

South Coast Rail Infrastructure



Background and Purpose

The Orange County Transportation Authority owns 40+ miles of rail between the cities of San Clemente and Fullerton. This vital link in the 351-mile Los Angeles – San Diego – San Luis Obispo (LOSSAN) Rail Corridor is the second busiest passenger rail corridor in the nation and annually carries more than \$1 billion in freight throughout Southern California. Between Los Angeles and San Diego, the line is designated as a Strategic Rail Corridor Network by the Department of Defense due to its connectivity with military bases and major ports.

OCTA is ready to undertake two feasibility studies that will address the rail line challenges in south Orange County:

- The first study will evaluate strategies to ensure uninterrupted rail operations, including a detailed analysis of 7 miles of critical coastal track between Dana Point and San Clemente at the San Diego County line. The objective of this short- to medium-term study is to ensure uninterrupted rail operations for the next 30 years.
- The second study will look longer term at a potential rail line relocation along the coast to an inland alignment between San Juan Capistrano and San Onofre State Beach, spanning 11 miles.

Most of the rail line in the study area is approximately 200 feet or less from the coastline in south Orange County. This rail line is vulnerable to catastrophic failure due to changing environmental conditions and coastal erosion, rendering it inoperable for extended periods. Service suspension has occurred three times in the past two years due to slope failures of private property next to the tracks. This underscores the importance of addressing resiliency of the coastal rail line.

Project Considerations

The rail line runs through heavily populated and built-out residential and commercial areas.

Key considerations will assess existing and future environmental and right-of-way risks, and issues and challenges with operations and maintenance along the LOSSAN Corridor in south Orange County. Depending on potential solutions identified, the lead agency is to be determined.

Results from the feasibility studies are expected to inform further project development efforts refining the scope, schedule, and cost estimates for recommended solutions.

Short- to Mid-Term Project Cost and Schedule*

PHASE	ESTIMATE	SCHEDULE
Feasibility Study / Conceptual Engineering	\$2 million+	24-30 months
Environmental / Preliminary Engineering	\$15 million - \$20 million	36-48 months
Final Design / Right-of-Way	\$30 million - \$45 million+	24-30 months
Construction	\$500 million - \$1 billion+	48+ months

*Cost and schedule estimates for the short- and mid-term study are subject to change

Track Stabilization Efforts

September 2021

Eroding private-property slope causes track movement forcing Metrolink to suspend passenger rail service in south Orange County and start emergency stabilization work on 700 feet of track with 15,000 tons of rock revetment.

October 2021

Emergency work is completed and passenger rail service restored.

December 2021

Geotechnical monitoring shows slow cumulative track movement, requiring 3,000 more tons of rock for stabilization.

February to August 2022

Inclinometers show stable readings.

September 2022

Passenger service suspended again after high tides and storm surge eroded some previously placed revetment and a 300-foot area just north suffers severe beach erosion after Hurricane Kay.

November 2022

OCTA begins placement of ground anchors and tie-backs to stabilize the tracks.

April 2023

Passenger rail service resumed in mid-April. Service was suspended again in late April due to a slope failure 2 miles north of the previous one.

Potential Project Issues

Erosion and Geologic Movement

- Identifying solutions is challenging.
- Erosion issues / causes not fully defined.

Partnerships

- Potential solutions require consensus from parties at state, federal and local levels.
- Project leads need to be identified.
- Partnerships should be developed to address long-term corridor issues.

Passenger Rail Service

- Providing safe and reliable service is a priority.
- Service interruptions must be minimized.

Funding

- Secured funding for short- and mid-term study.
- Awarded Transit and Intercity Rail Capital Program funding for the long-term study.