



FINDINGS OF FACT STAFF REPORT

Date: June 23, 2007

OPRD Coastal Land Use Coordinator: Tony Stein

OPRD File Number:

BA-617-07

County: Lincoln

Applicants: Jim and Lynn Nelson,
Ron and Carol Schaaf

Project Location:

6875,6885 Neptune Ave., Gleneden Beach
Lincoln County Assessor's Map #8S-11W-16AB, tax lot 1700 and 1701

Brief Project Description:

The application seeks to convert the existing Emergency Permit (BA 613-06) issued November 7th, 2006 into a permanent shoreline protection structure. The proposed project involves the construction of a riprap revetment, approximately 115 feet in length and approximately 35 feet in height above the beach level with an approximate slope of 1.5H to 1V. The proposed riprap revetment will project from 39 feet in the northern section to 60 feet in the southern section onto the ocean shore. The structure will tie into an existing permitted riprap revetment to the south (OPRD Permit # BA-485-99), and into another proposed riprap revetment under Emergency Permit (OPRD # BA-614-06) in the north.

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 tides, resulted in a direct and continuous wave attack on the ocean bluff. Beach sand eroded rapidly with significant block failure and sloughing occurring at the base toe and upper bluff of both properties. During a series moderate to heavy winter storms from October to early November, 2006, the top of the bluff had eroded to within 5 feet of the south corner of the Nelson house and had undermined the northwestern corner of the Schaaf house by 2-3 feet. The bluff had a negative slope extending beneath the Schaaf and Nelson homes. The Schaaf property lost an estimated 25 feet of ocean bluff two days prior to November 7th with a near vertical bluff scarp estimated at 30-35 feet. The adjacent property to the north owned by Jim and Lynn Nelson has also experienced erosion on their southern property boundary with a bluff loss of 12 to 15 feet. OPRD staff issued verbal approval to begin emergency protection for both properties on November 5th, with an extended marine forecast of heavy seas (21 feet), heavy rainfall and extreme high tides in the 10.0 range predicted during the period.

A geologic report included in the application (Ash Creek Associates Inc., January 18, 2007) documents the conditions of the site at the time of the report, discusses erosion rates, and bluff stability. The report indicates that 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 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 115-foot width of beach area along the base of the 35-foot high bluff. The presence of the riprap and the encroachment on the ocean shore will reduce the amount of usable beach area, and could even cause north to south access to 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 1,700 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 residence and would not avoid the need for placing riprap or other material on the ocean shore. The geologic report stated that moving the structures would not be economically feasible due the structural design and building layout. The buildings are currently occupying much of the usable land at the top of the bluff, and as previously discussed, would still be in danger even if they were to be moved to the east property line.

Other alternatives, such as vegetative stabilization, sand alteration, cobble placement and non-structural enhancement west of the existing bluff slope, are addressed in the geologic report. These alternatives 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 structure immediately to the south.

The geologic report recommends a riprap revetment to limit additional shoreline erosion. 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 7,475 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 in the immediate area, and the proposed project will be similar to these existing structures. The placement of rock fill above the riprap revetment will be covered with beach sand excavated from the riprap toe trench and planted with European beach grass. Although this action will not entirely match the existing bluff face to the south, it will provide a measure of compatibility with other altered sections found along the beach.

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, including the emergency pit run fill and the revetment, will occupy an area of approximately 7,475 square feet (0.17 acre), which includes one-half of Stevens Street. 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 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.

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 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.

In order to minimize the chance of enhanced erosion or flank scour on adjoining properties, the riprap design includes a tapering of the riprap height and width at the north end, to help minimize the possibility of end effects or flank scour. At the south end, the riprap will be tied into the existing riprap structure. Based on the above discussion, adverse impacts to the adjoining property to the north is a significant issue, particularly due to the under cut bluff, unstable slopes, and the potential for rapid erosion.

Since the geologic report was completed, the neighboring properties to the north have received an Emergency Permit (BA-614-06)

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 properties.

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. During this initial comment period, more than ten requests were received for a public hearing. A public hearing was held on May 9, 2007 and approximately 42 people were in attendance. Ten individuals testified, including 3 representing the applicants, 6 opposed to the request and 1 in favor of the request. In addition to the written submittals from the applicants and their representatives, 13 written comments were received, including 8 letters in support of the permit application, and 5 letters in opposition. The Surfrider Foundation submitted a petition in opposition to the application with a total of 75 signatures. Several other documents were submitted by various individuals with a total of 32 signatures in favor of the application.

The following concerns were raised by opponents: 1) home relocation, groundwater seepage and structural design and integrity issues were not adequately addressed in the Geologic Report; 2) the rip rap revetment is temporary and further site studies are necessary to determine eligibility for a permanent structure; 3) the loss of beach space and beach access from riprap placement.

Most of the issues raised in this letter have been addressed in this report.

VII. FINDINGS SUMMARY

Project Need – The proposed riprap is necessary to provide protection from ocean caused erosion. Bluff conditions and proximity of the houses to the bluff edge have caused the geologist to recommend the riprap revetment. There is evidence of significant active erosion, in the form of block fall from the bluff, the loss of lower sand beach levels and subsequent toe of the bluff erosion. Relocation of the houses is not a reasonable alternative due to the high costs, difficulty and danger in moving the structures, bluff steepness and undercutting, and no safe location on the properties to move the houses 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. House relocation 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 house 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