Fredericksburg District
Pollutant Discharge Elimination System

General Permit Registration Statement for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems

Annual Report
April 1, 2004

Serving the

Fredericksburg Urban Area

Virginia Department of Transportation
Fredericksburg District
87 Deacon Road
Fredericksburg, VA 22405
(540) 899-4288

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Executive Summary

The Small Municipal Separate Storm Sewer Systems (MS4s) within the Fredericksburg Urban Area operated by the Virginia Department of Transportation Fredericksburg District were approved for coverage under the Virginia Pollutant Discharge Elimination System (VPDES) General Permit for Discharges of Stormwater from Small MS4s on July 16, 2003, (General Permit No.: 040061). Coverage under the General Permit obligates VDOT to develop and implement a Stormwater Management Program designed to reduce the discharge of pollutants from the MS4s to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act and the State Water Control Law. This Annual Report provides an update on status of the implementation of VDOT's Stormwater Management Program during the first reporting cycle of the Permit – April 2003 through March 2004. In addition, this Report serves to communicate any proposed changes to the Management Program and summarizes activities planned for the upcoming reporting cycle.

VDOT's SWM Program is presented here in the form of the six minimum control measures required by the Virginia General Permit. This program has been developed with a consistent statewide implementation strategy since VDOT operates regulated MS4s (or components of regulated MS4s) within the public right-of-ways in each of the nine VDOT Districts.

Regulated Small MS4 Operator (Permitee):

The Virginia Department of Transportation Fredericksburg District
David E. Ogle, District Administrator
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Area of Coverage – Regulated Small MS4:

All those MS4s within the Fredericksburg Urban Area under the operational control of the Virginia Department of Transportation Fredericksburg District.

VDOT MS4s located within the Urban Area of Stafford County (Northern Virginia Urban Area), and the Urban Area of Gloucester County (Hampton Roads Urban Area) are covered by the Fredericksburg District and this VPDES Permit Annual Report (Permit No.: 040061)

In general, the VDOT Fredericksburg District exercises operational control of MS4s within subdivision-street, primary and secondary road, limited access, and interstate public right-of-ways; excluding those public right-of-ways within certain incorporated cities, towns, and other specifically designated jurisdictions that operate and maintain their own MS4s. A more detailed identification and description of the MS4s under the VDOT Fredericksburg District's operational control is being developed as part of the mapping efforts outlined in Minimum Control Measure 3: Illicit Discharge Detection and Elimination.

Anniversary of Coverage:

VDOT received approval for coverage within each of the 13 Urbanized Areas of Virginia, with the approval dates ranging from April through July of 2003. For ease of reporting and program management, the reporting cycle for each of the 13 permits has been defined as April through March, with an anticipated reporting date of April for the first, second, and fourth anniversaries of the permit coverage.

Responsible VDOT Personnel:

The Virginia Department of Transportation, under the leadership of the Commonwealth Transportation Commissioner, is organized into several divisions, each serving under a designated program Chief. Several areas of the Department were reorganized during the first year of the Permit in an effort to better manage the delivery of transportation services to the Commonwealth. The most significant change places the nine VDOT Districts under the direct authority of the Commonwealth Transportation Commissioner. In general, this and other changes reflect a decentralized implementation strategy: overall program policy and guidance is provided by the appropriate Program Chiefs, while the day to day operation and implementation of VDOT's road construction and maintenance program fall under the authority of the District Administrators.

The implementation of VDOT's Stormwater Management Program starts with the development of specific policies and operational guidance associated with each of the six minimum control measures. Central Office continues to support the Districts with program guidance, coordination, and assessment as necessary. However, each VDOT District Administrator serves as the Permitee overseeing the implementation of the day-to-day operational activities related to permit compliance within each of the designated Urban Area(s).

This Annual Report provides the status of each minimum control measure and identifies the responsible parties for continuing development and/or implementation.

VDOT Stormwater Management Program

The VDOT Stormwater management program has been developed in the context of the six minimum control measures outlined in the Virginia General Permit.

The six minimum control measures are:

(1) Public Education and Outreach On Stormwater Impacts;
(2) Public Involvement/Participation;
(3) Illicit Discharge Detection and Elimination;
(4) Construction Site Stormwater Runoff Control;
(5) Post Construction Stormwater Management In New and Redevelopment; and
(6) Pollution Prevention/Good Housekeeping for Municipal Operations.

A description and justification of Best Management Practices (BMPs) for each minimum control measure, as well as a schedule of measurable goals for implementation, was provided in the General Permit Registration Statement, dated March 8, 2003. This Annual Report identifies the progress towards achieving the measurable goals, as well as any changes and/or additions identified for each BMP.

BMP 1.1 – Watershed Signs

Target Date	BMP Activity	Resp. VDOT Dept.	Status
3/03 – 2/04	Develop Land-Use Permit guidance for the placement of watershed signs through partnership with DCR Adopt-a-Stream Program (location within R/W, printed message, size, contract and permit provisions, etc.). ➢ 5/03 Establish Land-Use Permit Advisory Committee. ➢ 6/03 Convene committee and meet monthly. ➢ 10/03 Make final recommendations to Dept. management for adoption.	~~CO/Dist AM~~ **Mobility Management**	Please see "Changes To BMP" below.
6/03 – 10/03	Develop watershed sign tracking system within the Adopt-a-Highway tracking system.	CO/Dist AM, ~~Public Affairs~~	Please see "Changes To BMP" below.
3/04 – 2/08	Install watershed signs in partnership with DCR and Local governments. Track and report sign placement for each District.	~~CO/Dist AM~~ **Mobility Management**	No activity to report.

Changes to BMP: This BMP originally included the development of Land Use Permit guidance to facilitate the placement of Watershed signs within the public right of way through partnership with DCR. Several meetings between VDOT and DCR have identified a more effective strategy for this BMP. VDOT's Division of Mobility Management manages a statewide sign installation contract. The contract will include the placement of Watershed signs thru a funding partnership with DCR. In addition, the Adopt-a-Highway program has recently been transferred to VDOT's Asset Management Division (AMD). VDOT's Division of Mobility Management will lead this BMP Activity and will develop specifications, provide coordination and tracking through the AMD, and will develop a revised BMP Activity implementation schedule. Upon completion, this information will be submitted to DEQ approval.

Partnership w/ or Reliance on Others: The placement of watershed signs is a partnership between DCR, local governments, and VDOT. A critical element of this partnership is adequate funding through DCR and/or the local governments.

BMP 1.2 – Educational Video

Target Date	BMP Activity	Resp. VDOT Dept.	Status
3/03 – 2/05 ➢ 4/03 ➢ 10/03 ➢ 1/04	Develop educational video on stormwater impacts and stormwater BMPs in partnership with DCR. Establish Video Workgroup and develop work plan Final Frame-Board script. Begin/contract video production.	CO/Dist, ~~**L&D**~~, Public Affairs	Please see "Changes To BMP" below.
3/05 – 2/08	Distribute Educational Video to local governments and Citizens Groups statewide for further distribution. Track number of videos distributed.	CO/Dist ~~**L&D**~~ **Public Affairs**	Please see "Changes To BMP" below.

Changes to BMP: VDOT's Office of Public Affairs serves to lead this effort and is developing a Public Education and Outreach Plan for this BMP that will include a revised BMP Activity implementation schedule. Upon completion, this information will be submitted to DEQ for approval.

Partnership w/ or Reliance on Others: Grant funding from DCR is no longer available for this activity.

BMP 1.3 – Public Service Announcements

Target Date	BMP Activity	Resp. VDOT Dept.	Status
3/03 – 2/04 ➢ 6/03 ➢ 9/03 ➢ 2/02	Develop 4-year work plan in collaboration with the other Urban Area MS4 operators for a series of mass media PSAs. Establish VDOT Public Service Announcement (PSA) Work Group to include local government representatives. Document formal commitments from all parties re: roles and responsibilities related to work plan. Final 4-year work plan to guide the development of PSAs.	CO/Dist. ~~L&D~~, Public Affairs	Please see "Changes To BMP" below.
3/04 – 2/08	Develop and Distribute PSAs in accordance with work plan. Track number of PSAs developed, aired and approximate exposure	CO/Dist ~~L&D~~, Public Affairs	Please see "Changes To BMP" below.

Changes to BMP: VDOT's Office of Public Affairs serves to lead this effort and is developing a Public Education and Outreach Plan for this BMP that will include a revised BMP Activity implementation schedule. Upon completion, this information will be submitted to DEQ for approval.

Partnership w/ or Reliance on Others: VDOT's office of Public Affairs communicates with local government and media outlet officials on a regular basis. However, no formal partnerships or agreements relative to this BMP activity have been developed.

BMP 2.1: VDOT Public Involvement and Participation Program

Target Date	BMP Activity	Resp. VDOT Dept.	Status
3/03 – 2/08	Advertise and conduct project specific Citizen Information Meetings, Location Public Hearings, Design Public Hearings, Combined Location & Design Public Hearings for all qualified VDOT projects.	CO/Dist L&D, ~~Env~~	VDOT's Location and Design Division's Public Involvement Program has recorded approximately 43 Public Meetings statewide during this reporting cycle: 5 Citizen Information Meetings, 32 Design Public Hearings, 2 Location Public Hearings, and 4 Combined Location & Design Public Hearings. The Fredericksburg District, serving the Fredericksburg Urban Area (and the Gloucester County portion of the Virginia Beach Urban Area), did not conduct any Public Hearings this reporting cycle. Please see "Changes To BMP" below.

Proposed Activities: VDOT's Central Office Location and Design Division's Public Involvement Program will begin recording the number of attendees at each meeting for future Annual reports.

Changes to BMP: This activity includes only those Public Hearings conducted by Location and Design's Public Participation Program. The Environmental Division participates in numerous Environmental Public Hearings coordinated by the U.S. Army Corps of Engineers related to various Permits. Those public hearings are not included here.

BMP 2.2: VDOT Participation in Local Government Watershed Planning

Target Date	BMP Activity	Resp. VDOT Dept.	Status
3/03 – 2/08 ➢ 6/03 ➢ 10/03	Participate in locally adopted (DCR approved) regional (watershed-wide) stormwater planning and implementation. Establish formal contact with local governments within Urban Area. Identify all local DCR approved SWM Programs, distribute local program requirements to District.	CO/Dist L&D, Env	Fredericksburg L&D staff work directly with local government officials to review design plans for projects intended to be accepted into the State road system, for VDOT Land Use Permit applications, and other projects that impact VDOT systems. This interaction has served to establish a formal point of contact between VDOT, the local governments, and the consultant and development community. Specifically, VDOT Fredericksburg District staff worked with Stafford County Site Development Roundtable sponsored by the County and The Center for Watershed Protection.
3/03 – 2/08 ➢ 6/03 ➢ 10/03	Participate in local government Technical Advisory groups and/or workshops to develop local watershed plans. Establish formal contact with local governments within Urban Area to promote VDOT interest in participation. Identify all local DCR approved Regional Programs, distribute Regional Program requirements to District.	CO/Dist L&D, Env	VDOT Fredericksburg District participates in the York River Tributary Strategy Workgroup sponsored by DCR. District L&D staff continue to work closely with the local government officials and are available to participate on local TACs when formed.

BMP 2.3: VDOT Participation in Watershed Organizations

Target Date	BMP Activity	Resp. VDOT Dept.	Status
3/03 – 2/08 ➢ 6/03	Participation in watershed organizations and local government technical advisory committees Establish formal contact with local watershed organizations within Urban Area to promote VDOT's willingness to participate in watershed planning and outreach. Document participation.	CO/Dist L&D, Env	Central office VDOT staff partnered in the development of a workshop titled "Innovative Stormwater Management" sponsored by the Rivanna Regional Stormwater Educational Partnership (of which VDOT is a full partner), and held on 2/10/2004. This workshop, while held in the Charlottesville Urban Area, was open to the public and listed several attendees from the Fredericksburg Urban Area. Fredericksburg District Staff also participated in the following: Erosion and Sediment Control and Water Quality, Mary Washington College; LID Demonstration Project, Tri-County Soil and Water Conservation District; LID Demonstration Project, Friends of the Rappahannock.

BMP 2.4: VDOT Adopt-a-Highway Program

Target Date	BMP Activity	Resp. VDOT Dept.	Status
3/03 – 2/08	Enhance the connection between the Adopt-a-Highway and Adopt-a-Stream programs.	CO/Dist L&D, AM, Public Affairs	The Adopt-a-Highway Program (AAH) is currently being delivered and led by the partnership of VDOT Office of Public Affairs and Asset Management Division. The program enlists numerous VDOT volunteers and private citizen groups throughout the state. Please see the VDOT Adopt-a-Highway home page at the following link for more information: http://www.virginiadot.org/infoservice/prog-aah-default.asp On March 8, 2004, improvements were made to VDOT's AAH Homepage to include links to Adopt-a-Stream and numerous other related pollution prevention programs in Virginia as a means to jointly promote these programs. These improvements can be viewed on the new page add to the AAH homepage through the following link: http://www.virginiadot.org/infoservice/prog-aah-pickupexpmain.asp In addition, VDOT will implement a statewide litter campaign program to link numerous agencies and industry partners at preventing and cleaning up litter in the Commonwealth (Please see Appendix 2, VDOT Litter Campaign).
3/03 – 2/08	Implement the VDOT Adopt-a-Highway program. Identify those activities occurring within the Urban Areas.	CO/Dist AM,	These initiatives will be implemented statewide and not limited to Urban Areas. VDOT will track and report on these activities annually.

BMP 2.5: Storm Drain Stenciling

Target Date	BMP Activity	Resp. VDOT Dept.	Status
3/03 – 2/04 ➢ 5/03 ➢ ➢ 6/03 ➢ 10/03	Develop formal guidance and specifications for storm drain stenciling of storm drain inlets and catch basins within VDOT right-of-ways. Establish AM Workgroup consisting of CO and Dist AM staff. Convene workgroup, meet monthly. Make final recommendations to Dept. management for adoption.	CO/Dist, AM	The formation of this BMP has been delayed the formation of this workgroup. A new schedule for this BMP has been accepted by DCR as a condition of approval of VDOT's 2004 ESC and SWM Program Specifications and is provided below. (Refer to Appendix 4 for correspondence with DCR.) Please see Changes to this BMP Activity next page.
3/04 – 2/08	Track all storm drain stenciling within Asset Management data system.	CO/Dist, AM	

Proposed Changes to BMP 2.5: Storm Drain Stenciling

Revised Target Date	Revised BMP Activity	Resp. VDOT Dept.
3/04 – 9/04	Develop formal guidance and specifications for the establishment of an anti-pollution message (stamp or stencil) for storm drain inlets and catch basins within VDOT right-of-ways.	CO/Dist, AM
➢ 5/04	Complete Survey of Precast Manufacturers.	
➢ 7/04	Complete Draft pre-cast and stenciling specifications for review by industry representatives.	
➢ 9/04	Compile comments and submit final recommendations to DCR for approval.	
1/05 – 4/08	Track all storm drain stenciling within Asset Management data system.	CO/Dist, AM

BMP 3.1: Storm sewer system map

Target Date	BMP Activity	Resp. VDOT Dept.	Status
3/03 – 2/04 ➢ 5/03 ➢ 6/03 ➢ 10/03 ➢ 2/04	Compile all existing mapping resources within the Urban Area, to include data tracked by local jurisdictions. Correlate all data within VDOT's AM systems and identify any gaps in existing mapping. Establish Workgroup consisting of CO and Dist AM staff. Evaluate VDOT mapping resources; Contact/survey local government mapping resources. Compile mapping data; Identify and document gaps in mapping. Final recommendations for mapping of VDOT MS4 systems and outfalls.	CO/Dist, AM	A workgroup consisting of representatives from VDOT's Asset Management Division Roadside Management Section and Systems Development Section, and Location and Design Division Hydraulic Section evaluated the mapping resources and identified the Asset Management System (AMS) as the most appropriate mapping and inventory system for this BMP activity. The workgroup identified the proposed Work Accomplishments and Inventory Module (WAM) of the AMS to meet the specific requirements of this BMP. The WAM is a comprehensive system that will record maintenance activities, such as illicit discharge detection inspections, BMP inspections and associated maintenance documentation, and inventory data, such as the location and condition of regulated outfalls, stormwater BMPs, etc. WAM is currently under development and will be deployed by January 1, 2005 via a pilot program to each of 9 VDOT Districts. Statewide rollout of AMS 1.0, WAM will occur in calendar year 2005 (Please see Appendix 3 - WAM Requirements v. 1.04 Document).
3/03 – 2/04 ➢ 5/03 ➢ 2/04	Develop mapping protocol with which to locate and map all remaining components of the regulated MS4 (as defined by appropriate asset groups) not captured previously. Establish Workgroup consisting of CO and Dist AM staff. Final recommendations for mapping and data collection protocol.	CO/Dist, AM	The mapping protocol is provided in the AMS WAM system described above.

3/04 – 2/05 ➢ 2/05	Implement supplemental mapping within each Urban Area in accordance with mapping and data collection protocol. Document progress in terms of % of total required mapping. Provide each District with complete map and data management systems to locate components of the regulated MS4.	CO/Dist, AM	Collection of data and mapping will include all VPDES MS-4 permit regulated VDOT outfalls within the urbanized areas and related inspection documentation by April 2008. Annual progress estimates will be available during next year's annual report once the pilot program has been completed.

Changes to BMP: The schedule for this BMP is modified based on the time required to complete the development, documentation, and roll out of the new AMS WAM System. The schedule for completing the mapping and inspections of regulated outfalls will be evaluated as the system is implemented.

BMP 3.2: Illicit Discharge Detection Program

Target Date	BMP Activity	Resp. VDOT Dept.	Status
3/03 – 2/04 ➢ 5/03 ➢ 6/03 ➢ 2/04	Develop Asset Management Illicit Discharge Inspection protocol, to include prioritization (based on pipe or conveyance size, land use served, likelihood of illicit discharges, record of any previous illicit discharges, etc.), frequency of inspections, record keeping, reporting of discharges, and enforcement. Establish Workgroup consisting of CO and Dist AM, L&D, and Env staff. Convene Workgroup, meet monthly. Final recommendations for AM Illicit Discharge Inspection Protocol.	CO/Dist, AM and Env.	An illicit discharge visual inspection protocol is being developed as an element of all routine, emergency, and requested maintenance activities on drainage related assets. Please see Changes to BMP below.
3/04 – 2/05	Develop and implement training for Illicit Discharge Inspection and Detection procedures.	CO/Dist, AM, Env, VDOT Learning Center	Training on the inspection protocol described above will be included as part of the rollout from September 2004 through March 2005. This training will be coordinated with the VDOT Asset Management Best Practices Manual Chapter 8, Hazardous Materials (under revision). This Chapter provides the requirements and resources for VDOT maintenance personnel to respond to incidents of hazardous materials spills. This manual is scheduled for completion by January 2005. Please see Appendix 3 for the draft Hazardous Materials chapter.
3/04 – 2/08	Implement Illicit Discharge Inspection protocol to document inspections of 25% (minimum) of the major outfalls per year.	Dist AM	Illicit Discharge inspections that identify potentially hazardous materials will be linked through VDOT's Emergency Operations Center. The Center manages a real-time incident response system that includes any hazardous material spills on VDOT right-of-way that has the potential to impact the motoring public. Please see the following link for more information on responses to major construction and maintenance projects, and a hotline for hazardous conditions identified by the motoring public and citizens: http://www.virginiadot.org/comtravel/

Changes to BMP: A workgroup comprising of CO AM Systems Development Section, CO AM Roadside Management Section, and CO L&D Hydraulics section will develop the Illicit Discharge Inspection protocol by September 2004. This protocol will be submitted to DEQ as part of this BMP activity.

BMP 3.3: Illicit Discharge Prohibition

Target Date	BMP Activity	Resp. VDOT Dept.	Status
3/03 – 2/04 ➢ 5/03 ➢ 6/03 ➢ 2/04	Develop and coordinate protocols for illicit discharge notification and documentation. Coordinate with existing Hazardous Material Spill Response protocol. Establish Workgroup consisting of CO and Dist AM, L&D, and Env staff. Convene Workgroup, meet monthly. Final recommendations for Illicit Discharge Notification and Response Protocol.	CO/Dist. AM and Env	See BMP 3.2
3/03 – 2/04	Amend Land Use Permit Special Conditions (MP-63) to explicitly prohibit all illicit discharges as defined by DEQ.	CO AM	Illicit discharges are currently prohibited by 24VAC30-150-20, General rules and regulations of the Commonwealth Transportation Board. The VDOT Local Assistance Division has taken over responsibility for the administration of the Land Use Permit and will be requested to add a prohibition consistent with existing regulations and this permit.
3/04 – 2/08	Develop and implement training for Illicit Discharge Inspection and Detection procedures.	CO/Dist., AM, Env, VDOT Learning Center	See BMP 3.2
3/04 – 2/08	Implement protocols for illicit discharge notification and documentation, and Hazardous Material Spill Response. Track number of spills reported	Dist. AM and Env.	See BMP 3.2

BMP 4.1: Implementation of VDOT's Erosion and Sediment Control Annual Plan

Target Date	BMP Activity	Resp. VDOT Dept.	Status
3/03 – 2/08	Implement VDOT's Comprehensive Erosion and Sediment Control and Stormwater Management Program Specifications as approved annually (Qualifying state program approved by VA Dept. of Conservation and Recreation) on all regulated land disturbing activities.	CO/Dist. L&D, Env, Con, AM	VDOT's 2004 ESC & SWM program specifications were conditionally approved by DCR on November 14, 2003. Specific elements identified as conditionally approved were addressed with a schedule for obtaining full compliance in a response letter to DCR, dated January 30, 2004. Please see Appendix 4 for a link to the full text of the 2004 ESC & SWM Program Specifications.
➢ 6/03	Submit conditionally approved sections of Annual Plan to DCR for final approval as outlined in Appendix 3.		Conditionally approved elements of VDOT's 2003 ESC & SWM Program Specifications were addressed and approved.
3/03 – 2/08	Track total number of land disturbing activities and total disturbed acreage.	CO/Dist. L&D, Con,	Based on a consolidation of data provided by DEQ Central Office and VDOT's Project Tracking System, as of **January 2004**, VDOT had approximately **795 active construction projects**, with approximately **11,887 disturbed acres**.

Approval Status of Qualifying State Program: DCR reviews VDOT's ESC & SWM Program Specifications annually. Significant changes to these specifications have occurred during the last two years as a result of changes in the VPDES Permit for Discharges from Small Construction Activities. As a result, specific elements have been conditionally approved with a proposed schedule for obtaining full approval. Please see Appendix 4 for copies of all correspondence and documentation of approval.

Proposed Activities: The number of projects and disturbed acres represents a snapshot of activity as of January, 2004. As part of VDOT's VPDES Construction Permit Program, VDOT is developing a Project Tracking and Notification System consistent with existing Permit requirements and proposed requirements per House Bill 1177 (March 2004 General Assembly). The Project Tracking and Notification System will provide up to date tabulation of active projects and total disturbed acres.

BMP 4.2: Program Evaluation, Assessment, and Reporting Procedures

Target Date	BMP Activity	Resp. VDOT Dept.	Status
3/03 – 2/04	Develop and refine a consistent process to evaluate and report on compliance with approved project specific ESC plan, permit conditions, and VDOT Annual Plan.	CO ENV.	VDOT Central Office has developed an Environmental Compliance Reporting (ECR) System. On-going refinement of the system is on schedule to allow for full reporting of VDOT's internal evaluation and assessment of the ESC and SWM Programs on regulated VDOT projects for the next reporting cycle.
3/04 – 2/08	Implement the ECR system on all regulated VDOT Projects. Track overall program and project compliance and develop annual report.	CO/Dist. ENV, L&D, Const. AM	

BMP 4.3: New Product Evaluation Protocol

Target Date	BMP Activity	Resp.VDOT Dept.	
3/03 – 6/04 ➢ 6/03 ➢ 6/04	Develop New Product Evaluation Protocol Establish New Product Technical Committee, including Materials Division and the Transportation Research Council. Final recommendations for New Product Evaluation Protocol	CO/Dist L&D, AM, Env, Material Div, VTRC.	New product evaluation protocols for erosion and sediment control products are currently evaluated through coordinated leadership between Asset Management Division and Materials Division. The new products application form is located at: http://www.virginiadot.org/business/bu-materials-New-Products-App.asp The list of approved erosion and sediment control materials is provided within the following document: http://www.virginiadot.org/business/resources/bu-mat-ALwlab033004.pdf (See erosion and sediment control items 52 through 60.) Please see "Changes To BMP" below.
6/04 – 2/08	Implement New Product Evaluation Protocol. Generate new product list for distribution to VDOT Districts, Residencies, VDOT contractors, and DCR.	CO/Dist L&D, AM, Env, Materials Div, VTRC.	A revised new product evaluation protocol for erosion and sediment control practices is currently being investigated. An update on a revised protocol to include goals, schedule and delivery date will be provided during the next annual report. Please see "Changes To BMP" below

Changes to BMP: VDOT's Location and Design and Asset Management Divisions have evaluated this BMP Activity after researching other states' new product protocols. The results of this evaluation led to the conclusion that the most appropriate process for accepting new products and technologies is to contract with research or academic institutions, such as VTRC, UVA, or Virginia Tech, for support in the evaluation process. The highly technical process required to objectively evaluate the effectiveness of new products, materials, and processes that are reaching the market place easily justifies such an arrangement. The objectivity and accuracy of the evaluation process must be beyond reproach since the acceptance of a product by VDOT provides an economic benefit to the companies that manufacture and sell these products.

Proposed Activities: Location and Design and Asset Management Divisions will continue to coordinate a New Product Evaluation Protocol and contract process. A proposed schedule for implementation will be developed and upon completion will be submitted to DEQ for approval.

Partnership w/ or Reliance on Others: VDOT will coordinate this effort with DCR and other local MS-4 permitees in order to share technologies and information.

BMP 4.4: VDOT ESCCC Program

Target Date	BMP Activity	Resp. VDOT Dept.	Status
3/03 – 2/04	Develop VDOT's Erosion and Sediment Control Contractor Certification Program.	CO ENV., VDOT Learning Center	The development VDOT's Erosion and Sediment Control Certification (ESCCC) Program was completed in the fall of 2003. This included training VDOT personnel to serve as instructors. (Please see Appendix 4 – ESCCC Course Agenda or visit VRTBA's website for additional course information at: http://www.vrtba.org) Certification through ESCCC Program is required of individuals conducting land-disturbing activity on VDOT owned or operated property (Please see Appendix 4 – VDOT ESC&SWM Programs Specifications Manual).
3/03 – 2/08	Implement VDOT's ESCCC Program. Report numbers of contractors trained	VDOT Learning Center	VDOT's ESCCC Course is being delivered via a partnership with the Virginia Road and Transportation Builders Association (VRTBA). The first course was held on October 8, 2003. Since then the course has been offered at 13 locations around the state, including: Abingdon, Wytheville, Roanoke, Lynchburg, Staunton, Richmond, Chesapeake, Fredericksburg, and Leesburg. As of March, 2004, **878** individuals have attended these courses. The attendance consists of **614** contractor/industry personnel, and 264 VDOT maintenance personnel. Approximately 18 classes are anticipated per year. Please visit VRTBA's website for additional course information and schedules at: http://www.vrtba.org

BMP 5.1: Implementation of VDOT's SWM Annual Plan

Target Date	BMP Activity	Resp. VDOT Dept.	Status
3/03 – 2/08	Implement VDOT's Comprehensive Stormwater Management Annual Plan (Qualifying state program approved by VA Dept. of Conservation and Recreation) on all regulated land disturbing activities. Compile and report BMP data as required by 9VAC25-750-50, Part II.B.5. (Appendix 4)	CO/Dist. L&D, Env., Const., AM	VDOT's 2004 ESC & SWM program specifications were conditionally approved by DCR on November 14, 2003. Specific elements identified as conditionally approved were addressed with a schedule for obtaining full compliance in a response letter to DCR, dated January 30, 2004. Please see Appendix 4 for a link to the full text of the 2004 ESC & SWM Program Specifications. A list of BMPs scheduled for construction during this reporting cycle is provided in Appendix 5.
➢ 6/03	Submit conditionally approved sections of Annual Plan to DCR for final approval as outlined in Appendix 3.		Conditionally approved elements of VDOT's 2003 ESC & SWM Program Specifications were addressed and approved. Please see Appendix 4 for copies of all correspondence and documentation of approval.

Approval Status of Qualifying State Program: DCR reviews VDOT's ESC & SWM Program Specifications annually. Significant changes to these specifications have occurred during the last two years as a result of changes in the VPDES Permit for Discharges from Small Construction Activities. As a result, specific elements have been conditionally approved with a proposed schedule for obtaining full approval. Please see Appendix 4 for copies of all correspondence and documentation of approval.

Proposed Activities: VDOT has been collecting permanent BMP Data for many years. However, a new data collection system was needed in order to capture the specific reporting requirements of this permit. A new system was developed and was recently implemented. Future annual reports will include the specific BMP data as required.

BMP 5.2: Update VDOT SWM Manual and Guidance

Target Date	BMP Activity	Resp. VDOT Dept.	Status
3/03 – 2/05	Evaluate and update VDOT's SWM Manual and Informational and Instructional Memorandum, in collaboration with the Virginia Transportation Research Council (VTRC). (See Appendix 3 for the VTRC Proposal)	CO L&D, AM, VTRC	The VTRC is finishing its report during the summer of 2004. An evaluation of VDOT's SWM Informational and Instructional Memorandum 195 will be conducted. Proposed revisions and updates to VDOT's SWM Manual will be submitted to DCR for the 2005 ESC & SWM Program Specification approval, and to DEQ as a product of this BMP Activity.

BMP 5.3: Stormwater BMP Maintenance and Inspection Program

Target Date	BMP Activity	Resp. VDOT Dept.	Status
3/03 – 2/04 ➢ 3/03 ➢ 10/03	Develop and implement a comprehensive inspection and maintenance program and tracking system in coordination with Asset Management Division. Establish Workgroup consisting of CO and Dist AM, L&D, and Env staff; meet twice per month. Final recommendations for BMP Maintenance and Maintenance Tracking Program Protocol.	CO/Dist. L&D, AM, VTRC, Env	The current VDOT Stormwater (SW) Management Maintenance Program is described in detail in the VDOT ESC&SWM Program Specifications Manual, Appendix K (link provided in Appendix 5 of this report. Current VDOT maintenance activities throughout the state have included inspection of SW facilities at a minimum frequency of once every six months. This data has been collected manually and compiled at specific VDOT Area Headquarters. The AMS WAM system described in BMP 3.1 will provide an automated process for collecting and reporting SWM Facility inspection data. To support these efforts, VDOT has applied for Federal Highway Administration Special Project Funds for FY 2005 to collect data within urbanized areas that may not be collected in their entirety by the AMS WAM pilot project this fall (Please see Appendix 5 – VDOT Stormwater Facility Inventory and Maintenance Study). If approved, this study will be completed by July 2005.
3/04 – 2/08	Implement comprehensive inspection and maintenance program and tracking system. Report BMP maintenance by activity and volume of material moved in accordance with Protocol.	CO/Dist. AM	Existing BMP maintenance procedures as approved by DCR will be followed until the new procedures and tracking system is implemented.

BMP 5.4: Program Evaluation and Assessment

Target Date	BMP Activity	Resp. VDOT Dept.	
3/03 – 2/04	Develop and refine a consistent process to evaluate and report on compliance with approved project specific SWM plan, permit conditions, and VDOT Annual Plan.	CO/Dist Con, AM, Env	See BMP 5.3.
3/04 – 2/08	Implement the ECR system on all regulated VDOT Projects.	CO/Dist. ENV, L&D, Const. AM	

BMP 5.5: New Product Evaluation Protocol

Target Date	BMP Activity	Resp. VDOT Dept.	Status
3/03 – 6/04 ➢ 6/03 ➢ 6/04	Develop New Product Evaluation Protocol Establish New Product Technical Committee, including Materials Division and the Transportation Research Council. Final recommendations for New Product Evaluation Protocol	CO/Dist L&D, AM, Env, Material Div, VTRC.	Please see "Changes To BMP" below.
6/04 – 2/08	Implement New Product Evaluation Protocol. Generate new product list for distribution to VDOT Districts, Residencies, VDOT contractors, and DCR.	CO/Dist L&D, AM, Env, Material Div, VTRC.	

Changes to BMP: VDOT's Location and Design and Asset Management Divisions have evaluated this BMP Activity after researching other states' new product protocols. The results of this evaluation led to the conclusion that the most appropriate process for accepting new products and technologies is to contract with research or academic institutions, such as VTRC, UVA, or Virginia Tech, for support in the evaluation process. The highly technical process required to objectively evaluate the effectiveness of new products, materials, and processes that are reaching the market place easily justifies such an arrangement. The objectivity and accuracy of the evaluation process must be beyond reproach since the acceptance of a product by VDOT provides an economic benefit to the companies that manufacture and sell these products.

Proposed Activities: Location and Design and Asset Management Divisions will continue to coordinate a New Product Evaluation Protocol and contract process. A proposed schedule for implementation will be developed and upon completion will be submitted to DEQ for approval.

Partnership w/ or Reliance on Others: VDOT will coordinate this effort with DCR and other local MS-4 permitees in order to share technologies and information.

BMP 6.1: Existing VDOT Training Programs

Target Date	BMP Activity	Resp. VDOT Dept.	Status
3/03 – 2/04	Establish catalogue of training programs currently available and consolidate training services through the VDOT Learning Center. Identify any gaps in the existing training program in addressing water quality related asset management activities.	CO L&D, VDOT Lrning Center	VDOT training and certification programs are currently being brought under one administrative umbrella led by the VDOT Learning Center (LC). VDOT's LC is currently developing a statewide contract for a Learning Management System (LMS). Please see Appendix 6, LMS Project Charter. The LMS will provide immediate access to both individuals and program managers to access on-line cataloged training programs, training resources, and to track all personnel by group, course types, etc. The target date for full deployment of the LMS system as populated with all existing VDOT Training program data related to water quality related asset management activity is January 2006. Please see Changes to BMP below. A detailed tracking report of numbers of personnel, corresponding courses/certifications completed, and a brief description of those courses/certifications will be provided in the next annual report.

Changes to BMP: Implementation of an on-line catalogue of training courses, as well as an assessment of existing and new courses related to water quality initiatives will be available in January 2006.

BMP 6.2: Develop New VDOT Training Programs

Target Date	BMP Activity	Resp. VDOT Dept.	
3/03 – 2/05	Develop new training and education programs as needed specifically targeted towards the maintenance and upkeep of VDOT's stormwater related infrastructure, incorporating the water quality goals of this program, including (but not limited to): Automobile and Equipment Maintenance, Haz Mat Storage and Handling, Turf Management, Spill Response and Prevention, Storm Drain System Cleaning, etc.	CO L&D, AM, VDOT Lrning Center	The LMS described in BMP 6.1 will also have the capability of enabling designated VDOT personnel and program managers the ability to develop new on-line training programs related specifically to VPDES MS-4 Permit program requirements. Also see BMP 6.3 and 6.4.
3/04 – 2/08	Track attendance of all VDOT personnel attending training courses		

Changes to BMP: Implementation of an on-line catalogue of training courses, as well as an assessment of existing and new courses related to water quality initiatives will be available in January 2005.sessment

BMP 6.3: Update VDOT Best Practices Manual for Maintenance Activities

Target Date	BMP Activity	Resp. VDOT Dept.	Status
3/03 – 2/05 ➢ 5/03 ➢ 9/04 ➢ 2/05	Update the VDOT Best Practices Manual for Maintenance Activities. Establish VDOT Task Force representing the District maintenance forces and CO staff; meet twice monthly. Evaluate and recommend revisions and improvements to the existing Maintenance Policy. Final recommendations. Transition new maintenance procedures to District AM staff.	CO/Dist AM	The Asset Management Program (AMP – formerly VDOT's Maintenance Program) Best Practices Committee representing every VDOT District has been formed to lead and manage the development of the Best Practices Manual. This committee is comprised of Assistant Resident Engineers, Maintenance Managers, Maintenance Superintendents, Maintenance Supervisors, two Central Office Asset Management Division Assistant Directors, Roadside Operations Program Manager and is chaired by the Special Studies Program Manager. This committee meets on a monthly basis. The 1991 Maintenance Guidelines Manual is being used as the foundation for the new/updated manual. Many of the chapters will fulfill related VPDES MS-4 Permit components related to post construction activity and good housekeeping. Principal chapters related to BMP 6.3 and VDOT's VPDES MS-4 permit requirements include Roadside Management (Chapter 11), Drainage & Stormwater Management (Chapter 5), Hazardous Materials (Chapter 8), Snow and Ice Control (Chapter 14), and Training (Chapter 19). Subcommittees have been established to address each chapter and meet on average, one additional time per month. A summary table identifying each manual chapter along with assigned subcommittee members is provided as Appendix 6 - VDOT Asset Management Program, Summary of Best Practices Manual (AMPBPM) Development, March 31, 2004. The manual will be finalized by January 1, 2005 for statewide usage.
3/04 – 2/05	Develop training courses on new Maintenance Policy and implement through the VDOT Learning Center as identified in BMP 6.2.	CO/Dist AM, VDOT Learning Center	

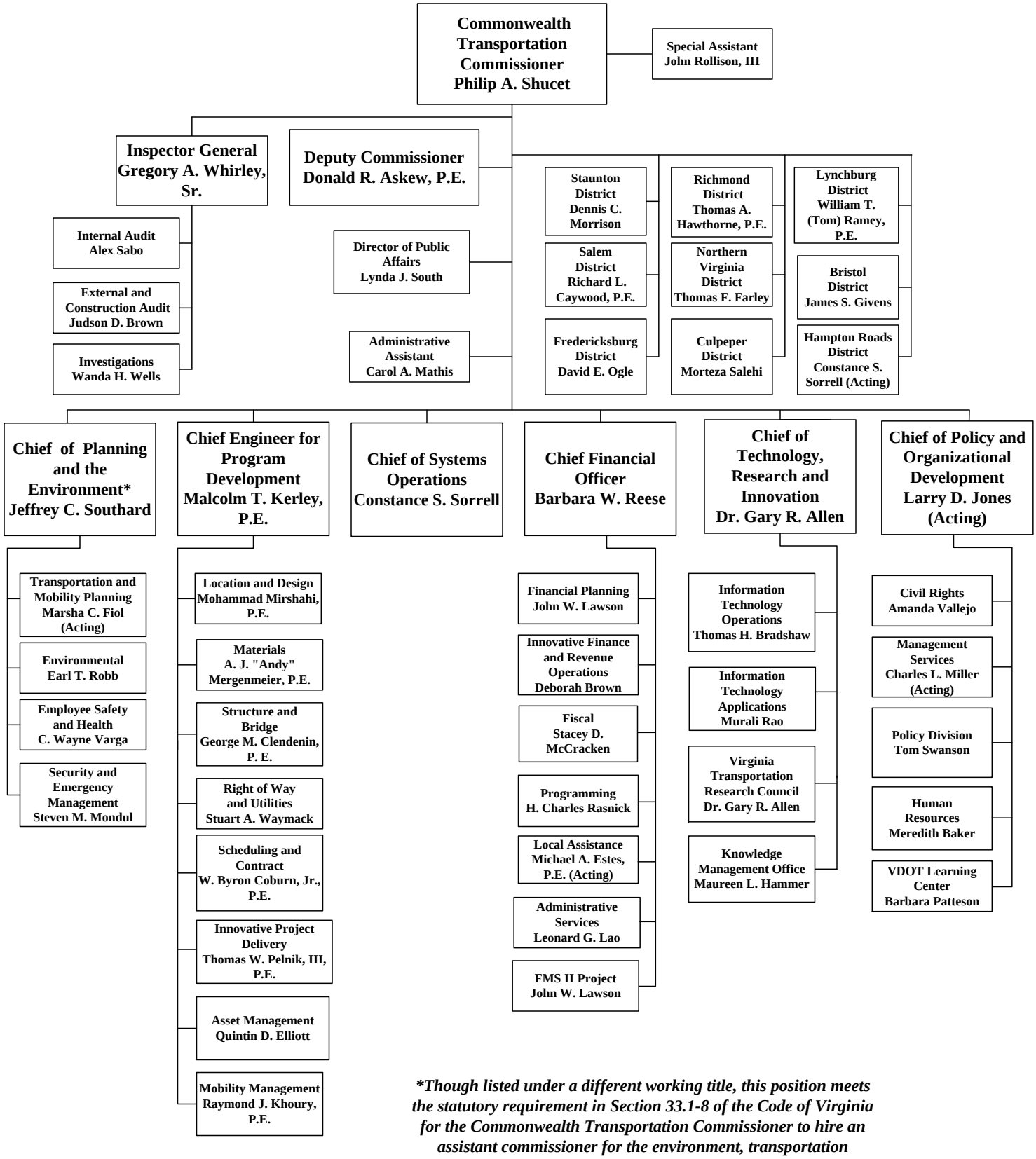
BMP 6.4: VDOT Turf Management Program

Target Date	BMP Activity	Resp. VDOT Dept.	Status
3/03 – 2/04 ➢ 5/03 ➢ 12/03 ➢ 2/04	Update the VDOT Best Practices Manual for Maintenance Activities to include Turf Management Practices. Establish VDOT Task Force representing the District maintenance forces and CO staff; meet twice monthly. Evaluate and recommend revisions and improvements to the existing turf management Maintenance Policy. Final recommendations. Transition new maintenance procedures to District AM staff.	CO/Dist AM	VDOT's Turf Management Program best practices are contained within Chapter 11, Roadside, of the VDOT Best Practices Manual (see BMP 6.3). The manual will be finalized by January 1, 2005. VDOT has applied for Federal Highway Administration Special Project Funds for FY 2005 for Nutrient Management Planning research and training to be conducted in partnership with Virginia Tech and DCR. Please see Appendix 6 for VDOT Nutrient Management Planning project. **RESEARCH:** VDOT's Roadside Management Section administers research contracts in partnership with Virginia Tech Roadside Turf Specialists on an annual basis. The annual turf research efforts are focused on ensuring VDOT is using the most efficient and effective means of construction and maintenance activity related to seed bed preparation, seeding, overseeding, fertilizing, liming, mulching, pesticide use specifications and practices. Historical reports can be found at: http://filebox.vt.edu/cals/cropsci/roadside.vegetation/annualreports.htm FY 2004 report will be available at this website on July 1, 2004. **TRAINING:** In addition, Virginia Tech Roadside Turf Specialists are currently developing a course for delivery to 3 regional locations to an estimated 100 District Roadside Management and 4 Central Office personnel by July of 2005. The draft course agenda/outline is provided within Appendix 6 - VT-VDOT Turf Short Course Outline.
3/04 – 2/08	Develop training courses on new Maintenance Policy and implement through the VDOT Learning Center as identified in BMP 6.2.	CO/Dist AM, VDOT Learning Center	

Virginia Department of Transportation

Organizational Structure with Manager Names

03/24/04



Though listed under a different working title, this position meets the statutory requirement in Section 33.1-8 of the Code of Virginia for the Commonwealth Transportation Commissioner to hire an assistant commissioner for the environment, transportation planning, and regulatory affairs

Appendix 1

Minimum Control Measure 1: Public Education and Outreach on Stormwater Impacts

Appendix 2

Minimum Control Measure 2:
Public Involvement/Participation

- VDOT Litter Campaign Initiative

VDOT Litter Campaign Initiative

Current methods to remove liter

- Adopt A Highway program (over 50,000 citizens and 6,400 groups)
- Inmate labor (approximately 70,000 man hours annually)
- Litter pickup is a requirement in the majority of Mowing contracts (approximately 80%)

Needs Assessment

- A program to reduce litter

Objective

- Education directed at students on waste management prior to driving age

Action Plan

- VDOT Asset Management Division will partner with members to include but not limited to:
    - VDOT Public Affairs Office
    - Va. Dept of Tourism
    - Va. Department of Education
    - Va. Department of Conservation and Recreation
    - Waste Management Industry
    - Construction Industry-VRTBA
    - Scenic Virginia
- Introduce an awareness program in local school systems (focus on elementary and middle school curriculums)

Benefits

- Safety
- Cost savings (VDOT spends approximately 6.5 million annually)
- Education of children to influence adults
- Create an aesthetically pleasing infrastructure

Proposed implementation date

- September 1, 2004

Appendix 3

Minimum Control Measure 3: Illicit Discharge Detection and Elimination

- Asset Management System – Work Accomplishments Module Requirements v. 1.04

- Chapter 8 HazMat (draft) of AMPBPM

Asset Management System (AMS 1.0)
Work Accomplishments Module (WAM)
Functional Requirements Document

Introduction

The accomplishments module captures work completed by VDOT on roadway assets. This module will coordinate with existing VDOT databases which will provide inventory and work descriptions to the accomplishments module in order to eliminate duplication. For pavement and other roadway assets, both state force and contract work will be captured in the Accomplishments module. For bridge, the module will capture only state force work, while contract work will continue to be tracked in Transport and PONTIS.

The accomplishments module is also a tool for building inventory incrementally, by logging assets into the database as work is performed. Each asset will have a unique identifier and location. Static assets can be located by milepost or GPS; linear assets can be located by road section or segment. ITAD and AMD business group will decide the details of precision of location information jointly.

This document describes the accomplishment functional requirements, examples of screens and forms used in the accomplishments module to enter work data and to build inventory, and flow charts detailing how the flow of information into accomplishments is synchronized with other VDOT databases. The module envisions that the user may also choose to initiate a work request prior to completing a work accomplishment. The work accomplishment fields are required; the work request fields are optional at this time.

Opening Menu Screen
Accomplishments Module

Menu
Bridge
Pavement
Other Roadway Assets

The next question to the user should be:

Work Request?	Yes	No
If Yes, Insert		
Work Request Number?		
Requestor?		
Asset?		
Location?		

.

If a work request has already been established, for example from PMSS or from VOIS, then some information on the accomplishments form should already be pre-populated. The individual entering the work accomplishment data will need a quick method to call

up the work request, in order to complete the form and capture any changes from the original request to the final accomplishment. If the individual entering the accomplishments data does not know the work request number, they should be able to pull up the form based on inputting the requestor, asset type, and location.

Bridge, Pavement, or Other Roadway Assets:

The individual charged with entering data into the accomplishments module will vary according to the asset type. The district or residency bridge crew maintenance supervisor will most likely enter data concerning state force bridge crew work, while the pavement coordinator will most likely enter pavement data. In the opening screen, the first filter should indicate whether work has been captured on Bridge, Pavement, or Other Roadway Assets. Each of the three choices would then route to a different set of following screens.

Bridge:

Data entered for bridge work should move to a screen that identifies the unique structure of the bridge. The person entering the data should identify the bridge or large culvert by the location of the asset, and once the unique location is entered, the system should be able to populate the screens with the unique structure identification number. These numbers tie to PONTIS, and enable the program to call up the physical aspects of the inventory item.

Second Menu Screens
Accomplishments Module
Bridge Selected

Work Order Number (Generated by System)		
Location	**Inventory Description**	**Inventory ID Number**
District Name (Drop Down List)	**Virginia Bridge**	**4 Digit Number (Pre-populates once location is entered)**
County Name (Drop Down List – Filtered by District)	**Federal Bridge**	**15 Digit Number (Pre-populates once location is entered)**
Residency Name (Drop Down List – Filtered by County)	**Bridge Element Group (Drop Down List)**	
Primary Route	**Bridge Element (Drop Down List**	
Secondary Route		

Accomplishment Form Used To Input Work
Bridge - Specific

Work Order No.	Non-intelligent, unique number assigned by computer (same as in above screen)	Computer fills in	
Bridge ID No.	Unique structure number. Doubles as Asset ID number in Inventory Table	Prepopulated from prior menu	From PONTIS
Work Order Status	Open or Pending, Scheduled or Further Work Req'd, Closed or Complete, create new W/O	Choose from drop-down	
Asset Type	Asset Type Code	Choose from drop-down or key-in	Validate w/ FMSII codes
Location	Choose location type, more than one possible	Pre-populated from prior menu – insert PONTIS location coordinates	Must have ability to update in Work Accomplishment, If location put in Work Request is not correct. Ability to choose most accurate location description available.

Generic Data Entry Form – User Can Store as Template and Pre-populate fields.

Org ID	Organization ID No. Performing work	Choose from drop-down or key-in	Org ID needed for both State & Contract
County Code	County work performed in	Choose from drop-down or key-in	Default to Org ID County w/ability to type over if different, County tells you which District
Category ID	Category Code to charge	Choose from drop-down or key-in	UPC, Route, Cost Center, EMS Work Order
Speed type	Speed type Code to charge	Choose from drop-down or key-in	FMSII
Project No.	Use UPC or OPC numbers	Key in, ability to enter more than one	Need both for Disasters,
Maintenance Work Activity	Specific Work Accomplished	Choose from drop-down or key-in	Use Blue book codes / cross reference with FMSII 5 digit Maintenance Activity Codes
Date	Date work performed/completed	Date Format, system fill-in, w/override	May be keying in Request/Accomplishment after the fact.
Workforce	State or Contract	Choose from drop-down or key-in	
Contract No.	IF Contract workforce, Contract No.	Choose from drop-down or key-in	These fields show up when Contract Workforce is used to accomplish work
Contract Qty	IF Contract	Choose from drop-	

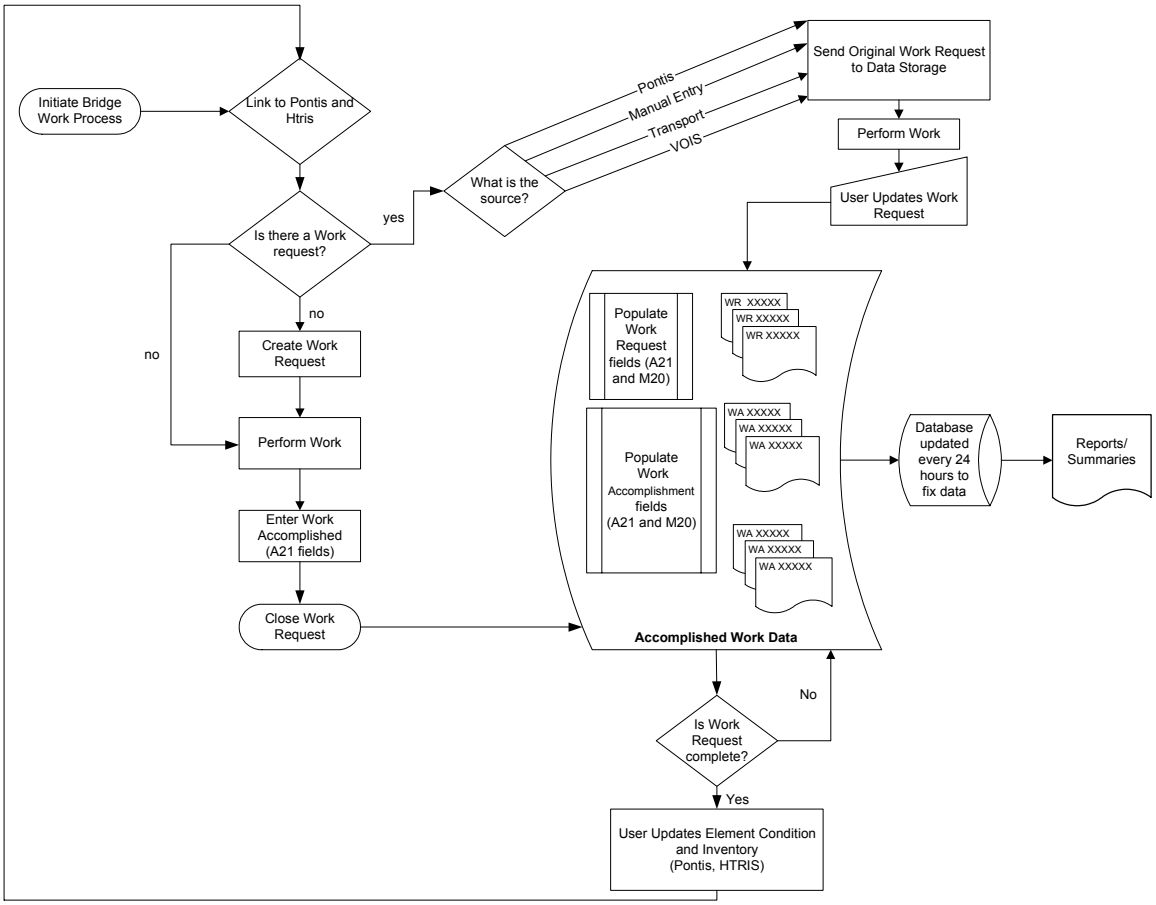
	workforce, Qty paid for	down or key-in	
Contract amount	IF Contract workforce, Amount invoiced/paid	Key in	
Employee ID	Choose Multiple State employees performing work	Choose from drop-down or key-in	These fields show up when State Workforce is used to accomplish work. Should be able to import material, labor & equipment rates from FMSII or local user should be able to populate his own material, labor & equipment tables to eliminate keying in ID's and $ rates. Have ability to enter multiple employees, equipment & materials
Labor Hours	Labor hours for each State Employee performing work (Regular and Overtime should appear as option)		
Equipment ID	Choose Multiple State or rental equipment used to perform work		
Equipment Hours	Equipment hours for each piece of equipment performing work		
Material Code	Material Code used to perform work		
Material Qty	Material Qty Used to perform work		

The final screen for the bridge user is the same closing screen as for any asset. In the case of bridge, the "Add new Asset" choice should be either hidden or in gray, not applicable. Once PONTIS has the functionality to accept information on work history tied to specific bridges and bridge elements, and then the work accomplished can be stored in PONTIS as well as in the AMS Inventory Module. For the first version, the work accomplished would be stored in the Accomplishment Database and linked to the Inventory Database. (Stored under the Structure ID number as the Asset ID number for linkage back to PONTIS).

Inventory Builder Screen
And/Or Final Screen

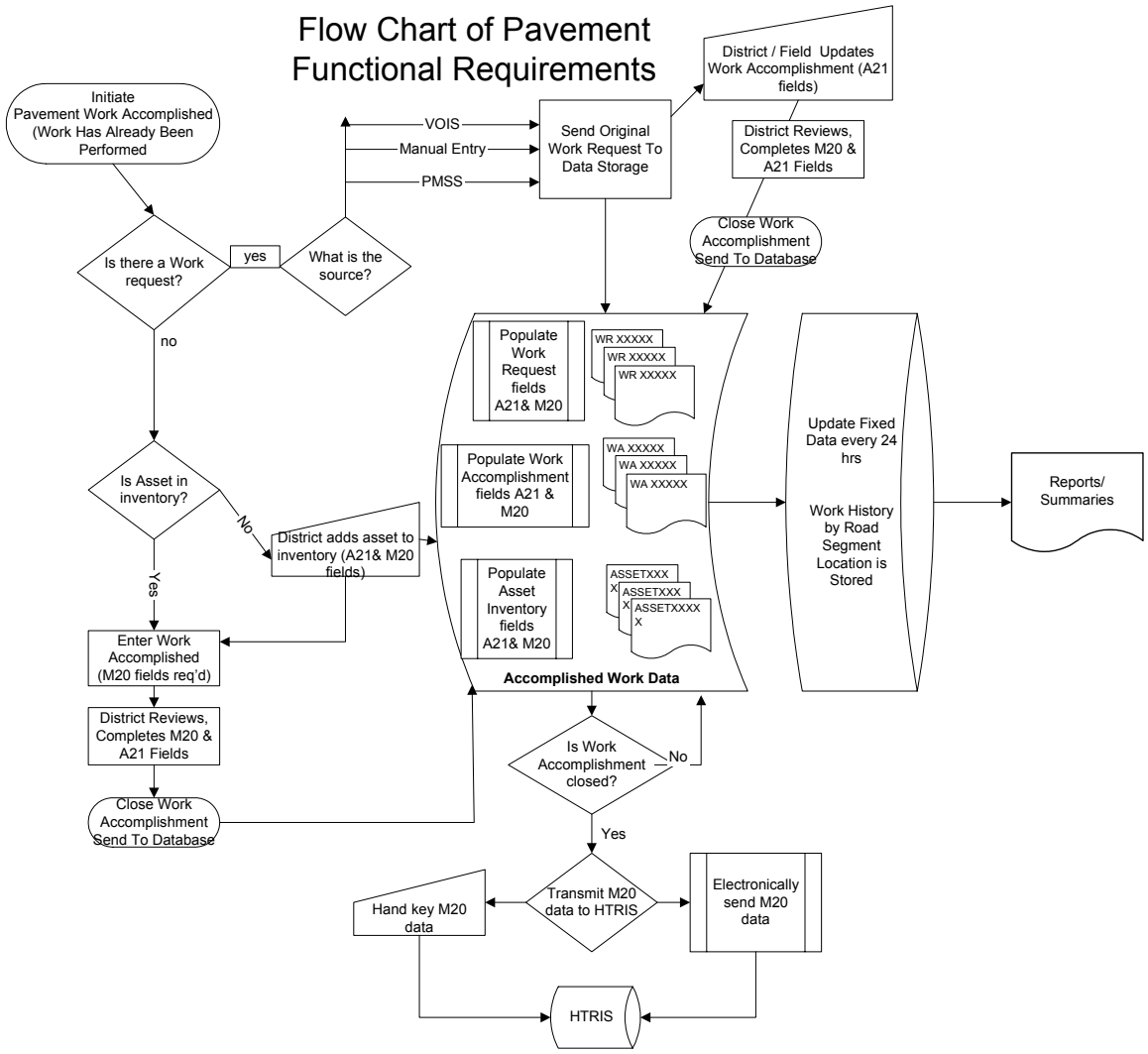
Menu
Add New Asset
Update Work History
Close/ Send Work Accomplishment to Database

Bridge Requirements



Pavement:

The pavement work request and accomplishment system will eventually replace the PMSS system. The transition from PMSS to the Accomplishments system envisions capturing the current work estimation information now in PMSS as Work Requested, and capturing the final work completed by the contractor as Work Accomplished. PMSS begins with a description of pavement work required including estimates of quantities and costs of work, which becomes a contract. Once the work is complete, any changes to the original contract must be captured in the work accomplishment system, and recorded as the final documentation of which work was completed.



District pavement personnel verify the contract work, and will complete the work accomplishments and send the information to both the Accomplishments database and the HTRIS database. Currently, the HTRIS data must be keyed in by hand, from a completed M-20 form. When pavement work is verified and complete, the final form will be sent to the database and printed so that the District personnel can re-key the data into HTRIS. Once HTRIS has the capability to accept an electronic M-20, then the AMS system should be able to generate that form and send it to HTRIS electronically.

Opening Menu Screen
Accomplishments Module

Menu
Bridge
Pavement
Other Roadway Assets

The next question to the user should be:

Work Request?	Yes	No
If Yes, Then:		
Work Request Number?		
Requestor?	Drop Down Menu (PMSS, VOIS, Other)	
Contract or Contractor?		
Location?		

.

The pavement coordinator should be able to pull up onto the screen the original work request populated by information from PMSS or another system. This work request should already be either partially (if request is from VOIS or other source) or completely (if request is from PMSS) filled out. Below are the work accomplishment required fields common to all roadway asset work. (Some or all of these fields would already be completed in the work request).

Accomplishment Form Used To Input Work

Work Order No.	Non-intelligent, unique number assigned by computer (same as in above screen)	Computer fills in	
Asset ID No.	(ID number by road segment or road section)	Prepopulated from prior menu	
Work Order Status	Open or Pending, Scheduled or Further Work Req'd, Closed or Complete, create new W/O	Choose from drop-down	
Asset Type	Asset Type Code	Choose from drop-	Validate w/ FMSII codes

		down or key-in	
Location	Choose location type, more than one possible	Pre-populated from prior menu – insert location coordinates	Must have ability to update in Work Accomplishment, If location put in Work Request is not correct. Ability to choose most accurate location description available.

Generic Data Entry Form – User Can Store as Template and Pre-populate fields.

Org ID	Organization ID No. Performing work	Choose from drop-down or key-in	Org ID needed for both State & Contract
County Code	County work performed in	Choose from drop-down or key-in	Default to Org ID County w/ability to type over if different, County tells you which District
Category ID	Category Code to charge	Choose from drop-down or key-in	UPC, Route, Cost Center, EMS Work Order
Speed type	Speed type Code to charge	Choose from drop-down or key-in	FMSII
Project No.	Use UPC or OPC numbers	Key in, ability to enter more than one	Need both for Disasters,
Maintenance Work Activity	Specific Work Accomplished	Choose from drop-down or key-in	Use Blue book codes / cross reference with FMSII 5 digit Maintenance Activity Codes
Date	Date work performed/completed	Date Format, system fill-in, w/override	May be keying in Request/Accomplishment after the fact.
Workforce	State or Contract	Choose from drop-down or key-in	
Contract No.	IF Contract workforce, Contract No.	Choose from drop-down or key-in	These fields show up when Contract Workforce is used to accomplish work
Contract Qty	IF Contract workforce, Qty paid for	Choose from drop-down or key-in	
Contract amount	IF Contract workforce, Amount invoiced/paid	Key in	
Employee ID	Choose Multiple State employees performing work	Choose from drop-down or key-in	These fields show up when State Workforce is used to accomplish work. Should be able to import material, labor & equipment rates from FMSII or local user should be able to populate his own material, labor & equipment tables to eliminate keying in ID's and $ rates. Have ability to enter multiple employees, equipment & materials
Labor Hours	Labor hours for each State Employee performing work (Regular and Overtime should appear as option)		
Equipment ID	Choose Multiple State or rental equipment used to perform work		

Equipment Hours	Equipment hours for each piece of equipment performing work	
Material Code	Material Code used to perform work	
Material Qty	Material Qty Used to perform work	

If no work request exists, then maintenance crews performing pavement work would fill out the forms once the state force work is completed.

DISTRICT	District code	From County/Maint Jurisdiction code	See PDS Code Manual for specific codes and definitions
RES	Residency Code	From County/Maint Jurisdiction code	
MAINT JURIS	Maintenance Jurisdiction	Choose from drop-down or key-in	See PDS Code Manual - Appendix B for specific codes and definitions
ROUTE-ID	Route number	Key-in	See PDS Code Manual for specific codes and definitions
DIR	Direction of lane(s)	Choose from drop-down or key-in	
LANE	Identify specific Lane	Choose from drop-down or key-in	
CONSTR/MAINT/ MILL	New construction, maintenance or milling	Choose from drop-down or key-in	
SPEC YR	Specification year used	Choose from drop-down or key-in	
DPTH OF MILL	Depth of milling in inches	Choose from drop-down or key-in	
SURFACE MIX	Surface Mix codes	Choose from drop-down or key-in	See PDS Code Manual - Appendix A for specific codes and definitions
SPEC FEAT	Special Feature	Choose from drop-down or key-in	
PROJ NO.	Project number	Key-in w/ability for multiple entries	See PDS Code Manual for specific codes and definitions
SCHED NO.	Schedule number	Key-in w/ability for multiple entries	
SURF MIX TYP	Surface Mix Type - choosing a type brings up the appropriate fields for that type of mix	Choose from drop-down or key-in	

ASPHALT TYP	Type of Asphalt used code	Choose from drop-down or key-in	See PDS Code Manual - Appendix A for specific codes and definitions
APP RATE	Application rate in lbs/Sq Yd		See PDS Code Manual for specific codes and definitions
AVG % ASPHALT CONT	Avg Job Mix design % asphalt content in mix		
NO CHGS IN %AC	No of changes in design asphalt mix content during project or schedule		
CURE METH	Method of curing code	Choose from drop-down or key-in	
TEXT METH	Method of texturing code		
BAGS/CU YD	No. Of bags of cement used per Cubic yard		
CEMENT VEND	Source/Supplier of Cement code		See PDS Code Manual - Appendix A for specific codes and definitions
CONSTR METH	Method of construction code		See PDS Code Manual for specific codes and definitions
SLAB THICK	Slab thickness in inches		
JOINT SPACE	Joint space in feet		
JOINT MATL	Joint material code		
ASPHALT TYP	Asphalt Type code	Choose from drop-down or key-in	See PDS Code Manual - Appendix A for specific codes and definitions
ASPHALT GAL	Gallons of Asphalt per square yard		See PDS Code Manual for specific codes and definitions
STONE	Pounds of aggregate/stone applied per square yard		
SIZE	Aggregate size code	Choose from drop-down or key-in with ability for multiple aggregates entry for these fields, i.e. Aggregate 1, Aggregate 2, 3…etc.	See PDS Code Manual - Appendix A for specific codes and definitions
TYPE	Aggregate type code		
SOURCE	Aggregate Supplier code		See PDS Code Manual - Appendix C or D for specific

			codes and definitions
PERCENT	Percent of the total mix for each aggregate		See PDS Code Manual for specific codes and definitions
MIX TYPE	Subsurface Mix Type code	Choose from drop-down or key-in with ability for multiple subsurface mixes for these fields starting from top to bottom, i.e. Top layer is Subsurface Layer 1, 2,3…etc. to the bottom or last layer	See PDS Code Manual - Appendix A for specific codes and definitions
DEPTH	Subsurface Mix depth in inches		See PDS Code Manual for specific codes and definitions
%PARTS	% of stabilizer in mix content, i.e. Cement, lime or asphalt		
YEAR	Year each subsurface layer is placed		
INSPECTOR	Inspector's name/employee code no.	Choose from drop-down or key-in employee code no.	
PAVEMENT SURFACE PATCHING	Type of Patch (Drop Down Menu) -Pothole Patch -Surface Patch -Partial Depth Patch -Full Depth Patch	Material Used AC PCC	

The district personnel verifying the pavement contract work would complete the forms, close and send them, and print the HTRIS m-20 form.

Inventory Builder Screen
And/Or Final Screen

Menu
Add New Asset
Update Work History
Close/ Send Work Accomplishment to Database

Other Roadway Assets

Opening Menu Screen
Accomplishments Module

Menu
Bridge
Pavement
Other Roadway Assets

The next question to the user should be:

Work Request?	Yes	No
If Yes, Insert		
Work Request Number?		
Requestor?		
Asset?		
Location?		

.

If a work request exists, this should enable the system to retrieve the work request and call it to the screen. The user can then use the work request as a starting point. If no work request exists, then the user fills out the next screen:

Second Menu Screens
Accomplishments Module
Other Roadway Assets Selected

Daily Work Activity Menu
Single Location – Many Asset Types
Many Locations – Single Asset Type
Many Locations – Many Asset Types
Inspection Only – One Asset Type
Inspection Only – Many Asset Types

The screen above enables the user to generate a unique work request or work accomplishment form for each asset and each location visited by the maintenance work crew without duplicating keystrokes. The basic information entered into the form will be the same information for each asset worked on and for each site visited. The system can automatically generate the cost allocated to each asset and to each site, if the data is entered. Our suggestion for allocating the same labor and equipment across multiple sites and multiple assets is to provide an additional column for the user. An example is provided below:

Third Menu Screen
Accomplishments Module
A-21 Screen Based on Daily Work Selected

Column 1	Column 2	Column 3	Column 4	Column 5	Column 8	Column 9	Column 10
A-21 (Information common to all sites and all assets. User can store various templates.	Crew (User Selects from Drop Down List)	Regular Hours	Overtime Hours	Equipment (User Selects from Drop Down List)	Location (Enter % or Hours of Total)	Asset Type (Enter % or Hours of Total	Enter Materials (Not necessary for inspections)
A-21 Becomes Unique Work Accomplishment (WA)	A. Smith	8		Track Hoe	Rte A % Hrs	Pipe % Hrs	
A-21 Becomes Unique WA	B. Jones	8		Grader	Rte B % Hrs	Fence % Hrs	
A-21 Becomes Unique WA	C. Green	8		Bucket Truck	Rte C % Hrs	Drop Inlet	
A-21 Becomes Unique WA	D. Woods	8		Pick up Truck	Rte D % Hrs	Ditch % Hrs	
A-21 Becomes Unique WA	F. Hill	8		Pick up Truck	Rte E % Hrs		
		Total	Total				

The system should be able to calculate a total cost for the work accomplished at each unique site and unique location and to generate a record. The system can apply the user's allocation of total hours spent at each site and on each asset to the total for the crew and equipment. This will complete the cost field for each record.

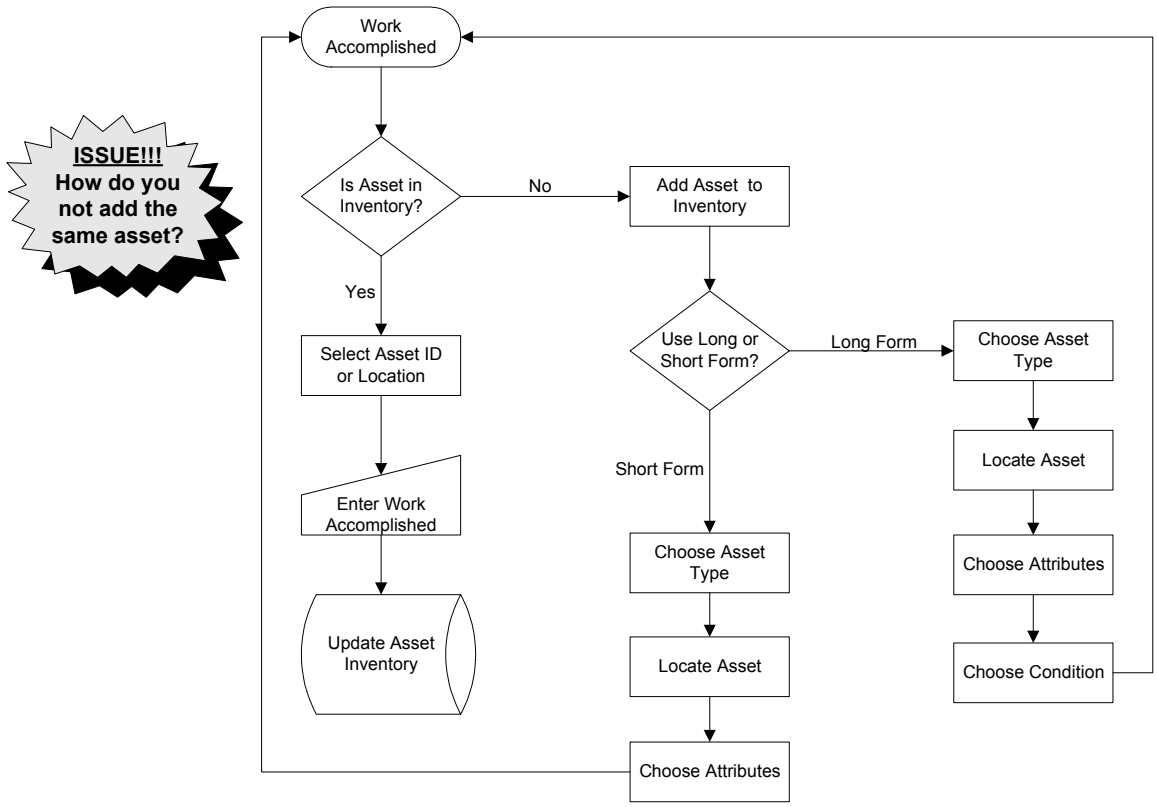
Finally, the user will have to complete the screen to indicate if the assets worked on are already in the Inventory Table, or if they should be added to the inventory table.

Inventory Builder Screen
And/Or Final Screen

Menu
Add New Asset
Update Work History
Close/ Send Work Accomplishment to Database

Most "other roadway asset" inventory is probably not already in the Inventory Table. The current Inventory Table is quite detailed. In order to minimize the work needed to add an asset to inventory, the user is given the choice of either completing a full inventory description which completes all of the inventory fields, (the long form) or completing a short inventory description which completes only some of the Inventory Table, but allows the user to note the presence of the asset at that site.

Adding New Assets In Work Accomplishment



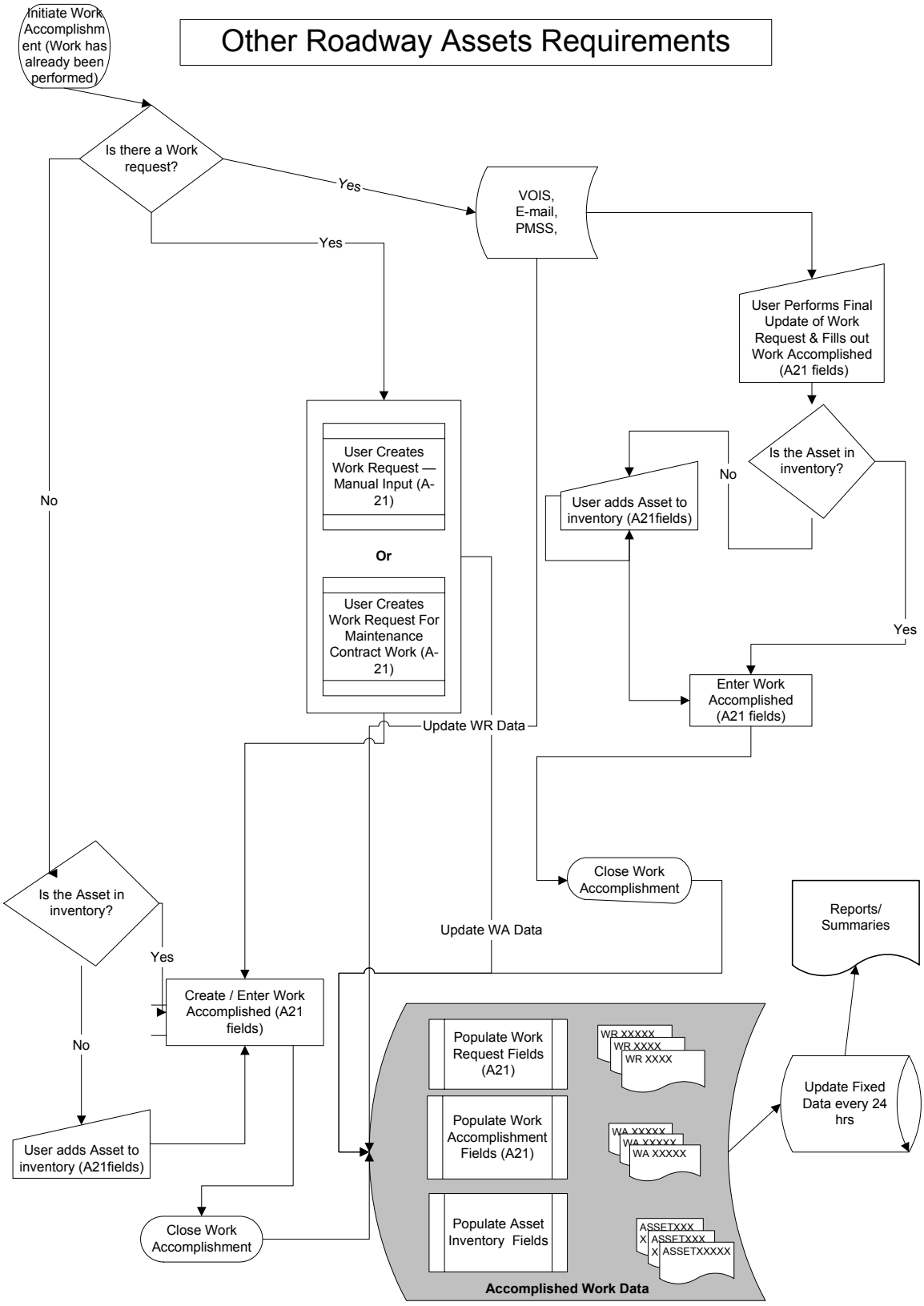
An example of the "short form" of an asset is provided below, using culverts/pipes:

Attribute	1st Drop Down Menu	2nd Drop Down Menu
Design Type	Cross	
	Cross Over	
	Entrance	
	Parallel	
Shape	Circular	Drop Down or Enter Inches
	Elliptical Shape	Drop Down or Enter Inches
	Arch	Drop Down or Enter Inches
	Box	Drop Down or Enter Inches
Sleeved	No	Pipe is not sleeved
	Yes	Pipe is Sleeved
Material	Concrete	Concrete Pipe
	Asphalt Coated Corrugated Metal	Asphalt Coated Pipe
Pipe Length	(number)	Length of Pipe
Depth of Fill	(number)	Height of Fill over Pipe in 5 Ft increments

This form corresponds with the Inventory Table, but limits the fields entered. The asset would be assigned an Asset ID, and would become part of the Inventory Table. An example of the "long form" for the same asset is in Attachment A.. Once the inventory is entered, the user returns to the final screen and updates the work history.

Inventory Builder Screen
And/Or Final Screen

Menu
Add New Asset
Update Work History
Close/ Send Work Accomplishment to Database


Initiate Work Accomplishment (Work has already been performed)
Other Roadway Assets Requirements
Is there a Work request?
Yes
No
Yes
VOIS, E-mail, PMSS,
User Performs Final Update of Work Request & Fills out Work Accomplished (A21 fields)
Is the Asset in inventory?
No
User adds Asset to inventory (A21fields)
Yes
User Creates Work Request — Manual Input (A-21)
Or
User Creates Work Request For Maintenance Contract Work (A-21)
Enter Work Accomplished (A21 fields)
Update WR Data
Close Work Accomplishment
Reports/ Summaries
Is the Asset in inventory?
Yes
No
Update WA Data
Create / Enter Work Accomplished (A21 fields)
User adds Asset to inventory (A21fields)
Close Work Accomplishment
Populate Work Request Fields (A21)
Populate Work Accomplishment Fields (A21)
Populate Asset Inventory Fields
WR XXXXX
WR XXXX
WR XXXX
WA XXXXX
WA XXXXX
WA XXXXX
ASSETXXX
ASSETXXX
ASSETXXXXX
Accomplished Work Data
Update Fixed Data every 24 hrs

Attachment A
"Long Form" - Duplicate of all fields in Inventory Table

ATTRIBUTE	VALUE	DESCRIPTION
Geographic Feature Type	Point	Point GIS Representation
Side	Left	Asset is Left of Centerline in Cardinal Direction
	Right	Asset is Right of Centerline in Cardinal Direction
	Median	Asset is on Median of Undivided Road
Inventory Attributes		
Design Type	Cross	Cross Pipe Runs Nominally Perpendicular to the Centerline of the Road; invert and Outflow on opposite Sides of the CL
	Cross Over	Runs Under a Crossover between Sides of a Divided Roadway
	Entrance	Entrance Pipe Runs Under an Entrance
	Parallel	Parallel Pipe Runs Parallel to the Centerline, invert and Outflow on the Same Side of the CL (crossover Pipe)
	Other	Other Design Type
Shape	Circular	Circular Shape
	Elliptical	Elliptical Shape
	Arch	Arch Shape
	Box	Box Shape
	Other	Other Shape
Sleeved	No	Pipe is not sleeved
	Yes	Pipe is Sleeved
Material	Concrete	Concrete Pipe
	Asphalt Coated Corrugated Metal	Asphalt Coated Pipe
	Corrugated Steel Pipe	Corrugated Steel Pipe
	Corrugated Aluminum Alloy	Corrugated Aluminum Alloy Pipe
	Corrugated Steel Pipe	Corrugated Steel Pipe
	Corrugated Aluminum Alloy Pipe	Corrugated Aluminum Alloy Pipe
	Structural Plate Steel	Structural Plate Steel Pipe
	Structural Plate Aluminum Alloy	Structural Plate Aluminum Alloy Pipe
	Structural Plate Steel	Structural Plate Steel Pipe
	Structural Plate Aluminum Alloy	Structural Plate Aluminum Alloy Pipe
	Aluminum Spiral Rib	Aluminum Spiral Rib Pipe
	Steel Spiral Rib	Steel Spiral Rib Pipe
	Cast Iron	Cast Iron Pipe
	Vitrified Clay	Vitrified Clay Pipe
	Plastic	Plastic Pipe
	Wood	Wood Pipe
Number Joints	(number)	Number of joints in pipe
Pipe End 1 Type	None	Pipe Has No End Sections or End Walls
	EW-1	Standard Endwall For Circular Pipe Culverts 12" - 36"
	EW-1A	Standard Endwall For Elliptical Pipe Culverts 23" X 14" - 53" X 34"
	EW-1PC	Precast Endwall For Circular Pipe Culverts 12" - 36"
	EW-1APC	Precast Endwall For Elliptical Pipe Culverts 23" X 14" - 53" X 34"
	EW-2	Standard Endwall For Circular Pipe Culverts 42" - 96"
	EW-2A	Standard Endwall For Elliptical Pipe Culverts 60" X 38" - 106" X 68"

	EW-2 PC	Precast Endwall For Circular Pipe Culverts 42" - 96"
	EW-2A PC	Precast Endwall For Elliptical Pipe Culverts 60" X 38" - 106" X 68"
	EW-2S	Standard Endwalls For 42"-96" Pipe Culverts 30 and 45 Degree Skews
	EW-2S PC	Precast Endwalls For 42"-96" Pipe Culverts 30 and 45 Degree Skews
	EW-6	Endwalls For Multiple Pipe Culverts 12" - 36" Pipe
	EW-6 PC	Precast Endwalls For Multiple Pipe Culverts 12" - 36" Pipe
	EW-6S	Endwalls For Multiple Pipe Culverts 12" - 36" Pipe 30 and 45 Degree Skew
	EW-6S PC	Precast Endwalls For Multiple Pipe Culverts 12" - 36" Pipe 30 and 45 Degree Skew
	EW-7	Endwalls For Multiple Pipe Culverts 42" - 96" Pipe
	EW-7 PC	Precast Endwalls For Multiple Pipe Culverts 42" - 96" Pipe
	EW-7S	Endwalls For Multiple Pipe Culverts 42" - 96" Pipe 30 and 45 Degree Skew
	EW-7S PC	Precast Endwalls For Multiple Pipe Culverts 42" - 96" Pipe 30 and 45 Degree Skew
	EW-9	Endwalls For Pipe Arches 13" - 38" Rise
	EW-9 PC	Precast Endwalls For Pipe Arches 13" - 38" Rise
	EW-10	Endwalls For Multiple Pipe Arches 13" - 38"Rise
	EW-10 PC	Precast Endwalls For Multiple Pipe Arches 13" - 38"Rise
	EW-11	Pipe Endwall with Load-Carrying Grate For 12" - 60" Pipes
	EW-11A	Pipe Endwall with Load - Carrying Grate For 12" - 24" Pipes
	EW-11APC	Precast Pipe Endwall with Load-Carrying Pipe Grate For 12" - 24" Pipes
	EW-12	Endwalls For Pipe Underdrain
	Endwall	Endwall, Design Type Generic
	ES-1	Flared End-Section For Concrete Pipe Culverts (12"-60")
	ES-1A	Flared End-Section For 23" X 14" to 53" X 34" Elliptical Concrete Pipe Culverts
	ES-2	Flared End-Section For 12" - 60" Corrugated Pipe Culverts
	ES-3	Flared End-Section For Metal Pipe Arches 13" - 47" Rise
	End Section	End Section Design Type Indeterminate
Pipe End 2 Type	None	Pipe Has No End Sections or End Walls
	EW-1	Standard Endwall For Circular Pipe Culverts 12" - 36"
	EW-1A	Standard Endwall For Elliptical Pipe Culverts 23" X 14" - 53" X 34"
	EW-1PC	Precast Endwall For Circular Pipe Culverts 12" - 36"
	EW-1APC	Precast Endwall For Elliptical Pipe Culverts 23" X 14" - 53" X 34"
	EW-2	Standard Endwall For Circular Pipe Culverts 42" - 96"
	EW-2A	Standard Endwall For Elliptical Pipe Culverts 60" X 38" - 106" X 68"
	EW-2 PC	Precast Endwall For Circular Pipe Culverts 42" - 96"
	EW-2A PC	Precast Endwall For Elliptical Pipe Culverts 60" X 38" - 106" X 68"
	EW-2S	Standard Endwalls For 42"-96" Pipe Culverts 30 and 45 Degree Skews
	EW-2S PC	Precast Endwalls For 42"-96" Pipe Culverts 30 and 45 Degree Skews
	EW-6	Endwalls For Multiple Pipe Culverts 12" - 36" Pipe
	EW-6 PC	Precast Endwalls For Multiple Pipe Culverts 12" - 36" Pipe
	EW-6S	Endwalls For Multiple Pipe Culverts 12" - 36" Pipe 30 and 45 Degree Skew
	EW-6S PC	Precast Endwalls For Multiple Pipe Culverts 12" - 36" Pipe 30 and

		45 Degree Skew
	EW-7	Endwalls For Multiple Pipe Culverts 42" - 96" Pipe
	EW-7 PC	Precast Endwalls For Multiple Pipe Culverts 42" - 96" Pipe
	EW-7S	Endwalls For Multiple Pipe Culverts 42" - 96" Pipe 30 and 45 Degree Skew
	EW-7S PC	Precast Endwalls For Multiple Pipe Culverts 42" - 96" Pipe 30 and 45 Degree Skew
	EW-9	Endwalls For Pipe Arches 13" - 38" Rise
	EW-9 PC	Precast Endwalls For Pipe Arches 13" - 38" Rise
	EW-10	Endwalls For Multiple Pipe Arches 13" - 38"Rise
	EW-10 PC	Precast Endwalls For Multiple Pipe Arches 13" - 38"Rise
	EW-11	Pipe Endwall with Load-Carrying Grate For 12" - 60" Pipes
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	EW-11APC	Precast Pipe Endwall with Load-Carrying Pipe Grate For 12" - 24" Pipes
	EW-12	Endwalls For Pipe Underdrain
	ES-1	Flared End-Section For Concrete Pipe Culverts (12"-60")
	ES-1A	Flared End-Section For 23" X 14" to 53" X 34" Elliptical Concrete Pipe Culverts
	ES-2	Flared End-Section For 12" - 60" Corrugated Pipe Culverts
	ES-3	Flared End-Section For Metal Pipe Arches 13" - 47" Rise
	End Section	End Section Design Type Indeterminate
Pipe Size	12"	Circular Diameter
	15"	Circular Diameter
	18"	Circular Diameter
	21"	Circular Diameter
	24"	Circular Diameter
	27"	Circular Diameter
	30"	Circular Diameter
	33"	Circular Diameter
	36"	Circular Diameter
	42"	Circular Diameter
	48"	Circular Diameter
	54"	Circular Diameter
	60"	Circular Diameter
	66"	Circular Diameter
	72"	Circular Diameter
	78"	Circular Diameter
	84"	Circular Diameter
	96"	Circular Diameter
	23" x 14"	Elliptical Shape
	30" x 19"	Elliptical Shape
	34" x 22"	Elliptical Shape
	38" x 24"	Elliptical Shape
	42" x 27"	Elliptical Shape
	45" x 29"	Elliptical Shape
	49" x 32"	Elliptical Shape
	53" x 34"	Elliptical Shape
	60" x 38"	Elliptical Shape

	68" x 43"	Elliptical Shape
	76" x 48"	Elliptical Shape
	83" x 53"	Elliptical Shape
	91" x 58"	Elliptical Shape
	98" x 63"	Elliptical Shape
	106" x 68"	Elliptical Shape
	17" x 13"	Arch
	21" x 15"	Arch
	24" x 18"	Arch
	28" x 20"	Arch
	35" x 24"	Arch
	40" x 31"	Arch
	42" x 29"	Arch
	46" X 36"	Arch
	49" X 33"	Arch
	53" X 41"	Arch
	57" X 38"	Arch
	60" x 46"	Arch
	64" x 43"	Arch
	66" x 51"	Arch
	71" x 47"	Arch
	3' x 3'	Box
	3' x 4'	Box
	4' x 3'	Box
	4' x 4'	Box
	4' x 5'	Box
	4' x 6'	Box
	5' x 3'	Box
	5' x 4'	Box
	5' x 5'	Box
	5' x 6'	Box
	5' x 7'	Box
	6' x 4'	Box
	6' x 5'	Box
	6' x 7'	Box
	6' x 8'	Box
	7' x 4'	Box
	7' x 6'	Box
	7' x 8'	Box
	7' x 10'	Box
	8' x 4'	Box
	8' x 6'	Box
	8' x 8'	Box
	8' x 10'	Box
	9' x 4'	Box
	9' x 6'	Box
	9' x 8'	Box

	9' x 10'	Box
	9' x 12'	Box
	10' x 4'	Box
	10' x 6'	Box
	10' x 8'	Box
	10' x 10'	Box
	10' x 12'	Box
	12' x 6'	Box
	12' x 8'	Box
	12' x 10'	Box
	12' x 12'	Box
	12' x 14'	Box
	12' x 16'	Box
	14' x 8'	Box
	14' x 10'	Box
	14' x 12'	Box
	14' x 14'	Box
	14' x 16'	Box
	OT	Other
	BOT	Box Other
	COT	Circular Other
	AOT	Arch Other
	EOT	Elliptical Other
Pipe Length	(Number)	Length of Pipe
Depth of Fill	(Number)	Height of Fill over Pipe in 5 Ft increments
End 1 Scour Protection	None	No Scour Protection
	Concrete	Concrete Scour Protection
	Other	Other Scour Protection
	RipRap	Rip Rap Scour Protection
	EG-1	Energy Dissipater
	EG-1A	Energy Dissipater
	EG-1A PC	Precast Energy Dissipater
	PS-2	Pipe Spill Out
	PS-3	Pipe Spill Out
End 2 Scour Protection	None	No Scour Protection
	Concrete	Concrete Scour Protection
	Other	Other Scour Protection
	RipRap	Rip Rap Scour Protection
	EG-1	Energy Dissipater
	EG-1A	Energy Dissipater
	EG-1A PC	Precast Energy Dissipater
	PS-2	Pipe Spill Out
	PS-3	Pipe Spill Out
Inventory Comment	(Text)	
Condition Attributes		
Blockage	(Number)	Vertical inches of Blockage
Pipe Needs Cleaning	No	Pipe Does Not Need Cleaning

	Yes	Pipe Needs Cleaning
Percent Structural Distress	(Number)	Percent of Pipe Structurally Distressed
Pipe Structurally Distressed	No	Pipe is Not Structurally Distressed
	Yes	Pipe is Structurally Distressed
Length Scour End 1	(Number)	Feet of Erosion/Scour
End 1 Scour	Yes	Scour Present
	No	Scour Not Present
Length Scour End 2	(Number)	Feet of Erosion/Scour
End 2 Scour	Yes	Scour Present
	No	Scour Not Present
Flowing Properly?	Yes	Pipe is Flowing Properly
	No	Pipe is Not Flowing Properly
Distress in Road	No	No Distress in Road Caused by Pipe
	Yes	Distress in Road Caused by Pipe
Evidence of Capacity Problem	No	No Presence or Evidence of Pipe Capacity being too Small
	Yes	Presence or Evidence of Pipe Capacity being too Small
Systematic Drainage Problem	No	No Presence of Drainage Problem that is More than the Pipe, Such as Blocked Ditches or Outflow
	Yes	Presence of Drainage Problem that is More than the Pipe, Such as Blocked Ditches or Outflow
Joint Separation	No	No Visible joint Separation
	Yes	Visible joint Separation
Pipe End 1 Condition	Undamaged	Pipe End is Undamaged
	Bent	Pipe End is bent
	Minor Damage	Pipe End Has Minor Damage
	Major Damage	Pipe End Has Major Damage
Pipe End 2 Condition	Undamaged	Pipe End is Undamaged
	Bent	Pipe End is bent
	Minor Damage	Pipe End Has Minor Damage
	Major Damage	Pipe End Has Major Damage
Condition Comment	(Text)	

CHAPTER 8 HAZMAT

HAZARDOUS MATERIALS INCIDENTS

8.100 PURPOSE

8.200 CONCEPT OF OPERATIONS

8.210 GENERAL

8.220 SITUATION

8.230 AUTHORITES

8.300 MISSION

8.400 RESPONSIBILITES

8.500 ORGANIZATION

8.600 REPORTS

8.700 LINKS

8.710 VIRGINIA DEPARTMENT OF EMERGENCY SERVICES
8.720 VIRGINIA DEPARTMENT OF TRANSPORTATION ENVIRONMENTAL
8.730 OFFICE OF EMPLOYEE SAFETY AND HEALTH
8.740 BRIDGE AND TUNNELS DMV
8.750 OSHA STANDARDS 1910.120

8.800 BOOKS AND MANUALS

8.810 Hazardous Materials For First Responders

8.820 2002 Emergency Response Guidebook

8.830 Hazardous Materials Awareness Student Guide

8.840 Hazardous Materials Operations Student Guide

8.850 All Manuals may be ordered through this link (http://www.vdfp.state.va.us/)
8.860 Hazardous Materials (Fairfax County Va. Fire and Rescue)

8.900 REFERENCES

HAZARDOUS MATERIALS INCIDENTS

8.100 PURPOSE

To define VDOT responsibilities and operational concepts for the preparation, response, and recovery activities associated with oil spills and hazardous materials incidents affecting the Commonwealth.

8.200 CONCEPT OF OPERATIONS

8.210 General:

VDOT will never act as the lead agency in the event of an oil or hazardous material incident. VDOT personnel will not clean up oil or hazardous material spills. They will act as an assisting agency to groups such as the State Police or local fire departments. Technical guidance will come from Hazardous Material Officers in the Department of Emergency Management. Operations are not to endanger Department of Transportation personnel or contaminate equipment. VDOT's role is to provide equipment and material to assist in the containing of oil and hazardous material spills on the highways of the Commonwealth. The Department of Transportation will also provide equipment and material to assist in containing oil and hazardous materials spills off the highways when requested to do so under the provisions of the Executive Order, which appears in the Basic Plan. VDOT's primary role in any oil or hazardous material spill recovery effort will be to assist in redirecting traffic around emergency operations. VDOT will participate in initiatives to ensure continued capability within the Commonwealth to respond to an oil or hazardous material incident.

8.220 SITUATION

Accidents or emergencies involving oil or hazardous materials can occur anywhere in the state. Past experience has shown, however, that incidents occur more frequently and with greater risk to the public and environment in transportation-related accidents than in accidents from fixed facilities. Even though both tend to be localized, both present significant and potentially long-ranged threats, placing a special premium on VDOT effectiveness, since most transportation accidents take place on state-maintained roads.

8.230 AUTHORITIES

Code of Virginia Title 44 Chapter 3.5

http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+TOC
Scroll down to Title 44 and click

Scroll down to chapter 3.5 and click

8.300 MISSION

The VDOT mission in any oil or hazardous material incident is:

A. To work with local governments, other state agencies, hazardous materials teams, and local fire departments to plan and prepare for disasters.

B. To participate, as requested, in life-threatening situations to protect lives, property, and the environment.

C. To restore the Commonwealth's roadway system in accordance with established priorities.

8.400 RESPONSIBILITIES

The State Emergency Operations Plan, *Volume 4: Oil and Hazardous Materials Emergency Response Plan* (http://www.vdem.state.va.us/library/eplan.cfm) *assigns* the following tasks to VDOT

A. Appoint an executive representative who can speak for the Department of Transportation in initiatives to ensure continued Commonwealth capability to respond to oil and hazardous materials incidents. These functions will normally be assigned and/or performed by the TEOC.

B. Provide necessary signs, barricades, lights, and flagmen to maintain flow of traffic and establish detours when required.

C. Provide necessary abrasives, if available, and apply to roadway surface and shoulders.

D. Provide material to block the flow of "run-off" contaminants from highways into sewer drains or bodies of water that would cause harm to human life, health, or the environment.

E. Assist evacuation of risk areas when possible.

F. Provide training in safety to Department of Transportation personnel that have the potential to become involved in responding to an oil or hazardous materials incident.

G. Provide the State EOC with a 24-hours-a-day, 7 days a week contact person who can

initiate an immediate response if required.

H. Assist in damage assessment of state highways, bridges, and rights of way.

I. Equip agency response team members with portable radio equipment and/or cellular phones.

J. Provide agency response team members with training in the use of agency equipment.

K. Ensure that assigned oil spill frequencies are used only as permitted under the FCC license requirements.

L. Maintain agency cost documentation for possible use in recovery actions.

8.500. Organization

VDOT is organized into a central administrative and executive office in Richmond and nine other districts statewide with maintenance and construction responsibilities. The districts are then divided into 45 residencies, which are sub-divided into area headquarters. Each of the 95 counties contains at least one area headquarters. The residency office coordinates the materials and equipment resources needed in the locale of an oil or HAZMAT incident. VDOT has subcontracted to VMS to maintain certain areas of the Interstate which includes 251 miles of roadway and includes the Hazardous Materials part.

8.600. Reports:

A wide variety of state and federal agencies have statutory responsibilities relative to accidental oil and hazardous material discharges and spills. A document has been developed by a multi-agency work-group entitled, "Guidelines for the Mitigation of Accidental Discharges of Motor Vehicle Fluids (Non-Cargo)." Nevertheless, all oil and/or hazardous material discharges should be reported to the TEOC immediately to ensure timely notification of the SEOC and DEQ.

8.700 Links

8.710 Virginia Department of Emergency Services
http://www.vdes.state.va.us/library/resourse.cfm#tech
Select Guidelines for Mitigation of Accidental Discharge of Motor Vehicle Fluids (non cargo)

8.720 VDOT Environmental
http://coweb/environmental/
Click on Hazmat
This link will take you to the Department's Environmental section which will show the training and guidelines for the Department

8.730 Office of Employee Safety and Health
http://coweb/safety/
Click on Policies, Pubs & Forms
Go to Hazard Communications
Shows the Department Hazard Communications Policy

8.740 Bridge and Tunnels
http://vahps.dmv.state.va.us/permits/vahps/vahpsmain.html
Click on Hazmat Hauling Info
This will give you the Standards on Hazmat in Bridges and Tunnels

8.750 OSHA STANDARDS 1910.120
http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9765
This link will show all the OSHA Standards on Hazardous Materials

8.800 BOOKS AND MANUALS

8.810 Hazardous Materials For First Responders
International Fire Service Training Association
This gives you in-depth on the 472 codes dealing with hazardous materials

8.820 2002 Emergency Response Guidebook (this manuals must be in all equipment that is on the roads)

8.830 Hazardous Materials Awareness Student Guide
Commonwealth of Virginia
Department of Emergency Management
Department of Fire Programs

8.840 Hazardous Materials Operations Student Guide
Commonwealth of Virginia
Department of Emergency Management
Department of Fire Programs

8.850 All Manuals may be ordered through this link (http://www.vdfp.state.va.us/)

8.860 Hazardous Materials
Response Team
Operations Manual
Fairfax County Fire and Rescue Department
Contact Battalion Chief William MacKay
703-246-4388
Email William.MacKay@fairfaxcounty.gov

8.900 REFERENCES

1. **Perry Cogburn**
   Dir. of E.O.C.
   Central Office
   Richmond Va.
   (804) 786-2848
   cogburn_pc@vdot.state.va.us

2. **Sharon Morales**
   Safety Engineer Senior
   Office of Employee Safety and Health
   (804) 371-6872
   morales_sw@vdot.state.va.us

3. **Battalion Chief William MacKay**
   Fairfax County Fire and Rescue
   (703) 246-4388
   William.MacKay@fairfaxcounty.gov
   Battalion Chief MacKay has volunteered to be assistance to the department when needed.

Appendix 4

Minimum Control Measure 4: Construction Site Stormwater Runoff Control

- ESC & SWM Program Specifications Manual, Coversheet with link to VDOT SWM Program Homepage
- DCR Conditional Approval Letter, 11/14/03
- VDOT Response/Compliance letter with schedule of milestones, 1/30/04
- Table 1 – 2004 VDOT Annual ESC & SWM Standards and Specifications
- Table 2 – 2003 VDOT ESC & SWM Specifications: Conditionally Approved Items and Final Approval Dates from DCR
- Table 3 – 2004 VDOT ESC & SWM Specifications Conditionally Approved Items & Anticipated Submittal Dates to DCR
- VRTBA & VDOT ESCCC Course Agenda

For Full Text of Manual Please go to

http://www.virginiadot.org/business/locdes/vpdes-vdotescswmpgms.asp

Virginia Department of Transportation
Erosion and Sediment Control (ESC) &
Stormwater Management (SWM) Program Manual

2004 VDOT Annual Submittal to the Department of Conservation and Recreation

Approved March 2004

Updated Version
March 2004

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

Joseph H. Maroon
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street, Suite 206
Richmond, Virginia 23219-2094
Phone (804) 786-2064 FAX: (804) 786-1798 TDD (804) 786-2121

November 14, 2003

Mr. Mohammad Mirshahi, P.E.
Location and Design Division
Virginia Department of Transportation (VDOT)
1401 East Broad Street
Richmond, Virginia 23219-2000

RE: 2004 VDOT Annual Specifications and Standards for Erosion and Sediment Control (ESC) and Stormwater Management (SWM) Programs

Dear Mr. Mirshahi:

The Department of Conservation and Recreation (DCR) received the draft 2004 VDOT Erosion and Sediment Control (ESC) and Stormwater Management (SWM) Specifications and Standards on September 15, 2003. In accordance with § 10.1-564 of the Virginia ESC Law and § 10.1-603.5 of the Virginia SWM Law, DCR has completed the initial review and conditionally approves the 2004 VDOT ESC and SWM Specifications and Standards contingent upon resolution of the comments listed below:

1. Submit the 2004 Outlet Protection Schedule of Milestones for developing additional guidelines, specifications, and design procedures.

2. Submit a schedule for preparing a specification that includes a permanent pollution prevention message for use on appropriate stormwater drainage structures.

3. Correct the DCR Certified Contractors figure shown in Section I, B.1 on page 2, and paragraph 2 of page 3. Also, please note that DCR is not requiring class-room training for VDOT contractors as a part of the 2004 VDOT ESC and SWM Specifications and Standards.

4. Submit draft procedures for approving deviations from the 2004 VDOT ESC and SWM Specifications and Standards and include these procedures as part of the Fulfillment Flowchart contained in Appendix F.

5. Submit fertilizer specifications and rates for review in accordance with VDOT Special Provision S244A.

Please resubmit the draft 2004 VDOT ESC and SWM Specifications and Standards with a response to the above comments by January 30, 2004. In addition, you should be aware that no variances or exceptions are being considered as a part of this draft submittal.

Thank you for your draft submission and continued efforts to conserve and protect Virginia's precious natural resources.

Sincerely,

Original Signiture on File

Jack E. Frye
Soil and Water Conservation Division Director

cc: Roy Mills, VDOT
Emmett R. Heltzel, P.E. VDOT
Joe Battiata, P.E. VDOT
Jake Porter, VDOT
Stuart Wilson, DCR
Lee Hill, DCR
Larry Gavan, DCR

COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION
1401 EAST BROAD STREET
RICHMOND, 23219-2000

PHILIP A. SHUCET
COMMISSIONER

MOHAMMAD MIRSHAHI, P.E.
STATE LOCATION AND DESIGN ENGINEER

January 30, 2004

Mr. Jack E. Frye, Director
Division of Soil and Water Conservation
Department of Conservation and Recreation
203 Governor Street, Suite 206
Richmond, Virginia 23219

RE: 2004 VDOT Annual Specifications and Standards for Erosion and Sediment Control and Stormwater Management Programs

Dear Mr. Frye:

Thank you for your letter of November 14, 2003, granting conditional approval of VDOT's 2004 Annual Specifications and Standards for Erosion and Sediment Control and Stormwater Management (ESC&SWM) Program Specifications. Please accept the attached responses to the conditionally approved elements of our ESC&SWM Program Specifications.

The summary table provided in your 2003 approval has proven to be very useful in tracking the approved, conditionally approved, and pending approval elements of our Specifications. We have updated that table to reflect additions, deletions, and changes to the approval status of individual elements resulting from your 2003 Specification approval and the recent 2004 specification conditional approval. Please find this table in both hard copy form within the Specification Manual and in electronic form (xls) on the enclosed compact disc. We request that you review and confirm the approval status of individual items. The highlighted items represent either new elements added to the September 15, 2003 submittal, elements that were conditionally approved last year, or those elements that we understand to be currently conditionally approved pending the conclusion of the proposed schedule for the development of additional specifications and guidelines.

We have enclosed one printed version and one electronic (compact disc) version of the conditionally approved specifications. Once we have completed our internal process of formally changing the Informational and Instructional Memorandums, Contract Special Provisions, and Road and Bridge Specifications, as approved, we will submit final printed and electronic copies.

We will also communicate with your office regarding the accomplishments of milestones as identified in the attached schedules.

We continue to look for opportunities to improve our ESC and SWM Program specifications and implementation. The collaboration between our Location and Design, Asset Management, Construction Management, and Programming and Scheduling Divisions has resulted in numerous improvements to our ESC and SWM programs throughout the Department.

Please feel free to contact Joseph Battiata or Roy Mills if you should have any questions or require additional information regarding this submission.

Sincerely,

(Original Signature on File)

Mohammad Mirshahi, P.E.
Director, Location and Design Division

cc: Mr. Malcolm T. Kerley, P.E.
Mr. Emmett R. Heltzel, P.E.
Mr. Roy Mills
Mr. W. Byron Coburn, P.E.
Mr. Brian Waymack
Mr. Joseph G. Battiata, P.E.

VDOT Erosion and Sediment Control Program Specifications

Response to DCR Comments

January 30, 2004

The following are responses to DCR comments on the VDOT ESC&SWM Program Specifications submitted on September 15, 2003. Comments were received on November 14, 2003.

DCR Comment:

1. Submit the 2004 Outlet Protection Schedule of Milestones for developing additional guidelines, specifications, and design procedures.

VDOT Response:

Based on the evaluation of our current outlet protection design criteria: *An Evaluation of the Design of Rip Rap Outlet Protection*, August 15, 2003, and subsequent comments received from your office, dated October 1, 2003, we have determined that additional guidelines and design procedures will help us to better serve our Construction and Asset Management Divisions. Therefore, we propose the following milestones:

April 1, 2004: Complete interviews and surveys of other mid-Atlantic states to compile current design criteria. Complete an evaluation of the Federal Highway Administration H.E.C. 14: Hydraulic Design of Energy Dissipaters. Compile results for distribution to VDOT Construction District Personnel, selected consultants and DCR personnel.

June 1, 2004: Compile comments from Construction District Personnel. Conduct internal design meetings to identify appropriate elements of a comprehensive outlet protection design criteria.

August 1, 2004: Develop draft design criteria and distribute to appropriate internal and external participants for review and comment.

September 15, 2004: Submit final DRAFT outlet protection design criteria and guidance to DCR for review as part of formal 2005 Program Specification submittal.

DCR Comment:

2. Submit a schedule for preparing a specification that includes a permanent pollution prevention message for use on appropriate stormwater drainage structures.

VDOT Response:

As we have expressed previously, we believe that while this represents a good stewardship and public education type of outreach, it is inappropriate for our annual specifications. However, we have committed to a similar effort as part of our VPDES MS4 Permit and will adopt this as part of that effort. The following schedule will be incorporated into our existing MS4 Permits:

May 1, 2004: Complete survey of VDOT approved pre-cast manufacturers to inventory of pre-cast stamp options and the associated costs.

July 1, 2004: Complete DRAFT pre-cast manufacturing and use specifications, and submit to industry representatives, developers, consultants and other stakeholders for comments.

September 15, 2004: Compile comments and submit recommendations to DCR as part of formal 2005 Program Specification submittal.

DCR Comment:

3. Correct the DCR Certified Contractors figure shown in Section I, B.1 on page 2, and paragraph 2 of page 3. Also, please note that DCR is not requiring classroom training for VDOT contractors as a part of the 2004 VDOT ESC and SWM Specifications and Standards.

VDOT Response:

We have removed the reference to Contractor Certification totals on pages 2 and 3 of Section I. We have also removed all reference to DCR related contractor classroom training.

DCR Comment:

4. Submit draft procedures for approving deviations from the 2004 VDOT ESC and SWM Specifications and Standards and include these procedures as part of the Fulfillment Flowchart contained in Appendix F.

VDOT Response:

VDOT has developed an internal plan design, review, and approval process for all regulated land disturbing activities. As part of that process, we have identified situations where a design was not in compliance with our currently approved specifications. We currently review these situations and document the need for special designs or other considerations needed to maintain compliance. Any design requiring a deviation from the VDOT ESC&SWM Specifications requires approval from the State Hydraulics Engineer in consultation with DCR Central Office. Such approval must be documented and made part of the project file.

A note requiring this provision has been added to the Fulfillment Flowchart, dated January 29, 2004.

DCR Comment:

5. Submit fertilizer specifications and rates for review in accordance with VDOT Special Provision S244A.

VDOT Response:

The specification for the fertilizer materials is found in S244A. The specification that covers the use or application rate of those materials is found in Section 603.03.c of the Road and Bridge Specifications, or Appendix I of the VDOT ESC&SWM Program Specifications.

TABLE 1 2004 VDOT Annual Erosion an Sediment Control and Stormwater Management Standards and Specifications							
VDOT Annual Plan Appendix	**VDOT Document**	**VDOT Document Sections**	**Current Date**	**DCR Approved**	**DCR Conditionally Approved**	**Notes**	**Pending internal VDOT Approval**
Appendix F	ESC & SWM Plan Development/Implementation Process	ESC/SWM/VPDES Fulfillment Flowchart	Feb. 11, 2004	☑		New item based on 11/14/03 comments	
Appendix F	ESC & SWM I&IM	IIM-LD-11.24 ESC - Revised	Jan 29, 2004	☑			☑
Appendix F	ESC & SWM I&IM	IIM-LD-73.3 Riprap	Jan 24, 1991	☑			
Appendix F	ESC & SWM I&IM	IIM-LD-110.16 General Notes	Nov. 21, 2003	☑			
Appendix F	ESC & SWM I&IM	IIM-LD-121.14 Pipe Criteria and Drainage Instructions	April 5, 2001	☑			
Appendix F	ESC & SWM I&IM	IIM-LD-122.11 Roadside Development - Revised	Jan 29, 2004	☑			☑
Appendix F	ESC & SWM I&IM	IIM-LD-166.3 Soil Stabilization Mat	Mar 22, 1996	☑			
Appendix F	ESC & SWM I&IM	IIM-LD-173 Construction Access	July 10, 1987	☑			
Appendix F	ESC & SWM I&IM	IIM-LD-195.5 Management of Stormwater	Mar 27, 2002	☑			
Appendix F	ESC & SWM I&IM	IIM-LD-221 Storm Sewer Design	July 7, 1998	☑			
Appendix F	ESC & SWM I&IM	IIM-LD-228 Sinkholes	Aug 15, 2002	☑			
Appendix G	VDOT Road Design Manual	Appendix A, pages A105-A140	unknown	☑			
Appendix H	Road & Bridge Standards	EC-1	2002	☑			
Appendix H	Road & Bridge Standards	EC-2	2002	☑			
Appendix H	Road & Bridge Standards	EC-3	2004	☑		Std. 114.03	☑
Appendix H	Road & Bridge Standards	EC-4	2002	☑			

TABLE 1 2004 VDOT Annual Erosion an Sediment Control and Stormwater Management Standards and Specifications							
VDOT Annual Plan Appendix	**VDOT Document**	**VDOT Document Sections**	**Current Date**	**DCR Approved**	**DCR Conditionally Approved**	**Notes**	**Pending internal VDOT Approval**
Appendix H	Road & Bridge Standards	EC-5	2003	☑			
Appendix H	Road & Bridge Standards	EC-6	2003	☑			
Appendix H	Road & Bridge Standards	EC-7	2002	☑			
Appendix H	Road & Bridge Standards	EC-8	2002	☑			
Appendix H	Road & Bridge Standards	EC-9	2002	☑			
Appendix H	Road & Bridge Standards	Roadside Development Sheet - a4	2002	☑			
Appendix H	Road & Bridge Standards	EC Summary - a5	2002	☑			
Appendix H	Road & Bridge Standards	Temp. Sediment Trap Detail - a6	2002	☑			
Appendix H	Road & Bridge Standards	Temp. Diversion Channel & Acceptable Linings	2002	☑			
Appendix H	Road & Bridge Standards	ESC-INS Sheet 1	2004	☑		Std. 115.01	☑
Appendix H	Road & Bridge Standards	ESC-INS Sheet 2	2002	☑			
Appendix H	Road & Bridge Standards	ESC-INS Sheet 3	2002	☑			
Appendix H	Road & Bridge Standards	PG-3 - Standard Rip Rap Ditch & Slope Protection	2002	☑			
Appendix H	Road & Bridge Standards	SWM-1 (Cast-In-Place)	2002	☑			
Appendix H	Road & Bridge Standards	SWM-1 (Precast)	2003	☑			
Appendix H	Road & Bridge Standards	SWM-DR - Sheet 1	2003	☑			
Appendix H	Road & Bridge Standards	SWM-DR - Sheet 2	2003	☑			

TABLE 1 2004 VDOT Annual Erosion an Sediment Control and Stormwater Management Standards and Specifications							
VDOT Annual Plan Appendix	**VDOT Document**	**VDOT Document Sections**	**Current Date**	**DCR Approved**	**DCR Conditionally Approved**	**Notes**	**Pending internal VDOT Approval**
Appendix H	Road & Bridge Standards	SWM-DR - Sheet 3	2003	☑			
Appendix H	Road & Bridge Standards	SWM-DR - Sheet 4	2003	☑			
Appendix H	Road & Bridge Standards	SWM-DR - Sheet 5	2003	☑			
Appendix I	Road & Bridge Specifications - Division I	Sec. 101 - Definitions	2002	☑			
Appendix I	Road & Bridge Specifications - Division I	Sec. 103 - Award and Execution	2002	☑			
Appendix I	Road & Bridge Specifications - Division I	Sec. 104 - Scope of Work	2002	☑			
Appendix I	Road & Bridge Specifications - Division I	Sec. 105 - Control of Work	2002	☑			
Appendix I	Road & Bridge Specifications - Division I	Sec. 106 - Control of Material	2003	☑			
Appendix I	Road & Bridge Specifications - Division I	Sec. 107 - Legal Relations & Public Responsibility	2003	☑			
Appendix I	Road & Bridge Specifications - Division I	Sec. 108 - Prosecution & Progress of Work	2002	☑			
Appendix I	Road & Bridge Specifications - Division II	Sec. 203 - Coarse Aggregate	2002	☑			
Appendix I	Road & Bridge Specifications - Division II	Sec. 204 - Stone for Masonry, Riprap, Porous Backfill, and Gabions	2002	☑			
Appendix I	Road & Bridge Specifications - Division II	Sec. 240 - Lime	2002	☑			
Appendix I	Road & Bridge Specifications - Division II	Sec. 244 - Roadside Development Materials	2003	☑			

TABLE 1 2004 VDOT Annual Erosion an Sediment Control and Stormwater Management Standards and Specifications							
VDOT Annual Plan Appendix	**VDOT Document**	**VDOT Document Sections**	**Current Date**	**DCR Approved**	**DCR Conditionally Approved**	**Notes**	**Pending internal VDOT Approval**
Appendix I	Road & Bridge Specifications - Division II	Sec. 245 - Geosynthetics	2003	☑			
Appendix I	Road & Bridge Specifications - Division III	Sec. 301 - Clearing & Grubbing	2003	☑			
Appendix I	Road & Bridge Specifications - Division III	Sec. 302 - Drainage Structures	2002	☑			
Appendix I	Road & Bridge Specifications - Division III	Sec. 303 - Earthwork	2003	☑			
Appendix I	Road & Bridge Specifications - Division IV	Sec. 401 - Structure Excavation	2002	☑			
Appendix I	Road & Bridge Specifications - Division IV	Sec. 402 - Sheet Piles	2002	☑			
Appendix I	Road & Bridge Specifications - Division IV	Sec. 403 - Dismantling & Removing Structures	2002	☑			
Appendix I	Road & Bridge Specifications - Division IV	Sec. 414 - RipRap	2002	☑			
Appendix I	Road & Bridge Specifications - Division IV	Sec. 415 - Concrete Slope Protection	2002	☑			
Appendix I	Road & Bridge Specifications - Division IV	Sec. 418 - Timber Structure	2002	☑			
Appendix I	Road & Bridge Specifications - Division V	Sec. 501 - Underdrains	2003	☑			
Appendix I	Road & Bridge Specifications - Division V	Sec. 506 - Retaining Walls	2002	☑			

TABLE 1 2004 VDOT Annual Erosion an Sediment Control and Stormwater Management Standards and Specifications							
VDOT Annual Plan Appendix	**VDOT Document**	**VDOT Document Sections**	**Current Date**	**DCR Approved**	**DCR Conditionally Approved**	**Notes**	**Pending internal VDOT Approval**
Appendix I	Road & Bridge Specifications - Division V	Sec. 511 - Allaying Dust	2002	☑			
Appendix I	Road & Bridge Specifications - Division V	Sec. 512	2003	☑			
Appendix I	Road & Bridge Specifications - Division V	Sec. 520 - Water & Sanitary Sewer Facilities	2002	☑			
Appendix I	Road & Bridge Specifications - Division VI	Sec. 602 - Topsoil	2002	☑			
Appendix I	Road & Bridge Specifications - Division VI	Sec. 603 - Seeding	2002		☑	Pending revisions per DCR/VDOT	
Appendix I	Road & Bridge Specifications - Division VI	Sec. 604 - Sodding	2002	☑			
Appendix I	Road & Bridge Specifications - Division VI	Sec. 605 - Planting	2002	☑			
Appendix I	Road & Bridge Specifications - Division VI	Sec. 606 - Soil Retention Coverings	2002	☑			
Appendix I	Road & Bridge Specifications - Division VI	Sec. 607 - Herbicide Spraying	2002	☑			
Appendix I	Road & Bridge Specifications - Division VI	Sec. 608 - Mowing	2002	☑			
Appendix I	Road & Bridge Specifications - Division VI	Sec. 609 - Tree Wells & Tree Walls	2002	☑			
Appendix I	Road & Bridge Specifications - Division VI	Sec. 610 - Gabions	2002	☑			
Appendix I	Road & Bridge Specifications Special Provisions & Copied Notes - May 2003 Advertisement	c101a, c303c, S107F, S107G, S303E	May 2003	☑		New Items	

TABLE 1

2004 VDOT Annual Erosion an Sediment Control and Stormwater Management Standards and Specifications

VDOT Annual Plan Appendix	VDOT Document	VDOT Document Sections	Current Date	DCR Approved	DCR Conditionally Approved	Notes	Pending internal VDOT Approval
Appendix I	Road & Bridge Specifications Special Provisions & Copied Notes - May 2003 Advertisement	c100b, c105c, c301a, c512c, S106A, S107D, S244A, S245A, S303A, S303C, S303E, S501B	Nov 2003	☑		New Items	
Appendix J	Erosion and Sediment Control Inspection Forms, Related Construction Forms & Memoranda	C-107a&b, C-10, C-12, C-18a, C-26, C-36i, C36, C-45, C-5, C-54, C-83, C-84, CD-2002-9	varies	☑		New Items	
Appendix K	VDOT Stormwater Management Maintenance Program	SWM Facilities Maintenance Program	2002	☑		Previously Conditionally Approved	

TABLE 1

2004 VDOT Annual Erosion an Sediment Control and Stormwater Management Standards and Specifications

VDOT Annual Plan Appendix	VDOT Document	VDOT Document Sections	Current Date	DCR Approved	DCR Conditionally Approved	Notes	Pending internal VDOT Approval
Appendix K	VDOT Stormwater Management Maintenance Program	SWM Basin Maintenance Inspection Checklist	2002	☑		Previously Conditionally Approved	
Appendix L	Environmental Compliance Report Form	ECR Page 1-2	2002	☑			
Appendix N	Pending Special Provisions	S107F - Stormwater Pollution Prevention Plan	unknown	☑			☑
Separate Cover	VDOT Drainage Manual	Chapter 6	2002	☑			
Separate Cover	VDOT Drainage Manual	Chapter 7	2002	☑			
Separate Cover	VDOT Drainage Manual	Chapter 8	2002		☑	Sections re: Outlet Protection	
Separate Cover	VDOT Drainage Manual	Chapter 10	2002	☑			
Separate Cover	VDOT Drainage Manual	Chapter 11	2003	☑			

TABLE 2 2003 VDOT Annual ESC and SWM Standards and Specifications Conditionally Approved Items and Final Approval Dates from DCR				
VDOT ESC and SWM Program Manual	**VDOT Document**	**Document Sections**	**Document Sections Revised**	**DCR Approval Date**
Appendix K	VDOT Stormwater Management Maintenance Program	SWM Facilities Maintenance Program	Complete Document - Development of VDOT Stormwater Maintenance Program	11/14/2003
Appendix K	VDOT Stormwater Management Maintenance Program	SWM Basin Maintenance Inspection Checklist	Complete Document - Development of VDOT Stormwater Maintenance Program. In the interim, the VA SWM Handbook to be utilized for inspection and maintenance.	11/14/2003
Separate Cover	VDOT Drainage Manual	Chapter 6	Hydraulic Design Advisory - Table 6-1 to reflect 10-year recurrence interval for the design of culverts on Minor Arterial, Collector, and Local Roads	11/14/2003
Separate Cover	VDOT Drainage Manual	Chapter 8	1) Outlet Protection - 6-month study to compare the differences between VDOT and DCR standards; 2) Hydraulic Design Advisory Section 8.3.2.1 to reflect 10-year recurrence interval for the design of culverts on Minor Arterial, Collector, and Local Roads	11/14/2003

TABLE 3
2004 VDOT Annual ESC and SWM Standards and Specifications
Conditionally Approved Items and Anticipated Submittal Dates to DCR

VDOT ESC and SWM Program Manual	VDOT Document	Document Sections	Document Sections to be Revised	Anticipated Submittal Date to DCR	DCR Approval Date
Appendix F, Appendix H	VDOT Drainage Manual, VDOT R&B Standards	Chapter 8, EC-1, Std. 114.01	Critieria for the design of riprap outlet protection and energy dissapators	Final Draft due September 15, 2004	
Appendix H	VDOT R&B Standards	Select Curb inlet, Drop Inlet and Yard Drain Standards	Develop Standard Details and/or specifications for the inclusion of an anti-pollution message for select inlet structures.	Final Draft due September 15, 2004	
Appendix I	VDOT R&B Specifications	Section 603 Seeding	Revise R&B Specification 603 to correspond to DCR Technical Bulletin	Submittal date to be coordinated with DCR as per collaborative research initiative.	

VRTBA & VDOT
Erosion and Sediment Control Contractor Certification (ESCCC)

COURSE AGENDA

8:30-8:50	Session 1: ESCCC Program Introduction & Overview (:20)
8:50-9:20	Session 2: Principles of Highway Construction Erosion and Sediment Control (:30)
9:20-9:50	Session 3: VDOT ESC & SWM Program Manual Overview (:30)
9:50-10:00	BREAK
10:00-10:50	Session 4: ESC & SWM Regulations & VPDES Construction Permit (:50)
10:50-11:00	BREAK
11:00-12:00	Session 5: Road & Bridge Specifications & Special Provisions (1:00)
12:00-12:45	Lunch
12:45-2:15	Session 6: Road & Bridge Standards (1:30)
2:15-2:30	BREAK
2:30-3:30	Session 7: Special Provision 107 (S-107, C-45 & C-107) (1:00)
3:30-4:00	Photo ID Check, Exam handout, Break, Examination Instructions
4:00-5:00	Session 8: Examination

QUALIFIER:
Please note, the VDOT ESCCC course, materials, and presentations do not constitute local, state, federal, or VDOT permit, plan, or contract authorization or approval. Please refer to project or operation specific policies, documents, permits, plans and contracts in order to ensure full compliance with laws, regulations, and contract requirements while working on VDOT property or under VDOT authority.

Appendix 5

Minimum Control Measure 5: Post Construction Stormwater Management in New Development and Redevelopment

- ESC & SWM Program Specifications Manual, Coversheet with link to VDOT SWM Program Homepage
- DCR SWM BMP Tracking Database (Report Cycle 3/03 to 4/04
- DCR Approval Documents – See Appendix 4
- VDOT SWM Facilities Inventory and Maintenance Study

For Full Text of Manual Please go to

http://www.virginiadot.org/business/locdes/vpdes-vdotescswmpgms.asp

Virginia Department of Transportation
Erosion and Sediment Control (ESC) &
Stormwater Management (SWM) Program Manual

2004 VDOT Annual Submittal to the Department of Conservation and Recreation

Approved March 2004

Updated Version
March 2004

PROJECT NUMBER:	PPMS:	RTE:	COUNTY	DISTRICT	AD DATE:
0001-029-F20, C501	12906	1		NOVA	10/1/2003

Remarks:

FACILITIES

LOC/STA:	TYPE FACILITY:	STORAGE VOLUME:	WATERSHED NAME:	DESIGNER:	ENTERED BY:	DATE:
101+40 RT.	Dry Pond	2553 CU. FT.	POHICK CREEK	LOUIS BERGER	SGI	12/23/200
REMARS/MONITOR:						
104+50 LT.	Dry Pond	13434 CU. FT.	POHICK CREEK	LOUIS BERGER	SGI	12/23/200
REMARS/MONITOR:						
99+50 RT.	Dry Pond	14629 CU. FT.	POHICK CREEK	LOUIS BERGER	SGI	12/23/200
REMARS/MONITOR:						
TELEGRAPH RD. / 11+00 RT.	Dry Pond	14123 CU. FT.	ACCOTINK CREEK	LOUIS BERGER	SGI	12/23/200
REMARS/MONITOR:						

Total Project CU. FT. **Total Project AC.**

PROJECT NUMBER:	PPMS:	RTE:	COUNTY	DISTRICT	AD DATE:
0028-029-114, C501	64968	28		NOVA	4/1/2003

Remarks:
PPTA Project

FACILITIES

LOC/STA:	TYPE FACILITY:	STORAGE VOLUME:	WATERSHED NAME:	DESIGNER:	ENTERED BY:	DATE:
Ramp A Sta. 10+95	Dry Pond	1.48 AC. FT.	Cain Branch	Dewberry	SGI	2/6/2004
REMARS/MONITOR:						
Ramp A Sta. 11+64 Lt.	Dry Pond	0.53 AC. FT.	Cain Branch	Dewberry	SGI	2/6/2004
REMARS/MONITOR:						
Ramp F Sta. 12+20 LT.	Dry Pond	7.1 AC. FT.	Cub Run	Dewberry	SGI	2/6/2004
REMARS/MONITOR:						
Ramp G Sta. 13+20 Rt.	Dry Pond	2.46 AC. FT.	Cain Branch	Dewberry	SGI	2/6/2004
REMARS/MONITOR:						

Total Project CU. FT. **Total Project AC.**

PROJECT NUMBER:	PPMS:	RTE:	COUNTY	DISTRICT	AD DATE:
0028-053-111, C501	64969	28		NOVA	7/1/2003

Remarks:
PPTA Project

FACILITIES

LOC/STA:	TYPE FACILITY:	STORAGE VOLUME:	WATERSHED NAME:	DESIGNER:	ENTERED BY:	DATE:
Ramp B Sta. 17+50 Rt.	Dry Pond	2.49 AC. FT.	Horsepen Run	Dewberry	SGI	2/6/2004
REMARS/MONITOR:						
Ramp F Sta. 19+75 Rt.	Dry Pond	2.39 AC. FT.	Horsepen Run	Dewberry	SGI	2/6/2004
REMARS/MONITOR:						
Rte. 28 Sta. 556+00 Rt.	Dry Pond	4.28 AC. FT.	Horsepen Run	Dewberry	SGI	2/6/2004
REMARS/MONITOR:						

Total Project CU. FT. **Total Project AC.**

PROJECT NUMBER:	PPMS:	RTE:	COUNTY	DISTRICT	AD DATE:
0608-029-301, C503	16504	608		NOVA	1/1/2004

Remarks:

FACILITIES

LOC/STA:	TYPE FACILITY:	STORAGE VOLUME:	WATERSHED NAME:	DESIGNER:	ENTERED BY:	DATE:
100+03 LT.	Dry Pond	61702 CU. FT.	LITTLE DIFIULT RUN	WOOLPERT	SGI	12/23/200
REMARS/MONITOR:						
116+34 RT.	Dry Pond	50349 CU. FT.	LITTLE DIFFICULT RUN	WOOLPERT	SGI	12/23/200
REMARS/MONITOR:						

Total Project CU. FT. **Total Project AC.**

PROJECT NUMBER:	PPMS:	RTE:	COUNTY	DISTRICT	AD DATE:
0642-029-221, C502	15130	642		NOVA	1/27/2004

Remarks:

FACILITIES

LOC/STA:	TYPE FACILITY:	STORAGE VOLUME:	WATERSHED NAME:	DESIGNER:	ENTERED BY:	DATE:
427+00 LT.	Dry Pond	36551 CU. FT.	POHICK CREEK	PBS&J	SGI	12/23/200
REMARS/MONITOR:						
531+00 LT.	Dry Pond	23627 CU. FT.	POHICK CREEK	PBS&J	SGI	12/23/200
REMARS/MONITOR:						

Total Project CU. FT. **Total Project AC.**

PROJECT NUMBER:	PPMS:	RTE:	COUNTY	DISTRICT	AD DATE:
0645-029-253, C503	5565	645		NOVA	12/23/2003

Remarks:

FACILITIES

LOC/STA:	TYPE FACILITY:	STORAGE VOLUME:	WATERSHED NAME:	DESIGNER:	ENTERED BY:	DATE:
151+50 RT	Dry Pond	47952 CU. FT.	POHICK CREEK	SITE BLAUVELT	SGI	12/23/200

REMARS/MONITOR:

Total Project CU. FT. **Total Project AC.**

PROJECT NUMBER:	PPMS:	RTE:	COUNTY	DISTRICT	AD DATE:
501-16235-02		622		Culpeper	6/19/2003

Remarks:

SWM for the New Rappahannock Area Headquarters - VDOT

FACILITIES

LOC/STA:	TYPE FACILITY:	STORAGE VOLUME:	WATERSHED NAME:	DESIGNER:	ENTERED BY:	DATE:
	Dry Pond	24437 CU. FT.	Rappahannock	Jim Filson	Jim Filson	6/19/2003

REMARS/MONITOR:

Total Project CU. FT. **Total Project AC.**

PROJECT NUMBER:	PPMS:	RTE:	COUNTY	DISTRICT	AD DATE:
6234-076-111, C503		234		NOVA	7/11/2003

Remarks:

FACILITIES

LOC/STA:	TYPE FACILITY:	STORAGE VOLUME:	WATERSHED NAME:	DESIGNER:	ENTERED BY:	DATE:
RTE. 234 STA. 440+00 LT.	DRY POND	0.51 AC. FT.	POWELLS CREEK	F&H	SGI	7/26/2002
REMARS/MONITOR:						
RTE. 234 STA. 453+79 STR.#6-19	UNDERGROUND	12184 AC. FT.	POWELLS CREEK	F&H	SGI	7/26/2002
REMARS/MONITOR: WATER QUALITY STRUCTURE						
RTE. 234 STA. 517+00 RT.	DRY POND	0.17 AC. FT.	QUANTICO CREEK	F&H	SGI	7/26/2002
REMARS/MONITOR:						
RTE. 234 STA. 520+00 LT.	DRY POND	0.19 AC. FT.	QUANTICO CREEK	F&H	SGI	7/26/2002
REMARS/MONITOR:						
RTE. 234 STA. 568+00 LT.	DRY POND	0.78 AC. FT.	POWELLS CREEK	F&H	SGI	7/26/2002
REMARS/MONITOR:						
RTE. 234 STA. 593+00 LT.	DRY POND	0.44 AC. FT.	QUANTICO CREEK	F&H	SGI	7/26/2002
REMARS/MONITOR:						
RTE.234 STA. 492+00 RT.	WET POND	0.45 AC. FT.	QUANTICO CREEK	F&H	SGI	7/26/2002
REMARS/MONITOR: PRESERVATION OF EXISTING WETLANDS						
RTE.234 STA.479+25 LT.STR#8-12	UNDERGROUND	12889 AC. FT.	POWELLS CREEK	F&H	SGI	7/26/2002
REMARS/MONITOR: WATER QUALITY STRUCTURE						
RTE.234 STA.528+50 STR.# 11-18	UNDERGROUND	5336 AC. FT.	QUANTICO CREEK	F&H	SGI	7/26/2002

Total Project CU. FT. **Total Project AC.**

REMARS/MONITOR:
WATER QUALITY STRUCTURE

Page 8 of 10

PROJECT NUMBER:	PPMS:	RTE:	COUNTY	DISTRICT	AD DATE:
CM-95-029-F20	54503	640		NOVA	1/1/2004

Remarks:

Commuter Parking Lot

FACILITIES

LOC/STA:	TYPE FACILITY:	STORAGE VOLUME:	WATERSHED NAME:	DESIGNER:	ENTERED BY:	DATE:

Total Project CU. FT. **Total Project AC.**

PROJECT NUMBER:	PPMS:	RTE:	COUNTY	DISTRICT	AD DATE:
CM95-029-F20	54503	640		NOVA	1/1/2004

Remarks:

Project is a Commuter Parking Lot

FACILITIES

LOC/STA:	TYPE FACILITY:	STORAGE VOLUME:	WATERSHED NAME:	DESIGNER:	ENTERED BY:	DATE:
15+20 Rt	Dry Pond	347650 CU. FT.	Pohick Creek	Woolpert	SGI	10/8/2003

REMARS/MONITOR:

Total Project CU. FT. **Total Project AC.**

VDOT Stormwater Management Facilities Inventory and Maintenance Study

Project Description

The Virginia Stormwater Management Law (10.1-603.1) and Virginia Pollutant Discharge Elimination System Municipal Separate Stormsewer (MS-4) Permit (9VAC25-180-10) contain regulatory requirements that mandate that VDOT develop, maintain, inspect, and repair stormwater management best management facilities. This project study, entitled VDOT Stormwater Management Facilities Inventory and Maintenance Study, will enable Asset Management Division to develop a comprehensive working Stormwater Management System (SMS) with which to input work accomplishments, maintenance and inspection data, and performance/location data with which to report to regulating agencies that require such data submitted in an annual performance report. Once developed, the SMS data will be shared with local governments for regional stormwater/watershed partnering efforts to ensure that the most effective (cost and performance – reduction of non-point source pollution). Regional stormwater management partnerships are frequently established with local governments throughout the Commonwealth, however, a management system that captures lifecycle maintenance efforts and costs and the location and performance of current SWM facilities, will enable effective planning, selection, location, and maintenance requirements of future facilities. This study will be accomplished through a coordinated effort led by AMD with L&D, Area Headquarters Superintendents, and District Asset Management and Hydraulics personnel. Deliverables will include1) collecting inventory and condition assessment data on all existing SWM facilities 2) GPS coordinates of facility inlets, outlets and other major structural components 3) for failing facilities or facilities with deficiencies: evaluation of potential cause for failure if attainable, repair/replacement recommendation, and cost estimate for such repair/replacement 4) integration of all data into AMS.

Length of Project: 1 year

Appendix 6

Minimum Control Measure 6: Pollution Prevention/Good Housekeeping for Municipal Operations

- VDOT Learning Center – Learning Management System (LMS) Project Charter
- VDOT Asset Management Program – Summary of Best Practices Manual Development, March 31, 2004
- VDOT Nutrient Management Planning Project
- Virginia Tech – VDOT Turf Short Course Outline

Project Charter

A. General Information

Provide basic information about the project including: Project Title – The proper name used to identify this project; Project Working Title – The working name or acronym that will be used for the project; Proponent Secretary – The Secretary to whom the proponent agency is assigned or the Secretary that is sponsoring an enterprise project; Proponent Agency – The agency that will be responsible for the management of the project; Prepared by – The person(s) preparing this document.

Project Title:	Web-base Learning Management System Project	***Project Working Title:***	Learning Management System
Proponent Secretary:	Honorable Whitt Clements	***Proponent Agency:***	VDOT
Prepared by:	Jeffrey W. Shrader		

Points of Contact

List the principal individuals who may be contacted for information regarding the project.

Position	***Title/Name/Organization***	***Phone***	***E-mail***
Project Sponsor	Chief of Policy & Org Development Constance S. Sorrell VDOT	804.786.1476	Connie.Sorrell@virginiadot.org
Program Manager	Division Administrator Barbara Patteson VDOT Learning Center	804.786.0315	Barbara.Patteson@virginiadot.org
Project Manager	Training Manager Jeffrey W. Shrader VDOT	804.786.4242	Jeffrey.Shrader@virginiadot.org
Proponent Cabinet Secretary	Whitt Clements	804.786.8032	Whit.Clements@governor.virginia.gov
Proponent Agency Head	Commissioner Philip A. Shucet VDOT	804.786.2700	Philip.Shucet@virginiadot.org

Customer (User) Representative(s)	Policy Planning Mgr I Dan Saverline VDOT Human Resources	804.371.6798	Daniel.Saverline@virginiadot.org
	District HR Manager Karl E. Larson Fredericksburg District	540.899.4274	Karl.Larson@virginiadot.org
	IT Training Coordinator Donna Ornduff VITA	804.786.7138	Donna.ornduff@virginiadot.org
	Train Coordinator Melissa Underwood VDOT Salem District	540.387.5405	Melissa.Underwood@virginiadot.org
	Training Manager Duane Sayre VDOT Materials Division	804.328.3150	Duane.Sayre@virginiadot.org
	Training Manager Haston Presnell VDOT Richmond District	804.524.6431	Haston.Presnell@virginiadot.org
	Training Coordinator William Danzeisen VDOT Richmond District	804.524.6430	William.Danzeisen@virginiadot.org
	Division Administrator, Acting Amy O'leary Knowledge Management	434.293.1995	Amy.Oleary@virginiadot.org
	Environmental Specialist II Jacob Porter Environmental	804.786.5360	Jacob.Porter@virginiadot.org
	IT Specialist I Ly Nguyen VDOT Learning Center	804.786.4250	Ly.Nguyen@virginiadot.org

Other	IT Specialist II Barbara Kiser VITA	804.371.0624	Jeanie.Kiser@virginiadot.org
	IT Specialist III Richard Waiton VDOT IT Applications	804.786.8382	Richard.Waiton@virginiadot.org
	Procurement Officer II Rachel Oliver Administrative Services	804.371.6731	Rachel.Oliver@virginiadot.org
	Procurement Officer II David Smith Administrative Services	804.786.5179	David4.Smith@virginiadot.org

B. Executive Summary

An Executive Summary is required when Sections C thru G of the charter are excessively long. In two or three paragraphs, provide a brief overview of this project and the contents of this document.

The mission of the VDOT Learning Center is to serve VDOT employees and its organizational units and partners with strategic, comprehensive, coordinated and targeted learning experiences to support critical business needs. The Learning Center, in collaboration and partnership with the other agency training units and business units, will introduce and implement a comprehensive learning management strategy that will provide immediate short-term benefits and establish a plan for longer-term initiatives. The learning management strategy will outline processes for planning, directing, and accounting for the resources, learning participants, and outcomes of learning activities in VDOT.

At present, the Center's ability to fulfill this responsibility is limited by an inability to efficiently plan, develop, administer, and track all training centrally. Divisions frequently develop and administer training programs without benefit of strong central support. This results in a perception that training programs and organizational initiatives are not coordinated and connected. The situation is made more urgent due to workforce demographics. Over the next few years a disproportionately large number of the Department's most experienced employees will become prime candidates for retirement. The need for coordinated succession planning, cross-training, and efficient transfer of this body of departing knowledge is therefore critical to the future success of the organization. An automated web-based Learning Management System (LMS) is fundamental to success in all of these areas.

This project's purpose is to implement the designated COV standard LMS system at VDOT with all the functionality needed to address the agency's objectives and needs.

C. Project Purpose

Explain the business reason(s) for doing this project. The Project Purpose (the Business Problem and Project Business Objectives) is in the Project Proposal, Section B.

1. Business Problem

The Business Problem is a question, issue, or situation, pertaining to the business, which needs to be answered or resolved. State in specific terms the problem or issue this project will resolve. Often, the Business Problem is reflected as a critical business issue or initiative in the Agency's Strategic Plan or IT Strategic Plan.

Critical Issues Facing VDOT:

** Maintaining competent workforce:* ***(Operational/Administrative/Organizational Issue)***

- VDOT faces a future shortfall of skilled workers with significant anticipated retirements in the next biennium

** Limited financial resources:* ***(Budgetary Issue)***

- Transportation demands consume available resources and requires simple communication of complex issues

** Aging infrastructure:* ***(Operational/Administrative/Organizational Issue and Budgetary Issue)***

- Increasing traffic demands and congestion issues continuously place stress on an ever-aging roadway infrastructure

** Increasing standards:* ***(Operational/Administrative/Organizational Issue and Budgetary Issue)***

- As public expectations continue to increase, standards of roadway design and construction are expected to increase in parallel

** Quantitative methods for identifying needs and prioritizing resources:* ***(Operational/Administrative/ Organizational Issue)***

- *VDOT requires a process and criteria for identifying and prioritizing construction and maintenance needs*

Currently, VDOT uses a training management system developed by Pathlore. It is a fat client network version with the capacity of 17 concurrent users. When new users are identified for system access, IT staff must change the user's pc status to "administrator" and then the software can be loaded.

This software allows for tracking of traditional instructor-led training classes, seminars and conferences. However, all internal training providers are not using the software and maintain separate databases for recordkeeping. The software's functional limitations contribute to units lack of motivation to adopt the system for training administration.

Lack of an integrated agency wide system to catalog existing learning assets and resources, completely track the learning progress of each employee or group of employees, limits the agency from delivering targeted learning to address business needs.

One of the Major Activities in VDOT's Strategic Plan is "Resource Planning and Development." The following "Associated Outcomes/Performance Measures are set for FY2004-2006:

** Track all centrally received Learning Center training in FY 04*
** Implement next generation web-based Learning Management System in FY 04*
** Adopt competency-based approach for building career groups, planning employee development, & building learning paths for top 1/3 of career groups in FY 04*
** Define and implement succession planning pilot process in FY 04*

2. Project Business Objectives

Define the specific Business Objectives of the project that correlate to the strategic initiatives or issues identified in the Commonwealth or Agency Strategic Plan. Every Business Objective must relate to at least one strategic initiative or issue and every initiative or issue cited must relate to at least one project business objective.

Commonwealth or Agency Strategic Plan – Initiative or Critical Issue	***Project Business Objectives***
Resource Planning/Development	To provide the infrastructure needed to build organizational capacity and ensure every employee has the skills and training necessary to perform his/her job with changing public expectations and changing job requirements.
Maintaining competent workforce	The infrastructure should provide the integration of skills and competencies with job roles and learning plans. Linking testing and performance qualifications to the above items will help ensure the right training is delivered to the right employees. Utilizing blended learning methods with competency-based training will produce measurable results in terms of employee performance.
Limited financial resources	Without the infrastructure and processes to track all employee training and associated costs there is no way to systematically manage training resources and look for ways to improve ROI for VDOT training dollars. Combining the right infrastructure with the systematic application of instructional systems design for training will correct this shortcoming.
Aging infrastructure	Increasing traffic demands and congestion issues drive constant change and the need for new innovative practices. Hence, the skill requirements and job responsibilities are changing rapidly. VDOT must have the capability to provide new training programs quickly, and the ability to make global changes to existing training programs in order to stay current.
Increasing standards	As public expectations and involvement increase, standards of roadway design & construction and public communication needs are changing and growing in parallel. Again, this translates into new skill requirements and job responsibilities for VDOT employees.
Quantitative methods and processes	VDOT requires a process and criteria for identifying and prioritizing construction and maintenance needs. Likewise, VDOT jobs require a process and criteria for identifying and prioritizing the most important training needs and a delivery strategy. The infrastructure provides ways to measure performance gaps, provides training via multiple methods, track licensure and mandated training requirements, knowledge testing, and test item analysis.

D. Assumptions

Assumptions are statements taken for granted or accepted as true without proof. Assumptions are made in the absence of fact. List and describe the assumptions made in the decision to charter this project.

- Assume that there is a commercial off the shelf LMS product that meets our needs.
- Assume that the DHRM LMS contract will be available within a timeframe that will meet VDOT timelines
- Assume that the need for a statewide Learning Management System is clearly recognized by senior management
- Assume that the project team will have senior management support throughout the project
- Assume that funds for full implementation of Learning Management System are available
- Assume that there is sufficient in-house technical support and hardware exists to successfully implement project.

E. Project Description, Scope and Management Milestones

1. Project Description

Describe the project approach, specific solution, customer(s), and benefits. The Project Description is located in the Project Proposal, Section C.

VDOT is participating in a multi-agency effort to evaluate and select an LMS vendor whose products and services best match the needs of the Commonwealth. Agencies will obtain LMS products and services required to implement the LMS through the state procurement vehicle.

The solution is to install a fully integrated web-enabled LMS system to deliver, track, and measure impact of agency training and learning efforts. Agencies will participate in the development and release of a procurement vehicle from which all agencies can purchase LMS products and services. Agencies will purchase the LMS products and service required to implement the LMS through the state procurement vehicle. VDOT will perform a phased implementation of key LMS capabilities. VDOT will outsource services such as software installation, systems training, and data migration services.

The customers of this project are employees, managers, and training professionals throughout the Commonwealth.

Benefits:

- Centralize training administration, including online registrations, automatic confirmation and notification, cost monitoring
- Manage learner profiles
- Track, manage, and report on any kind of enterprise training
- Establish structured curriculums and control/monitor learner progression
- Track and report regulatory agency training requirements

Scope

The Project Scope defines all of the products and services provided by a project, and identifies the limits of the project. In other words, the Project Scope establishes the boundaries of a project. The Project Scope addresses the who, what, where, when, and why of a project.

- LMS commercial software product will be installed without modification with the functionality to support training delivery and management for agency employees and identified external business partners and customers.
- The software product functionality will support:
  - Skills/competency management
  - Development and management of learning assets, content & resources
  - Resource management
  - Training registration, delivery, and tracking
  - Delivery of e-learning
  - e-commerce
- Agency will assess internal capacities and available services for the installation, training, and data migration to determine best approach
- There will be one major software and services purchase, and the software will be implemented within a year of project approval.

Summary of Major Management Milestones and Deliverables
Provide a list of Project Management Milestones and Deliverables (see Section E of the Project Proposal Document). This list of deliverables is not the same as the products and services provided, but is specific to management of the project. An example of a Project Management Milestone is the Project Plan Completed.

Event	***Estimated Date***	***Estimated Duration***
Project Charter Approved		
Project Plan Completed		
Project Plan Approved		
Project Execution – Started		
Project Execution Completed		
Project Closed Out		

F. Project Authority

Describe the authority of the individual or organization initiating the project, any management constraints, management oversight of the project, and the authority granted to the Project Manager.

1. Authorization

Name the project approval authority that is committing organization resources to the project. Identify the source of this authority. The source of the approval authority often resides in code or policy and is related to the authority of the individual's position or title.

Constance S. Sorrell

2. Project Manager

Name the Project Manager and define his or her role and responsibility over the project. Depending on the project's complexities, include how the Project Manager will control matrixed organizations and employees.

Jeffrey W. Shrader is project manager. He is responsible for:
Identifying/selecting project team members with the knowledge and expertise to successfully implement the project
Overseeing the development of approval documents,
Establishing project schedule and allocating resources
Defining agency technical/functional requirements
Establishing performance measures

3. Oversight

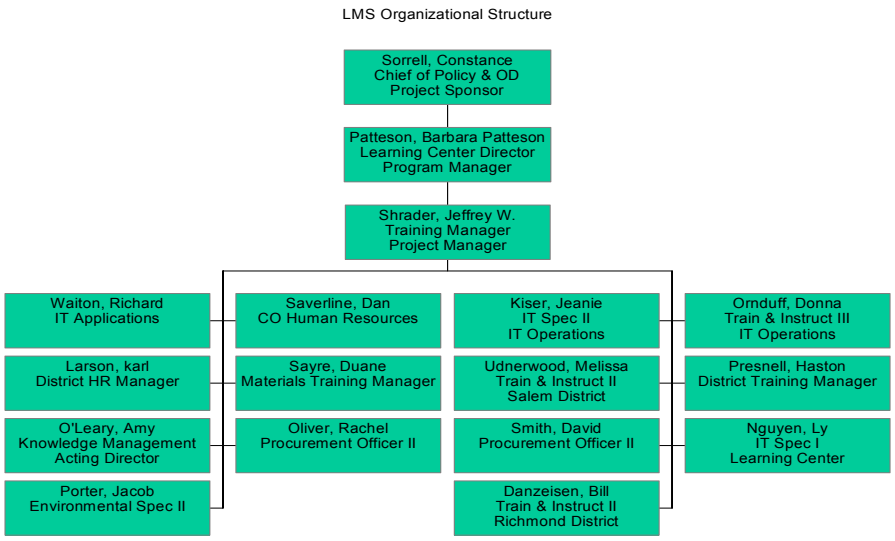
Describe the Commonwealth or Agency Oversight controls over the project.

Oversight provided by Transportation Secretariat IT Oversight Committee due to multi-agency aspects of the acquisition strategy.

G. Project Organization

1. Project Organization Chart

Provide a graphic depiction of the project team. The graphical representation is a hierarchal diagram of the project organization that begins with the project sponsor and includes the project team and other stakeholders.



2. Organization Description

Describe the type of organization used for the project team, its makeup, and the lines of authority.

The type of organizational structured used is a balanced matrix

3. Roles and Responsibilities

Describe, at a minimum, the Roles and Responsibilities of all stakeholders identified in the organizational diagram above. Some stakeholders may exist whom are not part of the formal project team but have roles and responsibilities related to the project. Include these stakeholders' roles and responsibilities also.

VDOT Asset Management Program
Summary of
Best Practices Manual (AMPBPM) Development
March 31, 2004

VDOT Asset Management Best Practices Manual has been under development since January 23, 2004. The Asset Management Program (AMP – formerly VDOT's Maintenance Program) Best Practices Committee representing every VDOT District was assigned to lead the development of the Best Practices Manual. This committee is comprised of Assistant Resident Engineers, Maintenance Managers, Maintenance Superintendents, Maintenance Supervisors, two Central Office Asset Management Division Assistant Directors, Roadside Operations Program Manager and chaired by the Special Studies Program Manager. This committee meets on a monthly basis. The 1991 Maintenance Guidelines Manual is being used as the foundation for the new/updated manual. Many of the chapters will fulfill related VPDES MS-4 Permit components related to post construction activity and good housekeeping. This manual will be finalized by January 1, 2005. Specific chapters related to fulfillment of VPDES MS-4 permit requirements are highlighted in the table below:

AMPBPM Committee
Subcommittee Groups

AMP#	MPM#	Chapter/Element/Category	Chairman	Subcommittee Members
1	1	Introduction/Preface	Bob Kardian	—
2	2	Roles, Responsibilities, Organization	Bob Kardian	Joe Mitchell
3	3	Budgets	Mark Fridenstine	Red Tsikuris, Eddie Buckle, Alan Brasili
4	4	Contracts	Jackie Christian	Eddie Buckle, JR Robertson
5	5	Drainage	Brian Waymack	Jake Porter, Lyndon Sewell, Joe Mitchell
6	11/6 7/12	Entrances/Connectors/Land Use	Jim Cline	Bob Kardian
7	7/12	Equipment/Misc.	Erle Potter	Dick Bonistalli
8	9	Hazardous Materials	Tommy Selvage	Brian Waymack, Jake Porter
9	10	Inmate Labor	Tim Cregger	Mark Fridenstine, Jackie Christian, Charlie Poindexter
—	12	Misc.	• Sale of Materials, Rental of Equipment and Performance of Work—reassigned to Equipment	
10	13	Railroads	Miles Pierce	JR Robertson
11	14/12	Roadside (Veg. Mgmt., Litter Program, etc.)	Brian Waymack	Jake Porter, Lyndon Sewell, Joe Mitchell
12	15/16/12	Roadway Surfaces (incl. Pavements, Shoulders & Turnouts, Crossovers)	Milton Thacker	Jack Smith, Ronnie Bryson, Miles Pierce
13	None	Safety	John Flythe	Eddie Buckle, Bill Stover
14	17	Snow & Ice Control	Bob Kardian	Mark Fridenstine, Red Tsikuris, Tommy Selvage, JR Robertson (incl. "Planning for S&I Control" document)
15	18	Special Operations/Facilities	Bruce Wilkerson	Tim Creggar, Red Tsikuris
16	19	Structures	Otis Hinton	Milton Thacker
17	None	Systems Development	Rob Hanson	Tammy Thomas
18	20	Traffic Services (or Traffic Control & Safety)	Ronnie Bryson	Bruce Wilkerson, Jim Cline
19	21	Training	Jake Porter	John Flythe, Milton Thacker, Bill Stover
20	None	Glossary & Definitions	Bob Kardian	
OUT				
	8	Hauling Permits		
	22	Truck Weigh		

VDOT Nutrient Management Planning

Project Description

HJ72 from 2004 Legislative Session is directing JLARC to evaluate "(iii) the use and implementation of NMPs (Nutrient Management Plans) by state agencies on state projects and state lands; (iv) the use of and need for nutrient management practices and related educational efforts in urban and rural environments;" HJ72 has currently passed by unanimous vote in both the House and Senate. The following project is directly related to HJ72 and we anticipate that, if approved, this project will reflect and document VDOT Nutrient Management Planning efforts as being an exceptional business model for other large open space management entities to follow in Virginia and other states, demonstrate that the current related Code and regulations are adequate, and increased regulation or enforcement is unnecessary. If HJ72 is approved by the Governor, VDOT initiated efforts last year and this corresponding project will demonstrate that we have been very proactive and a leader in NMP efforts.

The proposed VDOT Nutrient Management Planning (VNMP) project will provide designated VDOT field personnel the guidance, training, and educational resources with which to ensure that the Department is applying appropriate levels of fertilizer and other soil amendments during maintenance and construction operations which ensures plant growth efficiencies, economic effectiveness, and surety in reducing or eliminating runoff of potential nitrogen and phosphorous based pollutants (not limited to these constituents). In addition, the VNMP project is anticipated to provide a critical component of our turf management program, which will enhance or create an additional Stormwater Management (SWM) Best Management Practice (BMP) that may be used as a stand-alone BMP or in conjunction with other typical SWM BMPs. This project will produce the following deliverables in FY 2005: 1) VDOT Nutrient Management Planner Certification course, lead by the Department of Conservation and Recreation (will include course book, printing, instruction, travel costs incurred by both DCR and VDOT personnel) 2) course delivery to 30 designated VDOT field personnel 3) Economic models which demonstrate the cost effectiveness of site specific NMP efforts related directly to roadside turf management. Local governments which manage significant amounts roadside and open space (low maintenance turf in city parks, graveyards, etc.) will be invited to participate in the course development and will be provided access to the final materials. DCR will lead the development of the material and course with the assistance of VDOT and Virginia Tech roadside turf specialists.

Length of Project: 1 year

VDOT Vegetation Establishment and Management Short Course
Spring 2004, Proposed Outline

Day One Program

I. SOILS FOR TURF **Daniels Group**

8:00 a.m.-10:00 a.m.

A. Grading Cut Slopes
B. Grading Fill Slopes
C. Grading Medians
D. Grading Ditchlines

10:00 a.m. – 10:15 a.m.

BREAK

10:15 a.m.-12:00 noon

E. Seed bed preparation
    a. Topsoiling
    b. Soil Amendments
        i. Soil testing, determining P, K, liming requirements
        ii. Biosolids or compost use
F. Equipment requirements and limitations

12:00 noon – 1:00 p.m.

LUNCH ON YOUR OWN

II. TURF ESTABLISHMENT **Ervin Group**

1:00 p.m. – 1:20 p.m.

A. RD-4 Research and Green Tag Program: Process, Goals & Benefits

1:20 p.m. – 3:00 p.m.

B. Identification Characteristics and Selection of Adapted Turfgrasses and Legumes
    a. Tall fescue
    b. Fine fescues (Hard, Creeping red, Chewings, Sheep)
    c. Kentucky bluegrass
    d. Perennial ryegrass
    e. Orchardgrass

3:00 p.m. – 3:15 p.m. BREAK

3:15 p.m. – 5:00 p.m.

    f. Bermudagrass (other warm-seasons: zoysia, etc.)
    g. N. American Natives (blue grama, buffalograss, bluestems, Indiangrass)
    h. Weeping lovegrass
    i. Temporary Covers (annual ryegrass, Foxtail millet, Winter rye, Barley)
    j. Legumes (crownvetch, lespedeza, flat pea, white clover, birdsfoot trefoil)

End of Day One Program

Day 2 Program

II. TURF ESTABLISHMENT Ervin Group, Continued

8:00 a.m.-9:00 a.m.

C. Designing Seed Mixtures to Fit the Location and Season
    a. One-shot Seeding
    b. Multi-step Seeding
        i. Spring Seeding
        ii. Summer Seeding
        iii. Late Summer/Fall Seeding
        iv. Winter Seeding

9:00 a.m.-10:00 a.m.

D. Hydraulic Seeding, Mulching, Liming and Fertilization
    a. Hydraulic Seeding
    b. Mulching
        i. Straw, hat, wood and paper products
        ii. Binders and Soil stabilizers
        iii. Geotextiles
    c. Liming
    d. Fertilization
    e. Equipment requirements and limitations

10:00 a.m.-10:15 a.m. BREAK

10:15 a.m.-11:00 a.m.

E. Vegetation Renovation
    a. Fertility and overseeding
    b. Erosion repair
    c. Slope reclamation

11:00 a.m. – 12:00 noon

Turf Maintenance and Management Ervin Group

A. Mechanical – Mowing

a. Heights (max & min), Timing, and Frequency
b. Equipment requirements and limitations

12:00 noon – 1:00 p.m. -- LUNCH ON YOUR OWN

1:00 p.m. – 4:00 p.m.

III. Turf Maintenance and Management (continued) Hipkins Group

A. Chemical

i. Plant Growth Regulators
ii. Herbicides
iii. Equipment requirements and limitations

B. Safety considerations

4:00 p.m. – 5:00 p.m.

Questions/Review /Evaluation

Adjourn