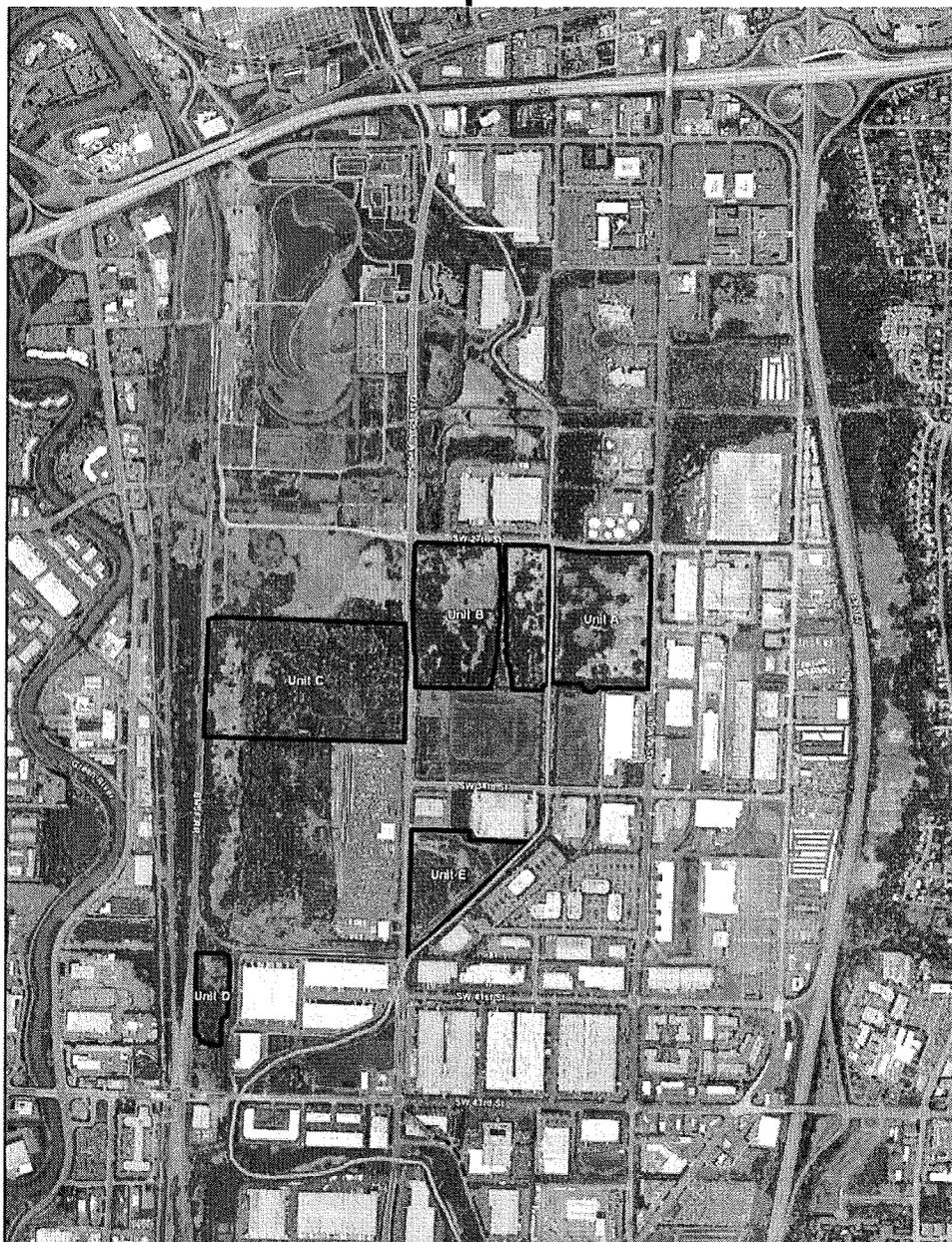




**Washington State
Department of Transportation**



Springbrook Creek Wetland and Habitat Mitigation Bank Prospectus



February 21, 2006



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Introduction and Purpose

The Washington State Department of Transportation (WSDOT) and the City of Renton, in partnership, are developing a mitigation bank by re-establishing, rehabilitating, and enhancing approximately 130 acres of wetland and riparian area located in the southwest portion of Renton, King County, Washington (Figure 1). The Springbrook Creek Wetland and Habitat Mitigation Bank (Springbrook Bank) will connect Springbrook Creek to historic wetlands, increase wetland area, improve hydrologic, water quality, and habitat functions, and provide environmental education opportunities.

The City of Renton (City) owns the five units that comprise Springbrook Bank, which is located in the Lower Green River Basin, within Water Resource Inventory Area 9 (WRIA 9). The purpose of Springbrook Bank is to provide compensatory mitigation for unavoidable impacts caused by WSDOT construction projects and other City-approved projects within the service area.

Springbrook Bank will be established through negotiations with the Bank Oversight Committee (BOC). The *Washington State Department of Transportation Wetland Compensation Bank Program Memorandum of Agreement* (CBMOA) (WSDOT 1994) provides the principles and procedures to which all the signatories have agreed to adhere in establishing, implementing, and maintaining WSDOT wetland mitigation banks. Springbrook Bank's development will also be consistent with the *Federal Guidance for the Establishment, Use, and Operation of Mitigation Bank* (US Corps of Engineers et al. 1995) and the *Washington State Draft Rule on Wetland Mitigation Banking* (WAC 173-700). Representatives from the following agencies comprise the BOC and will coordinate with WSDOT and the City to develop and approve the Mitigation Bank Instrument (MBI):

- U.S. Army Corps of Engineers, Seattle District (USACE)
- U.S. Fish and Wildlife Service (USFWS)
- Environmental Protection Agency (EPA)
- Washington State Department of Ecology (Ecology)
- City of Renton (City)

Springbrook Bank (Figure 2) represents one of the last remaining large tracts of undeveloped land in the Lower Green River Basin and connects with other mitigation areas and habitat corridors in the vicinity. Project objectives are to re-establish 17.79 acres of wetland, rehabilitate 52.47 acres of wetland, enhance 33.39 acres of wetland, enhance 14.36 acres of upland and riparian upland, and enhance and protect 9.71 acres of protection setback areas (buffer).

Goals

Bank goals are to improve ecological functions throughout the site by increasing wetland area, improving hydrologic, water quality, and habitat functions, increasing fish refuge/rearing habitat, and promoting environmental education.

Ecological Objectives

1. Increase wetland area at Springbrook Bank by removing fill material in Units A, B, C, and E to re-establish wetland functions on 17.79 acres.
2. Improve hydrologic functions by increasing wetland area and flood storage capacity in Units A, B, C, and E; extending wetland hydroperiod in Units A, B, C, and D; increasing the connectivity of wetlands in Units A, B, and E to Springbrook Creek; and increasing cover of woody vegetation in portions of all units.
3. Improve water quality functions by increasing wetland acreage; adding additional vegetation classes; increasing the connectivity of wetlands in Units A, B, and E to Springbrook Creek; and increasing the ratio of wetland to stream width in Unit E.
4. Improve habitat functions by increasing canopy closure; number of vegetation strata; number of water depth classes; number of vertical snags, brush piles, and large woody debris (LWD); canopy closure over the wetlands and stream; number of hydrologic regimes; number of native plant species; number of plant assemblages; vegetation class interspersions; improving buffer condition; diversity of plant communities in areas currently dominated by reed canarygrass and Himalayan Blackberry; and off-channel fish refuge and rearing habitat in Unit E.
5. Improve floodplain and riparian function by re-establishing hydrologic connectivity to Springbrook Creek and increasing woody cover directly adjacent to the creek in Units A, B, and E.

Site Location

Springbrook Bank is comprised of five units (totaling 130.39 acres) bounded by SW 27th Street to the north, Lind Avenue SW to the east, Burlington North Santa Fe railroad right of way to the west, and SW 43rd Street to the south. Springbrook Bank is located in the City of Renton, King County, Washington (Figure 2). The five units are described in the following paragraphs.

Unit A is 26.03 acres and is located between SW 27th Street and SW 30th Street, west of Lind Avenue, and east of Springbrook Creek. The unit is bordered along its northern and eastern sides by arterials serving industrial/commercial activities. The southern boundary is undeveloped right of way adjacent to industrial zoned property currently under development.

Unit B is located immediately south of SW 27th Street, adjacent to and west of Springbrook Creek, east of Oakesdale Avenue SW, and north of a commercial development. This unit is 36.44 acres in size.

Unit C encompasses 47.69 acres. It is located east of the Burlington Northern Santa Fe (BNSF) railroad right of way and west of Oakesdale Avenue SW. North of Unit C is undeveloped land owned by the Boeing Company. South of Unit C is a BNSF railroad facility and undeveloped property.

Unit D is a 5.48-acre site located immediately north of a City of Tukwila wetland mitigation site adjacent to SW 43rd Street. It is bordered on the west and north by BNSF right of way and to the east by developed light industrial zoned property.

Unit E is a 14.75-acre property located south of SW 34th Street, west of Springbrook Creek, north of SW 41st Street, and east of Oakesdale Avenue SW. It is bordered to the north by developed light industrial zoned property.

Rationale for Site Selection

This 130.39-acre site provides one of the last opportunities to create and enhance natural habitat and improve ecological functions within the rapidly developing Lower Green River Valley. Channelization of Springbrook Creek, past agricultural practices, and recent build-out of the area have dramatically altered hydrologic regimes, increased impervious surface, and removed native vegetation over the majority of the surrounding landscape. This will be one of the first urban mitigation banks in Washington State, and upon certification, the bank will serve as a model project for establishing banks in similar urbanized areas.

Springbrook Bank meets the following site selection criteria supported by the WSDOT CBMOA (1994), listed in order of preference:

1. A site where one or more of the three criteria used to determine if a site is a wetland (i.e., hydrophytic vegetation, hydric soils, and wetland hydrology), especially wetland hydrology, have been completely lost and can be restored (Units C and E).
2. A site where one or more wetland functions and values have been eliminated by prior human activity and can be restored to their previous type, size, and vigor (Units A, B, C, and E).
3. A site where wetland functions and values have been severely degraded by prior human activity and can be enhanced to their previous type, size, and vigor (Units A, B, C, and E).
4. A site that is not a wetland, but where a wetland can be created that is adjacent to and has high potential to complement existing wetlands. Examples include areas adjacent to existing riparian corridors, Washington Natural Heritage Sites, Washington State Wildlife Areas, and National Wildlife Refuges (Units C and E).
5. A site that is not wetland, but where a wetland can be created. (Units C and E).
6. A site where development, management, and maintenance could appropriately enhance one or more existing wetland functions and values (Units A, B, C, and D).

Opportunities for successful restoration at Springbrook Bank are high for the following reasons:

1. The proposed restoration strategy focuses on re-establishing ecological conditions and functions historically provided at or near the site.
2. The Springbrook Creek riparian corridor, surrounding mitigation sites, and adjacent railroad tracks provide excellent "corridors" for wildlife movement.
3. Activities will improve fish and wildlife habitat in a watershed where it has been severely degraded.

Ecological restoration activities at Springbrook Bank will address limiting factors for aquatic habitat functions in the Springbrook Creek sub-basin and downstream areas, such as lack of fish rearing and refuge habitat, degraded water quality, hydromodification, and lack of native riparian vegetation (Kerwin and Nelson 2000; WRIA 9 Steering Committee 2005). The opportunity to provide these habitat improvements is limited in the Lower Green River Basin by development pressures and water conveyance concerns.

Regional Setting and Condition

Springbrook Bank is located in the relatively flat Green River Valley (Valley). Springbrook Creek drains a watershed located on the east side of the Green River known as the Black River Basin and is defined as the “Springbrook, Mill, and Garrison Creek Watershed” (SMG Watershed) (Harza 1995). The Black River Basin covers about 15,763 acres (24.6 square miles) and can be delineated into two distinct topographical areas: the valley floor and the foothill zone. Slope steepness in the watershed ranges from 0 to 70 percent. Elevation in the watershed ranges between 10 and 525 feet above mean sea level (Kerwin and Nelson 2000).

Springbrook Creek is the main water conveyance channel in the SMG watershed, with its tributaries, Mill and Garrison Creeks (in Kent), and Panther and Rolling Hills Creeks, originating on plateaus east of the Valley. The channel of Springbrook Creek is approximately 12 miles long (Kerwin and Nelson 2000). Downstream of SW 16th Street and I-405, Springbrook Creek enters the improved portion of the creek referred to as the P-1 Channel, which flows to the Black River Pump Station (Figure 1). A constructed storage pond stores water prior to being pumped into the Green River.

The lower reaches of Springbrook Creek have been historically straightened, deepened, and widened by farmers, local jurisdictions, the Natural Resources Conservation Service (NRCS), and King County Drainage District #1 (Kerwin and Nelson 2000). Springbrook Creek was originally channelized for agricultural drainage purposes with later conveyance improvements made to reduce flood hazards as part of the City of Renton and NRCS East Side Green River Watershed Project (Beck 1996). Figure 4 shows that Springbrook Creek was channelized by 1936, and the surrounding areas had previously been converted to agricultural use. Existing wetlands within the Valley provide several hundred acre-feet of flood storage during the most extreme events (Beck 1996).

Site Size

The Springbrook Creek Mitigation and Habitat Bank (total of all five units) is 130.39 acres in size.

Site Conditions

Units A and B

Units A and B encompass approximately 62.5 acres, of which 55.5 acres are currently wetland (WSDOT 2005a).

Unit C

Unit C encompasses approximately 47.7 acres, of which 27.1 acres are currently wetland (WSDOT 2005a).

Unit D

Unit D encompasses approximately 5.5 acres, all of which is currently wetland (WSDOT 2005a).

Unit E

Unit E encompasses approximately 14.8 acres, none of which is currently wetland (WSDOT 2005a).

Soils

The King County Soil Survey describes four soil types at the Springbrook Bank site: Puget silty clay loam; Puyallup fine sandy loam; Snohomish silt loam; and Woodinville silt loam. The Puget, Snohomish, and Woodinville series are listed as hydric soils (Soil Conservation Service 1991).

In wetland re-establishment areas proposed in Units C and E, geotechnical borings were conducted to examine soils to be exposed through excavation. These soils include sandy gravel and sand to silty sand (fill), interbedded sand and silt underneath the areas of fill, and poorly graded sand to silt at the bottom of the soil borings. Peat was also intermixed and discovered in many of the soil layers (Hart Crowser 2005a). Geotechnical borings were also conducted in Unit A along the proposed trail alignment to help inform trail design. These investigations found a top layer of silt to sandy silt with scattered organic material along the berm only. Underneath the top layer along the berm and near the surface in other portions of the site lies a layer of organic silt and peat, which contains fibrous peat in the upper portion, a layer of soft gray plastic silt, underlain with a layer of silty sand at the bottom of the borings (Hart Crowser 2005b).

Wetlands Present on the Site

Eighty-nine acres of jurisdictional wetland occur on the Springbrook Bank site. Each wetland was delineated with the Washington State Wetlands Identification and Delineation Manual (1997) and subsequently rated using the City of Renton Wetland Rating System (2004). Category I wetlands are of the highest quality while Category IV wetlands are severely degraded and hydrologically isolated. Two wetlands — all of Unit D and portions of Unit C, totaling 26.8 acres — were rated as Category II and the remaining six wetlands — Units A, B, and portions of C, totaling 62.2 acres — were rated as Category III (WSDOT 2005).

In fall and winter 2004, the Method for Assessing Wetland Functions Volumes 1, Parts 1 and 2 (WFAM) (Hruby et al 1999) was used to assess functions and values of wetlands. The WFAM method measures on-site indicators of various wetland functions. These indices only address a wetland's potential to provide assessed functions, and are therefore, only relevant when comparing wetlands of the same hydrogeomorphic (HGM) class that share similar opportunities to perform specific functions. This assessment method is based on the HGM approach, described by Brinson (1993) and Smith et al (1995). An HGM class is determined primarily by landscape position, topography, and source of hydrology. The two HGM classes identified within the site are riverine and depressional. The riverine wetlands present in Units A and B are currently functioning similarly to depressional wetlands, due to the berms isolating Springbrook Creek from its floodplain.

The principal functions of the riverine wetlands include flow attenuation, reduction of downstream erosion, and removal of excess sediment, nutrients, and metals. The remaining depressional wetlands provide low levels of habitat functions and lack significant hydrologic and water quality functions due to their relative isolation from other wetlands/water sources and an absence of vegetative and/or habitat diversity.

Habitat and Wildlife Use

There is no high quality stream habitat present on or adjacent to the Springbrook Bank site. Springbrook Creek runs adjacent to portions of the site, paralleling three of the five units (Units A, B, and E). Springbrook Creek is characterized by rapid short-duration responses to rainfall events, high sediment loads, high temperatures, and low dissolved oxygen levels. Additionally, riffles, pools, and large woody debris are absent from the creek, providing little habitat for salmonids. Woody riparian vegetation is particularly lacking in the reach adjacent to Units A and B. The lower reach of Springbrook Creek (north of the bank site) is suitable for juvenile salmonid rearing and migration. However, spawning is unlikely in the creek due to the low gradient and lack of appropriate gravel substrate. Steelhead (*Oncorhynchus mykiss*), cutthroat trout (*Salmo clarki*), Chinook salmon (*Oncorhynchus tshawytscha*), Coho salmon (*Oncorhynchus kisutch*, and lamprey (*Lampetra* sp.) have been documented in Springbrook Creek (Kerwin and Nelson 2000, Harza 1995). Coho salmon were stocked in the creek from the mid 1970s until 2004 (WSDOT 2005b). The current configuration of the creek and adjacent berms in Units A and B creates a potential for fish standing during flood events (WSDOT 2006). Currently one small outlet is present in Units A and B for fish to enter and/or escape from on-site wetlands. The creek acts as a wildlife corridor connecting the various higher quality habitats along its length such as the Black River Riparian Forest to the north (Figure 1).

The railroad right of way acts as a wildlife corridor, connecting wildlife habitat south of the site to Springbrook Bank (Units C and D are adjacent to the BNSF rail line). Coyote and red-tailed hawks have been observed at the bank site. The bank is also used by great blue herons that nest at the Black River Riparian Reserve, located approximately two miles north of the bank. This nesting colony is one of the largest in the Puget Sound Area, with over 120 occupied nests in recent years (Seattle Audubon 2005). No signs of deer or other large mammal use have been observed at the bank site.

Current Land Use and Zoning

Springbrook Bank is located in an area of the City referred to as the Employment Area Valley. According to the City of Renton Comprehensive Plan (Renton 2004), the Employment Area Valley is "...intended to provide a mix of employment-based uses, including commercial, office, and industrial development to support the economic development of the City of Renton." The comprehensive plan objectives and policies specific to the Employment Area Valley are intended to promote economic development.

Units A, B, C, and E are zoned as Resource Conservation (RC). Unit D (adjacent to the business park located north of SW 43rd Street) is zoned Medium Industrial (IM). Development is allowed in accordance with the extent of environmentally sensitive area regulations found in the City's Critical Areas Ordinance (Renton 2005).

The RC zoning provides a very low-density residential zone that allows residential land use in combination with critical areas or agriculture uses. Examples of RC-zoned land uses include manufactured homes, eating or drinking establishments, day care centers, medical institutions, and veterinary offices.

The IM zoning provides areas for medium-intensity industrial activities involving manufacturing, processing, assembly, and warehousing. Examples of IM-zoned land uses include City government offices, schools, movie theaters, laboratories, power plants, airplane manufacturing, and vehicle service stations.

As with any zoned land, the City can change the zoning and re-designate the areas for other land uses. However, the establishment of a bank on these properties will protect the sites in perpetuity through the recording of a conservation easement.

Adjacent Parcel Ownership

See Figure 17 Adjacent Property Owners

The mitigation bank plan focuses on improving wetland functions within all five units of Springbrook Bank and improving riparian functions in three units adjacent to Springbrook Creek (Figure 2). Mitigation construction work will include extensive site grading in Units C and E; breaching the berms adjacent to Springbrook Creek in Units A and B; treating reed canarygrass and blackberry in Units A, B, and C; installing habitat structures and planting woody vegetation in all units. This work will increase a broad range of ecological functions to improve wetland habitat, water quality, and hydrologic functions.

The mitigation plan is based on activities that occur in specific areas as shown in Figures 10 through 14 and defined as follows.

Site Treatment Descriptions

Wetland Re-Establishment Areas: Removal of historic fill material will facilitate the re-establishment of former wetlands in Units A, B, C, and E. The excavation in Units A, B, and E will include removing sections of an existing berm to connect re-established wetlands in these units with Springbrook Creek. Native trees and shrubs, and habitat structures (vertical snags, brush piles, and/or large woody debris [LWD]) will be installed at both units. These activities will restore wetland area, function, and value where historic wetlands previously existed.

Wetland Rehabilitation Areas: Improving the hydrologic regime of existing wetlands (e.g., connecting Units A and B to Springbrook Creek, and providing additional treated surface and ground water to existing wetlands in Unit C) will facilitate the rehabilitation of existing wetlands in Units A, B, and C. Reed canarygrass monocultures will be mowed and treated with herbicide. Microtopography (planting hummocks) will be installed in Units A and B to provide additional habitat niches and hydrologic regimes, and facilitate tree establishment. Native trees and shrubs, and habitat structures will be installed in Units A, B, and C to improve species diversity and habitat structure and complexity.

Wetland Enhancement Type I Areas: Existing wetlands in Unit C will be enhanced by increasing plant and habitat diversity in large areas of invasive non-native vegetation (reed canarygrass and Himalayan blackberry) through a combination of several activities: implementation of aggressive reed canarygrass and Himalayan blackberry control measures; dense planting of native trees and shrubs; and placement of habitat structures. These activities will increase species diversity and habitat structure and complexity.

Wetland Enhancement Type II Areas: Supplemental hydrology will be provided to existing seasonally inundated areas in the northern portion of Unit D. The additional water will be redirected from a stormwater/groundwater management facility (constructed as part of the S. 180th Grade Separation Project) at the southern edge of Unit D and then transported via a new conveyance pipe from a treatment pond to the northern end of the unit. Additional hydrology will extend existing hydrologic regimes.

Forested Wetland Enhancement Areas: Native coniferous trees will be under-planted in the existing forested wetland portions of Units C and D. This may require the removal of invasive non-native vegetation from the understory in portions of Springbrook bank. Underplanting will enhance species and structural diversity in both units.

Upland Habitat Enhancement Areas: Removing invasive non-native vegetation, installing habitat structures, underplanting upland deciduous forests with native coniferous trees, and densely planting native woody species will enhance upland habitats in Units C.

Riparian Upland Enhancement Areas: Establishing riparian vegetation through a combination of mowing/herbicide treatment of reed canarygrass, selective removal of other invasive, non-native vegetation, and planting native trees and shrubs will increase riparian functions along Springbrook Creek in Units A, B, and E. This treatment is limited to berms adjacent to Springbrook Creek in Units A, B, and E and uplands adjacent to the wetland re-establishment areas in Unit E.

Protection Setback (Buffer): Portions of all units, except Unit D, will include 40-foot-wide “buffers” to be planted with native trees and shrubs in both wetlands and uplands. This will promote structural diversity and protect habitat from disturbance from adjacent land uses. This area will not generate mitigation credits.

Trail Zone: A Trail Zone in Unit A will include an eight-foot-wide trail and a 40-foot-wide protection setback area on both sides of the proposed trail. This will create a 2.66-acre area (88-foot wide by 1,365-foot long) that will not generate mitigation credits. In order to construct the trail, existing vegetation within an 18-foot-wide temporary construction corridor will be cleared, the 8-foot-wide trail constructed, and all the areas not occupied by the trail replanted with native woody vegetation. Areas within the Trail Zone dominated by reed canarygrass will still be mowed, treated with herbicide, and planted as part of the overall wetland rehabilitation treatment in Unit A.

The table below provides a summary of treatment types and acreage amounts for the Springbrook Bank.

Table 1: Mitigation Type and Acreage Summary

Mitigation Treatment Type	Acreage					
	Unit A	Unit B	Unit C	Unit D	Unit E	Total
Wetland Re-Establishment	0.05	0.12	9.27	--	8.35	17.79
Wetland Rehabilitation	20.02	31.39	1.06	--	--	52.47
Wetland Enhancement – Type I	--	--	4.69	--	--	4.69
Wetland Enhancement – Type II	--	--	--	2.63	--	2.63
Forested Wetland Enhancement	--	--	23.23	2.85	--	26.08
Riparian Upland Enhancement	0.65	1.49	--	--	4.42	6.56
Upland Habitat Enhancement	--	--	7.80	--		7.80
Protection Setback (Buffer)	2.65	3.44	1.64	--	1.98	9.71
Trail Zone	2.66	--	--	--	--	2.66
Totals	26.03	36.44	47.69	5.48	14.75	130.39

Functional Improvement

Substantial functional improvements are expected from Springbrook Bank at various scales—watershed, mitigation bank unit, and treatment type.

The proximity of Springbrook Bank to the lower reaches of Springbrook Creek will allow the improvements to water quality, hydrologic, floodplain, and riparian functions provided in these units to benefit downstream aquatic habitat in Springbrook Creek, the Green River, and the Duwamish River and its estuary. Springbrook Creek is one of the few remaining tributary streams to the Green River, making the habitat value of associated natural areas difficult to replicate due to landscape position, water supply availability, urbanization of the surrounding area, and historic hydrologic manipulation of natural hydrologic systems in the Lower Green River Basin. In a landscape that is nearly completely developed, protecting and improving the last remaining natural areas is a high priority. This will help to sustain the viability of remaining fish and wildlife populations such as Chinook salmon and the great-blue heron-nesting colony located in the Black River Riparian Forest. Improvements at Springbrook Bank will address limiting factors for the Springbrook Creek Sub-Basin watershed including degraded riparian condition, poor water quality, and lack of off-channel habitat (WRIA 9 Steering Committee 2005, Kerwin and Nelson 2000).

Significant increases to wetland, stream, riparian, and floodplain functions will result at Springbrook Bank by re-establishing, rehabilitating, and enhancing wetlands; enhancing upland habitat; and improving riparian conditions along Springbrook Creek. Water quality, hydrologic, and habitat functions are expected to increase significantly at Springbrook Bank.

Restoring and enhancing wetland and buffer areas within Springbrook Creek Basin is not anticipated to have any negative long-term effects on the aquatic resources in the basin, though there will be temporary effects caused by construction and excavation activities. These impacts, primarily minor water quality impacts related to sediment control, are anticipated to be short term (one year or less during and immediately following construction activity). Impacts will be avoided and minimized to the extent practicable through the use of construction Best Management Practices (BMPs). The actual duration of these minor impacts will depend on the schedule and phasing of construction. Even with temporary impacts due to construction, the Springbrook Bank will have a positive change to the ecological conditions and functions of the existing wetlands.

Buffer Zone

A 40-foot-wide protection setback area (buffer) will be established between the proposed habitat and adjacent land uses.

Fill Amounts

Approximately 702 cubic yards (CY) of fill will be placed in existing wetlands within the 130.54-acre bank site. In Units A and B, 0.05 CY of fill will be placed in existing wetlands due to grading associated with breaching the berm. In Unit C, 167 CY of temporary fill will be placed in existing wetlands for a construction entrance. Also in Unit C, 500 CY will be placed in existing wetlands for ditch plugs, 2.5 CY of fill to construct the log weir structure, and 28 CY of fill due to grading. In Unit D, 4.0 CY of fill will be used for quarry spalls that will be placed at the outlet of a pipe.

In Unit E, 908 CY of fill material (quarry spalls) will be placed below the ordinary high water mark at the breaches for scour protection.

Fish Stranding

A fisheries biologist reviewed the design for Units A and B to evaluate the effects on fishing related to breaching the berms. This evaluation concluded that the proposed site alteration from breaching the berms would restore natural floodplain habitat beneficial to fish and likely result in a decrease in fish stranding (WSDOT 2006). Springbrook Bank will also result in net improvements to fish habitat.

To ensure streamside wetlands do not strand fish, low-flow connecting channels were incorporated into the design of Unit E. This design will allow floodwaters to flow back into the channel without leaving any standing water not directly connected to the channel of Springbrook Creek preventing fish stranding.

The service area of Springbrook Bank (Figure 3) includes portions of WRIAs 8 and 9—Lower Green River, Black River, West Lake Washington (within Renton City limits), East Lake Washington, May Creek, Mill Creek Basins, and the Lower Cedar River Basin to State Route 18 (SR 18). The portion of the Lower Cedar River Basin southeast of SR 18 has been excluded from the service area because it extends over seven miles into less urbanized areas. The listed criteria were taken into account in defining the service area of Springbrook Bank and are based on criteria outlined in the *CBMOA* (WSDOT 1994), *Federal Guidance for the Establishment, Use, and Operation of Mitigation Banks* (US Army Corps of Engineers 1995), and the *Washington State Draft Rule on Wetland Mitigation Banking* (Washington State 2001).

1. Springbrook Bank will improve wetland and stream functions. The Bank will restore, enhance, and protect watershed processes that create improved wildlife habitat, riparian and floodplain functions, and water quality in an area with little natural space left to protect.
2. Springbrook Bank is very low in the watershed. By including sub-basins lower in WRIAs 8 and 9, Springbrook Bank will serve as mitigation for wetland impacts much closer to the project areas of candidate projects and within Renton City limits rather than farther away, but within the same WRIA.
3. Similar Ecoregion. The service area includes basins in a similar ecoregion, in which the remaining ecological systems are relatively uniform within a nearly built-out urban area. Springbrook Bank is designed to function at full watershed build-out to increase its sustainability in a highly urbanized watershed.
4. Watershed-Based Mitigation. The overall ecological benefit of an urban bank exceeds the value of alternatives, which would likely involve the creation of small wetland fragments along the highway right of way as compensation for impacts to small Category II, III, and IV wetlands.
5. WSDOT and City of Renton. The credits available to WSDOT from Springbrook Bank will be used for transportation projects, which occur in WRIAs 8 and 9. The credits available to the City will be used for City-approved projects within the service area.
6. WSDOT's Water Resources Program. Springbrook Bank and the Early Environmental Investments (EEI) Program are components of a larger water resources program that includes avoidance and minimization of water resource impacts, on-site stream mitigation where feasible, and other watershed solutions. Springbrook Bank is one of several alternatives for water resource improvement opportunities for WSDOT, local jurisdictions, and resource agencies to consider.

Projects located within the service area (Figure 3) are eligible for use of credits from Springbrook Bank for mitigation according to the terms of this MBI. Projects outside of the service area will only be eligible in limited circumstances where practicable alternatives do not exist and with special approval of the BOC members.

Demonstration of Financial Assurance

The funding for the Springbrook Bank design, construction, operation, monitoring, and a portion of site management is secured through the 2003 Transportation Funding Package for the WSDOT I-405 Corridor Program. The City is providing the land in perpetuity and funding the trail design and construction and a portion of site management. The City of Renton is a full-service municipality with various financial resources that include general fund revenues from taxes and fees and a Surface Water Utility enterprise fund that is funded by utility rates. The City can also issue bonds to fund capital improvements. The revenue from the sale of the City's share of credits from Springbrook Bank will be secured in an account set up specifically to fund all of the City's costs associated with the management of the bank. This funding will be used for monitoring and required site management actions during the initial monitoring and management period and long-term management. Revenues in the account shall accumulate and be restricted to finance costs associated with operating and managing Springbrook Bank. If the level of funding in the account is insufficient, the City will seek additional funding through its periodic budget requests. The City Parks Division is part of the City's Community Services Department and currently has an established fund for the maintenance and repair of parks and trails within the City. The Parks Division funding source would be used for the maintenance of the trail in the bank. Funding needed for bank operation will be reviewed annually as part of the City's normal budget process.

Reporting, Monitoring, and Long-Term Management

Reporting and Monitoring

WSDOT, on behalf of itself and the City, will prepare and submit monitoring reports to BOC represented agencies by March 31 following each formal monitoring year. These reports will document the progress that has been made towards achieving the performance standards, adaptive management actions, and an overview of site progress.

A combination of formal and informal monitoring of the bank site will occur during the initial monitoring and management period or until all performance standards are met, whichever occurs later. Formal monitoring will consist of quantitative sampling techniques to address specific performance standards, while informal monitoring will consist of visual inspection of the mitigation area to identify any issues and necessary adaptive management actions. Formal monitoring will occur once per specified year between June and September (see Table 3), while informal monitoring may occur periodically throughout the year (see Table 4). Additional formal monitoring visits may be conducted in years not specified to address performance standards not achieved in designated and/or prior years.

Table 2: Formal Monitoring Period

Monitoring Year	Frequency
Year 1	Annual Site Visit
Year 3	Annual Site Visit
Year 5	Annual Site Visit
Year 7	Annual Site Visit
Year 10	Annual Site Visit

Table 3: Informal Monitoring Period

Monitoring Year	Frequency
Year 1	Quarterly Site Visits
Year 2	Quarterly Site Visits
Year 3	Quarterly Site Visits
Year 4	Quarterly Site Visits
Year 5	Quarterly Site Visits
Year 6	Annual Site Visit
Year 7	Annual Site Visit
Year 8	Annual Site Visit
Year 9	Annual Site Visit
Year 10	Annual Site Visit

Long-Term Site Management

Site management after the initial monitoring and management period will be conducted by the City to ensure that functional benefits of the mitigation activities are not degraded. Springbrook Bank will be managed to maximize fulfillment of mitigation bank goals and objectives by ensuring the long-term protection of wetland and buffer areas. Long-term management of the site will focus on maintaining native plant communities and wildlife habitat diversity. Site management activities include, but are not limited to, weed control, trash removal, vandalism repair, and structure and/or signage repair. The following guidelines are established to assist in management of the site following the initial monitoring and management period:

- Deciduous scrub-shrub and forested areas will remain dominated by native woody target species included in the planting plan or currently established on the site.
- Native woody vegetation appropriate for the site will dominate the reed canarygrass treatment areas in Units A and B, and the wetland re-establishment areas in Units C and E.

- Weed control activities at the site will meet requirements of the King County Noxious Weed Control Board as well as weed control requirements specified in the MBI.
- If hydrologic conditions change within the system providing hydrology to the re-establishment area in Unit C, adjustments to the controls may be made. If excess water threatens woody planting survival water from the grade-separation pump station, water may be diverted to Springbrook Creek via existing infrastructure, or if insufficient water is present, the height of the weir maybe raised at the outflow of the re-establishment area to retain more water at the site.

All structures and facilities within Springbrook Bank, including fences, the elevated boardwalk, pump-station diversion pipe and structure, the Tukwila stormwater facility, and the stop-log weir, shall be properly maintained in perpetuity or for as long as each is needed to accomplish the goals of Springbrook Bank and achieve the requirements of the MBI.

The City will manage the site in perpetuity by fulfilling landowner obligations defined in the Conservation Easement to maintain the ecological functions on the site.

Conservation Easement

WSDOT and the City have taken actions to ensure that Springbrook Bank wetland, riparian, and habitat functions and values will be protected in perpetuity. The actions include establishing a conservation easement and encumbering the deed with the signed Mitigation Banking Instrument.

The conservation easement is intended to restore, protect, manage, and enhance the functional values of the wetlands and other lands and to conserve functions and values including fish and wildlife habitat, water quality improvement, flood water retention, groundwater recharge, open space, aesthetic values, and environmental education. Use prohibitions listed in the easement will prevent the site from being used for activities that would be incompatible with the intent of the easement.

As part of the Springbrook Bank, an elevated, eight-foot-wide public boardwalk trail, limited to pedestrian use, will be constructed through the western edge of Unit A, roughly parallel to Springbrook Creek (see Figure 5 for trail location). A 40-foot-wide vegetated buffer on each side will be present on each side of the trail. This area will not be included in the bank acreage generating mitigation credits. The elevated boardwalk will connect to both local and regional trail systems. Benches and interpretive signage will be placed at two locations along the trail to facilitate passive recreation, such as bird watching. The urban setting, the City's prior commitment to connect to regional and local trail systems, and the environmental education opportunities of this bank were factors in the decision to include a trail. Several alternative trail alignments were considered before the trail alignment was selected. This alignment best met the selection criteria regarding the minimization of impacts to the site, providing meaningful environmental education opportunities, and making the most direct connection to existing trail systems.

Reasons for Including a Trail at Springbrook Bank

The trail will provide the critical missing link to the existing trail that has been incorporated in the long-term planning for the local and regional trail systems:

- The City of Renton made formal commitments to the community to connect the trail system at this location long before the site was proposed as a mitigation bank. The City previously acquired an easement as part of a long-range trail linkage planning effort in the Springbrook Creek area as part of the City of Renton's Parks, Recreation, and Open Space Plan and Trails Master Plan (adopted June 1992).
- The proposed trail will connect to the existing Springbrook Trail that runs through the Green River Valley and then connects to a larger, regional trail system—King County's regional Interurban Trail and King County's regional Green River Trail.

Disturbances due to the urban setting and surrounding land uses will minimize wildlife impacts to the trail:

- Due to the densely urbanized setting and surrounding local land uses, wildlife that may use the bank site has been adapted to an urban setting through exposure to a high level of human activities in the project vicinity. Any disturbance related to the presence of the trail will be minor compared to disturbances from the surrounding urban landscape.

The public expects access to large publicly owned urban natural areas:

- Substantial state resources and City lands will be used to develop Springbrook Bank, which will be established in a highly urbanized ecosystem and develop connections between people and local natural resources.
- Springbrook Bank will conserve 130.39 acres of some of the last remaining large tracts of undeveloped green space in the Lower Green River Basin.

The trail will provide substantial environmental education opportunities:

- The unique urban setting of Springbrook Bank, the City's planned trail access, and the relative lack of natural areas in the project vicinity present a rare opportunity to integrate

environmental education, public access, and wetland mitigation. Maximizing this opportunity will increase awareness and understanding of the important ecosystem functions that wetlands, streams, and riparian areas provide within an urbanized setting.

- By placing the trail near Springbrook Creek, the public will see a diverse environment with connections to wetlands and streams.
- Educational opportunities provided by the trail help maximize environmental benefits for the community through education and public support for spending public dollars on environmental mitigation and stewardship activities in the region.
- Education and public involvement are vital parts of natural resource management. The importance of education and public involvement is demonstrated by its inclusion and emphasis in Green Infrastructure planning, Alternative Futures analysis, and the development of comprehensive plans. Education is essential because it provides the public with an accurate understanding of why natural resources are valuable to the community. Education and outreach efforts are also key factors to increasing enrollment in incentive programs that foster land conservation. Likewise, these efforts also encourage the public to get involved through voluntary actions either on their own property or by supporting local projects. Education and public involvement can also improve support for regulatory protection. [This text adapted from *Wetlands in Washington State – Volume 2: Guidance for Protecting and Managing Wetlands* (Washington State Department of Ecology 2005)].

Selection of Proposed Trail Alignment

Selection of a trail alignment was a process that incorporated a number of environmental and social factors. The following criteria were used to select the proposed trail alignment:

- Align the trail as directly as possible on City-owned property.
- Minimize impacts to wetlands, woody vegetation, and riparian areas.
- Incorporate environmental education within a wetland setting.
- Complete the missing link of an existing trail as planned in accordance with the City's Master Trail Plan and the King County Regional Trail System.

Several alternative trail alignments were considered but were rejected because they did not satisfy the selection criteria for a trail alignment. These alternative trail options and the reasons for rejecting them are summarized below.

Unit A Perimeter Option—This option aligns the trail within the southern, eastern, and northern perimeter buffer of Unit A. This option was rejected because it created a longer alignment that would have resulted in substantially greater impacts to wetlands and woody vegetation than the selected trail alignment.

Unit A Interior Option—This option includes a trail that broadly bends through the interior of the Unit A. This option was rejected because it created a longer alignment that would have resulted in substantially greater impacts to woody vegetation than the selected trail alignment, and would essentially bisect Unit A and disturb the interior.

Unit A Berm Option—This option aligns the trail on the berm next to Springbrook Creek. It was identified in the City of Renton Trails Master Plan (1992) and is consistent with the alignment of existing segments of Springbrook Trail located adjacent to Springbrook Creek. This option was rejected because it would directly affect riparian functions by disturbing

some existing riparian trees and limit future establishment of riparian trees. Impacts to riparian conditions are undesirable because Springbrook Creek is limited by water quality problems, such as high water temperature and low dissolved oxygen.

Oakesdale Avenue Option—This option aligns the trail west along SW 34th Street, north along Oakesdale Avenue SW, and east along 27th Street SW. This option was rejected for a number of reasons. This alignment is indirect and much longer, it would expose the public to safety risks associated with street traffic, it would abandon a portion of Springbrook Trail that already extends to the southern boundary of Unit A, it would not provide suitable environmental education opportunities in a wetland setting, and it would be inconsistent with the City's Trails Master Plan (1992).

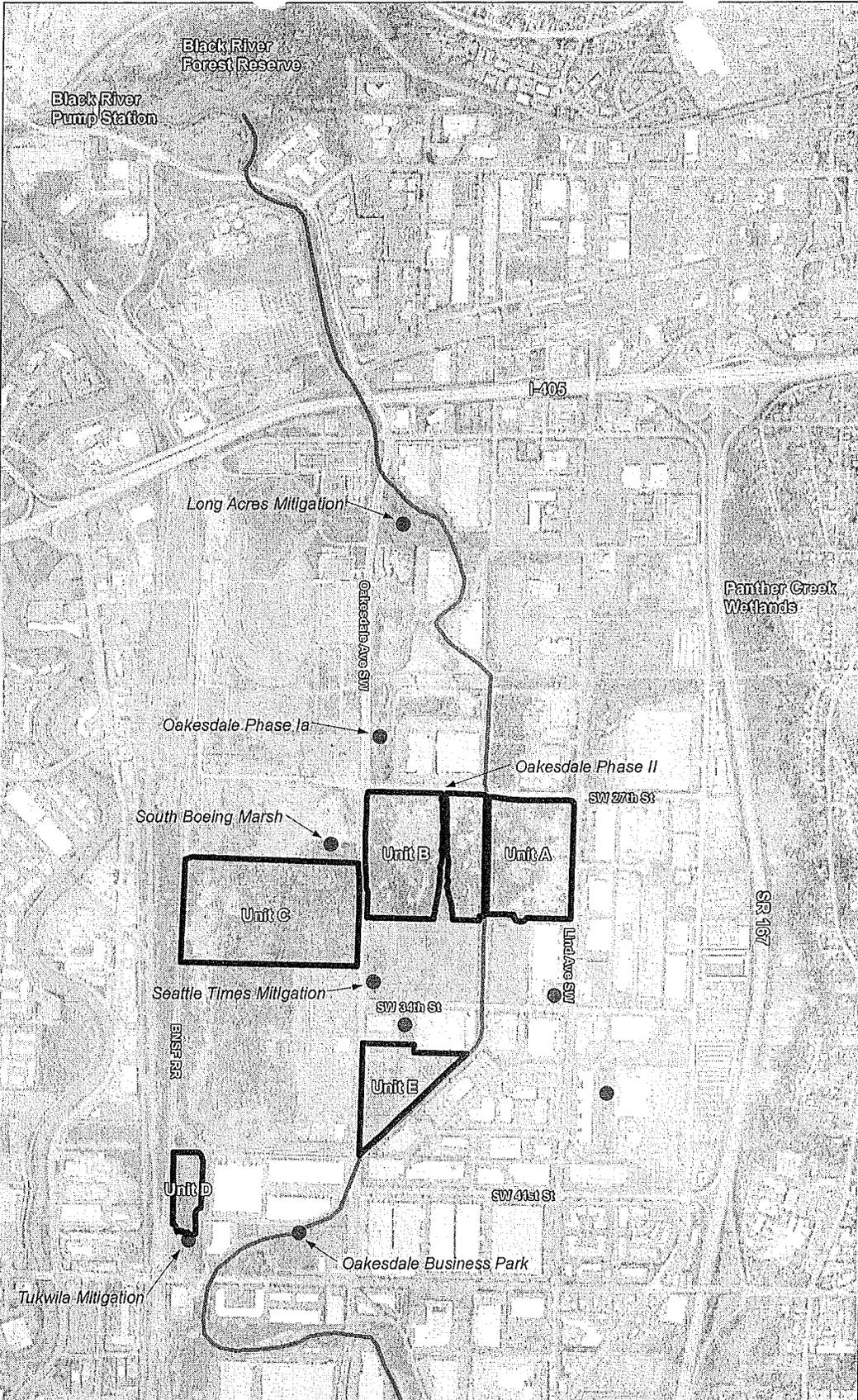
No Trail Option—This option was rejected because it would not establish the missing link to the existing Springbrook Trail, and would be inconsistent with the City's Trails Master Plan (1992). The City specifically acquired a portion of the property within Springbrook Bank for use as a trail.

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Source: City of Renton, 2003; WSDOT, 2005 | \\SEAW405405\gis\project\map_docs\EI\Springbrook\Prospectus\Figures 12-2005\Figure 1 Project Vicinity.mxd | Last Updated: 2-15-06



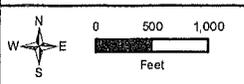
Legend

- Unit
- Springbrook Creek
- Other Wetland Mitigation Sites

PURPOSE: Wetland Mitigation

SPRINGBROOK

PROPOSED/RETAIN:



REFERENCE #:
200600100
APPLICANT: WSDOT

IN:
NEAR: Renton
COUNTY: King STATE: WA
DATE: 2/15/2006

HORIZONTAL DATUM: PROJECT
VERTICAL DATUM: NAD 83

FIGURE 1. PROJECT VICINITY

Source: City of Renton, 2003; WSDOT, 2005 | \NSEAW405405gis\project\map_docs\EEI\Springbrook\Prospectus\Figures 12-2005\Figure 2_Springbrook Bank Site.mxd | Last Updated: 2-15-06



Legend

-  Unit
-  Existing Trail
-  Existing Trail Easement

PURPOSE: Wetland Mitigation

PHOTO DATE: Winter 2002
(City of Renton)

SPRINGBROOK

REFERENCE #:

200600100

APPLICANT: WSDOT

PROPOSED/RETAIN:

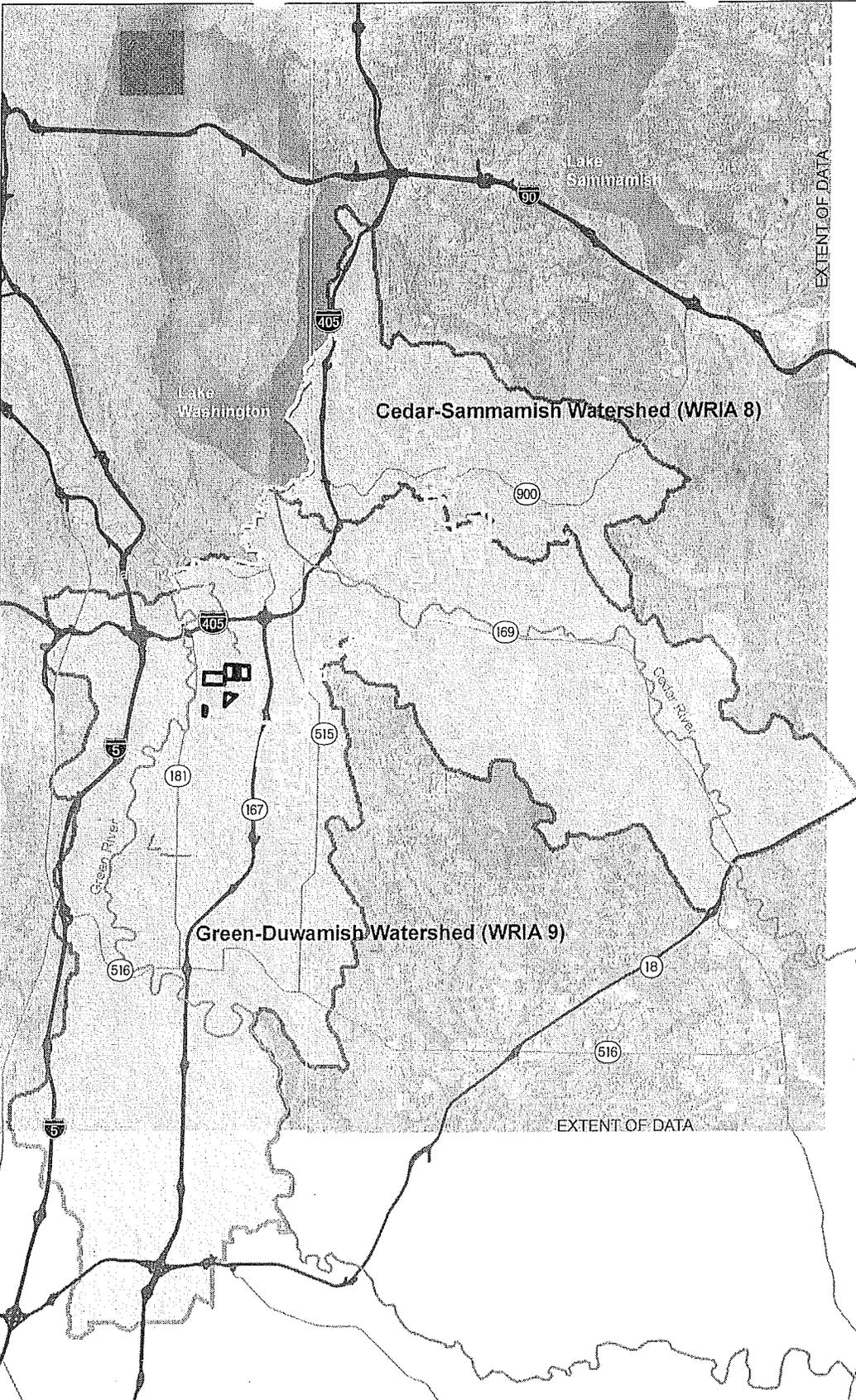
IN:
NEAR: Renton
COUNTY: King STATE: WA
DATE: 2/15/2006



HORIZONTAL DATUM: PROJECT
VERTICAL DATUM: NAD 83

FIGURE 2. SPRINGBROOK BANK SITE

Source: City of Renton, 2003; WSDOT, 2005 | \SEAV\405\405gis\project\map_docs\EEI\Springbrook\Prospectus\Figures 12-2005\Figure 3 Service Area.mxd | Last Updated: 2-15-06



Legend

- WRIA Boundary
- Service Area
- Springbrook Bank
- City of Renton
- River
- Freeway
- Arterial



PURPOSE: Wetland Mitigation
 PHOTO DATE: 2002 (King County)

SPRINGBROOK
 REFERENCE #:
200600100
 APPLICANT: WSDOT
FIGURE 3. SERVICE AREA

PROPOSED/RETAIN:
 IN:
 NEAR: Renton
 COUNTY: King STATE: WA
 DATE: 2/15/2006

HORIZONTAL DATUM: PROJECT
 VERTICAL DATUM: NAD 83

Legend

-  Unit
-  Springbrook Creek

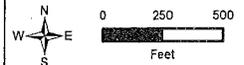


Source: City of Renton, 2003: WSDOT, 2005: \\\SEAW405405gis\project\map_docs\EEI\Springbrook\Prospectus\Figures 12-2005\Figure 4 Historical Aerial Photo.mxd | Last Updated: 2-15-06

PURPOSE: Wetland Mitigation
PHOTO DATE: 1936 (Puget Sound River History Project)

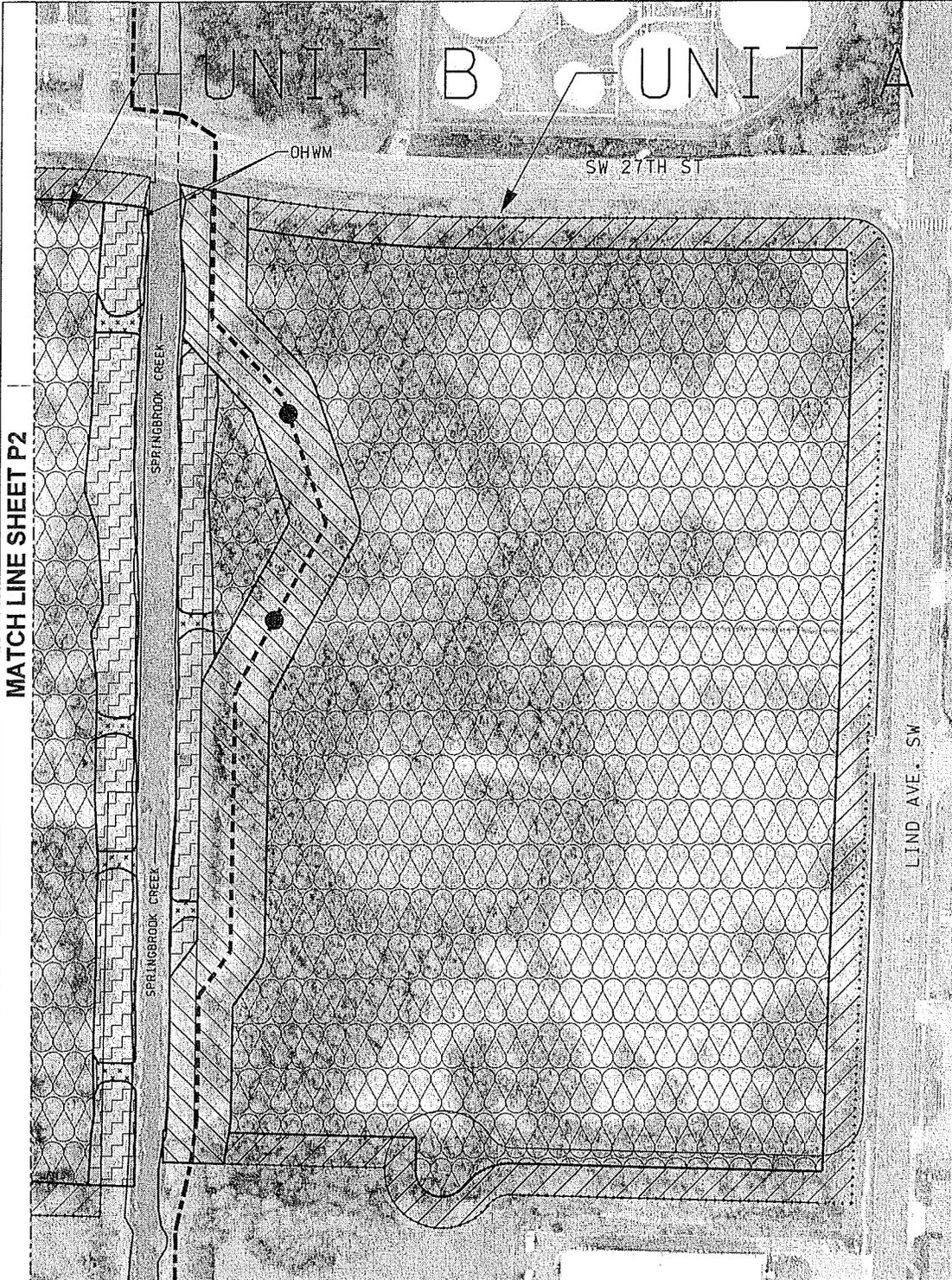
SPRINGBROOK
REFERENCE #:
200600100
APPLICANT: WSDOT
FIGURE 4. HISTORICAL AERIAL PHOTO

PROPOSED/RETAIN:
IN:
NEAR: Renton
COUNTY: King STATE: WA
DATE: 2/15/2006



HORIZONTAL DATUM: PROJECT
VERTICAL DATUM: NAD 83

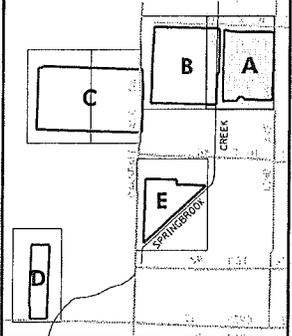
MATCH LINE SHEET P2



UNIT A LEGEND

- WETLAND RE-ESTABLISHMENT
- WETLAND REHABILITATION
- RIPARIAN ENHANCEMENT
- BUFFER FROM TRAIL
- BUFFER FROM PARCEL BOUNDARY
- PARCEL BOUNDARY
- PROPOSED TRAIL
- EXISTING TRAIL
- BENCHES

KEYMAP

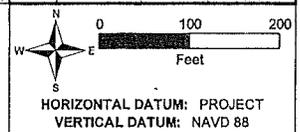


PURPOSE: Wetland Mitigation

SPRINGBROOK
 REFERENCE #:
200600100
 APPLICANT: WSDOT
 FIGURE 5
 UNIT A MITIGATION TYPE

PROPOSED/RETAIN:

IN: Streams and Wetlands
 NEAR/JAT: Renton
 COUNTY: King
 DATE: 02/15/06
 STATE: WA



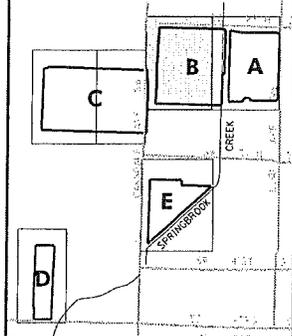
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UNIT B LEGEND

-  WETLAND REHABILITATION
-  BUFFER FROM PARCEL BOUNDARY
-  PARCEL BOUNDARY

KEYMAP

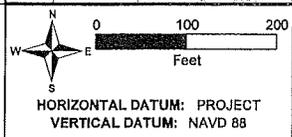


PURPOSE: Wetland Mitigation

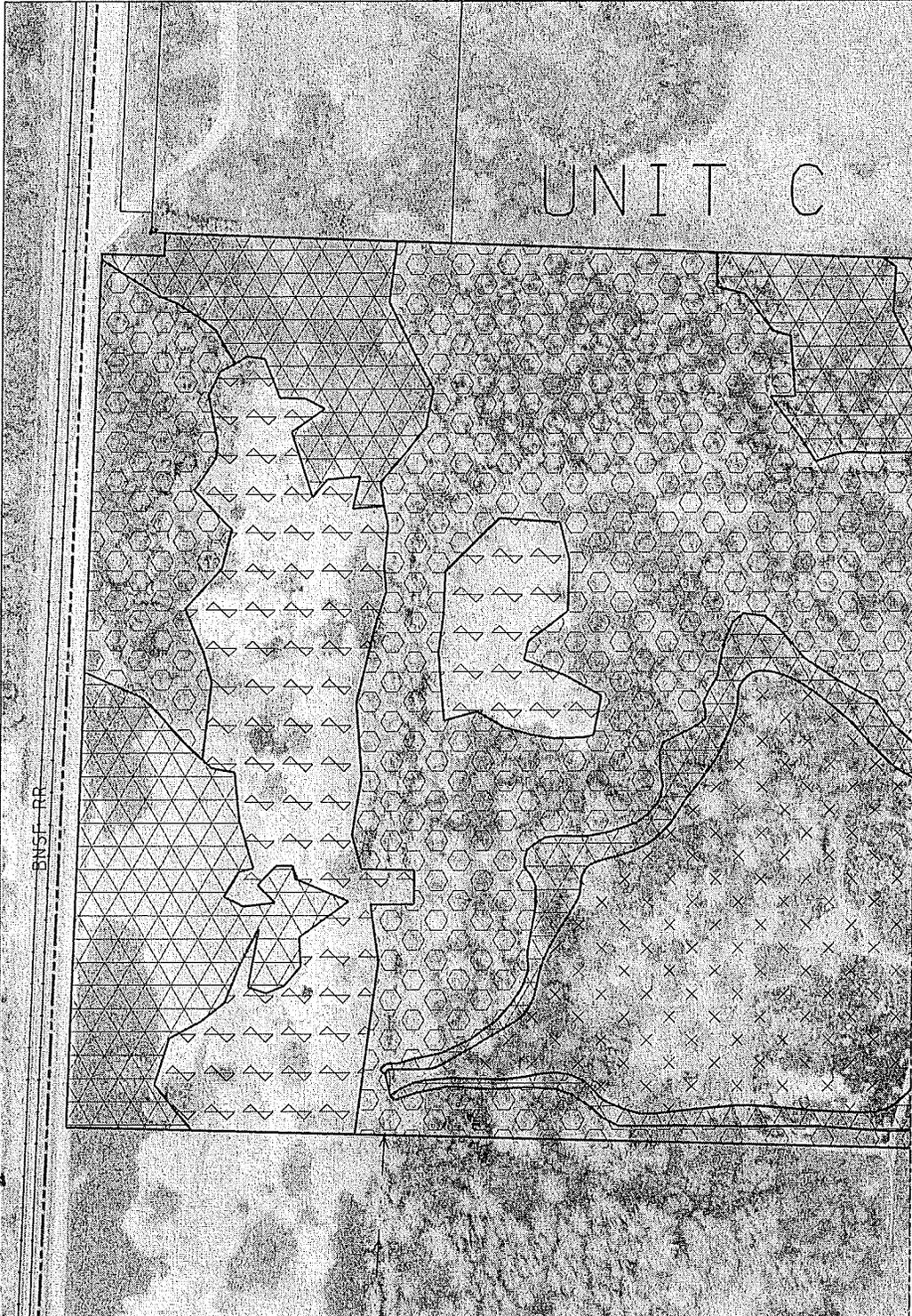
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 REFERENCE #:
200600100
 APPLICANT: WSDOT
 FIGURE 6
 UNIT B MITIGATION TYPE

PROPOSED/RETAIN:
 IN: Streams and Wetlands
 NEAR/AT: Renton
 COUNTY: King
 DATE: 02/15/06

STATE: WA



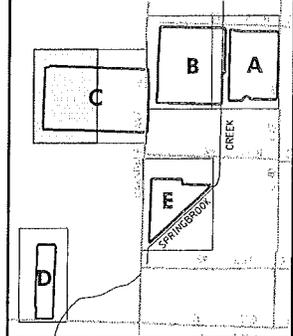
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UNIT C LEGEND

- WETLAND RE-ESTABLISHMENT
- WETLAND REHABILITATION
- FORESTED WETLAND ENHANCEMENT
- WETLAND ENHANCEMENT TYPE I
- UPLAND HABITAT ENHANCEMENT
- BUFFER FROM PARCEL BOUNDARY
- PARCEL BOUNDARY
- RAILROAD TRACK
- CITY LIMITS
- EXISTING CONVEYANCE DITCH

KEYMAP



PURPOSE: Wetland Mitigation

SPRINGBROOK
REFERENCE #:
200600100
APPLICANT: WSDOT
FIGURE 7
UNIT C MITIGATION TYPE

PROPOSED/RETAIN:
IN: Streams and Wetlands
NEAR/AT: Renton
COUNTY: King **STATE:** WA
DATE: 02/15/06

0 100 200 Feet
HORIZONTAL DATUM: PROJECT
VERTICAL DATUM: NAVD 88

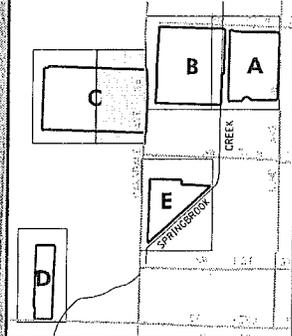
MATCH LINE SHEET P3



UNIT C LEGEND

-  WETLAND RE-ESTABLISHMENT
-  WETLAND REHABILITATION
-  FORESTED WETLAND ENHANCEMENT
-  UPLAND HABITAT ENHANCEMENT
-  BUFFER FROM PARCEL BOUNDARY
-  PARCEL BOUNDARY
-  EXISTING CONVEYANCE DITCH

KEYMAP



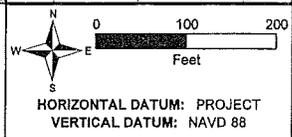
PURPOSE: Wetland Mitigation

SPRINGBROOK
 REFERENCE #:
200600100
 APPLICANT: WSDOT
 FIGURE 8
 UNIT C MITIGATION TYPE

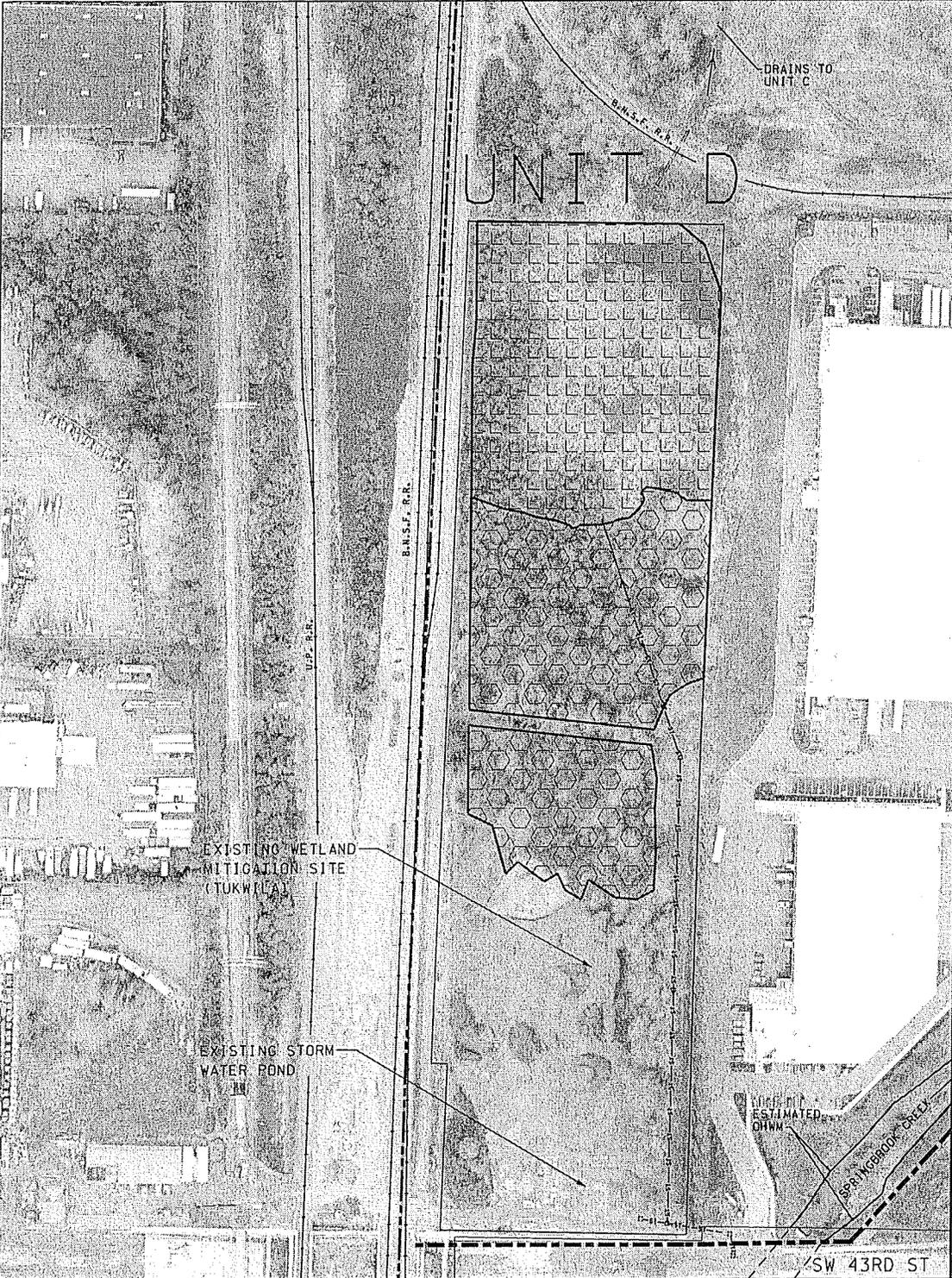
PROPOSED/RETAIN:

IN: Streams and Wetlands
 NEAR/AT: Renton
 COUNTY: King
 DATE: 02/15/06

STATE: WA



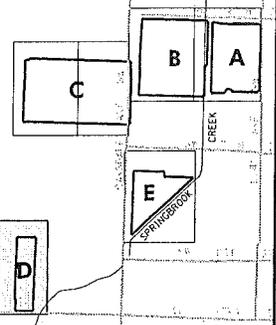
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UNIT D LEGEND

-  FORESTED WETLAND ENHANCEMENT
-  WETLAND ENHANCEMENT TYPE II
-  PARCEL BOUNDARY
-  PROPOSED STORM SEWER
-  EXISTING STORM SEWER
-  RAILROAD TRACK
-  EXISTING CONVEYANCE DITCH
-  CITY LIMITS
-  EXISTING TRAIL

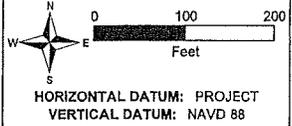
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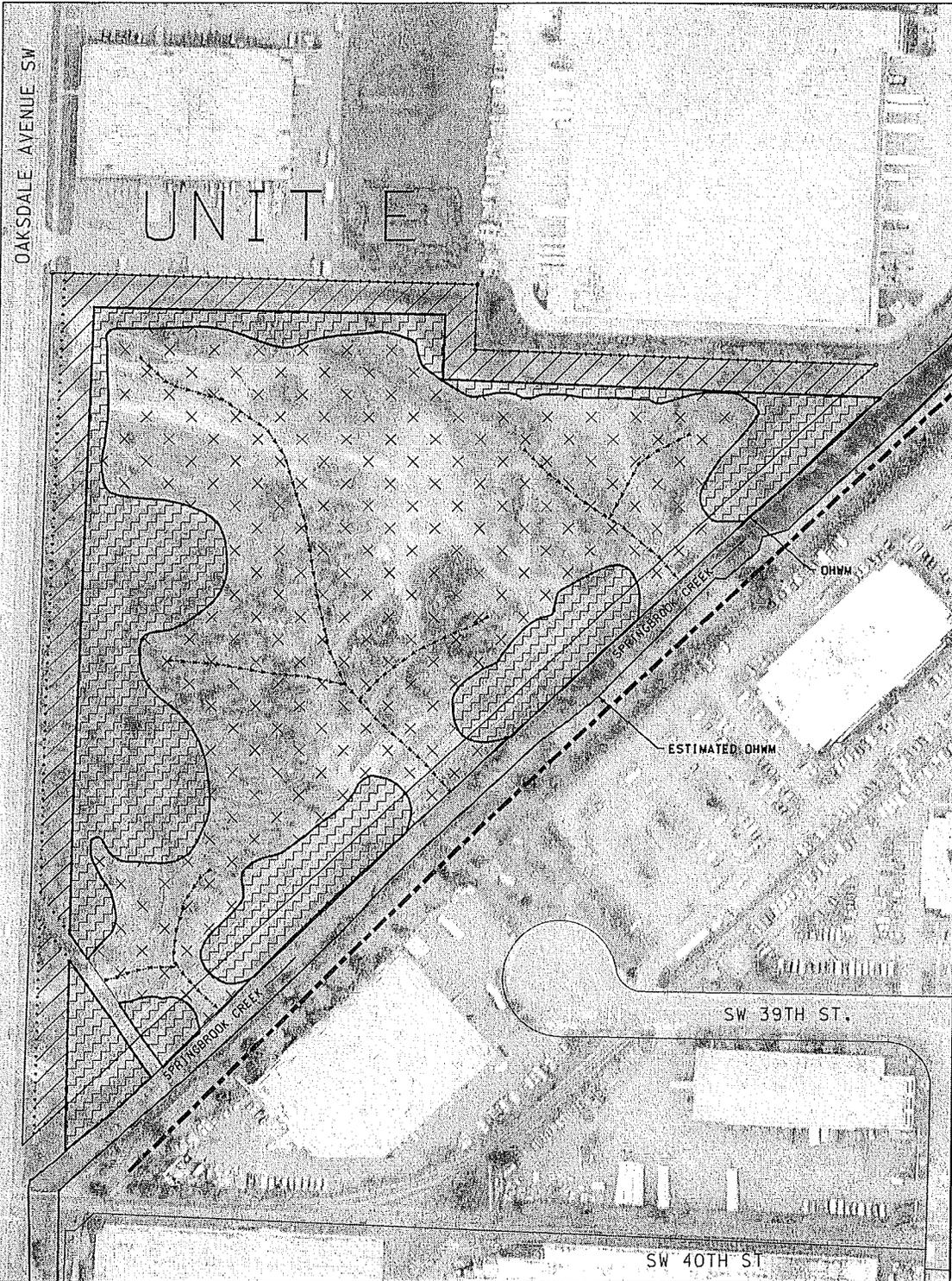
PURPOSE: Wetland Mitigation

SPRINGBROOK
 REFERENCE #:
200600100
 APPLICANT: WSDOT
 FIGURE 9
 UNIT D MITIGATION TYPE

PROPOSED/RETAIN:
 IN: Streams and Wetlands
 NEAR/AT: Renton
 COUNTY: King STATE: WA
 DATE: 02/15/06

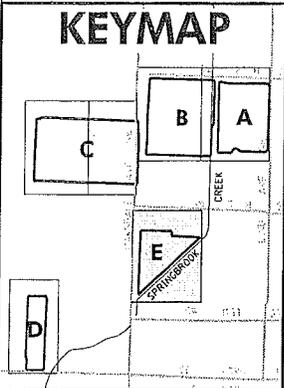


Source: WSDOT, 2004, KING COUNTY, 2004 | Last updated: 8:48:34 AM 3/3/2006 | PW:\Engineering\010\Drawings\Exhibits\Springbrook Prospectus Fig-10.dgn | chiss



UNIT E LEGEND

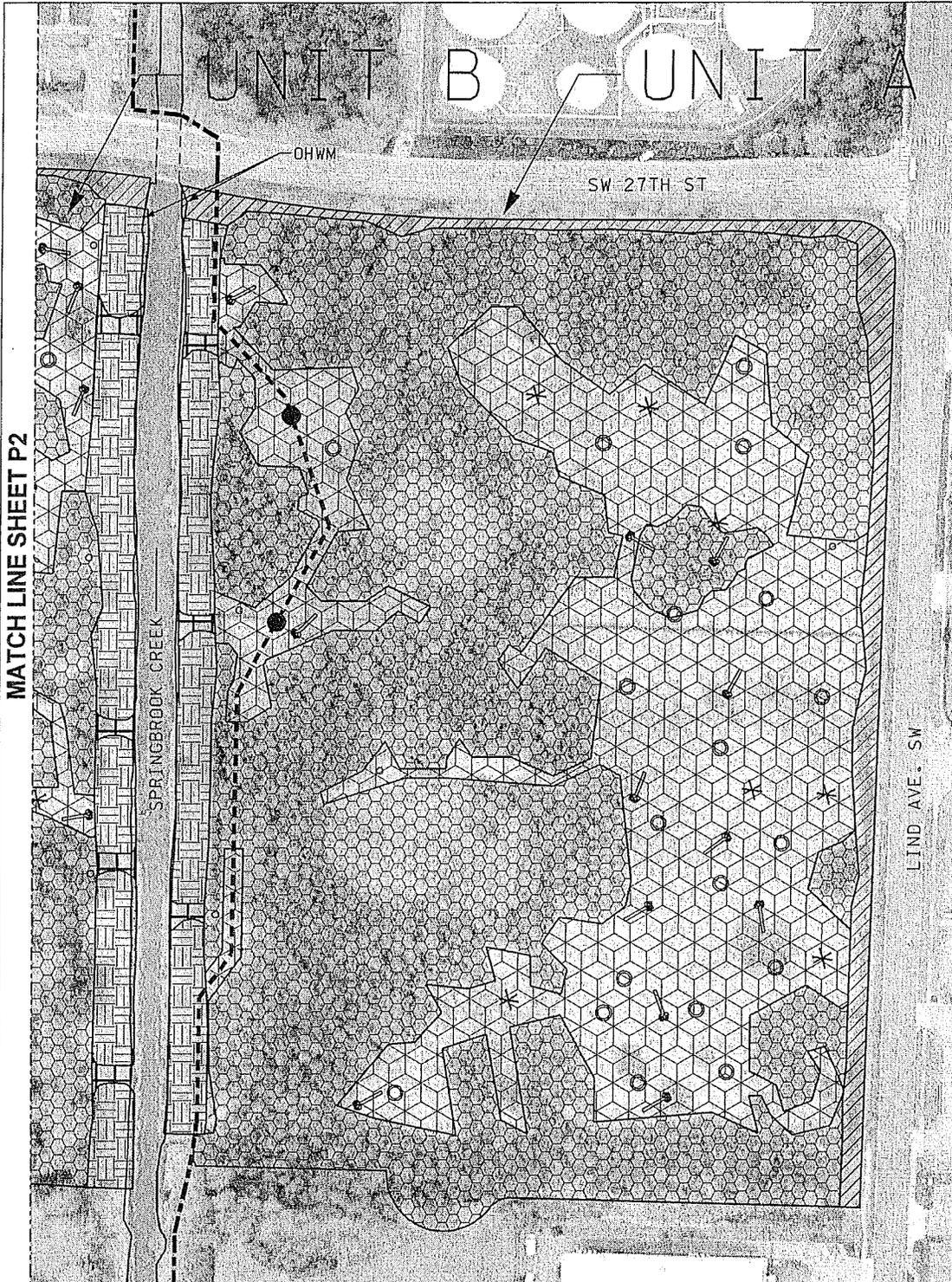
- WETLAND RE-ESTABLISHMENT
- RIPARIAN ENHANCEMENT
- BUFFER FROM PARCEL BOUNDARY
- PROPOSED DRAINAGE PATH
- PARCEL BOUNDARY
- EXISTING TRAIL



<p>PURPOSE: Wetland Mitigation</p>	<p>SPRINGBROOK REFERENCE #: 200600100 APPLICANT: WSDOT FIGURE 10 UNIT E MITIGATION TYPE</p>	<p>PROPOSED/RETAIN: IN: Streams and Wetlands NEAR/AT: Renton COUNTY: King DATE: 02/15/06</p> <p>STATE: WA</p>	<p>HORIZONTAL DATUM: PROJECT VERTICAL DATUM: NAVD 88</p>
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Source: WSDOT, 2004, KING COUNTY, 2004 | Last updated: 8:48:59 AM 3/9/2006 | P:\V\Engineering\01\Drawings\text\hibits\Springbrook Prospect\Fig-11.dgn | chriss

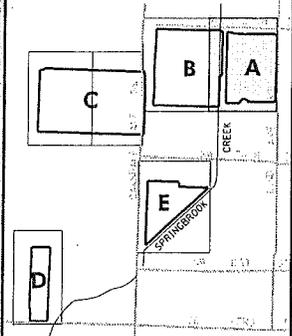
MATCH LINE SHEET P2



UNIT A & B LEGEND

-  REED CANARYGRASS REMOVAL, HYDROLOGIC ALTERATION AND WETLAND PLANTING
-  REED CANARYGRASS REMOVAL AND UPLAND PLANTING
-  HYDROLOGIC ALTERATIONS
-  INVASIVE REMOVAL AND UPLAND PLANTING
-  GRADING, HYDROLOGIC ALTERATION, AND WETLAND PLANTING
-  PROPOSED TRAIL
-  EXISTING TRAIL
-  VERTICAL SNAG
-  LOG
-  PLANTING HUMMOCK
-  BRUSH PILE
-  BENCHES

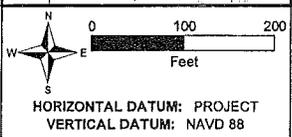
KEYMAP



PURPOSE: Wetland Mitigation

SPRINGBROOK
REFERENCE #:
200600100
APPLICANT: WSDOT
FIGURE 11 - UNIT A
MITIGATION TREATMENTS

PROPOSED/RETAIN:
IN: Streams and Wetlands
NEAR/AT: Renton
COUNTY: King
DATE: 02/15/06
STATE: WA



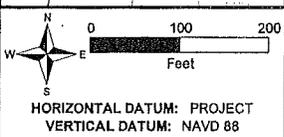
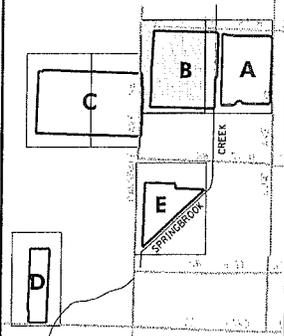
Source: WSDOT; 2004, KING COUNTY; 2004 | Last updated: 8:49:20 AM 3/3/2006 | P:\Engineering\010\Drawings\text\B\Springbrook Prospectus Fig-12.dgn | chris



UNIT B LEGEND

-  REED CANARYGRASS REMOVAL, HYDROLOGIC ALTERATION AND WETLAND PLANTING
-  HYDROLOGIC ALTERATIONS
-  INVASIVE REMOVAL AND UPLAND PLANTING
-  VERTICAL SNAG
-  LOG
-  PLANTING HUMMOCK
-  BRUSH PILE

KEYMAP

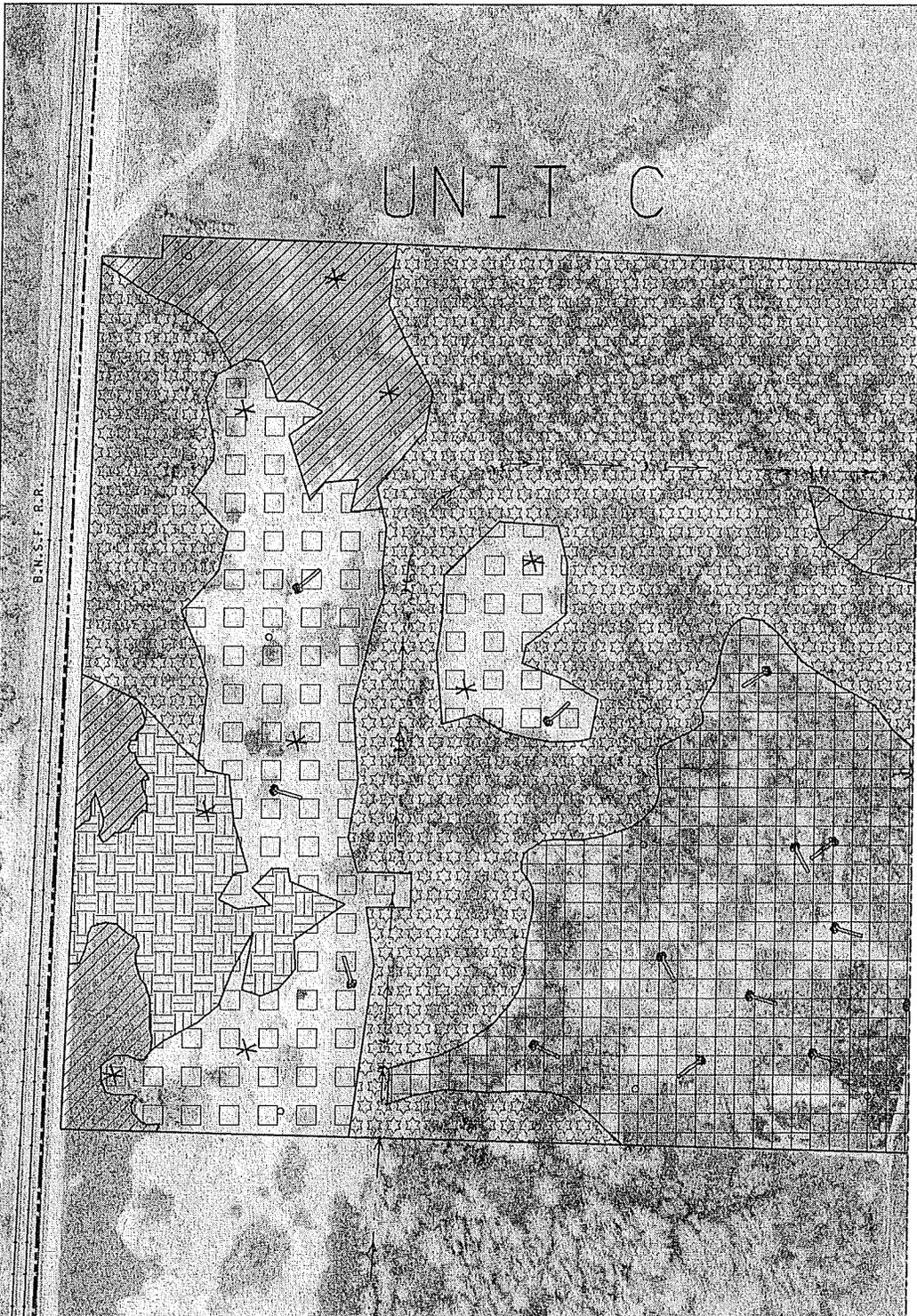


PURPOSE: Wetland Mitigation

SPRINGBROOK
 REFERENCE #:
200600100
 APPLICANT: WSDOT
 FIGURE 12 - UNIT B
 MITIGATION TREATMENTS

PROPOSED/RETAIN:
 IN: Streams and Wetlands
 NEAR/JAT: Renton
 COUNTY: King STATE: WA
 DATE: 02/15/06

UNIT C

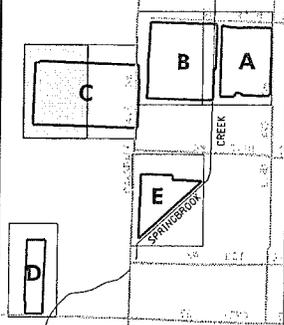


UNIT C LEGEND

-  REED CANARYGRASS REMOVAL AND UPLAND PLANTING
-  INVASIVE REMOVAL AND UPLAND PLANTING
-  GRADING, HYDROLOGIC ALTERATION, AND WETLAND PLANTING
-  INVASIVE REMOVAL AND WETLAND PLANTING
-  INVASIVE REMOVAL AND CONIFER UNDERPLANTING
-  REED CANARYGRASS REMOVAL AND WETLAND PLANTING
-  RAILROAD TRACK
-  EXISTING CONVEYANCE DITCH
-  CITY LIMITS
-  VERTICAL SNAG
-  LOG
-  BRUSH PILE
-  DITCH PLUG

MATCH LINE SHEET P4

KEYMAP

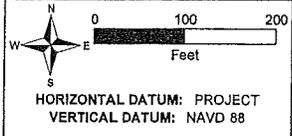


Source: WSDOT; 2004, KING COUNTY; 2004 | Last updated: 8:49:41 AM 3/3/2006 | P:\V\Engineering\010\Drawings\exhibits\Springbrook Prospectus Fig-13.dgn | ch1ss

PURPOSE: Wetland Mitigation

SPRINGBROOK
 REFERENCE #:
200600100
 APPLICANT: WSDOT
 FIGURE 13 - UNIT C
MITIGATION TREATMENTS

PROPOSED/RETAIN:
 IN: Streams and Wetlands
 NEAR/AT: Renton
 COUNTY: King STATE: WA
 DATE: 02/15/06



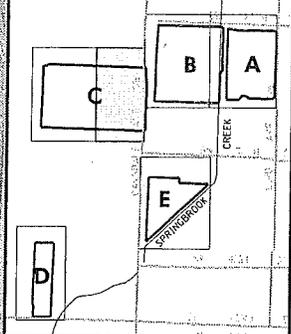
MATCH LINE SHEET P3



UNIT C LEGEND

-  GRADING, HYDROLOGIC ALTERATION, AND WETLAND PLANTING
-  INVASIVE REMOVAL AND WETLAND PLANTING
-  HYDROLOGIC ALTERATION AND CONIFER UNDERPLANTING
-  INVASIVE REMOVAL AND CONIFER UNDERPLANTING
-  EXISTING CONVEYANCE DITCH
-  VERTICAL SNAG
-  LOG
-  BRUSH PILE
-  DITCH PLUG

KEYMAP

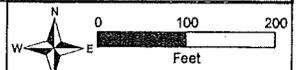


PURPOSE: Wetland Mitigation

SPRINGBROOK
 REFERENCE #:
200600100
 APPLICANT: WSDOT
 FIGURE 14 - UNIT C
MITIGATION TREATMENTS

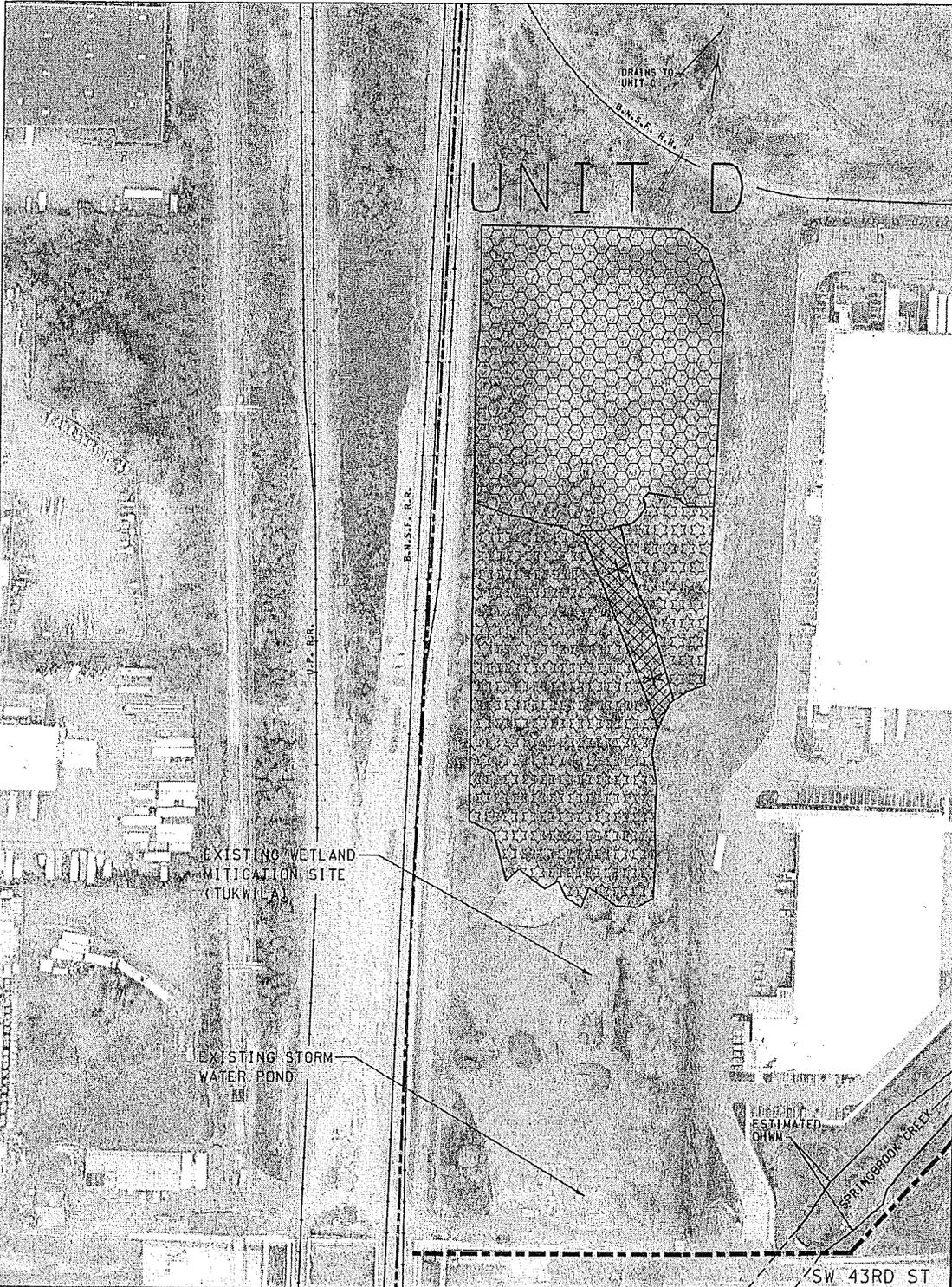
PROPOSED/RETAIN:
 IN: Streams and Wetlands
 NEAR/AT: Renton
 COUNTY: King
 DATE: 02/15/06

STATE: WA



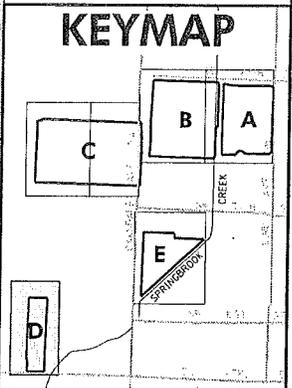
HORIZONTAL DATUM: PROJECT
 VERTICAL DATUM: NAVD 88

Source: WSDOT, 2004, KING COUNTY, 2004 | Last updated: 6:50:23 AM 3/3/2006 | P:\W\Engineering\01\Drawings\exhibits\Springbrook Prospectus Fig-15.dgn | chiss



UNIT D LEGEND

-  HYDROLOGIC ALTERATIONS
-  INVASIVE REMOVAL AND CONIFER UNDERPLANTING
-  GRADING AND WETLAND PLANTING
-  RAILROAD TRACK
-  EXISTING CONVEYANCE DITCH
-  CITY LIMITS
-  EXISTING TRAIL
-  BRUSH PILE

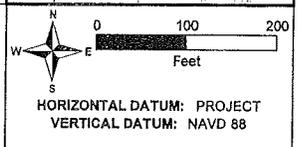


PURPOSE: Wetland Mitigation

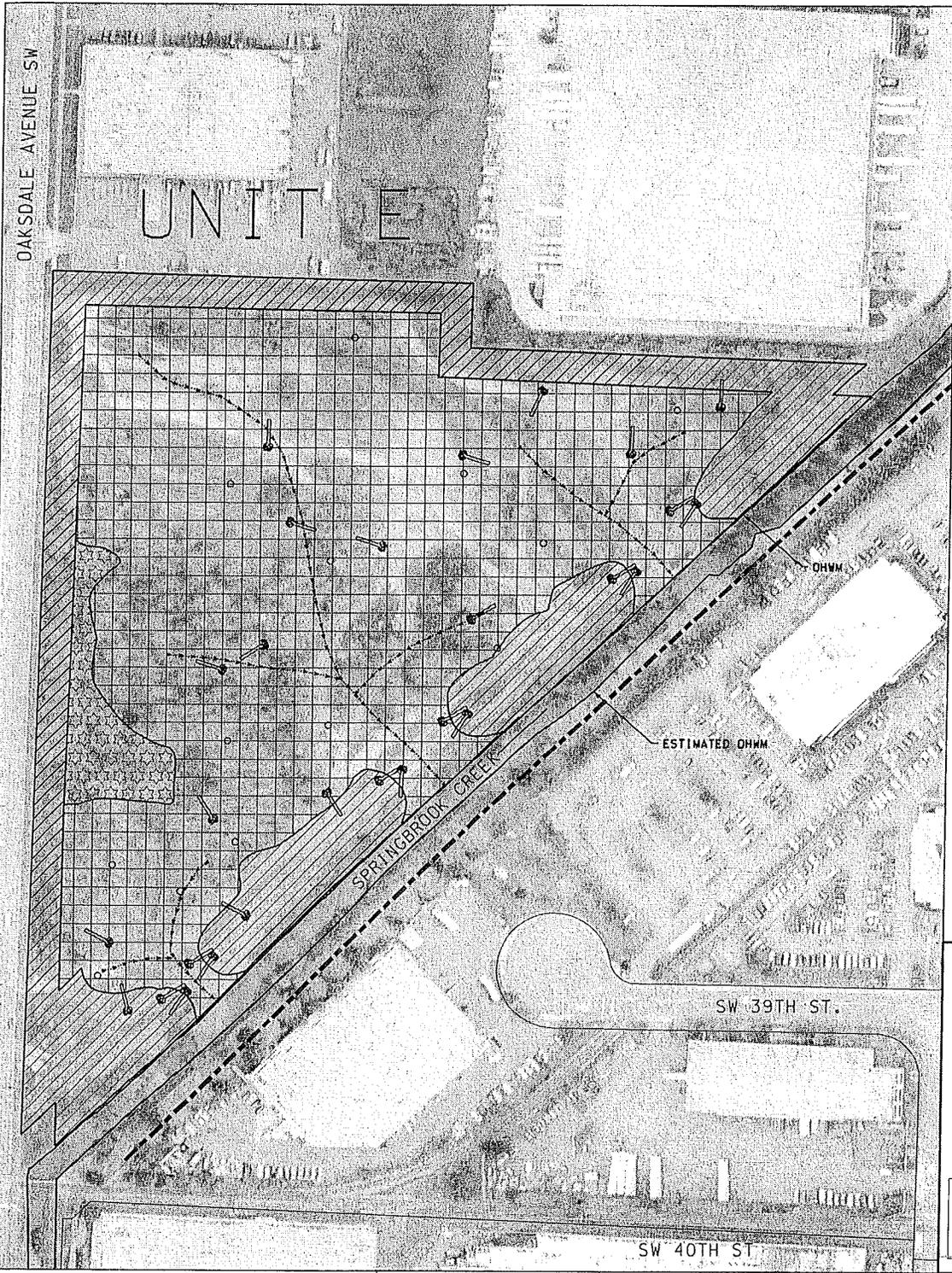
SPRINGBROOK
REFERENCE #:
200600100
APPLICANT: WSDOT
FIGURE 15 - UNIT D
MITIGATION TREATMENTS

PROPOSED/RETAIN:
 IN: Streams and Wetlands
 NEAR/AT: Renton
 COUNTY: King
 DATE: 02/15/06

STATE: WA



Source: WSDOT, 2004. KING COUNTY, 2004. | Last updated: 8:50:46 AM 3/9/2006 | chris | P:\W\Engineering\010\drawings\exhibits\Springbrook Prospectus Fig-16.dgn



UNIT E LEGEND

-  INVASIVE REMOVAL AND UPLAND PLANTING
-  GRADING, HYDROLOGIC ALTERATION, AND WETLAND PLANTING
-  INVASIVE REMOVAL AND CONIFER UNDERPLANTING
-  PROPOSED DRAINAGE PATH
-  EXISTING TRAIL
-  VERTICAL SNAG
-  LOG

KEYMAP

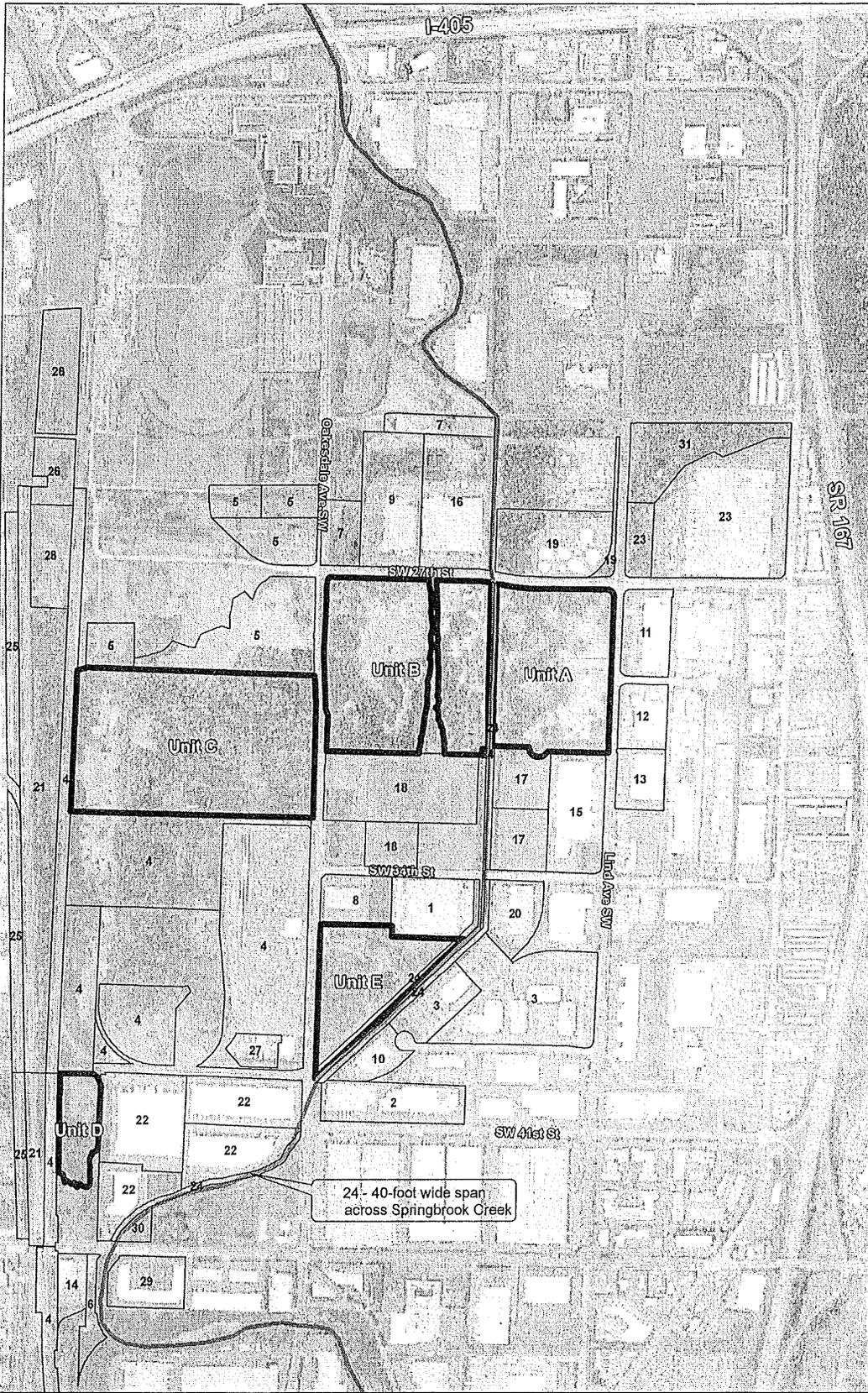
PURPOSE: Wetland Mitigation

SPRINGBROOK
 REFERENCE #:
200600100
 APPLICANT: WSDOT
 FIGURE 16 - UNIT E
 MITIGATION TREATMENTS

PROPOSED/RETAIN:
 IN: Streams and Wetlands
 NEAR/AT: Renton
 COUNTY: King
 DATE: 02/15/06
 STATE: WA

HORIZONTAL DATUM: PROJECT
 VERTICAL DATUM: NAVD 88

Source: City of Renton, 2003; WSDOT, 2005 | WSEAW405405gisprojectmap_docs\EEI\Springbrook\Prospectus\Figures 12-2005\Figure 17 Adjacent Property Owners.mxd | Last Updated: 2-15-2006



- ### Legend
-  Springbrook Creek
 -  Unit
 -  Parcel
 - 1 - Adventure 95 Limited Partnership
 - 2 - AMB Property Corp.
 - 3 - Bedford Property Investors
 - 4 - BNSF RR
 - 5 - Boeing Company
 - 6 - City of Kent
 - 7 - City of Renton
 - 8 - GK Services Co.
 - 9 - Kock, Hans George
 - 10 - Ogima LLC
 - 11 - Pietromonaco LLC
 - 12 - Pietromonaco/Modern LLC/Director of Real Estate
 - 13 - Portal Security LLC
 - 14 - PSAF Development Partners
 - 15 - Lind Avenue Investors
 - 16 - Renton #2 LLC
 - 17 - Oakesdale Commerce Center BSP
 - 18 - CALSmart LLC
 - 19 - Tosco Corp.
 - 20 - Triple Crown Prop. LLC
 - 21 - Union Pacific Railroad
 - 22 - Zelman Renton LLC
 - 23 - BIT Holdings Fifty-five Inc.
 - 24 - Drainage District #1
 - 25 - Puget Sound Energy/ Electricity
 - 26 - Central Puget Sound Reg. Tra.
 - 27 - Eagle Systems
 - 28 - City of Tukwila
 - 29 - Barnes & Nelson
 - 30 - Triple G Holdings LLC
 - 31 - Unowned

PURPOSE: Wetland Mitigation

SPRINGBROOK
REFERENCE #:
200600100
APPLICANT: WSDOT

PROPOSED/RETAIN:

IN:
NEAR: Renton
COUNTY: King STATE: WA
DATE: 2/15/2006



FIGURE 17. ADJACENT PROPERTY OWNERS

HORIZONTAL DATUM: PROJECT
VERTICAL DATUM: NAD 83