



Road Maintenance Program Sustainability and One-Time Infrastructure Investment Options

Department of Transportation
December 11, 2012

Legistar Item # 12-1274

Our mission is to provide a safe highway system that is responsive to the needs of the County's citizens and is environmentally sensitive.

■ **Presentation Objectives**

- Inform the Board of the cost required to maintain County roads on a reasonable, cyclical basis. Provide the Board options for consideration of increases to yearly maintenance work.
- Provide the Board some options for consideration of one-time investments in infrastructure.

Existing Budget Allocation

- Our current budget is allocated over 17 categories such that limited funding is used in the most efficient manner possible to maintain our County roadway system.
- Funding limitations and material cost increases have prevented the Department from performing certain maintenance tasks at targeted frequencies.

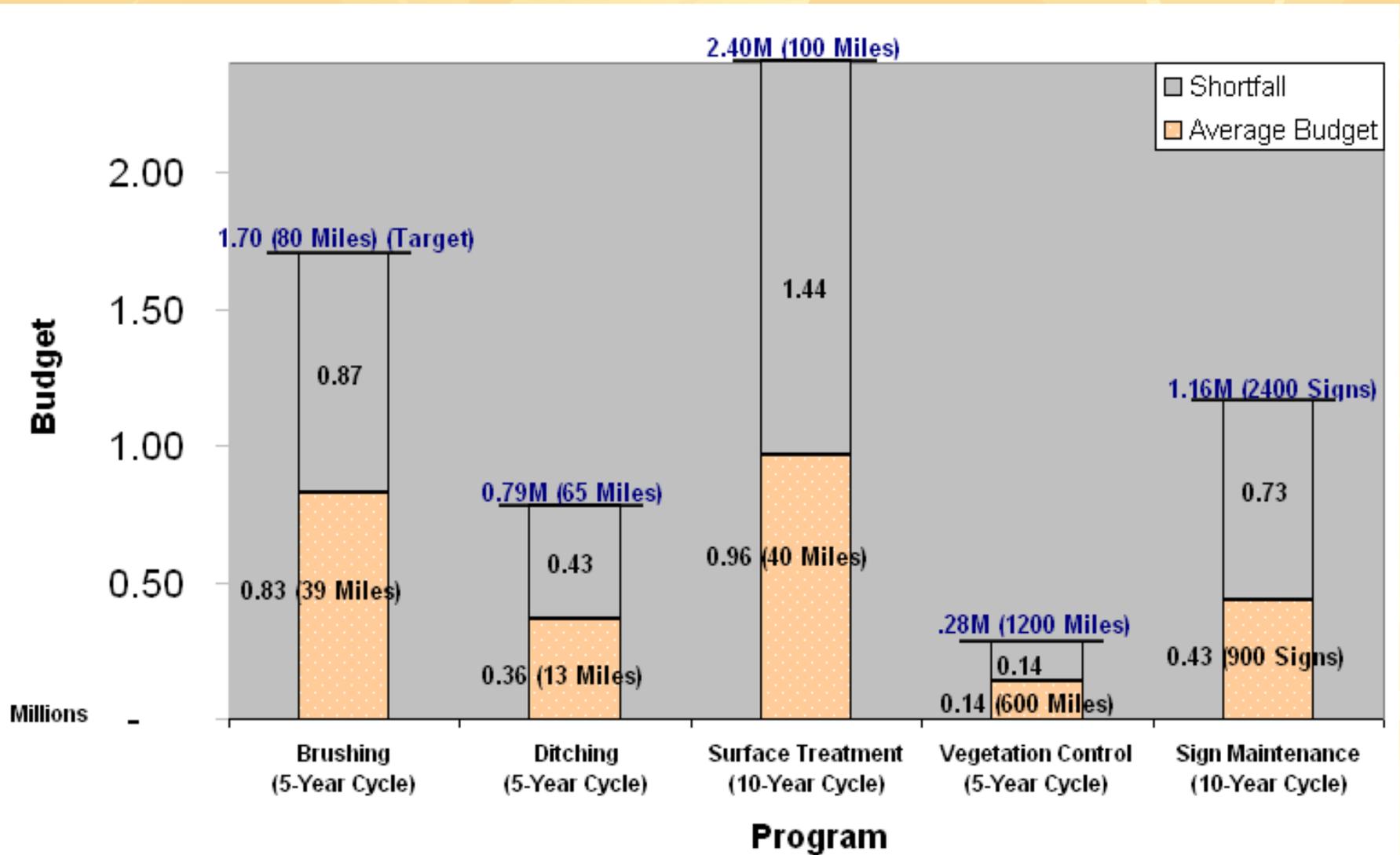
Annual Budget Over Prior 10 Years (Millions)

	<u>FY</u> <u>12/13</u>	<u>FY</u> <u>11/12</u>	<u>FY</u> <u>10/11</u>	<u>FY</u> <u>09/10</u>	<u>FY</u> <u>08/09</u>	<u>FY</u> <u>07/08</u>	<u>FY</u> <u>06/07</u>	<u>FY</u> <u>05/06</u>	<u>FY</u> <u>04/05</u>	<u>FY</u> <u>03/04</u>
	<u>Projected</u>	<u>Actual</u>								
Traffic Operations	0.23	0.21	0.25	0.22	0.37	0.29	0.30	0.30	0.25	0.17
Traffic Signal and Lighting Maint	0.42	0.27	0.22	0.22	0.22	0.24	0.24	0.21	0.14	0.12
Traffic Signal and Lighting Maintenance-TB	0.09	.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chip Seal - WS	0.78	0.91	1.05	0.89	0.00	0.01	0.00	0.76	0.62	0.84
Chip Seal - TB	0.35	0.66	0.00	0.00	0.00	0.27	0.00	0.54	0.57	0.42
Asphalt Patching	2.02	1.9	2.22	1.36	2.69	2.84	3.67	2.83	2.22	1.95
Crack Seal	0.29	0.31	0.13	0.10	0.26	0.28	0.30	0.06	0.14	0.19
Road Surface Grading	0.33	0.26	0.22	0.21	0.34	0.23	0.38	0.04	0.19	0.18
Brush and Weed	0.94	0.87	0.71	1.28	0.83	0.79	0.69	0.43	0.51	0.70
Road Side Ditching	0.30	0.39	0.21	0.43	0.47	0.73	0.37	0.40	0.25	0.22
Sweeping	0.45	0.46	0.40	0.49	0.40	0.33	0.38	0.32	0.30	0.35
Culvert Cleaning and Repair	1.21	1.1	1.38	1.16	1.23	1.00	0.96	0.81	0.85	0.58
Sign Maintenance - WS	0.43	0.34	0.37	0.55	0.40	0.41	0.46	0.32	0.32	0.27
Sign Maintenance - TB	0.02	0.02	0.02	0.02	0.02	0.05	0.03	0.02	0.02	0.01
Centerline/Marker Maintenance - WS	0.48	0.46	0.40	0.47	0.62	0.61	0.61	0.47	0.48	0.57
Centerline/Marker Maintenance - TB	0.07	0.6	0.09	0.05	0.10	0.07	0.08	0.05	0.07	0.04
Roadside Weed Control	0.21	0.18	0.14	0.13	0.13	0.13	0.14	0.10	0.07	0.06
Durapatching	0.36	0.11	0.20	0.18	0.31	0.38	0.41	0.39	0.35	0.25
Snow Removal - WS	1.04	0.43	1.15	0.62	0.81	0.77	0.46	0.68	0.39	0.31
Snow Removal - TB	2.36	1.2	2.59	1.93	1.60	1.85	1.18	1.56	1.41	1.18
Fixed Assets	0.52	0.48	0.84	0.23	2.21	0.44	0.46	0.08	0.94	0.08
Other		2.00	0.62	0.80	1.49	1.37	1.30	2.08	1.22	2.90
Total Budget	12.90	13.16	13.21	11.33	14.51	13.07	12.42	12.46	11.32	11.39

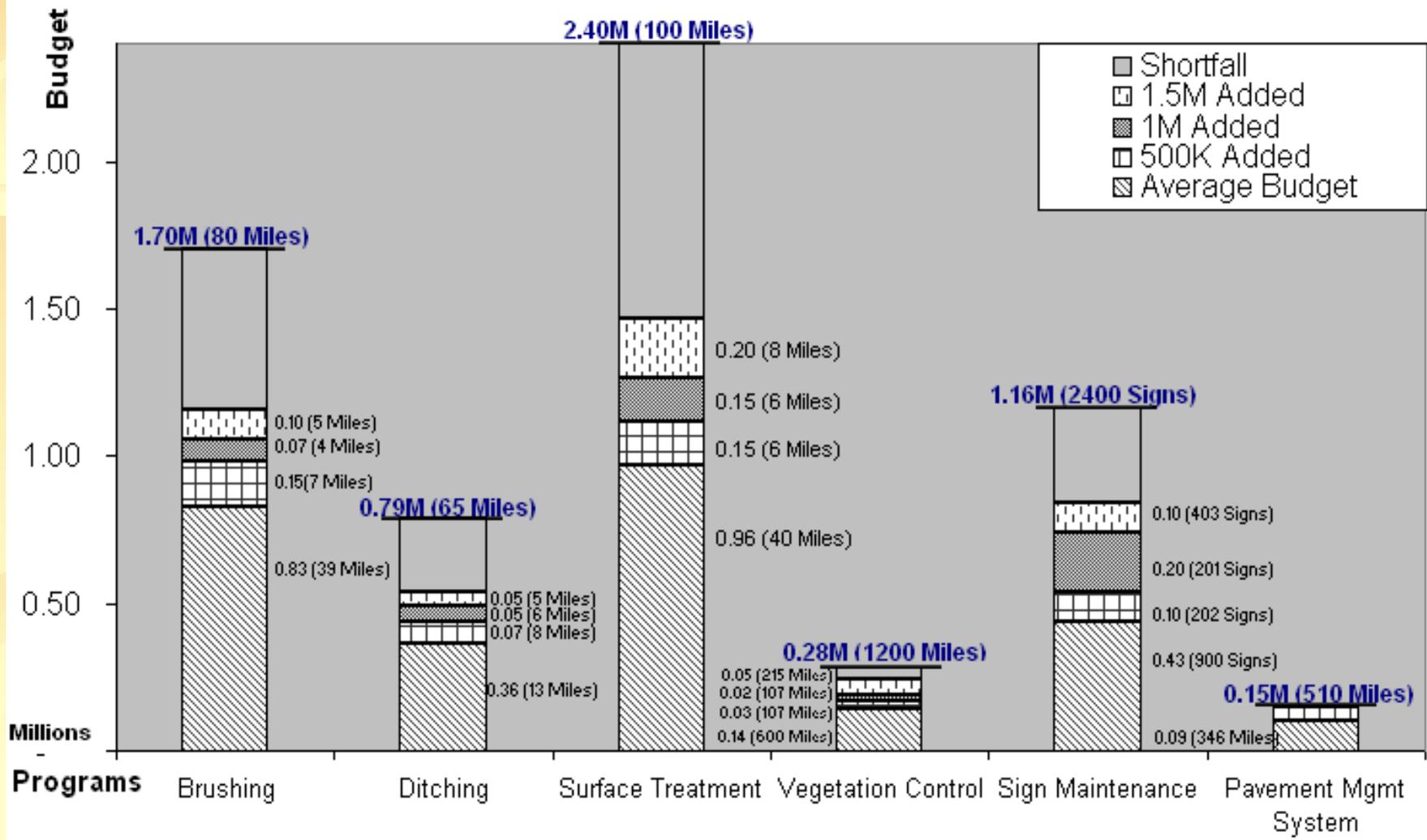
Areas of Focus

- Out of the 17 categories, these are the programs in need of more concentration and funding.
 - Brushing (5-Year Cycle = 80 miles/year)
 - Ditching (5-Year Cycle = 65 miles/year)
 - Surface Treatment (10-Year Cycle = 100 miles/year)
 - Vegetation Control (5-Year Cycle = 1200 miles/year)
 - Sign Maintenance (10-Year Cycle = 2400 signs/year)

Average Budget & Production Vs Targeted Budget & Production



Impacts of Stepped Increases to Road Maintenance Budget



Pavement Management System – Current Funding

- DOT's target is to inspect every road every two years (i.e., 50% of roads per year).
 - Inspection rate required to keep County qualified for potential preventative maintenance funding from FHWA.
 - Will keep information continuously updated, allowing for better decisions regarding surface treatment program.
- Average pavement management budget over the last 10 years: ~ \$98,600/year
 - Allows for the inspection of 34% of County roads each year.

Pavement Management System – Proposed Funding

- Proposed pavement management budget: \$150,000/year
 - Would allow for inspection of 50% of County roads each year.
 - Would also allow for building inventory of appurtenances.
 - Culverts, signs, signals, lights, etc.
 - Required budget may decrease over time as familiarity with Streetsaver increases.

Questions

- Questions on Road Maintenance Program Sustainability

Potential One-Time Investments

- DOT has been asked to provide options for a one-time investment in our roadway system.
- Asphalt Concrete (AC) Overlays are our best option
 - Impacts far more residents than surfacing dirt roads
 - Useful life
 - Roadway Section Improvement
- DOT looked at roads that met the following criteria:
 - PCI < 60, ADT > 2,000
 - Several roads that met these criteria were excluded from consideration because they are scheduled for surface treatment in 2013 or included in the 2012 CIP
 - Francisco Drive, Green Valley Road, Cambridge Road, Middletown Road, Mother Lode Drive, and Shingle Springs Road
 - Subjective analysis
- In order to complete the AC Overlays by November 2013, DOT needs direction in December 2012.

Potential AC Overlay Projects

Project #	Road Name	Start Location	End Location	ADT	PCI	Length (ft)	Estimated Cost at \$300K/mile
1	Black Bart Avenue	Pioneer Trl	Martin Ave	7231	25	2323	\$ 278,000.00
	Barbara Avenue	Martin Ave	Lodi Ave	5028	24	1531	
	Martin Avenue	Black Bart Ave	Barbara Ave	6000+/-	25+/-	1056	
2	Bass Lake Road	Near Serrano	Green Valley Rd	5296	53	11516	\$ 654,000.00
3	Patterson Drive	SR 49	Solstice Cir	4134	54	5438	\$ 689,000.00
	Pleasant Valley Road	Motherlode (Y)	SR 49	9168	53	6706	
4	Marshall Road	SR 49	1.3 miles uphill	3365	30	6864	\$ 390,000.00
5	Sly Park Road	Mormon Emigrant Trl	Pleasant Valley	3012	54	35165	\$ 2,000,000.00
6	Country Club Drive	Cambridge Dr	Cameron Park Dr	3400	30	8607	\$ 665,000.00
	Palmer Drive	Cameron Park Drive	Loma Drive	8899	55	2851	

Total Miles = 15.5 Miles

Total Cost = \$4.68M



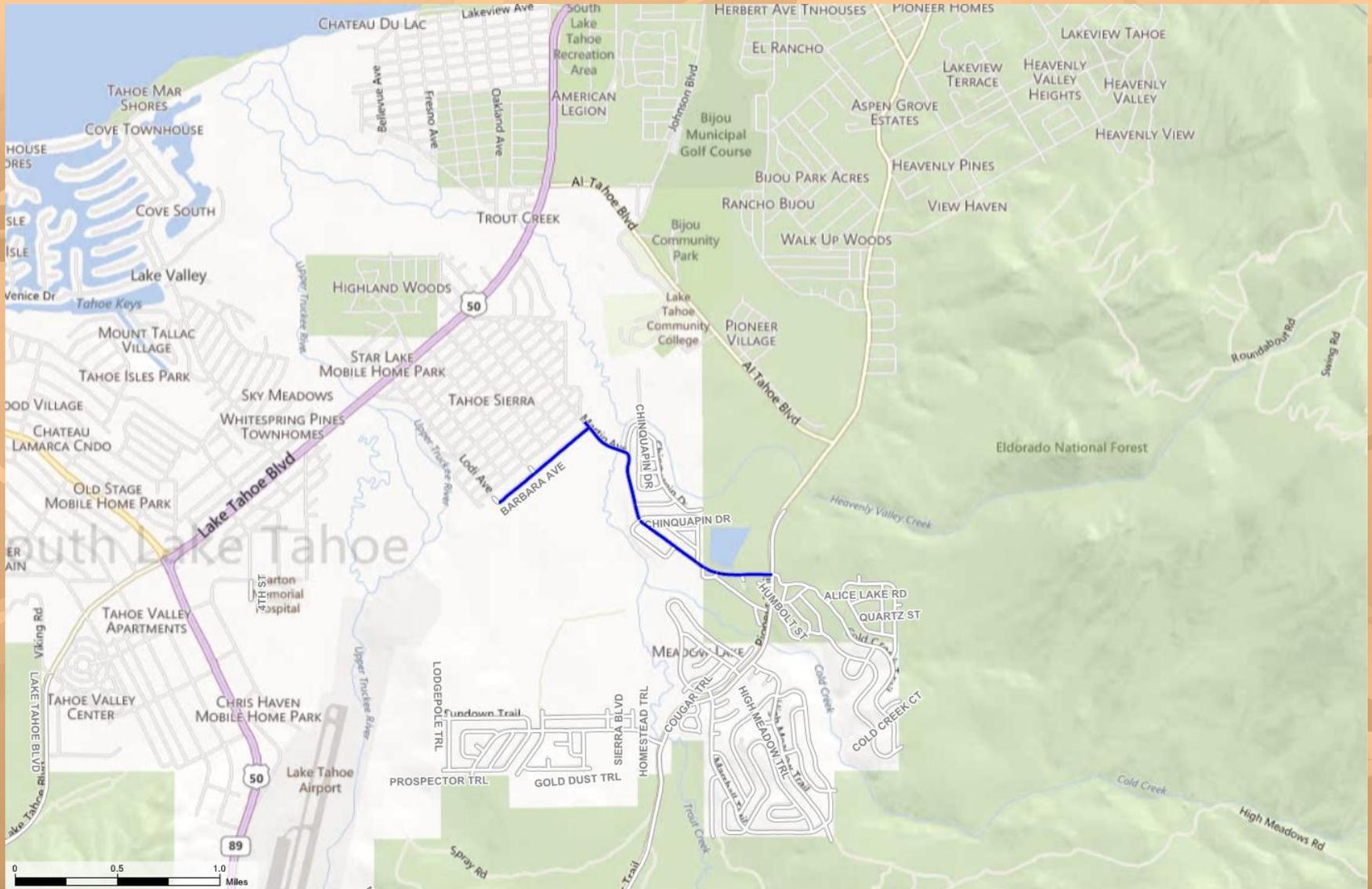
End of Presentation

Appendix

- **Proposed Project Location Maps**

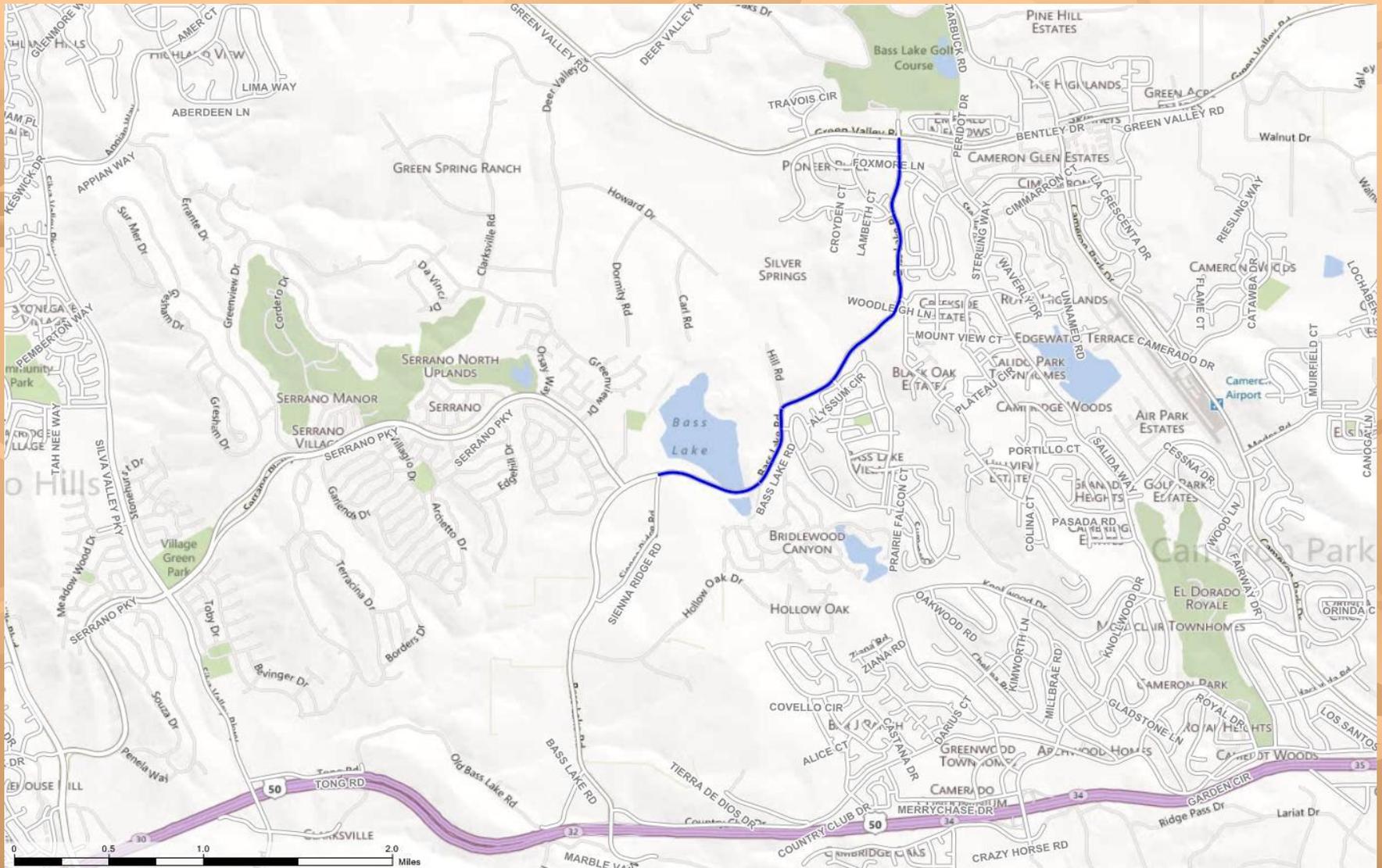
Proposed Project #1 Map

Black Bart Ave, Barbara Ave, Martin Ave



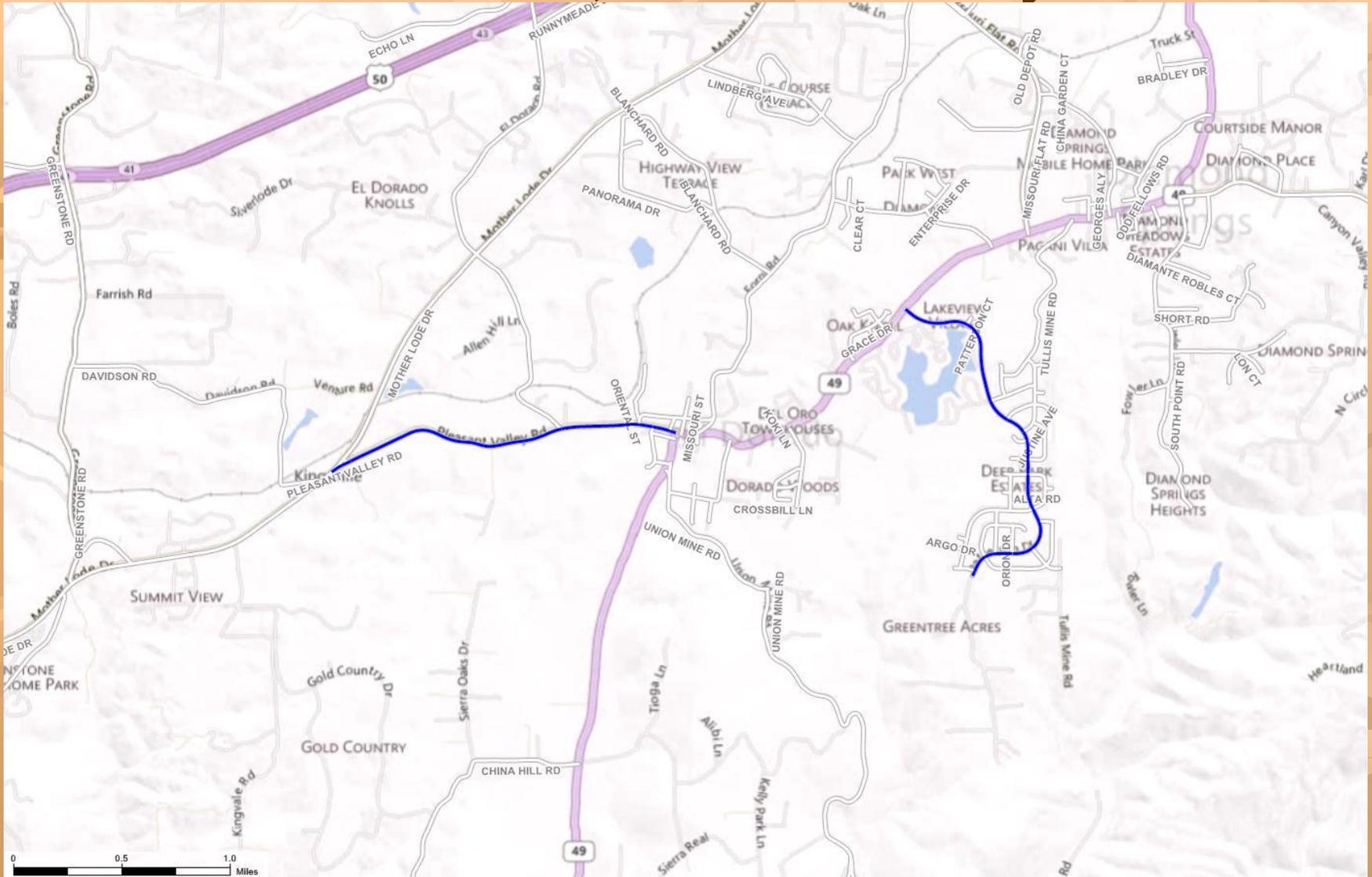
Proposed Project #2 Map

Bass Lake Road



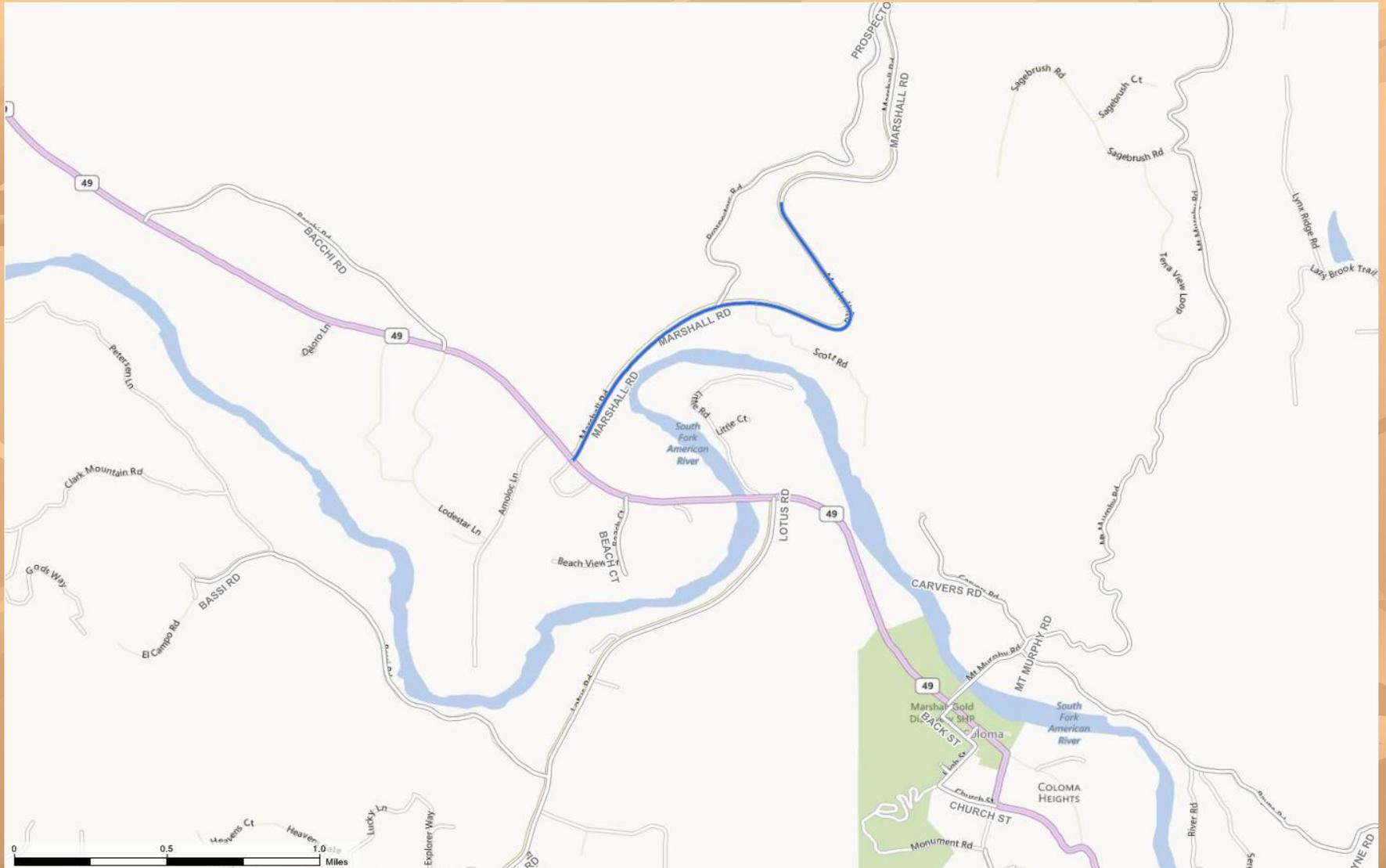
Proposed Project #3 Map

Patterson Drive, Pleasant Valley Road



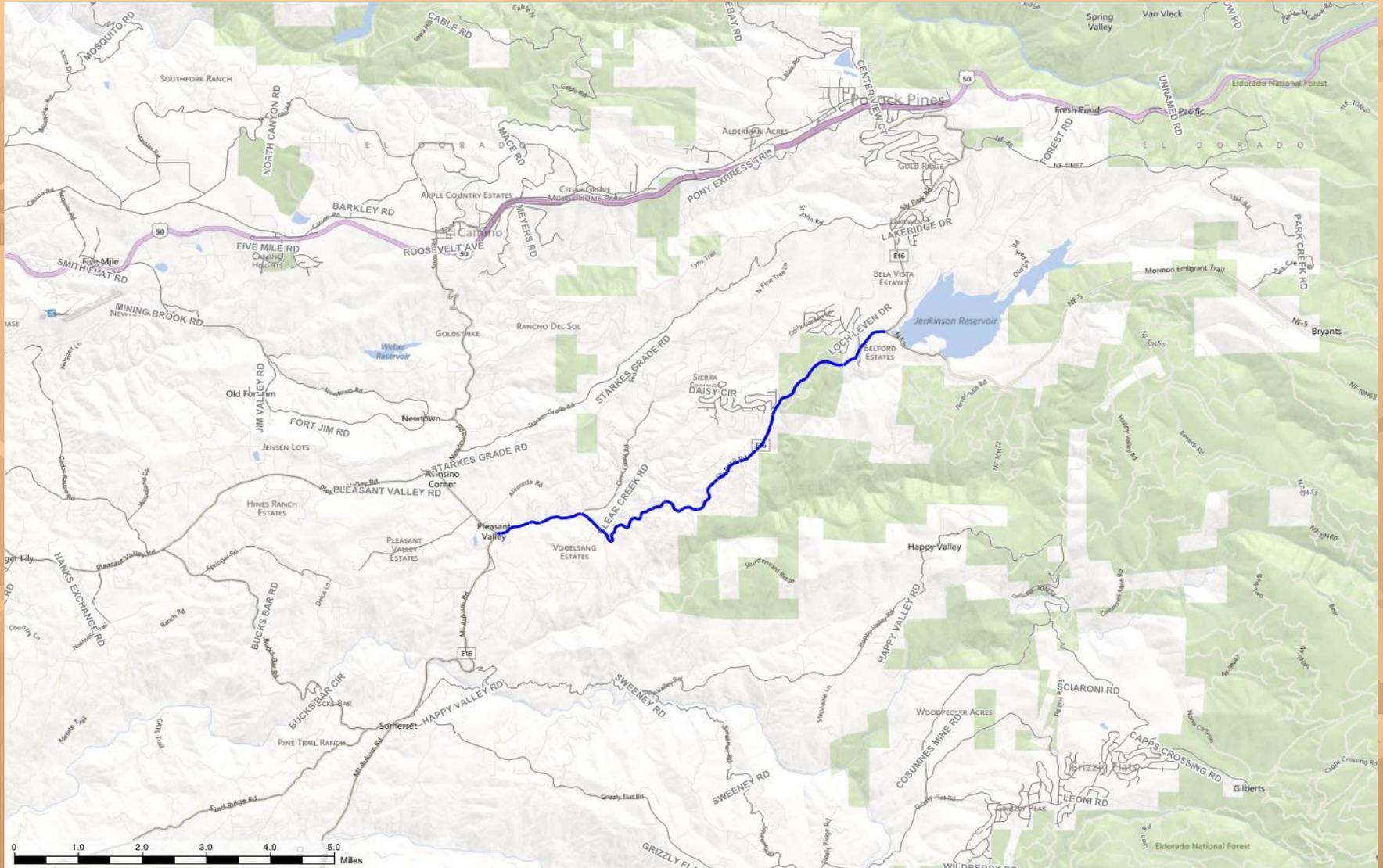
Proposed Project #4 Map

Marshall Road



Proposed Project #5 Map

Sly Park Road



Proposed Project #6 Map

Country Club Drive, Palmer Drive

