



## Deerfield Zoning Board of Appeals

Thursday, August 10, 2023 6:30 pm

8 Conway Street, South Deerfield MA 01373

Pursuant to a notice duly filed with the Town Clerk, a meeting of the Zoning Board of Appeals was held on Thursday, March 16, 2022 at 6:30 pm will be held in a hybrid fashion with the opportunity for both in-person attendance and remote participation in accordance with Chapter 107 of the Acts of 2022 which extended the Governor's March 12, 2020 Order Suspending Certain Provisions of the Open Meeting Law, M.G.L. c.30A § 20, until March 31, 2023. (Meeting will be recorded by FCAT and or Town of Deerfield and available on the Town of Deerfield's YouTube Channel <https://www.youtube.com/watch?v=eacWppvz25M>)

**Board members present:** Adam Sokoloski, Chairman; Laura Pontani (remote), David Potter (remote), Gaby Richard-Harrington (remote), David Sharp

**Also Present:** Amy Hahn, Building Assistant (remote); Alex Nichols, Chief Engineer, florrent, Inc.

1. Chairman Sokoloski opened the meeting at 6:30 pm
2. Roll Call
3. Minutes -March 27, 2023

***Motion to approve the minutes of March 27, 2023 -- Sokoloski***

***Second: Potter***

***Vote: Sokoloski – aye, Potter– aye, Pontani– abstain, Sharp-- abstain. Richard-Harrington – aye. Vote Passes (3-0-2)***

4. Sokolski thanked former board members Robert Decker III and Alex Herchenreder for their service and introduced new member Laura Pontani.

5. New Business

- **Public Hearing-** Hearing convened at 6:36 pm with notice read into the record Pursuant to MGL Chapter 40A section 9 & 10, a Special Permit application filed by **florrent, Inc.** for property located at **10 Greenfield Road (Map 175 Lot 6)** for a research laboratory and manufacturing facility that cannot meet the Performance Standards of Section 4900 in an I district, as provided for in the Zoning Bylaw c.179 §2230 and a variance from Zoning Bylaw c.179 §4131.
  - Alex Nichols presented florrent Inc.'s proposal for a research facility (phase one) and manufacturing facility (phase two) to research and produce activated carbon products in an existing building at 10 Greenfield Road.

Sokoloski questioned applicant on height of external stack being added to exterior of building. Applicant agreed to check with the Zoning Enforcement Officer to make sure that stack doesn't violate height requirements of bylaws c179 §2320

The Board discussed questions of emissions, odor and noise associated with production, type of fuel used to power furnaces, hazardous byproducts, and fire safety, including reactive chemical storage/fire hazard.

Emissions are as described in supplement to application. Furnaces use electrical resistance and burn hot enough to eliminate volatiles, there is no odor or noise associated with production. Hazardous waste is salt grinds and will be shipped to a DEP approved hazardous waste facility.

***Motion to close the public hearing— Potter***

***Second: Sokoloski:***

***Vote: Sokoloski – aye, Potter– aye, Pontani– aye, Sharp—aye, Richard-Harrington – aye. Vote Passes (5-0-0)***

*The Board was overall in support of the Special Permit as presented and the benefits outweigh the detriments pursuant to the purpose and intent of the Zoning Bylaw.*

*The following is quoted from the Special Permit Application submitted to the board. Dated 07/25/23 and as requested to be entered into the minutes as evidence of findings.*

5321. What are the social, economic, or community needs which are served by the proposal?

florrent's core mission is to contribute to a greener world by enabling a clean energy transition. To do this, florrent wants to create novel energy storage materials derived from waste hemp biomass inputs. The devices which incorporate these energy storage materials—called supercapacitors—are a critical piece of high-power electrical infrastructure that can help to stabilize grid-scale solar power, wind power, and battery deployments; regulate frequency and voltage in large grid systems; and lower costs and increase efficiency for C&I sites with high peak loads. Today, the key energy storage component (called the “active material”) in almost all supercapacitors is a type of activated carbon made using coconut husk biomass from the South Pacific, or American coal. In an effort to relocalize production of supercapacitor materials while meaningfully sequester carbon, florrent is using waste hemp biomass as our primary input—waste that would otherwise turn back into CO<sub>2</sub>.

florrent wants to bring the benefits of better supercapacitors—made through sequestering carbon from local hemp farms—to communities both large and small. In the process, we want to create jobs not only in manufacturing activated carbons in South Deerfield, but also for folks installing solar and wind energy.

We believe that this virtuous cycle will enable cleaner world defined by green jobs and thriving communities with access to democratized power generation resources.

5322. What effects would this proposal have on traffic flow and safety, including parking and loading?

The current proposal for a research facility—operating within the hours of 6am-9pm—would have negligible effects on traffic flow and safety. We plan on having a maximum staff of 5 (comprised of engineers and research scientists) on site at any given time, for which occupancy the current parking at 10 Greenfield Rd is well equipped.

5323. What is the adequacy of utilities and other public services for the proposed project?

For this research facility, we plan on using no more than 20kW of power at any given time (the space is currently spec'ed for 96kW), and do not plan on using facility water supply in excess of what might be expected for routine occupancy usage. While there is natural gas service to the building, this is only currently used for one element of the heating system. florrent does not plan to use natural gas in any of its research or eventual manufacturing processes. 2

5324. What are the potential impacts of this proposal on neighborhood character and social structures?

The operation of this research facility will have negligible impact on or noticeable change to neighborhood character and social structures—this building is located in an industrial zone, in an existing industrial complex, and will not mount any additional lights on the exterior of the building, generate additional traffic, create any noise audible at the property boundary (or indeed well within the property boundary), emit any odors, or any electromagnetic radiation.

5325. What are this proposal's potential impacts on the natural environment?

The purpose of the proposed research facility is to prove out the manufacturability of florrent's novel supercapacitor active materials, which could not only help to sequester a significant amount of carbon that would otherwise reenter the atmosphere as CO<sub>2</sub>, but could also be used to create devices which will help bring more renewable power generation resources onto the grid faster, as well as lowering the barrier to entry to electrified and electrifying grid-connected assets like EV charging and all-electric buildings. Particularly when it comes to sequestering carbon, it should be noted here that ~50% of the carbon in our waste biomass streams will now (and in the future at manufacturing scales) be turned into CO<sub>2</sub> during the carbon activation process. However, if this waste biomass was not used by florrent, almost 98% of the carbon contained in that waste would be turned into atmospheric CO<sub>2</sub> (mostly through the action of microbes).

By using this waste biomass in a high-value activated carbon application, we can ensure that it is not thrown out or used in low-value applications like soil stabilization—both of which won't sequester that carbon.

5326. What is this proposal's potential fiscal impact, including impact on town services, tax base, and employment?

This proposal's largest fiscal impact will come in the form of the employment opportunities florrent's next phase manufacturing facility will create (the research facility itself will place no meaningful burden on town services). When florrent scales up to continuous manufacturing in the same space at 10 Greenfield Rd, our production goals of 100 tonnes/year will necessitate hiring up to 21 new positions, of which 10 will be non-exempt on-site positions.

***Motion to approve the proposal as submitted—Richard-Harrington***

***Second: Potter***

Chair Sokoloski suggested the following conditions:

1. The Applicant shall provide 24/7 contact information to be on file with the town for emergency purposes
2. The Applicant shall provide a safety plan for chemicals that are water reactive and how they may be protected in the event of a fire and/or sprinkler activation. The Applicant shall allow yearly inspection by a hazardous materials technician, at the discretion of the Fire Cheif and will facilitate any drill(s) and/or specialized training requested.
3. The Applicant shall comply with all local, state and federal regulations.
4. Special permit and variance are granted for a research facility, phase one, as outlined in their application, only. Applicant will reapply for special permit and variance for a manufacturing facility, outlined as in application as phase two.
5. The Special Permit and variance approved are not transferrable to another ownership group or individual.
6. Approval of the Special Permit and Variance are only for Phase One, Research, as outlined in the application. The Applicant will come before the Board for approval before embarking on Phase Two, Manufacturing.

***Motion to approve the proposal as submitted with the above conditions—Richard Harrington***

***Second: Potter***

***Vote: Sokoloski – aye, Potter– aye, Pontani– aye, Sharp—aye, Richard-Harrington – aye. Vote Passes (5-0-0)***

***Motion to authorize Chair Sokoloski to review and approve permit decision administratively—Sokoloski***

***Second: Richard-Harrington***

***Vote: Sokoloski – abstain, Potter– aye, Pontani– aye, Sharp—aye, Richard-Harrington – aye. Vote Passes (4-0-1)***

6. Old Business
7. Review Mail
8. Items Unanticipated 48 Hours Prior to Posting
9. Adjourn

***Motion to adjourn at 8:02 pm - Potter***

***Second: Sokoloski                      Vote: Sokoloski – aye, Potter- aye, Decker – aye, Richard-Harrington– aye, Herchenreder-aye. Vote Passes (5-0-0)***

Respectfully Submitted,

Alex Herchenreder, Zoning Board of Appeals Alternate Member.