

**City of Charlottesville
Board of Architectural Review
January 18, 2023 - BAR Minutes (draft)**



First United Methodists Church BAR Appeal

Certificate of Appropriateness

BAR # 22-10-02

101 East Jefferson Street, TMP 330190000

North Downtown ADC District (contributing)

Owner: First United Methodist Church

Applicant: William L. Owens, AIA

Project: Install solar panels

Members Present: Ron Bailey, Dave Timmerman, Breck Gastinger, Cheri Lewis, James Zehmer, Carl Schwarz, Roger Birle

Staff Present: Jeff Werner, Mollie Murphy, Patrick Cory, Remy Trail

Jeff Werner - [summarized Staff Report]

William Owens, Applicant – I would like to reiterate that it is important to the church to demonstrate good stewardship of the environment and show that support by supporting sustainable energy. They have been doing a lot of green initiatives at the church. As a result of that, someone has offered a large donation to consider adding solar panels to the church. If they were to do so, they would like to maximize the advantage of that and the coverage of it to reduce their carbon footprint and their electrical bill as much as possible at a savings of close to 50 percent or \$11,000 as proposed. The last time we were here, a major part of our discussion was about the installation, not the panels themselves on a 100 year slate tile roof. We have tried to address that by proposing to remove the tiles underneath the panel arrays and replace them with a water proofing membrane. Right now, it doesn't have anything underneath the tile shingles. Asphalt shingles, which will give it a more typical installation and reduce any concerns there. The panels would cover any kind of roofing in change there. Anything that was remaining would be visible as site shingles. The new roofing would not be seen. The removed shingles would be salvaged and saved. They can be returned and used for repairs or replaced if the panels were removed in the future. The new roofing won't even be seen. The panels themselves would be seen except at a distance. We don't think the panels, since they fall about 6 inches off the roof surface and follow the roofline don't change the characteristic of the historic roof or are detrimental to the character of the historic structure.

QUESTIONS FROM THE BOARD

Mr. Schwarz – Can you reassure me as to what the breakage might be for removing the slate and putting them back? Is that a successful process?

Roofer – It will probably be about 25 percent.

Mr. Bailey – How long do you expect the solar panels to last?

Solar Installer – The warranties are 25 years. They are expected to last anywhere from 35 to 50 years. They become technologically obsolete long before they stop working. There are no moving parts. It is basically a rock on the roof.

Ms. Lewis – What do you do once those are obsolete?

Solar Installer – We really don't see that happening yet. I don't know that the solar industry has a good solution for what to do with all of the panels. They are striving to recycle materials from the panels. Recently, UVA came up with a method to vaporize the silver in the panel.

Ms. Lewis – How sustainable is that when you're talking about replacing materials in 25/30 years?

Solar Installer – That is an excellent question. I don't have a good answer to it.

Mr. Birle – I have a question about the brackets. Would they last more than 25 years?

Solar Installer – Everything is warrantied for 25 years as far as most of the equipment is concerned. The brackets are a piece of aluminum with a stainless steel bolt through them.

Mr. Birle – Once the panels become obsolete, the thought is that you could still have the same framework holding new panels?

Mr. Owens – It is a leg and a track. The panels can be removed and upgraded. Once they have lived their life (technologically or functionally), they can just be replaced. The whole issue with the materials and the recycling is something for the entire industry, not just for our project.

Mr. Bailey – What is the current condition of the slate roof?

Roofer – It is Buckingham slate. It is in pretty good shape

Mr. Timmerman – How old is it?

Mr. Owens – We think it is original to the building. It is close to 100 years old.

Mr. Timmerman – I have a question about the change; getting rid of the slate and putting the new membrane. Was that a result of our feedback? Was that a result of doing a further study on installing these panels on slate?

Mr. Owens – It would probably be both. Much of our conversation was regarding the installation on the slate. Their attempt was to simplify that. We were not able to find

something that really addressed the slate themselves easily. We simplified the geometry of the panel arrays that no longer have steps in them. They can be rectangular roof replacement. It seems to be very common and very easy to install these on an asphalt shingle roof. With the addition of a water proofing membrane and the asphalt shingles, slate is going to be in much worse condition than the roof underneath it. It is protected by the panels themselves from direct rain. There shouldn't be any issue with any kind of leakage long term. It makes it a more typical installation. You never see it. It was a combination of your feedback and finding no other solutions that we thought you would find better than what we came with.

Mr. Birle – How does the membrane meet the existing slate that you're leaving?

Roofer – We build a curb on the sides. We put a copper tap on that and separate the two [?] on the edge of the solar panels. At the bottom, it overlaps.

Mr. Birle – That curb would be the height of the bracket?

Roofer – Yes. It does have to be 3 inches.

Mr. Owens – The track overhangs by up to 3 feet. We would try to place it so that the new roofing stops well within the array.

Mr. Gastinger – I was concerned if you ended up getting too aggressive in removing it and we ended up with a 'halo' around the panel area.

Mr. Owens – The intent would be to keep it as tight as possible to the mounting legs.

Mr. Zehmer – What is the spacing on the mounting legs or anchor points?

Solar Installer – The panels are about 6 feet. There is an overhang on the top. It is probably about 4 feet between rails. There are two rails that support a panel or a row of panels. The spacing is engineered. That goes through a third party.

Mr. Zehmer – A typical asphalt shingle roof is around 25 years.

Roofer – The lifetime of architecture shingles is considered to be 40 to 50 years. They used to make them 25 years.

Mr. Owens – These won't be exposed to the sunlight.

Mr. Zehmer – That's why I was asking about the anchor points. If it is 18 inches or 2 feet, you have to drill a hole through it. That's going to weaken that system.

Mr. Owens – We have to find an engineer. It is 1 by 6 decking. Whether that is adequate enough to support the legs or we have to hit a rafter. The instructions typically say to hit a rafter. It would be easier if we didn't have to do that. If we're allowed to go forward, we will get into those details.

Mr. Zehmer – Where I was going was the concern that the asphalt roof still doesn't outlast the slate around it. You would have to come back and remove those panels to fix that roof.

Ms. Lewis – How many square feet are you removing? What is the area of historic slate?

Solar Installer –It is roughly 4000 square feet.

Mr. Timmerman – This a congregational decision. Do people of the congregation think this is a good idea? Are they very excited about it?

Alex Joyner, Pastor – There is great encouragement and excitement. During the pandemic, we had a justice group that formed that was very interested in green initiatives at the church. When this offer and significant donation came through, that was very encouraging. One of the struggles of every downtown church is being a historic structure and leading the way into something new. This seemed as a way, both to claim our place in downtown but to be a witness. There certainly was a lot of support.

Mr. Owens – This also coincides with the Inflation Reduction Act, which now opens up funding to nonprofits that it didn't before that allows this to be funded in a large part in a way that wasn't available before.

COMMENTS FROM THE BOARD

Mr. Gastinger – I note that while our specific guidelines do not deal with this in detail, we do reference the Secretary of Interior Guidelines. They do provide a number of additional recommendations and guidance.

When I first heard that you were coming back and I heard about the strategy that you were employing, I was very glad to hear that you are not removing all of the slate. I feel that this is a pretty creative way of actually addressing the problem/of dealing with the slate. From my perspective and the way that it has been presented in keeping the new roof under the perimeter of the solar panels, I really don't see how this has any impact on the historic district. I feel this is a supportable direction.

Mr. Birle – I agree. The roof was not visible as I was walking around the church earlier today. You can see the lower roofs from a distance. Given that the [City's] Comprehensive Plan talks about promoting green practices. Our own guidelines say not to discourage sustainable design. I can stand by this.

Mr. Schwarz – I badly want to see solar panels on this project. I can't stand behind it. I really struggle with taking a historic material that has a good long lifetime and removing that, potentially destroying a good portion of it, replacing it with a petroleum product that won't last as long, covering it with solar panels, and it didn't sound like there is a good plan to recycle or replace those solar panels. I am wondering at what point these solar panels actually start being green. There's going to be a long time you're throwing away energy and carbon to

put them up there. Our purview is the historic slate. Telling that 25 percent of that slate is going to be broken in the process, I can't support it unfortunately. I really want to support it.

Mr. Timmerman – From the Secretary of Interior Standards, there is an excerpt under planning. “Forming an integrated sustainability team and working on a large project that includes a preservation professional to ensure the character and integrity of the building is maintained during any upgrade.” I feel that gives a clue to maybe what you're talking about. If there's a way to evaluate the pros and cons, you might have already done that. I hate seeing the most sustainable building material that you can imagine that you pull out of the earth and go back into the earth. Solar panels are a wonderful technology and they are doing a lot of good in the way that it is forming alternates to what we have been using before. There is a beauty and sustainability to doing something very simple. Where is that balance? It is so easy to embrace the new technology because it is new. It appears to be the right thing. I would be interested in knowing if there is a professional assessment out there that really can weigh these sort of issues of these two materials. I am heartened by the comments that you have made about the excitement that the congregation has. We have an ethical need to conserve and be sustainable in this world. I am not going to step in the way of a congregation that has occupied a building for hundreds of years and wants to put a solid step forward in changing things for the better.

Ms. Lewis – We're asked to approve this as a certificate of appropriateness and say that it meets our ADC Guidelines. That's the limited purview of this Board: to weigh sustainability efforts versus the renewal energy system that you want to put on there. That's not in our purview. Even meeting the Comprehensive Plan goals, zoning ordinance encouragement, and Future Land Use Map goals is not part of our purview. Our purview is very narrow here. Our guidelines have not been updated. The city doesn't have the money in engaging a professional preservationist/consulting group who could rewrite our guidelines. We are bound by them. Our guidelines say two things. One is that we cannot install mechanical or service equipment that would damage or obscure a character defining feature of this property. I do think this roof is visible from public rights of way. The slate roof is historic and it is character defining of your beautiful church. Our other guidelines say that you don't remove slate. Slate is historic. It was made nearby. It is so durable. You can't install solar panels on it. Our guidelines are very clear. The other additional standards we can look to for a little bit of guidance are the Secretary of Interior Standards, which have begun to address solar installations. I just want to read those for our reflection and for the applicant hears them. We're bound by this. We don't love this outcome. I really don't think that I have leeway if I am bound to uphold these guidelines. The Secretary of Interior Standards for solar technology:

- Considering onsite solar technology only after implementing all appropriate treatments to improve energy efficiency of the building, which would often have a greater life cycle cost benefit than just the onsite installation of renewable energy.
- Analyzing whether solar technology can be used successfully and will benefit a historic building without compromising its character or the character of the site or the surrounding district.
- Install a solar device in a compatible location on the site or on a non-historic building or addition where it will have minimal impact on the historic building or site.

- Installing a solar device on a historic building only after all other locations have been investigated and determined infeasible.
- Installing a low profile solar device on the historic building so it is not visible or minimally visible from the public right of way or set back to take advantage of a parapet or other feature and to screen panels or on a secondary slope of a roof out of view from the public right of way.

As much as I commend your congregation for wanting to do this, my vote has to be ‘no’ only because of the guidelines that I am supposed to uphold here.

Mr. Zehmer – It is a really creative solution that you came up with. It is a character defining roof, especially over the sanctuary. In our previous meeting, we did talk about looking at the addition roofs. I can see myself supporting solar panels on those roofs. The question becomes: Do we need to tear the slate off those roofs to make them asphalt and solar panel? Would that pass muster? That would probably need another submission/revised submission to have that conversation. Per our guidelines: Place solar collectors and antennae on nonconforming character defining roofs or roofs of non-historic adjacent buildings. I can see a path that way. It is tough for me to approve this seeing them on the main sanctuary roof.

Mr. Bailey – I am extremely conflicted right now. I want it to go forward with this project. Cheri makes a very good point with regard to the standards that we’re supposed to uphold. I really want to support it. I think that I probably cannot support it.

Mr. Gastinger – I thank everybody on the Board for engaging in a debate about a tricky project. We are pulled in different directions. I will say that our guidelines never anticipated this kind of application. The removal of the slate, from what we have been given and what I understand, is that it is actually going to be preserved. It could assist in the long term preservation of the rest of the roof. That preservation of the slate is an important component of this proposal. It would be worth making clearer that if the solar panels were to be removed, it would be replaced with a slate roof to match, presumably with the pieces that were held in storage. I am coming at it from the renderings and the approach. There are two questions before us. Are the solar panels as presented detrimental to the historic district? If they are not, is the removal of the panels going to create any kind of lasting damage to the structure? If there is not, there is no visible indication of a roofing change from what is being proposed. I don’t see how it is detrimental to the historic district. That’s the way I am reading it.

Mr. Birle – Reading from our guidelines. Nothing in these guidelines should be construed to discourage green building or sustainable design. If such a design is found to conflict with a specific guideline, the BAR shall work with the applicant to devise a creative solution that meets the applicant’s goal of sustainability. I feel that is what they have presented. Our offering of a creative solution is really a tough decision.

Mr. Schwarz – In response to the first question: If it was an asphalt roof, I would vote approval. With a 25 percent breakage rate and who knows what is going to happen with that slate in storage for the next 20 years, I don’t believe that they would go back up. That’s unfortunate to not trust the church. At some point, whoever is in charge, the slate is going to

end up being garden markers. The removal of that slate would be condemning that roof to not be slate in the future.

Ms. Lewis – I concur with Mr. Schwarz. It wouldn't say anything about the church. It is human nature. Four thousand square feet of slate does not go back up on that roof once it is removed. I respect the Chair for his analysis. I don't think our analysis is whether the new installation is detrimental to our historic district. The question before us is whether this application complies and can we approve it under our current guidelines? That's our purview. Our purview is not about detriment or harm or future harm. Our guidelines say that you don't remove roofing. You don't harm slate.

Mr. Werner – I did some research. Twenty-five percent is optimistic. The breakage is much higher. When we discussed the roof on the Key Recreation Center, their roofing consultant said 50 percent. It is a difficult decision. The question for the applicant would be a deferral or a denial with an appeal. A deferral would allow additional continued research/discussion. The other perspective is that I am looking at the photo and I am seeing a slate roof a block west of this. In decisions like this, I used to think in terms of land use with a special use permit. When approving something, make sure there is a very small box so it applicable in a very limited way. If there are circumstances that would make this acceptable with a presumption that you're going to see similar requests.

Mr. Owens – With the comments on the slate, we can't change the project as it is in order to accommodate the concerns that the negative votes are going to have. The church is not interested in putting just a hand full of panels on the roof. Unless you have plans to change the guidelines very soon, you're going to get more and more of these requests. You're going to have to address the congregation that is coming from a very good spot to do this. The rest of the world is going to as well. It's not going to be a slate issue. We have to change the way we handle energy. We have to develop it. It is not about the slate coming pretty soon. You are going to have to be prepared to address this. I am in full support of addressing the slate roof and preserving it. There is a conflict coming between some of this stuff and preserving our planet. There's going to have to be a resolution to that. When it comes down to it, we're going to need the energy and not the slate.

Motion – Ms. Lewis - Having considered the standards set forth within the City Code, including the ADC District Design Guidelines, I move to find that the proposed slate roof replacement and roof-top solar panels at 101 East Jefferson Street do not satisfy the BAR's criteria and are not compatible with this property and other properties in the North Downtown ADC District, and that for the following reasons the BAR denies the application as submitted:

- **The removal of the slate and obscuring and damaging the slate does not meet our guidelines.**
- **This proposed system of rooftop installation does not comply with the Secretary of Interior Standards.**

Second by Mr. Schwarz – Motion passes 4-3.

(Yes: Schwarz, Zehmer, Lewis, Bailey. No: Birle, Gastinger, Timmerman.)