



**Environmental
Protection Agency**

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

October 17, 2012

RE: SUMMIT COUNTY
CITY OF GREEN
HERITAGE CROSSING OF GREEN
PERMIT NO: 3GC05303*AG

Joe Mosyjowski, P.E.
Mosyjowski & Associates Engineers
2615 Swartz Road
Hartsville, Ohio 44632

Dear Mr. Mosyjowski:

This office has reviewed the design and associated calculations concerning changes and retro-fits necessary to provide post construction storm water management for the above referenced site. Below is listed our comments broken up by the Best Management Practice presented:

Lot 1-R basin

- 1) The plans indicate that the size of the lot is 1.9518 acres. The drainage area listed in the table under Post-Construction Water Quality Design is listed as 1.57 acres. Provide your rationale for using the 1.57-acre figure. Provide a drawing that clearly identifies the drainage area for this basin.
- 2) This is a dry extended retention basin. As such, it is required to have a fore-bay and a micro-pool. Neither has been provided and the BMP cannot be approved. Each is to be sized to 10% of the WQv and must be clearly shown on the plans.
- 3) The pollutant storage volume is listed at 2,582 CF. This volume should be the sum of the fore-bay and micro-pool volume, which we calculate based on the WQv to be 684 CF.
- 4) The outlet from this basin is not acceptable. The detail provided indicates a 4-inch PVC pipe where the invert is flush with the basin bottom. This outlet design will plug. The exit pipe should extend into a micro-pool with an inverted entrance similar to the design you provided in the bypass pond and the wet extended detention basin.

Bypass basin

- 1) The drainage area listed in the table under Post-Construction Water Quality Design is listed as 2.03 acres. It is our understanding that this basin will treat road runoff that is currently untreated and being discharged to the stream. Provide your rationale for using the 2.03-acre figure. Provide a drawing that clearly identifies the drainage area for this basin.
- 2) This is a dry extended retention basin. As such, it is required to have a fore-bay and a micro-pool. A micro-pool has been provided but not a fore-bay and, therefore, the BMP is not approvable. The micro-pool volume is 200 CF instead of the required 442 CF. The fore-bay and the micro-pool are to be sized to 10% of the WQv and must be clearly shown on the plans.
- 3) The average depth used to calculate the orifice diameter is incorrect. The Hmax is difference in elevation between the Water quality elevation and the invert of the orifice discharge elevation. Havg is $\frac{1}{2}$ Hmax. The Havg should be 1.06 feet.
- 4) The pollutant storage volume is listed at 2,582 CF. This volume should be the sum of the forebay and micro-pool volume, which we calculate based on the WQv to be 884 CF.
- 5) Have you considered installing sand or other media filtration Table 2 or TARP approved BMP? We are skeptical of the long term viability of a concrete walled basin adjacent to the stream and within the Riparian setback. The aforementioned may provide a smaller footprint.

Block B-R wet extended detention basin

- 1) Provide the rationale for using the 3.73-acre drainage area listed in the Post –Construction Water Quality Design Table. Provide a drawing that clearly identifies the drainage area for this basin.
- 2) Provide the rationale for using a runoff coefficient of 0.85.
- 3) The design table indicates there will be a fore-bay. Wet extended detention basins do not include fore-bays. Please remove this reference.
- 4) The permanent pool as the Extended Detention Volume (EDv) must be sized to 75% of the WQV. The EDv volume is correct. The permanent pool design figure of 2582 listed under retention design is incorrect. It should be 6473 CF.

It appears that not all the catch basins located in Franks Parkway near Massillon Road are being routed into a BMP for Post Construction. The SWPPP amendment cannot be approved until all areas of the site discharging to the stream are routed thru an approvable Post Construction BMP.

If you should have any questions concerning any of the above, feel free to contact this writer at (330)963-1136 or by e-mail at phil.rhodes@epa.state.oh.us.

Sincerely,



Philip P. Rhodes, P.E.
Environmental Specialist II
Division of Surface Water

PPR/cs

Cc: Tom DiTirro, City of Green