

CONCEPTUAL MITIGATION PLAN

CENTENNIAL PARK

NOVEMBER 2022



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CENTENNIAL PARK

NOVEMBER 11, 2022

PROJECT LOCATION

DEVELOPMENT SITE:

67TH AVENUE NORTHEAST & 172ND STREET NORTHEAST/HIGHWAY 531
ARLINGTON, WASHINGTON 98223

MITIGATION SITE:

16430 51ST AVENUE NORTHEAST
ARLINGTON, WASHINGTON 98223

PREPARED FOR

WILLIAMS INVESTMENTS

2517 COLBY AVENUE,
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PREPARED BY

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**Soundview
Consultants**

Environmental Assessment
Planning + Land Use Solutions

Executive Summary

Soundview Consultants LLC (SVC) is assisting Williams Investments (Applicant) with a Conceptual Mitigation Plan for additional proposed parking stalls for a previously approved and constructed multi-family residential and retail commercial development of an 8.81-acre site located adjacent to 67th Avenue Northeast and 172nd Street Northeast/Highway 531 in the City of Arlington, Washington. The development site consists of one parcel situated in the Southwest ¼, of Section 23, Township 31 North, Range 5 East, W.M (Snohomish County Tax Parcel Number 31052300300800).

SVC investigated the development site for the presence of potentially-regulated wetlands, waterbodies, fish and wildlife habitat, and/or priority species in the fall of 2018 and winter of 2019. Using current methodology, the site assessment identified one potentially-regulated wetland (Wetland A) and one stream channel (Edgecomb Creek) on the development site and one newly relocated stream (Edgecomb Creek) offsite to the south within 225 feet of the site. The aforementioned critical areas and classifications were approved under a prior development proposal (SEPA MDNS file No. PLN#543).

The Applicant previously constructed a permitted, phased, mixed land use development consisting of multi-family residential units and commercial retail space with associated infrastructure to provide additional housing and commercial space within the City of Arlington (SEPA MDNS file No. PLN#543). The project was carefully designed in order to avoid and minimize impacts to critical areas to the greatest extent feasible, and no direct or indirect wetland impacts were required. Since the completion of the project, resident and guest parking has become an issue due to limited parking availability within the development, thus prompting the Applicant and City to consider additional parking space onsite.

The project includes offsite mitigation on a site within the same Quilceda Creek sub-basin as the development site. The 19.37-acre mitigation site is located at 16430 51st Avenue Northeast in the City of Arlington, Washington, approximately 1.25 miles to the southwest of the development site. The mitigation site consists of one parcel situated in the Northeast ¼ of Section 28, Township 31 North, Range 5 East, W.M (Snohomish County Tax Parcel Number 31052800100700). The mitigation site was investigated SVC in the summer of 2021 for potentially-regulated wetland, waterbodies, and/or priority habitat or species. The site investigations identified one potentially-regulated wetland (Wetland F) and one potentially-regulated stream (Hayho Creek) on the mitigation site. Wetland F is classified as a Category II wetland with a moderate habitat score of 7 points and is subject to a standard 110-foot buffer per AMC 20.93.830(a) table 20.93-4. Additionally, Hayho Creek, a Type F (fish-bearing) stream without ESA-listed salmonids, was identified on the western boundary of the mitigation site, which is subject to a standard 100-foot buffer per AMC 20.93.730 Table 20.93-3.

The proposed parking will result in necessary and unavoidable partial fill of the isolated, low-functioning Wetland A. Given the constraints of the existing development, the only space available for additional parking is within Wetland A or the FWHCA associated with the relict stream channel onsite. Wetland A is an isolated, low-functioning wetland, whereas the FWHCA used to have direct hydrologic connectivity to and is in close proximity to Edgecomb Creek and was subject to prior mitigation enhancement efforts. Therefore, to minimize impacts potential impacts to Edgecomb Creek, direct impacts are more ecologically practicable for Wetland A. The extent of wetland fill is limited to the amount of required parking and associated infrastructure, leaving a portion of the wetland following development that will only be indirectly impacted.

Mitigation for the direct and indirect impacts to Wetland A will be provided through offsite, in-kind, permittee responsible wetland creation on a 19.9-acre site located approximately 1.26 miles southwest of the development site. The mitigation site is located within in the same Quilceda Creek sub-basin and is part of the Hayho Creek wetland complex (Snohomish County Tax Parcel Number 31052800100700). Compensation through onsite wetland creation is not possible due to the limited space available; as such, offsite mitigation actions are required. Per section 6B.4.7, page 129 of the updated interagency mitigation guidance (WSDOE et al., 2021), when indirect impacts are proposed, the agencies typically require compensation at one-half of the recommended ratio for permanent impacts. The direct impacts to Category IV wetland area will require compensation in the form of wetland creation at a 1.5:1 ratio per AMC Table 20.93-7. Therefore, compensating for indirect Category IV wetland impacts in the form of wetland creation would require a ratio of 0.75:1 (half of the standard 1.5:1 ratio). The proposed offsite mitigation will exceed this mitigation ratio for wetland creation. Further, the project proposes Category II wetland creation contiguous with a large wetland complex despite impacts to a low-functioning, Category IV wetland, resulting in a net gain in ecological functions within the watershed. A Conceptual Mitigation Plan is provided in Chapter 2 of this report.

The table below summarizes the identified critical areas and regulatory status.

| Wetland Name | Size Onsite | Category/ Type ¹ | Regulated Under AMC Chapter 20.93 | Regulated Under RCW 90.48 | Regulated Under Clean Water Act |
|-------------------------------|-----------------|-----------------------------|-----------------------------------|---------------------------|---------------------------------|
| Development Site | | | | | |
| Wetland A | ~ 21,823 SF | IV | Yes | Yes | Not Likely |
| Relict Edgecomb Creek Channel | N/A | N/A | Yes ² | Yes ² | Not Likely |
| Relocated Edgecomb Creek | Offsite | Type F/ESA | Yes | Yes | Yes |
| Mitigation Site | | | | | |
| Wetland F | 6.54 AC | II | Yes | Yes | Likely |
| Hayho Creek | 650 linear feet | Type F | Yes | Yes | Yes |

1. Washington State Department of Ecology (WSDOE) wetland rating system (Hruby, 2014) per AMC 20.93.730 and AMC 20.93.800.
The relict channel is regulated by the local and state jurisdiction

The table below summarizes the planned critical area impacts.

| Critical Area | Existing Area Onsite | Impact Area | Impact Type |
|---------------|----------------------|---------------------|-------------|
| Wetland A | 21,823 SF (0.5 ac) | 16,688 SF (0.38 ac) | Direct |
| Wetland A | 21,823 SF (0.5 ac) | 5,136 SF (0.12 ac) | Indirect |

The table below summarizes the proposed compensatory mitigation to offset the proposed critical area impacts.

| Mitigation Type | Required Mitigation Ratio | Proposed Mitigation Area | Proposed Mitigation Ratio |
|-------------------------------|---------------------------|--------------------------|---------------------------|
| Wetland Creation (Offsite) | 1.5:1 | 32,736 SF (0.86 AC) | 1.5:1 |

Site Map

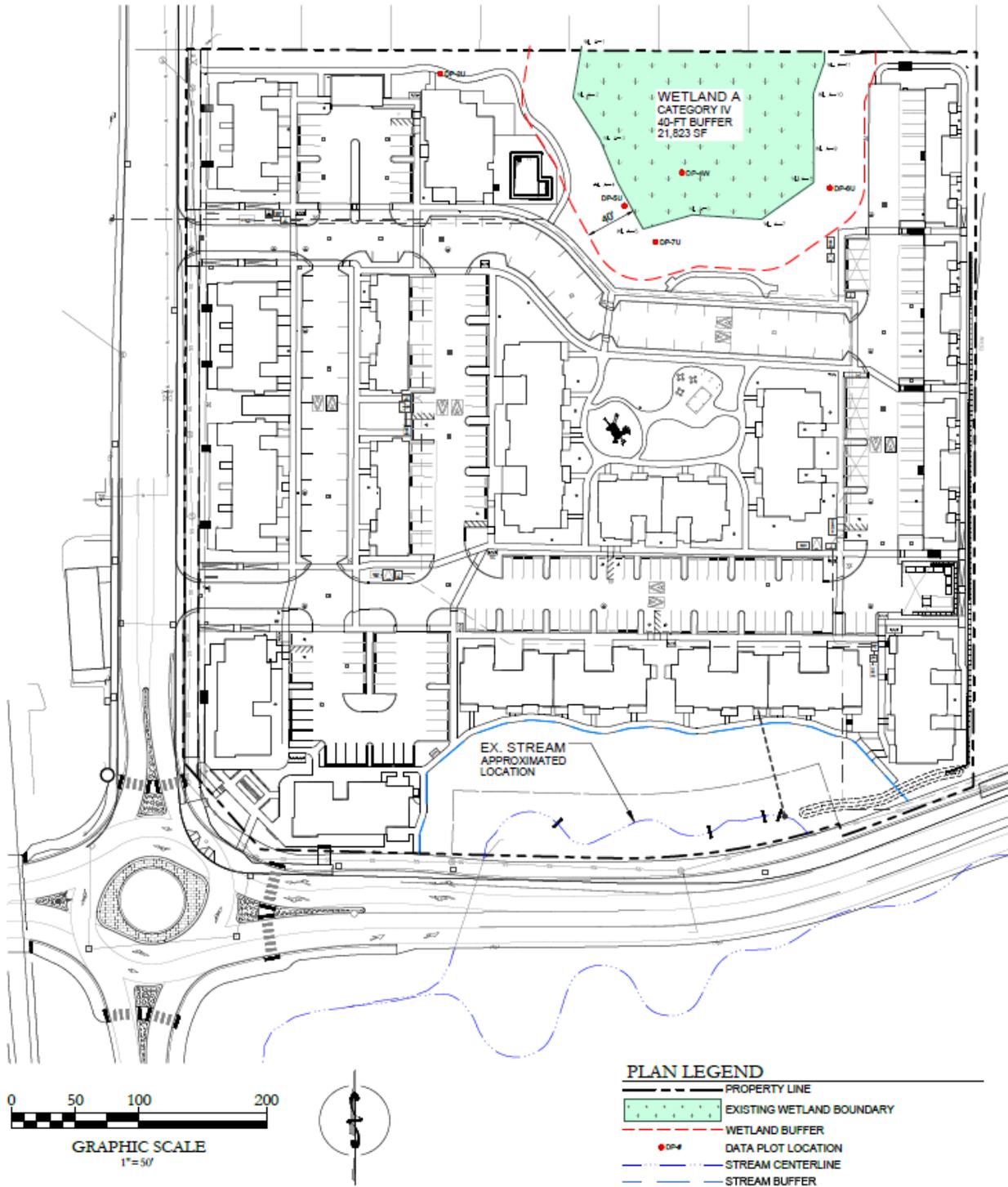


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- Appendix A – Site Plans
- Appendix B – Qualifications

Chapter 1. Regulatory Considerations

The site investigations in fall of 2018 identified and delineated one potentially-regulated wetland (Wetland A) and one relict stream channel on the development site. One regulated stream channel was also found offsite approximately 225 feet south of the site. No other potentially-regulated wetlands, waterbodies, fish and wildlife habitat, or priority species were identified on or adjacent to the development site during the site investigations.

1.1 Local Regulations

1.1.1 Buffer Standards

AMC 20.93.800(a) has adopted the 2014 *Revised Washington State Wetland Rating System for Western Washington* (Hruby, 2014). With this system, Category II wetlands are difficult, though not impossible, to replace, and provide high levels of some functions. Category IV wetlands are those that generally provide low levels of function and score less than 16 points. Wetland A on the development site is classified as a Category IV wetland and Wetland F on the mitigation site is classified as a Category II wetland. Under AMC 20.93.830, the standard buffer for a Category IV wetland is 40 feet and for a Category II wetland with a moderate habitat score of 7 points is 110 feet, assuming the implementation of all minimization measures listed in ACM 20.93.830(a) table 20.93-4 (Table 1 below). The project proposes to direct lights away from the wetland, locate noise generating activities away from the wetland, route new untreated runoff away from the wetland, and provide stormwater management to infiltrate new runoff from impervious surfaces. Please refer to the TESC plan prepared by the Project Engineer for more details regarding the proposed BMPs and TESC measures that will be implemented for the proposed project.

Table 1. Measures to Minimize Impacts to Wetlands

| Examples of Disturbance | Activities and Uses that Cause Disturbances | Examples of Measures to Minimize Impacts |
|-------------------------|--|---|
| Lights | <ul style="list-style-type: none"> •Parking lots •Warehouses •Manufacturing •Residential •Parks | <ul style="list-style-type: none"> •Direct lights away from critical areas and buffers •Day use only regulations preventing the need for lights •Timer on lights |
| Noise | <ul style="list-style-type: none"> •Manufacturing •Residential | <ul style="list-style-type: none"> •Locate activity that generates noise away from wetlands •If warranted, enhance existing buffer with native vegetation planting adjacent to noise source •For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry or mining, establish an additional 10 feet heavily vegetated buffer strip •Seasonal limitations on hours of operation |

| Examples of Disturbance | Activities and Uses that Cause Disturbances | Examples of Measures to Minimize Impacts |
|---|--|---|
| Toxic runoff* | <ul style="list-style-type: none"> •Parking lots •Roads •Manufacturing •Residential areas •Application of agricultural pesticides •Landscaping | <ul style="list-style-type: none"> •Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered •Establish covenants limiting use of pesticides within 150 ft of critical area or buffer •Apply integrated pest management |
| Stormwater runoff | <ul style="list-style-type: none"> •Parking lots •Roads •Manufacturing •Residential areas •Commercial •Landscaping | <ul style="list-style-type: none"> •Retrofit stormwater detention and treatment for roads and existing adjacent development •Prevent channelized flow from lawns that directly enters the buffer •Use Low Intensity Development technique |
| Change in water regime | <ul style="list-style-type: none"> •Impermeable surfaces •Lawns •Tilling •Forest and forest duff removal | <ul style="list-style-type: none"> •Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns •Retain minimum forest and forest duff |
| Pets and human disturbance | <ul style="list-style-type: none"> •Residential areas •Parks | <ul style="list-style-type: none"> •Use privacy fencing; plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion; •Place wetland and its buffer in a separate tract |
| Dust | <ul style="list-style-type: none"> •Construction sites | <ul style="list-style-type: none"> •Use best management practices to control dust |
| Disruption of corridors or connections | <ul style="list-style-type: none"> •Roads •Residential •Commercial •Manufacturing •Landscaping •Stormwater | <ul style="list-style-type: none"> •Maintain connection to offsite areas that are undisturbed •Restore corridors or connections to offsite habitats by replanting |
| <p>* These examples are not necessarily adequate for minimizing toxic runoff if threatened or endangered species are present at the site.</p> | | |

The relict Edgecomb Creek channel onsite was previously utilized by salmonid species and therefore is considered FHWCA under AMC 20.93.400. The relict channel is subject to a 100-foot native growth protection easement and additional 50-foot management zone per AMC 20.93.440(a). However, for the completion of the development on site, this buffer was reduced from 150 feet to 75 feet throughout, with one pinch point reduced to approximately 50 feet wide (SVC, 2021).

The relocated offsite Edgecomb Creek channel is considered a Type F-ESA water with documented Coho and Chum presence according to the WDFW SalmonScape inventory, and therefore requires a standard 150-foot buffer per AMC Table 20.93-3. However, SR 531 intersects the buffer associated with offsite Edgecomb Creek, entirely interrupting the buffer from projecting onto the development site, therefore, no buffer associated with Edgecomb Creek should be located on the development site.

Mitigation Site Perimeter Buffer

All compensatory mitigation areas will be protected by an established perimeter buffer as applicable. Per Table 6C-3 of the joint mitigation guidance (WSDOE et al., 2021), Category I or II wetlands with moderate habitat functions, should receive a 150-foot buffer for high land use intensity, 110-foot buffers for moderate land use intensity, and 75-foot buffer for low land use intensity. Wetland A on the mitigation site will receive a 110-foot buffer to the east due to adjacent moderate-intensity pipeline easement that is regularly maintained. The 110-foot buffer per interagency guidance is consistent with the City of Arlington standard buffer requirement for Category II wetlands with moderate habitat scores per AMC 20.93.830 Table 20.93-4.

1.1.2 Mitigation Sequencing

Under AMC 20.93.010(1), projects should first attempt to avoid impacts all together by not taking certain actions. If actions cannot be eliminated, impacts should be minimized by restraining the magnitude of an action, using different technology or by taking steps to avoid or reduce impacts. For impacts that cannot be avoided or minimized, compensation or rectification for the impact should be provided by replacing, enhancing, or providing substitute resources or environments, followed by monitoring and reduction of the impact over time. The project has attempted to avoid impacts to the greatest extent possible by reducing the proposed parking to the minimum required. However, given the constraints of the existing development, the only space available for additional parking is within Wetland A or the Fish and Wildlife Habitat Conservation Area (FWHCA) associated with the relict stream channel onsite. Impacts to the relict stream channel are completely avoided. Given that avoidance is not possible for this project, mitigation sequencing for impacts to critical areas is as follows:

1. *Minimize or limit the degree or magnitude of actions and their implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts.*

Given the constraints of the existing development, the only space available for additional parking is within Wetland A or the FWHCA associated with the relict stream channel onsite. Wetland A is an isolated, low-functioning wetland, whereas the FWHCA used to have direct hydrologic connectivity to and is in close proximity to Edgecomb Creek and was subject to prior mitigation enhancement efforts. Therefore, to minimize impacts potential impacts to Edgecomb Creek, direct impacts are more ecologically practicable for Wetland A. The extent of wetland fill is limited to the amount of required parking and associated infrastructure, leaving a portion of the wetland following development that will only be indirectly impacted. All appropriate BMPs and TESC measures will be implemented throughout the duration of the project to minimize temporary construction impacts.

2. *Mitigate any impacts by repairing, rehabilitating, or restoring the affected environment*

Mitigation for the direct and indirect impacts to Wetland A will be provided through offsite, in-kind, permittee responsible wetland creation on a 19.9-acre site located approximately 1.26 miles southwest of the development site. The mitigation site is located within in the same Quilceda Creek sub-basin and is part of the Hayho Creek wetland complex (Snohomish County Tax Parcel Number 31052800100700). Compensation through onsite wetland creation is not possible due to the limited space available; as such, offsite mitigation actions are required. Per section 6B.4.7, page 129 of the updated interagency mitigation guidance (WSDOE et al., 2021), when indirect impacts are proposed, the agencies typically require compensation at one-half of the recommended ratio for permanent impacts. The direct impacts to Category IV wetland area will require compensation in the form of wetland creation at a 1.5:1 ratio per AMC Table 20.93-7. Therefore, compensating for indirect Category IV wetland impacts in the form of wetland creation would require a ratio of 0.75:1 (half of the standard 1.5:1 ratio). The proposed offsite mitigation will exceed the required mitigation ratio for wetland creation. Further, the project proposes Category II wetland creation contiguous with a large wetland complex despite impacts to a low-functioning, Category IV wetland, resulting in a net gain in ecological functions within the watershed.

3. *Reduce or eliminate any impacts over time by preservation and maintenance operations during the life of the action.*

The offsite mitigation actions will be maintained and monitored for a minimum of 10 years per AMC 20.93.850(3) to ensure success of the project. Additional potential impacts to critical areas will be by reduced over time by preserving the wetland in a separate conservation tract per AMC 20.93.840(a)(4) and by installing permanent sensitive area signage and fencing in order to discourage trespassing and reduce habitat disturbance.

4. *Compensate for unavoidable impacts by replacing, enhancing or providing substitute resources or environments through monitoring of specific and cumulative impacts.*

See response to item 2 above. Mitigation for the direct and indirect impacts to Wetland A will be provided through offsite, in-kind, permittee responsible wetland creation on a 19.9-acre site located approximately 1.26 miles southwest of the development site.

1.1.3 Mitigation Requirements

Per AMC 20.93.840(a), in order to avoid significant environmental impacts, the applicant for a land use or development permit shall compensate for unavoidable wetland impacts, listed in order of preference. What is considered adequate mitigation will depend on the nature and magnitude of the potential impact.

1. *On-site wetlands restoration/improvement—Restoration or improvement in functional value of degraded on-site wetlands and/or their buffers at the ratio listed in Table 20.93-6 according to the wetland type.*

The existing Wetland A onsite is extremely degraded and low-functioning. However, given that the wetland is small and isolated in the landscape, it is not an ecologically practicable candidate for mitigation.

2. *On-site wetlands creation—Creation of on-site wetlands and their buffers at the ratio listed in Table 20.93-6 according to the wetland type.*

Permittee-responsible onsite mitigation is not possible given that all upland areas were previously developed onsite as part of the previously approved and constructed multi-use development (SEPA MDNS file No. PLN#543). Therefore, no space is available to perform mitigation actions and provide appropriate protective buffers.

3. *On-site wetlands buffer restoration—Restoration or improvement in functional value of degraded on-site wetland buffers at the ratio listed in Table 20.93-6 according to the wetland type.*

Very minimal buffer areas will remain onsite following the proposed parking area, and therefore there is not enough space to accommodate the required mitigation.

4. *Off-site wetlands protection—Where on-site protection is not possible, dedicate an exclusive easement for the protection of equivalent (in ecological type and function) wetland and its buffer on an off-site wetland at the ratio listed in Table 20.93-6 according to the wetland type. The location of any off-site wetland mitigation area shall be located within the same watershed as the impact and as near to the site as possible, following this preferred order:*

(A) Contiguous to the impacted wetland,

Given that the majority of the site is developed with the previously approved multi-use development (SEPA MDNS file No. PLN#543), there is not enough space to accommodate the required mitigation and provide appropriate protective buffers.

(B) Within the same drainage basin where it would best provide the same function as the impacted wetland, and

Mitigation will be provided through offsite, in-kind, permittee responsible wetland creation on a 19.9-acre site located approximately 1.26 miles southwest of the development site, within the same Quilceda Creek sub-basin. Although unavoidable impacts are to Category IV wetland area, the project will create Category II wetland area contiguous with a large wetland complex associated with Hayho Creek. In addition, the project will provide greater than the required 1.5:1 wetland creation, resulting in a net gain in ecological functions within the drainage basin.

(C) Elsewhere within the city.

See response to item (B) above.

1.2 State and Federal Considerations

On December 2, 2008, in a memorandum from the Environmental Protection Agency (EPA) and USACE, joint guidance is provided that describes waters that are to be regulated under Section 404 of the Clean Water Act (USACE, 2008). This memorandum was amended on February 2, 2012, where the EPA and USACE issued a final guidance letter on waters protected by the Clean Water Act (CWA).

The 2012 guidance describes the following waters where jurisdiction would be asserted: 1) traditional navigable waters, 2) interstate waters, 3) wetlands adjacent to traditional navigable waters, 4) non-navigable tributaries of traditional navigable waters that are relatively permanent meaning they contain water at least seasonally (e.g. typically three months and does not include ephemeral waters), and 5) wetlands that directly abut permanent waters. The regulated waters are those associated with naturally occurring waters and water courses and not artificial waters (i.e. stormwater pond outfalls).

The development site wetland (Wetland A) is a small depressional wetland that receives water primarily from direct precipitation and surface runoff from adjacent upland areas. An artificially constructed ditch was identified within Wetland A along the northern property boundary; this ditch is identified as the wetland outlet and enters the City's stormwater system as documented in the City's stormwater infrastructure inventory. Therefore, the wetland and ditch are not hydrologically connected to any tributaries in the area and are not likely considered regulated under Section 404 of the Clean Water Act. However, Wetland A is considered a natural water regulated by the Washington State Department of Ecology under the Revised Code of Washington 90.48.

Wetland F is associated with Hayho Creek that eventually connects to the Quilceda Creek, a Type S waterway. As such, the wetland and stream found on the site are likely regulated as water of the United States (WOTUS) and are subject to federal regulation. These wetlands are assumed to be federally regulated to expedite the permitting process. In addition, the identified critical areas are considered natural waters that are likely regulated by the WSDOE through the Revised Code of Washington (RCW) 90.48.

Chapter 2. Conceptual Mitigation Plan

The proposed mitigation actions for the project attempt to strike a balance between achieving project goals as well as a positive result for the watershed. In general, mitigation should be located within the same watershed as the impact site and should be located where it is most likely to successfully replace lost functions and values that best benefit the impacted watershed. Potential mitigation actions were examined in the context of both onsite and watershed processes to determine the most suitable mitigation strategy.

The proposed mitigation plan attempts to closely adhere to local critical areas regulations specified in AMC 20.93.740(a)(1) while also utilizing the best available science (Granger et al., 2005; Hruby et al., 2009; Sheldon et al., 2005; and WSDOE et al., 2006; and WSDOE et al., 2021). This chapter presents the mitigation details for the proposed parking expansion required for the Centennial Park mixed-use development.

2.1 Purpose and Need

The Applicant previously constructed a permitted, mixed land use development consisting of multi-family residential units and commercial retail space with associated infrastructure to provide additional housing and commercial space within the City of Arlington (SEPA MDNS file No. PLN#543). Since the completion of the project, resident and guest parking has become an issue due to limited parking availability within the development, thus prompting the Applicant and City to consider additional parking space onsite. The purpose of the proposed project is to alleviate the insufficient parking for the guests and residents of the Centennial Park development by providing an additional parking lot with 96 parking stalls.

2.2 Description of Impacts

The proposed parking will result in necessary and unavoidable partial fill of the isolated, low-functioning Wetland A. Given the constraints of the existing development, the only space available for additional parking is within Wetland A or the FWHCA associated with the relict stream channel onsite. Wetland A is an isolated, low-functioning wetland, whereas the FWHCA used to have direct hydrologic connectivity to and is in close proximity to Edgecomb Creek and was subject to prior mitigation enhancement efforts. Therefore, to minimize impacts potential impacts to Edgecomb Creek, direct impacts are more ecologically practicable for Wetland A. The extent of wetland fill is limited to the amount of required parking and associated infrastructure, leaving a portion of the wetland following development that will only be indirectly impacted.

A wetland function impact analysis for Wetland A is provided below, and a wetland impact summary is provided in Table 2.

- **Water Quality:** Wetland A is a depressional wetland that exhibits seasonal saturation and seasonal flooding or inundation. Wetland A has moderate site potential to improve water quality given the slightly constricted outlet, moderate amounts of persistent, ungrazed vegetation to trap and filter sediments and pollutants and greater than 50 percent of the wetland seasonally ponds. The wetland has low potential to receive sediment and pollutants from the residential land uses and roadways that generate pollutants within 150 feet of the wetland. Water quality functions

provided by Wetland A also have increased value to society due to the presence of an aquatic resource on the 303(d) listing and TMDL in the sub-basin. This function is limited by the small size of Wetland A which limits the storage capacity and the wetland's ability to filter nitrogen. The proposed offsite wetland will have a greater potential to improve water quality than Wetland A as it is located near high intensity land uses, including commercial stores, distribution centers, and agricultural farms. The created wetland will be planted with native wetland vegetation communities and will assist in creating an interconnected mosaic of wetland and riparian habitat types near Hayho Creek that will aid in pollutant and sediment trapping and overall water quality improvement. With the creation and preservation of the offsite wetland, the project will result in a net increase in water quality functions within the sub-basin and watershed.

- **Hydrologic:** The primary sources of hydrology for Wetland A are seasonally high groundwater table, direct precipitation, and surface sheet flow from adjacent uplands. Wetland A provides relatively low levels of hydrologic functions onsite due to its small size, shallow depth of storage which provide very limited flood storage functionality, and slightly constricted outlet. The wetland has a low potential to provide hydrologic functions within the landscape due to the lack of high intensity land uses (i.e. commercial, industrial) in the contributing basin and the wetland not receiving stormwater discharges. The wetland provides low flood attenuation value to society due to the wetland discharging into a ditch and stormwater infrastructure. The proposed site for the offsite wetland creation has the ability to provide flood storage, reductions in peak flood flows, food web and organic material support and transport, and refuge habitat for fish and wildlife during flood events in association with Hayho Creek. Given these characteristics, the proposed use offsite wetland creation and preservation, will result in a net increase hydrologic functions within the sub-basin and watershed.
- **Habitat:** Wetland A provides low site potential to provide diverse and complex habitat functions due to the wetland consisting of two plant communities, two hydroperiods, moderate species richness, and no interspersion of habitats. However, standing snags are found within the wetland, which is a special habitat feature. Habitat functions in the landscape are limited by land use intensity which limits habitat accessibility. The habitat provided by Wetland A has low value to society due to the lack of providing habitat for species valued in laws, regulation or policies. Wetland habitat functions will be replaced and increased within the sub-basin via the proposed offsite wetland creation, which will aim to increase species diversity and habitat complexity. The offsite wetland creation proposed will be planted with a native plant community that has varied structure and complexity, providing browse, cover and forage for small mammals and in turn provides prey for raptors and other larger mammals. The wetland will be a part of the larger wetland complex associated with Hayho Creek, providing additional habitat accessibility. As such, the offsite wetland creation and preservation will result in a net increase in habitat functions within the sub-basin and watershed.

Table 2. Wetland Impact Summary

| Wetland | HGM ¹ | Cowardin Class ² | City of Arlington Rating ⁴ | Impact Area | Impact Type |
|---------|------------------|-----------------------------|---------------------------------------|------------------------|-------------|
| A | Depressional | PSSAB | IV | 16,688 SF (0.38 ac) | Direct |
| A | Depressional | PSSAB | IV | 5,136 SF (0.12 ac) | Indirect |

1. Brinson, M. M. (1993).
2. WSDOE rating according to Washington State wetland rating system for Western Washington – Revised (Hruby, 2014).
3. Cowardin et al. (1979) or NWI Class based on vegetation: PSS = Palustrine Scrub-Shrub; Modifier for Water Regime: B = Seasonally Saturated.
4. AMC 20.93.800(A) wetland rating designation.

2.3 Mitigation Strategy

Mitigation for the direct and indirect impacts to Wetland A will be provided through offsite, in-kind, permittee responsible wetland creation on a 19.9-acre site located approximately 1.26 miles southwest of the development site. The mitigation site is located within in the same Quilceda Creek sub-basin and is part of the Hayho Creek wetland complex (Snohomish County Tax Parcel Number 31052800100700). Compensation through onsite wetland creation is not possible due to the limited space available; as such, offsite mitigation actions are required. Per section 6B.4.7, page 129 of the updated interagency mitigation guidance (WSDOE et al., 2021), when indirect impacts are proposed, the agencies typically require compensation at one-half of the recommended ratio for permanent impacts. The direct impacts to Category IV wetland area will require compensation in the form of wetland creation at a 1.5:1 ratio per AMC Table 20.93-7. Therefore, compensating for indirect Category IV wetland impacts in the form of wetland creation would require a ratio of 0.75:1 (half of the standard 1.5:1 ratio); however, 1.5:1 is proposed. Further, the project proposes Category II wetland creation contiguous with a large wetland complex despite impacts to a low-functioning, Category IV wetland, resulting in a net gain in ecological functions within the watershed. A summary of the proposed mitigation actions is provided in Table 3 below.

Table 3. Summary of Proposed Mitigation (Offsite).

| Mitigation Type | Required Mitigation Ratio ¹ | Proposed Mitigation Area | Proposed Mitigation Ratio |
|----------------------------|--|--------------------------|---------------------------|
| Wetland Creation (Offsite) | 1.5:1 | 32,736 SF (0.86 AC) | 1.5:1 |

The wetland creation will improve ecological functions and value of the site by providing additional functions according to the needs of the watershed and providing an overall improvement to the water quality, hydrologic, and habitat function of the site. The wetland creation area will be excavated approximately 12 to 18 inches to provide necessary depressions to hold sufficient hydrology to generate wetland conditions and will be excavated to the existing groundwater table if possible. Following construction of the mitigation area, the wetland creation will maintain at least at seasonal saturation. Organic topsoil from an offsite supplier will then be placed to provide a suitable substrate for the native plantings. A diverse assortment of trees, shrubs, and groundcover will be established

to provide browse, cover, and nesting for small mammals, which in turn provide prey for raptors and other mammals. The diverse native plantings will provide greater pollutant and sediment filtration, reduction of erosion and flood flows, increase screening of the wetland, and increase shading and wood recruitment over time as the plantings establish. The proposed offsite wetland creation actions will improve ecological conditions adjacent to Hayho Creek and within the sub-basin. Through careful design and utilization of best available science, the mitigation plan has a high probability of success and persistence. By following the site preparation specifications outlined herein (e.g., excavation, topsoil installation, and plantings) the wetland creation area will be able to maintain wetland hydrology during the growing season in most years to add onto the functional diverse offsite wetland. The native species have been carefully selected to ensure the plants take root and thrive in the newly created wetland environments.

The wetland creation will include, but may not be limited to, the following recommendations:

- Excavate an area for wetland creation that will hold sufficient wetland hydrology;
- Plant wetland creation area with native trees, shrubs, and groundcovers listed in Appendix A, or substitutes approved by the responsible Project Scientist, to help retain soils, filter stormwater, and increase biodiversity;
- An approved native seed mix will be used to seed the disturbed areas after planting;
- Maintain and control invasive plants annually, at a minimum, or more frequently if necessary. Maintenance to reduce the growth and spread of invasive plants is not restricted to chemical applications but may include hand removal, if warranted;
- Provide dry-season irrigation as necessary to ensure native plant survival;
- Direct exterior lights away from the wetland wherever possible; and
- Place all activities that generate excessive noise (e.g., generators and air conditioning equipment) away from the remaining wetlands and reduced buffer where feasible.

2.4 Approach and Mitigation Implementation

The offsite mitigation actions will occur concurrently with the development of the project. A pre-construction meeting will be held between the Applicant, general contractor, and the consulting Scientist to discuss the project and limitations specifically related to protection of critical areas and implementation of mitigation actions.

Equipment used will be typical for land clearing, grading, and excavation activities and will be kept in good working conditions and free of leaks. Equipment to be used will likely include excavators, backhoes, bulldozers, dump trucks, graders, et cetera. All equipment staging and materials stockpiles will be kept out of wetlands and regulated buffers, and the area will be kept free of spills and/or hazardous materials. All clean fill material will be sourced from upland areas onsite or from approved suppliers and will be free of pollutants and hazardous materials.

All appropriate BMPs and TESC measures, including dedicated construction entrance(s), silt fencing, and brush barriers, will be installed prior to and maintained throughout construction in order to minimize potential temporary impacts to the impact and mitigation wetlands. As no work windows are expected to limit the construction schedule, this schedule is flexible, and site work will likely commence as soon as permits are issued and the site is able to support heavy equipment.

The project sequencing will be as follows:

- Pre-construction conferences and regulatory notifications;
- Install TESC measures;
- Remove debris and invasive plant material from the wetland creation and other mitigation areas;
- Rough grade the wetland creation areas according to the approved grading plan;
- Rough grade inspection;
- Finish grade and prepare grounds for planting in all mitigation areas;
- Seed entire mitigation area;
- Monitor site hydrology if necessary;
- Plant inspections;
- Install plant materials;
- Post-construction inspection and as-built survey; and
- Post-construction maintenance, monitoring, and annual reporting.

2.5 Goals, Objectives, and Performance Standards

The goals and objectives for mitigation actions are based on providing offsite, in-kind wetland creation for a nearby wetland within the same sub-basin. The proposed creation actions will increase ecological functions and protection for the targeted offsite critical areas. The goals and objectives of the proposed mitigation actions are as follows:

Goal 1 – Compensate for approximately 16,688 square feet of direct impacts and 5,136 square feet of indirect impacts to Wetland A.

Objective 1 – Establish wetland hydrology in the 32,736-square-foot wetland creation area associated with Hayho Creek by excavating depressional areas (approximately 12 to 18 inches of material) to tie into the existing groundwater elevation.

Performance Standard 1 – The wetland creation area will have seasonally-saturated soils (or greater hydroperiod) within 12 inches of the surface over for a minimum of 14 consecutive days during the growing season in years with normal precipitation levels over the monitoring period.

Performance Standard 2 – The compensatory wetland creation area will measure at least 32,736 square feet in size as demonstrated by wetland delineations during the monitoring events conducted in Years 5 and 10 of the 10-year monitoring period required. The wetland area will be delineated using the *1987 Army Corps of Engineers Delineation Manual and the Western Mountains, Valleys, and Coast Regional Supplement, Version 2* (May 2010).

Objective 2 – Establish wetland habitat with diverse horizontal and vertical vegetation structure and species richness to provide habitat for wetland-associated wildlife over the compensatory wetland creation area (32,736 square feet).

Performance Standard 3 – By the end of Year 10, the compensatory wetland creation area will have at least 3 native tree species and 5 native shrubs species; native volunteer

species will be included in the count. To be considered, the native species must make up at least 5 percent of the vegetation class.

Performance Standard 4 –State-listed, Class A noxious weeds must be completely eliminated from the onsite wetland mitigation area in all monitoring years and invasive species that are not considered state-listed, Class-A noxious weeds shall not exceed 20 percent aerial cover in the wetland mitigation areas in all monitoring years.

Performance Standard 5 - Minimum plant survivorship within the wetland creation area will be at 100 percent of installed trees and shrubs at the end of Year 1 (utilization of native recruits and replacement of lost plants allowed), 85 percent at the end of Year 2, 80 percent at the end of year 3., and 75 percent in all remaining years during the monitoring period.

Performance Standard 6 – Minimum native woody species total areal cover within the wetland creation area will be at 20 percent total cover at the end of Year 2, 25 percent at the end of Year 3, 40 percent at the end of Year 5, 60 percent at the end of Year 7, and 65 percent at the end of Year 10.

2.6 Plant Materials and Installation

2.6.1 Plant Materials

All plant materials to be used for the restoration actions will be nursery grown stock from a reputable, local source. Only native species are to be used; no hybrids or cultivars will be allowed. Plant material provided will be typical of their species or variety; if not cuttings they will exhibit normal, densely developed branches and vigorous, fibrous root systems. Plants will be sound, healthy, vigorous plants free from defects, and all forms of disease and infestation.

Container stock shall have been grown in its delivery container for not less than six months but not more than two years. Plants shall not exhibit rootbound conditions. Under no circumstances shall container stock be handled by their trunks, stems, or tops. Seed mixture used for hand or hydroseeding shall contain fresh, clean, and new crop seed mixed by an approved method. The mixture is specified in the plan set.

Fertilizer will be in the form of Agriform plant tabs or an approved like form. Mulch or coir rings may be installed around woody vegetation as determined to be necessary for plant survivability by the landscape contractor.

2.6.2 Plant Scheduling, Species, Size, and Spacing

Plant installation should occur as close to conclusion of clearing and grading activities as possible to limit erosion and limit the temporal loss of function provided by the onsite habitat. All plantings should occur between September 1 and May 1 to ensure plants do not dry out after installation, or temporary irrigation measures may be necessary. All plantings will be installed according to the procedures detailed in the following subsections and as outlined on the site plans in Appendix C.

2.6.3 Quality Control for Planting Plan

All plant material should be inspected by the landscape contractor or Project Biologist upon delivery. Plant material not conforming to the specifications above will be rejected and replaced by the landscape contractor. Rejected plant materials shall be immediately removed from the site.

The landscape contractor should provide the Project Biologist with documentation of plant material that includes the supplying nursery contact information, location of genetic source, plant species, plant quantities, and plant sizes.

2.6.4 Product Handling, Delivery, and Storage

All seed should be delivered in original, unopened, and undamaged containers showing weight, analysis, and name of manufacturer. This material should be stored in a manner to prevent wetting and deterioration. All precautions customary in good trade practice shall be taken in preparing plants for moving. Workmanship that fails to meet industry standards will be rejected. Plants will be packed, transported, and handled with care to ensure protection against injury and from drying out. If plants cannot be planted immediately upon delivery they should be protected with soil, wet peat moss, or in a manner acceptable to the Project Biologist. Plants and mulch not installed immediately upon delivery shall be secured on the site to prevent theft or tampering. No plant shall be bound with rope or wire in a manner that could damage or break the branches. Plants transported on open vehicles should be secured with a protective covering to prevent windburn.

2.6.5 Preparation and Installation of Plant Materials

The landscape contractor shall verify the location of all elements of the mitigation plan with the responsible Project Biologist prior to installation. The responsible Project Biologist reserves the right to adjust the locations of landscape elements during the installation period as appropriate. If obstructions are encountered that are not shown on the drawings, planting operations will cease until alternate plant locations have been selected by and/or approved by the Project Biologist.

Circular plant pits with vertical sides will be excavated for all container stock. The pits should be at least 2 times the width of the rootball, and the depth of the pit should accommodate the entire root system. Please refer to planting detail in Appendix C.

Broken roots should be pruned with a sharp instrument and rootballs should be thoroughly soaked prior to installation. Set plant material upright in the planting pit to proper grade and alignment. Water plants thoroughly midway through backfilling and add Agriform tablets or similar. Water pits again upon completion of backfilling. No filling should occur around trunks or stems. Do not use frozen or muddy mixtures for backfilling. Form a ring of soil around the edge of each planting pit to retain water and install a 3- to 4-inch layer of mulch around the base of each container plant if determined to be necessary by the landscape contractor.

Topsoil, mulch, compost, or other amendments may be installed to ensure plant survivability at the discretion of the landscape contractor.

2.6.6 Temporary Irrigation Specifications

While the native species selected for the habitat restoration actions are hardy and typically thrive in northwest conditions and the proposed actions are planned in areas with sufficient hydroperiods for the species selected, some individual plants might perish due to dry conditions. Therefore, irrigation or regular watering may be provided as necessary for the duration of the first two growing seasons

while the native plantings become established. If used, irrigation will be discontinued after two growing seasons. Irrigation is recommended two times per week. Frequency and amount of irrigation will be dependent upon climatic conditions and may require more or less frequency watering than two times per week.

2.6.7 Invasive Plant Control and Removal

Invasive species to be removed include Himalayan blackberry, Scotch broom, and all listed noxious weeds. To ensure non-native invasive species do not expand following the habitat restoration actions, non-native invasive plants within the entire mitigation area will be pretreated with a root-killing herbicide approved for use in aquatic sites (i.e., Rodeo) a minimum of two weeks prior to being cleared and grubbed from the restoration areas. A second application is strongly recommended. The pretreatment with herbicide should occur prior to all planned restoration actions, and spot treatment of surviving non-native invasive vegetation should be performed again each fall prior to senescence for a minimum of five years.

2.7 Maintenance & Monitoring Plan

The conceptual maintenance and monitoring plan is described below in accordance with AMC 20.93.850. The Applicant is committed to compliance with the mitigation plan and overall success of the project. As such, the Applicant will continue to maintain the mitigation areas, keeping the sites free from non-native invasive vegetation, trash, and yard waste. Depending on the success of the mitigation sites, maintenance frequency may be decreased or increased at the discretion of the responsible Project Scientist.

The offsite mitigation areas will require continued monitoring and maintenance to ensure the mitigation actions are successful. Therefore, the wetland creation areas will be monitored for a period of ten years, with formal inspections by a qualified Project Scientist. Monitoring events will be scheduled in Years 1, 2, 5, 7, and 10. Delineations and functional assessments will be conducted in Years 5 and 10 for the wetland creation area. Closeout monitoring will occur in Year 10 for the wetland creation to ensure the success of the mitigation actions.

Monitoring will consist of percent cover measurements at permanent monitoring stations, walk-through surveys to identify invasive species presence and dead or dying mitigation plantings, photographs taken at fixed photo points, wildlife observations, and general qualitative habitat and stream function observations.

To determine percent cover, observed vegetation will be identified and recorded by species and an estimate of areal cover of dominant species within each sampling plots. Circular sample plots, approximately 30 feet in diameter (706 square feet), are centered at each monitoring station. The sample plots encompass the specified buffer areas and terminate at the observed boundary. Trees and shrubs within each 30-foot diameter monitoring plot are then recorded to species and areal cover. Herbaceous vegetation is sampled from a 10-foot diameter (78.5 square feet) within each monitoring plot, established at the same location as the center of each tree and shrub sample plot. Herbaceous vegetation within each monitoring plot is then recorded to species and includes an estimate of percent areal cover. A list of observed tree, shrub, and herbaceous species including percent areal cover of each species and buffer status is included within the monitoring report.

2.8 Reporting

Following implementation of the mitigation actions, the responsible Project Scientist will prepare an As-Built (Year 0) Report and will be submitted to the City of Arlington, the USACE, and WSDOE within 90 days following the post-construction monitoring event. Following each monitoring event, a brief monitoring report detailing the current ecological status of the mitigation actions, measurement of performance standards, and management recommendations will be prepared and submitted to the aforementioned agencies within 90 days of each monitoring event to ensure full compliance with the mitigation plan.

2.9 Contingency Plan

If monitoring results indicate that performance standards are not being met, it may be necessary to implement all or part of the contingency plan per AMC 20.93.390(3). Careful attention to maintenance is essential in ensuring that problems do not arise. Should any portions of the mitigation areas fail to meet the success criteria, a contingency plan will be developed and implemented with City. Such plans are adaptive and should be prepared on a case-by-case basis to reflect the failed mitigation characteristics. Contingency plans can include additional plant installation, erosion control, and plant substitutions including type, size, and location. The Contingency measures outlined below can also be utilized in perpetuity to maintain the buffers associated with the proposed project site.

Contingency/maintenance activities may include, but are not limited to:

1. Using plugs instead of seed for emergent vegetation coverage where seeded material does not become well-established;
2. Replacing plants lost to vandalism, drought, or disease, as necessary;
3. Replacing any plant species with a 20 percent or greater mortality rate after two growing seasons with the same species or native species of similar form and function;
4. Irrigating the mitigation areas only as necessary during dry weather if plants appear to be too dry, with a minimal quantity of water;
5. Reseeding and/or repair of the mitigation areas as necessary if erosion or sedimentation occurs;
6. Spot treat non-native invasive plant species;
7. Removing all trash or undesirable debris from the mitigation areas as necessary; and

2.10 Critical Area Protection Easement

Per AMC 20.93.290 long-term protection of the mitigation sites shall be provided by placement in separate tract in which development is prohibited or by execution of an easement dedicated to the City of Arlington, a conservation organization, land trust, or similarly preserved through a permanent protective mechanism acceptable to the city. The location and limitations associated with the mitigation areas shall be shown on the face of the deed or plat applicable to the properties and shall be recorded with the Snohomish County recording department.

2.11 Financial Assurances

Per AMC 20.93.390(5), performance security is required to assure that all actions approved under this mitigation plan are satisfactorily completed in accordance with the mitigation plan, performance standards, and regulatory conditions of approval. The Applicant will provide a performance bond (prior to the issuance of any building permits) and monitoring and maintenance bond in an amount equal to 125 percent of the total estimated fair market cost of labor, materials, and irrigation, as applicable. The bond quantity worksheet will be provided under the Final Mitigation Plan.

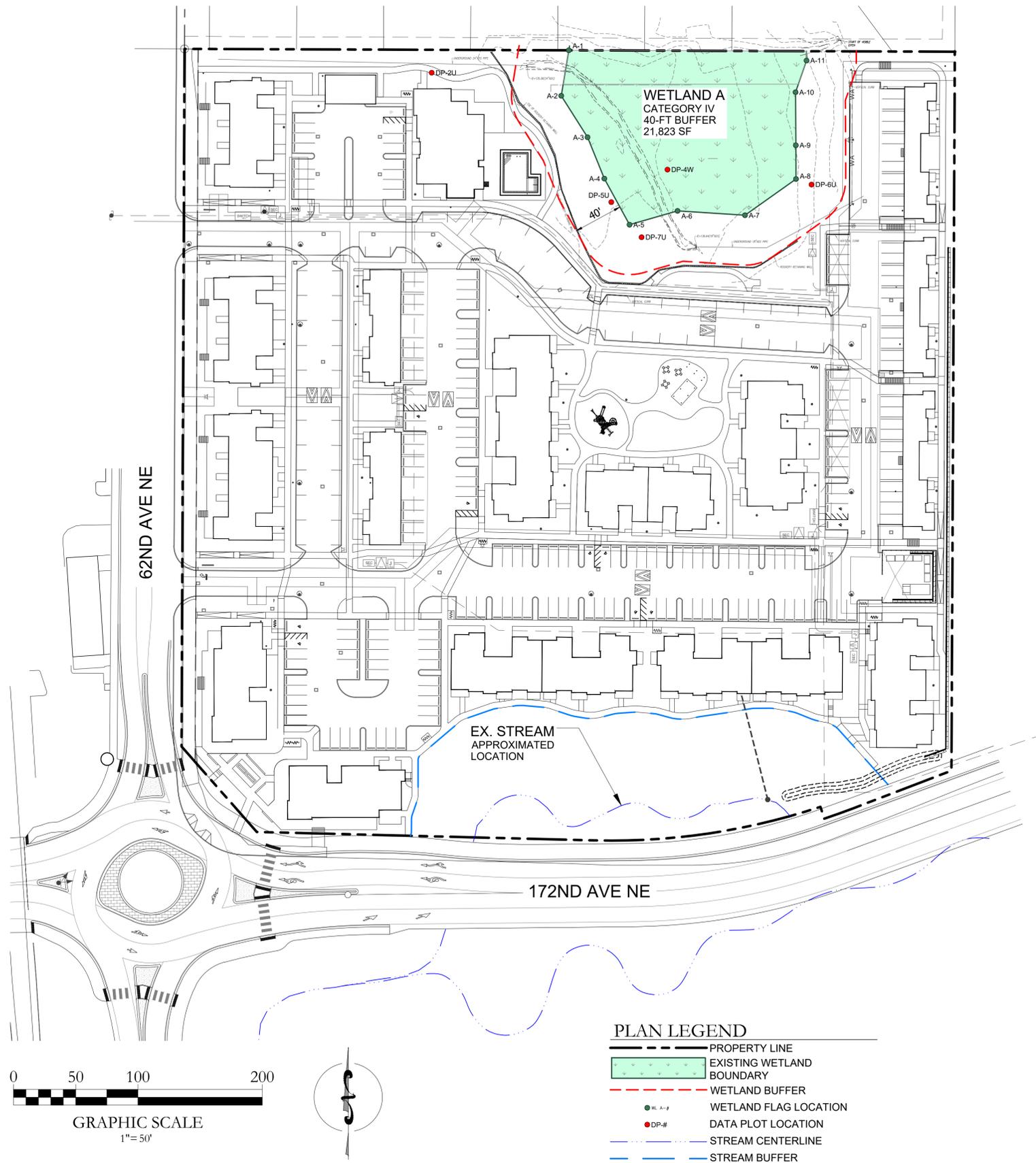
Chapter 3. Closure

The findings and conclusions documented in this report have been prepared for specific application for the Centennial Park project. These findings and conclusions have been developed in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area. The conclusions and recommendations presented in this assessment report are professional opinions based on an interpretation of information currently available to us and are made within the operation scope, budget, and schedule of this project. No warranty, expressed or implied, is made. In addition, changes in government codes, regulations, or laws may occur. Due to such changes, our observations and conclusions applicable to this assessment may need to be revised wholly or in part in the future.

Chapter 4. References

- Arlington Municipal Code (AMC). 2022. *Chapter 20.93 — Critical Area Ordinance*. Website: <https://www.arlingtonwa.gov/DocumentCenter/View/8106/Chapter-2093-Critical-Area-Ordinance>. Current through October 25th, 2022.
- Brinson, M. M. 1993. *A hydrogeomorphic classification for wetlands, Technical Report WRP-DE-4*. U.S. Army Corps of Engineer Waterways Experiment Station. Vicksburg, Mississippi.
- City of Arlington. 2019. *City of Arlington Public Notice – State Environmental Policy Act Determination of Non-Significance* (PLN #543). Dated July 10, 2019.
- Hruby, T., Harper, K., and S. Stanley. 2009. *Selecting Wetland Mitigation Sites Using a Watershed Approach*. Ecology Publication #09-06-032. December 2009
- Hruby, T. 2014. *Washington State Wetland Rating System for Western Washington – Revised*. Washington State Department of Ecology Publication # 14-06-29.
- Soundview Consultants (SVC). 2019. *Centennial Park - Wetland Delineation and Fish and Wildlife Habitat Assessment Report And Buffer Enhancement Plan*. Prepared June 28, 2019.
- Soundview Consultants (SVC). 2021. *Centennial Park Phase II –Conceptual Mitigation Plan*. Prepared October 9, 2020. Revised January 18, 2021
- Soundview Consultants (SVC). 2022. *Centennial Park– Wetland Delineation and Fish and Wildlife Habitat Assessment Report*. Prepared June 28, 2019. Revised November 2022.
- United States Army Corps of Engineers (USACE). 2008. *Revised Mem. from Envtl. Prot. Agency & Dep’t of the Army on Clean Water Act Jurisdiction Following the U.S. Supreme Court’s Decision in Rapanos v. United States & Carabell v. United States* (December 2, 2008).
- USACE and EPA. 2008. *Compensatory Mitigation for Losses of Aquatic Resources; Final Rule*. Federal Register. Volume 73, Number 70 (33 CFR Parts 325 & 332, 40 CFR Part 230).
- USACE and Environmental Protection Agency (EPA). 2012. *Guidance on Identifying Waters Protected by the Clean Water Act*. EPA/USACE. February 17, 2012.
- Washington State Department of Ecology (WSDOE), USACE, and EPA. 2006. *Wetland Mitigation in Washington State Part 2: Developing Mitigation Plans (Version 1.0)*. March 2006, WSDOE publication # 06-06-11b). WSDOE Shorelands and Environmental Assistance Program. Olympia, Washington.
- WSDOE, USACE Seattle District, and EPA Region 10. 2021. *Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance (Version 2)*. April 2021, Washington State Department of Ecology. Publication #21-06-0003. Olympia, Washington

Appendix A – Site Plans



VICINITY MAP



SOURCE: ESRI (ACCESSED 11/8/2022)

SOURCE:

LOCATION

THE SW ¼ OF SECTION 23,
TOWNSHIP 31N, RANGE 05E, WM

APPLICANT/OWNER

NAME: WILLIAMS INVESTMENTS
ADDRESS: 2517 COLBY AVENUE
EVERETT, WA 98201
CONTACT: RYAN KILBY & MISTY KILBY
E-MAIL: RYAN@WILLIAMSINVEST.COM
MISTY@WILLIAMSINVEST.COM

ENVIRONMENTAL CONSULTANT

SOUNDVIEW CONSULTANTS LLC
2907 HARBORVIEW DRIVE
GIG HARBOR, WA 98355
(253) 514-8952

SHEET INDEX

| SHEET NUMBER | SHEET TITLE |
|--------------|---|
| 1 | EXISTING CONDITIONS (ONSITE) |
| 2 | PROPOSED SITE PLAN & IMPACTS (ONSITE) |
| 3 | EXISTING & PROPOSED CONDITIONS (OFFSITE) |
| 4 | PLANTING TYPICAL & PLANT SCHEDULE (OFFSITE) |

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CENTENNIAL PARK
67TH AVE NE AND
172ND ST NE/HWY 531
ARLINGTON, WA 98223
SNOHOMISH COUNTY
PARCEL NUMBER:
31052300300800

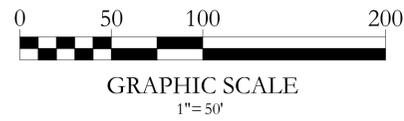
DATE: 4/18/2023

JOB: 1778.0001

BY: MW

SCALE: AS SHOWN

SHEET: 1



PLAN LEGEND

- PROPERTY LINE
- EXISTING WETLAND BOUNDARY
- STREAM CENTERLINE
- STREAM BUFFER

IMPACTS LEGEND

| | | |
|-------------------------------|----------------------------|------------------|
| | WETLAND A FILL | 16,688 SF |
| | INDIRECT WETLAND A IMPACTS | 5,136 SF |
| TOTAL WETLAND IMPACTS: | | 21,824 SF |

SOURCE:

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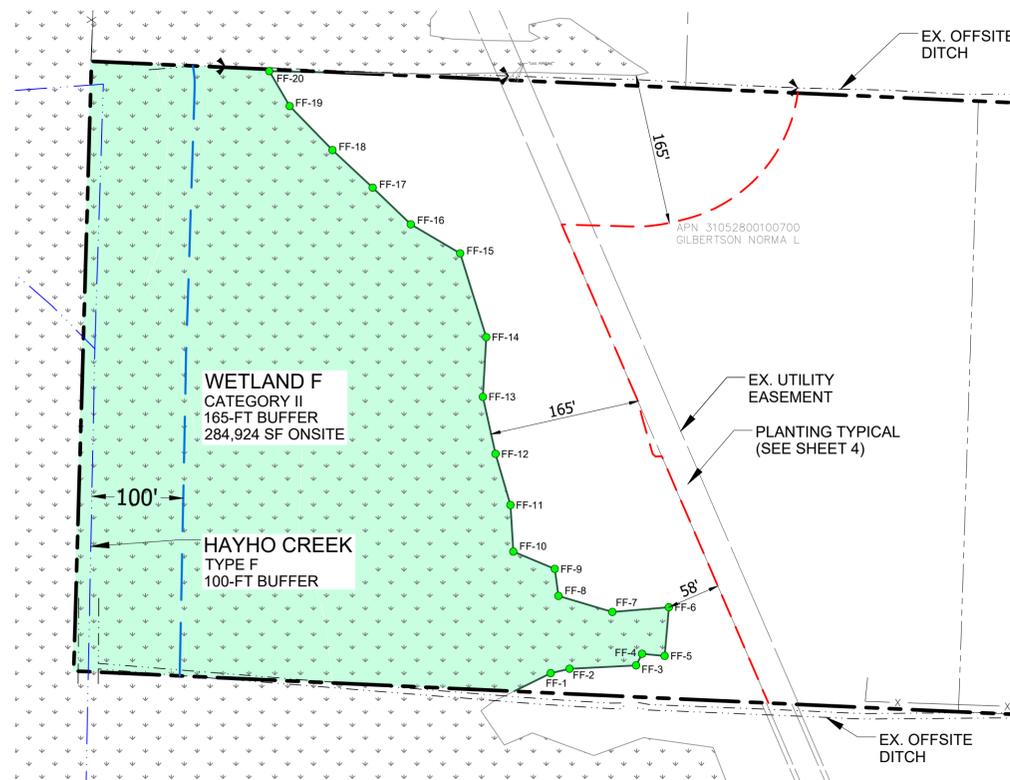
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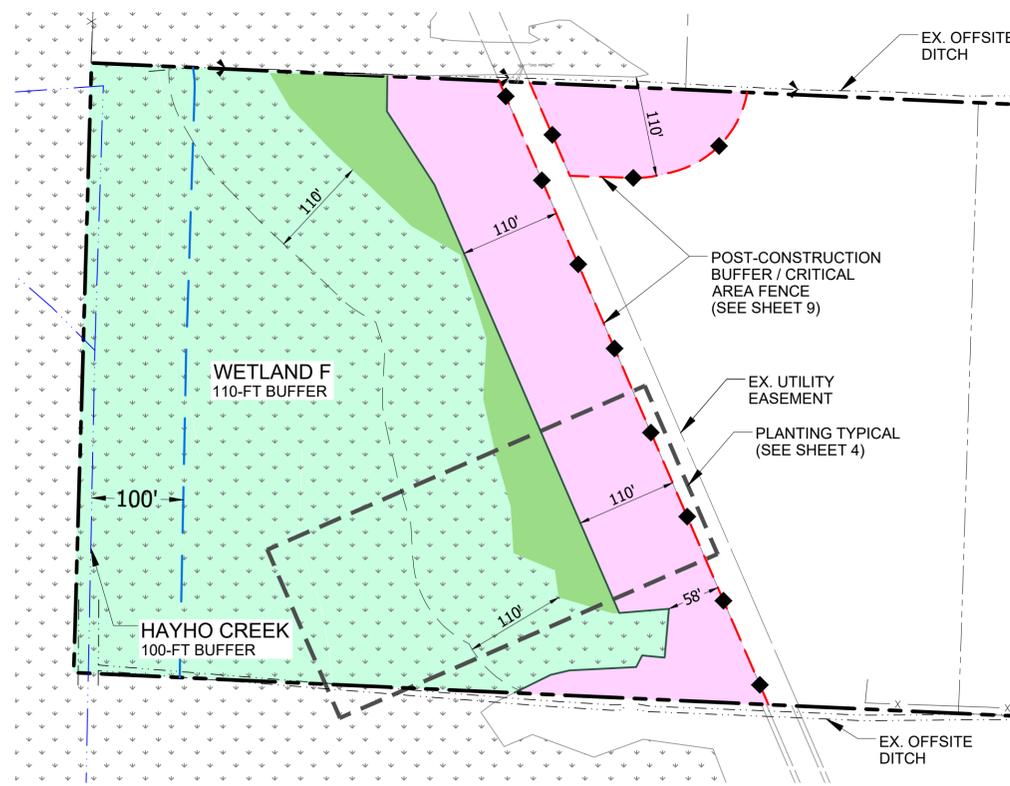
BY: MW

SCALE: AS SHOWN

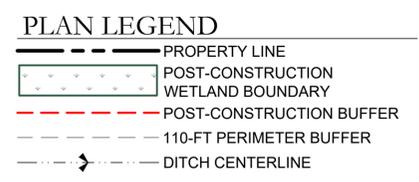
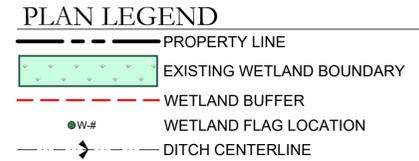
SHEET: 2



EXISTING CONDITIONS
SCALE: 1"=100'

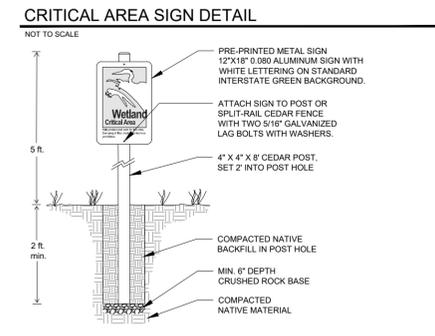
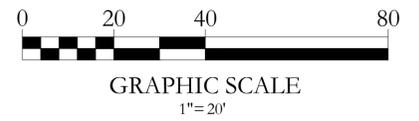


PROPOSED IMPACTS & MITIGATION

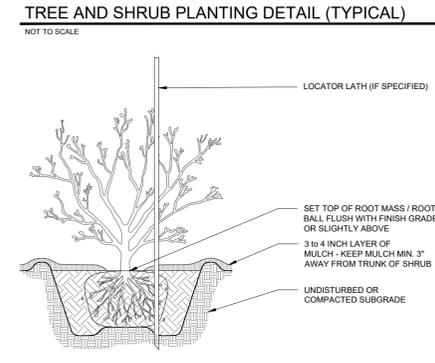


MITIGATION LEGEND

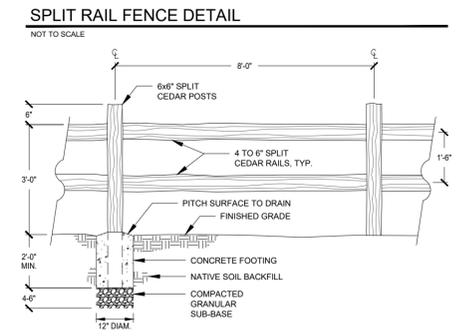
| | | |
|-------------------|--|------------|
| | WETLAND CREATION | 32,736 SF |
| | WETLAND ENHANCEMENT | 182,731 SF |
| | BUFFER ENHANCEMENT | 102,427 SF |
| TOTAL MITIGATION: | | 317,894 SF |
| | POST-CONSTRUCTION BUFFER / CRITICAL AREA FENCE | 1,091 LF |
| | CRITICAL AREA SIGN | 11 SIGNS |



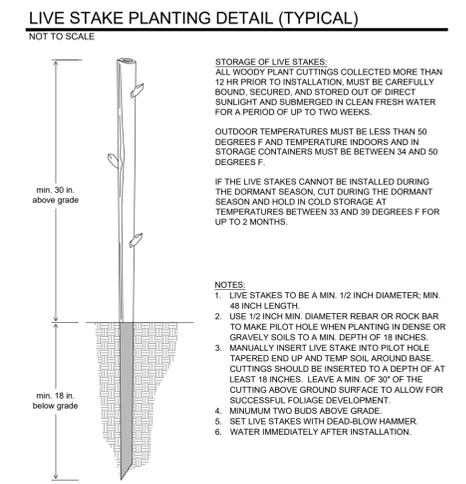
- CRITICAL AREA BOUNDARY SIGN NOTES:**
1. THE WETLAND/STREAM SIGN SHALL BE POSTED AT THE BOUNDARY BETWEEN THE LOT AND THE CRITICAL AREA.
 2. ONE SIGN SHALL BE POSTED FOR EVERY RESIDENTIAL LOT AND ONE PER EVERY ONE HUNDRED FEET FOR ALL PUBLIC RIGHTS OF WAY, TRAILS, PARKING AREAS, PLAYGROUNDS AND ALL OTHER USES LOCATED ADJACENT TO CRITICAL AREAS AND ASSOCIATED BUFFERS AND SHALL BE STATIONED PER LOCATION, ON THE APPROVED PLANS TO THE PROPOSED DEVELOPMENT.
 3. PRE-PRINTED METAL SIGN AVAILABLE THROUGH:
ZUMAR INDUSTRIES
PHONE: 1-800-426-7867
WEBSITE: WWW.ZUMAR.COM



- NOTES:**
1. PLANT SHRUBS OF THE SAME SPECIES IN GROUPS OF 3 TO 9 AS APPROPRIATE, OR AS SHOWN ON PLAN. AVOID INSTALLING PLANTS IN STRAIGHT LINES TO ACHIEVE A NATURAL-LOOKING LAYOUT.
 2. EXCAVATE PIT TO FULL DEPTH OF ROOT MASS AND 2 X ROOT MASS DIAMETER. SPREAD ROOTS TO FULL WIDTH OF CANOPY. SCARIFY SIDES OF PIT.
 3. MIDWAY THROUGH PLANTING ADD AGROFORM TABLET AND WATER THOROUGHLY.
 4. BACKFILL TO BE COMPACTED USING WATER ONLY.
 5. WATER IMMEDIATELY AFTER INSTALLATION.



- NOTES:**
1. POSTS AND RAILINGS PRE-CUT FOR ASSEMBLY.
 2. 3-RAIL DESIGNS ARE PERMITTED.
 3. FENCE SHALL BE PLACED AT APPROVED BUFFER EDGE.



- STORAGE OF LIVE STAKES:**
ALL WOODY PLANT CUTTINGS COLLECTED MORE THAN 12 HR PRIOR TO INSTALLATION, MUST BE CAREFULLY BOUND, SECURED, AND STORED OUT OF DIRECT SUNLIGHT AND SUBMERGED IN CLEAN FRESH WATER FOR A PERIOD OF UP TO TWO WEEKS.
- OUTDOOR TEMPERATURES MUST BE LESS THAN 50 DEGREES F AND TEMPERATURE INDOORS AND IN STORAGE CONTAINERS MUST BE BETWEEN 34 AND 50 DEGREES F.**
- IF THE LIVE STAKES CANNOT BE INSTALLED DURING THE DORMANT SEASON, CUT DURING THE DORMANT SEASON AND HOLD IN COLD STORAGE AT TEMPERATURES BETWEEN 33 AND 39 DEGREES F FOR UP TO 2 MONTHS.**
- NOTES:**
1. LIVE STAKES TO BE A MIN. 1/2 INCH DIAMETER; MIN. 48 INCH LENGTH.
 2. USE 1/2 INCH MIN. DIAMETER REBAR OR ROCK BAR TO MAKE PILOT HOLE WHEN PLANTING IN DENSE OR GRAVELLY SOILS TO A MIN. DEPTH OF 18 INCHES.
 3. MANUALLY INSERT LIVE STAKE INTO PILOT HOLE. TAPERED END UP AND TEMP. SOIL AROUND BASE. CUTTINGS SHOULD BE INSERTED TO A DEPTH OF AT LEAST 18 INCHES. LEAVE A MIN. OF 30" OF THE CUTTING ABOVE GROUND SURFACE TO ALLOW FOR SUCCESSFUL FOLIAGE DEVELOPMENT.
 4. MINIMUM TWO BUDS ABOVE GRADE.
 5. SET LIVE STAKES WITH DEAD-BLOW HAMMER.
 6. WATER IMMEDIATELY AFTER INSTALLATION.

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BY: MW
SCALE: AS SHOWN
SHEET: 3

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Consult Base Data\1778_0001_10223-01_10223.dwg
Printed April 16, 2023

Appendix B – Qualifications

All determinations and supporting documentation, including this *Conceptual Mitigation Plan* prepared for the *Centennial Park* project were prepared by, or under the direction of, Jon Pickett of SVC. Report preparation was completed by Emma Santana. Additional project oversight and final quality assurance / quality control was completed by Kyla Caddey.

Jon Pickett

Associate Principal

Professional Experience: 10+ years

Jon Pickett is an Associate Principal and Senior Scientist with a diverse background in environmental and shoreline compliance and permitting, wetland and stream ecology, fish and wildlife biology, mitigation compliance and design, and environmental planning and land use due diligence. Jon oversees a wide range of large-scale industrial, commercial, and multi-family residential projects throughout Western Washington, providing environmental permitting and regulatory compliance assistance for land use entitlement projects from feasibility through mitigation compliance. Jon performs wetland, stream, and shoreline delineations and fish & wildlife habitat assessments; conducts code and regulation analysis and review; prepares reports and permit applications and documents; provides environmental compliance recommendation; and provides restoration and mitigation design.

Jon earned a Bachelor of Science degree in Natural Resource Sciences from Washington State University and Bachelor of Science and Minor in Forestry from Washington State University. Jon has received 40-hour wetland delineation training (Western Mountains, Valleys, & Coast and Arid West Regional Supplements) and regularly performs wetland, stream, and shoreline delineations. Jon is a Whatcom County Qualified Wetland Specialist and Wildlife Biologist and is a Pierce County Qualified Wetland Specialist. He has been formally trained by WSDOE in the use of the Washington State Wetland Rating System 2014, How to Determine the Ordinary High-Water Mark (Freshwater and Marine), Using Field Indicators for Hydric Soils, and the Using the Credit-Debit Method for Estimating Mitigation Needs.

Kyla Caddey, PWS, Certified Ecologist

Senior Environmental Scientist

Professional Experience: 8 years

Kyla Caddey is a Senior Environmental Scientist with a diverse background in stream and wetland ecology, wildlife ecology and conservation, wildlife and natural resource assessments and monitoring, and riparian habitat restoration at various public and private entities. Kyla has field experience performing in-depth studies in both the Pacific Northwest and Central American ecosystems which included various environmental science research and statistical analysis. Kyla has advanced expertise in federal- and state-listed endangered, threatened, and sensitive species surveys and assessment of aquatic and terrestrial systems throughout the Puget Sound region. She has completed hundreds of wetland delineations and has extensive knowledge and interest in hydric soil identification. As the senior writer, she provides informed project oversight and performs final quality assurance / quality control on various types of scientific reports for agency submittal, including: Biological Assessments/Evaluations; Wetland, Shoreline, and Fish and Wildlife Habitat Assessments; Mitigation Plans, and Mitigation Monitoring Reports. She currently performs wetland, stream, and shoreline

delineations and fish and wildlife habitat assessments; prepares scientific reports; and provides environmental permitting and regulatory compliance assistance to support a wide range of commercial, industrial, and multi-family residential land use projects.

Kyla earned a Bachelor of Science degree in Environmental Science and Resource Management from the University of Washington, Seattle with a focus in Wildlife Conservation and a minor in Quantitative Science. She has also completed additional coursework in Comprehensive Bird Biology from Cornell University. Ms. Caddey is a Certified Professional Wetland Scientist (PWS #3479) through the Society of Wetland Scientists and Certified Ecologist through the Ecological Society of America. She has received 40-hour wetland delineation training (Western Mtns, Valleys, & Coast and Arid West Regional Supplement), is a Pierce County Qualified Wetland Specialist and Wildlife Biologist, and is a USFWS-approved Mazama pocket gopher survey biologist. Kyla has been formally trained through the Washington State Department of Ecology, Coastal Training Program, and the Washington Native Plant Society in winter twig and grass, sedge, and rush identification for Western WA; Using the Credit-Debit Method in Estimating Wetland Mitigation Needs; How to Determine the Ordinary High Water Mark; Using Field Indicators for Hydric Soils; How to Administer Development Permits in Washington Shorelines; Puget Sound Coastal Processes; and Forage Fish Survey Techniques. Additionally, she has received formal training in preparing WSDOT Biological Assessments.

Emma Santana

Staff Scientist

Professional Experience: 2 years

Emma Santana is a Staff Scientist with a diverse background in technical writing, permitting, and marine field work in the Pacific Northwest. Emma earned a Bachelor of Science degree in Environmental Science from Mills College (Oakland, California) and a Master of Science degree in Environmental Science from Western Washington University (Bellingham, Washington). During her studies she received extensive, hands-on experience working in lab and field settings, with a focus on marine and estuarine environments. In her thesis work, she quantified the springtime sedimentary exchange of nutrients and dissolved oxygen with the overlying water across the Salish Sea and worked jointly across with various government agencies. Emma has vast experience completing technical field reports and result assessments and has helped prepare various permits in Washington State.

Emma currently assists in wetland, stream, and shoreline delineations and fish and wildlife habitat assessments; conducts environmental code analysis; and prepares environmental assessment and mitigation reports, biological evaluations, and permit applications to support clients through the regulatory and planning process for various land use projects.