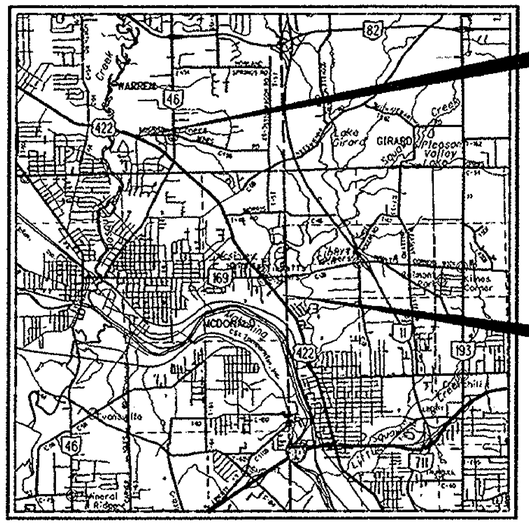
TRU - US-422-(15.59)(15.76)(16.02)
101062 PID - 84566
Dist 4 4/8/2010



LOCATION MAP

LATITUDE: 41°11'48" LONGITUDE: 80°43'43"

SCALE IN MILES
0 1 2 3 4

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

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

TRU-422-(15.59)(15.76)(16.02)

TRUMBULL COUNTY

CITY OF NILES

WEATHERSFIELD TOWNSHIP

INDEX OF SHEETS:

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE IMPROVEMENT OF 2.95 MILES OF US 422 BY PLANING AND RESURFACING ALONG WITH MINOR DRAINAGE IMPROVEMENTS & CURB INSTALLATION. ALSO INCLUDES BRIDGE WORK AT TRU-422-1559 & TRU-422-1602.

PROJECT EDA: 0.20 ACRE
ESTIMATED CONTRACTOR EDA: NA (MAINTENANCE PROJECT)
NOTICE OF INTENT EDA: NA (MAINTENANCE PROJECT)

2008 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.

DESIGN EXCEPTIONS

NONE

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
PRODUCTION

ENGINEERS SEAL:

STATE OF OHIO
DOUGLAS A. YARD
E-58044
REGISTERED
PROFESSIONAL ENGINEER

SIGNED:
DATE: 11/24/09

STANDARD CONSTRUCTION DRAWINGS

								SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	10/19/07	TC-22.10	1/19/01	GR-1.1	7/16/04			800	1.1/15/10
BP-5.1	7/28/00	TC-41.10	10/19/07	GR-2.1	1/16/04			832	5/5/09
BP-7.1	1/19/07	TC-41.20	1/19/01	GR-3.4	10/16/09			843	4/18/03
BP-7.2	1/19/07	TC-41.30	1/19/07	GR-4.2	1/19/07				
		TC-42.20	7/16/04	GR-5.2	1/16/04				
CB-1.2	7/15/05	TC-52.10	1/19/07	GR-5.3	1/16/04				
CB-2.1	7/15/05	TC-52.20	1/19/07						
CB-2.2	7/15/05	TC-65.10	1/21/05	DS-1-92	7/18/03				
CB-2.3	7/15/05	TC-65.11	1/21/05						
		TC-71.10	1/16/09					SPECIAL PROVISIONS	
MT-95.31	7/17/09	TC-73.10	1/19/01						
MT-95.32	7/17/09								
MT-99.20	1/16/09								
MT-101.90	1/16/09								
MT-105.10	1/16/09								

APPROVED E. M. Gotti
DATE 11-24-09 DISTRICT DEPUTY DIRECTOR

APPROVED Tolbert M. Molitoris II
DATE 12-2-09 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E081(028)
PID NO. 84566
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
TRU-422-(15.59) (15.76)(16.02)
1/20

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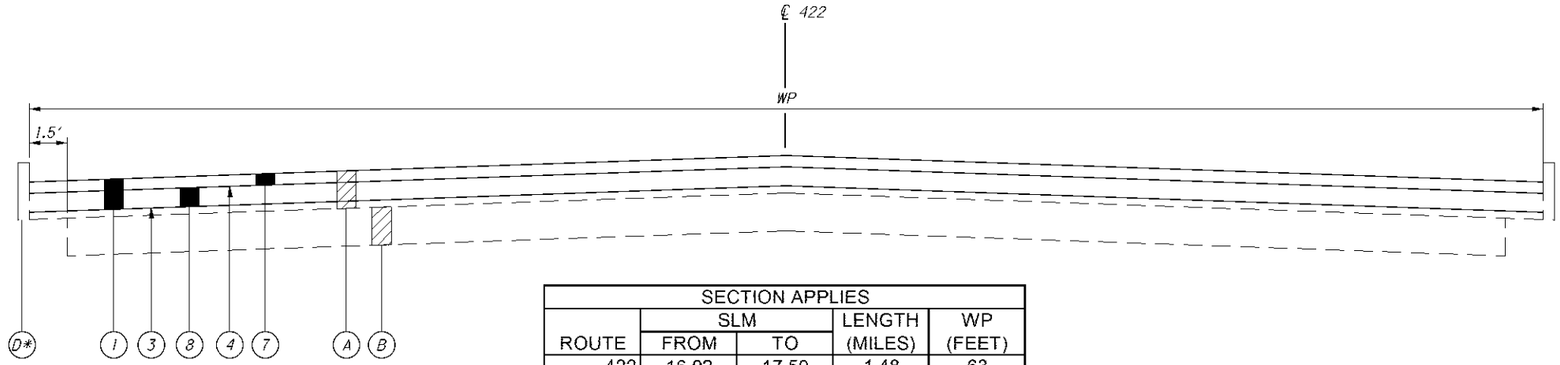
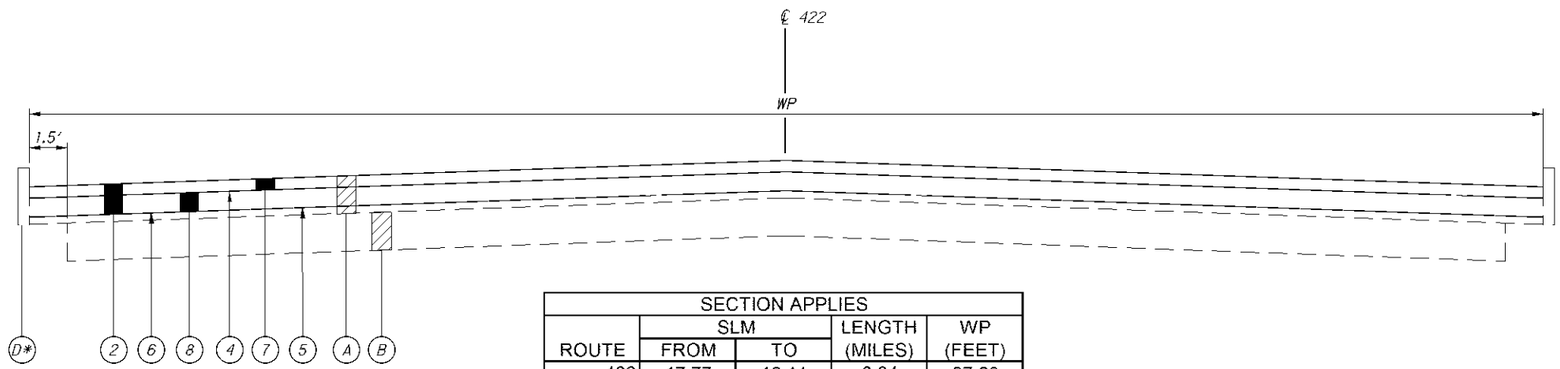


SECTION APPLIES				
	SLM		LENGTH	WP
ROUTE	FROM	TO	(MILES)	(FEET)
422	16.02	17.50	1.48	63
422	17.50	17.54	0.04	58.50
422	17.54	17.64	0.10	46.50
422	17.64	17.77	0.13	37.00



SECTION APPLIES				
	SLM		LENGTH	WP
ROUTE	FROM	TO	(MILES)	(FEET)
422	17.77	18.11	0.34	37.00
422	18.11	18.20	0.09	36.00
422	18.20	18.30	0.10	35.00
422	18.30	18.68	0.38	37.80
422	18.68	18.97	0.29	41.00

LEGEND

(1) 254, PAVEMENT PLANING, ASPHALT CONCRETE, (T=2")
(2) 254, PAVEMENT PLANING, ASPHALT CONCRETE, (T=2 1/4")
(3) 407, TACK COAT @0.15 GAL/SY
(4) 407, TACK COAT FOR INTERMEDIATE COURSE @0.04 GAL/SY
(5) 407, TACK COAT FOR INTERMEDIATE COURSE @0.10 GAL/SY
(6) 422, SINGLE CHIP SEAL
(7) 424, FINE GRADED POLYMER ASPHALT CONCRETE, TYPE A, (T=3/4")
(8) 448, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22, (T=1 1/4")

(A) EXISTING BITUMINOUS CONCRETE
(B) EXISTING BRICK - RIGID
(C) EXISTING PLANT MIX BITUMINOUS CONCRETE OR PENETRATION MACADAM
(D*) EXISTING CURB VARIOUS LOCATIONS

TYPICAL SECTIONS

TRU-422-(15.59)
(15.76)(16.02)

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

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

AT&T
ATTN: Jerry Smith
50 W. Bowery St.
4th Floor
Akron, OH 44308
330-384-8557
330-384-8879 Fax

Dominion East Ohio Gas
ATTN: Mary Long
320 Springside Drive
Suite 320
Akron, OH 44333
330-664-2409
888-504-0126 Fax

City of Niles Electric / Lighting
ATTN: Jim Newbrough
34 West State Street
Niles, OH 44446
330-550-8872
330-544-3429 Fax

City of Niles Sewer & Water Dept.
ATTN: Randy Fabrizio
34 West State Street
Niles, OH 44446
330-652-2622 ext:180
330-544-3429

Ohio Edison
ATTN: Bill Speece
730 South Ave.
Youngstown, OH 44502
PH: 330-740-7635

THE UNDERGROUND UTILITIES ON THIS PLAN HAVE BEEN LOCATED BY USING A SUBSURFACE UTILITY ENGINEERING COMPANY (SUE). IF THERE ARE ANY DISCREPANCIES BETWEEN FIELD MARKINGS AND WHAT THE PLAN INDICATES, PLEASE CONTACT STEVE JONES, DISTRICT UTILITY COORDINATOR 330-786-4818, PRIOR TO ANY SUBSURFACE WORK BEING INITIATED.

ITEM 603 - CONDUIT, TYPE B

CONTRACTOR SHALL VERIFY ALL PIPE INVERTS OF CATCH BASINS ON INTERSECTION DETAILS. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO TIE NEW CATCH BASINS INTO BASINS INTO EXISTING PIPES.

202 PIPE REMOVED, 24" AND UNDER 112 FT
603 4" CONDUIT, TYPE B 16 FT
603 12" CONDUIT, TYPE B 75 FT
603 15" CONDUIT, TYPE B 6 FT
603 18" CONDUIT, TYPE B 18 FT
603 36" CONDUIT, TYPE B 10 FT

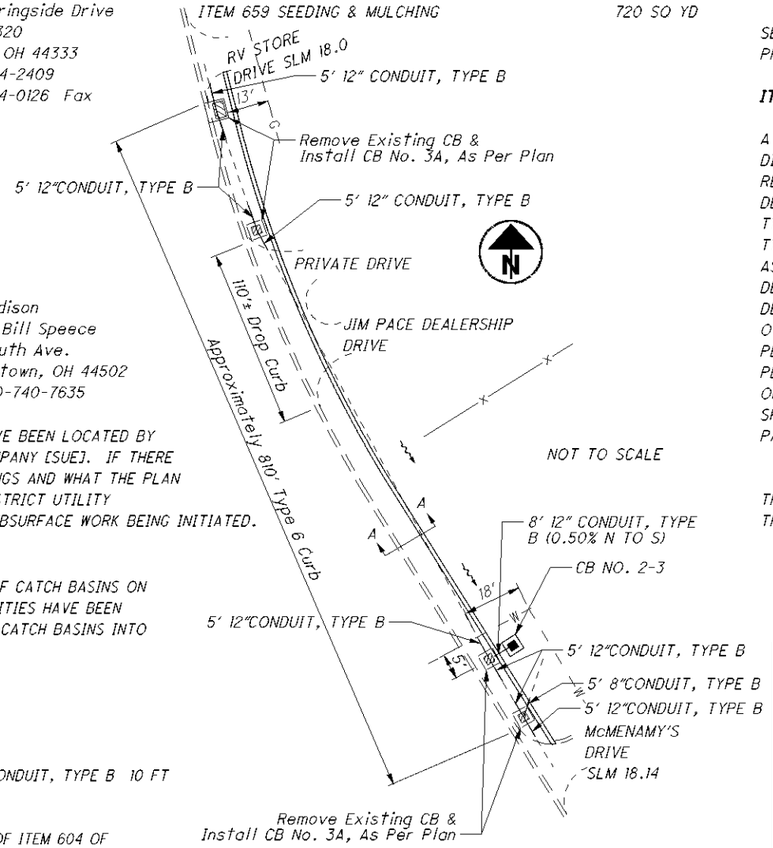
CATCH BASIN NO. 3A, AS PER PLAN

THIS ITEM OF WORK SHALL MEET ALL PROVISIONS OF ITEM 604 OF THE CONSTRUCTION MATERIAL SPECIFICATION EXCEPT ELEVATIONS AND OFFSETS ARE NOT PROVIDED IN THE PLAN. FINAL PLACEMENT OF THE CATCH BASINS SHALL BE APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL DETERMINE THE CATCH BASIN FLOWLINE ELEVATIONS TO MAINTAIN EXISTING CONDUIT FLOWLINES AND TO PROVIDE POSITIVE DRAINAGE OF THE PROPOSED CURBED PAVEMENT. THE CATCH BASINS HAVE 12" CONDUITS FLOWING TO AND FROM AS SHOWN IN THE DETAIL. THE LOWEST EXISTING FLOW LINE IS AT AN APROXIMATE DEPTH OF 5'.

ITEM 608 - CURB, TYPE 6

TYPE 6 CURB SHALL BE INSTALLED ON THE EAST SIDE OF US 422 FROM SLM 18.00 TO SLM 18.14 AS PER THE DETAIL BELOW. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 202 CURB & GUTTER REMOVED	810 FT
ITEM 202 PIPE REMOVED, 24" AND UNDER	40 FT
ITEM 202 CATCH BASIN REMOVED	4 EACH
ITEM 203 EXCAVATION	88 CU YD
ITEM 203 BORROW	88 CU YD
ITEM 252 FULL DEPTH PAVEMENT SAWING	810 FT
ITEM 301 ASPHALT CONCRETE BASE	135 CU YD
ITEM 304 AGGREGATE BASE	98 CU YD
ITEM 407 TACK COAT FOR INTERMEDIATE COURSE	44 GAL
ITEM 408 PRIME COAT	216 GAL
ITEM 424 FINE GRADED POLYMER, ASPHALT CONCRETE, TYPE A	8 CU YD
ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22	17 CU YD
ITEM 603 8" CONDUIT, TYPE B	5 FEET
ITEM 603 12" CONDUIT, TYPE B	52 FEET
ITEM 604 CATCH BASIN NO. 2-3	1 EACH
ITEM 604 CATCH BASIN NO. 3A, AS PER PLAN	4 EACH
ITEM 609 TYPE 6 CURB	810 FT
ITEM 659 SEEDING & MULCHING	720 SQ YD



CATCH BASIN NO. 2-3

THE LOCATION OF THIS BASIN SHALL BE FIELD ADJUSTED BY THE ENGINEER TO PROVIDE POSITIVE DRAINAGE OF THE LOW AREA BEHIND THE CURB. THIS CATCH BASIN SHALL HAVE A MINIMUM DEPTH OF 3'.

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.

PAVEMENT MARKING DETAILS

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

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 WIDTHS):

ROUTE S.L.M. TO S.L.M. LANE WIDTH

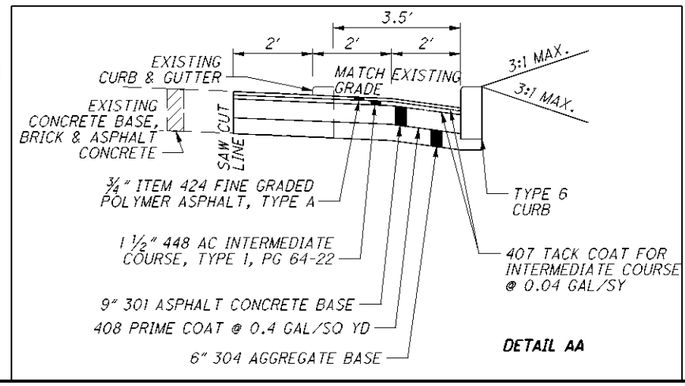
SEE THE PAVEMENT MARKING DETAIL SHEETS (SUPPLIED AT PRE-CONSTRUCTION MEETING)

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 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, SHOULDERS (T=6")	500 SQ. YD.
251, PARTIAL DEPTH PAVEMENT REPAIR, MAINLINE (T=3"±)	3150 SQ. YD.

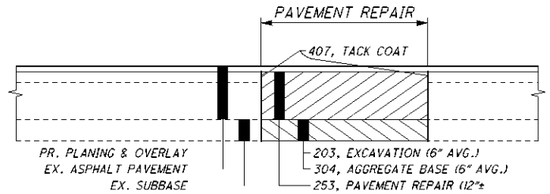


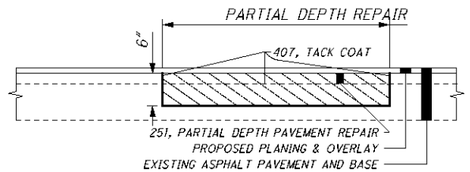
DETAIL AA

ITEM 253 - PAVEMENT REPAIR

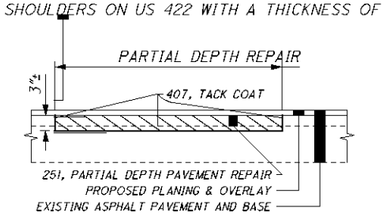
A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THIS ITEM SHALL CONSIST OF CUTTING AND REMOVING DETERIORATED PAVEMENT FULL DEPTH AND PLACING 12"± 301 ASPHALT CONCRETE BASE, PG64-22. THE MAXIMUM COMPACTED DEPTH OF ANY ONE LAYER SHALL BE 6 INCHES. UNLESS OTHERWISE DIRECTED 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. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REMOVED AND REPLACED TO THE LIMITS DESIGNATED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

253, PAVEMENT REPAIR, 3150 SQ YD





PARTIAL DEPTH PAVEMENT REPAIR FOR SHOULDERS ON US 422 WITH A THICKNESS OF 6".



ITEM 203 - EXCAVATION

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AND DISPOSING OF ALL UNSUITABLE MATERIAL BY EXCAVATING THE EXISTING SUBGRADE AND SUBBASE TO AN AVERAGE DEPTH OF 6 INCHES OR AS DIRECTED BY THE ENGINEER. EXACT LIMITS OF REMOVAL SHALL BE DETERMINED BY THE ENGINEER. ALL EQUIPMENT, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203 EXCAVATION. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

203, EXCAVATION 525 CU YD

ITEM 304 - AGGREGATE BASE

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED AND SHALL BE USED AS DIRECTED BY THE ENGINEER TO BACKFILL AREAS WHICH WERE EXCAVATED UNDER ITEM 203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

304, AGGREGATE BASE 525 CU YD

CALCULATED RMB CHECKED

GENERAL NOTES

TRU-422-(15.59) (15.76)(16.02)

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 332 GAL. HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS WORK.

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.

ITEM 422 SINGLE CHIP SEAL TIME RESTRICTIONS

THE CONTRACTOR IS REQUIRED TO HAVE A TWO (2) DAY WAITING PERIOD BETWEEN THE TIME THE INTERLAYER CHIP SEAL IS PLACED AND THE OVERLYING ASPHALT CONCRETE COURSE IS PLACED. AFTER THE TWO (2) SAY WAITING PERIOD, THE CONTRACTOR HAS A MAXIMUM OF FOUR (4) DAYS TO COVER UP THE CHIP SEAL.

CURB RAMPS

UNLESS OTHERWISE DIRECTED BY THE ENGINEER, INSTALLATION OF THE CURB RAMPS AND TRUNCATED DOMES WILL BE PERFORMED PRIOR TO MAINLINE RESURFACING.

THERE ARE AN ESTIMATED 27 LOCATIONS REQUIRING NEW CURB RAMPS (WITH TRUNCATED DOMES) TO BE INSTALLED. THE LOCATIONS AND TYPES WILL BE DETERMINED BY THE PROJECT ENGINEER.

THE FOLLOWING QUANTITIES HAVE BEEN FORWARDED TO THE GENERAL SUMMARY:

202, CURB REMOVED, 205 FT
202, CURB AND GUTTER REMOVED, 182 FT
608, 4" CONCRETE WALK, 1518 SQ FT

608, CURB RAMP, 27 EACH

608, TRUNCATED DOMES, 35 EACH
609, COMBINATION CURB AND GUTTER, TYPE 2, 182 FT
609, CURB, TYPE 6, 461 FT

ITEM SPECIAL - MAILBOX SUPPORT

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS, AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATIONS SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

WOOD POSTS SHALL BE NOMINAL 4" BY 4" SQUARE OR 4½" DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2" I.D. O.D., AND CONFORM TO AASHTO M 181.

HARDWARE (PLATES, SCREWS, BOLTS, ETC.) SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.10. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX SUPPORT SYSTEM, SINGLE.

THE FOLLOWING QUANTITIES HAVE BEEN FORWARDED TO THE GENERAL SUMMARY:

MAILBOX SUPPORT SYSTEM SINGLE 1 EA

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
1-½"	100
¾"	50-100
NO. 4	35-70
NO. 30	9-33
NO. 200	0-13

AN ESTIMATED QUANTITY OF 46 CU. YD. HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS WORK.

ITEM 632 - DETECTOR LOOP, AS PER PLAN

THREE WORKING DAYS PRIOR TO ANY PLANING OR TRENCHING AT INTERSECTIONS, THE CONTRACTOR SHALL CONTACT THE CITY OF NILES (330-544-9000 EXT 260) FOR THE INTERSECTIONS AT US 422 & BEST BUY, US 422 & FREDERICK, US 422 & SR 46, & US 422 & NILES VIENNA AND THE DISTRICT OFFICE (330-786-3146) FOR THE INTERSECTION AT US 422 & SR 169.

LOOP DETECTORS DISTURBED BY PAVEMENT PLANING OR TRENCHING SHALL BE ABANDONED IN PLACE. THE LOOP DETECTOR WIRE WILL BE CUT INTO THE PAVEMENT AFTER THE PROPOSED SURFACE COURSE HAS BEEN PLACED. EACH DETECTOR SHALL BE REPLACED IN KIND, AT THE SAME LOCATION AS EXISTING. THE QUANTITIES LISTED BELOW HAVE BEEN CARRIED TO THE GENERAL SUMMARY. THE NEW LOOP DETECTOR WIRES SHALL BE RUN INTO THE EXISTING CONTROL BOX OR THE EXISTING PULLBOX. INCLUDED IN THIS ITEM IS THE POURED EPOXY TYPE CABLE SPLICE KIT (CONFORMING TO 725.15E) THAT MUST BE USED IN MAKING THESE CONNECTIONS.

ALL NECESSARY MATERIAL, LABOR, SPLICE KITS AND EQUIPMENT SHALL BE INCIDENTAL TO PAYMENT OF THESE ITEMS.
632 DETECTOR LOOP, AS PER PLAN, 29 EACH

US 422 AND BEST BUY
(6 EACH by 6'X 25')

US 422 AND FREDERICK
(2 EACH by 6'X 25')

US 422 AND SR 46
(5 EACH by 6'X 25')
(1 EACH by 6'X 38')
(1 EACH by 6'X 45')

US 422 AND NILES VIENNA
(8 EACH by 6'X 8')
(2 EACH by 25'X 8')

US 422 AND SR 169
(1 EACH by 8'X 6')
(1 EACH by 15'X 6')
(2 EACH by 25'X 6')

ASBESTOS NOTIFICATION

AN ASBESTOS SURVEY OF THE US 422 BRIDGES OVER MOSQUITO CREEK (STRUCTURE NO. TRU-422-15.59, SFN 7807082) AND AN UNNAMED TRIBUTARY TO MOSQUITO CREEK (STRUCTURE NO. TRU-422-15.76, SFN 7807120), SCHEDULED FOR REHABILITATION WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON EITHER BRIDGE STRUCTURE.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO:

MAHONING-TRUMBULL AIR POLLUTION CONTROL
345 OAK HILL AVENUE, SUITE 200
YOUNGSTOWN, OHIO 44502
NEIL H. ALTMAN
(330) 743-3333
FAX: (330) 743-3960

AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR REHABILITATION. THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER. INFORMATION REQUIRED ON THE FORM WILL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED.

A COPY OF THE OEPA FORM IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 4 OFFICE, 2088 SOUTH ARLINGTON, AKRON, OHIO 44306.

BASIS FOR PAYMENT-THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202-PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

PAINTING AND SEALING OPERATIONS

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT EPOXY-URETHANE SEALER, PAINT, OR OTHER MATERIALS USED TO REPAIR, CLEAN, SEAL, OR TREAT ANY BRIDGE AND CULVERT STRUCTURE FROM ENTERING ANY STREAMS, WETLANDS OR OTHER WATERS OF THE UNITED STATES AND TAKE THE APPROPRIATE ACTIONS IN THE EVENT OF A RELEASE.

CONSTRUCTION AND DEMOLITION DEBRIS

THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID AND/OR LIMIT CONSTRUCTION AND DEMOLITION DEBRIS FROM ENTERING THE STREAMS. ANY MATERIAL THAT DOES FALL INTO THE STREAMS SHALL BE REMOVED AS SOON AS POSSIBLE.

STREAM/WETLAND AVOIDANCE

NO EXCAVATION, GRADING, OR FILLING OPERATIONS SHALL BE PERFORMED BELOW THE ORDINARY HIGH WATER MARK OF MOSQUITO CREEK AT TRU-422-15.59, BELOW THE ORDINARY HIGH WATER MARK OF AN UNNAMED OR AT A TRIBUTARY TO MOSQUITO CREEK AT TRU-422-15.76 AND/OR WITHIN THE WETLANDS LOCATED IN THE NORTHWEST QUADRANT ADJACENT TO THE BRIDGE AT TRU-422-15.59. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE EQUIPMENT AND/OR MATERIALS IN ANY STREAMS, WETLANDS OR OTHER WATERS OF THE UNITED STATES.

CALCULATED | CHECKED

GENERAL NOTES

TRU-422-(15.59)(15.76)(16.02)

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 ONE TEN FOOT LANE IN EACH DIRECTION SHALL BE MAINTAINED ON THE EXISTING PAVEMENT (COMPLETED PAVEMENT AND TEMPORARY 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 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 WITH A NON-YEILDING MATERIAL.

9. 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 OR ONE (1) MILE URBAN.

10. ONLY DURING OFF-PEAK PERIODS (ie 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.

11. 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.

12. A QUANTITY OF 20 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.

13. 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.

14. 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 1 - MILLED SURFACE & INTERMEDIATE COURSE
- 614, WORK ZONE CENTER LINE, CLASS II, 5.90 MILE
- 614, WORK ZONE LANE LINE, CLASS II 7.56 MILE
- 614, WORK ZONE STOP LINE, CLASS I 792 FT
- 614, WORK ZONE CHANNELIZING LINE, CLASS II 10986 FT

PHASE II - SURFACE COURSE
- 614, WORK ZONE CENTER LINE, CLASS III, 642 PAINT 2.95 MILE
- 614, WORK ZONE LANE LINE, CLASS III, 642 PAINT 3.78 MILE
- 614, WORK ZONE STOP LINE, CLASS III, 642 PAINT 396 FT
- 614, WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT 5493 FT

- 614, WORK ZONE MARKING SIGN, 16 EACH

TO BE USED AS DIRECTED BY THE ENGINEER
- 614, WORK ZONE EDGE LINE, CLASS III, 5.6 MILE

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, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

SURFACE CONDITION SIGNS

ERECT A GROOVED PAVEMENT SIGN (W8-H15) 250 FEET (75 M) 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 SHALL BE MADE UNDER THE LUMP SUM FOR ITEM 614 - MAINTAINING TRAFFIC.

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.

PLACEMENT OF ASPHALT CONCRETE

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES.

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.

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.

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

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.

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
(OTHER HOLIDAY OR EVENT)	

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 OR 12:00N) MONDAY
MONDAY	12:00N FRIDAY THROUGH (6:00 AM OR 12:00N) TUESDAY
TUESDAY	12:00N MONDAY THROUGH (6:00 AM OR 12:00N) WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH (6:00 AM OR 12:00N) THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH (6:00 AM OR 12:00N) FRIDAY
THURSDAY (THANKSGIVING ONLY)	12:00N WEDNESDAY THROUGH (6:00 AM OR 12:00N) MONDAY
FRIDAY	12:00N THURSDAY THROUGH (6:00 AM OR 12:00N) MONDAY
SATURDAY	12:00N FRIDAY THROUGH (6:00 AM OR 12:00N) 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 DAY THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

CALCULATED RMB CHECKED

MAINTENANCE OF TRAFFIC

TRU-422-(15.59) (15.76)(16.02)

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 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:

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 A RED LIGHT).

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). 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 ENGINEER. 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.

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 QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 40 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 AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, 2 PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS), ON SITE, FOR THE DURATION OF TIME SPECIFIED IN THIS NOTE, EACH SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR. THIS LIST IS AVAILABLE ON THE ODOT WEBSITE AT http://www.dot.state.oh.us/divisions/constructionmgt/materials/pages/portable-changeable.aspx
THE CLASS B UNITS SHALL HAVE A MINIMUM LEGIBILITY DISTANCE OF 475 FEET.

EACH SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO DIM THE SIGN DURING DARKNESS AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHOULD BE DELINEATED ON A PERMANENT BASIS BY AFFIXING RETROREFLECTIVE MATERIAL, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

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 PCMS SHOULD NOT BE LOCATED IN THE MEDIAN OF THE HIGHWAY UNLESS IT IS PROTECTED FROM BOTH DIRECTIONS OF TRAFFIC. THE PCMS SHOULD BE LOCATED BEHIND GUARDRAIL WHEREVER POSSIBLE. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE THE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS WILL BE OFF, FACING AWAY FROM ALL TRAFFIC AND SHALL DISPLAY ONE OR MORE HIGH INTENSITY YELLOW REFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

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

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE CONTRACTOR. A LIST OF ALL PROPOSED PREPROGRAMMED MESSAGES WILL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION. THE SIGN SHALL HAVE TWO DIFFERENT MEMORIES (PROM AND RAM) AND CAPABILITY TO STORE UP TO 99 MESSAGES IN EACH MEMORY. MESSAGE MEMORY OR PREPROGRAMMED 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. IN ORDER TO CONVEY A MAXIMUM OF INFORMATION AT A SINGLE GLANCE, ONLY THREE LINE PRESENTATION FORMATS WITH A MAXIMUM OF SIX MESSAGE PHASES WILL BE PERMITTED. NORMALLY, ONLY A MAXIMUM OF THREE MESSAGE PHASES SHOULD BE EMPLOYED. 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, DE-ACTIVATED 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 AREAS) ALLOW REMOTE SIGN ACTIVATION, DEACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 614. THE CONTRACTOR SHALL PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC AND THE ENTIRE COST TO CONTROL TRAFFIC ACCRUED BY THE DEPARTMENT WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24 HOURS PER DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES. THE REQUIREMENT TO FURNISH, INSTALL, MAINTAIN AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES AS OUTLINED IN 614.02.

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

614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN
240 DAY

CALCULATED | CHECKED

MAINTENANCE OF TRAFFIC

**TRU-422-(15.59)
(15.76)(16.02)**

SHEET NUMBER											PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	3	4	5	6		9	10	12	13	14	PROJECT (CITY)	PROJECT (OUTSIDE CITY)						
																	ROADWAY	
											LUMP	LUMP	201	11000	LUMP		CLEARING AND GRUBBING	
							18					18	202	23000	18	SQ YD	PAVEMENT REMOVED	
						289					175	114	202	23500	289	SQ YD	WEARING COURSE REMOVED	
		205					25				188	42	202	32000	230	FT	CURB REMOVED	
	810	182									176	816	202	32500	992	FT	CURB AND GUTTER REMOVED	
	152											152	202	35100	152	FT	PIPE REMOVED, 24" AND UNDER	
							1					1	202	58000	1	EACH	MANHOLE REMOVED	
	4						6					10	202	58100	10	EACH	CATCH BASIN REMOVED	
	613						117				316	414	203	10000	730	CU YD	EXCAVATION	
	88						20					108	203	40000	108	CU YD	BORROW	
		1518									1306	212	608	10000	1518	SQ FT	4" CONCRETE WALK	
		27									25	2	608	49000	27	EACH	CURB RAMP	
		35									27	8	608	53000	35	EACH	TRUNCATED DOMES	
		1										1	SPEC	69050100	1	EACH	MAILBOX SUPPORT SYSTEM, SINGLE	
																	EROSION CONTROL	
	720						105					825	659	10000	825	SQ YD	SEEDING AND MULCHING	
												1000	832	30000	1000	EACH	EROSION CONTROL	
																	DRAINAGE	
	16											16	603	00100	16	FT	4" CONDUIT, TYPE B	
	5											5	603	01800	5	FT	8" CONDUIT, TYPE B	
	127											127	603	04400	127	FT	12" CONDUIT, TYPE B	
	6											6	603	05900	6	FT	15" CONDUIT, TYPE B	
	18											18	603	07400	18	FT	18" CONDUIT, TYPE B	
	10											10	603	16400	10	FT	36" CONDUIT, TYPE B	
							1					1	604	00400	1	EACH	CATCH BASIN, NO. 3	
							4					4	604	00800	4	EACH	CATCH BASIN, NO. 3A	
	4											4	604	00801	4	EACH	CATCH BASIN, NO. 3A, AS PER PLAN	3
							1					1	604	02000	1	EACH	CATCH BASIN, NO. 6	
	1											1	604	04900	1	EACH	CATCH BASIN, NO. 2-3	
							1					1	604	09000	1	EACH	CATCH BASIN ADJUSTED TO GRADE	
							1					1	604	34500	1	EACH	MANHOLE ADJUSTED TO GRADE	
																	PAVEMENT	
	3150										1895	1255	251	01000	3150	SQ YD	PARTIAL DEPTH PAVEMENT REPAIR, 3"	
	500										301	199	251	01000	500	SQ YD	PARTIAL DEPTH PAVEMENT REPAIR, 6"	
	810					627						1437	252	01500	1437	FT	FULL DEPTH PAVEMENT SAWING	
	3150										1895	1255	253	01000	3150	SQ YD	PAVEMENT REPAIR	
						61624					49715	11909	254	01000	61624	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE, 2"	
						26737					3447	23290	254	01000	26737	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE, 2 1/4"	
	135						55					190	301	46000	190	CU YD	ASPHALT CONCRETE BASE, PG64-22	
	623						38				316	345	304	20000	661	CU YD	AGGREGATE BASE	
						9244					7457	1787	407	10000	9244	GALLON	TACK COAT	
	44					6209	20				2471	3802	407	14000	6273	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
	216						84					300	408	10000	300	GALLON	PRIME COAT	
		332									72	260	408	10001	332	GALLON	PRIME COAT, AS PER PLAN	4
						26737					3447	23290	422	10000	26737	SQ YD	SINGLE CHIP SEAL	
	8					1841	6				1108	747	424	10000	1855	CU YD	FINE GRADED POLYMER ASPHALT CONCRETE, TYPE A	
	17					3069	10				1846	1250	448	46020	3096	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22	
		182									176	6	609	12000	182	FT	COMBINATION CURB AND GUTTER, TYPE 2	
	810	461					627				415	1483	609	26000	1898	FT	CURB, TYPE 6	
							235					235	609	54000	235	SQ YD	6" CONCRETE TRAFFIC ISLAND	
		46									10	36	617	10101	46	CU YD	COMPACTED AGGREGATE, AS PER PLAN	4

CALCULATED RMB CHECKED

GENERAL SUMMARY

TRU-422-(15.59)
(15.76)(16.02)

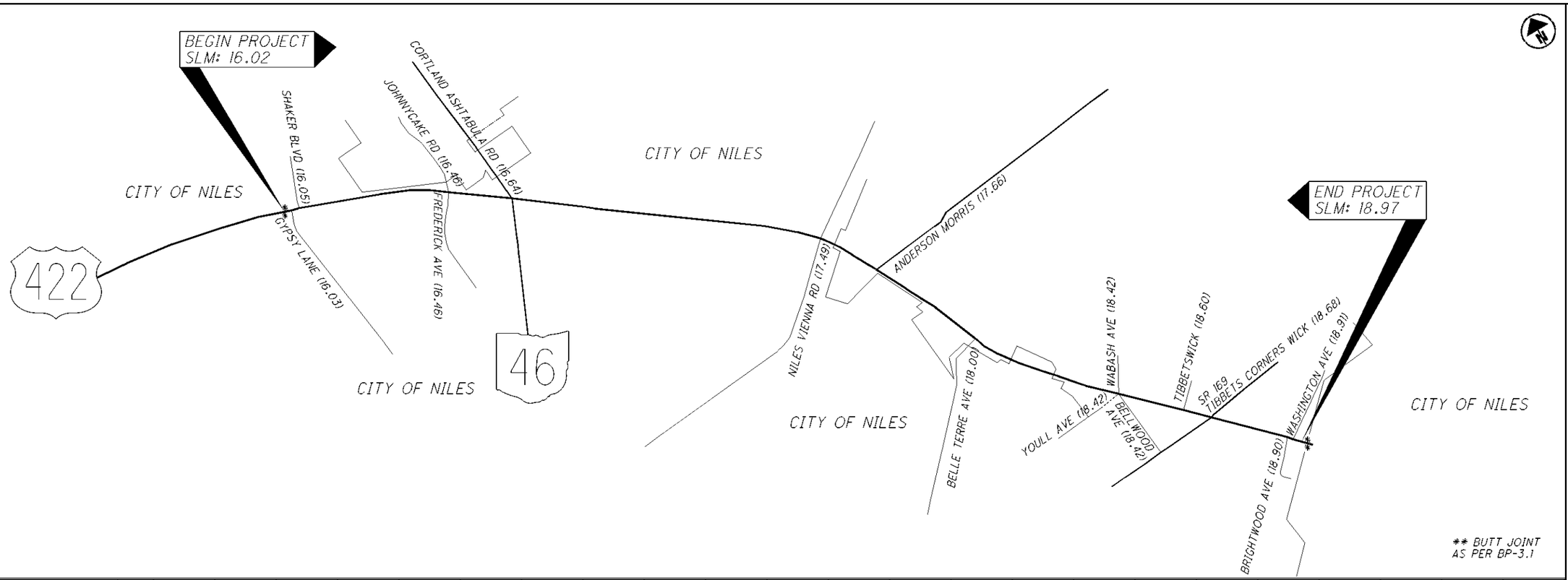
7
20

SHEET NUMBER											PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
		4	5	6				12	13	14	PROJECT (CITY)	PROJECT (OUTSIDE CITY)						
																	TRAFFIC CONTROL	
								158				158	621	10000	158	EACH	RPM, LOW PROFILE, YELLOW/YELLOW	
								32				32	621	10010	32	EACH	RPM, LOW PROFILE, WHITE	
								64				64	621	10020	64	EACH	RPM, LOW PROFILE WHITE/RED	
								251				251	621	54000	251	EACH	RAISED PAVEMENT MARKER REMOVED	
									235			235	630	03100	235	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
									66.2			66.2	630	80100	66.2	SQ FT	SIGN, FLAT SHEET	
		29									25	4	632	26501	29	EACH	DETECTOR LOOP, AS PER PLAN	4
										2.8		2.8	644	00100	2.8	MILE	EDGE LINE	
										3.78	2.84	0.94	644	00200	3.78	MILE	LANE LINE	
										2.95	1.42	1.53	644	00300	2.95	MILE	CENTER LINE	
										5493	3913	1580	644	00400	5493	FT	CHANNELIZING LINE	
										396	300	96	644	00500	396	FT	STOP LINE	
										219	34	185	644	00700	219	FT	TRANSVERSE/DIAGONAL LINE	
										56	56		644	00900	56	SQ FT	ISLAND MARKING	
										98	70	28	644	01300	98	EACH	LANE ARROW	
																	STRUCTURES	
																	FOR STRUCTURE TRU-422-15.59	17
																	FOR STRUCTURE TRU-422-15.76	17
																	MAINTENANCE OF TRAFFIC	
				40								40	614	11110	40	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
			16									16	614	12460	16	EACH	WORK ZONE MARKING SIGN	
			20									20	614	13000	20	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
				240								240	614	18401	240	DAY	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	6
			7.56								5.68	1.88	614	20400	7.56	MILE	WORK ZONE LANE LINE, CLASS II	
			3.78								2.84	0.94	614	20550	3.78	MILE	WORK ZONE LANE LINE, CLASS III, 642 PAINT	
			5.9								2.84	3.06	614	21400	5.9	MILE	WORK ZONE CENTER LINE, CLASS II	
			2.95								1.42	1.53	614	21550	2.95	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
			10986								7826	3160	614	23650	10986	FT	WORK ZONE CHANNELIZING LINE, CLASS II	
			5493								3913	1580	614	23680	5493	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT	
			792								600	192	614	26000	792	FT	WORK ZONE STOP LINE, CLASS I	
			396								300	96	614	26610	396	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
													614	11000	LUMP		MAINTAINING TRAFFIC	
												6	619	16010	6	MONTH	FIELD OFFICE, TYPE B	
													623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
													624	10000	LUMP		MOBILIZATION	

CALCULATED RMB CHECKED

GENERAL SUMMARY

TRU-422-(15.59) (15.76)(16.02)



SLM RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA	202 WEARING COURSE REMOVED	254 PAVEMENT PLANING, ASPHALT CONCRETE (T=2")	254 PAVEMENT PLANING, ASPHALT CONCRETE (T=2 1/4")	407 TACK COAT @0.15 GAL/SY	407 TACK COAT FOR INTERMEDIATE COURSE @0.04 GALY/SY	407 TACK COAT FOR INTERMEDIATE COURSE @0.10 GALY/SY	422 SINGLE CHIP SEAL	424 FINE GRADED POLYMER ASPHALT CONCRETE, TYPE A (T=3/4")	448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22 (T=1 1/4")									
					FT	FT	SQ YD	SQ YD	SQ YD	SQ YD	SQ YD	GALLON	GALLON	GALLON	SQ YD	CU YD	CU YD									
16.02	TO	17.08		L/R	5596.80	63.00	39177.60		175.00	39177.60		5876.64	1567.10			816.20	1360.33									
17.08	TO	17.50		L	2217.60	63.00	15523.20			15523.20		2328.48	620.93			323.40	539.00									
17.50	TO	17.54			211.20	58.50	1372.80			1372.80		205.92	54.91			28.60	47.67									
17.54	TO	17.64		R	528.00	46.50	2728.00			2728.00		409.20	109.12			56.83	94.72									
17.64	TO	17.77		R	686.40	37.00	2821.87			2821.87		423.28	112.87			58.79	97.98									
17.77	TO	18.07			1584.00	37.00	6512.00				6512.00		260.48	651.20	6512.00	135.67	226.11									
18.07	TO	18.11		R	211.20	37.00	868.27				868.27		34.73	86.83	868.27	18.09	30.15									
18.11	TO	18.14			158.40	36.00	633.60				633.60		25.34	63.36	633.60	13.20	22.00									
18.14	TO	18.20		L/R	316.80	36.00	1267.20				1267.20		50.69	126.72	1267.20	26.40	44.00									
18.20	TO	18.23		L	158.40	35.00	616.00				616.00		24.64	61.60	616.00	12.83	21.39									
18.23	TO	18.30		L/R	369.60	35.00	1437.33				1437.33		57.49	143.73	1437.33	29.94	49.91									
18.30	TO	18.68			2006.40	37.80	8426.88				8426.88		337.08	842.69	8426.88	175.56	292.60									
18.68	TO	18.97			1531.20	41.00	6975.47		113.89		6975.47		279.02	697.55	6975.47	145.32	242.20									
								SUBTOTALS	288.89	61623.47	26736.75	9243.52	3534.41	2673.67	26736.75	1840.84	3068.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
								TOTALS CARRIED TO GENERAL SUMMARY	289	61624	26737	9244	3535	2674	26737	1841	3069	0	0	0	0	0	0	0	0	0

ASPHALT CONCRETE SUBSUMMARY

TRU-422-(15.59)
(15.76)(16.02)

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SUBSUMMARY

CALCULATED RMB
CHECKED

REF NO.	LOCATION	STATION TO STATION			TO			202 PAVEMENT REMOVED SQ YD	202 CURB REMOVED FT	202 MANHOLE REMOVED EACH	202 CATCH BASIN REMOVED EACH	203 EXCAVATION CU YD	203 BORROW CU YD	252 FULL DEPTH PAVEMENT SAWING FT	301 ASPHALT CONCRETE BASE, PG64-22 CU YD	304 AGGREGATE BASE CU YD	407 TACK COAT FOR INTERMEDIATE COURSE GALLON	408 PRIME COAT GALLON	424 FINE GRADED POLYMER ASPHALT CONCRETE, TYPE A CU YD	448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22 CU YD	604 CATCH BASIN, NO. 3 EACH	604 CATCH BASIN, NO. 3A EACH	604 CATCH BASIN, NO. 6 EACH	604 CATCH BASIN ADJUSTED TO GRADE EACH	604 MANHOLE ADJUSTED TO GRADE EACH	609 CURB, TYPE 6 FT	609 6" CONCRETE TRAFFIC ISLAND SQ YD	659 SEEDING AND MULCHING SQ YD
P-1	422/169	65+32.16	LT			68+66.58	LT					61	20	315	28	21	10	44	3	5						315		105
R-1	422	65+96.00	LT			66+44.00	LT	18																				
P-2	169/422	68+06.00	RT			1+48.00	LT		25			25		126	12	8	4	18	1	2						126	69	
P-3	422	1+68.00	LT			2+65.00	LT					21		122	10	6	4	15	1	2						122	124	
P-4	169	68+29.00	RT			68+78.00	RT					10		64	5	3	2	7	1	1						64	42	
D-1	422	65+41.20	LT								1											1						
D-2	422	66+05.30	LT								1											1						
D-3	169	67+25.60	LT								1																	
D-4	169	67+34.25	LT							1											1							
D-5	169	67+94.32	LT								1											1						
D-6	169	67+91.00	RT								1											1						
D-7	422	1+24.16	LT								1												1					
A-1	422	66+81.66	RT																					1				
A-2	422	1+74.00	LT																						1			
TOTALS CARRIED TO GENERAL SUMMARY								18	25	1	6	117	20	627	55	38	20	84	6	10	1	4	1	1	1	627	235	105

TRU-422-(15.59)
(15.76)(16.02)

10
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NOTE: ℄ REFERENCES TO BE PROVIDED AT PRECON MEETING

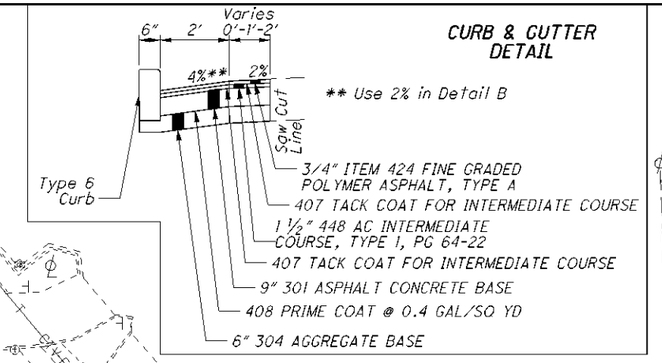
LEGEND

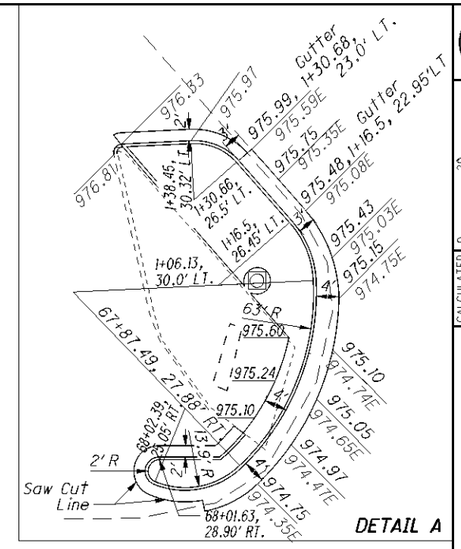
XXX.XX = PROPOSED TOP OF CURB/ISLAND ELEVATION
XXX.XXE = EXISTING ELEVATION AT SAW CUT LINE
XXX.XX = EXISTING GUTTER ELEVATION
SE = SIGN ELEVATION
CB ELEV = EXISTING CATCH BASIN ELEVATION

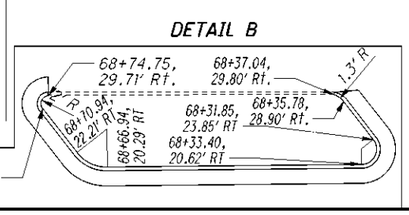
* Small Area of Pavement to be Milled @ saw cut line @ Sta. 68+02, 32' Rt., SR 169, to avoid ponding & to allow water to drain to catch basin at Sta. 67+91.00, 24.8' Rt., SR 169

All Stations & Offsets are at Back of Curb Unless Otherwise Noted

CURB & GUTTER DETAIL







HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED RMB CHECKED

INTERSECTION DETAILS
SR 422 & SR 169 SLM 18.68

TRU-422-(15.59) (15.76)(16.02)

11 20

I:\Projects\TRU\84566\roadway\sheets\84566G1001.dgn 21-DEC-2009 9:31AM rbisesi

LOCATION								621	621	621	621		621	
COUNTY	ROUTE	SECTION (S.L.M.)						RPM, LOW PROFILE, YELLOW/YELLOW	RPM, LOW PROFILE WHITE/RED	RPM, LOW PROFILE, WHITE	RPM, LOW PROFILE YELLOW/RED		RAISED PAVEMENT MARKER REMOVED	REMARKS
		FROM	TO					EACH	EACH	EACH	EACH		EACH	
TRU	422	17.61	18.97					158	64	32			251	US 422 EB FROM NILES CORP (17.61) TO GIRARD CORP (18.97) (2-WAY LEFT TURN LANE
														LANE LINES, CHANNELIZING LINES, CENTERLINES AND STOP APPROACHES)
TOTALS CARRIED TO GENERAL SUMMARY				0	0	0	0	158	64	32	0	0	251	

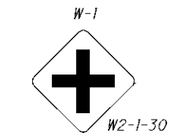
CALCULATED ALP CHECKED

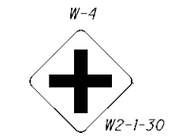
RAISED PAVEMENT MARKING SUB-SUMMARY

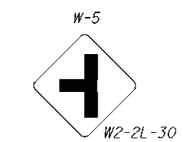
TRU-422-(15.59)(15.76)(16.02)

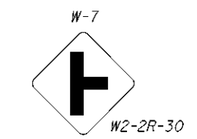
12 20

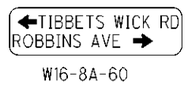
REF NO.	SHEET NO.	SLM	SIDE	CODE * PLYWOOD # YELLOW/GREEN ## WHITE ON BROWN	SIZE (INCHES)		630 GROUND MOUNTED SUPPORT, NO. 3 POST FT	630 SIGN, FLAT SHEET SQ FT
W-1		18.40	RT	W2-1-30	30X30		14.5	6.25
W-1		18.40	RT	W16-8A-48	48X15		14.5	5
W-2		18.42	LT	D3-1-48	48X8		12	2.67
W-3		18.42	RT	D3-1-36	36X8		12	2
W-4		18.44	LT	W2-1-30	30X30		14.5	6.25
W-4		18.44	LT	W16-8A-48	48X15		14.5	5
W-5		18.58	RT	W2-2L-30	30X30		14	6.25
W-5		18.58	RT	W16-8A-48	48X8		14	2.67
W-6		18.60	LT	D3-1-48	48X8		12	2.67
W-7		18.62	LT	W2-2R-30	30X30		14	6.25
W-7		18.62	LT	W16-8-48	48X8		14	2.67
W-8		18.66	RT	W16-8A-60	60x15		12.25	6.25
W-8		18.66	RT				12.25	
W-9		18.68	LT	D3-1-60	60x8		12	3.33
W-9							12	
W-10		18.68	RT	D3-1-48	48x8		12	2.67
W-11		18.70	RT	W16-8A-60	60X15		12.25	6.25
W-11		18.70	RT				12.25	
TOTALS CARRIED TO SHEET 9999						0	235	66.2











CALCULATED RMB
CHECKED

SIGNING SUBSUMMARY

TRU-422-(15.59)
(15.76)(16.02)

GENERAL SPEC: 640
MATERIAL TYPE: 644

CALCULATED RMB CHECKED

CENTER LINE

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	TOTAL MILES	EQUIVALENT SOLID LINE	COMMENTS
TRU	422	16.02	JCT. SHAKER BLVD.	17.44	JCT. NILES-VIENNA RD.	1.42		CITY OF NILES
TRU	422	17.44	JCT. NILES-VIENNA RD.	18.97	GIRARD CORP.	1.53		ODOT
TOTAL						2.95		

LANE LINE

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	TOTAL MILES	4" LANE LINE DASHED	4" LANE LINE SOLID	COMMENTS
TRU	422	16.02	JCT. SHAKER BLVD.	17.44	JCT. NILES-VIENNA RD.	2.84			CITY OF NILES
TRU	422	17.44	JCT NILES-VIENNA RD.	17.57	END LANE LINE	0.26			ODOT
TRU	422	18.63	JCT. SR 169	18.97	GIRARD CORP.	0.68			ODOT
TOTAL						3.78			

EDGE LINE

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	WHITE EDGE LINE TOTAL	WHITE EDGE LINE HIGHWAY	WHITE EDGE LINE RAMP	YELLOW EDGE LINE TOTAL	YELLOW EDGE LINE HIGHWAY	YELLOW EDGE LINE RAMP	COMMENTS
TRU	422	17.57	BEGIN EDGE LINE	18.97	GIRARD CORP.	2.80	2.80					ODOT
TOTAL						2.80	2.80					

AUXILIARY

CTY	ROUTE LOCATION	TRUE LOG	CHANNEL LINE	STOP LINE	TRANSVERSE DIAGONAL LINES WHITE	TRANSVERSE DIAGONAL LINES YELLOW	CROSS WALK LINES	WORD ON PVMT ONLY 72"	WORD ON PVMT ONLY 96"	LANE ARROWS TURN LEFT	LANE ARROWS TURN RIGHT	LANE ARROWS THRU	LANE ARROWS COMB.	SYMBOL MARKINGS RxR	SYMBOL MARKINGS SCHOOL 72"	SYMBOL MARKINGS SCHOOL 96"	ISLAND MARKING	DOTTED LINES	COMMENTS
			FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	SQ FT	FT	
TRU	US 422 @ SHAKER BLVD.	16.020	450	48						2	5								CITY OF NILES
TRU	US 422 @		763							5	8								CITY OF NILES
TRU	US 422 @		621	86						7	3								CITY OF NILES
TRU	US 422 @ FREDERICKS	16.460	680	76		34				8							56		CITY OF NILES
TRU	US 422 @ VILLAGE PLAZA		318							3	2								CITY OF NILES
TRU	US 422 @ SR 46	16.640	1081	90						7	8								CITY OF NILES
TRU	US 422 @ TWLT (17.04-17.44)									12									CITY OF NILES
TRU	US 422 @ NILES-VIENNA	17.440	710	72						9									
TRU	US 422 @ TWLT (17.53-18.63)									10									
TRU	US 422 @ SR 169	18.630	870	24	185					3	3	3							
TOTAL			5493	396	185	34				66	29	3					56		

PAVEMENT MARKING SUBSUMMARY

TRU-422-(15.59)
(15.76)(16.02)

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

GR-1.1 DATED/REVISED 7/16/04

GR-2.1 DATED/REVISED 1/16/04

GR-3.4 DATED/REVISED 1/20/06

GR-4.2 DATED/REVISED 1/19/07

GR-5.2 DATED/REVISED 1/16/04

GR-5.3 DATED/REVISED 1/16/04

DS-1-92 DATED/REVISED 7/18/03

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

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-422-1559
- -REMOVE EXISTING ASPHALT CONCRETE OVERLAY AND WATERPROOFING AND REPLACE WITH TYPE 3 WATERPROOFING AND ASPHALT CONCRETE OVERLAY ON THE DECK
- -REMOVE AND REPLACE ASPHALT CONCRETE OVERLAY ON THE APPROACH SLABS
- -INSTALL A POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
- -PATCH ALL UNSOUND AREAS OF THE CURBS AND SUBSTRUCTURE
- -REPAIR EROSION AT THE REAR AND FORWARD ABUTMENTS ALONG THE FOOTERS
- -SEAL ALL EXPOSED CONCRETE OF ABUTMENTS, CURBS, DECK EDGES, PARAPETS, AND WINGWALLS WITH EPOXY-URETHANE
- -CLEARING AND GRUBBING 10' AROUND ABUTMENTS FOR SEALING OPERATIONS
- -NEW STRUCTURE IDENTIFICATION SIGNS

TRU-422-1576
- -REMOVE EXISTING ASPHALT CONCRETE OVERLAY AND WATERPROOFING AND REPLACE WITH TYPE 3 WATERPROOFING AND ASPHALT CONCRETE OVERLAY ON THE DECK
- -REMOVE AND REPLACE STEEL DRIP STRIP
- -PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE
- -REPAIR EROSION BEHIND THE WINGWALLS ON THE RIGHT SIDE OF THE STRUCTURE
- -SEAL ALL EXPOSED CONCRETE OF ABUTMENTS, DECK EDGES, AND WINGWALLS WITH EPOXY-URETHANE
- -REPLACE GUARDRAIL
- -CLEARING AND GRUBBING 10' AROUND ABUTMENTS FOR SEALING OPERATIONS
- -NEW STRUCTURE IDENTIFICATION SIGNS

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 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

ITEM 202, WEARING COURSE REMOVED, AS PER PLAN:

REMOVE ALL OF THE ASPHALT CONCRETE ON STRUCTURE TRU-422-1559. THICKNESS VARIES WITH A MINIMUM THICKNESS OF 2 1/2"±. MILLING OR OTHER MECHANICAL METHOD OF ASPHALT DECK REMOVAL MAY BE PERFORMED TO WITHIN 1/2"± OF THE TOP OF THE EXISTING PRESTRESSED CONCRETE BOX BEAMS. THE LAST 1/2"± OF ASPHALT CONCRETE TO BE REMOVED AND THE WATERPROOFING WILL BE REMOVED USING A NON-DESTRUCTIVE METHOS SUCH AS HAND SCRAPING. THE CONTRACTOR WILL USE CAUTION IN REMOVING THE REMAINING ASPHALT AND WATER- PROOFING SO THAT THE SURFACE OF THE PRESTRESSED CONCRETE BOX BEAMS ARE NOT DAMAGED. ANY DAMAGE INCURRED TO THE BOX BEAMS WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

PAYMENT FOR THIS ITEM WILL INCLUDE ALL LABOR, MATERIALS, AND EQUIPEMENT NECESSARY TO PERFORM THIS ITEM. PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER SQUARE YARD FOR ITEM 202 - WEARING COURSE REMOVED, AS PER PLAN.

ASPHALT CONCRETE COURSES

ASPHALT CONCRETE COURSES FOR STRUCTURE TRU-422-1559 WILL CONSIST OF A VARIABLE THICKNESS OF 448 ASPHALT CONCRETE INTERMEDIATE COURSE COURSE, TYPE 2, PG64-28 AND A 1-1/2" THICKNESS OF 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M. PLACE THE 448 INTERMEDIATE COURSE IN TWO OPERATIONS. THE FIRST PORTION OF THE COURSE WILL BE OF 1-1/2" UNIFORM THICKNESS. FEATHER THE SECOND PORTION OF THE COURSE TO PLACE THE SURFACE PARALLEL TO AND 1-1/2" BELOW FINAL PAVEMENT SURFACE ELEVATION.

ITEM 515, HIGH EARLY STRENGTH KEY-WAY GROUT

AFTER REMOVAL OF THE ASPHALT AND WATERPROOFING THE KEY-WAY GROUT WILL BE EXAMINED FOR VISIBLE DETERIORATION. ANY GROUT DETERMINED TO NEED REPLACING BY THE ENGINEER WILL BE REMOVED BY ITEM 202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN. THE GROUT WILL BE REPLACED WITH ITEM 515 HIGH EARLY STRENGTH KEY-WAY GROUT.

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.

ITEM 601, DUMP ROCK FILL, TYPE B

THIS ITEM WILL BE USED TO REPAIR EROSION ALONG THE FORWARD AND REAR ABUTMENTS WHERE THE FOOTER IS EXPOSED OF STRUCTURE TRU-422-1559. ROCK WILL BE PLACED ALONG THE ABUTMENTS EXTENDING 5 FEET DOWN THE SLOPE AND 3' DEEP. PAYMENT FOR THIS ITEM WILL INCLUDE ALL LABOR, MATERIALS, AND NECESSARY TO PERFORM THIS ITEM. PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER CUBIC YARD FOR ITEM 601, DUMP ROCK FILL, TYPE B.

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-422-1559 (2 APPROACHES) & TRU-422-1576 (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-422-1559 (SFN:7807082) THE EXISTING SIGN SHOWS 1590. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1559.

STRUCTURE TRU-422-1576 (SFN:7807120) THE EXISTING SIGN SHOWS 1607. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1576.

DESIGN AGENCY: ODOT --- DISTRICT 4 PRODUCTION

DESIGNED LMS | DRAWN LMS | REVIEWED TJP | DATE 10-15-09

CHECKED | REVISED | STRUCTURE FILE NUMBER 7807082 & 7807120

STRUCTURE GENERAL NOTES

BRIDGE NO.: TRU-422-1559 & TRU-422-1576

US422 OVER MOSQUITO CREEK & US422 OVER MOSQUITO CREEK

TRU-422-(15.59)
(15.76)(16.02)
PID No. 84566

ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98

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
SSS265M	ET-2000 (1997) PLAN, ELEVATION AND SECTIONS	6/20/97	3/6/98
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

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

THE FACE OF THE TYPE E-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18" 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-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 606 - ANCHOR ASSEMBLY, TYPE B-98

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 SRT-350, GUARDRAIL END TERMINAL AS MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE SRT-350 SYSTEM IS CONSIDERED TO BE 37'-6", INCLUSIVE OF THREE 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
SS444	SLOTTED RAIL TERMINAL POST LAYOUT AND	7/12/99 Rev. 1	8/27/99
SS444M	ERECTION DETAILS SRT-350 (12.5, 8 POST)	7/12/99	
SS425M	SLOTTED RAIL TERMINAL SRT-350 POST LAYOUT AND ERECTION DETAILS (12.5, 9 POST)	6/21/97 Rev. 1	3/6/98

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

THE LENGTH OF THE FLEAT-350 IS CONSIDERED TO BE 37'-6", INCLUSIVE OF THREE 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
FLT-M	FLARED ENERGY ABSORBING TERMINAL (FLEAT-350) ASSEMBLY	4/16/98	7/31/98

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.

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

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

PAINTING AND SEALING OPERATIONS

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT EPOXY-URETHANE SEALER, PAINT, OR OTHER MATERIALS USED TO REPAIR, CLEAN, SEAL, OR TREAT ANY BRIDGE AND CULVERT STRUCTURE FROM ENTERING ANY STREAMS, WETLANDS OR OTHER WATERS OF THE UNITED STATES AND TAKE THE APPROPRIATE ACTIONS IN THE EVENT OF A RELEASE.

CONSTRUCTION AND DEMOLITION DEBRIS

THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID AND/OR LIMIT CONSTRUCTION AND DEMOLITION DEBRIS FROM ENTERING THE STREAMS. ANY MATERIAL THAT DOES FALL INTO THE STREAMS SHALL BE REMOVED AS SOON AS POSSIBLE.

STREAM / WETLAND AVOIDANCE

NO EXCAVATION, GRADING, OR FILLING OPERATIONS SHALL BE PERFORMED BELOW THE ORDINARY HIGH WATER MARK OF MOSQUITO CREEK AT TRU-422-1559, BELOW THE ORDINARY HIGH WATER MARK OF AN UNNAMED OR AT A TRIBUTARY TO MOSQUITO CREEK AT TRU-422-1576 AND/OR WITHIN THE WETLANDS LOCATED IN THE NORTHWEST QUADRANT ADJACENT TO THE BRIDGE AT TRU-422-1559. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE EQUIPMENT AND/OR MATERIALS IN ANY STREAMS, WETLANDS OR OTHER WATERS OF THE UNITED STATES.

ASBESTOS NOTIFICATION

AN ASBESTOS SURVEY OF THE BRIDGES AT TRU-422-15.59 AND TRU-422-15.76 SCHEDULED FOR REHABILITATION WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURES.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER.
THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO:

MAHONING-TRUMBULL AIR POLLUTION CONTROL
345 OAK HILL AVENUE, SUITE 200
YOUNGSTOWN, OHIO 44502
NEIL H. ALTMAN
(330) 743-3333
FAX: (330) 743-3960

AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR REHABILITATION. THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER.

INFORMATION REQUIRED ON THE FORM WILL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. A COPY OF THE OEPA FORM IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 4 OFFICE, 2088 SOUTH ARLINGTON, AKRON, OHIO 44306.

BASIS FOR PAYMENT-THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202-PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

DESIGN AGENCY
ODOT --- DISTRICT 4
PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
LMS	LMS	TJP	10-15-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	7807082 & 7807120

STRUCTURE GENERAL NOTES
BRIDGE NO.: TRU-422-1559 & TRU-422-1576
US422 OVER MOSQUITO CREEK & US422 OVER MOSQUITO CREEK

TRU-422-(15.59) (15.76)(16.02)
PID No. 84566

2 / 6

16 / 20

CALC:	LMS	DATE: 5/27/2009
CHECKED:	TJP	DATE: 10/15/2009

ESTIMATED QUANTITIES

BRIDGE NO. / STRUCTURE FILE NO.								ITEM	EXTENSION	UNIT	DESCRIPTION	SEE SHEET
		TRU-422-1559 SFN 7807082			TRU-422-1576 SFN 7807120							
		LUMP			LUMP			201	11000		CLEARING AND GRUBBING	
					LUMP			202	11201		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	1/6
		214			128			202	23500	SQ YD	WEARING COURSE REMOVED	
		883						202	23501	SQ YD	WEARING COURSE REMOVED, AS PER PLAN	1/6
					125			202	38000	FT	GUARDRAIL REMOVED	
					5			203	40000	CU YD	BORROW	
		32						407	10000	GALLON	TACK COAT	
		44			6			407	14000	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
		55			6			448	46040	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-28	
		46			6			448	46904	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M	
		389			89			512	10100	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
		911			128			512	33010	SQ YD	TYPE 3 WATERPROOFING	
		111						515	30000	FT	HIGH EARLY STRENGTH KEYWAY GROUT	
		142						SPEC	51631300	FT	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	5/6
					32			SPEC	51822300	FT	STEEL DRIP STRIP	
		150			100			519	11101	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN	1/6
		100						601	26000	CU YD	DUMPED ROCK FILL, TYPE B	
					100			606	13000	FT	GUARDRAIL, TYPE 5	
					1			606	22000	EACH	ANCHOR ASSEMBLY, TYPE B-98	
					1			606	22010	EACH	ANCHOR ASSEMBLY, TYPE E-98	
					2			606	26500	EACH	ANCHOR ASSEMBLY, TYPE T	
					4			606	35140	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4	
		15			15			630	02100	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
		2			2			630	80100	SQ FT	SIGN, FLAT SHEET, 730.20	
		2			2			630	84900	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
		2			2			630	86002	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
		75			75			843	50000	SQ FT	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	

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ODOT --- DISTRICT 4
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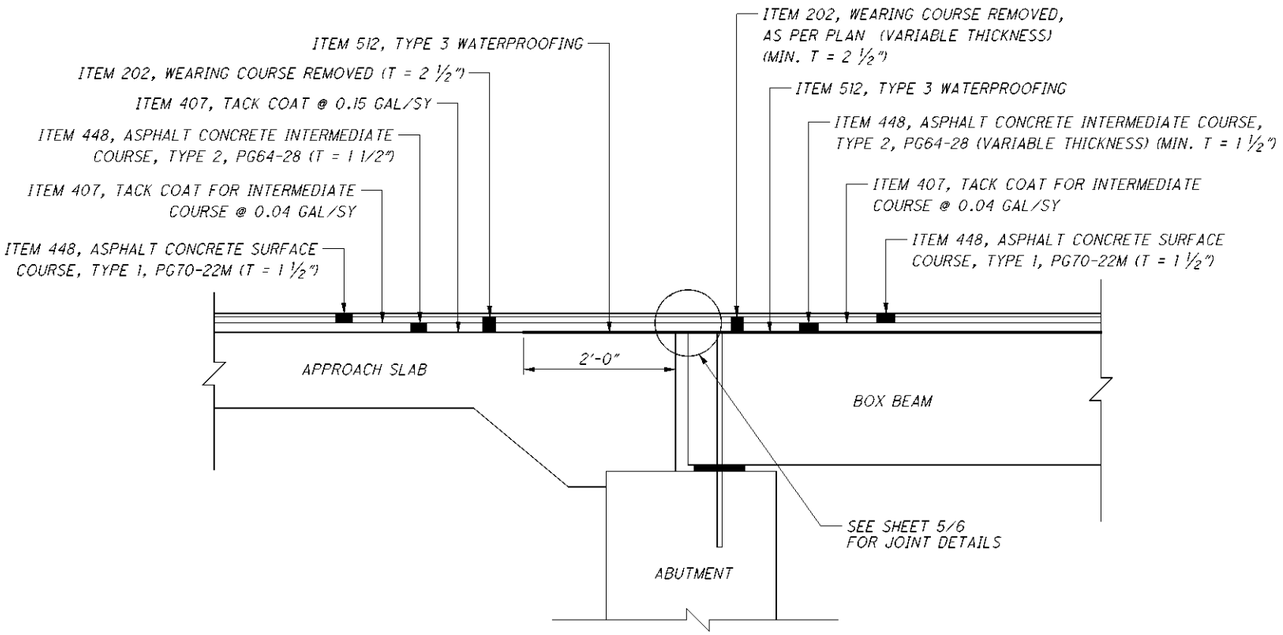
		7807082 & 7807120	

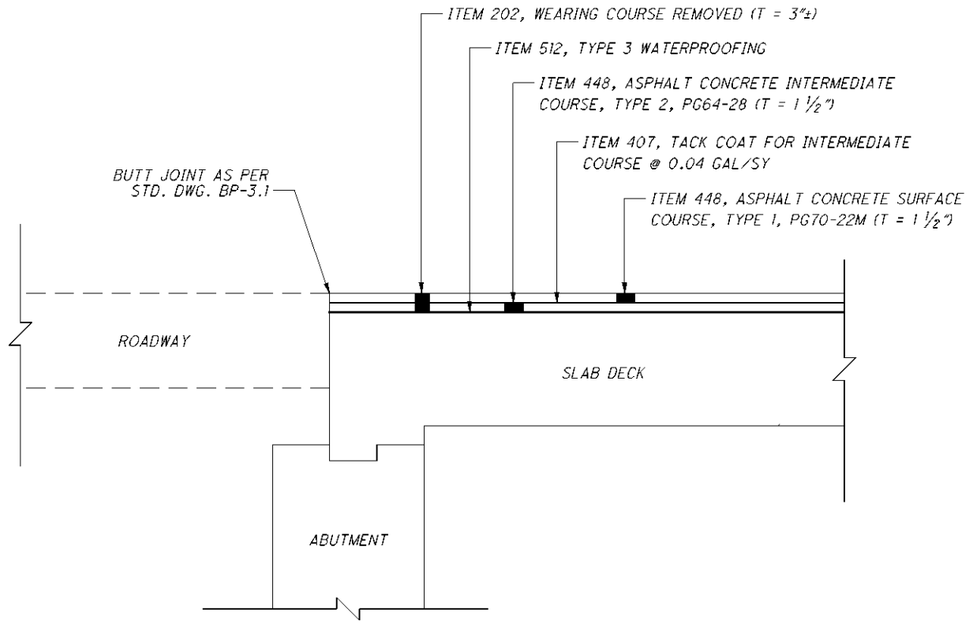
STRUCTURE ESTIMATED QUANTITIES
BRIDGE NO.: TRU-422-1559 & TRU-422-1576
US422 OVER MOSQUITO CREEK & US422 OVER MOSQUITO CREEK

TRU-422-(15.59)
(15.76)(16.02)
PID No. 84566



TRU-422-1559

APPROACH SHOWN, TRAILING SIMILAR



TRU-422-1576

APPROACH SHOWN, TRAILING SIMILAR

* EXISTING STEEL DRIP STRIP WILL BE REMOVED UNDER ITEM 202, PORTION OF STRUCTURES REMOVED, AS PER PLAN. SEE STD. DWG. DS-1-92 FOR NEW DRIP STRIP PLACEMENT FOR STRUCTURE TRU-422-1576 LEFT SIDE ONLY.

BRIDGE NUMBER	BRIDGE DECK												APPROACH SLABS										
	LENGTH (BRIDGE LIMITS)	BRIDGE WIDTH	DECK AREA	202 WEARING COURSE REMOVED (T = 3"±)	202 WEARING COURSE REMOVED, AS PER PLAN (VARIABLE THICKNESS) (MIN. T = 2 1/2")	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL/SY	448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-28 (T = 1 1/2")	448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-28 (VARIABLE THICKNESS) (MIN. T = 1 1/2")	448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M (T = 1 1/2")	512 TYPE 3 WATERPROOFING	515 HIGH EARLY STRENGTH KEYWAY GROUT	SPEC POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	SPEC STEEL DRIP STRIP	LENGTH (APPROACH SLABS)	APPROACH SLAB WIDTH	APPROACH SLAB AREA	APPROACH (FORWARD / REAR)	202 WEARING COURSE REMOVED (T = 2 1/2"±)	407 TACK COAT @ 0.15 GAL/SY	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL.SY	448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-28 (T = 1 1/2")	448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M (T = 1 1/2")	512 TYPE 3 WATERPROOFING		
	FT	FT	SQ YD	SQ YD	SQ YD	GALLON	CU YD	CU YD	CU YD	SQ YD	FT	FT	FT	FT	SQ YD			SQ YD	GALLON	GALLON	CU YD	CU YD	SQ YD		
TRU-422-1559	124.10	64.00	882.49		882.49	35.30		45.96	36.77	882.49	110.70	142.00		15.00	64.00	106.67	REAR	106.67	16.00	4.27	4.44	4.44	14.22		
														15.00	64.00	106.67	FWD	106.67	16.00	4.27	4.44	4.44	14.22		
TRU-422-1576	18.00	64.00	128.00	128.00		5.12	5.33		5.33	128.00			32.00												

DESIGN AGENCY
ODOT --- DISTRICT 4
PRODUCTION

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LMS	LMS	TJP	10-15-09
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		7807082 & 7807120	

SUPERSTRUCTURE DETAILS

BRIDGE NO.: TRU-422-1559 & TRU-422-1576

US422 OVER MOSQUITO CREEK & US422 OVER MOSQUITO CREEK

TRU-422-(15.59)
(15.76)(16.02)
PID No. 84566

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GENERAL NOTES AND DETAILS FOR POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

ITEM SPECIAL - POLYMER-MODIFIED ASPHALT EXPANSION JOINT SYSTEM

THIS ITEM WILL BE USED TO SEAL THE EXPANSION/CONTRACTION JOINTS AS PER THESE DETAILS AND THE MANUFACTURER'S REQUIREMENTS USING A POLYMER-MODIFIED ASPHALT SYSTEM. THE PRIME CONTRACTOR WILL OBTAIN THE SERVICES OF ONE OF THE FOLLOWING APPROVED APPLICATORS WHO WILL FURNISH AND INSTALL THE NEW BRIDGE EXPANSION JOINT SYSTEM AFTER ALL PAVING ON THE AFFECTED BRIDGE(S) HAS BEEN COMPLETED.

PRODUCT NAME	SUPPLIER	ADDRESS	PHONE NO.
THORMA-JOINT	DYNAMIC SURFACE APPLICATIONS, LTD	373 VILLAGE RD. PENNSDALE, PA 17756	(570)546-6041
MATRIX 502	CRAFCO INC.	420 N. ROOSEVELT AVE. CHANDLER, AZ 85226	(800)528-8242
EXPANDEX JOINT SYSTEM	WATSON-BOWMAN ACME	95 PINEVIEW DR. AMHERST, NY 14228	(716)691-7566
APJ ASPHALTIC PLUG EXPANSION JOINT	WYOMING EQUIPMENT SALES	281 SIXTH STREET P.O. BOX 287 WEST WYOMING, PA 18644	(570)693-2810

MATERIALS:

BRIDGING PLATE:

MILD STEEL 1/8" OR 1/4" THICK PLATE, 8" WIDE OR 18 GAUGE ALUMINUM, 8" WIDE.

BINDER:

TYPE:	POLYMER MODIFIED ASPHALT
SOFTENING POINT:	180 DEGREES F. MIN.
FLOW:	3 mm. MAX. AT 140 DEGREES F.
PENETRATION:	9 mm. MAX. AT 77 DEGREES F. 1 mm. MIN AT 0 DEGREES F. ASTM D 3407
DUCTILITY:	40 cm. MIN. ASTM D 113
RESILIENCE:	60% MIN. AT 77 DEGREES F.
TENSILE ADHESION:	700% MIN.
SPECIFIC GRAVITY:	1.10 * 0.05
POURING TEMP:	350 - 390 DEGREES F.

AGGREGATE:

TYPE:	CRUSHED, DOUBLE WASHED, AND DRIED GRANITE OR BASALT
GRADATION:	THE GRADATION OF THE AGGREGATE VARIES BY MANUFACTURER AND WILL BE AS PER THE MANUFACTURER'S RECOMMENDATIONS FOR THE SYSTEM BEING USED ON THIS PROJECT.

BACKER ROD:

THE BACKER SHALL BE A CLOSED CELL FOAM EXPANSION JOINT FILLER CAPABLE OF WITHSTANDING THE PLACEMENT TEMPERATURE OF THE POLYMER MODIFIED ASPHALT.

NOTE: PRIOR TO PLACEMENT OF ANY PORTION OF THE JOINT SYSTEM, THE PROJECT ENGINEER MUST HAVE CERTIFIED TEST DATA MEETING ALL THE MINIMUM REQUIREMENTS OF ALL THE MATERIALS OF THE JOINT SYSTEM.

INSTALLATION PROCEDURES:

SAWING AND SURFACE PREPARATION:

AFTER ALL PAVING OPERATIONS ARE COMPLETE, THE OVERLAY IS TO BE TRANSVERSELY SAW CUT FULL DEPTH NO LESS THAN TWO INCHES DEEP (20" CENTERED OVER JOINT OPENING, UNLESS OTHERWISE NOTED). REMOVE ALL MATERIAL, INCLUDING WATER-PROOFING MATERIAL, BETWEEN SAW CUTS. THOROUGHLY CLEAN AND DRY EXPOSED CONCRETE, STEEL, AND CUT SURFACES USING COMPRESSED AIR AND A HOT COMPRESSED AIR (HCA) LANCE. THE LANCE MUST PRODUCE A FLAME RETARDED AIR STREAM TEMPERATURE OF 3000 DEGREES F. AT A VELOCITY OF 3,000 FEET PER SECOND WITH 15 PSIG CHAMBER PRESSURE. IF THERE IS AN INTERRUPTION DUE TO WEATHER OR OTHER CAUSES, THE OPERATION WILL BE REPEATED WITH THE HCA LANCE IMMEDIATELY BEFORE THE BINDER COAT OPERATION. ALSO, 6 INCHES OF THE ROAD SURFACE ON EITHER SIDE OF THE JOINT WILL BE DRIED SO THAT A SUITABLE SURFACE FOR BITUMEN ADHESION IS OBTAINED.

SEALING OF EXPANSION JOINT: (PRE-STRESSED BOX OR CONCRETE SLAB)

THE EXPANSION JOINT GAP IS TO BE SEALED AND A BRIDGING PLATE CENTERED ALONG IT. A VERY NARROW GAP WILL BE SEALED BY POURING HOT BINDER INTO THE GAP. GAPS OF 1/8" OR MORE WILL FIRST BE FILLED WITH AN APPROPRIATELY SIZED BACKER ROD. THE BACKER ROD WILL BE INSTALLED SO THAT IT IS BETWEEN 1/8" AND 1 1/8" BELOW THE TOP OF THE EXISTING GAP. THE GAP WILL THEN BE FILLED WITH BINDER.

BOND BREAKER:

SPREAD BINDER OVER SURFACE AREA WHERE THE METAL BRIDGING PLATE WILL BE PLACED. CENTER THE BRIDGING PLATE OVER THE EXISTING JOINT AND BED INTO THE HOT BINDER. BUTT JOINT THE BRIDGING PLATES TO ACCOMODATE THE ENTIRE JOINT LENGTH. SPIKE HOLES WILL BE DRILLED AT 1 FOOT INTERVALS ALONG THE LONGITUDINAL CENTERLINE OF THE PLATES. SECURE BRIDGING PLATE WITH NAILS OR SPIKES. SEAL BUTT JOINTS WITH HOT BINDER AND ALLOW BINDER TO SETUP BEFORE NEXT OPERATION. WHEN ALUMINUM BRIDGING PLATES ARE USED, ONLY THE BINDER IS REQUIRED TO SECURE THE INDIVIDUAL PLATES.

BINDER COAT:

SEAL ALL PREPARED, EXPOSED SURFACES OF THE JOINT WITH BINDER. POUR THE HOT BINDER OVER THE FLOOR AREA OF THE JOINT AND SPREAD TO COAT ALL EXPOSED SURFACES. THE BINDER WILL BE A MINIMUM OF 1/32" THICK ON THE BOTTOM OF THE JOINT CAVITY, WITH POOLS OF GREATER THICKNESS WHERE SURFACE IRREGULARITIES EXIST. THE BINDER APPLICATION TEMPERATURE WILL BE BETWEEN 350 AND 390 DEGREES F. THE BINDER WILL NOT BE ALLOWED TO BE HEATED ABOVE 410 DEGREES F. NOR ALLOWED TO EXCEED 390 DEGREES F. FOR MORE THAN 1 HOUR. A DOUBLE JACKETED OIL MELTER WILL BE USED TO HEAT THE BINDER. THE MELTER WILL BE EQUIPPED WITH A CONTINUOUS AGITATION SYSTEM, TEMPERATURE CONTROLS, AND A CALIBRATED THERMOMETER. ALSO A SYSTEM FOR ACCURATELY MEASURING THE WEIGHTS OF THE BINDER AND THE AGGREGATE WILL BE REQUIRED.

BUILD-UP OF JOINT LAYERS:

AGGREGATE PREPARATION:

HEAT THE AGGREGATE TO A TEMPERATURE OF 275 TO 325 DEGREES F., WITH A SUITABLE ROTATING DRUM WITH ATTACHED HEAT SOURCE OR A HOT COMPRESSED AIR LANCE, TO REMOVE DUST AND MOISTURE.

AGGREGATE PROPORTION AND LAYER THICKNESS:

MIX THE AGGREGATE WITH THE BINDER SUCH THAT THE MINIMUM AGGREGATE CONTENT BY WEIGHT WILL BE 68%. THE HEATED AGGREGATE AND BINDER WILL BE COMBINED IN LAYERS, UNLESS PATENTED INSTALLATION REQUIRES DIFFERENTLY, NOT LESS THAN 3/4 OF AN INCH NOR EXCEEDING 2-1/2 INCHES. THE THICKNESS OF EACH LAYER CAN BE VARIED WITHIN THESE LIMITS, TO ACHIEVE THE REQUIRED JOINT THICKNESS (MIN. 2 INCHES). THE OBJECTIVE IS TO COAT EACH STONE AND FILL THE VOIDS WHILE AVOIDING AN EXCESS OF BINDER. THIS WILL ACHIEVE THE MAXIMUM CONTENT OF STONE CONSISTENT WITH ALL STONES BEING COATED WITH BINDER. RAKE THE MIXTURE TO MIX AND LEVEL.

THE TOP LAYER THICKNESS WILL VARY BETWEEN 1/2 INCH AND ONE (1) INCH. IN PREPARING THE TOP LAYER, THE RATIO OF AGGREGATE TO BINDER WILL BE APPROXIMATELY 6:1 BY WEIGHT. OVERFILL THE TOP LAYER AND COMPACT TO THE LEVEL OF THE ADJACENT SURFACES USING A ROLLER OR VIBRATORY PLATE COMPACTOR. IMMEDIATELY AFTER COMPLETION OF THE COMPACTION, POUR SUFFICIENT BINDER OVER THE JOINT TO FILL THE SURFACE VOIDS AND COAT THE SURFACE STONE. DUST THE FINISHED JOINT WITH A FINE, DRY AGGREGATE TO PREVENT TACKINESS.

MAINTENANCE OF TRAFFIC:

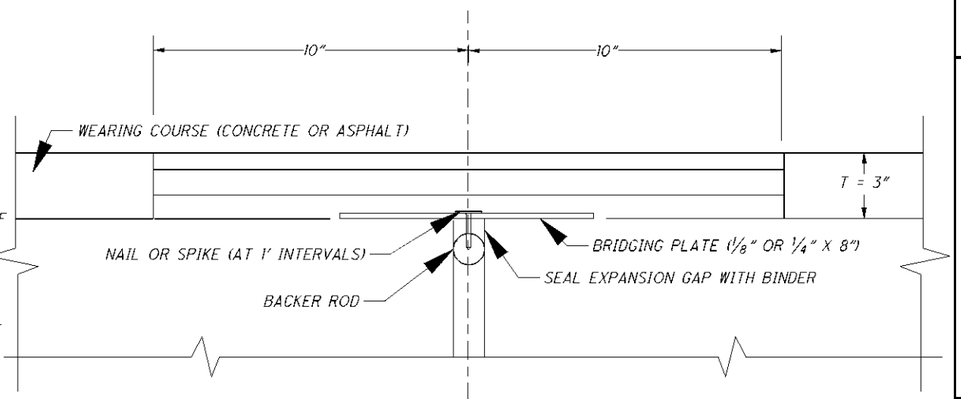
IF NECESSARY TO FACILITATE TRAFFIC MAINTENANCE, THE JOINT WILL BE INSTALLED IN TWO (2) HALF-WIDTH PHASES. DURING PHASE 1 APPROXIMATELY HALF OF THE TOTAL JOINT WILL BE INSTALLED. DURING PHASE 2, A MINIMUM OF TWO (2) INCHES OF THE PHASE 1 JOINT WILL BE REMOVED, AT OR NEAR THE CENTERLINE, WITH THE REMAINDER OF THE JOINT INSTALLED. IN ALL CASES, OPERATIONS WILL BE SCHEDULED SO THAT ALL LANES CAN BE OPEN TO TRAFFIC DURING ALL NON-WORKING HOURS.

TESTING:

CERTIFICATION WILL BE SUPPLIED FOR EACH PROJECT SHOWING BINDER COMPLIANCE WITH REQUIRED PROPERTIES. A ONE QUART SAMPLE OF BINDER WILL BE RETRIEVED FROM EACH BRIDGE FOR FURTHER TESTING BY THE O.D.O.T OFFICE OF MATERIALS MANAGEMENT.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT:

THE DEPARTMENT WILL MEASURE THE JOINT BY THE NUMBER OF FEET AND WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS: ITEM SPECIAL, FEET, POLYMER MODIFIED ASPHALT EXPANSION JONT SYSTEM.



TYPICAL PRESTRESSED BOX BEAM OR CONCRETE SLAB JOINT

OFFICE OF STRUCTURAL ENGINEERING

DESIGNED | CHECKED | REVIEWED

PLAN INSERT SHEET

POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
BRIDGE NO.: TRU-422-1559

TRU-422-(15.59)
(15.76)(16.02)

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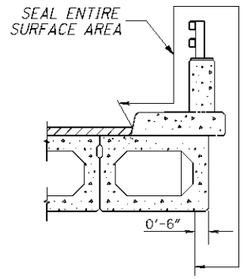
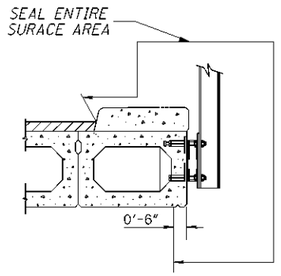
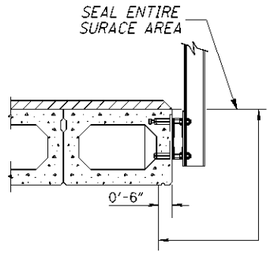
20



DETAIL D
PRESTRESSED BOX BEAM DECK WITH
CURB, SIDEWALK, AND PARAPET



DETAIL G
PRESTRESSED BOX BEAM DECK WITH
SIDEWALK AND OVER THE SIDE DRAINAGE



DETAIL H
PRESTRESSED BOX BEAM DECK
WITH OVER THE SIDE DRAINAGE

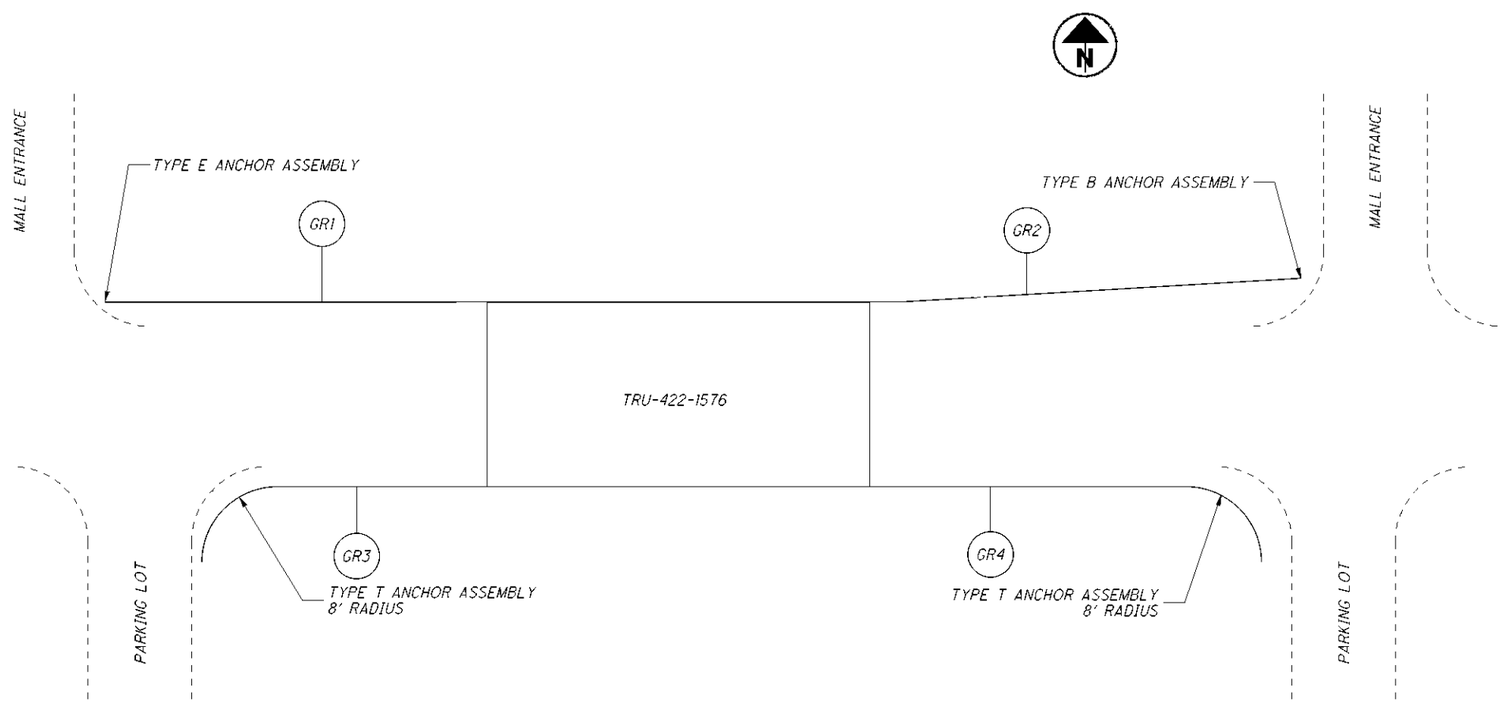
BRIDGE NO.	STRUCTURE TYPE	PROPOSED SEALING	FEDERAL COLOR NUMBER	ESTIMATED QUANTITIES ABUT SQ YD	PIER SQ YD	SUPER SQ YD	GEN SQ YD	TOTAL SQ YD
TRU-422-1559	3 SPAN PRESTRESSED BOX BEAMS	SEAL PARAPETS PER DETAIL D SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT WINGWALLS	PER CMS	74		315		389
TRU-422-1576	SIMPLE SPAN CONCRETE SLAB	SEAL DECK EDGES PER DETAIL G & H SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT WINGWALLS	PER CMS	75		14		89

NOTES:
- EPOXY-URETHANE SEALER SHALL BE USED UNLESS SHOWN OTHERWISE
- DETAILS E, F, G AND H ALSO APPLY TO CONCRETE SLAB BRIDGES

SEALING OF BEAM SEATS

SEALING OF BEAM SEATS: IF THE BEAMS SEATS ARE SEALED WITH AN EPOXY OR NON-EPOXY SEALER PRIOR TO SETTING THE BEARINGS, DO NOT APPLY SEALER TO THE CONCRETE SURFACES UNDER THE PROPOSED BEARING LOCATIONS. IF THESE LOCATIONS ARE SEALED, REMOVE THE SEALER TO THE SATISFACTION OF THE ENGINEER PRIOR TO SETTING THE BEARINGS. THE DEPARTMENT WILL NOT PAY FOR THIS REMOVAL.

REF NO.	SLM		202 GUARDRAIL REMOVED FT	606 GUARDRAIL, TYPE 5 FT	606 ANCHOR ASSEMBLY, TYPE B-98 EACH	606 ANCHOR ASSEMBLY, TYPE E-98 EACH	606 ANCHOR ASSEMBLY, TYPE T EACH	606 BRIDGE TERMINAL ASSEMBLY, TYPE 4 EACH
GR1	15.76	LT	37.5	25		1		1
GR2	15.76	LT	50	25	1			1
GR3	15.76	RT	37.5	25			1	1
GR4	15.76	RT		25			1	1
TOTALS CARRIED TO ESTIMATED QTY			125	100	1	1	2	4



DESIGN AGENCY
ODOT --- DISTRICT 4
PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
LMS	LMS	TJP	10-15-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
		7807082 & 7807120	

CONCRETE SEALING DETAILS AND GUARDRAIL DETAILS
BRIDGE NO.: TRU-422-1559 & TRU-422-1576
US422 OVER MOSQUITO CREEK & US422 OVER MOSQUITO CREEK

TRU-422-(15.59)
(15.76)(16.02)
PID No. 84566

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