



November 3, 2014

Del Webber
12833 NE 90th Street
Kirkland, WA 98034

RE: City of Kirkland / Watershed Company review comments for 12833 NE 90th Street.

This letter and the accompanying Buffer Mitigation Plan for Webber Short Plat prepared by *Acre Environmental Consulting, LLC* and dated November 3, 2014 Revision #1 are intended to provide the additional information requested by the Watershed Company in their September 26, 2014 comment letter for the above site (Watershed Company Reference Number: 060701.58). The recommendations provided by the Watershed Company in their comment letter are included below in bold italics and descriptions of how the recommendations were addressed are in plain text.

September 26, 2014 Watershed Company Recommendations:

- 1. Revise the submittal to include pervious pavement for the sidewalk portion located within the wetland buffer. Provide a cross sectional drawing showing the sidewalk in relation to the stream.***

To ensure that impervious areas within the buffer are not increased as required by KZC 90.20.4, the applicant has agreed to use pervious pavement to construct the 713 square feet of sidewalk proposed within the buffer. Use of pervious concrete is discussed both on the Acre plan and on the engineer's plans. A cross sectional drawing showing the proposed sidewalk in relation to the stream has been prepared by the project engineer, CPH Consultants and can be seen in the Typical Road Section detail on the Roadway Sections plan attached to the Acre Sheets W1 and W2.

2. Revise the plan to show a 10-foot buffer setback.

The site plan has been revised to include the required 10-foot buffer setback. A textual description has been included in the first paragraph of the Project Description section of the Buffer Mitigation Plan for Webber Short Plat prepared by *Acre Environmental Consulting, LLC* and dated November 3, 2014 Revision #1.

3. Revise the planting plan to avoid future conflicts with overhead power lines.

The Buffer Planting Plan for Webber Short Plat prepared by *Acre Environmental Consulting, LLC* has been revised and dated Revision 1, November 3, 2014. On this plan, the three big-leaf maple and six Douglas fir have been relocated south of the power line easement.

4. Provide additional plans or cross sections showing utility conflicts and required separation. If all utilities can fit within the roadway, revise the plans to eliminate the wetland buffer impact on the north side of the gravel road.

The existing sewer line and storm drain have been depicted on the Buffer Mitigation Plan for Webber Short Plat prepared by *Acre Environmental Consulting, LLC* and dated November 3, 2014 Revision #1. A discussion of the separation requirements and justification for the proposed water line location has been included in the Project Description section of this plan.

5. Provide a report that assesses the habitat, water quality, stormwater detention, ground water recharge, shoreline protection, and erosion protection functions of the buffer and evaluate the effects of the proposed modification on those functions.

A functions and values assessment has been prepared and is included in the first text box on Sheet W-2 of the Buffer Mitigation Plan for Webber Short Plat prepared by *Acre Environmental Consulting, LLC* and dated November 3, 2014 Revision #1.

- 6. Revise the bond quantity sheet to show the correct number of plants and 10 monitoring visits. Once correctly totaled, calculate 125 percent of that cost as the total bond quantity amount due to the City.**

The bond quantity sheet has been revised as requested and the total bond quantity amount due to the City has been revised to be 125 percent of the estimated project cost.

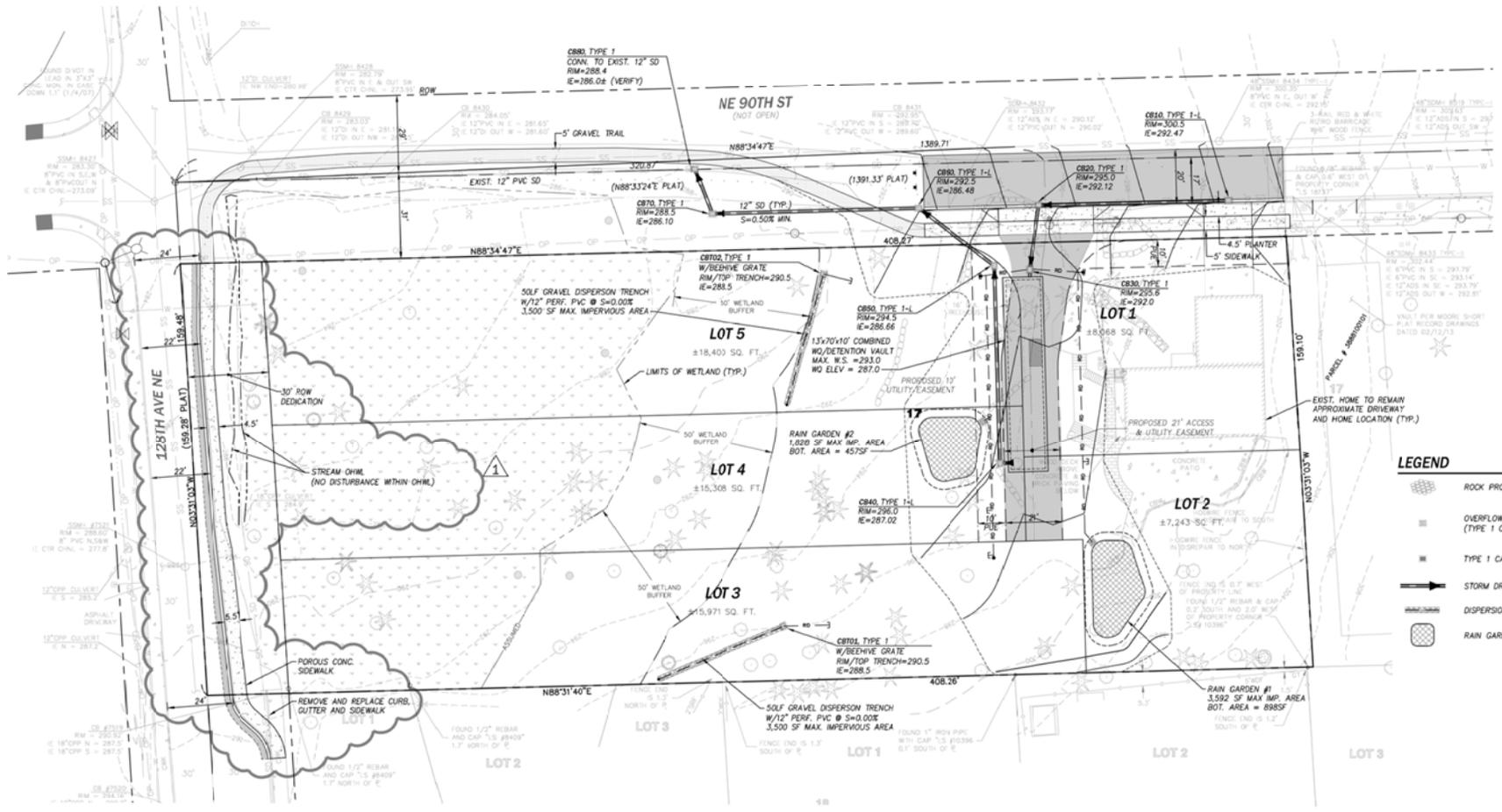
If there are any questions regarding this letter or the accompanying buffer mitigation plan, please contact me at 206.450.7746.

Acre Environmental Consulting, LLC.



Louis Emenhiser
Principal Wetland Ecologist
Professional Wetland Scientist #1680

NE 1/4, SE 1/4, SEC. 4, TWP 25 N, RGE. 5E., W.M.
WEBBER SHORT PLAT
 CITY OF KIRKLAND KING COUNTY, WA



LEGEND

- ROCK PROTECTION AT PIPE INLET/OUTLET
- OVERFLOW/FLOW CONTROL STRUCTURE (TYPE 1 CB w/ BEEHIVE GRATE)
- TYPE 1 CATCH BASIN
- STORM DRAIN PIPE
- DISPERSION TRENCH
- RAIN GARDEN



PRELIMINARY GRADING AND DRAINAGE PLAN

OWNER	DEL WEBBER 12833 NE 90TH STREET KIRKLAND, WA 98033		
PROJECT SURVEYOR	AXIS SURVEY AND MAPPING 13005 NE 128TH PLACE, KIRKLAND, WA 98034 PHONE: (425) 823-5700 FAX: (425) 823-6700		
SCALE	PROJECT NO.	SHEET	
AS NOTED	0100-13-101	1 of 4	



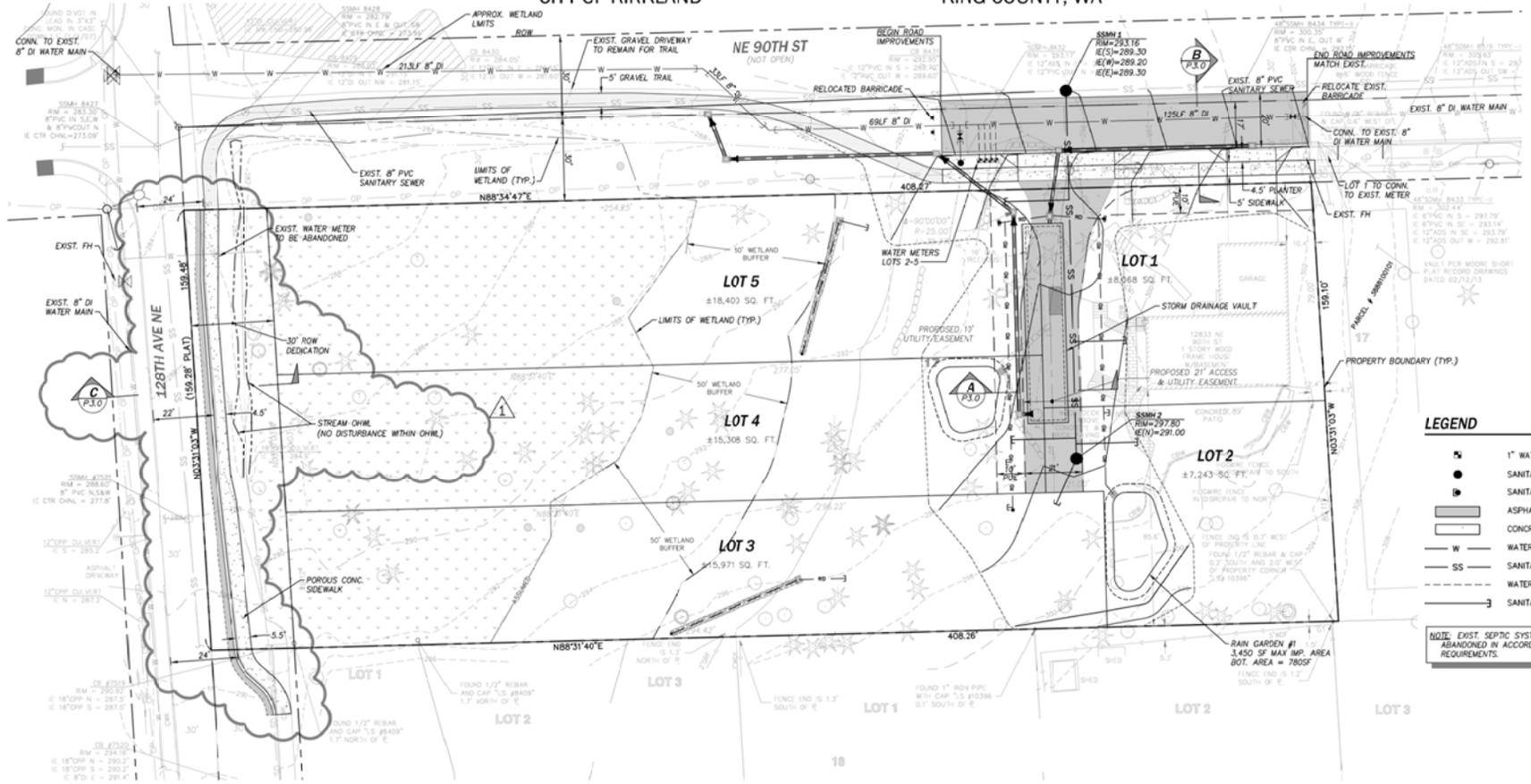
CPH CONSULTANTS
 Site Planning • Civil Engineering
 Land Use Consulting • Project Management
 733 7th Avenue, Suite 500 | Kirkland, WA 98033
 Phone: (425) 265-2299 | Fax: (425) 265-7398
 www.cphconsultants.com

NO.	DATE	REVISION	BY	CHK.
1	5/23/2014	PRELIMINARY SHORT PLAT SUBMITTAL	KTY	JBS
2	1/23/2015	ADD OHM AND REVISE SECTION	PCE	JBS

NE 1/4, SE 1/4, SEC. 4, TWP 25 N, RGE. 5E., W.M.

WEBBER SHORT PLAT

CITY OF KIRKLAND
KING COUNTY, WA



LEGEND

- 1" WATER METER AND SERVICE LINE
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEANOUT
- ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- WATER MAIN
- SANITARY SEWER MAIN
- WATER SERVICE
- SANITARY SEWER SERVICES

NOTE: EXIST. SEPTIC SYSTEM DRAINFIELD SHALL BE ABANDONED IN ACCORDANCE WITH DOE AND KC DOH REQUIREMENTS.



PRELIMINARY UTILITY PLAN			
OWNER		DEL WEBBER 12833 NE 90TH STREET KIRKLAND, WA 98033	
PROJECT SURVEYOR		AXIS SURVEY AND MAPPING 13005 NE 128TH PLACE, KIRKLAND, WA 98034 PHONE: (425) 823-5700 FAX: (425) 823-6700	
SCALE	PROJECT NO.	SHEET	
AS NOTED	0100-13-101	2 of 4	

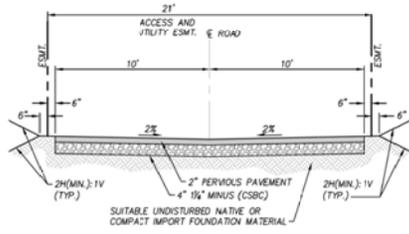


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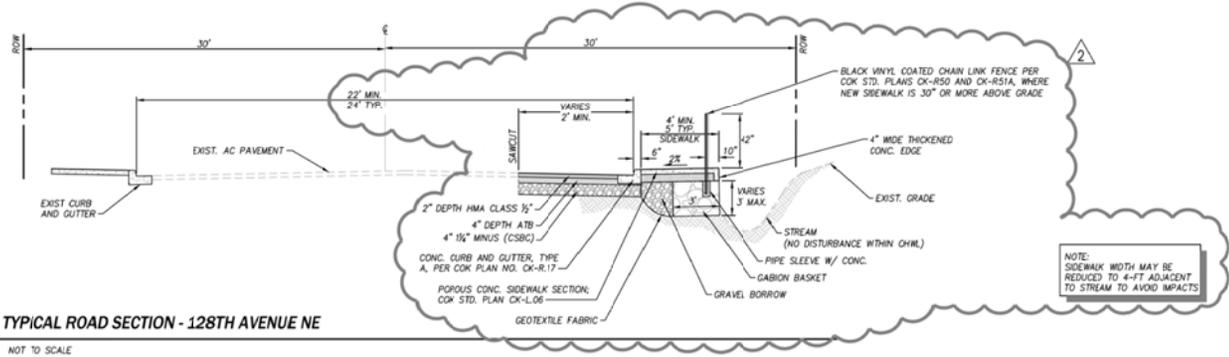
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www.cphconsultants.com

NO.	DATE	REVISION	BY	CHK.
1	5/23/2014	PRELIMINARY SHORT PLAT SUBMITTAL	KTY	JBS
2	1/21/2015	ADD OHM AND REVISE SECTION	PCE	JBS

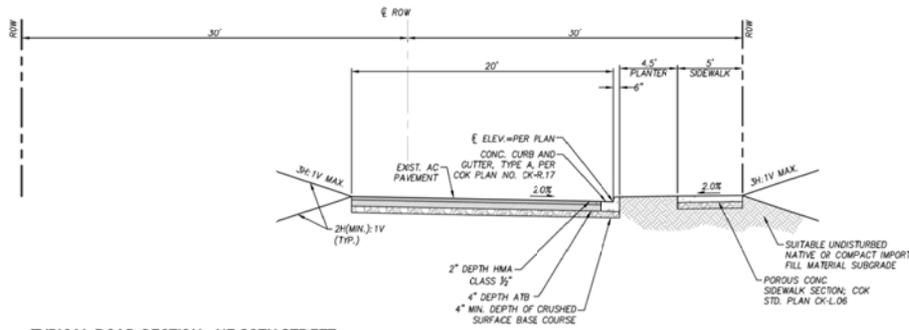
NE 1/4, SE 1/4, SEC. 4, TWP 25 N, RGE. 5E., W.M.
WEBBER SHORT PLAT
 CITY OF KIRKLAND KING COUNTY, WA



A PRIVATE DRIVEWAY - TYPICAL SECTION
 P2.00 NOT TO SCALE



C TYPICAL ROAD SECTION - 128TH AVENUE NE
 P2.00 NOT TO SCALE



B TYPICAL ROAD SECTION - NE 90TH STREET
 P2.00 NOT TO SCALE

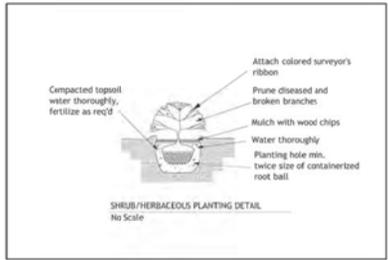
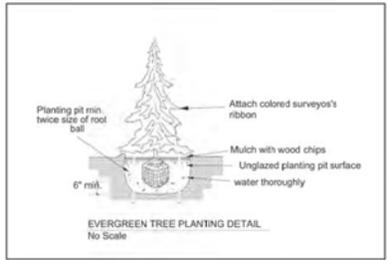
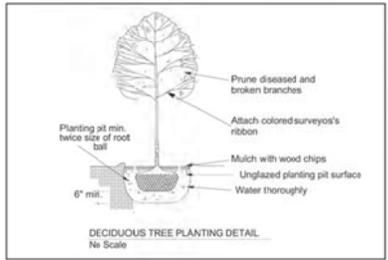
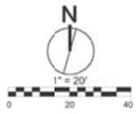
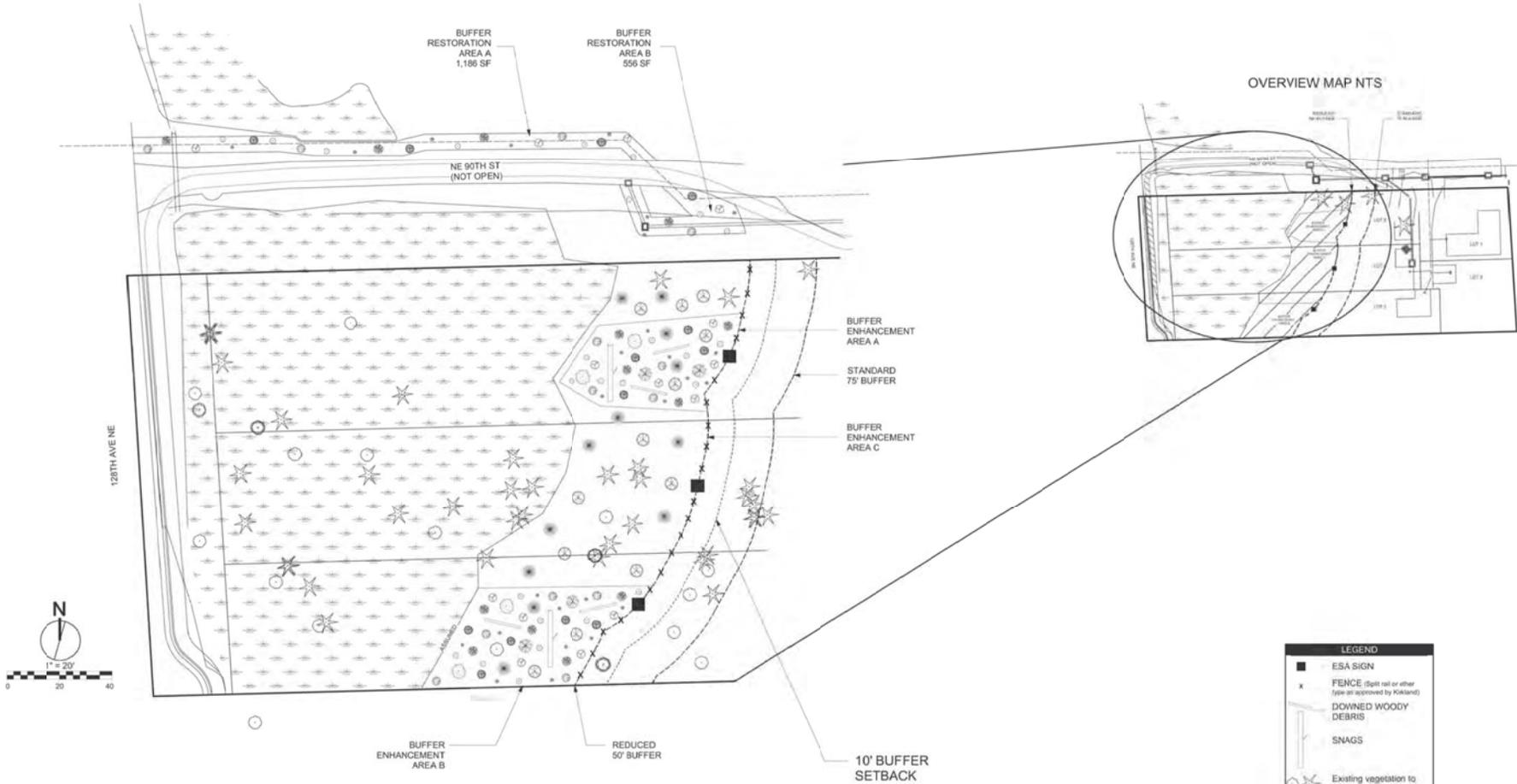
ROADWAY SECTIONS

OWNER	DEL WEBBER 12833 NE 90TH STREET KIRKLAND, WA 98033
PROJECT SURVEYOR	AXIS SURVEY AND MAPPING 13005 NE 128TH PLACE, KIRKLAND, WA 98034 PHONE: (425) 823-5700 FAX: (425) 823-6700
SCALE	PROJECT NO. AS NOTED 0100-13-101
SHEET	3 of 4



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NO.	DATE	REVISION	BY	CHK.
1	5/23/2014	PRELIMINARY SHORT PLAT SUBMITTAL	KTY	JBS
2	12/10/2014	REVISED SIDEWALK SECTION AT 128TH AVE NE	BAS	JBS
3	12/10/2014	ADD OHM AND REVISE SECTION	PCF	JBS



LEGEND

- ESA SIGN
- x FENCE (Split rail or other type as approved by Kirkland)
- DOWNED WOODY DEBRIS
- SNAGS
- Existing vegetation to remain.

The following symbols represent clumps of three (3) like species. When odd planting numbers occur, fractional group sizes shall be adjusted to accommodate the specified quantity of plants.

- *Acer macrophyllum*
- *Alnus rubra*
- *Prunus emarginata*
- *Pseudotsuga menziesii*
- *Oemleria cerasiformis*
- *Symphoricarpos albus*
- *Rosa nutkana*
- *Berberis nervosa*
- *Gaultheria shallon*
- *Polystichum munitum*

Acron Job: 14016
 Drawn By: L. Emmeringer
 Date: 05.21.2014
 Revision No.: 1 November 3, 2014



PREPARED BY:
 Acre Environmental Consulting, LLC
 17715 28th Avenue NE
 Lake Forest Park, WA 98155
 Phone: (206) 450-7746
 Email: louis@acreenvironmental.com

PREPARED FOR:
 Dan Webber
 12833 NE 90th Street
 Kirkland, WA 98034

BUFFER PLANTING PLAN
WEBBER SP
 12833 NE 90TH STREET
 KIRKLAND, WA 98034
 TAX PARCEL NO.: 388870-0100

**Critical Areas Mitigation
Bond Quantity Worksheet**

Print on legal-size (8 1/2 x 14") paper only.

Project Name: Webber Short Plat

Date: 11/03/14

Prepared by: Acre Env. Consulting, LLC

Project Number:

Project Description: Buffer reduction with enhancement & Buffer Restoration

Location: 12833 NE 90th Street

Applicant: Del Webber

Phone:

PLANT MATERIALS*						
Type	Unit Price	Unit	Quantity	Description	Cost	
PLANTS: Potted, 4" diameter, medium	\$5.00	Each			\$ -	
PLANTS: Container, 1 gallon, medium soil	\$11.50	Each	326		\$ 3,749.00	
PLANTS: Container, 2 gallon, medium soil	\$20.00	Each	96		\$ 1,920.00	
PLANTS: Container, 5 gallon, medium soil	\$36.00	Each			\$ -	
PLANTS: Seeding, by hand	\$0.00	SY			\$ -	
PLANTS: Slips (willow, rec-osier)	\$2.00	Each			\$ -	
PLANTS: Stakes (willow)	\$2.00	Each			\$ -	
PLANTS: Stakes (willow)	\$2.00	Each			\$ -	
PLANTS: Flats/plugs	\$2.00	Each			\$ -	
* All costs include installation					TOTAL	\$ 5,669.00
INSTALLATION COSTS (LABOR, EQUIPMENT, & OVERHEAD)						
Type	Unit Price	Unit	Quantity	Description	Cost	
Compost, vegetable, delivered and spread	\$37.88	CY			\$ -	
Decompacting till/hardpan, medium, to 6" depth	\$1.57	CY			\$ -	
Decompacting till/hardpan, medium, to 12" depth	\$1.57	CY			\$ -	
Hydroseeding	\$0.51	SY			\$ -	
Labor, general (landscaping)	\$40.00	HR	60.00		\$ 2,400.00	
Labor, general (construction)	\$40.00	HR	8.00		\$ 320.00	
Labor Consultant, supervising	\$55.00	HR	6.00		\$ 330.00	
Labor Consultant, on-site re-design	\$95.00	HR			\$ -	
Rental of decompacting machinery & operator	\$70.00	HR			\$ -	
Sand, coarse builder's, delivered and spread	\$42.00	CY			\$ -	
Staking material (set per tree)	\$7.00	Each			\$ -	
Surveying, line & grade	\$250.00	HR			\$ -	
Surveying, topographical	\$250.00	HR			\$ -	
Watering, 1" of water, 50' soaker hose	\$3.62	MSF			\$ -	
Irrigation - temporary	\$3,000.00	Acre	0.15		\$ 450.00	
Irrigation - buried	\$4,500.00	Acre			\$ -	
Tilling topsoil, disk harrow, 20hp tractor, 4'-6" deep	\$1.02	SY			\$ -	
	\$25.00	HR			\$ -	
* All costs include delivery and installation					TOTAL	\$ 3,500.00
HABITAT STRUCTURES*						
ITEMS	Unit Cost	Unit	Quantity	Description	Cost	
Fascines (willow)	\$ 2.00	Each			\$ -	
Logs, (cedar), w/ root wads, 16"-24" diam., 30' long	\$1,000.00	Each			\$ -	
Logs (cedar) w/o root wads, 16"-24" diam., 30'	\$400.00	Each			\$ -	
Logs, w/o root wads, 16"-24" diam., 30' long	\$245.00	Each	1.00		\$ 245.00	
Logs w/ root wads, 16"-24" diam., 30' long	\$480.00	Each			\$ -	
Rocks, one-man	\$80.00	Each			\$ -	
Rocks, two-man	\$120.00	Each			\$ -	
Root wads	\$163.00	Each			\$ -	
Spawning gravel, type A	\$22.00	CY			\$ -	
Weir - log	\$1,500.00	Each			\$ -	
Weir - adjustable	\$2,000.00	Each			\$ -	
Woody debris, large	\$163.00	Each			\$ -	
Snags - anchored	\$400.00	Each			\$ -	
Snags - on site	\$50.00	Each	2.00		\$ 100.00	
Snags - imported	\$800.00	Each			\$ -	
* All costs include delivery and installation					TOTAL	\$ 345.00
EROSION CONTROL						
ITEMS	Unit Cost	Unit	Quantity	Description	Cost	
Backfill and Compaction-embankment	\$ 4.89	CY			\$ -	
Crushed surfacing, 1 1/4" minus	\$30.00	CY			\$ -	
Ditching	\$7.03	CY			\$ -	
Excavation, bulk	\$4.00	CY			\$ -	
Fence, silt	\$1.60	LF	355.00		\$ 568.00	
Jute Mesh	\$1.26	SY			\$ -	
Mulch, by hand, straw, 2" deep	\$1.27	SY			\$ -	
Mulch, by hand, wood chips, 2" deep	\$3.25	SY	142.00		\$ 461.50	
Mulch, by machine, straw, 1" deep	\$0.32	SY			\$ -	
Piping, temporary, CPP, 6"	\$9.30	LF			\$ -	
Piping, temporary, CPP, 8"	\$14.00	LF			\$ -	
Piping, temporary, CPP, 12"	\$18.00	LF			\$ -	
Plastic covering, 6mm thick, sandbagged	\$2.00	SY			\$ -	
Rip Rap, machine placed, slopes	\$33.98	CY			\$ -	
Rock Constr. Entrance 100x15x1'	\$3,000.00	Each			\$ -	
Rock Constr. Entrance 50x15x1'	\$1,500.00	Each			\$ -	
Sediment pond riser assembly	\$1,695.11	Each			\$ -	
Sediment trap, 5' high berm	\$15.57	LF			\$ -	
Sediment trap, 6' high berm w/slipway incl. riprap	\$69.60	LF			\$ -	
Sodding, 1" deep, level ground	\$5.24	SY			\$ -	
Sodding, 1" deep, sloped ground	\$6.48	SY			\$ -	
Straw bales, place and remove	\$600.00	TON			\$ -	
Hauling and disposal	\$20.00	CY			\$ -	
Topsoil, delivered and spread	\$35.73	CY			\$ -	
	\$17.00	CY			\$ -	
is-wks-sensareaBQ.xls is-wks-sensareaBQ.pdf					TOTAL	\$ 1,029.50



September 26, 2014

Sean LeRoy
City of Kirkland
Planning and Community Development
123 Fifth Avenue
Kirkland, WA 98033

Re: Webber Short Platt Buffer Modification Proposal Review
12833 NE 90th Street, Kirkland, WA
The Watershed Company Reference Number: 060701.58

Dear Sean:

Thank you for the opportunity to review the buffer modification plan for the property at the above address. This letter outlines the findings of the buffer modification review.

Our review entailed a visit to the site and review of the following documents:

May 21, 2014 Webber SP buffer mitigation plan by Acre Environmental Consulting, LLC (Acre).

May 21, 2014 Bond Quantity Worksheet for the Webber buffer mitigation plan by Acre.

Findings

The buffer modification plan is well prepared and meets some of the requirements of chapter 90 of the Kirkland Zoning Code. However, there are several questions and revisions that are needed for full compliance.

Sheet W-1 shows a new section of sidewalk along 125th Avenue NE. The plan acknowledges this will result in an additional 713 square feet of impervious area. Sidewalks may be located in wetland buffers under KZC 90.20.4. However, this section requires demonstration of no alternative location for the impact and also requires no increase in impervious surface area or reduced flood storage capacity. There is no allowance for mitigating this increase in impervious area through the use of additional detention, as proposed. Also, a cross section showing the sidewalk and its relationship to the Class B stream would be helpful in understanding the proposed relationship of these features. During the site visit, it appeared there is very little room for the sidewalk between the stream channel and the current edge of pavement.

The Acre plan does not show or discuss the 10-foot buffer setback required in 90.45.2.

There are three bigleaf maples and six Douglas-fir trees (three plants per symbol) proposed very near the overhead power lines along the northern property line. These trees should be moved farther south to avoid future power line conflicts or they should be replaced with lower-growing species.

Utilities are proposed along the north edge of the gravel road in the NE 90th Street ROW. There is a one-sentence explanation about conflicts with the existing infrastructure and separation requirements for utilities. More information is needed to understand what infrastructure conflicts and which utilities require separation distances. In addition to meeting mitigation sequencing requirements in 90.20, lowering the buffer impact would also reduce the overall cost of the mitigation plan installation, monitoring and maintenance.

Other than the comments noted above, the plan adequately addresses the nine criteria required in 90.60.2.b. However, the last paragraph of that code section also requires applicants provide a report that assesses the habitat, water quality, stormwater detention, ground water recharge, shoreline protection, and erosion protection functions of the buffer and evaluates the effects of the proposed modification on those functions. This report has not been provided.

The bond quantity worksheet lists the number of 1-gallon container plants at 313 when the total on the plan is 326. On page two of the bond worksheet, there should be 10 monitoring visits instead of the five listed since there are two visits required in each of the five monitoring years. Sheet W-2 of the Acre plan lists the amount to be paid to the City but that figure is directly from the bond quantity estimate and does not include the additional 25% required in 90.145.3.

Recommendations

1. Revise the submittal to include pervious pavement for the sidewalk portion located within the wetland buffer. Provide a cross sectional drawing showing the sidewalk in relationship to the stream.
2. Revise the plan to show a 10-foot buffer setback.
3. Revise the planting plan to avoid future conflicts with overhead power lines.
4. Provide additional plans or cross sections showing utility conflicts and required separation. If all utilities can fit within the roadway, revise the plans to eliminate the wetland buffer impact on the north side of the gravel road.

Webber Buffer Modification Review
City of Kirkland Planning
September 26, 2014
Page 3

5. Provide a report that assesses the habitat, water quality, stormwater detention, ground water recharge, shoreline protection, and erosion protection functions of the buffer and evaluates the effects of the proposed modification on those functions.
6. Revise the bond quantity sheet to show the correct number of plants, 10 monitoring visits. Once correctly totaled, calculate 125% of that cost as the total bond quantity amount due to the city.

Please call if you have any questions or if we can provide you with any additional information.

Sincerely,



Hugh Mortensen, PWS
Principal



March 16, 2015

Sean LeRoy
City of Kirkland
Planning and Community Development
123 Fifth Avenue
Kirkland, WA 98033

Re: Webber Short Plat Revised Buffer Modification Proposal Review
12833 NE 90th Street, Kirkland, WA
The Watershed Company Reference Number: 060701.58

Dear Sean:

Thank you for the opportunity to review revised information submitted in support of the Webber Short Plat project. This letter outlines the findings of the revised buffer modification review.

Our review is limited to the following documents:

November 3, 2014 review comment response letter by Acre Environmental Consulting, LLC (Acre).

November 3, 2014, wetland buffer mitigation plan by Acre.

November 3, 2014 Bond Quantity Worksheet for the Webber buffer mitigation plan by Acre.

March 6, 2015 Preliminary Grading and Drainage Plan and Road Sections Plan by CPH Consultants.

January 21, 2015 Preliminary Utility Plan by CPH Consultants.

Findings

The revised materials submitted in support of the proposed buffer modification plan are meet the requirements of chapter 90 of the Kirkland Zoning Code. All of the recommendations from our September 26 2014 review letter have been adequately addressed. Specifically, stream impacts have been avoided by the proposed pervious-pavement sidewalk. Utility impacts are the minimum necessary given proper separation. The mitigation plan now reflects overhead power lines, provides a

Webber Revised Buffer Modification Review
City of Kirkland Planning
March 16, 2015
Page 2

functional assessment and shows the 10-foot building setback. The bond amount was accurately adjusted. The total amount, calculated at 125% of the estimate, is shown on sheet W4 of the mitigation plan (\$40,626.35).

The gravel dispersion trenches proposed are superior to above-grade dispersal facilities that use treated lumber. Nevertheless, the dispersion areas should be checked for point erosion during monitoring.

Please call if you have any questions or if we can provide you with any additional information.

Sincerely,



Hugh Mortensen, PWS
Principal

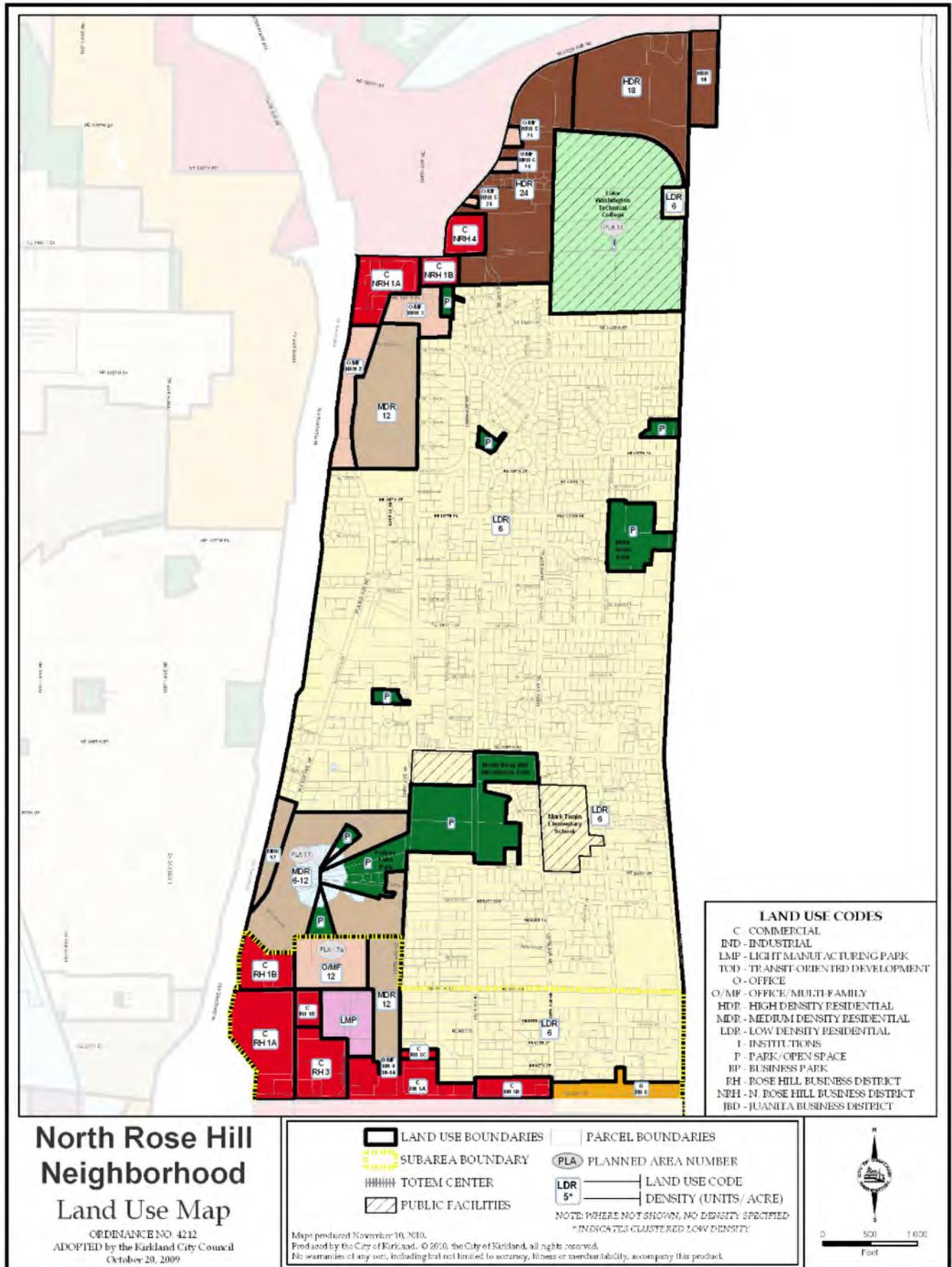


Figure NRH-4: North Rose Hill Land Use