Della Penna Engineering, Inc.
21 Whitetail Lane
Parkesburg, PA 19365

Phone 610-857-0045 Fax 610-857-0046

September 10, 2009

East Fallowfield Township
Board of Supervisors
2264 Strasburg Road
East Fallowfield, PA 19320

Re: "Baron Crest"
As-Built Plan Review #2

Dear Board Members:

The following revised plans and supporting documentation prepared by Howell Kline Surveying, LLC have been submitted for review:

Sheet	Description	Latest Date
1 of 3	As-Built Plan - Title Sheet	7/23/09
2 of 3	As-Built Plan - Improvement Construction Plan	7/23/09
3 of 3	As-Built Plan - Profile Sheet	7/23/09

- Legal Description Baron Crest Way Right-of-Way.
- Response Letter from Howell Kline Surveying dated 7/23/09.

The plans and documentation have been revised in accordance with the comments in my last review letter dated 9/23/08. The following items were noted during the review of the submitted documents:

1. The as-built grate elevation of the 2'x2' yard drain in the front of Lot 9 is 0.77' lower than the design elevation. The top of this inlet should be raised to the design elevation to reduce the deep depression around the yard drain. The top of this yard drain has been covered over again with soil and must be exposed to function as designed.

2. The 512.9 contour in the basin, which corresponds to the emergency spillway elevation, encroaches outside the stormwater management easement at several locations on lots 7 and 8. The grading should be revised to remain within the recorded easement on the plan or the easement will have to be revised.

3. The swale and riprap channel along the rear of lot 5 is also shown outside the stormwater management easement. As noted above the grading should be revised so that the swale is entirely within the easement or the easement will have to be revised.

4. The location of the observation well cap at the lower end of the large seepage bed on Lot 9 should be located and shown on the plan.

5. Additional topography has been provided on Lot 1. It appears that the grading is slightly different than the approved plan and all the runoff from the south does not enter Inlet 105 as intended. There have been on-going complaints about water in this area by the homeowner. The grading should be revised to direct runoff from the lot and from off site to the south into this inlet in a more direct manner. Two alternatives would be as follows: 1) Extend a pipe from this inlet with a new inlet located at the southwest corner of Lot 1 to capture any offsite runoff from the south before it enters the lot or 2) create a swale/berm along the fence along the Buck Run Road right-of-way to convey off-site water directly to the inlet.

6. The approved plan notes that the SWB-3 and SWB-4 outlet pipes from the basin are to have 14" and 12" orifices respectively which have not been installed over the 15" pipe openings. The proper orifice plates should be installed.

7. The as-built plan shows that the emergency spillway was constructed 53' wide at an elevation of 512.9. The design plans note that the spillway is to be 35' wide at elevation of 513.2. The Hydrologic Report for the basin design indicates that the spillway will function during the 50 and 100 year storms. Since the spillway was built much wider and slightly lower that the approved design an analysis should be performed to verify that it will still function to control the discharge rates as required.

8. The as-built plan notes that the basin volume at the spillway (elev. 512.9) is 20,105 cubic feet. The stage-storage table in the approved Hydrologic Report for the basin indicates that there should be 39,256 cubic feet of storage provided to that same elevation (512.92). The basin therefore must be regraded to provide the required storage or a revised analysis/design should be preformed to verify that it will still function as designed to meet township requirements.

9. The revised as-built plan includes detailed spot elevations along the level spreader outlet from the basin. There are only very minor deviations in the elevations along the length of the level spreader. However there have been numerous complaints from the downstream property owner about discharge from this facility. Before and after construction photographs of this area show that water has previously flowed in this natural drainageway. Since the design plans proposed to create sheet flow situation from the basin onto the downstream DeAbreu property, grading adjustments should be done to the level spreader to affect this result. Another option would be to pipe the basin outflow to the

stream on the DeAbreu property however this would require design calculations, temporary construction and permanent drainage easements and proper permitting.

10. A legal description should be provided for the proposed ultimate right-of-way of Buck Run Road.

11. The wearing course has been installed and final inspections of all improvements have been performed. The following items were noted:

    a. Many of the required landscape items have not been installed. The majority of those that were not installed are the perimeter buffer plantings and the basin plantings.

    b. The painted stop bar at the intersection with Buck Run Road needs to be installed.

    c. The areas along the edge of road need to be filled with topsoil to be flush with the edge of paving and then seeded and mulched.

    d. The basin bottom needs to be planted with the Wildlife and Plant Diversity seed mix specified on the plans.

    e. The joints where the basin outlet pipes are connected to the headwalls in the basin are open and allowing water to flow out of the joints. These should be sealed.

    f. Permanent Interceptor Swale No. 1 where it bends from the Lot 4&5 property line onto Lot 5 should be regraded to be 2 feet deep in accordance with the approved plan.

    g. All inlets should be cleaned of debris. The MS-4 decals should also be installed on all inlets.

Please feel free to call if you have any questions concerning this review or the outstanding items that were noted.

Very Truly Yours,

Christopher R. Della Penna, P.E.
Township Engineer

Cc: Vince Pompo, Esq. (via fax)
Howell Kline Surveying, LLC. (via fax)

Della Penna Engr., Inc.
21 Whitetail Lane
Parkesburg, PA 19365

Baron Crest - Completion of Improvements
Comparison of Contractors Estimates
Date : February 22, 2010

ITEM NO. (See Note 1)	Thomas Excav., Inc.	S.A. Macanga, Inc.
1	$1,000.00	$265.00
2	$2,000.00	Included in Item #8
3	$4,000.00	Included in Item #11f.
4	N/A	N/A
5	See Extra Item B	See Extra Item B
6	$1,000.00	$1,000.00
7	N/A	N/A
8	$42,000.00	$30,446.00
9	$1,000.00	Included in Extra Item A
10	N/A	N/A
11a	N/A	N/A
11b	$550.00	$1,800.00
11c	$1,000.00	$1,036.00
11d	$2,000.00	Included in Item #8
11e	$500.00	$360.00
11f	$1,500.00	$11,555.00
11g	$500.00	$2,250.00
Revised As-builts	$3,000.00	$0.00
Rake & Seed all Disturbed areas	$5,000.00	$0.00
Mobilization	$0.00	$1,500.00
Survey layout allowance	$0.00	$2,500.00
SUBTOTAL (APPROVED PLAN WORK)	**$65,050.00**	**$52,712.00**
Extra Item A - Install 15" HDPE Outlet Pipe from Basin to Stream (Not on approved plan)	$6,700.00	$7,918.00
Extra Item B - Install 15" HDPE Pipe and Inlet on Lot 1 to Southwest Corner of Lot. (Not on approved plan)	$5,000.00	$7,620.00
TOTAL	**$76,750.00**	**$68,250.00**

NOTES:

1. Item Numbers are based on the DPE, Inc. letter of September 10, 2009 and include only those items necessary to complete the improvements in accordance with the approved plan.
2. Extra Item A & B costs are for construction only and do not include fees for redesign or permitting. These items were not included on the approved plan.