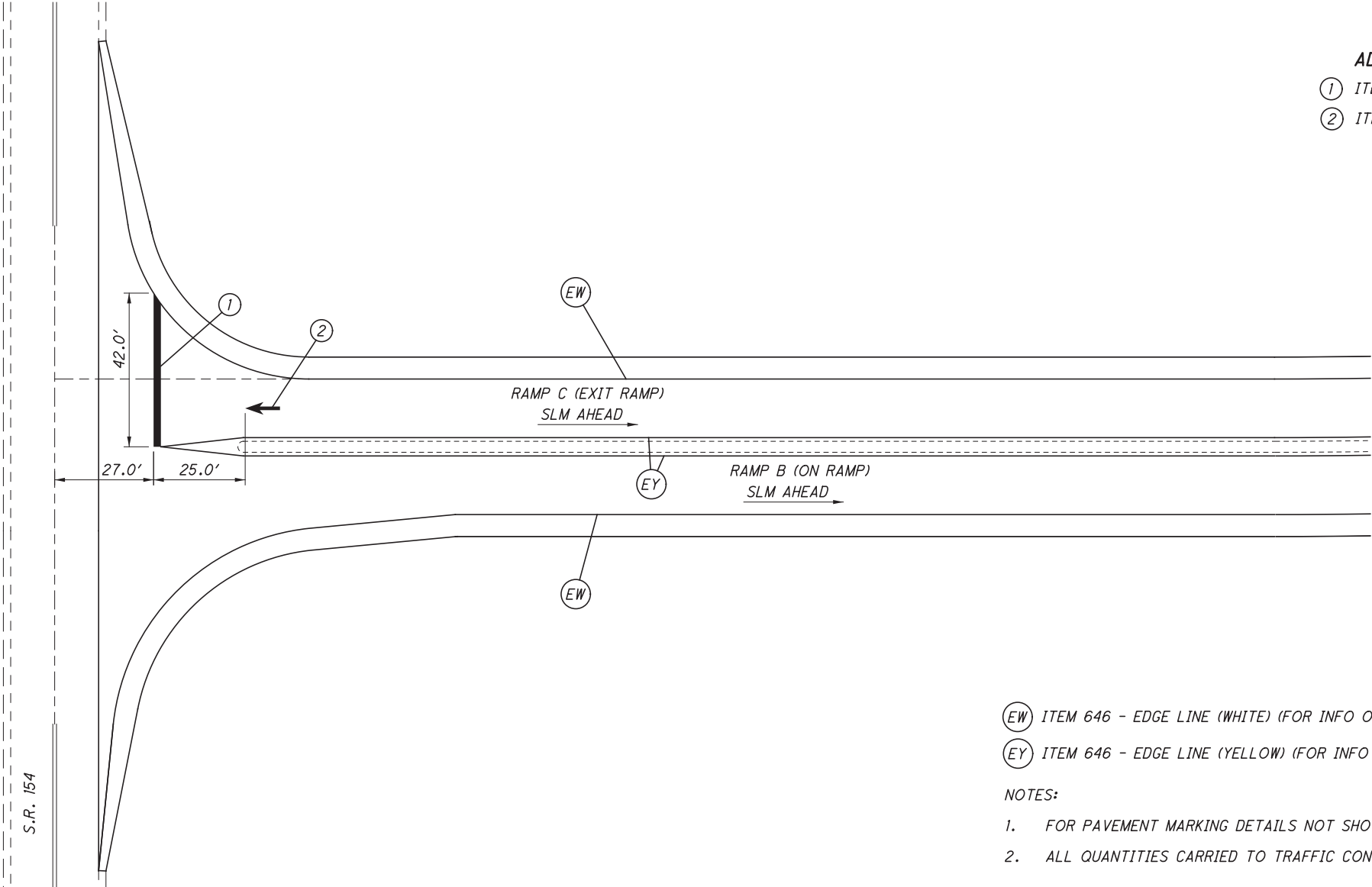
COUNTY COL
S.R. 11 - RAMP A
PART 2



ADDITIONAL PAVEMENT MARKINGS (01/NHS/PV)

- ① ITEM 646 - STOP LINE - 52 FT
② ITEM 646 - LANE ARROW - 1 EACH

COUNTY COL
S.R. 11 - RAMP C
PART 1



ADDITIONAL PAVEMENT MARKINGS (01/NHS/PV)

- ① ITEM 646 - STOP LINE - 42 FT
② ITEM 646 - LANE ARROW - 1 EACH

- EW ITEM 646 - EDGE LINE (WHITE) (FOR INFO ONLY, QUANTITY CARRIED ON SHEET 15)
EY ITEM 646 - EDGE LINE (YELLOW) (FOR INFO ONLY, QUANTITY CARRIED ON SHEET 15)

- NOTES:
1. FOR PAVEMENT MARKING DETAILS NOT SHOWN, SEE STANDARD CONSTRUCTION DRAWING TC-71.10.
2. ALL QUANTITIES CARRIED TO TRAFFIC CONTROL SUBSUMMARY.



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TRAFFIC CONTROL PLAN
RAMPS A & C

COL-11-11.14

16
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