

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

**ATB-322/7-
8.11/18.10**
VILLAGE OF ORWELL,
ORWELL, COLEBROOK, WAYNE
& PIERPONT TOWNSHIPS
ASHTABULA COUNTY

PROJECT DESCRIPTION

IMPROVEMENT OF 9.36 MILES OF US 322 BY PLANING THE SURFACE AND PLACING ASPHALT LAYER. IN ADDITION TO MISCELLANEOUS BRIDGE WORK TO THREE STRUCTURES ON US 322 AND STRUCTURE ATB-7-1810.

PROJECT EARTH DISTURBED AREA: 0.00 ACRES
ESTIMATED CONTRACTOR EDA: N/A (MAINTENANCE PROJECT)
NOTICE OF INTENT EDA: N/A (MAINTENANCE PROJECT)


2013 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 APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEET 7, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

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 UNDERGROUND PROTECTION SERVICE CALL: 1-800-925-0988	

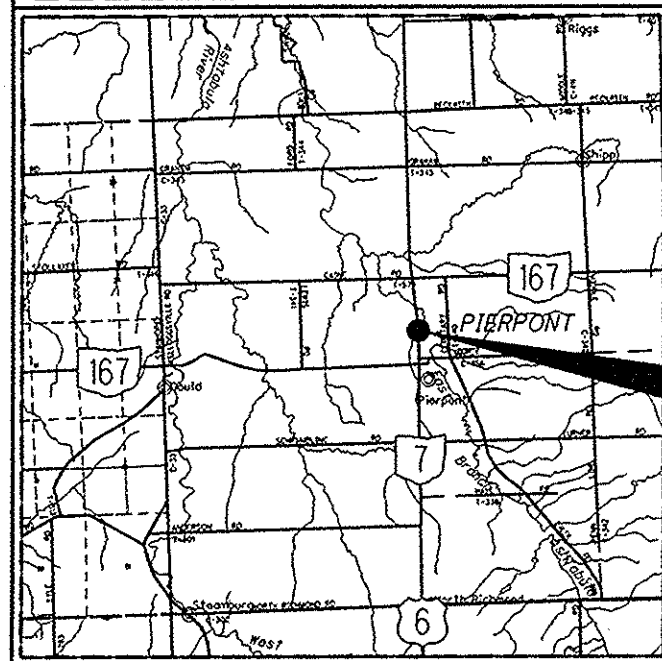
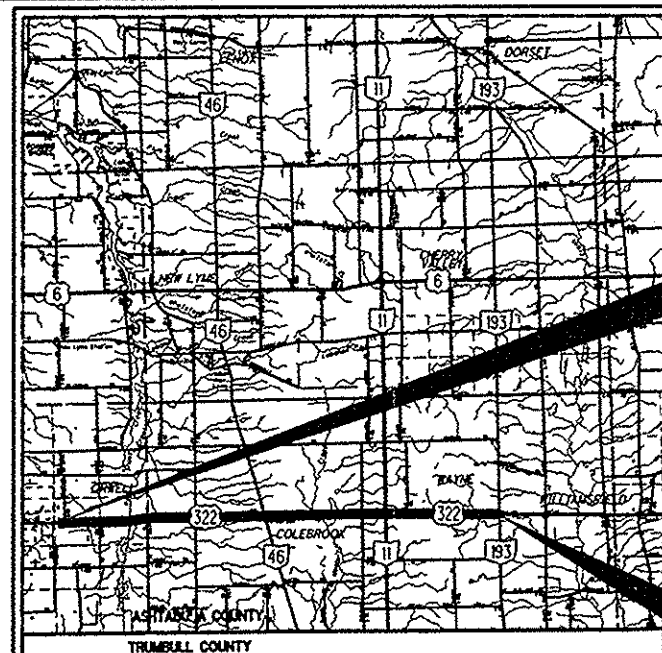
PLAN PREPARED BY:
ODOT --- DISTRICT 4
2088 S. ARLINGTON RD
AKRON OH, 44306

APPROVED: 
DATE: 4-10-13 DISTRICT DEPUTY DIRECTOR

APPROVED: 
DATE: 4-30-13 DIRECTOR, DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS:

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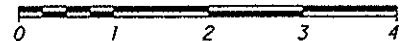


LOCATION MAPS

ATB-322 LATITUDE: N41°32'09" LONGITUDE: W80°45'34"

ATB-7 LATITUDE: N41°45'37" LONGITUDE: W80°34'15"

SCALE IN MILES



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

DESIGN DESIGNATION

CURRENT ADT (2013) ----- 3040
TRUCKS (24 HOUR B&C) ----- 300

DESIGN FUNCTIONAL CLASSIFICATION:
RURAL MINOR ARTERIAL
NHS PROJECT ----- NO

DESIGN EXCEPTIONS NONE

ENGINEERS SEAL:

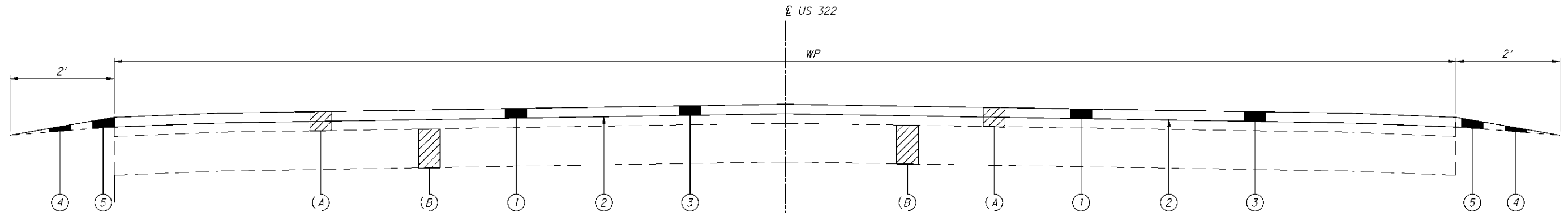


SIGNED: 
DATE: 4/16/2013

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	4/20/12	AS-1-81	1/18/13	800-2013	4/19/13
BP-4.1	7/16/04			832	5/5/09
BP-5.1	7/28/00	MT-95.31	7/20/12	843	4/18/03
BP-7.1	10/15/10	MT-95.32	7/20/12	848	12/31/12
DM-4.3	1/18/13	MT-97.10	7/20/12		
DM-4.4	7/20/12	MT-97.12	7/20/12		
		MT-99.20	7/20/12		
MGS-1.1	1/18/13	MT-101.60	7/20/12		
MGS-2.1	1/18/13	MT-101.90	10/19/12		
MGS-2.3	1/18/13	MT-105.10	7/20/12		
MGS-3.1	1/18/13				
		TC-65.10	4/20/12		
MGS-4.2	1/18/13	TC-65.11	4/20/12		
MGS-4.3	1/18/13	TC-71.10	10/19/12		
MGS-5.2	1/18/13	TC-73.10	4/20/12		
RM-1.1	1/18/13				

ATB - US-322/7-8.11/18.10
130454 PID - 84606 Contract Proposal Available @ www.
Dist 4 7/18/2013 contracts.dot.state.oh.us/home

FEDERAL PROJECT NO. E100(944)
PID NO. 84606
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
ATB-322/7-8.11/18.10
21



1

US 322			
SLM		WP (FT)	DISTANCE (MI)
FROM	TO		
8.11	9.65	25	1.54
9.68	12.49	25	2.81
12.49	14.95	30	2.46
14.95	14.98	37	0.03
14.98	15.02	44	0.04
15.06	15.12	37	0.06
15.12	15.16	44	0.04
15.16	15.19	37	0.03
15.19	17.47	30	2.28

LEGEND

- ① ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE (T = 1/2")
- ② ITEM 407, TACK COAT @ 0.15 GAL/SY
- ③ ITEM 446, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M AS PER PLAN (T = 1/2")
- ④ ITEM 617, COMPACTED AGGREGATE AS PER PLAN
- ⑤ SAFETY EDGE, SEE SHEET 3 FOR DETAILS
- (A) EXISTING ASPHALT SURFACE
- (B) EXISTING ASPHALT BASE

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SAFETY EDGE (ASPHALT CONCRETE)

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

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

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

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

ADVANT-EDGE PAVING EQUIPMENT LLC
P.O. BOX 9163
NISKAYUNA, NY 12309-0163
518-280-6090
WWW.ADVANTAEDGEPAVING.COM

CARLSON SAFETY EDGE END GATE
18425 50TH AVENUE EAST
TACOMA, WA 98446
253-875-8000

TROXLER ELECTRONIC LABORATORIES, INC.
3008 E. CORNWALLIS RD.
RESEARCH TRIANGLE PARK, NC 27709
1-877-TROXLER
WWW.TROXLERLABS.COM

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

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

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

PREPARE THE SHOULDER FOR PAVING A CONSISTENT SAFETY EDGE IN BOTH THICKNESS AND WIDTH.

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

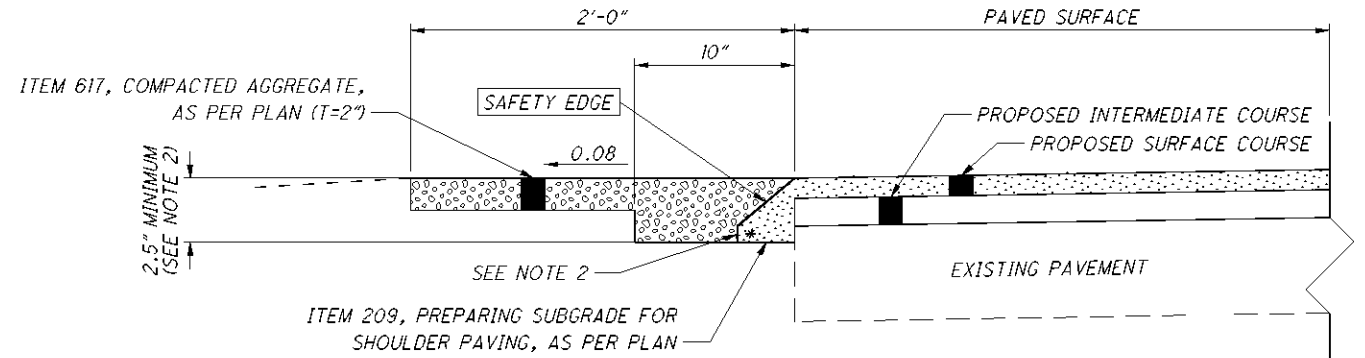
NOTES:

1.) SAFETY EDGES ARE REQUIRED AT THE OUTSIDE EDGES OF THE PAVED ROADWAY (EDGE OF TRAVEL LANE OR EDGE OF PAVED SHOULDER).

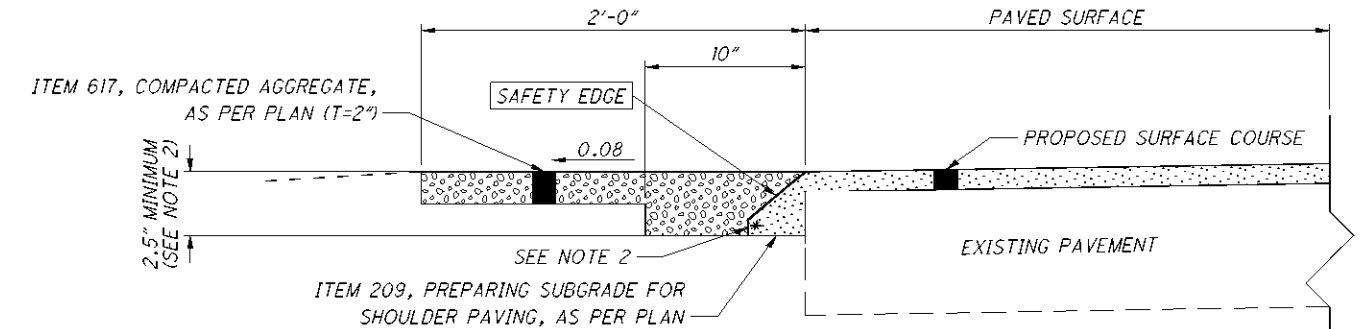
2.) CONSTRUCT THE SAFETY EDGE THE FULL ASPHALT CONCRETE OVERLAY THICKNESS OR 2.5" WHICHEVER IS GREATER, NOT TO EXCEED THE MAXIMUM SAFETY EDGE THICKNESS OF 6". CONSTRUCT A NEAR-VERTICAL FACE BELOW THE SAFETY EDGE FOR THICKNESS GREATER THAN 6".

3.) BLADE AND SHAPE EXISTING SHOULDER MATERIAL TO FORM A UNIFORM SURFACE UNDER THE SAFETY EDGE PRIOR TO PLACEMENT OF THE ASPHALT CONCRETE OVERLAY.

* 40° MAX



SAFETY EDGE DETAIL FOR 2 COURSE OVERLAY



SAFETY EDGE DETAIL FOR 1 COURSE OVERLAY

ESTIMATED QUANTITIES

ROUTE	SAFETY EDGE THICKNESS (IN.)	S.L.M TO S.L.M.		SIDE	209	446	
					PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M, AS PER PLAN	
					STATION	CU YD	
322	2.5	8.11	TO	9.65	L/R	162.6	15.66
322	2.5	9.68	TO	15.02	L/R	563.9	54.30
322	2.5	15.06	TO	17.47	L/R	254.5	24.51
TOTALS CARRIED TO GENERAL SUMMARY						982	95

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:

CEI The Illuminating Company
ATTN: Mark Robinson
6896 Miller Road
Brecksville, Ohio 44141
440-717-6845
440-546-8773 Fax

CenturyLink
ATTN: Rod Harris
3801 Elm Road
Warren, OH 44502
330-841-1404
330-372-6970 Fax

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

Fair Point Communications
ATTN: David Hendershott
70 South Maple St.
Orwell, OH 44076
800-400-5568
440-437-6117
440-437-1000 Fax

Ohio Edison
ATTN: Bill Speece
730 South Avenue
Youngstown, OH 44502
330-740-7635
330-740-7655 Fax

Orwell Natural Gas
ATTN: Chris Domankos
8500 Station St. Suite 100
Mentor, Ohio 44060
440-205-4600
440-205-0991 Fax

Time Warner Cable
ATTN: Dave DeFore
2904 State Road
AshTabula, OH 44004
216-575-8016 ext. 216-555-5739
866-679-2631 ext. 5739

Utility Pipeline Ltd.
ATTN: Robert Wentzel
5900 Mayfair Road, NW
North Canton, OH 44720
330-498-9130
330-498-9137 Fax

Windstream
ATTN: Jeff Gulyas
100 Owen Brown Road
Hudson, OH 44236
330-650-8404
330-656-2929 Fax

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.

WORK LIMITS

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

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
322	8.11 TO 17.47	11'

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.

FIELD DRIVES

THIS ITEM OF WORK WILL CONSIST OF PLACING ITEM 304, AGGREGATE BASE FOR ALL FILED DRIVES. FIELD DRIVES ARE TO BE PLACED AT A DISTANCE OF 10 FT FROM THE EDGE OF PAVED SHOULDERS UNLESS OTHERWISE DIRECTED BY THE ENGINEER. FIELD DRIVES WILL BE PLACED AFTER THE COMPLETION OF THE SURFACE COURSE. AVERAGE THICKNESS WILL BE 2 IN. ALL GRADING TOOLS, EQUIPMENT, MATERIAL, AND INCIDENTALS REQUIRED TO LAYOUT AND CONSTRUCT THE FIELD DRIVES WILL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 304, AGGREGATE BASE. AN ESTIMATED QUANTITY OF 20 CU. YD. HAS BEEN CARRIED TO THE GENERAL SUMMARY.

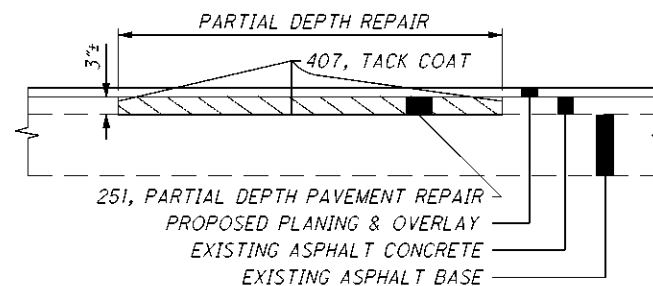
ITEM 446 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M, AS PER PLAN

703.05 DO NOT USE ANY FINE OR COARSE AGGREGATE WITH A 'SR' OR 'SRH' DESIGNATION ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

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 1 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:

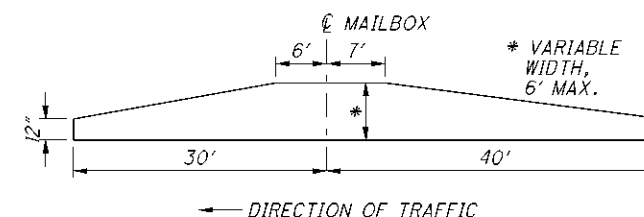
251, PARTIAL DEPTH PAVEMENT REPAIR, 4000 SQ. YD.



PAVED MAILBOX APPROACHES

ALL EXISTING MAIL BOX APPROACHES WILL BE PAVED WITH ASPHALT CONCRETE AS PER TYPICAL SHOWN OR AS NEAR AS PRACTICAL. AGGREGATE APPROACHES SHALL HAVE A 2 IN. MIN. THICKNESS; IMPROVED APPROACHES SHALL HAVE A 2 IN. MIN. THICKNESS. THE CONTRACTOR SHALL HAVE THE OPTION OF PAVING THE MAILBOX APPROACHES WITH EITHER THE PAVING OF THE DRIVEWAYS OR THE PAVING OF THE MAINLINE AND SHOULDERS. PAYMENT SHALL BE AS FOLLOWS:

THE CONTRACTOR SHOULD PAVE THE MAILBOX APPROACHES WITH THE MAINLINE AND SHOULDERS. ALL GRADING, TACK, TOOLS, EQUIPMENT, MATERIAL AND INCIDENTALS REQUIRED TO LAYOUT AND CONSTRUCT THE MAILBOX APPROACHES SHALL BE INCLUDED IN THE UNIT BID FOR ITEM, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M, AS PER PLAN .



ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN

IN LOW SHOULDER AREAS EXCEEDING 1", AND ADJACENT TO THE SAFETY EDGE, 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

ITEM 623 - MONUMENT ASSEMBLY, AS PER PLAN

ADJUSTABLE MONUMENT ASSEMBLIES AS SHOWN ON STANDARD CONSTRUCTION DRAWING RM-1.1 WILL BE PLACED BY THE CONTRACTOR AT THE TIME OF CONSTRUCTION.

THE CONTRACTOR WILL BE PROVIDED A LOCATION LIST OF EXISTING MONUMENTATION WHICH IS TO BE REPLACED WITH NEW ADJUSTABLE MONUMENT BOX ASSEMBLIES AT THE PRE-CONSTRUCTION MEETING. THIS LIST MAY INCLUDE BOTH EXPOSED AND BURIED MONUMENTATION AND MAY ALSO INCLUDE SOME TIES TO AID IN RECOVERY.

PAYMENT FOR THE REMOVAL OF ANY EXISTING MONUMENT ASSEMBLIES SHALL ALSO BE INCLUDED IN THIS ITEM.

QUANTITY THAT WILL BE CARRIED TO THE GENERAL SUMMARY: 623, MONUMENT ASSEMBLY, AS PER PLAN, 1 EACH

CALCULATED
CNC
CHECKED
MAC

GENERAL NOTES

ATB-322/7-
8.11/18.10

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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 BIDIRECTIONAL LANE SHALL BE MAINTAINED ON THE EXISTING AND COMPLETED PAVEMENT DURING CONSTRUCTION OF THE WORK.
2. THE CONTRACTOR SHALL INFORM THE DISTRICT OFFICE (330) 786-2208, EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK.
3. 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.
4. TRUCK MOUNTED ATTENUATORS [TMA'S] SHALL BE USED AS SHOWN IN THE STANDARD CONSTRUCTION DRAWINGS.
5. 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.
6. 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 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.
7. 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.
8. 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.

9. 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-II [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 CENTER LINE, CLASS II, 9.50 MILE
- 614, WORK ZONE STOP LINE, CLASS I, 156 FT
- 614, WORK ZONE CHANNELIZING LINE, CLASS I, 192 FT
- 614, WORK ZONE MARKING SIGN, 24 EACH

PHASE II- SURFACE COURSE

- 614, WORK ZONE CENTER LINE, CLASS III, 642 PAINT, 9.50 MILE
- 614, WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT, 192 FT
- 614, WORK ZONE STOP LINE, CLASS III, 642 PAINT, 156 FT

TO BE USED AS DIRECTED BY THE ENGINEER

- 614, WORK ZONE EDGE LINE, CLASS III, 18.72 MILE

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.

COOPERATION BETWEEN CONTRACTORS- DETOUR FOR ATB-7-1810

THE CONTRACTOR SHALL BE ADVISED THAT THERE IS A CURRENT PROJECT UNDER CONSTRUCTION, ATB-193-23.16, PID 82932, ODOT PROJECT 657(2012). AS A PART OF ODOT PROJECT 657(2012) TRAFFIC WILL BE DETOURED TO SR 7. ODOT PROJECT 657(2012) SHALL TAKE PRECEDENCE OVER THE CLOSURE OF ATB-7-1810. THE CONTRACTOR SHALL SCHEDULE HIS WORK AS TO CAUSE NO DELAY OR CONFLICT WITH ODOT PROJECT 657(2012). ANY CONFLICT BETWEEN CONTRACTORS INVOLVING WORK SCHEDULES OR COOPERATION SHALL BE RESOLVED BY THE ENGINEER. COMPENSATION FOR THIS COORDINATION SHALL BE INCIDENTAL TO VARIOUS PAY ITEMS WITHIN THIS CONTRACT.

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 \$3000 FOR EACH HOUR THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

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 \$1500 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.

ADVANCED NOTICE TO PAVE

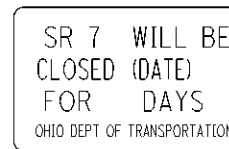
THE CONTRACTOR SHALL SUBMIT FOR APPROVAL TO THE DISTRICT CONSTRUCTION ENGINEER A DETAILED SCHEDULE 15 DAYS PRIOR TO THE PLACEMENT OF THE OVERLAY COURSES, ON HOW THEY PROPOSE TO PROSECUTE THE PAVING OPERATIONS. THE DETAILS SHALL SHOW THE ORDER OF PERFORMANCE OF EACH STAGE (START TO FINISH) OF THE WORK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

DETOUR NOTIFICATION [ODOT]

THE CONTRACTOR SHALL ADVISE THE ODOT DISTRICT OFFICE (330-786-3148) EIGHTEEN (18) DAYS IN ADVANCE OF WHEN THE DETOUR ROUTE SHOULD BE IN EFFECT. ALL WORK ZONE DEVICES REQUIRED SHALL BE FURNISHED, ERECTED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. PAYMENT FOR ALL WORK ASSOCIATED WITH THE DETOUR SHALL BE INCLUDED UNDER THE LUMP SUM BID FOR ITEM 614, DETOUR SIGNING.

ITEM 614, MAINTAINING TRAFFIC (NOTICE OF CLOSURE SIGN)

NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD OR RAMP CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.



W20-H14-60

ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR)

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 7 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 7. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$2000 FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

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SHEET NUMBER											PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
3	4	5	6	9	10	11	12	13			01/STR/ PV		EXT	TOTAL			
																ROADWAY	
		2			363						LUMP	201	11000	LUMP		CLEARING AND GRUBBING	
											2	202	23000	2	SQ YD	PAVEMENT REMOVED	
											363	202	23500	363	SQ YD	WEARING COURSE REMOVED	
						104					104	202	32000	104	FT	CURB REMOVED	
						5519					5519	202	38000	5519	FT	GUARDRAIL REMOVED	
982											982	209	72001	982	STATION	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	3
						4332					4332	606	15100	4332	FT	GUARDRAIL, TYPE MGS WITH LONG POSTS	
						400					400	606	17350	400	FT	GUARDRAIL, TYPE MSG, 25' LONG - SPAN	
						1					1	606	26050	1	EACH	ANCHOR ASSEMBLY, MGS TYPE B	
						17					17	606	26150	17	EACH	ANCHOR ASSEMBLY, MGS TYPE E	
						4					4	606	27820	4	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
						4					4	606	35050	4	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
						8					8	606	35140	8	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4	
		8									8	608	53020	8	SQ FT	DETECTABLE WARNING	
	1										1	623	39501	1	EACH	MONUMENT BOX ADJUSTED TO GRADE, AS PER PLAN	4
		1									1	SPEC	69050000	1	EACH	MAILBOX SUPPORT	5
											1000	832	30000	1000	EACH	EROSION CONTROL	
																PAVEMENT	
	4000										4000	251	01000	4000	SQ YD	PARTIAL DEPTH PAVEMENT REPAIR	
				151894							151894	254	01000	151894	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE	
	20										20	304	20000	20	CU YD	AGGREGATE BASE	
				22785	55						22840	407	10000	22840	GALLON	TACK COAT	
95				6329	158						6582	446	47029	6582	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M, AS PER PLAN	4
						72					72	609	24510	72	FT	CURB, TYPE 4-C	
				1212							1212	617	10101	1212	CU YD	COMPACTED AGGREGATE, AS PER PLAN	4
																TRAFFIC CONTROL	
							618				618	621	10000	618	EACH	RPM, LOW PROFILE, YELLOW/YELLOW	
							464				464	621	54000	464	EACH	RAISED PAVEMENT MARKER REMOVED	
						100					100	626	00100	100	EACH	BARRIER REFLECTOR	
							18.72				18.72	644	00100	18.72	MILE	EDGE LINE, 4"	
							9.50				9.50	644	00300	9.5	MILE	CENTER LINE	
							192				192.00	644	00400	192	FT	CHANNELIZING LINE, 8"	
							156				156.00	644	00500	156	FT	STOP LINE	
							260				260.00	644	00700	260	FT	TRANSVERSE/DIAGONAL LINE	
							114				114.00	644	00900	114	SQ FT	ISLAND MARKING	
							4				4.00	644	01300	4	EACH	LANE ARROW	
																STRUCTURES	
																FOR STRUCTURE ATB-322-0966 ESTIMATED QUANTITIES	18
																FOR STRUCTURE ATB-322-1356 ESTIMATED QUANTITIES	18
																FOR STRUCTURE ATB-322-1399 ESTIMATED QUANTITIES	18
																FOR STRUCTURE ATB-322-11502 ESTIMATED QUANTITIES	18
																FOR STRUCTURE ATB-7-1810 ESTIMATED QUANTITIES	18
																MAINTENANCE OF TRAFFIC	
			LUMP								LUMP	614	12420	LUMP		DETOUR SIGNING	
			24								24	614	12460	24	EACH	WORK ZONE MARKING SIGN	
			20								20	614	13000	20	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
			9.5								9.5	614	21400	9.5	MILE	WORK ZONE CENTER LINE, CLASS II	
			9.5								9.5	614	21550	9.5	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
				18.72							18.72	614	22350	18.72	MILE	WORK ZONE EDGE LINE, CLASS III, 642 PAINT	
				192							192	614	23000	192	FT	WORK ZONE CHANNELIZING LINE, CLASS I	
				192							192	614	23680	192	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT	
				156							156	614	26000	156	FT	WORK ZONE STOP LINE, CLASS I	
				156							156	614	26610	156	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
											614	11000	LUMP		MAINTAINING TRAFFIC		
											2	619	16010	2	MONTH	FIELD OFFICE, TYPE B	
											623	10000	LUMP		CONSTRUCTION LAYOUT STAKES AND SURVEYING		
											624	10000	LUMP		MOBILIZATION		

CALCULATED CNC CHECKED MAC
GENERAL SUMMARY
ATB-322/7-8.11/18.10
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ROUTE	SIDE	SLM TO SLM		202	202		606	606	606	606	606	606	606	609	628	COMMENTS	
				CURB REMOVED FT	GUARDRAIL REMOVED FT		GUARDRAIL, TYPE MGS WITH LONG POSTS FT	GUARDRAIL, TYPE MSG, 25' LONG - SPAN FT	ANCHOR ASSEMBLY, MGS TYPE B EACH	ANCHOR ASSEMBLY, MGS TYPE E EACH	ANCHOR ASSEMBLY, MGS TYPE T EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4 EACH	CURB, TYPE 4-C FT	BARRIER REFLECTOR EACH		
322	RT	9.63	TO	9.66												SEE PLAN INSERT SHEET FOR BRIDGE TERMINAL ASSEMBLY, TYPE 4	
322	RT	9.68	TO	9.69		125										SEE PLAN INSERT SHEET FOR BRIDGE TERMINAL ASSEMBLY, TYPE 4	
322	LT	9.63	TO	9.66		125										SEE PLAN INSERT SHEET FOR BRIDGE TERMINAL ASSEMBLY, TYPE 4	
322	LT	9.68	TO	9.70		125										SEE PLAN INSERT SHEET FOR BRIDGE TERMINAL ASSEMBLY, TYPE 4	
322	RT	13.53	TO	13.56		162.5										SEE PLAN INSERT SHEET FOR BRIDGE TERMINAL ASSEMBLY, TYPE 4	
322	RT	13.56	TO	13.64		112.5										SEE PLAN INSERT SHEET FOR BRIDGE TERMINAL ASSEMBLY, TYPE 4	
322	LT	13.53	TO	13.56		162.5										SEE PLAN INSERT SHEET FOR BRIDGE TERMINAL ASSEMBLY, TYPE 4	
322	LT	13.56	TO	13.64		87.5										SEE PLAN INSERT SHEET FOR BRIDGE TERMINAL ASSEMBLY, TYPE 4	
322	RT	13.96	TO	14.03		337.5		100									
322	LT	13.96	TO	14.03		387.5		225		100							
322	RT	14.82	TO	14.94		675		625								REPLACE TO SR 11 SOUTH ON RAMP - CONNECT TO EXISTING TYPE 5	
322	RT	14.95	TO	15.01	26	300		275					1	18	5	REPLACE FROM EXISTING TYPE 5 AT SR 11 SOUTH ON RAMP TO STRUCTURE	
322	RT	15.06	TO	15.11	26	350		325					1	18	6	FROM STRUCTURE TO SR 11 N OFF RAMP CONNECT TO EXISTING TYPE 5	
322	RT	15.12	TO	15.18		287.5		237.5							5	CONNECT TO EXISTING FROM SR 11 N OFF RAMP TO USR 322	
322	LT	14.82	TO	14.86		331.25		268.75							6	REPLACE RUN AT USR 322	
322	LT	14.87	TO	14.94		450		437.5							7	FROM DRIVEWAY TO SR 11 S ON RAMP CONNECT TO EXISTING TYPE 5	
322	LT	14.95	TO	15.01	26	350		325						1	18	6	FROM SR 11 S OFF RAMP CONNECT TO EXISTING TYPE 5 TO STRUCTURE
322	LT	15.06	TO	15.11	26	287.5		262.5						1	18	5	FROM STRUCTURE TO SR 11 N ON RAMP CONNECT TO EXISTING TYPE 5
322	LT	15.12	TO	15.18		300		250							5	FROM SR 11 N ON RAMP CONNECT TO EXISTING TYPE 5 TO USR 322	
322	RT	16.96	TO	17.01		250		175		100					4		
322	LT	16.96	TO	17.01		250		175		100					4		
TOTALS CARRIED TO GENERAL SUMMARY					104	5519	0	4332	400	1	17	4	4	8	72	100	0

CALCULATED	CNC	CHECKED	AAG
GUARDRAIL SUB SUMMARY			
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11 21			

CENTER LINE

GENERAL SPEC: 640
MATERIAL TYPE: 644

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	TOTAL MILES	EQUIVALENT SOLID LINE		COMMENTS
ATB	322	8.11	EAST CORP. ORWELL	17.47	JCT. SR 193	9.50	5.71		
TOTAL						9.50	5.71		

LANE LINE

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	TOTAL MILES	4" LANE LINE		COMMENTS
							DASHED	SOLID	
TOTAL									

EDGE LINE

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	WHITE EDGE LINE			YELLOW EDGE LINE			COMMENTS
						TOTAL	HIGHWAY	RAMP	TOTAL	HIGHWAY	RAMP	
ATB	322	8.11	EAST CORP. ORWELL	17.47	JCT. SR 193	18.72	18.72					
TOTAL						18.72	18.72					

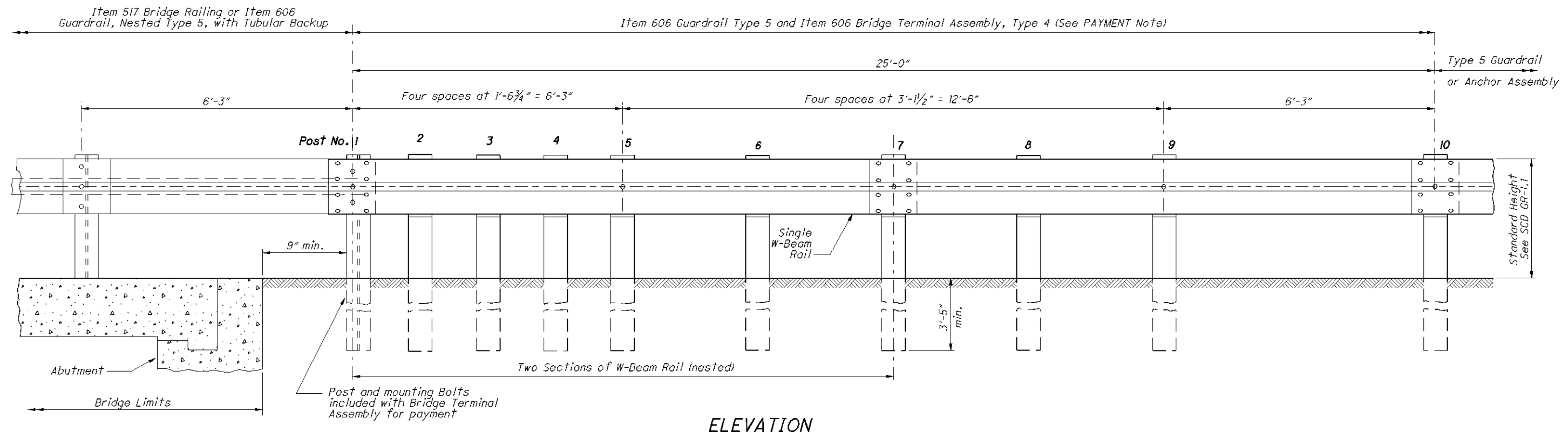
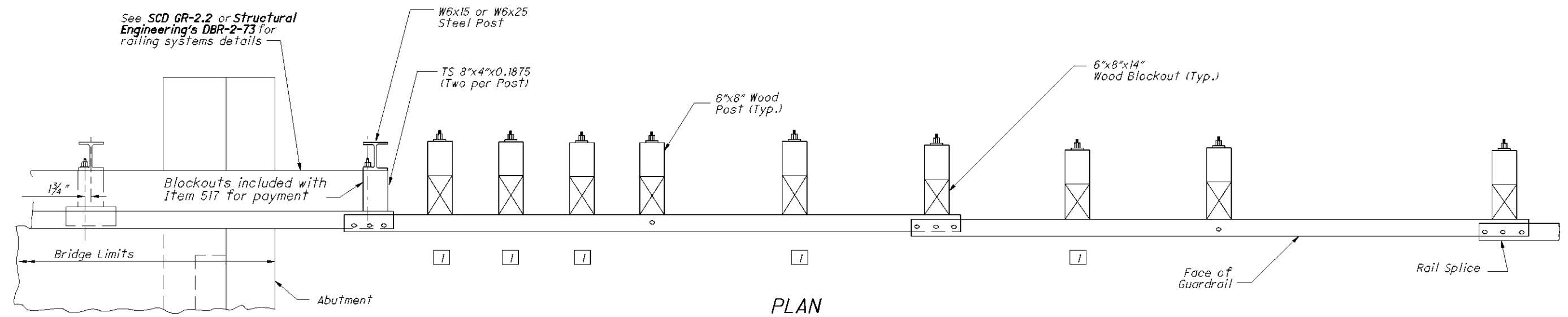
AUXILIARY

CTY	ROUTE LOCATION	TRUE LOG	CHANNEL LINE	STOP LINE	TRANSVERSE DIAGONAL LINES		CROSS WALK LINES	WORD ON PVMT		LANE ARROWS				SYMBOL MARKINGS				ISLAND MARKING	DOTTED LINES	COMMENTS
					WHITE	YELLOW		ONLY		TURN LEFT	TURN RIGHT	THRU	COMB.	R x R	SCHOOL					
								72"	96"						72"	96"				
ATB	US 322 @ SR 46	12.480	FT	56														STOP LINES ON SR 46		
ATB	US 322 @ SR 11 SB RAMPS	14.940	92	50		130				2								57	STOP LINE ON RAMP	
ATB	US 322 @ SR 11 NB RAMPS	15.115	100	50		130				2								57	STOP LINE ON RAMP	
TOTAL			192	156		260			4									114		

PAVEMENT MARKING SUB SUMMARY

ATB-322/7-8.11/18.10

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NOTES

GENERAL: For additional details, see SCD GR-1.1.

APPLICATION: The Type 4 Bridge Terminal Assembly shall connect Type 5 Guardrail runs to Type 5 Guardrail with Tubular Backup or To Deep Beam Bridge Guardrail (as shown on Structural Engineering SCD DBR-2-73).

DETAIL INFORMATION: The first post off the bridge shall be steel (W6x15 or W6x25). All holes in the off-structure end of the approach panel rail section spanning the abutment are slotted 3/4"x2 1/2". Tighten the bolts as specified for expansion joints in Item 606.05.

POSTS: Posts may be set in drilled holes or driven to grade. See SCD GR-1.1 for additional Post embedment details. Guardrail is not attached to certain posts (see LEGEND).

WOOD POSTS - Use square sawed pressure treated wood as specified in CMS 710.14 and fabricated with square ends. Bore bolt holes and trim the tops of posts, if required after the posts are set.

STEEL POSTS - are allowed as an alternate. Use W6x9 or W6x8.5 in lieu of the 6"x8" wood post. Use same post material through-out assembly.

BLOCKOUTS: Use wood blockouts only. Steel or plastic blockouts are not permitted. Notched wood blockouts are used with steel posts.

FLARED GUARDRAIL: Start Standard Guardrail Flares as shown on SCD GR-5.1 at or beyond Post No. 10; however, the flare may begin at Post No. 7.

PAYMENT: Item 606 - Bridge Terminal Assembly, Type 4, Each, includes the cost of extra components in excess of normal guardrail, such as additional posts and other hardware. The TS 8"x4" spacers and tubular backup rail extending to the first post off the bridge is included with Item 517 - Railing, or Item 606 - Guardrail, Nested Type 5 with Tubular Backup, for payment.

LEGEND

1 Guardrail is not attached to posts at Posts 2, 3, 4, 6, and 8. Blockout is fastened to post with standard Post Bolt.

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-81 DATED/REVISED 1/18/2013

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

843 DATED 4/18/03

848 DATED 12/31/12

DESIGN DATA

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996, GRADE 60, MINIMUM YIELD STRENGTH 60,000 PSI

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 - ATB-322-0966 (OVER ROCK CREEK)

- PATCH UNSOUND AREAS OF THE EXISTING CONCRETE WEARING SURFACE ON THE BRIDGE DECK AND APPROACH SLABS
- INSTALL NEW POLYMER MODIFIED EXPANSION JOINT
- SEAL REPAIRED WEARING SURFACE WITH SRS CONCRETE TREATMENT ON THE BRIDGE DECK AND APPROACH SLABS
- PATCH ALL UNSOUND AREAS OF THE CONCRETE SUBSTRUCTURE AND SEAL PATCHED AREAS WITH EPOXY-URETHANE
- REMOVE ALL SPALLED AREAS FROM THE BOTTOM OF THE BRIDGE DECK AND SEAL WITH EPOXY-URETHANE
- CLEARING AND GRUBBING 15' OF THE STRUCTURE TO REMOVE ALL VEGETATION
- PROVIDE NEW STRUCTURE IDENTIFICATION SIGNS

PROPOSED WORK - ATB-322-1356 (OVER MOSQUITO CREEK)

- SEE ROADWAY PLANS FOR PAVING DETAILS
- PATCH ALL UNSOUND AREAS OF THE CONCRETE SUBSTRUCTURE AND SEAL PATCHED AREAS WITH EPOXY-URETHANE
- REMOVE ALL SPALLED AREAS FROM THE BOTTOM OF THE BRIDGE DECK AND SEAL WITH EPOXY-URETHANE
- CLEARING AND GRUBBING 15' OF THE STRUCTURE TO REMOVE ALL VEGETATION
- PROVIDE NEW STRUCTURE IDENTIFICATION SIGNS

PROPOSED WORK - ATB-322-1399 (OVER BRANCH MOSQUITO CREEK)

- SEE ROADWAY PLANS FOR PAVING DETAILS
- PATCH ALL UNSOUND AREAS OF THE CONCRETE SUBSTRUCTURE AND SEAL PATCHED AREAS WITH EPOXY-URETHANE
- REMOVE ALL SPALLED AREAS FROM THE BOTTOM OF THE BRIDGE DECK AND SEAL WITH EPOXY-URETHANE
- CLEARING AND GRUBBING 15' OF THE STRUCTURE TO REMOVE ALL VEGETATION
- PROVIDE NEW STRUCTURE IDENTIFICATION SIGNS

PROPOSED WORK - ATB-322-1502 (OVER ATB-II-2.49)

- REMOVE AND REPLACE 14' OF PARAPET AT EACH CORNER TO BRING UP TO STANDARDS
- SEAL ALL EXPOSED CONCRETE OF THE NEWLY CONSTRUCTED PARAPETS WITH EPOXY-URETHANE
- CLEARING AND GRUBBING 10' AROUND ABUTMENTS

PROPOSED WORK - ATB-7-1810 (OVER EAST BRANCH OF ASHTABULA RIVER)

- REMOVE EXISTING ASPHALT CONCRETE AND CONCRETE OVERLAY, REPLACE WITH MICRO SILICA CONCRETE OVERLAY
- PATCH ALL UNSOUND AREAS OF THE CONCRETE SUBSTRUCTURE
- SEAL ALL EXPOSED CONCRETE SURFACES OF THE DECK EDGES, ABUTMENTS, PIERS, AND WING WALL
- PROVIDE 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.

CUT LINE CONSTRUCTION JOINT PREPARATION

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

PARAPET RETROFIT

REMOVE AND REPLACE 14' OF PARAPET ON STRUCTURE ATB-322-1502 AT EACH CORNER TO BRING UP TO STANDARD. REMOVE 14' OF EXISTING END OF PARAPET UNDER ITEM 202, PORTION OF STRUCTURE REMOVED. REPLACE PARAPET PER DETAILS ON SHEET 7/7. CLASS QC2 CONCRETE WILL BE USED.

SAWCUT 1/4 INCH DEEP CONTROL JOINTS ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE.

USE AN EDGE GUIDE, FENCE OR JIG TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH WILL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF 1/4 INCH.

PLACE CONTROL JOINTS AT A MINIMUM OF 6'-0" AND A MAXIMUM OF 10'-0" CENTERS.

SEAL THE PERIMETER OF THE CONTROL JOINT TO A MINIMUM DEPTH OF ONE INCH WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPE S. LEAVE THE BOTTOM ONE-HALF INCH OF BOTH THE INSIDE AND OUTSIDE FACES OF THE PARAPET UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

AFTER COMPLETION OF THE PARAPET RETROFIT, INSTALL A BRIDGE TERMINAL ASSEMBLY AS PER STANDARD CONSTRUCTION DRAWING MGS-3.1. SEE ROADWAY PLANS FOR GUARDRAIL QUANTITIES.

THE PRICE FOR ITEM 511, CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET) WILL INCLUDE THE COST OF LABOR, MATERIAL, EQUIPMENT, AND INCIDENTALS REQUIRED TO COMPLETE THE PARAPET RETROFIT WORK.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE ESTIMATED QUANTITIES:

- ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN 1176 POUND
- ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT 120 EACH
- ITEM 511 - CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET) 9 CU YD

ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN

IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO 709.00.

ITEM 509 REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN

REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE.

REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

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.

SPECIAL - STRUCTURE MISC.: CONCRETE SPALL REMOVAL

THIS WORK WILL CONSIST OF REMOVING ALL VISIBLY SPALLED AREAS OF THE BOTTOM DECK FLOOR OF STRUCTURES ATB-322-0966, ATB-322-1356, AND ATB-322-1399 WITHOUT SOUNDING. AFTER SPALLED CONCRETE AREAS HAVE BEEN REMOVED, REMOVAL AREAS WILL BE SEALED WITH ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

CONCRETE SPALL REMOVAL WILL BE PAID FOR AT THE UNIT BID PRICE FOR SPECIAL STRUCTURE MISC.: CONCRETE SPALL REMOVAL. THIS PRICE WILL INCLUDE THE COST OF LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

ATB-322-0966
SPEC, STRUCTURE MISC.: CONCRETE SPALL REMOVAL, 10 SQ YD
512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), 10 SQ YD

ATB-322-1356
SPEC, STRUCTURE MISC.: CONCRETE SPALL REMOVAL, 12 SQ YD
512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), 12 SQ YD

ATB-322-1399
SPEC, STRUCTURE MISC.: CONCRETE SPALL REMOVAL, 10 SQ YD
512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), 10 SQ YD

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ATB-322/7-8.11/18.10 PID No. 84606	STRUCTURE GENERAL NOTES ATB-322-0966, ATB-322-1356, ATB-322-1399, ATB-322-1502 & ATB-7-1810 SFN: 0406325, 0406368, 0406392, 0406406 & 0400718	DESIGNED	CNC	CHECKED	AAG
		DRAWN	CNC	REVISED	
		REVIEWED	LMP	DATE	2-19-13
				STRUCTURE FILE NUMBER	
				DESIGN AGENCY	ODOT --- DISTRICT 4
					PLANNING & ENGINEERING

STRUCTURE IDENTIFICATION SIGNS

STRUCTURE IDENTIFICATION SIGNS (I-425a) 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 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:

- ATB-322-0966 (TWO APPROACHES)
- ATB-322-1356 (TWO APPROACHES)
- ATB-322-1399 (TWO APPROACHES)
- ATB-7-1810 (TWO 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 ATB-322-0966 (SFN:0406325) THE EXISTING SIGN SHOWS 09.67. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0966.

STRUCTURE ATB-322-1356 (SFN:0406368) THE EXISTING SIGN SHOWS 13.58. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1356.

STRUCTURE ATB-322-1399 (SFN:0406392) THE EXISTING SIGN SHOWS 14.10. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1399.

STRUCTURE ATB-7-1810 (SFN:0406392) THE EXISTING SIGN SHOWS 18.15. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1810.

SCENIC RIVER AVOIDANCE (ATB-7-18.10 OVER EAST BRANCH OF ASHTABULA RIVER)

THE EAST BRANCH OF THE ASHTABULA RIVER UNDER THE ATB-7-18.10 BRIDGE IS DESIGNATED AS A STATE SCENIC RIVER. UNDER NO CIRCUMSTANCES SHALL ANY EQUIPMENT (LIFT, SCAFFOLDING, EARTH MOVING EQUIPMENT, ETC.) AND/OR MATERIALS ENTER THE RIVER. NO WORK SHALL BE PERFORMED BELOW THE IDENTIFIED ORDINARY HIGH WATER MARK (OHWM) OF THE ASHTABULA RIVER. NO FILL MATERIAL MAY BE PLACED BELOW THE OHWM OF THE EAST BRANCH OF THE ASHTABULA RIVER. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ALL CONSTRUCTION MATERIALS, WASTE MATERIALS, CHEMICALS OR OTHER SUBSTANCES USED TO CONSTRUCT THE PROJECT FROM ENTERING THE EAST BRANCH OF THE ASHTABULA RIVER. SHOULD ANY MATERIALS AND/OR DEMOLITION DEBRIS FALL INTO THE RIVER, WORK SHALL BE STOPPED, AND ALL DEBRIS/MATERIAL, ETC. SHALL BE REMOVED IMMEDIATELY, AND IN SUCH A WAY AS TO MINIMIZE TURBIDITY THAT COULD DEGRADE WATER QUALITY AND ADVERSELY AFFECT AQUATIC PLANT AND ANIMAL LIFE.

EXISTING RIPARIAN HABITAT ZONES SHALL BE MAINTAINED TO THE MAXIMUM EXTENT POSSIBLE. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR UTILIZE SPRAY PAINT ON ANY TREES OR OTHER FOLIAGE TO DELINEATE THE PROJECT CONSTRUCTION LIMITS. THE PROPOSED TRANSPORTATION IMPROVEMENT SHALL FACILITATE FREE MOVEMENT OF AQUATIC FAUNA.

IN EACH CASE WHERE THERE IS AN INCIDENT OF HAZARDOUS MATERIAL FALLING OR MIGRATING INTO THE ASHTABULA RIVER, THE CONTRACTOR SHALL, AS SOON AS POSSIBLE, NOTIFY THE ENGINEER/SUPERVISOR AND THE FOLLOWING AGENCIES:

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATERCRAFT 2010 MILTON BLVD. C-1
PO BOX 441
NEWTON FALLS, OH 44444
OFFICE (330) 872-0040
CELL (440) 225-5582
ATTN: MATTHEW SMITH, NORTHEAST REGION SCENIC RIVER MANAGER

OHIO EPA SPILL REPORTING
24 HOUR EMERGENCY SERVICE
CALL: 1-800-282-9378

PROVIDE AS MUCH OF THE FOLLOWING INFORMATION AS POSSIBLE:

1. TIME OBSERVED
2. LOCATION
3. MATERIAL RELEASED
4. PROBABLE SOURCE
5. VOLUME & DURATION
6. PRESENT & ANTICIPATED MOVEMENT OF CONTAMINANT
7. PERSONNEL ON SCENE
8. ACTIONS ALREADY INITIATED
9. PERSON(S) ON THE SCENE TO CONTACT.

WASTE MATERIALS (ATB-7-18.10 OVER EAST BRANCH OF ASHTABULA RIVER)

ALL WASTE MATERIALS GENERATED DURING CONSTRUCTION ACTIVITIES SHALL BE IMMEDIATELY REMOVED FROM THE CONSTRUCTION SITE. IMMEDIATE REMOVAL IS DEFINED AS DEPOSITING THE REMOVED MATERIAL DIRECTLY INTO A TRUCK AND REMOVING THE MATERIALS FROM THE SITE; PLACEMENT OF REMOVED MATERIALS WITHIN 1,000 FEET OF THE EAST BRANCH OF THE ASHTABULA RIVER IS PROHIBITED. PLACEMENT OF REMOVED MATERIAL INTO A WETLAND OR ON THE BANKS OF A STREAM OR RIVER EVEN TEMPORARILY IS CONSIDERED A FILL AND IS PROHIBITED.

PAINTING AND SEALING OPERATIONS (ATB-7-18.10 OVER EAST BRANCH OF ASHTABULA RIVER)

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT EPOXY-URETHANE SEALER, PAINT, OR OTHER STRUCTURAL MATERIALS USED TO REPAIR, CLEAN, SEAL, OR TREAT ANY BRIDGE STRUCTURE FROM ENTERING THE EAST BRANCH OF THE ASHTABULA RIVER AND TAKE THE APPROPRIATE ACTIONS IN THE EVENT OR A RELEASE.

THE CONTRACTOR SHALL LIMIT THE AMOUNT OF OPEN CONCRETE SEALER TO THE EXTENT PRACTICABLE TO PERFORM THE REQUIRED WORK. DISCARDED CONTAINERS SHALL BE REMOVED FROM THE VICINITY OF THE EAST BRANCH OF THE ASHTABULA RIVER AND UNDER NO CIRCUMSTANCES SHALL ANY SEALER BE STORED WITHIN THE 100 YEAR FLOODPLAIN OF THE EAST BRANCH OF THE ASHTABULA RIVER.

RIPARIAN HABITAT

EXISTING RIPARIAN HABITAT ZONES ALONG THE STREAM CHANNELS SHALL BE MAINTAINED TO THE MAXIMUM EXTENT PRACTICABLE DURING PROJECT CONSTRUCTION.

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. MECHANICAL EQUIPMENT OPERATION AT STREAM CHANNEL: THE MECHANICAL EQUIPMENT USED TO EXECUTE THE WORK AUTHORIZED HEREIN SHALL BE OPERATED IN SUCH A WAY AS TO MINIMIZE TURBIDITY THAT COULD DEGRADE WATER QUALITY AND ADVERSELY AFFECT AQUATIC PLANT AND ANIMAL LIFE.

STRUCTURE PAINTING/CONCRETE SEALING OPERATIONS

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

ODNR PRECONSTRUCTION NOTIFICATION (ATB-7-18.10 OVER EAST BRANCH OF ASHTABULA RIVER)

THE EAST BRANCH OF THE ASHTABULA RIVER UNDER THE ATB-7-18.10 BRIDGE IS DESIGNATED AS A STATE SCENIC RIVER AND THE OHIO DEPARTMENT OF NATURAL RESOURCES, DIVISION OF WATERCRAFT, MUST RECEIVE PRECONSTRUCTION NOTIFICATION. AT LEAST FIFTEEN (15) CALENDAR DAYS PRIOR TO THE BEGINNING OF ANY WORK INCLUDING INSTALLATION OF MAINTENANCE OF TRAFFIC SIGNAGE, STAGING OF EQUIPMENT AND/OR MATERIALS, ETC., WITHIN 1000 FEET OF THE EAST BRANCH OF THE ASHTABULA RIVER, THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE OHIO DEPARTMENT OF NATURAL RESOURCES, DIVISION OF WATERCRAFT.

INFORMATION REQUIRED AS PART OF THE PRECONSTRUCTION NOTIFICATION SHALL INCLUDE:
1) THE CONTRACTORS NAME AND ADDRESS;
2) CONTRACTOR AND ODOT DISTRICT 4 CONSTRUCTION REPRESENTATIVE CONTACT INFORMATION;
3) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REHABILITATION; AND
4) ONE COPY OF THE CONSTRUCTION PLANS.

THE CONTRACTOR SHALL COMPILE THE ABOVE PRECONSTRUCTION NOTIFICATION AND SUBMIT IT TO:

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATERCRAFT
2010 MILTON BLVD. C-1,
PO BOX 441
NEWTON FALLS, OH 44444
OFFICE (330) 872-0040
CELL (440) 225-5582
ATTN: MATTHEW SMITH, NORTHEAST REGION SCENIC RIVER MANAGER

A COPY OF THE NOTIFICATION SHALL BE PROVIDED TO THE ODOT PROJECT ENGINEER. THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIALS NECESSARY TO COMPLETE AND SUBMIT THE PRECONSTRUCTION NOTIFICATION.

STREAM AVOIDANCE: ATB-322-0966 (OVER ROCK CREEK), ATB-322-1356 (OVER MOSQUITO CREEK), ATB-322-1399 (OVER BRANCH MOSQUITO CREEK)

UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR IMPACT ROCK CREEK, MOSQUITO CREEK, OR THE BRANCH OF MOSQUITO CREEK. NO EXCAVATION, GRADING OR FILLING OPERATIONS SHALL BE PERFORMED IN ROCK CREEK, MOSQUITO CREEK, OR THE BRANCH OF MOSQUITO CREEK. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE CONSTRUCTION EQUIPMENT AND/OR MATERIALS IN ROCK CREEK, MOSQUITO CREEK, OR THE BRANCH OF MOSQUITO CREEK.

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ATB-322/7-8.11/18.10 PID No. 84606	2 / 7 16 21	STRUCTURE GENERAL NOTES ATB-322-0966, ATB-322-1356, ATB-322-1399, ATB-7-1810 SFN: 0406325, 0406368, 0406392, 0406406 & 040718				DESIGN AGENCY ODOT --- DISTRICT 4 PLANNING & ENGINEERING
		DESIGNED CNC CHECKED AAG	DRAWN CNC REVISED	REVIEWED LMP STRUCTURE FILE NUMBER	DATE 2-19-13	DESIGN AGENCY ODOT --- DISTRICT 4 PLANNING & ENGINEERING

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 1/4" 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 ACCOMMODATE 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:

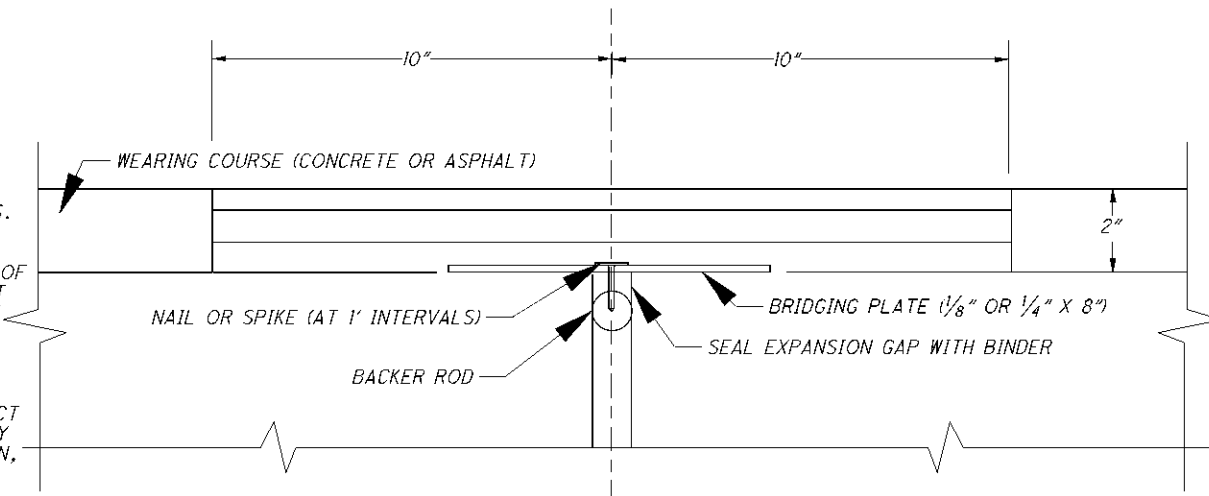
IF NECESSARY TO FACILITATE TRAFFIC MAINTENANCE, THE JOINT WILL BE INSTALLED IN TWO (2) HALF-WIDTH PHASES. DURING PHASE 1 APPROXIMATELY HALF OF THE TOTAL JOINT WILL BE INSTALLED. DURING PHASE 2, A MINIMUM OF TWO (2) INCHES OF THE PHASE 1 JOINT WILL BE REMOVED, AT OR NEAR THE CENTERLINE, WITH THE REMAINDER 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 JOINT SYSTEM.



TYPICAL PRESTRESSED BOX BEAM OR CONCRETE SLAB JOINT

I:\Projects\ATB\84606\structures\322_0966C\322_POLY_04-15-05_V8.dgn 22-APR-2013 2:24PM agqz

OFFICE OF STRUCTURAL ENGINEERING

DESIGNED REVIEWED

PLAN INSERT SHEET POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

ATB-322/7-8.11/18.10

3/7 17/21

CALC: CNC DATE: 1/17/2013
 CHECKED: AAG DATE: 1/22/2013

ESTIMATED QUANTITIES											
BRIDGE NO. / STRUCTURE FILE NO.							ITEM	EXTENSION	UNIT	DESCRIPTION	SEE SHEET
ATB-322-0966 SFN 0406325 02/STR/BR	ATB-322-1356 SFN 0406368 02/STR/BR	ATB-322-1399 SFN 0406392 02/STR/BR	ATB-322-1502 SFN 0406406 02/STR/BR	ATB-7-1810 SFN 0400718 02/STR/BR							
LUMP	LUMP	LUMP	LUMP				201	11000		CLEARING AND GRUBBING	
				1000			202	23500	SQ YD	WEARING COURSE REMOVED	
			LUMP				202	11201		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	1 / 7
				150			407	10000	GALLON	TACK COAT	
				125			446	47029	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M, AS PER PLAN	4 / 21
				1176			509	10001	POUND	EPOXY COATED REINFORCING STEEL, AS PER PLAN	1 / 7
				50			509	20001	POUND	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	1 / 7
				120			510	10000	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
				9			511	34448	CU YD	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)	
50	70		50	60			512	10100	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
462							512	10400	SQ YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS	
				105			516	10000	FT	PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL, 705.11	
72							SPEC	51631300	FT	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	3 / 7
100	200	200	100				519	11101	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN	1 / 7
10							SPEC	51912304	SQ YD	PATCHING CONCRETE BRIDGE DECK - TYPE C	1 / 7
30	32	30					SPEC	53000800	SQ YD	STRUCTURE, MISC.: CONCRETE SPALL REMOVAL	1 / 7
15	15	15	15	15			630	02100	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
2	2	2	2	2			630	80100	SQ FT	SIGN, FLAT SHEET, 730.20	
2	2	2	2	1			630	84900	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
	2	2	2	1			630	86002	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
75	75	75	75	75			843	50000	SQ FT	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	
				800			848	10000	SQ YD	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION(T = 1 1/2")	
				800			848	20000	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION	
				35			848	30000	CU YD	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY	
				25			848	50000	SQ YD	HAND CHIPPING	
				LUMP			848	50100		TEST SLAB	
				1			848	50200	CU YD	FULL-DEPTH REPAIR	
				1800			848	50300	SQ YD	WEARING COURSE REMOVED, ASPHALT	
				555			848	50320	SQ YD	EXISTING CONCRETE OVERLAY REMOVED(T = 3")	
				14			848	50340	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY	

STRUCTURE ESTIMATED QUANTITIES

ATB-322-0966, ATB-322-1356, ATB-322-1399, ATB-322-1502 & ATB-7-1810
 SFN: 0406325, 0406368, 0406392, 0406406 & 0400718

DESIGN AGENCY: ODOT --- DISTRICT 4
 PLANNING & ENGINEERING

DESIGNED: CNC
 CHECKED: AAG

DRAWN: CNC
 REVISED:

REVIEWED: LMP
 STRUCTURE FILE NUMBER:

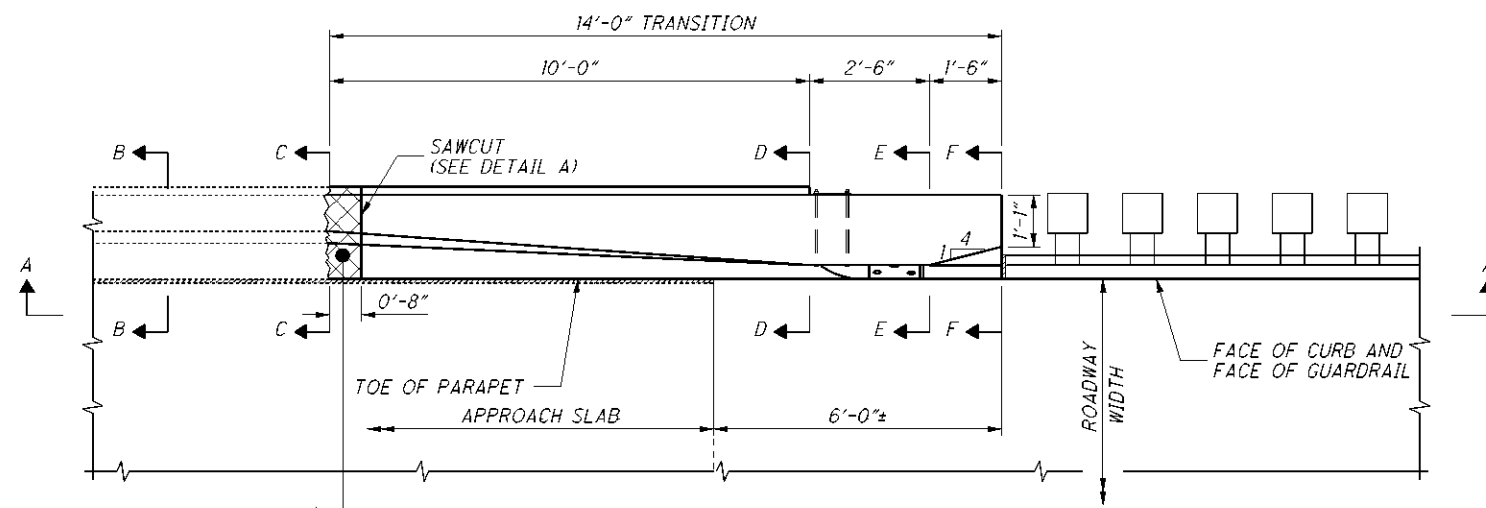
DATE: 2-19-13

ATB-322/7-
 8.11/18.10
 PID No. 84606

4 / 7

18
 21

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EXISTING PARAPET TO BE REMOVED BY CHIPPING, CARE WILL BE TAKEN TO PRESERVE LONGITUDINAL STEEL

PART PLAN OF PARAPET

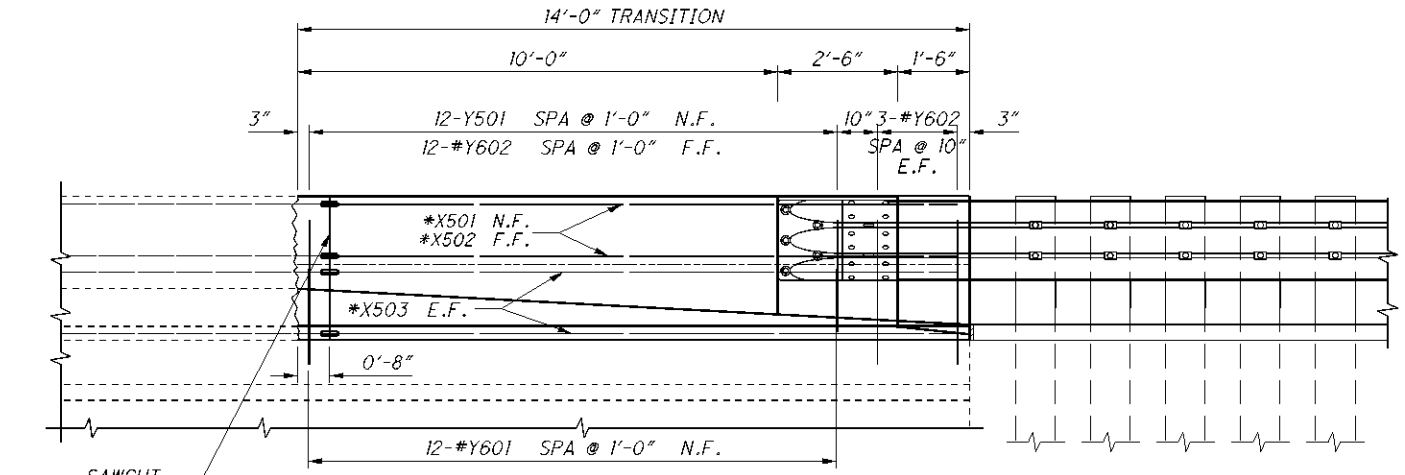
MARK	NUMBER				LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS						
	REAR ABUT	FWD ABUT	SUPER	TOTAL				A	B	C	D	E		
*X501			2	2	13'-1 1/2"	30	25	9'-4"	2'-6"	1'-6"	1 1/2"	5"		
*X502			2	2	13'-1"	28	STR							
*X503			4	4	13'-1"	55	STR							
Y501			12	12	3'-4"	42	16	2'-9"						
#Y601			12	12	2'-7 3/4"	48	13	9 1/2"	1'-2"	8"	7"			
#Y602			18	18	3'-4"	91	STR							
SUPERSTRUCTURE SUB-TOTAL						294								

THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, P601 IS A NO. 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

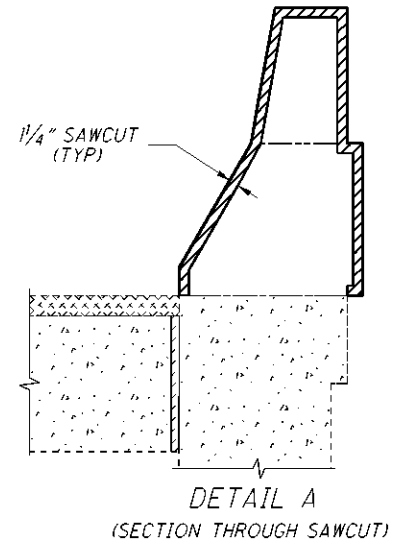
ALL REINFORCING STEEL TO BE EPOXY COATED

LEGEND: N.F. - NEAR FACE (TYP) - TYPICAL
 F.F. - FAR FACE SPA - SPACING
 E.F. - EACH FACE * - MECHANICAL CONNECTORS ARE REQUIRED
 # - DOWEL HOLE WITH NONSHRINK, NONMETALLIC GROUT, 6" DEEP (TYP)

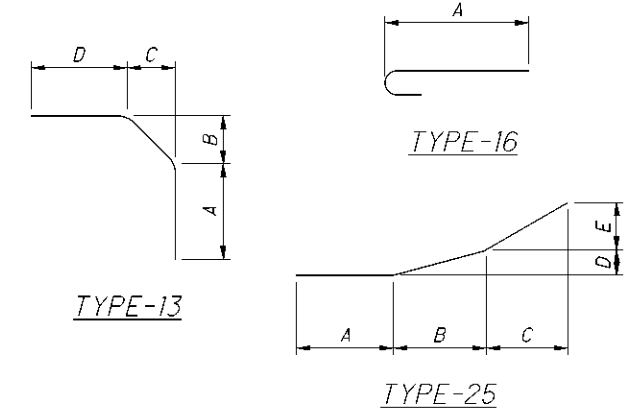
NOTES:
 1. REBAR TABLE IS TYPICAL FOR ONE END SECTION



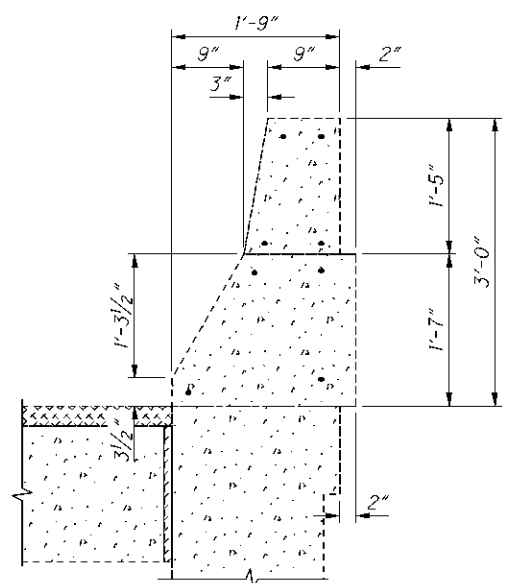
SECTION A-A



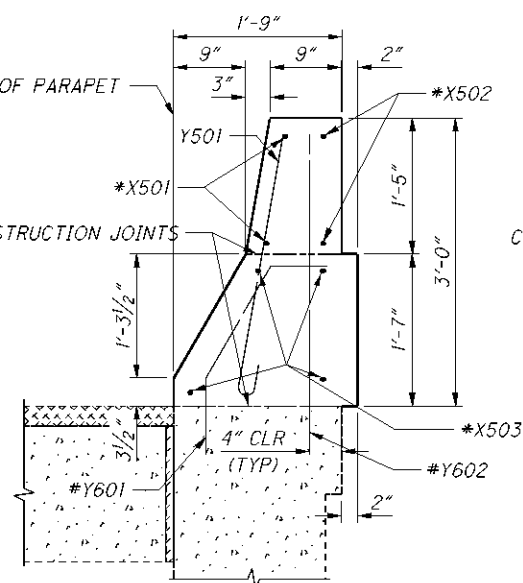
DETAIL A (SECTION THROUGH SAWCUT)



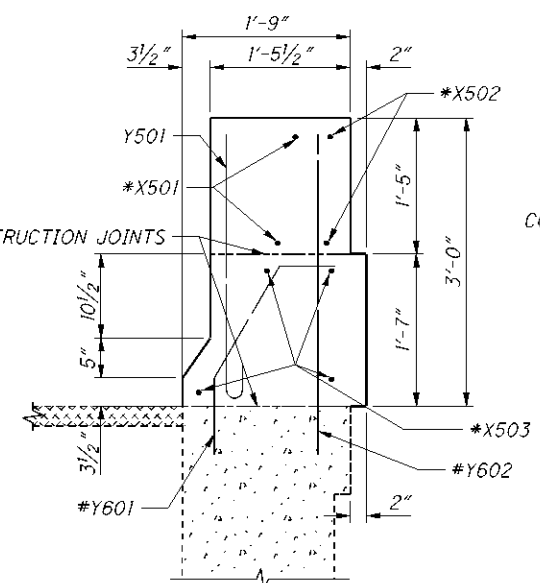
- FIELD BEND BARS WHERE NECESSARY. INCLUDE BENDING DIAGRAMS ON PROJECT PLANS.



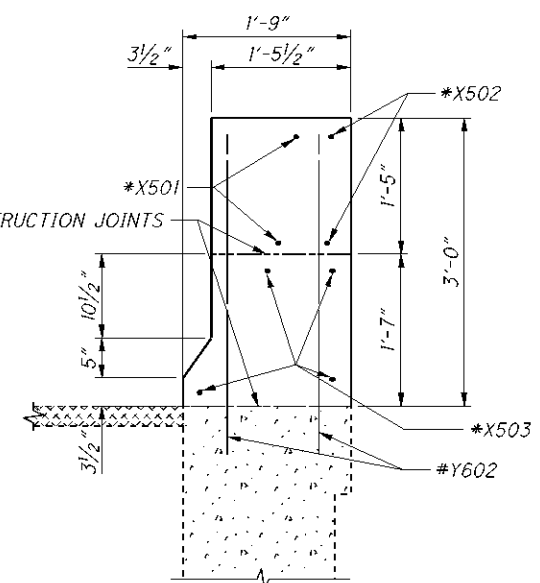
SECTION B-B



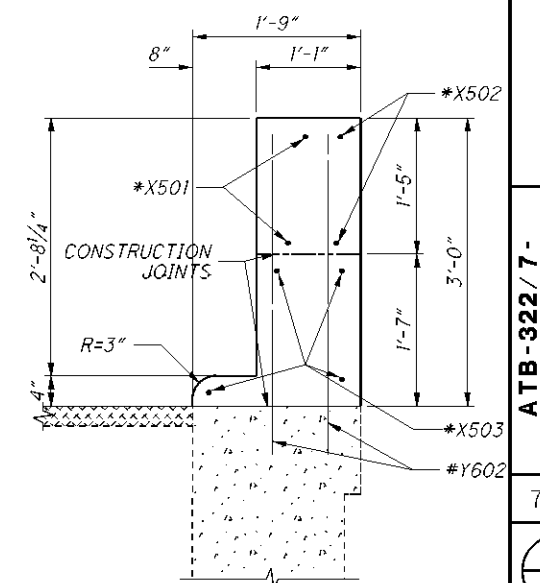
SECTION C-C



SECTION D-D



SECTION E-E



SECTION F-F

DESIGN AGENCY: ODOT - DISTRICT 4
 PLANNING & ENGINEERING

DATE: 04-24-13
 STRUCTURE FILE NUMBER: 0406406

DESIGNED: AAG
 CHECKED: ---

DRAWN: AAG
 REVISED: ---

REVIEWED: LMP

PARAPET RETROFIT
 BRIDGE NO.: ATB-322-1502
 OVER ATB-11-2.49

ATB-322/7-
 8.11/18.10
 PID No. 84606

7/7
 21/21