



FINDINGS OF FACT STAFF REPORT

Date: July 7, 2012 OPRD Coastal Land Use Coordinator: Tony Stein
OPRD File Number: BA-680-12 County: Lincoln Applicant: Karen and Jim Otta
Project Location: 9084 S. Coast Highway,
South Beach, OR
Lincoln County Assessor's Map #11S-11W-31 DA, tax lot 400.

Brief Project Description:

The proposed project involves the repair of an existing riprap structure and construction of an additional 130 feet of riprap revetment. The existing riprap revetment is located at the northwestern corner of the site, at the intersection of Moore Creek and the beach bluff. The overall riprap revetment is 160 feet in length, 13 feet in height above beach level, and will project approximately 19 feet from the bluff face onto the ocean shore,. Plans call for armor rock 2.0 to 6.0 feet in diameter, keyed approximately 4 feet into the bedrock or underlying sand at the toe of the slope, and placed in an interlocking state at a slope of 2H to 1V. The completed revetment will be covered with a 1 foot layer of sand and revegetated with beach grass. The proposed riprap revetment also includes a 6 foot wide riprap rock stairway and 6 foot wide handicap ramp constructed within the revetment footprint.

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.

According to the geologic report by H.G. Schlicker & Associates, Inc., (March 9, 2012), the area of the 7-10 foot high bluff proposed for the oceanfront protection is composed of weak, soft, fractured mudstone, alluvium and fill which is highly susceptible to erosion due to ocean wave activity and lateral erosion by Moore Creek. The existing riprap revetment is approximately 30 feet in length and 8 feet in height, and is composed of riprap from 2 to 4 feet in diameter. The structure has been damaged and riprap rocks have been removed from the structure and are found scattered along the ocean shore. The geologist reports that seven trenches/test pits were excavated at the site, and that no riprap or other types of oceanfront protective structures were found which may have been contiguous and buried to the south. South of the existing riprap revetment the geologist observed weak, fractured and sheared mudstone exposed on the bluff face. The bluff has eroded into the area southwest of the house, where a storm drain collection ditch discharges from the bluff.

The report states that Priest and others (1994) have determined that the average annual erosion rate from the adjacent bluff as 0.36 to 0.45 feet per year. The subject property lies in an area which has been mapped as experiencing critical erosion of marine terraces and sediments (Schlicker et al., 1973). Based on mapping completed by Priest and Allan (2004), the bluff along the western part of the site lies within the Active Erosion Hazard Zone. The area east of the bluff lies approximately 25 feet within the High-Risk Coastal Erosion Hazard Zone; and the area from approximately 25 feet to 50 feet from the bluff, including areas of the existing house, lies inside the Moderate-Risk Coastal Erosion Hazard Zone. Ongoing ocean wave and stream erosion may cause bluff failures or landslides that could damage the septic system or adjacent residence to the east. The existing home and/or a proposed replacement home cannot be relocated because a bluff slope is located immediately behind the site and precludes movement of the home site further to the east.

On March 9 2012, the existing septic field lines and septic tanks were located approximately 15 feet and 32 feet respectively away from the edge of the 7-10 foot high bluff. The northwest corner of the existing home lies 35-50 feet from the edge of the bluff.

The project proposal also incorporates a beach access stairway and ramp for handicap access into the riprap revetment utilizing riprap materials. The closest public beach accesses are located 2 miles to the north at South Beach State Park, and 1.8 miles to the south at Lost Creek State Park.

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 repair of existing riprap and the additional revetment will occupy an average width of 19 feet on underlying sand or existing bedrock on the beach along the base of the bluff. 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 3,040 square feet of beach area which was previously available for public use. The beach is wide and flat at this location, and the presence of the riprap will not significantly 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 Lincoln County Planning Department has certified that the project is in compliance with the Lincoln County Comprehensive Plan and Land Use Code. The Lincoln County Planning Department has signed the County Planning Department Affidavit form and has determined that the project has been reviewed and is consistent with the local comprehensive plan and zoning ordinances. State laws and regulations are being addressed through this permit review.

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 application evaluated the hazard alleviation methods for the project and stated that moving the Otta house away from the top of the bluff is not feasible because of the bluff slope immediately behind the existing house precludes movement of the home site further east. The existing septic field lines located west of the home, and immediately east of the steep bluff which does not allow for additional setback. The existing septic tanks

and septic field lines are located 10 feet and 25 feet respectively from the Otta house. Topography and shape of the subject lot does not allow for relocation of the home or septic drain to an area having less risk of erosion.

The geologic report ruled non-structural methods of shore protection for this site, including relocation of the home (as discussed above), improving storm water control, vegetative stabilization, sand nourishment, and non-structural dynamic revetments. The geologic report states that improvements to the storm water control systems at the site would not improve bluff stability, nor would vegetation stabilization be adequate to protect the site from future wave erosion. Beach nourishment would likely erode rapidly, and would need to be repeated every year, or even after a single large storm. The report utilized a “decision matrix” methodology (Lorang 1994) at the site, comparing possible erosion scenarios with the frequency of erosion events. Based on the score obtained using this methodology, a substantial structure is warranted for the site to mitigate for erosion, which includes the use of static structures such as a riprap revetment.

Considering these factors, the use of riprap shore protection constitutes the most reasonable option for controlling bluff 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 and a beach access stairway and ramp. These costs can be reduced through careful and efficient construction practices. There will be no public costs to maintain the structures, as maintenance and needed repairs are the responsibility of the upland property owner.

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. The subject property has been determined to be a developed prior to January 1st, 1977, and meets the eligibility requirements for shoreline protection under Goal 18.

Based on the submitted engineering and geologic reports, The Lincoln County Department of Planning and Development has determined that the proposed project is necessary to protect development that existed on January 1, 1977.

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 proposed project will change the visual appearance of the existing shoreline as very little riprap or permitted stairways exist in the immediate surrounding area. However, there are riprap revetments located 1/4 mile north of the subject property, and a riprap structure 1/3 of a mile to the south. There are several beach access stairways 1/3 of a mile to the south of the proposed project. The riprap will be placed at an elevation of 13 feet in height above beach level and in evaluating other projects; this change has been accepted when the need for the project has been justified. No key natural features such as beaches, sea stacks, bedrock formations, fossil beds or other features will be significantly affected. The existing riprap curves and wraps around the south bank at the ocean outlet of Moore Creek and east of the line of vegetation. Any structural modifications east of the existing line of vegetation is outside of OPRD's jurisdiction and falls under the jurisdiction of the Division of State Lands (DSL) and may require a removal/fill permit.

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

Grasses and shrubs and other low lying vegetation exist on the bluff face along the length of the property. The existing vegetation will be removed from bluff with installation of the proposed riprap, stairway and handicap ramp. The project proposes to place a one-foot layer of sand over the riprap upon completion and replant the new structure with beach grass.

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

The proposed riprap structure is located well below the top of the bluff and will 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.).

The applicant has proposed covering the revetment with sand and planting vegetation, which would allow it to blend in with the existing terrain and vegetation. If the riprap is washed clean of the sand and vegetation, then it will be more noticeable.

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 is quite wide here, and during normal conditions, the existence of the riprap will not be a detriment to typical recreational uses. During high tides in the winter, however, 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.

There is no state or federally listed species within this ocean shore area. In addition, there are no Oregon State Sensitive species found utilizing this area of shoreline.

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 public access along the shoreline during normal ocean conditions.

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 rip rap design indicates that the riprap will be structurally safe under normal ocean conditions and will not be an obstructional hazard. The engineering and geologic report recommends riprap armor rock approximately 2.0 to 6.0 feet in diameter, placed in an interlocking state at a slope of 2H to 1V.

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

The proposed riprap revetment will project out from the existing bluff toe approximately 19 feet. This normally 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 upper beach area and steep bluffs 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.

The geologic report states that the proposed riprap structure will curve and blend into the bluff face at the southern boundary and at the existing revetment to the north where it meets Moore Creek. This may help to reduce, or minimize the chance of flank scour along the edge of the riprap. Across Moore Creek to the north, the adjacent vacant lot does not contain any type of shoreline protection, but the stream channel outlet regularly accumulates large woody debris that may help minimize ocean erosion.

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 is to provide protection to the upland property and provide beach access points for the homeowners, visitors and handicap individuals.

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.

Oregon Department of Fish and Wildlife (ODFW) has reported that the lack of information in the application required for their review was an impediment to their ability to provide a well-informed assessment of the impacts of the proposed project. ODFW was uncertain as to predicting the precise impacts of individual shoreline protective structures on physical processes and the biological processes that are strongly influenced by these physical processes. ODFW stated that it does not have enough information to evaluate this permit comprehensively and made several recommendations that are outside the scope of this individual application.

ODFW also reported that Coastal Cutthroat Trout are present in Moore Creek, which is on the northern border of the property. The Oregon Native Fish Status Report (2005) concludes that relatively stable densities of

cutthroat trout found throughout the region in random and routine sampling along with the virtual absence of areas of low abundance suggests all populations of coastal cutthroat trout have been above critical levels.

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. A condition of this project would be that any additional work conducted along Moore Creek and east of the line of existing vegetation would require a permit from Division of State Lands. A permit may also be required from the Department of Fish and Wildlife to determine the Instream Work Period for the stream bank area that meets Moore Creek.

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 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. OPRD received no requests for a public hearing. One letter was received by the Oregon Department of Fish and Wildlife (ODFW).

VII. FINDINGS SUMMARY

Project Need – The proposed riprap is necessary to provide protection from ocean-caused erosion. Although the beach profile and adjacent bluff slope has not changed significantly in the past few years, there is evidence of steady erosion events impacting the subject bluff and adjacent properties.

The bluff is subject to direct wave energy which reduces the bluff stability and is contributing to the collapse of soil material along the bluff face. During extended periods of intense rainfall, increased steam flows from Moore Creek, coupled with high tides and heavy storm surf, bluff erosion and subsequent soil loss is expected to continue. The property owner has no other reasonable options to help reduce erosion of the bluff, and provide long-term protection to the property.

Alterations and Project Modifications: Other types of less structural methods would not provide the protection necessary to control wave erosion within the bluff slope, and the riprap project has been recommended by the project geologist. Topography and shape of the subject lot does not allow for relocation of the home or septic system to an area having less risk of erosion. Need for the riprap is justified, and the proposed method of erosion control is appropriate.

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