



September 26, 2017

Matthew C. Blume, P.E.,PTOE  
Connecticut Department of Transportation  
2800 Berlin Turnpike  
Newington, CT 06131

Project:  
Tri Town Trail - Northern Section  
Ledyard, CT 06339

**RE: Connecticut DOT Review of Tri Town Trail - Northern Section**

Mr. Blume,

Please see our responses and clarifications to your comments below.

*Comments as of July 18, 2017.*

***Design:***

1. *Due to the recreational nature of this project, the project sponsor is proposing to comply with the Accessibility Standards for Federal Outdoor Developed Areas. (approved by Ken Shooshan-Stoller via email on 8/30/2016).*

*Summary of attached email from FHWA: Although the PROWAG standards have not been officially adopted by FHWA, they are the preferred standards. As it is understood, the Federal Outdoor Developed Areas standards can be used, as long as there is documented justification that the PROWAG specifications would not be feasible under the particular circumstances of the project. However, if the trail is highly likely to be a transportation link, it is recommended that PROWAG be followed to the extent feasible. If not feasible, the specific reasons why not need to be documented by the project sponsor.*

**The trail has been designed to PROWAG standards.**

2. *The cost estimate provided does not include design costs, therefore it is assumed that the project sponsor will not be seeking reimbursement for costs associated with survey, design, and permitting efforts.*

**Design & Permitting costs for this section of the Tri Town Trail are under a separate contract with the Town of Ledyard and will be complete prior to construction. They are not part of this request.**

Brian Kent, PLA  
Chad Frost, PLA  
  
Landscape Architecture  
Urban Planning  
Sustainable Design  
Project Management

***Rights of Way:***

1. *This project appears to require permanent easements from at least two private property owners. The easements are shown bisecting the lots. Is the Town prepared to make all necessary acquisitions (with or without the owners' cooperation)?*

**Correct, the trail requires easements from two private land owners. The affected owners have been included in the design process from the beginning. Easement negotiations have been completed, and final easement language and boundaries have been established. Final documentation and authorization is expected by end of 2017.**

2. *This project appears to traverse a utility easement. Does the existing utility easement language allow the construction of a recreational trail? Have discussions begun with the utility company? Additional rights may need to be secured.*

**The utility company is aware of, and is supportive of the project.**

3. *The cost estimate provided does not include ROW costs, therefore it is assumed that the Town of Ledyard will bear the cost of all temporary and permanent easements, as necessary.*

**Correct. The Town of Ledyard is utilizing funds from its Open Space set-a-side account to acquire easements from the two private land owners.**

***Permitting:***

1. *The alignment traverses what appears to be town owned agricultural land, with soils mapped as "Prime Farmland Soils" and "Statewide Important Farmland Soils".*

**Correct, the town acquired this land with the intent for future outdoor recreation use and trails.**

2. *Trail traverses areas identified on NDDB mapping as areas with 'State & Federal Listed Species & Significant Natural Communities', mapped June 2017 (mapping provided below).*

**A wetland scientist has been contracted and NDDB mapping is underway.**

3. *The trail impacts stone walls located within the densely wooded area.*

**The trail utilizes existing openings in stone walls to minimize impact. Only one new opening is required and the ends of the stone wall will be carefully reconstructed. The understory of the existing forest is actually quite open due to the mature canopy. We do not anticipate significant disturbance, and have routed the trail to avoid significant trees.**

4. *The alignment has significant wetland impacts.*

§ ±4,100 sf of wetland spanned with bridges and boardwalks.

§ ±22,500 sf (0.5 acres) of wetland converted into stonedust trail.

- § *Wetland mitigation will likely be required due to disturbance associated with both construction activities and the final trail. This will likely escalate construction costs as the design develops.*
- § *The actual length of boardwalk trail required may be significantly higher than what was estimated due to proposed wetland impacts. Costs may escalate quickly through the design and permitting process.*
- § *Existing conditions provide for sheet flow across the area of the trail, into a wetland system. The proposed condition collects much of this sheet flow and conveys it to concentrated or point discharges. Impacts to the wetland system and hydrology of the area will need to be evaluated.*

**We understand the impacts, and have gone to great lengths to reduce them as much as possible. The trail has been re-routed multiple times to minimize disturbance and avoid wetland crossings. An area of wetland mitigation has been identified north of the northern bridge.**

**The project has already received local wetlands approval.**

5. *Category 2 Army Corp Permit Required. Depending on extent of temporary/construction impacts, an individual permit may be required.*

**Funding is in place and a contract for Army Corp permitting and shall be executed at the end of September 2017.**

6. *Water Quality Cert.*

**Funding is in place and a contract for Water Quality Certificate and shall be executed at the end of September 2017.**

7. *Section 404.*

**Funding is in place and a contract for Section 404 permitting and shall be executed at the end of September 2017.**

8. *The trail crosses the 100 year flood zone in two locations. (mapping provided below).*

**This is understood and has been accounted for in the proposed design. Funding is in place and a contract for permitting shall be executed at the end of September 2017.**

9. *Historic*

- § *Traverses what appears to be the historic Clark Farm (1025 Colonel Ledyard Highway), recent ownership history includes the Mashantucket Pequot Tribe.  
<http://ledyardhistory.org/virtualexhibit/vex17/toc.htm>*

**Funding is in place and a contract for Historic SHPO shall be executed at the end of September 2017.**

**Constructability:**

1. *The project proposes an alignment through wetlands and adjacent to steep slopes. There are constructability concerns that need further investigation, such as the ability to reach portions of this project with construction vehicles, without significantly impacting additional wetland area. Low environmental impact options to cross the wetlands with construction traffic have cost implications.*

**The project elements have been designed to minimize construction costs and impacts on the surrounding environment. The intent is to use light duty equipment and hand tools within ecologically sensitive areas. A mid-way point construction access shall be utilized from a private property to minimize disruption.**

***Estimate:***

1. *The Town of Ledyard provided an itemized construction estimate as part of their application package. The following items were not included in the estimate; Incidentals, Construction Staking, Minor Items, Inflation.*

**Correct.**

2. *Based on historic bidding results for similar projects, the following items appear to be underestimated; Excavation, Rock Excavation, Sedimentation Control System, Gravel Parking Lot, Structural items, etc.*

**The estimate numbers are based on recent trail projects, designed by Kent + Frost and constructed in Eastern Connecticut. Our plans and details minimize earth and rock hauling, and utilize the material where it is found – this may accommodate for some of the variation.**

3. *Accounting for the above, the anticipated construction costs associated with this project are forecasted to be approximately \$2.5m. This does not include Design, Permitting, or ROW costs, nor does it include provisions for additional boardwalk or wetland mitigation that will likely be required.*

**See note below.**

4. *Independent of the department's review, this project was reviewed in 2012 by the consulting firm VHB. At that time, the cost to construct the project was suggested to be approximately \$2 million.*

**The review by VHB was for the entire trail from RT 117 to RT 214 and was completed prior to any field work investigations. This proposed segment is much shorter and has all existing conditions and wetlands identified to fully articulate the cost. We welcome the opportunity to meet with DOT and VHB staff to accurately review this segment. The two projects are not comparable.**

***Summary:***

1. *The Transportation Alternatives program is a federally funded program, and as such, all federal requirements must be met through the design, permitting, and construction process.*

**This project intends to meet all requirements.**

2. *The current scope of the project (base bid) exceeds the available funding by approximately \$2 million.*

**We feel the provided engineered cost estimate is accurate and welcome the opportunity to discuss. The \$2 million cost estimate is not comparable for this project.**

3. *Costs associated with wetland mitigation and avoidance will likely escalate costs through the design process.*

**The design has been refined several times through the wetland approval process. We feel the design is fairly solid and should not significantly increase through the federal approvals.**

4. *There are concerns regarding the ability to secure the private easements as depicted.*

**We have great cooperation with the two private land owners and expect finalized easements to be forthcoming.**

5. *Significant direct and indirect wetland impacts proposed.*

**Correct. Due to topography and significant existing wetlands, impact is unavoidable. We have utilized all L.I.D. methodologies to minimize impact in a challenging location. Local wetlands approval has been granted.**

6. *A significant permitting effort will be required.*

**Correct. The Town of Ledyard is currently contracting all of the necessary permits prior to construction.**