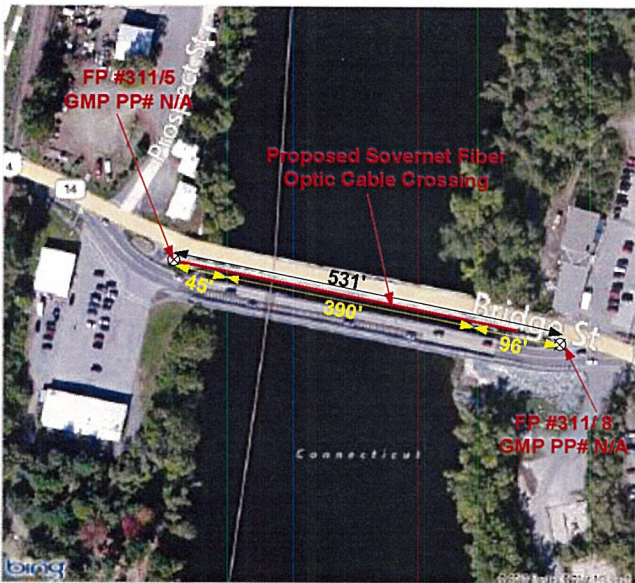
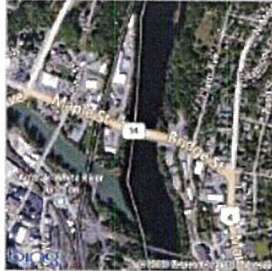
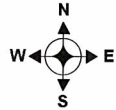


Connecticut River Crossing at Bridge St.

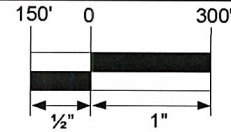
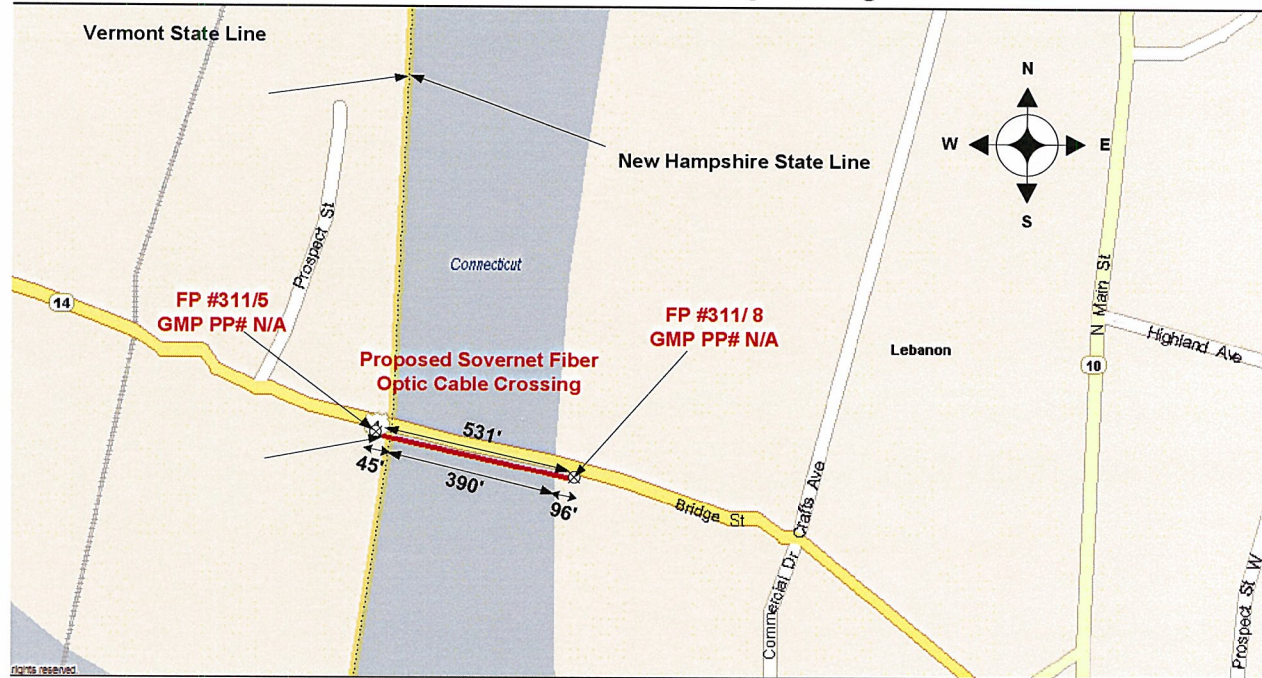
bing Maps

N H Bridge permit for Maple St & Bridge St, Rt. 14.

On the go? Use m.bing.com to find maps, directions, businesses, and more.



Connecticut River Crossing at Bridge St.



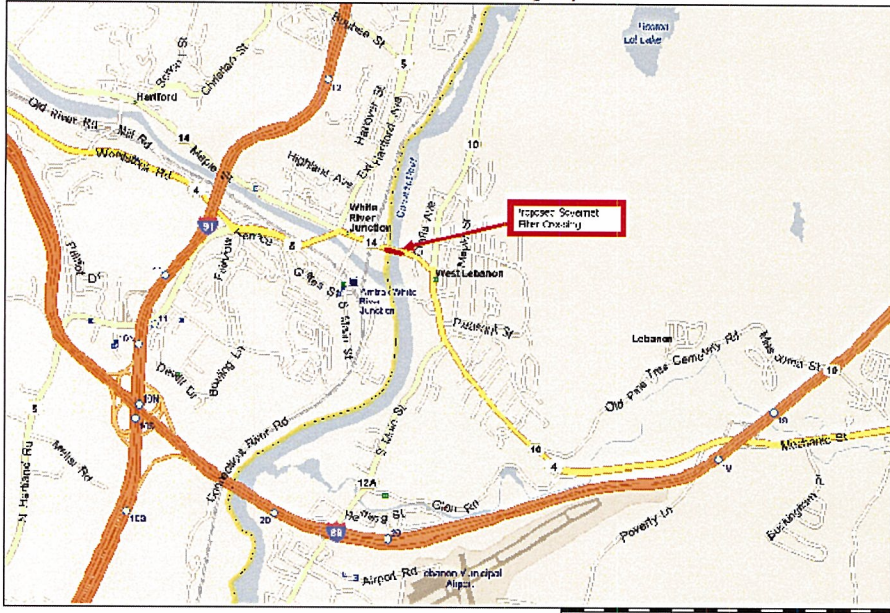
SCALE
1"=300'



SOVERNET COMMUNICATIONS
5 Canal Street
Bellow Falls, VT 05101
802-460-9100

WO:	SOVERNET COMMUNICATIONS		
ROUTE:	Zone 12		
ROW:	Public	DATE	
STAKED BY:	DLY	DATE	4-2-2012
REV BY:		DATE	
PROJECT:			
ROUTE:	Connecticut River crossing Hwy 4		
SHEET:	1	OF	2

Connecticut River Crossing at Bridge St.



Spanmaster @ Release 3.1 Sag / Tension Computations

Sovernet Fiber Corporation
 00/0213 - Connecticut at Maple St
 Connecticut River Crossing south of Bridge Street at Maple St. from White River Junction, VT to West Lebanon, NH.

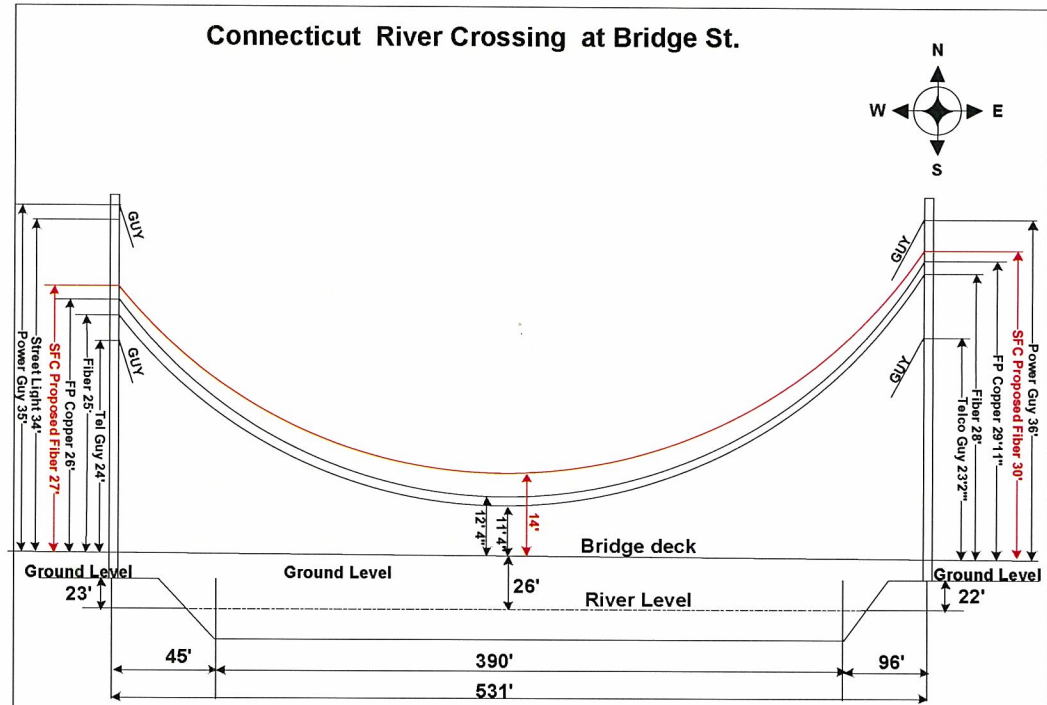
Selected Cables	X SECT AREA (sq.in)	EFF MODULUS (psi)	NOMINAL DIAM (in)	EFF EXP COEFF (1/F)	CABLE WEIGHT (lb/ft)	E*A LOAD BEARING CAPACITY (lb/ft)	MAX. RATED LOAD (lb)
514/11 2m FHS	0.0595	2.40E+07	0.313	5.60E-06	0.2050	1545.960	11200
ORF-2 1D-2x288	4.1900	1.20E+05	2.375	6.70E-06	1.0250	531.600	2580
Riser 116					1.9300		

NESC RESULTS

Location	Temp (F)	Span Length (ft)	Span Sag (ft)	Wind Speed (ft/s)	Wind Dir (deg)	Wind Comp (ft/s)	Wind Angle (deg)	Wind Comp Angle (deg)	Wind Comp Speed (ft/s)	Wind Comp Angle (deg)	Wind Comp Speed (ft/s)	Wind Comp Angle (deg)	
Hulu 2b1	0.0	1.982	.50	.3	4.0	3.729	20.24	65.08	0.19	0.72	7.25	18.50	20.9
232A1	120.0	0.000	.00	.0	0.0	1.230	15.19	28.56	0.02	0.54	0.00	15.19	0.0

Temp (F)	Midspan Sag (ft)	Tension (lb)	% Length Change	Clearance (ft)
-40.0	12.99	3.324	-0.04	15.51
-30.0	13.13	3.289	-0.04	15.37
-20.0	13.26	3.265	-0.03	15.24
-10.0	13.40	3.235	-0.03	15.10
0	13.54	3.200	-0.03	14.96
10.0	13.67	3.168	0.02	14.83
20.0	13.81	3.137	0.02	14.69
30.0	13.95	3.107	0.01	14.55
40.0	14.09	3.077	0.01	14.41
50.0	14.23	3.047	0.01	14.28
60.0	14.36	3.018	0.00	14.14
70.0	14.50	2.990	0.00	14.00
80.0	14.64	2.962	0.00	13.86
90.0	14.77	2.935	0.01	13.73
100.0	14.91	2.906	0.01	13.59
110.0	15.05	2.882	0.02	13.45
120.0	15.19	2.856	0.02	13.31
130.0	15.32	2.831	0.02	13.18
140.0	15.45	2.806	0.03	13.04

Connecticut River Crossing at Bridge St.



T-FP 311/5
 (Existing Joint Owned Utility Pole (GMP/FP) in Existing ROW)

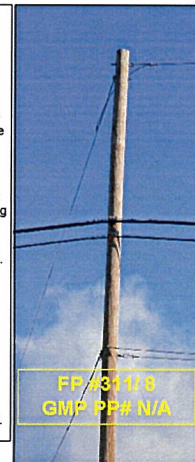
Not to Scale

T-FP 311/8
 (Existing Joint Owned Utility Pole (GMP/FP) in Existing ROW)



Construction Notes:

Sovernet Fiber Co proposes to install a 10 M Steel Stranded Cable between the existing poles shown above that will traverse the River. The new strand will be installed at the height shown. There will be a 2" duct Double lashed to the strand in which the fiber will be placed. The supporting Strand will be dead-ended on each Pole so that SFC's cable sag matches the adjacent cables. There will be an information tag installed at each Pole on the fiber at the time the fiber is installed. The cable will be placed using the correct safety Personnel when installing the Fiber. The proposed fiber will be installed with proper Clearance to the other cables Already in place. (See info Above).



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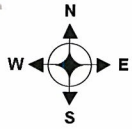
WO:	SOVERNET COMMUNICATIONS		
ROUTE:	Zone 12		
ROW:	Public	DATE	
STAKED BY:	DLY	DATE	4-2-2012
REV BY:		DATE	
PROJECT:			
ROUTE:	Connecticut River crossing Hwy 4		
SHEET:	2	OF	2

Mascoma River Crossing #1 at Glen Rd

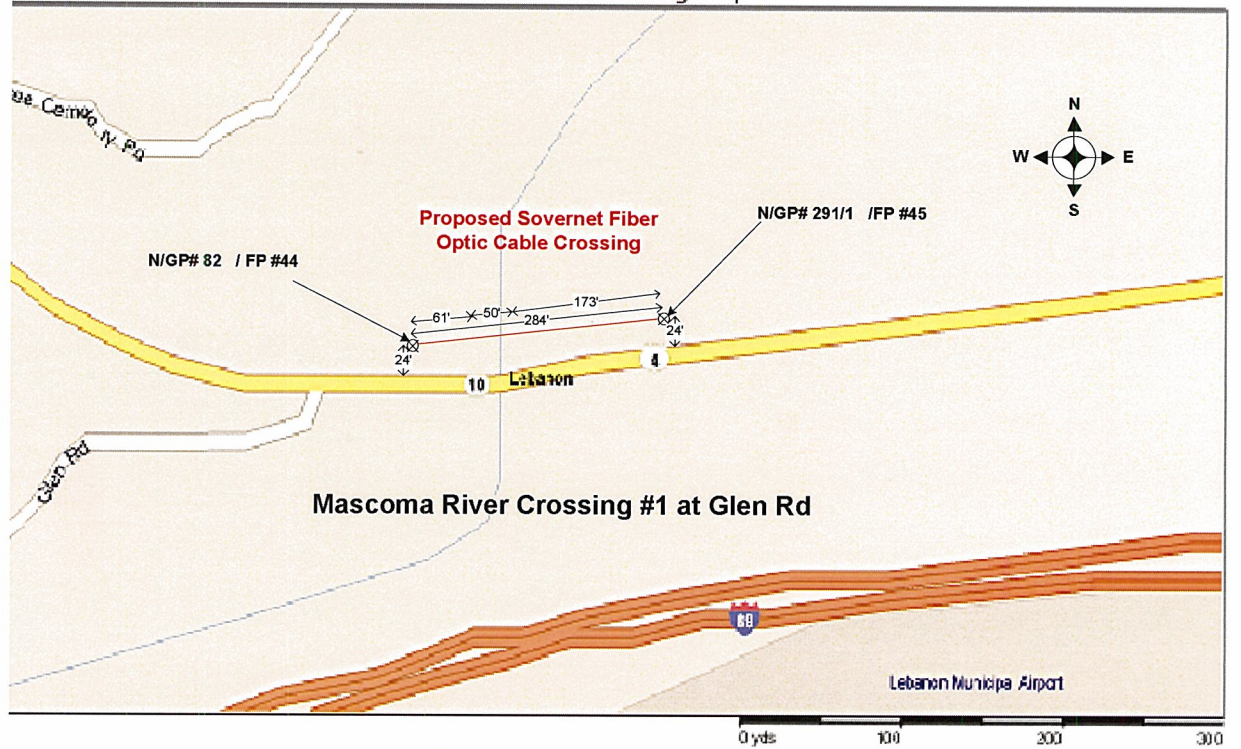
bing Maps

Mascoma River crossing # 1 @ Glen Rd

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Sections, businesses, and more



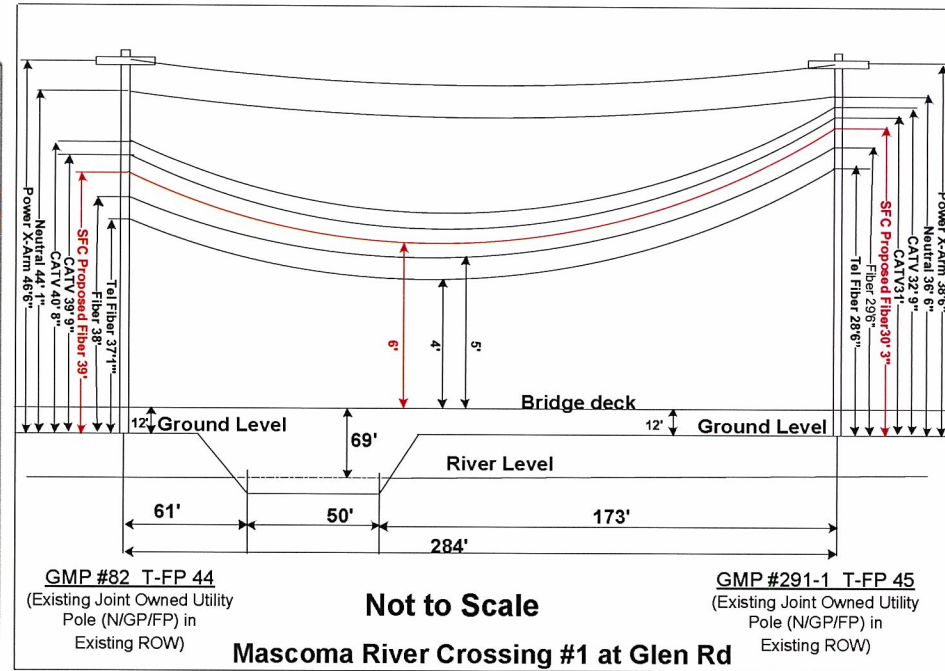
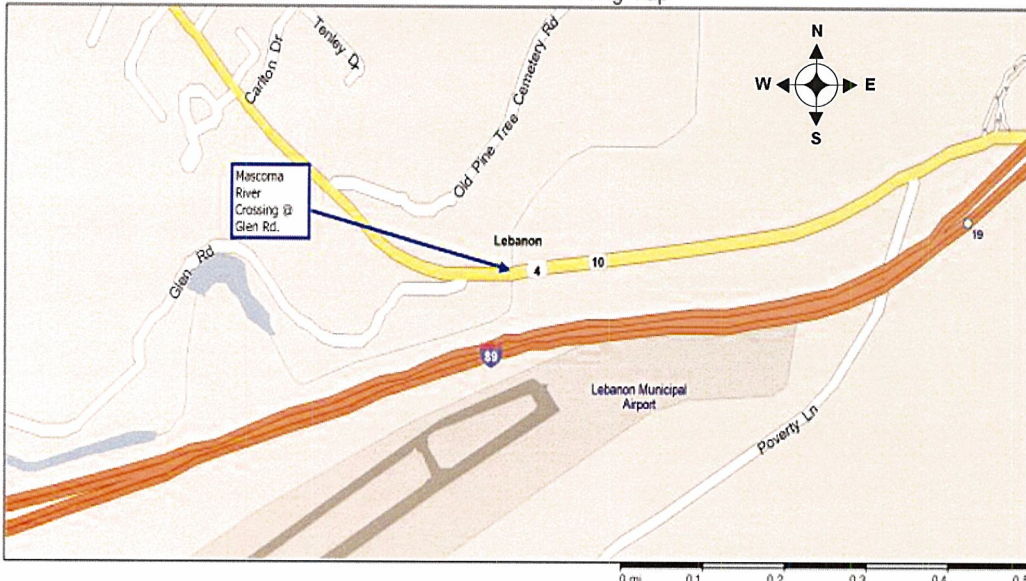
Sovernet NH Fiber Crossing Map



SOVERNETH
COMMUNICATIONS
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Bellow Falls, VT 05101
802-460-9100

WO:	SOVERNETH COMMUNICATIONS		
ROUTE:	Zone 12		
ROW:	Public	DATE	
STAKED BY:	DLY	DATE	5-23-12
REV BY:		DATE	
PROJECT:			
ROUTE:	Mascoma River crossing Glen St. #1		
SHEET:	1	OF	2

Mascoma River Crossing #1 at Glen Rd
Sovernet NH Fiber Crossing Map



Spanmaster Release 3.1 Sag / Tension Computations

Sovernet Fiber Construction: 0.0.03.12 Mascoma at Glen Rd.
Mascoma River Crossing North side of Route 4 at Glen Rd. in Lebanon

SELECTED CABLE	MINIMUM	MAXIMUM	WEIGHT	STRENGTH	SAFETY
5.10/11.2w EHS	0.0295	2.60E+07	0.313	5.60E+06	0.2050
OPT-2-D-2x288	4.4000	1.20E+05	2.375	6.70E+06	1.0250

NESS RESULTS

Temp (F)	Midspan Sag (ft)	Tension (lbs)	% Length Change	Clearance (ft)
10.0	16.19	774	-0.03	6.00
20.0	16.25	774	-0.03	6.00
30.0	16.30	774	-0.02	6.15
40.0	16.35	771	0.02	6.15
50.0	16.40	769	0.01	6.10
60.0	16.45	767	-0.01	6.10
70.0	16.50	764	0.00	6.00
80.0	16.55	762	0.01	5.95
90.0	16.60	760	0.01	5.90
100.0	16.65	758	0.02	5.85

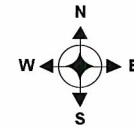
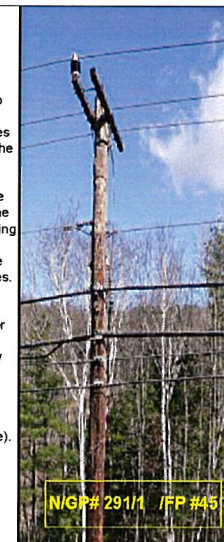
Span Length = 245.00 ft
Span Sag = 16.50 ft (100.0 in)
Span Tension = 762 lbs
Max Load = 11,200 lbs
Ultimate Load (60%) = 6,720 lbs
Catenary Length = 286.556 ft
Stress Free Length @ Installed Temperature = 286.417 ft
Unloaded Strand Sag = 16.12 ft (193.5 in) 5.00%
Tension = 774 lbs

Mascoma River Crossing #1 at Glen Rd



Construction Notes:

Sovernet Fiber Co proposes to install a 10M Steel Stranded Cable between the existing poles shown above that will traverse the River. The new strand will be installed at the height shown. There will be a 2" duct Double lashed to the strand in which the fiber will be placed. The supporting Strand will be dead-ended on each Pole so that SFC's cable sag matches the adjacent cables. There will be an information tag installed at each Pole on the fiber at the time the fiber is installed. The cable will be placed using the correct safety Personnel when installing the Fiber. The proposed fiber will be installed with proper Clearance to the other cables Already in place. (See info Above).



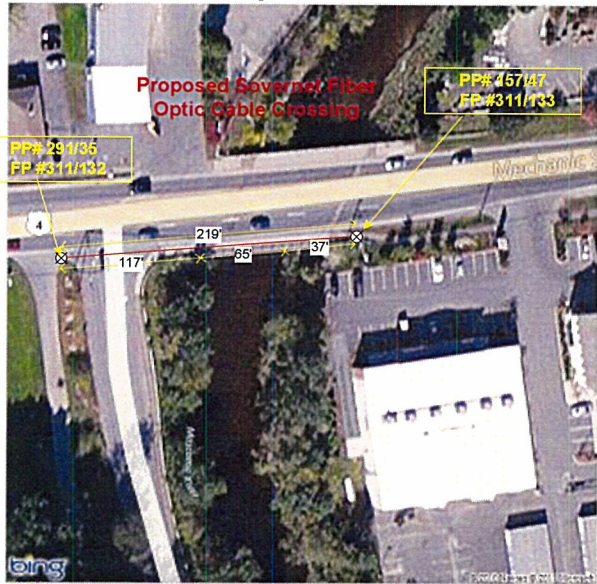
SOVERNET COMMUNICATIONS
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802-460-9100

WO:	SOVERNET COMMUNICATIONS		
ROUTE:	Zone 12		
ROW:	Public	DATE	
STAKED BY:	DLY	DATE	5-23-12
REV BY:		DATE	
PROJECT:			
ROUTE:	Mascoma River crossing Glen St. #1		
SHEET:	2	OF	2

bing Maps

Mascoma River Crossing #2 At Buckingham Place & Hwy 4

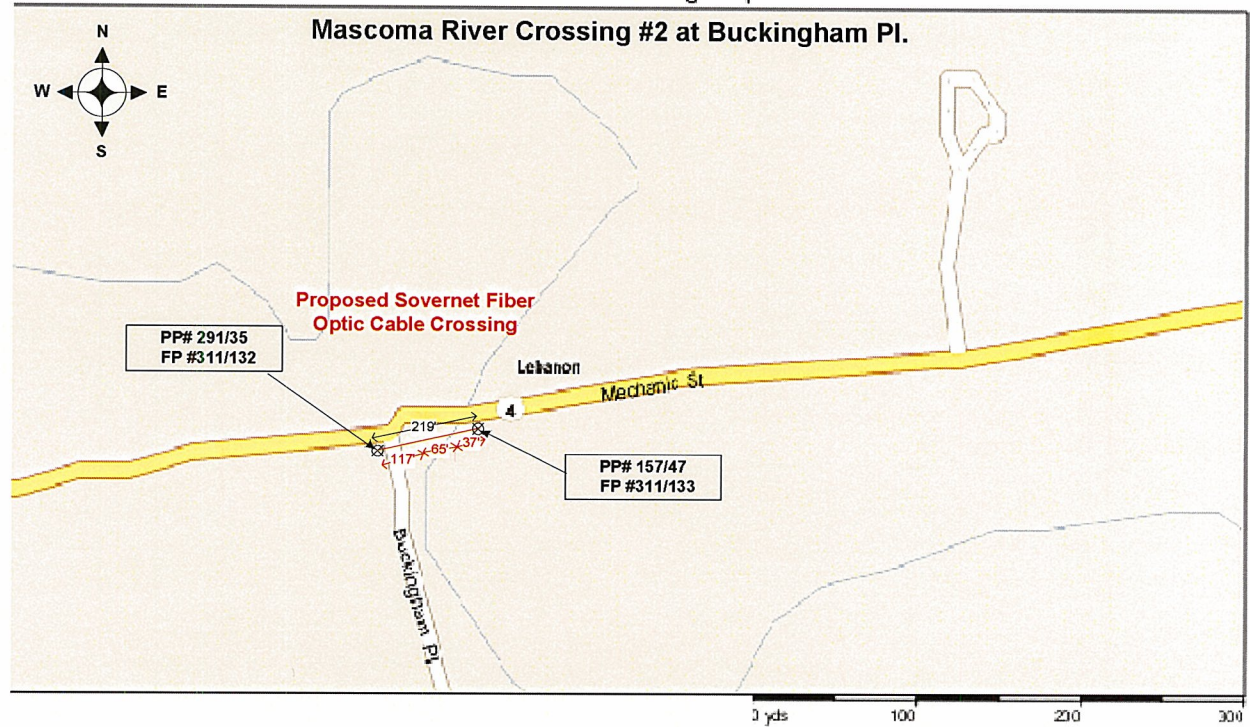
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Mascoma River Crossing #2 at Buckingham PI.

Sovernet NH Fiber Crossing Map

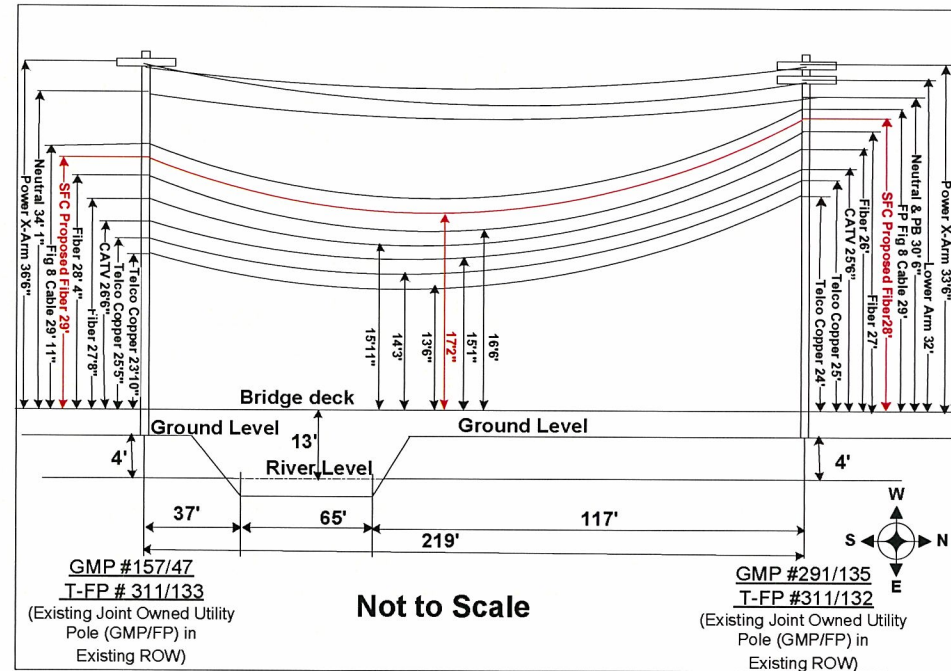
Mascoma River Crossing #2 at Buckingham PI.



SOVERNETH COMMUNICATIONS 
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WO:	SOVERNETH COMMUNICATIONS 		
ROUTE:	Zone 12		
ROW:	Public	DATE	
STAKED BY:	DLY	DATE	5-23-12
REV BY:		DATE	
PROJECT:			
ROUTE:	Mascoma River crossing Buck.PI. #2		
SHEET:	1	OF	2

Mascoma River Crossing #2 at Buckingham Pl.



Spanmaster @ Release 3.1 Sag / Tension Computations

Sovernet Fiber Corporation 06/05/12 Mascoma at Buckingham
Mascoma River Crossing South side of Route 1 at Buckingham Pl.

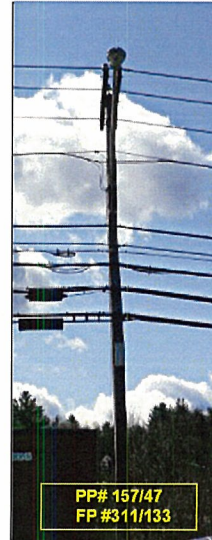
Selected Cables	X SECT AREA (sqin)	EFF MODULUS (psi)	NOMINAL DIAM (in)	EFF EXP COEFF (1/F)	CABLE WEIGHT (lb/ft)	E'A LOAD BEARING CAPACITY (lbs)	MAX RATED LOAD (lbs)
5/16" 11.2mEHS	0.0595	2.60E+07	0.3173	5.60E-06	0.2050	1545950	11200
ORF-2" D-2x288 Bundle	4.4300	1.20E+05	2.375	6.70E-06	1.0250	531600	2580

NESS RESULTS

WIND CONDITION	Temp (F)	ICE LOAD (lb/ft)	ICE THICK (in)	WIND SPEED (mph)	WIND DIR (deg)	WIND GUST (mph)	WIND GUST DIR (deg)	WIND GUST FREQ (1/30)	WIND GUST DURATION (min)	WIND GUST PERIOD (sec)	WIND GUST RISE TIME (sec)	WIND GUST FALL TIME (sec)	WIND GUST TOTAL TIME (sec)	WIND GUST TOTAL DURATION (min)	WIND GUST TOTAL PERIOD (sec)	WIND GUST TOTAL RISE TIME (sec)	WIND GUST TOTAL FALL TIME (sec)	WIND GUST TOTAL DURATION (min)
Hulu 251 - Heavy	0.0	1.982	.50	.8	4.0	3.729	11.54	19.50	0.00	2.10	1.15	10.87	20.9					
232A1	120.0	0.000	.00	.0	0.0	1.200	11.52	0.49	0.00	2.07	0.00	11.52	0.0					

Span Length = 210.00 ft	Temp (F)	Midspan Sag (ft)	Tension (lb)	% Length Change	Clearance 17.2 ft
Span Length = 210.00 ft					
Span Sag = 11.30 ft (135.6 in)					
Open Tension = 0.50 lb	-40.0	10.01	690	-0.00	17.09
Max 1 cord = 11.200 in	-30.0	10.55	695	-0.05	17.54
Usable load (6.0%) = 6,720 lb	20.0	10.90	685	0.05	17.60
Catenary Length = 220.555 ft	-10.0	10.95	682	-0.04	17.55
Strand Free Length @ Installed Temperature = 220.402 ft	.0	10.99	679	0.04	17.51
	10.0	11.04	677	-0.03	17.46
	20.0	11.00	674	-0.03	17.42
	30.0	11.12	671	-0.02	17.38
Unload cat strand	40.0	11.17	669	0.02	17.33
Sag = 11.02 ft (132.2 in) 5.00 % Tension = 112 lb	50.0	11.21	666	-0.01	17.29
	60.0	11.20	664	-0.01	17.24
	70.0	11.30	661	0.00	17.20
	80.0	11.34	659	0.01	17.16
	90.0	11.39	656	0.01	17.11
	100.0	11.43	654	0.02	17.07
	110.0	11.47	652	0.02	17.03
	120.0	11.52	649	0.03	16.99
	130.0	11.56	647	0.03	16.94
	140.0	11.60	645	0.04	16.90

Mascoma River Crossing #2 at Buckingham Pl.



Construction Notes:

Sovernet Fiber Co proposes to install a 10 M Steel Stranded Cable between the existing poles shown above that will traverse the River. The new strand will be installed at the height shown. There will be a 2" duct Double lashed to the strand in which the fiber will be placed. The supporting Strand will be dead-ended on each Pole so that SFC's cable sag matches the adjacent cables. There will be an information tag installed at each Pole on the fiber at the time the fiber is installed. The cable will be placed using the correct safety Personnel when installing the Fiber. The proposed fiber will be installed with proper Clearance to the other cables Already in place. (See info Above).



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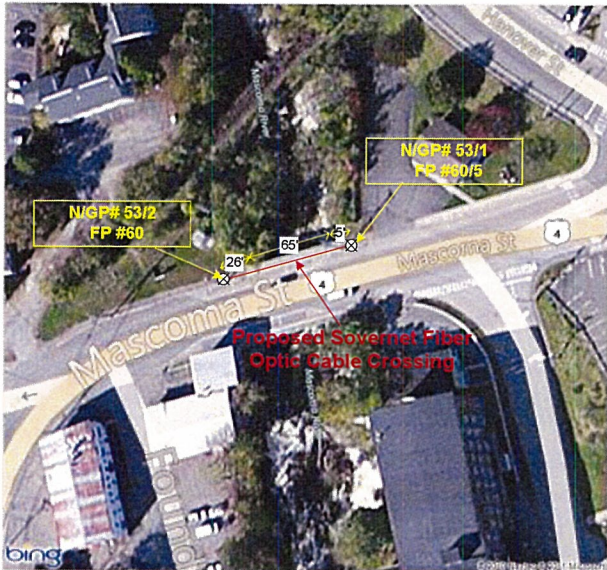
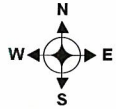
WO:	SOVERNET COMMUNICATIONS		
ROUTE:	Zone 12		
ROW:	Public	DATE	
STAKED BY:	DLY	DATE	5-23-12
REV BY:		DATE	
PROJECT:			
ROUTE:	Mascoma River crossing Buck. Pl. #2		
SHEET:	2	OF	2

Mascoma River Crossing #3 at High St.& Hwy 4

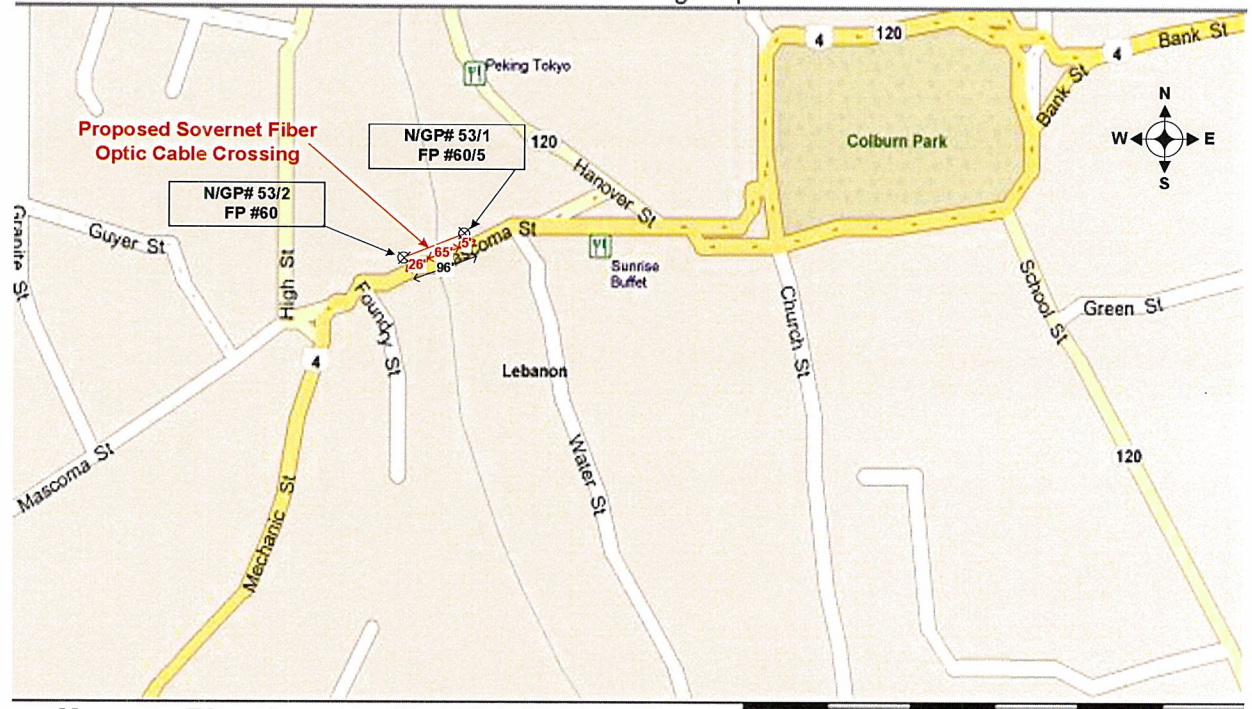
bing Maps

Mascoma River Crossing # 3 at High St & Hwy 4

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Sovernet NH Fiber Crossing Map



Mascoma River Crossing #3 at High St.& Hwy 4

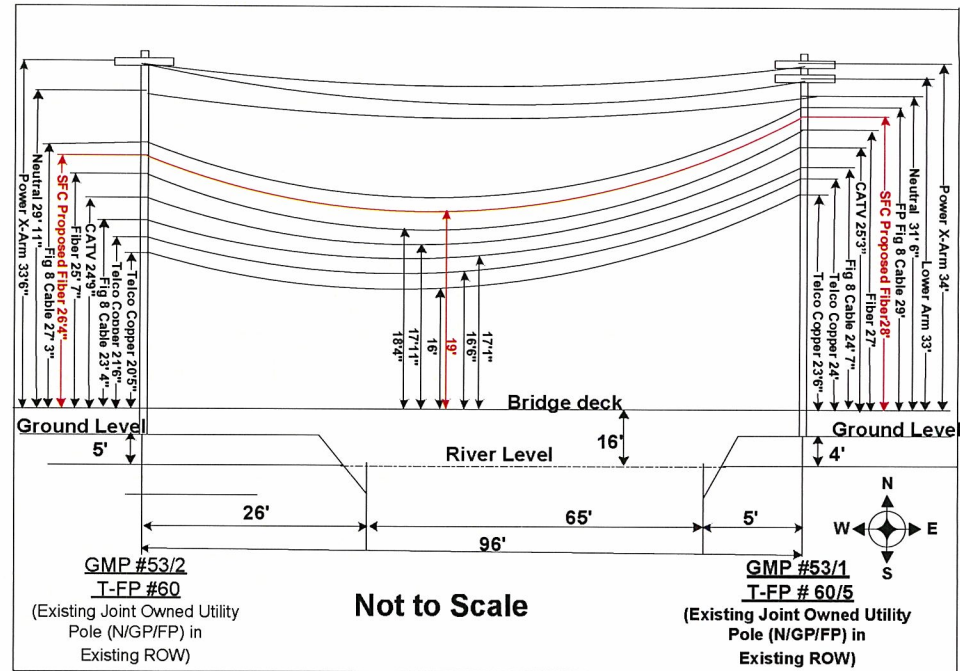
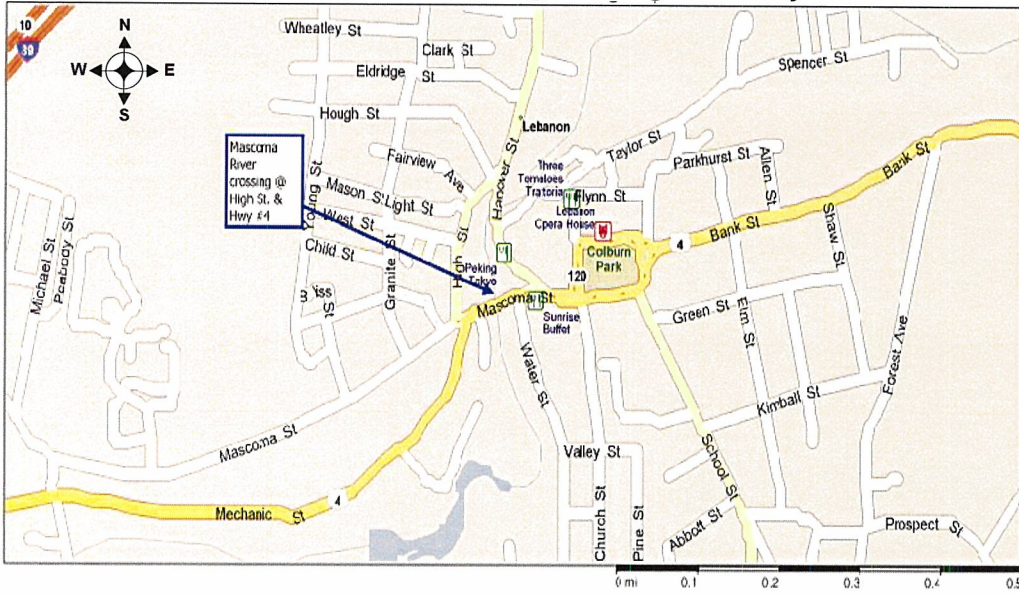
0 yds 100 200 300



SOVERNET COMMUNICATIONS
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WO:	SOVERNET COMMUNICATIONS		
ROUTE:	Zone 12		
ROW:	Public	DATE	
STAKED BY:	DLY	DATE	5-23-12
REV BY:		DATE	
PROJECT:			
ROUTE:	Mascoma River crossing High St.#3		
SHEET:	1	OF	2

Mascoma River Crossing #3 at High St. & Hwy 4



Spanmaster @ Release 3.1 Sag / Tension Computations

Sovernet Fiber Corporation 06/05/12 Mascoma at High St
 Mascoma River Crossing North side of Route 4 at High St.

Bundle	X-SECT AREA (sq.in)	EFF. MODULUS (psi)	NOMINAL DIAM (in)	EFF. EXP. COEFF. (1/F)	GABLE WEIGHT (lb/ft)	E'A LOAD BEARING CAPACITY (lbs)	MAX. RATED LOAD (lbs)
Bundle 1	0.0345	2,800,000	0.0004	5,800-016	0.2050	154,9400	11200
Bundle 2	4.4000	1,200,000	2.0000	6,200-016	1.0250	501600	25300
Bundle			2.6000		1.2900		

NSC RESULTS

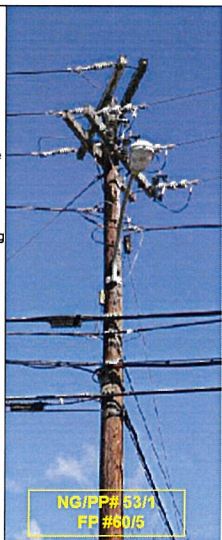
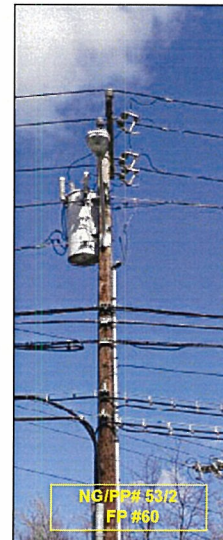
Temp (F)	Midspan Sag (ft)	Levspan (ft)	% Length Change	Clearance (ft)
40.0	8.07	182	-0.05	19.13
50.0	8.08	182	-0.05	19.12
60.0	8.09	182	-0.05	19.11
70.0	8.10	182	-0.04	19.10
80.0	8.12	181	-0.04	19.08
90.0	8.13	181	-0.03	19.07
100.0	8.14	181	-0.02	19.06
110.0	8.15	181	-0.02	19.05
120.0	8.16	180	0.02	19.04
130.0	8.18	180	0.01	19.02
140.0	8.19	180	-0.01	19.01
150.0	8.20	180	0.00	19.00
160.0	8.21	179	0.01	18.99
170.0	8.22	179	0.01	18.98
180.0	8.24	179	0.02	18.96
190.0	8.25	179	0.02	18.95
200.0	8.26	178	0.03	18.94
210.0	8.27	178	0.03	18.93
220.0	8.29	178	0.04	18.92

Span Length = 498.00 ft
 Square Sag = 8.20 ft (98.4 ft)
 Square Levspan = 1.73 ft
 Midspan = 11.20 ft
 Uplift Load (90%) = 6.72 ft
 Capacity Length = 97.66 ft
 Stress Free Length (ft)
 Installed Temperature = 97.057 ft
 Unloaded Strand
 Sag = 8.18 ft (98.2 in) 0.02 to
 Tension = 29 lb

Mascoma River Crossing #3 at High St. & Hwy 4

Construction Notes:

Sovernet Fiber Co proposes to install a 10 M Steel Stranded Cable between the existing poles Shown above that will traverse the River. The new strand will be installed at the height shown. There will be a 2" duct Double lashed to the strand in which the fiber will be placed. The supporting Strand will be dead-ended on each Pole so that SFC's cable sag matches the adjacent cables. There will be an Information tag installed at each Pole on the fiber at the time the fiber is installed. The cable will be Placed using the correct safety Personnel when installing the Fiber. The proposed fiber will Be installed with proper Clearance to the other cables Already in place.(See info Above).



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STAKED BY:	DLY	DATE	5-23-12
REV BY:		DATE	
PROJECT:	Mascoma River crossing High St.#3		
SHEET:	2	OF	2