

**STAFF REPORT FOR A TYPE II DECISION  
OF THE PLANNING DEPARTMENT  
FOR THE CITY OF BANDON, OREGON**



**FILE NUMBER:** 22-065

**LOCATION:** 1107 6<sup>th</sup> St SE  
Map Number 28S-14W-30DA/TL 2308

**APPLICANT:** Coos Curry Consulting Group, Sheri McGrath  
**PROPERTY OWNER:** Michael C. Berry

**REQUEST:** Approval of a request for a Geologic Assessment Review to construct a new garage.

**REVIEWING BODY:** Dana Nichols, Planning Manager

**DEEMED COMPLETE:** August 12<sup>th</sup>, 2022

**NOTICE DATE:** August 12<sup>th</sup>, 2022

**120 DAY DEADLINE:** December 10<sup>th</sup>, 2022

**APPLICABLE CRITERIA:** BMC (Bandon Municipal Code) Chapters:  
17.78 Hazards Overlay Zone

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**I. Procedural – Required Burden of Proof**

The development standards of the Hazards Overlay Zone are located in Chapter 17.78 of the Zoning Code. Bandon Code language will appear in italics.

**Title 17 – Chapter 17.78 – Hazards Overlay (HO) Zone**

**17.78.010 Purpose**

*The purpose of the Hazard Overlay Zone is to protect people, lands and development in areas that have been identified as being subject to geologic hazards and to apply review standards to all proposed development activity within the areas subject to geologic hazards by:*

- A. *Identifying areas subject to natural hazards (Landslide, Coastal Erosion, and Liquefaction);*
- B. *Assessing the risks to life and property posed by new development in areas of known natural hazard susceptibility; and*
- C. *Applying standards to the siting and design of new development on lands subject to natural hazards that will reduce the risk to life and property from these hazards.*

**Finding:** The subject property contains both high and very high landslide susceptibility areas located on the north side of the property and is thus subject to the requirements of this overlay zone.

**17.78.020      Applicability**

*The following areas are considered potentially geologically hazardous and are therefore subject to the requirements of this section:*

- A. *All lands partially or completely within “high” or “very high” landslide susceptibility areas as mapped in DOGAMI Open File Report O-16-02, “Landslide susceptibility overview map of Oregon”.*
- B. *All lands partially or completely within “high” or “very high” liquefaction susceptibility as mapped in DOGAMI OPEN-FILE REPORT O-13-06, “Ground motion, ground deformation, tsunami inundation, co-seismic subsidence, and damage potential maps for the 2012 Oregon Resilience Plan for Cascadia Subduction Zone Earthquakes.”*
- C. *All lands along the oceanfront.*

**Finding:** The subject property contains lands that are partially within high and very high areas of landslide susceptibility and is thus subject to the requirements of this overlay zone.

**17.78.030      Geologic Assessment Review**

- A. *Except for activities identified in Subsection 2 of this section as exempt, any new development or substantial improvement, as defined in Title 15, in an area subject to the provisions of this section shall require a Geologic Assessment Review.*
- B. *The following development activities are exempt from the requirement for a Geologic Assessment Review:*
  - 1. *Maintenance, repair, or alterations to existing structures that do not alter the building footprint or foundation and do not constitute substantial improvement as defined in Title 15.*
  - 2. *Exploratory excavations under the direction of a certified engineering geologist or registered geotechnical engineer;*
  - 3. *Construction of structures for which a building permit is not required;*
  - 4. *Yard area vegetation maintenance and other vegetation removal on slopes less than 25%;*
  - 5. *Maintenance and reconstruction of public and private roads, streets, parking lots, driveways, and utility lines, provided the work does not extend outside of the previously disturbed area;*
  - 6. *Maintenance and repair of utility lines, and the installation of individual utility service connections;*
  - 7. *Emergency response activities intended to reduce or eliminate an immediate danger to life, property, or flood or fire hazard;*
  - 8. *Construction/erection of beachfront protective structures subject to regulation by the Oregon Parks and Recreation Department under OAR 736, Division 20; and*
  - 9. *Any development or activity to be conducted on a site for which a certified engineering geologist has determined that there are no high or very high geologic hazards present. The City of Bandon is not liable for any type of certification that a geologic hazard is not present on site.*

**Finding:** The applicant is proposing to construct a new garage on the property, which does not qualify for an exemption.

**17.78.040 Geologic Report (Engineering Geologic Report and Geotechnical Engineering Report) Standards**

- A. *The Geologic Report shall include the required elements of this section and one of the following:*
  - 1. *A statement that the use and/or activity can be accomplished without measures to mitigate or control the risk of geologic hazard to the subject property resulting from the proposed use and/or activity;*
  - 2. *A statement that there is an elevated risk posed to the subject property by geologic hazards that requires mitigation measures in order for the use and/or activity to be undertaken safely sited on the property; or*
  - 3. *A certification that there are no high or very high geological hazards present on site. If such is certified by a licensed professional, then a Geologic Hazard Review application is not required. The City of Bandon is not liable for any type of certification that a geologic hazard is not present on site.*
- B. *Geologic Reports required pursuant to this section shall be prepared consistent with standard geologic practices employing generally accepted scientific and engineering principles, and shall at a minimum contain the applicable provisions of "Guideline for Preparing Engineering Geologic Reports," 2nd Edition, 5/30/2014, published by the Oregon Board of Geologist Examiners.*
- C. *For oceanfront property, reports shall also address the "Geological Report Guidelines for New Development on Oceanfront Properties," prepared by the Oregon Coastal Management Program of the Department of Land Conservation and Development, in use as of the effective date of this section.*
- D. *Geologic Reports required by this section shall include a statement from the preparer of the report that all of the applicable content requirements of this subsection have been addressed or are not applicable to the review. The report shall also include a description of the qualification of the licensed professional or professionals that prepared the report.*
- E. *For the purposes of Section 17.78.040, a Geologic Report refers to both engineering geologic reports and geotechnical engineering reports.*
- F. *Geologic Reports required by this section shall be valid for a period of five years from the date of preparation of such report. No extensions to this time line shall be granted. The city assumes no responsibility for the quality or accuracy of such reports.*

**Finding:** The applicant provided a Reconnaissance-Level Geologic Hazard Assessment and Erosion and Sediment Control Plan prepared by EVREN Northwest, Inc. (ENW), dated July 29<sup>th</sup>, 2022, as well as a Geotechnical Engineering Investigation prepared by Terra Dolce Consultants, Inc. (TDC) dated May 31<sup>st</sup>, 2022. The ENW report contains findings and recommendations to mitigate the effects of the natural hazard on the construction of a new 20 ft x 40 ft garage. The TDC report provides site-specific geotechnical engineering recommendations for the proposed construction.

The ENW report was prepared consistent with standard geologic practices and references the “Guidelines for Preparing Engineering Geologic Reports”, published by the Oregon Board of Geologist Examiners.

The ENW report was prepared by Lynn D. Green, C.E.G., Principal Engineering Geologist, and Paul M. Trone, R.G., Principal Geologist. The report is valid for five years from the date of site reconnaissance. The TDC report was prepared by Cynthia L. Hovind, P.E., G.E..

Staff finds that these criteria have been met.

#### **17.78.050 Decisions of Geological Assessment Reviews**

*A decision on a Geologic Assessment Review shall be based on the following standards:*

- A. The Geologic Report shall meet the content standards set forth in Section 17.78.040.*
- B. In approving a Geologic Assessment Review, the decision maker may impose any conditions which are necessary to ensure compliance with the provisions of this section or with any other applicable provisions of the City of Bandon Land Use and Development Code.*
- C. In the event the decision maker determines that additional review of the Geologic Report by an appropriately licensed and/or certified professional is necessary to determine compliance with this section, the City of Bandon may retain the services of such a professional for this purpose. The applicant shall be responsible for all costs associated with the additional review. The results of that evaluation shall be considered in making a decision on the Geologic Assessment Review.*

**Finding:** The ENW report contains the required information from 17.78.040, so staff finds this criterion has been met.

#### **17.78.060. Development Standards for Uses Subject to Review**

*In addition to the conditions, requirements and limitations imposed by a required Geologic Report, all uses subject to a Geologic Assessment Review shall conform to the following requirements:*

- A. Historical, Cultural, and Archaeological Resources: All activities and uses subject to Geologic Assessment Reviews proposed for areas of historical, cultural, or archaeologically sensitive areas, as identified in the City of Bandon Comprehensive Plan, shall require consultation with the appropriate Tribe prior to the commencement of any and all ground disturbing activity. Proof of this consultation shall be provided as a part of application submission.*
- B. Hazard Disclosure Statement: All applications for new development or substantial improvements subject to Geologic Assessment Review shall provide a Hazard Disclosure Statement signed by the property owner that acknowledges:
  - 1. The property is subject to potential natural hazards and that development thereon is subject to risk of damage from such hazards;*
  - 2. The property owner has commissioned an engineering geologic report for the subject property, a copy of which is on file with City of Bandon Planning Department, and that the property owner has reviewed the Geologic Report and has thus been informed and is aware of the type and extent of hazards present and the risks associated with development on the subject property;**

3. *The property owner accepts and assumes all risks of damage from natural hazards associated with the development of the subject property.*
- C. *Mitigation measures: If on-site structural mitigation measures are required as a condition of approval, the applicant shall, prior to the issuance of zoning compliance, record on the title to the subject property a notification that includes a description of the measures or improvements and that also specifies the obligation of the property owners to refrain from interfering with such measures or improvements and to maintain them.*
- D. *Safest site requirement: All new construction shall be limited to the recommendations, if any, contained in the Geologic Report; and*
1. *Property owners should consider use of construction techniques that will render new buildings readily moveable in the event they need to be relocated; and*
  2. *Properties shall possess access of sufficient width and grade to permit new buildings to be relocated or dismantled and removed from the site.*
- E. *Minimum Oceanfront Setbacks: In areas subject to the provisions of this section, the building footprint of all new development or substantial improvement subject to a Geologic Assessment Review shall be set back from the ocean shore a minimum twenty- five (25) feet from the top of the bank or greater if recommended by the Geologic Report.*
- F. *Erosion Control Measures: A certified engineering geologist, geotechnical engineer, or qualified civil engineer shall address the following standards:*
1. *Stripping of vegetation, grading, or other soil disturbance shall be done in a manner which will minimize soil erosion, stabilize the soil as quickly as practicable, and expose the smallest practical area at any one time during construction;*
  2. *Development plans shall minimize cut or fill operations so as to prevent off-site impacts*
  3. *Temporary vegetation and/or mulching shall be used to protect exposed critical areas during development;*
  4. *Permanent plantings and any required structural erosion control and drainage measures shall be installed as soon as practical;*
  5. *Provisions shall be made to effectively accommodate increased runoff caused by altered soil and surface conditions during and after development. The rate of surface water runoff shall be structurally retarded where necessary;*
  6. *Provisions shall be made to prevent surface water from damaging the cut face of excavations or the sloping surface of fills by installation of temporary or permanent drainage across or above such areas, or by other suitable stabilization measures such as mulching, seeding, planting, or armoring with rolled erosion control products, stone, or other similar methods;*
  7. *All drainage provisions shall be designed to adequately carry existing and potential surface runoff from the twenty year frequency storm to suitable drainageways such as storm drains, natural watercourses, or drainage swales. In no case shall runoff be directed in such a way that it significantly decreases the stability of known landslides or areas identified as unstable slopes prone to earth movement, either by erosion or increase of groundwater pressure;*
  8. *Where drainage swales are used to divert surface waters, they shall be vegetated or protected as necessary to prevent offsite erosion and sediment transport;*

9. *Erosion and sediment control devices shall be required where necessary to prevent polluting discharges from occurring. Control devices and measures which may be required include, but are not limited to:*
    - a. *Energy absorbing devices to reduce runoff water velocity;*
    - b. *Sedimentation controls such as sediment or debris basins. Any trapped materials shall be removed to an approved disposal site on an approved schedule;*
    - c. *Dispersal of water runoff from developed areas over large undisturbed areas;*
  10. *Disposed spoil material or stockpiled topsoil shall be prevented from eroding into streams or drainageways by applying mulch or other protective covering; or by location at a sufficient distance from streams or drainageways; or by other sediment reduction measures; and*
  11. *Such non-erosion pollution associated with construction such as pesticides, fertilizers, petrochemicals, solid wastes, construction chemicals, or wastewaters shall be prevented from leaving the construction site through proper handling, disposal, site monitoring and clean-up activities.*
- G. *Certification of compliance: Permitted development shall comply with the recommendations in the required Geologic Report. No development requiring a Geologic Report shall receive final approval (e.g. certificate of occupancy, final inspection, etc.) until the planning director receives a written statement by an appropriately licensed and/or certified professional indicating that all performance, mitigation, and monitoring measures contained in the report have been satisfied. If mitigation measures involve engineering solutions prepared by a licensed professional engineer, then the City of Bandon must also receive an additional written statement of compliance by the design engineer.*

**Finding:** The property is not located in a Historic-Cultural Overlay. The City of Bandon, per our memorandum of understanding, contacts the Coquille Indian Tribe each time there is a proposed ground disturbance.

The property owner submitted a signed Hazard Disclosure Statement.

The ENW report states that potential geologic hazards include mass wasting, compressible soils, and stormwater. To mitigate, the report dictates the following:

1. The property is subject to potential natural hazards and that development thereon is subject to potential risk of damage from such hazards. If the location of the proposed garage cannot be moved at least 25 feet back (south) from the break in slope, the services of a geotechnical engineer should be used in designing the foundation for that structure.
2. Use of construction techniques that will render new buildings readily movable in the event they need to be relocated.
3. Properties shall possess access of sufficient width and grade to permit new buildings to be relocated or dismantled and removed from the site.
4. Stormwater run-off, including downspout and footing drain discharge, from any structure constructed on the property should be managed in a way to prevent ponding, flooding, or excessive erosion or sedimentation. Existing and new drainpipes should be routed away from the sloping northern portion of the property or extended beyond the northern property boundary and to the Ferry Creek drainage.

Recommendations 2 & 3 meet the “safest site requirement” listed in 17. 78.060(D). Staff will require these recommendations as conditions of approval.

ENW also prepared an Erosion and Sediment Control Plan that was developed to (1) limit the disturbance of site soils during site excavation, (2) prevent the erosion of exposed soils during and following garage construction, and (3) controlling sediment generated by unavoidable soil erosion. The report contains recommendations for each component of 17.78.060(F), noting that 6 and 8 are not applicable. The recommendations will be included as conditions of approval.

The TDC report contains recommendations for site preparation, construction, and drainage that have all been included as conditions of approval for this application.

The property owner will be required to submit a letter from the certified professionals indicating that all performance, mitigation, and monitoring measures contained in the report have been satisfied. Because the mitigation measure requires an engineered foundation the applicant will also be required to submit an additional letter to the City of Bandon indicating compliance by the design engineer.

### **III. Recommendations**

Based on the above analysis and the information submitted in the application, Staff approves the request for approval of a Geologic Assessment Review, with the following conditions:

1. All proposals of the applicant shall become conditions of approval unless otherwise modified by Staff.
2. Approval of the plan is based solely on the information provided. No other approvals are express or implied.
3. All recommendations of the Geotechnical Engineering Investigation, prepared by Terra Dolce Consultants, Inc., dated May 31, 2022, and the Reconnaissance-Level Geologic Hazard Assessment and the Erosion and Sediment Control Plan, prepared by EVREN Northwest, dated July 29<sup>th</sup>, 2022, shall be followed, including:
  - a. The area within 5 feet of the foundation shall be cleared of ¾-inch rock, geofabric, trees, vegetation and other deleterious material and the material shall be removed from the site.
  - b. Site grading shall occur during a dry season. If wet weather construction occurs, or if wet soils are encountered, then the area shall be protected by at least 12 inches of ¾-inch-minus crushed rock underlain with woven geotextile, such as LINQ GTF 300 or equivalent. Disturbed soft soils shall be over-excavated and removed from the site.
  - c. All excavation shall be backfilled with Structural fill consisting of imported ¾-inch to 1 ½-inch-minus crushed rock with about 5 percent passing the No. 200 sieve. The crushed rock should be compacted to 95 percent maximum dry density and the moisture content shall be within 5 percent of the Optimum Moisture Content, as determined by standard Proctor (ASTM D698).
  - d. The northern foundation wall of the garage shall be supported on auger-cast piles with rebar reinforcements. The piles shall be 12 inches in diameter and extend a minimum of

2 feet into the underlying Siltstone. A concrete grade beam tied the pile heads together and shall be designed by the structural engineer.

- e. In the area of shallow foundations, the allowable bearing pressure shall be 2,000 pounds per square foot for dead loads in the medium dense native sands. The allowable bearing pressure may be increased by one-third for transitory live loads, such as loads and seismic loading.
  - f. Continuous foots and individual spread footings should have a minimum width of 18 inches and a minimum embedment of 18 inches. Subgrades for the shallow foundations should be firm and free of organics and deleterious debris as determined by the geotechnical engineer. Soft soils or undocumented fill encountered during excavation of the footings shall be removed to firm soils and backfilled with imported granular structural fill.
  - g. Foundations shall be founded on a 6-inch layer of lightly compacted  $\frac{3}{4}$ -inch-minus.
  - h. Slab on grade floor shall be designed for an allowable subgrade reaction modulus of 150 pounds per cubic inch. The sub-grade soil must be in a firm non-yielding condition at the time of slab construction. See report for additional construction requirements.
  - i. Stormwater from the proposed garage shall be discharged to the drainage ditch along the southern property line. Discharge drains shall consist of at least 4-inch diameter solid drain pipe.
  - j. The applicant shall submit foundation plans that have been prepared by a geotechnical engineer.
  - k. Construction shall be performed in such a way that renders the new building movable in the event it needs to be relocated.
  - l. Existing and new drainpipes should be routed away from the sloping northern portion of the property.
4. Terra Dolce Consultants Inc shall be on-site for special inspections during earth work and foundation construction activities. TDC will provide a letter to the City of Bandon confirming site conditions are as anticipated and will provide field monitoring recommendations as required. The following items shall require an inspection and report:
- a. Installation of auger cast piles
  - b. Subgrades for shallow foundations and slab-on-grade
  - c. For all use of Structural Fill, a Material Testing Firm shall be contracted by the property owners for compaction testing of the structural fill and slab-on-grade compacted rock.
5. During construction, if site conditions change, the property owner shall consult with the Geotechnical Engineers of record to determine new recommendations for developing the site.
6. Prior to the issuance of a Certificate of Occupancy, the applicant shall submit a Certification of Compliance from the engineer of record, per the requirements of 17.78.070(G), indicating that all measures and recommendations listed in the report have been satisfied.
7. The applicant shall submit an engineered foundation plan, as recommended by ENW, and shall submit a Certification of Compliance from the engineer of record, per the requirements of 17.78.070(G), indicating that all measures and recommendations listed in the report have been satisfied.