#### LONGITUDINAL JOINTS (FLEXIBLE PAVEMENT)

LOCATE LONGITUDINAL JOINTS IN THE SURFACE COURSE SUBJECT TO THE FOLLOWING REQUIREMENTS:

PLACE THE MAINLINE PAVEMENT SURFACE COURSE WITH A SINGLE COLD LONGITUDINAL JOINT LOCATED AT THE CROWN.

PLACE RAMP SURFACE COURSE WITH A SINGLE COLD LONG-ITUDINAL JOINT LOCATED NEAR THE MIDDLE OF THE RAMP'S TOTAL WIDTH.

AT SPEED CHANGE LANES AT RAMP MERGE AREAS AND DIVERGE AREAS: PLACE SURFACE COURSE ON SPEED CHANGE AREAS WITHIN THE SAME WORK DAY AS ADJACENT MAINLINE PAVEMENT.

# PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD PORTIONS OF THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

#### MEDIAN AND/OR CURBING ON APPROACH SLABS

WITHIN THE LIMITS OF THE APPROACH SLAB, TRANSITION THE SHAPE OF THE MEDIAN AND/OR CURBING ON APPROACH SLABS FROM THE STANDARD SECTION ON THE APPROACHES TO THE SECTION USED ON THE BRIDGE.

# PAVEMENT RESTORATION FOR PIPE INSTALLATIONS

THE FOLLOWING QUANTITY HAS BEEN PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION OF PIPES UNDER ITEM 603 THAT IS NOT OTHERWISE DETAILED IN THE PLANS.

ITEM 301 ASPHALT CONCRETE BASE, PG64-22 25 CU. YDS.

THE ABOVE QUANTITY IS BASED ON A 301 THICKNESS OF 6 INCHES AND A PAVEMENT RESTORATION WIDTH THAT INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH. SEE STANDARD CONSTRUCTION DRAWING DM-1.4 FOR TRENCH WIDTH FORMULA AND CALCULATION.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

## PAVEMENT RESTORATION FOR DRAINAGE STRUCTURE INSTALLATIONS

THE FOLLOWING QUANTITY IS PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION OF ITEM 604 DRAINAGE STRUCTURES THAT IS NOT OTHERWISE DETAILED IN THE PLANS.

ITEM 301 ASPHALT CONCRETE BASE, PG64-22 5 CU. YDS.

THE ABOVE QUANTITY IS BASED ON A 301 THICKNESS OF 6 INCHES AND A WIDTH OF TWO FEET AROUND THE PERIMETER OF THE DRAINAGE STRUCTURE.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

# PAVEMENT RESTORATION FOR MONUMENT ASSEMBLY INSTALLATIONS

THE FOLLOWING QUANTITY IS PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION OF ITEM 604 MONUMENT ASSEMBLIES THAT IS NOT OTHERWISE DETAILED IN THE PLANS.

ITEM 301 ASPHALT CONCRETE BASE, PG64-22 5 CU. YDS.

THE ABOVE QUANTITY IS BASED ON A 301 THICKNESS OF 6 INCHES AND A WIDTH OF TWO FEET AROUND THE PERIMETER OF THE MONUMENT ASSEMBLIES.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

#### ITEM 442 - ASPHALT SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN

LIMIT COARSE AGGREGATE TO A BLEND OF AIR COOLED BLAST FURNACE SLAG (ACBFS) OR TRAP ROCK FROM ONTARIO AND LIMESTONE. USE ACBFS OR TRAP ROCK FROM ONTARIO AT A MINIMUM OF 50% COARSE AGGREGATE. USE LIMESTONE FOR REMAINING PORTION OF COARSE AGGREGATE. WHEN ACBFS IS USED ALL REQUIREMENTS OF 442 APPLY EXCEPT USE A Ndes OF 50. A Nmax OF 75 AND ENSURE THE MINIMUM TOTAL AS-PHALT BINDER CONTENT IS 6.5 PERCENT.

### ITEM 407 - TACK COAT TACK COAT FOR INTERMEDIATE COURSE

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTEMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.10 GALLONS PER SQUARE YARD OF TACK COAT AND 0.05 GALLONS PER SQUARE YARD OF TACK COAT FOR INTERMEDIATE COURSE.

### ASPHALT CONCRETE SURFACE COURSES

IN ADDITION TO THE GUTTER SEALING REQUIREMENTS SPECIFIED ON SCD BP-3.1 AND IN 401.15, AFTER COMPLETION OF THE SURFACE COURSE, THE CONTRACTOR SHALL SEAL, WITH ASPHALT BINDER. THE FOLLOWING LOCATIONS:

- 1) ALL CASTINGS INCLUDING BUT NOT LIMITED TO MONUMENTS. MANHOLES. WATER VALVES. AND CATCH BASINS.
- 2) BUTT JOINTS AND FEATHER JOINTS INCLUDING BRIDGE APPROACHES.
- 3) FORWARD JOINT FOR DRIVEWAY ASPHALT AND TRAILING JOINT WHEN BUTTING TO EXISTING ASHPALT DRIVE.
- 4) PERIMETER OF ALL PAVEMENT REPAIRS WHEN PAVEMENT REPAIRS ARE NOT OVERLAID WITH ASPHALT CONCRETE.
- 5) ALL LONGITUDINAL AND TRANSVERSE COLD JOINTS (SHALL BE SEALED PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS).

THE MATERIAL USED SHALL BE A HOT APPLIED PG 64-22 BINDER. THE WIDTH OF THE SEALER SHALL BE 4 INCHES AS PER 401.15. ANY ADDITIONAL COSTS ASSOCIATED WITH THE WORK IDENTIFIED IN THIS NOTE SHALL BE INCLUDED IN THE APPRO-PRIATE ASPHALT CONCRETE ITEM OF WORK.

# ITEM 451 - REINFORCED CONCRETE PAVEMENT MISC.: USING CLASS MS PORTLAND CEMENT CONCRETE 9" THICK

ALL OF THE REQUIREMENTS STATED IN ITEM 451 REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT SHALL APPLY WITH THE FOLLOWING MODIFICATION:

MODERATE SETTING PORTLAND CEMENT FOR ACCELERATED STRENGTH DEVELOPMENT AS PER SEC. 499.05B OF THE CMS SHALL BE USED FOR THE CONSTRUCTION OF THE INTERSECTION OF LOST NATION ROAD AND REEVES ROAD. AN ESTIMATED QUANTITY OF 820 SY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO COMPLETE THE ABOVE WORK.

# ROADWAY

### ITEM 202 - PIPE REMOVED

SAND IS NOT PERMITTED AS A BACKFILL MATERIAL FOR TRENCHES OF PIPE REMOVAL AREAS.

### ITEM 202 - EMBANKMENT

CONSTRUCTION OF ALL PROPOSED SLOPES ALONG WIDENED SECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, SECTION 203.09.

# ITEM 619 - FIELD OFFICE, TYPE C, AS PER PLAN

A TYPE C FIELD OFFICE IS REQUIRED FOR THIS PROJECT. IN ADDITION TO THE REQUIREMENTS AS DESCRIBED IN ITEM 619 INCLUDE BROADBAND (DSL OR CABLE) ACCESS.

ITEM 619 - FIELD OFFICE, TYPE C, AS PER PLAN 42 MONTHS

# ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE B, AS PER PLAN

CONCRETE BARRIER, SINGLE SLOPE, TYPE B SHALL BE PER THE REQUIREMENTS OF CMS 622 AND SCD RM-4.3, EXCEPT: THE TOP WIDTH OF BARRIER SHALL VARY FROM 8" (MIN.) TO 24" (MAX.) PER DETAIL "V" ON SHEET 17.

#### GUARDRAIL REPLACEMENT

NO HAZARD SHALL BE LEFT UNPROTECTED EXCEPT FOR THE ACTUAL TIME NECESSARY TO REMOVE GUARDRAIL, INSTALL EMBANKMENT. GRADE. AND REINSTALL GUARDRAIL IN A CON-TINUOUS OPERATION. THE REMOVAL OF ALL GUARDRAIL SHALL BE AT ALL TIMES AS DIRECTED BY THE ENGINEER. NO GUARD-RAIL SHALL BE REMOVED UNTIL THE REPLACEMENT MATERIAL IS ON SITE, READY FOR INSTALLATION. FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE DEEMED SUFFICIENT CAUSE TO ORDER WORK SUSPENDED ON THE PROJECT UNTIL SUCH TIME THAT THE ENGINEER IS ASSURED OF SAID COMPLIANCE.

#### CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN IN AASHTO M 180. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

# 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./ REV.	ODOT APPROV
DWG. NO.	DRAWING NAME	DATE	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./	ODO I
		REV.	APPROVAL
DWG. NO.	DRAWING NAME	DATE	DATE
FLT-M	FLARED ENERGY	4/16/98	7/31/98
	ABSORBING TERMINAL		
	(FLFAT-350) ASSEMBLY		

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.

# 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	APPROVA
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:



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