



**OHIO TURNPIKE AND  
INFRASTRUCTURE COMMISSION**

**ADDENDUM NO. 3**

**PROJECT NO. 43-19-03**

BRIDGE DECK REPAIR AND REHABILITATION  
OHIO TURNPIKE RAMP OVER STATE ROUTE 420 M.P. 71.4,  
SOUTH BILLMAN ROAD OVER OHIO TURNPIKE M.P. 75.2  
WOOD AND OTTAWA COUNTIES, OHIO

**OPENING DATE: 2:00 P.M. (EASTERN TIME), DECEMBER 21, 2018**

**ATTENTION OF BIDDERS IS DIRECTED TO:**  
**ANSWERS TO QUESTIONS RECEIVED THROUGH 12:00 PM ON DECEMBER 17, 2018**

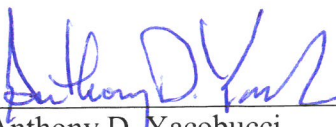
**MODIFICATIONS TO THE CONTRACT DOCUMENTS**

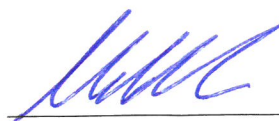
Plan Sheets: 8, 10, 12, 24, and 39 of 51

Supplemental Specifications: SS832 (January 17, 2014)

Bid Schedule of Items and Estimated Quantities Worksheet  
Ref. Nos. 13, 14, 15, and 18

Issued by the Ohio Turnpike and Infrastructure Commission by Anthony D. Yacobucci, Chief Engineer,  
and Mark R. Musson, Director of Contracts Administration.

  
Anthony D. Yacobucci      Date 12/17/18

  
Mark R. Musson      Date 12/17/18

**ANSWERS TO QUESTIONS RECEIVED THROUGH 12:00 P.M. ON DECEMBER 17, 2018:**

**Q#28 Will Class QC2 concrete for the bridge superstructures be acceptable in lieu of the Class HP4 Concrete?**

*A#28 Class QC2 concrete is acceptable as a replacement for Class HP4 concrete at no additional cost to the Commission. Where appearing throughout the Contract Documents "Class HP 4 Concrete" is supplemented with "or Class QC2 Concrete" through this Addendum No. 3. All applicable provisions of Item 511 of the Specifications shall apply except as modified in SP 511B for both HP4 and QC2.*

**Q#29 What is the anticipated Earth Disturbed Area for the project? This number (in acres) could not be found in the plans.**

*A#29 The Earth Disturbed Area (EDA) for this project is 1.5 Acres. This information has been added to the General Notes on Plan Sheet 8 of 51. Revised Plan Sheet 8 of 51 is included as part of this Addendum No. 3.*

**Q#30 The SWPPP is identified in the quantities to follow item ODOT C&MS 832, however this specification just updated to require the use of the SWPPPTrack software program on all projects. Does the OTIC intend to proceed in utilizing SWPPPTrack on this project?**

*A#30 The intent of the Project is to utilize the January 17, 2014 version of SS 832 which does not require the use of SWPPPTrack software. The entire Supplemental Specification 832, dated January 17, 2014, is included as part of this Addendum No. 3.*

**Q#31 The Abutment bearing details shown on Sht 39/51 for the SR-420 bridge show two steel load plates, one below the HP10x42 and one above the HP10x42. Are both of these steel load plates to be beveled per the detail and t1/t2 thickness shown on that sheet? If not what is the thickness of the non-beveled plate? Can the total bearing heights, Tt, in the Abutment Bearing Dimension Table be reviewed, they appear to be too short.**

*A#31 Only the top load plate is to be beveled. The bottom plate shall be 1 ½" thick. The HP dimensions on Plan Sheet 39 of 51 have been revised to account for the bottom steel plate. Revised Plan Sheet 39 of 51 is included as part of this Addendum No. 3.*

**Q#32 Plan sheet 12/51 shows the approach slab typical section. There is no #304 stone base or subgrade compaction underneath the approach slab. Is these omissions or will there be no payment for this work under the approach slabs?**

*A#32 Item 204 – Subgrade Compaction and Item SP 304 – 6" Aggregate Base are required and have been added to the "Approach Slab Section – Ramp over SR 420" detail on Plan Sheet 12 of 51.*

*In addition, the quantities for above noted Items have been revised on Plan Sheet 10 of 51 for both the MP 71.4 and MP 75.2 bridges. Reference No. 15, Item 204 – Subgrade Compaction and Reference No. 18, Item SP 304 – 6” Aggregate Base have been revised on the Bid Schedule of Items and Estimated Quantities Worksheet. Revised Plan Sheets 10 and 12 of 51 and the Bid Schedule of Items and Estimated Quantities Worksheet are included as part of this Addendum No. 3.*

**Q#33 In the provided Geotechnical Report page 14 section 6.0 “Construction Recommendations” states the following “Fill should be placed in uniform layers not more than 8 inches thick (loose measure) adequately keyed into stripped and scarified soils.” Will the OTC require contractors to key and or bench into the existing slopes at SR 420 (MP 71.4) structure while building the slope embankment associated with the structure? If so, will the OTC provide additional excavation quantities to accommodate for the key and or benching into the existing slopes? Also will OTC provide updated drawings of the minimum width and height requirements to key and or bench into the existing slopes?**

*A#33 The embankment shall be benched per the Ohio Department of Transportation Geotechnical Bulletin GB 2. Details of the proposed benching have been added to, and the cut and fill volumes have been revised, on Plan Sheet 24 of 51. The quantities for Item 203 – Embankment and Item SP 203 – Excavation have been revised on Plan Sheet 10 of 51. Reference No. 13, Item 203 – Embankment and Reference No. 14, Item SP 203 – Excavation have been revised on the Bid Schedule of Items and Estimated Quantities Worksheet. Revised Plan Sheets 10 and 24 of 51 and the Bid Schedule of Items and Estimated Quantities Worksheet are included as part of this Addendum No. 3.*

**Q#34 With short distances to pave asphalt at the bridges approaches will a Material Transfer Device (MTD) as call for in SP 400 (page SP-57) be required?**

*A#34 The use of a Material Transfer Device is not required for this project.*

**Q#35 Does SP 400S apply to the project as called under SP 400 page SP-60?**

*A#35 A Class 1 Inertial Profilometer is not required for this Project. Pavement will be evaluated in accordance with the SP 400S. Section C – Rolling Straightedge Pavement Tolerances. Any corrective action required shall be in accordance with SP 400S Section E – Corrective Action.*

**Q#36 Plan sheets do not include OTIC standard drawing CB-1 for the #1 CB bid item (reference 91). Please provide the most updated drawing for this item.**

*A#36 The referenced OTIC standard drawing, CB-1, was included in the plan set posted to Bid Express, but is also included as part of this Addendum No. 3.*

**Q#37 Bid item 63 “Vegetated Biofilter, As Per Plan”: plan sheet 8 note says “Place either item 659 seeding and mulching with a 4” lift of topsoil” but doesn’t say “or” to anything else. There are already bid items set up for seeding and mulching and topsoil. Please revise the plan note and provide a plan detail if necessary to define exactly what is considered incidental/inclusive to this bid item.**

*A#37 The “As Per Plan” note on Plan Sheet 8 of 51 has been updated to reflect the project-specific requirements; the word “either” has been removed from the plan note. The quantity is appropriate and the Vegetated Biofilters are noted on the plan sheets. Revised Plan Sheet 8 of 51 is included as part of this Addendum No. 3.*

**Q#38 At the Billman Rd bridge there is existing conduit inside both concrete parapet walls which are getting replaced. Are there any active utilities in these conduits? If the conduits have active lines in them are they going to be temporarily relocated while the parapet walls are removed and replaced? Are any conduits to be placed back within the new walls?**

*A#38 The existing conduits do not carry any active utilities and the new parapets do not need to include conduits.*

**Q#39 One of the sole plates needs a thickness dimension added to the total height (Tt) of the bearing assemblies at the abutments. When the various elements of the bearing (pad, centerline of tapered plate, and HP 10x42) are added up, it reaches the Tt dimension presented in the table; however, it does not appear to take into account the thickness of second load plate. Further, it is unclear as to which of the load plates is to be tapered, top or bottom. Please clarify.**

*A#39 The abutment bearing table and bearing details on Plan Sheet 39 of 51 have been revised to clarify the “Tt” dimension and the location of the beveled load plates. Revised Plan Sheet 39 of 51 is included as part of this Addendum No. 3.*

**Q#40 Does the existing structural steel at the MP 71.4 bridge contain lead paint?**

*A#40 It is anticipated that lead paint will be encountered on the MP 71.4 bridge thus the inclusion of the SP 525A items to address the removal of lead paint.*

**Q#41 Can the parapet on the wing walls of structure MP 75.2 (Billman Rd) be removed by sawing? Doweling bars instead of hand demoing the entire parapet to save the existing parapet vertical bars will be a significant cost savings.**

*A#41 In order to maintain the structural integrity of the parapet on top of the wingwall, the parapet is not permitted to be removed by sawing as the vertical parapet bars need to be maintained.*



**Q#42 Typical sections on plan sheet 12 for pavement with concrete median show the median going below bottom of stone of pavement/shoulders. Should there be SP304 aggregate base under the concrete median and if so, how deep? Also, please add additional volume to the SP304 item to accommodate this volume needed.**

*A#42 The typical sections on Plan Sheet 12 of 51 have been revised to show 6" of SP 304 – 6" Aggregate Base under the concrete median. In addition, the quantities on Plan Sheet 10 of 51 have been revised to include additional SP 304 – 6" Aggregate Base under the concrete median. Reference No. 18, Item SP 304 – 6" Aggregate Base has been revised on the Bid Schedule of Items and Estimated Quantities Worksheet. Revised Plan Sheets 10 and 12 of 51 and the Bid Schedule of Items and Estimated Quantities Worksheet are included as part of this Addendum No. 3.*

### **MODIFIED CONTRACT DOCUMENTS**

With this Addendum No. 3, the Commission substitutes the enclosed material for the following Contract Documents:

Plan Sheets: 8, 10, 12, 24, and 39 of 51

with additions to the Plan Drawings are called out with a cloud and a revision triangle as thus:



Supplemental Specifications: SS832, dated January 17, 2014

With this Addendum No. 3, the Commission modifies the Bid Schedule of Items for the following Reference Numbers: 13, 14, 15, and 18

### **Receipt of Addendum No. 3**

**Project No. 43-19-03 is hereby acknowledged:**

(Firm Name) \_\_\_\_\_

(Signature) \_\_\_\_\_

(Printed Name) \_\_\_\_\_

(Date) \_\_\_\_\_

**BIDDERS MUST RETURN THE ABOVE ACKNOWLEDGEMENT  
OF RECEIPT OF ADDENDUM NO. 3 WITH THEIR BID.**

17055\_GN001.dwg: 12/17/18 - 2:42pm

ROUNDING

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

UTILITIES

THERE ARE NO UNDERGROUND UTILITIES SHOWN ON THIS PLAN. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UNDERGROUND UTILITIES THAT EXIST UNDER OR ADJACENT TO THE WORK AREA.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION PROJECTS.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL

POSITIONING METHOD: ODOT VRS  
MONUMENT TYPE: TYPE B

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88  
GEOID: GEOID12B

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83 (2011)  
ELLIPSOID: GRS80  
MAP PROJECTION: LAMBERT CONFORMAL CONIC  
COORDINATE SYSTEM: OHIO STATE NORTH  
COMBINED SCALE FACTOR: 1.00000000 (ON GRID)  
ORIGIN OF COORDINATE SYSTEM: 0,0,0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

WORK LIMITS

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

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A 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 209 - LINEAR GRADING, AS PER PLAN

LINEAR GRADING, AS PER PLAN, SHALL CONSIST OF EXCAVATING TOPSOIL, AND PLACING A GRANULAR MATERIAL.

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

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

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 209, LINEAR GRADING, AS PER PLAN.

SEEDING AND MULCHING

THE FOLLOWING QUANTITY IS PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, SEEDING AND MULCHING 3,478 SQ. YD.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES.

QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

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, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E

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

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

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

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

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

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE OHIO TURNPIKE & INFRASTRUCTURE COMMISSION, REPRESENTATIVES OF OTIC AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE OHIO TURNPIKE & INFRASTRUCTURE COMMISSION.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE OHIO TURNPIKE & INFRASTRUCTURE COMMISSION.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

MANHOLES, CATCH BASINS AND INLETS REMOVED OR ABANDONED

ALL CASTINGS SHALL BE CAREFULLY REMOVED AND STORED WITHIN THE RIGHT OF WAY FOR SALVAGE BY OHIO TURNPIKE & INFRASTRUCTURE FORCES.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 ITEM.

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

CONTRACTION AND/OR EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN CONTRACTION AND EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. IN ALL CASES, THE PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES INCLUDING THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS IS IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2 AND THE SPECIFICATIONS.

CONTRACTION JOINTS IN CONCRETE PAVEMENT

WHERE NEW CONCRETE IS PLACED ADJACENT TO EXISTING CONCRETE, PROVIDE CONTRACTION JOINTS IN THE NEW CONCRETE TO FORM CONTINUOUS JOINTS WITH THOSE IN THE EXISTING CONCRETE.

THE MAXIMUM DISTANCE BETWEEN THE JOINTS IN THE NEW CONCRETE ARE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2, IF NECESSARY, ADDITIONAL JOINTS MAY BE PROVIDED IN THE NEW CONCRETE AT APPROXIMATELY EQUAL INTERVALS BETWEEN EXISTING JOINTS THAT EXCEED THE MAXIMUM SPACING.

ITEM 630 - SIGN ERECTED, FLAT SHEET, AS PER PLAN

THIS ITEM SHALL BE AS OUTLINED IN 630 EXCEPT THAT ALL SIGNS AND SUPPORTS TO BE INSTALLED SHALL BE PROVIDED BY THE COMMISSION, THE CONTRACTOR SHALL CONTACT THE CHIEF ENGINEER TO ARRANGE FOR PICKUP OF THE SIGN AND POST MATERIALS FOR THE PROJECT. ALL SIGNS SHALL BE INSPECTED BY THE COMMISSION STAFF IN THE PRESENCE OF THE CONTRACTOR PRIOR TO LOADING OF PROVIDED MATERIALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFE TRANSPORTATION OF THE MATERIALS PROVIDED TO THE JOB SITE, UPON ARRIVAL AT THE JOB SITE, THE TRANSPORTED SIGNING MATERIALS SHALL BE INSPECTED BY THE COMMISSION PERSONNEL TO ENSURE THAT NO DAMAGE OCCURRED DURING TRANSPORT. COSTS ASSOCIATED WITH THE PICK-UP OF THE SIGNS AND SUPPORTS, THE TRANSPORTATION TO THE PROJECT SITE AND ANY STORAGE COSTS UNTIL ERECTION SHALL BE CONSIDERED INCIDENTAL TO THE ITEM NECESSITATING THE WORK. THIS ITEM SHALL INCLUDE ALL LABOR AND MATERIAL COSTS NECESSARY TO INSTALL THE SIGNS AS SHOWN IN THE PLANS.

ALL COSTS ASSOCIATED WITH THIS ITEM SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 630 - SIGN ERECTED, FLAT SHEET, AS PER PLAN, EACH.

ITEM 670 - VEGETATED BIOFILTER, AS PER PLAN

THIS PLAN UTILIZES VEGETATED BIOFILTERS FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AS SHOWN IN THE PLANS TO ANY DISTURBED AREA ON THE SHOULDER AND FORESLOPE DRAINING TO A VEGETATED BIOFILTER. THE DITCH FOR EACH VEGETATED BIOFILTER SHALL BE TRAPEZOIDAL, AS SHOWN IN THE PLAN CROSS SECTIONS. PROVIDE ITEM 670 AS PER PLAN.

EARTH DISTURBED AREA

THE EARTH DISTURBED AREA (EDA) FOR THIS PROJECT IS 1.5 ACRES

8  
51

PROJECT 43-19-03  
DATE: 08/21/18

GENERAL NOTES

WOOD AND OTTAWA COUNTIES

M.P. 71.4 AND 75.2

DESIGNED  
ASW  
DRAWN  
ASW

CHECKED  
SJP  
IN CHARGE  
HVV

NO.  
1

REVISIONS  
ADDENDUM 3

BY  
MTG

DATE  
12/18

DESIGN AGENCY  
KS Associates Inc.

260 BURNS ROAD, ELYRIA, OHIO 44035

OHIO  
TURNPIKE

OHIO  
TURNPIKE

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

MP71.4\_GG001.dwg: 12/17/18 - 3:30pm

ESTIMATED QUANTITIES							
ITEM	TOTAL	UNIT	ITEM DESCRIPTION	GENERAL	M.P. 71.4	M.P. 75.2	SHT NO.
GENERAL							
IB. ART. 6	LUMP SUM	LUMP SUM	PREMIUM FOR CONTRACT PERFORMANCE BOND AND PAYMENT BOND	LUMP SUM			
SP 614	LUMP SUM	LUMP SUM	MAINTAINING TRAFFIC	LUMP SUM			
SP 619	LUMP SUM	LUMP SUM	FIELD OFFICE	LUMP SUM			
SP 623	LUMP SUM	LUMP SUM	CONSTRUCTION LAYOUT SURVEY	LUMP SUM			
624	LUMP SUM	LUMP SUM	MOBILIZATION	LUMP SUM			
ROADWAY							
201	LUMP SUM	LUMP SUM	CLEARING AND GRUBBING	LUMP SUM			
202	1,221	FOOT	GUARDRAIL REMOVED		1,096	125	
202	8	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED		4	4	
202	56	FOOT	CONCRETE BARRIER REMOVED		56		
202	2,002	SQ. YD.	PAVEMENT REMOVED		2,002		
202	5	EACH	CATCH BASIN REMOVED		5		
202	190	FOOT	PIPE REMOVED		190		
202	3	EACH	HEADWALL REMOVED		3		
203	4,527	CU. YD.	EMBANKMENT		4,527		
203	2,224	CU. YD.	EXCAVATION		2,224		
204	2,692	SQ. YD.	SUBGRADE COMPACTION		2,559	133	2
209	302	FOOT	LINEAR GRADING, AS PER PLAN		302		8
254	313	SQ. YD.	PAVEMENT PLANING, ASPHALT CONCRETE (3")			313	
SP 304	442	CU. YD.	AGGREGATE BASE		420	22	2
SP 402	101	CU. YD.	ASPHALT CONCRETE BASE COURSE OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG70-22 (1-3/4")		101		
SP 404	87	CU. YD.	ASPHALT CONCRETE SURFACE COURSE, USING CRUSHED SLAG, PG70-22 (1-1/2")		87		
407	144	GAL.	NON-TRACKING TACK COAT		125	19	
407	180	GAL.	NON-TRACKING TACK COAT FOR INTERMEDIATE COURSE		156	24	
448	16	CU. YD.	1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22			16	
448	15	CU. YD.	1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22			15	
451	104	FOOT	SPECIAL - PRESSURE RELIEF JOINT, TYPE B		104		
452	2,094	SQ. YD.	12-1/2" NON-REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT		2,094		
601	4	CU. YD.	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER		4		
601	118	SQ. YD.	TIED CONCRETE BLOCK MAT, TYPE 2		118		
SP 605	698	FOOT	6" SHALLOW PIPE UNDERDRAIN, WITH FABRIC WRAP		698		
606	1,038	FOOT	GUARDRAIL, TYPE MGS, USING STEEL POSTS		913	125	
606	8	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1, USING STEEL POSTS		4	4	
606	4	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2, USING STEEL POSTS		4		
606	2	EACH	MGS ANCHOR ASSEMBLY, TYPE E		2		
606	4	EACH	MGS ANCHOR ASSEMBLY, TYPE T		4		
609	80	SQ. YD.	CONCRETE MEDIAN		80		
609	80	FOOT	CURB, TYPE 4-C		80		
SP 611	80	FOOT	6" CONDUIT, TYPE F, 707.33		80		
SP 611	51	FOOT	12" CONDUIT, TYPE B		51		
SP 611	223	FOOT	12" CONDUIT, TYPE F, 707.33		223		
SP 611	11	FOOT	18" CONDUIT, TYPE A, 706.02		11		
SP 611	5	EACH	CATCH BASIN ADJUSTED TO GRADE		1	4	
SP 611	5	EACH	CATCH BASIN, NO. CB-1		5		
614	LUMP SUM	LUMP SUM	DETOUR SIGNING	LUMP SUM			
614	3	EACH	REPLACEMENT SIGN		3		
620	4	EACH	DELINEATOR		4		
622	118	FOOT	CONCRETE BARRIER, TYPE D		118		
622	4	EACH	CONCRETE BARRIER END SECTION, TYPE D		4		
626	51	EACH	BARRIER REFLECTORS, 1-WAY		43	8	
SP 627	28	CU. YD.	STONE SHOULDER PROTECTION		28		
630	2	EACH	SIGN ERECTED, FLAT SHEET, AS PER PLAN		2		8
630	32	FOOT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X12		32		
630	4	EACH	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION		4		
630	3	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL		3		
630	3	EACH	REMOVAL OF GROUND MOUNTED POST AND DISPOSAL		3		
630	2	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION		2		
630	4	EACH	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM AND REERECTION		4		

ESTIMATED QUANTITIES							
ITEM	TOTAL	UNIT	ITEM DESCRIPTION	GENERAL	M.P. 71.4	M.P. 75.2	SHT NO.
630	12	SQ. FT.	ADDITIONAL SIGNS, GROUND MOUNTED, AS DIRECTED BY THE ENGINEER		12		
642	0.7	MILE	EDGE LINE, 4", TYPE 1		0.5	0.2	
642	0.1	MILE	CENTER LINE, TYPE 1			0.1	
659	3,478	SQ. YD.	SEEDING AND MULCHING		3,478		
659	386	CU. YD.	TOPSOIL		386		
670	282	SQ. YD.	DITCH EROSION PROTECTION		282		
670	360	SQ. YD.	VEGETATED BIOFILTER, AS PER PLAN		360		8
832	10,000	EACH	EROSION CONTROL		10,000		
832	LUMP SUM	LUMP SUM	STORM WATER POLLUTION PROTECTION PLAN	LUMP SUM			
SPECIAL	57	FOOT	PIPE CLEANOUT, 24" AND UNDER		57		14
SPECIAL	2	EACH	18" PRECAST CONCRETE END SECTION		2		25
SPECIAL	1	EACH	PRECAST REINFORCED CONCRETE OUTLET		1		14
STRUCTURES							
SP 202	LUMP SUM	LUMP SUM	PORTIONS OF STRUCTURE REMOVED		LUMP SUM	LUMP SUM	
503	LUMP SUM	LUMP SUM	COFFERDAMS AND EXCAVATION BRACING		LUMP SUM		
503	242	CU. YD.	UNCLASSIFIED EXCAVATION		242		
505	LUMP SUM	LUMP SUM	PILE DRIVING EQUIPMENT MOBILIZATION		LUMP SUM		
507	1,400	FOOT	STEEL PILES, HP10x42, DRIVEN		1,400		
507	1,600	FOOT	STEEL PILES, HP10x42, FURNISHED		1,600		
SP 509	183,623	POUND	EPOXY COATED REINFORCING STEEL, GRADE 60		127,381	56,242	
510	310	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN		310		9
511	127	CU. YD.	CLASS QC1 CONCRETE, ABUTMENTS INCLUDING FOOTINGS		123	4	
511	170	CU. YD.	CLASS QC1 CONCRETE, PIERS		170		
511	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE		2		
SP 511B	567	CU. YD.	CLASS HP4 CONCRETE, SUPERSTRUCTURE DECK SLAB		350	217	
SP 511B	150	CU. YD.	CLASS S CONCRETE, BARRIERS AND PARAPETS, USING TYPE 1 CEMENT		67	83	
SP 511B	12	CU. YD.	CLASS HP4 CONCRETE FOR PREPLACEMENT TESTING		6	6	
513	179,901	POUND	STRUCTURAL STEEL		179,901		
513	6,816	EACH	WELDED STUD SHEAR CONNECTORS		6,816		
SP 514A	LUMP SUM	LUMP SUM	SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU		LUMP SUM		
SP 514A	LUMP SUM	LUMP SUM	FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU		LUMP SUM		
SP 514A	LUMP SUM	LUMP SUM	FIELD PAINTING OF NEW AND EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU		LUMP SUM		
SP 514A	LUMP SUM	LUMP SUM	FIELD PAINTING OF NEW AND EXISTING STEEL, FINISH COAT, SYSTEM OZEU		LUMP SUM		
SP 514A	20	HOURS	REMEDICATION OF CHLORIDES		52		
SP 514A	32	HOURS	GRINDING FINIS, TEARS, SLIVERS		84		
516	20	EACH	ELASTOMERIC BEARING PAD		20		
516	112	FOOT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL		112		
SP 516A	100	FOOT	CRACK REPAIR USING EPOXY INJECTION		50	50	
SP 516B	992	FOOT	SEALING OF CONSTRUCTION JOINTS		446	546	
SP 516G	20	EACH	REPLACE EXPANSION BEARING DEVICE		20		
SP 516J	5	EACH	REPLACE FIXED BEARING DEVICE		5		
518	64	CU. YD.	POROUS BACKFILL WITH GEOTEXTILE FABRIC		64		
518	72	FOOT	6" PERFORATED CORRUGATED PLASTIC PIPE		72		
518	80	FOOT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE		80		
SP 519	200	SQ. FT.	PATCHING OF CONCRETE STRUCTURES			200	
523	2	EACH	DYNAMIC LOAD TESTING		2		
SP 525A	LUMP SUM	LUMP SUM	WORKER PROTECTION		LUMP SUM		
SP 525A	40	EACH	PROTECTIVE CLOTHING/EQUIPMENT SET		40		
SP 525A	LUMP SUM	LUMP SUM	ESTABLISH REGULATED AREAS		LUMP SUM		
SP 525A	LUMP SUM	LUMP SUM	PAINT WASTE/HAZARDOUS WASTE CLASSIFICATION, HANDLING, AND DISPOSAL		LUMP SUM		
SP 525A	LUMP SUM	LUMP SUM	CONTAINMENT SYSTEM		LUMP SUM		
526	426	SQ. YD.	REINFORCED CONCRETE APPROACH SLABS		300	126	
526	106	FOOT	TYPE C INSTALLATION		106		
SP 527	LUMP SUM	LUMP SUM	FALSEWORK, TEMPORARY BRACING AND PROTECTIVE STRUCTURES		LUMP SUM	LUMP SUM	
SP 533	72	FOOT	3" CONTINUOUS STRIP SEAL IN STRUCTURAL STEEL JOINT			72	
SP 536	2,561	SQ. YD.	CONCRETE WEATHERPROOFING, DECK AND APPROACH SLABS		1,477	1,084	
SP 536	976	SQ. YD.	CONCRETE WEATHERPROOFING, SUBSTRUCTURE		634	342	
601	66	CU. YD.	CRUSHED AGGREGATE SLOPE PROTECTION		66		
SP 607	490	FOOT	TYPE II FENCE, ALL ALUMINUM (6'-0" CHAIN LINK WITH SPECIALS)			490	

DESIGN AGENCY  
**KS** KS Associates Inc.  
260 BURNS ROAD, ELYRIA, OHIO 44035

BY DATE  
RAP 12/18  
MTG 12/18

REVISIONS  
ADDENDUM 1  
ADDENDUM 3

CHECKED  
SJP  
IN CHARGE

DESIGNED  
CFE  
DRAWN  
CFE

NO.  
1  
2

WOOD AND OTTAWA COUNTIES

ESTIMATED QUANTITIES

PROJECT 43-19-03  
DATE: 08/21/18

10  
51

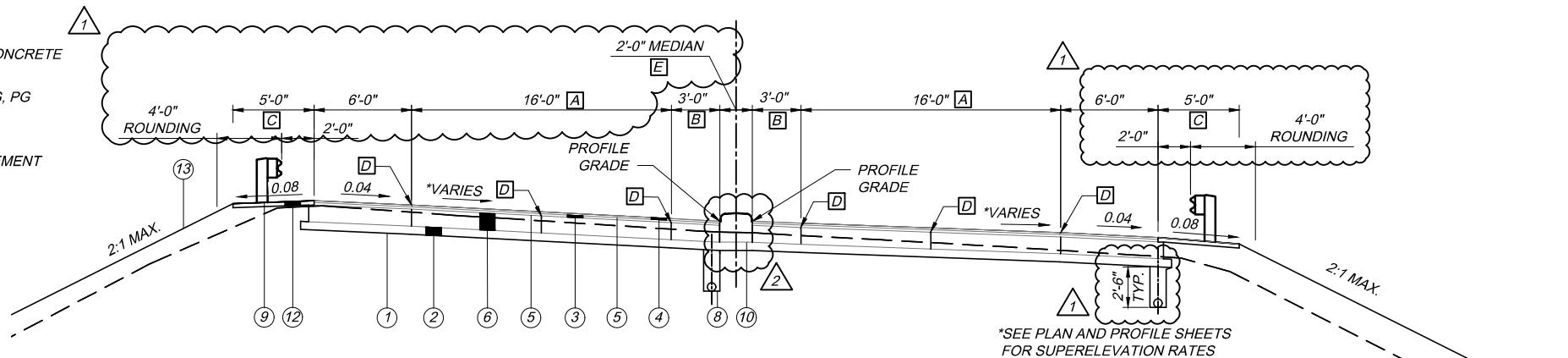
M.P. 71.4 AND 75.2

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

OHIO TURNPIKE

LEGEND

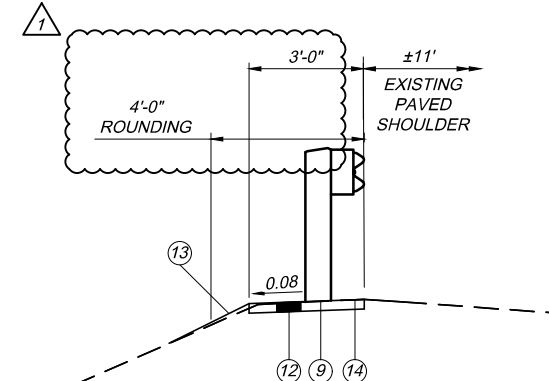
- ① ITEM 204 SUBGRADE COMPACTION  
② ITEM SP 304 6" AGGREGATE BASE  
③ ITEM SP 402 ASPHALT CONCRETE BASE COURSE OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 70-22 (1-3/4")  
④ ITEM SP 404 ASPHALT CONCRETE SURFACE COURSE, USING CRUSHED SLAG, PG 70-22 (1-1/2")  
⑤ ITEM 407 NON-TRACKING TACK COAT  
⑥ ITEM 452 12-1/2" NON-REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT  
⑦ ITEM 526 15" REINFORCED CONCRETE APPROACH SLAB  
⑧ ITEM SP 605 6" SHALLOW PIPE UNDERDRAIN, WITH FABRIC FILTER  
⑨ ITEM 606 GUARDRAIL, TYPE MGS  
⑩ ITEM 609 CONCRETE MEDIAN  
⑪ ITEM 609 CURB, TYPE 4-C  
⑫ ITEM SP 627 3" STONE SHOULDER PROTECTION  
⑬ ITEM 659 SEEDING AND MULCHING  
⑭ ITEM 209 LINEAR GRADING, AS PER PLAN



SUPERELEVATED SECTION - RAMP OVER SR 420

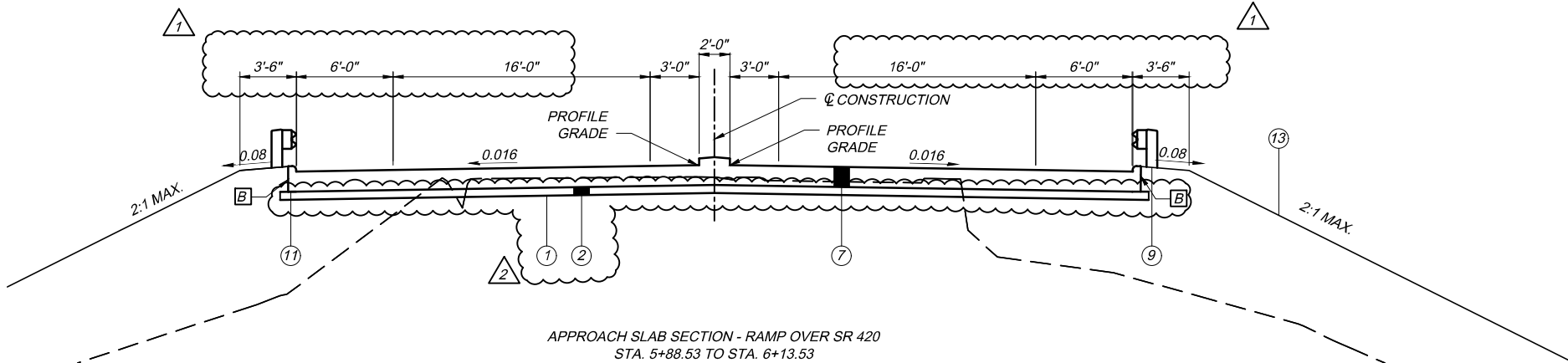
STA. 8+33.53 TO STA. 10+11.03

- [A] VARIES 16'-0" TO ±14'-6" FROM STA. 9+86.03 TO STA. 10+11.03  
[B] VARIES 3'-0" TO ±1'-6" FROM STA. 9+86.03 TO STA. 10+11.03  
[C] VARIES 5'-0" TO 3'-0" FROM STA. 10+01.03 TO STA. 10+11.03, RT  
VARIES 5'-0" TO 3'-0" FROM STA. 10+11.03 TO STA. 10+21.03, LT  
[D] LONGITUDINAL JOINT PER BP-6.1  
[E] CONCRETE MEDIAN PER RM-3.1 WITH 2'-0" MIN. WIDTH



TYPICAL GUARDRAIL DETAIL

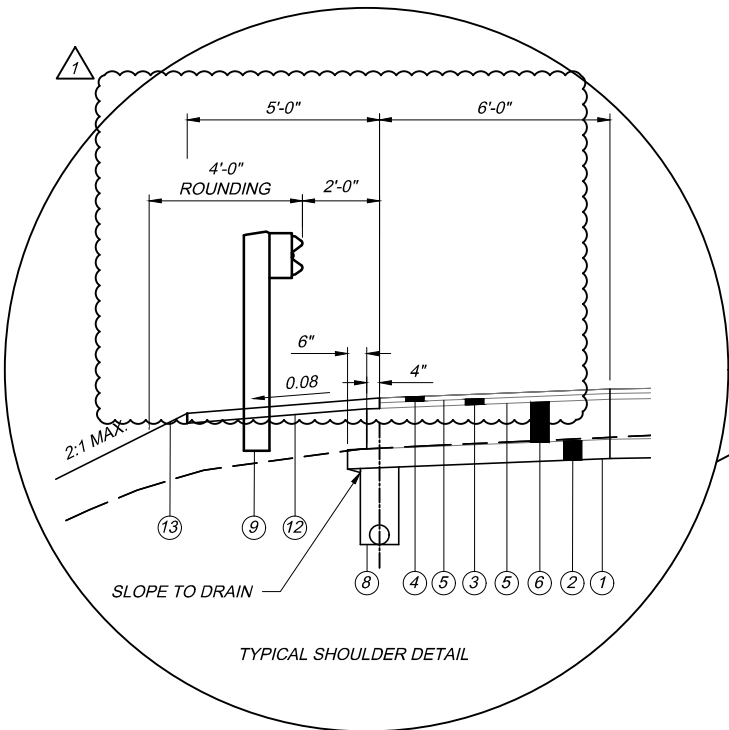
STA. 10+11.03 TO STA. 11+71.67, LT  
STA. 10+21.03 TO STA. 11+52.02, RT



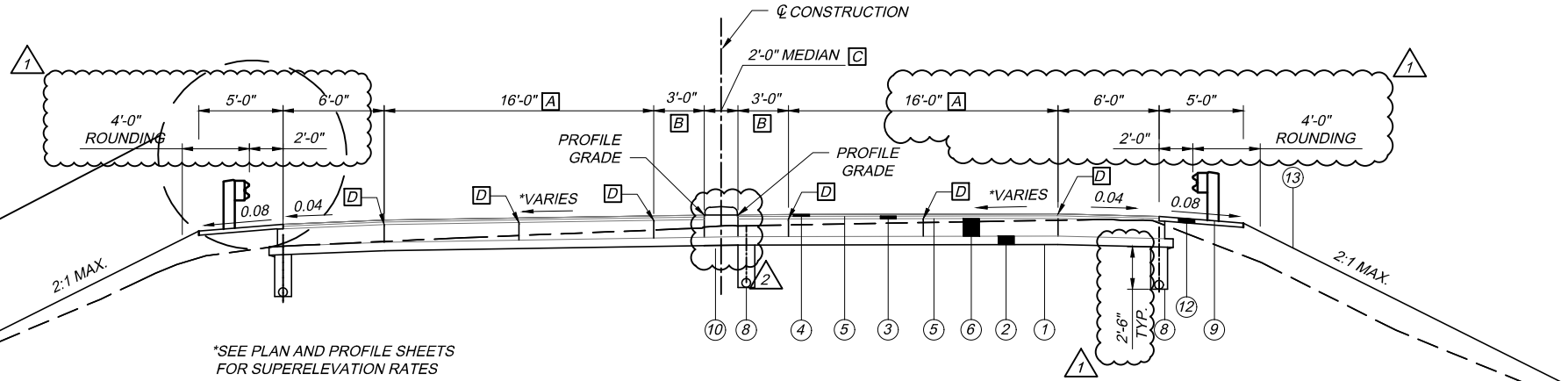
APPROACH SLAB SECTION - RAMP OVER SR 420

STA. 5+88.53 TO STA. 6+13.53  
STA. 8+08.53 TO STA. 8+33.53

- [B] MP 71.4 - INTEGRAL CURB, TYPE 4-A  
STA. 5+88.53 TO STA. 5+99.45 AND STA. 8+22.61 TO STA. 8+33.53



TYPICAL SHOULDER DETAIL



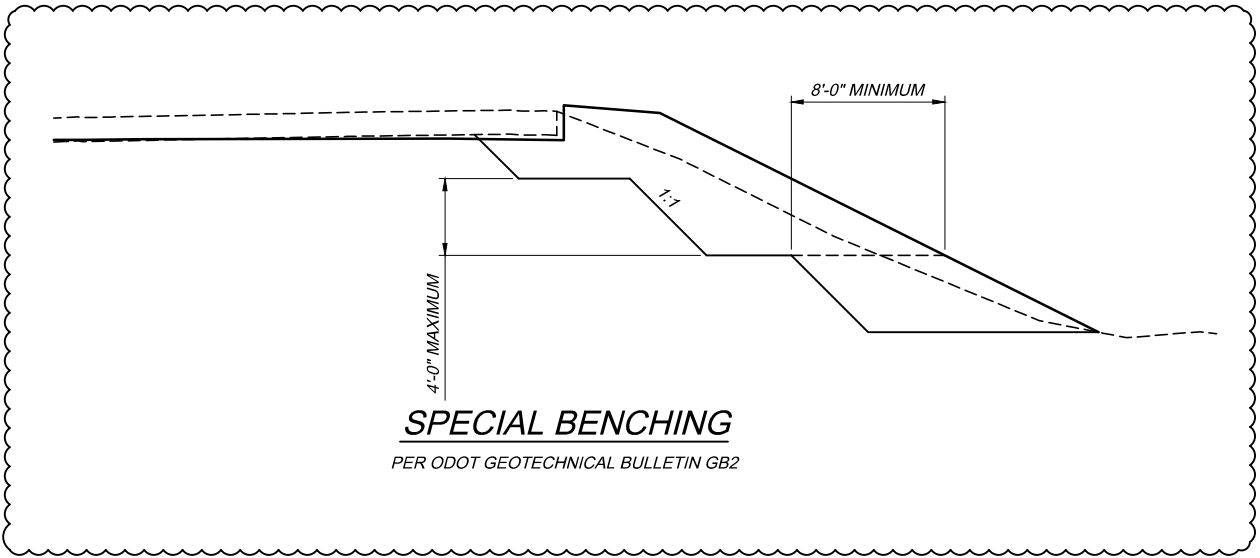
SUPERELEVATED SECTION - RAMP OVER SR 420

STA. 4+08.25 TO STA. 5+88.53

- [A] VARIES ±14'-6" TO 16'-0" FROM STA. 4+08.25 TO STA. 4+30.42  
[B] VARIES ±1'-6" TO 3'-0" FROM STA. 4+08.25 TO STA. 4+30.42  
[C] CONCRETE MEDIAN PER RM-3.1 WITH 2'-0" MIN. WIDTH  
±3'-0" FROM STA. 4+08.25 TO 4+23.50  
VARIES 3'-0" TO 2'-0" FROM STA. 4+23.50 TO STA. 4+33.50  
[D] LONGITUDINAL JOINT PER BP-6.1

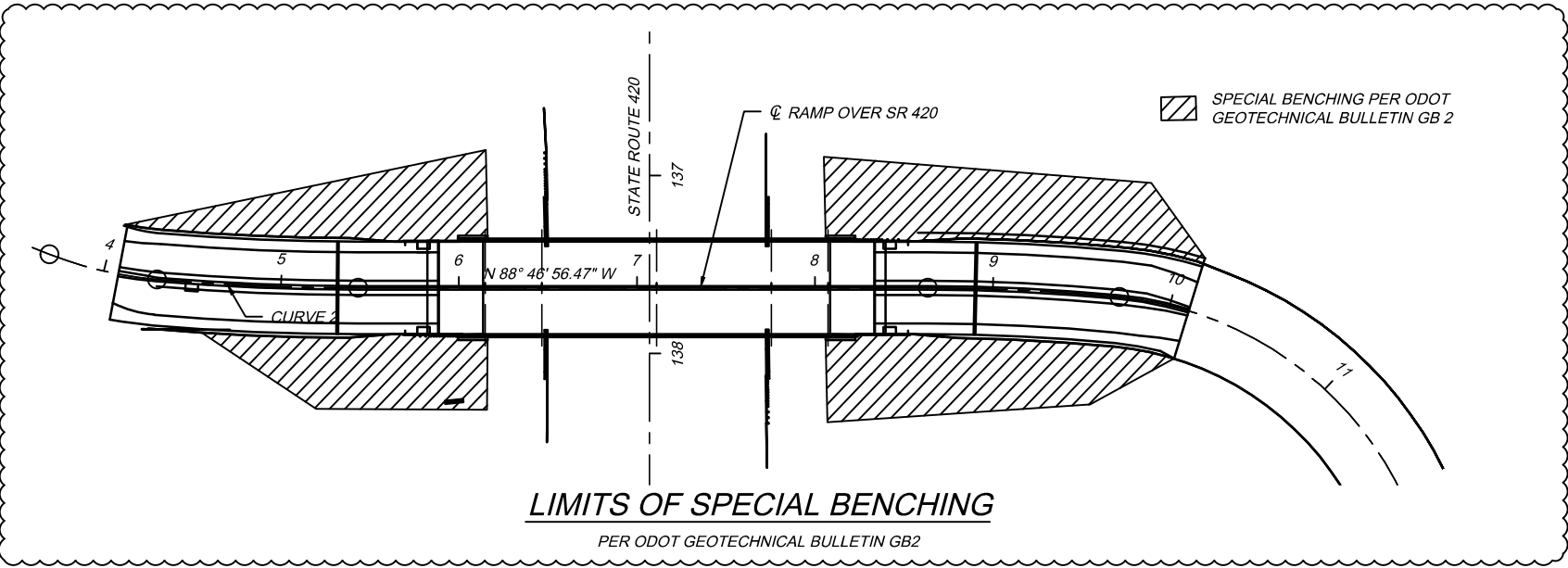
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STATION	END AREA		VOLUME		SEEDING	
	CUT	FILL	CUT	FILL	END WIDTH	SQUARE YARDS
4+08.25	0	0			5	62
4+50.00	45	94	34	73	21	213
5+00.00	98	212	132	283	55	334
5+50.00	145	324	225	496	65	242
5+80.03	233	458	210	435	80	78
5+88.53	231	500	73	151	84	106
6+00.00	240	605	100	235	83	131
6+13.53	155	590	99	299	92	314
8+08.53	244	640	220	522	108	314
8+33.53	232	487	70	147	118	112
8+42.03	213	455	63	129	118	104
8+50.00	212	426	379	741	117	641
9+00.00	197	374	352	611	114	634
9+50.00	183	286	236	364	114	449
10+00.00	72	107	30	42	47	58
10+11.03	74	99			47	
TOTALS			2224	4527		3478



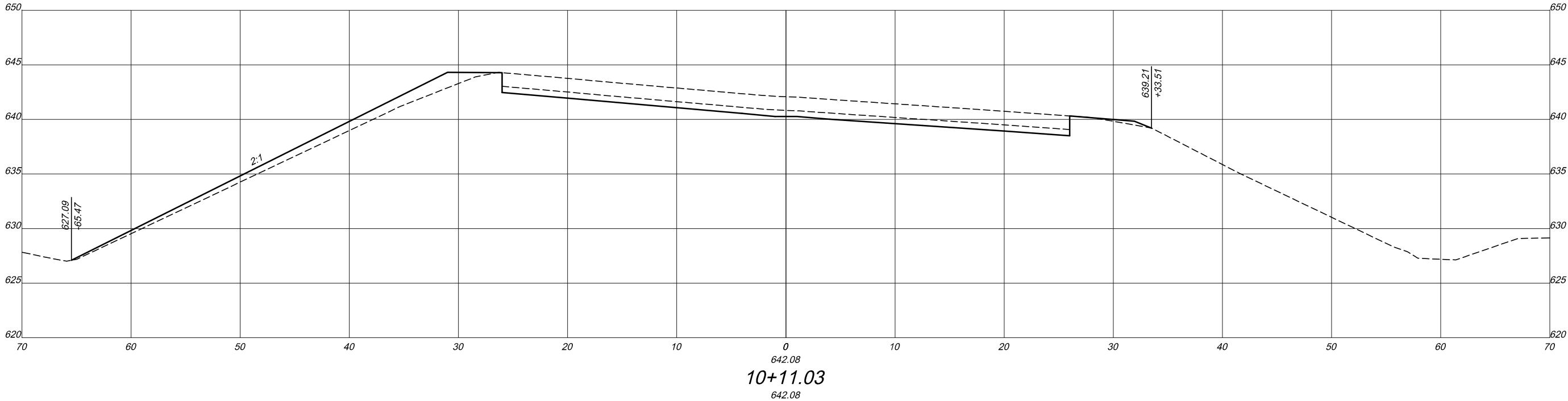
**SPECIAL BENCHING**

PER ODOT GEOTECHNICAL BULLETIN GB2



**LIMITS OF SPECIAL BENCHING**

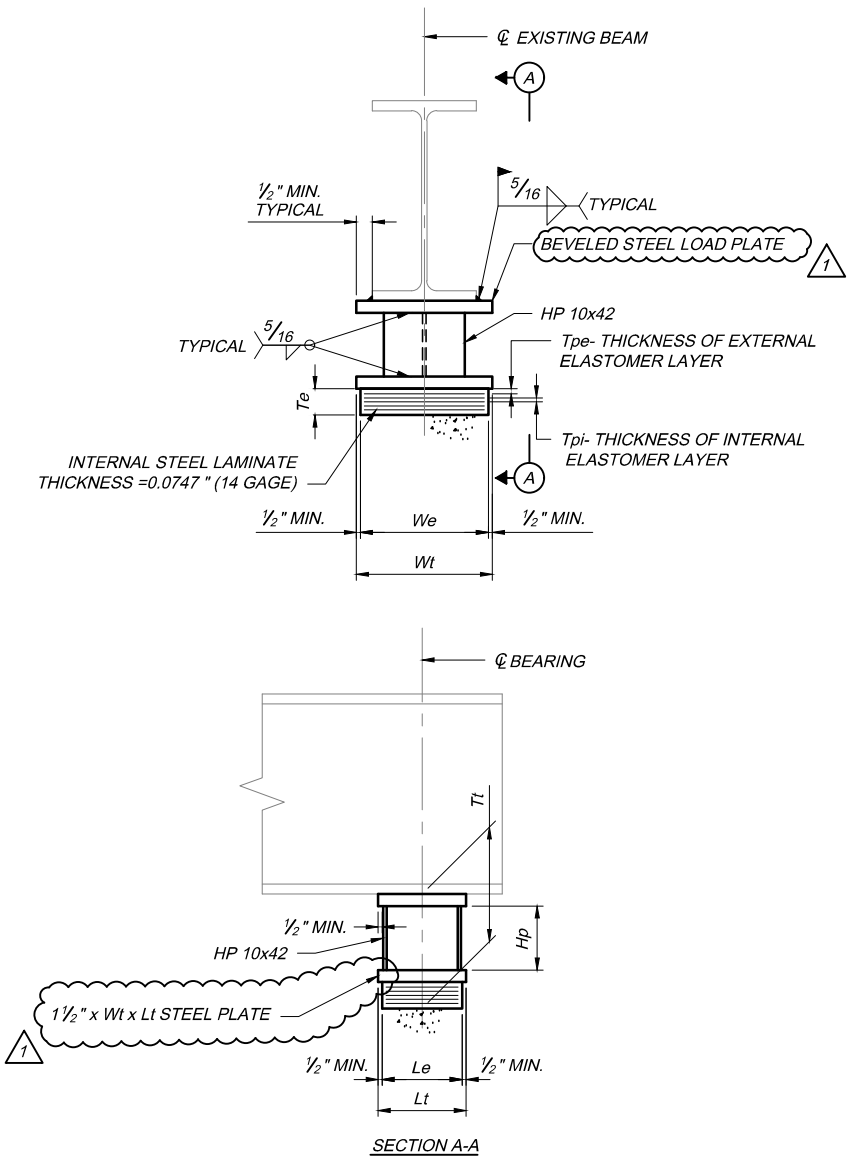
PER ODOT GEOTECHNICAL BULLETIN GB2



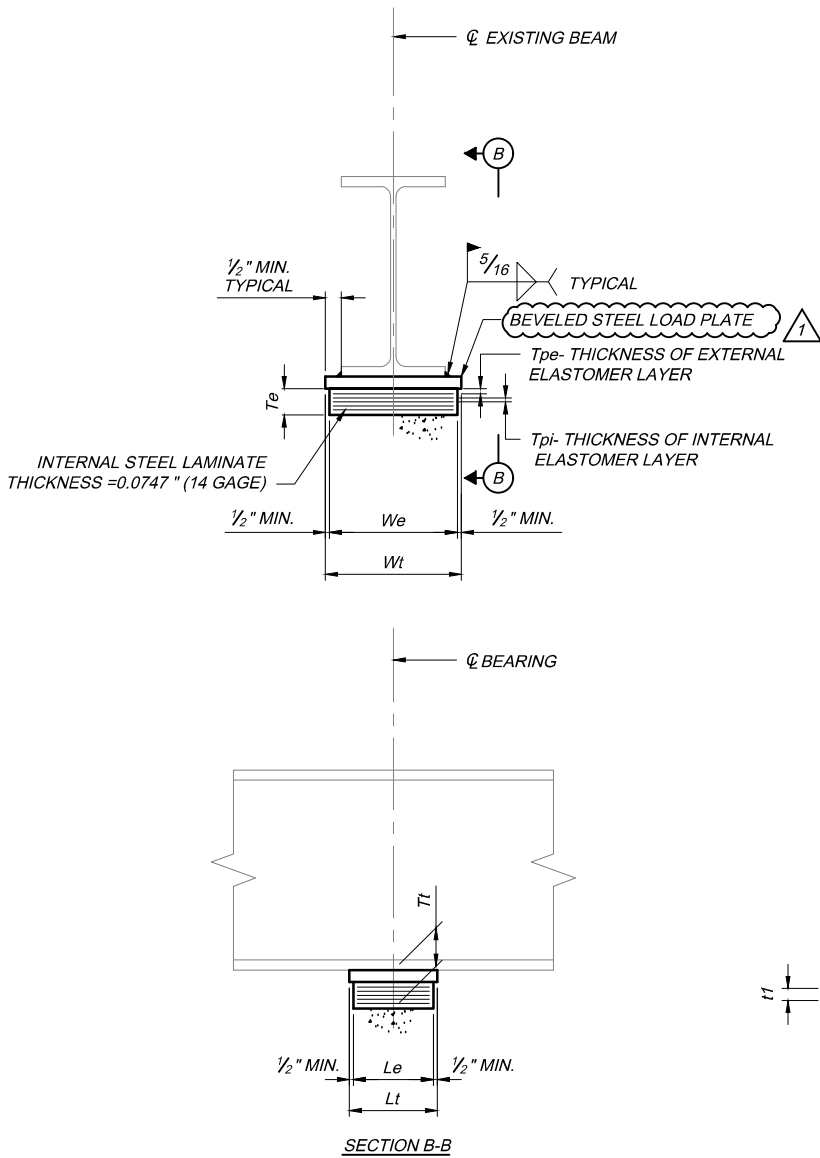
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**LAMINATED ELASTOMERIC  
EXPANSION BEARING**  
(AT ABUTMENTS)



**LAMINATED ELASTOMERIC  
EXPANSION BEARING**  
(AT PIERS)



**BEARING DIMENSION TABLE**

BEARING LOCATION	BEARING TYPE	DEAD LOAD (KIPS)	LIVE LOAD (KIPS)	TOTAL LOAD (KIPS)	Le	We	Tpi	No. OF Tpi'S	"Tpe" (2 EA.)"	NUMBER OF INTERNAL LAMINATES (14 GAUGE)	Te	BEVELED STEEL LOAD PLATE				Tt
												Lt	Wt	t1	t2	
REAR ABUTMENT	EXPANSION	9	55	64	9	10	0.28"	7	0.19"	8	2 15/16"	10 3/4"	16"	1 1/2"	1 3/4"	*
PIER 1	EXPANSION	58	97	155	12	14	0.35"	6	0.19"	7	3"	13"	16"	1 1/2"	1 5/8"	4 9/16"
PIER 2	EXPANSION	77	100	177	11	16	0.32"	6	0.19"	7	2 13/16"	12"	17"	1 1/2"	1 1/2"	4 5/16"
PIER 3	EXPANSION	58	97	155	12	14	0.35"	6	0.19"	7	3"	13"	16"	1 5/8"	1 1/2"	4 9/16"
FORWARD ABUTMENT	EXPANSION	9	55	64	9	10	0.28"	7	0.19"	8	2 15/16"	10 3/4"	16"	1 3/4"	1 1/2"	*

**ABUTMENT BEARING DIMENSION TABLE**

	BEAM DIMENSION	A	B	C	D	E	F	G	H	J
		10 3/16"	11 3/8"	7 3/8"	8 5/8"	9 7/8"	8 5/8"	7 3/8"	11 3/8"	10 3/16"
REAR ABUTMENT	Tt	16 1/4"	17 7/16"	13 7/16"	14 11/16"	15 15/16"	14 11/16"	13 7/16"	17 7/16"	16 1/4"
FOWARD ABUTMENT	Tt	16 1/4"	17 7/16"	13 7/16"	14 11/16"	15 15/16"	14 11/16"	13 7/16"	17 7/16"	16 1/4"

**NOTES**

ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE LONG TERM COMPRESSION PROOF LOAD TEST (AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED.

WELDING SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300 °F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

BEARING REPOSITIONING: IF THE BEARINGS ARE SET AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40°F AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/8 OF THE BEARING HEIGHT AT 60°F ± 10°F, THE GIRDERS SHALL BE RAISED TO ALLOW THE BEARING TO RETURN TO THEIR UNDEFORMED SHAPE AT 60°F ± 10°F.

THE STEEL LOAD PLATE SHALL BE ASTM A709 GRADE 36 STEEL AND SHALL BE PAINTED IN ACCORDANCE WITH SP 514A. SEE SP 514A FOR PAYMENT INFORMATION.

THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

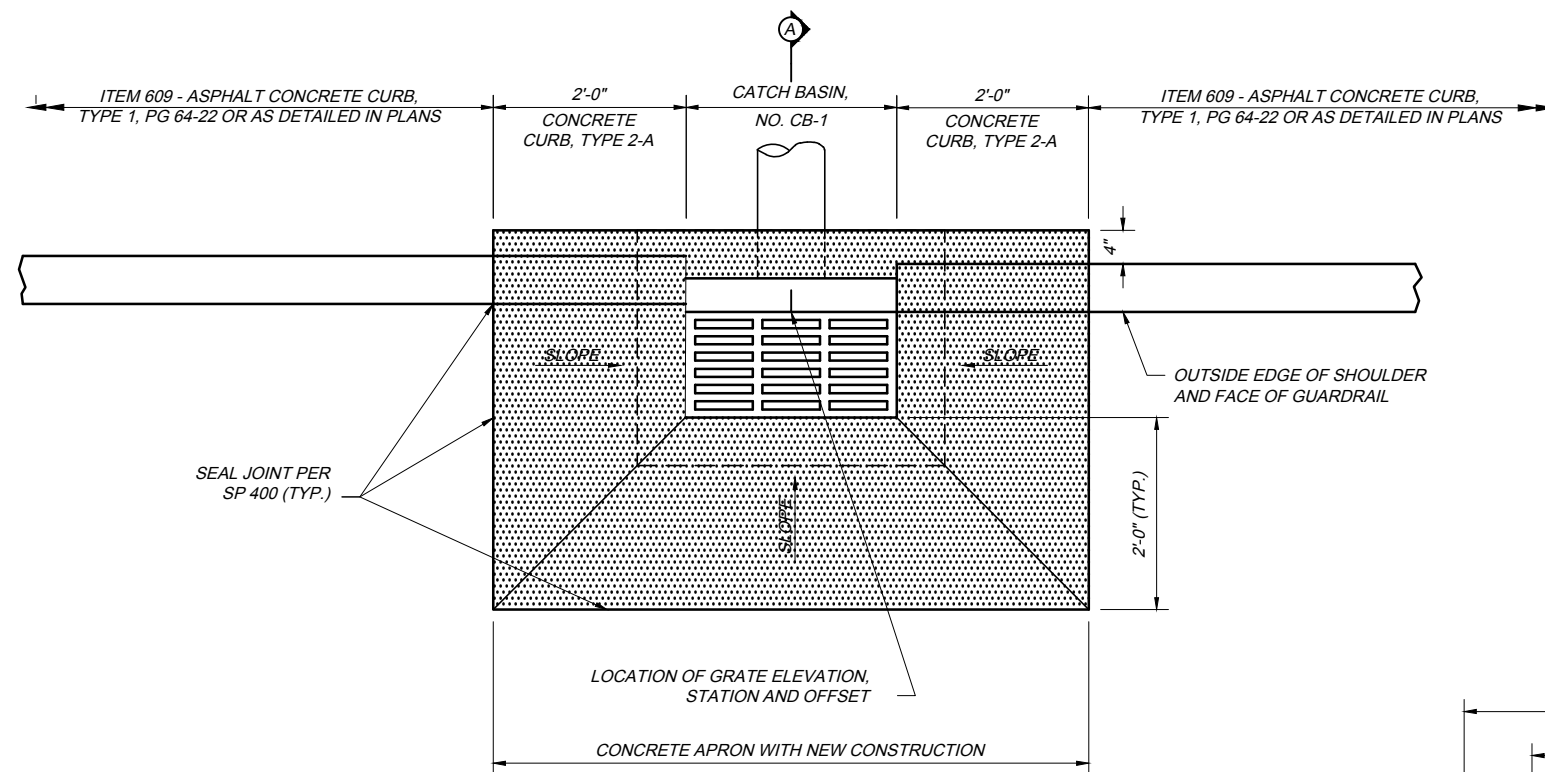
SUPERSTRUCTURE SUPPORT, AND/OR JACKING AND RESETTNG OF BEARINGS AS DIRECTED BY THE ENGINEER SHALL BE PERFORMED IN ACCORDANCE WITH ITEM 516 AND SP 516G. SEE STRUCTURE NOTES AND SPECIAL PROVISIONS.

BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, AND INCIDENTALS NECESSARY TO FURNISHED AND INSTALL LAMINATED ELASTOMERIC BEARINGS. SAMPLE BEARINGS SHALL NOT BE MEASURED FOR PAYMENT.

ALL BEARING SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INDICATE THE BEARING LOCATION ON THE BRIDGE AND A DIRECTION ARROW THAT POINTS UP STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED.

CONTRACTOR IS TO VERIFY EXISTING BEARING HEIGHTS PRIOR TO FABRICATION OF NEW BEARINGS AND LOAD PLATES. SEE GENERAL NOTES FOR EXISTING STRUCTURE VERIFICATION NOTE. FURNISH STEEL SHIM PLATES, FULL WIDTH OF BEAM FLANGE AND FULL LENGTH OF LOAD PLATE, AS REQUIRED BETWEEN THE BEAM FLANGE AND THE LOAD PLATE, TO PROVIDE THE REQUIRED STRUCTURE DEPTH AND PROPERLY ALIGN THE DECK JOINTS. CONTRACTOR IS RESPONSIBLE FOR PROPER EXPANSION JOINT FIT-UP. THE CONTRACTOR SHALL FURNISH SHIM PLATES WITH EACH BEARING DEVICE EVEN THOUGH THE CONTRACTOR MEASURED THE EXISTING BEARING HEIGHTS AND THE ENGINEER CONCURRED WITH THE MEASUREMENTS. INCLUDE STEEL SHIMS WITH ITEM SP 516 FOR PAYMENT. INCLUDE SHIM PACK WITH BEARINGS DELIVERED TO THE SITE FOR FINAL FIELD ADJUSTMENTS.

\* VARIES, SEE ABUTMENT BEARING DIMENSION TABLE



### PLAN VIEW

ITEM 601 - ROCK CHANNEL  
PROTECTION, TYPE C WITH  
FILTER FABRIC (4'W X 5'L X 18"D  
= 1.1 C.Y)

*VARIES 2:1 TO 4:1 SLOPE*

ITEM SPECIAL - 12" PRECAST  
CONCRETE END SECTION PER  
OTIC STANDARD DRAWING DR-1

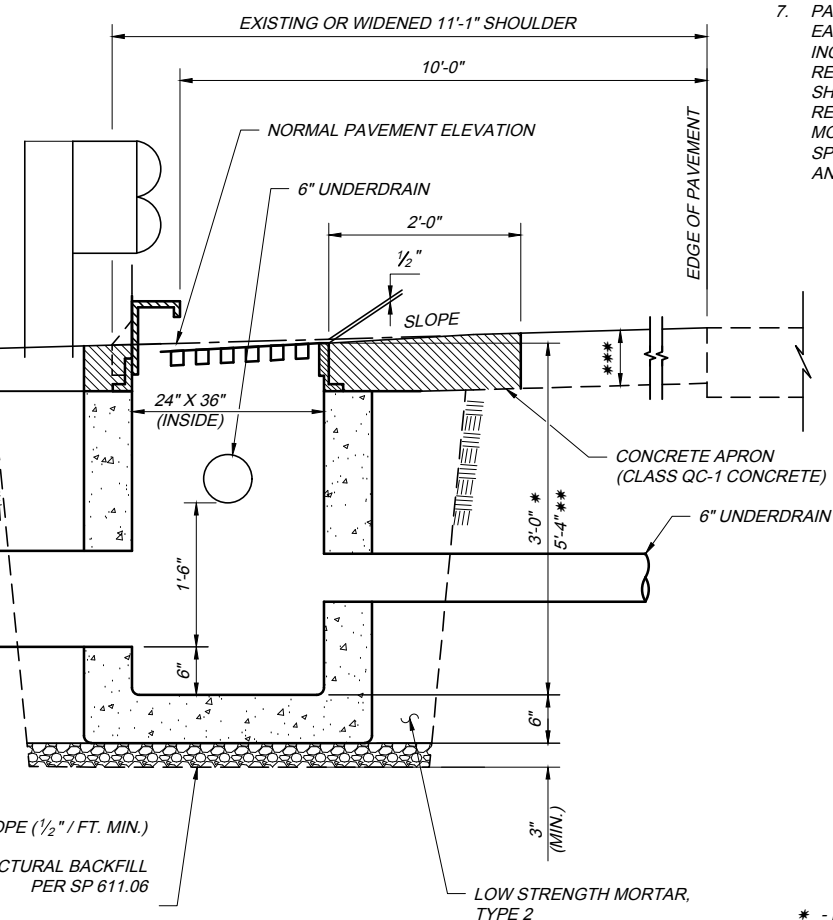
2'-0"  
MIN. COVER

STANDARD BEND WITH  
BANDING (TYP.)

12" CONDUIT,  
TYPE F, 707.33 —

— SLOPE (1/2" / FT. MIN.)

– STANDARD BEND WITH  
BANDING (TYP.)



*SECTION A-A*

NOTES:

1. GRATE AND CASTING: THE GRATE AND CASTING SHALL BE A NEENAH FOUNDRY CO., MODEL NO. R-3246 (HEAVY DUTY), EAST JORDAN IRON WORKS, MODEL NO. 7030 (HEAVY DUTY) OR AN APPROVED EQUAL. THE FOLLOWING TEXT SHALL BE CAST INTO THE TOP OF THE GRATE: **"DUMP NO WASTE" AND "DRAINS TO WATERWAY"**. TEXT SHALL BE PRINTED IN BOLD, CAPITAL LETTERS WITH A MINIMUM HEIGHT OF 1/2". **"WATERWAY"** MAY BE SUBSTITUTED WITH **"STREAM"**, **"RIVER"**, **"LAKE"**, ETC. ACTUAL PLACEMENT AND LOGO MAY VARY PER MANUFACTURER. MASONRY BLOCKS SHALL NOT BE USED TO RAISE THE FRAME. THE BASE OF THE FRAME SHALL BE SET IN A FULL BED OF PORTLAND CEMENT MORTAR AND ADJUST IT TO CONFORM TO THE FINISHED SHOULDER ELEVATION AND SLOPE.
2. PRECAST CONSTRUCTION: THE STRUCTURE SHALL BE A PRECAST CONSTRUCTION MEETING SP 611.10 AND 706.13. PRECAST WALLS SHALL HAVE A MINIMUM THICKNESS OF 6" AND REINFORCING SHALL BE SUFFICIENT TO PERMIT SHIPPING AND PLACEMENT WITHOUT DAMAGE. THE STRUCTURE SHALL BE PLACED ON 3" OF COMPACTED STRUCTURAL BEDDING PER SP 611.06. BACKFILL MATERIAL SHALL BE IN ACCORDANCE WITH ITEM 613 - LOW STRENGTH MORTAR, TYPE 2.
3. STEPS: PROVIDE STEPS WHERE THE DEPTH EXCEEDS 6". STEPS SHALL BE IN ACCORDANCE WITH ODOT STANDARD DRAWING MH-1.1
4. OPENING: ALL PENETRATIONS THROUGH PRECAST DRAINAGE STRUCTURES SHALL BE EITHER MANUFACTURED OR CORED. ENSURE PIPE OPENINGS ARE THE O.D. OF THE PIPE BEING SUPPLIED PLUS 2 MINIMUM. MORTAR OR GROUT THE VOIDS PER SP 611.10. PIPE SHALL BE TRIMMED FLUSH WITH INSIDE OF BASIN OR EXTEND INTO THE BASIN 1" MAX.
5. CONCRETE APRON: CAST A QC-1 CONCRETE APRON WITH TYPE 2A CURB FOR LIMITS SHOWN.
6. CONDUIT: THE CONDUIT SHALL BE SP 611 - 12" CONDUIT, TYPE F, 707.33 USING STANDARD BENDS WITH BANDING PER THE MANUFACTURERS' RECOMMENDATIONS. WHEN TWO DIFFERENT PIPE MATERIALS ARE CONNECTED, PROVIDE A MASONRY COLLAR PER ODOT STANDARD DRAWING DM-1.1.
7. PAYMENT: PAYMENT WILL BE MADE AT THE UNIT PRICE BID PER EACH FOR SP 611 - CATCH BASIN, NO. CB-1 AND SHALL INCLUDE ALL MATERIALS, EXCAVATION, EMBANKMENT, REINFORCING STEEL, CASTINGS, RECONSTRUCTED PAVED SHOULDER AND/OR CONCRETE APRON WITH CONCRETE CURB, RECONSTRUCTED ADJACENT ASPHALT CURB, LOW STRENGTH MORTAR BACKFILL AND LABOR REQUIRED TO CONSTRUCT THE SP 611 - CATCH BASIN, NO. CB-1 AS SHOWN ABOVE, COMPLETE AND ACCEPTED.

\* - DEPTH WITHOUT UNDERDRAIN  
\*\* - DEPTH WITH UNDERDRAIN  
\*\*\* - THICKNESS OF PAVEMENT (MINIMUM)

**STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION**

**SUPPLEMENTAL SPECIFICATION 832  
TEMPORARY SEDIMENT AND EROSION CONTROL**

**January 17, 2014**

- 832.01 Description**
- 832.02 Definitions**
- 832.03 SCD References**
- 832.04 Requirements and Provisions**
- 832.05 Locate and Furnish BMP**
- 832.06 Causeways and Access Fills (Stream and River Crossings and Fills)**
- 832.07 Causeway and Access Fills Construction and Payment**
- 832.08 Maintenance**
- 832.09 Storm Water Pollution Prevention Plan**
- 832.10 SWPPP Acceptance**
- 832.11 Inspections and SWPPP Updates**
- 832.12 Compensation**
- 832.13 Method of Measurement**
- 832.14 Basis of Payment**

**832.01 Description.** This work consists of locating, furnishing, installing, and maintaining temporary sediment and erosion control Best Management Practices (BMP) for earth disturbing activity areas, developing a Storm Water Pollution Prevention Plan, and filing a Co-Permittee form as required. Furnish a Storm Water Pollution Prevention Plan if required prior to any earth disturbing activity. Furnish and install temporary sediment and erosion control best management practices in compliance with all NPDES and surface water permits. Amend the Storm Water Pollution Prevention Plan in accordance with the OEPA NPDES Permit. In the event of conflict between these requirements and pollution control laws, rules, or regulations of other Federal, State, or local agencies, adhere to the more restrictive laws, rules, or regulations.

**832.02 Definitions**

**BMP.** Temporary sediment and erosion control best management practices designed and installed by methods compliant with the Ohio NPDES Permit (Appendix E of this specification Part III. G. 2.), by this specification and location shown on the SWPPP. .

**C&MS.** Construction and Material Specifications of the Ohio Department of Transportation dated as shown on the plans.

**CECI.** Contractor's Erosion Control Inspector. Must have active CESSWI or CPESC certification.



**CESSWI.** Certified Erosion, Sediment, and Storm Water Inspector sponsored by the Soil and Water Conservation Society and International Erosion Control Association. Information on certified individuals is available at [www.cesswi.org](http://www.cesswi.org).

**CPESC.** Certified Professional in Erosion and Sediment Control as sponsored by the Soil and Water Conservation Society and International Erosion Control Association. Information on certified individuals is available at [www.cpesc.net](http://www.cpesc.net).

**Co-Permittee.** A requirement of OEPA NPDES Permit (Appendix E of this specification, Part I. F. Notice of Intent Requirements).

**EDA.** Earth Disturbing Activity is any activity that exposes bare ground or an erodible material to storm water, including any “Disturbance” as defined in OEPA NPDES Permit, Part VII, Definition H.

**Contractor EDA.** Any EDA that is not shown on the plans as part of the project. EDA not shown on the plans and occurring within the project limits is also Contractor EDA.

**Project EDA.** Any EDA that is shown on the plans as part of the project.

**Total EDA.** Combined Project EDA and Contractor EDA.

**EPA.** Environmental Protection Agency.

**Isolated Wetland Permit.** Ohio EPA permit allowing the discharge of fill material into an isolated wetland.

**NOI.** Notice of Intent.

**NOT.** Notice of Termination.

**NPDES.** National Pollutant Discharge Elimination System.

**OEPA.** Ohio Environmental Protection Agency.

**OEPA NPDES Permit.** Ohio EPA Storm Water Construction General Permit (OHC 000004) Appendix E of this specification.

**OES.** Office of Environmental Services-ODOT.

**OHWM.** The line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas or defined in accordance with the most current version of 33 CFR 328.

**Operator.** As defined in OEPA NPDES Permit ( Appendix E of this specification, Part VII. Definitions, Q.)

**OWPCA.** Ohio Water Pollution Control Act (Ohio Revised Code 6111.01 et seq.).

**PCN.** Pre-Construction Notification for 404 permit.

**SCD.** Standard Construction Drawing.

**SWPPP.** Storm Water Pollution Prevention Plan.

**USACE.** United States Army Corps of Engineers.

**404 Permit.** USACE permit authorizing discharge of fill material into Waters of the US, per Section 404 of the Clean Water Act.

**401 Water Quality Certification (401 WQC).** Ohio EPA permit authorizing discharge of fill material, per Section 401 of the Clean Water Act.

**Waters of the United States.** Defined in Code of Federal Regulations, 33 CFR Part 328.

**832.03 SCD References.** Construct the following features according to the SCDs as listed on the plan title sheet.

Construction Fence .....	DM-4.3
Dikes .....	DM-4.3
Filter Fabric Ditch Check .....	DM-4.4
Inlet Protection.....	DM-4.4
Perimeter Filter Fabric Fence .....	DM-4.4
Rock Channel Protection Type C or D with/without Filter .....	DM-4.3/4.4
Sediment Basins and Dams .....	DM-4.3
Slope Drains.....	DM-4.3
Construction Entrance (Type 1 Driveway).....	BP 4.1

**832.04 Requirements and Provisions.** Furnish a SWPPP to represent compliance with OEPA NPDES Permit (See Appendix E), related rules, specifications, SCD, and permits. The Department will furnish the Contractor a copy of the NOI and the OEPA approval letter at or before the Pre-Construction meeting.

Locate, furnish, install, and maintain temporary sediment and erosion control Best Management Practices (BMP) that are compliant with the Clean Water Act (33 USC Section 1251 et seq.), the OWPCA, the 404 permit, the 401 WQC, the Isolated Wetland Permit, local government agency requirements, specifications, SCD, and other related rules and permits.

File a Co-Permittee form when the project requires a Notice of Intent (NOI) to the Ohio EPA.. Information about the Co-Permittee form can be found at [http://epa.ohio.gov/Portals/35/storm/StormWater\\_Co-Permittee\\_NOI.pdf](http://epa.ohio.gov/Portals/35/storm/StormWater_Co-Permittee_NOI.pdf) For a copy of the Co-Permittee form see Appendix D. When a co-permittee form is required, furnish the Department with a copy of the OEPA Co-permittee NOI approval letter at or before the Pre-Construction meeting.

Post Construction controls described in Appendix E (Part III.G.2.e) are not temporary erosion control features. Construction requirements and compensation for post construction controls are

detailed in the project plans. Provide protective measures that ensures sediment, debris and any contamination will not enter the Post Construction controls. All costs associated with these protective measures are included in the compensation for post construction controls.

The following provisions survive the completion and/or termination of the contract.

**Provision 1.** If a governmental agency or a local governmental authority finds a violation of the above noted requirements, or that the BMP are incomplete, or that the SWPPP is incomplete or that the implementation of the SWPPP is not being performed correctly or completely, full responsibility is borne by the Contractor to make all corrections.

**Provision 2.** If a governmental agency or a local governmental authority furnishes an assessment, damage judgment or finding, fine, penalty, or expense for a violation of the above noted requirements, or that the BMP are incomplete, or that the SWPPP is incomplete or that the implementation of the SWPPP is not being performed correctly or completely, the Contractor will reimburse the Department within 10 Calendar Days of the amount for any of the above. The Department may withhold the amount of money requested for the above from the Contractor's next pay estimate and deliver that sum to the governmental agency or local governmental authority issuing the assessment, damage judgment or finding, fine, penalty or expense.

**Provision 3.** The Contractor agrees to indemnify and hold harmless the Department, and will reimburse the Department for any assessments, damage judgment or finding, fine, penalty, or expense as a result of the failure of performing this portion of the Contract. The Department may withhold the amount of any assessments, damage judgment or finding, fine, penalty or expense from the Contractor's next pay estimate.

**Provision 4.** If a governmental agency or a local governmental authority furnishes a stop work order for any of the following: a violation of the above noted requirements; BMP are incomplete; SWPPP is incomplete; implementation of the SWPPP is not being performed correctly or completely, the Department will find the Contractor in default.

**Provision 5.** If the Department or any government regulatory agency finds a violation of the above noted requirements, or that the BMP are incomplete, or that the SWPPP is incomplete or that the implementation of the SWPPP is not being performed correctly or completely, the Contractor shall correct and mitigate the conditions within 48 hours of notification by the Department or regulatory agency. Failure to correct non-compliant site conditions may result in the Department suspending work for the entire project until the corrections are performed. Repeated non-compliance with the SWPPP or failure to regularly update the SWPPP as needed to match the site conditions may result in removal of the Contractors Superintendent in accordance with C&MS 108.05.

**EDA Requirements.** Furnish appropriate BMP for all EDA. Unless otherwise indicated, BMP will be compensated provided that the BMP are designed, installed and maintained appropriately. For projects that do not require a SWPPP as indicated in the table below, furnish a written plan for acceptance by the Engineer that identifies the location, extent and purpose of the BMP proposed. Compensation will not be provided for the written plan.

An estimated amount is established in the proposal for BMP to be used for project EDA and estimated Contractor EDA as outlined below:

### Scenarios for Routine Maintenance Projects

(as identified on the Plan Title Sheet)

Project EDA (acres)	Estimated Contractor EDA (acres) <sup>[1]</sup>		
	EDA = 0	0 < EDA < 1	1 ≤ EDA < 5
EDA = 0	A	B	C
0 < EDA < 5	B	B	C

### Scenarios for Non Routine Maintenance Projects

Project EDA (acres)	Estimated Contractor EDA (acres) <sup>[1]</sup>		
	EDA = 0	0 < EDA < 1	EDA ≥ 1
EDA = 0	A	B	D
0 < EDA < 1	E	<sup>[2]</sup>	F
EDA ≥ 1	F	F	F

- [1] If the actual Contractor EDA in the SWPPP exceeds the estimated Contractor EDA on the Title Sheet resulting in a Total EDA > 1 acre (0.4 ha), use Scenario D.
- [2] If project EDA and estimated Contractor EDA are less than 1 acre (0.4 ha), use Scenario E. If Project EDA and Estimated Contractor EDA are greater than 1 acre (0.4 ha), use Scenario F. If the actual Contractor EDA exceeds the estimated Contractor EDA and results in the Total EDA exceeding 1 acre (0.4 ha), use Scenario D.

Scenario A:	No requirements for SWPPP, NOI and NOT.
Scenario B:	Furnish BMP for Contractor EDA. No SWPPP, NOI or NOT are required. BMP used for Contractor EDA will not be compensated.
Scenario C:	Furnish a BMP, SWPPP, NOI, and NOT for Contractor EDA only. BMP used for Contractor EDA, SWPPP, NOI and NOT will not be compensated.
Scenario D:	Furnish a NOI, SWPPP with BMP, and a NOT for all EDA areas. The NOI, SWPPP, BMP, and the NOT will not be compensated.
Scenario E:	Furnish BMP for all EDA. No SWPPP, NOI or NOT are required. BMP used for the Project EDA will be compensated.
Scenario F:	Furnish a SWPPP with BMP for all EDA areas and file a Co-Permittee form. The SWPPP and these BMP will be compensated. The Department will furnish a NOI and NOT.

**832.05 Locate and Furnish BMP.** Locate and furnish the BMP in accordance with the OEPA NPDES Permit and the SWPPP.

The Department may accept other materials or alternative controls as BMP provided the Contractor submits a written proposal for the alternatives to the Engineer. Alternative controls, upon acceptance by the Engineer, will be compensated per unit price for the BMP as shown in Appendix F.

Furnish filter fabric ditch checks, inlet protection, perimeter filter fabric fence, sediment basins and dams, dikes, slope drains, construction entrances, erosion control mat and rock channel protection materials as specified on the SCD.

**A. Perimeter Controls.** Use perimeter filter fabric fence to capture construction related sediment carried in sheet flow runoff. Restrict the use of perimeter filter fabric fence to the extent allowed in the OEPA NPDES Permit.

Use dikes to divert and control surface water and sediment flow to prevent discharge of construction related sediment from the project.

Install perimeter filter fabric fence and dikes before any clearing and grubbing operations.

Ensure that the ponding of water behind the perimeter filter fabric fence or dike will not damage property or threaten human health and safety.

**B. Inlet Protection.** Construct the inlet protection for existing inlets at the beginning of construction and for new inlets immediately after completing the sump. Ensure that the ponding of water behind the inlet will not damage property or threaten human health and safety.

**C. Construction Seeding and Mulching.** Furnish commercial fertilizer, seed, and mulch materials conforming to C&MS Item 659. Apply seed and straw mulch materials according to C&MS Item 659 as modified below.

Apply straw mulch at a rate of 3 tons per acre (0.7 metric ton/1000 m<sup>2</sup>). Seed and mulch during construction. This BMP may only be installed after March 15 and before October 15. Use wood fiber or compost mulch only with concurrence of the Department. Fertilize construction seeding areas at one-half the application rate specified in C&MS Item 659. If project conditions prevent fertilizing the soil and preparing the seed bed, then the fertilizing and preparation requirements of C&MS Item 659 may be waived. Do not place construction seed or fertilizer on frozen ground. Apply seed for this BMP at the rates shown below:

Seed Mixture		Number of Bales
Fawn Tall Fescue	3.0 lb/1000 ft <sup>2</sup> (15 kg/1000 m <sup>2</sup> )	2 / 1000 ft <sup>2</sup> (0.01 ha)
and		
Annual Ryegrass	2 lb/1000 ft <sup>2</sup> (10 kg/1000 m <sup>2</sup> )	

**D. Construction Mulch.** Construction Mulch is the application of straw mulch applied directly to the disturbed soil surface. Use straw according to C&MS Item 659. C&MS 659 wood fiber or compost mulch may only be used with concurrence of the Department. Apply Construction Mulch only to disturbed areas which will remain idle for 14 days or less or areas of exposed subgrade that require temporary stabilization. Use a mechanical crimping implement or other suitable implement accepted by the Engineer when installing Construction Mulch on exposed subgrade. Apply Construction Mulch at a rate of 3 tons per acre (0.7 metric ton/1000 m<sup>2</sup>).

**E. Winter Seeding and Mulching.** Apply seed and straw mulch materials according to C&MS Item 659 as modified above. Apply straw mulch at a rate of 3 tons per acre (0.7 metric ton/1000 m<sup>2</sup>). Winter Seed and Mulch is required for EDA operations occurring between October 15 and March 15 and can only be installed during that time. When straw mulch is used in this BMP, it is required to be crimped in place. Crimped mulch is required to be anchored into the soil surface with a mechanical crimping implement or other suitable implement accepted by the Engineer. Bonded Fiber Matrix may be used instead of straw mulch.. All mulch and BFM used in this BMP must be capable of providing sufficient durable protective cover that provides OEPA NPDES Permit compliant erosion control for a minimum of 6 months. Provide maintenance of the BMP throughout the 6 month period. The Department will not provide compensation for reapplication or repair of this BMP during the 6 month period. The use of other seed and/or mulch materials in this time period requires specific Department approval. The use of winter seeding and mulching is not an acceptable practice for protecting the subgrade surface.

**F. Slope Protection.** Place dikes, install slope drains, and construct ditches to divert water from bare non-vegetated areas and to protect cut and fill slopes. Protect the side slopes from erosion by placing dikes at the top of fill slopes prior to construction of the slope. Construct ditches and dikes prior to construction of cut slopes to divert runoff away from the slope. Ensure that all sediment-laden discharges from slope protection are directed into an appropriate sediment control BMP.

Furnish Construction Slope Protection at the required locations as the slopes are constructed. Furnish all permanent slope protection as shown in the construction plans when final grade is complete.

**G. Ditch Checks and Ditch Protection.** Place filter fabric ditch checks or rock checks across a ditch and perpendicular to the flow. Use rock checks to protect the ditch from erosion. Use filter fabric ditch checks to filter sediment from the flowing water only when appropriate and when sediment dams/basins are considered a safety hazard or infeasible as determined by the Engineer

Place ditch checks as soon as the ditch is cut. If working on a ditch, replace the ditch checks by the end of the workday.

Install filter fabric ditch checks for drainage areas less than or equal to 2 acres (0.8 ha) as shown in the SCD. Install rock checks for drainage areas between 2 to 5 acres (0.8 to 2.0 ha) as shown in the SCD.

Install ditch checks in conjunction with Sediment Basins and Dams when appropriate.

Furnish Construction Ditch Protection at the required locations as the ditches are cut. Furnish all permanent ditch protection as shown in the construction plans when final grade is complete.

**H. Sediment Basins and Dams.** Design and construct Sediment Basins and Dams in accordance with and as described in the OEPA NPDES Permit for “sediment settling ponds”. Design and construct Sediment Basins and Dams at concentrated and critical flow locations to settle out sediment before the water leaves the EDA area. Do not construct Sediment Basins and Dams in any jurisdictional waterways .

All sediment basins requiring a dewatering device (riser and outlet pipe) shall incorporate a surface water dewatering device as described in the OEPA NPDES Permit. The Department will provide compensation for appropriately sized outlet pipes and surface dewatering device as described in Appendix F.

Compensation will not be provided for dewatering devices not included in the SWPPP and appropriately sized by the PE/CPESC. Compensation will be provided once for each dewatering device purchased exclusively for the project.

Complete the construction of the Sediment Basins and Dams before starting EDA operations.

When needed or when directed by the Engineer, install construction fence around the Sediment Basins and Dams.

**I. River, Stream, and Water Body Protection.** Provide appropriate river, stream and water body protection to all surface waters on and, adjacent to the project. River, Stream, and Water Body Protection may include diverting project water flow using dikes and slope protection. The Contractor may use a combination of BMP. Show all surface waters located within & adjacent to Project and Contractor EDA on the SWPPP.

**J. Stream Relocation, Temporary Channels and Ditches that carry Waters of the United States.** Perform this work in compliance with the OEPA NPDES Permit and any other applicable permits (i.e. 404/401 Permits). Stabilize Stream Relocation, Temporary Channels and Ditches with Construction Slope Protection or 70 percent grass growth before diverting flow into the new channel.

**K. Concrete washout areas BMP.** Compensation for this BMP is incidental to the concrete work.

**L. Construction Entrances.** Furnish Construction Entrance materials conforming to C&MS 712.09 Type B Filter Blankets for Rock Channel Protection and C&MS 703.01, Size Number 1 and 2, CCS aggregate. Furnish Construction Entrance protection at the locations shown on the SWPPP and as required below:

1. At locations where construction vehicles enter or leave EDA areas.
2. At all points of egress to public roads.
3. At all access locations where runoff from the construction access road is not protected by sediment controls.

Provide the appropriate size culvert as needed to prevent water from flowing onto paved surfaces and from overtopping the construction entrance surface. Identify the culvert size on the SWPPP. Install a maximum of three Construction Entrances per mile along the length of the project. The length of the project is the plan length along the project's longest axis. Additional construction entrances in excess of the maximum require acceptance from the Engineer.

Locate and identify all Construction Entrances on the SWPPP.

Provide a configuration consisting of 6 inches of aggregate over geotextile fabric. Provide geometry according to a Type 1 Driveway as shown in the SCD. Provide a minimum 10 foot width and length measuring a minimum of 150 feet and not exceeding 200 feet from edge of pavement.

Construction Entrance removal includes the appropriate disposal of geotextile fabric and pipe. Aggregate may be incorporated into embankment work when approved by the Department.

**M. Project fueling and refueling BMP locations.** Compensation for this BMP is incidental to the project.

The SWPPP shall include BMP to prevent and respond to spills or leaks as required by the OEPA NPDES Permit.

The Contractor will provide a separate Spill Prevention Control & Countermeasure Plan if required for the project as described in 40 CFR Part 112. The Contractor will not be compensated for the SPCC Plan.

**N.** All other BMP that are required and not specifically referenced in Appendix F will not be paid as a separate item, but will be included by the Contractor as part of the total project cost.

**832.06 Causeways and Access Fills (Stream and River Crossings and Fills).** Fording of jurisdictional waters, including all streams and rivers is not allowed. Evaluate the 404/401 permits to determine whether or not causeway and access fills are permitted in the contract. If a causeway and access fills have been permitted, construct fill(s) per the 404/401 permits, and the application submitted for those permits. Only the footprint area (acreage) of temporary fill, and volume of temporary fill as permitted and contained in the permit application will be allowed. The footprint area (acreage) of temporary fill, and volume of temporary fill may be furnished in the construction plans. The construction plans may furnish additional information or restrictions for causeways or access fills. If the Contractor proposes a causeway and access fill(s) which has not been permitted through the 404/401 permit process, the Contractor is required to coordinate the request for the causeway and access fill(s) with the project engineer and OES. The Department makes no guarantee to granting the request. The causeway and access fills request will be coordinated by OES with the USACE and OEPA where applicable.

Supply the project engineer/OES with the following information:

- A. A plan and profile drawing showing the causeway and access fills with OHWM elevation.
- B. Volume of temporary fill below the OHWM.
- C. The surface area of temporary fill below the OHWM.
- D. A restoration plan for the area affected by the causeway and access fills.
- E. Time frames for placement and removal of the causeway and access fills.
- F. Temporary Access Fill Checklist

The time frame allowed for the coordination of the causeway and access fill(s) will be 60 days, at a minimum, and the causeway and access fill(s) will not occur prior to the 404 Permit being authorized by the USACE and Ohio EPA, if an individual 401 is required. All coordination with the USACE and/or OEPA will be performed through OES.



**832.07 Causeway and Access Fills Construction and Payment.** Begin planning and installing causeways and access fills as early in construction as possible to avoid conflicts with 404/401 permits or other environmental commitments that have been included in the construction plans.

Access fills in streams or rivers may include, but are not limited to, cofferdams, access pads, temporary bridges, etc.

Make every attempt to minimize disturbance to water bodies during construction, maintenance and removal of the causeway and access fills. Construct the causeway and access fills as narrow as practical and perpendicular to the stream banks. Make the causeway and access fills in shallow areas rather than deep pools where possible. Minimize clearing, grubbing, and excavation of stream banks, bed, and approach sections. Construct the causeway and access fills as to not erode stream banks or allow sediment deposits in the channel.

Prior to the initiation of any in-stream work, establish a monument upstream of proposed temporary crossing or temporary construction access fill to visually monitor the water elevation in the waterway where the fill is permitted. Maintain the monument throughout the project. Provide a visual mark on the monument that identifies the elevation 1 foot above the Ordinary High Water Mark (OHWM). If the OHWM is not shown on the plans, the Department will establish the OHWM based on the definition of OHWM (832.02) or the peak discharge from the 2 year event, using the method described in the most current version of the Department's Location and Design Manual Volume II.

Ensure that the monument can be read from the bank of the waterway. Have this elevation set and certified by an Ohio Registered Surveyor.

Temporary causeway and access fill placed by the contractor above the OHWM are not subject to the 404/401 permit constraints.

Should the water elevation of the waterway, exceed the elevation 1 foot above OHWM, the Department will compensate the Contractor for repair of any resulting damage to the permitted temporary access fill up to the elevation of 1 foot above the OHWM. The Department will not pay for repair and maintenance of temporary access structures that are related to the construction access fill.

If the pool elevation of the waterway exceeds the 1 foot above the OHWM elevation as read from the monument, the contractor is entitled to an excusable, non-compensable delay in accordance with Section 108.06 of the Construction & Materials Specifications.

All costs associated with furnishing and maintaining the above referenced monument is incidental to the work.

Construct the causeway and access fills to a water elevation at least 1 foot (0.3 m) above the OHWM. If the causeway fills more than one-third the width of the stream, then use culvert pipes to allow the movement of aquatic life. Maintain normal downstream flows. Ensure that any ponding of water behind the causeway and access fills will not damage property or threaten human health and safety.

The following minimum requirements apply to causeways where culverts are used.

- A. Furnish culverts on the existing stream bottom.
- B. Avoid a drop in water elevation at the downstream end of the culvert.
- C. Furnish culverts with a diameter at least two times the depth of normal stream flow measured at the causeway centerline or with a minimum diameter of 18 inches (0.5 m) whichever is greater.
- D. Furnish a sufficient number of culverts normal to the flow to completely cross the channel from stream bank to stream bank with no more than 10 feet (3 m) between each culvert.

For all fill and surface material placed in the channel, around the culverts, or on the surface of the causeway and access fills furnish clean, non-erodible, nontoxic dumped rock fill, Type B, C, or D, as specified in C&MS 703.19.B. Extend rock fill up the slope from original stream bank for 50 feet (10 m) to catch and remove erodible material from equipment.

When the work requiring the causeway and access fills all portions of the causeway (including all rock and culverts) and access fills will be removed in its entirety. The material will not be disposed in other waters of the US or isolated wetland. The stream bottom affected by the causeway and access fills will be restored to its pre-construction elevations. The causeway and access fills will not be paid as a separate item but will be included by the Contractor as part of the total project cost.

All environmental protection and control associated with the 404/401 permit activities are incidental to the work within the boundaries of the 404/401 permit or as otherwise identified in the 404/401 permit application.

**832.08 Maintenance.** Properly maintain all BMP throughout all phases and sequencing of construction activities. Dispose of silt removed from BMP according to C&MS 105.16. When the Contractor properly places the erosion control Items then the Department will pay for the cost to maintain or replace these items of work by the following:

If a recorded rain event is greater than 0.5 inches (13mm), the Department will pay to replace all BMP that have failed during the event at the unit price for those BMP including Sediment Removal as described in Appendix F.

*Example: A 0.6 inch rain event damaged a 300 ft. segment of a 900 ft. run of filter fabric fence. The damaged segment was repaired and the sediment was removed. How do we pay for the 300 ft of repair and sediment removed?*

*Pay for 300 ft. of new Item Perimeter Filter Fabric Fence and Item Miscellaneous Sediment Removal.*

If a recorded rain event is less than or equal to 0.5 inches (13mm), the Department will pay to remove the sediment per the unit price for Sediment Removal as described in Appendix F. No compensation will be provided for BMP that fail during rain events of less than equal to 0.5 inches (13mm).

For all Perimeter Filter Fabric Fence, Filter Fabric Ditch Checks, Rock Checks, and Inlet Protection, Dikes, remove trapped sediment and any other debris which has accumulated when sediment reaches a height of one-half the BMP. Compensation will be paid at the unit price for Miscellaneous Sediment Removal as described in Appendix F.

When the sediment fills the sediment storage zone (as described in the OEPA NPDES Permit) of a Sediment Basin or Dam, remove deposited sediment per the unit price for Basin Sediment Removal as described in Appendix F. Remove Sediment Basins and Dams after the contributing drainage area has been stabilized.

When erodible materials accumulate at the surface of the construction entrance, furnish additional stone as needed to prevent tracking. Compensation for additional stone needed to maintain the Construction Entrance will be paid at the unit price for Construction Entrance. If tracking occurs, restore and clean the affected roadway surface at no additional cost to the Department.

Remove all BMP before the project is accepted. Dispose of the removed materials including sediment according to C&MS 105.16 and C&MS 105.17. Maintain the BMP until the up-slope permanent grass coverage is greater than 70% and the site reaches final stabilization in accordance with the OEPA NPDES Permit (See Appendix E, Part VII, J). At this stage, remove the BMP.

**832.09 Storm Water Pollution Prevention Plan.** If required, prepare the SWPPP as outlined in this specification. All activity identified by the SWPPP that is not specifically identified as a pay item elsewhere shall be included in the Lump Sum price bid for the SWPPP. At a minimum, the design and information requirements that must be included in the SWPPP are as follows:

- A. Provide a site specific SWPPP designed and sealed by a Professional Engineer who holds a current CPESC certification.
- B. Location of the required BMP for both on and off project EDA areas.
- C. Furnish quantity totals for all BMP required for the execution of the proposed plan.
- D. Location of a minimum of 100 feet (30 m) from the water's edge of any stream, ephemeral stream, wetland, or body of water:
  - 1. Concrete or asphalt plant areas
  - 2. Material and equipment staging or storage areas
  - 3. Dewatering Areas
  - 4. Concrete truck wash out BMP areas
  - 5. Construction access BMP locations
  - 6. Vehicle fueling and refueling locations
- E. Furnish an implementation schedule for each construction sequence.
- G. Furnish the total EDA areas in acres and identify each drainage area (watershed) impacted by the proposed construction.

- H. Locate all slopes that will be inactive for 14 calendar days or longer.
- I. Furnish the names of the individuals on site who will serve as the PE/CPESC SWPPP designer and CECI.
- J. Describe the type of construction activities that will be taking place.
- K. Furnish an estimated quantity for Basin Sediment Removal and Miscellaneous Sediment Removal for removing sediment from Sediment Basins and Dams, inlet protection, ditch checks, rock checks, perimeter filter fabric fence, and all other types of filter fabrics, straw or hay bales, or any other BMP.
- L. Furnish signatures of all contractors and subcontractors involved in BMP practices (see Appendix B).

If there are plan sheets which meet any of the requirements in Appendix E, use that information. Design files may be furnished to the awarded Contractor in electronic form upon request.

**832.10 SWPPP Acceptance.** Furnish the initial SWPPP to the Department for acceptance. The Department will allow work to begin upon receiving an acceptable SWPPP. See Appendix C for a sample acceptance form. The Department may assess critically the following:

- A. The type and location of BMP with totals.
- B. The SWPPP is for this project.
- C. There is no language in the SWPPP about any BMP being directed for use by the Engineer.
- D. The total estimated BMP quantities agree with the (per Each) “Erosion Control” amount identified in the proposal.
- E. The SWPPP accounts for the various phases of construction and the associated degree of earthwork disturbance over the life of the project.
- F. The SWPPP delineates overall watershed areas and individual BMP watersheds. Enough detail is shown in the SWPPP to verify that the BMP are appropriate for the application. If topographic mapping contained in the plans is not sufficient to identify and delineate the watersheds associated with the work, provide the appropriate mapping. .
- G. All perimeter filter fabric fence is identified in the SWPPP and supporting runoff calculations are attached.

- H. The SWPPP identifies the locations and specific geometry of the required Sediment Basins and Dams and related control structures. Provide the following information for each Sediment Basin and Sediment Dam:
1. Calculations demonstrating compliance with the 48 hour draw down time (if required by the OEPA NPDES Permit),
  2. Size of the contributing drainage area,
  3. Volume of the Sediment Storage Zone
  4. Volume of the Dewatering Zone (if required by the OEPA NPDES Permit),
  5. Basin excavation quantity or dam embankment quantity
  6. Quantity of rock channel protection
  7. Riser Pipe and outlet structure details (if required by the OEPA NPDES Permit).

Revise the accepted SWPPP as needed to maintain compliance with OEPA NPDES Permit. Revisions and amendments (See Appendix E, Part III, D) to the accepted SWPPP will be at no additional cost to the Department.

**832.11 Inspections and SWPPP Updates.** Perform the required OEPA NPDES Permit inspections and prepare inspection reports (see Appendix E).

The inspections must be performed by one of the following parties:

- A. The PE/CPESC who signed and sealed the SWPPP.
- B. The CPESC inspector who is under the supervision of the Engineer who signed and sealed the SWPPP.
- C. The CESSWI inspector who is under the supervision of the Engineer who signed and sealed the SWPPP.

Prepare the inspection reports for projects that have a SWPPP. Submit inspection reports to the Engineer every 7 days and within 24 hours of a 0.5 inch (13 mm) or greater rainfall event throughout the life of the contract. The inspection frequency may be reduced per the Ohio NPDES Permit Part III.G.2.i.

The reporting CECI will update, amend and revise the SWPPP as the contractor's operations and site conditions warrant. Identify all revisions and updates to the SWPPP and indicate what measures will be taken to maintain OEPA NPDES Permit compliance in the report. Include the following in the inspection report; the OEPA NPDES Permit inspection checklist (see appendix E, Part III.G.2.i), a map identifying all BMP needed, installed, maintained or removed since the last inspection report, certification that all construction activities are compliant with the SWPPP and the signature of the CECI responsible for the inspection. Provide a record of all written questions and comments from the Engineer related to the SWPPP. Include all responses to the Engineer's questions and comments in the inspection report. The signature of the PE/CPESC who sealed the SWPPP is required as part of the inspection report, on a monthly basis or when modifications to the SWPPP design are made. Include the certification requirements according to OEPA NPDES Permit (Part V. H.) with all reporting sign offs.

A BMP Inventory form is furnished in Appendix A to assist in documenting and recording the BMP quantities for payment. The BMP inventory form in Appendix A is not a substitute for the inspection report described above.

The CECI is required to notify the Department within 24 hours of any compliance deficiencies or verified complaints related to the SWPPP or OEPA NPDES Permit. Within 48 hours of the Department's or CECI's notice of deficiency, the contractor is required to construct, install, repair or correct the BMP measures needed to resume OEPA NPDES Permit compliance.

**832.12 Compensation.** The Department will furnish Item 832 Each, Erosion Control with an amount in the proposal to pay for BMP work. The fixed amount shown in the proposal is included (as any other bid items) in the Total Bid Amount. This fixed amount is the Department's estimate of the total cost of BMP work required to be performed for the project. If the BMP work exceeds this amount, the BMP work will still be paid at the pre-determined prices. All BMP work will be paid at the proposal pre-determined unit price times the correctly installed BMP number of units. The payment due will be deducted from Item 832 Each, Erosion Control. C&MS Table 104.02-2 does not apply to reductions in this contract item.

The Lump Sum amount bid for the SWPPP includes all work associated with development, design, NPDES required inspection, modification, revision, updates, amendments and reporting related to the SWPPP. Changes made to the SWPPP, but not caused by the Department, are the financial responsibility of the Contractor. Additional compensation will only be permitted for Department accepted amendments to the SWPPP resulting from revisions to the contract documents as per sections 104.02.B, 104.02.D and 104.02.F. Provide the additional costs for the amended SWPPP to the Department prior to beginning the associated revised work. All costs associated with providing and maintaining the required CPESC and CESSWI personnel, conducting the NPDES required inspections, and support engineering services are included in the contract Lump Sum bid for SWPPP. The Department will only pay for one accepted SWPPP regardless of the number of Construction phases, revisions, amendments or project redesigns.

### **832.13 Method of Measurement**

The Department will measure the SWPPP as a Lump Sum.

The Department will measure Construction Seeding and Mulching by the number of square yards (square meters).

The Department will measure Slope Drains by the number of feet (meters) of conduit.

The Department will measure Sediment Basins by the number of cubic yards (cubic meters) of excavation.

The Department will measure Sediment Basin surface dewatering device by each.

The Department will measure Sediment Dams by the number of cubic yards (cubic meters) of embankment.

Any pipe required for the outlet structure of a sediment basin or dam is incidental to the unit price paid for Sediment Basins and Dams.

The Department will measure Perimeter Filter Fabric Fence, and Construction Fence by the number of feet (meters).

The Department will measure Filter Fabric Ditch Check by the number of feet (meters).

The Department will measure Inlet Protection by the number of feet (meters).

The Department will measure Dikes by the number of cubic yards (cubic meters) of embankment.

The Department will measure Construction Ditch Protection and Construction Slope Protection by the number of square yards (square meters).

The Department will measure Rock Channel Protection, Type C or D (with or without filter) by the number of cubic yards (cubic meters).

The Department will measure Sediment Removal by the number of cubic yards (cubic meters).

The Department will measure Construction Mulching by the number of square yards (square meters) regardless if the application is crimped or not.

The Department will measure Winter Seeding and Mulching by the number of square yards (square meters).

The Department will measure Construction Entrance protection by the number of cubic yards (cubic meters)

### **832.14 Basis of Payment**

The Department will pay the contract Lump Sum price bid for the SWPPP.

The Department will make partial payments for the Storm Water Pollution Prevention Plan according to C&MS Section 109.09 and as modified by the following schedule:

The Department will release 60 percent of the lump sum amount bid for Storm Water Pollution Prevention Plan to the Contractor with the first regular estimate payable after the Engineer has accepted the Storm Water Pollution Prevention Plan submission.

The Department will release 30 percent of the lump sum amount bid for Storm Water Pollution Prevention Plan to the Contractor with the first regular estimate payable after 50 percent of the project is complete.

The Department will release the remaining 10 percent of the lump sum amount bid for Storm Water Pollution Prevention Plan to the Contractor with the first regular estimate payable after 90 percent of the project is complete.

The Department will pay for appropriate, properly installed and accepted BMP per Item 832 Each, Erosion Control. BMP compensation will be based on the unit prices shown in Appendix F.

The Department will not pay for BMP Items which are required as a result of the Contractor's negligence, carelessness, or failure to install permanent controls.

The Department will not pay for BMP that does not provide effective sediment and erosion control for the EDA.

The Department will not pay for any causeway and access fills.

The Department will not pay to replace BMP that have failed as a result of improper maintenance or installation.

The Department will not pay for concrete washout area BMP. Concrete washout area BMP are considered incidental to the concrete work.

The Department will not pay for BMP which are required as a part of the work and are not specifically identified as a separate item. Compensation for BMP that are required for NPDES Permit compliance and are not included in Appendix F of this specification are considered incidental to the work.

<b>Item</b>	<b>Unit</b>	<b>Description</b>
832	Lump Sum	Storm Water Pollution Prevention Plan
832	Each	Erosion Control



## Appendix A

### Weekly and Rain Event Erosion Control BMP Inventory

Contractor \_\_\_\_\_

Project No. \_\_\_\_\_ Co-Rt-Sec \_\_\_\_\_ Date \_\_\_\_\_

R=Replacement    W=Working    M=Maintenance    I=Install    D=Delete    Rain Amt

Station to Station	Side	Offset	Balloon Ref.	Perimeter Control	Inlet Protection	Constr. Speed	Dikes Fill Slopes	Dikes Cut Slopes	Slope Drains	FF Ditch Checks	Rock Ditch Checks	Sediment Basins	Stream Relocate	Stream Crossing	Date work was Complete

Notes:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

This form is furnished to assist in documenting and recording the BMP quantities for payment.  
This form is not a substitute for the inspection report described in 832.11.

Appendix B

**SIGNATURE LIST**

NPDES and Surface Water Pollution Prevention Plan  
Contractors and Sub-contractors responsible for any Earth Disturbing Activity  
Duty to inform contractors and subcontractors  
(Ohio EPA Permit No.:OHC000004 Part III. E)

Signature	Printed Name	Title	Company	Date

**Sample SWPPP Acceptance Form**

The Department has received the SWPPP for Project: \_\_\_\_\_

Co-Rt-Sec: \_\_\_\_\_

The submittal is dated: \_\_\_\_\_

The Department Accepts the Submittal.

\_\_\_\_\_  
Project Engineer, Project Supervisor

\_\_\_\_\_  
Date



## Co-Permittee Notice of Intent for Coverage Under Ohio EPA Storm Water Construction General Permit

Submission of this NOI constitutes notice that the party identified in Section I of this form intends to be authorized by Ohio's NPDES general permit for storm water associated with construction activity. Becoming a permittee obligates a discharger to comply with the terms and conditions of the permit. **NOTE:** All necessary information must be provided on this form. Read the accompanying instructions *carefully* before completing the form. Do not use correction fluid on this form. Forms transmitted by fax will not be accepted. There is no fee associated with submitting this form.

### I. Applicant Information/Mailing Address

Company (Applicant) Name: \_\_\_\_\_

Mailing (Applicant) Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Contact Person: \_\_\_\_\_ Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Contact E-Mail Address: \_\_\_\_\_

### II. Facility/Site Location Information

Existing Ohio EPA Facility Permit Number:   \_\_ GC \_\_ \_\_ \_\_ \_\_ \_\_ \* \_\_ G           OR    OHR1 \_\_ \_\_ \_\_ \_\_ \_\_

Initial Permittee Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Facility/Site Name: \_\_\_\_\_

City: \_\_\_\_\_ Township(s): \_\_\_\_\_

County(ies): \_\_\_\_\_ State: Ohio Zip Code: \_\_\_\_\_

Facility Contact Person: \_\_\_\_\_ Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Facility Contact E-Mail Address: \_\_\_\_\_

### III. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Applicant Name: \_\_\_\_\_ Title: \_\_\_\_\_

Applicant Signature: \_\_\_\_\_ Date: \_\_\_\_\_

OHIO E.P.A.

APR 11 2013

ENTERED DIRECTOR'S JOURNAL

Issuance Date: April 11, 2013  
Effective Date: April 21, 2013  
Expiration Date: April 20, 2018



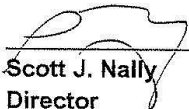
OHIO ENVIRONMENTAL PROTECTION AGENCY

**GENERAL PERMIT AUTHORIZATION FOR STORM WATER DISCHARGES ASSOCIATED  
WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT  
DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the federal Water Pollution Control Act, as amended (33 U.S.C. Section 1251 et. seq. hereafter referred to as "the Act") and the Ohio Water Pollution Control Act [Ohio Revised Code ("ORC") Chapter 6111], dischargers of storm water from sites where construction activity is being conducted, as defined in Part I.B of this permit, are authorized by the Ohio Environmental Protection Agency, hereafter referred to as "Ohio EPA," to discharge from the outfalls at the sites and to the receiving surface waters of the state identified in their Notice of Intent ("NOI") application form on file with Ohio EPA in accordance with the conditions specified in Parts I through VII of this permit.

It has been determined that a lowering of water quality of various waters of the state associated with granting coverage under this permit is necessary to accommodate important social and economic development in the state of Ohio. In accordance with OAC 3745-1-05, this decision was reached only after examining a series of technical alternatives, reviewing social and economic issues related to the degradation, and considering all public and intergovernmental comments received concerning the proposal.

This permit is conditioned upon payment of applicable fees, submittal of a complete NOI application form and written approval of coverage from the director of Ohio EPA in accordance with Ohio Administrative Code ("OAC") Rule 3745-38-02.

  
\_\_\_\_\_  
Scott J. Nally  
Director

I certify this to be a true and accurate copy of the  
official documents as filed in the records of the Ohio  
Environmental Protection Agency.

By:  Date: 4-11-13

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**PART I. COVERAGE UNDER THIS PERMIT****A. Permit Area.**

This permit covers the entire State of Ohio.

**B. Eligibility.**

1. Construction activities covered. Except for storm water discharges identified under Part I.B.2, this permit may cover all new and existing discharges composed entirely of storm water discharges associated with construction activity that enter surface waters of the state or a storm drain leading to surface waters of the state.

For the purposes of this permit, construction activities include any clearing, grading, excavating, grubbing and/or filling activities that disturb the threshold acreage described in the next paragraph. Discharges from trench dewatering are also covered by this permit as long as the dewatering activity is carried out in accordance with the practices outlined in Part III.G.2.g.iv of this permit.

Construction activities disturbing one or more acres of total land, or will disturb less than one acre of land but are part of a larger common plan of development or sale that will ultimately disturb one or more acres of land will be eligible for coverage under this permit. The threshold acreage includes the entire area disturbed in the larger common plan of development or sale.

This permit also authorizes storm water discharges from support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) provided:

- a. The support activity is directly related to a construction site that is required to have NPDES permit coverage for discharges of storm water associated with construction activity;
  - b. The support activity is not a commercial operation serving multiple unrelated construction projects and does not operate beyond the completion of the construction activity at the site it supports;
  - c. Appropriate controls and measures are identified in a storm water pollution prevention plan (SWP3) covering the discharges from the support activity; and
  - d. The support activity is on or contiguous with the property defined in the NOI (offsite borrow pits and soil disposal areas, which serve only one project, do not have to be contiguous with the construction site).
2. Limitations on coverage. The following storm water discharges associated with construction activity are not covered by this permit:
    - a. Storm water discharges that originate from the site after construction activities have been completed, including any temporary support activity, and the site has achieved

- final stabilization. Industrial post-construction storm water discharges may need to be covered by an NPDES permit;
- b. Storm water discharges associated with construction activity that the director has shown to be or may reasonably expect to be contributing to a violation of a water quality standard; and
  - c. Storm water discharges authorized by an individual NPDES permit or another NPDES general permit;
3. Waivers. After March 10, 2003, sites whose larger common plan of development or sale have at least one, but less than five acres of land disturbance, which would otherwise require permit coverage for storm water discharges associated with construction activities, may request that the director waive their permit requirement. Entities wishing to request such a waiver must certify in writing that the construction activity meets one of the two waiver conditions:
- a. Rainfall Erosivity Waiver. For a construction site to qualify for the rainfall erosivity waiver, the cumulative rainfall erosivity over the project duration must be five or less and the site must be stabilized with a least a 70 percent vegetative cover or other permanent, non-erosive cover. The rainfall erosivity must be calculated according to the method in U.S. EPA Fact Sheet 3.1 Construction Rainfall Erosivity Waiver dated January 2001 and be found at: [http://epa.ohio.gov/portals/35/permits/USEPAfact3-1\\_s.pdf](http://epa.ohio.gov/portals/35/permits/USEPAfact3-1_s.pdf). If it is determined that a construction activity will take place during a time period where the rainfall erosivity factor is less than five, a written waiver certification must be submitted to Ohio EPA at least 21 days before construction activity is scheduled to begin. If the construction activity will extend beyond the dates specified in the waiver certification, the operator must either: (a) recalculate the waiver using the original start date with the new ending date (if the R factor is still less than five, a new waiver certification must be submitted) or (b) submit an NOI application form and fee for coverage under this general permit at least seven days prior to the end of the waiver period; or
  - b. TMDL (Total Maximum Daily Load) Waiver. Storm water controls are not needed based on a TMDL approved or established by U.S. EPA that addresses the pollutant(s) of concern or, for non-impaired waters that do not require TMDLs, and equivalent analysis that determines allocations for small construction sites for the pollutant(s) of concern or that determines that such allocations are not needed to protect water quality based on consideration of existing in-stream concentrations, expected growth in pollutant contributions from all sources, and a margin of safety. The pollutant(s) of concern include sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the construction activity. The operator must certify to the director of Ohio EPA that the construction activity will take place, and storm water discharges will occur, within the drainage area addressed by the TMDL or equivalent analysis. A written waiver certification must be submitted to Ohio EPA at least 21 days before the construction activity is scheduled to begin.



4. Prohibition on non-storm water discharges. All discharges covered by this permit must be composed entirely of storm water with the exception of the following: discharges from firefighting activities; fire hydrant flushings; potable water sources including waterline flushings; irrigation drainage; lawn watering; routine external building washdown which does not use detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; springs; uncontaminated ground water from trench or well point dewatering and foundation or footing drains where flows are not contaminated with process materials such as solvents. Dewatering activities must be done in compliance with Part II.C and Part III.G.2.g.iv of this permit. Discharges of material other than storm water or the authorized non-storm water discharges listed above must comply with an individual NPDES permit or an alternative NPDES general permit issued for the discharge.

Except for flows from firefighting activities, sources of non-storm water listed above that are combined with storm water discharges associated with construction activity must be identified in the SWP3. The SWP3 must identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

5. Spills and unintended releases (Releases in excess of Reportable Quantities). This permit does not relieve the permittee of the reporting requirements of Title 40 of the Code of Federal Regulations ("CFR") Part 117 and 40 CFR Part 302. In the event of a spill or other unintended release, the discharge of hazardous substances in the storm water discharge(s) from a construction site must be minimized in accordance with the applicable storm water pollution prevention plan for the construction activity and in no case, during any 24-hour period, may the discharge(s) contain a hazardous substance equal to or in excess of reportable quantities.

40 CFR Part 117 sets forth a determination of the reportable quantity for each substance designated as hazardous in 40 CFR Part 116. The regulation applies to quantities of designated substances equal to or greater than the reportable quantities, when discharged to surface waters of the state. 40 CFR Part 302 designates under section 102(a) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, those substances in the statutes referred to in section 101(14), identifies reportable quantities for these substances and sets forth the notification requirements for releases of these substances. This regulation also sets forth reportable quantities for hazardous substances designated under section 311(b)(2)(A) of the Clean Water Act (CWA).

**C. Requiring an individual NPDES permit or an alternative NPDES general permit.**

1. The director may require an alternative permit. The director may require any operator eligible for this permit to apply for and obtain either an individual NPDES permit or coverage under an alternative NPDES general permit in accordance with OAC Rule 3745-38-04. Any interested person may petition the director to take action under this paragraph.

The director will send written notification that an alternative NPDES permit is required. This notice shall include a brief statement of the reasons for this decision, an application

form and a statement setting a deadline for the operator to file the application. If an operator fails to submit an application in a timely manner as required by the director under this paragraph, then coverage, if in effect, under this permit is automatically terminated at the end of the day specified for application submittal.

2. Operators may request an individual NPDES permit. Any owner or operator eligible for this permit may request to be excluded from the coverage of this permit by applying for an individual permit. The owner or operator shall submit an individual application with reasons supporting the request to the director in accordance with the requirements of 40 CFR 122.26. If the reasons adequately support the request, the director shall grant it by issuing an individual NPDES permit.
3. When an individual NPDES permit is issued to an owner or operator otherwise subject to this permit or the owner or operator is approved for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the effective date of the individual permit or the date of approval for coverage under the alternative general permit, whichever the case may be.

**D. Permit requirements when portions of a site are sold**

If an operator obtains a permit for a development, and then the operator (permittee) sells off lots or parcels within that development, permit coverage must be continued on those lots until a Notice of Termination (NOT) in accordance with Part IV.B is submitted. For developments which require the use of centralized sediment and erosion controls (i.e., controls that address storm water runoff from one or more lots) for which the current permittee intends to terminate responsibilities under this permit for a lot after sale of the lot to a new owner and such termination will either prevent or impair the implementation of the controls and therefore jeopardize compliance with the terms and conditions of this permit, the permittee will be required to maintain responsibility for the implementation of those controls. For developments where this is not the case, it is the permittee's responsibility to temporarily stabilize all lots sold to individual lot owners unless an exception is approved in accordance with Part III.G.4. In cases where permit responsibilities for individual lot(s) will be terminated after sale of the lot, the permittee shall inform the individual lot owner of the obligations under this permit and ensure that the Individual Lot NOI application is submitted to Ohio EPA.

**E. Authorization**

1. Obtaining authorization to discharge. Operators that discharge storm water associated with construction activity must submit an NOI application form in accordance with the requirements of Part I.F of this permit to obtain authorization to discharge under this general permit. As required under OAC Rule 3745-38-06(E), the director, in response to the NOI submission, will notify the applicant in writing that he/she has or has not been granted general permit coverage to discharge storm water associated with construction activity under the terms and conditions of this permit or that the applicant must apply for an individual NPDES permit or coverage under an alternate general NPDES permit as described in Part I.C.1.
2. No release from other requirements. No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations. Other permit requirements commonly associated with construction activities

include, but are not limited to, section 401 water quality certifications, isolated wetland permits, permits to install sanitary sewers or other devices that discharge or convey polluted water, permits to install drinking water lines, single lot sanitary system permits and disturbance of land which was used to operate a solid or hazardous waste facility (i.e., coverage under this NPDES general permit does not satisfy the requirements of OAC Rule 3745-27-13 or ORC Section 3734.02(H)). The issuance of this permit is subject to resolution of an antidegradation review. This permit does not relieve the permittee of other responsibilities associated with construction activities such as contacting the Ohio Department of Natural Resources, Division of Water, to ensure proper well installation and abandonment of wells.

#### **F. Notice of Intent Requirements**

1. **Deadlines for notification.**
  - a. **Initial coverage:** Operators who intend to obtain initial coverage for a storm water discharge associated with construction activity under this general permit must submit a complete and accurate NOI application form and appropriate fee at least 21 days prior to the commencement of construction activity. If more than one operator, as defined in Part VII of this general permit, will be engaged at a site, each operator shall seek coverage under this general permit. Coverage under this permit is not effective until an approval letter granting coverage from the director of Ohio EPA is received by the applicant. Where one operator has already submitted an NOI prior to other operator(s) being identified, the additional operator shall request modification of coverage to become a co-permittee. In such instances, the co-permittees shall be covered under the same facility permit number. No additional permit fee is required.
  - b. **Individual lot transfer of coverage:** Operators must each submit an individual lot notice of intent (Individual Lot NOI) application form (no fee required) to Ohio EPA at least seven days prior to the date that they intend to accept responsibility for permit requirements for their portion of the original permitted development from the previous permittee. The original permittee may submit an Individual Lot NOT at the time the Individual Lot NOI is submitted. Transfer of permit coverage is not granted until an approval letter from the director of Ohio EPA is received by the applicant.
2. **Failure to notify.** Operators who fail to notify the director of their intent to be covered and who discharge pollutants to surface waters of the state without an NPDES permit are in violation of ORC Chapter 6111. In such instances, Ohio EPA may bring an enforcement action for any discharges of storm water associated with construction activity.
3. **Where to submit an NOI.** Operators seeking coverage under this permit must submit a signed NOI form, provided by Ohio EPA, to the address found in the associated instructions.
4. **Additional notification.** NOIs and SWP3s are considered public documents and shall be made available to the public in accordance with Part III.C.2. The permittee shall make NOIs and SWP3s available upon request of the director of Ohio EPA, local agencies approving sediment and erosion control plans, grading plans or storm water management plans, local governmental officials, or operators of municipal separate storm sewer systems (MS4s) receiving drainage from the permitted site. Each operator

that discharges to an NPDES permitted MS4 shall provide a copy of its Ohio EPA NOI submission to the MS4 in accordance with the MS4's requirements, if applicable.

5. Re-notification. Existing permittees having coverage under the previous generations of this general permit (OHC000003, OHC000002 and OHR100000) shall have continuing coverage under OHC000004 with the submittal of a timely renewal application. Existing permittees will receive a renewal application and instructions for how to continue coverage under OHC000004. Within 90 days of receiving a renewal application from Ohio EPA, existing permittees shall submit the completed renewal application expressing their intent for continued coverage. In accordance with Ohio Administrative Code (OAC) 3745-38-02(E)(2)(a)(i), a renewal application fee will only apply to existing permittees having general permit coverage for 5 or more years as of the effective date of this general permit. Permit coverage will be terminated if Ohio EPA does not receive the renewal application within this 90 day period.

## Part II. NON-NUMERIC EFFLUENT LIMITATIONS

You shall comply with the following non-numeric effluent limitations for discharges from your site and/or from construction support activities. Part III of this permit contains the specific design criteria to meet the objectives of the following non-numeric effluent limitations.

- A. **Erosion and Sediment Controls.** You shall design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls shall be designed, installed and maintained to:
  1. Control storm water volume and velocity within the site to minimize soil erosion;
  2. Control storm water discharges, including both peak flowrates and total storm water volume, to minimize erosion at outlets and to minimize downstream channel and streambank erosion;
  3. Minimize the amount of soil exposed during construction activity;
  4. Minimize the disturbance of steep slopes;
  5. Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls shall address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting storm water runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;
  6. If feasible, provide and maintain a 50-foot undisturbed natural buffer around surface waters of the state, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration. If it is infeasible to provide and maintain an undisturbed 50-foot natural buffer, you shall comply with the stabilization requirements found in Part II.B for areas within 50 feet of a surface water; and
  7. Minimize soil compaction and, unless infeasible, preserve topsoil.

- B. Soil Stabilization.** Stabilization of disturbed areas shall, at a minimum, be initiated in accordance with the time frames specified in the following tables.

Table 1: Permanent Stabilization

Area requiring permanent stabilization	Time frame to apply erosion controls
Any areas that will lie dormant for one year or more	Within seven days of the most recent disturbance
Any areas within 50 feet of a surface water of the state and at final grade	Within two days of reaching final grade
Any other areas at final grade	Within seven days of reaching final grade within that area

Table 2: Temporary Stabilization

Area requiring temporary stabilization	Time frame to apply erosion controls
Any disturbed areas within 50 feet of a surface water of the state and not at final grade	Within two days of the most recent disturbance if the area will remain idle for more than 14 days
For all construction activities, any disturbed areas that will be dormant for more than 14 days but less than one year, and not within 50 feet of a surface water of the state	Within seven days of the most recent disturbance within the area  For residential subdivisions, disturbed areas must be stabilized at least seven days prior to transfer of permit coverage for the individual lot(s).
Disturbed areas that will be idle over winter	Prior to the onset of winter weather

Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed. Permanent and temporary stabilization are defined in Part VII.

- C. Dewatering.** Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls.
- D. Pollution Prevention Measures.** Design, install, implement and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented and maintained to:
1. Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters shall be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;

2. Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to storm water; and
3. Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.

**E. Prohibited Discharges.** The following discharges are prohibited:

1. Wastewater from washout of concrete, unless managed by an appropriate control;
2. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
3. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and
4. Soaps or solvents used in vehicle and equipment washing.

**F. Surface Outlets.** When discharging from sediment basins utilize outlet structures that withdraw water from the surface, unless infeasible. (Note: Ohio EPA believes that the circumstances in which it is infeasible to design outlet structures in this manner are rare. Exceptions may include time periods with extended cold weather during winter months. If you have determined that it is infeasible to meet this requirement, you shall provide documentation in your SWP3 to support your determination.)

**PART III. STORM WATER POLLUTION PREVENTION PLAN (SWP3)**

**A. Storm Water Pollution Prevention Plans.**

A SWP3 shall be developed for each site covered by this permit. For a multi-phase construction project, a separate NOI shall be submitted when a separate SWP3 will be prepared for subsequent phases. SWP3s shall be prepared in accordance with sound engineering and/or conservation practices by a professional experienced in the design and implementation of standard erosion and sediment controls and storm water management practices addressing all phases of construction. The SWP3 shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with construction activities. The SWP3 shall be a comprehensive, stand-alone document, which is not complete unless it contains the information required by Part III.G of this permit. In addition, the SWP3 shall describe and ensure the implementation of best management practices (BMPs) that reduce the pollutants in storm water discharges during construction and pollutants associated with post-construction activities to ensure compliance with ORC Section 6111.04, OAC Chapter 3745-1 and the terms and conditions of this permit.

**B. Timing**

A SWP3 shall be completed prior to the timely submittal of an NOI and updated in accordance with Part III.D. Upon request and good cause shown, the director may waive the requirement to have a SWP3 completed at the time of NOI submission. If a waiver has been granted, the

SWP3 must be completed prior to the initiation of construction activities. The SWP3 must be implemented upon initiation of construction activities.

If you wish to continue coverage from the previous generations of this permit (OHR100000, OHC000002 and OHC000003) you shall review and update your SWP3 to ensure that this permit's requirements are addressed within 180 days after the effective date of this permit. If it is infeasible for you to comply with a specific requirement in this permit because (1) the provision was not part of the permit you were previously covered under (OHR100000, OHC000002 and OHC000003), and (2) because you are prevented from compliance due to the nature or location of earth disturbances that commenced prior to the effective date of this permit, you shall include documentation within your SWP3 of the reasons why it is infeasible for you to meet the specific requirement. (Note: Ohio EPA believes examples of OHC000004 permit conditions that would be infeasible for permittees renewing coverage to comply with include: (1) Post-Construction Storm Water Management requirements, if general permit coverage was obtained prior to April 21, 2003, and (2) Sediment settling pond design requirements, if the general permit coverage was obtained prior to the effective date of this permit and the sediment settling pond has been installed.)

**C. SWP3 Signature and Review.**

1. Plan Signature and Retention On-Site. The SWP3 shall include the certification in Part V.H, be signed in accordance with Part V.G., and be retained on site during working hours.
2. Plan Availability
  - a. On-site: The plan shall be made available immediately upon request of the director or his authorized representative and MS4 operators or their authorized representative during working hours. A copy of the NOI and letter granting permit coverage under this general permit also shall be made available at the site.
  - b. By written request: The permittee must provide the most recent copy of the SWP3 within 10 days upon written request by any of the following:
    - i. The director or the director's authorized representative;
    - ii. A local agency approving sediment and erosion plans, grading plans or storm water management plans; or
    - iii. In the case of a storm water discharge associated with construction activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the operator of the system.
  - c. To the public: All NOIs, general permit approval for coverage letters, and SWP3s are considered reports that shall be available to the public in accordance with the Ohio Public Records law. The permittee shall make documents available to the public upon request or provide a copy at public expense, at cost, in a timely manner. However, the permittee may claim to Ohio EPA any portion of an SWP3 as confidential in accordance with Ohio law.



3. **Plan Revision.** The director or authorized representative may notify the permittee at any time that the SWP3 does not meet one or more of the minimum requirements of this part. Within 10 days after such notification from the director or authorized representative (or as otherwise provided in the notification), the permittee shall make the required changes to the SWP3 and, if requested, shall submit to Ohio EPA the revised SWP3 or a written certification that the requested changes have been made.

**D. Amendments**

The permittee shall amend the SWP3 whenever there is a change in design, construction, operation or maintenance, which has a significant effect on the potential for the discharge of pollutants to surface waters of the state or if the SWP3 proves to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with construction activity. Amendments to the SWP3 may be reviewed by Ohio EPA in the same manner as Part III.C.

**E. Duty to inform contractors and subcontractors**

The permittee shall inform all contractors and subcontractors not otherwise defined as "operators" in Part VII of this general permit who will be involved in the implementation of the SWP3 of the terms and conditions of this general permit. The permittee shall maintain a written document containing the signatures of all contractors and subcontractors involved in the implementation of the SWP3 as proof acknowledging that they reviewed and understand the conditions and responsibilities of the SWP3. The written document shall be created and signatures shall be obtained prior to commencement of work on the construction site.

**F. Total Maximum Daily Load (TMDL) allocations**

If a TMDL is approved for any waterbody into which the permittee's site discharges and requires specific BMPs for construction sites, the director may require the permittee to revise his/her SWP3.

**G. SWP3 Requirements**

Operations that discharge storm water from construction activities are subject to the following requirements and the SWP3 shall include the following items:

1. **Site description.** Each SWP3 shall provide:
  - a. A description of the nature and type of the construction activity (e.g., low density residential, shopping mall, highway, etc.);
  - b. Total area of the site and the area of the site that is expected to be disturbed (i.e., grubbing, clearing, excavation, filling or grading, including off-site borrow areas);
  - c. An estimate of the impervious area and percent imperviousness created by the construction activity;



- d. A calculation of the runoff coefficients for both the pre-construction and post-construction site conditions;
- e. Existing data describing the soil and, if available, the quality of any discharge from the site;
- f. A description of prior land uses at the site;
- g. An implementation schedule which describes the sequence of major construction operations (i.e., designation of vegetative preservation areas, grubbing, excavating, grading, utilities and infrastructure installation) and the implementation of erosion, sediment and storm water management practices or facilities to be employed during each operation of the sequence;
- h. The name and/or location of the immediate receiving stream or surface water(s) and the first subsequent named receiving water(s) and the areal extent and description of wetlands or other special aquatic sites at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project. For discharges to an MS4, the point of discharge to the MS4 and the location where the MS4 ultimately discharges to a stream or surface water of the state shall be indicated;
- i. For subdivided developments where the SWP3 does not call for a centralized sediment control capable of controlling multiple individual lots, a detail drawing of a typical individual lot showing standard individual lot erosion and sediment control practices.  
  
This does not remove the responsibility to designate specific erosion and sediment control practices in the SWP3 for critical areas such as steep slopes, stream banks, drainage ways and riparian zones;
- j. Location and description of any storm water discharges associated with dedicated asphalt and dedicated concrete plants covered by this permit and the best management practices to address pollutants in these storm water discharges;
- k. A copy of the permit requirements (attaching a copy of this permit is acceptable);
- l. A cover page or title identifying the name and location of the site, the name and contact information of all construction site operators, the name and contact information for the person responsible for authorizing and amending the SWP3, preparation date, and the estimated dates that construction will start and be complete;
- m. A log documenting grading and stabilization activities as well as amendments to the SWP3, which occur after construction activities commence; and
- n. Site map showing:

- i. Limits of earth-disturbing activity of the site including associated off-site borrow or spoil areas that are not addressed by a separate NOI and associated SWP3;
  - ii. Soils types for all areas of the site, including locations of unstable or highly erodible soils;
  - iii. Existing and proposed contours. A delineation of drainage watersheds expected during and after major grading activities as well as the size of each drainage watershed, in acres;
  - iv. Surface water locations including springs, wetlands, streams, lakes, water wells, etc., on or within 200 feet of the site, including the boundaries of wetlands or stream channels and first subsequent named receiving water(s) the permittee intends to fill or relocate for which the permittee is seeking approval from the Army Corps of Engineers and/or Ohio EPA;
  - v. Existing and planned locations of buildings, roads, parking facilities and utilities;
  - vi. The location of all erosion and sediment control practices, including the location of areas likely to require temporary stabilization during the course of site development;
  - vii. Sediment and storm water management basins noting their sediment settling volume and contributing drainage area. Ohio EPA recommends the use of data sheets (see ODNR's Rainwater and Land Development manual for examples) to provide data for all sediment traps, sediment basins and storm water management treatment practices noting important inputs to design and resulting parameters such as their contributing drainage area, disturbed area, water quality volume, sedimentation volume, practice surface area, facility discharge and dewatering time, outlet type and dimensions;
  - viii. The location of permanent storm water management practices to be used to control pollutants in storm water after construction operations have been completed;
  - ix. Areas designated for the storage or disposal of solid, sanitary and toxic wastes, including dumpster areas, areas designated for cement truck washout, and vehicle fueling;
  - x. The location of designated construction entrances where the vehicles will access the construction site; and
  - xi. The location of any in-stream activities including stream crossings.
2. Controls. In accordance with Part II.A, the SWP3 shall contain a description of the controls appropriate for each construction operation covered by this permit and the operator(s) shall implement such controls. The SWP3 shall clearly describe for each

major construction activity identified in Part III.G.1.g: (a) appropriate control measures and the general timing (or sequence) during the construction process that the measures will be implemented; and (b) which contractor is responsible for implementation (e.g., contractor A will clear land and install perimeter controls and contractor B will maintain perimeter controls until final stabilization). The SWP3 shall identify the subcontractors engaged in activities that could impact storm water runoff. The SWP3 shall contain signatures from all of the identified subcontractors indicating that they have been informed and understand their roles and responsibilities in complying with the SWP3. Ohio EPA recommends that the primary site operator review the SWP3 with the primary contractor prior to commencement of construction activities and keep a SWP3 training log to demonstrate that this review has occurred.

Ohio EPA recommends that the erosion, sediment, and storm water management practices used to satisfy the conditions of this permit should meet the standards and specifications in the most current edition of Ohio's Rainwater and Land Development (see definitions) manual or other standards acceptable to Ohio EPA. The controls shall include the following minimum components:

- a. Non-Structural Preservation Methods. The SWP3 shall make use of practices which preserve the existing natural condition as much as feasible. Such practices may include: preserving existing vegetation and vegetative buffer strips, phasing of construction operations in order to minimize the amount of disturbed land at any one time and designation of tree preservation areas or other protective clearing or grubbing practices. For all construction activities immediately adjacent to surface waters of the state, the permittee shall comply with the buffer non-numeric effluent limitation in Part II.A.6, as measured from the ordinary high water mark of the surface water.
- b. Erosion Control Practices. The SWP3 shall make use of erosion controls that are capable of providing cover over disturbed soils unless an exception is approved in accordance with Part III.G.4. A description of control practices designed to restabilize disturbed areas after grading or construction shall be included in the SWP3. The SWP3 shall provide specifications for stabilization of all disturbed areas of the site and provide guidance as to which method of stabilization will be employed for any time of the year. Such practices may include: temporary seeding, permanent seeding, mulching, matting, sod stabilization, vegetative buffer strips, phasing of construction operations, use of construction entrances and the use of alternative ground cover.
  - i. **Stabilization.** Disturbed areas shall be stabilized in accordance with Table 1 (Permanent Stabilization) and Table 2 (Temporary Stabilization) in Part II.B of this permit.
  - ii. **Permanent stabilization of conveyance channels.** Operators shall undertake special measures to stabilize channels and outfalls and prevent erosive flows. Measures may include seeding, dormant seeding (as defined in the most current edition of the Rainwater and Land Development manual), mulching, erosion control matting, sodding, riprap, natural channel design with bioengineering techniques or rock check dams.

- c. Runoff Control Practices. The SWP3 shall incorporate measures which control the flow of runoff from disturbed areas so as to prevent erosion from occurring. Such practices may include rock check dams, pipe slope drains, diversions to direct flow away from exposed soils and protective grading practices. These practices shall divert runoff away from disturbed areas and steep slopes where practicable. Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide non-erosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected.
- d. Sediment Control Practices. The plan shall include a description of structural practices that shall store runoff allowing sediments to settle and/or divert flows away from exposed soils or otherwise limit runoff from exposed areas. Structural practices shall be used to control erosion and trap sediment from a site remaining disturbed for more than 14 days. Such practices may include, among others: sediment settling ponds, silt fences, earth diversion dikes or channels which direct runoff to a sediment settling pond and storm drain inlet protection. All sediment control practices must be capable of ponding runoff in order to be considered functional. Earth diversion dikes or channels alone are not considered a sediment control practice unless those are used in conjunction with a sediment settling pond.

The SWP3 shall contain detail drawings for all structural practices.

- i. **Timing.** Sediment control structures shall be functional throughout the course of earth disturbing activity. Sediment basins and perimeter sediment barriers shall be implemented prior to grading and within seven days from the start of grubbing. They shall continue to function until the up slope development area is restabilized. As construction progresses and the topography is altered, appropriate controls shall be constructed or existing controls altered to address the changing drainage patterns.
- ii. **Sediment settling ponds.** A sediment settling pond is required for any one of the following conditions:
- Concentrated storm water runoff (e.g., storm sewer or ditch);
  - Runoff from drainage areas, which exceed the design capacity of silt fence or other sediment barriers;
  - Runoff from drainage areas that exceed the design capacity of inlet protection; or
  - Runoff from common drainage locations with 10 or more acres of disturbed land.

The permittee may request approval from Ohio EPA to use alternative controls if the permittee can demonstrate the alternative controls are equivalent in effectiveness to a sediment settling pond.

In accordance with Part II.F, if feasible, sediment settling ponds shall be dewatered at the pond surface using a skimmer or equivalent device. The sediment settling pond volume consists of both a dewatering zone and a sediment storage zone. The volume of the dewatering zone shall

be a minimum of 1800 cubic feet (ft<sup>3</sup>) per acre of drainage (67 yd<sup>3</sup>/acre) with a minimum 48-hour drain time for sediment basins serving a drainage area over 5 acres. The volume of the sediment storage zone shall be calculated by one of the following methods:

Method 1: The volume of the sediment storage zone shall be 1000 ft<sup>3</sup> per disturbed acre within the watershed of the basin. OR

Method 2: The volume of the sediment storage zone shall be the volume necessary to store the sediment as calculated with RUSLE or a similar generally accepted erosion prediction model.

The accumulated sediment shall be removed from the sediment storage zone once it's full. When determining the total contributing drainage area, off-site areas and areas which remain undisturbed by construction activity shall be included unless runoff from these areas is diverted away from the sediment settling pond and is not co-mingled with sediment-laden runoff. The depth of the dewatering zone shall be less than or equal to five feet. The configuration between inlets and the outlet of the basin shall provide at least two units of length for each one unit of width (> 2:1 length:width ratio); however, a length to width ratio of 4:1 is recommended. When designing sediment settling ponds, the permittee shall consider public safety, especially as it relates to children, as a design factor for the sediment basin and alternative sediment controls shall be used where site limitations would preclude a safe design. The use of a combination of sediment and erosion control measures in order to achieve maximum pollutant removal is encouraged.

- iii. **Silt Fence and Diversions.** Sheet flow runoff from denuded areas shall be intercepted by silt fence or diversions to protect adjacent properties and water resources from sediment transported via sheet flow. Where intended to provide sediment control, silt fence shall be placed on a level contour downslope of the disturbed area. This permit does not preclude the use of other sediment barriers designed to control sheet flow runoff. The relationship between the maximum drainage area to silt fence for a particular slope range is shown in the following table:

**Silt Fence Maximum Drainage Area Based on Slope**

Maximum drainage area (in acres) to 100 linear feet of silt fence	Range of slope for a particular drainage area (in percent)
0.5	< 2%
0.25	> 2% but < 20%
0.125	> 20% but < 50%

Placing silt fence in a parallel series does not extend the size of the drainage area. Storm water diversion practices shall be used to keep runoff away from disturbed areas and steep slopes where practicable. Such devices, which include swales, dikes or berms, may receive storm water runoff from areas up to 10 acres.

- iv. **Inlet Protection.** Other erosion and sediment control practices shall minimize sediment laden water entering active storm drain systems, unless the storm drain system drains to a sediment settling pond. All inlets receiving runoff from drainage areas of one or more acres will require a sediment settling pond.
- v. **Surface Waters of the State Protection.** If construction activities disturb areas adjacent to surface waters of the state, structural practices shall be designed and implemented on site to protect all adjacent surface waters of the state from the impacts of sediment runoff. No structural sediment controls (e.g., the installation of silt fence or a sediment settling pond) shall be used in a surface water of the state. For all construction activities immediately adjacent to surface waters of the state, the permittee shall comply with the buffer non-numeric effluent limitation in Part II.A.6, as measured from the ordinary high water mark of the surface water. Where impacts within this buffer area are unavoidable, due to the nature of the construction (e.g., stream crossings for roads or utilities), the project shall be designed such that the number of stream crossings and the width of the disturbance within the buffer area are minimized.
- vi. **Modifying Controls.** If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the permittee shall replace or modify the control for site conditions.
- e. **Post-Construction Storm Water Management Requirements.** So that receiving stream's physical, chemical and biological characteristics are protected and stream functions are maintained, post-construction storm water practices shall provide perpetual management of runoff quality and quantity. To meet the post-construction requirements of this permit, the SWP3 shall contain a description of the post-construction BMPs that will be installed during construction for the site and the rationale for their selection. The rationale shall address the anticipated impacts on the channel and floodplain morphology, hydrology, and water quality. Post-construction BMPs cannot be installed within a surface water of the state (e.g., wetland or stream) unless it's authorized by a CWA 401 water quality certification, CWA 404 permit, or Ohio EPA non-jurisdictional wetland/stream program approval. Note: localities may have more stringent post-construction requirements.

Detail drawings and maintenance plans shall be provided for all post-construction BMPs. Maintenance plans shall be provided by the permittee to the post-construction operator of the site (including homeowner associations) upon completion of construction activities (prior to termination of permit coverage). For sites located within a community with a regulated municipal separate storm sewer system (MS4), the permittee, land owner, or other entity with legal control of the property may be required to develop and implement a maintenance plan to comply with the requirements of the MS4. Maintenance plans shall ensure that pollutants collected within structural post-construction practices, be disposed of in accordance with local, state, and federal regulations. To ensure that storm water management systems function as they were designed and constructed, the post-construction operation and maintenance plan shall be a stand-alone

document, which contains: (1) a designated entity for storm water inspection and maintenance responsibilities; (2) the routine and non-routine maintenance tasks to be undertaken; (3) a schedule for inspection and maintenance; (4) any necessary legally binding maintenance easements and agreements; and (5) a map showing all access and maintenance easements. Permittees are not responsible under this permit for operation and maintenance of post-construction practices once coverage under this permit is terminated.

Post-construction storm water BMPs that discharge pollutants from point sources once construction is completed, may in themselves, need authorization under a separate NPDES permit (one example is storm water discharges from regulated industrial sites).

Construction activities that do not include the installation of any impervious surface (e.g., soccer fields), abandoned mine land reclamation activities regulated by the Ohio Department of Natural Resources, stream and wetland restoration activities, and wetland mitigation activities are not required to comply with the conditions of Part III.G.2.e of this permit. Linear construction projects, (e.g., pipeline or utility line installation), which do not result in the installation of additional impervious surface, are not required to comply with the conditions of Part III.G.2.e of this permit. However, linear construction projects shall be designed to minimize the number of stream crossings and the width of disturbance and achieve final stabilization of the disturbed area as defined in Part VII.J.1.

Large Construction Activities. For all large construction activities (involving the disturbance of five or more acres of land or will disturb less than five acres, but is a part of a larger common plan of development or sale which will disturb five or more acres of land), the post construction BMP(s) chosen shall be able to detain storm water runoff for protection of the stream channels, stream erosion control, and improved water quality. The BMP(s) chosen must be compatible with site and soil conditions. Structural post-construction storm water treatment practices shall be incorporated into the permanent drainage system for the site. The BMP(s) chosen must be sized to treat the water quality volume ( $WQ_v$ ) and ensure compliance with Ohio's Water Quality Standards in OAC Chapter 3745-1. The  $WQ_v$  shall be equivalent to the volume of runoff from a 0.75-inch rainfall and shall be determined according to the following equation:

$$WQ_v = C * P * A / 12$$

where:

$WQ_v$  = water quality volume in acre-feet

C = runoff coefficient appropriate for storms less than 1 inch

(Either use the following formula:  $C = 0.858i^3 - 0.78i^2 + 0.774i + 0.04$ ,

where  $i$  = fraction of post-construction impervious surface or use Table 1)

P = 0.75 inch precipitation depth

A = area draining into the BMP in acres

**Table 1**  
**Runoff Coefficients Based on the Type of Land Use**

Land Use	Runoff Coefficient
Industrial & Commercial	0.8
High Density Residential (>8 dwellings/acre)	0.5
Medium Density Residential (4 to 8 dwellings/acre)	0.4
Low Density Residential (<4 dwellings/acre)	0.3
Open Space and Recreational Areas	0.2

Where the land use will be mixed, the runoff coefficient should be calculated using a weighted average. For example, if 60% of the contributing drainage area to the storm water treatment structure is Low Density Residential, 30% is High Density Residential, and 10% is Open Space, the runoff coefficient is calculated as follows  $(0.6)(0.3) + (0.3)(0.5) + (0.1)(0.2) = 0.35$ .

An additional volume equal to 20 percent of the  $WQ_v$  shall be incorporated into the BMP for sediment storage. Ohio EPA recommends that BMPs be designed according to the methodology included in the most current edition of the Rainwater and Land Development manual or in another design manual acceptable for use by Ohio EPA.

The BMPs listed in Table 2 below shall be considered standard BMPs approved for general use. However communities with a regulated MS4 may limit the use of some of these BMPs. BMPs shall be designed such that the drain time is long enough to provide treatment, but short enough to provide storage for successive rainfall events and avoid the creation of nuisance conditions. The outlet structure for the post-construction BMP shall not discharge more than the first half of the  $WQ_v$  or extended detention volume (EDv) in less than one-third of the drain time. The EDv is the volume of storm water runoff that must be detained by a structural post-construction BMP. The EDv is equal to 75 percent of the  $WQ_v$  for wet extended detention basins, but is equal to the  $WQ_v$  for all other BMPs listed in Table 2.



**Table 2**  
**Structural Post-Construction BMPs & Associated**  
**Drain (Drawdown) Times**

<b>Best Management Practice</b>	<b>Drain Time of WQv</b>
Infiltration Basin or Trench <sup>1</sup>	48 hours
Permeable Pavement – Infiltration <sup>1</sup>	48 hours
Permeable Pavement – Extended Detention	24 hours
Dry Extended Detention Basin <sup>2</sup>	48 hours
Wet Extended Detention Basin <sup>3</sup>	24 hours
Constructed Wetland (above permanent pool) <sup>4</sup>	24 hours
Sand & Other Media Filtration <sup>5</sup>	24 hours
Bioretention Area/Cell <sup>5,6</sup>	24 hours
Pocket Wetland <sup>7</sup>	24 hours

<sup>1</sup> Practices that are designed to fully infiltrate the WQv (basin, trench, permeable pavement) shall empty within 48 hours to provide storage for the subsequent storm events.

<sup>2</sup> Dry basins must include forebay and micropool each sized at 10% of the WQv.

<sup>3</sup> Provide both a permanent pool and an EDv above the permanent pool, each sized at 0.75 WQv.

<sup>4</sup> Extended detention shall be provided for the WQv above the permanent water pool.

<sup>5</sup> The surface ponding area (WQv) shall completely empty within 24 hours so that there is no standing water. Shorter drawdown times are acceptable as long as design criteria in Ohio's Rainwater and Land Development manual have been met.

<sup>6</sup> This would include Grassed Linear Bioretention which was previously called Enhanced Water Quality Swale.

<sup>7</sup> Pocket wetlands must have a wet pool equal to the WQv, with 25% of the WQv in a pool and 75% in marshes. The EDv above the permanent pool must be equal to the WQv.

The permittee may request approval from Ohio EPA to use alternative structural post-construction BMPs if the permittee can demonstrate that the alternative BMPs are equivalent in effectiveness to those listed in Table 2 above.

Construction activities shall be exempt from this condition if it can be demonstrated that the WQv is provided within an existing structural post-construction BMP that is part of a larger common plan of development or if structural post-construction BMPs are addressed in a regional or local storm water management plan. A municipally operated regional storm water BMP can be used as a post-construction BMP provided that the BMP can detain the WQv from its entire drainage area and release it over a 24 hour period.

Transportation Projects. The construction of new roads and roadway improvement projects by public entities (i.e., the state, counties, townships, cities, or villages) may implement post-construction BMPs in compliance with the current version (as of the effective date of this permit) of the Ohio Department of Transportation's "Location and Design Manual, Volume Two Drainage Design" that has been accepted by Ohio EPA as an alternative to the conditions of this permit.

Offsite Mitigation of Post-Construction. Ohio EPA may authorize the offsite mitigation of the post-construction requirements of Part III.G.2.e of this permit on a case by case basis provided the permittee clearly demonstrates the BMPs listed in Table 2 are not feasible and the following criteria is met: (1) a maintenance agreement or policy is established to ensure operations and treatment in perpetuity; (2) the offsite location discharges to the same HUC-14 watershed unit; and (3) the mitigation ratio of the WQv is 1.5 to 1 or the WQv at the point of retrofit, whichever is greater. Requests for offsite mitigation must be received prior to receipt of the NOI applications.

Redevelopment Projects Sites that have been previously developed where no post-construction BMPs were installed shall either ensure a 20 percent net reduction of the site impervious area, provide for treatment of at least 20 percent of the WQv, or a combination of the two. A one-for-one credit towards the 20 percent net reduction of impervious area can be obtained through the use of green roofs. Where projects are a combination of new development and redevelopment, the total WQv that must be treated shall be calculated by a weighted average based on acreage, with the new development at 100 percent WQv and redevelopment at 20 percent WQv.

Non-Structural Post-Construction BMPs The size of the structural post-construction can be reduced by incorporating non-structural post-construction BMPs into the design. Practices such as preserving open space will reduce the runoff coefficient and, thus, the WQv. Ohio EPA encourages the implementation of riparian and wetland setbacks. Practices which reduce storm water runoff include green roofs, rain barrels, conservation development, smart growth, low-impact development, and other site design techniques. For examples, see the Ohio Lake Erie Commission's Balanced Growth Program at <http://balancedgrowth.ohio.gov/>.

In order to promote the implementation of such practices, the Director may consider the use of non-structural practices to demonstrate compliance with Part III.G.2.e of this permit for areas of the site not draining into a common drainage system of the site, i.e., sheet flow from perimeter areas such as the rear yards of residential lots, for low density development scenarios, or where the permittee can demonstrate that the intent of pollutant removal and stream protection, as required in Part III.G.2.e of this permit is being addressed through non-structural post-construction BMPs based upon review and approval by Ohio EPA.

Use of Alternative Post-Construction BMPs This permit does not preclude the use of innovative or experimental post-construction storm water management technologies. However, the Director may require these practices to be tested using the protocol outlined in the Technology Acceptance Reciprocity Partnership's (TARP) Protocol for Stormwater Best Management Practice Demonstrations or other approvable protocol. For guidance, see the following:

- <http://www.nistormwater.org>
- <http://www.mastep.net/>

The Director may require discharges from such structures to be monitored to ensure compliance with Part III.G.2.e of this permit. Permittees shall request

approval from Ohio EPA to use alternative post-construction BMPs if the permittee can demonstrate that the alternative BMPs are equivalent in effectiveness to those listed in Table 2 above. To demonstrate this equivalency, the permittee shall show that the alternative BMP has a minimum total suspended solids (TSS) removal efficiency of 80 percent under both laboratory and field conditions. Tests shall be conducted by an independent, third party tester. Also, the WQv discharge rate from the practice shall be reduced to prevent stream bed erosion and protect the physical and biological stream integrity unless there will be negligible hydrological impact to the receiving surface water of the state. The discharges will have a negligible impact if the permittee can demonstrate that one of the following four conditions exist:

- i. The entire WQv is recharged to groundwater;
- ii. The larger common plan of development or sale will create less than one acre of impervious surface;
- iii. The project is a redevelopment project within an ultra-urban setting (i.e., a downtown area or on a site where 100 percent of the project area is already impervious surface and the storm water discharge is directed into an existing storm sewer system); or
- iv. The storm water drainage system of the development discharges directly into a large river (fourth order or greater) or to a lake and where the development area is less than 5 percent of the watershed area upstream of the development site, unless a TMDL identified water quality problems into the receiving surface waters of the state.

The Director shall only consider the use of alternative BMPs on projects where the permittee can demonstrate that the implementation of the BMPs listed in Table 2 is infeasible due to physical site constraints that prevent the ability to provide functional BMP design. Alternative practices may include, but are not limited to, underground detention structures, vegetated swales and vegetated filter strips designed using water quality flow, natural depressions, rain barrels, green roofs, rain gardens, catch basin inserts, and hydrodynamics separators. The Director may also consider non-structural post-construction approaches where no local requirements for such practices exist.

Small Construction Activities For all small land disturbance activities (which disturb one or more, but less than five acres of land and is not a part of a larger common plan of development or sale which will disturb five or more acres of land), a description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed must be included in the SWP3. Structural measures should be placed on upland soils to the degree attainable. Such practices may include, but are not limited to: storm water detention structures (including wet basins); storm water retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff onsite; and sequential systems (which combine several practices). The SWP3 shall include an explanation of the technical basis used to select the practices to control pollution where flows exceed pre-development levels.

- f. Surface Water Protection. If the project site contains any streams, rivers, lakes, wetlands or other surface waters, certain construction activities at the site may be regulated under the CWA and/or state isolated wetland permit requirements. Sections 404 and 401 of the Act regulate the discharge of dredged or fill material into surface waters and the impacts of such activities on water quality, respectively. Construction activities in surface waters which may be subject to CWA regulation and/or state isolated wetland permit requirements include, but are not limited to: sewer line crossings, grading, backfilling or culverting streams, filling wetlands, road and utility line construction, bridge installation and installation of flow control structures. If the project contains streams, rivers, lakes or wetlands or possible wetlands, the permittee shall contact the appropriate U.S. Army Corps of Engineers District Office. (CAUTION: Any area of seasonally wet hydric soil is a potential wetland - please consult the Soil Survey and list of hydric soils for your County, available at your county's Soil and Water Conservation District. If you have any questions about Section 401 water quality certification, please contact the Ohio Environmental Protection Agency, Section 401 Coordinator.)

U.S. Army Corps of Engineers (Section 404 regulation):

- Huntington, WV District (304) 399-5210 (Muskingum River, Hocking River, Scioto River, Little Miami River, and Great Miami River Basins)
- Buffalo, NY District (716) 879-4330 (Lake Erie Basin)
- Pittsburgh, PA District (412) 395-7155 (Mahoning River Basin)
- Louisville, KY District (502) 315-6686 (Ohio River)

Ohio EPA 401/404 and non-jurisdictional stream/wetland coordinator can be contacted at (614) 644-2001 (all of Ohio)

Concentrated storm water runoff from BMPs to natural wetlands shall be converted to diffuse flow before the runoff enters the wetlands. The flow should be released such that no erosion occurs downslope. Level spreaders may need to be placed in series, particularly on steep sloped sites, to ensure non-erosive velocities. Other structural BMPs may be used between storm water features and natural wetlands, in order to protect the natural hydrology, hydroperiod, and wetland flora. If the applicant proposes to discharge to natural wetlands, a hydrologic analysis shall be performed. The applicant shall attempt to match the pre-development hydroperiods and hydrodynamics that support the wetland. The applicant shall assess whether their construction activity will adversely impact the hydrologic flora and fauna of the wetland. Practices such as vegetative buffers, infiltration basins, conservation of forest cover, and the preservation of intermittent streams, depressions, and drainage corridors may be used to maintain wetland hydrology.

- g. Other controls.

- i. **Non-Sediment Pollutant Controls.** In accordance with Part II.E, no solid (other than sediment) or liquid waste, including building materials, shall be discharged in storm water runoff. The permittee must implement all necessary BMPs to prevent the discharge of non-sediment pollutants to the drainage system of the site or surface waters of the state. Under

no circumstance shall wastewater from the washout of concrete trucks, stucco, paint, form release oils, curing compounds, and other construction materials be discharged directly into a drainage channel, storm sewer or surface waters of the state. Also, no pollutants from vehicle fuel, oils, or other vehicle fluids can be discharged to surface waters of the state. No exposure of storm water to waste materials is recommended. The SWP3 must include methods to minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, and sanitary waste to precipitation, storm water runoff, and snow melt. In accordance with Part II.D.3, the SWP3 shall include measures to prevent and respond to chemical spills and leaks. You may also reference the existence of other plans (i.e., Spill Prevention Control and Countermeasure (SPCC) plans, spill control programs, Safety Response Plans, etc.) provided that such plan addresses conditions of this permit condition and a copy of such plan is maintained on site.

- ii. **Off-site traffic.** Off-site vehicle tracking of sediments and dust generation shall be minimized. In accordance with Part II.D.1, the SWP3 shall include methods to minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. No detergents may be used to wash vehicles. Wash waters shall be treated in a sediment basin or alternative control that provides equivalent treatment prior to discharge.
- iii. **Compliance with other requirements.** The SWP3 shall be consistent with applicable State and/or local waste disposal, sanitary sewer or septic system regulations, including provisions prohibiting waste disposal by open burning and shall provide for the proper disposal of contaminated soils to the extent these are located within the permitted area.
- iv. **Trench and ground water control.** In accordance with Part II.C, there shall be no turbid discharges to surface waters of the state resulting from dewatering activities. If trench or ground water contains sediment, it shall pass through a sediment settling pond or other equally effective sediment control device, prior to being discharged from the construction site. Alternatively, sediment may be removed by settling in place or by dewatering into a sump pit, filter bag or comparable practice. Ground water which does not contain sediment or other pollutants is not required to be treated prior to discharge. However, care must be taken when discharging ground water to ensure that it does not become pollutant-laden by traversing over disturbed soils or other pollutant sources.
- v. **Contaminated Sediment.** Where construction activities are to occur on sites with contamination from previous activities, operators shall be aware that concentrations of materials that meet other criteria (is not considered a Hazardous Waste, meeting VAP standards, etc.) may still result in storm water discharges in excess of Ohio Water Quality Standards. Such discharges are not authorized by this permit. Appropriate BMPs include, but are not limited to:

- The use of berms, trenches, and pits to collect contaminated runoff and prevent discharges;
- Pumping runoff into a sanitary sewer (with prior approval of the sanitary sewer operator) or into a container for transport to an appropriate treatment/disposal facility; and
- Covering areas of contamination with tarps or other methods that prevent storm water from coming into contact with the material.

Operators should consult with Ohio EPA Division of Surface Water prior to seeking permit coverage.

- h. Maintenance. All temporary and permanent control practices shall be maintained and repaired as needed to ensure continued performance of their intended function. All sediment control practices must be maintained in a functional condition until all up slope areas they control are permanently stabilized. The SWP3 shall be designed to minimize maintenance requirements. The applicant shall provide a description of maintenance procedures needed to ensure the continued performance of control practices.
- i. Inspections. At a minimum, procedures in an SWP3 shall provide that all controls on the site are inspected at least once every seven calendar days and within 24 hours after any storm event greater than one-half inch of rain per 24 hour period. The inspection frequency may be reduced to at least once every month if the entire site is temporarily stabilized or runoff is unlikely due to weather conditions (e.g., site is covered with snow, ice, or the ground is frozen). A waiver of inspection requirements is available until one month before thawing conditions are expected to result in a discharge if all of the following conditions are met: the project is located in an area where frozen conditions are anticipated to continue for extended periods of time (i.e., more than one month); land disturbance activities have been suspended; and the beginning and ending dates of the waiver period are documented in the SWP3. Once a definable area is finally stabilized, the area may be marked on the SWP3 and no further inspection requirements apply to that portion of the site. The permittee shall assign "qualified inspection personnel" to conduct these inspections to ensure that the control practices are functional and to evaluate whether the SWP3 is adequate and properly implemented in accordance with the schedule proposed in Part III.G.1.g of this permit or whether additional control measures are required.

Following each inspection, a checklist must be completed and signed by the qualified inspection personnel representative. At a minimum, the inspection report shall include:

- i. the inspection date;
- ii. names, titles, and qualifications of personnel making the inspection;
- iii. weather information for the period since the last inspection (or since commencement of construction activity if the first inspection) including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each storm event (in inches), and whether any discharges occurred;
- iv. weather information and a description of any discharges occurring at the time of the inspection;



- v. location(s) of discharges of sediment or other pollutants from the site;
- vi. location(s) of BMPs that need to be maintained;
- vii. location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location;
- viii. location(s) where additional BMPs are needed that did not exist at the time of inspection; and
- ix. corrective action required including any changes to the SWP3 necessary and implementation dates.

Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of or the potential for pollutants entering the drainage system. Erosion and sediment control measures identified in the SWP3 shall be observed to ensure that those are operating correctly. Discharge locations shall be inspected to ascertain whether erosion and sediment control measures are effective in preventing significant impacts to the receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site vehicle tracking.

The permittee shall maintain for three years following the submittal of a notice of termination form, a record summarizing the results of the inspection, names(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the SWP3 and a certification as to whether the facility is in compliance with the SWP3 and the permit and identify any incidents of non-compliance. The record and certification shall be signed in accordance with Part V.G. of this permit.

- i. **When practices require repair or maintenance.** If the inspection reveals that a control practice is in need of repair or maintenance, with the exception of a sediment settling pond, it shall be repaired or maintained within 3 days of the inspection. Sediment settling ponds shall be repaired or maintained within 10 days of the inspection.
- ii. **When practices fail to provide their intended function.** If the inspection reveals that a control practice fails to perform its intended function and that another, more appropriate control practice is required, the SWP3 shall be amended and the new control practice shall be installed within 10 days of the inspection.
- iii. **When practices depicted on the SWP3 are not installed.** If the inspection reveals that a control practice has not been implemented in accordance with the schedule contained in Part III.G.1.g of this permit, the control practice shall be implemented within 10 days from the date of the inspection. If the inspection reveals that the planned control practice is not needed, the record shall contain a statement of explanation as to why the control practice is not needed.

3. Approved State or local plans. All dischargers regulated under this general permit must comply, except those exempted under state law, with the lawful requirements of municipalities, counties and other local agencies regarding discharges of storm water from construction activities. All erosion and sediment control plans and storm water

management plans approved by local officials shall be retained with the SWP3 prepared in accordance with this permit. Applicable requirements for erosion and sediment control and storm water management approved by local officials are, upon submittal of a NOI form, incorporated by reference and enforceable under this permit even if they are not specifically included in an SWP3 required under this permit. When the project is located within the jurisdiction of a regulated municipal separate storm sewer system (MS4), the permittee shall certify that the SWP3 complies with the requirements of the storm water management program of the MS4 operator.

4. Exceptions. If specific site conditions prohibit the implementation of any of the erosion and sediment control practices contained in this permit or site specific conditions are such that implementation of any erosion and sediment control practices contained in this permit will result in no environmental benefit, then the permittee shall provide justification for rejecting each practice based on site conditions. Exceptions from implementing the erosion and sediment control standards contained in this permit will be approved or denied on a case-by-case basis.

The permittee may request approval from Ohio EPA to use alternative methods to satisfy conditions in this permit if the permittee can demonstrate that the alternative methods are sufficient to protect the overall integrity of receiving streams and the watershed. Alternative methods will be approved or denied on a case-by-case basis.

#### **PART IV. NOTICE OF TERMINATION REQUIREMENTS**

##### **A. Failure to notify.**

The terms and conditions of this permit shall remain in effect until a signed Notice of Termination (NOT) form is submitted. Failure to submit an NOT constitutes a violation of this permit and may affect the ability of the permittee to obtain general permit coverage in the future.

##### **B. When to submit an NOT.**

1. Permittees wishing to terminate coverage under this permit shall submit an NOT form in accordance with Part V.G. of this permit. Compliance with this permit is required until an NOT form is submitted. The permittee's authorization to discharge under this permit terminates at midnight of the day the NOT form is submitted. Prior to submitting the NOT form, the permittee shall conduct a site inspection in accordance with Part III.G.2.i of this permit and have a maintenance agreement in place to ensure all post-construction BMPs will be maintained in perpetuity.
2. All permittees shall submit an NOT form within 45 days of completing all permit requirements. Enforcement actions may be taken if a permittee submits an NOT form without meeting one or more of the following conditions:
  - a. Final stabilization (see definition in Part VII) has been achieved on all portions of the site for which the permittee is responsible (including, if applicable, returning agricultural land to its pre-construction agricultural use);
  - b. Another operator(s) has assumed control over all areas of the site that have not been finally stabilized;



- c. For residential construction only, temporary stabilization has been completed and the lot, which includes a home, has been transferred to the homeowner. (Note: For individual lots without housing, which are sold by the developer, the individual lot permittee shall implement final stabilization prior to the individual lot permittee terminating permit coverage.); or
- d. An exception has been granted under Part III.G.4.

**C. How to submit an NOT.**

Permittees shall use Ohio EPA's approved NOT form. The form shall be completed and mailed according to the instructions and signed in accordance with Part V.G of this permit.

**PART V. STANDARD PERMIT CONDITIONS.**

**A. Duty to comply.**

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of ORC Chapter 6111 and is grounds for enforcement action.

Ohio law imposes penalties and fines for persons who knowingly make false statements or knowingly swear or affirm the truth of a false statement previously made.

**B. Continuation of an expired general permit.**

An expired general permit continues in force and effect until a new general permit is issued.

**C. Need to halt or reduce activity not a defense.**

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

**D. Duty to mitigate.**

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

**E. Duty to provide information.**

The permittee shall furnish to the director, within 10 days of written request, any information which the director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the director upon request copies of records required to be kept by this permit.

**F. Other information.**

When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the NOI, SWP3, NOT or in any other report to the director, he or she shall promptly submit such facts or information.

**G. Signatory requirements.**

All NOIs, NOTs, SWP3s, reports, certifications or information either submitted to the director or that this permit requires to be maintained by the permittee, shall be signed.

1. These items shall be signed as follows:
  - a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
    - i. A president, secretary, treasurer or vice-president of the corporation in charge of a principal business function or any other person who performs similar policy or decision-making functions for the corporation; or
    - ii. The manager of one or more manufacturing, production or operating facilities, provided, the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
  - b. For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or
  - c. For a municipality, State, Federal or other public agency: By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (1) the chief executive officer of the agency or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA).
2. All reports required by the permits and other information requested by the director shall be signed by a person described in Part V.G.1 of this permit or by a duly authorized representative of that person. A person is a duly authorized representative only if:
  - a. The authorization is made in writing by a person described in Part V.G.1 of this permit and submitted to the director;

- b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator of a well or well field, superintendent, position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
  - c. The written authorization is submitted to the director.
- 3. Changes to authorization. If an authorization under Part V.G.2 of this permit is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part V.G.2 of this permit must be submitted to the director prior to or together with any reports, information or applications to be signed by an authorized representative.

**H. Certification.**

Any person signing documents under this section shall make the following certification:

*"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*

**I. Oil and hazardous substance liability.**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under section 311 of the CWA or 40 CFR Part 112. 40 CFR Part 112 establishes procedures, methods and equipment and other requirements for equipment to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable surface waters of the state or adjoining shorelines.

**J. Property rights.**

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

**K. Severability.**

The provisions of this permit are severable and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

**L. Transfers.**

Ohio NPDES general permit coverage is transferable. Ohio EPA must be notified in writing sixty days prior to any proposed transfer of coverage under an Ohio NPDES general permit. The transferee must inform Ohio EPA it will assume the responsibilities of the original permittee transferor.

**M. Environmental laws.**

No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

**N. Proper operation and maintenance.**

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of SWP3s. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

**O. Inspection and entry.**

The permittee shall allow the director or an authorized representative of Ohio EPA, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment); and
4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

**P. Duty to Reapply**

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

**Q. Permit Actions**

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

**R. Bypass**

The provisions of 40 CFR Section 122.41(m), relating to "Bypass," are specifically incorporated herein by reference in their entirety. For definition of "Bypass," see Part VII.C.

**S. Upset**

The provisions of 40 CFR Section 122.41(n), relating to "Upset," are specifically incorporated herein by reference in their entirety. For definition of "Upset," see Part VII.GG.

**T. Monitoring and Records**

The provisions of 40 CFR Section 122.41(j), relating to "Monitoring and Records," are specifically incorporated herein by reference in their entirety.

**U. Reporting Requirements**

The provisions of 40 CFR Section 122.41(l), relating to "Reporting Requirements," are specifically incorporated herein by reference in their entirety.

**PART VI. REOPENER CLAUSE**

If there is evidence indicating potential or realized impacts on water quality due to any storm water discharge associated with construction activity covered by this permit, the permittee of such discharge may be required to obtain coverage under an individual permit or an alternative general permit in accordance with Part I.C of this permit or the permit may be modified to include different limitations and/or requirements.

Permit modification or revocation will be conducted according to ORC Chapter 6111.

**PART VII. DEFINITIONS**

- A. "Act" means Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483, Pub. L. 97-117 and Pub. L. 100-4, 33 U.S.C. 1251 et. seq.
- B. "Best management practices (BMPs)" means schedules of activities, prohibitions of practices, maintenance procedures and other management practices (both structural and non-structural) to prevent or reduce the pollution of surface waters of the state. BMP's also include treatment requirements, operating procedures and practices to control plant and/or construction site runoff, spillage or leaks, sludge or waste disposal or drainage from raw material storage.
- C. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
- D. "Commencement of construction" means the initial disturbance of soils associated with clearing, grubbing, grading, placement of fill, or excavating activities or other construction activities.

- E. "Concentrated storm water runoff" means any storm water runoff which flows through a drainage pipe, ditch, diversion or other discrete conveyance channel.
- F. "Director" means the director of the Ohio Environmental Protection Agency.
- G. "Discharge" means the addition of any pollutant to the surface waters of the state from a point source.
- H. "Disturbance" means any clearing, grading, excavating, filling, or other alteration of land surface where natural or man-made cover is destroyed in a manner that exposes the underlying soils.
- I. "Drainage watershed" means for purposes of this permit the total contributing drainage area to a BMP, i.e., the "watershed" directed to the practice. This would also include any off-site drainage.
- J. "Final stabilization" means that either:
  - 1. All soil disturbing activities at the site are complete and a uniform perennial vegetative cover (e.g., evenly distributed, without large bare areas) with a density of at least 70 percent cover for the area has been established on all unpaved areas and areas not covered by permanent structures or equivalent stabilization measures (such as the use of mulches, rip-rap, gabions or geotextiles) have been employed. In addition, all temporary erosion and sediment control practices are removed and disposed of and all trapped sediment is permanently stabilized to prevent further erosion; or
  - 2. For individual lots in residential construction by either:
    - a. The homebuilder completing final stabilization as specified above or
    - b. The homebuilder establishing temporary stabilization including perimeter controls for an individual lot prior to occupation of the home by the homeowner and informing the homeowner of the need for and benefits of, final stabilization. (Homeowners typically have an incentive to put in the landscaping functionally equivalent to final stabilization as quick as possible to keep mud out of their homes and off sidewalks and driveways.); or
  - 3. For construction projects on land used for agricultural purposes (e.g., pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its pre-construction agricultural use. Areas disturbed that were previously used for agricultural activities, such as buffer strips immediately adjacent to surface waters of the state and which are not being returned to their pre-construction agricultural use, must meet the final stabilization criteria in (1) or (2) above.
- K. "Individual Lot NOI" means a Notice of Intent for an individual lot to be covered by this permit (see Part I of this permit).

- L. "Larger common plan of development or sale"- means a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan.
- M. "MS4" means municipal separate storm sewer system which means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains) that are:
1. Owned or operated by the federal government, state, municipality, township, county, district(s) or other public body (created by or pursuant to state or federal law) including special district under state law such as a sewer district, flood control district or drainage districts or similar entity or a designated and approved management agency under section 208 of the act that discharges into surface waters of the state; and
  2. Designed or used for collecting or conveying solely storm water,
  3. Which is not a combined sewer and
  4. Which is not a part of a publicly owned treatment works.
- N. "National Pollutant Discharge Elimination System (NPDES)" means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits and enforcing pretreatment requirements, under sections 307, 402, 318 and 405 of the CWA. The term includes an "approved program."
- O. "NOI" means notice of intent to be covered by this permit.
- P. "NOT" means notice of termination.
- Q. "Operator" means any party associated with a construction project that meets either of the following two criteria:
1. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
  2. The party has day-to-day operational control of those activities at a project which are necessary to ensure compliance with an SWP3 for the site or other permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the SWP3 or comply with other permit conditions).
- As set forth in Part I.F.1, there can be more than one operator at a site and under these circumstances, the operators shall be co-permittees.
- R. "Ordinary high water mark" means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.
- S. "Owner or operator" means the owner or operator of any "facility or activity" subject to regulation under the NPDES program.

- T. "Permanent stabilization" means the establishment of permanent vegetation, decorative landscape mulching, matting, sod, rip rap and landscaping techniques to provide permanent erosion control on areas where construction operations are complete or where no further disturbance is expected for at least one year.
- U. "Percent imperviousness" means the impervious area created divided by the total area of the project site.
- V. "Point source" means any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or the floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.
- W. "Qualified inspection personnel" means a person knowledgeable in the principles and practice of erosion and sediment controls, who possesses the skills to assess all conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activity.
- X. "Rainwater and Land Development" is a manual describing construction and post-construction best management practices and associated specifications. A copy of the manual may be obtained by contacting the Ohio Department of Natural Resources, Division of Soil & Water Conservation.
- Y. "Riparian area" means the transition area between flowing water and terrestrial (land) ecosystems composed of trees, shrubs and surrounding vegetation which serve to stabilize erodible soil, improve both surface and ground water quality, increase stream shading and enhance wildlife habitat.
- Z. "Runoff coefficient" means the fraction of total rainfall that will appear at the conveyance as runoff.
- AA. "Sediment settling pond" means a sediment trap, sediment basin or permanent basin that has been temporarily modified for sediment control, as described in the latest edition of the Rainwater and Land Development manual.
- BB. "State isolated wetland permit requirements" means the requirements set forth in Sections 6111.02 through 6111.029 of the ORC.
- CC. "Storm water" means storm water runoff, snow melt and surface runoff and drainage.
- DD. "Steep slopes" means slopes that are 15 percent or greater in grade. Where a local government or industry technical manual has defined what is to be considered a "steep slope," this permit's definition automatically adopts that definition.
- EE. "Surface waters of the state" or "water bodies" means all streams, lakes, reservoirs, ponds, marshes, wetlands or other waterways which are situated wholly or partially within the boundaries of the state, except those private waters which do not combine or effect a junction with natural surface or underground waters. Waters defined as



sewerage systems, treatment works or disposal systems in Section 6111.01 of the ORC are not included.

- FF. "SWP3" means storm water pollution prevention plan.
- GG. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- HH. "Temporary stabilization" means the establishment of temporary vegetation, mulching, geotextiles, sod, preservation of existing vegetation and other techniques capable of quickly establishing cover over disturbed areas to provide erosion control between construction operations.
- II. "Water Quality Volume (WQ<sub>v</sub>)" means the volume of storm water runoff which must be captured and treated prior to discharge from the developed site after construction is complete. WQ<sub>v</sub> is based on the expected runoff generated by the mean storm precipitation volume from post-construction site conditions at which rapidly diminishing returns in the number of runoff events captured begins to occur.

**Temporary Sediment and Erosion Control Best Management Practices (BMP)  
Unit Price Schedule, October 2013**

**EROSION CONTROL PRICES**

Item	Unit	Description	Project Identified EDA (acres)					Fixed Price	Comment
			<5	5 to 10	10 to 15	15 to 20	>20		
			Price (\$)						
832	Sq. Yd.	Construction Seeding and Mulching	1.00	0.92	0.83	0.75	0.74		Based on NOI acres
832	Feet	Slope Drains						12.00	
832	Cu. Yd.	Sediment Basins and Dams						13.50	[3]
832	Feet	Perimeter Filter Fabric Fence	4.05	3.10	2.85	2.55	2.30		Based on NOI acres
832	Feet	Filter Fabric Ditch Check						11.00	
832	Feet	Inlet Protection						11.25	
832	Cu. Yd.	Dikes						3.00	
832	Sq. Yd.	Construction Ditch Protection						2.50	
832	Cu. Yd.	Rock Channel Protection, Type C or D with Filter						55.00	[1]
832	Cu. Yd.	Rock Channel Protection, Type C or D without Filter						50.00	[1]
832	Cu. Yd.	Basin Sediment Removal						10.00	
832	Cu. Yd.	Miscellaneous Sediment Removal						15.50	
832	Feet	Construction Fence						5.75	
832	Sq. Yd.	Construction Mulching	0.79	0.71	0.58	0.56	0.54		Based on NOI acres
832	Sq. Yd.	Winter Seeding and Mulching	1.08	1.00	0.92	0.85	0.81		Based on NOI acres
832	Cu. Yd.	Construction Entrance						75.25	

[1] Add the following amount per cubic yard for the cost of Type C or D Rock materials.

[3] Add the amount for the appropriately sized surface dewatering device for sediment basin outlet.

**BMP ROCK MATERIAL SCHEDULE**

<b>District</b> <sup>[2]</sup>	<b>Purchase &amp; Delivered to Job</b>		<b>Produced on Job</b>	
	Type C	Type D	Type C	Type D
1	\$ 60.00	\$ 58.00	\$ 27.50	\$ 27.50
2	\$ 60.00	\$ 58.00	\$ 27.50	\$ 27.50
3	\$ 67.00	\$ 65.00	\$ 27.50	\$ 27.50
4	\$ 71.00	\$ 68.00	\$ 27.50	\$ 27.50
5	\$ 63.00	\$ 60.00	\$ 27.50	\$ 27.50
6	\$ 65.00	\$ 63.00	\$ 27.50	\$ 27.50
7	\$ 65.00	\$ 63.00	\$ 27.50	\$ 27.50
8	\$ 65.00	\$ 63.00	\$ 27.50	\$ 27.50
9	\$ 66.00	\$ 65.00	\$ 27.50	\$ 27.50
10	\$ 70.00	\$ 68.00	\$ 27.50	\$ 27.50
11	\$ 65.00	\$ 63.00	\$ 27.50	\$ 27.50
12	\$ 71.00	\$ 68.00	\$ 27.50	\$ 27.50

[2] Based on the District in which the project is administered.

**SEDIMENT BASIN SURFACE DEWATERING DEVICE**

<b>Device Size</b>	<b>Purchase &amp; Delivered to Job</b>
1 1/2"	\$598.00
2"	\$750.00
2 1/2"	\$915.00
3"	\$1,100.00
4"	\$1,590.00
5"	\$2,375.00
6"	\$3,650.00
8"	\$6,000.00

[3] Surface dewatering device sized appropriately for sediment basin