



# TIMBER FRAMERS GUILD

Dedicated to the art and science of timber framing

Timber Framers Guild  
1106 Harris Avenue, Suite 303  
Bellingham, WA 98225-7002

29 August 2016

Mr. Geoff Dangerfield  
Chair  
Cathedral Working Group

Dear Geoff,

I am writing as the President of the American Timber Framers Guild (TFG), a professional organization with over 1200 members that specializes in traditional massive timber construction methodologies.

I write to affirm our offer to be the lead contractor in the construction of the timber framing for the Peoples Steeple proposal submitted by Marcus Brandt and Andy Buchanan.

We first wrote to express our interest in offering assistance in November of 2011 shortly after the tragic destruction of the Cathedral Spire and severe damage to other parts of the cathedral. I can categorically state that TFG remains just as interested and committed to assisting now as we were then.

You have before you now, an updated version of “The People’s Steeple” proposal by Marcus Brandt. It has been updated from the original November 2011 version to reflect changes since then. You also have a report from Dr. Andy Buchanan, Emeritus Professor, Civil Engineering, University of Canterbury. Those documents describe and advocate a plan to utilize time-proven techniques to rebuild the steeple.

We believe the proposed timber framing of the Cathedral Spire is the best option from an engineering and cost perspective. The steeple raising would also engage the people of Christchurch and focus world attention on the recovery of Christchurch Cathedral.

While our Guild prides itself in building beautiful, strong, long-lived, sustainable buildings, we are more pleased that we can use those structures to build, support and heal strong communities.

The tradition of communities coming together to build culturally important structures, particularly in times of need, reaches very far back in our history. The prospect of a multi-national community of like-minded craftsmen and women gathering in New Zealand for the shared purpose of fabricating and erecting such an iconic edifice is not only thrilling, it resonates across the boundaries that typically separate us, be they cultural, political, national or religious. This is the inspiration behind this endeavor.

For nearly thirty years the Timber Framers Guild has participated in this long tradition by helping communities to design and build public timber frame structures that serve their people. We bring Guild members from all over our continent, and often times beyond, who contribute their time and expertise in pursuit of the Guild’s mission to educate and inform the public about traditional timber framing. Over the course of so many years and so many projects, we have learned that whatever the goals are for the project, the lasting reward for those who participate is the deep sense of accomplishment and the profound connections they have made.

Over these thirty years, the Guild has built projects as far northwest as Alaska and British Columbia and as far southeast as South Carolina. We have experience working internationally in South America, the UK and Europe.

In 2011 the Guild led an international team and completed the reconstruction of the 15th century Gwoździec Synagogue roof, in Sanok, Poland. We have built timber frames of all shapes and sizes from small, beautifully-crafted pavilions to 45m span pedestrian bridges to 15m x 45m x 10m market halls used for community events. We have successfully managed the projects within the constraints of cost and schedule and have done so working with non-governmental organizations, not-for-profit groups and local, state and federal entities. We have the ability to deal with the complexities of building in today's most challenging environments.

Within our community we have members engaged in all aspects of timber frame construction from engineering design through erection and on into finishing of the building. We have members who bring deep experience and knowledge of traditional timber framing as well as modern framing methods; architects and designers steeped in the design of timber frames. We have professional engineers who have worked in this industry for 20 to 30 years and have done much work to advance the science of timber framing and have engineered timber frames that have been built in high seismic, hurricane and heavy snow environments in North America and Europe. And the Guild membership includes companies who have built hundreds of timber frames including large commercial and institutional structures; and project managers and timber frame instructors, all of whom have supported our community building program. We would utilize these resources for the "Peoples Steeple."

The usual business model for a commissioned volunteer project like this is for the Guild to provide and oversee a large volunteer group of skilled carpenters. Those volunteers are coordinated and led by a much smaller staff of paid professionals. The sponsoring group covers the costs of materials, transportation, food and lodging, professional fees and incidental expenses. Additionally the Guild receives an honest fee for helping to pull the project together to completion. While this is not free to the sponsor, we find that we can usually do a project for about 50% of the cost of simply contracting out the same work. Donations of materials, services, food, accommodation etc., can dramatically reduce the overall cost, and the knowledge that timber frame carpenters will be coming from around the world to volunteer their time can be an inspiration for others to contribute. We believe we could work out a variation of this model that would suit the needs of everyone involved.

We hope to offer our skills in your service and use the Steeple as a way to share our community with your community. We do not want to do this project "for you"; we want to do it "with you."

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"The People's Steeple" design and model is based on these time-proven approaches and techniques. It provides proof-of-concept. It has been carefully thought through and well vetted. However, there is room for refinement, development and engineering review.

To that end, I recently spent a weekend with Marcus Brandt, author of the steeple plan and long-time Guild member, and Dr. Andy Buchanan, Professor Emeritus, University of Canterbury. We visited and explored several centuries-old timber framed steeples in the U.S. Mid-Atlantic region and familiarized Andy with our design and building process. (My role and responsibility as a director, before being elected as president, was the community building program. Additionally, I am a principal of a specialty structural engineering firm specializing in heavy timber engineering.) Together we developed a couple of approaches that we could use in the design, fabrication and erection of the steeple.

It became apparent that the project lent itself to a design/build approach. The design phase would flesh-out and refine the design and engineering of the reconstructed steeple. That design would achieve six goals:

1. To the extent possible, be true to Scott's and Mountfort's original steeple in function, gravitas, proportions and appearance
2. Achieve seismic performance greater or equal to current NZ standards for public buildings
3. Cost effectiveness compared to alternative construction methods

4. Have a useful functional life well in excess of 500 years with moderate maintenance
5. Provide for safe community participation in its assembly and erection in compliance with NZ Health and Safety regulations.
6. Provide excellent access for on-going, cost-effective inspection and maintenance

The other key deliverables of the design phase of a design/build contract would be a definitive budget and plan to execute the fabrication and erection work. If accepted by the Cathedral working group, that plan would form the basis for a timber frame building phase of the contract.

Amongst other discipline experts, the Guild would be responsible for providing a qualified, licensed engineer or engineering firm and would be under contract to a New Zealand licensed professional who would perform the role of engineer-of-record and assure compliance to all local and national New Zealand building codes and H&S regulations. In this way, we would be able to bring the most knowledgeable and qualified design and engineering resources to bear, while the local, New Zealand engineer would assure that the timber work met all local requirements.

If chosen to lead the reconstruction of the timber frame steeple, the Guild would invite and coordinate the efforts of our sister organizations and the wider community of timber frame craftsmen and women from New Zealand, Canada, the U.K., Europe, Australia and elsewhere. Our intention would be to engage the widest possible group to benefit from the best timber frame knowledge and experience available. And, for the fabrication and erection of the steeple, the Guild would design a workshop and plan that involves and engages the Christchurch community in the work on and offsite. The Guild, together with the Church, City and other stake holders, would plan the erection of the steeple as a gala public event involving the community at large, and with the help of local, regional, national and international contacts, promote the fabrication and raising of the steeple as a truly global effort of cooperation and support.

As a representative of the Timber Framers Guild, I want to thank you for considering making this a communal effort and including the Guild in that consideration. We see no more worthy project than this one upon which to expend our skills, energy and emotion. We stand ready to assist you. We hope to travel this road with you. We await your invitation.

Yours Faithfully,



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*An Invitation: The Timber Framers Guild is having its national conference in Saratoga Springs, New York on the weekend of September 16-18. Members of the Cathedral Working Group are invited to attend as our guests. Please contact me if there is interest on behalf of the Cathedral Working Group.*