

April 6, 2020

Conservation Commission
Town Hall
Pembroke, MA 02359

RE: Proposed Old Cart Path Lane Ext. (70 Old Cart Path Lane)
Applicant: Stephen Saia

Dear Commission Members:

On behalf of the applicant, Grady Consulting, L.L.C. hereby submits two copies of the revised Definitive Subdivision Plan. The plans were revised in response to comments from review consultant, Arthur Allen, CPSS, CWS, CESSWI, EcoTec, Inc., in a letter to the Pembroke Conservation Commission, dated February 28, 2020.

Comments from the review letter are shown in *italic* font and the response to comments are shown in **bold** font. The response to comments are as follows:

1. The project proposes work with the 100-foot Buffer Zone to Bordering Vegetated Wetland (up to approximately 20-feet, at the closest point) and within the Outer Riparian Zone/Riverfront Area. It is my understanding that the Town of Pembroke does not have Bylaw Regulations providing for specific setbacks within the Buffer Zone. That being said, the Bylaw and the Wetlands Protection Act, allow the Commission to condition work within the Buffer Zone and also to limit work within the Riverfront Area as noted below.

No comment.

2. Based on my on-site review, I found that none of the Riverfront Area present on the site is in a "degraded" condition in accordance with 310 CMR 10.58(5). This means that proposed restoration of Riverfront Area cannot be used as credit against proposed Riverfront Area alterations. Therefore, potential alteration of Riverfront Area is limited to the Outer Riparian Zone (i.e., 100-200 feet from the Mean Annual High Water Line) and cannot exceed 10 percent of the total Riverfront Area present on the site. The project, as described in the Project Narrative, proposes 14% Outer Riparian Zone alteration.

The plans have been modified to address DEP comments regarding Riverfront restoration and proposed Riverfront Area alterations. The plans were revised to decrease the area of Riverfront disturbance to the allowable 10%.

3. In reviewing the project narrative, I shared DEP's stated concerns with the Alternatives Analysis submitted and with the proposal to alter 14% of the Outer Riparian Zone/Riverfront Area. It appears

that the revised plans and the NOI Form 3 currently reflect a reduction in alteration to 10% of the Outer Riparian Zone. Although proposed alterations have been reduced to the maximum permissible, the cursory Alternatives Analysis submitted is not adequate to establish a hardship justifying the 10% alteration. The Alternatives Analysis needs to address all of the requirements at 310 CMR 10.58(4) including Practicable and Substantially Equivalent Alternatives and the Scope of the analysis needs to address the requirements at 310 CMR 10.58(4)(c)2.

The plans were previously revised to eliminate the area of proposed restoration and reduce the disturbance of Riverfront Area to the 10 percent allowed. The proposed disturbance of riverfront area consists of a small portion of the proposed roadway and site grading located between the 100' inner riparian zone and 200' outer riparian zone consisting of approximately 4,600 sf or 4.7% of the riverfront area. The additional proposed disturbed riverfront area consists of the future development of Lot 2, approximately 5,200 sf or 5.3% of the riverfront area. In order to access the site the proposed roadway must cross over a portion of the 200' outer riparian zone. As designed, the proposed roadway is as far from the riverfront area as allowed by the Town of Pembroke Rules and Regulations Governing the Subdivision of Land. Any change in the roadway configuration would result in greater adverse impacts. Attached please find the Riverfront Area Analysis addressing all of the requirements of 310 CMR 10.58(4).

4. For instance, one fairly simple alternative that has not been presented would be to re-configure the lots and move the Lot 3 detention basin into the Riverfront Area and to move the Lot 2 house out of the Riverfront Area. As the Commission is likely aware, stormwater management structures are allowed within Riverfront Area provided there are no practicable alternative locations. A stormwater basin in the Riverfront Area is typically preferable to a house and landscaped yard in the Riverfront Area.

We have looked into and re-visited the suggested alternative. The Town of Pembroke Zoning Bylaw requires a minimum of 30,000 square feet of contiguous upland, 150' of frontage, and proposed house placed within a 150' diameter circle. The lots cannot be reconfigured as suggested and still meet these zoning requirements.

5. I recommend that a more detailed sequence of erosion control, construction and stabilization be provided to establish that the proposed work in Buffer Zone and Riverfront Area will be contained and have no direct impacts on the jurisdictional areas. In particular I recommend installing and stabilizing the proposed detention basins in the first phase of construction. Also, more detail should be provided on slope stabilization measures.

A more detailed erosion control, construction and stabilization sequence has been provided on sheet 5 of the plan.

If you have any questions please do not hesitate to call.

Sincerely,

GRADY CONSULTING, L.L.C.

A handwritten signature in black ink, appearing to read 'P. Seaberg', is positioned above a horizontal line.

Paul Seaberg
Project Designer

cc.

Stephen Saia
70 Old Cart Path Lane
Pembroke, MA 02359

Department of Environmental Protection
Southeast Regional Office
20 Riverside Drive
Lakeville, MA 02347

Pembroke Planning Board
Town Hall
Pembroke, MA 02359

RIVERFRONT AREA ANALYSIS

310 CMR 10.58(4) General Performance Standards

(4) General Performance Standard. Where the presumption set forth in 310 CMR 10.58(3) is not overcome, the applicant shall prove by a preponderance of the evidence that there are no practicable and substantially equivalent economic alternatives to the proposed project with less adverse effects on the interests identified in M.G.L. c.131 § 40 and that the work, including proposed mitigation, will have no significant adverse impact on the riverfront area to protect the interests identified in M.G.L. c. 131 § 40. In the event that the presumption is partially overcome, the issuing authority shall make a written determination setting forth its grounds in the Order of Conditions and the partial rebuttal shall be taken into account in the application of 310 CMR 10.58 (4)(d)1.a. and c.; the issuing authority shall impose conditions in the Order that contribute to the protection of interests for which the riverfront area is significant.

(a) Protection of Other Resource Areas. The work shall meet the performance standards for all other resource areas within the riverfront area, as identified in 310 CMR 10.30 (Coastal Bank), 10.32 (Salt Marsh), 10.55 (Bordering Vegetated Wetland), and 10.57 (Land Subject to Flooding). When work in the riverfront area is also within the buffer zone to another resource area, the performance standards for the riverfront area shall contribute to the protection of the interests of M.G.L. c. 131, § 40 in lieu of any additional requirements that might otherwise be imposed on work in the buffer zone within the riverfront area.

A narrative has been submitted demonstrating compliance with other resources areas within the riverfront area.

(b) Protection of Rare Species. No project may be permitted within the riverfront area which will have any adverse effect on specified habitat sites of rare wetland or upland, vertebrate or invertebrate species, as identified by the procedures established under 310 CMR 10.59 or 10.37, or which will have any adverse effect on vernal pool habitat certified prior to the filing of the Notice of Intent.

The project site is not located within specified habitat sites of rare wetland or upland vertebrate or invertebrate species or consist of any vernal pools.

(c) Practicable and Substantially Equivalent Economic Alternatives. There must be no practicable and substantially equivalent economic alternative to the proposed project with less adverse effects on the interests identified in M.G.L. c. 131 § 40.

The project as proposed, provides the least impacts of all possible alternatives. There are no practicable and substantially equivalent economic alternatives for the proposed project.

The proposed disturbance of riverfront area consists of a small portion of the proposed roadway and site grading located between the 100' inner riparian zone and 200' outer riparian zone consisting of approximately 4,600 sf or 4.7% of the riverfront area. The additional proposed disturbed riverfront area consists of the future development of Lot 2, approximately 5,200 sf or 5.3%. In order to access the site the proposed roadway must cross over a portion of the 200' outer riparian zone. As designed, the proposed roadway is as far from the riverfront area as allowed by the Town of Pembroke Rules and Regulations Governing the Subdivision of Land. Any change in the roadway configuration would result in greater adverse impacts.

Alternative Analysis

1. **Use - The project site is in a Residential Zone and residential use is the only use allowed by zoning. There are no practicable and substantially equivalent economic alternatives regarding use.**
2. **Relocate Infiltration Basin - The proposed basin #1 could be relocated west of the proposed roadway within a portion of the proposed grading and disturbed riverfront area. This would reduce the proposed area of disturbance as stormwater management structures are excluded. Although the stormwater management area shall be excluded in the riverfront disturbance area calculation it would result in a greater area of disturbance overall, approximately 5,000 sf or 5.1% in addition to the 10% proposed.**
3. **Reduce number of lots – The elimination of a lot is not a practicable and substantially equivalent economical alternative. The project consists of a small subdivision proposing three new house lots. This reduction in scale of activity is not consistent with the project purpose.**
4. **Common Driveway – A common driveway would reduce the area of disturbance within the riverfront area, but is not allowed by zoning.**

The configuration as proposed provides the least impacts of all other alternatives.

1. Definition of Practicable. As set forth in 310 CMR 10.04, an alternative is practicable and substantially equivalent economically if it is available and capable of being done after taking into consideration costs, existing technology, proposed use, and logistics, in light of overall project purposes. Available and capable of being done means the alternative is obtainable and feasible. Project purposes shall be defined generally (e.g., single family home, residential subdivision, expansion of a commercial development). The alternatives analysis may reduce the scale of the activity or the number of lots available for development, consistent with the project purpose and

proposed use. The alternatives analysis shall not include interior design specifications (i.e., neither the proposed use or project purpose in the Notice of Intent nor the Order of Conditions should specify the number of rooms, bedrooms, etc. within a building). Transactions shall not be arranged to circumvent the intent of alternatives analysis review. The four factors to be considered are:

a. Costs, and whether such costs are reasonable or prohibitive to the owner. The owner means the individual or entity which owns the area where the activity will occur or which will implement the project purpose. Cost includes expenditures for a project within the riverfront area, such as land acquisition, site preparation, design, construction, landscaping, and transaction expenses. Cost does not include anticipated profits after the project purpose is achieved or expenditures to achieve the project purpose prior to receiving an Order with the exception of land acquisition costs incurred prior to August 7, 1996. In taking costs into account, the issuing authority shall be guided by these principles:

i. The cost of an alternative must be reasonable for the project purpose, and cannot be prohibitive.

Not applicable. The alternatives do not substantially change the cost of the project.

ii. Higher or lower costs taken alone will not determine whether an alternative is practicable. An alternative for proposed work in the riverfront area must be a practicable and substantially equivalent economic alternative (i.e., will achieve the proposed use and project purpose from an economic perspective).

Not applicable. The alternatives do not substantially change the cost of the project.

iii. In considering the costs to the owner, the evaluation should focus on the financial capability reasonably expected from the type of owner (e.g., individual homeowner, residential developer, small business owner, large commercial or industrial developer) rather than the personal or corporate financial status of that particular owner. Applicants should not submit, nor should issuing authorities request, financial information of a confidential nature, such as income tax records or bank statements.

Not applicable.

iv. Issuing authorities may require documentation of costs, but may also base their determinations on descriptions of alternatives, knowledge of alternative sites, information provided by qualified professionals, comparisons to costs normally associated with similar projects, or other evidence. Any documentation

of costs should be limited to that required for a determination of whether the costs are reasonable or prohibitive.

Not applicable.

b. Existing technology, which includes best available measures (i.e., the most up-to-date technology or the best designs, measures, or engineering practices that have been developed and are commercially available);

Not applicable.

c. The Proposed Use. This term is related to the concept of project purpose. In the context of typical single family homes, the project purpose (construction of a single family house) and proposed use (family home) are virtually identical. In the context of projects where the purpose implies a business component, such as residential subdivision, commercial, and industrial projects, the proposed use typically requires economic viability. Practicable and substantially equivalent economic alternatives include alternatives which are economically viable for the proposed use from the perspective of site location, project configuration within a site, and the scope of the project. In the context of publically financed projects, the proposed use includes consideration of legitimate governmental purposes (e.g., protection of health and safety, providing economic development opportunities, or similar public purposes);

The project site is in a Residential Zone and residential use is the only use allowed by zoning. There are no practicable and substantially equivalent economic alternatives regarding use.

d. Logistics. Logistics refers to the presence or absence of physical or legal constraints. Physical characteristics of a site may influence its development. Legal barriers include circumstances where a project cannot meet other applicable requirements to obtain the necessary permits at an alternative site. An alternative site is not practicable if special legislation or changes to municipal zoning would be required to achieve the proposed use or project purpose. An alternative is not practicable if the applicant is unable to obtain the consent of the owner of an alternative site for access for the purpose of obtaining the information required by the Notice of Intent or of allowing the issuing authority to conduct a site visit.

Not applicable. There are no other alternative sites.

2. Scope of Alternatives. The scope of alternatives under consideration shall be commensurate with the type and size of the project. The issuing authority shall presume that alternatives beyond the scope described below are not practicable and therefore need

not be considered. The issuing authority or another party may overcome the presumption by demonstrating the practicability of a wider range of alternatives, based on cost, and whether the cost is reasonable or prohibitive to the owner; existing technology; proposed use; and logistics in light of the overall project purpose.

a. The area under consideration for practicable alternatives is limited to the lot for activities associated with the construction or expansion of a single family house on a lot recorded on or before August 1, 1996.

Not applicable. The proposed project consists of constructing a subdivision roadway for a four lot subdivision. The project does not consist of the construction or expansion of a single family house.

b. The area under consideration for practicable alternatives is limited to the lot, the subdivided lots and any adjacent lots formerly or presently owned by the same owner for:

i. activities associated with the construction or expansion of a single family house on a lot recorded after August 1, 1996;

Not applicable.

ii. any expansion of an existing structure, including enlargement of the footprint of any structure or the addition of associated structures for single family homes (e.g., a garage) on lots recorded after August 1, 1996;

Not applicable.

iii. any activity other than the construction or expansion of a single family house where the applicant owned the lot before August 7, 1996, including the creation of a real estate subdivision but excluding public projects, and the applicant will implement the project purpose;

The area under consideration for practicable alternatives is limited to #70 Old Cart Path Lane, which is owned by the applicant.

iv. new agriculture or aquaculture projects;

Not applicable.

v. any activity by a public entity when funds for the purchase of the site for the project purpose have been appropriated through action of the appropriate

municipal board or state agency prior to the August 7, 1996; or

Not applicable.

vi. any lot shown on a definitive subdivision plan approved under M.G.L. c. 41, §§ 81K to 81GG, provided there is a recorded deed restriction limiting the total alteration to 5000 square feet or 10%, whichever is greater, of the riverfront area allocated to the lots within the entire subdivision.

Not applicable.

c. Except as allowed under 310 CMR 10.58(4)(c)2.b., the area under consideration for practicable alternatives extends to the original parcel and the subdivided parcels, any adjacent parcels, and any other land which can reasonably be obtained within the municipality for:

i. activities associated with residential subdivision or housing complexes, institutional, industrial, or commercial projects; or

The area under consideration for practicable alternatives is limited to #70 Old Cart Path Lane, which is owned by the applicant. There is no other land which can reasonable be obtained.

ii. activities conducted by municipal government. For adjacent lots, reasonably be obtained means to purchase at market prices if otherwise practicable, as documented by offers (and any responses). For other land, reasonably be obtained means adequate in size to accommodate the project purpose and listed for sale within appropriately zoned areas, at the time of filing a Request for Determination or Notice of Intent, within the municipality.

Not applicable.

d. Alternatives extend to any sites which can reasonably be obtained within the appropriate region of the state for:

i. residential, institutional, commercial, or industrial activities required to evaluate off-site alternatives in more than one municipality in an Environmental Impact Report under M.G.L. c. 30, §§ 61 through 62H, or an alternatives analysis conducted by the Corps of Engineers for a Section 404 permit under the federal Clean Water Act, 33 U.S.C. 1251 et seq., and used for 401 Water Quality Certification under 314 CMR 9.00: 401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth; or

Not applicable.

ii. activities conducted by district, county, state or federal government entities. The area to be considered is the service area within the governmental unit boundary or jurisdictional authority, or the municipality if there is no defined service area, consistent with the project purpose.

Not applicable.

3. Evaluation of Alternatives. The applicant shall demonstrate that there are no practicable and substantially equivalent economic alternatives as defined in 310 CMR 10.58(4)(c)1., within the scope of alternatives as set forth in 310 CMR 10.58(4)(c)2., with less adverse effects on the interests identified in M.G.L. c. 131 § 40. The applicant shall submit information to describe sites and the work both for the proposed location and alternative site locations and configurations sufficient for a determination by the issuing authority under 310 CMR 10.58(4)(d). The level of detail of information shall be commensurate with the scope of the project and the practicability of alternatives. Where an applicant identifies an alternative which can be summarily demonstrated to be not practicable, an evaluation is not required. The purpose of evaluating project alternatives is to locate activities so that impacts to the riverfront area are avoided to the extent practicable. Projects within the scope of alternatives must be evaluated to determine whether any are practicable. As much of a project as feasible shall be sited outside the riverfront area. If siting of a project entirely outside the riverfront area is not practicable, the alternatives shall be evaluated to locate the project as far as possible from the river. The issuing authority shall not require alternatives which result in greater or substantially equivalent adverse impacts. If an alternative would result in no identifiable difference in impact, the issuing authority shall eliminate the alternative. If there would be no less adverse effects on the interests identified in M.G.L. c. 131, § 40, the proposed project rather than a practicable alternative shall be allowed, but the criteria in 310 CMR 10.58(4)(d) for determining no significant adverse impact must still be met. If there is a practicable and substantially equivalent economic alternative with less adverse effects, the proposed work shall be denied and the applicant may either withdraw the Notice of Intent or receive an Order of Conditions for the alternative, provided the applicant submitted sufficient information on the alternative in the Notice of Intent.

The project as proposed, provides the least impacts of all possible alternatives. There are no practicable and substantially equivalent economic alternatives for the proposed project. The proposed disturbance of riverfront area consists of a small portion of the proposed roadway and site grading located between the 100' inner riparian zone and 200' outer riparian zone consisting of approximately 4,600 sf or 4.7% of the riverfront area. The additional proposed disturbed riverfront area consists of the future development of Lot 2, approximately 5,200 sf or 5.3%. In order to access the site the proposed roadway must cross over a portion of the 200' outer riparian zone. As designed, the proposed roadway is

as far from the riverfront area as allowed by the Town of Pembroke Rules and Regulations Governing the Subdivision of Land. Any change in the roadway configuration would result in greater adverse impacts

(d) No Significant Adverse Impact. The work, including proposed mitigation measures, must have no significant adverse impact on the riverfront area to protect the interests identified in M.G.L. c. 131, § 40.

The proposed disturbance within the riverfront area will not have any significant adverse impacts on the riverfront area. The proposed area of disturbance is within the 10% allowed.

1. Within 200 foot riverfront areas, the issuing authority may allow the alteration of up to 5000 square feet or 10% of the riverfront area within the lot, whichever is greater, on a lot recorded on or before October 6, 1997 or lots recorded after October 6, 1997 subject to the restrictions of 310 CMR 10.58(4)(c)2.b.vi., or up to 10% of the riverfront area within a lot recorded after October 6, 1997, provided that:

a. At a minimum, a 100 foot wide area of undisturbed vegetation is provided. This area shall extend from mean annual high-water along the river unless another location would better protect the interests identified in M.G.L. c. 131 § 40. If there is not a 100 foot wide area of undisturbed vegetation within the riverfront area, existing vegetative cover shall be preserved or extended to the maximum extent feasible to approximate a 100 foot wide corridor of natural vegetation. Replication and compensatory storage required to meet other resource area performance standards are allowed within this area; structural stormwater management measures may be allowed only when there is no practicable alternative. Temporary impacts where necessary for installation of linear site-related utilities are allowed, provided the area is restored to its natural conditions. Proposed work which does not meet the requirement of 310 CMR 10.58(4)(d)1.a. may be allowed only if an applicant demonstrates by a preponderance of evidence from a competent source that an area of undisturbed vegetation with an overall average width of 100 feet will provide equivalent protection of the riverfront area, or that a partial rebuttal of the presumptions of significance is sufficient to justify a lesser area of undisturbed vegetation;

A 100 foot wide area of undisturbed vegetation is provided.

b. Stormwater is managed according to standards established by the Department in its Stormwater Policy.

Stormwater managed in accordance to standards established by the Department.

c. Proposed work does not impair the capacity of the riverfront area to provide important wildlife habitat functions. Work shall not result in an impairment of the capacity to provide vernal pool habitat identified by evidence from a competent source, but not yet certified. For work within an undeveloped riverfront area which exceeds 5,000 square feet, the issuing authority may require a wildlife habitat evaluation study under 310 CMR 10.60.

The proposed project does not impair the capacity of the riverfront area to provide important wildlife habitat functions. All proposed work is located within a previously developed river front area.

d. Proposed work shall not impair groundwater or surface water quality by incorporating erosion and sedimentation controls and other measures to attenuate nonpoint source pollution. The calculation of square footage of alteration shall exclude areas of replication or compensatory flood storage required to meet performance standards for other resource areas, or any area of restoration within the riverfront area. The calculation also shall exclude areas used for structural stormwater management measures, provided there is no practicable alternative to siting these structures within the riverfront area and provided a wildlife corridor is maintained (e.g. detention basins shall not be fenced).

The proposed work shall not impair groundwater or surface water quality. A silt sock erosion control barrier is proposed at the limit of work between the proposed work area and resource area. A sequence of erosion control, construction and stabilization has been provided.

2. Within 25 foot riverfront areas, any proposed work shall cause no significant adverse impact by:

- a. Limiting alteration to the maximum extent feasible, and at a minimum, preserving or establishing a corridor of undisturbed vegetation of a maximum feasible width. Replication and compensatory storage required to meet other resource area performance standards are allowed within this area; structural stormwater management measures shall be allowed only when there is no practicable alternative;*
- b. Providing stormwater management according to standards established by the Department;*
- c. Preserving the capacity of the riverfront area to provide important wildlife habitat functions. Work shall not result in an impairment of the capacity to provide vernal pool habitat when identified by evidence from a competent source but not yet certified; and*
- d. Proposed work shall not impair groundwater or surface water quality by incorporating erosion and sedimentation controls and other measures to attenuate nonpoint source pollution.*

Not applicable this site does not consist of a 25 foot riverfront area.

3. Notwithstanding the provisions of 310 CMR 10.58(4)(d)1. or 2., the issuing authority shall allow the construction of a single family house, a septic system if no sewer is available, and a driveway, on a lot recorded before August 7, 1996 where the size or shape of the lot within the riverfront area prevents the construction from meeting the requirements of 310 CMR 10.58(4)(d)1. or 2., provided that:

a. The lot can be developed for such purposes under the applicable provisions of other municipal and state law; and

b. The performance standards of 310 CMR 10.58(4)(d) are met to the maximum extent feasible. In difficult siting situations, the maximum extent of yards around houses should be limited to the area necessary for construction. Except where the lot contains vernal pool habitat or specified habitat sites of rare species, a wildlife habitat evaluation study shall not be required.

4. Notwithstanding the provisions of 310 CMR 10.58(4)(d)1. or 2., the issuing authority may allow the construction of a commercial structure of minimum feasible dimension, on a lot recorded before August 7, 1996 where the size or shape of the lot within the riverfront area prevents the construction from meeting the requirements of 310 CMR 10.58(4)(d)1. or 2., only if:

a. The lot can be developed for such purposes and cannot be developed for any other purposes under the applicable provisions of other municipal and state law;

b. The work is not eligible for 310 CMR 10.58(5); and

c. The performance standards of 310 CMR 10.58(4)(d)1. or 2. are met to the maximum extent feasible.

Not applicable.