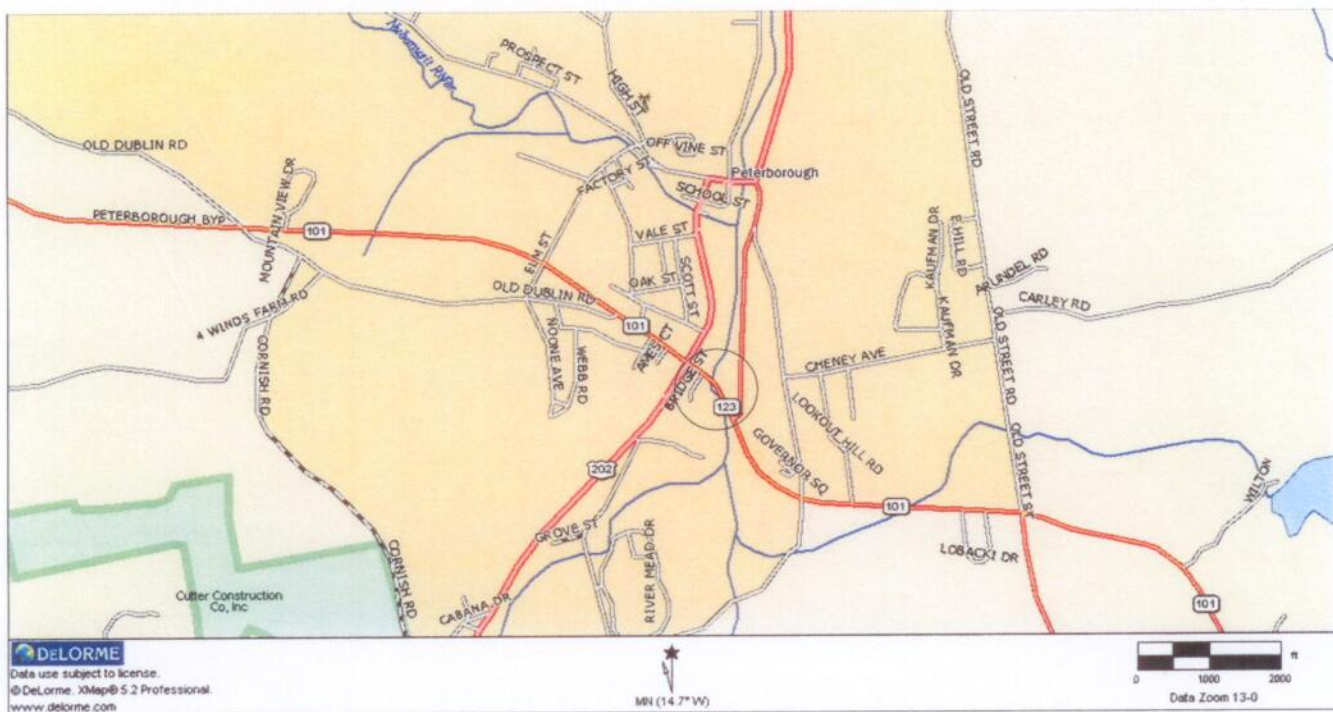


Teljet Longhaul LLC

Water Crossing Location

Stony Brook River

Wilton, New Hampshire



# PoleForeman - Pole Loading Analysis Report

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## POLE LOADING DATA

Pole: 50/2 Wood

Pole Loading

Horizontal: 89% (250B)

Vertical: 13% (250B)

NESC Edition: 2007

Loading District: Heavy

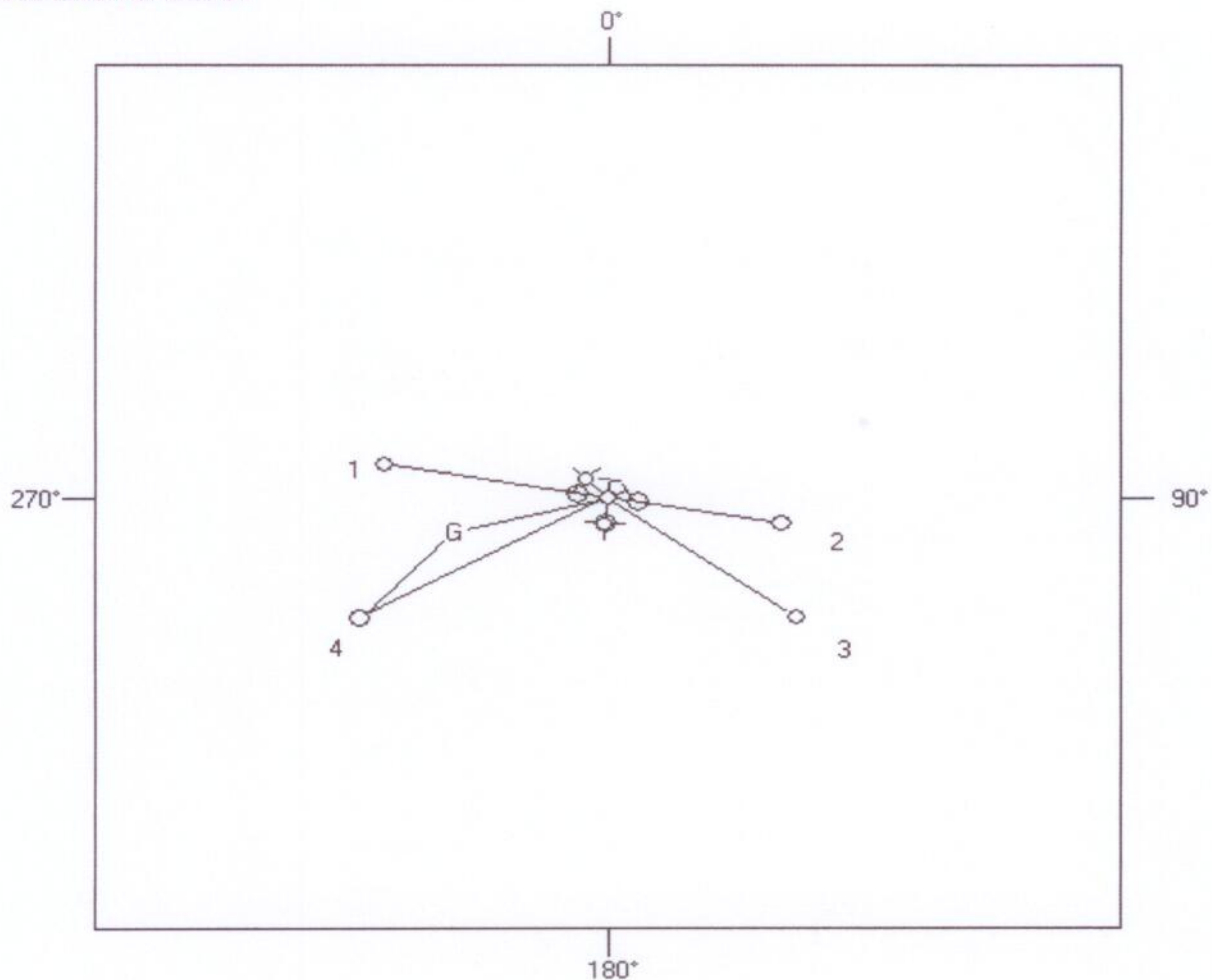
Construction: Grade B

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

## POLES

Pole #	Length (ft)	Depth (ft)	Elevation (ft)
0	50	7	0
1	50	7	0
2	40	6	0
3	40	6	0
4	50	7	0

## POLE LINE TOPOLOGY



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## GUY STRAND DATA

Anchor	Strand	Attach	Length	Direction	Tension	Strength	Loading
1	1/2" EHS	148"	14'	70°	9,023	24,210	37%
1	1/2" EHS	192"	14'	70°	8,408	24,210	35%
2	1/2" EHS	24"	14'	5°	1,249	24,210	5%
2	1/2" EHS	228"	14'	5°	0	24,210	0%
2	1/2" EHS	240"	14'	5°	1,629	24,210	7%

## ANCHOR DATA

Anchor	Rod	Anchor	Soil	Tension	Rod Strength	Anchor Strength
1	1" Rod	10" Triple Heli	Class - 4	17,426	36,000	31,000
2	1" Rod	10" Triple Heli	Class - 4	2,861	36,000	31,000

## SPAN GUY DATA

Span	Strand	Attach A	Attach B	Length	Direction	Tension	Strength	Loading
4	1/2" EHS	144"	60"	192'	240°	0	24,210	0%
4	1/2" EHS	207"	72"	192'	240°	0	24,210	0%
4	1/2" EHS	234"	159"	192'	240°	0	24,210	0%

## INSULATORS

Insulator	Attach	Loading	Angle
25KV Post	6"	57%	0°
25KV Post	6"	57%	0°
25KV Post	6"	57%	0°

## ARM / BRACKET DATA

Arm/Bracket	Attach	Vert Loading	Horz Loading
8" Double Xarm (3-5/8x4-5/8)	6"	33%	23%

## SPANS

Span: 1 Span Length (ft): 152 Direction: 280°

### Circuit: 1

Primary	Ruling Span (ft)	Offset (in)	Attach A (in)	Attach B (in)	Tension
1/0 ACSR (6/1)	150	44	-6	6	1602
1/0 ACSR (6/1)	150	0	-6	-11	1602
1/0 ACSR (6/1)	150	-44	-6	6	1602
Neutral					
1/0 ACSR (6/1)	150	1	129	42	1602

### 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" CATV	100	1.04	0.27	228	228	974	
6M (5/16) + 0.75" TELCO	100	1.03	0.50	240	240	2201	
10M (3/8) + 1.50" TELCO	100	1.81	1.40	252	252	3514	

Span: 2 Span Length (ft): 118 Direction: 100°

### Circuit: 1

Primary	Ruling Span (ft)	Offset (in)	Attach A (in)	Attach B (in)	Tension
1/0 ACSR (6/1)	100	44	-6	6	1395
1/0 ACSR (6/1)	100	0	-6	-11	1395
1/0 ACSR (6/1)	100	-44	-6	6	1395
Neutral					
1/0 ACSR (6/1)	100	1	129	42	1395

### 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	100	0.97	0.39	228	228	1238	
6.6M (1/4) + 0.75" CATV	100	1.04	0.27	240	240	974	
6.6M (1/4) + 0.50" TELCO	100	0.72	0.22	252	252	1174	

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**Span: 3**      **Span Length (ft): 158**      **Direction: 127°**

**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	150	0.97	0.39	216	216	1419	

**Span: 4**      **Span Length (ft): 192**      **Direction: 240°**

**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	150	0.97	0.39	216	216	1419	

**EQUIPMENT**

Equipment	Weight (lbs)	Attach (in)	Direction
15 KVA	280.0	96	100°
15 KVA	280.0	96	280°
15 KVA	280.0	96	185°

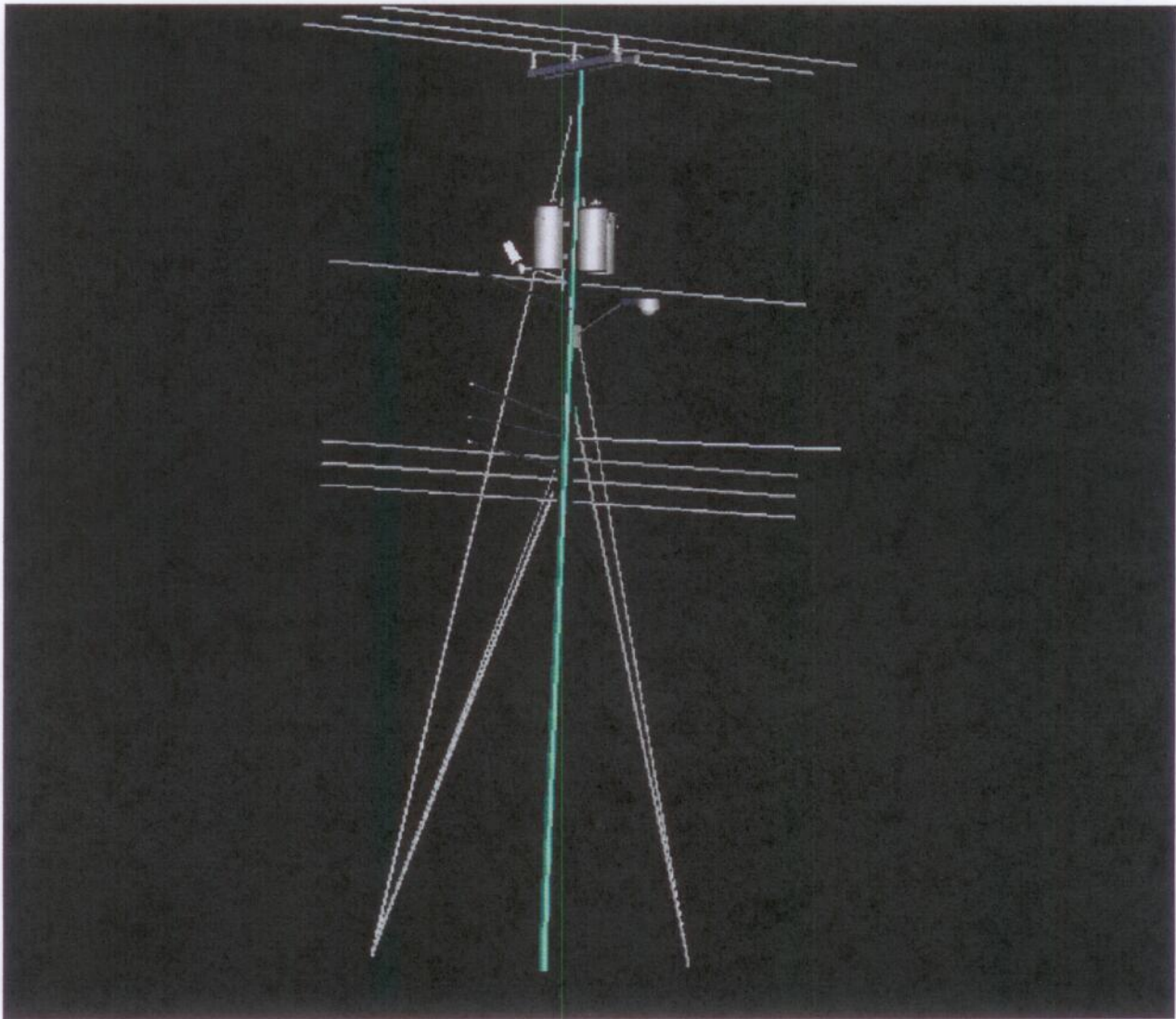
**LIGHTS**

Light	Bracket	Weight	EPA	Attach	Direction
150-400W Cobra	4 FT Bracket	64	0.87	155	185°
150-400W Flood	2 FT Bracket	44	1.3	123	315°

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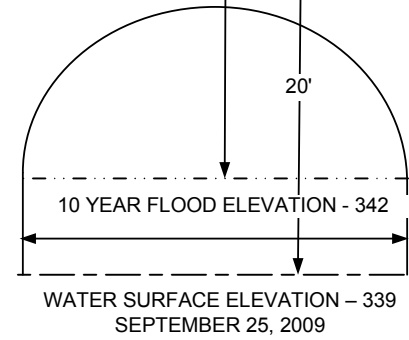
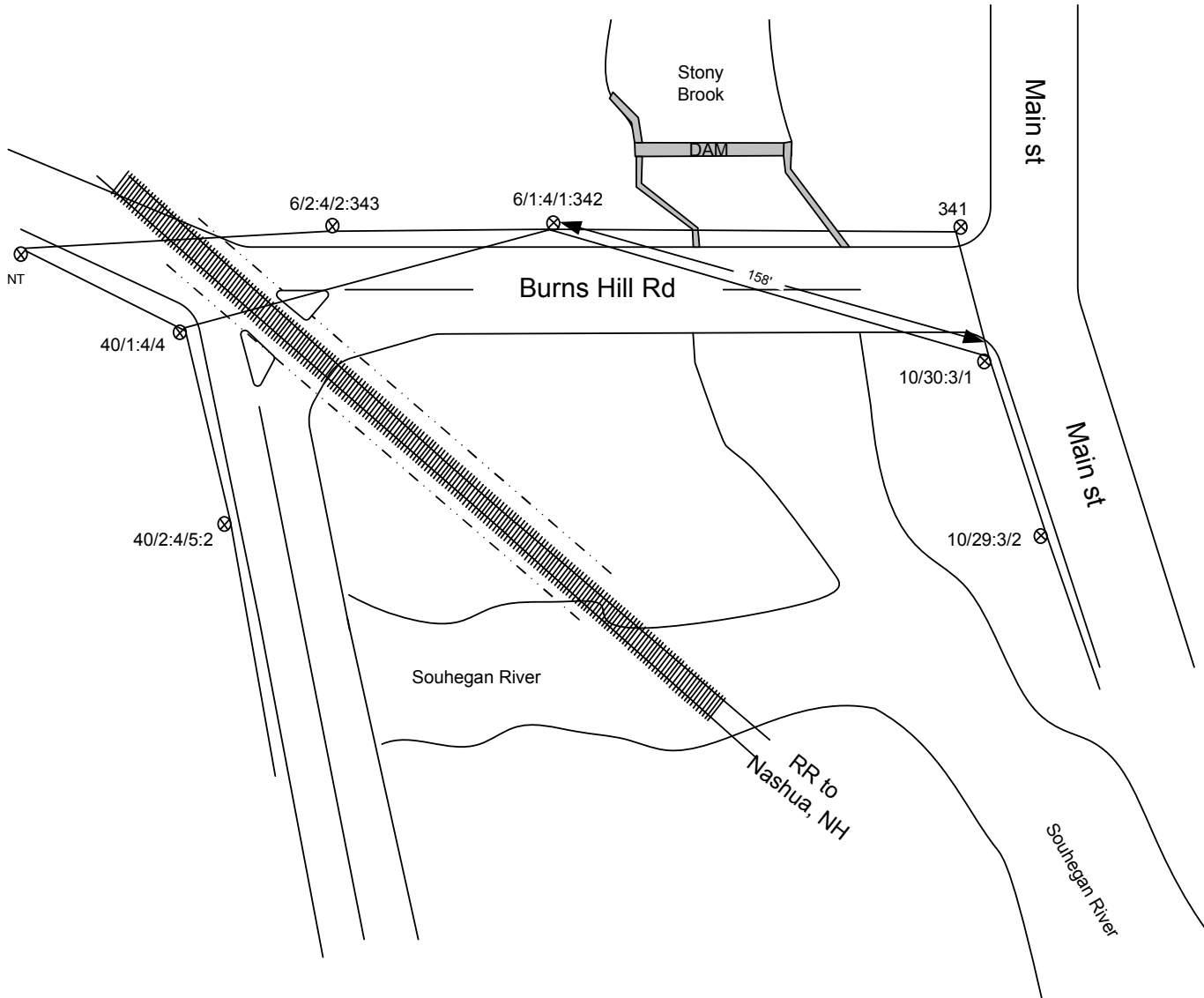
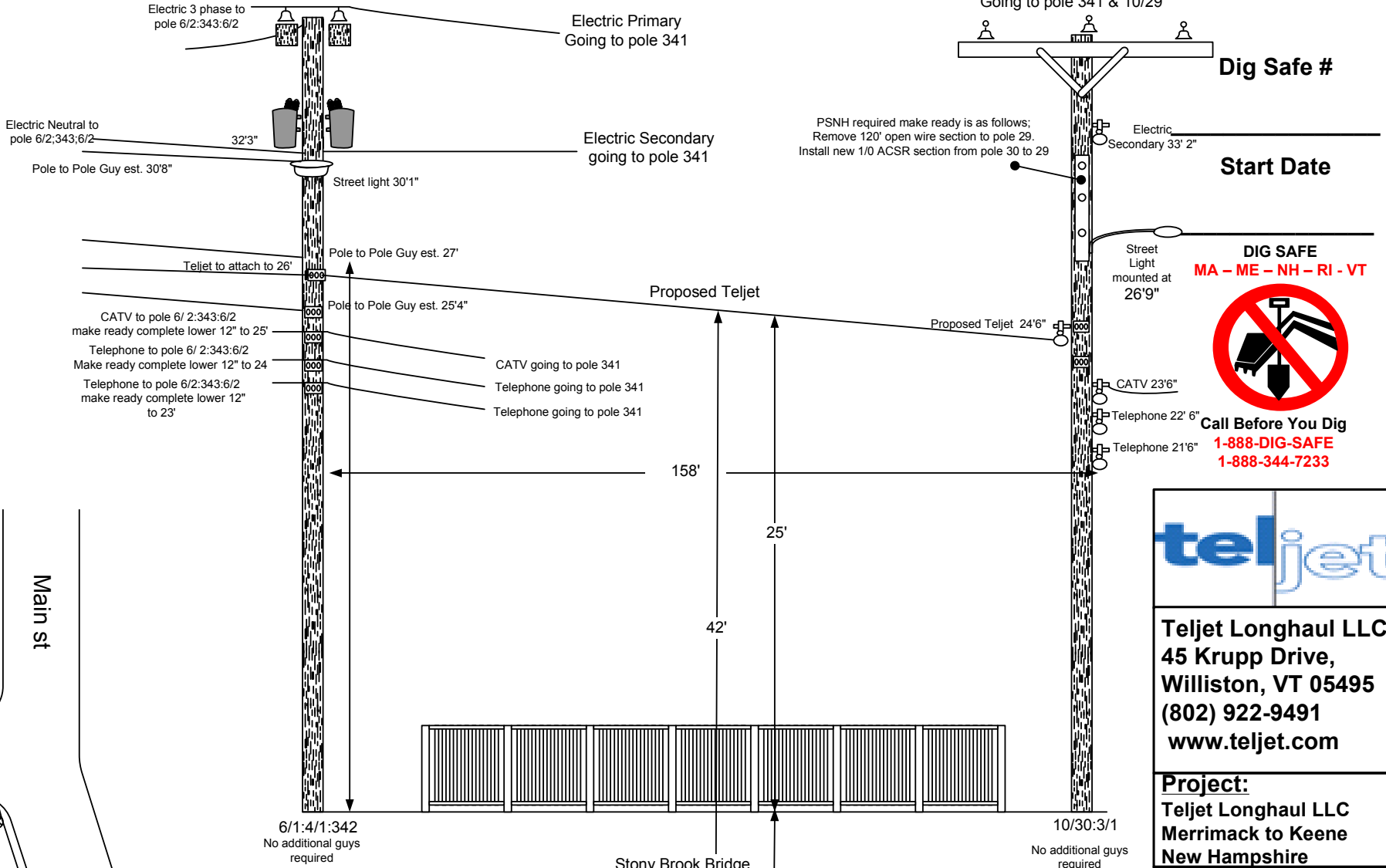
Selected Cables	X-SECT AREA (sq.in)	EFF MODULUS (psi)	NOMINAL DIAM (in)	EFF.EXP. COEFF. (1/F)	CABLE WEIGHT (lb/ft)	E*A LOAD BEARING CAPACITY (lbs)	MAX. RATED LOAD (lbs)
1/4"6.6mEHS	0.0352	2.60E+07	0.250	5.60E-06	0.1210	914940	6650
ORF-O-288-LN Bundle	0.5782	2.70E+05	0.858	1.13E-05	0.1960	155982	651
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

NESC RESULTS

Loading Condition	Temp. (F)	Ice Load lb/ft	Ice Thick in	Wind Constant lb/ft	Horz Wind Load lb/sq ft	Result Load + Const lb/ft	Sag ft	Tension lb	% Len Chg From Input Conditions	Sag @ Point 79 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	3.20	1743	0.08	3.21	1.51	2.83	28.1
232A1	120.0	0.000	.00	.0	0.0	0.317	1.97	503	0.01	1.97	0.00	1.97	0.0

Span Length = 158.00 ft  
Span Sag = 1.58 ft (19.0 in)  
Span Tension = 626 lb  
Max Load = 6,650 lb  
Usable load (60%) = 3,990 lb  
Catenary Length = 158.042 ft  
Stress Free Length @ Installed Temperature = 157.934 ft  
Unloaded Strand Sag = .84 ft (10.1 in) 0.53 %  
Tension = 451 lb

Temp (F)	Midspan Sag (ft)	Tension (lb)	% Length Change	Clearance
-40.0	.96	1,033	-0.02	N/A
-30.0	1.00	990	-0.02	N/A
-20.0	1.04	948	-0.02	N/A
-10.0	1.09	907	-0.01	N/A
.0	1.14	867	-0.01	N/A
10.0	1.19	828	-0.01	N/A
20.0	1.25	790	-0.01	N/A
30.0	1.31	754	-0.01	N/A
40.0	1.37	719	-0.01	N/A
50.0	1.44	686	0.00	N/A
60.0	1.51	655	0.00	N/A
70.0	1.58	626	0.00	N/A
80.0	1.65	598	0.00	N/A
90.0	1.73	572	0.01	N/A
100.0	1.81	547	0.01	N/A
110.0	1.89	524	0.01	N/A
120.0	1.97	503	0.01	N/A
130.0	2.05	483	0.02	N/A
140.0	2.13	465	0.02	N/A



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**teljet**

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(802) 922-9491  
www.teljet.com

**Project:**  
Teljet Longhaul LLC  
Merrimack to Keene  
New Hampshire

**Project # WIL-11**  
**Drawing # AC-RIV-2-ED**

**Date 04/13/2011**  
**Revision # 1.02**

**Proposed**  
**Stony Brook**  
**Crossing**  
**Wilton, NH**

**Location:**  
**Burns Hill Rd**  
**between poles 342 & 341**  
**nearest cross st:**  
**Main St**

**Teljet contact:**  
**Mary Lavigne**  
**802 922-9510**