Ohio | Environmental Protection Agency

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

April 18, 2011

Mark Wright
Schottenstein Store Corporation
4300 5th Avenue
Columbus, OH 43207

Re: First Group American Inc. Student Bus / Franklin County

Dear Mr. Wright:

This letter is written regarding the storm water inspection I conducted on April 6, 2011, at the First Group American Inc. Student Bus facility, located at 1799 Frebis Avenue, Columbus, Ohio. The Agency understands that these construction activities are currently covered under the General Storm Water Permit Associated with Construction Activities. It appeared during the inspection that construction activity has been completed for this site and all disturbed areas had been permanently stabilized with gravel and crushed bricks. Please address the following:

Post Construction Requirements:

The General Permit mandates specific water quality treatment for storm water following the completion of construction (see attachment). Please be able to demonstrate your post construction requirements per the General Permit will be met. Please submit to my attention the water quality calculations demonstrating compliance. This information can be sent to my attention via a response letter, or to my email at greg.sanders@epa.state.oh.us.

If you have not already done so, a Notice of Termination will be required providing that the post construction requirements have been met. Instructions and forms can be found at http://www.epa.state.oh.us/dsw/storm/stormform.html.

If you have any question regarding this letter or the inspection, please do not hesitate to contact me at our Central District Office at (614) 728-3851.

Sincerely,

Gregory L. Sanders
Environmental Specialist
Division of Surface Water
Central District Office

c: Jeff Bohne, DSW/CDO

GLS/nsm NOT letter – First Group American, Inc., April 6, 2011

Central District Office
50 West Town Street, Suite 700
P.O. Box 1049
Columbus, OH 43216-1049

614 | 728 3778
614 | 728 3898 (fax)
www.epa.ohio.gov

Post-Construction Requirements:

For all large construction activities (involving the disturbance of five or more acres of land or will disturb less than five acres, but is a part of a larger common plan of development or sale which will disturb five or more acres of land), the post construction Best Management Practices (BMPs) chosen must be able to detain storm water runoff for protection of the stream channels, stream erosion control and improved water quality. Structural (designed) post-construction storm water treatment practices shall be incorporated into the permanent drainage system for the site. The BMP(s) chosen must be sized to treat the water quality volume (WQ_v) and assure compliance with criteria in OAC 3745-1-04. In addition, the discharge must not violate Ohio's Water Quality Standards in OAC 3745-1. The WQ_v shall be equivalent to the volume of runoff from a 0.75-inch rainfall and shall be determined according to one of the two following methods:

1. Through a site hydrologic study approved by the local municipal permitting authority that uses continuous hydrologic simulation and local long-term hourly precipitation records or

2. Using the following equation:

$WQ_v = C * P * A / 12$

where:

WQ_v = water quality volume in acre-feet

C = runoff coefficient appropriate for storms less than 1 inch (see table 1)

P = 0.75 inch precipitation depth

A = area draining into the BMP in acres

Table 1
Runoff Coefficients Based on the Type of Land Use

Land Use	Runoff Coefficient
Industrial & Commercial	0.8
High Density Residential (>15 dwellings/acre)	0.5
Medium Density Residential (4-15 dwellings/acre)	0.4
Low Density Residential (1-4 dwellings/acre)	0.3
Open Space and Recreational Areas	0.2

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

An additional volume equal to 20 percent of the Water Quality Volume shall be incorporated into the BMP for sediment storage and/or reduced infiltration capacity. Ohio EPA recommends that BMPs be designed according to the methodology included in the Rainwater and Land Development manual or in another design manual acceptable for use by Ohio EPA.

BMPs shall be designed such that the drain time is long enough to provide treatment, but short enough to provide storage available for successive rainfall events as described in Table 2 below.

Table 2
Target Draw Down (Drain) Times for Structural Post-Construction Treatment Control Practices

Best Management Practice	Drain Time of WQ_v
Infiltration	24 - 48 hours
Vegetated Swale and Filter Strip	24 hours
Extended Detention Basin (Dry Basins)	48 hours
Retention Basins (Wet Basins)*	24 hours
Constructed Wetlands (above permanent pool)	24 hours
Media Filtration, Bioretention	40 hours

*Provide both a permanent pool and an extended detention volume above the permanent pool, each sized at 0.75 *WQ_v

An additional volume equal to 20 percent of the Water Quality Volume shall be incorporated into the BMP for sediment storage and/or reduced infiltration.

For redevelopment projects (i.e., developments on previously developed property), post-construction practices shall either ensure a 20 percent net reduction of the site impervious area, provide treatment of at least 20 percent of the Water Quality Volume, or a combination of the two.