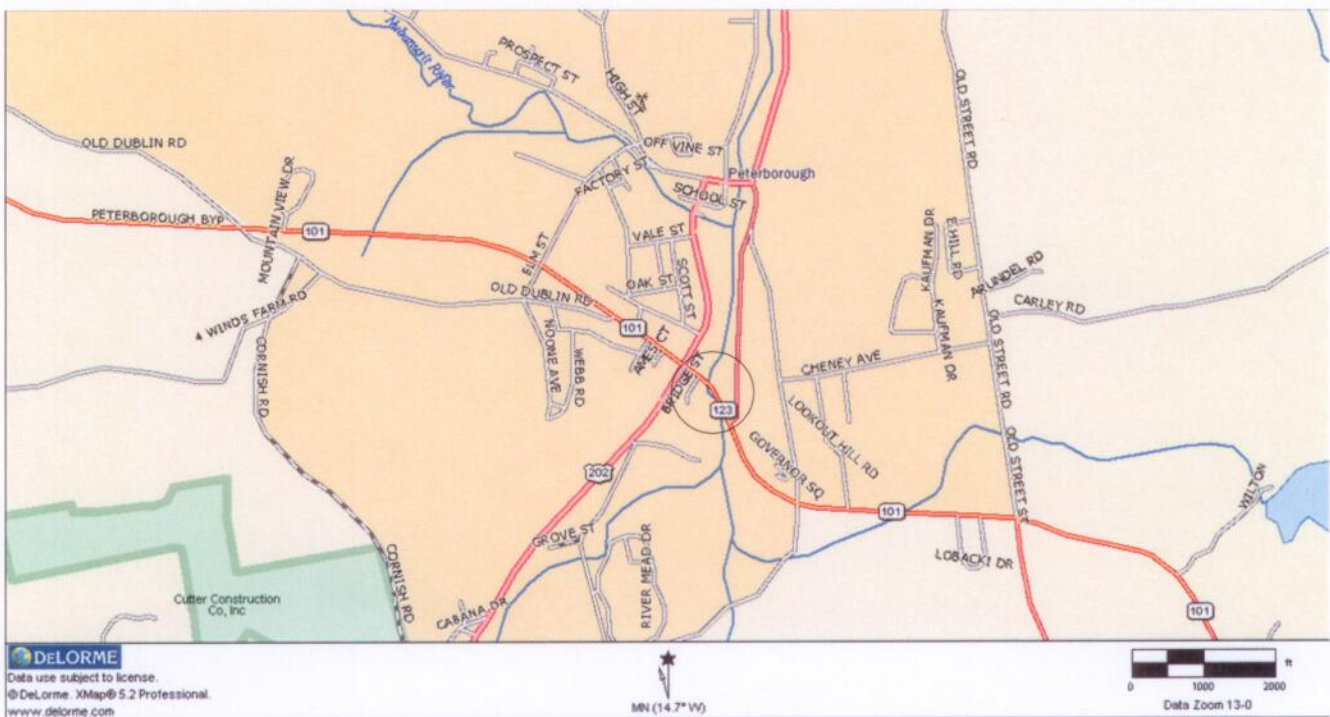


Teljet Longhaul LLC  
Water Crossing Location  
Contoocook River  
Peterborough, New Hampshire



# PoleForeman - Pole Loading Analysis Report

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## POLE LOADING DATA

Pole: 40/H2 Wood

Pole Loading

Horizontal: 59% (250B)  
Vertical: 0% (250B)

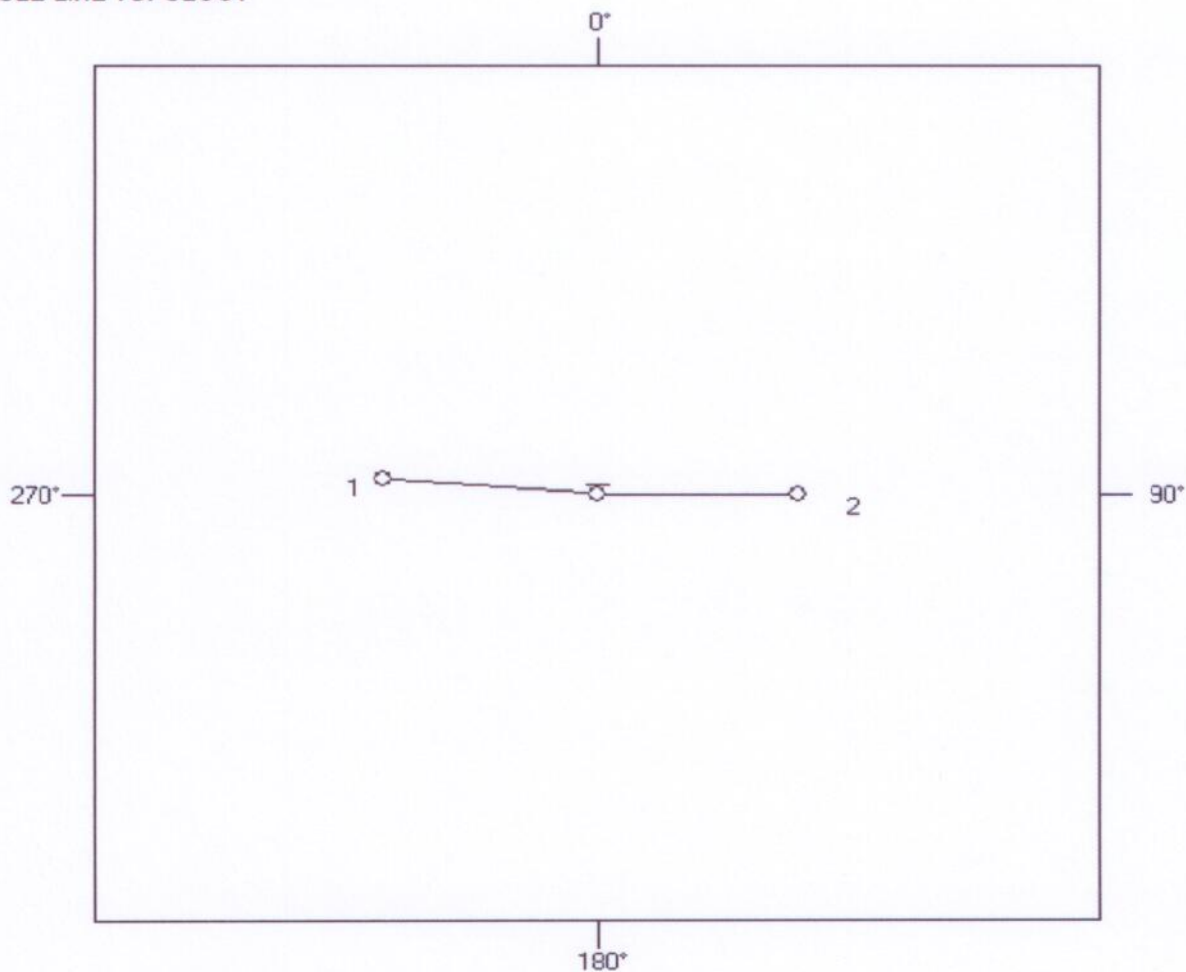
NESC Edition: 2007  
Loading District: Heavy  
Construction: Grade B

Rule 250B Loading: Wind (psf): 4 Ice (in): 0.5

## POLES

Pole #	Length (ft)	Depth (ft)	Elevation (ft)
0	40	10	0
1	40	6	0
2	45	6.5	0

## POLE LINE TOPOLOGY



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## GUY STRAND DATA

Anchor	Strand	Attach	Length	Direction	Tension	Strength	Loading
1	1/2" EHS	10"	10'	0°	0	24,210	0%
1	1/2" EHS	115"	10'	0°	33	24,210	0%

## ANCHOR DATA

Anchor	Rod	Anchor	Soil	Tension	Rod Strength	Anchor Strength
1	1" Rod	10" Triple Heli	Class - 4	33	36,000	31,000

## INSULATORS

Insulator	Attach	Loading	Angle
25KV Post	4"	63%	5°
25KV Post	7"	63%	5°
25KV Post	7"	63%	5°
3" SpoolTangent	75"	40%	5°

## ARM / BRACKET DATA

Arm/Bracket	Attach	Vert Loading	Horz Loading
10" Single Pole Top Post	4"	14%	63%
3" Single Xarm: (3-5/8x4-5/8)	7"	26%	12%
Spool Rack	75"		

## SPANS

Span: 1 Span Length (ft): 193 Direction: 275°

### Circuit: 1

Primary	Ruling Span (ft)	Offset (in)	Attach A (in)	Attach B (in)	Tension
1/0 ACSR (6/1)	200	44	-5	6	1802
1/0 ACSR (6/1)	200	0	-11	-11	1802
1/0 ACSR (6/1)	200	-44	-5	6	1802
Neutral					
1/0 ACSR (6/1)	200	1	78	42	1802

### Joint Use

Joint Use Cable	Ruling Span (ft)	Diameter (in)	Weight (lbs/ft)	Attach A (in)	Attach B (in)	Tension (lbs)	Description
6.6M (1/4) + 0.75" TELCO	200	0.97	0.39	119	119	1564	

Span: 2 Span Length (ft): 180 Direction: 90°

### Circuit: 1

Primary	Ruling Span (ft)	Offset (in)	Attach A (in)	Attach B (in)	Tension
1/0 ACSR (6/1)	200	44	-5	6	1802
1/0 ACSR (6/1)	200	0	-11	-11	1802
1/0 ACSR (6/1)	200	-44	-5	6	1802
Neutral					
1/0 ACSR (6/1)	200	1	78	42	1802

### Joint Use

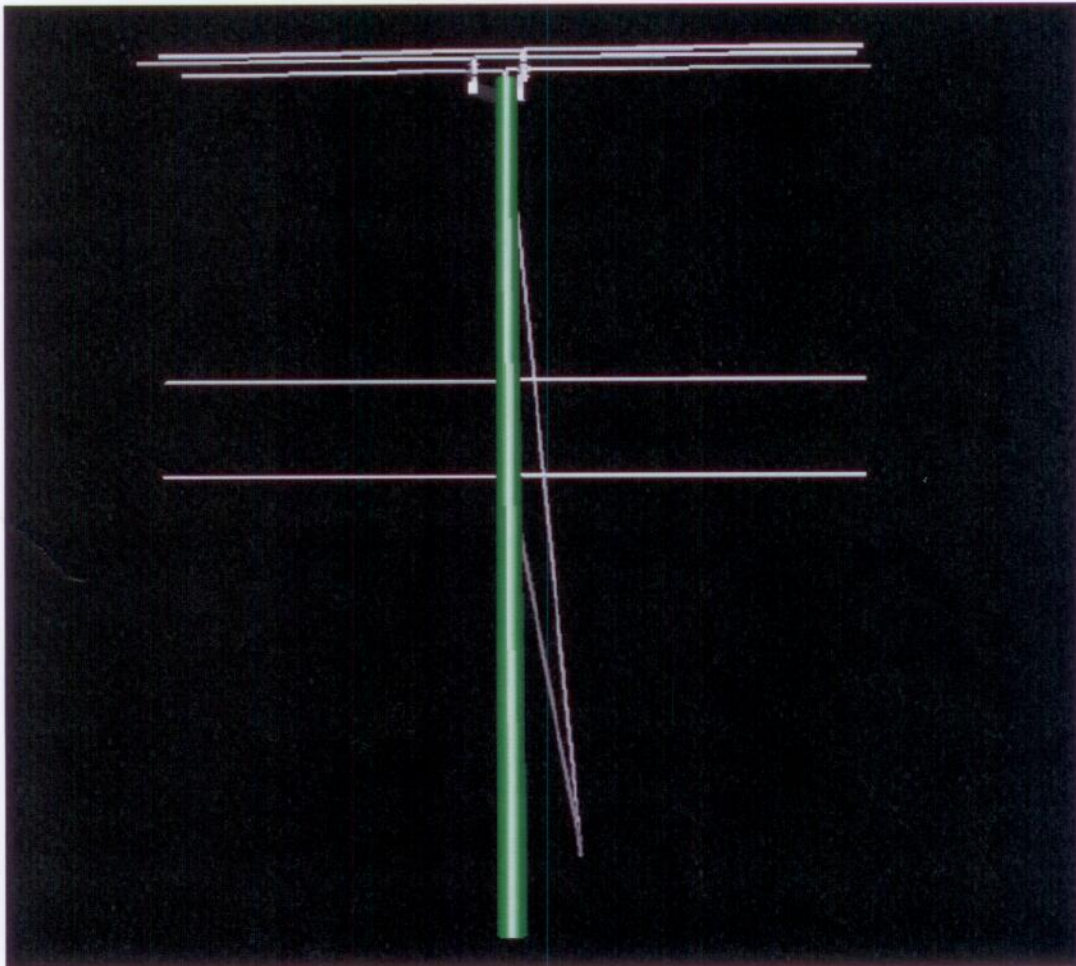
Joint Use Cable	Ruling Span (ft)	Diameter (in)	Weight (lbs/ft)	Attach A (in)	Attach B (in)	Tension (lbs)	Description
6.6M (1/4) + 0.75" TELCO	200	0.97	0.39	119	119	1564	



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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 Bundle	0.5782	2.70E+05	0.858	1.13E-05	0.1960	155982	651
			1.108		0.3170		

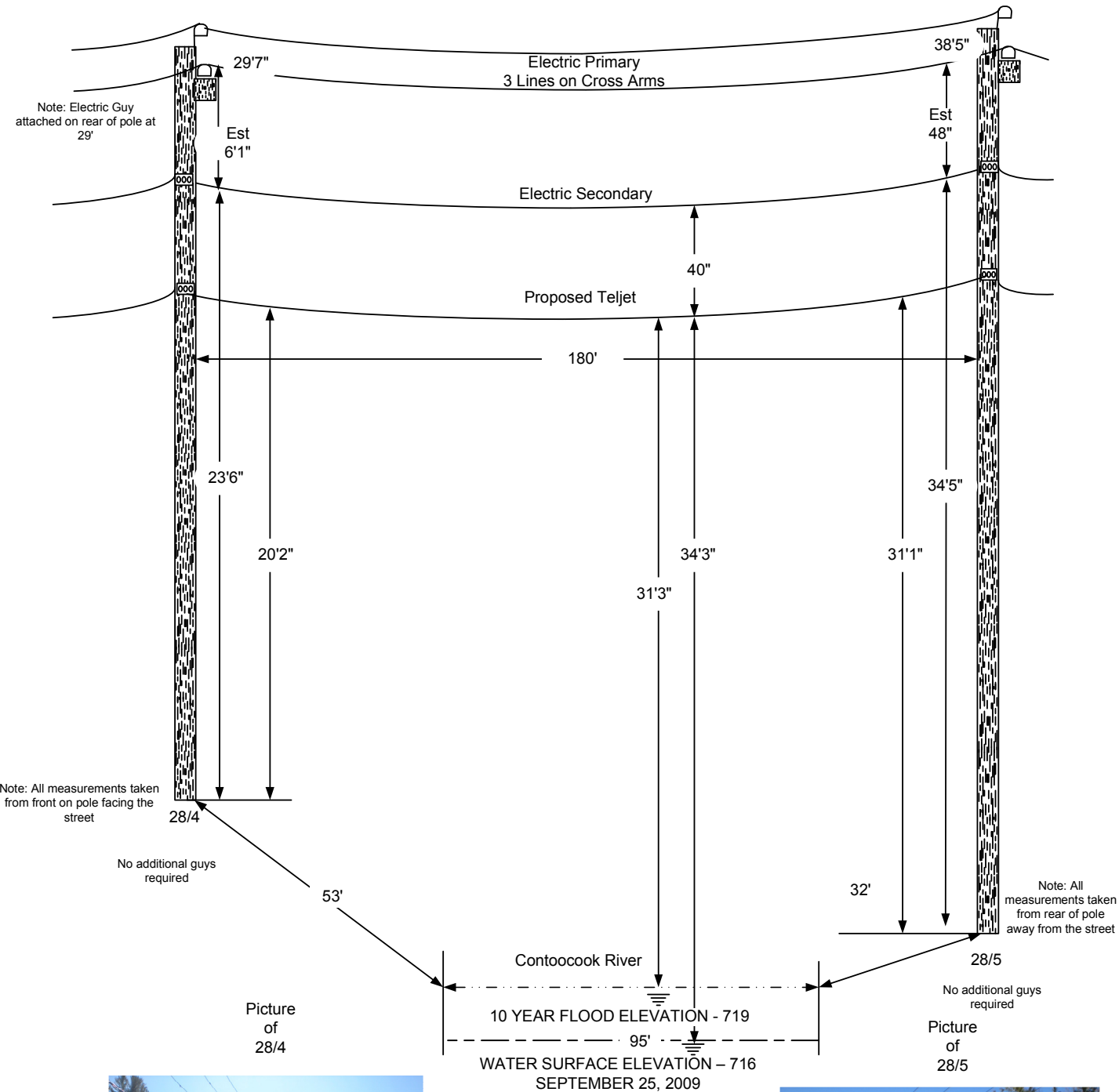
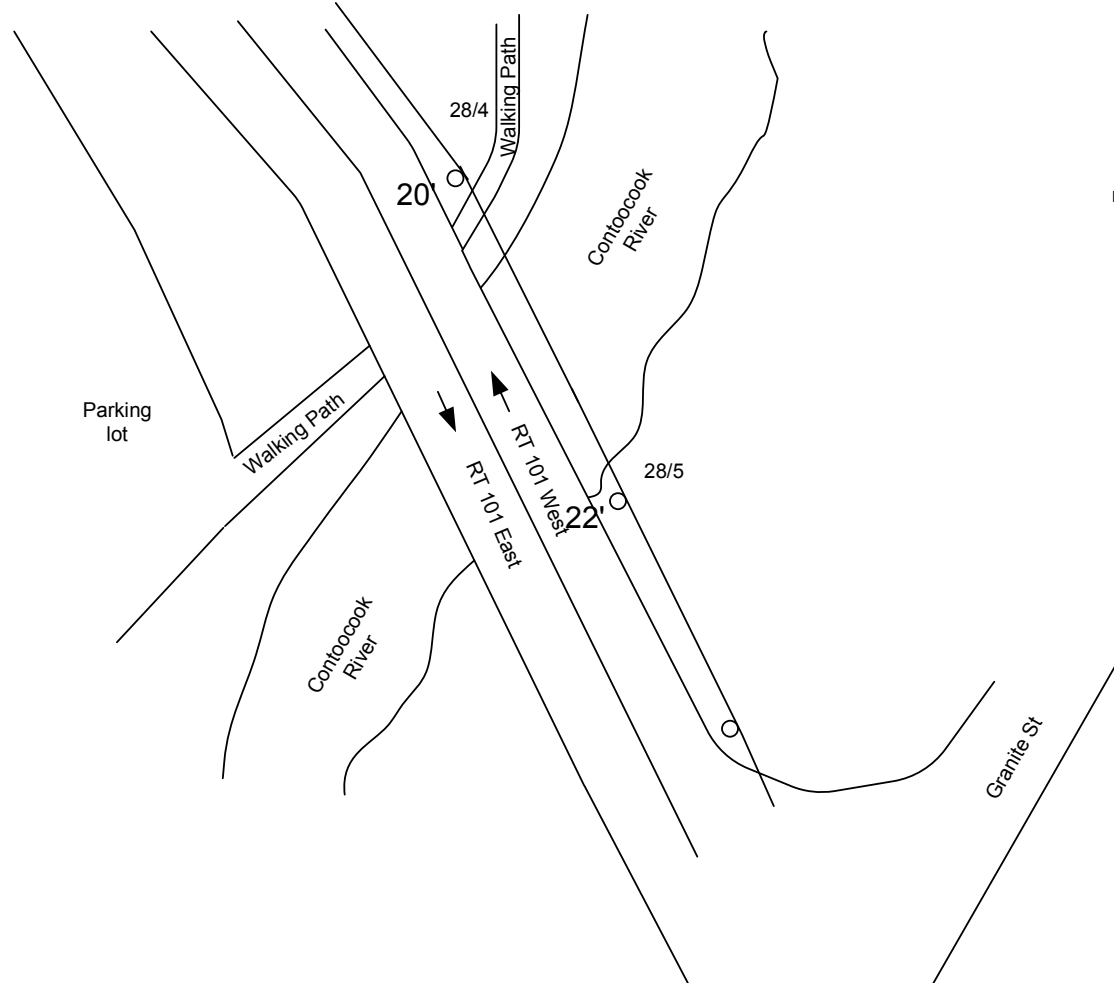
NESC RESULTS

Loading Condition	Temp. (F)	Ice Load lb/ft	Ice Thick in	Wind Constant lb/ft	Horiz Load lb/sq ft	Result Load + Const lb/ft	Sag ft	Tension lb	% Len Chg From Input Conditions	Sag @ Point 90.00 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	3.79	1910	0.09	3.80	1.79	3.35	28.1
232A1	120.0	0.000	.00	.0	0.0	0.317	2.21	581	0.01	2.21	0.00	2.21	0.0

Span Length = 180.00 ft  
Span Sag = 1.80 ft (21.6 in)  
Span Tension = 713 lb  
Max Load = 6,650 lb  
Usable load (60%) = 3,990 lb  
Catenary Length = 180.048 ft  
Stress Free Length @  
Installed Temperature = 179.908 ft

Unloaded Strand  
Sag = .92 ft (11.0 in) 0.51 %  
Tension = 533 lb

Temp (F)	Midspan Sag (ft)	Tension (lb)	% Length Change	Clearance
-40.0	1.14	1,128	-0.02	N/A
-30.0	1.18	1,085	-0.02	N/A
-20.0	1.23	1,042	-0.01	N/A
-10.0	1.28	1,001	-0.01	N/A
.0	1.33	961	-0.01	N/A
10.0	1.39	921	-0.01	N/A
20.0	1.45	883	-0.01	N/A
30.0	1.52	846	-0.01	N/A
40.0	1.58	810	-0.01	N/A
50.0	1.65	776	0.00	N/A
60.0	1.72	744	0.00	N/A
70.0	1.80	712	0.00	N/A
80.0	1.88	683	0.00	N/A
90.0	1.96	655	0.00	N/A
100.0	2.04	629	0.01	N/A
110.0	2.12	604	0.01	N/A
120.0	2.21	581	0.01	N/A
130.0	2.30	559	0.02	N/A
140.0	2.38	538	0.02	N/A



Construction Notes :

Frame and install strand and hardware 12 inches above CATV (if no CATV, then install above top telecom). The strand and proper line hardware ( i.e. suspension, curved clamp or double dead ends) will be installed following the existing lines in the communication space on the pole. Majority of the time this will be street side. If only power is on the pole Teljet cable will be attached 40' below neutral. Down guys will be installed if required by pole loading and utility walk out.

Construction Notes :

Dig Safe #

Start Date

DIG SAFE  
MA - ME - NH - RI - VT



Call Before You Dig  
1-888-DIG-SAFE  
1-888-344-7233



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www.teljet.com

Project:  
Teljet Longhaul LLC  
Merrimack to Keene  
New Hampshire

Project # PET-08  
Drawing # AC-RIV-1-ED

Date 04/13/2011  
Revision # 1.02

Proposed  
Contoocook River  
Crossing -  
Peterborough, NH

Location:  
Wilton Rd aka Route 101  
Peterborough  
Nearest cross St  
Granite St

Teljet contact:  
Mary Lavigne  
802 922-9510