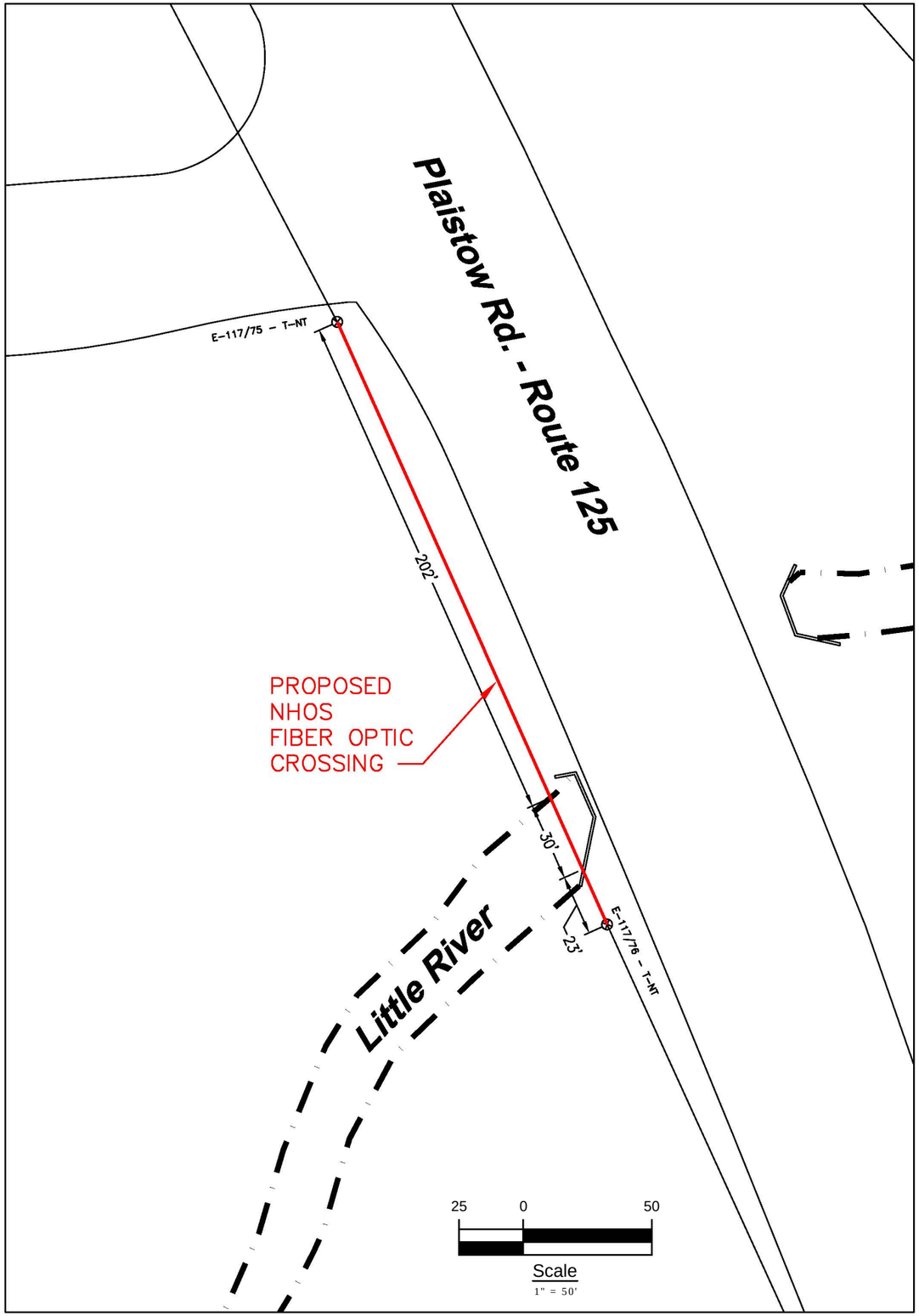

NHOS
New Hampshire Optical Systems
New Hampshire Optical Systems, Inc.
99 Pine Hill Rd.
Nashua, NH 03063
(603-821-6467)

Proposed River Crossing Plaistow, NH

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Project # TID-244 - Primary 18
Drawing # AC-PLA-RIV-2

Date: 02/19/13
Revision # 2

Proposed
River Crossing
(Little River)
Plaistow, NH

Location:
Plaistow Rd., Plaistow, NH
Nearest cross street- Garden Rd.

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LOCUS MAP
(Not to Scale)

CommScope®

Spanmaster ® Release 3.1 Sag / Tension Computations

Waveguide 09/01/11 Waveguide
River and Rail Crossings

Selected Cables	X-SECT AREA (sq.in)	EFF MODULUS (psi)	NOMINAL DIAM (in)	EFF.EXP. COEFF. (1/F)	CABLE WEIGHT (lb/ft)	E*A LOAD BEARING CAPACITY (lbs)	MAX. RATED LOAD (lbs)
1/4"6.6mEHS	0.0352	2.60E+07	0.250	5.60E-06	0.1210	914940	6650
ORF-O-288-LN	0.5782	2.70E+05	0.858	1.13E-05	0.1960	155982	651
Bundle			1.108		0.3170		

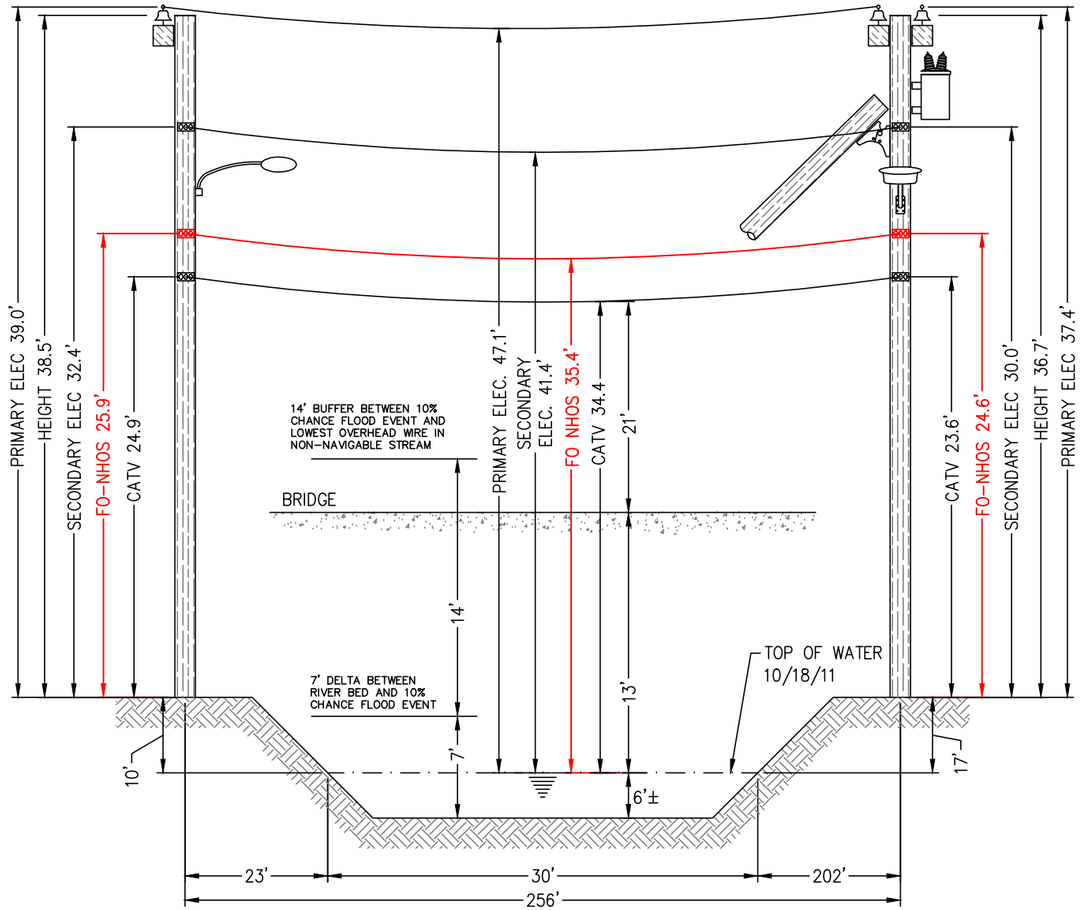
NESC RESULTS

Loading Condition	Temp. (F)	Ice Load lb/ft	Ice Thick in	Wind Constant lb/ft	Horz Wind Load lb/sq ft	Result Load + Const lb/ft	Sag ft	Tension lb	% Len Chg From Input Conditions	Sag @ Point 128 ft	Horz Sag Comp ft	Vert Sag Comp ft	Vector Angle Deg
Rule 251 - Heavy	0.0	1.000	.50	.3	4.0	1.793	5.97	2453	0.12	5.99	2.81	5.27	28.1
232A1	120.0	0.000	.00	.0	0.0	0.317	3.03	855	0.01	3.04	0.00	3.03	0.0

Span Length = 256.00 ft
Span Sag = 2.56 ft (30.7 in)
Span Tension = 1,014 lb
Max Load = 6,650 lb
Usable load (60%) = 3,990 lb
Catenary Length = 256.068 ft
Stress Free Length @
Installed Temperature = 255.785 ft

Unloaded Strand
Sag = 1.20 ft (14.4 in) 0.47 %
Tension = 824 lb

Temp (F)	Midspan Sag (ft)	Tension (lb)	% Length Change	Clearance
-40.0	1.79	1,449	-0.01	N/A
-30.0	1.84	1,406	-0.01	N/A
-20.0	1.90	1,363	-0.01	N/A
-10.0	1.96	1,321	-0.01	N/A
.0	2.03	1,279	-0.01	N/A
10.0	2.09	1,238	-0.01	N/A
20.0	2.16	1,198	-0.01	N/A
30.0	2.24	1,159	-0.01	N/A
40.0	2.31	1,121	0.00	N/A
50.0	2.39	1,084	0.00	N/A
60.0	2.47	1,048	0.00	N/A
70.0	2.56	1,013	0.00	N/A
80.0	2.65	979	0.00	N/A
90.0	2.74	946	0.00	N/A
100.0	2.84	915	0.01	N/A
110.0	2.93	884	0.01	N/A
120.0	3.03	855	0.01	N/A
130.0	3.13	828	0.01	N/A
140.0	3.24	801	0.02	N/A



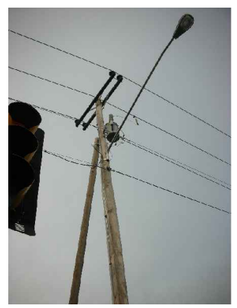
E-117/76 – T-NT
(Existing joint owned utility pole (UNITIL/Fairpoint) in existing Right-of-Way)

E-117/75 – T-NT
(Existing joint owned utility pole (UNITIL/Fairpoint) in existing Right-of-Way)

E-117/76 – T-NT

Construction Notes:

NHOS proposes to install a ¼ inch metal supporting strand between the existing utility poles shown above that will traverse the river. The strand will be installed at the proposed height (see above). The supporting strand will be secured to each pole using double dead end attachments to prevent any sag in the wire and maintain proper clearances. NHOS will lash a one inch diameter fiber optic cable (PVC jacket) to the strand using a dual lash method to provide security of the fiber over the right of way. The fiber will be tagged with twenty four hour contact information at each pole clamp. NHOS will employ the proper safety personnel during the crossing installation. The proposed install will meet all proper clearances from other Utilities. (see above). Additional pole guys will be added per NESC Rule 264 and as directed by pole owners.



E-117/75 – T-NT

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Proposed River Crossing Plaistow, NH

Notes:

1. The heights of structures shown hereon are based on field measurements taken with a Nikon 362 total station during a site survey on 10/18/11.
2. The horizontal distance between the nearest bridge edge and the existing overhead wires is approximately 12'.
3. The smallest vertical distance from the top of existing bridge deck to the lowest existing overhead wires is 21'.
4. The vertical distance between the top of water and bridge deck is approximately 13'.
5. The waterway is classified as not suitable for sail boating and per NESC Table 232-1 a vertical clearance of 14' must be maintained between the lowest conductor and 10 year floodplain.
6. Based on the FEMA Flood Profile for the Little River (Page 103P) and the Flood Insurance Rate Map for Rockingham County (Map Number 33015C0578E) dated May 17, 2005 the delta between the river bed and the 10 year flood elevation is approximately 7'. A 14' buffer (for non-navigable streams) was added to that . Based on the FEMA Flood Profile the stream bed elevation is 38' and the 10 year flood elevation is 45'.
7. Vertical distances are representative of attachment heights after utility make ready moves are completed.

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Date: 02/19/13
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Proposed
River Crossing
(Little River)
Plaistow, NH

Location:
Plaistow Rd., Plaistow, NH
Nearest cross street- Garden Rd.

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