

**AGENDA**  
**CITY OF STEVENSON COUNCIL MEETING**  
**June 22, 2020**  
**6:00 PM, Remote**

**Call-In Number 669-900-6833, or 253-215-8782 Meeting ID: 864 2184 9566 and on YouTube at  
<https://www.youtube.com/channel/UC4k9bA0IEEvsF6PSoDwjvA/>**

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**1. CALL TO ORDER:** Mayor to call the meeting to order.

**2. UNFINISHED BUSINESS:**

**a) Rock Cove Hospitality Center Shoreline Substantial Development Permit** - Council will further discuss the shoreline permit application including, and not limited to, traffic impact on Rock Creek Drive, public waterfront access and wildlife study. Associated documents are included in the packet with a detailed listing below.

MOTION: To approve the Shoreline Substantial Development Permit for Rock Cove Hospitality Center with conditions as presented/with changes as discussed.

- 1- Staff Report (p. 2)
- 2- Draft Decision (p. 6)
- A- Draft Denial (p. 24)
- B- Vision to Action Brownfields Redevelopment Summary and Phase II ESA (p. 29)
- C- Skamania County Housing Needs Analysis (p. 43)
- D- WSDOT Comments (p. 141)
- E- DAHP Comments (p. 142)
- F- Proponent Initial Public Access Proposal (p. 144)
- G- City Alternative Public Access Concept (p. 145)
- H- Proponent Modified Public Access Proposal (p. 146)
- I- Updated Critical Areas Assessment (p. 147)
- J- Initial Critical Areas Assessment (p. 163)
- K- Consultant Critical Areas Review (p. 177)
- L- PC Recommendation Summary (p. 182)
- M- DOE Comments (p. 183)
- N- Proposed Landscaping Plan (p. 187)
- O- Consulting Engineers Report (p. 188)
- P- Application, Phasing, Building Elevations (p. 191)
- Q- Geotech Report (p. 204)
- R- Cultural Resources Survey (p. 275)
- S- SEPA MDNS (p. 306)
- T- Proponent's Traffic Engineer Letter (p. 310)

**3. ADJOURNMENT** - Mayor will adjourn the meeting.



# City of Stevenson

## Planning Department

(509)427-5970

7121 E Loop Road, PO Box 371  
Stevenson, Washington 98648

**TO:** City Council  
**FROM:** Ben Shumaker  
**DATE:** June 18<sup>th</sup>, 2020  
**SUBJECT:** Special Council Report (SHOR2020-01)

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### **Introduction**

This memo provides several decision points structured to advance the City Council's review of the proposed Shoreline Substantial Development Permit. These decision points reflect staff's best attempt to capture the main reservations of the Council at the June 18<sup>th</sup> public hearing. This memo should not be taken to exclude any other reservations, discussions, or decisions desired by the Council, only to prioritize several for review. The questions are framed such that a "yes" answer allows the Council to proceed to the next decision without discussing modifications to the draft permit approval. "No" answers require additional discussion but are not discouraged under this framing.

At the June 18<sup>th</sup> meeting, the City Council closed the public hearing. As a result, public testimony is no longer being accepted for the official record related to this proposal. Please consult with legal counsel on the appropriate methods to include additional public testimony for the record if it is desired.

### **Decision Points**

- 1- Proposed Use:** The proposal falls within the SMP use category of "Hotels, Motels, Condominiums" and the Zoning Code use category of "Hotel". The proposal is listed as a "permissible" [sic] use in the Urban Environment of the SMP and a "P- permitted" use in the Commercial Recreation District of the Zoning Code.

Councilmember Knudsen desired discussion about requiring the proposal to include affordable housing in the site's program. Housing (affordable or otherwise) falls within the "Residences" use category of the SMP and, depending on its form, one of several use categories under the Zoning Code's "Dwelling Units" umbrella. Like the proposed use, "residences" are permissible under the SMP, however only "Multi-Family Dwellings" are listed for the Commercial Recreation District, and such uses require a Conditional Use Permit from the Planning Commission.

Attachment A provides a draft denial of the proposal based on its lack of provision of affordable housing. The draft includes findings intended to justify the Council's denial, and these findings rely on 1) the Council's determination of proper vs. improper uses and the SMP's encouragement of commercial development on Port property. These findings reference attachments B and C.

Staff experimented with a conditional approval requiring the inclusion of affordable housing units using similar justifications, but prepared the draft denial instead based on the need for a conditional use permit, which has not been applied for and for which Planning Commission approval cannot be guaranteed. For a project to move forward, the City would expect a new submittal which includes the residential use the Council could consider as more appropriate.

**Decision Requested:** Should the review of the project continue without further consideration of affordable housing? If not a motion to deny the project based on the draft could be considered.



**2- Traffic Impacts-** Staff's review of this proposal concluded it could proceed without a detailed traffic impact analysis. WSDOT disagrees (Attachment D) and requests the Council require a traffic impact analysis and mitigation of any impacts identified. The draft permit reviewed on June 18<sup>th</sup> included a requirement to prepare a traffic impact analysis, but not a direct requirement to mitigate for impacts. The Council, especially Councilmember Muth, desires better consideration of the traffic impacts of the proposal, particularly how they relate to the prospective use by the City of a nearby property as a fire station. The Council expressed a desire to discuss the potential traffic impacts with the applicant to determine if a suitable agreement can be reached, including agreements for some degree of improvements to the traffic system served by the site. Staff has continued to discuss this issue with the applicant and the applicant's engineers at PBS Engineering. A letter from the engineers is anticipated, but not available at the time of this writing. The following alternative condition has been prepared for Council discussion:

**Condition 2-** Prior to approval of any future phase, the proponent shall the prepare a traffic impact study evaluating the project in relation to traffic operations along the Rock Creek Drive corridor, it's intersections, adjacent uses, and termini at SR 14. The impact study shall include the cumulative traffic impact of this current phases along with the anticipated impact of all future phases.

**Condition 2A-** Prior to occupancy of any future phase, the proponent shall complete any traffic mitigation measure identified in the traffic impact study or otherwise required by the Council. Alternatively, the proponent may enter into a development agreement, or other suitable agreement approved by the Council, which will ensure completion of the mitigation measures according to a different timeline.

**Decision Requested:** Should the requested approval of Phase 1 of this project be withheld until a traffic impact study is prepared and evaluated? If not, is there Council consent to include the above alternative in the decision document?

**3- Cultural Resources-** Similar to the discussion of traffic impacts, staff determined this project could proceed without a cultural resources monitoring plan. In this case DAHP disagrees (Attachment E) and requests such a plan be approved in order to determine the project's impact on its environment. Council discussion of this topic was fairly general, and staff did not hear consensus one way or another about the inclusion of the plan as a pre-project requirement as drafted in Condition 3.

**Decision Requested:** Should the project prepare a cultural resources monitoring plan as requested by DAHP? If not, does the Council wish to delete the text of the condition?

**4- Public Access-** Conceptual changes to the existing public access easement at the site have been proposed (Attachment F). These changes are proposed at the same time as a modification to the lot lines on the property and a reduction in lots from 3 to 2. Together, these changes can be reviewed as a "Plat Alteration" under SMC 16.02.260, which the proponent is prepared to request of the Council. Council discussion, primarily led by Councilmember Hendricks, addressed 3 general topics related to the proposed changes in public access: 1) the location/configuration of the access easements (lollipop, continuous, out-and-back), 2) the condition of the public access areas in their improved state (ADA, paved, gravel, dirt, etc.), and 3) the type of access provided (visual or physical access to the water). The draft permit's conditions (especially 8A) anticipate the public access discussions would occur at the Plat Amendment process. Staff has prepared Attachment G as a starting point to discuss these issues. This is an all-in approach and specific areas could be removed from the concept map. Easement width is not addressed in this concept map. Additionally, the applicants provided Attachment H for consideration.

**Decision Requested:** Should the decision's on the type, location/configuration, and condition of public

access areas occur during the plat amendment process? If not does Attachment H represent the Council's desires for public access? If not does Attachment G?

- 5- Habitat Areas-** Two drafts of the habitat assessment were included in the June 18<sup>th</sup> meeting documents (Attachments I and J). As identified in the City's preliminary comments on the assessments (Attachment K) there is substantial agreement on the areas related to habitat functions at the site, but there is additional work to be done related to the restoration of those areas and the mitigation for impacts to the areas. Condition 1.3 and 9 contain a requirement to address these issues prior to construction. Condition 9 differs from 1.3 in that it anticipates some off-site mitigation may be involved in the approval and authorizes the work to occur within Shoreline Jurisdiction subject to the other requirements of the draft permit.

Councilmember Weissfeld responded to public discussion of the habitat areas of the site and requested additional Council review and the potential for additional site-specific inventories beyond those already submitted. The critical areas permitting process requires applicants to review several habitat area databases and confirm or correct their presence in the field. These databases deal primarily with endangered, threatened, or otherwise protected or unique habitats/species (salmon, spotted, owl, Oregon White Oak trees); they often omit more common species (deer, geese, maple trees). Staff was unable to determine whether the Council was concerned about the protected habitats/species or the more common species. One potential condition could be as follows, however, when this condition was suggested by staff to the City's outside habitat consultant it was dismissed as not necessary under the Migratory Bird Treaty Act:

**Condition 9A-** Tree and vegetation removal shall be accompanied by a survey prepared by a qualified biologist for the presence of nesting birds protected under the Migratory Bird Treaty Act. This survey shall provide conclusions and recommendations to guide the removal of the trees and/or vegetation.

**Decision Requested:** Should the draft permit only regulate habitats/species protected under the Critical Areas Code? If not should the above drafted condition be added to the permit document?

- 6- Landscaping-** Landscaping and/or screening was the subject of discussion by the Planning Commission (Attachment L) and DOE (Attachment M). Staff, in addressing these concerns, included Condition 14 in the draft approval. The applicants attempt to address these concerns is included in Attachment N. Additional detail on plantings is also expected via the Critical Areas Permit, which will likely involve restoration and/or mitigation plantings on the site. The detailed nature of the draft condition is an attempt to turn what can be a subjective discussion about landscaping/screening into an objective one with specific benchmarks. The benchmarks proposed are not included in the text of any City code and are subject any change that makes sense for the project.

Discussion at the meeting presented these options as bookends for the Council review, but staff did not capture the Council's consensus on whether either bookend or whether something in the middle was appropriate.

**Decision Requested:** Should the applicant be required to prepare photo simulations to demonstrate the project's ability to meet the objective standards as drafted? If not, should the project be required to implement the proposed landscape plan as drafted (and subject to changes as may be required under the Critical Areas Code)?

### **Additional Discussions**

Some discussions were also initiated at the meeting where staff didn't hear the need for a specific decision point but also didn't hear full satisfaction from the Council. Please refer to the following list and discuss as necessary:

- O. City Consulting Engineering Analysis

- P. Shoreline Application, Phasing Concept, and Conceptual Building Elevations
- Q. Project Geotechnical Assessment
- R. Project Cultural Resources Assessment
- S. City SEPA Threshold Determination

**Draft Shoreline Substantial Development Permit**

The draft Shoreline Substantial Development Permit has been updated to correct some typos. The dark blue font color continues to reflect additions intended to respond to the Planning Commission's recommendation, see pages 10, 11 (especially condition 8A), 13 (especially condition 11), and 16 (especially condition 14). The draft permit also reserves an area where all conditions may be listed in one place for ease of readership, and anticipates staff's copying/pasting of the conditions after approval by the Council, if approval is given. Additionally, where the permit references the attachment and incorporation of other documents/comments, the draft anticipates staff action to supplement the document after approval.

**Possible Motion:**

"...move to approve Shoreline Substantial Development Permit 2020-01 according to the findings, conclusions, conditions, and staff supplements as presented, discussed, and/or amended."

Ben Shumaker  
Community Development Director

**CITY OF STEVENSON**  
**SMC 18.08 – Shoreline Management**

Regarding a request by the FDM Development to construct )  
Phase 1 of a mixed-use hospitality development offering condo- )  
and studio-sized units and commercial venue space. Phase 1 )  
involves up to 16 condo-style units, operated by a single )  
ownership group, similar to a hotel, associated parking, utilities, )  
and other sitework. Project is located in the Urban Shoreline )  
Environment Designation adjacent to Rock Cove in Section 1 of )  
Township 2, Range 7, E.W.M, City of Stevenson, Skamania County,) )  
Washington, 98648. )

SHORELINE  
SUBSTANTIAL  
DEVELOPMENT PERMIT  
June 18<sup>th</sup>, 2020

**PROPOSAL:** The applicant proposes to construct a mixed-use hospitality development adjacent to Rock Creek Cove on the former Hegewald Lumber Mill Site in Stevenson, WA. The project seeks to complement the existing tourism industry in Stevenson by offering condo- and studio-sized units available for nightly and weekly rental, totaling 48 available bedrooms. A 15,000 square-foot commercial venue space will anchor the development and provide wide views of Rock Creek Cove and the Columbia River Gorge. The conceptual space planning of the commercial building consists of 5,000 open venue space, supported by 10,000 square feet of service, food preparation, and guest lounging area. The development seeks to attract both local and regional visitors, with venue space available for weddings, company parties, family reunions, and corporate retreats. The Applicant proposes a three-phased development, beginning with the condo-style units, operated by a single ownership group, similar to a hotel. Phase 2 will add the commercial venue space and restore waterside portions of the property for enhanced, publicly-accessible observation and enjoyment. Phase 3 completes the development with the studio-sized units, operated under the same ownership group as the remainder of the property. The request for a Shoreline Substantial Development Permit relates to Phase 1 only.

**LOCATION:** The site address has not yet been assigned for this location adjacent to SW Rock Creek Drive containing shorelands associated with Rock Cove (Stevenson Lake) a designated shoreline of the city. The site includes 3 legal lots assigned Tax Lot Numbers 02-07-01-0-0-1302, -1303, and -1304 by the County Assessor.

**ELEMENTS:** Economic Development, Public Access, Recreation, Shoreline Use, Conservation.

**USES:** Commercial/Industrial Development (Hotels, Motels, Condominiums).

**KEY ISSUES:** Public Access, Restoration, Construction and Operations, Scenic Vista and View Protection Regulations, Economic Development, Public Access, Circulation, Recreation, Shoreline Use, Conservation, Historical/Cultural.

**APPLICANT:** FDM Development  
Zachary Pyle

**Owner:** Erwin L & K, LLC & OPH DBD, LLC &  
Rawlings Family Investments, LLC

5101 NE 82<sup>nd</sup> Avenue, Suite 200  
Vancouver, WA 98662  
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**CITY STAFF:** Ben Shumaker                      Leana Kinley                      Scott Anderson  
Shoreline Administrator                      City Administrator                      Mayor

**BACKGROUND:** The proposal occurs on 3 tax lots associated with 3 legal lots within the City of Stevenson. Prior to about 1975, the site had been developed as a veneer mill. The site has been vacant since the millwork was halted and the buildings removed. Prior to about 2019 the site had been owned by Skamania County. While under county ownership, the site served as an overflow parking area, an informal compost site, and an informal public non-motorized boat launch to the waters of Rock Cove. This proposal is the first reviewed by the City since the county transferred ownership. The proposal is subject to this review pursuant to the Shoreline Management Act of 1971 and other City development regulations (e.g., Critical Areas, Zoning, SEPA, etc.).

## **STANDARDS, FINDINGS AND CONCLUSIONS**

### **SMC 18 – ENVIRONMENTAL PROTECTION**

Title 18 of the Stevenson Municipal Code is separated into three chapters. Chapter 18.04 considers the City's procedures under the State Environmental Policy Act (SEPA). This Chapter is referenced based on previous, administrative reviews. Chapter 18.08 addresses Shoreline Management and, together with the adopted Shoreline Management Master Program, is the focus of this review. Chapter 18.13 focuses on Critical Areas and Natural Resources Lands and involves administrative review related to this project's location along a riparian habitat area. This chapter is referenced several times, but no findings or conclusions are incorporated herein.

### **SMC CH. 18.04 ENVIRONMENTAL POLICY**

This chapter considers whether projects are likely to have a probable significant adverse impact on the environment, requiring agencies to evaluate actions before they are taken. The chapter is separated into 11 articles covering various permitting and project review actions. Only 2 articles are relevant to this proposal as more fully discussed below.

CRITERION §18.04 ARTICLE III CATEGORICAL EXEMPTIONS AND THRESHOLD DETERMINATIONS This article adopts Washington Administrative Code (WAC) sections related to the applicability and review process for projects under SEPA.

CRITERION §18.04 ARTICLE V COMMENTING This article adopts Washington Administrative Code (WAC) sections regarding the acceptance and issuance of comments for proposals reviewed under SEPA.

- FINDING(S):
- a. The SEPA Responsible Official issued a "mitigated determination of nonsignificance" (MDNS) on 6/3/2020 for City File # SEPA2020-02.
  - b. The MDNS contained 16 mitigation measures which the proponents must satisfy to ensure the project will have no probable significant adverse environmental impacts.
  - c. The City received timely comments on the threshold determination from the Washington State Department of Transportation (WSDOT), Washington Department of Ecology (Ecology), and Washington Department of Archaeology &

Historic Preservation (DAHP).

d. Comments from WSDOT request a traffic impact study and traffic mitigation measures if the study identifies reduced levels of service state routes.

e. Comments from Ecology request clarification of the project site plan, phasing plan, habitat buffer mitigation, and landscape plantings.

f. Comments from DAHP acknowledge much of the grading will occur in the site's imported fill areas and request submittal and implementation of a cultural resources monitoring plan for excavations into native soils.

CONCLUSIONS OF LAW: This project will comply with SMC 18.04 upon satisfaction of mitigation measures adopted in SEPA2020-01 and the comments received and incorporated herein for convenience as conditions 1.1 through 1.16, 2 and 3 below, as well as other conditions contained herein.

CONDITIONS:

**1. Prior to the Start of Construction** the proponent shall incorporate and/or address all mitigation measures associated with the Mitigated Determination of Nonsignificance issued under the State Environmental Policy Act, City File # SEPA2020-01:

**1.1.** The design and construction of water connections, streets, street lights, stormwater drainage systems, and site grading and erosion control plans shall be in accordance with the City of Stevenson Engineering and Construction Standards.

**1.2.** Construction dust shall not become a nuisance to neighboring or down-wind properties; dust control shall comply with all applicable standards of the Southwest Washington Clean Air Agency (SWCAA), especially SWCAA 400-040. Contact SWCAA at 360-574-3058 for more information.

**1.3.** Project construction shall not commence until authorization is obtained pursuant to the City of Stevenson Critical Areas Code.

**1.4.** If any item of possible archaeological interest (including human skeletal remains) is discovered on site during construction or site work, all the following steps shall occur:

- a. Stop all work in the immediate area (initially allowing for a 100' buffer, this number may vary by circumstance) immediately.
- b. Implement reasonable measures to protect the discovery site, including any appropriate stabilization or covering.
- c. Take reasonable steps to ensure the confidentiality of the discovery site.
- d. Take reasonable steps to restrict access to the site of discovery.
- e. Notify the City, DAHP, and Yakama, Nez Perce, Warm Springs, Umatilla, and Cowlitz tribes of the discovery.
- f. A stop-work order will be issued.
- g. The approval will be temporarily suspended.
- h. All applicable state and federal permits shall be secured prior to commencement of the activities they regulate and as a condition for resumption of development activities.
- i. Development activities may resume only upon receipt of City approval.
- j. If the discovery includes human skeletal remains, the Skamania County Coroner and local law enforcement shall be notified in the most expeditious manner possible. The County Coroner will assume jurisdiction over the site and the human skeletal remains, and will make a determination of whether they are crime-related. If they are not, DAHP will take jurisdiction over the remains and report them to the

appropriate parties. The State Physical Anthropologist will make a determination of whether the remains are Native American and report that finding to the affected parties. DAHP will handle all consultation with the affected parties as to the preservation, excavation, and disposition of the remains.

- 1.5.** A site-specific Stormwater Pollution Prevention plans shall be developed for each phase. Such plans shall comply with the City of Stevenson Engineering Standards and must be implemented prior to any clearing, grading, or construction. Any discharge of sediment-laden runoff or other pollutants to waters of the state is in violation of Chapter 90.48 RCW and WAC 173-201A, and is subject to enforcement action. Contact the Stevenson Public Works Department (509-427-5970) and Department of Ecology Water Quality/Watershed Resources Unit (360-407-6329) for more information.
- 1.6.** Re-vegetation of disturbed areas is necessary to reduce wind and water erosion, and the propagation of weeds. All undeveloped disturbed areas shall be reseeded and landscaped in conformity with the City of Stevenson Zoning and Critical Areas codes and the Skamania County Shoreline Management Master Program.
- 1.7.** A Construction Stormwater General Permit shall be obtained from Washington Department of Ecology for the grading of the site as necessary. A copy of the permit shall be provided to the City prior to the Pre-Construction Meeting. Contact 360-407-6329 for more information.
- 1.8.** The conclusions and recommendations of the January, 2020 geotechnical investigation shall be incorporated into the project plans and specifications.
- 1.9.** Construction shall occur within the hours of 7:00am and 10:00pm and according to the other noise control standards of SMC 8.08.
- 1.10.** The project's various components shall apply for and obtain all appropriate approvals required under the City's Shoreline Management Program.
- 1.11.** All stormwater management shall be provided on site of the development. A stormwater engineering report shall be provided meeting the requirements of the most current Puget Sound Stormwater Manual, as adopted by the Skamania County Stormwater Control Ordinance, Section 13.25.220A Quantity Control, dated January 26, 1994, or the latest edition, including any technical memorandum provided by the County that amends or clarifies the applicable sections of the ordinance.
- 1.12.** All stormwater facilities located on-site shall be privately owned and maintained. Easements shall be recorded for facilities serving multiple lots. Facility maintenance plans shall be developed to clearly identify the frequency and scope of maintenance to be completed.
- 1.13.** Public/pedestrian access to the shoreline shall be completed in pursuant to the shoreline substantial development permit issued for this project.
- 1.14.** This property is within a half mile of a known or suspected contaminated site. If contamination is currently known or observed during construction of this project, sampling of the potentially contaminated media must be conducted. If contamination of soil or groundwater is readily visible, or is revealed by sampling, Ecology must be notified. Contact the Department of Ecology Environmental Report Tracking System Coordinator's Southwest Regional Office (360-407-6300), for assistance and information about subsequent cleanup and to identify the type of testing that will be required.
- 1.15.** All grading and filling of land must utilize only clean fill. All other materials may be considered solid waste and permit approval may be required from the Skamania

County Environmental Health Department prior to filling. All removed debris resulting from this project must be disposed of at an approved site. Contact the Skamania County Environmental Health Department (509-427-3900) and the Department of Ecology Solid Waste Management Division (360-407-6287) for more information.

**1.16.** During construction, all releases of oils, hydraulic fluids, fuels, other petroleum products, paints, solvents, and other deleterious materials must be contained and removed in a manner that will prevent their discharge to waters and soils of the state. The cleanup of spills should take precedence over other work on the site.

**2. Prior to the Start of Construction** the proponent shall prepare a traffic impact study evaluating the project according to the expectations expressed by WSDOT in its SEPA comment letter dated 6/17/2020.

**3. Prior to the Start of Construction** the proponent shall prepare a cultural resources monitoring plan according to the expectations expressed by DAHP in its SEPA comment letter dated 6/17/2020. The proponent shall then implement the approved monitoring plan.

### **SMC CH. 18.08 SHORELINE MANAGEMENT**

This chapter details the procedures for review according to the Shoreline Management Act. The chapter is separated into 25 sections detailing program administration and project review. Findings and conclusions are detailed below, and a greater focus is placed on the imperative sections of the project review process.

CRITERION §18.08.010 THROUGH .090 These provisions establish the authority to review shoreline proposals and detail the regulatory applicability of the Shoreline Management Master Program.

FINDING(S):

- a. Section 18.08.020 adopts the 1974 "Stevenson Comprehensive Plan" as a standard of review. The *maps* associated with the Skamania County Shoreline Management Master Program are then adopted, but not the required *text* of the program itself. This decision uses the *maps* and the *text* of the Shoreline Master Program as the standards of review.
- b. The shorelines management review applies to this proposal because it is located on lands and/or waters under the jurisdiction of the Shorelines Management Act of 1971 as described in SMC 18.08.050.
- c. Rock Cove adjacent to this site is designated as a "shoreline of the city" under SMC 18.08.060(B).
- d. The proposal is considered a Substantial Development and must be consistent with the City's adopted shorelines management standards.
- d. The proposal does not involve a timber cutting permit and SMC 18.08.090 does not apply.

CONCLUSIONS OF LAW: This project will comply with SMC 18.08.010 through 18.08.090 upon satisfaction of the conditions contained herein.

CRITERION §18.08.100 – PERMITS—APPLICATION PROCEDURE. "Any person required to comply with the Shorelines Management Act of 1971 and this title, in regard to permits for substantial development and timber cutting, shall obtain the proper application forms from the city planning department. The completed application shall then be submitted to the planning department."

FINDING(S):

- a. The proponent obtained the appropriate application form and submitted a complete application for substantial development on 3/27/2020.



CONCLUSIONS OF LAW: This project will comply with SMC 18.08.100 without conditions.

CRITERION §18.08.110 – PERMITS—NOTICE PUBLICATION. "A. Upon submittal and acceptance of a proper application for a permit, the applicant shall cause to be published notices of the application for a permit at least once a week, on the same day of the week, for two consecutive weeks in a newspaper circulating and published within the city. An affidavit of publication shall be transmitted by the applicant to the planning department and affixed to the application for a permit.

B. Notices of application for a permit shall not be published prior to actual submission and acceptance by the planning department. All notices of application for a permit shall be made on forms provided by the planning department."

FINDING(S): a. Notice of the application was published by City staff in the *Skamania County Pioneer* on 4/15/2020 and 4/22/2020.

CONCLUSIONS OF LAW: This project will comply with SMC 18.08.110 without conditions.

CRITERION §18.08.120 – PERMITS—FEES. "Upon submittal and acceptance of a proper application for a permit, the applicant shall pay a fee based upon the fair market value of the project to the clerk-treasurer as follows: [4 categories of fees listed]

B. Fees are not refundable."

FINDING(S): a. City Council Resolution 296 became effective on 8/1/2017 and supersedes the fees in this section.  
b. The proponent supplied the appropriate \$1,000 application fee for a Shoreline Substantial Development Permit together with other application fees and a deposit for outside professional assistance on 2/7/2020 and 3/27/2020.

CONCLUSIONS OF LAW: This project will comply with SMC 18.08.120 without conditions.

CRITERION §18.08.130 – PERMITS—APPLICATION DISTRIBUTION. "The application for a permit and related information shall be submitted to the council by the planning department at their first regular meeting after thirty days from the date of the last publication of the application for a permit."

FINDING(S): a. The complete application was provided to the City Council at its 5/21/2020 regular meeting.

CONCLUSIONS OF LAW: This project will comply with SMC 18.08.130 without conditions.

CRITERION §18.08.140 – PERMITS—INTERESTED PARTIES—TIME LIMIT FOR RESPONSE. "A. Within thirty days of the last publication of the notice of the application for a permit, any interested person may submit his views on the application in writing to the council, or may notify the council of his desire to be notified of the action taken by the council.

B. Within thirty days of the last date of publication of the notice of the application for a permit, any interested person may also make a written request to the council that a public hearing be held on the application, pursuant to this title."

FINDING(S): a. One timely response was submitted to the City Council. The response requested notice of the action taken, requested a public hearing prior to action, and commented on public access at the proposal site.

CONCLUSIONS OF LAW: This project will comply with SMC 18.08.140 without conditions.

CRITERION §18.08.150 – REVIEW OF APPLICATIONS BY COUNCIL. “The city council shall review all applications for permits under this title at a regular council meeting. The council may refer, at its option, any application back to the planning commission for a further recommendation and/or public hearing.”

- FINDING(S):
- a. At its 5/21/2020 regular meeting, the City Council reviewed the application, and responses from interested parties.
  - b. The City Council referred the application to the Planning Commission for review and recommendation at the regular 6/8/2020 Planning Commission meeting.
  - c. The Planning Commission reviewed the application along with additional materials prepared by the applicant and provided a recommendation of conditional approval to the City Council.

CONCLUSIONS OF LAW: This project will comply with SMC 18.08.150 upon satisfaction of the conditions contained herein.

CRITERION §18.08.160 – REQUIRED PUBLIC HEARINGS. “In the following cases, decisions on applications for permits shall not be made until at least one public hearing has been held:

- A. One or more interested persons has submitted to the council, within thirty days of the final publication of notice of the application, a written request for such a hearing together with a statement of reasons for the request; or
- B. The estimated total cost of the proposed development exceeds two hundred fifty thousand dollars; or
- C. The council determines that the proposed development is one of broad public significance.”

- FINDING(S):
- a. The City Council received a request for public hearing from an interested party.
  - b. The estimated total cost of the proposed development exceeds \$250,000.
  - c. The City Council has determined a public hearing must be held.

CONCLUSIONS OF LAW: This project will comply with SMC 18.08.160 without conditions.

CRITERION §18.08.170 – PUBLIC HEARING—NOTICE PUBLICATION. “A. After setting a date and time for a public hearing, the council shall cause to be published a notice of the hearing, along with a description of the project and the project location, in a newspaper circulating and published within the town. The public hearing shall be held no sooner than fifteen days after the final date of publication of the notice of public hearing.

- B. Ten days' written notice of the time and place of the public hearing shall be mailed or delivered to the applicant and to any interested persons who has notified the council in any of the ways specified in Section 18.08.140.”

- FINDING(S):
- a. At its 5/21/2020 regular meeting, the City Council set 6/18/2020 at 6:15 as the date and time when the public hearing for this project would occur.
  - b. Notice of the public hearing was published in the *Skamania County Pioneer* on 6/3/2020 and 6/10/2020.
  - c. Written notice of the public hearing was transmitted to the applicant and to the interested party on 6/2/2020.

CONCLUSIONS OF LAW: This project will comply with SMC 18.08.170 without conditions.

CRITERION §18.08.180 –COUNCIL ACTION. “A. At the public hearing scheduled for consideration of a permit by the council, the council shall, after considering all relevant information available and evidence presented to it, either grant, conditionally grant, or deny the permit.

- B. In granting or extending a permit, the council may attach thereto such conditions, modifications and restrictions regarding the location, character and other features of the proposed development as it finds necessary. Such conditions may include the requirement to post a performance bond assuring compliance with other permit requirements, terms and conditions.

C. The decision of the council shall be the final decision of the town on all applications for permits. The council shall render a written decision including findings, conclusions and a final order, and transmit copies of its decision to the persons who are required to receive copies of the decision pursuant to Section 18.08.190.”

FINDING(S): a. At the public hearing on 6/18/2020, the City Council reviewed all relevant information and evidence related to this proposal.  
b. Based on this review, the City Council is satisfied this proposal can proceed according to specific conditions to ensure compliance.

CONCLUSIONS OF LAW: This project will comply with SMC 18.08.180 upon satisfaction of the conditions contained herein.

CRITERION §18.08.190 THROUGH .220 These provisions include actions intended to occur after issuance of a permit by the City.

FINDING(S): a. The proposal is subject to the notice, appeal, revocation, and expiration provisions provided in these sections.

CONCLUSIONS OF LAW: This project will comply with SMC 18.08.190 through 18.08.220 upon satisfaction of conditions 4-6, below.

CONDITIONS:

4. **Prior to the Start of Construction** the proponent shall not begin work until 45 days from the date of filing of the final order of the Council with the Washington State Department of Ecology and Attorney General or until all review proceedings initiated within 45 days from the date of such filing have been terminated.
5. **Throughout the Duration of this Project** the proponent shall comply with requirements from other federal, state and county permits, procedures and regulations.
6. **Throughout the Duration of this Project** this permit shall be valid for 2 years from the date of approval by the Council. If the proposal is not completed within the 2-year period, the proponent may request City Council review and extension of the permit. Such request shall be submitted within the 2-year period of validity. Requests for extension are limited to 1 year at a time and subject to a maximum of 5 total years from the date of approval by the Council (2-year initial period of validity and 3 1-year extensions). Extensions will be granted by the Council only after finding that the proponent has made progress toward completion of the permit or that some other good cause exists for the extension.

CRITERION §18.08.230 THROUGH .240 These provisions are related to the review of Shoreline Conditional Use Permits and Shoreline Variance requests.

FINDING(S): a. The proposal includes uses permissible in the Urban Shoreline Environment Designation and does not require a Shoreline Conditional Use Permit.  
b. The proposal does not include any structures requiring a Shoreline Variance.

CONCLUSIONS OF LAW: This project will comply with SMC 18.08.100 through 18.08.180 without conditions.

CRITERION §18.08.250 These provisions are related to violations of the City’s Shoreline Management Program.

FINDING(S): a. The proposal is not subject to enforcement or penalties based on violation at this time.

CONCLUSIONS OF LAW: This project will comply with SMC 18.08.250 upon satisfaction of the conditions contained herein.

**SKAMANIA COUNTY SHORELINE MANAGEMENT MASTER PROGRAM**

The Skamania County Shoreline Management Master Program (SMP) contains the policies applicable to proposals undertaken in shoreline areas. Key provisions related to this proposal include the Overall Goals of Shoreline Master Program, Master Program Elements, Use Activities, Environment Regulations, and Use Regulations. Findings and conclusions are detailed below based on the portions of the program that apply to this proposal.

CRITERION SMP OVERALL GOALS OF SHORELINE MASTER PROGRAM This section of the SMP contains 11 goals intended to reflect the aspirations of the citizens of Skamania County.

- FINDING(S):
- a. The proposal is located along the Rock Cove, a shoreline of the City.
  - b. The proposal is consistent with the goals for development in these areas because, as conditioned, it:
    - 1. Preserves natural shoreline character where it exists on the former industrial site.
    - 2. Protects shoreline ecology and resources consistent with the standards of this program, the City's Critical Areas Code, and other regulatory programs.
    - 3. Recognizes and protects private property rights consistent with public interest.
    - 4. Provides public visual access but not physical access for recreation opportunities on Rock Cove.
    - 5. Preserves and protects fragile natural resources and culturally significant features where they exist on this site.
    - 6. Is unrelated to the establishment of criteria for orderly residential growth.
    - 7. Promotes an allowed, water-related use which is reasonable and appropriate within the Urban Environment and promotes and enhances public interest.
    - 8. Maintains the existing quality of the shoreline environment, high as it may be.
    - 9. Protects shorelines against adverse effects to public health land, vegetation, wildlife, water and aquatic life.
    - 10. Includes water quality measures to maintain the state water quality classification of Rock Cove.
    - 11. Can provide public physical access to the shoreline in advancement of the public right of navigation.

CONCLUSIONS OF LAW: This project will comply with the SMP's Overall Goals of Shoreline Master Program upon satisfaction of the conditions contained herein.

CRITERION SMP MASTER PROGRAM ELEMENTS: ECONOMIC DEVELOPMENT This is one of 7 Program Elements and states: "For the location and design of industries, transportation facilities, port facilities, tourist facilities, commercial and other developments that are particularly dependent on shoreland locations".

- FINDING(S):
- a. The proposal involves water-related commercial development on a site with several peninsulas and inlets which limit upland areas (i.e., areas more than 200' from the Ordinary High Water Mark [OHWM]) on the site to a small area less than 50' wide at its widest point. Some development is located in the upland areas and the City Council is satisfied that the overall development is infeasible unless

- shoreland areas (i.e., areas within 200' of the OHWM) are included.
- b. Structures on the proposed site include buildings, access drives, utilities, and stormwater management facilities. The proposed structures on the site are subject to administrative review under the Zoning Code, the Critical Areas Code, and the Stevenson Engineering Standards. The City Council is satisfied that these reviews are sufficient, as conditioned, to ensure the structures will be situated so as not to decrease the quality of human or natural environments, or place an unreasonable demand upon facilities of adjacent areas.
  - c. The application narrative adequately demonstrates the proposed uses and facilities will be of benefit to the economic, social, and natural environment of the Mid-Columbia area.
  - d. The uses of the site are consistent with the permissible uses of the SMP and the Zoning Code and, as conditioned, contain appropriate considerations for compatibility with uses adjacent to the site.
  - e. The findings above are made in consideration of findings located elsewhere herein.

CONCLUSIONS OF LAW: This project will comply with the SMP's Economic Development Element upon satisfaction of the conditions contained herein.

CRITERION SMP MASTER PROGRAM ELEMENTS: PUBLIC ACCESS This is one of 7 Program Elements and states: "Assure safe, convenient and diversified access for the public to public shorelines of Skamania County."

- FINDING(S):
- a. The proposal site is the subject of a public easement providing public visual access to the shoreline and located along the entire Rock Cove perimeter of the site.
  - b. The public access easement was granted by Skamania County as the property owner when the site was divided in 1996, however, no pathway has been developed within the public access easement.
  - c. The 50' shoreline setback of the Urban Environment applies to structures associated with development of the public pathway and a variance would be required prior to development of the pathway.
  - d. The public has been using a portion of the site—without an easement to do so—for physical access to the shoreline as an informal non-motorized boat launch.
  - d. The applicant has initiated a concurrent proposal to amend the plat recorded in 1996 to modify the location of the lot lines and the public easement. The intended modification should consider the provision public physical access to the shoreline in exchange for partially reducing public visual access. The public access includes foot trails and public right of ingress and egress. Conditions are necessary to ensure the above.
  - e. The existing and proposed access will not endanger life or property nor interfere with the rights inherent with private property.
  - f. The City Council encourages the public access areas which are planned features of the proposal.
  - g. As conditioned, the proposal does not curtail or reduce the existing free movement of the public, as such, the proposal is not discouraged.
  - h. [The Planning Commission recommends retaining public access between the](#)

construction phases until the accessible pathway is constructed, improving connectivity through the center of the property, retaining circulatory access around the property in place of out-and-back access.

i. The findings above are made in consideration of findings located elsewhere in this permit.

CONCLUSIONS OF LAW: This project will comply with the SMP's Public Access Element upon satisfaction of conditions 7, 8, and 8A below and the other conditions contained herein.

CONDITIONS:

**7. Prior to the Start of Construction** the proponent shall provide financial assurance that the public access components of the project will be completed.

**8. Within 3 years or prior to occupancy of future phases**, whichever occurs first, all facilities for public access shall be installed.

**8.A Prior to the Start of Construction** the proponent shall formalize all easements for public access. This may be done through the plat amendment process.

CRITERION SMP MASTER PROGRAM ELEMENTS: CIRCULATION This is one of 7 Program Elements and states: "Develop safe, convenient and diversified circulation systems to assure efficient movement of people during their daily and other activities with minimum disruptions to the shoreline environment and minimum conflict between the different users."

FINDING(S):

- a. The public pathway easement around the site is considered under the Public Access and Recreation elements of the SMP and is not considered a major thoroughfare, transportation route, terminal or other public facility.
- b. The proposal includes no other components considered major thoroughfares, transportation routes, terminals or other public facilities. As a result, the circulation element does not require in-depth findings by the City Council.

CONCLUSIONS OF LAW: This project will comply with the SMP's Circulation Element upon satisfaction of the conditions contained herein.

CRITERION SMP MASTER PROGRAM ELEMENTS: RECREATION This is one of 7 Program Elements and states: "Assure diverse, convenient, and adequate recreational opportunities along the shorelines of Skamania County for the local residents and a reasonable number of transient users."

FINDING(S):

- a. Recreational uses of the site include free public visual access along a pedestrian pathway and potential public physical access to Rock Cove. Recreational uses also include the fee-based operation of the water-related commercial use as a hotel for transient users.
- b. Development of these access/recreation amenities is subject to permitting under the Critical Areas Code and Stevenson Engineering Standards which will ensure the health and safety of the facilities and will preserve the integrity of the environment.
- c. The City Council encourages the proposed private recreational pathways which connect to the proposed public access areas.
- d. The inherent location of the proposal provides recreational opportunities for local citizens and tourist visitors.
- e. The proposed recreational amenities on the site are compatible with adjacent uses.
- f. There is no need for state or local government to acquire additional portions of

this shoreline property for recreational purposes.

g. The findings above are made in consideration of findings located elsewhere in this permit.

CONCLUSIONS OF LAW: This project will comply with the SMP's Recreation Element upon satisfaction of the conditions contained herein.

CRITERION SMP MASTER PROGRAM ELEMENTS: SHORELINE USE This is one of 7 Program Elements and states: "Assure appropriate development in suitable locations without diminishing the quality of environment along the shorelines of Skamania County."

FINDING(S):

- a. The proposal involves land use and no water use. The land use relates to and does not conflict with the existing uses of the water at the specific site.
- b. A publicly-funded analysis (EPA Vision to Action Program) of appropriate development for the site concluded the appropriateness of the proposed uses at this site.
- c. Specific land uses and location of structures is considered under the Urban Environment Regulations.
- d. The findings above are made in consideration of findings located elsewhere in this permit.

CONCLUSIONS OF LAW: This project will comply with the SMP's Shoreline Use Element upon satisfaction of the conditions contained herein.

CRITERION SMP MASTER PROGRAM ELEMENTS: CONSERVATION This is one of 7 Program Elements and states: "Assure preservation of unique, fragile and scenic elements, and of non-renewable natural resources; assure continued utilization of the renewable resources."

FINDING(S):

- a. The City has secured third-party consultant support to review the proposal's compliance with the Critical Areas Code and assure the site manages extant fish and wildlife habitat in accordance with the Conservation Element and its policies.
- b. The proposal, as conditioned, preserves scenic and aesthetic qualities of the shoreline.
- c. The findings above are made in consideration of findings located elsewhere in this permit.

CONCLUSIONS OF LAW: This project will comply with the SMP's Conservation Element upon satisfaction of conditions 9 through 11 below and the other conditions contained herein.

CONDITIONS:

- 9. Prior to the Start of Construction** a Critical Areas Permit shall be secured for the development and all pre-construction conditions of the permit shall be satisfied. Any offsite mitigation necessary to secure the critical areas permit may be located within the shoreline area, provided the offsite mitigation complies with the conditions contained herein.
- 10. Prior to Occupancy** all construction related conditions of the proposal's Critical Areas Permit shall be satisfied.

CRITERION SMP MASTER PROGRAM ELEMENTS: HISTORICAL/CULTURAL This is one of 7 Program Elements and states: "Protect, preserve and restore sites and areas having historical, cultural, educational and scientific values."

- FINDING(S):
- a. An Cultural Resources Study was completed on 2/4/2020 by Applied Archaeological Research Inc. (AAR), which concludes the site lacks buildings, structures, or sites that are listed in or eligible for listing in national, state, or local preservation registers.
  - b. The study by AAR also provides recommendations which are included as SEPA mitigation measures. Historical/Cultural Element.
  - c. The study by AAR identifies the previous uses of the site and its focus on eligibility for preservation registers does not consider the inherent historic, cultural, or educational value of the site's historic use, discontinuance, and proposed re-use.
  - d. The inherent historic, cultural, and educational value of the site's historic usage, discontinuance, and reuse can be preserved through the installation of an interpretive sign. .
  - e. The findings above are made in consideration of findings located elsewhere in this permit.

CONCLUSIONS OF LAW: This project will comply with the SMP's Historical/Cultural Element upon satisfaction of the conditions contained herein.

CONDITIONS:

**11. Prior to Occupancy** an interpretive sign shall be installed on the site within a public access area. The content of the sign shall address the site's history, complement, and not duplicate other signs within the system of interpretive signs existing in the city. The interpretive sign should incorporate the city's standard design elements and the applicant shall obtain approval from the Shoreline Administrator prior to sign fabrication.

CRITERION SMP SHORELINE POLICY STATEMENTS FOR THE USE ACTIVITIES This section of the SMP details specific policies for 21 types of use activities that serve as "the criteria upon which judgements [sic] will be based in granting shoreline permits".

- FINDING(S):
- a. Of the 21 specific uses identified in this section of the SMP, only 6 require detailed findings herein: Archeological Areas and Historic Sites, Commercial/Industrial Development, Recreation, Solid Waste Disposal, Utilities, and Wildlife.
  - b. Archeological Areas and Historic Sites.
    - 1. The Cultural Resources Report performed by AAR identifies no resources which are listed or eligible for listing in the national, state, or local historic registers.
    - 2. An inadvertent discovery policy is one of the 16 required SEPA mitigation measures which must be satisfied as part of the site's development.
    - 3. The Inadvertent Discovery Policy includes appropriate protocols for stopping and restarting work if archaeological or historic resources are found.
  - c. Commercial/Industrial Development.
    - 1. The proposed use (hotels, motels, condominiums) is considered water-enjoyment uses and benefits from its proximity to the shoreline.
    - 2. The proposal site is not owned by the Port District, however, it is encouraged because it is located in an Urban Environment where the use is permissible.
    - 3. The Council has assessed the scenic views of the area and concludes the proposal, as conditioned herein, has acceptable effects, especially from the County Fairgrounds across Rock Cove.
    - 4. Parking facilities are located in appropriate places away from the immediate



water's edge and recreational areas.

5. Public visual public access, and potential public physical access, to the waterfront are integral parts of this proposal.

6. The new commercial/industrial facilities have proposed locations outside of the 50' shoreline setback and minimize unwarranted use of the shorelines.

7. Standards for building setbacks and design, site coverage and landscaping are dealt with through other sections of the SMP and through the City's Zoning Code.

d. Recreation.

1. The proposal includes public visual access, and potential public physical access, to the shoreline and facilitates recreational uses.

2. The proposed new public access relieves pressure from other, informal access points along the Rock Cove.

3. The proposal includes a pathway that provides linear access and linkage between other pathways and the site's public access points.

4. Standards for views and scenic vistas are dealt with through other sections of the SMP.

5. The location of parking facilities is dealt with through other sections of the SMP.

6. The proposed public access and pathway supplement the variety of recreational developments available to nearby population centers.

7. The potential recreation facilities involved with physical access help address an existing deficit in the overall supply of formal public physical access to Rock Cove.

8. No facilities for intensive recreation are proposed at this time.

9. No recreational facilities requiring large amounts of fertilizers or pesticides are proposed at this time.

10. Public health needs are an important part of developing recreational areas and should be considered in relation to this project.

e. Solid Waste Disposal.

1. Structures and devices related to solid waste storage, collection, and transportation are considered as part of the site's administrative review under the Zoning Code.

2. The proposed does not involve disposal of solid waste on site.

f. Utilities.

1. The proposal involves installation of utilities to serve the site's needs. All utilities serve the site are proposed to be underground.

2. Suitability of the utilities to serve growth at the site will be determined based on the administrative review under the Stevenson Engineering Standards.

3. No major transmission lines are proposed for the site, and the site's location and property line configuration make extension of transmission lines infeasible.

4. Revegetation of the site is subject to administrative review under the Critical Areas Code, Zoning Code, and Stevenson Engineering Standards.

g. Wildlife.

a. On behalf of the applicants, Ecological Land Services (ELS) prepared a Preliminary Critical Areas Assessment for the site to identify rare and endangered wildlife species habitat. The proposal is subject to evaluation of impacts to rare and endangered wildlife under the Critical Areas Code.

b. The assessment prepared by ELS did not identify winter range habitats

requiring protection from development beyond those protections required by the Critical Areas Code.

c. The assessment prepared by ELS did not identify nesting sites for waterfowl, hawks, owls and eagle species requiring protection from development beyond those protections required by the Critical Areas Code.

d. Review of the project's possible detrimental impacts on wildlife resources, including the fisheries resource and spawning areas for anadromous fish, is dealt with through the Critical Areas Code.

h. The findings above are made in consideration of findings located elsewhere in this permit.

CONCLUSIONS OF LAW: This project will comply with the SMP's Master Program Elements upon satisfaction of conditions 12 and 13 below and the other conditions contained herein.

CONDITIONS:

**12. Prior to the Start of Construction** the proponent shall evaluate the recreational facilities/sites in relation with all guidelines and standards of appropriate state and local public health officials.

**13. Prior to the Start of Construction** the proponent shall apply for and obtain all appropriate approvals required under the City's Building and Zoning codes and the Stevenson Engineering Standards.

CRITERION SMP ENVIRONMENT REGULATIONS This section of the SMP details regulations applicable within specific Shoreline Environment Designations. The proposal is located in the Urban Environment, and the other 3 designation types are not detailed.

FINDING(S):

a. Inapplicable Environment Regulations. The proposal is located within an Urban Environment and subject to regulation thereunder. The proposal has not been reviewed according to the regulations for Natural, Conservancy, or Rural environments.

b. Urban Environment Regulation.

1. Purpose. Based on the review below and elsewhere herein, this proposal advances the purpose of the Urban Environment.

2. Uses. The proposal includes the following principal use: Hotels, motels, condominiums. The use is permissible in the Urban Environment. The proposed parking is accessory to the proposed principal use and is not considered a stand-alone principal use subject to shoreline conditional use review. No unlisted uses or listed conditional uses are proposed.

3. Minimum shoreline Frontage and Lot Size. Changes proposed to shoreline frontage or lot size are subject to review under the Zoning Code and short plat amendment procedures.

4. Public Access. The commercial proposal includes areas for public visual and physical access to the shoreline which do not interfere with the primary commercial activity or endanger public safety.

5. Setbacks. No buildings or structures are proposed to be located closer than 50' to the ordinary high water mark nor over water.

6. Building Height. No proposed buildings exceed 35' in height.

7. Building Design. Site plans have been submitted which illustrate the access areas of the site and their relation to the buildings. The landscaping of the site is

subject to review under Restoration, below, and the Critical Areas and Zoning codes.

8. Side yards. No buildings are proposed within the 25 minimum required side yard.

9. Front yards. No front yard requirement is identified in the SMP. Minimum front yards are subject to review under the Zoning Code.

10. Parking and Loading. No parking areas are proposed within the 50' shoreline waterfront setback area. The anticipated plat amendment or boundary line adjustment procedure will ensure no parking areas are proposed within the 25' shoreline side yard area. Parking and loading areas are proposed upland of the buildings being served.

11. Signs. No signs are proposed at this time.

12. Restoration. The proposal includes limited detail on landscaping. Vegetation within Critical Area buffers are subject to review and approval under the Critical Areas Code. Vegetation located between the buildings and Rock Creek Drive is subject to review and approval under the Zoning Code. No vegetation, landscaping or screening has been proposed for the future development area. No dilapidated buildings exist on the site. Maintenance of the construction site has not been detailed as part of the proposal but is subject to limited controls under the SEPA mitigation measures.

c. The findings above are made in consideration of findings located elsewhere in this permit.

CONCLUSIONS OF LAW: This project will comply with the SMP's Master Program Environment Regulations upon satisfaction of conditions 14 through 15 below and the other conditions contained herein.

CONDITIONS:

**14. Prior to Completion of this Project** the proponent shall submit a landscaping and/or screening plan for the future development areas of this project. The plan shall comply with the Restoration regulations of the Shoreline Management Master Program. [The landscaping/screening plan shall provide photo simulations of the project from 2 sites on the County Fairgrounds demonstrating the landscaping, within 10 years, will screen at least 50% of the building walls and rooftops from view at each location. To achieve the screening within the required timeline, the proponents shall retain as many of the existing, native trees as practicable except as necessary for site improvements or for safety purposes. All retained trees shall be indicated on the landscape plan.](#)

**15. During the Duration of this Project** the proponent shall install temporary fencing/screening around the construction site to prevent public visual and physical access to the area. In order to explain the project and temporary blockages, the fencing may include signs on the landward sides of the project. Signs shall be temporary and shall not exceed 40 square feet.

CRITERION SMP SHORELINE USE REGULATIONS This section of the SMP details specific regulations for 6 categories of use and is "intended to govern the manner in which the particular use of [sic] type of development is placed in each environment so that these [sic] are no effects detrimental to achieving the objectives of the particular environment".

FINDING(S): a. Inapplicable Use Regulations. The proposal does not include components reviewable under the Renewable Resource; Flood Plain Development, Surface Mining, or Docks and Floating Structure regulations.

- b. Construction and Operations Regulations.
  - 1. No construction equipment is proposed to enter any shoreline body of water, and the City Council lacks the authority to permit this if the need arises.
  - 2. Vegetation from shoreline areas may be removed if authorized in compliance with the Critical Areas and Zoning codes.
  - 3. The proposal is subject to review under the Stevenson Engineering Standards to ensure measures are implemented to control land-borne and water-borne siltation and erosion and will also prevent waste materials and other foreign matter from entering the water.
  - 4. Fuel and chemicals are necessary to operate the equipment used in this proposal.
  - 5. Drainage for the land being prepared for development is subject to review and approval under the Stevenson Engineering Standards.
  - 6. Road building is not proposed at this time.
  - 7. Land clearing operations are not proposed at this time.
  - 8. Equipment, fuels and/or oil may be necessary to complete this proposal.
- c. Scenic Vista and View Protection Regulations.
  - 1. No signage is proposed at this time.
  - 2. The proposal and its installation of utilities is reviewed above.
  - 3. No buildings or structures higher than 35 feet are proposed at this time.

CONCLUSIONS OF LAW: This project will comply with the SMP's Use Regulations upon satisfaction of conditions 16 through 18 below and the other conditions contained herein.

CONDITIONS:

- 16. Throughout the Duration of this Project** construction equipment shall only enter the waters of Rock Cove if authorized to do so by the appropriate state and/or federal agencies.
- 17. Throughout the Duration of this Project** All fuel and chemicals shall be kept, stored, handled and used in a fashion which assures that there will be no opportunity for entry of such fuel and chemicals into the water.
- 18. Prior to Project Completion** the proponent shall ensure that all construction debris such as fuel and oil containers and barrels and other miscellaneous litter are removed from the shoreline area. No equipment shall be abandoned within the shoreline area.

**SMC CH. 18.13 CRITICAL AREAS AND NATURAL RESOURCE LANDS**

This chapter considers whether projects are located within or likely to impact Critical Areas (Critical Aquifer Recharge Areas, Fish & Wildlife Habitat Areas, Frequently Flooded Areas, Geologically Hazardous Areas, Wetlands), requiring mitigation if impacts are identified. The Chapter is subject to administrative review and approval.

FINDING(S): a. The proponent has submitted a Preliminary Fish & Wildlife Habitat Report and is working with staff and a third-party consultant to review and finalize the permit requirements.

CONCLUSIONS OF LAW: This project will comply with the Critical Areas Ordinance upon satisfaction of the conditions contained herein.

**SHORELINE SUBSTANTIAL DEVELOPMENT PERMIT ISSUANCE**

The preceding discussion describes the City Council’s review of the relevant information available and evidence presented regarding FDM Development’s proposal for the Rock Cove Hospitality Center (City file SHOR2020-01). The findings and conclusions of this document justify issuance of a Shoreline Substantial Development Permit under the Skamania County Shoreline Management Master Program. The Shoreline Substantial Development Permit for this proposal is conditionally granted subject to the conditions established herein. For ease of readership, all conditions are repeated below:

Any person aggrieved by the granting of this permit by the Council may seek review from the Shorelines Hearings Board, pursuant to RCW 90.58.180.

**1. ...[To be added by staff upon Council Approval]...**

DATED this \_\_\_\_ day of June, 2020

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For the Council,  
Scott Anderson, Mayor  
City of Stevenson

Attachments:

A....[To be added by staff upon Council Approval]...

**CITY OF STEVENSON**  
**SMC 18.08 – Shoreline Management**

Regarding a request by the FDM Development to construct )  
Phase 1 of a mixed-use hospitality development offering condo- )  
and studio-sized units and commercial venue space. Phase 1 )  
involves up to 16 condo-style units, operated by a single )  
ownership group, similar to a hotel, associated parking, utilities, )  
and other sitework. Project is located in the Urban Shoreline )  
Environment Designation adjacent to Rock Cove in Section 1 of )  
Township 2, Range 7, E.W.M, City of Stevenson, Skamania County,)  
Washington, 98648. )

SHORELINE  
SUBSTANTIAL  
DEVELOPMENT PERMIT  
DENIAL  
June 18<sup>th</sup>, 2020

**PROPOSAL:** The applicant proposes to construct a mixed-use hospitality development adjacent to Rock Creek Cove on the former Hegewald Lumber Mill Site in Stevenson, WA. The project seeks to complement the existing tourism industry in Stevenson by offering condo- and studio-sized units available for nightly and weekly rental, totaling 48 available bedrooms. A 15,000 square-foot commercial venue space will anchor the development and provide wide views of Rock Creek Cove and the Columbia River Gorge. The conceptual space planning of the commercial building consists of 5,000 open venue space, supported by 10,000 square feet of service, food preparation, and guest lounging area. The development seeks to attract both local and regional visitors, with venue space available for weddings, company parties, family reunions, and corporate retreats. The Applicant proposes a three-phased development, beginning with the condo-style units, operated by a single ownership group, similar to a hotel. Phase 2 will add the commercial venue space and restore waterside portions of the property for enhanced, publicly-accessible observation and enjoyment. Phase 3 completes the development with the studio-sized units, operated under the same ownership group as the remainder of the property. The request for a Shoreline Substantial Development Permit relates to Phase 1 only.

**LOCATION:** The site address has not yet been assigned for this location adjacent to SW Rock Creek Drive containing shorelands associated with Rock Cove (Stevenson Lake) a designated shoreline of the city. The site includes 3 legal lots assigned Tax Lot Numbers 02-07-01-0-1302, -1303, and -1304 by the County Assessor.

**ELEMENTS:** Shoreline Use

**USES:** Commercial/Industrial Development (Hotels, Motels, Condominiums).

**KEY ISSUES:** Shoreline Use

**APPLICANT:** FDM Development  
Zachary Pyle  
5101 NE 82<sup>nd</sup> Avenue, Suite 200  
Vancouver, WA 98662

**Owner:** Erwin L & K, LLC & OPH DBD, LLC &  
Rawlings Family Investments, LLC  
5101 NE 82<sup>nd</sup> Avenue, Suite 200  
Vancouver, WA 98662

(360) 529-0987

(360) 529-0987

<b>CITY STAFF:</b>	Ben Shumaker Shoreline Administrator	Leana Kinley City Administrator	Scott Anderson Mayor
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**BACKGROUND:** The proposal occurs on 3 tax lots associated with 3 legal lots within the City of Stevenson. Prior to about 1975, the site had been developed as a veneer mill. The site has been vacant since the millwork was halted and the buildings removed. Prior to about 2019 the site had been owned by Skamania County. While under county ownership, the site served as an overflow parking area, an informal compost site, and an informal public non-motorized boat launch to the waters of Rock Cove. This proposal is the first reviewed by the City since the county transferred ownership. The proposal is subject to this review pursuant to the Shoreline Management Act of 1971 and other City development regulations (e.g., Critical Areas, Zoning, SEPA, etc.).

**STANDARDS, FINDINGS AND CONCLUSIONS**

**SMC 18 – ENVIRONMENTAL PROTECTION**

Title 18 of the Stevenson Municipal Code is separated into three chapters. Chapter 18.04 considers the City’s procedures under the State Environmental Policy Act (SEPA). This Chapter is referenced based on previous, administrative reviews. Chapter 18.08 addresses Shoreline Management and, together with the adopted Shoreline Management Master Program, is the focus of this review. Chapter 18.13 focuses on Critical Areas and Natural Resources Lands and involves administrative review related to this project’s location along a riparian habitat area. This chapter is referenced several times, but no findings or conclusions are incorporated herein.

**SMC CH. 18.04 ENVIRONMENTAL POLICY**

This chapter considers whether projects are likely to have a probable significant adverse impact on the environment, requiring agencies to evaluate actions before they are taken. The chapter is separated into 11 articles covering various permitting and project review actions.

**CRITERION §18.04 ARTICLE III CATEGORICAL EXEMPTIONS AND THRESHOLD DETERMINATIONS** This article adopts

Washington Administrative Code (WAC) sections related to the applicability and review process for projects under SEPA.

[Detailed findings and conclusions related to this chapter are not included in this review based on review conducted under the SMP’s Shoreline Use Element and Commercial/Industrial Development Policies.]

**SMC CH. 18.08 SHORELINE MANAGEMENT**

This chapter details the procedures for review according to the Shoreline Management Act. The chapter is separated into 25 sections detailing program administration and project review.

[Detailed findings and conclusions related to this chapter are not included in this review based on review conducted under the SMP’s Shoreline Use Element and Commercial/Industrial Development Policies.]

**SKAMANIA COUNTY SHORELINE MANAGEMENT MASTER PROGRAM**

The Skamania County Shoreline Management Master Program (SMP) contains the policies applicable to proposals undertaken in shoreline areas. Key provisions related to this proposal include the Overall Goals of Shoreline Master Program, Master Program Elements, Use Activities, Environment Regulations, and Use Regulations. Findings and conclusions are detailed below based on the portions of the program that apply to this proposal.

CRITERION SMP OVERALL GOALS OF SHORELINE MASTER PROGRAM This section of the SMP contains 11 goals intended to reflect the aspirations of the citizens of Skamania County.

[Detailed findings and conclusions related to this SMP section are not included in this review based on review conducted under the SMP's Shoreline Use Element and Commercial/Industrial Development Policies.]

CRITERION SMP MASTER PROGRAM ELEMENTS: ECONOMIC DEVELOPMENT This is one of 7 Program Elements and states: "For the location and design of industries, transportation facilities, port facilities, tourist facilities, commercial and other developments that are particularly dependent on shoreland locations".

[Detailed findings and conclusions related to this SMP element are not included in this review based on review conducted under the SMP's Shoreline Use Element and Commercial/Industrial Development Policies.]

CRITERION SMP MASTER PROGRAM ELEMENTS: PUBLIC ACCESS This is one of 7 Program Elements and states: "Assure safe, convenient and diversified access for the public to public shorelines of Skamania County."

[Detailed findings and conclusions related to this SMP element are not included in this review based on review conducted under the SMP's Shoreline Use Element and Commercial/Industrial Development Policies.]

CRITERION SMP MASTER PROGRAM ELEMENTS: CIRCULATION This is one of 7 Program Elements and states: "Develop safe, convenient and diversified circulation systems to assure efficient movement of people during their daily and other activities with minimum disruptions to the shoreline environment and minimum conflict between the different users."

[Detailed findings and conclusions related to this SMP element are not included in this review based on review conducted under the SMP's Shoreline Use Element and Commercial/Industrial Development Policies.]

CRITERION SMP MASTER PROGRAM ELEMENTS: RECREATION This is one of 7 Program Elements and states: "Assure diverse, convenient, and adequate recreational opportunities along the shorelines of Skamania County for the local residents and a reasonable number of transient users."

[Detailed findings and conclusions related to this SMP element are not included in this review based on review conducted under the SMP's Shoreline Use Element and Commercial/Industrial Development Policies.]

CRITERION SMP MASTER PROGRAM ELEMENTS: SHORELINE USE This is one of 7 Program Elements and states: "Assure appropriate development in suitable locations without diminishing the quality of environment along the shorelines of Skamania County."



- FINDING(S):
- a. The proposal involves land use and no water use. The land use relates to and does not conflict with the existing uses of the water at the specific site.
  - b. A publicly-funded analysis (EPA Vision to Action Program) of appropriate development for the site identified a public desire to see residential uses incorporated into the site program.
  - c. A City-funded Housing Needs Analysis identifies a county-wide need for 1,949 total additional housing units over the next 20-years. The report also identifies the need for ~45% of those units to be affordable to middle-income households.
  - d. The proposed development site is more particularly suited to accommodate the mix of residential development identified than the use proposed (Commercial-Hotel, motel, condominiums).
  - e. The improper proposed uses should be discouraged and the land should be reserved for more the more appropriate use discussed herein.
  - f. The findings above are made in consideration of findings located elsewhere in this document.

CONCLUSIONS OF LAW: This project does not comply with the SMP's Shoreline Use Element.

CRITERION SMP MASTER PROGRAM ELEMENTS: CONSERVATION This is one of 7 Program Elements and states: "Assure preservation of unique, fragile and scenic elements, and of non-renewable natural resources; assure continued utilization of the renewable resources."

[Detailed findings and conclusions related to this SMP element are not included in this review based on review conducted under the SMP's Shoreline Use Element and Commercial/Industrial Development Policies.]

CRITERION SMP MASTER PROGRAM ELEMENTS: HISTORICAL/CULTURAL This is one of 7 Program Elements and states: "Protect, preserve and restore sites and areas having historical, cultural, educational and scientific values."

[Detailed findings and conclusions related to this SMP element are not included in this review based on review conducted under the SMP's Shoreline Use Element and Commercial/Industrial Development Policies.]

CRITERION SMP SHORELINE POLICY STATEMENTS FOR THE USE ACTIVITIES This section of the SMP details specific policies for 21 types of use activities that serve as "the criteria upon which judgements [sic] will be based in granting shoreline permits".

- FINDING(S):
- a. Of the 21 specific uses identified in this section of the SMP, only 1 requires detailed findings herein: Commercial/Industrial Development.
  - b. Commercial/Industrial Development.
    - 1. The proposed use (hotels, motels, condominiums) is considered water-enjoyment uses and benefits from its proximity to the shoreline; however, the proposal site is on land owned by the Port District where the City seeks to encourage such uses.
    - 2. This project should recognize and prioritize the City's encouragement of such uses on Port District property in developing its Shoreline Use program.
  - c. The findings above are made in consideration of findings located elsewhere in this document.

CONCLUSIONS OF LAW: This project does not comply with the SMP's Shoreline Policy Statements for Use Activities.

CRITERION SMP ENVIRONMENT REGULATIONS This section of the SMP details regulations applicable within specific Shoreline Environment Designations. The proposal is located in the Urban Environment, and the other 3 designation types are not detailed.

[Detailed findings and conclusions related to the SMP Environment Regulations are not included in this review based on review conducted under the SMP's Shoreline Use Element and Commercial/Industrial Development Policies.]

CRITERION SMP SHORELINE USE REGULATIONS This section of the SMP details specific regulations for 6 categories of use and is "intended to govern the manner in which the particular use of [sic] type of development is placed in each environment so that these [sic] are no effects detrimental to achieving the objectives of the particular environment".

[Detailed findings and conclusions related to the Shoreline Use Regulations are not included in this review based on review conducted under the SMP's Shoreline Use Element and Commercial/Industrial Development Policies.]

**SMC CH. 18.13 CRITICAL AREAS AND NATURAL RESOURCE LANDS**

This chapter considers whether projects are located within or likely to impact Critical Areas (Critical Aquifer Recharge Areas, Fish & Wildlife Habitat Areas, Frequently Flooded Areas, Geologically Hazardous Areas, Wetlands), requiring mitigation if impacts are identified.

[Detailed findings and conclusions related to this SMP element are not included in this review based on review conducted under the SMP's Shoreline Use Element and Commercial/Industrial Development Policies.]

**SHORELINE SUBSTANTIAL DEVELOPMENT PERMIT DENIAL**

The preceding discussion describes the City Council's review of the relevant information available and evidence presented regarding FDM Development's proposal for the Rock Cove Hospitality Center (City file SHOR2020-01). The findings and conclusions of this document justify denial of a Shoreline Substantial Development Permit under the Skamania County Shoreline Management Master Program. The Shoreline Substantial Development Permit for this proposal is denied based on the findings and conclusions contained herein.

Any person aggrieved this decision of the Council may seek review from the Shorelines Hearings Board, pursuant to RCW 90.58.180.

DATED this \_\_\_\_ day of June, 2020

\_\_\_\_\_  
For the Council,  
Scott Anderson, Mayor  
City of Stevenson

# Executive Summary

Skamania County initiated this effort to better understand the impact of brownfields in the community and to evaluate the potential for redevelopment around Rock Creek Cove, particularly on the former Hegewald Veneer Mill property. The project consisted of a Phase II environmental site assessment, county-wide brownfield site inventory, Vision-to-Action program, and U.S. Environmental Protection Agency Brownfields Community-Wide Assessment grant application. Funding was made available through the County's Economic Development budget and from a grant provided by the Center for Creative Land Recycling.

**Many people contributed to the success of this project. The County would like to acknowledge the following specifically:**



# 1 Introduction

## WHAT WAS ACCOMPLISHED

In October 2016, Skamania County (the County) initiated an effort to better understand the impact of brownfields in the community and to obtain more information about one brownfield site in particular: the former Hegewald Veneer Mill (Hegewald Site). To this end, the County was able to accomplish the following:

- Complete a Phase II environmental site assessment (ESA) for the Hegewald Site
- Create a preliminary brownfield site inventory for the County
- Complete a Vision-to-Action program for the Hegewald Site
- Prepare a U.S. Environmental Protection Agency (USEPA) Brownfields Community-Wide Assessment (CWA) grant application
- Determine a Redevelopment Pathway for the Hegewald Site, in particular, and brownfields in the county in general

### WHAT IS A BROWNFIELD?

Brownfield sites are abandoned or underused properties where there may be environmental contamination. Redevelopment efforts are often hindered by the liability for the cleanup or the uncertainty of cleanup costs. Brownfield sites that aren't cleaned up represent lost opportunities for economic development and for other community improvements.

*-Washington State Department of Ecology*

## SKAMANIA COUNTY

Skamania County, located in central southern Washington, is a rural community of approximately 11,200 residents. The county is bordered to the south by the Columbia River and reaches north into the Cascade Mountains and the Gifford Pinchot National Forest. The county was founded in 1854 and was a regional hub for booming fishing and lumber industries. Its location along the Columbia River opened the county to international trade of regional exports rooted largely in the area's wealth of timber and raw materials. In 1908, when the railroad was built through Stevenson, the county seat, the lumber industry thrived and dominated the county's economic activity for the next several decades, providing jobs for most of the local residents.

However, as the timber industry declined with the growing protections for endangered species, lumber mills closed and, by March 1993, more than a quarter of the county's employable

residents were out of work. Approximately 88 percent of the county is protected State and Federal land. Much of the remaining developable land area is located along the Columbia River, and were previously used for timber-related industrial processes that left the sites suspect for contamination. The County conducted this brownfield assessment and planning project in order to address brownfield concerns on sites with a high redevelopment potential and begin to imagine a new path forward.

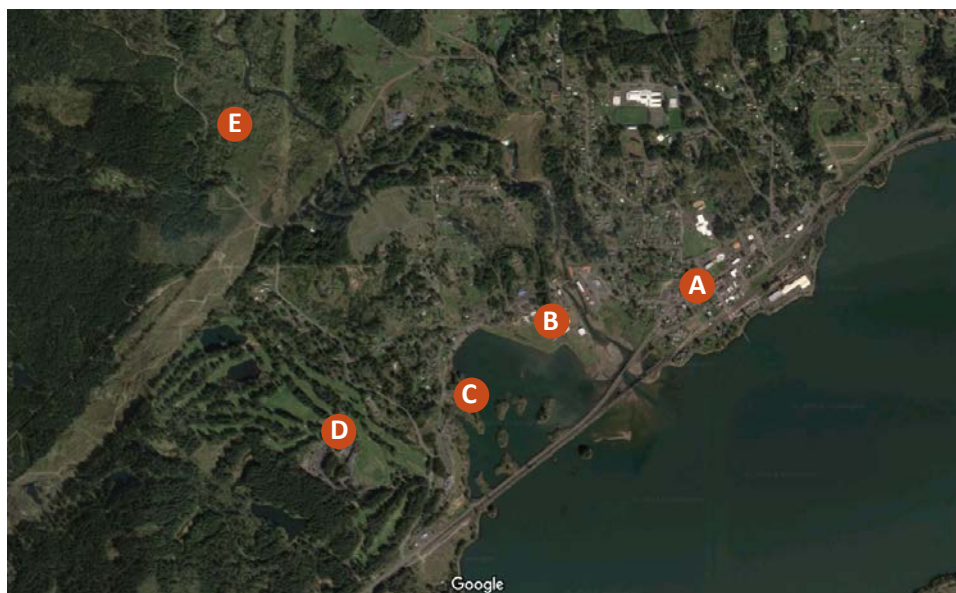
## THE HEGEWALD SITE

The Hegewald Site is currently owned by the County and is located on Rock Creek Drive between Skamania Lodge and downtown Stevenson, Washington. The 6.4-acre Hegewald Site forms a peninsula that projects into Rock Creek Cove. It was used as a timber-peeling plant from approximately 1950 to the early 1980s. The plant closed with the decline in the timber industry.

Much of the private and locally owned land in the county is restricted to development by lack of infrastructure and access as well as the Columbia Gorge National Scenic Overlay, which limits development outside recognized Urban Areas. The Hegewald Site therefore represents an important development opportunity for the County and the local community: it is a brownfield site with redevelopment potential located in the Stevenson Urban Area. It has waterfront access, a view of the Columbia Gorge, appropriate zoning for redevelopment (Commercial Recreation), access to general utilities, and has high visibility due to its location between Skamania Lodge and downtown Stevenson.

The primary barriers to redevelopment have been identified as: the potential for contamination, lack of a community-supported vision for a future use, and absence of a clear pathway to redevelopment. These issues were addressed in the County's initiative through the Phase II ESA, Vision-to-Action program, and Redevelopment Pathway, respectively.

**Figure 1. Map of Stevenson and Hegewald Site**



- A. City of Stevenson**
- B. Skamania County Fairgrounds**
- C. Former Hegewald Veneer Mill**
- D. Skamania Lodge**
- E. Gifford Pinchot National Forest**

Figure 2. Former Hegewald Veneer Mill



## 2 Phase II ESA

### PURPOSE

The Phase II ESA was conducted to evaluate the potential for environmental impacts associated with historical operations in selected areas of the Hegewald Site. The data generated were compared against Model Toxics Control Act (MTCA) cleanup levels (CULs) or Method B CULs for contaminants of concern to see if there were any exceedances.

### Historical Use

A timber-peeling/veneer facility operated on the Hegewald Site from approximately 1950 into the early 1980s. The facility was initially owned by the Hegewald Timber Company, Inc., and was purchased in the 1970s by Louisiana Pacific, which continued facility operations. Historical photographs indicate that the facility consisted of a large, factory-type building; a second, smaller structure of unknown use; and two wigwam burners. The wigwam burners appear to have been fed with woodwaste (sawdust, scraps, chips, etc.) obtained from the timber-peeling

work as well as from the timber-milling work Hegewald Timber Company, Inc. conducted on a nearby property to the west.

The Hegewald Site is currently vacant with some vegetation on the perimeter of the property. It is not utilized except for a small area where straw and horse manure from the County Fairgrounds are stockpiled. There are two concrete slab foundations left over from historical buildings, but no other historical development features appear to be present.

## Methodology

In order to assess whether there was any contamination on the Hegewald Site, ground-penetrating radar (GPR) was used to check for old infrastructure (e.g., tanks, tank pits, pipes, septic systems), and soil samples were collected from test pits and analyzed for metals, petroleum, and dioxins (contaminants that would be likely given the historic uses on the site). The GPR covered the entirety of the site. Ten test pits were dug on the site, with samples taken at various depths. The location of these test pits was determined based on the locations of historical features (e.g., former wigwam burner locations, former building locations, fill material locations).

## FINDINGS

The results of the GPR and test pit sampling are as follows:

- The GPR found no tanks on the site.
- There were no field-observed impacts in soil.
- Petroleum was not detected in the soil samples.
- Some metals and dioxins were detected in the soil, but not above the MTCA Method A or Method B soil CULs.

**In conclusion, no further investigation was considered warranted or was recommended.**

# 3 Brownfield Inventory

## PURPOSE

A preliminary brownfield inventory was conducted by windshield survey and through research into the USEPA brownfield and Washington State Department of Ecology's Environmental Information Management (EIM) database. The windshield survey covered all developable parts of the county that were not zoned for residential uses. This preliminary inventory provides a general understanding of brownfields in Skamania County. The inventory recorded the following for each parcel:

- Parcel Number



- Property Owner
- Address
- Size
- Zoning
- Brownfield Status (Non-Suspect, Unknown, Suspect, Known)

This analysis helped the County understand which properties had the most redevelopment potential. Parcels that were large, County-owned, and zoned to accommodate a mix of uses had the highest potential return on investment. Sites determined to have the most redevelopment potential (including the Hegewald Site) were included in the CWA grant application as examples of sites where grant funding for environmental assessment and redevelopment planning would yield the greatest benefit to the community.

## FINDINGS

The table below summarizes the findings from the brownfield inventory. All of the parcels in this analysis are located in Skamania County and are potentially redevelopable (in that they are not located on protected land) and are outside of residential zones.

**Table 1. Preliminary Brownfield Inventory Summary**

Brownfield Status	Total	Size (acres)		Zoning (percent of land area)			
		Total Acres	Median Size	Commercial	Mixed Use	Industrial	Public Recreation / Other
Non-Suspect	325	713.68	0.33	84%	3%	8%	5%
Unknown	53	391.28	1.56	90%	10%	0%	0%
Suspect	39	155.79	0.51	80%	20%	0%	0%
Known	30	405.31	1.59	7%	88%	0%	5%

### Definitions

Non-Suspect: Not listed in the Washington State Department of Ecology’s (Ecology) Environmental Information Management (EIM) database or the USEPA’s brownfield database. No visible indications of a prior use that could be associated with contamination.

Unknown: Not listed in the EIM or USEPA brownfield database and could not be seen from the road during the windshield survey.

Suspect: Not listed in the EIM or USEPA brownfield database, but had visible indications of a prior use that could be associated with contamination.

Known: Listed in the EIM or USEPA brownfield database.

Based on Table 1, it is evident that there is a lot of available developable land in Skamania County that requires little to no environmental assessment in order to be shovel-ready. Most of this land is already zoned for commercial and mixed-use development, and would be attractive to developers looking to build a mix of uses in the Columbia River Gorge. The full results of this preliminary inventory were provided to the County as a geodatabase.



# 4 Vision-to-Action

## PURPOSE

Vision-to-Action is an interactive tool developed for the USEPA to help communities generate momentum and focus on the sustainable redevelopment of brownfields. Skamania County partnered with the Center for Creative Land Recycling to fund this program for the Hegewald Site. The program consists of two community meetings and strategic planning from a consultant team. The first meeting was structured as an interactive workshop where the community was asked to brainstorm ideas for future redevelopment, identify common themes, and develop a list of prioritized uses by creating their own visions using simple art supplies. These ideas were translated into an artistic rendering of the site.

At the second workshop, the rendering was presented to the community, along with the results of a strengths, weaknesses, opportunities, and threats analysis and the Phase II ESA. As requested by the community, a planning exercise was conducted that took a wider view of Rock Creek Cove to understand how the prioritized uses identified during the first meeting could be distributed around the cove. Participants also had an opportunity to create new uses that might have been overlooked during the first meeting.

## FINDINGS

### Meeting #1

*NOVEMBER 30, 2016*

*ATTENDEES: 24*

The eight prioritized uses (in order of preference) were as follows:

1. Public Access/Trail
2. Water Access (dock, fishing, nonmotorized-boat launch)
3. Residential
4. Mixed Use
5. Retail
6. Other Lodging
7. Restaurant
8. Camping/Glamping

## Meeting #2

JANUARY 27, 2017

ATTENDEES: 18

During the planning exercise for Rock Creek Cove, attendees were given three questions to discuss as a small group. Below are the questions and the themes that emerged from the responses:

- What is the first (i.e., highest priority) use that the group decided on?
  - Water Access (nonmotorized boat launch)
  - Public Trail Access
- What uses did you include that did not come from the first meeting?
  - Event Space/Shelter
  - Cultural/Historical Monument
- Are you willing to trade some control over the redevelopment outcome in exchange for a quicker result?
  - Low-cost development (e.g., glamping) could be an interim use preceding full redevelopment.
  - Maintaining public access to an improved waterfront is worth waiting for.

Mixed use was the most popular land use suggested for the Hegewald Site. Generally, most participants imagined residences above a restaurant, café, or use tied to water recreation.

# 5 Community-Wide Assessment Grant

## PURPOSE

CWA grants provide funding for developing inventories of brownfields, prioritizing sites for assessment, conducting community involvement activities, conducting site assessments, and cleanup planning related to brownfield sites. If obtained, this grant would provide \$300,000 in funding to conduct Phase I and Phase II ESAs on some of the other known and suspected brownfield sites identified during the brownfield inventory, create a sub-area plan for Rock Creek Cove, and continue community involvement efforts.

**CWA grant recipients will be announced in spring 2017.**

# 6 Redevelopment Pathway

This section outlines steps recommended to implement the vision developed in the Vision-to-Action workshops. These are recommendations based on best practices and experiences with similar projects. As such, they are not necessarily prescriptive, nor are they iterative, the County should proceed according to their own internal processes and in response to the opportunities presented. Implementation steps are outlined specifically for the Hegewald Site and for the Rock Creek Cove in general.

## HEGEWALD SITE

The following steps are recommended to move the property toward disposition to a private development entity.

### Step 1: Property Marketing

The County should initiate a set of informal property-marketing actions, including setting up a development opportunity website, developing materials that clearly communicate the opportunity available on the Hegewald Site, drafting press releases on the planning work to-date, and hosting informal tours with developers.

### Step 2: Establish Terms of Sale & Public-Private Partnership

Terms of sale determine the conditions the County may want to impose on the sale of the property to help guide future use and development to closely match that identified in the Vision-to-Action workshops. These conditions may include provisions for public access, setbacks from the waterfront (if not otherwise determined by the zoning), and requirements for placement of amenities. It should be noted that there is always a tradeoff involved: more restrictions on development and conditions of operation can lead to decreased interest in the property and more difficult sales negotiations.

A Public-Private Partnership is also a useful tool if a public development or amenity is going to be included on the property. For instance, a park or boat launch on the property may require public investment if it is going to be maintained for public access on what will likely become private property. This partnership can be enticing for a developer who is looking for an incentive to invest in the private development component of the property.

### Step 3: Contract with a Commercial Broker

This is also an optional step if the County does not have the capacity to manage the negotiation and sale of the property to a private party. Commercial brokers most typically work on a commission basis – percentage of sale value – paid after the close of the sale. In some cases, they can work on a time and materials (or similar) basis to support additional marketing and disposition tasks.

## Step 4: Issue Request for Information or Request for Qualifications for Developer

The Request for Information (RFI), Request for Qualifications (RFQ), and Request for Proposals (RFP) are the standard forms of formal solicitation for a public entity. The degree of formality and commitment increases in degree from the RFI to RFP. In this case, we recommend starting with an RFI or RFQ to help focus outreach and gain a better understanding of interest from the development community without demanding a high level of effort or committing the County to a specific outcome through the RFP process. The RFI or RFQ processes also increase the odds of a broader and higher rate of response. The process may not produce a development partner, but can at least provide the county with a good sense of the level and type of interest in the property.

## Step 5: Agree on Disposition of Development Agreement

The Disposition of Development Agreement (DDA) is the document that enforces the terms of sale established in Step 2. This is the formal mechanism through which County objectives are memorialized (e.g. codifying issues that are important to the community, like height limitations) and the developer is provided with certainty on key elements such as developable land area. The DDA establishes who is responsible for specific actions and investments as well as the timeline over which these actions and investments will occur.

## Step 6: Identify funding for public components

If public amenities and improvements are expected, the County will need to obtain funding for design and construction. The State has several programs available, which are outlined in the funding options table, below.

## ROCK CREEK COVE AREA – STEPS FORWARD

### Step 1: Identify Champion(s)

Project champions are people who act as the main figurehead(s) of the project until completion. Project champions ensure that the project remains relevant to and in the forefront of the minds of the local community members, stakeholders, and decision makers. Long-term development projects (such as the realization of a sub-area plan; see Step 2) can lose saliency over time, which can translate into a loss of priority for funding the component parts (planning, infrastructure, analysis, etc.). Projects that lose their steam might never be completed. Project champions take on the responsibility of ensuring that all of the relevant stakeholders are on board as the project progresses. They can also be in charge of:

- Communicating the project's strategic objectives and relating those to the goals of other stakeholders
- Ensuring that the vision for the project is successfully translated into the requirements and plans that regulate the area
- Analyzing and implementing best practices
- Anticipating and eliminating obstacles that will threaten the project's viability
- Keeping stakeholders updated on the status of the project and celebrating all progress, small and large

- Continuing to engage the community and foster community buy-in by giving them a stake in the project’s success

## Step 2: Complete a Sub-Area Plan

Sub-area plans provide a framework for future development of areas of interest within a jurisdiction (waterfronts, central business districts, etc.). Sub-area plans are rooted in a community vision for the area as articulated by guiding principles or project goals and can be used to address community preferences in terms of land use and design, open space, economics, and transportation. For Skamania County, three elements will be of particular importance:

- Use and design standards: The community expressed a preference through the Vision-to-Action meetings for maintaining the small-town feel of their community in the scale and design of future development. The sub-area plan can address preferences for types of uses, height limitations, and design.
- Market analysis: A market analysis is an important component that can check the desires of the community against the capacity of the market to find the most suitable uses for a particular site and create a strategy for redevelopment.
- Circulation plan: It is important to understand how people will move to and through the area, including existing impediments to access. A circulation plan can address how pedestrians, cyclists, public transit, and automobiles can access the area and how these different forms of transportation will interact with one another.

## Step 3: Create a Redevelopment Opportunity Zone

Redevelopment Opportunity Zones (ROZs) open up new funding opportunities and give the zone a priority status for funding. ROZs also provide access to new tools for redevelopment that are authorized for use only in these zones, such as a Prospective Purchaser Agreed Order<sup>1</sup> and mixed funding.<sup>2</sup> According to RCW 70.15D.150, “A city or county may designate a geographic area within its jurisdiction as a redevelopment opportunity zone” so long as the following determinations and commitments are met and the city council adopts a resolution attesting to this fact:

1. At least 50 percent of the upland properties in the zone are brownfield properties, whether or not they are contiguous.
2. The upland portions of the zone consist entirely of parcels of property owned by either the city or the County, or whose owners have provided consent in writing to have their property included in the zone.
3. The cleanup of brownfield properties will be integrated with planning for the future uses of the properties and is consistent with the comprehensive land-use plan for the zone.
4. The proposed properties lie within the incorporated area of a city or within an urban-growth boundary.

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<sup>1</sup> A Prospective Purchaser Agreed Order provides greater protection and expediency for innocent parties to take on brownfield properties than tools currently available in Washington State.

<sup>2</sup> Mixed funding allows Ecology to provide funding to private and nonprofit parties through a Prospective Purchaser Consent Decree where public benefit can be demonstrated.

To establish a ROZ, the County would need to create a boundary and ensure that all properties within that boundary meet the eligibility criteria. The ROZ requires written consent of all property owners within the boundary and approval of city council.

#### **Step 4: Identify and Obtain Funding**

The developable properties in the county could benefit from a variety of funding sources, depending on the purpose of that funding (brownfield assessment and cleanup, economic development, and community planning). Below is a list of funding resources broken down by category, with a brief description of the purpose of the program and the amount of funding available.

<b>Brownfield Assessment and Cleanup</b>		
USEPA Cleanup Grant	Grants to provide funding for the cleanup activities on applicant-owned brownfield sites.	Up to \$200,000 per site. Up to three sites.
Ecology Oversight Remedial Action Grants	Grants for local governments to fund remedial investigations and cleanup actions.	No maximum. 50% match, with opportunities to decrease to 10%.
<b>Parks and Trails</b>		
U.S. Fish and Wildlife Service	Grant to construct, renovate, and maintain boating facilities.	Maximum of \$100,000 for small projects.
<b>Economic Development</b>		
EDA Economic Adjustment Assistance Program	Activities such as developing and updating a community economic development strategy (CEDS) and for implementing the CEDS by carrying out projects for site acquisition, preparation, construction, rehabilitation, technical assistance, market, or industry research and analysis, and other activities set out in 13 CFR 307.3.	Average project award: \$570,000. 50% match but may be adjusted.
EDA Planning Program	Development, implementation, revision, or replacement of CEDS and related short-term planning investment.	Unknown funding limit. 50% match but may be adjusted.
USDA Rural Business Opportunity Grant Program	Promotes sustainable economic development in rural communities with exceptional needs. Funds economic planning for rural communities and businesses as well as for the training of rural entrepreneurs and economic development officials.	\$100,000 maximum.
USDA Rural Business Enterprise Grant Program	Provides funds to public bodies and private nonprofit corporations for projects designed to finance and facilitate the development of small and emerging private or nonprofit businesses. Funding can be used for business district infrastructure projects, capital improvement projects, business incubators, and downtown revitalization projects.	Grants generally range between \$10,000 and \$500,000.
CERB Planning Projects	Funding for studies that evaluate high-priority economic development projects. Projects should target job growth and long-term economic prosperity.	\$50,000 maximum. 25% match.

CERB: Community Economic Revitalization Board

EDA: Economic Development Association

USDA: U.S. Department of Agriculture

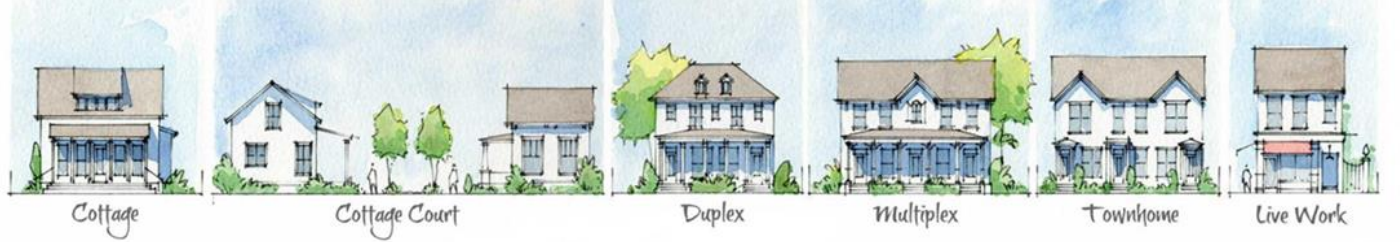






# Skamania County and City of Stevenson

## Housing Needs Analysis



## Acknowledgements

This work is made possible through input provided by Skamania County, City of Stevenson and Skamania County Economic Development Commission (EDC) staff and the project Technical Advisory Committee and community outreach participants. We specifically recognize and appreciate the time and attention dedicated to this work by the following individuals.

### Technical Advisory Committee

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## Section I. SUMMARY

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As part of the greater Portland-Vancouver bi-state region, Skamania County is experiencing unprecedented growth in population and households. **This trend is driving up housing needs** and is expected to continue over the foreseeable future as the Pacific Northwest continues to outpace national growth trends.

In addition to regional growth pressure caused in-part by commuters to distant job markets, **Skamania County's attractive location on the Columbia River and recreational amenities continue to attract part-time seasonal residents, who currently own about 1 in 5 dwellings.**

According to Windermere Realty, between 2018 and 2019, **average home prices in Skamania County increased 26%, which was by far the largest increase of any county** within the Region (second place was Columbia County with a 4% annual increase).

Income in Skamania County is insufficient for many people to comfortably afford housing. As of 2017, **there were nearly 1,100 of cost-burdened households** (paying over 30% of their income on housing). This 2017 data reflects a point in time before the double-digit housing prices began to occur, so the housing affordability problem is only getting worse.

Looking ahead, **Skamania County is projected to add another 3,619 new residents over the next 20 years, which will require another 1,949 additional housing units** to be constructed.

**With current vacancy rates near zero, the growing 20-year demand will support a variety of new housing types**, including 1,142 owner-occupied dwellings, 475 long-term renter dwellings, 331 short-term renter dwellings, and 20 units of group quarters (transitional housing units).

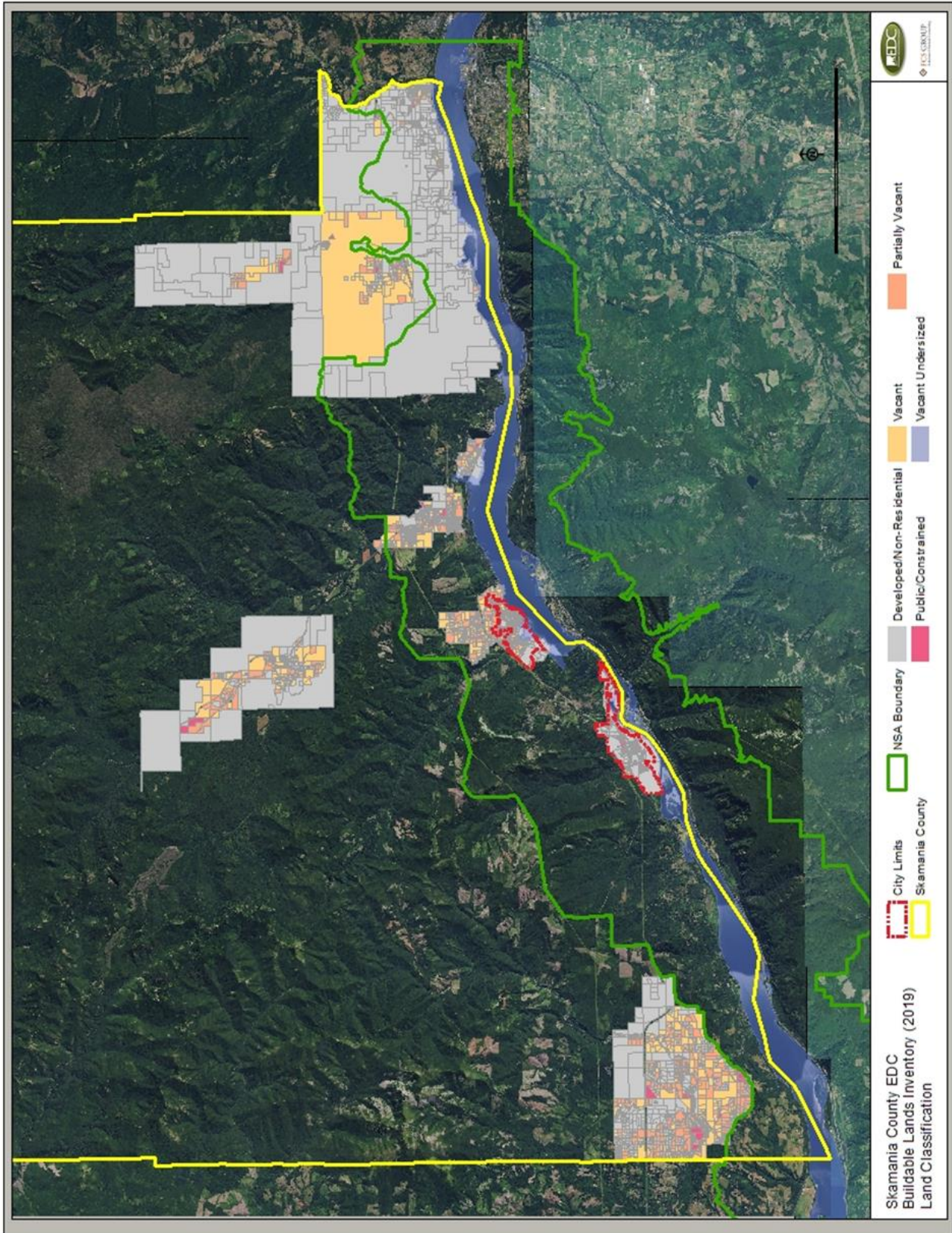
**It is estimated that 45% of this future housing demand (800 to 900 units) will need to be affordable to middle-income households** (with incomes less than \$88,000). Middle housing includes cottages, townhomes, duplexes, garden apartments as well as accessory dwelling units, which can be built at a lower cost than traditional rural detached housing.

**This study has identified and mapped 8,746 acres of potentially buildable land area** within Skamania County (**Exhibit 1.1**) which is zoned for new housing. **However, over 80% of this land is not appropriately zoned and/or served by utilities to address middle housing needs.** Based on existing policies and plans, the housing that will be constructed will meet the upper-income and seasonal investor demand segments but will not fully address middle-housing demand.

Currently, middle housing development is only being planned in the City of Stevenson, which accounts for just 8% of the County's buildable residential land inventory. **This study recommends that Skamania County and the City of Stevenson work in concert to amend local development codes and refresh infrastructure investment strategies** so that additional cottages, plexes, townhomes, and garden apartments can be built to address these trends.



Exhibit 1.2: Residential Land Base with all constraints



## Section II. INTRODUCTION

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The Skamania Economic Development Council (EDC) in partnership with the Skamania County, the City of Stevenson and Port of Skamania, selected FCS GROUP and WSP USA (planning consultants) to conduct a countywide assessment of buildable lands, housing needs and strategies to address future housing demand.

### II.A. WORK COMPLETED

This work was completed during 2019 and included input from the Technical Advisory Committee and community officials, developers, real estate brokers, business owners, school district representatives and housing advocacy groups. Key work elements entailed the following.

#### **Buildable Lands Inventory Tasks**

- ✓ Complete a countywide Buildable Lands Inventories (BLI). The inventory includes detailed information about tax lots in Skamania County and their suitability for residential development.
- ✓ Determine parcels and parcel areas using the Skamania County tax assessor parcel layer.
- ✓ Identify tax lots that do not have potential residential or employment growth capacity, including those in state and federal recreation areas.
- ✓ Identify constrained lands, such as federally owned lands, Columbia River Gorge National Scenic Area (CRGNSA) restrictions, as well as those in floodplains, containing steep slopes (25% or more) which are least suitable for future housing development.
- ✓ Consider existing and needed infrastructure, including water availability.
- ✓ Identify other lands to exclude (streets, rights-of-way, etc.).
- ✓ Determine public / semi-public parcels (publicly owned land, church owner land, etc.).
- ✓ Identify vacant tax lots by zoning class
- ✓ Determine developed areas and identify parcels that are fully developed.
- ✓ Determine potential infill area.

#### **Housing Needs Assessment Tasks**

- ✓ Complete a countywide housing needs assessment (HNA). The includes an analysis of the socioeconomic characteristics and trends affecting housing demand, recent housing development trends, existing housing inventory, market conditions, and projected economic trends.
- ✓ Create an inventory of existing housing stock to include the age, condition, and location of existing housing as well as the amount of housing that is owner occupied, and an inventory of rental housing.

- ✓ Review regional trends that affect housing needs in Skamania County including the amount of housing used for short-term rentals and vacation homes.
- ✓ Develop a market analysis that considers the cost of housing by type, the amount of time housing is on the market, and listing to sales ratio. This analysis takes into account trends in: new home construction; issued building permits; new household formations, and homeownership analysis.
- ✓ Create a projection of housing need by type, density, and price point.

### Housing Strategy & Zoning Tasks

- ✓ Develop a countywide housing strategy that will serve as an overarching framework that combines the BLI and HNA. The final strategy will include recommendations for changes to housing policy and zoning codes to encourage residential development as identified by local stakeholders.

## II.B. KEY FOCUS AREAS

To conduct this assessment, eight focus areas were selected by the Technical Advisory Committee that demonstrate the greatest potential for a range of housing, including workforce housing needs.

Focus areas include:

- City of Stevenson (urban growth area)
- Carson area
- Home Valley area
- Mill A area
- Cook area
- Stabler area
- Underwood area
- West End area

## II.C. COMMUNITY OUTREACH

To obtain input on the proposed plan, WSP conducted 20 stakeholder interviews in early October 2019. Interviews were conducted as informal conversations intended to understand individual and organizational perspectives, including up to four stakeholders per interview. Discussion topics generally covered the following:

- The adequacy of housing options in their community
- What specific types of housing are needed to meet current demand
- Specific barriers to housing development in Skamania County and the City of Stevenson
- Specific knowledge about utility and infrastructure needs to support housing for a site or community
- Top priorities should be to enhance housing options



These interviews helped to inform the housing strategy recommendations. Notable themes include the following:

- Housing options in Skamania County are inadequate for single-income earners, service workers, low-income residents, and those with housing assistance needs.
- A variety of housing options are needed across all market segments, especially multifamily (apartments and townhomes), mixed use in appropriate locations, and specialized housing for seniors, cottage housing options, and live-work spaces.
- Housing barriers include financial risk for less profitable housing types, high development costs and long permitting time lines, and a shortage of construction labor. Local regulations, including Columbia River Gorge National Scenic Area (NSA) requirements, are a barrier to housing development, as is a lack of sewer infrastructure in outlying areas of Stevenson and all of unincorporated areas, particularly in Carson.
- Priorities to enhance housing options include updating local codes to remove barriers, for example by encouraging accessory dwelling units, plexes and townhomes, senior living and apartments, generating additional financial resources for encouraging development of income-restricted housing, obtaining grants for community development, and building relationships between regulators and developers.

A complete summary of community input received from interview participants is provided in **Appendix A**.

## Section III. HOUSING NEEDS ANALYSIS

This housing needs forecast represents a 20-year projection from the base year (2019) through year 2039. These technical findings are also intended to serve as a forecast for planning purposes.

### III.A. METHODOLOGY

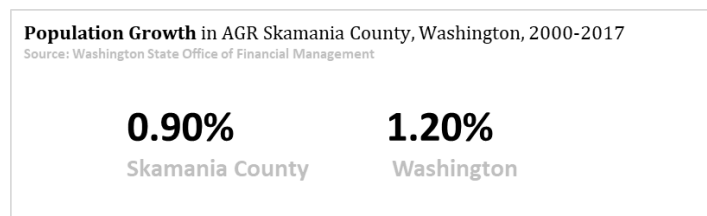
The methodology for projecting housing needs for Skamania County considers a mix of demographic and socio-economic trends, housing market characteristics and long-range population growth projections. Population is a primary determinate for household formations—which in-turn drives housing need.

County-wide population, households, income and market characteristics are described in this section using available data provided by reliable sources, such as the U.S. Census Bureau (Census and American Community Survey), the U.S. Department of Housing and Urban Development (HUD), Washington State Office of Financial Management (OFM) and the City of Stevenson and Skamania County planning departments. Where trends or long-range projections are provided by an identified data source, FCS GROUP has included extrapolations or interpolations of the data to arrive at a base year (2019 estimate) and forecast year (2039 projection).

The housing need forecast translates population growth into households and households into housing need by dwelling type, tenancy (owner vs. renter) and affordability level.

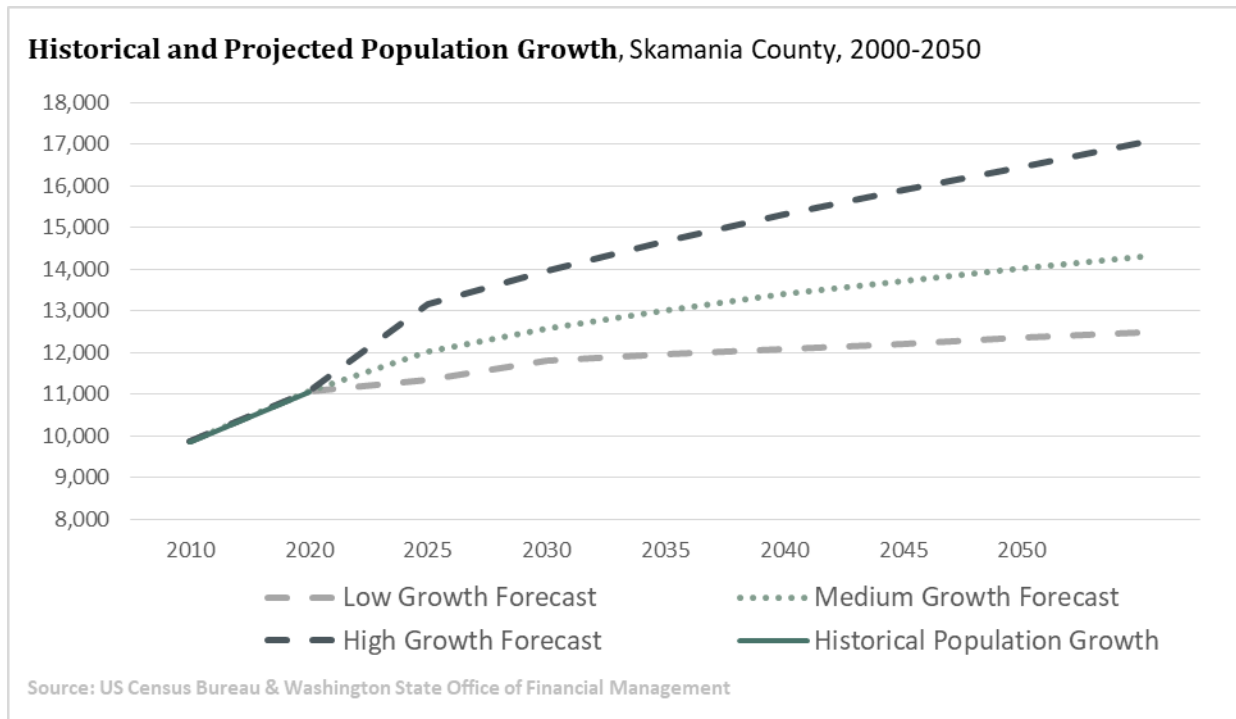
### III.B. DEMOGRAPHIC AND SOCIO-ECONOMICS

Over the 17-year period from 2000 to 2017, population in Skamania County has increased by 16.5%, from 9,872 in 2000 to 11,498 “year-round” residents in 2017. Historically, between 2000 and 2017 Skamania County’s population increased at an annual growth rate (AGR) of 0.9%, which was below the Washington state average of 1.2% during this time frame.



According to the Washington State Office of Financial Management, Skamania County population is projected to add new residents over the coming decades with projected increases ranging from 695 to 4,174 people over the next 20 years (0.2% to 1.3% avg. annual growth rate) as shown in **Exhibit 2.1**. As population increases, the demand for all types of housing will increase.

**Exhibit 2.1**



Skamania County has a substantially older population than most of Washington. In Skamania County, 18.5% of the population are 65 or older, compared to 14.4% for Washington as a whole. The median age of county residents was 46 in 2017, compared with the State average of 37.6.



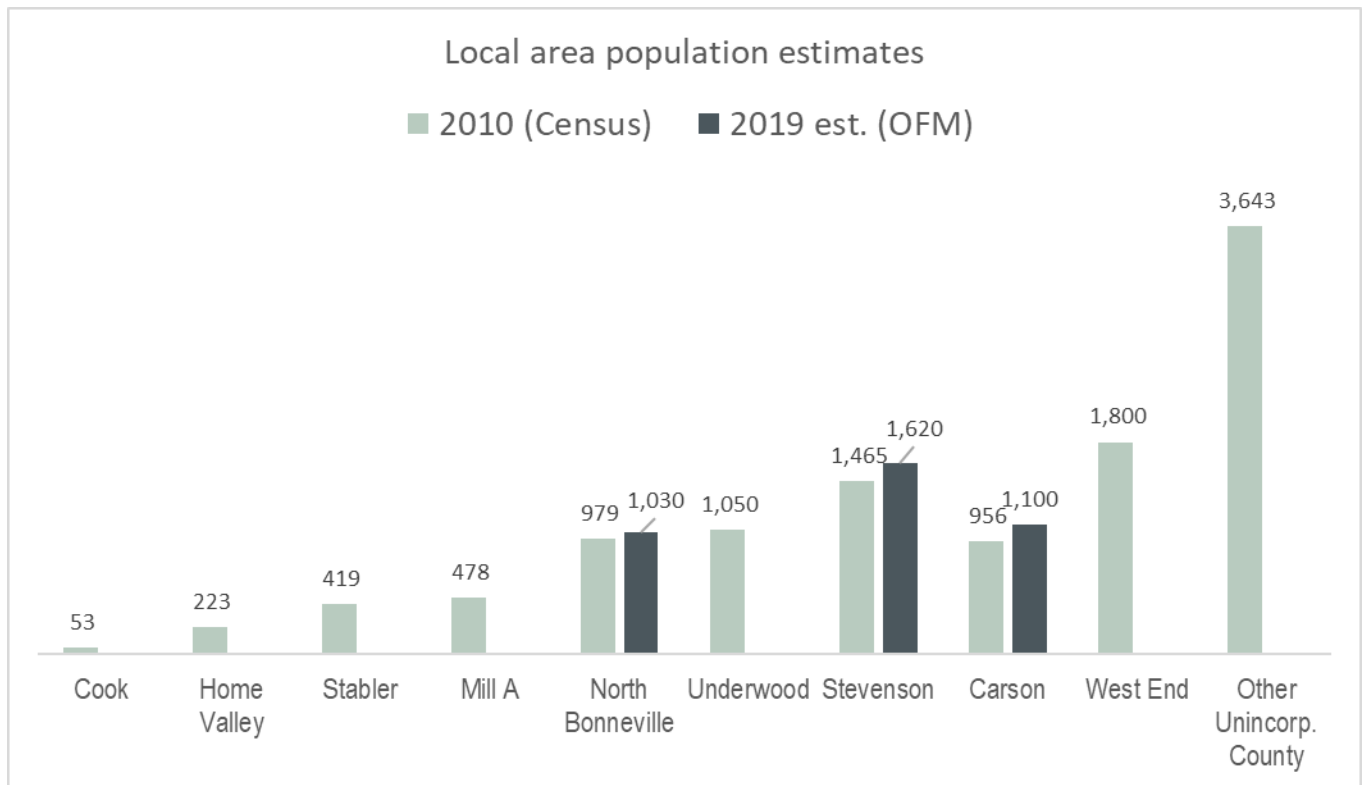
Skamania County’s average household size is 2.43 people per occupied household, which is slightly smaller than the statewide average of 2.55.



As shown in **Exhibit 2.2**, Stevenson is the largest city (est. 2017 pop. 1,620) in Skamania County, followed by North Bonneville (est. 2017 pop. 1,030). The unincorporated West End area of the county had an estimated population of 1,868 in 2004, according to County planning staff. Other major rural centers include Carson (est. 2019 pop. of 1,100 by OFM), followed by Underwood (est.

2010 pop. of 1,050). Other areas, including Mill A, Stabler, Home Valley and Cook each have fewer than 500 inhabitants.

**Exhibit 2.2 Local Area Population Estimates**

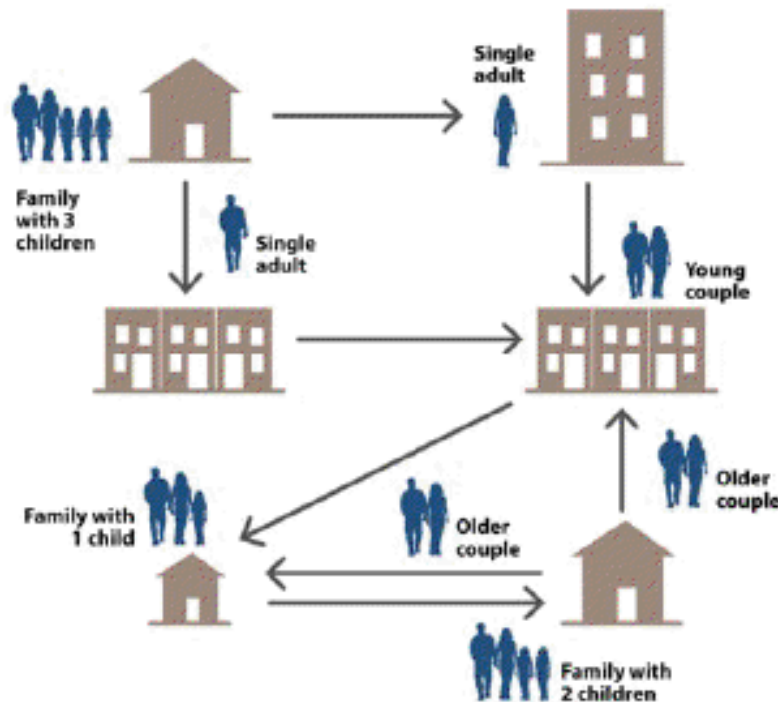


**III.C. FACTORS AFFECTING HOUSING DEMAND**

There is a clear linkage between demographic characteristics and housing choice. As shown in the figure below, housing needs change over a person’s lifetime. Other factors that influence housing include:

- Homeownership rates increase as income rises.
- Single family detached homes are the preferred housing choice as income rises.
- Renters are much more likely to choose attached housing and multifamily housing options (such as apartments or plexes).
- Very low-income households (those earning less than 50% of the median family income) are most at-risk for becoming homeless if their economic situation worsens.

### Housing Life Cycle



The relationship between demographic changes and housing needs can be used to forecast future housing needs. Three main demographic changes affecting housing in Skamania County include:

#### **Greatest/Silent Generation (those born before 1925 to 1945)**

This includes retirees better than age 74, who were raised during the Great Depression, World War I or World War II. This cohort accounted for 7% of the county's population in 2017. As people reach their 80s some move into assisted living facilities with convenient health care services.

#### **Baby Boom Generation (those born 1946 to 1964)**

Baby boomers (currently age 55 to 74) account for nearly one-third (31%) of Skamania County residents. The boomer segment has been growing more rapidly than the other cohorts over the past 10 years and many are now entering their retirement years. Boomers usually prefer to "age in place" but that preference can change if they become widowed, disabled and/or require assistance at later stages in life.

#### **Generation X (born early 1965 to 1980)**

Gen X (currently includes people between age 39 to 54) accounted for 20% of Skamania County residents in 2017. Gen X households often include families with children, and many prefer to live in single family detached dwellings at various price points.

#### **Millennials (born early 1980s to early 2000s)**

Millennials (currently in their twenties or thirties) accounted for 20% of Skamania County residents in 2017. Younger millennials tend to rent as they establish careers and/or pay back student loans.

Working millennials often become first-time homebuyers, opting to purchase smaller single-family detached homes or townhomes.

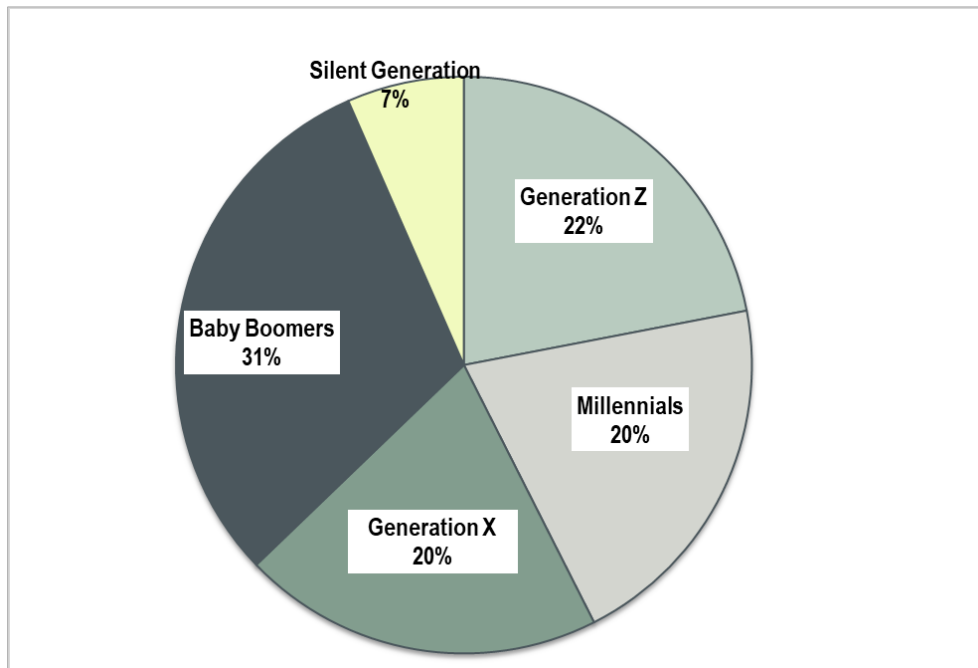
**Generation Z (born mid-2000s or later)**

Gen Z includes residents age 19 or less, which accounted for 22% of Skamania County residents in 2017. This segment mostly includes children living with Gen Xers or younger Baby Boomers.

**Families with Children**

This category includes a subset of Gen Xers and millennials, or younger Boomers. Taken as a whole, this category constitutes a significant share of Skamania County’s population and is expected to increase moderately over the next two decades. Families prefer to live in a variety of single-family housing options (detached homes or townhomes/plexes) at price points commensurate with their family income.

**Exhibit 2.3 Skamania County Population Cohorts**



**III.C.1. Income Characteristics**

Housing is typically the largest single expense or investment people make during their lifetime. Local income levels help determine the type of housing that is attainable. U.S. Housing and Urban Development guidelines indicate that housing is “attainable” when no more than 30% of median household income is allocated to housing (e.g., mortgage principal, interest and property tax payments or rent payments).

Median family income is a separate measure of income and is used by HUD when determining fair market rents for affordable housing.

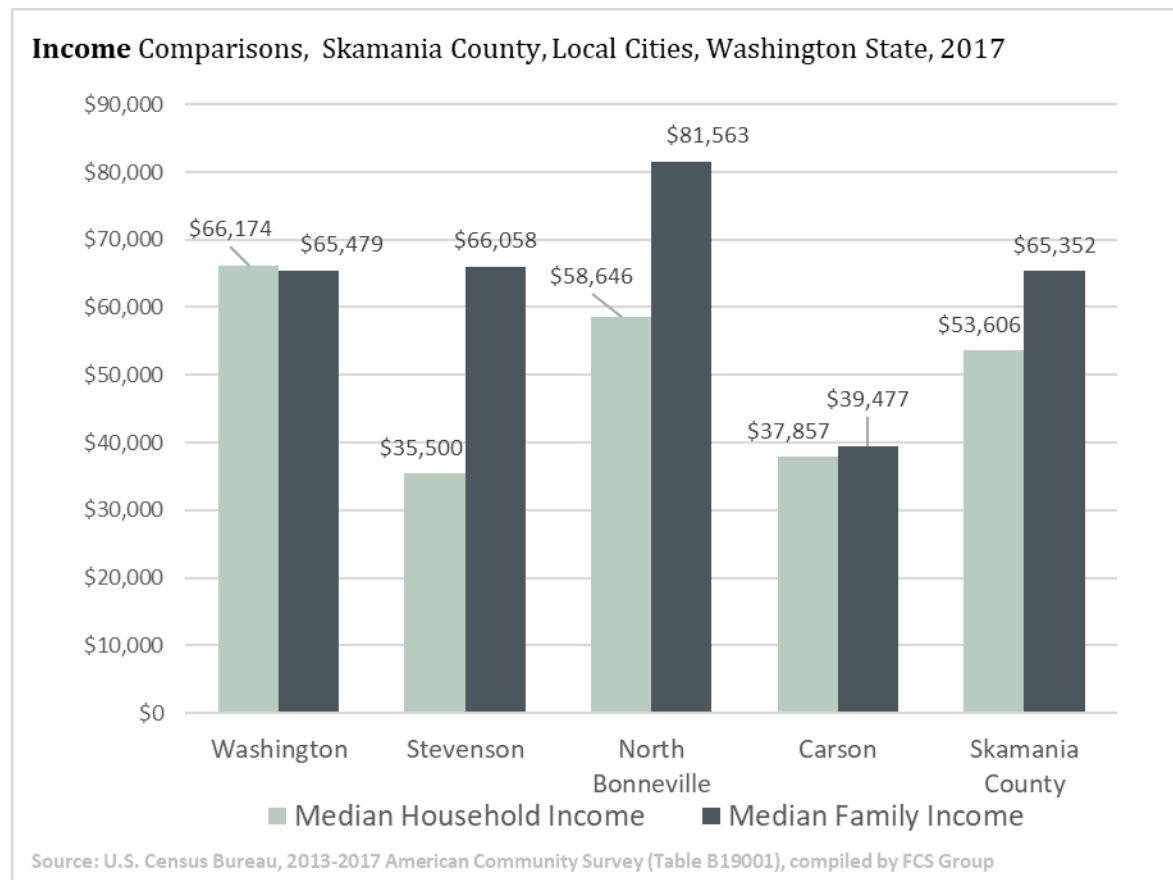
As shown in **Exhibit 2.4**, the median family income level in Skamania County (\$65,352) is nearly on par with the Washington state average (\$65,479). However, the median household income in Skamania County (\$53,606) is well below the state of Washington (\$66,174). Within Skamania County, income levels are higher in North Bonneville (west end of county) than in Stevenson and Carson.

**Definitions of Income**

**Median Household Income:** This includes the income of the householder and all other individuals 15 years old and over in the household, whether they are related to the householder or not. Because many households consist of only one person, average household income is usually less than average family income.

**Median Family Income:** A family consists of two or more people (one of whom is the householder) related by birth, marriage, or adoption residing in the same housing unit. Median family income is typically higher than median household income because of the composition of households. Family households tend to have more people, as contrasted with households who have lesser incomes because they are very young or elderly.

**Exhibit 2.4**



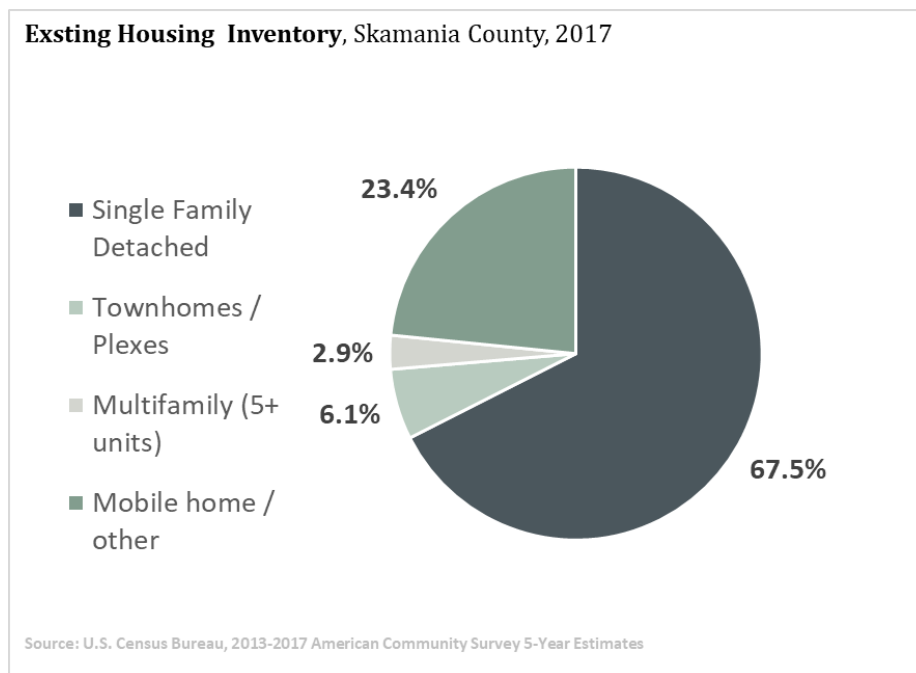
### III.D. EXISTING HOUSING CHARACTERISTICS

An analysis of historical development trends and local housing market dynamics provides insight regarding how the housing market functions. HNA findings indicate that changes in demographic and socio-economic patterns over the next two decades will result in a shift in housing demand from what is now predominantly single-family detached housing to wider mix of housing types.

According to the most recent American Community Survey, there were 5,766 housing units in Skamania County as of 2017. The existing housing stock is dominated by single family detached (low density development) which accounts for 67.5% of the inventory. The next leading housing type in Skamania County includes mobile homes with 23.4% of the overall inventory. Multifamily, townhomes and plexes account for only 9% of the existing inventory (see **Exhibit 2.5**).

In comparison to the Washington average, the local share of mobile homes is much larger (23.4% local vs. 6.5% state) and the current inventory of townhomes/plexes/multifamily is way smaller (9% local vs. 29.8% state).

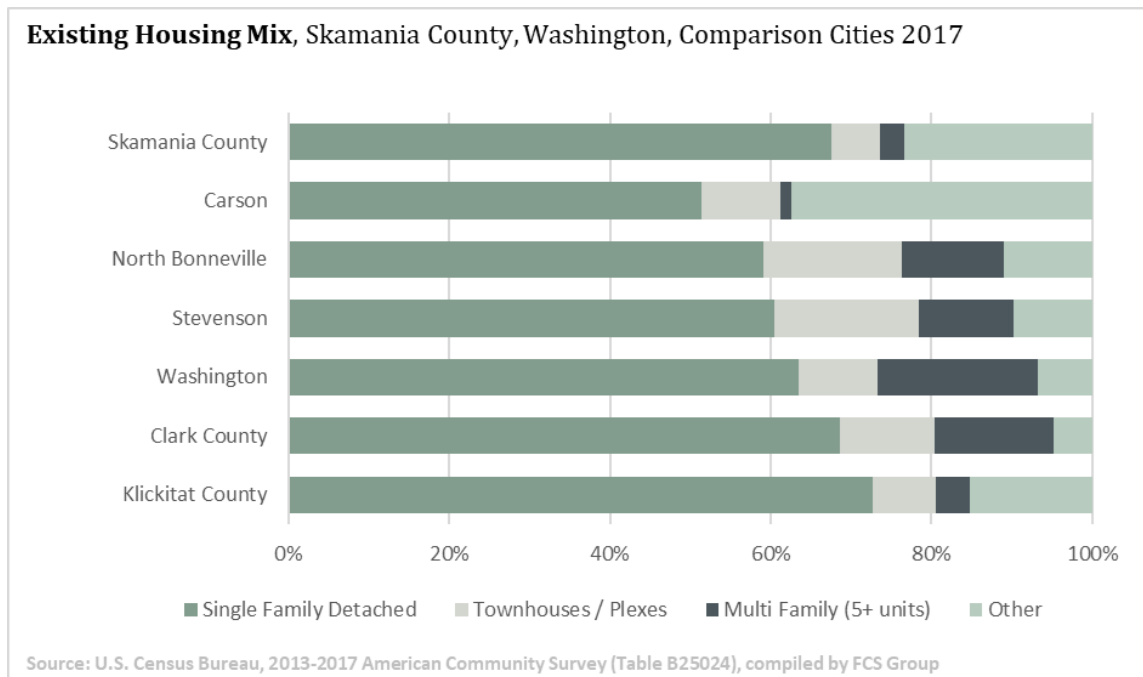
**Exhibit 2.5**



As indicated in **Exhibit 2.6**, in comparison with other locations, Skamania County presently has a relatively high share of single family detached and mobile homes/other housing types, but a relatively low share of townhomes/plexes and multifamily (middle housing) units.



Exhibit 2.6

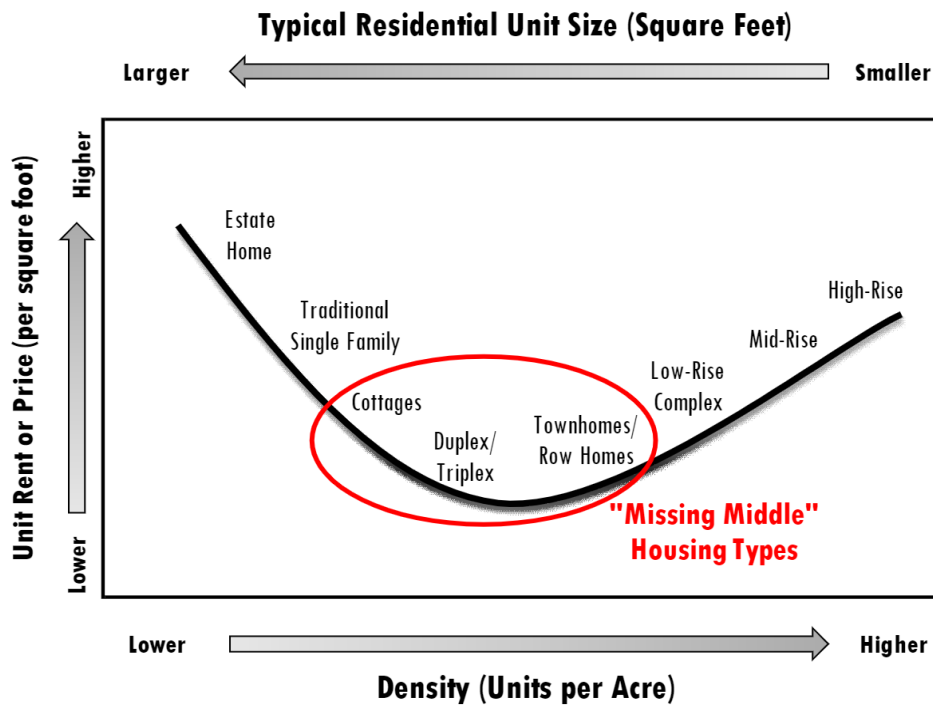


### The Concept of “Middle Housing”

“Middle Housing” is a term that refers to housing types that are attainable to households earning 80% of less of the area’s median family income. In the case of Skamania County, households that earn less than 80% of the area’s median family income account for nearly half of the local housing demand. Since the current “middle-income” housing inventory accounts for an estimated 35% of the total housing inventory, the “missing middle” housing demand is currently estimated at 15% of the total housing inventory or approximately 860 dwellings.

The demand for missing middle housing is expected to increase measurably in the future as income levels do not keep pace with rising land/development costs. In order to address this important market segment, additional development of lower cost housing types, such as cottage homes, duplexes, tri-plexes, townhomes, and apartments is needed as well as manufactured homes and accessory dwelling units (ADUs). As shown in **Exhibit 2.7**, these missing middle housing types can usually be built at a lower cost and rent level per square foot than other housing types.

Exhibit 2.7



Skamania County also has a relatively high share of seasonal housing units which are owned by part-time residents as “second homes” or used as “short-term rentals.” While it is not possible to pinpoint actual numbers, interview responses and U.S. Census data both indicate that about 18% of the housing inventory in the County is owned by non-local residents, which is double the statewide average (see **Figure 2.8**).

Exhibit 2.8 Skamania County Housing Tenancy and Seasonal Housing

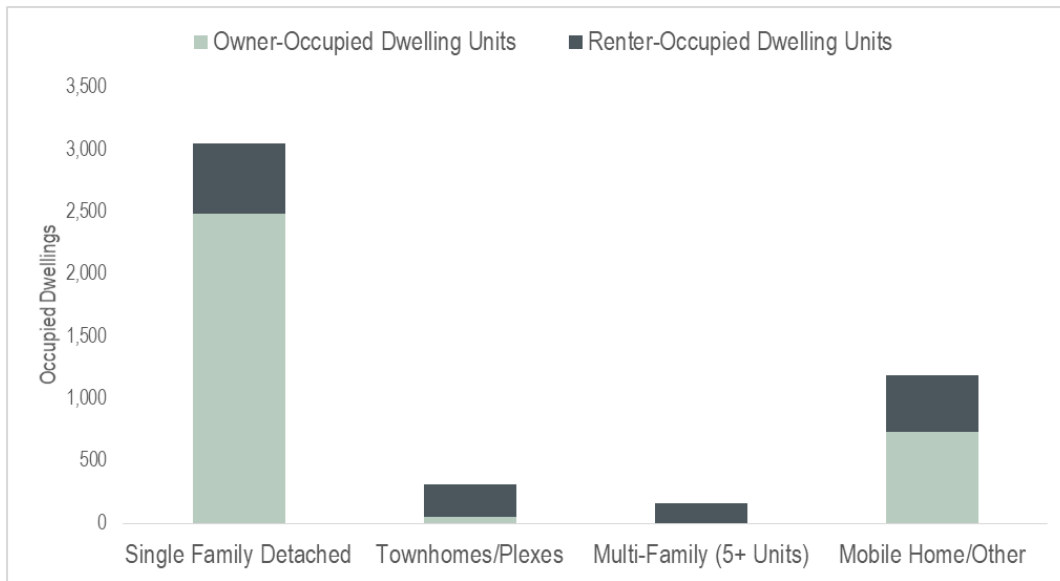
	Owner-Occupied Dwelling Units	Renter-Occupied Dwelling Units	Seasonal Housing and Vacant Units*	All Dwelling Units
Single Family Detached	2,481	571	842	3,894
Townhomes/Plexes	52	261	40	353
Multi-Family (5+ Units)	0	159	10	169
Mobile Home/Other	732	457	161	1,350
<b>Total Units</b>	<b>3,265</b>	<b>1,448</b>	<b>1,053</b>	<b>5,766</b>
<b>Distribution</b>	<b>57%</b>	<b>25%</b>	<b>18%</b>	<b>100%</b>

\* includes second homes and vacation rentals.

Source: 2013-2017 American Community Survey (Table B25032)

Housing tenancy for occupied homes in Skamania County consists of 69% owners and 31% renters. As indicated in **Exhibit 2.9**, homeowners primarily reside in detached homes or mobile homes (aka. manufactured housing). Renters primarily live in townhomes/plexes and multifamily apartments and mobile home parks.

**Exhibit 2.9 Skamania County Tenancy of Year Round Residents**

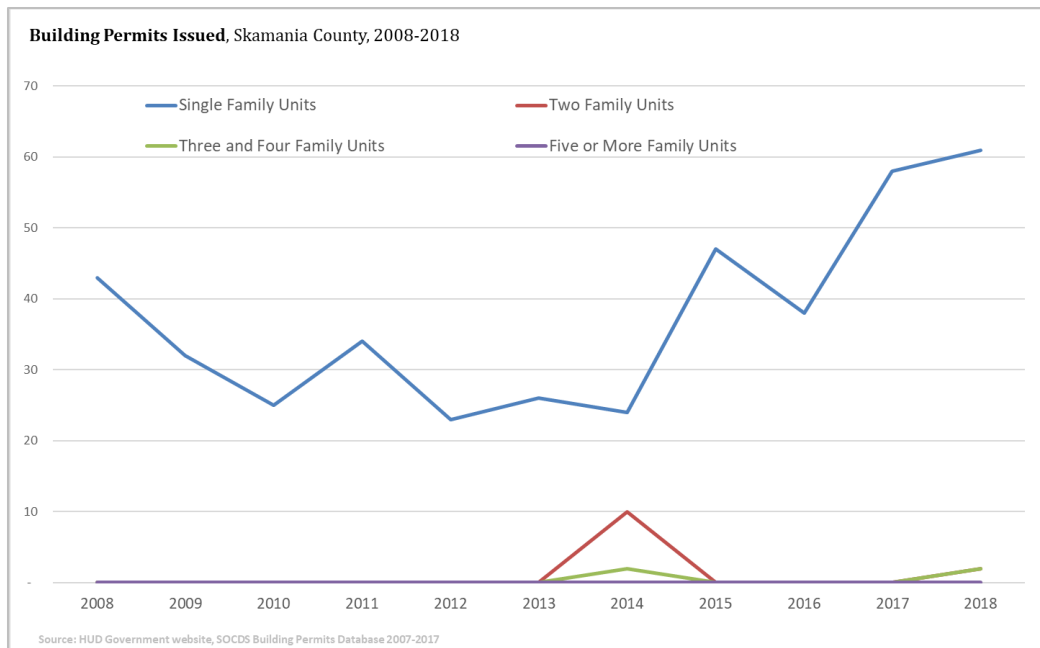


Vacancy rates for housing have trended down in recent years as demand has outpaced additions to the supply. Overall, the vacancy rates for rental housing in Skamania County is reported to be less than 3% currently.

### Construction Permitting Activity

During the past several years new building construction in Skamania County has been dominated by single family housing. Despite a drop in construction following the 2009 national recession, new housing construction been averaging 40 to 65 units per year since 2014 (see **Exhibit 2.10**).

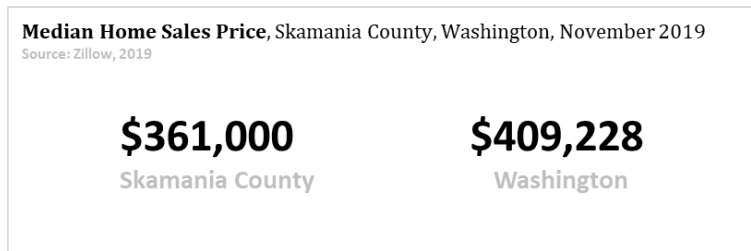
**Exhibit 2.10**



### III.E. HOUSING AFFORDABILITY

No matter how you look at it, home prices in Skamania County are rapidly rising. The median home price in Skamania County was \$361,000 (as of November 2019), which is below the median home price of Washington as a whole.

The median price reflects the level where 50% of the homes sold are higher and 50% are lower. Average prices take into account total sales prices divided by total homes sold.



Within Skamania County, median home sales prices reported by Zillow.com reflect median prices ranging from \$282,000 in Carson to \$524,000 in Underwood. Stevenson home prices appear to be increasing the fastest over the past year from \$314,000 in 2018 to \$337,000 in 2019 (as of November).

Current housing inventory of listings and sales trends reflect a very tight local housing market, with a standing inventory of less than 4 months in Skamania County (a healthy housing market typically has a 6-month inventory). Sales have been highest for homes with prices ranging from \$200,000 to \$400,000 (see **Exhibit 2.11**).

**Exhibit 2.11**

**Median Home Price Sales Trends in Select Markets**

	Nov-18	Nov-19	Change %
Skamania County	\$338,000	\$361,000	6.8%
Carson	\$266,000	\$282,000	6.0%
North Bonneville	\$283,000	\$300,000	6.0%
Stevenson	\$314,000	\$337,000	7.3%
Underwood	\$496,000	\$524,000	5.6%

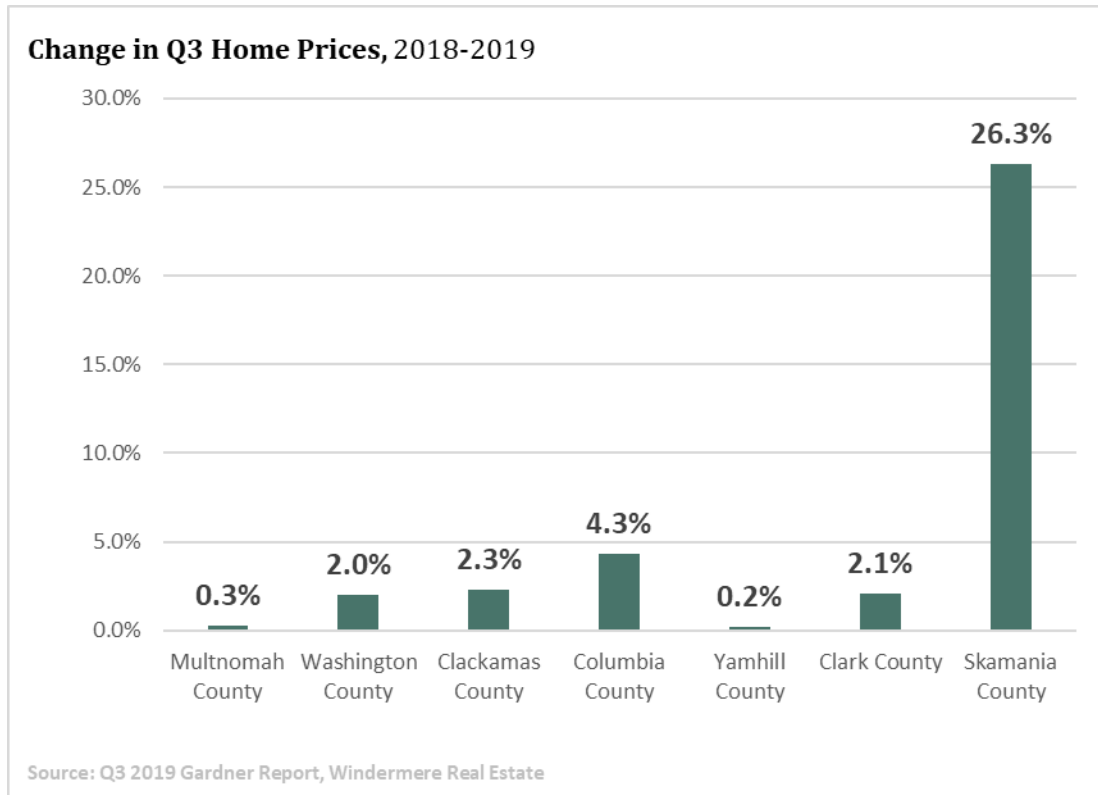
**Homes Sales and Inventory, Skamania County**

Sales Price Level	Recent Sales (past 2 years)	Avg. Sales Per Month (past 2 years)	Current Listings	Remaining Inventory (months)
Sales Price Level				
Less than \$100,000	33	1.4	4	2.9
\$100,000 to \$199,999	44	1.8	2	1.1
\$200,000 to \$299,999	104	4.3	15	3.5
\$300,000 to \$399,999	98	4.1	8	2.0
\$400,000 to \$499,999	70	2.9	12	4.1
\$500,000 or more	65	2.7	22	8.1
<b>Total</b>	<b>414</b>	<b>17.3</b>	<b>63</b>	<b>3.7</b>

Source: Zillow.com; analysis by FCS 12/20/19.

Year over year, average home prices in Skamania County have been increasing at a torrid pace, especially when compared with other counties within the greater Portland-Vancouver metropolitan region (see **Exhibit 2.12**).

**Exhibit 2.12: Change in Average Home Prices**



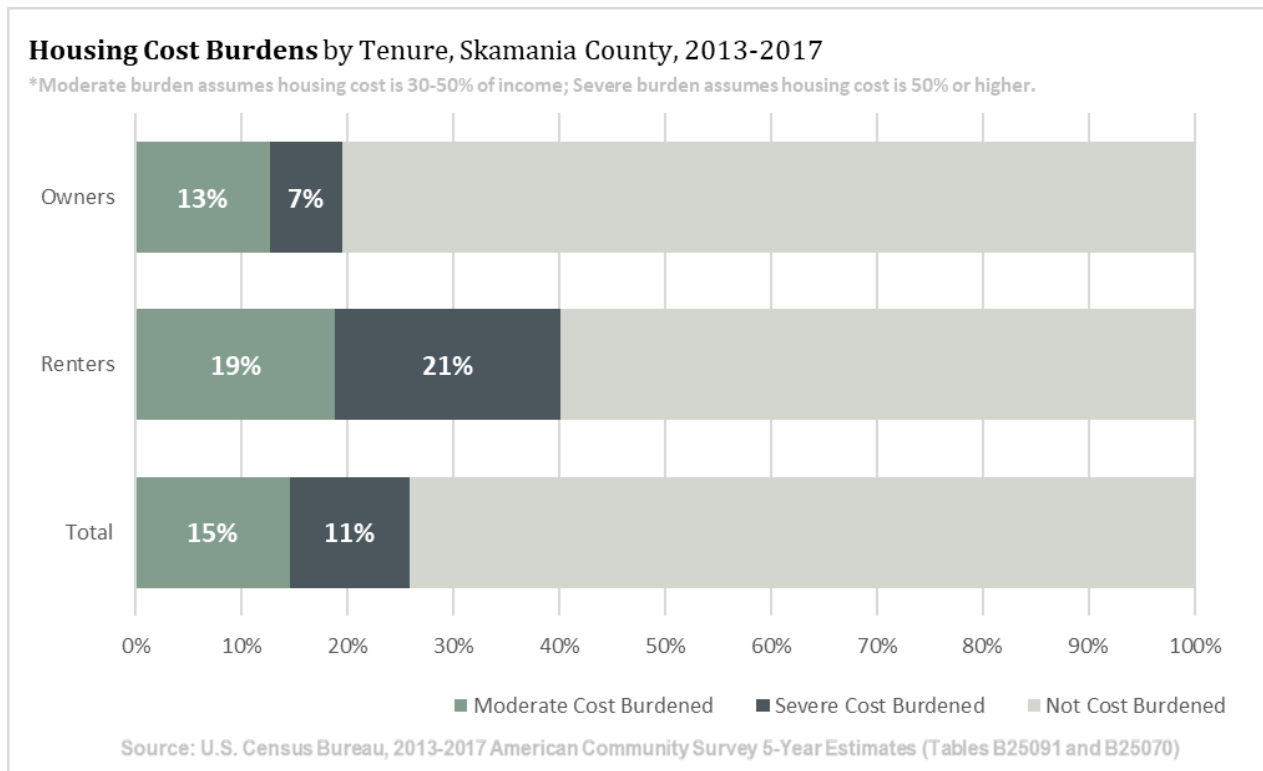
### III.E.1. Rents and Housing Cost Burdens

Median rents in Skamania County are also below the Washington statewide average. However, given the fact that median household incomes are 16% below the state average, housing affordability is a growing concern. Newer market rate rentals in Stevenson and Carson are reported to fetch monthly rents of \$1.25 to \$1.40 per square foot of floor area.

According to the U.S. Housing and Urban Development (HUD) standards, households are considered “cost burdened” if they pay over 30% of their income on housing. Households are “severely cost burdened” if they pay over 50% of their income on housing.

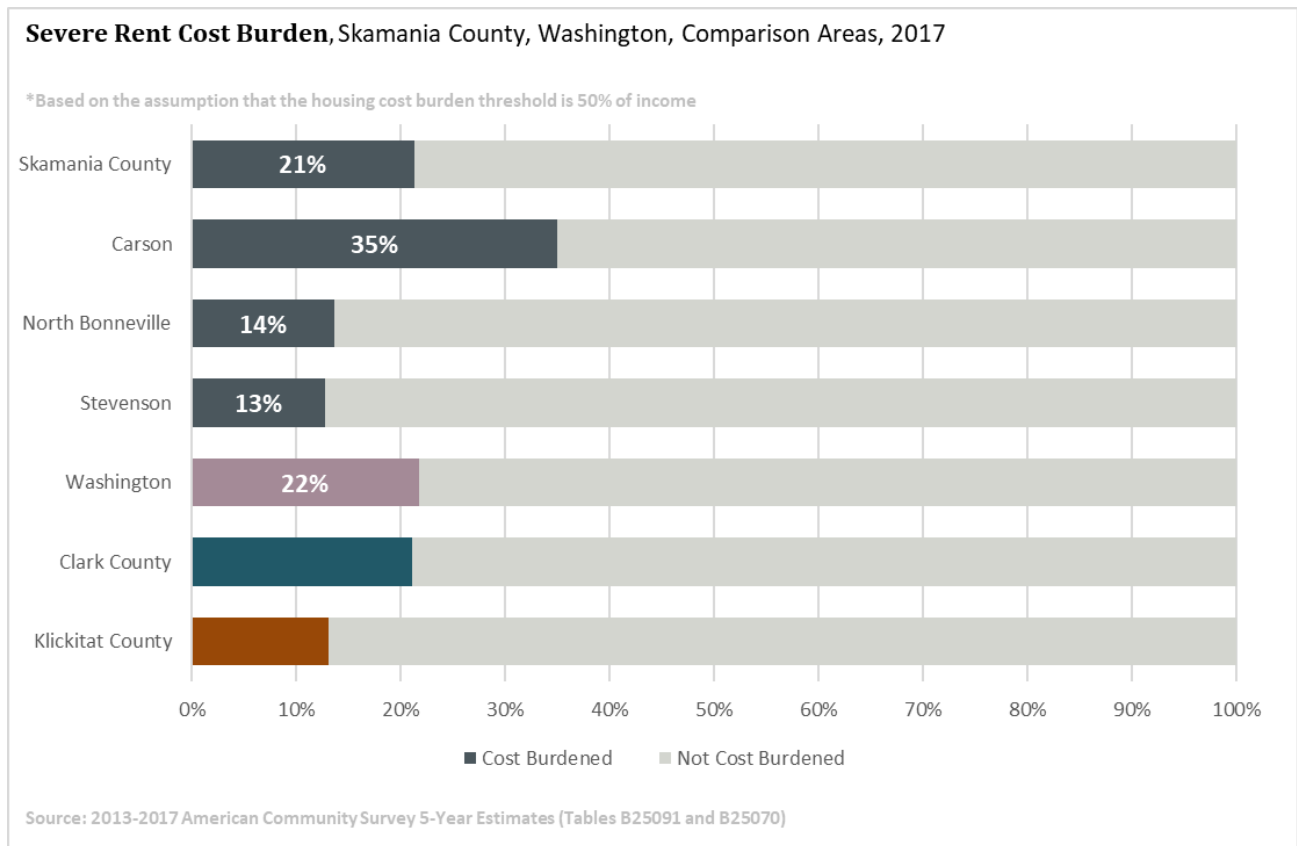
As indicated in **Exhibit 2.13**, 26% of the households in Skamania County were considered moderately to severely cost burdened in 2017. Approximately 40% of renters in Skamania County are cost burdened, which is slightly below the statewide average of 47%. Additionally, 20% of homeowners are cost burdened, which is below the statewide average of 21%.

Exhibit 2.13



**Exhibit 2.14** illustrates where housing rental cost burdens are occurring. The Carson area has the highest share of severe cost burdened rental households, and Stevenson and North Bonneville have the lowest share.

**Exhibit 2.14**



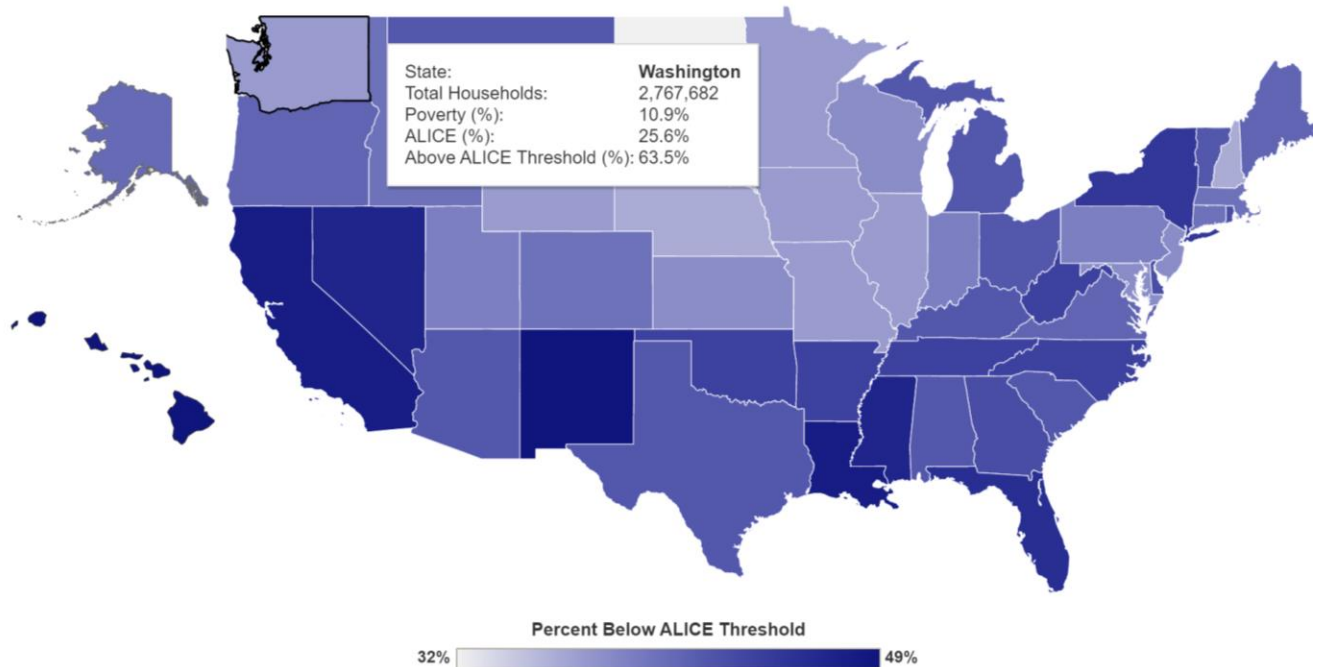
### III.E.2. Economic Hardship

Like many growing communities across the western U.S., nearly 1 in 3 Skamania County households are experiencing economic hardship as the cost of living rises faster than income levels.

Since the War on Poverty began in 1965, the Federal Poverty Level (FPL) has provided a standard for determining the proportion of people living in poverty in the U.S. Despite the FPL’s benefit of providing a nationally recognized income threshold for determining who is poor, its shortcomings include the fact that the FPL is not based on the current cost of basic household necessities, and except for Alaska and Hawaii, it is not adjusted to reflect cost of living differences across the U.S.

In recognition of these shortcomings, the United Way now provides a new measure of economically distressed households struggling in each county in a state. This effort provides a framework, to measure the struggles of households that do not earn enough to afford basic necessities, with a population called **ALICE** (**A**sset **L**imited, **I**ncome **C**onstrained, **E**mployed). As shown below, in 2016, the overall FPL in Washington state was 10.9% while the share of households living below the ALICE threshold was nearly 26%.

### State Level Details





### ALICE Methodology Overview

The ALICE research team developed new measures to identify and assess financial hardship at a local level and to enhance existing local, state, and national poverty measures.

**Household Survival Budget** is an estimate of the total cost of household essentials – housing, child care, food, transportation, technology, and health care, plus taxes and a 10 percent contingency. It is calculated separately for each county, and for six different household types.

**The ALICE Threshold** represents the minimum income level necessary based on the Household Survival Budget. Households below the Threshold include both ALICE households and those living in poverty.

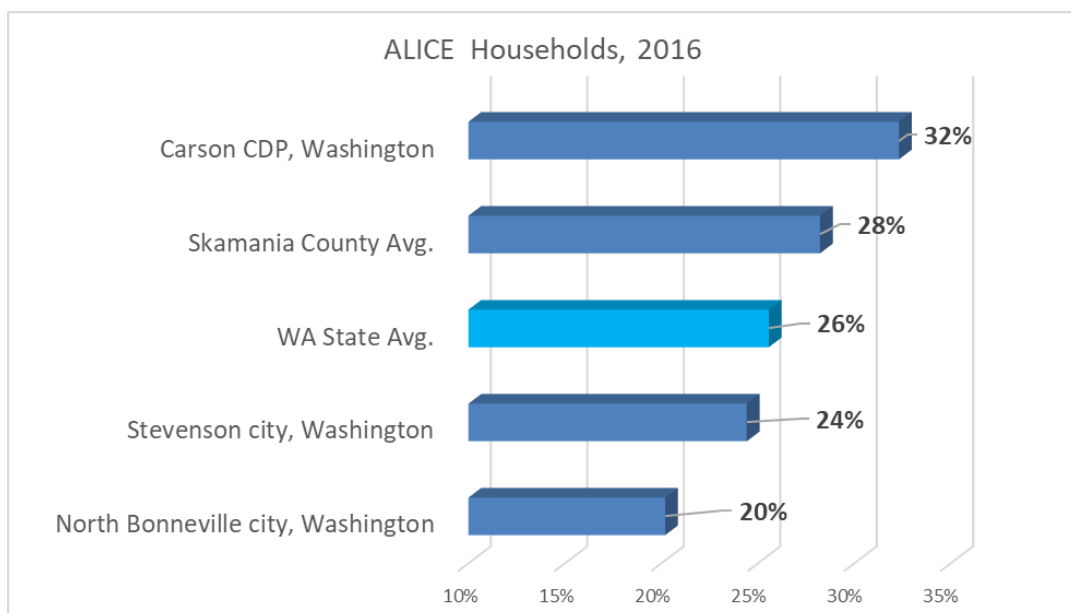
**The ALICE Income Assessment measures:**

1. The income households need to reach the ALICE Threshold
2. The income they actually earn
3. How much public and nonprofit assistance is provided
4. The Unfilled Gap – how much more money is needed to reach the ALICE Threshold despite both income and assistance

For more information please check out: <https://www.unitedforalice.org/methodology>

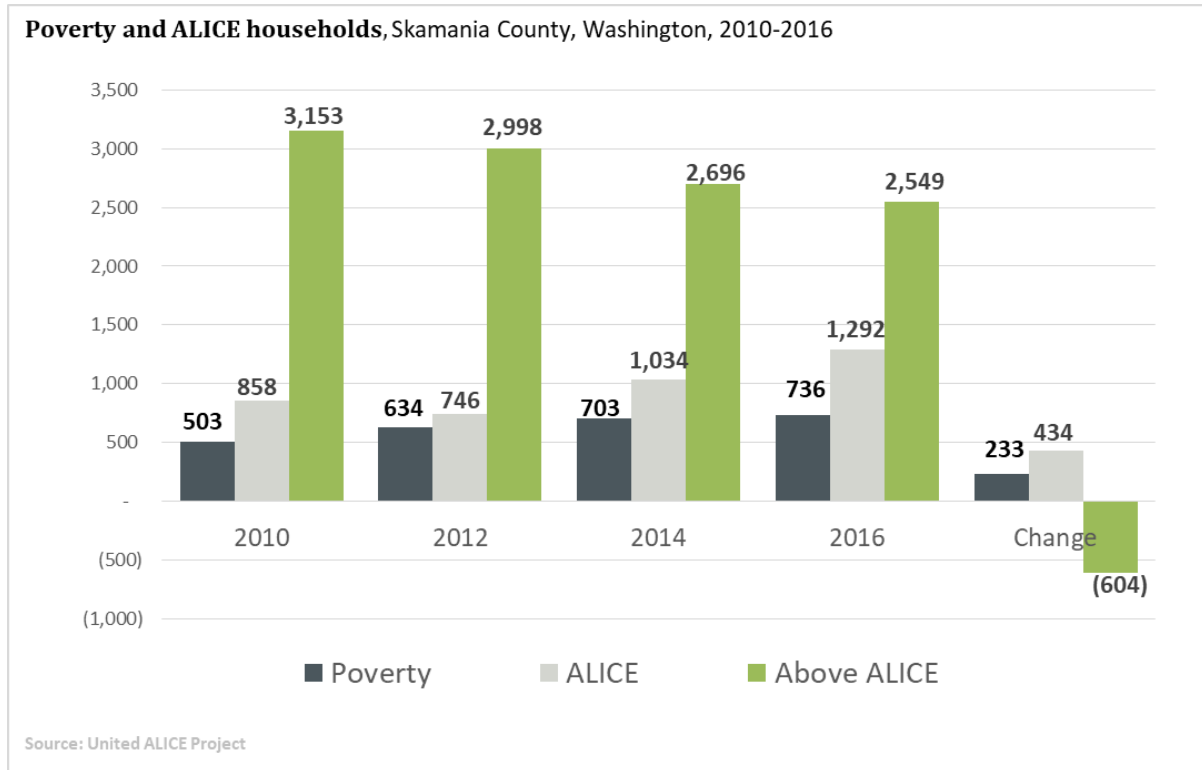
In Skamania County, the overall share of households living below the ALICE threshold was 28% in 2016, which was slightly worse than the statewide average (25.6%). Carson has the highest share with 32% or nearly one in three households living in hardship. North Bonneville and Stevenson have relatively lower shares with 20% and 24%, respectively (**Exhibit 2.15**).

**Exhibit 2.15**



Despite 10 years of economic expansion, there has been an increase in poverty and economic hardship in Skamania County. As shown in **Exhibit 2.16**, between 2010 and 2016, the number households in poverty increased by 233 and those meeting ALICE thresholds increased by 434. During this same time, the number of households above ALICE thresholds declined by 604. While housing is only part of the picture, it is the largest living expense for most households.

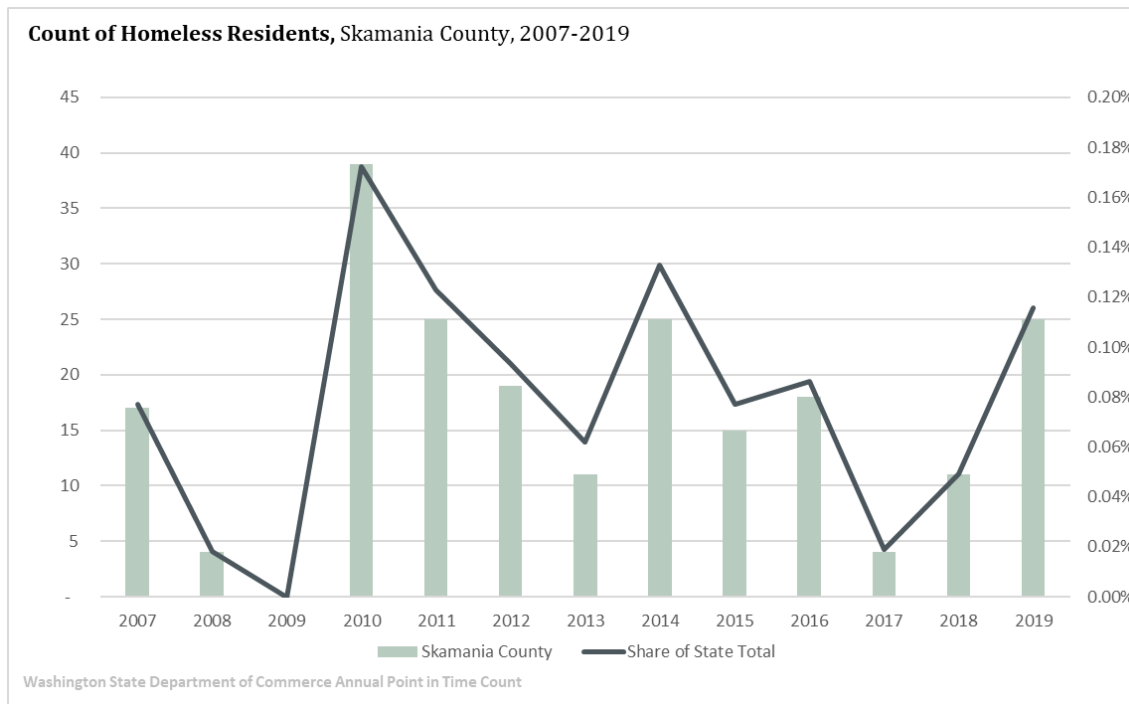
**Exhibit 2.16**



### III.E.3. Homeless Residents

Homelessness is an increasing issue throughout the Nation and is no longer isolated to urban centers. Washington counties are required to conduct an annual “point in time” assessment of sheltered and unsheltered homeless persons. The count is conducted in accordance with the requirements of the U.S. Department of Housing and Urban Development (HUD). The homeless population in Skamania County has fluctuated between zero and 40 people over the past decade. In 2019, Skamania County’s homeless population is estimated at 25 people, which marks the third straight year of increased homelessness in the county (**Exhibit 2.17**).

Exhibit 2.17

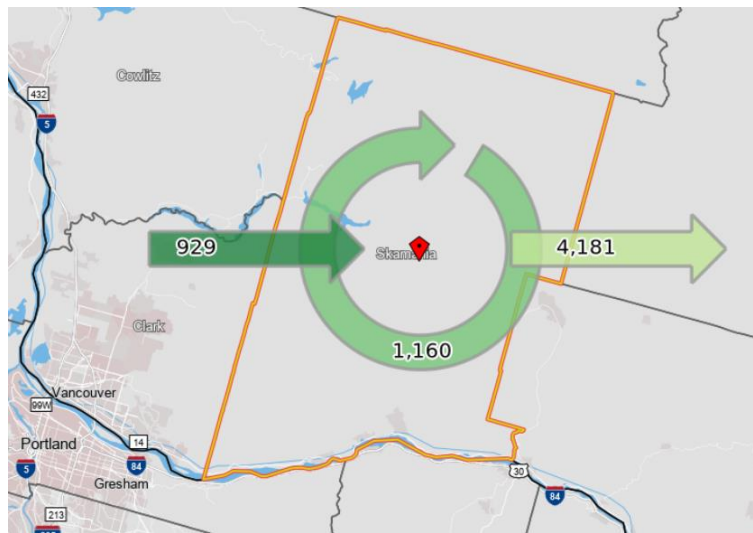


### III.F. POTENTIAL PENT-UP MARKET DEMAND

Representatives from local businesses, school districts, and local government voiced some concern over the lack of attainable housing for local employees. According to U.S. Census On-the-Map data, in 2017 there were 4,181 residents who commuted to work outside Skamania County and 929 workers who in-commuted to work inside Skamania County (**Exhibit 2.18**). Anecdotal input indicates that there has been an influx of new residents into Skamania County recently given relatively lower housing costs than what is found closer to the Portland/Vancouver Region.

Skamania County employers provided 2,089 jobs in 2017. **Almost one in five workers in Skamania County in-commute over 100 miles per day; which is 55% higher than the statewide average.**

**Exhibit 2.18: Commute Patterns, Skamania County, 2017**



As indicated in **Exhibit 2.19**, FCS GROUP has documented market gaps in Skamania County’s available housing inventory. Conversion of homes to seasonal and vacation rentals, low vacancy rates, and inadequate housing construction levels result in market gaps that can only be corrected by supply additions. Using conservatively low market capture rates, there is likely some pent-up housing demand for approximately 47 to 62 rental units and 70 to 93 owner units needed for moderate income households at 80% to 120% of the area median family income (MFI) level.

**Exhibit 2.19**

**Current Housing Market Gap for Housing at 80% to 120% MFI, Skamania County**

	Skamania County	Total Dwelling Units	Rental Units	Owner Units
Existing Workers in County	2,089			
Long Distance in-commuters (over 100 miles per day)	389			
Market Demand Sensitivity Analysis				
Low Capture Rate	30%	117	47	70
Midpoint Capture Rate	35%	136	54	82
High Capture Rate	40%	155	62	93

Based on U.S. Census Bureau, On-The-Map, 2017.

**III.F.1. Affordable Housing Need**

There are currently five affordable housing community developments in Skamania County, including three in Stevenson (Cascade Village, Rock Creek Terrace and White Cap) and one in North Bonneville (Hamilton Park) and one in Carson (Carson Springs). These developments provide 144 units of government assisted housing.

A local non-profit Mid-Columbia Housing Authority is currently developing affordable housing in Skamania County, with a new senior housing developments in Stevenson and planned mixed-income development in Carson.

In addition to the current pent-up demand for market rate rental housing, there is also a significant market gap for government assisted housing available to households earning less than 50% of the MFI level. According to the U.S. Housing and Urban Development, Skamania County is part of the greater Portland-Vancouver Region, which has a median family income level of \$87,900 in 2019. In comparison to the region, the median family income for Skamania County was much lower than the region at \$65,352 in 2017 (latest year for local Census data).

HUD fair market rents for Skamania County currently range from \$1,131 for efficiencies to \$2,531 for 4-bedroom units (**Exhibit 2.20**). Please refer to **Appendix C** for additional analysis of HUD housing affordability rents and income levels.

**Exhibit 2.20**

<b>HUD Fair Market Rent (FMR) by Unit Type, Skamania County, 2019</b>				
<small>Source: U.S. Department of Housing and Urban Development</small>				
<b>\$1,131</b>	<b>\$1,234</b>	<b>\$1,441</b>	<b>\$2,084</b>	<b>\$2,531</b>
Efficiency	1-Bedroom	2-Bedroom	3-Bedroom	4-Bedroom

Recent housing inventory data indicates that there are approximately 600 Skamania County households that would qualify for government housing at 50% of the MFI level, yet only 424 units were available at this price point in 2017, indicating pent up demand for 176 subsidized housing units. In light of inadequate levels of state and federal housing grants, we have assumed a 33% market capture rate or approximately 60 units of low-income (government subsidized) housing demand is likely to be constructed in Skamania County over the next 10 to 20 years.

## Section IV. FUTURE HOUSING NEED

The methodology includes two housing forecast scenarios which were reviewed and discussed by the Technical Advisory Committee. They include:

Scenario A Baseline Forecast

Scenario B Baseline + Pent-up Housing Demand Forecast

### Scenario A: Baseline Housing Demand Forecast

The future (20 year) housing forecast for Skamania County takes into account the population and socioeconomic and housing characteristics described earlier. After review of the three OFM population forecast scenarios, the Technical Advisory Committee agreed that the high growth forecast is the optimal forecast to use for long-range planning purposes and as such is included in the baseline housing forecast scenario.

The baseline forecast holds current household size, group quarters demand, vacancy rates and seasonal housing rates remain constant.

With the baseline forecast, Skamania County is projected to add approximately 3,619 people which will require 1,813 new dwellings over the next 20 years (see **Exhibit 4.1**). This forecast also would require approximately 20 units for net new group quarters population as transitional housing needs.

**Exhibit 4.1 Scenario A Baseline Forecast**

**Skamania Population & Housing: Baseline 20-Year Forecast (high growth forecast)**

	Estimate	Forecast	Proj. Change	Growth rate
	2019	2039	20 Years	AGR (2019-2039)
Skamania County Population	<b>11,853</b>	<b>15,472</b>	<b>3,619</b>	1.34%
Skamania County Housing Needs				
Group Quarters Population	61	79	19	
Population in Households		15,393	3,601	
Avg. Household Size	2.43	2.43		
Resident Housing Units	-	<b>6,334</b>	<b>1,482</b>	
Seasonal & Vacant Housing Units		<b>1,415</b>	<b>331</b>	
percent of housing stock	18.3%	18.3%		
Total Housing Units (baseline)	<b>5,937</b>	<b>7,750</b>	<b>1,813</b>	

Source: Findings based on Washington State Office of Financial Management data forecasts; other data derived from U.S. Census American Community Survey, 2013-2017. AGR = annual average growth rate.

## Scenario B: Baseline + Workforce Housing Forecast

This scenario includes the baseline along with capture of a portion of the current market gap for market rate workforce housing (136 units) with as much as 60 units of income restricted affordable housing for a total planned addition of approximately 1,946 units over the next 20 years (see **Exhibit 4.2**).

### Exhibit 4.2

#### Skamania County Housing Needs Forecast: Scenario B (dwelling units)

Total Housing Demand	Owner-Occupied	Long-term Rental	Short-term Rental	Total
	Units	Units	Units*	
Baseline Demand	1,088	394	331	1,813
Pent-up Market Capture	54	82	-	136
<b>Total</b>	<b>1,142</b>	<b>476</b>	<b>331</b>	<b>1,949</b>
Distribution	59%	24%	17%	100%

Source: analysis by FCS based on prior tables. \* Short term assumes rentals less than 30 days.

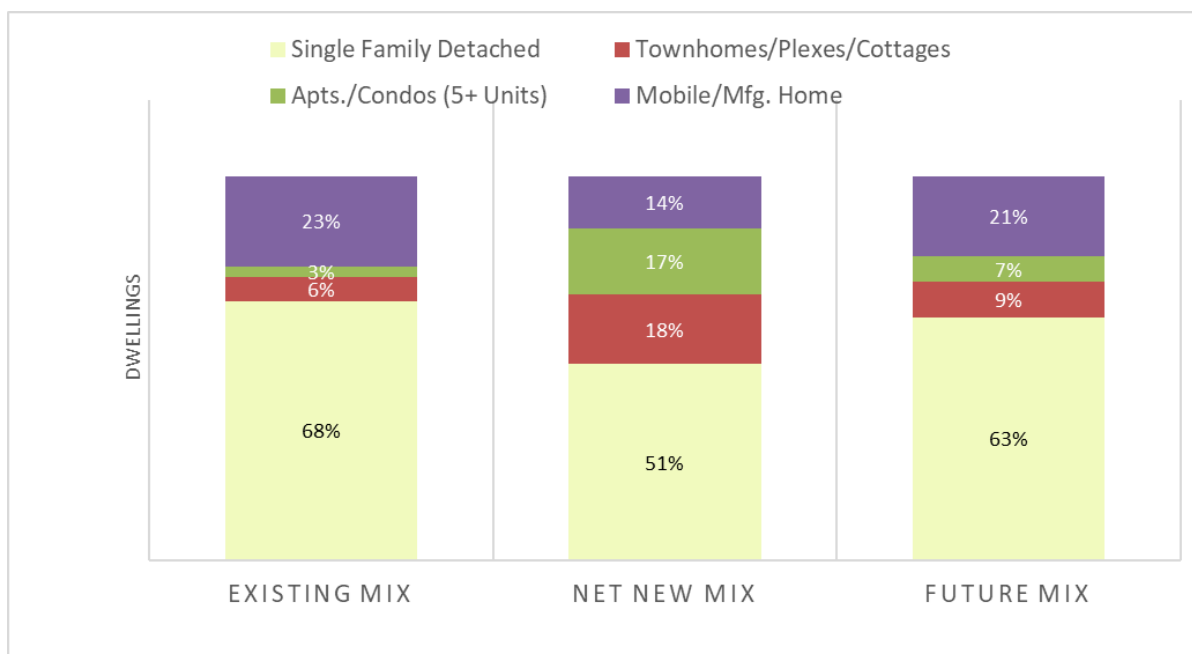
As reflected in **Exhibit 4.3**, the forecasted housing mix that would address future demand will likely consist of approximately: 994 single-family detached homes 356 townhomes/duplexes/ADUs (including cottage homes), 335 multifamily housing units and 264 manufactured housing units (as part of manufactured home parks). Additionally, there will also be increasing “group quarters” housing demand for about 20 additional residents that will require shared living arrangements (such as congregate care or interim housing).

### Exhibit 4.3

	Existing Dwelling Units	Net New Dwelling Units	Future Dwelling Units
Single Family Detached	3,894	994	4,888
Townhomes/Plexes	353	356	709
Multi-Family (5+ Units)	169	335	504
Mobile/Mfg. Home	1,350	264	1,614
<b>Total Units</b>	<b>5,766</b>	<b>1,949</b>	<b>7,715</b>

**Exhibit 4.4** compares the housing mix in Skamania County today compared with the forecasted market driven mix to be added over the next twenty years. Scenario B would increase the overall share of townhomes, plexes and multifamily in comparison to the current mix. The share of manufactured housing would remain relatively constant.

**Exhibit 4.4 Existing and Future Housing Mix, Scenario B**



*Source: analysis by FCS based on prior tables.*

The types of housing that is most suited to meet qualifying income levels for home ownership vary by family income level. The owner housing forecast that’s suited to meet qualifying income levels is provided in **Exhibit 4.5**.

**Exhibit 4.5**

**Owner-occupied Housing Needs, Scenario B\***

Family Income Level	Range of Home Sales Price	Attainable Housing Products	Distribution of Owner-Occupied Units	Projected Owner-Occupied Units Needed
Upper (120% or more of MFI)	\$500,000+	Large lot and Standard Homes	80%	914
Upper Middle (80% to 120% of MFI)	\$350,000 to \$499,000	Small Homes, Townhomes	10%	114
Lower Middle (50% to 80% of MFI)	\$230,000 to \$349,000	Mfgd. Homes, Plexes, Condos	10%	114
Low less than 50% of MFI)	n/a	Govt. Assisted	0%	0
<b>Total Dwelling Units</b>			<b>100%</b>	<b>1,142</b>

*\*Assumes 30% of income is used for mortgage payment, with 5% interest, 30-year term with 20% downpayment for upper middle and high income levels, and 5% downpayment for lower income levels.*

The rental housing forecast that’s suited to meet qualifying income levels is provided in **Exhibit 4.6**.



**Exhibit 4.6**

**Renter-Occupied Housing Needs, Scenario B\*\***

Family Income Level	Range of Monthly Rent (2 bedrm)	Attainable Housing Products	Estimated Distribution of Units	Projected Renter-Occupied Units Needed
Upper (120% or more of MFI)	\$2,400+	Large lot and Standard Homes	10%	81
Upper Middle (80% to 120% of MFI)	\$1,750 to \$2,400	Small Homes, Townhomes, Apartments	30%	242
Lower Middle (50% to 80% of MFI)	\$1,000 to \$1,750	ADUs, Townhomes, Mfgd. Homes, Plexes, Apts.	40%	323
Low (less than 50% of MFI)	Less than \$1,000	ADUs, plexes, gov't assisted apts.	20%	161
<b>Total Dwelling Units</b>			<b>100%</b>	<b>807</b>

*\*\*Assumes 30% of income is used for rental payments; standard two bedroom unit.*

#### IV.A. BUILDABLE LAND INVENTORY

As summarized in **Exhibit 4.7**, the current buildable residential land base for the eight focus areas includes 5,746 acres of vacant land and 2,550 acres of part-vacant land area. While only a portion of this land inventory is likely to be developed over the next 20 years, BLI properties could be subdivided for development at the property owners' discretion.

In addition to vacant lands, there are 450 acres of potentially redevelopable land area, where land is valued more than existing building improvements per Skamania County Assessor records.<sup>1</sup>

The aggregate of the eight focus areas have a total of 11,651 acres within the residential land base (net of constraints). If we assume that 25% of the net land area (within very low, low and medium density land classifications) is devoted to future roads, public facilities, parks and unknown site

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<sup>1</sup> Buildable land findings are detailed in the attached Skamania County Buildable Land Inventory report, which is based on July 1, 2019 per Skamania County Assessor tax records. North Bonneville is not included in these findings as the city opted to not participate in this housing study.

development issues, the potential dwelling unit capacity under current zoning at “buildout” is 4,850 dwelling units on 8,746 net acres (see **Exhibit 4.7**).

**Exhibit 4.7: Potential Residential Development Capacity**

Location	Vacant Acres	Part-Vacant Acres	Redevelopable Acres	Total Developable Acres	Total Dwelling Unit Capacity	Share of Total
Carson	304	241	61	606	889	18%
Cook	-	1	-	1	-	0%
Home Valley	51	65	3	120	116	2%
Mill A	2,830	309	31	3,170	762	16%
Stabler	886	403	88	1,377	780	16%
Stevenson	342	329	43	714	1,652	34%
Underwood	101	77	17	195	41	1%
West End	1,230	1,125	208	2,563	610	13%
<b>Grand Total</b>	<b>5,746</b>	<b>2,550</b>	<b>450</b>	<b>8,746</b>	<b>4,850</b>	<b>100%</b>

Individual focus area-specific buildable land maps are available in **Appendix B**.

## IV.B. HOUSING NEED VS LAND SUPPLY

The actual amount and type of housing that is built in Skamania County will depend heavily upon the availability of wastewater treatment (sanitary sewer) capacity that is available, particularly within the cities of Stevenson and North Bonneville.

Under current zoning, the buildable land inventory within the key focus areas can accommodate 4,850 additional (72% low-density detached) dwellings. As indicated in **Exhibit 4.8**, the vacant land inventory within the key focus areas is zoned to accommodate 2,977 dwellings or 61% of the buildout capacity of remaining demand. An additional 1,445 units could be built on part-vacant land at the property owner’s discretion. Redevelopment land could in theory only address 458 units of demand.

**Based on the Scenario B high-growth demand forecast, if all owners of buildable vacant land opt to develop their property to its full potential, the vacant residential land base in Skamania County’s focus areas would be fully depleted in 30 years.**

**Development of part-vacant and redevelopable lands could extend this buildout time line by another 10 to 20 years. However, most property owners will not wish to subdivide their properties, which will limit the available land supply and drive up land prices and development costs over the foreseeable time frame.**

Stevenson is the only focus area with the likely potential to accommodate significant additions to the missing middle housing supply. As shown in **Exhibit 4.8**, under current zoning and infrastructure plans, **Stevenson has the potential capacity to add about 886 units of missing middle housing on vacant lands, 262 units on part-vacant lands and 194 units on redevelopment lands. This equates to approximately 28% of the overall long-range housing capacity.**

Carson also has significant development potential but that is limited by current zoning and lack of a public wastewater treatment systems. Under current zoning, the Carson area has the capacity to add nearly 890 low-density detached dwellings before its developable land becomes fully depleted. While

there are plans in the pipeline to add some affordable multifamily housing in Carson, allowed densities are only 2 units per acre on medium density zones.

Other focus areas, including Mill A, Stabler, West End, Home Valley and Underwood have potential for addressing demand for large estate homes or standard detached homes on septic. However, given the nature of rolling topography, limited roadway access and lack of public water/sewer infrastructure, any chance for addressing missing middle housing in these locations is unlikely.

**Exhibit 4.8**

Focus Area	Expected Housing Types under current zoning	Dwelling Unit Capacity on Vacant Land	Dwelling Unit Capacity on Part-Vacant Land	Dwelling Unit Capacity on Redevelopable Land	Total Dwelling Unit Capacity
<b>Carson</b>	Standard detached*	243	66	75	384
	Large lot detached	230	241	31	502
	Estate homes	1	2	-	3
	<b>Carson Total</b>	<b>474</b>	<b>309</b>	<b>106</b>	<b>889</b>
<b>Cook</b>	Estate homes	-	-	-	-
	<b>Cook Total</b>	-	-	-	-
<b>Home Valley</b>	Estate homes	50	64	2	116
	<b>Home Valley Total</b>	<b>50</b>	<b>64</b>	<b>2</b>	<b>116</b>
<b>Mill A</b>	Estate homes	655	93	14	762
	<b>Mill A Total</b>	<b>655</b>	<b>93</b>	<b>14</b>	<b>762</b>
<b>Stabler</b>	Large lot detached	121	60	9	190
	Estate homes	382	170	38	590
	<b>Stabler Total</b>	<b>503</b>	<b>230</b>	<b>47</b>	<b>780</b>
<b>Stevenson</b>	Townhomes & Multifamily	512	175	156	843
	Cottages & Plexes	374	87	38	499
	Large lot detached	39	146	11	196
	Estate homes	64	45	5	114
	<b>Stevenson Total</b>	<b>989</b>	<b>453</b>	<b>210</b>	<b>1,652</b>
<b>Underwood</b>	Large lot detached	5	-	-	5
	Estate homes	17	16	3	36
	<b>Underwood Total</b>	<b>22</b>	<b>16</b>	<b>3</b>	<b>41</b>
<b>West End</b>	Large lot detached	1	4	3	8
	Estate homes	283	276	43	602
	<b>West End Total</b>	<b>284</b>	<b>280</b>	<b>46</b>	<b>610</b>
<b>Total Dwelling Capacity</b>		<b>2,977</b>	<b>1,445</b>	<b>428</b>	<b>4,850</b>
<b>Potential Missing Middle Housing**</b>		<b>886</b>	<b>262</b>	<b>194</b>	<b>1,342</b>
Missing Middle % of Capacity		<b>30%</b>	<b>18%</b>	<b>45%</b>	<b>28%</b>

\* Low density zoning in Carson allows 2 dwelling units per acre; which could include townhomes/plexes.

\*\* Includes small lot cottage homes, attached townhomes, plexes and apartments; limited to Stevenson focus area.

Compiled by FCS GROUP.

## Section V. POLICY RECOMMENDATIONS

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### V.A. KEY FINDINGS

Skamania County's housing market is steady and getting stronger every year. Vacancy rates for long-term rentals are near zero today, and investment owned properties (e.g., second homes) account for nearly 20% of the housing demand. While there is steady demand for single family detached housing construction, there is a vast middle-income housing segment that is not being addressed.

Based on the long-run forecast of 3,619 new residents, **Skamania County will need approximately 1,949 additional housing units** to be constructed over the next 20 years.

Market demand will support a variety of housing types, including approximately 1,142 owner-occupied dwellings, 475 long-term renter dwellings, 331 short-term renter dwellings, and 20 units of group quarters (transitional housing units).

With rental vacancy rates near zero and land development costs rising, most new homes being constructed today are only able to address higher income demand. This situation is expected to become even more challenging in the future as remaining buildable lands develop with low density detached housing.

While the current buildable land supply can full address the demand for rural estate homes and standard detached housing development, it is not likely to fully address the needs for middle-income housing types attainable to most local families. Middle income housing types include small lot detached "cottages", townhomes, duplexes and garden apartments. Under current zoning and infrastructure plans, these more attainably priced housing types will most likely only occur in Stevenson.

In order to meet the demand of nearly half of current and future households that earn less than \$90,000 in annual income, the county and its cities need to find a way to encourage additional private investment of middle housing. Using regional HUD guidelines, middle housing includes homes priced below \$368,000 (or two bedrooms that rent for less than \$1,700 per month).

To enable developers/builders to deliver middle housing at attainable price points, Skamania County and the City of Stevenson should consider amendments to its development code and infrastructure investment strategy so that new cottages, plexes, townhomes, and garden apartments can be built.

To attract private development of middle-income housing, a mix of local actions are recommended.

### V.B. CITY OF STEVENSON RECOMMENDATIONS

As the Skamania County's seat of government, largest city and primary community services provider, the City of Stevenson had taken proactive steps to accommodate new development. Those efforts have included updates to the City's Comprehensive Plan and water and sewer master plans, as well as a recently completed Downtown Plan.

Stevenson's buildable residential land base has the potential to accommodate the most diverse mix of densities and land use types among the focus areas, including the only high-density zoned land

identified in this study. However, while Stevenson has development potential, its infrastructure is constrained, and remaining vacant sites are limited to a total of 19 acres in the high-density category and 54 acres in the medium-density category (remaining vacant parcels are less than 2 acres in size).

The issues facing Stevenson today include:

- How to cost-effectively extend water and sanitary sewer system capacity to serve areas that are within ½ mile of the existing city limits?
- How to create more development opportunities for construction of “missing middle” housing products, such as plexes, townhomes and cottage homes; particularly in walkable settings and areas served by public sewer and water?
- Ways to work with the County and local property owners/residents to create future neighborhoods in urban exempt areas that include a variety of planned housing types.

The City of Stevenson should consider implementing the following recommendations in their zoning code to reduce or eliminate barriers to housing development.

- ✓ Consider adding flexibility to the development of ADUs by:
  - Increasing the number of allowable ADUs from one to one attached and one detached per SFDD
  - Increasing size from 800 to 900 square feet
  - Eliminating the additional parking space requirement
  - Make the owner-occupancy requirement optional for an additional fee to cover enforcement costs.
- ✓ Permit two-family dwellings (TFDs or duplexes) in the R1 zone instead of requiring a conditional use permit.
- ✓ Complete sewer and water master plan updates before allowing major zone changes. Identify timing of future sewer pump station(s) and water service elevation levels so both systems can be extended to handle future growth beyond 2030.
- ✓ Consider feasibility of consolidating R2 and R3 zones, especially near schools.
- ✓ Reduce the minimum lot size requirement for TFDs and MFDs in R2, R3, and CR zones. Attached single-family housing products can be located on lots as small as 2,000 square feet.
- ✓ Permit senior housing options in R3 zone instead of requiring a conditional use permit
- ✓ Allow senior housing options in the R1 and R2 zones through conditional use instead of prohibiting them
- ✓ Define Light Industrial Activities and permit retail and artisan manufacturers/cottage industry business owners to operate in live/work spaces in C1 zone

## V.C. JOINT COUNTY/STEVENSON RECOMMENDATIONS

Skamania County and the City of Stevenson can work together to more effectively address countywide middle-income housing needs. As noted above, within the current city limits, there are opportunities to rezone land for addition development. In adjacent areas outside the NSA boundary, there are opportunities to work with Skamania County to permit a wider mix of development along with planned sewer and water infrastructure expansion and multimodal (road/bicycle) transportation linkages. Recommendations include:

- ✓ Consider a city/county intergovernmental agreement (IGA) to support city of Stevenson expansion and potential rezoning that result in additional housing development opportunities.
- ✓ Identify local and state public-owned properties (excluding park/open space areas) that could be developed for a mix of housing types.

## V.D. SKAMANIA COUNTY RECOMMENDATIONS

**Relatively high land and development costs hamper development of attainable housing for residents and workers. As a result, Skamania County has an existing deficit for “missing middle” housing.** To help encourage or incentivize construction of missing middle housing, the County should continue to pursue state and federal housing investment grants and work with the city of Stevenson and North Bonneville to consider the following policies:

- ✓ Eliminate Process Barriers in the Code. Consider making multifamily uses and cluster developments permitted uses rather than requiring conditional use permits or prohibiting these uses outright. County staff will be most knowledgeable about the areas of the County and the corresponding zones where this would be most beneficial; more developed areas, such as Carson and the West End should be considered first.
  - The RR zone in Carson and the WERL-2 zones could permit multifamily units outright or some of these areas could be rezoned to allow for more housing. Code amendments should also be considered in commercial zones, such as CC, CR, and C where new housing would have the least impact on surrounding uses and where residents have come to expect greater intensity of use.
  - Cluster developments should be more widely considered as permitted uses in some of the higher intensity zones in the County, including R-1, R-2, NWLR-2 and GMA residential zones.
  - Mobile and manufactured homes are an important source of affordable housing and should be a permitted use in zones with standards developed for lease lot sizes.
  - The County should consider ADUs within GMA residential zones.
- ✓ Lot Size Requirements: There are multiple zones throughout the County that require lot sizes larger than necessary to accommodate certain unit types on septic systems. The County should use Attachment B of this report as a starting place to audit their code with the intent of reducing lot size requirements where allowed under septic requirements and where smaller sizes would fit within the existing development patterns. The County is undergoing an update to the septic code in 2020 with larger land area requirements than now exist. The lot size analysis should be updated when new septic land area requirements are known.

- ✓ Consider “lot size averaging” so that the site of individual lots in a short-plat development can vary from the zoned minimum or maximum density, in a manner that the overall development still meets average lot size requirements.
- ✓ Encourage use of “shadow plats” that show where future accessory dwelling units could be provided on lots approved for single family housing.
- ✓ Consider making multi-family residential a conditional use in the Rural Conservancy shoreline designation in the draft SMP.

### V.D.1. Carson Area Opportunity

There is currently an abundant supply of vacant buildable land (800+ acres) within the Carson area. This area is likely to be developed with very low-density detached housing (889 units permitted under current zoning). The best opportunity to consider alternative planning scenarios for Carson is before large vacant parcels are committed to detached housing development. To influence development potential, the feasibility of a small wastewater treatment facility could be evaluated along with:

- ✓ The potential mix of housing that can be provided
- ✓ The ability to create a commercial and business center
- ✓ Locations for small and medium size light industrial operations
- ✓ Facility capital and operation costs, funding, and governance options
- ✓ Community support (at least one property owner has voiced interest in dedicating land for the treatment facility)

**It is recommended that the County initiate a wastewater treatment facility feasibility study for the Carson Area.** The study would consider a variety of collection, conveyance, and treatment options to address both long- and intermediate-term sewer needs. The study would examine parameters, including capital and land cost, maintenance, permitting, effluent flows, and potential affects (benefits and costs) to customers (rate payers). There are a variety of systems (vacuum systems, septic-tank effluent systems, local and regional tanks, and a variety of packaged residential to regional treatment technologies) that could be considered.

Interim wastewater treatment solutions could enable the County or Public Utility District to begin collecting sewer system development charges in anticipation of a treatment plant. The initial feasibility study may cost on the order of \$75,000 to \$125,000. Grant funds through the Washington Department of Ecology, Department of Commerce and the U.S. Department of Agriculture may be explored to fund the study.

### V.D.2. New Local Funding Options

**Skamania County has no major dedicated source of revenue for leveraging outside investment (public or private) for middle- or low-income housing. The demand for short-term rentals is increasing and could eventually “crowd out” long-term rental housing availability for locals.**

Policy recommendations include:

- ✓ Consider creating an annual license fee for short-term rental units in unincorporated areas of the county. Utilize proceeds to help fund a part-time housing coordinator that is responsible



for pursuing federal and state grants and arranging potential public/private development partnerships that include workforce housing construction.

- ✓ In conjunction with local governments, Skamania County should leverage federal Community Development Block Grants (CDBG funds), state public works grants and bonds to help communities expand water and sewer infrastructure within areas planned for middle housing through establishment of local improvement districts or reimbursement district programs.

**Washington and federal (National Scenic Area) planning requirements hamstringing the county's ability to protect residents from rapidly rising property values. About 1 in 5 existing dwellings in Skamania County are owned by non-residents.**

- ✓ Engage Washington Legislature to consider new property tax guidelines for rural counties (e.g., population under 50,000) such as a "homestead property tax exemption" that would provide a relatively lower property tax rate for year-round residents in comparison with non-resident property owners. Non-resident dwellings tend to be occupied during peak season months which places additional cost on local services, such as transportation, parks and emergency services. The intent of this legislation would be to generate a more equitable source of general fund revenues and to manage rapid increases in housing costs.<sup>2</sup>



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<sup>2</sup> While Washington state does provide property tax exemptions and deferrals for eligible homeowners (e.g., low income senior citizens, disabled persons, etc.), it does not currently allow homestead property tax exemptions; which have proven to be effective in states such as Florida, which has a relatively high share of non-resident property owners.



# APPENDIX A: COMMUNITY OUTREACH

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# APPENDIX B: BUILDABLE LAND REPORT

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# APPENDIX C: LOCAL CODE EVALUATION

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## SKAMANIA COUNTY BUILDABLE LANDS INVENTORY STAKEHOLDER INTERVIEW SUMMARY

The Skamania Economic Development Council (EDC) in partnership with consultants FCS GROUP and WSP USA is assessing buildable lands and housing needs within Skamania County. Over the next few months, the EDC will inventory vacant lands to target where future housing growth should occur. To conduct this assessment, eight focus areas have been selected that demonstrate the greatest potential for a range of housing, including workforce housing needs. To solicit input on the proposed plan, WSP conducted a series of stakeholder interviews in early October 2019. Interviews were conducted as informal conversations intended to understand individual and organizational perspectives, including up to four stakeholders per interview. At the beginning of each interview, stakeholders were provided with a brief introduction, including general background information about the study area. Following the introduction, discussion topics generally covered the following.

- The adequacy of housing options in their community.
- What specific types of housing are needed to meet current demand.
- Specific barriers to housing development in Skamania County.
- Specific knowledge about utility and infrastructure needs to support housing for a site or community.
- What the EDC's top priorities should be to enhance housing options.
- Specific opportunity or catalyst sites.

The following is a summary of the input received, organized around the topics identified above. Candid responses were encouraged, and comments are not attributed to specific individuals to provide a level of anonymity. A list of stakeholders interviewed is included at the end of the summary.

### **Adequacy of housing options in your community.**

Overall, stakeholders agreed that available housing options are not adequate in Skamania County. While most stakeholders acknowledged that for some consumers (such as wealthier retirees), there is sufficient housing stock, there was broad consensus that the housing stock for the workforce (including service workers) is essentially nonexistent. Stakeholders indicated that most new construction was selling between \$300,000 to \$600,000, and that most first-time homebuyers or young families were being priced out of the market. Stakeholders also consistently indicated that rents are high, especially for single-income earners or service workers in the food and beverage or hospitality industries. Finally, stakeholders advised that low-income residents and those with housing assistance needs were severely underserved.

### **Specific types of housing needed to meet current demand.**

Many stakeholders felt that increasing housing stock across all market segments is needed. Almost all stakeholders indicated that a variety of multifamily housing represents the highest need. Apartments (studios to three-bedroom apartments) and entry-level townhomes were identified as the most desirable housing types. Several stakeholders indicated that mixed-use apartment buildings with ground floor retail and apartments above would be appropriate in certain locations. A variety of innovative housing products were also identified by stakeholders; these included master-planned 55+ communities, clustered cottage-style developments, shipping container villages, and light industrial/artisan live-work spaces.

### **Specific barriers to housing development in Skamania County.**

Several common themes emerged from the stakeholders regarding barriers to housing development. Among these, financial risk was identified as a top issue. Many stakeholders indicated that developing housing products that are more affordable for renters or first-time home buyers (including apartments and entry-level townhomes), just aren't as profitable due to high construction costs and the financial risk of lower income tenants or buyers. Other challenges include elevated land costs, the high costs of builder and development fees, extended development review time lines, and a shortage of construction labor.

The Columbia River Gorge National Scenic Area (NSA) was identified as being another significant barrier to housing development. Stakeholders indicated that the NSA rules restrict the available land inventory and greatly increases development time lines. Local geographic constraints, as well as local zoning code and development standards, further restrict development.

A majority of stakeholders agreed that the most likely places with available residential land to accommodate future development are Stevenson and Carson. However, a lack of infrastructure in some of the most desirable areas is another barrier identified by the stakeholders. Most notably, the lack of wastewater treatment (sewer) in Carson restricts lot sizes and limits denser development in what is otherwise a desirable area for residential growth. Right-of-way issues also prove to be challenging, with complex layers of easements, encroachments, and other elements increasing costs and development time lines.

While there was acknowledgement that attracting and retaining local jobs requires adequate housing, there was not common agreement regarding what economic development initiatives should be considered to positively impact the housing market. Perspectives varied greatly about potential strategies, from letting the market influence available housing products, to local government action in providing subsidized housing. Likewise, there were varying views on quality of life issues (including the perceived lower quality of rural schools – a negative; and the positive impacts of recreation and tourism) and their effects on recruitment of new employees and families. These groups are likely to face inadequate housing options.

**Specific knowledge about utility or infrastructure needs to enhance housing.**

The stakeholders cited the cost of hooking up to local water and sewer systems as one of the primary drivers of elevated housing costs in Skamania County. Additionally, stakeholders indicated that residential development in the desirable area of Carson would continue to be limited by a lack of wastewater treatment (sewer) in the community. Many stakeholders advised certain infrastructure in much of the county is well established and sufficient, including the transportation network, electricity provision, and fiber communications. Still, key infrastructure development and/or extensions for water and sewer delivery in upper Stevenson and Carson, were repeatedly noted as high-priority needs.

**Top priorities the EDC should focus on to enhance housing.**

Stakeholders indicated the EDC’s top priorities should focus on promoting efforts to update local codes to be more development-friendly, working with interested parties to coordinate housing-friendly initiatives, and directing technical and financial resources into the community to support housing choices. Specific suggestions developed by the stakeholders include encouraging smart-growth principles, innovative housing solutions (such as Accessory Dwelling Units), coordinating discussions between developers and regulators, and acquiring grants to help with community development. Several stakeholders emphasized the importance of creating flexibility in the development standards to bring creative housing products to market.

Some stakeholders suggested the EDC could take on a leadership role in building relationships between local agencies involved with review of proposed housing products, and local landowners or developers. Stakeholders indicated the need to build trust between local landowners and regulatory agencies, and that the EDC may be a good partner to take on that role.

**Specific opportunity or catalyst sites.**

The stakeholders indicated several opportunity or catalyst sites that should be considered for housing development. Additionally, they provided several locations or communities that were not ideal for housing. A summary of these sites/communities is provided below.

Potential Catalyst Communities or Sites	Communities or Sites Lacking Housing Infrastructure
<ul style="list-style-type: none"> <li>• Carson area generally</li> <li>• Wind River Valley/Wind River Business Park</li> <li>• Mixed-use infill in downtown Stevenson</li> <li>• Trailer park at west end of First Street in downtown Stevenson for live/work housing or tiny home village</li> <li>• Property owned by Bob Talent on the west side of Skamania Lodge</li> <li>• Healthy Planet LLC property in Stevenson</li> <li>• Barnes Bros. property in Home Valley</li> <li>• Old Wind Mountain Ranch in Home Valley</li> <li>• Gary Collins’ property in east Home Valley</li> </ul>	<ul style="list-style-type: none"> <li>• Stabler (water and sewer)</li> <li>• Mill A (water and sewer)</li> <li>• Cook (water and sewer)</li> <li>• Carson (sewer)</li> </ul>

Potential Catalyst Communities or Sites	Communities or Sites Lacking Housing Infrastructure
<ul style="list-style-type: none"> <li>• 30-acre M-d-Columbia Housing Authority site near Middle School in Carson</li> <li>• Brian Adams' property in "West Gateway" area of Stevenson</li> <li>• Fairgrounds and County shops along Rock Creek Drive</li> <li>• Underutilized "Main Street" commercial spaces in Carson</li> <li>• Upper Kanaka Creek area</li> <li>• Underwood (based on in situ expansion)</li> <li>• Old Co-Ply site in Stevenson</li> <li>• SDS Broughton Mill on the river close to Underwood</li> <li>• 27-acre field behind Backwoods Brewery in Carson</li> <li>• Carson Depot (for wastewater treatment facility)</li> <li>• North Bonneville Port Site (for live-work spaces)</li> <li>• Apartments in North Bonneville</li> <li>• Field next to gas station off State Route 14 (SR 14) in North Bonneville and old fuel area off SR 14 in west Stevenson</li> </ul>	

**Stakeholders interviewed.**

Individuals who participated in the stakeholder interviews are identified below. Stakeholder affiliation is also noted; however, the opinions given were those of the individual stakeholder and do not necessarily represent the organizations identified.

- Brian Adams (Terrapin Investments LLC)
- Pat Albaugh (Port of Skamania)
- Scott Anderson (Mayor of Stevenson)
- David Bennett (Windermere Realty)
- Karen Douglas (Stevenson-Carson School District)
- Tim Elsea (Skamania County Public Works-County Engineer)
- Xavier Gates (Walking Man Brewery)
- John Goodman (Skamania PUD)
- Bob Hamlin (Skamania County Commissioner)
- Jane Keeler (John L. Scott)
- Rick Leavitt (Leavitt Brothers Consulting)
- Jeff Logosz (Slingshot)
- Matt Maher (Wave Broadband)
- Don McCaskell (Invision II LLC)

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Ronda Miller (Wave Broadband)  
Carrie Nissen (LDB)  
Matt Piper (People for People)  
Zachary Pyle (FDM Management)  
Reyna Saldate (John L. Scott)  
Kevin Waters (Skamania Economic Development Council)

NF:nb  
October 21, 2019

DRAFT





# Skamania County

## Buildable Lands Inventory Technical Methodology



**Project Consultants**

**FCS GROUP**

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## OVERVIEW

FCS GROUP was tasked with completing a Buildable Lands Inventory (BLI) for the Skamania County Economic Development Council (SCEDC) with a focus on key areas of the County which included:

- City of Stevenson (urban growth area)
- Carson area
- Home Valley area
- Mill A area
- Cook area
- Stabler area
- Underwood area
- West End area

A draft BLI analysis was conducted for the City of North Bonneville. However, the maps and results are included in this report, as the City has opted not to participate as a focus area.

This inventory included an assessment of land suitable for residential development within the County and provides SCEDC with a catalog of developable lands (including potential catalyst sites) required to address the housing related land use needs.

Using Geographic Information Systems (GIS) tools, FCS GROUP analyzed existing property types, Zoning and Comprehensive Plan designations, valuation, and environmental constraints. Skamania County property assessment data was used as a basis for the initial vacancy typing, followed by an analysis of applicable environmental constraints (floodways, protected areas, parks/open spaces, steep slopes) to remove lands unsuitable for development based on natural feature limitations.

The resulting BLI includes detailed information about tax lots in Skamania County and their suitability for residential development. This inventory provides a tabular and graphic representation of the key focus areas. The datasets used for this project, with source and a brief description, are listed below in **Exhibit 1**.

## Exhibit 1: Skamania County BLI Data Sources

Dataset	Type	Description	Source
County Boundary	GIS Layer	Boundary of Skamania County	Skamania County
NSA Boundary	GIS Layer	Boundary of National Scenic Area	NSA Data Library <sup>1</sup>
City Limits	GIS Layer	City of Stevenson & City of North Bonneville city limits	Skamania County
Urban Areas	GIS Layer	Boundaries of Urban Areas	NSA Data Library <sup>1</sup>
Place Name	GIS Layer	Points representing cities, towns, or places. Identifies focus areas for analysis	Skamania County
Places Of Interest	GIS Layer	Polygons representing places with dedicated land use (fire stations, schools, government facilities)	Skamania County
Site Structure Address Points	GIS Layer	Address file of structures located in analysis area	Skamania County
Rail Roads	GIS Layer	Burlington Northern Santa Fe railroad centerline	Skamania County
Road Centerlines	GIS Layer	County and City roads, State highway, registered private roads, some major USFS and DNR forest roads	Skamania County
Streams - DNR	GIS Layer	Water courses, streams, and rivers	WADNR via Skamania County
Waterbodies - DNR	GIS Layer	Water bodies and features	WADNR via Skamania County
Aerial Imagery	Raster	National Agriculture Imagery Program (NAIP) aerial imagery - July 2017	USDA <sup>2</sup>
Zoning_CompPlan	GIS Layer	Zoning designations in Skamania County, includes County, cities, Nat.Scenic Area.	Skamania County
Zoning_CompPlan	GIS Layer	Comprehensive Plan designations in Skamania County, includes County, cities, Nat.Scenic Area.	Skamania County
Land Use Designation (LUD)	GIS Layer	Generalized land use designation for National Scenic Area	NSA Data Library <sup>1</sup>
FEMA FIRM Flood Maps	GIS Layer	FEMA Flood Insurance Rate Maps data from FEMA	FEMA via Skamania County
NWI Wetlands - USFWS	GIS Layer	Local or National Wetlands Inventory - March 2013	USFWS via Skamania County
Parks & Open Space	GIS Layer	Parks within City & UGA Limits	City/County
Steep Slopes	Raster	Slopes 15% or greater derived from LIDAR Digital Terrain Model (DTM)	WADNR <sup>3</sup>
CAO	Digital Map	Critical Areas Ordinance supporting data layers (City of Stevenson only)	City of Stevenson
Parcels	GIS Layer	Parcels/Tax lots with owner attribution	Skamania County
General/Special Mgmt Areas	GIS Layer	General Management Areas and Special Management Areas (GMA/SMA)	NSA Data Library <sup>1</sup>
WADNR Lands	GIS Layer	Lands managed by Washington Department of Natural Resources	WADNR <sup>4</sup>
Owl Management Lands	GIS Layer	Lands managed for owl habitat by Washington Department of Natural Resources	WADNR <sup>4</sup>
Parcels	GIS Layer	Parcels/Tax lots with valuation (Assessed/RMV/PMV) attribution	Skamania County
ROW	GIS Layer	Parcels identified as Right of Way (ROW)	Skamania County
Structure Footprints	GIS Layer	Building footprints indicating presence of a structure on parcel	Skamania County
Parcel Building Details	Tabular	Building type, style, size, age, condition and quality	Skamania County

<sup>1</sup> - [Columbia River Gorge National Scenic Area \(NSA\) Data Library](#)

<sup>2</sup> - [USDA - National Agriculture Imagery Program \(NAIP\)](#)

<sup>3</sup> - [WADNR - Washington Department of Natural Resources LIDAR Portal](#)

<sup>4</sup> - [WADNR - Washington Department of Natural Resources Open Data Portal](#)

## Buildable Land Inventory Methodology

The objective of the residential BLI is to determine the amount of developable land available for future residential housing development within the area of analysis. The steps taken to perform this analysis are as follows:

1. **Calculate gross acres** by land use plan/zoning designation, including classifications for fully vacant and partially vacant parcels. This step entails “clipping” all the parcels that are contained in the project area and excludes parcels outside this area for consideration of development at this time.
2. **Identify development constraints and calculate gross buildable acres** by plan designation by subtracting land that is constrained from future development, such as such as existing public right-of-way, parks and open space, steep slopes, and floodplains.
3. **Net out public facilities and calculate net buildable acres** by plan designation, by subtracting future public facilities such as roads, schools and parks from gross buildable acres.
4. **Determine total net buildable acres by plan designation** by disaggregating net buildable acres from step three into general land use plan designations (e.g., low density, medium density, high density, etc.) and taking into account potential redevelopment locations and mixed-use development opportunity areas.

The detailed steps used to create the land inventory are described below.



## RESIDENTIAL LAND BASE

The residential land base reflects current Skamania County Comprehensive Plan land use classifications and zoning designations (Comprehensive Plan and zoning maps for County areas are provided as **Exhibits 2 and 3**). Select areas have a defined Comprehensive Plan land use designation; areas which do not have a defined Comprehensive Plan land use designation utilize the zoning designation as the future land use for that area.

Properties that are within the residential land base include the following designations:

### Residential Zoning Designations

- High Density Residential (HDR)
- Manufactured Home Subdivision (MH)
- Multi-Family Residential (MF)
- Multi-Family Residential (R3)
- Multi-Family Residential Overlay (R3)
- Residential 1 (R1)
- Residential 2 (R2)
- Residential 5 (R5)
- Residential 10 (R10)
- Residential (GMA) R-1
- Residential (GMA) R-2
- Residential (GMA) R-5
- Residential (GMA) R-10
- Rural Estate (RE)
- Rural Estate 20 (RES20)
- Rural Residential (RR)
- Single-Family Residential (SFR)
- Single-Family Residential (R1)
- Suburban Residential (SR)
- Two-Family Residential (R2)

### Residential Comprehensive Plan Use Classifications

- Rural I
- Rural II

In addition, commercial land on which housing development is allowed was included the following Zoning designations:

### Commercial and Mixed-Use Zoning Designations

- Mixed Use (MU)
- Neighborhood Commercial (NC)

For analysis purposes, each of these Comprehensive Plan classifications/zoning designations have been grouped into four residential development categories that represent the expected level of development based on the housing types/densities that are permitted within the County. It should be noted that new housing development must be permitted outright or by

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conditional development approval. This includes: low, medium and high density residential categories; as well as a commercial/mixed use category (which allows a mix of medium and high-density housing).

BLI findings and results were reviewed by County and City Staff and subjected to public review, then refined accordingly based on the input received.

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Exhibit 2. Comprehensive Plan Designations

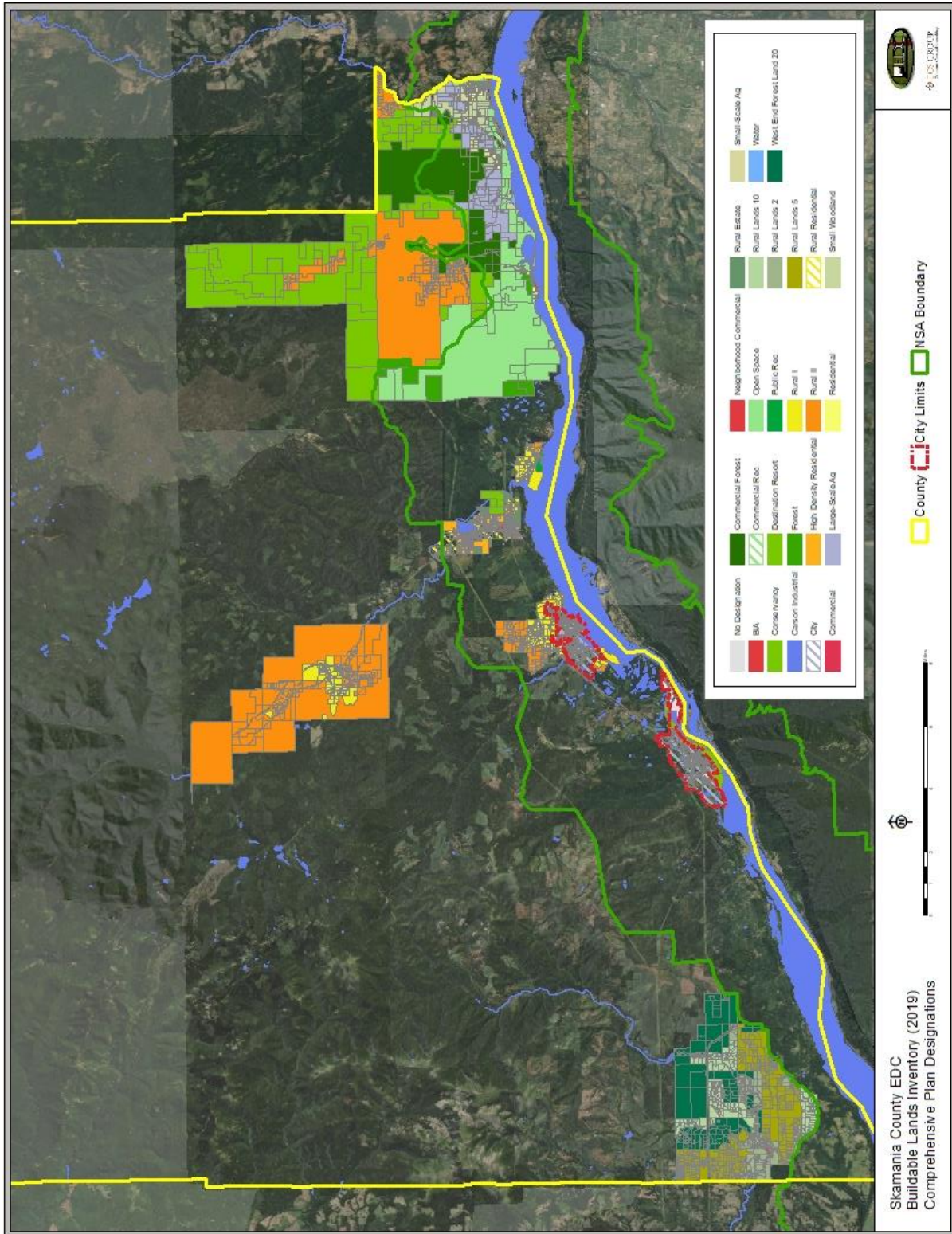
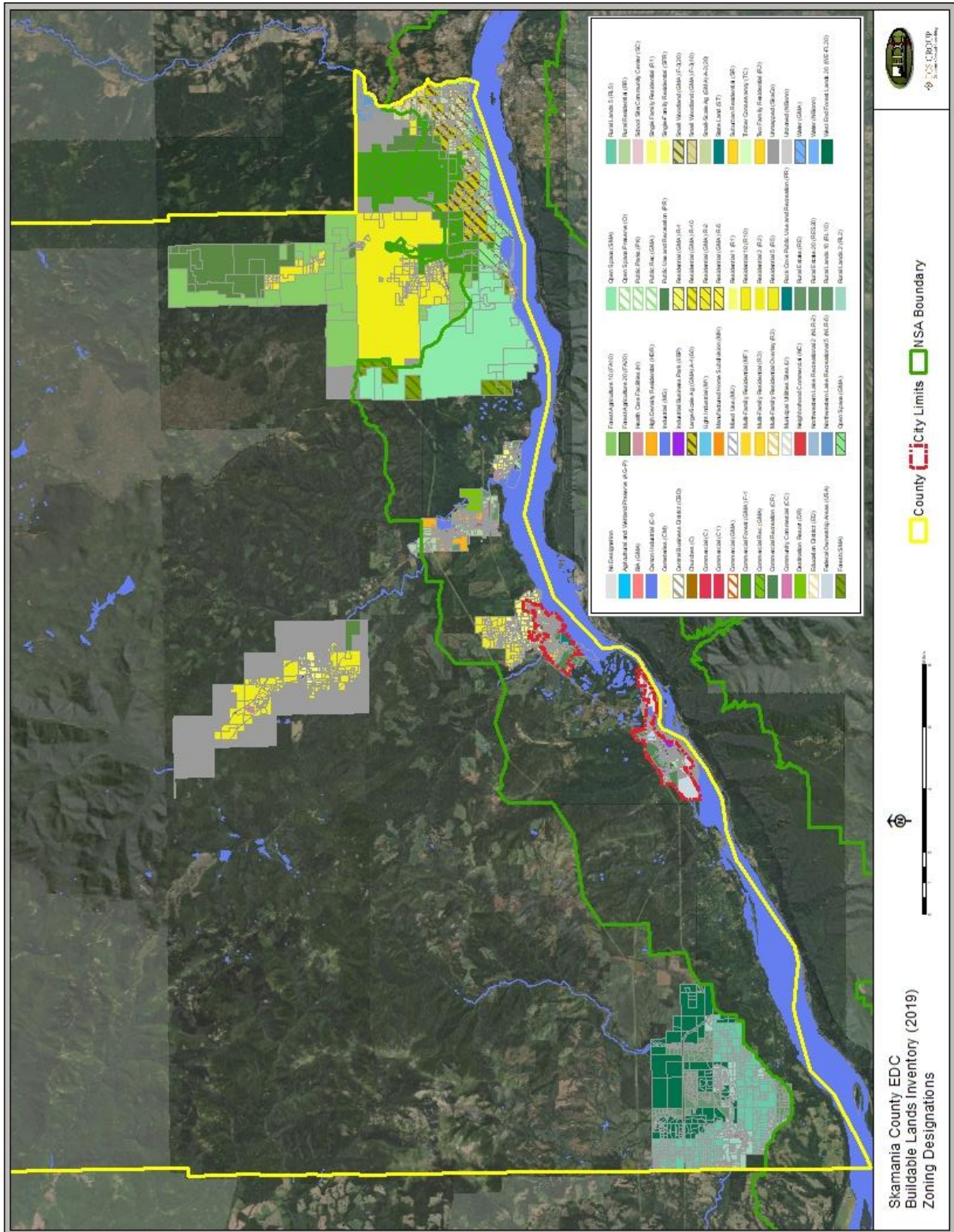




Exhibit 3. Zoning Designations



## LAND CLASSIFICATIONS

The next step includes classifying each tax lot (parcel) into one of the following categories.

- **Vacant land:** Properties with no structures or have buildings with very little value. For purpose of the BLI, residential lands with improvement value less than \$10,000 are considered vacant. These lands were also subjected to review using aerial photography; and if the land is in a committed use such as a parking lot, an assessment has been made to determine if it is to be classified as vacant, part vacant or developed.
- **Partially vacant land:** Properties that are occupied by a use (e.g., a home or building structure with value over \$10,000) but have enough land to be subdivided without the need for rezoning. This determination is made using tax assessor records and aerial photography. For lots with existing buildings, it is assumed that ¼ acre (10,890 sq. ft.) is retained by each existing home, and the remainder is included in the part vacant land inventory.
- **Vacant Undersized:** Properties that are vacant with less than 3,000 sq. ft. of land area. While this land area is not likely large enough to accommodate standard detached housing units, it may be suitable for accessory dwelling units (ADUs).
- **Developed & Non-Residential Land Base:** Properties unlikely to yield additional residential development for one of two reasons: they possess existing building structures at densities and are unlikely to subdivide or redevelop over the planning period; or they include parcels with Comprehensive Land Use Plan designations not included in the aforementioned residential land use classifications (such as commercial and industrial).
- **Public and Constrained (unbuildable) land:** These properties are unlikely to be developed because they are under a certain size (3,000 square feet), or restricted by existing uses such as: public ownership, roads and public right-of-way (ROW); common areas held by Home Owners Associations, parks/open space/recreation areas; cemeteries; and power substations.
- **Redevelopable Land:** In order to reflect existing market forces, a portion of developed properties were identified as “redevelopable.” These properties are a subset of developed, residentially zoned land that have existing “low value” structures which could be converted to more intensive residential uses during the planning period. The redevelopment land inventory includes tax lots have “land values” that are greater than “improvement values” based on current Skamania County assessor records.

These tax lot classifications were validated using aerial photos, building permit data, and assessor records. Preliminary BLI maps and results were refined based on input from Skamania County, City of Stevenson planning staff, and EDC staff along with public stakeholders during the planning process.

## DEVELOPMENT CONSTRAINTS

The BLI methodology for identifying and removing development constraints is consistent with best practices on buildable land inventories. By definition, the BLI is intended to include land that is “suitable, available, and necessary for residential uses.”

“Buildable Land” includes residential designated land within the project area, including vacant, part vacant and land that is likely to be redeveloped; and suitable, available and necessary for residential uses. Public-owned land is generally not considered to be available for residential use unless it is the intent of the public agency to see it developed for residential (i.e., as part of a public/private development or redevelopment project).

Land is considered to be “suitable and available” unless it is:

- Has slopes over 25 percent;
- Is within the 100-year flood plain (FEMA FIRM Zone A); or
- Parcels outside exempt areas within the Columbia Gorge National Scenic Area (NSA)

Based on best practices and data provided by the Skamania County, the following constraints have been deducted from the residential lands inventory.

- Land within waterbodies and floodways. Lands identified within waterbodies and floodways per the FEMA FIRM maps.
- Land within floodplains. This includes lands in flood-hazard areas (the 100-year floodplain ZONE A) from the buildable land inventory.
- Land within wetlands.
- Land with slopes greater than 25%.
- Land within natural resource protection measures. This includes parks and open spaces that are identified in the data provided.

**Exhibits 4-6** illustrate these types of “environmental” constraints.



Exhibit 4. Floodplains and Waterways

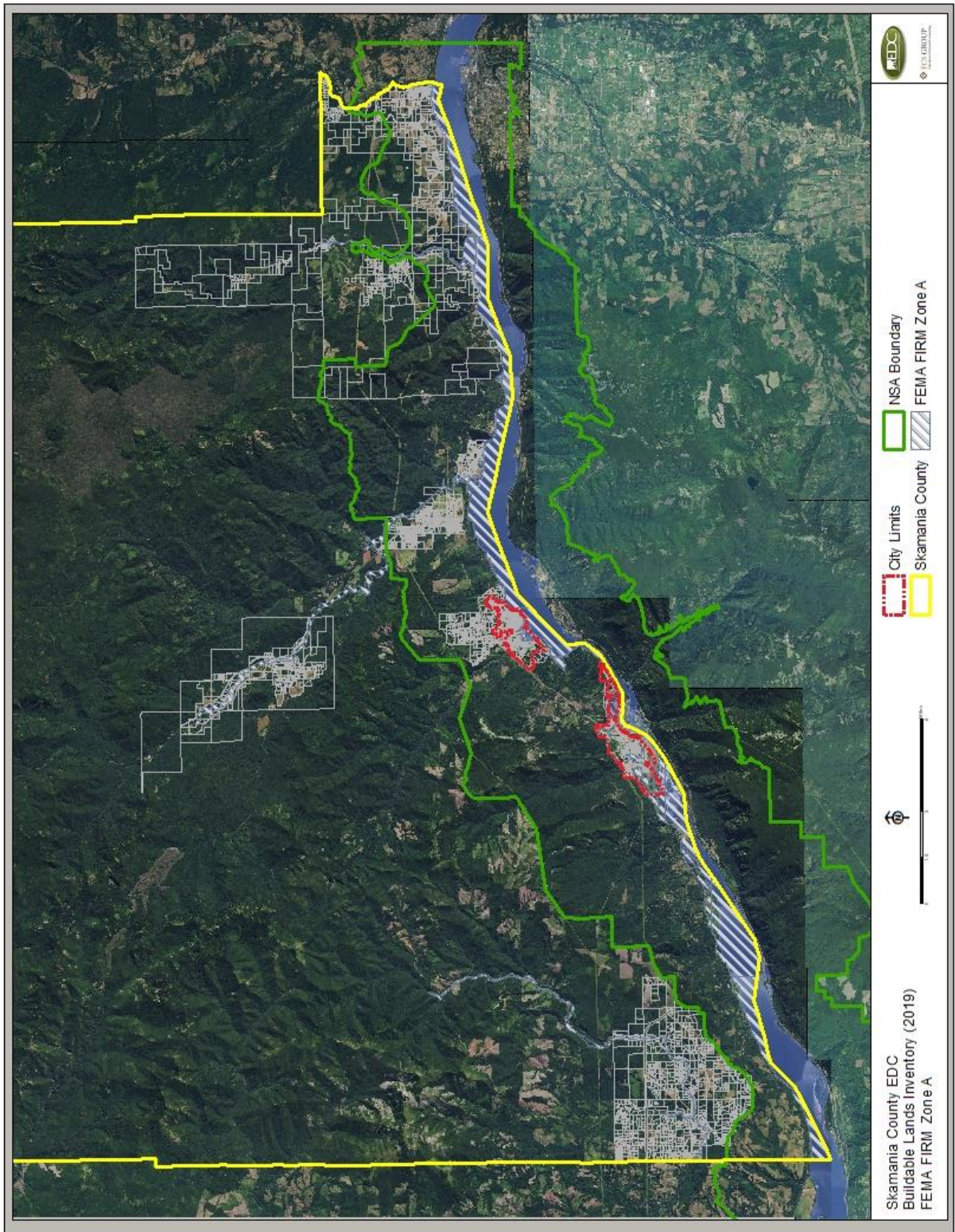




Exhibit 5. Wetlands

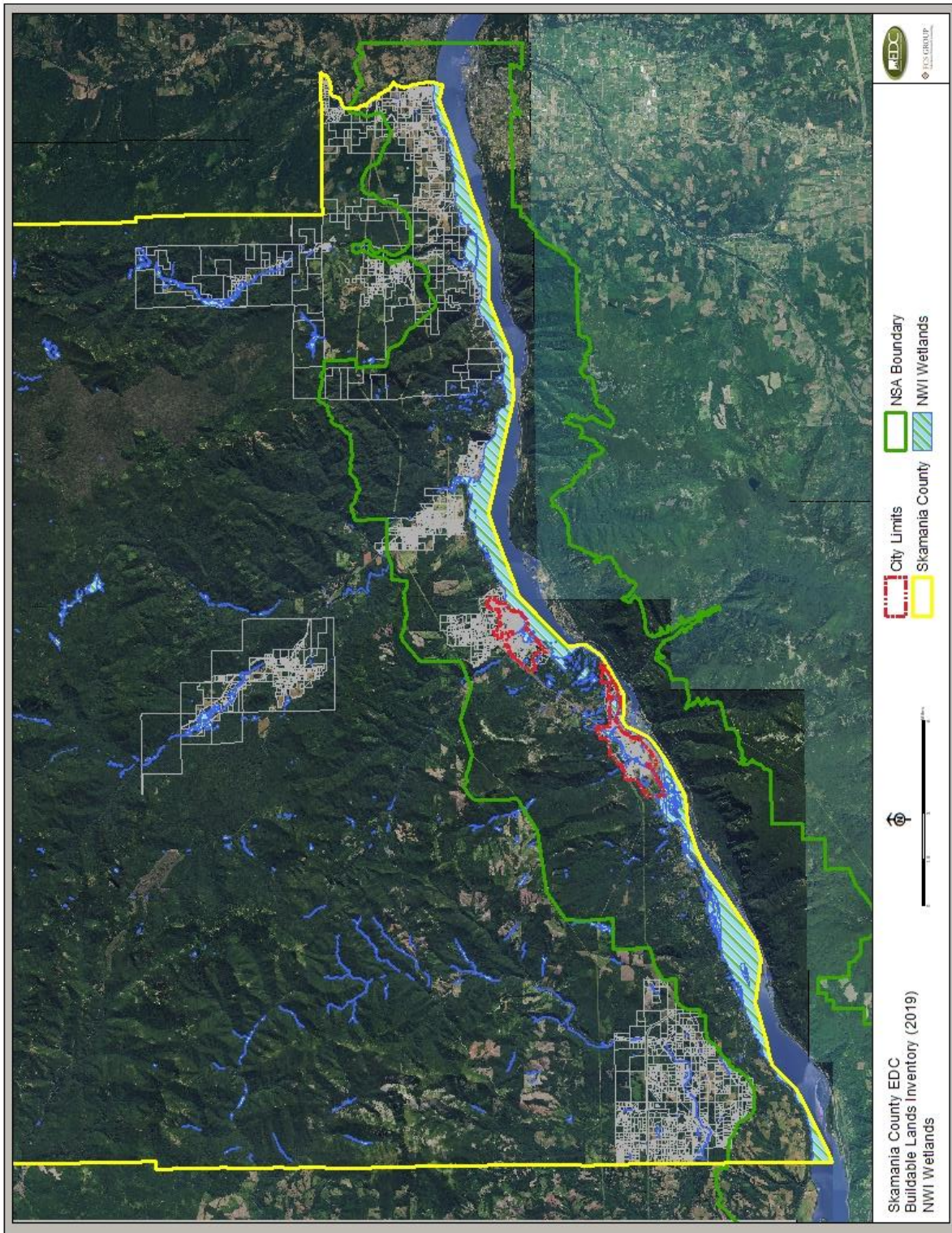
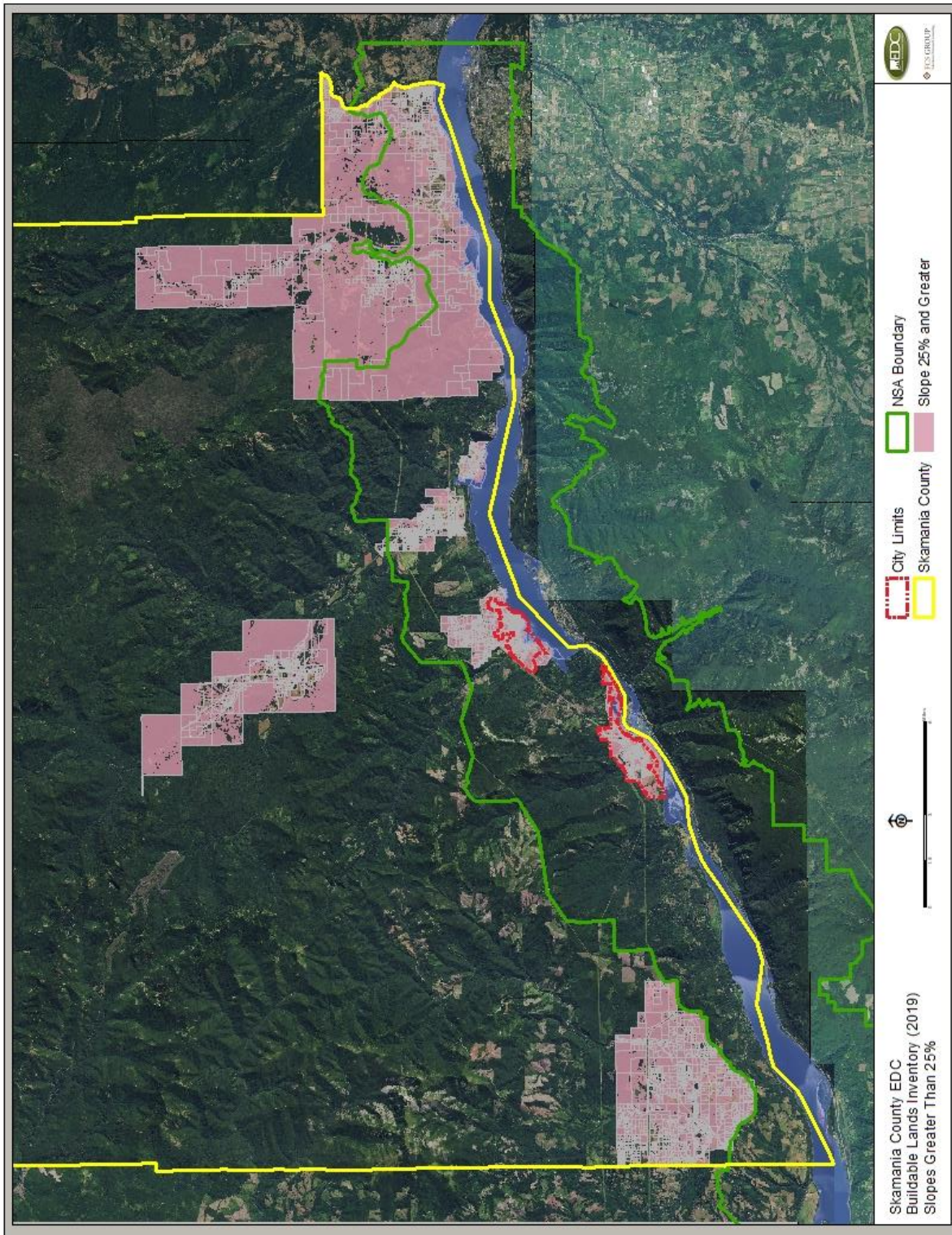




Exhibit 6. Slopes Over 25%



## RESIDENTIAL BUILDABLE LAND INVENTORY RESULTS

### Land Base

As noted above, the residential land base for the BLI includes all tax lots in the focus areas in residential, commercial and mixed-use designations. A summary of the land base by generalized plan designation is provided in **Exhibit 8**. The findings indicate that there are 5,361 tax lots in the land base with 36,032 gross acres.

**Exhibit 8: Gross Acreage in Land Base**

Land Classification	Count of Taxlot	Sum of Map Acres	Sum of Environmental	
			Constraints Acres	Sum of Lot Net Acres
Developed/Non-Residential	3,588	76,710	28,263	48,447
Partially Vacant	542	5,666	1,987	3,421
Unbuildable	133	655	248	407
Vacant	998	13,405	5,511	7,894
Vacant Undersized	100	29	23	6
<b>Grand Total</b>	<b>5,361</b>	<b>96,466</b>	<b>36,032</b>	<b>60,175</b>

### Buildable Land after constraints

The BLI methodology calculates the residential land base after accounting for the environmental constraints described previously in this report. The findings indicate that a total of 60,175 gross acres and 11,651 net acres are contained within the residential BLI in the focus areas. Approximately 7,655 acres (66%) are vacant, 3,397 acres (29%) are part-vacant, and 599 acres (5%) are considered to be re-developable (see **Exhibit 9**).

Buildable land has been organized into four general categories based on allowable density of the underlying zoning of each parcel. They are organized as follows:

- **Very Low:** generally allow development at less than one dwelling unit per acre. Specifically, these land uses allow between 0.05 and .5 dwelling units per acre.
- **Low:** Land classified as low density allows between one and 1.5 dwellings per acre.
- **Medium (Carson):** zoning allows up to 2 dwellings per acre.
- **Medium (Stevenson):** allows between 2 and 10 dwelling units per acre.
- **High (Stevenson):** allow between 16 and 34 dwelling units per acre.



**Exhibit 9: Residential Land Base with all constraints**

Row Labels	Vacant Acres	Part-Vacant Acres	Redevelopable Acres	Total
High	19	6	5	30
Medium	505	593	68	1,166
Low	291	87	66	444
Very Low	6,840	2,711	460	10,010
<b>Grand Total</b>	<b>7,655</b>	<b>3,397</b>	<b>599</b>	<b>11,651</b>

Given that this study is organized as an analysis of several focus areas, it should be noted that each area has unique availability as relates to developable residential land which is summarized below. Detailed tables for each focus area are available in **Appendix A**.

## Carson

The majority of developable land in Carson is in the low-density category which allows one unit per acre. There are also over 250 acres of medium-density land which allows 2 units per acre. Stakeholder interview feedback suggested that those densities could be increased significantly if a public sanitary sewer infrastructure system was constructed in Carson.

Row Labels	Vacant Acres	Part-Vacant Acres	Redevelopable Acres	Total
Medium	162.3	44.3	50.4	257
Low	211.8	223.0	30.6	465
Very Low	31.2	54.0	-	85
<b>Grand Total</b>	<b>405</b>	<b>321</b>	<b>81</b>	<b>808</b>

## Cook

Cook has very little vacant residential land based on the confluence of limited vacant land supply and various development constraints. This results in only one developable parcel which is part-vacant.

Row Labels	Vacant Acres	Part-Vacant Acres	Redevelopable Acres	Total
Very Low	-	1.3	-	1
<b>Grand Total</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>1</b>

## Home Valley

Developable land in Home Valley is limited to low-density properties with a mix of vacant and part-vacant parcels which total 159 acres, all of which allow one unit per acre.

Row Labels	Vacant Acres	Part-Vacant Acres	Redevelopable Acres	Total
Low	68	87	4	159
<b>Grand Total</b>	<b>68</b>	<b>87</b>	<b>4</b>	<b>159</b>

## Mill A

Mill A has a significant amount of vacant residentially zoned property, much of which is in the R-5 classification which allows one dwelling for every 5 acres. A review of these parcels indicates that the vast majority of the residentially-zoned properties in Mill A are owned by timber companies.

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Row Labels	Vacant Acres	Part-Vacant Acres	Redevelopable Acres	Total
Very Low	3,774	412	41	4,227
<b>Grand Total</b>	<b>3,774</b>	<b>412</b>	<b>41</b>	<b>4,227</b>

### Stabler

Stabler has a mix of low and very low-density residential land, much of which is vacant. The low density properties allow one dwelling per acre, while the very low density properties allow one dwelling for every two acres.

Row Labels	Vacant Acres	Part-Vacant Acres	Redevelopable Acres	Total
Low	163	82	13	258
Very Low	1,019	455	104	1,578
<b>Grand Total</b>	<b>1,182</b>	<b>537</b>	<b>117</b>	<b>1,835</b>

### Stevenson

Stevenson has the most diverse mix of densities and land use types among the focus areas, including the only high-density zoned land identified in this study. As with many of the focus areas, Stevenson has a significant amount of its developable land classified as vacant, including 19 acres in the high-density category and 54 acres in the medium-density category, which highlights the possibility that Stevenson could accommodate a significant amount of multifamily housing in the future. Much of this higher-density capacity can be served by Stevenson's existing sewer infrastructure which obviates the need to rely on septic tanks.

Row Labels	Vacant Acres	Part-Vacant Acres	Redevelopable Acres	Total
High	19	6	5	30
Low	127	229	27	383
Medium	54	9	4	68
Very Low	250	191	20	461
<b>Grand Total</b>	<b>450</b>	<b>436</b>	<b>56</b>	<b>942</b>

### Underwood

The vast majority of developable residential land in Underwood is in the very low-density category, meaning that most residential development there would be limited to homes on much larger footprints.

Row Labels	Vacant Acres	Part-Vacant Acres	Redevelopable Acres	Total
Low	8	1	1	10
Very Low	128	101	22	250
<b>Grand Total</b>	<b>135</b>	<b>102</b>	<b>23</b>	<b>260</b>

### West End

The West End focus area has significant amounts of very low-density properties. Like Underwood and Mill A, under existing conditions, the West End will yield mostly large lot dwelling

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development. Given its proximity to Clark County, this focus area is likely to absorb commuter housing demand from the Portland-Vancouver region.

Row Labels	Vacant Acres	Part-Vacant Acres	Redevelopable Acres	Total
Low	2	4	4	9
Very Low	1,639	1,496	274	3,409
<b>Grand Total</b>	<b>1,640</b>	<b>1,500</b>	<b>277</b>	<b>3,418</b>

## Development Capacity

The aggregate of the focus areas identified in this report have a total of 11,651 acres within the residential BLI land base (net of constraints). If we assume that 25% of the net land area within very low, low and medium density land classifications is devoted to future public roads, public facilities, parks and unknown site development issues, the potential dwelling unit capacity at buildout has been determined for 8,746 acres. Using density allowances identified in City and County zoning codes, the total residential dwelling unit development capacity in Skamania County is estimated to be 4,850 dwelling units (**Exhibit 12**).

It should be noted that the City of Stevenson is the only focus area that would allow a mix of low and medium density townhomes and higher density midrise apartments and mixed use developments to occur. It is likely that lower density detached homes would occur throughout the remaining portions of the county.

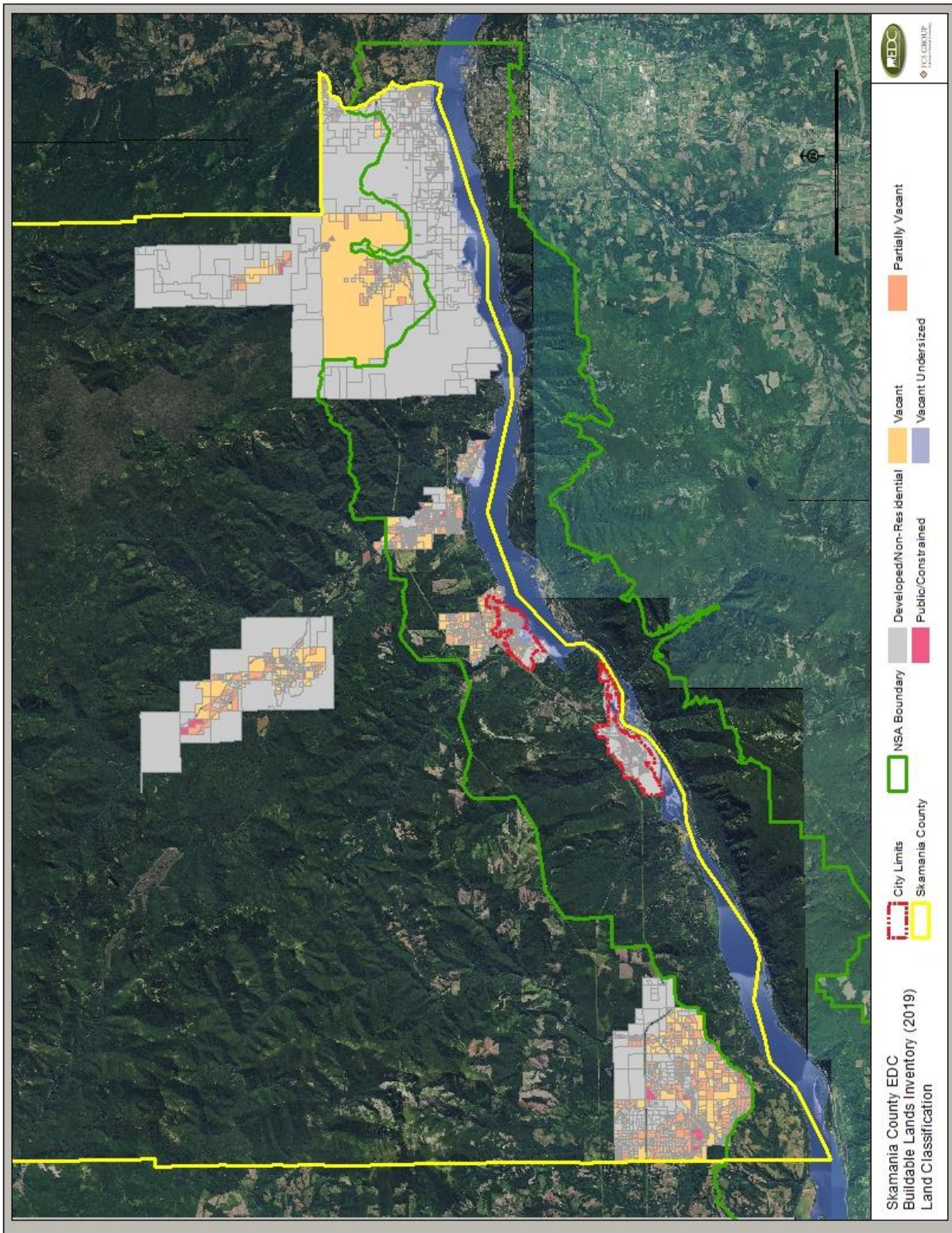
**Exhibit 12: Potential Residential Development Capacity**

Location	Vacant Acres	Part-Vacant Acres	Redevelopable Acres	Total Developable Acres	Total Dwelling Unit Capacity	Share of Total
Carson	304	241	61	606	889	18%
Cook	-	1	-	1	-	0%
Home Valley	51	65	3	120	116	2%
Mill A	2,830	309	31	3,170	762	16%
Stabler	886	403	88	1,377	780	16%
Stevenson	342	329	43	714	1,652	34%
Underwood	101	77	17	195	41	1%
West End	1,230	1,125	208	2,563	610	13%
<b>Grand Total</b>	<b>5,746</b>	<b>2,550</b>	<b>450</b>	<b>8,746</b>	<b>4,850</b>	<b>100%</b>

**Exhibit 13** illustrates the buildable vacant and partially vacant land areas for the residential land base within the focus areas. Individual focus area-specific buildable land maps are available in **Appendix B**.



Exhibit 13: Residential Land Base with all constraints



# APPENDIX A: DETAILED DEVELOPABLE LAND

## SUMMARY

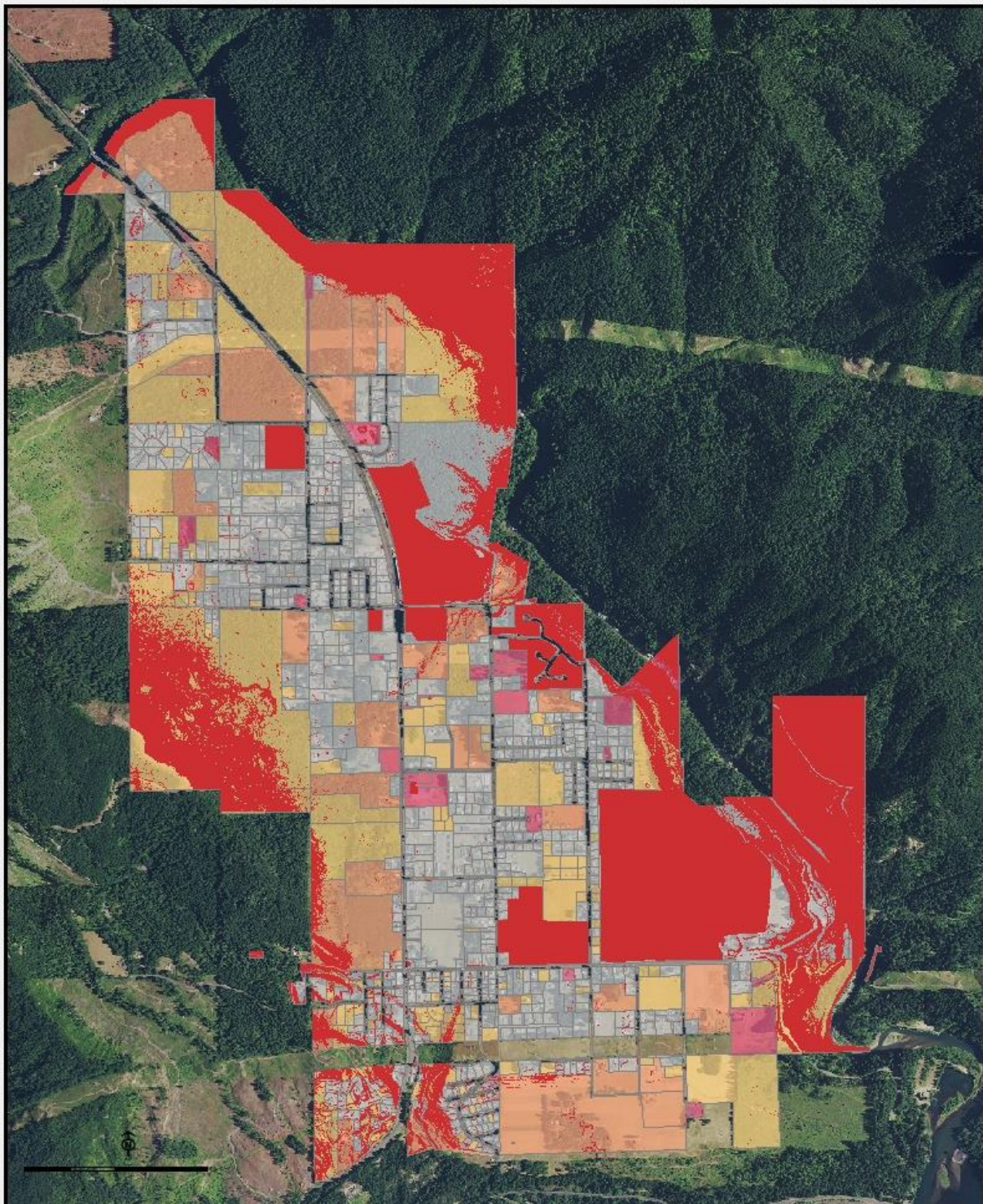
Location	Zone	Density (DU/Acre)	Grouping	Vacant Acres	Part-Vacant Acres	Redevelopable Acres
Stevenson	Residential (R-1)	1	Low	53	195.58	15.17
Stevenson	Residential (R-2)	0.5	Very Low	120.38	79.79	12.47
Stevenson	Residential (R-5)	0.2	Very Low	129.31	111.31	7.6
Stevenson	Single Family Residential (R-1)	7	Medium	44.27	4.31	3.83
Stevenson	Suburban Residential	2	Medium	73.98	33.49	12.12
Stevenson	Two-Family Residential (R-2)	10	Medium	1.91	0.69	0
Stevenson	Multi-Family Residential (R-3)	16	High	1.32	2.05	0.67
Stevenson	Multi-Family Residential Overlay (R-3)	16	High	6.13	0	0
Stevenson	Commercial (C-1)	34	High	11.56	4.23	4.3
Stevenson	Community Commercial (CC)	3	Medium	8.24	4.49	0
Carson	Rural Residential	1.5	Low	193.4	198.74	25.37
Carson	Rural Estate	0.05	Very Low	31.24	54.02	0
Carson	High-Density Residential (HDR)	2	Medium	162.25	44.33	50.35
Carson	Commercial	1	Low	18.4	24.28	5.26
Cook	Residential (GMA) (R-10)	0.1	Very Low	0	1.34	0
Mill A	Residential 10 (R-10)	0.1	Very Low	26.55	39.41	0
Mill A	Residential 2 (R-2)	0.5	Very Low	413.04	162.63	39.82
Mill A	Residential 5 (R-5)	0.2	Very Low	3333.96	210.23	0.9
Stabler	Residential 1 (R-1)	1	Low	158.39	77.15	10.67
Stabler	Residential 2 (R-2)	0.5	Very Low	1019.07	455.02	103.76
Stabler	Community Commercial (CC)	1	Low	4.45	4.55	2.33
West End	Rural Lands 10	0.1	Very Low	353.26	320.14	52.35
West End	Rural Lands 2	0.5	Very Low	292.78	343.74	32.63
West End	Rural Lands 5	0.2	Very Low	992.6	832.31	188.71
West End	Neighborhood Commercial (NC)	1.5	Low	1.56	4.22	3.54
Underwood	Residential (GMA) (R-1)	1	Low	7.69	1.31	1.23
Underwood	Residential (GMA) (R-10)	0.1	Very Low	0	3.5	0
Underwood	Residential (GMA) (R-2)	0.5	Very Low	16.38	15.73	3.45
Underwood	Residential (GMA) (R-5)	0.2	Very Low	30.74	79.15	18.14
Underwood	Residential 10 (R-10)	0.1	Very Low	72.84	0	0
Underwood	Residential 2 (R-2)	0.5	Very Low	7.59	2.55	0
Home Valley	Residential 1 (R-1)	1	Low	44.83	72.71	3.95
Home Valley	Community Commercial (CC)	1	Low	23.54	14.4	0

# APPENDIX B: FOCUS AREA BUILDABLE LAND MAPS

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Skamania County EDC  
Buildable Lands Inventory (2019)  
Land Classification with Constraints  
Carson Area

- |                           |                   |                  |             |
|---------------------------|-------------------|------------------|-------------|
| Developed/Non-Residential | Vacant            | Partially Vacant | Constraints |
| Public/Constrained        | Vacant Undersized |                  |             |





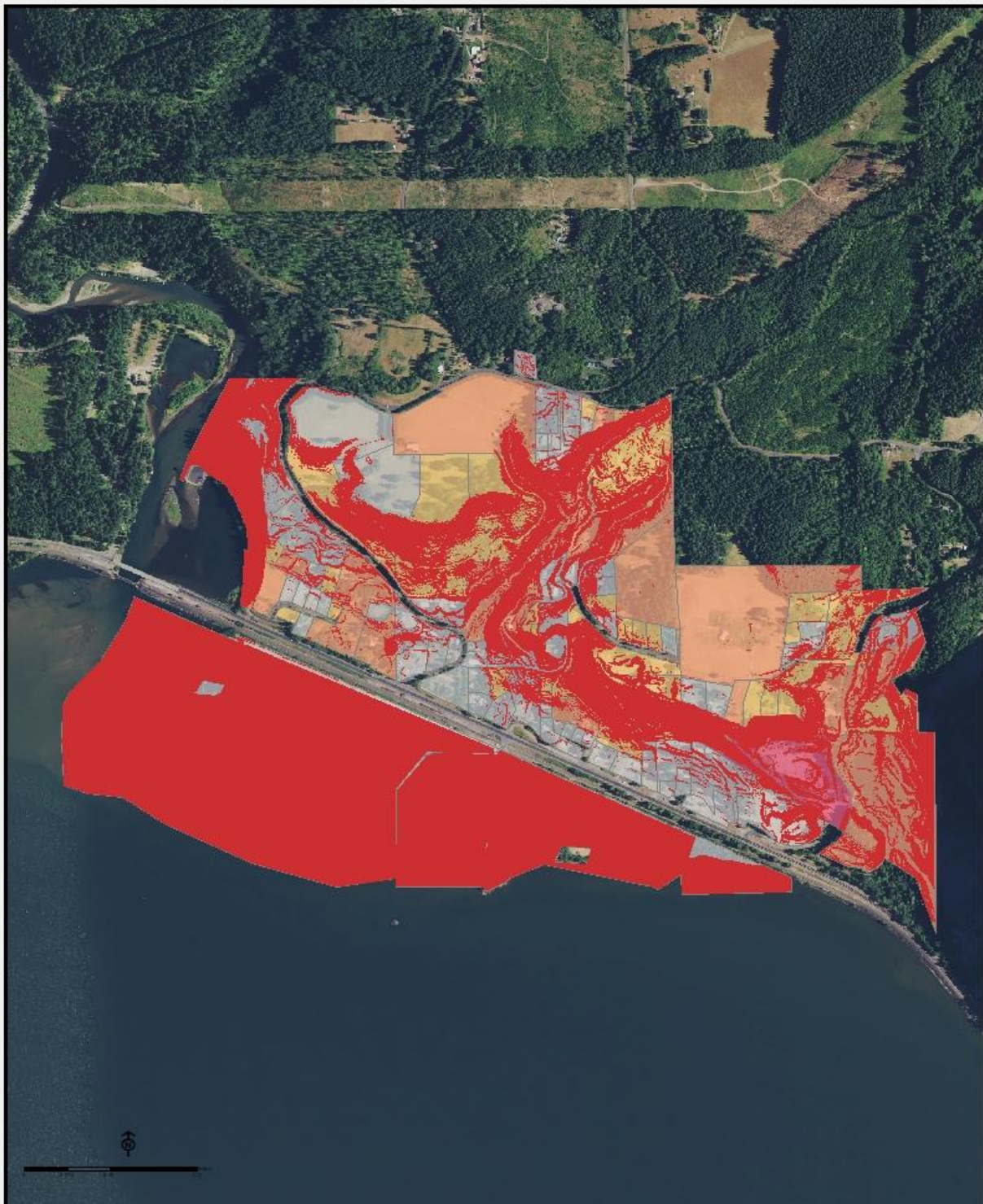


Skamania County EDC  
Buildable Lands Inventory (2019)  
Land Classification with Constraints  
Cook Area

- |                           |                   |                  |             |
|---------------------------|-------------------|------------------|-------------|
| Developed/Non-Residential | Vacant            | Partially Vacant | Constraints |
| Public/Constrained        | Vacant Undersized |                  |             |





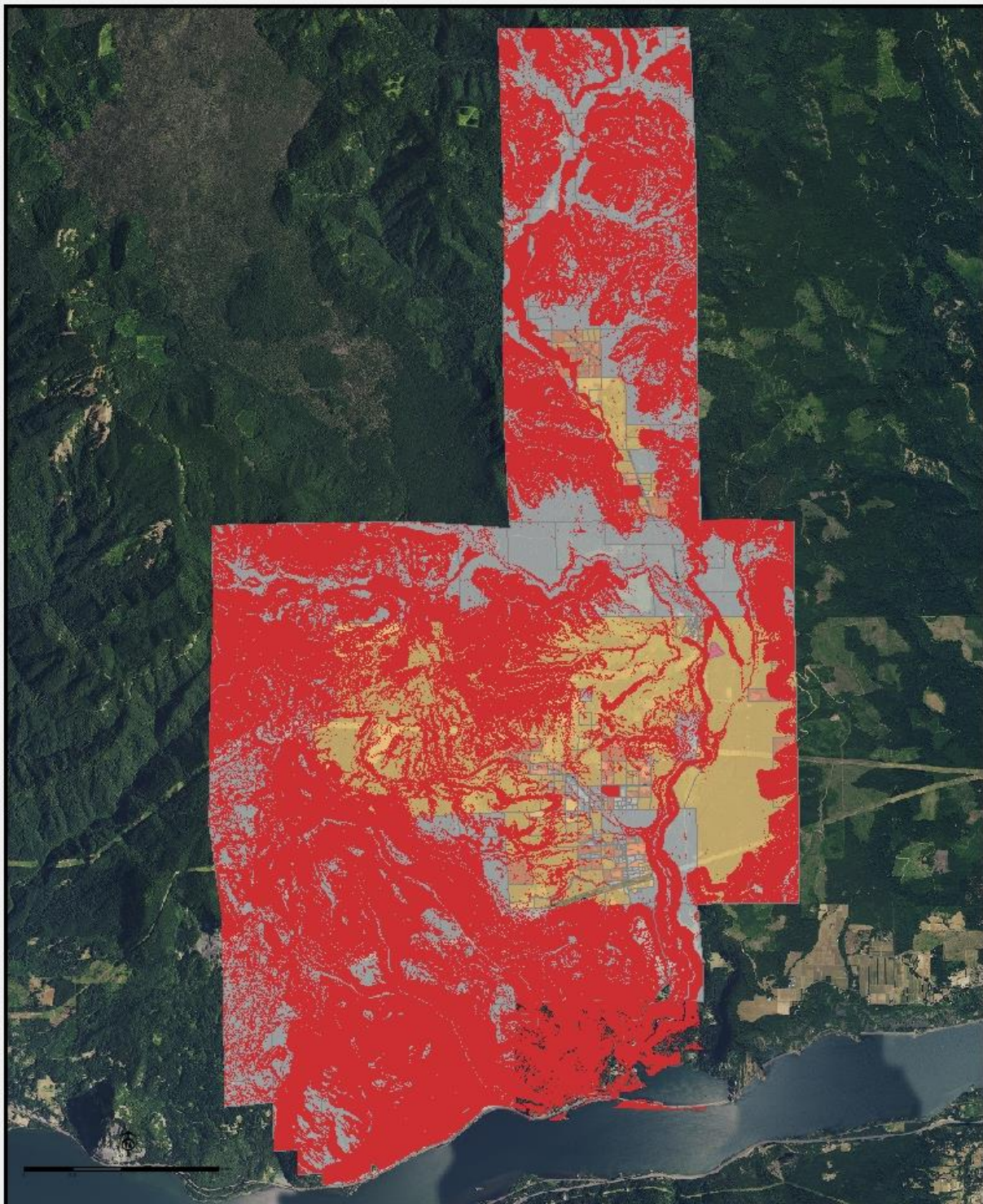


Skamania County EDC  
Buildable Lands Inventory (2019)  
Land Classification with Constraints  
Home Valley Area







- |                           |                   |                  |             |
|---------------------------|-------------------|------------------|-------------|
| Developed/Non-Residential | Vacant            | Partially Vacant | Constraints |
| Public/Constrained        | Vacant Undersized |                  |             |





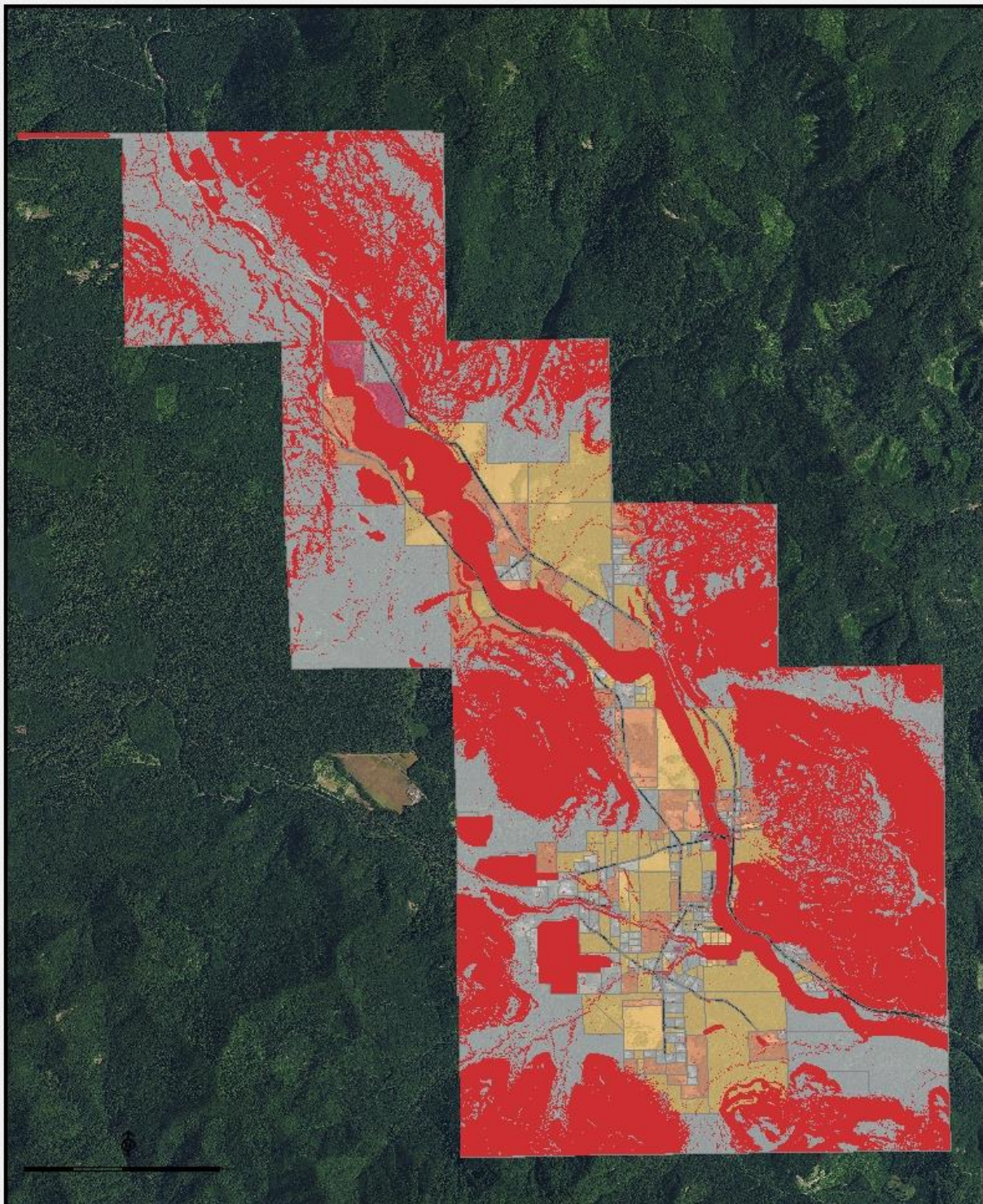


Skamania County EDC  
Buildable Lands Inventory (2019)  
Land Classification with Constraints  
Mill A Area

- |   |   |  |   |
|---|---|--|---|
|  Developed/Non-Residential |  Vacant            |  Partially Vacant |  Constraints |
|  Public/Constrained        |  Vacant Undersized |  |   |





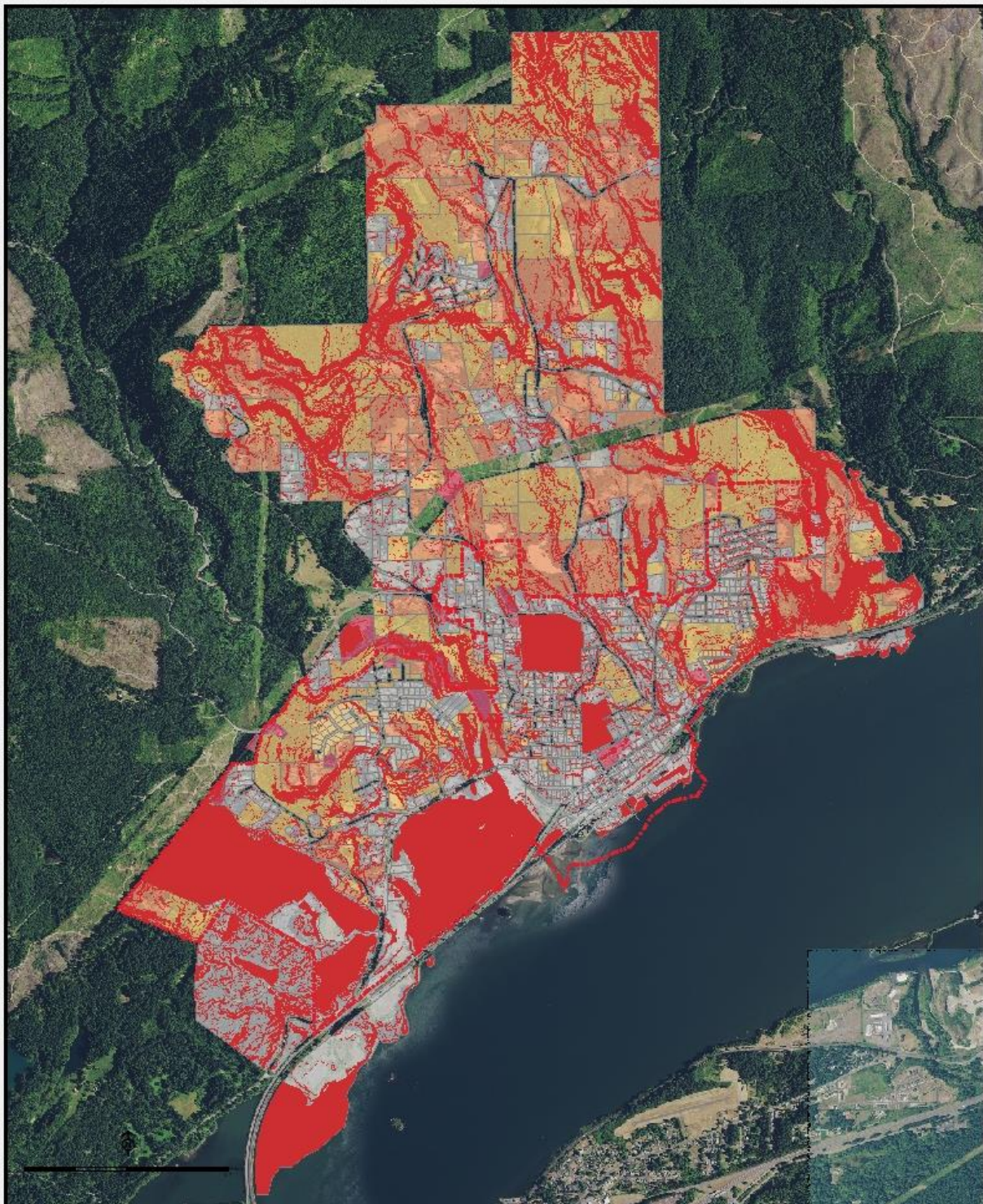


Skamania County EDC  
Buildable Lands Inventory (2019)  
Land Classification with Constraints  
Stabler Area

- |                           |                   |                  |             |
|---------------------------|-------------------|------------------|-------------|
| Developed/Non-Residential | Vacant            | Partially Vacant | Constraints |
| Public/Constrained        | Vacant Undersized |                  |             |





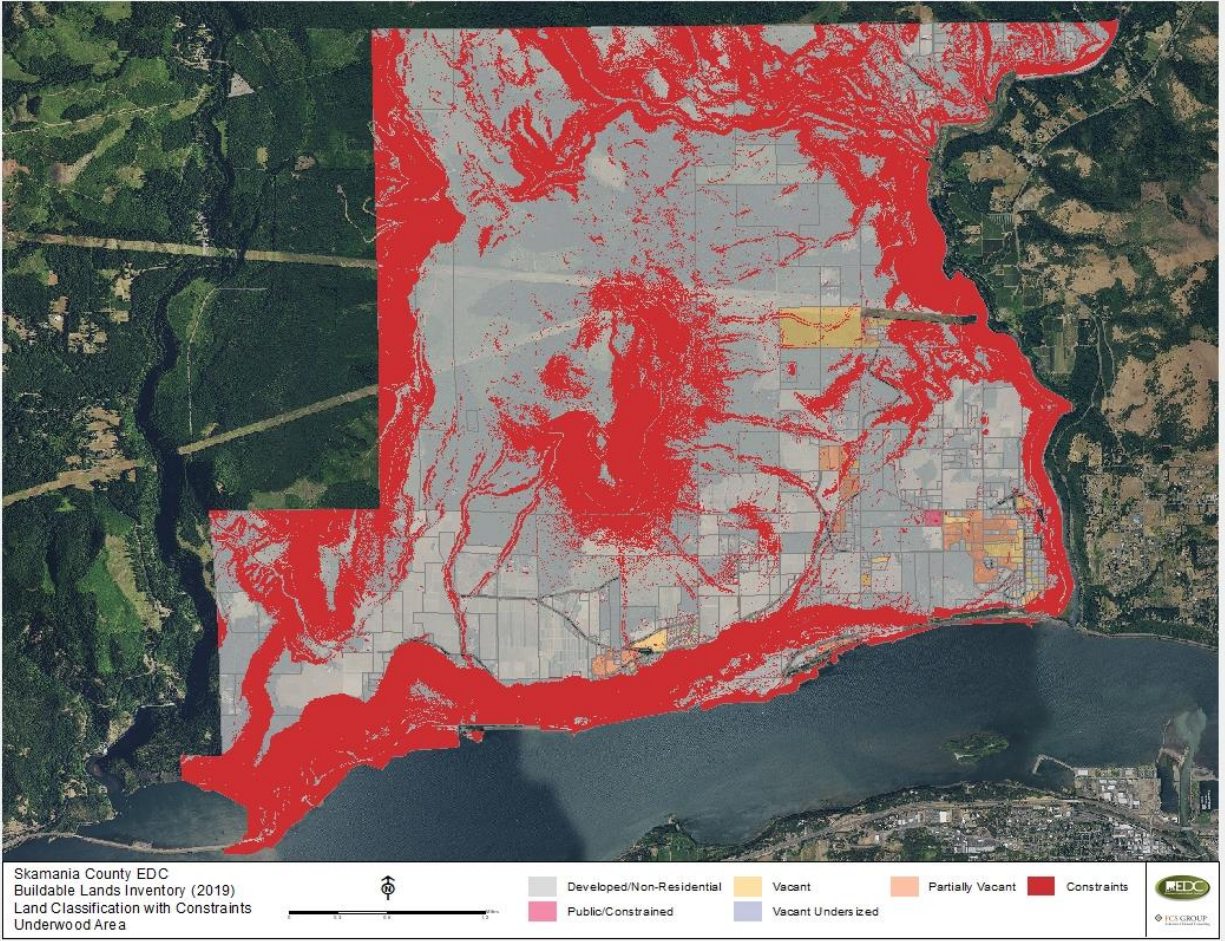


Skamania County EDC  
Buildable Lands Inventory (2019)  
Land Classification with Constraints  
Stevenson Area

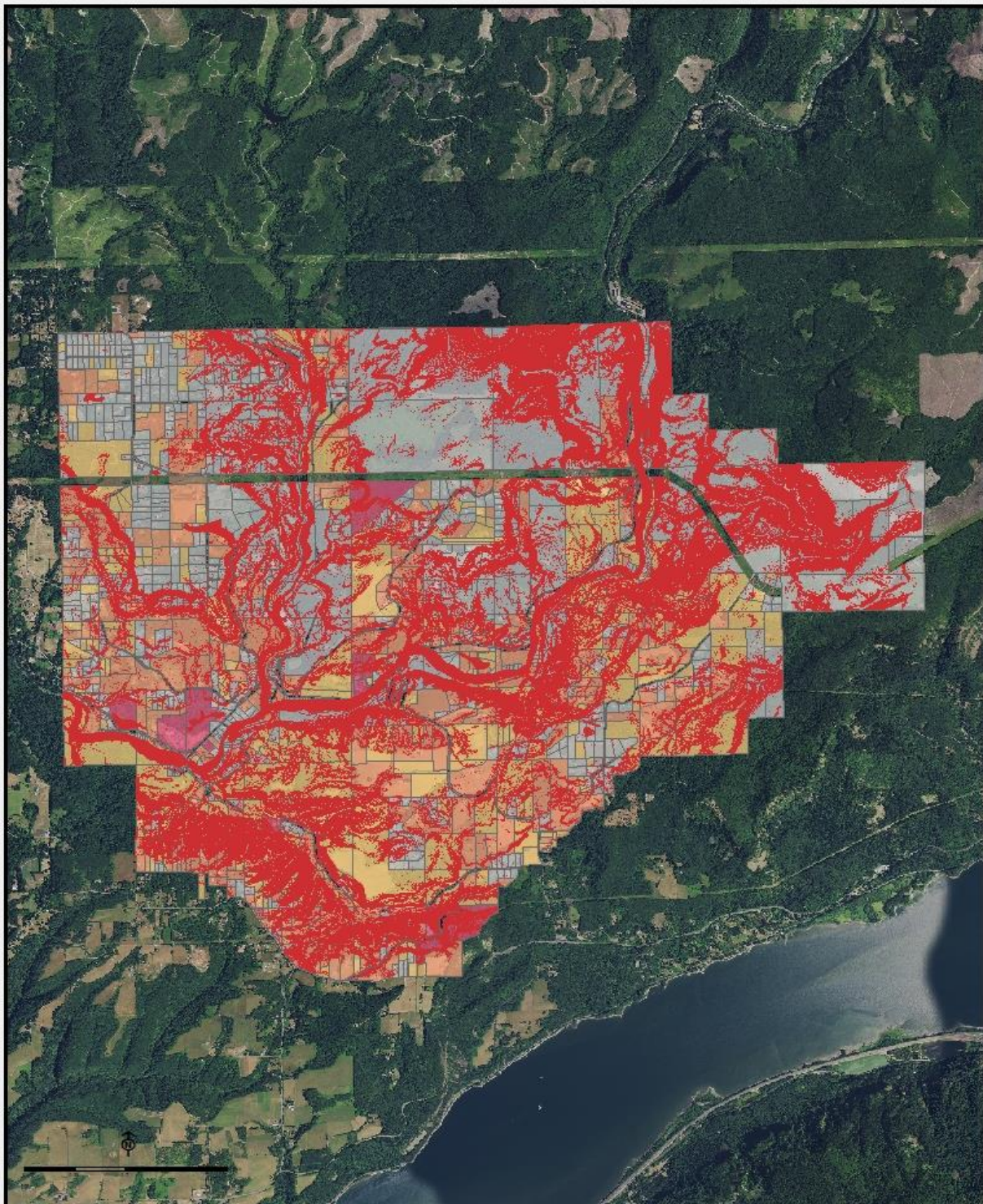
Grey	Developed/Non-Residential	Yellow	Vacant	Orange	Partially Vacant	Red	Constraints
Pink	Public/Constrained	Purple	Vacant Undersized				











Skamania County EDC  
Buildable Lands Inventory (2019)  
Land Classification with Constraints  
West End Area

- |                           |                   |                  |             |
|---------------------------|-------------------|------------------|-------------|
| Developed/Non-Residential | Vacant            | Partially Vacant | Constraints |
| Public/Constrained        | Vacant Undersized |                  |             |





## Memorandum

Date: November 27, 2019

Subject: Skamania County Housing Needs Assessment – Code Evaluation Memorandum

From: Scott Keillor and Ethan Spoo

To: Todd Chase, FCS GROUP

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### INTRODUCTION

Skamania County has contracted with FCS GROUP to complete a buildable lands inventory and Housing Needs Assessment (HNA) focused on identifying adequate lands as well as policy and regulatory changes that will encourage adequate provision of housing in the Skamania County and its communities including Stevenson and Carson. As part of the HNA project, WSP USA Inc (WSP) conducted a local zoning codes analysis to identify potential barriers to private and public sector housing development that might inhibit provision of an adequate and diverse supply of housing to meet the needs of the Skamania County residents and employees. This memorandum evaluates applicable land use regulations within the County to identify and explore solutions to possible code barriers to housing development. In early October 2019, WSP conducted stakeholder interviews of business, government, and development industry leaders to solicit their input on Skamania County’s housing market, perceived barriers to delivering housing choices, and possible solutions. Several notable themes emerged from these interviews that inform WSP’s code evaluation.

- Housing options in Skamania County are inadequate for single-income earners, service workers, low-income residents, and those with housing assistance needs.
- A variety of housing options are needed across all market segments, especially multifamily (apartments and townhomes), mixed use in appropriate locations, and specialized housing for seniors, cottage housing options, and live-work spaces.
- Housing barriers include financial risk for less profitable housing types, high development costs and long permitting time lines, and a shortage of construction labor. Local regulations, including Columbia River Gorge National Scenic Area (NSA) requirements, are a barrier to housing development, as is a lack of sewer infrastructure in outlying areas of Stevenson and all of unincorporated Carson.
- Priorities to enhance housing options include updating local codes to remove barriers, for example by encouraging accessory dwelling units, coordinating housing-friendly initiatives, directing technical and financial resources into the community, obtaining grants for community development, and building relationships between regulators and developers.



## CODE EVALUATION TO ADDRESS HOUSING NEEDS

### **Regulatory Barriers to Workforce and Affordable Housing Development**

Barriers to workforce and affordable housing have been studied around the nation. A 2005 U.S. Department of Housing and Urban Development Report, “Why Not in Our Community? Removing Barriers to Affordable Housing”<sup>1</sup> documents some of the more common regulatory barriers. Broadly speaking, these barriers include zoning and land use regulations and processes, such as slow and/or expensive land use reviews. More specifically, barriers include the following.

- Regulations that restrict any of the following: rental housing, higher density housing, multifamily housing, accessory dwelling units (ADUs), and manufactured homes.
- Regulations/reviews that increase the cost of the development, as the developer will pass these costs onto the occupants. This includes health, safety, and environmental restrictions when they unnecessarily go above and beyond their purpose of protecting the occupants and/or the environment.
- Local regulations that duplicate federal and state environmental regulations.
- Costs associated with lengthy review periods for permits/reviews, including multiple rounds of submittals by the applicant.
- Administrative procedures that are vague (including those that lack a specific time line and/or are not integrated into the larger approval process).
- Impact fees that are disproportionate to the actual cost and/or provide a higher level of infrastructure than needed for the community.
- Obsolete building and rehabilitation codes (e.g., old-fashioned and expensive materials, outdated construction methods, etc.).
- Allowing neighbor concerns to have undue influence on the approval of an affordable housing development.

This memorandum focuses specifically on regulations that restrict rental housing, higher density housing, ADUs, and manufactured homes.

### **Land Use Regulatory Framework**

WSP reviewed Skamania County and the City of Stevenson zoning codes to identify barriers to housing development. The land use regulatory framework in the County and its communities is established by the Washington Growth Management Act (GMA), the NSA Act, the Washington Shoreline Management Act, and state and local septic system requirements — all adapted to

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<sup>1</sup> See : “Why Not In Our Community?” *Removing Barriers to Affordable Housing. An Update to the Report of the Advisory Commission on Regulatory Barriers to Affordable Housing.* U.S. Department of Housing and Urban Development, February, 2005.

meet local community development needs. These state and federal acts have fairly detailed requirements for new development in the County that significantly influence new development.

- **Washington GMA:** Washington’s statewide land use planning program requires that high-population and high-growth counties and the cities within them adopt and periodically update comprehensive plans and implement development regulations. Although Skamania County is a non-planning county, it is still required to adopt critical areas regulations protecting wetlands, habitat areas, aquifers, flood hazards, and geologic hazards. These critical areas are prevalent throughout the county, which has many mountainous areas adjacent to streams. The County is currently in the process of updating its critical areas regulations, and Stevenson completed an update within the last year. Generally speaking, development is only allowed within critical areas and their buffers if mitigation is provided offsetting all impacts under critical area ordinances, contributing to the expense to develop land with these restrictions.
- **The Columbia River Gorge National Scenic Area (NSA) Act:** Development within the Columbia River Gorge NSA is regulated under the NSA Act and local Skamania County implementing regulations in Title 22 of the County’s code. The regulations are intended to protect the scenic, cultural, and natural resources within the Gorge and require that new development undergo NSA reviews. The regulations have the effect of restricting where development can occur by requiring that wetlands, streams, and cultural sites be protected and prescribe the architecture and design of buildings.
- **Shoreline Management Act:** Each jurisdiction across the state of Washington with streams flowing at a rate of 20 cubic feet per second or lakes 20 acres or larger is required to adopt a shoreline management program (SMP) that generally regulates land uses within 200 feet of these waterbodies, including protecting critical areas within shoreline jurisdiction, and prioritizing water-oriented uses (docks, trails, parks, boating facilities, water-dependent industries etc.) for shoreline location. Single-family residential uses are considered priority uses in SMPs across the state. Both City of Stevenson and Skamania County are in the process of updating their SMPs.
- **Septic System Land Area Requirements:** Washington Administrative Code (WAC) 246-272A and Skamania County Code Chapter 8.84 regulate the placement and design of small on-site septic systems (SOSSs), which are those treating effluence of less than 3,500 gallons per day (gpd). The County Department of Health is responsible for review and permitting of SOSSs. Review authority for large on-site septic systems (LOSSs) rests with the state under WAC 246-272B. In 2020, the County is due to adopt a septic code with even more restrictive land area requirements than outlined below.
- Lot sizes for SOSSs under WAC 246-272A are given in Table 1. Standard septic system requirements limit residential lot sizes to no smaller than one dwelling unit per acre when water is supplied by a well or no less than 12,500 square feet when public water is available. Exact lot sizes are determined by soil type; Type 4 and 5 soils (the most common in Skamania County) require minimum lot sizes of 18,000 square feet and 20,000 square feet when served by public water or 1 and 2 acres when served by a well, respectively. For unit

types other than single family, the minimum lot size requirements apply per unit volume of sewage (450 gpd). Sizing requirements dictate that 250 gallons be provided per bedroom, meaning that for duplexes, triplexes, and townhouses with one or two bedrooms, the required land area may be less than shown in the table.

**Table 1. Minimum Land Area Requirement  
Single-Family Residence or Unit Volume of Sewage**

Type of Water Supply	Soil Type (defined by WAC <a href="#">246-272A-0220</a> )					
	1	2	3	4	5	6
Public	0.5 acre	12,500 sq. ft.	15,000 sq. ft.	18,000 sq. ft.	20,000 sq. ft.	22,000 sq. ft.
	2.5 acre <sup>1</sup>					
Individual, on each lot	1.0 acre	1 acre	1 acre	1 acre	2 acres	2 acres
	2.5 acres <sup>1</sup>					

<sup>1</sup>See WAC [246-272A-0234\(6\)](#).

WAC 246-272B-3500 sets land area requirements when using an LOSS. Class 4 and 5 soils common in Skamania County require 1 acre of land per 1,575 gpd of effluent. Because the unit volume of sewage is 450 gpd, an average of 3.5 units can be built per acre using an LOSS in Skamania County which is greater than the 2.0 to 2.5 units per acre allowable for small on-site septic systems.

The same restrictions apply within the City of Stevenson, but large minimum lot size restrictions come into play much less often because public water and sewer infrastructure is more commonly available.

### Skamania County Code Evaluation

To evaluate Skamania County and the City of Stevenson codes for potential barriers to housing development, WSP reviewed the zones in each jurisdiction, noting whether residential development is allowed and common development restrictions (density/lot size and setbacks) per zone.

#### Summary of Zoning Code

Skamania County's zoning ordinance (Title 21) contains zoning regulations that apply to four specific subareas in more populated areas within the County (Carson, Northwestern Lake, West End, and Swift), NSA code that applies to the Columbia River Gorge in southern part of the County, and general regulations for less populated, more rural areas of the County. Table 2 lists zones where residential development is allowed, development restrictions within each zone, and notes about restrictions that may limit the ability to provide residential development. The table does not include forest or agricultural zones where single-family housing may be permitted but is subject to strict state restrictions on the number of units for large parcels, because these zones cannot be amended to allow for more residential development. The table also does not reference camping cabins or recreational vehicles (RV) allowed in some zones, because these are forms of temporary housing, not permanent housing solutions.

Minimum lot sizes in Skamania County are heavily influenced by lot and land size requirements for septic systems. In order to understand whether lot sizes are a barrier to development of workforce and affordable housing, it is necessary to understand septic system lot and land size requirements. Table A-1 in the appendix compares the land size requirements for different housing products with minimum lot sizes in each zone to determine whether minimum lot sizes in each zone are larger than they need to be to accommodate each type of housing product.

**Table 2. Skamania County Zoning Evaluation for Barriers to Housing Development**

Zone/Name	Residential Permitted?	Notable Development Restrictions	Identified Barriers
<b>Rural County Area</b>			
Residential (R-1)	<ul style="list-style-type: none"> <li>• Permitted: SFR up to fourplexes, ADUs</li> <li>• Conditional: mobile home parks</li> <li>• Prohibited: MFR (duplex and above) and cluster development</li> </ul>	<ul style="list-style-type: none"> <li>• SFR minimum lot size 2 acres (well and septic), 12,500 square feet (water and septic), 8,000 square feet (water and sewer)</li> <li>• MFR (duplex or above) required minimum lots size is 150-250% of SF lot sizes.</li> <li>• ADU setback: 20 feet from adjacent property</li> </ul>	<ul style="list-style-type: none"> <li>• Cluster development MFR (five and above) prohibited</li> <li>• Mobile homes require conditional use permits and lease lines must comply with lot size minimums.</li> </ul>
Residential (R-2)	<ul style="list-style-type: none"> <li>• Permitted: SFR, ADUs</li> <li>• Conditional: Duplexes, mobile home parks, cluster development</li> <li>• Prohibited: MFR (triplex and above)</li> </ul>	<ul style="list-style-type: none"> <li>• SFR minimum lot size: 2 acres</li> <li>• Duplex minimum lot size: 150% of SF</li> <li>• MFR (triplex and above) not permitted</li> <li>• ADU setback: 20 feet from adjacent property</li> </ul>	<ul style="list-style-type: none"> <li>• Cluster development requires a conditional use permit</li> <li>• Multifamily (triplex and above) prohibited</li> </ul>
Residential 5 (R-5) Residential 10 (R-10) Rural Estate (RES-20)	<ul style="list-style-type: none"> <li>• Permitted: SFR, ADUs</li> <li>• Conditional: small and large scale RV Parks, cluster developments</li> <li>• Prohibited: MFR (duplex and above)</li> </ul>	<ul style="list-style-type: none"> <li>• SFR minimum lot size: 5 acres (R-5), 10 acres (R-10), 20 acres (RES-20)</li> <li>• MFR prohibited</li> <li>• ADU setback: 20 feet from adjacent property</li> </ul>	<ul style="list-style-type: none"> <li>• Cluster development requires conditional use permit</li> <li>• Multifamily (duplex and above) prohibited</li> <li>• Lot sizes for single family are larger than necessary for septic land area requirements.</li> </ul>
Community Commercial (CC)	<ul style="list-style-type: none"> <li>• Permitted: SFR through fourplex, cluster developments, ADUs</li> <li>• Conditional: small and large scale RV parks</li> <li>• Prohibited: MFR (five and above) and cluster development</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum lot size for all residential uses: 10,800 square feet</li> <li>• ADU setback: 20 feet from adjacent property</li> </ul>	<ul style="list-style-type: none"> <li>• MFR (five and above) prohibited</li> <li>• Overly restrictive minimum lot sizes for single-family through duplex when connected to public sewer</li> </ul>

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Zone/Name	Residential Permitted?	Notable Development Restrictions	Identified Barriers
Commercial Recreation (CR)	<ul style="list-style-type: none"> <li>Permitted: Cluster developments, SFR for commercial caretaker and lots predating ordinance, ADUs</li> <li>Conditional: small and large scale RV parks</li> <li>Prohibited: MFR (duplex and above)</li> </ul>	<ul style="list-style-type: none"> <li>Minimum lot size: 12,500 square feet</li> <li>ADU setback: 20 feet from adjacent property</li> </ul>	<ul style="list-style-type: none"> <li>MFR (duplex and above) prohibited</li> </ul>
<b>Carson Subarea</b>			
High Density Residential (HDR)	<ul style="list-style-type: none"> <li>Permitted: SFR, ADUs</li> <li>Administrative Review: MFR and cluster developments</li> <li>Conditional Use: Mobile Home Parks</li> </ul>	<ul style="list-style-type: none"> <li>Minimum lot size SFR: 0.5 acre</li> <li>Minimum lot size (Duplex): 0.75 acres</li> <li>Minimum lot size (Triplex): 1.0 acres</li> <li>Minimum lot size (Fourplex): 1.25 acres</li> <li>Minimum lot size (MFR 5+): 2.0 acres</li> <li>ADU setback: 20 feet from adjacent property</li> </ul>	<ul style="list-style-type: none"> <li>Mobile home parks require conditional use permits.</li> <li>Overly restrictive lot sizes for SFR connected to public water/septic or sewer and for MFR (duplexes and above) connected to sewer.</li> </ul>
Rural Residential (RR)	<ul style="list-style-type: none"> <li>Permitted: SFR, ADUs</li> <li>Administrative Review: Cluster Development</li> <li>Conditional: MFR and Mobile Home Parks</li> </ul>	<ul style="list-style-type: none"> <li>Minimum lot size (SFR): 1 acre</li> <li>Minimum lot size (Duplex): 1.5 acres</li> <li>Minimum lot size (Triplex): 2.0 acres</li> <li>Minimum lot size (Fourplex): 2.5 acres</li> <li>Minimum lot size (MFR 5+): 3.0 acres</li> <li>ADU setback: 20 feet from adjacent property</li> </ul>	<ul style="list-style-type: none"> <li>Conditional use permit required for MFR (duplex and above)</li> <li>Overly restrict lot sizes for SFR and MFR developments connected to water/septic or sewer.</li> </ul>
Rural Estate (RE)	<ul style="list-style-type: none"> <li>Permitted: SFR, ADUs</li> <li>Administrative Review: Cluster development</li> </ul>	<ul style="list-style-type: none"> <li>Minimum lot size (SFR): 5 acres</li> <li>Minimum lot size (MFR 2+): not specified</li> <li>ADU setback: 20 feet from adjacent property</li> </ul>	<ul style="list-style-type: none"> <li>Conditional use permits required for MFR (duplex and above)</li> <li>SFR lot size minimums are larger than state septic lot size requirements</li> </ul>

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Zone/Name	Residential Permitted?	Notable Development Restrictions	Identified Barriers
	<ul style="list-style-type: none"> <li>• Conditional: MFR, small and large RV parks</li> <li>• Prohibited: Mobile home parks</li> </ul>		
Commercial (C)	<ul style="list-style-type: none"> <li>• Conditional: Residential above commercial</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>	None: no limitations on density or lot size.
<b>Northwestern Lake Subarea</b>			
NWL Residential 2 (NWLR-2)	<ul style="list-style-type: none"> <li>• Permitted: SFR, ADUs</li> <li>• Conditional: Cluster developments, duplexes</li> <li>• Prohibited: MFR (triplex and above)</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum lot size (SFR): 2 acres</li> <li>• Minimum lot size (duplex): 3 acres</li> <li>• ADU setback: 20 feet from adjacent property</li> </ul>	<ul style="list-style-type: none"> <li>• Duplexes and cluster developments require conditional use permits.</li> <li>• Multifamily uses (triplex and above) are prohibited.</li> <li>• Overly restrictive lot size for duplexes.</li> </ul>
NWL Residential 5 (NWLR-5)	<ul style="list-style-type: none"> <li>• Permitted: SFR, ADUs</li> <li>• Conditional: cluster developments, duplexes</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum lot size (SFR): 5 acres</li> <li>• Minimum lot size (duplex): 7.5 acres</li> <li>• ADU setback: 20 feet from adjacent property</li> </ul>	<ul style="list-style-type: none"> <li>• Duplexes require conditional use permit</li> <li>• MFR (triplex and above) prohibited</li> <li>• Overly restrictive lot size for SFR and duplexes connected to water/septic</li> </ul>
<b>West End Subarea</b>			
West End Rural Lands 2 (WERL-2)	<ul style="list-style-type: none"> <li>• Permitted: SFR, ADUs</li> <li>• Conditional: duplexes</li> <li>• Prohibited: MFR (triplex and above), cluster developments</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum lot size (SFR): 2 acres</li> <li>• Minimum lot size (duplex): 3 acres</li> <li>• ADU setback: 20 feet from adjacent property</li> </ul>	<ul style="list-style-type: none"> <li>• Duplexes require conditional use permits.</li> <li>• Multifamily (triplex and above) are prohibited</li> <li>• Overly restrictive lot size for SFR and duplexes connected to water/septic and sewer.</li> </ul>
West End Rural Lands 5 (WERL-5)	<ul style="list-style-type: none"> <li>• Permitted: SFR, ADUs</li> <li>• Conditional: duplexes</li> <li>• Prohibited: MFR (triplex and above), cluster developments</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum lot size (SFR): 5 acres</li> <li>• Minimum lot size (duplex): 7.5 acres</li> <li>• ADU setback: 20 feet from adjacent property</li> </ul>	<ul style="list-style-type: none"> <li>• Duplexes require conditional use permits</li> <li>• Multifamily and cluster developments are prohibited.</li> <li>• Overly restrictive lot sizes for SFR connected to well/septic, water/septic, or sewer.</li> </ul>



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Zone/Name	Residential Permitted?	Notable Development Restrictions	Identified Barriers
West End Rural Lands 10 (WERL-10)	<ul style="list-style-type: none"> <li>Permitted: SFR, ADUs</li> <li>Conditional: duplexes</li> <li>Prohibited: MFR (triplex and above) and cluster developments</li> </ul>	<ul style="list-style-type: none"> <li>Minimum lot size (SFR): 10 acres</li> <li>Minimum lot size (duplex): 15 acres</li> <li>ADU setback: 20 feet from adjacent property</li> </ul>	<ul style="list-style-type: none"> <li>Duplexes require conditional use permits.</li> <li>MFR (triplex and above) and cluster developments prohibited</li> <li>Overly restrictive lot size for duplexes.</li> </ul>
West End Forest Lands 20 (WEFL-20)	<ul style="list-style-type: none"> <li>Permitted: SFR,ADUs</li> <li>Prohibited: MFR (duplex and above) and cluster developments</li> </ul>	<ul style="list-style-type: none"> <li>Minimum lot size (SFR): 20 acres or 1 per legal lot of record</li> <li>ADU setback: 20 feet from adjacent property</li> </ul>	<ul style="list-style-type: none"> <li>Overly restrictive SFR lot sizes.</li> <li>Multifamily (duplex and above) and cluster developments prohibited.</li> </ul>
<b>Swift Subarea</b>			
Mountain Recreational Zone	<ul style="list-style-type: none"> <li>Permitted: SFR, cluster developments, ADUs</li> <li>Prohibited: MFR (Duplex and above)</li> </ul>	<ul style="list-style-type: none"> <li>Minimum lot size (SFR): 5 acres per unit</li> <li>ADU setback: 20 feet from adjacent property</li> </ul>	<ul style="list-style-type: none"> <li>Multifamily (duplex and above) prohibited</li> <li>Overly restrictive SFR lot sizes connected to well/septic, water/septic, or sewer.</li> </ul>
Swift Forest Lands 20 (SW-FL20)	<ul style="list-style-type: none"> <li>Permitted: SFR, ADUs, cluster developments</li> <li>Prohibited: MFR (duplex and above)</li> </ul>	<ul style="list-style-type: none"> <li>Minimum lot size (SFR): 20 acres or 1 per legal lot of record</li> <li>ADU setback: 20 feet from adjacent property</li> </ul>	<ul style="list-style-type: none"> <li>MFR (duplex and above) prohibited.</li> <li>Overly restrictive SFR lot sizes connected to well/septic, water/septic, or sewer.</li> </ul>
<b>NSA</b>			
GMA residential zones	<ul style="list-style-type: none"> <li>Permitted: SFR</li> <li>Prohibited: MFR (duplex and above), cluster developments</li> </ul>	<ul style="list-style-type: none"> <li>Minimum lot size (SFR): 1, 2, 5, and 10 acres for R-1, R-2, R-5, and R-10, respectively</li> </ul>	<ul style="list-style-type: none"> <li>Multifamily (duplex and above) and cluster developments prohibited</li> <li>Overly restrictive SFR lot sizes in R-1, R-2, R-5 and R-10 connected to water/septic or sewer.</li> <li>Overly restrictive SFR lot size connected to well/septic in R-5 and R-10.</li> </ul>

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Zone/Name	Residential Permitted?	Notable Development Restrictions	Identified Barriers
GMA – rural center	<ul style="list-style-type: none"> <li>• Permitted: SFR, duplexes</li> <li>• Prohibited: MFR (triplex and above) and cluster developments</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum lot size (SFR, duplex): 1 acre</li> </ul>	<ul style="list-style-type: none"> <li>• Multifamily (duplex and above) prohibited</li> <li>• Overly restrictive SFR lot sizes connected to water/septic or sewer.</li> </ul>
GMA -commercial	<ul style="list-style-type: none"> <li>• Permitted: SFR</li> <li>• Prohibited: MFR (duplex and above) and cluster developments</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum lot size (SFR): 1 acre</li> </ul>	<ul style="list-style-type: none"> <li>• Multifamily: (duplex and above) prohibited</li> <li>• Overly restrictive SFR lot sizes connected to water/septic or sewer.</li> </ul>
GMA – public recreation	<ul style="list-style-type: none"> <li>• Permitted: SFR on preexisting lot</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum lot size (SFR): preexisting lots of any size</li> </ul>	<ul style="list-style-type: none"> <li>• None: zone is primarily intended for public recreation</li> </ul>
GMA – commercial recreation	<ul style="list-style-type: none"> <li>• Permitted: SFR on preexisting lot</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum lot size (SFR): preexisting lots of any size</li> </ul>	<ul style="list-style-type: none"> <li>• None: zone is primarily intended for commercial recreation</li> </ul>

Source: Skamania County Zoning Ordinance, Title 21

Notes: SFR = single-family residential, MF = multifamily, ADU = Accessory Dwelling Unit, SF=square feet

## Housing Development Barriers

As identified in Table 2 above, regulatory barriers to housing in Skamania County fall into several major categories.

- **Process Barriers:** Conditional use permits are required for certain housing types in residential zones. Commonly, these include mobile home parks (an important form of affordable housing in the County) and cluster developments and multifamily housing in some zones. Multifamily housing and cluster developments are also commonly prohibited in lower density zones. Requiring conditional use permits or prohibiting certain types of housing is a barrier to the development of these types of housing because applicants must undergo additional process (conditional use review or zone changes) to build restricted housing types. Specific barriers identified by zone include the following,
  - Conditional use permit required for multifamily residential: R-2 (duplexes), RR, RE, NWLR-2 (duplexes), NWLR-5 (duplexes), and WERL-2/5/10 (duplexes).
  - Conditional use permit required for mobile home parks: R-1, R-2, HDR, and RR.
  - Multifamily uses prohibited: R-1 (five and above), R-2/5/10/20, CC, CR.
  - ADUs prohibited: The County allows ADUs wherever single-family homes are permitted outside of the NSA. The prohibition on ADUs inside the NSA is a barrier to development of this type of housing.
  - Limitations on cluster developments: The County’s cluster development regulations allow new residential developments to occur below minimum lot sizes and even allow for density bonuses ranging from 25 to 50 percent in Carson’s residential zones (HDR, RR, and RE). Cluster developments require conditional use permits or are permitted in most zones restricting the effectiveness of this tool to create higher densities and reduce housing costs.
- **Lot Size Requirements:** Because much of Skamania County is rural, its zoning code requires large lot sizes. The R-1 zone allows an 8,000-square-foot lot size minimum for single-family residential connected to sewer, and the CC zone allows 10,800-square-foot minimum lots without regard to sewer connection. Outside of these zones, the smallest lot size minimums are 1 acre and as large as 40 acres in some zones that allow residential uses. Often, lot size requirements exceed what is necessary to meet septic requirements. Attachment A provides a comparison of minimum required lot sizes in Skamania County’s zoning code with those required under the State and County’s septic code. The analysis shows that a number of zones have larger required minimum lot sizes than are necessary under septic regulations, which is to be expected in a rural county. Of note are lot sizes for single-family and duplex uses on public water and septic in the Northwestern Lake and West End subareas, as well as single-family and multifamily uses on water and septic in the Carson subarea. See Attachment A for further detail.

- Carson infrastructure barrier: As an economic center and because of its road network, Carson is a logical location for development of housing at urban densities to address workforce and affordable-housing shortages. But, Carson does not have public sewer infrastructure that, in turn, limits housing density. Development in Carson is served by on-site septic systems.

**City of Stevenson Code Evaluation**

Summary of Zoning Code

**Table 3. City of Stevenson Zoning Evaluation for Barriers to Housing Development**

Zone/Name	Residential permitted?	Notable Development Restrictions	Identified Barriers
R1 Single Family Residential	Permitted: SFDD, ADUs, manufactured and modular homes, adult family homes  Conditional: TFD, MFD, boarding house, dormitory  Prohibited: Mobile homes, assisted living, nursing homes	Minimum lot size (well/septic): 1 acre Minimum lot size (water/septic): 15,000 SF Minimum lot size (water/sewer): 6,000 SF	Two-family dwellings, and multifamily dwellings require conditional use permits.  Additional parking requirements, ADU maximum sizes (800 sf for detached units) and owner-occupancy requirements. Only one ADU is allowed in conjunction with a SFDD.  Prohibition on assisted living and nursing homes limits options for seniors.
R2 Two Family Residential	Permitted: SFDD, TFD, manufactured and modular homes, adult family home.  Conditional: MFD, boarding house, dorms.  Prohibited: Mobile homes, assisted living, nursing homes.	Minimum lot size (well/septic): N/A Minimum lot size (water/septic): 15,000 SF Minimum lot size (water/sewer): 5,000 SF + 2,000 SF per additional unit.	MFD requires conditional use permits.  Lot sizes for attached housing (TFD, MFD, townhomes) on individual lots could be as small as 2,000 square feet per unit.  Prohibition on assisted living and nursing homes limits options for seniors.



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Zone/Name	Residential permitted?	Notable Development Restrictions	Identified Barriers
R3 Multi-Family Residential	<p>Permitted: SFDD, townhome, MFD, manufactured and modular homes,</p> <p>Conditional: boarding house, assisted living, nursing home, dormitory.</p> <p>Prohibited: Mobile homes</p>	<p>Minimum lot size (well/septic): N/A                      Minimum lot size (water/septic): 15,000 SF + 5,000 SF per unit over 2.                      Minimum lot size (water/sewer):4,000 SF + 2,000 SF per additional unit.</p>	<p>Requiring conditional use for senior housing (assisted and nursing) may be burdensome in a high density residential zone.</p> <p>Lot sizes for attached housing (duplex, triplex, townhomes) on individual lots could be as small as 2,000 SF per unit.</p>
R3 Rock Cove Design Overlay	<p>Permitted: SFDD, townhome, MFD, manufactured and modular homes</p> <p>Conditional: boarding house, assisted living, nursing home, dormitory.</p> <p>Prohibited: Mobile homes</p>	<p>Minimum lot size (well/septic): N/A                      Minimum lot size (water/septic): 15,000 SF + 5,000 SF per unit over 2.                      Minimum lot size (water/sewer):4,000 SF + 2,000 SF per additional unit.</p>	<p>Requiring conditional use for senior housing (assisted and nursing) may be burdensome in a high density residential zone.</p> <p>Lot sizes for attached housing (duplex, triplex, townhomes) on individual lots could be as small as 2,000 SF per unit.</p>
MHR Mobile Home Residential	<p>Permitted: SFDD, manufactured, modular, and mobile homes, Adult Family Home</p> <p>Conditional: MFD, TFD, boarding house, assisted living, nursing home, dormitory.</p>	<p>Minimum lot size (well/septic): 5ac + 2 acres per unit over 2                      Minimum lot size (well/sewer): 5ac + 2 acres per unit over 2                      Minimum lot size (water/septic): 5ac + 2 acres per unit over 2                      Minimum lot size (water/sewer): 5ac + 5,000 sf per unit over 40</p>	<p>Overly restrictive lot size for all septic combinations (state law allows a ratio of 2 acres per one unit)</p> <p>MHR zone does not appear present in zoning map.</p>

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Zone/Name	Residential permitted?	Notable Development Restrictions	Identified Barriers
SR Suburban Residential	<p>Permitted: SFDD, ADUs, manufactured and modular homes, adult family home.</p> <p>Conditional: TFD, MFD, temporary residence, boarding house, assisted living, dorms.</p> <p>Prohibited: Mobile homes, travel trailers</p>	<p>Minimum lot size (well/septic): 1 acre                      Minimum lot size (water/septic): 20,000 sf                      Minimum lot size (water/sewer): 15,000 sf</p>	<p>Requiring conditional use for duplexes and MFR places a barrier on those development types.</p>
CR Commercial Recreation	<p>Conditional: MFD</p>	<p>Minimum lot size (all service levels): 10,000 sf</p>	<p>Overly restrictive lot size for TFD/MFD.</p>
C1 Commercial Recreation	<p>Permitted: SFDD, Manufactured Home, Modular Home, MFD, Boarding House, Adult Family Home, Assisted Living Facility</p> <p>Conditional: Temporary Residence, Nursing Home</p>	<p>Minimum lot size (all service levels)</p> <p>MFR: 1,200 sf per unit                      SFR: 6,000 sf</p> <p>All other uses: 0 sf</p>	<p>Requiring conditional use for senior housing (nursing homes) may be burdensome in a high-density zone.</p> <p>Requiring conditional use for Light Industrial Activities limits some live/work housing products for business owners in certain industries.</p>

Source: Stevenson Municipal Code, Title 17

Notes: SFDD = single-family detached dwelling, TFD= two-family dwelling, MFD = multifamily dwelling, ADU = Accessory Dwelling Unit, sf=square feet

## Housing Development Barriers

As identified in Table 3 above, regulatory barriers to housing in Stevenson fall into several major categories.

- **Process Barriers:** Conditional use permits are required for certain housing types in some residential or nonresidential but high-density zones. Most commonly, this applies to senior housing, which impacts a known low-income and vulnerable population. Mobile homes are prohibited in all residential zones except for the Mobile Home Residential zone. Lack of distinction between “mobile homes” and “manufactured” or “modular” homes impedes clarity in the development process and limits one of the most affordable housing options available. Requiring conditional use permits or prohibiting certain types of housing is a barrier to the development of these types of housing because applicants must undergo additional process (conditional use review or zone changes) to build restricted housing types. Specific barriers identified by zone include the following.
  - Conditional use permit required or for assisted living and nursing home facilities in zones: R3, MHR, and C1
  - Prohibitions on assisted living and nursing home facilities in zones: R1, R2
  - Prohibitions on mobile homes (but not manufactured or modular homes) in zones: R1, R2, R3, and SR.
  - Live/work housing products are not expressly permitted in zones: C1
- **Lot Size Requirements:** Most of Stevenson’s lot sizes provide reasonable flexibility for project proponents and are comparable to development standards in other urban areas.
  - Minimum lot sizes in the C1 zone provide for maximum flexibility, but the minimum lot sizes for MFR development in the R3 and CR zones are too restrictive. Lot sizes for attached housing (duplex, triplex, townhome, etc.) on individual lots can be as small as 2,000 square feet per unit.

## Shoreline Master Program and Critical Area Ordinances

As previously mentioned, certain Skamania County streams, river, and lakes are subject to regulation under the state Shoreline Management Act and the County’s local SMP. These include all streams and rivers with an average annual flow of 20 cubic feet per second and lakes of greater than 20 acres. Land adjacent to shoreline streams, rivers, and lakes generally within 200 feet is also regulated as a “shore land.” Skamania County’s SMP is undergoing a comprehensive update and is in draft form under final review by the Washington Department of Ecology (Ecology), which has final approval authority. The SMP, when adopted, will allow for single-family residential uses in the Rural Conservancy and Shoreline Residential environment designations (similar to zones) but prohibit them in all other designations. Multifamily residential uses will require conditional use permits in the Shoreline Residential Designation and permitted in the High Intensity Shoreline residential designation. Given that Ecology has final

approval authority for the SMP, there is little flexibility or opportunity to revise the draft SMP to allow for greater residential uses. One potential change may be to allow multifamily uses under conditional use permits in the Rural Conservancy designation. The SMP is a processing barrier and additional expense to developers of workforce and affordable housing within shoreline areas of the County.

The County is also updating its critical areas regulations under state mandate. The County's new critical areas regulations, once adopted, are expected to impose additional restrictions than the existing regulations. Generally speaking, there will be larger buffers required on streams and rivers. Submittal requirements for critical areas reports will be much more specific. Because the draft critical areas ordinance (CAO) does not outright prohibit development within critical areas, but requires applicants to demonstrate that impacts are unavoidable and to mitigate for all impacts, the critical areas ordinance imposes additional barriers on the development of housing in the county. The critical areas ordinance must meet best available science for the protection of critical areas, so there is little opportunity to reduce the barriers imposed by the regulations, but the County has reduced process barriers and expense to applicants by reducing critical area report requirements in certain situations.

The City of Stevenson recently completed an update to its CAO and is in the process of updating its SMP. The City's CAO and SMP are typical for Washington cities in that they restrict development located in critical areas and within 200 feet of shoreline water bodies. This should work to offset the barriers these documents create to the development of housing by potentially rezoning areas elsewhere for higher density, such as downtown.

## **Recommendations**

This section provides recommendations to modify Skamania County and City of Stevenson codes to eliminate housing barriers.

### **Skamania County**

Skamania County should consider implementing the following recommendations in their zoning code to reduce or eliminate barriers to housing development.

- Eliminate Process Barriers in the Code. Consider making multifamily uses and cluster developments permitted uses rather than requiring conditional use permits or prohibiting these uses outright. County staff will be most knowledgeable about the areas of the County and the corresponding zones where this would be most beneficial; more developed areas, such as Carson and the West End should be considered first.
  - The RR zone in Carson and the WERL-2 zones could permit multifamily units outright or some of these areas could be rezoned to allow for more housing. Code amendments should also be considered in commercial zones, such as CC, CR, and C where new housing would have the least impact on surrounding uses and where residents have come to expect greater intensity of use.

- Cluster developments should be more widely considered as permitted uses in some of the higher intensity zones in the County, including R-1, R-2, NWLR-2 and GMA residential zones.
- Mobile and manufactured homes are an important source of affordable housing and should be a permitted use in zones with standards developed for lease lot sizes.
- The County should consider ADUs within GMA residential zones.
- **Lot Size Requirements:** As noted in Attachment A, there are multiple zones throughout the County that require lot sizes larger than necessary to accommodate certain unit types on septic systems. The County should use Attachment A as a starting place to audit their code with the intent of reducing lot size requirements where allowed under septic requirements and where smaller sizes would fit within the existing development patterns. The County is undergoing an update to the septic code in 2020 with larger land area requirements than now exist. The lot size analysis should be updated when new septic land area requirements are known.
- Consider making residential a conditional use in the Rural Conservancy shoreline designation in the draft SMP.
- The County should commission a sewer study that would look at a variety of collection, conveyance, and treatment options to address both long- and intermediate-term sewer needs. The feasibility should discuss parameters, including cost, maintenance, permitting, future effluent flows, and the ability to develop an interim system prior to full buildout of a public system with a sewer treatment plant. There are a variety of systems (vacuum systems, septic-tank effluent systems, local and regional tanks, and a variety of packaged residential to regional treatment technologies) that could pave the way for residential densities exceeding existing limits under septic regulations prior to development of a public system with a sewer treatment plant. Interim sewer treatment would allow the County to begin collecting sewer system development charges in anticipation of a treatment plant. A sewer study may cost on the order of \$125,000 to \$175,000. Grant funds through the Washington Department of Ecology, Department of Commerce and the U.S. Department of Agriculture should be explored to fund the study.

### City of Stevenson

The City of Stevenson should consider implementing the following recommendations in their zoning code to reduce or eliminate barriers to housing development.

- Consider adding flexibility to the development of ADUs by:
  - Increasing the number of allowable ADUs from one to one attached and one detached per SFDD
  - Increasing size from 800 to 900 square feet
  - Eliminating the additional parking space requirement



- Make the owner-occupancy requirement optional for an additional fee to cover enforcement costs.
- Permit TFDs in the R1 zone instead of requiring a conditional use permit
- Reduce the minimum lot size requirement for TFDs and MFDs in R2, R3, and CR zones. Attached single-family housing products can be located on lots as small as 2,000 square feet.
- Permit senior housing options in R3 zone instead of requiring a conditional use permit
- Allow senior housing options in the R1 and R2 zones through conditional use instead of prohibiting them
- Define Light Industrial Activities and permit retail and artisan manufacturers/cottage industry business owners to operate in live/work spaces in C1 zone

### Joint County-City Recommendations

Skamania County and the City of Stevenson can work together to more effectively address countywide workforce and affordable housing shortages. Because of its role as the economic heart of Skamania County and availability of commercial services and land, development in Stevenson and its adjacent urban area may present some of the best opportunities to address the lack of workforce and affordable housing in the County. Within the city, there are opportunities to rezone land for higher density development. Outside the city, in the urban area, there are opportunities to work with Skamania County to provide sewer and water infrastructure that will facilitate orderly development and eventual urbanization.

- Stevenson rezoning opportunities:
  - Rezone Areas Zoned R2 and R3: The R2 zone allows for single-family and two-family residential uses. The R3 zone allows for a wide variety of residential uses including single-family, townhomes, and multifamily development. Areas north of Vancouver Avenue and west of School Street and immediately adjacent to Frank Johns Road south of Loop Road are zoned R2. If the City rezoned these areas as R3, it would provide an expanded opportunity for the development of multifamily houses in the City in an area already served by sewer and water infrastructure.
  - Rezone Areas Zoned Suburban Residential: Areas near the western extent of Ray Allen Road and between Loop Road and School Street are zoned Suburban Residential and could be rezoned to R2 or R3 and developed at higher densities with provision of sewer.
- Stevenson urban exempt area annexation and development:
  - Skamania County maintains authority for land in Stevenson’s urban area primarily located north of the city. Land north and east of Aalvik Road in the urban area is zoned R1 and R2 by Skamania County with minimum two-acre lot sizes. Land located immediately north of the city boundary along Kanaka Creek Road is also zoned R1. Both of these areas could be annexed into the City and developed if new sewer infrastructure is extended, including a sewer pump station in the Aalivik Road area and a gravity sewer

along Kanaka Creek Road. According to City and County staff, annexation may be a political barrier for these areas with uncertain support.

- As an alternative to near-term annexation, the City and County could jointly adopt an intergovernmental agreement (IGA) for the development of the Aalvik Road and Kanaka Creek Road areas that would require that these areas develop under City standards. In order to effectively administer the IGA, the City and County will need to jointly plan for the extension of sewer and water infrastructure. Existing City policies prohibit the extension of sewer infrastructure outside City limits; this prohibition would need to be lifted coupled with a new policy to require property owners to annex prior to sewer connection and to connect when sewer is within a certain distance of their property. The City and County should jointly address infrastructure in these areas including pursuing funding from state sources that would make improvements feasible. Once there is a plan and funding mechanism for sewer, resistance to annexation may decrease as property owners realize the benefits of redeveloping their properties.

The IGA should address zoning standards (lot size, density, setbacks, permitted/conditional/prohibited uses, etc.), infrastructure standards (street widths and improvements), and the development review process. The IGA would ensure that development within the urban area meets City standards so that development is orderly and efficient rather than piecemeal prior to annexation. If advance planning through an IGA does not occur, these areas may develop under low density County standards making it difficult for these areas to redevelop in the near term at urban densities and the opportunity would be lost to add significant numbers of housing units to address countywide shortages.

## ATTACHMENTS

- A: Comparison of Skamania County Code Lot Size Requirements to Septic Land Size Requirements in Class 5 Soils

SK:ES:llt

June 17, 2020

Ben Shumaker  
Community Development Director  
City of Stevenson  
7121 East Loop Road  
Stevenson, Washington, 98648

Re: SEPA 2020-01  
Rock Cove Hospitality Center  
SW Rock Creek Drive  
State Route 14, MP 43.09

Dear Mr. Shumaker:

Washington State Department of Transportation (WSDOT) staff have reviewed the pre-application materials for the proposal to construct 48 short term housing units and a 15,000 square foot commercial event space at parcels 02070100130200, 02070100130300 and 02070100130400 (State Route 14, MP 43.09). WSDOT would like to offer the following comments.

In order to evaluate the impacts of this development proposal to the state transportation system, WSDOT requests that the developer provide a traffic impact study which includes all state route corridors and intersections impacted by 10 or more peak hour trips. This traffic study should address the impacts to State Route 14 and suggest mitigation measures to maintain the current level of service and meet WSDOT safety requirements. Based on the number of vehicle trips cited on page 12 of the SEPA checklist, the study should analyze the need for a right turn deceleration lane at westbound State Route 14 at the intersection with SW Rock Creek Drive. WSDOT reserves the right to require additional mitigation based on the results or recommendations in the study.

These comments are based on a preliminary review of the project. As this project progresses, there may be need for additional information by this department for further review. There may be other issues and requirements by this department that are not stated here. *This review does not constitute final approval by WSDOT.*

Thank you for the opportunity to comment on this project. If you have any questions regarding these comments or need additional information, please contact Mr. Jeff Barsness, Development Services Engineer, at [BarsneJ@wsdot.wa.gov](mailto:BarsneJ@wsdot.wa.gov).

Sincerely,



Laurie Lebowsky  
Planning Director  
WSDOT Southwest Region



June 17, 2020

Ben Shumaker  
Planning Director  
City of Stevenson  
7121 E. Loop Road  
PO Box 371  
Stevenson, WA 98648

In future correspondence please refer to:  
Project Tracking Code: 2020-02-01145  
Property: Formal Survey for the Proposed Rock Creek Cove Resort  
Re: Monitoring Requested

Dear Ben Shumaker:

Thank you for contacting the Washington State Historic Preservation Officer (SHPO) and Department of Archaeology and Historic Preservation (DAHP) and providing documentation regarding the above referenced project. A desktop review of our Statewide Predictive Model has identified the proposed project area as having high potential for archaeological resources. This is due, in part, to the landform type, as well as the proximity of the proposed project area to the Columbia River, a resource known to have been important to both historic and prehistoric people.

Both the geotechnical report and the archaeological survey report provided to our agency on 6/3/2020 indicate that fill, variable in depth, is present across the entire site. Because of this, we do not believe that additional archaeological survey will be beneficial at the present time. In order to assess the archaeological potential of the proposed project area, we recommend that an archaeologist meeting the Secretary of the Interior's standards for prehistoric archaeology monitor the excavation of all soils with the potential to contain archaeological materials (i.e. native soils). We request to review the monitoring plan prior to the start of construction. All other aspects of this projects should follow an Inadvertent Discovery Plan.

We also recommend consultation with the concerned Tribes' cultural committees and staff regarding cultural resource issues.

These comments are based on the information available at the time of this review and on behalf of the SHPO in conformance with Washington State law. Should additional information become available, our assessment may be revised.

Thank you for the opportunity to comment on this project and we look forward to receiving the survey report. Please ensure that the DAHP Project Number (a.k.a. Project Tracking Code) is shared with any hired cultural resource consultants and is attached to any communications or submitted reports. Should you have any questions, please feel free to contact me.



Sincerely,

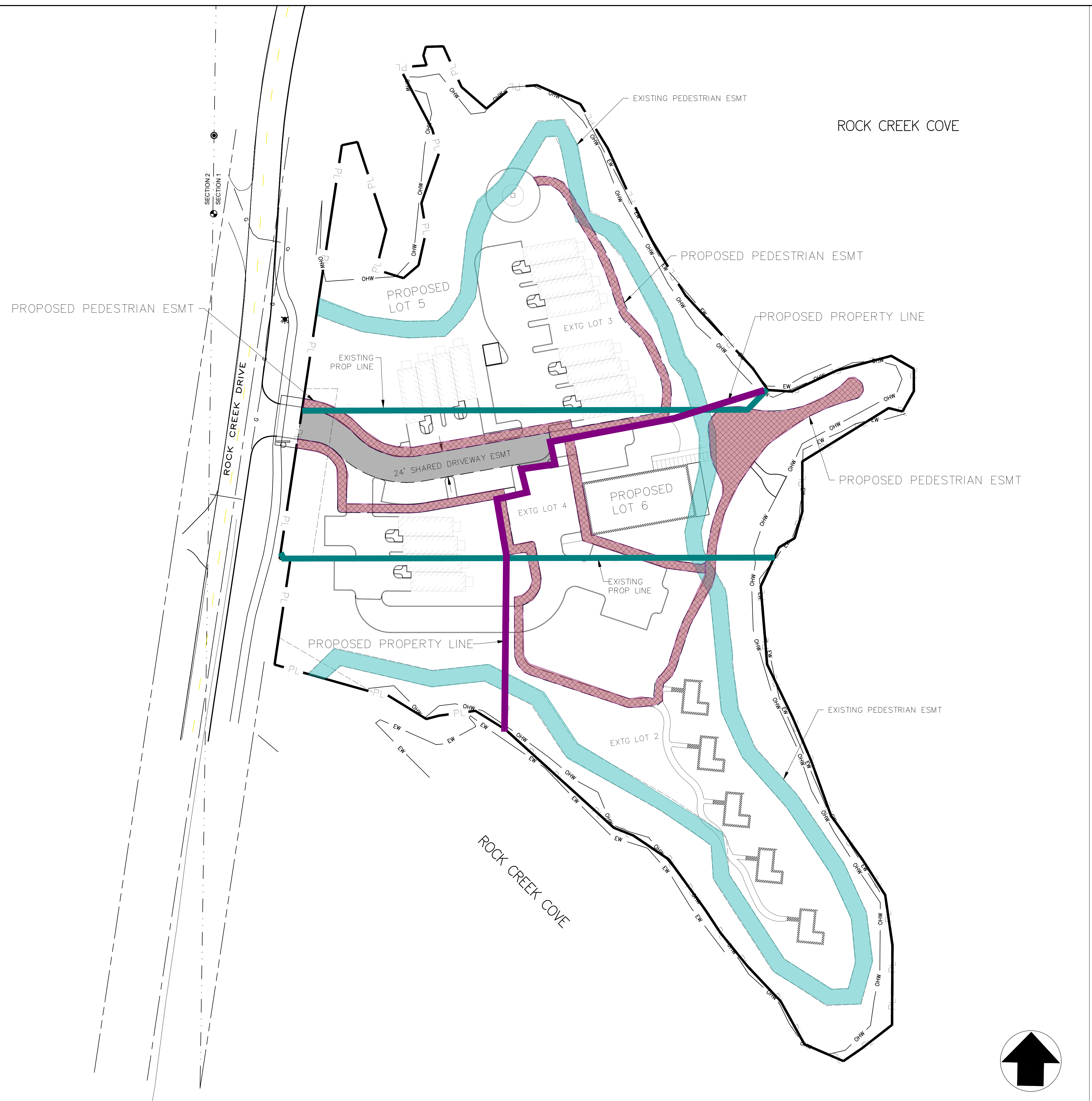
A handwritten signature in blue ink that reads "Sydney Hanson". The signature is fluid and cursive, with a long horizontal line extending from the end of the name.

Sydney Hanson  
Transportation Archaeologist  
(360) 586-3082  
Sydney.Hanson@dahp.wa.gov





PLOTTED ON: 2020/06/04 4:43 PM  
 PLOTTED BY: zachary pyle  
 FILENAME: C:\CAD Drawings\Rock Creek Cove\PLANS\C1.1 PLAT AMENDMENT.dwg



**PLAT AMENDMENT SUMMARY**

- TOTAL LOTS REDUCED FROM 3 TO 2
- PROPOSED LOT 5 (PHASE 1) IS LOT WITH FRONTAGE TO ROCK CREEK DRIVE
- PROPOSED LOT 6 (PHASES 2 AND 3) IS ACCESSED VIA A SHARED DRIVEWAY, SHOWN AS SOLID HATCH
- EXISTING PUBLIC ACCESS EASEMENT ALTERED TO PROVIDE ACCESS ALONG PROPOSED ACCESSIBLE PATHWAYS, SHOWN AS CROSS HATCH
- ADDITIONAL UTILITY EASEMENTS PROVIDED ON UTILITY PLAN SUBMITTED WITH APPLICATION FOR IMPROVEMENT

**LOT DIMENSIONAL SUMMARY**

TOTAL AREA: 6.39 AC  
 PROPOSED LOT 5: 3.36 AC  
 PROPOSED LOT 6: 3.03 AC

█ Existing Pedestrian Easement

█ Proposed Pedestrian Easement

█ Existing Lot Lines (3 Lots)

█ Proposed Lot Lines (Reduction to 2 Lots)

\*Color annotations provided by City staff based on applicant's 6/4/20 concept



ROCK CREEK COVE HOSPITALITY  
 PLAT AMENDMENT  
 FDM DEVELOPMENT, INC.  
 STEVENSON, WA

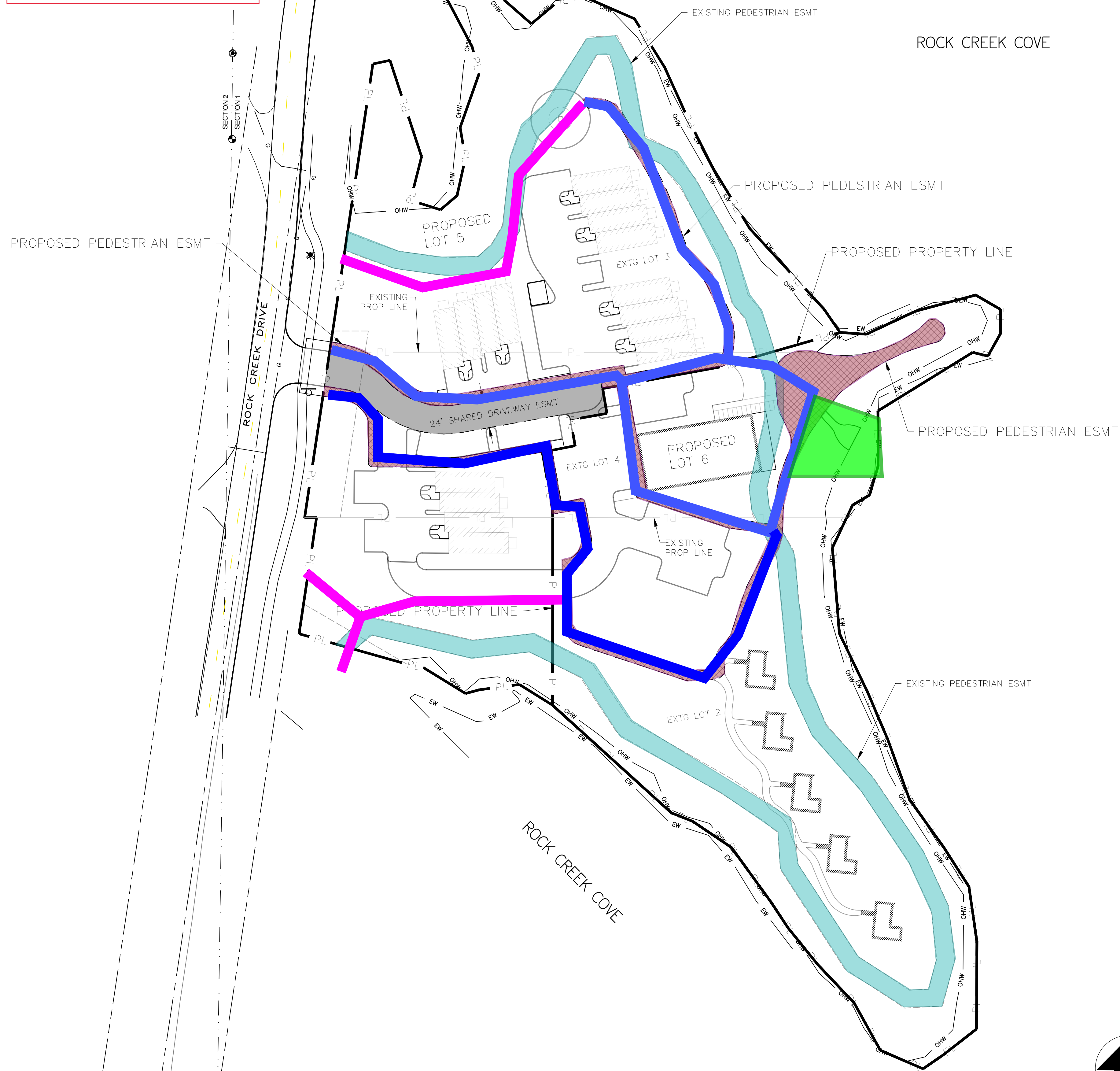
ISSUE	DATE	DESCRIPTION
A	6/4/2020	PRELIMINARY

DESIGNED: Z. PYLE  
 SCALE  
 0' 50' 100'

SHEET TITLE  
**PLAT AMENDMENT**  
 SHEET  
**C1.1**



**City-Prepared Public Access Concept**



PLAT AMENDMENT SUMMARY

- TOTAL LOTS REDUCED FROM 3 TO 2
- PROPOSED LOT 5 (PHASE 1) IS LOT WITH FRONTAGE TO ROCK CREEK DRIVE
- PROPOSED LOT 6 (PHASES 2 AND 3) IS ACCESSED VIA A SHARED DRIVEWAY, SHOWN AS SOLID HATCH
- EXISTING PUBLIC ACCESS EASEMENT ALTERED TO PROVIDE ACCESS ALONG PROPOSED ACCESSIBLE PATHWAYS, SHOWN AS CROSS HATCH
- ADDITIONAL UTILITY EASEMENTS PROVIDED ON UTILITY PLAN SUBMITTED WITH APPLICATION FOR IMPROVEMENT

LOT DIMENSIONAL SUMMARY

TOTAL AREA: 6.39 AC  
 PROPOSED LOT 5: 3.36 AC  
 PROPOSED LOT 6: 3.03 AC

	Existing Pedestrian Easement
	Proposed Pedestrian Easement
	Potential ADA loops, lollipops, & out-and-backs
	Potential gravel continuous
	Potential physical access

*\*Color annotations provided by City staff based on applicant's 6/4/20 concept*



ROCK CREEK COVE HOSPITALITY  
 PLAT AMENDMENT  
 FDM DEVELOPMENT, INC.  
 STEVENSON, WA

ISSUE	DATE	DESCRIPTION
A	6/4/2020	PRELIMINARY

DESIGNED: Z. PYLE  
 SCALE

SHEET TITLE  
**PLAT AMENDMENT**  
 SHEET  
**C1.1**



PLOTTED ON: 2024-01-31 12:45 PM PLOTTER: HP DesignJet 2400 Plotter FILENAME: C:\CAD Drawings\Rock Creek Cove\HANS\02.0 SITE PLAN.dwg



**PROJECT SUMMARY**

**PHASE 1**  
 16 3-BEDROOM CONDO UNITS OPERATED AS HOTEL  
 TOTAL 48 BEDROOMS  
 TOTAL 32,950 SF  
 PEDESTRIAN ACCESS TO NORTHERN PENINSULA  
 COVERED FIRE PIT  
 LANDSCAPE IMPROVEMENTS  
 STORMWATER FACILITIES CONSTRUCTION  
 MASS GRADING  
 TYPE S BUFFER OFF-SITE MITIGATION  
 BOUNDARY LINE ADJUSTMENT

**PHASE 2**  
 15,000 SQ FT COMMERCIAL VENUE SPACE  
 LANDSCAPE IMPROVEMENTS  
 OBSERVATION AREA AND BOAT RAMP RESTORATION AND  
 SAFETY IMPROVEMENTS

**PHASE 3**  
 5 STUDIO RENTALS  
 LANDSCAPE IMPROVEMENTS



ROCK CREEK COVE HOSPITALITY  
 MASTER PLAN  
 FDM DEVELOPMENT, INC.  
 STEVENSON, WA

ISSUE	DATE	DESCRIPTION
1	07/20/2023	PRELIMINARY

DESIGNED: Z. PYLE  
 SCALE  
 0' 40' 80'

SHEET TITLE  
**SITE PLAN**

SHEET  
 C2.0





June 16, 2020

Zachary Pyle, PE  
FDM Development, Inc.  
[zpyle@fdmdevelopment.com](mailto:zpyle@fdmdevelopment.com)  
(210) 849-5592

Re: Critical areas report and conceptual mitigation plan for the Rock Creek Cove Hospitality proposal

Zach,

Ecological Land Services (ELS) has prepared the following critical areas report and conceptual mitigation plan for FDM Development (the applicant) as a component of the proposed mixed-use hospitality development adjacent to Rock Creek Cove on parcels 02070100130300, 02070100130400, and 02070100130200 (study area) in the City of Stevenson, Skamania County, Washington. The study area is in the SW  $\frac{1}{4}$  of the NW  $\frac{1}{4}$  of Section 1, Township 2 N, and Range 7 East of the Willamette Meridian, coordinates 45.6890, -121.8992, and is accessed from SW Rock Cove Dr (Figure 1). The study area's zoning is "Commercial" (C1). This report provides a description of existing critical areas on the proposed development site, a summary of proposed impacts from development, and a conceptual compensatory mitigation plan for unavoidable impacts.

ELS and Washington State Dept of Ecology (Ecology) completed fieldwork on December 30, 2019 to assess critical areas and fish and wildlife habitat in the study area. Together we concluded wetlands were not present but that all areas surrounding the study area are subject to fluctuations in water level in the Columbia River. We physically demarcated the ordinary high water mark (OHWM) of the Columbia River using consecutively numbered fluorescent tape flagging. S&F Land Services, a professional surveyor, recorded the flag locations on the same day. The findings from December 30, 2019 are presented here in accordance with Stevenson Municipal Code (SMC), Title 18 "Environmental Protection", Chapters 18.08 "Shoreline Management" and 18.13 "Critical Areas and Natural Resource Lands", and Stevenson's 2018 Shoreline Master Programs (SMP).

*Proposal description:*

The applicant is proposing a mixed-use hospitality development adjacent to Rock Creek Cove on the former Hegewald Lumber Mill Site in Stevenson, WA. The project seeks to complement the existing tourism industry in Stevenson by offering condo- and studio-sized units available for nightly and weekly rental, totaling 48 available bedrooms. A 15,000 square-foot commercial venue space will anchor the development and provide wide views of Rock Creek Cove and the Columbia River Gorge. The conceptual space planning of the commercial building consists of 5,000 open venue space, supported by 10,000 square feet of service, food preparation, and guest lounging area. The development seeks to attract both local and regional visitors, with venue space available for weddings, company parties, family reunions, and corporate retreats.

The project is proposed in three phases of development: Phase 1 includes condo-style units, operated by a single ownership group. Phase 2 will add the commercial venue space and restore water-side portions of the property for enhanced, publicly-accessible observation and enjoyment. Phase 3 completes the development with the studio-sized units, operated under the same ownership group as the remainder of the property.

### *Site Description*

The study area consists of three parcels that form a peninsula in Rock Cove.<sup>1</sup> An unnamed tributary enters Rock Cove north of the study area (Figure 3). An open connection between Rock Cove and the Columbia River is present near its confluence with Rock Creek, southeast of the study area. The study area is currently undeveloped (there are no buildings) but it retains improvements from prior industrial land uses from the timber industry. These improvements include concrete and gravel surfaces, gravel roads accessing various points within the study area, a graveled boat launch, and armored embankments that span the majority of shoreline. A line of derelict wooden pilings is located just offshore southeast.

### *Methods*

#### Stream Assessment:

ELS uses guidance provided by Ecology<sup>2</sup> and the U.S. Environmental Protection Agency<sup>3</sup> (EPA) to inform decisions about the location of an ordinary high water mark (OHWM) and to make determinations about stream characteristics, including habitat functions and flow dynamics. The Shoreline Management Act (SMA) of Washington State defines OHWM as a mark “...found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland...” (RCW 90.58.030(2)). ELS and Ecology used principles in this guidance and site-specific indicators to identify the OHWM of the Columbia River within the study area boundary. Site specific indicators included transitions in vegetation, wrack lines, scouring under trees and exposed roots, and breaks in topography.

#### Wetland Assessment:

ELS follows the Routine Determination Method developed by the U.S. Army Corps of Engineers (Corps) for wetland delineation.<sup>4</sup> The Routine Determination Method examines vegetation, soils, and hydrology to determine if wetland is present. EPA defines wetlands as “...areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.”

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<sup>1</sup> Rock Cove is a man-made side channel of the Columbia River formed by the berm for Lewis and Clark Hwy (WA 14) and an adjacent railroad.

<sup>2</sup> Publication No. 16-06-029: “Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State”, revised October 2016.

<sup>3</sup> Publication No. 910-K-14-001: “Streamflow Duration Assessment Method for the Pacific Northwest”, November 2015.

<sup>4</sup> “Corps of Engineers Wetlands Delineation Manual”, Wetlands Research Program Technical Report Y-87-1 (Environmental Laboratory 1987) and the “Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (Version 2.0)” (U.S. Army Corps of Engineers, May 2010)

## Soil Assessment:

ELS uses the Natural Resource Conservation Service (NRCS) map unit descriptions to gather baseline soil data. NRCS identifies soils in the study area as Arents 0 to 5 percent slopes. Arents is described by NRCS as a well-drained, terraced soil with more than 80 inches depth to the groundwater table. A typical profile includes gravelly sandy loam from 0 to 24 inches and extremely gravelly sandy loam between 24 and 60 inches. Arents do not have diagnostic horizons because they have been deeply mixed by plowing, spading, or other methods of moving by humans (NRCS 2020).

## *Critical areas findings*

ELS and Ecology identified one unnamed tributary to the Columbia River north of the study area (Figures 2 and 3). The tributary is identified as a Type F (fish-bearing) water by Washington Department of Natural Resources (DNR) (Figure 4). Rock Cove, a side channel of the Columbia River, surrounds the study area on three sides. The Columbia River is designated Type S and is a shoreline of statewide significance. One Oregon white oak (*Quercus garryana*) is rooted above the OHWM at the northeast end of the study area. It is considered a Priority Habitat by Washington State Dept of Fish and Wildlife (DFW) and is recommended for protection. SMC provides guidance for Oregon white oak protection in Table 18.13.095-2 *Mitigation for Vegetation Removal within Riparian Habitat Areas*. No other priority habitats or critical areas<sup>5</sup> were identified in the study area.

According to SMC 18.13.095(D), the area designated as a fish and wildlife habitat conservation area (FWHCA) for Type F waters is 100 feet and Type S waters is 150 feet.<sup>6</sup> FWHCAs in the study area are partially to significantly degraded, as buffer degradation is defined in SMC 18.13.010(B)(15); meaning, areas of the FWHCA are dominated by more than 30 percent aerial coverage of invasive vegetation (primarily Himalayan blackberry (*Rubus armeniacus*)) and/or by fill, gravel, debris, asphalt, and other non-native material. Existing vegetation consists of deciduous and evergreen trees spaced along the north, east, and southwest shoreline with woody shrubs and herbaceous species established in some locations, particularly in the northwest and southeast portions of shoreline near SW Rock Creek Dr. (Figure 2). Elsewhere, shrubs and herbaceous vegetation are sparse or absent due to existing impervious surfaces, armored embankments, and other disturbances from industrial activities.

## *FWCA regulation*

In most places the transition from top-of-bank to the OHWM is relatively steep. Erosion control in the steeper portions of the shoreline has been historically achieved with riprap-like armoring. Approximately 65 percent of the shoreline is armored with material that consists of loose stones, gravel, fragments of concrete, and large pieces of metal (i.e. rebar, logging cable, and non-specific steel remnants). Derelict in-water pilings are located along the southeast shoreline of the study area and formerly supported timber industry infrastructure.

SMC 18.13.095(D)(3) identifies functionally isolated buffer as lawns, pre-existing roads and structures, vertical separation, and other areas that do not protect the FWHCA from adverse impacts. Shoreline

---

<sup>5</sup> "Critical areas" are aquifer recharge areas, fish and wildlife habitat conservation areas, frequently flooded areas, geologically hazardous areas, and wetlands as defined in RCW 36.70.A and designated by SMC 18.13.

<sup>6</sup> Table 18.13.095-1 - Fish & Wildlife Habitat Conservation Area Protective Buffer Widths



armoring meets the description of a preexisting structure that that does afford protection from adverse impacts. It lacks pervious surfacing for detaining and/or filtering sediment loads in surface runoff, an established and diverse native vegetation community able to provide forage, screening, refuge, or denning opportunities for wildlife species, and over-water shading for near-shore aquatic wildlife in the Columbia River. Accordingly, those portions of the study area that contain armoring satisfy the buffer exemption criteria per SMC 18.13.095(B)(3) (Figure 2).

#### *Additional SMP requirements*

The standard shoreline management area (or shoreline setback) for all designated shorelines in Washington State is 200 feet, measured landward from the OHWM. The study area is zoned “active waterfront”; according to the 2018 SMP, development setbacks in active waterfront is typically 50 feet.<sup>7</sup> Regarding the use of existing concrete, asphalt, and gravel surfaces for new development, a shoreline use lawfully constructed but does not conform to the current SMP standards is considered a nonconforming use. For the purposes of the December 2018 SMP, existing roads in the study area are considered nonconforming uses and do not need a Shoreline Conditional Use Permit to be retained or improved (SMP 2018).

#### *Impacts and mitigation*

The applicant’s proposal follows the standard mitigation sequencing protocol of avoidance, minimization, and compensation for unavoidable impacts to critical areas. Critical areas associated with the proposal include the FWHCA for the unnamed tributary and the Columbia River, and one Oregon white oak tree. Phases 1 and 3 completely avoid FWHCA impacts and the oak tree will not be disturbed by development; however, Phase 2 of the development impacts approximately 0.12-acre of the Columbia River’s FWHCA in an area where it is not functionally isolated by armoring (Figure 3). The proposed impact area is partially degraded by remnant debris that appears to consist of almost entirely of sawdust stockpiling.

Mitigation for buffer impacts is proposed as a combination of reduction and enhancement in accordance with SMC 18.13.095(D)(5). After reduction at the proposed impact site, all remaining buffer in the study area will be enhanced by removing non-native Himalayan blackberry (which currently has a dominant presence in shoreline vegetation) and installing native shrubs and herbaceous plants. A conservation covenant will be established for the entire enhancement area. Most buffer enhancement actions will take place in areas that are not functionally isolated by armoring to maximize functional and relevant habitat improvements. These portions of the FWHCA total approximately 1.03 acres in the study area and achieve an enhancement ratio of approximately 8:1 for the impacts’ mitigation (Figure 3). The applicant is also proposing to enhance portions of the 50-foot shoreline setback in the same manner (blackberry removal and native plant installation) to improve overall habitat function and ecological health in the study area. These proposed enhancement actions are anticipated to increase, diversify, and improve critical area functions above and beyond those provided by existing buffer conditions.

---

<sup>7</sup> Tables identifying setback distances per development type are attached to this letter for reference.

*Accuracy and limitations*

ELS bases this report's determinations on standard scientific methodology and best professional judgment. The information contained in this report should be considered preliminary and used at your own risk until it has been approved in writing by the City of Stevenson and any additional agency as determined necessary by the city. ELS is not responsible for the impacts of any changes in environmental standards, practices, or regulations after the date of this report.

Thank you for the opportunity to provide this information. If you have any questions, please contact me by phone (360) 578-1371 or email [andrew@eco-land.com](mailto:andrew@eco-land.com).

Sincerely,

A handwritten signature in blue ink that reads "Andrew R. Allison". The signature is fluid and cursive.

Andrew R. Allison  
Wetland Scientist

Attachments:

Figures

Photoplates

Engineered site plan





# DRAFT

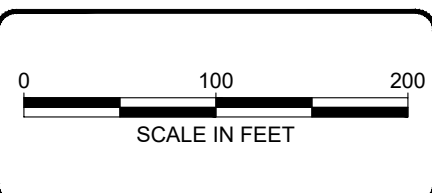
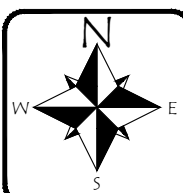


**LEGEND:**

- Site Boundary
- OHWM
- Stream with Flow Direction
- FWHCA Buffer for Type F
- Functionally Isolated FWHCA Buffer for Type S
- Shoreline Management Plan Setback
- Culvert
- Oak Tree Location
- Existing Graveled or Concrete Surfacing
- Existing Rip Rap

**NOTE(S):**

1. Aerial from Google Earth™.
2. OHWM line was determined through a joint effort by Ecological Land Services and Washington Department of Ecology on December 30, 2019. OHWM flags were professionally surveyed by S&F Land Services December 30-31, 2019.



1157 3rd Ave., Suite 220A  
 Longview, WA 98632  
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 DWN: EF  
 REQ. BY: AA  
 PRJ. MGR: AA  
 CHK: AA  
 PROJECT NO:  
 2682.02










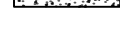


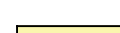
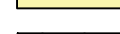

Figure 2  
 EXISTING CONDITIONS SITE MAP  
 Rock Cove CAR  
 FDM Development  
 City of Stevenson, Skamania County, Washington  
 Section 1, Township 2N, Range 7E, W.M.



# DRAFT

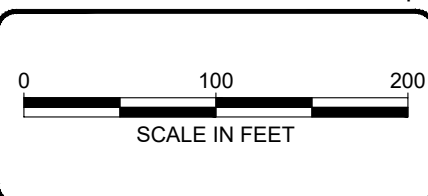
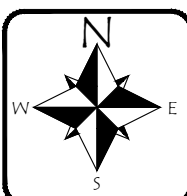


**LEGEND:**

-  Site Boundary
-  OHWM
-  Stream with Flow Direction
-  FWHCA Buffer for Type F
-  Functionally Isolated FWHCA Buffer for Type S
-  Reduced FWHCA Buffer For Type S (105')
-  Shoreline Management Plan Setback
-  Culvert
-  Oak Tree Location
-  Proposed Graveled Surfacing
-  Proposed Storm Line
-  Proposed Storm Outfall
-  Proposed Impacts (0.12 ac.)
-  Buffer Enhancement Area (1.03 ac.)  
(1:8.6 Impact to Enhancement Area Ratio)
-  Associated Habitat Improvement (1.43 ac.)

**NOTE(S):**

1. Aerial from Google Earth™.
2. OHWM line was determined through a joint effort by Ecological Land Services and Washington Department of Ecology on December 30, 2019. OHWM flags were professionally surveyed by S&F Land Services December 30-31, 2019. .
3. Site Plan provided by FDM Development, Inc.




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 2682.02

Figure 3  
**PROPOSED CONDITIONS MAP**  
 Rock Cove CAR  
 FDM Development  
 City of Stevenson, Skamania County, Washington  
 Section 1, Township 2N, Range 7E, W.M.





**LEGEND:**

- 2** Arents, 0 to 5 percent slopes. Not hydric.
- 17** Bonneville stony sandy loam. Not hydric.
- 123** Steever stony clay loam, 2 to 30 percent slopes. Not hydric.
- 177** **Water.**

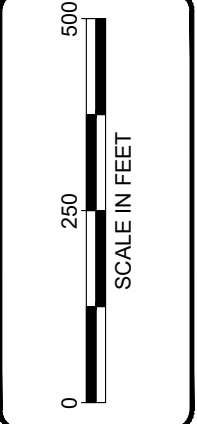
**NOTE(S):**

1. Map provided online by NRCS at web address:  
<http://websoilsurvey.nrcs.usda.gov/app/>

Figure 4  
 NRCS SOIL SURVEY  
 Rock Cove CAR  
 FDM Development  
 City of Stevenson, Skamania County, Washington  
 Section 1, Township 2N, Range 7E, W.M.

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




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Mapped wetlands indicated onsite by US Fish & Wildlife Service.

**LEGEND:**

-  Freshwater Emergent Wetland
-  Lake
-  Riverine

- PEM1Ch** Palustrine, Emergent, Persistent, Seasonally Flooded, Diked/ Impounded.
- PEM1/UBFh** Palustrine, Emergent, Persistent, Unconsolidated Bottom, Semipermanently Flooded, Diked/ Impounded.
- L1UBHh** Lacustrine, Limnetic, Unconsolidated Bottom, Permanently Flooded, Diked/ Impounded.
- R4SBC** Riverine, Intermittent, Streambed, Seasonally Flooded.

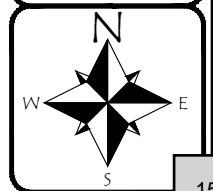
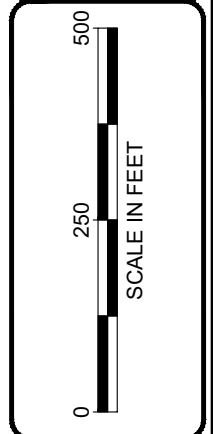
**NOTE(S):**

1. Map provided online by US Fish & Wildlife Service at web address: <http://www.fws.gov/wetlands/data/index.html>

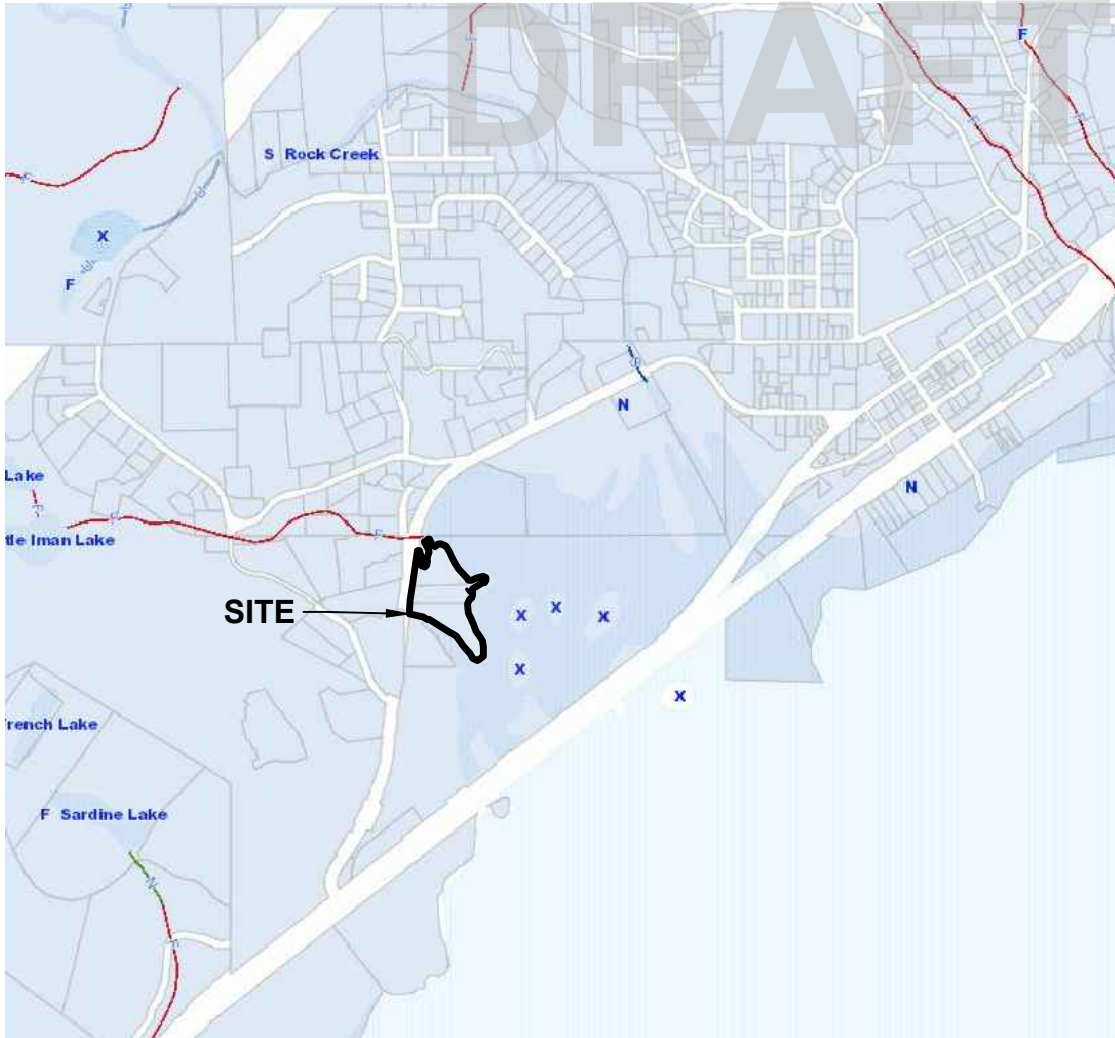
Figure 5  
**NATIONAL WETLANDS INVENTORY**  
 Rock Cove CAR  
 FDM Development  
 City of Stevenson, Skamania County, Washington  
 Section 1, Township 2N, Range 7E, W.M.

DATE: 6/11/20  
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No mapped streams indicated onsite by the Washington State Department of Natural Resources (DNR).

**LEGEND:**

**Streams**

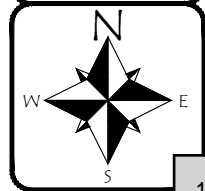
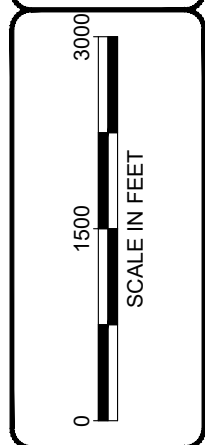
Streams

- Type S
- Type F
- Type N, Np, Ns
- U, unknown
- X, non-typed per WAC 222-16

Figure 6  
**DNR STREAM TYPE MAP**  
 Rock Cove CAR  
 FDM Development  
 City of Stevenson, Skamania County, Washington  
 Section 1, Township 2N, Range 7E, W.M.

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**NOTE:** Map provided online by Washington State Department of Natural Resources at web address: <https://fortress.wa.gov/dnr/protectiongis/fpamt/index.html>





**Photo 1. Inflow point of the unnamed tributary via concrete culvert.**



**Photo 2. Unnamed tributary flowing toward Rock Cove.**



**Photo 3. Overview of unnamed tributary's confluence with Rock Cove.**



**Photo 4. Mud flat adjoining Rock Cove.**



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MGR: ARBA  
PR#: 2682.02

**Photoplate 1**  
**Site Photos**  
Rock Cove Preliminary Critical Areas Assessment  
FDM Development, Inc.  
City of Stevenson, Washington





**Photo 1. Vegetated shoreline on the north end of the study area.**



**Photo 2. Vegetated shoreline extending toward the unnamed tributary.**



**Photo 3. Riprap on the eastern shoreline, facing north.**



**Photo 4. Riprap on the eastern shoreline, facing south.**



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**Photoplate 2**  
**Site Photos**  
Rock Cove Preliminary Critical Areas Assessment  
FDM Development, Inc.  
City of Stevenson, Washington





**Photo 1. Graveled boat launch on the east side of the study area.**



**Photo 2. Vegetated shoreline on the west side, facing south.**



**Photo 3. Vegetated shoreline and mud flat in the southwest portion of the study area, facing south.**



**Photo 4. Groomed vegetation in the center of the study area.**



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MGR: ARBA  
PR#: 2682.02

**Photoplate 3**  
**Site Photos**  
Rock Cove Preliminary Critical Areas Assessment  
FDM Development, Inc.  
City of Stevenson, Washington





**Photo 1. Existing concrete and gravel surfacing.**



**Photo 2. Existing concrete and gravel surfacing.**



**Photo 3. Groomed vegetation in the center of the study area.**



**Photo 4. Existing gravel road.**



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MGR: ARBA  
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**Photoplate 4**  
**Site Photos**  
Rock Cove Preliminary Critical Areas Assessment  
FDM Development, Inc.  
City of Stevenson, Washington



FILENAME: C:\\_CAD Drawings\Rock Creek Cove\PLANS\C2.0 SITE PLAN.dwg  
 PLOTTED BY: zachary pyle  
 PLOTTED ON: 2020/01/31 12:45 PM



PROJECT SUMMARY

**PHASE 1**  
 16 3-BEDROOM CONDO UNITS OPERATED AS HOTEL  
 TOTAL 48 BEDROOMS  
 TOTAL 32,950 SF  
 PEDESTRIAN ACCESS TO NORTHERN PENINSULA  
 COVERED FIRE PIT  
 LANDSCAPE IMPROVEMENTS  
 STORMWATER FACILITIES CONSTRUCTION  
 MASS GRADING  
 TYPE S BUFFER OFF-SITE MITIGATION  
 BOUNDARY LINE ADJUSTMENT

**PHASE 2**  
 15,000 SQ FT COMMERCIAL VENUE SPACE  
 LANDSCAPE IMPROVEMENTS  
 OBSERVATION AREA AND BOAT RAMP RESTORATION AND  
 SAFETY IMPROVEMENTS

**PHASE 3**  
 5 STUDIO RENTALS  
 LANDSCAPE IMPROVEMENTS



ROCK CREEK COVE HOSPITALITY  
 MASTER PLAN  
 FDM DEVELOPMENT, INC.  
 STEVENSON, WA

ISSUE	DATE	DESCRIPTION
A	01/30/2020	PRELIMINARY

DESIGNED: Z. PYLE  
 SCALE  
 0' 40' 80'

SHEET TITLE  
**SITE PLAN**  
 SHEET  
**C2.0**





January 21, 2020

Zachary Pyle, PE  
Development Manager  
FDM Development, Inc.  
5453 Ridgeline Dr #160  
Kennewick, WA 99338  
[zpyle@fdmdevelopment.com](mailto:zpyle@fdmdevelopment.com)  
(210) 849-5592

Re: Rock Cove Preliminary Critical Areas Assessment

Zach,

Ecological Land Services (ELS) completed a field assessment for FDM Development to determine whether wetlands or fish and wildlife habitat conservation areas (hereafter collectively termed critical areas) are located on or adjacent to parcels 02070100130300, 02070100130400, and 02070100130200 (hereafter referred to as the study area) in the City of Stevenson, Skamania County, Washington. The study area is in the SW  $\frac{1}{4}$  of the NW  $\frac{1}{4}$  of Section 1, Township 2 N, and Range 7 East of the Willamette Meridian, coordinates 45.6890, -121.8992, and accessed from Rock Cove Drive (Figure 1). City of Stevenson zoning is "Commercial Recreation" (CR).

ELS completed fieldwork for a critical areas determination on December 30, 2019 in collaboration with Washington Department of Ecology (Ecology) staff. This letter provides a description of the study area's existing conditions as observed on December 30<sup>th</sup> and a summary of critical areas findings in accordance with Stevenson Municipal Code (SMC), Title 18 "Environmental Protection", Chapters 18.08 "Shoreline Management" and 18.13 "Critical Areas and Natural Resource Lands", and Stevenson's Shoreline Master Programs (SMP) dated 1977 (approved) and 2018 (in review).

#### *Site Description*

The study area consists of three parcels that form a peninsula in Rock Cove; Rock Cove is a side channel of the Columbia River formed by the berm for Lewis and Clark Hwy (WA 14) and an adjacent railroad. An unnamed tributary enters Rock Cove north of the study area and Rock Creek enters Rock Cove to the east (Figure 3). An open connection between Rock Cove and the Columbia River is present at its confluence with Rock Creek, southeast of the study area. The study area is currently undeveloped (there are no buildings) but it retains improvements from prior industrial land uses that include concrete and gravel surfaces, gravel roads accessing various points within the study area, a graveled boat launch, and riprap embankments that span the majority of shoreline. A line of abandoned wooden pilings is located just offshore northeast.

Dominant vegetation in the study area included Douglas fir (*Pseudotsuga menziesii*) and red alder (*Alnus rubra*) with Himalayan blackberry (*Rubus armeniacus*) in the understory and rooted in riprap along the

shoreline, and clusters of reed canarygrass (*Phalaris arundinacea*) and soft rush (*Juncus effuses*) rooted in places along the water's edge, at the head of sediment bars and mudflats, and along the river's ordinary high water mark (OHWM).

### *Methods*

ELS followed the U.S. Army Corps of Engineers (Corps) Routine Determination Method described in the "Wetland Delineation Manual" (Environmental Laboratory 1987) and the "Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)" (Corps 2010). To make determinations about the presence of wetland in the study area. For regulatory purposes under the Clean Water Act (Section 404) the Environmental Protection Agency (EPA) defines wetlands as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (EPA 2014). Wetlands are regulated as "Waters of the United States" by the Corps, as "Waters of the State" by Ecology, and locally by the City of Stevenson.

The Revised Code of Washington (RCW) 90.58.030(2)(b) and Washington Administrative Code (WAC) 173-22-030(11), defines ordinary high water mark as the action of water "so common and usual and so long continued in all ordinary years as to mark upon the soil a character distinct from that of the abutting upland." In collaboration with Ecology staff, ELS used principles in this guidance to identify transitions in vegetation, wrack lines, scouring under trees and exposed roots, and breaks in topography to distinguish the OHWM of the Columbia River along the study area boundary. Ecology and ELS flagged the OHWM with consecutively numbered orange tape flagging. The flag locations were professionally surveyed by S&F Land Services.

### *Critical areas findings*

ELS and Ecology identified one unnamed tributary north of the study area (Figures 2 and 3). The tributary is identified as a Type F (fish-bearing) water by Washington Department of Natural Resources (DNR) (Figure 4). Rock Creek is east of the study area and is designated as Type S, a shoreline of the state. Rock Cove surrounds the study area on three sides. The Columbia River is designated Type S and is a shoreline of statewide significance. There were no wetlands or other surface waters in the study area, and no priority habitat for terrestrial wildlife. According to SMC 18.13.095(D), the area designated as a fish and wildlife habitat conservation area (FWHCA) for Type F waters is 100 feet and for Type S waters, 150 feet.<sup>1</sup> SMC 18.13.095(D)(3) addresses functionally isolated buffers, indicating areas that "do not protect the FWHCA from adverse impacts due to features such as "lawns, pre-existing roads, structures, or vertical separation" are exempt from buffer criteria. Accordingly, portions of the study area are exempt from the FWHCA for Rock Cove due to areas of maintained vegetation and the presence of riprap which is both structural and vertical separation from Rock Cove (Figure 2).

SMC 18.13.095(D)(6) outlines provisions for buffer averaging or riparian habitat buffer reduction with mitigation to allow reasonable use of a parcel.

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<sup>1</sup> Table 18.13.095-1 - Fish & Wildlife Habitat Conservation Area Protective Buffer Widths



Averaged buffers must meet the following conditions:

- a. There are no feasible alternatives to the site design
- b. The averaged buffer will not result in degradation of the FWHCA's functions and values.
- c. The total buffer area after averaging is equal to the area required without averaging.
- d. The buffer at its narrowest point is never less than 75% of the required base buffer width.

Reduced buffers must meet the following conditions:

- a. mitigation involves restoration or enhancement of all remaining buffers.
- b. Conservation covenants shall--and performance bonds may--be required.
- c. Reduced buffers do not result in a net loss of existing buffer functions.

#### *December 2018 SMP requirements*

The standard shoreline management area (or shoreline setback) for all designated shorelines is 200 feet, measured landward from the OHWM. The study area is zoned "active waterfront"; according to the 2018 SMP, setbacks for development proposed in active waterfront is typically 50 feet.<sup>2</sup>

Regarding improvements from prior industrial land uses including concrete and gravel surfaces, gravel roads, the graveled boat launch, and riprap embankments, the following condition applies:

A shoreline use that was lawfully constructed prior to the effective date of the SMA or the December 2018 SMP and that does not conform to the current SMP standards is considered a nonconforming use. For the purposes of the December 2018 SMP, existing roads (whether asphalt, gravel, or dirt) are considered nonconforming uses and do not need a Shoreline Conditional Use Permit to be retained or improved (SMP 2018).

Thank you for the opportunity to provide this information. The findings in this letter are intended for FDM Development's planning strategy and should be considered preliminary until they're reviewed and approved in writing by the City of Stevenson and Washington Department of Ecology. If you have any questions, please contact me by phone (360) 578-1371 or email [andrew@eco-land.com](mailto:andrew@eco-land.com).

Sincerely,



Andrew R. Allison  
Wetland Scientist, Principal

Attachments:

Figures 1-4

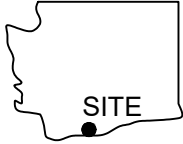
Photoplates 1-4

City of Stevenson 2018 SMP "Table 5.1 Shoreline Use & Setback Standards"

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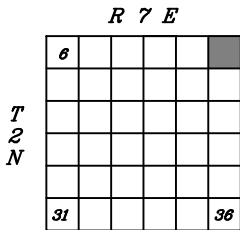
<sup>2</sup> Tables identifying setback distances per development type are attached to this letter for reference.

WASHINGTON



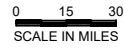
Latitude: 45.6886°  
Longitude: -121.8981°

LOCATION MAP



**NOTE:**  
USGS topographic quadrangle map reproduced using  
MAPTECH Inc., Terrain Navigator Pro software.

### PROJECT VICINITY MAP



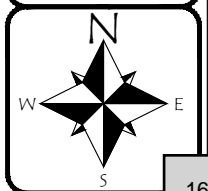
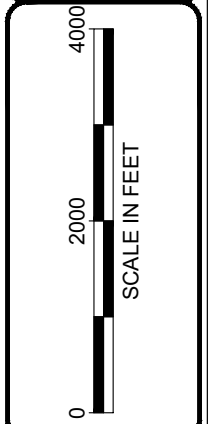
**SITE**

Figure 1

VICINITY MAP  
Rock Cove CAR  
FDM Development  
City of Stevenson, Skamania County, Washington  
Section 1, Township 2N, Range 3E, W.M.

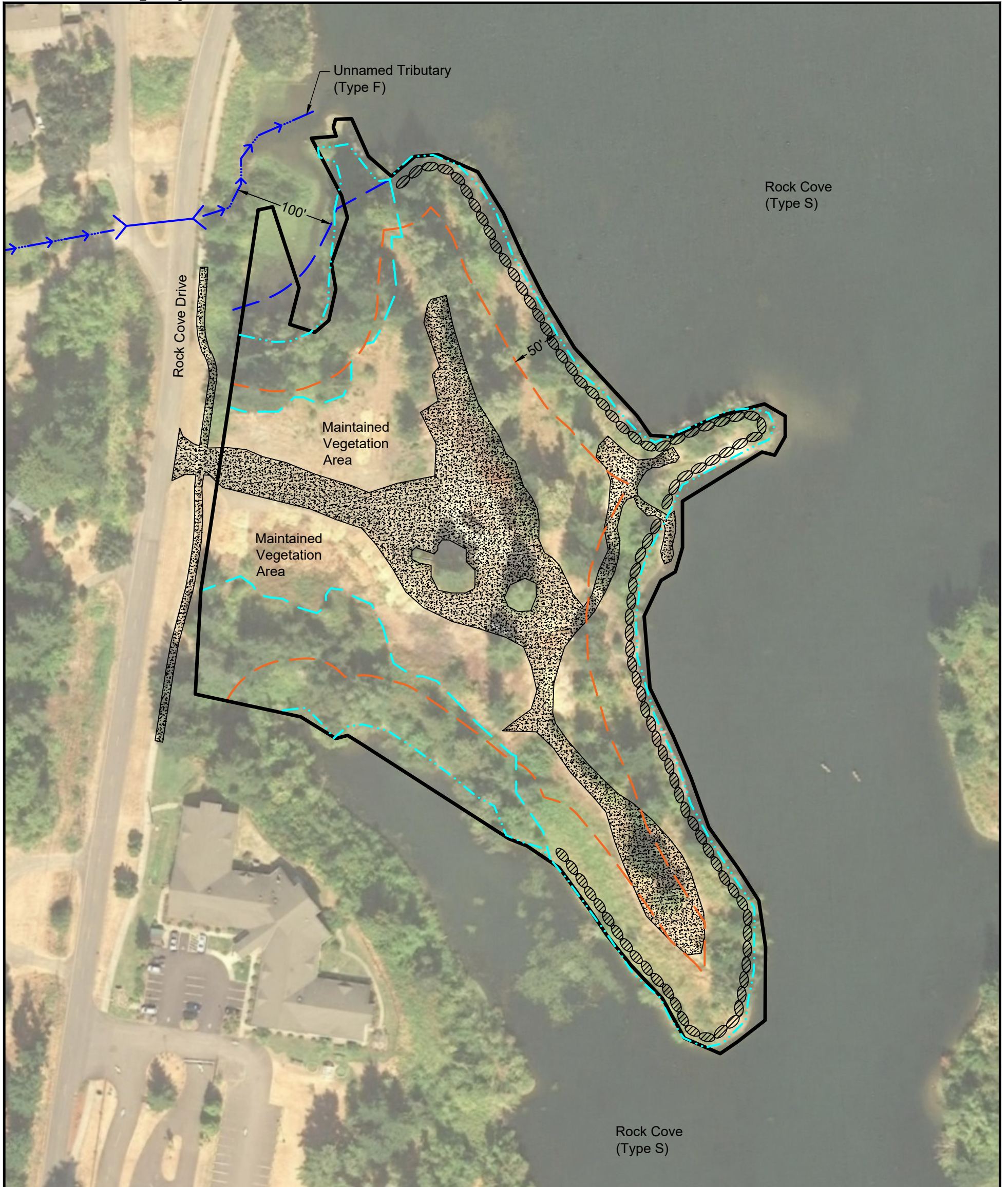
DATE: 1/17/20  
DWN: EF  
REQ. BY: AA  
PRJ. MGR: AA  
CHK: AA  
PROJECT NO:  
2682.02

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Fax: (360) 414-9305  
www.eco-land.com



1/17/2020 3:00 PM 2686.02 DL.dwg Emilio



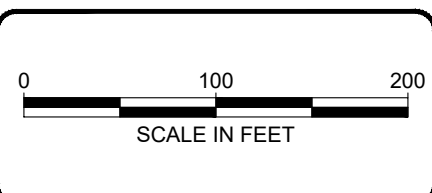
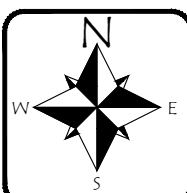


**LEGEND:**

- Site Boundary
- OHWM
- Stream with Flow Direction
- FWHCA Buffer for Type F
- FWHCA Buffer for Type S
- Shoreline Management Plan Setback
- Culvert
- Existing Graveled or Concrete Surfacing
- Existing Rip Rap

**NOTE(S):**

1. Aerial from Google Earth™.
2. OHWM line was determined through a joint effort by Ecological Land Services and Washington Department of Ecology on December 30, 2019. OHWM flags were professionally surveyed by S&F Land Services December 30-31, 2019.
3. FWHCA buffer is functionally isolated along existing riprap and existing graveled or concrete surfacing.



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Figure 2  
 SITE MAP  
 Rock Cove CAR  
 FDM Development  
 City of Stevenson, Skamania County, Washington  
 Section 1, Township 2N, Range 3E, W.M.



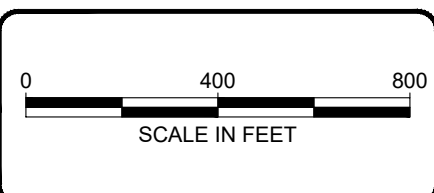
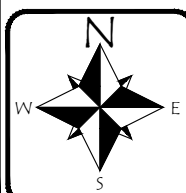


**LEGEND:**

-  Site Boundary
-  OHWM
-  Stream with Flow Direction

**NOTE(S):**

1. Aerial from Google Earth™.

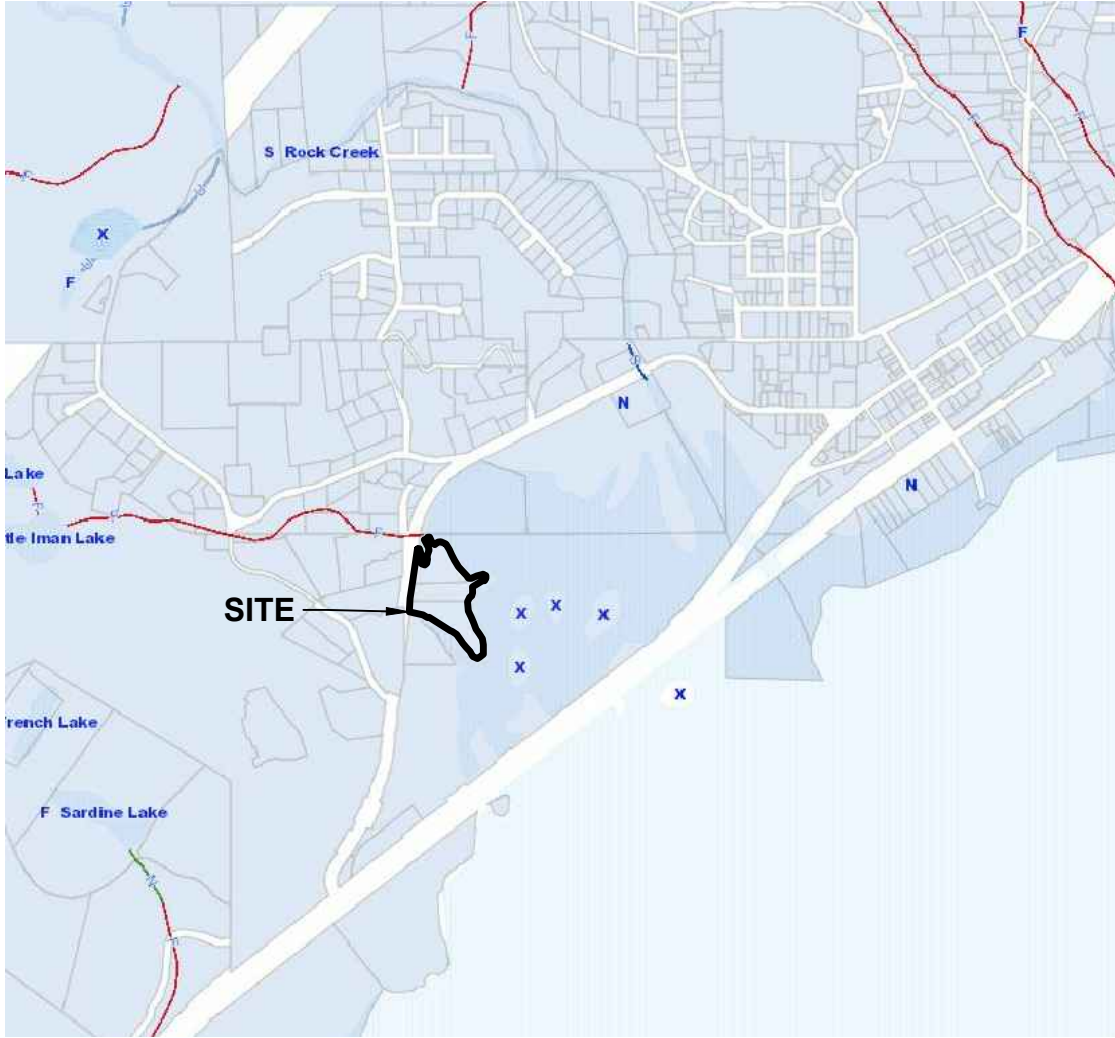



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Figure 3  
SITE OVERVIEW MAP  
Rock Cove CAR  
FDM Development  
City of Stevenson, Skamania County, Washington  
Section 1, Township 2N, Range 3E, W.M.





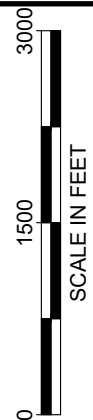
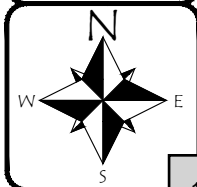
No mapped streams indicated onsite by the Washington State Department of Natural Resources (DNR).

**LEGEND:**

**Streams**

Streams

- Type S
- Type F
- Type N, Np, Ns
- U, unknown
- X, non-typed per WAC 222-16



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 PRJ. MGR: AA  
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 2682.02

Figure 4  
 DNR STREAM TYPE MAP  
 Rock Cove CAR  
 FDM Development  
 City of Stevenson, Skamania County, Washington  
 Section 1, Township 2N, Range 3E, W.M.





**Photo 1. Inflow point of the unnamed tributary via concrete culvert.**



**Photo 2. Unnamed tributary flowing toward Rock Cove.**



**Photo 3. Overview of unnamed tributary's confluence with Rock Cove.**



**Photo 4. Mud flat adjoining Rock Cove.**



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PR#: 2682.02

**Photoplate 1**  
**Site Photos**  
Rock Cove Preliminary Critical Areas Assessment  
FDM Development, Inc.  
City of Stevenson, Washington





**Photo 1. Vegetated shoreline on the north end of the study area.**



**Photo 2. Vegetated shoreline extending toward the unnamed tributary.**



**Photo 3. Riprap on the eastern shoreline, facing north.**



**Photo 4. Riprap on the eastern shoreline, facing south.**



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**Photoplate 2**  
**Site Photos**  
Rock Cove Preliminary Critical Areas Assessment  
FDM Development, Inc.  
City of Stevenson, Washington





**Photo 1. Graveled boat launch on the east side of the study area.**



**Photo 2. Vegetated shoreline on the west side, facing south.**



**Photo 3. Vegetated shoreline and mud flat in the southwest portion of the study area, facing south.**



**Photo 4. Groomed vegetation in the center of the study area.**



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**Photoplate 3**  
**Site Photos**  
Rock Cove Preliminary Critical Areas Assessment  
FDM Development, Inc.  
City of Stevenson, Washington





**Photo 1. Existing concrete and gravel surfacing.**



**Photo 2. Existing concrete and gravel surfacing.**



**Photo 3. Groomed vegetation in the center of the study area.**



**Photo 4. Existing gravel road.**



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**Photoplate 4**  
**Site Photos**  
Rock Cove Preliminary Critical Areas Assessment  
FDM Development, Inc.  
City of Stevenson, Washington

<b>TABLE 5.1 – SHORELINE USE &amp; SETBACK STANDARDS</b>										
	<b>Shoreline Environment Designation</b>									
	<b>Most Restrictive</b>					<b>Least Restrictive</b>				
	<b>AQUATIC</b>		<b>NATURAL</b>		<b>SHORELINE RESIDENTIAL</b>		<b>URBAN CONSERVANCY</b>		<b>ACTIVE WATERFRONT</b>	
	<b>Allowance</b>	<b>Setbacks (ft)</b>	<b>Allowance</b>	<b>Setbacks (ft)</b>	<b>Allowance</b>	<b>Setbacks (ft)</b>	<b>Allowance</b>	<b>Setbacks (ft)</b>	<b>Allowance</b>	<b>Setbacks (ft)</b>
P= Permitted, C=Conditional Use, X= Not Permitted, n/a= Not Applicable										
<b>Agriculture &amp; Mining</b>										
Agriculture	X	n/a	X	n/a	X	n/a	X	n/a	X	n/a
Mining	X	n/a	X	n/a	X	n/a	X	n/a	X	n/a
<b>Aquaculture</b>										
Water-Oriented	C	n/a	X	n/a	X	n/a	C	0	C	0
Non-Water Oriented	X	n/a	X	n/a	X	n/a	X	n/a	C	150
<b>Boating Facilities &amp; Overwater Structures</b>										
Non-motorized Boat Launch	See Adjacent Upland Environment		C		P		P		P	
Motorized Boat Launch			X		C		C		P	
Mooring Buoy			C		C		P		P	
Float			X		C		C		P	
Private Leisure Deck			X	n/a	C	n/a	C	n/a	P	n/a
Public Leisure Pier			X		C		P		P	
Single-User Residential Dock			X		C		C		P	
Joint-Use Moorage			X		P		P		P	
Marina		X		X		C		P		
<b>Commercial &amp; Industrial</b>										
Water-Dependent	P				X <sup>1</sup>	0	P	0	P	0
Water-Related, Water Enjoyment	C	n/a	X	n/a	X <sup>1</sup>	75	P	50	P	33
Non-Water-Oriented	X				X	-	C <sup>2</sup>	150	C <sup>2</sup>	100
<b>Forest Practices</b>										
All	X	n/a	C	50	P	50	P	50	P	25
<b>Institutional</b>										
Water-Dependent	C		C	0	C	0	P	0	P	0
Water-Related	X	n/a	X	n/a	C	100	P	75	P	50
Non-Water-Oriented	X		X	n/a	C	100	C	100	P	100
Cemetery	X		X	n/a	C	50	P	50	C	50
<b>Instream Structures</b>										
All	C	n/a	C	0	C	0	C	0	C	0

**TABLE 5.1 – SHORELINE USE & SETBACK STANDARDS, CONT.**

	Shoreline Environment Designation									
	Most Restrictive					Least Restrictive				
	AQUATIC		NATURAL		SHORELINE RESIDENTIAL		URBAN CONSERVANCY		ACTIVE WATERFRONT	
	Allowance	Setbacks (ft)	Allowance	Setbacks (ft)	Allowance	Setbacks (ft)	Allowance	Setbacks (ft)	Allowance	Setbacks (ft)
P= Permitted, C=Conditional Use, X= Not Permitted, n/a= Not Applicable										
<b>Land Division</b>										
All	C	n/a	C	n/a	P	n/a	P	n/a	P	n/a
<b>Recreational</b>										
Water-Dependent	P		P	0	P	0	P	0	P	0
Water-Related/Water-Enjoyment	X		C	100	P	50	P	50	P	50
Trail Parallel to the Shoreline, View Platform	C	n/a	P	50	P	50	P	33	P	25
Dirt or Gravel Public Access Trail to the Water	X		P	0	P	0	P	0	P	0
Non-Water-Oriented (golf course, sports field)	X		X	n/a	X	n/a	C	150	C	100
<b>Residential</b>										
Single-Family	X		X		P	50	C	50	X	N/A
Multi-Family	X	n/a	X	n/a	P	50	P	50	P	50
Over-Water Residence	X		X		X	n/a	X	n/a	X	n/a
<b>Transportation &amp; Parking Facilities</b>										
Highway/Arterial Road	C		X	n/a	C	100	P	50	P	50
Access & Collector Road	X		C	100	P	100	P	50	P	50
Private Road	X		C	100	P	50	C	50	C	50
Bridge	C	n/a	C	0	C	0	P	0	P	0
Railroad	C		C	100	C	100	P	50	P	50
Airport	X		X	n/a	X	n/a	C	150	C	150
Primary Parking Facility	X		X	n/a	X	n/a	X	n/a	X	n/a
Accessory Parking (On-Site Parking Serving another Use, Including Recreation/Vista Uses)	X		P	100	P	100	P	50	P	33

**TABLE 5.1 – SHORELINE USE & SETBACK STANDARDS, CONT.**

	Shoreline Environment Designation									
	Most Restrictive					Least Restrictive				
	AQUATIC		NATURAL		SHORELINE RESIDENTIAL		URBAN CONSERVANCY		ACTIVE WATERFRONT	
	Allowance	Setbacks (ft)	Allowance	Setbacks (ft)	Allowance	Setbacks (ft)	Allowance	Setbacks (ft)	Allowance	Setbacks (ft)
P= Permitted, C=Conditional Use, X= Not Permitted, n/a= Not Applicable										
<b>Utilities</b>										
Water-Oriented	P	n/a	C	0	C	0	P	0	P	0
Non-Water-Oriented (Parallel)	X	n/a	C	100	C	50	P	50	P	33
Non-water-Oriented (Perpendicular)	C	n/a	C	0	C	0	C	0	P	0
1 – All Industrial uses are prohibited, however, a Water-Oriented Commercial use may be allowed as a conditional use in the Shoreline Residential SED. 2 – Conditionally allowed only when a) the project provides a significant public benefit with respect to SMA objectives (e.g., providing public access and ecological restoration) and i) is part of a mixed-use project that includes water-dependent uses or ii) navigability is severely limited or b) the site is physically separated from the shoreline by another property or public right-of-way.										





June 17, 2020

Mr. Ben Schumaker  
Planning Director  
City of Stevenson  
Stevenson, WA 98648

RE: Rock Creek Cove Hospitality Site – Critical Areas Review

Mr. Shumaker:

Olson Environmental (OE) has reviewed the Critical Areas Report dated June 16, 2020 to determine compliance with the City of Stevenson Municipal Code 18.13 which addresses Critical Areas and Natural Resource Lands. The report was prepared by Ecological Land Services (ELS) for the Applicant which is FDM Development. The Applicant is proposing a mixed-use hospitality development on the former Hegewald Lumber Mill site located between Rock Creek Drive and Rock Creek Cove. ELS identified riparian habitat associated with Rock Cove within the project area, therefore SMC 18.13.095 (Fish and Wildlife Habitat Conservation Areas – FWHCA) applies to this development. The Applicant is proposing minor encroachments into the riparian buffer which requires a Critical Areas Permit as outlined in SMC 18.13.035. In addition, an Oregon white oak tree was identified at the southeast end of the study area. This tree is not proposed to be removed for this project. The project area is also within a designated shoreline which is not part of this review. OE's findings are as follows:

#### Fish and Wildlife Habitat Conservation Areas Critical Areas Report

Critical Area report requirements are outlined in SMC 18.13.050 and specifically for FWHCA in SMC 18.13.095(C). ELS has identified a Type F stream in the north of the study area as shown in Figure 2 of their report. Rock Cove which surrounds three sides of the project area is a shoreline of the state (Type S) water. According to SMC Table 19.13.095-1, Type F streams have a 100 foot riparian buffer and Type S waters have a 150 foot riparian buffer. Riprap occurs along approximately 65 percent of the shoreline and maintained vegetation areas occur north and south of the existing entrance to the property (Fig. 2). The Applicant has presented the case that the riprap and maintained vegetation areas functionally isolate the 150 foot Type S riparian buffer (Fig. 2) based on SMC 18.13.095(D)(3) which identifies functionally isolated buffers as lawns, walkways, driveways, other mowed or paved areas, and areas which are functionally separated from a FWHCA and do not protect the FWHCA from

adverse impacts due to pre-existing roads, structures, or vertical separation, shall be excluded from buffers otherwise required by this chapter. If existing developments cause the width of the remaining buffer to be less than 50 percent of the base buffer, both conditions shall apply:

- a. If the reduced buffer exists in degraded condition, the reduced buffer shall be enhanced in accordance with 18.13.095D.5, unless the area in question is utilized for activities consistent with water dependent uses
- b. The buffer cannot be further reduced by averaging or on-site mitigation.

OE concurs that based on this definition the riprap functionally isolates the 150 foot buffer as shown in Figure 2. The maintained vegetation areas may functionally isolate however more detail needs to be provided to make that justification.

The remaining buffer in the riprap areas is less than 50 percent (75') of the base buffer (150'). If the maintained vegetation areas are considered functionally isolated the remaining buffer area north of the existing entrance and a portion of the buffer in the south-central portion of the project area are less than 50 percent (see attached graphic).

Based on ELS' description of the buffer at least portions of the remaining buffer are degraded. Therefore, SMC 18.13.095(D)(3)(a & b) apply. The degraded buffer in those areas where less than 50 percent of the base buffer remains shall be enhanced and the buffer cannot be further reduced by on-site mitigation.

OE recommends that the Applicant provide a more detailed habitat assessment report that includes the requirements of SMC 18.13.050, SMC 18.13.095(B)(1) and 18.13.095(C)(1) prior to final approval.

### Conceptual Mitigation Plan

The Applicant has provided a conceptual mitigation plan that outlines the enhancement of the remaining riparian buffer and onsite mitigation for further reducing the buffer for the development. Very little detail is provided in the conceptual plan. Based on the information provided above only the buffer areas that have not been reduced by 50 percent by functional isolation can be further reduced through onsite mitigation. As per SMC 18.13.095(D)(5) onsite mitigation can be used to reduce the base buffer to 70 percent of the base buffer. For this project that would reduce the 150 foot base buffer to 105 feet. To reduce the buffer further requires off-site mitigation. As per SMC 18.13.095(D)(6), the riparian buffer can be reduced to 33 percent of the base buffer width through off-site mitigation. This would reduce the base buffer from 150 feet to 49.5 feet. It is OE's opinion that this project can meet the buffer reduction criteria by utilizing the off-site mitigation option which would allow the development

to occur outside of the 50 foot setback as required under the City's SMP. The Applicant shall provide a detailed mitigation plan that includes the requirements of SMC 18.13.095(D)(6) and 18.13.095(F). The Applicant has previously been provided a list of off-site mitigation options that would meet the requirements of SMC 18.13.095(D)(6).

Should you have questions or need more information, please contact me.

Regards,

*Kevin L. Grosz*  
Kevin L. Grosz, S.P.W.S.  
Project Manager  
Wetland/Wildlife Biologist



DRAFT

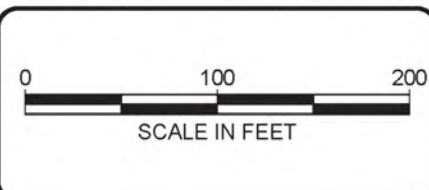


**LEGEND:**

- Site Boundary
- OHWM
- Stream with Flow Direction
- FWHCA Buffer for Type F
- Functionally Isolated FWHCA Buffer for Type S
- Reduced FWHCA Buffer For Type S (105')
- Shoreline Management Plan Setback
- Culvert
- Oak Tree Location
- Proposed Graveled Surfacing
- Proposed Storm Line
- Proposed Storm Outfall
- Proposed Impacts (0.12 ac.)
- Buffer Enhancement Area (1.03 ac.)  
(1:8.6 Impact to Enhancement Area Ratio)
- Associated Habitat Improvement (1.43 ac.)

**NOTE(S):**

1. Aerial from Google Earth™.
2. OHWM line was determined through a joint effort by Ecological Land Services and Washington Department of Ecology on December 30, 2019. OHWM flags were professionally surveyed by S&F Land Services December 30-31, 2019.
3. Site Plan provided by FDM Development, Inc.



1157 3rd Ave., Suite 220A  
Longview, WA 98632  
Phone: (360) 578-1371  
Fax: (360) 414-9305  
www.eco-land.com

DATE: 6/11/20  
DWN: EF  
REQ. BY: AA  
PRJ. MGR: AA  
CHK: AA  
PROJECT NO:  
2682.02

Figure 3  
PROPOSED CONDITIONS MAP  
Rock Cove CAR  
FDM Development  
City of Stevenson, Skamania County, Washington  
Section 1, Township 2N, Range 7E, W.M.



# DRAFT

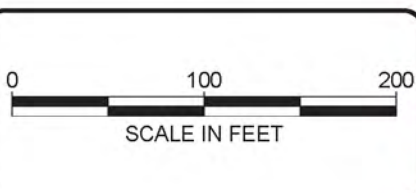


**LEGEND:**

- Site Boundary
- OHWM
- Stream with Flow Direction
- FWHCA Buffer for Type F
- Functionally Isolated FWHCA Buffer for Type S
- Shoreline Management Plan Setback
- Culvert
- Oak Tree Location
- Existing Graveled or Concrete Surfacing
- Existing Rip Rap

**NOTE(S):**

1. Aerial from Google Earth™.
2. OHWM line was determined through a joint effort by Ecological Land Services and Washington Department of Ecology on December 30, 2019. OHWM flags were professionally surveyed by S&F Land Services December 30-31, 2019.



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DATE: 6/11/20  
 DWN: EF  
 REQ. BY: AA  
 PRJ. MGR: AA  
 CHK: AA  
 PROJECT NO:  
 2682.02

Figure 2  
 EXISTING CONDITIONS SITE MAP  
 Rock Cove CAR  
 FDM Development  
 City of Stevenson, Skamania County, Washington  
 Section 1, Township 2N, Range 7E, W.M.





# City of Stevenson

*Leana Kinley, City Administrator*

Phone (509)427-5970  
FAX (509) 427-8202

7121 E Loop Road, PO Box 371  
Stevenson, Washington 98648

To: City Council  
From: Leana Kinley, City Administrator  
RE: Rock Cove Hospitality Center Shoreline Substantial Development (SHOR2020-01)  
Meeting Date: June 18, 2020

## **Executive Summary:**

On March 27<sup>th</sup>, 2020 the City received a complete application from FDM Development to “develop a mixed-use hospitality center. The project will be developed in phases, consisting multi-room units (Phase 1), event space (Phase 2, and single-room/studio units (Phase 3). All units will be managed by a single operator and available for rent on nightly basis. The proposed hospitality orientation of the project takes full advantage of the water views and access by providing views of Rock Creek Cove and non-motorized boating access to the water utilizing an existing boat ramp”. City Council reviewed the application on May 21<sup>st</sup>, 2020 and set a date of June 18<sup>th</sup>, 2020 for a Public Hearing. The Planning Commission met on June 8<sup>th</sup>, 2020 to review the application and provide a recommendation to Council.

## **Overview of Items:**

The City Council established this date to hold a public hearing on the proposal because the estimated cost exceeds \$250,000. The Planning Commission reviewed this project at their public meeting on June 8<sup>th</sup>, 2020 and made a recommendation on points listed below:

- Condition 8 initially provided 7 years, or prior to occupancy of future phases, for all facilities for public access to be installed. This time frame is too long and the Planning Commission recommended a shorter time frame in the event only phase 1 is completed. The condition has been updated to 3 years.
- In conjunction with condition 8, they recommend public access be maintained between construction phases even if the accessible pathway is not constructed.
- Improved connectivity through the center of the property and having the pathway be more circulatory rather than an out and back pathway is recommended.
- Condition 14 currently requires a landscaping and/or screening plan to comply with the Restoration regulations of the Shoreline Management Master Program. The recommendation is to ensure the landscaping plan also mitigates the view of the property from the fairgrounds by lessening the intrusiveness of the buildings.
- Installation of interpretive signs about the historic uses be installed on the property.

The Council is asked to consider all relevant information available and evidence presented at the public hearing and either grant, conditionally grant, or deny the permit. Staff recommends conditionally granting the permit subject to the attached draft Shoreline Substantial Development Permit and associated conditions.

## **Action Needed:**

Draft motion: Move to adopt the Shoreline Substantial Development Permit (SHOR2020-01) as recommended by the Planning Commission based on its satisfactory compliance with the Skamania County Shoreline Management Master Program and SMC 18.08.



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300  
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

June 17, 2020

Ben Schumaker, Community Development Director  
City of Stevenson  
Community Development Department  
7121 East Loop Road  
PO Box 371  
Stevenson, WA 98648

Dear Ben Schumaker:

Thank you for the opportunity to comment on the mitigated determination of nonsignificance for the Rock Creek Cove Mixed-Use Hospitality Development Project (SEPA2020-01, SHOR2020-01) as proposed by FDM Development. The Department of Ecology (Ecology) reviewed the environmental checklist and has the following comment(s):

**SHORELANDS & ENVIRONMENTAL ASSISTANCE:  
Miranda Adams, Wetlands/Shorelands Specialist (360) 690-7164**

Ecology staff appreciates the applicant's efforts to coordinate with permitting agencies early on during the project design process; the information submitted is an improvement over previous iterations of the proposal. However, it appears that certain aspects of the project may require a shoreline conditional use permit and possibly a shoreline variance from the regulatory agencies.

Please note that there's no legend on Site Plan Sheet C2.0 plan, and it is difficult to discern certain features from one another. Please ensure that the applicant includes a legend for the shoreline permit submittal. In addition, it is preferable to use different colors for the various dashed lines (e.g., 50-foot setback, 33-foot setback, phases, and unidentified lines). It is unclear what the "Type S Buffer" is on this sheet; this needs to be clarified. How will impacts to this buffer be "mitigated off-site" as noted on the plans?

It is unclear what is meant by "landscape improvements" and what areas of the property this includes. Is there an intent to plant along the shoreline and, if so, what types of plants will be used? Shoreline buffer impacts should be mitigated with addition of native plants to prevent and/or minimize future impacts from recreational users along the shoreline; traditional landscaping (e.g. lawn, ornamentals) should not be used as an alternative to providing an ecologically sound, functional shoreline buffer consisting of native vegetation.

It is unclear what is planned for the “observation area” on the small peninsula in Phase 2. The entire peninsula is within the 50-foot setback; therefore, development can only be allowed in that area with a shoreline variance. If development is proposed within the setback, it must meet all variance criteria in WAC 173-27-170. Development includes grading, placement of gravel, and placement of structures, among other things (see WAC 173-27-030(6) for a complete definition of development).

If the existing boat ramp and observation deck were legally authorized when they were first installed, then repair or replacement without a variance is generally allowed if the structure is in a degraded condition. However, they would have to meet the following exemption criteria:

WAC 173-27-040(2)(b) Normal maintenance or repair of existing structures or developments, including damage by accident, fire or elements. "Normal maintenance" includes those usual acts to prevent a decline, lapse, or cessation from a lawfully established condition. "Normal repair" means to restore a development to a state comparable to its original condition, including but not limited to its size, shape, configuration, location and external appearance, within a reasonable period after decay or partial destruction, except where repair causes substantial adverse effects to shoreline resource or environment. Replacement of a structure or development may be authorized as repair where such replacement is the common method of repair for the type of structure or development and the replacement structure or development is comparable to the original structure or development including but not limited to its size, shape, configuration, location and external appearance and the replacement does not cause substantial adverse effects to shoreline resources or environment.

**SOLID WASTE MANAGEMENT: Derek Rockett (360) 407-6287**

All grading and filling of land must utilize only clean fill. All other materials may be considered solid waste and permit approval may be required from the local jurisdictional health department prior to filling. All removed debris resulting from this project must be disposed of at an approved site. Contact the local jurisdictional health department for proper management of these materials.

**WATER QUALITY/WATERSHED RESOURCES UNIT:**

**Greg Bengé (360) 690-4787**

Erosion control measures must be in place prior to any clearing, grading, or construction. These control measures must be effective to prevent stormwater runoff from carrying soil and other pollutants into surface water or stormdrains that lead to waters of the state. Sand, silt, clay particles, and soil will damage aquatic habitat and are considered to be pollutants.

Any discharge of sediment-laden runoff or other pollutants to waters of the state is in violation of Chapter 90.48 RCW, Water Pollution Control, and WAC 173-201A, Water Quality Standards for Surface Waters of the State of Washington, and is subject to enforcement action.



Construction Stormwater General Permit:

The following construction activities require coverage under the Construction Stormwater General Permit:

1. Clearing, grading and/or excavation that results in the disturbance of one or more acres **and** discharges stormwater to surface waters of the State; and
2. Clearing, grading and/or excavation on sites smaller than one acre that are part of a larger common plan of development or sale, if the common plan of development or sale will ultimately disturb one acre or more **and** discharge stormwater to surface waters of the State.
  - a) This includes forest practices (including, but not limited to, class IV conversions) that are part of a construction activity that will result in the disturbance of one or more acres, **and** discharge to surface waters of the State; and
3. Any size construction activity discharging stormwater to waters of the State that Ecology:
  - a) Determines to be a significant contributor of pollutants to waters of the State of Washington.
  - b) Reasonably expects to cause a violation of any water quality standard.

If there are known soil/ground water contaminants present on-site, additional information (including, but not limited to: temporary erosion and sediment control plans; stormwater pollution prevention plan; list of known contaminants with concentrations and depths found; a site map depicting the sample location(s); and additional studies/reports regarding contaminant(s)) will be required to be submitted.

Additionally, sites that discharge to segments of waterbodies listed as impaired by the State of Washington under Section 303(d) of the Clean Water Act for turbidity, fine sediment, high pH, or phosphorous, or to waterbodies covered by a TMDL may need to meet additional sampling and record keeping requirements. See condition S8 of the Construction Stormwater General Permit for a description of these requirements. To see if your site discharges to a TMDL or 303(d)-listed waterbody, use Ecology's Water Quality Atlas at: <https://fortress.wa.gov/ecy/waterqualityatlas/StartPage.aspx>.

The applicant may apply online or obtain an application from Ecology's website at: <http://www.ecy.wa.gov/programs/wq/stormwater/construction/> - [Application](#). Construction site operators must apply for a permit at least 60 days prior to discharging stormwater from construction activities and must submit it on or before the date of the first public notice.

Ecology's comments are based upon information provided by the lead agency. As such, they may not constitute an exhaustive list of the various authorizations that must be obtained or legal requirements that must be fulfilled in order to carry out the proposed action.

If you have any questions or would like to respond to these comments, please contact the appropriate reviewing staff listed above.

Ben Schumaker

June 17, 2020

Page 4

Department of Ecology  
Southwest Regional Office

(GMP:202002917)

cc: Miranda Adams, SEA  
Derek Rockett, SWM  
Greg Bengé, WQ  
Zachary Pyle, FDM Development (Proponent)

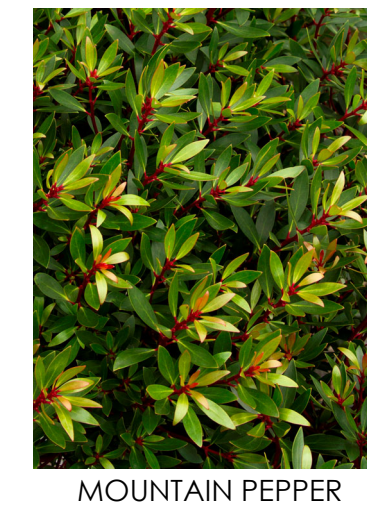




TREES

- PLANTING LEGEND**
- TREES**
- PROPOSED EVERGREEN TREE
    - EXCELSA WESTERN RED CEDAR
    - GOLDEN DEODAR CEDAR
    - OREGON GREEN AUSTRIAN PINE
  - PROPOSED DECIDUOUS TREE
    - SCARLET OAK
    - VINE MAPLE
    - PRAIRIE GOLD ASPEN
  - EXISTING EVERGREEN TREE
  - EXISTING DECIDUOUS TREE

SCREENING & BUFFERING



MITIGATION



STORMWATER



ORNAMENTAL



MAUL FOSTER ALONGI  
 109 E 13TH STREET  
 VANCOUVER, WA 98660  
 PHONE: 360.694.2691  
 www.maulfooster.com

**FDMA**  
 DEVELOPMENT INC.

ROCK CREEK COVE HOSPITALITY  
 PHASE 1  
 STEVENSON, WA

ISSUE	DATE	CONCEPTUAL PLANTING PLAN	DESCRIPTION
A	6/17/2020		

PROJECT: 1416.09.01  
 DESIGNED: C. RILEY  
 DRAWN: C. RILEY  
 CHECKED:  
 SCALE  
 0 20' 40'  
 NOTE: BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY.  
 SHEET TITLE  
 CONCEPTUAL PLANTING PLAN  
 SHEET  
 L1

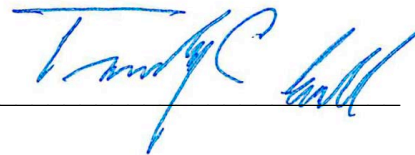
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CITY OF STEVENSON  
**ROCK CREEK COVE HOSPITALITY SITE IMPROVEMENTS**  
SITE PLAN APPLICATION

**CONSULTING ENGINEER'S REPORT**

June 10, 2020



**A. GENERAL DISCUSSION**

**1. Description:** The request is to construct a hospitality facility on a vacant site between Rock Creek Drive and Rock Creek Cove. The site is currently undeveloped and was previously used for lumber operations of an unknown type. The development is proposed to occur in three phases. The first phase includes sixteen short-term rental units (four quad buildings). The second phase will include a commercial venue/meeting space of unknown size. The third phase is proposed as five townhouse units.

**2. Water Service:** Public water is available on Rock Creek Drive by means of a 6-inch ductile iron water main per City of Stevenson records. No modification to the public water system is proposed with this development. An on-site private water system and public fire service is proposed. All water improvements shall be designed and constructed in accordance with the City of Stevenson's Engineering Design and Construction standards (public) and the Uniform Plumbing Code (private).

**3. Sanitary Sewer Service:** Public sewer is available in Rock Creek Drive by means of an 8-inch sewer. No modification to the public sewer system is proposed with this development based on the preliminary plans. A private sewer system is proposed to serve the development. All sanitary sewer service improvements shall be designed and constructed in accordance with the City of Stevenson's Engineering Design and Construction standards and the Uniform Plumbing Code.

The sanitary sewer system is proposed to connect to the existing sewer pipe without a manhole. City engineering standards require connections to use manholes with pipe sizes 8" and larger.

**4. Street System:** Rock Creek Drive is classified as a major collector and has been improved with curb and sidewalk along the frontage of the site. The development proposes to use the existing driveway that swerves the site and the existing driveway has adequate sight distance in both directions. No improvements or modifications are proposed to the existing driveways.

On-site circulation appears adequate to serve the proposed development; however no turnaround is proposed. City of Stevenson Street Design Standards require cul-de-sacs on all public and private streets. The length of the dead-end access drive is approximately 450'. Hammerhead turnarounds may be used in lieu of a cul-de-sac provided that the street serves six or less lots and the street is less than 200' in length, and shall have a minimum depth of 30 feet. Although the length of the drive exceeds 200', since this development is not a single-family residential development, a hammerhead turnaround that is clearly signed as a "No Parking" area would also be appropriate.

**5. Storm Drainage:** All stormwater systems will need to be designed and constructed in accordance with City of Stevenson's Engineering Design and Construction standards, the Department of Ecology's 1992 Stormwater Management Manual for the Puget Sound Basin, and the Uniform Plumbing Code.

This project is considered a "New Development" project for stormwater thresholds, as the development is greater than 5000 square feet, with greater than One(1) acre of land disturbing activity. Minimum Requirements 1-11 apply.

A Preliminary TIR was submitted with the application providing additional information on the intended stormwater management approach. The preliminary application shows the site being managed through the use of new catch basins and bioretention/infiltration/treatment swales, with outfalls to Rock Creek Cove. The proposed bioretention facilities were designed using WWHM2012 per the DOE Stormwater Manual. They are designed to infiltrate at least 91% of the runoff through the treatment soil and are considered enhanced treatment. Per the DOE manual, the level of treatment required for the subject project is basic treatment.

The proposed biofiltration swales will treat stormwater runoff, which will be discharged to Rock Cove, a large water body along the north shore of the Columbia River. There are no negative water quality impacts anticipated downstream of the project site and no off-site analysis or mitigation is required.

All stormwater facilities constructed to manage runoff onsite shall be privately owned and maintained. Infiltration testing completed by GN Northern, Inc. on the proposed site indicated that subsurface soils have adequate infiltration capacity.

**6. Grading & Erosion Control:** A Geotechnical Engineering Report dated January 13, 2020, by GN Northern, Inc. was submitted for this development and provided information regarding subsurface conditions, infiltration, geologic hazards, slope stability, seismic design, and grading recommendations. A grading and erosion control plan shall be required, and proper erosion control measures shall be maintained throughout construction. The plan shall include all recommendations for grading provided in the Geotechnical Report.

## **B. CONCLUSIONS:**

1. The City's water and sanitary sewer systems currently have capacity available to provide the anticipated domestic and fire protection supply and sanitary sewer services necessary for the proposed development.
2. Stormwater facilities designed and constructed in accordance with the City's regulations can adequately manage and control runoff from this site.
3. The street system has capacity to serve the development and site access meets standards and the proposed access to the City street meets access standards.
4. Information contained within the provided Geotechnical Report indicate the development is feasible as proposed.

**C. RECOMMENDED CONDITIONS OF APPROVAL:**

1. The design and construction of water and sewer systems, streets, storm drainage systems, site grading and erosion control plans shall be in accordance with City of Stevenson Engineering Design and Construction Standards, and applicable provisions of the Uniform Plumbing Code.
2. The fire service line to the proposed fire hydrant shall be designed and constructed to City of Stevenson water standards for public facilities, and the applicant shall establish a 15'-wide public water easement encompassing the proposed fire hydrant service.
3. Either a cul-de-sac turnaround shall be provided at the end of the access drive having a curb radius of 41', or a hammerhead turnaround having a minimum depth of 30' shall be provided at the end of the access drive. The turnaround area shall be signed as a "No Parking" area, with curbs painted red.
4. The sanitary sewer connection to the public sewer shall be made using a manhole.
5. All recommendations provided in the Geotechnical Engineering Report dated January 13, 2020, by GN Northern, Inc. shall be followed for design and construction
6. All onsite stormwater facilities shall remain in private ownership and be maintained privately. Ownership and Maintenance responsibility shall be clearly shown on the Final Engineering plans.
7. An approved grading and erosion control plan shall be provided, and temporary sedimentation and erosion control measures shall be maintained throughout construction.

\*\*\*\*\*

By: Wallis Engineering

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**SHORELINES PERMIT APPLICATION****Substantial Development, Timber Cutting, Conditional Uses, Variances**

PO Box 371 Stevenson, Washington 98648

Phone: (509)427-5970 Fax: (509)427-8202

**Request:**
 Substantial Development   
  Timber Cutting   
  Conditional Use   
  Variance
**Applicant/Contact:** Zachary PyleMailing Address: 5101 NE 82nd Avenue, Suite 200, Vancouver, WA 98662Phone: 360-529-0987Fax: N/AE-Mail Address (Optional): zpyle@fdmdevelopment.com**Property Owner:** ERWIN L & K, LLC & OPH DBD, LLC &, RAWLINGS FAMILY INVESTMENTS, LLCMailing Address: 5101 NE 82nd Avenue, Suite 200, Vancouver, WA 98662Phone: 360-529-0987Fax: N/A

If There are Additional Property Owners, Please Attach Additional Pages and Signatures as Necessary
---

**Subject Property Address** (Or Nearest Intersection): Rock Creek Dr**Tax Parcel Number:** 02070100130200, 300, 400**Zoning:** CR**Name of Affected Waterbody:** Rock Creek Cove**Shoreline Designation:** \_\_\_\_\_**Current Use:** Vacant**Proposed Use:** Hospitality

**Brief Project Summary:** This project seeks to develop a mixed-use hospitality center. The project will be developed in phases, consisting multi-room units (Phase 1), event space (Phase 2), and single-room/studio units (Phase 3). All units will be managed by a single operator and available for rent on nightly basis. The proposed hospitality orientation of the project takes full advantage of the water views and access by providing views of Rock Creek Cove and non-motorized boating access to the water utilizing an existing boat ramp.

**Water Supply Source:** City**Sewage Disposal Method:** City

*As the property owners of the real property described in this proposal, our signatures indicate our approval of this proposal, with the understanding that the proposal is subject to review, approval, and/or denial under SMC 18.04.*

*I/we hereby provide written authorization for the City to reasonably access to the subject property to examine the proposal and carry out the administrative duties of the Stevenson Municipal Code.*

*I/we hereby certify my/our awareness that application fees are non-refundable, there is no guarantee that a permit will be issued*

Incomplete applications will not be accepted. • Please ensure that all submittals are included
--

**Signature of Applicant:** Zachary PyleDate: 02/05/2020**Signature of Property Owner:** [Signature]Date: 02/05/2020

For Official Use Only:

Date Application Received 2/7/2020 • Date Application Complete \_\_\_\_\_



SUBMIT TO:  
City Hall  
7121 NE Loop Road

# Shorelines Permit

## Submittal Requirements

*The following information is required for all Shoreline Permit Applications. Applications without the required information will not be accepted. Site plans are to be submitted on 8½"x11" or 11"x17" paper, and drawn to a standard engineering scale (e.g. 1"=10', 1"=20', ¼"=1', etc.).*

- Application Fee** (Amount: \$1,000.00 Date: 2/7/2020 Receipt #: 2282)
- Completed and Signed Shorelines Permit Application**
- Any Associated Land Use and Building Permit Applications**
- Two (2) Complete Site Plan Proposals—Drawn to scale, showing the proposal site and all adjoining areas within 100 feet, and including the following:**
  - A Vicinity Map
  - A North Arrow
  - All property boundary lines and dimensions
  - The location and width of all public and private roads
  - The location and size of all existing structures, utility lines, easements, septic tanks and drainfields, wells, and other improvements
  - The location and extent of all proposed structures and/or uses
  - The location, species, and diameter of all significant trees
  - The location and description of all critical areas and buffers

*The following information is required for Timber Cutting Permits. Timber cutting permits are related to selective commercial timber cutting where no more than thirty (30) percent of the merchantable timber is harvested, or clear-cutting necessary for the preparation of land for another use.*

- Timber Cutting Permits**
  - A Report Prepared by a Professional Forester Documenting the Full Amount of Merchantable Timber Existing at the Time of Application, and the Amount of Timber Proposed for Cutting
  - A Description of Any Topography, Soil Conditions, or Silviculture Practices Necessary for Regeneration that May Render Selective Logging Ecologically Detrimental

*The following information is required for Shoreline Conditional Use Permits. Conditional uses are those uses which either do not need a shoreline location or are considered unsuitable for siting within a particular shoreline environment. Such uses must:*

- Cause no unreasonable adverse effects on the environment or other uses within the area;
- Not interfere with the public use of public shorelines;
- Have a design that is compatible with the shorelines environment in which it will be located; and
- Not be contrary to the goals, policy statements or general intent of the shoreline environments.

- Shoreline Conditional Use Permits**
  - A Narrative Explaining How the Proposal Meets the Four Criteria Above

# Shorelines Permit

## Submittal Requirements, Continued

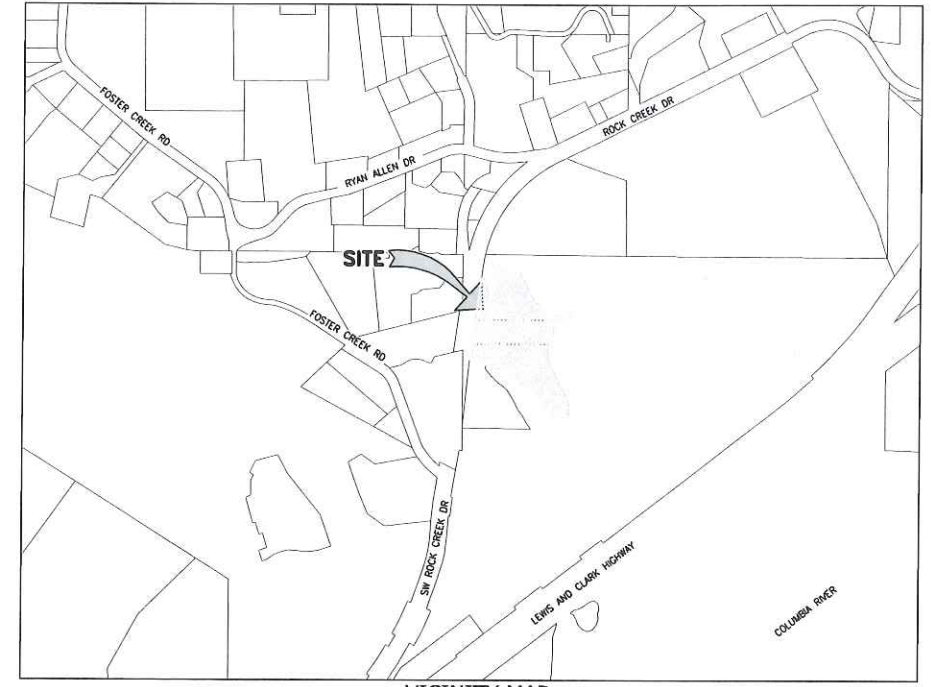
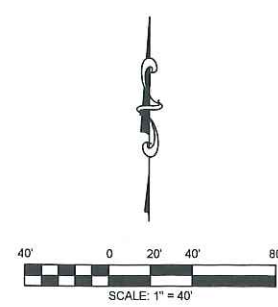
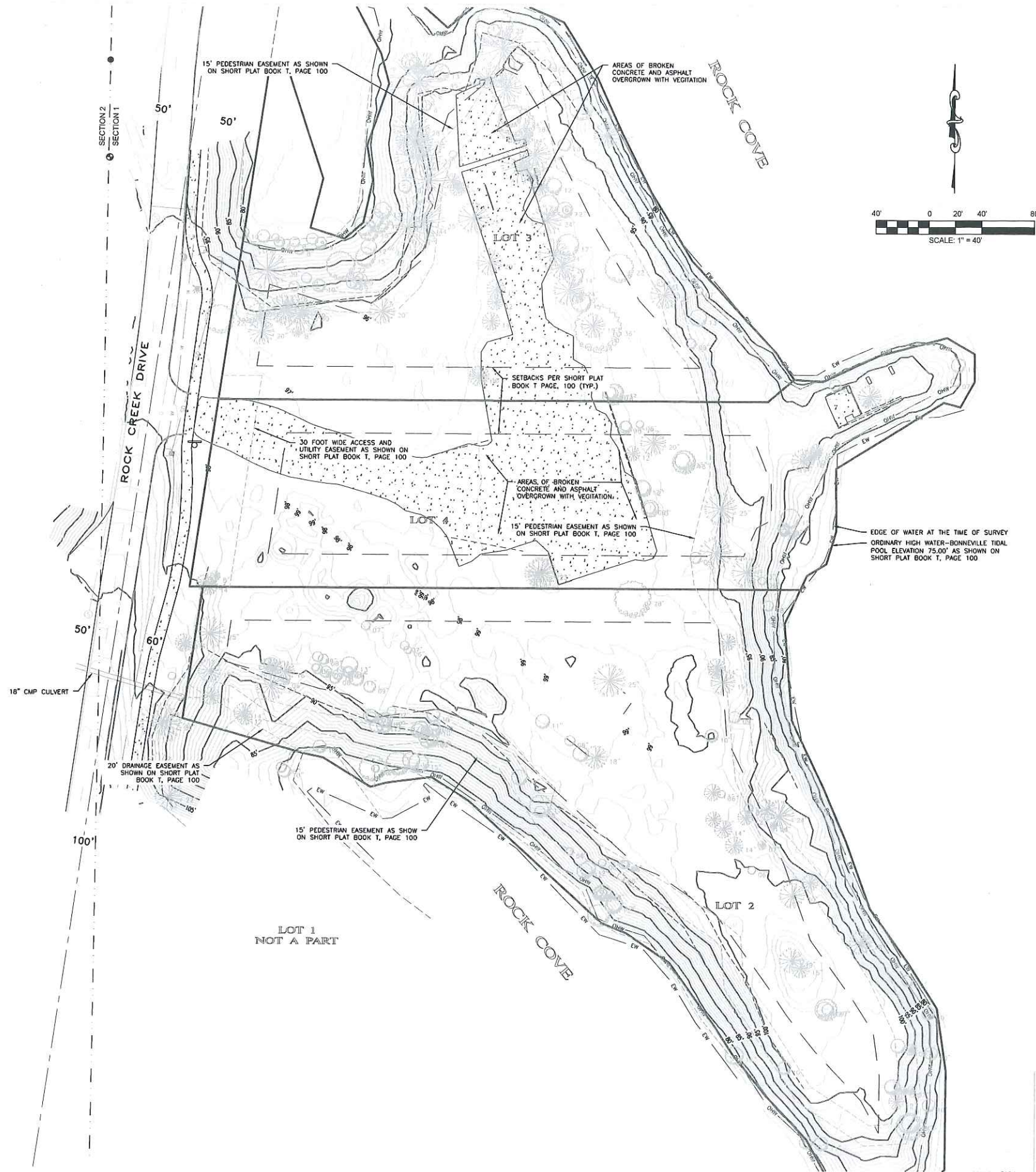
*The following information is required for Shoreline Variances. Variances deal with specific requirements of the Shoreline Management Master Program and their objective is to grant relief when there are practical difficulties or unnecessary hardship in the way of carrying out the strict letter of the Shoreline Management Master Program. The property owner must show that if forced to comply with the provisions then no reasonable use of the property can be made. The fact that the property owner might make a greater profit by using the property in a manner contrary to the intent of the Shoreline Management Master Program is not a sufficient reason for variance. A variance will be granted only after the applicant can demonstrate the following:*

- The hardship which serves as a basis for granting of variance is specifically related to the property of the applicant;
- The hardship results from the application of the requirements of the Act and the Shoreline Management Master Program and not from for example, deed restrictions or the applicant's own actions;
- The variance granted will be in harmony with the general purpose and intent of the Shoreline Management Master Program.
- Public welfare and interest will be preserved. If more harm will be done to the area by granting the variance than would be done to the applicant by denying it, the variance will be denied.

### Shoreline Variances

- A Narrative Explaining How the Proposal Meets the Four Criteria Above
- A Financial Analysis Showing that No Reasonable Use of the Property Can be Made





VICINITY MAP  
SCALE: 1" = 1000'

**LEGEND:**

- ROAD STRIPING
- FLOW LINE CURB
- STANDARD CURB
- EDGE OF PAVEMENT
- EDGE OF CONCRETE
- WALL-TOP
- WALL-TOE
- WATER
- DITCH FLOW LINE
- STORM SEWER
- GAS
- SANITARY SEWER
- EDGE OF WATER
- ORDINARY HIGH WATER LINE
- CENTERLINE
- RIGHT OF WAY
- BOUNDARY LINE
- LOT/PARCEL LINE
- EASEMENT
- SETBACK
- SECTION LINE
- CONCRETE HATCH
- MAJOR CONTOUR
- MINOR CONTOUR
- FOUND MONUMENT-ALUMINUM CAP
- FOUND MONUMENT-BRASS CAP
- FOUND MONUMENT - 5/8" IRON ROD
- SIGN
- SCHRUB/BUSH
- TREE - DECIDUOUS
- TREE - CONIFER
- SANITARY SEWER MANHOLE
- STORM CATCH BASIN
- STORM CULVERT
- FIRE HYDRANT
- WATER METER

**HORIZONTAL DATUM (BASIS OF BEARINGS):**  
PROJECT IS WASHINGTON STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, SCALED TO GROUND AROUND CONTROL POINT #1 WITH A COMBINED SCALE FACTOR OF 1.00003427467. THE HORIZONTAL DATUM IS NAD83(2011) EPOCH 2010.00 BASED ON STATIC GPS OBSERVATIONS ON CONTROL POINT #1, PROCESSED THROUGH OPUS. UNITS ARE IN US SURVEY FEET.

**VERTICAL DATUM:**  
NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) BASED ON STATIC GPS OBSERVATIONS ON POINT #1 PROCESSED THROUGH OPUS, USING GEOID 18.

**SURVEY NOTES**  
THIS MAP DOES NOT CONSTITUTE A PROPERTY BOUNDARY SURVEY. PARCEL LINEWORK SHOWN IS FOR INFORMATIONAL PURPOSES ONLY.  
OHW LINE WAS FIELD DETERMINED THROUGH A JOINT EFFORT BY ECOLOGICAL LAND SERVICES AND WASHINGTON DEPARTMENT OF ECOLOGY ON DECEMBER 30, 2019. FIELD SURVEY OF OHW FLAGS TOOK PLACE DEC. 30-31, 2019.

**S&F Land Services**

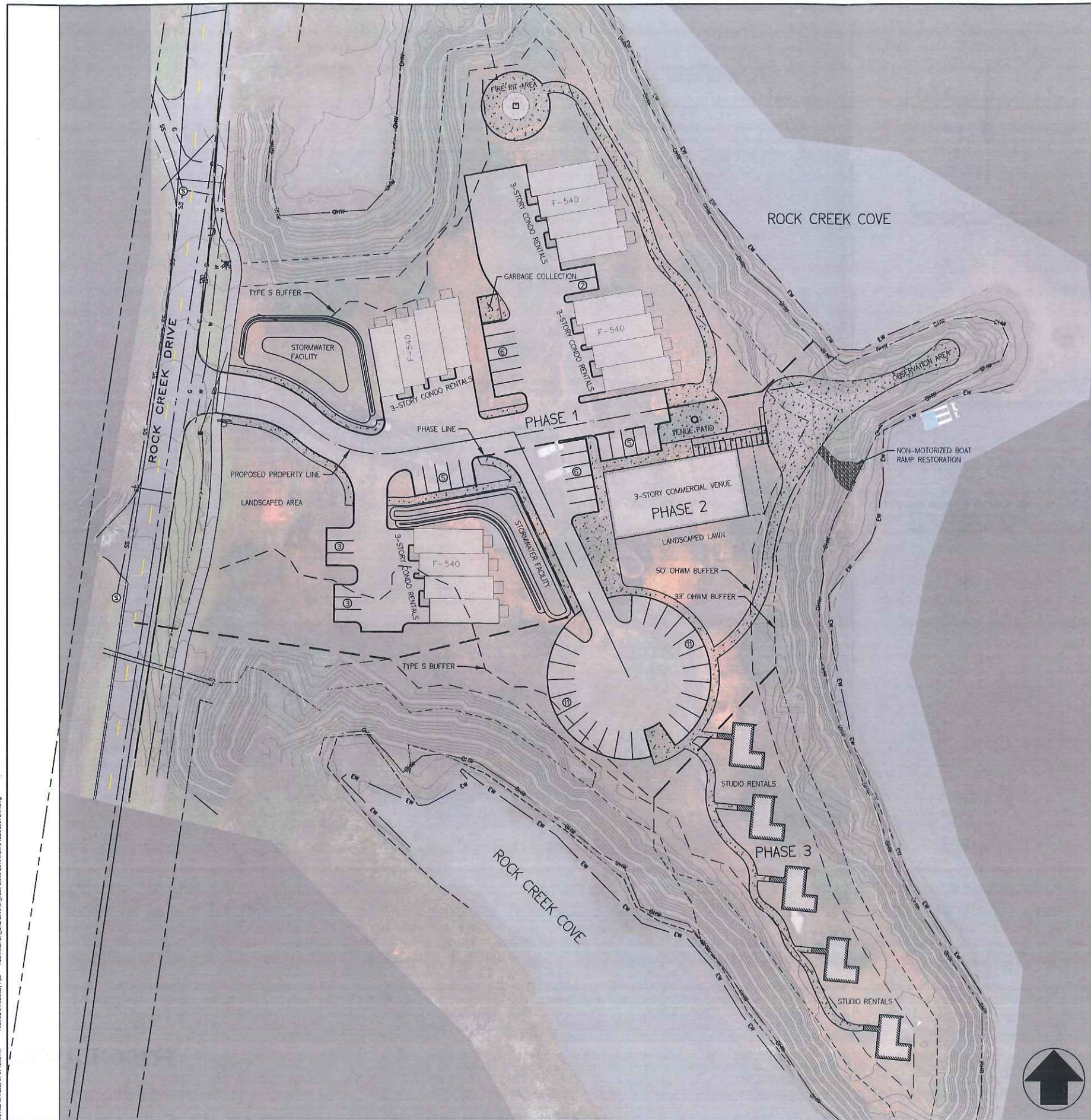
1725 N ROOSEVELT DR.  
STE B, SEASIDE, OR 97138  
(503) 738-3425

WWW.SFLANDS.COM	JOB NO.	FIELD	EMAIL: INFO@SFLANDS.COM
DATE	19-211-01	AS	DRAWN
JAN 3, 2020			DJT
			CHECKED
			CCS

1921101\_1 AND 1 OF 1  
ROCK CREEK COVE  
A PORTION OF TAX LOT 02-07-01-1300  
SECTION 1, TOWNSHIP 4 NORTH,  
RANGE 7 EAST, WILLAMETTE MERIDIAN,  
SKAMANIA COUNTY, WASHINGTON



PLOTTED ON: 2024-11-11 12:41 PM  
 PLOTTED BY: JENNIFER PINK  
 REFINAME: C:\LOAD DATA\2024\Rock Creek Cove\PLANS\C2.0 SITE PLAN.rvt



**PROJECT SUMMARY**

**PHASE 1**  
 16 3-BEDROOM CONDO UNITS OPERATED AS HOTEL  
 TOTAL 48 BEDROOMS  
 TOTAL 32,950 SF  
 PEDESTRIAN ACCESS TO NORTHERN PENINSULA  
 COVERED FIRE PIT  
 LANDSCAPE IMPROVEMENTS  
 STORMWATER FACILITIES CONSTRUCTION  
 MASS GRADING  
 TYPE S BUFFER OFF-SITE MITIGATION  
 BOUNDARY LINE ADJUSTMENT

**PHASE 2**  
 15,000 SQ FT COMMERCIAL VENUE SPACE  
 LANDSCAPE IMPROVEMENTS  
 OBSERVATION AREA AND BOAT RAMP RESTORATION AND  
 SAFETY IMPROVEMENTS

**PHASE 3**  
 5 STUDIO RENTALS  
 LANDSCAPE IMPROVEMENTS



ROCK CREEK COVE HOSPITALITY  
 MASTER PLAN  
 FDM DEVELOPMENT, INC.  
 STEVENSON, WA

ISSUE	DATE	PREPARED	DESCRIPTION

DESIGNED: Z. PYLE  
 SCALE  
 0' 40' 80'

SHEET TITLE  
**SITE PLAN**  
 SHEET  
**C2.0**



Receipt: 2282 02/07/2020  
Acct #: 1175 COPY  
City Of Stevenson  
7121 E. Loop Rd.  
PO Box 371  
Stevenson, WA 98648-0371  
(509) 427-5970

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Receipting Vendor

Planning Fees

SEPA2020-01 Pyle	200.00
SHOR2020-01 Pyle	1,000.00
CAP2020-01 Pyle	200.00
Non Taxed Amt:	<u>1,400.00</u>
Total:	1,400.00
Chk: 10005	<u>1,400.00</u>
Ttl Tendered:	1,400.00
Change:	0.00

Issued By: Mary C.  
02/07/2020 09:06:03



May 14, 2020

Project Name: Rock Creek Cove Hospitality

Re: Land Use Application Narrative

Dear Mr. Shumaker:

## PROJECT APPLICATION SUMMARY

FDM Development (the Applicant) is proud to present the Rock Creek Cove Hospitality project: a mixed-use hospitality development adjacent to Rock Creek Cove on the former Hegewald Lumber Mill Site in Stevenson, WA. The project seeks to complement the existing tourism industry in Stevenson by offering condo- and studio-sized units available for nightly and weekly rental, totaling 48 available bedrooms. A 15,000 square-foot commercial venue space will anchor the development and provide wide views of Rock Creek Cove and the Columbia River Gorge. The conceptual space planning of the commercial building consists of 5,000 open venue space, supported by 10,000 square feet of service, food preparation, and guest lounging area. The development seeks to attract both local and regional visitors, with venue space available for weddings, company parties, family reunions, and corporate retreats.

The Applicant proposes a three-phased development, beginning with the condo-style units, operated by a single ownership group, similar to a hotel. Phase 2 will add the commercial venue space and restore water-side portions of the property for enhanced, publicly-accessible observation and enjoyment. Phase 3 completes the development with the studio-sized units, operated under the same ownership group as the remainder of the property.

The project encompasses parcels 02070100130200, 02070100130300, and 02070100130400. The parcels make up 6.40 acres, all within the Commercial Recreation (CR) zoning designation. The following narrative addresses the proposed development within the context of the applicable City of Stevenson Municipal Code (SMC).

In addition to the Application Narrative, the Applicant has provided a preliminary site plan and several existing conditions studies to support the application.

## COMPLIANCE WITH SMC 17.25

### Commercial Recreation District Purpose

17.25.010: “Trade districts support development of a healthy, diversified economy and facilitate Stevenson to become the year-round recreation and tourist destination of the county and Central Gorge. The standards in this chapter are intended to enhance the vitality of the downtown core, improve our status as a tourist destination, and ensure that the local business community remains a healthy component of Stevenson's economy.”

17.25.020: “The commercial recreation district (CR) provides for the siting of facilities within Stevenson for the express purpose of expanding the tourism industry while adding to local citizens' opportunities for economic development. The establishment of the CR commercial recreation district is intended to enhance and diversify the business and tourism opportunities in Stevenson through development of commercial and other facilities that complement the natural and cultural attractions of the area without significant adverse effect to environmental features or to natural, cultural and historic resources and their settings.”

As noted in the project summary, this project fits squarely within the stated purpose of the Commercial Recreation Zone. The proposed development is a tourism-oriented destination that also provides added local benefits to the community in terms of water access, enjoyment, and venue operations. The project is located approximately 1 mile from the downtown core, which will allow for and encourage visitors to experience both downtown and the natural environment of Rock Creek Cove.

### Uses

Utilizing Table 17.25.040-1, the following uses have been reviewed for compliance with the CR zone:

Overnight Lodging (Hotel): **Permitted**

Food Service: **Permitted**

Arts, Entertainment, and Recreation Uses (Public Assembly): **Permitted**

The project proposes to provide overnight lodging, operated as a hotel via condo- and studio-sized units. Food service and public assembly will support and anchor the overnight lodging. As stated within the code, those uses are permitted outright.

Multi-family Dwelling: **Conditional** and subject to review according to the density and parking requirements of the R3 multi-family residential district (see below)

Overnight Lodging (Vacation Rental Home): **Conditional**

Additionally, the Applicant will also demonstrate compliance with the zoning should the ownership group decide, at a later date, to convert any of the units to vacation rental units or multi-family residential (see the Compliance with 17.23 below). The Applicant understands that at the time of land use change, an additional Application for Improvement will be required.

### Density and Dimensional Standards

Minimum Lot Area: 10,000 square feet

Maximum Lot Coverage: 35%

The project proposes a boundary line adjustment that will reduce the number of lots from three to two. The proposed lots are 99,400 square feet and 179,050 square feet, individually. Total coverage by building footprints is approximately 22,700 square feet in total, approximately 8% of total lot area. These requirements are met.

Maximum Building Height: 35 feet  
Front Setback: 25 feet  
Side, Street Setback: 20 feet  
Side, Interior: 0 feet  
Rear, Interior: 0 feet  
Rear, Through Lot: 20 feet

The maximum height of Phase 1 buildings is 35 feet. Since the commercial building is only conceptual at this time, the Applicant accepts this as a continued condition of approval. Minimum setback from the public roadway is approximately 100 feet. The minimum distance between adjacent buildings (or clusters, in the case of the multiroom units) is 30 feet. These requirements are met.

### **Commercial Recreation Trade District Design**

1. Buildings shall be appropriately scaled and compatible with their locations and surrounding environment, including adjacent buildings, landscaping, water bodies and other natural features.
2. Exterior building materials and finishes shall be compatible with the unique setting of the Columbia River Gorge. Preference should be given to nonglossy finishes and earthtone colors.

The proposed Phase 1 buildings are designed in the heavy timber craftsman style that complements existing design aesthetics in Stevenson. Phase 2 and 3 buildings will complement Phase 1 buildings, while moving to a slightly more modern aesthetic representative of the more commercial-specific use. Color tones and building materials will remain natural and nonglossy.

3. Outdoor storage shall be visually screened by landscaping, fences, walls or enclosures.
4. Refuse containers shall be fully enclosed and covered. Enclosures shall be constructed of materials compatible with the main structure.

Outdoor storage is not proposed for the site. A central garbage collection location will be screened with a masonry wall and a landscaped buffer around it.

5. Screening and buffering shall be provided between dissimilar uses to minimize negative impacts, such as those from noise, traffic, lighting and glare.
6. Screening and buffering shall be located along the perimeter of a lot or parcel.

The property's unique geography ensures that the development will not negatively impact adjacent parcels. Additionally, the minimum setback from road frontage is approximately 100 feet. Existing trees, a proposed berm around a stormwater pond, and ground covers will provide robust screening from the public roadway.



7. The location and number of access points to the site, their relationship to existing streets and traffic, the interior circulation patterns, and the separation between pedestrians and vehicles shall be designed to maximize safety and convenience.

8. Pedestrian sidewalks, pathways and access ways shall be located and constructed to minimize conflicts with vehicular traffic and natural hazards.

9. Safety crossings and adequate sight lines shall be provided at pathway intersections with roads.

The property's unique geometry minimizes options for public roadway access. However, within the parcel, pedestrian and vehicle circulation is clear and provides sufficient turnaround for emergency vehicles. Pedestrian pathways in the developed portion of the site will meet ADA requirements. Pedestrian crossings of driveways will be highlighted with painted striping. Lighting will be provided at both the pedestrian- and building-scale. Entryways, street lighting, and recreation areas will be lit to provide safe access throughout the development.

10. Roads, buildings and other structural improvements shall be located and designed to minimize grading and modification of existing landforms and natural characteristics.

11. Developments shall not contribute to the instability of a parcel or to adjoining lands.

The existing property is fairly flat and will be maintained as such. Additionally, setbacks required by the shoreline management plan and the geotechnical investigation report ensure that buildings will be located at a distance adequate to retain structural stability of the natural slopes.

12. Surface drainage systems shall be designed so as not to adversely affect neighboring properties, roads or water bodies.

Surface drainage is designed to capture and convey runoff from impervious surfaces to on-site stormwater facilities. These facilities will treat, detain, and discharge the runoff in accordance with the western Washington stormwater control regulations.

13. Developments within the designated shoreline areas of the CR district shall provide ample public visual and physical access to the water.

The development proposes restoring access to the shoreline area via sidewalks, viewing platforms, and a non-motorized boat launch.

## COMPLIANCE WITH 17.23 - R3 DESIGN STANDARDS

As stated above, the ownership group would like to maintain the option to convert any of the hotel units to vacation rental units or multi-family residential at a later date, dependent upon market conditions. The Applicant understands that at the time of land use change, an additional Application for Improvement will be required. However, the Applicant would like to demonstrate alignment with the R3 design standards at this time in order to avoid concerns with residential design standards down the road.

### **R3 District Purpose**

“To provide a corridor along Rock Creek Drive that would be aesthetically pleasing to residents and to visitors. To encourage attractive development along Rock Creek Drive that blends well with the existing topographic features and those structures of high quality in the area, such as the Rock Creek Center, Skamania Lodge and Columbia Gorge Interpretive Center.”

The project is located along the southern portion of Rock Creek Drive and provides patrons staying or living in the units to enjoy the nearby attractions. The units are designed in the heavy timber craftsman style that complements existing design aesthetics in Stevenson.

### **Natural Site Features, Site Grading, and Drainage**

The proposed development fully utilizes the extensive shoreline along the property, giving each cluster of units a unique view of Rock Creek Cove and the gorge. Site design prioritized saving large evergreen trees on-site where feasible. Mass grading is minimized, and shoreline features will be left intact.

### **Building Design, Finish, and Roofline Variation**

As mentioned above, the units are designed to reflect a heavy timber craftsman style, appropriate for the Rock Creek Cove subarea and Stevenson as a whole. The minimum distance between each cluster of units is 30 feet, approximately 45% of the combined building height and within 5% of building design guidelines. Site constraints from required shoreline and slope setbacks limit further separation of the closest clusters.

Proposed roofline variations conform to code design guidelines by inserting non-structural decorative heavy-timber frames and regular intervals along the building roofline.

### **On-Site Open Space and Landscape Requirements**

Each unit contains a second-floor balcony space. Additionally, open space and walking paths, although within shoreline buffer locations, provide well over 4,000 square feet of open space required for 16 units. The minimum setback from road frontage is approximately 100 feet. Existing trees, a proposed berm around a stormwater pond, and ground covers will provide robust screening from the public roadway.

### **Parking and Loading Requirements**

Residential structures: two spaces per dwelling unit plus one space for each room rented, except that one-bedroom dwelling units only require one space.

Each unit is provided two parking spaces, compliant with both residential structure standards, should the use be changed from hotel-operated use to privately-owned condos or vacation rentals.

### **Pedestrian Pathway, Outdoor Storage, and Lighting**

Pedestrian pathways in the developed portion of the site will meet ADA requirements. Pedestrian crossings of driveways will be highlighted with painted striping.

Garbage collection is located within the development and will be screened from both the public roadway and the on-site points of interest by a masonry wall and landscaping.

Lighting will be provided at both the pedestrian- and building-scale. Entryways, street lighting, and recreation areas will be lit to provide safe access throughout the development.

Sincerely,  
FDM Development, Inc.

Zachary Pyle, PE  
Project Engineer, Development Manager

Attachments:

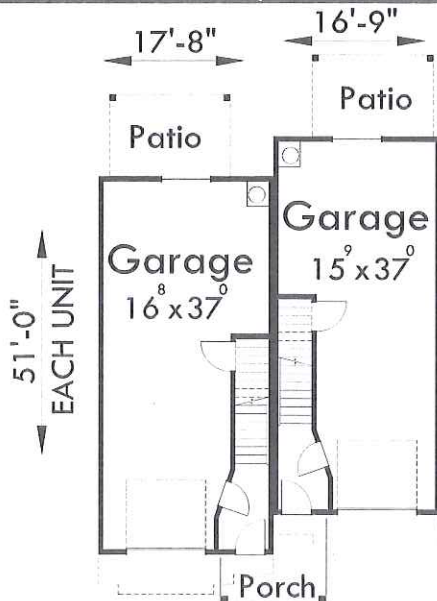
1. Existing Conditions Plan
2. Preliminary Site Plan
3. Conceptual Phase 1 Building Elevations
4. Geotechnical Investigation
5. Cultural Resources Study
6. Preliminary Critical Areas Assessment



# Plan #F-540

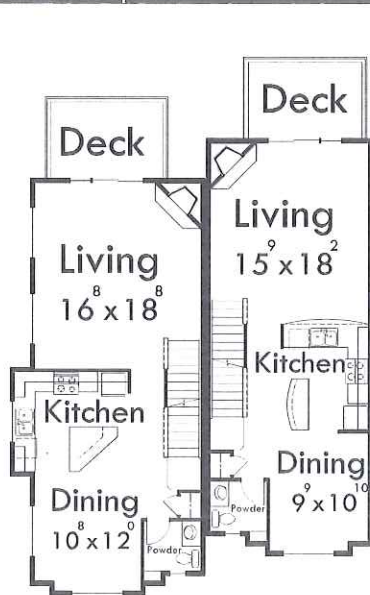


<b>END UNITS</b>		<b>MIDDLE UNITS</b>	
FIRST FLR.	54 sq. ft.	FIRST FLR.	54 sq. ft.
SECOND FLR.	752 sq. ft.	SECOND FLR.	692 sq. ft.
THIRD FLR.	715 sq. ft.	THIRD FLR.	651 sq. ft.
TOTAL	1521 sq. ft.	TOTAL	1397 sq. ft.
GARAGE	618 sq. ft.	GARAGE	583 sq. ft.



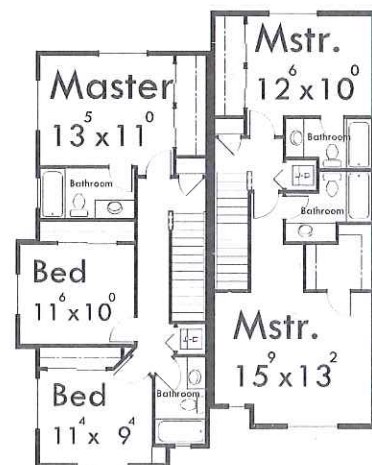
END UNITS MIDDLE UNITS

First floor



END UNITS MIDDLE UNITS

Second floor



END UNITS MIDDLE UNITS

Third floor

www.houseplans.pro by Bruinier & associates, inc. building designers ©  
 1304 SW Bertha Blvd. Portland, Oregon 97219 (503-246-3022)



## **GEOTECHNICAL SITE INVESTIGATION REPORT**

### **PROPOSED ROCK CREEK COVE DEVELOPMENT**

**PARCEL # 02070100130200, 02070100130300 & 02070100130400**

**ROCK CREEK DRIVE, STEVENSON, WASHINGTON**

**GNN PROJECT NO. 219-1183**

**JANUARY 2020**

*Prepared for*

**FDM DEVELOPMENT INC.  
5101 NE 82ND AVENUE, SUITE 200  
VANCOUVER, WA 98662**



*Prepared by*

**GN NORTHERN, INC.  
CONSULTING GEOTECHNICAL ENGINEERS  
YAKIMA, WASHINGTON  
(509) 248-9798 / (541) 387-3387**

*Common Sense Approach to Earth and Engineering  
Since 1995*



*At GN Northern our mission is to serve our clients in the most efficient, cost effective way using the best resources and tools available while maintaining professionalism on every level. Our philosophy is to satisfy our clients through hard work, dedication and extraordinary efforts from all of our valued employees working as an extension of the design and construction team.*



January 13, 2020

FDM Development Inc.  
5101 NE 82nd Ave, Suite 200  
Vancouver, WA 98662

Attn: Zachary Pyle, PE, Development Manager

CC: F. Dean Maldonado, Principal

**Subject: Geotechnical Site Investigation Report  
Proposed Rock Creek Cove Development  
Parcel # 02070100130200, 02070100130300 & 02070100130400  
Rock Creek Drive, Stevenson, Washington**

**GNN Project No. 219-1183**

Gentlemen,

As requested, GN Northern (GNN) has completed a geotechnical site investigation for the proposed Rock Creek Cove vacation homes project to be constructed at the vacant site located on Rock Creek Drive, east of the intersection with Attwell Road, in the City of Stevenson, Washington.


Based on the findings of our subsurface study, we conclude that the site is suitable for the proposed construction provided that our geotechnical recommendations presented in this report are followed during the design and construction phases of the project.

This report describes in detail the results of our investigation, summarizes our findings and presents our recommendations concerning earthwork and the design and construction of foundation for the proposed project. It is important that GN Northern provide consultation during the design phase as well as field compaction testing and geotechnical monitoring services during the earthwork phase to ensure implementation of the geotechnical recommendations.

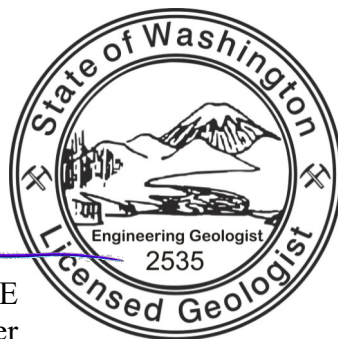
If you have any questions regarding this report, please contact us at 509-248-9798 or 541-387-3387.

Respectfully submitted,


**GN Northern, Inc.**



Karl A. Harmon, LEG, PE  
Senior Geologist/Engineer

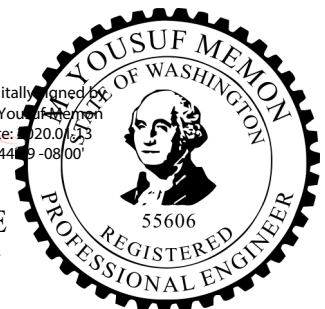


Karl A. Harmon



M. Yousuf Memon, PE  
Geotechnical Engineer

Digitally signed by  
M. Yousuf Memon  
Date: 2020.01.13  
14:44:09 -0800



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- APPENDIX I – VICINITY MAP (FIGURE 1), SITE EXPLORATION MAP (FIGURE 2), CRITICAL AREAS MAP (FIGURE 3)
- APPENDIX II – EXPLORATORY TEST-PIT LOGS, KEY CHART (FOR SOIL CLASSIFICATION)
- APPENDIX III – LABORATORY TESTING RESULTS
- APPENDIX IV – SITE & EXPLORATION PHOTOGRAPHS
- APPENDIX V – HISTORIC AERIAL PHOTOGRAPHS
- APPENDIX VI – SLOPE STABILITY ANALYSIS
- APPENDIX VII – NRCS SOIL SURVEY

## 1.0 PURPOSE AND SCOPE OF SERVICES

This report has been prepared for the proposed Rock Creek Cove vacation homes project to be constructed at the vacant site located on Rock Creek Drive, east of the intersection with Attwell Road, in the City of Stevenson, Washington; site location is shown on the *Vicinity Map* (Figure 1, Appendix I). Our investigation was conducted to collect information regarding subsurface conditions and present recommendations for suitability of the subsurface materials to support the proposed building structures and allowable bearing capacity for the proposed construction.

GN Northern, Inc. has prepared this report for use by the client and their design consultants in the design of the proposed development. Do not use or rely upon this report for other locations or purposes without the written consent of GN Northern, Inc.

Our study was conducted in general accordance with our *Proposal for Geotechnical Engineering Services* dated October 29, 2019. Notice to proceed was provided in the form of a signed/authorized copy of our proposal via email on November 19, 2019.

A conceptual site plan (*Concept D*, prepared by FDM Development, dated 10/28/2019), along with a topographic survey of the project site (Lots 2, 3, and 4 of Rock Creek Cove, prepared by S&F Land Services, dated 12/11/2019), were provided by Mr. Pyle via email on December 17, 2019. Field exploration, consisting of twelve (12) test-pits and one (1) infiltration test, was completed on December 23, 2019. Locations of the exploratory test-pits and infiltration test are shown on the *Site Exploration Map* (Figure 2, Appendix I), and detailed test-pit logs are presented in Appendix II.

This report has been prepared to summarize the data obtained during this study and to present our recommendations based on the proposed construction and the subsurface conditions encountered at the site. Results of the field exploration were analyzed to develop recommendations for site development, earthwork, pavements, and foundation bearing capacity. Design parameters and a discussion of the geotechnical engineering considerations related to construction are included in this report.



## 2.0 PROPOSED CONSTRUCTION

Based on the preliminary information presented on the conceptual site plan and communication with your office, we understand that the proposed development will likely include approximately 15 to 25 structures. The various vacation rental structures are anticipated to consist of 6 to 8 single-room studio units along with 8 to 16 multi-story 3-bedroom units. Based on the current site layout, the studio units are planned across the southern finger, while the multi-story units are planned across the northern and western portions of the site. Proposed development will also include a 3-story central building with upstairs suite, central floor reception area, and lower floor kitchen and bar. Site development will also include associated infrastructure elements consisting of underground utilities, stormwater facilities, parking areas, and drive lanes. While the current site plan calls for a proposed wedding chapel/shelter on the eastern finger, we understand that development across this portion of the site may not be permitted.

Structural loading information was not available at the time of this report. Based on our experience with similar projects, we expect maximum wall loads to be on the order of 2,500 plf and maximum column loads to be less than 80 kips. It shall be noted that assumed loading is based on limited preliminary information provided at the time of this report. If loading conditions differ from those described herein, GNN should be given an opportunity to perform re-analysis. Settlement tolerances for structures are assumed to be limited to 1 inch, with differential settlement limited to ½ inch.

## 3.0 FIELD EXPLORATION & LABORATORY TESTING

The field exploration was completed on December 23, 2019. A local public utility clearance was obtained prior to the field exploration. Twelve (12) exploratory test-pits were completed at various locations within the footprint of the proposed development. Test-pits were excavated by Riley Materials using a Link-Belt 145x4 excavator to depths of approximately 8 to 14.5 feet below existing ground surface (BGS) and logged by a GNN field geologist/engineer. Additionally, an infiltration test was performed on the north side of the entrance driveway. Upon completion, all excavations were loosely backfilled with excavation spoils. Test-hole locations are shown on *Site Exploration Map* (Figure 2)

The soils observed during our field exploration were classified according to the Unified Soil Classification System (USCS), utilizing the field classification procedures as outlined in ASTM D2488. A copy of the USCS Classification Chart is included in Appendix II. Photographs of the site and exploration are presented in Appendix IV. Depths referred to in this report are relative to the existing ground surface elevation at the time of our investigation. The surface and subsurface conditions described in this report are as observed at the time of our field investigation.

Representative samples of the subsurface soils obtained from the field exploration were selected for testing to determine the index properties of the soils in general accordance with ASTM procedures. The following laboratory tests were performed:

**Table 1: Laboratory Tests Performed**

Test	To determine
Particle Size Distribution (ASTM D6913)	Soil classification based on proportion of sand, silt, and clay-sized particles
Natural Moisture Content (ASTM D2216)	Soil moisture content indicative of in-situ condition at the time samples were taken

Results of the laboratory test are included on the test-pit logs and are also presented in graphic form in Appendix III attached to the end of the report.

#### 4.0 SITE CONDITIONS

The project site is located east of the intersection of Rock Creek Drive and Attwell Road, approximately ½-mile north of State Highway 14, in the City of Stevenson, Washington. The 6.4-acre project site is currently comprised of three separate parcels identified by the Skamania County Assessor as Parcel Numbers: 020701001302000 (Lot 2), 020701001303000 (Lot 3), and 020701001304000 (Lot 4) located within the SW ¼ of the NW ¼ of Section 1, Township 2 North and Range 7 East, Willamette Meridian.

The subject site is generally characterized as an irregular shaped peninsula with several fingers extending east from Rock Creek Drive into Rock Cove. The majority of the upper surface of the site is relatively flat, while the irregular shaped peninsula fingers typically include steep slopes along the perimeter down to the shoreline. Surface conditions across the site include a variety of gravel covered and paved areas (asphalt and concrete), as well as areas with a dense growth of mature trees and vegetation, with selected areas across slope faces that include a veneer of angular

rock (apparent rip-rap). Recently placed stockpiles of apparent landscape clippings are present across an area located south of the existing entrance driveway.

Surface topography across the subject site has been historically altered by previous grading activity related to the preexisting use. The upper historically graded portions of the site are relatively flat at elevations ranging from approximately 95' to 101' across a majority of the site. Site grades step down towards that eastern finger with surface elevations ranging from approximately 87' to 90'. The surrounding edges of the various peninsula fingers typically include relatively steep slopes, with gradients as steep as 1H:1V, from the upper flat portions descending down to the shoreline.

The history of past use and development of the property was not investigated as part of our scope of services for this geotechnical site investigation. Based on our cursory review of available historic aerial photos (Appendix V) and topographic maps, along with a previously completed phase II environmental site assessment (Maul Foster Alongi, 2017), the site is known to have been historically developed with an industrial lumber mill facility. Scattered buried remnants related to the noted previous development and operations at the site including concrete foundation and slabs, miscellaneous utilities, trash and debris should be anticipated. Additionally, the eastern finger extending into Rock Cove appears to have been created by historic filling of the area between the main portion of the site and a preexisting island toward the eastern tip. The 1935 aerial photograph taken prior to historic site development of the site shows the site vicinity at the time when the Rock Cove had not been flooded by construction of the Bonneville Dam.

## **5.0 SITE & REGIONAL GEOLOGY**

The City of Stevenson and Skamania County are located in the South Cascades physiographic province that extends from the Columbia River to the south to Interstate 90 to the north, and is dominated by three massive stratovolcanoes. The current day volcanoes are the most recent installments of a 40-million-year-old volcanic complex called the Cascades Volcanic Arc. The bedrock geology of the western Columbia Gorge is dominated by Oligocene to early Miocene volcanoclastic rocks and minor interbedded lava flows of the ancestral Cascade Volcanic Arc. At many locations, the ancestral arc rocks are unconformably overlain by lava flows of the middle Miocene Columbia River Basalt Group, late Miocene to Pliocene fluvial deposits, or Quaternary olivine-phyric mafic lavas (Pierson et al., 2016).



The western part of the Columbia River Gorge is characterized by massive landslides on the Washington side, and the instability of these land masses is associated with abundant rainfall, high relief, composition and structure of the underlying rocks, tectonic uplift associated with the structural evolution of the Cascade Range and Yakima Fold Belt, and valley-side erosion by the incising Columbia River, which flows across the uplifting terrains (Pierson et al., 2016). The Cascade landslide complex is one such landslide feature that spans from the town of North Bonneville to the western portion of Stevenson. The Cascade landslide complex is subdivided into four individual landslides: the Carpenters Lake, Bonneville, and Red Bluffs landslides, as well as a reactivated part of the Red Bluffs landslide body known as the Crescent Lake landslide. Immediately east of the Cascade landslide complex is the newly recognized Stevenson landslide which is occupied by the City of Stevenson.

The project site is located near the eastern toe of the Red Bluffs landslide, approximately 1-mile east of the reactivated Crescent Lake landslide. The head scarp of the Red Bluffs landslide is located approximately 3½ miles northwest of the site. Surface geology at the site is mapped as Quaternary landslide deposits [Qls] of the Red Bluffs landslide (mass wasting deposits), consisting of poorly sorted blocks, boulders, gravels, and fines sediments produced by the gravitational failure and rotational-translational slide of bedrock and/or unconsolidated sediments above the bedrock (Korosec, 1987).

## **6.0 SUBSURFACE CONDITIONS**

Based on the findings of our field exploration, subsurface soils at the project site include a variably-thick layer of artificial fill soils likely associated with historic site development, atop the native silty gravel with sand stratum (mass wasting deposits). The undocumented artificial fill soils were noted to depths of approximately 3 to 8 feet across the upper portion of the site. Test-pit TP-9 excavated on the lower eastern finger encountered fill to the full depth of exploration (~8 feet) that is believed to represent historic fill placed to create new land. Fill soils were generally classified as silty gravel with sand and variable amounts of cobbles and boulders, and with some areas also including organics, wood debris and miscellaneous trash. The fill soils at the site are likely to be related to the previous historic development at the site. The apparent native underlying soils were classified as Silty Gravel with Sand (GM) and included varying amounts of cobbles and boulders. The native soil stratum typically appeared medium dense. Due to similar soil condition between

the upper fills and the underlying native stratum, the fill/native transition was typically ambiguous and therefore not clearly discernable within the test-pits. Test-pit logs in Appendix II show detailed descriptions and stratification of the soils encountered.

### **6.1 NRCS Soil Survey**

Although altered at the surface, the soil survey map of the site prepared by the Natural Resources Conservation Service (NRCS) identifies the site soils as *Arents* with typical profile described as *gravelly sandy loam* grading to *extremely gravelly sandy loam*. Based on the NRCS map (Appendix VII), these units generally consist of *well drained* materials.

### **6.2 Groundwater**

Groundwater was encountered within two of the exploratory test-pits at depths ranging from approximately 12 to 14 feet BGS at the time of our exploration in late December. Approximate correlating groundwater elevations ranged from approximately 83' in TP-3 in the western portion, down to 78' in TP-8 near the eastern portion. A review of the Washington Department of Ecology's online water well log database revealed a lack of nearby water wells in the site vicinity. Water levels within the adjacent Rock Cove portion of the Columbia River, controlled by the down-river Bonneville Dam, are typically noted at an elevation approximately 20 to 25 feet below the upper leveled-off site elevation. Therefore, we believe groundwater at the site is not directly affected by pool elevations in the Columbia River, and is likely controlled by the complex hydrogeological conditions of the up-gradient mass-wasting landslide deposits, as well as regional precipitation and snowmelt. Groundwater levels will fluctuate with irrigation, precipitation, drainage, and regional pumping from wells.

## **7.0 SOIL INFILTRATION TESTING**

A single infiltration test was performed on the north side of the existing entrance drive at a depth of approximately 5.5 feet BGS using a small-scale Pilot Infiltration Test (PIT). To the degree possible, care was exercised during excavation to attempt to maintain relatively uniform side walls, and the resulting size and geometry of the finished test-pit was carefully recorded in the field. Water was introduced into the test-pit using a garden hose connected to a nearby fire hydrant. The water flow into the test-pit was continued until the soils with the test-pit were saturated and a

constant flow rate was established. The stabilized inflow rate was measured and recorded, and the resulting un-factored infiltration rates are presented in the table below:

**Table 2: Infiltration Test Results**

Test ID	Approximate Location (GPS Coordinates)	Soil Tested	Field Infiltration Rate
P-1	45°41'20.69"N, 121°53'56.06"W	Silty Gravel	<b>4 inches/hour</b>

The infiltration rate presented herein represents the un-factored field soil infiltration rate. An appropriate factor of safety should be applied to the field infiltration rate to determine long-term design infiltration rate. Determination of safety factors for long-term design infiltration should consider the following: pretreatment, potential for bio-fouling, system maintainability, horizontal and vertical variability of soils, and type of infiltration testing. Typical factors of safety for these soils generally range from 2 to 3. If stormwater management facilities are selected at other locations, additional site-specific infiltration testing shall be performed.

## **8.0 GEOLOGIC HAZARDS**

Potential geologic hazards that may affect the proposed development include: [i] landslides & slope instability, [ii] seismic hazards (ground shaking, surface fault rupture, soil liquefaction, and other secondary earthquake-related hazards), and [iii] flooding & erosion. The perimeter/shoreline edges of the subject property are generally all mapped by the City of Stevenson’s Critical Areas & Geologic Hazards Map as ‘Potentially Unstable Slope’ which refers to an area with slopes of 25% or greater per Stevenson Municipal Code (SMC), Chapter 18.13, Section 18.13.090, Critical Area - Geologically Hazardous Areas. A discussion follows on the specific hazards to this site:

### **8.1 Landslides**

As discussed above in Section 5.0, the project site lies within the Cascade landslide complex that is subdivided into four individual landslides (Carpenters Lake, Bonneville, Red Bluffs, & Crescent Lake landslide). The Bonneville landslide has been dated to have occurred from 1416-1452 A.D. by a combination of dating methods. The Red Bluffs landslide has crosscutting morphologic features suggesting a younger age than that of the Bonneville landslide, with an age range of 1760-1770 A.D. The Crescent Lake landslide has reactivated within the last few decades and currently is moving downslope at an average rate of 11–18 cm/year and possibly as fast as 25 cm/year (Pierson et al., 2016). Results of another recent study (Hu et al., 2015) showed that the central upper part of



the Crescent Lake landslide moved a total of 700 mm downslope during a 4-year observation period from 2007 to 2011, and that the movement was seasonal and showed a strong correlation with winter precipitation. In contrast to the Crescent Lake landslide, coherent parts of Red Bluffs, Bonneville and Stevenson landslides were observed to remain stable during the observation period.

Although considered a recent landslide (< 1,000 years old), the Red Bluffs landslide is not considered an active landslide (movement in last 20 years). Based on Table 18.13.090-1, Landslide Hazard Classification, of the Stevenson Municipal Code (SMC), the landslide hazard for the site classifies as ‘Moderate Hazard’.

### ***8.2 Regional Faulting & Surface Fault Rupture***

The nearest regional faulting with Quaternary displacement (< 130,000 years) consists of the faults near The Dalles located approximately 12 miles east of the project site (Czajkowski, 2014). Published slip rates for these faults are listed at less than 0.2 mm/year. For the purposes of this report, an active fault is defined as a fault that has had displacement within the Holocene epoch or last 11,700 years. Due to the lack of any known active fault traces in the immediate site vicinity, surface fault rupture is unlikely to occur at the subject property. While future fault rupture could occur at other locations, rupture would most likely occur along previously established fault traces.

### ***8.3 Earthquakes & Seismic Conditions***

Earthquakes caused by movements along crustal faults, generally in the upper 10 to 15 miles, occur on the crust of the North America tectonic plate when built-up stresses near the surface are released. The two largest crustal earthquakes felt in the state of Washington included the 1872, M 6.8 quake near Lake Chelan and the 1936, M 6.0 Walla Walla earthquake. Noteworthy to the City of Stevenson, the Mount Saint Helens Seismic Zone is located approximately 30 miles towards the north-northwest. The following list provides information gathered from the online USGS database regarding historic earthquakes ( $\geq 4.0$  M) within the past 50 years for epicenters within 100 kilometers of project site, sorted by magnitude (largest to smallest):

**Table 3: Earthquakes within 100-kilometers of project site**

<b>Date(s) of Event</b>	<b>Magnitude(s)</b>	<b>Nearby Faults / Seismic Zone</b>	<b>Approx. Distance from Site (miles)</b>
March to May, 1980	4.0 - 5.7	Mt. Saint Helens Seismic Zone	33 – 47
March 25, 1993	5.6	Mt. Angel Fault Zone	57
February 14, 1981	5.2	Mt. Saint Helens Seismic Zone	48

May 13, 1981	4.5	Mt. Saint Helens Seismic Zone	50
June 29, 2002	4.5	Faults near The Dalles	26
March 1, 1982	4.4	Mt. Saint Helens Seismic Zone	48
February 14, 2011	4.3	Mt. Saint Helens Seismic Zone	44
July 14, 2008	4.2	<i>Unknown</i>	60
December 13, 1974	4.1	Faults near The Dalles	33
February 2, 1981	4.0	Toppenish Ridge Fault Zone	59

Based on seismic scenarios published by the Washington State Department of Natural Resources (DNR), M 7.0 Mount Saint Helens and M 7.1 Mill Creek earthquake events would result in a shaking intensity of ‘V’ (moderate shaking) on the Modified Mercalli Intensity (MMI) scale. We further used the USGS deaggregation tool which provides the relative contributions of hazard for each seismic source based on Probabilistic Seismic Hazard Analysis (PSHA). Based on the deaggregation, it appears that about 23% of the contribution to the probabilistic hazard at the site comes from the Cascadia Subduction Zone, with the remaining contribution primarily from the shallower sources.

#### ***8.4 Soil Liquefaction***

Liquefaction is the loss of soil strength from sudden shock (usually earthquake shaking), causing the soil to become a fluid mass. In general, for the effects of liquefaction to be manifested at the surface, groundwater levels must be within 50 feet of the ground surface and the soils within the saturated zone must also be susceptible to liquefaction. Based on the published Liquefaction Susceptibility Map of Skamania County, Washington (Palmer et al., 2004a), the site is mapped with a ‘low to moderate’ relative susceptibility for seismically-induced liquefaction to occur. A detailed assessment of the liquefaction potential at the site, including liquefaction-induced settlement and the effects of lateral spreading, is beyond the scope of this investigation.

#### ***8.5 Secondary Seismic Hazards***

Additional secondary seismic hazards related to ground shaking include ground subsidence, tsunamis, and seiches. The site is far inland, so the hazard from tsunamis is non-existent. The potential hazard of seiches from a significant seismic event is relatively low for development on the upper portion of the project site that is elevated approximately 20 to 25 feet above Rock Cove.

### **8.6 Site Slopes**

Surface topography across the subject site has been historically altered by previous grading activity related to the preexisting lumber mill facility. The upper historically graded portions of the site are relatively flat at elevations ranging from approximately 95' to 101'. The surrounding edges of the various peninsula fingers typically include relatively steep slopes, with gradients as great as 1H:1V, from the upper flat portions descending down to the shoreline. A field reconnaissance of the subject property was performed to observe site conditions and look for common geomorphic features of landslides as well as indications of possible signs demonstrating recent activity and instability of slide masses. While several areas across the site include a relatively dense cover of vegetation, no apparent indications of recent failures or significant slope instability were observed. Section 9.0 presents results of a preliminary slope stability analysis completed at the site and Section 12.0 provides recommendations for appropriate structure setbacks.

### **8.7 Flooding and Erosion**

The subject property is mapped by Federal Emergency Management Agency (FEMA) as Zone 'C' which translates to areas of minimal flooding. Portions of the subject property are however situated in areas where sheet flow and erosion may occur. Soil erodibility is only one of several factors affecting the erosion susceptibility. Soil erosion by water also increases with the length and steepness of the site slopes due to the increased velocity of runoff and resulting greater degree of scour and sediment transport. The need for and design of erosion protection measures is within the purview of the design Civil Engineer. Appropriate erosion and sediment control plan(s) and a drainage plan shall be prepared by the project civil engineer with the final construction drawings. Erosion should be mitigated with appropriate BMPs consisting of proper drainage design including collecting and disposal (conveyance) of water to approved points of discharge in a non-erosive manner. Appropriate project design, construction, and maintenance will be necessary to mitigate the site erosion hazards.

## **9.0 SLOPE STABILITY ANALYSIS**

A preliminary slope stability analysis was conducted for a critical slope section across the southern finger as shown on Figure 2. The analysis was conducted using a generalized geologic cross-section model developed from the existing site topography and data obtained from our subsurface exploration. An output of our slope stability analysis is attached in Appendix VI.



The slope stability analysis was conducted by a two-dimensional limit equilibrium stability analysis of selected trial failure surfaces using the computer program *SLIDE (Version 7)*. Potential circular-arc failure surfaces were evaluated using the Spencer method under static conditions. The computer program searched for critical potential failure surfaces with low computed factors of safety. The computed factor of safety (FS) against slope failure is simply the ratio of total resisting forces or moments (strength of the slope) to the total driving forces or moments for planar or circular failure surfaces respectively. A slope with a factor of safety of 1.0 is in equilibrium, indicating that the disturbing forces driving the slope down are equal to its strength to resist failure. Simply put slope-failure result when the strength of the slope is overcome by gravity.

The selection of unit weight and shear strength parameters for the various earth materials were based on judgment and data obtained during our field investigation, laboratory testing, review of previous studies, research and previous experience with similar materials in similar geotechnical and geologic settings. Engineering and geologic judgment must be applied to the estimated shear strength parameters in order to consider lateral and vertical variations in the subsurface conditions, such as degree of cementation, fracturing, planes of weakness, and gradational characteristics. The following geotechnical strength parameters were used in our stability calculations:

**Table 4: Estimated Strength Parameters**

Material	Shear Strength Parameters		Unit Weight (pcf)
	Friction Angle: $\phi$	Cohesion: c (psf)	
Fill/Disturbed Soil	33	25	120
Native Silty Gravel w/ Sand	35	50	130 (moist)
			138 (saturated)

GN Northern recommends that any existing or reconfigured slopes should meet or be designed and constructed to meet a minimum factor of safety of 1.5 for the static condition and 1.1 under seismic loading. Based on the results of our slope stability analysis, we conclude that the steep perimeter slopes do not meet minimum recommended safety factors. Consequently, the currently proposed layout with future structures sited at/over the edge of slopes is generally considered unfeasible, and remedial grading and/or other appropriate mitigation measures will be required to increase slope safety factors and provide adequate subgrade support for the proposed structures.

In lieu of appropriate remediation of the slope stability concerns, in order to provide sufficient vertical and lateral support for the proposed foundations without significant risk of detrimental settlement, appropriate increased setbacks/embedment for the new building foundations should be maintained. It should be understood however that while the proposed structures may not be at significant risk from slope instability, the existing slopes will remain at risk for some future failure if not appropriately remediated.

### 10.0 SEISMIC DESIGN PARAMETERS

Based on subsurface data obtained during or field exploration, along with our review of the published NEHRP Site Class Map of Skamania County, Washington (Palmer et al., 2004b), a site class ‘D’ as defined by 2015 International Building Code (IBC) is applicable. According to Mapped Spectral Acceleration obtained from the USGS Seismic Design Maps using the 2015 IBC, the following site-specific design values may be used:

**Table 5: IBC Design Response Spectra Parameters**

Seismic Design Parameter	Value (unit)
$S_s$	0.657 (g)
$S_1$	0.292 (g)
$F_a$	1.274 (unitless)
$F_v$	1.816 (unitless)
$SM_s$	0.837 (g)
$SM_1$	0.530 (g)
$SD_s$	0.558 (g)
$SD_1$	0.354 (g)

$S_s$  = MCE spectral response acceleration at short periods  
 $S_1$  = MCE spectral response acceleration at 1-second period  
 $F_a$  = Site coefficient for short periods  
 $F_v$  = Site coefficient for 1-second period  
 $SM_s$  = MCE spectral response acceleration at short periods as adjusted for site effects  
 $SM_1$  = MCE spectral response acceleration at 1-second period as adjusted for site effects  
 $SD_s$  = Design spectral response acceleration at short periods  
 $SD_1$  = Design spectral response acceleration at 1-second period

It shall be noted that determination of an appropriate site class requires shear wave velocity, soil undrained shear strength, or standard penetration resistance (N-value) data in the upper 100 feet of the subsurface profile, which was beyond the scope of this investigation.

## 11.0 SUMMARY OF FINDINGS & CONCLUSIONS

Conditions imposed by the proposed development have been evaluated on the basis of assumed elevations and engineering characteristics of the subsurface materials encountered in the exploratory test-pits, and their anticipated behavior both during and after construction. The following is a summary of our findings, conclusions and professional opinions based on the data obtained from a review of selected technical literature and the site evaluation.

- Based on the findings of this geotechnical evaluation and our understanding of the proposed development, from a geotechnical perspective, it is our opinion that the site is suitable for the proposed development, provided the soil design parameters and site-specific recommendations in this report are followed in the design and construction of the project.
- Final design plans for the proposed development, including grading, drainage and finished elevations, were not provided at the time of this report. Once the plans are finalized, GNN **must** be provided an opportunity to review final design plans to provide revised recommendations if/as necessary.
- Site soils include a variably-thick layer of artificial fill soils believed to be related to historic site development, atop the native silty gravels with sand. The undocumented artificial fill soils, largely made-up of similar soils that were apparently derived from onsite and/or near sources, extend to depths ranging from 3 to 8 feet and include some areas with miscellaneous trash and debris. Our estimation of the depth of fill materials is based on selected, localized points of exploration, and cannot quantify the full extent of the onsite fill. Additional undocumented fill soils with trash/debris, buried within the subsurface profile, may extend to greater depths at isolated locations across the site.
- Groundwater was encountered within the two of our test-pits at depths ranging from approximately 12 to 14 feet BGS at the time of our exploration in late December. Approximate correlating groundwater elevations ranged from approximately 83' in TP-3 in the western portion, down to 78' in TP-8 near the eastern portion. We believe groundwater at the site is not directly affected by pool elevations in the Columbia River, and is likely controlled by the complex hydrogeological conditions of the up-gradient mass-wasting landslide deposits, as well as regional precipitation and snowmelt.



- The onsite silty gravel soils, screened and processed to be free of oversize rocks (>5 inches) and any deleterious materials including trash and debris, are generally suitable for reuse as engineered fill and utility trench backfill.
- The proposed building structures may be supported on conventional shallow foundations bearing on a layer of crushed rock atop the recompacted native subgrade in accordance with the recommendations of this report. However, due to presence of artificial fill soils across future building footprints, over-excavation of the existing fill soils to a competent native stratum and replacement with engineered fill will be required.
- Due to ecological constraints, it appears that remedial grading of the onsite slopes to improve long-term stability is not considered feasible. Therefore, deeper embedment of the building foundations will be required in order to meet the minimum setback requirements while ignoring the stability of the onsite slopes.
- Appropriate slope setbacks for future structures should be incorporated in the final planning and design of the project. Slopes setbacks shall adhere to IBC 2015 Section 1808.7 *Foundations on or Adjacent to Slopes*, as well as the recommendations of this report.
- Site grading shall incorporate the requirements of IBC 2015, Appendix J *Grading*.
- Upon completion, all test-pit excavations were loosely backfilled with excavation spoils. The contractor is responsible to locate the test-pits to re-excavate the loose soils and re-place as compacted engineered fill.
- The underlying geologic condition for seismic design is site class 'D'. The *minimum* seismic design should comply with the 2015 International Building Code (IBC) and ASCE 07-10, *Minimum Design Loads for Buildings and Other Structures*.
- The near-surface site soils are susceptible to wind and water erosion when exposed during grading operations. Preventative measures and appropriate BMPs to control runoff and reduce erosion should be incorporated into site grading plans.
- Based on our evaluation, the risk for liquefaction at the project site is considered low to moderate. A site-specific liquefaction analysis to assess the risk of soil liquefaction and liquefaction-induced settlement was beyond the scope of this geotechnical evaluation and would require additional exploration including a 50-foot deep boring with continuous penetration testing.

## 12.0 GEOTECHNICAL RECOMMENDATIONS

The following geotechnical recommendations are based on our current understanding of the proposed project as shown on the conceptual site plan (Concept D, prepared by FDM Development, dated 10/28/2019), and as described in Section 2.0 of this report. The report is prepared to comply with the 2015 International Building Code Section 1803, Geotechnical Investigations, and as required by Subsection 1803.2, Investigations Required. Please note that Soil Design Parameters and Recommendations presented in this report are predicated upon appropriate geotechnical monitoring and testing of the site preparation and foundation and building pad construction by a representative of GNN's Geotechnical-Engineer-of-Record (GER). Any deviation and nonconformity from this requirement may invalidate, partially or in whole, the following recommendations. We recommend that we be engaged to review grading and foundation plans in order to provide revised, augmented, and/or additional geotechnical recommendations as required.

### ***12.1 Site Development – Grading***

Site grading shall incorporate the requirements of IBC 2015 Appendix J. The project GER or a representative of the GER should observe site clearing, grading, and the bottoms of excavations before placing fills. Local variations in soil conditions may warrant increasing the depth of over-excavation and recompaction. Seasonal weather conditions may adversely affect grading operations. To improve compaction efforts and prevent potential pumping and unstable ground conditions, we suggest performing site grading during dryer periods of the year.

Soil conditions shall be evaluated by in-place density testing, visual evaluation, probing, and proof-rolling of the imported fill and re-compacted on-site soil as it is prepared to check for compliance with recommendations of this report. A moisture-density curve shall be established in accordance with the ASTM D1557 method for all onsite soils and imported fill materials used as structural fill.

### ***12.2 Clearing and Grubbing***

At the start of site grading, any vegetation, large roots, non-engineered/artificial fill, including trash and debris, and any abandoned underground utilities shall be removed from the proposed building and structural areas. The surface shall be stripped of all topsoil and/or organic growth

(vegetation) that may exist within the proposed structural areas. The topsoil and organic rich soils shall either be stockpiled on-site separately for future use or be removed from the construction area. Depth of stripping can be minimized with real-time onsite observation of sufficient removals. Areas disturbed during clearing shall be properly backfilled and compacted as described below.

### ***12.3 Suitability of the Onsite Soils as Engineered Fill***

The onsite silty gravel with sand soils, screened and processed to be free of oversize rocks (>5 inches) and deleterious materials including trash and debris, are generally suitable for reuse as engineered fill and utility trench backfill. Suitable onsite soils shall be placed in maximum 8-inch lifts (loose) and compacted to at least 95% relative compaction (ASTM D1557) near its optimum moisture content. Compaction of these soils shall be performed within a range of  $\pm 2\%$  of optimum moisture to achieve the proper degree of compaction.

### ***12.4 Temporary Excavations***

It shall be the responsibility of the contractor to maintain safe temporary slope configurations since the contractor is at the job site, able to observe the nature and conditions of the slopes and be able to monitor the subsurface conditions encountered. Unsupported vertical cuts deeper than 4 feet are not recommended if worker access is necessary. The cuts shall be adequately sloped, shored or supported to prevent injury to personnel from caving and sloughing. The contractor and subcontractors shall be aware of and familiar with applicable local, state and federal safety regulation including the current OSHA Excavation and Trench Safety Standards, and OSHA Health and Safety Standards for Excavations, 29 CFR Part 1929, or successor regulations.

According to chapter 296-155 of the Washington Administrative Code (WAC), it is our opinion that the soil encountered at the site is classified as Type C soils. We recommend that temporary, unsupported, open cut slopes shall be no steeper than 1.5 feet horizontal to 1.0 feet vertical (1.5H:1V) in Type C soils. No heavy equipment should be allowed near the top of temporary cut slopes unless the cut slopes are adequately braced. Final (permanent) fill slopes should be graded to an angle of 2H:1V or flatter. Where unstable soils are encountered, flatter slopes may be required.



### ***12.5 Utility Excavation, Pipe Bedding and Trench Backfill***

To provide suitable support and bedding for the pipe, we recommend the utilities be founded on suitable bedding material consisting of clean sand and/or sand & gravel mixture. To minimize trench subgrade disturbance during excavation, the excavator should use a smooth-edged bucket rather than a toothed bucket.

Pipe bedding and pipe zone materials shall conform to Section 9-03.12(3) of the *WSDOT Standard Specifications*. Pipe bedding should provide a firm uniform cradle for support of the pipes. A minimum 4-inch thickness of bedding material beneath the pipe should be provided. Prior to installation of the pipe, the pipe bedding should be shaped to fit the lower part of the pipe exterior with reasonable closeness to provide uniform support along the pipe. Pipe bedding material should be used as pipe zone backfill and placed in layers and tamped around the pipes to obtain complete contact. To protect the pipe, bedding material should extend at least 6 inches above the top of the pipe.

Placement of bedding material is particularly critical where maintenance of precise grades is essential. Backfill placed within the first 12 inches above utility lines should be compacted to at least 90% of the maximum dry density (ASTM D1557), such that the utility lines are not damaged during backfill placement and compaction. In addition, rock fragments greater than 1 inch in maximum dimension should be excluded from this first lift. The remainder of the utility excavations should be backfilled and compacted to 95% of the maximum dry density as determined by ASTM D1557.

Onsite soils are considered suitable for utility trench backfill provided they are free of oversize material and trash/debris and can be adequately compacted. All excavations should be wide enough to allow for compaction around the haunches of pipes and underground tanks. We recommend that utility trenching, installation, and backfilling conform to all applicable federal, state, and local regulations such as OSHA and WISHA for open excavations.

Compaction of backfill material should be accomplished with soils within  $\pm 2\%$  of their optimum moisture content in order to achieve the minimum specified compaction levels recommended in this report. However, initial lift thickness could be increased to levels recommended by the

### ***12.6 Imported Crushed Rock Structural Fill***

Imported structural fill shall consist of well-graded, crushed aggregate material meeting the grading requirements of Washington State Department of Transportation (WSDOT) Standard Specification 9-03.9(3) (1-1/4 inch minus Base Course Material) presented here:

**Table 6: WSDOT Standard Spec. 9-03.9(3)**

<b>Sieve Size</b>	<b>Percent Passing (by Weight)</b>
1¼ Inch Square	99 - 100
1 Inch Square	80 - 100
5/8 Inch Square	50 – 80
U.S. No. 4	25 - 45
U.S. No. 40	3 – 18
U.S. No. 200	Less than 7.5

A fifty (50) pound sample of each imported fill material shall be collected by GNN personnel prior to placement to ensure proper gradation and establish the moisture-density relationship (proctor curve).

### ***12.7 Compaction Requirements for Engineered Fill***

All fill or backfill shall be approved by a representative of the GER, placed in uniform lifts, and compacted to a minimum 95% of the maximum dry density as determined by ASTM D1557. The compaction effort must be verified by a representative of the GER in the field using a nuclear density gauge in accordance with ASTM D6938. The thickness of the loose, non-compacted, lift of structural fill shall not exceed 8 inches for heavy-duty compactors or 4 inches for hand operated compactors.

### ***12.8 Building Pad & Foundation Subgrade Preparation***

Building structures may be supported on conventional shallow foundations bearing on subgrade prepared in accordance with the recommendations of this report. We recommend that all building foundations, including all exterior footings, interior footings and isolated column footings for any over-hang patio roof/decks, be supported on uniform improved native subgrade support conditions. The minimum footing depth shall be 24 inches below adjacent grades for frost protection and bearing capacity considerations. Interior footings may be supported at nominal depths below the floor. All footings shall be protected against weather and water damage during/after construction.

Following completion of site clearing and grubbing operations, all foundation areas shall be over-excavated to expose the native silty gravels. We anticipate the native soils in the vicinity of the currently proposed building footprints will range from depths of approximately 3 to 8 feet BGS. In order to reduce the risk of differential settlement, we recommend the differential in depth of foundation over-excavation (thickness of fill) be limited to 50%; i.e. if the deepest required foundation over-ex is 6 feet, then no portion of the foundation excavation shall be less than 3 feet below footing elevation. The exposed native gravelly stratum shall be moisture-conditioned (as necessary) and proof-compacted to a dense and non-yielding surface. Any soft spots encountered during compaction shall be over-excavated an additional 12 inches and replaced as compacted fill. Although not anticipated, deeper foundation over-excavations may extend into groundwater; consequently, employment of appropriate means of dewatering by the contractor may be required.

Foundation backfill shall consist of suitable screened/processed onsite soils (see *Suitability of Onsite Soils as Engineered Fill*) and/or imported 2-inch minus Gravel Borrow material (meeting the grading and quality requirements of WSDOT Standard Spec. Sec. 9-03.14(1)). The upper 12 inches of backfill directly below the foundations shall consist of imported 1¼"-minus crushed rock structural fill placed as engineered fill, moisture-conditioned and compacted to at least 95% of the maximum dry density as determined by the ASTM D1557. Crushed rock structural fill shall extend minimum 12 inches beyond the edges of the footings.

Where future buildings are proposed near or on the existing slopes, building foundations will be required to be constructed with appropriate setbacks in accordance with IBC 2015 Section 1808.7 (see *Slope Setbacks* section below). In general, if buildings are constructed with the current proposed layout, deeper embedment of the foundations will be required in order to meet the minimum setback, such that a minimum distance of 10 feet from the exterior face of the footings to a projected 2H:1V slope face from the toe of the existing slope is maintained. These recommendations may require the need for stepped foundations across the building structure, or deeper foundations such as taller stem-walls or columns.

Footings constructed in accordance with the above recommendations may be designed for an allowable bearing capacity of **2,500 pounds per square foot (psf)**. The allowable bearing pressure may be increased by 1/3 for short-term transient loading conditions. The estimated total settlement



for footings is approximately 1-inch with differential settlement less than half that magnitude. The weight of the foundation concrete below grade may be neglected in dead load computations.

Lateral forces on foundations from short term wind and seismic loading would be resisted by friction at the base of foundations and passive earth pressure against the buried portions. We recommend an allowable passive earth pressure for the compacted onsite soil of **220 pcf**. This lateral foundation resistance value includes a factor of safety of 1.5. We recommend a coefficient of friction of **0.45** be used between cast-in-place concrete and imported crushed rock fill. An appropriate factor of safety should be used to calculate sliding resistance at the base of footings.

### ***12.9 Slab-on-Grade Floors***

We recommend placing a minimum 6-inch layer of crushed aggregate fill beneath all slabs. The material shall meet the WSDOT Specification 9-03.9 (3), “Crushed Surfacing Top Course”. The crushed rock material shall be compacted to at least 95% of the maximum dry density as determined by the ASTM D1557 method. Prior to placement of crushed aggregate fill, the building pad shall be prepared as described above in the *Building Pad & Foundation Subgrade Preparation* section. We recommend a modulus of subgrade reaction equal to 120 pounds per cubic inch (pci) based on a value for gravel presented in the Portland Cement Association publication No. EB075.01D. Slab thickness, reinforcement and joint spacing shall be determined by a licensed engineer based on the intended use and loading.

An appropriate vapor retarder (15-mil polyethylene liner) shall be used (ASTM E1745/E1643) beneath areas receiving moisture sensitive resilient flooring/VCT where prevention of moisture migration through slab is essential. The slab designer should refer to ACI 302 and/or ACI 360 for procedures and cautions regarding the use and placement of a vapor retarder. The architect shall determine the need and use of a vapor retarder.

### ***12.10 Retaining Walls***

The following table presents recommendations for lateral earth pressures for use in retaining wall design. The values are given in terms of equivalent fluid pressures without surcharge loads and are based on the assumption that proper drainage is provided behind the wall, the backfill is horizontal and that no-buildup of hydrostatic pressure occurs.

**Table 7: Lateral Earth Pressures**

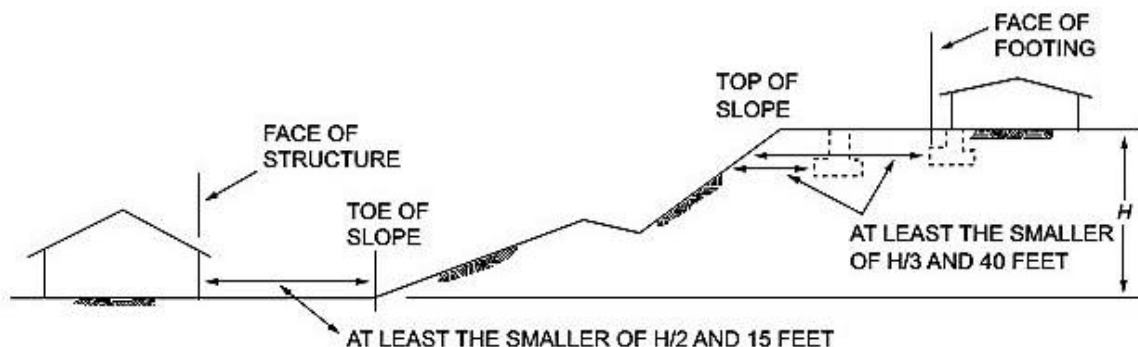
Lateral Pressures	Suitable Onsite Soils
Active Pressure Use when wall is permitted to rotate 0.1 to 0.2% of wall height for granular backfill	38 pcf - level ground
At-Rest Pressure	56 pcf - level ground

Drainage: Retaining structures should include adequate back drainage to avoid build-up of hydrostatic pressures. Positive drainage for retaining walls should consist of a vertical layer of permeable material (chimney drain), such as a pea gravel or crushed rock (typically ¼- to ¾-inch crushed), at least 18 inches thick, positioned between the retaining wall and the backfill. We recommend installing a non-woven filter fabric such as Mirafi 140N between the drainage material and the general backfill to prevent fines from migrating into the drainage material. A 4-inch diameter perforated or slotted drain-pipe, wrapped or socked in filter fabric, shall be installed at the bottom of the chimney drain.

Backfill and Subgrade Compaction: Compaction on the retained side of the wall within a horizontal distance equal to one wall height should be performed by hand-operated or other lightweight compaction equipment. This is intended to reduce potential locked-in lateral pressures caused by compaction with heavy grading equipment. Retaining wall foundations and subgrade improvements shall be constructed in accordance with the recommendations of this report.

**12.11 Slope Setbacks**

In accordance with IBC 2015 Section 1808.7 *Foundations on or Adjacent to Slopes*: “foundations on or adjacent to slope surfaces shall be founded in firm material with an embedment and setback from the slope surface sufficient to provide vertical and lateral support for the foundation without detrimental settlement.” IBC Figure 1808.7.1 (presented below) defines the appropriate minimum setbacks from ascending and descending slope surfaces:



Appropriate setbacks can be accommodated by lateral offset and/or increased embedment. The long-term performance of the structure near slopes is dependent on the protection of slopes from erosion or over steepening from subsequent slope grading. Slopes should be maintained to prevent erosion or undermining of the toe.

### ***12.12 Flexible Pavement***

Due to the presence of undocumented fills throughout the project site, remedial grading will be required to minimize the risk of pavement distress. We recommend that the new pavement section be constructed on an improved subgrade. Due to the presence of artificial fills soils that include some miscellaneous trash and debris, the pavement subgrade over-excavation be completed in accordance with one of the following two options:

- (1) Pavement areas shall be fully over-excavated to remove the artificial fill soils. Based on our site exploration, we anticipate that the maximum depth of excavation could be as great as approximately 8 feet.
- (2) Excavate the proposed pavement areas to a minimum depth of 12 inches BGS. We recommend installing a Mirafi 600X geotextile fabric at the bottom of the over-ex. It must be understood that if this option is selected, the owner must accept some risks related to future distresses to the pavements including the potential for settlement and cracking.

After appropriate over-excavation is complete and confirmed by a representative of the GER, the exposed native subgrade shall be moisture-conditioned and compacted to a dense and non-yielding surface. After a suitable subgrade is confirmed by a representative of the GER, the over-excavation shall be backfilled with engineered structural fill soil consisting of suitable/screened onsite soil (see Section 12.3) and/or imported 2-inch minus Gravel Borrow material (meeting the grading and quality requirements of WSDOT Standard Spec. Sec. 9-03.14(1)). Engineered structural fill soils shall be placed in max. 8-inch thick loose lifts and each lift compacted to 95% of ASTM D1557. The following table presents recommended light duty and heavy-duty asphalt pavement sections for proposed project to constructed atop the prepared subgrade:



**Table 8: Recommended Asphalt Concrete Paving Sections**

Traffic	Asphalt Thickness (inches)	Crushed Aggregate Base Course (inches)
Heavy Duty†	4.0	10*
Standard Duty ††	3.0	6

†Heavy duty applies to pavements subjected to truck traffic and drive lanes

††Standard duty applies to general parking areas

\*The upper 2” of crushed rock should be top course rock placed over the base course layer

Pavement section recommendations assume proper drainage and construction monitoring. Pavement shall be constructed on a dense and non-yielding surface. All fills used to raise low areas must be compacted structural fills and shall be placed under engineering control conditions.

Soils containing roots or organic materials shall be completely removed from the proposed paved areas prior to subgrade construction. The upper 12 inches of subgrade soils beneath the pavement section shall be moisture conditioned and proof-compacted to a dense and non-yielding condition. All fills used to raise low areas must be compacted onsite soils or structural gravel fill and shall be placed under engineering control conditions. The finished surface shall be smooth, uniform and free of localized weak/soft spots. All subgrade deficiency corrections and drainage provisions shall be made prior to placing the aggregate base course. All underground utilities shall be protected prior to grading.

The HMAC utilized for the project should be designed and produced in accordance with Section 5-04 Hot Mix Asphalt of the *Washington Department of Transportation 2014 Standard Specifications for Road and Bridge Construction* (WSDOT Specifications). Aggregate Base material shall comply with Section 9-03.9(3) Crushed Surfacing of the *WSDOT Specifications*. Aggregate base or pavement materials should not be placed when the surface is wet.

### **12.13 Subgrade Protection**

The degree to which construction grading problems develop is expected to be dependent, in part, on the time of year that construction proceeds and the precautions which are taken by the contractor to protect the subgrade. The fine-grained soils currently present on site are considered to be moisture and disturbance sensitive due to their fines content and may become unstable (pumping) if allowed to increase in moisture content and are disturbed (rutted) by construction traffic if wet. If necessary, the construction access road should be covered with a layer of gravel or

quarry spalls course. The soils are also susceptible to erosion in the presence of moving water. The soils shall be stabilized to minimize the potential of erosion into the foundation excavation. The site shall be graded to prevent water from ponding within construction areas and/or flowing into excavations. Accumulated water must be removed immediately along with any unstable soil. Foundation concrete shall be placed and excavations backfilled as soon as possible to protect the bearing grade. We further recommend that soils that become unstable are to be either:

- Removed and replaced with structural compacted gravel fill, or
- Mechanically stabilized with a coarse crushed aggregate (possibly underlain with a geotextile) and compacted into the subgrade.

#### ***12.14 Surface Drainage***

With respect to surface water drainage, we recommend that the ground surface be sloped to drain away from the structure. Final exterior site grades shall promote free and positive drainage from the building areas. Water shall not be allowed to pond or to collect adjacent to foundations or within the immediate building area. We recommend that a gradient of at least 5% for a minimum distance of 10 feet from the building perimeter be provided, except in paved locations. In paved areas, a minimum gradient of 1% should be provided unless provisions are included for collection/disposal of surface water adjacent to the structure. Catch basins, drainage swales, or other drainage facilities should be aptly located. All surface water such as that coming from roof downspouts and catch basins be collected in tight drain lines and carried to a suitable discharge point, such as a storm drain system. Surface water and downspout water should not discharge into a perforated or slotted subdrain, nor should such water discharge onto the ground surface adjacent to the building. Cleanouts should be provided at convenient locations along all drain lines.

#### ***12.15 Wet Weather Conditions***

The project site soils are fine-grained and sensitive to moisture during handling and compaction. Proceeding with site earthwork operations using these soils during wet weather could add project costs and/or delays. The stability of exposed soils may rapidly deteriorate due to a change in moisture content. Therefore, if possible, complete site clearing, preparation, and earthwork during periods of warm, dry weather when soil moisture can be controlled by aeration. During/subsequent to wet weather, drying or compacting the on-site soils will be difficult. It may be necessary to

amend the on-site soils or import granular materials for use as structural fill. If earthwork takes place in wet weather/conditions, the following recommendations should be followed:

- Fill material should consist of clean, granular soil, and not more than 3% fines (by weight) should pass the No. 200 sieve. Fines should be non-plastic. These soils would have to be imported to the site.
- Earthwork should be accomplished in small sections and carried through to completion to reduce exposure to wet weather. Soils that becomes too wet for compaction should be removed and replaced with clean, granular material.
- The construction area ground surface should be sloped and sealed to reduce water infiltration, to promote rapid runoff, and to prevent water ponding.
- To prevent soil disturbance, the size or type of equipment may have to be limited.
- Work areas and stockpiles should be covered with plastic. Straw bales, straw wattles, geotextile silt fences, and other measures should be used as appropriate to control soil erosion.
- Excavation and fill placement should be observed on a full-time basis by a representative of GER to determine that unsuitable materials are removed and that suitable compaction and site drainage is achieved.

### 13.0 REFERENCES

- Czajkowski, J.L., and Bowman, J.D., 2014. Faults and Earthquakes in Washington State. Washington State Department of Natural Resources (DNR), Washington Division of Geology and Earth Resources, Open-File Report 2014-05.
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- International Code Council, Inc., 2015 International Building Code (IBC).
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- U.S. Department of the Interior, U.S. Geological Survey (USGS), (1979). Bonneville Dam Quadrangle, Washington-Oregon, 7.5 Minute Series (Topographic). DMA 1675 III NW-Series V891.
- U.S. Geologic Survey (USGS), Earthquake Hazards Program, U.S. Seismic Design Maps, online tool, website: [earthquake.usgs.gov/designmaps/us/application.php](http://earthquake.usgs.gov/designmaps/us/application.php)
- Washington State Department of Natural Resources (DNR), Washington Division of Geology and Earth Resources, on-line mapping tool, <https://fortress.wa.gov/dnr/protectiongis/geology/>



## 14.0 CONTINUING GEOTECHNICAL SERVICES

GNN recommends that the Client should maintain an adequate program of geotechnical consultation, construction monitoring, and soils testing during the final design and construction phases to monitor compliance with GNN's geotechnical recommendations. Maintaining GNN as the geotechnical consultant from beginning to end of the project will provide continuity of services. If GN Northern, Inc. is not retained by the owner/developer and/or the contractor to provide the recommended geotechnical inspections/observations and testing services, the geotechnical engineering firm or testing/inspection firm providing tests and observations shall assume the role and responsibilities of Geotechnical Engineer-of-Record.

GNN can provide construction monitoring and testing as additional services. The costs of these services are not included in our present fee arrangement, but can be obtained from our office. The recommended construction monitoring and testing includes, but is not necessarily limited to, the following:

- Consultation during the design stages of the project.
- Review of the grading and drainage plans to monitor compliance and proper implementation of the recommendations in GNN's Report.
- Observation and quality control testing during site preparation, grading, and placement of engineered fill as required by the local building ordinances.
- Geotechnical engineering consultation as needed during construction

## 15.0 LIMITATIONS OF THE GEOTECHNICAL SITE INVESTIGATION REPORT

This GEOTECHNICAL SITE INVESTIGATION REPORT (“Report”) was prepared for the exclusive use of the Client. GN Northern, Inc.’s (GNN) findings, conclusions and recommendations in this Report are based on selected points of field exploration, and GNN’s understanding of the proposed project at the time the Report is prepared. Furthermore, GNN’s findings and recommendations are based on the assumption that soil, rock and/or groundwater conditions do not vary significantly from those found at specific exploratory locations at the project site. Variations in soil, bedrock and/or groundwater conditions could exist between and beyond the exploration points. The nature and extent of these variations may not become evident until during or after construction. Variations in soil, bedrock and groundwater may require additional studies, consultation, and revisions to GNN’s recommendations in the Report.

In many cases the scope of geotechnical exploration and the test locations are selected by others without consultation from the geotechnical engineer/consultant. GNN assumes no responsibility and, by preparing this Report, does not impliedly or expressly validate the scope of exploration and the test locations selected by others.

This Report’s findings are valid as of the issued date of this Report. However, changes in conditions of the subject property or adjoining properties can occur due to passage of time, natural processes, or works of man. In addition, applicable building standards/codes may change over time. Accordingly, findings, conclusions, and recommendations of this Report may be invalidated, wholly or partially, by changes outside of GNN’s control. Therefore, this Report is subject to review and shall not be relied upon after a period of **one (1) year** from the issued date of the Report.

In the event that any changes in the nature, design, or location of structures are planned, the findings, conclusions and recommendations contained in this Report shall not be considered valid unless the changes are reviewed by GNN and the findings, conclusions, and recommendations of this Report are modified or verified in writing.

This Report is issued with the understanding that the owner or the owner’s representative has the responsibility to bring the findings, conclusions, and recommendations contained herein to the attention of the architect and design professional(s) for the project so that they are incorporated

into the plans and construction specifications, and any follow-up addendum for the project. The owner or the owner's representative also has the responsibility to verify that the general contractor and all subcontractors follow such recommendations during construction. It is further understood that the owner or the owner's representative is responsible for submittal of this Report to the appropriate governing agencies. The foregoing notwithstanding, no party other than the Client shall have any right to rely on this Report and GNN shall have no liability to any third party who claims injury due to reliance upon this Report, which is prepared exclusively for Client's use and reliance.

GNN has provided geotechnical services in accordance with generally accepted geotechnical engineering practices in this locality at this time. GNN expressly disclaims all warranties and guarantees, express or implied.

Client shall provide GNN an opportunity to review the final design and specifications so that earthwork, drainage and foundation recommendations may be properly interpreted and implemented in the design and specifications. If GNN is not accorded the review opportunity, GNN shall have no responsibility for misinterpretation of GNN's recommendations.

Although GNN can provide environmental assessment and investigation services for an additional cost, the current scope of GNN's services does not include an environmental assessment or an investigation for the presence or absence of wetlands, hazardous or toxic materials in the soil, surface water, groundwater, or air on, below, or adjacent to the subject property.

*APPENDICES*



*Appendix I*  
*Vicinity Map (Figure 1)*  
*Site Exploration Map (Figure 2)*  
*Critical Areas Map (Figure 3)*



**FIGURE 1: VICINITY MAP**

**PROJECT NO. 219-1183**

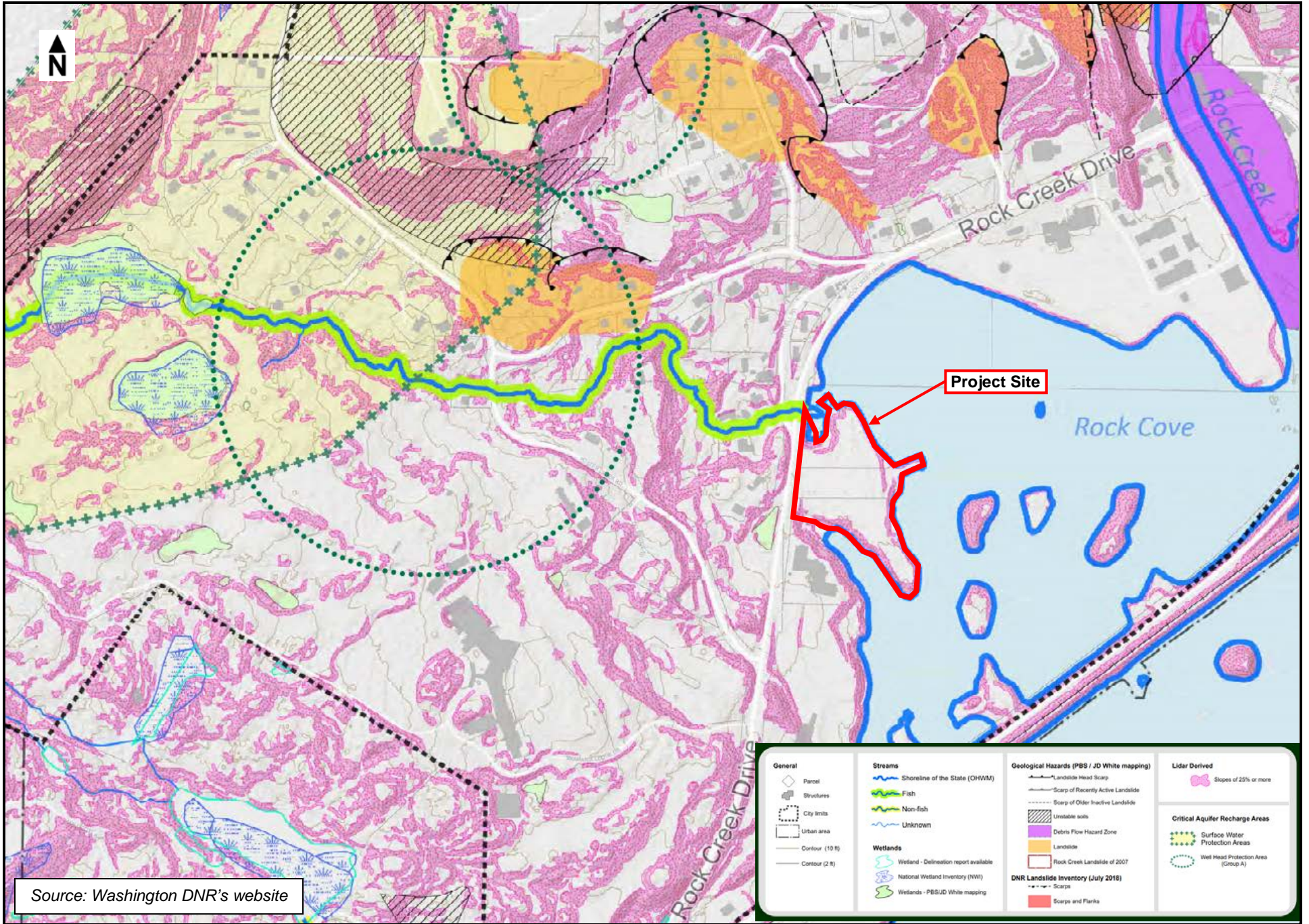




FIGURE 2: SITE EXPLORATION MAP

PROJECT NO. 219-1183





Source: Washington DNR's website

FIGURE 3: CRITICAL AREAS MAP

PROJECT NO. 219-1183



*Appendix II*  
*Exploratory Test-Pit Logs*  
*Key Chart (for Soil Classification)*



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# TEST PIT NUMBER TP-1

PAGE 1 OF 1

**CLIENT** FDM Development **PROJECT NAME** Proposed Rock Creek Cove Development  
**PROJECT NUMBER** 219-1183 **PROJECT LOCATION** Rock Creek Drive, Stevenson, WA  
**DATE STARTED** 12/23/19 **COMPLETED** 12/23/19 **GROUND ELEVATION** 98 ft **TEST PIT SIZE** 36 x 96 inches  
**EXCAVATION CONTRACTOR** Riley Materials **GROUND WATER LEVELS:**  
**EXCAVATION METHOD** Link-Belt 145x4 Excavator **AT TIME OF EXCAVATION** ---  
**LOGGED BY** KAH **CHECKED BY** MYM **AT END OF EXCAVATION** ---  
**NOTES** Approx. GPS Coords.: 45°41'19.59"N, 121°53'55.44"W **AFTER EXCAVATION** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	TESTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0					~6" to 18" LANDSCAPE CUTTINGS / ORGANIC DEBRIS
2.5			GP-GM		FILL: POORLY GRADED GRAVEL WITH SILT AND SAND, (GP-GM) gray, moist to wet, appears loose to medium dense, with cobbles, with wood and organic debris  - pipe at ~3' BGS
5.0	GB	MC = 22% Fines = 18%	GC		CLAYEY GRAVEL WITH SAND, (GC) brown, wet, appears loose to medium dense, with organics and roots (APPARENT NATIVE)  - becomes blueish gray, moist, appears medium dense (NATIVE)  - with boulders from 10' to 11'
14.5					

- Significant amount of surface water flowing into test-pit excavation  
 - Referenced elevations are approximate and based on Survey Topography for Lots 2, 3, and 4 of Rock Creek Cove dated December 11, 2019 prepared by S&F Land Services  
 Bottom of test pit at 14.5 feet.

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# TEST PIT NUMBER TP-2

PAGE 1 OF 1

<b>CLIENT</b> <u>FDM Development</u>	<b>PROJECT NAME</b> <u>Proposed Rock Creek Cove Development</u>
<b>PROJECT NUMBER</b> <u>219-1183</u>	<b>PROJECT LOCATION</b> <u>Rock Creek Drive, Stevenson, WA</u>
<b>DATE STARTED</b> <u>12/23/19</u> <b>COMPLETED</b> <u>12/23/19</u>	<b>GROUND ELEVATION</b> <u>98 ft</u> <b>TEST PIT SIZE</b> <u>36 x 96 inches</u>
<b>EXCAVATION CONTRACTOR</b> <u>Riley Materials</u>	<b>GROUND WATER LEVELS:</b>
<b>EXCAVATION METHOD</b> <u>Link-Belt 145x4 Excavator</u>	<b>AT TIME OF EXCAVATION</b> <u>---</u>
<b>LOGGED BY</b> <u>KAH</u> <b>CHECKED BY</b> <u>MYM</u>	<b>AT END OF EXCAVATION</b> <u>---</u>
<b>NOTES</b> <u>Approx. GPS Coords.: 45°41'18.75"N, 121°53'55.09"W</u>	<b>AFTER EXCAVATION</b> <u>---</u>

DEPTH (ft)	SAMPLE TYPE NUMBER	TESTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0					
2.5					
5.0	GB	MC = 28% Fines = 47%	GM		- becomes orange brown, appears loose to medium dense, some cobbles  - with a significant amount of woody debris, organics, roots
7.5					
8.0					8.0
10.0			GM		SILTY GRAVEL WITH SAND, (GM) brown, subrounded, moist, appears medium dense to dense, with cobbles and boulders (APPARENT NATIVE)
12.5					
14.0					14.0

- Groundwater not encountered at time of excavation  
 - Referenced elevations are approximate and based on Google Earth topography  
 Bottom of test pit at 14.0 feet.

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# TEST PIT NUMBER TP-3

PAGE 1 OF 1

**CLIENT** FDM Development **PROJECT NAME** Proposed Rock Creek Cove Development  
**PROJECT NUMBER** 219-1183 **PROJECT LOCATION** Rock Creek Drive, Stevenson, WA  
**DATE STARTED** 12/23/19 **COMPLETED** 12/23/19 **GROUND ELEVATION** 97 ft **TEST PIT SIZE** 36 x 96 inches  
**EXCAVATION CONTRACTOR** Riley Materials **GROUND WATER LEVELS:**  
**EXCAVATION METHOD** Link-Belt 145x4 Excavator **AT TIME OF EXCAVATION** 14.00 ft / Elev 83.00 ft  
**LOGGED BY** KAH **CHECKED BY** MYM **AT END OF EXCAVATION** ---  
**NOTES** Approx. GPS Coords.: 45°41'20.75"N, 121°53'55.36"W **AFTER EXCAVATION** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	TESTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0					
2.5			GP-GM		FILL: POORLY GRADED GRAVEL WITH SILT AND SAND, (GP-GM) gray brown, angular, wet, appears loose to medium dense, with cobbles
3.0					94.0
5.0			GM		SILTY GRAVEL WITH SAND, (GM) brown, subrounded, moist, appears medium dense, trace cobbles (APPARENT NATIVE)
7.5					
10.0					- becomes blueish gray
12.5	GB	MC = 29% Fines = 28%			
14.5					82.5

- Groundwater encountered at ~14' BGS at time of excavation  
 - Referenced elevations are approximate and based on Google Earth topography  
 Bottom of test pit at 14.5 feet.

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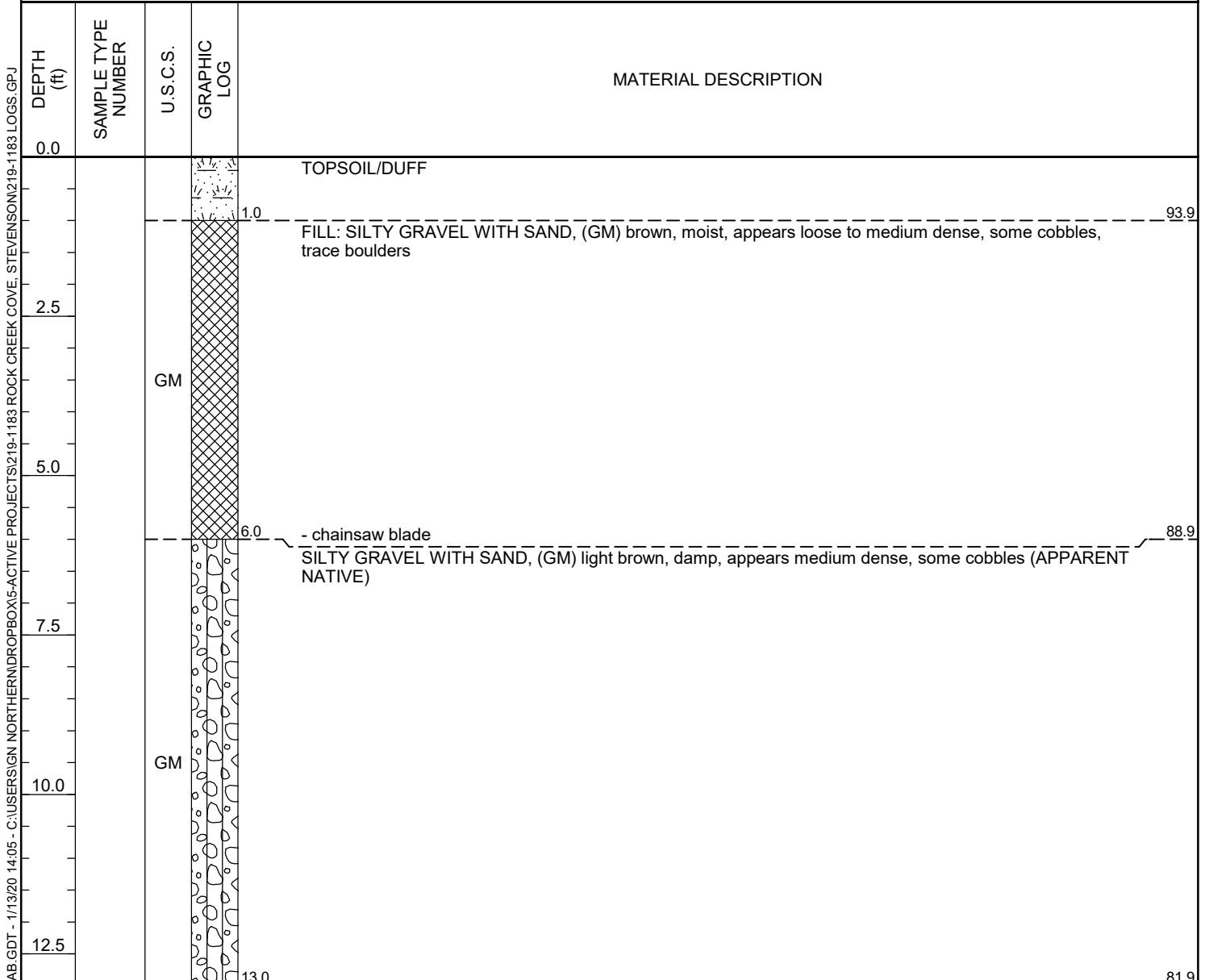
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# TEST PIT NUMBER TP-4

PAGE 1 OF 1

**CLIENT** FDM Development  
**PROJECT NUMBER** 219-1183  
**DATE STARTED** 12/23/19 **COMPLETED** 12/23/19  
**EXCAVATION CONTRACTOR** Riley Materials  
**EXCAVATION METHOD** Link-Belt 145x4 Excavator  
**LOGGED BY** KAH **CHECKED BY** MYM  
**NOTES** Approx. GPS Coords.: 45°41'23.09"N, 121°53'53.97"W

**PROJECT NAME** Proposed Rock Creek Cove Development  
**PROJECT LOCATION** Rock Creek Drive, Stevenson, WA  
**GROUND ELEVATION** 94.9 ft **TEST PIT SIZE** 36 x 96 inches  
**GROUND WATER LEVELS:**  
**AT TIME OF EXCAVATION** ---  
**AT END OF EXCAVATION** ---  
**AFTER EXCAVATION** ---



- Groundwater not encountered at time of excavation  
 - Referenced elevations are approximate and based on Google Earth topography  
 Bottom of test pit at 13.0 feet.

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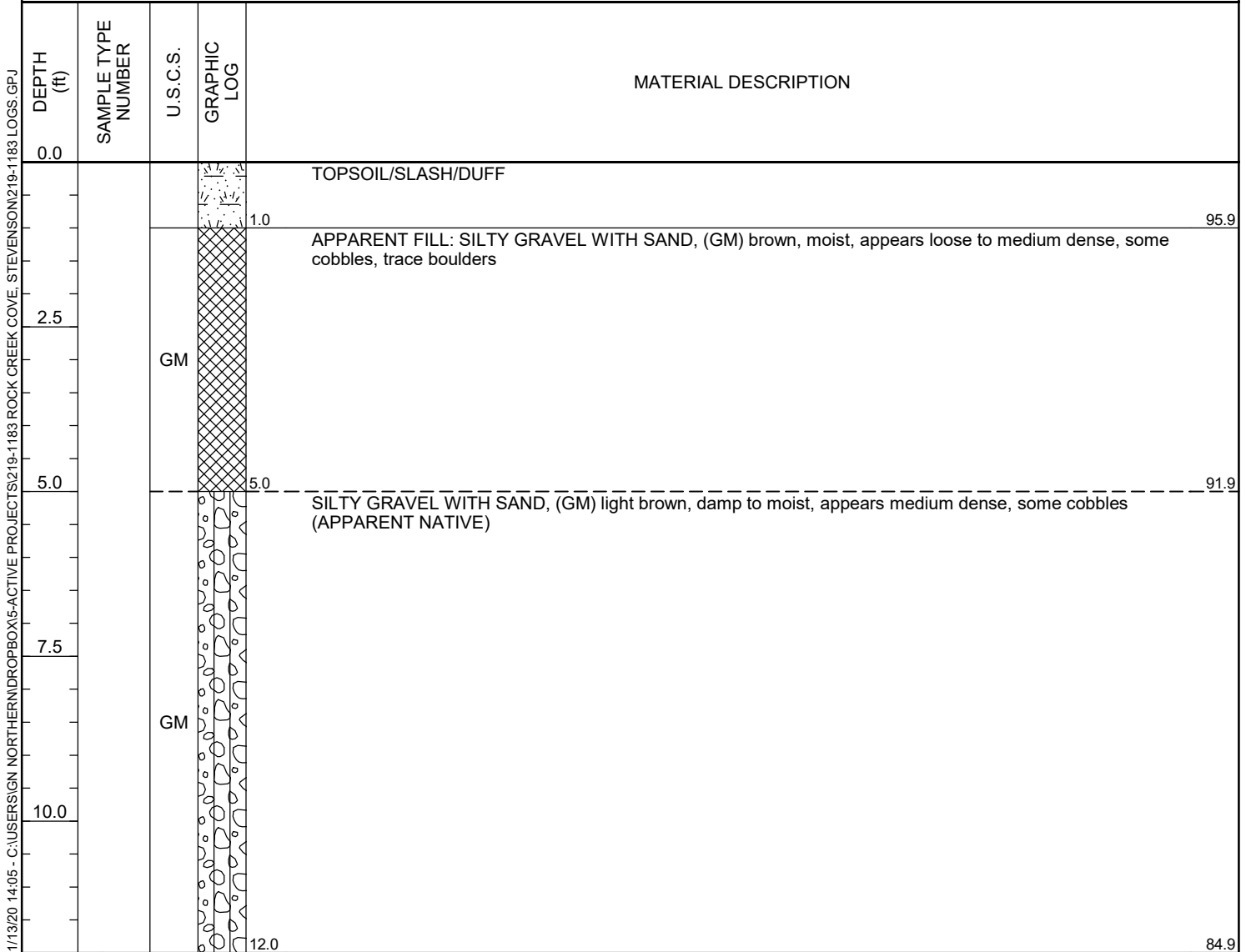


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# TEST PIT NUMBER TP-5

PAGE 1 OF 1

<b>CLIENT</b> <u>FDM Development</u>	<b>PROJECT NAME</b> <u>Proposed Rock Creek Cove Development</u>
<b>PROJECT NUMBER</b> <u>219-1183</u>	<b>PROJECT LOCATION</b> <u>Rock Creek Drive, Stevenson, WA</u>
<b>DATE STARTED</b> <u>12/23/19</u> <b>COMPLETED</b> <u>12/23/19</u>	<b>GROUND ELEVATION</b> <u>96.9 ft</u> <b>TEST PIT SIZE</b> <u>36 x 96 inches</u>
<b>EXCAVATION CONTRACTOR</b> <u>Riley Materials</u>	<b>GROUND WATER LEVELS:</b>
<b>EXCAVATION METHOD</b> <u>Link-Belt 145x4 Excavator</u>	<b>AT TIME OF EXCAVATION</b> <u>---</u>
<b>LOGGED BY</b> <u>KAH</u> <b>CHECKED BY</b> <u>MYM</u>	<b>AT END OF EXCAVATION</b> <u>---</u>
<b>NOTES</b> <u>Approx. GPS Coords.: 45°41'22.14"N, 121°53'53.51"W</u>	<b>AFTER EXCAVATION</b> <u>---</u>



- Groundwater not encountered at time of excavation  
 - Referenced elevations are approximate and based on Google Earth topography  
 Bottom of test pit at 12.0 feet.

GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 1/13/20 14:05 - C:\USERS\IGN NORTHERN\IDROPBOX\ACTIVE PROJECTS\219-1183 ROCK CREEK COVE - STEVENSON\219-1183 LOGS.GPJ

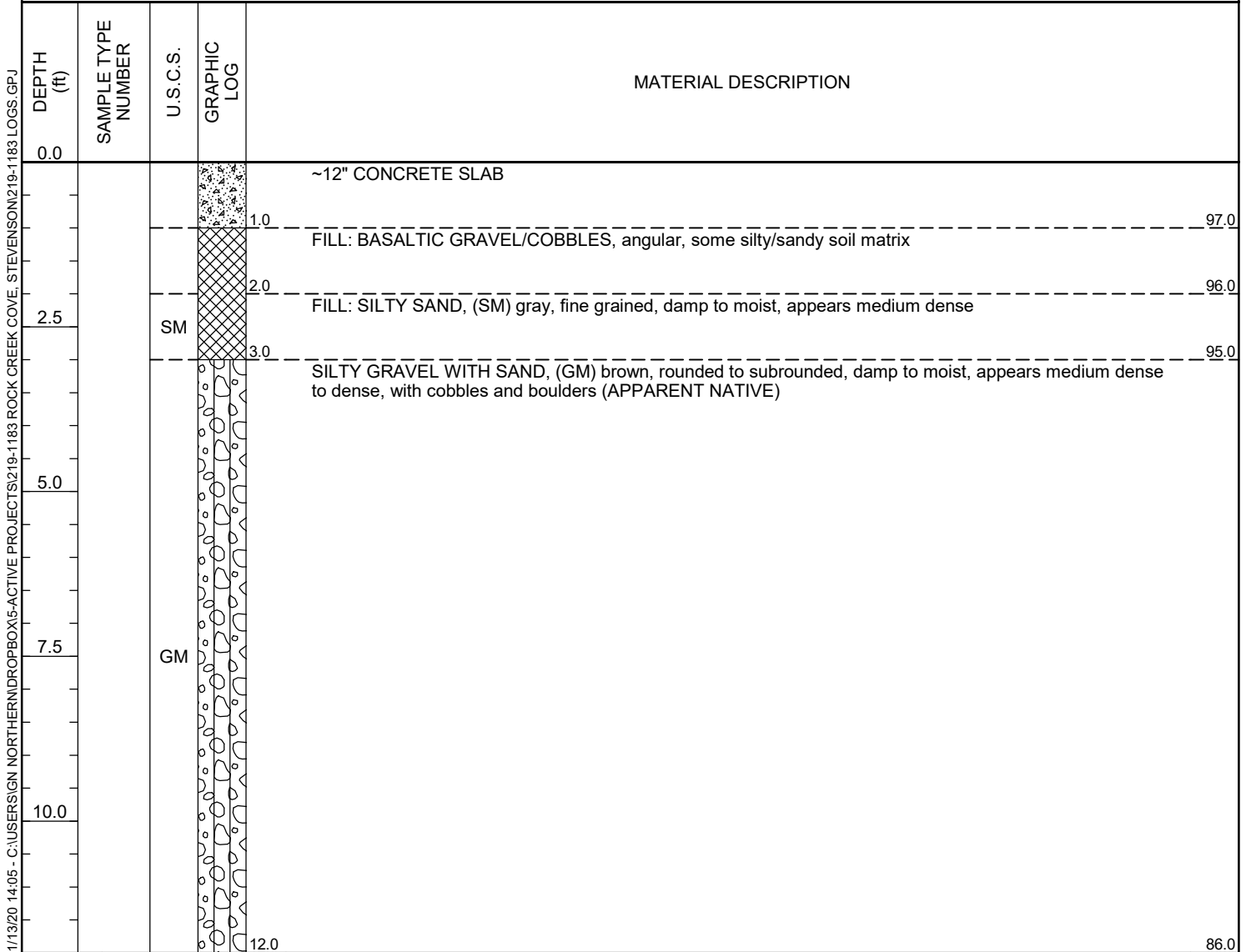


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 Spokane Valley, WA, 99206  
 Telephone: (509) 248-9798  
 Fax: (509) 248-4220

# TEST PIT NUMBER TP-6

PAGE 1 OF 1

**CLIENT** FDM Development **PROJECT NAME** Proposed Rock Creek Cove Development  
**PROJECT NUMBER** 219-1183 **PROJECT LOCATION** Rock Creek Drive, Stevenson, WA  
**DATE STARTED** 12/23/19 **COMPLETED** 12/23/19 **GROUND ELEVATION** 98 ft **TEST PIT SIZE** 36 x 96 inches  
**EXCAVATION CONTRACTOR** Riley Materials **GROUND WATER LEVELS:**  
**EXCAVATION METHOD** Link-Belt 145x4 Excavator **AT TIME OF EXCAVATION** ---  
**LOGGED BY** KAH **CHECKED BY** MYM **AT END OF EXCAVATION** ---  
**NOTES** Approx. GPS Coords.: 45°41'21.16"N, 121°53'53.95"W **AFTER EXCAVATION** ---



- Groundwater not encountered at time of excavation  
 - Referenced elevations are approximate and based on Google Earth topography  
 Bottom of test pit at 12.0 feet.

GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 1/13/20 14:05 - C:\USERS\IGN NORTHERN\DR\PROJECTS\219-1183 ROCK CREEK COVE - STEVENSON\219-1183 LOGS.GPJ



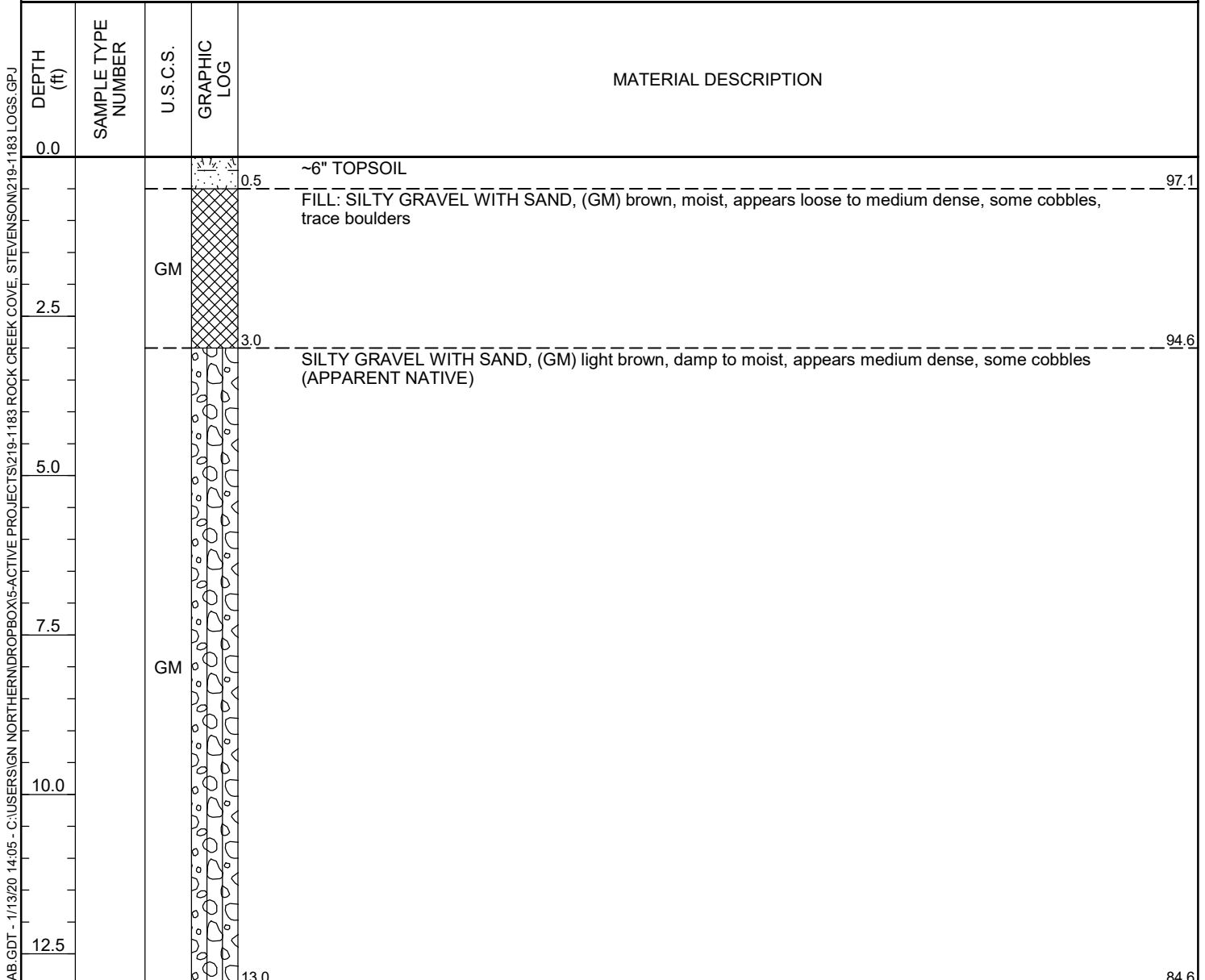
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# TEST PIT NUMBER TP-7

PAGE 1 OF 1

**CLIENT** FDM Development  
**PROJECT NUMBER** 219-1183  
**DATE STARTED** 12/23/19 **COMPLETED** 12/23/19  
**EXCAVATION CONTRACTOR** Riley Materials  
**EXCAVATION METHOD** Link-Belt 145x4 Excavator  
**LOGGED BY** KAH **CHECKED BY** MYM  
**NOTES** Approx. GPS Coords.: 45°41'19.86"N, 121°53'52.14"W

**PROJECT NAME** Proposed Rock Creek Cove Development  
**PROJECT LOCATION** Rock Creek Drive, Stevenson, WA  
**GROUND ELEVATION** 97.6 ft **TEST PIT SIZE** 36 x 96 inches  
**GROUND WATER LEVELS:**  
**AT TIME OF EXCAVATION** ---  
**AT END OF EXCAVATION** ---  
**AFTER EXCAVATION** ---



- Groundwater not encountered at time of excavation  
 - Referenced elevations are approximate and based on Google Earth topography  
 Bottom of test pit at 13.0 feet.

GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 1/13/20 14:05 - C:\USERS\IGN NORTHERN\IDROPBOX\5-ACTIVE PROJECTS\219-1183 ROCK CREEK COVE - STEVENSON\219-1183 LOGS.GPJ



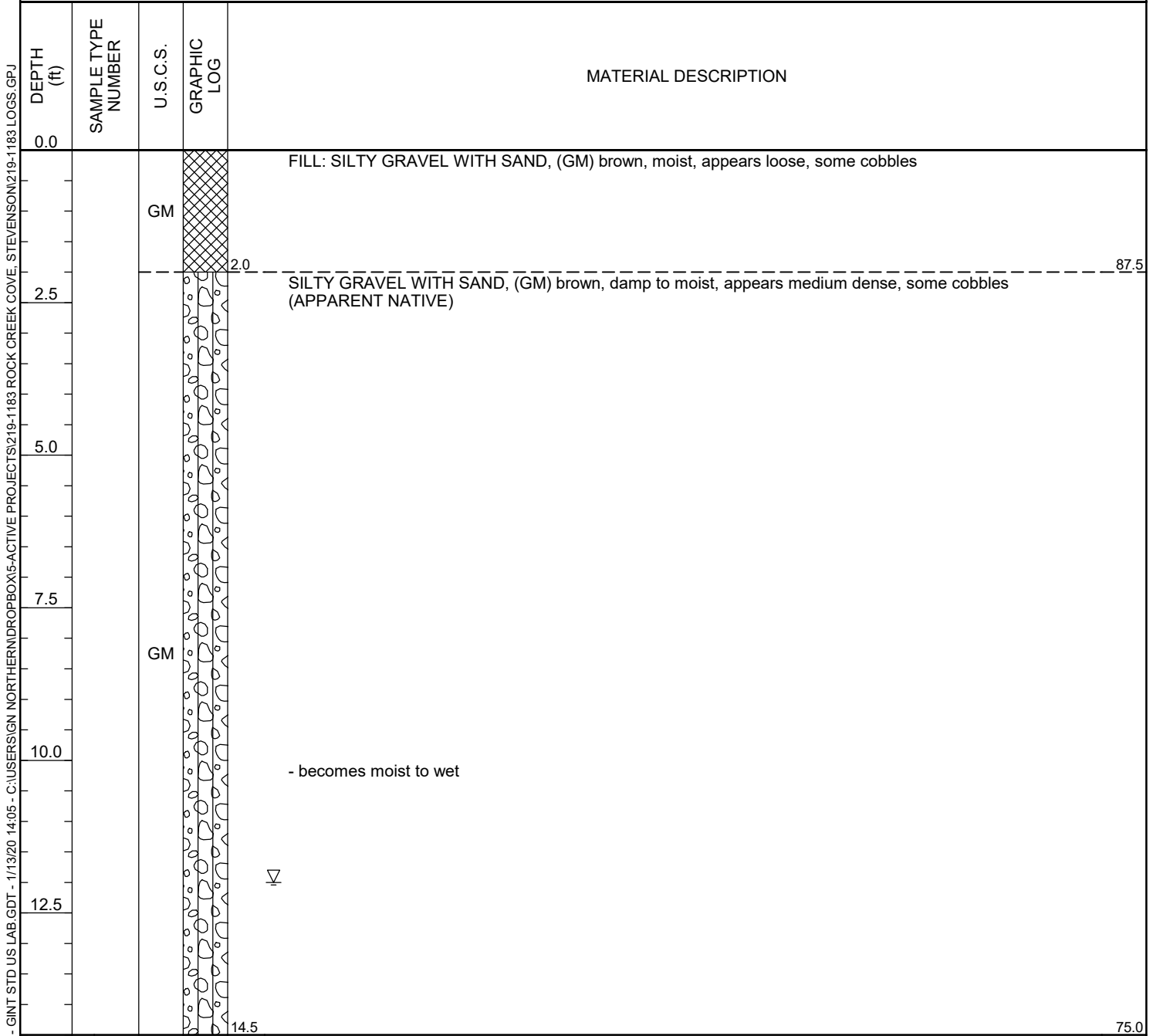


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# TEST PIT NUMBER TP-8

PAGE 1 OF 1

**CLIENT** FDM Development **PROJECT NAME** Proposed Rock Creek Cove Development  
**PROJECT NUMBER** 219-1183 **PROJECT LOCATION** Rock Creek Drive, Stevenson, WA  
**DATE STARTED** 12/23/19 **COMPLETED** 12/23/19 **GROUND ELEVATION** 89.5 ft **TEST PIT SIZE** 36 x 96 inches  
**EXCAVATION CONTRACTOR** Riley Materials **GROUND WATER LEVELS:**  
**EXCAVATION METHOD** Link-Belt 145x4 Excavator  **AT TIME OF EXCAVATION** 12.00 ft / Elev 77.50 ft  
**LOGGED BY** KAH **CHECKED BY** MYM **AT END OF EXCAVATION** ---  
**NOTES** Approx. GPS Coords.: 45°41'20.44"N, 121°53'51.63"W **AFTER EXCAVATION** ---



- becomes moist to wet

▽

- Groundwater encountered at ~12' BGS at time of excavation  
 - Referenced elevations are approximate and based on Google Earth topography  
 Bottom of test pit at 14.5 feet.

GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 1/13/20 14:05 - C:\USERS\IGN NORTHERN\IDROPBOX\ACTIVE PROJECTS\219-1183 ROCK CREEK COVE - STEVENSON\219-1183 LOGS.GPJ



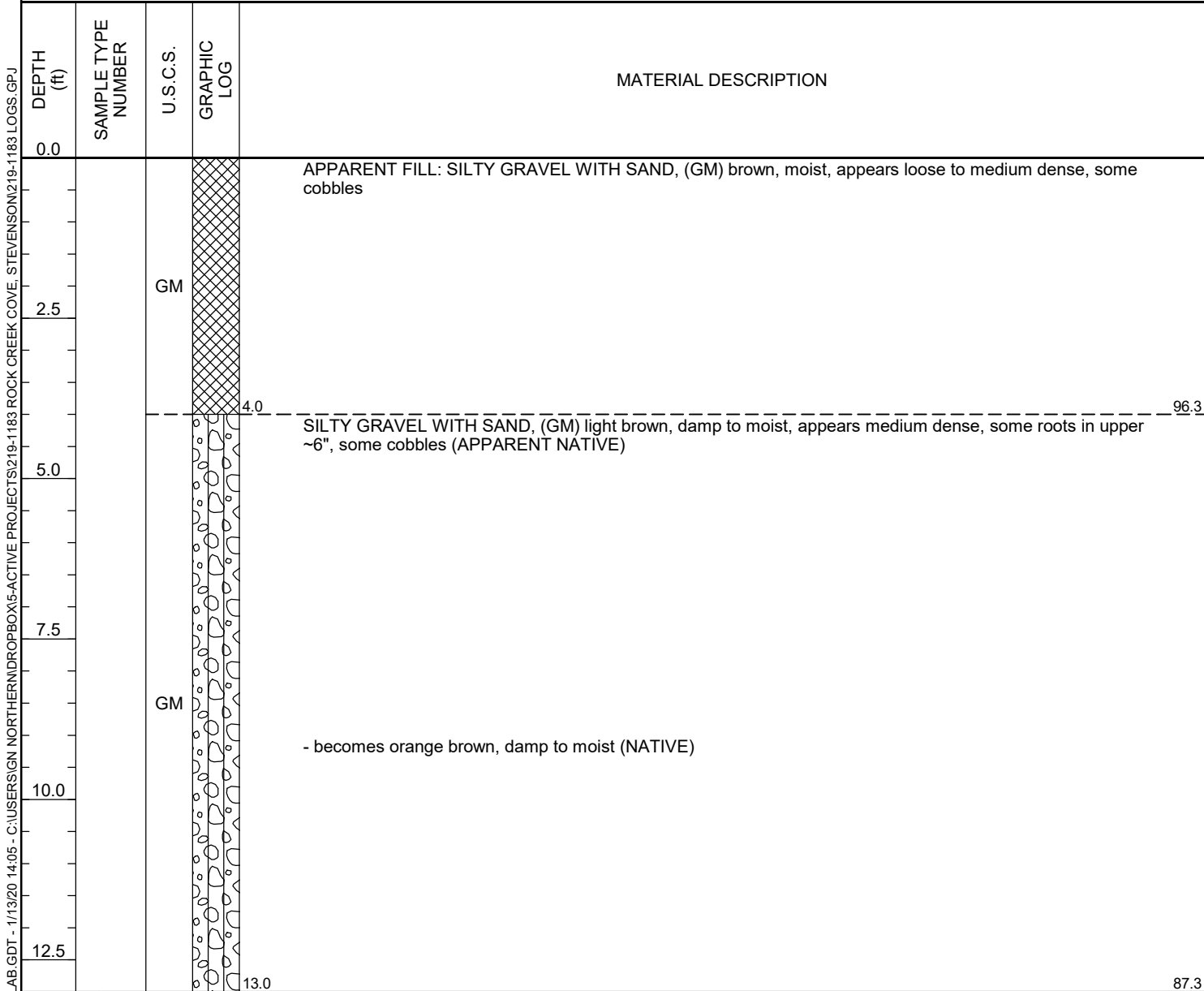


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# TEST PIT NUMBER TP-10

PAGE 1 OF 1

<b>CLIENT</b> <u>FDM Development</u>	<b>PROJECT NAME</b> <u>Proposed Rock Creek Cove Development</u>
<b>PROJECT NUMBER</b> <u>219-1183</u>	<b>PROJECT LOCATION</b> <u>Rock Creek Drive, Stevenson, WA</u>
<b>DATE STARTED</b> <u>12/23/19</u> <b>COMPLETED</b> <u>12/23/19</u>	<b>GROUND ELEVATION</b> <u>100.3 ft</u> <b>TEST PIT SIZE</b> <u>36 x 96 inches</u>
<b>EXCAVATION CONTRACTOR</b> <u>Riley Materials</u>	<b>GROUND WATER LEVELS:</b>
<b>EXCAVATION METHOD</b> <u>Link-Belt 145x4 Excavator</u>	<b>AT TIME OF EXCAVATION</b> <u>---</u>
<b>LOGGED BY</b> <u>KAH</u> <b>CHECKED BY</b> <u>MYM</u>	<b>AT END OF EXCAVATION</b> <u>---</u>
<b>NOTES</b> <u>Approx. GPS Coords.: 45°41'15.46"N, 121°53'49.93"W</u>	<b>AFTER EXCAVATION</b> <u>---</u>



- Groundwater not encountered at time of excavation  
 - Referenced elevations are approximate and based on Google Earth topography  
 Bottom of test pit at 13.0 feet.

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# TEST PIT NUMBER TP-11

<b>CLIENT</b> <u>FDM Development</u>	<b>PROJECT NAME</b> <u>Proposed Rock Creek Cove Development</u>
<b>PROJECT NUMBER</b> <u>219-1183</u>	<b>PROJECT LOCATION</b> <u>Rock Creek Drive, Stevenson, WA</u>
<b>DATE STARTED</b> <u>12/23/19</u> <b>COMPLETED</b> <u>12/23/19</u>	<b>GROUND ELEVATION</b> <u>104 ft</u> <b>TEST PIT SIZE</b> <u>36 x 96 inches</u>
<b>EXCAVATION CONTRACTOR</b> <u>Riley Materials</u>	<b>GROUND WATER LEVELS:</b>
<b>EXCAVATION METHOD</b> <u>Link-Belt 145x4 Excavator</u>	<b>AT TIME OF EXCAVATION</b> <u>---</u>
<b>LOGGED BY</b> <u>KAH</u> <b>CHECKED BY</b> <u>MYM</u>	<b>AT END OF EXCAVATION</b> <u>---</u>
<b>NOTES</b> <u>Approx. GPS Coords.: 45°41'16.39"N, 121°53'50.59"W</u>	<b>AFTER EXCAVATION</b> <u>---</u>

DEPTH (ft)	SAMPLE TYPE NUMBER	TESTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0					
2.5			SM		FILL: SILTY SAND WITH GRAVEL, (SM) dark gray brown, fine grained, damp to moist, appears loose to medium dense, with misc. trash/metal debris  - becomes cemented, very dense
3.5					100.5
5.0	GB	MC = 17% Fines = 12%	SM		APPARENT FILL: SILTY SAND, (SM) reddish brown, fine grained, damp, appears medium dense, some gravel
6.0					98.0
7.5			GM		SILTY GRAVEL WITH SAND, (GM) light brown, damp to moist, appears medium dense, with cobbles, with boulders (APPARENT NATIVE)
10.0					94.0

- Groundwater not encountered at time of excavation  
 - Referenced elevations are approximate and based on Google Earth topography  
 Bottom of test pit at 10.0 feet.

GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 1/13/20 14:05 - C:\USERS\IGN NORTHERN\DR\PROJECTS\219-1183 ROCK CREEK COVE - STEVENSON\219-1183 LOGS.GPJ



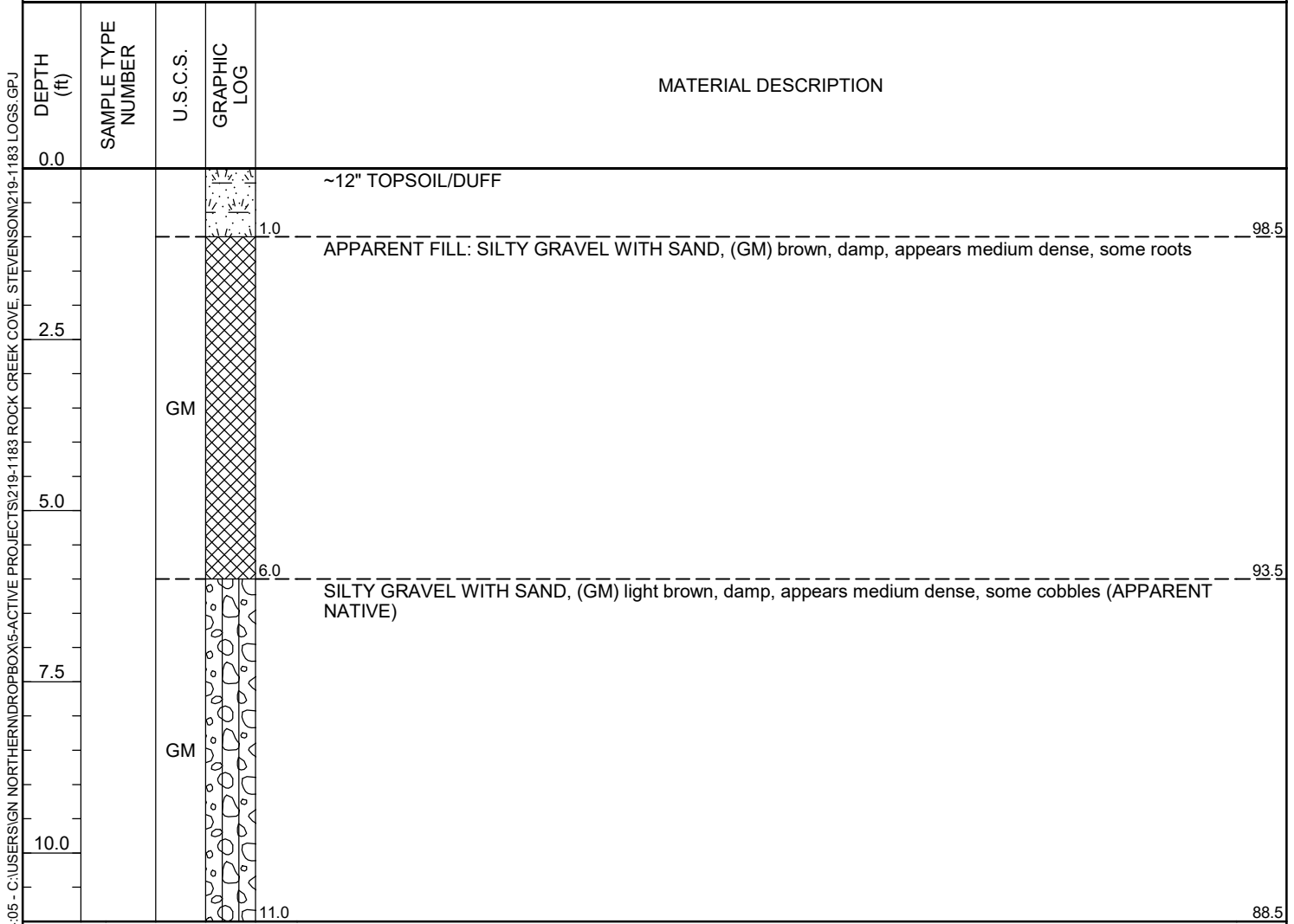


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 Fax: (509) 248-4220

# TEST PIT NUMBER TP-12

PAGE 1 OF 1

**CLIENT** FDM Development **PROJECT NAME** Proposed Rock Creek Cove Development  
**PROJECT NUMBER** 219-1183 **PROJECT LOCATION** Rock Creek Drive, Stevenson, WA  
**DATE STARTED** 12/23/19 **COMPLETED** 12/23/19 **GROUND ELEVATION** 99.5 ft **TEST PIT SIZE** 36 x 96 inches  
**EXCAVATION CONTRACTOR** Riley Materials **GROUND WATER LEVELS:**  
**EXCAVATION METHOD** Link-Belt 145x4 Excavator **AT TIME OF EXCAVATION** ---  
**LOGGED BY** KAH **CHECKED BY** MYM **AT END OF EXCAVATION** ---  
**NOTES** Approx. GPS Coords.: 45°41'17.30"N, 121°53'51.73"W **AFTER EXCAVATION** ---



- Groundwater not encountered at time of excavation  
 - Referenced elevations are approximate and based on Google Earth topography  
 Bottom of test pit at 11.0 feet.

GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 1/13/20 14:05 - C:\USERS\IGN NORTHERN\IDROPBOX\ACTIVE PROJECTS\219-1183 ROCK CREEK COVE - STEVENSON\219-1183 LOGS.GPJ

# KEY CHART

RELATIVE DENSITY OR CONSISTENCY VERSUS SPT N-VALUE					
COARSE-GRAINED SOILS			FINE-GRAINED SOILS		
DENSITY	N (BLOWS/FT)	FIELD TEST	CONSISTENCY	N (BLOWS/FT)	FIELD TEST
Very Loose	0 – 4	Easily penetrated with ½-inch reinforcing rod pushed by hand	Very Soft	0 – 2	Easily penetrated several inches by thumb
Loose	4 – 10	Difficult to penetrate with ½-inch reinforcing rod pushed by hand	Soft	2 – 4	Easily penetrated one inch by thumb
Medium -Dense	10 – 30	Easily penetrated with ½-inch rod driven with a 5-lb hammer	Medium-Stiff	4 – 8	Penetrated over ½-inch by thumb with moderate effort
Dense	30 – 50	Difficult to penetrate with ½-inch rod driven with a 5-lb hammer	Stiff	8 – 15	Indented about ½-inch by thumb but penetrated with great effort
Very Dense	> 50	penetrated only a few inches with ½-inch rod driven with a 5-lb hammer	Very Stiff	15 – 30	Readily indented by thumb
			Hard	> 30	Indented with difficulty by thumbnail

USCS SOIL CLASSIFICATION						
MAJOR DIVISIONS			GROUP DESCRIPTION			
Coarse-Grained Soils  <50% passes #200 sieve	Gravel and Gravelly Soils <50% coarse fraction passes #4 sieve	Gravel (with little or no fines)		GW	Well-graded Gravel	
		Gravel (with >12% fines)		GP	Poorly Graded Gravel	
		Sand and Sandy Soils >50% coarse fraction passes #4 sieve	Sand (with little or no fines)		GM	Silty Gravel
			Sand (with >12% fines)		GC	Clayey Gravel
	Fine-Grained Soils  >50% passes #200 sieve	Silt and Clay Liquid Limit < 50		SW	Well-graded Sand	
				SP	Poorly graded Sand	
			SM	Silty Sand		
Silt and Clay Liquid Limit > 50			SC	Clayey Sand		
		ML	Silt			
		CL	Lean Clay			
Highly Organic Soils	Silt and Clay Liquid Limit > 50		OL	Organic Silt and Clay (low plasticity)		
			MH	Inorganic Silt		
			CH	Inorganic Clay		
		OH	Organic Clay and Silt (med. to high plasticity)			
	PT	Peat		Top Soil		

LOG SYMBOLS		
	2S	2" OD Split Spoon (SPT)
	3S	3" OD Split Spoon
	NS	Non-Standard Split Spoon
	ST	Shelby Tube
	CR	Core Run
	BG	Bag Sample
	TV	Torvane Reading
	PP	Penetrometer Reading
	NR	No Recovery
	GW	Groundwater Table

MODIFIERS	
DESCRIPTION	RANGE
Trace	<5%
Little	5% – 12%
Some	>12%

MOISTURE CONTENT	
DESCRIPTION	FIELD OBSERVATION
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but not visible water
Wet	Visible free water

## SOIL CLASSIFICATION INCLUDES

1. Group Name
2. Group Symbol
3. Color
4. Moisture content
5. Density / consistency
6. Cementation
7. Particle size (if applicable)
8. Odor (if present)
9. Comments

MAJOR DIVISIONS WITH GRAIN SIZE							
SIEVE SIZE							
12"	3"	3/4"	4	10	40	200	
GRAIN SIZE (INCHES)							
12	3	0.75	0.19	0.079	0.0171	0.0029	
Boulders	Cobbles	Gravel		Sand			Silt and Clay
		Coarse	Fine	Coarse	Medium	Fine	

Conditions shown on boring and testpit logs represent our observations at the time and location of the fieldwork, modifications based on lab test, analysis, and geological and engineering judgment. These conditions may not exist at other times and locations, even in close proximity thereof. This information was gathered as part of our investigation, and we are not responsible for any use or interpretation of the information by others.

*Appendix III*  
*Laboratory Testing Results*



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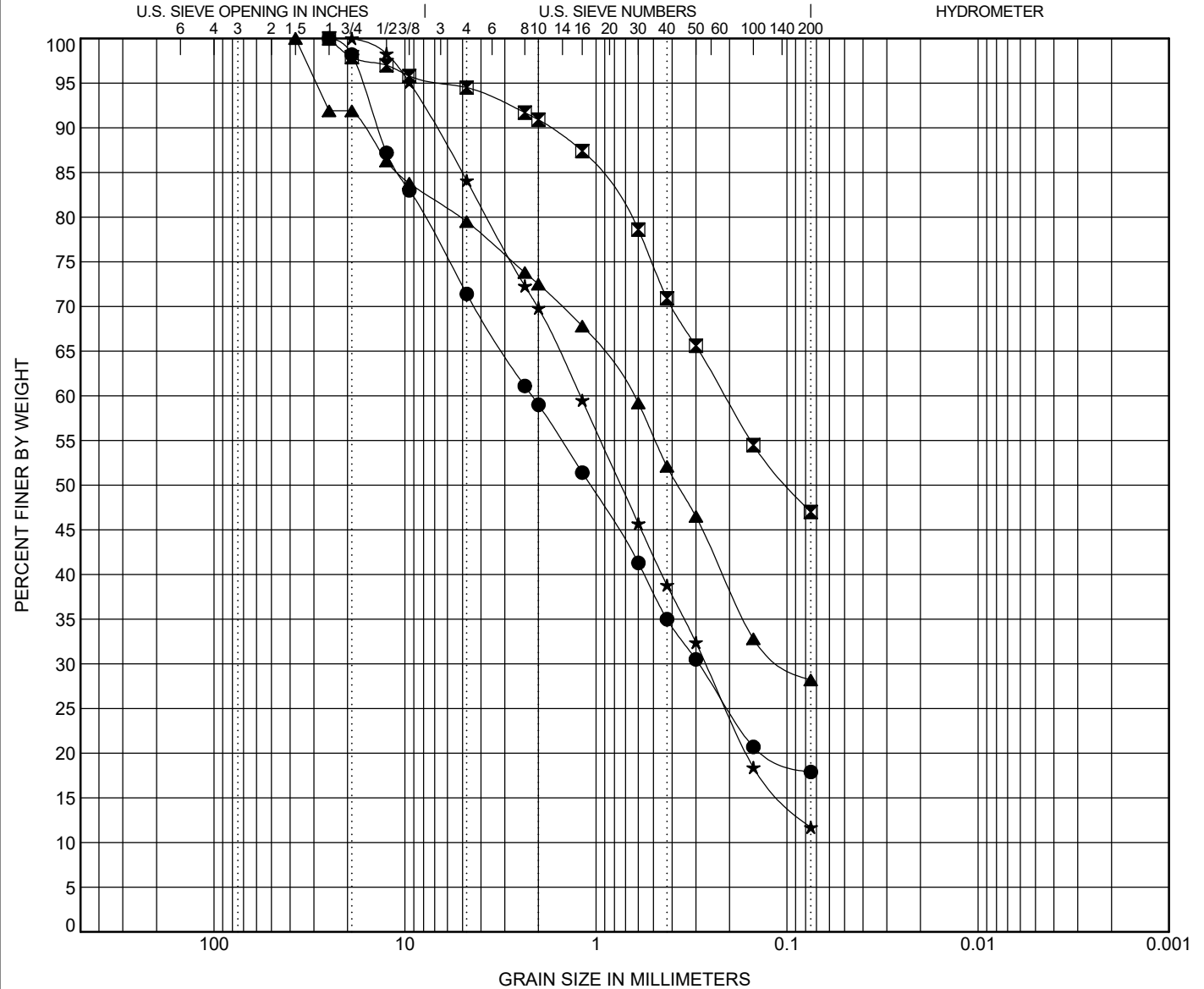
# GRAIN SIZE DISTRIBUTION

CLIENT FDM Development

PROJECT NAME Proposed Rock Creek Cove Development

PROJECT NUMBER 219-1183

PROJECT LOCATION Rock Creek Drive, Stevenson, WA



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	DEPTH	Classification					LL	PL	PI	Cc	Cu
● TP-1	5.0	SILTY SAND WITH GRAVEL (SM)									
☒ TP-2	3.5	SILTY SAND (SM)									
▲ TP-3	11.0	SILTY SAND WITH GRAVEL (SM)									
★ TP-11	4.0	SILTY SAND WITH GRAVEL (SM)								0.93	19.25

BOREHOLE	DEPTH	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● TP-1	5.0	25	2.164	0.29		28.6	53.5		17.9
☒ TP-2	3.5	25	0.211			5.5	47.5		47.0
▲ TP-3	11.0	37.5	0.639	0.098		20.5	51.3		28.2
★ TP-11	4.0	19	1.211	0.266		15.9	72.4		11.7

GRAIN SIZE - TEMPLATE - JESSE.GDT - 1/13/20 14:06 - C:\USERS\GN NORTHERN\IDROPBOX\5-ACTIVE PROJECTS\219-1183 ROCK CREEK COVE, STEVENSON\219-1183 LOGS.GPJ



*Appendix IV*  
*Site & Exploration Photographs*





*Excavation of test-pit TP-1, looking west*



*Exposed subsurface soil profile within test-pit TP-1*



*Excavation of test-pit TP-2, looking southwest*



*Exposed subsurface soil profile within test-pit TP-2*



*Excavation of test-pit TP-3, looking west*



*Exposed subsurface soil profile within test-pit TP-3*





*View of site conditions near test-pit TP-4*



*Exposed subsurface soil profile within test-pit TP-4*



*Excavation of test-pit TP-5, looking east*



*Exposed subsurface soil profile within test-pit TP-5*



*Excavation of test-pit TP-6, looking north*



*Exposed subsurface soil profile within test-pit TP-6*





*View of site conditions near test-pit TP-7, looking north*



*View of site conditions*



*View of site conditions near test-pit TP-8, looking west*



*Exposed subsurface soil profile within test-pit TP-8*



*Exposed subsurface soil profile within test-pit TP-9*



*Exposed subsurface soil profile within test-pit TP-10*





*Exposed subsurface soil profile within test-pit TP-11*



*Exposed subsurface soil profile within test-pit TP-11*



*Excavation of test-pit TP-12, looking southwest*



*Exposed subsurface soil profile within test-pit TP-12*



*View of site conditions near test-pit TP-12, looking northwest*



*Infiltration test setup at test-pit P-1*



*Appendix V*  
*Historic Aerial Photographs*



*1935 Historic USGS Aerial*



*1952 Historic USGS Aerial*





*1955 Historic USGS Aerial*



*1973 Historic USGS Aerial*





*1975 Historic USGS Aerial*



*1979 Historic USGS Aerial*





*1981 Historic USGS Aerial*



*1984 Historic USGS Aerial*



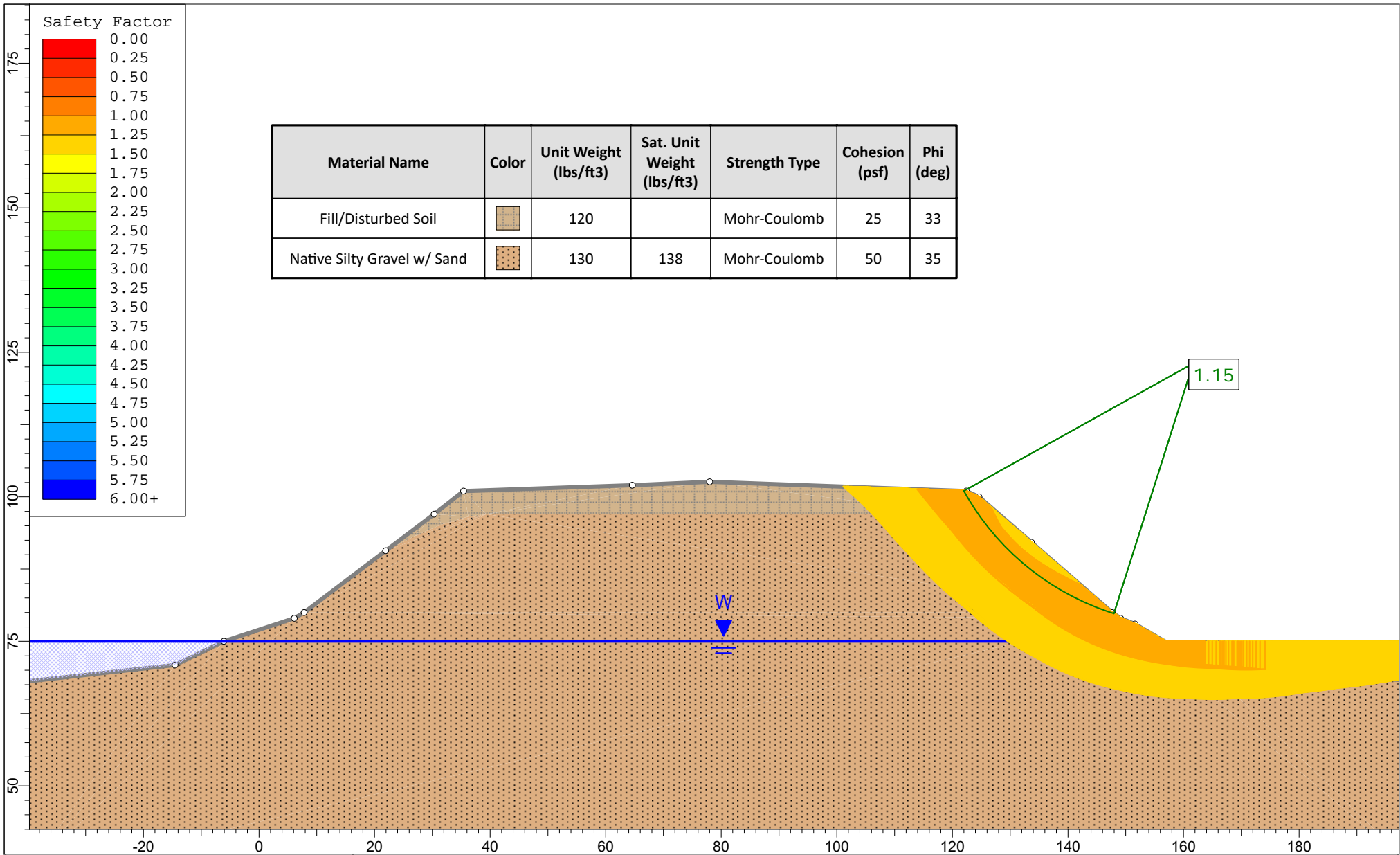



*1993 Historic USGS Aerial*



*2007 Historic USGS Aerial*

*Appendix VI*  
*Slope Stability Analysis*



 <p><b>Northern, Inc.</b>  <small>Consulting Engineers Environmental Scientists Geologists          Construction Materials Testing Geophysical Services</small></p>	Project		Rock Creek Cove Vacation Homes Project			
	Analysis Description				Existing Slopes Across Southern Peninsula - Spencer Method - Static	
	Drawn By	MYM	Scale	1:276	Company	GN Northern, Inc,
	Date		File Name	Slide1.slim		



*Appendix VII*  
*NRCS Soil Survey*



United States  
Department of  
Agriculture

**NRCS**

Natural  
Resources  
Conservation  
Service

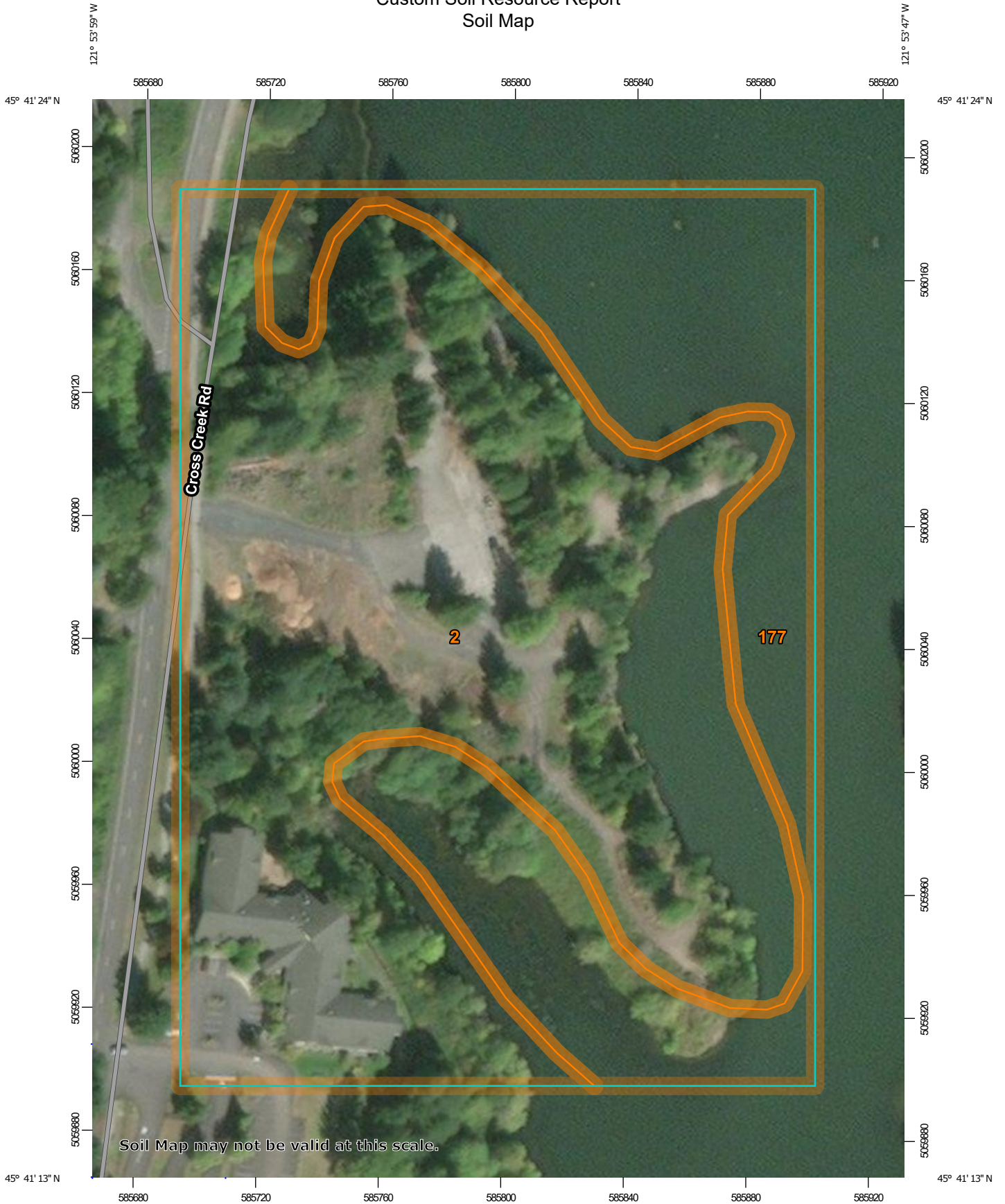
A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for Skamania County Area, Washington

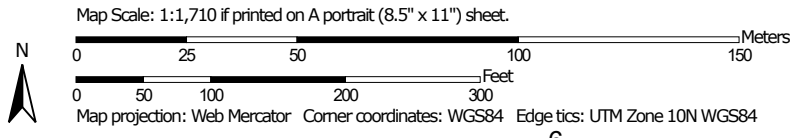
## Rock Creek Cove Vacation Homes Project



# Custom Soil Resource Report Soil Map



Soil Map may not be valid at this scale.





## Skamania County Area, Washington

### 2—Arents, 0 to 5 percent slopes

#### Map Unit Setting

*National map unit symbol:* 1hhrw

*Elevation:* 0 to 200 feet

*Mean annual precipitation:* 40 to 80 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 200 days

*Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

*Arents and similar soils:* 100 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Arents

##### Setting

*Landform:* Terraces

##### Typical profile

*H1 - 0 to 24 inches:* gravelly sandy loam

*H2 - 24 to 60 inches:* extremely gravelly sandy loam

##### Properties and qualities

*Slope:* 0 to 5 percent

*Depth to restrictive feature:* More than 80 inches

*Natural drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 5.95 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water storage in profile:* Moderate (about 6.3 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3s

*Hydrologic Soil Group:* A

*Hydric soil rating:* No

### 177—Water

#### Map Unit Composition

*Water:* 100 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

# CULTURAL RESOURCES REPORT COVER SHEET

DAHP Project Number: \_\_\_\_\_ (Please contact the lead agency for the project number. If associated to SEPA, please contact [SEPA@dahp.wa.gov](mailto:SEPA@dahp.wa.gov) to obtain the project number before creating a new project.)

Author: Donald D. Pattee and Bill R.Roulette

Title of Report: Results of a Cultural Resources Study of the Proposed Rock Creek Cove Resort Property, Stevenson, Washington

Date of Report: February 4, 2020

County(ies): Skamania Section: 1 Township: 2N Range: 7E

Quad: Bonneville Dam, OR-WA; Carson, WA-OR 2017 Acres: 6.4

PDF of report submitted (REQUIRED)  Yes

Historic Property Inventory Forms to be Approved Online?  Yes  No

Archaeological Site(s)/Isolate(s) Found or Amended?  Yes  No

TCP(s) found?  Yes  No

Replace a draft?  Yes  No

Satisfy a DAHP Archaeological Excavation Permit requirement?  Yes # \_\_\_\_\_  No

Were Human Remains Found?  Yes DAHP Case # \_\_\_\_\_  No

DAHP Archaeological Site #:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- Submission of PDFs is required.
- Please be sure that any PDF submitted to DAHP has its cover sheet, figures, graphics, appendices, attachments, correspondence, etc., compiled into one single PDF file.
- Please check that the PDF displays correctly when opened.

# RESULTS OF A CULTURAL RESOURCES STUDY OF THE PROPOSED ROCK CREEK COVE RESORT PROPERTY, STEVENSON, WASHINGTON



By  
Donald D. Pattee, M.A., RPA 32246885,  
and  
Bill R. Roulette, M.A., RPA 11132,

Report submitted to

FDM Development, Inc.  
Kennewick, Washington

February 4, 2020

**APPLIED ARCHAEOLOGICAL RESEARCH, INC., REPORT NO. 2292**



APPLIED  
ARCHAEOLOGICAL  
RESEARCH, INC.  
*Cultural Resource Management and Historic Preservation*

4001 NE Halsey Street, Suite 3  
Portland, OR 97232  
Phone (503) 281-9451



**RESULTS OF A CULTURAL RESOURCES STUDY  
OF THE PROPOSED ROCK CREEK COVE RESORT  
PROPERTY, STEVENSON, WASHINGTON**

By:

Donald D. Pattee, M.A., RPA 32246885  
Bill R. Roulette, M.A., RPA 11132

Report submitted to

FDM Development, Inc.  
Kennewick, Washington

February 4, 2020

**APPLIED ARCHAEOLOGICAL RESEARCH, INC., REPORT NO. 2292**

## ABSTRACT

FDM Development, Inc. (FDM) proposes to develop the Rock Creek Cove resort on an industrial property, formerly occupied by the Hegewald Veneer Mill (HVM), located in the western part of the town of Stevenson in Skamania County, Washington. Developments will include the construction of 14 vacation rental homes, a property management building, and paved parking areas around each structure.

The development site is within an urban exempt area of the Columbia River Gorge National Scenic Area. Therefore, the proposed project is not required to follow the guidelines for cultural resource surveys described in the Columbia River Gorge National Scenic Area Management Plan. However, the project is required to comply with the State Environmental Policy Act as implemented by Skamania County Code (16.04). The State Environmental Policy Act requires all developers to consider the impacts a project may have on the environment and to cultural resources before making permitting decisions. FDM contracted with Applied Archaeological Research, Inc. (AAR) to assist it in determining the effects of its proposed project on cultural resources.

AAR's study was designed to locate cultural resources that may be affected by the development and included background research and a field study. The latter included an intensive pedestrian survey and the excavation of four shovel test pits.

As a result, AAR determined that the entire project area had been impacted by the construction and operation of the HVM. Two concrete pads are all that remain of the mill operations. They mark the locations of the main sawmill building and another mill building. In AAR's opinion, the pads are not archaeological and they were not recorded as an archaeological resource.

In terms of Line 13 of the State Environmental Policy Act checklist, it is AAR finding that the project area does not contain any buildings, structures, or sites, that are listed in or eligible for listing in national, state, or local preservation registers. AAR recommends no further archaeological work is warranted in the current project area.

Although considered unlikely, there is always a possibility that an archaeological resource may be discovered during future development activity on the property. For that reason, the applicant and any contractors that may work on the property need to be aware that under the Revised Code of Washington at 27.53.060, it is unlawful to knowingly damage, deface, or destroy an archaeological site on public or private land in Washington. The Revised Code of Washington at 27.44.040 makes it a class C felony to knowingly remove, mutilate, deface, injure, or destroy any cairn or grave of any native Indian. Thus, in the event that archaeological materials, Indian cairns, or human remains are encountered during the development of the property, all construction activities must stop in the vicinity of the finds and the Department of Archaeology and Historic Preservation should immediately be notified and work halted in the vicinity of the finds until they can be inspected and assessed. Procedures outlined under Washington Administrative Code 25-48 will be followed and work will not resume until mitigation measures have been agreed upon.

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## INTRODUCTION

### Project Description and Staffing

FDM Development, Inc. (FDM) proposes to develop the former site of the Hegewald Veneer Mill (HVM) located at Rock Creek Cove resort into a resort that would include 14 vacation rental homes, a property management building, associated infrastructure, and paved parking areas. The development site is within an urban exempt area of the Columbia River Gorge National Scenic Area (CRGNSA). Therefore, the proposed project is not required to follow the guidelines for cultural resource surveys described in the CRGNSA Management Plan. However, the project is required to comply with the State Environmental Policy Act (SEPA) as implemented by Skamania County Code (16.04). SEPA requires all developers to consider the impacts a project may have on the environment and to cultural resources before making permitting decisions. To assist FDM in its compliance with SEPA requirements, Applied Archaeological Research, Inc. (AAR) conducted a cultural resource survey of the proposed development site.

Archaeological fieldwork for the project was supervised by Donald D. Pattee, M.A., RPA 32246885 who was assisted by Michelle R. Lynch, M.A., RPA 429967347. The project was under the technical supervision of Bill R. Roulette, M.A., RPA 11132, AAR's Principle Investigator. Mr. Pattee, Ms. Lynch, and Mr. Roulette meet the Secretary of the Interior's professional qualification standards.

### Conventions

In this report, measurements for common distances, elevations, and areas are in United States customary units (e.g., feet, miles, and acres). Measurements related to archaeological techniques and artifact analyses are in metric units (e.g., meters, centimeters, and millimeters). Numbers in the thousands used to express ages and distances feature commas to denote thousands. Calendar dates and dates used to express years before present (B.P.) do not use commas to denote the thousands place but do use commas to denote the ten thousands place.

### Description of the Project Area

The proposed resort development site is in the western part of the town of Stevenson in Skamania County, Washington, in Section 1, Township 2 North, Range 7 East, Willamette Meridian (Figure 1). It is privately owned and encompasses 6.4 acres. It is composed of three contiguous tax parcels numbered 02070100130300, 02070100130400, and 02070100130200, that together form an irregularly-shaped tract that is maximally 1,022 feet (ft) measured north-to-south and 580 ft measured east-to-west. The property is located on a peninsula that projects into Rock Creek Cove on the northern bank of the Columbia River. The cove was created in 1937 as a result of flooding that occurred along the banks of the river east of Cascade Locks soon after the Bonneville Dam began operation. Its west side is bordered by Rock Creek Drive. Its other sides are defined by the boundaries of the proposed development footprint and the cove (Figure 2).

The project area is at an elevation of about 102 ft above mean sea level (amsl). Its surface has been artificially flattened and built up. The modifications are most likely related to the development of the property by the HVM in the early 1950s (see below). Its central part contains two concrete pads that mark the former locations of mill buildings. The largest pad is 337 ft long and 86 ft wide. It marks the former location of the main sawmill (Figure 3). The other pad is 59 ft long and 45 ft wide and most likely marks the location of a second mill building, possibly a machine shop.

Prior to AAR's fieldwork parts of the property had been disturbed by heavy equipment that was used to clear brush and remove trees. Cleared vegetation and soil were pushed into low piles that

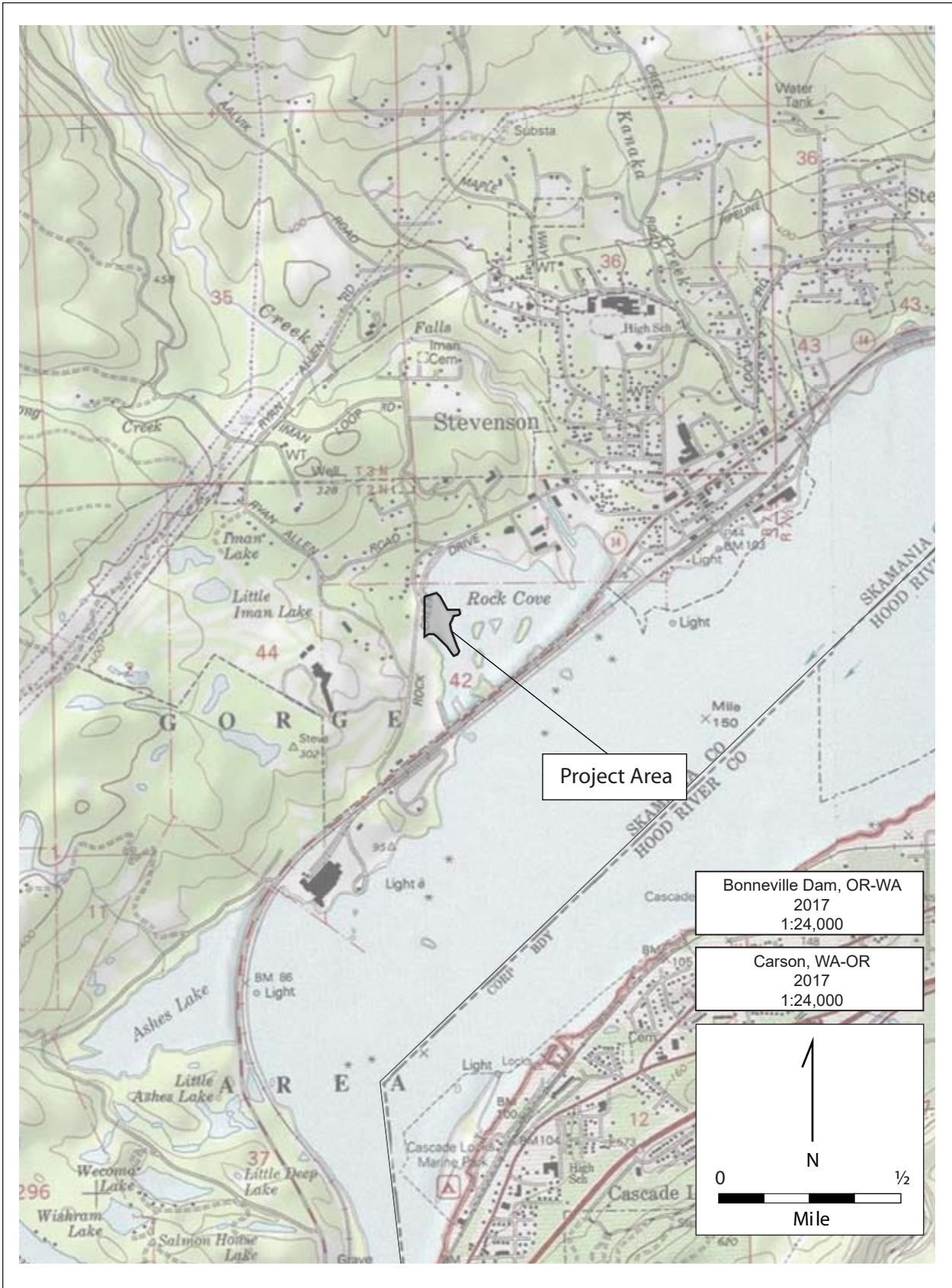


Figure 1. Location of the project area.





Figure 2. Aerial photomap of the project area.



Figure 3. Photographic overview looking east at the concrete foundation of the main sawmill building of the HVM.

remain in place (Figure 4). At least two trenches had been excavated in the eastern part of the property and partly backfilled (Figure 5). The ground surface in the parts of the property that were not disturbed or otherwise obscured by gravel or building foundations were covered in grasses, blackberry brambles, and a scattering of Douglas-fir, alder, and maple trees (Figure 6).

### **Project Background**

In 2016, Skamania County initiated an inventory of all brownfield sites (i.e. abandoned properties where there may be environmental contamination) located in the county to better understand their impacts on surrounding communities and to study their potential for commercial development. As part of the inventory, the county conducted a Phase II environmental site assessment (ESA) of the project area to evaluate the potential environmental impacts associated with the historical operation of the HVM. No cultural resource investigations were conducted on the property in advance of or as part of the assessment. The ESA included the use of ground penetrating radar across the site to check for buried infrastructure (e.g. tanks, tank pits, pipes, or septic systems). In addition, ten test pits were excavated in select areas to extract soil samples to be analyzed for metals, petroleum, and dioxins. The GPR results showed that there were no buried infrastructure and no petroleum was detected in the soil. Some metals and dioxins were detected, but did not exceed contamination levels considered by the Model Toxics Control Act to be harmful to humans. The ESA recommended that no further environmental remediation of the site was warranted.





Figure 4. Photographic overview looking north of an area cleared of brush. The vegetation and displaced soil have been pushed into low piles.



Figure 5. Photographic overview looking northeast of an area that had been trenched prior to fieldwork.





Figure 6. Photographic overview looking west showing typical vegetation throughout the project area at the time of fieldwork.

## ENVIRONMENTAL, CULTURAL, AND HISTORICAL CONTEXTS

### Environmental Setting

The project area is located in the southernmost part of the Southern Washington Cascade physiographic province where the mountains have been incised by the Columbia River Gorge. The province is characterized by deeply dissected and weathered mountains set on a generally western sloping terrace. It contains rugged mountainous areas, river floodplains, and low terraces.

The modern topography of the Gorge reflects the down cutting of the Columbia River through basalt bedrock. The basalt was laid down during the Miocene in a number of individual flows that collectively are known as the Columbia River Basalts. The lava from these flows originated in central and eastern Washington and Oregon and streamed westward down the Columbia River valley to the sea (Allen et al. 1986). Exposures of these flows can be seen in the steep walls framing the Gorge.

Following the deposition of the basalts, the Cascades were up-arched. As the mountains were rising, the Columbia River was cutting down through the range, creating its deep canyon. Later, toward the end of the Pliocene and into the Pleistocene, volcanic activity resumed in the Cascades, producing lava flows which filled the tributaries of the Columbia and which displaced the river to the north, near its present position. The strato volcano peaks of Mt. Hood, Mt. St. Helens, and Mt. Adams began to rise some 700,000 years ago, a process which continues into the present. The up-arching of the Cascades created a barrier to easterly flowing moist marine air and resulted in the climatic division of the region into the moist western and dry eastern portions (Allen et al. 1986). In the Columbia River Gorge, this climatic change occurs around White Salmon and Hood River, a short distance upriver, or east, of the project area.

Although the basalt flows of the Miocene laid the foundation for the physiography of the Gorge, the geological events of the Pleistocene shaped it into its present configuration. The most important of these events were the Missoula Floods (known variously as the Bretz or Spokane floods) that occurred between about 17,000 and 12,700 years ago (Clague et al. 2003; Waitt 1994). The floodwaters originated in Glacial Lake Missoula, a body of water formed when the Purcell Trench Lobe of the Cordilleran ice sheet blocked the Clark Fork River in Montana. When the waters of Lake Missoula breached the ice dam, a wall of water estimated to have been ca. 2,000 ft high was released. In a single flood, somewhere near 500 cubic miles of water rushed across the Columbia Plateau and entered the Columbia River system (Alt and Hyndman 1993:172). The tremendous force and volume of the floods scoured away the soils of the Gorge and altered the river valley from its previous V shape to its present U-shaped cross-sectional profile (Allen et al. 1986:159).

The floods led to the oversteepening of the Gorge walls, particularly in areas where the Columbia River basalts are underlain by the easily erodible Eagle Creek Formation. These conditions have made a nearly 50-square-mile area toward the west end of the Gorge prone to landslides. The project area is situated near the leading edge of a debris deposit from the quaternary-aged Red Bluff landslide, which is part of the greater Cascade Landslide Complex. The deposits extend further southward and are submerged in Rock Creek Cove (Pierson et al. 2016; Randall 2012).

The project area is in the *Tsuga heterophylla* zone, a classification of plant associations that is found throughout western Washington and Oregon in wet maritime climates between sea level and about 2,300 ft amsl (Franklin and Dyrness 1988). Throughout the zone, Douglas-fir, western hemlock, and western redcedar with few hardwoods dominate typical overstory vegetation in forested areas. Common forest understory plants throughout the zone include vine maple, hawthorn, wild rose, blackberry, thimbleberry, and snowberry.

The primary soil mapped within the project area is Arents, 0 to 5 percent slopes (Haggen 1990). It is an anthropogenic soil that developed as the result of disturbance and redeposition through various human activities such as mining, dredging of water bodies, road building, and construction (Sencindiver and Ammons 2000). It does not represent a native soil body, but rather formed in spoils that have been removed from their original context and redeposited. No single profile of Arents is typical. One commonly observed includes a 24-inch-thick "A horizon" of dark brown, gravelly sandy loam. The underlying material extends to a depth of 5 ft below surface and consists of stratified gravelly to very gravelly loamy sand (Haagen 1990).

### **Ethnographic Overview**

The project area is located at the eastern periphery of the traditional territory of the Cascade people that spoke an Upper Chinook dialect and were closely aligned with other Upper Chinook peoples that occupied both sides of the Columbia River between from roughly the mouth of the Washougal River to a point above Dallesport including the Hood River, White Salmon, Wasco, and Wishram (French and French 1998:360-363). The territory of the Cascades Chinook included lands on each side of the Columbia River in the vicinity of the Cascades of the Columbia, a section of river narrowed and obstructed with landslide debris where the river dropped about 40 ft in elevation through a series of rapids over a distance of several miles. The Cascades controlled the portages around the rapids and the important salmon fishery centered there.

The Cascade people and other Upper Chinookan groups lived in autonomous villages without overarching political organization or centralized government (French and French 1998:369). Villages were presided over by chiefs who held office based primarily on a system of hereditary leadership rights (Silverstein 1990:541). Chiefs were usually persons of the highest rank within the hierarchically organized Chinook society, and chiefly status was conferred on members of wealthy and politically

influential families. Status, class, and rank were used as organizational principles in Chinook society. Chiefs, along with shamans, warriors, and traders, formed a small upper class with slaves forming the bottom of the social hierarchy. Commoners ranged between these hierarchical poles and were probably ranked along numerous socially recognized gradations. High rank and high class was strongly linked to wealth.

Winters were spent in permanent settlements consisting of one or more rectangular, gabled-roofed, upright-cedar-plank houses (Hajda 1994; Silverstein 1990) that featured raised sleeping and storage platforms that lined the house walls. In 1805, Lewis and Clark encountered the Chinook village of Wishram on the north side of the Columbia River (near what is now Columbia Hills State Park) and described some 20 homes constructed of wood, the first wooden houses the expedition had seen since leaving Illinois (Wilke et al. 1983:75-76). Chinook subsistence was oriented toward fishing and root-and-berry gathering. Most subsistence activities were organized around small groups that dispersed to smaller camps focused on task-specific subsistence activities.

Native peoples that lived along the Columbia River came into contact with European and American sea-borne fur traders in the late-eighteenth century. Diseases introduced by the traders, especially small pox, influenza, and malaria, spread rapidly upriver and throughout the region with catastrophic results. The first historical reports of a malarial epidemic are from 1830. Within four years 75 to 90 percent of the regional native population was dead (Boyd 1985). Displaced groups and individuals formed *ad hoc* communities or joined those still existing, and either attempted to follow traditional patterns or adopted the life ways of the Euroamericans (Hajda and Boyd 1988:45-46).

## Historical Overview

The first Euroamericans to pass through the Columbia River Gorge were explorers and fur traders in the early decades of the nineteenth century. Among the explorers were Lewis and Clark who led their Corps of Discovery expedition down the Columbia River in 1805, and David Thompson, who traversed the length of the Columbia River in 1811. After the establishment of a land-based fur trade around 1811, a greater number of Euroamericans traveled throughout the region in search of furs. Travel logs left by early traders in the region document the spread of disease among the native populations of the Columbia River as early as the 1830s, resulting in a catastrophic population loss (Minor et al. 1986:54-55). By 1834, missionaries began trickling into the region, followed several years later by the initial waves of pioneers heading to the Willamette Valley along the Oregon Trail. Between 1841 and 1851 all travelers and settlers heading west had to pass through the Columbia River Gorge, where, just east of the city of Stevenson, they were forced to portage along the north bank of the river around the rapids known as the Upper, Middle, and Lower Cascades.

The passing of the Oregon Donation Land Act of 1850 resulted in a steady influx of Euroamerican settlers that initially used the area for grazing livestock and logging (Mack and McClure 1999). As more settlers arrived to the region, small communities were established along the banks of the Columbia River, which provided needed services for travelers passing through the gorge. These included lodging, supplies, and improved portage routes. One such community was Stevenson, which shared the name of its founder, George Stevenson. The town was founded in 1893 and quickly became an important way-stop for travelers passing through the gorge. River transportation improved with the construction of the Cascade Locks in 1896 allowing boats to by-pass the cascades. Incoming travelers to the region could now navigate the Columbia River from Portland as far as The Dalles. Easier river travel spurred economic development in Stevenson and by 1900 the town featured two hotels, two saloons, two restaurants, as well as a general store, drug store, post-office, jail, print shop, and court house (Skamania County Chamber of Commerce 2020; Wilma 2006). The town was officially incorporated in 1908. That same year, the Spokane, Portland, and Seattle rail line arrived and connected the town to the major cities of the Pacific Northwest (Wilma 2006).



The rail line and the more navigable river resulted in logging and milling becoming one of the more important economic pursuits in the region as timber products could be transported with relative ease to Portland or Seattle and then shipped overseas where demand was high. In the following decades, the logging industry became vital to the economy of Stevenson. Trees logged in the hills backing the town were transported by flumes down to sawmills that lined the shoreline including the HVM.

The HVM operated between 1952 and 1973. It was primarily used for the production of wood veneer, which was peeled from tree logs and then pressed into 8-foot-long sheets (Hunt 1964). The sheets were used to line doors, table tops, and cabinetry panels. At the height of its operation, the mill produced 60,000,000 square feet of veneer annually (Hunt 1964). Waste produced from the process (e.g. wood chips or parts of the log not suitable for milling) was burned in two conical structures referred to at the time as “wigwam burners” (Hunt 1964). Tree logs were stored in Rock Creek Cove, which was enclosed by wooden booms that prevented the logs from floating downriver. In 1973, the mill was sold to Louisiana Pacific, which operated it until its closure in 1975. Around that same time, other sawmills in the Stevenson area closed resulting in the loss of hundreds of jobs and severely impacting the economy of the town. It did not fully recover until the early 1990s (Wilma 2006).

### **Historical Maps Research**

As part of the background research, historical maps were reviewed to determine the likelihood that the project area contains undocumented historic-era features and to trace land ownership. Maps reviewed include those produced by the General Land Office (GLO) as part of the cadastral survey and those prepared by the United States Geologic Survey (USGS). Historic aerial photographs were also reviewed.

The earliest maps that depict the project area are cadastral survey maps produced by the General Land Office (GLO) in 1860, 1876, 1903, and 1906. The project area is shown as devoid of developments on the maps (GLO 1860, 1876, 1903, 1906). An 1864 GLO map shows lands taken out of federal ownership through land claims. The project area is shown as within a 319.91-acre land claim filed by D. Baughman (GLO 1864).

A 30-minute (1:125,000) map published by the United States Geological Survey (USGS) in 1929 shows the project area before inundation of the Bonneville Pool (also known as Bonneville Lake) the reservoir behind Bonneville Dam (USGS 1929). No buildings or other developments are depicted in it (Figure 7). A 15-minute map published by the USGS in 1957 shows the project area after completion of the Bonneville Dam and formation of the reservoir behind it (USGS 1957). A large rectangular structure is shown on the map to be in the project area representing the main HVM sawmill building (Figure 8).

An aerial photograph taken of the mill sometime between 1952 and 1973 on display in the Columbia Gorge Interpretive Center Museum, shows that HVM in full development (Figure 9). The mill complex can be seen to cover the entire project area with much of it covered by buildings, what appear to be graveled surfaces, stockpiled wood products, and general debris. The photograph shows the main sawmill and the second mill building in locations corresponding to where concrete pads remain. It also shows two wigwam burners that were located in the southern part of the property (Western Ways, Inc., n.d.).

### **Previous Archaeology in the Project Area and Vicinity**

A review of records on file at the Washington State Department of Archaeology and Historic Preservation (DAHP) accessed online using its Washington Information System for Architectural and Archaeological Records Data (WISAARD) database showed that the project area has not previously been surveyed for cultural resources. Thirty-three cultural resource investigations have been conducted within

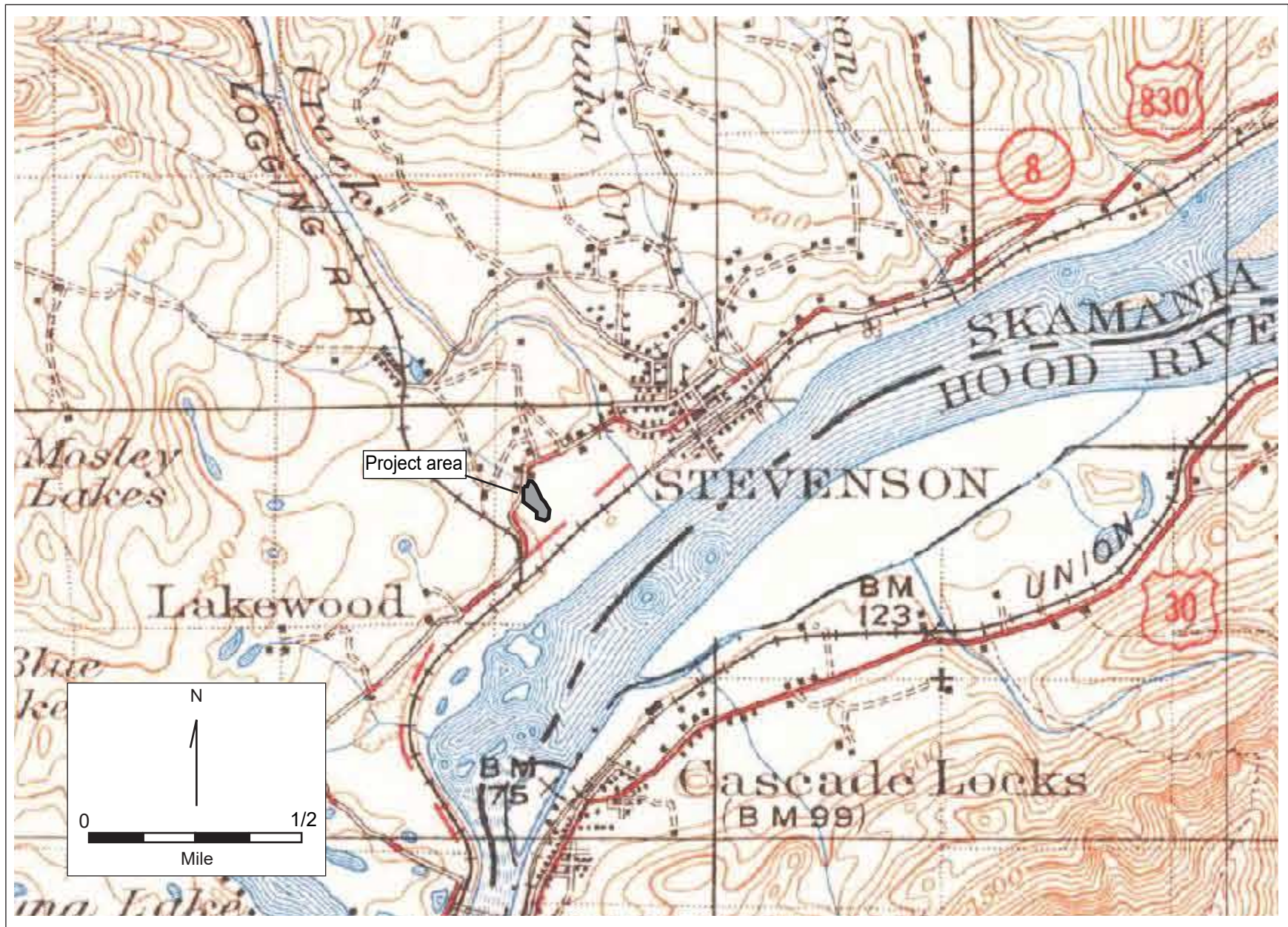


Figure 7. Location of the project area as depicted on the Hood River, Wash.-Oreg., 30-minute topographic quadrangle published in 1929.



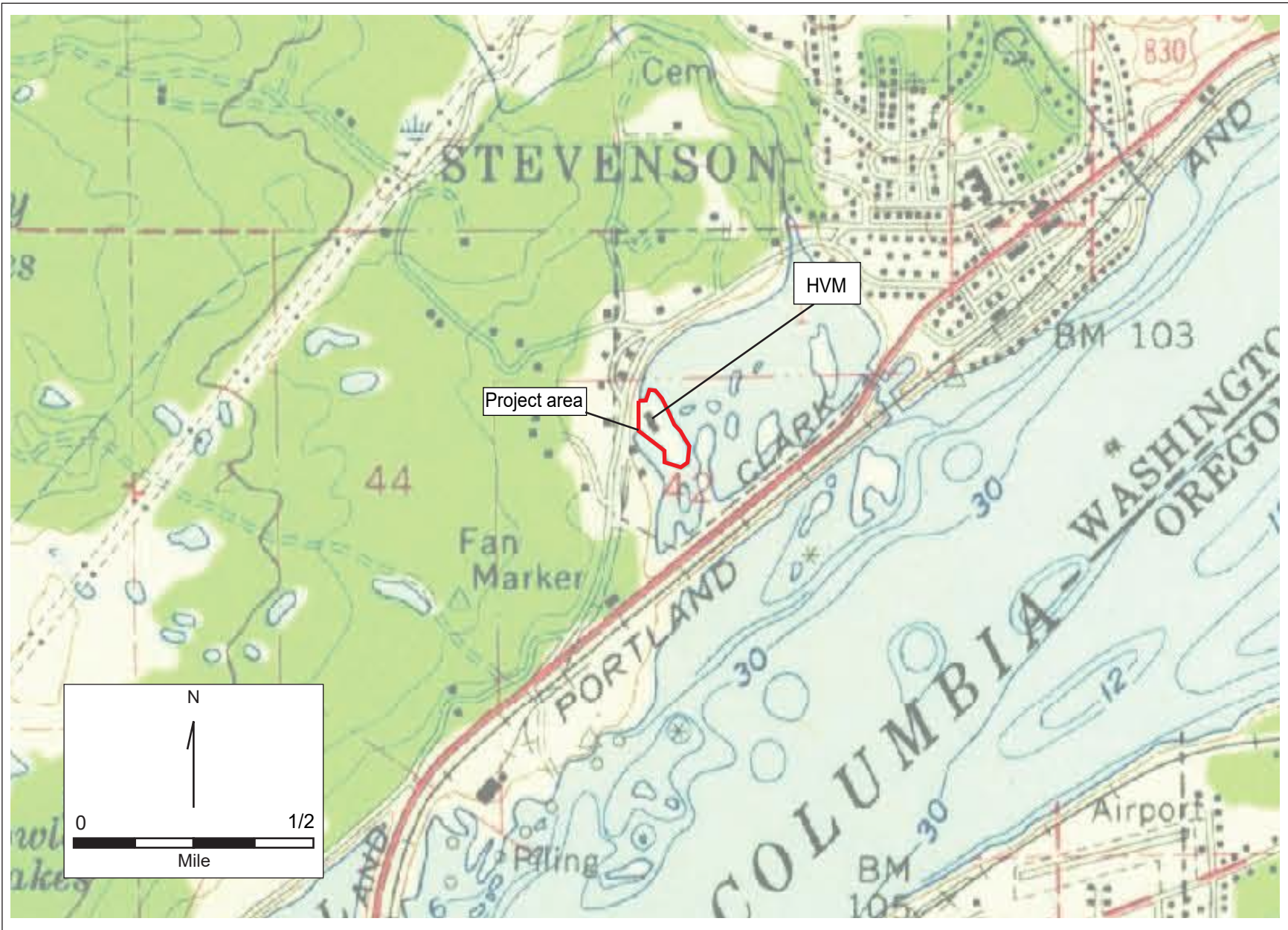


Figure 8. Location of the project area and the HVM as depicted on the Bonneville Dam, Oreg.-Wash., 15-minute topographic quadrangle published in 1957.





Figure 9. Aerial photomap taken of the HVM sometime between 1952 and 1973. Photomap is currently on display in the Columbia Gorge Interpretive Center Museum.

two miles of it (Table 1). The studies have generally consisted of reconnaissance and formal surveys that have resulted in the identification of multiple component sites 45SA20 and 45SA541, pre-contact sites 45SA210, 45SA600, 45SA633, 45SA650, pre-contact isolate 45SA585, and historic-era sites 45SA8, 45SA121, 45SA501, and 45SA502.

Of the previously recorded sites, 45SA20, the Ice House Lake site, has been the most intensively studied. The site was recorded during a cultural resources survey conducted by the University of Washington in advance of the construction of a powerhouse at Bonneville Dam (Mesrobian and Sunstrom 1976). It is located about 1.4 miles to the southwest of the project area on terraces overlooking the northern shore of the Columbia River. Evaluative test excavations were conducted at the site in 1988. They included a surface inspection as well as the excavation of six 1-x-1 meter (m) test units (TUs) and six auger test probes. The investigation resulted in the recovery of a variety of pre-contact and historic-era artifacts as well as floral and faunal remains.

Pre-contact artifacts recovered from the site included 11,243 pieces of cryptocrystalline silicate (CCS), obsidian, basalt, and petrified wood debitage and 99 stone tools. Tools included projectile points, preforms, knife fragments, bifaces, flake knives, perforators, used flakes, hammerstones, pounders, anvils, choppers, cobble flake knives, spall tools, abraders, and cores (Minor 1988). Most of the projectile points identified were small, narrow necked forms consistent with Types 7, 8, 10, and 12 described in Pettigrew's (1981) projectile point chronology of the Portland Basin. Broad-necked projectile points of the Type 2 variety were also observed (Pettigrew 1981).

The 439 historic-era artifacts recovered during the investigations included fragments of earthenware, porcelain, stoneware, and Chinese ware, clay pipes, vessel glass, machine cut nails, spikes, brace plates, iron bolts, staples, wire, bullets, metal scraps, and gunflint. A few pieces of charred nut shell and 148 animal bones were also recovered. Most of the bones were small fragments. Most were from sturgeon but they also included horse, elk, deer, cow, salmonids, and cyprinid bones (Minor 1988).

Minor (1988) determined that the site represented the village *Wahlala* (Curtis 1911) or *Walala* (Spier and Sapir 1930) occupied by the Cascade Chinook. It is described in the journal of Lewis and Clark as consisting of eight plank slab houses that were inhabited part of the year during the fishing season. Based on the results of the investigation, the site was interpreted to have been continually used by Chinook as a seasonal fishing village during the pre-contact period and into historic times. Initial occupation of the site was thought to have occurred 830 years ago. The site was likely abandoned around 1850 when the United States established a strong military presence throughout the Columbia River Gorge (see below). The site was recommended as eligible for listing on the National Register of Historic Places (NRHP).

The other multicomponent site within two miles of the project area is 45SA541. The site was recorded based on the inadvertent discovery of human remains in the side wall of a utility trench during the installation of buried telecommunications equipment. The discovery triggered emergency archaeological excavations and the screening of a sample of the spoils created during the trenching. Recovered were 86 human or potentially human bones and mixed historical; and prehistoric artifacts all of which were contained in a thick layer of imported fill (Paraso and Ellis 2010).

Of the previously recorded pre-contact resources, three of them (45SA210, 45SA585, and 45SA650) consist of low density, lithic scatters that have not been documented past the initial survey phase. Site 45SA210 was identified 1.5 miles to the southwest of the project area on the north shore of Ashes Lake. As documented, the site contains one desert side-notched projectile point, a piece of human bone, and pieces of lithic debitage (Cole and Southard 1971). Only lithic debitage was identified at the other resources with site 45SA585 containing 10 pieces of CCS and basalt debitage and isolated find 45SA650 containing a single piece of CCS debitage (Becker and Roulette 2017; Olander et al. 2011).

Table 1. Cultural Resource Surveys Conducted within 2 Miles of the Project Area

Author(s) of Report/Year	Type of Investigation	Size of Study Area	Findings
Cole and Southard 1971	Formal survey	Not listed	45SA210 identified and documented
Dunnell and Lewarch 1974	Formal survey	Not listed	45SA8 identified and documented
Mesrobian and Sundstrom 1976	Formal survey	Not listed	45SA20 identified and recorded
Minor 1988	Evaluative testing	Not listed	Additional study at 45SA20 that refined its boundaries and expanded its artifact assemblage.
Minor and Beckham 1988	Evaluative testing	Not listed	45SA121 identified and documented
Freed 1989	Damage Assessment	Not listed	Additional study at 45SA20 that expanded its artifact assemblage.
Boynton 1995	Formal survey	82 acres	Archaeological resources identified and documented at distances greater than 2 miles from the project area
Musil 1999	Formal survey	120 acres	No archaeological resources identified
Easton and Roulette 2002	Formal survey	Not listed	No archaeological resources identified
Stilson 2002	Formal survey	4.4 acres	Archaeological resources identified and documented at distances greater than 2 miles from the project area
Scott 2003	Cultural resource monitoring	47 mile linear corridor	Archaeological resources identified and documented at distances greater than 2 miles from the project area
White and Ozburn 2003	Reconnaissance survey	Not listed	No archaeological resources identified
Boynton and Fagan 2006	Formal survey	4.2 acres	45SA501 and 45SA502 identified and documented
Gall 2006	Formal survey	25.4 acres	No archaeological resources identified
Dryden 2007	Reconnaissance survey	0.90 acre	No archaeological resources identified
Dryden 2009	Reconnaissance survey	0.01 acre	No archaeological resources identified
Lloyd-Jones and Ozburn 2009	Formal survey	5 acres	No archaeological resources identified
Dryden 2010a	Reconnaissance survey/cultural resource monitoring	2 acres	No archaeological resources identified
Dryden 2010b	Reconnaissance survey	0.15 acre	No archaeological resources identified
Paraso and Ellis 2010	Emergency archaeological excavations	Not listed	45SA541 identified and documented
Olander et al. 2011	Formal survey	Not listed	45SA585 identified and documented
Kiers 2012	Formal survey	<0.1 acre	No archaeological resources identified
Knutson et al. 2012	Formal survey	8.6 acres	45SA600 identified and documented. Numerous other resources identified at distances greater than 2 miles from the project area.
Harris et al. 2013	Formal survey	3.5 acres	No archaeological resources identified
O'Donnchadha 2013	Formal survey	1 acre	No archaeological resources identified
Bard et al. 2014	Formal survey	123.5 acres	Archaeological resources identified and documented at distances greater than 2 miles from the project area



Table 1. Cultural Resource Surveys Conducted within 2 Miles of the Project Area, continued

Author(s) of Report/Year	Type of Investigation	Size of Study Area	Findings
Jenkins and Reese 2014	Formal survey	2.6 acres	No archaeological resources identified
Pattee and Roulette 2014	Formal survey	8.26 acres	No archaeological resources identified
Smith and Gall 2014	Formal survey	30 acres	Additional study at 45SA600 that refined its boundaries. 45SA633 identified and documented.
Holschuh 2015	Formal survey	1 acre	No archaeological resources identified
Becker and Roulette 2017	Formal survey	1 acre	45SA650 identified and documented
Homan and O'Donnchadha 2017	Formal survey	52.51 acres	No archaeological resources identified
Gall and Smith 2019	Formal survey	41.5 acres	Additional study at 45SA8 that refined its boundaries and expanded its artifact assemblage. Archaeological resources identified and documented at distances greater than 2 miles of the project area.

Pre-contact sites 45SA600 and 45SA633 were observed to contain shallow pit features that had been excavated into a talus slope. The sites are located about two miles to the southwest of the project area. The date, origin, and function of the pits could not be determined. They are similar to those identified on the summit of Wind Mountain located approximately seven miles to the northeast of the project area, which are considered sacred to past and contemporary Native American groups. Because of this, the features were recorded as archaeological sites (Knutson et al. 2012; Smith and Gall 2014).

Historic-era site 45SA121 is located about 1.2 miles to the southwest and consists of the remnants of the U.S. Army's Fort Lugenbeel and the civilian town site of Upper Cascades. The town was established in 1851 and became one of the first frontier communities in the Columbia River Gorge. It contained hotels, homes, storage buildings, a portage tramway, and a sawmill. By 1855 the U.S. Army had established Fort Cascades at the Lower Cascades and Fort Rains at the Middle Cascades to the west to ensure the safe passage of troops and supplies from Fort Vancouver. Both forts were attacked and destroyed by Native Americans in 1856. Following the attack, the U.S. Army regained control of the area and constructed Fort Lugenbeel on a ridge above the community at Upper Cascades to deter future attacks (Minor and Beckham 1988). Evaluative testing at the site in 1988 resulted in the identification of multiple building foundations associated with the fort and town site as well as the recovery of 4,630 artifacts. These included ceramic and glass fragments, nails, spikes, bricks, various items related to firearms, clay pipe fragments, buttons, and faunal remains (Minor and Beckham 1988). The fort and town site were used between 1850 and 1880. The site has been listed on the NRHP under Criterion D.

Historic-era site 45SA8 was initially identified in 1974 as an historical homestead based on anecdotal information (Dunnell and Lewarch 1974). At the time of its recording, the location of the site was not field verified. In 2019, the site was the subject of a formal cultural resources survey that resulted in the discovery of a sparse, subsurface historic-era debris scatter. Observed artifacts included amber, aqua, amethyst, and colorless vessel glass, cut nails, several bottle bases, fragments of whiteware ceramics, and metal fragments (Gall and Smith 2019). Based on the identification of temporally sensitive artifacts during the investigation, the site deposit was determined to have formed between 1880 and 1920 (Gall and Smith 2019).

Historic-era sites 45SA501 and 45SA502 are located approximately 1 mile to the northeast of the project area. They were identified during a cultural resources survey conducted in advance of the construction of a residential subdivision. Site 45SA501 consists of a small dump of household debris, which includes oval Postum tins, a Hazel-Atlas bottle base, zinc caps, rusted cans, canning jars, and

fragments of machine molded glass. The dump has been interpreted to have formed in the early 20<sup>th</sup> century (Boynton and Fagan 2006). Site 45SA502 consists of the ruins of an historic-period residential structure that was constructed in 1895 (Boynton and Fagan 2006).

Two historic-era cemeteries, which were recorded as cultural resources, are located within two miles of the project area. They are sites 45SA555, the Iman Cemetery, and 45SA651, the Gropper Cemetery. The first is located on land that was owned by Feliz Grundy Iman and was established in 1889 (Anonymous n.d.a). The second is located on the northern end of Stevenson and was established in 1905 (Anonymous n.d.b).

## **METHODS AND RESULTS**

### **Fieldwork Methods**

Fieldwork was conducted on January 8 and 15, 2020. The approach to the fieldwork was informed by the results of the background research that showed that the entire development site had been significantly impacted by past development that appears to have included grading and leveling the ground surface. Subsequent to that soil and gravel were dumped across the landform and compacted. With that history of land use in mind, the potential for buried archaeological deposits to be present was assessed as very low. Consequently, the fieldwork consisted of an intensive surface survey and the excavation of four shovel-test-pits (STPs) to verify the suspected level of disturbance and to examine the character of subsurface conditions (Figure 10).

The STPs were 30 centimeters (cm) in diameter and were excavated in 20-cm or thinner levels to depths that ranged between 20 and 50 cm below surface (cmbs). All sediments removed from the probes were screened through one-eighth-inch-mesh hardware cloth. Afterward, the STPs were completely backfilled and their locations were recorded using a handheld Trimble Geo7X global positioning system (GPS) device. GPS data were then corrected and exported to a graphics program for final editing and formatting.

### **Results of the Field Investigations**

The ground surface was inspected by walking transects spaced no more than 10 m apart. Ground surface visibility was variable. In the parts of the property that were obscured by building foundations, gravel, or trampled blackberry brambles, surface visibility was zero percent. Areas that had been trenched and then backfilled prior to fieldwork had 100 percent visibility. Other areas of the property were covered in a thin layer of grass and duff. Surface visibility in these areas was about 25 percent. No artifacts were found on the ground surface. The two concrete pads, mentioned above, were observed. They appear to be all that remains of the HVM. All other mill facilities have been completely removed. The slabs are overgrown and covered with a thin layer of moss and grass.

No artifacts were found in the STPs. Soil profiles encountered during the excavations consisted entirely of fill material, which matched the description of Arents, 0 to 5 percent slopes mapped on the property. Profiles generally included a 5- to 20-cm-thick organic layer of very dark brown (7.5YR 2/2) sandy loam, which capped a 10- to 45-cm-thick layer of brown (10YR 4/3), sandy loam (Figure 11). At least three quarters of the soil matrix in the latter layer contained angular gravel intermixed with small to medium angular cobbles (Figure 12). STP 3 and 4 terminated at 20 cmbs due to an impenetrable layer of angular cobbles (Table 2).



Figure 10. Aerial photomap of the project area showing the locations of the concrete slabs representing mill structures, STPs, and pedestrian transects walked.





Figure 11. Representative view of the gravelly fill encountered in the STPs.



Figure 12. Representative view showing the amount of rock found in the STPs.

Table 2. Summary Results of STPs Excavated

STP #	Depth (cmbs)	Sediments (Moist)	Results
1	0-5	Organic layer of very dark brown (10YR2/2) sandy loam	No artifacts
	45-50	Brown (10YR4/3) sandy loam. Numerous angular gravels and cobbles.	
2	0-20	Organic layer of very dark brown (10YR2/2) sandy loam	No artifacts
	20-50	Brown (10YR4/3) sandy loam. Numerous angular gravels and cobbles.	
3	0-5	Organic layer of very dark brown (10YR2/2) sandy loam	No artifacts
	5-20	Brown (10YR4/3) sandy loam. Numerous angular gravels and cobbles. Terminated at impenetrable layer of angular cobbles.	
4	0-5	Organic layer of very dark brown (10YR2/2) sandy loam	No artifacts
	5-20	Brown (10YR4/3) sandy loam. Numerous angular gravels and cobbles. Terminated at impenetrable layer of angular cobbles.	

## SUMMARY AND RECOMMENDATIONS

### Summary

This report has described the results of a cultural resources study conducted by AAR of a 6.4-acre property that FDM proposes to develop into the Rock Creek Cove resort. The study included background research and field investigations. The results of the background research indicate that the property has been significantly altered such that it has low potential to contain archaeological resources. AAR's fieldwork included an intensive surface survey and excavation of four STPs. No artifacts were found. Profiles exposed in the probes showed that a thick layer of imported gravelly fill covers the entire development site.

The only trace of the HVM consists of two concrete pads that mark the location of two of the mill buildings. In AAR's view, the pads are not archaeological and they were not recorded as an archaeological resource.

### Recommendations

AAR's study was done to assist FDM in complying with SEPA as implemented by Skamania County Code (16.04). In terms of Line 13 of the SEPA checklist, it is AAR finding that the project area does not contain any buildings, structures, or sites, that are listed in or eligible for listing in national, state, or local preservation registers. AAR recommends no further archaeological work is warranted in the current project area.

Although considered unlikely, there is always a possibility that an archaeological resource may be discovered during future development activity on the property. For that reason, the applicant and any contractors that may work on the property need to be aware that under the Revised Code of Washington at 27.53.060, it is unlawful to knowingly damage, deface, or destroy an archaeological site on public or private land in Washington. Under the Revised Code of Washington at 27.44.040 it is a class C felony to knowingly remove, mutilate, deface, injure, or destroy any cairn or grave of any native Indian. Thus, in the event that archaeological materials, Indian cairns, or human remains are encountered during the development of the property, all construction activities must stop in the vicinity of the finds and the DAHP should immediately be notified and work halted in the vicinity of the finds until they can be inspected and assessed. Procedures outlined under Washington Administrative Code at 25-48 will be followed and work will not resume until mitigation measures have been agreed upon.



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# City of Stevenson

## Planning Department

(509)427-5970

7121 E Loop Road, PO Box 371  
Stevenson, Washington 98648

### MITIGATED DETERMINATION OF NONSIGNIFICANCE

<b>DATE:</b>	June 3 <sup>rd</sup> , 2020
<b>PROJECT NAME:</b>	Rock Cove Hospitality Center (SEPA2020-01/SHOR2020-01)
<b>APPLICANT</b>	FDM Development, Zachary Pyle
<b>DESCRIPTION OF PROPOSAL:</b>	<p>Project action involving a mixed use hospitality development offering condo- and studio-sized units (available for nightly and weekly rental, totaling 48 available bedrooms) and a 15,000 square-foot commercial venue space (conceptual space planning of the commercial building consists of 5,000 open venue space, supported by 10,000 square feet of service, food preparation, and guest lounging area).</p> <p>The Applicant proposes a three-phased development, beginning with the condo-style units. Phase 2 will add the commercial venue space and restore waterside portions of the property for enhanced, publicly-accessible observation and enjoyment. Phase 3 completes the development with the studio-sized units.</p>
<b>PROJECT LOCATION:</b>	The site has no current address and is along SW Rock Creek Drive (Tax Parcels 02-07-01-0-0-1302, -1303, -1304), in the City of Stevenson, Skamania County, WA 98648.
<b>CONTACT PERSON:</b>	Zachary Pyle, FDM Development <a href="mailto:zpyle@fdmdevelopment.com">zpyle@fdmdevelopment.com</a> • (210) 849-5592
<b>LEAD AGENCY:</b>	City of Stevenson, Washington
<b>RESPONSIBLE OFFICIAL</b>	Ben Shumaker, Community Development Director <a href="mailto:ben@ci.stevenson.wa.us">ben@ci.stevenson.wa.us</a> • (509) 427-5970

Description of Proposal: A mixed use hospitality development adjacent to Rock Creek Cove on the former Hegewald Lumber Mill Site in Stevenson, WA. The project seeks to complement the existing tourism industry in Stevenson by offering condo- and studio-sized units available for nightly and weekly rental, totaling 48 available bedrooms. A 15,000 square-foot commercial venue space will anchor the development and provide wide views of Rock Creek Cove and the Columbia River Gorge. The conceptual space planning of the commercial building consists of 5,000 open venue space, supported by 10,000 square feet of service, food preparation, and guest lounging area. The development seeks to attract both local and regional visitors, with venue space available for weddings, company parties, family reunions, and corporate retreats.

The Applicant proposes a three-phased development, beginning with the condo-style units, operated by a single ownership group, similar to a hotel. Phase 2 will add the commercial venue space and restore waterside portions of the property for enhanced, publicly-accessible observation and enjoyment. Phase 3 completes the development with the studio-sized units, operated under the same ownership group as the remainder of the property.



A site-wide cultural resources survey, property geotechnical report, a preliminary habitat report, a conceptual site plan for all 3 phases, and conceptual building elevations for phase 1 are attached to the checklist and application materials.

Threshold Determination: The City of Stevenson, acting as lead agency for this proposal, has determined this proposal, as mitigated, will not have a probable significant adverse impact on the environment.

An environmental impact statement (EIS) is not required under RCW 43.21C.030 (2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request. This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for 14 days from the date of issuance.

The full checklist and materials can be found online at:

[www.ci.stevenson.wa.us/planning-department/current-public-notice](http://www.ci.stevenson.wa.us/planning-department/current-public-notice)

Mitigation Measures: The following mitigation measures are required as a result of this review:

*General*

1. The design and construction of water connections, streets, street lights, stormwater drainage systems, and site grading and erosion control plans shall be in accordance with the City of Stevenson Engineering and Construction Standards.

*Air Quality*

2. Construction dust shall not become a nuisance to neighboring or down-wind properties; dust control shall comply with all applicable standards of the Southwest Washington Clean Air Agency (SWCAA), especially SWCAA 400-040. Contact SWCAA at 360-574-3058 for more information.

*Critical Habitat Areas*

3. Project construction shall not commence until authorization is obtained pursuant to the City of Stevenson Critical Areas Code.

*Cultural Resources*

4. If any item of possible archaeological interest (including human skeletal remains) is discovered on site during construction or site work, all the following steps shall occur:
  - a. Stop all work in the immediate area (initially allowing for a 100' buffer, this number may vary by circumstance) immediately.
  - b. Implement reasonable measures to protect the discovery site, including any appropriate stabilization or covering.
  - c. Take reasonable steps to ensure the confidentiality of the discovery site.
  - d. Take reasonable steps to restrict access to the site of discovery.
  - e. Notify the City, DAHP, and Yakama, Nez Perce, Warm Springs, Umatilla, and Cowlitz tribes of the discovery.
  - f. A stop-work order will be issued.
  - g. The approval will be temporarily suspended.
  - h. All applicable state and federal permits shall be secured prior to commencement of the activities they regulate and as a condition for resumption of development activities.
  - i. Development activities may resume only upon receipt of City approval.
  - j. If the discovery includes human skeletal remains, the Skamania County Coroner and local law enforcement shall be notified in the most expeditious manner possible. The County Coroner will assume jurisdiction over the site and the human skeletal remains, and will make a determination of whether they are crime-related. If they are not, DAHP will take jurisdiction over the remains and report them to the appropriate parties. The State Physical Anthropologist will make a determination of whether the remains are Native American and report that finding to the affected parties. DAHP will handle all consultation with the affected parties as to the preservation, excavation, and disposition of the remains.

### *Erosion Control*

5. A site-specific Stormwater Pollution Prevention plans shall be developed for each phase. Such plans shall comply with the City of Stevenson Engineering Standards and must be implemented prior to any clearing, grading, or construction. Any discharge of sediment-laden runoff or other pollutants to waters of the state is in violation of Chapter 90.48 RCW and WAC 173-201A, and is subject to enforcement action. Contact the Stevenson Public Works Department (509-427-5970) and Department of Ecology Water Quality/Watershed Resources Unit (360-407-6329) for more information.
6. Re-vegetation of disturbed areas is necessary to reduce wind and water erosion, and the propagation of weeds. All undeveloped disturbed areas shall be reseeded and landscaped in conformity with the City of Stevenson Zoning and Critical Areas codes and the Skamania County Shoreline Management Master Program.
7. A Construction Stormwater General Permit shall be obtained from Washington Department of Ecology for the grading of the site as necessary. A copy of the permit shall be provided to the City prior to the Pre-Construction Meeting. Contact 360-407-6329 for more information.

### *Geologic Hazards*

8. The conclusions and recommendations of the January, 2020 geotechnical investigation shall be incorporated into the project plans and specifications.

### *Noise Abatement & Control*

9. Construction shall occur within the hours of 7:00am and 10:00pm and according to the other noise control standards of SMC 8.08.

### *Shorelines Management*

10. The project's various components shall apply for and obtain all appropriate approvals required under the City's Shoreline Management Program.

### *Stormwater*

11. All stormwater management shall be provided on site of the development. A stormwater engineering report shall be provided meeting the requirements of the most current Puget Sound Stormwater Manual, as adopted by the Skamania County Stormwater Control Ordinance, Section 13.25.220A Quantity Control, dated January 26, 1994, or the latest edition, including any technical memorandum provided by the County that amends or clarifies the applicable sections of the ordinance.
12. All stormwater facilities located on-site shall be privately owned and maintained. Easements shall be recorded for facilities serving multiple lots. Facility maintenance plans shall be developed to clearly identify the frequency and scope of maintenance to be completed.

### *Transportation*

13. Public/pedestrian access to the shoreline shall be completed in pursuant to the shoreline substantial development permit issued for this project.

### *Wastes & Hazardous Materials*

14. This property is within a half mile of a known or suspected contaminated site. If contamination is currently known or observed during construction of this project, sampling of the potentially contaminated media must be conducted. If contamination of soil or groundwater is readily visible, or is revealed by sampling, Ecology must be notified. Contact the Department of Ecology Environmental Report Tracking System Coordinator's Southwest Regional Office (360-407-6300), for assistance and information about subsequent cleanup and to identify the type of testing that will be required.
15. All grading and filling of land must utilize only clean fill. All other materials may be considered solid waste and permit approval may be required from the Skamania County Environmental Health Department prior to filling. All removed debris resulting from this project must be disposed of at an approved site. Contact the Skamania County Environmental Health Department (509-427-3900) and the Department of Ecology Solid Waste Management Division (360-407-6287) for more information.

16. During construction, all releases of oils, hydraulic fluids, fuels, other petroleum products, paints, solvents, and other deleterious materials must be contained and removed in a manner that will prevent their discharge to waters and soils of the state. The cleanup of spills should take precedence over other work on the site.

Comments on Threshold Determination: If you would like to comment on this Threshold Determination, your written comments should be sent to the address below by 5:00 PM on Wednesday, June 17<sup>th</sup>, 2020.

All comments on this proposal are to be directed to Ben Shumaker, Community Development Director, City Hall, 7121 E Loop Road, PO Box 371, Stevenson, Washington 98648 or [ben@ci.stevenson.wa.us](mailto:ben@ci.stevenson.wa.us).





June 22, 2020

Ben Shumaker  
City of Stevenson  
7121 E Loop Road  
Stevenson, Washington 98648

Via email: Ben@ci.stevenson.wa.us

Regarding: Traffic Impact Study  
Rock Creek Cove Hospitality Center Phase 1  
SHOR2020-01, SEPA 2020-01  
SW Rock Creek Drive  
Stevenson, Washington

Dear Mr. Shumaker:

This letter presents the information required for a traffic impact study (TIS) supporting the proposed Rock Creek Cove Hospitality Center, Phase 1, on Rock Creek Drive within the City of Stevenson, Washington (City).

### **PROJECT DESCRIPTION**

The Rock Creek Cove Hospitality Center is proposed as a three-phase project on Rock Creek Drive on parcels 02070100130200, 20270100130300, and 02070100130400. See Figure 1 for a vicinity map. This study is only for the first phase. See the attached site plan for all three phases.

In the June 17, 2020, letter from the Washington State Department of Transportation (WSDOT), a traffic study was requested in the State Environmental Policy Act (SEPA) review of the project.

Phase 1 of the development proposes the construction of 16 condominiums to be used as rental units to be completed and in use by 2021.

### **PROJECT TRIPS**

#### **Trip Generation**

Trip generation estimates for Phase 1 were prepared based on the average trip rates for 16 recreation homes (land use code 610) from the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 10th Edition. The supporting calculations are attached. No adjustments were made for transit, pass-by, or diverted links. Table 1 presents a summary of the new trip generation calculations for the typical weekday peak hours of the adjacent street.

**Table 1. ITE Trip Generation-Rock Creek Cove Hospitality Center – Phase 1**

<b>Land Use (ITE Code)</b>	Recreational Homes	
Independent Variable	Dwelling Units	
<b>Size</b>	16	
Average Weekday Trips (ADT)	56	
<b>Peak Hour Trips</b>	<b>AM Peak Hour</b>	<b>PM Peak Hour</b>
<b>In</b>	2	2
<b>Out</b>	2	2
<b>Total Trips</b>	4	4

The Saturday daily trips are estimated at 48 with a PM peak hour of 6 trips, 3 entering and 3 exiting.

**Trip Distribution**

A trip distribution pattern was estimated based on population density with the assumption that most trips will originate in the Portland metropolitan area. The few trips associated with employees at the site will enter and exit from the east, but these trips will arrive or depart outside the AM and PM peak hours.

**Response to WSDOT SEPA Comments**

The Phase 1 trip generation will not impact any state corridor or intersection with more than 10 peak hour trips. Based on the WSDOT SEPA comments, no additional study is necessary for Phase 1. With the permitting of Phases 2 and 3, a traffic study should be completed to address the accumulated impacts of Phases 1 through 3.


**Traffic Safety Evaluation**

The site distance was evaluated graphically and meets safe stopping distance for Rock Creek Road, posted 25 miles per hour, at the site driveway. With completion of Phase 1, no object should be installed that would reduce the sight distance below 155 feet at the site driveway looking in either direction.

The existing sidewalk/multi-use path on Rock Creek Drive provides safe access for both pedestrians and bicyclists.

Please feel free to contact me at 360.695.3488 or John.Manix@pbsusa.com with any questions or comments.

Sincerely,

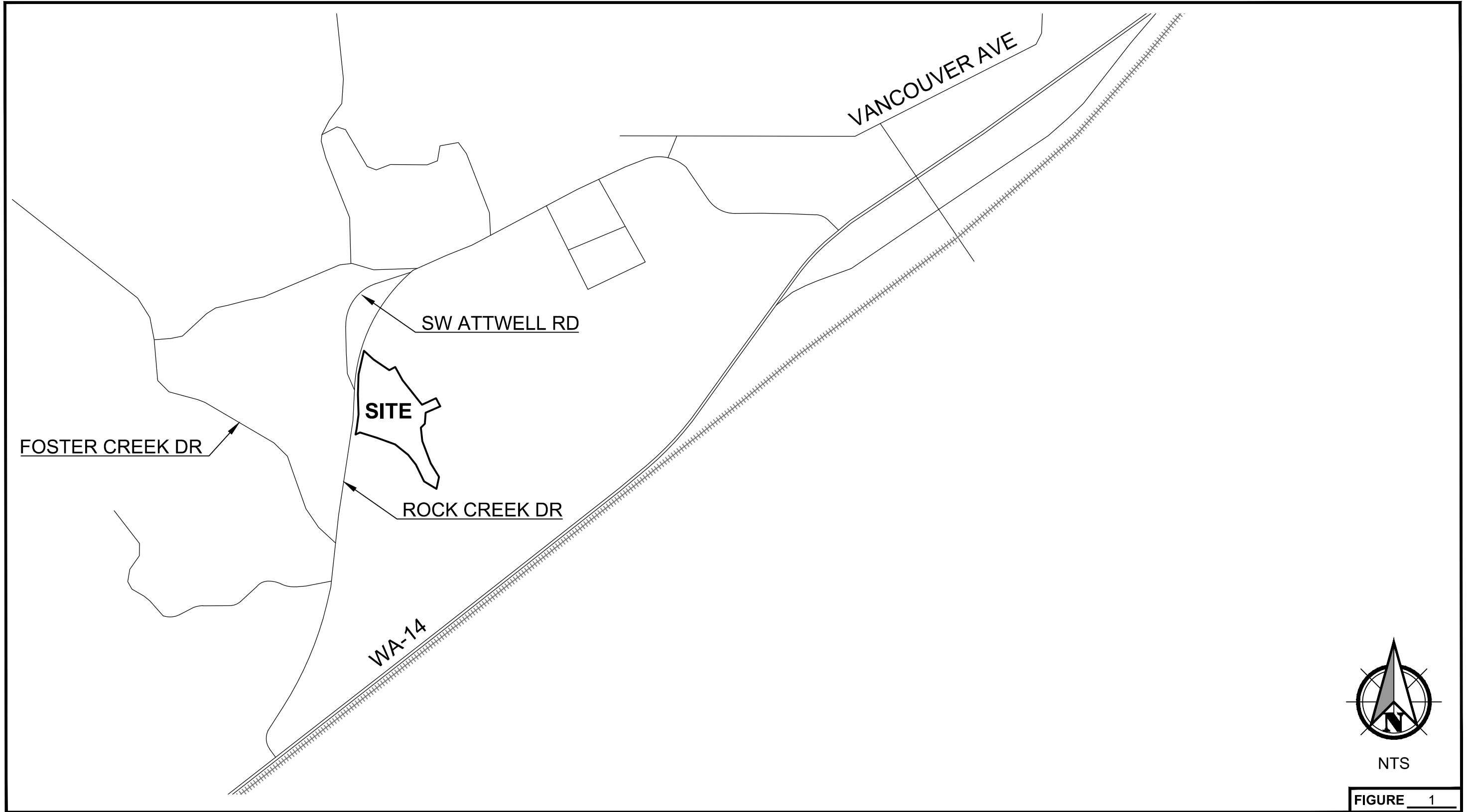
  
 John Manix, PE  
 Senior Traffic Engineer



Digitally signed by John Manix  
 DN: C=US,  
 E=john.manix@pbsusa.com, O=PBS  
 Engineering and Environmental,  
 OU=Traffic Engineering, CN=John  
 Manix  
 Date: 2020.06.22 16:09:31-07'00'

Attachments: Figure 1. Vicinity Map  
 Site Plan

JAM:GPJ:mo



**Vicinity Map**  
**Rock Creek Cove Hospitality - Phase 1**



FILENAME: C:\\_CAD Drawings\Rock Creek Cove\PLANS\C2.0 SITE PLAN.dwg  
 PLOTTED BY: zachary pyle  
 PLOTTED ON: 2020/01/31 12:45 PM



PROJECT SUMMARY

**PHASE 1**  
 16 3-BEDROOM CONDO UNITS OPERATED AS HOTEL  
 TOTAL 48 BEDROOMS  
 TOTAL 32,950 SF  
 PEDESTRIAN ACCESS TO NORTHERN PENINSULA  
 COVERED FIRE PIT  
 LANDSCAPE IMPROVEMENTS  
 STORMWATER FACILITIES CONSTRUCTION  
 MASS GRADING  
 TYPE S BUFFER OFF-SITE MITIGATION  
 BOUNDARY LINE ADJUSTMENT

**PHASE 2**  
 15,000 SQ FT COMMERCIAL VENUE SPACE  
 LANDSCAPE IMPROVEMENTS  
 OBSERVATION AREA AND BOAT RAMP RESTORATION AND  
 SAFETY IMPROVEMENTS

**PHASE 3**  
 5 STUDIO RENTALS  
 LANDSCAPE IMPROVEMENTS



ROCK CREEK COVE HOSPITALITY  
 MASTER PLAN  
 FDM DEVELOPMENT, INC.  
 STEVENSON, WA

ISSUE	DATE	DESCRIPTION
A	01/30/2020	PRELIMINARY

DESIGNED: Z. PYLE  
 SCALE  
 0' 40' 80'

SHEET TITLE  
**SITE PLAN**  
 SHEET  
**C2.0**