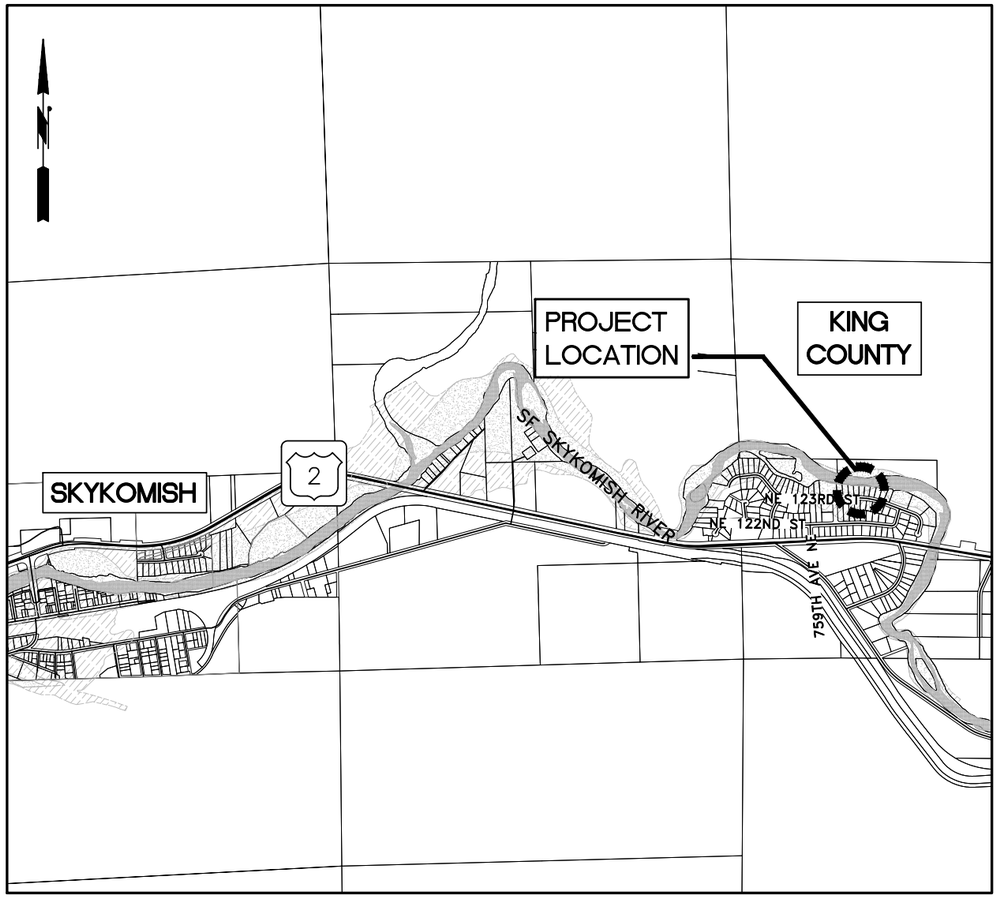
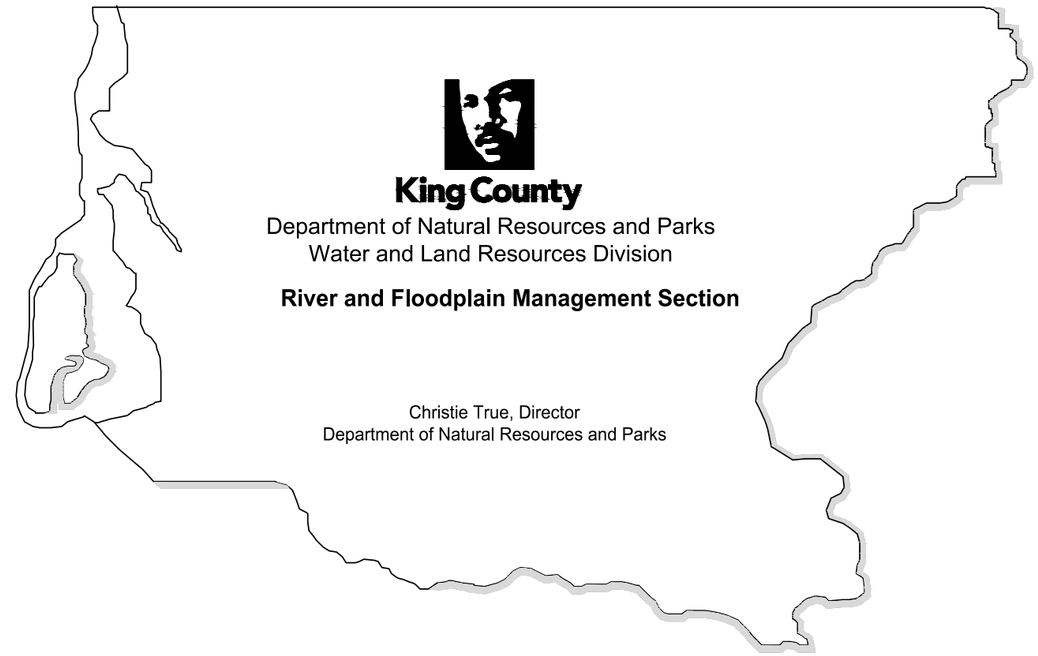
VICINITY MAP





King County
Department of Natural Resources and Parks
Water and Land Resources Division

River and Floodplain Management Section

Christie True, Director
Department of Natural Resources and Parks

2019 TIMBERLANE REVETMENT REPAIR

SOUTH FORK SKYKOMISH RIVER RM 18.6

LAT 47.714, LONG -121.316

SHEET INDEX

SHEET	DESCRIPTION
1	VICINITY MAP AND SHEET INDEX
2	ACCESS AND TRAFFIC CONTROL PLAN AND LEGEND
3	EXISTING CONDITIONS AND SHEET PLAN
4	TEMPORARY EROSION AND SEDIMENT CONTROL (TESC) PLAN
5	PROPOSED DESIGN PLAN
6	PROPOSED DESIGN PLAN
7	TYPICAL SECTIONS
8	TYPICAL SECTIONS
9	DETAILS AND NOTES

Know what's below.
Call before you dig.
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

FIELD BOOK: TM	01/2019
SURVEYED: PARAMETRIX	01/2019
SURVEY BASE MAP: JA	01/2019
CHECKED: RH	01/2019

NUM.	REVISION	BY	DATE
	30% DESIGN 08/2019		

NUM.	RECORD CHANGES APPROVED	BY	DATE

APPROVED:	MARK RUEBEL, P.E.	08/2019
PROJECT MANAGER:	STELLA TORRES	08/2019
ECOLOGIST:	THOMAS BLOXTON	08/2019
DESIGNER:	JESSY HARDY, E.I.T.	08/2019
	MARK RUEBEL, P.E.	08/2019
CAD DESIGN:	JESSY HARDY, E.I.T.	08/2019

PROJECT No. 1135532
CONTRACT No. --

MARK W. RUEBEL STATE OF WASHINGTON 44267 REGISTERED PROFESSIONAL ENGINEER

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

TIMBERLANE REVETMENT REPAIR
SOUTH FORK SKYKOMISH RIVER
RM 18.6
VICINITY MAP AND SHEET INDEX

SHEET **1** OF **9** SHEETS

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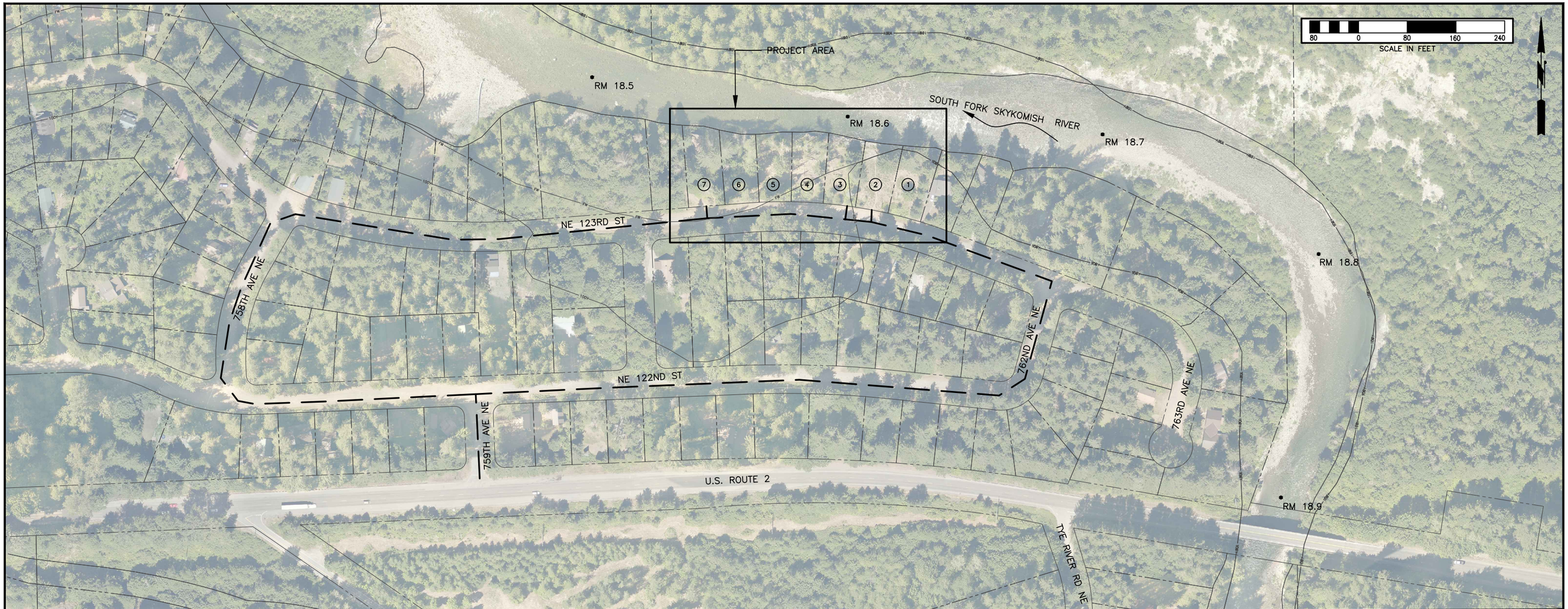

LEGEND:

- CONTROL POINT
- EXISTING ANGULAR ROCK
- EXISTING DECIDUOUS TREES AND DRIP LINES
- EXISTING SNAGS
- EXISTING CONIFER TREES AND DRIP LINES
- EDGE OF GRAVEL ROAD
- EXISTING TRAIL
- OP — OVERHEAD POWER
- POWER POLE WITH GUY WIRE
- LIGHT POLE
- P — POWER RISER
- OHW — ORDINARY HIGH WATER
- W — UNDERGROUND WATER LINE
- WATER VALVE
- POST INDICATOR VALVE
- SP — STAND PIPE
- SURVEY — SURVEY EXTENTS
- EXISTING MAJOR CONTOUR (5')
- EXISTING MINOR CONTOUR (1')
- HAUL ROUTE
- 100Y — 100 YR FLOODPLAIN
- FW — FLOODWAY
- PARCEL LINES
- RIGHT-OF-WAY
- SHEET VIEWPORT
- CONSTRUCTION ACCESS
- WORK AREA
- CONSTRUCTION STAGING AREA
- STRAW WATTLE
- HVF — HIGH VISIBILITY FENCE
- TREES/SNAGS TO BE REMOVED
- PROPOSED COIR WRAP LIFTS
- PROPOSED NATIVE PLANTINGS
- SALVAGED ROCK

KING COUNTY PARCELS	
TAG ID	PARCEL NUMBER
1	8649400250
2	8649400260
3	8649400270
4	8649400280
5	8649400290
6	8649400300
7	8649400310

ACCESS AND TRAFFIC CONTROL NOTES:

1. TRAFFIC CONTROL SIGNS SHALL BE INSTALLED IN COMPLIANCE WITH MUTCD.
2. TRAFFIC CONTROL PLAN TO BE MODIFIED AT KING COUNTY ENGINEER'S DISCRETION.
3. CLOSE SITE ACCESS ON WEEKENDS AND NON-WORKING HOURS WITH HIGH VISIBILITY FENCE.
4. PROTECT NATIVE VEGETATION NEAR ACCESS AND STAGING AREAS AS PRACTICAL.
5. RESTORE ANY DAMAGE TO GRAVEL ROAD RESULTING FROM CONSTRUCTION.

811
Know what's below.
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TIMBERLANE REVETMENT REPAIR
SOUTH FORK SKYKOMISH RIVER
RM 18.6
ACCESS AND TRAFFIC CONTROL PLAN AND LEGEND

SHEET 2 OF 9 SHEETS

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SURVEY CONTROL POINTS

CP#	NORTHING	EASTING	ELEV.
1004	260735.24	1521595.01	1001.96
1006	260752.40	1521325.16	996.83
1007	260728.18	1521448.36	998.97
1008	260884.08	1521258.01	997.76
1009	260713.19	1521238.43	996.67
1010	260878.77	1521362.63	999.09
1011	260872.00	1521473.19	1001.60
1012	260865.14	1521605.65	1001.46

GENERAL CONSTRUCTION NOTES:

1. THE DRIVE MECHANISMS OF EQUIPMENT SHALL NOT OPERATE WATERWARD OF OHW.
2. ALL GAS AND OIL CONTAINERS FOR SMALL EQUIPMENT WILL BE STORED SECURELY IN UTILITY VEHICLES.
3. VERIFY LOCATION OF ALL OVERHEAD, SURFACE, AND UNDERGROUND UTILITIES AND PROTECT. CALL 811 PRIOR TO ANY EXCAVATION.

CONSTRUCTION SEQUENCING NOTES:

1. ATTEND PRE-CONSTRUCTION MEETING AND NOTIFY PERMIT AUTHORITIES BEFORE STARTING CONSTRUCTION.
2. IMPLEMENT THE TESC PLAN. SEE SHEET 4.
3. REMOVE MARKED TREES AS DIRECTED BY ENGINEER. SEE TABLE SHEET 4.
4. REMOVE EXISTING ANGULAR ROCK AND NATIVE FILL ABOVE OHW FROM ROCK REVETMENTS AND ROCK WALL. SEE SHEET 4. LARGE ROCK BELOW OHW TO REMAIN.
5. PLACE SALVAGED LARGE ROCK FROM OHW TO 2-YR WSE AT 2H:1V OR SHALLOWER. SEE SHEET 5 AND 6.
6. TRANSITION TO TOP OF BANK. ADD OR REMOVE COIR WRAP LIFTS, PER DIRECTION OF ENGINEER, NO GREATER THAN 1' THICK. PLACE SALVAGED FILL AND TOP WITH 6"-8" TOPSOIL LAYER AND COIR BLANKET TO MATCH PRE-EXISTING GRADE.
7. PLACE SALVAGED LARGE ROCK AND FILTER LAYER AT UPSTREAM END OF PROJECT. SEE SHEETS 5 AND 7.
8. TRANSITION TO EXISTING GRADE AT ENDS OF WORK.
9. FOLLOWING CONSTRUCTION, REMOVE TESC FEATURES AND SEED DISTURBED AREAS.
10. REPAIR ANY DAMAGES TO ACCESS ROAD.
11. PLANTINGS TO BE COMPLETED BY OTHERS FOLLOWING CONSTRUCTION.

20 0 20 40 60
SCALE IN FEET

811
Know what's below.
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(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

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MARK W. RUEBEL STATE OF WASHINGTON 14267 REGISTERED PROFESSIONAL ENGINEER
CONSTRUCTION COPY

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Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

TIMBERLANE REVETMENT REPAIR
SOUTH FORK SKYKOMISH RIVER
RM 18.6
EXISTING CONDITIONS AND SHEET PLAN

SHEET **3** OF **9** SHEETS

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TREE REMOVAL TABLE		
TREE NUMBER	SPECIES	DBH
1	DOUGLAS FIR	2'–2"
2	DOUGLAS FIR	2'–6"
3	DOUGLAS FIR	0'–4"
4	DOUGLAS FIR	0'–5"
5	BIG LEAF MAPLE	0'–11"
6	PACIFIC YEW	1'–2"
7	DOUGLAS FIR	1'–6"
S1	CLASS 1 SNAG – DOUGLAS FIR	1'–5"
S2	CLASS 1 SNAG – DOUGLAS FIR	1'–2"
S3	CLASS 2 SNAG – DOUGLAS FIR	1'–3"
S4	CLASS 2 SNAG – DOUGLAS FIR	1'–6"

TEMPORARY EROSION AND SEDIMENT CONTROL (TESC) NOTES:

1. WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE PERMITS.
2. WHEN POSSIBLE, NATIVE VEGETATION SHALL BE LEFT IN PLACE AND CARE SHALL BE TAKEN TO MINIMIZE DAMAGE.
3. ACCESS CORRIDORS AND CONSTRUCTION STAGING AREAS AS SHOWN ARE APPROXIMATE AND WILL BE FIELD STAKED/FLAGGED BY ENGINEER.
4. THE FOLLOWING BMPS SHALL BE ON–SITE OR READILY ACCESSIBLE DURING ALL CONSTRUCTION ACTIVITIES: HOG FUEL FOR EQUIPMENT ACCESS, STRAW WATTLES, PLASTIC SHEETING.
5. THE TESC MEASURES MUST BE INSTALLED AND MAINTAINED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES IN SUCH A MANNER TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE RIVER OR VIOLATE APPLICABLE WATER QUALITY STANDARDS.
6. PROVIDE AND MAINTAIN A SPILL CLEANUP KIT FOR FUEL AND HYDRAULIC OIL SPILLS.
7. ANY AREA OF EXPOSED SOILS THAT WILL NOT BE DISTURBED FOR TWO DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH APPROVED TESC COVER METHODS.
8. ALL EQUIPMENT WORKING AT OHW SHALL BE EQUIPPED WITH BIODEGRADABLE HYDRAULIC FLUIDS.

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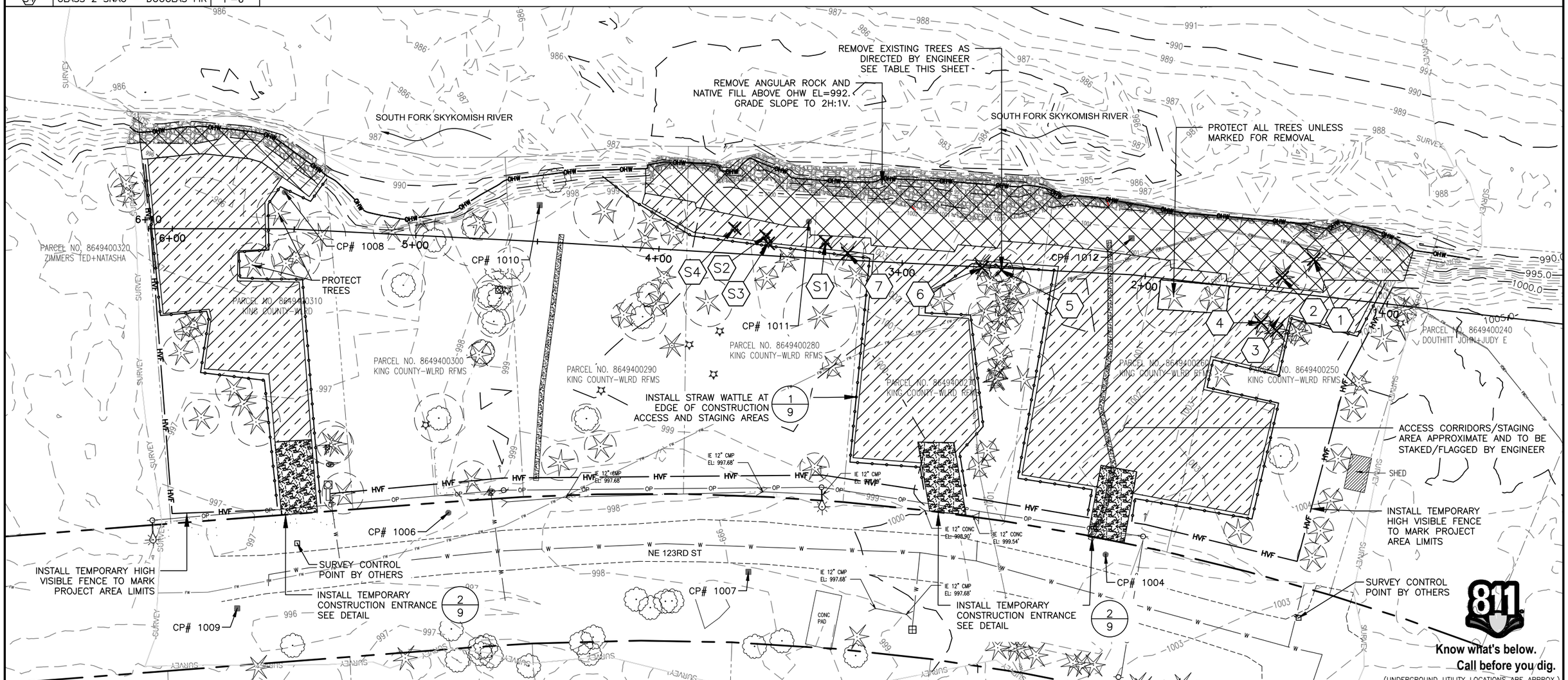
SCALE IN FEET



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ECOLOGIST:	THOMAS BLOXTON	08/2019
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CAD DESIGN:	JESSY HARDY, E.I.T.	08/2019

PROJECT No. 1135532
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MARK RUEBEL STATE OF WASHINGTON 24267 REGISTERED PROFESSIONAL ENGINEER
COMPLETION

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

TIMBERLANE REVETMENT REPAIR
SOUTH FORK SKYKOMISH RIVER
RM 18.6
TEMPORARY EROSION AND SEDIMENT CONTROL (TESC) PLAN

SHEET **4** OF **9** SHEETS

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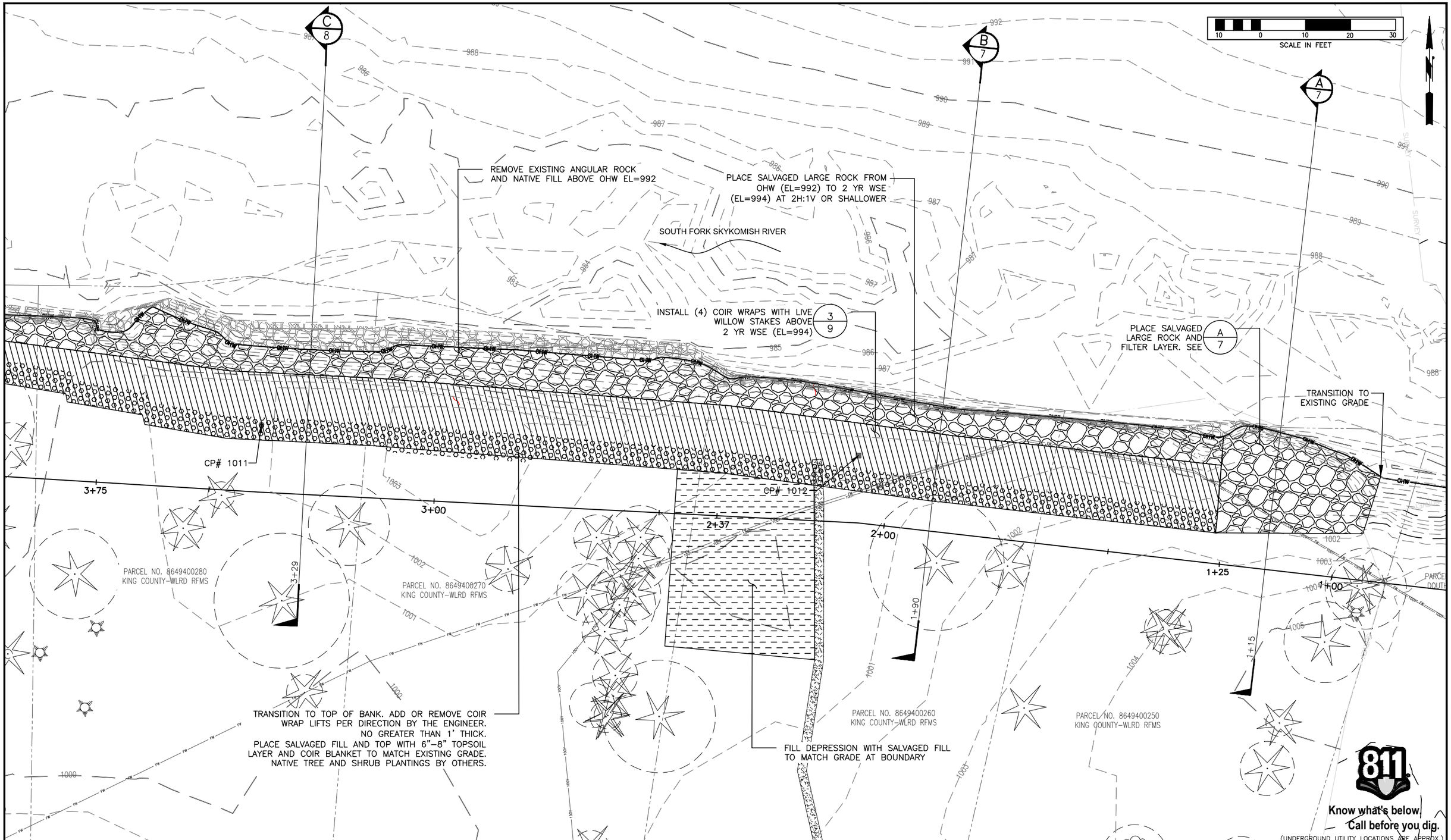

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SURVEYED: PARAMETRIX	01/2019		30% DESIGN 08/2019			PROJECT MANAGER: STELLA TORRES	08/2019
SURVEY BASE MAP: JA	01/2019					ECOLOGIST: THOMAS BLOXTON	08/2019
CHECKED: RH	01/2019					DESIGNER: JESSY HARDY, E.I.T.	08/2019
						MARK RUEBEL, P.E.	08/2019
		NUM.	RECORD CHANGES APPROVED	BY	DATE	CAD DESIGN: JESSY HARDY, E.I.T.	08/2019

PROJECT No. 1135532

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MARK W. RUEBEL STATE OF WASHINGTON 34267 REGISTERED PROFESSIONAL ENGINEER

CONSTRUCTION

King County
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Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

TIMBERLANE REVETMENT REPAIR
SOUTH FORK SKYKOMISH RIVER
RM 18.6
PROPOSED DESIGN PLAN

SHEET **5** OF **9** SHEETS

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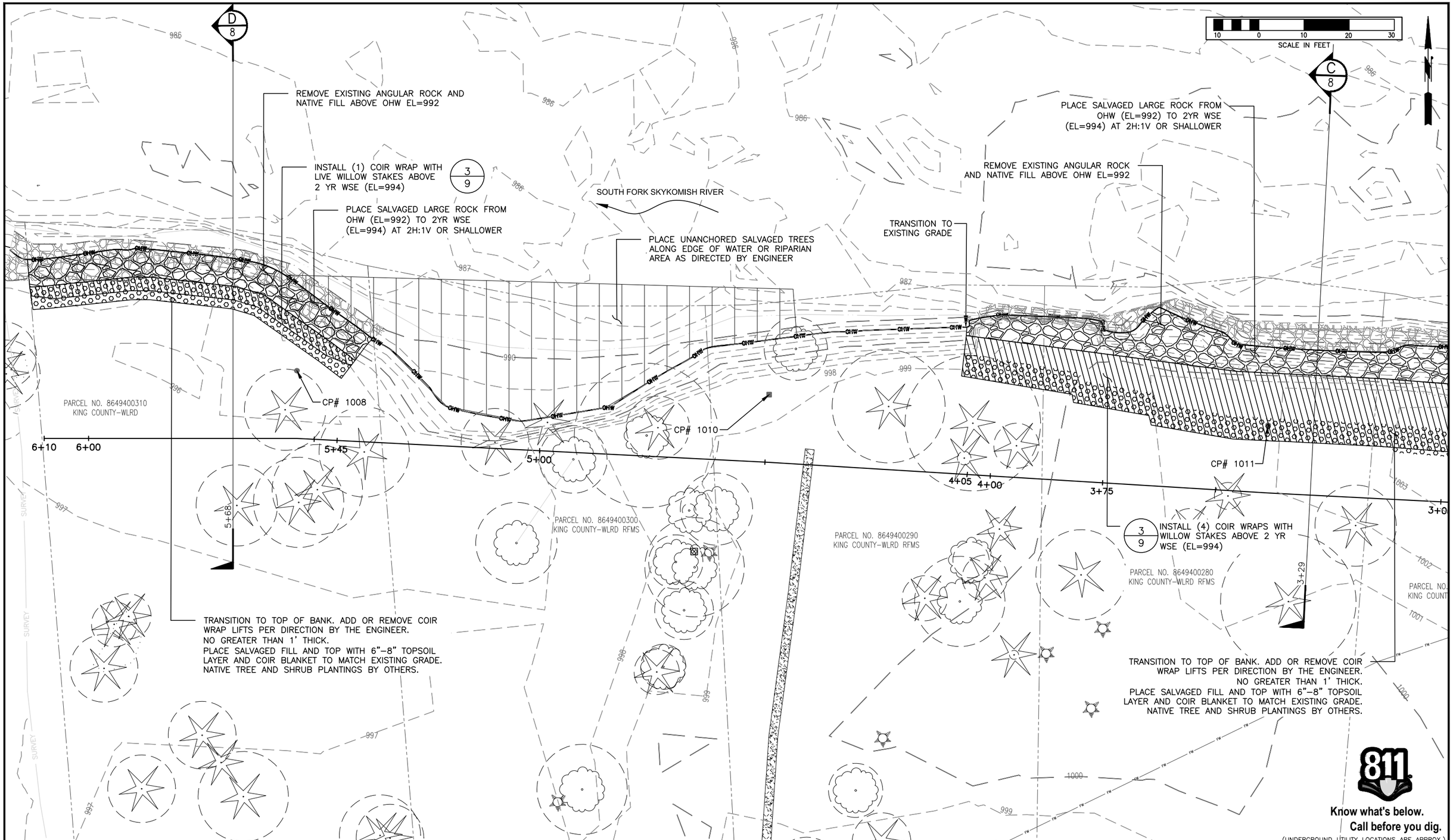

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SURVEY BASE MAP: JA	01/2019		
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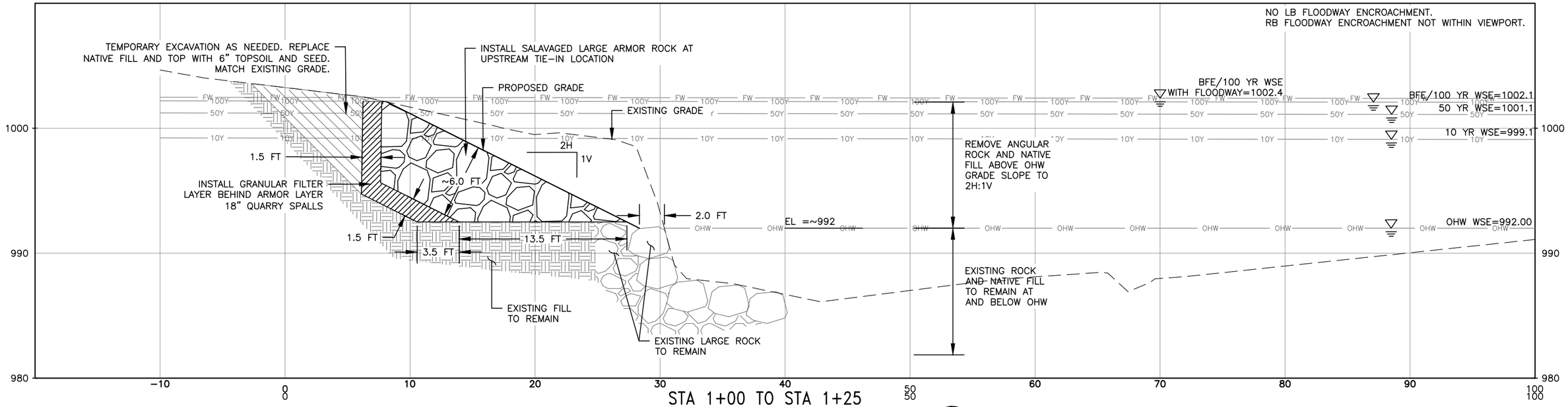
CONDITIONAL APPROVAL

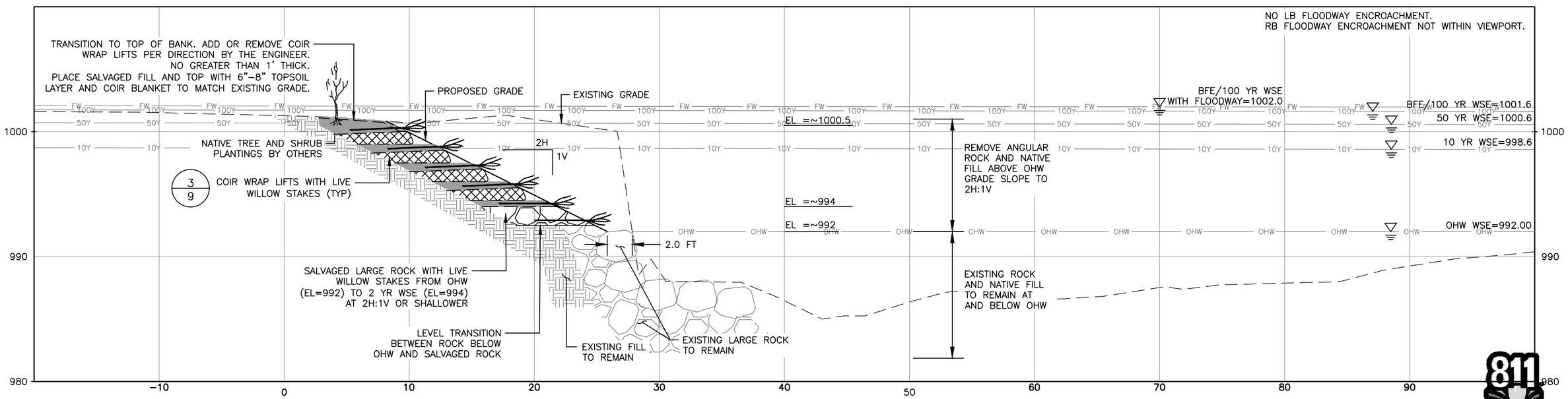
King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

TIMBERLANE REVETMENT REPAIR
SOUTH FORK SKYKOMISH RIVER
RM 18.6
PROPOSED DESIGN PLAN

SHEET **6** OF **9** SHEETS



STA 1+00 TO STA 1+25
TYPICAL SECTION A
1"=8'
A
5



STA 1+25 TO STA 2+37 AND STA 3+75 TO STA 4+05
TYPICAL SECTION B
1"=8'
B
5

811
Know what's below.
Call before you dig.
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TIMBERLANE REVETMENT REPAIR
SOUTH FORK SKYKOMISH RIVER
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TYPICAL SECTIONS

SHEET 7 OF 9 SHEETS

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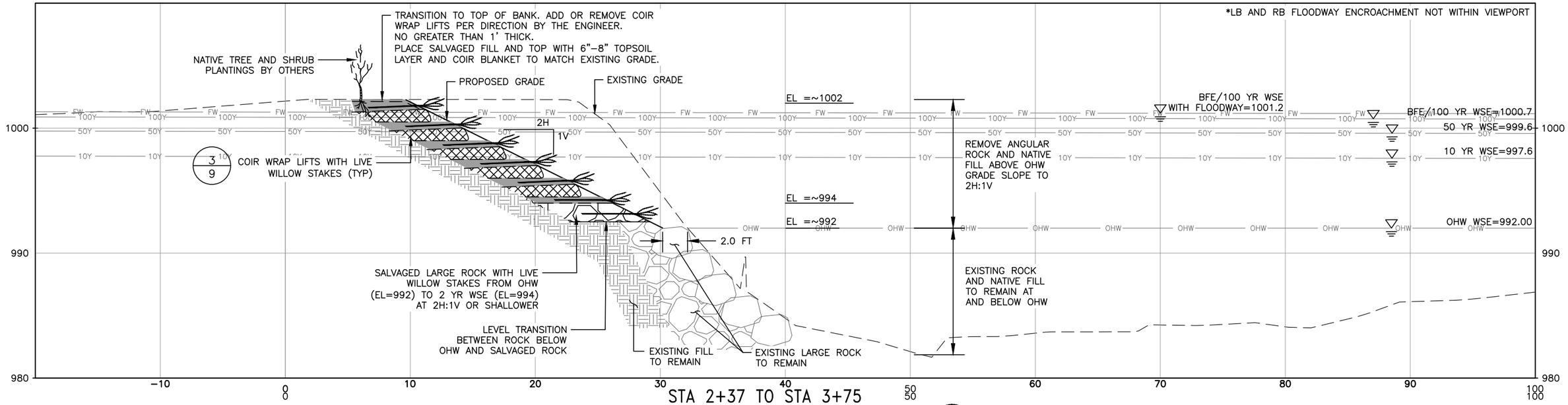
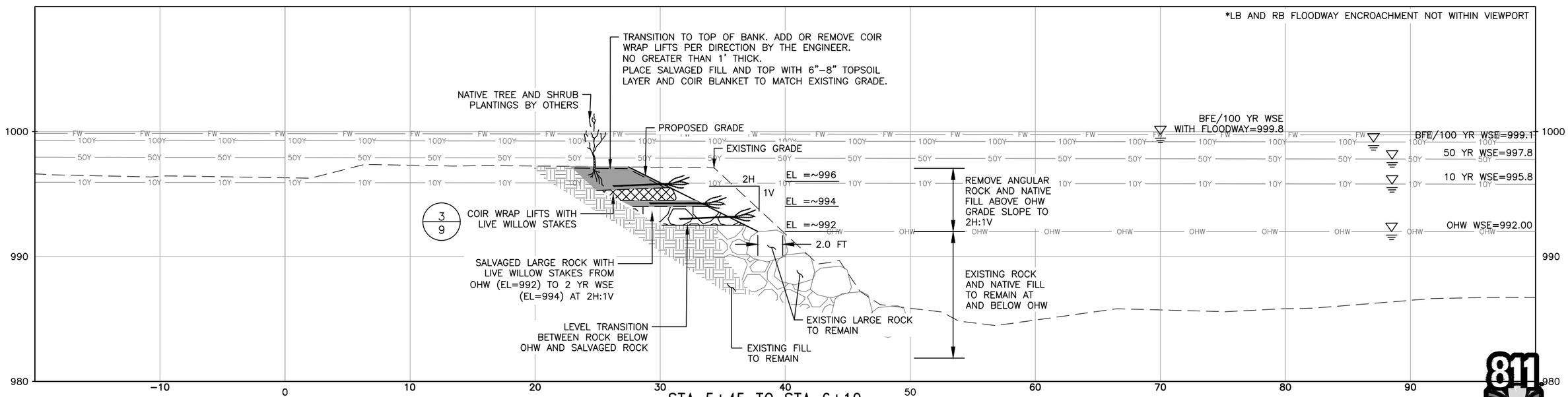


STA 2+37 TO STA 3+75
TYPICAL SECTION C

1"=8'

C
5,6



STA 5+45 TO STA 6+10
TYPICAL SECTION D

1"=8'

D
6

811
Know what's below.
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TIMBERLANE REVETMENT REPAIR
SOUTH FORK SKYKOMISH RIVER
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TYPICAL SECTIONS

SHEET 8 OF 9 SHEETS

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SURVEY NOTES:

HORIZONTAL DATUM:
HORIZONTAL DATUM FOR THIS SURVEY IS NAD 1983(11) BASED ON PUBLISHED INFORMATION FROM WSDOT, POINT DESIGNATION GP 17002-192.

PROJECTION IS WASHINGTON STATE PLANE NORTH ZONE, U.S. SURVEY FEET

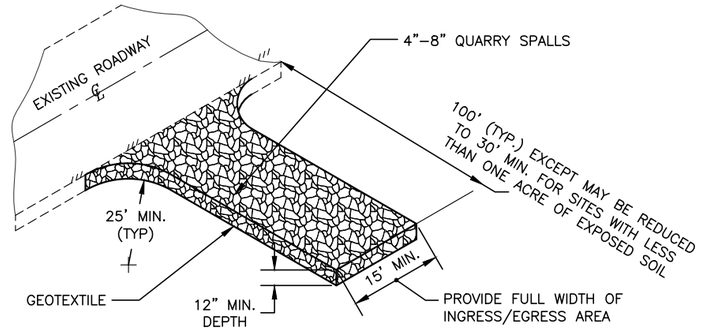
POINT DESIGNATION GP 17002-192
NORTHING: 259892.495
EASTING: 1523668.911

VERTICAL DATUM: NAVD88
VERTICAL DATUM IS NAVD88 BASED ON PUBLISHED INFORMATION FROM WSDOT, POINT DESIGNATION GP 17002-192.

POINT DESIGNATION GP 17002-192
ELEVATION: 1098.108

SEE SURVEY FOR TEMPORARY BENCHMARKS

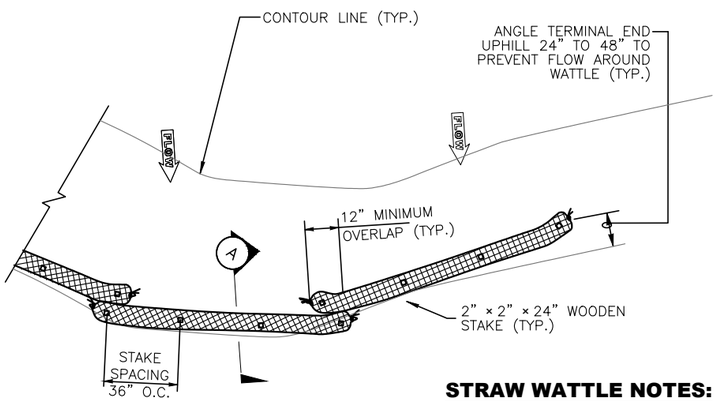
SOURCE OF INFORMATION:
1. TOPOGRAPHIC SURVEY COMPLETED BY PARAMETRIX. FINALIZED IN MARCH 2019.
2. BATHYMETRIC SURVEY CONDUCTED BY PACIFIC GEOMATIC SERVICES, INC., IN DECEMBER 2018.
3. CONTOUR OUTSIDE SURVEY EXTENTS DERIVED FROM 2017 LIDAR
4. OHW LOCATED BY KING COUNTY DURING FIELD INVESTIGATION DEC 2018.
5. 2YR AND 10YR WSE BY HERRERA ENVIRONMENTAL CONSULTANTS, INC. 2014
6. BSE/100YR WSE FROM KING COUNTY FIS 2010
7. AERIAL PHOTO 2017
8. PROPERTY LINES AND RIGHT-OF-WAY SHOWN ARE SOURCED FROM KING COUNTY ASSESSORS GIS DATABASE AND ARE NOT INTENDED TO IMPLY BOUNDARY SURVEY.

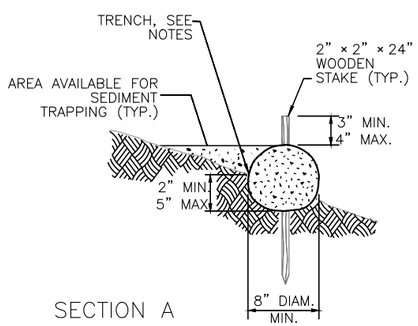


TEMPORARY CONSTRUCTION ENTRANCE NOTES:

1. THE TEMPORARY CONSTRUCTION ACCESS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2" STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEAN-OUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY. PROVIDE FLAGGING FOR CONSTRUCTION VEHICLES ENTERING AND LEAVING SITE.
2. PER KING COUNTY ROAD DESIGN AND CONSTRUCTION STANDARDS (KCRDCS), DRIVEWAYS SHALL BE PAVED TO EDGE OF R-O-W PRIOR TO INSTALLATION OF THE CONSTRUCTION ENTRANCE TO AVOID DAMAGING OF THE ROADWAY.
3. IT IS RECOMMENDED THAT THE ENTRANCE BE CROWNED SO THAT RUNOFF DRAINS OFF THE PAD.

TEMPORARY CONSTRUCTION ENTRANCE 2/4
NTS

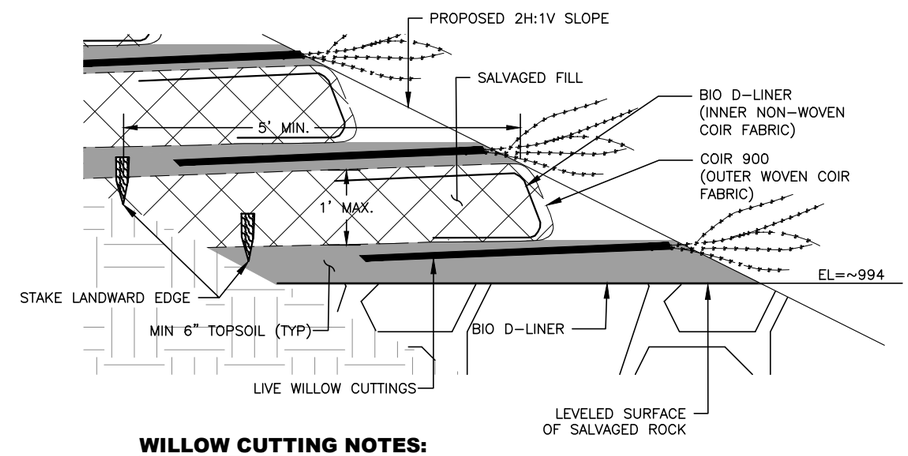




STRAW WATTLE NOTES:

1. INSTALL WATTLES PERPENDICULAR TO FLOW AND PARALLEL TO CONTOURS.
2. SECURELY KNOT EACH END OF WATTLE. OVERLAP ADJACENT WATTLES ENDS 12" BEHIND ONE ANOTHER AND SECURELY TIE TOGETHER.
3. COMPACT EXCAVATED SOIL AND TRENCHES TO PREVENT UNDERCUTTING. ADDITIONAL STAKING MAY BE NECESSARY TO PREVENT UNDERCUTTING.
4. WATTLES SHALL BE INSPECTED REGULARLY, AND IMMEDIATELY AFTER A RAINFALL PRODUCES RUNOFF, TO ENSURE THEY REMAIN THOROUGHLY ENTRENCHED AND IN CONTACT WITH SOIL.
5. A SINGLE ROW OF WATTLES MAY BE USED FOR SLOPES LESS THAN 10% AND SHORTER THAN 100 FT.

SINGLE ROW WATTLE INSTALLATION DETAIL 1/4
NTS



WILLOW CUTTING NOTES:

1. USE HEALTHY LIVE WOOD THAT IS AT LEAST ONE YEAR OLD.
2. MAKE A CLEAN ANGULAR CUT AT THE BUTT END WHEN HARVESTING WILLOW CUTTINGS.
3. CUTTINGS SHOULD BE 4'-5' LONG, AND A MINIMUM OF ¾" DIAMETER AND A MAXIMUM OF 1½" DIAMETER. CUTTINGS CAN BE BRUSHY WITH SIDE BRANCHES.
4. PRIOR TO INSTALLATION, SOAK CUTTINGS (MINIMUM OF 1' DEPTH AT BUTT END) IN WATER FOR A MINIMUM OF 24 HOURS.
5. MAINTAIN CUTTINGS IN WATER CONTINUOUSLY FROM TIME OF HARVEST UNTIL INSTALLATION IN MIN. 1' DEPTH WATER AT BUTT END.

COIR WRAP INSTALLATION:

1. PLACE BIO D-LINER AT ELEVATION 994.73' ON LEVELED SURFACE OF SALVAGED ROCK BELOW.
2. INSTALL 6" LIFT OF 50/50 TOPSOIL AND SALVAGED FILL MIX ON BIO D-LINER. PLACE WILLOW CUTTINGS AT 6" O.C.
3. WATER SOIL THOROUGHLY; SATURATE SOIL TO 6" DEPTH.
4. INSTALL 1' TALL WOODEN FORMS ON GRADED SOIL PER ENGINEER'S DIRECTIONS.
5. PLACE OUTER WOVEN COIR FABRIC ON SOIL AND OVER FORM. OUTER WOVEN COIR SHALL BE A MINIMUM OF 5' WIDE AT THE BOTTOM OF THE LIFT WITH A MINIMUM OF 5' OF EXCESS FABRIC OVER WATERWARD EDGE OF WOODEN FORM. STAKE FABRIC ON LANDWARD EDGE.
6. PLACE BIO D-LINER (INNER NON-WOVEN COIR) FABRIC OVER OUTER WOVEN COIR FABRIC TO SERVE AS INNER LINER AT FRONT FACE OF LIFT. BIO D-LINER SHALL BE A MINIMUM OF 2' WIDE AT THE TOP OF THE LIFT.
7. INSTALL AND BUCKET COMPACT SALVAGED FILL TO TOP OF FORM.
8. FOLD BOTH WOVEN AND NON-WOVEN (BIO D-LINER) COIR FABRICS OVER SALVAGED FILL. PULL TAUGHT AND STAKE.
9. REMOVE WOODEN FORMS.

WILLOW DETAIL 3/5-8
NTS

811
Know what's below.
Call before you dig.
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

FIELD BOOK: TM	01/2019	NUM.	REVISION	BY	DATE
SURVEYED: PARAMETRIX	01/2019		30% DESIGN 08/2019		
SURVEY BASE MAP: JA	01/2019				
CHECKED: RH	01/2019	NUM.	RECORD CHANGES APPROVED	BY	DATE

APPROVED:	MARK RUEBEL, P.E.	08/2019
PROJECT MANAGER:	STELLA TORRES	08/2019
ECOLOGIST:	THOMAS BLOXTON	08/2019
DESIGNER:	JESSY HARDY, E.I.T.	08/2019
	MARK RUEBEL, P.E.	08/2019
CAD DESIGN:	JESSY HARDY, E.I.T.	08/2019

PROJECT No. 1135532
CONTRACT No. --

MARK W. RUEBEL, STATE OF WASHINGTON, 44267, REGISTERED PROFESSIONAL ENGINEER
COMPLETION

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

TIMBERLANE REVETMENT REPAIR
SOUTH FORK SKYKOMISH RIVER
RM 18.6
DETAILS AND SURVEY NOTES

SHEET 9 OF 9 SHEETS