

STATE OF NEW HAMPSHIRE
Inter-Department Communication

DATE: February 26, 2013
AT (OFFICE): NHPUC

FROM: Leszek Stachow,



SUBJECT: DT 12-054 Comcast of Maine/New Hampshire, Inc.
Petition to Cross 240 Public Waterways

TO: Commissioners
Debra Howland, Executive Director

On February 29, 2012, Comcast of Maine/New Hampshire, Inc. ("Comcast") filed a petition, pursuant to RSA 371:17, seeking approval for a General License to Cross Over 240 Public Waters. This filing was made pursuant to an agreement with Commission Staff to resolve issues raised in Commission Order No 25,175 issued November 30, 2010 in Docket DT 10-239.

The crossings in this petition are located in the following New Hampshire counties:

- o Cheshire County
- o Grafton County
- o Hillsboro county
- o Merrimack
- o Rockingham
- o Strafford
- o Sullivan

In its petition, Comcast requested that the New Hampshire Public Utilities Commission ("the Commission") issue a general license to permit Comcast to maintain its existing cables and other wires over and across certain of the public waters of the State of New Hampshire.

According to the petition, Comcast has license agreements with utility pole owners that govern all of its pole attachments in New Hampshire, requiring all facilities to be built in compliance with specifications of the latest editions of the Bellcore Bluebook of Construction Practices, the National Electric Safety Code (NESC) and the

National Electric Code (NEC). In addition Comcast has stated that upon information and belief, all of the utilities with whom Comcast has license agreements have been authorized by the Commission for their water crossings, and that therefore Comcast believes that all of its water crossings using the poles of New Hampshire public utilities comply with RSA 371:17.

Comcast's petition filed on February 29, 2012 listed a total of 240 water crossings that are classified at or above the 4th Order River level, which require license to cross state water pursuant to RSA 371:17.

Review of NESC code requirements.

Using a random sample of water crossings (27 in total) representing more than 10% of the number of crossings submitted by Comcast, Staff reviewed documents and data provided by Comcast, including the diagrams, descriptions, and maps of the crossings.

Staff encountered significant difficulties in reviewing the sample group of crossings for the following reasons:

- Diagrams are often unclear
- Drawn by hand and incomplete
- Although GPS coordinates are furnished, pole numbers were frequently missing on the technical diagrams and never provided on the accompanying location maps
- Limited description of adjacent attachments and appurtenances
- No sag or tension details furnished

Additionally, as demonstrated on the attached worksheet, a number of the minimum cable clearances appear to be out of compliance with the NESC. In all cases the limited detail on the technical diagrams made it impossible to determine if the crossing complies with requirements of the NESC regarding vertical clearances to water surfaces.. The attached worksheet is a summary of Staff's review.

As a result, Staff was unable to confirm whether utility crossings at these locations comply with the NESC.

Recommendations and Conclusions

Based upon Staff's analysis and findings utilizing the 10 % of crossings sampled, Staff recommends that the Commission require that Comcast resubmit the crossing details in augmented form thereby making it possible for Staff to determine whether the crossings are in compliance with the NESC and if not to require corrective action.

Staff recommends that the suggested detail in the revised filing should include the following as a minimum:

1. Attachment heights to be clearly marked for each attachment on both poles.
2. Vertical distance from Comcast cable to water surface in the center of the span.
3. Each cable to be clearly designated as Primary electrical, Secondary electrical, Neutral, and all existing municipal and/or communications cables in turn.
4. Distance between the poles to be clearly designated, including distance of the span over the waterway.
5. The map of the site to include a clear positioning of both poles, their relevant pole numbers and the name of the body of water.
6. Technical detail to include, Span Length, Span Tension, maximum Sag under Heavy Load conditions, Weight of cable and supporting strand in lbs/ft, to correspond to diagram details and to facilitate verification of sag calculation.
7. A clear statement of the location including the town in which the crossing is located and the nearest cross street.
8. Indication of whether water is suitable for sailing.
9. Demonstration that crossing complies with Table 232-1 and Table 235-5 in the NESC assuming heavy load conditions.

Sample of 27 crossing locations in the following: Auburn, Chester, Derry, Brentwood, Epping and Exeter

Crossing location	Clear details in as built drawings/ maps	All necessary appurtenances included	Can minimum water clearances be verified under heavy load conditions	Is there 40 inches between electrical neutral and proposed attachment on each pole	Possibility to determine Max sag	Is there a minimum of 12 inch clearance between proposed attachment and adjacent communication attachments at each pole
Auburn, Massabesic Lake, #4 Londonderry Turnpike, E29-055/623-51 and E 056/52 COMCAST Map ref: 498-509	No	Unknown	No	Unclear	No	Yes
Auburn, Massabesic Lake, #5 Londonderry Turnpike, E056/52 and E 057/53 COMCAST Map ref: 498-509	No	Unknown	No	Yes	No	Yes
Auburn, Massabesic Lake, #6 Londonderry Turnpike, E057/53 and E 059/623-55 COMCAST Map ref: 498-509	No	Unknown	No	Yes	No	Yes
Auburn, Sucker Brook #1. Manchester Road, I-103/T2 and 104-T-75-1 COMCAST Map ref: 502-512	No	Unknown	No	No (Pole 104/T-75-1)	No	Yes
Auburn, Sucker Brook #2. Hooksett Road, E6T-185-011 ½ /7-44 ½ and E1/7-45 COMCAST Map ref: 501-512	No	Unknown	No	Yes	No	Yes
Chester, Exeter River #1 Freemont Rd 1414-15/62 and 1414-15 ½ /62 ½ COMCAST Map ref:494-525	No (unmatched pole designation)	Unknown	No	Yes	No	Yes
Derry, Beaver Brook, #5, Highland Avenue, NT/NT and 85-18/19	No	Unknown	No	Yes (Note:intervening cable 'FA' is located	No	Yes

COMCAST Map ref: 476-513				over 40 inches from Neutral and >12 inches above Comcast cable)		
Brentwood, Dudley Brook, #1 Middle Road, 1-18/42-2 and 1-17/42-1 COMCAST Map ref:498-539	No	Unknown	No	Yes	No	Yes
Brentwood, Dudley Brook, #2 Pickpocket Road 2-2-24/NT and 2-3-23/NT COMCAST Map ref:496-540	Yes	Unknown	No	Yes	No	Yes
Brentwood, Exeter River #1 Haigh Road, 12-13/43-13-432 and 12-14/14 COMCAST Map ref:496-538	Yes	Unknown	No	Yes	No	Yes
Brentwood, Exeter River #2 Crawley Falls Road, 1-115/37-53 and 69/52 COMCAST Map ref:495-535	No	Unknown	No	Yes(intervenin g cable 'FA" is located < 40 inches from Neutral , 25 and 36 inches respectively and >12 inches above Comcast cable)	No	No, (Pole 69/52) distance is 8 inches)
Brentwood, Exeter River #3 Route 125, 1A-1/301C-1 and L 301C /301-2 COMCAST Map ref: 495-535	No	Unknown	No	Yes	No	Yes(However position of cables C and FA appear to be marked as reversed on one pole(unmarked))
Brentwood, Exeter River #4, Mill Road, 7-18/113 and 7-17/112 COMCAST Map ref:494-534	Yes	Unknown	No	No (Pole 7- 18/113 distance is 38 inches)	No	Yes
Brentwood, Exeter River #6, Route 107 8-10/31-11 and 8-1B /10 ½	No	Unknown	No	Yes	No	Yes

COMCAST Map ref:493-534						
Epping, Pawtuckaway River, Folsom Mill Ln, 63-11/5?0 and 63-10/3 COMCAST Map ref:508-530	No	Unknown	No	No for both poles	No	n/a
Epping, Lamprey River #1, Hedding Rd 57-24/24 and 57-25/62-25 COMCAST Map ref:509-538	No	Unknown	No	Yes	No	Yes
Epping, Lamprey River #2, Route 125, 67-2/114-1 and 67-1/MT COMCAST Map ref:519-544	No	Unknown	No	No (Pole 67-2/114-1 distance is 27 inches)	No	Yes
Epping, Lamprey River #4, Main Street, 37-24/1-5 and NT-6 COMCAST Map ref:507-535	No	Unknown	No	Yes	No	Yes
Epping, Piscassic River #1 Exeter Road, NT-210 and NT /113-211 COMCAST Map ref:505-537	No	Unknown	No	Yes,(but intervening (S fiber) cable is 39 inches from Neutral on pole NT 112-211).	No	No,(on pole NT 210 distance is 11 inches)
Epping, Piscassic River #2, Route 125 70-12/38 and 70-11/37 COMCAST Map ref:504-535	No	Unknown	No	Yes	No	Yes
Exeter, Colcord Pond, Brentwood Road, 18/18 and 19/19 COMCAST Map ref:496-543	No(Pole numbers as stated and in technical diagram disagree	Unknown	No	Yes	No	Yes
Exeter, Dudley Brook, Brentwood Road, 87/1378-8 and 1377/80/86 COMCAST Map ref:497-541	No(Pole numbers as stated and in technical diagram disagree	Unknown	No	Not enough data to determine	No	Yes

Exeter, Exeter River # 2, Kingston Road, 57-3-139 and 56/138/51 COMCAST Map ref:493-542	No(Pole numbers as stated and in technical diagram disagree	Unknown	No	Yes	No	Yes
Exeter, Exeter River # 3, Linden Street, 32-59/12154/1705 and 60 COMCAST Map ref:492-544	No	Unknown	No	Not enough data to determine	No	Not enough data to determine
Exeter, Exeter River # 4, Court Street, 567/56-1907 and Missing pole number COMCAST Map ref:492-545	No(Pole number missing)	Unknown	No	Yes(however intervening 'SEC 'cable is 12 inches from neutral on one pole and 11 inches from neutral on other)	No	Yes
Exeter, Exeter River # 5, High Street, 99-1 and Missing pole number COMCAST Map ref:495-546	No	Unknown	No	Not applicable	No	No (at both poles adjacent cables < 12 inches distant)
Exeter, Little River, Garrison Ln 5/109-5 and 14/75-6 COMCAST Map ref:497-543	No	Unknown	No	Yes	No	Yes