



## FINDINGS OF FACT STAFF REPORT

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Date: October 10, 2014      OPRD Coastal Land Use Coordinator: Tony Stein  
OPRD File Number: BA-695-14      County: Tillamook      Applicant: Dale E. Anderson

**Project Location:** Five vacant lots located at the south end of North Pacific Street, Rockaway Beach. Tillamook County Assessor's Map #2N-10W-32CB, tax lots 7800, 7900, 8000, 8100 and 8200.

**Brief Project Description:** The proposed project involves the reconstruction of an existing riprap revetment along 150 feet of shoreline fronting five contiguous vacant lots. Plans call for armor rock 3.0 to 5.0 feet in diameter, keyed into the beach sand and placed in an interlocking state approximately 18 feet in height above beach level, with a slope of 2H to 1V or a maximum of 1.5H:1V at the northern end of the property. The proposed riprap revetment will project approximately 30 to 41 feet onto the ocean shore and tie into an existing riprap revetment to the north (BA# 477-99) of the subject property.

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### ADMINISTRATIVE RULE STANDARDS AND RELEVANT FACTS

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#### I. GENERAL STANDARDS, OAR 736-020-0010

**Project Need – There shall be adequate justification for a project to occur on and alter the ocean shore area.**

The property has existing riprap that was observed and documented by OPRD staff in December of 1999 when severe foredune erosion affected the Rockaway Beach area. At that time, OPRD staff gave verbal approval to repair the damaged structure to protect the subject properties while constructing shoreline protection on adjacent properties to the north approved under BA# 477-99.

The proposal seeks to reconstruct the existing riprap material, along with additional rock, to re-establish a functional revetment for the purpose of erosion control. ORS 390.650 allows repairs to existing structures, to repair damage from storms and wave action, and exempts these repairs from the ocean shore improvement permit process. ORS 390.650 (5) Subsections (2) and (3) of this section do not apply to an application for a permit for the repair, replacement or restoration, in the same location, of an authorized improvement or improvement existing on or before May 1, 1967, if the repair, replacement or restoration is commenced within three years after the damage to or destruction of the improvement being repaired, replaced or restored occurs. OPRD has no record of the placement year of the structure, but a new Ocean Shore Alteration Permit application is required because the three year time limit has been exceeded for restoring the revetment.

During the past three decades, the subject site has experienced sporadic phases of accretion and erosion, with significant foredune erosion occurring during periods of El Nino and La Nina storm cycles. The properties saw significant erosion during the strong El Nino cycles of 1982/83 and 1997/98, and strong to moderate La Nina cycles occurring in 1999/2000 and 2006/2007 winter storm season. An active rip embayment is situated at the mouth of Rock Creek approximately 450 feet to the south of the subject properties. During significant storm events that coincide with peak high tides, ocean waves and drift logs attack adjacent riprap structures on each side of the Rock Creek outlet, and the foredune face to the north. According to the permit application and the accompanying geologic report (Dune Hazard Reconnaissance and Report, EEI Report No. 13-138-1) by R. Warren Krager, Principal Engineering Geologist, dated November 22, 2013, analysis of a nearby cross sectional beach profile (Rock 6) from the Northwest Association of Networked Ocean Observing Systems (NANOOS) shows significant erosion of the upper elevation of the active beach and dune zone and the foredune zone since 1997. A graph (Plate 3 in the report) shows about 45 meters (+/- 150 feet) of shoreline erosion between 1998 and late 2002. Krager reports that little change in the shoreline has occurred in the past 5 to 7 years other than some possible seasonal sand accumulation or revetment damage and repairs. The subject riprap revetment is currently buried with sand and the foredune remains partially vegetated with European Beach grass. No definitive information exists on the base width and height dimensions of the riprap structure.

Krager recommends that the proposed structure design account for the significant beach erosion that will likely occur in the future. Krager recommends that a properly engineered erosion protection boulder or similar structure be constructed along the western shoreline fronting the property. The Anderson property is one of the few remaining unprotected properties along a contiguous line of shoreline structures north of Rock Creek, and if left unprotected, future wave attack and foredune erosion will reduce the potential for development on the properties. Significant erosion events on the subject property could potentially impact a public access, city street, emergency turnaround, public utilities as well as adjacent development to the east. A riprap revetment is present on the adjacent tax lot to the north and another is found approximately 175 feet to the south.

The application included an engineering site investigation by Morgan Civil Engineering dated March 2, 2014, "Engineering Portion of Dune Hazard Report for Tax Lots 7800-8200, Map 02N 10W 32CB, Lots 17-22, Block 21 of SEA VIEW PARK, City of Rockaway Beach, Tillamook County, Oregon, (Pacific Street), Project #13-10-LLB". Morgan states "that the previous riprap used for shoreline protection at the western side of the building area has been scattered and is no longer effective." Morgan also recommends repair of the shoreline revetment to help protect the proposed building site against possible erosion.

The project is being proposed in anticipation of residential duplex development on the subject property and a required ocean shores setback line has been previously established by the City of Rockaway. Any proposed buildings constructed on the property will need to conform to the City of Rockaway setback standards and requirements. North Pacific Street is a paved road with a right-of-way that terminates south of the property. An unimproved public access continues south across the foredune along North Pacific Street and onto the beach.

A finding of project need follows the review of all other applicable standards and is included in the findings summary at the end of this report.

***Protection of Public Rights – Public ownership of or use easement rights on the ocean shore shall be adequately protected.***

The proposed riprap will occupy a maximum width of 41 feet of beach area along the base of the foredune. This encroachment onto the ocean shore is similar to the adjacent riprap revetments to the north of the subject site. In evaluating similar riprap projects, OPRD has found this amount of encroachment to be acceptable when the need for the project was considered justified. The project will occupy an estimated 6,150 square feet of beach area which was previously available for public use. The presence of the riprap will not affect public ownership or easement rights on the ocean shore.

***Public Laws – The applicant shall comply with federal, state, and local laws and regulations affecting the project.***

The City of Rockaway Planning Department has certified that the project is in compliance with the City of Rockaway Comprehensive Plan and Land Use Code. State of Oregon regulations are being addressed under the review of this permit. Federal regulations could potentially involve a U.S. Army Corps of Engineers permit; however a Corps permit is usually not required for this type of project. A condition of the permit will require that the applicant obtain any required permits from the Corps, if applicable.

***Alterations and Project Modifications – There are no reasonable alternatives to the proposed activity or project modifications that would better protect the public rights, reduce or eliminate the detrimental affects on the ocean shore, or avoid long-term cost to the public.***

The geologic report does not address non-structural methods of shore protection, including vegetative stabilization, sand nourishment, and dynamic revetments, as a riprap revetment has already been constructed for shoreline protection. This subject property is located in a high energy wave environment along this section of coastline, and vegetative stabilization or sand alteration would not be sufficient to substantially slow or halt erosion, or stabilize the foredune slope. Dynamic revetments are not recommended for the site due to the frequent exposure to wave attack. The proposed riprap will not entirely eliminate all foredune erosion risk, but will help control erosion and undermining of the lower dune slope, which is one of the primary causes of upper slope failure. The geologic report recommends a properly engineered riprap revetment as the appropriate measure to protect the property.

Considering these factors, the continued use of riprap shore protection constitutes the most reasonable option for controlling erosion at this site.

***Public Costs – There are no reasonable special measures which might reduce or eliminate significant public costs. Prior to submission of the application, the applicant shall consider alternatives such as nonstructural solutions, provision for ultimate removal responsibility for structures when no longer needed, reclamation of excavation pits, mitigation of project damages to public interests, or a time limit on project life to allow for changes in public interest.***

Alternative shore protection methods other than riprap shore protection have been discussed above. These alternatives are not considered reasonable special measures, as they would fail to provide the needed long-term protection for the property. Public costs of the riprap include the loss of some upper beach area, heavy equipment activity on the beach during construction, and the visual presence of additional riprap. These costs can be reduced through careful and efficient construction practices. There will be no public costs to maintain the structure, as maintenance and needed repairs are the responsibility of the upland property owners.

***Compliance with LCDC Goals – The proposed project shall be evaluated against the applicable criteria included within Statewide Planning Goals administered by the Department of Land Conservation and Development.***

The City of Rockaway has certified that the project is in compliance with the City of Rockaway Comprehensive Plan and Land Use Code, which are acknowledged by LCDC as meeting the Statewide Planning Goal requirements. In 1986, the City of Rockaway adopted an Exception to Goal 18 which otherwise prohibits development in beach and dune areas. As a result of the exception, vacant lots within the exception area also became eligible for beachfront protective structures if they could otherwise be permitted. In 2008 the City adopted revisions to the City's comprehensive plan to clarify the location of the exception and identified the westerly limit of the exception to be the City's Ocean Setback Line (OSL) as determined by the City of Rockaway Beach based on the City's adopted definition of the OSL.

## II. SCENIC STANDARDS, OAR 736-020-0015

*Projects on the ocean shore shall be designed to minimize damage to the scenic attraction of the ocean shore area.*

***Natural Features – The project shall retain the scenic attraction of key natural features, for example, beaches, headlands cliffs, sea stacks, streams, tide pools, bedrock formations, fossil beds and ancient forest remains.***

The natural features of the beach in the general vicinity will remain intact, and no significant landforms such as headlands, sea stacks, or streams will be affected. The riprap will only be placed to about 18-19 feet in height above beach level. The scenic quality of the bluff face above the riprap will remain unaltered under the current proposal.

***Shoreline Vegetation – The project shall retain or restore existing vegetation on the ocean shore when vital to scenic values.***

Some pioneering vegetation exists on the lower dune face, with scattered European Beach Grass, wild strawberry and other plants found at the top of the dune. Vegetation exists behind the upper dune slope, some which will be retained after construction of the riprap revetment. The application states that disturbed areas will be revegetated after the project is revetment is completed. The sand on and around the revetment will be planted with beach grass and maintained.

***View Obstruction – The project shall avoid or minimize obstruction of existing views of the ocean and beaches from adjacent properties.***

The riprap will not affect existing views from adjacent properties. The proposed riprap structure will project no higher than the existing foredune height and will not obstruct existing views of the ocean and beaches from adjacent properties.

***Compatibility with Surroundings – The project shall blend in with the existing shoreline scenery (type of construction, color, etc.).***

The applicant has proposed covering the riprap revetment with sand and planting beach grass on the new revetment structure. If the riprap is washed clean of the sand and vegetation, it will become more noticeable. There is an existing riprap revetment on the adjacent property to the north and another just south of the subject project. The proposed riprap will be similar to the existing revetments near and adjoining the site and will be compatible with the surrounding beach areas and blend in reasonably well with the existing scenery.

## III. RECREATION USE STANDARDS, OAR 736-020-0020

***Recreation Use – The project shall not be a detriment to public recreation use opportunities within the ocean shore area except in those cases where it is determined necessary to protect sensitive biological resources such as state or federally listed species.***

The beach in this area is wide and relatively flat, and the riprap will occupy some beach area, but will not significantly affect public recreational use opportunities. During storm events or winter high tides, wave run-up may reach the riprap structure. During normal conditions, however, the existence of the riprap will not be a detriment to typical recreation uses.

***Recreation Access – The project shall avoid blocking off or obstructing public access routes within the ocean shore area except in those cases where it is determined necessary to protect sensitive biological resources such as state or federally listed species.***

The project will not extend out onto the ocean shore to cause an obstruction to north and south public access along the shoreline during normal ocean conditions. Upland public access to the beach is available across the foredune at the south end of the unpaved and unimproved section of North Pacific Street. This public access route will be unaffected by the proposed revetment. Another public access to the beach is located about 70 feet north at the end of the Third Street right-of-way.

#### **IV. SAFETY STANDARDS, OAR 736-020-0030**

The project shall be designed to avoid or minimize safety hazards to the public and shoreline properties. The following safety standards shall be applied, where applicable, to each application for an ocean shore permit.

***Structural Safety – The project shall not be a safety hazard to the public due to inadequate structural foundations, lack of bank stability, or the use of weak materials subject to rapid ocean damage.***

Remnants of riprap rocks found at the subject site appear to be undersized and have unraveled from the original structure. The revetment was most likely constructed in a manner that would not meet today's engineering standards for structural stability to avoid ocean damage. The proposed design indicates that the riprap revetment will be structurally sound under typical ocean conditions and will not be a safety hazard. The engineering report recommends riprap armor rock consisting of hard, durable and angular basalt rock, approximately 3.0 to 5.0 feet in diameter, placed individually and set for stability.

***Obstructional Hazards – the project shall minimize obstructions to pedestrians or vehicles going onto or along the ocean shore area.***

The riprap will project out from the existing bluff toe approximately 41 feet. Typically, this will not affect lateral beach access, except during times of extreme high water. During these periods, however, wave run-up is likely to be hitting the riprap or unprotected shoreline on nearby properties, therefore the proposed riprap will not create a new obstruction to beach access.

***Neighboring Properties – The project shall be designed to avoid or minimize ocean erosion or safety problems for neighboring properties.***

In the past, the subject and neighboring properties have experienced significant erosion events and loss of protective foredune. To the north, beginning on the adjacent property (Tax Lot 7700), a 3,900 foot long revetment was constructed under BA# 477-99 permit to protect residential properties after significant erosion during the winter of 1998/99. The proposed riprap will tie into this structure and form a contiguous revetment along the shoreline, as well as reduce any future end-cutting and unraveling of riprap on Tax lot 7700.

To the south, the adjacent property (Tax Lot 8201) is the last unprotected property along this stretch of Rockaway and the Seascape Townhomes development is located very close to the edge of the foredune. In August of 2014, two test pits were excavated in front of this adjacent property and it was confirmed that no riprap structure had been previously placed on the property. The engineering report shows that the southern end of the proposed riprap tapering to termination on the subject property. As indicated by the engineering report, in order to minimize the possibility of enhanced erosion or flank scour on the adjoining property, the riprap design includes a tapering of the riprap height and width at the south end.

***Property Protection – Beachfront property protection projects shall be designed to accomplish a reasonable degree of increased safety for the on-shore property to be protected.***

The purpose of the project is to repair the existing riprap revetment to an engineering standard that will provide protection to the upland property.

**V. NATURAL AND CULTURAL RESOURCE STANDARDS, OAR 736-020-0030**

*Projects on the ocean shore shall avoid or minimize damage to the following natural resources, habitat, or ocean shore conditions, and where applicable, shall not violate state standards:*

***Fish and wildlife resources including rare, threatened or endangered species and fish and wildlife habitats.***

There are no reported fish and wildlife resources that will be impacted by the proposed project.

***Estuarine values and navigation interests.***

The project is not adjacent to an estuary, and does not affect navigable water on the ocean.

***Historic, cultural and archeological sites.***

Notice of the application was provided to the State Historic Preservation Office, and to the Confederated Tribes of Siletz and the Confederated Tribes of Grand Ronde. There were no reports of historic, cultural, or archeological sites at this location.

***Natural areas (vegetation or aquatic features).***

There is no existing significant vegetation or aquatic features that will be impacted by the proposed riprap.

***Air and water quality of the ocean shore area.***

The project will take place above the ordinary high tide line, and will not cause foreign materials or pollutants to enter the water. Riprap placed at the site will be free of debris or foreign materials. The proposed project does not adversely affect water quality on the ocean shore. Air quality will not be affected, except for a negligible amount of exhaust from the use of heavy equipment during the construction period.

***Areas of geologic interest, fossil beds, ancient forest remnants.***

None of these features have been identified at the site.

***When necessary to protect native plant communities or fish and wildlife habitat on the subject or adjacent properties, only native, non-invasive, plant species shall be used for revegetation.***

The site is within a developed commercial and residential area, and there are no known protected native plant communities or fish and wildlife habitat on the subject property.

## **VI. PUBLIC COMMENT**

Notice of the proposed project was posted at the site for 30 days in accordance with ORS 390.650. Individual notification and a copy of the application were mailed to government agencies and individuals on OPRD's ocean shore mailing list. OPRD received 12 requests for a public hearing, and a public hearing was held on August 26, 2014 with 19 people in attendance. Ten testified, including one representing the applicant, eight opposing, and one neutral to the request.

The following concerns were raised by opponents: 1) lack of project need, 2) no existing buildings on the property to protect, 3) loss of beach area and additional shoreline protection along the beach, and 5) OPRD application review process and existing rules on unpermitted structures. The issues raised in public testimony are all valid concerns, most which have been addressed in this findings document.

Other concerns raised were emergency vehicle safety issues on North Pacific Street and the turnaround area, heavy equipment accessing Third Street, and view obstruction by homeowners located east of the project. These are concerns outside of OPRD's jurisdictional authority and will need to be addressed by the City of Rockaway pending any development proposal on the property.

One letter opposed to the application was received from the Oregon Shores Conservation Coalition (OSCC). The OSCC voiced concerns regarding the riprap repair eligibility for the property, OPRD's review process of applications that have grandfathered (pre-1967) shoreline protective structures, and concerns regarding the protection of developed vacant lots. OSCC also stated that there appears to be little justification for rebuilding the structure to protect an undeveloped property.

## **VII. FINDINGS SUMMARY**

### **Project Need –**

The purpose of the project is to repair the existing riprap revetment to an engineering standard that will provide protection to the upland property. The riprap project has been recommended by the project geologist. Repair and rebuilding is necessary to provide protection from ocean-caused erosion. Other types of less structural methods would not provide the protection necessary to control wave erosion at the toe of the slope. Based on the geologic report and the analysis indicated above, need for the improved riprap revetment is justified, and the proposed method of erosion control is appropriate, especially considering that the project will tie into an existing riprap revetment to the north. The southern end of the proposed riprap revetment will also provide additional upland protection for utilities and the emergency vehicle turnaround area at the terminus of North Pacific Street.

### **Structural Stability -**

The project will reconstruct the existing riprap material, include placement of additional rock, and re-establish a functional riprap revetment for long term erosion control.

### **Neighboring Properties -**

The site is within one of the remaining segments of unarmored shoreline left in the area north of Rock Creek in Rockaway, and OPRD recognizes that there is other nearby properties that may be subject to an equal or greater risk of catastrophic erosion. This section of shoreline currently has minimal foredune protection, and large buildings are built mere feet away from the foredune edge. Additional applications for protective structures are inevitable in this area due to these conditions, and some cumulative impacts such as loss of the sand contribution from dune erosion, can be expected. A case-by-case review will be required to determine if the need for additional shoreline structures is justified.

Based on the above considerations, OPRD finds that there is adequate justification for the project to occur on and alter the ocean shore area.

The following checklist summarizes whether the application satisfies the general, scenic, recreation, safety and natural and cultural resource standards as defined in OAR 736-020-0010 through 736-020-0030:

Standard	Yes	No	Standard	Yes	No
Project Need	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Structural Safety	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Protection of Public Rights	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Obstructional Hazards	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Public Laws	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Neighboring Properties	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Alteration and Project Modifications	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Property Protection	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Public Costs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Fish and Wildlife Resources	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Compliance with LCDC Goals	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Estuarine Values and Navigation Interests	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Natural Features	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Historic, Cultural and Archeological Sites	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Shoreline Vegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Natural Areas	<input checked="" type="checkbox"/>	<input type="checkbox"/>
View Obstruction	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Air and Water Quality of the ocean shore	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Compatibility with Surroundings	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Areas of Geologic Interest	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Recreation Use	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Use of Native Plant Species when Necessary	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Recreation Access	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>

**VIII. STAFF RECOMMENDATION:**

Based on an analysis of the facts and in consideration of the standards evaluated under OAR-736-020-0005 through OAR 736-020-0030, I recommend the following action:

- Approval
- Approval with conditions
- Denial

Tony Stein  
 Ocean Shores Coordinator