



Attachment D

Project No. 11097  
March 17, 2011

Mr. Evan Karpf  
Carroll Planning Board  
PO Box 146  
Twin Mountain, NH 03595

Subject: **Major Subdivision Application & Plan Review  
Hunt, LLC – 2-Family Residential Subdivision  
Carroll Tax Map 207, Lot 36**

Dear Mr. Karpf:

With the intent of meeting the Town of Carroll Subdivision Regulation requirements for an engineering review, we have reviewed the subdivision application with supporting documents for the residential subdivision located off Paquette Drive in Twin Mountain, NH. The following documents were provided to determine compliance with the Town of Carroll Subdivision Regulations and conformance with standard engineering practices:

- "Subdivision of Land for Hunt Properties, LLC," Carroll, NH, prepared by Kellogg Surveying & Mapping, Inc., Littleton, NH, dated February 2011, sealed by Gardner P. Kellogg, LLS.
- "Hunt, LLC 2-Family Residential Development Plan Set" (Sheets 1-8), Carroll, prepared by Headwaters Hydrology, LLC, Littleton, NH, dated February 2011, sealed by Philip L. Beaulieu, P.E.
- "Drainage Analysis for Hunt, LLC – 2-family Residential Development," Carroll, NH, prepared by Headwaters Hydrology, LLC, Littleton, NH, dated February 2011
- "Hunt, LLC 2-family Residential Development – Waiver Request, Twin Mountain" prepared by Headwaters Hydrology, LLC, dated March 3, 2011, signed Philip L. Beaulieu, P.E.
- "USGS Location Map, Subdivision Application and Checklist (signed David Scalley, dated 2/11/11), NRCS Soils Map and Descriptions, Test Pit and Perc. Test Data, Wetland Delineation Letter (signed Sean Sweeney, CWS, dated December 16, 2010), Tax Maps, Conceptual Estimate of Construction Costs, and Waiver Request" prepared by Headwaters Hydrology, LLC.

Based on our interpretation of the Town of Carroll's Subdivision Regulations and our experience with similar projects, we recommend the following items be addressed prior to Planning Board issuing final approval:

- 1.1. Provide a statement of compliance that the proposed lots meet current zoning requirements or variances per 4.11 m, p. 14;
- 1.2. Provide the owners written agreement for subdivider's responsibility for maintenance of drainage easements per 4.12 A 12, p.16;
- 1.3. Provide State subdivision application submission date and approval status per 4.12 A (16), p 16;
- 1.4. Provide status of Performance and Maintenance Bond should the owner intend transfer of ownership of the road to the Town per 4.12 A 17, p 16;
- 1.5. Provide location of erosion and sediment control measures per 4.12 B 6, p 17;
- 1.6. Provide available field data (i.e. test pits, percolation tests, etc.) serving as the basis for the design of the infiltration basins per 4.12 B 7, p 17;
- 1.7. Provide a statement for domestic demands from the proposed development and estimated available fire flow at the interconnection per 4.12 C 4, p. 18;
- 1.8. Revise Note 19 of the General Notes on Sheet 2 of 8 to include work within Paquette Drive at the interconnection of the proposed watermain per 4.14 b, p. 20;
- 1.9. Submit a waiver request for proposed road grades greater than 1% in 100 feet per 4.14 j, p 20;

**March 17, 2011 Site Visit of Intersection of Ruby's Way & Paquette Drive**



**Looking South Along Paquette Drive**



**Looking North Along Paquette Drive**

- 1.10. Identify the intersecting angle of the proposed road with Paquette Drive and confirm that it is less than 75 degrees per 4.14 j, p. 20 and no less than 60 degrees per 4.17 3 A 4, p. 24;
- 1.11. Identify available site distances at the intersection of Ruby's Way and Paquette Drive for conformance with 4.17 3 A 3, p. 23. (See photos taken during a site visit on March 17, 2011); and,
- 1.12. Provide information on the design plans that specify the proposed water main and valves meet, or exceed, Town water specifications described in 4.28, p. 43.

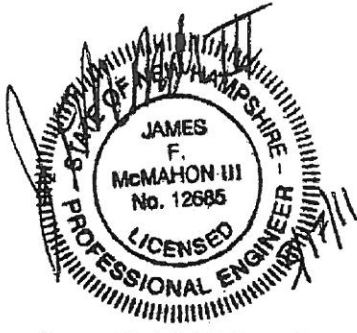
Other areas of concern not clearly defined in the Town's Subdivision Regulations, but require additional clarification to meet standard engineering practices in New Hampshire:

- 2.1. Revise Note 1 of the General Notes on Sheet 2 of 8 to include the most current NHDOT specifications, dated 2010;
- 2.2. Define proposed clearing limits by adding the proposed treeline to design plans;
- 2.3. Specify culvert headers or stone rip-rap to the culverts (as described on p. 27 of the Town Subdivision Regulations) on the design plans, add the proposed culverts to the road profile to clarify if minimum depth requirements are met, and provide outlet protection (if necessary) for culverts;
- 2.4. Provide the design speed for the proposed road design within the General Notes on Sheet 2;
- 2.5. Add erosion and sediment control best management practice locations on the site plans, and adjusting Note 3 of the Construction Sequence on Sheet 8 of 8 to include installation and maintenance of erosion and sediment control best management practices will conform with NH Stormwater Management Manual Volume 3;
- 2.6. If the owner intends to transfer ownership of Ruby's Way to the Town, we suggest the owner confirm in writing that construction observation, as required by 5.03, p. 46, will be provided by a licensed engineer in order to prepare as-built plans and certification of construction; and,
- 2.7. Regarding the waiver for permanent road length of greater than 600 feet per 4.14 m, p. 21 and 1,000 feet per 4.17 3 A 6, p 24, we feel granting the waiver is appropriate given the unique lot characteristics. Concerns with a lengthy emergency response to residents at the cul-de-sac may be addressed by providing pull off areas for fire apparatus staging. Pull off areas may provide additional emergency vehicle access within the travel way and is an example of an added design feature to increase the effectiveness of emergency response vehicles and ensure health and safety of residents within the subdivision.

Carroll Planning Board  
Hunt, LLC Subdivision  
Twin Mountain, NH  
March 17, 2011

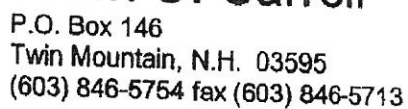
Should you have any questions or require additional explanation on our findings, please call me at (603) 444-4111.

Thank you,



James F. McMahon, III, P.E.  
*Project Engineer II*  
Horizons Engineering, Inc.

Cc: Hunt, LLC., David Scalley (owner)  
Headwaters Hydrology, LLC, Philip Beaulieu, P.E. (agent)  
File



**Invoice No.** 2011-7-22-01

**Customer**

Name D & S Construction/ Dave Scalley  
Address 105 Union Road Suite 104  
City Whitefield, NH 03598

Date 7/22/2011  
Date of Service March/April  
Notice 1st

<b>Qty</b>	<b>Item Description</b>	<b>Price</b>	<b>TOTAL</b>
	<b>HORIZONS ENGINEERING</b>		
	HUNT, LLC Technical Review - 3/16/2011-4/6/2011	\$1,487.50	
<b>Payment Details</b>			
<input type="radio"/> Cash <input type="radio"/> Check <input type="radio"/> Money Order			
		<b>TOTAL</b>	<b>\$1,487.50</b>

### Payment Details

- ☐ Cash  
☐ Check  
☐ Money Order

Name \_\_\_\_\_  
Check # \_\_\_\_\_  
Amount \_\_\_\_\_

Please Send Invoices Attention: Rena

*All payments are due withing 30 days of receipt of bill.*

*Thank you for your prompt payment.*