

**The State of New Hampshire  
Before the  
Public Utilities Commission**

**PETITION OF FREEDOM RING COMMUNICATIONS d/b/a BAYRING COMMUNICATIONS FOR  
LICENSE TO CONSTRUCT AND MAINTAIN A UTILITY CABLE/CONDUIT OVER AND ACROSS THE  
CONCORD AND MONTREAL RAILROAD BETWEEN UTILITY POLE CECO 13 AND UTILITY POLE  
CECO 12.**

TO THE PUBLIC UTILITIES COMMISSION:

Freedom Ring Communications d/b/a BayRing Communications, a public utility engaged in the generation, transmission, distribution and sale of telecommunications in the State of New Hampshire, hereby petitions the Public Utilities Commission ("Commission"), pursuant to RSA 371:17, for a license to construct and maintain telecommunication lines over and across the Concord and Montreal Railroad in the City of Concord, New Hampshire, and in support of its petition states as follows:

1. In order to meet the reasonable requirements of service to the public, BayRing Communications is proposing to construct a new 216 fiber optic line. The new line will help to accommodate the growth in demand and to obtain a greater level of service reliability in the Concord area.
2. The new line will cross the C&M RR along the east side of West Portsmouth Street.
3. The location of the proposed crossing is shown on the attached location map.
4. The design and proposed construction of the crossing is shown on the attached Dewsnap Engineering Associates LLP. Profile drawing entitled "Existing Overhead Merrimack County, Near west Portsmouth Street, Concord, NH".
5. The proposed crossing will occur between two existing Utility poles set approximately 59 feet apart. The existing pole on the west side of the C&M RR, Utility Pole CECO 13 is approximately 45 feet tall. The existing pole on the east side of the C&M RR, Utility Pole CECO 12 is approximately 45 feet tall. The line will be made up of two materials; Conductor nominal diameter 5/16in 7-strand steel EHS and 1 non-supporting cable, added diameter = 0.750 in, weight = 0.124lb/F which contains 216 fiber optic. The Strand and non-supporting cable will be sagged using the Heavy Load condition (0° F, pounds psf wing loading and ½" radial ice) with a maximum tension of 2764 lbs under that load.

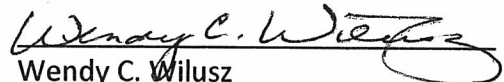
6. Using the above design criteria, the maximum sag of the non-supporting cable and minimum clearances for the crossing have been determined and designed as follows:
- A. 0° F, Non-supporting cable – The maximum sag on the fiber optic cable under this condition is 0.41'. The minimum clearance to land is 32'.
  - B. 120° F, Non-supporting cable – The maximum sag on the fiber optic cable under this condition is 0.10'. The minimum clearance to land is 32'.
  - C. 50° F, Non-supporting cable – The maximum sag on the fiber optic cable under this condition is 0.07'. The minimum clearance to land is 32'.
7. There are no NHDES or NHDOT permits necessary specifically for the construction of this crossing.
8. The proposed crossing has been designed and will be constructed, maintained and operated by BayRing Communications, its affiliates and contractors.
9. BayRing Communications submits that the license petitioned for herein may be exercised without substantially affecting the rights of the public in the crossing of the Concord and Montreal Railroad. Minimum safe line clearances above the railroad will be maintained at all times. The use of the railroad will not be diminished in any material respect as a result of the overhead line crossing.

WHEREFORE, BAYRING COMMUNICATIONS respectfully requests that the Commission:

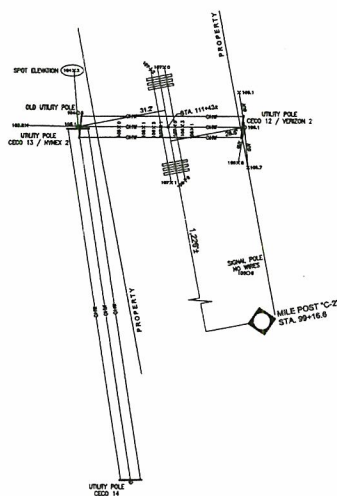
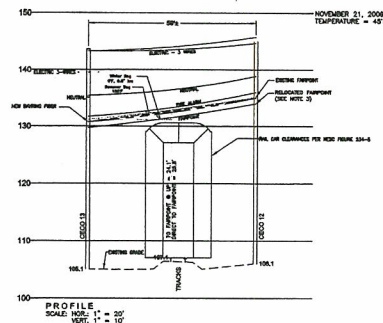
- a. Find that the license petitioned for herein may be exercised without substantially affecting the railroad which are the subject of this petition;
  - b. Grant BayRing Communications a license to construct and maintain communication lines over and Concord and Montreal railroad in Concord, New Hampshire, as specified in the petition; and
  - c. Issue an Order Nisi and orders for its publication.
- Dated at Portsmouth the 11<sup>th</sup> day of January, 2010.

Respectfully submitted,

BAYRING COMMUNICATIONS  
By Its Director of Operations

  
Wendy C. Wilusz  
Director of Operations

BayRing Communications  
359 Corporate Drive  
Portsmouth, NH 03801  
(603) 766-1000



#### NOTES:

1. ALL PROPERTY LINE DATA TO BE CONSIDERED APPROXIMATE.
2. OHW - DENOTES OVERHEAD WIRE
3. MAINTAIN 12" SEPARATION BETWEEN FIRE ALARM AND BAYRING AND BETWEEN BAYRING AND FAIRPOINT AT POLES CEC012 & CEC013

#### LEGEND

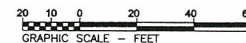
- Summer Sag 120°F  
- - - Winter Sag 0°F 0.5" Ice

Sag and Tension Data Conductor nominal Dia 5/16in 7-Strand Steel EHS Span = 60.0 Feet NESC Heavy Load Zone Creep is NOT a factor									
Temp °F	Ice Inch	Wind PSF	K lb/ft	Weight lb/ft	Final Sag Ft	Tension lb	Sag Ft	Initial Tension, lb	
0	0.00	0.00	0.00	0.205	—	—	0.03	2772	—
-20	0.00	0.00	0.00	0.205	—	—	0.04	2594	—
0	0.00	0.00	0.00	0.205	—	—	0.04	2594	—
30	0.00	0.00	0.00	0.205	—	—	0.04	2326	—
50	0.00	0.00	0.00	0.205	—	—	0.04	2237	—
60	0.00	0.00	0.00	0.205	—	—	0.04	2060	—
80	0.00	0.00	0.00	0.205	—	—	0.05	1795	—
120	0.00	0.00	0.00	0.205	—	—	0.06	1533	—
167	0.00	0.00	0.00	0.205	—	—	0.08	1134	—
212	0.00	0.00	0.00	0.205	—	—	0.12	768	—

Above: Initial Data Prior to Cable Installation

\* Design Conditions

1 Non-Supporting Cable(s) Added, Dia = 0.750 in, WT = 0.124lb/ft ± 0.000lb/ft									
Temp °F	Ice Inch	Wind PSF	K lb/ft	Weight lb/ft	Final Sag Ft	Tension lb	Sag Ft	Initial Tension, lb	
0	0.50	4.00	0.30	2.508	0.41	2764	0.41	2764	—
32	0.50	0.00	0.00	1.612	0.30	2379	0.30	2401	—
-20	0.00	0.00	0.00	0.329	0.08	2774	0.05	2774	—
0	0.00	0.00	0.00	0.329	0.08	2584	0.06	2586	—
30	0.00	0.00	0.00	0.329	0.08	2300	0.06	2329	—
50	0.00	0.00	0.00	0.329	0.07	2205	0.07	2240	—
60	0.00	0.00	0.00	0.329	0.07	2016	0.07	2063	—
90	0.00	0.00	0.00	0.329	0.08	1733	0.08	1799	—
120	0.00	0.00	0.00	0.329	0.10	1451	0.10	1539	—
167	0.00	0.00	0.00	0.329	0.15	1018	0.13	1144	—
212	0.00	0.00	0.00	0.329	0.24	626	0.19	788	—



EXISTING OVERHEAD	
MERRIMACK COUNTY	
NEAR WEST PORTSMOUTH STREET	
CONCORD, NH	
Prepared For: Bayflying Communications 350 Corporate Drive Portsmouth, NH 03801-6808	Prepared By: Dewarup Engineering Assoc. LLP 178 Lincoln Avenue - Seaport, MA 01906 Tel: (781) 233-0985
Date: November 30, 2009	Scale: As Shown
Ver. Plan: V 21 / 37	Benchmark: A S S U M E D
Field By: P.A.D. & S.F.D.	FILE No:
Drawn By: S.F.D., Chk. By: P.A.D.	

**CEG** Consulting Engineers Group Inc.  
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Add Proposed Communication line profiles and data table  
12/22/09 TO/FF



## Railroad Crossing Location

