

Williston Federated Church Steeple Repair Project

This is a project supervised by
the
Trustees of the Williston
Federated Church



- As indicated in picture, structure of spire comes down to just above the main roof ridgeline/uppermost front window. Think of this structure as an upside-down octagonal ice creamcone with 8 full length structural ribs that define the corners. Jay Southgate refers this structure as the “cone”
- The ribs of the cone rest on transfer beams in the tower at the point indicated by in the picture that line on the front foto. So called because they transfer the load to the outer structure.
- This is a good and common method of steeple design.

The Trustees have selected

Jay Southgate Construction & Steeplejacks (Barre, VT)
for this project

<http://www.southgatesteeplejacks.com/about-us.html>

Jay Southgate Inspection Report Net

- Slight lean of steeple towards front/playground he suspects is due to rot. Minor repair could secure steeple prior to replacement.
- Spire leaks “terribly”. Rainwater runs down the ribs whenever it rains.
 - Water running down a vertical piece of wood can do so while causing little trouble. But, the rot happens fast when this water hits a horizontal surface.
 - The water dwells at the juncture of the vertical and horizontal elements and rots the wood. In a timber frame, the mortice makes a place for the water to pool, which is even worse.
- Transfer beams at the front/playground corner are the old originals, and therefore have mortices in which the water has pooled. So, all the ribs are rotting on their bottoms, but the newer transfer beams do not appear to have started rotting yet. But they will soon.

Jay Southgate Inspection Report Net (cont.)

- “Exterior wood work on spire is 100% “shot”.”
 - If you go up and try to fix it you will be throwing money away.
Eyebrow Roof
 - This is bad. The old metal roofing is slathered in paint, rusting, failing, leaking. that is why the crown molding below has rotted out as shown by those metal patches put in by the last repair.

Steeple Proposal Net

- Propose to create a 100% new product that will consist of the cone as the basic structure. To this Cone will be attached all the exterior finish from the eyebrow roof/tower eaves up.
- Condition of belfry woodwork is not too bad. However we needs to replace the entire cone system down to the main roof ridge. This coupled with the fact that the eyebrow roofing is in poor condition means that we will have to create a new belfry exterior. This will eliminate old lead paint and result in a more durable product.

Steeple Proposal Net (cont.)

- Exterior Woodwork
 - Choice of materials: The preferred option is to use copper sheathing over the top of the spire. Additional material: Spanish Cedar, Klear or Azek.
- “So, we'll document it, design it, build it in one piece, truck it to the site and swap it out for the old one.”

Steeple Proposal Cost Estimate

COSTS	
PRE-CONSTRUCTION	
Document steeple/pluck finial	3000
Crane fees for same	800
Attend 2 meetings with historic folk	1000
Design	8000
Engineering	7000
	\$19,800.00
IN SHOP	
Build the Cone	37000
Spire finish	38000
Frame out the belfry	17000
Belfry/Tower Eave finish	46000
Copper roofing 2 levels	45500
Epoxy work on Finial	2000
	\$185,500.00
ON SITE	
Deal with phone co.	0-5000
Pack to ship	5000
Truck to site	2500
Rig old spire for removal	6000
Lead Safety for same	2000
Pluck old steeple and place in dumpster, install new	5000
Crane fees for same	4500
Final connections, punch list	8000
	\$38,000

[TOTAL \$243,300

Proposed Funding Sources

Goal	\$240,000
Church Funds on Hand	\$50,000
Local Grants	\$40,000
Others Grants	\$50,000
Contriburtions	\$100,000
Total	\$240,000
Finance Balance	\$0

Timeline

