

April 14, 2025

Billie J. Theriault; Regional Supervisor  
Land Use Planning Commission  
45 Radar Road  
Ashland, ME 04732

Subject: Burnt Jacket Holdings I, LLC  
Beaver Cove Access Road (STI # 250115)  
LUPC Stormwater Review (Application #: RP 3313)

Dear Billie:

On behalf of Burnt Jacket Holdings I, LLC, Sevee & Maher Engineers, Inc. (SME) is pleased to submit this letter in response to the Stormwater Review comments by Sebago Technics dated March 4, 2025. The revised materials are intended to provide materials and address items that were of concern to the reviewer.

#### **REVIEW ITEMS**

- 1. The Applicant should provide Worksheet #3 and Worksheet #4 with the included phosphorus calculations.**

SME Response: Worksheets #3 and #4 are attached to this response as Attachment 1.

- 2. If the final number of structures on the parcel is unknown, the applicant should consider adding the proposed cottage and future structures to the total phosphorus export calculations, as this may be the only opportunity to consider phosphorus removal associated with those impervious sources.**

SME Response: The subject Nonresidential Development Application is limited to the private driveway. The cottage received a building permit from the LUPC. Phosphorous treatment will be provided for future developments if required by the applicable LUPC permitting.

The proposed project and associated uses will not result in a subdivision.

- 3. Plan Sheets C-201 and C-203 should be revised to show the design elements associated with the proposed turnaround locations such that they may be constructed in a way for use of the determined design emergency vehicle. Limits of disturbance including grading should also be shown and the erosion control devices extended to cover such limits.**

SME Response: The proposed turnaround at Station 13+00 will be updated to show grading and additional erosion control. This turnaround is an access to a future land management use which will be constructed as part of the driveway project and can be used as a turnaround for emergency vehicles. Figures 1 and 2 are included in Attachment 2 and show the turnaround location, grading, erosion control and traffic movements of an E'One fire truck. The proposed

turnaround located at Station 35+00 is an access to a future residential use. The final location of this access is still being evaluated because of conflicts between the access location and the driveway grading and stormwater measures. For the purpose of the driveway application, the end of the driveway can serve as a second turnaround location. Figure 3 is included in Attachment 2 and shows the traffic movements of an E'One fire truck turning around at the end of the driveway. The approximate access location at Station 35+00 is also shown on Figure 3 for reference. If these changes are acceptable to the reviewer, we will update the driveway plans accordingly.

- 4. Plan Sheet C-201 and C-203 should be revised to show the riprap ditch lined up with the swale indicated by the grading. On sheet C-203, the swale appears to diverge from the road around STA. 36+00 while maintaining a slope of 12%. The riprap ditch should extend through this section. Additionally, from station 39+00 to station 30+00 there is no planned relief culvert. It is recommended to follow the ditch relief culvert spacing and alignment standard outlined in LUPC Chapter 10.27 D. Roads and Water Crossings, given the steep slope of the roadway. Please provide calculations for adequate riprap diameter in proposed aprons based on anticipated flow.**

SME Response: The proposed driveway is in a fill section at Station 36+00. The intersection of the fill embankment with existing ground represents the bottom of the ditch. In areas of fill on the uphill side of the road North American Green (NAG) P-300 permanent erosion control matting will be installed on side-slopes. In areas of fill on the downhill side of the driveway, NAG S75 matting will be installed on side-slopes until vegetation is established. Additional callouts will be added to Drawings C-201 and C-203 accordingly. Drawing C-301 will be updated to show a detail for North American Green S75 matting.

Proposed cross culverts are not spaced in accordance with LUPC Chapter 10.27D, Roads and Water Crossings, due to site constraints and design requirements, which are addressed as follows:

- The cross culverts, catch basin inlet grates, and swales are sized to handle flows from the 100-year storm;
- The natural drainage sub catchments created by the property's topography direct runoff to predefined locations of the driveway. Cross culverts are proposed at each of those locations;
- Culverts are spaced to receive and disperse the total volume of runoff as evenly as possible along the driveway and to mitigate erosion; and
- Culvert inlets utilize a catch basin grate. Cross-culvert locations are coordinated with the retaining wall design to maintain enough cover on the downhill side to outlet the culverts.

The reviewer's concern with cross culverts between Station 30+00 and 39+00 is understood and will be addressed with the addition of a 24-inch culvert at Station 33+00.

The Riprap Inlet/Outlet Protection Detail on Drawing C-301 identifies the riprap diameter and the dimensions of the inlet and outlet aprons for each culvert diameter. The riprap diameter

and apron dimensions are in accordance with MEDEP standards. Each culvert was sized to handle the 100-year storm event.

The sizing of riprap in the swales was evaluated against MEDEP standards using flow velocity during the 25-year storm. Six-inch-diameter riprap is adequate for Stations 0+00 through 14+00. Eight-inch-diameter riprap will be used from Station 14+00 to 18+25 and from Stations 26+13 to 29+84. From Station 18+29 to 22+31, 10-inch-diameter riprap will be used. Callouts will be added to the plan set to specify this.

- 5. Plan sheets C-201 and C-203 should be revised to show additional erosion control measures such as slope blankets or mesh on the exposed side slopes being steeper than 3H:1V and not receiving riprap.**

SME Response: As mentioned in response #4, sideslopes will be stabilized with North American Green S75 matting or North American Green P-300 permanent erosion control matting. Callouts will be added to Drawings C-201 and C-203 and a detail added to Drawing C-301.

- 6. Plan sheet C-203 depicts the end of the access road at a grade of 11 %. There should be a barrier installed at the end to prevent vehicles from driving past the end of the road and down the steep slope. Similarly, erosion control measures should be extended past the end of the road to prevent erosion of the existing hillside in this area.**

SME Response: A temporary concrete barrier will be installed to prevent vehicles from driving past the end of the road. Additional erosion control has also been added (see Response to comment 3 above).

- 7. The plan views on the plan and profile sheets should more clearly label the centerline horizontal curvature. In particular, the curves at the end of the road would seem to make it difficult for the selected design vehicle to maneuver.**

SME Response: Line and curve labels will be added to the plan view on Drawings C-200 through C-203. As noted in response #3 above, an AutoTurn analysis was performed with an E'One fire truck and all curves are sized for safe traffic movements. See the figures included in Attachment 2.



If these responses are acceptable, SME will provide a revised drawing set for final review. If you have any questions or comments, please do not hesitate to contact me.

Sincerely,

SEVEE & MAHER ENGINEERS, INC.

A handwritten signature in black ink, appearing to read "M. Roy", written in a cursive style.

Michael Roy  
Senior Civil Engineer

Attachments

**ATTACHMENT 1**

**PHOSPHOROUS WORKSHEETS**

### Appendix D: Worksheet 3 - Mitigation credit

Project name: Beaconsfield Farm Project

Development type: Driveway

Sheet # 3 of 4

#### Mitigation credit when a pre-existing source is being eliminated

Mitigation Source Area Land Use	Acres	Export Coefficient (lbs P/acre/year)	Modifier	Pre-treatment Historical P Export (lbs P/year)	Treatment Factor for Historical BMP(s) (1.0 if no BMPs)	Historical P Export (lbs P/year)		Mitigation Credit (lbs P/year)	Comments
			0.5	0	1	0		0	
			0.5	0	1	0		0	
			0.5	0	1	0		0	
<b>Total source elimination mitigation credit (SEC)</b>								<b>0</b>	<b>lbs P/year</b>

#### Mitigation credit when a pre-existing source is treated by a new BMP

Mitigation Source Area Land Use	Acres	Export Coefficient (lbs P/acre/year)	Modifier	Pre-treatment Historical P Export (lbs P/year)	Treatment Factor for Historical BMP(s) (1.0 if no BMPs)	Historical P Export (lbs P/year)	Treatment Factor for New BMP(s) Chapter 6	Mitigation Credit (lbs P/year)	Comments
			0.5	0	1	0	1 -	0	
			0.5	0	1	0	1 -	0	
			0.5	0	1	0	1 -	0	
<b>Total source treatment mitigation credit (STC)</b>								<b>0</b>	<b>lbs P/year</b>

<b>TOTAL MITIGATION CREDIT (SEC + STC)</b>								<b>0</b>	<b>lbs P/year</b>
--	--	--	--	--	--	--	--	----------	-------------------

## WORKSHEET 4 - PROJECT PHOSPHORUS EXPORT SUMMARY

Summarizing the project's algal available phosphorus export (PPE)

**Project Name: Beaconsfield Farm**

<b>Project Phosphorus Budget - Worksheet 1</b>	<b>PPB</b>	41.22	lbs P/year
<b>Total Pre-Treatment Phosphorus Export - Worksheet 2</b>	<b>Pre-PPE</b>	10.79	lbs P/year
<b>Total Post-Treatment Phosphorus Export - Worksheet 2</b>	<b>Post-PPE</b>	10.79	lbs P/year
<b>Total Phosphorus Mitigation Credit - Worksheet 3</b>	<b>TMC</b>	0.00	lbs P/year
<b>Project Phosphorus Export (Post-PPE - TMC)</b>	<b>PPE</b>	10.79	lbs P/year

**Is the Project Phosphorus Export  $\leq$  the Project Phosphorus Budget? (PPE $\leq$ PPB)**

<i>If YES, PPE is less than or equal to PPB and the project meets its phosphorus budget. If NO, PPE is greater than PPB, more reduction in phosphorus export is required or the payment of a compensation fee may be an option</i>	YES
--	-----

<i>The amount of phosphorus that needs further treatment or compensation</i>	0      lbs P/year
--	-------------------

**Has Project Phosphorus Export been sufficiently reduced?**

*Is (Pre-PPE - Post-PPE)/Pre-PPE greater than 0.60?*

<i>If YES, in some watersheds the compensation fee is an available option. If NO, more treatment must be provided. PPE must be further reduced.</i>	N/A
---	-----

<i>The post-treatment phosphorus export must be less than 40% of the pre-treatment export (Post-PPE &lt; 0.4*Pre-PPE)</i>	N/A
---	-----

**If the project is located in a watershed that is eligible for a compensation fee (or is a residential subdivision with buffers), a compensation fee may be appropriate as follows:**

<i>If Project Export has been reduced by greater than 60% and less than 75%, \$25,000 per pound minus \$833 per 1% Percent Export</i>	N/A
---	-----

<i>If Project Export has been reduced by greater than 75%, \$12,500 per pound minus \$500 per 1% Project Export</i>	N/A
---	-----

**ATTACHMENT 2**

**FIGURES**

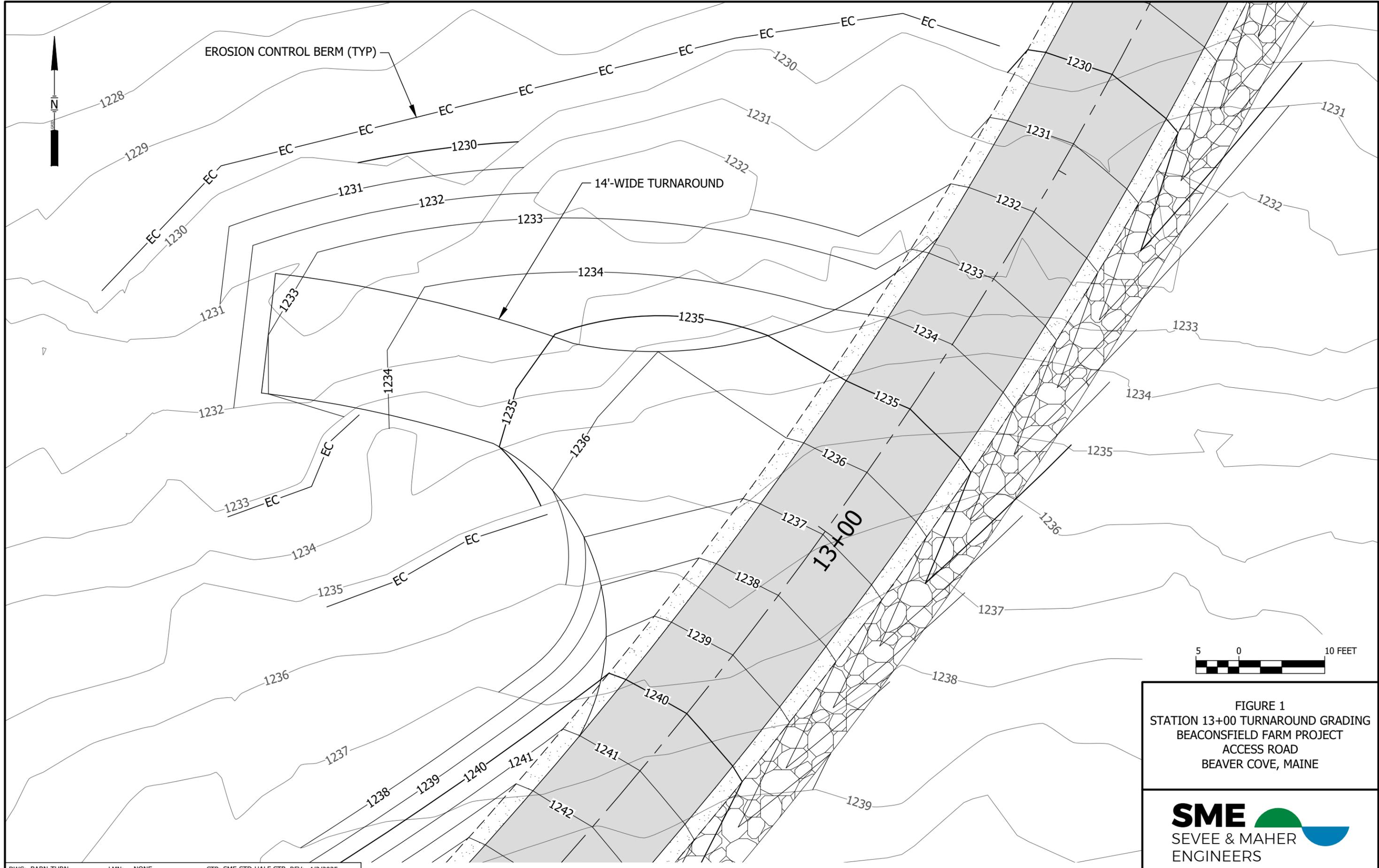
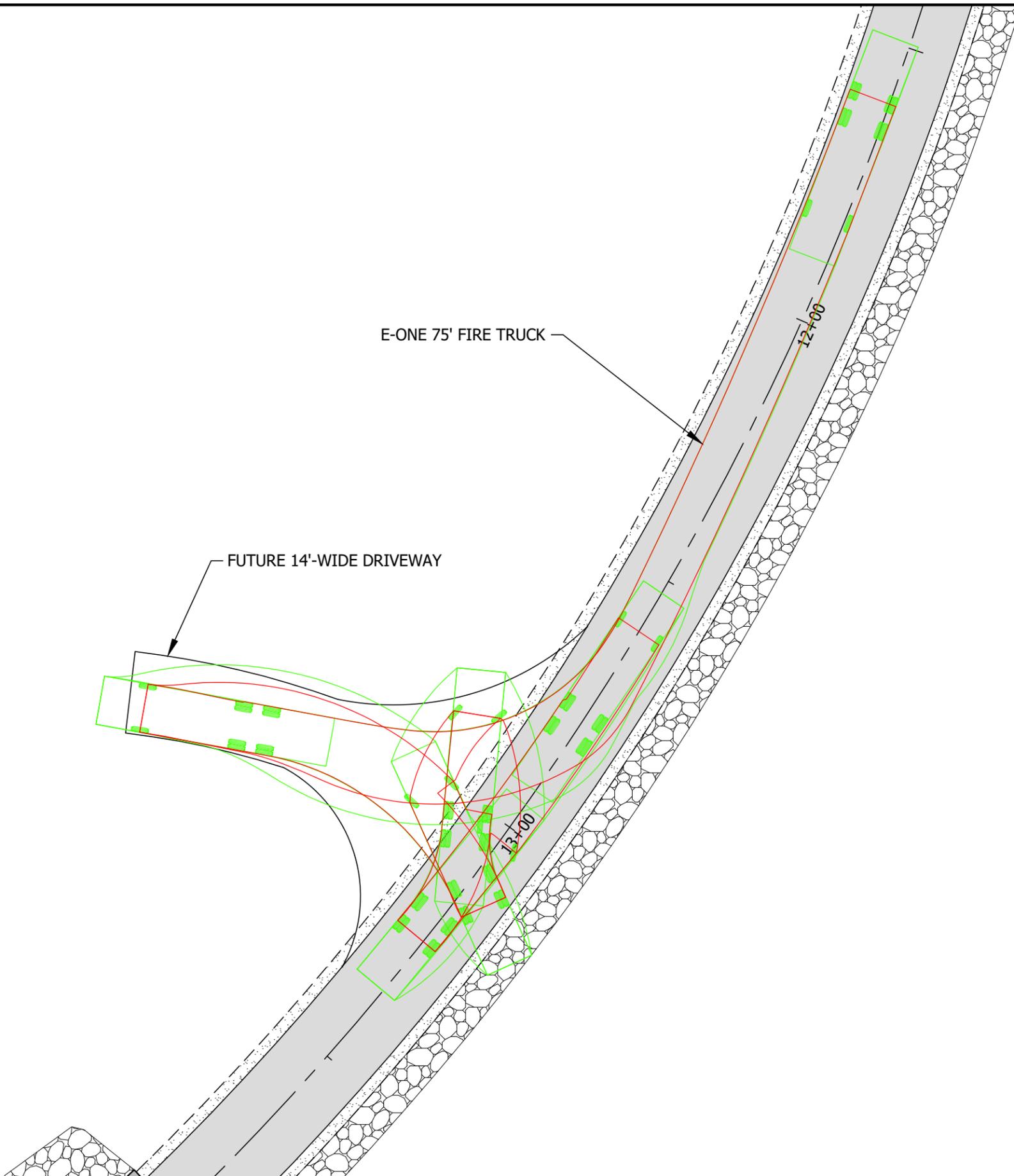


FIGURE 1  
 STATION 13+00 TURNAROUND GRADING  
 BEACONSFIELD FARM PROJECT  
 ACCESS ROAD  
 BEAVER COVE, MAINE



I:\Servers\Beaconsfield Farm Project\Acad\Figures\BARN-TURN.dwg, B. FIRE TRUCK-W-GRADE, 4/3/2025 12:09:51 PM, .sjm

\\server\dfs\Beaconsfield Farm Project\Acad\Figures\BARN-TURN.dwg, B. FIRE TRUCK-WO.GRADE, 4/3/2025 12:10:20 PM, sjm



**LEGEND**

- WHEEL PATH
- VEHICLE OVERHANG PATH



FIGURE 2  
 EMERGENCY VEHICLE  
 STATION 13+00 TURNAROUND  
 BEACONSFIELD FARM PROJECT  
 ACCESS ROAD  
 BEAVER COVE, MAINE



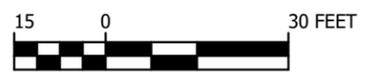
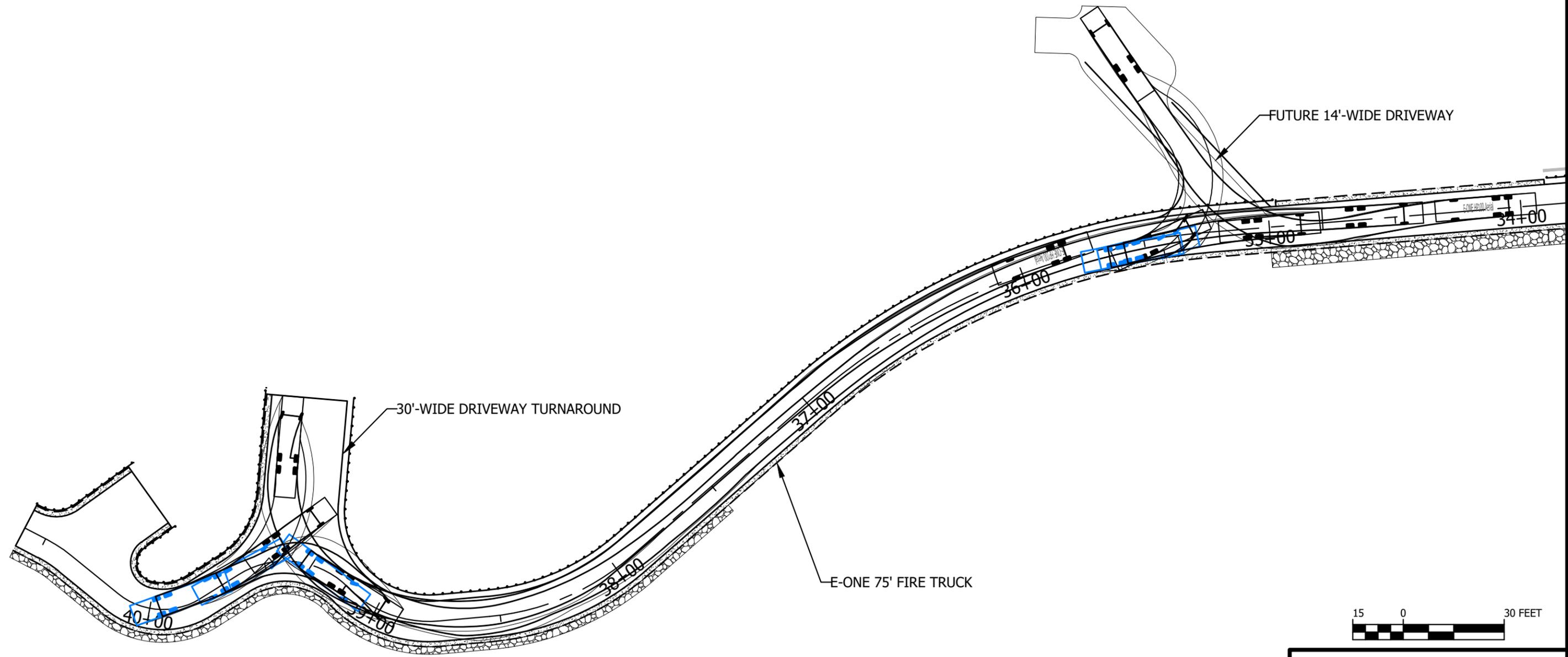
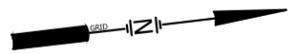


FIGURE 3  
EMERGENCY VEHICLE ACCESS  
BEACONSFIELD FARM PROJECT  
ACCESS ROAD  
BEAVER COVE, MAINE

