# VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
# STORM WATER DISCHARGE PERMITTING FOR CONSTRUCTION SITES

1. SITE DESCRIPTION
a. Nature of the Construction Activity: This project consists of demolition, site grading and construction activities associated with the construction of an infill structure between the existing facilities of Highway Motors located on Peters Creek Road in the City of Roanoke, Va.

b. *Sequence of Construction: See below for a soil erosion control narrative. The perimeter controls and on-site control* measures for the project will be installed prior to site grading for the building infill and storm water management facility begins.

c. Estimates of Area: The subject development will require approximately 1.27 acres of disturbed area. It is estimated by the design engineer that the earthwork for this development will require the import of approximately 650 cubic yards of material. This estimate is based on preliminary site grading analysis. The general contractor shall provide permit information from the approving authority for any required off-site borrow/fill site(s).

d. Runoff Quantities: The approximate pre-development runoff coefficient, "c" for the area to be permitted is 0.79; based on topology and current ground covers. The approval of these construction plans by local governing authorities has required that a permanent stormwater management facility be constructed to reduce post-development storm run-offs to pre-development quantities or less.

A subsurface investigation has not been performed on this project site.

e. Existing Vegetation: The project property is presently developed with most of the site being building, paved parking/gravel areas and some grass areas along the perimeter of the property.

f. Incidental Pollution Sources: The development of this site involves minimal site grading and building construction activities. As such, the main possible contaminant source to adjoining areas and waterways is the delivery of fuel for the construction equipment. This is to be done via a fuel truck delivery daily. No Provisions have been provided for to provide spill protection in the event that the Contractor chooses to keep a truck (or tank) on-site. The seeding and fertilization of disturbed areas is to be performed by the sitework and/or landscaping contractors, and no on-site storage of seeding or fertilizing materials will occur. Seeding, fertilizer, and/or sodding materials will be brought onto the site only in quantities that will be used immediately. All sanitary waste will be directly contained (portable unit during construction) and no potential pollutants are anticipated.

g. Receiving Channels: The stormwater management facility to be constructed will discharge to a roadside ditch along Barnes Avenue.

h. Site Map: For the following requirements, see referenced areas and sheets of this plan set:
(1) See sheets C-5 for post-developed grading and drainage structures.
(2) Limits of demolition are designated on plan sheet C-3.
(3) Sheet C-5 delineates structural controls (perimeter and interior) for containment of siltation and related soil erosion control.
(4) Sheet C-5 describes areas to be vegetated, both permanent and temporary in nature and specifications.
(5) There are no adjoining surface waters on this project.
(6) Locations of storm drain discharges are shown on sheet C-5 as is the grading delineating the required drainage divides.
(7) The limits of new and existing asphalt parking is shown in C-5.
(8) Permanent storm water management for the site is to be constructed in conjunction with the proposed development. The SWM requirements are to be met by constructing one permanent wet-pond impoundment capable of retaining two and ten year post-development storms and discharging at the two and ten year pre-development discharges respectively, and passing a one-hundred year storm via the emergency spillway. This wet-pond is shown on sheet C-5 of these plans.
(9) No off-site materials areas are to be covered by this plan. Exact location of the General Contractors off-site borrow/fill areas are unknown, but they are subject to the rules and regulations for the local governing authority in obtaining a Land-disturbing Permit.
(10) No on-site equipment fuel storage or chemical storage are anticipated for this development however, provisions have been made for on-site storage if the contractor so chooses.

i. Non-Construction Activities: There are no other discharges associated with this project that are considered a non-construction activity.

2. CONTROLS:
a. Erosion & Sediment Control: The erosion control plans for this project are being developed in conjuction with this plan and re being reviewed by the City of Roanoke and will be modified/updated to account for the comments generated by the City.
(1)(a) through (1)(f) requirements are contained within plan sheets C-5.
(2) Stabilization Practices and Requirements are outlined on sheets C-5. The General Contractor is required to complete and initial the following record of land disturbing activities:

Date of Notice to Proceed with Sitework: _____initialed by: _____

Dates of Clearing and Grubbing Operations: from_____to_____ initialed by: _____

Date of Installation of Perimeter Controls: _____initialed by: _____

Dates of Earthwork Operations: From_____to_____initialed by: _____

Installation of Permanent Stabilization Commenced on: _____

Installation of Permanent Stabilization Completed on: _____

The General Contractor is further required to keep a log of dates of temporary or permanent delays associated with land disturbing activities, and temporary and permanent stabilization measures for areas contained within the site.

3. STRUCTURAL PRACTICES:
a. No temporary sediment basin is specified for this project.

b. Stormwater Management: See item 1 h. (8) above for permanent storm water management facility locations.
(1) As stated above, the wet-pond provides 2-2 and 10-10 peak flow reductions, and controlled release of the one-hundred year post-development runoff.
(2) Since the outfall discharges to an existing road side ditch outfall protection is specified.

c. Other Controls:
(1) There shall be no solid materials, including building materials, garbage, or debris discharged to surface waters.
(2) At the points of Construction Vehicle Access, the contractor shall install and maintain the temporary construction entrance *in accordance with these plans.*
(3) Pursuant to City of Roanoke approved plans, all sewer construction, materials, and testing shall be in conformance with Western Va. Water Authority Standards and Specifications.
(4) As stated above, no fuel storage containment or chemical storage is anticipated on-site. The General Contractor is required to maintain a list of materials stored on-site, and shall protect these materials from precipitation and runoff, such that contamination of the storm drain system and ultimate receiving channels is avoided. If hazardous materials such as those listed above are stored on-site in an unprotected area, the General Contractor shall prepare and maintain contingency plans in the event of a spill or unauthorized discharge.
(5) There are no other discharges associated with this project that are considered a non-construction activity.

d. Approved State or Local Plans:
(1) These plans are to be implemented in conjunction with the aforementioned E&S Plans.
(2) The Contractor shall maintain these Pollution Control Plans should any revisions to the perimeter or interior controls be *required. This holds true also for any additional E&S measures that may* be required by the City of Roanoke or their approved agent(s).

3. MAINTENANCE:
The General Contractor is responsible for insuring installation and maintenance compliance with the controls and stabilization measures contained herein. All controls shall be maintained to provide the optimum performance of each control. If controls are found to be in need of repair or replacement, the General Contractor is responsible for implementing the required *repair/replacement immediately upon discovery.*

4. INSPECTIONS:
The General Contractor shall inspect disturbed areas of the site that have not been finally stabilized, and areas used for storage of materials that are exposed to precipitation, structural control measures, and the area of construction vehicle access at least every fourteen (14) calendar days, and within 48 hours of the end of a storm event producing 0.5 inches or greater of precipitation. Where areas have been finally or temporarily stabilized or runoff is unlikely due to winter conditions (site is covered with snow, ice, or frozen ground exists) such inspections shall be conducted at least once every month.

a. Inspect disturbed areas and areas of materials storage that are exposed to precipitation for evidence of, or the potential for pollutants entering the storm drain system. Inspect E&S controls in accordance with requirements stated herein, and inspect points of storm drain discharge for excessive sedimentation. Correct site controls as required to reduce sedimentation of storm drains, culverts, and receiving channels.
b. *If controls or pollutant prevention areas are found to be in need of repair or modification, the General Contractor shall* provide additional measures or modifications to existing measures as required. Any additional measures or modifications to existing measures shall be recorded as field revisions to these plans. In the event that additional controls are found to be required, the General Contractor shall be responsible for implementing these controls before the next anticipated storm event. If implementation before the next storm event is impractical, they shall be implemented as soon as practical.
c. A report summarizing the scope of inspections, name of inspector, inspector's qualifications, dates of inspections, major observations pertaining to the implementation of these Pollution Control Plans, and actions taken shall be made and retained *as a part of these Pollution Control Plans. Major observations of these reports shall include: the locations of excessive* sedimentation or other pollutants from the site; locations of controls in need of repair; locations of failed or inadequate controls; and locations where additional controls are needed. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in conformance with the Storm Water Pollution Control Plan and Permit. The report shall be signed in accordance with the permit regulation.

5. NONSTORM WATER DISCHARGES:
*Other than flows from fire fighting activities, there shall be no sources of non-storm water combined with storm water* discharges from the construction site.

NOTICE TO CONTRACTORS
The General Contractor is solely responsible for implementing or overseeing the implementation of all controls required herein. It shall be the General Contractor's responsibility to regulate the activities of all subcontractors on the site, to insure compliance with the requirements and implementation of controls required herein. Prior to performing any work on the subject site, the General Contractor shall complete the following Certification. The General Contractor may, at his option, require subcontractors associated with implementation of controls required herein to provide similar Certifications, which will become a part of these Pollution Control Plans.

"I certify under penalty of law that I understand the terms and conditions of this Virginia Pollutant Discharge Elimination System (VPDES) general permit that authorizes the storm water discharges from the construction activity identified as part of this Certification".

PRINTED NAME: _____ SIGNATURE: _____

ADDRESS: _____ PROPERTY IDENTIFICATION: _____

_____ DATE OF CERTIFICATION: _____

TELEPHONE: _____

## *EROSION-SILTATION CONTROL COST ESTIMATE*
*(FOR SOIL EROSION CONTROL BONDING PURPOSES ONLY)*

*ALL COSTS GIVEN ARE COMPLETE IN PLACE*

| *DESCRIPTION* | *UNIT* | *QUANTITY* | *UNIT COST* | *TOTAL COST* |
|---|---|---|---|---|
| *PERMANENT SEEDING* | *ACRE* | *0.60* | *$ 2,000.00* | *$ 1,200.00* |
| *TEMPORARY SEEDING* | *ACRE* | *0.60* | *$ 500.00* | *$ 300.00* |
| *OUTLET PROTECTION CL-1 RIP RAP* | *TONS* | *2* | *$ 20.00* | *$ 40.00* |
| *INLET PROTECTION* | *EA.* | *3* | *$ 150.00* | *$ 450.00* |
| *SILT FENCE* | *L.F.* | *400* | *$ 5.00* | *$ 2,000.00* |
| *DIVERSION DIKE* | *L.F.* | *215* | *$ 5.00* | *$ 1,075.00* |
| *CONSTRUCTION ENTRANCE MAINTENANCE* | *LS* | *1* | *$ 1,000.00* | *$ 1,000.00* |
| *CHECK DAM* | *EA.* | *1* | *$ 100.00* | *$ 100.00* |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| *SUB-TOTAL* | | | | *$ 6,165.00* |
| *10% CONTINGENCY* | | | | *$ 617.00* |
| *TOTAL ESTIMATED PROJECT COST* | | | | *$ 6,782.00* |

## *SOIL EROSION NARRATIVE*

*PROJECT DESCRIPTION:*
*THE PURPOSE OF THIS PROJECT IS TO CONDUCT DEMOLITION AND SITE DEVELOPMENT ACTIVITIES FOR THE CONSTRUCTION OF AN INFILL BUILDING FOR THE EXISTING HIGHWAY MOTORS FACILITY ON PETERS CREEK ROAD IN THE CITY OF ROANOKE, VA. THE PROPERTY IS LOCATED AT 5307 PETERS CREEK ROAD. THE TOTAL DISTURBED AREA IS APPROXIMATELY 1.27 ACRES.*

*EXISTING SITE CONDITIONS:*
*THE PROJECT SITE CONSISTS OF TWO PARCELS TOTALING 4.81 ACRES LOCATED ON PETERS CREEK ROAD. (THE SUBJECT PARCELS ARE BEING COMBINED AS PART OF THIS PROJECT) THE PROPERTY IS MOSTLY DEVELOPED WITH TWO BUILDINGS AND SEVERAL PAVED AND GRAVELED PARKING AREAS. THE PERIMETER OF THE SITE IS MOSTLY GRASSY AREAS.*

*ADJACENT PROPERTY:*
*THE PROJECT SITE IS BOUNDED ON THE WEST BY PROPERTIES ZONED CG, TO THE NORTH BY PETERS CREEK ROAD, TO THE EAST BY PROPERTIES ZONED CG & I-1, AND TO THE SOUTH BY BARNES AVENUE.*

*OFF-SITE AREAS:*
*SOME FILL WILL BE REQUIRED FOR THIS SITE. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL PERMIT INFORMATION FOR THE BORROW SITE TO THE CITY OF ROANOKE.*

*SOILS:*
*SOILS ARE IDENTIFIED IN THE USDA 'SOIL SURVEY OF ROANOKE COUNTY AND THE CITIES OF ROANOKE AND SALEM, VIRGINIA' AS "URBAN LAND".*

*CRITICAL AREAS:*
*THE POTENTIAL FOR RUNOFF FROM THIS SITE VERY LIMITED DUE TO THE VARIOUS LOCATIONS OF WORK BEING PERFORMED ON THE SITE. THE TWO MOST CRITICAL AREAS ARE DOWNSTREAM OF THE GRADING WORK REQUIRED FOR THE LOADING DOCK AND THE STORM WATER MANAGEMENT FACILITY. PERIMETER CONTROLS ARE PROPOSED TO PREVENT THE RUNOFF OF SEDIMENT LADEN WATER FROM THE SITE.*

*EROSION CONTROL MEASURES:*
*UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE 'VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK', LATEST EDITION.*

1. *PRIOR TO ANY WORK BEING PERFORMED ON THE SITE, THE TEMPORARY CONSTRUCTION ENTRANCE INDICATED ON THESE PLANS SHALL BE CONSTRUCTED. THE ENTRANCE SHALL BE IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.*
2. *INLET PROTECTION SHALL BE INSTALLED AS SOON AS PRACTICAL. INSTALLATION OF OTHER EROSION CONTROL DEVICES INDICATED SHALL OCCUR PRIOR TO BEGINNING EXCAVATION OF SITE.*
3. *IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND AFTER EACH SIGNIFICANT RAINFALL.*
   *- THE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION TO PREVENT TRACKING OF MUD OFF-SITE.*
   *- SILT FENCES AND INLET PROTECTIONS SHALL BE CHECKED REGULARLY FOR UNDERMINING AND SEDIMENT BUILDUP.*

*PERMANENT STABILIZATION:*
*ALL DISTURBED AREAS NOT PAVED OR LANDSCAPED ARE TO BE PERMANENTLY SEEDED IN ACCORDANCE WITH SPECIFICATIONS PROVIDED HEREIN.*

*STORMWATER RUNOFF:*
*IN ACCORDANCE WITH ROANOKE CITY STANDARDS THERE WILL BE NO CHANGE IN THE PEAK RUNOFF RATE ASSOCIATED WITH THE DEVELOPMENT OF THIS PROJECT.*

*CALCULATIONS:*
*DETAILED STORMWATER MANAGEMENT CALCULATIONS ARE INCLUDED WITH THE SUBMITTAL PACKAGE TO THE CITY OF ROANOKE.*

COMMONWEALTH OF VIRGINIA
FRANK B. CALDWELL, III
NO. 9184
3/5/07
PROFESSIONAL ENGINEER

*NARRATIVES AND CONSTRUCTION NOTES*
*FOR*
# HIGHWAY MOTORS
*5307 PETERS CREEK ROAD*
*CITY OF ROANOKE, VA.*

*Designed:* JWK
*Checked:* FBC
*Date:* October 16, 2006
*Rev:* Mar. 5, 2007
*Scale:* 1"=30'
*Tax Parcel:* 6600105
*W.O. No.:* 06-0078

CWA
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