



June 16, 2020

Zachary Pyle, PE
FDM Development, Inc.
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.¹ 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 Ecology² and the U.S. Environmental Protection Agency³ (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.⁴ 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.”

¹ 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.

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

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

⁴ “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 areas⁵ 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.⁶ 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

⁵ "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.

⁶ 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.⁷ 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.

⁷ 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.

Sincerely,

A handwritten signature in blue ink that reads "Andrew R. Allison". The signature is fluid and cursive, with the first name being the most prominent.

Andrew R. Allison
Wetland Scientist

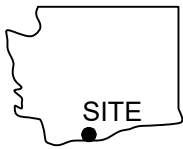
Attachments:

Figures

Photoplates

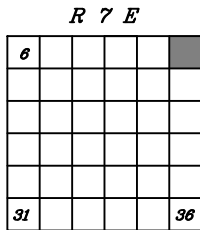
Engineered site plan

WASHINGTON



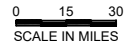
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Longitude: -121.8981°

LOCATION MAP



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

PROJECT VICINITY MAP



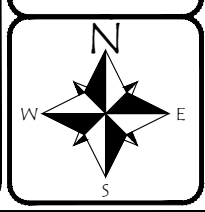
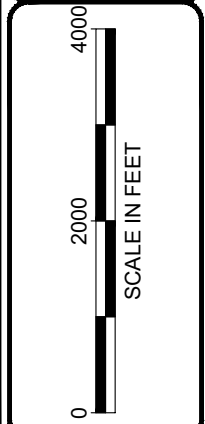
SITE

Figure 1

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

DATE: 6/11/20
DWN: EF
REQ. BY: AA
PRJ. MGR: AA
CHK: AA
PROJECT NO:
2682.02

1157 3rd Ave., Suite 220A
Longview, WA 98632
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www.eco-land.com



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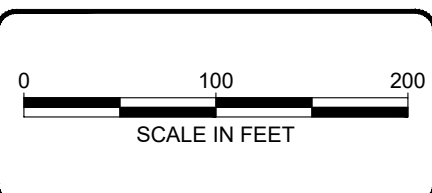
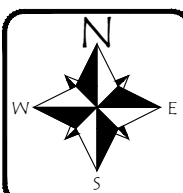


LEGEND:

- 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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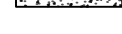


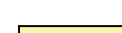
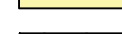

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Figure 2
 EXISTING CONDITIONS SITE MAP
 Rock Cove CAR
 FDM Development
 City of Stevenson, Skamania County, Washington
 Section 1, Township 2N, Range 7E, W.M.

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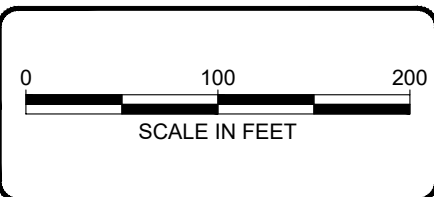


LEGEND:

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

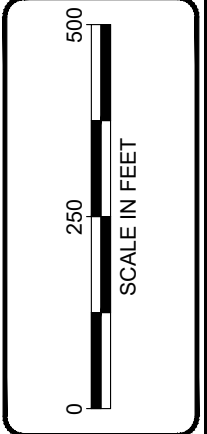


LEGEND:

- 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/>



**Ecological
Land Services**

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


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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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.

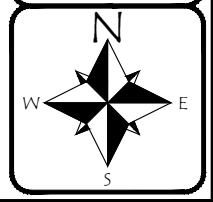
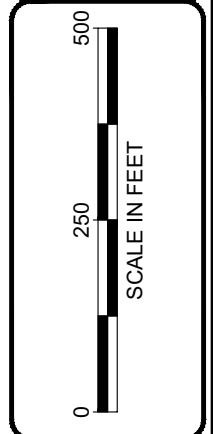
NOTE(S):

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
 DWN: EF
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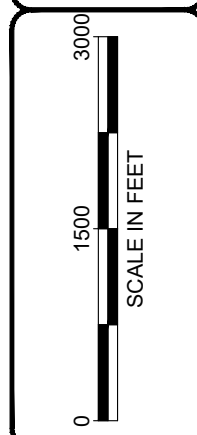
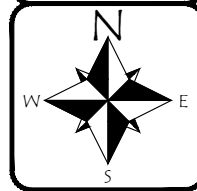


No mapped streams indicated onsite by the Washington State Department of Natural Resources (DNR).

LEGEND:

Streams
Streams

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



Ecological Land Services

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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.

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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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.

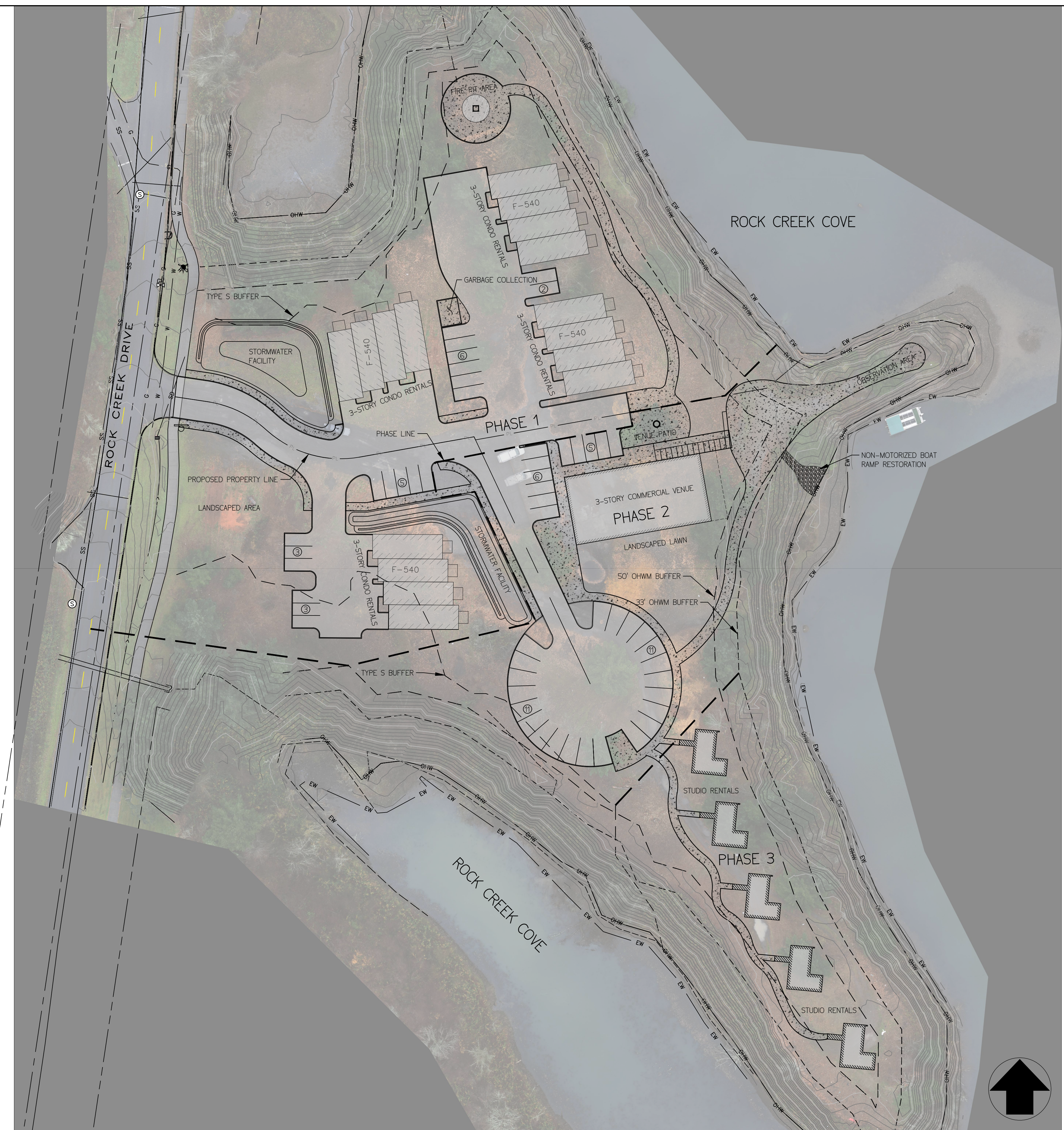


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Photoplate 4
Site Photos
Rock Cove Preliminary Critical Areas Assessment
FDM Development, Inc.
City of Stevenson, Washington

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