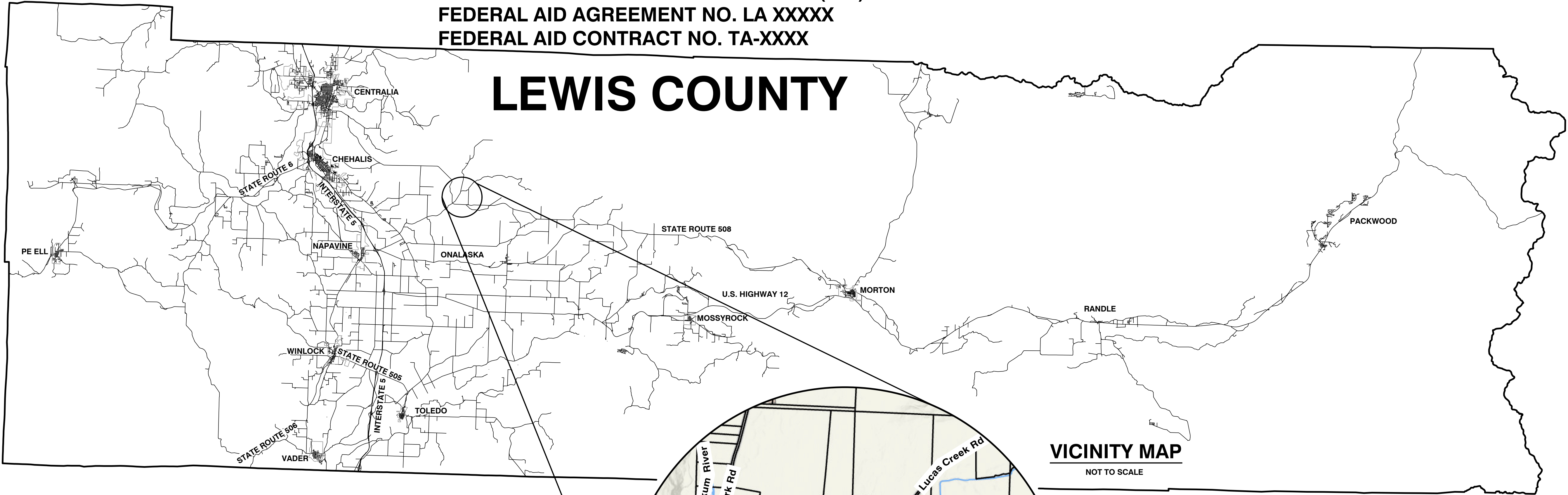


SENN RD MP 0.89 BRIDGE SCOUR REPAIR

COUNTY ROAD PROJECT NO: 2159R
FEDERAL AID PROJECT NO. BHOS-2021(074)
FEDERAL AID AGREEMENT NO. LA XXXXX
FEDERAL AID CONTRACT NO. TA-XXXX



COMMISSIONERS:

SEAN D. SWOPE, DISTRICT 1
LINDSEY R. POLLOCK, DVM, DISTRICT 2
SCOTT J. BRUMMER, DISTRICT 3



**ENGINEERING-
DESIGN SECTION**

SHEET INDEX	
SHEET NAME	SHEET #
VICINITY MAP AND SHEET INDEX	1
TAX PARCEL MAP	2
EXISTING CONDITIONS AND SITE PREPARATION	3
SCOUR COUNTERMEASURE PLAN	4
SCOUR COUNTERMEASURE PROFILE	5
SCOUR COUNTERMEASURE DETAILS	6
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SHEET 1 VICINITY MAP AND SHEET INDEX

DATE: JULY 2026

APPLICANT: LEWIS COUNTY PUBLIC WORKS

REFERENCE #:

ADJACENT PROPERTY OWNERS: SEE JARPA FORM

PURPOSE: BRIDGE SCOUR REPAIR

LAT/LONG: 46.63899N. LAT. / -122.77172W. LONG.

SITE LOCATION ADDRESS: 264 SENN RD,
CHEHALIS, WA, 98532

PROPOSED PROJECT: SENN ROAD MP 0.89 BRIDGE SCOUR REPAIR PROJECT

WATER BODY: LUCAS CREEK

NEAR: ONALASKA

COUNTY: LEWIS

STATE: WA

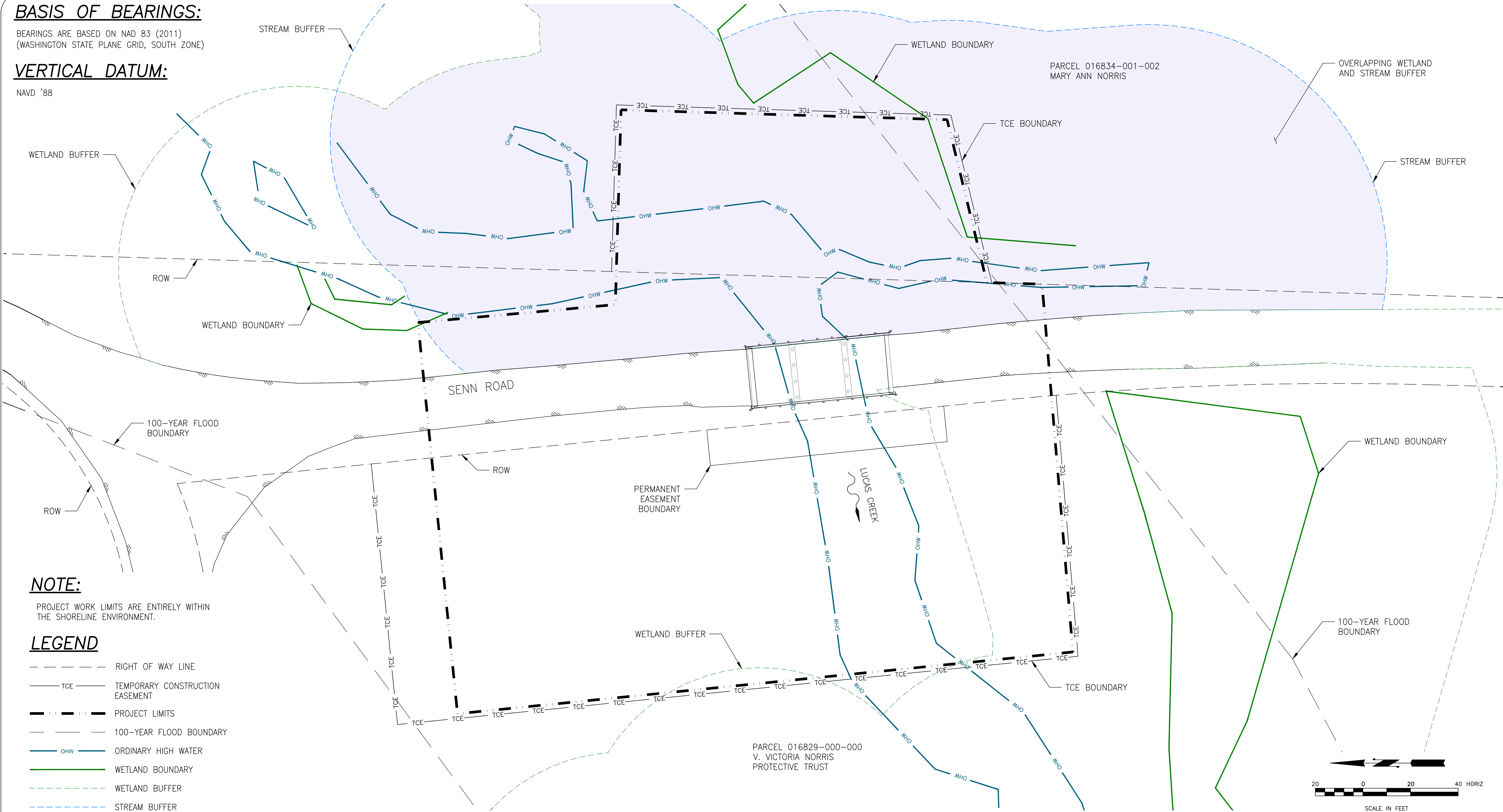
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BASIS OF BEARINGS:

BEARINGS ARE BASED ON NAD 83 (2011)
(WASHINGTON STATE PLANE GRID, SOUTH ZONE)

VERTICAL DATUM:

NAVD '88

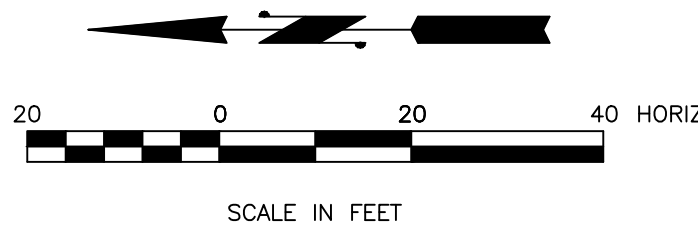


NOTE:

PROJECT WORK LIMITS ARE ENTIRELY WITHIN
THE SHORELINE ENVIRONMENT.

LEGEND

- RIGHT OF WAY LINE
- - - TCE --- TEMPORARY CONSTRUCTION EASEMENT
- - - - - PROJECT LIMITS
- 100-YEAR FLOOD BOUNDARY
- OHW — ORDINARY HIGH WATER
- WETLAND BOUNDARY
- - - - - WETLAND BUFFER
- - - - - STREAM BUFFER



SHEET 2 TAX PARCEL MAP

DATE: JULY 2026

APPLICANT: LEWIS COUNTY PUBLIC WORKS

REFERENCE #:

ADJACENT PROPERTY OWNERS: SEE JARPA FORM

PURPOSE: BRIDGE SCOUR REPAIR

LAT/LONG: 46.63899N. LAT. / -122.77172W. LONG.

SITE LOCATION ADDRESS: 264 SENN RD,
CHEHALIS, WA, 98532

PROPOSED PROJECT: SENN ROAD MP 0.89 BRIDGE SCOUR REPAIR PROJECT

WATER BODY: LUCAS CREEK

NEAR: ONALASKA

COUNTY: LEWIS

STATE: WA

Jul 20, 2026 — 1:55pm
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NOTE:

PROJECT WORK LIMITS ARE ENTIRELY WITHIN THE SHORELINE ENVIRONMENT.

EROSION CONTROL NOTES:

1. THE IMPLEMENTATION OF THIS TESC PLAN AND CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE CONSTRUCTION SWPPP FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR UNTIL ALL WORK IS COMPLETED AND APPROVED.
2. THE BMP'S SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE BMP'S SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.
3. THE BMP'S SHALL BE INSPECTED DAILY BY THE APPLICANT/CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTION. THE CONSTRUCTION SWPPP FACILITIES ON INACTIVE SITE SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A MAJOR STORM EVENT.
4. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM PER WASHINGTON STATE DEPARTMENT OF ECOLOGY'S STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON B-2 VOLUME II - CONSTRUCTION STORMWATER POLLUTION PREVENTION JULY 2019.
5. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

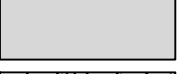
CONSTRUCTION NOTES:

- 1 HIGH VISIBILITY SILT FENCE PER WSDOT STANDARD PLAN 1-30.17
- 2 HIGH VISIBILITY FENCE PER WSDOT STANDARD PLAN 1-10.10
- 3 STABILIZED CONSTRUCTION ENTRANCE PER WSDOT STANDARD PLAN 1-80.10
- 4 REMOVE AND REPLACE PORTION OF FENCE
- 5 PROTECT TREE
- 6 REMOVE TREE
- 7 REMOVE AND REPLACE A PORTION OF THE GUARDRAIL

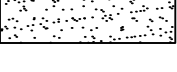
LEGEND



STABILIZED CONSTRUCTION ENTRANCE



EXISTING SLOPE PROTECTION / RIPRAP



AREA OF PREVIOUS BANK STABILIZATION WORK - NOT TO BE DISTURBED



HIGH VISIBILITY SILT FENCE



HIGH VISIBILITY FENCE



TEMPORARY CONSTRUCTION EASEMENT



PROJECT LIMITS



100-YEAR FLOOD BOUNDARY



ORDINARY HIGH WATER



WETLAND BOUNDARY



WETLAND BUFFER

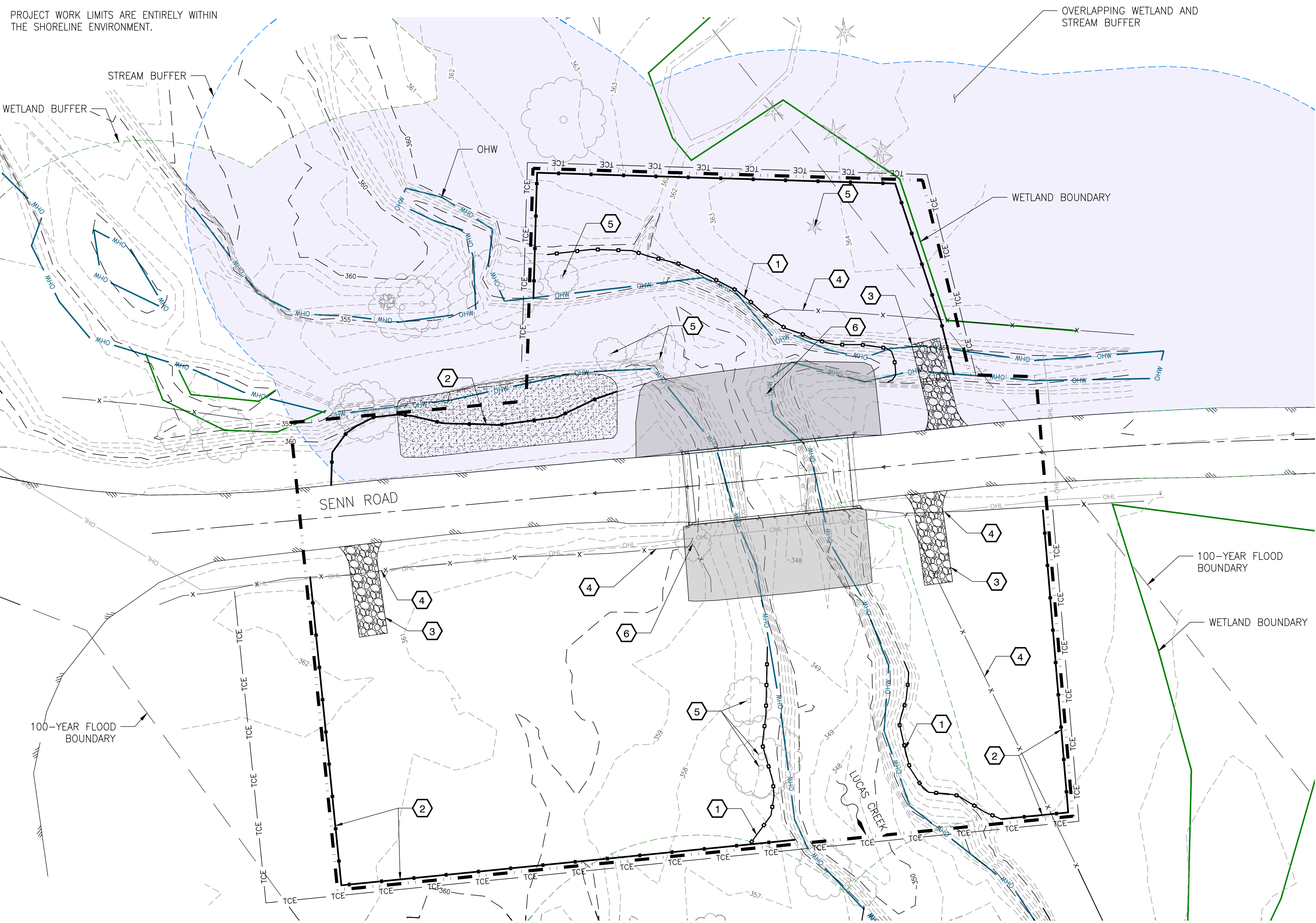


STREAM BUFFER



20 0 20 40 HORIZ

SCALE IN FEET



SHEET 3 EXISTING CONDITIONS AND SITE PREPARATION

DATE: JULY 2026

APPLICANT: LEWIS COUNTY PUBLIC WORKS

REFERENCE #:

ADJACENT PROPERTY OWNERS: SEE JARPA FORM

PURPOSE: BRIDGE SCOUR REPAIR

LAT/LONG: 46.63899N. LAT. / -122.77172W. LONG.

SITE LOCATION ADDRESS: 264 SENN RD, CHEHALIS, WA, 98532

PROPOSED PROJECT: SENN ROAD MP 0.89 BRIDGE SCOUR REPAIR PROJECT

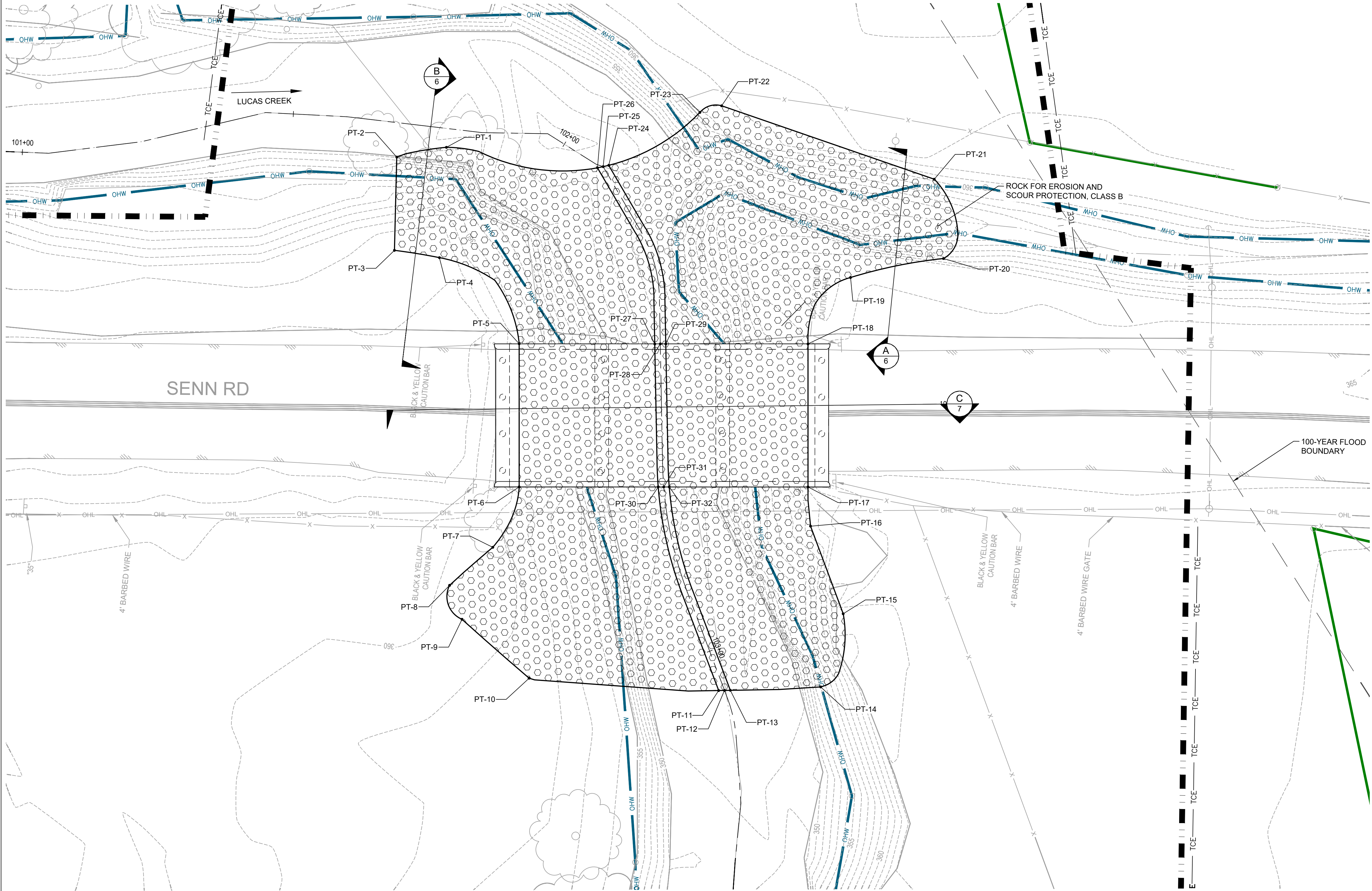
WATER BODY: LUCAS CREEK

NEAR: ONALASKA

COUNTY: LEWIS

STATE: WA

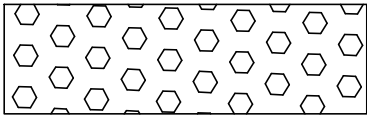
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SCOUR COUNTERMEASURE NOTES:

1. SEE SCOUR COUNTERMEASURE LAYOUT TABLE ON THIS SHEET FOR LAYOUT POINTS AND TOP OF COUNTERMEASURE ELEVATIONS.
2. SEE SHEET 5 FOR SCOUR COUNTERMEASURE PROFILE.
3. SEE SHEETS 6 AND 7 FOR SCOUR COUNTERMEASURE SECTIONS.
4. MINIMIZE DISTURBANCE OF THE STREAMBED OUTSIDE OF THE SCOUR COUNTERMEASURE FOOTPRINT TO THE MAXIMUM EXTENT PRACTICABLE. STREAMBED OUTSIDE THE SCOUR COUNTERMEASURE LIMITS THAT IS DISTURBED SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITIONS.
5. SEE THIS SHEET FOR ALIGNMENT LAYOUT TABLE.
6. FILL VOIDS IN ROCK FOR EROSION AND SCOUR PROTECTION CLASS B WITH BLENDED STREAMBED AGGREGATE (APPROXIMATELY 383 TONS)

LEGEND

-  ROCK FOR EROSION AND SCOUR PROTECTION CLASS B 1,485 TON

SHEET 4 SCOUR COUNTERMEASURE PLAN

DATE: JULY 2026

APPLICANT: LEWIS COUNTY PUBLIC WORKS

REFERENCE #:

ADJACENT PROPERTY OWNERS: SEE JARPA FORM

PURPOSE: BRIDGE SCOUR REPAIR

LAT/LONG: 46.63899N. LAT. / -122.77172W. LONG.

SITE LOCATION ADDRESS: 264 SENN RD,
CHEHALIS, WA, 98532

PROPOSED PROJECT: SENN ROAD MP 0.89 BRIDGE SCOUR REPAIR PROJECT

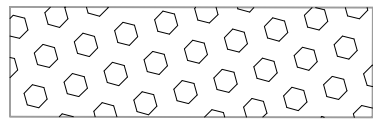
WATER BODY: LUCAS CREEK

NEAR: ONALASKA

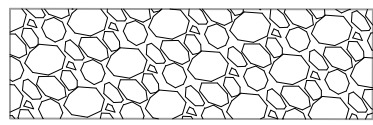
COUNTY: LEWIS **STATE:** WA

STREAMBED AGGREGATE	PERCENT BY VOLUME	WSDOT STANDARD SPECIFICATION
STREAMBED SEDIMENT	40%	9-03.11(1)
STREAMBED COBBLES 8-IN.	60%	9-03.11(4)

LEGEND



ROCK FOR EROSION AND
SCOUR PROTECTION CLASS B

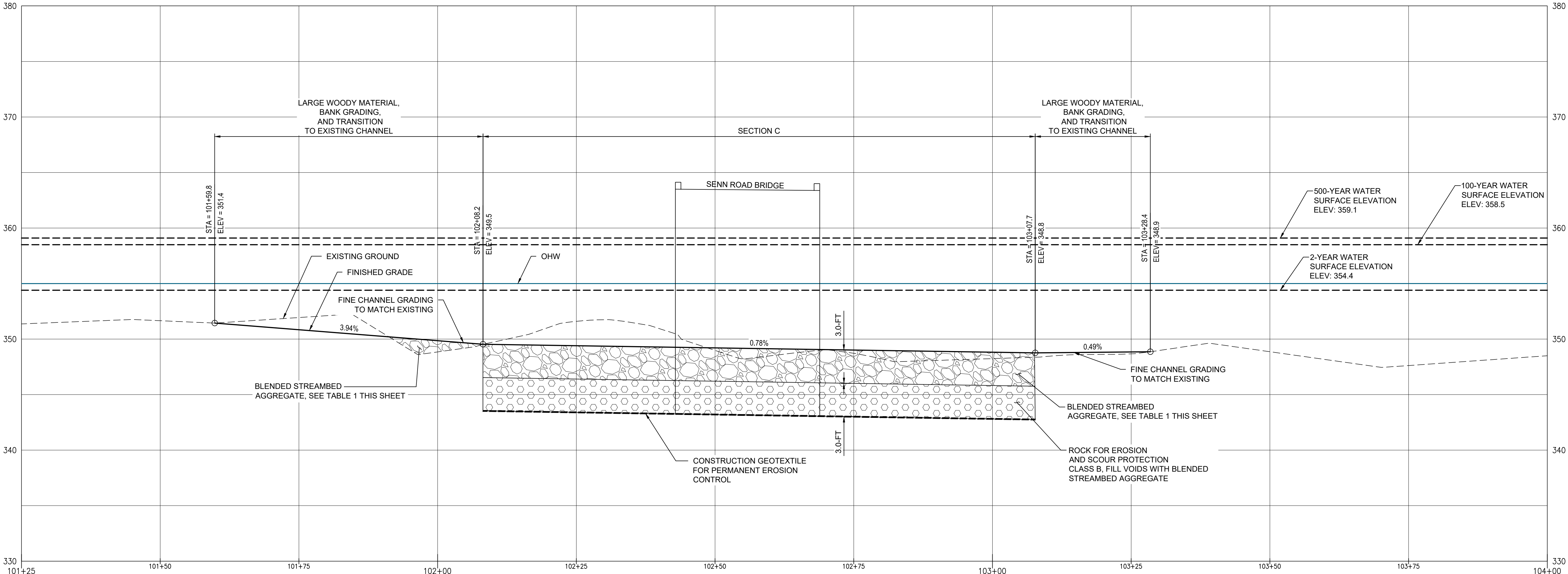


BLENDED STREAMBED AGGREGATE
 290 TONS

CONSTRUCTION GEOTEXTILE FOR
PERMANENT EROSION CONTROL
861 SY

GENERAL NOTES:

1. ALL MATERIAL AND WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION" 2026 EDITION AND SPECIAL PROVISIONS.
2. SEE SHEETS 6 AND 7 FOR TYPICAL SCOUR COUNTERMEASURE AND STREAM RECONSTRUCTION SECTION.
3. SEE SHEET 9 FOR LARGE WOODY MATERIAL DETAILS.



PROFILE VIEW

H: 1"=10', V: 1"=5'

SHEET 5 SCOUR COUNTERMEASURE PROFILE

DATE: JULY 2026

APPLICANT: LEWIS COUNTY PUBLIC WORKS

REFERENCE #:

ADJACENT PROPERTY OWNERS: SEE JARPA FORM

PURPOSE: BRIDGE SCOUR REPAIR

LAT/LONG: 46.63899N. LAT. / -122.77172W. LONG.

SITE LOCATION ADDRESS: 264 SENN RD,
CHEHALIS, WA, 98532

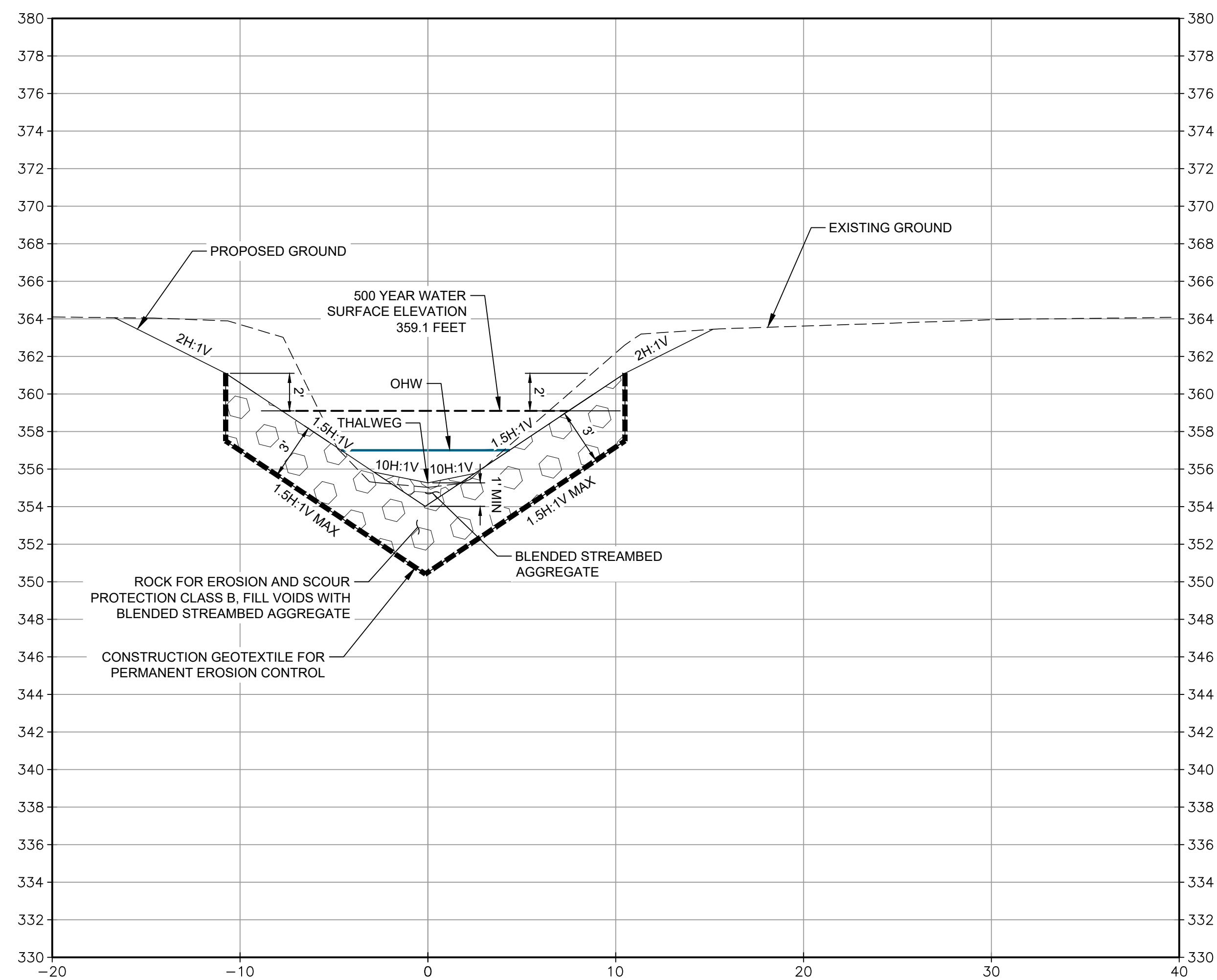
PROPOSED PROJECT: SENN ROAD MP 0.89 BRIDGE SCOUR REPAIR PROJECT

WATER BODY: LUCAS CREEK

NEAR: ONALASKA

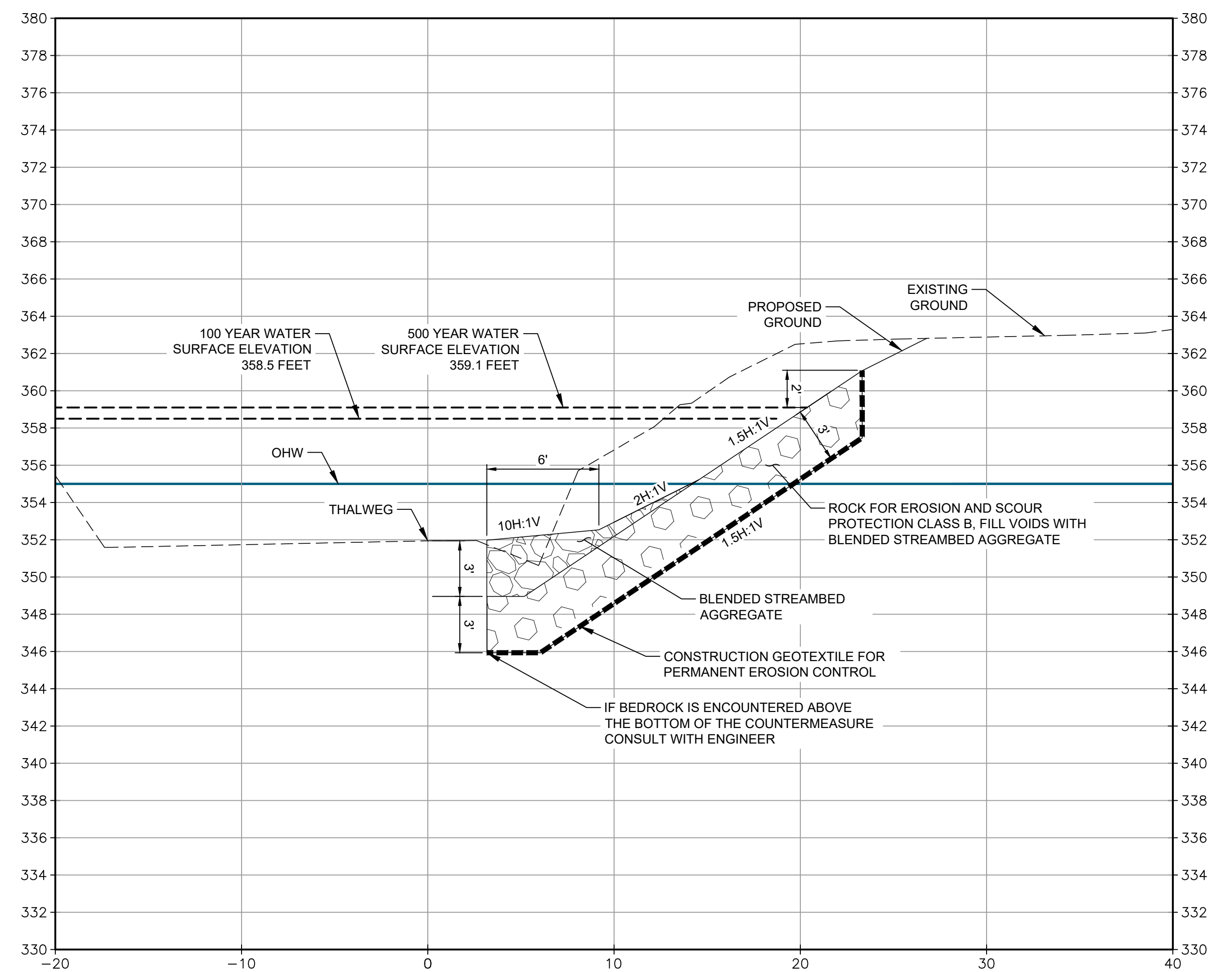
COUNTY: LEWIS

STATE: WA



SECTION A - SCOUR COUNTERMEASURE TYPICAL SECTION ALONG BRIDGE APPROACH

SCALE: 1" = 5'



SECTION B - SCOUR COUNTERMEASURE TYPICAL TRANSITION SECTION

SCALE: 1" = 5'

SHEET 6 SCOUR COUNTERMEASURE DETAILS

DATE: JULY 2026

APPLICANT: LEWIS COUNTY PUBLIC WORKS

REFERENCE #:

ADJACENT PROPERTY OWNERS: SEE JARPA FORM

PURPOSE: BRIDGE SCOUR REPAIR

LAT/LONG: 46.63899N. LAT. / -122.77172W. LONG.

SITE LOCATION ADDRESS: 264 SENN RD,
CHEHALIS, WA, 98532

PROPOSED PROJECT: SENN ROAD MP 0.89 BRIDGE SCOUR REPAIR PROJECT

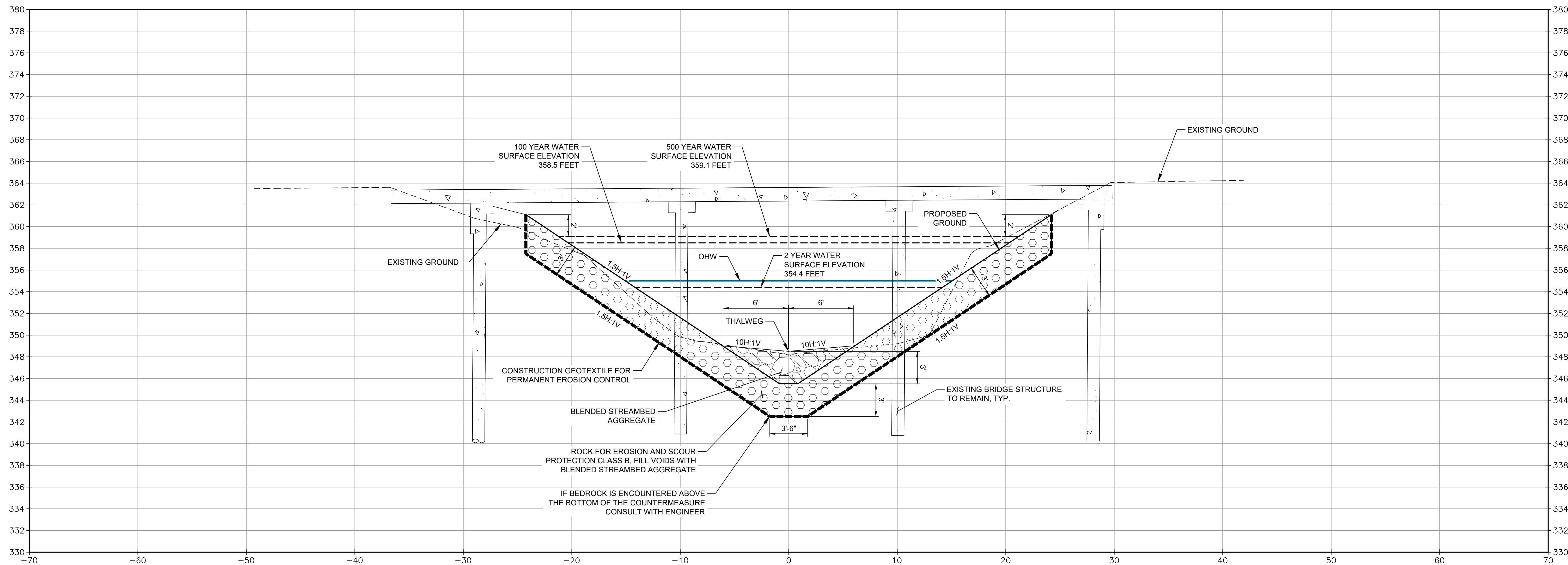
WATER BODY: LUCAS CREEK

NEAR: ONALASKA

COUNTY: LEWIS

STATE: WA

1. BLENDED STREAMBED AGGREGATE IS 40% STREAMBED SEDIMENT AND 60% 8-INCH COBBLES. SEE STANDARD SPECIFICATION 8-30 "STREAMS, RIVERS, AND WATERBODIES."



SECTION C - TYPICAL SCOUR COUNTERMEASURE AND STREAM RECONSTRUCTION SECTION

SCALE: 1" = 5'

SHEET 7 SCOUR COUNTERMEASURE DETAILS

DATE: JULY 2026

APPLICANT: LEWIS COUNTY PUBLIC WORKS

REFERENCE #:

ADJACENT PROPERTY OWNERS: SEE JARPA FORM

PURPOSE: BRIDGE SCOUR REPAIR

LAT/LONG: 46.63899N. LAT. / -122.77172W. LONG.

SITE LOCATION ADDRESS: 264 SENN RD,
CHEHALIS, WA, 98532

PROPOSED PROJECT: SENN ROAD MP 0.89 BRIDGE SCOUR REPAIR PROJECT

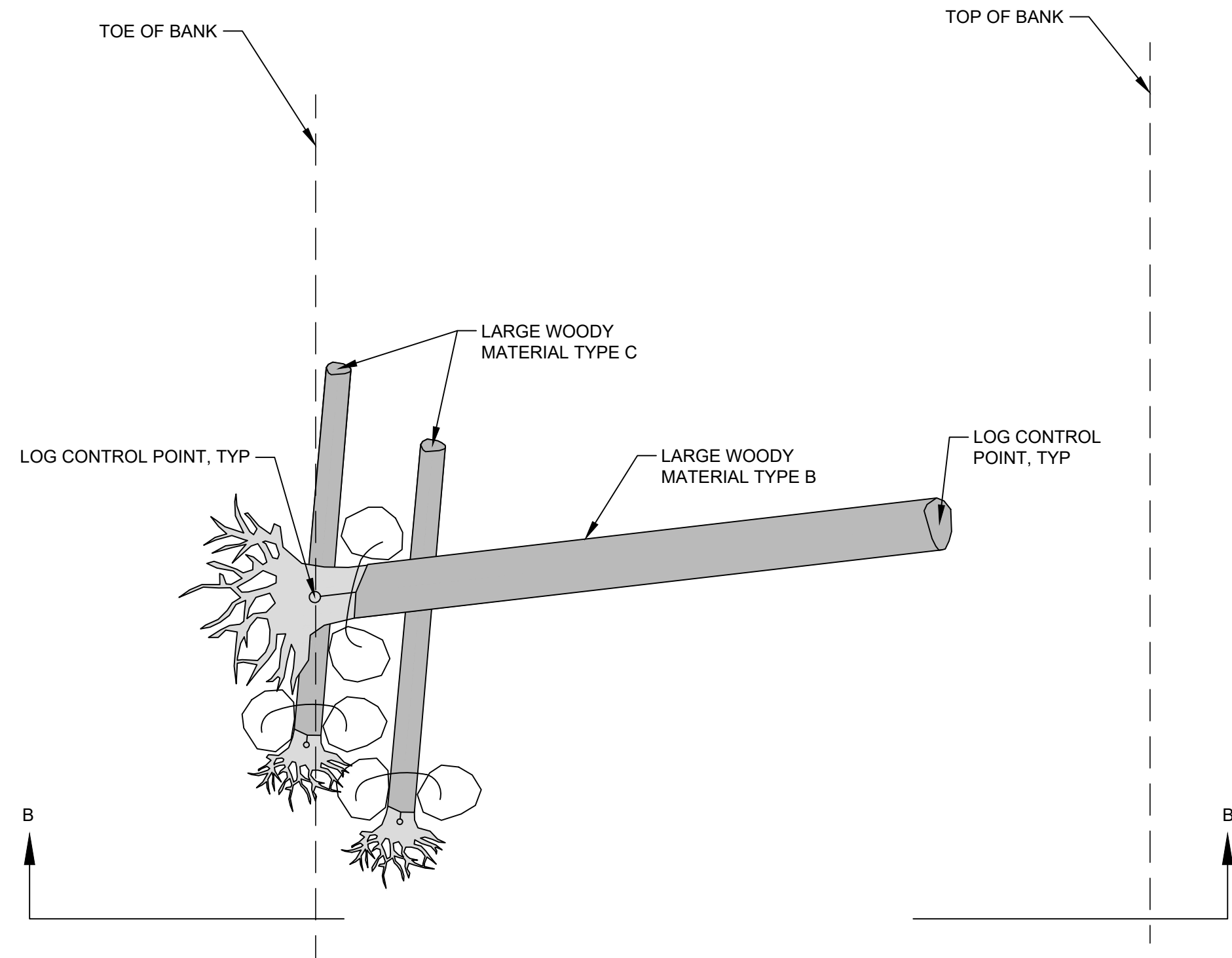
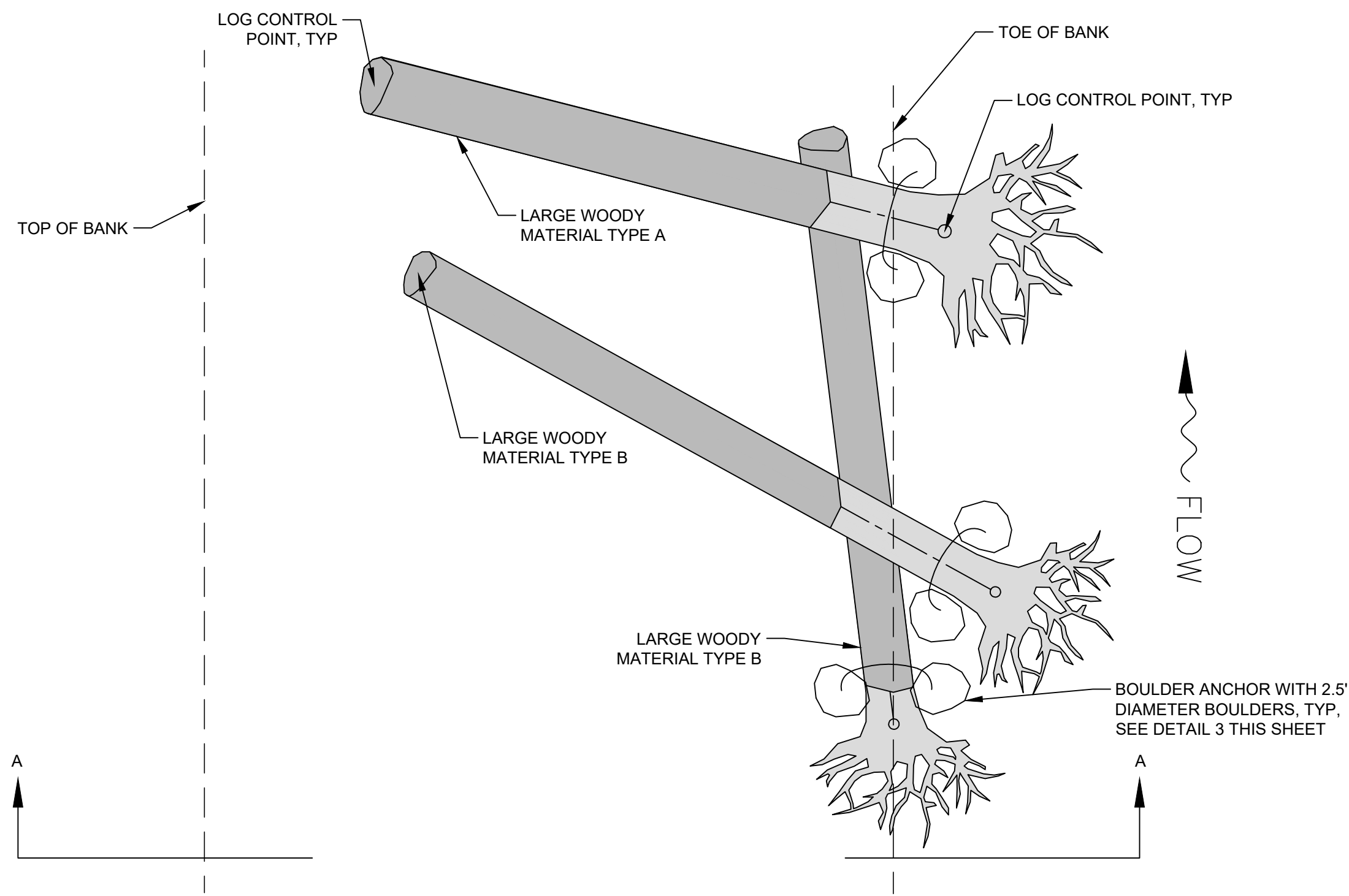
WATER BODY: LUCAS CREEK

NEAR: ONALASKA

COUNTY: LEWIS

STATE: WA

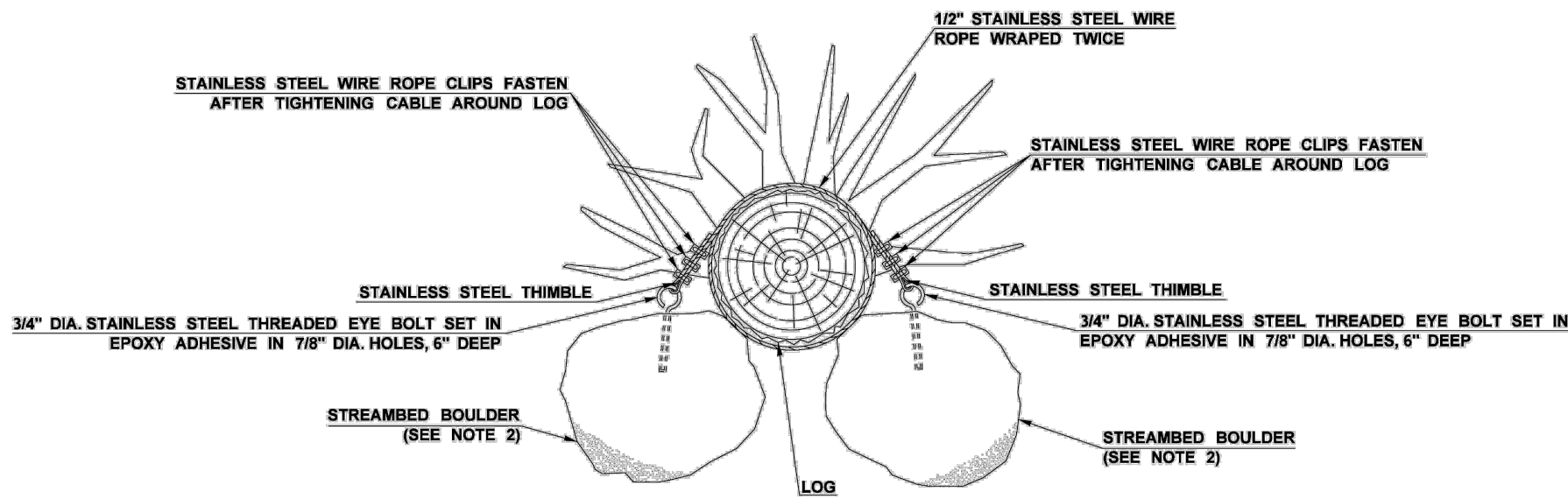
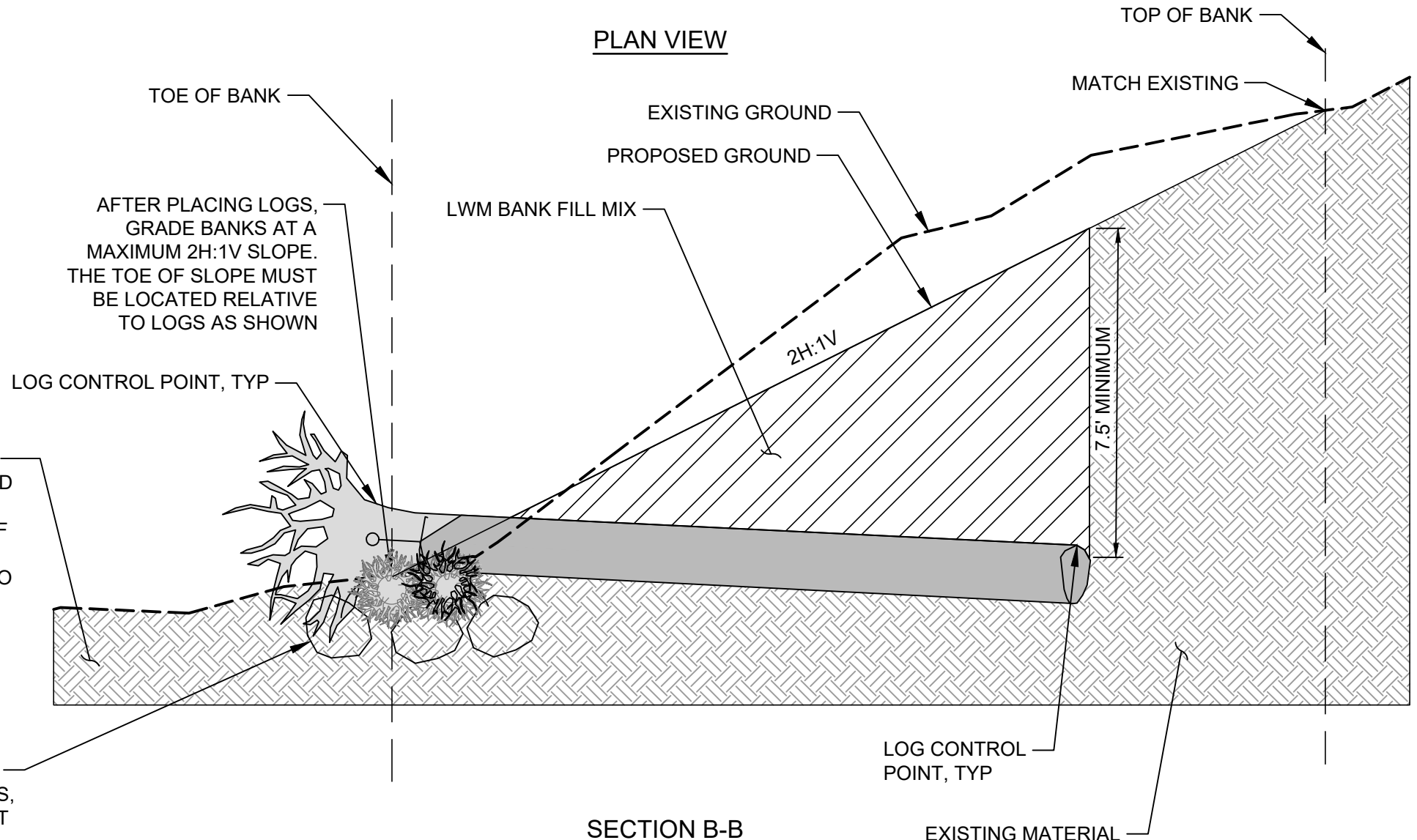
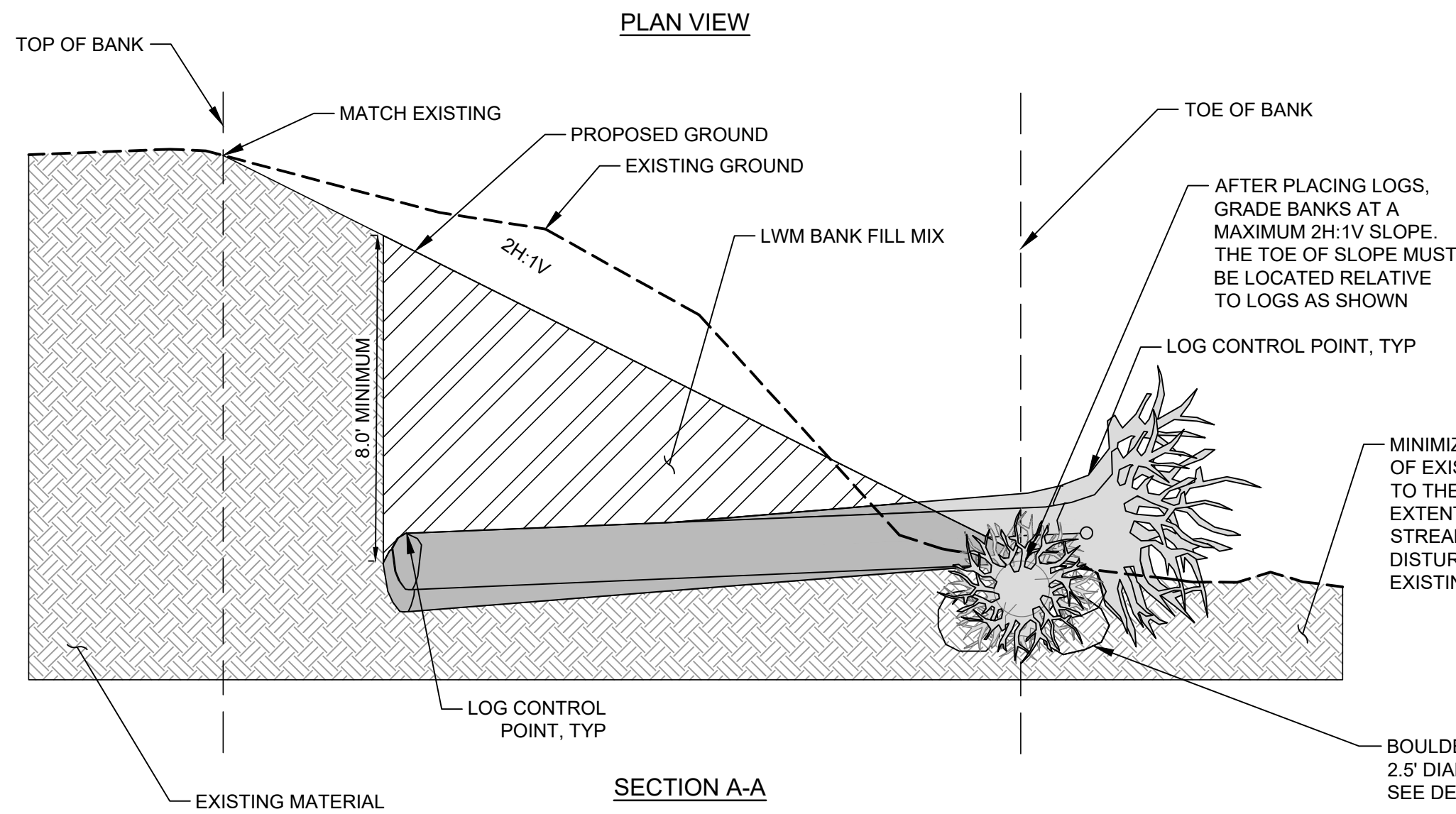
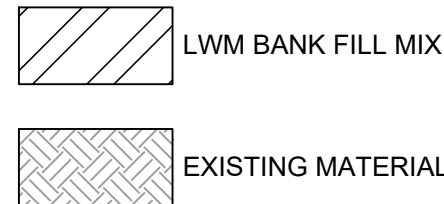
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STREAM RECONSTRUCTION NOTES:

1. DETAILS SHOWN ON THIS SHEET MAY BE ROTATED OR MIRRORED. SEE SHEET 8 FOR LARGE WOODY MATERIAL (LWM) ORIENTATIONS.
2. SEE LWM LAYOUT TABLE AND LWM SCHEDULE ON SHEET 8 FOR LOG CONTROL POINTS, TOP OF LOG ELEVATIONS, AND LOG DIMENSIONS.
3. SEE SPECIAL PROVISIONS 8-33 "LOG STRUCTURES" FOR LWM.
4. LOCATIONS AND ORIENTATIONS OF STREAMBED FEATURES ARE APPROXIMATE AND SHALL BE STAKED PER PLAN BY THE CONTRACTOR AND APPROVED BY THE FIELD STREAM DESIGN ENGINEER. FINAL LOCATION AND ORIENTATION OF THESE STREAMBED FEATURES SHALL BE APPROVED BY THE FIELD STREAM DESIGN ENGINEER.
5. BLENDED STREAMBED AGGREGATE IS 60% 8-INCH COBBLES AND 40% STREAMBED SEDIMENT. SEE STANDARD SPECIFICATIONS 8-30 "STREAM, RIVERS, AND WATERBODIES."
6. ALL LWM DETAIL SECTIONS ON THIS SHEET ARE LOOKING DOWNSTREAM.
7. LWM BANK FILL MIX IS 50% BLENDED STREAMBED AGGREGATE AND 50% ROCK FOR EROSION CONTROL AND SCOUR PROTECTION CLASS B.

LEGEND:



NOTES:

1. SEE SPECIAL PROVISIONS "WOODY MATERIAL" FOR DESCRIPTION OF MATERIALS AND CONSTRUCTION REQUIREMENTS.
2. SEE STANDARD SPECIFICATIONS 8-30 "WATER CROSSINGS" FOR BOULDER DESCRIPTION.

1
11 LARGE WOODY MATERIAL (LWM) LOG JAM - DETAIL 1
NOT TO SCALE

2
11 LARGE WOODY MATERIAL (LWM) LOG JAM - DETAIL 2
NOT TO SCALE

3
11 BOULDER ANCHOR - DETAIL 3
NOT TO SCALE

SHEET 9 STREAM RECONSTRUCTION DETAILS

DATE: JULY 2026

APPLICANT: LEWIS COUNTY PUBLIC WORKS

REFERENCE #:

ADJACENT PROPERTY OWNERS: SEE JARPA FORM

PURPOSE: BRIDGE SCOUR REPAIR

LAT/LONG: 46.63899N. LAT. / -122.77172W. LONG.

SITE LOCATION ADDRESS: 264 SENN RD,
CHEHALIS, WA, 98532

PROPOSED PROJECT: SENN ROAD MP 0.89 BRIDGE SCOUR REPAIR PROJECT

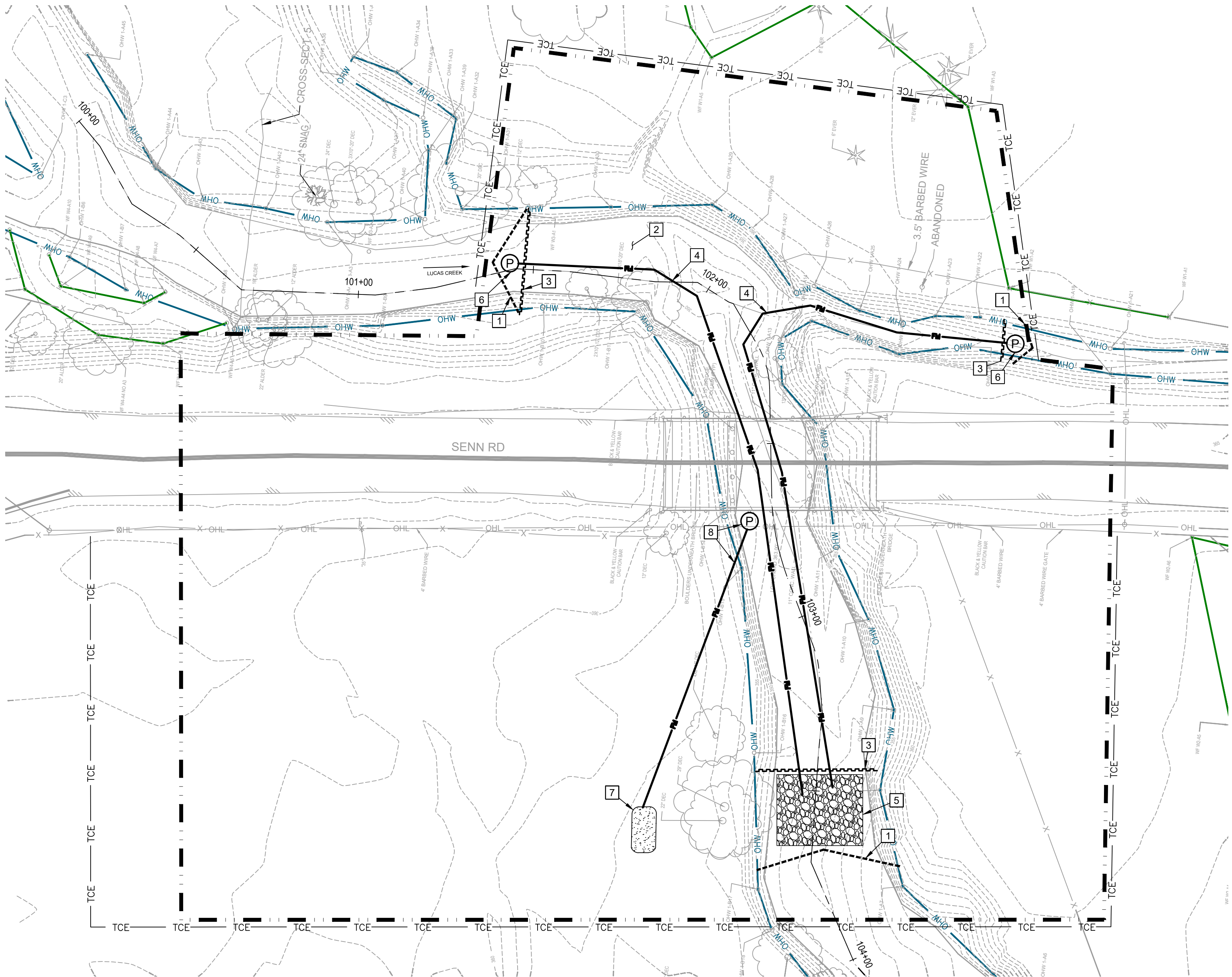
WATER BODY: LUCAS CREEK

NEAR: ONALASKA

COUNTY: LEWIS

STATE: WA

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GENERAL NOTE:

1. ALL MATERIAL AND WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION" 2026 EDITION AND SPECIAL PROVISIONS.

TEMPORARY STREAM DIVERSION NOTES:

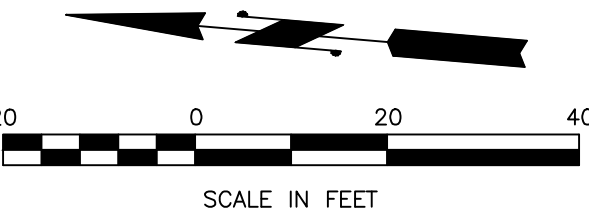
1. THE TEMPORARY STREAM DIVERSION SHOWN IS CONCEPTUAL. SEE SPECIAL PROVISIONS. THE TEMPORARY STREAM DIVERSION MAY BE PHASED IN ORDER TO UTILIZE THE EXISTING STREAM CHANNEL TO THE EXTENT FEASIBLE DURING CONSTRUCTION.
2. CONTRACTOR SHALL SUBMIT THE TEMPORARY STREAM DIVERSION PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL WITHIN 7 DAYS OF NOTICE TO PROCEED.
3. THE TEMPORARY STREAM DIVERSION SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING.
4. THE STREAM DIVERSION SYSTEM SHALL BE CAPABLE OF CONVEYING THE FLOW SPECIFIED IN THE CONTRACT DOCUMENTS.
5. FISH EXCLUSION AND FISH REMOVAL SHALL BE PERFORMED BY THE CONTRACTOR, BEFORE IN-WATER WORK IN ACCORDANCE WITH THE WASHINGTON DEPARTMENT OF FISH AND WILDLIFE HPA.

TEMPORARY STREAM DIVERSION KEY NOTES:

1. INSTALL FISH SCREEN.
2. CAPTURE AND REMOVE ALL FISH BETWEEN THE FISH SCREENS IN ACCORDANCE WITH THE HPA. FISH CAPTURE SHALL BE PERFORMED UNDER THE SUPERVISION OF AN EXPERIENCED FISHERY BIOLOGIST.
3. INSTALL COFFERDAM. SEE DETAIL 1 ON SHEET 11. INSTALL COFFERDAMS AT STA 101+47.1 AND STA 103+44.1.
4. INSTALL TEMPORARY STREAM DIVERSION PIPE. ADJUST LOCATION OF DIVERSION PIPE AS NEEDED TO PERFORM WORK.
5. INSTALL OUTLET PROTECTION TO PREVENT EROSION AT TEMPORARY STREAM DIVERSION OUTFALL. OUTLET PROTECTION SHALL BE REMOVED WHEN CONSTRUCTION IS COMPLETE. SEE DETAIL 1 ON SHEET 11.
6. INSTALL STREAM BYPASS PUMP(S) AND PIPES AS NEEDED DURING CONSTRUCTION. ADJUST LOCATION OF BYPASS PUMPS AND PIPES AS NEEDED TO PERFORM WORK.
7. INSTALL FILTER BAG FOR SEDIMENT REMOVAL FROM ANY DEWATERING ACTIVITIES THAT MAY BE NECESSARY DURING CONSTRUCTION. SEE DETAIL 2 ON SHEET 11.
8. INSTALL DEWATERING PUMP AND PIPES AS NEEDED DURING CONSTRUCTION. ADJUST LOCATION OF DEWATERING PUMPS AND PIPES AS NEEDED TO PERFORM WORK.

LEGEND

- | | |
|--|-------------------------|
| | COFFER DAM |
| | FISH SCREEN |
| | FORCE MAIN |
| | PUMP |
| | TEMPORARY QUARRY SPALLS |
| | FILTER BAG |



SHEET 10 TEMPORARY STREAM DIVERSION PLAN

DATE: JULY 2026

APPLICANT: LEWIS COUNTY PUBLIC WORKS

REFERENCE #:

ADJACENT PROPERTY OWNERS: SEE JARPA FORM

PURPOSE: BRIDGE SCOUR REPAIR

LAT/LONG: 46.63899N. LAT. / -122.77172W. LONG.

SITE LOCATION ADDRESS: 264 SENN RD,
CHEHALIS, WA, 98532

PROPOSED PROJECT: SENN ROAD MP 0.89 BRIDGE SCOUR REPAIR PROJECT

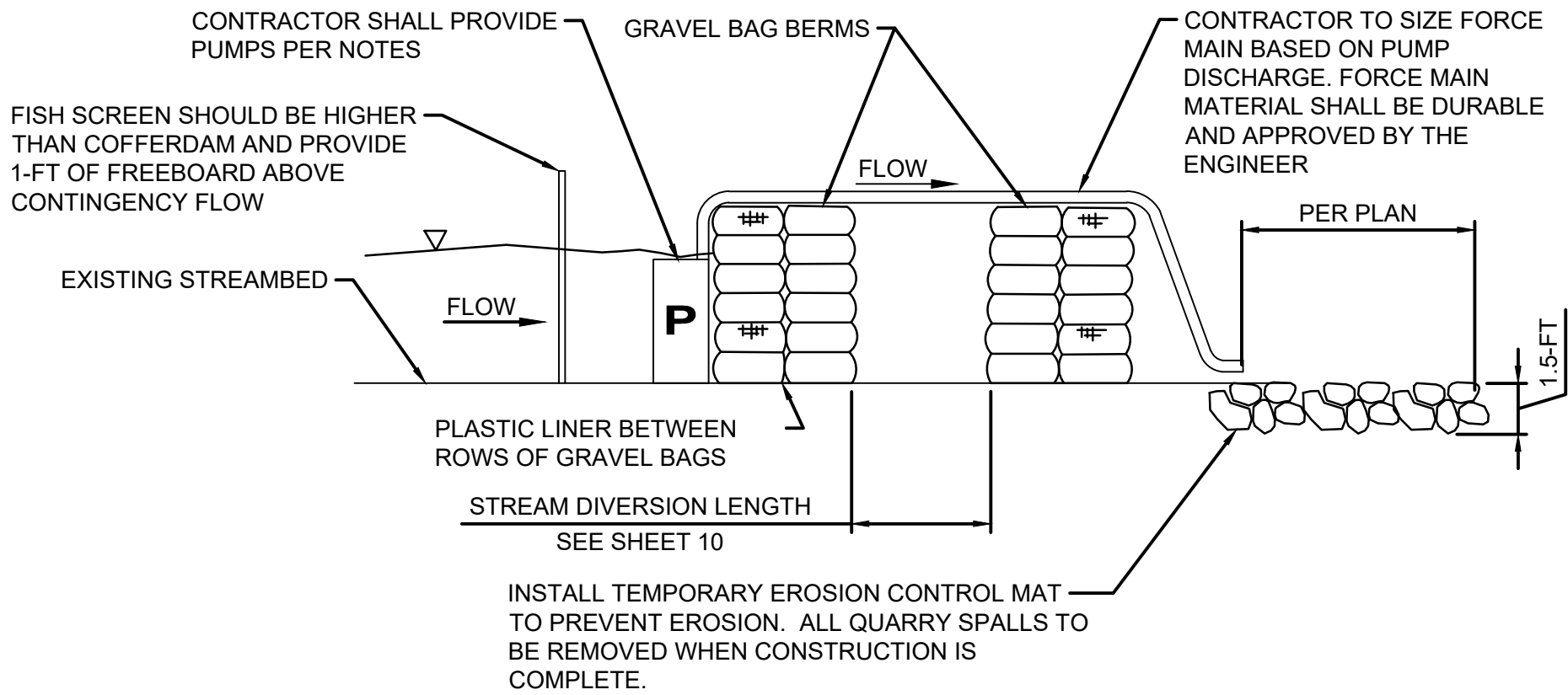
WATER BODY: LUCAS CREEK

NEAR: ONALASKA

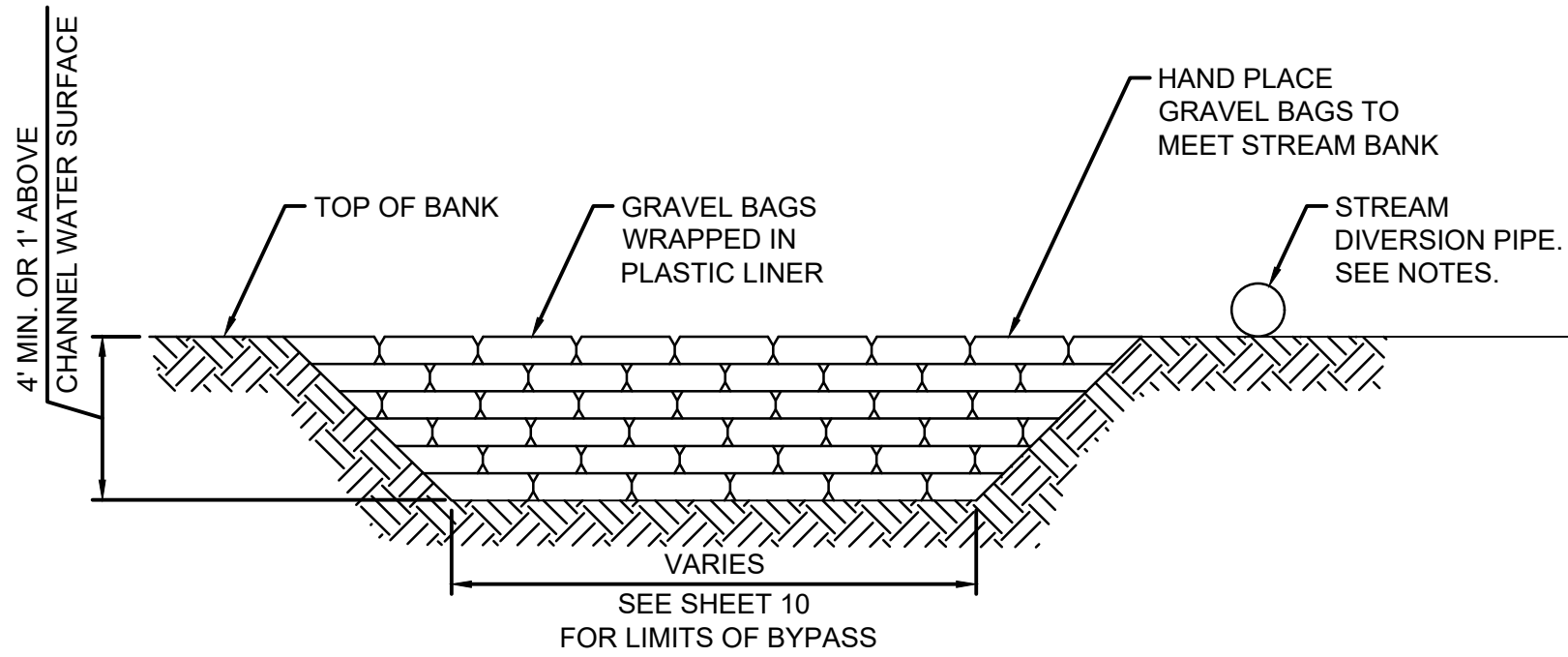
COUNTY: LEWIS

STATE: WA

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SIDE VIEW



FRONT VIEW

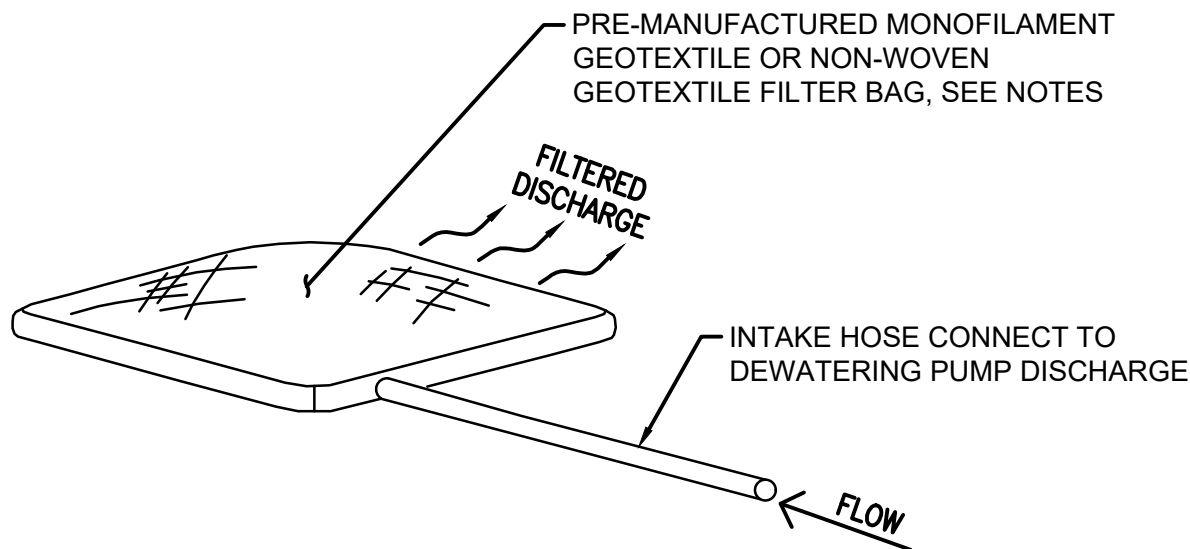
NOTES:

1. COFFERDAM IS CONCEPTUAL. CONTRACTOR MAY USE ALTERNATIVE AS APPROVED BY ENGINEER.
2. COFFERDAM SHALL BE CONSTRUCTED BY THE CONTRACTOR WITH ROUNDED PEA GRAVEL BAGS, OR OTHER MEANS PRE-APPROVED BY THE ENGINEER. GRAVEL BAGS SHALL BE CONSTRUCTED OF WOVEN SYNTHETIC FIBER. NO ANGULAR OR CRUSHED MATERIALS MAY BE USED. GRAVEL BAGS SHALL BE WASTEHAULED AFTER REMOVAL OF TEMPORARY STREAM DIVERSION.
3. THE HEIGHT AND WIDTH OF THE COFFERDAM SHALL BE DETERMINED BY THE CONTRACTOR BASED ON THE WATER SURFACE ELEVATION AND CHANNEL SHAPE AT THE TIME OF CONSTRUCTION. THE COFFERDAMS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER. THE AVERAGE MAXIMUM DAILY FLOW IS APPROXIMATELY 14 CFS.
4. REMOVE LOOSE COBBLES AND BOULDERS FROM THE STREAMBED PRIOR TO INSTALLING COFFERDAM.
5. EXTEND BOTH ENDS OF THE COFFERDAM UP THE BANKS OF THE CHANNEL AS NEEDED TO PREVENT THE STREAM FROM END-RUNNING THE COFFERDAM.
6. PUMP INTAKE SCREEN SHALL BE BACKWATERED WITH THE PLACEMENT OF THE GRAVEL BAG BERM TO PREVENT FISH FROM GETTING IMPINGED OR ENTRAINED ON THE INTAKE SCREEN.
7. COFFERDAM SHALL BE MAINTAINED BY THE CONTRACTOR AND IMPROVED AS NECESSARY AND DIRECTED BY THE ENGINEER.
8. CONTRACTOR SHALL HAVE ON SITE, EMERGENCY DIVERSION PIPE, PUMPS, GENERATOR, AND APPURTENANCES IN THE EVENT OF HIGH FLOWS AS WELL AS BACKUP PUMP(S) IN CASE OF PRIMARY PUMP FAILURE. EMERGENCY DIVERSION PUMP INTAKE SHALL BE SCREENED TO PREVENT FISH FROM ENTERING DIVERSION SYSTEM. SEE THE CONTRACT PROVISIONS AND HPA FOR ADDITIONAL INFORMATION ON TEMPORARY STREM DIVERSION.
9. COFFERDAM MATERIALS SHALL BE REMOVED FROM THE SITE AND BECOME PROPERTY OF CONTRACTOR.

1
5

COFFER DAM DETAIL

NOT TO SCALE



NOTES:

1. FILTER BAG SHALL BE MINIMUM 10-FT X 15-FT AND REPLACED AS NEEDED TO ACCOMMODATE ACTUAL SEDIMENT LOAD CONDITIONS (I.E. VOLUME, TYPE OF SEDIMENT, ETC.)
2. DRAIN FILTER BAG TO COUNTY APPROVED RECEIVING AREA. RECEIVING AREA SHALL BE VEGETATED AND UPLAND OF THE OHWM AND TURBIDITY MONITORING STATION.
3. FILTER BAG SYSTEM TO BE INSPECTED DAILY WHEN IN USE TO VERIFY ADEQUATE PERFORMANCE.
4. TURBIDITY MONITORING STATION INSTALLED AND MAINTAINED PER PERMIT REQUIREMENTS (TO BE DETERMINED), SHOULD A TURBIDITY EXCEEDENCE OCCUR, THE FILTER BAG SYSTEM IS TO BE INSPECTED IMMEDIATELY AND REPLACED IF ANOTHER SEDIMENT SOURCE IS NOT IDENTIFIED.

2
5

FILTER BAG DETAIL

NOT TO SCALE

SHEET 11 TEMPORARY STREAM DIVERSION DETAILS

DATE: JULY 2026

APPLICANT: LEWIS COUNTY PUBLIC WORKS

REFERENCE #:

ADJACENT PROPERTY
OWNERS: SEE JARPA FORM

PURPOSE: BRIDGE SCOUR REPAIR

LAT/LONG: 46.63899N. LAT. / -122.77172W. LONG.

SITE LOCATION ADDRESS: 264 SENN RD,
CHEHALIS, WA, 98532

PROPOSED PROJECT: SENN ROAD MP 0.89 BRIDGE SCOUR REPAIR PROJECT

WATER BODY: LUCAS CREEK

NEAR: ONALASKA

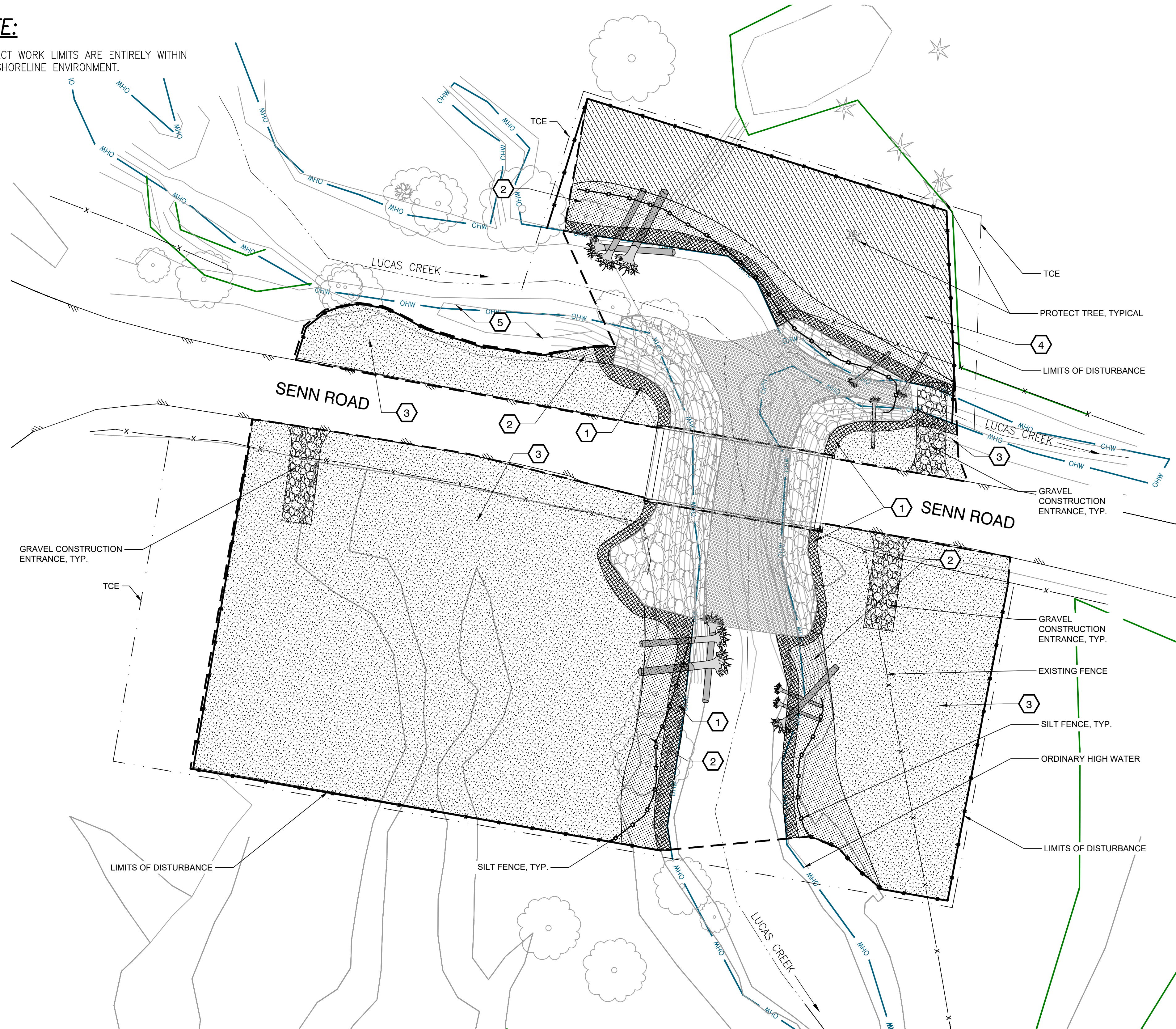
COUNTY: LEWIS

STATE: WA

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NOTE:

PROJECT WORK LIMITS ARE ENTIRELY WITHIN THE SHORELINE ENVIRONMENT.



CONSTRUCTION NOTES:

- 1 LIVE STAKES
- 2 RIPARIAN SEED MIX AND PLANTING
-PLACE 12 INCHES OF TYPE B TOPSOIL
-PLACE 24 DIAM. MULCH RING AT TREES/SHRUBS
-INSTALL BROWSE PROTECTORS
- 3 UPLAND SEED MIX
-PLACE 4 INCHES OF TYPE B TOPSOIL
- 4 UPLAND SEED MIX AND PLANTING
-PLACE 12 INCHES OF TYPE B TOPSOIL
-PLACE 24 DIAM. MULCH RING AT TREES/SHRUBS
-INSTALL BROWSE PROTECTORS
- 5 PREVIOUSLY RESTORED BANK AREA. NO WORK BEYOND SILT FENCE LINE.

NOTE: ALL PLANTING WORK PAID WITH 'LANDSCAPE RESTORATION' BID ITEM

GENERAL NOTES:

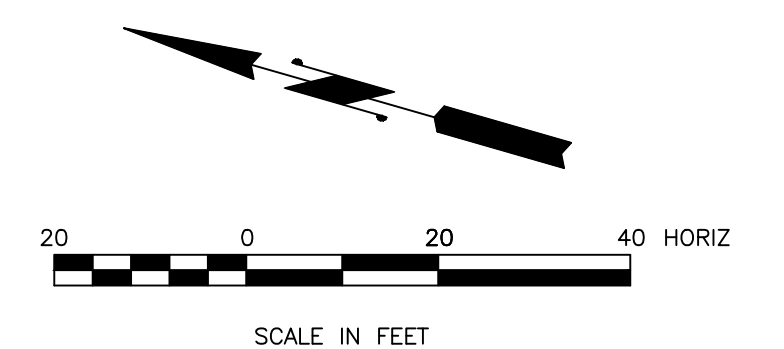
- 1) SEE PLANT SCHEDULE, DETAILS AND NOTES SHEET 13.
- 2) ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED IN ACCORDANCE WITH PROJECT PLANS AND CONSTRUCTION SPECIFICATIONS.
- 3) STAKE THE LIMITS OF PLANTING AREAS FOR APPROVAL BY THE ENGINEER PRIOR TO PLANTING INSTALLATION.
- 4) SEE STREAM SHEETS, REVETMENT PLANS, AND DETAILS.

PLANTING LEGEND:

	PLANTING ZONE 1 - LIVE STAKES
	PLANTING ZONE 2 - RIPARIAN SEED MIX AND PLANTING
	PLANTING ZONE 3 - UPLAND SEED MIX
	PLANTING ZONE 4 - UPLAND SEED MIX AND PLANTING

STREAM LEGEND:

	EXPOSED RIP RAP
	STREAMBED COBBLES
	LARGE WOOD DEBRIS



SHEET 12 RESTORATION PLAN

DATE: JULY 2026

APPLICANT: LEWIS COUNTY PUBLIC WORKS

REFERENCE #:

ADJACENT PROPERTY OWNERS: SEE JARPA FORM

PURPOSE: BRIDGE SCOUR REPAIR

LAT/LONG: 46.63899N. LAT. / -122.77172W. LONG.

SITE LOCATION ADDRESS: 264 SENN RD,
CHEHALIS, WA, 98532

PROPOSED PROJECT: SENN ROAD MP 0.89 BRIDGE SCOUR REPAIR PROJECT

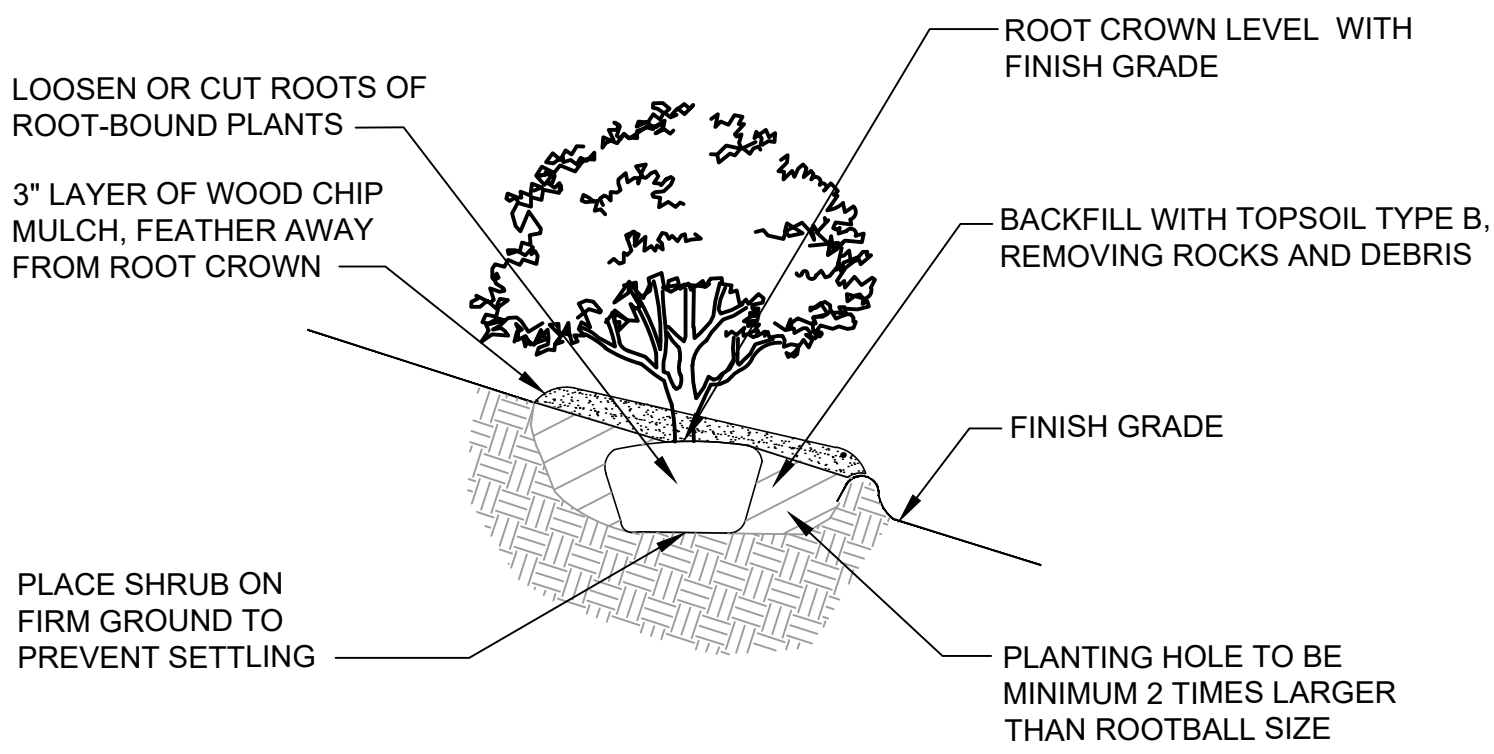
WATER BODY: LUCAS CREEK

NEAR: ONALASKA

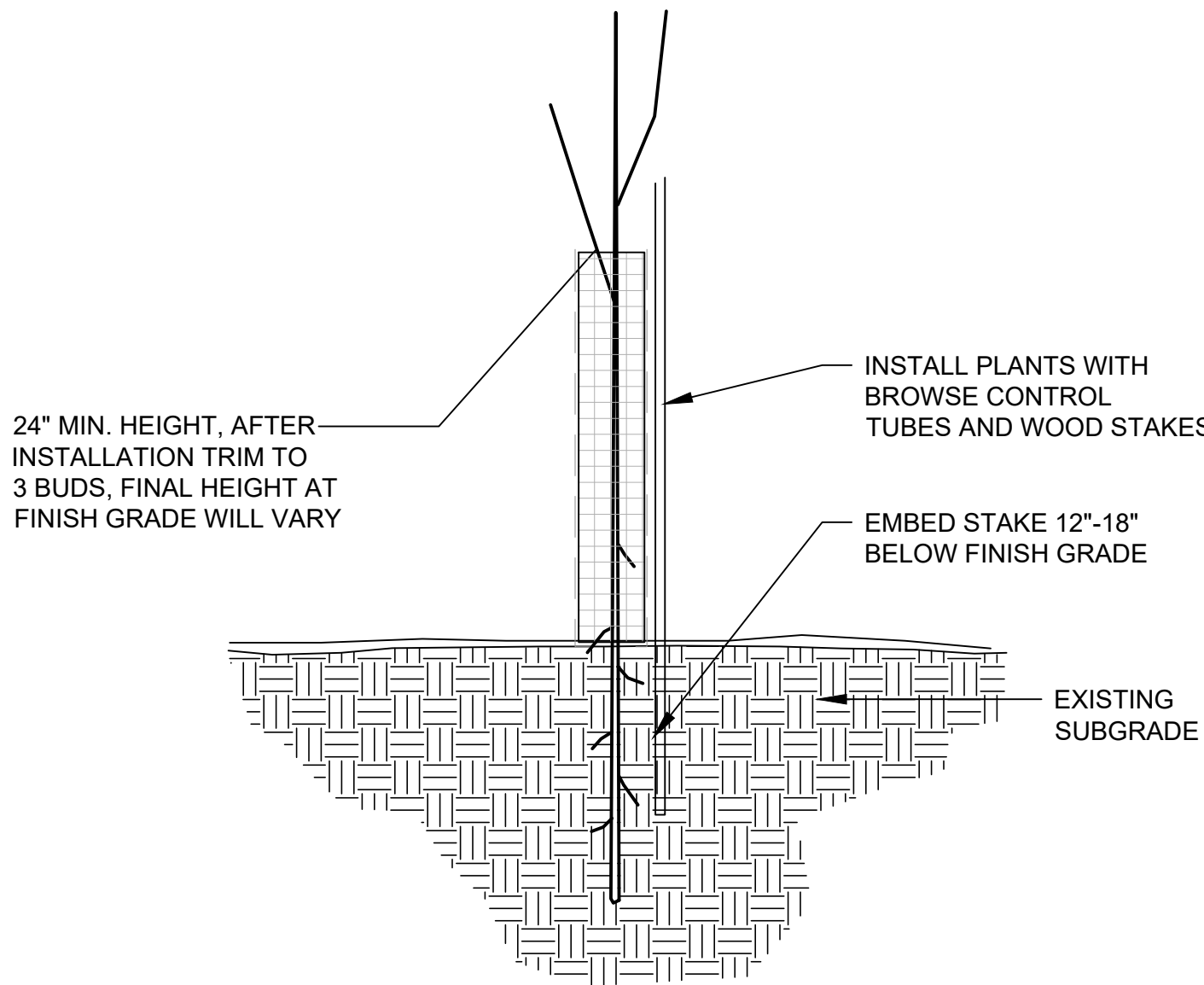
COUNTY: LEWIS

STATE: WA

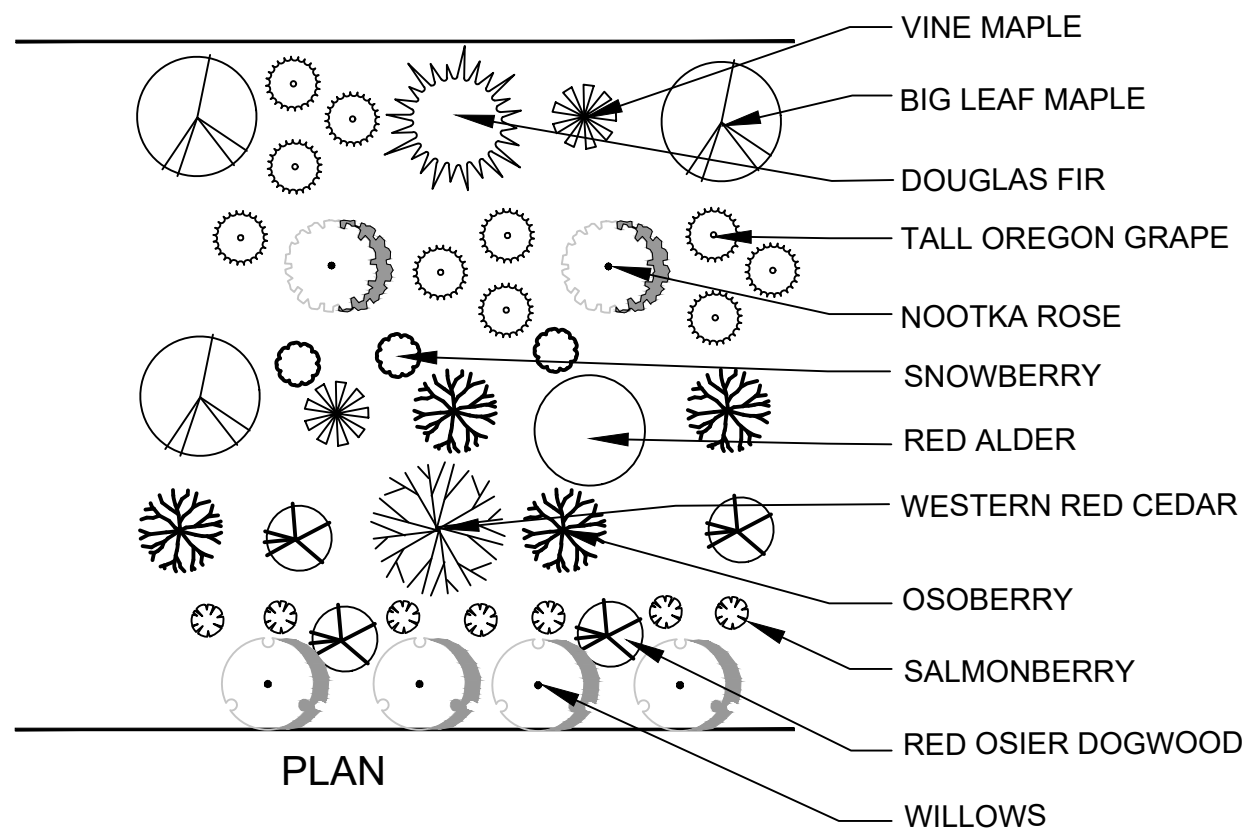
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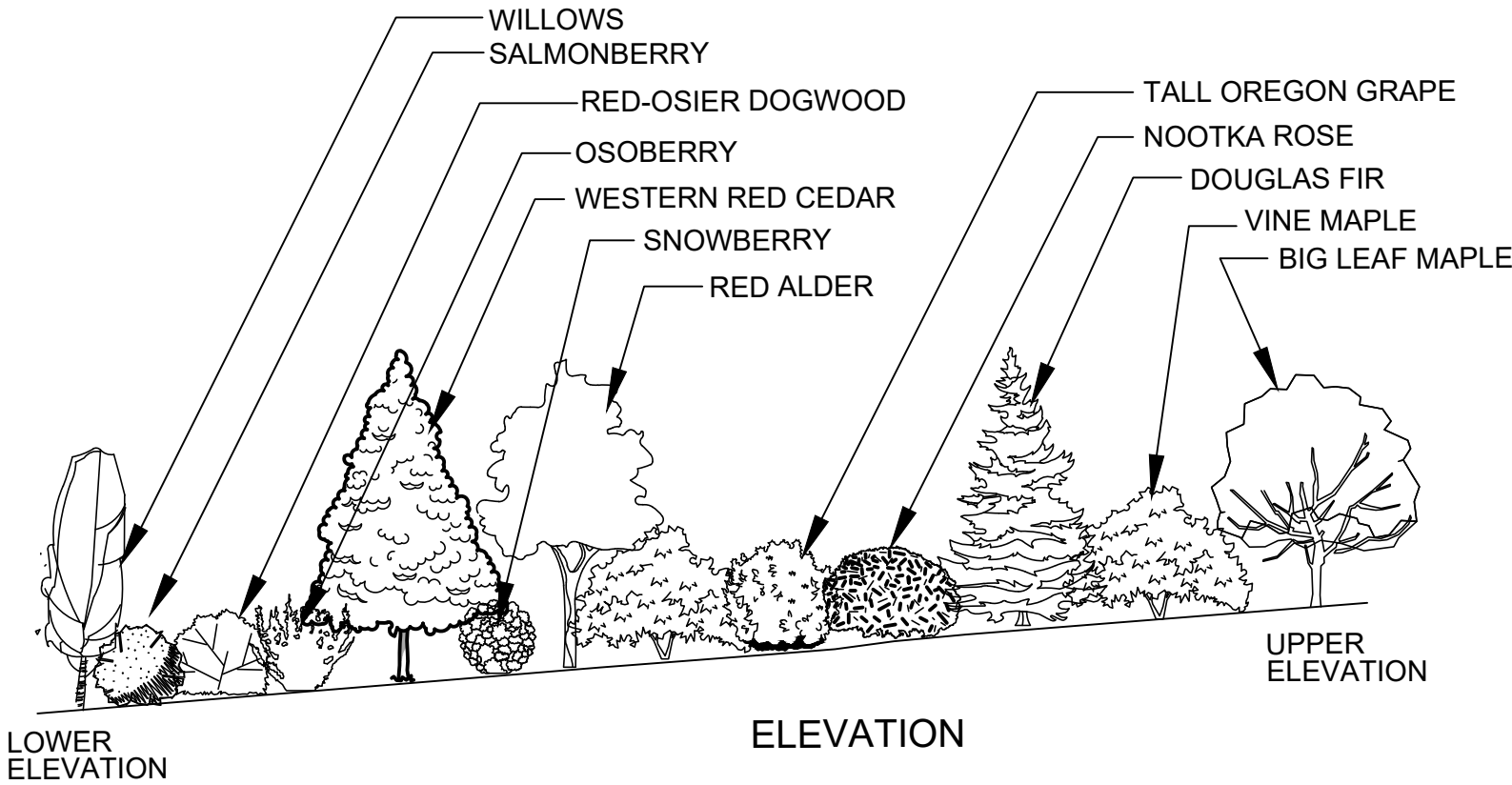
RESTORATION SHRUB/TREE PLANTING ON SLOPE
Scale: N.T.S.



BROWSE GUARD
Scale: N.T.S.



TYPICAL UPLAND AND RIPARIAN PLANTING
Scale: N.T.S.



PLANT MATERIAL:

1. PLANT MATERIAL MUST BE SOURCED FROM NATURALLY OCCURRING POPULATIONS BELOW 1,000 FEET ELEVATION IN AN AREA BOUNDED BY THE COAST RANGE TO THE WEST, THE CASCADE RANGE TO THE EAST, CENTRALIA, WA TO THE NORTH, AND COTTAGE GROVE, OR TO THE SOUTH. CONTRACTOR SHALL PROVIDE PROOF OF SOURCE TO OWNER PRIOR TO DELIVERING THE PLANT MATERIAL TO THE SITE.
2. PLANT TREES IN GROUPS OF 3-5 AND SHRUBS IN GROUPS OF 5, IN ACCORDANCE WITH DETAILS AND NOTES.
3. UNIFORMLY DISTRIBUTE PLANT SPECIES IN EACH CONTIGUOUS AREA AND AS DIRECTED BY THE ENGINEER.
4. PLANT MATERIAL INSTALLATION MEANS AND METHODS TO BE IN ACCORDANCE WITH WSDOT STANDARD PLAN.

UTILITY NOTES:

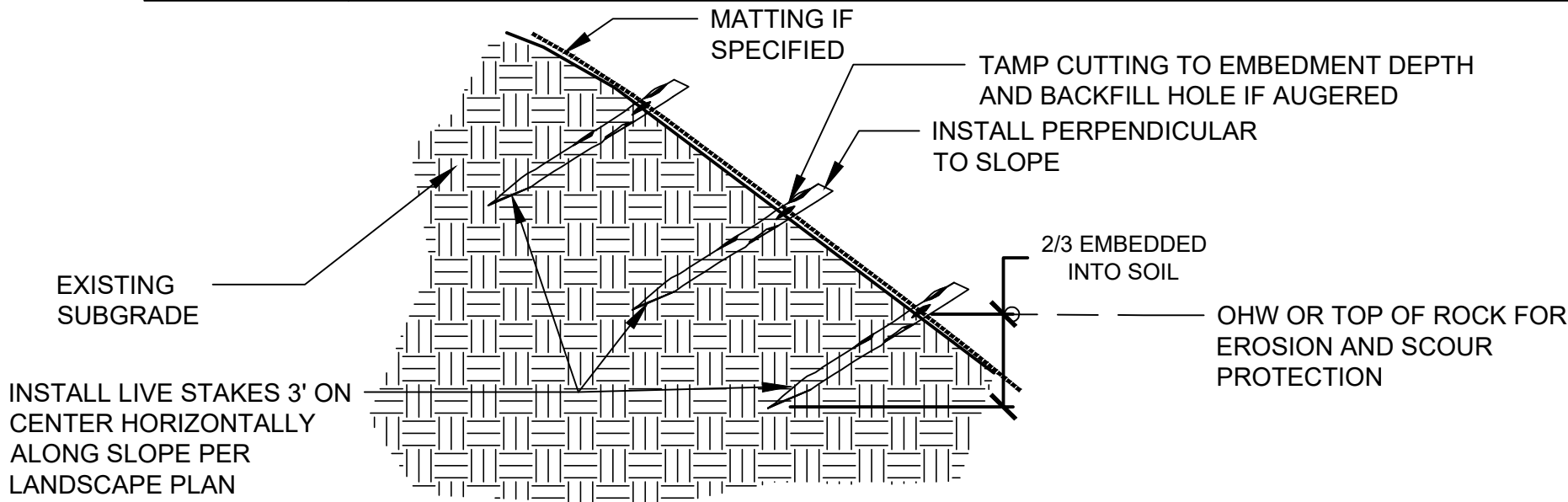
1. CONTRACTOR IS CAUTIONED THAT EXISTING UNDERGROUND FACILITIES OCCUR THROUGHOUT THE WORK AREAS INCLUDING BUT NOT LIMITED TO POWER, GAS, TELEPHONE, WATER SUPPLY, AND IRRIGATION. CONTRACTOR SHALL MARK THE FACILITIES BEFORE WORK, POTHOLE WHERE NECESSARY, AND PROTECT DURING CONSTRUCTION. IMMEDIATELY NOTIFY OWNER'S REPRESENTATIVE IF ANY CONFLICTS ARE FOUND.

LANDSCAPE NOTES:

1. THE LANDSCAPE CONTRACTOR IS TO THOROUGHLY REVIEW THE SITE. IF THERE ARE ANY DISCREPANCIES BETWEEN THE PLAN AND THE EXISTING CONDITIONS NOTIFY THE ENGINEER IMMEDIATELY.
2. PROVIDE QUANTITY OF PLANT MATERIAL INDICATED IN PLANT LIST OR THE QUANTITY REQUIRED TO COVER AREAS INDICATED AT SPECIFIED SPACING, WHICHEVER IS GREATER.
3. LEAVE PLANT NAME IDENTIFICATION TAGS ON TEN PERCENT OF ALL TREES AND SHRUBS INSTALLED TO AID INSPECTORS IN VERIFYING THAT SPECIFIED PLANTS HAVE BEEN INSTALLED.
4. INVASIVE SPECIES/WEED CONTROL: REMOVE ALL WEEDS AND INVASIVE SPECIES INCLUDING BUT NOT LIMITED TO BLACKBERRY, TEASEL, ST. JOHN'S WART, REED CANARY GRASS, BIRDSFOOT TREFOIL, PRICKLY LETTUCE, SOWTHISTLE, AND TANSY RAGWORT WITHIN PROJECT LIMITS UNLESS OTHERWISE DIRECTED. MEANS AND METHODS TO BE IN ACCORDANCE WITH LEWIS COUNTY STANDARDS.
5. LANDSCAPE RESTORATION, INCLUDING PLANTING AREA PREPARATION, PLANT SELECTION AND INSTALLATION, AND PLANT ESTABLISHMENT, SHALL CONFORM WITH THE REQUIREMENTS LISTED IN THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, CHAPTER 8-02 ROADSIDE RESTORATION, AND THE SPECIAL PROVISIONS FOR THIS PROJECT.

PLANT SCHEDULE:

SYMBOL	COMMON NAME	BOTANICAL NAME	TYPE	SPACING/SEEDING RATE	QTY./LBS
	PLANTING ZONE 1-LIVE STAKES		AREA (SF/AC) =2,024/0.04		225
	<i>Salix lasiandra</i>	Pacific Willow	3'L Cutting, 3/4" MIN DIA	3 FT O.C. Clusters of same species	65
	<i>Salix scouleriana</i>	Scouler Willow	3'L Cutting, 3/4" MIN DIA	3 FT O.C. Clusters of same species	90
	<i>Salix sitchensis</i>	Sitka Willow	3'L Cutting, 3/4" MIN DIA	3 FT O.C. Clusters of same species	70
	PLANTING ZONE 2 - RIPARIAN SEED MIX AND PLANTING		AREA (SF/AC) =4,318/0.09		
	SEED MIX				4.31 LBS
	<i>Bromus carinatus</i>	California brome	Seed	See Specifications	
	<i>Elymus glaucus</i>	Blue wildrye	Seed	See Specifications	
	<i>Hordeum brachyantherum</i>	Meadow Barley	Seed	See Specifications	
	SHRUBS				147
	<i>Rubus spectabilis</i>	Salmonberry	1 Gallon	6-FT OC	19
	<i>Cornus sericea</i>	Red-Osier Dogwood	1 Gallon	6-FT OC	25
	<i>Mahonia aquifolium</i>	Tall Oregon Grape	1 Gallon	6-FT OC	28
	<i>Oemleria cerasiformis</i>	Osoberry	1 Gallon	6-FT OC	25
	<i>Symphoricarpos albus</i>	Snowberry	1 Gallon	6-FT OC	25
	<i>Rosa nutkana</i>	Nootka Rose	1 Gallon	6-FT OC	25
		PLANTING ZONE 3 - UPLAND SEED MIX		AREA (SF/AC) =25,519/0.58	
SEED MIX				25.51 LBS	
<i>Agrostis exerata</i>		Spike bentgrass	Seed	See Specifications	
<i>Bromus carinatus</i>		California brome	Seed	See Specifications	
<i>Elymus glaucus</i>		Blue wildrye	Seed	See Specifications	
<i>Deschampsia cespitosa</i>		Tufted Hair Grass	Seed	See Specifications	
<i>Hordeum brachyantherum</i>		Meadow Barley	Seed	See Specifications	
PLANTING ZONE 4 - UPLAND SEED MIX AND PLANTING		AREA (SF/AC) = 4,655/0.10			
SEED MIX				4.65 LBS	
<i>Agrostis exerata</i>		Spike bentgrass	Seed	See Specifications	
<i>Bromus carinatus</i>	California brome	Seed	See Specifications		
<i>Elymus glaucus</i>	Blue wildrye	Seed	See Specifications		
<i>Deschampsia cespitosa</i>	Tufted Hair Grass	Seed	See Specifications		
<i>Hordeum brachyantherum</i>	Meadow Barley	Seed	See Specifications		
	TREES				24
	<i>Tree quantities include tree mitigation for the (#) tree removals</i>				
	<i>Acer circinatum</i>	Vine Maple	2 Gallon	15-FT O.C.	5
	<i>Acer macrophyllum</i>	Big Leaf Maple	2 Gallon	15-FT O.C.	4
	<i>Alnus rubra</i>	Red Alder	2 Gallon	15-FT O.C.	5
	<i>Thuja plicata</i>	Western Red Cedar	2 Gallon	15-FT O.C.	5
	<i>Pseudotsuga menziesii</i>	Douglas Fir	2 Gallon	15-FT O.C.	5
	SHRUBS				127
	<i>Cornus sericea</i>	Red-Osier Dogwood	1 Gallon	6-FT OC	25
	<i>Oemleria cerasiformis</i>	Osoberry	1 Gallon	6-FT OC	25
	<i>Symphoricarpos albus</i>	Snowberry	1 Gallon	6-FT OC	15
	<i>Sambucus racemosa</i>	Red Elderberry	1 Gallon	6-FT OC	27
	<i>Rosa nutkana</i>	Nootka Rose	1 Gallon	6-FT OC	25
	<i>Rubus spectabilis</i>	Salmonberry	1 Gallon	6-FT OC	10



LIVE STAKE PLANTING ALONG OHW
Scale: N.T.S.

SHEET 13 RESTORATION DETAILS

DATE: JULY 2026

APPLICANT: LEWIS COUNTY PUBLIC WORKS

REFERENCE #:

ADJACENT PROPERTY OWNERS: SEE JARPA FORM

PURPOSE: BRIDGE SCOUR REPAIR

LAT/LONG: 46.63899N. LAT. / -122.77172W. LONG.

SITE LOCATION ADDRESS: 264 SENN RD, CHEHALIS, WA, 98532

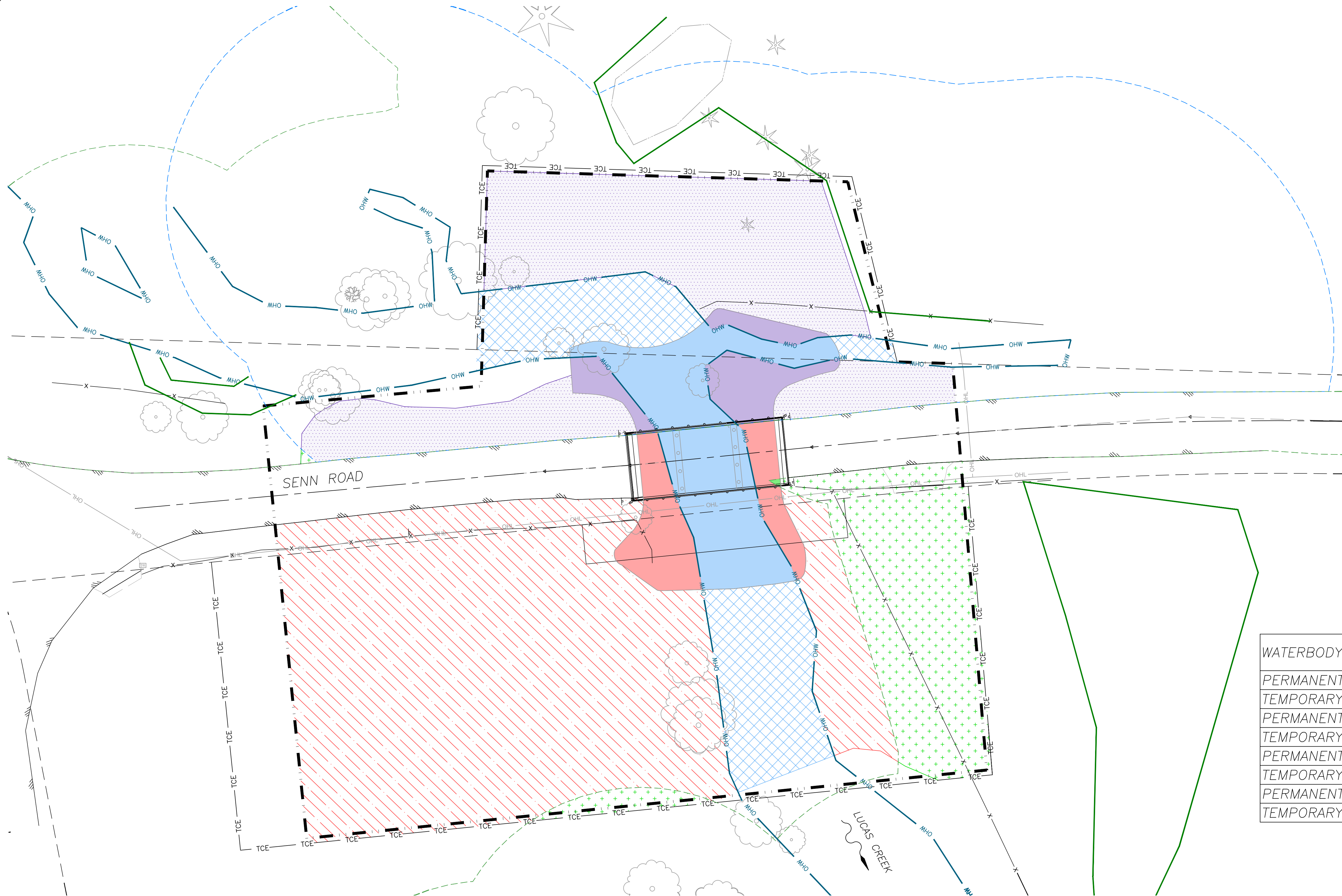
PROPOSED PROJECT: SENN ROAD MP 0.89 BRIDGE SCOUR REPAIR PROJECT

WATER BODY: LUCAS CREEK

NEAR: ONALASKA

COUNTY: LEWIS STATE: WA

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NOTE:
PROJECT WORK LIMITS ARE ENTIRELY WITHIN THE SHORELINE ENVIRONMENT.

LEGEND

- PERMANENT STREAM IMPACTS
- TEMPORARY STREAM IMPACTS
- PERMANENT SHORELINE VEGETATION IMPACTS
- TEMPORARY SHORELINE VEGETATION IMPACTS
- PERMANENT WETLAND BUFFER IMPACTS
- TEMPORARY WETLAND BUFFER IMPACTS
- PERMANENT OVERLAPPING STREAM AND WETLAND BUFFER IMPACTS
- TEMPORARY OVERLAPPING STREAM AND WETLAND BUFFER IMPACTS
- TEMPORARY CONSTRUCTION EASEMENT
- PROJECT LIMITS
- ORDINARY HIGH WATER
- WETLAND BOUNDARY
- WETLAND BUFFERS
- STREAM BUFFERS

WATERBODY IMPACT	AREA (SF)
PERMANENT STREAM IMPACTS	3,578
TEMPORARY STREAM IMPACTS	5,102
PERMANENT SHORELINE VEGETATION IMPACTS	1,620
TEMPORARY SHORELINE VEGETATION IMPACTS	20,050
PERMANENT WETLAND BUFFER IMPACTS	7
TEMPORARY WETLAND BUFFER IMPACTS	5,870
PERMANENT OVERLAPPING BUFFER IMPACTS	1,343
TEMPORARY OVERLAPPING BUFFER IMPACTS	9,793

SHEET 14 IMPACTS

DATE: JULY 2026

APPLICANT: LEWIS COUNTY PUBLIC WORKS

REFERENCE #:

ADJACENT PROPERTY OWNERS: SEE JARPA FORM

PURPOSE: BRIDGE SCOUR REPAIR

LAT/LONG: 46.63899N. LAT. / -122.77172W. LONG.

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