



FINDINGS OF FACT STAFF REPORT

Date: September 17, 2007 OPRD Coastal Land Use Coordinator: Tony Stein

OPRD File Number: BA-626-07 County: Lincoln Applicants: Gary Leighton

Project Location: 6965 Neptune Ave., Gleneden Beach
Lincoln County Assessor's Map #8S-11W-16AB, tax lot 1300

Brief Project Description: The application seeks to convert the existing Emergency Permit (BA# 615-06) issued November 21st, 2006 into a permanent shoreline protection structure. The proposed project involves the construction of a riprap revetment, approximately 35 feet in length and 20 feet in height above the beach level with an approximate slope of 1.5H to 1V. The rip rap revetment will extend 30 feet beyond the bluff toe of the slope onto the ocean shore. The proposed structure will tie into existing riprap revetments to the north and south of the subject property.

ADMINISTRATIVE RULE STANDARDS AND RELEVANT FACTS

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.

During the late summer and fall of 2006, the formation of a very large rip embayment just south of Laurel Street caused rapid sand erosion and a lowering of beach elevations along this section of the beach. Heavy winds and rain coupled with large ocean swells and high tides, resulted in a direct and continuous wave attack on the ocean bluff. Beach sand eroded rapidly with erosion and scouring occurring at the base toe of the bluff and at the flanked ends of the adjacent riprap revetment during a series of moderate to heavy winter storms from October to early November, 2006, the top of the bluff had steepened and set back measurements from the top of the bluff to the foundation of the Leighton home was 13 feet. OPRD staff issued verbal approval to begin emergency protection for the Leighton property on November 21st, after major storm events and high tides had occurred on November 7th and 13th. DOGAMI staff surveyed the area on November 28th and determined that the general elevation of the beach had lowered approximately 5 to 11 feet when compared to a 2002 LIDAR aerial photograph. Two properties to the south of the subject property had lost an estimated 15-25 feet of ocean bluff from significant block failure during the period

The temporary road construction and the riprap rock emergency measures that crossed in front of the Leighton property to address the imminent peril of five homes to the south (Permits BA 613-06 and BA 614-06) reduced the bluff erosion rate and provided an interim measure of safety to this property.

A geologic report was not required for this property as the proposed rip rap revetment is less than 50 feet in width. For this area, marine terrace erosion rates estimated by the Department of Geology and Mineral Industries (DOGAMI) are 0.62 feet per year, with a 0.76 foot per year potential error. A geologic report (Kuper Consulting 2001) prepared for a nearby property just south of the subject site, described erosion rates that had occurred at the site and reported that the bluff face was actively eroding at rates that were significantly higher than the rates estimated by DOGAMI. Kuper Consulting stated in the report that since 1999, the actual erosion rate at this location has been more than 5 times this rate at approximately 3.5 feet per year.

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 would occupy approximately 30-feet of beach area along the base of the 20-foot high bluff. The presence of the riprap and the encroachment on the ocean shore will reduce the amount of usable beach area and beach access could be blocked during winter high water events. 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 1,050 square feet of beach area which was previously available for public use.

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

The Lincoln County Planning Department has certified that the project is in compliance with the Lincoln County 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 applicants 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.

Relocating the home would not provide protection to the residences and would not avoid the need for placing riprap or other material on the ocean shore. The building is currently occupying much of the usable land at the top of the bluff.

Other alternatives, such as vegetative stabilization, sand alteration, cobble placement and non-structural enhancement west of the existing bluff slope were not considered an option, due to the near vertical bluff slope, high wave energy, steep beach slope and the presence of rip embayments offshore.

Vegetative stabilization is considered unfeasible due to the sheer steepness of the exposed bluff face. Dynamic revetments are ruled out due to the need for more structural and longer lasting protection. A riprap revetment is the preferred method of shore protection because of the need for a durable, more structural means of shore protection. In addition, riprap would be suitable at the site due to the presence of an existing riprap structures on adjacent properties to the north and south.

Considering the above factors, the 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.

Public costs associated with the proposed riprap will be the loss of approximately 1,050 square feet of upper beach area. Alternative shore protection methods other than riprap 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.

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.

Lincoln County has certified that the project is in compliance with the Lincoln County Comprehensive Plan and Land Use Code, which are acknowledged by LCDC as meeting the Statewide Planning Goal requirements.

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 project would cover the existing bluff face, and encroach some distance out onto the ocean shore., This level of scenic alteration has been acceptable for other riprap projects where the need for the project has been justified and where alternatives have been adequately considered.

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

There is no existing vegetation that would be affected by the proposed riprap revetment.

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

The proposed riprap revetment would not affect existing views from adjacent properties.

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

Other riprap revetments are located adjacent to the subject property and continue north and south for some distance. The proposed project will be similar in design to these existing structures. The upper portion of the riprap revetment will be covered with beach sand excavated from the riprap toe trench. This action will provide a measure of compatibility with other shoreline protection structures found along the beach to the north and south.

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 riprap would occupy some beach area, but would not significantly affect public recreation use opportunities. The proposed structure will occupy an area of approximately 1,050 square feet. During high tides in the winter, wave run-up often reaches the upper areas of the beach, and may cover the entire beach at times. The loss of additional beach area will increase the chance of this occurring. During normal conditions, however, the existence of the riprap would not be a detriment to typical recreational 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.

Riprap revetments encroach some distance out from the natural bluff toe, and increase the chance of high water covering the entire beach area. Under normal conditions, the structure will not block or obstruct any important public access routes within the ocean shore area.

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.

The proposed design indicates that the riprap would be structurally safe and not an obstructive hazard. Rocks would be placed individually to form an interlocking structure, as is the standard practice for revetment design. Water seepage through the bluff face during periods of heavy rains should not compromise the design integrity of the pit run fill, filter fabric or riprap rock structure to any degree that would cause serious damage to the revetment or cause a safety hazard to the public.

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

During high water events during the winter, wave run-up can cover the entire beach, washing up to the unprotected bluffs and riprap revetments. Any level of encroachment onto the beach would increase the chance of the entire beach being submerged, leaving no room for pedestrians or emergency vehicles.

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

The riprap revetment will be constructed to blend into the existing riprap structures to the north and south of the subject property. The flanked ends of these existing structures currently extend 15 feet into the subject property.

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 revetment would be to 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 would be impacted by the proposed project.

Estuarine values and navigation interests.

The proposed project is not adjacent to an estuary, and would 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 would be impacted by the proposed riprap.

Air and water quality of the ocean shore area.

The project would take place above the ordinary high tide line, and would 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 will 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 residential area, and there are no known protected native plant communities or fish and wildlife habitat on or adjacent to 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. No requests were received for a public hearing. One letter was received from an adjacent landowner asking for clarification of the proposal.

VII. FINDINGS SUMMARY

Project Need – The proposed riprap is necessary to provide protection for the property from ocean caused erosion. Bluff conditions and proximity of the home to the bluff edge have caused the homeowner to request a riprap revetment. There is evidence of active erosion, in the form of block fall from the bluff, the loss of lower beach sand levels and subsequent toe of the bluff scouring. Relocation of the home is not a reasonable alternative due to the lack of available space, and that there is no safe location on the property to move the home to. 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 above considerations, OPRD finds that there is adequate justification for the project to occur on and alter the ocean shore area.

Alternatives – There are no other reasonable alternatives for controlling the erosion and protecting the residence. Relocation of the home and non-structural alternatives are not appropriate due to the physical conditions of the site and the lack of available room to move the existing home to a safe location. Some public costs will be associated with the project. However, these costs can be reduced through careful and efficient riprap construction practices.

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
Coastal Land Use Coordinator