

NEEDHAM PLANNING BOARD MINUTES

November 28, 2023

The Needham Planning Board meeting, held virtually using Zoom, was called to order by Adam Block, Chairman, on Tuesday, November 28, 2023, at 7:00 p.m. with Mr. Crocker and Mmes. McKnight and Espada, Planning Director, Ms. Newman and Assistant Planner, Ms. Clee.

Mr. Block noted this is an open meeting that is being held remotely per state guidelines. He reviewed the rules of conduct for all meetings. This meeting does not include any public hearings and public comment will not be allowed. If any votes are taken at the meeting the vote will be conducted by roll call. All supporting materials, including the agenda, are posted on the town's website.

Discussion of Zoning Strategies for Solar Energy Systems

Mr. Block stated the Board would be discussing Climate Action Zoning for Solar Installations, what the state recommends through the Department of Energy Resources (DOER), and what Needham is contemplating. He wants to make sure all the members are agreeing to regulate 1) roof mounted solar panels, 2) ground mounted solar systems – small and medium scale, large is already in the By-Law, and 3) solar canopies over parking lots and parking garages. They are not going to regulate pole mounted solar arrays and building mounted solar canopies. He noted Mr. Crocker advocated last time for pole mounted and building mounted solar canopies, but he is ok moving forward without those. Mr. Crocker stated he is ok with not specifying pole mounted as it is the same as ground mounted. Mr. Block stated it is not the same, since a pole mounted system is on poles. Mr. Crocker stated a ground mounted system is a structure on the ground that could be supported by poles. Technically, they have to abide by the same requirements. There is no need to mention pole mounted as they would both have the same requirements.

Mr. Block asked about building mounted solar. Mr. Crocker feels they need to include building mounted in conversations going forward. Ms. McKnight noted building mounted solar is throughout the By-Law. She stated Mr. Block commented on solar canopies above parking areas and solar canopies above parking garages. She feels those above parking garages are building mounted solar canopies. Mr. Block is making a distinction between roof mounted systems which are different than a canopy over mechanicals or a solar canopy over a parking garage. Ms. McKnight stated the distinction is not clarified in the proposal. There are solar canopies on garages but not on top of any other buildings.

Ms. Espada feels it would be good for the Planning Director to explain what she did. Ms. Newman stated she took what DOER has and researched other towns. Mr. Block wants to be clear on what the Board is regulating. Ms. Newman stated she took the Zoning By-Law and broke it up into components. She defined terms of what would potentially be regulated. She followed the definitions that were part of the draft zoning article DOER put together including the definition for solar, roof mounted, ground mounted, small scale, medium scale, active solar systems and passive solar systems. She used the definitions as amended. A lot of towns have used that, but she went with the state model. She added building mounted solar parking canopy, building integrated photovoltaic (BIPV) and solar energy system surface integrated. To regulate, she added a new definition for solar energy system. She did add building mounted, but the Board may not want to add that. She added a solar parking canopy that was not part of the state's model. She also added building integrated and solar energy and wanted to define those terms.

Mr. Block looked at the solar amendment Ms. Newman prepared. He asked if it captured a parking garage. Ms. Newman will broaden the definition to capture both. Ms. McKnight asked Mr. Block to explain why it would be allowed on parking garages but not other types of buildings. Mr. Block stated there is no market demand for canopies over office buildings or school buildings. No one is asking for it. If it was asked for, he would not allow 10-15 feet above the roof. There would need to be more research to understand the impacts. He wants a simple zoning path that people can understand, and later, as things evolve, it could be added. He sees no need to do that now. Ms. McKnight explained why solar canopies should be allowed on parking garages. They are allowing a solar canopy over a building structure when the available roof area is

not sufficient to generate electricity for a regular roof mounted system. This has nothing to do with a garage. They are allowing a canopy over a garage. She suggested thinking of a canopy over Pollard School or the Trip Advisor building. There is a By-Law that mechanicals cannot take up more than 25% of the roof surface. The Board should either say no mechanical systems larger than 25% of the roof area or make an exception for solar canopies. She feels the Board should work on the policy tonight. The policy should say solar over a parking garage would be the definition of building mounted and keep it simple.

Mr. Crocker feels Mr. Block came into the meeting with a particular idea. He feels this needs to be a group discussion. There is a difference in the percent of roof coverage. He feels the Board should plan for the future and the members need to discuss this. Mr. Block stated there needs to be another definition for solar parking canopy for garage structures. He noted in Ms. Newman's memo, page 1, item 1d) and 1c), all agree to remove the nameplate capacity in the definition. The question is the size. This is being done by square footage with the small up to 1,750 square feet. Mr. Crocker stated it is fine to reduce that to 1,500 square feet. All agreed. Medium would be more than 1,500 square feet. Ms. McKnight asked for clarification as to whether "equivalent to a rated nameplate capacity" would be deleted but Ms. Newman stated it would make sense to leave it. Mr. Block stated no capacity should be included. They are not regulating capacity, only the size of the system. He does not want to keep having to update this.

Ms. Newman stated, in her memo, under land use regulations, roof mounted solar energy systems are allowed in all districts as of right. That is consistent with the DOER regulations. In the residential districts, small scale and solar panel canopies as of right in the rear and side yards and ground mounted per site plan review. Both are consistent with the DOER model. Medium systems permitted through site plan review deviates from DOER. Ms. Newman noted where she had yellow highlight that is where she deviated from the DOER model. She stated for lot coverage, DOER recommends the towns not apply standards to ground mounted where there is grass or other pervious surface underneath. She treated them as a structure and will follow the lot coverage rules of the district they are in.

Mr. Crocker noted, under Lot Coverage, 3 b) and d) are similar. If you replace b) with d) that takes care of the square foot of the array. Ms. Newman feels the panels could be larger than the surface. Mr. Crocker noted they are dealing with lot coverage and not the size of arrays. After discussion, Ms. Newman stated her intent is to indicate that a solar canopy that extends beyond the building counts toward lot coverage. Mr. Block and Ms. Espada agreed. Ms. McKnight stated it needs to be taken into account that there is a definition of lot coverage in the By-Law. They do not count surface parking areas. Do they want a parking lot canopy to be counted toward lot coverage? Ms. Newman is saying over the building that extends beyond the building counts toward lot coverage and over a parking lot to the extent the canopy extends beyond the parking surface, that extended part counts toward lot coverage. Mr. Block stated solar panels are impervious surface. Mr. Crocker clarified that solar panels are classified as pervious surface.

Ms. Newman noted the Storm Water Management By-Law needs to be met when putting this up. She tried to indicate the impervious portions of ground mounted solar energy systems are subject to the Needham Storm Water Management By-Law and need to comply with that. Mr. Block asked if any extended part would count toward the lot coverage calculation regardless of application – ground mounted or on the roof. Ms. Newman stated yes, for an active solar system. All agreed. Mr. Crocker noted 3 b) is something different than 3 d). Ms. Newman noted one is ground mounted and one is active energy. She took this from Natick and would like to look at this further. She will follow up with Natick to clarify. Mr. Block would like her to see how Natick treats these: if they are pervious or impervious; and how they deal with Storm Water Management Systems.

Ms. Newman reviewed Section 4 – Height for Building-Mounted Solar Energy Systems. The state recommendation is that all building-mounted be exempt from height but she was not comfortable with that. She followed Natick where the height above the roof is based on the pitch of the roof for all districts. The systems should not be higher than the height of the roof. Mr. Block asked what the standard is now for mechanicals. Mr. Crocker noted 15 feet above the roof line. He would like different constraints for different districts. Mr. Block noted single family residential is no more than one foot higher than the roof of a house. Mr. Crocker stated a normal system is 5 to 7 feet, but a foot seems perfectly reasonable. Ms. McKnight likes the way it is presently worded. Ms. Newman would like to go through the memo then focus on zoning. Mr. Block stated the Board has not defined or regulated a canopy over a building or solar lids. Ms. McKnight noted what is being proposed makes a distinction between roof mounted and ground mounted and says canopies over buildings do not count.

Mr. Crocker commented that the conversation should be allowed. All members agree on building mounted solar applications.

Ms. Newman noted the next category is for ground mounted solar systems. DOER recommends using existing height limits that apply. Needham zoning does not have any limits for accessory structures so there is no standard to apply. She chose a 10-foot vertical height for small and medium scale. For a solar parking canopy in the residential district the maximum height would be the height of the principal structure. Mr. Block stated, if the maximum height of the structure is 35 feet, there could be a 35-foot canopy. This needs to be discussed. Mr. Crocker agrees that is too high. The Board will come back to height. Ms. McKnight noted Section d) refers to the Special Permit Granting Authority. Mr. Block stated it would be the Planning Board. Ms. McKnight feels it should say that. Ms. Newman noted Section 6 for setbacks. DOER had model recommendations for urban towns. The setback standards would be the standards of the district they are placed in with rear and side setbacks of 20 feet or less. She linked it to the setback requirement for buildings as they exist in all districts.

Ms. Newman stated DOER also recommends solar systems be discouraged in front yards. Her draft does not allow this at all. Other towns are allowing in front by special permit. The Board may want to consider opening it up to a special permit process. Ms. Espada agrees with Mr. Crocker that the systems in the front yard should be by special permit. Ms. Newman feels it makes sense. Mr. Block asked if it is being made discretionary by use or by other criteria. Ms. Newman will make allowing in rear and side yard discretionary. Mr. Crocker stated any structure has to be 10 feet from the house and meet all the other setbacks. Ms. McKnight liked that it was not allowed in front yards. Mr. Block agreed. Ms. McKnight stated this is new and people are going to be worried about it. She feels it should be kept out of the front yards. Ms. Espada stated if there is a large front yard you cannot see from the street it should be discretionary depending on the situation. Mr. Block feels then there would need to be a screening requirement. Ms. McKnight stated it could be done in the front of the house but not in the required front setback.

Ms. Newman noted the DOER model has BIPV Solar Energy Systems and Surface-integrated Solar Energy Systems. It is clear these fall within the parameters of the Needham By-Laws. For the impervious lot coverage requirement, she added a reference and linked it back to the Zoning By-Law. Mr. Block feels there needs to be clarity on the pervious portion and the impervious portion. Ms. Newman noted, for Site Plan Approval, she called out that DOER was not requiring site plan approval for medium sized and she was requiring site plan approval for all zoning districts. Ms. McKnight noted the Planning Board would serve as the Special Permit granting authority. It does not say medium requires a special permit. They need to be careful with that.

Ms. Newman noted that DOER had design standards in their model. She used all of their standards and added a standard on height, layout and lighting for review by the entity doing the approval. Mr. Block noted the wording needs to be to the Planning Director by the end of this year. The members will go through the draft zoning Ms. Newman did and start to give her direction.

The Board took a 5 minute recess.

Mr. Block stated the definitions in Section 1 d) and 1 e) of Ms. Newman's memo are clear. A pole mounted system is X number of solar arrays on a single pole, canopy panels are mounted on one canopy and a canopy structure is mounted. Mr. Crocker stated it is not pole versus canopy but ground mounted versus canopy. Pole mounted could have multiple poles on the array. Mr. Block stated the members talked about allowing a height of up to 35 feet or more. They need to focus on definitions. He agrees the number of poles is irrelevant. There need to be height and setback requirements. He does not want the height the same as the primary residence. Mr. Crocker noted the Board already said ground mounted systems cannot be more than 10 feet high. Ms. Newman stated Natick counted panels and also the profile on the ground. Ms. Espada feels if Natick already vetted this, that should be looked at. Ms. Newman noted Natick had 2 standards – maximum height of 10 feet and a lot coverage standard for ground mounted that the total surface area is counted toward lot coverage.

Mr. Block suggested using the section on page 2, item 3 – 6.2, for roof mounted in all districts. Ms. McKnight asked what the purpose is of the reference to “nonconforming uses and structures and are located...” Ms. Newman stated solar could be put on a nonconforming structure as of right without getting a special permit. Ms. McKnight suggested rewording

without the subsection numbers and if located on the property it does not increase the nonconformity. She asked for clarification as to whether rear and side yards in b) and c) are not talking about setbacks. Ms. McKnight stated it might work to allow in front yards but not within the front setback. She suggested coming up with special wording for that. Mr. Block stated he is not a proponent. He feels there will need to be sketches of what is being talked about at Town Meeting. He is not convinced it should be allowed in front yards. Mr. Block noted small scale ground mounted solar and solar canopies should be allowed in side and rear yards and all agreed. Ms. McKnight and Mr. Block are fine with not allowing it in the front yard. Ms. Espada and Mr. Crocker are ok with it in the front yard with a special permit.

Ms. Newman walked the Board through the process of when changes can be made. This zoning amendment could be advertised for the public hearing with a special permit in and then remove it. Mr. Block would recommend against advertising as allowing it by right. He does not advocate allowing by right in front yards or having further regulations to allow it. Ms. McKnight suggested Ms. Newman draft with allowing in the front yard. Then it can be reviewed when Mr. Alpert is present. Mr. Block noted for medium scale with site plan review, "by the Planning Board" should be added. This was agreed. Mr. Block noted in 1 c), nonresidential districts, small is allowed in rear and side yards. There were no objections. Mr. Crocker feels building mounted solar needs to be added here. There were no objections. Ms. Newman will modify the language under b) for front yards and c) for nonresidential. Ms. Espada feels it should be by special permit in both residential and non-residential districts. Ms. McKnight agreed with requiring special permits for all districts but would prefer not to allow in residential front yards. Mr. Crocker suggested leaving language regarding special permits for both residential and nonresidential.

Mr. Block stated it is different in front yards for commercial districts. The Board cannot allow on a sidewalk as that is a municipal function. He asked if they would allow a solar canopy over a seating area. Mr. Crocker stated they would. French Press has such a canopy. Solar panels should be allowed there. He would allow in the front yard of commercial but they would need to be careful. For example, a retail establishment that is set back from the road. Mr. Block noted Fresco for example, as long as it does not take up seating area. If they have a canopy, he would have no issue having solar on the canopy. Ms. McKnight stated 6.6.2 does not seem to allow building mounted solar at all. Ms. Newman assumed it was already allowed and she did not need to separate it. She asked if she should call it out. Ms. McKnight feels it should say what type of building mounted would be allowed. Mr. Crocker stated he was focusing more on commercial buildings like those across 128. He would allow mechanicals. There are no walls so it could be seen through. Ms. Newman will have to give more thought to what Mr. Crocker wants to do. Mr. Block stated, on page 52 of the packet, the bottom image to him is not a canopy. He does not feel any other mechanicals could fit under this. He would allow this in any commercial district. He might not allow where it gives more height in the Center Business District or the Heights. Mr. Crocker stated, technically, a building not already built at the height limit could do it. They cannot stop people from going up to the height allowed. Mr. Block feels the height can be restricted. The Board needs to figure out how to and where to handle smaller versions of pole mounted system dimensional regulations and lot coverage.

Ms. Newman noted in 6.2.2 a) 1) active solar systems are not buildings but the area shall count toward the maximum percent of lot coverage. This creates a series of standards that would apply. She reviewed the standards and noted double counting needs to be avoided. Ms. Espada agreed with what Ms. Newman said. They need to abide by lot coverage. Mr. Crocker asked if a pergola would count in front of the building. Ms. Espada stated it would as it covers part of the lot. Mr. Block asked about height for building mounted/roof mounted solar systems. Ms. Espada stated the Board talked about a pitch of less than 15 degrees, allow 3 feet and go up to 6 feet. Ms. Newman stated this came out of Natick. They cannot go more than 3 feet above the maximum height of the district. She will try to find out the rationale from Natick.

Ms. McKnight wants to be clear and noted that in Section 4.7.2, height exceptions, exceptions are specified and do not include solar panels. Mr. Crocker would like something in there to allow these solar lids. Maybe start with 15 feet over mechanicals. Mr. Block stated they need to modify that provision. Instead of "except with roof mounted solar system" he would say "building mounted would be setback 2 feet from the perimeter of the building." Mr. Crocker stated that does not make sense from what they have seen. Most are set back. Mr. Block is fine with roof mounted in all districts but building mounted should not be allowed right to the edge of the building. Mr. Crocker noted the edge is where the structure of the building is. If you pull it back, they would need to cantilever the system and add structure.

Mr. Block stated for small and medium ground mounted he is ok with a 10-foot height if there is a screening requirement. Ms. McKnight is concerned that the maximum height of a solar canopy should not be 35 feet. Ms. Newman feels there needs to be a height for commercial also. She would like to speak with an architect or some expert to see what the appropriate height should be for ground mounted. Mr. Block feels she should start with what Boston Properties did. For small scale he feels 10 feet is too high. It should be 8 feet at the most. Ms. Newman will find out what screening is legally permissible. Medium scale is allowed by site plan review. They would want screening for that also and for a solar parking canopy in a residential district. Ms. Newman will need to figure out the appropriate height number.

Mr. Crocker asked if they need to think about fire access around the house. Ms. McKnight suggested asking the Fire Chief so there are no surprises later. Ms. McKnight noted in Section 3 under setbacks the last phrase regarding trees says “trees should be...” “Should” should not be used when requiring something. She suggested using “shall” or “must.” Mr. Block stated they need to specify a primary structure setback. Ms. Newman noted it has to meet the setback requirements/dimensional standards. She is treating them as accessory structures like a garage. If not defined as a structure this would not have a required setback. Mr. Block wants to add “notwithstanding setbacks for mechanicals in any district, roof mounted and building mounted systems shall have the setback of the building.” Ms. Newman is not sure that is needed. Mr. Block stated if not added they cannot define mechanical systems. Ms. Espada noted this is an electrical system and not a mechanical system. There are no electrical systems on roofs. This is specific to solar, which is electric. Ms. McKnight feels they need to look at the height limits for each district.

Mr. Block noted site plan review was left to discuss. He may want to add a provision for screening for medium and potentially small scale. Ms. Newman stated there is no site plan review for small scale, but it could be added for medium scale.

Minutes

Upon a motion made by Mr. Block, and seconded by Ms. McKnight, it was by a vote of the four members present unanimously:

VOTED: to accept the minutes of 9/5/23 as amended by Ms. McKnight.

Report from Planning Director and Board members

Ms. Newman will report at the next meeting.

Correspondence

Mr. Block noted correspondence from Ross Donald, dated 11/22/23, with questions about the Needham Housing Authority project. Mr. Block spoke with him and explained the general rules of public participation in meetings. He told him project financing was not part of zoning.

Upon a motion made by Mr. Crocker, and seconded by Ms. McKnight, it was by a vote of the four members present unanimously:

VOTED: to adjourn the meeting at 10:14 p.m.

Respectfully submitted,
Donna J. Kalinowski, Notetaker

Natasha Espada, Vice-Chairman and Clerk