



GOLDSMITH

LAND DEVELOPMENT SERVICES

MEMORANDUM

Date: February 25, 2015
To: David Pyle, City of Bellevue Planning & Community Development
From: ^{QMK} Jill M. Routt, (Goldsmith) and Scott Brainard, (Wetland Resources, Inc.)
Re: Avalon Newcastle: Coal Creek Parkway-Critical Areas Land Use Permit

Avalon Newcastle is a mixed-use development project, within the City of Newcastle, with a SEPA MDNS requirement to construct frontage improvements to Coal Creek Parkway SE, within the City of Bellevue. In order to meet the frontage improvement requirement, the applicant must expand portions of the currently maintained width of roadway/sidewalk, etc. but remaining within the limits of public right-of-way. Some of this public right-of-way area lies within a dimension (buffer width) from a stream and a wetland that is regulated. The applicant, AvalonBay Communities is submitting an application for Critical Areas Land Use Permit, for this allowed use within a critical area buffer.

The purpose of this memorandum is to address the code required Performance Standard and Decision Criteria of applicable City of Bellevue Land Use Code Sections, as required to obtain approval of this permit.

20.25H.055.B Uses and Development Allowed Within Critical Areas

The chart within this Code Section lists Uses and Development that may be allowed in a Critical Area, Critical Area Buffer, or Critical Area Structure Setback. The subject project (construction of frontage improvements within City of Bellevue public right-of-way) meets the Allowed Uses line item in the chart for:

“New or expanded public rights-of-way, private roads, access easements and driveways.” This project is for expansion of improvements of an existing road – within public right-of-way. For the Stream Buffers, the applicant is required to address Code Sections:

- **20.25H.055.C.2**
- **20.25H.080.A**
- **20.25H.080.B**

For the Wetland Buffer, the applicant is required to address Code Sections:

- **20.25H.055.C.2**
- **20.25H.100**

Additionally, this memo will address the Critical Areas Land Use Permit Decision Criteria of Code Section:

- **20.30P.140.**

Code Sections 20.25H.055.C.2 Uses and Development Allowed Within Critical Areas - Performance Standards

2. New and Expanded Uses or Development. As used in this section, "facilities and systems" is a general term that encompasses all structures and improvements associated with the allowed uses and development described in the table in subsection B of this section:

- a. New or expanded facilities and systems are allowed within the critical area or critical area buffer only where no technically feasible alternative with less impact on the critical area or critical area buffer exists. A determination of technically feasible alternatives will consider:
 - i. The location of existing infrastructure;
 - ii. The function or objective of the proposed new or expanded facility or system;
 - iii. Demonstration that no alternative location or configuration outside of the critical area or critical area buffer achieves the stated function or objective, including construction of new or expanded facilities or systems outside of the critical area;
 - iv. Whether the cost of avoiding disturbance is substantially disproportionate as compared to the environmental impact of proposed disturbance; and
 - v. The ability of both permanent and temporary disturbance to be mitigated.

Response: The subject proposal is construction of required frontage improvements and intersection improvements for the Avalon Newcastle mixed use development, within the City of Newcastle. Frontage and intersection improvements must be constructed within the existing ROW of Coal Creek Parkway, within the City of Bellevue. Some portions of these improvements will disturb a minor width of the regulated buffer dimension from a stream and from a wetland. The stream is a Type F stream, and the wetland is a Category III. Both critical areas (the stream and the wetland) are partially on the Avalon Newcastle site.

Warrants for the improvements are documented in the City of Newcastle's Avalon Newcastle Expanded Environmental Checklist, and MDNS as issued by Newcastle in October 2014.

One element of the design is a required left turn lane, southbound on Coal Creek Parkway for access to the new / to be constructed Newcastle Connector within the Avalon Newcastle project site. The Newcastle Connector is a required roadway per the Newcastle Comprehensive Plan. The required design of the left turn lane necessitates expansion of the existing maintained roadway and relocation of the sidewalk, within the existing Coal Creek Parkway ROW, (on the east side of the road). The design also results in expansion to the existing maintained roadway that extends toward the southerly portion of the project frontage.

There is no feasible alternative to construction of these improvements on Coal Creek Parkway. As they are frontage improvement requirements, the expansion is to be implemented along the Avalon Newcastle frontage – with no alternative to construct them elsewhere. The existing alignment and grade of Coal Creek Parkway is set, and any alternative, such as moving the entire roadway westerly and reconstructing - is not feasible in regards to safety and standard road design principles. The intersection improvements are centered upon the new Newcastle Connector / Coal Creek Parkway intersection to be aligned with the existing SE 66th Street, at the location where it intersects with Coal Creek Parkway, and there is no feasible alternative to this location.



Disturbance to the Critical Area buffers will be mitigated as part of the buffer averaging / mitigation plan prepared for the Avalon Newcastle project, and submitted with this permit application package. (See "Final Mitigation Plan for Avalon Newcastle" by Wetland Resources, Inc., submitted with these permit application materials).

- b. If the applicant demonstrates that no technically feasible alternative with less impact on the critical area or critical area buffer exists, then the applicant shall comply with the following:
 - i. Location and design shall result in the least impacts on the critical area or critical area buffer;
 - ii. Disturbance of the critical area and critical area buffer, including disturbance of vegetation and soils, shall be minimized;
 - iii. Disturbance shall not occur in habitat used for salmonid rearing or spawning or by any species of local importance unless no other technically feasible location exists;
 - iv. Any crossing over of a wetland or stream shall be designed to minimize critical area and critical area buffer coverage and critical area and critical area buffer disturbance, for example by use of bridge, boring, or open cut and perpendicular crossings, and shall be the minimum width necessary to accommodate the intended function or objective; provided, that the Director may require that the facility be designed to accommodate additional facilities where the likelihood of additional facilities exists, and one consolidated corridor would result in fewer impacts to the critical area or critical area buffer than multiple intrusions into the critical area or critical area buffer;
 - v. All work shall be consistent with applicable City of Bellevue codes and standards;
 - vi. The facility or system shall not have a significant adverse impact on overall aquatic area flow peaks, duration or volume or flood storage capacity, or hydroperiod;
 - vii. Associated parking and other support functions, including, for example, mechanical equipment and maintenance sheds, must be located outside critical area or critical area buffer except where no feasible alternative exists; and
 - viii. Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of LUC 20.25H.2 10.

Response: The proposed frontage improvement is an allowed use under Bellevue Land Use Code 20.25H.050 and is entirely located within the existing right-of-way (ROW) and at the outer edge of the buffer of Stream A and Wetland A (See preliminary Coal Creek Parkway plans submitted with these application materials). No other less impacting location is feasible for the required frontage improvements given the need for them to occur within the ROW. In addition, construction will be the minimum necessary to meet frontage improvement requirements. No other less impacting location for the intersection improvement is feasible, as the new intersection must align with the existing SE 66th St. intersection with Coal Creek Parkway.

No impacts to habitat used for salmonid rearing or spawning or by any species of local importance will occur as part of the proposed frontage or intersection improvements. In addition, no wetland and stream crossings are proposed as part of the frontage or intersection improvement projects.

The applicant and City will ensure that all work will be consistent with applicable City of Bellevue codes and standards for frontage improvement projects. The improvements will not have a significant adverse impact on overall aquatic area flow peaks, duration or



volume or flood storage capacity, or hydroperiod, as the improvements are limited to disturbance of an outer edge area of buffer. Associated parking and other support functions, will be located outside the subject critical area buffers.

The proposed disturbance to the critical area buffers will be permanent and will be mitigated by providing additional high quality forested buffer adjacent to the feature in which the impacts will occur. Disturbance of 373 square feet to the Stream A buffer will be mitigated by additional buffer added to the Stream A corridor, of 381 square feet. This is in addition to the buffer averaging being tabulated for impacts within the City of Newcastle. Disturbance of 1,924 square feet to the Wetland A buffer will be mitigation by additional buffer added to Wetland A, of 1,609 square feet. This is in addition to the buffer averaging being tabulated for the impacts within the City of Newcastle. (See "Final Mitigation Plan for Avalon Newcastle", by Wetland Resources, Inc., submitted with these permit application materials). This proposed mitigation is in compliance with Bellevue Land Use Code 20.25H.

Code Section 20.25H.080(A)(B) Performance Standards

A. General.

Development on sites with a type S or F stream or associated critical area buffer shall incorporate the following performance standards in design of the development, as applicable:

1. Lights shall be directed away from the stream.

Response: The subject development for this permit is construction of a roadway expansion, within current City of Bellevue ROW. The roadway construction will impact a minor area of the outer portion of the stream buffer. Lights will not be directed toward the stream. Full detailed roadway design of these Coal Creek Parkway improvements will demonstrate compliance, and will be submitted for approval under a City of Bellevue Clearing and Grading permit application.

2. Activity that generates noise such as parking lots, generators, and residential uses shall be located away from the stream or any noise shall be minimized through use of design and insulation techniques.

Response: The subject development for this permit is construction of a roadway expansion, within current City of Bellevue ROW. There is no change of use associated with this permit.

3. Toxic runoff from new impervious area shall be routed away from the stream.

Response: The subject development for this permit is construction of a roadway expansion, within current City of Bellevue ROW. The roadway construction will impact a minor area of the outer portion of the stream buffer. Toxic runoff (if any) from new impervious area shall be treated and routed away from the stream. Full detailed roadway design of these Coal Creek Parkway improvements will demonstrate compliance, and will be submitted for approval under a City of Bellevue Clearing and Grading permit application.

4. Treated water may be allowed to enter the stream critical area buffer.

Response: The subject development for this permit is construction of a roadway expansion, within current City of Bellevue ROW. The roadway construction will impact a minor area of the outer portion of the stream buffer. Treated water will be



routed toward the roadway drainage system. Full detailed roadway design of these Coal Creek Parkway improvements will demonstrate compliance, and will be submitted for approval under a City of Bellevue Clearing and Grading permit application.

5. The outer edge of the stream critical area buffer shall be planted with dense vegetation to limit pet or human use.

Response: Street Tree plantings within the City of Bellevue ROW will be per City standards. Full detailed roadway design of these Coal Creek Parkway improvements will demonstrate compliance, and will be submitted for approval under a City of Bellevue Clearing and Grading permit application.

6. Use of pesticides, insecticides and fertilizers within 150 feet of the edge of the stream critical area buffer shall be in accordance with the City of Bellevue's "Environmental Best Management Practices," now or as hereafter amended.

Response: Use of pesticides, insecticides and fertilizers within the City of Bellevue ROW will be per City standards.

B. Modification of Stream Channel.

1. When Allowed. A stream channel shall not be modified by relocating the open channel, or by closing the channel through pipes or culverts unless in connection with the following uses allowed under LUC 20.25H.055:
 - a. A new or expanded utility facility or system;
 - b. A new or expanded essential public facility;
 - c. Public flood control measures;
 - d. In-stream structures;
 - e. New or expanded public right-of-way, private roads, access easements or driveways;
 - f. Habitat improvement project; or
 - g. Reasonable use exception; provided, that a modification may be allowed under this section for a reasonable use exception only where the applicant demonstrates that no other alternative exists to achieve the allowed development. A critical areas report may not be used to modify the uses set forth in this subsection B.1.

Response: There will be no modification of a stream channel as part of this roadway improvement project.

2. Critical Areas Report Required. Any proposal to modify a stream channel under this section may be approved only through a critical areas report.

Response: N.A.

3. Relocation of Closed Stream Channel. Any proposal to relocate an existing closed stream channel may be approved only through a critical areas report. (Ord. 5680, 6-26-06, § 3)

Response: N.A.

Code Section 20.25H.100 Performance Standards

Development on sites with a wetland or wetland critical area buffer shall incorporate the following performance standards in design of the development, as applicable:

- A. Lights shall be directed away from the wetland.



Response: The subject development for this permit is construction of a roadway expansion, within current City of Bellevue ROW. The roadway construction will impact a minor area of the outer portion of the wetland buffer. Lights will not be directed toward the wetland. Full detailed roadway design of these Coal Creek Parkway improvements will demonstrate compliance, and will be submitted for approval under a City of Bellevue Clearing and Grading permit application.

- B. Activity that generates noise such as parking lots, generators, and residential uses, shall be located away from the wetland, or any noise shall be minimized through use of design and insulation techniques.

Response: The subject development for this permit is construction of a roadway expansion, within current City of Bellevue ROW. There is no change of use associated with this permit.

- C. Toxic runoff from new impervious area shall be routed away from the wetlands.

Response: The subject development for this permit is construction of a roadway expansion, within current City of Bellevue ROW. The roadway construction will impact a minor area of the outer portion of the wetland buffer. Toxic runoff (if any) from new impervious area shall be treated and routed away from the wetland. Full detailed roadway design of these Coal Creek Parkway improvements will demonstrate compliance, and will be submitted for approval under a City of Bellevue Clearing and Grading permit application.

- D. Treated water may be allowed to enter the wetland critical area buffer.

Response: The subject development for this permit is construction of a roadway expansion, within current City of Bellevue ROW. The roadway construction will impact a minor area of the outer portion of the wetland buffer. Treated water will be routed toward the roadway drainage system. Full detailed roadway design of these Coal Creek Parkway improvements will demonstrate compliance, and will be submitted for approval under a City of Bellevue Clearing and Grading permit application.

- E. The outer edge of the wetland critical area buffer shall be planted with dense vegetation to limit pet or human use.

Response: Street Tree plantings within the City of Bellevue ROW will be per City standards. Full detailed roadway design of these Coal Creek Parkway improvements will demonstrate compliance, and will be submitted for approval under a City of Bellevue Clearing and Grading permit application.

- F. Use of pesticides, insecticides and fertilizers within 150 feet of the edge of the stream (*wetland?*) buffer shall be in accordance with the City of Bellevue's "Environmental Best Management Practices," now or as hereafter amended. (Ord. 5680, 6-26-06, § 3)

Response: Use of pesticides, insecticides and fertilizers within the City of Bellevue ROW will be per City standards.

Code Section 20.30P.140 Decision Criteria

The Director may approve or approve with modifications an application for a Critical Areas Land Use Permit if:

- A. The proposal obtains all other permits required by the Land Use Code; and



Response: All other permits required for the subject work are being obtained.

- B. The proposal utilizes to the maximum extent possible the best available construction, design and development techniques which result in the least impact on the critical area and critical area buffer; and

Response: The project is being designed to minimize as much as possible the impact to the outer portion of the critical area buffers that happen to fall within the public ROW. See preliminary Coal Creek Parkway plans, submitted with these permit application materials, as well as responses provided, herein, to Land Use Code elements regarding feasibility of alternatives.

- C. The proposal incorporates the performance standards of Part 20.25H LUC to the maximum extent applicable; and

Response: See above responses to the applicable performance standards sections of Part 20.25H LUC.

- D. The proposal will be served by adequate public facilities including streets, fire protection, and utilities; and

Response: This project is for construction of expansion to improvements within the City of Bellevue ROW of Coal Creek Parkway, and will be served by adequate public facilities.

- E. The proposal includes a mitigation or restoration plan consistent with the requirements of LUC 20.25H.210; except that a proposal to modify or remove vegetation pursuant to an approved Vegetation Management Plan under LUC 20.25H.055.C.3.i shall not require a mitigation or restoration plan; and

Response: The Final Mitigation Plan prepared by Wetland Resources for the Avalon Newcastle project (enclosed, herein) incorporate the applicable buffer averaging square footages as required to address critical area buffer impacts associated with the construction of roadway expansion within the City of Bellevue's Coal Creek Parkway ROW. The proposed disturbance to the critical area buffers will be permanent and will be mitigated by providing additional high quality forested buffer adjacent to the feature in which the impacts will occur. Disturbance of 373 square feet to the Stream A buffer will be mitigated by additional buffer added to the Stream A corridor, of 381 square feet. This is in addition to the buffer averaging being tabulated for impacts within the City of Newcastle. Disturbance of 1,924 square feet to the Wetland A buffer will be mitigation by additional buffer added to Wetland A, of 1,609 square feet. This is in addition to the buffer averaging being tabulated for the impacts within the City of Newcastle. (See "Final Mitigation Plan for Avalon Newcastle", by Wetland Resources, Inc., submitted with these permit application materials). This proposed mitigation is in compliance with Bellevue Land Use Code 20.25H.

- F. The proposal complies with other applicable requirements of this code. (Ord. 5683, 6-26-06, § 27)

Response: The design of this roadway complies with other applicable requirements of this Code.





CITY OF NEWCASTLE
 12835 Newcastle Way, Suite 200
 Newcastle, WA 98056
 (425) 649-4444

**SEPA MITIGATED DETERMINATION OF
 NON-SIGNIFICANCE**

Application File: Avalon Newcastle

Application File Numbers: 13-PL-058/59/60

Applicant: Avalon Bay Communities, Inc.
 Applicant Contact: Jo Ryan
 Goldsmith Engineering
 P O Box 3565
 Bellevue WA 98009

Date of Issuance: October 26, 2014

Location of Proposal: The project is addressed as 6602 Coal Creek Parkway SE. King County Tax parcel #'s 2724059006, 2724059040 & 2824059099.

Description of Proposal: Development of a 53 acre site for a phased 900 (+/-) dwelling unit and up to 49,000 SF non-residential mixed use (commercial/amenities) development and associated site improvements, including critical areas mitigation. Primary access to the proposed development would be from Coal Creek Parkway SE at SE 66th Street. Two additional access points will be provided, one at Newcastle Golf Club Road and the other from 132nd Avenue SE, which currently dead ends at the project development's southern parcel boundary. The roadway section through the proposed development from Coal Creek Parkway SE to Newcastle Golf Club Road will provide a new public road as identified in Newcastle's Comprehensive Plan. The planned extension of 132nd Avenue SE to the new "Newcastle Connector" is also on the City's long range plans. Both will be dedicated to the City as public streets.

The project development will be segregated into ten (10) lots and is expected to take up to 20-years to develop. A breakdown of the phases is included below. The details regarding phasing and required improvements by Lot will be outlined in the Development Agreement.

	Approx. net developed area proposed (not including public roadways)	Approximate non-residential square foot proposed	Approximate range multifamily units	Approximate range affordable units*
Lots 1a & 1b	± 1.8 Ac.	Approx. 25,000 SF	None proposed	None proposed
Lot 2	± 3.5 Ac.	None proposed	Approx. 35 – 60	None proposed

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Avalon Newcastle
Coal Creek Parkway Road Improvements
Critical Areas Land Use Permit

Lot 3	± 4.1 Ac.	Approx. 12,000 SF	Approx. 200 – 255	Bldg. 3A 0-20 units
Lot 4	± 2.9 Ac.	None proposed	Approx. 150 – 165	Bldg. 4A 0 – 6 units
Lot 5	± 2.9 Ac.	Approx. 12,000 SF	Approx. 70 – 90	Bldg. 5A 0 – 14 units
Lot 6	± 2.5 Ac.	None proposed	Approx. 60 – 95	Bldg. 6A 0 – 5 units
Lot 7	± 1.3 Ac.	None proposed	Approx. 16 – 26	None proposed
Lot 8	± 1.8 Ac.	None proposed	Approx. 16 – 28	None proposed
Lot 9	± 2.0 Ac.	None proposed	Approx. 75 – 125	None proposed
Lot 10	± 3.5 Ac.	None proposed	Approx. 24 – 35	None proposed
Totals	Approx. 25 Ac.	Up to 49,000 SF	Up to 900 units	Maximum 45 units per Development Agreement

*The specific distribution of Affordable units is described in the Development Agreement.

The project development also includes provisions for several open spaces, including trails and the creation of a public “Central Square”.

There are several identified critical areas on the site and immediate vicinity including streams, wetlands, steep slopes and mine hazard areas. Many of the stream, wetland and slope buffers are already impacted due to the prior legal industrial use of the site.

Stormwater runoff facilities will be designed using the 2009 King County Storm Water Design Manual. Centralized detention vaults are proposed for flow control with tight-lined surface outfalls discharging to on-site streams via outfalls placed in the stream buffer. Surface water runoff from pollution-generating impervious surfaces will be treated either in Filterra® bioretention systems or swales/rain gardens to achieve enhanced basic water quality treatment. Low impact development stormwater BMPs will be provided consistent with the Design Manual.

Responsible Official & Lead Agency: Tim McHarg, AICP, Director of Community Development
City of Newcastle
12835 Newcastle Way, Suite 200
Newcastle WA 98056-1316
425-649-4444

Additional Required Permits: Site Plan Approval, Binding Site Plan, Development Agreement, building permits, clearing and grading permit, Engineering Review Permit (road, storm, and utilities design); right-of-way use permit – City of Newcastle. Grading, right-of-way permit and others as identified for the improvements at the intersection of Coal Creek Parkway and the Newcastle Connector – City of Bellevue. Hydraulic Project Approval (HPA) – Washington State Department of Fish and Wildlife. Section 404 – U.S. Army Corps of Engineers, and Section 401 – Washington State Department of Ecology may be required.

Environmental Information Considered:

City Documents

1. City of Newcastle Comprehensive Plan Final Environmental Impact Statement, Issued May 7, 1997.
2. City of Newcastle Determination of Non-significance, Comprehensive Plan Amendments, September 13, 1999.
3. Environmental Impact Statement Addendum, Community Business Center/Lake Boren Corridor Master Plan, March 2000.
4. City of Newcastle Environmental Checklist, Adoption of Comprehensive Plan Amendments, October 26, 2000
5. City of Newcastle Determination of Non-significance, Amendments to the Comprehensive plan, October 30, 2000.
6. City of Newcastle Stream Inventory, 2005, Adolfson Associates, Inc, December 2005.
7. bp squared – “Mutual Materials Newcastle Property Critical Areas Report” Feb. 6, 2012; and supplement Mar. 30, 2012.
8. City of Newcastle Letter of Approval of 2012 CAR – Mutual Materials; April 23, 2012.

Applicant Submitted Documents

The following documents, in addition to others on file at the City of Newcastle, have been incorporated by reference for purposes of review under WAC 197-11-635 and NMC 14.05.210:

<u>Document Title</u>	<u>Date Prepared</u>
Expanded SEPA Environmental Checklist	October 2013 (Revised June 2014, August 2014, September 2014)
Stream Assessment for the Proposed Avalon Newcastle Master Planned Development Letter with attachments	August 29, 2014
Conceptual Mitigation Plan	September 23, 2014
Newcastle Mutual Materials – Supplemental Analysis	August 21, 2014
Revised Critical Area Sheets	August 19, 2014
Site Access Memo	July 24, 2014
Binding Site Plan Application Drawings Sheets 1-41	June 2014
Site Plan and Elevation Drawings SPR-1 – SPR-8	June 2014
Preliminary Plan Set Sheets C-1 – C-16	June 2014
Responses to Geotechnical Review Comments	June 2014
Fish and Wildlife Habitat Management Plan	June 25, 2014
Technical Memorandum – Transportation Supplemental Analysis	August 21, 2014
Technical Memorandum – Transportation Supplemental Analysis	June 24, 2014
Transportation Impact Analysis	October 2013
Preliminary Drainage Control Plan and Level 1 Downstream Analysis	October 2013
Tree Retention Plan	October 25, 2013
Site Plan Application Drawings Sheets 1-25	October 2013
Geologically Hazardous Areas Review	October 22 2013
Aquatic Resources Impacts Analysis and Conceptual Mitigation Plan	October 28, 2013
Phase I Environmental Site Assessment	October 7, 2013
Draft Development Agreement	September 2014 (revised October 2014)

Mitigated Determination of Non-Significance (MDNS):

This MDNS is issued under WAC 197-11-350 and NMC 14.05.140 and does not constitute approval of the permits for this proposal. This proposal will be reviewed for compliance with all applicable City codes that regulate development activities.

The lead agency for this proposal has determined the project does not have a probable significant adverse impact on the environment provided the identified mitigation measures contained in this Determination, as well as other applicable local, state and federal regulations, are met. An environmental impact statement is not required under RCW 43.21.C.030(2)(C). This decision was made after review of a completed environmental checklist and other information on file with the lead agency, including the documents incorporated by reference into this MDNS. This information is available to the public on request by contacting David Lee, Associate Planner (425-649-4444) at Newcastle City Hall during normal business hours.

SEPA Mitigation Measures

The following measures shall be implemented by the applicant:

EARTH

1. In consideration of erosion hazards, all grading and landscaping shall be completed in accordance with grading and landscaping plans, respectively, approved by the City of Newcastle, as well as a seasonal grading restriction, as applicable.
2. Alteration of existing regulated steep slopes, and protection of regulated steep slopes through the use of buffers, shall be completed in accordance with grading and mitigation plans approved by the City of Newcastle.
3. Mitigation of the Western Undocumented Prospect Tunnel and the No. 4 Coal Seam Prospect Tunnel coal mine hazard areas shall be completed in accordance with grouting and grading procedures described in plans approved by the City of Newcastle. Mitigation shall include monitoring of the grouting and grading processes in order to verify the effectiveness of the mitigation. The measures of a contingency plan approved by the City of Newcastle shall be implemented in the event that monitoring and verification of the grouting and grading processes indicate that additional measures are necessary to mitigate the coal mine hazards.
4. Mitigation of the potential Northwest Prospect Shafts coal mine hazard area shall be completed in accordance with Deep Dynamic Compaction and grading procedures described in plans approved by the City of Newcastle. Mitigation shall include monitoring of the Deep Dynamic Compaction and grading processes in order to verify the effectiveness of the mitigation. The measures of a contingency plan approved by the City of Newcastle shall be implemented in the event that monitoring and verification of the Deep Dynamic Compaction and grading processes indicate that additional measures are necessary to mitigate the coal mine hazard.
5. Grading, utility construction, and road construction within the influence zone of the Southeast Moderate Coal Mine hazard shall be completed in accordance with plans approved by the City of Newcastle.
6. Within the road prism for the new public road connection to Newcastle Golf Club Road a design measure, as approved by the City, shall be included to address the moderate coal mine hazard condition and provide protection to the road and utilities from potential settlement.

AIR

7. Construction equipment shall be well-maintained and prolonged period of idling vehicles and engine-powered equipment shall be prohibited.

WATER

8. To limit the potential for the introduction of non-native plant species into critical areas, only Pacific Northwest native plant species shall be utilized in all landscaping areas located adjacent to (within 15 feet) any stream or wetland buffer, consistent with NMC 18.24.350.F.
9. All stream crossings/culverts shall be designed and installed such that they do not diminish flood carrying capacity of the stream, per NMC 18.24.360.E. The Engineering Review Permit (ERP) plans shall detail BMPs to protect the streams and wetlands from unintentional temporary and/or permanent impacts below the stream's ordinary high water (OHWM)/delineated wetland edge during installation of the stream crossings.
10. If culvert removal and stream channel restoration is required for any stream culverts as a result of the HPA process, then a detailed design for such work shall be included in the ERP plans and appropriate compensatory mitigation for all permanent and temporary impacts resulting from such work shall be detailed in the *Final Mitigation, Monitoring and Contingency Plan* to be submitted with the ERP plans. Culvert removal and channel restoration on Stream A/B, if proposed, shall not negatively affect the hydrology of Wetland A such that its hydrologic, water quality or habitat functions would be diminished.
11. The condition of two existing culverts with proposed road crossings has not yet been determined. If videoing the Stream B crossing at 132nd provides evidence of a failed, failing or likely to fail culvert, and a design alternative is not available, replacement may be required by the City. Also, the downstream end of the 36-inch corrugated metal pipe culvert on Stream C just west of Block 8 is buried. The City may require the culvert be exposed to restore conveyance capacity and/or determine its condition. Any work associated with either culvert shall be included in the ERP plans and appropriate compensatory mitigation for all permanent and temporary impacts resulting from such work shall be detailed in the *Final Mitigation, Monitoring and Contingency Plan* to be submitted with the ERP plans.
12. Outfall pipes conveying flow from the proposed vaults shall be flexible material and oriented to avoid clearing trees from within the stream buffers to the maximum extent possible. Stormwater facility outfalls shall be constructed landward of the stream OHWM or wetland boundaries and shall meet Washington State Department of Fish and Wildlife design criteria.
13. Trees removed as a result of locating the outfall pipes shall be replaced with the same or comparable native tree species, minimum 5 gallon size plants, located as close as practicable to the location of the removed tree. The survival and health of such replacement trees shall be documented as part of the annual monitoring of Buffer Restoration Areas, consistent with the *September 23, 2014 Conceptual Mitigation Plan* and ultimately the *Final Mitigation, Monitoring, and Contingency Plan* to be submitted with the ERP plans.
14. Applicant shall submit a *Final Mitigation, Monitoring, and Contingency Plan* per NMC 18.24.130.B through D, as part of the 100% design construction drawings at the time of the ERP submittal; the Final Plan shall disclose, quantify, and graphically depict all areas of stream and wetland buffer impacts (both permanent and temporary), area and locations of buffer restoration, and area and location of additional buffer areas. The document shall be consistent in intent and content with the *September 23, 2014 Conceptual Mitigation Plan* prepared by Wetland Resources Inc.
15. The *Final Mitigation, Monitoring, and Contingency Plan* shall include a detailed description of how buffer restoration of the brick rubble removal and restoration will occur, particularly in regard to safeguarding adjacent critical areas and their buffers from temporary or permanent construction impacts and in regard to creating soils suitable to support the restoration plantings. Soil conditions in the brick rubble removal and restoration areas shall be evaluated and restored to suitable planting conditions relative to organic content, nutrients, and soil structure following

decompaction and prior to planting in all buffer restoration areas identified in the *Plan* to ensure satisfactory establishment and growth of mitigation plantings.

16. The *Final Mitigation, Monitoring, and Contingency Plan* shall include a detailed description of how the applicant will maintain the brick rubble removal areas and all buffer restoration areas until planting is completed, with particular attention to invasive species and erosion control during the period of initial mass grading of the site prior to planting.
17. No areas of brick rubble fill removal within critical area buffers or buffer restoration within critical area buffers shall remain unplanted for more than 2 years from the start of brick fill removal and mass site grading, regardless of whether the overall mass grading effort is completed for the entire site.
18. The *Final Mitigation, Monitoring, and Contingency Plan* shall include a detailed description and quantification of impacts from the final size and orientation of the stormwater vaults once the developed area of each lot is determined.
19. The *Final Mitigation, Monitoring, and Contingency Plan* shall include monitoring of the stormwater vault outfalls, including the area of the stream and stream buffer downstream/down gradient of the outfall and documentation of any scour, erosion, or other impacts occurring as a result of the stormwater discharge. Repair of any such damage shall be required as part of the *Final Mitigation, Monitoring, and Contingency Plan*.
20. If the installation of mitigation plantings over the stormwater vaults occurs after the overall mass grading effort and/or other areas of buffer restoration plantings, then mitigation monitoring and bonding for the stormwater vault buffer restoration areas will be separated in time and require a 5 year monitoring schedule starting at the time of plant installation in the stormwater vault buffer restoration areas.
21. Enhanced basic water quality treatment shall be provided for all runoff from pollution generating impervious and pervious surfaces. Certain LID BMPs from the 2012 Low Impact Technical Guidance Manual for Puget Sound and treatment devices certified for General Use through the Department of Ecology's TAPE program as providing this level of treatment may be included in the treatment facility menu.
22. All existing stormwater outfall pipes shall either be removed or plugged and abandoned in place during site development.
23. A stormwater detention facility operation and maintenance agreement meeting the City's NPDES PHASE II permit requirements and other applicable City regulations and standards shall be developed by the applicant and approved by the City prior to approving the ERP.

ENVIRONMENTAL HEALTH

24. The diesel contaminated soils near the former 8,000-gallon underground storage tank (UST) near the north-central portion of the former Keller Kiln building shall be excavated and properly disposed of off-site at a licensed facility during site development activities.
25. Prior to dedication, coal spoils requiring cleanup under MTCA located within areas that will be dedicated to the City of Newcastle shall be removed, capped, or contained as allowed by MTCA to remediate contamination under public right-of-way.

RECREATION

26. The portion of the existing Coal Creek Trail that traverses the site shall either be deeded to the City of Bellevue or established via an easement for the benefit of the City of Bellevue, for purposes of retaining the existing trail on the property.
27. All proposed on-site trails and open space shall be subject to the Development Agreement and phasing requirements contained therein.

TRANSPORTATION

28. The transportation analysis and comments by the City of Bellevue, shows the project would result in some additional traffic along the SE 66th Street/SE 67th Street/ 128th Avenue SE corridor. The applicant shall enter into a Memorandum of Understanding with the City of Bellevue, prior to recordation of the first Binding Site Plan, to help fund potential traffic calming measures on the SE 66th Street corridor between Coal Creek Parkway SE and Newcastle Way. The purpose of the traffic calming measures will be to reduce the volume, or slow the speed of, traffic in the corridor.
29. At the Coal Creek Parkway SE and SE 66th Street intersection, the current stop control will not provide sufficient capacity for traffic volumes to access the site. A traffic signal shall be installed at the Coal Creek Parkway SE and SE 66th Street intersection, and adequate lane capacity provided to meet the City of Bellevue's intersection level of service standard. With the addition of the traffic signal at the intersection, the LOS improves from F to C. This signal shall also provide for pedestrian crossing.
30. The site access intersection at Newcastle Golf Club Road is anticipated to operate at LOS D, which would meet the City's LOS standard. However, the City separately plans to realign 136th Avenue SE which would add a fourth leg to the intersection. At the proposed site access intersection on Newcastle Golf Club Road, a center left turn lane shall be provided by the applicant to accommodate left turns to and from the proposed development, and support the planned realignment of 136th Avenue SE. The intersection would operate at LOS C with this improvement, and meet the City's level of service standard with this improvement.
31. Development of the Newcastle Connector Roadway includes frontage improvements on the east side of Coal Creek Parkway, and shall include construction of a 4 foot planter strip, 8 foot sidewalk, roadway widening necessary to accommodate a southbound left turn pocket at the Coal Creek Parkway and SE 66th Street intersection, and utility relocations. A traffic signal shall also be installed at the Coal Creek Parkway and SE 66th Street intersection as described above in Number 29. Prior to construction of the southbound left turn pocket, access shall be limited to right-in right-out only from the Lot 1 secondary access points just north and south of SE 66th Street, or as otherwise approved by the City.
32. The applicant shall develop a construction management plan, prior to construction, which addresses haul routes, construction employee parking, site access, and traffic control.

Comments and Appeals

Written comments must be submitted to the responsible official at the lead agency address below within 14 days of the issuance of this determination. The comment period ends November 10, 2014 at 5:00 PM.

Anyone may appeal this decision by submitting written and specific factual objections to: Newcastle City Hall, 12835 Newcastle Way, Suite 200, Newcastle, WA 98056. The City must receive appeals within 14 days of the end of the comment period. The appeal period ends at 5:00 p.m. on November 24, 2014.

Contact: Tim McHarg, AICP, Director of Community Development

Address: Newcastle City Hall
12835 Newcastle Way, Suite 200
Newcastle, WA 98056
(425) 649-4444

Responsible Official

10/23/14

City of Newcastle
Department of Community Development
SEPA Review Summary

A. Background

Avalon Bay has applied for the redevelopment of a 53 acre site for a phased 900 (+/-) dwelling unit and 49,000 SF non-residential mixed use (commercial/residential) development and associated site improvements, including critical areas mitigation. Primary access to the proposed development would be from Coal Creek Parkway SE and SE 66th Street. Two additional access points will be provided, one at Newcastle Golf Club Road and the other from 132nd Avenue SE, which currently dead ends at the project development's southern parcel boundary. The roadway section through the proposed development from Coal Creek Parkway SE to Newcastle Golf Club Road will provide a new public road as identified in Newcastle's Comprehensive Plan. The planned extension of 132nd Avenue SE to the new "Newcastle Connector" is also on the City's long range plans. Both will be dedicated to the City as public streets. The project requires a Development Agreement with the City of Newcastle.

B. Environmental Elements

1. Earth

Project is located on parcels #2724059006, 2824059099 and 2724059040, with a site address of 6620 Coal Creek Parkway SE. Project area is bounded by Coal Creek Parkway SE to the west, City of Bellevue parks property to the north and east, the YMCA and Newcastle Golf Club Road to the south as well as multi-family-residential to the south. The site topography ranges from 240 feet to a maximum elevation of 490 feet. Surface grades vary throughout the project area. Steep-sided ravines border the eastern and western sides. The area where the former Mutual Materials facility was located is fairly flat. There are two areas of localized shallow ground movements observed between the former developed portion of the site and Coal Creek. Both of these areas likely formed below storm drainage outfalls that discharge directly to the upper portion of the steep slope. Removal or abandonment of these storm drain pipes will be required. Shallow peripheral slumping was observed in several areas adjacent to the exposed soils. The southeastern portion of the site is underlain by former coal mine workings for the No. 3 Seam, 2nd Level, Upper and Lower Splits between depths of about 175 feet and 315 feet. Analysis indicates potential future ground subsidence and potential ground strain in the southeastern portion of the site of 1 to 3.5 inches or less. This area is limited to the roadway and utilities associated with the planned southern access to the site. No. 4 Seam Prospect Tunnel is located in the southern portion of the site which has the potential for settling. An underground coal prospect tunnel is located in the western portion of the site along the proposed site access. Anecdotal information suggests that there may be small-diameter coal prospect exploration shafts in the northwestern portion of the site. The site currently contains a building pad from the former Mutual Materials facility along with several clay sheds. The balance of the site is primarily vegetated with both native and invasive species. Applicant proposes to cut approximately 200,000 cubic yards and an approximate balance of fill.

- The SEPA Responsible Official finds probable impact.

Mitigation

- In consideration of erosion hazards, all grading and landscaping shall be completed in accordance with grading and landscaping plans, respectively, approved by the City of Newcastle, as well as a seasonal grading restriction, as applicable.
- Alteration of existing regulated steep slopes, and protection of regulated steep slopes through the use of buffers, shall be completed in accordance with grading and mitigation plans approved by the City of Newcastle.
- Mitigation of the Western Undocumented Prospect Tunnel and the No. 4 Coal Seam Prospect Tunnel coal mine hazard areas shall be completed in accordance with grouting and grading procedures described in plans approved by the City of Newcastle. Mitigation shall include monitoring of the grouting and grading processes in order to verify the effectiveness of the mitigation. The measures of a contingency plan approved by the City of Newcastle shall be implemented in the event that monitoring and verification of the grouting and grading processes indicate that additional measures are necessary to mitigate the coal mine hazards.
- Mitigation of the potential Northwest Prospect Shafts coal mine hazard area shall be completed in accordance with Deep Dynamic Compaction and grading procedures described in plans approved by the City of Newcastle. Mitigation shall include monitoring of the Deep Dynamic Compaction and grading processes in order to verify the effectiveness of the mitigation. The measures of a contingency plan approved by the City of Newcastle shall be implemented in the event that monitoring and verification of the Deep Dynamic Compaction and grading processes indicate that additional measures are necessary to mitigate the coal mine hazard.
- Grading, utility construction, and road construction within the influence zone of the Southeast Moderate Coal Mine hazard shall be completed in accordance with plans approved by the City of Newcastle.
- Within the road prism for the new public road connection to Newcastle Golf Club Road a design measure, as approved by the City, shall be included to address the moderate coal mine hazard condition and provide protection to the road and utilities from potential settlement.

2. Air

Temporary construction-related emissions will be released into the air. Long term emissions will be those consistent with residential development and the establishment of a new public connector road. Watering dry portions of the construction project will control dust.

- The SEPA Responsible Official finds probable impact.

Mitigation

- Construction equipment shall be well-maintained and prolonged period of idling vehicles and engine-powered equipment shall be prohibited.

3. Water

Currently, there are three wetlands and five streams on the site. No direct impacts to streams or wetlands are proposed; only buffer impacts are proposed; however, if removal of existing culverts is required by the HPA, as per comments by WDFW and Muckleshoot Indian Tribe (MIT) at the September 10, 2014 field meeting and in subsequent e-mails from WDFW and MIT, then direct impacts to streams and/or wetlands could occur. Direct impacts to streams and/or wetlands could occur if videoing the stream crossings provide evidence of a failed, failing or likely to fail culvert, and a design alternative is not available, replacement may be required by the City. The

development will result in stream/wetland buffer impacts due to on-site public road construction, utility extensions (including stormwater facilities with vault and outfall locations in critical area buffer), a new trail connected to the existing Coal Creek trail, pedestrian connections, and parking lot construction, as well as frontage improvements to adjacent public rights-of-way.

The project requires crossing four of the on-site streams in five locations to gain access to the developable portions of the project. The four crossings are proposed to be bottomless culverts and will span the entirety of the ordinary high water mark (OHWM) and will have no direct impact to the streams or wetlands. Buffers associated with these stream crossings will be permanently impacted by the project. The fifth crossing at the extension of 132nd Place SE is an existing culvert that is not proposed to be replaced.

Development impacts will be mitigated through a combination of restoration of existing hardscape areas within critical area buffers and buffer averaging via dedicating additional buffer areas as applicable per NMC or as modified through the Development Agreement.

Development of the site will be phased and will be governed by an approved Drainage Control Plan. As such, the developed site will replicate existing conditions by infiltrating, where feasible, stormwater runoff generated on-site, and treating and detaining surface water runoff for water quality and peak rate control prior to discharging to on-site streams.

Centralized detention vaults for the majority of the site, as well as other vaults/stormwater flow control facilities for specific lots, are proposed for flow control with tight-lined surface outfalls discharging to the buffer of three on-site streams. Surface water runoff from pollution-generating impervious surfaces will be treated either in Filterra© bioretention systems or swales/rain gardens. Treated stormwater from these systems and roof water will be drained into a clean water conveyance to the stormwater detention vaults. The Applicant, in its SEPA Environmental Checklist, indicates that the centralized vaults will be dedicated to the City of Newcastle; however, this will not be the case. Specific details will be determined during ERP review.

Developed stormwater shall be detained to the Conservation Flow Control Standard as detailed in the 2009 King County Surface Water Design Manual (SWDM), assuming a forested predeveloped site landcover.

Low Impact Development BMPs shall be applied as required in the SWDM for large lot high impervious projects.

- The SEPA Responsible Official finds probable impact.

Mitigation

- To limit the potential for the introduction of non-native plant species into critical areas, only Pacific Northwest native plant species shall be utilized in all landscaping areas located adjacent to (within 15 feet) any stream or wetland buffer, consistent with NMC 18.24.350.F.
- All stream crossings/culverts shall be designed and installed such that they do not diminish flood carrying capacity of the stream, per NMC 18.24.360.E. The Engineering Review Permit (ERP) plans shall detail BMPs to protect the streams and wetlands from unintentional temporary and/or permanent impacts below the stream's ordinary high water (OHWM)/delineated wetland edge during installation of the stream crossings.
- If culvert removal and stream channel restoration is required for any stream culverts as a result of the HPA process, then a detailed design for such work shall be included

in the ERP plans and appropriate compensatory mitigation for all permanent and temporary impacts resulting from such work shall be detailed in the Final Mitigation, Monitoring and Contingency Plan to be submitted with the ERP plans. Culvert removal and channel restoration on Stream A/B, if proposed, shall not negatively affect the hydrology of Wetland A such that its hydrologic, water quality or habitat functions would be diminished.

- The condition of two existing culverts with proposed road crossings has not yet been determined. If videoing the Stream B crossing at 132nd provides evidence of a failed, failing or likely to fail culvert, and a design alternative is not available, replacement may be required by the City. Also, the downstream end of the 36-inch corrugated metal pipe culvert on Stream C just west of Block 8 is buried. The City may require the culvert be exposed to restore conveyance capacity and/or determine its condition. Any work associated with either culvert shall be included in the ERP plans and appropriate compensatory mitigation for all permanent and temporary impacts resulting from such work shall be detailed in the Final Mitigation, Monitoring and Contingency Plan to be submitted with the ERP plans.
- Outfall pipes conveying flow from the proposed vaults shall be flexible material and oriented to avoid clearing trees from within the stream buffers to the maximum extent possible. Stormwater facility outfalls shall be constructed landward of the stream OHWM or wetland boundaries and shall meet Washington State Department of Fish and Wildlife design criteria.
- Trees removed as a result of locating the outfall pipes shall be replaced with the same or comparable native tree species, minimum 5 gallon size plants, located as close as practicable to the location of the removed tree. The survival and health of such replacement trees shall be documented as part of the annual monitoring of Buffer Restoration Areas, consistent with the September 23, 2014 Conceptual Mitigation Plan and ultimately the Final Mitigation, Monitoring, and Contingency Plan to be submitted with the ERP plans.
- Applicant shall submit a Final Mitigation, Monitoring, and Contingency Plan per NMC 18.24.130.B through D, as part of the 100% design construction drawings at the time of the ERP submittal; the Final Plan shall disclose, quantify, and graphically depict all areas of stream and wetland buffer impacts (both permanent and temporary), area and locations of buffer restoration, and area and location of additional buffer areas. The document shall be consistent in intent and content with the September 23, 2014 Conceptual Mitigation Plan prepared by Wetland Resources Inc.
- The Final Mitigation, Monitoring, and Contingency Plan shall include a detailed description of how buffer restoration of the brick rubble removal and restoration will occur, particularly in regard to safeguarding adjacent critical areas and their buffers from temporary or permanent construction impacts and in regard to creating soils suitable to support the restoration plantings. Soil conditions in the brick rubble removal and restoration areas shall be evaluated and restored to suitable planting conditions relative to organic content, nutrients, and soil structure following decompaction and prior to planting in all buffer restoration areas identified in the Plan to ensure satisfactory establishment and growth of mitigation plantings.
- The Final Mitigation, Monitoring, and Contingency Plan shall include a detailed description of how the applicant will maintain the brick rubble removal areas and all buffer restoration areas until planting is completed, with particular attention to

invasive species and erosion control during the period of initial mass grading of the site prior to planting.

- No areas of brick rubble fill removal within critical area buffers or buffer restoration within critical area buffers shall remain unplanted for more than 2 years from the start of brick fill removal and mass site grading, regardless of whether the overall mass grading effort is completed for the entire site.
- The Final Mitigation, Monitoring, and Contingency Plan shall include a detailed description and quantification of impacts from the final size and orientation of the stormwater vaults once the developed area of each lot is determined.
- The Final Mitigation, Monitoring, and Contingency Plan shall include monitoring of the stormwater vault outfalls, including the area of the stream and stream buffer downstream/down gradient of the outfall and documentation of any scour, erosion, or other impacts occurring as a result of the stormwater discharge. Repair of any such damage shall be required as part of the Final Mitigation, Monitoring, and Contingency Plan.
- If the installation of mitigation plantings over the stormwater vaults occurs after the overall mass grading effort and/or other areas of buffer restoration plantings, then mitigation monitoring and bonding for the stormwater vault buffer restoration areas will be separated in time and require a 5 year monitoring schedule starting at the time of plant installation in the stormwater vault buffer restoration areas.
- Enhanced basic water quality treatment shall be provided for all runoff from pollution generating impervious and pervious surfaces. Certain LID BMPs from the 2012 Low Impact Technical Guidance Manual for Puget Sound and treatment devices certified for General Use through the Department of Ecology's TAPE program as providing this level of treatment may be included in the treatment facility menu.
- All existing stormwater outfall pipes shall either be removed or plugged and abandoned in place during site development.
- A stormwater detention facility operation and maintenance agreement meeting the City's NPDES PHASE II permit requirements and other applicable City regulations and standards shall be developed by the applicant and approved by the City prior to approving the ERP.

4. Plants

Plants on site: alder, maple, cottonwood, willow, Douglas fir, western red cedar, shrubs, salmonberry, blackberry, dogwood, snowberry, grass, cattail, buttercup, skunk cabbage, ferns, horsetail, stinging nettle, slough sedge, bulrush, English Ivy. According to the information presented in the SEPA Checklist, no threatened or endangered plant species are known to be on or near the project site. The critical areas will be placed within critical areas tracts to remain in private ownership. Tree retention and replacement will be provided pursuant to NMC 18.16. Landscaping plans will incorporate native vegetation species.

- No probable significant adverse environmental impact.

5. Animals

Songbirds, deer, coyote and rodents are present at the site. No endangered or threatened animal species are known to be on or near the site. According to the information presented in the SEPA Checklist, the project site is located within the Pacific Flyway, which is a known regional migration route for birds. The critical areas (which include areas of Fish & Wildlife Habitat Conservation Areas) will be placed within critical

areas tracts, and once the critical areas mitigation measures have been installed and matured, the critical areas tracts should provide functional habitat for wildlife.

Tree retention and replacement will be provided pursuant to NMC 18.16.

- No probable significant adverse environmental impact.

6. Energy and Natural Resources

Electricity and natural gas will be used to fulfill the project's energy needs. The project will not impact the use of solar energy. Low-rise residential buildings are striving for LEED for Homes Certification. All mid-rise buildings are striving for LEED for Homes Midrise Certification. Non-residential buildings may target LEED for Core and Shell Certification.

- No probable significant adverse environmental impact.

7. Environmental Health

Based on environmental assessments conducted at or near the project site, there are three known environmental conditions currently present. A small amount of diesel related to a previously removed 8,000-gallon underground storage tank (UST) is present in soil beneath the north-central portion of the former Keller Kiln building. As part of the proposal, the impacted soil will be excavated and disposed of off-site during site development activities in accordance with applicable regulations. The southeastern portion of the site contains coal mine spoils dating back to as early as 1880. The spoils are up to 15 feet thick and in some areas may be more than 75,000 cubic yards in volume. Sampling and analysis of the spoils indicates that discrete, localized portions of the spoils may contain naturally occurring metals at concentrations slightly exceeding default cleanup levels established by the Washington Model Toxics Control Act (MTCA). The area delineated to be coal mine spoil fill is proposed to be segregated within tracts. The only disturbance of coal spoils would be proposed excavation of spoil fill, and replacement fill for the Newcastle Connector Road intersection with Newcastle Golf Club Road. Some of the surface water that enters and runs through the project site contains metals at concentrations slightly exceeding default cleanup levels established by MTCA and other applicable regulations. A remedy will be developed and implemented for the impacted surface water in consultation with the Washington State Department of Ecology. It is expected the remedy may consist of institutional controls to prevent exposure to the impacted surface water. The potential for methane generation from the mine spoil waste is extremely low due to the length of time they have been in place (more than 100 years).

No known environmental health hazards will result from this development. Construction noise will be temporary. The development is by and large surrounded by critical areas or public rights-of-ways; therefore any long term noise should be non-significant. Construction hours are limited by the City to 7am-7pm, weekdays, and 9am-6pm weekends.

- The SEPA Responsible Official finds probable impact.

Mitigation

- The diesel contaminated soils near the former 8,000-gallon underground storage tank (UST) near the north-central portion of the former Keller Kiln building shall be excavated and properly disposed of off-site at a licensed facility during site development activities.
- Prior to dedication, coal spoils requiring cleanup under MTCA located within areas that will be dedicated to the City of Newcastle shall be removed, capped, or

contained as allowed by MTCA to remediate contamination under public right-of-way.

8. Land and Shoreline Use

There are no existing homes or operating commercial or industrial uses on the project site. The remaining existing structures will be demolished. The current zoning is MU-R/MU-C which is a mixed-use development designation according to the Comprehensive Plan. It also within the Newcastle CBC Plan area, therefore is subject to the Community Business Center Overlay Zone. There are no shorelines of statewide significance located on the site. All wetlands and streams are discussed under number 3 above. Once completed, the development will have up to 900 dwelling units and up to 49,000 SF of commercial/retail space.

- No probable significant adverse environmental impact.

9. Housing

Approximately 900 multi-family units site-wide. Affordable housing units will be provided at a rate of 5% of the total number of multi-family units, and such affordable housing units shall be provided only within apartment rentals, as provided for in the Development Agreement.

- No probable significant adverse environmental impact.

10. Aesthetics

The tallest portion of the buildings is proposed to be 75', which is allowed in the MU zone with the CBC overlay. Principal exterior building materials will be consistent with residential and mixed-use development in the area. The City's CBC Design Guidelines encourage the use of brick materials associated with the prior use of the site. The buildings will be designed so that massing is broken up through architectural articulation. Furthermore, the project design adheres to landscaping requirements of NMC Chapter 18.16 and the CBC Design Guidelines, except as modified by the Development Agreement. Views along the perimeter of the project would be altered; but due to topography and vegetation, views would not be significantly affected. Building permits must be obtained for each building as required in the Newcastle Municipal Code.

- No probable significant adverse environmental impact.

11. Light and Glare

Street lights, buildings and the associated traffic will give off light and/or glare consistent with mixed-use developments. All exterior lights, with the exception of pedestrian level walkway lighting, will be shielded to be focused directly below the lighting area. Vehicle headlights on the Newcastle Connector and 132nd Place SE will be visible to residents along those streets.

- No probable significant adverse environmental impact.

12. Recreation

The project includes new trail connections that will link to existing trail systems in the vicinity. New trails will be provided on the project site. A Central Square is also proposed that includes a plaza, water feature, seating and event lawns. Smaller open space areas may include tot lots to serve on-site residents. A portion of the existing Coal Creek Trail traverses the northwestern portion of the site. The Applicant proposes to maintain the current configuration of, and public access to, that portion of the existing Coal Creek Trail subject to final agreement with the City of Bellevue.

- The SEPA Responsible Official finds probable impact.

Mitigation

- The portion of the existing Coal Creek Trail that traverses the site shall either be deeded to the City of Bellevue or established via an easement for the benefit of the City of Bellevue, for purposes of retaining the existing trail on the property.
- All proposed on-site trails and open space shall be subject to the Development Agreement and phasing requirements contained therein.

13. Historic and Cultural Preservation

There are no known places or objects listed on or proposed for any preservation registers. However, there are signs of historic coal mining activities.

If any such place or object is encountered during construction, work will cease and the owner will notify the appropriate agencies as required by law.

- No probable significant adverse environmental impact.

14. Transportation

The site will be accessed from Coal Creek Parkway via a new public road ("Newcastle Connector"). The Newcastle Connector will continue through the site and connect to Newcastle Golf Club Road. There would also be a new public road extending from 132nd Place SE to the Newcastle Connector. Several other private roadways are proposed for access to the various proposed lots. The intersection with Coal Creek Parkway will be aligned with SE 66th Street and will be signalized. The nearest bus stop is along Newcastle Golf Club Road by King County Metro. There are two transit routes providing service to Bellevue, Renton and Downtown Seattle. The project will provide parking stalls per the City of Newcastle's parking requirements, including accessible spaces and bike storage. A 20% reduction for shared parking is being proposed, as well as inclusion of the on-street parking spaces along the Newcastle Connector being counted towards the overall site parking, as provided for in the Development Agreement. Frontage improvements will be provided as required by the City of Newcastle and the City of Bellevue. A traffic impact fee will be paid to the City of Newcastle or credit given for the new public roads as they are included in the City of Newcastle's Capital Improvement Plan.

- The SEPA Responsible Official finds probable impact.

Mitigation

- The transportation analysis and comments by the City of Bellevue, shows the project would result in some additional traffic along the SE 66th Street/SE 67th Street/ 128th Avenue SE corridor. The applicant shall enter into a Memorandum of Understanding with the City of Bellevue, prior to recordation of the first Binding Site Plan, to help fund potential traffic calming measures on the SE 66th Street corridor between Coal Creek Parkway SE and Newcastle Way. The purpose of the traffic calming measures will be to reduce the volume, or slow the speed of, traffic in the corridor.
- At the Coal Creek Parkway SE and SE 66th Street intersection, the current stop control will not provide sufficient capacity for traffic volumes to access the site. A traffic signal shall be installed at the Coal Creek Parkway SE and SE 66th Street intersection, and adequate lane capacity provided to meet the City of Bellevue's intersection level of service standard. With the addition of the traffic signal at the intersection, the LOS improves from F to C. This signal shall also provide for pedestrian crossing.

- The site access intersection at Newcastle Golf Club Road is anticipated to operate at LOS D, which would meet the City's LOS standard. However, the City separately plans to realign 136th Avenue SE which would add a fourth leg to the intersection. At the proposed site access intersection on Newcastle Golf Club Road, a center left turn lane shall be provided by the applicant to accommodate left turns to and from the proposed development, and support the planned realignment of 136th Avenue SE. The intersection would operate at LOS C with this improvement, and meet the City's level of service standard with this improvement.
- Development of the Newcastle Connector Roadway includes frontage improvements on the east side of Coal Creek Parkway, and shall include construction of a 4 foot planter strip, 8 foot sidewalk, roadway widening necessary to accommodate a southbound left turn pocket at the Coal Creek Parkway and SE 66th Street intersection, and utility relocations. A traffic signal shall also be installed at the Coal Creek Parkway and SE 66th Street intersection as described above. Prior to construction of the southbound left turn pocket, access shall be limited to right-in right-out only from the Lot 1 secondary access points just north and south of SE 66th Street, or as otherwise approved by the City.
- The applicant shall develop a construction management plan, prior to construction, which addresses haul routes, construction employee parking, site access, and traffic control.

15. Public Services

The increase in public services will be consistent with those of a mixed-use development. Impact fees will be paid or credited pursuant to a Development Agreement for transportation, schools and parks. Property taxes will be collected to pay for services.

- No probable significant adverse environmental impact.

16. Utilities

Electricity, natural gas, refuse service, water, telephone, sanitary sewer and cable TV will be provided to the development.

- No probable significant adverse environmental impact.



City of Bellevue

N 1/2 , NW 1/4 AND SE 1/4, NW 1/4 , SECTION 27, TOWNSHIP 24 N, RANGE 5 E, W.M. CITY OF NEWCASTLE, KING COUNTY, WASHINGTON

COAL CREEK PARKWAY SE CLEARING & GRADING PLAN SET (RIGHT-OF-WAY IMPROVEMENTS)

APPROVED BY

PERMIT NUMBER:

CITY OF BELLEVUE KING COUNTY, WASHINGTON FEBRUARY, 2015

LEGAL

PARCEL A:

THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER; AND THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER; ALL IN SECTION 27, TOWNSHIP 24 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON;

EXCEPT THOSE PORTIONS THEREOF CONVEYED TO KING COUNTY BY DEEDS RECORDED UNDER RECORDING NO'S 5994802 AND 5659125.

PARCEL B:

THE WEST 360 FEET OF THAT PORTION OF THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 27, TOWNSHIP 24 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, LYING NORTH OF THE THOMAS DONALD COUNTY ROAD NO. 193;

EXCEPT THAT PORTION THEREOF DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF THE SAID NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER SOUTH 88°23'59" EAST 3.62 FEET; THENCE SOUTH 23°57'01" EAST TO THE NORTH MARGIN OF THE SAID COUNTY ROAD NO. 193; THENCE WESTERLY ALONG SAID NORTH MARGIN TO THE WEST LINE OF THE SAID NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF NORTHWEST QUARTER; THENCE ALONG SAID WEST LINE NORTH 01°21'14" EAST TO THE POINT OF BEGINNING.

PARCEL C:

LOT B, CITY OF NEWCASTLE BOUNDARY LINE ADJUSTMENT NO. BLA-97-4, RECORDED DECEMBER 15, 1997 UNDER RECORDING NO. 9712151616, IN KING COUNTY, WASHINGTON.

PARCEL D:

THAT PORTION OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 28, TOWNSHIP 24 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, LYING EASTERLY OF THE COAL CREEK LAKE BOREN ROAD AS CONVEYED TO KING COUNTY BY DEED RECORDED UNDER RECORDING NO. 5992888.

BASIS OF BEARING:

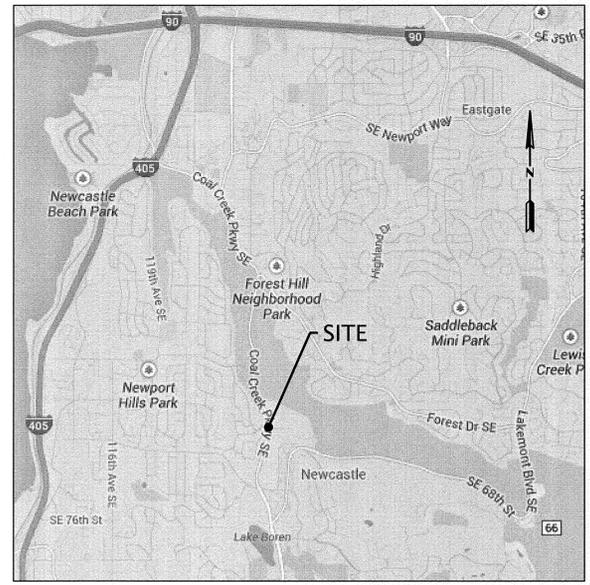
BASIS OF POSITION: THE NORTHWEST CORNER OF SECTION 27, TOWNSHIP 24 NORTH, RANGE 5 EAST (ALSO KNOWN AS CITY OF BELLEVUE (COB) SURVEY CONTROL POINT 0166) - A FOUND 4" X 4" CONCRETE MONUMENT WITH A 3/8" BRASS ROD WITH PUNCH. SEE CITY OF BELLEVUE SURVEY DATABASE FOR A MORE DETAILED DESCRIPTION. THE PUBLISHED STATE PLANE COORDINATES ARE N 201,817.006 E 1,311,714.441 (US SURVEY FEET).

BASIS OF BEARING: HELD THE BEARING BETWEEN THE ABOVE NOTED BASIS OF POSITION AND THE WEST QUARTER CORNER OF SAID SECTION 27 (ALSO KNOWN AS COB SURVEY CONTROL POINT 0171) - A FOUND 4" X 4" CONCRETE MONUMENT WITH 3/8" BRASS ROD WITH PUNCH MARK TO BE S 01°31'39" W PER DIRECT INVERSE. SEE CITY OF BELLEVUE SURVEY DATABASE FOR A MORE DETAILED DESCRIPTION. THE PUBLISHED STATE PLANE COORDINATES ARE N 199,164.819 E 1,311,643.730 (US SURVEY FEET).

BENCHMARK:

VERTICAL DATUM: NAVD 1988 PER CITY OF BELLEVUE DATABASE.

MASTER BENCHMARK: CITY OF BELLEVUE SURVEY CONTROL POINT 0326 - A FOUND 4" X 4" CONCRETE MONUMENT IN CASE WITH A BRASS PLUG WITH PUNCH MARK DOWN 0.8 FEET. MONUMENT IS LOCATED IN THE CUL-DE-SAC AT THE NORTH END OF 131ST AVENUE SE, NORTH OF SE 66TH STREET. SEE CITY OF BELLEVUE SURVEY DATABASE FOR A MORE DETAILED DESCRIPTION. ELEVATION = 371.48 FEET (NAVD 1988).



VICINITY MAP
N.T.S.

DEVELOPMENT CONTACTS

OWNER/APPLICANT/AGENT
BRIAN FRITZ
AVALONBAY COMMUNITIES, INC.
600 108TH AVE. NE
SUITE 840
BELLEVUE, WA 98004
PHONE: 425-468-9446
FAX: 425-455-0135

ARCHITECT/LANDSCAPE ARCHITECT
JAMES BRADLEY, AIA
GGLO ARCHITECTURE & INTERIOR DESIGN
1301 FIRST AVENUE
SUITE 301
SEATTLE, WA 98101
PHONE: 206-467-5828
FAX: 206-467-0627

ENGINEER/SURVEYOR
KEITH J. GOLDSMITH, PE
GOLDSMITH
1215 114TH AVENUE SE
BELLEVUE, WA 98004
PHONE: 425-462-1080
FAX: 425-462-7719

PROJECT INFORMATION:

TAX PARCEL #: 272405-9006, 272405-9040, 282405-9099
SITE LOCATION: 6620 COAL CREEK PARKWAY SE, NEWCASTLE, WA 98059
AREA: 53 ACRES
EXISTING ZONE: MIXED USE (MU) RESIDENTIAL (R) AND MIXED USE (MU) COMMERCIAL (C)
DENSITY: APPROX. 900 UNITS, APPROX. 18 DU/AC
PROPOSED USE: RESIDENTIAL AND COMMERCIAL
SEWER / WATER: COAL CREEK UTILITY DISTRICT
FIRE DISTRICT: CITY OF BELLEVUE
SCHOOL DISTRICT: ISSAQUAH SCHOOL DISTRICT
REFUSE: WASTE MANAGEMENT

CAUTION:

LOCATION OF EXISTING UTILITIES SHOWN IS APPROXIMATE AND MAY NOT BE ACCURATE OR ALL INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY LOCATION OF UTILITIES PRIOR TO PROCEEDING WITH CONSTRUCTION.

NOTE: YOU MUST CALL 1-800-424-5555 NOT LESS THAN 48 HOURS BEFORE BEGINNING EXCAVATION WHERE ANY UNDERGROUND UTILITIES MAY BE LOCATED. FAILURE TO DO SO COULD MEAN BEARING SUBSTANTIAL REPAIR COSTS. (UP TO THREE TIMES THE COST OF REPAIRS TO THE SERVICE).

SHEET INDEX

Sheet #	DESCRIPTION
1	COVER
2 - 4	OVERALL AND INDEX PLAN
5 - 6	COAL CREEK PARKWAY SE IMPROVEMENTS PLAN SHEETS COAL CREEK PARKWAY SE IMPROVEMENTS PROFILE SHEETS

SCOPE OF CONSTRUCTION ACTIVITIES

A SUMMARY OF CONSTRUCTION ACTIVITIES TO BE COMPLETED DURING THE INITIAL PHASE OF WORK (SITE MAINTENANCE AS WELL AS ACTIVITY TO BE PERMITTED UNDER THIS ERP) INCLUDE:

- DEMOLITION OF EXISTING HARDSCAPE ON-SITE INCLUDING: PAVEMENT, CONCRETE FOUNDATIONS AND STANDING CLAY SHED (MAY PURSUE SEPARATE DEMOLITION PERMIT FOR PORTIONS)
- DRILLING AND SLURRY INJECTION FOR COAL MINE DECLASSIFICATION
- SELECT SOIL REMOVAL AS MAY BE DIRECTED BY PHASE II ENVIRONMENTAL ASSESSMENT
- REMOVAL AND PROCESSING (CRUSHING) OF EXISTING BRICK PILES AND/OR RUBBLE FILL ON-SITE
- DEEP DYNAMIC COMPACTION (DDC) AS DESIGNATED ON THE PLANS
- CLEARING, STRIPPING AND REGRADING AS SHOWN ON THE PLANS
- TEMPORARY EROSION CONTROL
- EXCAVATION AND SITE PREPARATION FOR STORMWATER VAULT INSTALLATION (PENDING ISSUANCE OF NECESSARY PERMITS)
- EXCAVATION AND SITE PREPARATION FOR STREAM CROSSING CULVERT INSTALLATION (PENDING ISSUANCE OF NECESSARY PERMITS)
- CRITICAL ARE MITIGATION
- WATER AND SEWER CONSTRUCTION PER APPROVED PLANS BY COAL CREEK UTILITY DISTRICT

NOTICE REQUIRED:

CONTRACTOR SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION OR BLASTING AT LEAST TWO BUSINESS DAYS, BUT NOT MORE THAN TEN WORKING DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION IN ACCORDANCE WITH RCW TITLE 19. NAMES AND TELEPHONE NUMBERS OF THE OPERATORS OF UNDERGROUND UTILITY LINES IN THIS PROJECT APPEAR BELOW. THESE NUMBERS SHALL ALSO BE USED TO SERVE IN AN EMERGENCY CONDITIONS AS REQUIRED.

COAL CREEK UTILITY DISTRICT SANITARY SEWER AND WATER	(425) 235-9200 (ROBERT RUSSELL)
CENTURYLINK HOME TELEPHONE	(206) 345-0173 (DENA KLUDSIKOFESKY)
PUGET SOUND ENERGY GAS COMPANY & POWER COMPANY	(425) 462-3488 (KELLY PERNEL)
COMCAST CABLE COMPANY	(253) 288-7531 (THOMAS PERRY)

CALL BEFORE YOU DIG 1-800-424-5555



GOLDSMITH
LAND DEVELOPMENT SERVICES
1215 114th Ave SE, Bellevue, WA 98004 | PO Box 3565, Bellevue, WA 98009
T 425 462 1080 F 425 462 7719 www.goldsmithengineering.com

AVALONBAY COMMUNITIES, INC.

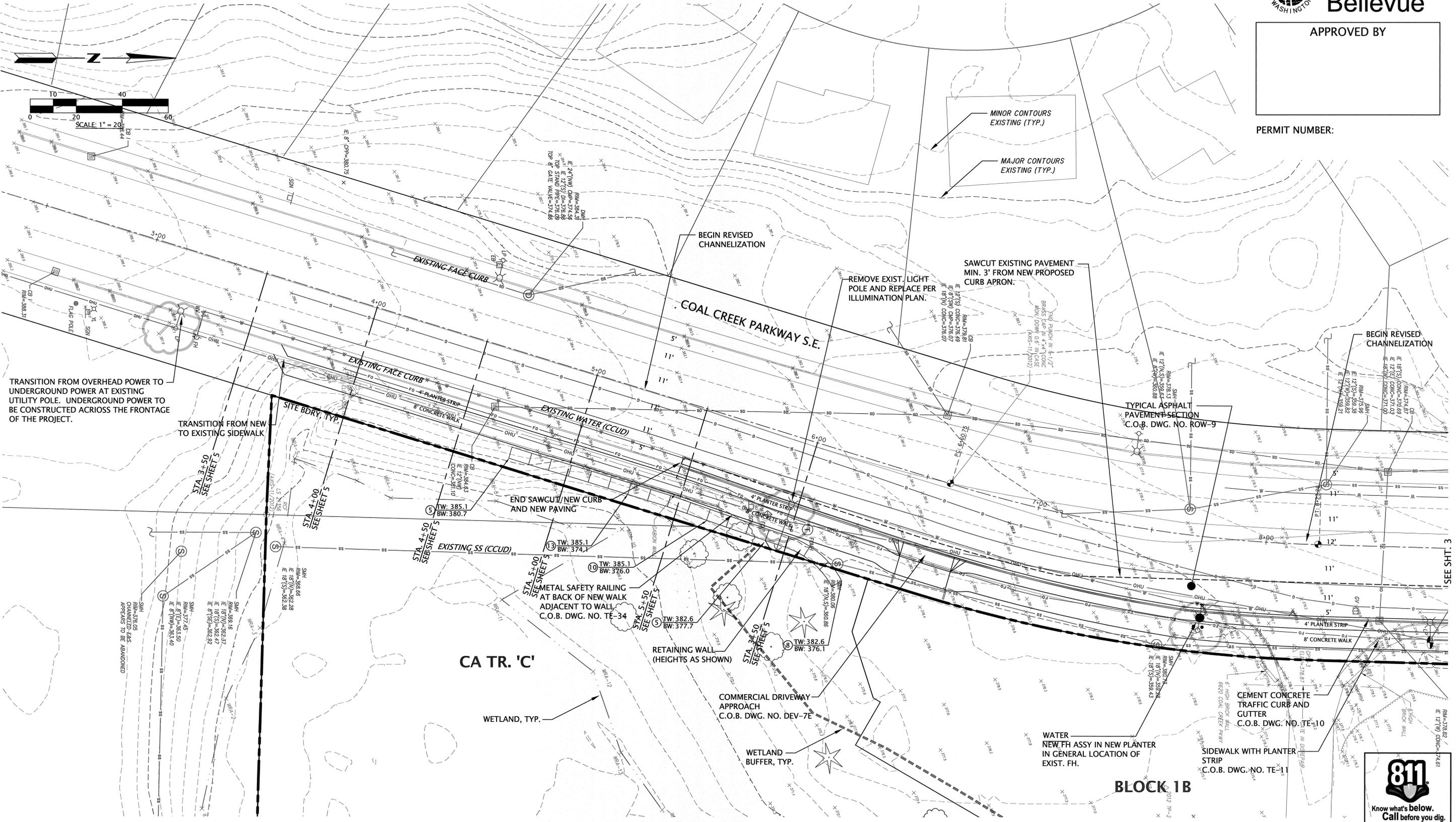
600 108th Ave. NE, Bellevue, Washington 98004, 425-468-9446

N 1/2, NW 1/4 AND SE 1/4, NW 1/4 SECTION 27, TOWNSHIP 24 N, RANGE 5 E, W.M.
CITY OF NEWCASTLE, KING COUNTY, WASHINGTON



APPROVED BY

PERMIT NUMBER:



GOLDSMITH
LAND DEVELOPMENT SERVICES
1215 114th Ave SE, Bellevue, WA 98004 | PO Box 3565, Bellevue, WA 98009
T 425 462 1080 F 425 462 7719 www.goldsmithengineering.com

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AVALONBAY COMMUNITIES, INC.

RIGHT-OF-WAY IMPROVEMENTS
PLAN
COAL CREEK PARKWAY SE

CITY OF BELLEVUE KING COUNTY WASHINGTON

JOB NO. 13110
SHEET 2

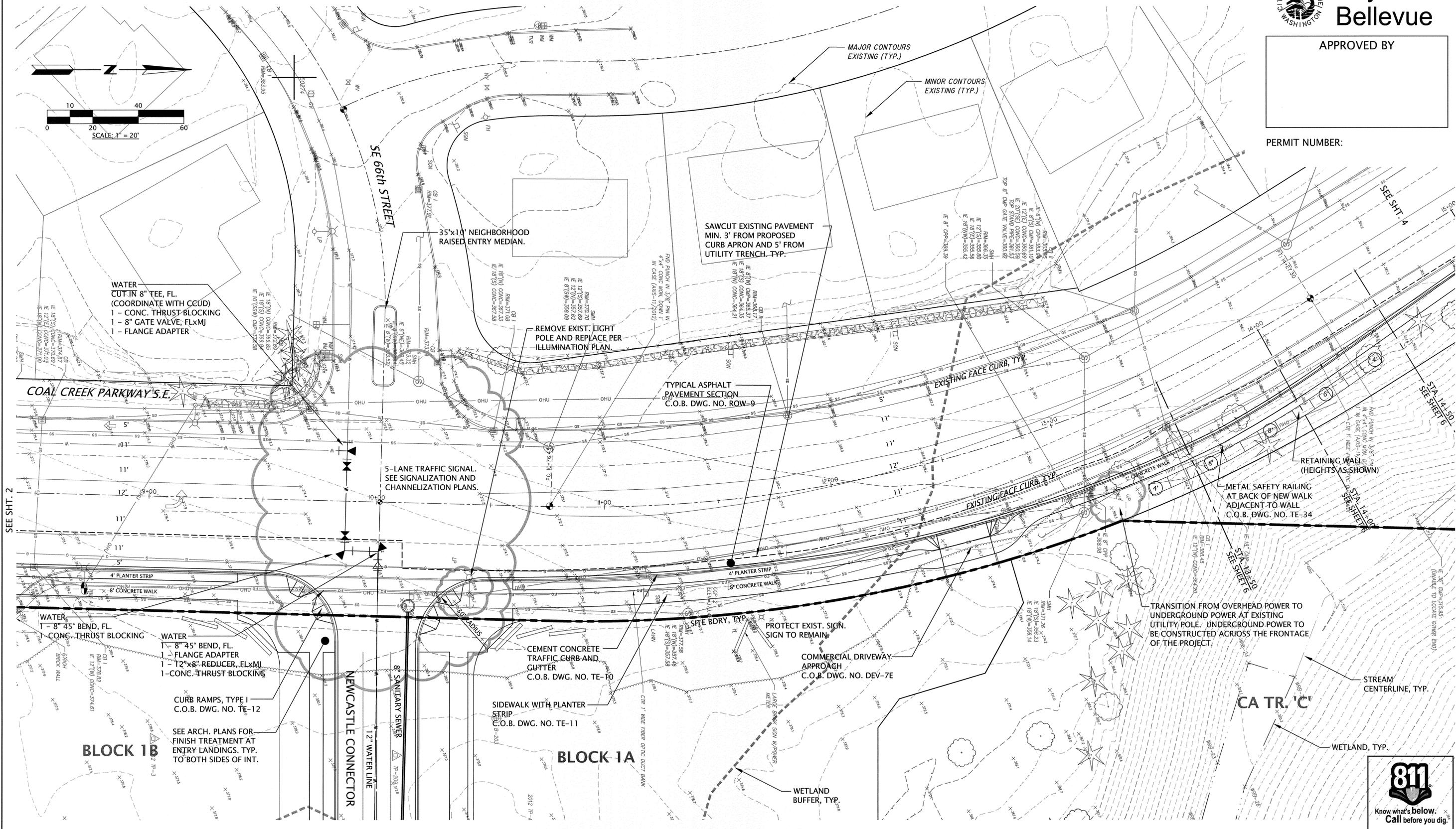
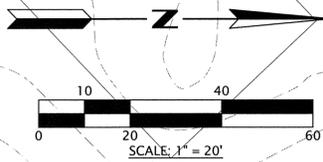
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CITY OF NEWCASTLE, KING COUNTY, WASHINGTON



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1215 114th Ave SE, Bellevue, WA 98004 | PO Box 3565, Bellevue, WA 98009
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RIGHT-OF-WAY IMPROVEMENTS PLAN
COAL CREEK PARKWAY SE

AWALONBAY COMMUNITIES, INC.
CITY OF BELLEVUE KING COUNTY WASHINGTON

JOB NO. 13110
SHEET
3



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City of Bellevue

APPROVED BY

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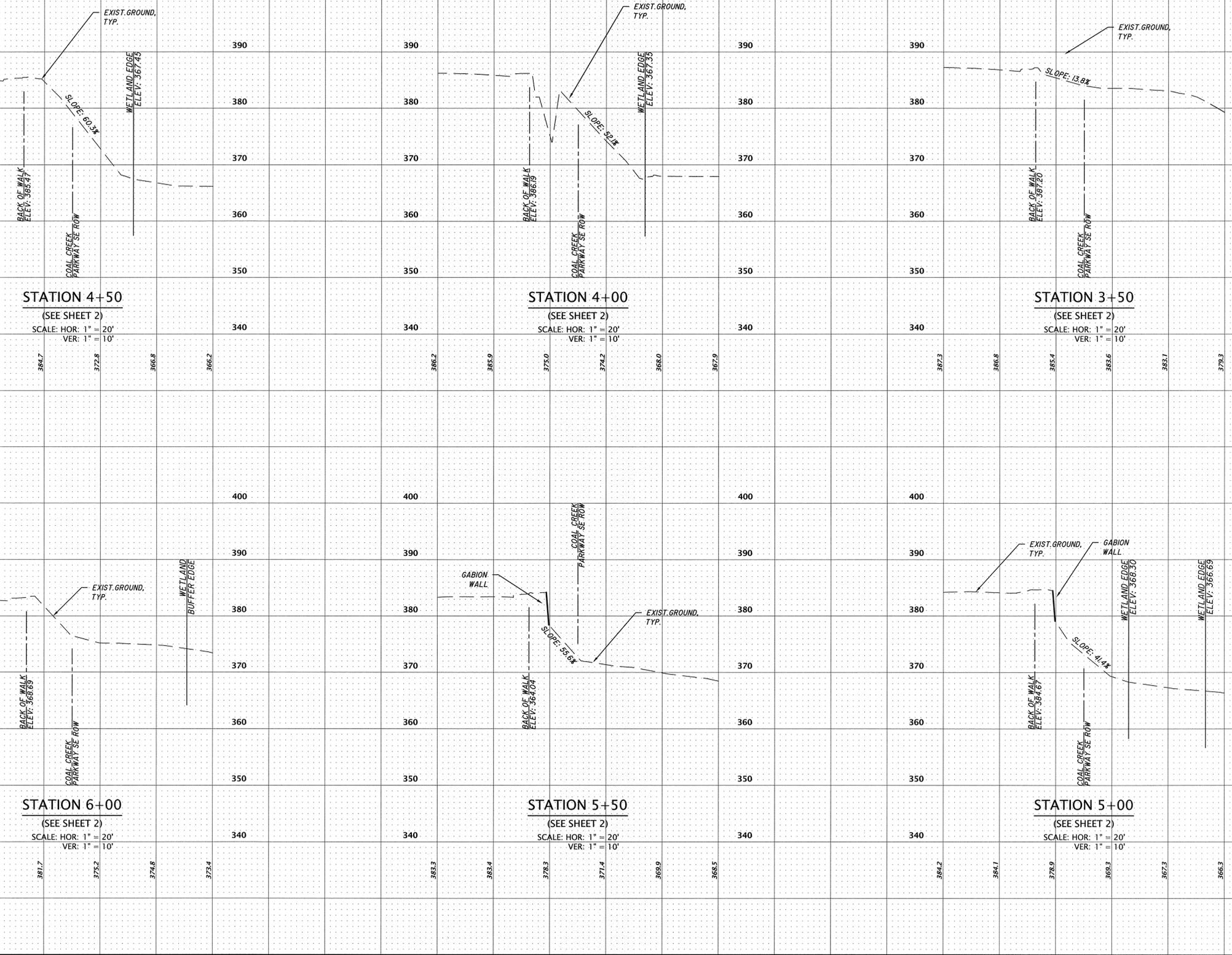
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AVALONBAY COMMUNITIES, INC.

JOB NO. 13110

GOLDSMITH
LAND DEVELOPMENT SERVICES
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RIGHT-OF-WAY IMPROVEMENTS
SECTIONS
COAL CREEK PARKWAY SE
CITY OF NEWCASTLE KING COUNTY WASHINGTON

Know what's below.
Call before you dig.

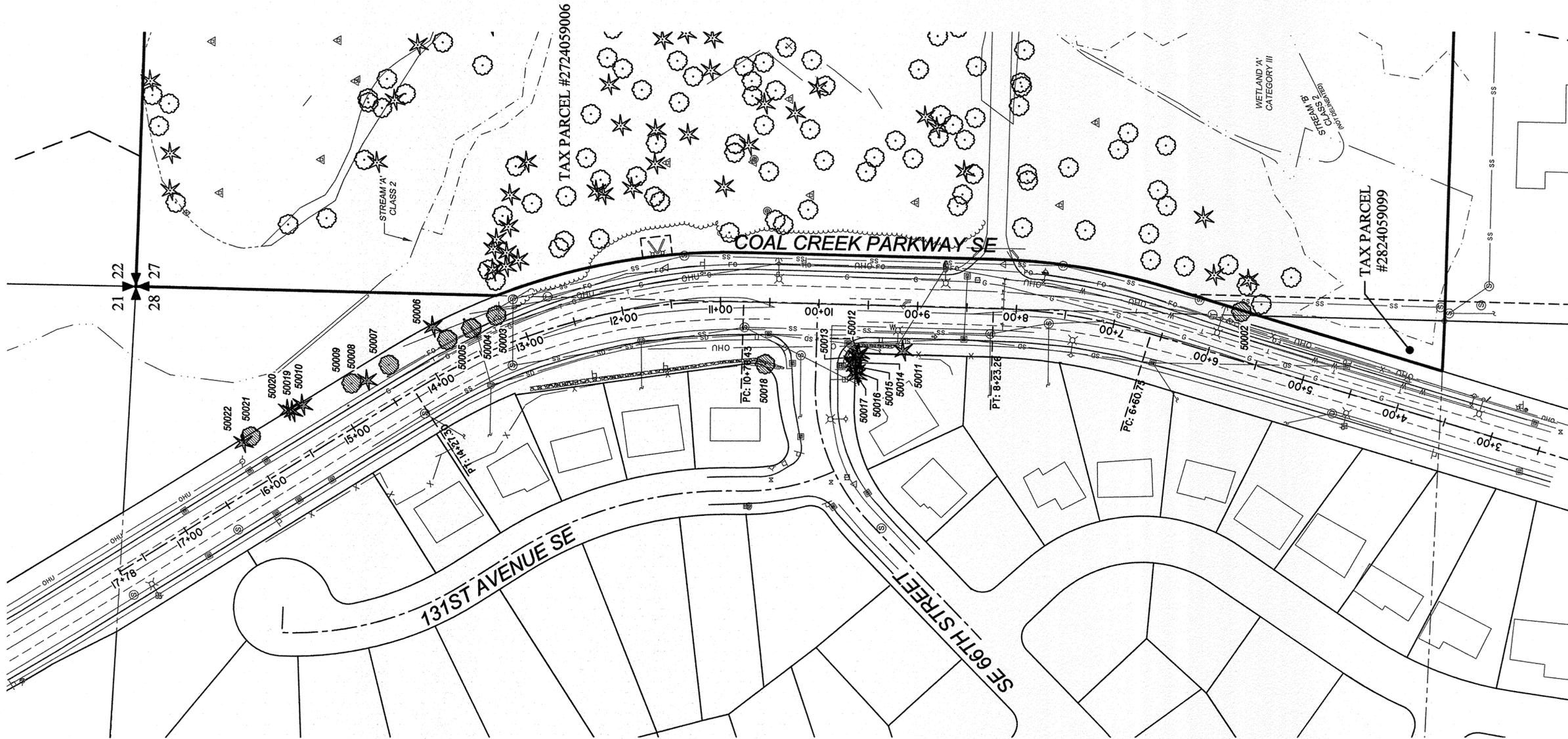


NOTES

- PURPOSE OF EXHIBIT: TO DEPICT THE LOCATION OF TREES DEFINED BY THE CITY OF BELLEVUE AS SIGNIFICANT WITHIN THE ROW OF COAL CREEK PARKWAY SE.
- EXHIBIT LIMITS: PROJECT STATIONS 3+60 TO 16+10 RIGHT 50 FEET FROM THE CENTERLINE OF COAL CREEK PARKWAY SE AND AT THE INTERSECTION OF SE 66TH STREET.
- THE CITY OF BELLEVUE DEFINES AS SIGNIFICANT ANY TREE WHICH HAS A TRUNK DIAMETER OF 8 INCHES OR GREATER (DIAMETER AT BREAST HEIGHT).
- HORIZONTAL DATUM: NAD 83(2011). WASHINGTON STATE PLANE COORDINATES-NORTH ZONE PER THE CITY OF BELLEVUE
- BASIS OF POSITION: THE NORTHWEST CORNER OF SECTION 27, TOWNSHIP 24 NORTH, RANGE 5 EAST (ALSO KNOWN AS CITY OF BELLEVUE (COB) SURVEY CONTROL POINT 0166) - A FOUND 4" X 4" CONCRETE MONUMENT WITH A 3/8" BRASS ROD WITH PUNCH MARK TO BE S 01°31'39" W PER DIRECT INVERSE. SEE CITY OF BELLEVUE SURVEY DATABASE FOR A MORE DETAILED DESCRIPTION. THE PUBLISHED STATE PLANE COORDINATES ARE N 201,817,006 E 1,311,714.441 (US SURVEY FEET).
- BASIS OF BEARING: HELD THE BEARING BETWEEN THE ABOVE NOTED BASIS OF POSITION AND THE WEST QUARTER CORNER OF SAID SECTION 27 (ALSO KNOWN AS COB SURVEY CONTROL POINT 0171) - A FOUND 4" X 4" CONCRETE MONUMENT WITH 3/8" BRASS ROD WITH PUNCH MARK TO BE S 01°31'39" W PER DIRECT INVERSE. SEE CITY OF BELLEVUE SURVEY DATABASE FOR A MORE DETAILED DESCRIPTION. THE PUBLISHED STATE PLANE COORDINATES ARE N 199,164,819 E 1,311,643,730 (US SURVEY FEET).
- MONUMENTATION WAS FIELD VISITED ON JULY 22, 2013.
- ALL DISTANCES SHOWN HEREON ARE GROUND DISTANCES UNLESS OTHERWISE NOTED.
GRID DISTANCES WERE REDUCED TO GROUND DISTANCES USING A COMBINATION FACTOR OF 0.9999673430, WHERE THE GRID DISTANCE DIVIDED BY THE COMBINATION FACTOR EQUALS THE GROUND DISTANCE. THEREFORE THE ONLY TRUE WASHINGTON STATE PLANE COORDINATE IS THE BASIS OF POSITION.
- PLANIMETRIC AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON DATA OBTAINED BY AXIS SURVEY AND MAPPING IN 2008 AND PROVIDED TO GOLDSMITH VIA ELECTRONIC DRAWING FILES AND FIELD LOCATED INFORMATION BY GOLDSMITH OBTAINED IN 2013, 2014, and 2015.
- SURVEY WORK PERFORMED IN CONJUNCTION WITH THIS SURVEY UTILIZED ONE OR MORE OF THE FOLLOWING SURVEY INSTRUMENTS AND PROCEDURES:
A. FIELD TRAVERSE AND / OR GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) POSITIONING SYSTEM SURVEY.
B. ELECTRONIC TOTAL STATIONS, INCLUDING TOPCON GPT 3005, TOPCON PS-103A, NIKON DTM-430, OR NIKON DTM-530.
C. TOPCON HIPER LITE PLUS GNSS EQUIPMENT.
D. TOPCON GR-3 GNSS EQUIPMENT.
E. ALL FIELD TRAVERSE WORK COMPLIES WITH CURRENT STANDARDS AS OUTLINED IN WAC 332-130-070, 080 AND 090. ALL INSTRUMENTS MAINTAINED TO MANUFACTURER'S SPECIFICATIONS AS REQUIRED BY WAC 332-130-100.

TREE TABLE

50002	10"	MAPLE
50003	12", 12"	BIRCH
50004	4", 4", 8"	BIRCH
50005	10"	MAPLE
50006	14"	FIR
50007	8", 8", 8"	MAPLE
50008	10"	FIR
50009	9"	MADRONA
50010	12"	FIR
50011	26"	FIR
50012	16"	FIR
50013	17"	FIR
50014	8"	CEDAR
50015	12"	CEDAR
50016	12"	CEDAR
50017	5", 9"	CEDAR
50018	10"	ALDER
50019	9"	FIR
50020	16"	FIR
50021	10", 20"	FIR
50022	13"	FIR



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GOLDSMITH
 LAND DEVELOPMENT SERVICES
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AVALONBAY COMMUNITIES, INC.

COAL CREEK PARKWAY TREE EXHIBIT

FOR
AVALON NEWCASTLE

KING COUNTY

WASHINGTON

JOB NO. 13110

SHEET

1/1



Wetland Resources, Inc.

COB File # 15-106573-LO
Avalon Newcastle
Coal Creek Parkway Road Improvements
Critical Areas Land Use Permit

Delineation / Mitigation / Restoration / Habitat Creation / Permit Assistance

9505 19th Avenue S.E.
Suite 106
Everett, Washington 98208
(425) 337-3174
Fax (425) 337-3045

**AQUATIC RESOURCES IMPACTS ANALYSIS
AND
CONCEPTUAL MITIGATION PLAN**

FOR

***Avalon Newcastle:
Site Plan Development***

Wetland Resources, Inc. Project #13131

Prepared By:

Wetland Resources, Inc.
9505 19th Ave SE, Suite 106
Everett, WA 98208
(425) 337-3174

For:

AvalonBay Communities
Attn: Brian Fritz
11808 Northup Way, #W311
Bellevue, WA 98005

October 28, 2013

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- IX. REFERENCES**

I. PROJECT LOCATION AND PROJECT DESCRIPTION

A. PROJECT LOCATION

AvalonBay Communities, Inc. (the “Applicant”) proposes the redevelopment of a 53.31-acre site located in the City of Newcastle. This site is commonly referred to as the former Mutual Materials facility (the “Project Site”).

The Project Site is comprised of three separate tax parcels, #2724059006, #2824059009, and #2724059040, located in portions of Sections 27 and 28, Township 24N, Range 05E, W.M. The Project Site address is 6620 Coal Creek Parkway SE, in Newcastle, Washington. The Project Site is located within the Cedar / Sammamish Watershed (WRIA 8).

Adjacent uses include commercial offices and condominiums to the south, parks to the north and east, and public rights-of-way to the west and southeast. Specifically, the adjacent uses are as follow:

North: City of Bellevue Parks – Coal Creek Park

East: City of Newcastle – Coal Creek Park

Southeast: City of Newcastle - Mixed Use (YMCA)

West: City of Bellevue – Residential Subdivision

South: City of Newcastle – Mixed Use (commercial/office use); High Density Residential (condos); Limited Open Space

The Project Site fronts two arterial streets: Coal Creek Parkway SE along its westerly property boundary and Newcastle Golf Club Road along a portion of its southeastern property boundary.

B. PROJECT DESCRIPTION

This project proposes development of the Project Site into an urban, mixed-use community as planned for by the City of Newcastle in its Comprehensive Plan and, more specifically, as envisioned in the City’s 2000 Community Business Center/Lake Boren Corridor Master Plan and 2008 Community Business Center Design Guidelines (the “CBC Plan”) for a master-planned, mixed-use community. The City’s CBC Plan identifies the area containing the Project Site as the “Coal Creek Sector” and, as such, provides distinct design criteria and requirements.

Primary access to the Project Site is currently provided from Coal Creek Parkway SE, which will continue to serve as the primary entrance to the developed project. The location of the intersection, however, will be relocated to the north to align with NE 66th Street to the west as planned by the City in its 2003 Comprehensive Plan. This will require a new traffic signal at this intersection. Two other access points will be provided; one at Newcastle Golf Club Road and one from 132nd Avenue SE, which currently dead-ends at the site’s southern parcel boundary.

The proposed road network to serve the Project Site will be provided per the City of Newcastle’s CBC Plan as stated:

RECOMMENDED CIRCULATION ACTIONS

C-4: Develop “Newcastle Connector” between Coal Creek Parkway and Coal Creek Newcastle Road. This road will provide the primary regional access to development in the Coal Creek Sector and the Newcastle Golf Course to the east while reducing traffic congestion in the Downtown Sector. Provide traffic signals at the Coal Creek Parkway and 132nd Avenue SE intersections and realign Newcastle Coal Creek Road at its intersection with Newcastle Connector.

C-5: Extend 132nd Avenue SE northward to Newcastle Connector. This is an obvious connection to the Coal Creek Sector to improve circulation and reduce traffic on Coal Creek Parkway.

C-6: Develop a modified grid of neighborhood streets in the Coal Creek Sector. During the master planning process for the Mutual Materials site, establish a grid circulation pattern that provides convenient connections between uses within the area.

In addition to providing the required road network, the Applicant proposes phased development of the site by planning block areas (Blocks 1 through 9) for purposes of project description (Reference Site Plan prepared by Goldsmith, dated October 2013). The Site Plan depicts approximately 900 residential multi-family units and approximately 49,000 square feet of commercial/retail space with public and private open spaces, multi-modal trails, and preserved critical areas.

II. EXISTING CONDITIONS

The current physical condition of the Project Site is highly disturbed from over 100 years of coal mining operations and development and operation of the Mutual Materials facility. The Project Site contains areas of broken concrete slabs, pavement, abandoned buildings or building foundations, and openly graded areas of earth and brick. Much of the Project Site's topography is the result of previous grading activities. These activities resulted in brick piles and fill slopes containing brick rubble stemming from the expansion of the site's operating footprint of the Mutual Materials facility.

Several areas of the site, lying within standard critical area buffer dimensions, are considered "highly degraded" (previously developed with buildings, pavement, or brick piles) and thus do not provide an existing functional critical area buffer. Portions of these non-functional, degraded buffer areas are honored in dimension by the site plan design and will be restored to provide compensation mitigation for critical area buffer impacts resulting from the construction of the Avalon Newcastle Site Plan Development.

The Project Site is encumbered with streams and wetlands as delineated by Wetland Resources, Inc. (WRI), and as further described below.

III. AQUATIC RESOURCES

A. SITE INVESTIGATIONS

The Project Site has been investigated for critical areas and Critical Area Reports have been submitted to the City of Newcastle for review and approval. Below is a chronology of aquatic resources investigations conducted to date on the Project Site.

2001: Environmental Science Associates (ESA, formerly Adolfson Associates), under contract by the City of Newcastle, conducted a stream inventory in 2001 and a wetland inventory in 2005. These inventories identified one wetland (Wetland A) and five streams (Streams A, B, C, E, and G) within the boundary of the Project Site.

2011: In October of 2011, Wetland Resources, Inc. (WRI) completed a site investigation, wetland delineation, and ordinary high water mark (OHWM) determination at the site of the former Mutual Materials facility in Newcastle, Washington. The purpose of the site investigation was to delineate jurisdictional wetlands and streams on the subject property and approximate wetland and stream locations within 200 feet of the property boundary.

WRI confirmed the presence of the wetland and streams during the October 2011 site investigations. One wetland and the OHWM of four streams were delineated at that time. These resources are referred to as Wetland A and Streams A, B, C, and E for the purposes of this report. An additional stream, Stream G (Coal Creek), was identified on the northernmost portion of the property, but was not delineated/flagged due to the extreme topography of the surrounding ravine.

2012: A second site investigation was performed on March 19, 2012 by WRI in response to comments made by the City of Newcastle regarding the 2011 site investigation and determination report. The March 2012 site investigation resulted in the delineation of one off-site wetland and a second on-site wetland (Wetland F). The off-site wetland was determined to be a Category III wetland that received a habitat functions score of 25 points on the Washington State Wetland Rating System for Western Washington (Hruby 2004). Category III wetlands with habitat scores between 20 and 28 points, and that are adjacent to high and moderate land-uses, receive a 110-foot buffer per the Newcastle Municipal Code (NMC), section 18.24.315. This buffer extends onto the Project Site. The on-site wetland (Wetland F) is associated with Stream E and meets the criteria for a Category II wetland with a habitat score of 26 points. Wetland F receives a 110-foot buffer per NMC 18.240.315.

2013: The property was revisited on September 3, 2013 to confirm the findings and investigate the current site conditions. This report represents a summary of the site investigations and details the proposed impacts and mitigation actions for development of the Project Site.

B. METHODOLOGIES

Wetland boundaries were determined using the routine determination approach described in the Corps of Engineers Wetlands 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) (U.S. Army Corps of Engineers 2010). Under the routine methodology, the process for making a wetland determination is based on three steps:

- 1.) Examination of the site for hydrophytic vegetation (species Critical Areas Land Use Permit)
- 2.) Examination of the site for hydric soils;
- 3.) Determining the presence of wetland hydrology

The following criteria must be met in order to make a positive wetland determination:

Vegetation Criteria

The Corps Manual and 2010 Regional Supplement define hydrophytic vegetation as “*the assemblage of macrophytes that occurs in areas where inundation or soil saturation is either permanent or of sufficient frequency and duration to influence plant occurrence.*” Field indicators are used to determine whether the hydrophytic vegetation criteria have been met. Examples of these indicators include, but are not limited to, the rapid test for hydrophytic vegetation, a dominance test result of greater than 50%, and/or a prevalence index score less than or equal to 3.0.

Soils Criteria

The 2010 Regional Supplement (per the National Technical Committee for Hydric Soils) defines hydric soils as soils “*that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.*” Field indicators are used to determine whether a given soil meets the definition for hydric soils. Indicators are numerous and include, but are not limited to, presence of a histosol or histic epipedon, a sandy gleyed matrix, depleted matrix, and redoximorphic depressions.

Hydrology Criteria

Wetland hydrology encompasses all hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface for a sufficient duration during the growing season. Areas with evident characteristics of wetland hydrology are those where the presence of water has an overriding influence on the characteristics of vegetation and soils due to anaerobic and chemically reducing conditions, respectively. The strongest indicators include the presence of surface water, a high water table, and/or soil saturation within at least 12 inches of the soil surface.

Streams

The ordinary high water marks (OHWM) of streams and were identified using the methodology described in the Washington State Department of Ecology document Determining the Ordinary High Water Mark on Streams in Washington State (Second Review Draft) (Olson and Stockdale 2010). Streams were classified according to NMC section 18.24.340.

C. DETERMINATIONS

Section 18.24.180 of the NMC requires that all wetlands, streams, steep slope hazard areas and their associated buffers be designated as Critical Areas. Table 1, below, lists the wetlands and streams identified on the Project Site.

The following table summarizes the jurisdictional aquatic resources found on the Project Site and as shown on Exhibit 14 (Goldsmith’s “Existing Conditions Critical Areas”).

Table 1: Wetlands and Streams Located on the Project Site

FEATURE	RATING*	REQUIRED BUFFER WIDTH**
Wetland A	Cat. III	60'
Wetland F	Cat. II	110'
Stream A	Class 2	100'
Stream B	Class 2	100'
Stream C	Class 3	25'
Stream E	Class 2	50'
Stream G (Coal Creek)	Class 2	100'

*Wetland ratings based on Washington State Wetland Rating System for Western Washington (Hruby 2004); stream classifications based on Newcastle Municipal Code (NMC), Section 18.24.340.

**Wetland buffer widths per NMC 18.24.315; stream buffer widths per NMC 18.24.350

Wetland A: Wetland A is a palustrine forested and depressional wetland that meets the criteria for a Category III wetland. A 60-foot buffer is assigned to Category III wetlands adjacent to high and moderate land use activities per NMC 18.24.315.

Wetland F: Wetland F is associated with Stream E and meets the criteria for a Category II wetland with a habitat score of 26 points. Based on these results, Wetland F receives a 110-foot buffer per NMC 18.24.315.

Stream A: Stream A meets the criteria for a Class 2 stream that contains salmonids per the NMC 18.24.340 and requires a 100-foot protective buffer (NMC 18.24.350).

Stream B: Stream B meets the criteria for a Class 2 stream that contains salmonids per the Newcastle Municipal Code (NMC) Section 18.24.340 and requires a 100-foot protective buffer (NMC 18.24.350). Stream B is located in a steep ravine with some slopes greater than 30 percent.

Stream C: Stream C is a Class 3 stream and is assigned a 25-foot buffer. Stream C is located in a steep ravine with some slopes greater than 30 percent.

Stream E: Stream E is perennial and has a downstream block to fish passage as identified in the City of Newcastle stream inventory. It is classified as a Class 2 stream without salmonids and requires a 50-foot protective buffer per NMC 18.24.350. Stream E is located in a steep ravine with some slopes greater than 30 percent.

Stream G: Stream G meets the criteria for a Class 2 stream that contains salmonids per the NMC 18.24.340 and requires a 100-foot protective buffer (NMC 18.24.350). Stream G is located in a steep ravine with slopes greater than 30 percent.

IV. PROPOSED ACTIVITIES AND IMPACTS ANALYSIS

A. PROPOSED SITE DEVELOPMENT

The proposed Avalon Newcastle Site Plan Development does not involve any in-water work, wetland fill, or impacts to critical areas themselves; only buffer areas will be impacted. The Site Plan Development will result in critical area buffer impacts due to on-site public road construction, utility extensions, paved trails, pedestrian connections, and parking lot construction, as well as required frontage improvements to adjacent public rights-of-way. Per Section 18.24.125 of the NMC, the following sequential measures were applied to the project in order to avoid and/or reduce impacts to critical areas and critical area buffers:

A. Avoiding the impact or hazard by not taking a certain action

The Avalon Newcastle Site Plan Development has been designed to avoid impacts to critical areas and to minimize impacts to buffers to the maximum extent practicable. The impact actions (i.e. road and parking construction) are necessary for the successful development of the site. As stated above, the proposed road network to serve the Project Site is required by the City of Newcastle in its Comprehensive Plan and CBC Plan, specifically as a part of the Coal Creek Sector mixed-use development. Without these features, the City's goals for development would not be met.

B. Minimizing the impact or hazard by:

- 1. Limiting the degree or magnitude of the action with appropriate technology; or*
- 2. Taking affirmative steps, such as project redesign, relocation, or timing*

Best Available Science (BAS) was utilized during the site investigations, delineations/ordinary high water mark (OHWM) determinations, and mitigation plan development. Best Management Practices (BMP's) will be utilized during construction to avoid/minimize additional impacts to critical areas and buffers.

This proposal has been designed to avoid impacts to critical areas (streams and wetlands) and to minimize impacts to critical area buffers. As stated above, the internal public road layout is required by the City of Newcastle, but has been designed to avoid critical area and buffer impacts to the maximum extent practicable.

The locations of the parking areas west of Stream A are necessary to provide access to the proposed Newcastle Connector as well as Coal Creek Parkway. The driveways/entrances for these parking areas must be as far back (east) of the Newcastle Connector/Coal Creek Parkway intersection as possible so that traffic requirements for turning movements and queuing can be met (Reference the Transportation Impacts Analysis, prepared by The TranspoGroup, dated October 2013).

C. Rectifying the impact to critical areas by repairing, rehabilitating, or restoring the affected critical area or its buffer.

The wetland and stream buffer impacts associated with public roadways and parking areas will be offset by compensatory mitigation in the form of buffer width averaging (see Section V, below: CONCEPTUAL MITIGATION AND RESTORATION ACTIONS).

D. Minimizing or eliminating the hazard by restoring or stabilizing Critical Areas and using Permit engineered or other methods.

The public road crossings of Streams A, B, and C, and the access road crossing Stream E will utilize bottomless culverts or box culverts in order to avoid aquatic impacts and fill. The footings of these structures will be placed outside of the OHWM for each stream. Compensatory mitigation will be provided for impacts to the associated stream buffers resulting from roadway construction. (See Section V below.)

E. Reducing or eliminating the impact or hazard over time by preservation or maintenance operations during the life of the development proposal or alteration.

Per NMC 18.24.180, all wetlands, streams, steep slope hazard areas and their associated buffers will be designated as Critical Areas. In addition, permanent critical area markers/signs will be installed throughout the Avalon Newcastle development per NMC 18.24.160.

F. Compensating for the adverse impact by enhancing critical areas and their buffers or creating substitute critical areas and their buffers.

Mitigation and restoration actions have been developed for the Site Plan Development. These actions will compensate for unavoidable impacts to critical area buffers (See Section V, below: CONCEPTUAL MITIGATION AND RESTORATION ACTIONS).

G. Monitoring the impact, hazard or success of required mitigation and taking remedial action.

Per NMC 18.24.130, a Monitoring Plan will be developed as part of the detailed Mitigation Plan for the Site Plan Development. Contingency plans will also be developed and will be implemented should the mitigation plans fail and/or if performance standards are not being met.

B. IMPACTS FROM PROPOSED SITE DEVELOPMENT

Section 18.24.320 of the NMC lists alterations that are permitted within wetlands and their buffers. These alterations are allowable only if the City determines that there are no practicable alternative locations with less adverse impacts. Mitigation is required for all wetland and buffer impacts. Item G in NMC 18.24.320 addresses “wetland and buffer road and underground utility crossings.” In addition, NMC Section 18.24.360 lists permitted alterations within streams and stream buffers, one of which is “stream and buffer crossings” (item E). Wetland, stream, and buffer crossings are allowable provided they comply with the listed requirements in the NMC.

The proposed public road layout for the Avalon Newcastle project was developed in conjunction with the City of Newcastle. The proposed roads have been developed to tie into existing public roads to the south of the development (132nd Place SE and Newcastle Golf Club Road) and to provide access to Coal Creek Parkway. For traffic safety and operational factors, the site entrance at Coal Creek Parkway needs to be aligned with the existing SE 66th Street access point on the other side of the Parkway. Since the road locations cannot be altered or moved, the stream and wetland crossings are unavoidable.

The stream and wetland crossings will not impact wetland hydrology or stream beds or banks.

Bottomless culverts or box culverts will be used at each crossing in ~~Critical Areas and Use Permit~~ and wetland hydrology. These structures will be placed outside of the stream OHWM's so that in-water work and placement of fill is avoided and to allow for continued movement of aquatic organisms throughout Streams A and B.

Construction of the road crossings will take place during the summer low-flow periods when fish use is at its lowest. Vegetation removal within the road crossing construction areas will be limited to the minimum amount necessary to accomplish the task. The crossings have been planned for and will be located where they will have the least amount of adverse impacts on the wetland and stream buffers while still serving as functional roadways.

The Applicant may apply for an early Grading & Clearing Permit prior to Site Plan Approval to begin site preparation for demolition and removal of existing structures and brick and rubble fill from the site, including removal of fill from some areas of "degraded buffers" (see discussion above in Section II EXISTING CONDITIONS). Following completion of this early grading and fill removal, affected critical area buffers will be seeded with grass and/or covered with hay in order to reduce the possibility of erosion. Once Site Plan Development is complete, compensatory mitigation in the form of restoration, enhancement, and/or buffer averaging will be implemented.

Although certain areas of the proposed fill removal and grading activities will occur within portions of stream buffers and wetland buffers, they will not result in adverse impacts. These areas will be stabilized by the removal of brick and rubble material followed by re-grading to create much more gradual, gentle slopes. The proposed activities are considered restoration actions since the resulting slopes will be more gentle and gradual than the existing slopes, more stable, and will be replanted with native vegetation following Site Plan Development. Slope stability will increase and wildlife habitat will be improved. Since the proposed fill removal will not result in adverse impacts to on-site critical areas or buffers and is actually proposing to stabilize and restore critical area buffers, this proposal complies with the requirements of NMC 18.24.130.

C. REQUIRED MITIGATION AREAS

Sections 18.24.325(B)(1) and 18.24.370(C)(1)(a)(i) of the NMC state that mitigation for wetland buffer and stream buffer impacts must be provided at a 1:1 ratio of mitigation area to impact area. The proposed Site Plan Development mitigation plan will result in a 1:1 ratio of mitigated buffers to existing, degraded buffers. Additional buffer area will also be provided through buffer width averaging, as necessary.

The Avalon Newcastle Site Plan Development will impact approximately 1.33 acres of wetland and stream buffers. These impacts are the result of roadway crossings, paved trail crossings, and other project encroachments (i.e. parking areas, utilities, etc.). Approximately 2.32 acres of buffers are available to either: (a) be planted (in areas where buffers are currently degraded) to mitigate for those impacts and/or (b) provide additional buffer as necessary to meet mitigation compensation requirements (See Table 2 below).

V. CONCEPTUAL MITIGATION AND RESTORATION ACTIONS

A. REQUIRED MITIGATION

This Conceptual Mitigation Plan has been prepared to address proposed development activities and anticipated impacts to critical area buffers on the Project Site based on the Site Plan prepared by Goldsmith (October 2013). This Plan is intended to be sufficient for Site Plan Approval; it demonstrates that the proposed Site Plan Development complies with the City’s critical area regulations. A detailed Mitigation Plan will be prepared for City of Newcastle review and approval prior to issuance of an Engineering Review Permit for construction of site infrastructure.

Site Plan Development mitigation will include stream and wetland buffer restoration and/or enhancement as well as buffer width averaging. Mitigation will be provided to compensate for the following anticipated permanent impacts to stream buffers and wetland buffers:

Table 2: Wetlands and Streams Located on the Project Site*

AQUATIC RESOURCE	APPROXIMATE AREA OF BUFFER IMPACTS	APPROXIMATE AREA AVAILABLE FOR BUFFER COMPENSATION VIA RESTORATION OR ENHANCEMENT	APPROXIMATE AREA AVAILABLE FOR ADDITIONAL BUFFER (BUFFER WIDTH AVERAGING)
Streams A & B Wetland A	0.8 Acre	1.0 Acre	0.32 Acre
Streams C & E Wetland F	0.53 Acre	0.7 Acre	0.3 Acre
TOTAL	1.33 Acres	1.7 Acres	0.62 Acres

*See Goldsmith Sheet 5 “Site Plan” for proposed areas of impacts and mitigation.

Mitigation and restoration will be completed following all earthwork activities so that heavy machinery and human traffic will not impact those areas. Following Site Plan Approval, and prior to issuance of an Engineering Review Permit for construction of site infrastructure, a detailed Mitigation Plan will be prepared for City of Newcastle review and approval to provide specific species and quantities of native vegetation that will be planted in the mitigation areas.

Buffer width averaging is being proposed as compensation for parking lot encroachment into the buffer of Stream A. Buffer width averaging will provide at least a 1:1 ratio for buffer replacement. New buffer area will be designated to the north, east, and south of the parking areas and adjacent to Steam A and Wetland A.

Section 18.24.370 of the NMC outlines the specific mitigation requirements for streams. Although the removal of brick and rubble fill material from buffers will not result in adverse impacts to any streams or stream buffers, it will still comply with NMC 18.24.370. Section 18.24.370(C)(1)(a)(i) states the following:

C. Mitigation of the adverse impact of alterations to streams or their buffers shall be in the

same drainage sub-basin and shall include:

1. For permanent alterations, rectification, restoration or enhancement of the altered stream or buffer, as determined by the city, using the following formulae:

a. For mitigation on-site:

i. Rectification of the adverse impact to any class of stream by repairing, rehabilitating or restoring the affected stream or buffer shall be on a 1:1 areal and functional basis

The Mitigation Plan would include measures that would result in a 1:1 ratio of restored buffer to impacted buffer due to roadway crossings.

B. PROPOSED RESTORATION ACTIONS

Prior to planting, any remaining invasive species will be removed from the mitigation areas and soils will be de-compacted to a depth of 12 inches. Following the removal of invasive species and completion of earthwork, a wood-chip mulch (containing some green/vegetative material) will be applied to the restoration areas at a depth of 2"-4". During plant installation, mulch will be cleared from around the planting pits so as not to make contact with the vegetation.

Trees will be planted at 12 feet on-center (OC), shrubs at 6 feet OC, and ferns at 2 feet OC.

Plant installation should take place in late fall or early spring (prior to the start of the growing season). Plants should be obtained from a reputable nursery familiar with native vegetation and that is capable of providing local genetic stock. Limited species substitution may be allowed; however, the City of Newcastle and/or the project ecologist must approve the substitution.

The plants shall be arranged with the appropriate numbers, sizes, species, and distribution to achieve the required vegetation coverage. The actual placement of individual plants shall mimic natural, asymmetric vegetation patterns found on similar undisturbed sites in the area.

Irrigation shall be provided for all mitigation areas during the summer season, any extensive dry periods, and as determined by the project ecologist. If an irrigation system is to be used, it shall be installed by an experienced landscaper. Watering rates shall be established following construction activities and plant installation.

Following Site Plan Approval, and prior to issuance of an Engineering Review Permit for construction of site infrastructure, a detailed Mitigation Plan will be prepared for City of Newcastle review and approval to provide specific species and quantities of native vegetation that will be planted in the mitigation areas.

VI. GOALS, MONITORING, MAINTENANCE, AND CONTINGENCY

A. GOALS

Project goals identify what the mitigation plan is attempting to accomplish. Objectives identify specific actions that are taken or components that are initiated in order to meet the project goals. Finally, performance standards provide measurable criteria for determining if the goals and objectives are being achieved (WA. State Department of Ecology et al., 2006)

The overall goal of the proposed Avalon Newcastle project is to redevelop the former Mutual Materials facility into a mixed-use community as envisioned by the City of Newcastle. The goal of the mitigation plan is to compensate for unavoidable critical area impacts by restoring/enhancing portions of the buffers for Wetland A (including Stream B), Stream A, Stream C, Stream E, and Wetland F.

The project proposes to provide mitigation for impacts to critical area buffers through restoration and buffer averaging. Upon Site Plan Approval, specific performance standards will be included in the detailed Mitigation Plan for the Avalon Newcastle development.

B. MONITORING

A Monitoring Plan that is consistent with NMC 18.24.130 will be developed and included in the detailed Mitigation Plan for the Avalon Newcastle development. In general, monitoring will begin the first year following mitigation installation and will continue for at least 5 years, or as directed by the City of Newcastle. Monitoring visits will occur twice yearly and monitoring reports will be submitted to the Applicant and the City for review.

C. MAINTENANCE PLAN

Maintenance will be performed within the restoration areas as necessary and may include, but is not limited to, replacement of dead vegetation, removal of invasive and non-native vegetation, trash cleanup, and repair of damaged signs. Maintenance needs will be discussed in the monitoring reports, as necessary.

D. CONTINGENCY

A Contingency Plan will be developed per NMC Sections 18.24.130(C)(3)(b) and 18.24.130(E). This plan will be implemented should the restoration actions be deemed unsuccessful. Implementation of the contingency plan would constitute a new mitigation/restoration plan and would be subject to all mitigation regulations including a monitoring plan and a financial guarantee.

VII. COST ESTIMATE AND FINANCIAL GUARANTEE

A Cost Estimate will be prepared and included in the detailed Mitigation Plan for the Avalon Newcastle development. In addition, a financial guarantee shall be posted as required by NMC 18.24.140.

VIII. USE OF THIS REPORT

This Conceptual Mitigation Plan is supplied to AvalonBay Communities, Inc., as a means of determining on-site wetland and stream conditions, and as a means of implementing mitigation actions for a development proposal as required by the City of Newcastle. This report is based largely on readily observable conditions and, to a lesser extent, on readily ascertainable conditions. No attempt has been made to determine hidden or concealed conditions.

The laws applicable to wetlands and streams are subject to varying interpretations and may be changed at any time by the courts or legislative bodies. This report is intended to provide information deemed relevant in the applicant's attempt to comply with the laws now in effect.

This report conforms to the standard of care employed by wetland ecologists. No other representation or warranty is made concerning the work or this report and any implied representation or warranty is disclaimed.

Wetland Resources, Inc.



Jim Rothwell
Senior Ecologist, PWS

IX. REFERENCES

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Wetland Resources, Inc.

COB File # 15-106573-LO
Avalon Newcastle
Coal Creek Parkway Road Improvements
Critical Areas Land Use Permit

Delineation / Mitigation / Restoration / Habitat Creation / Permit Assistance

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ADDENDUM TO THE DETAILED MITIGATION PLAN

FOR THE

Avalon Newcastle Master Planned Development

Wetland Resources, Inc. Project #13131

Prepared By:

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For:

Avalon Bay Communities
Attn: Edward Lammas
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Bellevue, WA 98005

February 27, 2015

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- A. DETAILED MITIGATION PLAN MAP: AVALON NEWCASTLE – CITY OF BELLEVUE
(WETLAND RESOURCES, INC. 2015)
- B. DETAILED MITIGATION PLAN FOR THE AVALON NEWCASTLE MASTER PLANNED
DEVELOPMENT (WETLAND RESOURCES, INC. 2015)

A. INTRODUCTION

The Avalon Newcastle Master Planned Development is a proposed mixed-use development project located within the City of Newcastle. As part of this project, frontage improvements along Coal Creek Parkway are required per the Mitigated Determination of Non-significance (MDNS) issued as part of the State Environmental Policy Act (SEPA). In order to meet the frontage improvement requirement, the applicant – AvalonBay Communities – must expand portions of the currently maintained width of roadway/sidewalk, etc., but remain within the limits of the public right-of-way. Part of the proposed right-of-way improvements will occur within City of Bellevue limits. Furthermore, some of the improvements will fall within critical area buffers.

Wetland Resources, Inc. (WRI) has prepared this report as an addendum to the attached *Detailed Mitigation Plan for the Avalon Newcastle Master Planned Development* (WRI 2015). The purpose of this report is to address impacts occurring to critical area buffers located within the City of Bellevue. The applicant is submitting an application for a City of Bellevue Critical Areas Land Use Permit to perform the roadway frontage improvements within the critical area buffer. Additional information can be found in the February 25, 2015 memorandum prepared by Goldsmith Land Development Services.

B. PROJECT LOCATION

Avalon Bay Communities, Inc. (the “Applicant”) is proposing the redevelopment of a 53.31-acre site located in the City of Newcastle. This site is commonly referred to as the former Mutual Materials facility (the “Project Site”). The project is referred to as the Avalon Newcastle Master Planned Development.

The project site is comprised of three separate tax parcels, #2724059006, #2824059009, and #2724059040, located in portions of Sections 27 and 28, Township 24N, Range 05E, W.M. The Project Site address is 6620 Coal Creek Parkway SE, in Newcastle, Washington. The Project Site is located within the Cedar / Sammamish Watershed (WRIA 8).

Adjacent uses include commercial offices and condominiums to the south, parks to the north and east, and public rights-of-way to the west and southeast. Specifically, the adjacent uses are as follow:

North: City of Bellevue Parks – Coal Creek Park

East: City of Newcastle – Coal Creek Park

Southeast: City of Newcastle - Mixed Use (YMCA)

West: City of Bellevue – Residential Subdivision

South: City of Newcastle – Mixed Use (commercial/office use); High Density Residential (condos); Limited Open Space

The project site fronts two arterial streets: Coal Creek Parkway SE along its westerly property boundary and Newcastle Golf Club Road along a portion of its southeastern property boundary.

C. PROJECT DESCRIPTION

This project proposes development of the project site into an urban, mixed-use community as planned for by the City of Newcastle in its Comprehensive Plan and, more specifically, as envisioned in the City’s 2000 Community Business Center/Lake Boren Corridor Master Plan and

2008 Community Business Center Design Guidelines (the “CBC Plan”) for a master plan, mixed-use community. The City’s CBC Plan identifies the area containing the Project Site as the “Coal Creek Sector” and, as such, provides distinct design criteria and requirements.

Primary access to the project site is currently provided from Coal Creek Parkway SE, which will continue to serve as the primary entrance to the developed project. The location of the intersection, however, will be relocated to the north to align with NE 66th Street to the west as planned by the City in its 2003 Comprehensive Plan. This will require a new traffic signal at this intersection. Two other access points will be provided; one at Newcastle Golf Club Road and one from 132nd Avenue SE, which currently dead-ends at the site’s southern parcel boundary.

The proposed road network to serve the Project Site will be provided per the City of Newcastle’s CBC Plan as stated:

RECOMMENDED CIRCULATION ACTIONS

C-4: Develop “Newcastle Connector” between Coal Creek Parkway and Coal Creek Newcastle Road. This road will provide the primary regional access to development in the Coal Creek Sector and the Newcastle Golf Course to the east while reducing traffic congestion in the Downtown Sector. Provide traffic signals at the Coal Creek Parkway and 132nd Avenue SE intersections and realign Newcastle Coal Creek Road at its intersection with Newcastle Connector.

C-5: Extend 132nd Avenue SE northward to Newcastle Connector. This is an obvious connection to the Coal Creek Sector to improve circulation and reduce traffic on Coal Creek Parkway.

C-6: Develop a modified grid of neighborhood streets in the Coal Creek Sector. During the master planning process for the Mutual Materials site, establish a grid circulation pattern that provides convenient connections between uses within the area.

In addition to providing the required road network, the Applicant proposes phased development of the site by planning block areas (Blocks 1 through 10) for the purposes of project description. The site plan depicts approximately 900 residential multi-family units and approximately 49,000 square feet of commercial/retail space with public and private open spaces, multi-modal trails, and preserved critical areas.

D. CRITICAL AREAS AND PROPOSED IMPACTS

Three (3) wetlands and five (5) streams are located on the project site. Only three of these features, however – Wetland A, Stream A, and Stream B – will be involved in the Coal Creek Parkway improvements. These features are briefly described below.

Table 1: Wetlands and Streams Located on the Avalon Newcastle Project Site

FEATURE	RATING*	REQUIRED BUFFER WIDTH**
Wetland A	Cat. III	60'
Stream A	Class 2	100'
Stream B	Class 2	100'

*Wetland ratings based on Washington State Wetland Rating System for Western Washington (Hruby 2004); stream classifications based on Newcastle Municipal Code (NMC), Section 18.24.340.

**Wetland buffer widths per NMC 18.24.315; stream buffer widths per NMC 18.24.350

Wetland A: Wetland A is a palustrine forested and depressional wetland that meets the criteria for a Category III wetland. A 60-foot buffer is assigned to Category III wetlands adjacent to high and moderate land use activities per NMC 18.24.315.

Stream A: Stream A meets the criteria for a Class 2 stream that contains salmonids per the NMC 18.24.340 and requires a 100-foot protective buffer (NMC 18.24.350).

Stream B: Stream B meets the criteria for a Class 2 stream that contains salmonids per the Newcastle Municipal Code (NMC) Section 18.24.340 and requires a 100-foot protective buffer (NMC 18.24.350). Stream B is located in a steep ravine with some slopes greater than 30 percent.

Streams A and B, although called out separately, comprise a single stream system. They are located in the same stream corridor on the western part of the project site. Furthermore, they are illustrated as one system on Figures 9 and 11 of the City of Newcastle 2001 Stream Inventory (Adolfson Associates, Inc. 2002). The existing project site entrance bisects the streams; a culvert is located beneath the existing entrance/roadway.

The frontage improvements will occur within the buffer of Stream A and the buffer of Stream B/Wetland A (Stream B flows through Wetland A). The required improvements will impact approximately 373 square feet (SF) of the Stream A buffer and 1,609 SF of the Stream B/Wetland A buffer.

E. PERFORMANCE STANDARDS FOR DEVELOPMENT WITHIN CRITICAL AREAS

Per section 20.25H.055 of the City of Bellevue Land Use Code (LUC), specific uses and/or development may occur within critical areas or critical area buffers if the requirements applicable to those specific critical areas are met. The proposed Coal Creek Parkway frontage improvements are considered “New or expanded public rights-of-way, private roads, access easements and driveways” per the table in section 20.25H.055. For activities occurring in streams and stream buffers, LUC sections 20.25H.055.C.2, 20.25H.080.A, and 20.25H.080.B must be addressed. For activities occurring in wetlands and wetland buffers, LUC sections 20.25H.055.C.2 and 20.25H.100 must be addressed. These code sections have been addressed in the February 25, 2015 memorandum prepared by Goldsmith Land Development Services.

Project applicants must demonstrate that all reasonable efforts have been made to avoid and minimize impacts to critical areas and/or critical area buffers. Per section 20.25H.215 of the LUC, mitigation sequencing shall be performed in the following order of preference:

- A. Avoiding the impact altogether by not taking a certain action or parts of an action;
- B. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps, such as project redesign, relocation, or timing, to avoid or reduce impacts;
- C. Performing the following types of mitigation (listed in order of preference):
 1. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
 2. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or

3. Compensating for the impact by replacing, enhancing, or restoring critical areas and other resources or environments;

D. Monitoring the hazard or other required mitigation and taking remedial action when necessary.

Since the roadway frontage improvements are required as part of the SEPA MDNS, avoiding the stream and wetland buffer impacts is not feasible. The buffer impacts have been minimized/reduced as much as practicable while still allowing for the necessary frontage improvements. Relocating or redesigning the roadway to avoid the buffer impacts is not a reasonable action due to costs and logistics. The buffer impact areas cannot be restored following the frontage improvements since these will be permanent impacts. Similarly, the impacts cannot be reduced or eliminated over time. As compensation for the 1,982 SF of buffer impact, approximately 2,305 SF of additional buffer will be designated adjacent to the impact areas (see attached Final Mitigation Plan map). This meets the required one-to-one buffer mitigation ratios contained in LUC sections 20.25H.085.B and 20.25H.105.C.3.

Section 20.25H.085.A and B of the LUC and section 20.25H.105.A.2 and C.3 both include provisions for mitigation of stream and wetland buffer impacts. The preference of mitigation actions includes the following:

- On-site, through replacement of lost critical area buffer;
- On-site, through enhancement of the functions and values of remaining critical area buffer;
- Off-site, through replacement or enhancement, in the same sub-drainage basin;
- Off-site, through replacement or enhancement, out of the sub-drainage basin but in the same drainage basin.

Furthermore, the LUC states that impacted critical area buffer must be replaced at a ratio of one-to-one.

The additional buffer areas being designated are located on-site and represent slightly more than a one-to-one ratio.

F. ADDITIONAL PROJECT AND MITIGATION INFORMATION

The *Detailed Mitigation Plan for the Avalon Newcastle Master Planned Development* (Wetland Resources, Inc., 2015), submitted concurrently with this report, includes additional project information and outlines the entire mitigation plan for the proposed Avalon Newcastle project. In addition, the *Detailed Mitigation Plan* map illustrates the mitigation actions and locations.

DETAILED MITIGATION PLAN MAP

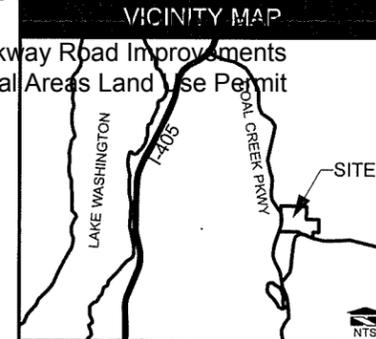
AVALON NEWCASTLE - CITY OF BELLEVUE

PORTION OF SECTION 27, TOWNSHIP 24N, RANGE 05E, W.M.

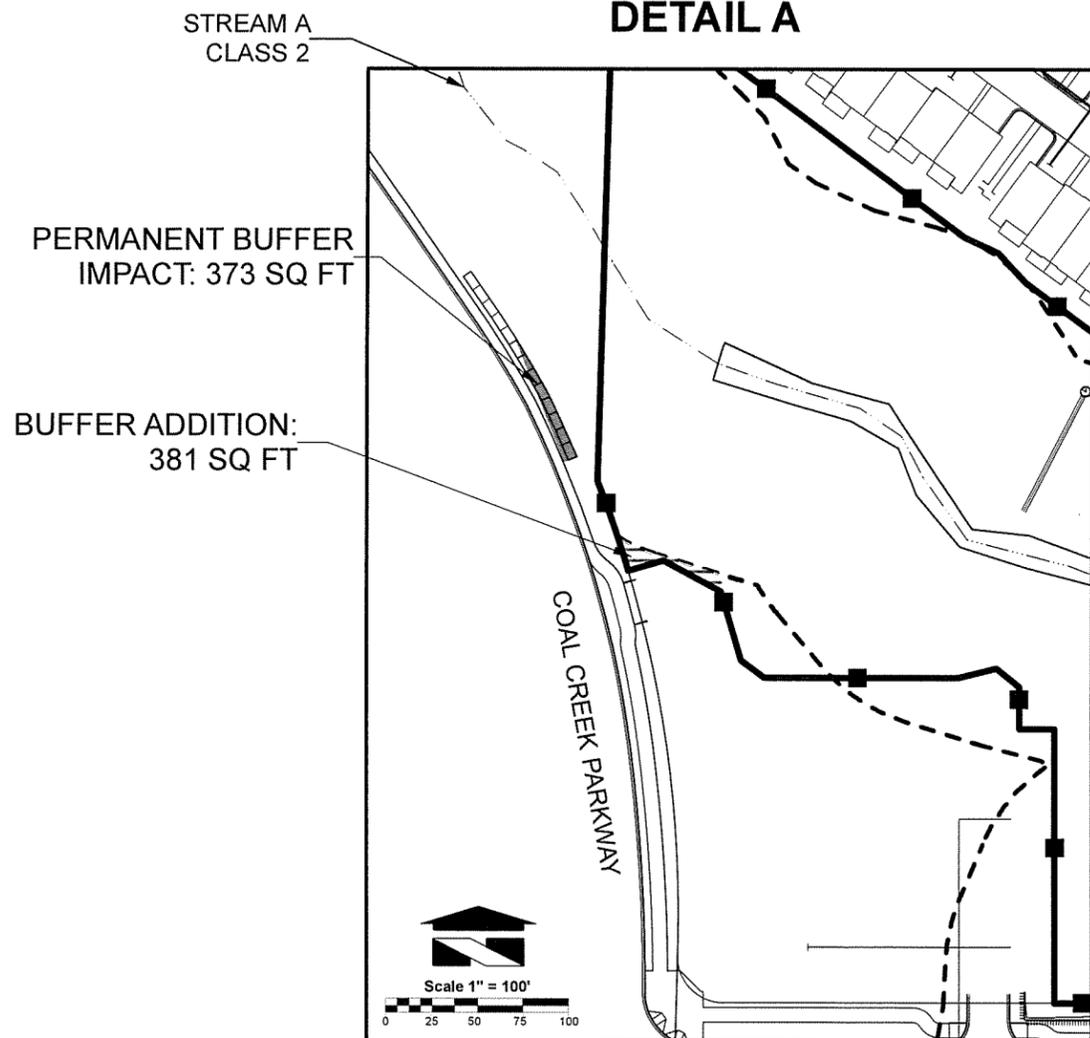
COB File # 15-106573-ILO

VICINITY MAP

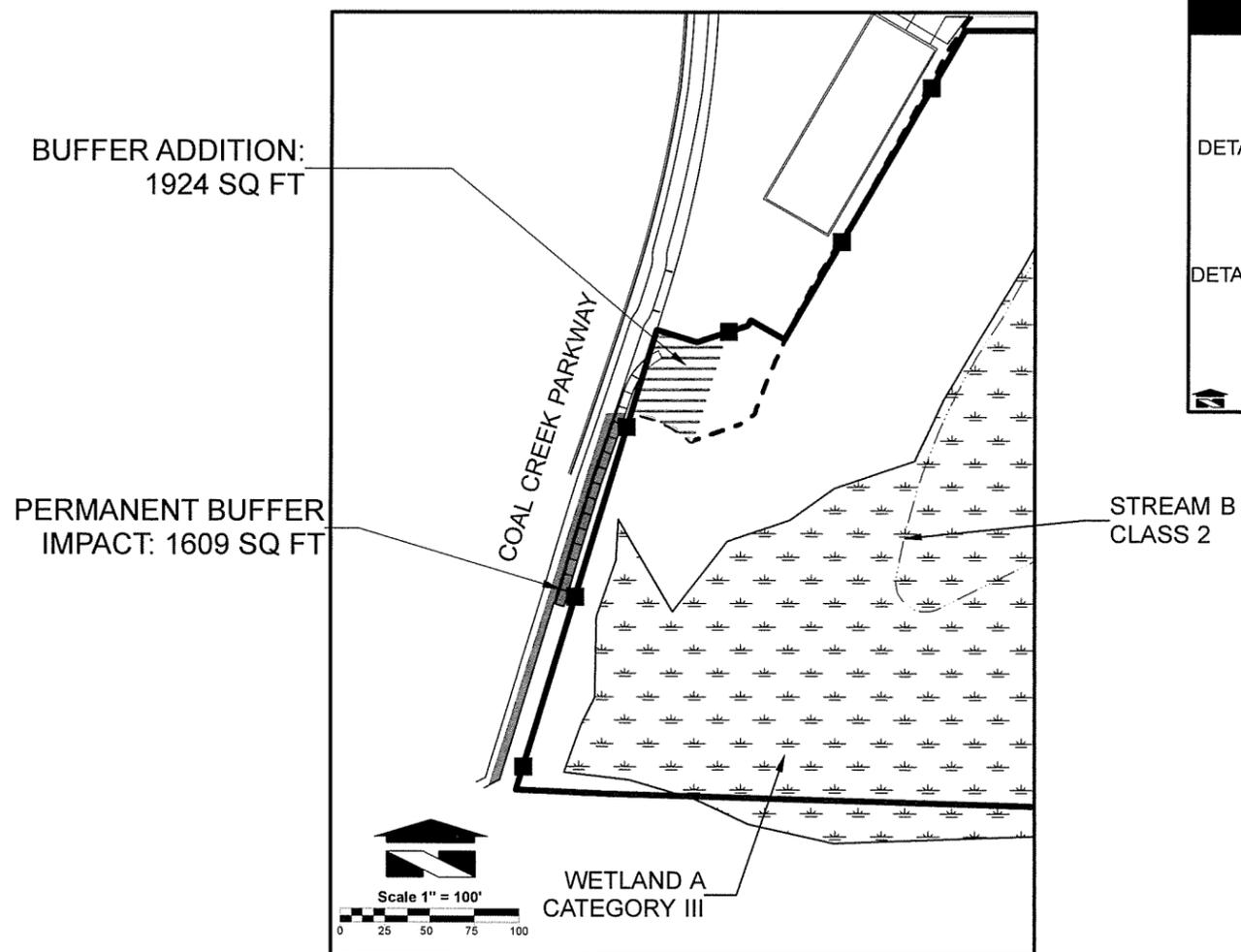
Coal Creek Parkway Road Improvements
Critical Areas Land Use Permit



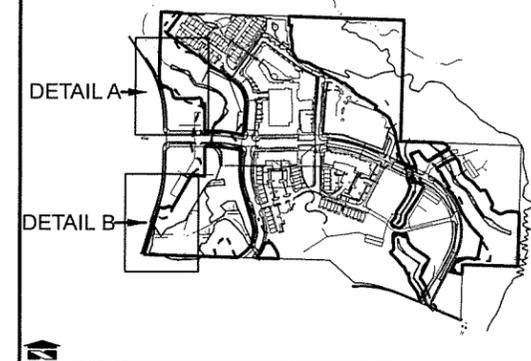
DETAIL A



DETAIL B



PROJECT OVERVIEW MAP



LEGEND	
	PERMANENT BUFFER IMPACTS
	ADDITIONAL BUFFER DESIGNATION
	WETLAND
	STREAM
	CRITICAL AREA TRACT
	BUFFER
	CRITICAL AREA SIGN

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DETAILED MITIGATION PLAN MAP
Avalon Newcastle - City of Bellevue
 Bellevue, Washington

Avalon Bay Communities, Inc. Sheet 1/1
 Attn: Edward Lammas WRI Job # 13131
 600 108th Ave. NE, Suite 840 Drawn by: NW
 Bellevue, WA 98004 Date: February 24, 2015



COB File # 15-106573-LO
Avalon Newcastle
Coal Creek Parkway Road Improvements
Critical Areas Land Use Permit

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DETAILED MITIGATION PLAN

FOR THE

Avalon Newcastle Master Planned Development:

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February 26, 2015

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I. PROJECT LOCATION AND PROJECT DESCRIPTION

A. PROJECT LOCATION

Avalon Bay Communities, Inc. (the “Applicant”) proposes the redevelopment of a 53.31-acre site located in the City of Newcastle. This site is commonly referred to as the former Mutual Materials facility (the “Project Site”). The project is referred to as the Avalon Newcastle Master Planned Development.

The Project Site is comprised of three separate tax parcels, #2724059006, #2824059009, and #2724059040, located in portions of Sections 27 and 28, Township 24N, Range 05E, W.M. The Project Site address is 6620 Coal Creek Parkway SE, in Newcastle, Washington. The Project Site is located within the Cedar / Sammamish Watershed (WRIA 8).

Adjacent uses include commercial offices and condominiums to the south, parks to the north and east, and public rights-of-way to the west and southeast. Specifically, the adjacent uses are as follow:

North: City of Bellevue Parks – Coal Creek Park

East: City of Newcastle – Coal Creek Park

Southeast: City of Newcastle - Mixed Use (YMCA)

West: City of Bellevue – Residential Subdivision

South: City of Newcastle – Mixed Use (commercial/office use); High Density Residential (condos); Limited Open Space

The Project Site fronts two arterial streets: Coal Creek Parkway SE along its westerly property boundary and Newcastle Golf Club Road along a portion of its southeastern property boundary.

B. PROJECT DESCRIPTION

This project proposes development of the Project Site into an urban, mixed-use community as planned for by the City of Newcastle in its Comprehensive Plan and, more specifically, as envisioned in the City’s 2000 Community Business Center/Lake Boren Corridor Master Plan and 2008 Community Business Center Design Guidelines (the “CBC Plan”) for a master-planned, mixed-use community. The City’s CBC Plan identifies the area containing the Project Site as the “Coal Creek Sector” and, as such, provides distinct design criteria and requirements.

Primary access to the Project Site is currently provided from Coal Creek Parkway SE, which will continue to serve as the primary entrance to the developed project. The location of the intersection, however, will be relocated to the north to align with NE 66th Street to the west as planned by the City in its 2003 Comprehensive Plan. This will require a new traffic signal at this intersection. Two other access points will be provided; one at Newcastle Golf Club Road and one from 132nd Avenue SE, which currently dead-ends at the site’s southern parcel boundary.

The proposed road network to serve the Project Site will be provided per the City of Newcastle’s CBC Plan as stated:

RECOMMENDED CIRCULATION ACTIONS

C-4: Develop “Newcastle Connector” between Coal Creek Parkway and Coal Creek Newcastle Road. This road will provide the primary regional access to development in the Coal Creek Sector and the Newcastle Golf Course to the east while reducing traffic congestion in the Downtown Sector. Provide traffic signals at the Coal Creek Parkway and 132nd Avenue SE intersections and realign Newcastle Coal Creek Road at its intersection with Newcastle Connector.

C-5: Extend 132nd Avenue SE northward to Newcastle Connector. This is an obvious connection to the Coal Creek Sector to improve circulation and reduce traffic on Coal Creek Parkway.

C-6: Develop a modified grid of neighborhood streets in the Coal Creek Sector. During the master planning process for the Mutual Materials site, establish a grid circulation pattern that provides convenient connections between uses within the area.

In addition to providing the required road network, the Applicant proposes phased development of the site by planning block areas (Blocks 1 through 10) for the purposes of project description. The site plan depicts approximately 900 residential multi-family units and approximately 49,000 square feet of commercial/retail space with public and private open spaces, multi-modal trails, and preserved critical areas.

Wetland Resources, Inc. (WRI) has prepared this detailed mitigation plan to address critical area impacts associated with the proposed redevelopment and to comply with the critical areas regulations outlined in chapter 18.24 of the Newcastle Municipal Code (NMC). Information on existing site conditions and methodologies used for wetland and stream designations can be found in the report *Aquatic Resources Impacts Analysis and Conceptual Mitigation Plan* (Wetland Resources, Inc., Oct. 2013).

II. CRITICAL AREAS

Section 18.24.180 of the NMC requires that all wetlands, streams, steep slope hazard areas and their associated buffers be designated as Critical Areas. Table 1, below, lists the wetlands and streams identified on the Project Site.

Table 1: Wetlands and Streams Located on the Project Site

FEATURE	RATING*	REQUIRED BUFFER WIDTH**
Wetland A	Cat. III	60'
Wetland F	Cat. II	110'
Wetland G	Cat. III	110'
Stream A	Class 2	100'
Stream B	Class 2	100'
Stream C	Class 3	25'
Stream E	Class 2	50'
Stream G (Coal Creek)	Class 2	100'

*Wetland ratings based on Washington State Wetland Rating System for Western Washington (Hruby 2004); stream classifications based on Newcastle Municipal Code (NMC), Section 18.24.340.

**Wetland buffer widths per NMC 18.24.315; stream buffer widths per NMC 18.24.350

Wetland A: Wetland A is a palustrine forested and depressional wetland that meets the criteria for a Category III wetland. A 60-foot buffer is assigned to Category III wetlands adjacent to high and moderate land use activities per NMC 18.24.315.

Wetland F: Wetland F is associated with Stream E and meets the criteria for a Category II wetland with a habitat score of 26 points. Based on these results, Wetland F receives a 110-foot buffer per NMC 18.24.315.

Wetland G: Wetland E is located immediately south of Wetland F and meets the criteria for a Category III wetland. It received a habitat functions score of 25 points on the Washington State Wetland Rating System. Category III wetlands with habitat scores between 20 and 28 points, and that are adjacent to high and moderate land-uses, receive 110-foot buffers per NMC 18.24.315.

Wetland G was originally thought to be located entirely off-site (i.e. east of the project site). However, based on observations made during recent surveying activities, it was determined that the wetland extends onto the project site. It is partially fed by a pipe that extends from the YMCA property to the south. The easement for this pipe was established while the Mutual Materials property was still operating.

Stream A: Stream A meets the criteria for a Class 2 stream that contains salmonids per the NMC 18.24.340 and requires a 100-foot protective buffer (NMC 18.24.350).

Stream B: Stream B meets the criteria for a Class 2 stream that contains salmonids per the Newcastle Municipal Code (NMC) Section 18.24.340 and requires a 100-foot protective buffer (NMC 18.24.350). Stream B is located in a steep ravine with some slopes greater than 30 percent.

Streams A and B, although called out separately, comprise a single stream system. They are located in the same stream corridor on the western part of the Project Site. Furthermore, they are illustrated as one system on Figures 9 and 11 of the City of Newcastle 2001 Stream Inventory (Adolfson Associates, Inc. 2002). The existing Project Site entrance bisects the streams; a culvert is located beneath the existing entrance/roadway.

Stream C: Stream C is a Class 3 stream and is assigned a 25-foot buffer. Stream C is located in a steep ravine with some slopes greater than 30 percent.

Stream E: Stream E is perennial and has a downstream block to fish passage as identified in the City of Newcastle stream inventory. It is classified as a Class 2 stream without salmonids and requires a 50-foot protective buffer per NMC 18.24.350. Stream E is located in a steep ravine with some slopes greater than 30 percent.

Stream G (Coal Creek): Stream G meets the criteria for a Class 2 stream that contains salmonids per the NMC 18.24.340 and requires a 100-foot protective buffer (NMC 18.24.350). Stream G is located in a steep ravine with slopes greater than 30 percent.

III. PROPOSED ACTIVITIES AND IMPACTS ANALYSIS

A. PROPOSED SITE DEVELOPMENT AND MITIGATION SEQUENCING

The proposed Avalon Newcastle project will not involve any in-water work, wetland fill, or impacts to critical areas themselves. However, development will result in critical area buffer impacts due to on-site public road construction, utility extensions, paved trails, pedestrian connections, and parking lot construction, as well as required frontage improvements to adjacent public rights-of-way. Per Section 18.24.125 of the NMC, the following sequential measures have been applied to the project in order to avoid and/or reduce impacts to critical areas and critical area buffers:

A. Avoiding the impact or hazard by not taking a certain action

The Avalon Newcastle Site Plan Development has been designed to avoid impacts to critical areas and to minimize impacts to buffers to the maximum extent practicable. The impact actions (i.e. road and parking construction) are necessary for the successful development of the site. As stated above, the proposed road network to serve the Project Site is required by the City of Newcastle in its Comprehensive Plan and CBC Plan, specifically as a part of the Coal Creek Sector mixed-use development. Without these features, the City's goals for development would not be met.

B. Minimizing the impact or hazard by:

1. *Limiting the degree or magnitude of the action with appropriate technology; or*
2. *Taking affirmative steps, such as project redesign, relocation, or timing*

Best Available Science (BAS) was utilized during the site investigations, delineations/ordinary high water mark (OHWM) determinations, and mitigation plan development. Best Management Practices (BMP's) will be utilized during construction to avoid/minimize additional impacts to critical areas and buffers.

This proposal has been designed to avoid impacts to critical areas (streams and wetlands) and to minimize impacts to critical area buffers. As stated above, the internal public road layout is required by the City of Newcastle, but has been designed to avoid critical area and buffer impacts to the maximum extent practicable.

The locations of the parking areas west of Stream A are necessary to provide access to the proposed Newcastle Connector as well as Coal Creek Parkway. The driveways/entrances for these parking areas must be as far back (east) of the Newcastle Connector/Coal Creek Parkway intersection as possible so that traffic requirements for turning movements and queuing can be met.

C. Rectifying the impact to critical areas by repairing, rehabilitating, or restoring the affected critical area or its buffer.

The wetland and stream buffer impacts associated with public roadways and parking areas will be offset by compensatory mitigation in the form of stream and wetland buffer restoration and designation of new buffer area.

D. Minimizing or eliminating the hazard by restoring or stabilizing the hazard area through engineered or other methods.

The public road crossings of Streams A, B, and C, and the access road crossing Stream E will utilize bottomless culverts in order to avoid aquatic impacts and placement of fill. The footings of these structures will be placed outside of the OHWM for each stream. Compensatory mitigation will be provided for impacts to the associated stream buffers resulting from roadway construction.

E. Reducing or eliminating the impact or hazard over time by preservation or maintenance operations during the life of the development proposal or alteration.

Per NMC 18.24.180, all wetlands, streams, steep slope hazard areas, and their associated buffers will be designated as Critical Areas and will be placed in critical area tracts. In addition, permanent critical area markers/signs will be installed throughout the Avalon Newcastle development per NMC 18.24.160.

F. Compensating for the adverse impact by enhancing critical areas and their buffers or creating substitute critical areas and their buffers.

Mitigation actions have been developed for the proposed development. These actions will compensate for unavoidable impacts to critical area buffers.

G. Monitoring the impact, hazard or success of required mitigation and taking remedial action.

Per NMC 18.24.130, a monitoring plan will be developed as part of the mitigation plan. Contingency plans will also be developed and will be implemented should the mitigation plans fail and/or if performance standards are not being met.

B. BRICK REMOVAL, RESTORATION, AND BUFFER MODIFICATION

The current physical condition of the Project Site is highly disturbed from over 100 years of coal mining operations and development and operation of the Mutual Materials facility. The Project Site contains areas of broken concrete slabs, pavement, abandoned buildings or building foundations, and openly graded areas of earth and brick. Much of the Project Site's topography is the result of previous grading activities. These activities resulted in brick piles and fill slopes containing brick rubble stemming from the expansion of the site's operating footprint of the Mutual Materials facility.

Portions of the on-site critical area buffers are considered degraded due to the presence of brick piles and fill material. These degraded buffer areas provide little in the way of critical area protection or functions and values. As part of the overall Avalon Newcastle project, these areas will be restored.

Brick and fill material will be removed from portions of the buffers of Streams A, B, C, E and Wetland A, as well as from the top of the steep slopes located in the northeastern corner of the project site. These brick removal areas, although degraded, do contain a fairly dense cover of vegetation, primarily young red alder (*Alnus rubra*) and big leaf maple (*Acer macrophyllum*), Himalayan blackberry (*Rubus armeniacus*), and mature black cottonwood (*Populus balsamifera*). Trees and shrubs have become established throughout the degraded buffers since the Mutual Materials facility ceased operations. Following the removal of this material, the northeastern steep slope area and the buffer of Stream C – both of which meet the criteria for steep slope hazard areas per NMC 18.06.628 –

will be re-graded. Re-grading activities will result in slopes that are more gradual, gentle, and stable and will reduce the need for a steep slope buffer in those areas.

Brick and fill removal activities will take place prior to the development of the project site. Once development is complete, the brick removal/buffer modification areas will be restored with native vegetation. Specific plant species and planting specifications are addressed below. Overall, approximately 42,310 square feet (SF) of buffer area will be restored via brick removal and installation of native vegetation.

C. IMPACTS FROM SITE DEVELOPMENT

Section 18.24.320 of the NMC lists alterations that are permitted within wetlands and their buffers. These alterations are allowable only if the City determines that there are no practicable alternative locations with less adverse impacts. Mitigation is required for all wetland and buffer impacts. Item G in NMC 18.24.320 addresses “wetland and buffer road and underground utility crossings.” In addition, NMC Section 18.24.360 lists permitted alterations within streams and stream buffers, one of which is “stream and buffer crossings” (item E). Wetland, stream, and buffer crossings are allowable provided they comply with the listed requirements in the NMC.

The proposed public road layout for the Avalon Newcastle project was developed in conjunction with the City of Newcastle. The proposed roads have been developed to tie into existing public roads to the south of the development (132nd Place SE and Newcastle Golf Club Road) and to provide access to Coal Creek Parkway. For traffic safety and operational factors, the site entrance at Coal Creek Parkway needs to be aligned with the existing SE 66th Street access point on the west side of the Parkway. Since the road locations cannot be altered or moved, the stream and wetland crossings are unavoidable.

Roadway, stream crossing, and parking area development will permanently impact 36,298 SF of the Stream A/Stream B/Wetland A buffer, 7,620 of Stream C buffer, and 8,222 SF of Stream E buffer. All of the buffer impact areas are currently comprised of forested and scrub-shrub vegetation and contain several species. These include, but are not limited to, red alder, big-leaf maple, Douglas fir (*Pseudotsuga menziesii*), black cottonwood, western red cedar (*Thuja plicata*), Indian plum (*Oemleria cerasiformis*), salmonberry (*Rubus spectabilis*), red elderberry (*Sambucus racemosa*), vine maple (*Acer circinatum*), snowberry (*Symphoricarpos albus*), beaked hazelnut (*Corylus cornuta*), Himalayan blackberry, and sword fern (*Polystichum munitum*), among others. The majority of the buffer impact areas are also located within steep ravines/stream corridors. The buffer impact areas currently provide wildlife habitat, stream shading, and water quality improvement and hydrologic functions. While these functions will be lost as a result of the project impacts, they will be replaced via mitigation/buffer restoration activities.

The proposed stream crossings over Stream A, Stream C, and Stream E will not impact wetland hydrology, streambeds, or stream banks and will comply with the requirements outlined in NMC 18.24.360(E). Since all of the streams being crossed are either class 2 or class 3, bottomless culverts will be used to span the stream corridors. This will allow for unimpeded stream flow and maintenance of wetland hydrology. The culverts will be placed outside of each stream’s OHWM so that in-water work and placement of fill is avoided and to allow for continued movement of aquatic organisms. Construction of the road crossings will take place during the summer low-flow periods when fish use is at its lowest. Vegetation removal within the road crossing construction areas will be limited to the minimum amount necessary to accomplish the task. The crossings have been planned for and will be located where they will have the least amount of adverse impacts on the streams,

wetlands, and buffers while still serving as functional roadways. Permanent indirect impacts from the stream crossings are not expected to occur. Details on the proposed stream crossings and culverts can be found in the project engineering plans/documentation prepared by Goldsmith Land Development Services.

Two bio-swales are proposed for construction; one on the east side of Stream A and the other on the east side of Stream B/Wetland A. The bio-swales will be 2-3 feet deep, two feet wide at the bottom, and will have 3:1 side slopes. Inlet structures to the swales are located south of the Newcastle Connector Road and flows sheet to the swale north of the Newcastle Connector. All swale flows will outfall to a piped conveyance that leads to the stormwater detention vault adjacent to Stream A. The bio-swales represent 2,652 SF of permanent buffer impact, which will be mitigated for via buffer width averaging and buffer restoration. Per NMC 18.24.360(C), surface water conveyance within stream buffers is allowable if the discharge does not increase the rate of flow above predevelopment rates, decrease water quality, or decrease the quality of salmonid spawning and rearing areas.

D. TEMPORARY IMPACTS FROM STORMWATER MANAGEMENT

Approximately 4,457 SF of temporary impacts to the Stream A buffer will result from the installation of a stormwater detention vault. The vault impact area is comprised of existing hardscape/asphalt as well as trees and shrubs. Dominant species include young red alder and big leaf maple, mature black cottonwood trees, and dense Himalayan blackberry. Following the installation of the vault and re-grading, the temporary impact area will be replanted with native shrubs. In order to avoid damage to the vaults from roots, trees will not be planted within the vault impact area.

Per NMC 18.24.320 and 18.24.360, the installation of stormwater vaults within wetland and stream buffers is not an allowable activity unless the project applicant requests a modification of the development agreement as outlined in NMC 18.45.030(C). A modification to the City's stream, wetland, and buffer regulations is only permitted when the applicant "*can demonstrate to the satisfaction of the city that the modification will achieve greater hydrological, water quality, or aquatic area habitat functions*" (NMC 18.45.030(C)(7)). As part of the Avalon Newcastle Master Planned Development, a modification to the development agreement will be requested to allow for the installation of the stormwater vaults.

The vault will be installed at the northeast corner of the new project site entrance. This area is primarily comprised of existing hardscape and brick rubble material, but also contains trees and a mixed native/invasive shrub layer. The brick rubble fill material will be removed from this area, followed by re-grading, installation of the vault, and restoration of the area with native shrubs. Since the majority of the vault area is dominated by brick rubble/hardscape and a dense layer of Himalayan blackberry, the proposed restoration activities are expected to achieve greater habitat functions (compared to existing conditions), thereby meeting the modification requirements of 18.45.030(C)(7). In addition to the restoration activities, approximately 1,900 SF of additional/new buffer will be designated near the southeast corner of the vault.

Temporary impacts within the buffers of Stream A, Stream C, and Stream E will result from the construction of stormwater outfall pipes and dispersion pads. The stormwater outfall pipes will extend from the detention vaults to the dispersion pads located in the buffers. The pipes will temporarily impact 3,484 SF of the Stream A buffer, 35 SF of the Stream B/Wetland A buffer, 76 SF of the Stream C buffer, and 552 SF of the Stream E buffer. These temporary impact areas will

be restored with native shrubs and herbaceous vegetation (trees will not be planted so as to avoid impacts to the pipes).

The pipe outfalls and dispersion pads will be located outside of the stream OHWM's. The dispersion pads will impact 244 SF of the Stream A buffer, 21 SF of the Stream B/Wetland A buffer, 42 SF of the Stream C buffer, and 128 SF of the Stream E buffer. Per NMC 18.24.360(C), surface water conveyance within stream buffers is allowable if the discharge does not increase the rate of flow above predevelopment rates, decrease water quality, or decrease the quality of salmonid spawning and rearing areas.

E. TEMPORARY GRADING IMPACTS

Grading and earth moving activities will result in temporary buffer impacts throughout the project site. Approximately 12,912 SF of Stream A/Stream B/Wetland A buffer, 4,579 SF of Stream C buffer, and 4,809 SF of Stream E buffer will temporarily impacted by these actions. These areas will be restored with native vegetation.

IV. PROPOSED MITIGATION ACTIONS

A. MITIGATION REQUIREMENTS

This Detailed Mitigation Plan has been prepared to address proposed development activities and anticipated impacts to critical area buffers on the Project Site. This Plan is intended to be sufficient for project approval; it demonstrates that the proposed project complies with the City's critical area regulations. Sections 18.24.325(B)(1) and 18.24.370(C)(1)(a)(i) of the NMC state that mitigation for wetland buffer and stream buffer impacts must be provided at a 1:1 ratio (mitigation area to impact area).

The Avalon Newcastle Site Plan Development will permanently impact approximately 52,140 SF of stream and wetland buffer and temporarily impact approximately 27,749 SF of buffer. These impacts are the result of roadway crossings, parking areas, detention vaults, stormwater outfall pipes and dispersion pads, and general grading activities. As mitigation for these impacts, approximately 63,391 SF of buffer will be restored (42,310 SF from brick rubble removal and restoration and 21,081 SF from restoration of existing hardscape areas). In addition, temporarily impacted buffer areas will be restored (27,749 SF total). New buffer area totaling 31,468 SF will be also be dedicated (10,532 SF of this new buffer area will be temporarily impacted during construction, but will be restored). Overall, the ratio of mitigation areas to impact areas will be slightly over 1:1 (not including temporary impact/restoration areas).

The 31,468 SF of new buffer that will be designated constitutes buffer width averaging actions per NMC 18.24.350(C). Buffer width averaging is allowable if it will increase stream or buffer functions, will provide additional natural resource protection, and will not adversely affect salmonid habitat. Furthermore, the total buffer area contained in each stream must not decrease because of buffer width averaging. The proposed buffer addition areas within each of the on-site stream buffers are similar to the buffer areas being averaged/reduced. There are no significant differences between the buffer addition and buffer reduction areas. Both areas are comprised of fairly dense forested vegetation that provides wildlife habitat, water quality improvement, and some stream shading. Along with buffer restoration, buffer width averaging is expected to improve stream and wetland buffer functions. Salmonid habitat will not be significantly impacted by averaging activities; the additional buffer and remaining buffer will maintain stream functions and existing salmonid

habitat due to the forested nature of both areas. Finally, the overall buffer area contained in each on-site stream corridor will not be reduced via buffer width averaging.

B. PROPOSED MITIGATION

Approximately 48,830 SF of stream and wetland buffer will be restored with native vegetation to compensate for project related impacts (including temporary impact/mitigation areas). Restoration areas include 32,354 SF of the Stream A/Stream B/Wetland B buffer, 10,987 SF of the Stream C buffer and top of steep slopes (NE corner of site), and 5,489 SF of the Stream E buffer. These quantities include temporary impact and mitigation areas (27,749 SF total). The brick rubble removal areas will also be restored, which total 42,310 SF. In addition, approximately 31,468 SF of new buffer will be designated adjacent to the on-site streams and wetland (10,532 SF of which will be temporarily impacted during construction and restored). New buffer areas include 20,648 SF adjacent to the Stream A/Stream B/Wetland B buffer, 2,328 SF adjacent to Stream C, and 8,492 SF adjacent to Stream E. The new buffer area located near the southeast corner of the stormwater vault/the northeast side of the new site entrance will also be restored with native vegetation (approx. 1,900 SF, included in restoration quantities, above). Mitigation areas are illustrated on the Detailed Mitigation Plan map that accompanies this report. Table 2, below, lists the impact and mitigation quantities for the on-site aquatic resources.

Table 2: Impact and Mitigation Area Quantities and Descriptions*

Aquatic Resource	Impact Type and Size	Proposed Mitigation Action and Quantity
Stream A/Stream B/Wetland A	Stream crossing, buffer reduction, and bio-swales: 38,950 SF -Permanent buffer impact	Buffer restoration: 15,769 SF
	Detention vault (4,457 SF), stormwater pipes (3,519 SF), and dispersion pads (265 SF) -Temporary buffer impacts	Restoration of temporary impacts: 16,585 SF Additional buffer: 20,648 SF (7,051 SF to be temp. impacted and restored)
	Grading impacts: 12,912 SF -Temporary buffer impacts	
Stream C	Stream crossing and buffer reduction: 7,620 SF -Permanent buffer impact	Buffer Restoration: 5,312 SF
	Stormwater pipes (76 SF) and dispersion pads (42 SF) -Temporary buffer impacts	Restoration of temporary impacts: 5,675 SF Additional buffer: 2,328 SF (82 SF to be temp. impacted and restored)
	Grading impacts: 4,579 SF -Temporary buffer impacts	
Stream E	Stream Crossing and buffer reduction: 8,222 -Permanent buffer impact	Additional buffer: 8,492 SF (3,399 SF to be temp. impacted and restored)
	Stormwater pipes (552 SF) and dispersion pads (128 SF) -Temporary buffer impacts	Restoration of temporary impacts: 680 SF
	Grading impacts: 4,809 SF -Temporary buffer impacts	

*For simplicity, the brick rubble fill removal/restoration areas have not been listed in Table 2.

In addition to the above mitigation, approximately 5,381 SF of the Stream B/Wetland A buffer and 4,345 SF of the Stream C buffer will be planted with pacific willow and black cottonwood trees. These are relatively fast-growing species that will become established faster than the other proposed species and provide shade for the adjacent streams. These areas are illustrated on the Detailed Mitigation Plan map.

C. PLANTING PLAN

The following tables list the plant species and quantities that will be installed throughout the restoration areas. Planting specifications for the bio-swales have been prepared by the project landscape architect and are not included in the following tables or on the Detailed Mitigation Plan map.

Table 3: Tree and Shrub Planting Areas (77,894 SF)*

SPECIES	SCIENTIFIC NAME	SIZE	SPACING	QUANTITY
Douglas fir	<i>Pseudotsuga menziesii</i>	1 gallon	10' on-center (OC)	390
Big-leaf maple	<i>Acer macrophyllum</i>	1 gallon	10' OC	390
Red Elderberry	<i>Sambucus racemosa</i>	1 gallon	4' OC	818
Vine maple	<i>Acer circinatum</i>	1 gallon	4' OC	818
Thimbleberry	<i>Rubus parviflorus</i>	1 gallon	4' OC	818
Beaked hazelnut	<i>Corylus cornuta</i>	1 gallon	4' OC	818
Snowberry	<i>Symphoricarpos albus</i>	1 gallon	4' OC	818
Sword fern	<i>Polystichum munitum</i>	1 gallon	2' OC	14,606
Woodland strawberry	<i>Fragaria vesca</i>	4" Pot	1.5' OC	15,146

*Does not include willow and cottonwood planting areas adjacent to Stream B/Wetland A and Stream C. See Table 6.

Table 4: Shrub Only Planting Areas (13,075 SF)

SPECIES	SCIENTIFIC NAME	SIZE	SPACING	QUANTITY
Red Elderberry	<i>Sambucus racemosa</i>	1 gallon	4' OC	163
Vine maple	<i>Acer circinatum</i>	1 gallon	4' OC	163
Thimbleberry	<i>Rubus parviflorus</i>	1 gallon	4' OC	163
Beaked hazelnut	<i>Corylus cornuta</i>	1 gallon	4' OC	163
Snowberry	<i>Symphoricarpos albus</i>	1 gallon	4' OC	163
Sword fern	<i>Polystichum munitum</i>	1 gallon	2' OC	2,452
Woodland strawberry	<i>Fragaria vesca</i>	4" Pot	1.5' OC	2,542

Table 5: Dispersion Pad Planting Areas (435 SF)

SPECIES	SCIENTIFIC NAME	SIZE	SPACING	QUANTITY
Pacific willow*	<i>Salix lasiandra</i>	Live stakes	3' OC	49

*Pacific willow stakes are for stormwater dispersion pads only (435 SF): 27 stakes for Stream A pad; 3 stakes for Stream B pad; 5 stakes for Stream C pad; 14 stakes for Stream E pad.

Table 6: Streamside Cottonwood and Willow Planting Areas (9,726 SF)*

SPECIES	SCIENTIFIC NAME	SIZE	SPACING	QUANTITY
Black cottonwood*	<i>Populus balsamifera</i>	1 gallon	10' OC	50
Pacific willow*	<i>Salix lasiandra</i>	1 gallon	10' OC	50

*Cottonwood and willow trees shall be planted adjacent to the southeast side of Stream B/Wetland A (5,381 SF) and on both sides of a portion of Stream C (4,345 SF) only. Each area shall receive 25 of each species.

Throughout all of the planting areas, trees will be planted at 10 feet on-center (OC), shrubs at 4 feet OC, ferns at 2 feet OC, groundcover (woodland strawberry) at 1.5 feet OC, and live stakes at 3 feet OC. Ferns shall be planted in clusters of 3-5 in close proximity to trees and shrubs so that they will receive shade from the larger plants over time.

Plant installation should take place in late fall or early spring (prior to the start of the growing season). Plants shall be obtained from a reputable nursery familiar with native vegetation and that is capable of providing local genetic stock. Limited species substitution may be allowed; however, the City of Newcastle and/or the lead biologist must approve the substitution.

Plants shall be arranged with the appropriate numbers, sizes, species, and distribution to achieve the required vegetation coverage. The actual placement of individual plants shall mimic natural, asymmetric vegetation patterns found on similar undisturbed sites in the area.

Lath staking, brightly colored flagging, or another form of marking shall be placed on or near each installed plant to assist in locating the plants during maintenance and monitoring activities.

Irrigation shall be provided during the first two years of the monitoring period and will occur during the summer/dry season (e.g. June through September), any extensive dry periods, and/or as determined by the lead ecologist. Special attention should be paid to sword ferns, which require ample soil moisture to survive transplanting, particularly when shade is not available. Water shall be applied to the new plants at a rate of one (1) inch per week. The irrigation system shall be installed by an experienced landscaper.

The lead biologist shall be on-site to inspect plant materials for proper size and quality, inspect the layout and planting locations, and to complete a final walk-through before accepting the buffer restoration installation.

D. EXCAVATION AND SOIL AMENDMENTS

All of the buffer restoration areas are comprised of existing hardscape or brick rubble/fill. Prior to plant installation, a portion of the hardscape/fill materials will be removed from the restoration areas. Since the depth of fill material throughout the restoration areas is unknown, excavation depths will vary depending on location. At the very least, however, the restoration areas will be excavated down to the finished subgrade. If this reveals native soils, then shallow planting soil will be applied, followed by plant installation and mulch application (see below). Testing of existing restoration area soils for organic content and nutrients may be performed prior to planting to determine if any amendments are required. Conversely, if the initial grading actions reveal additional fill material instead of native soils, then 12 inches of additional brick/fill material will be removed and replaced with topsoil and/or stripped soil from the project site. Following this, restoration plantings will be installed and mulch will be applied. It is assumed that new topsoil (where necessary) will be applied at depths ranging from 6 to 24 inches. Where new topsoil is not applied over an area, individual planting pits should be amended with a topsoil mix. Excavation depths, topsoil necessity, and topsoil amounts will be determined in the field during the excavation process.

In addition to topsoil, a wood chip mulch (containing some green/vegetative material) will be placed around the base of each plant in a 3 foot radius and at a depth of 2"-4". Mulch shall not be allowed to contact plant stems in order to avoid plant decay and rot.

E. CONSTRUCTION OFFICE TRAILER

A construction office trailer measuring approximately 36' by 60' will be placed slightly north of the existing site entrance and will remain in place for approximately two years. The proposed trailer area is currently comprised of hardscape/asphalt, but is also located within a proposed buffer restoration area (see the Detailed Mitigation Plan map). Restoration of this specific area (2,160 SF) will be delayed until the construction trailer is no longer necessary and has been removed from the site or relocated. This is not expected to impact the overall mitigation plan or the buffer functions.

F. REMOVAL OF EXISTING CULVERTS

Existing culverts are located within Streams A and C. These culverts and stream crossing areas will not be utilized as part of the proposed Newcastle Connector Road crossings. The project State Environmental Policy Act (SEPA) determination concluded from the evaluation of impacts of the new proposed stream crossings, together with mitigation proposed in the form of added stream buffers and enhanced stream buffers, that removal of the existing culverts was not warranted as a project condition or mitigation. A review of the SEPA determination was made by the Washington Department of Fish and Wildlife (WDFW) and a site visit was held on September 10, 2014 to review the proposal and crossing locations. The WDFW official and representatives from the Muckleshoot Tribe expressed interest in having two of these culverts removed during site development since they would not be utilized for the project.

It was discussed that the request for removal of the culverts could be made as a condition of the hydraulic project approval (HPA). It was also discussed that the existence of the culverts is not a result of the project and is not a condition of SEPA review. The result of these discussions was that Avalon-Newcastle (the property owner) is not opposed to removing the two existing culverts for the long-term benefit of the stream; however, such removal will require a significantly greater level of design and permitting (through the U.S. Army Corps of Engineers or others), including stream restoration and possibly in-stream flow control for wetlands. This would require a significantly longer timeframe for permitting than would be required for HPA and City of Newcastle approval of the proposed crossings.

The approach discussed for accommodating the removal of these culverts was to submit for an HPA for the new proposed crossings, together with a commitment to follow-up with separate applications for culvert removal, with the goal of accomplishing all permits, removal, and stream restoration within a period of three years following issuance of the HPA. The work required for these new crossings would occur during the summer of 2015 while permits for culvert removal are prepared and under review. Then, the removal of the culverts would occur on or before the summer of 2018 (pending permit issuance), which is still within the duration of site development and construction.

If removal of the existing culverts is required, there will be direct impacts to Streams A and C. Mitigation will be provided and will include, among other things, stream bank re-grading to 3:1 slopes, installation of large woody debris and boulders, streambed enhancement, installation of an in-stream flow control structure to maintain Wetland A hydrology, and revegetation of the stream buffers.

G. POST-MITIGATION FUNCTIONAL ASSESSMENT

Although some stream and wetland buffer functions will be lost during site development, this proposed mitigation plan aims to replace them. As previously stated, the buffer impact areas

currently provide some wildlife habitat, stream shading, and water quality and hydrologic functions. The proposed mitigation actions will replace these functions, however, through the removal of hardscape areas, the installation of native trees, shrubs, and herbaceous vegetation, and the designation of new buffer area. While permanent and temporary project impacts will total approximately 79,889 SF, mitigation actions will improve approximately 48,830 SF of stream and wetland buffer and designate approximately 31,468 SF of new stream and wetland buffer (10,532 SF of which will be temporarily impacted and restored). This represents slightly more than a 1:1 mitigation to impact ratio. Although there will be a temporal loss in buffer functions as the installed native vegetation matures, lost functions are expected to be replaced as the planting areas become established. Furthermore, the restoration areas, new buffer areas, and all of the on-site critical areas will be permanently protected through the establishment of Critical Area Tracts.

H. PROJECT PHASING AND MITIGATION SEQUENCING

The phasing of the Avalon Newcastle project is described as occurring in three (3) parts: the initial site work, a Phase 1 development area (including commencing construction of the Newcastle Connector and the stormwater vaults), and a Phase 2 development area. Phase 1 development consists of Lots 1 – 3 and Lot 5. Phase 2 consists of Lot 4, and Lots 6 -10. This is a generalization of the development in major phasing areas. Actual development may occur in smaller phases or even lot-by-lot Development. A more detailed matrix of development phasing is included in the Development Agreement, to be approved by the City of Newcastle.

The initial site work activity is intended to occur as a first level of activity and continuous effort over one to two years, and will include: site preparation and brick fill reclamation, plus clearing and mass grading of the entire site to approximate future block development super pad grades, and road subgrades, with temporary drainage control and erosion protection.

The Engineering Review Permit (ERP), overall clearing and grading plans for the initial site work activity across the entire property, will include and define the locations and extent of critical areas impacts and provide the overall mitigation plans and planting plans to be implemented, consistent with the overall impacts and mitigation concept as proposed in the preliminary Binding Site Plan application.

It is assumed at the time of ERP for these clearing and grading plans the applicant will be required to post a site restoration bond, and a performance bond for the critical areas mitigation as defined on the plans.

Once this performance bond is in place, the mass grade work will commence across the entire site, including work in the identified zones of critical areas impacts.

It is intended that the planting of mitigation areas identified for restoration will commence immediately following establishment of site grades per completion of the overall mass grading effort. This will be the case for all critical area impact zones, with the exception of the stormwater vault location. The mitigation planting in the area of temporary impacts associated with the stormwater vault will occur as part of the construction within the Phase 1 development. The mitigation planting in those locations will occur immediately following the installation of the vault.

I. POTENTIAL IMPACTS AND MITIGATION – FUTURE PERMITTING

As part of the Avalon Newcastle Master Planned Development, a Hydraulic Project Approval (HPA) from the Washington Department of Fish and Wildlife (WDFW) will be required. Hydraulic Project Approval permits are typically required for construction projects or activities occurring in or near state waters. The proposed crossings over Streams A, C, and E fall under the HPA program.

V. GOALS, MONITORING, MAINTENANCE, AND CONTINGENCY

A. GOALS, OBJECTIVES, AND PERFORMANCE STANDARDS

Project goals identify what the mitigation plan is attempting to accomplish. Objectives identify specific actions that are taken or components that are initiated in order to meet the project goals. Finally, performance standards provide measurable criteria for determining if the goals and objectives are being achieved (WA. State Department of Ecology et al., 2006)

The goals of this mitigation plan include the following:

- Restoration of approximately 52,140 SF of stream and wetland buffer impacted by project-related impacts.
- Restoration of approximately 42,130 SF of stream and wetland buffer impacted by historical brick rubble fill material.
- Restoration of approximately 27,749 SF of stream and wetland buffer temporarily impacted by project actions.
- Increase the overall area (square footage) of stream and wetland buffer on the project site.

These goals will be met by performing the following actions (i.e. objectives):

- Install 780 native trees, 4,905 native shrubs, 17,058 ferns, and 17,688 woodland strawberry throughout the buffer restoration areas.
- Install 50 black cottonwood trees and 50 pacific willow trees adjacent to Wetland A/Stream B and Stream C (see Table 6, above, for specific quantities for each area).
- Install 49 Pacific willow stakes throughout the three stormwater outfall dispersion pads (see Table 5, above, for specific quantities for each dispersion pad).
- Designate approximately 31,468 SF of new stream and wetland buffer area throughout the project site.
- Incorporate the new buffer areas into the recorded Critical Area Tracts and provide permanent signage for all critical area tracts per NMC 18.24.160(B).

The performance standards for all of the planted areas include the following:

- Survival of planted trees, shrubs, and herbaceous/groundcover vegetation throughout all of the restoration areas will be 100% following the first year of monitoring; 80% following the third year; and 70% by the end of the fifth year. All dead plants shall be replaced following the first year of monitoring.

- Tree and shrub aerial coverage throughout the restoration areas will be 20% at the end of the third monitoring year and 40% at the end of the fifth monitoring year. (Note: desirable native volunteer species, such as red alder and black cottonwood, may contribute up to 20% cover. If volunteer species exceed 20% cover, control measures shall be initiated in an effort to maintain species diversity).
- Herbaceous species aerial coverage throughout the restoration areas will be 25% at the end of the third year of monitoring and 50% at the end of the fifth year.
- Invasive and non-native species shall not provide more than 25% aerial coverage within any of the restoration areas at any time.
- All critical areas and critical area tracts shall be illustrated on the official project site plans.

B. PROJECT NOTES

Pre-Construction Meeting

Monitoring by the lead biologist for all portions of this project is strongly recommended. An on-site, pre-construction meeting should be held between the lead biologist, project applicant, equipment operators and construction crew, and City of Newcastle personnel. The objective of such a meeting is to confirm the location of the mitigation areas and the mitigation actions.

Inspections

The lead biologist should periodically inspect the mitigation installation process. Minor adjustments to the original design may be necessary prior to and during construction due to unusual or unknown site conditions. A City of Newcastle representative and/or the lead biologist will make these decisions during construction.

Planting Notes

Plant installation should take place in late fall or early spring (prior to the start of the growing season), if possible. Plants shall be obtained from a reputable nursery familiar with native vegetation and that is capable of providing local genetic stock. Limited species substitution may be allowed; however, the City of Newcastle and/or the lead biologist must approve the substitution.

Handling

Plants shall be handled so as to avoid damage, including breaking, bruising, root damage, sunburn, drying, freezing or other injury. Plants must be covered during transport. Plants shall not be bound with wire or rope in a manner that could damage branches. Protect plant roots with shade and wet soil in the period between delivery and installation. Do not lift container stock by trunks, stems, or tops. Do not remove from containers until ready to plant. Water all plants as necessary to keep moisture levels appropriate to the species requirements. Plants shall not be allowed to dry out. All plants shall be watered thoroughly immediately upon installation. Soak all containerized plants thoroughly prior to installation.

Storage

Plants stored for longer than one month prior to planting shall be planted in nursery rows and treated in a manner suitable to specific species requirements. Plants must be re-inspected by the lead biologist and/or landscaper prior to installation.

Damaged plants

Damaged, dried out, or otherwise mishandled plants will be rejected at installation inspection. All rejected plants shall be immediately removed from the site.

Plant Names

Plant names shall comply with those generally accepted in the native plant nursery trade. Any question regarding plant species or variety shall be referred to the landscape designer, lead biologist, or City of Newcastle personnel. All plant materials shall be true to species and variety and legibly tagged.

Quality and condition

Plants shall be normal in pattern of growth, healthy, well branched, and vigorous, with well-developed root systems, and free of pests and diseases. Damaged, diseased, pest-infested, scraped, bruised, dried out, burned, broken, or defective plants will be rejected.

Roots

All plants shall be containerized unless explicitly authorized by the landscape designer and/or lead biologist. Root bound plants or B&B plants with damaged, cracked, or loose rootballs (major damage) will be rejected. Immediately before installation, plants with minor root damage (e.g. broken and/or twisted roots) must be root-pruned. Matted or circling roots of containerized plantings must be pruned or straightened and the sides of the root ball must be roughened.

Sizes

Plant sizes shall be the size indicated in Tables 3 through 6, above. Larger stock may be acceptable provided that it has not been cut back to the size specified, and that the root ball is proportionate to the size of the plant. Smaller stock may be acceptable, and preferable under some circumstances, based on site-specific conditions. Measurements, caliper, branching, and balling and burlapping shall conform to industry standards.

Form

Evergreen trees shall have single trunks and symmetrical, well-developed form. Deciduous trees shall be single trunked unless specified as multi-stem in the plant schedule. Shrubs shall have multiple stems and be well branched.

Weeding

Non-native and invasive vegetation in the mitigation areas will be hand weeded from around all newly installed plants at the time of installation and on a routine basis throughout the monitoring period. No chemical control of vegetation on any portion of the site is allowed without the approval of the City of Newcastle.

Site conditions

The contractor shall immediately notify the landscape designer and/or lead biologist of drainage or soil conditions likely to be detrimental to the growth or survival of plants. Planting operations should not be conducted under the following conditions: freezing weather, when the ground is frozen, excessively wet weather, excessively windy weather, or in excessive heat.

Planting Pits

Planting pits should be circular with vertical sides, and should be 6” deeper and 12” larger in diameter than the root ball of the plant. In compacted soils, the sides of the planting pits should be scarified/broken up. Set plants upright in pits. Burlap, if used, shall be removed from the planting pits. Backfill shall be worked back into holes such that air pockets are removed without compacting the soils.

Water

Plants should be watered midway through backfilling, and again upon completion of backfilling. For spring plantings (if approved), a rim of earth should be mounded around the base of the tree or shrub no closer than the drip line, or no less than 30" in diameter, except on steep slopes or in hollows. Plants should be watered a second time within 24-48 hours after installation. The earthen rim/dam should be leveled prior to the second growing season.

Staking

Most shrubs and trees do not require staking. If the plant can stand upright without staking in a moderate wind, stakes should not be used. If the plant needs support, then strapping or webbing should be used as low as possible on the trunk to loosely brace the tree with two stakes. Do not brace the tree tightly or too high on the trunk. Do not use wire in a rubber hose for strapping as it exerts too much pressure on the bark. As soon as supporting the plant becomes unnecessary, stakes should be removed. All stakes must be removed within two (2) years of installation.

Plant Location

Lath staking, brightly colored flagging, or another form of marking shall be placed on or near each installed plant to assist in locating the plants during maintenance and monitoring activities.

Arrangement and Spacing

The plants shall be arranged with the appropriate numbers, sizes, species, and distribution to achieve the required vegetation coverage. The actual placement of individual plants shall mimic natural, asymmetric vegetation patterns found on similar undisturbed sites in the area.

Inspection(s)

The lead biologist shall be present on site to inspect the plants prior to planting. Minor adjustments to the original design may be required prior to and during construction.

Mulch

A wood chip mulch (containing some green/vegetative material) will be placed around the base of each plant in a 3-foot radius and at a depth of 2 to 4 inches. Mulch shall not be allowed to contact plant stems in order to avoid plant decay and rot.

C. MONITORING

A five-year monitoring plan will begin with the preparation of an as-built report following mitigation installation. This report will outline what occurred on the project site during construction and identify if any changes were made to the approved mitigation plan. Following submittal of the as-built plan, monitoring visits will occur. Monitoring will begin the first year following mitigation installation. Monitoring visits will occur twice yearly (once in the spring, once

in the fall) and will continue for five years.

Monitoring techniques will include general visual observations to assess tree and shrub survivability and coverage. In addition, transects will be established throughout the planting areas to assess plant survivability and quadrats will be used to determine plant coverage. The sizes and locations of the transects and quadrats will be discussed in the first monitoring report.

Monitoring reports will be prepared and submitted to the City of Newcastle in the fall of each monitoring year (i.e. following the second monitoring visit). The reports will summarize the overall conditions of the mitigation areas and discuss whether the performance standards are being met. Photos of the mitigation areas will also be provided. On year 5, the final monitoring report will be prepared and will determine if the mitigation plan has been successful per the established goals, objectives, and performance standards. If the mitigation plan is deemed unsuccessful, contingency actions will be utilized and/or the monitoring period may be extended.

D. CONTINGENCY

If, during any of the monitoring visits, 20% of the plants within any restoration area, or in any particular stratum within a restoration area, are severely stressed, or it appears that 20% may not survive, additional plants will be added to the mitigation areas. If invasive and non-native species exceed 25% aerial coverage within any of the restoration areas at any time, control measures will be initiated. Additional contingency actions may include, but will not be limited to, more aggressive weed control, additional mulching, species substitution, soil amendments, and/or additional irrigation. If necessary, a meeting between the lead project ecologist and City of New Castle personnel will be held to develop new contingency actions.

Per NMC 18.24.130(E), should contingency actions be necessary, implementation of such actions shall constitute a new mitigation plan and will be subject to all mitigation requirements including a monitoring plan and financial guarantee. The five-year monitoring period shall restart upon implementation of contingency actions.

The contingency plan shall follow the project phasing and mitigation sequencing discussed above. It shall remain in place until all planting/restoration areas have been monitored for a period of at least five years and all performance standards have been met.

E. MAINTENANCE

Maintenance will be performed within the restoration areas as necessary. Maintenance actions may include, but are not limited to, replacement of dead vegetation, removal of invasive and non-native vegetation, trash cleanup, and repair of damaged signs. Maintenance needs will be discussed in the annual monitoring reports.

VI. COST ESTIMATE AND FINANCIAL GUARANTEE

The following is a cost estimate for plant materials, labor, monitoring, and maintenance. This does not represent an actual bid (please note: plant prices include labor and installation):

Plants – \$9.50/plant:	\$385,510.00
Estimated cost of monitoring – 5 years @ \$7,000/year:	\$35,000.00
Estimated cost of maintenance – 5 years @ \$5,000/year:	\$25,000.00
Total:	\$445,510.00

Per NMC 18.24.140(B), a financial guarantee must be posted by the applicant since this development proposal is subject to mitigation, maintenance, and monitoring plans. The amount of this guarantee shall be determined by the City of Newcastle.

VII. USE OF THIS REPORT

This Detailed Mitigation Plan is supplied to Avalon Bay Communities, Inc., as a means of determining on-site wetland and stream conditions, and as a means of implementing mitigation actions for a development proposal as required by the City of Newcastle. This report is based largely on readily observable conditions and, to a lesser extent, on readily ascertainable conditions. No attempt has been made to determine hidden or concealed conditions.

The laws applicable to wetlands and streams are subject to varying interpretations and may be changed at any time by the courts or legislative bodies. This report is intended to provide information deemed relevant in the applicant's attempt to comply with the laws now in effect.

This report conforms to the standard of care employed by wetland ecologists. No other representation or warranty is made concerning the work or this report and any implied representation or warranty is disclaimed.

Wetland Resources, Inc.



Jim Rothwell
Senior Ecologist, PWS

VIII. REFERENCES

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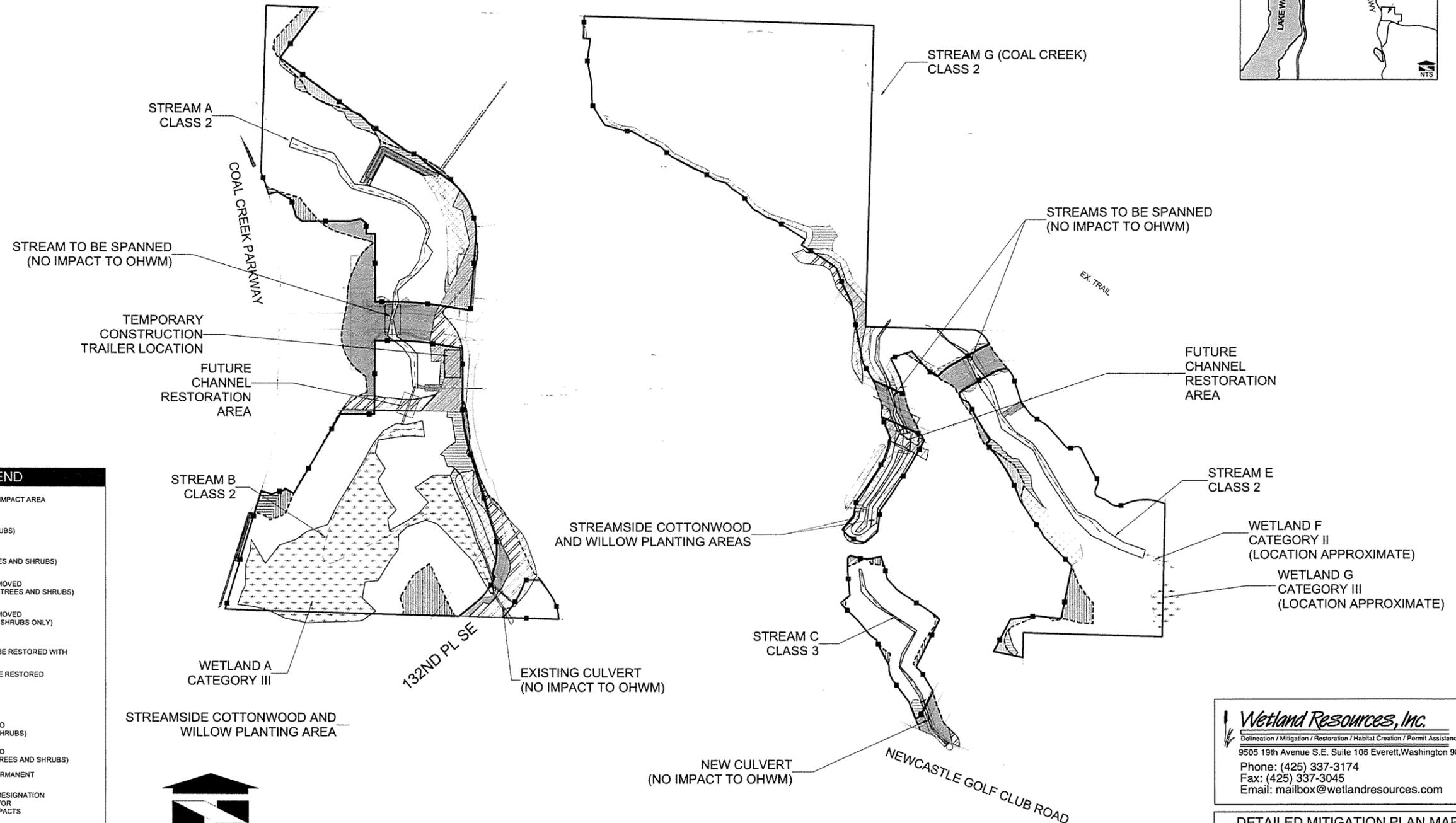
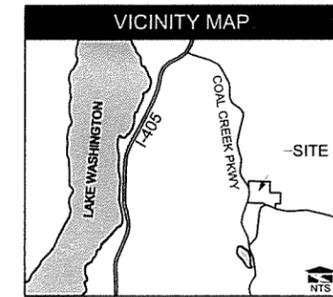
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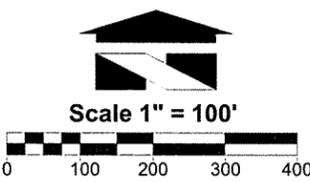
DETAILED MITIGATION PLAN

AVALON NEWCASTLE

PORTION OF SECTION 27, TOWNSHIP 24N, RANGE 05E, W.M.



LEGEND	
[Symbol]	PERMANENT BUFFER IMPACT AREA
[Symbol]	TEMPORARY BUFFER IMPACT AREA (TO BE RESTORED WITH SHRUBS)
[Symbol]	TEMPORARY BUFFER IMPACT AREA (TO BE RESTORED WITH TREES AND SHRUBS)
[Symbol]	EXISTING BRICK (TO BE PARTIALLY REMOVED AND RESTORED WITH TREES AND SHRUBS)
[Symbol]	EXISTING BRICK (TO BE PARTIALLY REMOVED AND RESTORED WITH SHRUBS ONLY)
[Symbol]	EX HARDSCAPE*
[Symbol]	EX HARDSCAPE* (TO BE RESTORED WITH TREES AND SHRUBS)
[Symbol]	EX HARDSCAPE (TO BE RESTORED WITH SHRUBS ONLY)
[Symbol]	ADDITIONAL BUFFER DESIGNATION AREA
[Symbol]	ADDITIONAL BUFFER DESIGNATION AREA (TO BE RESTORED WITH SHRUBS)
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[Symbol]	CITY OF BELLEVUE PERMANENT BUFFER IMPACTS
[Symbol]	ADDITIONAL BUFFER DESIGNATION AREA AS MITIGATION FOR CITY OF BELLEVUE IMPACTS
[Symbol]	WETLAND
[Symbol]	STREAM
[Symbol]	CRITICAL AREA TRACT
[Symbol]	BUFFER
[Symbol]	CRITICAL AREA SIGN



*EX HARDSCAPE INCLUDES CONCRETE, ASPHALT, GRAVEL, ETC.

Wetland Resources, Inc.
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 Fax: (425) 337-3045
 Email: mailbox@wetlandresources.com

DETAILED MITIGATION PLAN MAP
Avalon Newcastle
 Newcastle, Washington

Avalon Bay Communities, Inc. Sheet 1/3
 Attn: Edward Lammass WRI Job # 13131
 600 108th Ave. NE, Suite 840 Drawn by: NW
 Bellevue, WA 98004 Date: February 26, 2015

DETAILED MITIGATION PLAN AVALON NEWCASTLE

PORTION OF SECTION 27, TOWNSHIP 24N, RANGE 05E, W.M.

COB File # 15-106573-LO
Avalon Newcastle
Coal Creek Parkway Road Improvements
Critical Areas Land Use Permit

PROJECT LOCATION AND PROJECT DESCRIPTION

Project Location
Avalon Bay Communities, Inc. (the "Applicant") proposes the redevelopment of a 53.31-acre site located in the City of Newcastle. This site is commonly referred to as the former Mutual Materials facility (the "Project Site"). The project is referred to as the Avalon Newcastle Master Planned Development.

The Project Site is comprised of three separate tax parcels, #2724059006, #2824059009, and #2724059040, located in portions of Sections 27 and 28, Township 24N, Range 05E, W.M. The Project Site address is 6620 Coal Creek Parkway SE, in Newcastle, Washington. The Project Site is located within the Cedar / Sammamish Watershed (WRIA 8).

Adjacent uses include commercial offices and condominiums to the south, parks to the north and east, and public rights-of-way to the west and southeast. Specifically, the adjacent uses are as follows:

- North: City of Bellevue Parks - Coal Creek Park
- East: City of Newcastle - Coal Creek Park
- Southeast: City of Newcastle - Mixed Use (YMCA)
- West: City of Bellevue - Residential Subdivision
- South: City of Newcastle - Mixed Use (commercial/office use); High Density Residential (condos); Limited Open Space

The Project Site fronts two arterial streets: Coal Creek Parkway SE along its westerly property boundary and Newcastle Golf Club Road along a portion of its southeastern property boundary.

Project Description

This project proposes development of the Project Site into an urban, mixed-use community as planned for by the City of Newcastle in its Comprehensive Plan and, more specifically, as envisioned in the City's 2000 Community Business Center/Lake Boren Corridor Master Plan and 2008 Community Business Center Design Guidelines (the "CBC Plan") for a master-planned, mixed-use community. The City's CBC Plan identifies the area containing the Project Site as the "Coal Creek Sector" and, as such, provides distinct design criteria and requirements.

Primary access to the Project Site is currently provided from Coal Creek Parkway SE, which will continue to serve as the primary entrance to the developed project. The location of the intersection, however, will be relocated to the north to align with NE 66th Street to the west as planned by the City in its 2003 Comprehensive Plan. This will require a new traffic signal at this intersection. Two other access points will be provided; one at Newcastle Golf Club Road and one from 132nd Avenue SE, which currently dead-ends at the site's southern parcel boundary.

The proposed road network to serve the Project Site will be provided per the City of Newcastle's CBC Plan as stated:

RECOMMENDED CIRCULATION ACTIONS

C-4: Develop "Newcastle Connector" between Coal Creek Parkway and Coal Creek Newcastle Road. This road will provide the primary regional access to development in the Coal Creek Sector and the Newcastle Golf Course to the east while reducing traffic congestion in the Downtown Sector. Provide traffic signals at the Coal Creek Parkway and 132nd Avenue SE intersections and realign Newcastle Coal Creek Road at its intersection with Newcastle Connector.

C-5: Extend 132nd Avenue SE northward to Newcastle Connector. This is an obvious connection to the Coal Creek Sector to improve circulation and reduce traffic on Coal Creek Parkway.

C-6: Develop a modified grid of neighborhood streets in the Coal Creek Sector. During the master planning process for the Mutual Materials site, establish a grid circulation pattern that provides convenient connections between uses within the area.

In addition to providing the required road network, the Applicant proposes phased development of the site by planning block areas (Blocks 1 through 10) for the purposes of project description. The site plan depicts approximately 900 residential multi-family units and approximately 49,000 square feet of commercial/retail space with public and private open spaces, multi-modal trails, and preserved critical areas.

Wetland Resources, Inc. (WRI) has prepared this detailed mitigation plan to address critical area impacts associated with the proposed redevelopment and to comply with the critical areas regulations outlined in chapter 18.24 of the Newcastle Municipal Code (NMC). Information on existing site conditions and methodologies used for wetland and stream designations can be found in the report Aquatic Resources Impacts Analysis and Conceptual Mitigation Plan (Wetland Resources, Inc., Oct. 2013).

PROPOSED ACTIVITIES AND IMPACTS ANALYSIS

Proposed Site Development and Mitigation Sequencing

The proposed Avalon Newcastle project will not involve any in-water work, wetland fill, or impacts to critical areas themselves. However, development will result in critical area buffer impacts due to on-site public road construction, utility extensions, paved trails, pedestrian connections, and parking lot construction, as well as required frontage improvements to adjacent public rights-of-way. Per Section 18.24.125 of the NMC, the following sequential measures have been applied to the project in order to avoid and/or reduce impacts to critical areas and critical area buffers:

A. Avoiding the impact or hazard by not taking a certain action.

The Avalon Newcastle Site Plan Development has been designed to avoid impacts to critical areas and to minimize impacts to buffers to the maximum extent practicable. The impact actions (i.e. road and parking construction) are necessary for the successful development of the site. As stated above, the proposed road network to serve the Project Site is required by the City of Newcastle in its Comprehensive Plan and CBC Plan, specifically as a part of the Coal Creek Sector mixed-use development. Without these features, the City's goals for development would not be met.

B. Minimizing the impact or hazard by:
1. Limiting the degree or magnitude of the action with appropriate technology; or
2. Taking affirmative steps, such as project redesign, relocation, or timing.

Best Available Science (BAS) was utilized during the site investigations, delineations/ordinary high water mark (OHWM) determinations, and mitigation plan development. Best Management Practices (BMPs) will be utilized during construction to avoid/minimize additional impacts to critical areas and buffers.

This proposal has been designed to avoid impacts to critical areas (streams and wetlands) and to minimize impacts to critical area buffers. As stated above, the internal public road layout is required by the City of Newcastle, but has been designed to avoid critical area and buffer impacts to the maximum extent practicable.

The locations of the parking areas west of Stream A are necessary to provide access to the proposed Newcastle Connector as well as Coal Creek Parkway. The driveways/entrances for these parking areas must be as far back (east) of the Newcastle Connector/Coal Creek Parkway intersection as possible so that traffic requirements for turning movements and queuing can be met.

C. Rectifying the impact to critical areas by repairing, rehabilitating, or restoring the affected critical area or its buffer.

The wetland and stream buffer impacts associated with public roadways and parking areas will be offset by compensatory mitigation in the form of stream and wetland buffer restoration and designation of new buffer area.

D. Minimizing or eliminating the hazard by restoring or stabilizing the hazard area through engineered or other methods.

The public road crossings of Streams A, B, and C, and the access road crossing Stream E will utilize bottomless culverts in order to avoid aquatic impacts and placement of fill. The footings of these structures will be placed outside of the OHWM for each stream. Compensatory mitigation will be provided for impacts to the associated stream buffers resulting from roadway construction.

E. Reducing or eliminating the impact or hazard over time by preservation or maintenance operations during the life of the development project or alteration.

Per NMC 18.24.180, all wetlands, streams, steep slope hazard areas, and their associated buffers will be designated as Critical Areas and will be placed in critical area tracts. In addition, permanent critical area markers/signs will be installed throughout the Avalon Newcastle development per NMC 18.24.160.

F. Compensating for the adverse impact by enhancing critical areas and their buffers or creating substitute critical areas and their buffers.

Mitigation actions have been developed for the proposed development. These actions will compensate for unavoidable impacts to critical area buffers.

G. Monitoring the impact, hazard or success of required mitigation and taking remedial action.

Per NMC 18.24.130, a monitoring plan will be developed as part of the mitigation plan. Contingency plans will also be developed and will be implemented should the mitigation plans fail and/or if performance standards are not being met.

Brick Removal, Restoration, and Buffer Modification

The current physical condition of the Project Site is highly disturbed from over 100 years of coal mining operations and development and operation of the Mutual Materials facility. The Project Site contains areas of broken concrete slabs, pavement, abandoned buildings or building foundations, and openly graded areas of earth and brick. Much of the Project Site's topography is the result of previous grading activities. These activities resulted in brick piles and fill slopes containing brick rubble stemming from the expansion of the site's operating footprint of the Mutual Materials facility.

Portions of the on-site critical area buffers are considered degraded due to the presence of brick piles and fill material. These degraded buffer areas provide little in the way of critical area protection or functions and values. As part of the overall Avalon Newcastle project, these areas will be restored.

Brick and fill material will be removed from portions of the buffers of Streams A, B, C, E and Wetland A, as well as from the top of the steep slopes located in the northeastern corner of the project site. These brick removal areas, although degraded, do contain a fairly dense cover of vegetation, primarily young red alder (*Alnus rubra*) and big leaf maple (*Acer macrophyllum*), Himalayan blackberry (*Rubus armeniacus*), and mature black cottonwood (*Populus balsamifera*). Trees and shrubs have become established throughout the degraded buffers since the Mutual Materials facility ceased operations. Following the removal of this material, the northeastern steep slope area and the buffer of Stream C - both of which meet the criteria for steep slope hazard areas per NMC 18.06.628 - will be re-graded. Re-grading activities will result in slopes that are more gradual, gentle, and stable and will reduce the need for a steep slope buffer in those areas.

Brick and fill removal activities will take place prior to the development of the project site. Once development is complete, the brick removal/buffer modification areas will be restored with native vegetation. Specific plant species and planting specifications are addressed below. Overall, approximately 42,310 square feet (SF) of buffer area will be restored via brick removal and installation of native vegetation.

Impacts from site development

Section 18.24.320 of the NMC lists alterations that are permitted within wetlands and their buffers. These alterations are allowable only if the City determines that there are no practicable alternative locations with less adverse impacts. Mitigation is required for all wetland and buffer impacts. Item G in NMC 18.24.320 addresses "wetland and buffer road and underground utility crossings." In addition, NMC Section 18.24.360 lists permitted alterations within streams and stream buffers, one of which is "stream and buffer crossings" (item E). Wetland, stream, and buffer regulations are allowable provided they comply with the listed requirements in the NMC.

The proposed public road layout for the Avalon Newcastle project was developed in conjunction with the City of Newcastle. The proposed roads have been developed to tie into existing public roads to the south of the development (132nd Place SE and Newcastle Golf Club Road) and to provide access to Coal Creek Parkway. For traffic safety and operational factors, the site entrance at Coal Creek Parkway needs to be aligned with the existing SE 66th Street access point on the west side of the Parkway. Since the road locations cannot be altered or moved, the stream and wetland crossings are unavoidable.

Roadway, stream crossing, and parking area development will permanently impact 36,298 SF of the Stream A/Stream B/Wetland A buffer, 7,620 SF of Stream C buffer, and 8,222 SF of Stream E buffer. All of the buffer impact areas are currently comprised of forested and scrub-shrub vegetation and contain several species. These include, but are not limited to, red alder, big-leaf maple, Douglas fir (*Pseudotsuga menziesii*), black cottonwood, western red cedar (*Thuja plicata*), Indian plum (*Oemleria cerasiformis*), salmonberry (*Rubus spectabilis*), red elderberry (*Sambucus racemosa*), vine maple (*Acer circinatum*), snowberry (*Symphoricarpos albus*), beaked hazelnut (*Corylus cornuta*), Himalayan blackberry, and sword fern (*Polystichum munitum*), among others. The majority of the buffer impact areas are also located within steep ravines/stream corridors. The buffer impact areas currently provide wildlife habitat, stream shading, and water quality improvement and hydrologic functions. While these functions will be lost as a result of the project impacts, they will be replaced via mitigation/buffer restoration activities.

Impacts from site development (Cont)

The proposed stream crossings over Stream A, Stream C, and Stream E will not impact wetland hydrology, streambeds, or stream banks and will comply with the requirements outlined in NMC 18.24.360(E). Since all of the streams being crossed are either class 2 or class 3, bottomless culverts will be used to span the stream corridors. This will allow for unimpeded stream flow and maintenance of wetland hydrology. The culverts will be placed outside of each stream's OHWM so that in-water work and placement of fill is avoided and to allow for continued movement of aquatic organisms. Construction of the road crossings will take place during the summer low-flow periods when fish use is at its lowest. Vegetation removal within the road crossing construction areas will be limited to the minimum amount necessary to accomplish the task. The crossings have been planned for and will be located where they will have the least amount of adverse impacts on the streams, wetlands, and buffers while still serving as functional roadways. Permanent indirect impacts from the stream crossings are not expected to occur. Details on the proposed stream crossings and culverts can be found in the project engineering plans/documentation prepared by Goldsmith Land Development Services.

Two bio-swales are proposed for construction: one of the east side of Stream A and the other on the east side of Stream B/Wetland A. The bio-swales will be 2-3 feet deep, two feet wide at the bottom, and will have 3:1 side slopes. Inlet structures to the swales are located south of the Newcastle Connector Road and flows sheet to the swale north of the Newcastle Connector. All swale flows will outfall to a piped conveyance that leads to the stormwater detention vault adjacent to Stream A. The bio-swales represent 2,652 SF of permanent buffer impact, which will be mitigated for via buffer width averaging and buffer restoration. Per NMC 18.24.360(C), surface water conveyance within stream buffers is allowable if the discharge does not increase the rate of flow above predevelopment rates, decrease water quality, or decrease the quality of salmonid spawning and rearing areas.

Temporary Impacts From Stormwater Management

Approximately 4,457 SF of temporary impacts to the Stream A buffer will result from the installation of a stormwater detention vault. The vault impact area is comprised of existing hardscape/asphalt as well as trees and shrubs. Dominant species include young red alder and big leaf maple, mature black cottonwood trees, and dense Himalayan blackberry. Following the installation of the vault and re-grading, the temporary impact area will be replanted with native shrubs. In order to avoid damage to the vaults from roots, trees will not be planted within the vault impact area.

Per NMC 18.24.320 and 18.24.360, the installation of stormwater vaults within wetland and stream buffers is not an allowable activity unless the project applicant requests a modification of the development agreement as outlined in NMC 18.45.030(C). A modification to the City's stream, wetland, and buffer regulations is only permitted when the applicant "can demonstrate to the satisfaction of the city that the modification will achieve greater hydrological, water quality, or aquatic area habitat functions" (NMC 18.45.030(C)(7)). As part of the Avalon Newcastle Master Planned Development, a modification to the development agreement will be requested to allow for the installation of the stormwater vaults.

The vault will be installed at the northeast corner of the new project site entrance. This area is primarily comprised of existing hardscape and brick rubble material, but also contains trees and a mixed native/invasive shrub layer. The brick rubble fill material will be removed from this area, followed by re-grading, installation of the vault, and restoration of the area with native shrubs. Since the majority of the vault area is dominated by brick rubble/hardscape and a dense layer of Himalayan blackberry, the proposed restoration activities are expected to achieve greater habitat functions (compared to existing conditions), thereby meeting the modification requirements of 18.45.030(C)(7). In addition to the restoration activities, approximately 1,900 SF of additional/new buffer will be designated near the southeast corner of the vault.

Temporary impacts within the buffers of Stream A, Stream C, and Stream E will result from the construction of stormwater outfall pipes and dispersion pads. The stormwater outfall pipes will extend from the detention vaults to the dispersion pads located in the buffers. The pipes will temporarily impact 3,484 SF of the Stream A buffer, 33 SF of the Stream B/Wetland A buffer, 76 SF of the Stream C buffer, and 552 SF of the Stream E buffer. These temporary impact areas will be restored with native shrubs and herbaceous vegetation (trees will not be planted so as to avoid impacts to the pipes).

The pipe outfalls and dispersion pads will be located outside of the stream OHWM's. The dispersion pads will impact 244 SF of the Stream A buffer, 21 SF of the Stream B/Wetland A buffer, 42 SF of the Stream C buffer, and 128 SF of the Stream E buffer. Per NMC 18.24.360(C), surface water conveyance within stream buffers is allowable if the discharge does not increase the rate of flow above predevelopment rates, decrease water quality, or decrease the quality of salmonid spawning and rearing areas.

Temporary Grading Impacts

Grading and earth moving activities will result in temporary buffer impacts throughout the project site. Approximately 12,912 SF of Stream A/Stream B/Wetland A buffer, 4,579 SF of Stream C buffer, and 4,809 SF of Stream E buffer will temporarily be impacted by these actions. These areas will be restored with native vegetation.

PROPOSED MITIGATION ACTIONS

Mitigation Requirements

This Detailed Mitigation Plan has been prepared to address proposed development activities and anticipated impacts to critical area buffers on the Project Site. This Plan is intended to be sufficient for project approval; it demonstrates that the proposed project complies with the City's critical area regulations. Sections 18.24.325(B)(1) and 18.24.370(C)(1)(a)(i) of the NMC state that mitigation for wetland buffer and stream buffer impacts must be provided at a 1:1 ratio (mitigation area to impact area).

The Avalon Newcastle Site Plan Development will permanently impact approximately 52,140 SF of stream and wetland buffer and temporarily impact approximately 27,749 SF of buffer. These impacts are the result of roadway crossings, parking areas, detention vaults, stormwater outfall pipes and dispersion pads, and general grading activities. As mitigation for these impacts, approximately 63,391 SF of buffer will be restored (42,310 SF from brick rubble removal and restoration and 21,081 SF from restoration of existing hardscape areas). In addition, temporarily impacted buffer areas will be restored (27,749 SF total). New buffer area totaling 31,468 SF will be also be dedicated (10,532 SF of this new buffer area will be temporarily impacted during construction, but will be restored). Overall, the ratio of mitigation areas to impact areas will be slightly over 1:1 (not including temporary impact/restoration areas).

The 31,468 SF of new buffer that will be designated constitutes buffer width averaging actions per NMC 18.24.350(C). Buffer width averaging is allowable if it will increase stream or buffer functions, will provide additional natural resource protection, and will not adversely affect salmonid habitat. Furthermore, the total buffer area contained in each stream must not decrease because of buffer width averaging. The proposed buffer addition areas within each of the on-site stream buffers are similar to the buffer areas being averaged/reduced. There are no significant differences between the buffer addition and buffer reduction areas. Both areas are comprised of fairly dense forested vegetation that provides wildlife habitat, water quality improvement, and some stream shading. Along with buffer restoration, buffer width averaging is expected to improve stream and wetland buffer functions. Salmonid habitat will not be significantly impacted by averaging activities; the additional buffer and remaining buffer will maintain stream functions and existing salmonid habitat due to the forested nature of both areas. Finally, the overall buffer area contained in each on-site stream corridor will not be reduced via buffer width averaging.

Proposed Mitigation

Approximately 48,830 SF of stream and wetland buffer will be restored with native vegetation to compensate for project related impacts (including temporary impact/mitigation areas). Restoration areas include 32,354 SF of the Stream A/Stream B/Wetland B buffer, 10,987 SF of the Stream C buffer and top of steep slopes (NE corner of site), and 5,489 SF of the Stream E buffer. These quantities include temporary impact and mitigation areas (27,749 SF total). The brick rubble removal areas will also be restored, which total 42,310 SF. In addition, approximately 31,468 SF of new buffer will be designated adjacent to the on-site streams and wetland (10,532 SF of which will be temporarily impacted during construction and restored). New buffer areas include 20,648 SF adjacent to the Stream A/Stream B/Wetland B buffer, 2,328 SF adjacent to Stream C, and 8,492 SF adjacent to Stream E. The new buffer area located near the southeast corner of the stormwater vault/the northeast side of the new site entrance will also be restored with native vegetation (approx. 1,900 SF, included in restoration quantities, above). Mitigation areas are illustrated on the Detailed Mitigation Plan map that accompanies this report. Table 2, below, lists the impact and mitigation quantities for the on-site aquatic resources.

Table 2: Impact and Mitigation Area Quantities and Descriptions*

Aquatic Resource	Impact Type and Size	Proposed Mitigation Action and Quantity
Stream A/Stream B/Wetland A	Stream crossing, buffer reduction, and bio-swale: 28,538 SF -Permanent buffer impact	Buffer restoration: 12,760 SF Restoration of temporary impacts: 16,385 SF
	Detention vault (4,457 SF), stormwater pipe (3,519 SF), and dispersion pads (265 SF) -Temporary buffer impacts	Additional buffer: 20,648 SF (7,051 SF to be temp. impacted and restored)
Stream C	Grading impacts: 12,912 SF -Temporary buffer impacts	Buffer Restoration: 3,312 SF Restoration of temporary impacts: 9,578 SF
	Stream crossing and buffer reduction: 7,620 SF -Permanent buffer impact	Additional buffer: 2,328 SF (82 SF to be temp. impacted and restored)
Stream E	Stormwater pipes (76 SF) and dispersion pads (42 SF) -Temporary buffer impacts	Additional buffer: 4,579 SF -Temporary buffer impacts
	Grading impacts: 4,579 SF -Temporary buffer impacts	Additional buffer: 8,492 SF (3,399 SF to be temp. impacted and restored) Restoration of temporary impacts: 680 SF

*For simplicity, the brick rubble fill removal/restoration areas have not been listed in Table 2.

In addition to the above mitigation, approximately 5,381 SF of the Stream B/Wetland A buffer and 4,345 SF of the Stream C buffer will be planted with pacific willow and black cottonwood trees. These are relatively fast-growing species that will become established faster than the other proposed species and provide shade for the adjacent streams. These areas are illustrated on the Detailed Mitigation Plan map.

C. Planting Plan
The following tables list the plant species and quantities that will be installed throughout the restoration areas. Planting specifications for the bio-swales have been prepared by the project landscape architect and are not included in the following tables or on the Detailed Mitigation Plan map.

Table 3: Tree and Shrub Planting Areas (77,894 SF)*

SPECIES	SCIENTIFIC NAME	SIZE	SPACING	QUANTITY
Douglas fir	<i>Pseudotsuga menziesii</i>	1 gallon	10' OC	390
Big-leaf maple	<i>Acer macrophyllum</i>	1 gallon	10' OC	390
Red Elderberry	<i>Sambucus racemosa</i>	1 gallon	7' OC	818
Vine maple	<i>Acer circinatum</i>	1 gallon	7' OC	818
Thornhoney	<i>Rubus parviflorus</i>	1 gallon	7' OC	818
Beaked hazelnut	<i>Corylus cornuta</i>	1 gallon	7' OC	818
Snowberry	<i>Symphoricarpos albus</i>	1 gallon	7' OC	818
Sword fern	<i>Polystichum munitum</i>	1 gallon	7' OC	11,666
Woodland strawberry	<i>Fragaria vesca</i>	4" Pot	1.5' OC	15,146

*See site plan for willow and cottonwood planting areas adjacent to Stream B/Wetland A and Stream C. See Table 6.

Table 4: Shrub Only Planting Areas (13,075 SF)

SPECIES	SCIENTIFIC NAME	SIZE	SPACING	QUANTITY
Red Elderberry	<i>Sambucus racemosa</i>	1 gallon	7' OC	163
Vine maple	<i>Acer circinatum</i>	1 gallon	7' OC	163
Thornhoney	<i>Rubus parviflorus</i>	1 gallon	7' OC	163
Beaked hazelnut	<i>Corylus cornuta</i>	1 gallon	7' OC	163
Snowberry	<i>Symphoricarpos albus</i>	1 gallon	7' OC	163
Sword fern	<i>Polystichum munitum</i>	1 gallon	7' OC	2,432
Woodland strawberry	<i>Fragaria vesca</i>	4" Pot	1.5' OC	2,542

Table 5: Dispersion Pad Planting Areas (435 SF)

SPECIES	SCIENTIFIC NAME	SIZE	SPACING	QUANTITY
Pacific willow*	<i>Salix lasiolepis</i>	Live stake	7' OC	49

*Pacific willow stake size for stormwater dispersion pads only: 433 SV; 57 stakes for Stream A pad; 1 stake for Stream B pad; 3 stakes for Stream C pad; 11 stakes for Stream E pad.

Table 6: Streamside Cottonwood and Willow Planting Areas (9,726 SF)*

SPECIES	SCIENTIFIC NAME	SIZE	SPACING	QUANTITY
Black cottonwood*	<i>Populus trichocarpa</i>	1 gallon	10' OC	20
Pacific willow*	<i>Salix lasiolepis</i>	1 gallon	10' OC	30

*Cottonwood and willow trees shall be planted adjacent to the southeast side of Stream B/Wetland A, 5,381 SF and on both sides of a portion of Stream C (1,345 SF each). Each area shall receive 25 of each species.

Throughout all of the planting areas, trees will be planted at 10 feet on-center (OC), shrubs at 4 feet OC, ferns at 2 feet OC, groundcover (woodland strawberry) at 1.5 feet OC, and live stakes at 3 feet OC. Ferns shall be planted in clusters of 3-5 in close proximity to trees and shrubs so that they will receive shade from the larger plants over time.

Plant installation should take place in late fall or early spring (prior to the start of the growing season). Plants shall be obtained from a reputable nursery familiar with native vegetation and that is capable of providing local genetic stock. Limited species substitution may be allowed; however, the City of Newcastle and/or the lead biologist must approve the substitution.

Plants shall be arranged with the appropriate numbers, sizes, species, and distribution to achieve the required vegetation coverage. The actual placement of individual plants shall mimic natural, asymmetric vegetation patterns found on similar undisturbed sites in the area.

Lath staking, brightly colored flagging, or another form of marking shall be placed on or near each installed plant to assist in locating the plants during maintenance and monitoring activities.

Irrigation shall be provided during the first two years of the monitoring period and will occur during the summer/dry season (e.g. June through September), any extensive dry periods, and/or as determined by the lead ecologist. Special attention should be paid to sword ferns, which require ample soil moisture to survive transplanting, particularly when shade is not available. Water shall be applied to the new plants at a rate of one (1) inch per week. The irrigation system shall be installed by an experienced landscaper.

The lead biologist shall be on-site to inspect plant materials for proper size and quality, inspect the layout and planting locations, and to complete a final walk-through before accepting the buffer restoration installation.

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DETAILED MITIGATION PLAN MAP Avalon Newcastle Newcastle, Washington

DETAILED MITIGATION PLAN AVALON NEWCASTLE

PORTION OF SECTION 27, TOWNSHIP 24N, RANGE 05E, W.M.

COB File # 15-106573-LO
Avalon Newcastle
Coal Creek Parkway Road Improvements
Critical Areas Land Use Permit

Excavation and Soil Amendments

All of the buffer restoration areas are comprised of existing hardscape or brick rubble/fill. Prior to plant installation, a portion of the hardscape/fill materials will be removed from the restoration areas. Since the depth of fill material (throughout the restoration areas is unknown, excavation depths will vary depending on location. At the very least, however, the restoration areas will be excavated down to the finished subgrade. If this reveals native soils, then shallow planting soil will be applied, followed by plant installation and mulch application (see below). Testing of existing restoration area soils for organic content and nutrients may be performed prior to planting to determine if any amendments are required. Conversely, if the initial grading actions reveal additional fill material instead of native soils, then 12 inches of additional brick/fill material will be removed and replaced with topsoil and/or stripped soil from the project site. Following this, restoration plantings will be installed and mulch will be applied. It is assumed that new topsoil (where necessary) will be applied at depths ranging from 6 to 24 inches. Where new topsoil is not applied over an area, individual planting pits should be amended with a topsoil mix. Excavation depths, topsoil necessity, and topsoil amounts will be determined in the field during the excavation process.

In addition to topsoil, a wood chip mulch (containing some green/vegetative material) will be placed around the base of each plant in a 3 foot radius and at a depth of 2"-4". Mulch shall not be allowed to contact plant stems in order to avoid plant decay and rot.

Construction Office Trailer

A construction office trailer measuring approximately 36' by 60' will be placed slightly north of the existing site entrance and will remain in place for approximately two years. The proposed trailer area is currently comprised of hardscape/asphalt, but is also located within a proposed buffer restoration area (see the Detailed Mitigation Plan map). Restoration of this specific area (2,160 SF) will be delayed until the construction trailer is no longer necessary and has been removed from the site or relocated. This is not expected to impact the overall mitigation plan or the buffer functions.

Removal of Existing Culverts

Existing culverts are located within Streams A and C. These culverts and stream crossing areas will not be utilized as part of the proposed Newcastle Connector Road crossings. The project State Environmental Policy Act (SEPA) determination concluded from the evaluation of impacts of the new proposed stream crossings, together with mitigation proposed in the form of added stream buffers and enhanced stream buffers, that removal of the existing culverts was not warranted as a project condition or mitigation. A review of the SEPA determination was made by the Washington Department of Fish and Wildlife (WDFW) and a site visit was held on September 10, 2014 to review the proposal and crossing locations. The WDFW official and representatives from the Muckleshoot Tribe expressed interest in having two of these culverts removed during site development since they would not be utilized for the project.

It was discussed that the request for removal of the culverts could be made as a condition of the hydraulic project approval (HPA). It was also discussed that the existence of the culverts is not a result of the project and is not a condition of SEPA review. The result of these discussions was that Avalon-Newcastle (the property owner) is not opposed to removing the two existing culverts for the long-term benefit of the stream; however, such removal will require a significantly greater level of design and permitting (through the U.S. Army Corps of Engineers or others), including stream restoration and possibly in-stream flow control for wetlands. This would require a significantly longer timeframe for permitting than would be required for HPA and City of Newcastle approval of the proposed crossings.

The approach discussed for accommodating the removal of these culverts was to submit for an HPA for the new proposed crossings, together with a commitment to follow-up with separate applications for culvert removal, with the goal of accomplishing all permits, removal, and stream restoration within a period of three years following issuance of the HPA. The work required for these new crossings would occur during the summer of 2015 while permits for culvert removal are prepared and under review. Then, the removal of the culverts would occur on or before the summer of 2018 (pending permit issuance), which is still within the duration of site development and construction.

If removal of the existing culverts is required, there will be direct impacts to Streams A and C. Mitigation will be provided and will include, among other things, stream bank re-grading to 3:1 slopes, installation of large woody debris and boulders, streambed enhancement, installation of an in-stream flow control structure to maintain Wetland A hydrology, and revegetation of the stream buffers.

Post-Mitigation Functional Assessment

Although some stream and wetland buffer functions will be lost during site development, this proposed mitigation plan aims to replace them. As previously stated, the buffer impact areas currently provide some wildlife habitat, stream shading, and water quality and hydrologic functions. The proposed mitigation actions will replace these functions, however, through the removal of hardscape areas, the installation of native trees, shrubs, and herbaceous vegetation, and the designation of new buffer area. While permanent and temporary project impacts will total approximately 79,889 SF, mitigation actions will improve approximately 48,830 SF of stream and wetland buffer and designate approximately 31,468 SF of new stream and wetland buffer (10,532 SF of which will be temporarily impacted and restored). This represents slightly more than a 1:1 mitigation to impact ratio. Although there will be a temporal loss in buffer functions as the installed native vegetation matures, lost functions are expected to be replaced as the planting areas become established. Furthermore, the restoration areas, new buffer areas, and all of the on-site critical areas will be permanently protected through the establishment of Critical Area Tracts.

Project Phasing and Mitigation Sequencing

The phasing of the Avalon Newcastle project is described as occurring in three (3) parts: the initial site work, a Phase 1 development area (including commencing construction of the Newcastle Connector and the stormwater vaults), and a Phase 2 development area. Phase 1 development consists of Lots 1, 3 and Lot 5. Phase 2 consists of Lot 4, and Lots 6-10. This is a generalization of the development in major phasing areas. Actual development may occur in smaller phases or even lot-by-lot Development. A more detailed matrix of development phasing is included in the Development Agreement, to be approved by the City of Newcastle.

The initial site work activity is intended to occur as a first level of activity and continuous effort over one to two years, and will include: site preparation and brick fill reclamation, plus clearing and mass grading of the entire site to approximate future block development super pad grades, and road subgrades, with temporary drainage control and erosion protection.

The Engineering Review Permit (ERP), overall clearing and grading plans for the initial site work activity across the entire property, will include and define the locations and extent of critical areas impacts and provide the overall mitigation plans and planting plans to be implemented, consistent with the overall impacts and mitigation concept as proposed in the preliminary Binding Site Plan application.

It is assumed at the time of ERP for these clearing and grading plans the applicant will be required to post a site restoration bond, and a performance bond for the critical areas mitigation as defined on the plans.

Once this performance bond is in place, the mass grade work will commence across the entire site, including work in the identified zones of critical areas impacts.

It is intended that the planting of mitigation areas identified for restoration will commence immediately following establishment of site grades per completion of the overall mass grading effort. This will be the case for all critical area impact zones, with the exception of the stormwater vault location. The mitigation planting in the area of temporary impacts associated with the stormwater vault will occur as part of the construction within the Phase 1 development. The mitigation planting in those locations will occur immediately following the installation of the vault.

Potential Impacts and Mitigation - Future Permitting

As part of the Avalon Newcastle Master Planned Development, a Hydraulic Project Approval (HPA) from the Washington Department of Fish and Wildlife (WDFW) will be required. Hydraulic Project Approval permits are typically required for construction projects or activities occurring in or near state waters. The proposed crossings over Streams A, C, and E fall under the HPA program.

GOALS, MONITORING, MAINTENANCE, AND CONTINGENCY

Goals, Objectives, and Performance Standards

Project goals identify what the mitigation plan is attempting to accomplish. Objectives identify specific actions that are taken or components that are initiated in order to meet the project goals. Finally, performance standards provide measurable criteria for determining if the goals and objectives are being achieved (WA State Department of Ecology et al., 2006).

The goals of this mitigation plan include the following:

- Restoration of approximately 52,140 SF of stream and wetland buffer impacted by project-related impacts.
- Restoration of approximately 42,130 SF of stream and wetland buffer impacted by historical brick rubble fill material.
- Restoration of approximately 27,749 SF of stream and wetland buffer temporarily impacted by project actions.
- Increase the overall area (square footage) of stream and wetland buffer on the project site.

These goals will be met by performing the following actions (i.e. objectives):

- Install 780 native trees, 4,905 native shrubs, 17,058 ferns, and 17,688 woodland strawberry throughout the buffer restoration areas.
- Install 50 black cottonwood trees and 50 pacific willow trees adjacent to Wetland A/Stream B and Stream C (see Table 6, above, for specific quantities for each area).
- Install 49 Pacific willow stakes throughout the three stormwater outfall dispersion pads (see Table 5, above, for specific quantities for each dispersion pad).
- Designate approximately 31,468 SF of new stream and wetland buffer area throughout the project site.
- Incorporate the new buffer areas into the recorded Critical Area Tracts and provide permanent signage for all critical area tracts per NMC 18.24.160(B).

The performance standards for all of the planted areas include the following:

- Survival of planted trees, shrubs, and herbaceous/groundcover vegetation throughout all of the restoration areas will be 100% following the first year of monitoring; 80% following the third year; and 70% by the end of the fifth year. All dead plants shall be replaced following the first year of monitoring.

- Tree and shrub aerial coverage throughout the restoration areas will be 20% at the end of the third monitoring year and 40% at the end of the fifth monitoring year. (Note: desirable native volunteer species, such as red alder and black cottonwood, may contribute up to 20% coverage. If volunteer species exceed 20% cover, control measures shall be initiated in an effort to maintain species diversity).
- Herbaceous species aerial coverage throughout the restoration areas will be 25% at the end of the third year of monitoring and 50% at the end of the fifth year.

- Invasive and non-native species shall not provide more than 25% aerial coverage within any of the restoration areas at any time.
- All critical areas and critical area tracts shall be illustrated on the official project site plans.

Project notes

Pre-Construction Meeting

Monitoring by the lead biologist for all portions of this project is strongly recommended. An on-site, pre-construction meeting should be held between the lead biologist, project applicant, equipment operators and construction crew, and City of Newcastle personnel. The objective of such a meeting is to confirm the location of the mitigation areas and the mitigation actions.

Inspections

The lead biologist should periodically inspect the mitigation installation process. Minor adjustments to the original design may be necessary prior to and during construction due to unusual or unknown site conditions. A City of Newcastle representative and/or the lead biologist will make these decisions during construction.

Planting Notes

Plant installation should take place in late fall or early spring (prior to the start of the growing season), if possible. Plants shall be obtained from a reputable nursery familiar with native vegetation and that is capable of providing local genetic stock. Limited species substitution may be allowed; however, the City of Newcastle and/or the lead biologist must approve the substitution.

Handling

Plants shall be handled so as to avoid damage, including breaking, bruising, root damage, sunburn, drying, freezing or other injury. Plants must be covered during transport. Plants shall not be bound with wire or rope in a manner that could damage branches. Protect plant roots with shade and wet soil in the period between delivery and installation. Do not lift container stock by trunks, stems, or tops. Do not remove from containers until ready to plant. Water all plants as necessary to keep moisture levels appropriate to the species requirements. Plants shall not be allowed to dry out. All plants shall be watered thoroughly immediately upon installation. Soak all containerized plants thoroughly prior to installation.

Project notes (Cont.)

Storage

Plants stored for longer than one month prior to planting shall be planted in nursery rows and treated in a manner suitable to specific species requirements. Plants must be re-inspected by the lead biologist and/or landscaper prior to installation.

Damaged plants

Damaged, dried out, or otherwise mishandled plants will be rejected at installation inspection. All rejected plants shall be immediately removed from the site.

Plant Names

Plant names shall comply with those generally accepted in the native plant nursery trade. Any question regarding plant species or variety shall be referred to the landscape designer, lead biologist, or City of Newcastle personnel. All plant materials shall be true to species and variety and legibly tagged.

Quality and condition

Plants shall be normal in pattern of growth, healthy, well branched, and vigorous, with well-developed root systems, and free of pests and diseases. Damaged, diseased, pest-infested, scraped, bruised, dried out, burned, broken, or defective plants will be rejected.

Roots

All plants shall be containerized unless explicitly authorized by the landscape designer and/or lead biologist. Root bound plants or B&B plants with damaged, cracked, or loose rootballs (major damage) will be rejected. Immediately before installation, plants with minor root damage (e.g. broken and/or twisted roots) must be root-pruned. Matted or circling roots of containerized plantings must be pruned or straightened and the sides of the root ball must be roughened.

Sizes

Plant sizes shall be the size indicated in Tables 3 through 6, above. Larger stock may be acceptable provided that it has not been cut back to the size specified, and that the root ball is proportionate to the size of the plant. Smaller stock may be acceptable, and preferable under some circumstances, based on site-specific conditions. Measurements, caliper, branching, and balling and burlapping shall conform to industry standards.

Form

Evergreen trees shall have single trunks and symmetrical, well-developed form. Deciduous trees shall be single trunked unless specified as multi-stem in the plant schedule. Shrubs shall have multiple stems and be well branched.

Weeding

Non-native and invasive vegetation in the mitigation areas will be hand weeded from around all newly installed plants at the time of installation and on a routine basis throughout the monitoring period. No chemical control of vegetation on any portion of the site is allowed without the approval of the City of Newcastle.

Site conditions

The contractor shall immediately notify the landscape designer and/or lead biologist of drainage or soil conditions likely to be detrimental to the growth or survival of plants. Planting operations should not be conducted under the following conditions: freezing weather, when the ground is frozen, excessively wet weather, excessively windy weather, or in excessive heat.

Planting Pits

Planting pits should be circular with vertical sides, and should be 6" deeper and 12" larger in diameter than the root ball of the plant. In compacted soils, the sides of the planting pits should be scarified/broken up. Set plants upright in pits. Burlap, if used, shall be removed from the planting pits. Backfill shall be worked back into holes such that air pockets are removed without compacting the soils.

Water

Plants should be watered midway through backfilling, and again upon completion of backfilling. For spring plantings (if approved), a rim of earth should be mounded around the base of the tree or shrub no closer than the drip line, or no less than 30" in diameter, except on steep slopes or in hollows. Plants should be watered a second time within 24-48 hours after installation. The earthen rim/dam should be leveled prior to the second growing season.

Staking

Most shrubs and trees do not require staking. If the plant can stand upright without staking in a moderate wind, stakes should not be used. If the plant needs support, then strapping or webbing should be used as low as possible on the trunk to loosely brace the tree with two stakes. Do not brace the tree tightly or too high on the trunk. Do not use wire in a rubber hose for strapping as it exerts too much pressure on the bark. As soon as supporting the plant becomes unnecessary, stakes should be removed. All stakes must be removed within two (2) years of installation.

Project notes (Cont.)

Plant Location

Lath staking, brightly colored flagging, or another form of marking shall be placed on or near each installed plant to assist in locating the plants during maintenance and monitoring activities.

Arrangement and Spacing

The plants shall be arranged with the appropriate numbers, sizes, species, and distribution to achieve the required vegetation coverage. The actual placement of individual plants shall mimic natural, asymmetric vegetation patterns found on similar undisturbed sites in the area.

Inspection(s)

The lead biologist shall be present on site to inspect the plants prior to planting. Minor adjustments to the original design may be required prior to and during construction.

Mulch

A wood chip mulch (containing some green/vegetative material) will be placed around the base of each plant in a 3-foot radius and at a depth of 2 to 4 inches. Mulch shall not be allowed to contact plant stems in order to avoid plant decay and rot.

Monitoring

A five-year monitoring plan will begin with the preparation of an as-built report following mitigation installation. This report will outline what occurred on the project site during construction and identify if any changes were made to the approved mitigation plan. Following submittal of the as-built plan, monitoring visits will occur. Monitoring will begin the first year following mitigation installation. Monitoring visits will occur twice yearly (once in the spring, once in the fall) and will continue for five years.

Monitoring techniques will include general visual observations to assess tree and shrub survivability and coverage. In addition, transects will be established throughout the planting areas to assess plant survivability and quadrats will be used to determine plant coverage. The sizes and locations of the transects and quadrats will be discussed in the first monitoring report. Monitoring reports will be prepared and submitted to the City of Newcastle in the fall of each monitoring year (i.e. following the second monitoring visit). The reports will summarize the overall conditions of the mitigation areas and discuss whether the performance standards are being met. Photos of the mitigation areas will also be provided. On year 5, the final monitoring report will be prepared and will determine if the mitigation plan has been successful per the established goals, objectives, and performance standards. If the mitigation plan is deemed unsuccessful, contingency actions will be utilized and/or the monitoring period may be extended.

Contingency

If, during any of the monitoring visits, 20% of the plants within any restoration area, or in any particular stratum within a restoration area, are severely stressed, or it appears that 20% may not survive, additional plants will be added to the mitigation areas. If invasive and non-native species exceed 25% aerial coverage within any of the restoration areas at any time, control measures will be initiated. Additional contingency actions may include, but will not be limited to, more aggressive weed control, additional mulching, species substitution, soil amendments, and/or additional irrigation. If necessary, a meeting between the lead project ecologist and City of Newcastle personnel will be held to develop new contingency actions. Per NMC 18.24.130(E), should contingency actions be necessary, implementation of such actions shall constitute a new mitigation plan and will be subject to all mitigation requirements including a monitoring plan and financial guarantee. The five-year monitoring period shall restart upon implementation of contingency actions. The contingency plan shall follow the project phasing and mitigation sequencing discussed above. It shall remain in place until all planting/restoration areas have been monitored for a period of at least five years and all performance standards have been met.

Maintenance

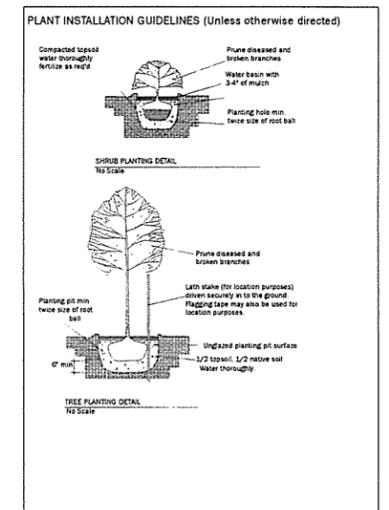
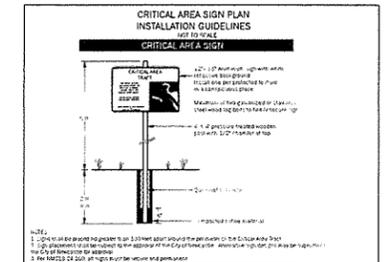
Maintenance will be performed within the restoration areas as necessary. Maintenance actions may include, but are not limited to, replacement of dead vegetation, removal of invasive and non-native vegetation, trash cleanup, and repair of damaged signs. Maintenance needs will be discussed in the annual monitoring reports.

COST ESTIMATE AND FINANCIAL GUARANTEE

The following is a cost estimate for plant materials, labor, monitoring, and maintenance. This does not represent an actual bid (please note: plant prices include labor and installation):

Plants - \$9.50/plant:	\$385,510.00
Estimated cost of monitoring 5 years @ \$7,000/year:	\$35,000.00
Estimated cost of maintenance 5 years @ \$5,000/year:	\$25,000.00
Total:	\$445,510.00

Per NMC 18.24.140(B), a financial guarantee must be posted by the applicant since this development proposal is subject to mitigation, maintenance, and monitoring plans. The amount of this guarantee shall be determined by the City of Newcastle.



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DETAILED MITIGATION PLAN MAP
Avalon Newcastle
 Newcastle, Washington