

COASTAL AREA MANAGEMENT EVALUATION

241 LONG NECK POINT ROAD
DARIEN, CONNECTICUT



Prepared For
Timothy and Angela Riley

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LANDTECH

Site/Civil, Environment Engineers + Planners

1. INTRODUCTION

This report identifies the existing coastal resources on and adjacent to the property at 241 Long Neck Point Road and provides an evaluation of potential impacts to these resources in accordance with Chapter 444 Section 22a-90 through 22a-112 of the Connecticut General Statutes known as the “Coastal Management Act” and follows the guidelines provided in the Connecticut Coastal Management Manual prepared by the then named Connecticut Department of Environmental Protection (September 2000).

2. EXISTING CONDITIONS

The property is located at 241 Long Neck Point Road in Darien, CT. It is 1.08± acres in size and located in an R-1 Residential Zone. The property is accessed from the west directly from Long Neck Point Road and abuts Long Island Sound along its eastern boundary. The property is currently undeveloped, the previous house was demolished about 5 years ago leaving an open grassed area with a few mature trees. Also remaining is a terraced system of walls along the shoreline. A brick retaining wall is located on the upland lawn creating a lower grassed terrace. Below the grassed terrace is a stacked boulder wall with a stone staircase leading to a lower narrow terrace supported by a concrete wall which is protected by a boulder revetment. Waterward of the boulder revetment is a *Spartina alterniflora* dominated tidal wetland.

A review of the June 2020 edition of the Connecticut Department of Energy and Environmental Protection’s Natural Diversity Database identified no protected or high interest species in the vicinity of the property. LandTech found no protected or high interest species on the property.

3. DESCRIPTION OF PROPOSED PROJECT

The property owners, Timothy and Angela Riley, are proposing to construct a new single family residence in the location of the previous residence. The house will be served by public water and sewer which already serve the property. The house will be accessed a new driveway, inground pool, associated grading, and a stormwater management system to handle water from impervious areas. The owners are also proposing to remove a brick retaining wall and patio, reset some boulders that have fallen from an existing stacked stone wall at the edge of the lawn area, place a stone cap on that wall and repair the concrete face in several spots of the concrete wall.

4. DESCRIPTION OF COASTAL RESOURCES

Policies have been established by the State to protect the existing coastal resources. Coastal Resources on and adjacent to the site were identified from the Coastal Resources Norwalk South quadrangle map, prepared by the Coastal Area Management Program of the Connecticut Department of Environmental Protection, dated 1979. This information was then field verified and adjusted if necessary.

4.1 APPLICABLE COASTAL RESOURCES

The coastal resources applicable to this project are discussed below.

- **Shorelands**

Areas located above the 100-year elevation (15.0 NAVD) and within the Coastal Boundary are designated as Shorelands. The vast majority of the property from near the bottom of the stacked boulder wall landward fall within this designation. This area is designated as Zone X.

- **Coastal “Flood” Hazard Areas**

The Coastal Hazard Area is identified by the portion of the property within the 100-year flood zone. Areas that fall into this designation are those below elevation 15 (NAVD) as depicted on the Federal Flood Insurance Rate Map (FIRM) Number 09001C0536G. The area of shoreline from the bottom of the stacked boulder wall (above the concrete wall) waterward falls within this designation. The Coastal Flood Hazard Area is divided into a narrow (26’ to 34’ wide) AE 14 zone above the concrete wall, while the area of the concrete wall and waterward are in a VE15 zone (See Proposed Site Improvements For A New Single Family Residence – Site Plan, dated October 23, 2020).

The following coastal resources are outside the influence of the project but are on or adjacent to the property.

- **Coastal Waters**

Coastal waters are waters of Long Island Sound and its embayments, tidal rivers and harbors, which have a salinity of at least 500 parts per million (ppm) (0.5 ‰) under low flow conditions. Long Island Sound which abuts the property to the east is a Coastal Water body.

- **Rocky Shorefronts**

Rocky shorefronts are shorefront areas which are composed of boulders and bedrock which are an insignificant source of sediment as they are highly erosion resistant. Boulders are present along the waterward side of the concrete seawall in the form of a sloped revetment. Although these boulders are not natural to the site, they provide the same function as a natural rocky shorefront. They dissipate wave energy thereby protecting the shoreline configuration and provide a hard substrate for plants and mollusks. The rocky shorefront is in good condition.

- **Tidal Wetlands**

Tidal wetlands are defined as those areas at or below an elevation of one foot above local extreme high water (6.8 + 1’ NAVD for this property) and which grow or are capable of growing plants tolerant of tidal conditions.

A tidal wetland is located along the waterward edge of the sloped revetment. The tidal wetland is dominated by *Spartina alterniflora* and appears to be in good condition.

4.2 APPLICABLE COASTAL USES

Coastal Uses are those uses of general public access, septic system/sewer or water lines, shoreline flood & erosion control structures, stormwater management, vegetated buffers, and/or water dependent uses as defined in the Connecticut General Statutes.

The property is private so there is no public access, the property is already serviced by public water and sewer so no new utilities are needed. The coastal uses that apply to this project are listed below.

- **Flood and Erosion Control Structures**

A flood and erosion control structure is any structure the purpose of which is to control flooding or erosion from tidal, coastal or navigable waters including breakwaters, bulkheads, groins, jetties, revetments, riprap, seawalls and the placement of concrete, rocks or other significant barriers to the flow of flood waters or the movement of sediments along the shoreline.

The property contains a brick wall, a stacked boulder wall, a concrete seawall and a boulder revetment along the shoreline. All of which could be considered flood and erosion control structures.

- **Stormwater Management**

This is a system designed to minimize potential adverse impacts to natural resources including water quality from stormwater runoff. This is consistent with the overall goal of developing a property in a way that minimizes changes in runoff rates and volumes.

- **Vegetated Buffers**

A vegetated buffer is a small area or strip of land of permanent vegetation adjacent to a waterbody or other resource. It can be natural or artificially planted and who's function is to protect water quality, control erosion, trap sediment and other protections of natural resources.

A narrow-vegetated buffer exists between the stacked stone wall and the concrete wall. It is dominated by seaside goldenrod and occasional shrubs.

5. CONSISTANCY WITH COASTAL RESOURCE AND USE POLICIES

The following coastal resources are applicable to the proposed activities.

- **Shorelands**

The construction of the proposed house, driveway, grading, a new stormwater management system and associated improvements are located in shorelands.

This project is consistent with applicable coastal resource policies as none of the activities proposed in this project increases hypoxia, pathogens, contaminants or debris in Long Island Sound.

- **Coastal Flood Hazard Area**

The work proposed in the coastal hazard area is limited to the removal of the brick wall and patio, resetting of some boulders within the stacked wall, the installation of a stone cap on that wall and the repair to the concrete face of the concrete seawall. These activities are consistent with coastal resource policies as: 1) these structures are existing, two structures are being removed and the project does not propose any new nonstructural solutions, and 2) none of these activities will alter the natural circulation patterns or fresh/saltwater exchange relationship on the property.

The following are Coastal Resources which are outside the influence of the project but are on or adjacent to the property.

- **Coastal Waters**

This project is compliant with applicable policies as it does not degrade coastal habitat or water quality while allowing biological productivity, marine populations and essential circulation patterns to be maintained.

- **Rocky Shorefronts**

The project is consistent with coastal resource policies as the rocky shorefront (sloped revetment) will not be altered under the proposed activities, the boulders will continue to protect the property by dissipating wave energy and will remain as a substrate for plants and mollusks.

- **Tidal Wetlands**

This project is consistent with coastal policies as no impact to the tidal wetlands will occur and the existing functions of the tidal wetland will continue post development.

The following Coastal Uses are applicable to this project.

- **Flood and Erosion Control Structures**

The 151± foot long brick wall and connected brick patio along the upper portion of the slope will be removed. In addition, some of the existing boulders along the upper stacked stone wall north of the existing brick patio have become dislodged and will be resituated. The top of the stonewall will be capped with stone. The concrete seawall has a finished coat of cement /stucco. Some of the cement has chipped off in several spots and will be repaired with cement. These activities will be conducted using an excavator situated on land. No new flood and erosion control structures are proposed.

The project is consistent with applicable policies as no new flood and erosion control structures are proposed, two structures are being removed and others are being repaired so that they can continue their function. Other consistencies are that the project does not alter the slope and toe of the shoreline nor does it alter the natural erosion/depositional relationship of the shoreline.

- **Stormwater Management**

In accordance with best management practices, stormwater from the roof of the new house, driveway, and auto court will be directed to subsurface rechargers southeast of the house.

The improvement of the stormwater management on the property meets applicable policies as it improves the quality of the stormwater by directing it directly into the ground promoting groundwater infiltration and cooling the water prior to it leaving the property. The project also does not introduce significant suspended solids or pathogens or alter the salinity of the coastal waters nor does it alter existing drainage patterns, tidal exchange rates or circulation patterns.

- **Vegetated Buffers**

A vegetated buffer will be created along the top of slope. It is designed to filter out particulates and take up nutrients from the lawn prior to the water flowing off site. The existing narrow vegetated buffer between the stacked stone wall and the concrete seawall will remain undisturbed. This beneficial component is consistent with applicable policies as it is a natural way to improve water quality and protect downgradient sensitive coastal resources.

6. POTENTIAL ADVERSE IMPACTS

The proposed project does not incur any of the adverse impacts outlined the Connecticut Coastal Management Manual, as the project does not: degrade water quality; degrade circulation patterns;

degrade erosion or drainage patterns through the significant alteration of groundwater flow; degrade natural features of public vistas or view points thereby degrading public aesthetics; increase the

hazard of coastal flooding through the alteration of shoreline bathymetry; degrade wildlife, finfish or shellfish habitat, or alter or degrade tidal wetlands, beaches, or rocky shorefronts.

7. WATER DEPENDANT USE

The proposed project does not include any water dependant uses as the property is private and does not provide public access to coastal waters. The project does not however, inhibit future water-dependant uses or water-dependent development. No alteration to the sloped revetment or tidal wetlands will occur, therefore no changes to the public access along the mean high-water line will occur.

8. SUMMARY

This application requests authorization to conduct activities along the shoreline. First is a request to construct a new house, driveway, inground pool, and associated improvements. The project proposes a house in the general location of the previous house. The development provides no negative impacts to sensitive coastal resources. The house will have a new stormwater management system which will improve the quality of stormwater leaving the site.

The second component is the improvement of the shoreline. The removal of the brick wall and patio removes structures and impervious area from the shoreline. The installation of a vegetated buffer will help improve water prior to it leaving the site. The resetting of boulders and placing a stone cap on the stacked boulder wall and repairing the face of the concrete wall in several spots will maintain these existing structures allowing them to continue to serve their functions.

The coastal uses and coastal resources on and adjacent to the property were evaluated. No adverse impacts to any coastal resources were identified.

The above detailed assessment finds that the construction of the single-family residence and the associated improvements along with the removal of two structures, the repair of a stacked stone wall and placement of a cap along with the minor repairs to the face of the concrete seawall are consistent with coastal policies outlined in the Connecticut Coastal Management Act.

9. REFERENCES

2000. Connecticut Coastal Management Manual. Connecticut Department of Environmental Protection. Hartford, Connecticut.