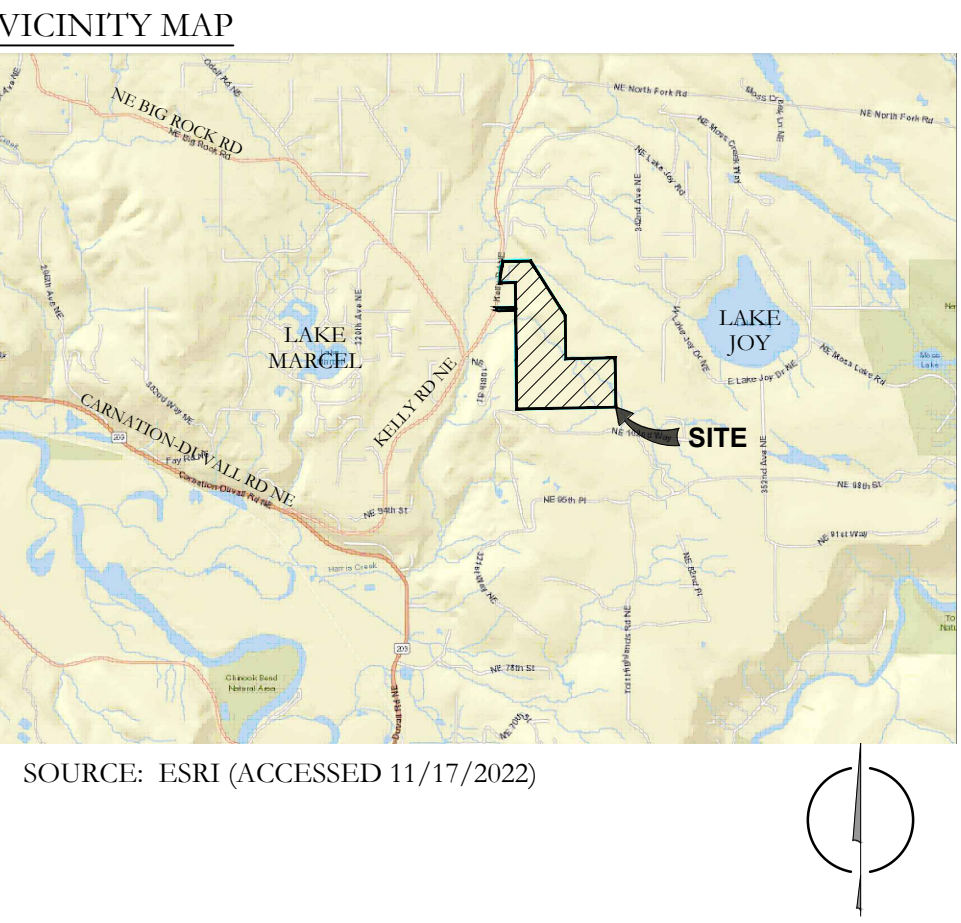
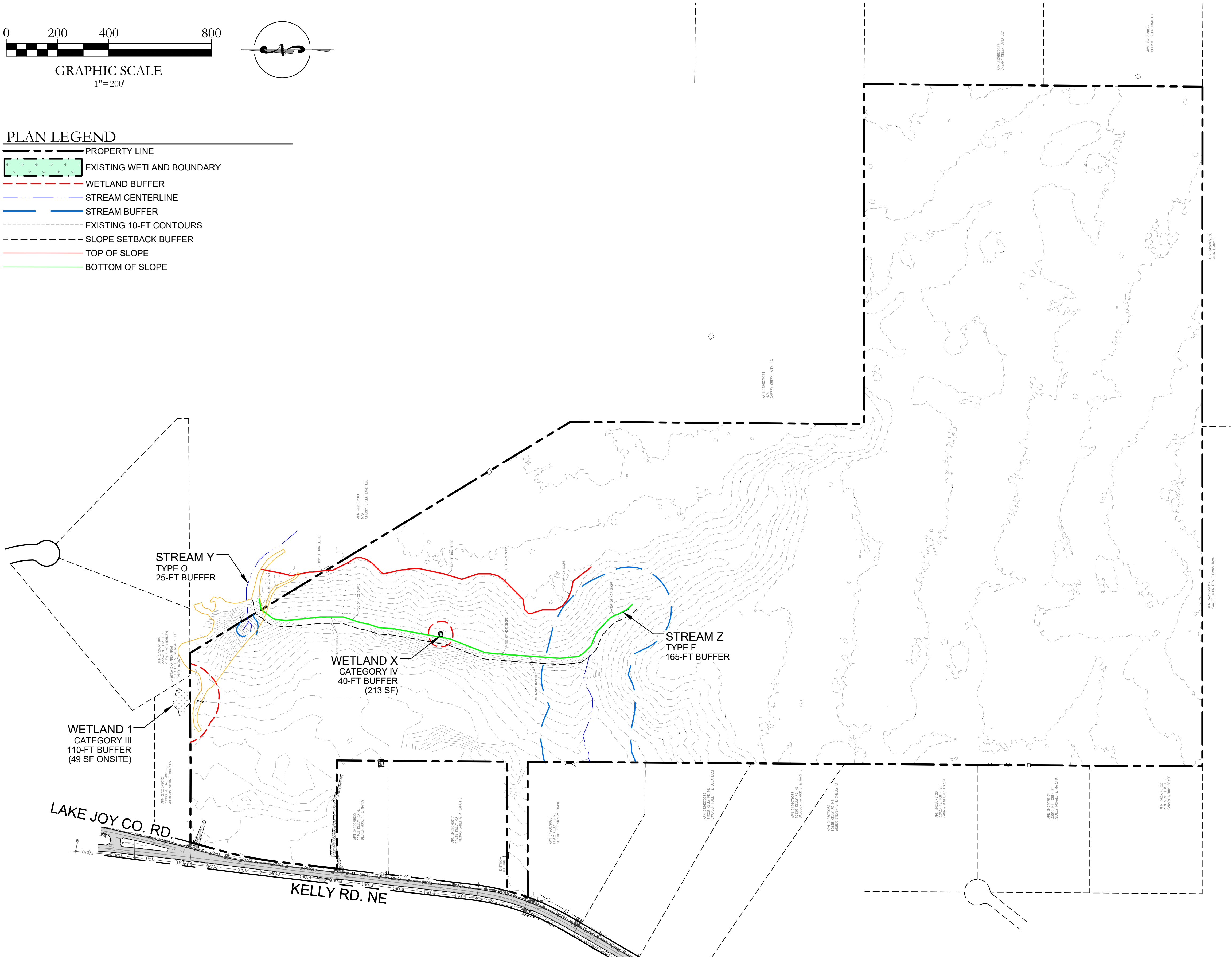




PLAN LEGEND

- PROPERTY LINE
- EXISTING WETLAND BOUNDARY
- WETLAND BUFFER
- STREAM CENTERLINE
- STREAM BUFFER
- EXISTING 10-FT CONTOURS
- SLOPE SETBACK BUFFER
- TOP OF SLOPE
- BOTTOM OF SLOPE



LOCATION
THE NE & SE 1/4 OF SECTION 34,
TOWNSHIP 26N, RANGE 07E, WM

APPLICANT/OWNER
NAME: J-P LEDFORD AZURE NW LLC
ADDRESS: 1019 39TH AVE SE, SUITE 205
PUYALLUP, WA 98374
CONTACT: TOM YOUNG (253) 517-8188
TONI CAVALLI (253) 517-8541
E-MAIL: TOM.YOUNG@AZURENW.COM
TONI.CAVALLI@AZURENW.COM

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

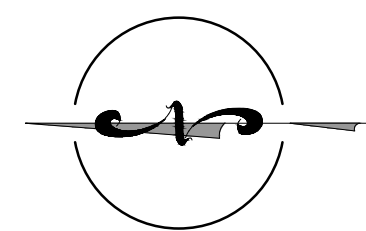
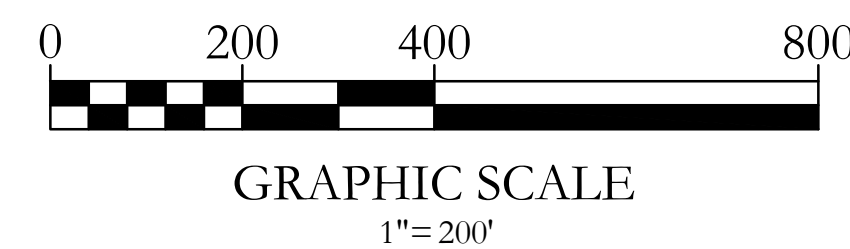
SHEET INDEX	
SHEET NUMBER	SHEET TITLE
1	EXISTING CONDITIONS OVERVIEW
2	EXISTING CONDITIONS
3	PROPOSED SITE PLAN
4	MITIGATION PLAN

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222
barghausen.com

Soundview Consultants LLC
Environmental Assessment • Planning • Land Use Solutions
P: 253.514.8952
F: 253.514.8954
2907 HARBORVIEW DRIVE
GIG HARBOR, WASHINGTON 98335
WWW.SOUNDVIEWCONSULTANTS.COM

TOLTHUE HEIGHTS
NA - ADJACENT TO
11402 KELLY ROAD NE
CARNATION, WA 98014
KING COUNTY
PARCEL NUMBER:
3426079002

DATE: 4/22/2025
JOB: 2020.0004
BY: MW/GZ
SCALE: AS SHOWN
SHEET: 1



PROPERTY LINE

EXISTING WETLAND BOUNDARY

WETLAND BUFFER

WETLAND FLAG

DATA PLOT LOCATION

STREAM CENTERLINE

STREAM BUFFER


STREAM OHW (ORDINARY HIGH WATER) FLAG LOCATION

EXISTING 10-FT CONTOURS

TOP OF SLOPE

BOTTOM OF SLOPE

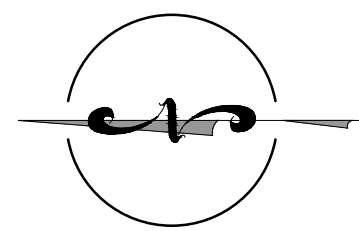
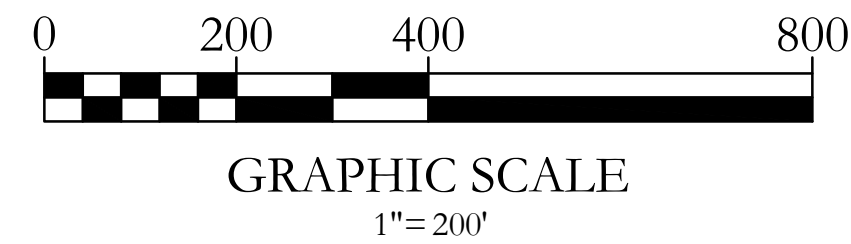
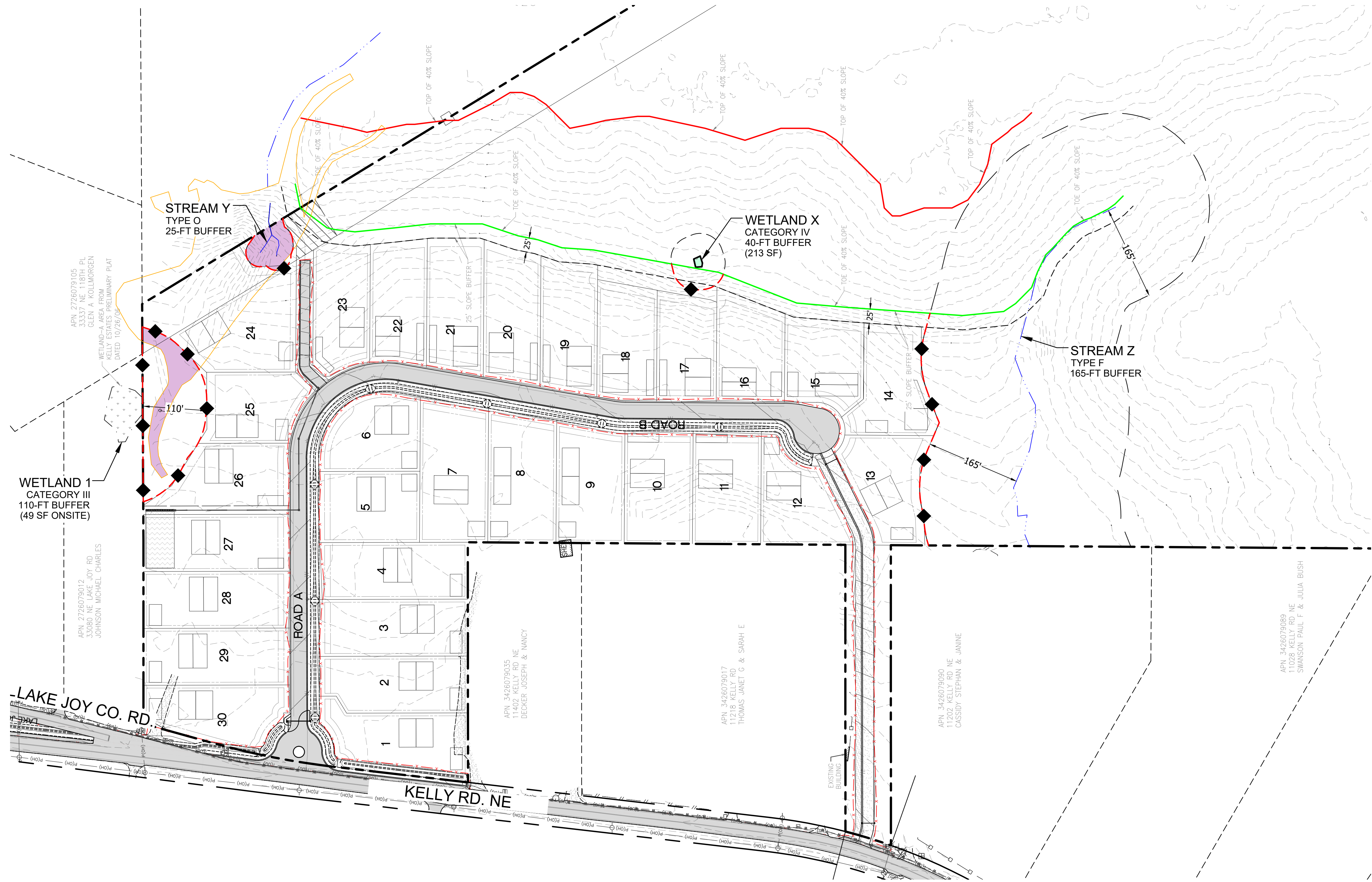
SLOPE SETBACK BUFFER



**Barghausen
Consulting Engineers, Inc.**
18215 72nd Avenue South
Kent, WA 98032
425.251.6222 **barghausen.com**

 **Soundview Consultants LLC**
Environmental Assessment • Planning • Land Use Solutions
P: 253.514.8952
F: 253.514.8954
2907 HARBORVIEW DRIVE
GIG HARBOR, WASHINGTON 98335
WWW.SOUNDVIEWCONSULTANTS.COM

DATE: 4/22/2025
JOB: 2020.0004
BY: MW/GZ
SCALE: AS SHOWN
SHEET: 2



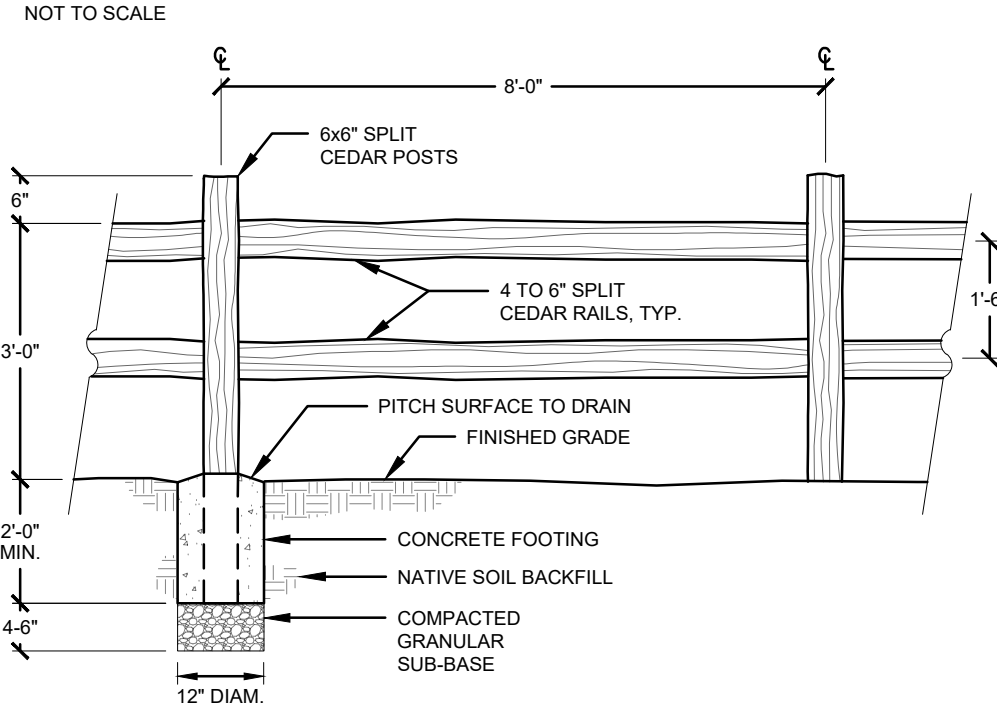
PLAN LEGEND

- PROPERTY LINE
- EXISTING WETLAND BOUNDARY
- WETLAND BUFFER
- STREAM CENTERLINE
- STREAM BUFFER
- POST-CONSTRUCTION BUFFER/ CRITICAL AREA FENCE -- 1,485 LF
- CRITICAL AREA SIGN -- 13 SIGNS
- EXISTING 10-FT CONTOURS
- TOP OF SLOPE
- BOTTOM OF SLOPE
- SLOPE SETBACK BUFFER
- BUFFER RESTORATION SEED MIX -- 12,440 SF (FOR RESTORATION OF EXISTING VEHICULAR DISTURBANCE, see PLANT SCHEDULE)

PLANT SCHEDULE

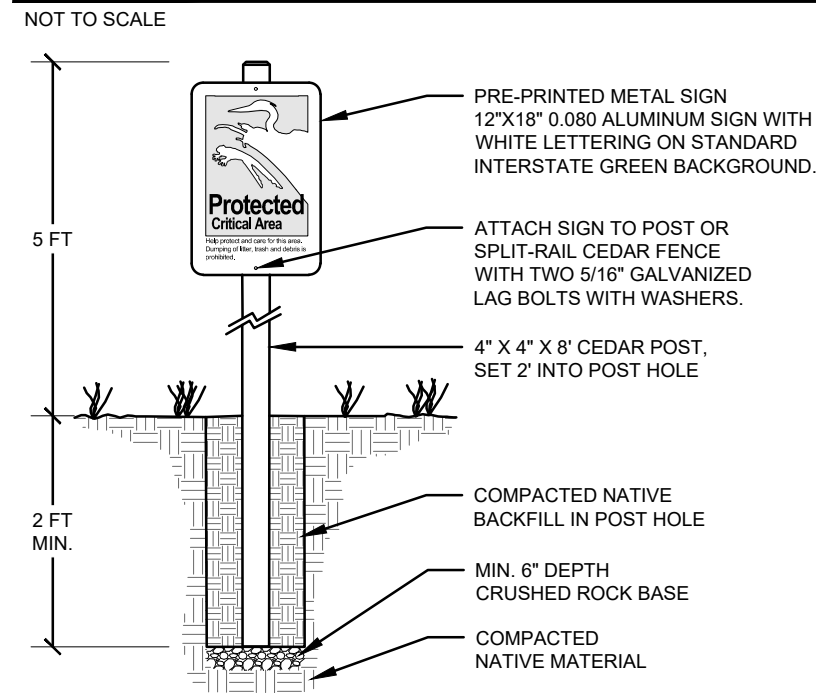
		Area (sf):	12,440
		Cov'g (%):	100
Scientific Name	Common Name	WL Status	BUFFER RESTORATION
SEED MIXES (www.riverrefugeseed.com)			
Native Upland Grass Mix #9		20 lbs/acre	(Qty)
<i>Elymus glaucus</i>	Blue wildrye	30%	
<i>Bromus carinatus</i>	California brome	25%	
<i>Hordeum brachyantherum</i>	Meadow barley	10%	
<i>Festuca roemerii</i>	Roemer's fescue	10%	
<i>Deschampsia elongata</i>	Slender hairgrass	10%	
<i>Agrostis exarata</i>	Spike bentgrass	5%	
<i>Deschampsia cespitosa</i>	Tufted hairgrass	5%	
<i>Festuca rubra</i> var. <i>rubra</i>	Red fescue	5%	
		Total (lbs):	6
1 - Scientific names and species identification taken from <i>Flora of the Pacific Northwest, 2nd Edition</i> (Hitchcock and Cronquist, Ed. by Giblin, Ledger, Zika, and Olmstead, 2018).			
2 - Alternate native plant species may be substituted or added with Project Biologist approval.			

SPLIT RAIL FENCE DETAIL



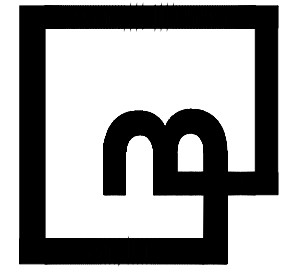
- NOTES:
- POSTS AND RAILINGS PRE-CUT FOR ASSEMBLY.
 - 3-RAIL DESIGNS ARE PERMITTED.
 - FENCE SHALL BE PLACED AT APPROVED BUFFER EDGE.

CRITICAL AREA SIGN DETAIL

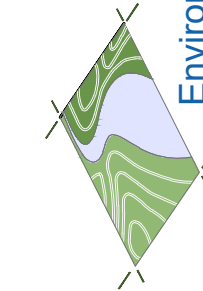


- CRITICAL AREA BOUNDARY SIGN NOTES:
- THE WETLAND/STREAM SIGN SHALL BE POSTED AT THE BOUNDARY BETWEEN THE LOT AND THE CRITICAL AREA.
 - ONE SIGN SHALL BE POSTED PER RESIDENTIAL LOT AND ONE SIGN PER 100 FEET FOR ALL PUBLIC RIGHTS-OF-WAY, TRAILS, PARKING AREAS, PLAYGROUNDS, AND ALL OTHER USES LOCATED ADJACENT TO WETLANDS AND ASSOCIATED BUFFERS.
 - PRE-PRINTED METAL SIGN AVAILABLE THROUGH:
ZUMAR INDUSTRIES
PHONE: 1-800-426-7967
WEBSITE: WWW.ZUMAR.COM

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222
barghausen.com



Soundview Consultants LLC
Environmental Assessment • Planning • Land Use Solutions
P: 253.514.8952
F: 253.514.8954
2907 HARBORVIEW DRIVE
GIG HARBOR, WASHINGTON 98335
WWW.SOUNDVIEWCONSULTANTS.COM



TOLTHUE HEIGHTS
NA - ADJACENT TO
11402 KELLY ROAD NE
CARNATION, WA 98014
KING COUNTY
PARCEL NUMBER:
3426079002

DATE: 4/22/2025

JOB: 2020.0004

BY: MW/GZ

SCALE: AS SHOWN

SHEET: 3

FINAL MITIGATION PLAN

THIS CHAPTER PRESENTS THE MITIGATION DETAILS FOR THE TOLTHUE HEIGHTS COMMERCIAL DEVELOPMENT. THE PROJECT ATTEMPTS TO CLOSELY ADHERE TO LOCAL CRITICAL AREAS REGULATIONS SPECIFIED IN KCC 21A.24 WHILE ALSO UTILIZING THE BEST AVAILABLE SCIENCE (GRANGER ET AL., 2005; HRUBY ET AL., 2009; SHELTON ET AL., 2005; AND WSDOE ET AL., 2006; AND WSDOE ET AL., 2021). THE FOLLOWING SECTIONS PRESENT THE FINAL MITIGATION PLAN TO IMPROVE WETLAND AND STREAM BUFFER PROTECTIONS AND ECOLOGICAL FUNCTIONS.

1.1 DESCRIPTION OF IMPACTS

THE RESIDENTIAL DEVELOPMENT INCLUDES 30 SINGLE FAMILY RESIDENCE LOTS WITH ASSOCIATED UTILITIES AND INTERNAL ACCESS ROADS. THE SITE PLAN HAS BEEN CAREFULLY DESIGNED TO UTILIZE ALL DEVELOPABLE UPLAND AREA ONSITE TO AVOID ALL CRITICAL AREA IMPACTS. HOWEVER, SEVERAL EXISTING OFF-ROAD VEHICLE (ORV) TRAILS HAVE PARTIALLY DEGRADED THE BUFFERS OF STREAM Y AND WETLAND 1. AS SUCH, THE EXISTING 12,440 SQUARE FEET OF DISTURBED WETLAND 1 AND STREAM Y BUFFER AREAS WILL BE FULLY RESTORED BY REPLANTING WITH NATIVE SEED MIX TO REPLACE THE IMPACTED BUFFER FUNCTIONS.

1.2 BUFFER MITIGATION

PER KCC 21A.24.340 AND KCC 21A.24.380, BUFFER RESTORATION WILL BE PROVIDED FOR WETLAND 1 AND STREAM Y. GIVEN THE EXISTING DEGRADED CRITICAL AREA BUFFERS AREAS ONSITE DUE TO EXISTING ORV TRAILS, THESE AREAS WITHIN THE BUFFERS WILL BE FULLY RESTORED BY REPLANTING WITH NATIVE SEED MIX. SPLIT RAIL FENCING AND WETLAND SIGNAGE WILL BE PLACED ALONG THE RESTORATION AND PROPERTY BOUNDARY. NATIVE SEED MIX WILL RECEIVE TEMPORARY IRRIGATION VIA WATER TRUCK AND HOSE AS NEEDED TO FACILITATE GROWTH DURING YEAR 1. THE BUFFER RESTORATION ACTION WILL ESTABLISH DIVERSE HERBACEOUS VEGETATION STRATA FOR HABITAT COMPLEXITY BENEFICIAL TO WILDLIFE. THE ONSITE BUFFER AREAS WILL BE MUCH HIGHER FUNCTIONING THAN THE EXISTING DEGRADED BUFFER AREAS THAT CONTAIN CLEARED AND COMPACTED TRAILS.

1.3 APPROACH AND BEST MANAGEMENT PRACTICES

THE RESTORATION PLAN INCLUDES THE USE OF ONSITE WETLAND AND STREAM BUFFER RESTORATION TO PROVIDE INCREASED WETLAND AND STREAM PROTECTION BY MAINTENANCE OR IMPROVEMENT OF CRITICAL AREA FUNCTIONS. MITIGATION ACTIONS WILL OCCUR IMMEDIATELY AFTER GRADING IS COMPLETE. TESC MEASURES WILL BE IMPLEMENTED THAT CONSISTS OF HIGH-VISIBILITY FENCING (HVF) INSTALLED AROUND NATIVE VEGETATION ALONG THE REDUCED PERIMETER OF THE BUFFER, SILT FENCING BETWEEN THE GRADED AREAS AND UNDISTURBED BUFFER, SPLIT RAIL FENCING AND SIGNAGE ALONG DISTURBED AREAS WHICH WILL BE SEEDED, AND PLASTIC SHEETING ON STOCKPILED MATERIALS. THESE TESC MEASURES WILL BE INSTALLED PRIOR TO THE START OF DEVELOPMENT OR RESTORATION ACTIONS AND ACTIVELY MANAGED FOR THE DURATION OF THE PROJECT.

ALL EQUIPMENT STAGING AND MATERIALS STOCKPILES WILL BE KEPT OUTSIDE OF CRITICAL AREAS AND ASSOCIATED BUFFERS, AND THE AREA WILL NEED TO BE KEPT FREE OF SPILLS AND/OR HAZARDOUS MATERIALS. ALL FILL MATERIAL FOR SITE PREPARATION AND ROAD SURFACING WILL BE SOURCED FROM UPLAND AREAS ONSITE OR FROM APPROVED SUPPLIERS AND WILL NEED TO BE FREE OF POLLUTANTS AND HAZARDOUS MATERIALS. CONSTRUCTION MATERIALS ALONG WITH ALL CONSTRUCTION WASTE AND DEBRIS WILL BE EFFECTIVELY MANAGED AND STOCKPILED ON PAVED SURFACES AND KEPT FREE OF THE REMAINING WETLAND BUFFER AREA. FOLLOWING COMPLETION OF THE DEVELOPMENT, THE ENTIRE SITE WILL BE CLEANED AND DETAIL GRADED USING HAND TOOLS WHEREVER NECESSARY, AND TESC MEASURES WILL NEED TO BE REMOVED.

1.4 GOALS, OBJECTIVES, AND PERFORMANCE STANDARDS

THE GOALS AND OBJECTIVES FOR THE MITIGATION ACTIONS ARE BASED ON REPLACING WETLAND AND STREAM BUFFER FUNCTIONS LOST BY THE EXISTING INDIRECT IMPACTS TO WETLAND 1 AND STREAM Y, PROVIDING ADDITIONAL HABITAT AND PROTECTION FOR THE ONSITE WETLANDS AND STREAM, AND PROVIDING SUPPLEMENTARY WATER QUALITY AND HYDROLOGICAL FUNCTIONS. THE MITIGATION ACTIONS ARE CAPABLE OF IMPROVING HABITAT FUNCTION FOR THE WETLAND AND STREAM OVER TIME BY ESTABLISHMENT OF A DENSE NATIVE VEGETATION BARRIER BETWEEN THE PROJECT AND THE CRITICAL AREAS. THE GOALS AND OBJECTIVES OF THE MITIGATION ACTIONS ARE AS FOLLOWS:

GOAL 1 - RESTORE 12,440 SQUARE FEET OF BUFFER TO REPLACE EXISTING BUFFER FUNCTIONS IN AREAS IMPACTED BY EXISTING ORV TRAILS.

OBJECTIVE 1.1 - ESTABLISH NATIVE PLANT COVER WITHIN THE BUFFER RESTORATION AREAS.

PERFORMANCE STANDARD 1.1.1 - NATIVE VEGETATION SPECIES WILL PROVIDE AT LEAST 70 PERCENT COVER IN ALL MONITORING YEARS.

OBJECTIVE 1.2 - EFFECTIVELY CONTROL AND/OR ELIMINATE NON-NATIVE INVASIVE SPECIES FROM THE BUFFER RESTORATION AREA.

PERFORMANCE STANDARD 1.2.1 - NON-NATIVE INVASIVE PLANTS WILL NOT MAKE UP MORE THAN 20 PERCENT COVER DURING ALL MONITORING YEARS. NON-NATIVE INVASIVE PLANTS ARE PLANTS LISTED BY THE WASHINGTON STATE NOXIOUS WEED BOARD.

1.5.1 PRODUCT HANDLING, DELIVERY, AND STORAGE

ALL SEED AND FERTILIZER SHALL BE DELIVERED IN ORIGINAL, UNOPENED, AND UNDAMAGED CONTAINERS SHOWING WEIGHT, ANALYSIS, AND NAME OF MANUFACTURER. THIS MATERIAL SHALL BE STORED IN A MANNER TO PREVENT WETTING AND DETERIORATION.

1.5.2 INVASIVE PLANT CONTROL AND REMOVAL

INVASIVE SPECIES ONSITE TO BE REMOVED INCLUDE ANY LISTED NOXIOUS WEEDS OR INVASIVE SPECIES THAT ARE EXISTING OR MAY COLONIZE THE MITIGATION AREA. TO ENSURE NON-NATIVE INVASIVE SPECIES DO NOT EXPAND FOLLOWING THE RESTORATION ACTIONS, INVASIVE SPECIES WITHIN THE MITIGATION AREAS WILL BE PRETREATED WITH A ROOT-KILLING HERBICIDE APPROVED FOR USE IN AQUATIC SITES (E.G., RODEO) A MINIMUM OF TWO WEEKS PRIOR TO BEING REMOVED FROM THE CRITICAL AREAS AND/OR ASSOCIATED BUFFERS. THE PRE-TREATMENT WITH HERBICIDE SHALL OCCUR PRIOR TO ALL PLANNED RESTORATION ACTIONS, AND SPOT TREATMENT OF ANY SURVIVING OTHER INVASIVE VEGETATION SHOULD BE PERFORMED AGAIN EACH FALL PRIOR TO LEAF SENESCENCE FOR A MINIMUM OF FIVE YEARS.

1.6 MAINTENANCE & MONITORING PLAN

THE MAINTENANCE AND MONITORING PLAN IS DESCRIBED BELOW IN ACCORDANCE WITH KCC 21A.24.130. 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 PROJECT, KEEPING THE SITE FREE FROM OF NON-NATIVE INVASIVE VEGETATION, TRASH, AND WASTE.

THE MITIGATION PLAN REQUIRES CONTINUED MONITORING AND MAINTENANCE TO ENSURE THE ACTIONS ARE SUCCESSFUL. THEREFORE, THE BUFFER MITIGATION AREAS WILL BE MONITORED FOR A PERIOD OF THREE YEARS WITH FORMAL INSPECTIONS BY A QUALIFIED PROJECT SCIENTIST. MONITORING EVENTS WILL BE SCHEDULED AT THE TIME OF CONSTRUCTION, 30 DAYS AFTER SEEDING AND ANNUALLY IN YEARS 1 THROUGH 3. CLOSEOUT ASSESSMENT WILL BE CONDUCTED IN YEAR 3 FOR THE BUFFER MITIGATION AREAS TO ENSURE ADEQUATE MITIGATION AREAS WERE ESTABLISHED.

MONITORING WILL CONSIST OF PERCENT COVER MEASUREMENTS AT PERMANENT MONITORING STATIONS, WALK-THROUGH SURVEYS TO IDENTIFY INVASIVE SPECIES, PHOTOGRAPHS TAKEN AT FIXED PHOTOGRAPHIC POINTS, WILDLIFE OBSERVATIONS, AND GENERAL QUALITATIVE HABITAT AND WETLAND/BUFFER 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 BUFFER BOUNDARY. HERBACEOUS VEGETATION IS SAMPLED FROM A 10-FOOT DIAMETER (78.5 SQUARE FEET) WITHIN EACH MONITORING PLOT. HERBACEOUS VEGETATION WITHIN EACH MONITORING PLOT IS THEN RECORDED TO AT LEAST THE GENUS LEVEL 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 WETLAND STATUS IS INCLUDED WITHIN THE MONITORING REPORT.

1.7 REPORTING

FOLLOWING EACH FORMAL 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 KING COUNTY BY DECEMBER 31ST EACH YEAR TO ENSURE FULL COMPLIANCE WITH THE MITIGATION PLAN.

1.8 TEMPORARY IRRIGATION SPECIFICATIONS

WHILE THE NATIVE SPECIES SELECTED FOR THE 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 IRRIGATION MAY BE NECESSARY DUE TO DRY CONDITIONS. THEREFORE, IRRIGATION OR REGULAR WATERING MAY BE PROVIDED AS NECESSARY FOR THE DURATION OF THE FIRST GROWING SEASONS WHILE THE NATIVE SEED MIX BECOMES ESTABLISHED VIA A WATERTRUCK AND HOSE. IF USED, IRRIGATION WILL BE DISCONTINUED AFTER FIRST GROWING SEASONS. IRRIGATION IS RECOMMENDED AS NEEDED TO ENSURE SUCCESS OF THE ESTABLISHED SEED MIX.

1.9 CRITICAL AREA PROTECTION

LONG-TERM PROTECTION OF THE MITIGATION SITE SHALL BE PROVIDED PER KCC 21A.24.180 BY PLACEMENT IN A SEPARATE TRACT IN WHICH DEVELOPMENT IS PROHIBITED OR BY EXECUTION OF AN EASEMENT DEDICATED TO THE KING COUNTY, A CONSERVATION ORGANIZATION, LAND TRUST, OR SIMILARLY PRESERVED THROUGH A PERMANENT PROTECTIVE MECHANISM ACCEPTABLE TO THE COUNTY. THE LOCATION AND LIMITATIONS ASSOCIATED WITH THE MITIGATION AREA SHALL BE SHOWN ON THE FACE OF THE DEED OR PLAT APPLICABLE TO THE PROPERTY AND SHALL BE RECORDED WITH THE PIERCE COUNTY RECORDING DEPARTMENT. IN ADDITION, SPLIT-RAIL FENCING AND CRITICAL AREAS SIGNAGE WILL BE PLACED ALONG THE PERIMETER OF THE ONSITE BUFFER AREAS ADJACENT TO DEVELOPMENT TO INHIBIT INTRUSION INTO THE AREAS PER KCC 21A.24.160, AS WELL AS ALONG THE PROPERTY BOUNDARY ADJACENT TO WETLAND 1.

1.10 FINANCIAL ASSURANCES

UNDER KCC 21A.22.090, PERFORMANCE SECURITY IS REQUIRED TO ASSURE THAT ALL ACTIONS APPROVED UNDER THIS MITIGATION PLAN ARE SATISFACTORILY COMPLETED IN ACCORDANCE WITH THE PLAN, PERFORMANCE STANDARDS, AND REGULATORY CONDITIONS OF APPROVAL. PRIOR TO FINAL INSPECTION, A MAINTENANCE AND WARRANTY SECURITY (BOND) SHALL BE OBTAINED IN AN AMOUNT EQUAL TO 125 PERCENT OF THE TOTAL FAIR MARKET COST OF CONSTRUCTION/INSTALLATION LABOR AND MATERIALS. A BOND QUANTITY WORKSHEET HAS BEEN PREPARED TO ACCOMPANY THIS FINAL MITIGATION PLAN.

SOURCES:



Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222
barghausen.com



Soundview Consultants LLC
Environmental Assessment • Planning • Land Use Solutions
P: 253.514.8952
F: 253.514.8954
2907 HARBORVIEW DRIVE
GIG HARBOR, WASHINGTON 98335
WWW.SOUNDVIEWCONSULTANTS.COM

TOLTHUE HEIGHTS
NA -- ADJACENT TO
11402 KELLY ROAD NE
CARNATION, WA 98014

KING COUNTY
PARCEL NUMBER:
3426079002

DATE: 4/22/2025
JOB: 2020.0004
BY: MW/GZ
SCALE: AS SHOWN
SHEET: 4