



**THE STATE OF NEW HAMPSHIRE**  
**DEPARTMENT OF TRANSPORTATION**



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December 2, 2016

Ms. Stephanie Labbe  
Project Manager  
PAR Electrical Contractors, Inc.  
60 Fuller Rd  
Chicopee MA 01020

Dear Ms. Labbe:

The Department has reviewed the Sample Submission and Request for Exception to the NHDOT Utility Accommodation Manual (UAM). The following comments are to be incorporated into future submissions:

**General Plan Comments:**

1. On sheet WMNFG001, general note 3 specifies a "30" minimum unless otherwise shown". The note should include the minimum depth of 48 inches under the ditch line and 18 inches below the roadbed structural box if under pavement. It must be noted that if the proposed facility is under two surface conditions, the greater of the two depth requirements will take precedence.
2. Be aware that the roadbed structural box does not end at the edge of pavement but extends horizontally to the edge of the slope. Please see Appendix B of the UAM for typical sections.
3. Minimum depth of cover requirements are measured to the nearest part of the proposed facility; i.e. protective slab, top of splice vault, etc.
4. On sheet WMNFG001, general note 9 is incorrect as the minimum depth requirement is measured to the top of the proposed facility. Per the UAM, the minimum depth would be 30 inches to the top of the splice vault. However this is dependent on the surface condition. For example, if the splice vault is located under the ditch line, then the minimum depth to the vault would be 48 inches.
5. On sheet WMNFG001, general note 10 should read, "No open trenches and excavations will be allowed. Trenches shall be filled in at the completion of work each day."
6. A general note should be included to indicate that the Contractor, at their expense, is responsible to protect the Right of Way (ROW) and property monuments and any restoration due to the result of the Contractor's work. A detail for mailbox replacements needs to be included.

7. A general note should be included to identify that if any highway sign is removed; it shall be replaced within 48 hours of removal.
8. The symbol used on the plans for the trenchless construction does not match the symbol identified for trenchless installation on sheet WMNFG001.
9. All sheets need to reflect the State routes either by, NH \_\_\_\_, US \_\_\_\_, or I \_\_\_\_. Examples: NH 112, US 3, I-393 with the road name secondary.
10. The Town box in the Title block of the plans should indicate the specific Town the plan sheet is in and not the Towns within the plan set.
11. All culverts shall be shown on the plans and profiles. The sample submission is missing some crossings.
12. Verify all water and sewer mains and services and other underground facilities are shown on the plans.
13. Ensure culverts and other facility crossings are shown at the correct stationing on the profile.
14. All ROW types need to be labelled on each sheet. State ROW types include regular ROW, Controlled Access ROW (CAROW) and Limited Access ROW (LAROW). The plans should also differentiate between municipal ROW and state ROW.
15. Anticipated tree cutting/taking should be shown on the plans as the proposed facilities appear to potentially disturb existing trees.
16. The proposed underground transmission facility should cross below existing water/sewer facilities and culverts to reduce the risk of future relocation due to maintenance/improvements to those existing facilities.
17. The plans and profiles need to show the bridge foundation information. It is anticipated that bridge plans will be provided by December 1, 2016.
18. Crossings near bridges should be adjusted to outside the bridge abutments wherever possible.
19. Temporary wetland impact is not adequate justification for installing the transmission lines under the pavement. Example: 1492+00-1494+00.
20. Detail 1 should be reflecting an 18 inch minimum depth to the protective layer below the roadbed structural box. The Typical details (Details 1, 2 & 4) should be showing the "Traceable Safety Ribbon" below the structural box so it is not impacted during any NHDOT maintenance operation or project.
21. Typical details for construction under roadbeds with the structural box or applicable concrete sections and gravel shoulder should be included to represent to the Contractor the appropriate requirements.
22. The Department has concerns over the splice vaults "floating" in areas that have high groundwater elevations. Details 5 and 6 do not include any anchoring to prevent "floating". Is the top and bottom anticipated to have holes to prevent the structure from "floating"?
23. Details 5 and 6 also need to reflect the minimum 30 inches to the top of the vault cover outside the roadbed, 48 inches below ditch lines and 18 inches under the structural box when under the roadbed.

24. Detail 7 needs to show the structural pavement design required for the Contractor to meet or exceed.
25. Detail 8 note 1 needs to include that the box and cover needs to meet or exceed H20 loading. Vaults need to be designed by a structural engineer licensed in the State of NH.
26. A detail for stone check dams for ditch lines should be included. Clay collars and drainage off slopes when using fluidized backfill should be shown as well.
27. Labels need to be on the existing utilities to identify the facility on the Horizontal Directional Drill (HDD) plan sheets. Line styles as used in the plans are appropriate in the HDD plan sheets.
28. The Trenchless Crossing sheets show the anticipated work area but lack the detail to identify how the layout space will be protected overnight. An approximate construction time frame would help to identify how long each area will be affected by these construction operations.
29. The Traffic Control Typical sheets have symbols overwriting letters. This makes it difficult to review. Revise traffic control plan to meet current MUTCD requirements.

#### Location Specific Comments:

1. On sheet WMNFC181, the underground electric facility is proposed under a roadside ditch and per UAM is required to have a minimum depth of 48 inches. The plans are currently showing 30 inches.
2. The plans show the Town of Woodstock water main outside the right-of-way. Is this an accurate location?
3. On sheet WMNFC184 is showing the minimum separation from the existing sewer to be a minimum of 2 feet. The proposed facility travels over the existing sewer and the measurement is shown from the top of the proposed facility to the top of the sewer facility. The measurement should be shown from the bottom of the transmission to the top of the sewer facility.
4. On sheet WMNF184 the label pointing to the ROW line at approximately Station 1426+00 indicates that the Contractor is to verify the ROW limits and install the facility "within the determined ROW limits." The ROW needs to be verified during the design stage so the Contractor knows the construction limits.
5. What is the minimum distance the underground transmission facility can be from buildings? The Department has concerns with the distance between the transmission facility and the Town of Woodstock's building at approximately station 1454+50. Address is 17 Lost River Road.
6. On sheet WMNFC195 the transmission facility is shown in the profile going under an existing water facility but the plan is not showing this crossing. Is it a service or is it a main as stated on the profile?
7. Confirm the alignment of Parker Ledge Road as Google Earth imagery appears to contradict what is shown at station 1486+00.
8. Is the transition between directional drill and open cut possible at Sta. 1444+50. The proposed alignment would likely be restricted by conduit curve by deflection.
9. There is a discrepancy of the name of the crossing (Gordon Pond Brook or Lost River) between the plan set and the bridge plans for the river crossing at station 1473+50. Also the HDD plans

do not show the water crossing names. These should be labeled with the river or stream name not simply "river" or "stream".

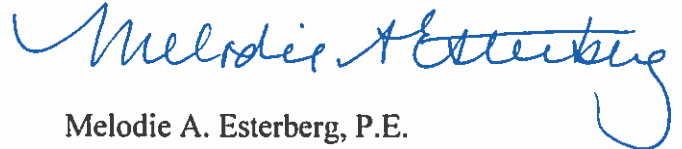
The Department has reviewed the Sample Request for Exceptions letter and provides the following comments to be incorporated into future submissions:

1. Exception requests for the alignment under the pavement need to provide the beginning and ending station, whether the left or right side of the roadway and reason for the request for each segment.
2. Exception requests for not crossing the roadway normal or at a right angle to the alignment of the roadway also need to provide the beginning and ending station, whether the left or right side of the roadway and reason for the request for each segment.
3. The exception request for the use of Schedule 40 PVC-EPC under the pavement is incorrect with respect to "additional cover beyond the minimum 18 inches required under the pavement". The requirement is a minimum 18 inches below the roadbed structural box which includes the pavement and structural materials (gravel and sand) under the pavement.

The location of each exception request segment is necessary as the Department will review and determine whether to grant the exception on an individual basis. No decisions have been made regarding the use of Fluidized Thermal Backfill at this time. This will be reviewed pending performance of the test sections over the winter.

If you have any questions regarding these comments, please do not hesitate to contact me.

Sincerely,



Melodie A. Esterberg, P.E.  
Chief of Design Services

MAE/LDS/mcp

CC: D. Rodrigue  
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