



FINDINGS OF FACT STAFF REPORT

Date: October 12, 2010 OPRD Coastal Land Use Coordinator: Tony Stein
OPRD File Number: BA-666-10 County: Lincoln Applicant: Barry Heidt and Venita Bafus

Project Location: 7265 and 7285 Neptune Ave., Gleneden Beach
Lincoln County Assessor's Map #8S-11W-9 DD, Tax Lots 5100 (Norris Residence), 5200 (Heidt Residence), 5300 (Vacant Lot, Bafus), 5301 (Bafus Residence), 5400 (Vacant Lot, Bafus) and 5500 (Phillips Residence).

Brief Project Description: The proposed project involves the construction of a riprap revetment along 208 feet of shoreline fronting 5 individual tax lots. Due to severe bluff erosion and bank retreat, the necessary riprap and fill material required to stabilize the bluff beneath the subject homes will extend onto adjacent tax lot 5100 in the north, and tax lot 5500 in the south. Plans call for armor rock 1.4 to 6.0 feet in diameter, keyed into the beach sand and placed in an interlocking state approximately 25 feet in height above beach level, with a slope of 2H to 1V. The area above the riprap revetment will be backfilled with pit run material and sand at a 1.5H:1V slope to provide lateral bank stability to elevations of approximately 50 and 60 feet to protect the home structures. A two-foot thick layer of sand will be placed over the face of the revetment and planted with beach grass. The proposed riprap revetment will project approximately 50 feet onto the ocean shore and tie into the existing riprap revetment to the south (BA# 527-01) of the subject properties.

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 winter of 2009 and 2010, strong storms removed the beach sand and eroded bluff material from the lower slope of the subject properties. Active rip embayments along this stretch of beach have been continuously observed and have caused large and rapid changes in the nearshore processes and beach profiles that control bluff erosion. A series of storms have resulted in upper bluff retreat of 30-40 feet and as much as 65 to 75 feet of bluff erosion at beach level. On February 2, 2010, the north corner of the Bafus home foundation to the edge of the bluff was measured at 12 feet, and the south corner of the Heidt home foundation to the edge of the bluff measured at 24 feet.

According to the permit application and the accompanying geologic report (Ash Creek and Associates, Inc., June 14th, 2010) the riprap structure is necessary reduce the risk of rapid bluff retreat from ocean erosion and end-cutting from the existing riprap revetment (BA# 527-01) adjacent to the Bafus property. The 80 foot high bluff is nearly vertical or has a negative slope, and will continue to fail because of episodic land sliding and bluff undercutting as the slope reverts to its normal angle of repose. These impacts are causing continual erosion below the Bafus and Heidt properties. Another concern is the refraction of waves around and behind the adjacent riprap revetment to the south (TL 5500) that will gradually erode the toe of the bluff face and endanger the existing residence. Overall erosion rates have been estimated at approximately 0.27 to 0.30 feet per year based on the previous 60 year period.

This is an area of Gleneden Beach that has extremely steep, tall, eroding bluffs, and houses are built close to the bluff edge. The subject properties are several of the remaining unprotected properties along a contiguous line of shoreline structures, and if left unprotected, future wave attack and bluff erosion will steepen and undermine the bluff and accelerate sloughing and landsliding on the Bafus and Heidt properties.

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 an average width of 50 feet of beach area along the base of the bluff. This encroachment onto the ocean shore is similar to the adjacent riprap revetments to the north and south 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 10,400 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 Lincoln County Department of Planning and Development (LCDPD) 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 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 rules out non-structural methods of shore protection, including vegetative stabilization, sand nourishment, and dynamic revetments, primarily based on the high energy wave environment along this section of coastline. Vegetative stabilization or sand alteration would not be sufficient to substantially slow or halt erosion, or stabilize the steep bluff slope. Dynamic revetments are not recommended for the site due to the frequent exposure to wave attack. The geologic report recommends a riprap revetment and bank stabilization structure as the appropriate measure to protect the property.

Considering these factors, the use of riprap shore protection and bluff stabilization constitutes the most reasonable option as the initial step 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.

OPRD issued Emergency Permit BA# 659-10 for all three Bafus properties as an interim measure to protect the Bafus residence (TL 5301), the southern corner of the Heidt property, and the northern corner of the Philips riprap revetment and residence (TL 5500). Based on the location and proximity of the existing home, extreme site conditions and the possibility of severely damaged or destroyed homes, a pattern of continuous erosion and safety concerns for recreational beach users, OPRD issued this temporary permit for TL 5301 in addition to TL 5400 and TL 5300. The Bafus residence (TL 5301) is located in the center of the three Bafus properties and meets the requirements of the Lincoln County Comprehensive Code (LCCP), which only permits beachfront protective structures where development existed on January 1, 1977. The Bafus tax lots north (TL 5300) and south (TL 5400) of the Bafus residence are vacant properties and were not developed prior to January 1, 1977. The temporary Emergency Permit allowed protection to extend onto these properties, allowing the Bafus family a reasonable measure of time to assess current and future protection options, pending discussion and a determination of the Goal 18 issues with the Lincoln County Planning Department.

OPRD also issued Emergency Permit BA# 660-10 to protect the Heidt residence (TL 5200), the southern corner of the Norris property (TL 5100), and the northern corner of the Bafus vacant lot (TL 5300). The adjacent property and home to the north of Heidt (TL 5200) is owned by Shyrlene Norris (TL 5100) and has also experienced accelerated erosion with an estimated bluff loss of 25 to 30 feet. The adjacent vacant lot (TL 5300) to the south is owned by Jack Bafus and has a vertical bluff scarp estimated at 75-80 feet. The Heidt property has a home built prior to January 1, 1977, and meets the Statewide Planning Goal 18 requirement for shoreline protection. As discussed above, the Bafus's vacant lot (TL5300) to the south is undeveloped and currently does not meet the requirements of the Lincoln County Comprehensive Code (LCCP). The Norris residence (TL 5100) also does not meet the requirements of the Lincoln County Comprehensive Code (LCCP), for allowing beachfront protective structures where development did not exist on January 1, 1977. Based on the location and proximity of the Heidt home, extreme site conditions, a pattern of continuous erosion, safety concerns for recreational beach users, and the mix of adjacent properties that satisfy and do not satisfy Goal 18 requirements, OPRD issued this temporary permit for TL 5200.

The Lincoln County Department of Planning and Development (LCDPD) has determined that the Bafus residence is now threatened by active erosion, and based on the date of construction is eligible for shoreline protection.. LCDPD has also determined that it is necessary to extend the proposed revetment to the north and south of TL 5301 onto vacant lots (TL 5400 and 5300), and that this action would be incidental to the primary purpose of providing shoreline protection for the Bafus residence.

In addition, the severity of erosion to the Heidt property requires the proposed revetment to be extended 28 feet along the southern half of tax lot 5100 (Shyrlene Norris), adjacent to the Heidt property on the north. LCDPD has determined that in order to protect the northern part of the Heidt property, the Norris property protection structure would be incidental to the primary purpose of providing shoreline protection for the Heidt residence.

LCDPD 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. Based on the submitted engineering geologic report, the LCDPD has determined that active shoreline erosion threatens the eligible Goal 18 properties and 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 project would cover a significant portion of the 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.

Vegetation exists along the upper bluff slope of the Heidt property, which will be retained after construction of the riprap and bluff stabilization revetment. In order to establish vegetation, the finished project includes planting vegetation over a two foot layer of sand, which will restore vegetation to the altered bluff slope.

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.

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 pit run and sand and infilling the bluff scarp area 50 feet above the structure on the Heidt property and 60 feet on the Bafus property. Both areas will be planted with vegetation, allowing it to blend in with the existing terrain and vegetative cover. If the riprap revetment is washed clean of the sand and vegetation, then it will be more noticeable. However, the mid and upper bluff areas of the structure will remain vegetated as proposed. There are existing riprap revetments just north of the subject project, and an adjacent riprap revetment to the south. The proposed riprap will be similar to the existing revetments adjoining the subject site and will 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 riprap would occupy some beach area, but would not significantly affect public recreation use opportunities. The proposed structure, including the pit run fill and the revetment, will occupy an area of approximately 10,400 square feet (0.17 acre). 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.

The project will not extend out onto the ocean shore to cause an obstruction to public access along the shoreline during normal ocean conditions. According to the geologic report, the shoreline protection structure will have no further impact on the beach by closely maintaining the line of the existing riprap revetment to the south of this property, and, on average, encroaching no further seaward than the base of the bluff prior to the erosion.

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 a safety hazard. The engineering and geologic report recommends riprap armor rock consisting of hard, durable, non-weathered basaltic rock, approximately 1.4 to 6.0 feet in diameter, placed in an interlocking state, as is the standard practice for revetment design.

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 50 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 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, neighboring properties have experienced similar erosion and over-steepening of the lower bluff face. Previous riprap permits were issued to protect those properties in 1996 (BA# 381-96), 2001 (BA# 527-01) and in 2008 (BA# 650-08). Within the Findings of Fact for BA# 527-01, it states that it would have been advantageous to connect the riprap to the existing riprap to the south, thus creating a continuous shoreline protective structure.

In order to minimize the chance of enhanced erosion or flank scour on the adjoining property, 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 localized scour. At the south end, the riprap will be tied into the existing riprap structure (BA# 527-01). 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.

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 a reasonable degree of increased safety and 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 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 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. No comments were received in support or opposition to the proposed structure within the posting period.

VII. FINDINGS SUMMARY

Project Need – The proposed riprap is necessary to provide protection to the Bafus and Heidt properties from ocean-caused erosion. There is evidence of active erosion at the site, resulting in accelerated end cutting of the adjacent riprap revetment to the south and extensive bank failure along the length of the project. The proposed shoreline protection structure will protect the subject properties and provide long-term stability with a continuous riprap revetment. The property owners have no other reasonable options to help reduce erosion of the bluff and provide long-term protection to the developed properties. Other types of less structural methods would not provide the protection necessary to control wave erosion at the toe of the slope, and the riprap project has been recommended by the project geologist. Need for the riprap is justified, and the proposed method of erosion control is appropriate, especially considering that the project will tie into the existing riprap revetment to the south.

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.**

Constructing individual shoreline structures on the eligible tax lots under Goal 18 would not provide the protection necessary to stop damage or loss to the existing homes. Due to the extremely steep bluff and unstable soil characteristics found at this site, this action would not stop erosion at the toe of the bluff or continual sloughing of the vertical bluff face on adjacent tax lots, and would undermine structure stability and pose a safety hazard for recreational beach users. The riprap revetment needs to extend onto adjacent tax lots to provide a continuous measure of bluff structure and stabilization to adequately protect eligible Goal 18 properties.

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