

820190 - Traffic Signal Hardware and Wiring

Originating Year:	1999	Project Type:	Traffic and Transportation	Department:	250 - Public Works
Planned Completion Year:	Ongoing	Category:	Infrastructure	Project Manager:	Matthew Hoang

Project Description/Scope/Purpose

This project provides funding for design and construction for replacement of traffic signal underground conduits and signal pole structures at the end of their estimated life span. Underground cables and conduits have a life expectancy of approximately 35 years. Signals identified for replacement are evaluated by location specific assessments based upon an inventory of traffic signal life cycles. The City has 138 traffic signals. Out of these, 72 percent are beyond their design life and are due for replacement.

The traffic signals at South Fair Oaks Avenue/California Avenue and S Bernardo Avenue/Heatherstone Way are being reconstructed in FY 2024/25.

The traffic signals at South Fair Oaks Avenue/E Olive Avenue, and W Maude Avenue/N Pastoria Avenue are being designed in FY 2024/25 and are expected to start construction in FY 2025/26.

For future projects, design and construction for two traffic signals will be performed every three years. Bernardo/Washington, Mary/Knickerbocker, and Mary/Cascade will be designed in FY 2026/27 and FY 2027/28 and constructed in FY 2028/29. Mary/Ticonderoga, Mary/Remington, and Wolfe/Old San Francisco Road will be designed in FY 2029/30 and FY 2030/31 and constructed in FY 2031/32.

Project Evaluation and Analysis

Underground conduits/substructures, as they age and corrode, become filled with dirt and water and cannot be cleaned. Failure to replace systems may result in wire failure in the future with no means of quick replacement and signal shutdown for multiple days until replaced. Traffic signal poles and associated hardware are evaluated for replacement concurrently in order to consider updated design standards and condition of infrastructure. Project costs are based on bid history and construction prices received.

Fiscal Impact

The budget provided is sufficient for three signals per three-year cycle. Project costs are based on bid history and construction prices received. Near term funding levels are calibrated to match conditions in the field.

Funding Sources

Gas Tax Fund

Plans and Goals

LT - Land Use and Transportation - LT-2: Environmentally Sustainable Land Use & Transportation Planning and Development

Project Financial Summary

	Project Costs	Revenues	Operating Costs
Prior Actual	6,312,408	4,167,494	-
2024-25	4,102,272	1,258,729	-
2025-26	1,711,570	-	-
2026-27	492,294	-	-
2027-28	-	-	-
2028-29	3,359,940	-	-
2029-30	553,764	-	-
2030-31	-	-	-
2031-32	3,779,476	-	-
2032-33	622,908	-	-
2033-34	-	-	-
2034-35	4,251,395	-	-
2035-36	700,688	-	-
2036-37	-	-	-
2037-38	4,782,242	-	-
2038-39	788,178	-	-
2039-40	-	-	-
2040-41	5,379,372	-	-
2041-42	886,594	-	-
2042-43	-	-	-
2043-44	6,051,062	-	-
2044-45	997,297	-	-
20 Year Total	34,356,779	-	-
Grand Total	44,771,459	5,426,223	-