



Town of Mashpee

Planning Board

16 Great Neck Road North
Mashpee, MA 02649

Meeting of the Mashpee Planning Board

Wednesday, April 3, 2024; 7:00 PM

Mashpee Town Hall - Waquoit Meeting Room

16 Great Neck Road North, Mashpee, MA 02649

Broadcast Live on Local Channel 8

Streamed Live on the Town of Mashpee Website: <https://www.mashpeema.gov/channel-8>

Call Meeting to Order

- Pledge of Allegiance

Approval of Minutes

- Review of Meeting Minutes from March 20, 2024
- Review and approval of Meeting Minutes from joint Select Board and Planning Board from December 18, 2023

Public Comment

Public Hearings

7:10 PM Applicant: Joao Junqueira

Location: 474 Main Street (Map 27-21-A) and 31 Ashumet Road (Map 27-21-B)

Request: Applicant proposes to construct a 4,752 sq. ft. commercial building for retail sales of water related products with indoor and outdoor storage.

New Business

- Vote to set a Public Hearing date for an Application for Approval of Definitive Plan and approval of an accompanying special permit submitted by New Seabury Homes, LLC to subdivide six parcels into seven new lots at property addressed as off the western sideline of Great Oak Road (between Red Brook Road and Sipps Road) (Map 110: Parcels 58, 59, 80, 82, 83, and 97)
- Vote to set a Public Hearing date to establish the fee schedule for Tree Permits and Certificates of Exemption as required by Mashpee General Bylaw Chapter 175 Tree Preservation.
- 275 Quinacisset Avenue - Deliberation and potential vote on the the application submitted by Southworth Mashpee Properties LLC to modify the Willowbend Country Club Special Permit.

Old Business

- Continue review of draft implementation table of the Local Comprehensive Plan Update

Board Engineer Report

- Project Reviews and Inspections

Chairwoman's Report

- Water Quality Issues

Town Planner Report

- Harbor Management Planning Committee Update
- Housing Production Plan Update



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Board Member Committee Reports

- Cape Cod Commission, Charter Review Committee, Community Preservation Committee, Design Review, Plan Review, Environmental Oversight Committee, Historic District Commission

Correspondence

- February 2024 Discharge Monitoring Report for South Cape Village – N = 1.5
- 48 Quaker Run Road MassDEP Waterways License Application No. 23-WW01-0156-APP
- Notices for Towns of Barnstable, Falmouth and Sandwich

Additional Topics (not reasonably anticipated by Chair)

Adjournment

MASHPEE TOWN CLERK
MAR 28 '24 AM 10:55



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Mashpee Planning Board Minutes of Meeting

**Wednesday, March 20, 2024 at 7:00 PM
Mashpee Town Hall - Waquoit Meeting Room
16 Great Neck Road North
Mashpee, Ma 02649**

**Broadcast Live on Local Channel 8
Call-in Conference Number: (508)-539-1400 x 8585
Streamed Live on the Town of Mashpee website
<https://www.mashpeema.gov/channel -8>**

Present: Chair Karen Faulkner, Mary Waygan, Dennis Balzarini, Dale Oakley, Mike Richardson

Also Present: Evan Lehrer – Town Planner

Virtually Present: Robert Hansen, Ed Pesce – Consulting Engineer, Troy Miller – Chief Development Officer Southworth, Matt Eddy - Baxter Nye Engineering, Jack McElhinney- Attorney for Southworth Mashpee, Zackary Seabury- Health Agent, Jared Meader – Wastewater Superintendent, David Morris – Building Commissioner

CALL TO ORDER

Chair Karen Faulkner called the meeting of the Planning Board to order at 7:00 PM. The Pledge of Allegiance was recited.

APPROVAL OF MINUTES – March 06, 2024

No comments were made regarding the minutes.

MOTION:

Mr. Richardson made a motion to approve the meeting minutes as presented. Seconded by Mr. Balzarini. All in favor. Mr. Hansen abstained.

PUBLIC COMMENT

Wendy Willams – She is running for Select Board because she is tired of seeing the mistreatment of people in this town and the back-room manipulations. Nasty comments are made, and people are fearful of losing their jobs. She thinks it is sneaky and dishonest of someone to take out seats to run for two positions. She referenced two current Board members who are doing so this election. She would like them to tell the people what they intend to do and follow through with their word, not play games.



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PUBLIC HEARING

7:10 PM (Continued from 08/02/2023)

Applicant: Southworth Mashpee Properties LLC
Location: 275 Quinaquisset Avenue (Map 69 Parcel 32)
Request: Applicant proposes to modify the Willowbend Country Club Special Permit to construct a 14-unit single family cottage community immediately contiguous to the Willowbend Golf Course. With these changes the total unit count for the annexation of 275 Quinaquisset into the Willowbend Special Permit as allowed. 287 dwelling units is the maximum number of dwelling units authorized under the Special Permit. All units will be connected to and served by the existing privately owned wastewater treatment plant which serves the entire Willowbend project.

Ms. Faulkner received a letter from David Weeden who would like her to read aloud. It was addressed to Mr. Lehrer, and Mr. Weeden was reaching out from his role as Tribal Historic Preservation Officer. The recent article caught his eye. The project at 275 Quinaquisset is considered culturally sensitive and warrants an archeological investigation and sensitivity assessment. The Town passed a bylaw for culturally sensitive areas to consider archeological concerns. In his professional opinion there are environmental characteristics and may have culturally sensitive materials. He is concerned with any disturbances to the ground. Mr. Weeden attached a GIS color map that lists sensitive areas in red and yellow, red is high sensitivity and yellow are moderate areas surrounding Willowbend.

Jack McElhinney, Attorney for Southworth Mashpee is present this evening with Matt Eddy Civil and Site Engineer. Also present is Troy Miller, Chief Development Officer for Southworth along with Dennis Ring, Chief of Construction. He thanked Ms. Faulkner for that letter and requested a copy. They are very familiar with that process, when they did their new nine holes, they worked closely with the Tribe and did an intense survey and placed archeological restrictions. If they get to that point they don't object.

There was a letter submitted a while back that the Board perceived as intimidating, in response to comments raised at the February 21st meeting, and Town Counsel's opinion was this Board had a legal authority if necessary. Relative criteria were met to modify the correct bedroom count in the original Special Permit. It was discussed at length and was deemed appropriate to request of the applicant some mitigation impacts in return. The letter identified certain major areas of mitigation proposals, primarily a substantial increase of acreage to the bog region, 5 acres that would return the wetland back to the natural river system over time off Quinaquisset. Willowbend has committed to a \$90,000 contribution to be used towards affordable housing efforts. The Board wanted to see more, so they significantly increased their donation to include a half-acre parcel of land east of the golf course, Accessors Map 77, Parcels 21, 22, & 23, located in the neighborhood southeast of Cotuit Bay Condominiums. That lot has a value of



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\$300,000 and is a dry buildable lot in town. They are proposing that the parcel be donated to the town or an organization of the town's choosing, such as Habitat for Humanity. They engaged in conversations with Beth Wade. This would bring a total commitment of \$390,000 to affordable housing efforts.

Mr. McElhinney continued regarding the other issue being the Flow Neutral Bylaw, it's a non-zoning home rule ordinance. Mr. Eddy had conversations with the Chair of the Sewer Commission, the governing body in charge of interpreting this and applying it. It's fair to say there are several ambiguities on how that applies to this situation with having the wastewater treatment plant and being an open space development where the lot sizes are substandard for zoning and 250+ acres of open space. We are at a point to work on those issues with sewer. They are prepared to resolve all other issues, not suggesting that point has been reached, but they would be happy to agree on a condition to satisfy the Sewer Commission on their bylaw.

Ms. Faulkner summarized that the bog mitigation efforts will turn active bogs into wetlands and the acreage has increased to 5.3, formerly 2.3. It was previously stated there would be a \$90,000 cash contribution to the Affordable Housing Trust. They are also going to donate these three parcels which come to one half acre valued at \$300,000. They are spending \$750,000 for bog mitigation, and this brings the total mitigations to approximately \$1.1 Million. Flow Neutral allows you to build 4 bedrooms on one acre, that equals 10,000 sq. ft. per one bedroom. If you want to build on 5 acres, you could build 20 bedrooms. They are proposing to build 12 units with 4 bedrooms, that totals 48 bedrooms putting us 28 bedrooms over.

Mr. McElhinney stated the way they interpreted the bylaw, it talks about property connected to the plant, which is more than 440 acres. In 2015 they were entitled to over 2,000 bedrooms. Simplistically, he looks at it as there is no discharge on that parcel, the physical discharge there today is going away. Looking at 440 acres, those 48 bedrooms are 2% of the available capacity of the plant. The Sewer Commission and DEP are the ones who determine the available capacity, they must approve the permit and are dealt with through the application. At the end of the day, it's another board's expertise and bylaw.

Ms. Faulkner would like Jared Meader to explain the paragraph at the bottom of page one and a couple sentences on the second page, the potential applicability of home rule for the Flow Neutral Bylaw.

Mr. Meader noted this policy was not intended to prohibit developments such as Cranberry Point due to nitrogen flows. Considering total capacity of July 2015, the plant is fully improved to handle 150 gallons per day with more than enough unused. He noted the bylaw has areas of gray that are tricky. Any flow treatment plant will increase nitrogen, just less, it still impairs an already bad situation. The bylaw is not designed to stop growth, it is designed to control and grow responsibly. He reads it as you can build those rooms on this size lot but, you must take 4 acres and set them aside as nitrogen deed restricted land. It will be shown as open



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space deed restricted for this nitrogen sensitive area. Someone could calculate the total number of bedrooms and square footage to include a nitrogen sensitive area and it should balance.

Mr. Meader noted it doesn't have to be large lots; it could be natural buffers between homes. He talked with another engineer from Environmental Partners on how to perceive, there are many ways to look at that bylaw. They all came to the consensus that the ultimate intent was for one bedroom per 10,000 sq. ft. He noted this bylaw heavily relies on residential properties, not commercial.

Ms. Waygan stated this is the first time they have looked at it as part of a Special Permit process and it will be tweaked soon.

Health Agent Zack Seabury commented on Chapter 108, and it is requiring an update. It lacks definitions and has holes. It's geared towards residential based on writing, which could limit housing, and with there being no calculation for industrial to decide flow rates, its limiting. The Willowbend is on a sewer treatment plant, DEP takes that away from him. Given a certain number of bedrooms and a large acreage, he doesn't have a dog in the fight as the Health Department.

Mr. Meader echoed the same thing for Sewer, they have no authority over a private treatment plant. A permit is designed for maximum flow per day, it can be broken down to bedrooms but industrial wouldn't break it down that way, it would just be total daily flow.

Mr. Lehrer has examined Flow Neutral from every perspective with the same conclusion and issues. He thinks the Willowbend application pertaining to flow neutral is a unique test case given flow neutral due process and regulation. As drafted, it restricts flows to the 2015 flows of all properties. Single family residences are entitled to 4 bedrooms by right and everything above 40,000 sq. ft. is one bedroom for every 10,000 sq. ft. He struggles as it pertains to Willowbend, the way Chapter 108 handles due process in people seeking relief. It articulates well for private owners who have on-site septic and what their relief criteria or entity reviewing. There is a glaring hole as it pertains to properties connected to private sewers. Neither BOH nor Sewer Commission has jurisdiction in flows of private treatment plants. It is important to consider that limitation. Chapter 108 has provisions and a pathway for approval even under the most restrictive view of reading. If the Board were to vote, they could establish a condition. The entity who hears this is unclear. Ultimately, DEP would grant relief and he has not spoken with them.

Mr. Balzarini stated the new housing at LeClair Village received its comprehensive permit before the flow neutral was active. He inquired about Ken Marsters development, it was stated that each lot is entitled to no more than 4 bedrooms, anything less than 40,000 sq. ft. is also entitled to 4 bedrooms. Ms. Waygan thinks that was negotiated.



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Matt Eddy stated there is a pathway as nitrogen plans go through DEP and the wastewater plant has a variance waiver. They will ask for a variance from the Commission for the existing title 5 septic that will be removed as a reduction, nitrogen will be released at the plant at a lower level.

Ms. Waygan noted this bylaw was reviewed by the Town Counsel before it got onto the Warrant and it was approved by the Attorney General.

Ms. Faulkner commented about the inactive bog and mitigation that will no longer require the use of fertilizers, which are a primary source of nitrogen.

Mr. Eddy stated the farmers are allowed to use whatever pesticides they want. To echo the sentiment of the Conservation Agent without putting words in his mouth, he felt it was an absolute benefit in removing the active bogs, it seems like such a win for Mashpee.

Ms. Faulkner asked if anyone could elaborate on the magnitude of nitrogen that would be on the wetlands over 3-5 years. Mr. Eddy can't quantify that but he can reach out to professionals and see if it can be quantified. It is not just about the elimination, but the entire system will restore back to its natural state by removing nitrogen from natural causes, as well as removing the existing title 5 up stream.

Ms. Faulkner read that a good plan would be to hire a wetlands scientist to come up with a specific plan in stages, and Conservation would have to approve what plants were used. She inquired if someone would be monitoring the nitrogen at each stage.

Mr. Eddy stated that is what they are doing, Fuss & O'Neill are spearheading the bog restoration, they have been hired by the town in other capacities and he has worked with them for a couple decades. They presented at the first hearings with Conservation, but they are not going to design bog mitigation until everyone agrees. He explained that over the course of five years they will closely monitor data and flow, they will report to Conservation and put up a bond for total restoration up front. It costs roughly \$150,000 per acre, which was provided to them by Fuss & O'Neil. The process involves excavating everything that is currently there. The five-year monitoring begins after completion to ensure it is functioning as desired.

Mr. McElhinney stated this project will be done correctly with industry best practices. LEC has been hired to review. It was on the front page of the Boston Globe this week.

Mr. Eddy noted road runoff is going into the wetland on this parcel and mitigation will now capture that runoff area before it hits the wetlands. The bog restoration would start and units would be ongoing simultaneously with restoration efforts. As for completion, it depends on how long it will take to build the units and how long they take to sell, it is not reasonable to say the mitigation will be done all at once.



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Mr. McElhinney stated the bond would be in place before occupancy or building permits were issued. It goes into place prior to construction.

Mr. Hansen inquired about the bedroom count violation. Mr. McElhinney will agree to disagree what that limit means but this Board has provided some insight into those mitigations and prioritized water quality, housing, and nitrogen reduction.

Building Commissioner David Morris commented he is not concerned about the 48 bedrooms. He is happy to see the condominiums decreased from 14 to 12 units, as 14 was too cramped. The Board should be thinking about how this build out ends.

Mr. Lehrer questioned the Zoning Enforcement Officer's interpretation contained in the special permit. The Chair's concern is there are 12-13 properties in the Willowbend permit area that development rights and properties were conveyed to new owners. The Board has expressed concern over the determination relative to bedroom count. If a building permit was received today, knowing what we know and are up to date on, can they get a building permit for bedrooms with the bedroom count having gone over what the special permit says?

Mr. Morris commented that has been the procedure. He doesn't see how that can just be stopped right now. Whether it was right or wrong, he wasn't aware, but he was made aware later. They never had a bedroom count in the Building Department. Now that there is a bedroom count what would happen to the application coming in? He would honor it. He would consider these to be grandfathered.

Mr. Morris said there is a path to grant this project that is going on now but it's more important for the Board to find an endgame. He believed those properties were grandfathered in and he has been treating them that way, until he is given a reason. Who knows at what point they went over; it was before he was here. He can't just come up with a reason why it would stop, doing these lots that are all in special permit, because it wasn't denied before he has a hard time doing so now. We must come to an agreement of when the special permit is built out. There are a lot of upsides for the town to move forward on this, with the mitigations to Shoestring Bay. As far as an endgame goes, that is important for him to know as well.

Ms. Faulkner stated they would write a condition.

Ms. Waygan asked if he has knowledge of the special permit count of units as there is also a unit cap. If an application exceeded a number of units, would you deny it? It hasn't happened, if you look at these materials, they are right there minus two units. As Building Commissioner, is unit count in this special permit going to be the end game for you?

Mr. Morris commented that it needs to be made clear.



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Ms. Waygan stated there are 273 units, because one property purchased two development rights, and the cap is 287. With these 12 approved, they have two more units under the special permit. If those two last units get built, as Building Commissioner, are you going to issue more permits after the number of units are reached? Is that condition enough to stop issuing permits once the number of units is reached?

Mr. Lehrer clarified Ms. Waygan's question, if Willowbend were to build out their final units to 287, if someone were to submit a permit for a 288th unit, would he feel entitled to grant?

Mr. Morris thinks they can eat the last two permits without a problem.

Mr. Eddy thinks it's an unfair question because for there to be a unit, there needs to be an approved site plan that he would know about, a place for that house to land.

Mr. Balzarini stated he would like to see the \$90,000 rounded up to \$100,000. Ms. Faulkner asked Troy Miller if that was acceptable, he agreed to the ask.

Wendy Williams- She needs to talk about the issue of the 12 lots that have yet to be built on. It's not the town's problem to make that up to the property owner. She understands why they want people to get their homes. Under most circumstances she would agree, but the problem is not the fault with the town, its that Willowbend sold these lots under false pretenses. Willowbend didn't tell them they were already over their bedroom limit. It is up to them to go back to those property owners and find a way to make good. We shouldn't have to absorb any more environmental degradation. The other thing she normally wouldn't bring up, but they are misrepresenting what the Conservation said about these bogs. The Conservation Department wants to see the entire bog fixed, not just tiny pieces. It would then be a fair trade to let these people have 12 units on this land in return for fixing the entirety of bog, 5 acres of Quaker Run is nothing, it's a mess right now, it's not enough. These people are giving us small potatoes, nickel and diming. A half-acre for one low-income house does not compensate for filling 4 acres with 12 condos that are going to further ruin our waters. Look at trees coming down, pavement, and runoff from cars that flow into the bay. It is hard to believe we are still here talking about this. She read over their PR material about how they are so community oriented. Conversations have been going on for a year, they are making a big ask. When you come up with a big ask you need to come up with a big offer in return. Trades we are talking about here shouldn't be about bedroom limit, it should be about if they should even be able to build 12 units on the shoreline. Willowbend has four big problems, they are well over bedroom limit set by special permit, they threatened to sue the town, why trust to build future developments? She is uncomfortable with this entire process because the Chair had an ex parte meeting with the project proponent, and she's looked for notes and she can't get them. She is not saying corruption, but she doesn't know what was said or offered at that meeting. She has asked the town for notes, and she hasn't gotten them, she is worried it shouldn't have happened. If you want to build on town land that almost certainly has paleolithic artifacts, we have a Tribe here



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that is very concerned about that. We have a study that is at least a decade old. Willowbend is known as a paleolithic habitat, she cannot be certain but when one house was built it disrupted a shell midden, it's like a garbage heap. There are all kinds of information that scientists can uncover from a shell midden. She is unsure if that is real or not. Lastly, the flow neutral bylaw has to be addressed. Go to the person who wrote it, on a state level, ask what the intention is and what does it mean. If we do not understand we are not able to make decisions. This was sent by the state and told we had to accept the FNB in order to get money or we pay interest. Her words to Willowbend are the same as they were a year ago, we want to work with you and help you get to the end game, but right now you are not seriously coming to the table. A half an acre? You want to build 12 condos for rich people who don't even live here! Those people have a lot of land, they can find more, or they could donate that 5 acres in contention right now to the Tribe and in return other things could be done for them on other land that is not so sensitive and delicate. Conservation pointed out several other parcels to build on. She brought an article from last week's Boston Globe that discussed what they could be doing, down Cape someone is restoring bogs, and they don't even have to foot the bill because the state and federal government will pay a substantial amount of it.

Ed Pesce commented that if the Board is considering this proposal there are a couple appropriate conditions they should consider. He would advise them to obtain a variance from sewer. He would get a more definitive bog restoration to be reviewed and approved by Conservation. The Building Commissioner made a good point, what establishes the end of the build out? Willowbend needs to understand that as well as the Building Commissioner. We should not move this project forward without confirming that with Willowbend.

Troy Miller agrees with what Mr. Pesce said, having a definitive end to the special permit is something they are interested in writing into the end of the special permit decision. He has always viewed this project based on unit count and continues to believe that, with these 12 plus the additional two. That would be a way to close out this permit.

Lynne Barbee- She is learning about all this, but she wants to briefly speak on the Flow Neutral Bylaw. The Board has before them comments made by Andrew Gottlieb at the Affordable Housing Committee and Arden Cadrin at the Select Board meeting. Ms. Cadrin says FNB limits development to one bedroom per every 10,000 sq. ft. It is very clear whether the property is on private sewer or a plant, in all of Mashpee. Mr. Gottlieb's comments referred to the HPP, he says the flow neutral concept has its origins in the 2008 Environmental Bond Bill that established loan options for wastewater loans, there are 5 conditions one must meet, one being a FNB in place to obtain a 0% loan. If a town passes a bylaw that meets DEP criteria, which Mashpee's did, and alters or fails to enforce it, the loan agreement with Clean Water Trust requires a town to forfeit a 0% loan, pay the 2% to other towns, and pay any forgone interest. That equates to \$6 Million in interest penalties for phase 1 and result in loss on Phase 2, in excess of \$30 Million in debt. She can't document this, but these are people



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who she trusts have already done the research and she felt it was important to have that on the record tonight.

Ms. Waygan commented in response to David Weeden and his role as Tribal Historic Preservation Officer, she would like to see the Planning Board retain Public Archaeological Laboratory (PAL) or a similar qualified firm to conduct a site assessment or investigation with the Tribal Historic Preservation Officer present during any site visits. The Board can impose and collect fees from the project proponent. Her concern is of hearing comment that the PAL survey report was done in 2011, we also heard public comment that these technologies have changed. We don't have Mr. Weeden here but we have this piece in zoning that talks about approving special permits and finding adverse impacts on historic resources. We can't make that finding without doing that work.

Ms. Faulkner stated the Board can make that a condition to go forward.

Ms. Waygan objects to closing the public hearing until the PAL study is complete.

MOTION:

Mr. Richardson made a motion to close the Public Hearing on 275 Quinaquisset for Southworth Mashpee. Seconded by Mr. Balzarini.

Roll Call Vote:

Mr. Hansen: Yes; Mr. Balzarini: Yes; Mr. Richardson: Yes, Ms. Waygan: No, Ms. Faulkner: Yes (Passes 4-1)

Ms. Faulkner noted the Board must deliberate and make findings. Mr. Lehrer reminded her they have 90 days to make the filing. Ms. Waygan was hoping Mr. Lehrer would write up a draft decision. He will lay the groundwork for the deliberation. He will make inferences and assumptions and will be subject to change for the Boards review and approval.

Ms. Waygan added to put it on the agenda for next meeting. Mr. Lehrer would like to establish a series of conditions and findings that are captured appropriately in that decision. We have 90 days to file with the Clerk. Over the next few meetings, we can work towards a decision and then a vote will take place.

NEW BUSINESS

Vote to set a Public Hearing date for May Town Meeting Warrant Articles

MOTION:

Ms. Waygan made a motion to hold a Public Hearing for the May Town Meeting Warrant Articles for Zoning on Wednesday, April 17, 2024, at 7:10PM. Seconded by Mr. Balzarini. All in favor.



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Ms. Faulkner asked Mr. Balzarini about the road taking in his neighborhood, they are looking for \$2 Million and there will be a betterment once the road is completed. She asked if it was fair to say the number of landowners divided into that number would be the betterment?

Mr. Lehrer stated there are 151 property owners.

Discussion and possible vote of Windchime's requests to perform vegetation management within areas identified on the approved site plans as "not to disturb" such as, removing weeds and overgrowth and vines on trees. Windchime proposes the use of a nontoxic herbicide. The request also includes selective pruning of Kousa Dogwood and Limelight Hydrangea. The Board will review this request in accordance with Condition #6 of the Windchime Special Permit (fka Sandcastle) recorded in Barnstable County Registry of Deeds in Book 5743 Page 225.

Mr. Lehrer stated there are designated areas such as islands to be naturally vegetative and not to prune, except with permission. Over a few visits he would say there is a fair amount of vine growth and invasion that would require selective vegetative management. These areas say do not disturb, and in this area the vines are all over the place. They could pull them off then use nontoxic herbicide.

Kathy Egan, member of the Board of Trustees of Windchime, stated there are two issues, the vines are destroying the trees and the weeds. They continually have that removed via an appropriate herbicide or having it cut down. Everything else was taken care of.

MOTION:

Mr. Richardson made a motion to authorize Chair Karen Faulkner to sign the document allowing pruning and herbicide in the do not disturb area. Seconded by Mr. Balzarini. All in favor.

Re-execution of Covenant Release for property addressed as 12 Cypress Circle. The Affordable Housing Trust is purchasing this property for affordable housing.

Mr. Lehrer noted this subdivision dates back to the 1970's. The original developer skipped town after beginning developing Cypress Circle. This was authorized by the CPC and Town Meeting. It took some years to resolve the title issues, this property was inherited from a deceased family member. The title is secured, and they are prepared for closing. Mr. Lehrer has prepared a new document and re-release. This was done conditionally for the town to convey for affordable purposes. The original was transmitted to Counsel to keep safe until day of closing, where it will be recorded at the Registry of Deeds.

MOTION:

Mr. Richardson made a motion to release the lot from the covenant recognized with no lot number and plan of land signed by William C. Nye dated March 1, 1972, on the



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condition the property be made for affordable housing purposes and held in the Affordable Housing Trust. Seconded by Ms. Waygan. All in favor.

OLD BUSINESS

Continue review of draft implementation table of the Local Comprehensive Plan

Mr. Lehrer stated there were draft edits made to the Municipal Buildings chapter with discussed changes made from the meeting two weeks ago at the Mashpee Public Library. Actions have not been addressed and he is coordinating meetings with department heads to capture everything. As he is editing chapters such as Coastal and Natural Resources and Water, he is struggling to edit in any official manner. There is so much redundancy and the implementation section is incredibly repetitive, he feels it's not as high quality as it could be. Should it be in a singular Natural Resources section with subsections highlighting each of those things? Water and Coastal Resources are falling under the Natural Resources umbrella. He has not made efforts to adjust but he would like to discuss what direction the Board would like to go with that. As he refines the document, he feels it would be a mistake in his editing.

Ms. Waygan would like to keep everything in for now, so we know we are not missing anything. Then, when we pull all the pieces out, we won't forget to indicate if a piece is in the water chapter.

Mr. Lehrer doesn't have any issue with keeping chapters, it's the implementation that he is concerned about. The editing piece is the worst and hardest part of the process, it is a current cog in his wheel to make any substantive progress and efforts to improve efficiency.

Ms. Waygan thinks it's too raw to start taking duplicates out yet. Say you have a natural resource, and you don't make a reference to all water stuff, its meant to be in both. We need to at least refer to it.

Ms. Faulkner would like to leave it up to Mr. Lehrer to figure out what feels right for him to do. Mr. Lehrer stated so many actions pertain to water quality improvements, because of that, there is repetition between both. The implementation chapter's actions are complete duplicates. He has tried to deal with habitat issues and wetlands that aren't coastal, and it is so interconnected. Many goals have been established through this process and they are so interrelated it's difficult to edit appropriately.

The Chair reiterated to do what makes sense to him and then the Board will review. If he has been doing it for weeks and it is driving him nuts he needs to do what he feels is best.

Ms. Waygan had an addition to the last page where it has action items and says needs, add DNR and Fire Department. She also noted the Sustainability chapter needs work; she found a visual that was interesting. She is also starting to read the Cape Cod Commission's 300-page plan on climate change.



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BOARD ENGINEER REPORT

Mr. Pesce is working on the write-up of 31 Ashumet Road, the Board will have it before their hearing next week on April 3rd.

TOWN PLANNER REPORT

Harbor management

Mr. Lehrer is currently reviewing and editing comments from the draft. It was due two days ago. There is a meeting next Tuesday to go through it. Ms. Waygan noted those meetings were well attended.

HPP

Mr. Lehrer presented the draft to the Affordable Housing Committee, and they went through public comments. The intention going forward is for the AHC to review each comment, provide verbal response, direct staff and consultant on how to respond to each comment, either with a change to the plan or not. A written response will be provided and if there was no change it would be articulated in that written document. The committee would like an executive summary cover letter. Mr. Lehrer thinks one comment articulated frustration with the plan, asserting that the plan is articulated to create conflicts to the flow neutral and if the needs assessment contemplated the CWNP, and if zoning bylaw would retain in the plan as strategies. That is incorrect, they work with communities all the time to readdress the assumption to ensure flow neutrality of 0% interest loans wouldn't be compromised. It was suggested the plan as drafted would compromise that, and it would not. If the Boards take comments and the AHC suggests a memo saying they disagree, and a vote was taken to remove provisions, they will be removed.

BOARD MEMBER COMMITTEE REPORTS

Cape Cod Commission -

Charter Review Committee-

Community Preservation Committee-

Design Review-

No Meeting

Survey is coming out soon.

No Update, Articles are on the Warrant.

Tradesman Exchange, Signage color was initially objected, she argued it was a good thing because there is little visibility at 800 Falmouth Rd., the back needs some signage, and sizes were correct. They will have to come to the Planning Board.

Another project at 474 Main St. and 31 Ashumet Road. Retail building for water pipes and storage, require special permit with Board and go before Historic Commission for approval. Gray clapboard on Main St. all rest



Town of Mashpee

Planning Board

16 Great Neck Road North
Mashpee, Massachusetts 02649

Plan Review-
Environmental Oversight Committee-

will be painted or stained shingles. Gray roof, it looks good.

No Meeting

Held an emergency meeting right before public comment deadline for HPP and submitted comments about Flow Neutral Bylaw and concerns.

Historical Commission -

Meeting April 9th, which is after the opening of the public hearing, Mr. Lehrer will not be present.

Mr. Lehrer noted something to consider with single family dwellings and the flow conversion with FNB. What if a 5-bedroom single family dwelling wanted to convert to 5 one-bedroom apartments, 1:1. The flow rates differ with single and multifamily, if you don't have 50,000 sq. ft. lot, you can't have 5 bedrooms as multifamily without relief.

ADJOURNMENT

MOTION:

Mr. Balzarini made a motion to adjourn the meeting of the Planning Board at 9:10PM. Seconded by Ms. Waygan. All in favor.

Respectfully Submitted,

Christine M. MacDonald
Board Secretary

LIST OF DOCUMENTS

Additional documents may be available in the Planning Department.

- 28 Quaker Run Road Mass DEP Waterways License Application No. 24-WW01-0016-APP
- DEP Handouts about proposed changes to the Wetland Protection Act in regard to flood zone changes.
- Notices for Towns of Barnstable, Falmouth, and Sandwich



**AGENDA
SELECT BOARD
MONDAY, DECEMBER 18, 2023
WAQUOIT MEETING ROOM
MASHPEE TOWN HALL
16 GREAT NECK ROAD NORTH
MASHPEE, MA 02649**

Broadcast Live on Local Cable Channel 8

Streamed Live on the Town of Mashpee Website: <https://www.mashpeema.gov/channel-8>

6 p.m. – Convene Joint Meeting with the Planning Board in Open Session

PLEDGE OF ALLEGIANCE

MOMENT OF SILENCE

- Presentation of the Draft Housing Production Plan: *Town Planner Evan Lehrer; Barrett Planning Group*

Adjourn Joint Meeting with the Planning Board

MINUTES

Discussion and Approval of the Following Minutes: Monday, December 4, 2023 Regular Session

APPOINTMENTS & HEARINGS

- 6:40 pm Public Hearing – Modification of Weekday Entertainment License (including Saturday) of Elevated Crust, LLC dba Wicked Restaurant 35F South Street Mashpee
- Discussion and Approval of Modification of Weekday Entertainment License (including Saturday) of Elevated Crust, LLC dba Wicked Restaurant 35F South Street Mashpee
- Discussion and Possible Approval of Sending a Letter of Support for the Proposal Submitted by the Association to Preserve Cape Cod (APCC) for NOAA's "Coastal Habitat Restoration and Resilience Grants for Tribes and Underserved Communities"
- Presentation and Discussion of Visitor Center at 966 Falmouth Road: *Friends of the National Wildlife Refuge*
- Discussion and Approval of Official Names for Mashpee Ancient Burial Grounds: *Mashpee Historical Commission*
- Certification of Hiring Process of Firefighter/ Paramedic: *Blake Wilson*
- Public Comment

COMMUNICATIONS & CORRESPONDENCE

NEW BUSINESS

- Discussion and Approval of the Following Resignations:
Human Services Committee: Member at Large (Term Expires June 30, 2024) *Sam MacDonald*
Sewer Commission: Member at Large (Term Expires June 30, 2026) *Erin Copeland*
- Discussion and Approval of Reappointment: Barnstable County HOME Consortium Council,
Term February 1, 2024 – January 31, 2027: *Gary Shuman*

ADDITIONAL TOPICS

(This space is reserved for topics that the Chair did not reasonably anticipate would be discussed)

LIAISON REPORTS

WATER QUALITY UPDATES

TOWN MANAGER UPDATES

EXECUTIVE SESSION

ADJOURNMENT

Mashpee Select Board
Minutes
December 18, 2023

Present: Selectman John J. Cotton, Selectman Thomas F. O'Hara, Selectman Carol A. Sherman,
Selectman David W. Weeden, Selectman Michaela A. Wyman-Colombo
Town Manager Rodney C. Collins
Assistant Town Manager Wayne E. Taylor

Meeting Called to Order by Chairman Cotton at 6:00 p.m.
Mashpee Town Hall, Waquoit Meeting Room

Presentation of the Draft Housing Production Plan: Town Planner Evan Lehrer; Barrett Planning Group:

The Select Board conducted an introductory meeting with Evan Lehrer, Town Planner/Community Development Director and Alexis Lanzillotta, Senior Planner of the Barrett Planning Group LLC to review the updated draft Housing Production Plan (HPP) with members of the Planning Board.

In attendance were Planning Board members; Karen D. Faulkner, Mary Waygan, Michael R. Richardson, Dennis Balzarini, and Robert Hansen, associate member.

When adopted the document will be forwarded to the Executive Office of Housing and Livable Communities (EOHLC) for approval. The goal is to submit the Housing Production Plan to the EOHLC by the end of January 2024.

The statewide goal under 40B is to have at least 10% of year-round housing units in every municipality deed-restricted as affordable to low-or moderate-income households. As of June 2023, 4.66 percent of Mashpee's year-round housing stock meets this requirement.

The Subsidized Housing Inventory (SHI) is a list compiled by the Executive Office of Housing & Livable Communities formerly referred to as the Department of Housing and Community Development (DHCD). To be listed on SHI, housing units must be deed-restricted as affordable to households at or below 80% HUD Area Median Family Income (HAMFI).

80% HAMFI for a household size of 1 is at or below \$64,450. For a household size of 2, the 80% HAMFI is at or below \$73,560. A household size of 3 must be at or below \$82,850. Mashpee's household sizes are smaller than those across the state and nation, but not unique to Cape Cod.

A goal is to provide mixed housing types consistent with community and regional needs, provide for a range of year-round housing stock including rental, homeownership, and other occupancy arrangements. And, to determine implementation strategies, site identification; town-owned and other, as well as desired characteristics for development and opportunities for regional partnership.

To meet the threshold for one-year certification of this plan, Mashpee would need to produce (37) new SHI-eligible affordable housing units in a given calendar year.

Mashpee Select Board
Minutes
December 18, 2023

Presentation of the Draft Housing Production Plan: Town Planner Evan Lehrer; Barrett Planning Group:
(continued)

Results of the Housing Production Plan survey identify and prioritize the quality of open waters, groundwater and drinking water 63.3% and attainable, affordable, and workforce housing 70% as serious needs. This includes the desire for more single-family homes and multifamily options.

Survey results voiced strong support for the redevelopment of existing buildings/properties into housing 80% and a requirement for developers of new housing units to dedicate a portion of those units to low/moderate income households 65.8%, remove regulatory barriers to mixed use in commercial districts 62.8% and height and density bonuses for inclusion of attainable, affordable workforce housing 60.1%.

There is Town support to acquire additional open space 44.7%, and creating attainable affordable housing and workforce housing 68.6% with Town investments. A community center is also desired 31.5%.

In 2022 the median sales price for a single-family home in Mashpee was \$675,000. 57% of the respondents indicated they could not afford to purchase a home in Mashpee for this price. The fair market rents for a 1-bedroom \$1,553, a 2-bedroom \$2,044 are deemed affordable by 47% of those responding.

Important housing initiatives include helping people to stay in affordable year-round housing, ensuring that new housing is sustainably built, helping those to stay in the community as they age, and creating housing with a mix or price ranges. Barriers to affordable housing in Mashpee include; cost, price, availability, inventory, affordability, zoning, regulations, Airbnb, land and income and wages.

In assessing the local housing stock, it was noted that 34% of Mashpee's single-family homes are Cape style, 28% are ranch, with 13% as colonial and contemporary. 51% of residents in Mashpee are over the age of 55 years versus 31% in the state. 50% of residents over the age of 55 live in Barnstable County.

Strategies outlined in the plan are reflected into (5) overarching groups: Affordable Housing Development & Preservation, Zoning for Housing Choice, Planning & Collaboration, Capacity and Advocacy & Support.

The Affordable Housing Development & Preservation strategies contained in the plan were reviewed. This includes making good use of Chapter 40B as a vehicle for creating affordable housing by;
Collaborating with Mashpee Commons for the continued implementation of their Phase I and for future and additional project phases,

Preparing local LIP guidelines to promote the program and outline the Town's priorities,

Provide 40B training and technical assistance,

Continue to explore 209 Old Barnstable Road and VFW sites,

Explore the creation of a non-profit Community Land Trust through a land donation or funding to facilitate more affordable homeownership opportunities,

Require the inclusion of affordable units in all new residential development and redevelopment,

Develop regulations to allow small affordable units on unbuildable lots under zoning provided wastewater policies are met,

Explore opportunities to preserve existing modestly priced housing stock and creating deed restricted affordable units through a rehabilitation program, buy down of units upon resale and other options.

Mashpee Select Board
Minutes
December 18, 2023

Presentation of the Draft Housing Production Plan: Town Planner Evan Lehrer; Barrett Planning Group:
(continued)

Under Zoning for Choice there may be recommendations for change when exploring zoning mechanisms for increasing options for housing choice outside of the Town's current Open Space Incentive Development Bylaw. This may prompt a revision under Planning & Collaboration as well.

It is recommended the specifics of the survey and results of the workshop groups be incorporated into the Zoning for Choice strategy. There is concern with respect to the impacts of climate change, and for polluted water bodies. It was agreed the clean water perspective would be further reviewed with the Sewer Commission to see how the strategies fit into the Nitrogen Management Plan.

It was also suggested the year-round population be further reviewed to accurately reflect the residency figures resulting from the pandemic.

Adjourn Meeting with Planning Board.

Motion made by Mr. Balzarini to adjourn the Planning Board meeting.

Motion seconded by Ms. Waygan.

VOTE: 5-0. Unanimous.

MINUTES

Monday, December 4, 2023 Regular Session:

Motion made by Selectman Sherman to approve the Regular Session minutes of Monday, December 4, 2023 as presented.

Motion seconded by Selectman Wyman-Colombo.

VOTE: 5-0. Unanimous.

Roll Call Vote:

Selectman Cotton, yes

Selectman O'Hara, yes

Selectman Sherman, yes

Selectman Weeden, yes

Selectman Wyman-Colombo, yes

Opposed, none

Mashpee Select Board
Minutes
December 18, 2023

APPOINTMENTS & HEARINGS

Public Hearing – Modification of Weekday Entertainment License (including Saturday) of Elevated Crust, LLC dba Wicked Restaurant 35F South Street Mashpee:

Discussion and Approval of Modification of Weekday Entertainment License (including Saturday) of Elevated Crust, LLC dba Wicked Restaurant 35F South Street Mashpee:

Acting as the Local Licensing Authority, the Select Board opened the Public Hearing to consider modifications to the Weekday Entertainment License (including Saturday) of Elevated Crust LLC d/b/a Wicket Restaurant, 35F South Street, Mashpee. Modifications would allow one amplifier for a one-to-three-person band, live music and recorded music outdoors until 12:00 a.m. through December 31, 2023.

To conform to posting requirements, the hearing notice was read aloud into the record.

Kris Abney was in attendance to review the modification of the Weekday Entertainment License (including Saturday) with the Select Board. Ms. Abney indicated the request is for live entertainment as presented for the remainder of 2023 only. All other necessary paperwork is in order, and the 2024 Annual Alcoholic Beverage and Entertainment Licenses were approved at the last Select Board meeting in normal course.

Being no comment, the Select Board motioned as follows;

Motion made by Selectman Sherman to close the Public Hearing.

Motion seconded by Selectman Wyman-Colombo.

VOTE: 5-0. Unanimous.

Roll Call Vote:

Selectman Cotton, yes	Selectman O'Hara, yes	Selectman Sherman, yes
Selectman Weeden, yes	Selectman Wyman-Colombo, yes	Opposed, none

Motion made by Selectman Sherman to approve the Modification of Weekday Entertainment License (including Saturday) of Elevated Crust, LLC d/b/a Wicked Restaurant 35F South Street, Mashpee as stipulated until December 31, 2023.

Motion seconded by Selectman O'Hara.

VOTE: 5-0. Unanimous.

Roll Call Vote:

Selectman Cotton, yes	Selectman O'Hara, yes	Selectman Sherman, yes
Selectman Weeden, yes	Selectman Wyman-Colombo, yes	Opposed, none

Mashpee Select Board
Minutes
December 18, 2023

Discussion and Possible Approval of Sending a Letter of Support for the Proposal Submitted by the Association to Preserve Cape Cod (APCC) for NOAA's "Coastal Habitat Restoration and Resilience Grants for Tribes and Underserved Communities":

Daniel Kent, Assistant Conservation Agent was in attendance to review a draft letter addressed to the National Marine Fisheries Service, National Oceanic and Atmospheric Administration (NOAA), and Department of Commerce dated December 11, 2023 expressing full support to the proposal submitted by the Association to Preserve Cape Cod (APCC).

The grant proposal is for Coastal Habitat Restoration and Resilience Grants for Tribes and Underserved Communities. The project would engage the Tribe to restore fish passage and habitat along the Mashpee River, one of the most important diadromous fish runs. The ecological restorations would ensure the water temperature would revert-back to normal levels to support the herring, sea brook trout and eel. The project was noted to have three segments. This includes repairs to the fish ladders and erosion work.

The letter serves as the Town's authorization to have the APCC submit this proposal and receive grant funds if awarded. The partnership will generate public awareness and feasibility studies.

There is not cost to the Town to participate. All segments are anticipated to be complete within three years.

Motion made by Selectman Weeden to send the letter in full support to the APCC proposal for Coastal Habitat Restoration and Resilience Grants for Tribes and Underserved Communities.

Motion seconded by Selectman O'Hara.

VOTE: 5-0. Unanimous.

Roll Call Vote:

Selectman Cotton, yes	Selectman O'Hara, yes	Selectman Sherman, yes
Selectman Weeden, yes	Selectman Wyman-Colombo, yes	Opposed, none

Presentation and Discussion of Visitor Center at 966 Falmouth Road: Friends of the National Wildlife Refuge:

Friends of the National Wildlife Refuge Glen Davis and MaryKay Fox were in attendance with State Representative David Vieira to discuss the proposed visitor center planned to be cited at 966 Falmouth Road, Mashpee, Town-owned land adjacent to the South Cape Resort.

Mr. Davis indicated the Mashpee National Wildlife Refuge was created in 1995. It is the second largest open, accessible conservation land on Cape Cod, nearly 6,000 acres. There are no visitors center or central place for the public to learn or enhance their experience with the Refuge.

The property identified for the visitors center is 2.43 acres. It consists of a paved parking lot. Plans for the visitor center would include a greenhouse, a pavilion, pollinator gardens, solar power and alterations to the parking lot. Maintaining the tree buffer would suppress noise emanating from Route 28. There is a potential connection with the partner lands, and a great habitat management area without crossing the highway.

The project has been endorsed by the Conservation Commission, and the Refuge Partnership. CPA funds will be requested for the October Town Meeting for this project with additional funding to derive from existing partnerships and funds from the Friends of the National Wildlife Refuge.

APPOINTMENTS & HEARINGS

Presentation and Discussion of Visitor Center at 966 Falmouth Road: Friends of the National Wildlife Refuge: (continued)

Town Manager Rodney C. Collins indicated he has had conversations with high regards for the visitor center proposal. This was a valuable presentation, and it is endorsed by the Town Manager. The property lies under the jurisdiction of the Select Board with no restrictions on the land.

Motion made by Selectman Sherman to authorize the Town Manager to negotiate the proposed National Wildlife Refuge Visitor Center on behalf of the Select Board.

Motion seconded by Selectman Wyman-Colombo.

VOTE: 5-0. Unanimous.

Roll Call Vote:

Selectman Cotton, yes	Selectman O'Hara, yes	Selectman Sherman, yes
Selectman Weeden, yes	Selectman Wyman-Colombo, yes	Opposed, none

It was suggested the Select Board adopt policy to recognize wooded lots to allow the Tribe to burn and heat their homes as well as making a living selling and using wood. It was recommended Town Counsel be consulted regarding the taking of wood, to include utilization by all residents of the Town of Mashpee.

Discussion and Approval of Official Names for Mashpee Ancient Burial Grounds: Mashpee Historical Commission:

Ava Costello, Chair of the Historical Commission was before the Select Board to gain approval to name the Ancient Burying Grounds historically correct with appropriate signage to identify the ancient cemeteries.

The (4) Mashpee Ancient Burying Grounds include;

Lakewood Cemetery – Historic correction: Bourne Ancient Burial Ground
 Avant Cemetery – Historic correction: Amos-Coombs-Avant Ancient Burial Ground
 Pocknett Cemetery – Historic correction: Pocknett Ancient Burial Ground
 Attaquin Cemetery – Historic correction: Attaquin Ancient Burial Ground

Motion made by Selectman Sherman to approve the Historically correct names of the Ancient Burial Grounds with appropriate signage to identify these sites.

Motion seconded by Selectman Weeden.

VOTE: 5-0. Unanimous.

Roll Call Vote:

Selectman Cotton, yes	Selectman O'Hara, yes	Selectman Sherman, yes
Selectman Weeden, yes	Selectman Wyman-Colombo, yes	Opposed, none

There was a comment regarding the Boardley Cemetery situated on Cotuit Road in Mashpee. Ms. Costello indicated she would research this cemetery.

Mashpee Select Board
Minutes
December 18, 2023

Certification of Hiring Process of Firefighter/ Paramedic: Blake Wilson:

Correspondence was received from Fire Chief John F. Phelan dated December 6, 2023 relative to the phases of the entry-level selection process for the hiring of Firefighter/Paramedic Blake Wilson. Town Manager Rodney C. Collins affirmed that all policies and practices consistent with the process have been adhered to. In addition to the monitoring and review as required from the Department of Human Resources.

Motion made by Selectman Sherman to certify the hiring process of Firefighter/Paramedic Blake Wilson for appointment effective December 19, 2023.

Motion seconded by Selectman Wyman-Colombo.

VOTE: 5-0. Unanimous.

Roll Call Vote:

Selectman Cotton, yes	Selectman O'Hara, yes	Selectman Sherman, yes
Selectman Weeden, yes	Selectman Wyman-Colombo, yes	Opposed, none

Public Comment:

Lynne Barbee a resident of Surf Drive commented favorably on the proposed visitor center planned by the Friends of the Mashpee National Wildlife Refuge. This will be a valuable resource for the Town of Mashpee. Ms. Barbee noted she has a copy of the brochure for the MNWR that was used by her family recently to walk the trails.

NEW BUSINESS

Discussion and Approval of the Following Resignations:

Human Services Committee: Member at Large (Term Expires June 30, 2024) Sam MacDonald:

The Select Board was in receipt of a letter of resignation dated October 20, 2023 from Sam MacDonald from the Human Services Committee.

Motion made by Selectman Sherman to accept the letter of resignation of Sam MacDonald from the Human Services Committee sending a letter of regret to Mr. MacDonald for his service.

Motion seconded by Selectman O'Hara.

VOTE: 5-0. Unanimous.

Roll Call Vote:

Selectman Cotton, yes	Selectman O'Hara, yes	Selectman Sherman, yes
Selectman Weeden, yes	Selectman Wyman-Colombo, yes	Opposed, none

Mashpee Select Board
Minutes
December 18, 2023

Sewer Commission: Member at Large (Term Expires June 30, 2026) Erin Copeland:

A letter of resignation was received from Erin Copeland dated December 11, 2023 from the Sewer Commission.

Motion made by Selectman Weeden to accept the resignation of Erin Copeland from the Sewer Commission sending a letter of gratitude to Ms. Copeland for her service.

VOTE: 5-0. Unanimous.

Roll Call Vote:

Selectman Cotton, yes	Selectman O'Hara, yes	Selectman Sherman, yes
Selectman Weeden, yes	Selectman Wyman-Colombo, yes	Opposed, none

Discussion and Approval of Reappointment: Barnstable County HOME Consortium Council, Term February 1, 2024 – January 31, 2027: Gary Shuman:

Correspondence was received from the Barnstable County HOME Consortium Advisory Counsel dated November 29, 2023 announcing that Mashpee's member representative, Gary Shuman's term is due to expire on January 31, 2024.

Motion made by Selectman Sherman to reappoint Gary Shuman to the Barnstable County HOME Advisory Counsel from February 1, 2024 through January 31, 2027.

Motion seconded by Selectman O'Hara.

VOTE: 5-0. Unanimous.

Roll Call Vote:

Selectman Cotton, yes	Selectman O'Hara, yes	Selectman Sherman, yes
Selectman Weeden, yes	Selectman Wyman-Colombo, yes	Opposed, none

LIAISON REPORTS

Community Preservation Committee: The CPC interviewed (3) candidates for the (2) At Large vacancies at their December 14, 2023 meeting. The candidates were well-qualified. It is the recommendation of the CPC to support the Select Board, the appointing authority for this position. It was suggested that a standardized list of questions be presented to the applicants for the purpose of consistency.

Intermunicipal Agreement: The Tri-party Intermunicipal Agreement between the Towns of Mashpee, Sandwich and Falmouth is underway. The Town Manager's are currently working with their respective Town Counsel's on the matter of shared watersheds. The MassDEP has extended the date from requiring the incorporation of the Best Available Nitrogen Reducing Technology (BANRT) in septic systems serving new construction in designated Natural Resource Nitrogen Sensitive Areas to July 8, 2024.

Open Space and Recreation Plan: An application has been submitted to the Community Preservation Committee to fund the update of the Town's Open Space and Recreation Plan. Andrew McManus, Conservation Agent is the fiscal administrator for this project. Additional letters of support have been received from the Environmental Oversight Committee, the Department of Natural Resources, the Town Planner/Community Development Director and Conservation Committee. Updating the Local Comprehensive Plan will allow the Town to leverage state funding.

Mashpee Select Board
Minutes
December 18, 2023

LIAISON REPORTS

Mashpee Chamber of Commerce. The holiday parade was another successful event for the Town of Mashpee.

TOWN MANAGER UPDATES

Town Hall Closure: The Mashpee Town Hall will be closed on December 25, 2023, December 26, 2023 for the Christmas Holiday and on January 1, 2024 in observance of New Years Day.

KC Coombs School Grant: The KC Coombs School received a commercial equipment rebate in the amount of \$262,050. Catherine Laurent, Director of Public Works was recognized for this initiative.

ADJOURNMENT

Motion made by Selectman O'Hara to adjourn at 7:35 p.m.

Motion seconded by Selectman Wyman-Colombo.

VOTE: 5-0. Unanimous.

Roll Call Vote:

Selectman Cotton, yes
Selectman Weeden, yes

Selectman O'Hara, yes Selectman Sherman, yes
Selectman Wyman-Colombo, yes Opposed, none

Respectfully submitted,

Kathleen M. Soares
Secretary to the Select Board

PHN 7:10 PM - JOAO JUNQUEIRA



Town of Mashpee

Planning Board

16 Great Neck Road North
Mashpee, MA 02649

Mashpee Planning Board Public Hearing Notice

Pursuant to Massachusetts General Laws, Chapter 40A, the Mashpee Planning Board will hold a public hearing on Wednesday, April 3, 2024 at 7:10 p.m. in the Waquoit Meeting Room at the Mashpee Town Hall, 16 Great Neck Road North, to consider an application by Joao Junqueira, property owner, requesting a Special Permit to construct and operate a 4,752 square foot commercial building for retail sale of plumbing and water related products with accessory storage at a currently vacant property addressed as 31 Ashumet Road/474 Main Street, Mashpee, MA 02649 (Assessors Map 27-21A and 27-21B). The subject lot is located predominantly in the C-3 Limited Commercial Zoning District with portions of the parcel bisected by the R-5 Zoning Districts and is located within the Groundwater Protection District and Light Industrial Overlay District. This petition is made pursuant to the Mashpee Zoning Bylaw Sections 174-24(C)(1), 174-25(E)(13), 174-45.6(D), Article XIII: Groundwater Protection District, and 174-25.1: Standards for Developments in C-3 Districts.

Submitted by

Karen D. Faulkner, Chair
Mashpee Planning Board

Publication dates: Friday, March 15, 2024
 Friday, March 22, 2024

MASHPEE TOWN CLERK
MAR 7 '24 AM 10:24



Town of Mashpee

Planning Board

16 Great Neck Road, North
Mashpee, Massachusetts 02649

APPLICATION FOR SPECIAL PERMIT

Date February 12, 2024

The undersigned hereby applies for a Special Permit from the Planning Board.

Name of Applicant Joao Junqueira c/o Christopher J. Kirrane, Esq. Phone 508-477-6500

Address PO Box 560, Mashpee, MA 02649

Owner, if different _____ Phone _____

Address _____

Attach copies of (a) most recent recorded deed and (b) tax bill or Assessors' certification.

Deed of property recorded in Barnstable County Registry Book 35690 Page 6 or
Land Court Certificate of Title No. _____ Book 36014 Page 239

Location and description of property Two adjoining parcels, on containing 40,442 sq. ft.
and one containing 58,298 sq. ft. being known as 474 Main Street and 31 Ashumet Road

Mashpee Assessors Map(s) and Block(s) 27-21-B (Ashumet Road) and 27-21-A (474 Main Street)

Zoning District(s) in which property is located C3

How long have you owned the property 2023

Section(s) of the Zoning Bylaw which require the permit you seek 174-24(C)(1); 174-25(E)(13); 174-45.6(D)

Present use of property Vacant 174-82(A)(1); 174-82(A)(4)

Proposed use of property 4,752 sq. ft. commercial building for retail sales of water related products with indoor and outdoor storage

Check one: ☐ Applicant will send notice to abutters via certified mail, with return receipt to Mashpee Planning Board, and will provide certified abutters list.

☒ Applicant requests that Planning Department send notice to parties in interest via certified mail, and will provide labels and certified abutters list.

Signature of Owner or Authorized Representative

[Signature]
Attach written authorization signed by owner.

10998

ROCKLAND TRUST

CAPEWIDE CONSTRUCTION INC
53 MERCANTILE WAY UNIT 6
MASHPEE, MA 02649-3371

53-447/113
948
CHECK ARMOR
SECURITY PROTECTION

2/12/24

PAY TO THE
ORDER OF

Town of Mashpee
Five thousand and

\$ 5000.00

60
100

DOLLARS

MEMO
Ashmet/Main
per review

KFA

AUTHORIZED SIGNATURE

⑈010998⑈ ⑆011304478⑆ 294801045⑈

Photo Safe Deposit®

Details on Back

11063

ROCKLAND TRUST

CAPEWIDE CONSTRUCTION INC
53 MERCANTILE WAY UNIT 6
MASHPEE, MA 02649-3371

53-447/113
948
CHECK ARMOR
SECURITY PROTECTION

2/26/2024

PAY TO THE
ORDER OF Town of Mashpee

Five Hundred Twenty-Five and 00/100*****

\$**525.00

DOLLARS

Town of Mashpee
16 Great Neck Rd. North
Mashpee, MA 02649

Signature

MEMO
Planning Ashmet/Main St.

⑈011063⑈ ⑆011304478⑆ 294801045⑈

Photo Safe Deposit®

Details on Back

N O T
A N
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C O P Y

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C O P Y

SPACE ABOVE THIS LINE FOR RECORDER'S USE ONLY

QUITCLAIM DEED

ONE THIRTY LAND TRUST, INC., a Massachusetts corporation with a usual place of business in Norfolk County, Massachusetts, for nominal consideration paid,

do hereby grant all their right, title and interest to **JOAO L. JUNQUEIRA**, of 53 Mercantile Way, Unit 6, Mashpee, MA, 02649

WITH QUITCLAIM COVENANTS

A certain parcel of land situated in the Town of Mashpee, Barnstable County, Massachusetts, shown as Lot 1 on a Plan entitled "Plan of Land on Main Street & Ashumet Road in Mashpee, Massachusetts" dated May 18, 2007 and prepared by Sullivan Engineering, Inc., and recorded with Barnstable District Registry of Deeds in Plan Book 629, Page 44.

For Grantors Title, see Deed dated October 8, 2010 and recorded in Barnstable County Registry of Deeds in Book 24895, Page 118.

This conveyance is made subject to and with the benefit of:

All easements, restrictions, and other matters of record to the extent the same are in force and applicable.

This conveyance does not represent all or substantially all of the assets of One Thirty Land Trust, Inc. in the Commonwealth of Massachusetts.

This deed is to confirm that all the land of Lot 1 as shown on Plan Book 629, Page 44, is conveyed to the Grantee as was intended by the deed from Mashpee One Thirty Shops to Joao L. Junqueira said Deed being dated February 17, 2023 and recorded at said Registry in Book 35690, Page 6.

[SIGNATURE PAGE FOLLOWS]

Property Address: 474 Main Street and 31 Ashumet Road, Mashpee, Massachusetts

EXECUTED as a sealed instrument this 26 day of September, 2023.

NOT
AN
OFFICIAL
COPY

NOT
AN
OFFICIAL
COPY

One Thirty Land Trust, Inc.

NOT
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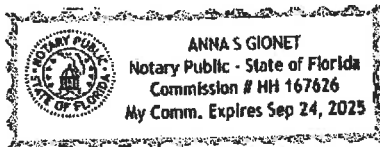
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By: William F. Hulbig
William F. Hulbig, President & Treasurer

STATE OF FLORIDA

County of Collier, ss.

On this 26 day of September, 2023, before me, the undersigned notary public, personally appeared William F. Hulbig, President & Treasurer of One Thirty Land Trust, Inc., proved to me through satisfactory evidence of identification which was [VEL Driver's License [] personally known to me [] Other: _____ to be the person whose name is signed on the preceding or attached document and acknowledged to me that he signed it voluntarily for its stated purpose.



Anna S. Gionet
Notary Public

My commission expires: 09/24/2025
(SEAL)



William Francis Galvin
Secretary of the
Commonwealth

The Commonwealth of Massachusetts
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State House, Boston, Massachusetts 02133

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Date: September 29, 2023

To Whom It May Concern :

I hereby certify that according to the records of this office,
ONE THIRTY LAND TRUST, INC.

is a domestic corporation organized on **December 21, 2005** , under the General Laws of the
Commonwealth of Massachusetts. I further certify that there are no proceedings presently pend-
ing under the Massachusetts General Laws Chapter 156D section 14.21 for said corporation's
dissolution; that articles of dissolution have not been filed by said corporation; that, said cor-
poration has filed all annual reports, and paid all fees with respect to such reports, and so far as
appears of record said corporation has legal existence and is in good standing with this office.



In testimony of which,
I have hereunto affixed the
Great Seal of the Commonwealth
on the date first above written.

William Francis Galvin

Secretary of the Commonwealth

Certificate Number: 23090548070

Verify this Certificate at: <http://corp.sec.state.ma.us/CorpWeb/Certificates/Verify.aspx>

Processed by: ili

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SPACE ABOVE THIS LINE FOR RECORDER'S USE ONLY

QUITCLAIM DEED

ONE THIRTY LAND TRUST, INC., a Massachusetts corporation with a usual place of business in Norfolk County, Massachusetts, for nominal consideration paid,

do hereby grant all their right, title and interest to **JOAO L. JUNQUEIRA**, of 53 Mercantile Way, Unit 6, Mashpee, MA, 02649

WITH QUITCLAIM COVENANTS

A certain parcel of land situated in the Town of Mashpee, Barnstable County, Massachusetts, shown as Lot 1 on a Plan entitled "Plan of Land on Main Street & Ashumet Road in Mashpee, Massachusetts" dated May 18, 2007 and prepared by Sullivan Engineering, Inc., and recorded with Barnstable District Registry of Deeds in Plan Book 629, Page 44.

For Grantors Title, see Deed dated October 8, 2010 and recorded in Barnstable County Registry of Deeds in Book 24895, Page 118.

This conveyance is made subject to and with the benefit of:

All easements, restrictions, and other matters of record to the extent the same are in force and applicable.

This conveyance does not represent all or substantially all of the assets of One Thirty Land Trust, Inc. in the Commonwealth of Massachusetts.

This deed is to confirm that all the land of Lot 1 as shown on Plan Book 629, Page 44, is conveyed to the Grantee as was intended by the deed from Mashpee One Thirty Shops to Joao L. Junqueira said Deed being dated February 17, 2023 and recorded at said Registry in Book 35690, Page 6.

[SIGNATURE PAGE FOLLOWS]

Property Address: 474 Main Street and 31 Ashumet Road, Mashpee, Massachusetts

EXECUTED as a sealed instrument this 26 day of September, 2023.

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One Thirty Land Trust, Inc.

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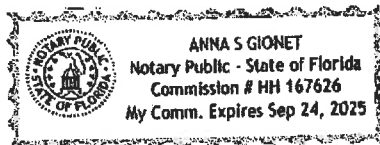
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By: William F. Hulbig
William F. Hulbig, President & Treasurer

STATE OF FLORIDA

County of Collier, ss.

On this 26th day of September, 2023, before me, the undersigned notary public, personally appeared William F. Hulbig, President & Treasurer of One Thirty Land Trust, Inc., proved to me through satisfactory evidence of identification which was [VEL Driver's License [] personally known to me [] Other: _____ to be the person whose name is signed on the preceding or attached document and acknowledged to me that he signed it voluntarily for its stated purpose.



Anna S. Gionet
Notary Public

My commission expires: 09/24/2025
(SEAL)



William Francis Galvin
Secretary of the
Commonwealth

The Commonwealth of Massachusetts
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State House, Boston, Massachusetts 02133

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Date: September 29, 2023

To Whom It May Concern :

I hereby certify that according to the records of this office,

ONE THIRTY LAND TRUST, INC.

is a domestic corporation organized on **December 21, 2005** , under the General Laws of the Commonwealth of Massachusetts. I further certify that there are no proceedings presently pending under the Massachusetts General Laws Chapter 156D section 14.21 for said corporation's dissolution; that articles of dissolution have not been filed by said corporation; that, said corporation has filed all annual reports, and paid all fees with respect to such reports, and so far as appears of record said corporation has legal existence and is in good standing with this office.



In testimony of which,
I have hereunto affixed the
Great Seal of the Commonwealth
on the date first above written.

William Francis Galvin

Secretary of the Commonwealth

Certificate Number: 23090548070

Verify this Certificate at: <http://corp.sec.state.ma.us/CorpWeb/Certificates/Verify.aspx>

Processed by: ili

MASSACHUSETTS STATE EXCISE TAX
BARNSTABLE COUNTY REGISTRY OF DEEDS
Date: 03-21-2023 @ 10:37am
Ctl#: 123 O F F Doc#: 10771
Fee: \$1,026.00 Cons: \$300,000.00

BARNSTABLE COUNTY EXCISE TAX
BARNSTABLE COUNTY REGISTRY OF DEEDS
Date: 03-21-2023 @ 10:37am
Ctl#: 123 O F F Doc#: 10771
Fee: \$948.00 Cons: \$300,000.00

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QUITCLAIM DEED

MASHPEE 130 SHOPS, INC., a Massachusetts corporation with a usual place of business in Norfolk County, Massachusetts, for consideration paid in the amount of **THREE HUNDRED THOUSAND AND 00/100 DOLLARS (\$300,000.00)** paid,

do hereby grant to **JOAO L. JUNQUEIRA**, of 53 Mercantile Way, Unit 6, Mashpee, MA, 02649

WITH QUITCLAIM COVENANTS

A certain parcel of land situated in the town of Mashpee, Barnstable County, Massachusetts, shown as Lot 1 and Lot 3 of a Plan entitled "Plan of Land on Main Street & Ashumet Road in Mashpee, Massachusetts" dated November 11, 2005 and prepared by Sullivan Engineering, Inc., and recorded with Barnstable District Registry of Deeds in Plan Book 606, Page 11.

Lot 1 is a portion of the premises conveyed to Mashpee Route 130 Shops, Inc. by Deed from Amanda Hronek, Trustee dated March 25, 2004 and recorded with Barnstable District Registry of Deeds in Book 18594, Page 189 and Confirmatory Deed dated May 26, 2004 and record with said Deeds in Book 18975, Page 279.

For Grantors Title, see Deed dated September 13th, 2021 and recorded in Barnstable County Registry of Deeds in Book 34543, Page 50.

Lot 3 is a portion of the premises conveyed to the grantor by Deed from Amanda Hronek, Trustee dated March 25, 2004 and recorded with Barnstable District Registry of Deeds in Book 18594, Page 189 and Confirmatory Deed dated May 26, 2004 and record with said Deeds in Book 18975, Page 279.

For Grantors Title, see Deed dated September 13th, 2021 and recorded in Barnstable County Registry of Deeds in Book 34493, Page 193 and Confirmatory Deed to correct Grantees corporate name recorded in Book 34543, Page 112.

[REMAINDER OF PAGE LEFT INTENTIONALLY BLANK]

Property Address: 474 Main Street and 31 Ashumet Road, Mashpee, Massachusetts

This conveyance ^{N O T}_{A N} is made subject to and with the benefit of: ^{N O T}_{A N}

^{O F F I C I A L}_{C O P Y} All easements, restrictions, and other matters of record to the extent the same are in
force and applicable. ^{O F F I C I A L}_{C O P Y}

This conveyance ^{N O T}_{A N} does not represent all or substantially all of the assets of Mashpee 130
Shops, Inc. in the Commonwealth of Massachusetts. ^{N O T}_{A N}

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^{O F F I C I A L}_{C O P Y}

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[SIGNATURE PAGE FOLLOWS]

EXECUTED as a sealed instrument this 17th day of February, 2023.

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Mashpee 130 Shops, Inc.

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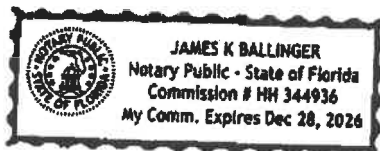
By: [Signature]
William F. Hulbig, President & Treasurer

STATE OF

Florida

County of Collier, ss.

On this 17th day of February, 2023, before me, the undersigned notary public, personally appeared William F. Hulbig, President & Treasurer of Mashpee 130 Shops, Inc., proved to me through satisfactory evidence of identification which was [☒] Driver's License [] personally known to me [] Other: _____ to be the person whose name is signed on the preceding or attached document and acknowledged to me that he signed it voluntarily for its stated purpose.



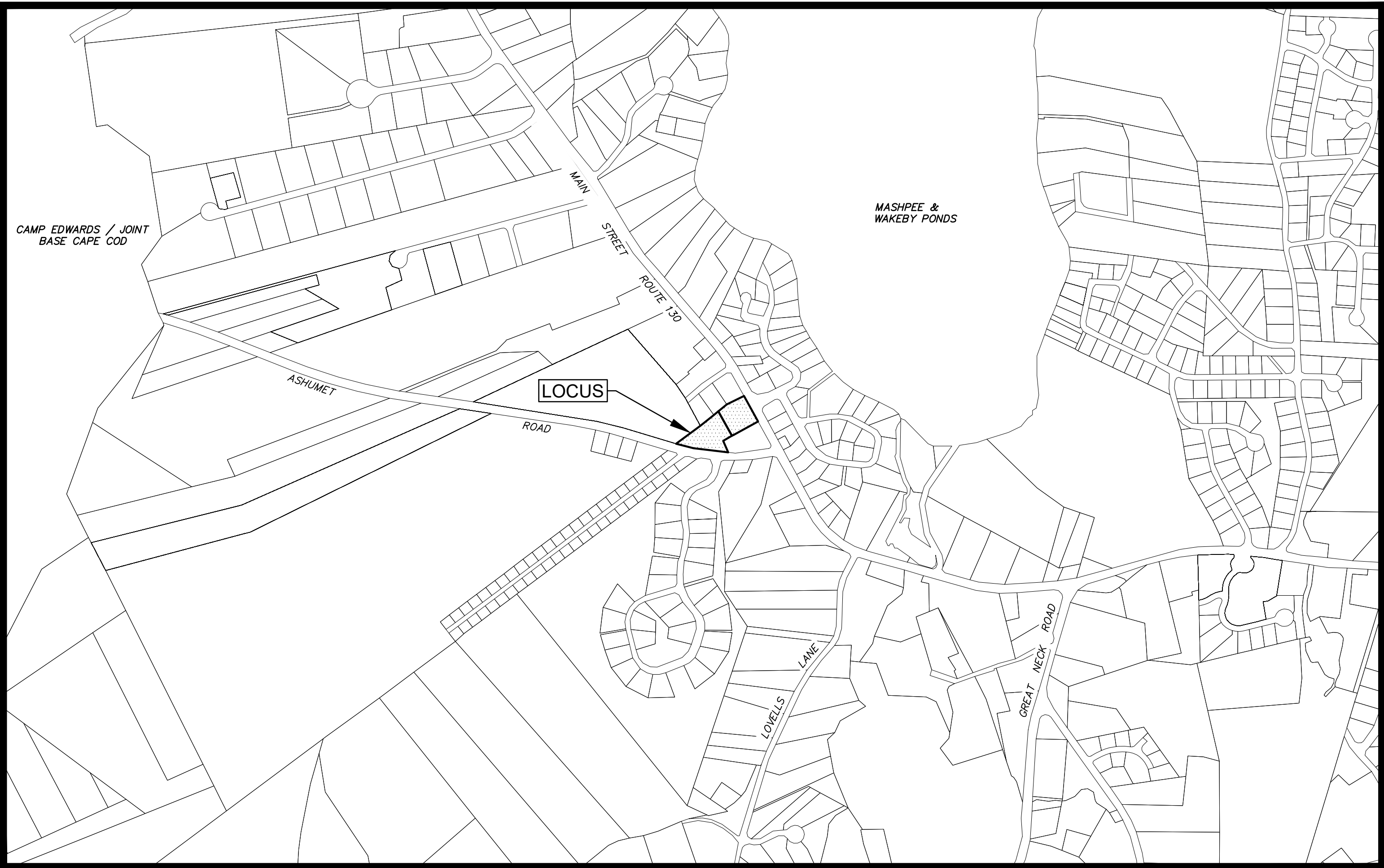
[Signature]
Notary Public
My commission expires:
(SEAL)

PROPOSED SITE DEVELOPMENT
AT
#474 MAIN STREET & 31 ASHUMET ROAD
MASHPEE, MASSACHUSETTS

FEBRUARY 19, 2024

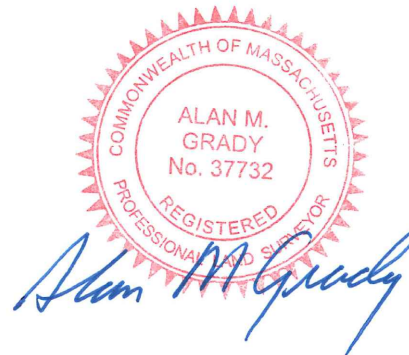
SHEET INDEX	REVISED DATES						△ CONSTRUCTION REVISIONS
1	TITLE SHEET						
2	CONSTRUCTION NOTES						
3	EXISTING CONDITIONS and SITE PREPARATION						
4	LAYOUT, ZONING and LANDSCAPING						
5	GRADING, DRAINAGE and UTILITIES						
6	CONSTRUCTION DETAILS						
7	CONSTRUCTION DETAILS						

1. LOCUS: #474 MAIN STREET
PARCEL 27-001-000A
&
#31 ASHUMET ROAD
PARCEL 27-001-000B
2. OWNER: JOAO L. JUNQUEIRA
53 MERCANTILE WAY, UNIT 6
MASHPEE, MA 02649
3. DEED REF: Deed Bk: 36014 Pg: 239
4. PLAN REF: Plan Bk: 629 Pg: 44 (LOTS 1 & 3)
5. ZONING DISTRICT: C-3 & R-5
6. LOCUS DOES NOT FALL WITHIN A SPECIAL FLOOD HAZARD ZONE AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP No. 25001C-0538-J dated 07/16/2014.
7. LOCUS DOES NOT FALL WITHIN THE NATURAL HERITAGE and ENDANGERED SPECIES PROGRAM (NHESP) AREAS OF ESTIMATED HABITATS OF RARE WILDLIFE and PRIORITY HABITATS OF RARE SPECIES.
8. LOCUS DOES FALL WITHIN A ZONE II WELLHEAD PROTECTION AREA.
9. THE LOCATION OF UNDERGROUND UTILITIES AS REPRESENTED ON THESE PLANS IS BASED UPON PLANS AND INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES OR MUNICIPAL DEPARTMENTS SUPPLEMENTED BY FIELD IDENTIFICATION WHEREVER POSSIBLE. NO WARRANTY IS MADE AS TO THE ACCURACY OF THESE LOCATIONS OR THAT ALL UNDERGROUND UTILITIES ARE SHOWN. THE CONTRACTOR SHALL CONTACT DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION. DIG SAFE TELEPHONE NUMBER IS 1-800-322-4844.



LOCUS MAP

Scale : 1" = 500'



CIVIL ENGINEER / LAND SURVEYOR:



49 HERRING POND ROAD BUZZARDS BAY, MA 02532 19 OLD SOUTH ROAD NANTUCKET, MA 02554

(Tel) 508.833.0070 (Tel) 508.325.0044
(Fax) 508.833.2282 www.brackeneng.com

OWNER/APPLICANT:

JOAO L. JUNQUEIRA
53 MERCANTILE WAY, UNIT 6
MASHPEE, MA 02649

GENERAL CONSTRUCTION NOTES:

1. ALL SITE PREPARATION NECESSARY TO COMPLETE THIS PROJECT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
2. ALL NECESSARY POLICE DETAIL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL COORDINATE WITH THE LOCAL POLICE DEPARTMENT.
3. THE CONTRACTOR SHALL MAKE ALL NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS, PAY ALL FEES INCLUDING POLICE DETAILS AND POST ALL BONDS, IF NECESSARY, ASSOCIATED WITH THE SAME, AND COORDINATE WITH THE OWNER AND THE ENGINEER.
4. ALL EXISTING CONDITIONS SHOWN SHALL BE CONSIDERED APPROXIMATE AND ARE BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOW EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER PRIOR TO INSTALLING ANY PORTION OF THE SITE WORK WHICH WOULD BE AFFECTED.
5. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF VARIOUS UTILITY COMPANIES, AND WHEREVER POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY IN THE TOWN, AND "DISGAGE" (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK IN PREVIOUSLY UNALTERED AREAS TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESOLVE CONFLICTS BETWEEN THE PROPOSED UTILITIES AND FIELD LOCATED UTILITIES AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED, INCOMPLETELY OR INACCURATELY SHOW. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCURATE RECORDS OF THE LOCATION AND ELEVATION OF ALL WORK INSTALLED AND EXISTING UTILITIES FOUND DURING CONSTRUCTION FOR THE PREPARATION OF THE AS-BUILT PLAN.
6. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL EXISTING UTILITIES IN WORKING ORDER AND FREE FROM DAMAGE DURING THE ENTIRE DURATION OF THE PROJECT. ALL COST RELATED TO THE REPAIR OF UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. EXCAVATION REQUIRED WITHIN THE PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT NO COST TO THE OWNER.
7. THE CONTRACTOR SHALL UTILIZE ALL PRECAUTIONS AND MEASURES TO ENSURE THE SAFETY OF THE PUBLIC, ALL PERSONNEL, AND PROPERTY DURING CONSTRUCTION IN ACCORDANCE WITH OSHA STANDARDS, INCLUDING BARRICADES, SAFETY LIGHTING, CONES, POLICE DETAIL AND/OR FLAGMEN AS DETERMINED NECESSARY BY THE ENGINEER AND/OR TOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF POLICE DETAIL AND FOR COORDINATING WITH THE LOCAL OR STATE POLICE DEPARTMENT FOR ALL REQUIRED POLICE DETAIL.
8. ALL TRENCHING WORK WITHIN A ROADWAY SHALL BE COORDINATED WITH THE PROPER LOCAL & STATE AGENCY. TRENCH SAFETY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR INCLUDING ANY LOCAL AND/OR STATE PERMITS REQUIRED FOR THE TRENCHWORK. THIS WORK MAY BE REQUIRED TO TAKE PLACE OUTSIDE OF NORMAL HOURS OF OPERATION FOR THE FACILITY, THE CONTRACTOR SHALL PLAN ACCORDINGLY.
9. ALL TRENCH WORK WITHIN EXISTING PAVEMENT SHALL BE SAWCUT PER THE APPLICABLE DETAILS. TRENCHWORK BACKFILL AND COMPACTION SHALL HAVE MAX 8-INCH LIFTS. CONTRACTOR SHALL BE REQUIRED TO REMOVE PATCH AND REPAVE AFTER ONE COMPLETE 12-MONTH CYCLE IF SETTLEMENT OCCURS DUE TO INADEQUATE COMPACTION AS DETERMINED BY THE ENGINEER WITHIN THE WARRANTY PERIOD.
10. THE CONTRACTOR SHALL MAKE ALL CONNECTION ARRANGEMENTS WITH UTILITY COMPANIES, AS REQUIRED.
11. ALL IMPORTED MATERIAL, IF REQUIRED, SHALL BE CLEAN. NO MATERIAL WILL BE ACCEPTED FROM AN EXISTING OR FORMER 21E SITE AS DEFINED BY THE MASSACHUSETTS CONTINGENCY PLAN 310 CMR 40.0000.
12. SITE LAYOUT SURVEY REQUIRED FOR CONSTRUCTION WILL BE PROVIDED BY THE CONTRACTOR AND SHALL BE CONDUCTED BY A MASSACHUSETTS REGISTERED PROFESSIONAL LAND SURVEYOR. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE SURVEYOR FOR ALL SITE SURVEY WORK.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCHMARKS DURING CONSTRUCTION INCLUDING BENCHMARK LOCATIONS AND ELEVATIONS AT CRITICAL AREAS. THE LOCATION OF ALL CONTROL POINTS AND BENCHMARKS SHALL BE COORDINATED WITH THE ENGINEER.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL GRADE STAKES SET BY THE SURVEYOR. GRADE STAKES SHALL REMAIN UNTIL A FINAL INSPECTION OF THE ITEM HAS BEEN COMPLETED BY THE ENGINEER. ANY RE-STAKING OF PREVIOUSLY SURVEYED SITE FEATURES SHALL BE THE RESPONSIBILITY (INCLUDING COSTS) OF THE CONTRACTOR.
15. UNLESS OTHERWISE SPECIFIED ON THE PLANS AND DETAILS/SPECIFICATIONS, ALL SITE CONSTRUCTION MATERIALS AND METHODOLOGIES ARE TO CONFORM TO THE MOST RECENT VERSION OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (THE MASSACHUSETTS HIGHWAY DEPARTMENT 1988 STANDARD SPECIFICATION FOR HIGHWAYS AND BRIDGES, THE 2002 SUPPLEMENTAL SPECIFICATIONS AND THE 2006 SPECIAL PROVISIONS).
16. CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS REGARDING NOISE, VIBRATION, DUST, SEDIMENTATION CONTAINMENT, AND TRENCH WORK.
17. SOLID WASTES SHALL BE COLLECTED AND STORED IN A SECURED DUMPSTER. THE DUMPSTER SHALL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS.
18. THE CONTRACTOR SHALL RESTORE ALL SURFACES EQUAL TO THEIR ORIGINAL CONDITION AFTER CONSTRUCTION IS COMPLETE. AREAS NOT DISTURBED BY CONSTRUCTION SHALL BE LEFT NATURAL. THE CONTRACTOR SHALL TAKE CARE TO PREVENT DAMAGE TO SHRUBS, TREES, OTHER LANDSCAPING, AND/OR NATURAL FEATURES. WHEREAS THE PLANS DO NOT SHOW ALL LANDSCAPE FEATURES, EXISTING CONDITIONS MUST BE VERIFIED BY THE CONTRACTOR IN ADVANCE OF THE WORK.
19. ALL UNPAVED AREAS DISTURBED BY THE WORK SHALL HAVE A MINIMUM OF 4-INCHES OF LOAM INSTALLED AND BE SEEDED WITH GRASS SEED AS SHOWN ON THE PLAN AND/OR DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING ANY LOAM AND SEEDED AREAS UNTIL LAWN GROWTH IS ESTABLISHED AND APPROVED BY THE ENGINEER AND/OR OWNER.
20. ALL PROPOSED STRUCTURES SHALL BE DESIGNED BY THEIR MANUFACTURERS FOR AASHTO H-20 LOADING, PRECAST CONCRETE SHALL HAVE A MINIMUM 28-DAY STRENGTH OF 4000 PSI UNLESS OTHERWISE NOTED HEREIN.
21. ALL WHEELCHAIR RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATION AND LOCAL AND/OR TRAFFIC STANDARD DETAILS (1998) DRAWING NUMBER 107.1.0 AND 107.2.0 RAMPS SHALL HAVE AN 8% MAX. SLOPE AND 2% CROSS SLOPE.
22. LEDGE OR BOULDER EXCAVATION IS NOT ANTICIPATED FOR THIS SITE. HOWEVER, THE CONTRACTOR SHALL PROVIDE A UNIT PRICE COST IN CUBIC YARD MEASURE FOR LEDGE AND/OR BOULDER REMOVAL. LEDGE AND/OR BOULDERS LESS THAN 1 CUBIC YARD IN SIZE BASED ON THE AVERAGE DIMENSIONS WILL NOT BE CONSIDERED PAYABLE ROCK. UNIT PRICE SHALL BE GIVEN FOR BOTH ON AND OFF SITE DISPOSAL. COST OF REPLACEMENT MATERIAL SHALL BE INCLUDED IF ADDITIONAL FILL MATERIAL IS REQUIRED.
23. THE CONTRACTOR SHALL REGULARLY INSPECT THE PERIMETER OF THE PROPERTY TO CLEAN UP AND REMOVE LOOSE CONSTRUCTION DEBRIS BEFORE IT LEAVES THE SITE. ALL CONSTRUCTION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE SITE TO AN APPROVED DUMP SITE. ALL TRUCKS LEAVING THE SITE SHALL BE COVERED.
24. CONCRETE TRUCKS SHALL NOT BE WASHED ONSITE. ANY CEMENT OR CONCRETE DEBRIS LEFT IN THE DISTURBED AREA SHALL BE REMOVED BY HAND AT THE CONTRACTOR'S EXPENSE.
25. BURIAL OF ANY STUMPS, SOIL DEBRIS, AND/OR STONES/BOULDERS ONSITE IS PROHIBITED. NO ROAD SALT OR OTHER DE-ICING CHEMICALS SHALL BE USED ON THE ACCESS ROADWAY.
26. IF ANY DEVATION OR ALTERATION OF THE WORK PROPOSED ON THESE DRAWINGS IS REQUIRED, THE CONTRACTOR IS TO IMMEDIATELY CONTACT AND COORDINATE WITH THE ENGINEER AND OWNER.
27. AT THE END OF CONSTRUCTION, THE CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS AND SURPLUS MATERIALS FROM THE SITE. A THOROUGH INSPECTION OF ALL THE WORK PERIMETER IS TO BE MADE AND ALL DISCARDED MATERIALS, BLOWN OR WATER CARRIED DEBRIS, SHALL BE COLLECTED AND REMOVED FROM THE SITE.
28. THIS ENGINEERING FIRM MAKES NO DETERMINATION AND ASSUMES NO LIABILITY REGARDING THE STATUS OF THE PROPOSED SITE IMPROVEMENTS WITH REGARDS TO APPLICABLE FEMA STANDARDS, THE MASSACHUSETTS STATE BUILDING CODE, OR OTHER APPLICABLE STANDARDS, RULES, OR REGULATIONS REGARDING CONSTRUCTION IN THE FEMA DESIGNATED SPECIAL FLOOD HAZARD ZONE.
29. ALL PROPOSED PLAYGROUND EQUIPMENT AND DESIGN TO BE BY OTHERS.

GENERAL GRADING & DRAINAGE NOTES:

1. ALL CUT AND FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
2. EXISTING GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT.
3. PROPOSED GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT.
4. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
5. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
6. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLAN AND SPECIFICATIONS FOR EARTHWORK AND COMPACTION REQUIREMENTS FOR ALL SLABS AND BUILDING FOUNDATIONS.
7. PROPOSED ELEVATIONS ARE SHOWN TO FINISH PAVEMENT OR GRADE UNLESS NOTED OTHERWISE.
8. ALL EARTHWORK AND SITE PREPARATION SHALL BE DONE IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS OF ANY SUBSURFACE INVESTIGATION OR GEOTECHNICAL REPORTS PREPARED FOR THIS SITE. CONTRACTOR RESPONSIBLE TO OBTAIN AND PAY FOR ANY GEOTECHNICAL REPORTS NECESSARY.
9. PARKING AREAS ARE NOT TO BE PAVED UNTIL THE ENTIRE PERMANENT DRAINAGE SYSTEM HAS BEEN INSTALLED AND ALL PIPE CONNECTIONS COMPLETE.
10. DRAINAGE PIPING SHALL BE HIGH DENSITY POLYETHYLENE PIPE AND CONFORM TO AASHTO M284 CORRUGATED POLYETHYLENE PIPE. PIPE SHALL BE INSTALLED AT THE LOCATIONS INDICATED ON THE PLAN. MINIMUM CLEARANCE BETWEEN PROPOSED DRAINAGE PIPING AND OTHER UTILITIES/STRUCTURES SHALL BE 18" VERTICALLY AND 4-FT HORIZONTALLY. CPP SHALL BE CAREFULLY BACKFILLED IN ACCORDANCE WITH THE LATEST MASSACHUSETTS HIGHWAY DEPARTMENT STAND SPECIFICATIONS. THE MINIMUM COVER FOR HDPE PIPES IS 1'-0" FOR H=20 TRAFFIC LOADS IF INSTALLED IN ACCORDANCE WITH AASHTO SECTION 30. THIS IS BASED ON EMPIRICAL CALCULATION OF LOAD RESPONSE, MANUFACTURE'S TESTING, AND FIELD EXPERIENCE WITH THE PIPE. AASHTO SPECIFICATIONS SECTION 18.4.1.5 DEFINES THE MINIMUM COVER AS 10/8 BUT NOT LESS THAN 12 INCHES". THIS COVER IS MEASURED FROM THE PIPE TO THE TOP OF A RIGID (CONCRETE) PAVEMENT OR THE BOTTOM OF A FLEXIBLE (BITUMINOUS) PAVEMENT, BOTH AASHTO AND ASTM AS WELL AS MOST MANUFACTURES, REQUIRE ADDITIONAL (TEMPORARY) COVER FOR CONSTRUCTION LOADS GREATER THAN H=20. GENERALLY, AN ADDITIONAL 2" OF TEMPORARY COVER, MOUNDED OVER THE PIPE AND REMOVED FOR FINAL GRADING AND PAVING IS SUFFICIENT FOR LARGE CONSTRUCTION VEHICLE LOADS.
11. BACKFILL ADJACENT TO PIPES AND STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADJOINING FILL.

MATERIAL. BACKFILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED SIX INCHES IN THICKNESS AND COMPACTED TO A DENSITY OF 95% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN +/-2% OF OPTIMUM. ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T-99. TESTING OF BACKFILL MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

BASIC CONSTRUCTION SEQUENCE:

THE FOLLOWING CONSTRUCTION SEQUENCE IS TO BE USED AS A GENERAL GUIDELINE. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER AND ENGINEER AND SUBMIT A PROPOSED CONSTRUCTION SEQUENCE FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

1. SURVEY AND STAKE THE PROPOSED LIMIT OF DISTURBANCE AND LIMIT OF SEDIMENTATION BARRIERS.
2. PLACE SEDIMENTATION BARRIERS (STRAWBALES, SILT FENCE, ETC.) AS SHOWN ON THE PLANS AND STAKED OUT IN THE FIELD. IN NO CASE IS THE LIMIT OF WORK TO EXTEND BEYOND THE SEDIMENTATION BARRIERS/LIMIT OF DISTURBANCE AS SHOWN ON THE PROJECT PLANS.
3. TEMPORARY CONSTRUCTION ENTRANCES TO BE INSTALLED IF NECESSARY. NO OTHER ENTRANCES SHALL BE USED TO GAIN ACCESS TO THE SITE BY ANY CONSTRUCTION OR DELIVERY VEHICLES.
4. BEGIN CLEARING THE SITE AND DEMOLITION AS REQUIRED.
5. SURVEY AND STAKE CENTERLINE OF THE PROPOSED DRAINAGE SYSTEMS, DRAINAGE LINES, AND SEPTIC COMPONENTS.
6. EXCAVATE AND ROUGH GRADE THE PROPOSED STORMWATER MANAGEMENT AREAS (SWMA) AND ANY ADDITIONAL TEMPORARY BASINS NECESSARY TO CONTROL SITE RUNOFF AND SEDIMENTS. PERMANENT SWMA SEEDING AND PLANTING SHALL BE COMPLETED AFTER THE CONTRIBUTING AREA TO THE BASIN HAS REACHED A MINIMUM OF 80% STABILIZATION AND IS NO LONGER REQUIRED TO BE USED AS A CONSTRUCTION SEDIMENTATION BASIN.
7. BEGIN CLEARING AND DEMOLITION IN AREAS OF BUILDING, PARKING LOTS, SEPTIC, PLAYGROUND, AND STORMWATER MANAGEMENT AREAS. TOPSOIL IS TO BE STRIPPED FROM THE AREA OF THE PROPOSED WORK AND SWMA AND STOCKPILED IN APPROVED LOCATIONS. TOPSOIL STOCKPILES ARE TO BE PROTECTED BY A SEDIMENT BARRIER.
8. INSTALL TEMPORARY CONVEYANCE DEVICES (SWALES, CHECK DAMS, PIPES, ETC.) AS NECESSARY TO CONVEY RUNOFF TO TREATMENT AREAS.
9. BEGIN ROUGH GRADING AREAS FOR PARKING, PLAYGROUND AND BUILDINGS. BRING ROUGH GRADING TO PROPER ELEVATIONS AS SOON AS PRACTICABLE. WORK SHALL PROGRESS DILIGENTLY TO MINIMIZE TIME SOILS ARE UN-STABILIZED.
10. BEGIN UTILITY AND SEPTIC CONSTRUCTION, CONTRACTOR SHALL BE FREE TO INSTALL UTILITIES IN ANY ORDER HE/SHE CHOOSES. ANY EROSION CONTROL DEVICE DISTURBED DURING THE UNDERGROUND UTILITY CONSTRUCTION SHALL BE IMMEDIATELY REPAIRED OR REPLACED IN KIND AND STABILIZED. MODIFY TEMPORARY CONVEYANCE DEVICES AS NECESSARY TO CONVEY RUNOFF TO TREATMENT AREAS.
11. INSTALL DRAINAGE PIPES, DRAINAGE MANHOLES AND UNDERGROUND DRAINAGE STRUCTURES. WORK SHALL BEGIN AT THE SWMA(S) AND PROGRESS UP-GRADIENT, PROTECT DISCHARGE OUTLETS WITH RIP-RAP APRONS. THE SWMA(S) AND DRAINAGE NETWORK ARE TO BE PROTECTED FROM SEDIMENTATION WITH SILT FENCE AND STRAWBALES UNTIL ALL UN-STABILIZED AREAS ARE STABILIZED WITH STONE SUB-BASE OR VEGETATION. INSTALL SEDIMENT BARRIERS AT ALL POINTS OF ENTRY INTO THE DRAINAGE NETWORK. PARTICULAR CARE SHALL BE TAKEN TO PROTECT THE UNDERGROUND SWMA(S) FROM SEDIMENT.
12. PERMANENTLY SEED ALL DISTURBED AREAS OUTSIDE OF THE AREA TO BE PAVED OR GRAVELED.
13. ONCE ALL UNDERGROUND UTILITIES HAVE BEEN CONSTRUCTED, PLACE COMPACTED GRAVEL FOUNDATION AND ROUGH GRADE THE PARKING AREAS IN ACCORDANCE WITH THE SITE PLANS AND IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL REGULATIONS AS SOON AS POSSIBLE.
14. BEGIN PARKING CONSTRUCTION PER SITE PLANS AND IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL REGULATIONS. PARKING AREAS ARE NOT TO BE PAVED UNTIL THE ENTIRE PERMANENT DRAINAGE SYSTEM HAS BEEN INSTALLED AND ALL PIPE CONNECTIONS COMPLETE.
15. FINISH PERMANENT STABILIZATION. SWEEP THE ROADWAY TO REMOVE ALL SEDIMENTS. REPAIR DRAINAGE OUTLETS AND SWMA(S) AS REQUIRED. THE CONTRACTOR SHALL CLEAN AND FLUSH THE DRAINAGE STRUCTURES AND PIPES AT THE END OF CONSTRUCTION AND ALL ACCUMULATED SEDIMENTS IN THE SWMA(S) SHALL BE REMOVED. CONTRACTOR SHALL INSPECT THE DRAINAGE NETWORK AND REPAIR ANY DAMAGE IMMEDIATELY.
16. COMPLETE ALL REMAINING PLANTING AND SEEDING.
17. REMOVAL OF ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES FOLLOWING VEGETATIVE ESTABLISHMENT OF ALL DISTURBED AREAS SHALL BE APPROVED BY THE ENGINEER AND WHEN THE CONTRIBUTING AREA HAS REACHED A MINIMUM OF 80% STABILIZATION.

EROSION & SEDIMENT CONTROL NOTES:

1. THE SITE CONSTRUCTION FOREMAN SHALL BE DESIGNATED AS THE ON-SITE PERSONNEL RESPONSIBLE FOR THE DAILY INSPECTION AND MAINTENANCE OF ALL SEDIMENT AND EROSION CONTROLS AND SHALL IMPLEMENT ALL NECESSARY MEASURES TO CONTROL EROSION AND PREVENT SEDIMENT FROM LEAVING THE SITE.
2. THE CONTRACTOR SHALL INSTALL ALL EROSION AND SEDIMENT CONTROL (ESC) MEASURES AS SHOWN ON THE SIGNED PLANS IN CONSULTATION WITH THE TOWN, AND AS DETERMINED NECESSARY IN THE FIELD BY THE ENGINEER BEFORE ANY CONSTRUCTION ACTIVITIES ARE TO BEGIN. THESE MEASURES SHALL BE CHECKED, MAINTAINED, REPLACED AS NECESSARY DURING THE ENTIRE CONSTRUCTION PERIOD OF THE PROJECT. SUCH MEASURES SHALL REPRESENT THE LIMIT OF WORK. WORKERS SHALL BE INFORMED THAT NO CONSTRUCTION ACTIVITY IS TO OCCUR BEYOND THE LIMIT OF WORK AT ANY TIME THROUGH THE CONSTRUCTION PERIOD.
3. A MINIMUM SURPLUS OF 50 FEET OF EROSION CONTROL BARRIER (SILT FENCE, STRAWBALE AND/OR SILT SOCK) SHALL BE STOCKPILED ONSITE AT ALL TIMES. STOCKPILE EROSION & SEDIMENT CONTROL MEASURES IN A DRY AND ACCESSIBLE PLACE.
4. THE CONTRACTOR SHALL PROTECT THE ADJACENT PROPERTIES FROM SEDIMENTATION DURING PROJECT CONSTRUCTION UNTIL ACCEPTANCE BY THE OWNER.
5. IF WARRANTED, A CONSTRUCTION EXIT SHALL BE CONSTRUCTED AS SHOWN IN THE DETAILS TO SHED DIRT FROM CONSTRUCTION VEHICLE TIRES. THE CRUSHED STONE PAD WILL BE REPLACE/CLEANED AS NEEDED TO MAINTAIN ITS EFFECTIVENESS.
6. THE LIMIT OF ALL CLEARING, GRADING AND DISTURBANCES SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. THE CONTRACTOR SHALL PHASE THE SITE WORK IN A MANNER TO MINIMIZE AREAS OF EXPOSED SOIL. IF TREES ARE TO BE CUT ON THE ENTIRE SITE, ONLY THOSE AREAS WHICH ARE ACTIVELY UNDER CONSTRUCTION SHALL BE GRUBBED. THE REQUIRED SEDIMENTATION CONTROL FACILITIES MUST BE PROPERTY ESTABLISHED, CLEARLY VISIBLE AND IN OPERATION PRIOR TO INITIATING ANY LAND CLEARING ACTIVITY AND/OR OTHER CONSTRUCTION RELATED WORK.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MONITOR LOCAL WEATHER REPORTS DURING CONSTRUCTION AND PRIOR TO SCHEDULING EARTHMOVING OR OTHER CONSTRUCTION ACTIVITIES WHICH WILL LEAVE LARGE DISTURBED AREAS UN-STABILIZED. IF INCLEMENT WEATHER IS PREDICTED, THE CONTRACTOR SHALL USE THEIR BEST PROFESSIONAL JUDGEMENT WHEN SCHEDULING CONSTRUCTION ACTIVITIES AND SHALL BE RESPONSIBLE FOR ENSURING THE NECESSARY EROSION CONTROL DEVICES ARE INSTALLED AND FUNCTIONING PROPERLY TO MINIMIZE EROSION FROM ANY IMPENDING WEATHER EVENTS.
8. ESC MEASURES SHALL BE INSPECTED AND MAINTAINED ON A WEEKLY BASIS AND AFTER EACH RAINFALL EVENT OF 0.50 INCH OR GREATER DURING CONSTRUCTION TO ENSURE THAT THE EROSION AND SEDIMENTATION CONTROL MEASURES ARE INTACT AND FUNCTIONING PROPERLY. IDENTIFIED DEFICIENCIES SHALL BE CORRECTED IMMEDIATELY NO LATER THAN 24 HOURS AFTER IDENTIFICATION.
9. SOIL STOCKPILES LEFT UNCOVERED SHALL BE SURROUNDED ON THEIR PERIMETERS WITH SILT SOCK, SILT FENCE, STRAWBALES OR A COMBINATION OF SILT FENCE WITH STRAWBALE, AS DETERMINED NECESSARY.
10. DISTURBED AREAS AND SLOPES SHALL NOT BE LEFT UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS THE INACTIVE WINTER SEASON. THE CONTRACTOR SHOULD PROVIDE APPROPRIATE STABILIZATION PRACTICES ON ALL DISTURBED AREAS AS SOON AS POSSIBLE BUT NOT MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY AREAS HAVING A SLOPE GREATER THAN 3:1 SHALL BE REINFORCED WITH EROSION BLANKETS OR APPROVED EQUAL UNTIL THE SITE IS PROPERLY STABILIZED. TEMPORARY SWALES MAY ALSO BE REQUIRED IF DETERMINED NECESSARY IN THE FIELD BY THE ENGINEER.
11. THE CONTRACTOR SHALL INSTALL A SILT SOCK OR APPROVED EQUIVALENT IN EACH EXISTING CATCH BASIN RECEIVING RUNOFF FROM THE SITE. UPON THE INSTALLATION OF EACH CATCH BASIN, THE CONTRACTOR SHALL INSTALL A SILT SOCK OR APPROVED EQUIVALENT. THESE ARE TO BE INSPECTED AFTER EACH SIGNIFICANT STORM EVENT AND REMOVED AND EMPTIED AS NEEDED DURING THE ENTIRE CONSTRUCTION PERIOD.
12. SMALL, TEMPORARY, SEDIMENTATION BASINS MAY BE CONSTRUCTED ON AN AS-NEEDED BASIS DURING CONSTRUCTION TO AND IN THE CAPTURE OF SITE RUNOFF AND SEDIMENT. IT WILL BE THE RESPONSIBILITY OF THE SITE CONTRACTOR, IN CONSULTATION WITH THE ENGINEER, TO SIZE AND LOCATE THESE BASINS IN APPROPRIATE LOCATIONS.
13. THE CONTRACTOR SHALL CONTAIN ALL SEDIMENT ONSITE. ALL EXITS FROM THE SITE WILL BE SWEEPED AS NECESSARY INCLUDING ANY SEDIMENT TRACKING. PAVED AREAS SHALL BE SWEEP AS NEEDED TO REMOVE SEDIMENT AND POTENTIAL POLLUTANTS WHICH MAY ACCUMULATE DURING SITE WORK.
14. ACCUMULATED SEDIMENT SHALL BE REMOVED FROM ALL TEMPORARY PRACTICES AND DISPOSED OF IN A PRE-APPROVED LOCATION BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.
15. THE CONTRACTOR SHALL PROVIDE ONSITE OR MAKE READILY AVAILABLE THE NECESSARY EQUIPMENT AND SITE PERSONNEL DURING CONSTRUCTION HOURS FOR THE DURATION OF THE PROJECT TO ENSURE ALL ESC DEVICES ARE PROPERLY MAINTAINED AND REPAIRED IN A TIMELY AND RESPONSIBLE MANNER. IF SITE WORK IS SUSPENDED DURING THE WINTER MONTHS, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE PERSONNEL AND EQUIPMENT EITHER ONSITE OR MAKE READILY AVAILABLE TO ENSURE ALL ESC DEVICES ARE PROPERLY MAINTAINED AND REPAIRED IN A TIMELY AND RESPONSIBLE MANNER.
16. PROPER MEASURES SHALL BE IMPLEMENTED BY THE CONTRACTOR IF DETERMINED THAT DETERMINED IS NECESSARY DURING CONSTRUCTION. THESE MEASURES SHALL INCLUDE DETERMINING BAGS, TEMPORARY STRAWBALES, SILT FENCES, SILT SOCKS, AND/OR OTHER APPROVED DEVICES. THE DETERMINING SET UP SHALL BE APPROVED BY THE ENGINEER.
17. DUST SHALL BE CONTROLLED BY WATERING OR OTHER APPROVED METHODS AS NECESSARY, OR AS DIRECTED BY THE ENGINEER AT NO EXTRA COST TO THE OWNER.
18. THE CONTRACTOR IS RESPONSIBLE FOR THE INSPECTION AND MAINTENANCE DURING CONSTRUCTION OF ALL STORMWATER FACILITIES INSTALLED OR AFFECTED BY THE PROJECT. ANY SEDIMENT OR DEBRIS COLLECTED WITHIN THESE FACILITIES FROM THE PROJECT WORK SHALL BE REMOVED PRIOR TO THE OWNER'S ACCEPTANCE.

STORMWATER FACILITY OPERATION & MAINTENANCE:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSPECTION AND MAINTENANCE OF ALL STORMWATER MANAGEMENT FACILITIES UNTIL SUCH TIME THAT THE PARKING LOT, BUILDING, AND ASSOCIATED UTILITIES ARE ACCEPTED BY THE OWNER AND THE ENGINEER.
2. THE CONTRACTOR SHALL INSPECT AND RESTORE/CLEAN ALL FACILITIES (INLETS, MANHOLES, INFILTRATION BASINS, ETC.) OF SEDIMENT AND DEBRIS PRIOR TO THE OWNER'S ACCEPTANCE.

3. ALL SEDIMENT AND DEBRIS SHALL BE DISPOSED OF PROPERLY IN A PRE-APPROVED LOCATION.
4. THE CONTRACTOR SHOULD REFER TO THE OPERATION & MAINTENANCE PLAN FOR ADDITIONAL INFORMATION PERTAINING TO STORMWATER FACILITY OPERATION AND MAINTENANCE REQUIREMENTS AND SHALL MAINTAIN A WORKING COPY ON SITE AT ALL TIMES.
5. ALL STORMWATER FACILITIES SHALL BE INSPECTED BY THE CONTRACTOR AFTER EVERY MAJOR RAINFALL EVENT FOR THE ENTIRE DURATION OF THE CONSTRUCTION PROJECT AND THE FIRST 3 MONTHS AFTER CONSTRUCTION TO ENSURE PROPER STABILIZATION AND CONSTRUCTION.
6. SPECIFIC ANNUAL MAINTENANCE SHALL BE AS FOLLOWS:
 - A. DRAINAGE STRUCTURES (INLETS & CATCH BASINS): ALL DRAINAGE STRUCTURES WILL BE INSPECTED ANNUALLY TO MONITOR FOR PROPER OPERATION, COLLECTION OF LITTER OR TRASH, AND STRUCTURAL DETERIORATION. PIPES AND STRUCTURES SHALL BE CLEANED OF SEDIMENT AS NECESSARY, AND REPAIRED WHEN REQUIRED.
 - B. INFILTRATION/RAINGARDEN SYSTEM: THE SYSTEM WILL BE INSPECTED ANNUALLY TO ENSURE THAT DESIGN INFILTRATION RATES ARE BEING IF SEDIMENT OR ORGANIC DEBRIS BUILD-UP HAS LIMITED THE INFILTRATION CAPABILITIES AND BUILT UP WITHIN THE CHAMBERS AND/OR RAINGARDEN THE SYSTEM SHALL BE CLEANED IN ACCORDANCE WITH THE MANUFACTURER'S AND/OR ENGINEER'S REQUIREMENTS.
 - C. ROUTINE MAINTENANCE: OTHER ROUTINE MAINTENANCE WILL INCLUDE REMOVAL OF TRASH AND LITTER FROM THE SITE AND PERIMETER AREA AND ANNUAL STREET SWEEPING AFTER THE SPRING THAW TO AVOID EXCESSIVE ACCUMULATION OF SEDIMENT IN THE DRAINAGE SYSTEM. THE PIPES DRAINING THE PROJECT WILL BE INSPECTED ANNUALLY FOR PROPER FLOW.

NOTE: OPERATION AND MAINTENANCE CHECKLIST AVAILABLE UPON REQUEST

WATER & SEWER INSTALLATION NOTES:

UTILITY TYPE	MINIMUM COVER OVER TOP OF PIPE	MINIMUM HORIZONTAL DISTANCE TO DRAIN STRUCTURE
WATER MAIN	5'	2'

1. SEWER AND WATER MAINS SHALL BE INSTALLED ACCORDING TO THE FOLLOWING GUIDELINES TO PREVENT FREEZING OF THE MAIN OR SEWER.
2. DEAD END WATER LINES SHALL BE INSULATED WHERE SOIL COVER OR HORIZONTAL SEPARATION TO PRECAST STRUCTURES IS LESS THAN THE DISTANCE SPECIFIED ABOVE AND/OR WHERE SHOWN ON PLANS.
3. INSULATION SHALL BE 2" THICK POLYURETHANE INSULATION WITH PVC JACKET PLACED AROUND PIPE OR DESIGNER APPROVED EQUAL.
4. WATER AND SEWER SEPARATION SHALL TYPICALLY BE 10-FEET MINIMUM HORIZONTAL AND 18-INCHES VERTICAL WITH SEWER MAINS BELOW THE WATER MAINS (SEE DETAIL). IF SITE CONDITIONS REQUIRE LESS, THEN THE UTILITIES SHALL BE INSTALLED AS SHOWN IN THE CONSTRUCTION DETAILS.


















WATER SYSTEM NOTES:

1. THE CONTRACTOR SHALL CONSTRUCT THE WATER LINE AND ITS APPURTENANCE IN ACCORDANCE WITH THE LOCAL WATER DEPARTMENT'S STANDARDS AND SPECIFICATIONS AND PAY FOR ALL ASSOCIATED FEES AS REQUIRED BY THE WATER DEPARTMENT.
2. THE CONTRACTOR SHALL SUPPLY TWO COPIES OF SWORN CERTIFICATES TO PROVE THAT ALL PIPES AND FITTINGS ARE INSPECTED AND TESTED AS REQUIRED BY THE STANDARD SPECIFICATIONS TO WHICH THE MATERIAL IS MANUFACTURED.
3. ALL NEWLY INSTALLED WATER SYSTEM COMPONENTS SHALL BE CLEARED OF ALL FOREIGN MATERIALS SUCH AS DIRT AND MISCELLANEOUS DEBRIS PRIOR TO SYSTEM TESTING AND SHALL BE WITNESSED BY THE LOCAL WATER DEPARTMENT. NOT TESTING IS ALLOWED WITHOUT REMOVAL OF ALL FOREIGN MATERIALS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE TO INSTALL AND REMOVE ALL NECESSARY BLOW-OFFS REQUIRED FOR THIS PROJECT AT NO EXTRA COST TO THE OWNER.

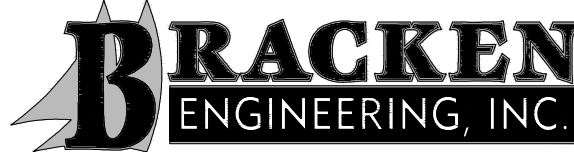
WATER SYSTEM INSTALLATION INSPECTION NOTES:

1. THE CONTRACTOR SHALL SUPPLY TO THE ENGINEER TWO COPIES OF SWORN CERTIFICATES TO PROVE THAT ALL PIPE AND FITTINGS ARE INSPECTED AND TESTED AS REQUIRED BY THE STANDARD SPECIFICATIONS TO WHICH THE MATERIAL IS MANUFACTURED.
2. A PRESSURE TEST AND DISINFECTION TEST OF ALL WATER LINES SHALL BE CONDUCTED BY THE CONTRACTOR AND WITNESSED BY THE APPROVED INSPECTOR OF THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A MINIMUM OF 48-HOUR ADVANCE NOTICE TO THE LOCAL WATER DEPARTMENT PRIOR TO THE PRESSURE AND DISINFECTION TESTS. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL NECESSARY EQUIPMENT AND CHEMICALS TO PROPERLY CONDUCT THE TESTS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO COLLECT ALL BACTERIOLOGICAL SAMPLES AND PAY FOR ALL RELATED LABORATORY FEES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN UP-TO-DATE AS-BUILT DRAWINGS AND NOTES INDICATE THE HORIZONTAL AND VERTICAL LOCATION WITHIN TWO TIES OFF ALL SYSTEM COMPONENTS INSTALLED. THESE AS-BUILT DRAWINGS AND NOTES WILL BE UTILIZED BY THE ENGINEER FOR THE PREPARATION OF RECORD PLANS.

LEGEND

	EXISTING OVERHEAD WIRES
	EXISTING UNDERGROUND ELECTRIC
	EXISTING WATER LINES
	EXISTING DRAINAGE LINES
	EXISTING CONTOURS
	EXISTING SPOT GRADE
	EXISTING HYDRANT
	EXISTING WATER VALVE
	EXISTING SEWER MANHOLE
	EXISTING DRAIN MANHOLE
	EXISTING CATCH BASIN
	EXISTING UTILITY POLE
	EXISTING GUY WIRE
	EXISTING ELECTRIC METER
	EXISTING LIGHT POLE
	EXISTING LIGHT POST
	EXISTING TREES

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Sheet Title:

CONSTRUCTION NOTES

Project:

PROPOSED SITE DEVELOPEMENT IN MASPHEE, MASSACHUSETTS

Prepared For:

JOAO JUNQUEIRA

#474 MAIN STREET
PARCEL 27-001-000A

31 ASHUMET ROAD
PARCEL 27-001-000B

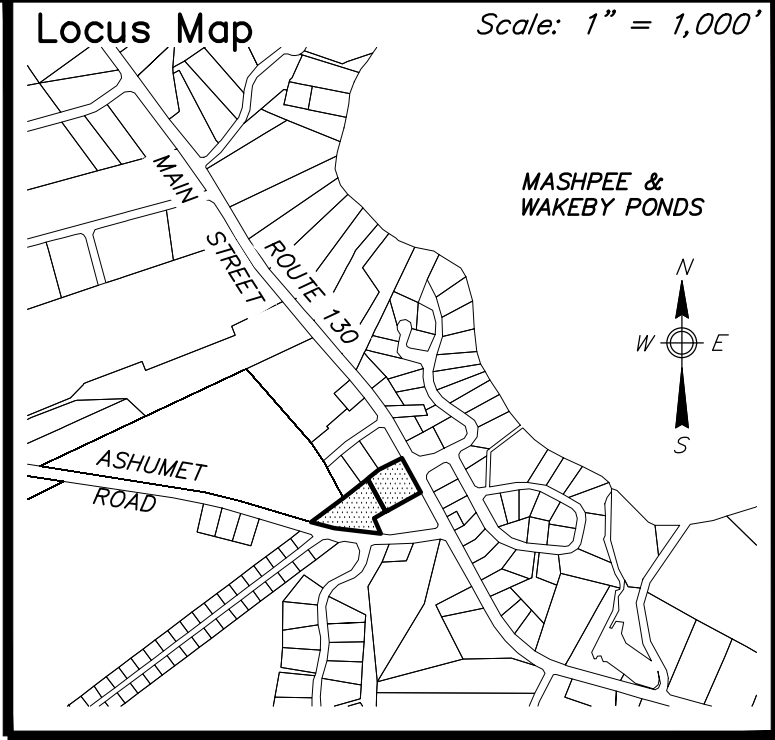
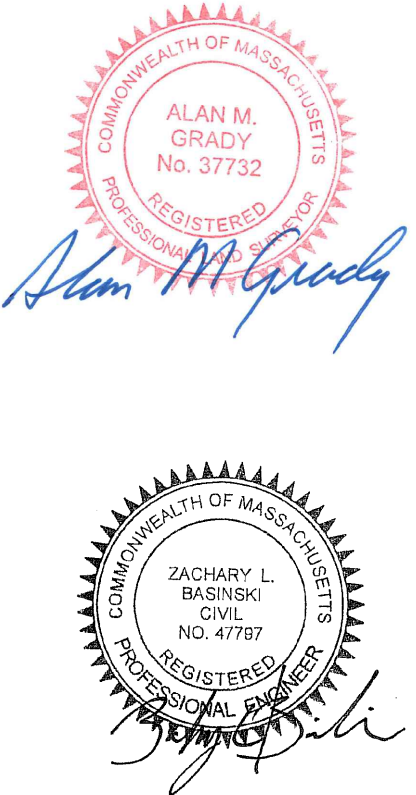
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No.	Date	Revision	Description		By
Date:	FEBRUARY 19, 2024	Drawn:	RED/BEI	Checked: ZLB/AMG	Sheet: 2 of 7

SOIL LOGS

DATE PERFORMED: DECEMBER 14, 2023
SOIL EVALUATOR: ROBERT E. DEWAR, EIT, SE#14230
WITNESSED BY: CHRISTINE WILLANDER, ASST. HEALTH AGENT
MAX. GROUND WATER ELEV.: NONE TO 83.8
METHOD OF DETERMINATION: NO WATER / NO REDOX

TP NO. 1 GRD. EL. 98.8 GW. EL. NONE TO 86.8	TP NO. 2 GRD. EL. 98.9 GW. EL. NONE TO 86.9
0" FILL	0" FILL
84" Apb SANDY LOAM 10YR 3/2	72" Apb SANDY LOAM 10YR 3/2
96" Bw LOAMY SAND 10YR 4/6	76" Bw LOAMY SAND 10YR 4/6
120" C MEDIUM SAND 2.5Y 6/6 20% GRAVEL 5% STONE	96" C MEDIUM SAND 2.5Y 6/6 20% GRAVEL 5% STONE
180" NO REDOX NO WATER	144" NO REDOX NO WATER

TP NO. 3 & 4 GRD. EL. 98.1 GW. EL. NONE TO 87.1	TP NO. DTP#1 GRD. EL. 96.0 GW. EL. NONE TO 84.0
0" FILL	0" A/C LOAMY SAND 10YR 3/4
54" Bw LOAMY SAND 10YR 5/8	10" Bw SANDY LOAM 10YR 3/4
72" C MEDIUM SAND 2.5Y 6/4 20% GRAVEL 5% STONE	36" C MEDIUM SAND 2.5Y 6/4 WITH LENSES OF GRAVEL
132" NO REDOX NO WATER	144" NO REDOX NO WATER



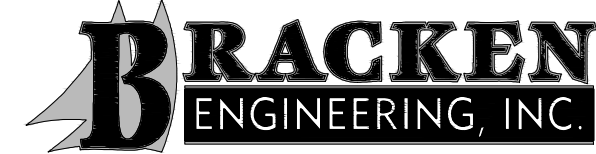
PROJECT NOTES

- LOCUS: #474 MAIN STREET PARCEL 27-001-000A & #31 ASHUMET ROAD PARCEL 27-001-000B
- OWNER: JOAO L. JUNQUEIRA 53 MERCANTILE WAY, UNIT 6 MASHPEE, MA 02649
- DEED REF: Deed Bk: 36014 Pg: 239
- PLAN REF: Plan Bk: 629 Pg: 44 (LOTS 1 & 3)
- ZONING DISTRICT: C-3 & R-5
- LOCUS DOES NOT FALL WITHIN A SPECIAL FLOOD HAZARD ZONE AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP 25001C-0538-J dated 07/16/2014.
- LOCUS DOES NOT FALL WITHIN THE NATURAL HERITAGE AND ENDANGERED SPECIES PROGRAM (NHESP) AREAS OF ESTIMATED HABITATS OF RARE WILDLIFE AND PRIORITY HABITATS OF RARE SPECIES.
- LOCUS DOES FALL WITHIN A ZONE II WELLHEAD PROTECTION AREA.
- THE LOCATION OF UNDERGROUND UTILITIES AS REPRESENTED ON THESE PLANS IS BASED UPON PLANS AND INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES OR MUNICIPAL DEPARTMENTS SUPPLEMENTED BY FIELD IDENTIFICATION WHEREVER POSSIBLE. NO WARRANTY IS MADE AS TO THE ACCURACY OF THESE LOCATIONS OR THAT ALL UNDERGROUND UTILITIES ARE SHOWN. THE CONTRACTOR SHALL CONTACT DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION. DIG SAFE TELEPHONE NUMBER IS 1-800-322-4844.
- THE CONTRACTOR SHALL REPORT TO THE OWNER AND ENGINEER ANY SIGNIFICANT VARIATIONS IN EXISTING SITE CONDITIONS FROM THOSE SHOWN ON THESE PLANS. ANY PROPOSED REVISIONS TO THE WORK, IF REQUIRED BY THESE SITE CONDITIONS, SHALL NOT BE UNDERTAKEN UNTIL REVIEWED AND APPROVED BY THE OWNER AND ENGINEER.
- THE CONTRACTOR SHALL VERIFY THE LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES PRIOR TO TAPPING INTO, CROSSING, OR EXTENDING THEM. IF THE NEW WORK POSES A CONFLICT WITH EXISTING UTILITIES, THE ENGINEER SHALL BE NOTIFIED PRIOR TO THE CONTRACTOR CONTINUING.
- THE MASHPEE WATER DEPARTMENT SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO ANY WORK ON, OR AFFECTING THE WATER SYSTEM.
- PROJECT ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- ALL DISTURBED LANDSCAPE AND HARDSCAPE AREAS TO BE RE-ESTABLISHED UNLESS OTHERWISE STATED ON THESE PLANS.

ZONING REQUIREMENTS:
C-3 (LIMITED COMMERCIAL)

MIN. LOT SIZE.....	40,000 S.F.
FRONTAGE.....	200' MIN.
FRONT YARD.....	75' MIN.
SIDE YARD.....	20' MIN.
REAR YARD.....	20' MIN.
LOT COVERAGE.....	20% MAX.
HEIGHT.....	35' MAX.

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Sheet Title:

EXISTING CONDITIONS &
SITE PREPARATION

Project:

PROPOSED SITE DEVELOPEMENT
IN MASPHEE, MASSACHUSETTS

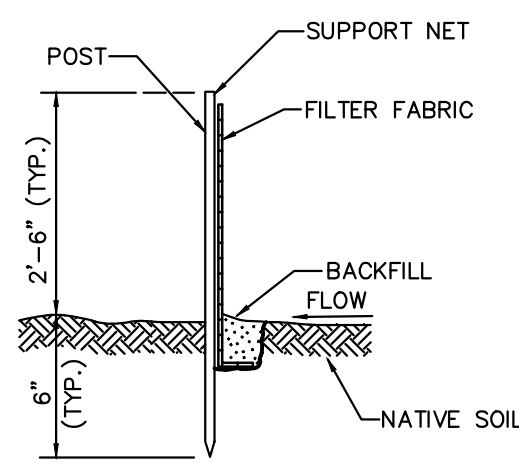
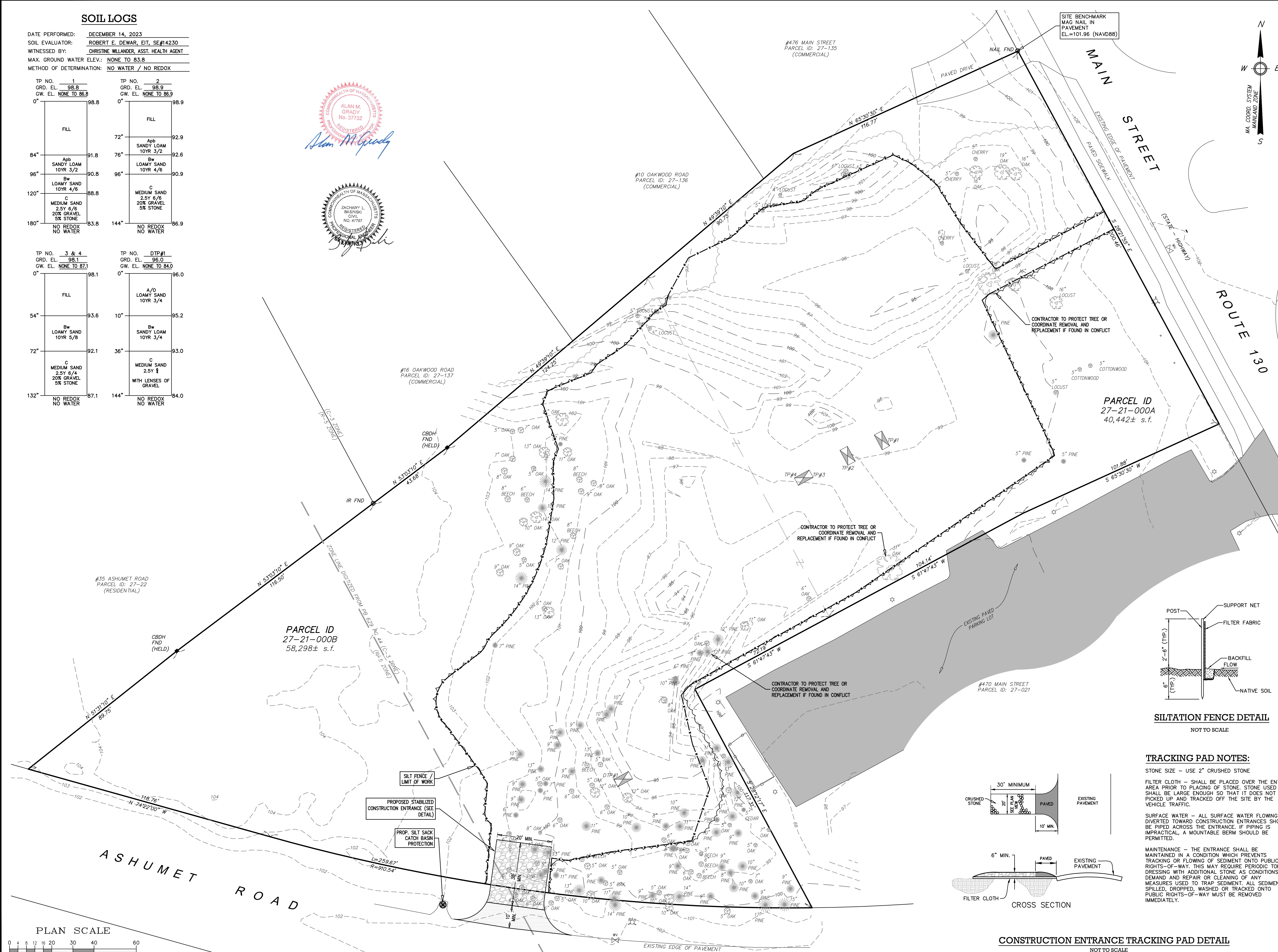
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JOAO JUNQUEIRA
#474 MAIN STREET
PARCEL 27-001-000A
&
31 ASHUMET ROAD
PARCEL 27-001-000B

No.	Date	Revision	Description	By
1	FEBRUARY 19, 2024	1	RED/BE	ZLB/AMG

Date: FEBRUARY 19, 2024 Drawn: RED/BE Checked: ZLB/AMG Sheet: 3 of 7

ISSUED FOR PERMIT



SILTATION FENCE DETAIL

NOT TO SCALE

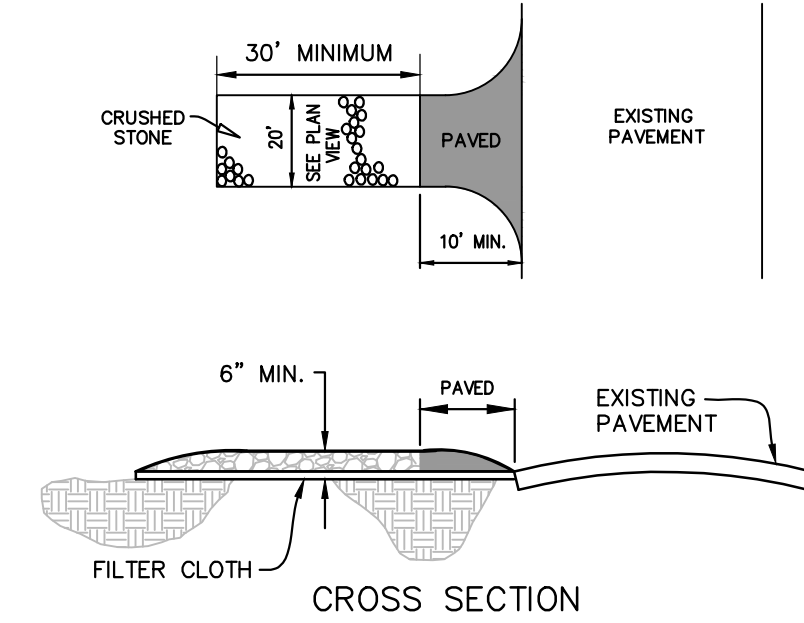
TRACKING PAD NOTES:

STONE SIZE - USE 2" CRUSHED STONE

FILTER CLOTH - SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. STONE USED SHALL BE LARGE ENOUGH SO THAT IT DOES NOT GET PICKED UP AND TRACKED OFF THE SITE BY THE VEHICLE TRAFFIC.

SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHOULD BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM SHOULD BE PERMITTED.

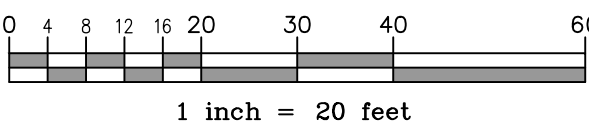
MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH PREVENTS TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANING OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.



CONSTRUCTION ENTRANCE TRACKING PAD DETAIL

NOT TO SCALE

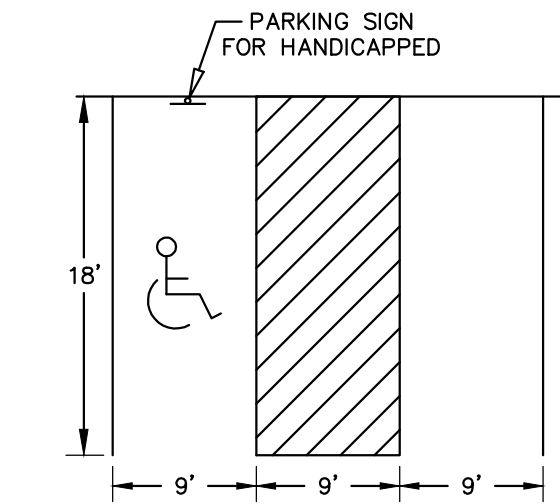
PLAN SCALE



<u>ZONING SUMMARY</u>		
ZONING DISTRICT: C-3	REQUIRED	PROPOSED
MINIMUM LOT AREA	40,000 S.F.	98,740 S.F.
MINIMUM FRONTAGE	200'	200.46'
MINIMUM FRONT YARD	75'	76.1 ±'
MINIMUM SIDE YARD	20'	21.0 ±'
MINIMUM REAR YARD	20'	N/A
MAXIMUM LOT COVERAGE	20% (MAX.)	6.1%
MAXIMUM HEIGHT	35'	<35'

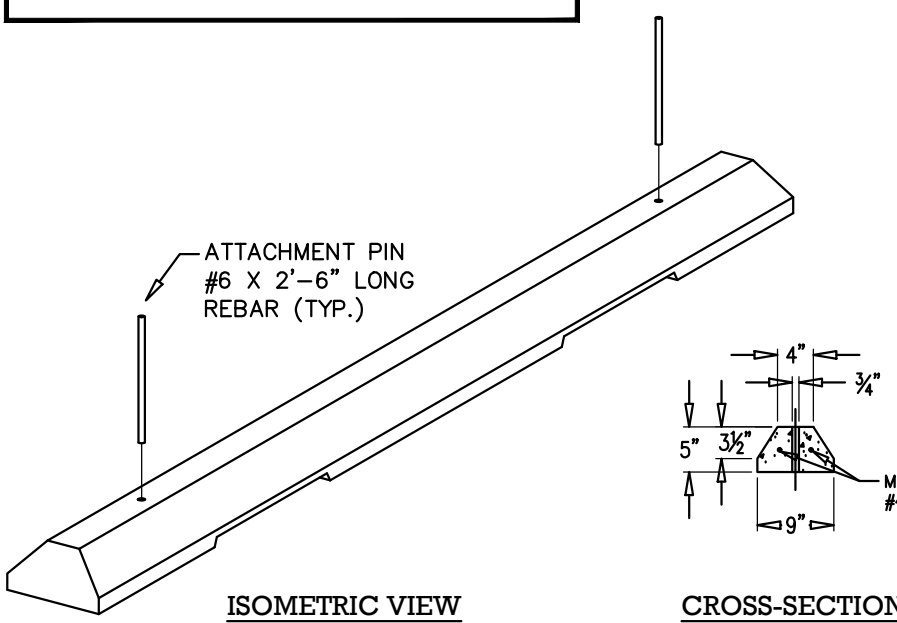
<u>PARKING SUMMARY</u>			
<u>USE</u>	<u>REQUIRED</u>	<u>TOTAL</u>	
HARDWARE STORE (1,248 S.F.)	1 SPACE GFA	300 S.F.	4 SPACES
WAREHOUSE (4,752 S.F.)	1 SPACE GFA	900 S.F.	5 SPACES
TOTAL REQUIRED =		9 SPACES	
TOTAL PROVIDED =		9 SPACES	

<u>ADA PARKING SUMMARY</u>	
per §821 CMR 23.2.1	
REQUIRED:	
TOTAL PARKING SPACES = 9	
MIN. ACCESSIBLE SPACES REQUIRED = 1 (MIN. OF 1 VAN ACCESSIBLE)	
PROVIDED:	
(1) VAN ACCESSIBLE SPACE	



NOTE:
GRADE TO BE 2% MAXIMUM IN ANY DIRECTION ACROSS
HANDICAP STALLS AND LOADING AREAS.

NOT TO SCALE



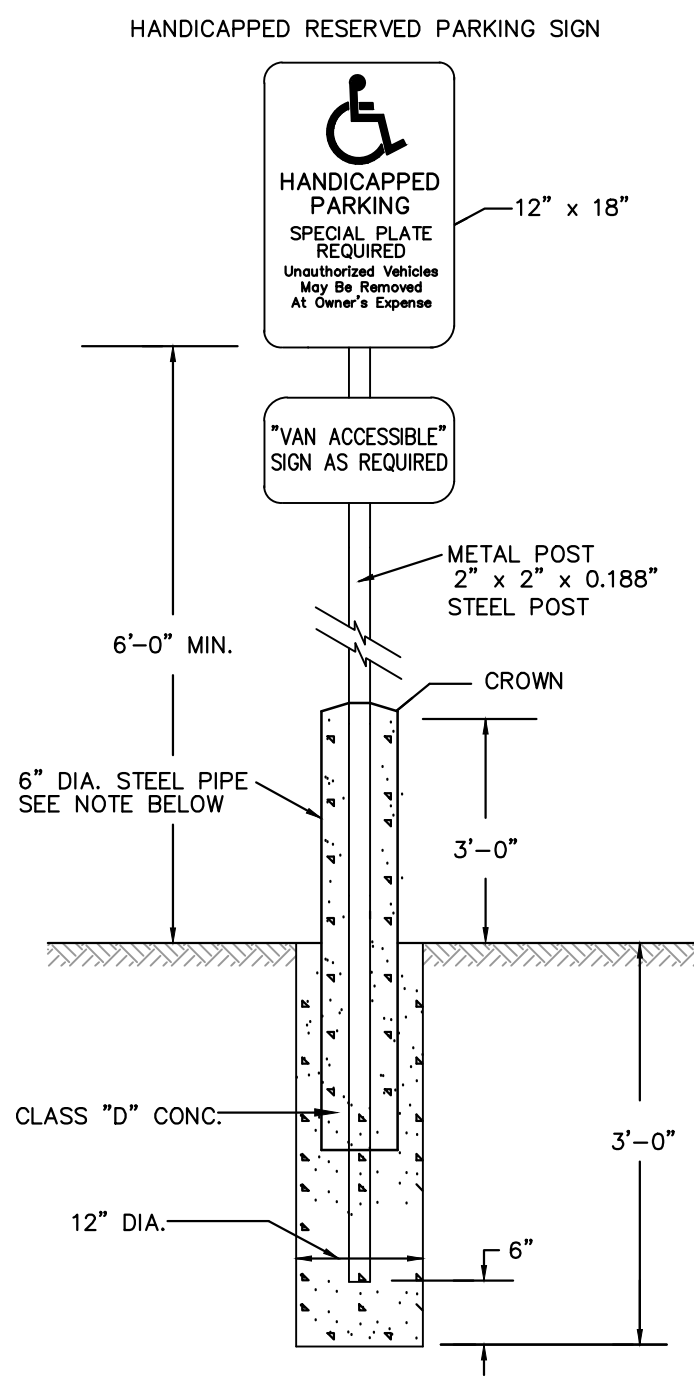
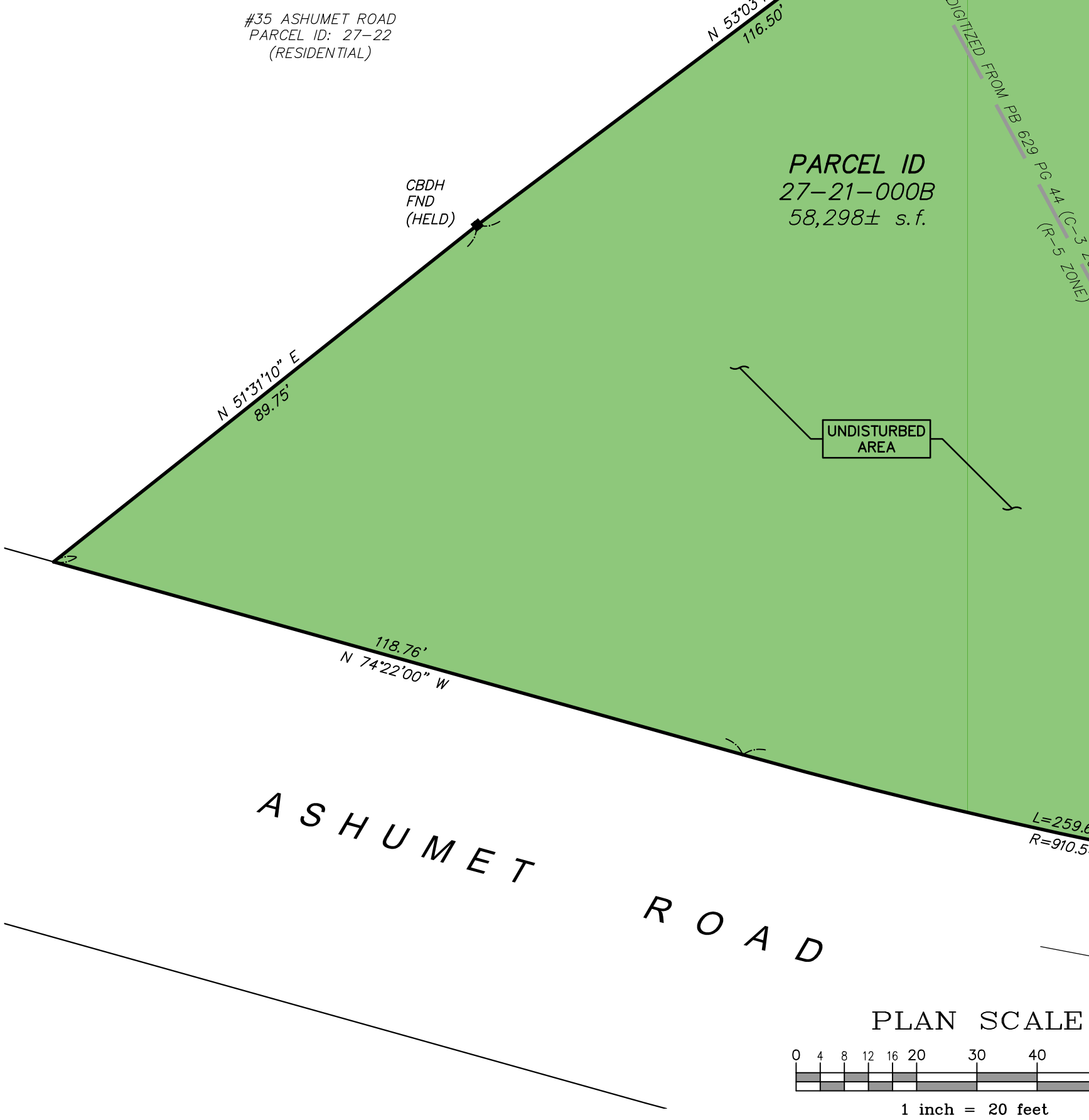
ELEVATION

Diagram showing the elevation of a structural member with the following dimensions and features:

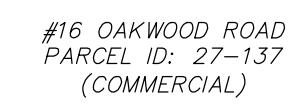
- Overall width: 6'
- Overall height: 5'
- Top horizontal segments: 10" (left), 4'-4" (center), 10" (right)
- Bottom horizontal segments: 1'-0" (left), 1'-0" (left of center), 2'-0" (center), 1'-0" (right of center), 1'-0" (right)
- Chamfer: 3/4" CHAMFER (TYP.) at the bottom corners.

NOTE: PRECAST CONCRETE BUMPERS TO BE PLACED AS SHOWN ON PLAN OR WHERE PARKING SPACES ABUT A CURB <6" ADJACENT TO THE BUILDING.

PRECAST CONCRETE BUMPER DETAIL
NOT TO SCALE

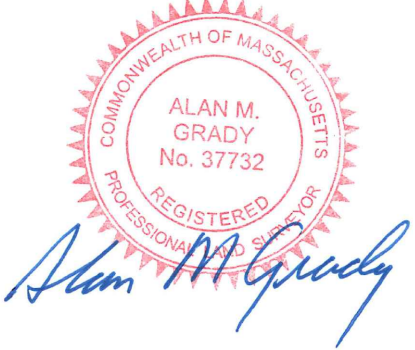


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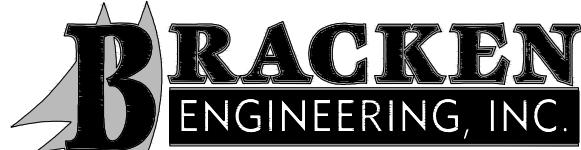


- LOCUS: #474 MAIN STREET
PARCEL 27-001-000A

&
#31 ASHUMET ROAD
PARCEL 27-001-000B
2. OWNER: JOAO L. JUNQUEIRA
53 MERCANTILE WAY, UNIT 6
MASHPEE, MA 02649
3. DEED REF: Deed Bk: 36014 Pg: 239
4. PLAN REF: Plan Bk: 629 Pg: 44 (LOTS 1 & 3)
5. ZONING DISTRICT: C-3
6. LOCUS DOES NOT FALL WITHIN A SPECIAL FLOOD HAZARD ZONE AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP No. 2501C-0538-1 dated 07/16/2014.
7. LOCUS DOES NOT FALL WITHIN THE NATURAL HERITAGE AND ENDANGERED SPECIES PROGRAM (NHESP) AREAS OF ESTIMATED HABITATS OF RARE WILDLIFE AND PRIORITY HABITATS OF RARE SPECIES.
8. LOCUS DOES FALL WITHIN A ZONE II WELLHEAD PROTECTION AREA.
9. THE LOCATION OF UNDERGROUND UTILITIES AS REPRESENTED ON THESE PLANS IS BASED UPON PLANS AND INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES OR MUNICIPAL DEPARTMENTS SUPPLEMENTED BY FIELD SURVEY WHEN POSSIBLE. NO WARRANTY IS MADE AS TO THE ACCURACY OF THESE LOCATIONS OR THAT ALL UNDERGROUND UTILITIES ARE SHOWN. THE CONTRACTOR SHALL CONTACT DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF EXCAVATION. DIG SAFE TELEPHONE NUMBER IS 1-800-322-4844.
10. THE CONTRACTOR SHALL REPORT TO THE OWNER AND ENGINEER ANY SIGNIFICANT VARIATIONS IN EXISTING SITE CONDITIONS FROM THOSE SHOWN ON THESE PLANS. ANY PROPOSED REVISIONS TO THE WORK, IF REQUIRED BY THESE SITE CONDITIONS, SHALL NOT BE UNDERTAKEN UNTIL REVIEWED AND APPROVED BY THE OWNER, ENGINEER, AND IF NECESSARY, ANY APPLICABLE MUNICIPAL AGENCIES.
11. THE CONTRACTOR SHALL VERIFY THE LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES PRIOR TO TAPPING INTO, CROSSING, OR EXTENDING THEM. IF THE NEW WORK POSES A CONFLICT WITH EXISTING UTILITIES, THE ENGINEER SHALL BE NOTIFIED PRIOR TO THE CONTRACTOR CONTINUING.
12. THE MASHPEE WATER DEPARTMENT SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO ANY WORK ON, OR AFFECTING THE WATER SYSTEM.
13. PROJECT ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD83).
14. ALL DISTURBED LANDSCAPE AND HARDSCAPE AREAS TO BE RE-ESTABLISHED UNLESS OTHERWISE STATED ON THESE PLANS.



Prepared By:



49 HERRING POND ROAD BUZZARDS BAY, MA 02532	19 OLD SOUTH ROAD NANTUCKET, MA 02554
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Sheet Title:

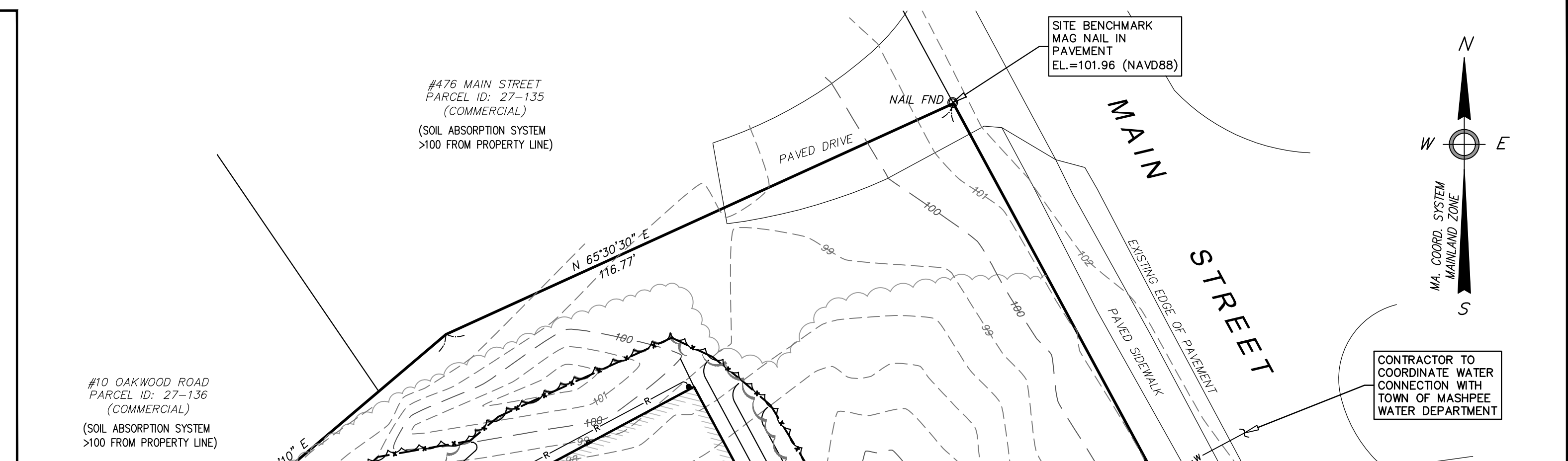
LAYOUT, ZONING & LANDSCAPING

Project: PROPOSED SITE DEVELOPEMENT
IN MASPHEE, MASSACHUSETTS

Prepared For:
JOAO JUNQUEIRA
 #474 MAIN STREET
 PARCEL 27-001-000A
 &
 31 ASHUMET ROAD
 PARCEL 27-001-000B

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Date:	FEBRUARY 19, 2024	Drawn:	RED/BEI	Checked: ZLB/AMG
				Sheet: 4 of 7

ISSUED FOR PERMIT



- [illegible]

-
- #35 ASHUMET ROAD
PARCEL ID: 27-22
(RESIDENTIAL)
(SOIL ABSORPTION SYSTEM
>100 FROM PROPERTY LINE)
- CBDH
FND
(HELD)
- N 57°37'10" E
116.50'
- ZONE LINE DIGITIZED FROM PB 82-29 AC 44 (C-3 ZONE)
(R-1.5 ZONE)
- PARCEL ID
27-00B**
58,298± s.f.
- ENCLOSED DRAINAGE PAV.
PR. SEDIMENT FOREBAY
PAVED SWALE
SPILLOVER WEIR
EL.: 94.80
- GRASS SWALE
SWALE
RIP RAP
RIP RAP CHECK DAM
- S 61°47'43" W
104.14'
S 61°47'43" W
- FRAME AND COVER TO GRADE (TYP.)
- EXISTING PAVED PARKING LOT
- #470 MAIN STREET
PARCEL ID: 27-021
(LOCUS SERVED BY TOWN WATER)
- PLAN SCALE**
- 0 4 8 12 16 20 30 40 60
1 inch = 20 feet
- SOIL LOGS**
- Prepared By:
BRACKEN ENGINEERING, INC.
- 49 HERRING POND ROAD
BUZZARDS BAY, MA 02532
(tel) 508-333-0070
- 19 OLD SOUTH ROAD
NANTUCKET, MA 02554
(tel) 508-335-0044

SOIL EVALUATOR: ROBERT E. DEWAR, EIT, SE#14230
WITNESSED BY: CHRISTINE WILLANDER, ASST. HEALTH AGENT
MAX. GROUND WATER ELEV.: NONE TO 83.8
METHOD OF DETERMINATION: NO WATER / NO REDOX

TP NO. 1
 GRD. EL. 98.8
 GW. EL. NONE TO 86.9

TP NO. 2
 GRD. EL. 98.9
 GW. EL. NONE TO 86.9

TP NO. 3 & 4
 GRD. EL. 98.1
 GW. EL. NONE TO 87.1

0" 98.8
72" 92.9
84" 91.8
96" 90.8
120" 88.8
180" 83.8

FILL
 Aps SANDY LOAM 10YR 3/2
 Bw LOAMY SAND 10YR 4/6
 C MEDIUM SAND 2.5Y 6/8 20% GRAVEL 5% STONE
 NO REDOX NO WATER

0" 98.9
72" 92.9
76" 92.6
96" 90.9
144" 86.9

FILL
 Aps SANDY LOAM 10YR 3/2
 Bw LOAMY SAND 10YR 4/6
 C MEDIUM SAND 2.5Y 6/4 20% GRAVEL 5% STONE
 NO REDOX NO WATER

0" 98.1
54" 93.6
72" 92.1
132" 87.1

FILL
 Bw LOAMY SAND 10YR 5/8
 C MEDIUM SAND 2.5Y 6/4 20% GRAVEL 5% STONE
 NO REDOX NO WATER

ASHUMET ROAD
PROPOSED SITE DEVELOPEMENT IN MASHPÉE, MASSACHUSETTS
 Prepared For:
JOAO JUNQUEIRA
 #474 MAIN STREET
 PARCEL 27-001-000A
 &
 31 ASHUMET ROAD
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BUZZARDS BAY, MA 02532 (tel) 508.833.0070 (fax) 508.833.2282	NANTUCKET, MA 02554 (tel) 508.325.0044 www.brackeneng.com
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Sheet Title:

GRADING, DRAINAGE & UTILITIES

Project:

PROPOSED SITE DEVELOPMENT IN MASHPFIE, MASSACHUSETTS

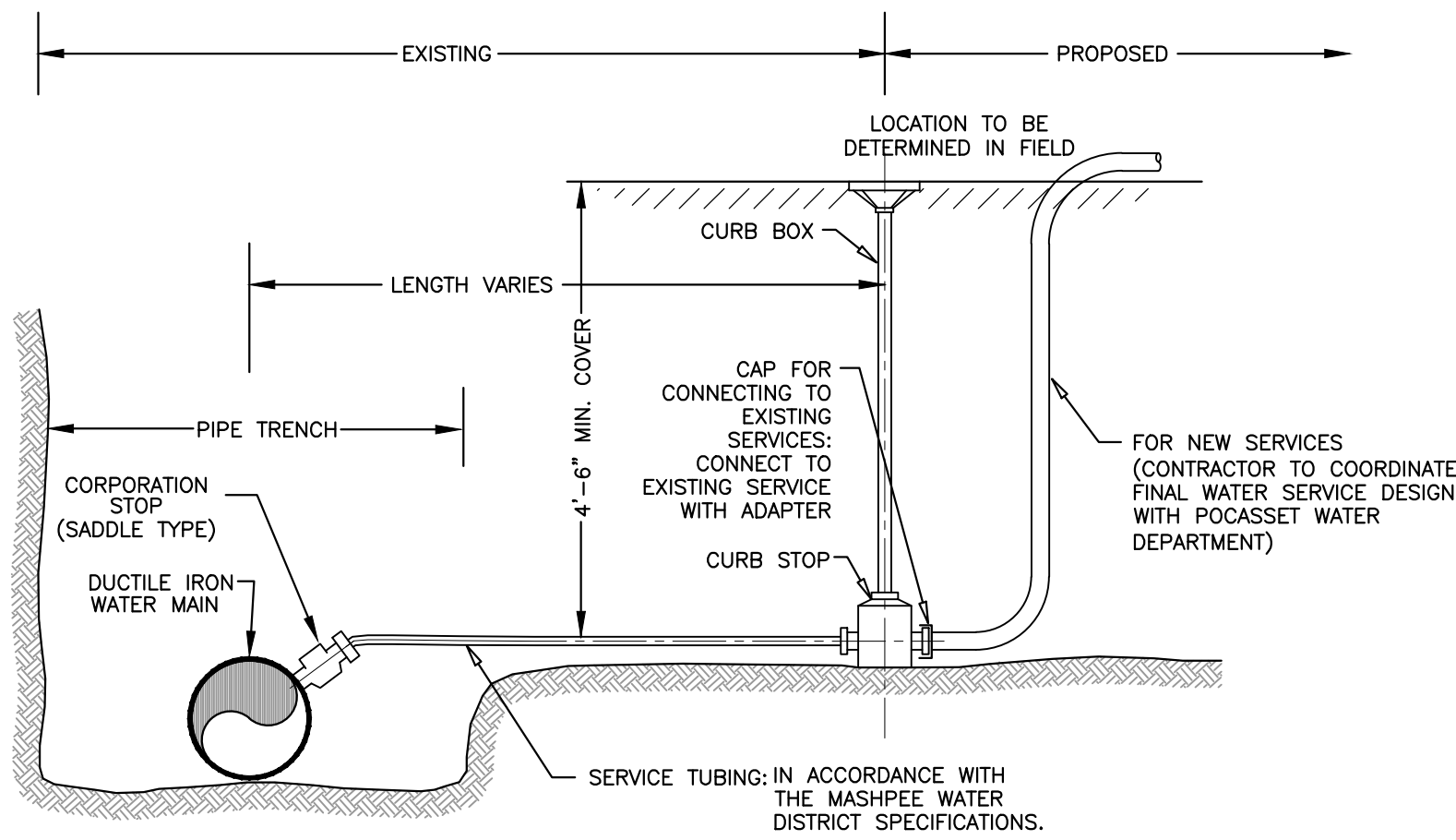
Prepared For:

JOAO JUNQUEIRA

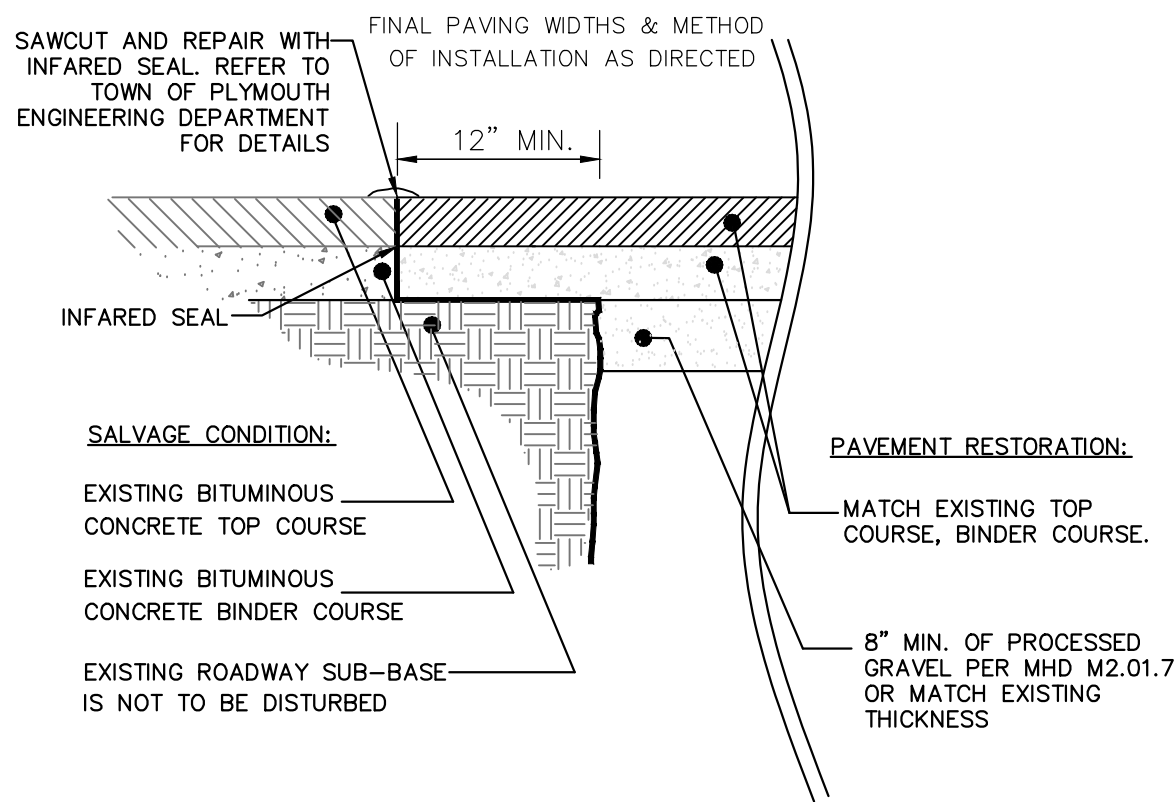
#474 MAIN STREET
PARCEL 27-001-000A
&
31 ASHUMET ROAD
PARCEL 27-001-000B

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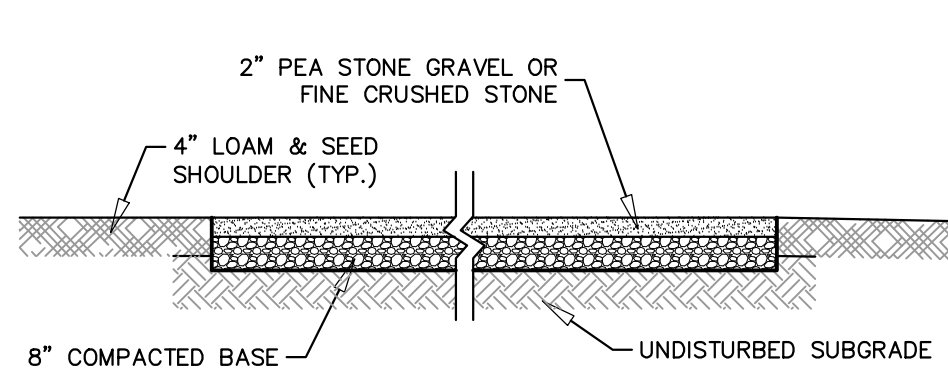
No.	Date	Revision Description	By



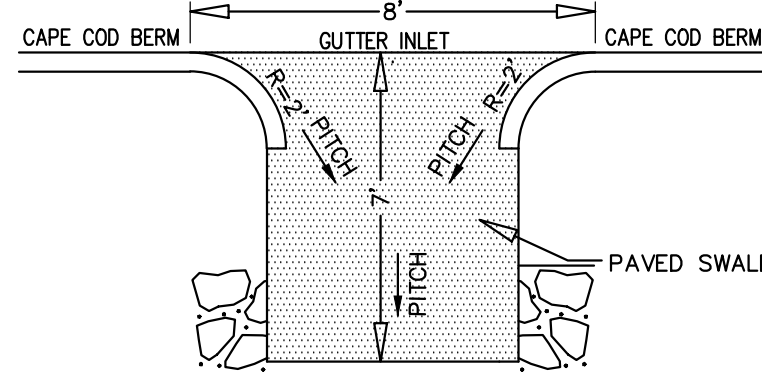
NOTE: CONTRACTOR TO CONFIRM SERVICE CONNECTION MATERIALS AND METHODS WITH MASHPPEE WATER DISTRICT PRIOR TO CONSTRUCTION.
TYPICAL WATER SERVICE CONNECTION
NOT TO SCALE



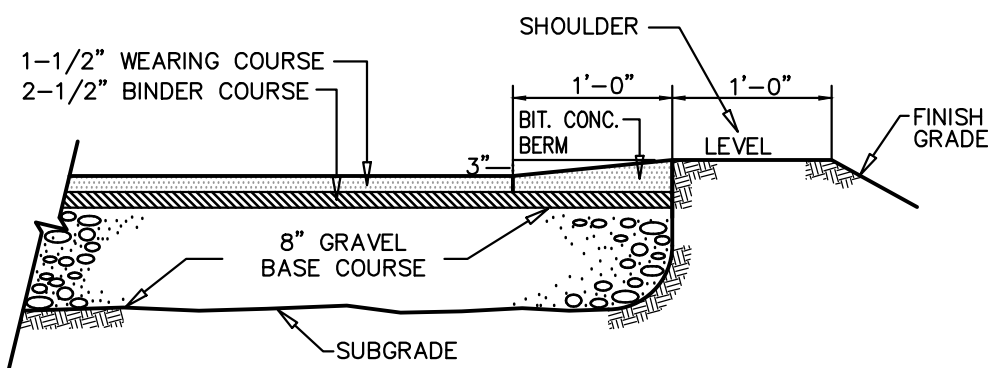
PAVEMENT SAW CUT & INFARED SEAL DETAIL
NOT TO SCALE



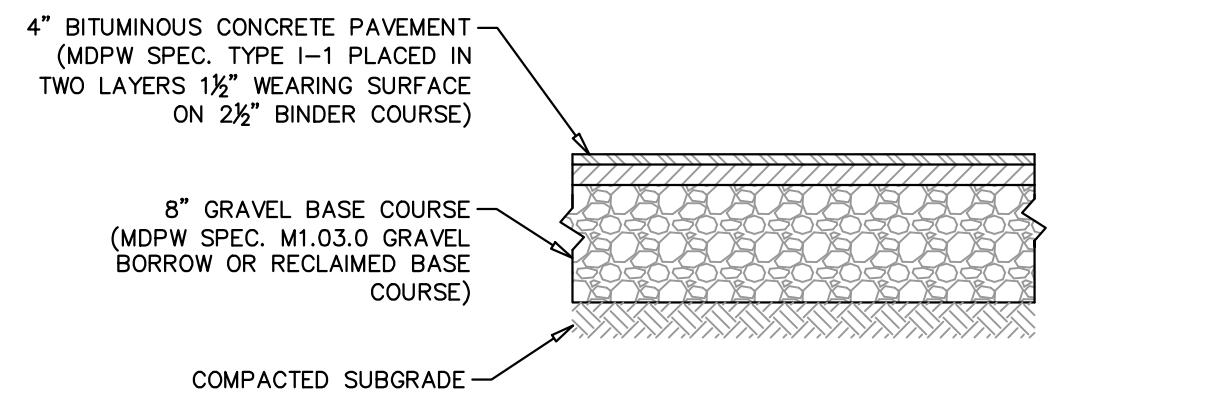
GRAVEL SECTION



PAVED SWALE DETAIL
NOT TO SCALE

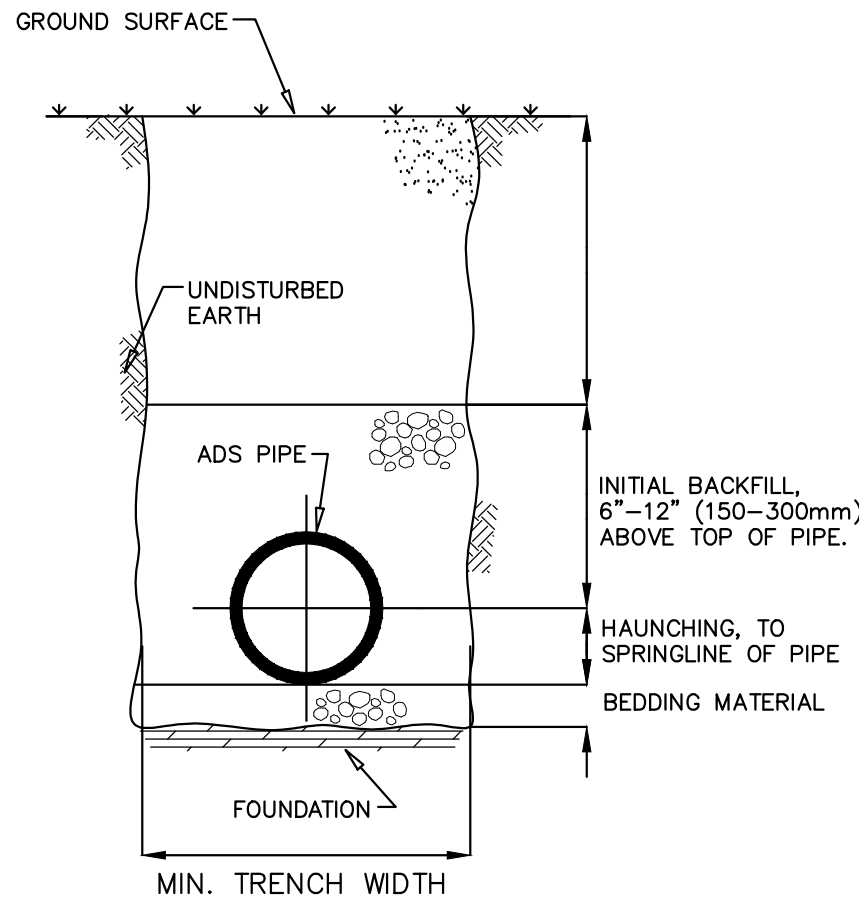


CAPE COD BERM
NOT TO SCALE



- NOTE:
- SANDY LOAM and/or LOAMY SAND TOPSOIL MATERIAL SHALL BE EXCAVATED FROM ALL PAVED AREAS PRIOR TO SUB-BASE INSTALLATION.
 - SUB-GRADE (EXISTING MATERIAL) SHALL CONSIST OF INERT MATERIAL THAT IS HARD, DURABLE STONE and/or COARSE SAND, FREE FROM LOAM AND CLAY TO A DEPTH NOT LESS THAN 4 FEET BELOW THE FINISH PAVEMENT SURFACE.
 - SUBGRADE FILL SHALL BE COMPACTED TO 95% COMPACTION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
 - SEE SITE LAYOUT PLAN FOR PAVEMENT WIDTH AND LOCATION.
 - SEE GRADING PLAN FOR PAVEMENT SLOPE AND CROSS SLOPE.
 - PRIOR TO INSTALLING THE WEARING COURSE, THE EXISTING BINDER COURSE SURFACE SHALL BE SWEEPED COMPLETELY CLEAN BY A STREET SWEEPING MACHINE AND A TACK COAT SHALL BE INSTALLED TO A LEVEL APPROVED BY THE ENGINEER.

PARKING AREA PAVEMENT SECTION
NOT TO SCALE



NOTES:

- FOUNDATION:** WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF CLASS I OR II MATERIAL AS DEFINED IN ASTM D2321. "STANDARD PRACTICE FOR INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS," LATEST EDITION; AS AN ALTERNATIVE AND AT THE DISCRETION OF THE ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A WOVEN GEOTEXTILE FABRIC.
- BEDDING, HAUNCHING & INITIAL BACKFILL:** SUITABLE MATERIAL SHALL CONSIST OF CLEAN, HARD, PARTICLES OF GRAVEL MEETING THE FOLLOWING:

SIEVE SIZES	PASSING %
No. 4	85-95%
No. 8	5-15%
No. 16	0-2%

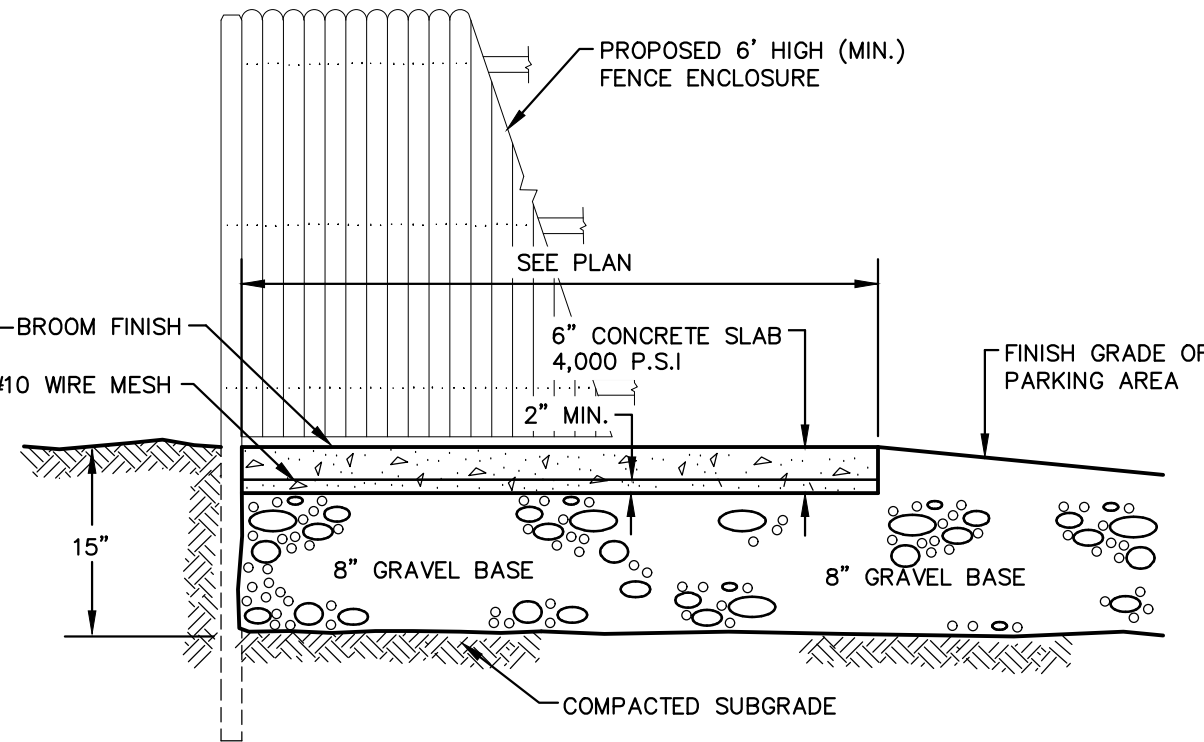
 MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
 MINIMUM BEDDING THICKNESS SHALL BE 4" (100MM) FOR 4"-24" (100-600MM) AND 42"-48" (1050-1200MM) CORRUGATED POLYETHYLENE PIPE (CPEP); 6" (150MM) FOR 30"-36" (750-900MM) CPEP.
- MINIMUM TRENCH WIDTHS SHALL BE AS FOLLOWS:**

NOMINAL Ø in (mm)	MIN. RECOMMENDED TRENCH WIDTH, in (mm)
8 (200)	25 (630)
10 (250)	28 (710)
12 (300)	31 (790)
15 (375)	34 (860)
18 (450)	39 (990)
- MINIMUM COVER:** MINIMUM RECOMMENDED DEPTHS OF COVER FOR VARIOUS LIVE LOADING CONDITIONS ARE SUMMARIZED IN THE FOLLOWING TABLE. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TAKEN FROM THE TOP OF PIPE TO THE GROUND SURFACE.

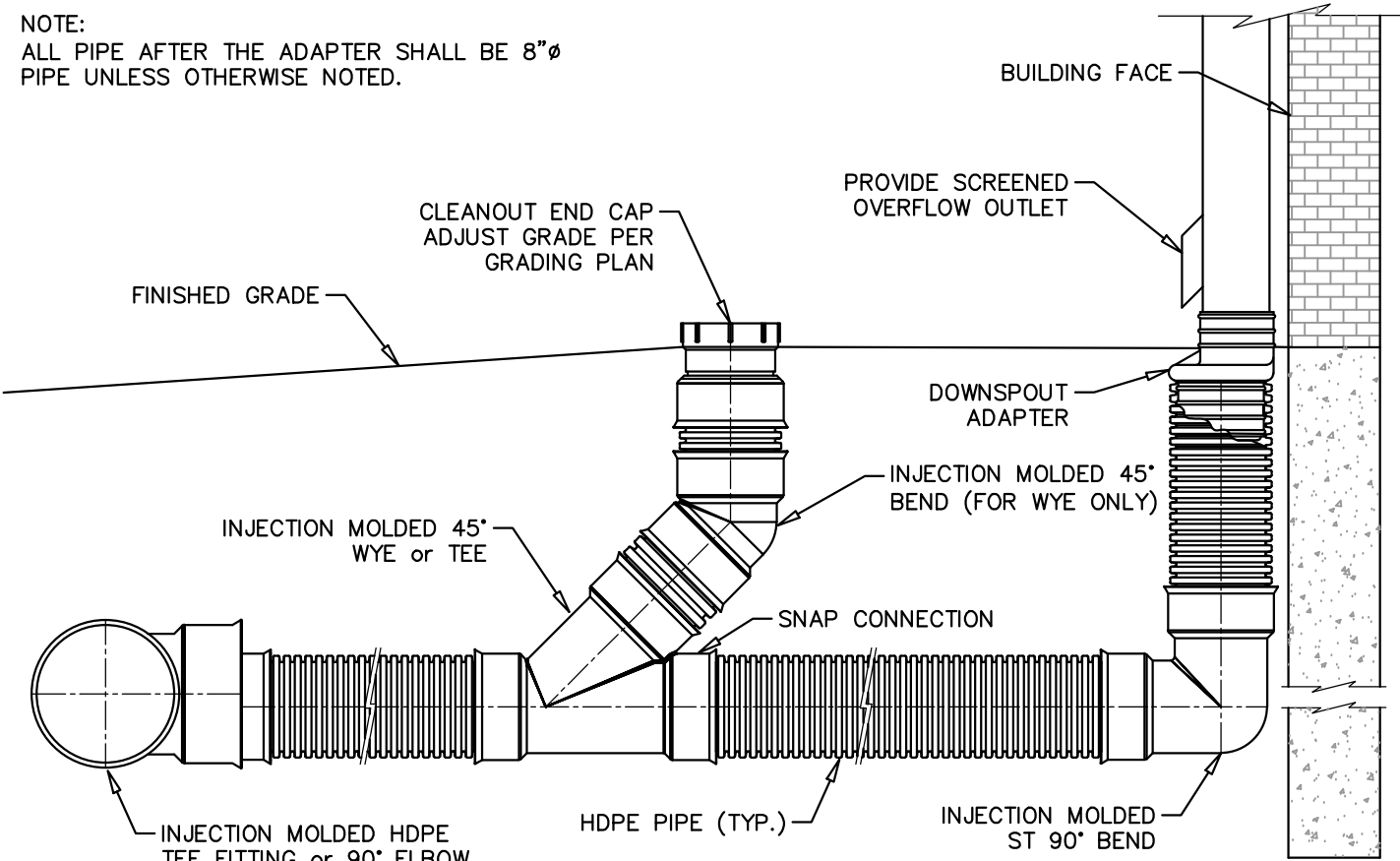
SURFACE LIVE LOADING CONDITION	MINIMUM RECOMMENDED COVER, in (mm)
H25 (FLEXIBLE PAVEMENT)	12 (300)
H25 (RIGID PAVEMENT)	12 (300)
E80 RAILWAY	24 (610)
HEAVY CONSTRUCTION	48 (1220)

 *TOP OF PIPE TO BOTTOM OF BITUMINOUS PAVEMENT SECTION

TRENCH CROSS-SECTION & A.D.S. PIPE INSTALLATION DETAIL
NOT TO SCALE



CONCRETE PAD and FENCE FOR TRASH CONTAINER
NOT TO SCALE



TYPICAL ROOF DRAIN DETAIL
NOT TO SCALE

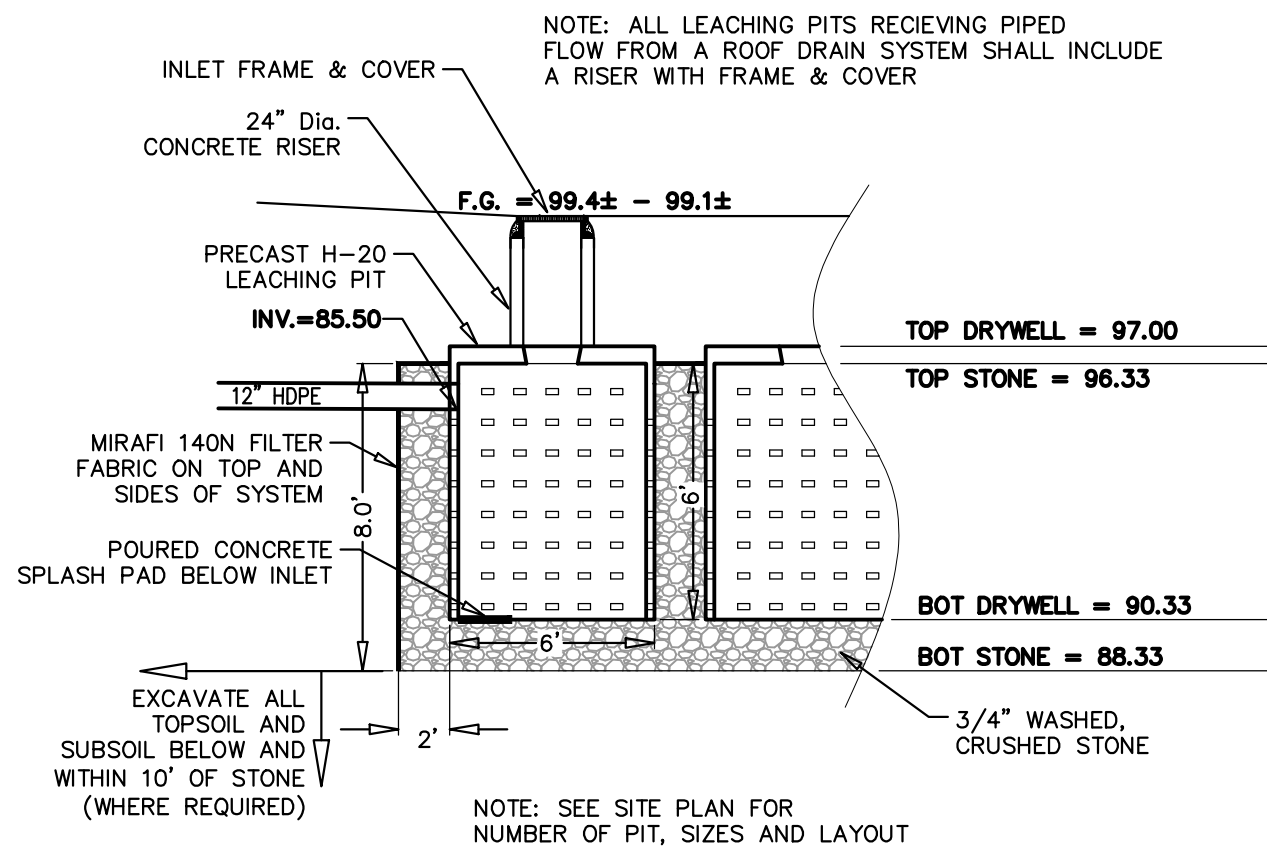
SIZE OF MAIN	90° BENDS, TEES, CAPS AND PLUGS	45° BENDS AND WYES	22 1/2° BENDS	11 1/4° BENDS
3"-4"	5	4	2	2
6"-12"	12	9	5	2

NOTES:

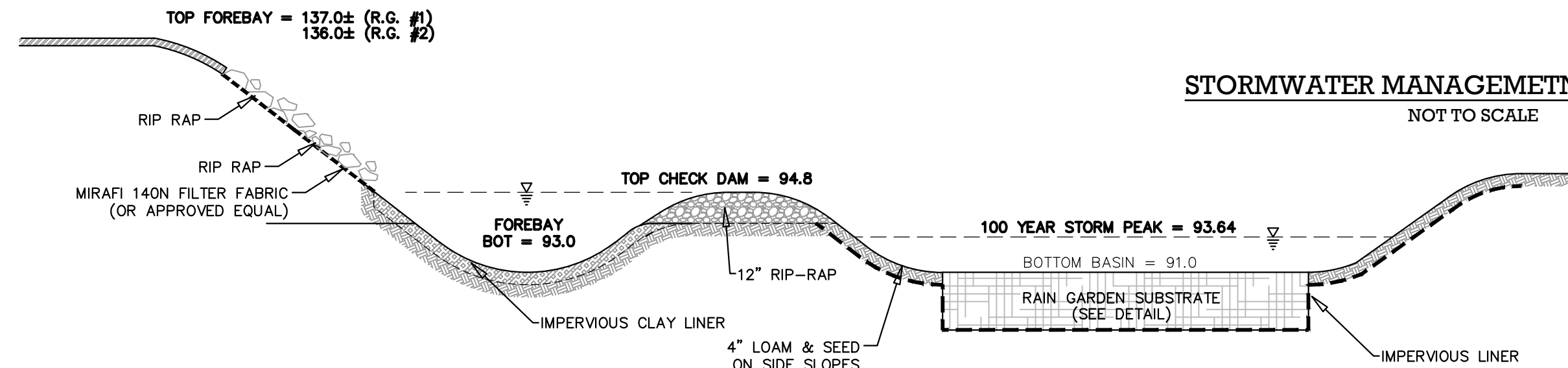
- ALL FORCE MAIN FITTINGS SHALL HAVE CONCRETE BACKING FOR THRUST RESTRAINT UNLESS OTHERWISE SPECIFIED.
- CONTRACTOR SHALL USE CARE TO AVOID PLACEMENT OF CONCRETE ON THE FITTING JOINTS.
- VOLUME AND ACTUAL PLACEMENT DETERMINED BY CHART.
- PLACE ALL CONCRETE ON UNDISTURBED SOIL OR ROCK.
- ENGINEER MAY REQUIRE THRUST RODS TO BE USED INSTEAD OF CONCRETE ANCHORS, AT NO ADDITIONAL COST DUE TO FIELD CONDITIONS.
- REINFORCING (TIE) RODS TO BE #8 BARS. COAT EXPOSED BAR WITH ASPHALT.
- RESTRAINED JOINT RETAINER GLANDS SHALL BE USED WHERE DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.

CONCRETE THRUST RESTRAINT FOR FITTINGS

NOT TO SCALE

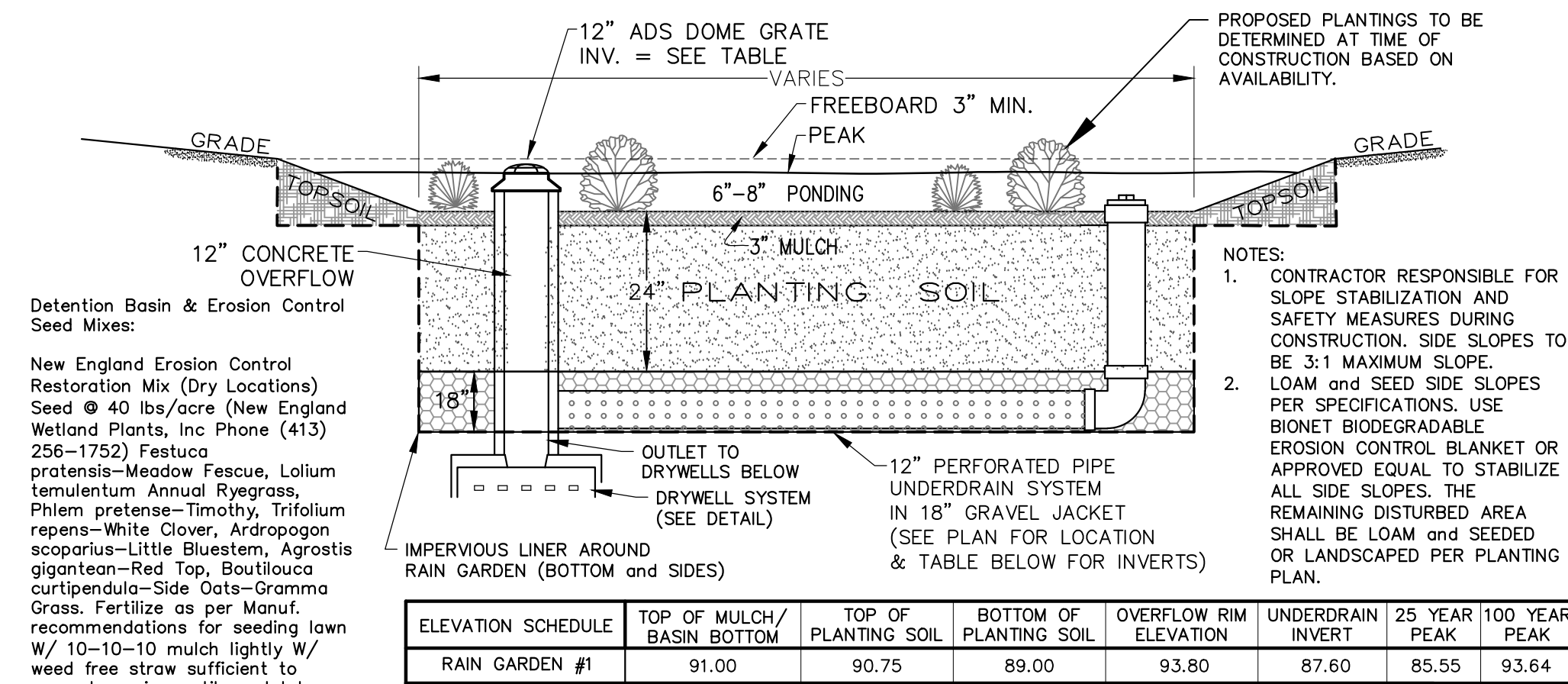


STORMWATER MANAGEMENT AREA DETAIL
NOT TO SCALE



- NOTES:
- CONTRACTOR RESPONSIBLE FOR SLOPE STABILIZATION AND SAFETY MEASURES DURING CONSTRUCTION. SIDE SLOPES TO BE 3:1 MAXIMUM SLOPE.
 - LOAM AND SEED SIDE SLOPES PER SPECIFICATIONS. USE BIONET BIODEGRADABLE EROSION CONTROL BLANKET OR APPROVED EQUAL TO STABILIZE ALL SIDE SLOPES. THE REMAINING DISTURBED AREA SHALL BE LOAM AND SEEDING OR LANDSCAPED PER PLANTING PLAN.

TYPICAL FOREBAY TO RAIN GARDEN DETAIL
NOT TO SCALE



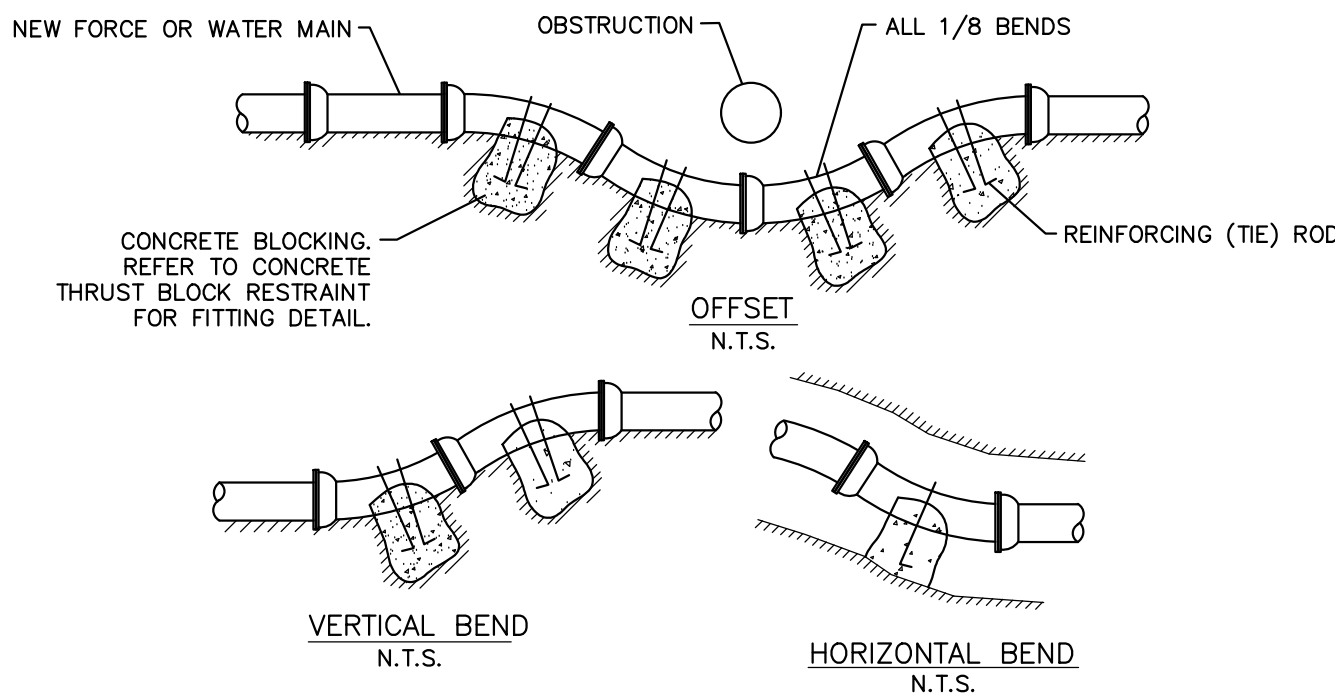
USE ENGINEERED SOIL MIX FOR BIOTENTION/RAIN GARDEN SYSTEMS

- THE SOIL MIX SHOULD BE A MIXTURE OF SAND, COMPOST AND SOIL. (40% SAND; 20-30% TOPSOIL; 30-40% COMPOST)
- THE SOIL MIX MUST BE UNIFORM, FREE OF STONES, STUMPS, ROOTS OR SIMILAR OBJECTS LARGER THAN 2 INCHES. CLAY CONTENT SHOULD NOT EXCEED 5%.
- SOIL pH SHOULD GENERALLY BE BETWEEN 5.5-6.5.
- USE SOILS WITH 1.5% TO 3% ORGANIC CONTENT AND MAXIMUM 500 ppm SOLUBLE SALTS.
- THE SAND COMPONENT SHOULD BE GRAVELLY SAND THAT MEETS ASTM D422.
- THE TOPSOIL COMPONENT SHALL BE A LOAMY SAND TEXTURE.
- THE COMPOST COMPONENT MUST BE PROCESSED FROM YARD WASTE

IN ACCORDANCE WITH MASSDEP GUIDELINES (SEE [HTTP://WWW.MASS.GOV/DEP/RECYCLE/REDUCE/LEAFGUID.DOC](http://www.mass.gov/dep/recycle/reduce/leafguid.doc)), THE COMPOST MUST NOT CONTAIN BIOSOLIDS.

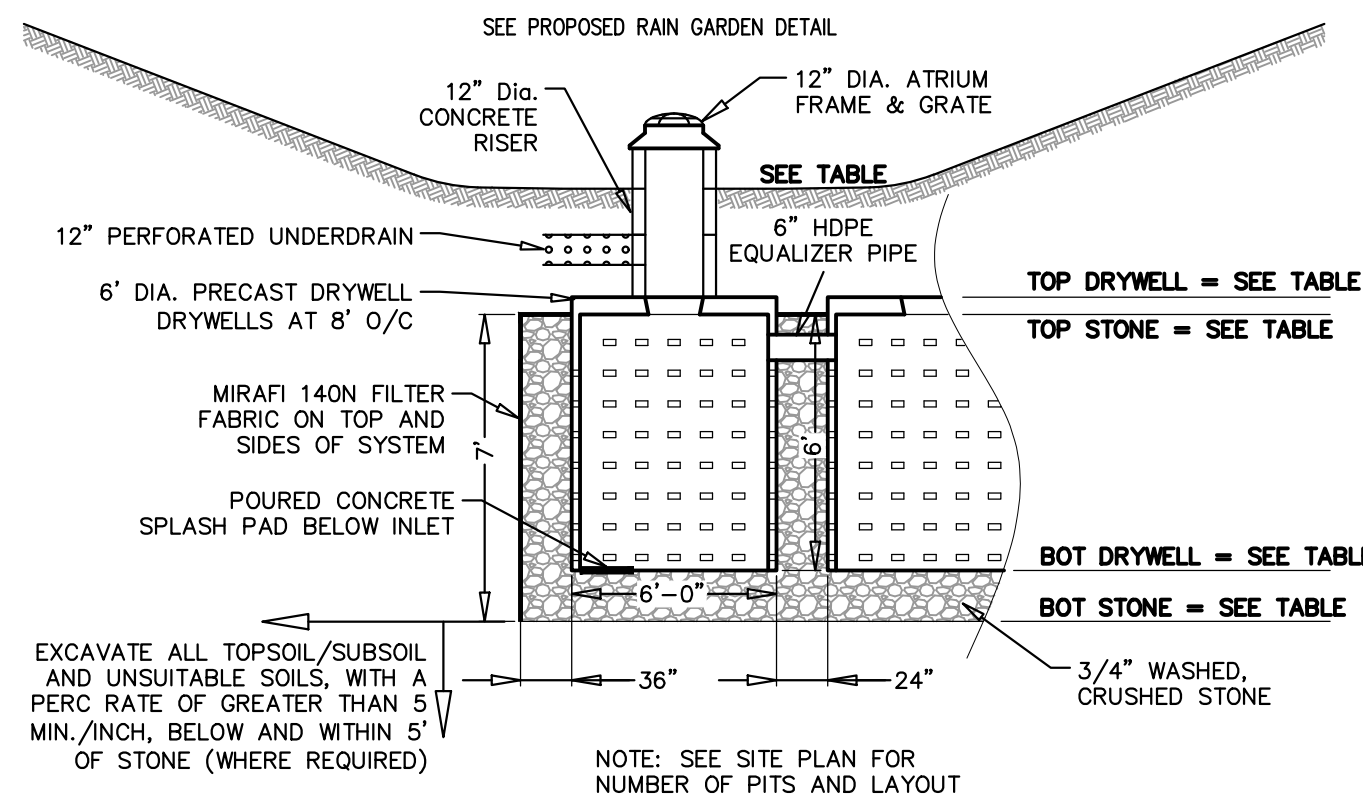
- ON-SITE SOIL MIXING OR PLACEMENT IS NOT ALLOWED IF SOIL IS SATURATED OR SUBJECT TO WATER WITHIN 48 HOURS COVER AND STORE SOIL TO PREVENT WETTING OR SATURATION.
- PLACE PLANTING SOLS IN 6" LIFTS AND COMPACT WITH MINIMAL PRESSURE UNTIL THE DESIRED ELEVATION IS REACHED.

RAIN GARDEN DETAIL
NOT TO SCALE



ANCHORAGE DETAILS

NOT TO SCALE



ELEVATION SCHEDULE	INLET RIM ELEVATION	TOP OF DRYWELL	TOP OF STONE	INVERT IN	BOTTOM OF DRYWELL	BOTTOM OF STONE
SWMA #1	93.80	87.00	86.33	87.60	81.00	79.00

STORMWATER MANAGEMENT AREA DETAIL
NOT TO SCALE



Prepared By:

BRACKEN ENGINEERING, INC.

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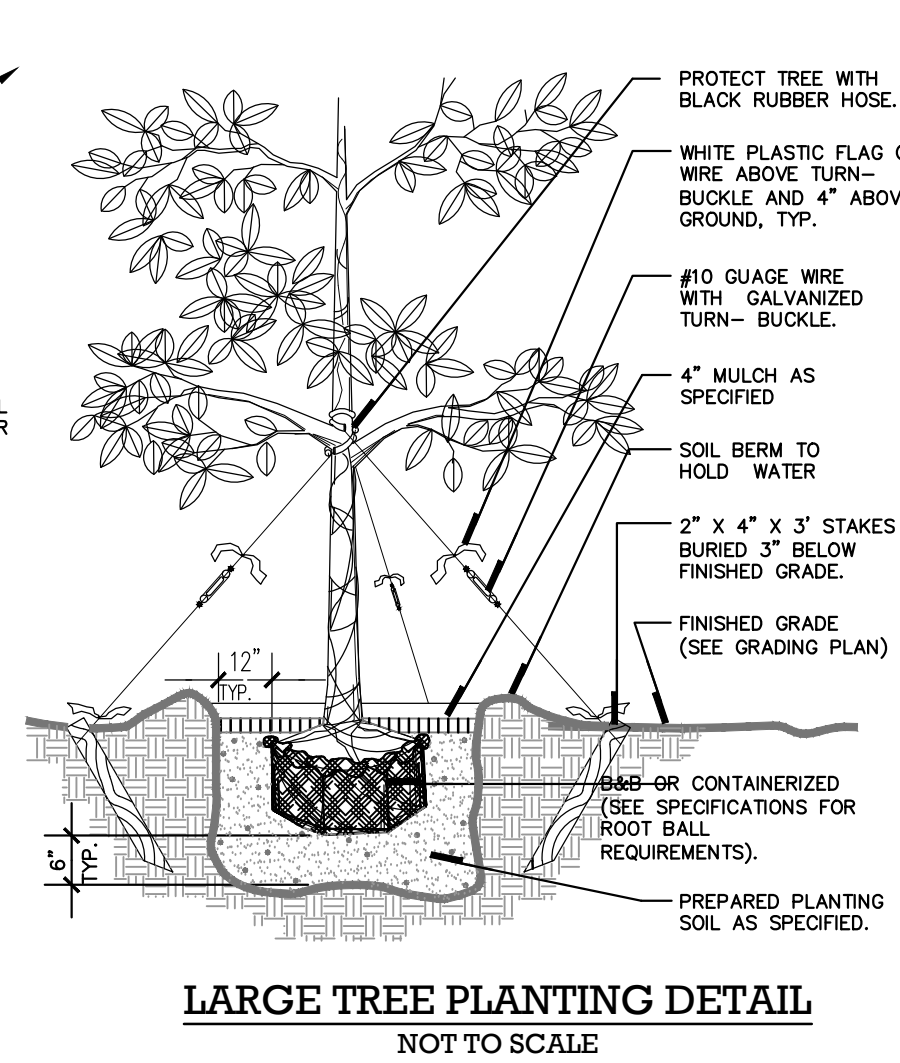
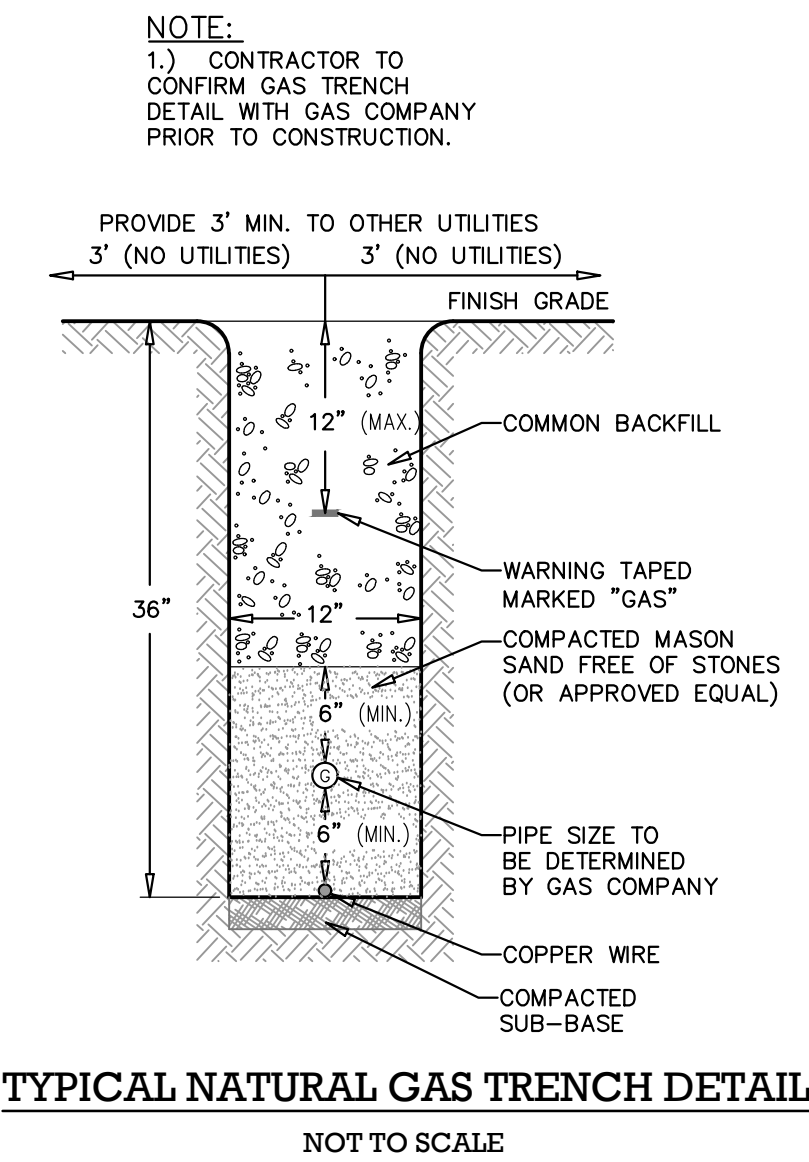
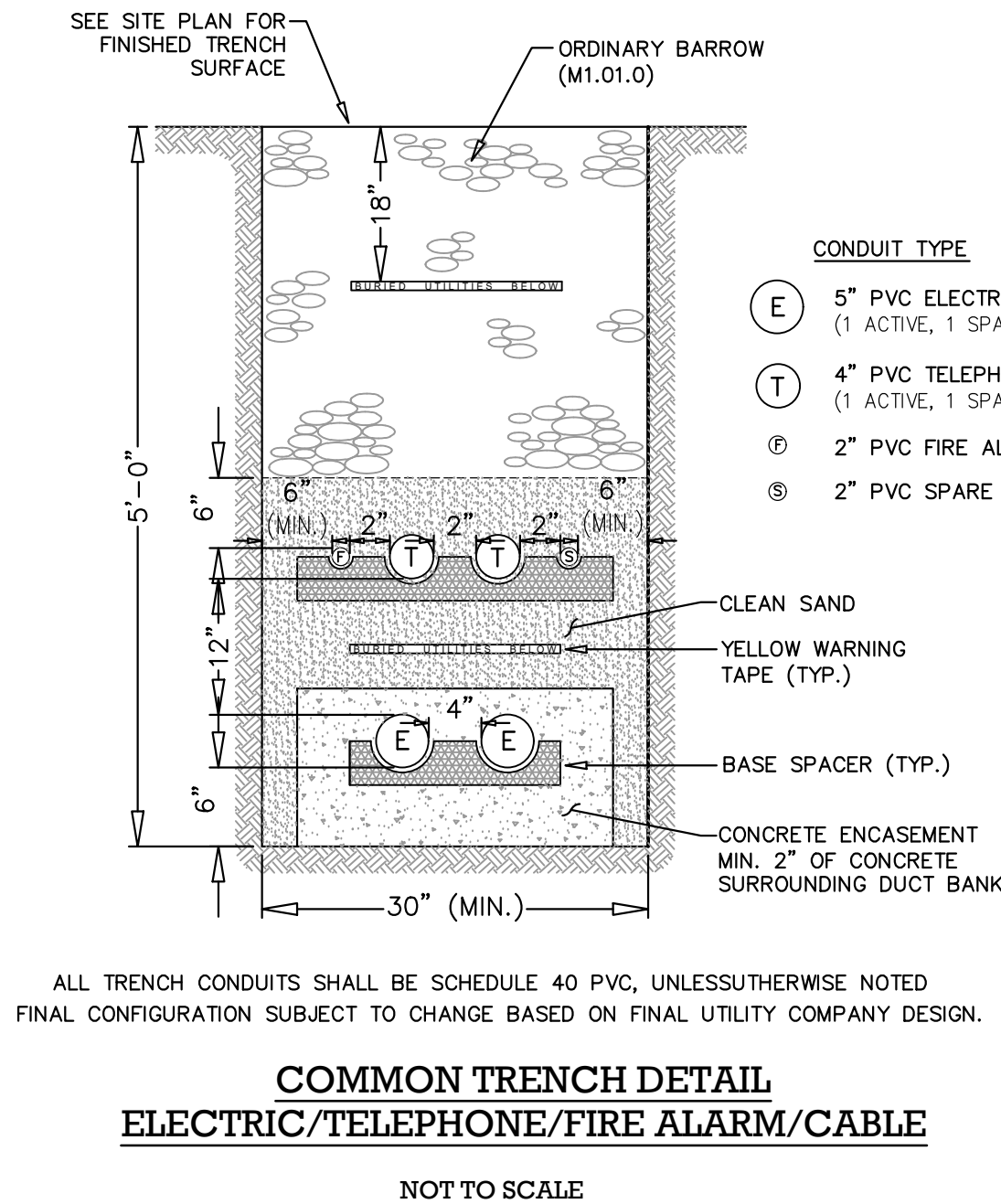
CONSTRUCTION DETAILS

Project:
PROPOSED SITE DEVELOPEMENT IN MASHPPEE, MASSACHUSETTS
Prepared For:
JOAO JUNQUEIRA
#474 MAIN STREET
PARCEL 27-001-000A
&
31 ASHUMET ROAD
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1	FEBRUARY 19, 2024			
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Date: FEBRUARY 19, 2024 Drawn: RED/BEI Checked: ZLB/AMG Sheet: 6 of 7

ISSUED FOR PERMIT

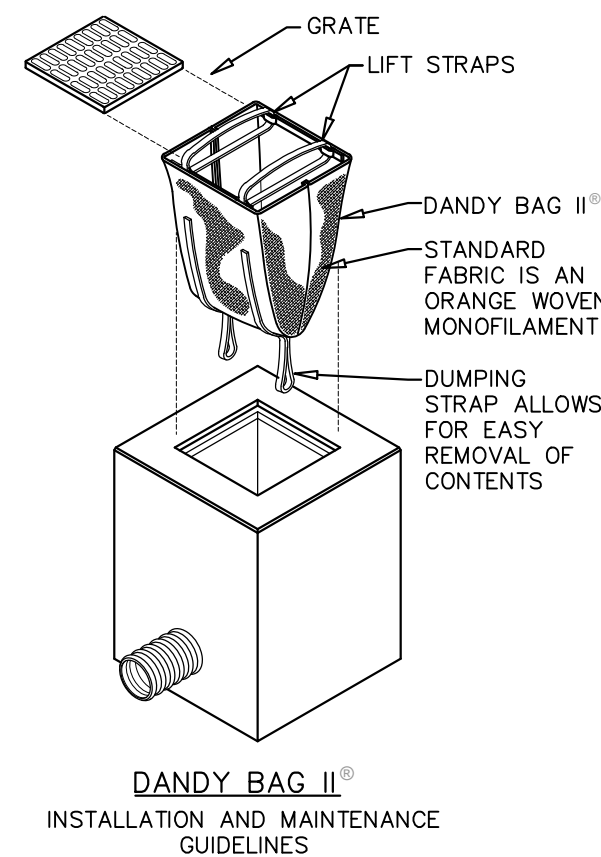


INSTALLATION:

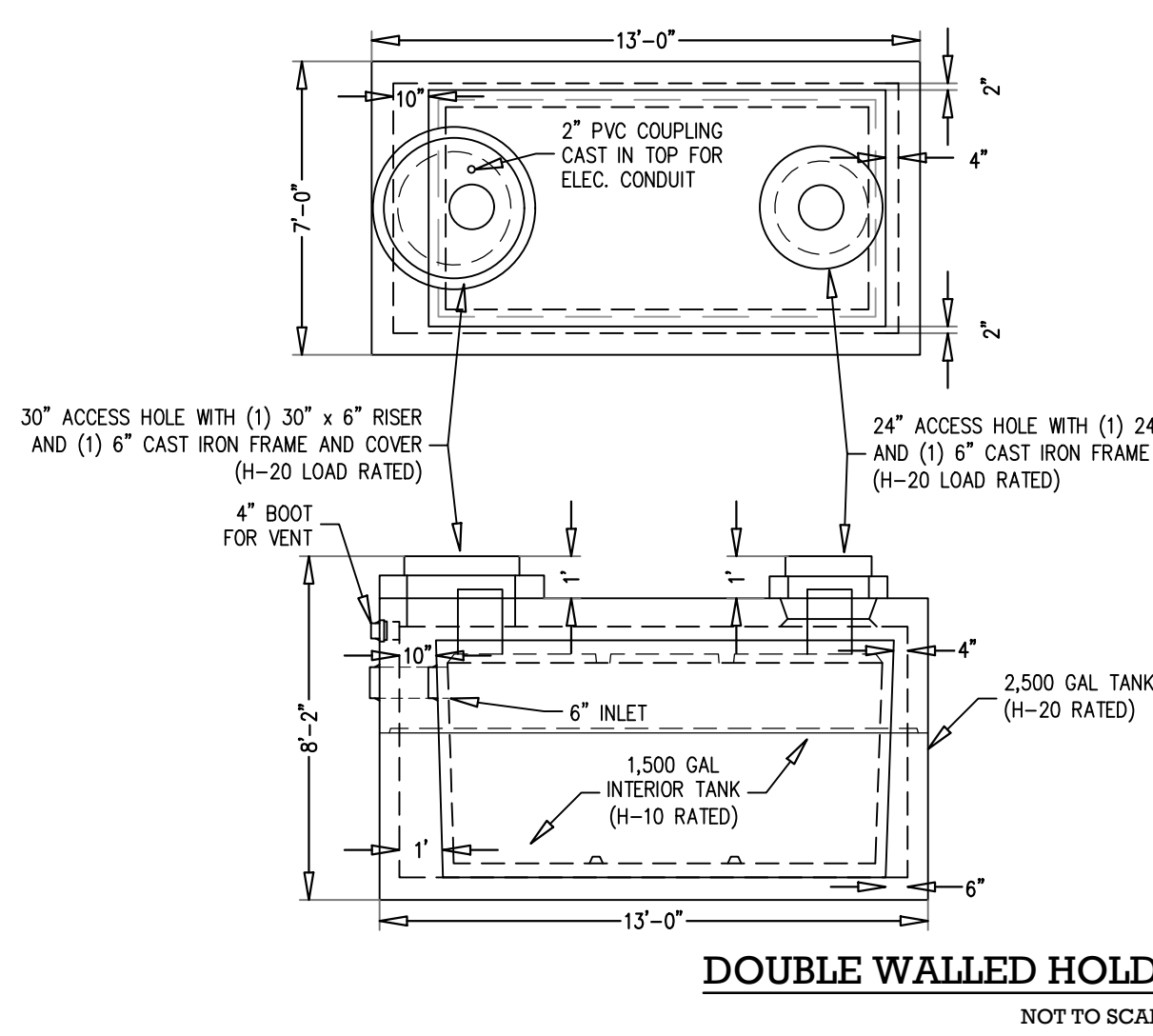
REMOVE THE GRATE FROM CATCH BASIN. IF USING OPTIONAL OIL ABSORBENTS, PLACE ABSORBENT PILLOW IN UNIT. STAND THE GRATE ON END. MOVE THE TOP LIFTING STRAPS OUT OF THE WAY AND PLACE THE GRATE INTO THE DANDY BAG II® SO THAT THE GRATE IS BELOW THE TOP STRAPS AND ABOVE THE LOWER STRAPS. HOLDING THE LIFTING DEVICES, INSERT THE GRATE INTO THE INLET.

MAINTENANCE:

REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM VICINITY OF UNIT AFTER EACH STORM EVENT. AFTER EACH STORM EVENT AND AT REGULAR INTERVALS, LOOK INTO THE DANDY BAG II®. IF THE CONTAINMENT AREA IS MORE THAN 1/4 FULL OF SEDIMENT, THE UNIT MUST BE EMPTIED. TO EMPTY UNIT, LIFT THE UNIT OUT OF THE INLET USING THE LIFTING STRAPS AND REMOVE THE GRATE. IF USING OPTIONAL OIL ABSORBENTS, REPLACE ABSORBENT WHEN NEAR SATURATION.

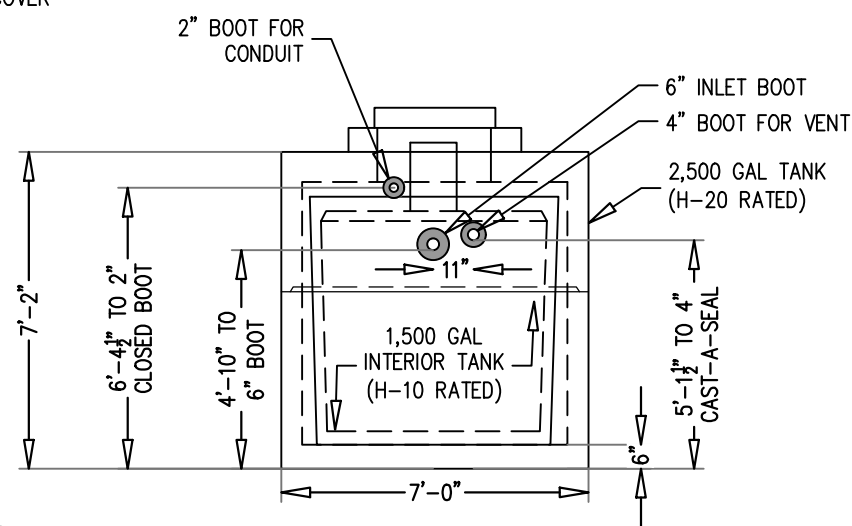


SILT SACK DETAIL
NOT TO SCALE



NOTES:

- TANK PROVIDED BY ACME-SHOREY PRECAST CO., INC. OR APPROVED EQUAL.
- OUTER TANK IS H-20 LOAD RATED 2,500 TANK.
- INNER TANK IS H-10 LOAD RATED 1,500 MONOLITHIC TANK.
- CONCRETE MINIMUM STRENGTH: 5,000 PSI @ 28-DAYS
- STEEL REINFORCEMENT: ASTM-A-615-68, GRADE 60
- DESIGN LOADING: STANDARD UNITS: AASHTO-H-20'
- TANKS SHALL BE INSTALLED LEVEL AND TRUE TO GRADE ON A LEVEL, STABLE BASE THAT HAS BEEN MECHANICALLY COMPACTED AND ONTO WHICH SIX (6) INCHES OF CRUSHED STONE HAS BEEN PLACED.
- TANK TO BE EQUIPPED WITH A FLOAT TO TRIGGER AN ALARM MOUNTED ON THE BUILDING EXTERIOR.
- ALARM PANEL SHALL BE EQUIPPED WITH BOTH AUDITORY AND VISUAL ALARM INDICATORS.



Prepared By:

BRACKEN ENGINEERING, INC.

49 HERRING POND ROAD
BUZZARDS BAY, MA 02532

(tel) 508.833.0070
(fax) 508.833.2282

19 OLD SOUTH ROAD
NANTUCKET, MA 02554

(tel) 508.325.0044
(fax) 508.833.2282

Sheet Title:

CONSTRUCTION DETAILS

Project:

**PROPOSED SITE DEVELOPEMENT
IN MASPHEE, MASSACHUSETTS**

Prepared For:

JOAO JUNQUEIRA

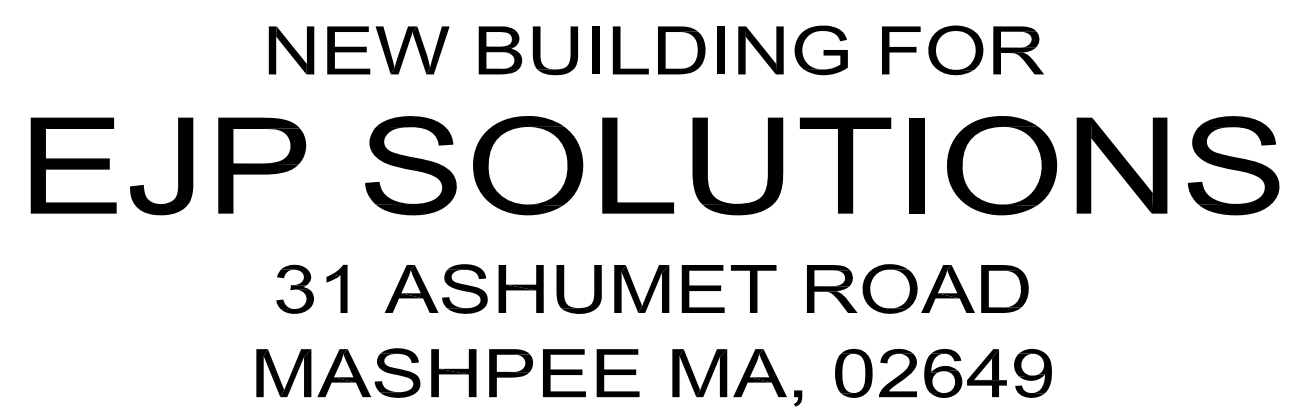
#474 MAIN STREET
PARCEL 27-001-000A

&
31 ASHUMET ROAD
PARCEL 27-001-000B

No.	Date	Revision	Description	By
1	11/13/23	REVISED	BASED ON INITIAL P.B. COMMENTS	RED
Date: FEBRUARY 19, 2024 Drawn: RED/BEI Checked: ZLB/AMG Sheet: 7 of 7				

ISSUED FOR PERMIT

TEL 508 540 7400
EMAIL info@giampietroarchitects.com



AB.	ANCHOR BOLT	DET.	DETAIL	FT	FOOT	MAT.	MATERIAL	PART.	PARTITION	T.O.F.	TOP OF FOUNDATION
AF.F	ABOVE FINISH FLOOR	DIA	DIAMETER	FTG.	FOOTING	MAX.	MAXIMUM	PL.	PLATE	T.O.W.	TOP OF WALL
AC	ACOUSTICAL TILE	DM	DIMENSION	FND.	FOUNDATION	MECH.	MECHANICAL	PLAS.	PLASTER	TREAD	
ALUM	ALUMINUM	DR	DOOR	FURB	FURNITURE	INSUL	INSULATION	PLASTO	PLASTIC LAMINATE	TYP.	TYPICAL
ANOD	ANODIZED	DH	DOUBLEHUNG	G	GAS	INT.	INTERIOR	PLBG.	PLUMBING	UNFN.	UNFINISHED
AS	ASBESTOS	DWR	DRAWER	GALV.	GALVANIZED	JT	JOINT	PLYWD	PLYWOOD	VERIF	VERIFY IN FIELD
BMT	BENT	DWG(S)	DRAWING(S)	GC	GENERAL CONTRACTOR	JAM	JAM LAMINATE	RESUSU	RESURFACED	VIN	VINYL
BRT	BUTIRAMINOUS	DR	DRINKING FOUNTAIN	GL	GLASS/GLAZING	LAV.	LAVATORY	Q.T.	QUARRY TILE	VCT	VINYL COMPOSITION TILE
BLK	BLACK	DW	DISHWASHER	GR	GRADING	L	LENGTH	RQKD	REQUIRED	VWC	VINYL WALL COVERING
BLKG	BLK/G	ELEC.	ELECTRICAL	CYP.BD.	CYSPRINT BOARD	MANUF	MANUFACTURER	REF	REFRIGERATOR	W.C	WATER CLOSET
BOTT	BOTTOM	EL	ELEVATION	HDBD	HARDBOARD	M.O.	MASONRY OPENING	REV.	REVISIONS	W	WIDE/WIDTH
B.O.W.	BOTTOM OF WALL	ELEV.	ELEVATOR	HDWD	HARDWOOD	MAT.	MATERIAL	R	RISER	W	WITH
BM	BENCH MARK	EMER	EMERGENCY	HVAC	HEATING/VENTILATING & AIR CONDITIONING	MAX.	MAXIMUM	R.D.	ROOF DRAIN	W/ST	WITH STAIRS
BLDG	BUILDING	EQ	EQUAL			MECH.	MECHANICAL	RM	ROOM	WIND	WINDOW
CP	CARPET	EXIST.	EXISTING	HDWR	HARDWARE	MIN.	MINIMUM	R.O.	ROUGH OPENING	W.W.M.	WEILED WIRE MESH
CST	CASEMENT	OR EXG.		HGT	HEIGHT	MTD.	MOUNTED	SCT.	SECTION	WOOD	WOOD
CMT	CORNER	EL	ELEVATION	H.M.	HOLLOW METAL	N.	NUMBER	SCHED.	SCHEDULE		
CLG	CEILING	EXP	EXPOSED	INSUL	INSULATION	NOM.	NOMINAL	SPEC.	SPECIFICATIONS		
CLOS	CLOSET	EXT.	EXTERIOR	INT.	INTERIOR	N.I.G.	NOT IN CONTRACT	STD.	STANDARD		
COL	COLOR	FIN	FINISHED	NOT TO	NOT TO SCALE	N.T.S.	NOT TO SCALE	SHP	SHEP/POLZ		
CONC.	CONCRETE	FA	FIRE ALARM	LAM.	LAMINATE	O.C.	ON CENTER	STEP	STEEL		
CMU	CONCRETE MASONRY UNIT	F.B.O.	FIRE EXTINGUISHER BY OWNER	LAV.	LAVATORY	OH	OVERHEAD	SUSP.	SUSPENDED		
CONST.	CONSTRUCTION	FE	FIRE EXTINGUISHER	L	LENGTH	OPNG.	OPENING	THK	THICK		
CONSTR.	CONSTRUCTION	FL	FLOORING	PL	PLASTER	PA	PAINTED	TPAB	TOPASBESTOS		
CJ	CONTROL/CONSTR. JOINT	FLUR	FLOURESCENT	M.O.	MASONRY OPENING	PNL	PANEL	T&G	TONGUE&GROOVE		

new and approval, shop drawings

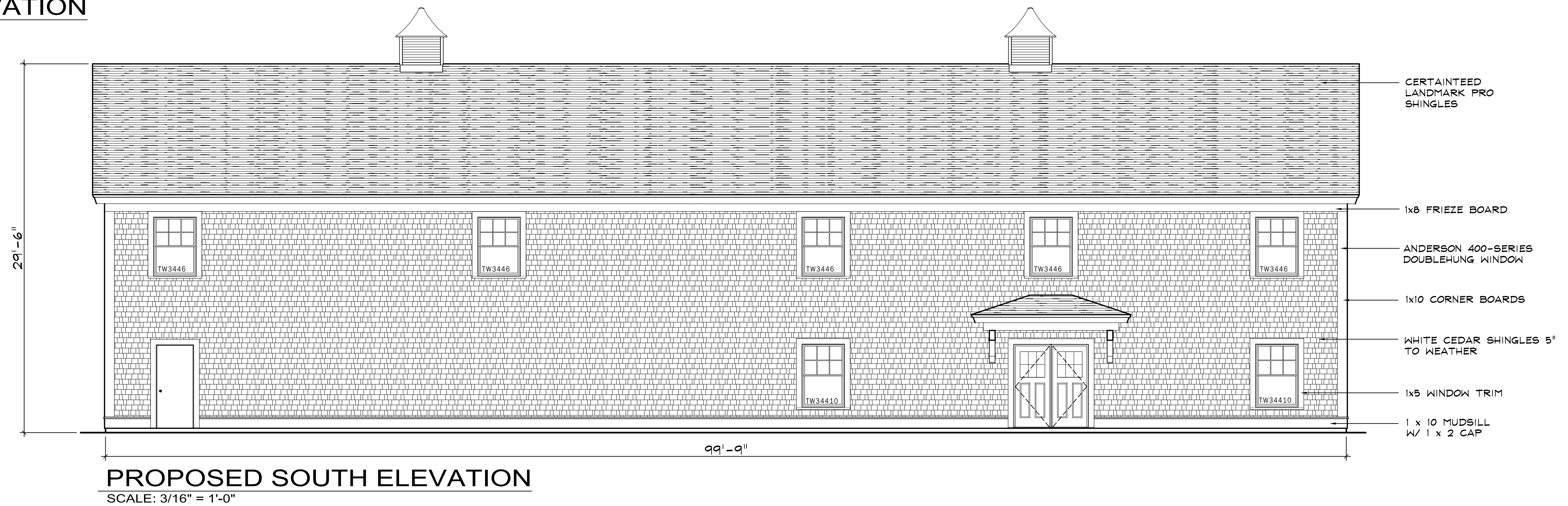
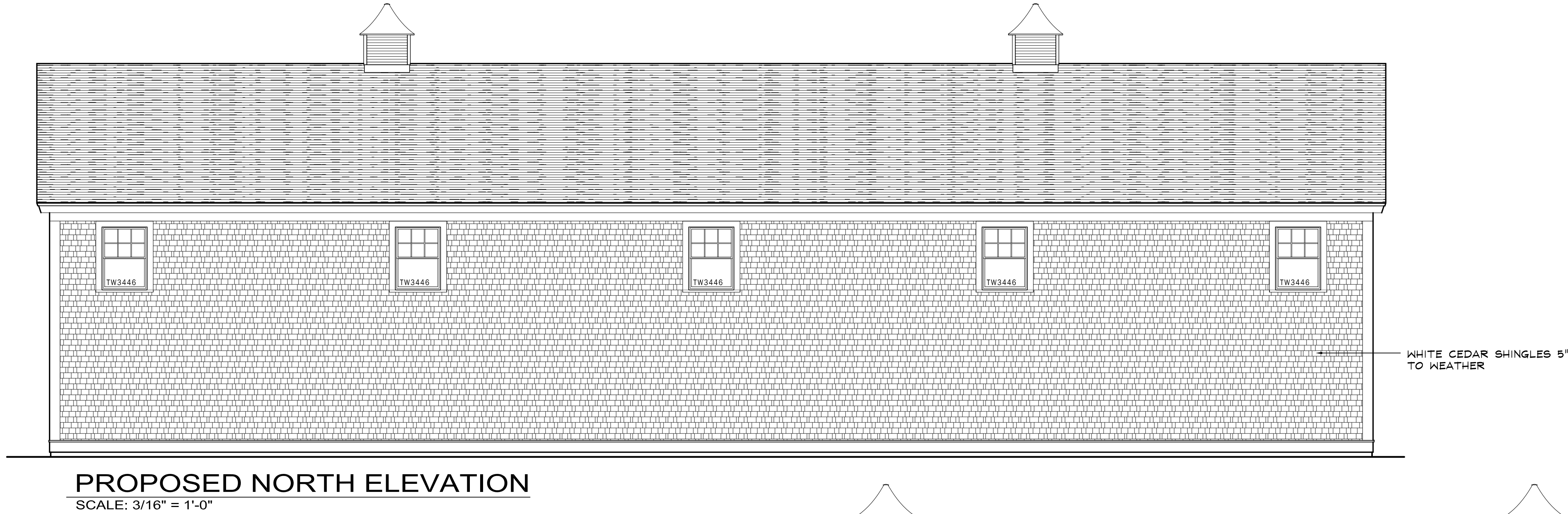
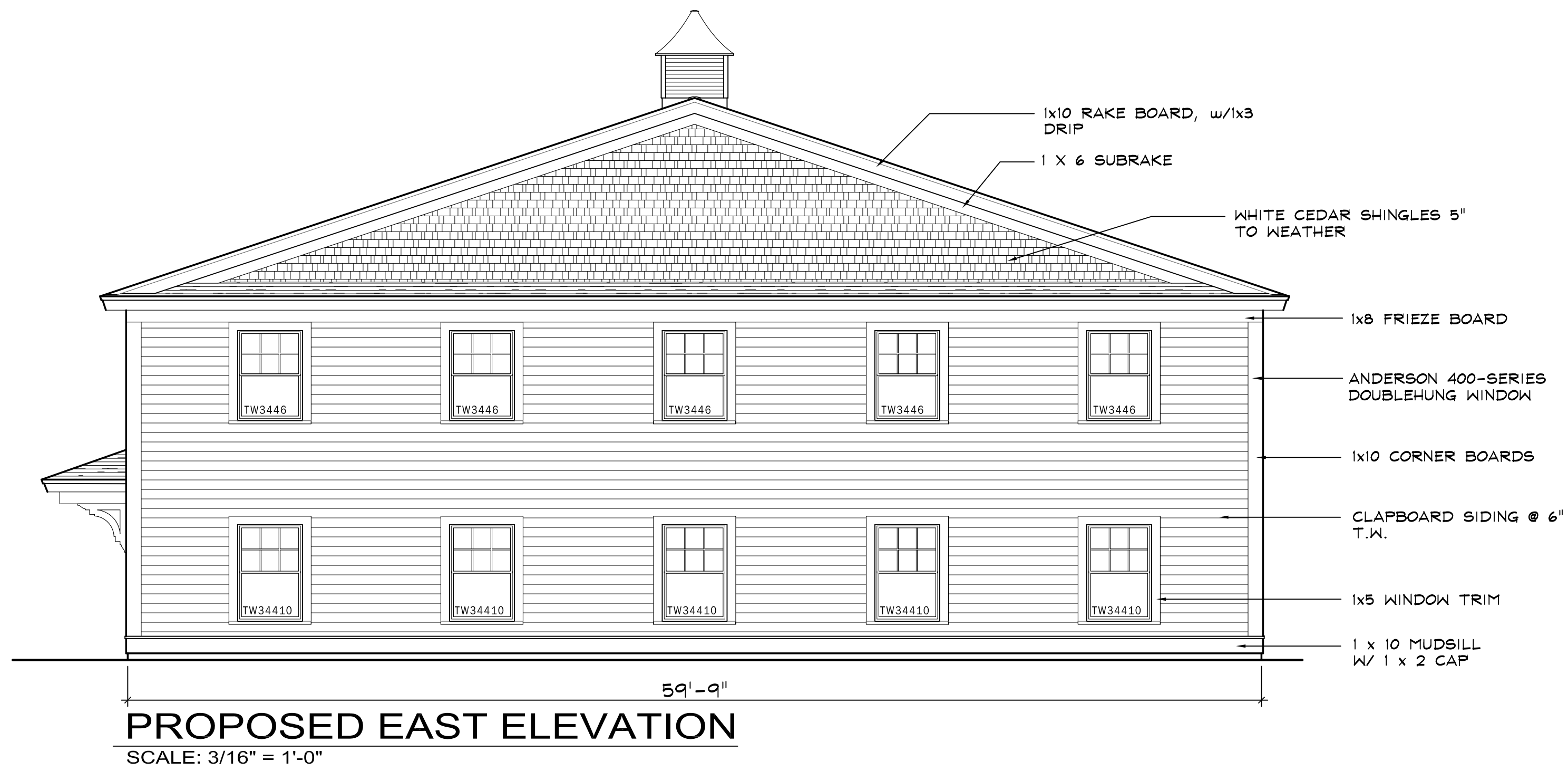
16. The General Contractor shall submit to the Architect for review and approval, shop drawings for all manufactured structural elements (i.e.: steel beams & columns, LVL beams, truss joists, wood roof trusses, steel joists, etc.) in accordance with 780 CMR Section 116.2.2 entitled "Architect/Engineer responsibilities during construction".
17. The General Contractor shall notify the Architect / Engineer of required inspections at least two (2) days in advance.
18. All warranties, guarantees and service maintenance agreements shall commence with the issuance of the occupancy permit so that the Owner may receive full use of the item for the guarantee or warranty period
19. GENERAL WORK TO BE PERFORMED AS PART OF THE GENERAL CONSTRUCTION:
 - A. Seal cracks and openings to make the exterior skin of the building tight to water and air entry.
 - B. Provide adequate blocking, bracing, nailers, fastenings and other supports to install parts of the work securely. Blocking, bracing, nailers, fastenings and other supports shall be of a type not subject to deterioration or weakening as the result of environmental conditions or aging.
 - C. Perform cutting and patching for all trades. Patch holes where ducts, conduit, pipes and other products pass through or are being removed from existing construction.
 - D. Provide chases, furred spaces, trenches, covers, pits, foundations and other construction required in conjunction with the Work. If such construction is not shown on the Drawings, coordinate with Architect for sizes and placement.
 - E. Provide and coordinate access doors and panels as required for access to equipment requiring adjustment, inspection, maintenance or other access and as required for access to spaces not otherwise accessible, such as attics and crawl spaces.
 - F. Check Drawings and manufacturers' literature for requirements for bases, pads, and other supporting structures. Provide such structures. Remove supporting structures associated with removed equipment and patch remaining surfaces.
 - G. As part of one year warranty specified in the General Conditions, repair cracks and other damage which occur as a result of settlement and shrinkage during the first year after Substantial Completion.
20. All work shall conform to the applicable sections of the Ninth Edition of the Massachusetts State Building Code (Basic/Commercial)

T1	TITLE SHEET (THIS SHEET)
A1	ELEVATIONS
A2	BUILDING FLOOR PLAN 521 CMR MAAB COMPLIANT LAV PLAN
A3	LOFT FRAMING PLAN OFFICE FOUNDATION PLAN & DETAILS

Giampietro Architects
354 Gifford Street
Falmouth, MA 02540
Tel: 508-540-7400
Fax: 508-540-0220

CONSTRUCTION DOCS

DO NOT SCALE FROM DRAWINGS



CONSULTANT



SIGNATURE

NEW BUILDING FOR:
EJP SOLUTIONS
31 ASHMET RD
MASHPEE, MA 02649



DRAWING TITLE:
ELEVATIONS

DRAWN BY: *RP6*

CHECKED BY: *RP6*

DATE: *01/29/2024*

REVISIONS:

PROJECT No. **2345**

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SHEET No.

A1

ARCHITECT:

GIAMPIETRO ARCHITECTS

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Falmouth, MA 02540

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EMAIL info@giampietroarchitects.com

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ABBREVIATIONS

AB.	ANCHOR BOLT	DET.	DETAIL	FT	FOOT	MAT.	MATERIAL	PART.	PARTITION	T.O.F.	TOP OF FOUNDATION
AF.F.	ABOVE FINISH FLOOR	DIA	DIAMETER	FTG.	FOOTING	MAX.	MAXIMUM	PL.	PLATE	T.O.W.	TOP OF WALL
ACT	ACOUSTICAL TILE	DIM.	DIMENSION	FND.	FOUNDATION	MECH.	MECHANICAL	PLAS.	PLASTER	T	TREAD
ALUM	ALUMINUM	DR	DOOR	FURR	FURRED(ING)	INSUL	INSULATION	P.LAM.	PLASTIC LAMINATE	TYP.	TYPICAL
ANOD	ANODIZED	DE	DOUBLEHUNG	G	GAS	INT.	INTERIOR	PLBG.	PLYBUNG	UNFIN.	UNFINISHED
@	AT	DRWR	DRAWER	JOINT	JOINT	PLYWD	PLYWOOD	V.I.F.	VERIFY IN FIELD	VIN	VINYL
BMT	BASEMENT	DWG(S)	DRAWING(S)	JT	LAMINATE	P.T.	PRESSURE TREATED	Q.T.	QUARRY TILE	VCT	VINYL COMPOSITION TILE
BPT	BUTYMBOUS	GL	GLASS/GLAZING	LAV	LAVATORY	REQ'D	REQUIRED	WVC	VINYL WALL COVERING	WC	WATER CLOSET
BLK	BLOCK	GR	GRADING	L	LENGTH	REF.	REFRIGERATOR	W	WIDE/WIDTH	W	WITH
BLKG	BLOCKING	HDWD	HARDWOOD	MFR	MANUFACTURER	REV.	REVISIONS	R	RISER	W/O	WITHOUT
BOTT	BOTTOM	GYP.BD.	GYPSEUM BOARD	M.O.	MASONRY OPENING	R.D.	ROOF DRAIN	R.O.	ROUGH OPENING	W.D.W.	WINDOW
B.O.W.	BOTTOM OF WALL	HDBD	HARDBOARD	MAT.	MATERIAL	SCHD.	SCHEDULE	S.ECT.	SECTION	W.D.M.	WELDED WIRE MESH
BM	BEAM	HVAC	HEATING,VENTILATING, & AIR CONDITIONING	MAX.	MAXIMUM	SECT.	SECTION	SCHD.	SCHEDULE	WD	WOOD
BLDG	BUILDING	EL	ELEVATION	MIN.	MINIMUM	SCHD.	SCHEDULE	SCHD.	SCHEDULE		
CPT	CARPET	HDWR	HARDWARE	MTD.	MOUNTED	SPEC.	SPECIFICATIONS	STD.	STANDARD		
CSMT	CAREMENT	HTGT	HEIGHT	NO.	NUMBER	S&P	SHELF&POLE	STL	STEEL		
CK	CAULK(ING)	H.M.	HOLLOW METAL	NOM.	NOMINAL	SUSP.	SUSPENDED	THK	THICK		
CLG	CEILING	INSUL	INSULATION	N.T.S.	NOT TO SCALE	T&B	TOP&BOTTOM	T&G	TONGUE&GROOVE		
CLOS	CLOSET	INT.	INTERIOR	OH	OVERHEAD						
COL	COLUMN	JOINT	JOINT	OPNG.	OPENING						
CONC	CONCRETE	LAM.	LAMINATE	PD.	PAINTED						
CMU	CONCRETE MASONRY UNIT	LAV.	LAVATORY	PNL.	PANEL						
CONST.	CONSTRUCTION	F.B.O.	FURNISHED BY OWNER								
CONT.	CONTINUOUS	FE	FIRE EXTINGUISHER								
CJ	CONTROL/CONSTR. JOINT	FL	FLOOR(ING)								
		FLUOR	FLUORESCENT								

GENERAL NOTES

- The General Conditions state that the Contract Documents are complimentary.
- Provide the services of a Massachusetts Registered Surveyor to layout structure on site and establish existing elevations. Elevation of finished floor shall be established by Architect with elevation information provided by Surveyor.
- The General Contractor is responsible for all the work.
 - Build and install parts of the Work level, plumb, square and in correct position.
 - Make joints tight and neat. If such is impossible, apply moldings, sealant or other joint treatment as directed by Architect.
 - Under potentially damp conditions, provide galvanic insulation between different metals which are not adjacent on the galvanic scale.
 - Apply protective finish to parts of the Work before concealing them. For example, paint door tops, bottoms, glazing stops, glazing rabbets, and hardware cutouts before hanging doors, and paint corrodible mounting plates before installing parts over them.
- Where accessories are required in order to install parts of the Work in usable form and to make the Work perform properly, provide such accessories. If special tools are required to maintain, adjust and repair products, provide them.
- Follow manufacturer's instructions for assembling, installing and adjusting products. Do not install products in a manner contrary to the manufacturer's instructions unless authorized in writing by the Architect.
- Adjust and operate all items of equipment, leaving them fully ready for use.
- The division of the Documents into Architectural, Structural, Electrical, Mechanical, Plumbing and Civil components is not intended as division of the Work by trade or otherwise.
- Provide utility installations from lot line to house including underground electrical, water, telephone and CATV to comply with all local codes and requirements.
- Concrete shall have compressive strength of 3000 psi @ 28 days for walls and 4000 psi @ 28 days for slab work, and reinforcing rods & woven wire fabric (WWF) per drawings. Where noted, provide hard steel trowel finish on slabs. Dampproofing shall be factory manufactured semi-mastic consistency from asphalts and mineral fibers, and installed on all walls and footings. Piers for decks shall be concrete filled Sonotube forms.
- The General Contractor shall verify all dimensions at the site and shall notify the Architect of any discrepancies before proceeding with the Work or purchasing materials or equipment. Verify critical dimensions in the field before fabricating items which must fit adjoining construction.
- All details are typical unless otherwise noted and are not necessarily shown in the Documents at all locations where they occur.
- The Architectural Documents govern the location of all Electrical and Mechanical items installed as a part of the Work.
- Existing items which are not to be removed and are damaged or removed in the course of the Work shall be repaired and replaced in like new condition without cost.
- Existing surfaces disturbed during the course of the Work shall be reconstructed and finished to match adjoining surfaces. Patched areas shall be finished in such a manner as to provide visual and structural continuity across the entire affected surface.
- All voids created or surfaces disturbed resulting from cutting, removal or installation of elements as part of the Work shall be filled and finished to match adjoining construction.
- Except as provided in the Documents, no structural member or element shall be cut without written approval of the Architect. The General Contractor shall coordinate all cutting and shall advise the Architect of any potential conflicts with new or existing structure.
- Demolition work shall only be carried out once all temporary shoring and bracing is in place. Removal of all temporary supports shall be completed only after new work is secure and complete.
- All materials, equipment and workmanship shall conform to the requirements of authorities having jurisdiction of the Work.
- All materials and equipment shall comply with the Occupational Safety and Health Act, including all amendments.
- All materials and equipment shall conform to the requirements of authorities having jurisdiction regarding not using or installing asbestos or asbestos-containing materials.
- All paint used on all products and assemblies shall conform to A.N.S.I. Z86.1, Specifications for Paints and Coatings Accessible to Children to Minimize Dry Film Toxicity.

- The General Contractor shall submit to the Architect for review and approval, shop drawings for all manufactured structural elements (i.e.: steel beams & columns, LVL beams, truss joists, wood roof trusses, steel joists, etc.) in accordance with 780 CMR Section 116.2.2 entitled "Architect/Engineer responsibilities during construction".
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SCHEDULE OF DRAWINGS

- | | |
|-----------|--|
| T1 | TITLE SHEET (THIS SHEET) |
| A1 | ELEVATION |
| A1 | BUILDING FLOOR PLAN
521 CMR MAAB COMPLIANT LAV PLAN |
| A2 | LOFT FRAMING PLAN
OFFICE FOUNDATION PLAN
& DETAILS |

NEW BUILDING FOR
EJP SOLUTIONS
31 ASHUMET ROAD
MASHPEE MA, 02649

SYMBOLS

NORTH ARROW

SECTION INDICATOR - LETTER
IN TOP HALF OF CIRCLE INDICATES THE SPECIFIC SECTION. THE NUMBER AND LETTER IN THE BOTTOM HALF INDICATES THE DWG. ON WHICH THE SECTION APPEARS

NEW SPOT ELEVATION

EXISTING SPOT ELEVATION

NEW CONTOURS

EXISTING CONTOUR

ELEVATION MARK

COLUMN COORDINATES & REFERENCE GRID LINES

ROOM NUMBER

DOOR NUMBER

WINDOW TYPE

WALL TYPE

INTERIOR ELEVATION
NUMBERS INDICATE ELEVATION NUMBER & LETTER INDICATES THE DRAWING WHERE THE ELEVATIONS ARE LOCATED

CONCRETE - PLAN OR SECTION

BRICK - PLANS OR SECTIONS

CONCRETE BLOCK PLANS OR SECTIONS

PLYWOOD, LARGE SCALE

STEEL, LARGE SCALE

ROUGH LUMBER

FINISH LUMBER

INSULATION - RIGID

INSULATION - BATT

EARTH

COMPACT STONE

WELDED WIRE MESH

PROPERTY LINE

CENTER LINE

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MASSACHUSETTS
COMPLIANCE
(WFCM)

DO NOT SCALE FROM DRAWINGS

DRAWING TITLE:

TITLE SHEET

DRAWN BY: JFM

CHECKED BY: RPB

DATE: 01/29/2023

REVISIONS:

PROJECT No. 2345

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SHEET No.

T1

CONSTRUCTION DOCS.

CONSULTANT

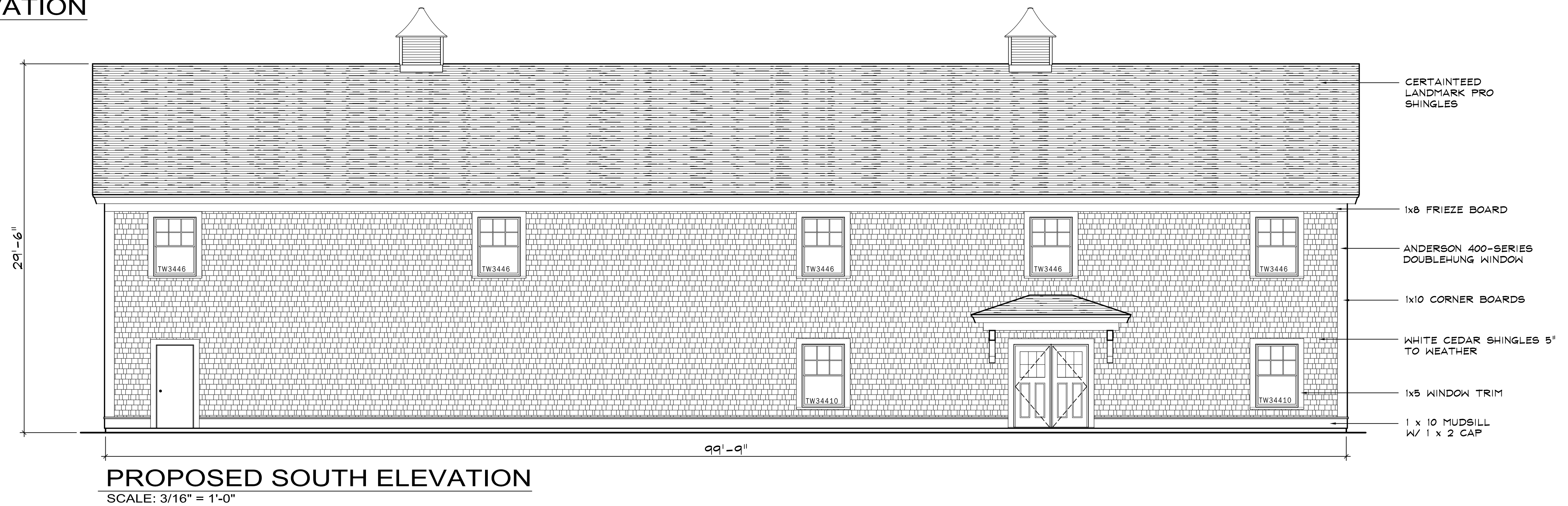
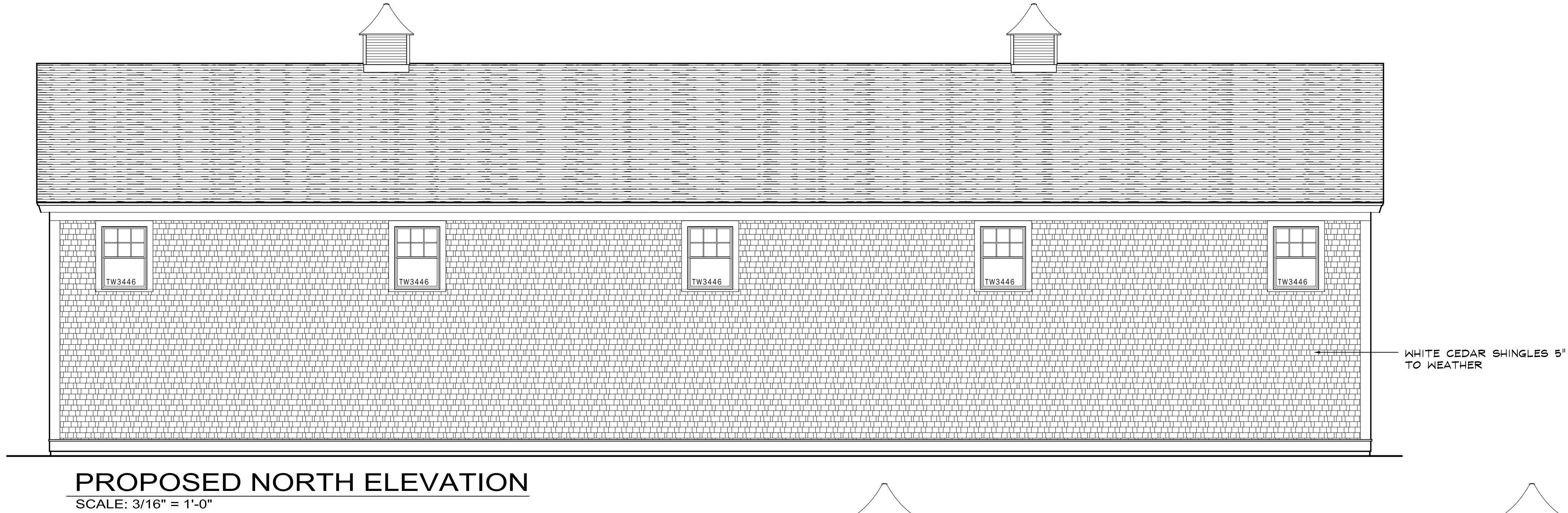
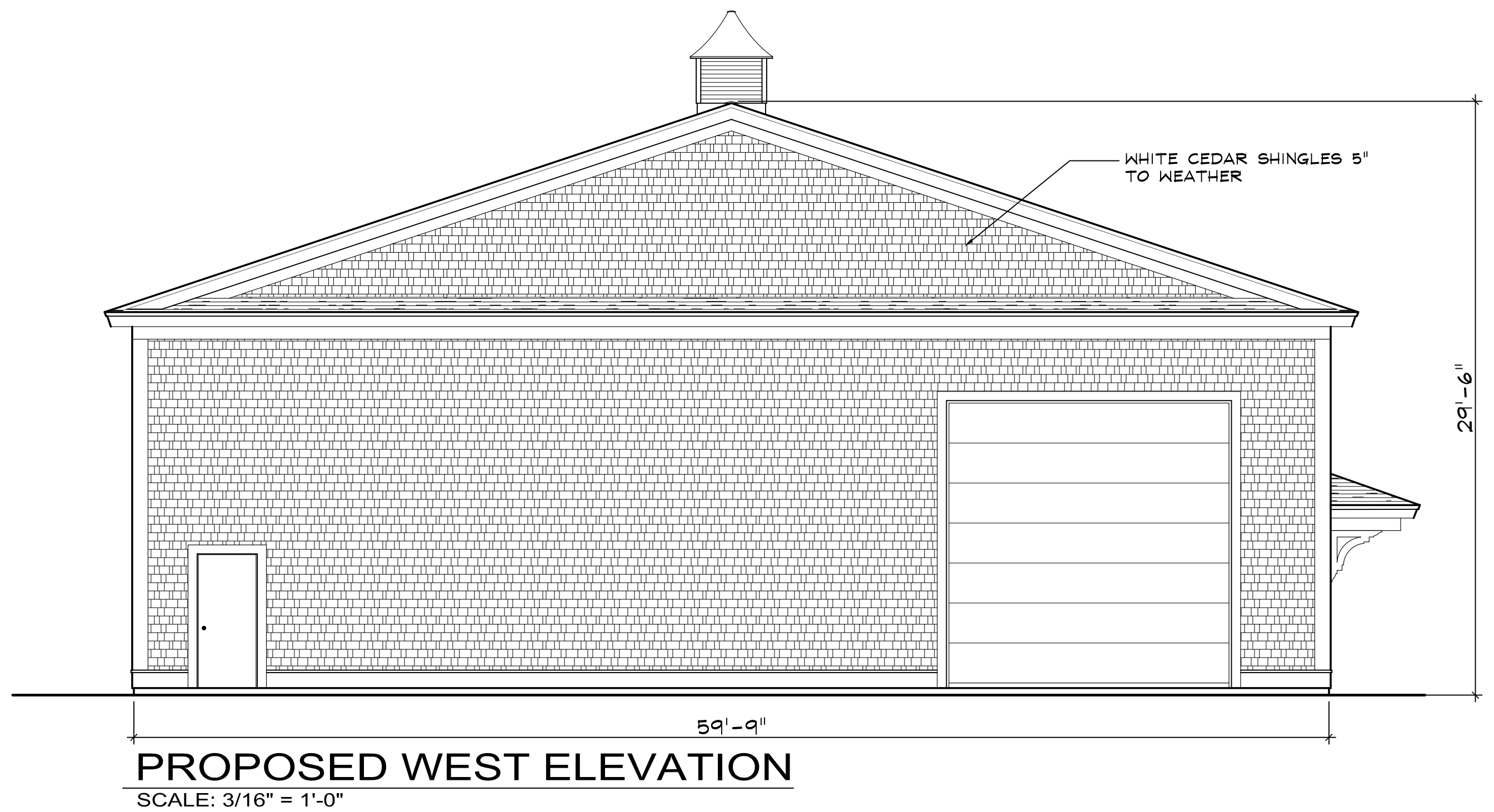
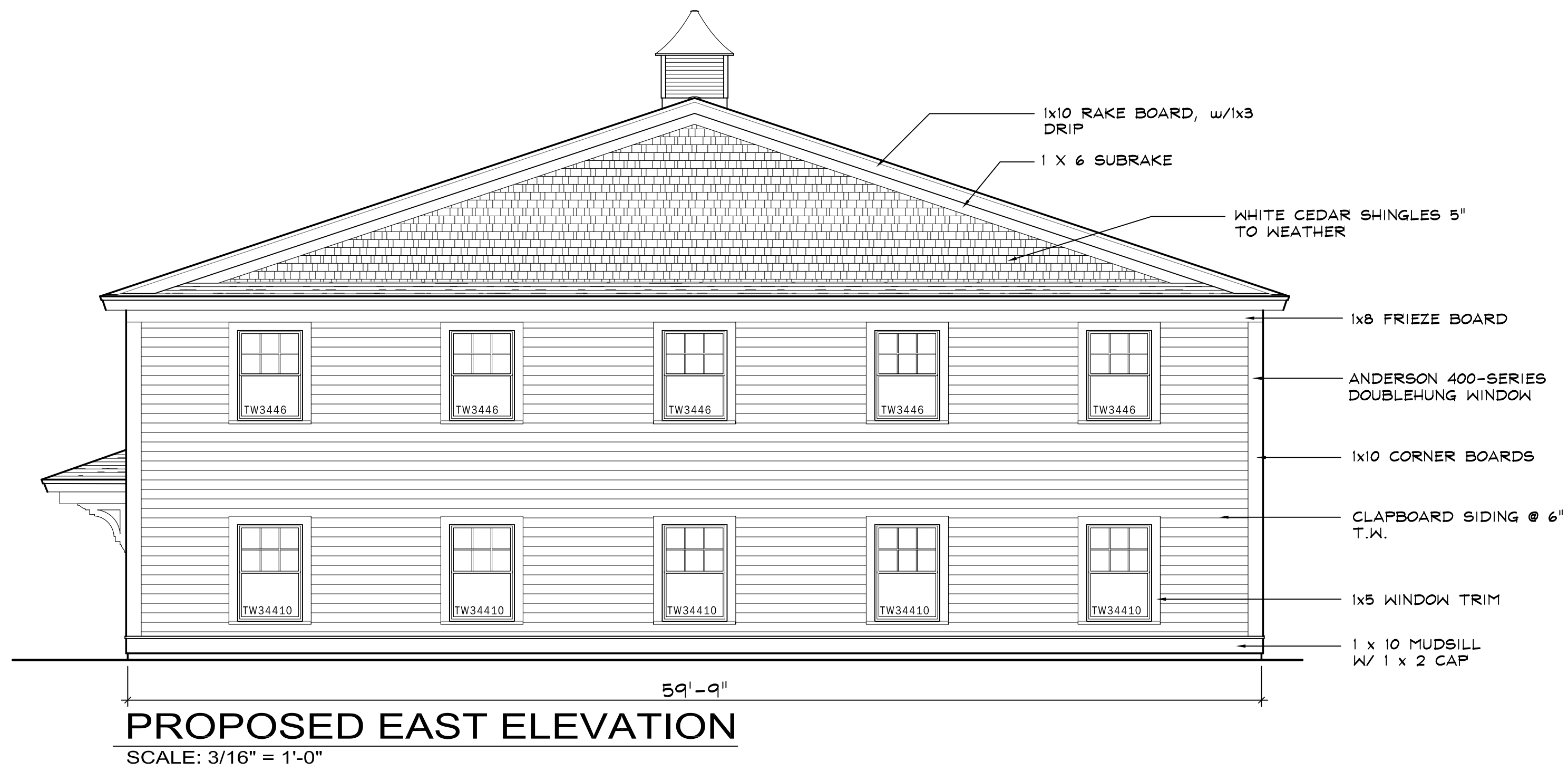
ARCHITECT

SIGNATURE

SIGNATURE

NEW BUILDING FOR:
EJP SOLUTIONS
31 ASHUMET ROAD
MASHPEE, MA 02649

Giampietro Architects
354 Gifford Street
Falmouth, MA 02540
Tel: 508-540-7400
Fax: 508-540-0220



CONSULTANT

SIGNATURE

ARCHITECT

SIGNATURE

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MASHPEE, MA 02649

Giampietro Architects
354 Gifford Street
Falmouth, MA 02540
Tel: 508-540-7400
Fax: 508-540-0220

DRAWING TITLE:
ELEVATIONS

DRAWN BY: **RP6**

CHECKED BY: **RP6**

DATE: **01/29/2024**

REVISIONS:

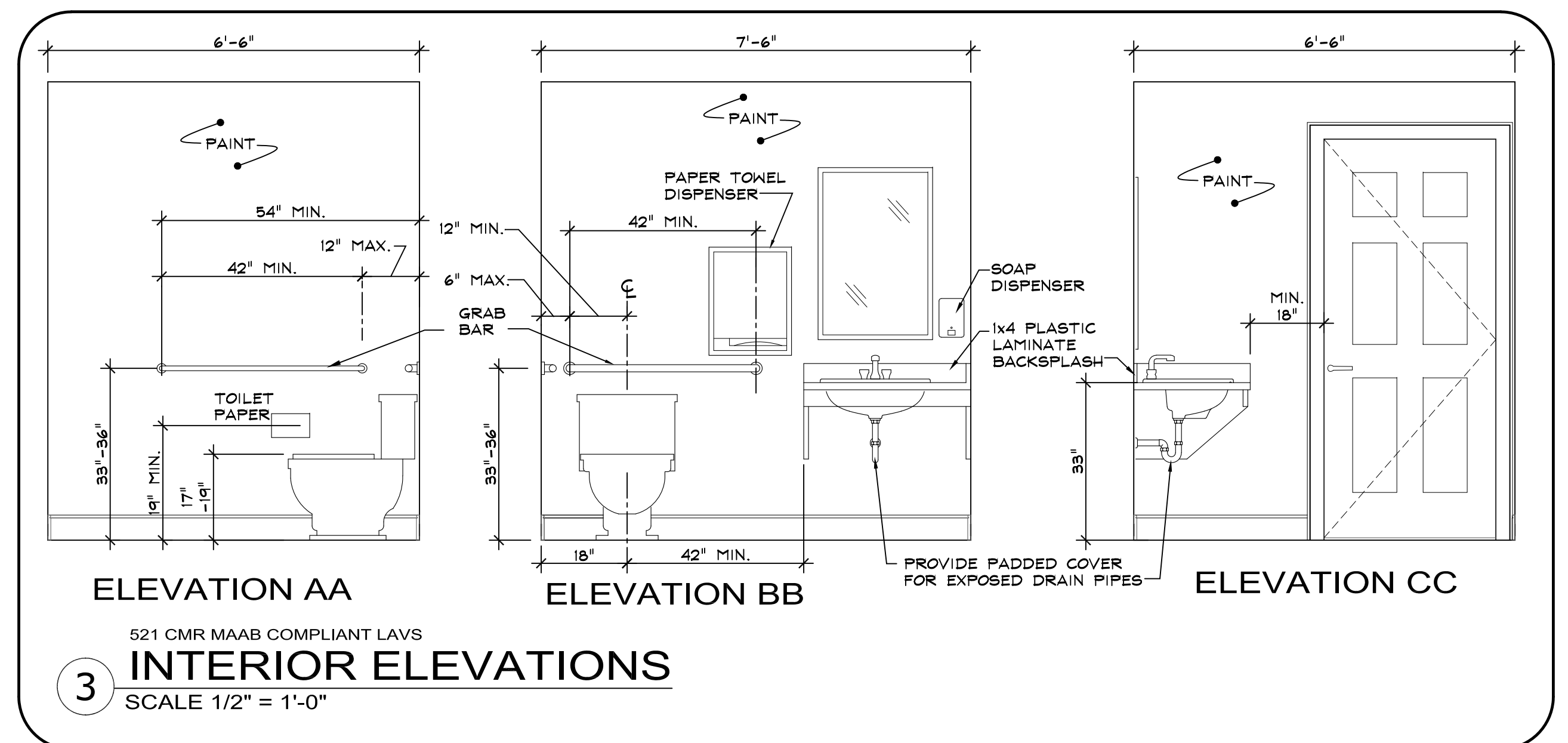
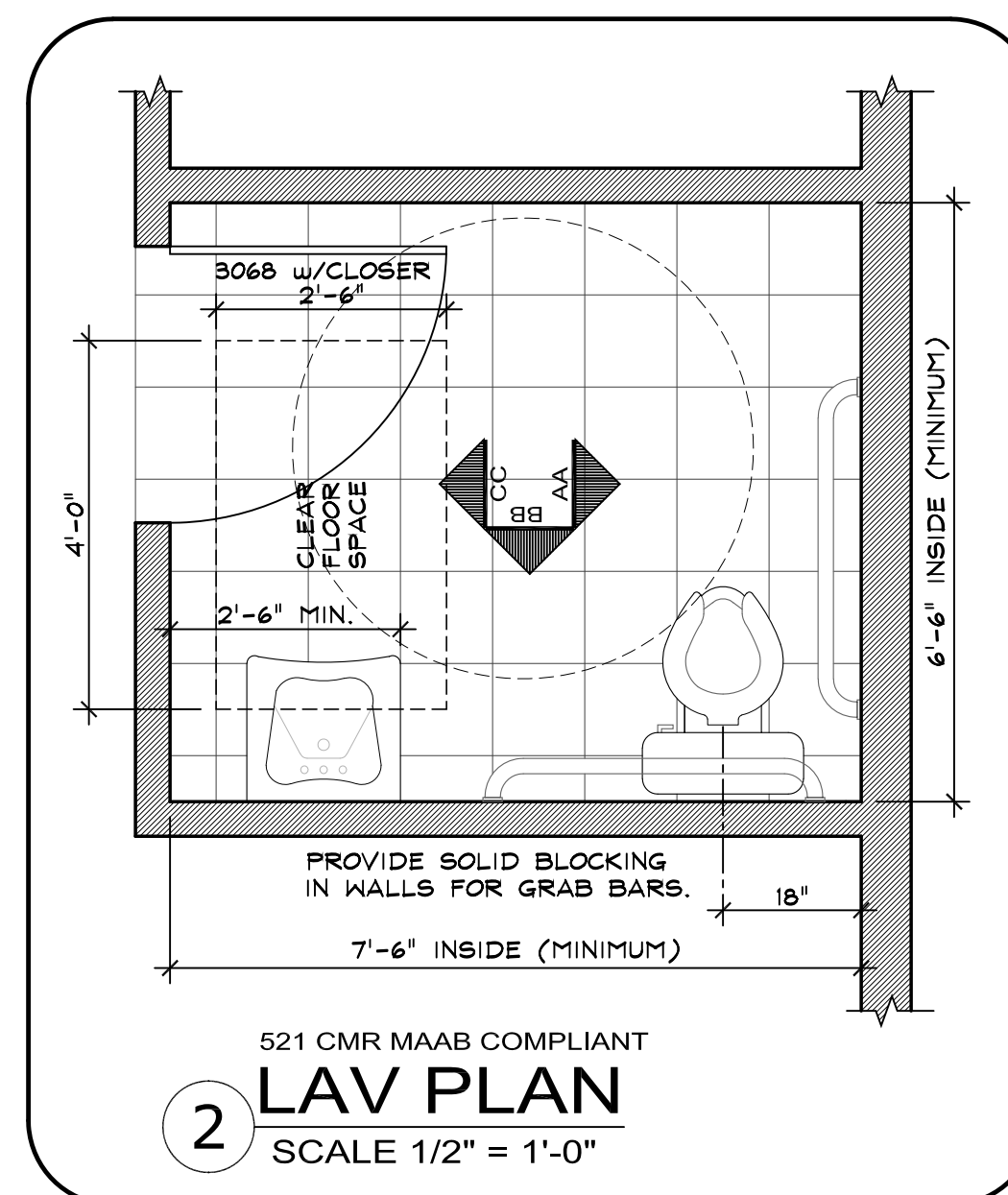
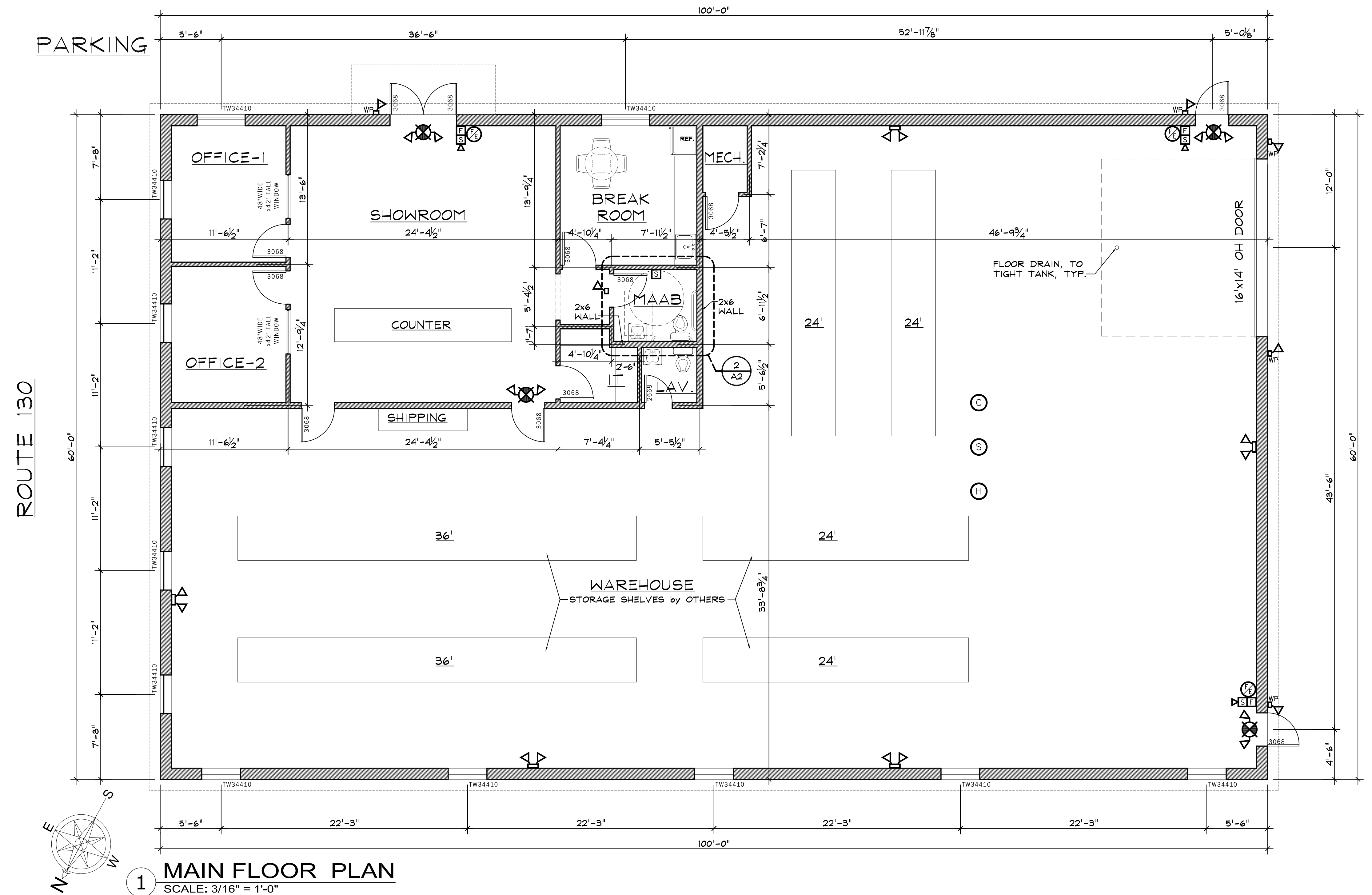
PROJECT No. **2345**

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SHEET No.

A1

CD



FIRE PROTECTION SYMBOL LEGEND:

	DOUBLE HEAD EMERGENCY LIGHT		FIRE EXTINGUISHER
	SINGLE HEAD EMERGENCY LIGHT WP = WATERPROOF		SMOKE DETECTOR
	EXIT SIGN ARROW INDICATES DIRECTION TO EXIT		HEAT DETECTOR
	EXIT SIGN w/EMERGENCY LIGHT		CARBON MONOXIDE DETECTOR
	HORN + STROBE ALERT		COMBINATION SMOKE & CARBON MONOXIDE DETECTOR
	(SILENT) STROBE ALERT		VENT FAN
	FIRE ALARM PULL		THERMOSTAT

SIGNATURE _____

SIGNATURE _____

EJP SOLUTIONS
31 ASHUMET RD
MASHPEE, MA 02649

Giampietro Architects
354 Gifford Street
Falmouth, MA 02540
Tel: 508-540-7400
Fax: 508-540-0220

DRAWING TITLE:
FLOOR PLAN

DRAWN BY: *RPC*

CHECKED BY: *RPC*

DATE: 01/29/2024

VISIONS:

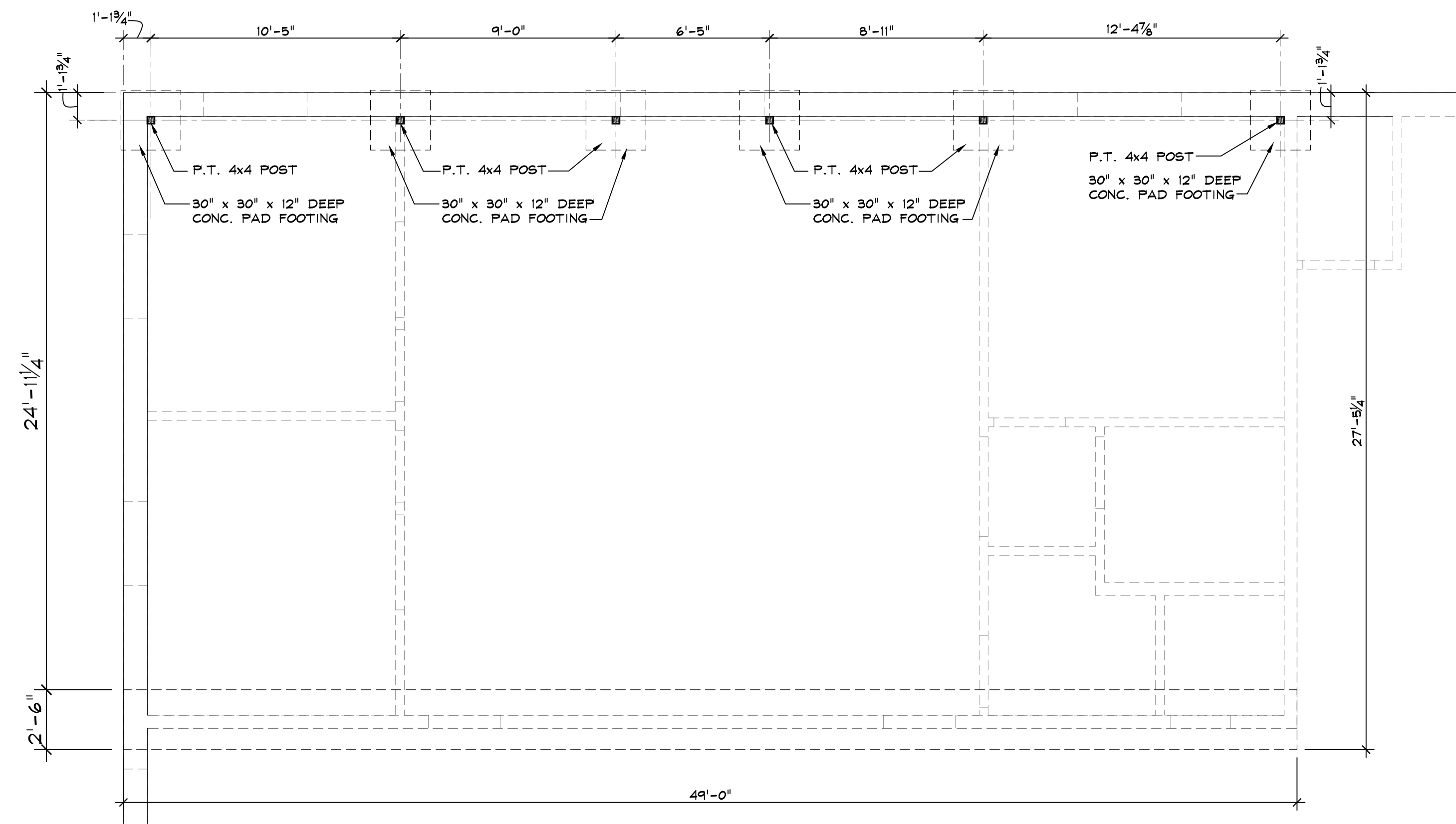
PROJECT No.	2345
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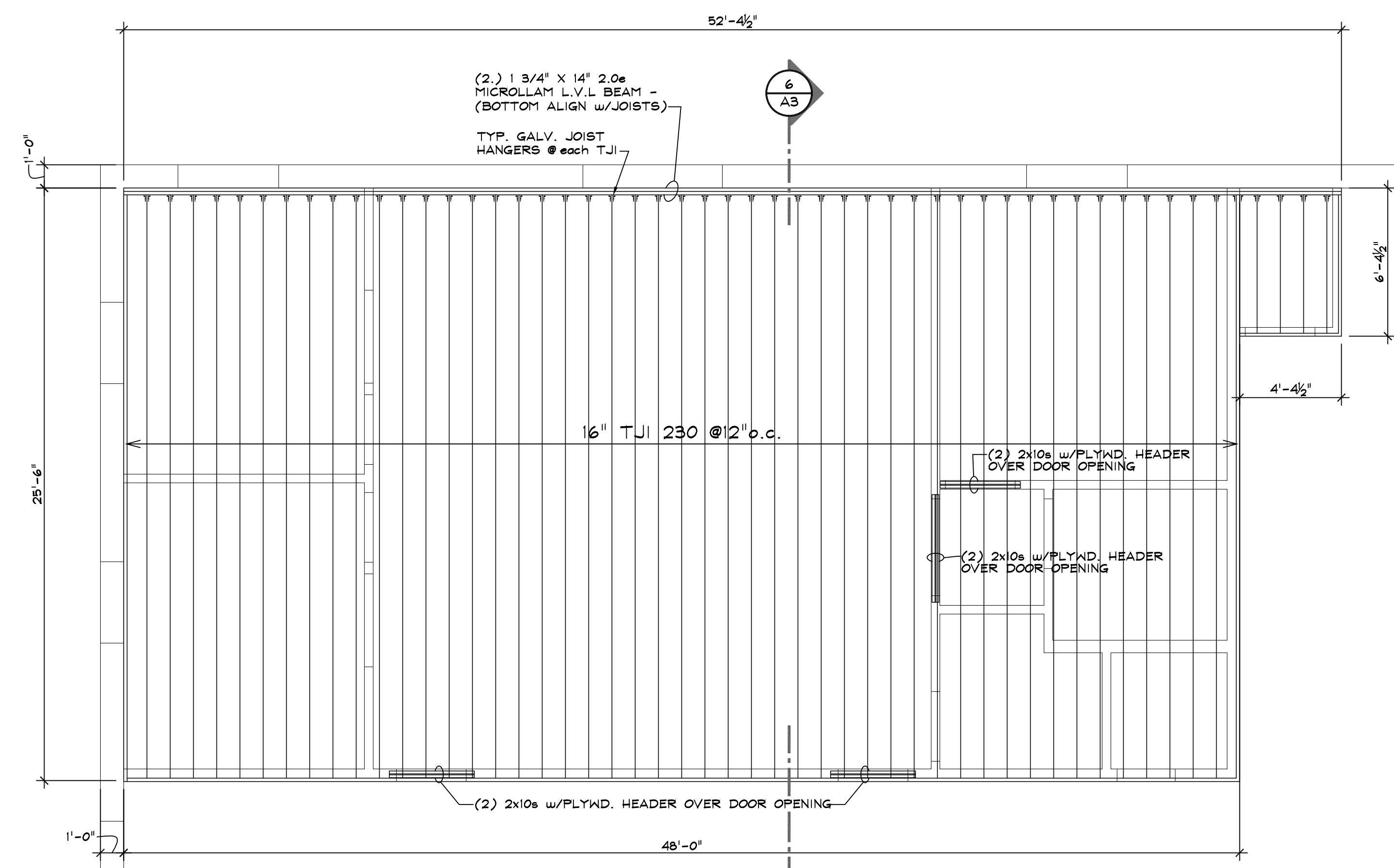
EET No.

A2

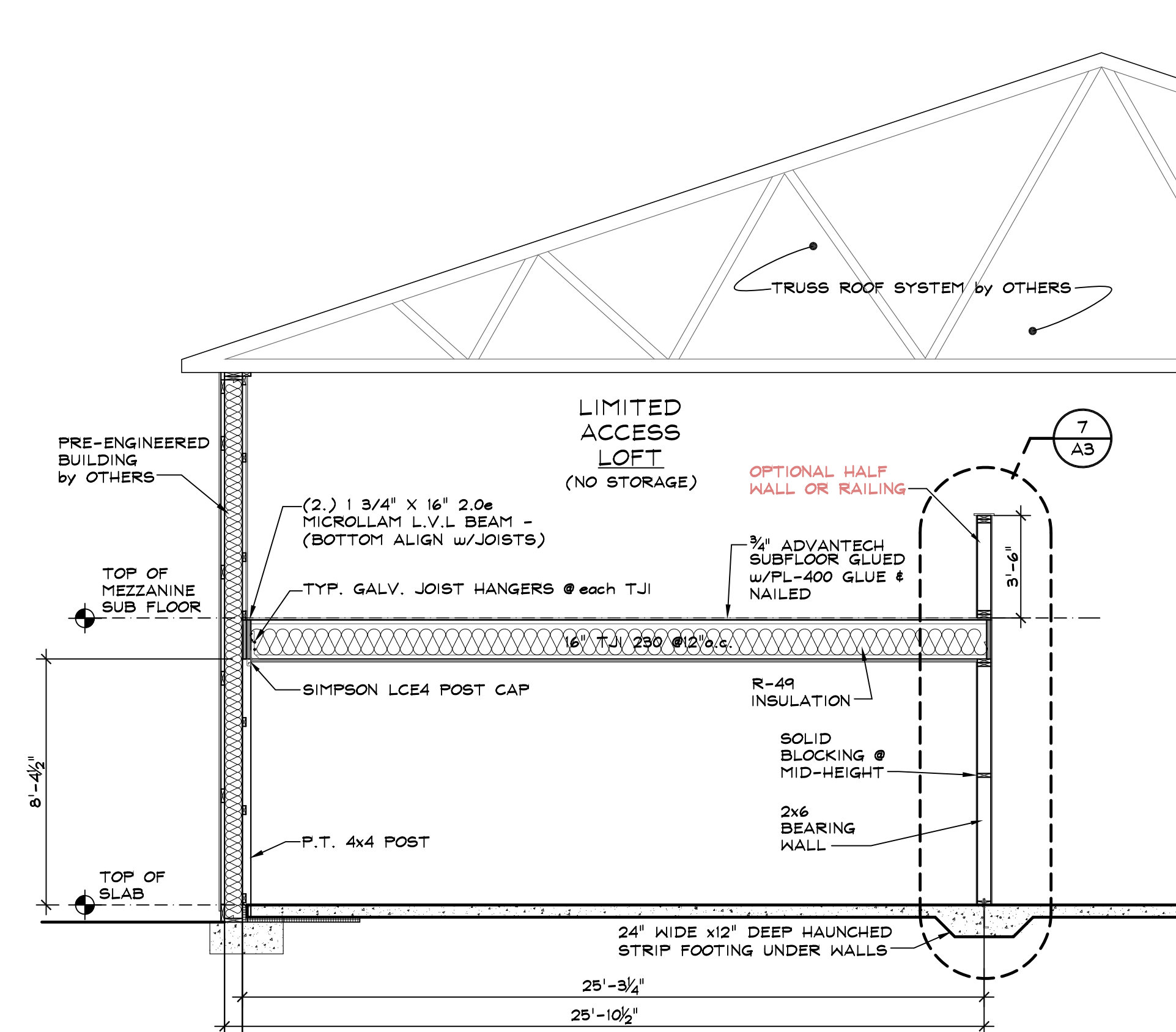
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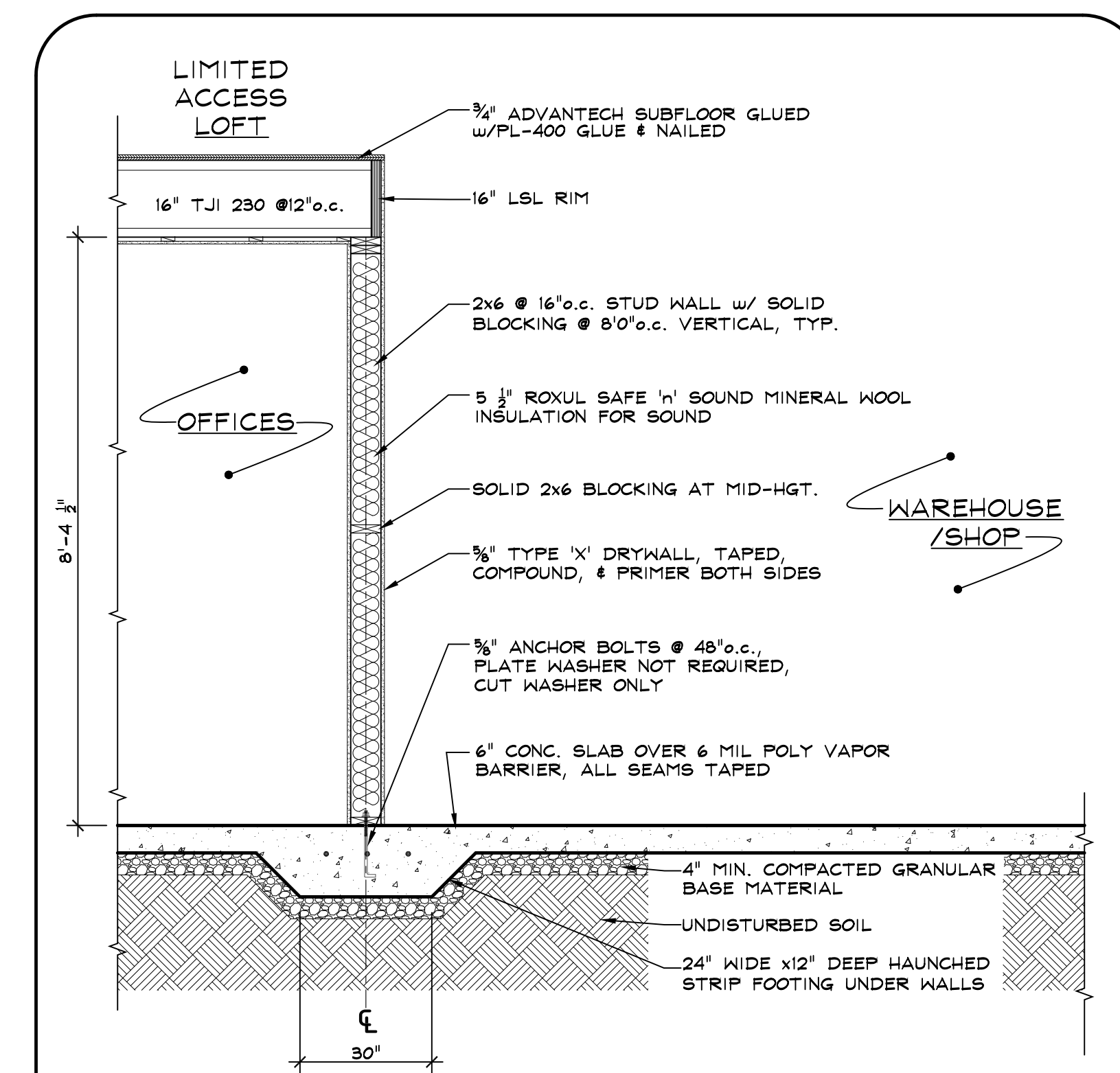
4 FOUNDATION PLAN
SCALE: 1/4" = 1'-0"



5 LOFT FRAMING PLAN
SCALE: 1/4" = 1'-0"



6 CROSS SECTION
SCALE: 1/4" = 1'-0"



7 BEARING WALL & FOOTING DETAIL
SCALE: 1/2" = 1'-0"

CONSULTANT

ARCHITECT

SIGNATURE

SIGNATURE

NEW BUILDING FOR:
EJP SOLUTIONS
31 ASHUMET RD
MASHPEE, MA 02649

Giampietro Architects
354 Gifford Street
Falmouth, MA 02540
Tel: 508-540-7400
Fax: 508-540-0220

DRAWING TITLE:
**OFFICE AREA FND.
LOFT FRAMING
PLAN & DETAILS**

DRAWN BY: **RP6**

CHECKED BY: **RP6**

DATE: **01/29/2024**

REVISIONS:

PROJECT No. **2345**

THIS DRAWING IS PART OF A COMPLETE ARCHITECTURAL SET. THERE IS INFORMATION PERTAINING TO THIS DRAWING ON OTHER SHEETS. REFER TO T1 FOR COMPLETE SHEET LIST. DO NOT DO TAKE OFF, BIDDING OR CONSTRUCTION ON THIS STRUCTURE WITHOUT A COMPLETE SET.

SHEET No.

A3

CD

DRAINAGE ANALYSIS REPORT

**#474 Main Street & 31 Ashumet Road
Mashpee, MA
Parcels 27-001-000A & 27-001-000B**

PREPARED FOR

**Joao L. Junqueira
53 Mercantile Way, Unit 6
Mashpee, MA 02649**

PREPARED BY

**Bracken Engineering, Inc.
49 Herring Pond Road
Buzzards Bay, MA 02532**



**Zachary L. Basinski, P.E.
February 19, 2024**

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Introduction:

The purpose of this report is to analyze the hydrologic impacts associated with the development of a proposed 6,000 sf warehouse & retail building and associated parking lot and loading areas. The stormwater system is designed to meet the Town of Mashpee Zoning Regulations and the Massachusetts Stormwater Management Act.

Existing Conditions:

The locus is shown as parcels 27-001-000A & 27-001-000B on the Town of Mashpee Assessors Maps. The total area of the site is 98,740± s.f., or approximately 2.267 acres and the total anticipated area of disturbance is 44,625± SF.

The site is abutted by developed commercial lots to the north and south on Main Street, and a multi-unit residential property to the north west (off Ashumet Rd). To the east lies Main Street (State Rt 132) and to the southwest lies Ashumet Road.

The site is a vacant lot. Soil on the site consists of a Enfield Silt Loam, Carver Coarse Sand, and disturbed Urban Land. Exploratory test pits performed on site indicated sandy soils consistent with Carver Coarse Sand. These soils have high infiltration and a very low runoff rate. The topography consists of higher elevations along the North and west property lines with a lower valley in the middle of the site, sloping up again to the south and east property lines. The site was subject to an unknown history of soil dumping, leaving a hummocky, disturbed surface. Existing runoff on the site predominately drains towards the low points in the middle of the lot where it infiltrates naturally. A portion of the western side of the lot slopes towards Ashumet Road.

Proposed Conditions:

The proposed project consists of constructing a 6,000 s.f. warehouse/retail building with associated parking area and loading zone areas. All proposed parking, loading areas and entrance driveways will be paved. An additional outdoor material storage area will be surfaced with gravel. New stormwater runoff associated with the proposed building and proposed loading dock area will be directed towards three (3) proposed stormwater management areas. The stormwater management areas are located along the north, east, and southern property lines. Runoff from the parking area and driveway shall be routed towards a sediment forebay and rain garden before being infiltrated in subsurface basins. Runoff from the proposed roof shall be piped directly to a subsurface infiltration area.

The stormwater management area has been sized to treat the required water quality volume and completely mitigate the required recharge volume onsite up to a 100-year storm event. See the enclosed calculations for further details.

Stormwater Recharge:

Infiltration BMP's have been designed using the "static" method to infiltrate the Required Recharge Volume for each subcatchment area. Carver Coarse Sand soils have a hydrologic soil classification of "A" and accordingly a 0.60-inch Target Depth Factor. Soil conditions have been confirmed to verify the substratum to be sand with an 8.27 inch/hour Rawls Rate. The drawdown analysis for the Required Recharge Volume has been provided. See attached calculations for each BMP. Since the infiltration BMP's have been sized to attenuate the 100-year storm event and the separation distance to seasonal high groundwater is greater than four feet, groundwater mounding calculations have not been provided.

Method of Calculation:

The stormwater management areas were analyzed utilizing standard engineering practices and the Soil Conservation Service (SCS) Technical Release 20 (TR20). The systems were sized using the rainfall data for a two (2), ten (10), twenty-five (25), and one hundred (100) year, twenty-four (24) hour duration storm frequencies. Based on the U.S. Department of Agriculture's Technical Release Paper 40 (TP40) rainfall maps, the precipitation is 3.5", 4.8", 5.7", and 7.1" respectively.

To assist in the analysis, the computer software program "HydroCAD" was used to develop hydrographs and infiltration area inflow/outflow calculations.

The drainage area boundaries were developed from on-site survey topography, the anticipated development footprint and proposed site grades.

The proposed subsurface infiltration system has been designed to treat and recharge runoff up to a 7.1" (100-yr) storm event.

Critical Areas:

The site is located within a Zone II wellhead protection zone and the Mashpee Groundwater Protection District.

Erosion and Sediment Controls:

Erosion control measures including silt socks, tracking pads, silt sacks and construction notes are shown on site development plans.

Operations and Maintenance Plan:

An operation and maintenance plan is included, see appendix.

Conclusion:

The drainage system has been designed in accordance with the Town of Mashpee Zoning By-law utilizing the Massachusetts Stormwater Management Standards. A stormwater management system incorporating low impact development techniques has been designed to treat, mitigate and recharge the increase in stormwater runoff onsite. The following chart identifies the pre- and post-development stormwater characteristics at the identified design points.

TABLE 1:

STORM EVENT (Year)	2		10		25		100	
Design Point	PRE (cfs)	POST (cfs)	PRE (cfs)	POST (cfs)	PRE (cfs)	POST (cfs)	PRE (cfs)	POST (cfs)
1	0.00	0.00	0.00	0.00	0.01	0.00	0.04	0.02
2	0.00	--	0.00	--	0.00	--	0.03	--
2P	--	0.47	--	0.65	--	0.77	--	0.95
3	0.00	0.00	0.03	0.01	0.07	0.03	0.16	0.10
4	0.00	--	0.00	--	0.00	--	0.02	--
4P	--	0.33	--	0.96	--	1.5	--	2.37
5	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01

LEGEND

①

= DESIGN POINT

1S

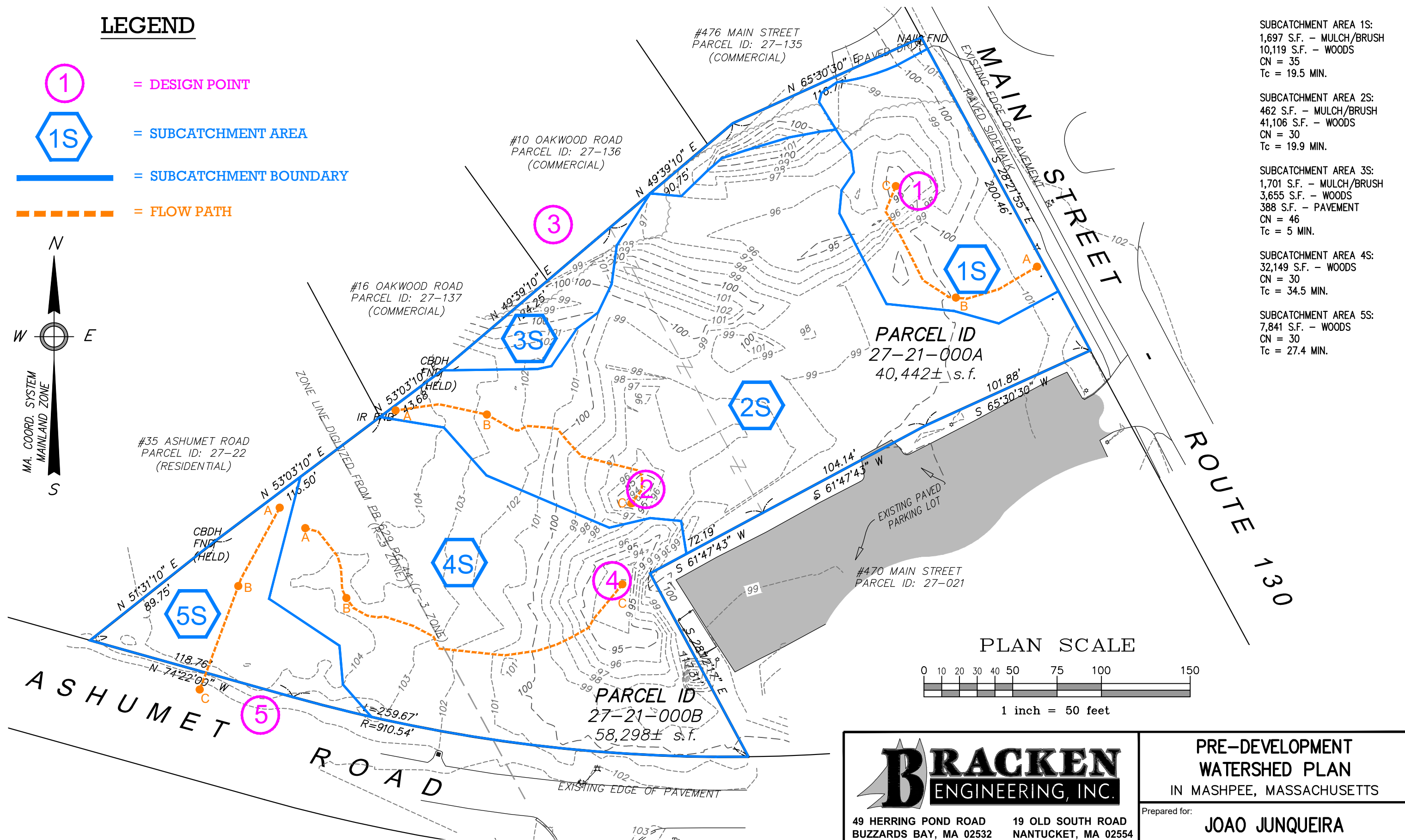
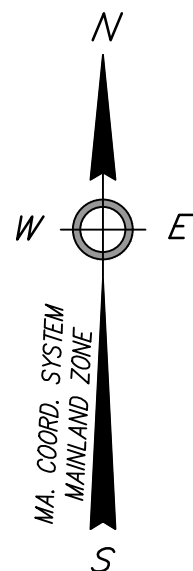
= SUBCATCHMENT AREA

—

= SUBCATCHMENT BOUNDARY

- - -

= FLOW PATH



SUBCATCHMENT AREA 1S:
1,697 S.F. - MULCH/BRUSH
10,119 S.F. - WOODS
CN = 35
Tc = 19.5 MIN.

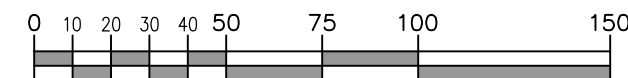
SUBCATCHMENT AREA 2S:
462 S.F. - MULCH/BRUSH
41,106 S.F. - WOODS
CN = 30
Tc = 19.9 MIN.

SUBCATCHMENT AREA 3S:
1,701 S.F. - MULCH/BRUSH
3,655 S.F. - WOODS
388 S.F. - PAVEMENT
CN = 46
Tc = 5 MIN.

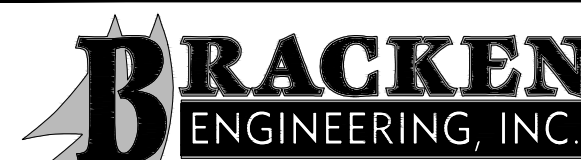
SUBCATCHMENT AREA 4S:
32,149 S.F. - WOODS
CN = 30
Tc = 34.5 MIN.

SUBCATCHMENT AREA 5S:
7,841 S.F. - WOODS
CN = 30
Tc = 27.4 MIN.

PLAN SCALE



1 inch = 50 feet



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PRE-DEVELOPMENT
WATERSHED PLAN
IN MASHPEE, MASSACHUSETTS

Prepared for:

JOAO JUNQUEIRA

#474 MAIN STREET & 31 ASHUMET ROAD
PARCELS 27-001-000A & 27-001-000B

Date:
FEBRUARY 19, 2024

Drawn:
RED/BEI

Checked:
ZLB

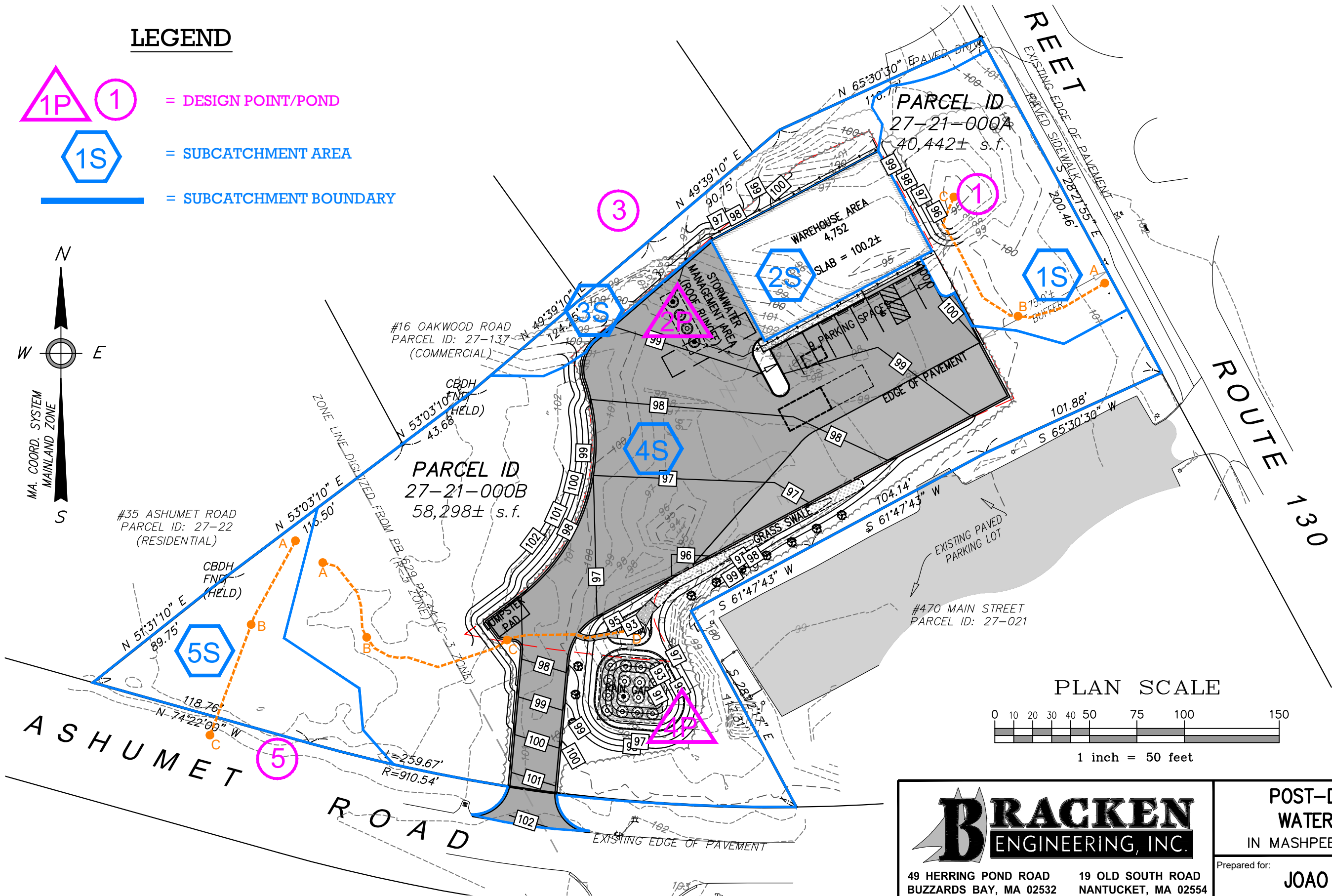
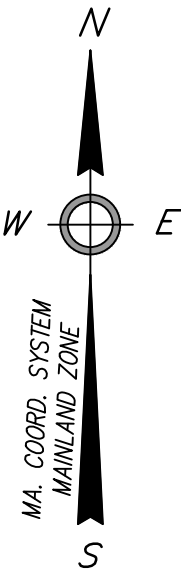
LEGEND

- 1P

1

= DESIGN POINT/POND
- 1S

= SUBCATCHMENT AREA
- = SUBCATCHMENT BOUNDARY



- SUBCATCHMENT AREA 1S:

827 S.F. - GRASS

10,598 S.F. - WOODS

CN = 33

Tc = 19.5 MIN.
- SUBCATCHMENT AREA 2S:

6,000 S.F. - ROOF

CN = 98

Tc = 5.0 MIN.
- SUBCATCHMENT AREA 3S:

1,203 S.F. - GRASS

4,731 S.F. - WOODS

388 S.F. - PAVEMENT

CN = 41

Tc = 5 MIN.
- SUBCATCHMENT AREA 4S:

30,382 S.F. - WOODS

23,939 S.F. - PAVEMENT

6,630 S.F. - GRASS

4,832 S.F. - GRAVEL

2,063 S.F. - RAIN GARDEN

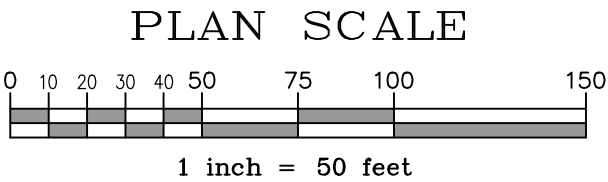
CN = 59

Tc = 33.3 MIN.
- SUBCATCHMENT AREA 5S:

7,841 S.F. - WOODS

CN = 30

Tc = 27.4 MIN.



B

BRACKEN

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POST-DEVELOPMENT

WATERSHED PLAN

IN MASHPEE, MASSACHUSETTS

Prepared for:

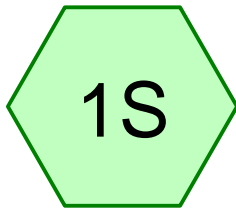
JOAO JUNQUEIRA

#474 MAIN STREET & 31 ASHUMET ROAD

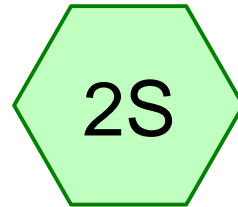
PARCELS 27-001-000A & 27-001-000B

Date:	Drawn:	Checked:
FEBRUARY 19, 2024	RED/BEI	ZLB

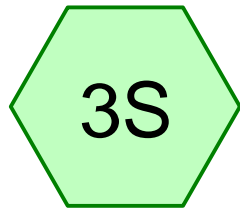
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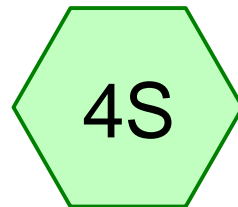
Catchment Area 1



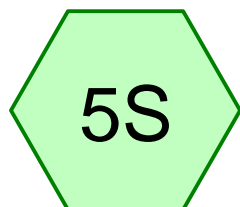
Catchment Area 2



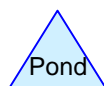
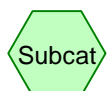
Catchment Area 3



Catchment Area 4



Catchment Area 5



Routing Diagram for 474 Main Street - Pre-Development
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474 Main Street - Pre-Development

Prepared by {enter your company name here}

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Page 2

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	A - 2 YR	Type III 24-hr		Default	24.00	1	3.50	2
2	B - 10 YR	Type III 24-hr		Default	24.00	1	4.80	2
3	C - 25 YR	Type III 24-hr		Default	24.00	1	5.70	2
4	D - 100YR	Type III 24-hr		Default	24.00	1	7.00	2

474 Main Street - Pre-Developement

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Page 3

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
3,860	68	<50% Grass cover, Poor, HSG A (1S, 2S, 3S)
388	98	Paved parking, HSG A (3S)
94,870	30	Woods, Good, HSG A (1S, 2S, 3S, 4S, 5S)
99,118	32	TOTAL AREA

474 Main Street - Pre-Development

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Page 4

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
99,118	HSG A	1S, 2S, 3S, 4S, 5S
0	HSG B	
0	HSG C	
0	HSG D	
0	Other	
99,118		TOTAL AREA

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Page 5

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Subc Num
3,860	0	0	0	0	3,860	<50% Grass cover, Poor	
388	0	0	0	0	388	Paved parking	
94,870	0	0	0	0	94,870	Woods, Good	
99,118	0	0	0	0	99,118	TOTAL AREA	

474 Main Street - Pre-Development

Type III 24-hr A - 2 YR Rainfall=3.50"

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Printed 2/2/2024

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Page 6

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Catchment Area 1	Runoff Area=11,816 sf 0.00% Impervious Runoff Depth=0.00" Flow Length=131' Tc=19.5 min CN=35 Runoff=0.00 cfs 0 cf
Subcatchment 2S: Catchment Area 2	Runoff Area=41,568 sf 0.00% Impervious Runoff Depth=0.00" Flow Length=170' Tc=19.9 min CN=30 Runoff=0.00 cfs 0 cf
Subcatchment 3S: Catchment Area 3	Runoff Area=5,744 sf 6.75% Impervious Runoff Depth>0.08" Tc=5.0 min CN=46 Runoff=0.00 cfs 38 cf
Subcatchment 4S: Catchment Area 4	Runoff Area=32,149 sf 0.00% Impervious Runoff Depth=0.00" Flow Length=231' Tc=34.5 min CN=30 Runoff=0.00 cfs 0 cf
Subcatchment 5S: Catchment Area 5	Runoff Area=7,841 sf 0.00% Impervious Runoff Depth=0.00" Flow Length=112' Tc=27.4 min CN=30 Runoff=0.00 cfs 0 cf

Total Runoff Area = 99,118 sf Runoff Volume = 38 cf Average Runoff Depth = 0.00"
99.61% Pervious = 98,730 sf 0.39% Impervious = 388 sf

474 Main Street - Pre-Development

Type III 24-hr A - 2 YR Rainfall=3.50"

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Page 7

Summary for Subcatchment 1S: Catchment Area 1

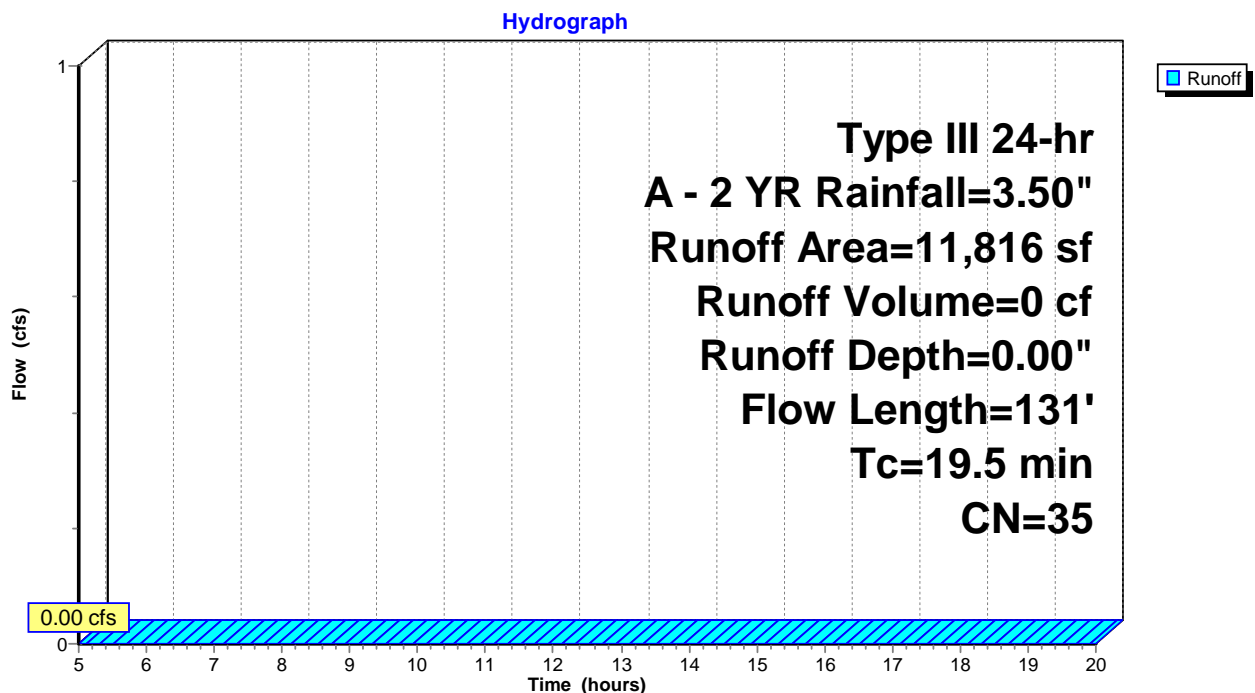
[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0 cf, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr A - 2 YR Rainfall=3.50"

Area (sf)	CN	Description
1,697	68	<50% Grass cover, Poor, HSG A
10,119	30	Woods, Good, HSG A
11,816	35	Weighted Average
11,816		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.5	50	0.0260	0.05		Sheet Flow, A-B
					Woods: Dense underbrush n= 0.800 P2= 3.50"
1.0	81	0.0691	1.31		Shallow Concentrated Flow, B-C
					Woodland Kv= 5.0 fps
19.5	131	Total			

Subcatchment 1S: Catchment Area 1

474 Main Street - Pre-Development

Type III 24-hr A - 2 YR Rainfall=3.50"

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Summary for Subcatchment 2S: Catchment Area 2

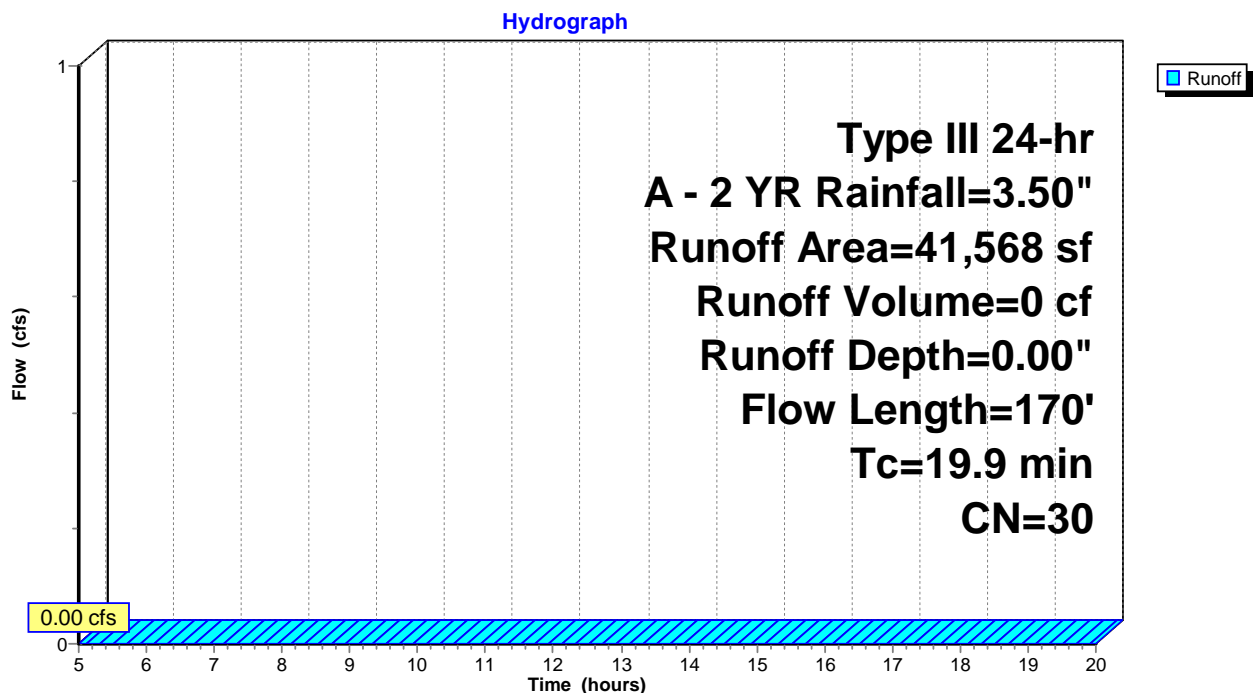
[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0 cf, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr A - 2 YR Rainfall=3.50"

Area (sf)	CN	Description
462	68	<50% Grass cover, Poor, HSG A
41,106	30	Woods, Good, HSG A
41,568	30	Weighted Average
41,568		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.0	50	0.0320	0.05		Sheet Flow, A-B
					Woods: Dense underbrush n= 0.800 P2= 3.50"
2.9	120	0.0750	0.68		Shallow Concentrated Flow, B-C
					Forest w/Heavy Litter Kv= 2.5 fps
19.9	170	Total			

Subcatchment 2S: Catchment Area 2

474 Main Street - Pre-Development

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Type III 24-hr A - 2 YR Rainfall=3.50"

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Summary for Subcatchment 3S: Catchment Area 3

[49] Hint: $T_c < 2dt$ may require smaller dt

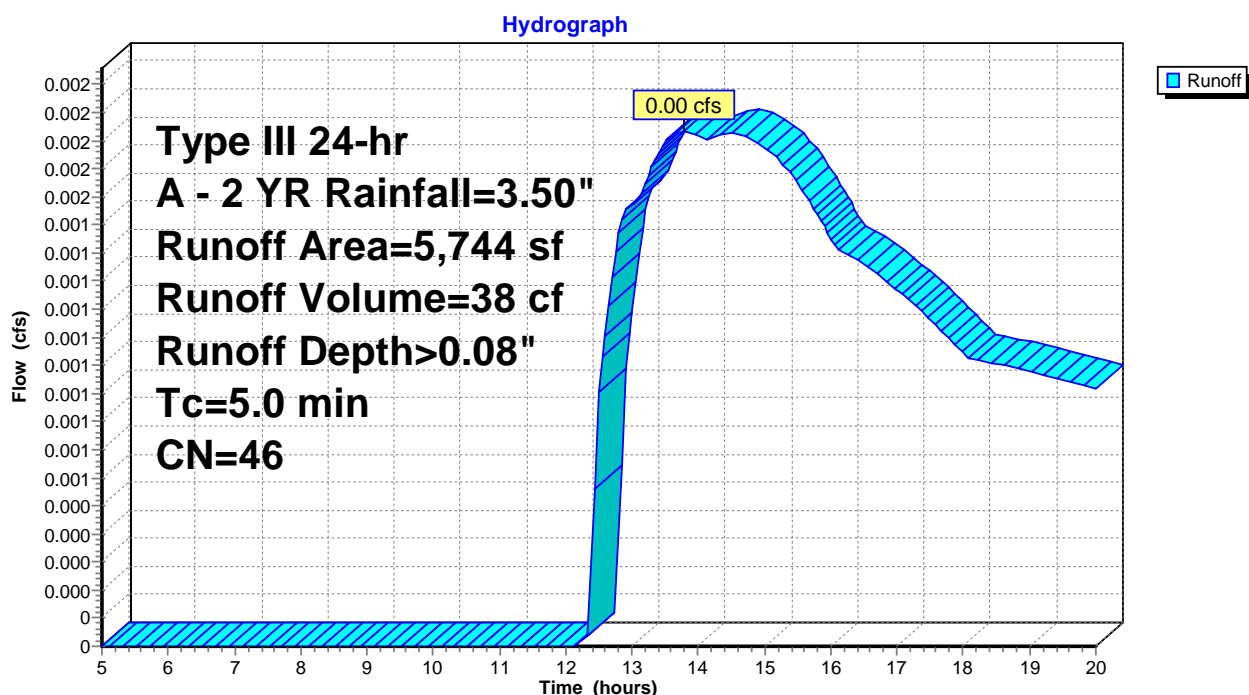
Runoff = 0.00 cfs @ 13.78 hrs, Volume= 38 cf, Depth> 0.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, $dt=0.05$ hrs
Type III 24-hr A - 2 YR Rainfall=3.50"

Area (sf)	CN	Description
1,701	68	<50% Grass cover, Poor, HSG A
3,655	30	Woods, Good, HSG A
388	98	Paved parking, HSG A
5,744	46	Weighted Average
5,356		93.25% Pervious Area
388		6.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, TC

Subcatchment 3S: Catchment Area 3



474 Main Street - Pre-Development

Type III 24-hr A - 2 YR Rainfall=3.50"

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Page 10

Summary for Subcatchment 4S: Catchment Area 4

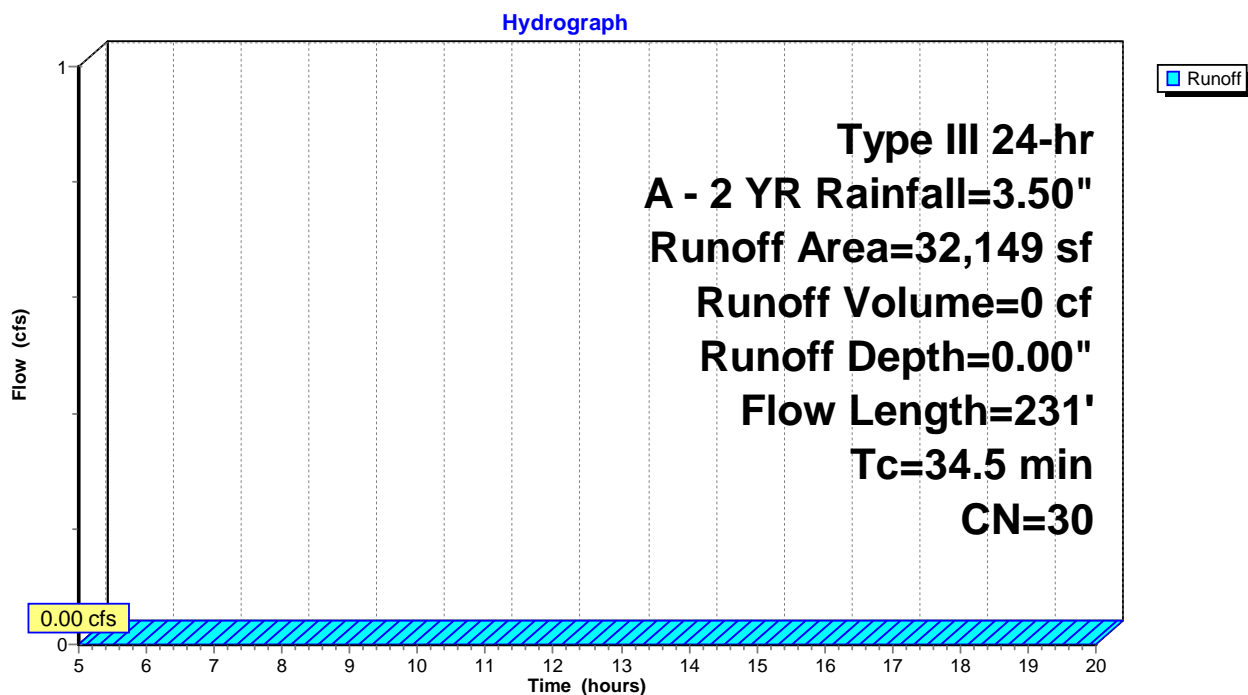
[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0 cf, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr A - 2 YR Rainfall=3.50"

Area (sf)	CN	Description
32,149	30	Woods, Good, HSG A
32,149		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.6	50	0.0080	0.03		Sheet Flow, A-B
					Woods: Dense underbrush n= 0.800 P2= 3.50"
4.9	181	0.0608	0.62		Shallow Concentrated Flow, B-C
					Forest w/Heavy Litter Kv= 2.5 fps
34.5	231	Total			

Subcatchment 4S: Catchment Area 4

474 Main Street - Pre-Development

Type III 24-hr A - 2 YR Rainfall=3.50"

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Summary for Subcatchment 5S: Catchment Area 5

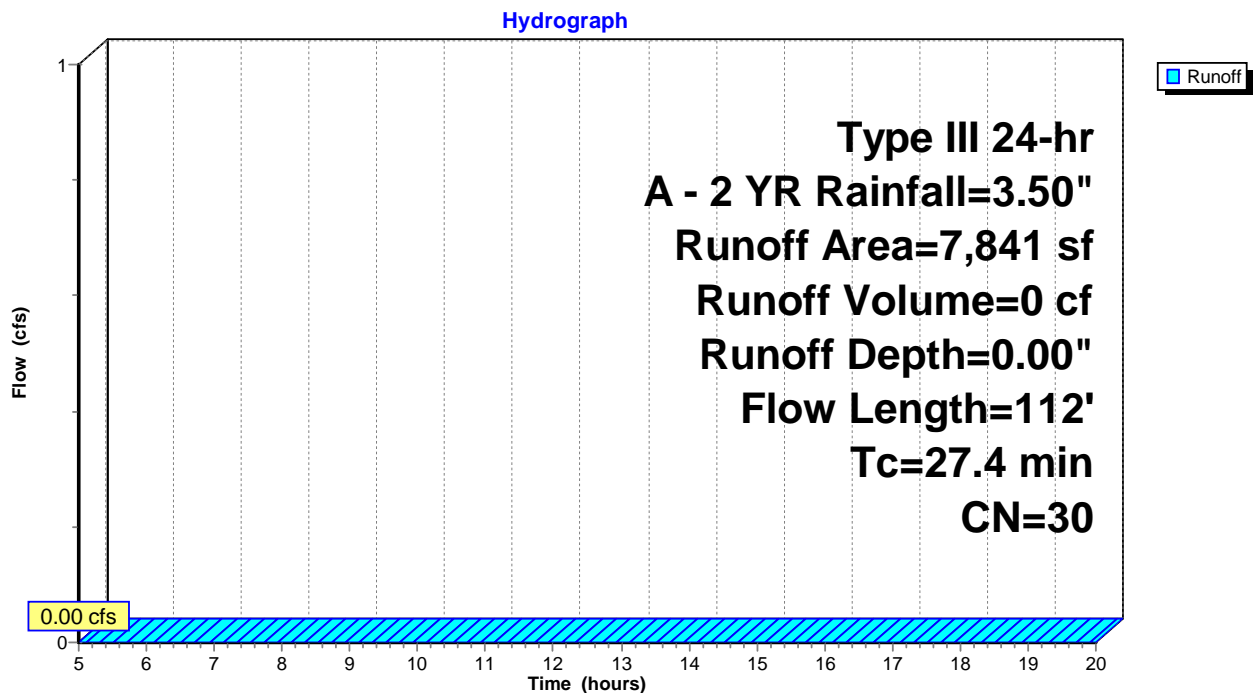
[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0 cf, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr A - 2 YR Rainfall=3.50"

Area (sf)	CN	Description
7,841	30	Woods, Good, HSG A
7,841		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.2	50	0.0120	0.03		Sheet Flow, A-B
					Woods: Dense underbrush n= 0.800 P2= 3.50"
2.2	62	0.0339	0.46		Shallow Concentrated Flow, B-C
					Forest w/Heavy Litter Kv= 2.5 fps
27.4	112	Total			

Subcatchment 5S: Catchment Area 5

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Type III 24-hr B - 10 YR Rainfall=4.80"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Catchment Area 1	Runoff Area=11,816 sf 0.00% Impervious Runoff Depth>0.04" Flow Length=131' Tc=19.5 min CN=35 Runoff=0.00 cfs 38 cf
Subcatchment 2S: Catchment Area 2	Runoff Area=41,568 sf 0.00% Impervious Runoff Depth=0.00" Flow Length=170' Tc=19.9 min CN=30 Runoff=0.00 cfs 0 cf
Subcatchment 3S: Catchment Area 3	Runoff Area=5,744 sf 6.75% Impervious Runoff Depth>0.36" Tc=5.0 min CN=46 Runoff=0.03 cfs 172 cf
Subcatchment 4S: Catchment Area 4	Runoff Area=32,149 sf 0.00% Impervious Runoff Depth=0.00" Flow Length=231' Tc=34.5 min CN=30 Runoff=0.00 cfs 0 cf
Subcatchment 5S: Catchment Area 5	Runoff Area=7,841 sf 0.00% Impervious Runoff Depth=0.00" Flow Length=112' Tc=27.4 min CN=30 Runoff=0.00 cfs 0 cf

Total Runoff Area = 99,118 sf Runoff Volume = 210 cf Average Runoff Depth = 0.03"
99.61% Pervious = 98,730 sf 0.39% Impervious = 388 sf

474 Main Street - Pre-Development

Type III 24-hr B - 10 YR Rainfall=4.80"

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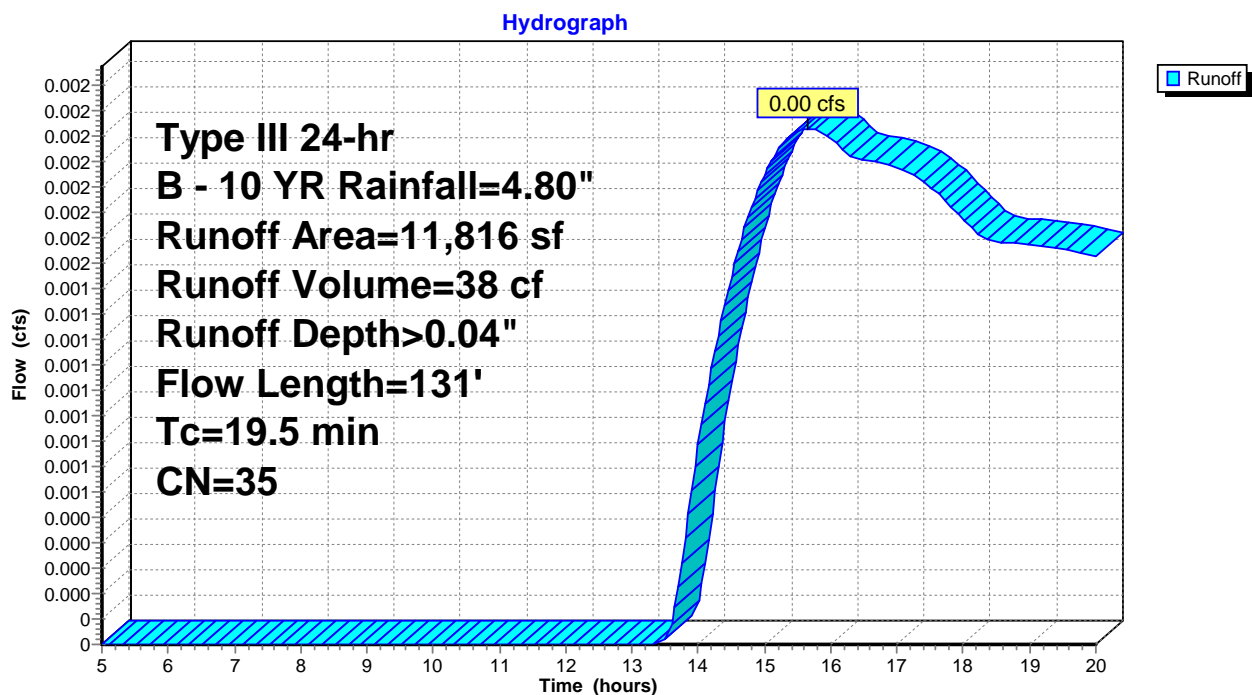
Summary for Subcatchment 1S: Catchment Area 1

Runoff = 0.00 cfs @ 15.66 hrs, Volume= 38 cf, Depth> 0.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr B - 10 YR Rainfall=4.80"

Area (sf)	CN	Description
1,697	68	<50% Grass cover, Poor, HSG A
10,119	30	Woods, Good, HSG A
11,816	35	Weighted Average
11,816		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.5	50	0.0260	0.05		Sheet Flow, A-B
					Woods: Dense underbrush n= 0.800 P2= 3.50"
1.0	81	0.0691	1.31		Shallow Concentrated Flow, B-C
					Woodland Kv= 5.0 fps
19.5	131	Total			

Subcatchment 1S: Catchment Area 1

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Type III 24-hr B - 10 YR Rainfall=4.80"

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Summary for Subcatchment 2S: Catchment Area 2

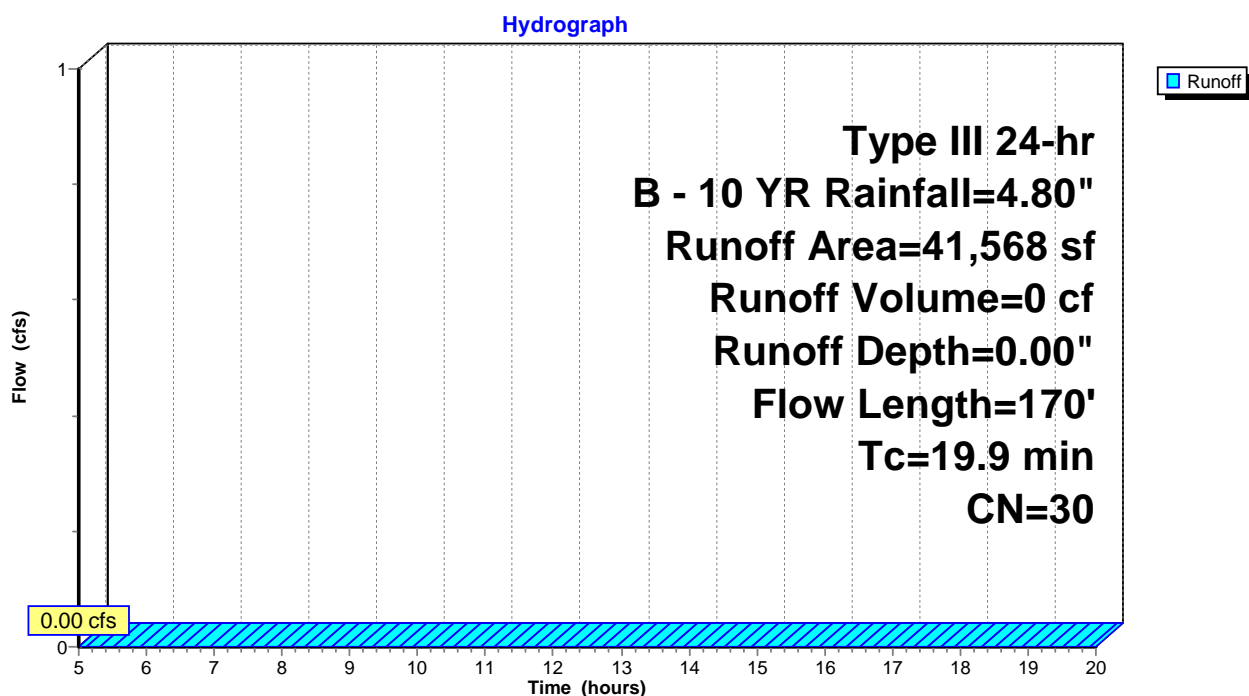
[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0 cf, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr B - 10 YR Rainfall=4.80"

Area (sf)	CN	Description
462	68	<50% Grass cover, Poor, HSG A
41,106	30	Woods, Good, HSG A
41,568	30	Weighted Average
41,568		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.0	50	0.0320	0.05		Sheet Flow, A-B
					Woods: Dense underbrush n= 0.800 P2= 3.50"
2.9	120	0.0750	0.68		Shallow Concentrated Flow, B-C
					Forest w/Heavy Litter Kv= 2.5 fps
19.9	170	Total			

Subcatchment 2S: Catchment Area 2

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Type III 24-hr B - 10 YR Rainfall=4.80"

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Summary for Subcatchment 3S: Catchment Area 3

[49] Hint: $T_c < 2dt$ may require smaller dt

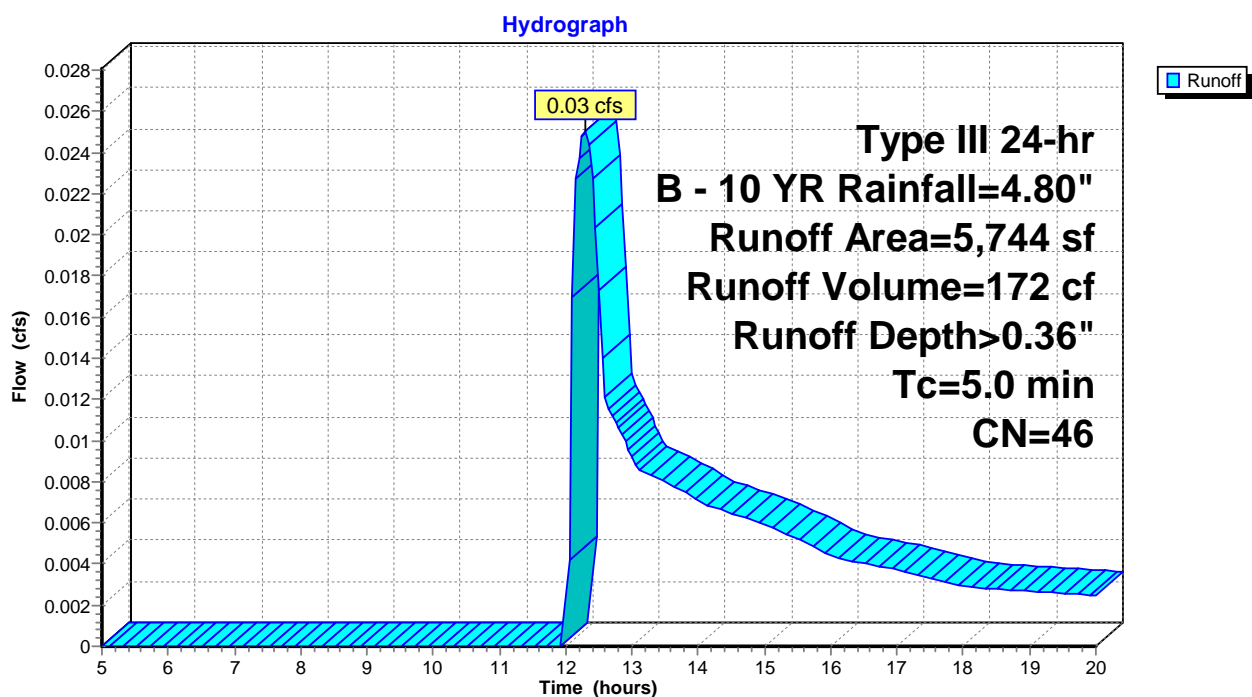
Runoff = 0.03 cfs @ 12.29 hrs, Volume= 172 cf, Depth> 0.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, $dt=0.05$ hrs
Type III 24-hr B - 10 YR Rainfall=4.80"

Area (sf)	CN	Description
1,701	68	<50% Grass cover, Poor, HSG A
3,655	30	Woods, Good, HSG A
388	98	Paved parking, HSG A
5,744	46	Weighted Average
5,356		93.25% Pervious Area
388		6.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, TC

Subcatchment 3S: Catchment Area 3



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Type III 24-hr B - 10 YR Rainfall=4.80"

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Summary for Subcatchment 4S: Catchment Area 4

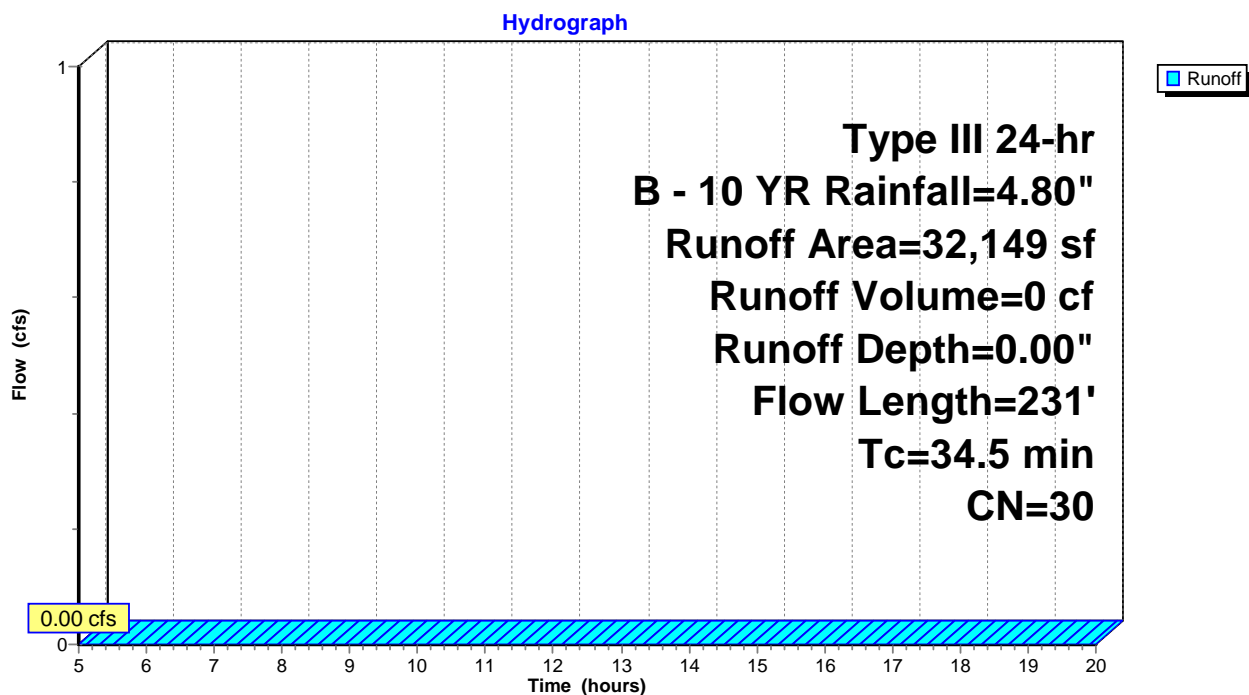
[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0 cf, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr B - 10 YR Rainfall=4.80"

Area (sf)	CN	Description
32,149	30	Woods, Good, HSG A
32,149		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.6	50	0.0080	0.03		Sheet Flow, A-B
					Woods: Dense underbrush n= 0.800 P2= 3.50"
4.9	181	0.0608	0.62		Shallow Concentrated Flow, B-C
					Forest w/Heavy Litter Kv= 2.5 fps
34.5	231	Total			

Subcatchment 4S: Catchment Area 4

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Type III 24-hr B - 10 YR Rainfall=4.80"

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Summary for Subcatchment 5S: Catchment Area 5

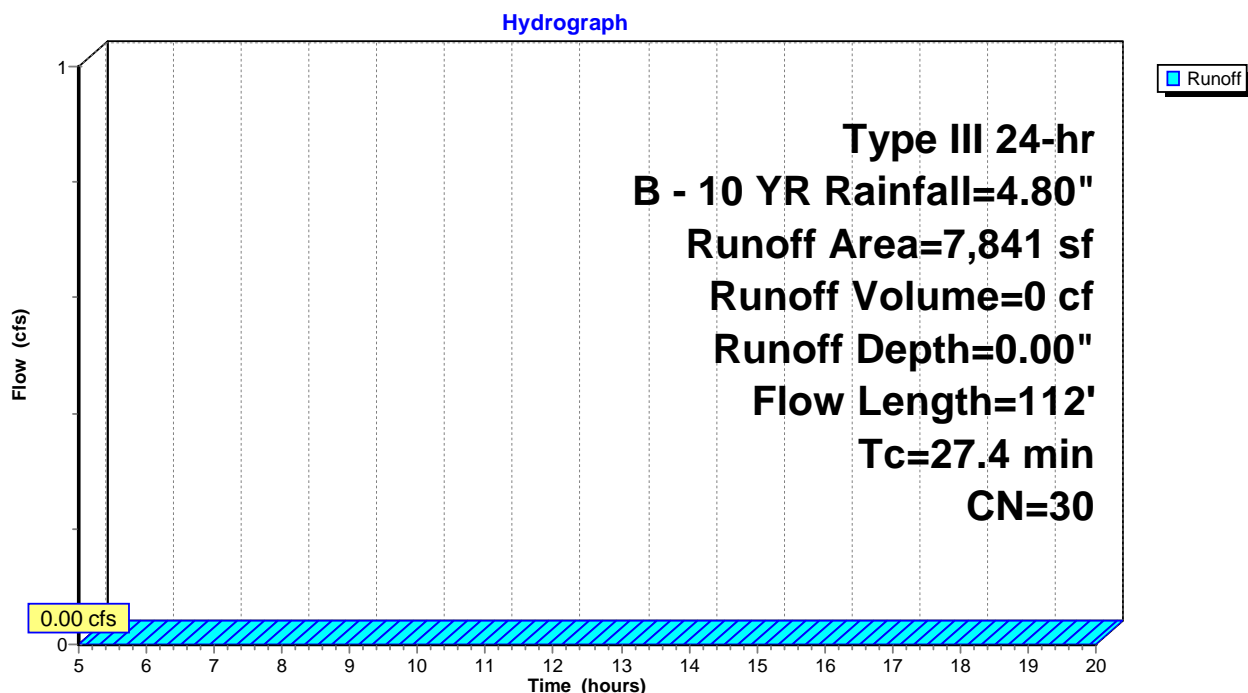
[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0 cf, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr B - 10 YR Rainfall=4.80"

Area (sf)	CN	Description
7,841	30	Woods, Good, HSG A
7,841		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.2	50	0.0120	0.03		Sheet Flow, A-B
					Woods: Dense underbrush n= 0.800 P2= 3.50"
2.2	62	0.0339	0.46		Shallow Concentrated Flow, B-C
					Forest w/Heavy Litter Kv= 2.5 fps
27.4	112	Total			

Subcatchment 5S: Catchment Area 5

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Type III 24-hr C - 25 YR Rainfall=5.70"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Catchment Area 1	Runoff Area=11,816 sf 0.00% Impervious Runoff Depth>0.15" Flow Length=131' Tc=19.5 min CN=35 Runoff=0.01 cfs 144 cf
Subcatchment 2S: Catchment Area 2	Runoff Area=41,568 sf 0.00% Impervious Runoff Depth>0.02" Flow Length=170' Tc=19.9 min CN=30 Runoff=0.00 cfs 85 cf
Subcatchment 3S: Catchment Area 3	Runoff Area=5,744 sf 6.75% Impervious Runoff Depth>0.65" Tc=5.0 min CN=46 Runoff=0.07 cfs 311 cf
Subcatchment 4S: Catchment Area 4	Runoff Area=32,149 sf 0.00% Impervious Runoff Depth>0.02" Flow Length=231' Tc=34.5 min CN=30 Runoff=0.00 cfs 62 cf
Subcatchment 5S: Catchment Area 5	Runoff Area=7,841 sf 0.00% Impervious Runoff Depth>0.02" Flow Length=112' Tc=27.4 min CN=30 Runoff=0.00 cfs 16 cf
Total Runoff Area = 99,118 sf Runoff Volume = 617 cf Average Runoff Depth = 0.07" 99.61% Pervious = 98,730 sf 0.39% Impervious = 388 sf	

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Type III 24-hr C - 25 YR Rainfall=5.70"

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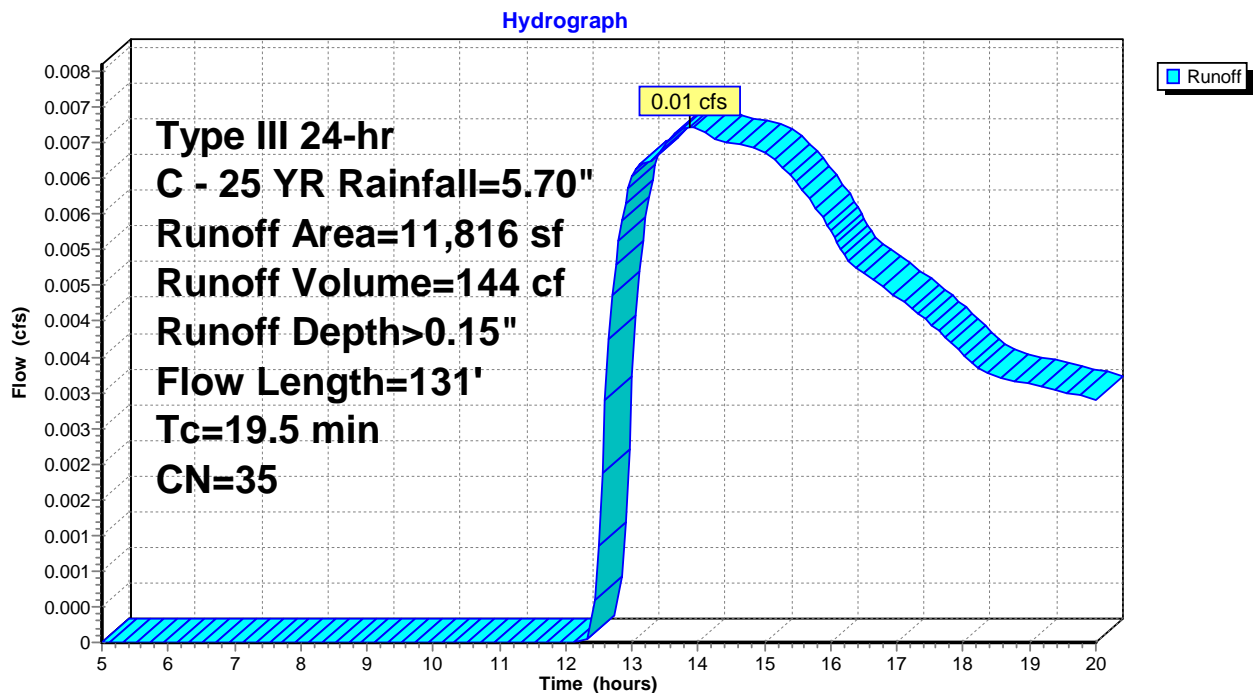
Summary for Subcatchment 1S: Catchment Area 1

Runoff = 0.01 cfs @ 13.88 hrs, Volume= 144 cf, Depth> 0.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr C - 25 YR Rainfall=5.70"

Area (sf)	CN	Description
1,697	68	<50% Grass cover, Poor, HSG A
10,119	30	Woods, Good, HSG A
11,816	35	Weighted Average
11,816		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.5	50	0.0260	0.05		Sheet Flow, A-B
					Woods: Dense underbrush n= 0.800 P2= 3.50"
1.0	81	0.0691	1.31		Shallow Concentrated Flow, B-C
					Woodland Kv= 5.0 fps
19.5	131	Total			

Subcatchment 1S: Catchment Area 1

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Type III 24-hr C - 25 YR Rainfall=5.70"

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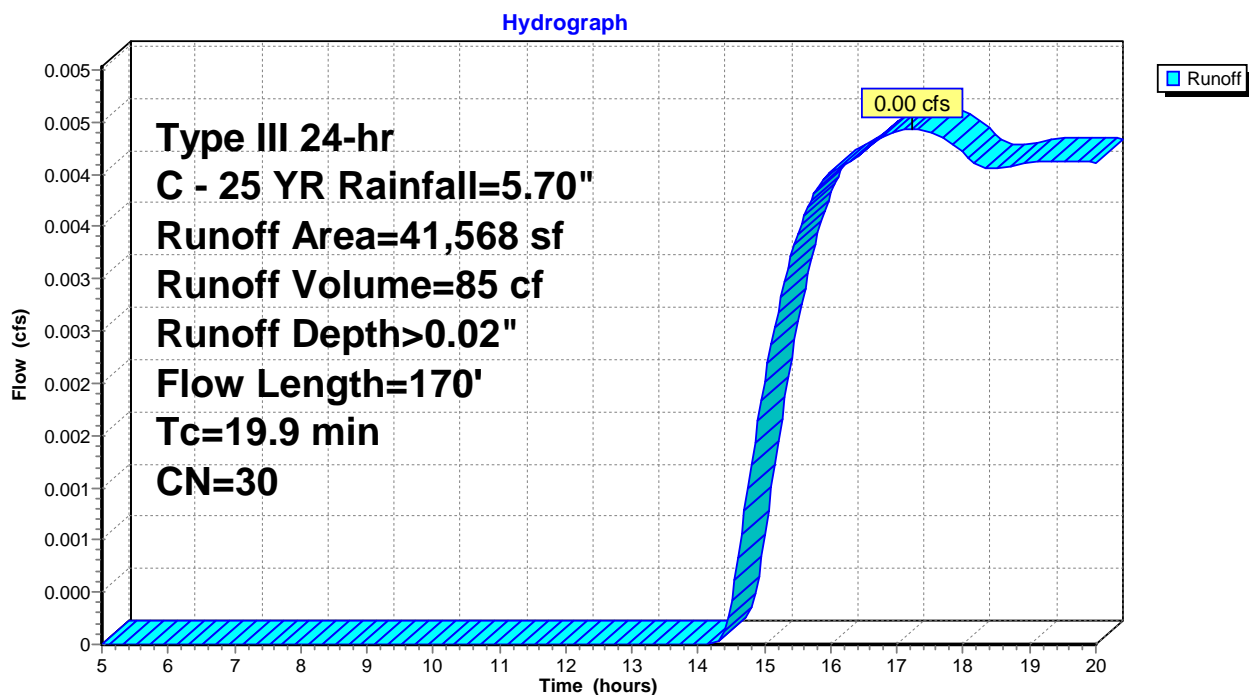
Summary for Subcatchment 2S: Catchment Area 2

Runoff = 0.00 cfs @ 17.22 hrs, Volume= 85 cf, Depth> 0.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr C - 25 YR Rainfall=5.70"

Area (sf)	CN	Description
462	68	<50% Grass cover, Poor, HSG A
41,106	30	Woods, Good, HSG A
41,568	30	Weighted Average
41,568		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.0	50	0.0320	0.05		Sheet Flow, A-B
					Woods: Dense underbrush n= 0.800 P2= 3.50"
2.9	120	0.0750	0.68		Shallow Concentrated Flow, B-C
					Forest w/Heavy Litter Kv= 2.5 fps
19.9	170	Total			

Subcatchment 2S: Catchment Area 2

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Type III 24-hr C - 25 YR Rainfall=5.70"

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Summary for Subcatchment 3S: Catchment Area 3

[49] Hint: $T_c < 2dt$ may require smaller dt

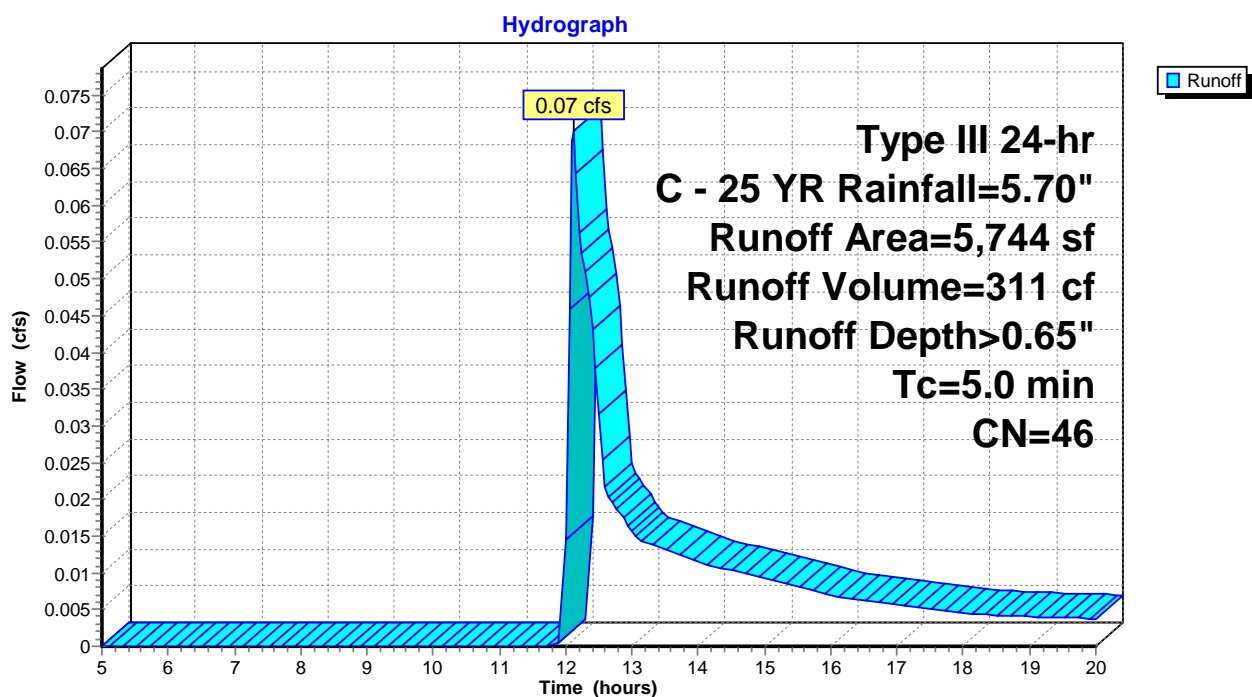
Runoff = 0.07 cfs @ 12.12 hrs, Volume= 311 cf, Depth> 0.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, $dt=0.05$ hrs
Type III 24-hr C - 25 YR Rainfall=5.70"

Area (sf)	CN	Description
1,701	68	<50% Grass cover, Poor, HSG A
3,655	30	Woods, Good, HSG A
388	98	Paved parking, HSG A
5,744	46	Weighted Average
5,356		93.25% Pervious Area
388		6.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, TC

Subcatchment 3S: Catchment Area 3



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Type III 24-hr C - 25 YR Rainfall=5.70"

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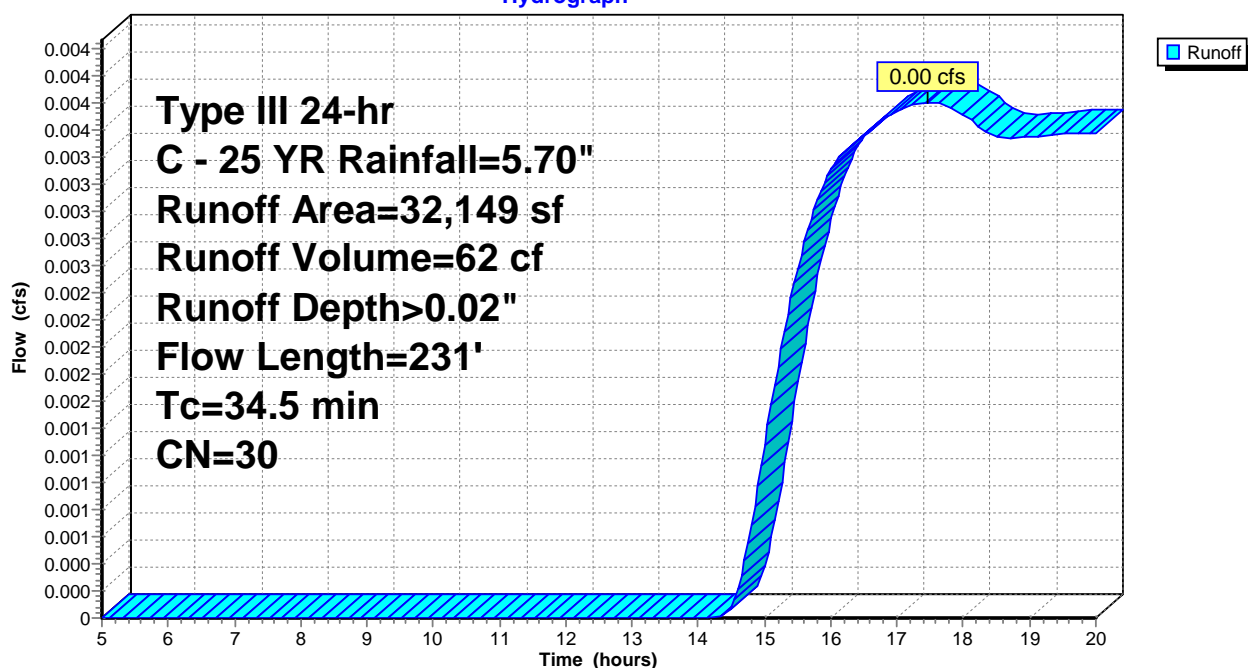
Runoff = 0.00 cfs @ 17.46 hrs, Volume= 62 cf, Depth> 0.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr C - 25 YR Rainfall=5.70"

Area (sf)	CN	Description
32,149	30	Woods, Good, HSG A
32,149		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.6	50	0.0080	0.03		Sheet Flow, A-B Woods: Dense underbrush n= 0.800 P2= 3.50"
4.9	181	0.0608	0.62		Shallow Concentrated Flow, B-C Forest w/Heavy Litter Kv= 2.5 fps
34.5	231	Total			

Hydrograph



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Type III 24-hr C - 25 YR Rainfall=5.70"

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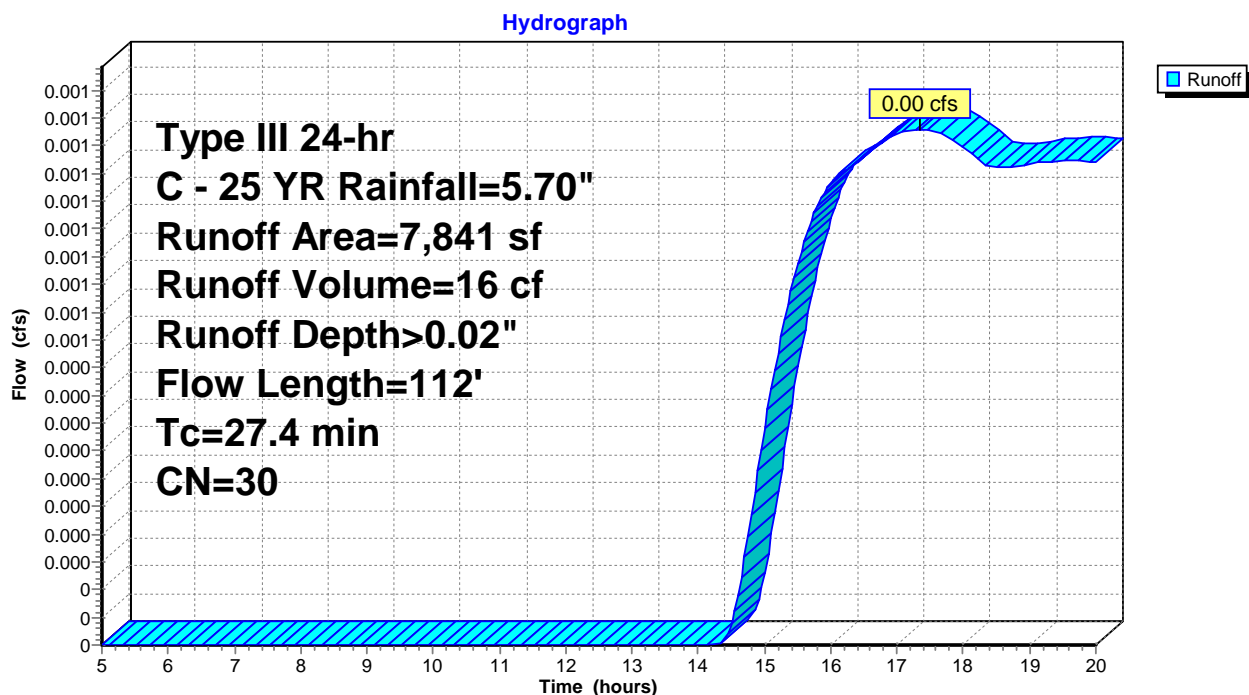
Summary for Subcatchment 5S: Catchment Area 5

Runoff = 0.00 cfs @ 17.34 hrs, Volume= 16 cf, Depth> 0.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr C - 25 YR Rainfall=5.70"

Area (sf)	CN	Description
7,841	30	Woods, Good, HSG A
7,841		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.2	50	0.0120	0.03		Sheet Flow, A-B
					Woods: Dense underbrush n= 0.800 P2= 3.50"
2.2	62	0.0339	0.46		Shallow Concentrated Flow, B-C
					Forest w/Heavy Litter Kv= 2.5 fps
27.4	112	Total			

Subcatchment 5S: Catchment Area 5

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Type III 24-hr D - 100YR Rainfall=7.00"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Catchment Area 1

Runoff Area=11,816 sf 0.00% Impervious Runoff Depth>0.41"
Flow Length=131' Tc=19.5 min CN=35 Runoff=0.04 cfs 400 cf

Subcatchment 2S: Catchment Area 2

Runoff Area=41,568 sf 0.00% Impervious Runoff Depth>0.16"
Flow Length=170' Tc=19.9 min CN=30 Runoff=0.03 cfs 550 cf

Subcatchment 3S: Catchment Area 3

Runoff Area=5,744 sf 6.75% Impervious Runoff Depth>1.17"
Tc=5.0 min CN=46 Runoff=0.16 cfs 562 cf

Subcatchment 4S: Catchment Area 4

Runoff Area=32,149 sf 0.00% Impervious Runoff Depth>0.16"
Flow Length=231' Tc=34.5 min CN=30 Runoff=0.02 cfs 417 cf

Subcatchment 5S: Catchment Area 5

Runoff Area=7,841 sf 0.00% Impervious Runoff Depth>0.16"
Flow Length=112' Tc=27.4 min CN=30 Runoff=0.01 cfs 103 cf

Total Runoff Area = 99,118 sf Runoff Volume = 2,032 cf Average Runoff Depth = 0.25"
99.61% Pervious = 98,730 sf 0.39% Impervious = 388 sf

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Type III 24-hr D - 100YR Rainfall=7.00"

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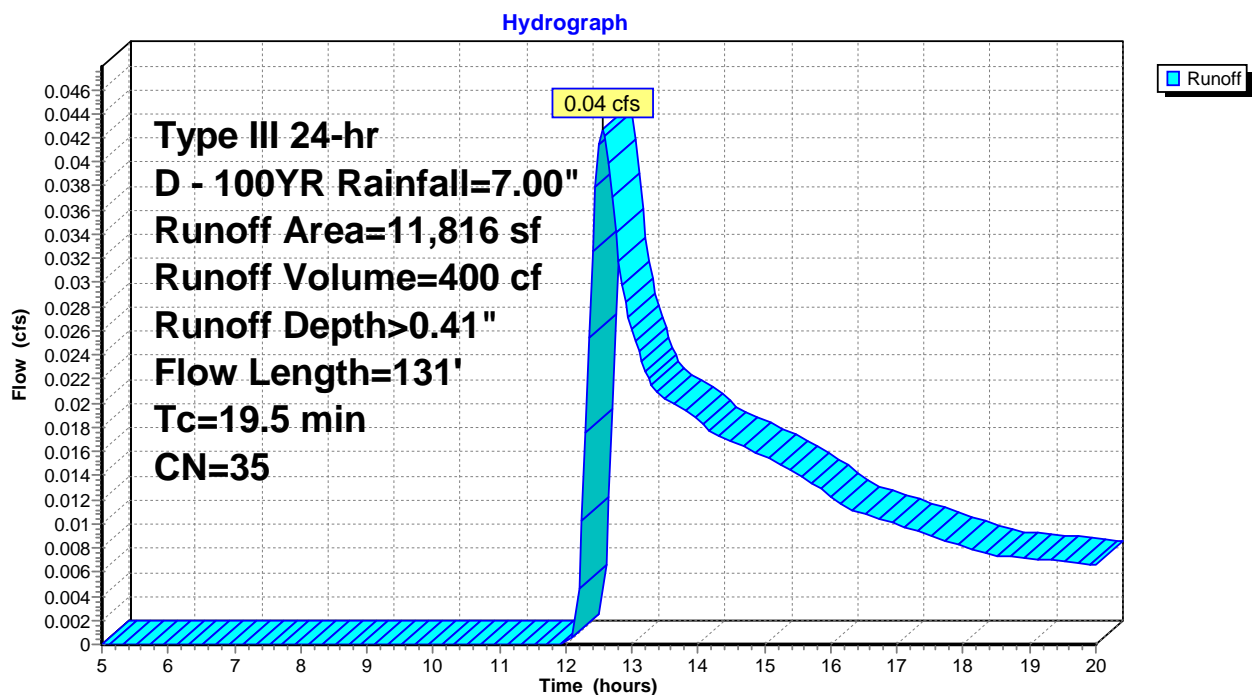
Summary for Subcatchment 1S: Catchment Area 1

Runoff = 0.04 cfs @ 12.56 hrs, Volume= 400 cf, Depth> 0.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr D - 100YR Rainfall=7.00"

Area (sf)	CN	Description
1,697	68	<50% Grass cover, Poor, HSG A
10,119	30	Woods, Good, HSG A
11,816	35	Weighted Average
11,816		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.5	50	0.0260	0.05		Sheet Flow, A-B
					Woods: Dense underbrush n= 0.800 P2= 3.50"
1.0	81	0.0691	1.31		Shallow Concentrated Flow, B-C
					Woodland Kv= 5.0 fps
19.5	131	Total			

Subcatchment 1S: Catchment Area 1

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Type III 24-hr D - 100YR Rainfall=7.00"

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Summary for Subcatchment 2S: Catchment Area 2

Runoff = 0.03 cfs @ 13.99 hrs, Volume= 550 cf, Depth> 0.16"

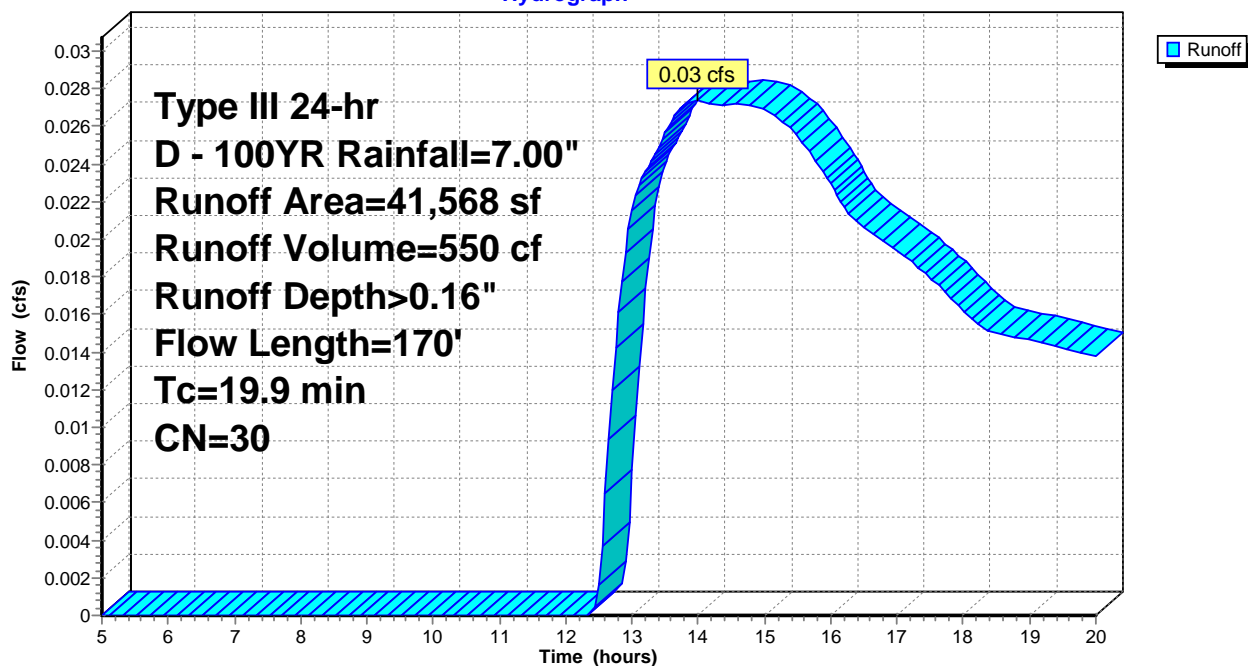
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr D - 100YR Rainfall=7.00"

Area (sf)	CN	Description
462	68	<50% Grass cover, Poor, HSG A
41,106	30	Woods, Good, HSG A
41,568	30	Weighted Average
41,568		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.0	50	0.0320	0.05		Sheet Flow, A-B
					Woods: Dense underbrush n= 0.800 P2= 3.50"
2.9	120	0.0750	0.68		Shallow Concentrated Flow, B-C
					Forest w/Heavy Litter Kv= 2.5 fps
19.9	170	Total			

Subcatchment 2S: Catchment Area 2

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Type III 24-hr D - 100YR Rainfall=7.00"

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Summary for Subcatchment 3S: Catchment Area 3

[49] Hint: $T_c < 2dt$ may require smaller dt

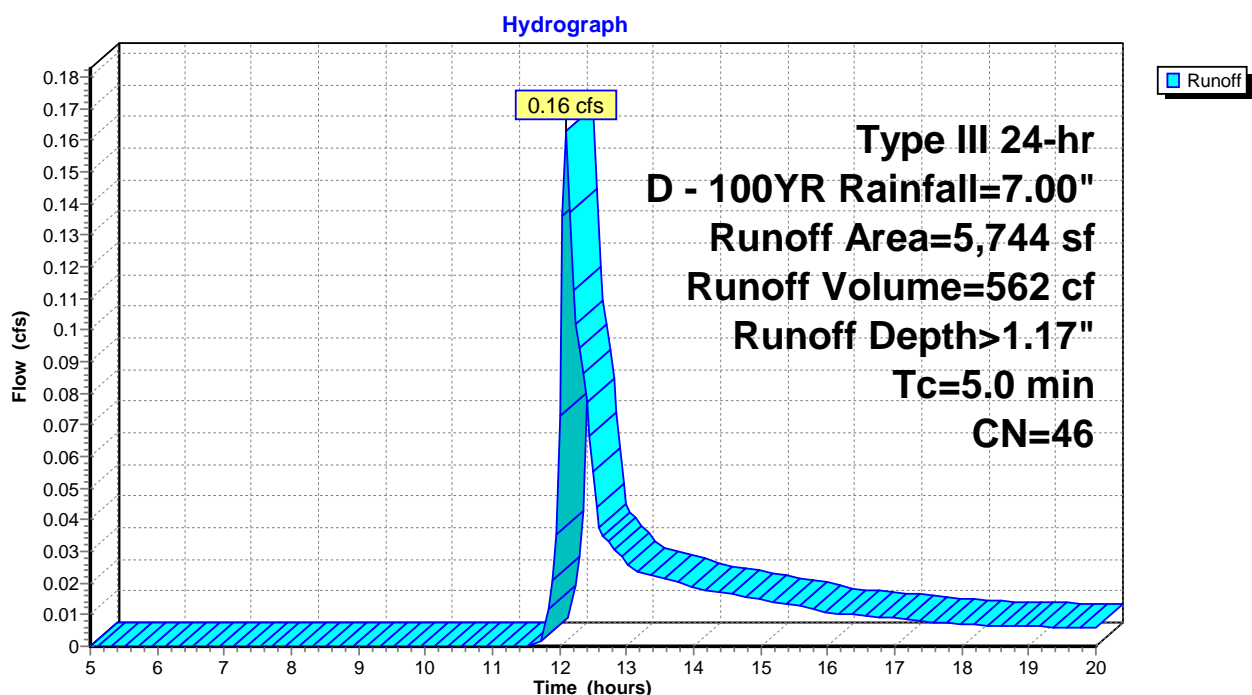
Runoff = 0.16 cfs @ 12.10 hrs, Volume= 562 cf, Depth> 1.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, $dt=0.05$ hrs
Type III 24-hr D - 100YR Rainfall=7.00"

Area (sf)	CN	Description
1,701	68	<50% Grass cover, Poor, HSG A
3,655	30	Woods, Good, HSG A
388	98	Paved parking, HSG A
5,744	46	Weighted Average
5,356		93.25% Pervious Area
388		6.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, TC

Subcatchment 3S: Catchment Area 3



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Type III 24-hr D - 100YR Rainfall=7.00"

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Summary for Subcatchment 4S: Catchment Area 4

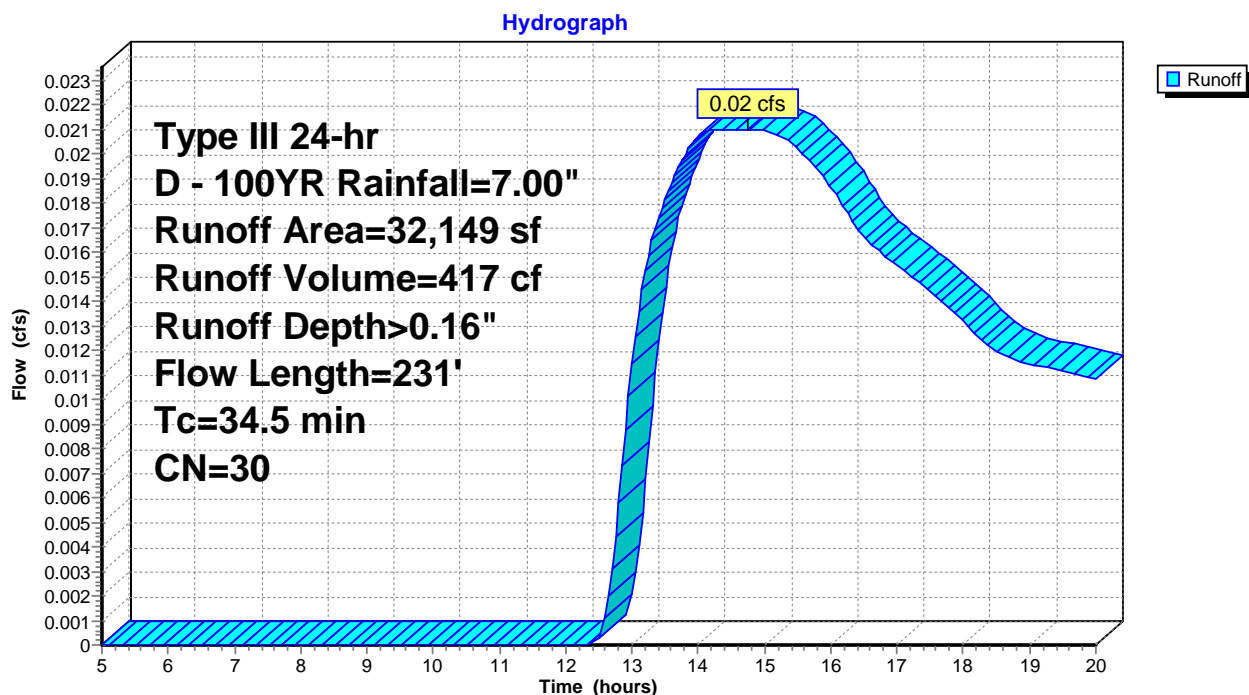
Runoff = 0.02 cfs @ 14.75 hrs, Volume= 417 cf, Depth> 0.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr D - 100YR Rainfall=7.00"

Area (sf)	CN	Description
32,149	30	Woods, Good, HSG A
32,149		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.6	50	0.0080	0.03		Sheet Flow, A-B
					Woods: Dense underbrush n= 0.800 P2= 3.50"
4.9	181	0.0608	0.62		Shallow Concentrated Flow, B-C
					Forest w/Heavy Litter Kv= 2.5 fps
34.5	231	Total			

Subcatchment 4S: Catchment Area 4



474 Main Street - Pre-Development

Type III 24-hr D - 100YR Rainfall=7.00"

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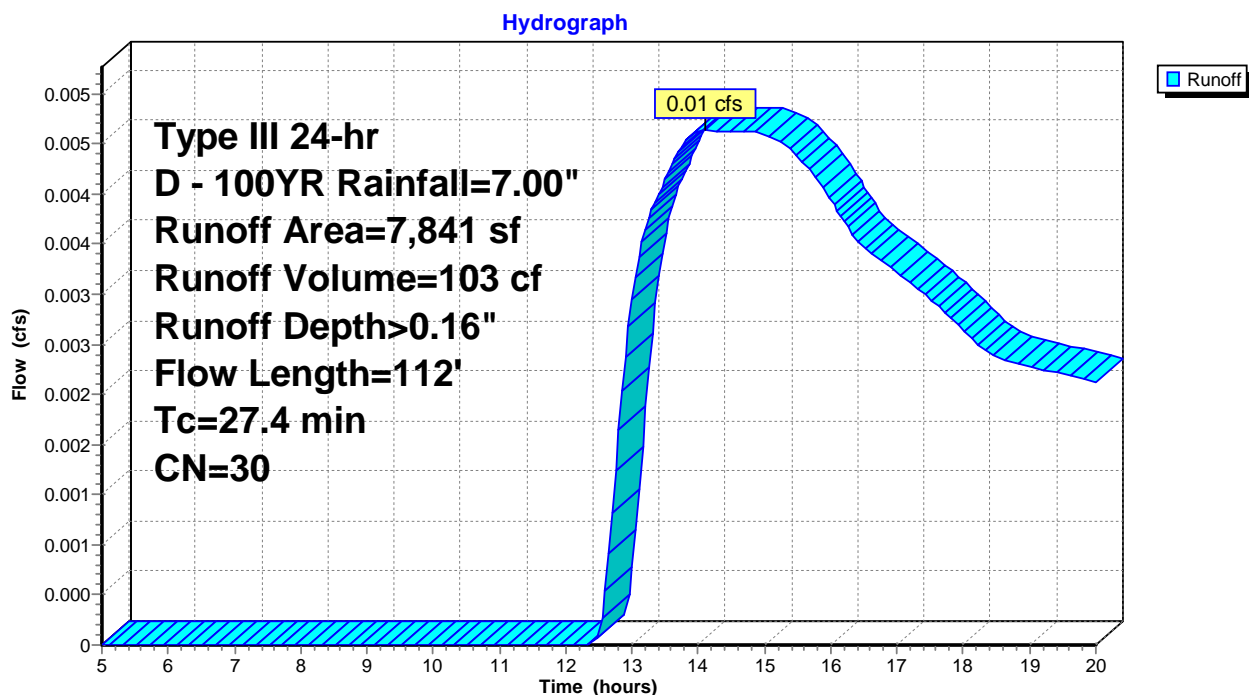
Summary for Subcatchment 5S: Catchment Area 5

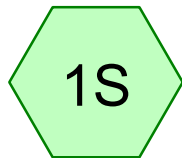
Runoff = 0.01 cfs @ 14.11 hrs, Volume= 103 cf, Depth> 0.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr D - 100YR Rainfall=7.00"

Area (sf)	CN	Description
7,841	30	Woods, Good, HSG A
7,841		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.2	50	0.0120	0.03		Sheet Flow, A-B
					Woods: Dense underbrush n= 0.800 P2= 3.50"
2.2	62	0.0339	0.46		Shallow Concentrated Flow, B-C
					Forest w/Heavy Litter Kv= 2.5 fps
27.4	112	Total			

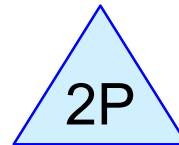
Subcatchment 5S: Catchment Area 5



Catchment Area 1



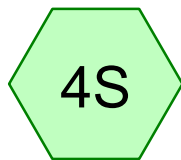
Roof Area



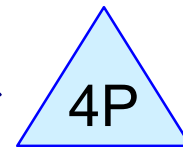
Roof SWMA



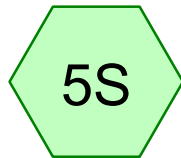
Catchment Area 3



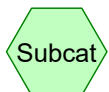
Catchment Area 4



Rain Garden



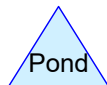
Catchment Area 5



Subcat



Reach



Pond



Link

Routing Diagram for 474 Main Street - Post-Development

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Area Listing (selected nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
4,093	68	<50% Grass cover, Poor, HSG A (1S, 3S, 4S)
6,630	39	>75% Grass cover, Good, HSG A (4S)
4,832	76	Gravel roads, HSG A (4S)
24,327	98	Paved parking, HSG A (3S, 4S)
6,000	98	Roofs, HSG A (2S)
53,552	30	Woods, Good, HSG A (1S, 3S, 4S, 5S)
99,434	55	TOTAL AREA

474 Main Street - Post-Development

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Soil Listing (selected nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
99,434	HSG A	1S, 2S, 3S, 4S, 5S
0	HSG B	
0	HSG C	
0	HSG D	
0	Other	
99,434		TOTAL AREA

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Ground Covers (selected nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Sub Num
4,093	0	0	0	0	4,093	<50% Grass cover, Poor	
6,630	0	0	0	0	6,630	>75% Grass cover, Good	
4,832	0	0	0	0	4,832	Gravel roads	
24,327	0	0	0	0	24,327	Paved parking	
6,000	0	0	0	0	6,000	Roofs	
53,552	0	0	0	0	53,552	Woods, Good	
99,434	0	0	0	0	99,434	TOTAL AREA	

474 Main Street - Post-Development*Type III 24-hr A - 2 YR Rainfall=3.50"*

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Catchment Area 1	Runoff Area=11,425 sf 0.00% Impervious Runoff Depth=0.00" Flow Length=131' Tc=19.5 min CN=33 Runoff=0.00 cfs 0 cf
Subcatchment2S: Roof Area	Runoff Area=6,000 sf 100.00% Impervious Runoff Depth>3.05" Tc=5.0 min CN=98 Runoff=0.47 cfs 1,524 cf
Subcatchment3S: Catchment Area 3	Runoff Area=6,322 sf 6.14% Impervious Runoff Depth>0.01" Tc=5.0 min CN=41 Runoff=0.00 cfs 8 cf
Subcatchment4S: Catchment Area 4	Runoff Area=67,846 sf 35.28% Impervious Runoff Depth>0.42" Flow Length=199' Tc=33.3 min CN=59 Runoff=0.33 cfs 2,386 cf
Subcatchment5S: Catchment Area 5	Runoff Area=7,841 sf 0.00% Impervious Runoff Depth=0.00" Flow Length=112' Tc=27.4 min CN=30 Runoff=0.00 cfs 0 cf
Pond 2P: Roof SWMA	Peak Elev=86.62' Storage=394 cf Inflow=0.47 cfs 1,524 cf Outflow=0.11 cfs 1,523 cf
Pond 4P: Rain Garden	Peak Elev=80.92' Storage=1,167 cf Inflow=0.33 cfs 2,386 cf Outflow=0.06 cfs 1,453 cf

Total Runoff Area = 99,434 sf Runoff Volume = 3,919 cf Average Runoff Depth = 0.47"
69.50% Pervious = 69,107 sf 30.50% Impervious = 30,327 sf

474 Main Street - Post-Development

Type III 24-hr A - 2 YR Rainfall=3.50"

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Summary for Subcatchment 1S: Catchment Area 1

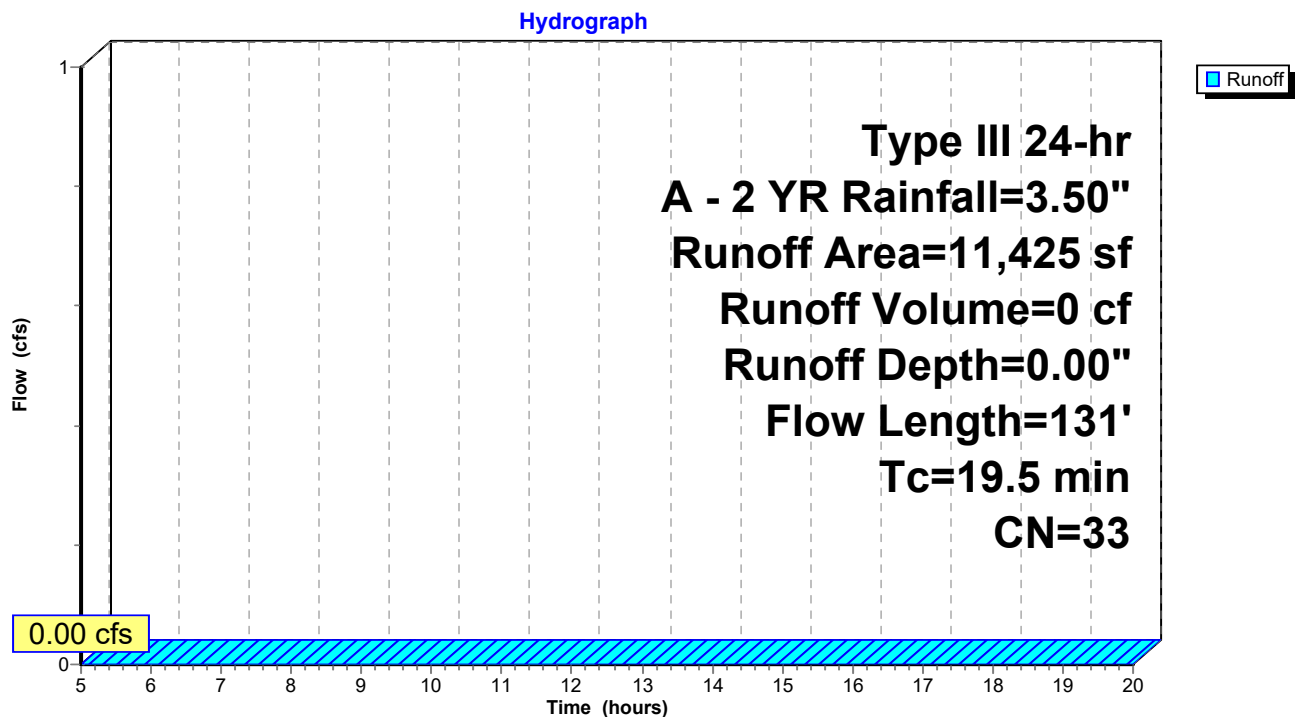
[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0 cf, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr A - 2 YR Rainfall=3.50"

Area (sf)	CN	Description
827	68	<50% Grass cover, Poor, HSG A
10,598	30	Woods, Good, HSG A
11,425	33	Weighted Average
11,425		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.5	50	0.0260	0.05		Sheet Flow, A-B
					Woods: Dense underbrush n= 0.800 P2= 3.50"
1.0	81	0.0691	1.31		Shallow Concentrated Flow, B-C
					Woodland Kv= 5.0 fps
19.5	131	Total			

Subcatchment 1S: Catchment Area 1

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Type III 24-hr A - 2 YR Rainfall=3.50"

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Summary for Subcatchment 2S: Roof Area

[49] Hint: $T_c < 2dt$ may require smaller dt

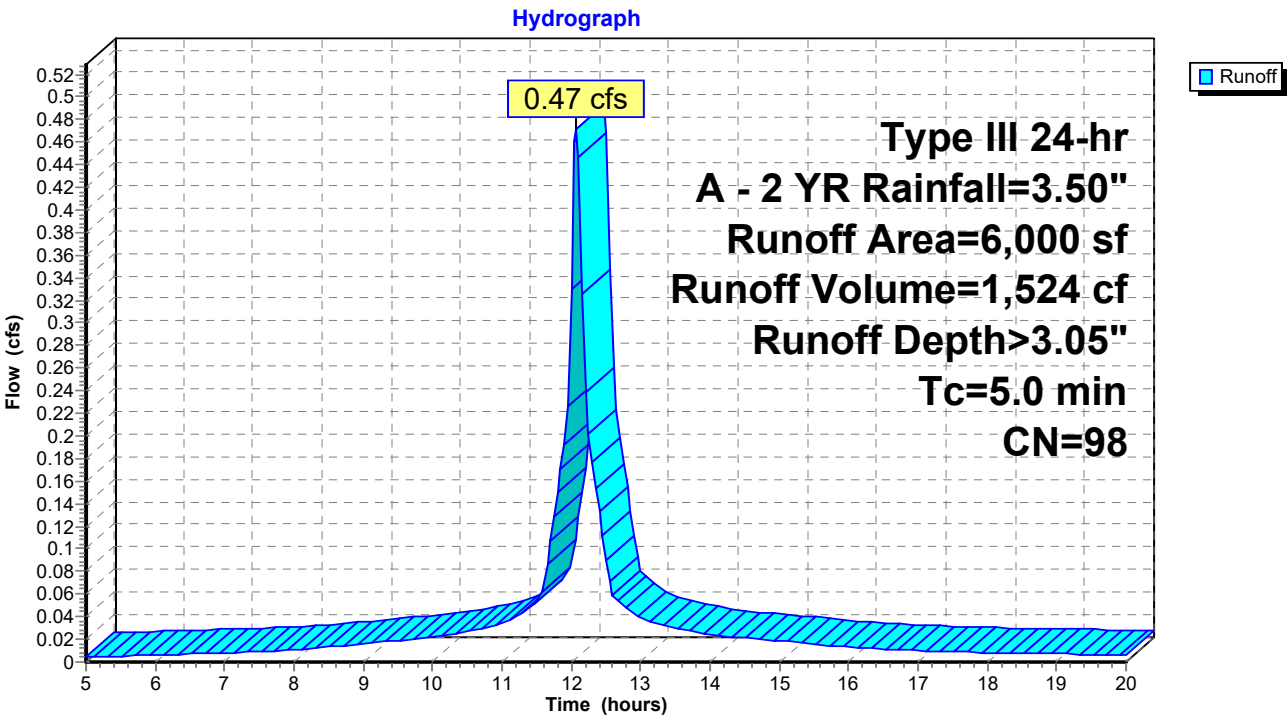
Runoff = 0.47 cfs @ 12.07 hrs, Volume= 1,524 cf, Depth> 3.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, $dt=0.05$ hrs
Type III 24-hr A - 2 YR Rainfall=3.50"

Area (sf)	CN	Description
6,000	98	Roofs, HSG A
6,000		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 2S: Roof Area



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Type III 24-hr A - 2 YR Rainfall=3.50"

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Summary for Subcatchment 3S: Catchment Area 3

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.00 cfs @ 17.05 hrs, Volume= 8 cf, Depth> 0.01"

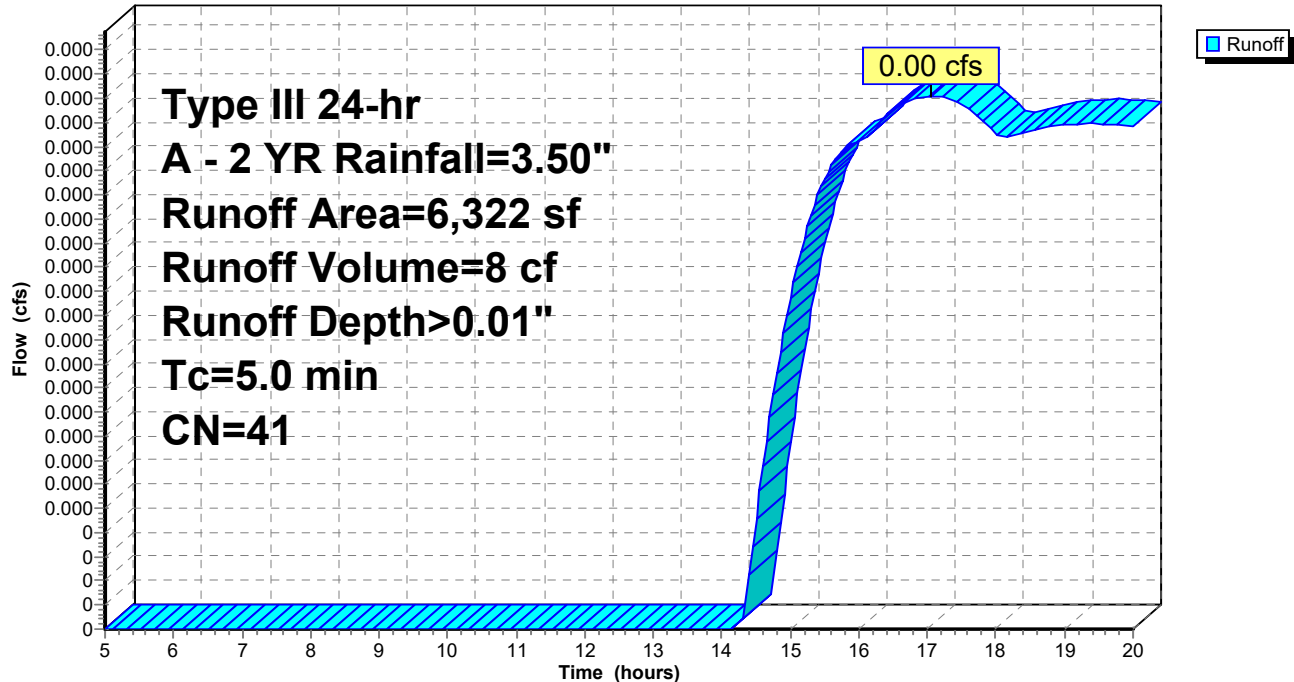
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, $dt=0.05$ hrs
Type III 24-hr A - 2 YR Rainfall=3.50"

Area (sf)	CN	Description
1,203	68	<50% Grass cover, Poor, HSG A
4,731	30	Woods, Good, HSG A
388	98	Paved parking, HSG A
6,322	41	Weighted Average
5,934		93.86% Pervious Area
388		6.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, TC

Subcatchment 3S: Catchment Area 3

Hydrograph



474 Main Street - Post-Development

Type III 24-hr A - 2 YR Rainfall=3.50"

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Summary for Subcatchment 4S: Catchment Area 4

Runoff = 0.33 cfs @ 12.61 hrs, Volume= 2,386 cf, Depth> 0.42"

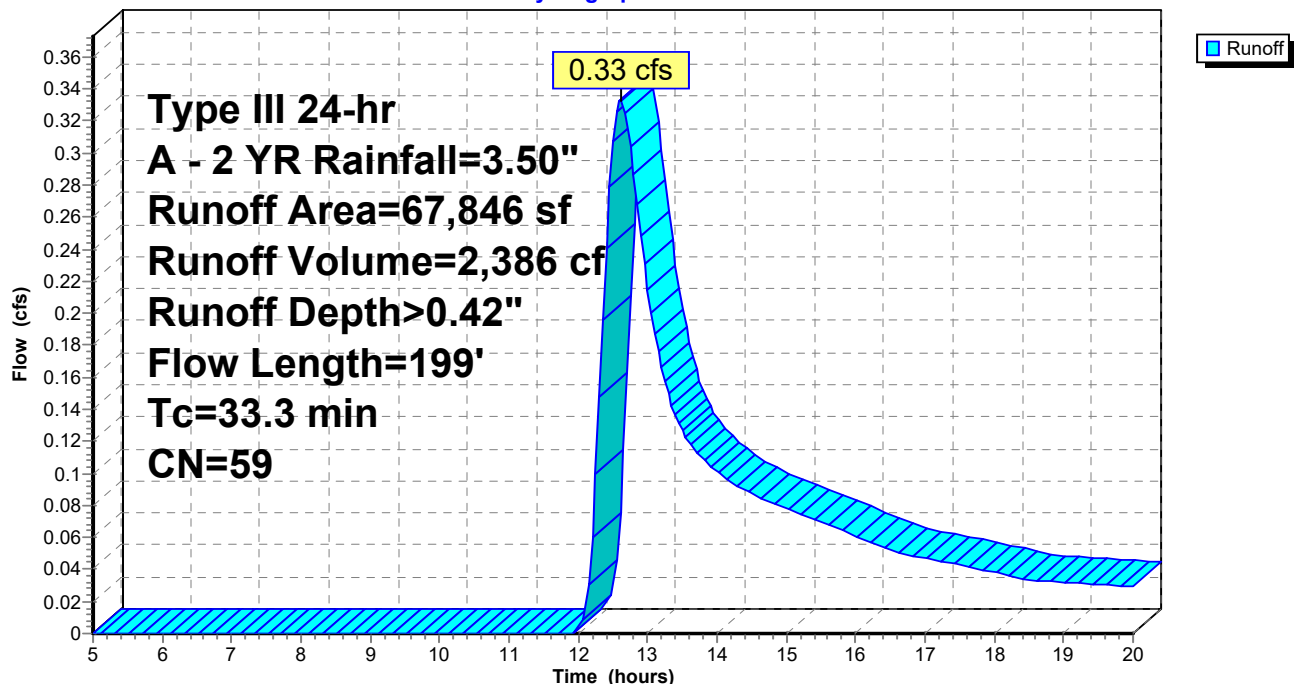
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr A - 2 YR Rainfall=3.50"

Area (sf)	CN	Description
30,382	30	Woods, Good, HSG A
23,939	98	Paved parking, HSG A
6,630	39	>75% Grass cover, Good, HSG A
4,832	76	Gravel roads, HSG A
2,063	68	<50% Grass cover, Poor, HSG A
67,846	59	Weighted Average
43,907		64.72% Pervious Area
23,939		35.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.6	50	0.0080	0.03		Sheet Flow, A-B Woods: Dense underbrush n= 0.800 P2= 3.50"
3.5	82	0.0250	0.40		Shallow Concentrated Flow, B-C Forest w/Heavy Litter Kv= 2.5 fps
0.2	67	0.1300	7.32		Shallow Concentrated Flow, C-D Paved Kv= 20.3 fps
33.3	199	Total			

Subcatchment 4S: Catchment Area 4

Hydrograph



474 Main Street - Post-Development

Type III 24-hr A - 2 YR Rainfall=3.50"

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Summary for Subcatchment 5S: Catchment Area 5

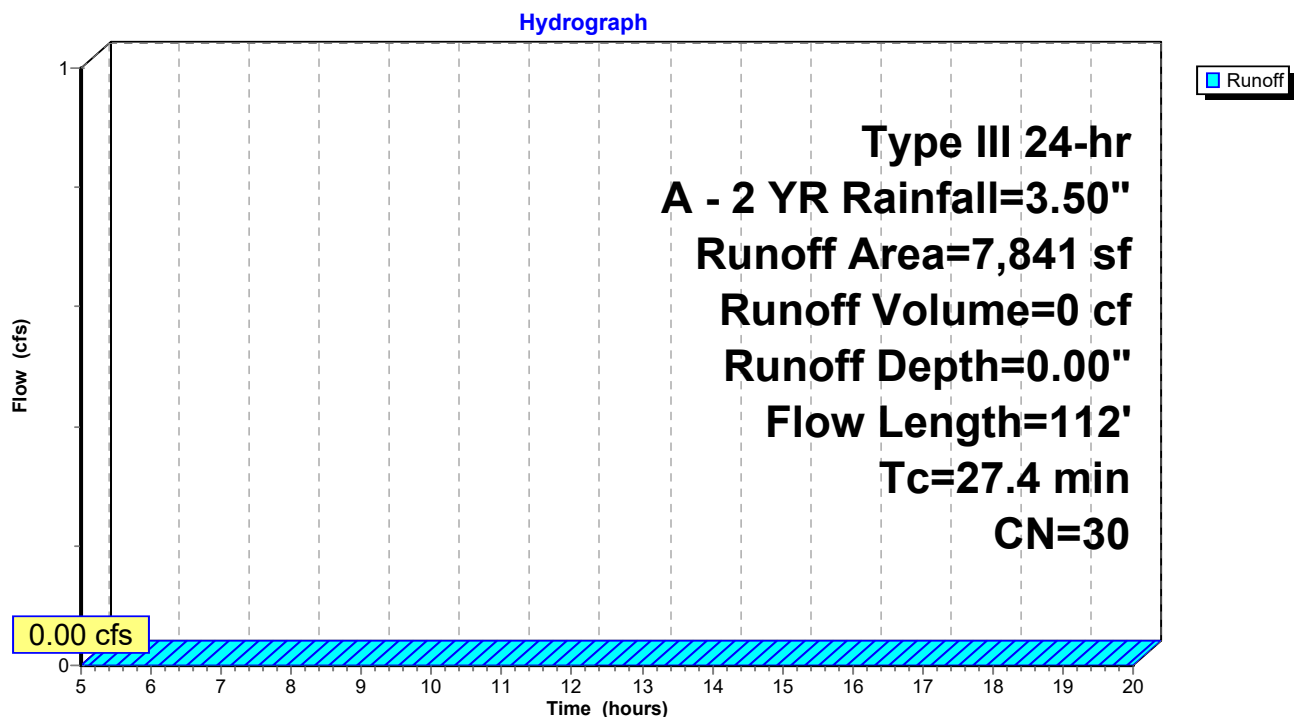
[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0 cf, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr A - 2 YR Rainfall=3.50"

Area (sf)	CN	Description
7,841	30	Woods, Good, HSG A
7,841		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.2	50	0.0120	0.03		Sheet Flow, A-B
					Woods: Dense underbrush n= 0.800 P2= 3.50"
2.2	62	0.0339	0.46		Shallow Concentrated Flow, B-C
					Forest w/Heavy Litter Kv= 2.5 fps
27.4	112	Total			

Subcatchment 5S: Catchment Area 5

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Type III 24-hr A - 2 YR Rainfall=3.50"

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Summary for Pond 2P: Roof SWMA

[82] Warning: Early inflow requires earlier time span

Inflow Area = 6,000 sf, 100.00% Impervious, Inflow Depth > 3.05" for A - 2 YR event
 Inflow = 0.47 cfs @ 12.07 hrs, Volume= 1,524 cf
 Outflow = 0.11 cfs @ 12.46 hrs, Volume= 1,523 cf, Atten= 77%, Lag= 23.1 min
 Discarded = 0.11 cfs @ 12.46 hrs, Volume= 1,523 cf

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 86.62' @ 12.46 hrs Surf.Area= 340 sf Storage= 394 cf

Plug-Flow detention time= 23.7 min calculated for 1,518 cf (100% of inflow)
 Center-of-Mass det. time= 23.2 min (760.2 - 737.0)

Volume	Invert	Avail.Storage	Storage Description
#1	84.00'	769 cf	10.00'W x 34.00'L x 8.00'H Prismatic 2,720 cf Overall - 796 cf Embedded = 1,924 cf x 40.0% Voids
#2	86.00'	679 cf	6.00'D x 6.00'H Vertical Cone/Cylinder x 4 Inside #1 796 cf Overall - 3.0" Wall Thickness = 679 cf
		1,448 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	84.00'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.11 cfs @ 12.46 hrs HW=86.62' (Free Discharge)

↑ **1=Exfiltration** (Exfiltration Controls 0.11 cfs)

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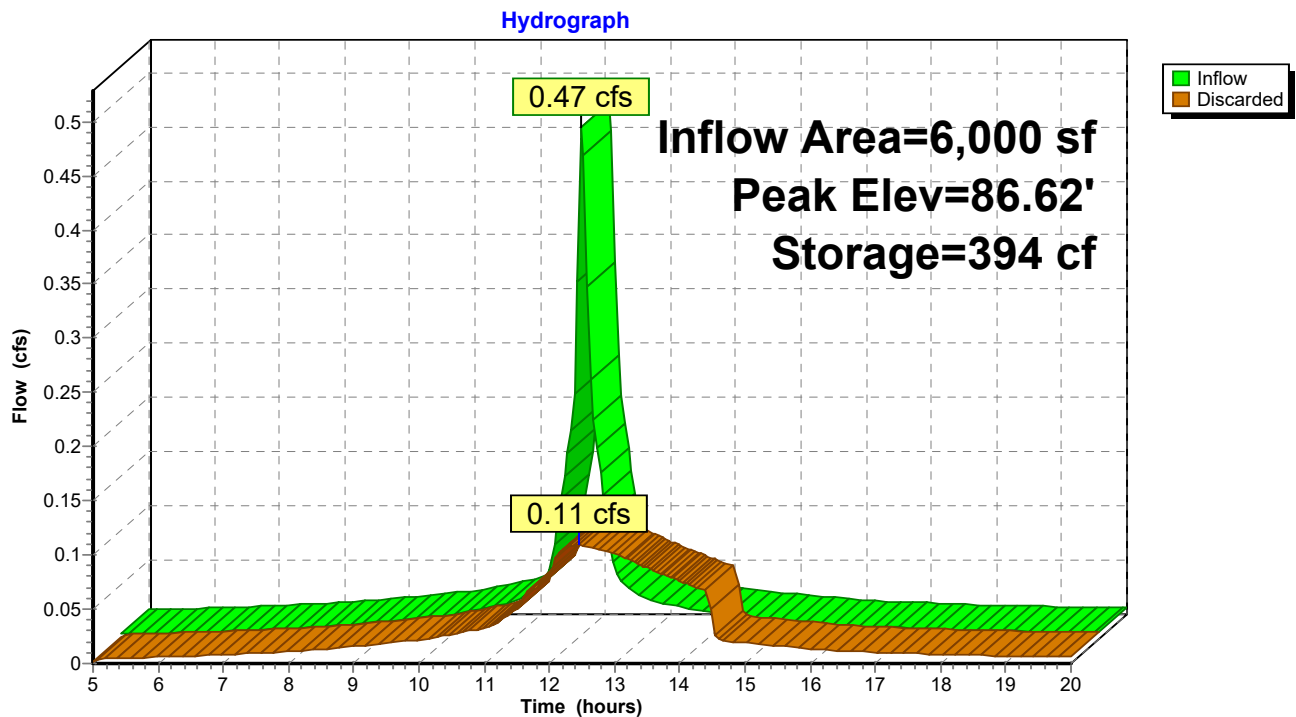
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Type III 24-hr A - 2 YR Rainfall=3.50"

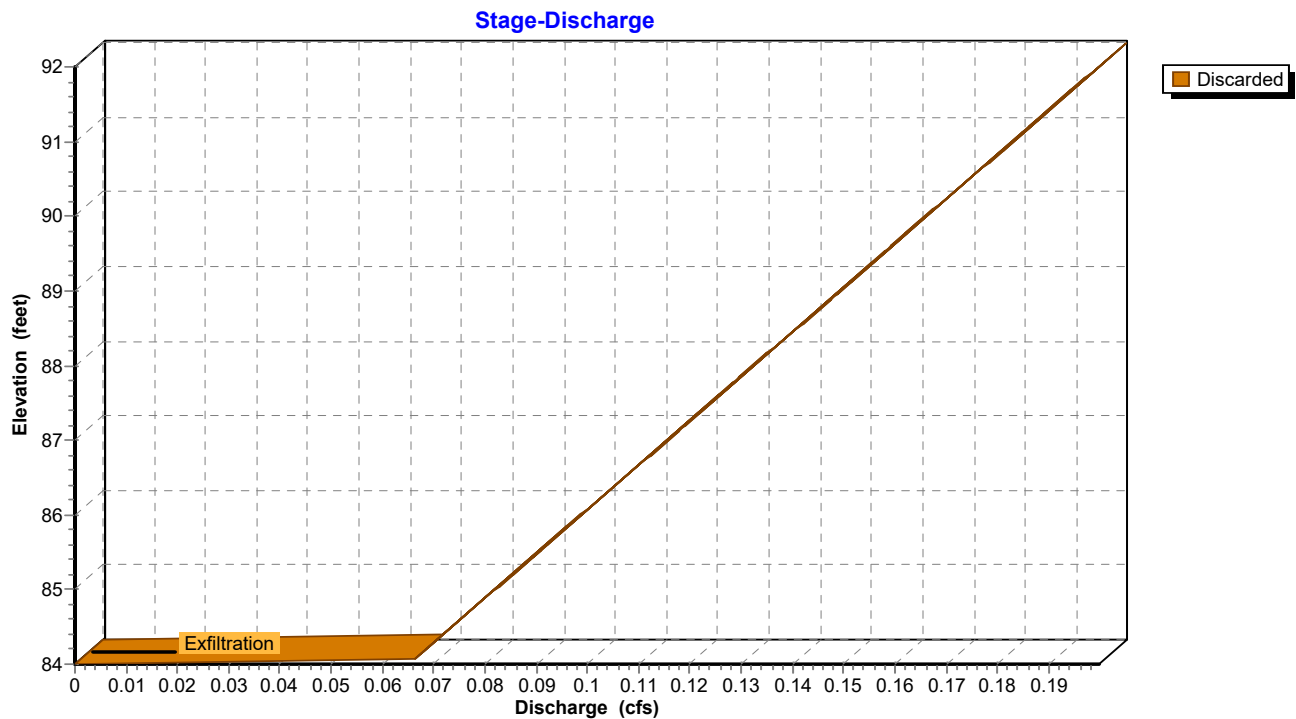
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Pond 2P: Roof SWMA



Pond 2P: Roof SWMA



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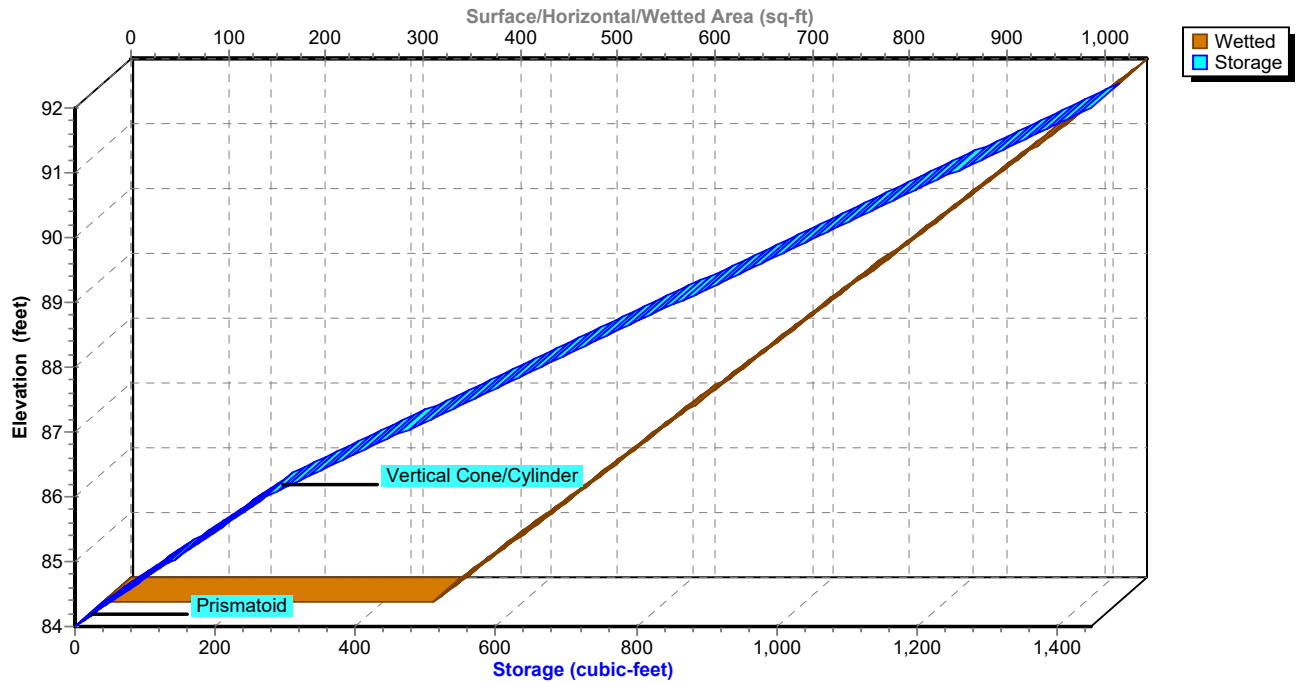
Type III 24-hr A - 2 YR Rainfall=3.50"

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Pond 2P: Roof SWMA

Stage-Area-Storage



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Type III 24-hr A - 2 YR Rainfall=3.50"

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Summary for Pond 4P: Rain Garden

Inflow Area = 67,846 sf, 35.28% Impervious, Inflow Depth > 0.42" for A - 2 YR event
 Inflow = 0.33 cfs @ 12.61 hrs, Volume= 2,386 cf
 Outflow = 0.06 cfs @ 16.06 hrs, Volume= 1,453 cf, Atten= 82%, Lag= 207.0 min
 Discarded = 0.06 cfs @ 16.06 hrs, Volume= 1,453 cf

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 80.92' @ 16.06 hrs Surf.Area= 1,296 sf Storage= 1,167 cf

Plug-Flow detention time= 194.7 min calculated for 1,448 cf (61% of inflow)
 Center-of-Mass det. time= 108.9 min (984.3 - 875.4)

Volume	Invert	Avail.Storage	Storage Description
#1	87.66'	3,876 cf	Custom Stage Data (Irregular) Listed below (Recalc) -Impervious 36.00'W x 36.00'L x 8.00'H Prismaoid 10,368 cf Overall - 3,186 cf Embedded = 7,182 cf x 40.0% Voids 6.00'D x 6.00'H Vertical Cone/Cylinder x 16 Inside #2 3,186 cf Overall - 3.0" Wall Thickness = 2,714 cf
#2	78.75'	2,873 cf	
#3	80.75'	2,714 cf	
		9,463 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
87.66	359	73.0	0.0	0	0	359
87.67	359	73.0	40.0	1	1	360
88.99	359	73.0	40.0	190	191	456
89.00	359	73.0	30.0	1	192	457
90.74	359	73.0	30.0	187	379	584
90.75	359	73.0	30.0	1	381	585
90.99	359	73.0	30.0	26	406	602
91.00	359	73.0	100.0	4	410	603
92.00	606	91.9	100.0	477	887	864
93.00	910	110.7	100.0	753	1,640	1,184
94.00	1,270	129.6	100.0	1,085	2,725	1,565
94.80	1,614	145.3	100.0	1,151	3,876	1,925

Device	Routing	Invert	Outlet Devices
#1	Discarded	78.75'	8.270 in/hr Exfiltration over Wetted area from 78.75' - 90.00' Excluded Wetted area = 1,296 sf

Discarded OutFlow Max=0.06 cfs @ 16.06 hrs HW=80.92' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.06 cfs)

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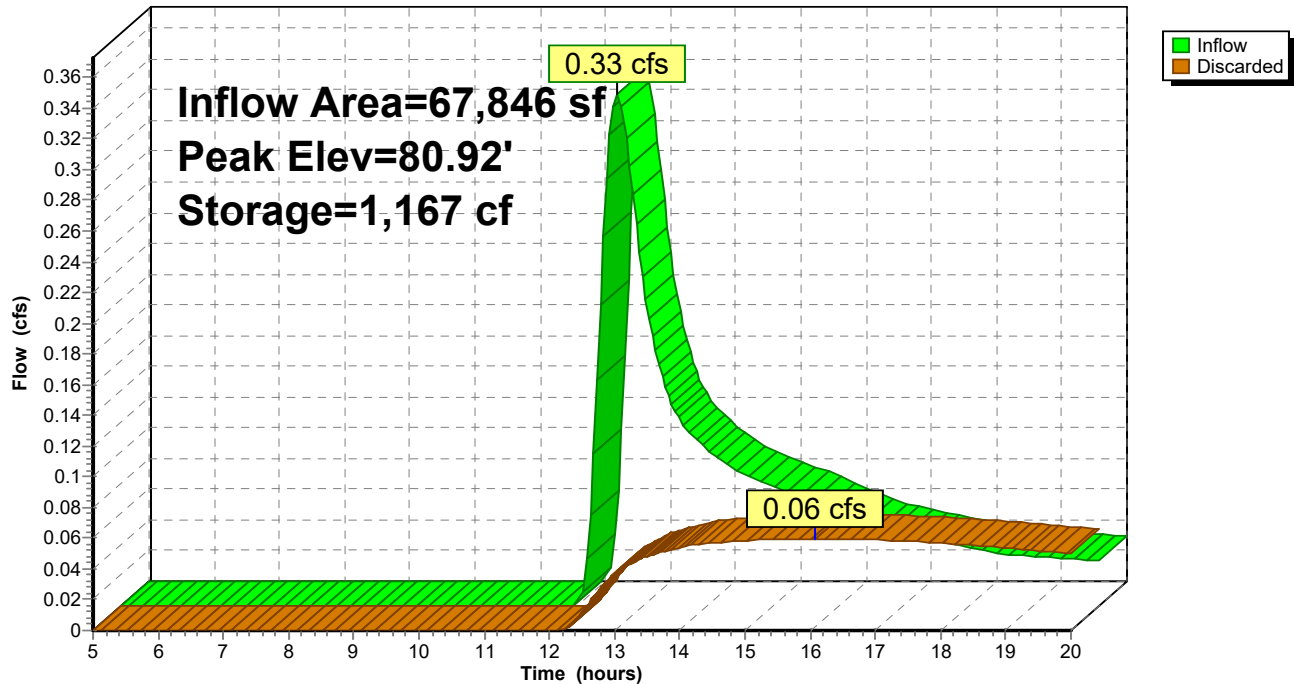
Type III 24-hr A - 2 YR Rainfall=3.50"

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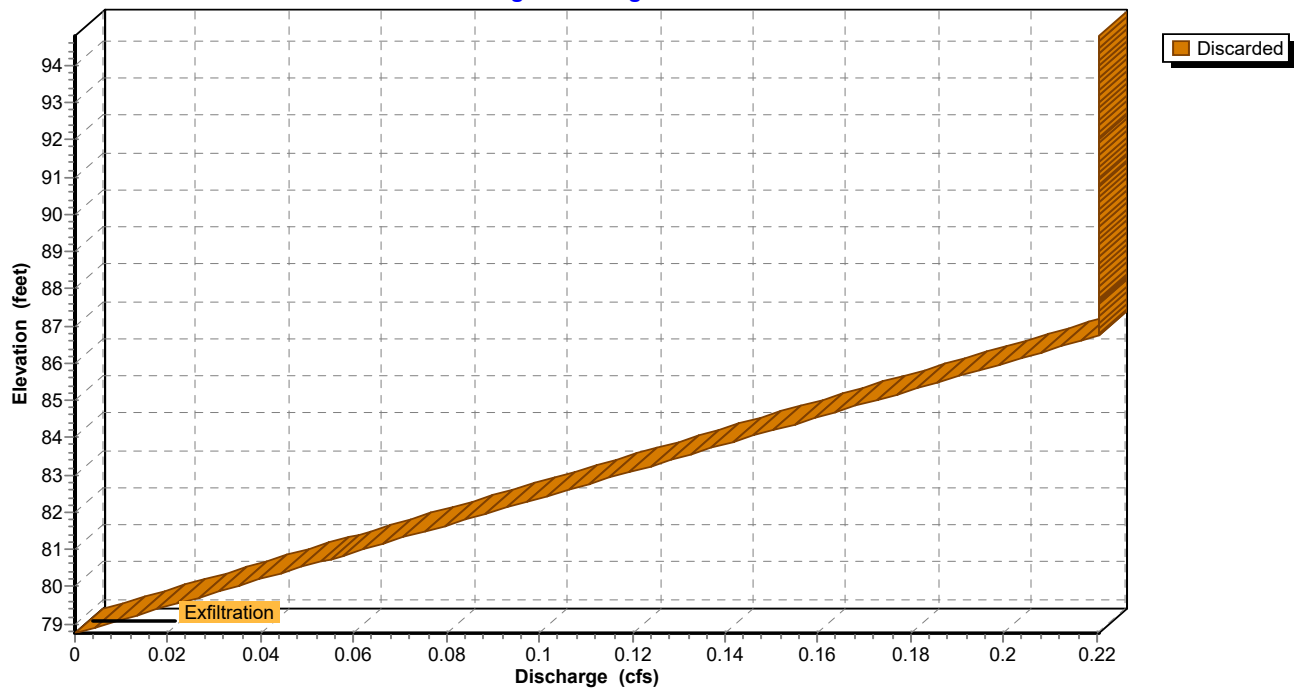
Pond 4P: Rain Garden

Hydrograph



Pond 4P: Rain Garden

Stage-Discharge



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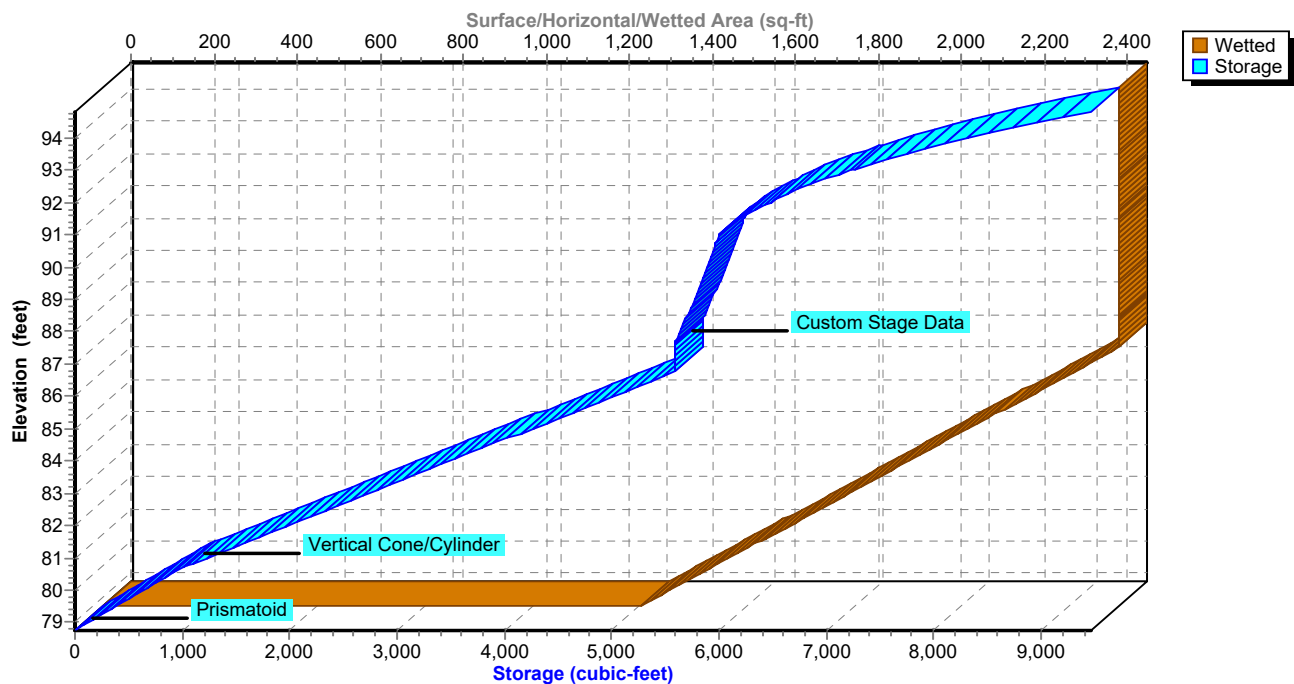
Type III 24-hr A - 2 YR Rainfall=3.50"

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Pond 4P: Rain Garden

Stage-Area-Storage



474 Main Street - Post-Development*Type III 24-hr B - 10 YR Rainfall=4.80"*

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Catchment Area 1	Runoff Area=11,425 sf 0.00% Impervious Runoff Depth>0.01" Flow Length=131' Tc=19.5 min CN=33 Runoff=0.00 cfs 12 cf
Subcatchment2S: Roof Area	Runoff Area=6,000 sf 100.00% Impervious Runoff Depth>4.24" Tc=5.0 min CN=98 Runoff=0.65 cfs 2,118 cf
Subcatchment3S: Catchment Area 3	Runoff Area=6,322 sf 6.14% Impervious Runoff Depth>0.18" Tc=5.0 min CN=41 Runoff=0.01 cfs 96 cf
Subcatchment4S: Catchment Area 4	Runoff Area=67,846 sf 35.28% Impervious Runoff Depth>0.99" Flow Length=199' Tc=33.3 min CN=59 Runoff=0.96 cfs 5,621 cf
Subcatchment5S: Catchment Area 5	Runoff Area=7,841 sf 0.00% Impervious Runoff Depth=0.00" Flow Length=112' Tc=27.4 min CN=30 Runoff=0.00 cfs 0 cf
Pond 2P: Roof SWMA	Peak Elev=87.76' Storage=618 cf Inflow=0.65 cfs 2,118 cf Outflow=0.13 cfs 2,117 cf
Pond 4P: Rain Garden	Peak Elev=83.40' Storage=3,049 cf Inflow=0.96 cfs 5,621 cf Outflow=0.13 cfs 3,192 cf

Total Runoff Area = 99,434 sf Runoff Volume = 7,847 cf Average Runoff Depth = 0.95"
69.50% Pervious = 69,107 sf 30.50% Impervious = 30,327 sf

474 Main Street - Post-Development

Type III 24-hr B - 10 YR Rainfall=4.80"

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Summary for Subcatchment 1S: Catchment Area 1

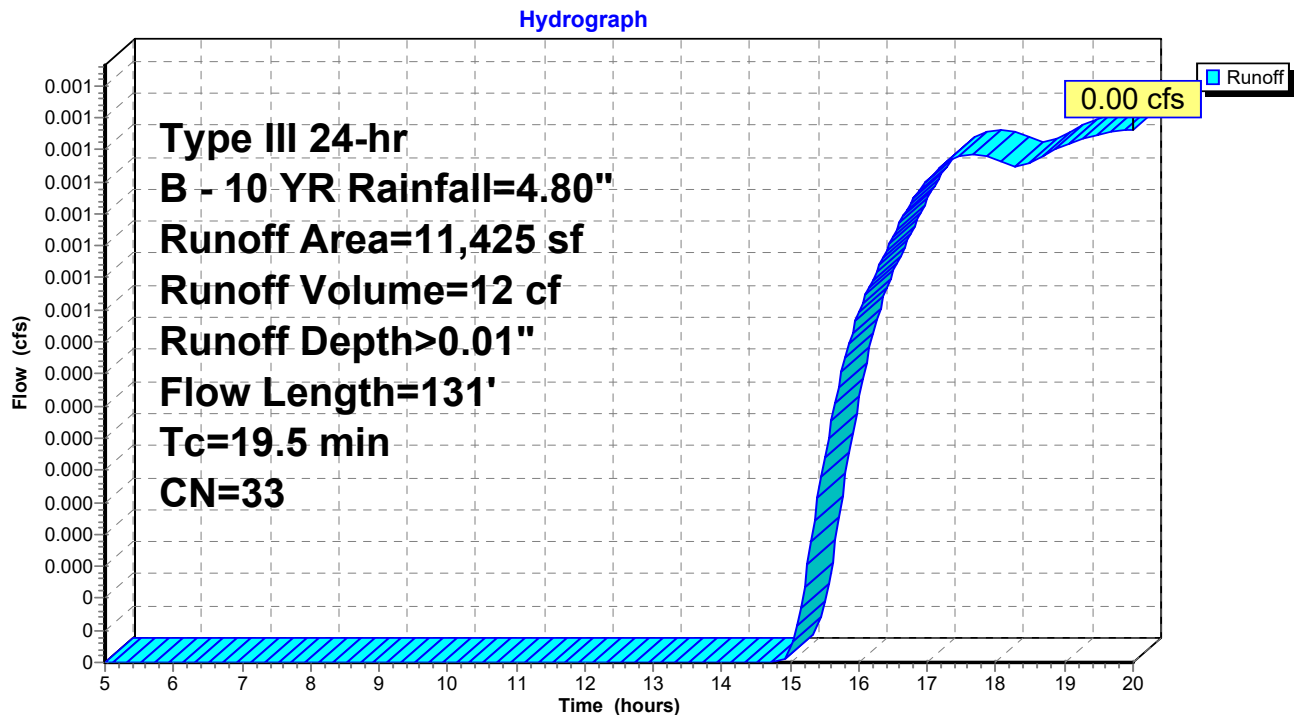
[73] Warning: Peak may fall outside time span

Runoff = 0.00 cfs @ 20.00 hrs, Volume= 12 cf, Depth> 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr B - 10 YR Rainfall=4.80"

Area (sf)	CN	Description
827	68	<50% Grass cover, Poor, HSG A
10,598	30	Woods, Good, HSG A
11,425	33	Weighted Average
11,425		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.5	50	0.0260	0.05		Sheet Flow, A-B
					Woods: Dense underbrush n= 0.800 P2= 3.50"
1.0	81	0.0691	1.31		Shallow Concentrated Flow, B-C
					Woodland Kv= 5.0 fps
19.5	131	Total			

Subcatchment 1S: Catchment Area 1

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Type III 24-hr B - 10 YR Rainfall=4.80"

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Summary for Subcatchment 2S: Roof Area

[49] Hint: $T_c < 2dt$ may require smaller dt

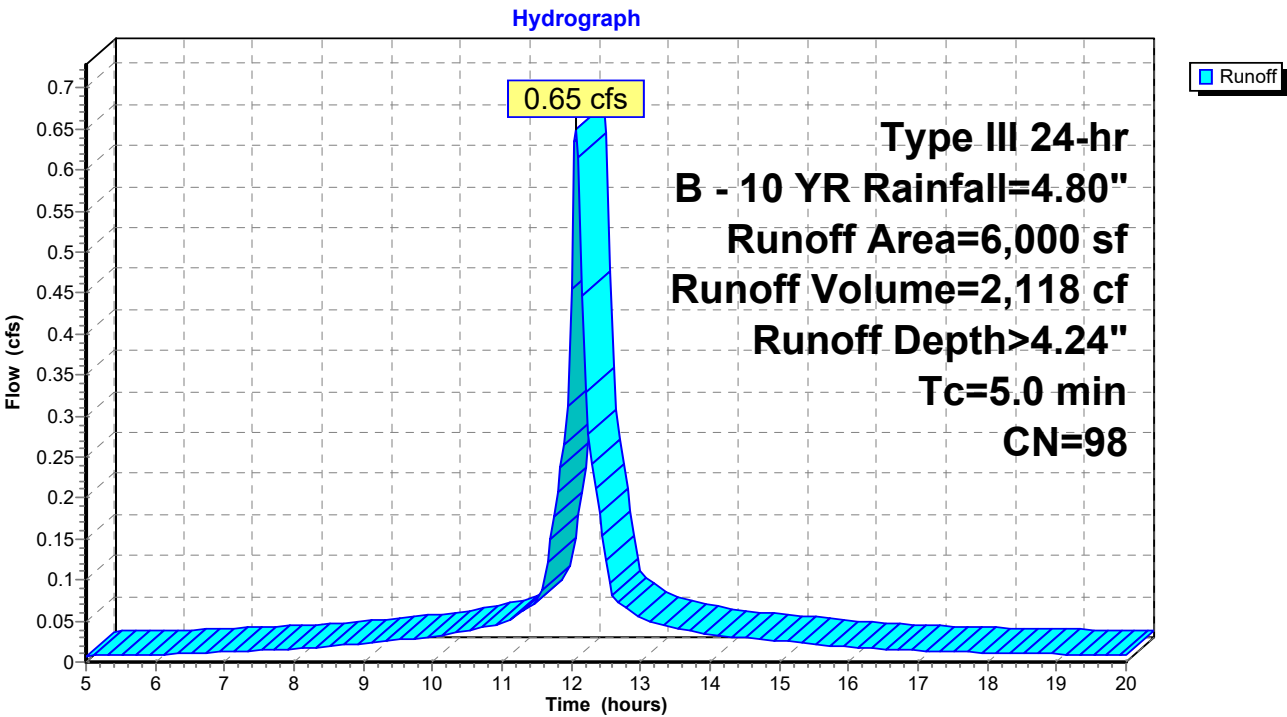
Runoff = 0.65 cfs @ 12.07 hrs, Volume= 2,118 cf, Depth> 4.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, $dt=0.05$ hrs
Type III 24-hr B - 10 YR Rainfall=4.80"

Area (sf)	CN	Description
6,000	98	Roofs, HSG A
6,000		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 2S: Roof Area



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Type III 24-hr B - 10 YR Rainfall=4.80"

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Summary for Subcatchment 3S: Catchment Area 3

[49] Hint: $T_c < 2dt$ may require smaller dt

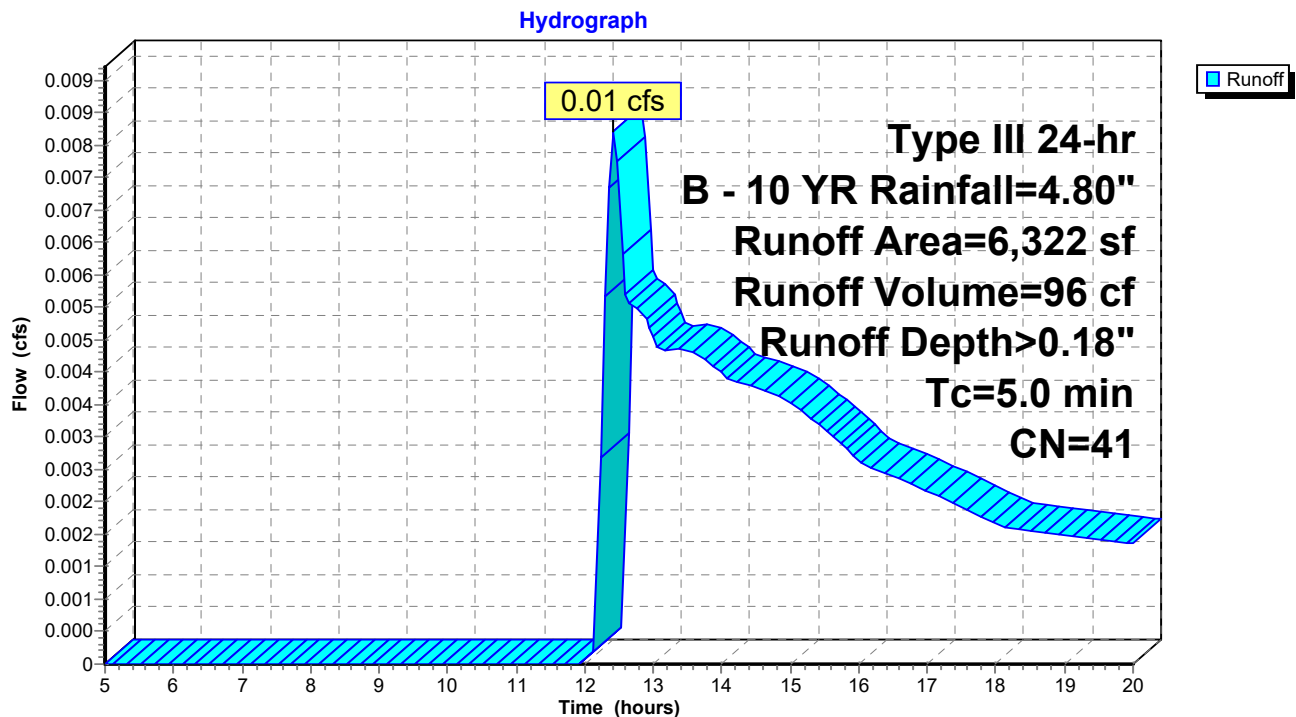
Runoff = 0.01 cfs @ 12.42 hrs, Volume= 96 cf, Depth> 0.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, $dt=0.05$ hrs
Type III 24-hr B - 10 YR Rainfall=4.80"

Area (sf)	CN	Description
1,203	68	<50% Grass cover, Poor, HSG A
4,731	30	Woods, Good, HSG A
388	98	Paved parking, HSG A
6,322	41	Weighted Average
5,934		93.86% Pervious Area
388		6.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, TC

Subcatchment 3S: Catchment Area 3



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Type III 24-hr B - 10 YR Rainfall=4.80"

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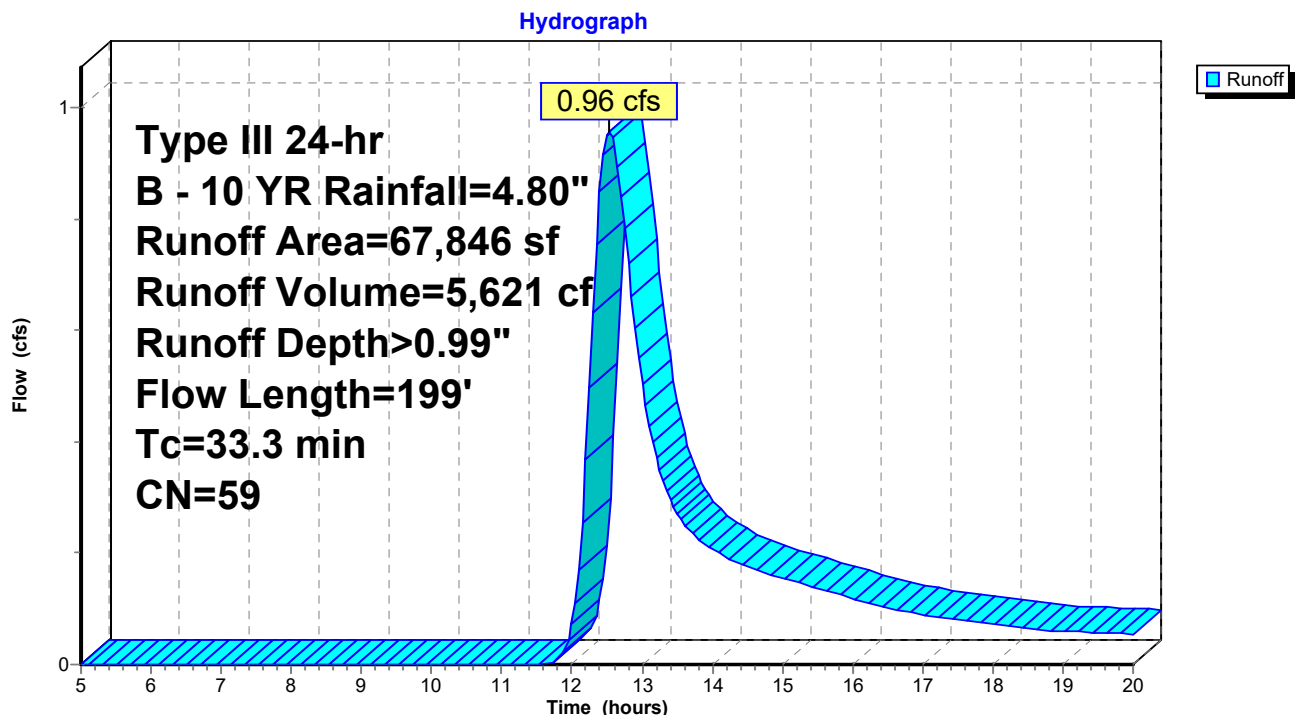
Summary for Subcatchment 4S: Catchment Area 4

Runoff = 0.96 cfs @ 12.54 hrs, Volume= 5,621 cf, Depth> 0.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr B - 10 YR Rainfall=4.80"

Area (sf)	CN	Description
30,382	30	Woods, Good, HSG A
23,939	98	Paved parking, HSG A
6,630	39	>75% Grass cover, Good, HSG A
4,832	76	Gravel roads, HSG A
2,063	68	<50% Grass cover, Poor, HSG A
67,846	59	Weighted Average
43,907		64.72% Pervious Area
23,939		35.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.6	50	0.0080	0.03		Sheet Flow, A-B Woods: Dense underbrush n= 0.800 P2= 3.50"
3.5	82	0.0250	0.40		Shallow Concentrated Flow, B-C Forest w/Heavy Litter Kv= 2.5 fps
0.2	67	0.1300	7.32		Shallow Concentrated Flow, C-D Paved Kv= 20.3 fps
33.3	199	Total			

Subcatchment 4S: Catchment Area 4

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Type III 24-hr B - 10 YR Rainfall=4.80"

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Summary for Subcatchment 5S: Catchment Area 5

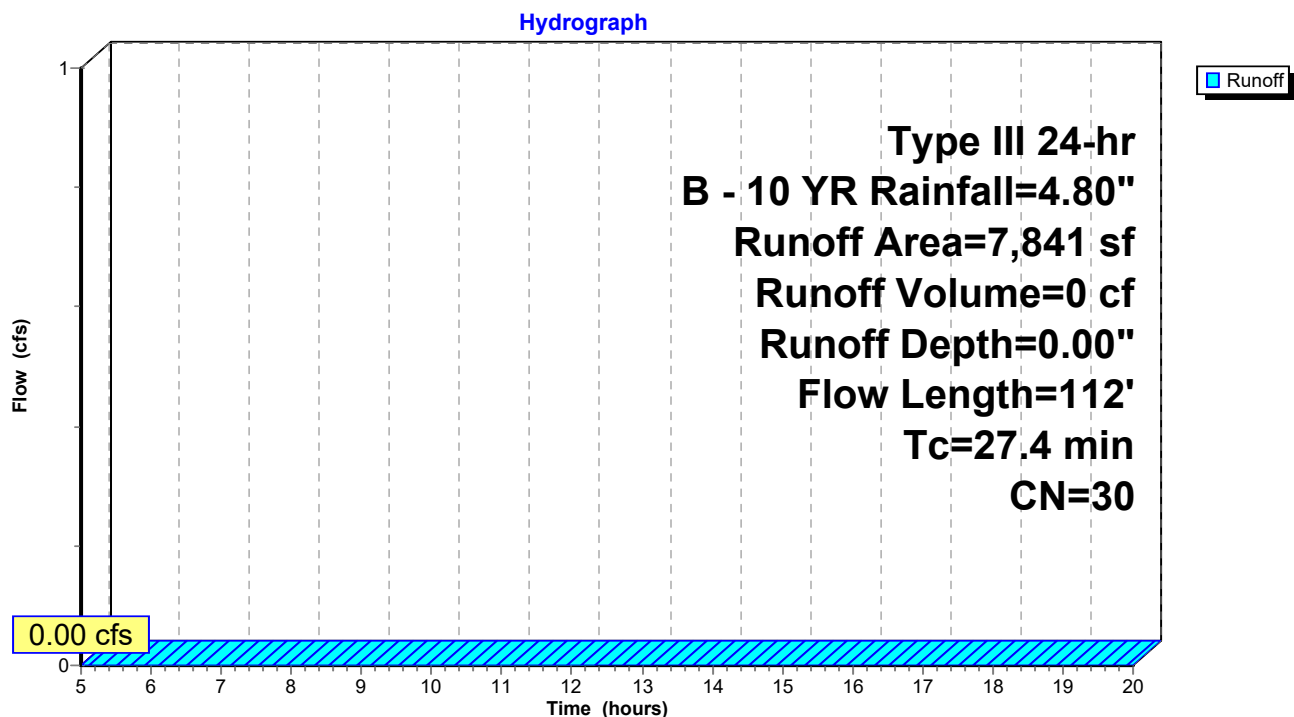
[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0 cf, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr B - 10 YR Rainfall=4.80"

Area (sf)	CN	Description
7,841	30	Woods, Good, HSG A
7,841		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.2	50	0.0120	0.03		Sheet Flow, A-B
					Woods: Dense underbrush n= 0.800 P2= 3.50"
2.2	62	0.0339	0.46		Shallow Concentrated Flow, B-C
					Forest w/Heavy Litter Kv= 2.5 fps
27.4	112	Total			

Subcatchment 5S: Catchment Area 5

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Type III 24-hr B - 10 YR Rainfall=4.80"

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Summary for Pond 2P: Roof SWMA

[82] Warning: Early inflow requires earlier time span

Inflow Area = 6,000 sf, 100.00% Impervious, Inflow Depth > 4.24" for B - 10 YR event
 Inflow = 0.65 cfs @ 12.07 hrs, Volume= 2,118 cf
 Outflow = 0.13 cfs @ 12.49 hrs, Volume= 2,117 cf, Atten= 80%, Lag= 25.4 min
 Discarded = 0.13 cfs @ 12.49 hrs, Volume= 2,117 cf

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 87.76' @ 12.49 hrs Surf.Area= 340 sf Storage= 618 cf

Plug-Flow detention time= 34.2 min calculated for 2,116 cf (100% of inflow)
 Center-of-Mass det. time= 33.7 min (768.3 - 734.6)

Volume	Invert	Avail.Storage	Storage Description
#1	84.00'	769 cf	10.00'W x 34.00'L x 8.00'H Prismatic 2,720 cf Overall - 796 cf Embedded = 1,924 cf x 40.0% Voids
#2	86.00'	679 cf	6.00'D x 6.00'H Vertical Cone/Cylinder x 4 Inside #1 796 cf Overall - 3.0" Wall Thickness = 679 cf
		1,448 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	84.00'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.13 cfs @ 12.49 hrs HW=87.76' (Free Discharge)

↑ **1=Exfiltration** (Exfiltration Controls 0.13 cfs)

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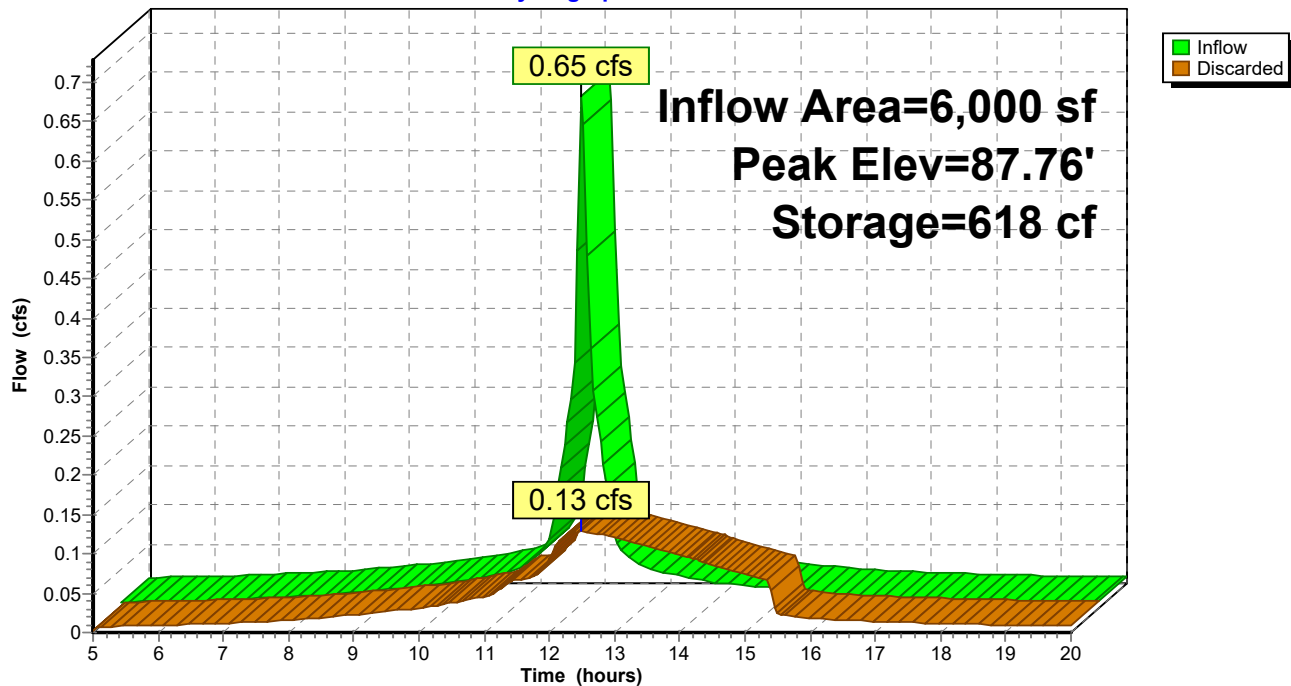
Type III 24-hr B - 10 YR Rainfall=4.80"

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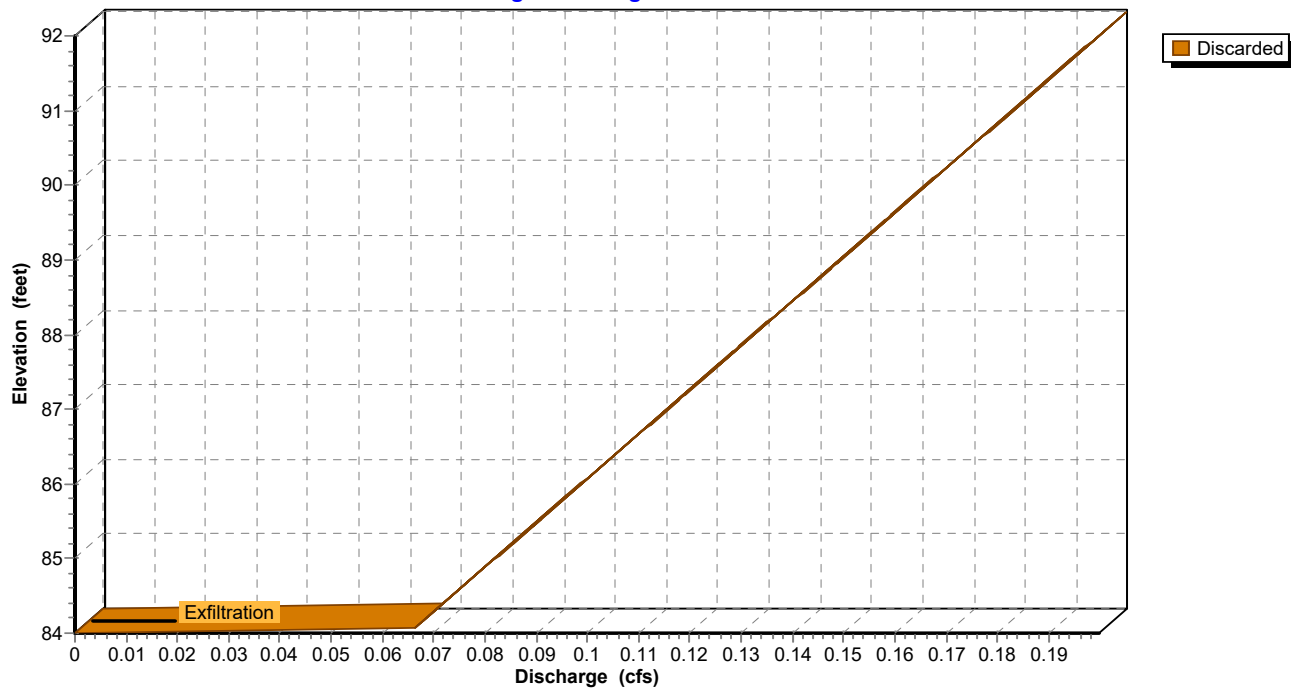
Pond 2P: Roof SWMA

Hydrograph



Pond 2P: Roof SWMA

Stage-Discharge



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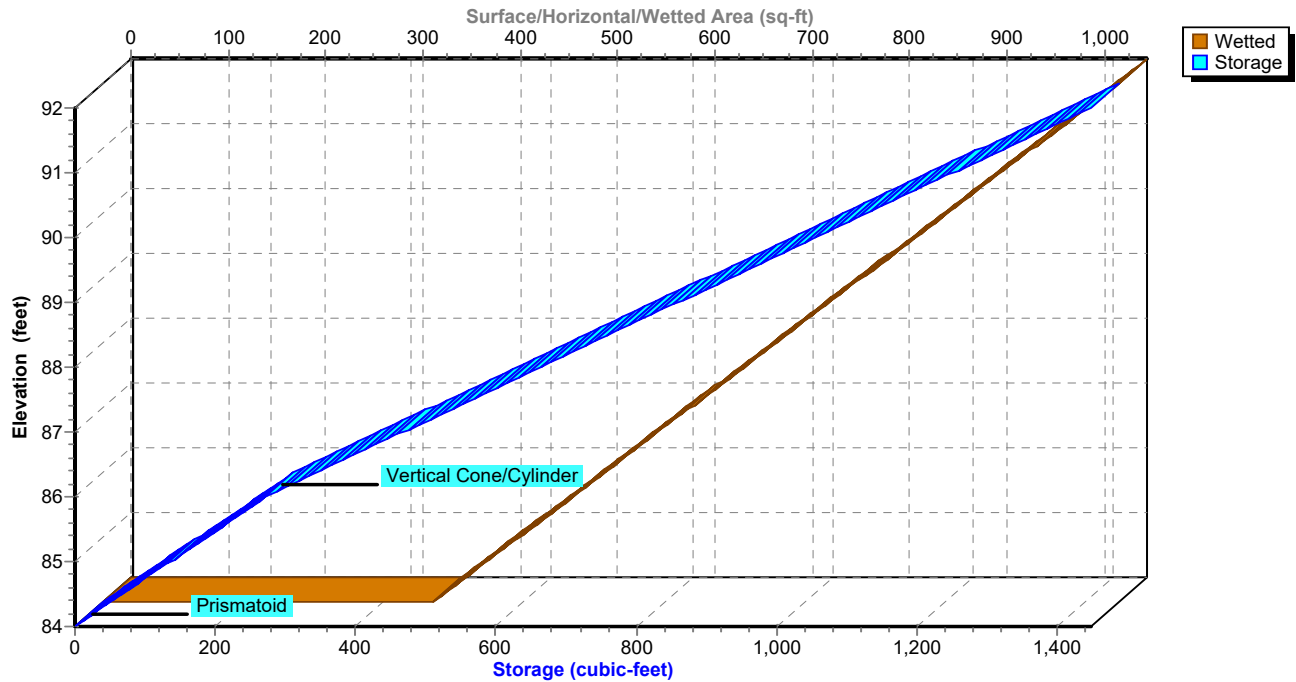
Type III 24-hr B - 10 YR Rainfall=4.80"

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Pond 2P: Roof SWMA

Stage-Area-Storage



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Type III 24-hr B - 10 YR Rainfall=4.80"

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Summary for Pond 4P: Rain Garden

Inflow Area = 67,846 sf, 35.28% Impervious, Inflow Depth > 0.99" for B - 10 YR event
 Inflow = 0.96 cfs @ 12.54 hrs, Volume= 5,621 cf
 Outflow = 0.13 cfs @ 15.73 hrs, Volume= 3,192 cf, Atten= 87%, Lag= 191.5 min
 Discarded = 0.13 cfs @ 15.73 hrs, Volume= 3,192 cf

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 83.40' @ 15.73 hrs Surf.Area= 1,296 sf Storage= 3,049 cf

Plug-Flow detention time= 210.6 min calculated for 3,192 cf (57% of inflow)
 Center-of-Mass det. time= 124.0 min (976.9 - 852.9)

Volume	Invert	Avail.Storage	Storage Description
#1	87.66'	3,876 cf	Custom Stage Data (Irregular) Listed below (Recalc) -Impervious
#2	78.75'	2,873 cf	36.00'W x 36.00'L x 8.00'H Prismatoid
			10,368 cf Overall - 3,186 cf Embedded = 7,182 cf x 40.0% Voids
#3	80.75'	2,714 cf	6.00'D x 6.00'H Vertical Cone/Cylinder x 16 Inside #2
			3,186 cf Overall - 3.0" Wall Thickness = 2,714 cf
		9,463 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
87.66	359	73.0	0.0	0	0	359
87.67	359	73.0	40.0	1	1	360
88.99	359	73.0	40.0	190	191	456
89.00	359	73.0	30.0	1	192	457
90.74	359	73.0	30.0	187	379	584
90.75	359	73.0	30.0	1	381	585
90.99	359	73.0	30.0	26	406	602
91.00	359	73.0	100.0	4	410	603
92.00	606	91.9	100.0	477	887	864
93.00	910	110.7	100.0	753	1,640	1,184
94.00	1,270	129.6	100.0	1,085	2,725	1,565
94.80	1,614	145.3	100.0	1,151	3,876	1,925

Device	Routing	Invert	Outlet Devices
#1	Discarded	78.75'	8.270 in/hr Exfiltration over Wetted area from 78.75' - 90.00' Excluded Wetted area = 1,296 sf

Discarded OutFlow Max=0.13 cfs @ 15.73 hrs HW=83.40' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.13 cfs)

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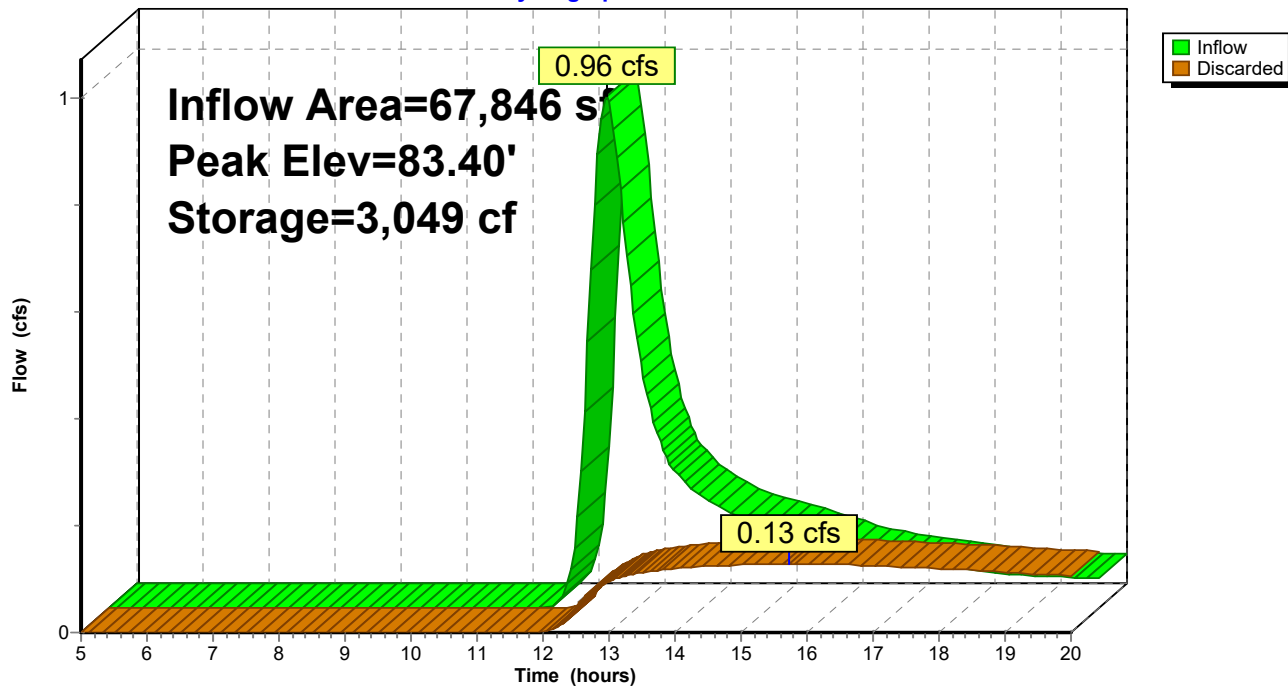
Type III 24-hr B - 10 YR Rainfall=4.80"

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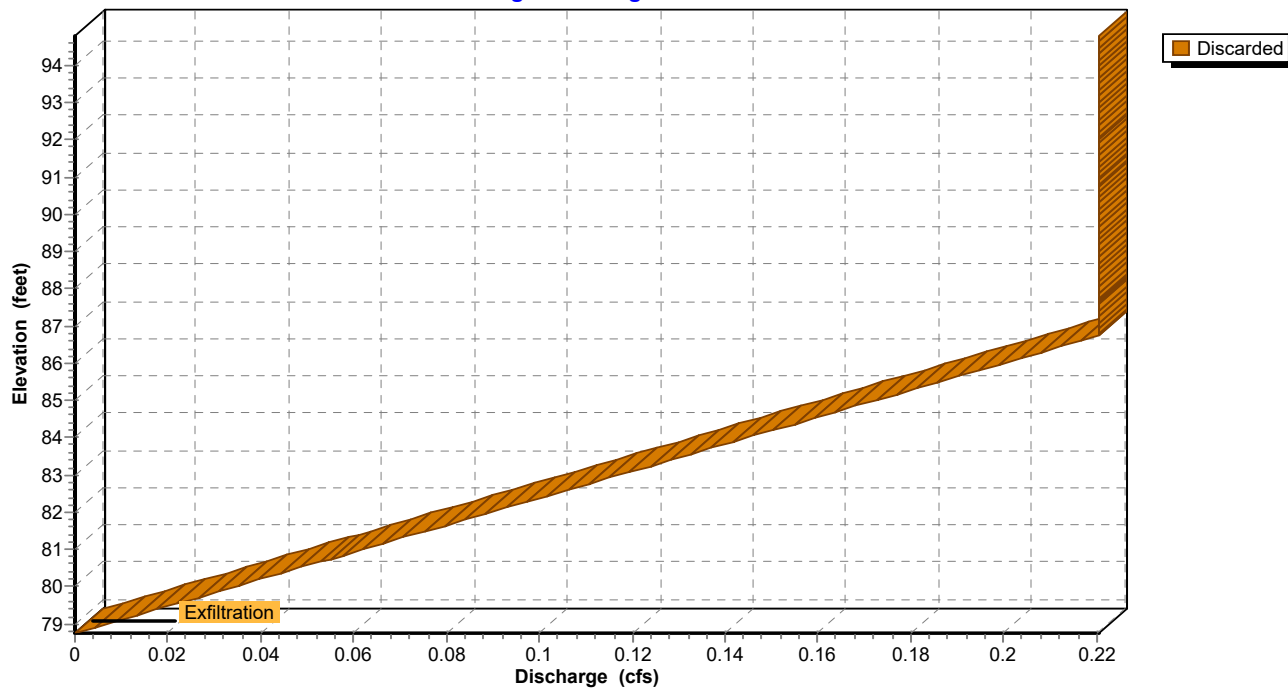
Pond 4P: Rain Garden

Hydrograph



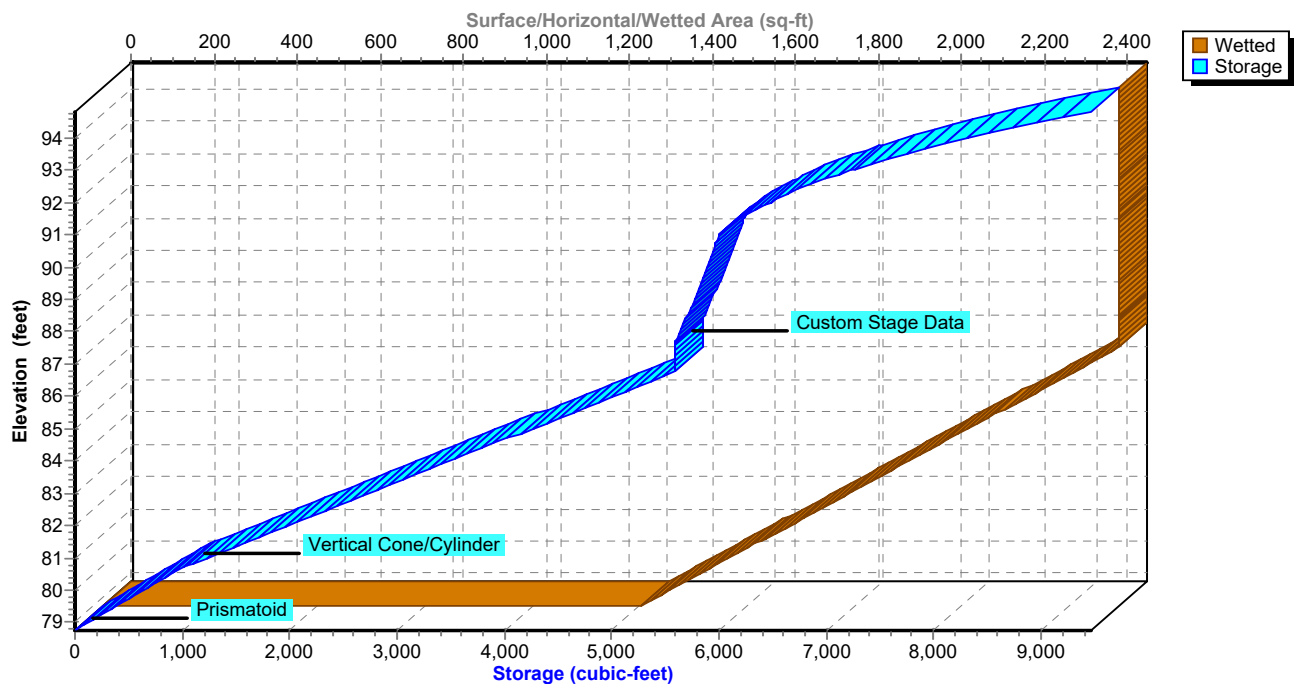
Pond 4P: Rain Garden

Stage-Discharge



Pond 4P: Rain Garden

Stage-Area-Storage



474 Main Street - Post-Development*Type III 24-hr C - 25 YR Rainfall=5.70"*

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Catchment Area 1	Runoff Area=11,425 sf 0.00% Impervious Runoff Depth>0.09" Flow Length=131' Tc=19.5 min CN=33 Runoff=0.00 cfs 83 cf
Subcatchment2S: Roof Area	Runoff Area=6,000 sf 100.00% Impervious Runoff Depth>5.06" Tc=5.0 min CN=98 Runoff=0.77 cfs 2,528 cf
Subcatchment3S: Catchment Area 3	Runoff Area=6,322 sf 6.14% Impervious Runoff Depth>0.39" Tc=5.0 min CN=41 Runoff=0.03 cfs 206 cf
Subcatchment4S: Catchment Area 4	Runoff Area=67,846 sf 35.28% Impervious Runoff Depth>1.48" Flow Length=199' Tc=33.3 min CN=59 Runoff=1.50 cfs 8,355 cf
Subcatchment5S: Catchment Area 5	Runoff Area=7,841 sf 0.00% Impervious Runoff Depth>0.02" Flow Length=112' Tc=27.4 min CN=30 Runoff=0.00 cfs 16 cf
Pond 2P: Roof SWMA	Peak Elev=88.59' Storage=780 cf Inflow=0.77 cfs 2,528 cf Outflow=0.14 cfs 2,526 cf
Pond 4P: Rain Garden	Peak Elev=85.55' Storage=4,677 cf Inflow=1.50 cfs 8,355 cf Outflow=0.19 cfs 4,682 cf

Total Runoff Area = 99,434 sf Runoff Volume = 11,187 cf Average Runoff Depth = 1.35"
69.50% Pervious = 69,107 sf 30.50% Impervious = 30,327 sf

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Type III 24-hr C - 25 YR Rainfall=5.70"

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Summary for Subcatchment 1S: Catchment Area 1

Runoff = 0.00 cfs @ 15.07 hrs, Volume= 83 cf, Depth> 0.09"

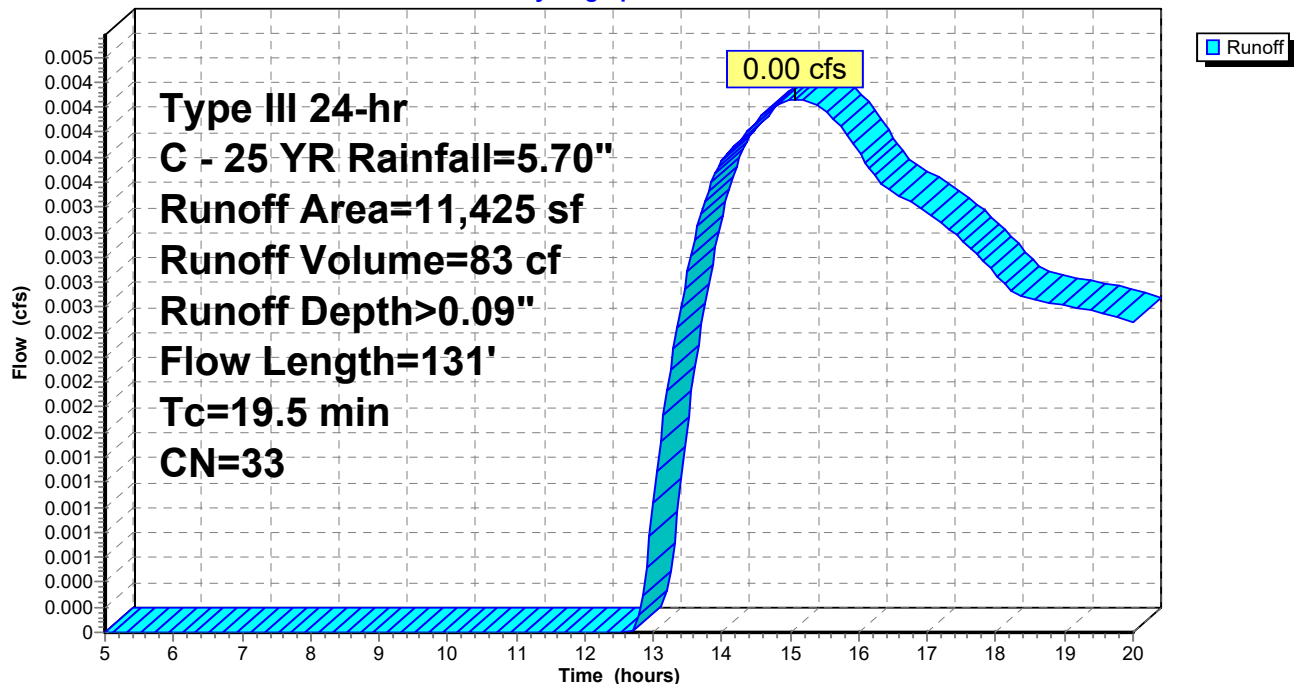
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr C - 25 YR Rainfall=5.70"

Area (sf)	CN	Description
827	68	<50% Grass cover, Poor, HSG A
10,598	30	Woods, Good, HSG A
11,425	33	Weighted Average
11,425		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.5	50	0.0260	0.05		Sheet Flow, A-B
					Woods: Dense underbrush n= 0.800 P2= 3.50"
1.0	81	0.0691	1.31		Shallow Concentrated Flow, B-C
					Woodland Kv= 5.0 fps
19.5	131	Total			

Subcatchment 1S: Catchment Area 1

Hydrograph



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Summary for Subcatchment 2S: Roof Area

[49] Hint: $T_c < 2dt$ may require smaller dt

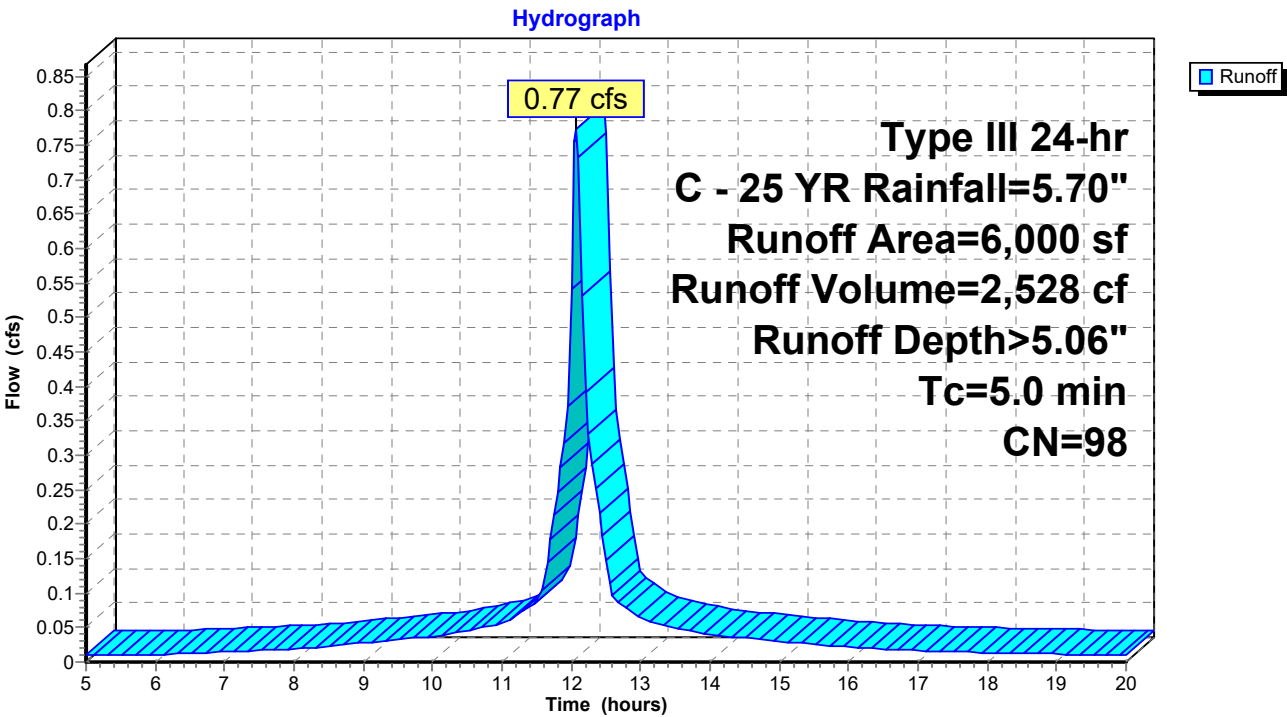
Runoff = 0.77 cfs @ 12.07 hrs, Volume= 2,528 cf, Depth> 5.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, $dt=0.05$ hrs
Type III 24-hr C - 25 YR Rainfall=5.70"

Area (sf)	CN	Description
6,000	98	Roofs, HSG A
6,000		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 2S: Roof Area



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Type III 24-hr C - 25 YR Rainfall=5.70"

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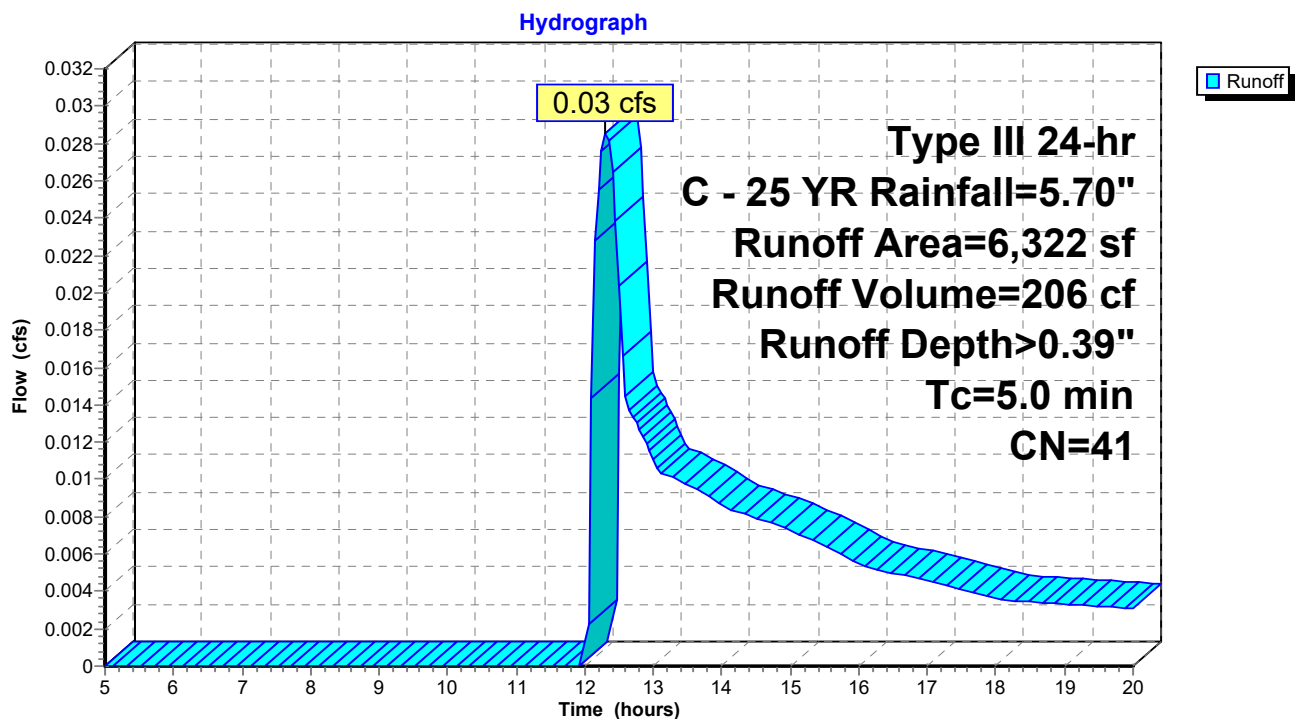
Summary for Subcatchment 3S: Catchment Area 3[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.03 cfs @ 12.31 hrs, Volume= 206 cf, Depth> 0.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, $dt=0.05$ hrs
Type III 24-hr C - 25 YR Rainfall=5.70"

Area (sf)	CN	Description
1,203	68	<50% Grass cover, Poor, HSG A
4,731	30	Woods, Good, HSG A
388	98	Paved parking, HSG A
6,322	41	Weighted Average
5,934		93.86% Pervious Area
388		6.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, TC

Subcatchment 3S: Catchment Area 3

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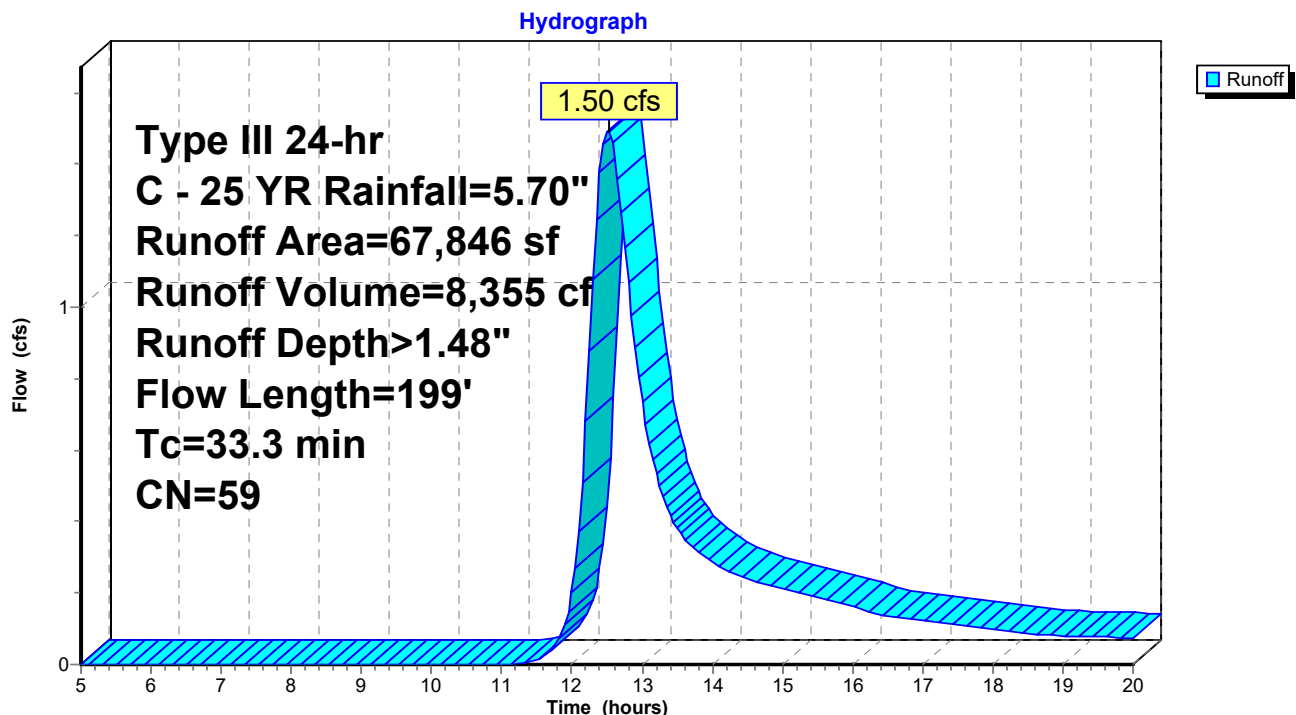
Summary for Subcatchment 4S: Catchment Area 4

Runoff = 1.50 cfs @ 12.51 hrs, Volume= 8,355 cf, Depth> 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr C - 25 YR Rainfall=5.70"

Area (sf)	CN	Description
30,382	30	Woods, Good, HSG A
23,939	98	Paved parking, HSG A
6,630	39	>75% Grass cover, Good, HSG A
4,832	76	Gravel roads, HSG A
2,063	68	<50% Grass cover, Poor, HSG A
67,846	59	Weighted Average
43,907		64.72% Pervious Area
23,939		35.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.6	50	0.0080	0.03		Sheet Flow, A-B Woods: Dense underbrush n= 0.800 P2= 3.50"
3.5	82	0.0250	0.40		Shallow Concentrated Flow, B-C Forest w/Heavy Litter Kv= 2.5 fps
0.2	67	0.1300	7.32		Shallow Concentrated Flow, C-D Paved Kv= 20.3 fps
33.3	199	Total			

Subcatchment 4S: Catchment Area 4

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Type III 24-hr C - 25 YR Rainfall=5.70"

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Summary for Subcatchment 5S: Catchment Area 5

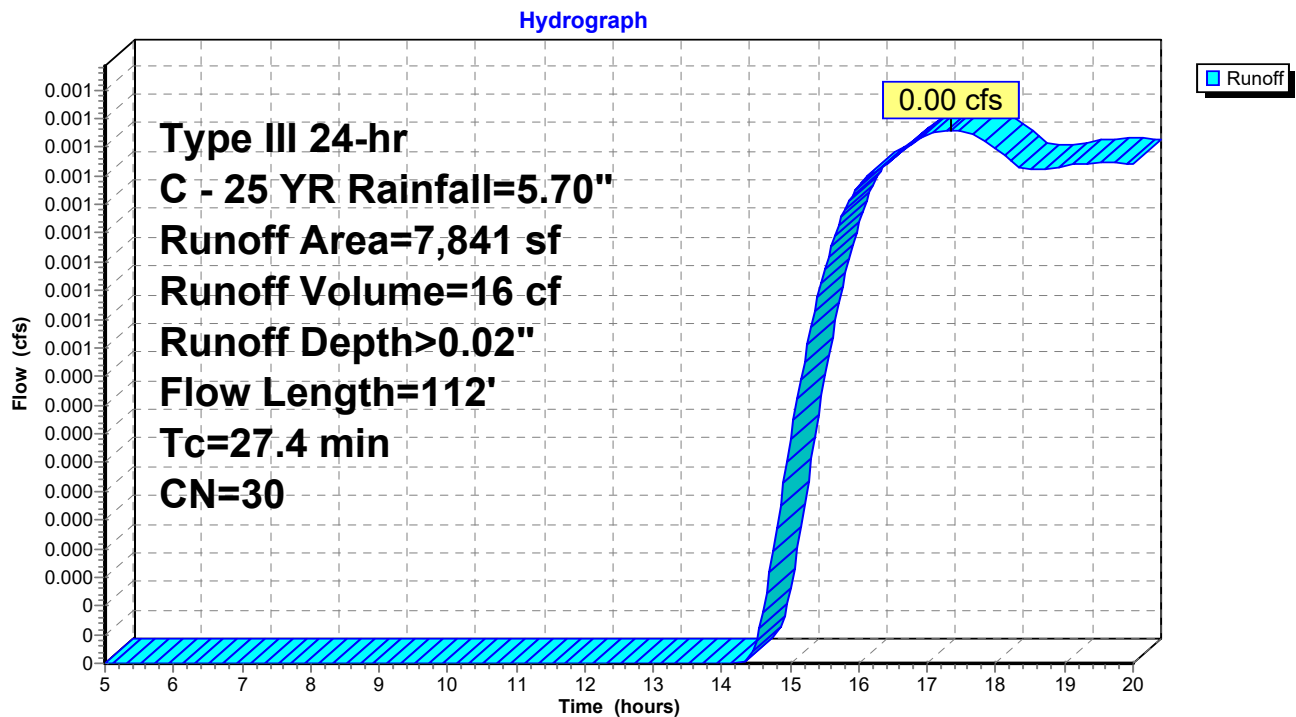
Runoff = 0.00 cfs @ 17.34 hrs, Volume= 16 cf, Depth> 0.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr C - 25 YR Rainfall=5.70"

Area (sf)	CN	Description
7,841	30	Woods, Good, HSG A
7,841		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.2	50	0.0120	0.03		Sheet Flow, A-B Woods: Dense underbrush n= 0.800 P2= 3.50"
2.2	62	0.0339	0.46		Shallow Concentrated Flow, B-C Forest w/Heavy Litter Kv= 2.5 fps
27.4	112	Total			

Subcatchment 5S: Catchment Area 5



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Type III 24-hr C - 25 YR Rainfall=5.70"

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Summary for Pond 2P: Roof SWMA

[82] Warning: Early inflow requires earlier time span

Inflow Area = 6,000 sf, 100.00% Impervious, Inflow Depth > 5.06" for C - 25 YR event
 Inflow = 0.77 cfs @ 12.07 hrs, Volume= 2,528 cf
 Outflow = 0.14 cfs @ 12.51 hrs, Volume= 2,526 cf, Atten= 82%, Lag= 26.3 min
 Discarded = 0.14 cfs @ 12.51 hrs, Volume= 2,526 cf

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 88.59' @ 12.51 hrs Surf.Area= 340 sf Storage= 780 cf

Plug-Flow detention time= 41.2 min calculated for 2,526 cf (100% of inflow)
 Center-of-Mass det. time= 40.6 min (774.3 - 733.7)

Volume	Invert	Avail.Storage	Storage Description
#1	84.00'	769 cf	10.00'W x 34.00'L x 8.00'H Prismatic 2,720 cf Overall - 796 cf Embedded = 1,924 cf x 40.0% Voids
#2	86.00'	679 cf	6.00'D x 6.00'H Vertical Cone/Cylinder x 4 Inside #1 796 cf Overall - 3.0" Wall Thickness = 679 cf
		1,448 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	84.00'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.14 cfs @ 12.51 hrs HW=88.59' (Free Discharge)

↑ **1=Exfiltration** (Exfiltration Controls 0.14 cfs)

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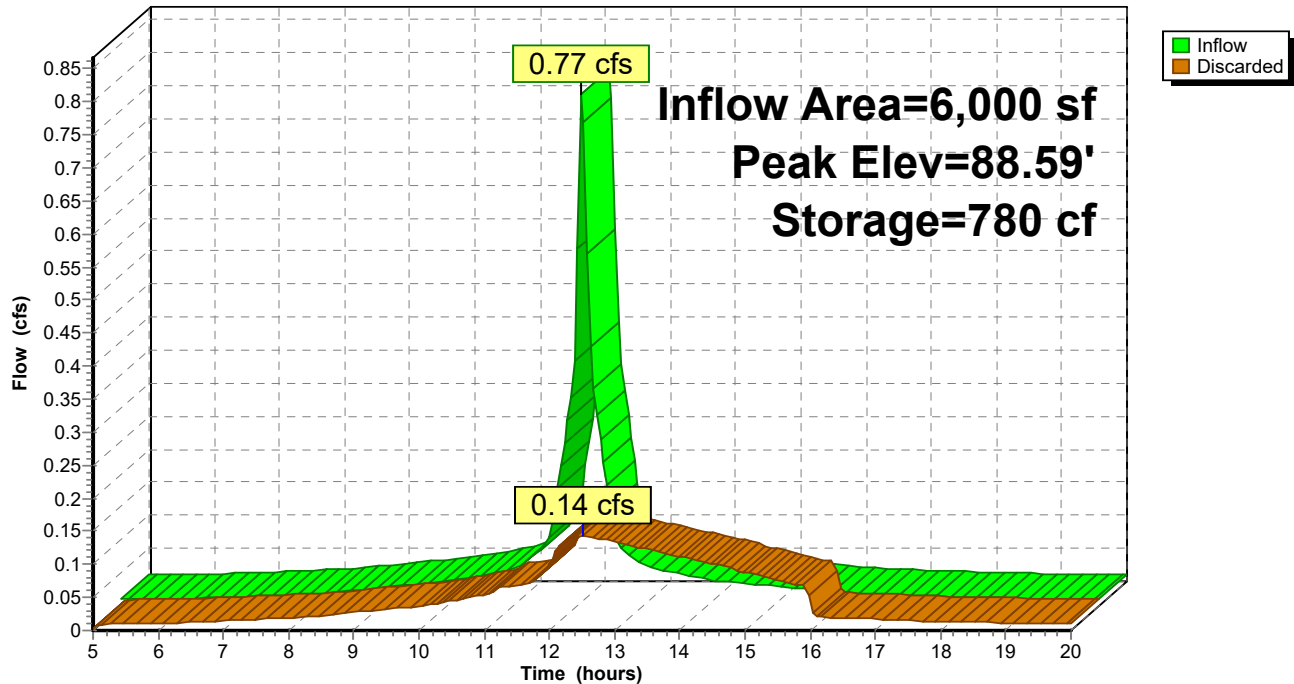
Type III 24-hr C - 25 YR Rainfall=5.70"

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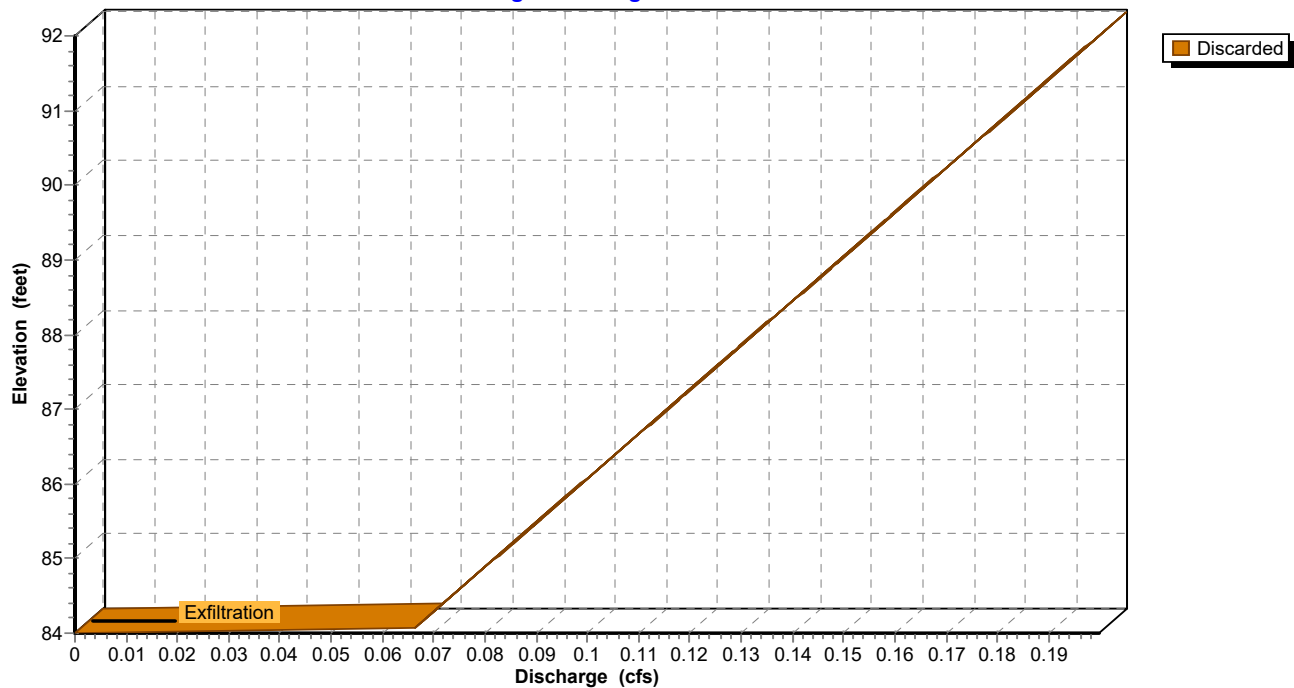
Pond 2P: Roof SWMA

Hydrograph



Pond 2P: Roof SWMA

Stage-Discharge



474 Main Street - Post-Development

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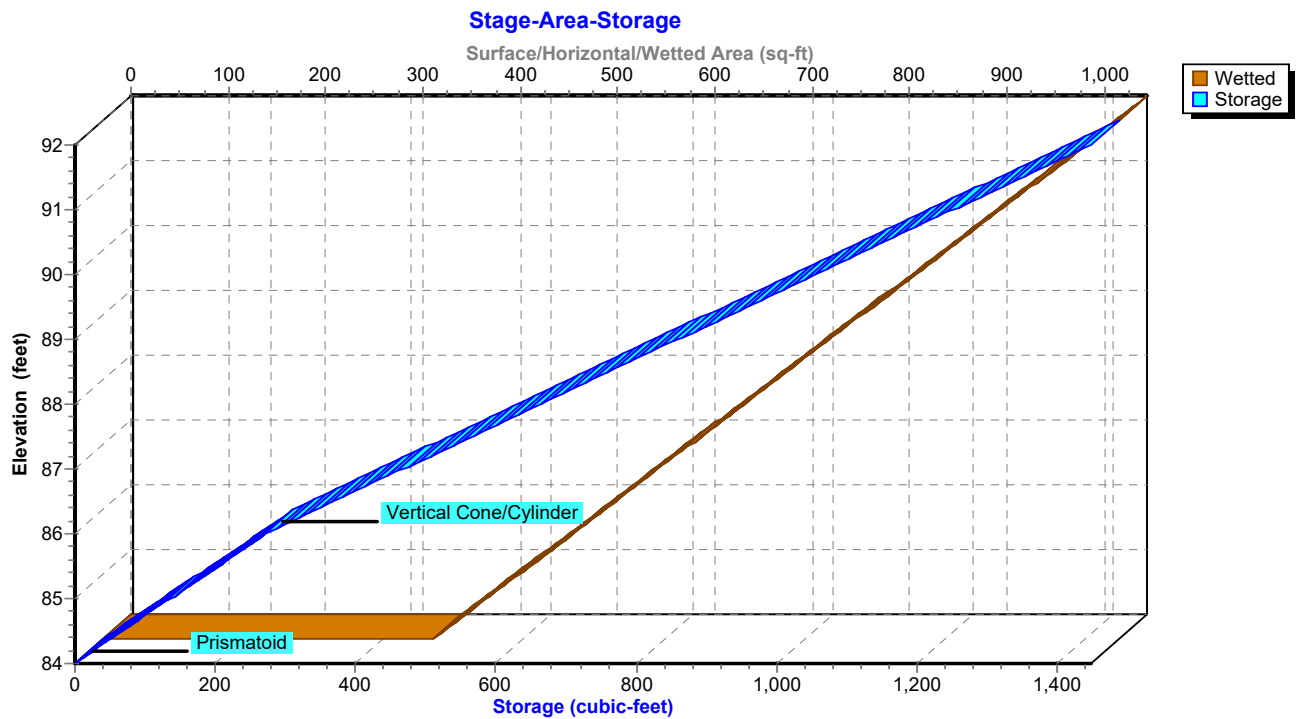
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Type III 24-hr C - 25 YR Rainfall=5.70"

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Pond 2P: Roof SWMA



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Type III 24-hr C - 25 YR Rainfall=5.70"

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Summary for Pond 4P: Rain Garden

Inflow Area = 67,846 sf, 35.28% Impervious, Inflow Depth > 1.48" for C - 25 YR event
 Inflow = 1.50 cfs @ 12.51 hrs, Volume= 8,355 cf
 Outflow = 0.19 cfs @ 15.50 hrs, Volume= 4,682 cf, Atten= 87%, Lag= 178.9 min
 Discarded = 0.19 cfs @ 15.50 hrs, Volume= 4,682 cf

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 85.55' @ 15.50 hrs Surf.Area= 1,296 sf Storage= 4,677 cf

Plug-Flow detention time= 214.3 min calculated for 4,682 cf (56% of inflow)
 Center-of-Mass det. time= 129.8 min (973.7 - 843.9)

Volume	Invert	Avail.Storage	Storage Description
#1	87.66'	3,876 cf	Custom Stage Data (Irregular) Listed below (Recalc) -Impervious 36.00'W x 36.00'L x 8.00'H Prismaoid 10,368 cf Overall - 3,186 cf Embedded = 7,182 cf x 40.0% Voids 6.00'D x 6.00'H Vertical Cone/Cylinder x 16 Inside #2 3,186 cf Overall - 3.0" Wall Thickness = 2,714 cf
#2	78.75'	2,873 cf	
#3	80.75'	2,714 cf	
		9,463 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
87.66	359	73.0	0.0	0	0	359
87.67	359	73.0	40.0	1	1	360
88.99	359	73.0	40.0	190	191	456
89.00	359	73.0	30.0	1	192	457
90.74	359	73.0	30.0	187	379	584
90.75	359	73.0	30.0	1	381	585
90.99	359	73.0	30.0	26	406	602
91.00	359	73.0	100.0	4	410	603
92.00	606	91.9	100.0	477	887	864
93.00	910	110.7	100.0	753	1,640	1,184
94.00	1,270	129.6	100.0	1,085	2,725	1,565
94.80	1,614	145.3	100.0	1,151	3,876	1,925

Device	Routing	Invert	Outlet Devices
#1	Discarded	78.75'	8.270 in/hr Exfiltration over Wetted area from 78.75' - 90.00' Excluded Wetted area = 1,296 sf

Discarded OutFlow Max=0.19 cfs @ 15.50 hrs HW=85.55' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.19 cfs)

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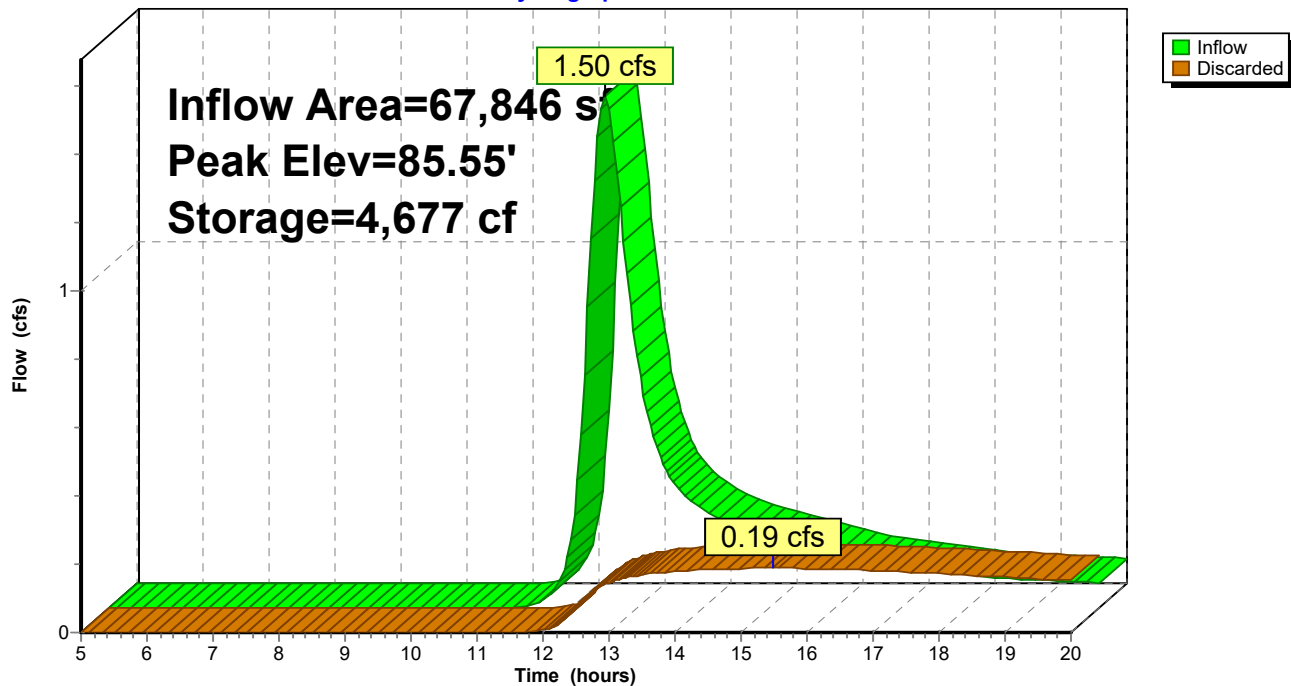
Type III 24-hr C - 25 YR Rainfall=5.70"

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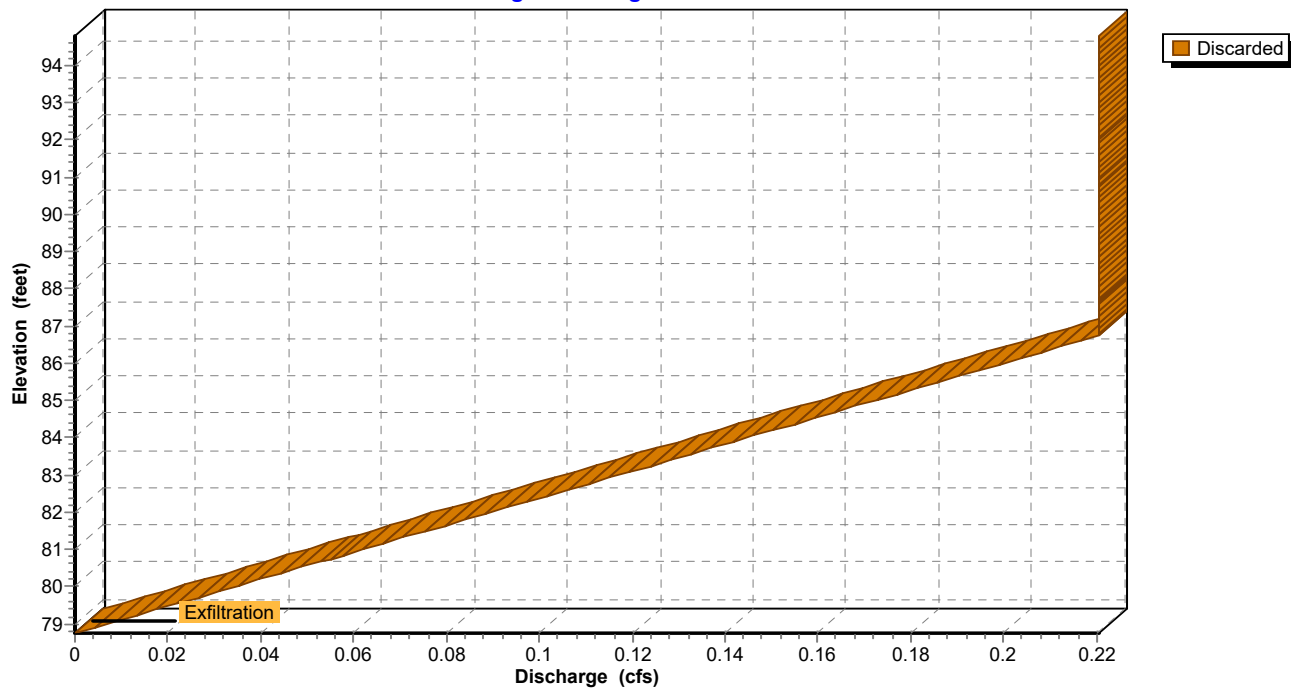
Pond 4P: Rain Garden

Hydrograph



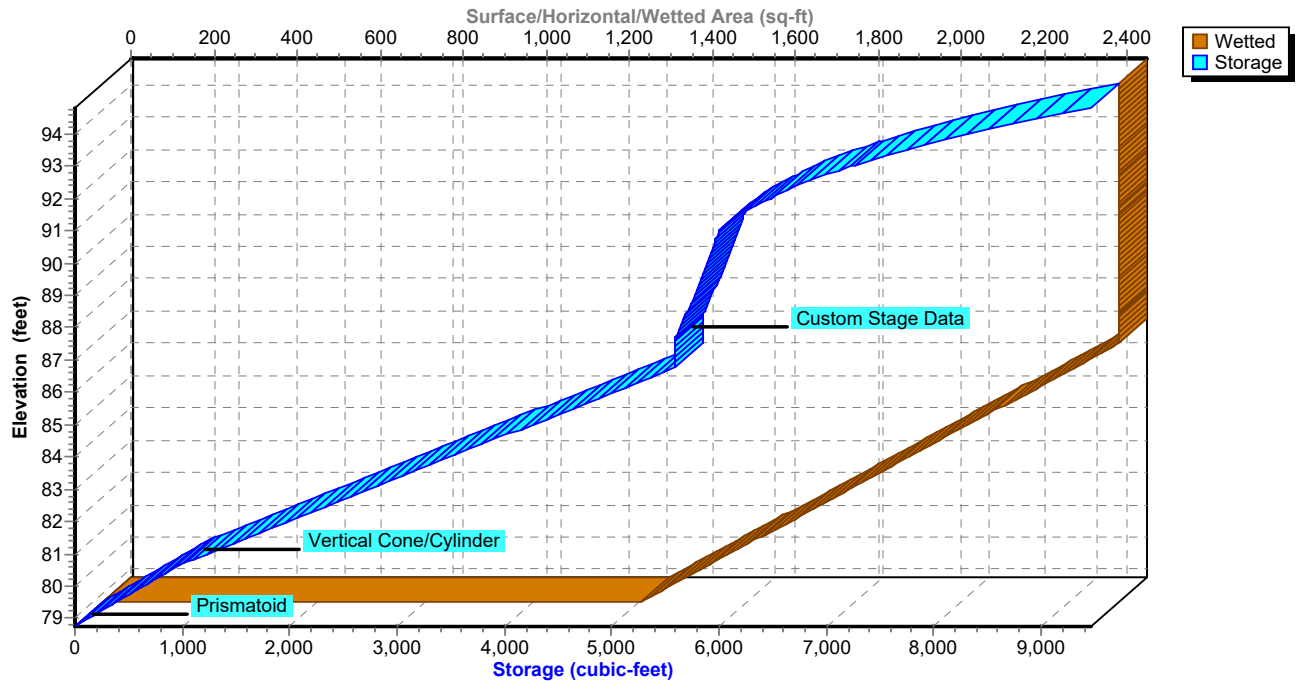
Pond 4P: Rain Garden

Stage-Discharge



Pond 4P: Rain Garden

Stage-Area-Storage



474 Main Street - Post-Development*Type III 24-hr D - 100YR Rainfall=7.00"*

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Catchment Area 1	Runoff Area=11,425 sf 0.00% Impervious Runoff Depth>0.30" Flow Length=131' Tc=19.5 min CN=33 Runoff=0.02 cfs 284 cf
Subcatchment2S: Roof Area	Runoff Area=6,000 sf 100.00% Impervious Runoff Depth>6.24" Tc=5.0 min CN=98 Runoff=0.95 cfs 3,119 cf
Subcatchment3S: Catchment Area 3	Runoff Area=6,322 sf 6.14% Impervious Runoff Depth>0.80" Tc=5.0 min CN=41 Runoff=0.10 cfs 421 cf
Subcatchment4S: Catchment Area 4	Runoff Area=67,846 sf 35.28% Impervious Runoff Depth>2.27" Flow Length=199' Tc=33.3 min CN=59 Runoff=2.37 cfs 12,824 cf
Subcatchment5S: Catchment Area 5	Runoff Area=7,841 sf 0.00% Impervious Runoff Depth>0.16" Flow Length=112' Tc=27.4 min CN=30 Runoff=0.01 cfs 103 cf
Pond 2P: Roof SWMA	Peak Elev=89.83' Storage=1,023 cf Inflow=0.95 cfs 3,119 cf Outflow=0.16 cfs 3,117 cf
Pond 4P: Rain Garden	Peak Elev=93.64' Storage=7,882 cf Inflow=2.37 cfs 12,824 cf Outflow=0.22 cfs 6,054 cf

Total Runoff Area = 99,434 sf Runoff Volume = 16,751 cf Average Runoff Depth = 2.02"
69.50% Pervious = 69,107 sf 30.50% Impervious = 30,327 sf

474 Main Street - Post-Development

Type III 24-hr D - 100YR Rainfall=7.00"

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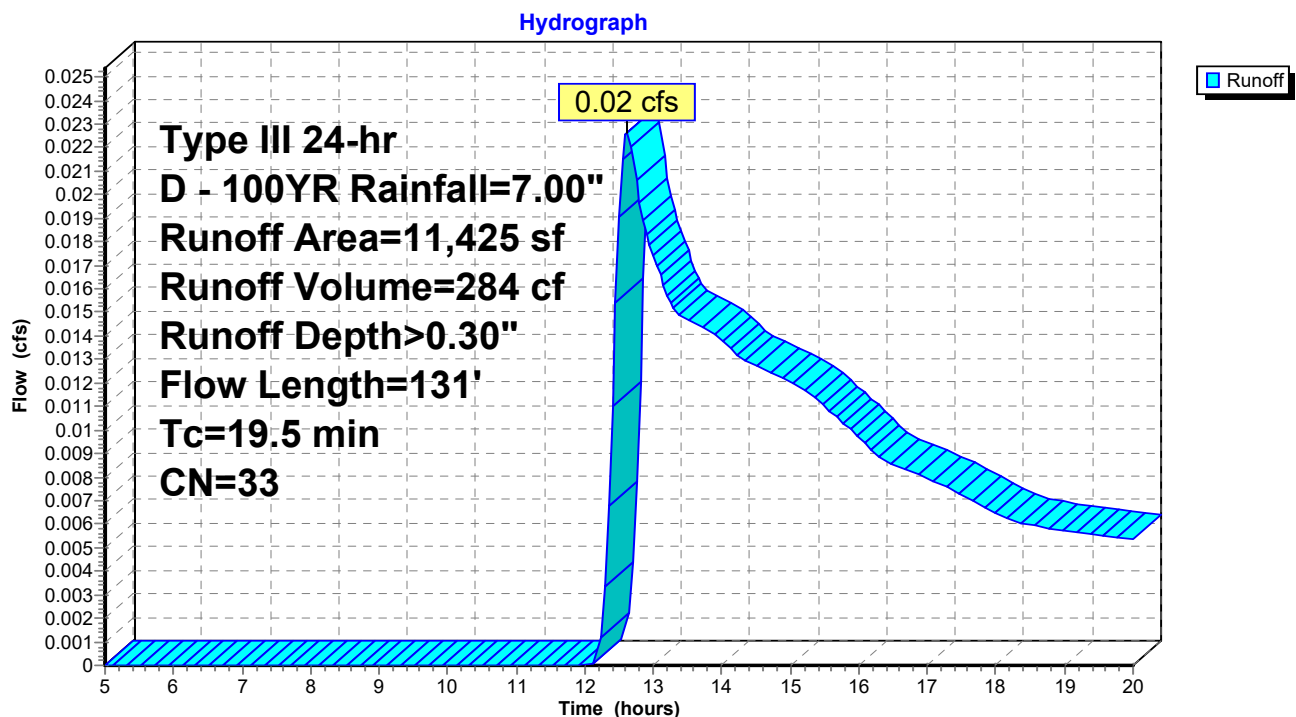
Summary for Subcatchment 1S: Catchment Area 1

Runoff = 0.02 cfs @ 12.62 hrs, Volume= 284 cf, Depth> 0.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr D - 100YR Rainfall=7.00"

Area (sf)	CN	Description
827	68	<50% Grass cover, Poor, HSG A
10,598	30	Woods, Good, HSG A
11,425	33	Weighted Average
11,425		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.5	50	0.0260	0.05		Sheet Flow, A-B
					Woods: Dense underbrush n= 0.800 P2= 3.50"
1.0	81	0.0691	1.31		Shallow Concentrated Flow, B-C
					Woodland Kv= 5.0 fps
19.5	131	Total			

Subcatchment 1S: Catchment Area 1

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Type III 24-hr D - 100YR Rainfall=7.00"

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Summary for Subcatchment 2S: Roof Area

[49] Hint: Tc<2dt may require smaller dt

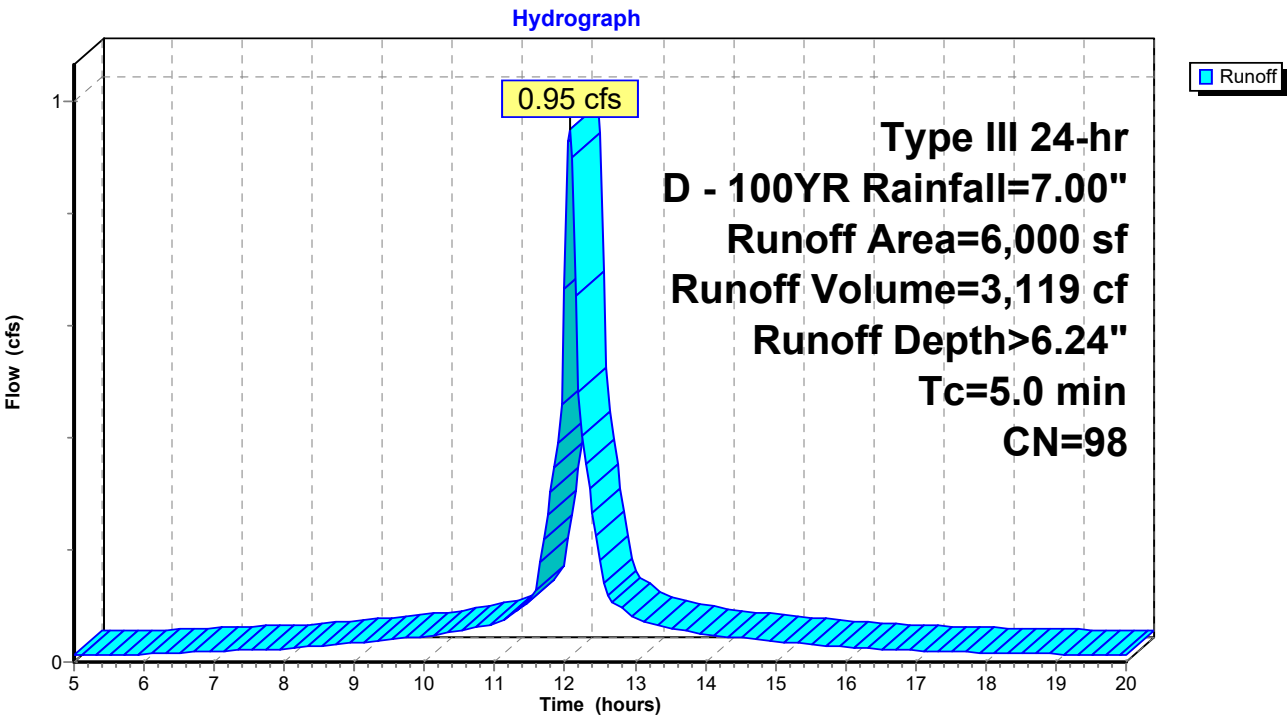
Runoff = 0.95 cfs @ 12.07 hrs, Volume= 3,119 cf, Depth> 6.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr D - 100YR Rainfall=7.00"

Area (sf)	CN	Description
6,000	98	Roofs, HSG A
6,000		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 2S: Roof Area



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Type III 24-hr D - 100YR Rainfall=7.00"

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Summary for Subcatchment 3S: Catchment Area 3

[49] Hint: $T_c < 2dt$ may require smaller dt

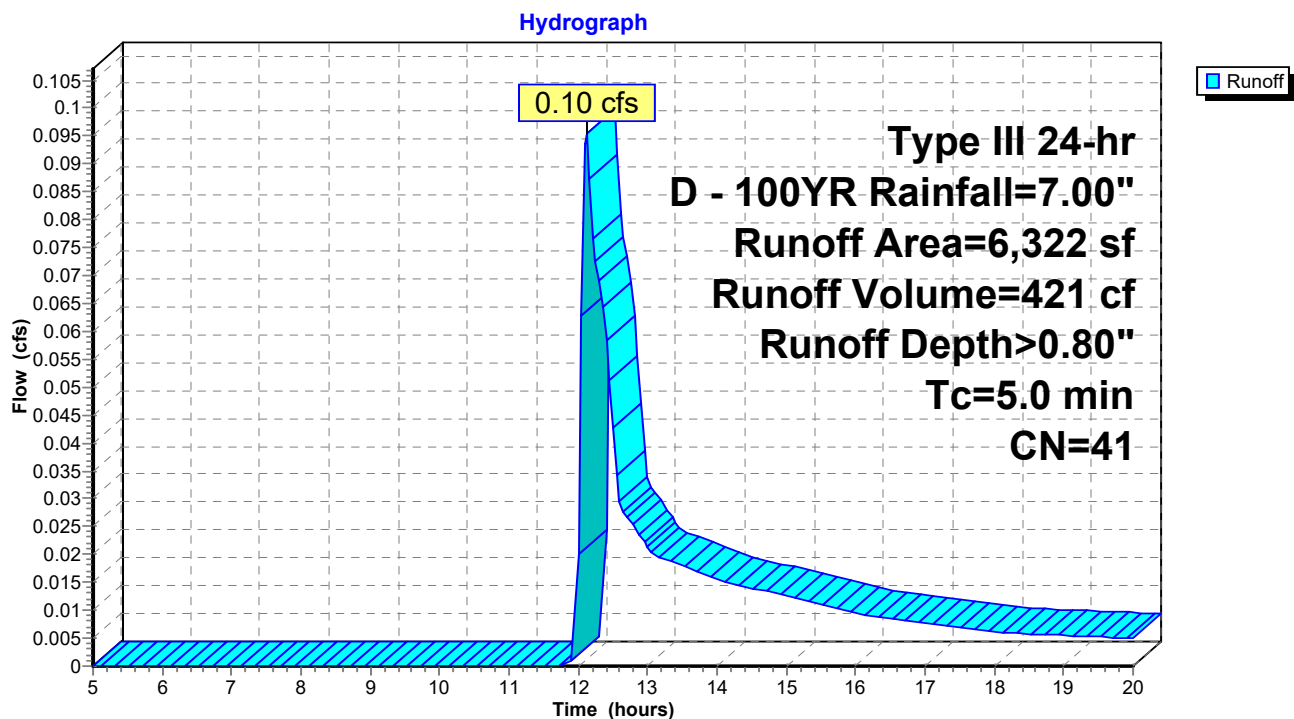
Runoff = 0.10 cfs @ 12.12 hrs, Volume= 421 cf, Depth> 0.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, $dt=0.05$ hrs
Type III 24-hr D - 100YR Rainfall=7.00"

Area (sf)	CN	Description
1,203	68	<50% Grass cover, Poor, HSG A
4,731	30	Woods, Good, HSG A
388	98	Paved parking, HSG A
6,322	41	Weighted Average
5,934		93.86% Pervious Area
388		6.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, TC

Subcatchment 3S: Catchment Area 3



474 Main Street - Post-Development

Type III 24-hr D - 100YR Rainfall=7.00"

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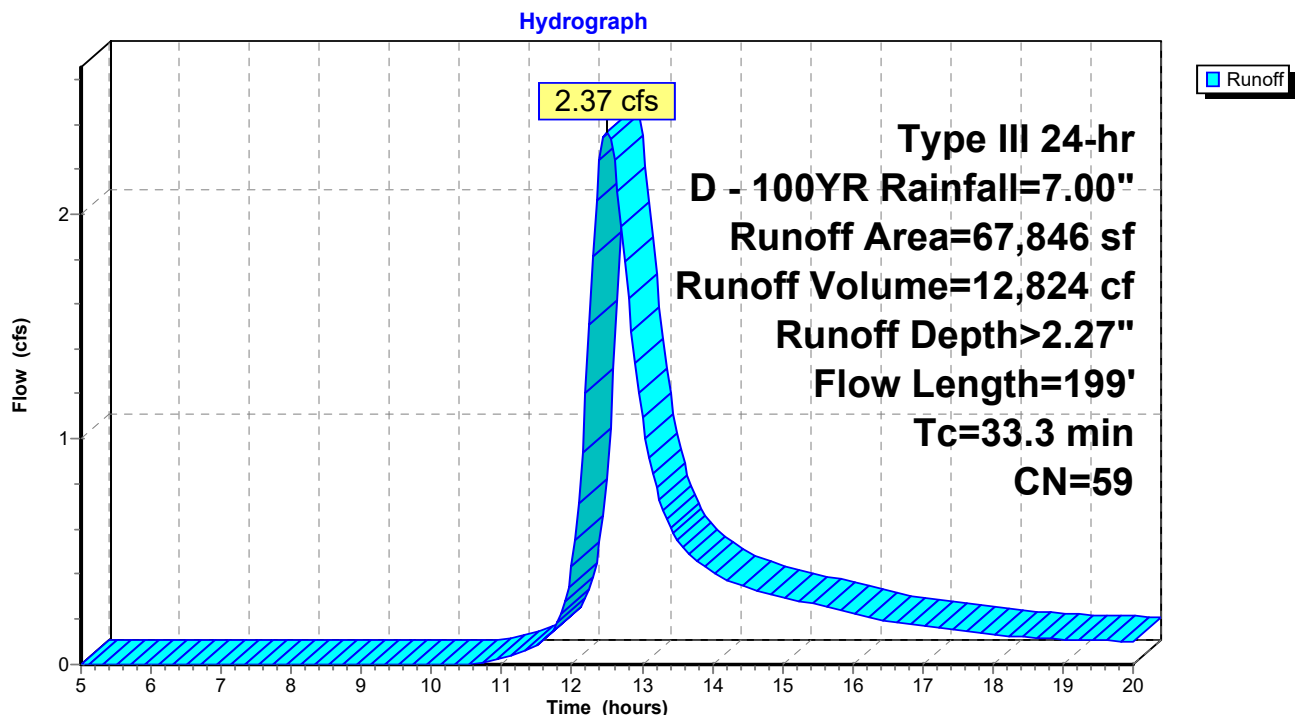
Summary for Subcatchment 4S: Catchment Area 4

Runoff = 2.37 cfs @ 12.50 hrs, Volume= 12,824 cf, Depth> 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr D - 100YR Rainfall=7.00"

Area (sf)	CN	Description
30,382	30	Woods, Good, HSG A
23,939	98	Paved parking, HSG A
6,630	39	>75% Grass cover, Good, HSG A
4,832	76	Gravel roads, HSG A
2,063	68	<50% Grass cover, Poor, HSG A
67,846	59	Weighted Average
43,907		64.72% Pervious Area
23,939		35.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.6	50	0.0080	0.03		Sheet Flow, A-B Woods: Dense underbrush n= 0.800 P2= 3.50"
3.5	82	0.0250	0.40		Shallow Concentrated Flow, B-C Forest w/Heavy Litter Kv= 2.5 fps
0.2	67	0.1300	7.32		Shallow Concentrated Flow, C-D Paved Kv= 20.3 fps
33.3	199	Total			

Subcatchment 4S: Catchment Area 4

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Type III 24-hr D - 100YR Rainfall=7.00"

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Summary for Subcatchment 5S: Catchment Area 5

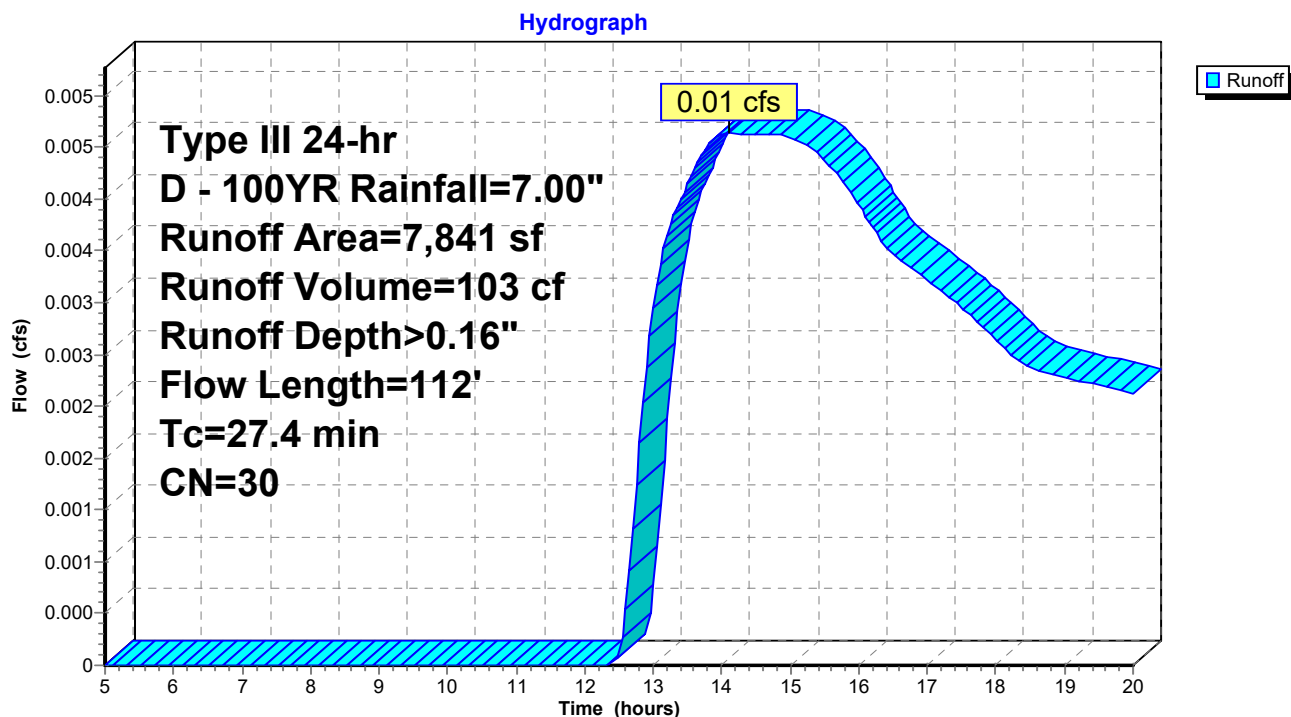
Runoff = 0.01 cfs @ 14.11 hrs, Volume= 103 cf, Depth> 0.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr D - 100YR Rainfall=7.00"

Area (sf)	CN	Description
7,841	30	Woods, Good, HSG A
7,841		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.2	50	0.0120	0.03		Sheet Flow, A-B Woods: Dense underbrush n= 0.800 P2= 3.50"
2.2	62	0.0339	0.46		Shallow Concentrated Flow, B-C Forest w/Heavy Litter Kv= 2.5 fps
27.4	112	Total			

Subcatchment 5S: Catchment Area 5



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Type III 24-hr D - 100YR Rainfall=7.00"

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Summary for Pond 2P: Roof SWMA

[82] Warning: Early inflow requires earlier time span

Inflow Area = 6,000 sf, 100.00% Impervious, Inflow Depth > 6.24" for D - 100YR event
 Inflow = 0.95 cfs @ 12.07 hrs, Volume= 3,119 cf
 Outflow = 0.16 cfs @ 12.52 hrs, Volume= 3,117 cf, Atten= 83%, Lag= 27.2 min
 Discarded = 0.16 cfs @ 12.52 hrs, Volume= 3,117 cf

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 89.83' @ 12.52 hrs Surf.Area= 340 sf Storage= 1,023 cf

Plug-Flow detention time= 50.4 min calculated for 3,116 cf (100% of inflow)
 Center-of-Mass det. time= 49.9 min (782.7 - 732.8)

Volume	Invert	Avail.Storage	Storage Description
#1	84.00'	769 cf	10.00'W x 34.00'L x 8.00'H Prismatic 2,720 cf Overall - 796 cf Embedded = 1,924 cf x 40.0% Voids
#2	86.00'	679 cf	6.00'D x 6.00'H Vertical Cone/Cylinder x 4 Inside #1 796 cf Overall - 3.0" Wall Thickness = 679 cf
		1,448 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	84.00'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.16 cfs @ 12.52 hrs HW=89.83' (Free Discharge)

↑ **1=Exfiltration** (Exfiltration Controls 0.16 cfs)

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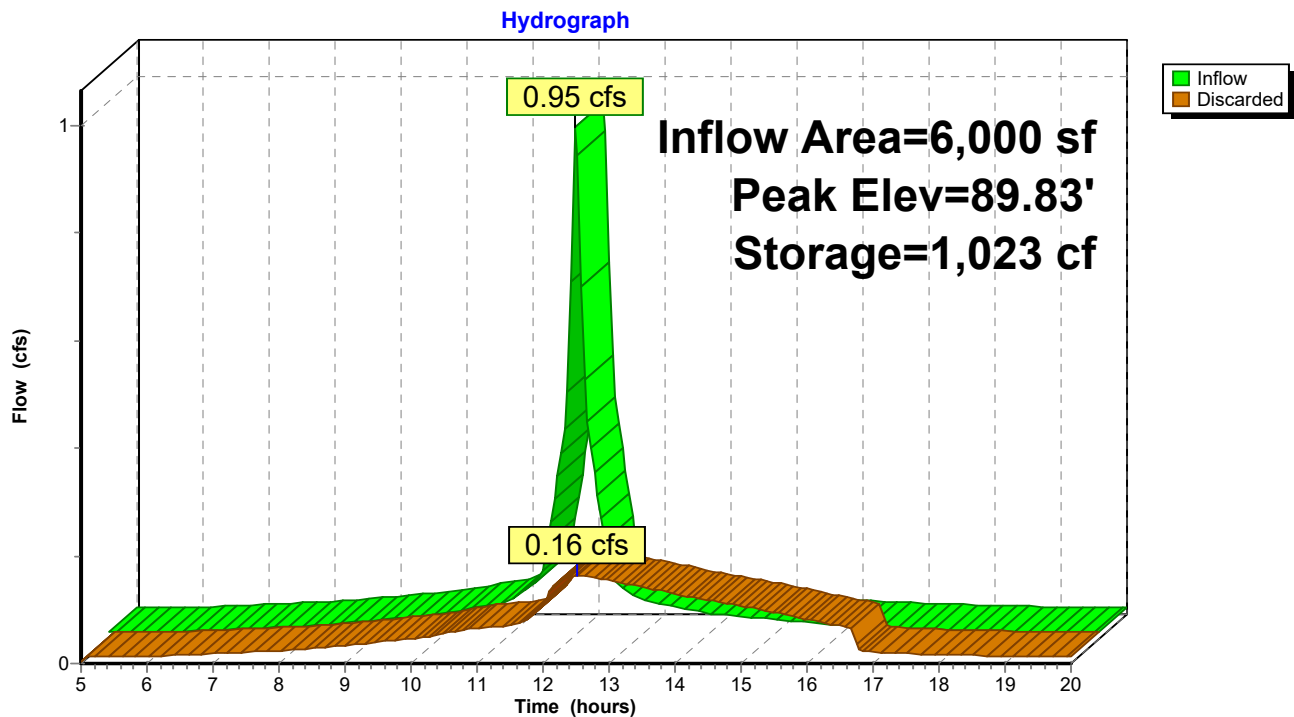
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Type III 24-hr D - 100YR Rainfall=7.00"

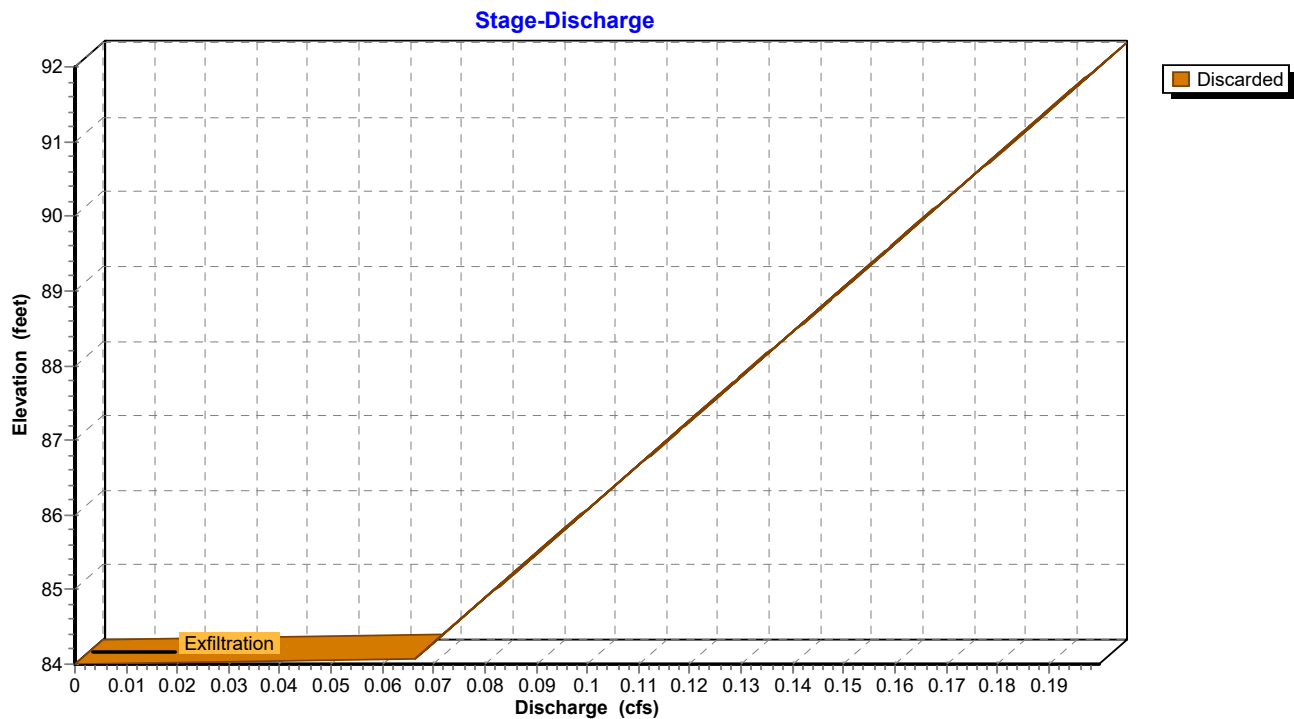
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Pond 2P: Roof SWMA



Pond 2P: Roof SWMA



474 Main Street - Post-Development

Type III 24-hr D - 100YR Rainfall=7.00"

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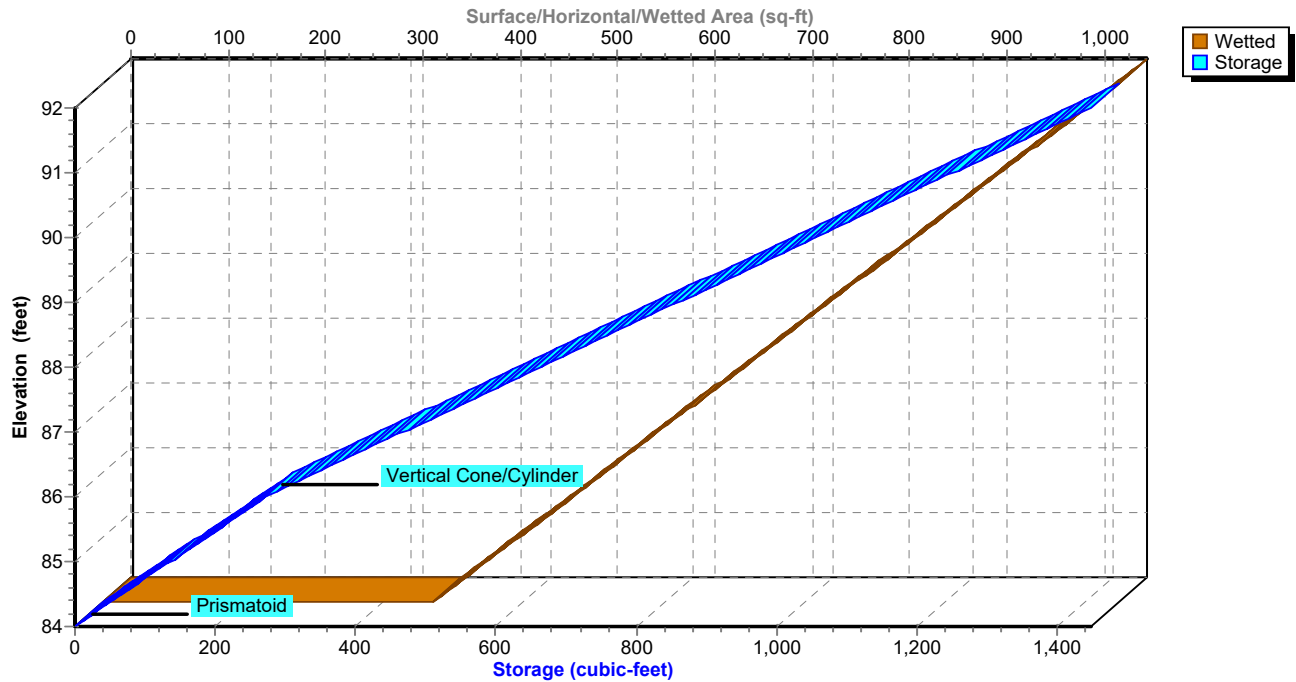
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Pond 2P: Roof SWMA

Stage-Area-Storage



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Type III 24-hr D - 100YR Rainfall=7.00"

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Summary for Pond 4P: Rain Garden

Inflow Area = 67,846 sf, 35.28% Impervious, Inflow Depth > 2.27" for D - 100YR event
 Inflow = 2.37 cfs @ 12.50 hrs, Volume= 12,824 cf
 Outflow = 0.22 cfs @ 12.95 hrs, Volume= 6,054 cf, Atten= 91%, Lag= 27.2 min
 Discarded = 0.22 cfs @ 12.95 hrs, Volume= 6,054 cf

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 93.64' @ 16.07 hrs Surf.Area= 1,296 sf Storage= 7,882 cf

Plug-Flow detention time= 224.5 min calculated for 6,034 cf (47% of inflow)
 Center-of-Mass det. time= 137.7 min (972.3 - 834.5)

Volume	Invert	Avail.Storage	Storage Description
#1	87.66'	3,876 cf	Custom Stage Data (Irregular) Listed below (Recalc) -Impervious 36.00'W x 36.00'L x 8.00'H Prismaoid 10,368 cf Overall - 3,186 cf Embedded = 7,182 cf x 40.0% Voids 6.00'D x 6.00'H Vertical Cone/Cylinder x 16 Inside #2 3,186 cf Overall - 3.0" Wall Thickness = 2,714 cf
#2	78.75'	2,873 cf	
#3	80.75'	2,714 cf	
		9,463 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
87.66	359	73.0	0.0	0	0	359
87.67	359	73.0	40.0	1	1	360
88.99	359	73.0	40.0	190	191	456
89.00	359	73.0	30.0	1	192	457
90.74	359	73.0	30.0	187	379	584
90.75	359	73.0	30.0	1	381	585
90.99	359	73.0	30.0	26	406	602
91.00	359	73.0	100.0	4	410	603
92.00	606	91.9	100.0	477	887	864
93.00	910	110.7	100.0	753	1,640	1,184
94.00	1,270	129.6	100.0	1,085	2,725	1,565
94.80	1,614	145.3	100.0	1,151	3,876	1,925

Device	Routing	Invert	Outlet Devices
#1	Discarded	78.75'	8.270 in/hr Exfiltration over Wetted area from 78.75' - 90.00' Excluded Wetted area = 1,296 sf

Discarded OutFlow Max=0.22 cfs @ 12.95 hrs HW=88.27' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.22 cfs)

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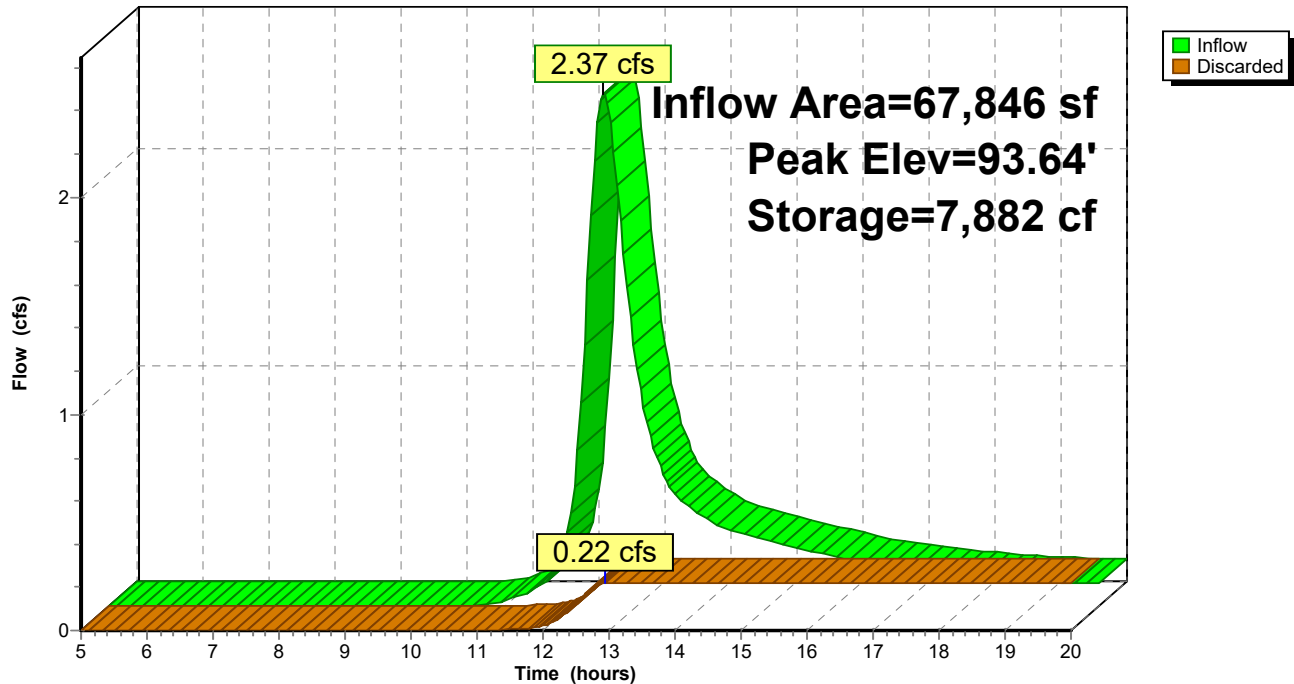
Type III 24-hr D - 100YR Rainfall=7.00"

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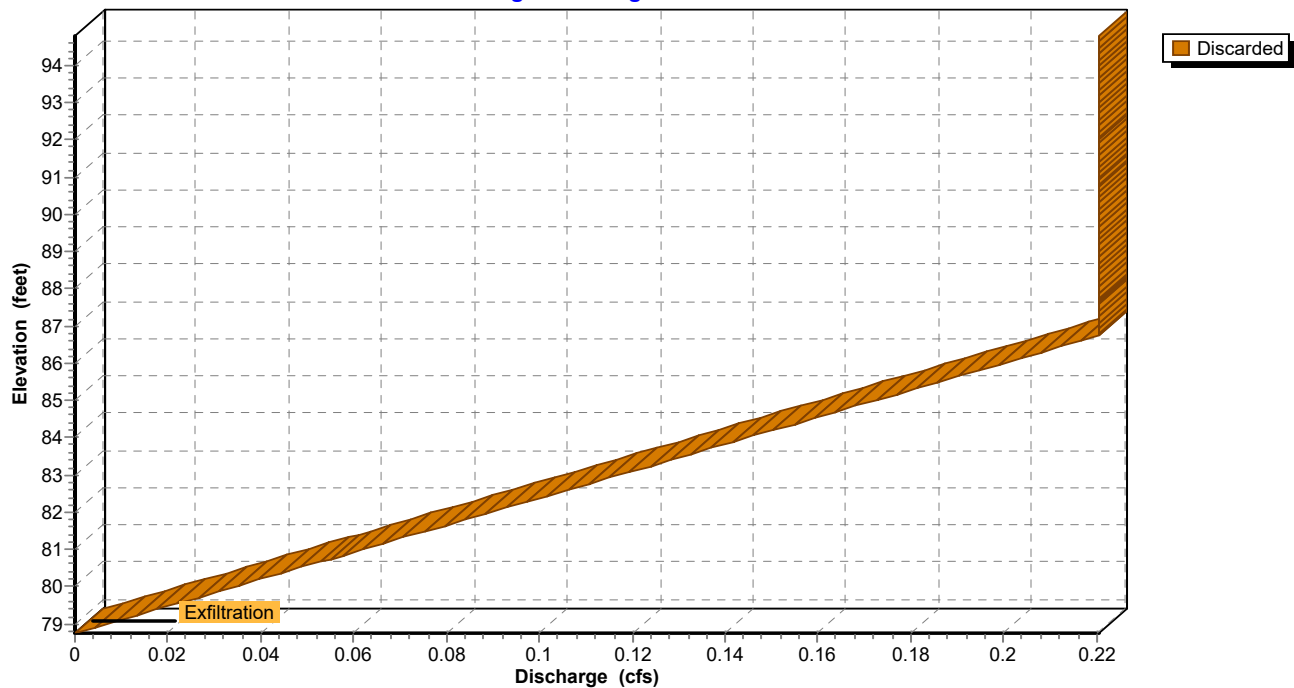
Pond 4P: Rain Garden

Hydrograph



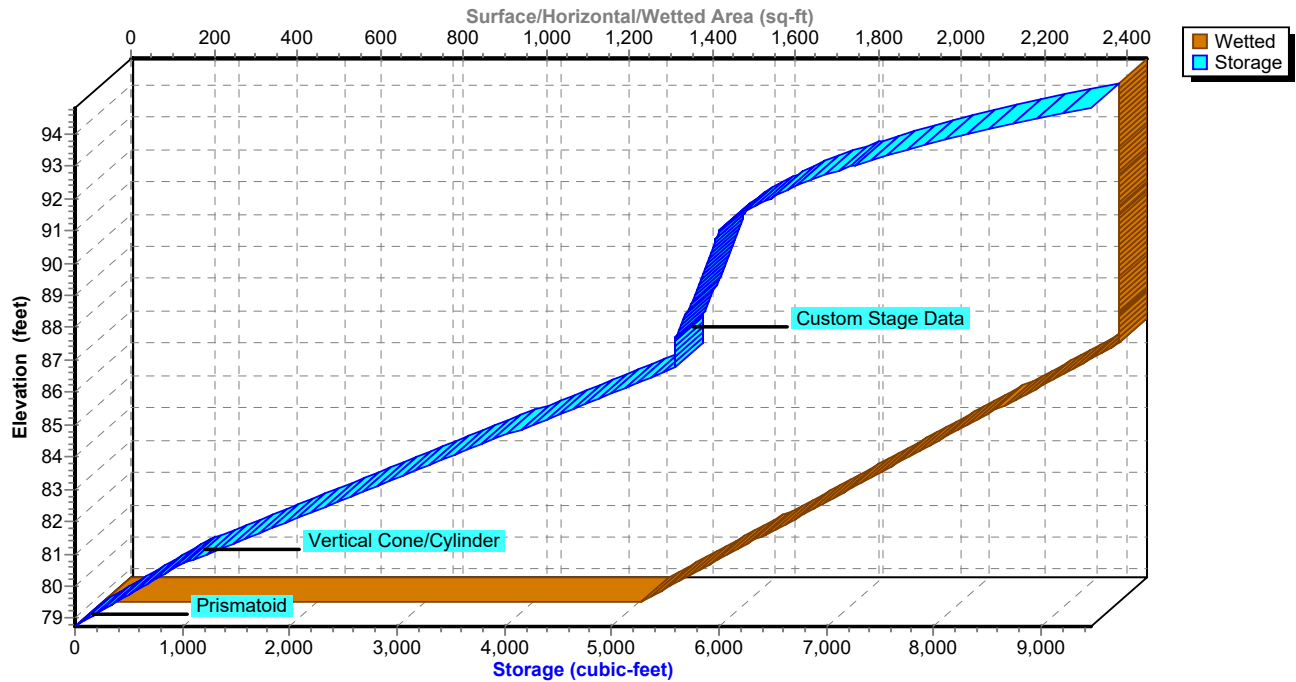
Pond 4P: Rain Garden

Stage-Discharge



Pond 4P: Rain Garden

Stage-Area-Storage

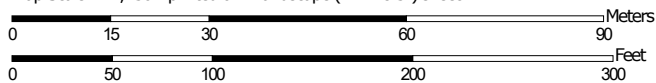


Soil Map—Barnstable County, Massachusetts
(474 Main Street & 31 Ashumet Road)



Soil Map may not be valid at this scale.

Map Scale: 1:1,150 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

1/18/2024
Page 1 of 3

Barnstable County, Massachusetts

252D—Carver coarse sand, 15 to 35 percent slopes

Map Unit Setting

National map unit symbol: 2y07y

Elevation: 0 to 220 feet

Mean annual precipitation: 36 to 71 inches

Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 250 days

Farmland classification: Not prime farmland

Map Unit Composition

Carver, coarse sand, and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Carver, Coarse Sand

Setting

Landform: Moraines, outwash plains

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Head slope, nose slope, side slope, riser

Down-slope shape: Convex, linear

Across-slope shape: Linear

Parent material: Sandy glaciofluvial deposits

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material

Oe - 2 to 3 inches: moderately decomposed plant material

A - 3 to 7 inches: coarse sand

E - 7 to 10 inches: coarse sand

Bw1 - 10 to 15 inches: coarse sand

Bw2 - 15 to 28 inches: coarse sand

BC - 28 to 32 inches: coarse sand

C - 32 to 67 inches: coarse sand

Properties and qualities

Slope: 15 to 35 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Excessively drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to very high (1.42 to 14.17 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: A

Ecological site: F149BY005MA - Dry Outwash

Hydric soil rating: No

Minor Components

Deerfield

Percent of map unit: 10 percent

Landform: Outwash terraces, outwash plains, kame terraces,
outwash deltas

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Concave

Hydric soil rating: No

Hinckley

Percent of map unit: 5 percent

Landform: Moraines, eskers, kames, outwash deltas, outwash
terraces, outwash plains, kame terraces

Landform position (two-dimensional): Summit, shoulder, backslope,
footslope, toeslope

Landform position (three-dimensional): Head slope, nose slope,
side slope, crest, riser, tread

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Merrimac

Percent of map unit: 3 percent

Landform: Kame terraces, outwash deltas, outwash terraces

Landform position (three-dimensional): Riser, tread

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Freetown, coastal lowland

Percent of map unit: 2 percent

Landform: Bogs, marshes, swamps

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Barnstable County, Massachusetts

Survey Area Data: Version 20, Sep 12, 2023

Barnstable County, Massachusetts

265A—Enfield silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 98qs

Elevation: 0 to 1,000 feet

Mean annual precipitation: 40 to 50 inches

Mean annual air temperature: 45 to 55 degrees F

Frost-free period: 140 to 240 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Enfield and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Enfield

Setting

Landform: Outwash plains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Silty, friable loamy eolian deposits over loose sandy glaciofluvial deposits

Typical profile

H1 - 0 to 12 inches: silt loam

H2 - 12 to 31 inches: silt loam

H3 - 31 to 64 inches: gravelly coarse sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: 16 to 40 inches to strongly contrasting textural stratification

Drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 7.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 1

Hydrologic Soil Group: B

Ecological site: F144AY024NY - Well Drained Eolian Outwash
Hydric soil rating: No

Minor Components

Merrimac

Percent of map unit: 10 percent
Hydric soil rating: No

Carver

Percent of map unit: 5 percent
Hydric soil rating: No

Hinckley

Percent of map unit: 5 percent
Hydric soil rating: No

Data Source Information

Soil Survey Area: Barnstable County, Massachusetts
Survey Area Data: Version 20, Sep 12, 2023

Barnstable County, Massachusetts

602—Urban land

Map Unit Setting

National map unit symbol: 98s7

Frost-free period: 120 to 220 days

Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Parent material: Excavated and filled land

Minor Components

Udipsamments

Percent of map unit: 15 percent

Hydric soil rating: Unranked

Data Source Information

Soil Survey Area: Barnstable County, Massachusetts

Survey Area Data: Version 20, Sep 12, 2023

Appendix - F

Drawdown Calculations for Stormwater Management Systems

Exfiltration Rate: 8.27 in/hr = 0.689 ft/hr Carver Coarse Sand

<u>Subsurface Sys. 2P:</u>	100-YR Recharge Volume:	3,117.00 c.f.			
	Bottom Area:	500 s.f.			
	Bottom Exfiltration rate =	340 s.f.	x	0.689 ft/hr	= 234.3 c.f./hour
	Drawdown Time =	3,117.00 c.f.	/	234.3 c.f./hr	= 13.31 hours
	13.31 hours < 72 hours, therefore, system complies with drawdown time.				

<u>Subsurface Sys. 4P:</u>	100-YR Recharge Volume:	6,054.00 c.f.			
	Bottom Area:	1156 s.f.			
	Bottom Exfiltration rate =	1156 s.f.	x	0.689 ft/hr	= 796.5 c.f./hour
	Drawdown Time =	6,054.00 c.f.	/	796.5 c.f./hr	= 7.601 hours
	7.6 hours < 72 hours, therefore, system complies with drawdown time.				



Appendix G

Project: 474 Main Street / 31 Ashumet Road – Mashpee, MA

Rain Garden

Prepared By: ZLB

Date: 02/19/2024

TSS Removal Calculation Worksheet	A	B	C	D	E
	BMP	TSS Removal Rate	Starting TSS Load	Amount Removed (BxC)	Remaining Load (C-D)
	Street Sweeping	10%	1.00	0.10	0.90
	Sediment Forebay	25%	0.90	0.22	0.68
	Rain Garden	90%	0.68	0.61	0.07
Total TSS Removal =				93%	

Note: Greater than 44% TSS removed prior to infiltration

Appendix H

Required Water Quality

This site falls within an area with a rapid recharge rate (>2.4 inches per hour). Therefore, 1" water quality volume is to be used.

Rain Garden #1

Required WQV = (1.0 inch) * (1 ft/12 inches) * A_{imp} , where A_{imp} is the impervious area onsite.

WQV = (1.0 inch) * (1 ft/12 inches) * 28,056 s.f. = **2,338 c.f.**

Water Quality Volume below overflow grate elevation **93.8 = 2,484 c.f.**

Water Quality Volume Provided = 2,484 c.f. > 2,338 c.f. Required

Required Sediment Forebay Sizing

Rain Garden Forebay #1

Required Sediment Forebay Volume = (0.1 inch) * (1 ft/12 inches) * A_{imp} = **233.8 c.f.**

Sediment Control Volume below check dam elevation **94.8 = 271 c.f.**

Sediment Control Volume Provided = 271 c.f. > 233.8 c.f. Required

Appendix I

CONSTRUCTION PERIOD POLLUTION PREVENTION & EROSION AND SEDIMENTATION CONTROL PLAN

The construction of the proposed development is to be done sequentially according to elevation and siting needs.

Siltation control is to be established as needed to protect the abutting property and roadway from eroding soil and siltation during construction. Silts sacks are to be installed in all existing abutting catch basins.

No washing and/or cleaning of vehicles and/or equipment is to take place on site. In order to prevent mud and debris from being transported offsite. If debris is transported onto abutting properties it is to be removed immediately to maintain public safety. Any mud or siltation that has been tracked offsite is to be cleaned up before crews leave for the day.

Care should be taken to avoid excessive compaction of the area being used for onsite recharge. Filter fabric and/or silt sacks are to be placed under the grate of all catch basins. All basins and drains are to be checked monthly or before and after large rain storms, 0.5 inches or greater. This barrier is to be replaced when silt has built up or any damage has been found during inspection. The silt sacks are to be emptied and washed when they are 1/3 full. Site will then be brought to proposed subgrade for the patio and lawn areas. Once subgrade is obtained and all abutting landscape areas have been stabilized, the final patio areas shall be installed.

Care should be taken throughout the construction process to protect the infiltration areas from siltation and heavy vehicle traffic. It is recommended to stake or flag these areas as a visual reminder to onsite contractors.

A construction dumpster shall be kept onsite where it is out of the way of construction. All trash, scraps, offcuts, and the like are to be deposited in the dumpster as soon as possible. The dumpster is to be covered at the end of the work day to prevent wind-born debris from littering the neighboring properties. All contractors are responsible for cleaning up their waste and scraps. If it is necessary to store materials onsite, they must be kept neat and orderly.

OPERATIONS AND MAINTENANCE PLAN

Facility Location: 474 Main Street / 31 Ashumet Road – Mashpee, MA
Parcel IDs: 27-001-000A & 27-001-000B

Proposed Facility Owner: Joao L. Junqueira
53 Mercantile Way, Unit 6
Mashpee, MA 02649

Facility Description:

The drainage system Best Management Practice (BMP) is designed for a commercial development consisting of one building, and associated loading, parking, storage areas. Drainage system components consist of the following:

- Two (2) subsurface infiltration systems
- One (1) rain garden with subsurface infiltration
- One (1) sediment forebay
- One (1) grassed conveyance swale

Maintenance During Site Preparation:

1. Tree clearing and removal of topsoil shall be kept at a minimum in conformance with the Design Plan.
2. Stockpile areas for top and subsoil shall be located in an area away from the low points to avoid entering the drainage system. The perimeter of stockpile areas is to be staked with silt fence and/or haybales, if required.
3. All erosion control measures shall be inspected and repaired or replaced following every rainfall event.
4. Shoulders and side slopes shall be protected with mulch, hay, sod or approved equal until all slopes are permanently stabilized.

Maintenance During Building Construction:

1. The driveway entrance shall be designated prior to work. The entrance shall be prepared by removing top and subsoil and placing crushed stone in accordance with Plan Details. This entrance shall be the sole entrance during construction of the buildings, driveway, and site preparation. This apron shall be pitched away from the roadway to prevent runoff from the apron entering the roadway.
2. Areas that drain to the main driveway, such as lawn and landscaped areas shall be permanently stabilized prior to final pavement.
3. The owner of the facilities (Joao L. Junqueira), or its agent, shall inspect all of the erosion control measures on a weekly basis and repair/replace as required. The owner/agent shall also inspect all erosion control measures after each significant rainstorm.
4. The rain gardens and drywells shall be protected with crushed stone and rip-rap until stabilized with vegetation.

Routine Maintenance:

The routine maintenance program shall begin only after the following:

- Construction and slope stabilization are complete;
- All disturbed areas are adequately vegetated and stabilized;
- All leaching systems have been pumped and completely cleaned;
- The system has been completely inspected by the design engineer and the Planning Board's engineer and found to be functioning as designed in that no clogging of the leaching system has occurred during construction.

Routine maintenance shall consist of the following:

1. The leaching systems shall be inspected annually.
2. The rain gardens are to be cleared of debris and sediment on a bi-annual basis, including the stone diaphragm.
3. Forebay is to be inspected annually. Excessive sediment buildup is to be removed as required.
4. The Grass Conveyance Swale is to be inspected annually. Excessive sediment buildup is to be removed as required.

EMERGENCY SPILL CLEANUP PLAN

Facility Location: 474 Main Street / 31 Ashumet Road – Mashpee, MA
Parcel IDs: 27-001-000A & 27-001-000B

The owner of the facility shall have a designated person with overall responsibility for spill response cleanup.

- 1) Key personnel shall be trained in the use of this plan and spill containment and cleanup methods. All employees should have basic knowledge of spill control procedures.
- 2) A summary of this plan shall be posted in a prominent location in the building. The Summary shall identify the spill cleanup coordinators, location of cleanup kit, and phone numbers of regulatory agencies and individuals to be contacted in the event of a spill.

- 3) In the event of a spill, the following shall be notified:

a. Mashpee Fire Department	508-539-1454
b. Department of Environmental Protection	508-946-2700
c. Mashpee Water District	508-477-6767
d. Bourne Board of Health	508-539-1426

- 4) The cleanup of spills shall begin immediately.
- 5) An emergency spill containment and cleanup kit shall be stored and maintained on site. The kit shall be stored in a manner that allows rapid access and use by employees. A Spill Safety Supply-Oilup Sorbent® 31 Gallon Spill Response Kit or equal and Two Spillmagnet™ 24" x 24" drain covers shall be stored with the emergency spill response and containment kit. Kits and refills are available from Lab Safety Supply (800-356-0783).
- 6) The emergency spill cleanup plan shall be updated regularly.

OWNER CERTIFICATION

Facility Location: 474 Main Street / 31 Ashumet Road – Mashpee, MA
Parcel IDs: 27-001-000A & 27-001-000B

I, Joao L. Junqueira, hereby acknowledge that I have read and understand the Operation and Maintenance Plan and Emergency Spill Cleanup Plan, which shall be adhered to during and after construction. A copy of the Emergency Spill Cleanup Plan shall be given to each tenant with the Hazardous Waste Acknowledgement Form.

Joao L. Junqueira

Date



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.


A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature




Signature and Date 2/19/24

Checklist

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?

- ☒ New development
☐ Redevelopment
☐ Mix of New Development and Redevelopment



Checklist for Stormwater Report

Checklist (continued)

LID Measures: Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:

- ☒ No disturbance to any Wetland Resource Areas
- ☒ Site Design Practices (e.g. clustered development, reduced frontage setbacks)
- ☐ Reduced Impervious Area (Redevelopment Only)
- ☒ Minimizing disturbance to existing trees and shrubs
- ☐ LID Site Design Credit Requested:
 - ☐ Credit 1
 - ☐ Credit 2
 - ☐ Credit 3
- ☐ Use of "country drainage" versus curb and gutter conveyance and pipe
- ☒ Bioretention Cells (includes Rain Gardens)
- ☐ Constructed Stormwater Wetlands (includes Gravel Wetlands designs)
- ☐ Treebox Filter
- ☐ Water Quality Swale
- ☒ Grass Channel
- ☐ Green Roof
- ☐ Other (describe): _____

Standard 1: No New Untreated Discharges

- ☒ No new untreated discharges
- ☒ Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
- ☒ Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.



Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

- ☐ Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.
- ☐ Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.
- ☒ Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge

- ☒ Soil Analysis provided.
- ☒ Required Recharge Volume calculation provided.
- ☐ Required Recharge volume reduced through use of the LID site Design Credits.
- ☒ Sizing the infiltration, BMPs is based on the following method: Check the method used.
 - ☒ Static
 - ☐ Simple Dynamic
 - ☐ Dynamic Field¹
- ☒ Runoff from all impervious areas at the site discharging to the infiltration BMP.
- ☐ Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.
- ☒ Recharge BMPs have been sized to infiltrate the Required Recharge Volume.
- ☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:
 - ☐ Site is comprised solely of C and D soils and/or bedrock at the land surface
 - ☐ M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
 - ☐ Solid Waste Landfill pursuant to 310 CMR 19.000
 - ☐ Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.
- ☒ Calculations showing that the infiltration BMPs will drain in 72 hours are provided.
- ☐ Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

¹ 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.



Checklist for Stormwater Report

Checklist (continued)

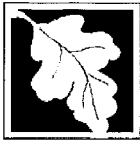
Standard 3: Recharge (continued)

- ☐ The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.
- ☐ Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality

The Long-Term Pollution Prevention Plan typically includes the following:

- Good housekeeping practices;
 - Provisions for storing materials and waste products inside or under cover;
 - Vehicle washing controls;
 - Requirements for routine inspections and maintenance of stormwater BMPs;
 - Spill prevention and response plans;
 - Provisions for maintenance of lawns, gardens, and other landscaped areas;
 - Requirements for storage and use of fertilizers, herbicides, and pesticides;
 - Pet waste management provisions;
 - Provisions for operation and management of septic systems;
 - Provisions for solid waste management;
 - Snow disposal and plowing plans relative to Wetland Resource Areas;
 - Winter Road Salt and/or Sand Use and Storage restrictions;
 - Street sweeping schedules;
 - Provisions for prevention of illicit discharges to the stormwater management system;
 - Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
 - Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
 - List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.
- ☒ A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.
 - ☒ Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:
 - ☒ is within the Zone II or Interim Wellhead Protection Area
 - ☐ is near or to other critical areas
 - ☒ is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
 - ☐ involves runoff from land uses with higher potential pollutant loads.
 - ☐ The Required Water Quality Volume is reduced through use of the LID site Design Credits.
 - ☒ Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.



Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

- ☐ The BMP is sized (and calculations provided) based on:
 - ☒ The ½" or 1" Water Quality Volume or
 - ☐ The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.
- ☐ The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the propriety BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.
- ☐ A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs)

- ☐ The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.
- ☐ The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted *prior* to the discharge of stormwater to the post-construction stormwater BMPs.
- ☐ The NPDES Multi-Sector General Permit does *not* cover the land use.
- ☐ LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.
- ☐ All exposure has been eliminated.
- ☐ All exposure has *not* been eliminated and all BMPs selected are on MassDEP LUHPPL list.
- ☐ The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas

- ☐ The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.
- ☐ Critical areas and BMPs are identified in the Stormwater Report.



Checklist for Stormwater Report

Checklist (continued)

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable

- ☐ The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:
 - ☐ Limited Project
 - ☐ Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
 - ☐ Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
 - ☐ Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
 - ☐ Bike Path and/or Foot Path
 - ☐ Redevelopment Project
 - ☐ Redevelopment portion of mix of new and redevelopment.
- ☐ Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.
- ☐ The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
 - Construction Period Operation and Maintenance Plan;
 - Names of Persons or Entity Responsible for Plan Compliance;
 - Construction Period Pollution Prevention Measures;
 - Erosion and Sedimentation Control Plan Drawings;
 - Detail drawings and specifications for erosion control BMPs, including sizing calculations;
 - Vegetation Planning;
 - Site Development Plan;
 - Construction Sequencing Plan;
 - Sequencing of Erosion and Sedimentation Controls;
 - Operation and Maintenance of Erosion and Sedimentation Controls;
 - Inspection Schedule;
 - Maintenance Schedule;
 - Inspection and Maintenance Log Form.
- ☒ A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.



Checklist for Stormwater Report

Checklist (continued)

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

- ☐ The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has **not** been included in the Stormwater Report but will be submitted **before** land disturbance begins.
- ☐ The project is **not** covered by a NPDES Construction General Permit.
- ☐ The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.
- ☐ The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

- ☒ The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:
 - ☒ Name of the stormwater management system owners;
 - ☒ Party responsible for operation and maintenance;
 - ☒ Schedule for implementation of routine and non-routine maintenance tasks;
 - ☒ Plan showing the location of all stormwater BMPs maintenance access areas;
 - ☐ Description and delineation of public safety features;
 - ☐ Estimated operation and maintenance budget; and
 - ☐ Operation and Maintenance Log Form.
- ☐ The responsible party is **not** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:
 - ☐ A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
 - ☐ A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

Standard 10: Prohibition of Illicit Discharges

- ☒ The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;
- ☒ An Illicit Discharge Compliance Statement is attached;
- ☐ NO Illicit Discharge Compliance Statement is attached but will be submitted **prior to** the discharge of any stormwater to post-construction BMPs.

Appendix K

ILLICIT DISCHARGE POLLUTION PREVENTION STATEMENT 474 Main Street / 31 Ashumet Road – Mashpee, Ma.

There is to be no dumping of toxins, pollutants, or illicit materials into the storm drainage systems on-site as it is strictly prohibited by law.

Toxins, pollutants, or illicit materials consist of, but are not limited to: paint, bleach, antifreeze, motor oil, raw sewage, hydrocarbons, kitchen grease, lubricating grease, etc.

The on-site storm drainage system is to be inspected periodically in accordance with the Operations and Maintenance plan. At the time of inspection, an inspection for illicit discharges shall be conducted. If illicit discharges are found during inspection, then immediate action should be taken to remediate and clean up the illicit discharge.

The remediation and/or clean-up is to be performed by a qualified company, such as Clean Harbors, 42 Longwater Dr., Norwell, MA 02061, Phone 1-800-645-8265 or equivalent.



PESCE ENGINEERING & ASSOCIATES, INC.

**43 Porter Lane
West Dennis, MA 02670**
Phone: 508-333-7630
epesce@comcast.net

April 2, 2024

Mashpee Planning Board
Attn: Mr. Evan Lehrer, Town Planner
Mashpee Town Hall
16 Great Neck Road North
Mashpee, MA 02649

RE: Engineering Review of the **Proposed Commercial/Retail Building**
Located at 474 Main Street & 31 Ashumet Road, Mashpee, MA

Dear Mr. Lehrer & Members of the Planning Board:

Pesce Engineering & Associates, Inc. is pleased to provide you with this engineering review of the Special Permit application package for the proposed commercial & retail building to be located at 474 Main Street (Rt. 130) & 31 Ashumet Road, Mashpee, MA. We have evaluated the plans for consistency with the Town's Zoning Bylaw, and conformance with the Massachusetts Stormwater Management Regulations.

In addition to a site visit on March 14th, we have reviewed the following new information to prepare this letter report:

- Site Plans entitled "Proposed Site Development at #474 Main Street & 31 Ashumet Road, Mashpee, Massachusetts," prepared by Bracken Engineering, Inc., 7 Sheets, dated February 19, 2024.
- Drainage Analysis Report, #474 Main Street & 31 Ashumet Road, Mashpee, MA, prepared by Bracken Engineering, Inc., dated February 19, 2024.
- Architectural Plans (floor plans & elevations), prepared by Giampietro Architects, 4 Sheets, dated January 29, 2024.

This project calls for the construction of a proposed new commercial & retail building at the subject address. The proposed project is a 2-story, 6,000 square foot (SF) building with 9 parking spaces. The 2 parcels for this project total 2.27 acres of land located in the Commercial-3 (C-3) Zoning District, as well as partially within the Residential-5 (R-5) Zoning District (a portion of the 31 Ashumet Rd. parcel). The project site is located within a DEP-designated Zone II of a public drinking water supply well, and, also within the Ground Water Protection Overlay District. The project site is entirely upland area, and is not located within the 100-yr. floodplain. The proposed building will be serviced by the municipal water system and an on-site Title 5 septic system.

The following are our review comments:

Site Plan, Layout & Utilities

Overall, the site engineering design is sound and reasonable, and we have minimal/minor comments as a result. The site layout & parking/circulation design has been performed in accordance with the requirements of the Mashpee Zoning Bylaw, and good engineering practice.

We have the following site plan, layout and utilities comments:

1. We recommend that this project be reviewed by the Mashpee Fire Dept. (with comments provided in writing via letter or e-mail to the Board or staff), regarding the adequacy of access for emergency vehicles, which may involve providing a swept path analysis (via AutoTURN software or other method with the size of fire truck as directed by the Fire Dept.).
2. We recommend that a Lighting Plan be prepared for the Board to review. This plan should include the proposed parking lot and building mounted lighting. All fixtures should be designed to be "Dark Sky" compliant (downward facing light, fitted with proper shields, or guards, to provide a 90-degree vertical cutoff of light).
3. We recommend that a "STOP" sign and painted stop line be provided for safety, on the exit lane of the site access/egress driveway at Ashumet Road.
4. Based on our site visit, we recommend that a note be added to the plans indicating that the existing vegetation on Ashumet Road shall be pruned/cleared to provide adequate safe sight distance at the proposed driveway. Care should be observed regarding the location of future signage at this location as well.
5. We have the following comments regarding the proposed septic design:
 - a. We note that the proposed septic design indicates frames and covers to be brought to grade (on the plan view on Sheet 5) for two of the proposed leaching chambers. We recommend that the "System Profile" view on this sheet be amended to reflect this requirement as well, to avoid any confusion during construction.
 - b. We recommend that the proposed location of the required SAS vent be added to the site plans (and odor control provided).
6. The following comments pertain to the proposed Holding Tank:
 - a. Sheets 4 & 5 show a label for the proposed Holding Tank as a "Tight Tank" on the plans. A minor point of clarification is that the term "Tight Tank" refers to a sanitary waste tank in Title 5, while the term "Holding Tank" refers to an industrial wastewater holding tank in 314 CMR 18.00. However, in order to avoid any confusion, we recommend that this tank label be amended to be a "Holding Tank."
 - b. We recommend that addition construction detail information for the proposed Holding Tank be added to the plans for clarity during construction. This should

include the required audible & visual alarm (and mounting locations), when the volume in the tank reaches 75% of capacity (reference 314 CMR 18.08, Design and Operation Requirements for In-ground Holding Tanks).

Stormwater Management

This project proposes to mitigate post-development runoff via the use of a new stormwater management system. The runoff from the new parking area and driveway access will be collected into two (2) swales (one paved, one grassed) which flow to a sediment forebay. The forebay then discharges to a rain garden. This rain garden has an overflow inlet to a subsurface stormwater infiltration system consisting of sixteen (16) leaching pits (6 ft. diameter) with crushed stone all around them. This system will effectively remove the additional Total Suspended Solids (TSS) required in a Zone II (Mass. Stormwater Handbook, Standard #6, treatment before infiltration for stormwater discharges within a Zone II).

A separate stormwater infiltration system consisting of 4 leaching pits (with crushed stone) has been sized to accommodate the roof runoff from the new building. Both stormwater management systems have been designed for the 100-yr. storm event.

We have the following stormwater management comments:

1. The drainage design references USDA TP-40 (Technical Paper 40) for the selection of the design storm events. TP-40 has been replaced with the NOAA (National Oceanic and Atmospheric Administration) Atlas 14, Volume 10, Version 3, Point Precipitation Frequency Data. Use of this data base has essentially become the state-of-the-art now for most drainage analysis applications, since it uses the latest rainfall data that is based on the changing storms as a result of climate change conditions. Using this NOAA data is more conservative, and we recommend that the 100-yr. storm event be based on this reference (7.52" vs. 7.0" in the design), and the drainage system amended as required.
2. We have the following comments for the O&M Plan, Emergency Spill Plan & Drainage Analysis Report:
 - a. The O&M Plan should include an inspection log form, and the certification sheet should be signed & dated by the Applicant.
 - b. Line 3) d. of the Emergency Spill Cleanup Plan should be amended with the label of the "Mashpee" Board of Health.
 - c. The Illicit Discharge should also be signed and dated by the Applicant.

Thank you for this opportunity to assist the Planning Board in their review of this project, and as always, please call or e-mail me if you have any questions or comments.

Sincerely,

PESCE ENGINEERING & ASSOCIATES, INC.



Edward L. Pesce., P.E., LEED ® AP
Principal

cc: Zac Basinski, P.E., Bracken Engineering, Inc.

NEW BUSINESS



Town of Mashpee

Planning Board

16 Great Neck Road North
Mashpee, MA 02649

Mashpee Planning Board Public Hearing Notice

Pursuant to Massachusetts General Laws, Chapter 41 Section 81T and the Mashpee Rules and Regulations Governing the Subdivision of Land, the Mashpee Planning Board will hold a public hearing on Wednesday, May 1, 2024 at 7:15 p.m. in the Waquoit Meeting Room, at the Mashpee Town Hall, at 16 Great Neck Road North, Mashpee, MA 02649, to consider an application made by New Seabury Homes, LLC for approval of a Definitive Subdivision Plan of land that would divide six (6) parcels into seven (7) building lots off of Great Oak Road and Red Brook Road. The properties are identified on Mashpee Assessor's Map 110 Parcels 58, 59, 80, 82, 83 and 97 and are addressed as 52 and 58 Red Brook Road and 23, 29, 41 and 47 Great Oak Road. The submitted plan proposes to create lots that are between 15,016 s.f. and 17,083 s.f. in size and proposes to protect 181,266 s.f. of land as open space. The lots proposed would be accessed by a cul-de-sac road called Osprey Court.

Plans may be reviewed in the offices of the Town Clerk or Town Planner at Mashpee Town Hall.

Submitted by

Karen D. Faulkner, Chair
Mashpee Planning Board

Publication dates:

Friday, April 12, 2024
Friday, April 19, 2024



Town of Mashpee

Planning Board

16 Great Neck Road North
Mashpee, MA 02649

Mashpee Planning Board Public Hearing Notice

Pursuant to Massachusetts General Laws, Chapter 40A, Section 9 and the Mashpee Zoning Bylaw Sections 174-24(C) and 174-47, the Mashpee Planning Board will hold a public hearing on Wednesday, May 1, 2024 at 7:10 PM in the Waquoit Meeting Room, at the Mashpee Town Hall, at 16 Great Neck Road North, Mashpee, MA 02649 to consider an application made by New Seabury Homes, LLC for approval of a special permit for a cluster subdivision. The applicant proposes to divide the properties identified on Mashpee Assessor's Map 110 Parcels 58, 59, 80, 82, 83 and 97 and which are addressed as 52 and 58 Red Brook Road and 23, 29, 41 and 47 Great Oak Road comprised of 318,064 square feet into 7 new building lots ranging in size between 15,016 s.f. and 17,083 s.f.. The applicant proposes that the Planning Board authorize minimum lot sizes of 10,000 s.f. with 15 foot side and rear setbacks with 40 foot front setbacks while preserving 181,266 s.f. as protected open space (57% of total land area). The Plans and submitted Application can be viewed in the offices of the Town Clerk or the Town Planner.

Submitted by
Karen D. Faulkner, Chair

Publication Dates

Friday, April 12, 2024
Friday, April 19, 2024

Evan Lehrer
Community Development Director
(508) 539-1414
elehrer@mashpeema.gov



Planning Department
Mashpee Town Hall
16 Great Neck Road North
Mashpee, MA 02649

To: Karen Faulkner, Chair
Members of the Planning Board
From: Evan Lehrer, Community Development Director
Date: March 22, 2024
Re: Mashpee's Tree Preservation General Bylaw - Fees

Request:

Vote to establish permit fees for Certificates of Exemption or Tree Preservation Plan Applications sought under Mashpee's Tree Preservation General Bylaw. I propose a \$50 application fee for Certificates of Exemption and a \$100 application fee for Tree Preservation Plans.

Background:

At the October 2023 Town Meeting, Mashpee's Tree Preservation General Bylaw was adopted. The Attorney General approved of the Bylaw in January 2024 and since that time the Planning Department has been working to get the program up and running. We have finalized application forms and procedures. We will be hosting question and answer sessions for property owners, builders, engineers, arborists, and any other interested party in April. To begin accepting applications, we require the Planning Board vote to establish the fee schedule pursuant to Section 175-10 of the General Bylaws:

§175-10: RULES AND REGULATIONS

The Planning Board may promulgate rules and regulations to effectuate the purposes of this Bylaw. Such rules may prescribe the size, form, contents, style and number of copies of plans for determining final compliance with these regulations. The adoption or amendment of rules and regulations shall be after a public hearing to receive comments on the proposed or amended rules and regulations. The public hearing shall be advertised once in a newspaper of general local circulation, at least 14 days prior to the date of the public hearing.



PLANNING BOARD DECISION
WILLOWBEND SPECIAL PERMIT MODIFICATION
275 Quinaquisset Avenue – Cranberry Point

1. **Proposal.**

Reference is made to a Special Permit Decision issued by the Mashpee Planning Board, dated April 15, 1987 and recorded with the Barnstable County District Registry of Deeds at Book 5707, Page 290, as amended from time to time (hereinafter the "Special Permit"). By decision dated August 7, 1991, the Special Permit was transferred to Bent Twig Limited Partnership whose interest was subsequently assigned to Willowbend Development Corporation, and then to Willowbend Country Club, Inc. Most recently the Special Permit was transferred to Southworth Mashpee Properties LLC who is hereinafter referred to as the "applicant". The Special Permit authorizes construction of a residential / golf course community known as Willowbend south of Route 28 in east Mashpee ("the project").

The applicant proposes to modify the special permit and site plans to allow for the construction of 12 single-family cottage-style condominiums on properties addressed as 275 Quinquisset Avenue and, Mashpee, MA 02649 (Assessor's Map 69 Block 169) totaling 220,650 square feet (+/-) or 5.065 acres. The units proposed represent a reduction of 2 units that were removed from the proposal to accommodate a more substantial naturally vegetated buffer between the limits of development and Quinaquisset Avenue consistent with most of the Willowbend project. Additionally, the original submittal included a "village green" along the easterly portion of the property which was removed from consideration to minimize impacts to wetlands along that portion of the site.

The subject property is not currently included within Willowbend's special permit area and is improved with a single-family dwelling, sheds, a septic system, paved driveway, and lawn area. The existing dwelling is proposed for demolition. The existing development on these lots is concentrated around the dwelling, with extensive forested uplands to the west and forested uplands and wetlands to the east of the driveway/dwelling. Willowbend proposes to annex the subject parcel into the Willowbend Special Permit area as allowed pursuant to 174-24(C)(9)(g) of the Mashpee Zoning Bylaws which is intended to reduce the overall density of the project by not increasing the overall number of dwelling units authorized by the special permit nor decreasing the amount of protected open space.

The subject property is bounded by Quinaquisset Avenue to the north and surrounded by cranberry bogs to the west and south constructed around the Quaker Run, a perennial stream, which flows south through the cranberry bogs and the golf course. The project will tie into existing utilities in Quinaquisset Avenue, including the Willowbend Wastewater Treatment Facility and no new septic systems are proposed. The project further incorporates a stormwater collection system that includes a new sediment forebay along Quinaquisset Avenue to offer pre-treatment to stormwater runoff currently entering the wetlands system without any pre-treatment.

The 12 units proposed would contribute to the overall dwelling unit maximum of 287 dwelling units defined in the Special Permit. Subsequent to the most recent modification of the Willowbend Special Permit pertaining to Willow Circle (See Barnstable County Registry of Deeds Book 34860 Page 149) the total number of dwelling units in the project were found to be 274. The applicant provided documentation during the Planning Board's review of this application that demonstrated that one property owner in Willowbend purchased two building



Town of Mashpee

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lots to build one dwelling and, as such, the dwelling unit count stands at 273. Inclusion of these 12 units would increase the total number of dwelling units in the project area to 275. Willowbend's special permit further specifies a maximum number of bedrooms allowed within the project area of 853. The Planning Board alleged, and the applicant acknowledged, that the number of bedrooms currently within the permit area exceeds 853.

2. Jurisdiction.

The application was made and this decision has been issued by the Mashpee Planning Board pursuant to Section 174-24(C)(9) of the Mashpee Zoning Bylaw as it existed on XX/XX/XXXX the date on which this special permit modification was approved/denied by the Mashpee Planning Board. As the proposal does not increase square footage of any use by more than 10%, the provisions of Section 174-24.C.(9)(d) of said bylaw provide that the land involved in this application is subject to the dimensional and other relevant provisions of the Zoning Bylaw as it existed on November 6, 1985, the date on which a preliminary subdivision plan was filed on the property, freezing the zoning in effect at the time that this special permit was originally issued on April 15, 1987. Expansion of the project area is permitted under Section 174-24.C.(9)(g) of the Zoning Bylaw if approved by the Planning Board. With regard to the prohibition contained in Section 174-24.C.(9)(f) on increasing the number of units in a development, the proposed 285 units are less than the 338 originally authorized by the special permit and less than the 287 maximum currently defined in the 1991 special permit modification recorded in Book 8229 Page 264.

The project is also subject to the applicable provisions of M.G.L. Chapter 40A, Section 9.

3. Chronology.

Application for this Special Permit Modification and accompanying site development plans was filed with the Town Clerk and Planning Board on February 1, 2023. A hearing was opened before the Mashpee Planning Board at the Mashpee Town Hall, 16 Great Neck Road North, Mashpee, Massachusetts on March 1, 2023 at 7:10 p.m. Notice was duly given to abutters in accordance with Massachusetts General Laws Chapter 40A. Notice was also given by publication in the Mashpee Enterprise, a newspaper of general circulation in the Town of Mashpee, on February 10, 2023 and February 17, 2023.

On March 20, 2024, the Planning Board voted to close the hearing. On April 3, 2024 the Planning Board commenced the deliberative process and made the following findings outlined below in Section 4: Findings. Upon a motion to grant the special permit modification subject to the conditions enumerated below made by _____ and seconded by _____ the members of the Board were recorded voting as follows: Members.... were recorded as voting in favor of approval of the proposed modification; members..... were recorded as voting against. The motion to approve the special permit modification passed/failed.

4. Findings.

- a. The proposed modification involves less than 10% increase in the area of any use and is therefore, under the provisions of Section 174-24.C.(9)(d) of the Zoning Bylaw, subject to the dimensional and other relevant provisions of the Zoning Bylaw as it existed on November 6, 1985, the date on which a preliminary subdivision plan was filed on the property, freezing the zoning in effect at the time that this special permit was originally issued on April 15, 1987. At that time, the property was in an R-3M



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zoning district. This subdivision is proposed under the cluster subdivision zoning regulations applicable to the project on that date.

- b. The proposed modification lies outside of the "Original Project" area but within the project area as expanded by vote of the Planning Board in Willowbend Special Permit Modification #27 pursuant to Section 174-24.C.(9)(g) of the Zoning Bylaw increasing said area to 330.14 acres in Mashpee and 3.39 acres in Barnstable.
- c. Under the provisions of Sections 9.3 and 9.4 of the applicable 1985 Zoning By-law, a minimum of 92.0 acres of open space was required within the "original project area". Current open space is 237.9 acres, well in excess of the required acreage.
- d. Under the 1985 special permit, the project would have been allowed 341 residential units and was permitted for 338 units. In 1991, the Permit was modified to reduce the total number of units to 287. The current proposal increases the number of approved units to 285 out of 287 maximum allowed units, which the Board finds to be permissible under Section 174-24.C.(9)(f), as it is less than the originally allowed 338 units and less than the currently allowed 287, and hereby approves said increase.
- e. Under the 1985 special permit, which was affirmed in a 1991 special permit modification, the project is allowed no more than 853 bedrooms within the project area. The Planning Board finds, and the applicant acknowledged that there are currently more than 853 bedrooms in the project area and were at least 855 on August 2, 2023 as calculated by the Town Planner utilizing Assessor's data and Building Department records. The Planning Board finds that the applicant is not in compliance with this condition of the special permit and has established a new series of conditions to mitigate the impacts of the additional bedrooms in existence and planned, including this application. Those conditions are outlined below in Section 5: Conditions.
- f. The project satisfies the requirements of Massachusetts General Law Chapter 40A, in that it complies with the general purposes and intent of the Mashpee Zoning Bylaw on the applicable dates.
- g. The original special permit (1987) is conditioned on maintaining a minimum 100 foot buffer strip from either edge of Sampson's Mill Road and Quinaquisset Avenue left in its existing vegetative state, except for entrance areas, golf cart underpass and golf course areas shown on the filed plans. The submitted site plans for Cranberry Point indicate a buffer strip totaling 65 feet between the first condominium and the edge of Quinaquisset Avenue which is less than the 100 feet required. The Board finds that section 9.352 of the Zoning Bylaws in place at the time of the original special permit approval stated:

"A buffer strip of land equal in width to the front yard requirement of the underlying zoning district shall be created along the entire perimeter of the parcel. The perimeter shall be unbroken except for access roads. The buffer strip shall be considered part of the open space. The buffer strip shall be maintained in its natural state or landscaped if in the opinion of the Planning Board it is necessary to protect privacy of adjoining land owners and shall not be used for parking or organized recreational activities. The Planning Board may require a buffer strip in excess of the minimum requirement depending on the use of adjoining land."



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The Planning Board finds that a reduced 65 foot buffer strip is greater than 40 feet, which was the minimum width of the front yard requirement applicable under the 1985 bylaw, which would adequately protect the privacy of adjoining land owners and is not being used for parking or organized recreational activities. The Board finds that the 65 foot buffer strip shown on the site development plans does not derogate from the purpose and intent of the bylaw or special permit and exceeds the minimum requirements of the applicable zoning criteria and hereby authorizes a 65 foot buffer between the edge of Quinaquisset Avenue and the limits of development on the subject parcel.

- h. The Board finds that Mashpee General Bylaws Chapter 108: Flow Neutral applies to the subject property which limits present and future wastewater flows to the flows permitted from the property as of the effective date of the Mashpee Comprehensive Wastewater Management Plan (CWMP), July 1, 2015. Chapter 108 establishes a 1 bedroom per 10,000 square feet of lot area limit for multifamily projects such as Cranberry Point. The subject parcel totals 220,650 square feet. As such, under the provisions of Chapter 108, the subject property is limited to 22 bedrooms without relief.
- i. The Board finds that the subject parcel and surrounding bog system contemplated in the applicant's mitigation package are within or adjacent to areas mapped as moderate pre-contact archaeological sensitivity areas determined from a Town-wide pre-contact sensitivity survey conducted by the Public Archaeological Laboratory (PAL) from Pawtucket, RI. The Board accepted comment from the Mashpee Wampanoag Tribal Historic Preservation Officer (THPO) who expressed concern over any and all ground disturbing activities on the subject parcel and surrounding bog parcels under consideration for restoration due to the cultural and archaeological sensitivity of the area and the potential to discover culturally sensitive artifacts and materials.
- j. The Board finds that the proposed stormwater sediment forebay proposed within the 65 foot buffer strip along Quinaquisset Avenue will capture and pre-treat stormwater before it enters the wetlands systems in and around the subject parcel.
- k. The submitted site plans were reviewed by the Planning Board's consulting engineer Ed Pesce, who provided written responses to the Planning Board dated February 27, 2023, October 13, 2023, and December 6, 2023. The Board finds that the applicant was responsive to the engineer's comments and made satisfactory revisions to the submitted plans. The Board accepts the recommendation of the consulting engineer to recommend approval. In his December 6, 2023 letter transmitted as an email to Evan Lehrer, Community Development Director, the consulting engineer wrote:

"The revised plans and associated documentation have addressed the majority of my previous engineering review comments. There are a few comments that still need to be resolved. However, these comments are relatively minor, and I believe can be resolved with direct coordination between myself and Matt Eddy of Baxter Nye. Subject to the discretion of the Board, I would recommend approval of these plans, with the condition that all the Pesce Engineering comments are satisfactorily addressed."

- l. Due to changes made to the development plans to remove, to the maximum extent practicable, impacts to bordering vegetated wetland onsite updates to the drainage and grading plans need to be made to the satisfaction of the consulting engineer.



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- m. The project on the subject parcel as well as the bog restoration contemplated in the plans fall within the jurisdiction of the Mashpee Conservation Commission and require the issuance of an order of conditions.
- n. The Board finds that the subject parcel is within the jurisdictional buffer of the Mashpee Conservation Commission. The 12 condominiums proposed on the subject parcel and the bog restoration contemplated in the plans require review and approval by the Conservation Commission. Additionally, the Board finds that, due to the subject parcel's existence within the jurisdictional buffer of the Mashpee Conservation Commission the project is exempt from the requirements of the Chapter 175 Mashpee Tree Preservation General Bylaw.
- o. In conformance with the provisions of Article VI, Section 174-24.C.(2) of the Zoning Bylaw, the Planning Board finds that the proposal will not adversely affect public health or safety, will not cause excessive demand on community facilities, will not significantly decrease surface or ground water quality or air quality, will not have significant adverse impact on wildlife habitat, estuarine systems, traffic flow, traffic safety, waterways, fisheries, public lands or neighboring properties, will not cause excessive levels of noise, vibration, electrical disturbance, radioactivity or glare, will not destroy or disrupt any species listed as rare, endangered or threatened by the Massachusetts Natural Heritage program or any known historic or archeologic site, will not produce amounts of trash, refuse or debris in excess of the Town's landfill and waste disposal capacities, will properly dispose of stumps, construction debris, hazardous materials and other wastes, will provide adequate off street parking, will not cause excessive erosion or cause increase runoff into neighboring properties or into any natural river, stream, pond or water body and will not otherwise be detrimental to the Town or the area.

5. Conditions.

- a. The project shall be constructed in conformance with the following site plans:

"Cranberry Point at Willowbend - Site Construction Plans, Mashpee, Massachusetts," Prepared for Southworth Mashpee Properties, LLC, 130 Willowbend Drive, Mashpee, MA 02649; Project Titled: Cranberry Point – 275 Quinaquisset Avenue, Mashpee, MA 02649; Prepared by Baxter Nye Engineering & Surveying, Hyannis, MA 02601, dated January 16, 2023 consisting of 19 sheets as follows:

C0.0	Cover Sheet
C1.0	Legend and General Notes
CPP1.0	Certified Plot Plan
C2.0	Existing Conditions Plan
C3.0	Master Layout Plan
C3.1	Site Layout Plan – Sheet 1 of 2
C3.2	Site Layout Plan – Sheet 2 of 2
C3.3	Sight Distance Plan
C-3.4	Truck Turning Template Plan
C-4.0	Grading & Drainage Plan Sheet 1 of 2
C-4.1	Grading & Drainage Plan Sheet 2 of 2



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C4.2	Grading Inset & Drainage Details
C4.3	Drainage Notes
C5.0	Utility Plan – Sheet 1 of 2
C5.1	Utility Plan – Sheet 2 of 2
C5.2	Proposed Driveway and Utility Profiles
C6.0	Master Mitigation Plan
C7.0	Details Plan
C7.1	Details Plan

- b. The applicant shall submit updated and final grading and drainage plans to the Planning Board for its file to the satisfaction of the Planning Board's consulting engineer.
- c. To mitigate the impacts of the bedrooms that exist and that are proposed in the project that exceed 853, the applicant shall:
 - I. Make a \$100,000 cash contribution to the Mashpee Affordable Housing Trust to be made upon issuance of the building permit for the first unit at Cranberry Point.
 - II. Donate parcels 21, 22, and 23 shown on Mashpee Assessor's Map 77, totaling just over one-half an acre to the Mashpee Affordable Housing Trust.
- d. The applicant shall demonstrate compliance with the requirements of Chapter 108 Flow Neutral Bylaw to the satisfaction of the Sewer Commission or other relevant authority. Given the parcels size, 22 bedrooms are allowed on the parcel by right, but 48 bedrooms are proposed. Willowbend shall demonstrate compliance with the requirements of Chapter 108 to the satisfaction of the Sewer Commission by demonstrating one or more of the following:
 - I. The total land area held in common throughout Willowbend (that has not been conveyed to private property owners) area results in less than 1 bedroom per 10,000 square feet based on all available estimates of existing and planned bedrooms.
 - II. Can restrict land area under the control of Willowbend for purposes of nitrogen aggregation if and when those regulations are promulgated by the Sewer Commission. Any land area restricted for this purpose should be in the same watershed.
 - III. Obtain a variance from the Sewer Commission from the provisions of Chapter 108 in accordance with the requirements for variance relief in the bylaw.
- e. Restore 5.3 acres of cranberry bogs to natural wetlands systems identified in the site plans around the perennial stream called Quaker Run subject to the issuance of an Order of Conditions from the Mashpee Conservation Commission. Until adequate performance surety is posted with the Mashpee Conservation Commission for the scope of the restoration, no building permits shall be issued for this project.
- f. The applicant shall retain the services of Public Archaeology Laboratory (PAL) or similarly qualified firm to conduct a site assessment, sometimes referred to as a Phase 1 or Phase 1A investigation, of the project site at 275 Quinaquisset Avenue as well as any of the parcels identified for bog restoration on the submitted site plan with the Mashpee Wampanoag Tribal Historic Preservation Officer present



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during any site visits. The site assessment should take advantage of the most advanced archaeological technologies available to determine with accuracy the likelihood of any archaeological resources on the sites. Additionally, the scope of work shall include at a minimum:

I. Pending response from David Weeden

- g. Local contractors and suppliers will be given first preference with regard to contracts for construction of the project.
- h. No lot shall be cleared until a building permit is issued for construction on said lot, except as necessary relative to removal of the existing structures on the property or for connection of the property to utilities or in connection with the project's stormwater management facilities.
- i. Except where modified by the provisions of this decision, all previous special permit conditions regarding the project shall remain in full force and effect.
- j. All conditions of this special permit and modification shall be binding not only upon the applicant but also on all successors-in-interest and assigns of the applicant.
- k. Any modifications to the site plans of this project resultant from conditions imposed by the Conservation Commission, the Sewer Commission, or any governmental agency with jurisdiction over the project shall be submitted to the Planning Board for its file through the Planning Department.
- l. This decision must be recorded within 60 days of their endorsement by the Board, with a notice provided to the Board of the Book and Page at which each was recorded.

6. Expiration, Extension or Modification.

This Special Permit Modification shall lapse only as part of any lapse of the original Special Permit as previously modified. It may be further modified under the terms of Section 174-24.C.(9) of the Mashpee Zoning Bylaw.

7. Signature and Filing.

This special permit modification document, which incorporates by reference herein all plans noted, has been approved on this ____ day of _____ 2024. A copy of same shall be filed with the Town Clerk in accordance with applicable law.

Mashpee Planning Board - Duly Authorized Member

COMMONWEALTH OF MASSACHUSETTS
Barnstable, ss.

date

On this ____ day of _____ 2024, before me, the undersigned notary public, personally appeared _____, proved to me through satisfactory evidence of identification, which were



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_____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he/she) signed it voluntarily for its stated purpose.

Notary Public

My Commission expires: _____
date of expiration

A copy of this decision and the accompanying plans approved by the Planning Board have been duly filed on _____, 2024 with the Town Clerk of Mashpee.

Town Clerk

Notice of this decision was mailed on _____ to the applicant, to any parties in interest to whom such notice is required under Massachusetts General Law. Any appeal should be made pursuant to Section 17 of Chapter 48 of the Massachusetts General Laws 20 days after the date of such filing.

I, Deborah Kaye, Town Clerk of the Town of Mashpee, hereby certify that a copy of this decision and the accompanying plans approved by the Planning Board were filed with the office of the Town Clerk on _____, 2024 and that no appeal of that decision was filed within 20 days thereafter.














Town Clerk

Date: _____













Upon expiration of the statutory appeal period with no appeal having been filed, this special permit decision has been endorsed by the undersigned members of the Mashpee Planning Board on _____, 2024 and may be recorded.

OLD BUSINESS

Natural Resources
Goals, Policies, & Actions
Goals
Goal NR-1: Return Mashpee's water bodies to pristine condition.
Goal NR-2: Ensure Mashpee's wildlife and wildlife habitats, both terrestrial and aquatic, continue to thrive in harmony with the built environment for the rest of time.
Goal NR-3: Never will any Mashpee resident, community member or visitor be unable to enjoy equitable access to pristine Natural Resources in Mashpee such as clean air and drinking water, healthy surface water bodies and estuaries, vast open spaces, productive wetlands, etc.
Goal NR-4: Remove all threats from pollutants emerging from Joint Base Cape Cod and other sources into Mashpee's groundwater and open water bodies and ensure that no contamination enters and negatively impacts Mashpee's natural systems.
Goal NR-5: Be true stewards of the land alongside the Mashpee Wampanoag Tribe towards shared social, cultural, and environmental prosperity.
Goal NR-6: Become a municipal leader in climate resiliency and make Mashpee's low lying areas i.e., floodplain/Land Subject to Coastal Storm Flow (LSCSF), coastlines/seashore are as resilient as possible to climate change impacts.
Goal NR-7: Maintain and restore the quality of Mashpee's groundwater and monitor groundwater levels to ensure an adequate supply of safe, high quality drinking water.
Goal NR-8: Prevent future harmful algal blooms such as cyanobacteria in Mashpee waters to maximize recreational opportunities and public health and safety on Mashpee waterways.
Goal NR-9: Maximize nutrient removing wastewater technologies to the maximum extent on every Mashpee parcel and remove and replace all outdated technologies such as cesspools.
Policies
Policy NR-1: Prioritize the protection, preservation and enhancement of coastlines and of coastal habitat, terrestrial and aquatic habitat, wetlands, vernal pools, animal and plant populations, and wetland resource areas to minimize and mitigate impacts of development and climate change on all natural systems for long-term environmental and social benefits.
Policy NR-2: Develop and maintain an intergovernmental collaboration with the Mashpee Wampanoag Tribe and the Town of Mashpee toward Natural Resource Protection.
Policy NR-3: Prioritize the preservation and enhancement of ancient ways to water.
Policy NR-4: Protect the aboriginal rights of the Wampanoag Native People for fishing, hunting and gathering in and on Mashpee water and lands by nurturing collaborative opportunities to educate the community about Wampanoag history on this land.
Policy NR-5: Maintain and enhance cross-sector collaborations such as with educational institutions and research organizations to bolster water quality sampling programs and reporting.
Policy NR-6: Maximize the productivity of Mashpee's shellfisheries for recreational, commercial, and municipal aquaculture and promote shellfishing and aquaculture, especially in areas with impacted water quality.
Policy NR-7: Reduce pollutant and nutrient loads into Mashpee's natural systems by appropriately managing stormwater, maintaining stormwater collection infrastructure, and limiting the use of harmful or polluting materials such as chemical fertilizers.
Policy NR-8: Maintain navigational channels not just for mariner safety but also for adequate stream and tidal flow.
Policy NR-9: Maximize funding opportunities for projects focused on natural resource protection.
Policy NR-10: Limit new development or expansion of structures in the 100 year flood plain.

Natural Resources								
Policy NR-11: Acquire as much land area in the floodplain for open space protection as is possible.								
Policy NR-12: Prioritize coastal habitat restoration projects and enhance investments in green infrastructure like the Popponesset Spit.								
Policy NR-13: Regularly evaluate regulatory mechanisms designed to protect natural systems and modify whenever conditions necessitate.								
Policy NR-14: Continue to support the shellfish propagation and shellfish seeding program to enhance local fisheries, restore vital habitat, and remove excessive nitrogen in both Waquoit and Popponesset Bay.								
Policy NR-15: Preserve fishing and hunting rights of way on shore.								
Policy NR-15: Remedy user conflicts within waterways consistent with the DNHRMP.								
Actions						Timeframe	Responsibility	Cost
NR-1. Conduct a personnel needs assessment to understand gaps in consideration of current and planned water quality monitoring and testing programs.						S	DNR ConC	\$
NR-2. Establish Water Quality Task force as a subcommittee of the Environmental Oversight Committee to conduct necessary engagement and community education around recommended bylaw changes to address water quality issues: fertilizer and pesticide use, wetlands buffers, and floodplain management.						S	TM BOS EOC DNR	\$
NR-3. Implement recommended stormwater improvements within the Santuit Pond Watershed as recommended by the Fuss & O'Neill MVP Action Grant.						S	DNR BOS ConC DPW EOC	\$\$
NR-4. Construct the Wastewater Treatment Facility and wastewater collection system consistent with the Watershed Nitrogen Management plan as amended from time to time.						M	SC BOS BH DPW	\$\$\$
NR-5. Continue acquisition of conservation lands with a priority in areas with high						S	ConC BOS PD	\$









Commented [EL1]: Policy – What actions will support it?
Refer to draft harbor management plan

Natural Resources								
environmental sensitivity or areas adjacent to other open space, wildlife refuge, and/or conservation land in recharge areas.								
NR-6. Implement water quality improvement measures as recommended upon completion of the Mashpee Wakeby Diagnostic Study - To be completed in 2025.						M	DNR BOS ConC TM	\$
NR-7. Invest in necessary equipment and facilities to test cyanobacteria in-house that would specifically identify species in real time to assist in determinations of toxicity.						S	DNR BOS ConC TM	\$
NR-8. Continue to maintain navigational channels for not only navigation but for adequate stream and tidal flow.						O	DNR WC	\$
NR-10. Continue to investigate and inventory the legal status of all known public landings and access to coastal water and great ponds to develop an access plan.						O	DNR WC	
NR-11. Work to purchase parcels, if feasible, to enhance public access to water or create new sites for public landings.						O	BOS ConC DNR	\$\$\$
NR-12. Identify areas for coastal and habitat restoration to enhance water quality and implement restoration projects with a focus on areas within or in close proximity to wetland resource areas. Cranberry Bogs are an obvious place to start.						M	DNR BOS ConC	\$
NR-14. Protect Mashpee from invasive species through education, regulations and enforcement.							DNR BOS ConC	\$
NR-15. Maximize protective buffers to wetlands, ponds,							DNR BOS	\$

Commented [EL2]: What about Ashumet and John's Pond PFAS issues?


Commented [EL3]: Confirm this is a priority with Ashley.

Commented [EL4]: Duplicate of a policy above. Probably better as policy but need specified actions to support policy. Dredge related. What actions do we need to continue to implement to address dredging? Refer to draft Harbor Management Plan

Natural Resources								
rivers, lakes, bays and other sensitive natural systems.							ConC PD	
NR-16. Seek funding from Joint Base Cape Cod to begin addressing the PFAS contamination of John's Pond and Ashumet Pond.							DNR BOS ConC	\$
NR-17. Explore the use of a District of Critical Planning Concern to temporarily curb nutrient loads while a long term solution is planned.							DNR ConC PD	\$
NR-18. Adopt fertilizer restrictions to reduce pollution loading from fertilizers.							DNR BOS ConC	\$
NR-19. Implement stormwater retrofit projects or new stormwater systems using Best Management Practices (and low impact design principles) that have been identified by the Stormwater Task Force.							DPW DNR ConC	\$
NR-20. Educate residents about the Mashpee Water District and encourage that all residents connect to public drinking water.						S	DPW	\$
NR-21. Identify the most appropriate sites to establish Aquaculture Development Zones consistent with the Department of Natural Resources Harbor Management Plan.								
NR-22. Identify, preserve, and enhance ancient and public ways to water with a particular focus on those areas identified in the Coastal Resources Element of the 1998 Comprehensive Plan. Coordinate with officials at Joint Base Cape Cod to determine strategies and funding sources to address the pollutants, such								

Commented [EL5]: Policy? There could be regulatory changes to follow as actions.

Commented [EL6]: Confirm with Ashley

Natural Resources								
as PFAS, negatively impacting Mashpee residents' quality.								
NR-23. Evaluate regulatory mechanisms that would limit construction in land under ocean to maintain and restore habitat vital to our fisheries and implement those regulations if desired and feasible.								
NR-24. Establish boat washes to prevent invasive species from spawning in waterways.						M	RD	\$

CORRESPONDENCE



Massachusetts Department of Environmental Protection

eDEP Transaction Copy

Here is the file you requested for your records.

To retain a copy of this file you must save and/or print.

Username: **EBELAIR**

Transaction ID: **1687653**

Document: **Groundwater Discharge Monitoring Report Forms**

Size of File: **2922.67K**

Status of Transaction: **Submitted**

Date and Time Created: **3/26/2024:10:32:34 AM**

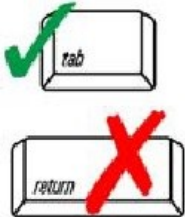
Note: This file only includes forms that were part of your transaction as of the date and time indicated above. If you need a more current copy of your transaction, return to eDEP and select to "Download a Copy" from the Current Submittals page.



Groundwater Permit
MONITORING WELL DATA REPORT

668
1. Permit Number
2. Tax identification Number
2024 QUARTERLY 1
3. Sampling Month & Frequency

Important:When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A. Facility Information

1. Facility name, address:		
SOUTH CAPE VILLAGE		
a. Name		
672 FALMOUTH ROAD/RTE. 28		
b. Street Address		
MASHPEE	MA	02649
c. City	d. State	e. Zip Code
2. Contact information:		
MYLES OSTROFF		
a. Name of Facility Contact Person		
6174311097	myles@chartweb.com	
b. Telephone Number	c. e-mail address	
3. Sampling information:		
2/2/2024	RI ANALYTICAL	
a. Date Sampled (mm/dd/yyyy)	b. Laboratory Name	
BRENT PLANT		
c. Analysis Performed By (Name)		

B. Form Selection

1. Please select Form Type and Sampling Month & Frequency	
Monitoring Well Data Report - 2024 Quarterly 1	
<input type="checkbox"/> All forms for submittal have been completed.	
2. <input type="checkbox"/> This is the last selection.	
3. <input type="checkbox"/> Delete the selected form.	



Groundwater Permit
MONITORING WELL DATA REPORT

668

1. Permit Number

2. Tax identification Number

2024 QUARTERLY 1

3. Sampling Month & Frequency

C. Contaminant Analysis Information

- For "0", below detection limit, less than (<) value, or not detected, enter "ND" <
- TNTC = too numerous to count. (Fecal results only)
- NS = Not Sampled
- DRY = Not enough water in well to sample.

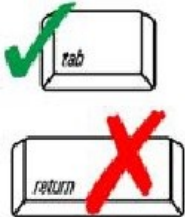
Parameter/Contaminant	P-1	P-2	P-4	P-6		
Units	Well #: 1	Well #: 2	Well #: 3	Well #: 4	Well #: 5	Well #: 6
NITRATE-N	1.7	DRY	3.8	2.4		
MG/L						
TOTAL NITROGEN(NO3+NO2+TKI	2.35	DRY	8.2	6.9		
MG/L						
TOTAL PHOSPHORUS AS P	0.82	DRY	2.2	2.1		
MG/L						
ORTHO PHOSPHATE	ND	DRY	1.6	2.2		
MG/L						



Groundwater Permit
MONITORING WELL DATA REPORT

668
1. Permit Number
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2024 ANNUAL
3. Sampling Month & Frequency

Important:When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A. Facility Information

1. Facility name, address:		
SOUTH CAPE VILLAGE		
a. Name		
672 FALMOUTH ROAD/RTE. 28		
b. Street Address		
MASHPEE	MA	02649
c. City	d. State	e. Zip Code
2. Contact information:		
MYLES OSTROFF		
a. Name of Facility Contact Person		
6174311097	myles@chartweb.com	
b. Telephone Number	c. e-mail address	
3. Sampling information:		
2/2/2024	RI ANALYTICAL	
a. Date Sampled (mm/dd/yyyy)	b. Laboratory Name	
BRENT PLANT		
c. Analysis Performed By (Name)		

B. Form Selection

1. Please select Form Type and Sampling Month & Frequency	
Monitoring Well Data Report - 2024 Annual	
<input type="checkbox"/>	All forms for submittal have been completed.
2. <input type="checkbox"/>	This is the last selection.
3. <input type="checkbox"/>	Delete the selected form.



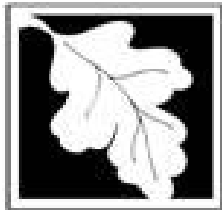
Groundwater Permit
MONITORING WELL DATA REPORT

668
1. Permit Number
2. Tax identification Number
2024 ANNUAL
3. Sampling Month & Frequency

D. VOC Analysis Information

- If VOCs are present, please indicate the amounts of the individual compounds in µg/l.
- For "0", below detection limit, less than (<) value, or not detected, enter "ND"
- NS = Not Sampled
- DRY = Not enough water in well to sample.

Parameter/Contaminant	P-1	P-2	P-4	P-6		
Units	Well #: 1	Well #: 2	Well #: 3	Well #: 4	Well #: 5	Well #: 6
ACETONE	ND	NS	ND	ND		
UG/L						
BENZENE	ND	NS	ND	ND		
UG/L						
1,1 DICHLOROETHANE	ND	NS	ND	ND		
UG/L						
1,2 DICHLOROETHANE	ND	NS	ND	ND		
UG/L						
1,1 DICHLOROETHYLENE	ND	NS	ND	ND		
UG/L						
CIS-1,2-DICHLOROETHYLENE	ND	NS	ND	ND		
UG/L						
TRANS 1,2 DICHLOROETHYLENE	ND	NS	ND	ND		
UG/L						
ETHYL BENZENE	ND	NS	ND	ND		
UG/L						
METHYLENECHLORIDE	ND	NS	ND	ND		
UG/L						
TOLUENE	ND	NS	ND	ND		
UG/L						
O-XYLENE	ND	NS	ND	ND		
UG/L						
P/M XYLENE	ND	NS	ND	ND		
UG/L						
CARBON TETRACHLORIDE	ND	NS	ND	ND		
UG/L						
CHLOROFORM	ND	NS	ND	ND		
UG/L						
2-BUTANONE (MEK)	ND	NS	ND	ND		
UG/L						



Groundwater Permit
MONITORING WELL DATA REPORT

668
1. Permit Number
2. Tax identification Number
2024 ANNUAL
3. Sampling Month & Frequency

D. VOC Analysis Information

- If VOCs are present, please indicate the amounts of the individual compounds in µg/l.
- For "0", below detection limit, less than (<) value, or not detected, enter "ND"
- NS = Not Sampled
- DRY = Not enough water in well to sample.

Parameter/Contaminant	P-1	P-2	P-4	P-6		
Units	Well #: 1	Well #: 2	Well #: 3	Well #: 4	Well #: 5	Well #: 6
4-METHYL-2-PENTANONE (MIBK)	ND	NS	ND	ND		
UG/L						
TRICHLOROETHYLENE	ND	NS	ND	ND		
UG/L						
TETRACHLOROETHYLENE	ND	NS	ND	ND		
UG/L						
1,1,1 TRICHLOROETHANE	ND	NS	ND	ND		
UG/L						
VINYLCHLORIDE	ND	NS	ND	ND		
UG/L						
STYRENE	ND	NS	ND	ND		
UG/L						
CHLOROBENZENE	ND	NS	ND	ND		
UG/L						
METHYL TERTIARY BUTYL ETHER	ND	NS	ND	ND		
UG/L						
CHLOROETHANE	ND	NS	ND	ND		
UG/L						
1,2-DICHLOROPROPANE	ND	NS	ND	ND		
UG/L						
DIBROMOCHLOROMETHANE	ND	NS	ND	ND		
UG/L						
1,1,2-TRICHLOROETHANE	ND	NS	ND	ND		
UG/L						
2-CHLOROETHYL VINYL ETHER	ND	NS	ND	ND		
UG/L						
BROMODICHLOROMETHANE	ND	NS	ND	ND		
UG/L						
BROMOFORM	ND	NS	ND	ND		
UG/L						



Groundwater Permit
MONITORING WELL DATA REPORT

668

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2024 ANNUAL

3. Sampling Month & Frequency

D. VOC Analysis Information

- If VOCs are present, please indicate the amounts of the individual compounds in µg/l.
- For "0", below detection limit, less than (<) value, or not detected, enter "ND"
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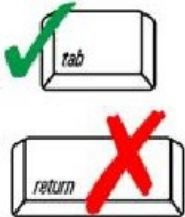
Parameter/Contaminant	P-1	P-2	P-4	P-6		
Units	Well #: 1	Well #: 2	Well #: 3	Well #: 4	Well #: 5	Well #: 6
1,1,2,2-TETRACHLOROETHANE	ND	NS	ND	ND		
UG/L						
CHLOROMETHANE	ND	NS	ND	ND		
UG/L						
BROMOMETHANE	ND	NS	ND	ND		
UG/L						
CARBONDISULFIDE	ND	NS	ND	ND		
UG/L						
2-HEXANONE	ND	NS	ND	ND		
UG/L						
ACROLEIN	ND	NS	ND	ND		
UG/L						
ACRYLONITRILE	ND	NS	ND	ND		
UG/L						
TRANS-1,3-DICHLOROPROPENE	ND	NS	ND	ND		
UG/L						
CIS-1,3-DICHLOROPROPENE	ND	NS	ND	ND		
UG/L						



Groundwater Permit
DISCHARGE MONITORING REPORT

668
1. Permit Number
2. Tax identification Number
2024 FEB MONTHLY
3. Sampling Month & Frequency

Important:When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A. Facility Information

1. Facility name, address:		
SOUTH CAPE VILLAGE		
a. Name		
672 FALMOUTH ROAD/RTE. 28		
b. Street Address		
MASHPEE	MA	02649
c. City	d. State	e. Zip Code
2. Contact information:		
MYLES OSTROFF		
a. Name of Facility Contact Person		
6174311097	myles@chartweb.com	
b. Telephone Number	c. e-mail address	
3. Sampling information:		
2/29/2024	RI ANALYTICAL	
a. Date Sampled (mm/dd/yyyy)	b. Laboratory Name	
KRISTIN PHELAN		
c. Analysis Performed By (Name)		

B. Form Selection

1. Please select Form Type and Sampling Month & Frequency	
Discharge Monitoring Report - 2024 Feb Monthly	
<input type="checkbox"/> All forms for submittal have been completed.	
2. <input type="checkbox"/> This is the last selection.	
3. <input type="checkbox"/> Delete the selected form.	



Groundwater Permit
DISCHARGE MONITORING REPORT

668

1. Permit Number

2. Tax identification Number

2024 FEB MONTHLY

3. Sampling Month & Frequency

D. Contaminant Analysis Information

- For "0", below detection limit, less than (<) value, or not detected, enter "ND"
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- NS = Not Sampled

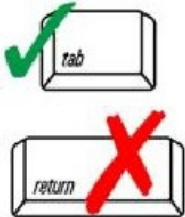
1. Parameter/Contaminant	2. Influent	3. Effluent	4. Effluent Method
Units			Detection limit
BOD	92	3.2	3.0
MG/L			
TSS	60	5.3	2.0
MG/L			
TOTAL SOLIDS	440		
MG/L			
AMMONIA-N	14		
MG/L			
NITRATE-N		ND	0.050
MG/L			
TOTAL NITROGEN(NO3+NO2+TKN)		1.5	0.50
MG/L			
OIL & GREASE		0.70	0.50
MG/L			



Groundwater Permit
DISCHARGE MONITORING REPORT

668
1. Permit Number
2. Tax identification Number
2024 QUARTERLY 1
3. Sampling Month & Frequency

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A. Facility Information

1. Facility name, address:		
SOUTH CAPE VILLAGE		
a. Name		
672 FALMOUTH ROAD/RTE. 28		
b. Street Address		
MASHPEE	MA	02649
c. City	d. State	e. Zip Code
2. Contact information:		
MYLES OSTROFF		
a. Name of Facility Contact Person		
6174311097	myles@chartweb.com	
b. Telephone Number	c. e-mail address	
3. Sampling information:		
2/29/2024	RI ANALYTICAL	
a. Date Sampled (mm/dd/yyyy)	b. Laboratory Name	
KRISTIN PHELAN		
c. Analysis Performed By (Name)		

B. Form Selection

1. Please select Form Type and Sampling Month & Frequency	
Discharge Monitoring Report - 2024 Quarterly 1	
<input type="checkbox"/> All forms for submittal have been completed.	
2. <input type="checkbox"/> This is the last selection.	
3. <input type="checkbox"/> Delete the selected form.	



Groundwater Permit
DISCHARGE MONITORING REPORT

668

1. Permit Number

2. Tax identification Number

2024 QUARTERLY 1

3. Sampling Month & Frequency

D. Contaminant Analysis Information

- For "0", below detection limit, less than (<) value, or not detected, enter "ND"
- TNTC = too numerous to count. (Fecal results only)
- NS = Not Sampled

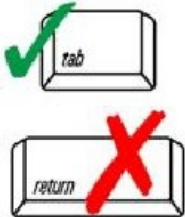
1. Parameter/Contaminant	2. Influent	3. Effluent	4. Effluent Method
Units			Detection limit
TOTAL PHOSPHORUS AS P		3.5	0.010
MG/L			
ORTHO PHOSPHATE		3.4	0.020
MG/L			



Groundwater Permit
DISCHARGE MONITORING REPORT

668
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2024 ANNUAL
3. Sampling Month & Frequency

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A. Facility Information

1. Facility name, address:		
SOUTH CAPE VILLAGE		
a. Name		
672 FALMOUTH ROAD/RTE. 28		
b. Street Address		
MASHPEE	MA	02649
c. City	d. State	e. Zip Code
2. Contact information:		
MYLES OSTROFF		
a. Name of Facility Contact Person		
6174311097	myles@chartweb.com	
b. Telephone Number	c. e-mail address	
3. Sampling information:		
2/29/2024	RI ANALYTICAL	
a. Date Sampled (mm/dd/yyyy)	b. Laboratory Name	
KRISTIN PHELAN		
c. Analysis Performed By (Name)		

B. Form Selection

1. Please select Form Type and Sampling Month & Frequency	
Discharge Monitoring Report - 2024 Annual	
<input type="checkbox"/> All forms for submittal have been completed.	
2. <input type="checkbox"/> This is the last selection.	
3. <input type="checkbox"/> Delete the selected form.	



Groundwater Permit
DISCHARGE MONITORING REPORT

668

1. Permit Number

2. Tax identification Number

2024 ANNUAL

3. Sampling Month & Frequency

E. VOC Analysis Information

- If VOCs are present, please indicate the amounts of the individual compounds in µg/l.
- For "0", below detection limit, less than (<) value, or not detected, enter "ND"
- NS = Not Sampled

1. Parameter/Contaminant	2. Influent	3. Effluent	4. Effluent Method
Units			Detection limit
ACETONE		ND	10
UG/L			
BENZENE		ND	1.0
UG/L			
1,1 DICHLOROETHANE		ND	1.0
UG/L			
1,2 DICHLOROETHANE		ND	1.0
UG/L			
1,1 DICHLOROETHYLENE		ND	1.0
UG/L			
CIS-1,2-DICHLOROETHYLENE		ND	1.0
UG/L			
TRANS 1,2 DICHLOROETHYLENE		ND	1.0
UG/L			
ETHYL BENZENE		ND	1.0
UG/L			
METHYLENECHLORIDE		ND	1.0
UG/L			
TOLUENE		ND	1.0
UG/L			
O-XYLENE		ND	1.0
UG/L			
P/M XYLENE		ND	1.0
UG/L			
CARBON TETRACHLORIDE		ND	1.0
UG/L			
CHLOROFORM		ND	1.0
UG/L			
2-BUTANONE (MEK)		ND	1.0
UG/L			



Groundwater Permit
DISCHARGE MONITORING REPORT

668

1. Permit Number

2. Tax identification Number

2024 ANNUAL

3. Sampling Month & Frequency

E. VOC Analysis Information

- If VOCs are present, please indicate the amounts of the individual compounds in µg/l.
- For "0", below detection limit, less than (<) value, or not detected, enter "ND"
- NS = Not Sampled

1. Parameter/Contaminant	2. Influent	3. Effluent	4. Effluent Method
Units			Detection limit
4-METHYL-2-PENTANONE (MIBK)		ND	1.0
UG/L			
TRICHLOROETHYLENE		ND	1.0
UG/L			
TETRACHLOROETHYLENE		ND	1.0
UG/L			
1,1,1 TRICHLOROETHANE		ND	1.0
UG/L			
VINYLCHLORIDE		ND	0.40
UG/L			
STYRENE		ND	1.0
UG/L			
CHLOROBENZENE		ND	1.0
UG/L			
METHYL TERTIARY BUTYL ETHER		ND	1.0
UG/L			
CHLOROETHANE		ND	1.0
UG/L			
1,2-DICHLOROPROPANE		ND	1.0
UG/L			
DIBROMOCHLOROMETHANE		ND	1.0
UG/L			
1,1,2-TRICHLOROETHANE		ND	1.0
UG/L			
2-CHLOROETHYLVINYL ETHER		ND	1.0
UG/L			
BROMODICHLOROMETHANE		ND	1.0
UG/L			
BROMOFORM		ND	1.0
UG/L			



Groundwater Permit
DISCHARGE MONITORING REPORT

668

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2024 ANNUAL

3. Sampling Month & Frequency

E. VOC Analysis Information

- If VOCs are present, please indicate the amounts of the individual compounds in µg/l.
- For "0", below detection limit, less than (<) value, or not detected, enter "ND"
- NS = Not Sampled

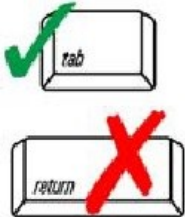
1. Parameter/Contaminant	2. Influent	3. Effluent	4. Effluent Method
Units			Detection limit
1,1,2,2-TETRACHLOROETHANE		ND	1.0
UG/L			
CHLOROMETHANE		ND	1.0
UG/L			
BROMOMETHANE		ND	1.0
UG/L			
CARBONDISULFIDE		ND	1.0
UG/L			
2-HEXANONE		ND	1.0
UG/L			
ACROLEIN		ND	1.0
UG/L			
ACRYLONITRILE		ND	1.0
UG/L			
TRANS-1,3-DICHLOROPROPENE		ND	1.0
UG/L			
CIS-1,3-DICHLOROPROPENE		ND	1.0
UG/L			



Groundwater Permit
DAILY LOG SHEET

668
1. Permit Number
2. Tax identification Number
2024 FEB DAILY
3. Sampling Month & Frequency

Important:When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A. Facility Information

1. Facility name, address:		
SOUTH CAPE VILLAGE		
a. Name		
672 FALMOUTH ROAD/RTE. 28		
b. Street Address		
MASHPEE	MA	02649
c. City	d. State	e. Zip Code
2. Contact information:		
MYLES OSTROFF		
a. Name of Facility Contact Person		
6174311097	myles@chartweb.com	
b. Telephone Number	c. e-mail address	
3. Sampling information:		
2/29/2024	WHITEWATER	
a. Date Sampled (mm/dd/yyyy)	b. Laboratory Name	
JAMIE STEWART		
c. Analysis Performed By (Name)		

B. Form Selection

1. Please select Form Type and Sampling Month & Frequency	
Daily Log Sheet - 2024 Feb Daily	
<input type="checkbox"/> All forms for submittal have been completed.	
2. <input type="checkbox"/> This is the last selection.	
3. <input type="checkbox"/> Delete the selected form.	



Groundwater Permit
DAILY LOG SHEET

668
1. Permit Number
2. Tax identification Number
2024 FEB DAILY
3. Sampling Month & Frequency

C. Daily Readings/Analysis Information

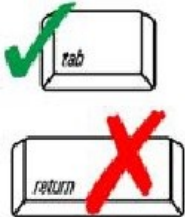
Date	Effluent Flow GPD	Reuse Flow GPD	Irrigation Flow GPD	Turbidity	Influent pH	Effluent pH	Chlorine Residual (mg/l)	UV Intensity (%)
1	9129					6.7		
2	9741					6.9		
3	9741							
4	9741							
5	11526					7.1		
6	9333					7.5		
7	9061					7.3		
8	9718					7.1		
9	9156					7.1		
10	9156							
11	9156							
12	10243					7.3		
13	10243							
14	9099					7.1		
15	4060					7.4		
16	7					6.8		
17	7854					6.8		
18	7854							
19	7854							
20	10781					7.3		
21	10821					7.3		
22	11245					6.8		
23	11856					7.5		
24	11856							
25	11856							
26	11034					7.2		
27	8760					7.3		
28	11121					7		
29	8939					7		
30								
31								



Groundwater Permit
MONITORING WELL DATA REPORT

668
1. Permit Number
2. Tax identification Number
2024 FEB MONTHLY
3. Sampling Month & Frequency

Important:When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A. Facility Information

1. Facility name, address:		
SOUTH CAPE VILLAGE		
a. Name		
672 FALMOUTH ROAD/RTE. 28		
b. Street Address		
MASHPEE	MA	02649
c. City	d. State	e. Zip Code
2. Contact information:		
MYLES OSTROFF		
a. Name of Facility Contact Person		
6174311097	myles@chartweb.com	
b. Telephone Number	c. e-mail address	
3. Sampling information:		
2/2/2024	WHITEWATER	
a. Date Sampled (mm/dd/yyyy)	b. Laboratory Name	
JAMIE STEWART		
c. Analysis Performed By (Name)		

B. Form Selection

1. Please select Form Type and Sampling Month & Frequency	
Monitoring Well Data Report - 2024 Feb Monthly	
<input type="checkbox"/> All forms for submittal have been completed.	
2. <input type="checkbox"/> This is the last selection.	
3. <input type="checkbox"/> Delete the selected form.	



Groundwater Permit
MONITORING WELL DATA REPORT

668

1. Permit Number

2. Tax identification Number

2024 FEB MONTHLY

3. Sampling Month & Frequency

C. Contaminant Analysis Information

- For "0", below detection limit, less than (<) value, or not detected, enter "ND"
 - TNTC = too numerous to count. (Fecal results only)
 - NS = Not Sampled
 - DRY = Not enough water in well to sample.
- <

Parameter/Contaminant	P-1	P-2	P-4	P-6		
Units	Well #: 1	Well #: 2	Well #: 3	Well #: 4	Well #: 5	Well #: 6
PH	6.7	DRY	6.4	6.7		
S.U.						
STATIC WATER LEVEL	18.2	DRY	47.5	51.3		
FEET						
SPECIFIC CONDUCTANCE	304	DRY	773	684		
UMHOS/C						



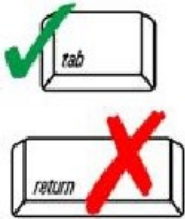
Groundwater Permit

668

1. Permit Number

2. Tax identification Number

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Any person signing a document under 314 CMR 5.14(1) or (2) shall make the following certification

If you are filing electronic-ally and want to attach additional comments, select the check box.

☐

Facility Information

SOUTH CAPE VILLAGE		
a. Name		
672 FALMOUTH ROAD/RTE. 28		
b. Street Address		
MASHPEE	MA	02649
c. City	d. State	e. Zip Code

Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

ELIZABETH BELAIR	3/26/2024
a. Signature	b. Date (mm/dd/yyyy)

Reporting Package Comments

FAILED BOD, TURNED DOWN CARBON FEEDING THE SYSTEM.



Shorefront Consulting

Professional Services on Land or At Sea

290 Center St., Dennis Port, MA 02639
508-280-8046

www.shorefrontconsulting.com
shorefrontconsulting@gmail.com

Mashpee Planning Department
16 Great Neck Road North
Mashpee, MA 02649
By USPS

March 15, 2024

Re: Chapter 91 Application Filing Package- Municipal Planning Board Notification

Proposed Pier, Ramp, and Float
48 Quaker Run Road Realty Trust, Thomas and Joan Analetto, Trustees
48 Quaker Run Road
Mashpee, MA 02649
Assessor's Map 90, Parcel 45

On behalf of my clients Thomas and Joan Analetto, I am submitting a Chapter 91 License application. The following items are enclosed:

- Chapter 91 License Application
- Copy of Mashpee Order of Conditions SE43-3241
- Copy of plans Entitled "Plan Accompanying Petition Of 48 Quaker Run Road Realty Trust, Thomas Antonio Analetto & Joan Marie Analetto, Trustees To Construct and Maintain a Pier, Ramp, and Float Within The Waters of The Santuit River At 48 Quaker Run Road, Mashpee, Barnstable County, Massachusetts" Dated 12/28/23 (4 sheets)

In accordance with the Chapter 91 License application instructions, please sign and date the signature page indicating that you have received this package. Your review is not required at this time. If there are any questions or concerns regarding this filing, please contact me as soon as possible. Please return the signed signature page by USPS in the SASE envelope provided.

Sincerely,

Mark Burgess
Shorefront Consulting
B.S. Ocean Engineering

Received By

MAR 20 2024

Planning Dept.

Enclosures: As Stated

cc: Thomas and Joan Analetto (Applicants)



Massachusetts Department of Environmental Protection
Chapter 91 Waterways Water-Dependent, Nonwater Dependent, Amendment Application
Municipal Planning Board Notification

Note to Permittee: This form should be submitted, with the top portion completed, to the municipal Planning Board along with the complete application and project plans.

48 Quaker Run Road Realty Trust, Thomas Antonio Analetto & Joan Marie Analetto, Trustees
Name of Permittee

48 Quaker Run Road
Project Address

Santuit River
Name of Waterway

Mashpee
City/Town

Description of project and use or change in use (this field is not limited to the one line shown).

Description of project
Proposed Pier, Ramp, and Float for private boating access to the Santuit River

To be completed by the municipal Planning Board representative.

"I hereby certify that the project described above and more fully detailed in the Permittee's Waterways License application and plans have been submitted by the Permittee to the municipal Planning Board."

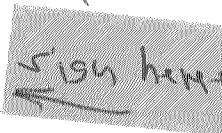
Evan R. Lehrer
Print Name of Municipal Planning Board Representative

03/20/2024
Date

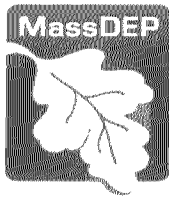
[Signature]
Signature of Municipal Planning Board Representative

Community Development Director
Title

Mashpee
City/Town



Note: Any Planning Board recommendation shall be submitted in accordance with 310 CMR 9.13(5). Comments pertaining to this Application shall be submitted in accordance with 310 CMR 9.13(4); any comments submitted after the close of the public comment period shall not constitute a basis for standing in any appeal pursuant to 310 CMR 9.13(4) and/or 310 CMR 9.17.



Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs

Department of Environmental Protection

100 Cambridge Street 9th Floor Boston, MA 02114 • 617-292-5500

Maura T. Healey
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

WW01 - Water-Dependent License/Permit Application

Permittee Information

Name: Thomas Analetto
Phone: (781) 540-1299
Address: 32 WOODLAND ROAD
MILTON, MA 02186

Application Submitter Information

Name: MARK C BURGESS
Phone: (508) 280-8046, (508) 280-8046
Address: 290 CENTER STREET
DENNIS PORT, MA 02639

Location Information

Santuit River
48 QUAKER RUN ROAD MASHPEE, MA 02649
Latitude: 41.6063
Longitude: 70.4627

List of Abutters

Full Legal Name	Abutting Property Address
Thomas & Joan Marie Analetto	52 Quaker Run Road, Mashpee, MA 02649
Thomas & Joan Marie Analetto	44 Quaker Run Road, Mashpee, MA 02649

Additional Contacts Info

Please provide the Name of the Permittee(s) exactly as it should be listed in the license/permit that will be recorded at the Registry of Deeds (the name(s) listed here need to match the name(s) listed on the plans or the license may be rejected by the Registry of Deeds)

48 Quaker Run Road Realty Trust, Thomas Antonio. and Joan Marie Analetto, Trustees

I hereby attest that I have listed all the Permittees in the Application Contacts section (each Permittee entered as a separate contact - do not list 2 names in 1 field)

Yes

Is the project site within a right of way?

No

Are you submitting evidence of legal authority to apply in lieu of the Property Owner's Signature? If yes, please attach a document 'Evidence of Legal Authority' in the document section

No

I hereby attest that I have listed all the Property Owners in the Application Contacts section

Yes

I hereby attest that I have listed all the Abutters in the above Contact table section

Yes

Application Type

Please select the application type you are applying for

Residential with less than or equal to 4 units

Project Information

Brief Description of Project (e.g., dock, seawall, boat ramp, Harborwalk – if a longer narrative is to be provided, please upload a separate document)

Proposed 101' Long Permanent Pier, 3'X20' Ramp, and 8'X24' Float

Brief Description of Project Location - Non-Traditional Address (e.g., 'west end Toronto Avenue right-of-way at Gloucester Harbor' DO NOT complete this field if your project has a traditional address - enter N/A)

Project is located on the north side of the Santuit River, in the area of "Simons Narrows"

Proposed Use/Activity description

Proposed Pier, Ramp, and Float for private boating access to the Santuit River.

Is this site subject to 21E?

No

Does the project exceed the MEPA review thresholds for Waterways standards?

No

Is the Project site in an Environmental Justice Community?

No

Which Wetlands Protection Act process document are you attaching?

WPA Order of Conditions

Has there ever been a waterways jurisdictional determination issued for this project site?	No
Does your project require a 401 water quality certificate? If yes, please attach if currently available, a copy of '401 Water Quality Certificate' in the document section.	No
Are you seeking a Variance? If yes, please attach a supporting evidence of compliance with 310 CMR 9.21, 'Variance Supplement' in the document section.	No
Is the project located within the Designated Port Area? If yes, please review the standards at 310 CMR 9.12 and 9.32.	No
Is the project located within an area subject to State Approved Municipal Harbor Plan? If yes, please attach supporting evidence of compliance with applicable MHP, 'MHP Supplement' in the document section.	No
Are you seeking a CWD (consolidated written determination) in accordance with 310 CMR 9.14(4)? If yes, please attach a document 'CWD Supplement' in the document section.	No
Does your project involve dredging?	No

Documents

Documents

Required Documents:

1. Chapter 91 Plans
2. List of Environmental Regulatory Programs
3. WPA Order of Conditions

Special Fee Provision

Exemption

Exclusion (special agreement or policy)

Substitution (ASP/IRP)

Double Fee for Enforcement

Hardship payment extension request

Attachments

Name	Description	Type	Latest Updated
Analetto recorded order SE43-3241.pdf	letto recorded Order of Conditions for pro	WPA Order of Conditions	12/28/2023
Analetto Chapter 91 plans scan 12-28-23.pdf	Analetto Chapter 91 plans sheets 1-4	Chapter 91 Plans	12/28/2023
environmental-regulatory-pr ograms.docx	ist of Environmental Regulatory Program	List of Environmental Regulatory Programs	12/28/2023

Application Contacts

Name	Organization Name	Contact Person	Telephone #	Contact Type	Email
Marie, Analetto	n/a	n/a	(781) 540-1299	Additional Permittee	taajma98@aol.com
Mark, Burgess	n/a	n/a	(508) 280-8046	Application Prepared By	shorefrontconsulting@g mail.com

Fee Info

Amount: \$ 215.00
Status: Paid
Description: WW01 Application Fees
Payment Date: 28-Dec-2023

Certification Information

Individual
MARK BURGESS
290 CENTER STREET
DENNIS PORT, MA 02639
United States

Telephone #: (508) 280-8046, (508) 280-8046
E-mail: shorefrontconsulting@gmail.com

I hereby certify that the information submitted in this application is true and accurate to the best of my knowledge. All applicants and property owners must sign the "Proof of Signature" which will be provided after initial review by the Department. All future application correspondence may be signed by the Application Submitter.

**Massachusetts Department of Environmental
Protection**
Bureau of Resource Protection - Wetlands
WPA Form 5 - Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File #:043-3241
eDEP Transaction #:1584423
City/Town:MASHPEE

A. General Information

1. Conservation Commission MASHPEE
2. Issuance a. ☒ OOC b. ☐ Amended OOC

3. Applicant Details

a. First Name THOMAS & JOAN MARIE b. Last Name ANALETTO / TRUSTEES
c. Organization 48 QUAKER RUN ROAD REALTY TRUST
d. Mailing Address 32 WOODLAND ROAD
e. City/Town MILTON f. State MA g. Zip Code 02186

4. Property Owner

a. First Name THOMAS & JOAN MARIE b. Last Name ANALETTO / TRUSTEES
c. Organization 48 QUAKER RUN ROAD REALTY TRUST
d. Mailing Address 32 WOODLAND ROAD
e. City/Town MILTON f. State MA g. Zip Code 02186

5. Project Location

a. Street Address 48 QUAKER RUN ROAD
b. City/Town MASHPEE c. Zip Code 02649
d. Assessors Map/Plat# MAP 90 e. Parcel/Lot# PARCEL 45
f. Latitude 41.60637N g. Longitude 70.46277W

6. Property recorded at the Registry of Deeds for:

a. County	b. Certificate	c. Book	d. Page
BARNSTABLE		28155	190

7. Date

a. Date NOI Filed : 6/2/2023 b. Date Public Hearing Closed: 7/13/2023 c. Date Of Issuance: 8/1/2023

8. Final Approved Plans and Other Documents

a. Plan Title:	b. Plan Prepared by:	c. Plan Signed/Stamped by:	d. Revised Final Date:	e. Scale:
PLAN "PLAN SHOWING PROPOSED PIER, RAMP, AND FLOAT	DOWN CAPE ENGINEERING	DANIEL A. OJALA, P.E., P.L.S.	06/27/2023	1" = 20'

B. Findings

Findings pursuant to the Massachusetts Wetlands Protection Act

Following the review of the the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act.

Check all that apply:

- | | | |
|--|--|---|
| a. <input type="checkbox"/> Public Water Supply | b. <input checked="" type="checkbox"/> Land Containing Shellfish | c. <input checked="" type="checkbox"/> Prevention of Pollution |
| d. <input type="checkbox"/> Private Water Supply | e. <input checked="" type="checkbox"/> Fisheries | f. <input checked="" type="checkbox"/> Protection of Wildlife Habitat |

Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File #:043-3241

eDEP Transaction #:1584423

City/Town:MASHPEE

☐ g. Ground Water Supply ☒ h. Storm Damage Prevention ☐ i. Flood Control

2. Commission hereby finds the project, as proposed, is:

Approved subject to:

- a. ☒ The following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.

Denied because:

- b. ☐ The proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect interests of the Act, and a final Order of Conditions is issued. A description of the performance standards which the proposed work cannot meet is attached to this Order.
- c. ☐ The information submitted by the applicant is not sufficient to describe the site, the work or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).

3. ☐ Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310CMR10.02(1)(a).

a. linear feet

Inland Resource Area Impacts (For Approvals Only):

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input type="checkbox"/> Bank	a. linear feet	b. linear feet	c. linear feet	d. linear feet
5. <input type="checkbox"/> Bordering Vegetated Wetland	a. square feet	b. square feet	c. square feet	d. square feet
6. <input type="checkbox"/> Land under Waterbodies and Waterways	a. square feet	b. square feet	c. square feet	d. square feet
	e. c/y dredged	f. c/y dredged		
7. <input type="checkbox"/> Bordering Land Subject to Flooding	a. square feet	b. square feet	c. square feet	d. square feet
Cubic Feet Flood Storage	e. cubic feet	f. cubic feet	g. cubic feet	h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding	a. square feet	b. square feet		

Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

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eDEP Transaction #:1584423

City/Town:MASHPEE

Cubic Feet Flood Storage	e. cubic feet	d. cubic feet	e. cubic feet	f. cubic feet
--------------------------	---------------	---------------	---------------	---------------

9. ☐ Riverfront Area

	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	g. square feet	h. square feet	i. square feet	j. square feet

Coastal Resource Area Impacts:

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
---------------	---------------------	----------------------	----------------------	-----------------------

10. ☐ Designated Port Areas

Indicate size under Land Under the Ocean below

11. ☒ Land Under the Ocean

711	711
a. square feet	b. square feet
0	0
c. c/y dredged	d. c/y dredged

12. ☐ Barrier Beaches

Indicate size under Coastal Beaches and/or Coastal Dunes below

13. ☒ Coastal Beaches

24	24	0	0
a. square feet	b. square feet	c. c/y nourishment	d. c/y nourishment

14. ☐ Coastal Dunes

a. square feet	b. square feet	c. c/y nourishment	d. c/y nourishment

15. ☒ Coastal Banks

4	4
a. linear feet	b. linear feet

16. ☐ Rocky Intertidal Shores

a. square feet	b. square feet

17. ☒ Salt Marshes

64	64	0	0
a. square feet	b. square feet	c. square feet	d. square feet

18. ☐ Land Under Salt Ponds

a. square feet	b. square feet

c. c/y dredged	d. c/y dredged

19. ☒ Land Containing Shellfish

735	735	0	0
a. square feet	b. square feet	c. square feet	d. square feet

20. ☐ Fish Runs

Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above

c. c/y dredged	d. c/y dredged

21. ☐ Land Subject to Coastal Storm Flowage

a. square feet	b. square feet
----------------	----------------

**Massachusetts Department of Environmental
Protection**

Bureau of Resource Protection - Wetlands

WPA Form 5 - Order of Conditions

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Provided by MassDEP:

MassDEP File #:043-3241

eDEP Transaction #:1584423

City/Town:MASHPEE

22

☐ Restoration/Enhancement (For Approvals Only)

If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c & d or B.17.c & d above, please enter the additional amount here.

a. square feet of BVW

b. square feet of Salt Marsh

23

☐ Streams Crossing(s)

If the project involves Stream Crossings, please enter the number of new stream crossings/number of replacement stream crossings.

a. number of new stream crossings

b. number of replacement stream
crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. the work is a maintenance dredging project as provided for in the Act; or
 - b. the time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order.
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not exceed the issuance date of the original Final Order of Conditions.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.
8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work..

**Massachusetts Department of Environmental
Protection**

Bureau of Resource Protection - Wetlands

WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File #:043-3241

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City/Town:MASHPEE

10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,

"Massachusetts Department of Environmental Protection"

[or "MassDEP"]

File Number : "043-3241"

11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before Mass DEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.
17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.

NOTICE OF STORMWATER CONTROL AND MAINTENANCE REQUIREMENTS

19. The work associated with this Order (the "Project") is (1) ☐ is not (2) ☒ subject to the Massachusetts Stormwater Standards. If the work is subject to Stormwater Standards, then the project is subject to the following conditions;
- a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollutant Discharge Elimination System Construction General Permit as required by Stormwater Standard 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.
- b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that: i. all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all

**Massachusetts Department of Environmental
Protection**

Bureau of Resource Protection - Wetlands

WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File #:043-3241

eDEP Transaction #:1584423

City/Town:MASHPEE

- construction period sediment trapped in inlet and outlet control structures; *ii.* as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized; *iii.* any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10; *iv.* all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition; *v.* any vegetation associated with post-construction BMPs is suitably established to withstand erosion.
- c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 19(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following: *i.*) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and *ii.*) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.
 - d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollutant Discharge Elimination System Multi-Sector General Permit.
 - e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 19(f) through 19(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 19(f) through 19(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.
 - f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.
 - g) The responsible party shall:
 - 1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
 - 2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
 - 3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.
 - h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
 - i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
 - j) The stormwater management system approved in the Order of Conditions shall not be changed without the

**Massachusetts Department of Environmental
Protection**

Bureau of Resource Protection - Wetlands

WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File #:043-3241

eDEP Transaction #:1584423

City/Town:MASHPEE

prior written approval of the issuing authority.

- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions:

D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? ☒ Yes ☐ No

2. The Conservation Commission hereby (check one that applies):

a. ☐ DENIES the proposed work which cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw specifically:

1. Municipal Ordinance or Bylaw _____

2. Citation _____

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order or Conditions is issued. Which are necessary to comply with a municipal ordinance or bylaw:

b. ☒ APPROVES the proposed work, subject to the following additional conditions.

1. Municipal Ordinance or
Bylaw

TOWN OF
MASHPEE

2. Citation CHAPTER 172

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

The special conditions relating to municipal ordinance or bylaw are as follows:
SEE PAGES A THROUGH F

TOWN OF MASHPEE CHAPTER 172 ORDER OF CONDITIONS FOR

43-3241 (48 Quaker Run Road)

Work Description:

As described in the Notice of Intent project narrative and Plan of Record submitted by Shorefront Consulting Inc. (plan dated 6.27.23): Construction and maintenance of pier, ramp, and 192 square foot float with kayak racks and access steps.

1. As per the recommendation of the Mashpee Shellfish Constable, the following conditions are required:

- As per Ch. 172, Regulation 27 (*Residential Docks, Piers and Floats*) Section VI Mitigation: Payment of a shellfish mitigation fee in the amount of **\$4,399.35** to offset the impacts of the proposed pier expansion and float size on existing shellfish habitat. (*check payable to the Town of Mashpee*). ***This shellfish mitigation fee is due prior to commencement of any work. Shellfish mitigation fees help to fund the purchase of shellfish seed for the Town's Shellfish Propagation Program***

2. Any work activities and/or alterations discovered during inspections that are not included in the work description above will be due cause for enforcement actions, including enforcement orders, fines, revocation of this permit and/or denial of a Certificate of Compliance.

This Order of Conditions (OOC) authorizes the Conservation Agent, Assistant Agent or other designated representative of the Conservation Department to enter the property, as necessary, to monitor the project for compliance with this OOC. This authorization must continue until such time as a Certificate of Compliance is issued from either the Conservation Commission or the MA Department of Environmental Protection (as applicable).

3. This OOC is subject to amendment, revocation or a new application should the Commission deem:

- Incomplete work is causing damage to the interests of either the MA State Wetlands Protection Act (M.G.L., Ch. 131, Section 40) or the Town of Mashpee Wetland Ordinance (Chapter 172).
- New information, not available at the time this OOC was issued, has become available and indicates that the Order is not adequate to protect the interests of both the state and local wetland protection acts.

Should the Commission choose to amend or revoke this OOC, the applicant/permit holder will be notified by certified mail and must be allowed to respond and present evidence at a public hearing. Notice of said hearing must be published in a newspaper of local circulation and the hearing must be conducted in accordance with the MA Open Meeting Law (M.G.L. Ch.39, Section 23B).

4. Notwithstanding any contents of the Notice of Intent for the permit and/or any provisions of this OOC, all work/alterations on this site subject to this permit must meet the following performance standards for 310 CMR 10.00 and Mashpee's Chapter 172 Wetland Bylaw:

- 310 CMR 10.02(1)(d)- Land Subject to Coastal Storm Flow
- 310 CMR 10.25- Land Under Ocean
- 310 CMR 10.30- Coastal Banks
- 310 CMR 10.32- Salt Marshes
- 310 CMR 10.34- Land Containing Shellfish

310 CMR 10.35- Banks of or Land Under the Ocean, Ponds, Streams, Rivers, Lakes or Creeks that Underlie Anadromous/Catadromous ("Fish Run")
310 CMR 10.55- Bordering Vegetated Wetland

Ch.172, Reg.12- Mitigation
Ch.172, Reg.13- Biodiversity
Ch.172, Reg.15- Shellfish
Ch.172, Reg.16- Coastal Banks
Ch.172, Reg.17- Coastal Resource Areas (Other than Banks)
Ch.172, Reg.25- Land Subject to Flooding or Inundation by Coastal Flowage
Ch.172, Reg.26- Mashpee Conservation Commission Policies
Ch.172, Reg.27- Docks, Piers and Floats
Ch.172, Reg.29- Buffer Zones and Buffer Strips
Ch.172, Reg.32- Water Quality

Resource Area Values to be Protected (Chapter 172-1)

Erosion/Sedimentation Control
Storm Damage Prevention
Water Pollution Control
Water Quality
Fisheries
Land Containing Shellfish
Prevention of Pollution
Protection of Wildlife Habitat
Recreation

5. PREWORK CONDITIONS: *(The following conditions must be met PRIOR to any work proceeding or Conservation Dept. sign offs on any other town permits)*

- Submission of a dated copy of the recording page of the Order of Conditions (OOC) to the Conservation Department. It is recommended that this order of conditions not be recorded until the end of the 10 day appeal period from the date of issue (date of issue is the date that the OOC is mailed out or picked up in person).
- Submission of FORMS A & B, attached to this Order of Conditions (OOC) to the Conservation Department.
- The applicant and/or project supervisor(s) are required to notify all contractors/subcontractors on site of the OOC requirements. A copy of the OOC must be kept onsite or be made readily available during inspection at all times. Both the applicant and project supervisor may be held jointly liable in the event of a violation of the OOC.
- All required staking for structure corners, wetland resource areas and work limits must be clearly present on the lot and accurate with the plan of record.
- All erosion control/work limit(s) must be in place as per the plan of record or as per staff direction (as applicable).
- Scheduling of a site visit with Conservation Department staff at least one week prior to any commencement of work to confirm all of the pre-work conditions are met.

- Any deviations made or intended to be made from the approved plan of record accompanying the OOC must require, in advance, one of the following:
 - A new Notice of Intent or Amended Order Request
 - A written Administrative Approval from the Conservation Department indicating the proposed changes are not substantial enough to require either of the above

6. WORK LIMIT/EROSION CONTROL CONDITIONS:

- A siltation curtain must be placed as per the plan of record or at the discretion of Conservation Department staff.
- Siltation curtains must remain in place throughout the project until authorization to remove is provided by Conservation Department staff to remove.

7. CONSTRUCTION ACTIVITY/MATERIAL STORAGE CONDITIONS:

- Construction/reconstruction must be done in such a way that debris (sawdust, etc.) is not introduced into the water and/or any wetland resource area. Cutting, routing, shaping etc. should take place in an upland location away from wetlands. If this is not possible, then deployment of tarps to capture debris will be required.
- The only saltmarsh loss/disturbance under this OOC is for cross sectional areas occupied by the pilings shown on the approved Plan of Record. Any additional loss of salt marsh will result in enforcement/mitigation proceedings.
- All soils removed from postholes/pilings are to be removed from the marsh.
- Non-leaching wood preservative must be used for wood construction materials. CCA Treated piles are acceptable.
- Construction must be completed as quickly as possible to minimize turbidity and sedimentation.
- No construction equipment is to traverse wetland/salt marsh areas.
- The construction of the boardwalk must not destroy any portion of the marsh except for the immediate area of the boardwalk pilings.
- All trash and debris on site must be cleaned up daily and contained with onsite disposal (e.g. trailer or dumpster).
- Records as to the destination of all waste materials removed from the construction site must be kept and made available to the Conservation Department upon request. Said records must describe the ultimate disposal site, contents, volume of debris and date of disposal (receipts).

ADDITIONAL CONDITIONS

- 8. Upon receipt of this Order of Conditions, the applicant is required to apply for a Chapter 91 License from the State of Massachusetts (if applicable). Proof of application to Chapter 91 must be provided to the Mashpee Conservation Department. Upon receipt of a Chapter 91 Permit, a recorded copy of said permit must be provided to the Mashpee Conservation Department. No construction is to commence until the property owner submits a copy of an approved and recorded Commonwealth of Massachusetts Chapter 91 Waterways license to the Conservation Department.**

9. The chosen contractor must have demonstrated experience working in a marine environment. Proof of recent experience must be provided to the Conservation Department upon request.
10. All floats associated with this dock must be encapsulated. No exposed Styrofoam.
11. Total area of float(s) cannot exceed 200 square feet (including jetski floats)
12. No part of the fixed pier/access steps can be wider than four (4) feet.
13. Fixed pier must have through-flow decking to allow for 50% sunlight penetration in all areas of span over salt marsh and/or bordering vegetated wetland.
14. Limited jetting is typically allowed for the purposes of setting pier piles in place. Once piles are set, they must be driven to refusal.
15. Any additional loss/damage to salt marsh as a result of construction disturbances outside of project footprint(s) will be subject to a 2:1 mitigation ratio per square foot of saltmarsh loss/damage.
16. The float, if removed seasonally, cannot be dragged across any wetland resource area NOR can it be stored upon any salt marsh, bank or bordering vegetated wetland at any time.
17. Performance standards of 310 CMR 10.34 (Land Containing Shellfish) and 10.25 (Land Under Ocean) require minimal adverse effects on water circulation, eel grass (if present), water quality and/or sediment changes. Any vessel(s) using this dock cannot adversely impact the values associated with Land Under Ocean and/or Land Containing Shellfish through grounding or prop dredging of the underlying sediments. The commission reserves the right to require additional measures to ensure that the performance standards for Land Under Ocean and Land Containing Shellfish are not adversely impacted.
18. The DEP permit number AND street address are to be displayed in perpetuity on the float and fixed pier. A minimum of three (3) inch lettering on contrasting color background must be used for displaying this information. Any signage that fades or falls apart must be replaced immediately. No certificate of compliance will be issued on any dock project without proof of this signage in place.
19. At no time is boat washing (using chemical agents) to occur while vessel(s) are docked at this pier/float.
20. Decking spacing for the fixed pier must be constructed as per the Plan of Record submitted by *Shorefront Consulting Inc. (plan dated 6.27.23)*.
21. All Conservation and dock/pier notes on the Plan of Record submitted by *Shorefront Consulting Inc. (plan dated 6.27.23)* are hereby incorporated into this OOC.
22. The Commission reserves the right to require modifications and/or limitations relative to authorized work/methodology of work to ensure compliance with this OOC. Any modifications/restrictions will be provided in writing to the applicant.
23. A Naturally Vegetated Buffer Strip (NVBS) delineated as *all native vegetation within 50' of the salt marsh* must be maintained in perpetuity. Within this Buffer Strip, no removal and/or pruning of

vegetation is permitted with the exception of pathway no wider than four (4) feet. Pathway(s) must be shown on a plan of record and staked in the field prior to creation.

24. Vista pruning is not allowed under this permit.
25. The Conservation Department must be notified immediately of any proposed changes in plans or construction methodology.
26. In the event of any adverse impacts to wetland resource areas as a result of construction and/or maintenance of this project, the Commission reserves the right to require additional measures to protect resource areas and values as per M.G.L. Chapter 131 Section 40 and/or Mashpee's Chapter 172 Wetland Bylaw. The Conservation Agent, Assistant Agent and/or other designated representative of the Commission shall have the right to enter the premises to monitor ongoing work/maintenance.
27. The Plan of Record for this OOC does not constitute specific acceptance of the boundaries of resource areas under M.G.L. Chapter 131 Section 40 and Chapter 172 of the Mashpee Code for any work not described under Section 1 A of this Order. A new filing/application may be necessary if deemed so by the Commission and require new plans and/or new delineations of resource areas. The Commission may also require that said plans be prepared by a certified engineer, surveyor and/or landscape designer.
28. This OOC or any continuing conditions in perpetuity applies to any successor in interest or control
29. Violation of any conditions in this Order or any continuing conditions in perpetuity may result in the issuance of an enforcement order. Such enforcement order, if issued, will require the immediate cessation of all work until the mandates in the enforcement order are followed. In some instances, the violation may necessitate a hearing, in this case, such hearing will be held no more than 15 days from the issuance of an enforcement order.
30. In the event that a Superseding Order of Conditions is issued following an appeal to the MA State Department of Environmental Protection, this OOC issued pursuant to Chapter 172 of the Mashpee Code shall be considered amended to include all conditions of said Superseding Order. Notwithstanding the preceding, all special conditions protecting the wetland values of Chapter 172 shall remain in effect unless modified by an Order amending said conditions. The Commission reserves the right to require (in the event of the issuance of a Superseding Order by DEP) an Amended Order of Conditions if it deems such necessary for clarification and/or protection of the wetland values of Chapter 172.
31. Special conditions: 4, 10, 11, 12, 13, 16, 17, 18, 19, 23, 26, 28, & 29 extend beyond the Certificate of Compliance (in perpetuity) and shall be referenced in all future deeds of this property.
32. Upon completion of this project, the applicant must submit the following to the Commission to receive a Certificate of Compliance, closing out the permit/OOC with the Conservation Department:
 - a. A form requesting a Certificate of Compliance (WPA Form 8A).
 - b. A written statement from the registered professional engineer, surveyor, landscape designer, architect or wetland consultant associated with this project certifying that the work has been conducted as shown on the plan(s) of record and documents referenced, and as conditioned by the Commission.

- c. The Commission reserves the right, before issuing a Certificate of Compliance (should items "a" and "b" be deemed insufficient and/or in effort) to require an "as built" plan prepared and signed/stamped by a registered professional engineer or land surveyor of the Commonwealth.

33. This Order is valid for three years from the date of issuance but may be extended for more additional periods of up to three years per extension request. All extension requests are at the discretion of the Commission and may be subject to denial if deemed appropriate.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 - Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File #:043-3241
eDEP Transaction #:1584423
City/Town:MASHPEE

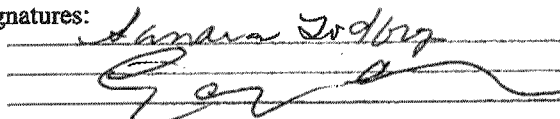
E. Signatures

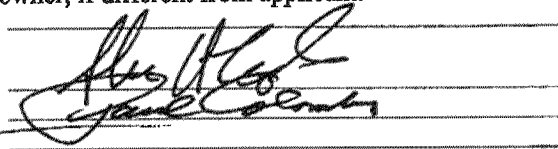
This Order is valid for three years from the date of issuance, unless otherwise specified pursuant to General Condition #4. If this is an Amended Order of Conditions, the Amended Order expires on the same date as the original Order of Conditions.

Please indicate the number of members who will sign this form. This Order must be signed by a majority of the Conservation Commission.

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures:





☐ by hand delivery on

☒ by certified mail, return receipt requested, on

Date

Date August 1, 2023

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.

G. Recording Information

This Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

MASHPEE

Massachusetts Department of Environmental
Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 - Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File #:043-3241
eDEP Transaction #:1584423
City/Town:MASHPEE

subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

MASHPEE

Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

MASHPEE

Conservation Commission

Please be advised that the Order of Conditions for the Project at:

48 QUAKER RUN ROAD

Project Location

043-3241

MassDEP File Number

Has been recorded at the Registry of Deeds of:

County

Book

Page

for:

Property Owner THOMAS & JOAN MARIE ANALETTO
/ TRUSTEES

and has been noted in the chain of title of the affected property in:

Book

Page

In accordance with the Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant

Rev. 4/1/2010

	I CERTIFY THAT THIS PLAN, AS PREPARED, CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.
	NAME _____ DATE _____

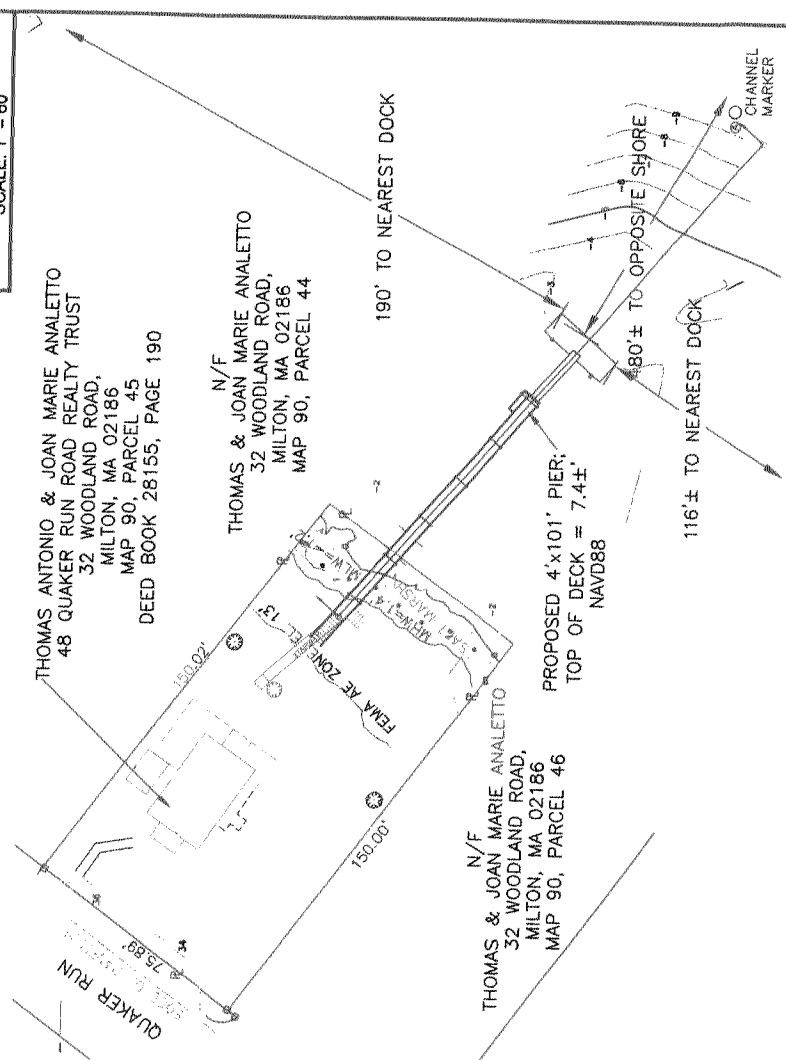
DATE _____

LEGEND

- _____ MEAN/ORDINARY HIGH WATER (MHW, EL. 1.4' NAVD88)
- MEAN/ORDINARY LOW WATER (MLW, EL. -1.2' NAVD88)
- EXISTING CONTOURS
- - - - - PROPERTY LINE
- . - . - FEMA FLOODPLAIN ZONE AE BOUNDARY

LOCUS MAP
SCALE: 1" = 60'

LOCUS MAP
SCALE: 1" = 60'



23-WW01 # 0156-AP

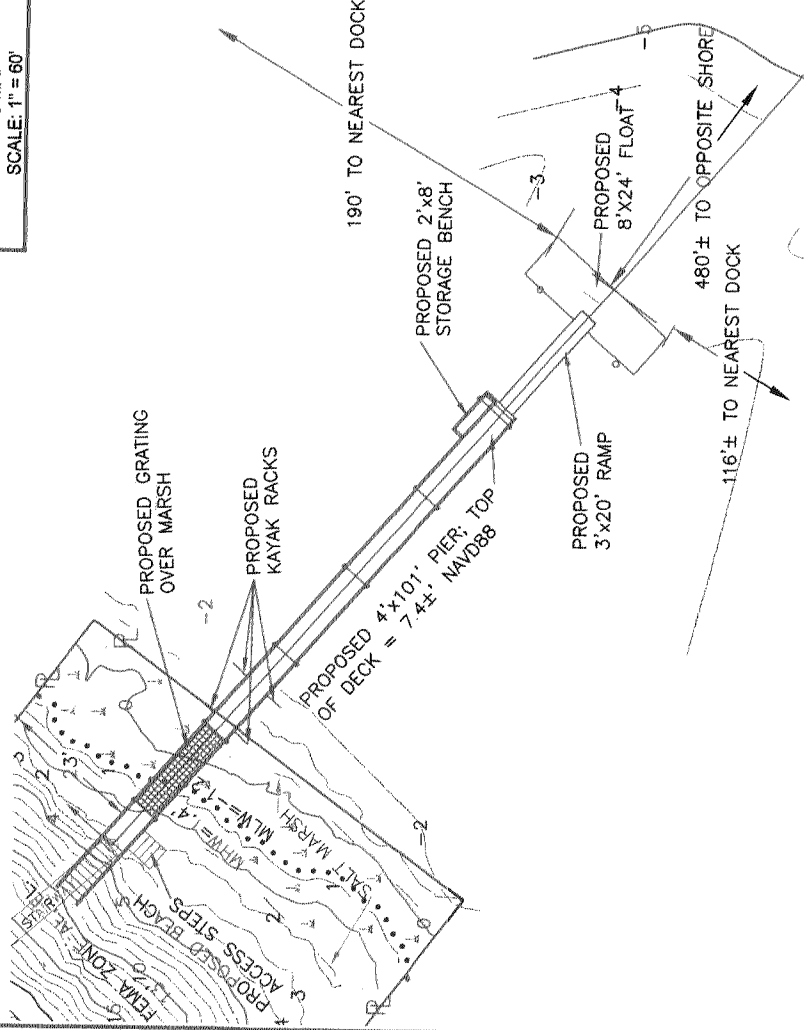
I CERTIFY THAT THIS PLAN, AS PREPARED, CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

NAME

DATE



LOCUS MAP
SCALE: 1" = 60'



PLAN ACCOMPANYING PETITION OF 48 QUAKER RUN ROAD REALTY TRUST, THOMAS ANTONIO ANALETTO & JOAN MARIE ANALETTO, TRUSTEES TO CONSTRUCT AND MAINTAIN A DOCK, RAMP, AND FLOAT WITHIN WATERS OF THE SANTUIT RIVER AT 48 QUAKER RUN ROAD, MASHPEE, BARNSTABLE COUNTY, MASSACHUSETTS



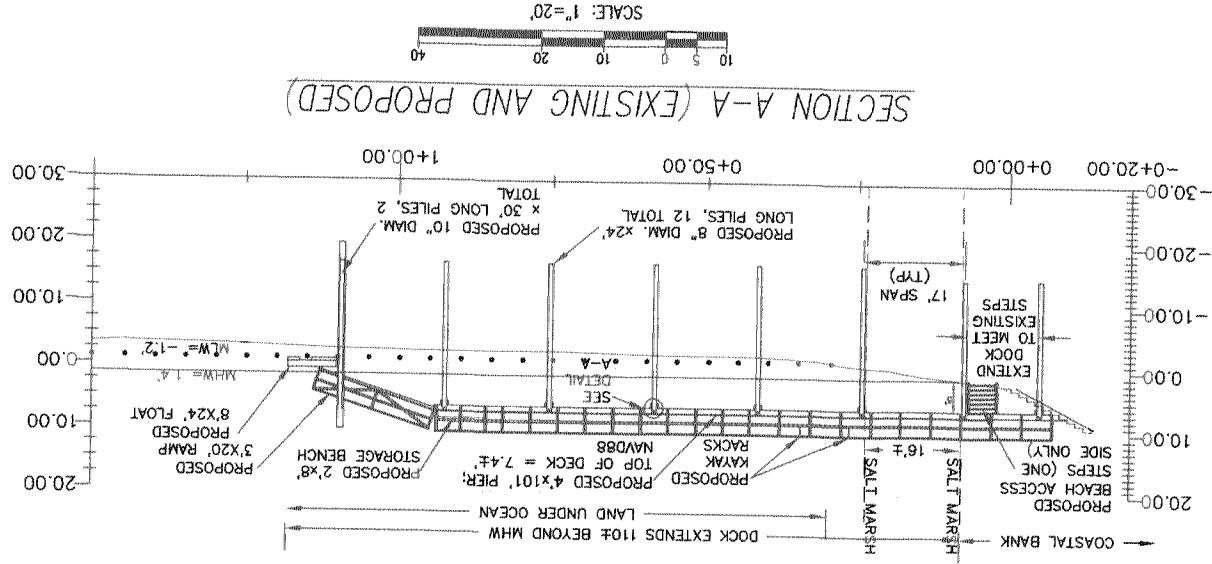
PROPOSED SITE PLAN
SHEET 2 OF 4
DECEMBER 28, 2023

23-WW01 # 0156-AP

I CERTIFY THAT THIS PLAN, AS PREPARED, CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

NAME

DATE



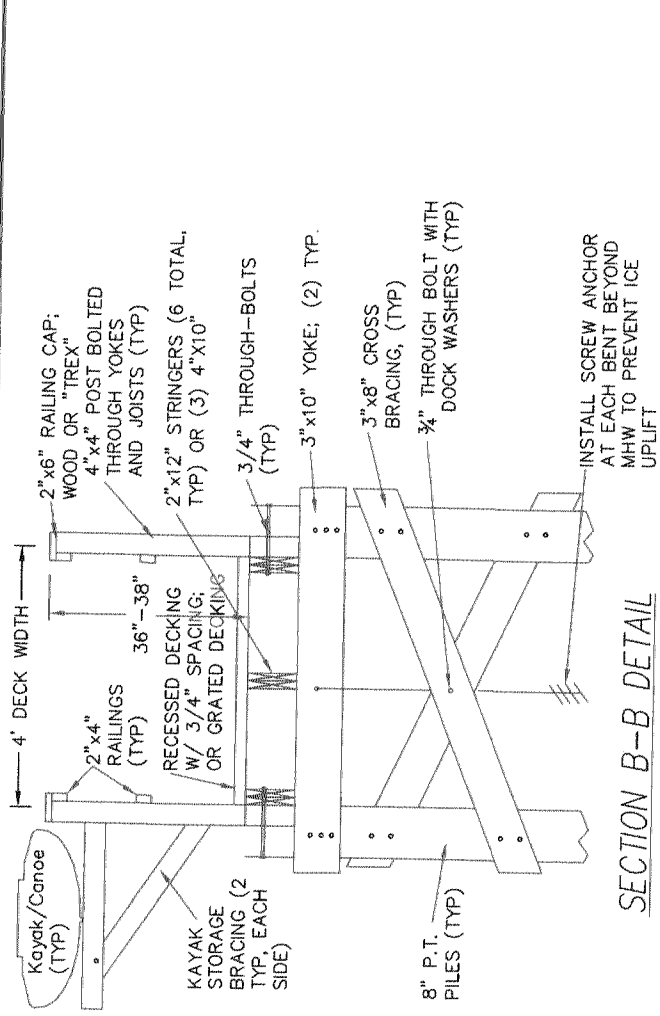
PLAN ACCOMPANYING PETITION OF 48
QUAKER RUN ROAD REALTY TRUST, THOMAS
ANTONIO ANALETTO & JOAN MARIE
ANALETTO, TRUSTEES TO CONSTRUCT AND
MAINTAIN A DOCK, RAMP, AND FLOAT WITHIN
WATERS OF THE SANTUIT RIVER AT 48
QUAKER RUN ROAD, MASHPEE, BARNSTABLE
COUNTY, MASSACHUSETTS

PROPOSED SITE PLAN
SHEET 3 OF 4
DECEMBER 28, 2023

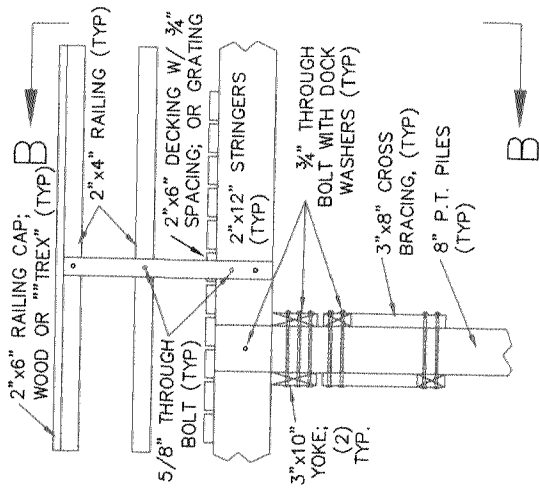
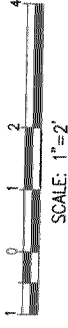
I CERTIFY THAT THIS PLAN, AS PREPARED, CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

NAME _____

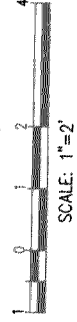
DATE _____



SECTION B-B DETAIL



DETAIL A



PLAN ACCOMPANYING PETITION OF 48 QUAKER RUN ROAD REALTY TRUST, THOMAS ANTONIO ANALETTO & JOAN MARIE ANALETTO, TRUSTEES TO CONSTRUCT AND MAINTAIN A DOCK, RAMP, AND FLOAT WITHIN WATERS OF THE SANTUIT RIVER AT 48 QUAKER RUN ROAD, MASHPEE, BARNSTABLE COUNTY, MASSACHUSETTS

DOCK DETAILS
SHEET 4 OF 4
DECEMBER 28, 2023



DEPARTMENTS OF THE ARMY AND THE AIR FORCE
JOINT FORCE HEADQUARTERS
MASSACHUSETTS NATIONAL GUARD
OFFICE OF THE ADJUTANT GENERAL
2 RANDOLPH ROAD
HANSCOM AFB, BEDFORD, MA 01731-3001

Ms. Tori Kim, MEPA Director
Executive Office of Energy and Environmental Affairs
MEPA Office
100 Cambridge Street, Suite 900
Boston, MA 02114

14 March 2024

Received By

Re: Notice of Project Change - EEA #5834
Range Operations and
Camp Edwards, Joint Base Cape Cod,
Sandwich, Massachusetts

MAR 20 2024

Planning Dept.

Dear Ms. Kim:

The Massachusetts Army National Guard (MAARNG) is pleased to present a Notice of Project Change (NPC) to the Final Area-Wide Environmental Impact Report (EIR) for the MMR Master Plan issued by MEPA on 16 July 2001 (EEA #5834) for the construction of Range Operations and Control Area (ROCA) structures at India, Sierra and Tango Ranges at Camp Edwards Massachusetts.

Federal standards and available funding have led to the need and opportunity for additional range support buildings at all primary ranges to include at minimum a range tower, ammunition break-down building (for range day logistics, not ammunition storage), equipment storage shed, bleacher overhang, and a covered mess. The addition of the ROCA structures will provide facilities to enhance the soldier training experience, while providing proper command and control for safe range operations. There will be no change in site usage as these building are part of standard design and management of the respective small arms ranges and this is an ongoing activity at these locations. Structures such as the ammunition breakdown buildings will reduce exposure of ammunition, weapons, and soldiers to the environment during handling and maintenance, increasing both human and environmental safety.

For MAARNG projects at Camp Edwards, an established Special Review Process includes "lowered thresholds" for MEPA reviews (in addition to the stand-alone MEPA thresholds at 301 CMR 11.03) including impervious areas (more than 0.5 acres), vegetative clearing (more than two acres), and any new building or structure (more than 500 s.f.). The Project, as proposed, does exceed the lowered threshold for new buildings and structures of more than 500 s.f. (six structures are proposed, five of which are greater than 500 s.f., totaling approximately 3,595 s.f. of new construction).

Agency coordination is limited due to the minimal impacts of the proposed construction of the additional structures on each range. There are no required permits. The existing project locations have been heavily disturbed in the past and are currently maintained at active ranges. There is no significant change in use or activity as the project locations are currently used for soldier staging and training, range operations, and parking. Due to the existence of the Conservation and Management Permit accounting for construction projects at Camp Edwards coordination did occur with the MA Division of Fisheries and Wildlife. Coordination has also occurred with the Environmental Management Commission relative to the Upper Cape Water Supply Reserve and Environmental Performance Standards.

The NPC will be made available for public review as well as mailed to local stakeholders, required agencies, and to all on the EEA #5834 circulation list. The NPC will also be available on line on the MAARNG Environmental and Readiness Center (E&RC) publications page at [Massachusetts Army National Guard Environmental and Readiness Center \(massnationalguard.org/erc/publications.htm\)](https://massnationalguard.org/erc/publications.htm) and

copies will be on file at the Bourne, Sandwich, Falmouth, and Mashpee public libraries. Additional copies of the NPC can be obtained by emailing me at the email address below.

The MAARNG respectfully requests that you publish notice of the availability of the NPC for public review in the March 22, 2024 edition of *The Environmental Monitor*. Please contact me at the number or email address below if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Keith J. Driscoll', with a long horizontal flourish extending to the right.

Keith J. Driscoll
NEPA/MEPA Manager
Massachusetts Army National Guard
Keith.J.Driscoll.nfg@army.mil
339-202-3980



TOWN OF FALMOUTH
MASSACHUSETTS

Received By

MAR 20 2024

Planning Dept.

BOARD OF APPEALS

Notice of Decision

Notice is hereby given that the Board of Appeals of the Town of Falmouth has made a decision on a petition by Scott A. and Agnieszka A. Dresser, Trustees, 44 Waquoit Landing Road, Waquoit, Ma.

(Map 32, Lot 000) under 240-11.4A and 240-10.2A of the Zoning by-Law, as amended to **grant** the Special Permit to raze the existing, detached garage and replace it with a two car garage, and expand the second floor of the existing, nonconforming dwelling.

Appeals, if any, shall be made pursuant to the Massachusetts General Laws, Chapter 40A, Section 17, and shall be filed within twenty (20) days after **March 13, 2024**, which is the date the Decision was filed in the office of the Town Clerk.

Please contact Noreen Stockman at 508-495-7460
or Noreen.stockman@falmouthma.gov if you have any questions or comments
full text of decision available at <http://www.falmouthma.gov>

Received By

MAR 25 2024

Planning Dept.



**TOWN OF FALMOUTH
MASSACHUSETTS**

BOARD OF APPEALS

Notice of Decision

Notice is hereby given that the Board of Appeals of the Town of Falmouth has made a decision on a petition by Michael T. Vassalotti, Jr. and Rachael R. Vassalotti, 22 Overy Drive, North Falmouth, Ma.

(Map 05A, Lot 013) under 240-6.6B of the Zoning by-Law, as amended to **grant** the Special Permit to construct a detached garage, exceeding 900sf in size.

Appeals, if any, shall be made pursuant to the Massachusetts General Laws, Chapter 40A, Section 17, and shall be filed within twenty (20) days after **March 20, 2024**, which is the date the Decision was filed in the office of the Town Clerk.

Please contact Noreen Stockman at 508-495-7460
or Noreen.stockman@falmouthma.gov if you have any questions or comments
full text of decision available at <http://www.falmouthma.gov>



TOWN OF FALMOUTH
MASSACHUSETTS

BOARD OF APPEALS

Notice of Decision

Received By

MAR 25 2024

Planning Dept.

Notice is hereby given that the Board of Appeals of the Town of Falmouth has made a decision on a petition by NextGrid Torrey LLC, 177 Huntington Ave., - 1703 unit 73069, Boston, MA. (Map 15, Lot 009) under 240-5.1C (2) of the Zoning by-Law, as amended to **grant** the special permit to allow solar photovoltaic array carports, battery energy storage systems and associated electrical equipment.

Appeals, if any, shall be made pursuant to the Massachusetts General Laws, Chapter 40A, Section 17, and shall be filed within twenty (20) days after **March 21, 2024**, which is the date the Decision was filed in the office of the Town Clerk.

Please contact Noreen Stockman at 508-495-7460
or Noreen.stockman@falmouthma.gov if you have any questions or comments
full text of decision available at <http://www.falmouthma.gov>



TOWN OF FALMOUTH

ZONING BOARD OF APPEALS

59 TOWN HALL SQUARE, FALMOUTH, MA 02540
508-495-7460 – FAX 508-495-7463

BOARD OF APPEALS NOTICE OF PUBLIC HEARING

Received By

MAR 25 2024

Planning Dept.

Being all persons deemed affected by the Board of Appeals under Section 11 of Chapter 40A of the Massachusetts General Laws you are hereby notified that:

Application #020-24 Dennis E. and Andrea S. Harrington, 9 Carriage Hill Drive, Wethersfield, CT.:

Applied to the Zoning Board of Appeals for a special permit pursuant to section(s) 240-11.3A(4) of the Code of Falmouth to raze and rebuild the existing dwelling, exceeding 20% lot coverage by structures.

The subject property is 23 Cuttysark Road, East Falmouth, Ma.

Map 40 Section 02A Parcel 000 Lot(s) 297

A public hearing will be given on this application, in the Select Board's Meeting Room, Town Hall, on

Thursday, April 11, 2024 at 6:00PM

You are invited to be present.

By Order of the Board of Appeals,
Chairman, James T. Morse

Plans are available for review prior to the hearing at the Board of Appeals office, Town Hall during the hours of 8:00 AM to 4:00 PM. *Plans are available to review at <https://www.falmouthma.gov/1113/Applications-under-review-by-the-ZBA>



TOWN OF FALMOUTH

ZONING BOARD OF APPEALS

59 TOWN HALL SQUARE, FALMOUTH, MA 02540
508-495-7460 – FAX 508-495-7463

BOARD OF APPEALS NOTICE OF PUBLIC HEARING

Received By

MAR 25 2024

Planning Dept.

Being all persons deemed affected by the Board of Appeals under Section 11 of Chapter 40A of the Massachusetts General Laws you are hereby notified that:

Application #018-24 Robert M. and Tracy L. Driscoll, 187 Monroe Street, Dedham, MA.: Applied to the Zoning Board of Appeals for a special permit pursuant to section(s) 240-10.2A & 240-11.3A(4) of the Zoning Board of Appeals to demolish and rebuild a portion of the existing garage with additional habitable space above, increasing lot coverage by structures. **The subject property is 463 Shorewood Drive, East Falmouth, MA.**

Map 40 Section 02A Parcel 000 Lot(s) 009

A public hearing will be given on this application, in the Select Board's Meeting Room, Town Hall, on **Thursday, April 11, 2024 at 6:00PM**
You are invited to be present.

By Order of the Board of Appeals,
Chairman, James T. Morse

Plans are available for review prior to the hearing at the Board of Appeals office, Town Hall during the hours of 8:00 AM to 4:00 PM. *Plans are available to review at <https://www.falmouthma.gov/1113/Applications-under-review-by-the-ZBA>



TOWN OF FALMOUTH

ZONING BOARD OF APPEALS

59 TOWN HALL SQUARE, FALMOUTH, MA 02540
508-495-7460 – FAX 508-495-7463

BOARD OF APPEALS NOTICE OF PUBLIC HEARING

Received By

MAR 25 2024

Planning Dept.

Being all persons deemed affected by the Board of Appeals under Section 11 of Chapter 40A of the Massachusetts General Laws you are hereby notified that:

Application #023-24 Emily Serio, P.O. Box 2366, East Falmouth, MA.: Applied to the Zoning Board of Appeals for a special permit pursuant to section(s) 240-9.5(6) of the Code of Falmouth to allow a Home Occupation (spa). **The subject property is 426 Teaticket Highway, East Falmouth, MA.**

Map 34 Section 04 Parcel 027A Lot(s) 000

A public hearing will be given on this application, in the Select Board's Meeting Room, Town Hall, on **Thursday, April 11, 2024 at 6:00PM**
You are invited to be present.

By Order of the Board of Appeals,
Chairman, James T. Morse

Plans are available for review prior to the hearing at the Board of Appeals office, Town Hall during the hours of 8:00 AM to 4:00 PM. *Plans are available to review at <https://www.falmouthma.gov/1113/Applications-under-review-by-the-ZBA>



TOWN OF FALMOUTH

ZONING BOARD OF APPEALS

59 TOWN HALL SQUARE, FALMOUTH, MA 02540
508-495-7460 – FAX 508-495-7463

BOARD OF APPEALS NOTICE OF PUBLIC HEARING

Received By

MAR 25 2024

Planning Dept.

Being all persons deemed affected by the Board of Appeals under Section 11 of Chapter 40A of the Massachusetts General Laws you are hereby notified that:

Application #022-24 Barnstable County Agricultural Society, Inc., 1220 Nathan S. Ellis Highway, East Falmouth, MA.: Applied to the Zoning Board of Appeals for a special permit pursuant to section(s) 240-6.1, 240-14.1I, 240-5.1F and 240-5.1B of the Code of Falmouth to allow non-agricultural events with associated parking and parking for a fee. **The subject property is 1220 Nathan S. Ellis Highway, East Falmouth, Ma.**

Map 18 Section 02 Parcel 002 Lot(s) 180 and associated lots

A public hearing will be given on this application, in the Select Board's Meeting Room, Town Hall, on

Thursday, April 11, 2024 at 6:00PM

You are invited to be present.

By Order of the Board of Appeals,
Chairman, James T. Morse

Plans are available for review prior to the hearing at the Board of Appeals office, Town Hall during the hours of 8:00 AM to 4:00 PM. *Plans are available to review at <https://www.falmouthma.gov/1113/Applications-under-review-by-the-ZBA>



TOWN OF FALMOUTH

ZONING BOARD OF APPEALS

59 TOWN HALL SQUARE, FALMOUTH, MA 02540
508-495-7460 – FAX 508-495-7463

BOARD OF APPEALS NOTICE OF PUBLIC HEARING

Received By

MAR 25 2024

Planning Dept.

Being all persons deemed affected by the Board of Appeals under Section 11 of Chapter 40A of the Massachusetts General Laws you are hereby notified that:

Application #021-24 Michael D. Clements, 1305 Sandwich Road, East Falmouth, MA.: Applied to the Zoning Board of Appeals for a special permit pursuant to section(s) 240-6.1B and 240-11.3A(4) of the Code of Falmouth to construct a detached barn exceeding 900sf in size with lot coverage by structures over 20%. **The subject property is 1305 Sandwich Road, East Falmouth, MA.**

Map 09 Section 01 Parcel 004 Lot(s) 145

A public hearing will be given on this application, in the Select Board's Meeting Room, Town Hall, on **Thursday, April 11, 2024 at 6:00PM**

You are invited to be present.

By Order of the Board of Appeals,
Chairman, James T. Morse

Plans are available for review prior to the hearing at the Board of Appeals office, Town Hall during the hours of 8:00 AM to 4:00 PM. *Plans are available to review at <https://www.falmouthma.gov/1113/Applications-under-review-by-the-ZBA>



TOWN OF FALMOUTH

ZONING BOARD OF APPEALS

59 TOWN HALL SQUARE, FALMOUTH, MA 02540
508-495-7460 – FAX 508-495-7463

BOARD OF APPEALS NOTICE OF PUBLIC HEARING

Received By

MAR 25 2024

Planning Dept.

Being all persons deemed affected by the Board of Appeals under Section 11 of Chapter 40A of the Massachusetts General Laws you are hereby notified that:

Application #019-24 Luiz Netto, 614 East Falmouth Highway, East Falmouth, MA.: Applied to the Zoning Board of Appeals for a special permit pursuant to section(s) 240-6.3B of the Code of Falmouth to allow a tow truck operation with vehicle storage. **The subject property is 614 East Falmouth Highway, East Falmouth, MA.**

Map 33 Section 21 Parcel 009B Lot(s) 000

A public hearing will be given on this application, in the Select Board's Meeting Room, Town Hall, on **Thursday, April 11, 2024 at 6:00PM**
You are invited to be present.

By Order of the Board of Appeals,
Chairman, James T. Morse

Plans are available for review prior to the hearing at the Board of Appeals office, Town Hall during the hours of 8:00 AM to 4:00 PM. *Plans are available to review at <https://www.falmouthma.gov/1113/Applications-under-review-by-the-ZBA>

ABUTTER NOTIFICATION

PROJECT TYPE: Town of Sandwich Board of Health Rules and Regulations
Variance Request for Subsurface Sewage Disposal
System Upgrade

SITE LOCATION: #8 Beachway East (Map 64 Parcel 113)

APPLICANT: The Weiss Realty Trust

HANOVER OFFICE:
427 Columbia Road
Hanover, MA 02339
781-826-9200

PLYMOUTH OFFICE:
40 Court Street, Ste 2A
Plymouth, MA 02360
508-746-6060

MARINE DIVISION:
26 Union Street
Plymouth, MA 02360
508-746-6060

FALMOUTH OFFICE:
448 N. Falmouth Highway Unit A
North Falmouth, MA 02556
508-563-2183

merrillinc.com

The Sandwich Board of Health will be conducting a Public Hearing to consider a Board of Health Rules and Regulations, Variance Request for the above referenced project in accordance with the State Environmental Code Title V (310 CMR 15.000) and Town of Sandwich Board of Health Regulations. As per Title V and the Town of Sandwich Regulations, we are notifying you of the waivers requested:

- 310 CMR Section 15.211 – Minimum Setback Distance: Requesting reductions from foundation wall and private well to the proposed leaching field.
- Town of Sandwich Board of Health Regulations – Minimum Setback Distance to a Wetland: Requesting reductions from the wetland to the proposed septic tank, nitRoe tank and leaching field.

The hearing is scheduled for April 8, 2024; please contact the Board of Health for the scheduled time and location.

Received By

MAR 18 2024

Planning Dept.

Town of Sandwich
THE OLDEST TOWN ON CAPE COD



Board of Appeals

100 Route 6A
Sandwich, MA 02563
Phone: 508-833-8001
Fax: 508-833-8006
E-mail: planning@sandwichmass.org

**Special Permit
Certificate of Approval**

Current Property Owner(s): First Church Sandwich
Property Address: 136 Main Street
Map, Parcel: 73-186
Book, page #: 1337, 902

TOWN CLERK
TOWN OF SANDWICH

MAR 13 2024

10 H 30 M AM
RECEIVED & RECORDED

On March 12, 2024, the Board of Appeals voted to approve a special permit from Section 2200 of the Sandwich Zoning By-law for property located at 136 Main Street, as shown on Assessor's Map 73, Parcel 186, to establish a thrift shop.

The Board of Appeals certifies that the decision attached hereto is a true and correct copy of its decision to approve a special permit and that copies of said decision, and of all plans referred to in the decision, have been filed with the Board of Appeals and the Town Clerk.

The Board of Appeals also calls to the attention of the owner or applicant that General Laws, Chapter 40A, Section 11 provides that no special permit, or any extension, modification or renewal thereof, shall take effect until a copy of the decision bearing the certification of the town clerk that twenty days have elapsed after the decision has been filed in the office of the town clerk and no appeal has been filed or that, if such appeal has been filed, that it has been dismissed or denied, is recorded in the registry of deeds for the county and district in which the land is located and indexed in the grantor index under the name of the owner of record or is recorded and noted on the owner's certificate of title. The owner or applicant shall pay the fee for such recording or registering. A copy of that registered decision shall be returned to the Planning & Development office as proof of filing.

Any person aggrieved by this decision may appeal to the Superior Court or Land Court as in Section 17 of Chapter 40A, M.G.L. by filing a NOTICE OF ACTION AND COMPLAINT with the Town Clerk within twenty (20) days of the date of filing of this decision.

Board of Appeals Member

MARCH 13, 2024

Date

Received By

MAR 18 2024

Planning Dept.

PROCEDURAL HISTORY

1. Application from Section 2200 of the Zoning By-Law for property located at 136 Main Street was filed on February 7, 2024.
2. After proper notice was given, the public hearing was opened on March 12, 2024 and closed on March 12, 2024.
3. A site plan was not provided.
4. The Board reviewed the application and all other materials submitted prior to the close of the public hearing. The Board received and gave due consideration to the testimony given at the public hearing.
5. The following members attended the public hearing:

James Killion
Christopher Neeven
Erik Van Buskirk
Mary Foley

FINDINGS

The Zoning Board of Appeals finds that:

1. The Board of Appeals finds that this application meets the requirements of Section 9, M.G.L. Chapter 40A
2. Subject property is located within the Village Zoning District.
3. Subject property is approximately 0.77 acres.
4. Subject property has approximately 78 feet of frontage on Main Street.
5. The applicant wishes to operate a thrift shop.
6. Under section 3120, the applicant is required to provide one parking space per 200 square feet of gross floor area. The applicant must provide 10 parking spaces.
7. The applicant is proposing the hours of operation as Tuesday through Saturday 10 am-3 pm.
8. The existing parking exceeds the requirements of section 3120.
9. Section 1330 requirements:
 - a) The Board of Appeals does not find that there are conditions peculiar to this case but not generally true for similar permitted uses on other sites in the same district;
 - b) The Board of Appeals finds that nuisance, hazard or congestion will not be created;
 - c) The Board of Appeals finds that there will not be substantial harm to the neighborhood;
 - d) The Board of Appeals finds that there is no derogation from the intent of the bylaw such that the districts' objectives will be satisfied.

Motion: I, Christopher Neeven, move to adopt these findings as the findings of the Board of Appeals.

Second: Erik VanBuskirk

Vote:	James Killion	Yes
	Christopher Neeven	Yes
	Erik VanBuskirk	Yes
	Mary Foley	Yes

CONDITIONS:

At the public hearing, the Board of Appeals considered potential conditions of approval for the special permit. The Board of Appeals voted that the following conditions of approval shall be imposed upon any approval of a special permit and that these conditions are reasonable and that the applicant and its successor-in-interest shall be bound by these conditions:

1. Failure to comply with all the conditions set forth in this decision shall terminate the grant of this special permit.
2. Pursuant to the requirements of Sandwich Protective Zoning By-law Section 1330, the grant of special permit shall expire upon:
 - a) Transfer of ownership, prior to initiation of substantial construction on or occupancy of the site unless such transfer is authorized in this permit, or
 - b) If no substantial construction or occupancy takes place within three (3) years of special permit approval, excluding such time required to pursue or await the determination of an appeal referred to in MGL C 40A, Section 17.
3. The special permit shall not take effect until it is recorded at the Barnstable County Registry of Deeds and a copy of the recorded special permit is provided to the Board of Appeals.
4. The applicant must provide 10 parking spaces for the use.

Motion: I, Christopher Neeven, move to impose the above conditions of approval upon any approval of the special permit.

Second: Erik VanBuskirk

Vote:	James Killion	Yes
	Christopher Neeven	Yes
	Erik VanBuskirk	Yes
	Mary Foley	Yes

DECISION:

After reviewing the application, the plan and other materials submitted and after giving due consideration to testimony given at the public hearing, the Board hereby approves/denies the special permit application for property located at 136 Main Street, as shown on Assessor's Map 73, Parcel 186, to establish a thrift shop.

Motion: I, James Killion, move to approve the special permit application.

Second: Christopher Neeven

Vote:	James Killion	Yes
	Christopher Neeven	Yes
	Erik VanBuskirk	Yes
	Mary Foley	Yes



TOWN OF FALMOUTH
MASSACHUSETTS

BOARD OF APPEALS

Notice of Decision

Notice is hereby given that the Board of Appeals of the Town of Falmouth has made a decision on a petition by Kenneth M. and Carol J. Bello, 362 Acapesket Road, East Falmouth, Ma.

(Map 40, Lot 221) under 240-10.2A of the Zoning by-Law, as amended to **grant** the Special Permit to raze and rebuild the existing, nonconforming, detached cabana.

Appeals, if any, shall be made pursuant to the Massachusetts General Laws, Chapter 40A, Section 17, and shall be filed within twenty (20) days after **March 25, 2024**, which is the date the Decision was filed in the office of the Town Clerk.

Please contact Noreen Stockman at 508-495-7460
or Noreen.stockman@falmouthma.gov if you have any questions or comments
full text of decision available at <http://www.falmouthma.gov>



TOWN OF FALMOUTH
MASSACHUSETTS

BOARD OF APPEALS

Notice of Decision

Notice is hereby given that the Board of Appeals of the Town of Falmouth has made a decision on a petition by Matthew and Finola Cox, 32 Sycamore Street, East Falmouth, Ma.

(Map 46A, Lot 043) under 240-10.2A and 240-11.3A(4) of the Zoning by-Law, as amended to **grant** the Special Permit to remove a portion of the existing deck, construct a porch addition and expand the 2nd floor, increase lot coverage by structures.

Appeals, if any, shall be made pursuant to the Massachusetts General Laws, Chapter 40A, Section 17, and shall be filed within twenty (20) days after **March 25, 2024**, which is the date the Decision was filed in the office of the Town Clerk.

Please contact Noreen Stockman at 508-495-7460
or Noreen.stockman@falmouthma.gov if you have any questions or comments
full text of decision available at <http://www.falmouthma.gov>



**TOWN OF FALMOUTH
MASSACHUSETTS**

BOARD OF APPEALS

Notice of Decision

Received By

MAR 28 2024

Planning Dept.

Notice is hereby given that the Board of Appeals of the Town of Falmouth has made a decision on a petition by Winthrop H. and Pia Z. Munro, 225 Metoxit Road, East Falmouth, Ma.

(Map 31 Lot 000) of the Zoning By-Law, as amended to **grant** the Special Permit to construct a detached accessory apartment in the front yard more than 50' from the front property line.

Appeals, if any, shall be made pursuant to the Massachusetts General Laws, Chapter 40A, Section 17, and shall be filed within twenty (20) days after **March 25, 2024** which is the date the Decision was filed in the office of the Town Clerk.

Please contact Noreen Stockman at 508-495-7460
or Noreen.stockman@falmouthma.gov if you have any questions or comments
full text of decision available at <http://www.falmouthmass.us>

A PERFECT ENVIRONMENT LLC

d/b/a

GEO-CAPE ENVIRONMENTAL CONSULTANTS

100 INDEPENDENCE DRIVE, SUITE 7-623

HYANNIS, MA 02601

Phone: 774-238-1813

Email: aperfectenvironment@gmail.com

Received By

MAR 28 2024

Planning Dept.

March 25, 2024

TO: ABUTTERS OF 13 CHURCH STREET, SANDWICH

RE: VARIANCES FROM TITLE 5 REGULATION, 13 CHURCH STREET

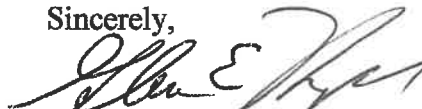
You are being notified due to variance requests from 310 CMR 15.000, Title 5 of the State Environmental Code for the proposed septic system upgrade at the above-referenced property. The variances are listed below:

1. 310 CMR 15.212 – A variance is requested to allow the proposed soil absorption system (SAS) to be installed 4 feet to groundwater in lieu of the required 5 feet.
2. 310 CMR 15.405(1)(a) - A variance is requested to allow the proposed SAS to be constructed 6.5 feet from the side property line and 8 feet from the street-side property line in lieu of the required 10 feet.

The review of the variances by the Board of Health shall occur at 6:00 pm on April 8, 2024 at the Sand Hill Community School, 16 Dewey Avenue, Sandwich. Board of Health public meetings are held in-person. Agendas are posted at least 48 hours prior to the meeting. The meeting agenda may be viewed on the town website www.sandwichmass.org at "Agendas & minutes".

If you wish to submit any comments prior to the hearing, please contact myself at the above number or the Board of Health office at 508-888-4200.

Sincerely,



Glen E. Harrington, R.S.