

Legend:

- PARCEL BOUNDARY
- DELINEATED STREAM OHWM
- REDUCED BUFFER (86.25')
- APPROXIMATE KNOTWEED PATCH (630 SF)
- EXISTING EVERGREEN TREE
- EXISTING DECIDUOUS TREE

1. CRITICAL AREAS DELINEATED ON 6/18/2019 BY THE WATERSHED COMPANY; 750 6TH ST S, KIRKLAND WA, 98033; (425) 822-5242.
2. SURVEY DATED 2/11/20; PROVIDED BY PLOG; 22525 SE 64TH PL, ISSAQUAH WA, 98027; (206) 420-7130.
3. ENTIRE SUBJECT PARCEL LOCATED WITHIN 115-FT STREAM BUFFER; STANDARD BUFFER NOT SHOWN IN EXTENTS OF PLAN.

W1	EXISTING CONDITIONS
W2	PROPOSED IMPACTS ASSESSMENT
W3	MITIGATION AND PLANTING PLAN
W4	PLANT SCHEDULES AND SITE PREPARATION
W5	PLANT INSTALLATION DETAILS AND NOTES
W6	MITIGATION PLAN NOTES



SCALE 1" = 10'



2021-RUE-0001

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LFP GAREY RUE

PREPARED FOR MARK GAREY
PARCEL #4022900497
36XX NE 205TH ST
LAKE FOREST PARK, WA

[illegible]



PREPARED FOR MARK GAREY
PARCEL #4022900497
36XX NE 205TH ST
LAKE FOREST PARK, WA

190405
SHEET NUMBER:
W2 OF 6

2021-RUE-0001

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PREPARED FOR MARK GAREY
PARCEL #4022900497
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LAKE FOREST PARK, WA

SUBMITTALS & REVISIONS	
NO.	DESCRIPTION
1	MITIGATION PLAN

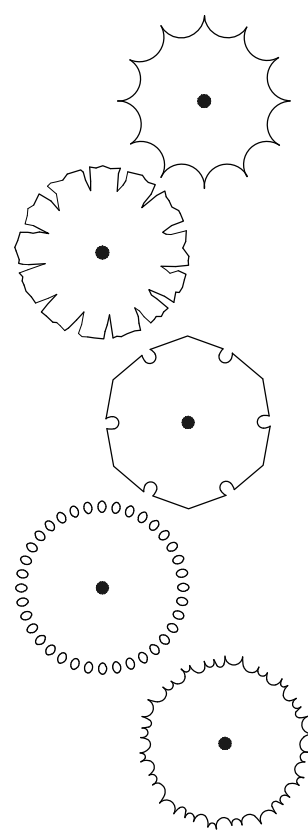
SHEET SIZE: ORIGINAL PLAN IS 22" x 34". SCALE ACCORDINGLY.	
PROJECT MANAGER:	NL
DESIGNED:	AK
DRAFTED:	AK
CHECKED:	MF
JOB NUMBER:	190405
SHEET NUMBER:	W3 OF 6

DATE PRINTED BY FILENAME

NOTES

- COIR WATTLE IS SHOWN OFFSET FOR CLARITY PURPOSES; WATTLE SHALL BE PLACED ALONG DELINEATED BOUNDARY OF STREAM OR PROPERTY LINE WHERE STREAM BOUNDARY IS OFF-SITE.
- SEE INVASIVE PLANT REMOVAL AND SITE PREPARATION DETAILS ON SHEET W5.
- SEE PLANT SCHEDULES FOR PLANTING AREAS ON SHEET W4.

LEGEND



- GRAND FIR / ABIES GRANDIS
- DOUGLAS FIR / PSEUDOTSUGA MENZIESII
- WESTERN RED CEDAR / THUJA PLICATA
- WESTERN HEMLOCK / TSUGA HETEROPHYLLA
- SITKA SPRUCE / PICEA SITCHENSIS

- PARCEL BOUNDARY
- DELINEATED STREAM OHWM
- REDUCED BUFFER (86.25')
- EXISTING EVERGREEN TREE
- EXISTING DECIDUOUS TREE
- EXISTING DECIDUOUS TREE TO BE REMOVED

PROPOSED CONDITIONS

- MITIGATION AREA (3,651 SF)
- PLANTING AREA TYPE A (2,969 SF)
- PLANTING AREA TYPE B (682 SF)
- SPLIT RAIL FENCE (205 LF)
- COIR WATTLE (146 LF)

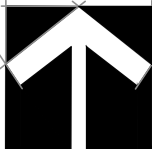
W5
2
W5
1



MITIGATION AND PLANTING PLAN

SCALE 1" = 10'

0' 5' 10' 20' 40'

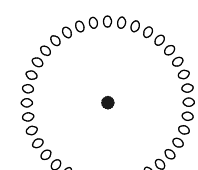
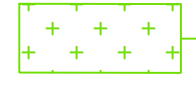


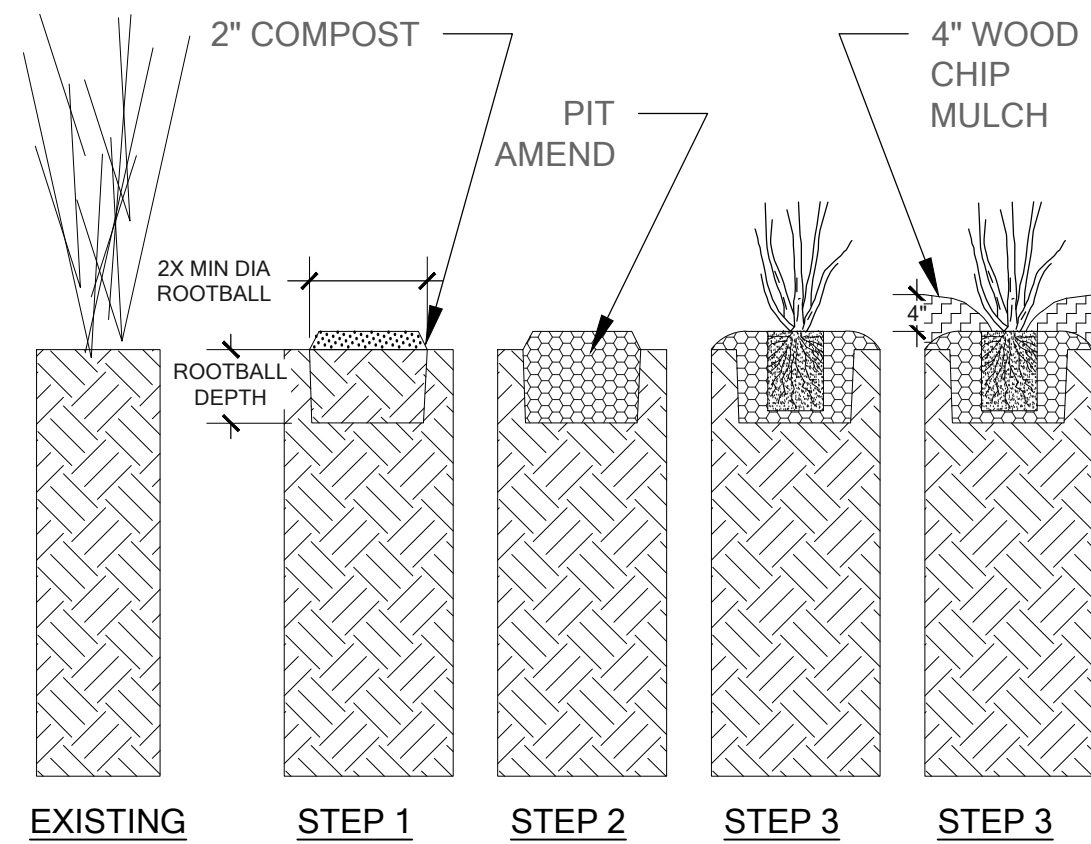
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PLANTING AREA TYPE A (2,969 SF)

TREES	COMMON / BOTANICAL NAME	SIZE	QTY	SPACING
	GRAND FIR / ABIES GRANDIS	2 GALLON	7	PER PLAN
	DOUGLAS FIR / PSEUDOTSUGA MENZIESII	2 GALLON	8	PER PLAN
	WESTERN RED CEDAR / THUJA PLICATA	2 GALLON	9	PER PLAN
	WESTERN HEMLOCK / TSUGA HETEROPHYLLA	2 GALLON	9	PER PLAN
TOTAL TREES			33	
SHRUBS	COMMON / BOTANICAL NAME	SIZE	QTY	SPACING
	ACER CIRCINATUM / VINE MAPLE	1 GALLON	16	5' O.C.
	OEMLERIA CERASIFORMIS / OSOBERY	1 GALLON	16	5' O.C.
	RIBES SANGUINEUM / RED-FLOWERING CURRANT	1 GALLON	16	5' O.C.
	SAMBUCUS RACEMOSA / RED ELDERBERRY	1 GALLON	16	5' O.C.
	RUBUS PARVIFLORUS / THIMBLEBERRY	1 GALLON	16	5' O.C.
	SYMPHORICARPOS ALBUS / SNOWBERRY	1 GALLON	16	5' O.C.
TOTAL SHRUBS			96	
GROUND COVERS	COMMON / BOTANICAL NAME	SIZE	QTY	SPACING
	GAULTHERIA SHALLON / SALAL	1 GALLON	152	30" O.C.
	MAHONIA NERVOSA / DULL OREGON GRAPE	1 GALLON	152	30" O.C.
	POLYSTICHUM MUNITUM / SWORD FERN	1 GALLON	152	30" O.C.
TOTAL GROUND COVERS			456	
TOTAL PLANT QTY			585	



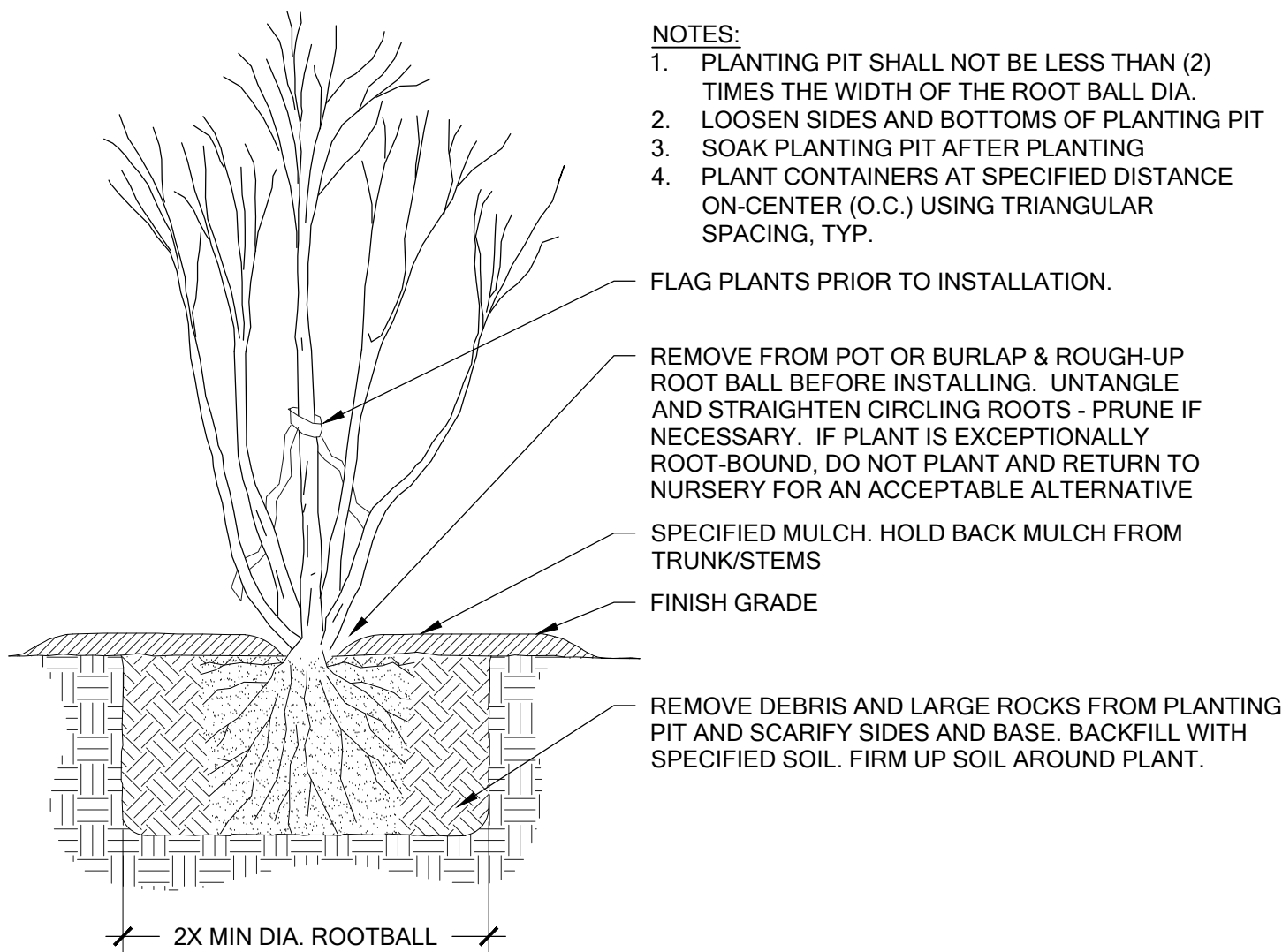
PLANTING AREA PREPARATION
STEP 1
REMOVE UNDESIRABLE SPECIES. WORK WITHIN EXISTING ROOT ZONES SHALL BE DONE BY HAND.
STEP 2
PLACE 0.13 CF / 1 GALLON OF COMPOST PER PLANTING PIT AND MIX WITH EXCAVATED SOIL.
STEP 3
LEAVE MINIMUM ONE (1) INCH LAYER OF AMENDED SOIL AT THE BOTTOM OF THE PIT THEN INSTALL PLANT (SEE PLANTING DETAIL). BACKFILL WITH AMENDED SOIL.
STEP 4
INSTALL MULCH LAYER FOUR (4) INCHES DEEP. HOLD BACK MULCH FROM TRUNKS / STEMS.

1 SITE PREPARATION

Scale: NTS

PLANTING AREA TYPE B (682 SF)

TREES	COMMON / BOTANICAL NAME	SIZE	QTY	SPACING
	SITKA SPRUCE / PICEA SITCHENSIS	2 GALLON	9	PER PLAN
	SALIX SITCHENSIS / SITKA WILLOW	LIVESTAKE	25	30" O.C.
TOTAL TREES			34	
SHRUBS	COMMON / BOTANICAL NAME	SIZE	QTY	SPACING
	CORNUS SERICEA / RED-TWIG DOGWOOD	LIVESTAKE	25	30" O.C.
	LONICERA INVOLUCRATA / BLACK TWINBERRY	LIVESTAKE	25	30" O.C.
	PHYSOCARPUS CAPITATUS / PACIFIC NINEBACK	LIVESTAKE	25	30" O.C.
TOTAL SHRUBS			75	



- NOTES:
1. PLANTING PIT SHALL NOT BE LESS THAN (2) TIMES THE WIDTH OF THE ROOT BALL DIA.
 2. LOOSEN SIDES AND BOTTOMS OF PLANTING PIT
 3. SOAK PLANTING PIT AFTER PLANTING
 4. PLANT CONTAINERS AT SPECIFIED DISTANCE ON-CENTER (O.C.) USING TRIANGULAR SPACING, TYP.

FLAG PLANTS PRIOR TO INSTALLATION.

REMOVE FROM POT OR BURLAP & ROUGH-UP ROOT BALL BEFORE INSTALLING. UNTANGLE AND STRAIGHTEN CIRCLING ROOTS - PRUNE IF NECESSARY. IF PLANT IS EXCEPTIONALLY ROOT-BOUND, DO NOT PLANT AND RETURN TO NURSERY FOR AN ACCEPTABLE ALTERNATIVE

SPECIFIED MULCH. HOLD BACK MULCH FROM TRUNK/STEMS

FINISH GRADE

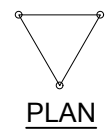
REMOVE DEBRIS AND LARGE ROCKS FROM PLANTING PIT AND SCARIFY SIDES AND BASE. BACKFILL WITH SPECIFIED SOIL. FIRM UP SOIL AROUND PLANT.

2 CONTAINER PLANTING

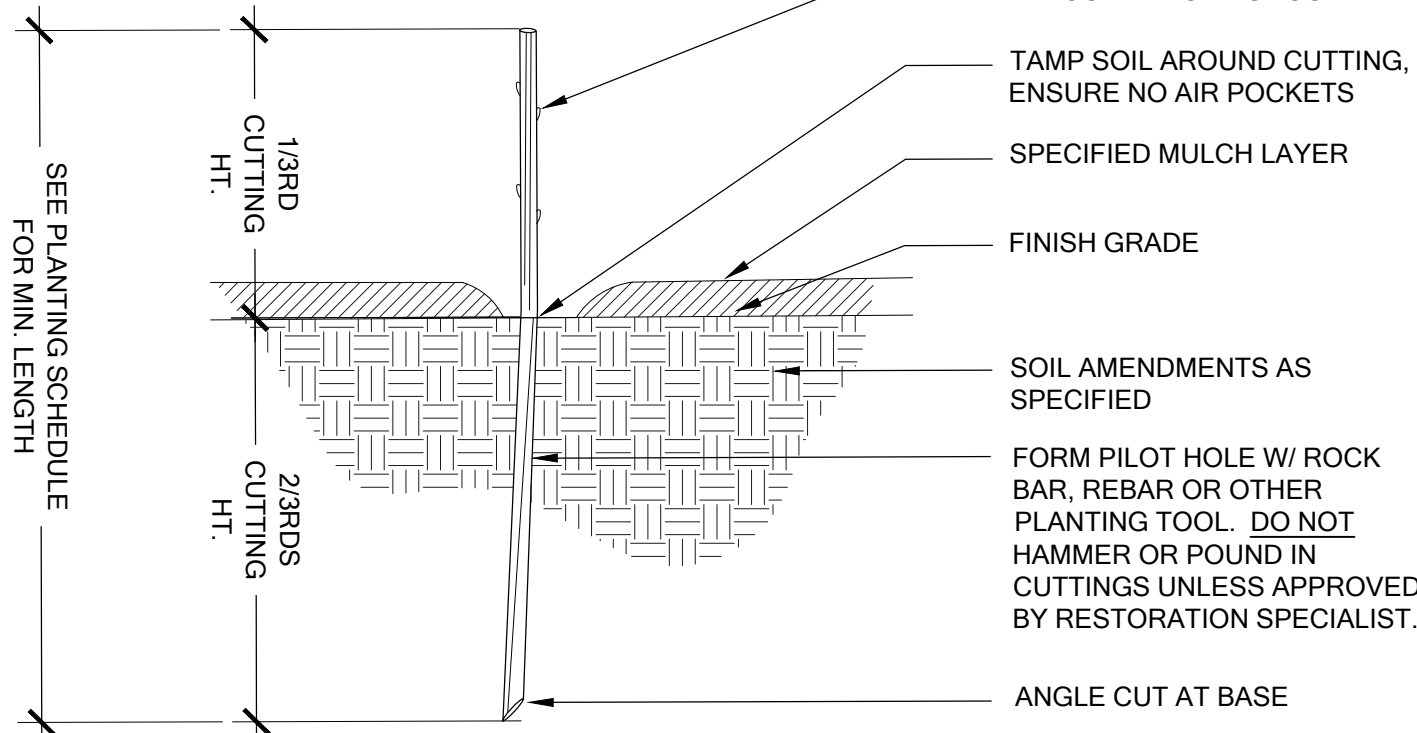
Scale: NTS

- NOTES:
1. INSTALL HARDWOOD CUTTINGS DURING THEIR DORMANCY. DO NOT ALLOW THEM TO DRY OUT.
 2. CUTTINGS SHALL BE 3/4" TO 1" IN DIAMETER OR APPROVED EQUIVALENT.
 3. INSTALL TO MIN. 2/3RDS DEPTH INTO SOIL. USE TRIANGULAR SPACING. SEE PLANTING SCHEDULE FOR SPACING.
 4. INSURE THAT BUDS ARE POINTING UP.
 5. FIRM UP SOIL AROUND INSTALLED CUTTING.
 6. WATER AFTER PLANTING AND BEFORE MULCHING.

INSTALL CUTTINGS USING TRIANGULAR SPACING



PLAN



3 LIVE STAKE PLANTING

Scale: NTS

LFP GAREY RUE

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PARCEL #4022900497
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LAKE FOREST PARK, WA

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SUBMITTALS & REVISIONS				BY	AK
NO.	DATE	DESCRIPTION	MITIGATION PLAN		
1	11/24/20				
	</				

PLANT INSTALLATION SPECIFICATIONS

GENERAL NOTES

QUALITY ASSURANCE

- PLANTS SHALL MEET OR EXCEED THE SPECIFICATIONS OF FEDERAL, STATE, AND LOCAL LAWS REQUIRING INSPECTION FOR PLANT DISEASE AND INSECT CONTROL. PLANTS SHALL BE HEALTHY, VIGOROUS, AND WELL-FORMED, WITH WELL DEVELOPED, FIBROUS ROOT SYSTEMS, FREE FROM DEAD BRANCHES OR ROOTS. PLANTS SHALL BE FREE FROM DAMAGE CAUSED BY TEMPERATURE EXTREMES, LACK OR EXCESS OF MOISTURE, INSECTS, DISEASE, AND MECHANICAL INJURY. PLANTS IN LEAF SHALL BE WELL FOLIATED AND OF GOOD COLOR. PLANTS SHALL BE HABITUATED TO THE OUTDOOR ENVIRONMENTAL CONDITIONS INTO WHICH THEY WILL BE PLANTED (HARDENED-OFF).
- TREES WITH DAMAGED, CROOKED, MULTIPLE OR BROKEN LEADERS WILL BE REJECTED. WOODY PLANTS WITH ABRASIONS OF THE BARK OR SUN SCALD WILL BE REJECTED.
- NOMENCLATURE: PLANT NAMES SHALL CONFORM TO FLORA OF THE PACIFIC NORTHWEST BY HITCHCOCK AND CRONQUIST, UNIVERSITY OF WASHINGTON PRESS, 2018 AND/OR TO A FIELD GUIDE TO THE COMMON WETLAND PLANTS OF WESTERN WASHINGTON & NORTHWESTERN OREGON, ED. SARAH SPEAR COOKE, SEATTLE AUDUBON SOCIETY, 1997.

DEFINITIONS

- PLANTS/PLANT MATERIALS. PLANTS AND PLANT MATERIALS SHALL INCLUDE ANY LIVE PLANT MATERIAL USED ON THE PROJECT. THIS INCLUDES BUT IS NOT LIMITED TO CONTAINER GROWN, B&B OR BARERROOT PLANTS; LIVE STAKES AND FASCINES (WATTLES); TUBERS, CORMS, BULBS, ETC.; SPRIGS, PLUGS, AND LINERS.
- CONTAINER GROWN. CONTAINER GROWN PLANTS ARE THOSE WHOSE ROOTBALLS ARE ENCLOSED IN A POT OR BAG IN WHICH THAT PLANT GREW.

SUBSTITUTIONS

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN SPECIFIED MATERIALS IN ADVANCE IF SPECIAL GROWING, MARKETING OR OTHER ARRANGEMENTS MUST BE MADE IN ORDER TO SUPPLY SPECIFIED MATERIALS.
- SUBSTITUTION OF PLANT MATERIALS NOT ON THE PROJECT LIST WILL NOT BE PERMITTED UNLESS AUTHORIZED IN WRITING BY THE RESTORATION CONSULTANT.
- IF PROOF IS SUBMITTED THAT ANY PLANT MATERIAL SPECIFIED IS NOT OBTAINABLE, A PROPOSAL WILL BE CONSIDERED FOR USE OF THE NEAREST EQUIVALENT SIZE OR ALTERNATIVE SPECIES, WITH CORRESPONDING ADJUSTMENT OF CONTRACT PRICE.
- SUCH PROOF WILL BE SUBSTANTIATED AND SUBMITTED IN WRITING TO THE CONSULTANT AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION.

INSPECTION

- PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE RESTORATION CONSULTANT FOR CONFORMANCE TO SPECIFICATIONS, EITHER AT TIME OF DELIVERY ON-SITE OR AT THE GROWER'S NURSERY. APPROVAL OF PLANT MATERIALS AT ANY TIME SHALL NOT IMPAIR THE SUBSEQUENT RIGHT OF INSPECTION AND REJECTION DURING PROGRESS OF THE WORK.
- PLANTS INSPECTED ON SITE AND REJECTED FOR NOT MEETING SPECIFICATIONS MUST BE REMOVED IMMEDIATELY FROM SITE OR RED-TAGGED AND REMOVED AS SOON AS POSSIBLE.
- THE RESTORATION CONSULTANT MAY ELECT TO INSPECT PLANT MATERIALS AT THE PLACE OF GROWTH. AFTER INSPECTION AND ACCEPTANCE, THE RESTORATION CONSULTANT MAY REQUIRE THE INSPECTED PLANTS BE LABELED AND RESERVED FOR PROJECT. SUBSTITUTION OF THESE PLANTS WITH OTHER INDIVIDUALS, EVEN OF THE SAME SPECIES AND SIZE, IS UNACCEPTABLE.

MEASUREMENT OF PLANTS

- PLANTS SHALL CONFORM TO SIZES SPECIFIED UNLESS SUBSTITUTIONS ARE MADE AS OUTLINED IN THIS CONTRACT.
- HEIGHT AND SPREAD DIMENSIONS SPECIFIED REFER TO MAIN BODY OF PLANT AND NOT BRANCH OR ROOT TIP TO TIP. PLANT DIMENSIONS SHALL BE MEASURED WHEN THEIR BRANCHES OR ROOTS ARE IN THEIR NORMAL POSITION.
- WHERE A RANGE OF SIZE IS GIVEN, NO PLANT SHALL BE LESS THAN THE MINIMUM SIZE AND AT LEAST 50% OF THE PLANTS SHALL BE AS LARGE AS THE MEDIAN OF THE SIZE RANGE. (EXAMPLE: IF THE SIZE RANGE IS 12" TO 18", AT LEAST 50% OF PLANTS MUST BE 15" TALL.).

SUBMITTALS

PROPOSED PLANT SOURCES

- WITHIN 45 DAYS AFTER AWARD OF THE CONTRACT, SUBMIT A COMPLETE LIST OF PLANT MATERIALS PROPOSED TO BE PROVIDED DEMONSTRATING CONFORMANCE WITH THE REQUIREMENTS SPECIFIED. INCLUDE THE NAMES AND ADDRESSES OF ALL GROWERS AND NURSERIES.

PRODUCT CERTIFICATES

- PLANT MATERIALS LIST - SUBMIT DOCUMENTATION TO CONSULTANT AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION THAT PLANT MATERIALS HAVE BEEN ORDERED. ARRANGE PROCEDURE FOR INSPECTION OF PLANT MATERIAL WITH CONSULTANT AT TIME OF SUBMISSION.
- HAVE COPIES OF VENDOR'S OR GROWERS' INVOICES OR PACKING SLIPS FOR ALL PLANTS ON SITE DURING INSTALLATION. INVOICE OR PACKING SLIP SHOULD LIST SPECIES BY SCIENTIFIC NAME, QUANTITY, AND DATE DELIVERED (AND GENETIC ORIGIN IF THAT INFORMATION WAS PREVIOUSLY REQUESTED).

DELIVERY, HANDLING, & STORAGE

NOTIFICATION

CONTRACTOR MUST NOTIFY CONSULTANT 48 HOURS OR MORE IN ADVANCE OF DELIVERIES SO THAT CONSULTANT MAY ARRANGE FOR INSPECTION.

PLANT MATERIALS

- TRANSPORTATION - DURING SHIPPING, PLANTS SHALL BE PACKED TO PROVIDE PROTECTION AGAINST CLIMATE EXTREMES, BREAKAGE AND DRYING. PROPER VENTILATION AND PREVENTION OF DAMAGE TO BARK, BRANCHES, AND ROOT SYSTEMS MUST BE ENSURED.
- SCHEDULING AND STORAGE - PLANTS SHALL BE DELIVERED AS CLOSE TO PLANTING AS POSSIBLE. PLANTS IN STORAGE MUST BE PROTECTED AGAINST ANY CONDITION THAT IS DETRIMENTAL TO THEIR CONTINUED HEALTH AND VIGOR.
- HANDLING - PLANT MATERIALS SHALL NOT BE HANDLED BY THE TRUNK, LIMBS, OR FOLIAGE BUT ONLY BY THE CONTAINER, BALL, BOX, OR OTHER PROTECTIVE STRUCTURE, EXCEPT BARERROOT PLANTS SHALL BE KEPT IN BUNDLES UNTIL PLANTING AND THEN HANDLED CAREFULLY BY THE TRUNK OR STEM.
- LABELS - PLANTS SHALL HAVE DURABLE, LEGIBLE LABELS STATING CORRECT SCIENTIFIC NAME AND SIZE. TEN PERCENT OF CONTAINER GROWN PLANTS IN INDIVIDUAL POTS SHALL BE LABELED. PLANTS SUPPLIED IN FLATS, RACKS, BOXES, BAGS, OR BUNDLES SHALL HAVE ONE LABEL PER GROUP.

WARRANTY

PLANT WARRANTY

PLANTS MUST BE GUARANTEED TO BE TRUE TO SCIENTIFIC NAME AND SPECIFIED SIZE, AND TO BE HEALTHY AND CAPABLE OF VIGOROUS GROWTH.

REPLACEMENT

- PLANTS NOT FOUND MEETING ALL OF THE REQUIRED CONDITIONS AT THE CONSULTANT'S DISCRETION MUST BE REMOVED FROM SITE AND REPLACED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- PLANTS NOT SURVIVING AFTER ONE YEAR TO BE REPLACED AT THE CONTRACTOR'S EXPENSE.

PLANT MATERIAL

GENERAL

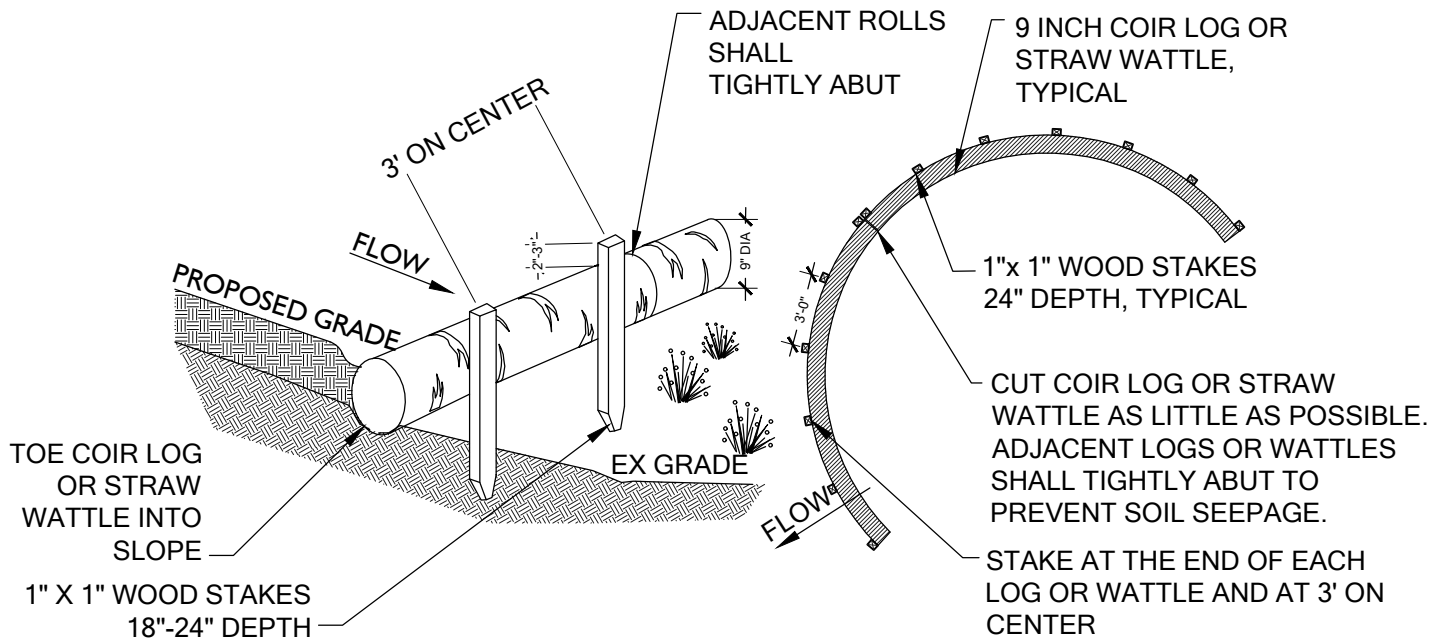
- PLANTS SHALL BE NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES UNDER CLIMATIC CONDITIONS SIMILAR TO OR MORE SEVERE THAN THOSE OF THE PROJECT SITE.
- PLANTS SHALL BE TRUE TO SPECIES AND VARIETY OR SUBSPECIES. NO CULTIVARS OR NAMED VARIETIES SHALL BE USED UNLESS SPECIFIED AS SUCH.

QUANTITIES

SEE PLANT LIST ON ACCOMPANYING PLANS AND PLANT SCHEDULES.

ROOT TREATMENT

- CONTAINER GROWN PLANTS (INCLUDES PLUGS): PLANT ROOT BALLS MUST HOLD TOGETHER WHEN THE PLANT IS REMOVED FROM THE POT, EXCEPT THAT A SMALL AMOUNT OF LOOSE SOIL MAY BE ON THE TOP OF THE ROOTBALL.
- PLANTS MUST NOT BE ROOT-BOUND; THERE MUST BE NO CIRCLING ROOTS PRESENT IN ANY PLANT INSPECTED.
- ROOTBALLS THAT HAVE CRACKED OR BROKEN WHEN REMOVED FROM THE CONTAINER SHALL BE REJECTED.

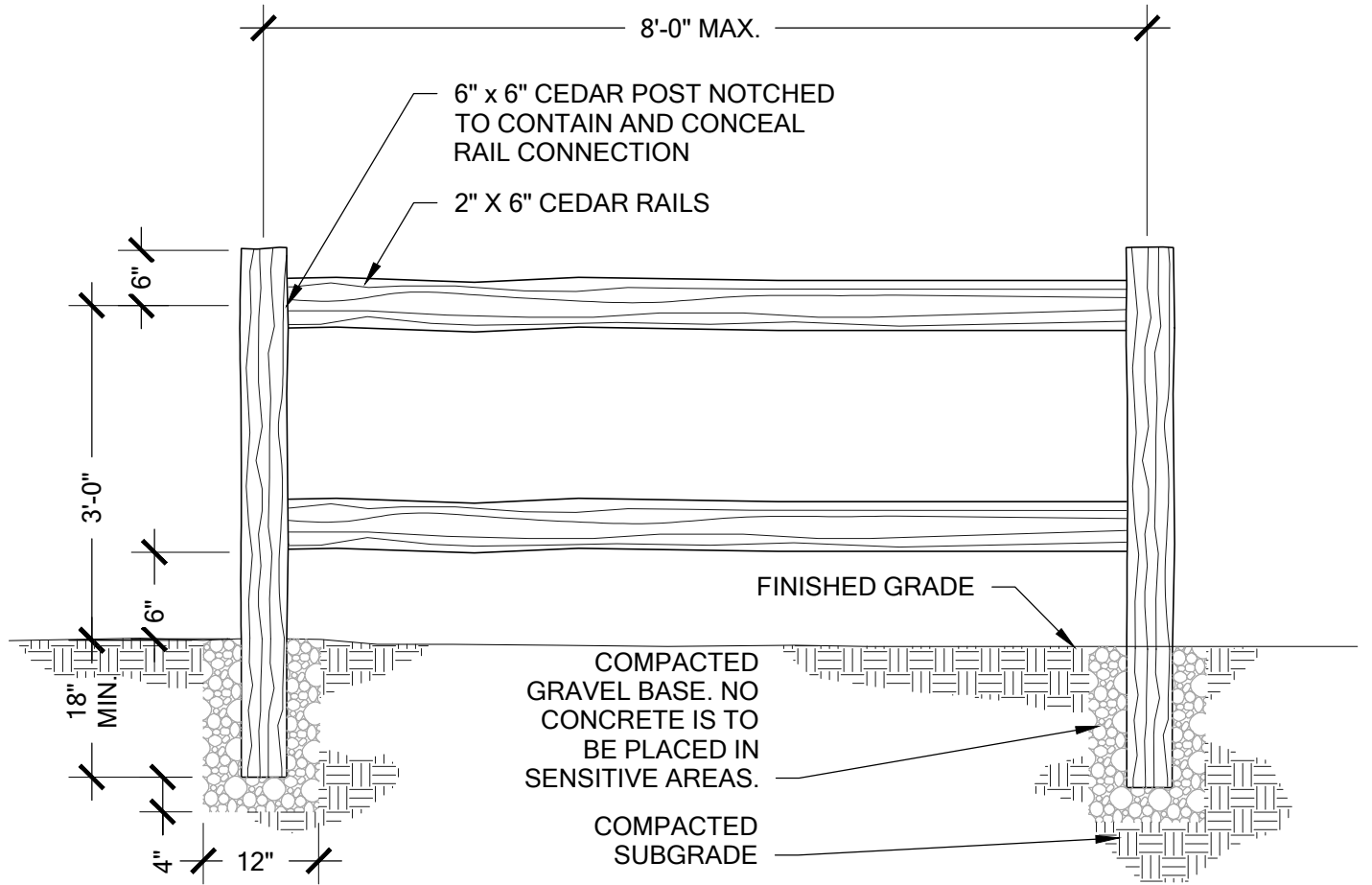


NOTES

- COIR LOG OR STRAW WATTLE SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION RELATED ACTIVITIES
- COIR LOG OR STRAW WATTLE SHALL BE 8-10" INCH IN DIAMETER AND INSTALLED PER SURFACE WATER DESIGN MANUAL - APPENDIX D (D.2.1.2.5)
- STAKING: WOODEN STAKES ARE RECOMMENDED TO SECURE THE COIR LOG OR STRAW WATTLE. BE SURE TO USE A STAKE THAT IS LONG ENOUGH TO PROTRUDE SEVERAL INCHES ABOVE THE COIR LOG OR STRAW WATTLE: 18" IS A GOOD LENGTH FOR HARD, ROCKY SOIL; FOR SOFT LOAMY SOIL USE A 24" STAKE.
- WHEN INSTALLING RUNNING LENGTHS OF COIR LOG OR STRAW WATTLE, BUTT THE SECOND LOG TIGHTLY AGAINST THE FIRST; DO NOT OVERLAP THE ENDS.
- STAKE THE LOGS OR WATTLES AT EACH END AND THREE (3) FEET ON CENTER. STAKES SHOULD BE DRIVEN OUTSIDE THE COIR LOG OR STRAW WATTLE, BUT CLOSE ENOUGH TO HOLD IT IN PLACE. LEAVE 2 - 3 INCHES OF THE STAKE PROTRUDING ABOVE THE COIR LOG OR STRAW WATTLE. A HEAVY SEDIMENT LOAD WILL TEND TO PICK UP THE COIR LOG OR STRAW WATTLE AND COULD PULL IT OFF THE STAKES IF THEY ARE DRIVEN DOWN TOO LOW.
- WHEN COIR LOG OR STRAW WATTLE ARE USED FOR FLAT GROUND APPLICATIONS, DRIVE THE STAKES STRAIGHT DOWN; WHEN INSTALLING COIR LOG OR STRAW WATTLE ON SLOPES, DRIVE THE STAKES PERPENDICULAR TO THE SLOPE. DRIVE THE FIRST END STAKE OF THE SECOND COIR LOG OR STRAW WATTLE AT AN ANGLE TOWARD THE FIRST COIR LOG OR STRAW WATTLE IN ORDER TO HELP ABUT THEM TIGHTLY TOGETHER.

1 COIR WATTLE

Scale: NTS



2 SPLIT RAIL FENCE

Scale: NTS



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Science & Design

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SCALE ACCORDINGLY.

PROJECT MANAGER: NL
DESIGNED: AK
DRAFTED: AK
CHECKED: MF

JOB NUMBER:
190405

SHEET NUMBER:
W5 OF 6

2021-RUE-0001

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PLANT INSTALLATION DETAILS AND NOTES

MITIGATION PLAN NOTES

OVERVIEW

THIS PLAN HAS BEEN PREPARED TO ENHANCE ON-SITE STREAM BUFFER FUNCTION AS COMPENSATION FOR STREAM BUFFER IMPACTS ASSOCIATED WITH THE DEVELOPMENT OF A SINGLE-FAMILY RESIDENCE. THE EXISTING CONDITIONS SUBJECT TO THE PROVISIONS OF THIS MITIGATION PLAN ARE PARTIALLY DEGRADED AND CONTAIN A MIXTURE OF NATIVE AND NON-NATIVE INVASIVE VEGETATION SUCH AS HIMALAYAN BLACKBERRY, KNOTWEED AND ENGLISH IVY.

THE PLAN CALLS FOR ENHANCEMENT OF 3,651 SQUARE FEET OF STREAM BUFFER THROUGH THE REMOVAL OF INVASIVE SPECIES AND PLANTING OF NATIVE TREES, SHRUBS AND GROUNDCOVER.

MITIGATION AREA WORK SEQUENCE (SEE MATERIALS FOR ITEMS IN BOLD)

A RESTORATION SPECIALIST SHALL MAKE SITE VISITS TO VERIFY THE FOLLOWING PROJECT MILESTONES:

1. MARK THE CLEARING LIMITS WITH HIGH VISIBILITY FENCING OR SIMILAR MEANS.
2. INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE SITE PREPARATION PLAN (SHEET W3).
3. PREPARE SITE SOILS PER THE SITE PREPARATION PLAN (SHEETS W4 AND W5)
4. INSTALL NATIVE PLANTS PER PLANTING DETAILS ON SHEET W4 AND W5.
 - A. NATIVE PLANT INSTALLATION SHALL OCCUR DURING THE DORMANT SEASON (OCTOBER 15TH THROUGH MARCH 1ST) IN FROST-FREE PERIODS ONLY.
 - B. LAYOUT PLANT MATERIAL PER PLAN FOR INSPECTION BY THE RESTORATION SPECIALIST. PLANT SUBSTITUTIONS WILL NOT BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE RESTORATION SPECIALIST.
 - C. INSTALL PLANTS PER PLANTING DETAILS
5. WATER IN EACH PLANT THOROUGHLY TO REMOVE AIR POCKETS.
6. INSTALL A TEMPORARY IRRIGATION SYSTEM CAPABLE OF SUPPLYING AT LEAST 1-INCH OF WATER PER WEEK TO THE ENTIRE PLANTED AREA DURING THE DRY SEASON (JUNE 1ST THROUGH SEPTEMBER 30TH).
7. ONE YEAR AFTER INITIAL PLANTING, APPLY A SLOW-RELEASE, PHOSPHOROUS-FREE, GRANULAR FERTILIZER TO EACH INSTALLED PLANT.

MAINTENANCE AND MONITORING PLAN

THE SITE SHALL BE MAINTAINED AND MONITORED FOR FIVE YEARS FOLLOWING SUCCESSFUL INSTALLATION. COMPONENTS OF THE 5-YEAR MAINTENANCE AND MONITORING PLAN ARE DETAILED BELOW.

THE SITE SHALL BE MAINTAINED FOR FIVE YEARS FOLLOWING SUCCESSFUL INSTALLATION.

1. REPLACE EACH PLANT FOUND DEAD IN THE SUMMER MONITORING VISITS IN THE FOLLOWING DORMANT SEASON (OCTOBER 15 - MARCH 1). REPLACEMENT SHALL BE OF THE SAME SPECIES AND SIZE PER PLAN UNLESS OTHERWISE APPROVED BY THE RESTORATION SPECIALIST.
2. GENERAL WEEDING FOR ALL PLANTED AREAS
 - A. AT LEAST TWICE ANNUALLY, REMOVE COMPETING GRASSES AND WEEDS FROM AROUND THE BASE OF EACH INSTALLED PLANT TO A RADIUS OF 12 INCHES. WEEDING SHOULD OCCUR AT LEAST ONCE IN THE SPRING AND ONCE IN THE SUMMER. THOROUGH WEEDING WILL RESULT IN LOWER PLANT MORTALITY AND ASSOCIATED PLANT REPLACEMENT COSTS.
 - B. MORE FREQUENT WEEDING MAY BE NECESSARY DEPENDING ON WEED CONDITIONS THAT DEVELOP AFTER PLANT INSTALLATION.
 - C. NOXIOUS WEEDS MUST BE REMOVED FROM THE ENTIRE MITIGATION AREA, AT LEAST TWICE ANNUALLY.
 - D. DO NOT USE STRING TRIMMERS IN THE VICINITY OF INSTALLED PLANTS, AS THEY MAY DAMAGE OR KILL THE PLANTS.
3. MAINTAIN A FOUR-INCH-THICK LAYER OF WOODCHIP MULCH ACROSS THE ENTIRE PLANTING AREA. MULCH SHOULD BE PULLED BACK TWO INCHES FROM THE PLANT STEMS.
4. INSPECT AND REPAIR THE IRRIGATION SYSTEM AS NECESSARY EACH SPRING. DURING AT LEAST THE FIRST TWO GROWING SEASONS, MAKE SURE THAT THE ENTIRE PLANTING AREA RECEIVES A MINIMUM OF ONE INCH OF WATER PER WEEK FROM JUNE 1ST THROUGH SEPTEMBER 30TH.

GOALS

1. WITHIN THE PROPOSED ENHANCEMENT AREAS, ESTABLISH DENSE NATIVE VEGETATION THAT IS APPROPRIATE TO THE ECO-REGION AND SITE TO IMPROVE HABITAT, WATER QUALITY, AND HYDROLOGIC FUNCTION.
2. INCREASE HABITAT COVER AND REFUGE FOR AMPHIBIANS, SMALL MAMMALS, AND INVERTEBRATES. PROVIDE PERCHING, NESTING AND FORAGING HABITAT FOR NATIVE BIRDS.
3. REDUCE PREVALENCE OF INVASIVE PLANTS ON THE PROPERTY.

PERFORMANCE STANDARDS

THE STANDARDS LISTED BELOW WILL BE USED TO JUDGE THE SUCCESS OF THE INSTALLATION OVER TIME. IF PERFORMANCE STANDARDS ARE MET AT THE END OF YEAR 5, THE SITE WILL THEN BE DEEMED SUCCESSFUL.

1. **SURVIVAL: ACHIEVE 100% SURVIVAL OF INSTALLED TREES AND SHRUBS BY THE END OF YEAR 1.**
 - A. ACHIEVE 80% SURVIVAL OF INSTALLED TREES AND SHRUBS FROM YEAR 2 THROUGH 3. THIS STANDARD CAN BE MET THROUGH PLANT ESTABLISHMENT OR THROUGH REPLANTING AS NECESSARY TO ACHIEVE THE REQUIRED NUMBERS. SURVIVAL WILL NOT BE MONITORED AFTER YEAR 3.
2. **NATIVE WOODY PLANT COVER:**
 - A. ACHIEVE A TOTAL OF 30% COVER OF NATIVE VEGETATION IN THE UNDERSTORY (MAY CONSIST OF WOODY OR HERBACEOUS SPECIES) WITH A MINIMUM 30% COVER OF NATIVE WOODY SPECIES (TREES/SHRUBS) BY YEAR 2. NATIVE COVER WILL INCLUDE ALL INSTALLED, EXISTING, OR VOLUNTEER PLANTS EXCEPT FOR THE EXISTING CANOPY COVER (TREE SPECIES OVER 20 FEET IN HEIGHT).
 - B. ACHIEVE A TOTAL OF 50% COVER OF NATIVE VEGETATION IN THE UNDERSTORY (MAY CONSIST OF WOODY OR HERBACEOUS SPECIES) WITH A MINIMUM 30% COVER OF NATIVE WOODY SPECIES (TREES/SHRUBS) BY YEAR 3. NATIVE COVER WILL INCLUDE ALL INSTALLED, EXISTING, OR VOLUNTEER PLANTS EXCEPT FOR THE EXISTING CANOPY COVER (TREE SPECIES OVER 20 FEET IN HEIGHT).
 - C. ACHIEVE A TOTAL OF 80% COVER OF NATIVE VEGETATION IN THE UNDERSTORY (MAY CONSIST OF WOODY OR HERBACEOUS SPECIES) WITH A MINIMUM 50% COVER OF NATIVE WOODY SPECIES (TREES/SHRUBS) BY YEAR 5. NATIVE COVER WILL INCLUDE ALL INSTALLED, EXISTING, OR VOLUNTEER PLANTS EXCEPT FOR THE EXISTING CANOPY COVER (TREE SPECIES OVER 20 FEET IN HEIGHT).
3. **SPECIES DIVERSITY: ESTABLISH AT LEAST FOUR NATIVE TREE SPECIES, FIVE NATIVE SHRUB SPECIES, AND TWO NATIVE GROUNDCOVER SPECIES IN THE MITIGATION AREA AND MAINTAIN THIS DIVERSITY THROUGH YEAR 3. NATIVE VOLUNTEER SPECIES AND EXISTING VEGETATION MAY COUNT TOWARDS THESE STANDARDS.**
4. **INVASIVE COVER: AREA COVER FOR ALL NON-NATIVE, INVASIVE AND NOXIOUS WEEDS WILL NOT EXCEED 10% AT ANY YEAR DURING THE MONITORING PERIOD. INVASIVE PLANTS INCLUDE THOSE ON THE KING COUNTY OR WASHINGTON STATE NOXIOUS WEEDS LISTS.**

MONITORING METHODS

THIS MONITORING PROGRAM IS DESIGNED TO TRACK THE SUCCESS OF THE MITIGATION SITE OVER TIME AND TO MEASURE THE DEGREE TO WHICH THE SITE IS MEETING THE PERFORMANCE STANDARDS OUTLINED IN THE PRECEDING SECTION.

AN AS-BUILT PLAN WILL BE PREPARED BY THE RESTORATION PROFESSIONAL PRIOR TO THE BEGINNING OF THE MONITORING PERIOD. THE AS-BUILT PLAN WILL BE A MARK-UP OF THE PLANTING PLANS INCLUDED IN THIS PLAN SET. THE AS-BUILT PLAN WILL DOCUMENT ANY DEPARTURES IN PLANT PLACEMENT OR OTHER COMPONENTS FROM THE PROPOSED PLAN.

MONITORING WILL TAKE PLACE ONCE ANNUALLY IN THE FALL FOR FIVE YEARS. YEAR-1 MONITORING WILL COMMENCE IN THE FIRST FALL SUBSEQUENT TO INSTALLATION.

THE FORMAL MONITORING VISIT SHALL RECORD AND REPORT THE FOLLOWING IN AN ANNUAL REPORT, AVAILABLE UPON REQUEST BY THE CITY OF LAKE FOREST PARK:

1. VISUAL ASSESSMENT OF THE OVERALL SITE.
2. YEAR-1 ASSESSMENT OF PLANT SURVIVAL. YEAR-2 THROUGH YEAR-3 COUNTS OF ESTABLISHED NATIVE TREES AND SHRUBS BY SPECIES, TO THE EXTENT FEASIBLE.
3. COUNTS OF DEAD PLANTS OR COMPLETE PLANT CENSUS WHERE MORTALITY IS SIGNIFICANT IN ANY MONITORING YEAR.
4. ESTIMATE OF NATIVE COVER IN THE MITIGATION AREA THROUGH LINE-INTERCEPT METHODOLOGY AT A MINIMUM OF TWO TRANSECTS.
5. ESTIMATE OF NATIVE WEED COVER IN THE MITIGATION AREA THROUGH LINE-INTERCEPT METHODOLOGY AT A MINIMUM OF TWO TRANSECTS.
6. PHOTOGRAPHIC DOCUMENTATION FROM AT LEAST THREE FIXED REFERENCE POINTS.
7. ANY INTRUSIONS INTO OR CLEARING OF THE PLANTING AREAS, VANDALISM, OR OTHER ACTIONS THAT IMPAIR THE INTENDED FUNCTIONS OF THE MITIGATION AREA.
8. RECOMMENDATIONS FOR MAINTENANCE OR REPAIR OF ANY PORTION OF THE MITIGATION AREA.

MAINTENANCE

THE SITE WILL BE MAINTAINED IN ACCORDANCE WITH THE FOLLOWING INSTRUCTIONS FOR AT LEAST FIVE YEARS FOLLOWING COMPLETION OF CONSTRUCTION:

1. FOLLOW THE RECOMMENDATIONS NOTED IN THE PREVIOUS MONITORING SITE VISIT.
2. GENERAL WEEDING FOR ALL PLANTED AREAS.
 - A. AT LEAST TWICE YEARLY, REMOVE ALL COMPETING WEEDS AND WEED ROOTS FROM BENEATH EACH INSTALLED PLANT AND ANY DESIRABLE VOLUNTEER VEGETATION TO A DISTANCE OF 18 INCHES FROM THE MAIN PLANT STEM. WEEDING SHOULD OCCUR AT LEAST TWICE DURING THE SPRING AND SUMMER. FREQUENT WEEDING WILL RESULT IN LOWER MORTALITY, LOWER PLANT REPLACEMENT COSTS, AND INCREASED LIKELIHOOD THAT THE PLAN MEETS PERFORMANCE STANDARDS BY YEAR 5.

- B. MORE FREQUENT WEEDING MAY BE NECESSARY DEPENDING ON WEED CONDITIONS THAT DEVELOP AFTER PLANT INSTALLATION.
 - C. DO NOT WEED THE AREA NEAR THE PLANT BASES WITH STRING TRIMMER (WEED WHACKER/WEED EATER). NATIVE PLANTS ARE EASILY DAMAGED OR KILLED, AND WEEDS EASILY RECOVER AFTER TRIMMING.
 - D. SELECTIVE APPLICATIONS OF HERBICIDE MAY BE NEEDED TO CONTROL INVASIVE WEEDS, ESPECIALLY WHEN INTERMIXED WITH NATIVE SPECIES. HERBICIDE APPLICATION, WHEN NECESSARY, SHALL BE CONDUCTED ONLY BY A STATE-LICENSED APPLICATOR.
3. APPLY SLOW-RELEASE AQUATIC SAFE PHOSPHOROUS-FREE, GRANULAR FERTILIZER TO EACH INSTALLED PLANT WITHIN THE WETLAND/STREAM BUFFER ANNUALLY IN THE SPRING (BY JUNE 1) OF YEARS 2 THROUGH 5. DO NOT APPLY FERTILIZER INTO WETLANDS OR STREAMS.
 4. REPLACE MULCH AS NECESSARY TO MAINTAIN A 4-INCH-THICK LAYER, RETAIN SOIL MOISTURE, AND LIMIT WEEDS.
 5. REPLACE EACH PLANT FOUND DEAD IN THE SUMMER MONITORING VISITS DURING THE UPCOMING DORMANT SEASON (OCTOBER 15 TO MARCH 1), FOR BEST SURVIVAL.
 6. THE PROPERTY OWNER WILL ENSURE THAT WATER IS PROVIDED FOR THE WETLAND/STREAM BUFFER PLANTING AREAS WITH A MINIMUM OF 1 INCH OF WATER PER WEEK FROM JUNE 1 THROUGH SEPTEMBER 30 FOR THE FIRST TWO YEARS FOLLOWING INSTALLATION, THROUGH THE OPERATION OF A TEMPORARY IRRIGATION SYSTEM AT MINIMUM. LESS WATER IS NEEDED DURING MARCH, APRIL, MAY AND OCTOBER.

CONSTRUCTION NOTES AND SPECIFICATIONS

THE RESTORATION PROFESSIONAL WILL MONITOR:

1. ALL SITE PREPARATION.
 - A. WEED REMOVAL.
 - B. SOIL PREPARATION.
 - C. MULCH PLACEMENT.
2. PLANT MATERIAL INSPECTION.
 - A. PLANT MATERIAL DELIVERY INSPECTION.
 - B. 100% PLANT INSTALLATION INSPECTION.

MITIGATION PLANTING AND IRRIGATION

1. INSTALL MITIGATION PLANTS DURING THE DORMANT SEASON (OCTOBER 15 - MARCH 1).
 - A. PREPARE SOIL PER DETAIL AND INSTALL PLANTS PER DETAIL.
2. INSTALL A TEMPORARY, ABOVE GROUND IRRIGATION SYSTEM TO PROVIDE FULL COVERAGE TO ALL INSTALLED PLANTS WITHIN THE WETLAND/STREAM BUFFERS.

MATERIAL SPECIFICATIONS AND DEFINITIONS

1. FERTILIZER: SLOW RELEASE, GRANULAR PHOSPHOROUS-FREE FERTILIZER. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR APPLICATION. KEEP FERTILIZER IN A WEATHER-TIGHT CONTAINER WHILE ON SITE. NOTE THAT FERTILIZER IS TO BE APPLIED ONLY IN YEARS 2 THROUGH 5 AND NOT IN THE FIRST YEAR.
2. FERTILIZER (FOR NEAR AQUATIC ENVIRONMENTS): SLOW-RELEASE, PHOSPHOROUS-FREE GRANULAR FERTILIZER. LABEL MUST INDICATE THAT PRODUCT IS SAFE FOR AQUATIC ENVIRONMENTS. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR USE. KEEP FERTILIZER IN WEATHER-TIGHT CONTAINER WHILE ON-SITE. FERTILIZER IS ONLY TO BE APPLIED IN YEARS 2 AND 3, NOT IN YEAR ONE.
3. IRRIGATION SYSTEM: AUTOMATED SYSTEM CAPABLE OF DELIVERING AT LEAST ONE INCH OF WATER PER WEEK FROM JUNE 1 THROUGH SEPTEMBER 30 FOR AT LEAST THE FIRST THREE YEARS FOLLOWING INSTALLATION.
4. RESTORATION PROFESSIONAL: WATERSHED COMPANY [(425) 822-5242] PERSONNEL, OR OTHER PERSONS QUALIFIED TO EVALUATE ENVIRONMENTAL RESTORATION PROJECTS.
5. WOODCHIP MULCH: "ARBORIST CHIPS" (CHIPPED WOODY MATERIAL) APPROXIMATELY ONE TO THREE INCHES IN MAXIMUM DIMENSION (NOT SAWDUST). THIS MATERIAL IS COMMONLY AVAILABLE IN LARGE QUANTITIES FROM ARBORISTS OR TREE-PRUNING COMPANIES. MULCH SHALL NOT CONTAIN APPRECIABLE QUANTITIES OF GARBAGE, PLASTIC, METAL, SOIL, AND DIMENSIONAL LUMBER OR CONSTRUCTION/DEMOLITION DEBRIS.

CONTINGENCIES

IF THERE IS A SIGNIFICANT PROBLEM WITH THE RESTORATION AREAS MEETING PERFORMANCE STANDARDS, A CONTINGENCY PLAN WILL BE DEVELOPED AND IMPLEMENTED. CONTINGENCY PLANS CAN INCLUDE, BUT ARE NOT LIMITED TO: SOIL AMENDMENT, ADDITIONAL PLANT INSTALLATION, AND PLANT SUBSTITUTIONS OF TYPE, SIZE, QUANTITY, AND LOCATION.

MITIGATION PLAN NOTES



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PERMIT SET - NOT FOR CONSTRUCTION

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