

Memorandum

*Flex your power!
Be energy efficient!*

To: File

Date: August 21, 2012

From: GAIL POPHAM 
Assoc. Env. Plan., Natural Science

File: 01-48110, 01-45490, 01-47940, 01-44830; DN 197/199 Various

Subject: Biological Memo – Addendum to the Natural Environment Study (NES) 197/199 Safe STAA Access Project

Revised Effects to Trees

On March 18, 2010 the Del Norte County STAA Project Natural Environment Study (NES) was completed. Since that time, additional analysis by Tom Gaman, Registered Professional Forester (#1776) and Ray Moritz, ISA (International Society of Arboriculture) Certified Arborist was conducted at the project locations to evaluate the effects of the proposed project on trees and tree stands. Based on the analysis provided in the Arborist/Forester Report (July 2012) this memo summarizes the revised estimates of project-related removal of trees at the seven project locations. The March 18, 2010 Del Norte County STAA Project NES determined a total of approximately 224 trees would be removed throughout the seven project Locations (Table 1, Attachment 2). According to the Arborist/Forester Report approximately 98 additional trees will be removed (322 total). A comparison of tree removal estimates between the Caltrans NES (March 2010) and the Forester/Arborist Report (July 2012) for each of the Project locations is shown in Table 1 and Attachment 2.

Caltrans assessment in the NES included woody species with DBH of 6" or greater as "trees". Woody species with DBH of less than 6" were not included in Caltrans tree counts. The Arborist/Forester Report included woody species with DBH of 5" or greater as "trees".

Estimates of tree root effects are discussed in the Forester/Arborist Report (July 2012), they were not addressed in the Caltrans NES (March 2010), nor are they addressed in this memo.

Caltrans initially estimated that approximately 220 trees would be removed. The revised tree removal estimate is that approximately 331 trees may be removed (111 additional trees). This is the sum of either the Caltrans estimate for each location or the Arborist/Forester estimate for each location -- whichever is greater. Only ten of the 111 additional trees are greater than 10" DBH (24", 21", 17" and 15" Douglas-firs at Patrick Creek Narrows Location 2; and 24", and five 20" Douglas-firs at the Narrows). The additional 18 trees that may be removed a Patrick Creek Narrows, Location 1 are all between 6" and 8" in diameter (Table 1, Attachment 2).

Effects to Listed Species

Three federally/state-listed species are known to occur in the project area: federally threatened northern spotted owl, federally and state threatened marbled murrelet, and federally and state

threatened Southern Oregon Northern California Coastal (SONCC) coho salmon. The additional tree removal will not change the affect to these species or their habitat.

At Ruby 1 the trees that are being removed are not suitable for nesting MAMU or NSO due to their close proximity to the roadway or small size. The tree removal at Ruby 2 does not affect any fish bearing streams.

At Ruby 2 the three 18-23"-DBH redwoods that will be removed meet the size criterion, but are too close to the highway and human habitations to be suitable for MAMU or NSO nesting (within 20 feet of the road). The tree removal at Ruby 2 does not affect any fish bearing streams.

The trees will be removed for the work at The Narrows and PCN1 are not suitable for nesting MAMU or NSO due to their close proximity to the roadway or small size. The tree removal at The Narrows includes the potential removal of one 24"-DBH Douglas fir that is immediately next to the guardrail, high on the bank of the MF Smith River, approximately 90 feet from the Ordinary High Water (OHW) level. Nonetheless, this tree is a riparian tree since it would fall into the river if felled in that direction. However, the removal of this tree would not affect the live channel of the MF Smith River. The 10 additional 6-8" trees at PCN1 are within 30 feet of guardrail, high on the bank of the MF Smith River, approximately 20 feet from the OHW level. These are also riparian trees. The removal of these additional trees will have no affect on the live channel of the MF Smith River or SONCC coho salmon.

At PCN 2 the four additional 31-52"-DBH Douglas-firs that will be removed meet the size criterion, but are too close to the highway to be suitable for MAMU or NSO nesting (All trees to be removed at PCN-2 are within 100 feet of the road. The number of riparian trees (Southeast of the bridge) that will be removed at PCN2 has been revised from eleven to five: three Douglas-firs (34, 26, and 17" dbh), and two tanoaks (10 and 13" dbh). The removal of riparian vegetation at PCN2 for the MF Smith River bridge replacement will have a minor temporary impact on SONCC coho critical habitat (0.05 acres removed).

At PCN3 no trees will be removed. At Washington Curve eleven additional Douglas-firs (15-29"- DBH) will be removed that are big enough to be considered suitable nesting trees; however, the tree canopy is open and stand lacks dense canopy closure. All trees to be removed at Washington Curve are within 80 feet of the road. To avoid adverse impacts to NSO and MAMU all trees will be removed between September 15 and February 1, outside the NSO and MAMU nesting seasons. All of the trees that will be removed at Washington Curve are on the side of the road opposite the MF Smith River. There will be no riparian trees removed. The removal of the additional trees will have no affect on the MF Smith River or SONCC coho salmon.

Revised Effects to Special Status Plants

On page 104 of the March 18, 2010 Del Norte County STAA Project NES the CNPS List 3 Siskiyou iris (*Iris bracteata*) was listed as being "not found in plant area surveys". Since that time, additional floristic surveys have detected extensive *Iris bracteata* populations at Patrick Creek Narrows Locations 1 and 2, The Narrows, and Washington Curve (Attachment 1). In

addition, populations of horned butterwort (*Pinguicula macroceras*), CNPS 2.2, Del Norte willow (*Salix delnortensis*), CNPS 4.3, and Piper's bluegrass (*Poa piperi*), CNPS 4.3 were detected near DN 199-PM-19.8 (Attachment 1). Avoidance and minimization measures detailed in the March 18, 2010 Del Norte County STAA Project NES will apply to these additional plant populations.

Table 1. Caltrans NES (March 2010) Tree Removal Estimates compared to Forester/Arborist Report (July 2012) Tree removal Estimates, by Location, Species, and DBH.

RUBY 1	Caltrans NES		Forester/Arborist Report	
	Species, DBH	Number of trees	Species, DBH	Number of trees
	Coast Redwood, 18"	1	Coast Redwood, 12-23"	2
	Coast Redwood, 17"	1	Red Alder, 5-11.9"	1
	Red Alder, 16"	1	Red Alder, 5-11.9"	1
	Red Alder, 14"	2		
	California Bay, *	1		
	TOTAL	6	TOTAL	4

*Stump with multiple stems - diameters of each stem average approximately 12 inches

RUBY 2	Coast Redwood, 31"	1	Coast Redwood, 24-35.9"	2
	Coast Redwood, 23"	1	Coast Redwood, 12-23.9"	1
	Coast Redwood, 18"	1	Bigleaf maple, 12-23.9"	1
	California Bay, 16"	1	Red Alder, 12-23.9"	1
	Bigleaf maple, 12"	2	California Bay, 12-23.9"	1
	Red Alder, 17"	1		
	Red Alder, 14"	1		
	Red Alder, 12"	1		
	Red Alder, 10"	6		
	TOTAL	15	TOTAL	6

PATRICK CREEK NARROWS 1	No trees removed		Douglas-fir, 8"	1
			Douglas-fir, 6"	1
			White Alder, 8"	3
			White Alder, 7"	2
			White Alder, 6"	11
	TOTAL	0	TOTAL	18

PATRICK CREEK NARROWS 2	Douglas, fir, 53"	1	Old growth Douglas-fir, 52"	1
	Douglas-fir, 34.7"	1	Old growth Douglas-fir, 34"	1
	Douglas-fir, 31.5"	1	Douglas-fir, 26"	1
	Douglas-fir, 16"	1	Douglas-fir, 24"	1
	Douglas-fir, 14"	2	Douglas-fir, 21"	1
	Douglas-firs, 12"	2	Douglas-fir, 17"	1
	Douglas-firs, 6-12"	3	Douglas-fir, 15"	1
	Douglas-fir, 8"	3	Douglas-fir, 10"	1
	Douglas-fir, 6"	2	Douglas-fir, 8"	1
	Bigleaf maple, 6"	1	Douglas-fir, 6"	1
	California bay, 6"	2	Bigleaf maple, 15, 20"	2
	California bay, 9"	1	Bigleaf maple, 10", 8"	2
	Canyon live oak, 15"	1	Bigleaf maple, 14"	1
	Canyon live oaks, 12"	2	Bigleaf maple, 8"	1

PATRICK CREEK NARROWS 2 (cont.)	Canyon live oak, 10"	1
	Canyon live oak, 6-8"	34
	Mtn. dogwood, 9"	1
	Pacific madrone, 8"	3
	Tanoak, 15"	2
	Tanoak, 13.7"	1
	Tanoak, 12", 8"†	2
	Tanoak, 11.5"	1
	Tanoak, 8.6"	1
	Tanoak, 7"	1
	White alder, 7"	7
TOTAL	83	

Bigleaf maple, 7"	1
Bigleaf maple, 6"	2
California bay, 10"	1
California bay, 5"	1
Canyon live oak, 8", 8", 8", 7"	4
Canyon live oak, 8", 8", 8", 10"	4
Canyon live oak, 8", 8", 6", 6"	4
Canyon live oak, 8", 6"	2
Canyon live oak, 8", 6"	2
Canyon live oak, 6"x15, 8"x15	30
Canyon live oak, 13", 9"	2
Canyon live oak, 18"	2
Canyon live oak, 14"	1
Canyon live oak, 12"	2
Canyon live oak, 10"	1
Canyon live oak, 8"	4
Canyon live oak, 6"	2
Pacific madrone, 12", 12"	2
Pacific madrone, 10", 8", 6", 6"	4
Pacific madrone, 6"	1
Tanoak, 6", 6"	2
Tanoak, 15", 6", 15"	3
Tanoak, 10", 6"	2
Tanoak, 10", 10", 8", 8"	4
Tanoak, 18"	1
Tanoak, 13"	2
Tanoak, 10"	2
Tanoak, 8"	3
Tanoak, 6"	1
TOTAL	108

† multiple stems - each counted separately

PATRICK CREEK NARROWS 3	No trees removed	0
	TOTAL	0

No trees removed	0
TOTAL	0

THE NARROWS	No trees removed	0
TOTAL	0	

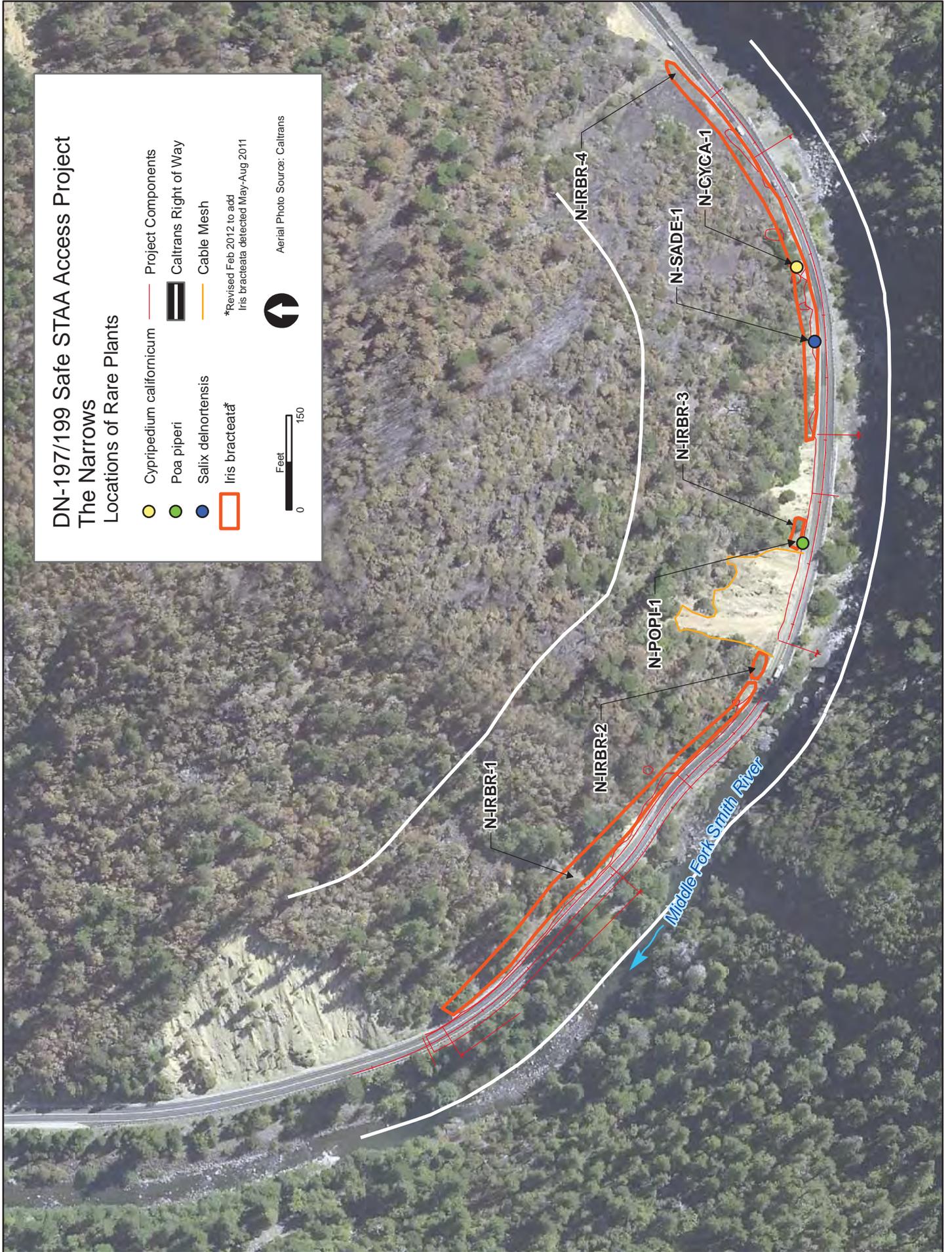
Douglas-fir, 24"	1
Douglas-fir, 20"	5
Douglas-fir, 6-12"	15
Canyon live oak, 6-12"	15
Pacific madrone, 6-12"	10
TOTAL	46

WASHINGTON CURVE	Douglas-fir, 28.5"	1
	Douglas-fir, 25.2"	1
	Douglas-fir, 23.6"	1
	Douglas-fir, 22.5"	1
	Douglas-fir, 21.7"	1
	Douglas-fir, 21.3"	1
	Douglas-fir, 19.8"	1

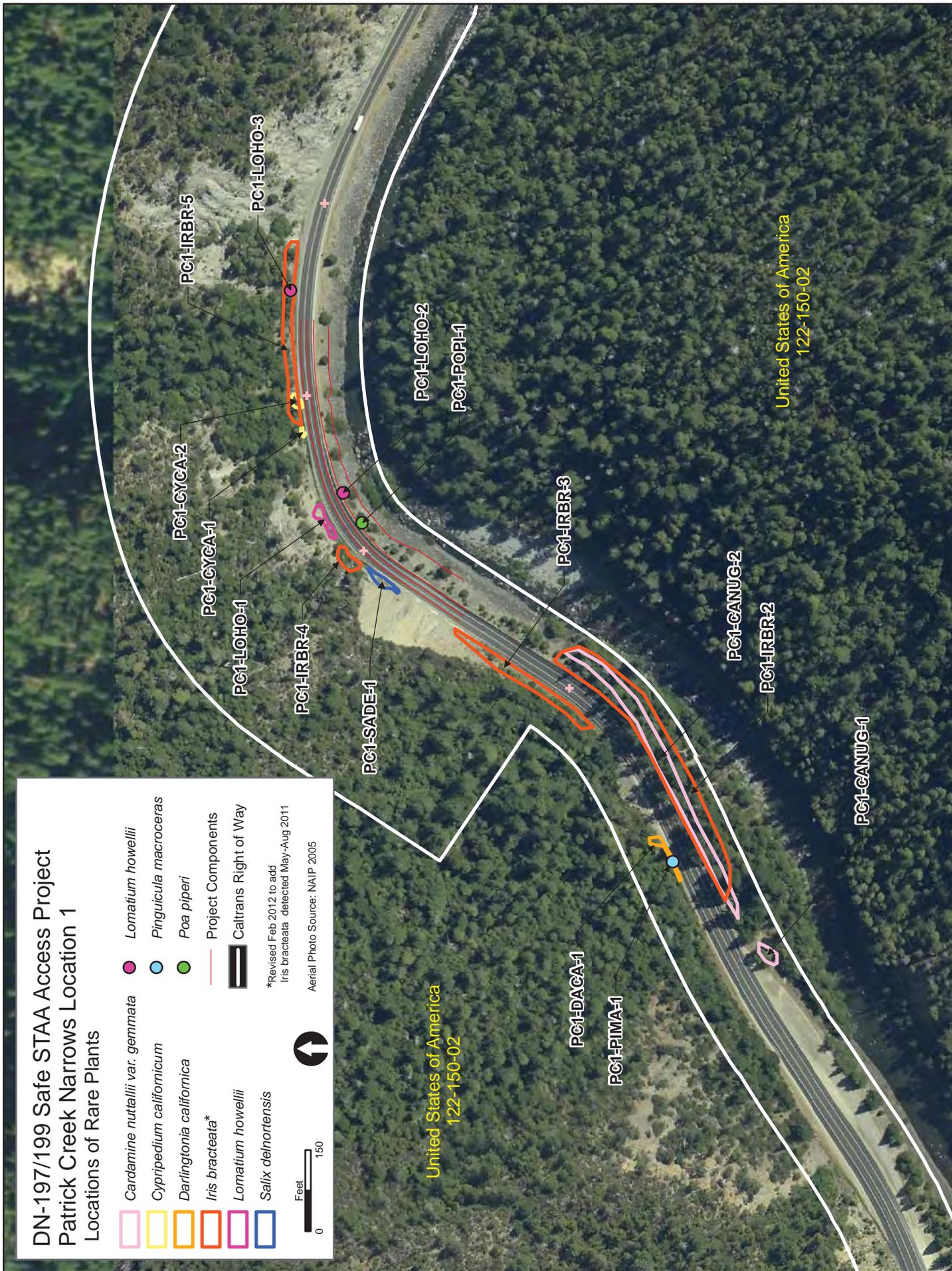
Douglas-fir, 28"	1
Douglas-fir, 26"	1
Douglas-fir, 22"	1
Douglas-fir, 20"	2
Douglas-fir, 18"	1
Douglas-fir, 16"	1
Douglas-fir, 15"	1

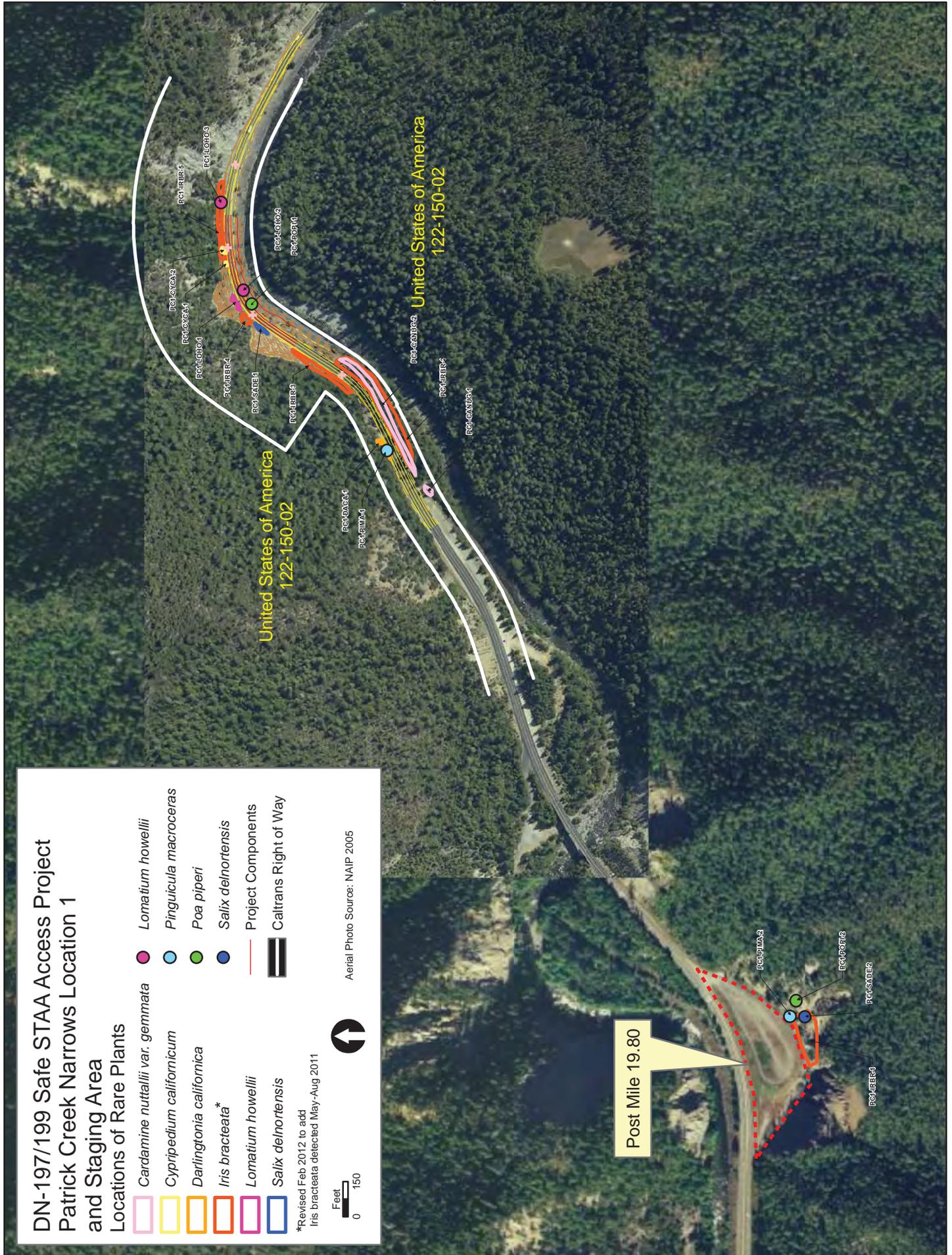
WASHINGTON CURVE (cont.)	Douglas-fir, 19.4"	1	Douglas-fir, 13"	1
	Douglas-fir, 18.7"	1	Douglas-fir, 12"	3
	Douglas-fir, 18"	1	Douglas-fir, 11"	1
	Douglas-fir, 15.2"	1	Douglas-fir, 10"	3
	Douglas-fir, 12.2"	1	Douglas-fir, 9"	3
	Douglas-fir, 6-12	14	Douglas-fir, 8"	3
	Knob cone pine, 13"	2	Douglas-fir, 7"	3
	Knob cone pine, 14"	6	Douglas-fir, 5"	1
	Knob cone pine, 16"	1	Knob cone pine, 16"	1
	knob cone pine, 6-12"	48	Knob cone pine, 15"	1
	Tanoak, 6-12"	33	Knob cone pine, 14"	1
	Canyon live oak, 6-12"	4	Knob cone pine, 13"	1
			Knob cone pine, 12"	4
			Knob cone pine, 11"	3
			Knob cone pine, 10"	6
			Knob cone pine, 9"	7
			Knob cone pine, 7"	6
			Knob cone pine, 6"	2
			Pacific madrone, 7"	2
			Canyon live oak, 7", 5"†	2
			Canyon live oak, 6", 5", 5"†	3
			Canyon live oak, 5", 5", 5", 5"†	4
			Canyon live oak, 15", 14"†	2
			Canyon live oak, 10", 5"†	2
			Canyon live oak, 12"	1
			Canyon live oak, 6"	4
			Canyon live oak, 5"	4
			Tanoak, 9", 8", 5"†	3
			Tanoak, 9", 6"†	2
			Tanoak, 9", 6"†	2
			Tanoak, 8", 5", 5"†	3
			Tanoak, 8, 5†	2
		Tanoak, 6", 6", 5", 5"†	4	
		Tanoak, 6", 6"†	2	
		Tanoak, 6", 5", 5", 5", 5"†	4	
		Tanoak, 6", 5", 5"†	3	
		Tanoak, 6", 5"†	2	
		Tanoak, 5", 6", 6"†	3	
		Tanoak, 5", 5", 7"†	3	
		Tanoak, 10", 8"†	2	
		Tanoak, 10", 6"†	2	
		Tanoak, 10", 10"†	2	
		Tanoak, 11"	1	
		Tanoak, 9"	1	
		Tanoak, 8"	3	
		Tanoak, 7"	5	
		Tanoak, 6"	4	
		Tanoak, 5"	3	
	TOTAL	120	TOTAL	138

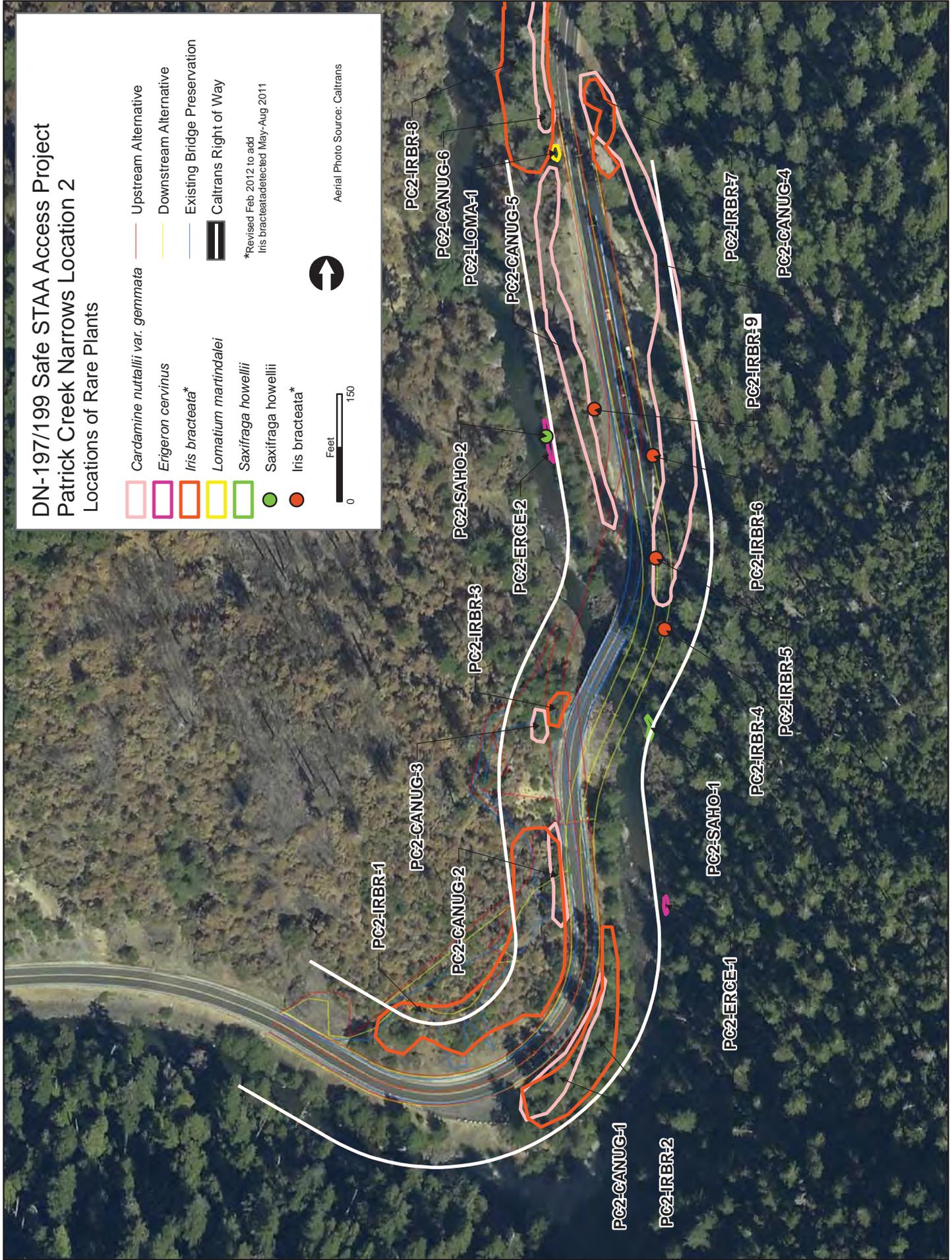
Attachment 1. Revised Rare Plant Maps



Attachment 1. Revised Rare Plant Maps



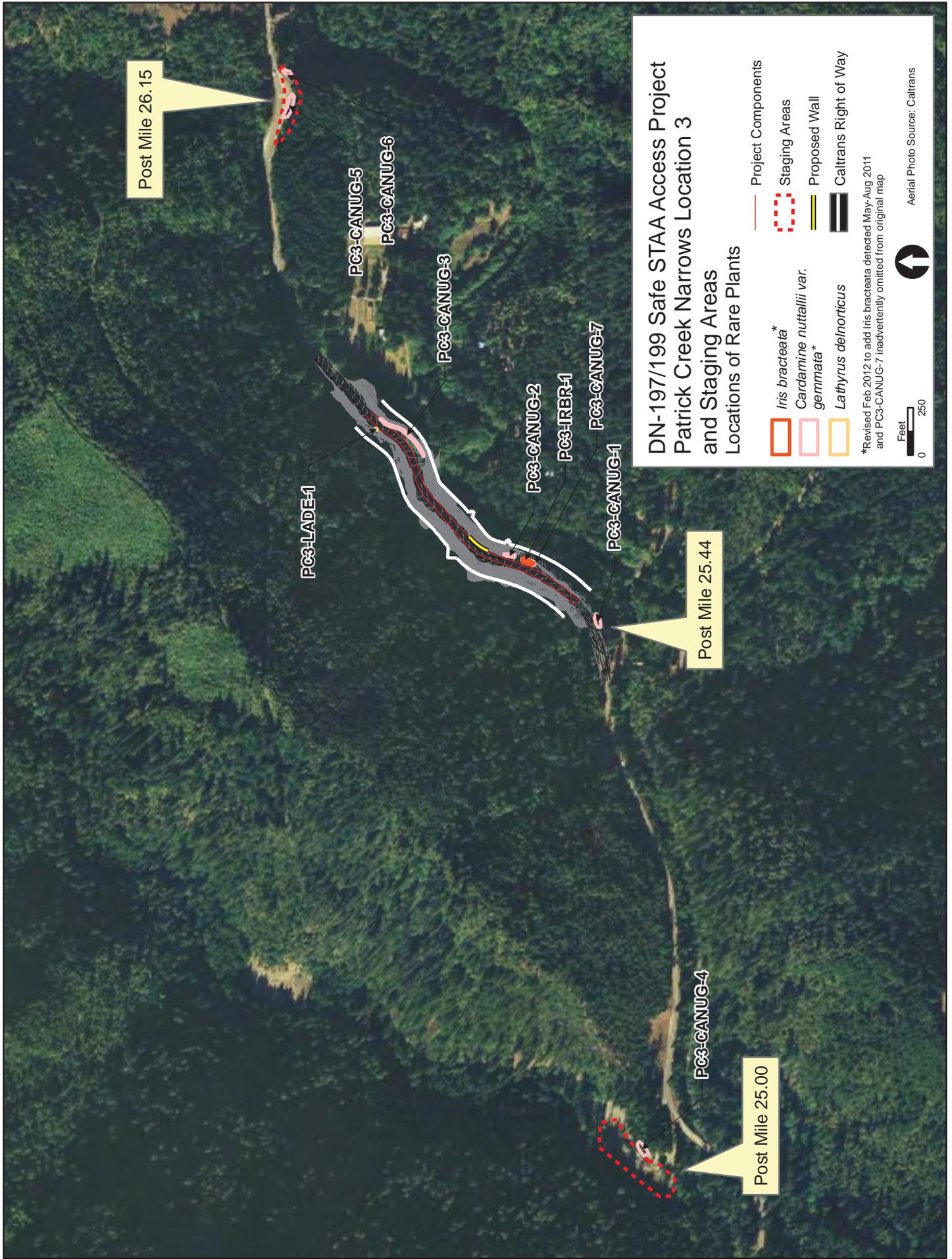


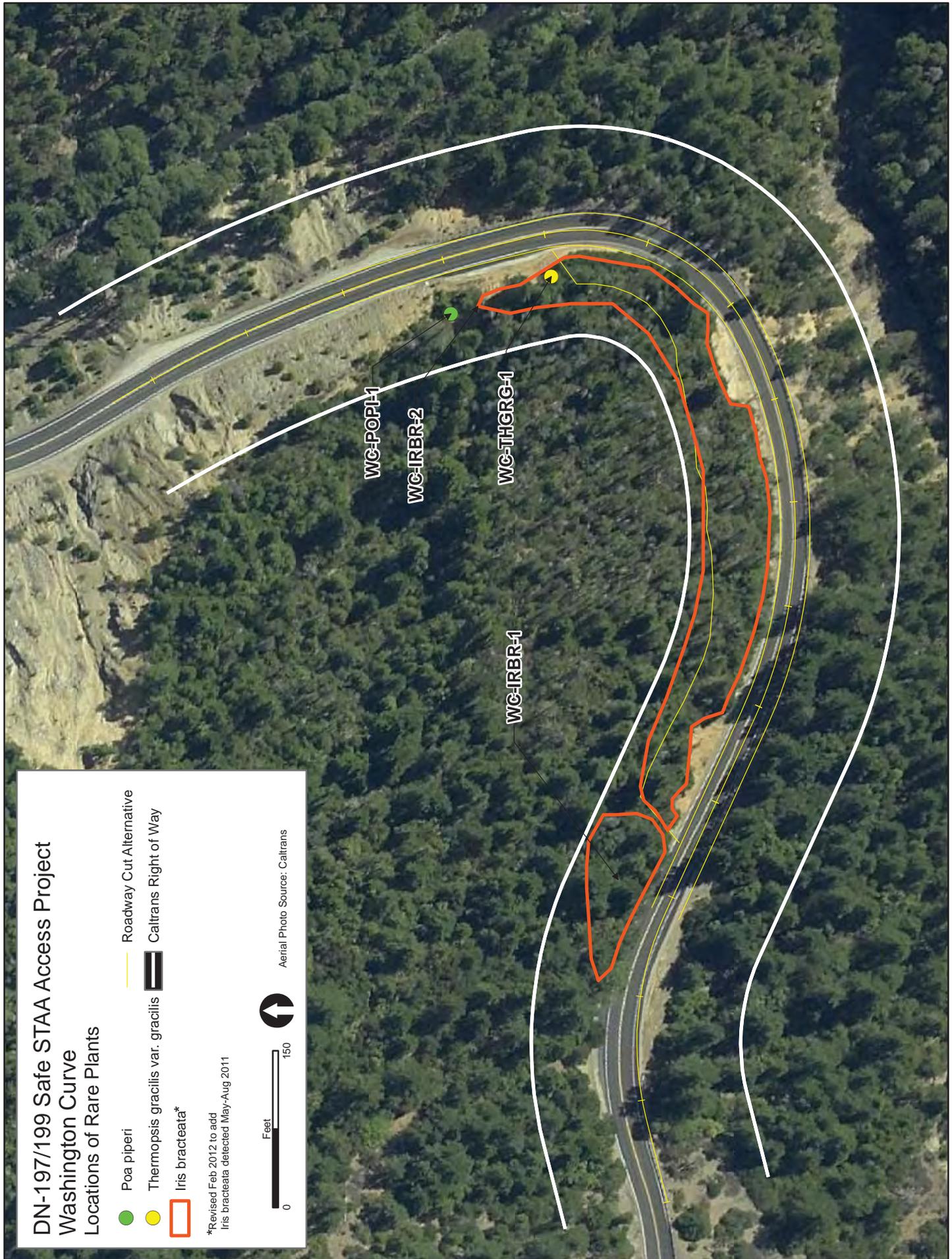


Attachment 1. Revised Rare Plant Maps



Attachment 1. Revised Rare Plant Maps





**DN-197/199 Safe STAA Access Project
Washington Curve
Locations of Rare Plants**

- *Poa piperi*
- *Thermopsis gracilis* var. *gracilis*
- Iris bracteata**
- Roadway Cut Alternative
- Caltrans Right of Way

*Revised Feb. 2012 to add
Iris bracteata detected May-Aug 2011



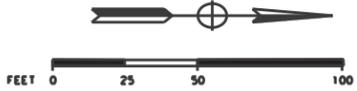
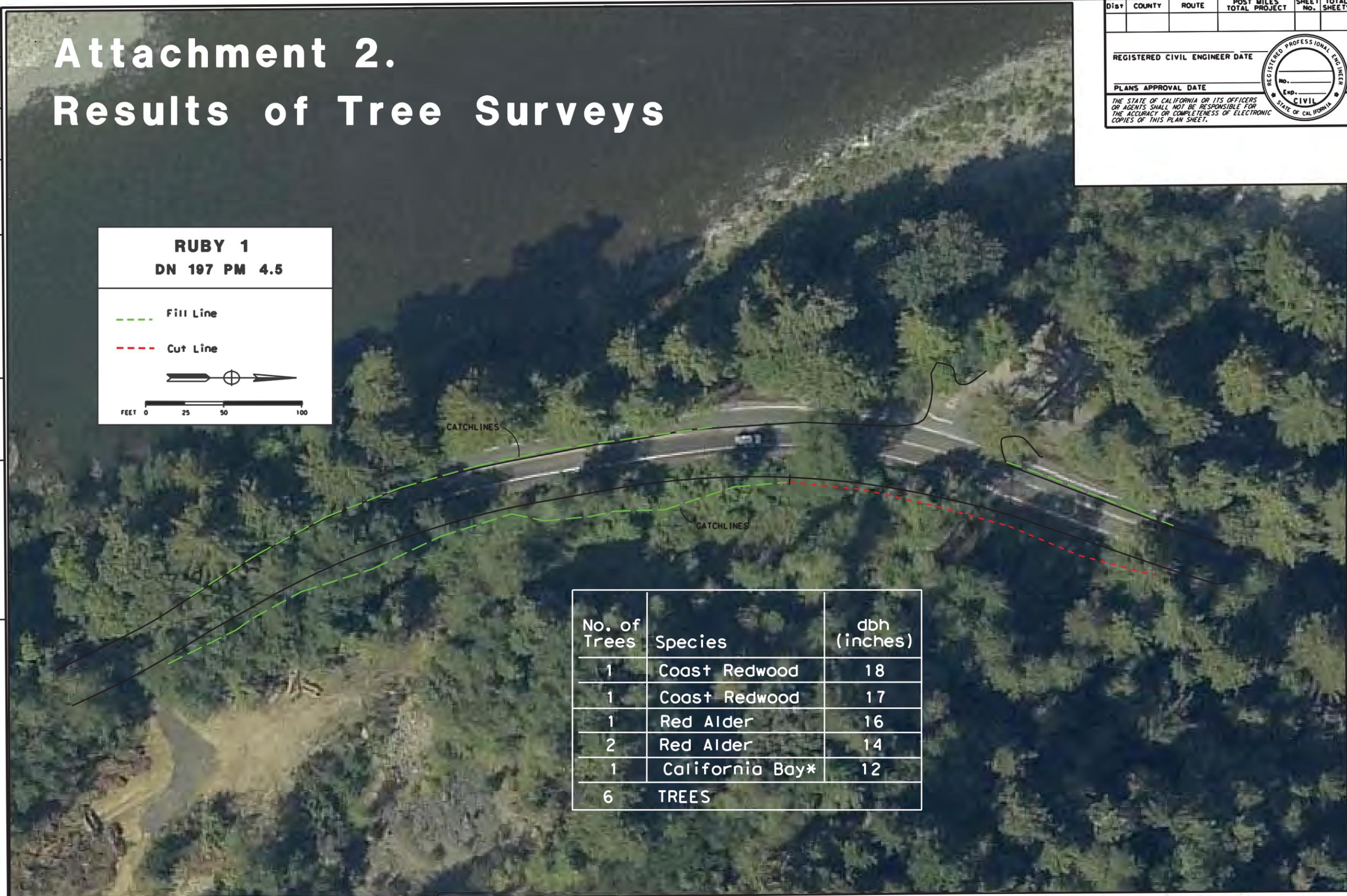
Aerial Photo Source: Caltrans

Attachment 2. Results of Tree Surveys

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
REGISTERED CIVIL ENGINEER DATE					
PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.</small>					

RUBY 1
DN 197 PM 4.5

--- Fill Line
--- Cut Line

No. of Trees	Species	dbh (inches)
1	Coast Redwood	18
1	Coast Redwood	17
1	Red Alder	16
2	Red Alder	14
1	California Bay*	12
6	TREES	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

REVISIONS:

NO.	DATE	BY	DESCRIPTION
00-00-00			

Attachment 2. Results of Tree Surveys

RESULTS OF RUBY 2 TREE SURVEYS DN STAA (1 of 2)

No. of Trees	Species	dbh (inches)	Four-foot Shoulders Alternative	Two-foot Shoulders Alternative	Two-Foot Widening in Spot Locations Alternative
1	Stump	72	☹	☹	☹
1	Redwood	23	*	*	*
1	California bay	16	*	*	*
1	Redwood	126	*	*	*
2	Bigleaf maple	12	*	*	*
1	California bay	16	*	*	*
1	Redwood	60	*	*	*
1	Redwood	94	*	*	*
1	Douglas-fir	20	*	*	*
1	Redwood	144	*	*	*
1	Stump	180	☹	☹	☹
1	Redwood	14	*	*	*
1	Stump	120	☹	☹	☹
1	Red alder	17	*	*	*
1	Red alder	14	*	*	*
6	Red alder	10	*	*	*
1	Stump	120	☹	☹	☹
1	Redwood	120	*	*	*
1	Red alder	6-12	*	*	*
1	Redwood	23	*	*	*
1	Redwood	24	*	*	*
1	Redwood	6-12	*	*	*
1	Stump	144	☹	☹	☹
1	Redwood	36	*	*	*
1	California bay	24	*	*	*
1	Redwood	6-12	*	*	*
1	Stump	72	☹	☹	☹
2	Redwood	12	*	*	*
1	Redwood	48	*	*	*
1	Redwood	36	*	*	*

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE _____

PLANS APPROVAL DATE _____

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REGISTERED PROFESSIONAL ENGINEER
No. _____
Exp. _____
CIVIL
STATE OF CALIFORNIA

(Continued from previous column)

No. of Trees	Species	dbh (inches)	Four-foot Shoulders Alternative	Two-foot Shoulders Alternative	Two-Foot Widening in Spot Locations Alternative
1	Stump	120	☹	☹	☹
1	Stump	54	*	*	*
1	Redwood	19	*	*	*
1	Stump	96	*	*	*
1	Redwood	120	*	*	*
2	Bigleaf maple	6-12	*	*	*
1	Redwood	12	*	*	*
1	Redwood	36	*	*	*
1	Redwood	12	*	*	*
1	Redwood	31	*	*	*
1	California bay	12	☹	☹	☹
1	California bay	6-12	*	*	*
1	Redwood	6-12	☹	☹	☹
1	Redwood	48	*	*	*
1	Tanoak	48	*	*	*
1	Red alder	12	*	*	*
1	Redwood	60	*	*	*
1	Stump	60	☹	☹	☹
1	Redwood	18	*	*	*
1	Stump	48	☹	☹	☹
1	Stump	72	☹	☹	☹
1	Red alder	6-12	*	*	*
1	Redwood	16	*	*	*
1	Stump	72	☹	☹	☹
1	Redwood	6-12	*	*	*
9	Red alder	6-12	*	*	*
1	Incense cedar	6-12	*	*	*
Tree Removal/Alternative			50	23	15
Stump Removal/Alternative			12	8	4

RUBY 2
DN-197 PM 3.2/4.0

-- LEGEND --

- Two-Foot Widening in Spot Locations Alternative
- Two-Foot Shoulders Alternative
- Four-Foot Shoulders Alternative

FEET 0 50 100 200 300

N

*=Trees ☹=Stumps
(Table continued on next column)

*=Trees ☹=Stumps

REVISOR: _____ DATE: _____

CHECKED BY: _____

DESIGNED BY: _____

FUNCTIONAL SUPERVISOR: _____

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

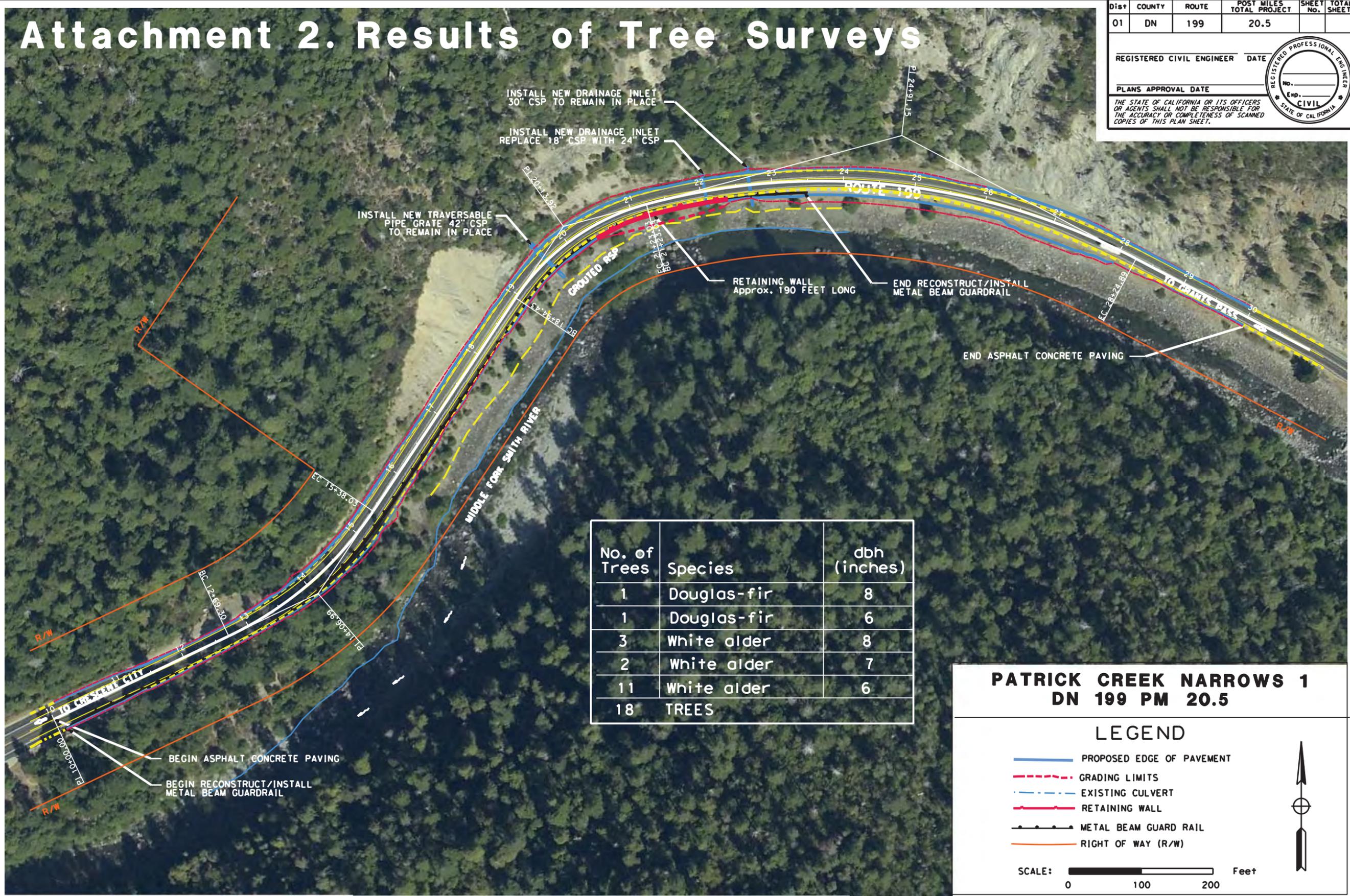
Attachment 2. Results of Tree Surveys

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	DN	199	20.5		

REGISTERED CIVIL ENGINEER DATE _____

PLANS APPROVAL DATE _____

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No. of Trees	Species	dbh (inches)
1	Douglas-fir	8
1	Douglas-fir	6
3	White alder	8
2	White alder	7
11	White alder	6
18	TREES	

**PATRICK CREEK NARROWS 1
DN 199 PM 20.5**

LEGEND

- PROPOSED EDGE OF PAVEMENT
- - - GRADING LIMITS
- - - EXISTING CULVERT
- RETAINING WALL
- METAL BEAM GUARD RAIL
- RIGHT OF WAY (R/W)

SCALE: 0 100 200 Feet



REVISOR: _____ DATE: _____

DESIGNER: _____ CHECKER: _____

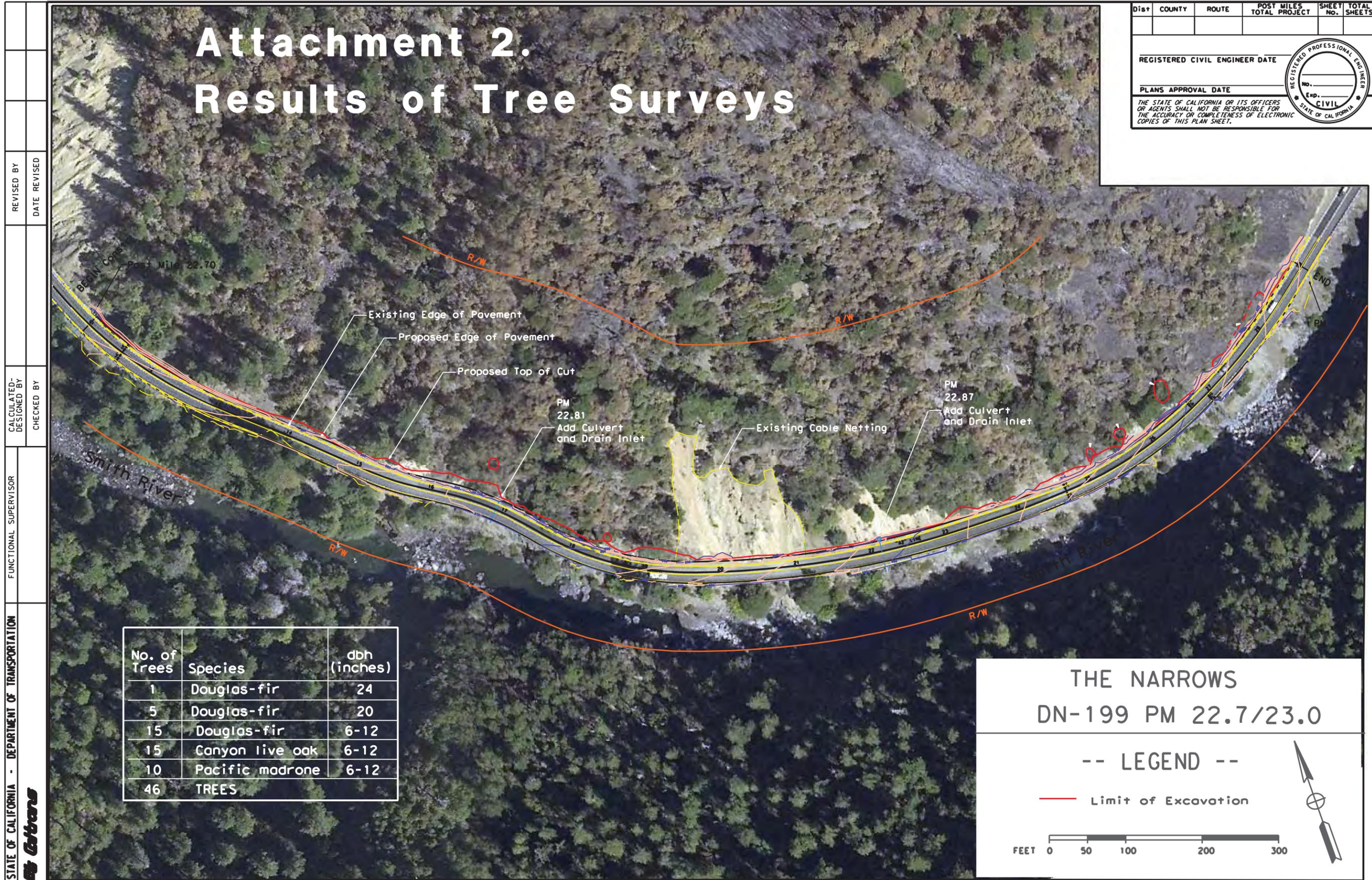
FUNCTIONAL SUPERVISOR: _____

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION



Attachment 2. Results of Tree Surveys

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
REGISTERED CIVIL ENGINEER DATE					
PLANS APPROVAL DATE					
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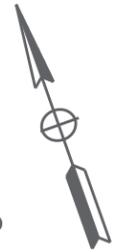



No. of Trees	Species	dbh (inches)
1	Douglas-fir	24
5	Douglas-fir	20
15	Douglas-fir	6-12
15	Canyon live oak	6-12
10	Pacific madrone	6-12
46	TREES	

THE NARROWS
DN-199 PM 22.7/23.0

-- LEGEND --

— Limit of Excavation




Attachment 2. Results of Tree Surveys

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	DN	199	PM 24.08		

REGISTERED CIVIL ENGINEER DATE _____

PLANS APPROVAL DATE _____

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PATRICK CREEK NARROWS LOCATION 2 DN-199 PM 23.9/24.3

RESULTS OF PCN-2 TREE SURVEYS DN STAA (South of Bridge)

No. of Trees	Species	dbh (inches)	Downstream Bridge Replacement	Upstream Bridge Replacement	Preservation With Upslope Retaining Wall
2	Canyon live oak	12	x		x
1	California bay	5	x		x
4	Bigleaf maple	6-8	x	x	x
1	Douglas-fir	6	x	x	x
26	Canyon live oak	6-12	x	x	x
1	Canyon live oak	14	x	x	x
6	Pacific madrone	6-10	x	x	x
10	Canyon live oak	8	x	x	x
1	Douglas-fir	16		x	x
2	Douglas-fir	8-10	x	x	x
1	Douglas-fir	14		x	x
2	Douglas-fir	6-12		x	x
1	Canyon live oak	10	x	x	x
12	Canyon live oak	6-8	x	x	x
1	Canyon live oak	12		x	x
2	Douglas-fir	12		x	x
1	Douglas-fir	14		x	x
36	Douglas-fir	6-12		x	x
4	White alder	8		x	x
8	Canyon live oak	6-12		x	x
2	Douglas-fir	24		x	x
1	Douglas-fir	34		x	x
2	Douglas-fir	36		x	x
1	Douglas-fir	32		x	x
3	Douglas-fir	16		x	x
3	Douglas-fir	28		x	x
1	Douglas-fir	17		x	x
1	Canyon live oak	12		x	x
8	Canyon live oak	6-8		x	x
1	Canyon live oak	12	x	x	x
2	Douglas-fir	12		x	x
2	Douglas-fir	24-26	x	x	x
1	Douglas-fir	18		x	x
1	Douglas-fir	15	x	x	x
1	Canyon live oak	10	x	x	x
2	Tanoak	10		x	x
1	Douglas-fir	17	x	x	x
1	Tanoak	6	x	x	x
2	White alder	6-12		x	x
1	Bigleaf maple	10	x		
4	Tanoak	8-10	x		
1	Douglas-fir	34	x		
1	Douglas-fir	24	x		
2	Pacific madrone	12	x		
1	Douglas-fir	21	x		
1	Douglas-fir	36			
Tree Removal South of Bridge/Alt			84	160	160

RESULTS OF PCN-2 TREE SURVEYS DN STAA (North of Bridge)

No. of Trees	Species	dbh (inches)	Downstream Bridge Replacement	Upstream Bridge Replacement	Preservation With Upslope Retaining Wall
2	White alder	14		x	
1	Douglas-fir	8		x	
1	Bigleaf maple	14		x	
1	Bigleaf maple	6		x	
1	Douglas-fir	42		x	
1	Canyon live oak	12		x	
1	Douglas-fir	14		x	
1	White alder	6		x	
2	Canyon live oak	11		x	
2	Douglas-fir	38		x	
1	Big leaf maple	14	x		
1	Tanoak	8	x		
2	Canyon live oak	9	x		
1	Canyon live oak	13	x		
2	Big leaf maple	10+8*	x		
1	Tanoak	18	x		x
1	Douglas-fir	6	x		
1	Mountain dogwood	9			x
1	California bay	10	x		x
2	Bigleaf maple	15+20*	x		x
1	Douglas-fir	52	x		
2	Tanoak	10+6*	x		
1	Tanoak	8	x		
1	Tanoak	8	x		
3	Tanoak	6	x		
2	Tanoak	15	x		
2	Tanoak	13+12*	x		
Tree Removal North of Bridge/Alt			24	13	5
TOTAL TREE REMOVAL / ALT			108	173	165

LEGEND:

DOWNSTREAM ALIGNMENT

UPSTREAM ALIGNMENT

PRESERVATION ALIGNMENT

SCALE:

REVISOR: _____
 DESIGNED BY: _____
 CHECKED BY: _____
 FUNCTIONAL SUPERVISOR: _____
 DEPARTMENT OF TRANSPORTATION
 STATE OF CALIFORNIA

DATE PLOTTED => \$DATE
 TIME PLOTTED => \$TIME

Appendix K. Results of Tree Surveys

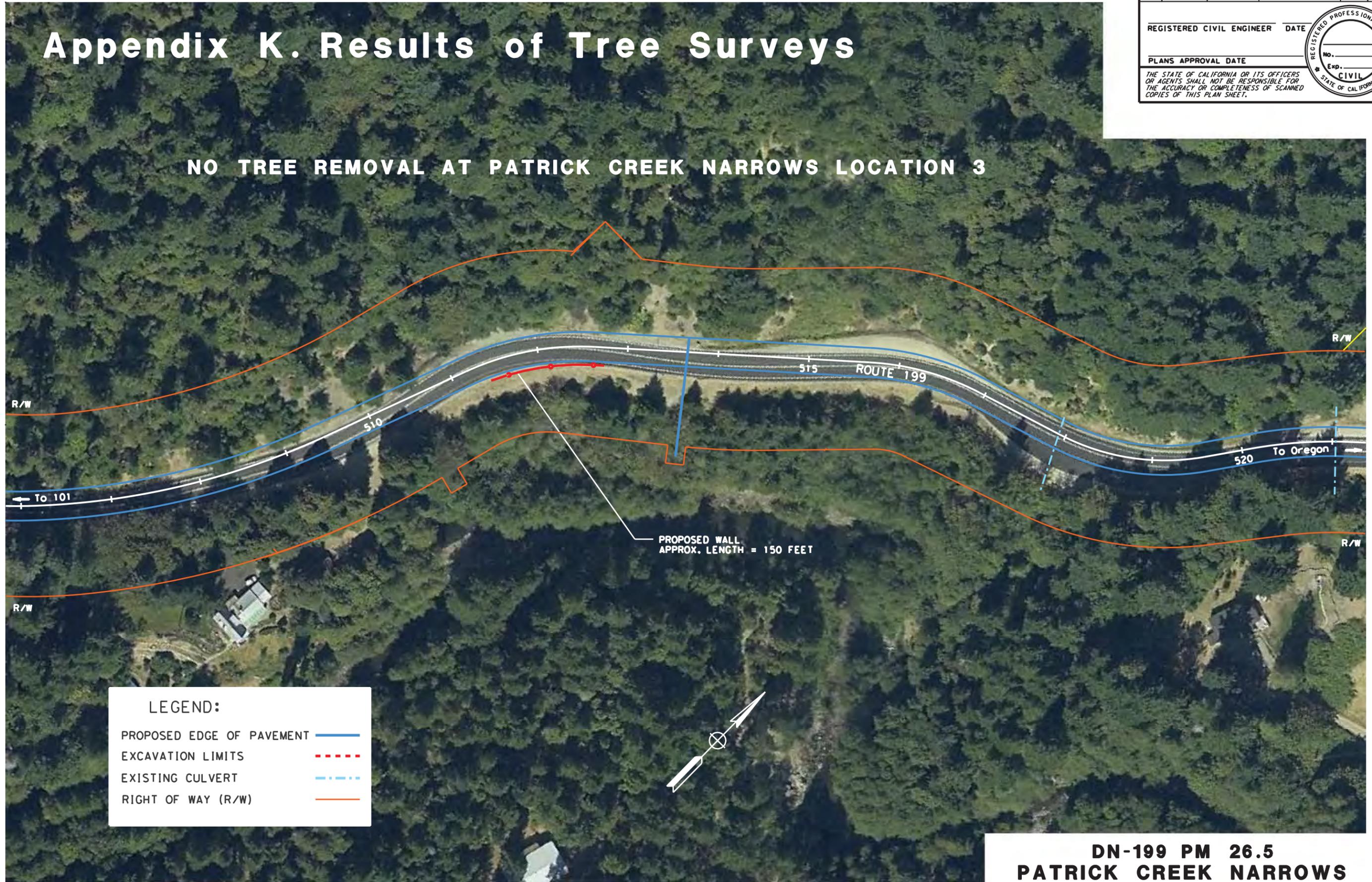
NO TREE REMOVAL AT PATRICK CREEK NARROWS LOCATION 3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE _____

PLANS APPROVAL DATE _____

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



LEGEND:

- PROPOSED EDGE OF PAVEMENT —
- EXCAVATION LIMITS - - -
- EXISTING CULVERT - - -
- RIGHT OF WAY (R/W) —



**DN-199 PM 26.5
PATRICK CREEK NARROWS
LOCATION 3**

#REQUEST STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION DESIGN
 FUNCTIONAL SUPERVISOR
 CALCULATED-DESIGNED BY CHECKED BY
 REVISED BY DATE REVISED

LAST REVISION DATE PLOTTED => \$DATE
 11-22-09 TIME PLOTTED => \$TIME

