

Fiscal Year 2021-22 Capital Construction Request

Transportation Weather Radar System in Southwest Colorado

PROGRAM PLAN STATUS

2022-013

Approved Program Plan

Date Approved:

PRIORITY NUMBERS

<u>Prioritized By</u>	<u>Priority</u>	
CDOT	1 of 1	
OSPB	2 of 53	Recommended for funding.

PRIOR APPROPRIATIONS AND REQUEST INFORMATION

<u>Fund Source</u>	<u>Prior Approp.</u>	<u>FY 2021-22</u>	<u>FY 2022-23</u>	<u>Future Requests</u>	<u>Total Costs</u>
CCF	\$0	\$300,000	\$0	\$0	\$300,000
CF	\$0	\$500,000	\$0	\$0	\$500,000
RF	\$0	\$1,800,000	\$0	\$0	\$1,800,000
Total	\$0	\$2,600,000	\$0	\$0	\$2,600,000

ITEMIZED COST INFORMATION

<u>Cost Item</u>	<u>Prior Approp.</u>	<u>FY 2021-22</u>	<u>FY 2022-23</u>	<u>Future Requests</u>	<u>Total Cost</u>
Land Acquisition	\$0	\$0	\$0	\$0	\$0
Professional Services	\$0	\$102,000	\$0	\$0	\$102,000
Construction	\$0	\$1,150,000	\$0	\$0	\$1,150,000
Equipment	\$0	\$930,000	\$0	\$0	\$930,000
Miscellaneous	\$0	\$0	\$0	\$0	\$0
Contingency	\$0	\$418,000	\$0	\$0	\$418,000
Total	\$0	\$2,600,000	\$0	\$0	\$2,600,000

PROJECT STATUS

This is a new, never-before-requested project.

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Transportation

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PROJECT DESCRIPTION / SCOPE OF WORK

The Colorado Department of Transportation (CDOT) is requesting a combination of state funds, cash funds spending authority, and reappropriated funds to purchase and install a C-band, dual polarization Doppler weather radar system southwest of Durango. The project is being undertaken in conjunction with several other state and local agencies to improve various functions associated with weather forecasting, water management, public safety, and economic development. The department explains that the area to be covered by the radar is not currently covered by federal radar systems due to mountainous topography.

Under the project, a vendor will install the radar system, including a tower; stakeholders will contract with the vendor to maintain the system over its life. The radar will collect data in a 146-mile radius in the Four Corners area. CDOT says the new system will be state-of-the-art and meet federal standards for the next two decades.

Cost assumption. The cost assumption for the project was established based on a similar project in Alamosa. The project is not required to comply with the requirements of the High Performance Certification and Art in Public Places programs because it purchases equipment and does not build or renovate a physical facility.

PROJECT JUSTIFICATION

CDOT and other state and local agencies use radar systems to forecast weather and water supplies. These forecasts are used to support various public interests, including public safety, water management, and economic development. CDOT explains that Colorado's existing radar infrastructure, which is managed by federal agencies, does not cover the Four Corners area due to interruption by mountain ranges, thus impacting the ability of stakeholders to perform their missions.

CDOT says the radar system will improve its Division of Maintenance's weather forecasting and avalanche prediction, allowing it to direct appropriate resources in the correct locations for road clearing and other core duties. The new radar system will support CDOT's Division of Aeronautics as it manages flights in the region. The department says the system will fill a critical gap in severe weather forecasting, lightning detection, and overall aviation safety, supplementing the 13 mountain weather observing systems that provide real-time weather updates to pilots in the high country. The system will also support local emergency managers, first responders, public safety officials, and other decision makers by providing more accurate weather information. For instance, La Plata County, a project partner, will use the system to assess flash floods associated with a local wildfire burn scar.

Another project partner, the Colorado Water Conservation Board, along with local water providers, is interested in using the radar system to assist with spring water runoff forecasting. The system enhances the ability of stakeholders to accurately predict water levels for water management, agricultural, and river compact purposes. CDOT notes that a similar radar system installed in Alamosa is predicted to save millions of dollars in water allocations. The system will also help businesses, particularly the tourism industry, assess weather conditions for safety and recreation.

PROGRAM INFORMATION

CDOT's Highway Division of Maintenance is responsible for roadway maintenance and preservation, as well as associated duties such as snow and ice removal, avalanche control, and rockfall mitigation. CDOT's Aeronautical Division works with the Federal Aviation Administration and local governments to promote aviation safety and provide advisory assistance for Colorado's public-use airports.

PROJECT SCHEDULE

	Start Date	Completion Date
Design		
Construction	May 2021	December 2021
Equipment		
Occupancy		

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SOURCE OF CASH FUNDS

The source of cash funds for the project is the State Highway Fund, along with financial commitments from other stakeholders. Money accrues to the State Highway Fund through excise taxes and from the Highway Users Tax Fund. Stakeholders that have committed to provide capital funding, in-kind services, or annual funding for ongoing maintenance and operations include the Department of Natural Resources (DNR), the Department of Local Affairs (DOLA), the Southwest Water Conservation District, La Plata County, the Southwest Basin Roundtable, the Durango La Plata County Airport, the La Plata Electric Association, the Southern Ute Indian Tribe, and the U.S. Bureau of Reclamation. Specific funding commitments for project construction are as follows:

- CDOT—\$100,000;
- DOLA —\$1,700,000 (categorized as Reappropriated Funds);
- DNR —\$100,000 (categorized as Reappropriated Funds); and
- local partners —\$400,000.

OPERATING BUDGET

The project has no impact on state operating costs. CDOT explains that the system will cost \$25,000-\$40,000 in annual maintenance and operating costs, which will be covered by fees collected by a local stakeholder coalition.

STAFF QUESTIONS AND ISSUES

All staff questions have been incorporated into the project write-up.