STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

2800 BERLIN TURNPIKE, P.O. BOX 317546
NEWINGTON, CONNECTICUT 06131-7546
Phone:

MAR 2 2 2005

Ms. Pamela B. Katz
Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Dear Ms. Katz:

Subject: Docket No. 272-The Connecticut Light and Power Company and the United Illuminating Company Application for a Certificate of Environmental Compatibility and Public Need for the Construction of a New 345 kV Electric Transmission Line and Associated Facilities Between Scovill Rock Switching Station in Middletown and Norwalk Substation in Norwalk, Connecticut Including the Reconstruction of Portions of Existing 115-kV and 345 kV Electric Transmission Lines, the Construction of the Beseck Switching Station in Wallingford, East Devon Substation in Milford, and Singer Substation in Bridgeport, Modification at Scovill Rock Switching Station and Norwalk Substation and the Reconfiguration of Certain Interconnection.

The Connecticut Department of Transportation (ConnDOT) submits the following comments on the Applicants' "Post-Hearing Brief" ("Applicants' Brief"), dated March 16, 2005.

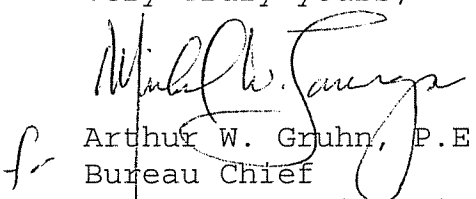
ConnDOT and the Connecticut Light and Power Company ("CL&P") entered into an encroachment agreement for the use of state highway rights-of-way for the proposed transmission facilities approved by the Siting Council in Docket 217 on January 27,2005. ConnDOT acknowledges extensive study and review were required for Docket 217 to produce the encroachment agreement. ConnDOT worked collaboratively with CL&P to make the encroachment agreement a reality.

The encroachment agreement allows CL&P to bury the top of the transmission facilities in state highway rights-of-way at a depth of only three feet in exchange for CL&P's waiver of relocation costs for future highway projects. Additionally, ConnDOT developed "Guidelines for the Use of Steel Plates" (copy enclosed) which allows CL&P to use skid-resistant steel plating during certain periods of the year for consecutive sections of open trenching not to exceed three hundred feet.

In the event that the Siting Council approves the Application in Docket 272 with the state highway rights-of-way as the preferred route for Segments 3 & 4, ConnDOT expects to use the Docket 217 encroachment agreement as the model for developing the encroachment agreement in this docket. This should substantially reduce the time to negotiate the encroachment agreement for Docket 272.

ConnDOT appreciates the opportunity to provide comments to the Siting Council since the information contained in this letter is directly relevant to the issues raised in the Applicants' Brief.

Very truly yours,



for Arthur W. Gruhn, P.E.
Bureau Chief
Bureau of Engineering and
Highway Operations

cc: Service List

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

GUIDELINES FOR USE OF STEEL PLATES IN STATE HIGHWAY RIGHT OF WAY

Generally, the use of plates to cover roadway excavations should be avoided. If a careful review of all reasonable alternatives indicates no other choice, the permittee may request permission from ConnDOT for their use. The use of steel plates during roadway excavations on state highways will remain solely at the discretion of the District Maintenance Director. Local traffic volumes, roadway dimensions, weather conditions and other existing circumstances could alter the following conditions.

Steel Plates can be used under the following conditions:

1.) For a trench that does not exceed 3' in width, the steel plate must be a minimum of 1" thick and a minimum of 12' in length
2.) For a trench that exceeds 3' in width, a professional engineer (licensed in Connecticut) must design the plate and support system. The plate and support system must be capable of supporting a 4 axle construction vehicle (see attachment)
3.) The maximum covered trench length – 160' or as determined by the District Maintenance Director as field conditions warrant
4.) The maximum trench width – 8' or as determined by the District Maintenance Director as field conditions warrant. If trench is wider, the trench walls support system must be designed by a Professional Engineer
5.) If the trench depth is greater than 3', sidewall shoring must be installed
6.) Plates must have permanent slip-resistant surface
7.) Plates must be pinned and ramped in place. When plates are left in place in excess of 48 hours, the plates must be recessed to road level and pinned
8.) Traffic control signs must be installed to warn motorists of steel plates
9.) Plates must be in accordance with ASTM Standards and certification must be provided by the permittee prior to securing permission.

Steel Plates can not be used:

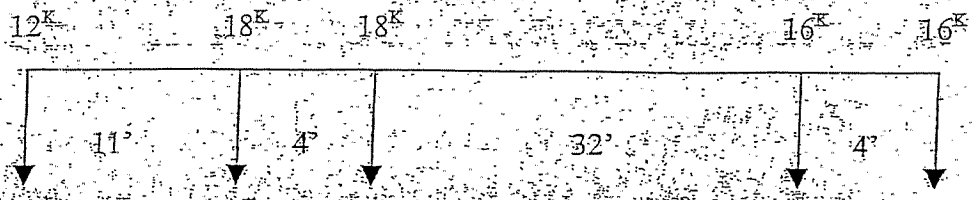
1.) Between November 1st to April 30th
2.) During holidays or weekends

Steel Plates can not be left in place at the following locations:

1.) At intersections
2.) Near stop bars or stop signs (minimum distance of 100')
3.) On limited access highways
4.) At handicapped ramps
5.) On bridges
6.) In areas where crosswalks are present including schools, hospitals, churches or elderly housing
7.) At any other locations deemed unsuitable by the District Maintenance Director

4. Whenever the Inventory rating for the HS20 vehicle is less than 34 tons, ratings shall also be computed for the following vehicles:

a. The standard 18-wheel tractor/trailer combination (3S2) with a gross vehicle weight of 80,000#, and an overall wheelbase of 51 feet (12k on front axle, 36k on front tandem, 32k on rear tandem). Axles are spaced at 11', 4', 32' & 4' (front to rear).

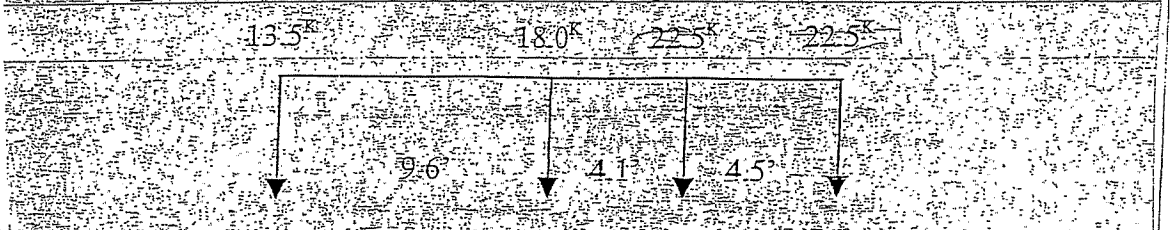


3 S2 Vehicle

b. The standard single unit vehicle (H20) with a gross vehicle weight of 40,000# and a wheelbase of 14 feet (8k on front axle and 32k on rear axle).

In addition, whenever the Operating rating for the HS20 vehicle is less than 58 tons, ratings shall be computed for the following vehicle:

The four axle single unit construction vehicle (4 Axle) with a gross vehicle weight of 76,500# with an overall wheelbase of 18.2 feet (13.5k on front axle and 18.0k, 22.5k & 22.5k on the rear three axles). Axles are spaced at 9.6', 4.1' & 4.5' (front to rear).



4 – Axle Construction Vehicle

December 23, 2004

Mr. Dave Forrest
Director – Transmission Engineering
Northeast Utilities Service Company
P.O. Box 270
Hartford, CT 06141

Dear Dave:

Subject: Northeast Utilities (NU)
Bethel-Norwalk Transmission Project
Use of Steel Plates

The Department of Transportation ("Department") reviewed your December 15, 2004 letter regarding the use of steel plates over trenches on the underground portion of the Bethel-Norwalk Transmission Project. Before responding to the specific issues listed in your letter, several global issues need to be addressed.

The Department developed the "Guidelines for Use of Steel Plates in State Highway Right of Way" (Guidelines) to apply to any underground installation in the state highway right of way. The Guidelines establish criteria under which the Department will permit the use of steel plates without the need for specific approval by anyone other than the District Maintenance Director or their representative. If a particular installation requires a deviation from the Guidelines, the proponent must submit the deviation to the Department for review and approval prior to any Departmental authorization for such deviation.

In the case of the Northeast Utilities' ("NU") transmission projects, NU should submit any contemplated deviation to the Department during the initial design review process. After review of the initial design plans, the Department will approve or disapprove the proposed deviation from the Guidelines, along with the plans. If field conditions require a deviation after the original plan approval, NU could submit a supplemental request for an engineering exception to the Department for approval.

The Department will not agree to the inclusion of any engineering or technical issue as a part of an encroachment agreement. Engineering and technical issues must be handled through the Department's engineering approval process that occurs during the

review of the encroachment permit application, which is separate from the encroachment agreement. As with deviations from the Guidelines, NU can submit these exception requests to the Department with the original plan submittal or as a supplemental request necessitated by field conditions. This is necessary to allow for the maximum flexibility for both the Department and NU to address changed or unanticipated conditions that may occur through the course of any project.

The Department's responses to your specific issues are as follows:

1. Discretion of District Maintenance Director

   The general discussion above addresses this issue. If NU needs to utilize steel plates beyond the criteria established in the Guidelines, then it is incumbent upon NU to prepare the necessary request and engineering documentation and submit it to the Department for review and approval. NU should make this submittal to the Department's Utility Section with the original plan submittal for Department approval, or if necessary, as a modification to the permit for the work as necessitated by field conditions, in which case the submittal would be made through the District permit office subject to review of the Department. The Department will review any such submittal and inform NU of its acceptance or rejection. The Guidelines specifically state (Items 2 and 4 under the conditions of use) that if trench width or depth exceed the parameters listed, then NU should submit a design by a Professional Engineer licensed in Connecticut for the Department's review.

2. Maximum Trench Length

   The Department reviewed your request to allow a longer trench length to be covered by the steel plates. The Department will agree to extend the maximum longitudinal length to three hundred feet, conditioned upon conditions at any given location.

3. Maximum Trench Width

   Again, these Guidelines are intended for use in any underground application. The maximum widths in the guidelines have been determined for the typical one-inch thick steel plate. If needed, the Department may allow a wider trench if NU submits suitable engineering designs based upon conditions that NU anticipates at the proposed location for the wider trench. (See items 2 and 4 under conditions of use).

4. Use of Steel Plates during Winter Periods

The use of steel plates during the winter months creates significant winter maintenance and safety issues. Although the date of any given winter storm may be unpredictable, the Department monitors weather conditions each year in anticipation of storms that require snow and ice control. Roads cannot be plowed with steel plates in place and when unpredicted storm or weather conditions develop, there would not be sufficient time to remove the plates. In addition, steel plates are susceptible to frost and ice build up that will be difficult to control. While the Department understands NU's desire to avoid costs, it is unacceptable to the Department to put the motoring public at risk and allow the use of steel plates during winter driving conditions. The Department is currently reviewing the historical storm records for the past ten years to determine if the prohibition period could be reduced. Nonetheless, the Department will require NU to remove steel plates prior to any impending winter storms during the non-prohibition period.

5. Use during Holidays and Weekends

If NU's contractor will be actively working on a holiday or weekend (as permitted by the traffic restrictions for the project and location), the Department will permit the use of steel plates in accordance with the Guidelines. In no case will steel plates be permitted to remain in place if NU's contractor will not be working for more than a twenty-four hour period.

6. Use at Intersections

Use of steel plates is allowed at intersections, but not within 100 feet of a stop bar or stop sign. Even with a skid resistant surface, there is potential for reduced stopping ability. The 100-foot restriction is intended to provide a reasonable safety buffer in the area where the potential is greatest for braking action and possible "panic" braking. The Department will not change this requirement.

As stated above, if NU has a need for utilizing steel plates on trenches exceeding those permitted by the Guidelines, the engineering design for these installations should be submitted to the Department as soon as possible. The steel plates and trench wall support details must be designed to be capable of supporting the loads of a four axle construction vehicle as detailed on the attachment to the Guidelines. The maximum deflection of the plate when loaded at the center of the trench must be provided and identified in the

design submitted to the Department and must be reasonable to avoid impact loading on adjacent plates.

We will notify you of any acceptable change to the winter restrictions on the use of steel plates within the next week.

Very truly yours,

Arthur W. Gruhn
Chief Engineer
Bureau of Engineering and
Highway Operations