

STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION
TRU-422-0.00
 CHAMPION TOWNSHIP
 SOUTHLINGTON TOWNSHIP
 WARREN TOWNSHIP
 TRUMBULL COUNTY

PROJECT DESCRIPTION

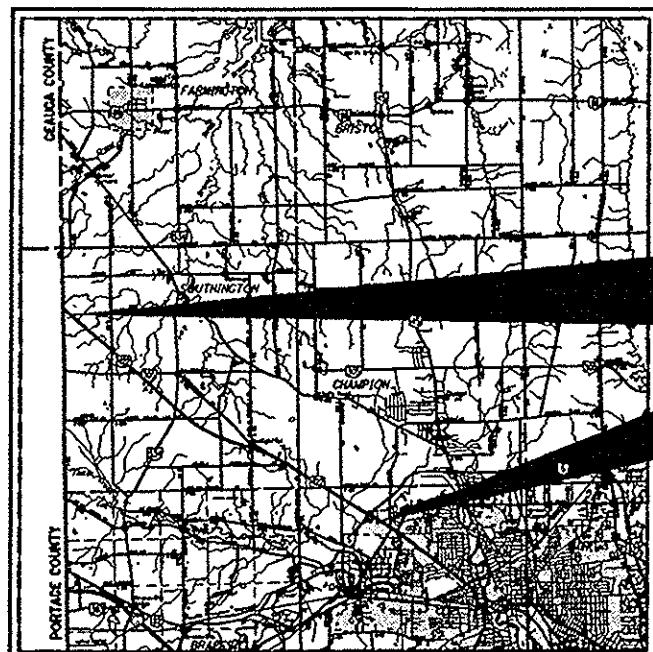
THIS PROJECT SHALL CONSIST OF MILLING AND RESURFACING OF 8.24 MILES OF US 422 IN TRUMBULL COUNTY. THERE WILL ALSO BE MINOR REPAIRS TO TWO CULVERTS.

PROJECT EARTH DISTURBED AREA: 0 ACRES
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA: N/A (MAINTENANCE PROJECT)
 NOTICE OF INTENT EARTH DISTURBED AREA: N/A (MAINTENANCE PROJECT)

2010 SPECIFICATIONS

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

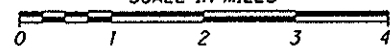
* I HEREBY APPROVED THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.



LOCATION MAP

LATITUDE: N41°17'15" LONGITUDE: W80°56'11"

SCALE IN MILES



PORTION TO BE IMPROVED -----
 INTERSTATE HIGHWAY -----
 STATE & FEDERAL ROUTES -----
 COUNTY & TOWNSHIP ROADS -----
 OTHER ROADS -----

DESIGN FUNCTIONAL CLASSIFICATION:
 RURAL PRINCIPAL ARTERIAL - OTHER SLM 0.00 TO SLM 7.56
 URBAN PRINCIPAL ARTERIAL - OTHER SLM 7.56 TO SLM 8.24
 NHS PROJECT ----- YES

DESIGN EXCEPTIONS

NONE REQUIRED

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
 CALL TWO WORKING DAYS
 BEFORE YOU DIG

CALL
 1-800-362-2764
 (TOLL FREE)
 OHIO UTILITIES PROTECTION SERVICE
 NON-MEMBERS
 MUST BE CALLED DIRECTLY
 OIL & GAS PRODUCERS PROTECTIVE
 SERVICE CALL: 1-800-925-0988

PLAN PREPARED BY:
 ODOT---DISTRICT 4
 2088 S. ARLINGTON ROAD
 AKRON, OHIO 44306

INDEX OF SHEETS:

TITLE SHEET	1
TYPICAL SECTIONS	2-4
GENERAL NOTES	5-6
MAINTENANCE OF TRAFFIC NOTES	7
GENERAL SUMMARY	8
ASPHALT CONCRETE SHEETS	9-10
RAISED PAVEMENT MARKING SUBSUMMARY	11
PAVEMENT MARKING SUBSUMMARY	12
RUMBLE STRIPE DETAILS	12a
STRUCTURES	13-14

STANDARD CONSTRUCTION DRAWINGS

ENGINEERS SEAL:	BP-3.1	10/19/07	MT-95.32	7/17/09	TC-71.10	1/15/10			SUPPLEMENTAL SPECIFICATIONS
	BP-4.1	7/16/04	MT-95.50	4/17/09	TC-72.20	10/16/09			800-2010 4/16/10
			MT-95.60	1/16/09	TC-73.10	1/19/07			832 5/5/09
	DM-4.3	4/17/09	MT-98.10	7/17/09					843 4/16/03
	DM-4.4	4/17/09	MT-98.11	7/17/09					
			MT-98.20	7/17/09					
	GR-1.1	7/16/04	MT-99.20	1/16/09					
	GR-2.1	1/16/04	MT-101.90	1/16/09					
	GR-4.1	4/18/03	MT-105.10	1/16/09					
	GR-4.2	1/19/07							
	GR-5.2	1/16/04	TC-41.20	1/19/07					
	GR-5.3	1/16/04	TC-42.20	7/16/04					
			TC-52.10	1/19/07					
	MT-35.10	4/20/01	TC-52.20	1/19/07					
	MT-95.30	7/17/09	TC-65.10	1/21/05					
	MT-95.31	7/17/09	TC-65.11	1/21/05					

ENGINEERS SEAL:

 SIGNED: *[Signature]*
 DATE: 7/23/10

SPECIAL PROVISIONS

APPROVED *[Signature]*
 DATE 2-3-2010 DISTRICT DEPUTY DIRECTOR

APPROVED *[Signature]*
 DATE 2-24-10 DIRECTOR, DEPARTMENT OF TRANSPORTATION

TRU - US-422-0.00
 100367 PID - 76414
 Dist 4 5/27/2010

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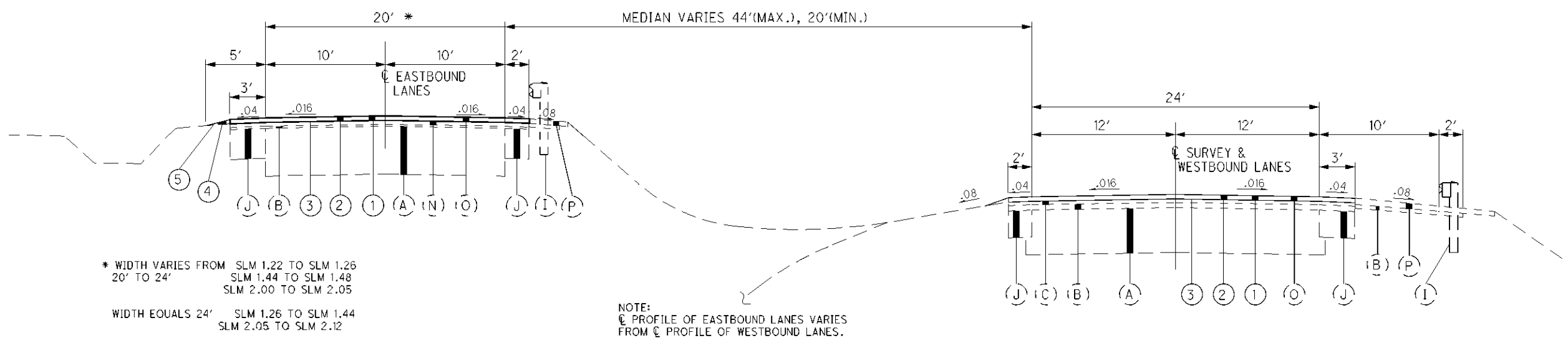
FEDERAL PROJECT NO.
E100(122)

PID NO.
76414

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT
NONE

TRU-422-0.00



* WIDTH VARIES FROM SLM 1.22 TO SLM 1.26
20' TO 24'
SLM 1.44 TO SLM 1.48
SLM 2.00 TO SLM 2.05

WIDTH EQUALS 24' SLM 1.26 TO SLM 1.44
SLM 2.05 TO SLM 2.12

NOTE:
E PROFILE OF EASTBOUND LANES VARIES
FROM E PROFILE OF WESTBOUND LANES.

NORMAL SECTION 1
SLM 0.00 TO SLM 2.12 = 2.12 MILES

PROPOSED PAVEMENT LEGEND

- ① ITEM 254 1 1/2" PAVEMENT PLANNING, ASPHALT CONCRETE
- ② ITEM 448 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M
- ③ ITEM 407 TACK COAT AT 0.15 GAL/SQ YD
- ④ ITEM 617 COMPACTED AGGREGATE, AS PER PLAN
- ⑤ ITEM 408 PRIME COAT, AS PER PLAN

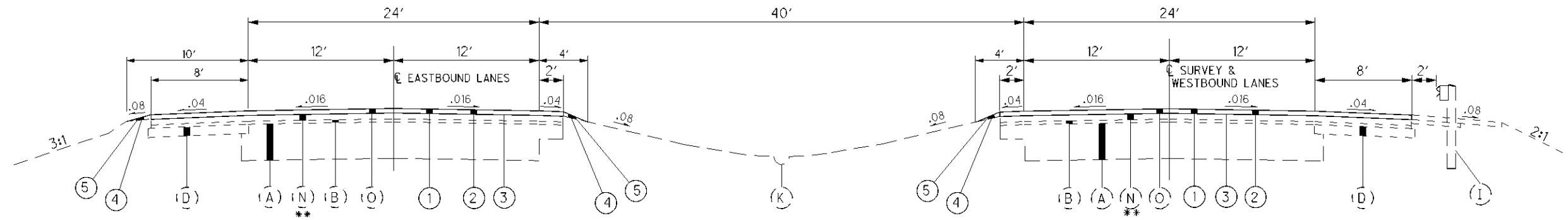
EXISTING PAVEMENT LEGEND

- (A) EXISTING ASPHALT PAVEMENT (3/4"404, 1 1/4"402, 8"-BITUMINOUS AGGREGATE BASE OR 11"-15"MACADAM BASE)
- (B) ITEM 446 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, AC-20
- (C) ITEM 858 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, AC-20
- (D) 3" BITUMINOUS AGGREGATE BASE, AC-20
- (E) 6" AGGREGATE BASE
- (F) 8" BITUMINOUS AGGREGATE BASE
- (G) CONCRETE MEDIAN
- (H) CONCRETE CURB, TYPE 6
- (I) GUARDRAIL, TYPE 5
- (J) 9" REINFORCED CONCRETE PAVEMENT
- (K) 12" SPLIT TILE GUTTER
- (L) GRANULAR SUBBASE
- (M) 6" PIPE UNDERDRAINS
- (N) ITEM 448 2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
- (O) ITEM 858 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (446)
- (P) ITEM 448 ASPHALT CONCRETE, SURFACE COURSE, UNDER GUARDRAIL, TYPE 1, PG64-22, AS PER PLAN

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TYPICAL SECTIONS

TRU-422-0.00

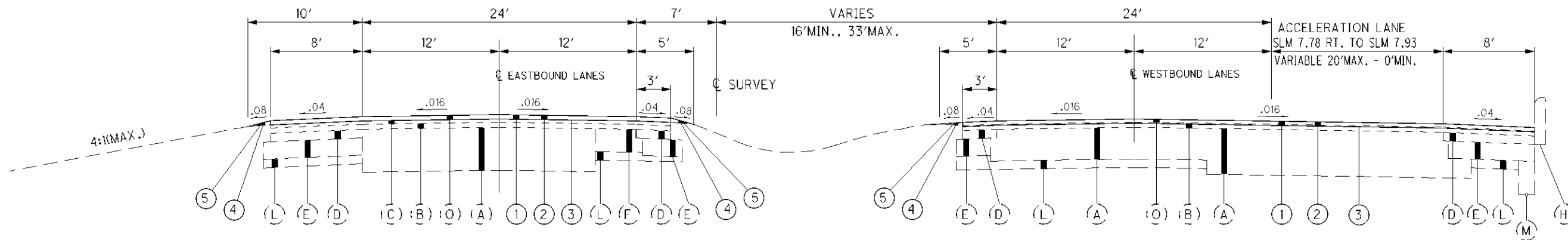


NORMAL SECTION 2

** ONLY AT SLM 2.17 TO SLM 2.22
 SLM 4.04 TO SLM 4.09
 SLM 4.51 TO SLM 4.59
 SLM 4.77 TO SLM 4.86

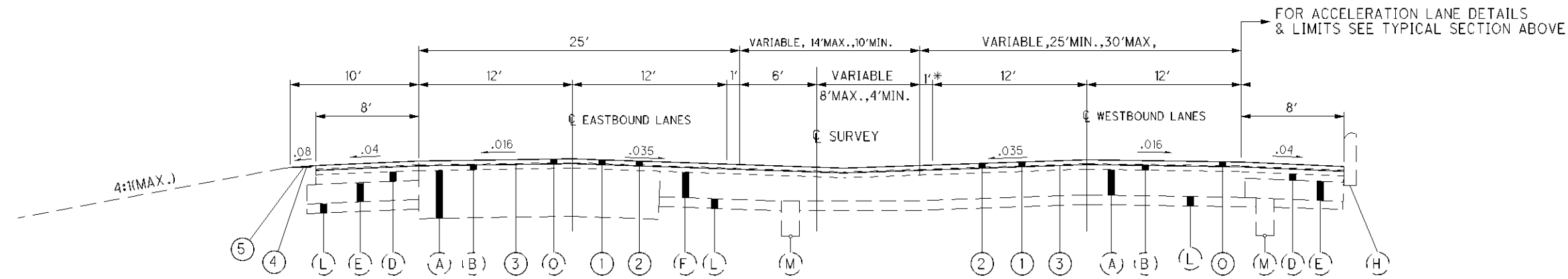
SLM 2.12 TO SLM 7.76 = 5.64 MILES
 TOTAL = 5.64 MILES

** ONLY AT SLM 4.50 TO SLM 4.22
 SLM 4.08 TO SLM 4.00
 SLM 3.59 TO SLM 3.29
 SLM 2.47 TO SLM 2.17



NORMAL SECTION 3

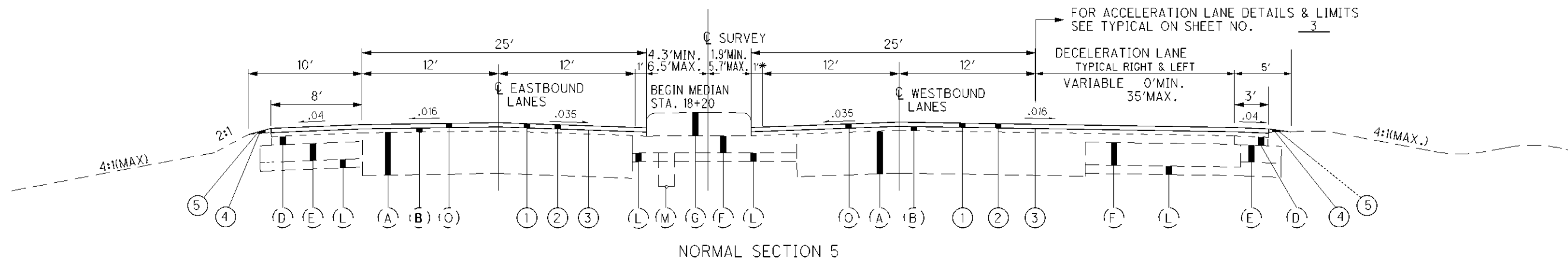
SLM 7.76 TO SLM 7.89 = 0.13 MILES
 TOTAL = 0.13 MILES



NORMAL SECTION 4

SLM 7.89 TO SLM 7.96 = 0.07 MILES
 TOTAL = 0.07 MILES

SEE LEGEND SHEET NO. 2



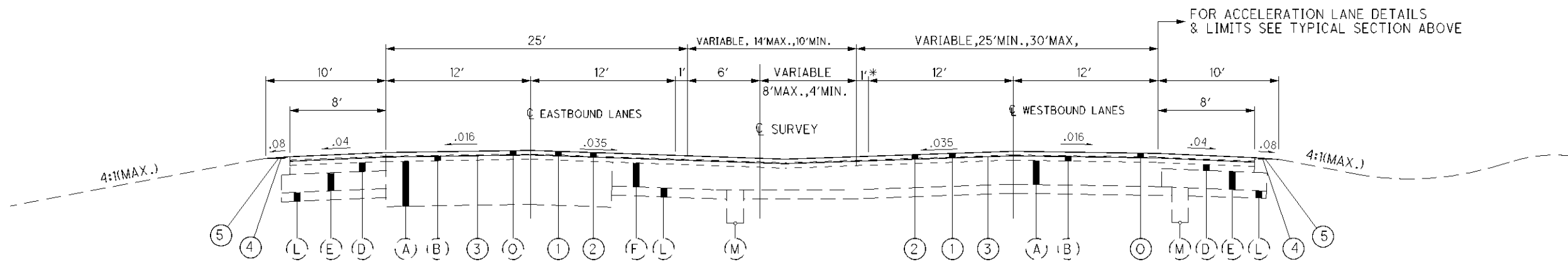
NORMAL SECTION 5
 SLM 8.06 TO SLM 8.15 = 0.09 MILES
 TOTAL = 0.09 MILES

* VARIES FROM 5' MIN. TO 12' MAX.
 SLM 8.04 TO SLM 8.06
 SLM 7.89 TO SLM 7.92
 FROM SLM 8.02 TO SLM 8.04 AND
 FROM SLM 7.87 TO SLM 7.89

WIDTH = 12'

FOR ACCELERATION LANE DETAILS & LIMITS
 SEE TYPICAL ON SHEET NO. 3

DECELERATION LANE
 TYPICAL RIGHT & LEFT
 VARIABLE 0' MIN.
 35' MAX.



NORMAL SECTION 6
 SLM 7.96 TO SLM 8.06 = 0.10 MILES
 SLM 8.15 TO SLM 8.24 = 0.09 MILES
 TOTAL = 0.19 MILES

SEE LEGEND SHEET NO. 2

FOR ACCELERATION LANE DETAILS & LIMITS
 SEE TYPICAL SECTION ABOVE

UTILITIES

THE CONTRACTOR SHALL USE THE FOLLOWING PROCEDURE AT EACH LOCATION WHERE WORK IS PERFORMED, IN ACCORDANCE WITH SECTIONS 105.07 AND 107.16 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE OHIO UTILITIES PROTECTION SERVICE (OUPS), THE OHIO & GAS PROCEDURES UNDERGROUND PROTECTION SERVICE (OGPUPS), THE OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 4 HEAD-QUARTERS AND ALL NON REGISTERED UTILITY OWNERS AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION IN ALL AREAS.

OUPS 1-800-362-2764 (CONTACT LIMITED BASIS PARTICIPANTS DIRECTLY)
 OGPUPS 1-800-925-0988
 ODOT 330-786-3145 KEN GREENE

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE NOT SHOWN ON THE PLANS, BUT CAN BE OBTAINED FROM THE OWNERS OF THE UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES.

PROFILE AND ALIGNMENT

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

PAVEMENT MARKING LANE WIDTHS

THE NORMAL LANE WIDTH FOR THE PAVEMENT MARKINGS ON THIS PROJECT SHALL BE AS FOLLOWS [AT LEAST 3 DAYS PRIOR TO PERFORMING THE WORK CONTACT THE TRAFFIC OFFICE AT 330-786-3147 TO CONFIRM THE

ROUTE	S.L.M. TO S.L.M.	LANE WIDTH
US 422 (EB)	0.00 TO 2.12	10'
US 422 (WB)	0.00 TO 2.12	12'
US 422	2.12 TO 8.24	12'

PAVEMENT MARKING DETAILS

THE PAVEMENT MARKING DETAIL SHEETS WILL BE SUPPLIED TO THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.

ITEM SPECIAL - MISC.: VERTICAL CLEARANCE

AFTER ALL CONSTRUCTION HAS BEEN COMPLETED, A REGISTERED SURVEYOR WILL TAKE VERTICAL CLEARANCE MEASUREMENTS AT LOCATIONS INDICATED ON THE APPROVED ODOT FORM (AVAILABLE IN THE DISTRICT 4 STRUCTURES AND PAVEMENT OFFICE). THE FINAL MEASUREMENTS SHALL BE RECORDED ON THE FORM AND SUBMITTED TO THE PROJECT ENGINEER AND THE DISTRICT 4 STRUCTURES AND PAVEMENT ENGINEER. THE RECORD SHALL BEAR THE SEAL OF THE LICENSED SURVEYOR WHO HAS TAKEN THE MEASUREMENTS. THIS WORK SHALL BE PERFORMED AT THE FOLLOWING STRUCTURES: TRU-5-0861R & TRU-5-0861L

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

SPECIAL - MISC.: VERTICAL CLEARANCE, 2 EACH

INTERSECTIONS

INTERSECTIONS WILL BE RESURFACED 2 FT. BEYOND THE EDGE LINE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR INDICATED IN THE PLAN. INTERSECTIONS SHALL BE PAVED AFTER COMPLETION OF THE SURFACE COURSE OR WITH THE MAINLINE PAVEMENT IF THIS CAN BE ACCOMPLISHED WITHOUT CHANGING THE VELOCITY AND DIRECTION OF THE PAVER. USE THE SAME ASPHALT CONCRETE AS THE MAINLINE PAVEMENT. PROVIDE A SMOOTH TRANSITION TO THE EXISTING PAVEMENT. ANY GRADING OR PRIME NECESSARY TO ACCOMPLISH THIS WORK SHALL BE INCLUDED IN THE COST OF THE PERTINENT BID ITEM.

DRIVEWAYS

THE CONTRACTOR WILL NOT BE PERMITTED TO LEAVE A DIFFERENCE IN ELEVATION BETWEEN THE MAINLINE ASPHALT SURFACE COURSE AND THE EXISTING DRIVEWAYS. IF APPROVED BY THE ENGINEER, AN ASPHALT WEDGE WITH A WIDTH OF APPROX 2' MAY BE PLACED EITHER ON THE ROADWAY SHOULDER OR DRIVEWAY DEPENDENT UPON WHICH SIDE IS HIGH. A QUANTITY OF MAINLINE SURFACE COURSE ASPHALT HAS BEEN PROVIDED IN THE CALCULATIONS AND GENERAL SUMMARY TO PERFORM THIS ITEM OF WORK.

ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN

IN LOW SHOULDER AREAS EXCEEDING 1", OR AS DIRECTED BY THE ENGINEER, RECYCLED ASPHALT PAVEMENT (RAP) SHALL BE USED IN AREAS ADJACENT TO THE PAVED BERM. THE RAP SHALL HAVE A MINIMUM PG CONTENT OF 4.5% AND MEET THE FOLLOWING GRADATION. ONCE THE STOCKPILE MEETS THE GRADATION, THE PG CONTENT OF THE RAP SHALL BE DETERMINED PER 441.03. THE RAP ANALYSIS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO USE. METHOD OF MEASUREMENT SHALL BE AS PER 617.06. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF ITEM 617. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 617 COMPACTED AGGREGATE, AS PER PLAN.

MODIFIED GRADATION SHALL APPLY:

SIEVE	TOTAL PERCENT PASSING
1-1/2"	100
3/4"	50-100
NO. 4	35-70
NO. 30	9-33
NO. 200	0-13

AN ESTIMATED QUANTITY OF 535 CU. YD. HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS WORK.

ITEM 408 - PRIME COAT, AS PER PLAN

THE CONTRACTOR WILL 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.

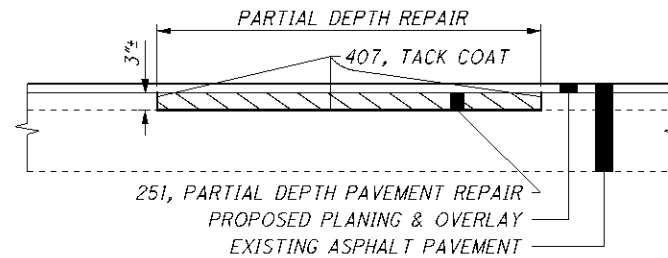
THE CONTRACTOR SHALL PROVIDE A SHIELD TO PREVENT THE SPRAYING OR DRIFTING OF LIQUID PRIME COAT MATERIAL ONTO THE EDGE OF THE PAVEMENT OR EDGELINE. CARE ALSO SHALL BE TAKEN TO AVOID SPRAYING LIQUID PRIME COAT MATERIAL ONTO DRIVEWAY APRONS, MAILBOX APPROACHES OR ANY PEDESTRIAN AREAS. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO 107.10 OF THE SPECIFICATIONS.

AN ESTIMATED QUANTITY OF 774 GAL. HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS WORK.

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THE ITEM SHALL CONSIST OF REPAIRING EXISTING LOCATIONS EXHIBITING SURFACE DETERIORATION AND PLACING 3" OF ITEM 448 ASPHALT CONCRETE, TYPE 2. THE ASPHALT CONCRETE SHALL BE COMPACTED WITH A TYPE I PNEUMATIC TIRE ROLLER AND A STEEL WHEEL ROLLER AS PER 401.13. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER THE COMPLETION OF MAINLINE PAVEMENT PLANING. ALSO, THIS ITEM SHALL COMMENCE WITHIN 7 DAYS OF THE COMPLETION OF MAINLINE PAVEMENT PLANING. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REPAIR. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

251, PARTIAL DEPTH PAVEMENT REPAIR, 15756 SY



ITEM 604, CATCH BASIN ADJUSTED TO GRADE

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY AND IS TO BE USED AS DIRECTED BY THE ENGINEER TO RAISE EXISTING CATCH BASINS TO GRADE.

604, CATCH BASIN ADJUSTED TO GRADE
 US 422 5 EACH

BARRIER REFLECTORS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS DIRECTED BY THE ENGINEER FOR INSTALLING/REPLACING BARRIER REFLECTORS ON ALL EXISTING BARRIER RUNS WITHIN THE PROJECT LIMITS.

202, REMOVAL MISC.: BARRIER REFLECTOR, 27 EACH
 626, BARRIER REFLECTOR, TYPE A 100 EACH
 626, BARRIER REFLECTOR, TYPE B 8 EACH

REMOVE AND REPLACE EXISTING GUARDRAIL

THE EXISTING GUARDRAIL AT SLM 1.40 WILL BE REMOVED AND REPLACED. THE FOLLOWING ITEMS HAVE BEEN INCLUDED FOR USE AS DIRECTED BY THE ENGINEER:

ITEM 202, GUARDRAIL REMOVED 537.5 FT
 ITEM 606, GUARDRAIL, TYPE 5 462.5 FT
 ITEM 606, ANCHOR ASSEMBLY, TYPE A 1 EA
 ITEM 606, ANCHOR ASSEMBLY, TYPE E 1 EA
 ITEM 606, ANCHOR ASSEMBLY, TYPE T 2 EA
 ITEM 626, BARRIER REFLECTOR, TYPE A 6 EA

REPAIR OF DAMAGED GUARDRAIL

AN ADDITIONAL QUANTITY OF ITEM 606 GUARDRAIL, TYPE 5 HAS BEEN INCLUDED FOR USE TO REPAIR DAMAGED GUARDRAIL AS DIRECTED BY THE ENGINEER.

ITEM 606, GUARDRAIL, TYPE 5 150 FT

GENERAL NOTES

TRU-422-0.00

ITEM 606 - ANCHOR ASSEMBLY, TYPE E

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS, OR AN APPROVED EQUAL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE AT WWW.DOT.STATE.OH.US/DRRC/ UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS:

1. THE ET-2000 (1997) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF TWO 25'-0" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS142	ET2000 PLUS 50'-0" PLAN, ELEVATION AND SECTION 25'-0" RAIL, SLEEVE W/PL POSTS 1-4	4/12/00	7/31/00
SS141	ET2000 PLUS PLAN, ELEVATION AND SECTION 25'-0" RAIL, HBA POSTS 1-4	2/29/00	7/31/00
SS158	ET2000 PLUS 50'-0" WITH 12'-6" PANELS AND HBA POSTS 1-4 PLAN, ELEVATION AND SECTION	5/22/00	7/31/00
SS330	ET2000 PLUS 50'-0" WITH FOUR FOUNDATION TUBES AND FOUR CRT POSTS	3/28/06	3/29/06
SS373	ET2000 PLUS 50'-0" WITH 7 SYT POSTS AND ONE HBA POST	6/20/09	1/20/09

2. THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 2516 MALLORY LANE, STOW, OHIO, 44224, (TELEPHONE: 330-346-0721).

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF FOUR 12'-6" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SKT-4M	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES	12/11/97	3/6/98
SKT HINGED CRT	SEQUENTIAL KINKING TERMINAL (SKT-350) FOUR POSTS ARE STEEL HINGED AND FIVE POSTS ARE CRT	4/30/06	5/23/06
SKT-SP	SEQUENTIAL KINKING TERMINAL (SKT-350) A SEVEN POST OPTION USING STANDARD STEEL POST	3/30/09	3/4/09

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18" X 18", OR 12" X 18" IF APPLIED TO A RECTANGULAR ET-2000 "PLUS" EXTRUDER HEAD.

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

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

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, 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.

PAVING UNDER GUARDRAIL

THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER BY REMOVING EXISTING PAVEMENT AND PAVING UNDER THE GUARDRAIL USING 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22, UNDER GUARDRAIL, AS PER PLAN.

ALL COLLECTED DEBRIS AND ASPHALT, INCLUDING RHIZOMES, ROOTS AND OTHER VEGETATIVE PLANT MATERIAL SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN 105.17.

THE REMOVED MATERIAL SHALL BE REPLACED WITH COMPACTABLE GRANULAR MATERIAL CONFORMING TO 703.16 PLACED TO GRADE AS DETAILED ON THE TYPICAL SECTION OR AS APPROVED BY THE ENGINEER.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER PAVING UNDER THE GUARDRAIL USING 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22, UNDER GUARDRAIL, AS PER PLAN.

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

METHOD A:

1. SET GUARDRAIL POSTS
2. PLACE ITEM 448

METHOD B:

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

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 448, ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, PG 64-22, UNDER GUARDRAIL, AS PER PLAN.

ITEM 618 - EDGE LINE, RUMBLE STRIPE (ASPHALT CONCRETE)

DESCRIPTION: THIS WORK CONSISTS OF GRINDING DEPRESSIONS (RUMBLE STRIPES) AND PLACING 4 INCH WIDE EDGE LINES SO AS TO BE VISIBLE FROM BOTH DIRECTIONS OF TRAVEL IN THE PAVEMENT AT THE LOCATION OF THE EDGE OF PAVEMENT.

CONSTRUCT EDGE LINE, RUMBLE STRIPES ACCORDING TO TRAFFIC PLAN INSERT SHEET 206410 (SEE SHEET 6).

CONSTRUCTION OF EDGE LINE, RUMBLE STRIPE: FURNISH EQUIPMENT TO GRIND THE DEPRESSIONS WITH A ROTARY CUTTING HEAD THAT WILL PRODUCE THE REQUIRED DIMENSIONS AND A PATTERN OF CUTTING TIPS TO PRODUCE A SMOOTH CUT WITH APPROXIMATELY 0.06 INCHES (1.5 mm) BETWEEN PEAKS AND VALLEYS. ENSURE THAT THE CUTTING HEAD IS ON ITS OWN SUSPENSION SYSTEM, INDEPENDENT FROM THAT OF THE POWER UNIT, TO ALLOW THE HEAD TO ALIGN ITSELF WITH THE SLOPE PAVEMENT OR ANY IRREGULARITIES IN THE PAVEMENT SURFACE. EQUIP THE CUTTING TOOL WITH GUIDES OR A GUIDANCE SYSTEM, CLEARLY VISIBLE TO THE OPERATOR, TO PROVIDE FOR CONSISTENT ALIGNMENT. TAKE EFFECTIVE MEASURES TO CONTROL DUST DURING THE GRINDING OPERATION.

LOCATION AND PLACEMENT RESTRICTIONS OF EDGE LINE, RUMBLE STRIPE: EDGE LINE, RUMBLE STRIPES ARE NOT TO BE USED AT LOCATIONS WHERE THE LANE WIDTH IS LESS THAN 11 FEET AND THE POSTED SPEED LIMIT IS LESS THAN 50 MPH. RUMBLE STRIPES ARE NOT TO BE USED WHERE THE SHOULDER WIDTH IS LESS THAN 2 FEET. DISCONTINUE EDGE LINE, RUMBLE STRIPES AT INTERSECTIONS, RIGHT TURN LANES, DRIVEWAYS, STRUCTURES AND 650 FEET FROM URBAN AND/OR RESIDENTIAL AREAS. DISCONTINUE RUMBLE STRIPES AT THE INTERSECTION OF TWO STATE ROUTES WHERE RAISED PAVEMENT MARKERS BEGIN OR END.

LOCATE EDGE LINE, RUMBLE STRIPES ON THE PAVEMENT PER THE SPECIFICATIONS OF TRAFFIC PLAN INSERT SHEET 206410 (SEE SHEET 6).

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE EDGE LINE, RUMBLE STRIPES IN THE UNIT OF MILES (KILOMETERS) COMPLETED IN PLACE. THE DEPARTMENT WILL MEASURE QUANTITIES AS THE LENGTH OF COMPLETED GRINDING, INCLUDING THE GAPS, INTERSECTIONS AND OTHER SECTIONS OF PAVEMENT NOT BEING GROUND BETWEEN THE BEGINNING STRAIGHT LINE MILEAGE AND THE ENDING STRAIGHT LINE MILEAGE LISTED IN THE PLANS.

BASIS OF PAYMENT: THE DEPARTMENT WILL NOT PAY FOR REPAIRING SURFACE DAMAGE AND EXTRANEIOUS MARKS CAUSED BY THE CONTRACTOR'S OPERATIONS. THE DEPARTMENT WILL PAY FOR THE EDGE LINE PAVEMENT MARKING UNDER THE FOLLOWING ASSOCIATED ITEM NUMBER: ITEM 646 EPOXY.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:
 ITEM 618 - EDGE LINE, RUMBLE STRIPE (ASPHALT CONCRETE)
 33.16 MILE

MAINTENANCE OF TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS AND RAMPS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS AND THE FOLLOWING:

1. A MINIMUM OF TEN FOOT LANE IN EACH DIRECTION SHALL BE MAINTAINED ON THE EXISTING PAVEMENT AND COMPLETED PAVEMENT DURING CONSTRUCTION OF THE WORK.
2. THE CONTRACTOR SHALL INFORM THE DISTRICT OFFICE (330) 786-2211, EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK.
3. CONES SHALL NOT BE ACCEPTABLE TRAFFIC CONTROL DEVICES FOR LANE RESTRICTIONS OR LANE REDUCTIONS THAT ARE IN OPERATION ONE-HALF HOUR AFTER SUNSET OR ONE HALF-HOUR BEFORE SUNRISE. ALL NIGHTTIME LANE RESTRICTIONS SHALL REQUIRE DRUMS OR BARRICADES AT A MAXIMUM SPACING OF FIFTY (50) FEET. WEIGHTED CHANNELIZERS MAY BE USED IN ACCORDANCE WITH THE STANDARD CONSTRUCTION DRAWINGS.
4. LANE RESTRICTIONS OR LANE REDUCTIONS SHALL NOT BE PERMITTED AFTER NORMAL WORKING HOURS. NORMAL WORKING HOURS SHALL BE THOSE HOURS DURING WHICH THE CONTRACTOR HAS A FULL COMPLEMENT OF EMPLOYEES AND EQUIPMENT ACTIVELY REMOVING AND/OR PLACING PAVEMENT MATERIALS.
5. THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN AND SUBSEQUENTLY REMOVE ALL FLAGS, BARRICADES, SIGNS, SIGN SUPPORTS AND FURNISH AND MAINTAIN ALL FLAGGERS, WATCHERS AND INCIDENTALS RELATED THERETO.
6. ALL FULL OR PARTIAL DEPTH PAVEMENT REMOVAL AND REPLACEMENT OPERATIONS SHALL BE COMPLETED THE SAME DAY THE EXCAVATION IS MADE. IF THE CONTRACTOR CANNOT COMPLETE THE WORK, THE EXCAVATION SHALL BE BACKFILLED OR PROTECTED.
7. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE PERMITTED TO HAVE SUCCESSIVE WORK ZONES UNLESS THE DISTANCE BETWEEN THE DRUMS, BARRICADES OR CONES EXCEEDS TWO (2) MILES RURAL.
8. ONLY DURING OFF-PEAK PERIODS (i.e ANY PERIOD OTHER THAN 6-8AM AND 3-6PM) SHALL THE CONTRACTOR INSTALL AND SUBSEQUENTLY RESET ALL TRAFFIC CONTROL NECESSARY FOR THE WORK ZONE FOR EACH CONSTRUCTION PHASE.
9. IN ADDITION TO THE REQUIREMENTS OF 614.11 WORK ZONE PAVEMENT MARKINGS, AT THE END OF EACH DAY OF WORK, THE CONTRACTOR SHALL REPLACE (WITH WORK ZONE MARKINGS) ALL LANE, CENTER, STOP OR CHANNELIZING LINES THAT WERE REMOVED OR COVERED DURING THE PAVEMENT REMOVAL OR PLACEMENT OPERATIONS. QUANTITIES FOR SUCH PLACEMENT ARE CARRIED AS PART OF THE ITEMS LISTED UNDER 614 WORK ZONE PAVEMENT MARKINGS.
10. A QUANTITY OF 40 CU. YDS. OF 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC SHALL BE PROVIDED FOR USE IN MAINTAINING PAVEMENT, SHOULDERS AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER.

11. PRIOR TO OPENING TO TRAFFIC EACH LANE SHALL BE IN A SAFE, PASSABLE CONDITION. ALL TRANSVERSE JOINTS SHALL EXTEND ACROSS THE FULL LANE AND SHOULDER WIDTH AND EACH LANE SHALL BE FREE FROM UNEVEN LONGITUDINAL JOINTS. THE CONTRACTOR SHALL PROVIDE ASPHALT WEDGES FOR TRANSVERSE JOINTS WHEREVER THERE ARE PAVEMENT ELEVATION DIFFERENCES.

12. A QUANTITY OF ITEM 614 WORK ZONE MARKING SIGN HAS BEEN INCLUDED IN THE PLAN. THIS QUANTITY SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING SIGNS: W8-1 [BUMP], W6-3 [TWO-WAY TRAFFIC], W8-H13 [NO EDGE LINES], R4-1 [DO NOT PASS], R4-2 [PASS WITH CARE], W8-11 [UNEVEN LANES]. THESE QUANTITIES SHALL BE AS PER 614.04.

THE FOLLOWING QUANTITIES SHALL BE USED FOR THE MAINTENANCE OF TRAFFIC ON THIS PROJECT:

PHASE I - PLANED SURFACE

- 614, WORK ZONE LANE LINE, CLASS II, 16.48 MILE
- 614, WORK ZONE STOP LINE, CLASS I, 160 FT
- 614, WORK ZONE CHANNELIZING LINE, CLASS I, 170 FT
- 614, WORK ZONE MARKING SIGN (ALL PHASES), 48 EACH

PHASE II - SURFACE COURSE

- 614, WORK ZONE LANE LINE, CLASS III, 642 PAINT, 16.48 MILE
- 614, WORK ZONE STOP LINE, CLASS III, 642 PAINT, 160 FT
- 614, WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT 170 FT

TO BE USED AS DIRECTED BY THE ENGINEER

- 614, WORK ZONE EDGE LINE, CLASS III, 642 PAINT 33.16 MILE

ADVANCED NOTICE TO PAVE

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL TO THE DISTRICT CONSTRUCTION ENGINEER A DETAILED SCHEDULE 15 DAYS PRIOR TO THE PLACEMENT OF THE OVERLAY COURSES, ON HOW THEY PROPOSE TO PROSECUTE THE PAVING OPERATIONS. THE DETAILS SHALL SHOW THE ORDER OF PERFORMANCE OF EACH STAGE (START TO FINISH) OF THE WORK INCLUDING THE MAINTENANCE OF TRAFFIC THAT WILL BE USED.

CONTRACTOR'S EQUIPMENT - OPERATION AND STORAGE

A QUALIFIED FLAGGER SHALL BE EMPLOYED WHERE THE CONTRACTOR'S EQUIPMENT MUST MERGE WITH THE TRAFFIC STREAM. THE CONTRACTOR'S EQUIPMENT SHALL BE EQUIPPED WITH AT LEAST ONE AMBER FLASHING LIGHT. PAVERS, ROLLERS AND OTHER EQUIPMENT MAY BE PARKED IN AREAS ALONG THE HIGHWAY WHEN PAVING OPERATIONS ARE SCHEDULED TO CONTINUE WITHIN THE NEXT WORKDAY. OTHERWISE THE EQUIPMENT SHALL BE STORED AT A STORAGE AREA OUTSIDE THE R/W, THE LOCATION OF WHICH SHALL HAVE PRIOR APPROVAL OF THE ENGINEER. WHEN PARKING ALONG THE HIGHWAY THE EQUIPMENT SHALL BE PLACED AND DELINEATED AS PER 614.03. NO EQUIPMENT SHALL BE PARKED IN THE MEDIAN OF THE HIGHWAY. ADEQUATE BARRICADES AND LIGHTS 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. NO EQUIPMENT SHALL BE PARKED ON PRIVATE PROPERTY UNLESS PRIOR APPROVAL OF THE OWNER AND THE PROJECT ENGINEER/SUPERVISOR HAS BEEN GRANTED.

WINTER TRAFFIC LIMITATIONS

ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC BETWEEN NOVEMBER 15 AND APRIL 1. NOVEMBER 14 SHALL BE CONSIDERED TO CONSTITUTE AN INTERIM COMPLETION DATE AND DISINCENTIVES OF \$1300 SHALL BE ASSESSED FOR EACH CALENDAR DAY THAT THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT. THE CONTRACTOR MAY CLOSE LANES PRIOR TO APRIL 1 WITH WRITTEN APPROVAL FROM THE DISTRICT CONSTRUCTION ENGINEER.

TRAFFIC CONTROL INSPECTOR

THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL OTHER THAN THE SUPERINTENDENT AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO CONTINUOUSLY INSPECT ALL TRAFFIC CONTROL DEVICES WHENEVER CONSTRUCTION WORK IS BEING PERFORMED WITHIN THE WORK LIMITS OF THE PROJECT. THE DESIGNATED INDIVIDUAL SHALL ALSO INSPECT ALL TRAFFIC DEVICES AT THE BEGINNING AND AT THE END OF EACH WORK DAY. THE DESIGNATED INDIVIDUAL OR A QUALIFIED REPRESENTATIVE SHALL ALSO BE AVAILABLE ON AN AROUND THE CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS SHALL BE EQUIPPED WITH CELLULAR PHONES AND THEIR NAMES AND PHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER AT THE PRE-CONSTRUCTION MEETING. THE DESIGNATED INDIVIDUAL MAY HAVE OTHER CONSTRUCTION RELATED DUTIES AS LONG AS IMMEDIATE ATTENTION IS GIVEN TO TRAFFIC CONTROL. PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

ITEM 614, MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING

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 HOLIDAY OR EVENT	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)	12:00N WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY-WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA-WIDE.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$1300 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

SURFACE CONDITION SIGNS

ERECT A GROOVED PAVEMENT (W8-H15) SIGN 250 FEET IN ADVANCE OF ANY SECTION OF ROADWAY WHERE TRAFFIC MUST TRAVEL ON A PLANED SURFACE. ENSURE THESE SIGNS ARE IN PLACE BEFORE OPENING THE ROADWAY TO TRAFFIC. ERECT THESE SIGNS ON EACH ENTRANCE RAMP AND AT INTERSECTIONS OF THROUGH ROUTES TO WARN TRAFFIC OF THIS SURFACE CONDITION. PAYMENT WILL BE MADE UNDER THE LUMP SUM PAID FOR ITEM 614 - MAINTAINING TRAFFIC.

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CALCULATED
LMB
CHECKED

MAINTENANCE OF TRAFFIC

TRU-422-0.00

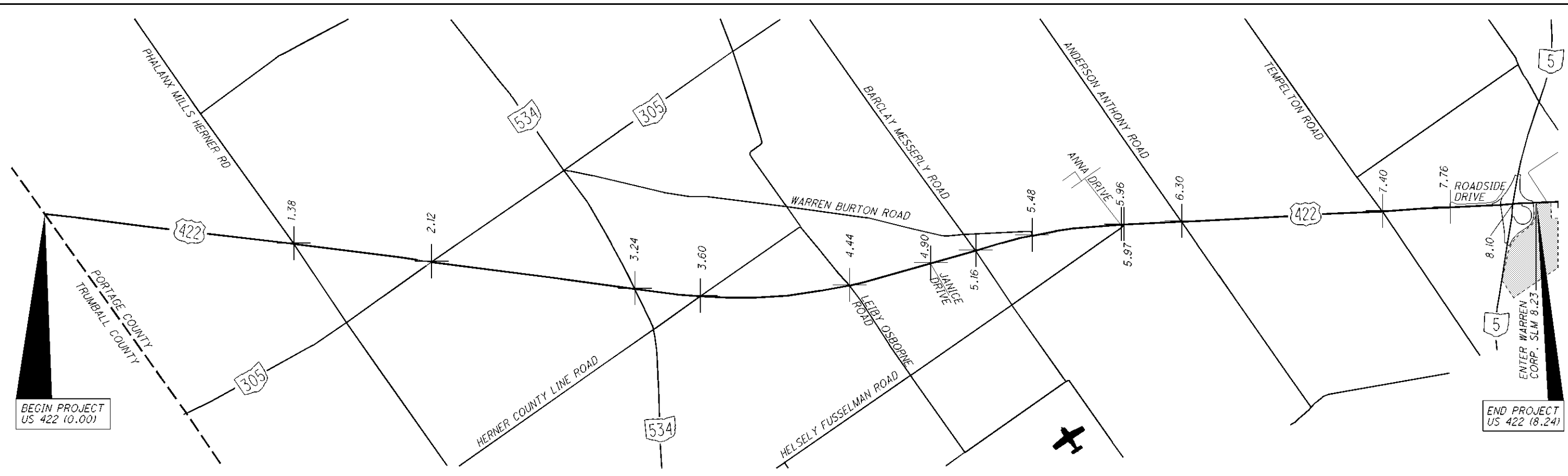
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SHEET NUMBER											PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
5	6	7	9	10	11	12	NHS	NON-NHS										
537.5							537.5		202	38000	537.5	FT	ROADWAY GUARDRAIL REMOVED					
108							108		202	98100	108	EACH	REMOVAL MISC.:BARRIER REFLECTOR					
612.5							612.5		606	13000	612.5	FT	GUARDRAIL, TYPE 5					
1							1		606	25000	1	EACH	ANCHOR ASSEMBLY, TYPE A					
1							1		606	26100	1	EACH	ANCHOR ASSEMBLY, TYPE E					
2							2		606	26500	2	EACH	ANCHOR ASSEMBLY, TYPE T					
2							2		SPEC	69098000	2	EACH	MISC.: VERTICAL CLEARANCE	5				
													EROSION CONTROL					
							1000		832	30000	1000	EACH	EROSION CONTROL					
													DRAINAGE					
5							2	3	604	09000	5	EACH	CATCH BASIN ADJUSTED TO GRADE					
													PAVEMENT					
21754							21319	435	251	01000	21754	SQ YD	PARTIAL DEPTH PAVEMENT REPAIR					
			315111	6487			315166	6432	254	01000	321598	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE					
			47267	974			47276	965	407	10000	48241	GALLON	TACK COAT					
774							759	15	408	10001	774	GALLON	PRIME COAT, AS PER PLAN	5				
			59				58	1	448	46061	59	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, PG64-22, AS PER PLAN	5				
							13133	268	448	46900	13401	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22					
535			13130	271			524	11	617	10101	535	CU YD	COMPACTED AGGREGATE, AS PER PLAN	5				
	33.16						32.88	0.28	618	41000	33.16	MILE	TRAFFIC CONTROL EDGE LINE, RUMBLE STRIPE (ASPHALT CONCRETE)					
					32		31	1	621	10010	32	EACH	RPM, LOW PROFILE, WHITE					
					1178		1154	24	621	10020	1178	EACH	RPM, LOW PROFILE WHITE/RED					
					1187		1163	24	621	54000	1187	EACH	RAISED PAVEMENT MARKER REMOVED					
33							33		626	00100	33	EACH	BARRIER REFLECTOR					
						33.16	32.68	0.48	646	10000	33.16	MILE	EDGE LINE					
						16.48	16.34	0.14	646	10100	16.48	MILE	LANE LINE					
						170	70	100	646	10300	170	FT	CHANNELIZING LINE					
						160	76	84	646	10400	160	FT	STOP LINE					
						280	50	230	646	10600	280	FT	TRANSVERSE/DIAGONAL LINE					
						182	70	112	646	10800	182	SQ FT	ISLAND MARKING					
						3	1	2	646	20300	3	EACH	LANE ARROW					
													STRUCTURES (OVER 20')					
													FOR STRUCTURE TRU-422-0137	14				
													FOR STRUCTURE TRU-422-0759	14				
													MAINTENANCE OF TRAFFIC					
		48					46	2	614	12460	48	EACH	WORK ZONE MARKING SIGN					
		40					39	1	614	13000	40	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC					
		16.48					16.34	0.14	614	20400	16.48	MILE	WORK ZONE LANE LINE, CLASS II					
		16.48					16.34	0.14	614	20550	16.48	MILE	WORK ZONE LANE LINE, CLASS III, 642 PAINT					
		33.16					32.68	0.48	614	22350	33.16	MILE	WORK ZONE EDGE LINE, CLASS III, 642 PAINT					
		170					70	100	614	23000	170	FT	WORK ZONE CHANNELIZING LINE, CLASS I					
		170					70	100	614	23680	170	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT					
		160					76	84	614	26000	160	FT	WORK ZONE STOP LINE, CLASS I					
		160					76	84	614	26610	160	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT					
									614	11000		LUMP	MAINTAINING TRAFFIC					
							4		619	16010	4	MONTH	FIELD OFFICE, TYPE B					
									623	10000		LUMP	CONSTRUCTION LAYOUT STAKES					
									624	10000		LUMP	MOBILIZATION					

GENERAL SUMMARY

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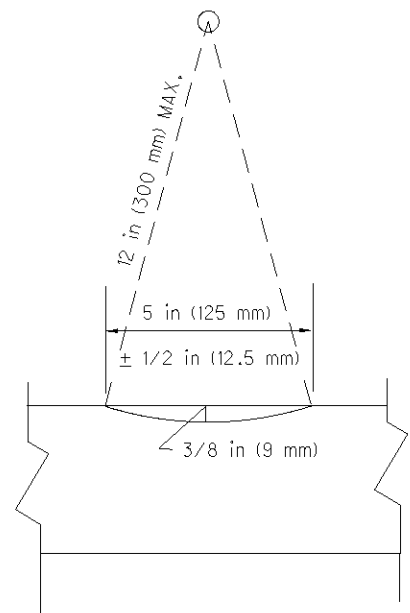
SLM RANGE		TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA	254	407	448	448																
								PAVEMENT PLANING, ASPHALT CONCRETE T= 1 1/2"	TACK COAT AT 0.15 GAL/SY YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22 T= 1 1/2"	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, PG64-22, AS PER PLAN	SQ YD	GALLON	CU YD	CU YD												
TO	FROM			FT	FT	SQ YD	SQ YD	SQ YD	GALLON	CU YD	CU YD																
0.00	1.22	1	EB	6441.60	25.00	17893.33		17893.33	2684.00	745.56																	
1.22	1.26	1	EB	211.20	27.00	633.60		633.60	95.04	26.40																	
1.26	1.44	1	EB	950.40	29.00	3062.40		3062.40	459.36	127.60	59.00																
1.44	1.48	1	EB	211.20	27.00	633.60		633.60	95.04	26.40																	
1.48	2.00	1	EB	2745.60	25.00	7626.67		7626.67	1144.00	317.78																	
2.00	2.05	1	EB	264.00	27.00	792.00		792.00	118.80	33.00																	
2.05	2.12	1	EB	369.60	29.00	1190.93		1190.93	178.64	49.62																	
2.12	7.89	2, 3	EB	30465.60	34.00	115092.27		115092.27	17263.84	4795.55																	
8.06	8.15	5	EB	475.20	33.00	1742.40		1742.40	261.36	72.60																	
0.00	2.12	1	WB	11193.60	29.00	36068.27		36068.27	5410.24	1502.86																	
2.12	7.76	2	WB	29779.20	34.00	112499.20		112499.20	16874.88	4687.50																	
7.76	7.81	3	WB	264.00	34.00	997.33		997.33	149.60	41.56																	
7.81	7.89	3	WB	422.40	45.00	2112.00		2112.00	316.80	88.00																	
8.06	8.15	5	WB	475.20	33.00	1742.40		1742.40	261.36	72.60																	
7.89	7.96	4		369.60	100.00	4106.67		4106.67	616.00	171.11																	
7.96	8.06	6		528.00	80.00	4693.33		4693.33	704.00	195.56																	
8.15	8.24	6		475.20	80.00	4224.00		4224.00	633.60	176.00																	
SUBTOTALS								315110.40	47266.56	13129.71	59.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
TOTALS CARRIED TO GENERAL SUMMARY								315111	47267	13130	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

COUNTY	ROUTE	LOCATION						621	621	621	621		621	REMARKS
		RPM, LOW PROFILE, YELLOW/YELLOW	RPM, LOW PROFILE WHITE/RED					RPM, LOW PROFILE, WHITE	RPM, LOW PROFILE YELLOW/RED	RAISED PAVEMENT MARKER REMOVED				
		FROM	TO					EACH	EACH	EACH	EACH		EACH	
TRU	US 422	0.00	8.24						1178	32			1187	US 422 EB TRUMBUL CO LINE (SLM 0.00 TO SLM 8.24) (LANE LINES, STOP APPROACHES, CHANNELIZING LINES, AND GORE MARKINGS)
TOTALS CARRIED TO GENERAL SUMMARY				0	0	0	0	0	1178	32	0	0	1187	

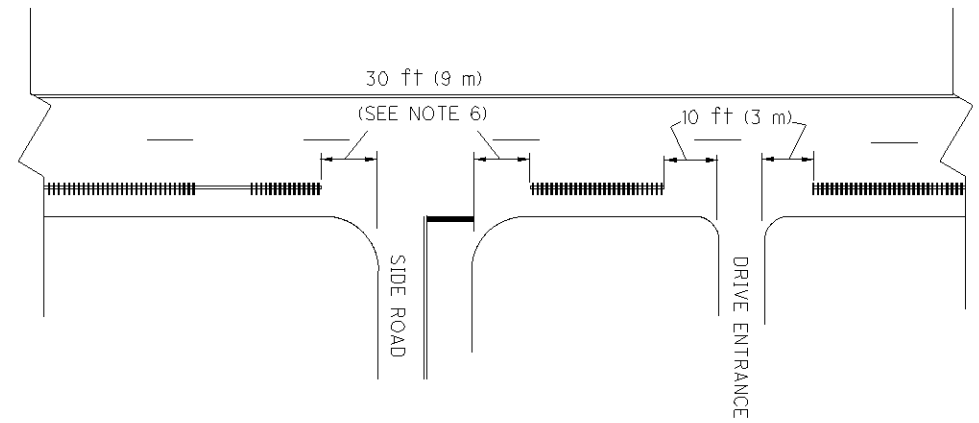
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RAISED PAVEMENT MARKING SUB-SUMMARY
TRU - 422 - 0.00
11 14

NOTES

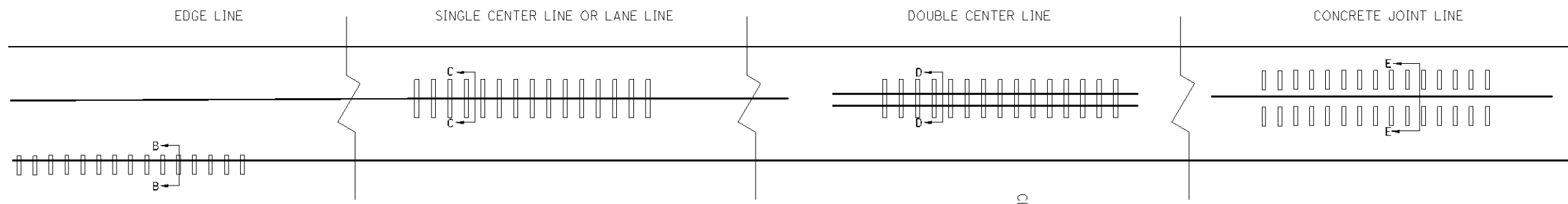
- Rumble stripes shall be interrupted for driveways and intersections.
- Rumble stripes shall be paid for in accordance with Item 618.
- Rumble stripes shall be installed on a 40 foot (12 meter) cycle, i.e. 30 feet (9 meters) of rumble stripes followed by a 10 foot (3 meter) gap.
- When the side road radius is greater than 30 feet (9 meters) rumble stripe application should be discontinued 50 feet (15 meters) in advance of the intersection.



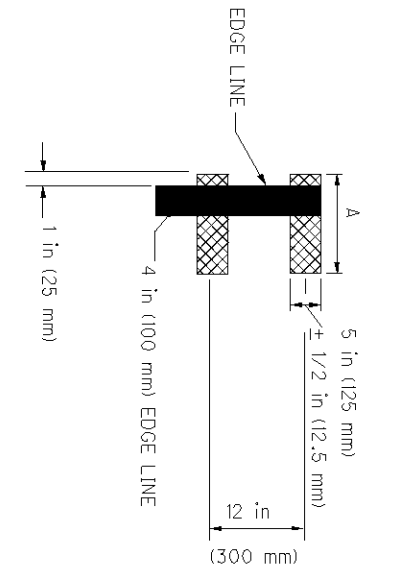
PROFILE



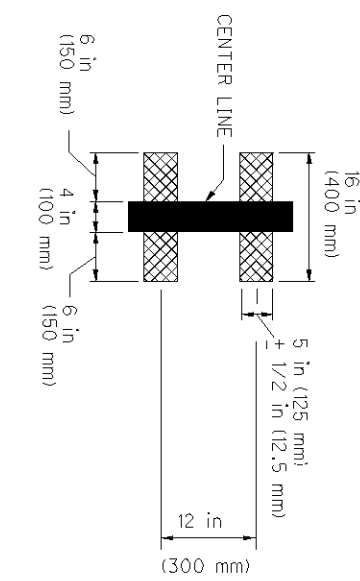
SIDE ROAD AND DRIVEWAY RUMBLE STRIPE INSTALLATION DETAILS



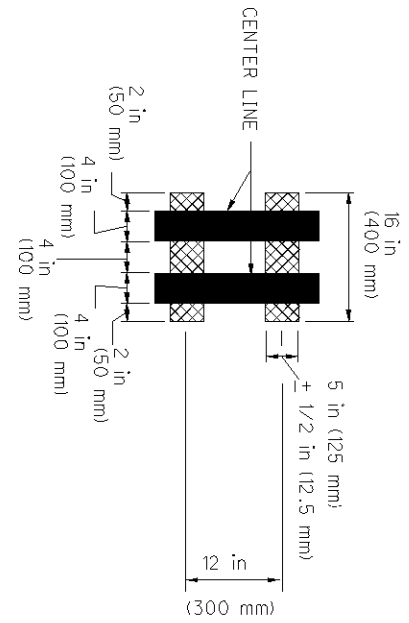
SHOULDER WIDTH	A
2-5 ft (0.6-1.5 m)	6 in (150 mm)
5 ft-1 in - 8 ft (1.5 m-25mm - 2.4 m)	10 in (250 mm)
≥ 8 ft- 1 in (≥ 2.4 m-25mm)	16 in (400 mm)



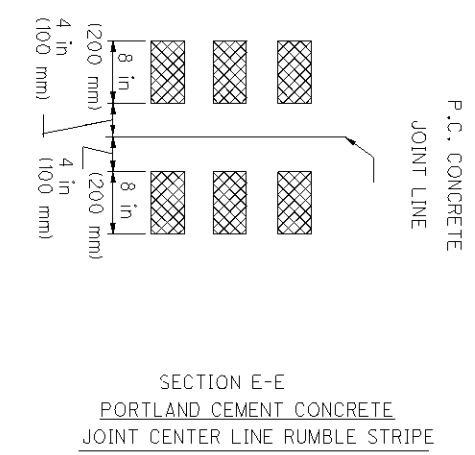
SECTION B-B
EDGE LINE RUMBLE STRIPE



SECTION C-C
CENTER LINE OR LANE LINE
RUMBLE STRIPE



SECTION D-D
CENTER LINE RUMBLE STRIPE



SECTION E-E
PORTLAND CEMENT CONCRETE
JOINT CENTER LINE RUMBLE STRIPE

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS):

843 DATED 4-18-03

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION, INCLUDING THE 2002 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

PROPOSED WORK

TRU-422-0137

- REPAIR EROSION AT FORWARD RIGHT WINGWALL
- CLEARING AND GRUBBING WITHIN 15' OF THE STRUCTURE
- NEW STRUCTURE IDENTIFICATION SIGNS

TRU-422-0759

- PATCH ALL UNSOUND CONCRETE OF THE CULVERT AND WINGWALLS
- CLEARING AND GRUBBING WITHIN 15' OF THE STRUCTURE
- NEW STRUCTURE IDENTIFICATION SIGNS

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.

ITEM 601, DUMPED ROCK FILL

THIS ITEM WILL BE USED TO REPAIR THE EROSION AT FORWARD RIGHT WING WALL OF STRUCTURE TRU-422-0137. DUMPED ROCK FILL WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 601 DUMPED ROCK FILL. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

ITEM 519, PATCHING CONCRETE STRUCTURES, AS PER PLAN

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

STRUCTURE IDENTIFICATION SIGNS

STRUCTURE IDENTIFICATION SIGNS (I-H25a) WILL BE PLACED ON EACH APPROACH OFF THE RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. A QUANTITY OF ONE SIGN PER APPROACH WILL BE INSTALLED. THE SIGNS WILL BE HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND WILL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 7.5' IN LENGTH.

INSTALL SIGNS FOR THE FOLLOWING STRUCTURES:
TRU-422-0137 (2 APPROACHES) AND TRU-422-0759 (2 APPROACHES)

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:

- ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT
- ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 7.5 FT
- ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 1 EACH
- ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 1 EACH

CORRECTING BRIDGE IDENTIFICATION SIGN NUMBERS:

SOME OF THE EXISTING BRIDGE NUMBER SIGNS HAVE INCORRECT BRIDGE NUMBERS ON THEM. THE FOLLOWING BRIDGE NUMBERS ARE THE CORRECT ONES AND WILL BE USED ON THE NEW BRIDGE IDENTIFICATIONS SIGNS.

STRUCTURE TRU-422-0759 (SFN:7806965) THE EXISTING SIGN SHOWS 0707. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0759.

ENDANGERED SPECIES HABITAT:

ANY UNAVOIDABLE CUTTING OF TREES WITH SUITABLE ROOSTING AND BROOD-REARING HABITAT FOR THE INDIANA BAT (LIVING OR STANDING DEAD TREES OR SNAGS WITH EXFOLIATING, PEELING OR LOOSE BARK, SPLIT TRUNKS AND/OR BRANCHES, OR CAVITIES) WILL BE PERFORMED ONLY BEFORE APRIL 1 OR AFTER SEPTEMBER 30 WHEN THE SPECIES WOULD NOT BE USING SUCH HABITAT

CONSTRUCTION AND DEMOLITION DEBRIS THE CONTRACTOR

SHALL TAKE PRECAUTIONS TO AVOID AND/OR LIMIT CONSTRUCTION AND DEMOLITION DEBRIS FROM ENTERING THE STREAM(S). ANY DEBRIS THAT DOES FALL INTO THE STREAM(S) SHALL BE REMOVED AS SOON AS POSSIBLE.

STREAM AVOIDANCE

NO EXCAVATION, GRADING, OR FILLING OPERATIONS SHALL BE PERFORMED IN A TRIBUTARY TO DEAD BRANCH AT TRU-422-1.37 (SFN 7806930) AND IN CHOCOLATE RUN AT TRU-422-7.59 (SFN 7806965). UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE CONSTRUCTION EQUIPMENT AND/OR MATERIALS IN THESE STREAMS.

WETLANDS AVOIDANCE

NO EXCAVATION, GRADING, OR FILLING OPERATIONS SHALL BE PERFORMED IN THE WETLANDS LOCATED ON THE EAST AND WEST SIDES OF A TRIBUTARY TO DEAD BRANCH AT THE TRU-422-1.37 (SFN 7806930) BRIDGE/CULVERT STRUCTURE. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE CONSTRUCTION EQUIPMENT AND/OR MATERIALS IN ANY WETLANDS.

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DESIGN AGENCY ODOT --- DISTRICT 4 PRODUCTION	
DATE	STRUCTURE FILE NUMBER
REVIEWED	SCB REVISED
DRAWN	SCB CHECKED
STRUCTURE GENERAL NOTES TRU-422-0137 & TRU-422-0759 BRANCH OF DEAD AND GRAND RIVER & CHOCOLATE RUN	
TRU-422-0.00 PID No. 76414	
1 / 2	
<div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> 13 14 </div>	

