STATE OF MARYLAND
DEPARTMENT OF THE ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

NONTIDAL WETLANDS AND WATERWAYS PERMIT

PERMIT NUMBER: 04-NT-0408/200560011
EFFECTIVE DATE: June 23, 2006
EXPIRATION DATE: June 23, 2011

PERMITTEE: Maryland Department of Transportation
State Highway Administration
707 N. Calvert Street
Baltimore, MD 21202
Attn: Ms. Susan M. Ridenour

Maryland Department of Transportation
Maryland Transportation Authority
300 Authority Drive
Baltimore, MD 21222
Attn: Mr. Keith Duerling

In accordance with Environment Article §5-503(a) and §5-906(b), Annotated Code of Maryland (1996 Replacement Volume), Code of Maryland Regulations (COMAR) 26.17.04 and 26.23.01, and the attached general and specific conditions, the Maryland Department of Transportation, State Highway Administration and Maryland Transportation Authority are hereby authorized by the Water Management Administration (Administration) to conduct regulated activities in nontidal wetlands, buffers, or expanded buffers, and/or to change the course, current, or cross-section of waters of the State, in accordance with the project plates/drawings (permit drawings) contained in Appendix A of the Final Environmental Impact Statement (FEIS), as further refined since the FEIS, and as described below:

This permit authorizes construction of an 18 mile, access controlled, multi-modal highway linking I-270 and I-95/US 1 extending from I-370/I-270 near the Shady Grove Metrorail Station southeast to I-95/US 1 south of Laurel. The highway includes eight interchanges, located at MD 355, Shady Grove METRO Access/Shady Grove Road, MD 97 (Georgia Ave.), MD 182 (Layhill Road), MD 650 (New Hampshire Ave.), US 29/Briggs Chaney Road, I-95 and Virginia Manor Road, and an at grade intersection with US 1. In addition, the project includes portions of an east-west bicycle/pedestrian trail within the project right-of-way, and park-and-ride lots constructed in the southwest quadrant of ICC/MD 97, the northeast quadrant of ICC/MD 182, and the southwest quadrant of ICC/US 29. The highway and associated improvements will permanently impact (1) 47.79 acres of nontidal wetlands, consisting of 16.12 acres of forested and scrub/shrub nontidal wetlands, including 0.86 acre of isolated nontidal wetlands, and 31.67 acres of emergent nontidal wetlands, including 2.43 acres of isolated nontidal wetlands; (2) 40.03 acres of nontidal wetlands buffer; (3) 38,088 linear feet of stream; (4) 32.4 acres of nontidal floodplain; and (5) 9.09 acres of open water ponds(s). The project will permanently convert 0.34 acre of forested and scrub/shrub nontidal wetlands to emergent wetlands (under bridges). In addition, the construction will temporarily impact 3.01 acres of nontidal wetlands, 2.86 acres of nontidal wetlands buffer, and 768 linear feet of stream. Compensatory mitigation for wetland and waterways impacts will be provided through numerous wetland creation, wetland restoration, stream restoration, and stormwater retrofit projects at multiple offsite locations. This project is proceeding as "design-build" and is subject to additional review for avoidance and minimization, and compliance with nontidal wetlands and waterways regulations, as addressed in the special conditions of this authorization.

Amanda L. Sigillito, Chief
Nontidal Wetlands and Waterways Division

Attachments: Conditions of Authorization
Best Management Practices

cc: WMA Compliance Program w/ file
U.S. Army Corps of Engineers, Transportation Program

GENERAL CONDITIONS

1. Validity: The Permit is valid only for use by the Permittee. The Permit may be transferred only with prior written approval of the Administration. In the event of transfer, the transferee agrees to comply with all terms and conditions of the Permit.
2. Initiation of Work, Modifications, and Extension of Term: The Permittee shall initiate authorized activities within two (2) years of the Effective Date of this Permit or the Permit shall expire. The Permittee may submit written requests to the Administration for (a) extension of the period for initiation of work, (b) modification of the Permit, including the approved Permit Drawings, or, (c) not later than 45 days prior to expiration date, an extension of the term. Requests for modification shall be in accordance with applicable regulations and shall state the reasons for changes, and shall indicate the impacts on nontidal wetlands, streams, and the floodplain, as applicable. The Administration may grant a request at its sole discretion.
3. Responsibility and Compliance: The Permittee is fully responsible for all work performed, and activities authorized by the Permit shall be performed in compliance with the Permit and Approved Plans. The Permittee agrees that a copy of the Permit and Approved Plans shall be kept at the construction site and provided to its employees, agents and contractors. A person (including the Permittee, its employees, agents or contractors) who violates or fails to comply with the terms and conditions of the Permit, Approved Plans or an administrative order may be subject to penalties in accordance with §5-514 and §5-911, Environment Article, Annotated Code of Maryland (1996 Replacement Volume).
4. Failure to Comply: If the Permittee, its employees, agents or contractors fail to comply with the Permit or Approved Plans, the Administration may, in its discretion, issue an administrative order requiring the Permittee, its employees, agents and contractors to cease and desist any activities which violate the Permit, or the Administration may take any other enforcement action available to it by law, including filing civil or criminal charges.
5. Suspension or Revocation: The Permit may be suspended or revoked by the Administration, after notice of opportunity for a hearing, if the Permittee: (a) submits false or inaccurate information in the Permit application or subsequently required submittals; (b) deviates from the Approved Plans, specifications, terms and conditions; (c) violates, or is about to violate terms and conditions of the Permit; (d) violates, or is about to violate, any regulation promulgated pursuant to Title 5, Environment Article, Annotated Code of Maryland as amended; (e) fails to post a bond if required pursuant to COMAR 26.23.04.04(B); (f) fails to allow authorized representatives of the Administration to enter the site of authorized activities at any reasonable time to conduct inspections and evaluations; (g) fails to comply with the requirements of an administrative action or order issued by the Administration; or (h) does not have vested rights under the Permit and new information, changes in site conditions, or amended regulatory requirements necessitate revocation or suspension.
6. Other Approvals: The Permit does not authorize any injury to private property, any invasion of rights, or any infringement of federal, State or local laws or regulations, nor does it obviate the need to obtain required authorizations or approvals from other State, federal or local agencies as required by law.
7. Site Access: The Permittee shall allow authorized representatives of the Administration access to the site of authorized activities during normal business hours to conduct inspections and evaluations necessary to assure compliance with the Permit. The Permittee shall provide necessary assistance to effectively and safely conduct such inspections and evaluations.
8. Inspection Notification: The Permittee shall notify the Administration's Compliance Division at (410) 537-3510 at least five (5) days before starting activities authorized by the Permit and five (5) days after completion.
9. Sediment Control: The Permittee shall obtain approval from the Administration for an erosion and sediment control plan specifying soil erosion control measures. The approved erosion and sediment control plan shall be included in the contract specifications, and shall be available at the construction site.
10. Federally Mandated State Authorizations:
    X Water Quality Certification: Water Quality Certification (WQC) is granted for this project provided that all work is performed in accordance with the conditions of this Permit and the conditions of the attached Water Quality Certification.

__X__ Coastal Zone Consistency: This Permit constitutes the State's concurrence with the applicant's certification that the proposed/authorized activities are consistent with the Maryland Coastal Zone Management Program, as required by Section 307 of the Federal Coastal Zone Management Act of 1972, as amended.

11. Best Management Practices During Construction: The Permittee, its employees, agents and contractors shall conduct authorized activities in a manner consistent with the Best Management Practices specified on the Approved Plans and in the Special Conditions of the Permit.
12. Disposal of Excess: Unless otherwise shown on the Permit Drawings, all excess fill, spoil material, debris, and construction material shall be disposed of outside of nontidal wetlands, nontidal wetlands buffers, and the 100-year floodplain, and in a location and manner which does not adversely impact surface or subsurface water flow into or out of nontidal wetlands.
13. Temporary Staging Areas: Temporary construction trailers or structures, staging areas and stockpiles shall not be located within nontidal wetlands, nontidal wetlands buffers, or the 100-year floodplain unless specifically approved by the Administration.
14. Temporary Stream Access Crossings: Temporary stream access crossings shall not be constructed or utilized unless shown on the Permit Drawings. If temporary stream access crossings are determined necessary prior to initiation of work or at any time during construction, the Permittee, its employees, agents or contractors shall submit a written request to the Administration and secure the necessary permits or approvals for such crossings before installation of the crossings. Temporary stream access crossings shall be removed and the disturbance stabilized prior to completion of authorized activities or within one (1) year of installation.
15. Discharge: Runoff or accumulated water containing sediment or other suspended materials shall not be discharged into waters of the State unless treated by an approved sediment control device or structure.
16. Instream Construction Prohibition: Activities within the following stream channels are prohibited during the time periods indicated as determined by the use classification of the stream (COMAR 26.08.02.08) and the special circumstances as indicated:

    - Upper Rock Creek (mainstem) and Tributaries: Use III restriction – October 1 through April 30, inclusive.
    - Upper Rock Creek (mainstem) and Tributaries (south of Muncaster Mill Road): Use IV restriction – March 1 through June 15, inclusive.
    - North Branch Rock Creek (north of Muncaster Mill Road): April 15 through July 31, inclusive, to protect the Comely Shiner, a threatened species. During the period October 1 through April 14, inclusive, all practicable measures shall be undertaken to protect water quality and all proposed instream activities shall be coordinated with the Administration prior to proceeding.
    - North Branch Rock Creek (south of Muncaster Mill Road): Use IV restriction plus additional period to protect the Comely Shiner – March 1 through July 31, inclusive.
    - Northwest Branch and Tributaries: Use IV restriction plus additional period to protect the Comely Shiner – March 1 through July 31, inclusive.
    - Paint Branch and Tributaries: Use III restriction – October 1 through April 30, inclusive.
    - Little Paint Branch: Use I restriction plus additional period to protect the Comely Shiner – March 1 through July 31, inclusive.
    - Indian Creek and Tributaries: Use 1 restriction – March 1 through June 15, inclusive.
    - All other waterways affected by highway construction: Use 1 restriction – March 1 through June 15, inclusive.

17. Disturbance of Stream Channels: Motor driven construction equipment shall not be allowed within the stream channel unless shown on the Permit Drawings or specifically authorized in writing by the Administration.
18. Instream Blasting: The Permittee shall obtain prior written approval from the Administration before blasting or using explosives in the stream channel.

19. Minimum Disturbance: Any disturbance of stream banks, channel bottom, nontidal wetlands, and nontidal wetlands buffer authorized by this Permit shall be the minimum necessary to conduct permitted activities. All disturbed areas shall be vegetatively stabilized no later than seven (7) days after construction is completed or in accordance with approved erosion and sediment control plan(s).
20. Restoration of Construction Site: The Permittee shall restore the construction site upon completion of authorized activities. Undercutting, meandering or degradation of the stream banks or channel bottom, any deposition of sediment or other materials, and any alteration of wetland vegetation, soils, or hydrology, resulting directly or indirectly from construction or authorized activities, shall be corrected by the Permittee as directed by the Administration.
21. Nontidal Wetland and Stream Mitigation Requirements: The Permittee shall mitigate for impacts to nontidal wetlands and streams in accordance with the approved Compensatory Mitigation Package agreed to by the ICC Interagency Working Group which is incorporated by reference into this Permit.

THE FOLLOWING SPECIAL CONDITIONS APPLY TO ALL ACTIVITIES AUTHORIZED BY PERMIT NO. 04-NT-0408/200560011.

SPECIAL CONDITIONS

1. Avoidance and Minimization: This Permit conveys authorization to impact wetlands, wetland buffers, waters, and the regulated floodplain within the limit of disturbance as shown on the permit drawings titled "ICC Corridor 1" dated 1 May 2006. Avoidance and minimization of impacts to these regulated resources shall be emphasized throughout the remainder of the design and construction process (see Special Condition #17).
2. Best Management Practices: The provisions contained in the attached "Best Management Practices for Working in Wetlands and Waterways" are a part of this permit.
3. Pre-proposal / Preconstruction Meetings: The Nontidal Wetlands and Waterways Division (Division) shall be invited to attend a scheduled pre-proposal meeting with the potential design-build contractors for each contract. At this meeting, the Division will present the Permit conditions and address the contractor's questions. Following award of any Design-Build contract related to this permit, the Permittee will schedule a meeting with the Contractor, Subcontractors, SHA staff, and the Division to discuss requirements of the Permit, compliance measures, design review and coordination, and scheduling. The Division shall be notified of this meeting a minimum of 14 days prior to the date of the meeting. This meeting may be in conjunction with a partnering activity or other regulatory agency meeting.
4. Regulated Impacts - Plan Submittal: Prior to any disturbance to a State regulated nontidal wetland, nontidal wetland buffer, or nontidal waterway, including the regulated 100-year floodplain, detailed plan submittals for the proposed impacts must be submitted to and approved by the Administration.
5. Erosion and Sediment Control Plan Submittal: Detailed Erosion and Sediment Control Plans and associated specifications for work involving permanent and temporary impacts to nontidal wetlands and their regulated buffers shall be submitted to and approved by the Administration prior to work in these areas. Plans should include methods for the protection of water quality; maintenance of streamflow; dewatering, and measures to prevent the release of sediment and other contaminants into regulated areas; provisions to prevent accidental entry of persons or equipment; measures to maintain existing hydrology to adjacent areas both during construction and following completion; and, for temporary impacts, methods to minimize disturbance and restore function.
6. Stormwater Management Plan Submittal: Detailed Stormwater Management Plans shall be submitted to and approved by the Administration prior to any work in regulated resource areas. No stormwater management structures, other than those listed in Special Condition #34, shall be placed in wetlands or waterways. The use of rip-rap shall be minimized in order to reduce thermal impacts to waters. Stormwater shall be controlled to prevent washing of sediments, trash, and debris into receiving nontidal wetlands or waterways.
7. Construction Phasing: The Permittee shall submit and periodically update a construction schedule and sequencing plan to the Administration in order to facilitate timely review of design submittals and construction compliance. The construction schedule should include any offsite activities that may be subject to regulation and approval, such as stockpile and disposal, construction of access to the project, and project related utility construction.

8. Culvert Length: A waiver of the 150' maximum culvert length requirement is hereby approved for the following stream crossings: Rock Creek watershed Centerline Station #s 112 +78, 123+84, 129+77, 150+00, 162+62, 173+30, 207+01, 275+47, 283+64, 297+11, 313+89, 358+38, 366+33, 377+35, 615+50, and 110+24; Northwest Branch watershed Centerline Station #s 46+54-RC, 411+92, 418+40, 425+02, 432+59, 436+03, 486+07, 499+12, 507+56, 519+41, 576+70, and 652+15; Paint Branch watershed Centerline Station #s 673+00, 699+80 and 706+32; Little Paint Branch watershed Centerline Station # 838+00; Indian Creek watershed Centerline Station #s 935+00, 978+10, 990+37, 992+00, 1006+70, 843+44, 848+36, 6+50, 310+00, 318+00, 816+00, 231+50, and 939+00; and Patuxent River watershed Centerline Station #s 871+00, 885+14, 896+00, 931+55, and 962+00. This waiver does not relieve the Permittee from the responsibility to minimize the length of these culverts to the maximum extent practicable.
9. Passage of Aquatic Life: Provisions for passage of aquatic life will be a strong consideration during the review of waterway crossing designs. Adequate sizing of structures in order to reduce velocities, promote natural substrate development, and allow adequate depression to accommodate future stream conditions will be considerations. All rip-rap within streams shall have a depressed "low flow" channel or other feature to allow passage. Where appropriate, structures greater than 150 linear feet will incorporate provisions to promote passage, including resting areas, baffles, and / or other techniques appropriate to promote passage of those species known to occur in the waterway.
   Fish passage shall be provided at the following stream crossings: Rock Creek watershed Centerline Station #s 112+78, 123+84, 129+77, 150+00, 162+62, 173+30, 207+01, 240+00, 275+47, 297+11, 320+00, 327+00, 358+38, and 615+50; Northwest Branch watershed Centerline Station #s 425+02, 432+59, 436+03, 486+07, 499+12, 507+56, 533+00, 560+00, 576+70, and 595+00; Paint Branch watershed Centerline Station #s 690+00, 699+80, 740+00, and 750+00; Little Paint Branch watershed Centerline Station #s 838+00, and 880+00; Indian Creek watershed Centerline Station #s 978+10, 990+37, 992+00, 1006+70, 813+00, 231+50, and 939+00; and Patuxent River watershed Centerline Station #s 871+00, 885+14, 896+00, 931+55, and 962+00.
10. Record Keeping: A full time Independent Environmental Monitor (IEM) shall be retained as a representative of the Administration. The IEM will monitor construction activities to ensure compliance with all environmental permit conditions. The IEM will notify the Administration immediately upon determination of any non-compliance with the terms or conditions of this Permit, the Water Quality Certification, or Approved Plans and specifications. The IEM shall develop and maintain a tracking report to monitor ongoing construction activities and efforts at minimization, and to document impacts as work progresses. This environmental monitoring report shall include a detailed depiction of each nontidal wetland and waterway authorized to be impacted, any changes to impacts in final design, and a continuing and cumulative total of as-built impacts. The report will also include compliance with Erosion and Sediment Control and Stormwater Management Plans, and a narrative description of current work and any potential environmental concerns.
11. Temporary Impacts to Streams: Proposed temporary stream crossings for construction access to be in place less than one year shall be designed to pass the two-year storm event. Crossings to be in place between one and two years shall be designed to pass the five-year storm event. All temporary crossings must be designed to remain stable in case of overtopping. If construction constraints make these requirements impractical, the design submittal shall include detailed information showing provisions to prevent degradation to water quality during periods of overtopping, including provisions to secure all devices to prevent movement downstream. No materials, equipment, debris, or excavated soils shall be kept within the 100-year floodplain without specific approval from the Administration. Proposed maintenance of streamflow for construction activities shall also be submitted to the Administration for approval, and will require a design report indicating the flows to be handled, and provisions for when flows exceed capacity. In no case may a temporary stream crossing or maintenance of streamflow technique result in an increased risk of flooding to adjacent property owners without their written consent. Design submittals for temporary stream impacts shall include detailed plans for restoration, stabilization, and landscaping of the channel and floodplain area.
12. Temporary Impacts to Wetlands: The Permittee shall develop plans for approval by the Administration detailing proposed methods to minimize degradation (including compaction, alteration of hydrology, release of contaminants, etc.) of temporarily impacted nontidal wetlands and nontidal wetland buffers prior to initiation of work in these areas. Plans shall include a detailed assessment of pre-impact conditions;

an analysis of the hydrologic conditions supporting the wetland; measures to restore hydrology to pre-impact conditions; measures to mitigate compaction; and restoration plans, including landscaping with appropriate species. No materials, equipment, debris, or excavated soils will be stockpiled or stored within temporarily impacted wetlands or regulated buffers.

13. Changes to Approved Impacts: Should final design result in necessary impacts to any wetlands or waterways greater than those approved in this Permit, a Permit Modification shall be required prior to initiation of work in these areas.
14. Associated Impacts: Impacts to nontidal wetlands, buffers, and waterways, both temporary and permanent, resulting from activities associated with this project, including utility relocation; disposal of materials; access; temporary storage facilities; stewardship measures; or related activities, are subject to all conditions of this Permit including review and approval of submittals prior to initiation of work within regulated areas.
15. Sediment Basin Removal: The removal of the existing sediment basin on the Konterra property in the vicinity of I-95 Station #790 will require a Dam Safety Permit from the Administration. Detailed plans for the removal of this sediment basin shall be submitted to the Administration. Plans shall include a design report that addresses existing conditions; proposed dewatering method; proposed erosion and sediment control; proposed grading including any special requirements for handling saturated soils; proposed stabilization methods; and stream restoration (see Special Condition #26).
16. Partially/Temporarily Impacted Wetlands / Waterways: At the completion of construction, the Permittee shall demonstrate to the satisfaction of the Administration that any partially / temporarily impacted wetlands / waterways have not suffered a loss of functions and values as a result of the impacts. At the request of the Permittee, the Administration will participate in field assessments to determine current status of these wetlands and will make recommendations for their restoration. The Permittee shall mitigate for any loss of functions and values in accordance with regulatory standards and the approved mitigation plans.

Avoidance and Minimization

17. To the extent practicable, the Permittee shall further avoid and minimize impacts to jurisdictional wetlands and streams in the development of final design plans and during construction. This Permit conveys authorization to impact wetlands, wetland buffers, waters, and the regulated floodplain within the limit of disturbance as shown on the permit drawings, with the caveat that temporary and permanent stream impacts are limited to no more than 25 feet from the ends of culverts and rip-rapped pipe outlets. The limit of disturbance includes the total project area extending to 25 feet beyond the grading limits, and 25 feet beyond each parapet of any proposed bridge. This area may be disturbed for ditches, silt fence, construction equipment access roads, haul roads, noise walls, bike paths, etc. Because this area will be extensively altered, it has been included in the quantification of permanent impacts, and requires mitigation. Jurisdictional wetlands and waterways within the right-of-way bump-outs designated on the permit drawings for erosion and sediment control and/or stormwater management facilities are also authorized herein as permanent impacts. Jurisdictional resources beneath bridge decks are considered to be avoided or, in some cases, conversion impacts, except for a 25-foot wide swath under the bridge that will be needed for an equipment access road, which has been quantified in the permit as a temporary wetland/stream impact that is to be restored in place rather than offset through mitigation. The mitigation package provides sufficient compensatory mitigation to offset all the impacts that have been characterized as permanent. The Permittee may submit documentation showing impact areas that have been successfully avoided or reduced and, if approved, may deduct those amounts from the permitted impacts that have to be mitigated. Should the need for authorization of any additional jurisdictional wetlands and waterways impacts be identified as the design and construction progresses, the Permittee shall request a Permit Modification for the additional impacts. Any request for authorization of additional jurisdictional wetlands and waterways impacts not authorized herein, shall be accompanied by documentation to demonstrate that there is no practicable alternative, and therefore, the additional impacts are necessary and unavoidable.
18. Culverts conveying the stream base flow will be depressed a minimum of one foot below the invert of the stream so that a natural substrate will accumulate in the culvert. The Permittee shall design culverts to address the specific geomorphic characteristics of the stream to avoid downstream scour and channel

degradation, and to maintain ecological functions such as aquatic habitat, flood attenuation, sediment transport and stream channel stability. (see Special Condition #11 of attached Water Quality Certification).

19. Bridges shall be constructed at the major stream crossings listed below. No bridge piers shall be constructed in any stream. The bridges shall be constructed to the dimensions discussed below. All references to a prohibition on the discharge of permanent fill are not intended to prohibit the construction of bridge piers. All vertical dimensions referenced below will be permitted to vary by as much as plus or minus two feet.

    a. On Rock Creek Option C, the bridge over Rock Creek shall be constructed such that the profile grade line (PGL) at centerline Station 239+50 is 54 feet above the elevation of the floodplain floor immediately below, and shall be an arch design. The length of the bridge shall approximate the dimensions shown in the attached permit drawings.
    b. The bridge over North Branch Rock Creek shall be constructed such that the PGL at centerline Station 318+80 is 28 feet above the elevation of the floodplain floor immediately below, shall be approximately 285 feet long, and shall avoid permanent fill being placed on the floor of the 100-year floodplain, or in wetland 1W, as shown on the permit drawings.
    c. The bridge over the Tributary to North Branch Rock Creek shall be constructed such that the PGL at centerline Station 328+05 is 16 feet above the elevation of the floodplain floor immediately below, and shall be approximately 135 feet long (measured along the highway centerline) or approximately 84 feet measured perpendicularly between the abutment faces. This will require a relocation of the stream beneath the structure. Retaining walls or wing walls will be needed to ensure that the structure and fill are no closer than 20 feet to any streambank, and will be constructed to limit the encroachment of fill material into wetlands 1Z, 1ZA, and 1W as shown on the permit drawings. If riprap is required to be placed on the floodplain floor, it shall be buried so as not to impede wildlife passage. During design, the need for channel stability measures shall be investigated for the portion of the tributary between the ICC and the confluence with North Branch Rock Creek.
    d. The first bridge over Northwest Branch shall be constructed such that the PGL at centerline Station 532+30 and the PGL at centerline Station 535+00 are 44 feet and 39 feet, respectively, above the elevation of the floodplain floor immediately below. The bridge shall be approximately 575 feet long, and shall result in no permanent fill in wetland 2R, and no permanent fill in the channel of the tributary that enters the floodplain on the west side of the stream, south of the highway.
    e. The bridge over Bonifant Road and Northwest Branch shall be constructed such that the PGL at centerline Station 560+00 is 46 feet above the elevation of the floodplain floor immediately below, shall be approximately 885 feet long, and shall result in no permanent fill within 30 feet of the top of the streambank.
    f. The third bridge over Northwest Branch shall be constructed such that the PGL at centerline Station 594+00 is 48 feet above the elevation of the floodplain floor immediately below, shall be approximately 1140 feet long, and, utilizing retaining walls, shall result in no permanent fill within 30 feet of the top of the streambank of Northwest Branch or the Rolling Stone Tributary, and shall avoid discharge of permanent fill in the stream channel of the tributary coming from Mills Avenue. This requirement shall not apply to fill associated with potential wetland or stream restoration efforts in this area to correct significant head cuts eroding into the floodplain.
    g. The bridge over Good Hope Tributary shall be constructed such that the PGL at centerline Station 690+50 is 66 feet above the elevation of the floodplain floor immediately below, shall be approximately 590 feet long, and, utilizing retaining walls, shall result in no permanent fill within 30 feet of the top of either streambank. This profile is designed to comply with Special Condition #30, which requires the discharge of any runoff in the Paint Branch watershed be directed to the Northwest Branch or the Paint Branch mainstem, not to the Good Hope and Gum Springs Tributaries. If the Permittee should determine, and the Administration approve, an alternative means of ensuring that the highway runoff can be collected, treated, and discharged to the Paint Branch mainstem, with no runoff directed to the Good Hope or Gum Springs Tributaries, the vertical under clearance (from the bottom of superstructure steel to floodplain floor) could be as low as 45 feet, in which case the bridge length shall be sufficient to maintain a bottom opening on the ground of 380 feet, measured between the toes of fill, directly beneath the highway centerline.

h. The bridge over Gum Springs Tributary and Paint Branch mainstem shall be constructed such that the PGL at centerline Station 742+00 and the PGL at centerline Station 749+00 are 43 feet and 38 feet, respectively, above the elevation of the floodplain floor immediately below. The bridge shall be approximately 1280 feet long and, utilizing retaining walls, shall result in no permanent fill within the limits of the 100-year floodplain, as shown on the permit drawings, no permanent fill in wetland 3M, and no permanent fill in the channel of the tributary located to the rear of the properties on Creek Side Drive.

i. The bridge over Little Paint Branch shall be constructed such that the PGL at centerline Station 880+00 is 40 feet above the elevation of the floodplain floor immediately below, shall be approximately 530 feet long, and shall result in no permanent fill within 30 feet of the top of any streambank.

20. There shall be no grubbing of vegetation that grows beneath the proposed bridges over Rock Creek, North Branch Rock Creek, Northwest Branch, Good Hope Tributary, Gum Springs Tributary, Paint Branch Mainstem, or Little Paint Branch except, in consultation with the Administration, the minimum needed to construct project components such as foundations, haul roads, slope protection and utilities.
21. If riprap is determined necessary on the floodplain floor under any bridges, the riprap will be buried with material that is easily traversable by wildlife, preferably soil. Likewise, the use of slope protection under bridges will be minimized to retain as much of the natural terrain as possible for wildlife movement, and to minimize the disturbance of earthwork in the vicinity of streams.
22. If riprap is needed for energy dissipation at either end of a stream culvert, it shall be buried below the invert of the stream, so as not to impede fish passage during low flows.
23. Prior to placing fill in the following areas, the Permittee shall evaluate, and the Administration shall approve, whether it is practicable to avoid stream channels (or, to relocate, if it is not possible to avoid) in the following areas where streams are expected to be impacted by the highway construction:

    - Ramp B;
    - Station 200-216 Right (Plate 2);
    - Station 438-446 Left (Plate 15);
    - Station 624 to 624 Left (the upper 1000 feet of Notley Road Tributary on Plate 24); and
    - NB I-95 Station 955-961 Right (Plate 39).

    As part of evaluating these streams, consideration shall be given as to whether a relocated channel will receive sufficient overland flow or groundwater contribution to sustain a stream ecosystem. Prior to any stream relocation, plans shall be submitted to the Administration for review and approval.
24. Although this authorization approves the discharge of fill in wetland 3C located south of the Montgomery County Department of Public Works and Transportation (DPWT) maintenance depot (Station 673), the Permittee shall design and construct measures to maintain groundwater seepage at this location.
25. The new in-stream sediment basin that is being provided immediately upstream of the I-95 interchange to replace the existing facility will require a Dam Safety Permit from the Administration. This sediment basin shall be constructed so that most of the pond is situated to one side of the current location of the stream channel. The objective is to facilitate relocation of the stream around the basin at some point in the future, by others, when it is no longer needed. This basin shall be functional before the 35-foot high dam (in the southwest quadrant of the I-95 interchange) is modified.
26. The limit of encroachment into Aitcheson Bog (wetland 8C) shall be no closer than is shown on Plates 33 and 36 of the permit drawings. The limit of fill shall be accomplished either by using a retaining wall (as shown) or alternative measure that has been reviewed and approved by the Administration. Special precautions shall be undertaken to control erosion during any modification of the 35-foot high earthen dam in the southwest quadrant of the I-95 interchange, including ensuring that the sediment behind the dewatered dam is contained so as not to exceed the State's water quality standards during storm events.
27. Using a permanent deed restriction or conservation easement, the Permittee shall protect approximately 19.9 acres encompassing wetland 6J and a 100-foot upland buffer around wetland 6J, north of the ICC, in order to

protect the habitat of the state-endangered rough-leaved aster and halberd-leaved greenbrier. The deed restriction or construction easement shall prohibit any cutting, clearing, grading, draining, dumping, filling, and construction within this wetland and any forested portion of the 100-foot buffer, with the exception of construction of stormwater management pond outfalls. However, construction of stormwater management ponds shall be permitted on lands within the 100-foot buffer that are not forested on the date of this permit issuance. Treated stormwater may be directed to wetland 6J, provided suitable velocity dissipation is provided in accordance with MDE requirements. The draft deed restriction or conservation easement shall be submitted to the Administration for review and approval prior to recordation.

Stormwater Management

Many of the following conditions 28 through 34 impose requirements that are more stringent than the MDE 2000 Maryland Stormwater Design Manual. The Permittee has offered, and the Administration has accepted, these measures to ensure that the project will not result in significant degradation to wetlands and waterways. These measures shall be implemented by the Permittee. Any material changes in these conditions, or failure to implement and enforce these requirements, will be grounds for modifying, suspending, or revoking this permit. The Permittee and the Independent Environmental Monitor shall be responsible for monitoring these requirements during the construction of the project. Following construction, the Permittee, or the designated owner of the stormwater facilities, shall be responsible for incorporating these stormwater facilities into their inspection and maintenance program for stormwater management facilities.

28. To manage runoff that is being discharged to any Use III stream, the runoff from the first 1.5 inches of rainfall will be treated in sand filtration basins located beneath the median or the shoulders. Elsewhere on the project, the first 1.5 inches of rainfall will be managed in accordance with the MDE 2000 Maryland Stormwater Design Manual. Within parkland, underground detention basins shall be used to treat the channel protection volume (i.e., the runoff from the one-year, 24-hour storm, which in Montgomery County equates to 2.6 inches of rainfall) to minimize encroachment into parkland. Underground detention basins shall also be used outside parklands to manage discharge to the Paint Branch mainstem. Everywhere else, the channel protection volume may be managed in surface detention ponds. In Use III and Use IV watersheds, channel protection volume designs shall not exceed 12-hour storage. Where both filtration and underground management are being used, the system will operate within the following parameters: (1) The runoff from the first 1.5 inches of rainfall will be directed to sand filters; (2) Beneath the sand filters will be a drainage system for collecting the filtered water and conveying it to the underground detention chambers; (3) Inlets will be provided at the road surface to collect the rainfall that exceeds the capacity of the filtration structures (i.e., rainfall in excess of the first 1.5 inches); and (4) The surface inlets will also direct their unfiltered water to the underground detention chambers, which will have the capacity to manage the runoff from the first 2.6 inches of rainfall. The water that is collected beneath the sand filters will be the first flush, and during summer months, this water will be warmer than the runoff that will accumulate later in the storm event (which will be coming from the inlets). The two inputs into the underground detention chambers shall be designed so that, as the chamber fills to capacity, the cooler water coming from the inlets will not flush-out the warmer water coming from the sand filters.
29. The outfall from the stormwater management structures in the Paint Branch watershed shall be directed either to Northwest Branch or the Paint Branch mainstem. Stormwater runoff from all bridge decks in the Paint Branch watershed shall be captured and managed for quality and quantity prior to discharging the runoff.
30. The sediment pond outfall at Station 782 shall not have an outlet ditch or pipe through the existing wetland that is downslope of the pond.
31. No ancillary facilities such as park-and-ride lots, maintenance depots, or any other facility that adds impervious surface to the watershed of the Paint Branch Special Protection Area (SPA) shall be added to this construction project without first undergoing coordination with the public, environmental resource agencies, and permit agencies regarding the natural environmental impacts of the proposal and the proposal for managing the stormwater runoff. This coordination will address the manner in which runoff from such additional impervious surfaces will be managed to comply with the more stringent stormwater requirements imposed for this project in the Paint Branch SPA.

32. The runoff from the first 1-inch of runoff from the existing stormwater management facility at the DPWT maintenance depot shall be redirected to the Northwest Branch watershed.
33. Infiltration practices (structural and non-structural) shall be employed in the Paint Branch watershed to treat the computed recharge volume. The design of infiltration structures shall be based on field infiltration tests rather than sieve analysis. To preclude sediment from entering the infiltration structures during construction, they shall either be sealed with plastic, or their construction deferred until the surrounding slopes are stabilized. Infiltration basins shall not be used as sediment traps. Infiltration basins shall not be put into service until all of the contributing drainage area is stabilized. In the Paint Branch watershed, infiltration structures will be constructed at the base of the highway slopes adjacent to the eastbound lanes between the Good Hope and Gum Springs bridges. Infiltration in the Paint Branch watershed may also be supplemented using bottomless inlets and/or manholes.
34. Except as shown on the permit drawings, no stormwater management pond or erosion and sediment control basin shall be constructed in any wetland. Where the drawings show a right-of-way bump-out for a stormwater management pond or erosion and sediment control basin in the vicinity of a stream, the pond or basin shall be constructed in a manner that does not impound the stream (except at the location authorized by Condition #25 above if necessary, and at Stream WMM at Southbound I-95, Station 900 Left). For any stormwater management pond constructed in the vicinity of a stream, the pond shall be located a sufficient distance from the stream to maintain a 15-foot wide cleared area beyond the toe of any berms surrounding the pond, plus an additional 30-foot wide, or larger, vegetated buffer along the stream. Stormwater pond outfalls may be constructed across the 30-foot vegetated buffer area.

Erosion and Sediment Control

The Permittee has offered, and the Administration has accepted, the following special condition (#35) to ensure that the project will not result in significant degradation of regulated resources as a result of construction activities. The measures contained in this permit condition shall be implemented by the Permittee, and shall be monitored for compliance by the contractor's quality assurance staff, the Independent Environmental Monitor, and the Permittee's project management staff during the construction of the project. Any material changes to items a - f in Special Condition #35, or failure to implement these requirements, will be grounds for modifying, suspending, or revoking this permit.

35. SHA shall utilize their new erosion and sediment control program on this project. The new program incorporates the following features:

    a. An incentive/disincentive program to encourage compliance with the erosion and sediment control plan. This program will involve random, surprise inspections of the contractor's erosion and sediment control devices. Quarterly incentives will be provided for maintaining an average rating of 85 with no D or F ratings.
    b. A rating of D or F will result in shutdown of all earthwork activities except erosion and sediment control maintenance, and will result in assessment of a financial penalty on the contractor.
    c. The contractor will have 72 hours to upgrade sediment controls if a C rating is reported. Failure to upgrade to a B rating within 72 hours will result in a D rating, requiring shutdown of all earthwork activities except erosion and sediment control maintenance.
    d. Ratings of C and lower will be reported to the principals of the contracting company. Two F ratings will result in dismissal of the contractor's erosion and sediment control manager and superintendent for a period of 6 months. Both positions must be filled by people who have received SHA certification in erosion and sediment control.
    e. SHA will contribute to the cost of maintaining erosion and sediment control measures in the case of a "severe storm event" that exceeds a designated rainfall threshold.
    f. The erosion and sediment control measures will be monitored and maintained during weekends and holidays.

36. In the Paint Branch watershed (i.e., between MD 650 and Old Columbia Pike) and the North Branch Rock Creek watershed (i.e., from MD 115 to MD 97), the Permittee shall employ redundant controls where sediment is generated, as well as redundant controls at the locations where sediment-laden runoff is contained and treated before being discharged.
37. No flocculants shall be used in sediment ponds until approved for use by the Administration after reviewing the Permittee's evaluation of the health effects of such flocculants on aquatic and terrestrial fauna.
38. Super silt fence shall be employed near streams and wetlands. Erosion and sediment controls shall be applied to haul roads and construction access roads, in accordance with Administration requirements.
39. The Permittee shall evaluate opportunities to convert sediment pond locations which are no longer needed to permanent vernal pools.

Construction Activities

40. This permit does not include authorization of any wetland, waterway, or floodplain impacts that may be required in order to construct, or to provide access to, mitigation or environmental stewardship sites, including wetland creation, stream restoration, stormwater retrofit sites, fish passage projects, reforestation projects, or any other components of the project that are outside the limits of the proposed improvements shown on the permit drawings.
41. This authorization does not include any impacts for utility relocations/installations outside the limits of disturbance shown on the permit drawings. All utility impacts inside the limits of disturbance shown on the permit drawings shall be further avoided or reduced to the extent practicable.
42. Because all jurisdictional wetlands and waterways resources within the limit of disturbance have been included in the authorized impacts, temporary stream crossings, temporary stream diversions, temporary stream relocations, and utility installations affecting jurisdictional wetlands and waterways within the limit of disturbance are authorized herein. Construction work within stream channels shall deploy a stream diversion device to limit turbidity increases. Earthen materials shall not be used in the deployment of temporary stream diversions, stream crossings, or cofferdams, due to the potential for washout during storm events. Any temporary stream crossings will be completely removed when no longer needed and the streambanks restored by planting native woody vegetation.
43. Any temporary crossings of wetlands, such as wetland crossings required for temporary haul roads, temporary access roads, and utility installations, will be accomplished in a manner that will achieve the following objectives:

    a. Where temporary aggregate is placed in a wetland, the objective is to ensure that the aggregate does not become embedded in the soil and can be completely removed when the temporary road is no longer needed. A physical separation of the existing wetland soil and the discharged aggregate shall be provided. The discharge of aggregates can be avoided altogether by using timber mats where the soil is too wet or too soft to support construction equipment.
    b. Where the temporary crossing is in a floodplain, any temporary, earthen road material shall be stabilized and any other appropriate measures taken to ensure the road will withstand expected flood flows during overtopping, and controlled to prevent any erosion and discharge of sediment into wetlands and waterways.
    c. When the temporary crossing is no longer needed, the objective is to restore any impacted wetlands to functioning wetlands consistent with the Corps' 1987 Wetland Delineation Manual. The temporary fill material shall be removed, the compacted topsoil scarified, the wetland planted with native plantings or reseeded with a wetland seed mix, and any exposed soil mulched. The Permittee shall ensure that sufficient wetland hydrology is established in accordance with the Manual.

44. Every effort shall be made to avoid disturbance to riparian vegetation, particularly within 30 feet of stream banks. Any pre-existing vegetation that is grubbed within a temporarily-disturbed area within 30 feet of a stream bank shall be replanted with native riparian vegetation after the removal of the temporary disturbance, with the exception of utility corridors.

45. Temporary stream crossings are hereby authorized, within the limit of disturbance shown on the permit drawings, for the purpose of constructing either an access road for construction equipment or a haul road. There shall be no more than one temporary stream crossing constructed on any stream at each bridge or culvert location. At the following streams, temporary stream crossings associated with this authorization shall be accomplished using bridges that completely span the stream (i.e. no piers in streams), and no other type of temporary crossing shall be permitted:

    - Rock Creek, Station 240;
    - North Branch Rock Creek, Station 319;
    - Tributary to North Branch Rock Creek, Station 328;
    - Northwest Branch, all three crossings, excluding the channel at Station 599;
    - Good Hope Tributary, Station 690;
    - Gum Springs Tributary, Station 740;
    - Paint Branch Mainstem, Station 748; and
    - Little Paint Branch, Station 880.

    In the floodplain of Northwest Branch, between Stations 593 and 601, there are numerous shallow channels that convey water only when the floodplain is inundated. These channels shall be piped under any temporary road that might be constructed across this floodplain.
46. To reduce fish mortality, the Permittee shall collect fish prior to dewatering work areas, and release the fish downstream.
47. No stockpiling or storage of equipment, materials, or structural steel; no staging areas; and no installation of ancillary facilities such as concrete or asphalt plants or construction trailers shall be permitted within any stream, wetland, State-regulated wetland buffer, or floodplain. No construction materials, aggregates, or earth shall be stockpiled or stored in a manner that would affect wetlands or streams. All stockpiles shall be included in erosion and sediment control plans submitted to the Administration for review and approval.
48. No concrete trucks shall be washed off in a manner that would allow the cement-laden wash water to enter a stream or wetland.
49. In order to preclude accidental encroachment into wetlands that are beyond the permitted limit of disturbance (LOD), orange plastic fencing and signage shall be installed along the LOD adjacent to the wetlands. The LOD shall be established as per Special Condition #17. The installation of fencing shall be accomplished immediately after stakeout of the LOD and prior to installation of erosion and sediment controls. The following specific locations will require orange plastic fencing (station numbers are approximate, but the entire edge of the wetland that is adjacent to the LOD shall be protected):

    - Station 105 Right, wetland RP7;
    - Station 113 Left, wetland 1AF;
    - Ramp F Station 803 Right, wetland 1AG;
    - Station 152 Left and Right, wetland 1D;
    - Station 173 Left, wetland 1FA;
    - Station 175 Right, wetland 1H;
    - Station 277 Left, wetland 1MD;
    - Station 277 Right, wetland 1Q;
    - Station 283 Left, wetland 1MDA;
    - MD 115 Station 15 Right, wetland 1MDA;
    - Station 313 Right, wetland 1T;
    - Station 320 Left, wetland 1W;
    - Station 327 Left, wetland 1ZA;
    - Station 328 Right, wetland 1Z;
    - Station 361 to 366 Left, wetland 1DD;

- MD 97 Station 197 to 202 Left, wetland 1EE;
- Station 419 Left, wetland 4A5;
- Station 420 Right, wetland 4A5;
- Station 534 Left, wetland 2R;
- Station 559 Right, wetland 2X;
- Station 577 Left, wetland 2BB;
- Station 595 Left, wetland 2DD;
- Station 600 Left, wetland 2HH;
- Station 600 Right, wetland 2HH;
- Station 743 Left, wetland 3K;
- Station 743 Right, wetland 3K;
- Station 746 Right, wetland 3MA;
- Station 750 Left, wetland 3M;
- Station 749 Right, wetland 3M;
- Station 756 Right, wetland 3O;
- Station 774 Right, wetland 3P;
- US 29 interchange Ramp ES Station 202-205 Right, wetland 3QA;
- US 29 interchange Ramp SW Station 83 Right, wetland 3QD;
- Station 864 Right, wetland 3TA;
- Station 881 Left and Right, wetland 3X;
- I-95 interchange Ramp I-A, from Ramp Station 6 to SB I-95 Station 771, wetland 8C;
- SB I-95 Station 757 Left, wetland 8C;
- I-95 Ramp NB-CD, Station 616 Left, wetland 8D; and
- Station 978 Left and Right, wetland 6J.

50. Where utility lines pass through or along the boundaries of wetland areas, measures must be taken to prevent the porous bedding and backfill material from draining the wetland. Examples of acceptable prevention measures would be clay collars or trench plugs installed, at a minimum, every 100 feet, with a collar located at the entrance point and exit point of the utility lines into and out of the wetland area.
51. The Permittee shall undertake all measures necessary to ensure that any cut slopes or ditching adjacent to wetlands do not result in the draining of the wetland. An example of an appropriate measure for preventing a wetland from being drained in such circumstances is to construct a bentonite-filled trench along the top of cut, and at a minimum along the extent of the wetland.
52. Disposal areas for excess excavation material shall not impact wetlands, streams, or floodplains without prior authorization from the Administration. The Permittee shall track the disposal of all excess excavation material to ensure that there is no unauthorized discharge of fill in regulated areas. If the Permittee proposes to discharge fill at locations outside the permitted project limits, it is the Permittee's responsibility to ensure that all required federal, State, and local permits have been acquired for the disposal operation.

Compensatory Mitigation

53. Compensatory mitigation for impacts to nontidal wetlands and waterways shall be provided as designated in the Compensatory Mitigation Package agreed to by the Interagency Working Group, which provides sufficient in-kind compensatory mitigation for the authorized wetland impacts. If any new sites are subsequently determined necessary or preferable, the Permittee shall obtain approval of the new site(s) from the Administration Corps after consultation with the Interagency Working Group. Stream impacts are being mitigated at a 1:1 ratio, with the exception of the restoration in Northwest Branch mainstem which, due to the magnitude of the restoration effort, will offset 3 linear feet of impact for every one linear foot within the restored reach. Fish passage projects are considered to offset 500 linear feet of stream impact. Wetland impacts are being mitigated, in-kind, at the following ratios:

- Wash pond wetlands – 1:1 (1 acre of mitigation for every 1 acre impacted) with emergent, scrub-shrub, or forested wetlands;
- Emergent wetlands – 1:1 (1 acre of mitigation for every 1 acre impacted);
- Scrub-shrub wetlands – 2:1 (2 acres of mitigation for every 1 acre impacted); and
- Forested wetlands – 2:1 (2 acres of mitigation for every 1 acre impacted).

54. Within 180 days of permit issuance, the Permittee shall submit a Compensatory Mitigation and Monitoring Plan (CMMP) for Administration and Corps approval which shall designate a schedule for design and construction of the approved compensatory mitigation sites. The CMMP shall discuss the design goals and performance standards for the compensatory mitigation wetland or stream sites, including proposed ecological functions; opportunities to re-connect streams to their floodplains or to expand floodplains; proposed vegetative community and areal coverage; proposed manipulations of earthwork; proposed sources of hydrology, including consecutive days and depth of saturation; proposed soil amendments; proposed buffers; proposed habitat features; control of browsing by deer, voles, and beaver; control of invasive species; permanent restriction of access by recreational vehicles; signage; and proposed construction access points. The Administration and the Corps shall be provided final design plans for each of the approved compensatory mitigation sites for review and approval prior to commencing construction. With the exception of post-construction monitoring, all compensatory mitigation shall be completed by the time that highway construction is complete.
55. Wetland mitigation projects shall be monitored in accordance with the most recent guidelines developed by the Permittee with the Corps and Administration, and the CMMP developed in accordance with Condition #54. The Permittee shall monitor the wetland creation and stream restoration sites for a period of five consecutive growing seasons, and submit monitoring reports annually to the Administration and the Corps. The reports shall contain the information required by the "New SHA Mitigation Monitoring Protocols for Wetland and Stream Restoration" (effective 2006 monitoring season). Year #1 of the 5-year monitoring period shall commence with the first spring season following completion of construction and planting of the wetland mitigation site. If wetland creation or restoration is not considered successful by the Administration and the Corps within five years, the reasons for the failure shall be determined by the Permittee and any areas not successfully established shall be remediated, or the Permittee shall locate an alternative site, in conjunction with the Administration and the Corps, and construct the required replacement wetland acreage. Monitoring reports shall be submitted annually to the Administration and the Corps by December 31 of each year, for five years. If there is any doubt that adequate hydrology has been established to satisfy the hydrology performance criterion, the Administration and the Corps may direct the installation of groundwater monitoring wells. If any remediation was needed during the initial five-year monitoring period, the Administration and the Corps may require that monitoring and reporting be extended as much as five additional years beyond the date of the last remediation, depending upon the nature of the remediation.
56. With the exception of mitigation constructed on Maryland National Capital Park and Planning Commission (MNCPPC) property, wetland mitigation sites shall be protected in perpetuity with a conservation easement or deed restriction. The conservation easement or deed restriction shall be in the form of a covenant running with the land and recorded with the deed, conveyance, or transfer. All prospective purchasers of all, or portions, of the wetland mitigation site shall receive notice of the conservation easement or deed restriction, and the prohibitions shall be referred to in every deed, conveyance, or transfer of all or portions of the mitigation site. The covenant shall include prohibitions against cutting, mowing, clearing, grading, draining, construction of roads or structures, dumping, filling, and erecting billboards or commercial signs, on the mitigation site as displayed on the plat map which describes the property being conveyed, granted, or transferred except as required to establish and maintain the mitigation site as authorized by the Administration and the Corps or other Federal agency having authority to do so. The draft conservation easement or deed restriction shall be submitted to the Administration for review and approval prior to final recordation in the land records of the appropriate county. Following review and approval of the draft conservation easement or deed restriction, the Permittee shall record the final easement or restriction, and shall submit a copy

of the fully executed and recorded easement or restriction, with liber and folio number stamped thereon, to the Administration and the Corps, as part of the annual monitoring report following the second growing season.

Monitoring Project Impacts

57. The Permittee shall provide an Independent Environmental Monitor who shall report directly to the Administration and the Corps, notifying them and the Permittee of any reported or observed violations or non-compliance.
58. The Permittee shall provide a qualified, professionally certified, multi-disciplinary, Environmental Management Team, independent from the construction contractors, to review the design and construction for compliance with all permit conditions, to conduct quality assurance and performance ratings, and to track the completion of compensatory mitigation and monitor its success. The Environmental Manager, who directs the Environmental Management Team, shall obtain approval for any changes involving impacts to regulated resources are authorized and shall keep records of the impact totals, ensuring that appropriate mitigation is constructed for all impacts. The Environmental Manager shall make recommendations throughout construction for further avoidance and minimization of impacts. The Environmental Manager will notify the Administration, the Corps, the resource agencies, and the Independent Environmental Monitor by email of all violations of, and non-compliance with, this Permit. The Environmental Manager shall make recommendations for bringing the project into compliance with permit conditions, and provide the Administration, the Corps and resource agencies copies of all reports dealing with resolution of violations and non-compliance. The Environmental Manager shall conduct agency coordination meetings throughout design and construction. These meetings will occur on a monthly basis, until such time as it is determined that less frequent meetings are appropriate.
59. Prior to the construction closeout meeting, a project inspection shall be conducted of the wetlands listed in permit condition #49 above, and the wash pond wetlands (systems 8CA and 10E) by the Permittee with the Administration. This inspection shall assess the condition of the remaining portion of those wetlands which were partially impacted (i.e., the portion shown as outside the limit of disturbance), as well as any temporarily-impacted wetlands, to determine whether they continue to function as wetlands. Particular attention shall be given to wetlands that are adjacent to cut slopes or ditches; for example, the following wetlands:

    - Station 283 Left, wetland 1MDA
    - MD 115 Station 15 Right, wetland 1MDA
    - Station 420 Right, wetland 4A5
    - Station 756 Right, wetland 3O
    - US 29 interchange Ramp ES Station 202-205 Right, wetland 3QA

    If the inspection reveals that the wetlands beyond the limit of disturbance have ceased to satisfy any of the three parameters for determining wetland jurisdiction, as per the Corps' 1987 Wetland Delineation Manual, the Permittee shall be obligated to either restore these wetlands or provide additional mitigation at the approved ratios. This inspection will also be used to verify the successful restoration of any temporarily-impacted wetlands. If restoration efforts have failed, subsequent monitoring will be required or remediation may be undertaken to restore the wetland. If remediation efforts fail, or if the Permittee chooses not to remediate, the Permittee shall mitigate for the lost resource. In addition, this inspection will be used to verify any wetlands that were authorized to be impacted, but were subsequently avoided, in order to deduct these from the mitigation obligation.

NONTIDAL WETLANDS AND WATERWAYS PERMIT NUMBER 04-NT-0408/200560011

BEST MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, AND 100-YEAR FLOODPLAINS

1) No excess fill, construction material, or debris shall be stockpiled or stored in nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
2) Place materials in a location and manner which does not adversely impact surface or subsurface water flow into or out of nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
3) Do not use the excavated material as backfill if it contains waste metal products, unsightly debris, toxic material, or any other deleterious substance. If additional backfill is required, use clean material free of waste metal products, unsightly debris, toxic material, or any other deleterious substance.
4) Place heavy equipment on mats or suitably operate the equipment to prevent damage to nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
5) Repair and maintain any serviceable structure or fill so there is no permanent loss of nontidal wetlands, nontidal wetland buffers, or waterways, or permanent modification of the 100-year floodplain in excess of that lost under the originally authorized structure or fill.
6) Rectify any nontidal wetlands, wetland buffers, waterways, or 100-year floodplain temporarily impacted by any construction.
7) All stabilization in the nontidal wetland and nontidal wetland buffer shall consist of the following species: Annual Ryegrass (Lolium multiflorum), Millet (Setaria italica), Barley (Hordeum sp.), Oats (Uniola sp.), and/or Rye (Secale cereale). These species will allow for the stabilization of the site while also allowing for the voluntary revegetation of natural wetland species. Other non-persistent vegetation may be acceptable, but must be approved by the Nontidal Wetlands and Waterways Division. **Kentucky 31 fescue shall not be utilized in wetland or buffer areas.** The area should be seeded and mulched to reduce erosion after construction activities have been completed.
8) After installation has been completed, make post-construction grades and elevations the same as the original grades and elevations in temporarily impacted areas.
9) To protect aquatic species, in-stream work is prohibited during the periods indicated in the Nontidal Wetlands and Waterways Permit and the Water Quality Certification for the project.
10) Stormwater runoff from impervious surfaces shall be controlled to prevent the washing of debris into the waterway.
11) Culverts shall be constructed and any riprap placed so as not to obstruct the movement of aquatic species, unless the purpose of the activity is to impound water.