STATE OF OHIO DEPARTMENT OF TRANSPORTATION

END PROJECT STA. 289+80 SLM 5.47

WOO-280-5.07

CITY OF NORTHWOOD, VILLAGE OF WALBRIDGE BEGIN PROJECT STA. 267+50 **WOOD COUNTY**

LOCATION MAP

LATITUDE: 41°35'44.02" LONGITUDE: -83°28'37.31"



DESIGN DESIGNATION

CURRENT ADT (2025)	30500
DESIGN YEAR ADT (2045)	37500
DESIGN HOURLY VOLUME (2045)	3800
DIRECTIONAL DISTRIBUTION	64%
TRUCKS (24 HOUR B&C)	16%
DESIGN SPEED	70 MPH
LEGAL SPEED	65 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
URBAN INTERSTATE	
NHS PROJECT	YES

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVERS

NONE REQUIRED

UNDERGROUND UTILITIES Contact Two Working Days Before You Dig **⇒** 0HI0811,org Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764 (Non members must be called directly)

PLAN PREPARED BY: OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 2

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MGS-4.2

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STANDARD CONSTRUCTION DRAWINGS

FEDERAL PROJECT NUMBER

E-230259

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

SLOPE REPAIR OF A LANDSLIDE ON THE LEFT SIDE OF SOUTHBOUND IR 280 IN WOOD COUNTY. INSTALL NEW CURB AND TIED-BLOCK MATS TO CONTROL EROSION.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: ESTIMATED CONTRACTOR EARTH DISTURBED AREA: NOTICE OF INTENT EARTH DISTURBED AREA:



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.

2023 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS, CHANGES LISTED IN THE PROPOSAL, AND THE SUPPLEMENTAL SPECIFICATION 800 VERSION INDICATED ON THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

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

lock Marchbanks, PhD Director, Department of Transportation

		800-2023 1/19/24	1/15/16	TC-51.12	4/17/20	RM-4.2	1/19/24	P-3.1
)	808 1/18/19	10/18/13	TC-52.10			7/15/22	P-5.1
		821 4/20/12	1/15/21	TC-52.20	7/19/19	MT-95.30		
ENGINEER'S SEAL		832 7/21/23			7/21/23	MT-95.40	7/17/20	M-1.1
27707772277332772		875 1/18/19			7/21/23	MT-95.41	7/16/21	M-1.2
WOO-280-5.07		921 4/20/12			7/21/17	MT-95.50	1/15/16	M-4.3
					4/19/19	MT-98-20	1/15/16	M-4.4
NATE OF OXY					7/16/21	MT-98.30	γ	
367				7	4/21/23	M7-101.70	7/16/21	1GS-1.1
DOUG ROGERS	•				7/21/23	MT-101.75	1/19/18	1GS-2.1
						MT_101 00 _	1/10/19	1GS-3 1

SUPPLEMENTAL

| SPECIFICATIONS | PROVISIONS

SPECIAL



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ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS, EVEN THOUGH OTHERWISE SHOWN.

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

BUCKEYE PIPELINE

BRANDON ALLEN 6161 HAMILTON BOULEVARD ALLENTOWN, PA 18106 encroachmentreviews@buckeye.com 216-318-2124

GENERATION PIPELINE

ADAM PIEKARSKI 119 N. 25th ST. E SUPERIOR, WI 54880 crossingus@enbridge.com 330-391-8207

UTILITIES

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

SURVEY PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE THE TABLE ON THIS SHEET FOR DATA CONTAINING PROJECT CONTROL INFORMATION. USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING. AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL

POSITIONING METHOD:	ODOT \
Common WETHOD.	0207

MONUMENT TYPE: Type B - 3/4" IRON PIN W/ "PRIMARY PROJECT CONTROL" CAP

VERTICAL POSITIONING

NAVD88 ORTHOMETRIC HEIGHT DATUM: GEOID18 GEOID:

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83 (2011) **ELLIPSOID**:

MAP PROJECTION: LAMBERT CONFORMAL CONIC COORDINATE SYSTEM: OHIO STATE PLANE NORTH COMBINED SCALE FACTOR: 1.00000000

ORIGIN OF COORDINATE SYSTEM:

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH

UNITS ARE IN U.S. SURVEY FEET.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A TUMP 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.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. BENCH ALL OTHER SLOPED EMBANKMENT AREAS AS SET FORTH IN SECTION 203.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS). NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF SECTION 203.05.

SEEDING AND MULCHING

659, WATER

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS IN ACCESS AREAS:

659, TOPSOIL 67 CU. YD. 659, SEEDING AND MULCHING 600 SQ. YD. 659, REPAIR SEEDING AND MULCHING 30 SQ. YD. 659, INTER-SEEDING 30 SQ. YD. 659, COMMERCIAL FERTILIZER 0.09 TON

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

4 M. GAL.

REVIEW OF DRAINAGE FACILITIES

PRIOR TO THE START OF WORK AND AGAIN BEFORE FINAL ACCEPTANCE, PERFORM AN INSPECTION WITH REPRESENTATIVES OF THE DEPARTMENT, CONTRACTOR AND LOCALS OF ALL EXISTING DRAINAGE FACILITIES THAT ARE TO REMAIN IN SERVICE WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES IS DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION ARE MAINTAINED BY THE DEPARTMENT.

CONFIRM ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE-MENTIONED PARTIES ARE MAINTAINED AND LEFT IN A CONDITION COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. THE CONTRACTOR IS RESPONSIBLE TO CORRECT ANY CHANGE IN THE CONDITION RESULTING FROM THEIR OPERATIONS AS DIRECTED AND APPROVED BY THE ENGINEER. PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE IS INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

PROJECT CONTROL TABLE													
STATION/OFFSET PROJECT COORDINATES (SEE SURVEY PARAMETERS)						MONUMENT DESCRIPTION							
STATION OFFSET (C/L of R/W) (C/L of R/W) NORTHING(ft) EASTING(ft) ELEV(ft) (NAVD88/18) PT # DESCRIPTION													
		-		SURVE	Y CONTROL								
295+20.72	86.23 LT	707059.297	1701228.540	612.29 *	CP#100	3/4" IRON PIN WITH "PRIMARY CONTROL POINT" CAP							
282+41.54	42.88 LT	705779.792	1701260.926	641.05 *	CP#101	3/4" IRON PIN WITH "PRIMARY CONTROL POINT" CAP							
265+61.34	40.45 LT	704099.631	1701248.946	616.48 *	CP#102	3/4" IRON PIN WITH "PRIMARY CONTROL POINT" CAP							
				BENC	HMARKS								
288+14.80	44.30 LT	706353.042	1701264.423	627.090	BM#200	BOLT ON SIGN SUPPORT BASE							
273+21.74 40.12 LT 704860.002 1701255.796 640.800 BM#201 MAG NAIL SET ON GUARDRAIL POST													

*This elevation may be subject to seasonal changes. Confirm elevation against other primary vertical control and benchmarks just prior to the start of construction activities.

EXISTING SUBSURFACE DRAINAGE

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS OR AGGREGATE DRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE. UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 601, TIED CONCRETE BLOCK MAT, TYPE 2 56 SQ. YD. ITEM 605, AGGREGATE DRAINS 30 FT. ITEM 611, 6" CONDUIT, TYPE F 20 FT. ITEM 611, PRECAST REINFORCED CONCRETE OUTLET 2 EACH ITEM 605, 4" UNCLASSIFIED PIPE UNDERDRAINS 30 FT.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS. IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ITEM 619 - FIELD OFFICE, TYPE A

THE FOLLOWING QUANTITY WAS CARRIED TO THE GENERAL SUMMARY FOR A FIELD OFFICE, TYPE A

13 MNTH

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

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

BENCHING OF SLOPE DRAINS

PLACE SPECIAL BENCHING SLOPE DRAINS AT THE LOCATIONS SHOWN ON THE PLAN AND PROFILE AND CROSS SECTION SHEETS. THESE DRAINS SHALL CONSIST OF ITEM 204 GRANULAR EMBANKMENT, AS PER PLAN (NO. 8 AGGREGATE), ITEM 690 GEOTEXTILE FABRIC, 712.09 TYPE A, AND ITEM 611 CONDUIT TYPE E, 707.31 (PERFORATED). THE TYPE E CONDUIT SHALL BE PERFORATED AS PER CONDUIT FOR ITEM 605 UNCLASSIFIED PIPE UNDERDRAINS. THE GRANULAR EMBANKMENT SAHLL BE PLACED IN LIFTS AS THE SPECIAL BENCHING BACKFILL IS CONSTRUCTED. TRANSVERSE OUTLET DRAINS SHALL BE PROVIDED AT THE LOCATIONS SHOWN ON THE PLAN & PROFILE AND CROSS SECTION SHEETS. THESE OUTLET DRAINS SHALL CONSIST OF ITEM 611 CONDUIT TYPE F, 707.33 WITH ITEM 611 PRECAST REINFORCED CONCRETE OUTLETS.

ITEM 611, 6" CONDUIT, TYPE E, AS PER PLAN, 707.31

THE TYPE E CONDUIT SHALL BE PERFORATED AS PER CONDUIT FOR ITEM 605 UNCLASSIFIED PIPE UNDERDRAINS. INCLUDED IN THIS BID ITEM ARE THE CONNECTIONS REQUIRED FOR CONDUIT INSTALLATION. THE CONNECTIONS INCLUDE:

-(4) 90° ELBOW (6"):

-(16) TEE CONNECTIONS (12"x6"x6").

-(4) END PLUGS (6"):

ITEM 832 EROSION CONTROL

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED FORWARD TO THE GENERAL SUMMARY TO SUPPORT CONTRUCTION STORMWATER

mITEM 832 EROSION CONTROL 56,000 EACH

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ITEM 614, MAINTAINING TRAFFIC (LANE CLOSURE/ REDUCTION REQUIRED)

A MINIMUM OF TWO LANES OF SOUTHBOUND IR-280 TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. EXCEPT FOR A PERIOD NOT TO EXCEED 80 CONSECUTIVE CALENDAR DAYS, WHEN SOUTHBOUND IR 280 MAY BE REDUCED TO A SINGLE LANE OF TRAFFIC WITH THE FULL INSIDE SHOULDER. THE RAMP FROM SR-51 TO IR-280 SB SHALL BE CLOSED CONCURRENTLY WITH THE OUTSIDE LANE OF IR-280 SOUTHBOUND. THE CLOSURE OF THE RAMP SHALL FOLLOW SCD MT-98.30. THIS SHALL ALSO INCLUDE THE INSTALLATION OF CLOSED PLAQUES (W20xH15a 72"x18") ON THE OVERHEAD SIGNS AT THE ENTRANCE RAMP AND IN ADVANCE OF THE ENTRANCE RAMPS PER NOTE 6D IN SCD MT-98.30. THE SIGNS AT THE RAMP SHALL BE 72"x18" W20xH15a SIGNS AND THE ADVANCE OVERHEAD SIGNS SHALL BE 48"x12" W20xH15a SIGNS. THE PAYMENT FOR THE FABRICATION, INSTALLATION AND SUBSEQUENT REMOVAL OF THESE SIGNS SHALL BE INCLUDED IN ITEM 614 MAINTAINING TRAFFIC LUMP SUM.

LANE CLOSURES FOR WOO-280 MUST FOLLOW ODOT'S 2016 PERMITTED LANE CLOSURE SCHEDULE AS LISTED ON THE FOLLOWING WEBSITE:

HTTP://PLCM.DOT.STATE.OH.US/

THE CONTRACTOR SHALL BE ASSESSED DISINCENTIVES IN ACCORDANCE WITH THE TIME FRAMES AND AMOUNTS SHOWN IN THE LANE VALUE CONTRACT TABLE SHOWN ON THIS SHEET.

LANE VALUE CONTRACT TABLE												
DESCRIPTION OF CRITICAL LANE TO BE MAINTAINED	RESTRICTED TIME PERIOD	TIME UNIT	DISINCENTIVE \$ PER TIME UNIT									
*2 LANES OF SOUTHBOUND IR 280	BEYOND 80 DAYS FOR ALLOWED FULL-TIME CLOSURE OF 1 LANE	EACH CALENDAR DAY	\$5,000									
*2 LANES OF SOUTHBOUND IR 280	PER PLCS	EACH MINUTE	\$100									

^{*} PER THE PERMITTED LANE CLOSURE SCHEDULE, 24/7 LANE RESTRICTIONS ARE NOT PERMITTED UNTIL AFTER 9/1/24.

THE DETOUR ROUTE FOR THE RAMP TRAFFIC WILL BE IR 280 NB TO WHEELING RD TO IR 280 SOUTHBOUND. ODOT SIGN CREWS WILL HANDLE POSTING THE DETOUR. PLEASE CONTACT JORDAN MAAS 419-373-4404 OR 419-265-5080 (CELL) AT LEAST 21 DAYS PRIOR TO THE FIRST DAY OF THE RAMP CLOSURE TO SCHEDULE ODOT CREWS TO SET UP THE DETOUR ROUTE.

THE POSTED DETOUR FOR THE RAMP SHALL BE:

IR-280 NB TO WHEELING RD TO IR-280 SB

THE DEPARTMENT WILL FURNISH, ERECT, MAINTAIN, AND SUBSEQUENTLY REMOVE THE DETOUR ROUTE SIGNS AND SUPPORTS.

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.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 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, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

DUST CONTROL

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

ITEM 616, WATER 98 M. GAL.

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL; AND, ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

[INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND PERMANENT CONCRETE BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS: ALONG TAPERS AND TRANSITION AREAS; OR ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.] [THE INCREASED BARRIER DELINEATION SHALL CONSIST OF EITHER DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.]

[DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE "CRIMPED." PANELS SHALL BE INSTALLED AND SPACED PER TRAFFIC SCD MT-101.70.]

[TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.]

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 1 (ONE-WAY) 120 EACH ITEM 614 INCREASED BARRIER DELINEATION ITEM 614, OBJECT MARKER, ONE-WAY 65 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

[ALONG RUNS OF INCREASED BARRIER DELINEATION WHERE THIS ITEM IS PROVIDED. THE QUANTITY SHALL BE MEASURED AS THE ENTIRE LENGTH OF THE RUN OF INCREASED BARRIER DELINEATION, INCLUDING THE SPACES BETWEEN THE INDIVIDUAL DELINEATION PANELS OR STACKS OF BARRIER REFLECTORS.]

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 IN 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.

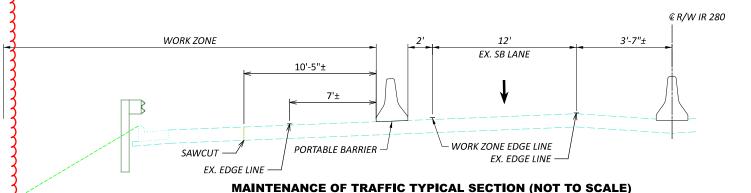
AN ESTIMATED QUANTITY OF 10 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

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.

AN ESTIMATED QUANTITY OF 25 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.



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ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING

A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT

ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S

APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM

THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN

THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED

CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE

CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT

PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT

AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A

COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM,

INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE

SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF

CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH

DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE.

EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING

TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL

AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL

A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING

APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS

PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED,

GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE

COST OF THE GATING IMPACT ATTENUATOR.

AS REQUIRED BY THE MANUFACTURER.

800 FEET AND 650 FEET, RESPECTIVELY.

PER PLAN

ENGINEER FOR ACCEPTANCE.

UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE

HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)

WOO-280-5

ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS WILL BE PROVIDED BY THE PROJECT ENGINEER. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL 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 TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

(THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 48 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.)

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED 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 PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD 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. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

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

(THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.) THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. 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. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 50 SIGN MONTH ASSUMING 5 PCMS SIGN(S) FOR 10 MONTH(S)

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

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 OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 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:

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

DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC, OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH

IN ADDITION TO THE REQUIREMENT OF C&MS 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) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

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 FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

FOR OPERATIONS WITHOUT POSITIVE PROTECTION OCCURRING WITHIN 10 FEET OF AN OPEN TRAVELED LANE THAT MEET ALL OF THE FOLLOWING CRITERIA:

ON A MULTI-LANE DIVIDED INTERSTATE, OTHER FREEWAY OR EXPRESSWAY: AND AN AUTHORIZED SPEED LIMIT OF 45 MPH OR GREATER THAT IS IN EFFECT AT THE TIME OF THE OPERATION;

AADT OF 50,000 (OR AADT OF 30,000 WITH 25% OR HIGHER PERCENT TRUCKS)

"WITHOUT POSITIVE PROTECTION" MEANS USE OF DRUMS, CONES, SHADOW VEHICLE, ETC, WITHOUT PROTECTION FROM PORTABLE BARRIER OR OTHER RIGID BARRIER ALONG THE WORK AREA. THIS PHRASE DOES NOT APPLY TO CASES WHERE POSITIVE PROTECTION IS REQUIRED. MOBILE OPERATIONS ARE REGARDED AS "WITHOUT POSITIVE PROTECTION". FOR WORK ZONES USING A COMBINATION OF BARRIER AND TEMPORARY TRAFFIC CONTROL DEVICES (CONES, DRUMS, ETC), THE DESIGNATION SHALL BE BASED UPON THE TYPE

OF DEVICES USED IN THE AREA THAT WORKERS ARE LOCATED.

IF MULTIPLE ACTIVE LOCALIZED QUALIFYING WORK AREAS OCCUR WITHOUT POSITIVE PROTECTION, PER MAINLINE TRAFFIC DIRECTION, PROVIDE A UNIFORMED LEO AND OFFICIAL PATROL CAR IN ADVANCE OF:

THE FIRST ACTIVE WORK AREA THAT DRIVERS WILL ENCOUNTER: OR

THE ACTIVE WORK AREA LATERALLY CLOSEST TO THE OPEN TRAVELED LANE; OR

OTHER LOCATION AS APPROVED BY THE ENGINEER. THE UNIFORMED LEO AND OFFICIAL PATROL CAR MAY RELOCATE AMONG THE LISTED LOCATIONS AS APPROPRIATE AS THE OPERATIONS PROCEED IN THE LOCALIZED QUALIFYING WORK AREAS.

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION (OR AT THE POINT OF ROAD CLOSURE), AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK

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 LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

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. 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 THAT 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 QUANTITIES HAVE BEEN CARRIED TO THE GENERAL

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 32 HOURS

THE HOURS PAID SHALL INCLUDE ANY 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 A LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.



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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:

WZSZ REVISION NUMBER(S) COUNTY-ROUTE-SECTION(S) DIRECTION(S)

WZ-15243: MP WOO-5.00 TO MP WOO-5.50, SB

POTENTIAL WZSZ LOCATIONS SHALL HAVE AN ORIGINAL (PRE-CONSTRUCTION) POSTED SPEED LIMIT OF 55 MPH OR GREATER, 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 W7S7** 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 SPECIFICATIONS (SS) 808 AND 908, AND TRAFFIC SCD MT-104.10.]

[WZSZS USING TEMPORARY FLATSHEET SPEED LIMIT SIGNS SHALL BE IN ACCORDANCE WITH THIS NOTE AND SCD MT-104.10. ADDITIONALLY PAYMENT MAY BE REMOVED, OR A DISINCENTIVE APPLIED, FOR WZSZS USING TEMPORARY FLATSHEET SPEED LIMIT SIGNS THE SAME AS DESCRIBED IN THE MOST RECENT PUBLICATION OF SS 808 IN REGARDS TO WZSZS USING DSL SIGN ASSEMBLIES (SEE SS 808.06 PARAGRAPHS 4 THROUGH 7, INCLUDING TABLE 1).]

ONLY ONE WARRANTED SPEED LIMIT APPLIES AT ANY ONE TIME; SPEED LIMIT REDUCTIONS ARE NOT CUMULATIVE. WZSZS SHALL NOT BE USED FOR MOVING/MOBILE ACTIVITIES, AS DEFINED IN OMUTCD PART 6.

WHEN LOOKING UP THE WARRANTED WORK ZONE SPEED LIMITS, ALWAYS USE THE ORIGINAL, PRECONSTRUCTION, 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 OR GREATER) MULTI-LANE HIGHWAYS

WITH POSITIVE WITHOUT POSITIVE
PROTECTION PROTECTION

ORGINAL WORKERS WORKERS NOT WORKERS WORKERS NOT
POSTED PRESENT PRESENT PRESENT
SPEED
LIMIT

70	60	<i>65</i>	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 808, DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY 20 SIGN MNTH [ASSUMING 2 DSL SIGN ASSEMBLIES FOR 10 MONTHS]

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 SHUT-DOWNS.

(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 R11-H5A-48 SIGNS SHALL BE MOUNTED ON 2 NO. 3 POSTS WHEN LOCATED WITHIN CLEAR ZONES.

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

ITEM 614, WORK ZONE INCREASED PENALTIES SIGN

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P.7B 79

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> MOT PLAN STA. 297+00 TO STA. 302+00

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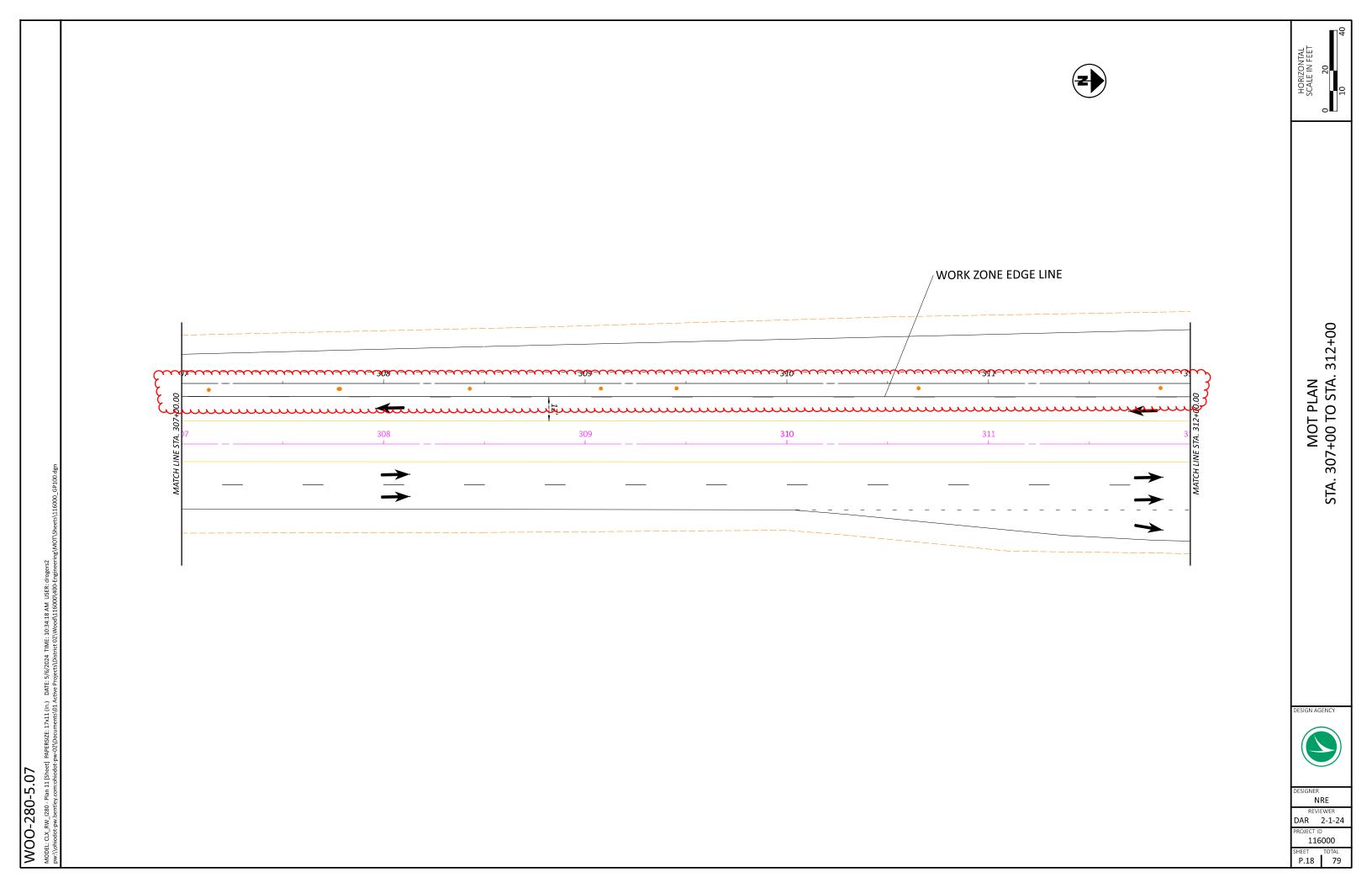
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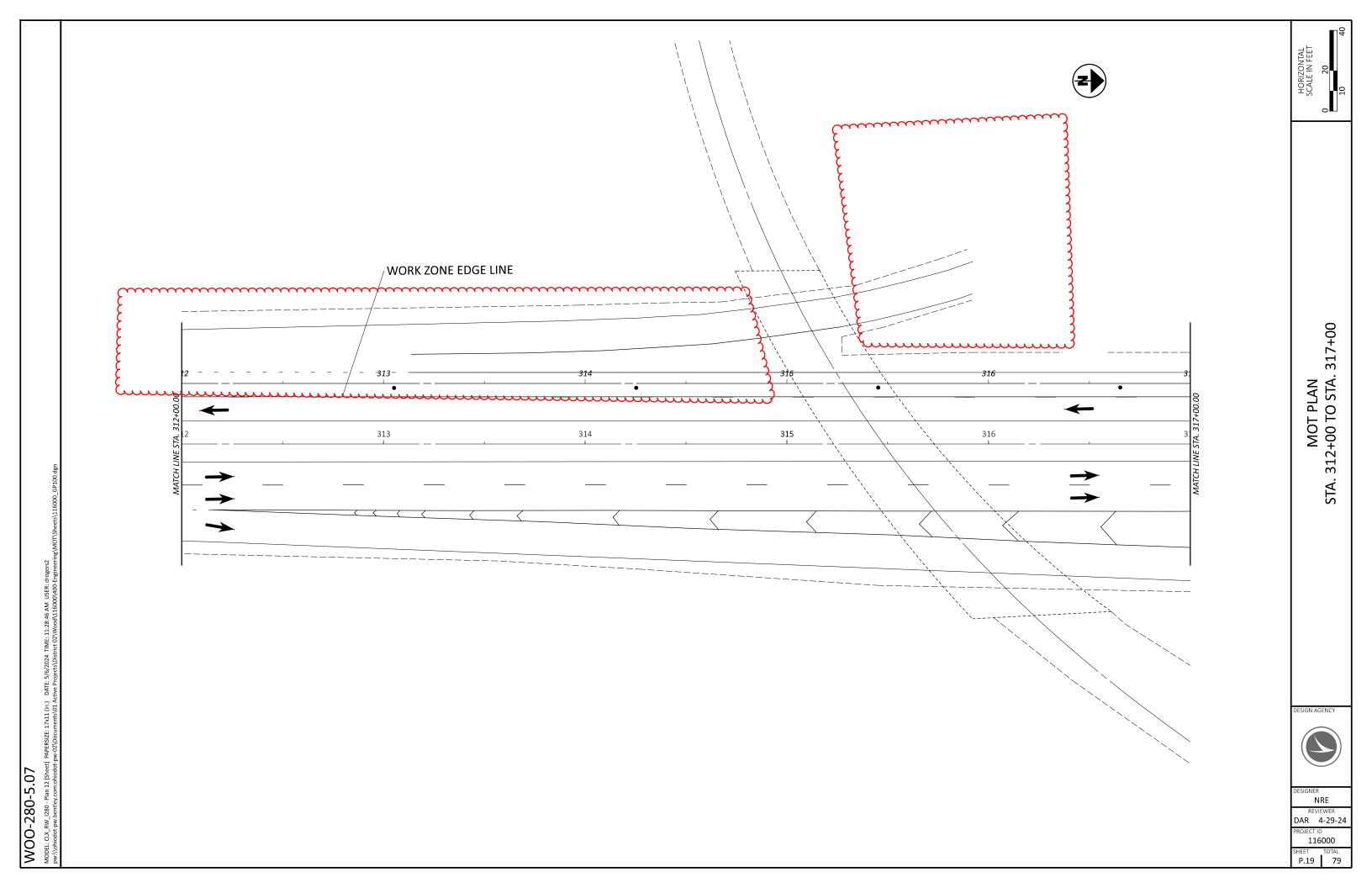


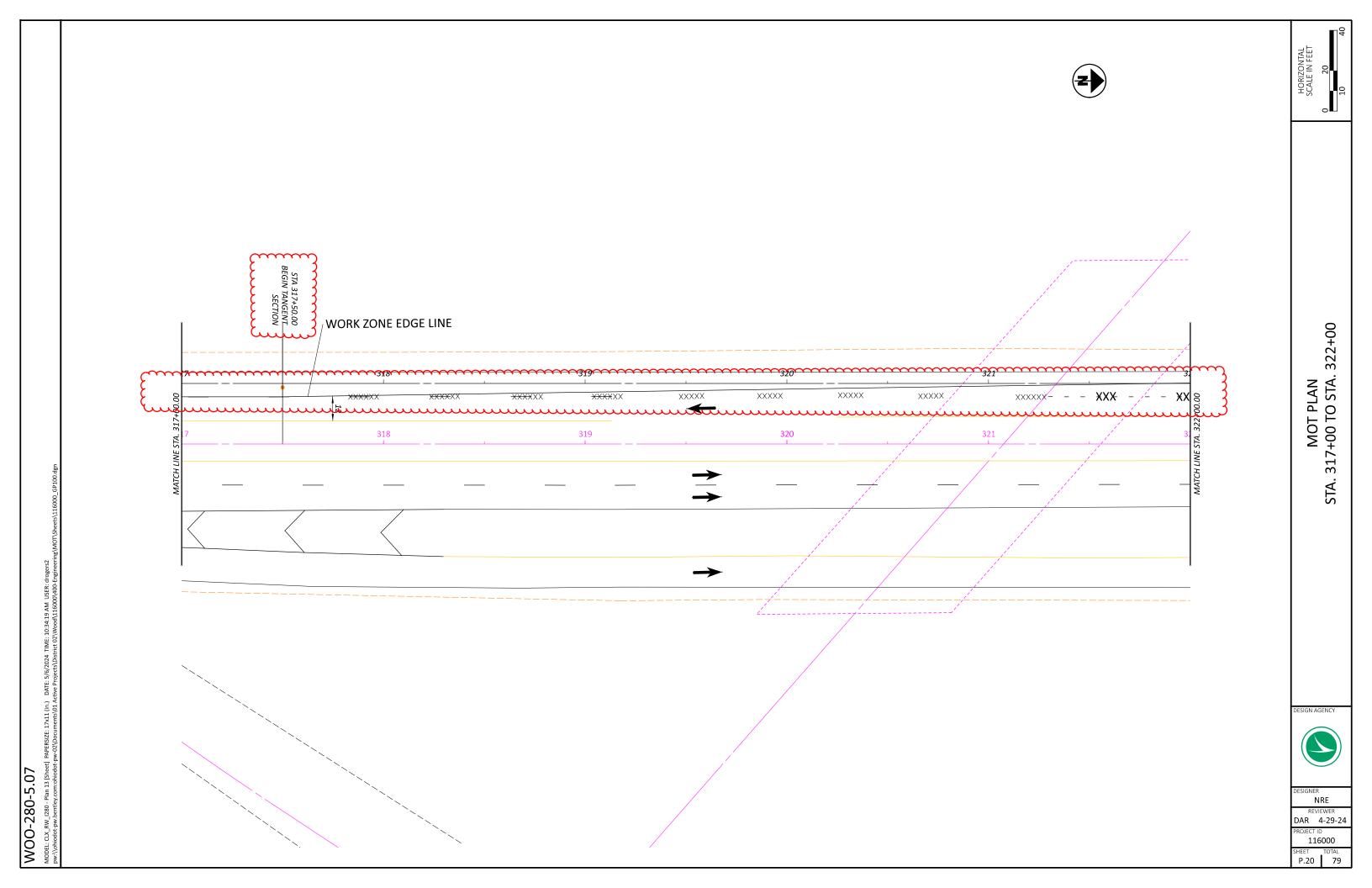
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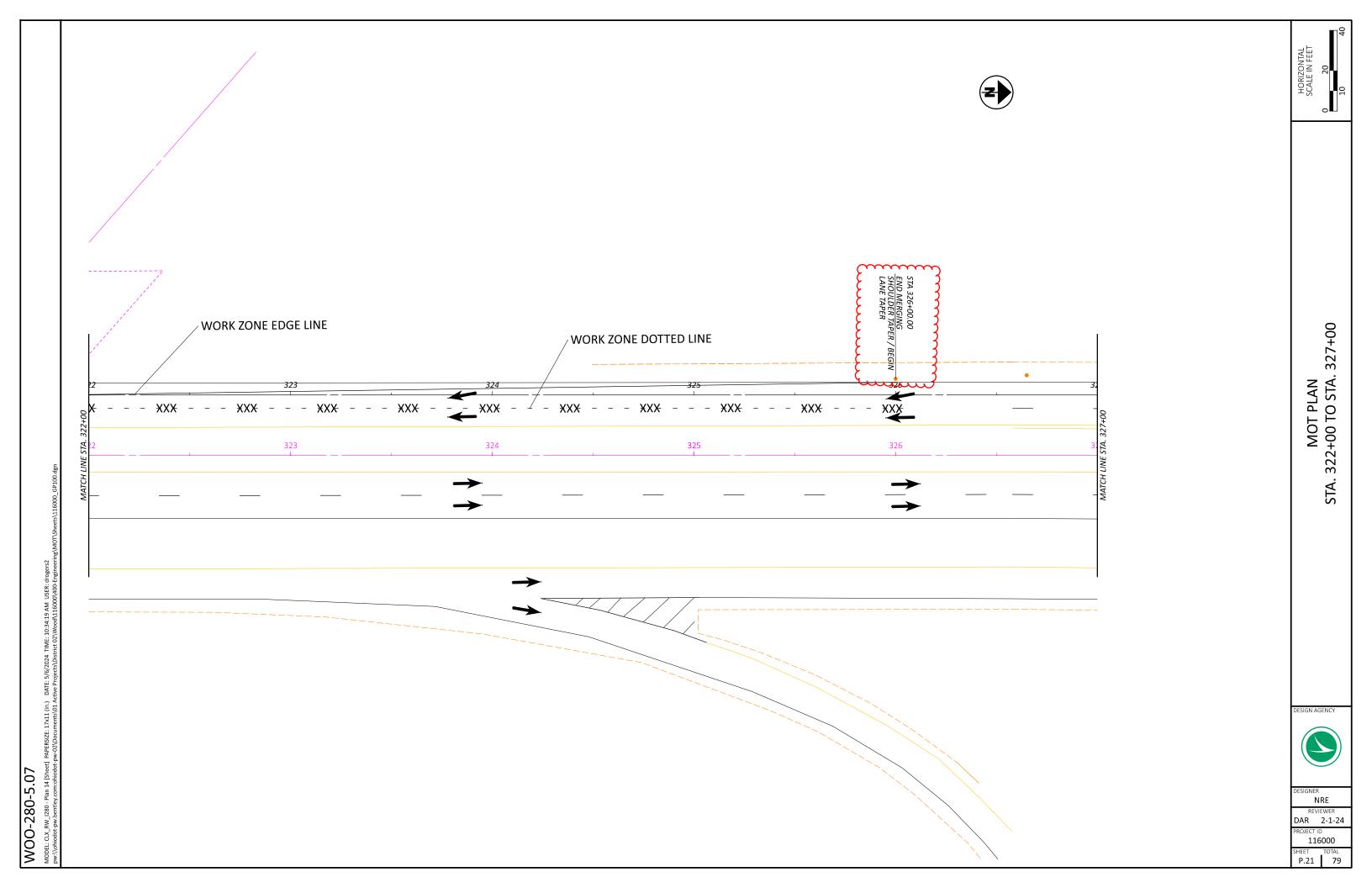
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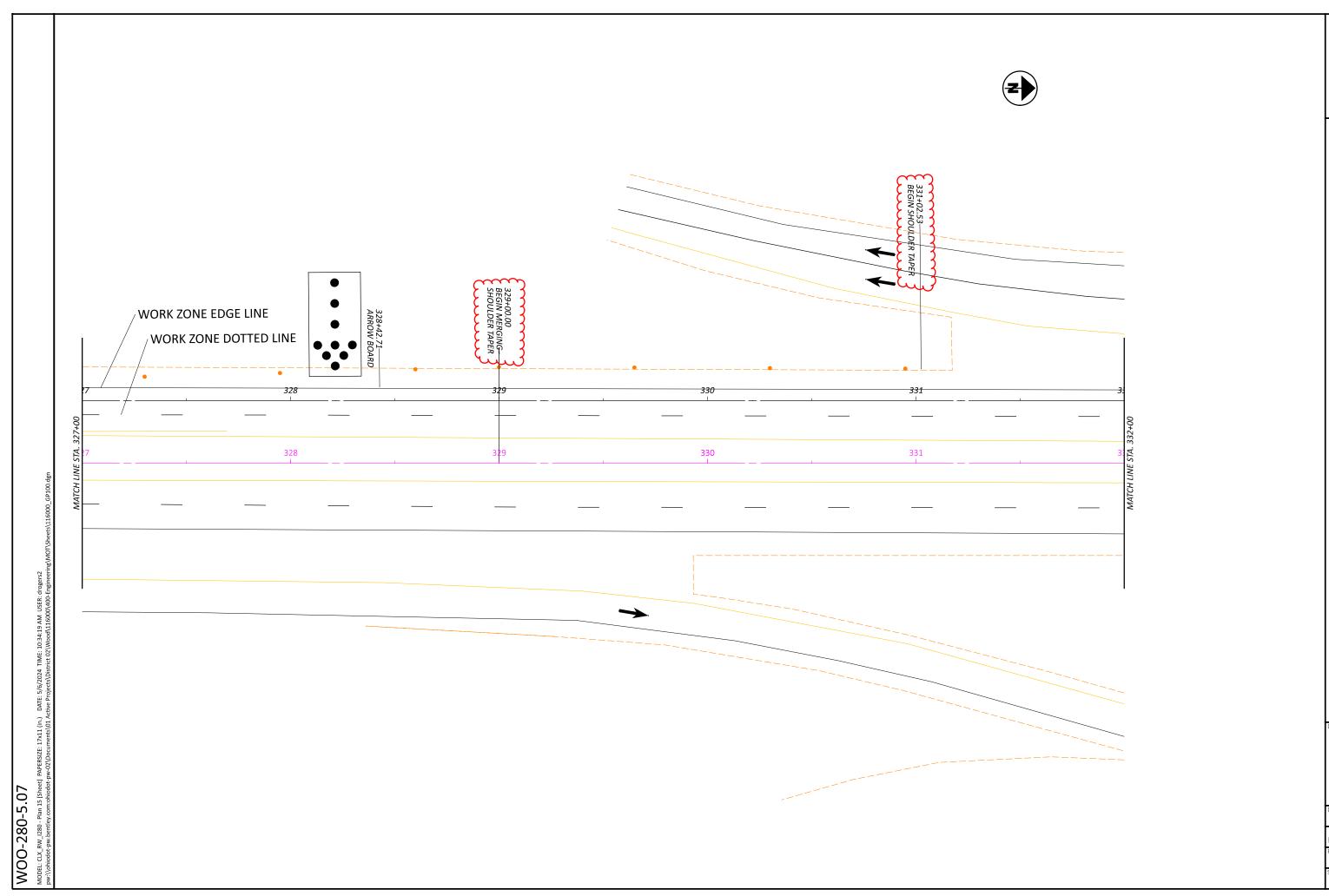
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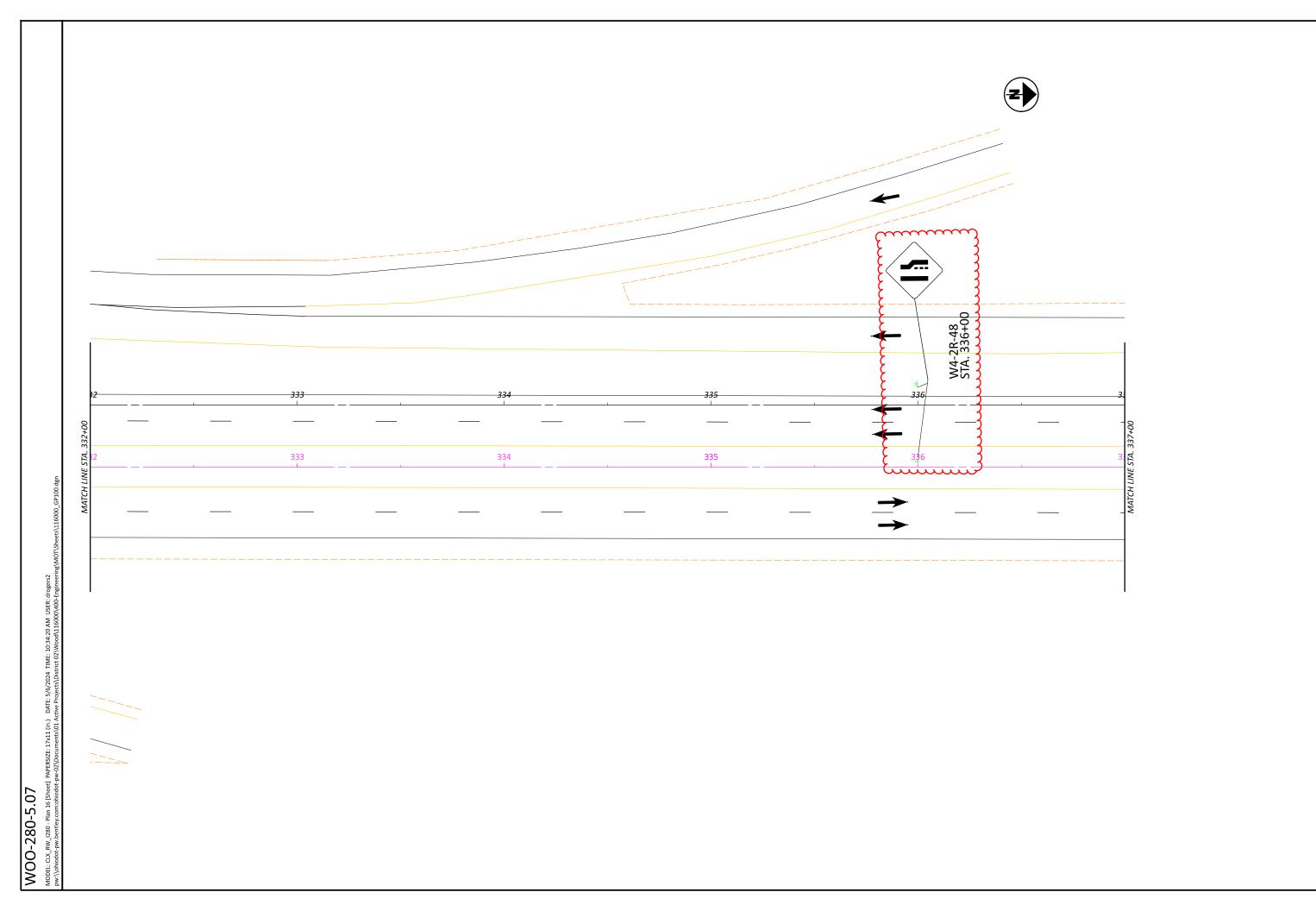
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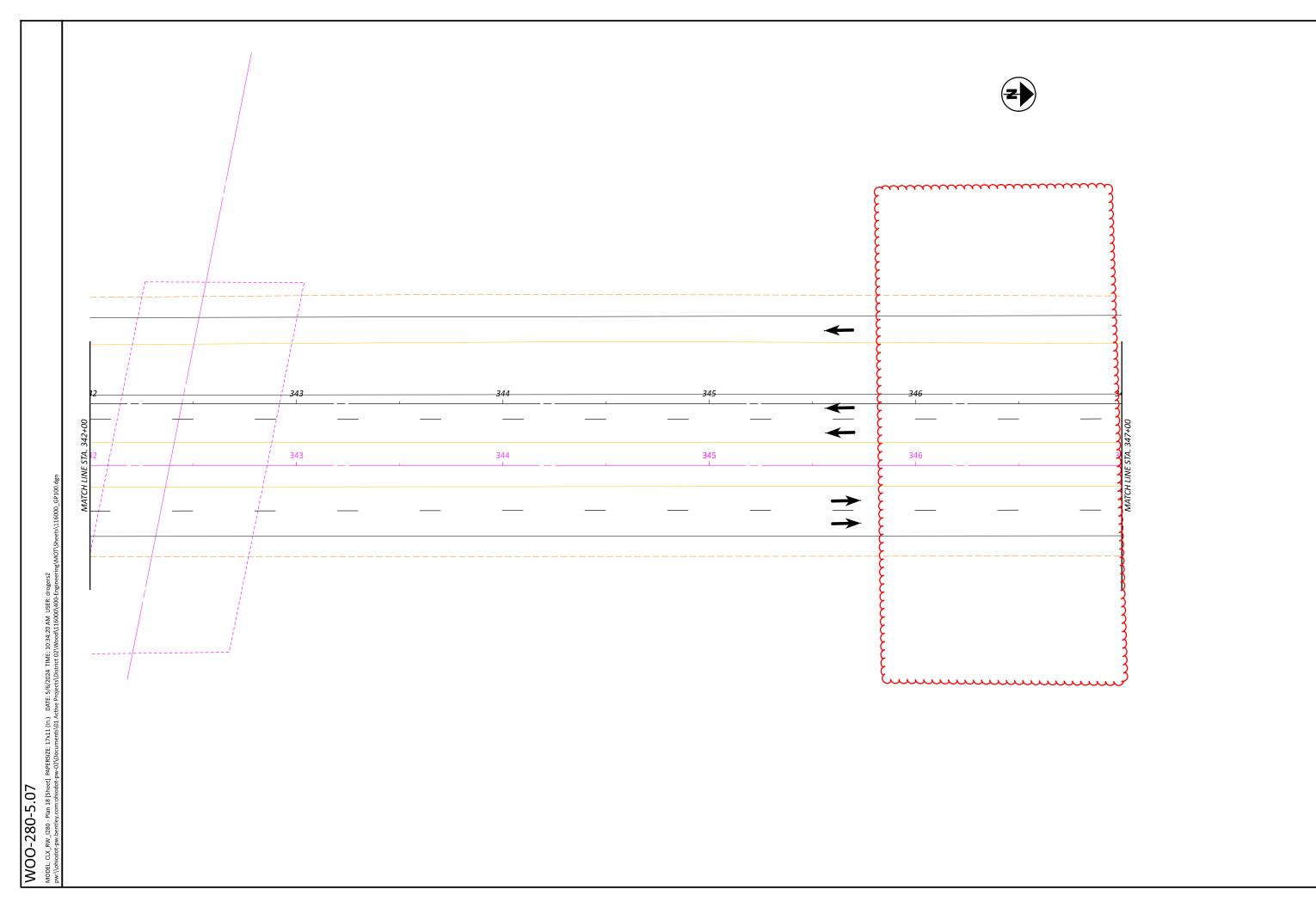
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MOT PLAN STA. 342+00 TO STA. 347+00

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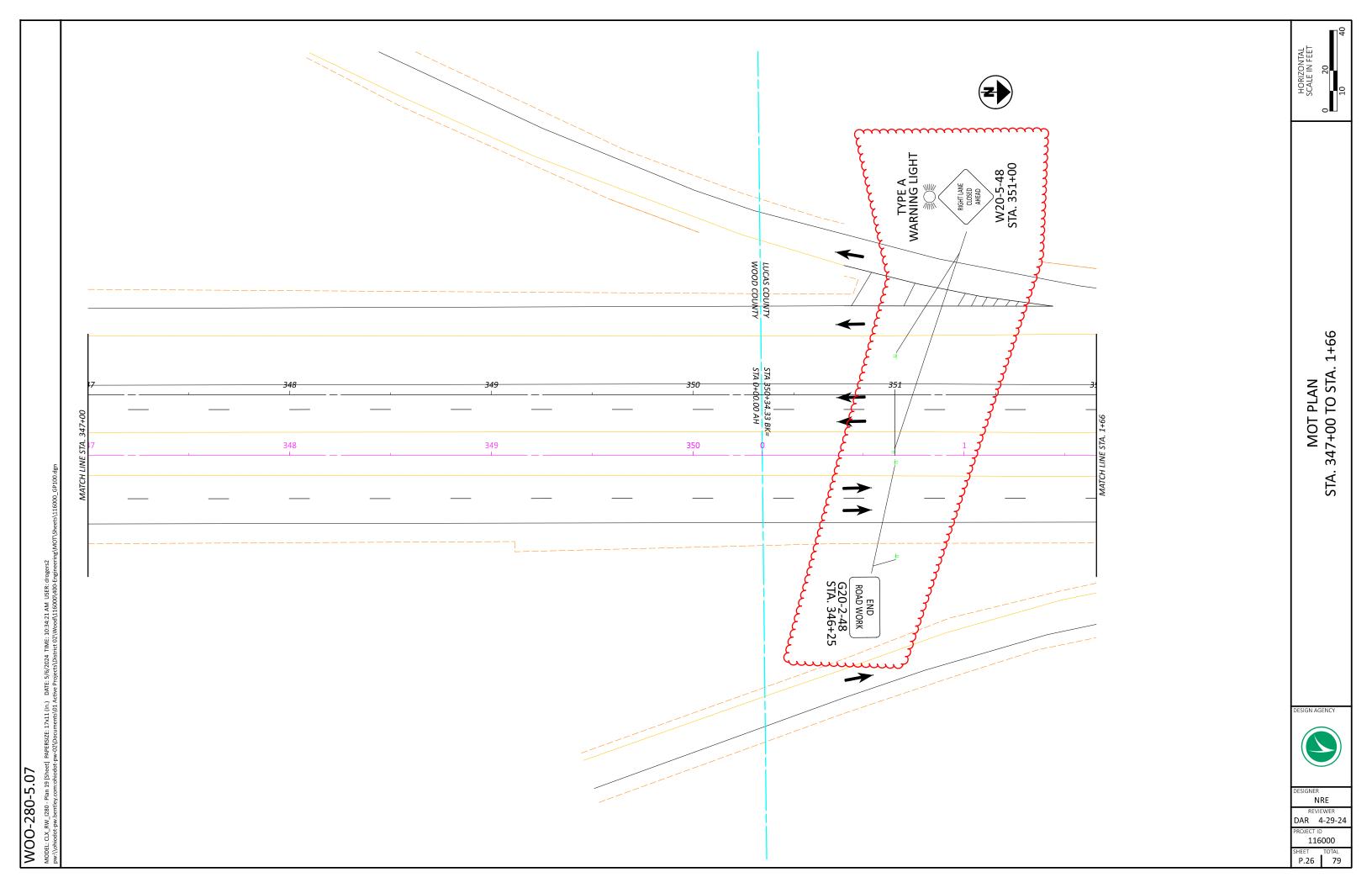
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GENERAL SUMMARY

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STAT	ION R	ANGE	LABEL	SHEET NUMBER	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA	PAVEMENT REMOVED	FENCE REMOVED	SUBGRADE COMPACTION	ASPHALT CONCRETE BASE, PG64- 22, (449)	AGGREGATE BASE	TACK COAT	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (449) 1-	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (449) 1-3/4"	COMBINATION CURB AND GUTTER, TYPE 4	LONGITUDINAL JOINT ADHESIVE	FENCE, TYPE 47	4" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC
						FT	FT	SY	SY	SY	FT	SY	CY	CY	GAL	CY	CY	FT	LB	FT	FT
267+50.00	TO	277+50.00	P1		LT	1000.00	5.00	555.56				555.56	92.59	92.59	66.67	23.15	27.01		1010.00		1000.00
277+50.00	TO	277+72.12	P2		LT	22.12	2.50	6.14				6.14	1.02	1.02	0.74	0.26	0.30		22.12		
280+80.56	TO	281+59.50	P3		LT	78.94	3.00	26.31				26.31	4.39	4.39	3.16	1.10	1.28		78.94		
281+59.50	TO	289+70.00	P4		LT	810.50	6.00	540.33				540.33	90.06	90.06	64.84	22.51	26.27		822.50		810.50
267+50.00	TO	277+72.12	P5		LT				709.07	710											
280+80.56	TO	289+70.00	P6		LT				610.75	611											
267+50.00	TO	277+50.00	01		I.T.	1000.00	2.50	277.78	444.44			444.44		77.16				1000.00			
267+50.00	TO	277+50.00	C1 C2		LT LT	27.00	2.50	7.50	12.00			12.00		2.08				27.00			
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281+59.50	ТО	289+70.00	C4	-	LT	810.50	2.50	225.14	360.22			360.22		62.54			-	810.50			
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				-	TOTALS	CARRIE	O TO GE	NERAL SI	JMMARY	1321	490	1987	189	338	136	48	55	1931	1934	490	1811

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REF NO.	SHEET NO.	STATIO	N TO S	TATION	WIDTH	LENTH (FROM CAD)	TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	6" CONDUIT, TYPE E, AS PER PLAN, 707.31 (PERFORATED)	PRECAST REINFORCED CONCRETE OUTLET
					FT	FT	SY	FT	FT	EACH
R1	39	267+40.00	TO	267+60.00	20.02	50.15	112			
R2	39	269+65.00	TO	269+85.00	20.02	51.87	116			
R3	40	272+15.00	TO	272+35.00	20.02	53.78	120			
R4	41	274+15.00	TO	274+35.00	20.02	55.86	125			
R5	41	277+15.00	TO	277+35.00	20.02	56.27	126			
R6	42	281+65.00	TO	281+85.00	20.02	56.46	126			
R7	42	283+40.00	TO	283+60.00	20.02	55.03	123			
R8	43	285+90.00	TO	286+10.00	20.02	53.88	120			
R9	43	287+90.00	TO	288+10.00	20.02	47.23	106			
R10	43	289+60.00	ТО	289+80.00	20.02	38.44	86			
D1	39-41	267+50.00	ТО	277+50.00					2000	
D2	42-43	281+25.00	TO	289+25.00					1600	
D3	39		267+50.00			52.10		53		2
D4	39		269+75.00			53.10		54		2
D5	40		272+25.00			53.21		54		2
D6	41		274+25.00			53.33		54		2
D7	42		281+75.00			54.13		55		2
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REF NO.	SHEET NO.	STATION TO STATION					GUARDRAIL REMOVED	ANCHOR ASSEMBLY REMOVED, TYPE E	ANCHOR ASSEMBLY REMOVED, TYPE T	BRIDGE TERMINAL ASSEMBLY REMOVED	GUARDRAIL, TYPE MGS	BRIDGE TERMINAL ASSEMBLY, TYPE 2	BRIDGE TERMINAL ASSEMBLY, TYPE 1	ANCHOR ASSEMBLY, MGS TYPE T	ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016
0.00	20.14	007:45.07	1.7	Т-0	077.74.00		FT 4407.5	EACH	EACH	EACH	FT	EACH	EACH	EACH	EACH
GR1	39-41	267+15.37	LT	TO	277+74.39	LT	1137.5		1	1					
GR2	39-41	266+33.77	LT	TO	277+75.53	LT					1125	1		1	
GR3	42-44	280+65.88	LT	TO	293+05.40	LT					1250		1		1
GR4	42-44	280+65.90	LT	ТО	293+11.77	LT	1250	1		1					
TOTAL	CARRIED TO	GENERAL SUM	MARY			-	2388	1	1	2	2375	1	1	1	1

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						614	614	614	630	622	642	642	Ç	626
LOCATION	SHEET NO.	STATION	I TO	STATION	SIDE	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	WORK ZONE DOTTED LINE, CLASS I, 6", 642 PAINT	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	PORTABLE BARRIER, UNANCHORED	LANE LINE, 6", TYPE 1	CHANNELIZING LINE, 12", TYPE 1		BARRIER REFLECTOR, TYPE 2, ONE-WAY
			1 == 1			EACH	MILE	FT	EACH	FT	MILE	FT	<u></u>	EACH
PCB		263+56.66	TO	296+02.77	LT	1			∞	3221			}	25
ALONG PCB		263+56.66	TO	315+27.82	LT		0.979		Y 4)				}	^
SB ENTRANCE RAMP		313+25.00	TO	315+27.82	LT		0.039		4				<u> </u>	
SB ENTRANCE RAMP		313+85.74	TO	315+27.82	LT							142		
SB ENTRANCE RAMP		313+23.03	TO	314+11.98	LT							90	ζ.	
SB ENTRANCE RAMP		299+02.86	TO	313+05.00	LT			1405			0.266		}	
													7	1
UPSTREAM LANE CLOSURE		313+05.00	ТО	329+07.68	LT		0.303						7	
UPSTREAM LANE CLOSURE		321+27.80	ТО	329+07.68	LT			780			0.148		ζ	7
									~~				}	-
TOTALS CAR	RIED T	O GENERA	L SU	MMARY	•	1	1.33	2185	(43	3221	0.42	232	7	25
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DESIGNER
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PROJECT ID 116000 SHEET TOTAL P.35A 79

