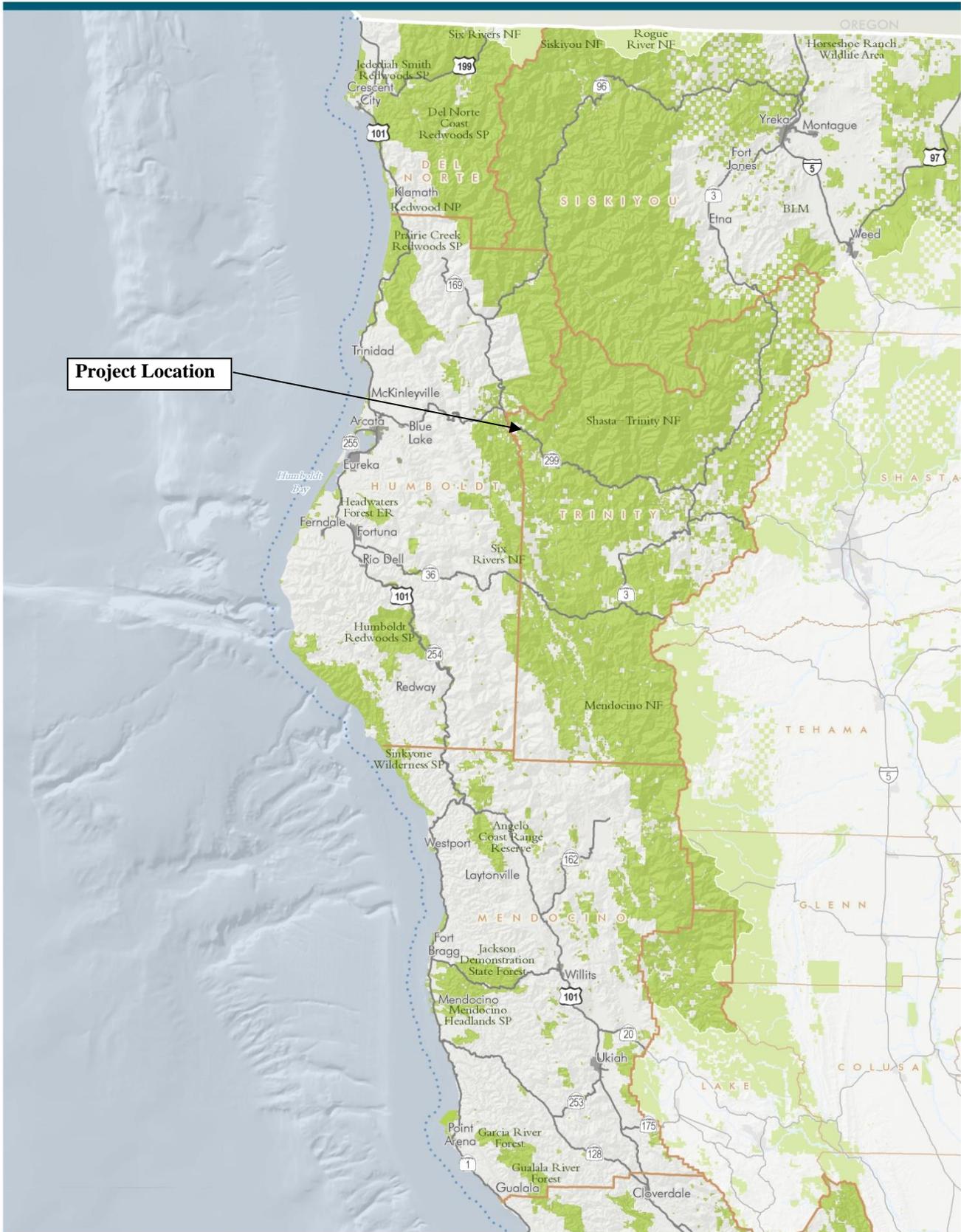
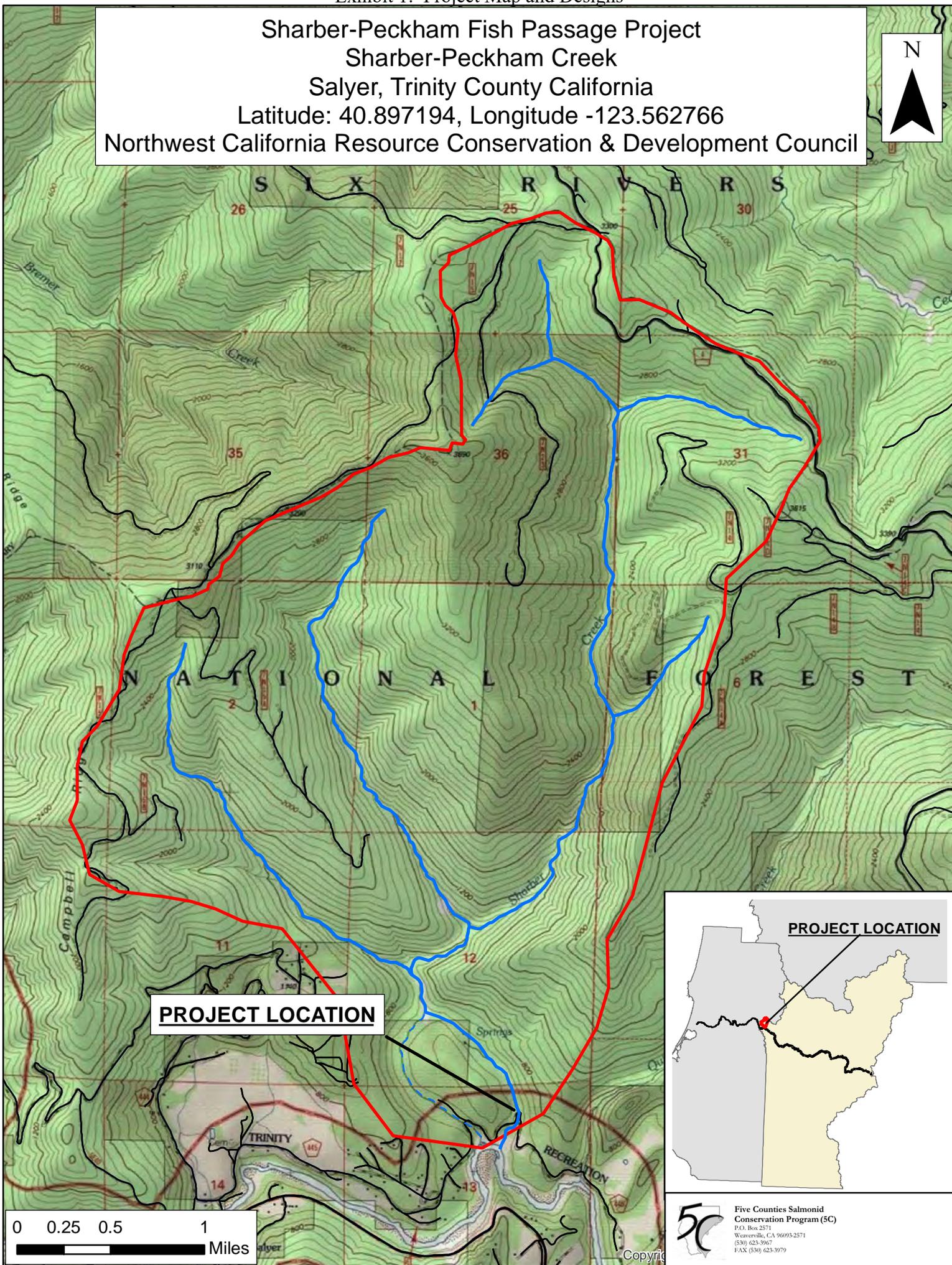


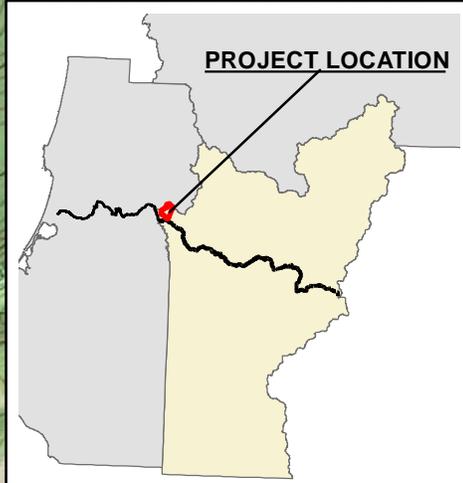
Exhibit 1: Project Location Map



Sharber-Peckham Fish Passage Project
Sharber-Peckham Creek
Salyer, Trinity County California
Latitude: 40.897194, Longitude -123.562766
Northwest California Resource Conservation & Development Council



PROJECT LOCATION



0 0.25 0.5 1
Miles

5C Five Counties Salmonid Conservation Program (5C)
P.O. Box 2571
Weaverville, CA 96093-2571
(530) 623-3967
FAX (530) 623-3979

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Sharber-Peckham Fish Passage Project
Sharber-Peckham Creek
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PROJECT LOCATION



PLANS FOR CONSTRUCTION OF

SHARBER—PECKHAM CREEK CROSSING REPLACEMENT

2016

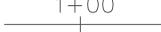
COMPLETE DESIGN SUBMITTAL

- 1 TITLE PAGE
- 2 LEGEND AND SYMBOLS
- 3 EXISTING PLAN VIEW
- 4 DESIGN PLAN VIEW
- 5 DESIGN PROFILE VIEW WITH EG
- 6 CULVERT PROFILE VIEW
- 7 CULVERT CROSS SECTION AT INLET
- 8 ROCK DISTRIBUTION AND PLACEMENT
- 9 WATER MANAGEMENT
- 10 DETOUR

SHARBER—PECKHAM CREEK

LEGEND AND SYMBOLS

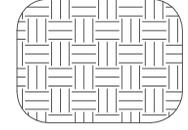
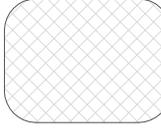
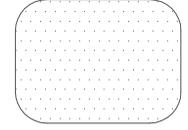
LINE AND POINT SYMBOLS

	ROAD EDGE
	FENCE LINE
	DETOUR ROAD EDGE
	ARMORED CRITICAL DIP
	UTILITIES CENTER LINE
	ELEVATION CONTOUR
	ALIGNMENT WITH MARKER
	LIMITS OF DISTURBANCE
	CONTROL POINT MARKER
	WELL INTAKE

ABBREVIATIONS

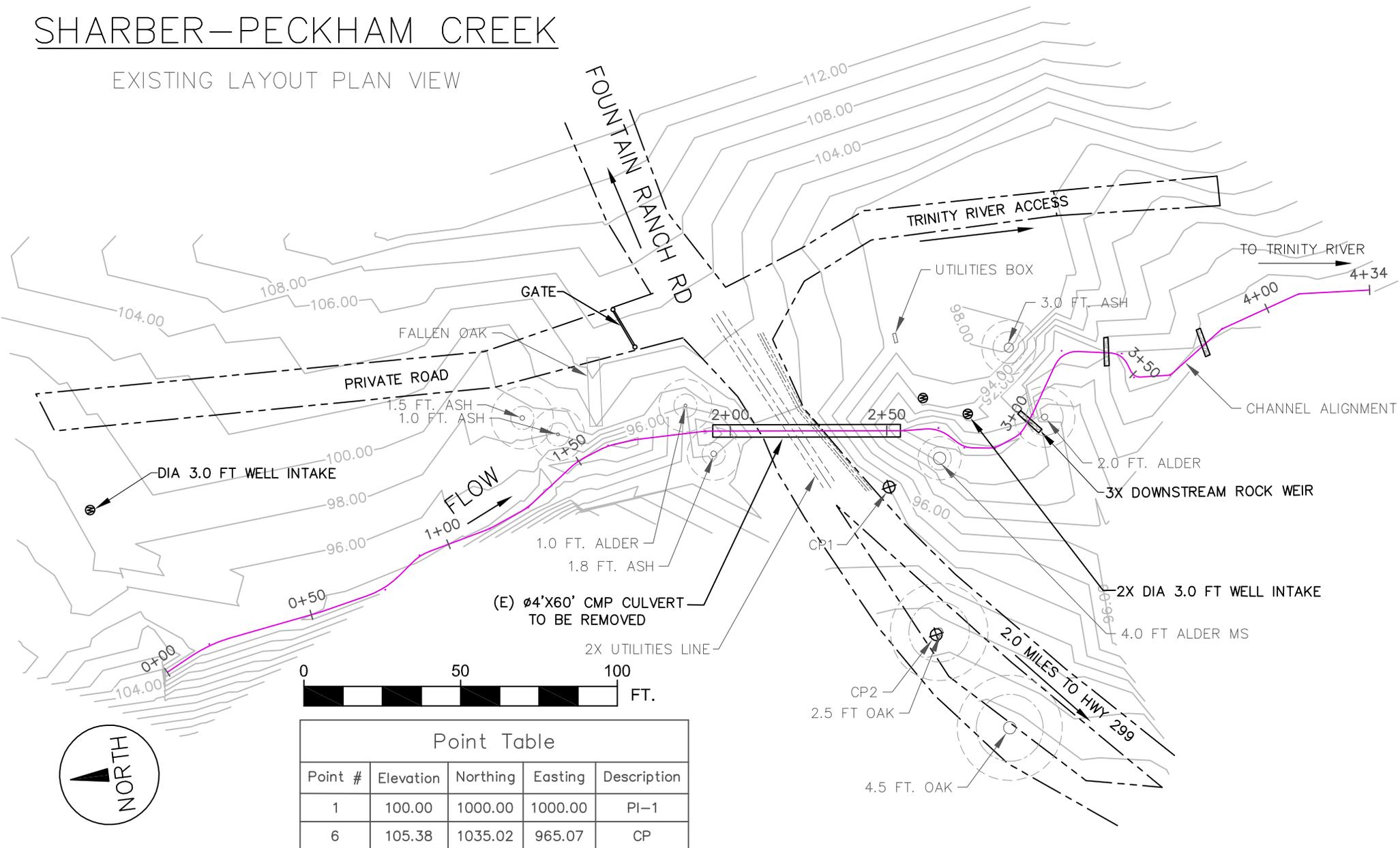
CMP	CORRUGATED METAL PIPE
CP	CONTROL POINT MARKER
EG/NG	EXISTING/NEW GROUND
EL	ELEVATION
(E)/(N)	EXISTING/NEW
FT	FOOT OR FEET
FLOW	FLOW DIRECTION
IN	INCH OR INCHES
MAX/MIN	MAXIMUM/MINIMUM
NTS	NOT TO SCALE
R.D.	RELATIVE DENSITY
RSP	ROCK SLOPE PROTECTION
STA	STATION
TYP	TYPICAL
1.5:1	HORIZONTAL: VERTICAL SLOPE
%	PERCENT

MATERIAL SYMBOLS

	ROCK		EARTH
	GRADED CHANNEL		ROADWAY AGGREGATE
	SAND		

SHARBER-PECKHAM CREEK

EXISTING LAYOUT PLAN VIEW



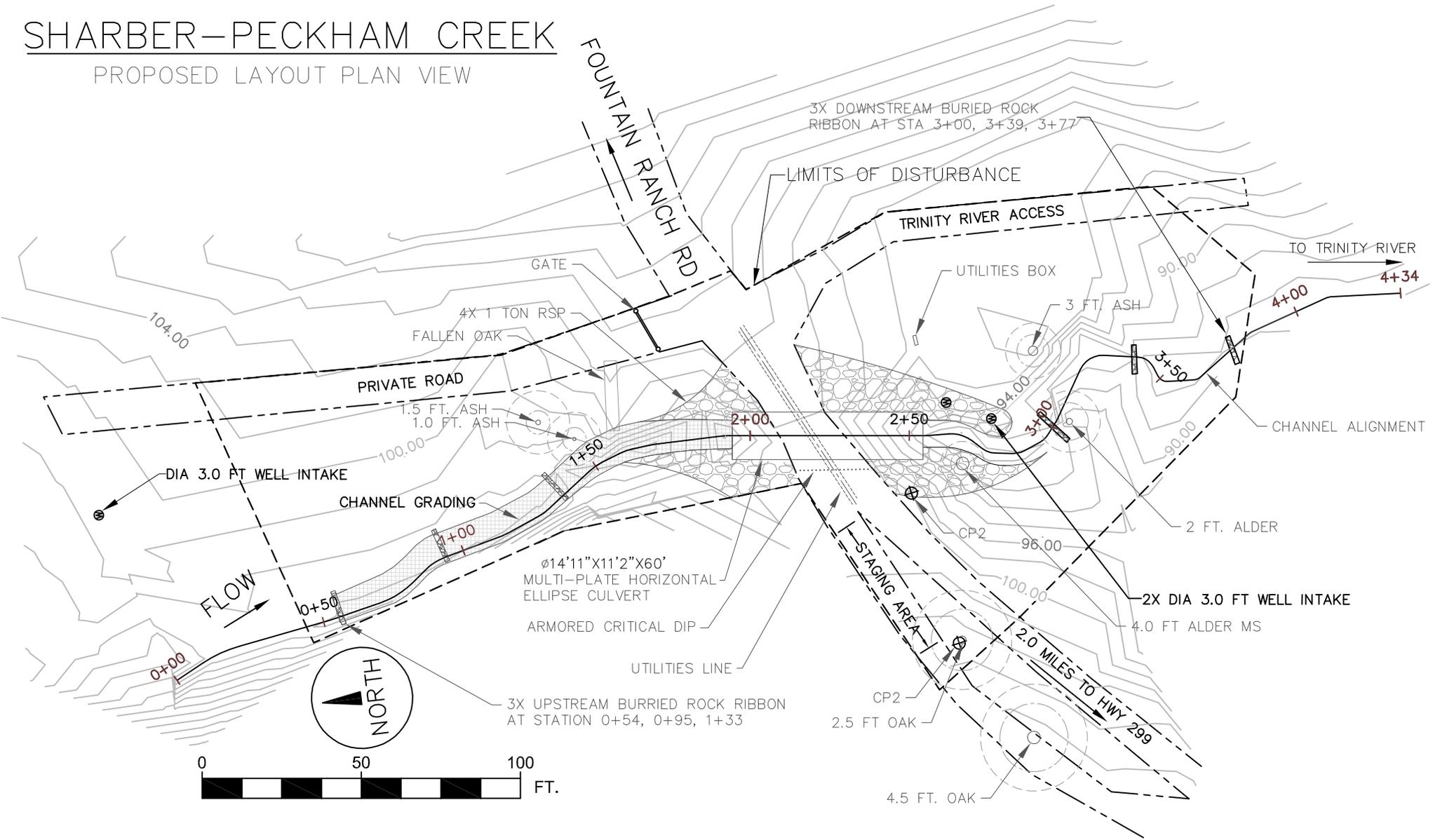
Point Table

Point #	Elevation	Northing	Easting	Description
1	100.00	1000.00	1000.00	PI-1
6	105.38	1035.02	965.07	CP



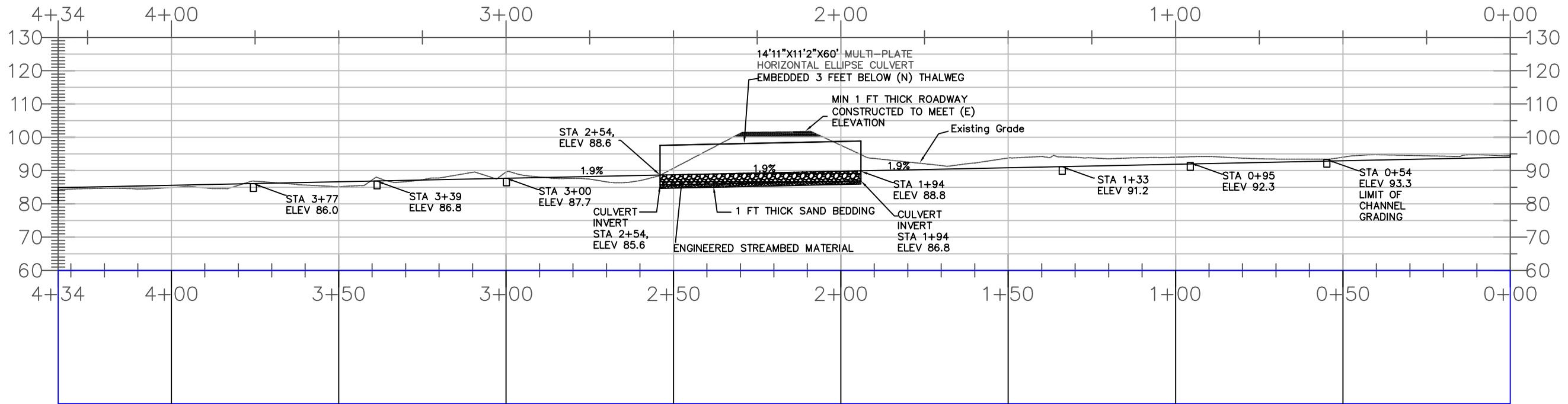
SHARBER-PECKHAM CREEK

PROPOSED LAYOUT PLAN VIEW



SHARBER-PECKHAM CREEK

DESIGN PROFILE VIEW WITH EG



SHARBER-PECKHAM CREEK

CULVERT PROFILE VIEW

Installation Specifications:

Installation of the Contech Multi-Plate Ellipse Pipe shall be in accordance with Contech specifications.

Installation of Streambed Material and bank lining rock shall be in accordance with page 8 and shall not begin until structural backfill has been placed.

Minimum overhead height for normal highway loads for the Contech Multi-Plate Ellipse Pipe is 2 ft. If heavy equipment is to travel over the pipe during construction, a temporary overhead height of 4 ft. is required for the duration of heavy equipment travel.

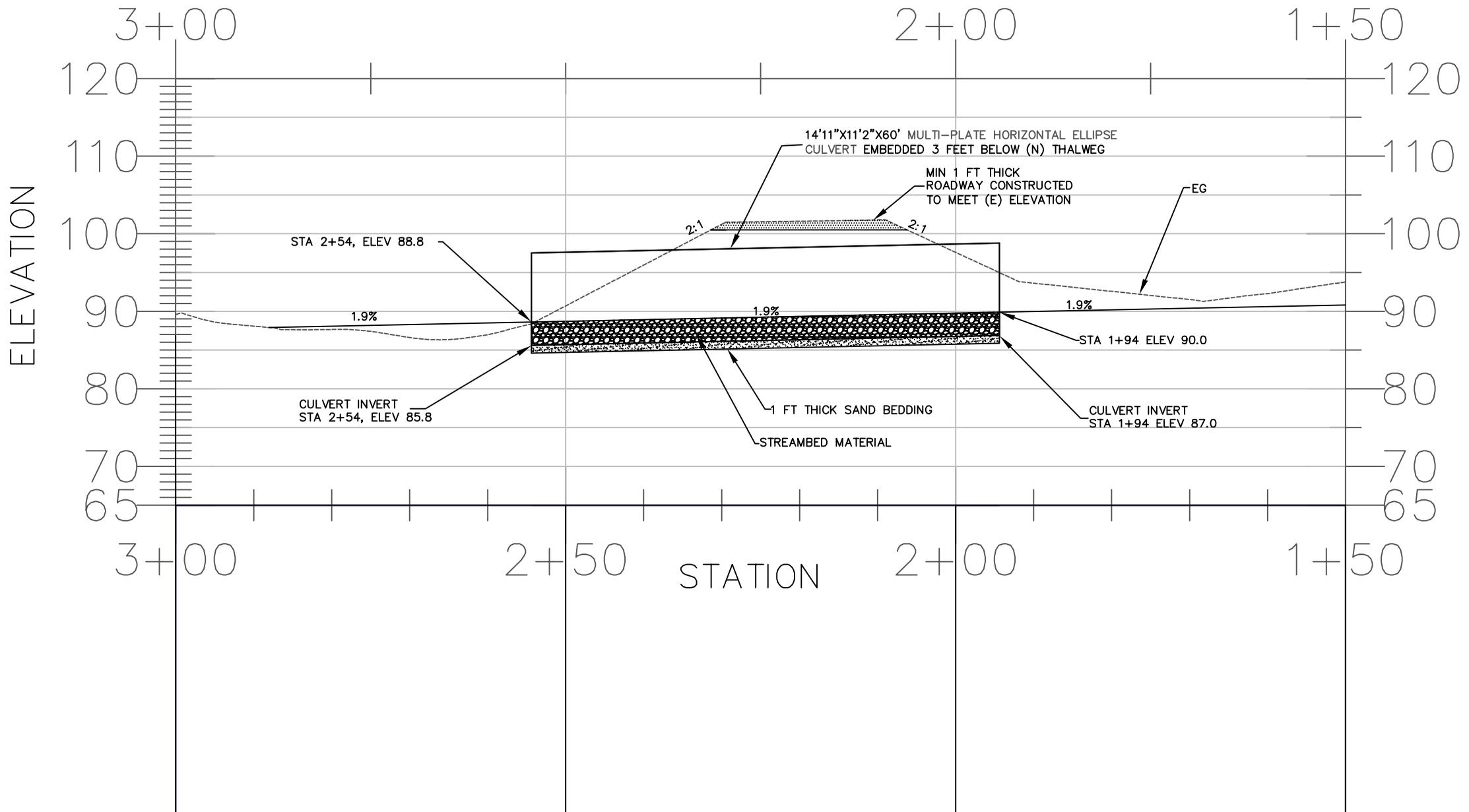
Material Specifications:

Sand bedding shall conform to 19-3.02E-2 of Caltrans, 2010.

Structural backfill shall conform to 19-3.02 of Caltrans, 2010.

Embankment backfill shall conform to Caltrans 19-3.02B.

Streambed Material shall be as specified on page 8.



SHARBER-PECKHAM CREEK

CULVERT CROSS SECTION AT INLET

Installation Specifications:

Installation of the Contech Multi-Plate Ellipse Pipe shall be in accordance with Contech specifications.

Installation of Streambed Material and Rock Steps shall be in accordance with page ___ and shall not begin until structural backfill has been placed.

The Contractor must compact impervious material where erosion of backfill material or seepage through backfill material may occur. This approach is particularly important at culvert inlets and outlets.

Minimum overhead height for normal highway loads for the Contech Multi-Plate Ellipse Pipe is 2 ft. If heavy equipment is to travel over the pipe during construction, a temporary overhead height of 4 ft. is required for the duration of heavy equipment travel.

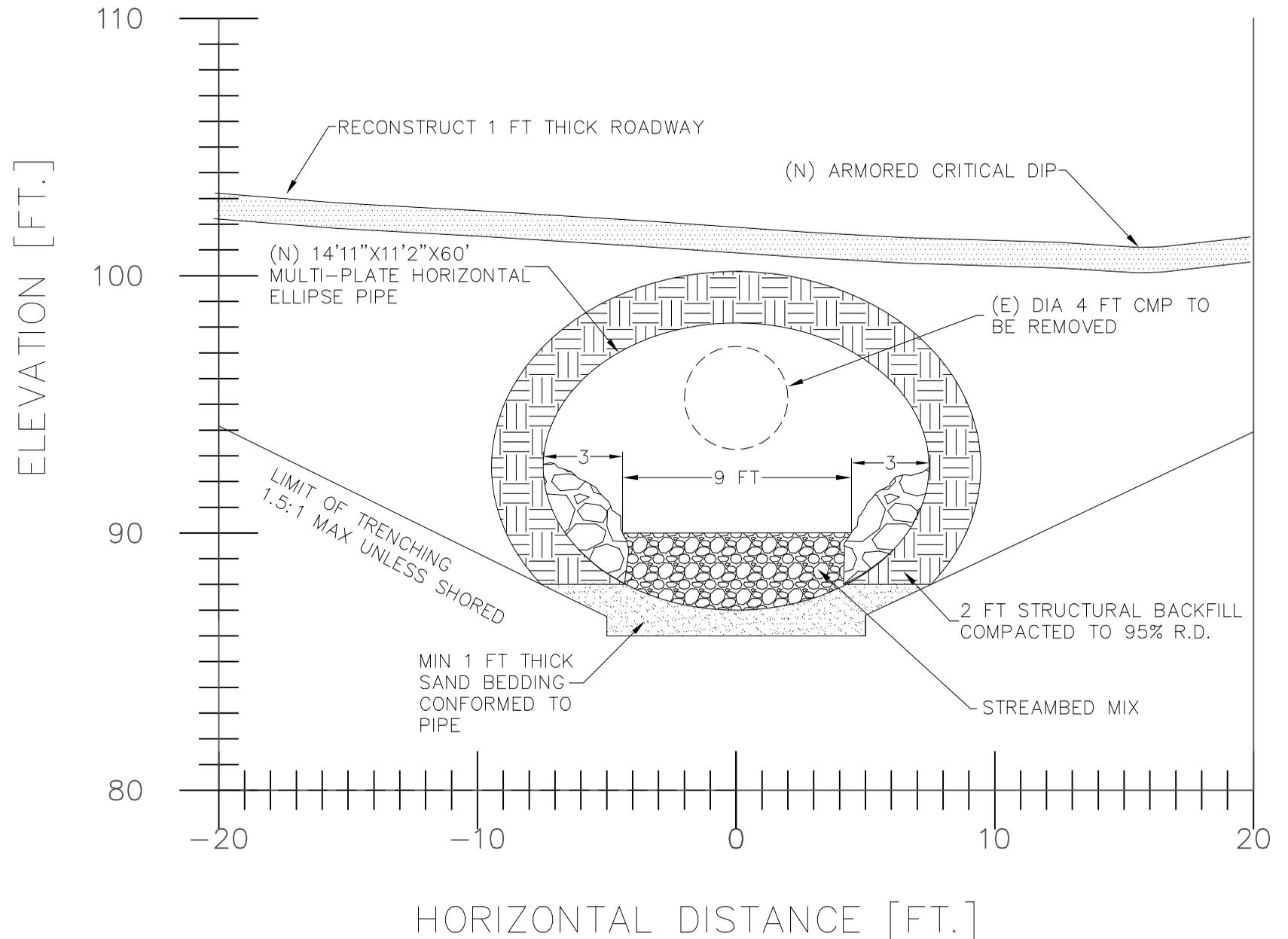
Material Specifications:

Sand bedding shall conform to 19-3.02E-2 of Caltrans, 2010.

Structural backfill shall conform to 19-3.02 of Caltrans, 2010.

Embankment backfill shall conform to Caltrans 19-3.02B.

Streambed Material and Rock Ribbons shall be as specified on page ___.



SHARBER-PECKHAM CREEK

ROCK DISTRIBUTION AND PLACEMENT

STREAMBED MATERIAL DISTRIBUTION

D100 = 11.80 IN
 D84 = 3.80 IN
 D50 = 1.25 IN
 D35 = 0.50 IN
 D28 = 0.08 IN

ROCK BANKLINE MATERIAL DISTRIBUTION

D100 = 36.00 IN.
 D84 = 15.00 IN.
 D50 = 6.00 IN.
 D16 = 0.40 IN.
 D8 = 0.08 IN.

ROCK RIBBON MATERIAL DISTRIBUTION

D100 = 27.00 IN.
 D50 = 13.00 IN.

Installation Specifications:

The streambed mix within the multi-plate ellipse pipe will consist of the Streambed Material Distribution with larger rocks from the Rock Bankline and Rock Ribbon distributions incorporated as keystones.

Streambed material shall be uniformly mixed and installed such that it does not stratify during installation. Do not contaminate Streambed Material with soil.

Fill voids with smaller material and compact to obtain a low-permeability mass.

After installation, material shall be flooded and further compacted. Continue flooding and compacting until voids are filled and water remains flowing on the surface across the entire length of installed material.

No water used during the flooding process shall be allowed to discharge into the live stream.

Installation Specifications:

Rock shall be placed in accordance with Caltrans, 2010 Section 72 and shall use "Method A" placement as specified in Caltrans, 2010 Section 72-2.03b. No filter cloth shall be installed.

All large rock shall be individually placed and secured by machine tamping. Rocks shall have a minimum of four contact points and be securely supported. Rocks shall not be cable together.

As large rocks are placed, voids shall be filled with smaller size of Rock Bankline gradation and compacted to obtain a low-permeability mass.

After installation, material shall be flooded and further compacted. voids that form during the flooding process shall be filled and the process repeated until no voids form.

No water used during the flooding process shall be allowed to discharge into the live stream.

Installation Specifications:

Rock shall be placed in accordance with Caltrans, 2010 Section 72 and using "Method A" placement as specified in Caltrans, 2010 Section 72-2.03B.

All large rock shall be individually placed and secured by machine tamping. Rocks shall have a minimum of four contact points and be securely supported. Rocks shall not be cable together.

Rock Ribbons shall be made up of primarily D100 rock with D50 filling voids between the larger rock. Streambed material will be placed to make a low-permeability mass.

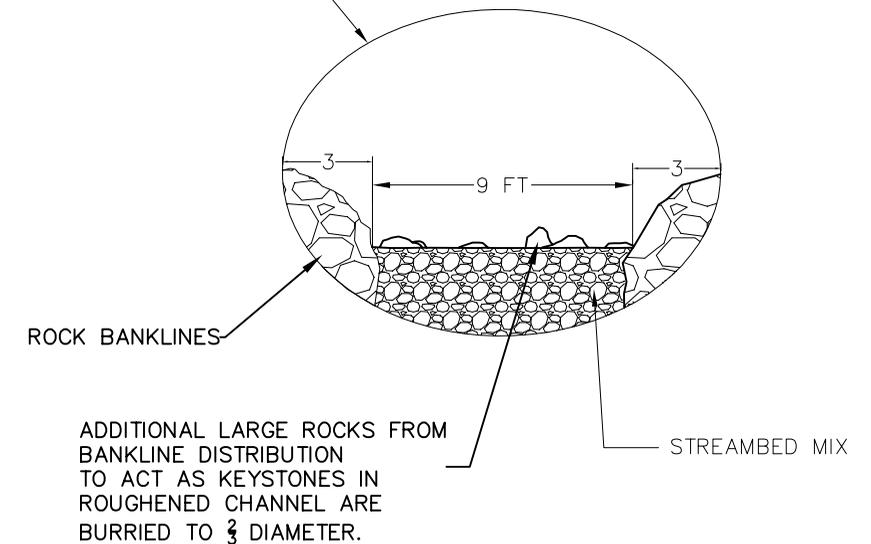
Grade shall be measured at the low-flow notch of each rock ribbon. Rock ribbons will inside the multi-plate ellipse pipe will be placed approximately 1 channel width, or 14.2 feet apart.

Rock Ribbons may have a one or two footer rock structure. All rock ribbons will be keyed into bank lines.

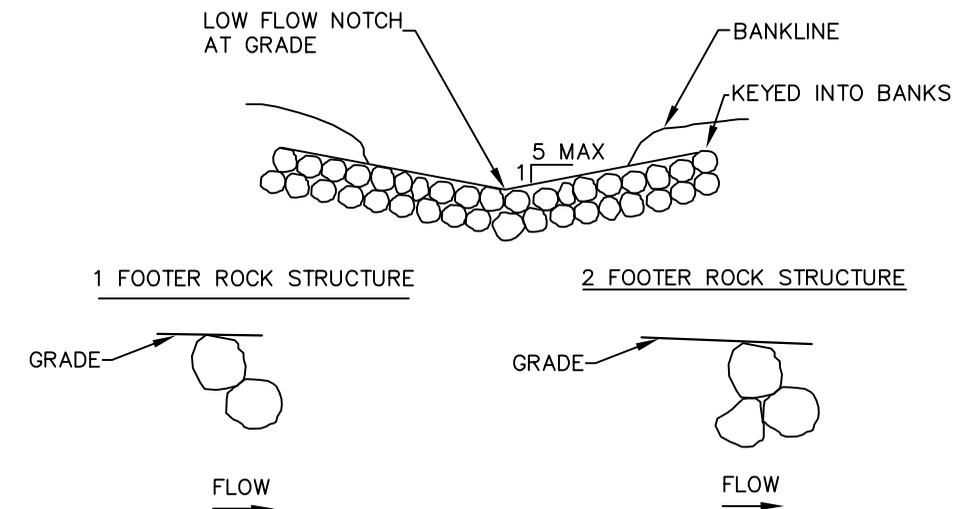
3 upstream rock ribbons are to be constructed at STA 0+73, 1+33, and 1+88. Three downstream Rock Ribbons are to be constructed at STA 3+00, 3+39, and 3+37. Five Rock Ribbons are to be constructed in the culvert at 14.2 ft. intervals.

ROCK PLACEMENT IN CULVERT

(N) 14'11"X11'2"X60'
 MULTI-PLATE HORIZONTAL
 ELLIPSE PIPE



TYPICAL ROCK RIBBON STRUCTURE



SHARBER - PECKHAM CREEK

WATER MANAGEMENT PLAN

SPECIFIC WATER MANAGEMENT NOTES:

AN ACCESS ROAD WILL BE CONSTRUCTED TO THE UPPER EXTEND OF THE PROJECT AREA SUFFICIENT FOR HEAVY EQUIPMENT TO CONSTRUCT THE WATER MANAGEMENT DAM. AN EXCAVATOR OR BACKHOE WILL BE USED TO DID A SUMP HOLE IN THE CREEK BOTTOM AND CONSTRUCT AN EARTHEN DAM AT THE BANKFULL CREEK LEVEL.

PLASTIC SHEETING WILL BE USED TO FACE THE EARTHEN DAM TO REDUCE INTERSTITIAL FLOWS PAST THE DIVERSION. SANDBAGS OR ROCKS WILL BE USED TO SECURE THE PLASTIC

A PLASTIC PIPE SUFFICIENT TO CARRY ANTICIPATED STREAM FLOWS DURING CONSTRUCTION WILL BE INSTALLED IN THE FACE OF THE EARTHEN DAM. THE PIPE WILL BE STABILIZED WITH SAND BAGS AND/OR LARGE ROCKS.

A CHANNEL WILL BE EXCAVATED IN THE CROSSING REPLACEMENT AREA SUFFICIENT FOR THE PLACEMENT OF THE DIVERSION PIPE. WHERE ADJACENT HEAVY EXUIPMENT USE, OR VULNERABLE TO DISTURBANCE/DAMAGE, THE PIPE WILL BE BURIED OR OTHERWISE PROTECTED.

THE PIPE WILL RUN FROM THE POINT OF DIVERION, THROUGH THE PROJECT SITE, AND EXIT AT A POINT IN THE LOWER PROJECT AREA SUFFICIENTLY DISTANT FROM CONSTRUCTION ACTIVITIES.

THE PIPE WILL BE SET AT SUCH A GRADE AS TO ALLOW FOR GRAVITY FLOW.

A ROCK ENERGY DISAPPITOR WILL BE PLACED AT THE OUTLET OF THE DIVERSION PIPE TO PREVENT EROSION

THE DIVERSION AND ALL PIPING WILL BE REMOVED WHEN IN-CREEK CONSTRUCTION IS COMPLETE

SPECIFIC PUMPING NOTES:

AN ELECTIC PUMP WILL BE MADE AVAILABLE SHOULD THE GRAVITY DIVERSION BE INADEQUATE DURING ANY PRECIPITATION EVENT CAUSING INCREASE SURFACE FLOWS. THE PUMP DISCHARGE WILL FOLLOW THE GRAVITY DIVERSION SYSTEM. POWER WILL BE SUPPLIED BY THE PRIVATE SYSTEM LOCATED AT THE UPPER EXTENT OF THE PROJECT

A GAS POWERED PUMP WILL BE MADE AVAILABLE TO PUMP SUBSURFACE FLOWS FROM THE SUMP HOLE AND/OR EXCAVATION AREA. SUFFICIENT HOSE WILL BE MADE AVAILABLE TO PUMP WATER TO A STABLE LOCATION LOCATED OUTSIDE OF THE PROJECT AREA. ENERGY DISSAPATORS OR A WATER DISPERSAL SYSTEM WILL BE ATTACHED TO THE END OF THE HOSE TO PREVENT EROSION

FISH EXCLUSION NOTES:

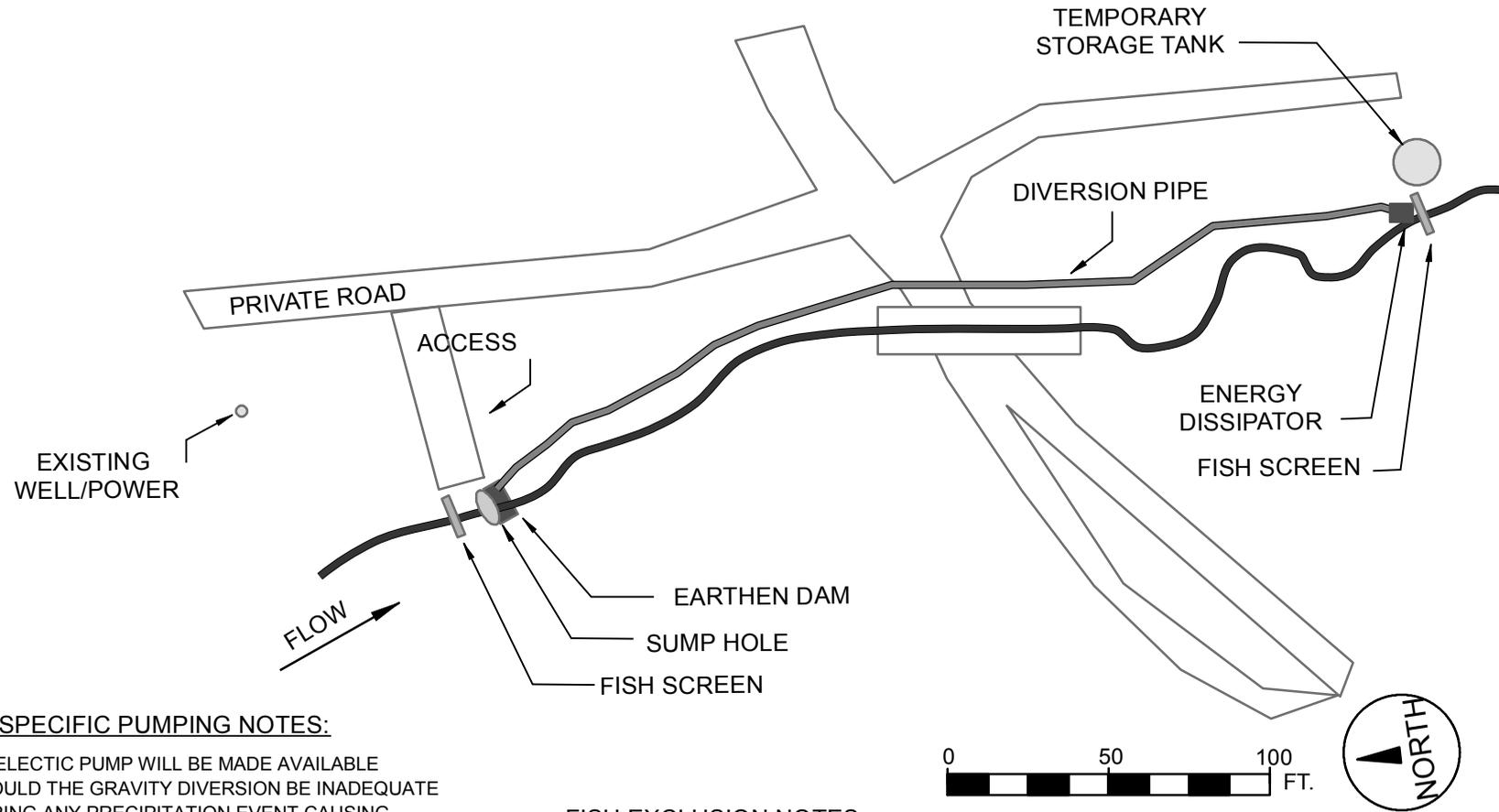
SCREENS (3/32") WILL BE PLACED IN THE CREEK AT THE UPPER AND LOWER EXTENT OF THE PROJECT SUFFICIENT TO BLOCK ALL FISH PASSAGE DURING THE IN-CREEK CONSTRUCTION PERIOD. SCREENS WILL BE INSPECTED, CLEANED AND MAINTAINED DAILY AND AS NECESSARY. WEATHER REPORTS WILL BE MONITORED TO ASSURE ANY INCREASED CREEK FLOWS DO NOT COMPROMISE SCREEN FUNCTION

THE SCREENS WILL BE REMOVED WHEN IN-CREEK CONSTRUCTION IS COMPLETE

COMMUNITY WATER SUPPLY NOTES:

POTABLE WATER WILL BE SUPPLIED BY DELIVERY TO EXISTING PRIVATE WATER STORAGE TANKS LOCATED ON GALAZY DRIVE. DOMESTIC WATER WILL BE TRUCKED FROM SHARBER-PECKHAM CREEK OR THE TRINITY RIVER USING A TEMPORARY HOLDING TANK AND EXISTING WATER RIGHTS AND PERMITTING.

THE TEMPORARY TANK WILL BE REMOVED WHEN IN-CREEK CONSTRUCTION IS COMPLETE



SHEET		9		OF		9	
NORTHWEST CALIFORNIA RESOURCE CONSERVATION AND DEVELOPMENT COUNCIL: FIVE COUNTIES SALMONID CONSERVATION PROGRAM				SHARBER-PECKHAM CREEK FISH PASSAGE PROJECT			
DESIGNED BY: DC/ML				DRAWN BY: DC			
REVIEWED BY: ML				APPROVED BY:			
ROAD NAME: GALAXY ROAD/FOUNTAIN RANCH ROAD		ROAD NO.: PRVT/CO 445		AGREEMENT NO.:		PLOT DATE: 03/19/2016	
WATER MANAGEMENT PLAN							

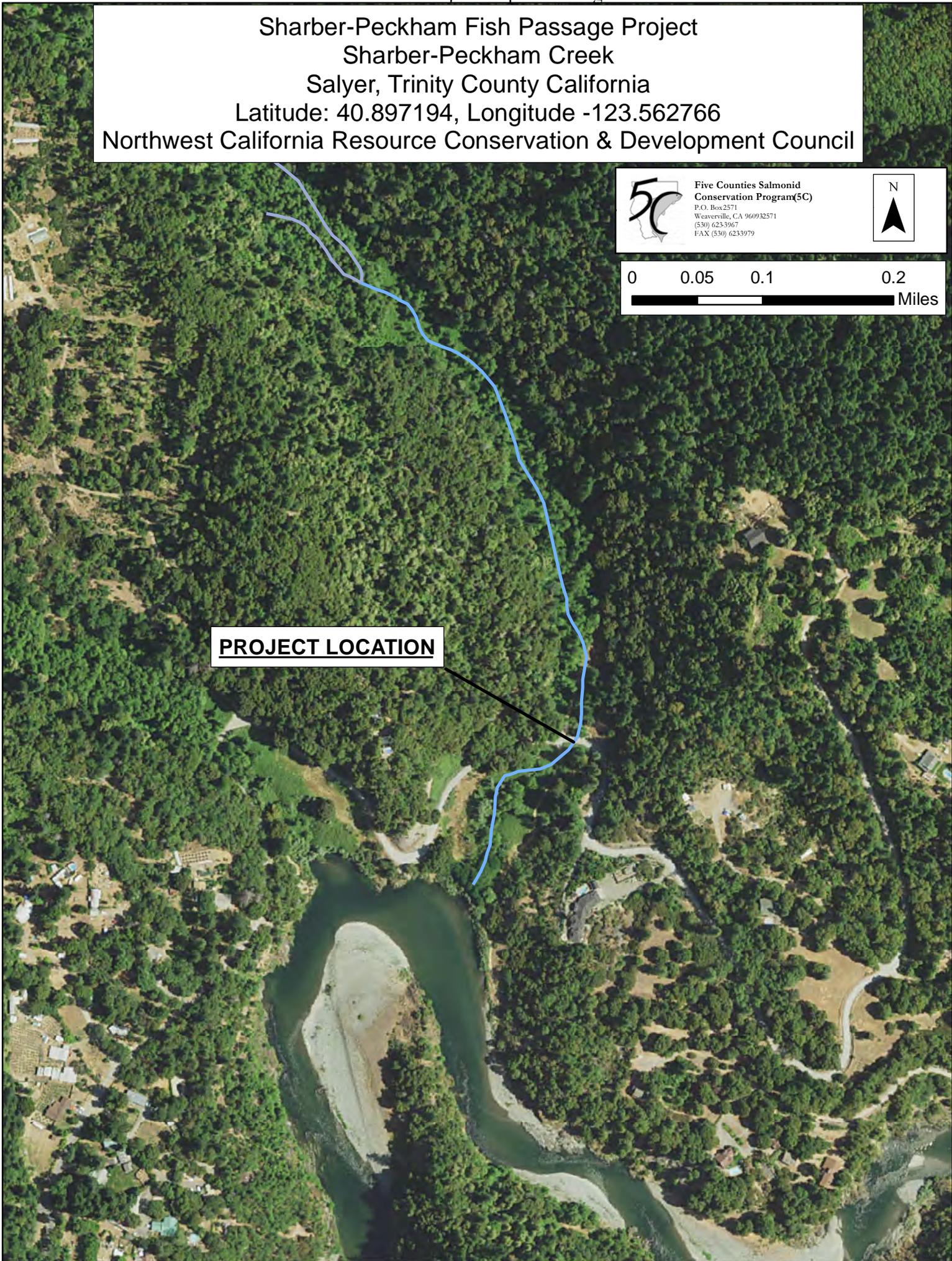
Sharber-Peckham Fish Passage Project
Sharber-Peckham Creek
Salyer, Trinity County California
Latitude: 40.897194, Longitude -123.562766
Northwest California Resource Conservation & Development Council



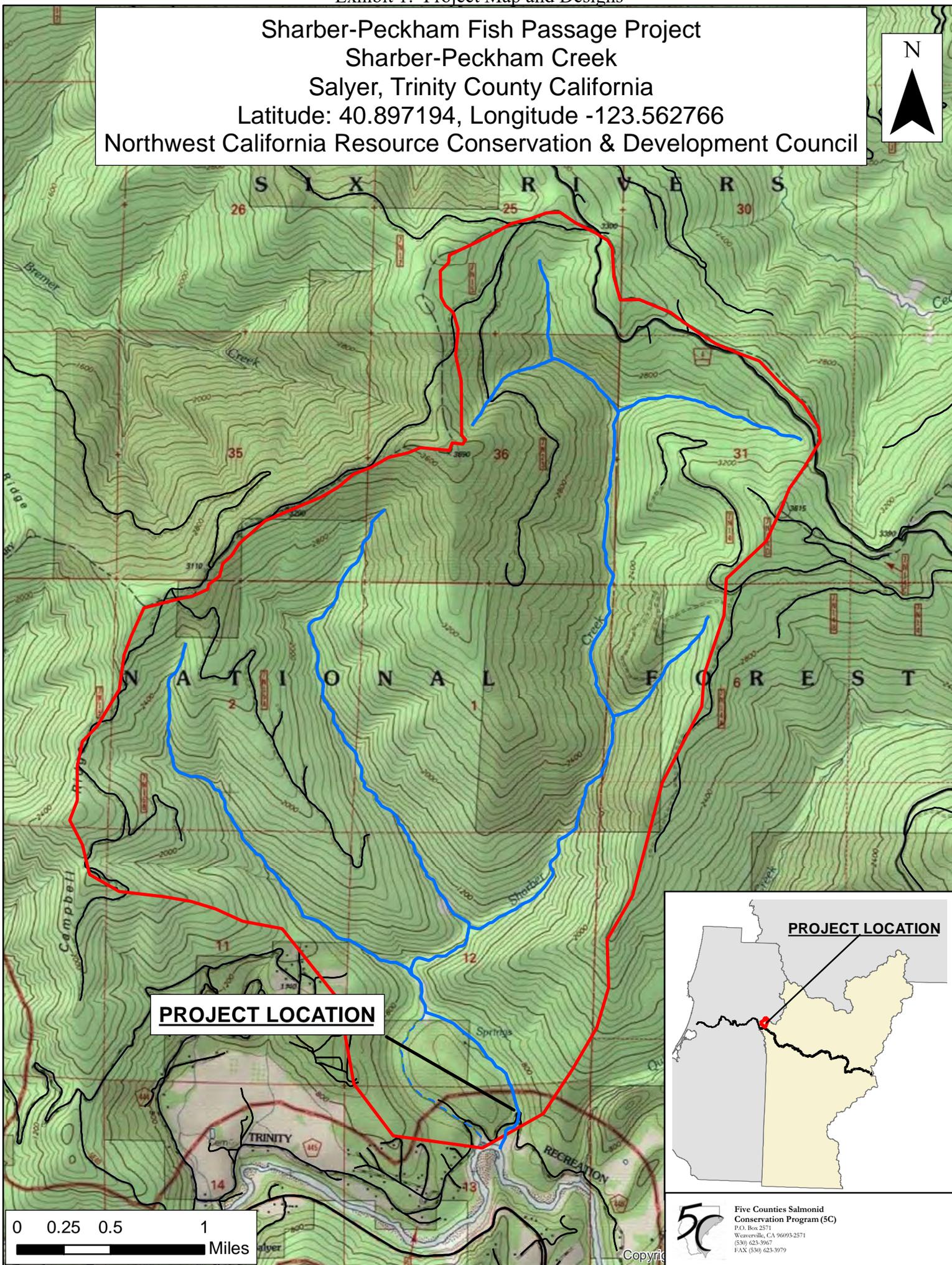
Five Counties Salmonid
Conservation Program(5C)
P.O. Box 2571
Weaverville, CA 960932571
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PROJECT LOCATION



Sharber-Peckham Fish Passage Project
Sharber-Peckham Creek
Salyer, Trinity County California
Latitude: 40.897194, Longitude -123.562766
Northwest California Resource Conservation & Development Council



PROJECT LOCATION



0 0.25 0.5 1
Miles

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Sharber-Peckham Fish Passage Project Photos



Photo 1. Looking west on private road toward project location. The large alder to the right is on the right bank of the creek when looking downstream.



Photo 2. Culvert outlet, outfall pool, and well casing (looking upstream) 12/16/13.

Sharber-Peckham Fish Passage Project Photos



Photo 3. First (upper) boulder weir at tail of outfall pool (looking downstream) 12/16/13



Photo 4. First boulder weir (looking upstream) 2/13/14

Sharber-Peckham Fish Passage Project Photos



Photo 5. First boulder weir (looking upstream) 3/13/14



Photo 6. Third (lower) boulder weir (looking upstream) 12/16/13

Sharber-Peckham Fish Passage Project Photos



Photo 7. Just downstream of the first boulder weir (looking downstream) 3/13/14

Sharber-Peckham Fish Passage Project Photos



Photo 8. Culvert inlet 12/16/13



Photo 9. Culvert inlet and pool (looking downstream) 12/16/13

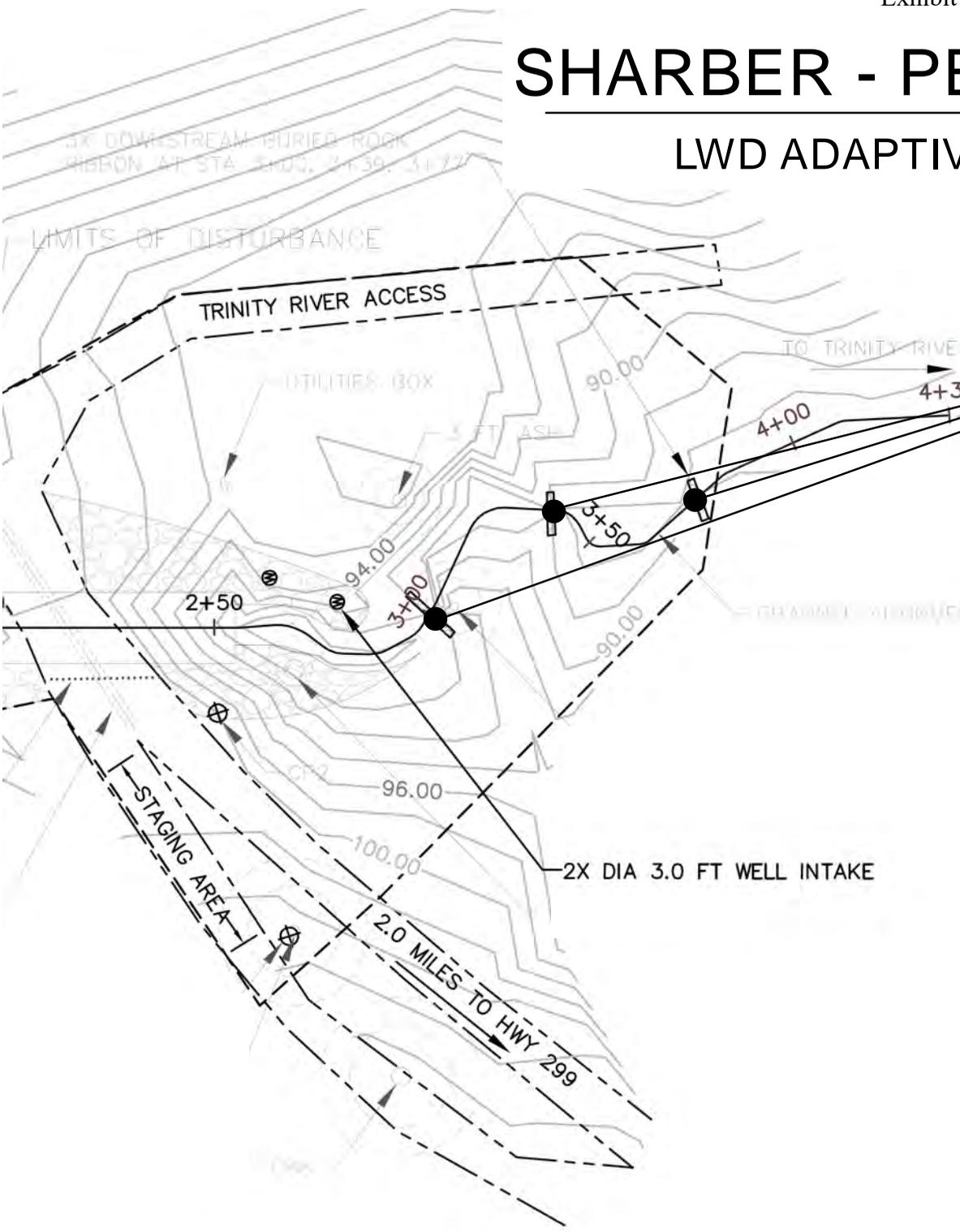
Sharber-Peckham Fish Passage Project Photos



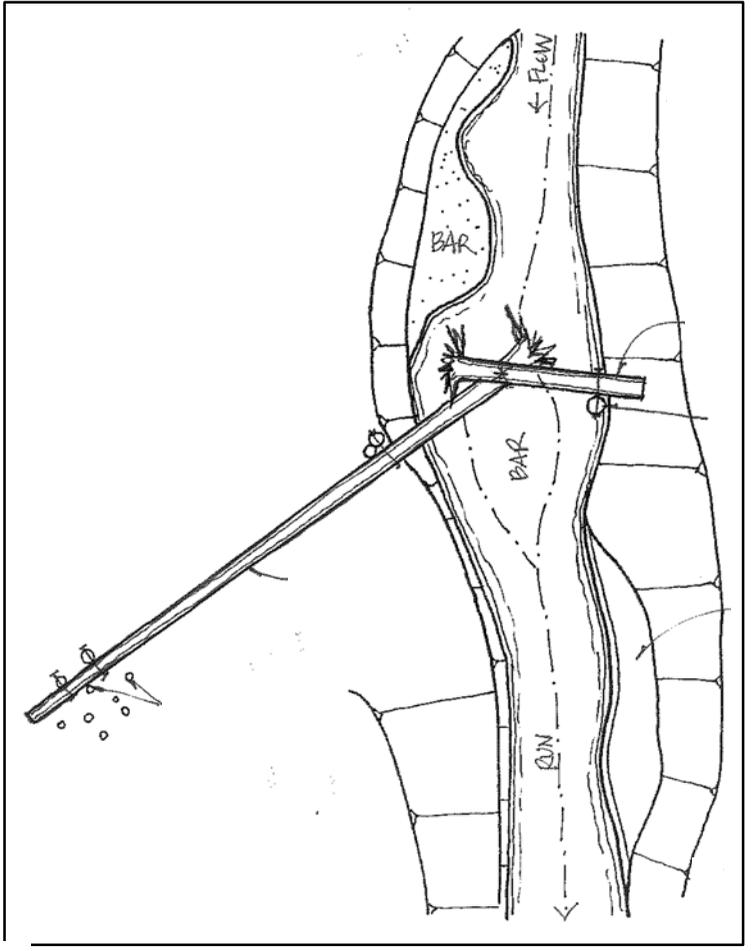
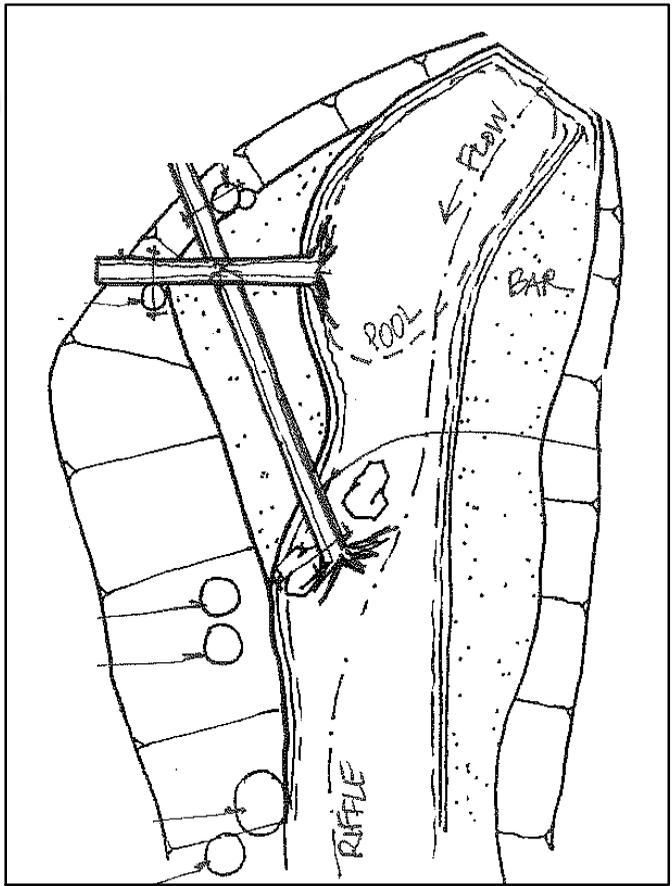
Photo 10. ~75 upstream of project extent (looking downstream) 3/13/14

SHARBER - PECKHAM CREEK

LWD ADAPTIVE MANAGEMENT



Typical Designs
For Large Wood Placement
Under Adaptive
Management Option



LEGEND

-  CREEK THALWEG
-  CREEK BANK
-  LOG WITH ROOTWAD
-  LOG TO LOG ANCHOR