CMP Sampling Methods & Procedures

Receiving Water Sampling:
Manual Sampling: Samples will be taken at the appropriate time as stated in Part V.A.5 of the permit. Sampling will begin at the designated representative receiving water at the downstream location first. The sample will be taken as far downstream (within project right of way) of the confluence of the last storm water discharge point and upstream of any additional discharges not associated with this project. The sample will be taken in the center of the receiving water at a point where mixing of the receiving waters and the project outfall has occurred and produced a homogenous sample. On receiving waters where access to the center of the receiving waters is not practical, several samples from across the receiving waters will be taken and the arithmetic average of the turbidity of these samples will be usedfor the upstream value. A large mouth, clean, glass or plastic jar/bottle labeled with the project number and location will be used to collect the sample. The sample container will be held such that the opening faces upstream. Once the sample jar/bottle is full and capped. It will be transported to the location where the turbidity testing will be conducted. All turbidity tests will be conducted immediately but in no case later than 48 hours after the time the sample was obtained.

Upstream samples will be taken after downstream samples have been acquired. The sample will be taken immediately upstream of the confluence of the first storm water discharge from the project. The sample will be taken in the center of the receiving water. On receiving waters where access to the center of the receiving waters is not practical, several samples from across the receiving waters will be taken and the arithmetic average of the turbidity of these samples will be usedfor the upstream value. A large mouth, clean, glass or plastic jar/bottle labeled with the project number and location will be used to collect the sample. The sample container will be held such that the opening faces upstream. Once the sample jar/bottle is full and capped. It will be transported to the location where the turbidity testing will be conducted. All turbidity tests will be conducted immediately but in no case later than 48 hours after the time the sample was obtained.

Testing:
All turbidity tests shall be done in accordance with 40 CFR Part 136. Turbidity results will be recorded and reported to EPD in accordance with Part V.B of the permit.

Automatic Sampling:
Samples will be taken at the appropriate times as specified in Part V.A5 of the permit. Automatic sampling can be accomplished at both upstream and downstream simultaneously by using a sampling device such as the ISCO model 3700 or 6700 or equivalent. These devices can be triggered by flow meters to obtain the required samples. This determination will be made on a project by project basis. The probe for the automatic sampler will be placed in the center of the receiving water at a point as far downstream of the confluence of the last storm water discharge point and upstream of any additional discharges not associated with this project. Samples will remain in the automatic sampler until the next business day, when they will be collected and tested after rainfall measurements.

The probe for upstream sampling will be positioned immediately upstream of the confluence of the first storm water discharge point from the project. The probe will be placed in the center of the receiving water. Samples will remain in the automatic sampler until the next business day, when they will be collected and tested.

Outfall Sampling:

Manual Sampling:
Samples will be taken at the appropriate time as stated in Part V.A.5 of the permit. Sampling will begin at the designated representative outfall. The sample will be taken as far downstream (within the project Right of Way) of the confluence of the last storm water discharge point, and upstream of any additional discharges not associated with the project. The sample will be taken in the center of the outfall channel. A large mouth, clean, glass or plastic jar/bottle labeled with project number and location will be used to collect the sample. The sample container will be held such that the opening faces upstream. Once the sample jar/bottle is full and capped, it will be transported to the location where the turbidity testing will be conducted. All turbidity tests will be conducted immediately but in no case, later than 48 hours after the time the sample was obtained.

Automatic Sampling:
Samples will be taken at the appropriate times as specified in Part V.A.5 of the permit. Automatic sampling can be accomplished by using a sampling device such as the ISCO model 3700 or 6700, or equivalent. These devices can be triggered by flow meters to collect the required samples. This determination will be made on a project by project basis. The probe for the automatic sampler will be placed in the center of the outfall channel at a point as far downstream of the confluence of the last storm water discharge point and upstream of any additional discharges not associated with the project. Samples will remain in the automatic sampler until the next businees day when they will be collected and tested.

Testing:
All turbidity tests shall be done in accordance with 40 CFR Part 136. Turbidity results will be recorded and reported to EPD in accordance with Part V.B of the permit.

This project is located within the City of Temple, Carroll & Haralson County, Georgia.
This project is located within the Webster Creek Basin, in Carroll & Haralson County, Georgia.

All Erosion Control features shall be in accordance with the "Manual for Erosion and Sediment Control for the State of Georgia", latest edition.

NOTES:

1. CLEARING AND GRADING SHALL BE LIMITED TO AREAS DESIGNATED AS RIGHT-OF-WAY AND THOSE AREAS REQUIRED FOR STORM DRAINAGE, DETENTION FACILITIES, AND UTILITIES.
2. THE DEVELOPER IS RESPONSIBLE FOR OBTAINING ANY PERMITS THAT MAY BE REQUIRED FOR LAND DISTURBANCES AND/OR BUFFER REQUIREMENTS.
3. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH LAND-DISTURBING ACTIVITIES.
4. PRIOR TO DEVELOPMENT THIS PROPERTY CONSISTS OF LAND WOODED WITH A COMBINATION OF PINES & HARDWOODS.
5. SILT FENCE TO BE TYPE "C", WIRE BACK.
6. STILLING BASIN TO BE PROVIDED AT EACH PIPE OUTLET.

DESCRIPTION OF CONSTRUCTION ACTIVITY:

THE PROPOSED DEVELOPMENT OF THE 61 LOT (PHASES 1 & 2) SUBDIVISION WILL INCLUDE CONSTRUCTION OF STREETS, UTILITIES, STORM DRAINAGE, STORM WATER MANAGEMENT FEATURES. THE PROPOSED CONSTRUCTION IS ACCOMPANIED BY A VERY RIGOROUS EROSION CONTROL PROGRAM TO ENSURE THAT STORMWATER ASSOCIATED WITH THE CONSTRUCTION DOES NOT CAUSE EROSION, SEDIMENTATION AND POLLUTION WITHIN THE RECEIVING WATERS OF THIS DRAINAGE AREAS.

DESCRIPTION OF INTENDED SEQUENCE OF MAJOR ACTIVITIES:

THE GENERAL ORDER OF ACTIVITIES WILL BE AS FOLLOWS BARRING ANY WEATHER OR OTHER UNFORESEEN CONDITIONS: (1) INSTALL EROSION AND SEDIMENT CONTROL FEATURES, (2) CLEARING AND GRUBBING, CONSTRUCTION OF ROADWAYS AND UTILITIES, (3) MAINTAIN EROSION CONTROL FEATURES IN PLACE, (4) TEMPORARY VEGETATION WILL BE APPLIED WHERE WORK HAS CEASED, (5) PERMANENT VEGETATION/RE-GRASSING OF DISTURBED AREAS, (6) REMOVE EROSION CONTROL FEATURES AFTER COMPLETION OF CONSTRUCTION, (7) FINAL CLEANUP. THE PROPOSED DEVELOPMENT IS EXPECTED TO BE COMPLETED BY APRIL 2006.

MAINTENANCE STATEMENT:

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

EROSION CONTROL MEASURES SHALL BE INSPECTED AFTER EVERY RAINFALL EVENT, AND AT A MINIMUM OF ONCE A WEEK, AND ALL DEFICIENCIES CORRECTED WITHIN THREE DAYS OF INSPECTION. ALL DISTURBED AREAS, WHERE CONSTRUCTION ACTIVITY HAS CEASED, SHALL HAVE TEMPORARY OR PERMANENT VEGETATION APPLIED WITHIN 14 DAYS.

EROSION AND SEDIMENT CONTROLS STATEMENT:

THE FOLLOWING EROSION CONTROL DEVICES, BOTH VEGETATIVE AND STRUCTURAL BEST MANAGEMENT PRACTICES, SHALL BE IMPLEMENTED THROUGHOUT THE DEVELOPMENT, AS DETAILED ON THE FOLLOWING PLAN SHEETS: TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, SILT FENCES, DRAINAGE SWALES, SEDIMENT TRAPS, CHECK DAMS, HAY BALE FILTER DAMS, STORM DRAIN INLET PROTECTION, ROCK OUTLET PROTECTION, STILLING BASINS & DETENTION/SEDMENTATION PONDS.

ALL ELEMENTS OF EROSION CONTROL, SHALL CONFORM TO THE STANDARDS SET FORTH BY "MANUAL OF EROSION AND SEDIMENT CONTROL IN GEORGIA" LATEST EDITION.

SEDIMENT BASINS SHALL CONTAIN 67 CY PER DISTURBED ACRE DRAINED.

RUNOFF COEFFICIENT STATEMENT:

THE EXISTING LAND IS PREVIOUSLY CLEARED AND GRADED TRACT WITH RELATIVELY FLAT TERRAIN (C=0.35)
THE EXISTING LAND CONSISTS OF LAND WOODED W/ A COMBINATION OF PINES & HARDWOODS. (C=0.35)
FOR THE PROPOSED DEVELOPMENT THE OVERALL
FINAL RUNOFF COEFFICIENT WILL BE APPROXIMATELY C=0.79.

THE TOTAL AREA FOR THIS PROJECT IS 8.36 ACRES. THE TOTAL DISTURBED AREA FOR THE PROJECT IS APPROXIMATELY 12.75 ACRES.
TOTAL AREA PHASE 1 = 9.22 ACRES, DISTURBED AREA = 5.85 ACRES (West) TOTAL AREA PHASE 2 = 18.67 ACRES, DISTURBED AREA = 5.90 ACRES (East)

Waste Materials:
All waste materials will be collected and stored in a secured, loded, metal Dumpster, rented from a licensed solid waste disposal company. The materials shall be placed in dumpsite which meets all State and local regulations. All trash and construction debris from the site will be placed in the dumpster or transported to the authorized disposal area. All construction waste shall be hauled off-site a minimum of once a week or as needed to keep site safe during and after working hours. No large piles of debris shall be left that would allow children or adults to climb to a height over five feet about the existing grade on site. No construction waste materials will be buried on-site. All personnel will be instructed regarding the correct procedure(s) for waste disposal. Notices and information regarding these procedures will be posted and/or provided to appropriate personnel by the contractor or the person responsible for the day-to-day construction activities and operations at this site. The contractor is responsible for the implementation of these procedures throughout his contract for construction.

Hazardous Waste:
All hazardous waste material will be disposed of in a manner specified by state or local regulation or by the manufacturer. Site personnel will be instructed in any special procedures and/or practices by the contractors day-to-day manager of site operations.

Sanitary Waste:
All sanitary waste will be collected from the portable restroom units a minimum of once per week by a sanitary waste contractor and hauled to a location approved for disposal by state and local regulations.

Offsite Vehicle Tracking:
A stabilized construction exit is required (more than one if needed) to reduce vehicle tracking of sediments. Dump trucks hauling material form the construction site will be covered with a tarpaulin.

Timing of Controls/Measures

The sequence of major activities gives the general timing for the completion of construction activities. Sediment and erosion controls identified in the plan will be installed immediately upon commencement of land disturbance activities being initiated. Grading and stabilization of the site shall commence as soon as other improvements have been completed. Permanent grassing of the areas indicated will take place as soon as finish grading has been completed. Temporary controls and measures will be removed when project has been final inspected and approved by the building department.

Maintenance / Inspection Procedures

Erosion and Sediment control inspection and Maintenance practices

These are the inspection and maintenance practices contractor will use to maintain erosion and sediment controls.

* All control measures will be inspected at least once each week and following any storm event of 0.5 inches or greater.
* All measures will maintained in good working order, if a repair is necessary, it will be initiated within 24 hours of report.
* Built up sediment will be removed from silt fence when it has reached one-third the height of the fence.
* Slt fence will be inspected for depth of sediment, tears, to see if the fabric is securely attached to the fence posts, and to see that the fence posts are firmly in the ground.
* Temporary and permanent seeding and planting will be inspected for bare spots, washouts, and healthy growth.
* A maintenance inspection report will be made after each inspection. A copy of the report-form to be completed by the Inspector shall be in accordance with guidelines of EPD.
* Contractors site superintendent will be responsible for filling out inspection and maintenance reports. Another individual will be selected as an alternate to be responsible for inspections, maintenance and repair activities, and filling out the inspection and maintenance report should the superintendent be unavailable.
* Personnel selected for inspection and maintenance responsibilities will receive training from contractor. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.

Non-Storm Water Discharges: It is expected that the following non-storm water discharges will occur form site during the construction period:

* Pavement wash waters (where no spills or leaks of toxic of hazardous materials have occurred).

"I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of best management practices, required by the Georgia Water Quality Control Act and the document "Manual of Erosion and Sediment Control in Georgia" and that the designed system of best management practices meets the design requirements contained in the General NPDES Permit No. GAR100000."

"I certify that the permittee's Comprehensive Monitoring Program provides for the monitoring of the receiving water or the monitoring of the storm water outfalls and is expected to meet the monitoring requirements contained in the General NPDES Permit No. GAR100000."

"I certify that the permittee's Comprehensive Monitoring Program provides for the monitoring of: (a) all perennial and intermittent streams and other water bodies shown on the USGS topographic map and all other field verified perennial and intermittent streams and other water bodies, or (b) where any such specific identified perennial or intermittent stream and other water body is not proposed to be sampled. I have determined in my professional judgement, utilizing the factors required in the General NPDES Permit No. GAR100000, that the increase in the turbidity of each specific identified sampled receiving water will be representative of the increase in the turbidity of a specific identified un-sampled receiving water."

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

HOWARD B. RAY, P.E.
HUGHES-RAY COMPANY, INC.

INVENTORY FOR POLLUTION PREVENTION PLAN:

The materials or substances listed below are expected to be present onsite during construction:
* Concrete
* Detergents
* Paints (enamel)
* Metal Columns and roofs
* Wood and wood products
* Fertilizers
* PVC pipe
* Cleaning solvents
* Petroleum based products
* Sand and limestone rock
* Asphalt

Spill Prevention

Material Management Practices

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff.

Good Housekeeping:

The following good housekeeping practices will be followed onsite during the construction project.
* An effort will be made to store only enough product required to do the job.
* All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
* Products will be kept in their original containers with the original manufacture label.
* Substances will not be mixed with one another unless recommended by the manufacturer.
* Manufactures recommendations for proper use and disposal will be followed.
* The site superintendent will inspect daily to ensure proper use and disposal of materials onsite.

Hazardous Products:

These practices are used reduce the risks associated with hazardous materials.

* Products will be kept in original containers unless they are not re-sealable.
* Original labels and material safety data will be retained; they contain important product information.
* If surplus product must be disposed of, manufacturers or local and state recommended methods for proper disposal will be followed.

Spill Prevention

The following product specific practices will be followed onsite:

Petroleum Products:

All onsite vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers, which are clearly labeled. Any asphalt substances used onsite will be applied according to the manufacture recommendations.

Fertilizers:

Fertilizers used will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to storm water. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

Paints:

All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewer system but will be properly disposed of according to manufacturers instructions of state and local regulations.

Concrete Trucks:

The contractor will establish a single wash-out basin for concrete trucks. Concrete trucks will only be allowed to wash out or discharge surplus concrete or drum wash water on the site at this location. When the project is completed, and as a part of the final clean-up, the contractor will be responsible for removing all concrete spoils and waste in the basin to an off-site location. The basin area will be filled with dirt, compacted, graded, grassed and restored to original condition or better.

Spill Control Practices

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan. The following practices will be followed for spill prevention and clean-up.

* Manufactures recommended methods for spill cleanup will be clearly posed and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
* Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite. Equipment and material will include but not be limited to brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand sawdust, and plastic and metal trash containers specifically for this purpose.
* All spills will be cleaned up immediately after discovery.
* The spill area will be kept well ventilated and personnel will appropriate protective clothing to prevent injury from contact with a hazardous substance.
* Spills of toxic or hazardous material will be reported to the appropriate state or local government agency regardless of the size.
* The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included.
* The contractors site superintendent responsible for the day-to-day site operations, will be the spill prevention and cleanup coordinator, he will designate at least one other site person who will receive spill prevention and cleanup training. This individual will become responsible for a particular phase of prevention and cleanup. The names of responsible spill personnel will be posted in the material storage area and in the office trailer onsite (or designated onsite job location).

DRAWING NO. H04135-PLANS.DWG
DRAWN BY: GB
CHECKED BY: HBR
JOB NO.: H04135
SCALE: 1"50'

DATE: 16 DECEMBER 2004

NO.	DATE	REVISION DESCRIPTION

NPDES NOTES
OF
WEBSTER LAKE, PHASE 1
LAND LOTS 178, 179, 206 & 207
6TH DISTRICT
CITY OF TEMPLE
CARROLL & HARALSON COUNTY, GEORGIA

GEORGIA REGISTERED PROFESSIONAL ENGINEER HOWARD B. RAY
12-21-04

GEORGIA REGISTERED No. 2010 LAND SURVEYOR CLIFFORD R. HUGHES

PREPARED BY
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Land Surveying Land Planning Site Design
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