

March 28, 2022, **UPDATED April 7, 2022**

Town of Swampscott Conservation Commission  
c/o Ms. Marzie Galazka, Director of Community Development  
22 Monument Avenue  
Swampscott, MA 01907

Re: **UPDATED** Review of Notice of Intent, MADEP File #071-0349  
New Swampscott Elementary School, 10 Whitman Street, Swampscott, MA

Ladies and Gentlemen:

This **UPDATED** correspondence is submitted to you in accordance with our proposal dated November 26, 2021. This **UPDATED** review of the project and related materials and information is being conducted to assure compliance of the project, plans and submitted data with the requirements of the Massachusetts Wetlands Protection Act (MAWPA), the Wetlands Protection Act Regulations, 310 CMR 10.00 et. seq. (MAWPA REGS) and the Massachusetts Department of Environmental Protection 2008 Stormwater Regulations and Handbook (MADEP 2008 SWR & MADEP 2008 SWH).

### **REVIEW MATERIALS**

Electronic files for the **UPDATED** materials for this **UPDATED** review were received on Friday, April 1, 2022, Monday, April 4, 2022, and Tuesday, April 5, 2022. Hard copy of the **UPDATED** plans was received late in the day on Monday, April 4, 2022. This **UPDATED** review of the project is based on the most recent materials received.

### **PROJECT REVIEW**

The following are our **UPDATED** comments and observations on the **UPDATED AND REVISED** plans, calculations and other materials received with respect to the requirements of the regulations and standard engineering practice. The numbered items in this report correspond to the numbered items in our previous report dated March 28, 2022. **NOTE THAT THE UPDATES TO OUR COMMENTS AND ANY NEW COMMENTS ARE SHOWN IN THE BOLD ITALIC TEXT.**

### **NOTICE OF INTENT FILING:**

The MADEP has issued a file number, MADEP FILE #071-0349, in response to the Notice of Intent (NOI) filing for the project and as of Friday, March 25, 2022, had no technical comments. With the issuance of a file number by MADEP, the public hearing for the project may be closed when the SCC determines that they have received all the necessary information on which to base their decision and an Order of Conditions (affirmative or denial) may be issued, if the SCC so votes.

### **NOTICE OF INTENT**

The following are our comments on the Notice of Intent (NOI) as filed. A corrected/revised NOI Form and supporting materials should be filed with the SCC and MADEP in response to these comments.

1. The Notice of Intent Form as filed with the SCC at the beginning of the month was improperly completed. The box under Section A2 of the form indicating there were multiple property owners was not checked and it should have been. In addition, ownership information for the adjacent UU Church property was not shown in the form was not signed by the UU Church as an owner. We understand that after the filing of the NOI, the Town of Swampscott made an eminent domain taking against the UU Church property. We have been provided a copy of a letter from Town Counsel to the SCC asserting that the eminent domain taking qualifies the town of Swampscott as a "Owner" under the wetlands protection act. While the issue of land ownership and rights to file the NOI are legal issues and need to be resolved by an attorney or the courts, we believe that the NOI Form should be revised to indicate multiple property owners, indicate the eminent domain taking, add the book and page of the eminent domain taking to the recording information on the form and an explanation as to the town's ability to file the NOI should be attached to the form. This amended form should be filed with both the SCC and the MADEP as part of the official record for this filing.

***Comment Addressed by the additional materials received which included a letter from Town Counsel to the SCC dated March 24, 2022, and a letter from Town Counsel to MADEP dated March 31, 2022. Since the ownership issue and the legality of the NOI filing is a legal issue we defer to Town Counsel on this issue.***

### **WETLAND RESOURCE AREA DELINEATION**

2. We understand that LEC feels that these areas are not jurisdictional and that they have reached out to MADEP. They have reported that MADEP agrees that these areas are not jurisdictional. In our opinion the Applicant should provide a written letter or email to the SCC from MADEP stating that they have reviewed these areas and in their opinion they are not jurisdictional under the MAWPA. Otherwise, these areas should be delineated, shown on the plans and the proposed path should be moved out of these areas.

***Comment Somewhat Addressed by the LEC Memo dated March 39, 2022, and the supplemental information provided. The SCC needs to make their determination in regard to whether these areas the jurisdictional or not.***

### **STORMWATER REPORT, CHECKLIST, CALCULATIONS, CPPPP, LTO&MP**

3. The Table of Contents for the Stormwater Report is missing all the items before Stormwater Standard 7, It appears there is a page missing.

***Comment Addressed by the revised plans and information received.***

4. The Soils data attached to the Stormwater Report is all labeled, "draft". This data should be finalized and the Stormwater Report should be updated with the final data. Were any of the test pits observed and logged by a Massachusetts Licensed Soil Evaluator?

***Comment Addressed by the Applicant's Engineer's response.***

5. The soil type used for many of the existing and proposed watersheds is predominantly HSG D with some HSG C and a small portion of HSG B in the existing watersheds. Many of the soils on the site are mapped as Udorthents or Urban Land. The adjacent soils are HSG B soils. The Engineer needs to explain his use of HSG D soils for the modelling rather than HSG B or even HSG C soils.

***Comment Addressed by the Applicant's Engineer's response and the revised calculations.***

6. Many of the times of concentration for the modelling were directly entered as 6 minutes, which is the minimum for the methodology. The times for each subcatchment should be entered as the longest flow path and a minimum time of 6 minutes should be entered under Advanced Options. The software will then calculate the time of concentration from the flow path and either use that time or 6 minutes, whichever is longer.

***Comment Addressed by the Applicant's Engineer's response and the revised calculations.***

7. The calculations in the model do not include the outlet pipes from the underground detention basins and they need to. This is a concern as it appears that the existing 18" pipe that the runoff flows to does not have sufficient capacity to carry the flow in larger storms (an older 18" concrete pipe at a slope of 0.857% has a capacity of about 8.6 c.f.s. while the 25 year storm flow out of the two detention systems and bypassed drainage is 10.44 c.f.s. and the 100 year storm flow is 22.34 c.f.s.). Therefore, the model's assumption of a free discharge out of the control structures may be incorrect and the underground storage systems may not function as expected in larger storms. The model should be updated to include these discharge pipes in the calculations. Also, the actual elevations of the 18" pipe at the connection point were not obtained as the manholes were not found. Has there been a correlation between the elevations on the old plan of the 18" pipe and the datum of the present survey? Using that correlation, what is the elevation of the 18" pipe at the connection point?

***Comment Addressed by the Applicant's Engineer's response and the revised calculations.***

8. Why is the drainage from the southeast corner of the site not connected to the isolator row and subsurface detention system #2? It seems that a lot of drainage pipe is being installed when this flow could be connected to the storage system. This would decrease the load on the proposed jellyfish treatment system.

***Comment Addressed by the Applicant's Engineer's response.***

9. There are a number of manhole locations where the angle between the upstream drain pipes and the discharge pipe is less than 90 degrees. It appears that most of these can be eliminated by adjusting the manhole locations. We recommend that these be changed where possible so that the pipes are at least 90 degrees apart (not less than 90 degrees).

***Comment Addressed by the revised plans.***

10. The proposed underground storage facilities are located below the likely Estimated Seasonal High Groundwater Table (ESHGWT) and not 2 feet above the ESHGWT as MADEP requires for all such facilities. While we understand the difficulties this site presents this is contrary to MADEP requirements. The facilities have been encapsulated in an impermeable barrier which is good engineering practice. If these systems are to remain as designed, the Engineer should include a plan to monitor the systems for groundwater intrusion, a corrective action plan should this occur and flotation calculations for the dry systems. Also, details should be included for sealing the system barrier at all penetrations (such as at pipes). We suggest that the LTPPP inspection interval for these systems be increased to every 2 months from twice/year.

***Comment Addressed by the Applicant's Engineer's response. We suggest that a Condition be included in the Order of Conditions for the project requiring that the buoyancy calculations for the underground storage areas be submitted to the SCC for review and approval prior to any materials for these systems being ordered.***

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11. What precautions are being taken in the blasting specifications for the project to ensure that none of the blasting work will create any unforeseen changes in the adjacent wetlands (such as opening up cracks in the underlying rock which could cause the wetland to dry up)?

***Comment Addressed by the Applicant's Engineer's response and the revised specifications.***

12. The project is proposing the use of proprietary BMPs to treat the stormwater from the project (isolator rows and jellyfish filter). Given that this is a publicly bid project we understand that in general alternates may be proposed by the Contractor. The OOC to be issued for the project will state that any alternates that the part from the proposed storm water treatment system must be submitted to and approved by the SCC prior to the contractor ordering this alternative system.

***Comment Addressed by the Applicant's Engineer's response. We suggest that a Condition be included in the Order of Conditions for the project requiring that any changes or substitutions in the isolator row or jellyfish BMPs be submitted to the SCC for review and approval prior to any materials for these systems being ordered.***

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13. All references in the Stormwater Report to the 2017 CGP should be updated to reference the 2022 CGP and the 2017 CGP in the DRAFT SWPPP needs to be replaced with the 2022 CGP.

***Comment Addressed by the revised DRAFT SWPPP.***

14. The SWPPP provided is a DRAFT SWPPP which is appropriate at this point. The OOC for the project should require that a final SWPPP be prepared, submitted to the SCC for review and be approved by the SCC prior to any site work occurring on the project.

***Comment Addressed by the Applicant's Engineer's response. We suggest that a Condition be included in the Order of Conditions for the project requiring that the FINAL SWPPP be submitted to the SCC for review and that the FINAL SWPPP be approved prior to any land disturbance on the project.***

15. We are attaching to this report questions that the acting chair of the SCC forwarded to us has regarding the LTPPP, CPPPP and other aspects of the project. Rather than repeating these questions herein, the Applicant and his Engineers should also address the questions that are attached hereto.

***Comment Addressed by the revised plans.***

#### **DESIGN AND PLAN REVIEW AND COMMENTS:**

##### **GENERAL**

16. The plans filed with the NOI all say, "DD SUBMISSION and DRAFT PERMIT – NOT FOR CONSTRUCTION". While they are signed and sealed by a Massachusetts Registered Professional Engineer, the Applicant needs to understand that once these plans are accepted and the project is approved by the SCC, ANY changes to the plans will have to come back to the SCC for a determination as to whether the changes are significant, require an Amended OOC or the filing of a New NOI. The labels "DD SUBMISSION" and "DRAFT PERMIT – NOT FOR CONSTRUCTION" should be removed from the final revised plans before acceptance by the SCC.

***Comment Addressed by the revised plans.***

17. The plans do not show any underdrains around the building or in any other locations. Will there be any underdrains installed for the project? If so, they should be shown on the plans.

***Comment Addressed by the Applicant's Engineer's response.***

18. The LIMIT OF WORK and EROSION CONTROL lines should be shown on the Site Layout, Utility, Drainage and Grading Plans.

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***Comment Addressed by the Applicant's Engineer's response and the revised plans.***

19. We understand that the Town has made an eminent domain taking of an easement or other property rights in the adjacent UU Church property. The location of this easement should be added to all of the plans for the project.

***Comment Addressed by the Applicant's Engineer's response and the additional information provided.***

20. Landscaping plans showing the treatment of all non-paved areas should be submitted to the SCC. These plans should be reviewed by the SCC to ensure that there are no non-native species and invasive species proposed for the project.

***Comment Addressed by the revised submission including the landscaping plan.***

Sheets C-100 & 101

21. Include a note defining what the terms "R&D" and "R&S" mean.

***Comment Addressed by the Applicant's Engineer's response.***

22. There is some R&D Pavement outside of the erosion control line as well as water line work.. The erosion control line should be adjusted to include these areas.

***Comment Addressed by the revised plans.***

23. An access gate should be added to the west side of the work to gain access from the Church Property.

***Comment Addressed by the revised plans.***

24. It appears that the location of the construction fence on the south side of the property needs to be adjusted in a southerly direction to accommodate all of the work.

***Comment Addressed by the revised plans.***

25. A limit of work line needs to be shown on this plan (and all of the plans).

***Comment Addressed by the revised plans.***

26. Is there no R&D or R&S work proposed on the UU Church property (none is shown)?

***Comment Addressed by the revised plans.***

Sheets C-200 & 201

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27. Dimensions should be shown on all driveways walks, etc.

***Comment Addressed by the Applicant's Engineer's response.***

28. the plan shows the work extending north away from the main school site however the details of this work are not shown.

***Comment Addressed by the Applicant's Engineer's response and the revised plans.***

29. The crosswalk at the outlet to Whitman Road should be perpendicular across the roadway.

***Comment Addressed by the Applicant's Engineer's response.***

30. Which ADA parking spaces are van spaces? What pavement type is in front of the school building between the ADA access?

***Comment Addressed by the revised plans.***

31. How tall is the chain-link fence around the basketball court?

***Comment Addressed by the Applicant's Engineer's response.***

32. Which parking spaces are EV spaces? Are there signs designating the EV spaces? Are there any compact parking spaces?

***Comment Addressed by the Applicant's Engineer's response.***

33. What is the large stippled circular area between the parking lot in the roadway?

***Comment Addressed by the Applicant's Engineer's response.***

34. What are the paved surface types at the front of the new building?

***Comment Addressed by the Applicant's Engineer's response.***

35. What is the construction of the pathway in the UU church property?

***Comment Addressed by the Applicant's Engineer's response and the revised plans.***

36. There are no details of the crosswalk ramps, etc. at Laurel Road and Forest Avenue.

***Comment Addressed by the Applicant's Engineer's response and the revised plans.***

37. The paint striping appears to end at the western end of Forest Avenue, why?

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***Comment Addressed by the Applicant's Engineer's response and the revised plans.***

38. The southerly end of the driveway and walkway (near the 20.00 dimension) does not meet existing conditions, why?

***Comment Addressed by the Applicant's Engineer's response.***

39. The vehicle gates in the driveway's appear to be single leaf 28 foot wide gates. These are very heavy and we suggest you consider changing them to double leaf 14 foot gates.

***Comment Addressed by the revised plans.***

Sheets C-300 & 301

40. The new water connection to the 10 inch main south of the school is located off the school property and outside of the erosion control and limit of work lines. Will a street opening permit of Forest Avenue be required for this work? As previously stated limit of work and erosion control lines need to be adjusted to include this work.

***Comment Addressed by the revised plans.***

41. The hydrant connections are shown on this plan as 4". Standard practice is for these connections to be 6" and the detail on the plans shows these connections as 6". The discrepancy should be reconciled

***Comment Addressed by the revised plans.***

42. We suggest consideration being given to adding a divisional valve on the long section of new 8 inch water line.

***Comment Addressed by the revised plans.***

43. The inverts for the proposed 5000 gallon grease trap should be shown and slopes should be shown on all proposed sewer lines. The sewers entering SMHs 302 and 304 should be adjusted to be 90° or greater.

***Comment Addressed by the revised plans.***

44. There should be a gate valve on the water line connecting to the fire hydrant near subsurface detention system #1

***Comment Addressed by the revised plans.***



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45. The curbing is located directly over the frame and cover of EX. SMH#308. The curbing configuration should be adjusted.

***Comment Addressed by the revised plans.***

46. A note should be added to the lights along the new walkway on the UU Church property to indicate that these are lights.

***Comment Addressed by the revised plans.***

Sheets C-400 & 401

47. The manhole covers on the jellyfish treatment unit should be shown on the plan as the curbing is located across the unit. If necessary either the location of the unit or the curbing configuration should be adjusted.

***Comment Addressed by the revised plans.***

48. How deep is the foundation of the new school building adjacent to the subsurface isolator row proposed for roof drain #4?

***Comment Addressed by the Applicant's Engineer's response.***

49. All of the drain pipes on the drainage plans need to have pipe slopes shown on them.

***Comment Addressed by the revised plans.***

50. What is the circle located in the northwest corner of subsurface detention system #1? The plan should also show the locations of the access/cleanout manholes for both of the subsurface detention systems.

***Comment Addressed by the revised plans.***

51. A note should be added to the plans denoting that, "CPP" is corrugated plastic pipe.

***Comment Addressed by the Applicant's Engineer's response.***

52. What is the invert elevation out of DMH #207?

***Comment Addressed by the revised plans.***

Sheets C-500 & 501

53. Spot elevations should be added to the plan where the contours are spaced further apart. The rim elevations of catch basins should be shown on the plan.

***Comment Addressed by the Applicant's Engineer's response.***

54. The Engineer should review the slope of the parking lot northwest corner (appears to be steep),

***Comment Addressed by the Applicant's Engineer's response.***

55. The sidewalk along the west side of the parking area does not show a railing as required by ADA. Details need to be added to the detail sheets in the parking lot may require a retaining wall along the west side due to walkway slope and level landings. The Engineer should review this.

***Comment Addressed by the Applicant's Engineer's response.***

56. The plan should show the surface features around the school that are shown on the previous plans. These features should be identified and the planters and other structures at the front of the school should also be identified.

***Comment Addressed by the Applicant's Engineer's response and the Landscaping Plan provided.***

57. The limit of work and erosion control should be expanded at the southeast and corner of the site where the driveway connects to the existing pavement in Forest Avenue. Grades should also be shown at the pathway to the woods at the south side of the new school building.

***Comment Addressed by the revised plans.***

58. The grassed area between the new driveway on the east side of the site and the property line appears to grade into the neighbors' yards (it does not presently do this). What is the impact of this work on the neighboring properties?

***Comment Addressed by the Applicant's Engineer's response.***

59. What is the limit of the full depth pavement reconstruction on the UU Church property?

***Comment Addressed by the revised plans.***

Sheet C-600

60. The tracking pad is shown as \*12 x 50. We believe that this should be wider (even for one way traffic) and it should be clarified as to whether the optional wash rack is included/required or not. The detail should correlate with plans.

***Comment Addressed by the revised plans.***

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Sheets C-601 & 602

No Comments.

Sheet C-603

61. The typical trench drain detail references to XX.XXX should be changed to actual numbers.

***Comment Addressed by the revised plans.***

62. In the SC 740 chamber detail, what material is to be used under, over and immediately inside the impermeable liner material for the subsurface storage systems? Is there a stone size limit or material spec for the fill material over these systems? We assume that the 18" cover is under paved areas only and that deeper cover is required under non-paved areas but this should be clarified.

***Comment Addressed by the revised plans.***

63. In the Isolator Row Detail, what is the sump depth?

***Comment Addressed by the revised plans.***

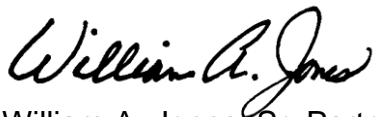
64. We suggest that an additional manhole cover be included in the OCS Detail so that access can be gained to each side of the weir plate for cleanout.

***Comment Addressed by the Applicant's Engineer's response.***

We look forward to discussing the project, this report and any questions that the SCC may have regarding the project at the continued public hearing. We are available to discuss the project with you, your staff and/or the Applicant and/or his Engineers and representatives as necessary.

Very truly yours,

**LINDEN ENGINEERING PARTNERS, LLC**



William A. Jones, Sr. Partner



Richard G. Cutts, P.E., President