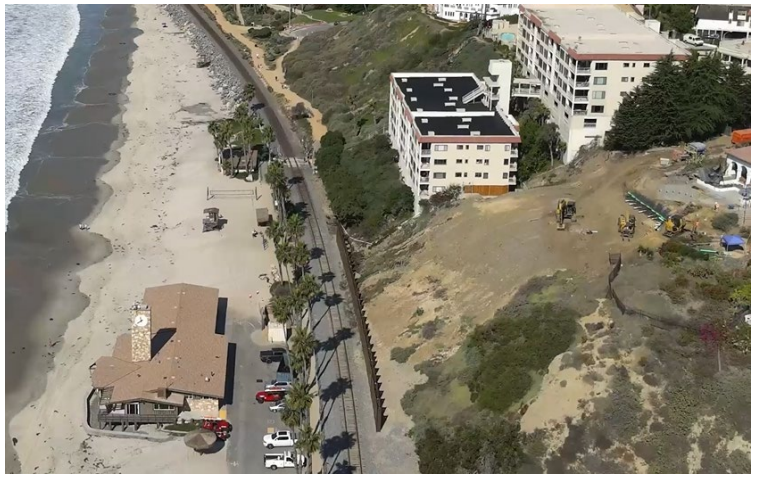
Coastal Rail Resiliency Projects Update

Progress to Date

- Stabilized tracks at Cyprus Shore due to landslide
- Protected tracks at Casa Romantica from bluff failure
- Protected tracks at Mariposa Point from bluff failure
- Invested $37.7M to implement the above three efforts
- Initiated Coastal Rail Resiliency Study
- Retained experts to assess risk and develop solutions to protect rail line
- Held nearly 30 public/stakeholder meetings to inform and gather input



Coastal Rail Resiliency Study - Initial Assessment

- Address imminent threats to avoid interruptions to rail operations
- Identify and address areas most vulnerable to seaward beach erosion and wave impacts
- Identify and address areas most vulnerable to coastal bluff/slope failure
- Consider potential environmental impacts and permit requirements
- Incorporate public and agency input
- Establish reasonable implementation timelines

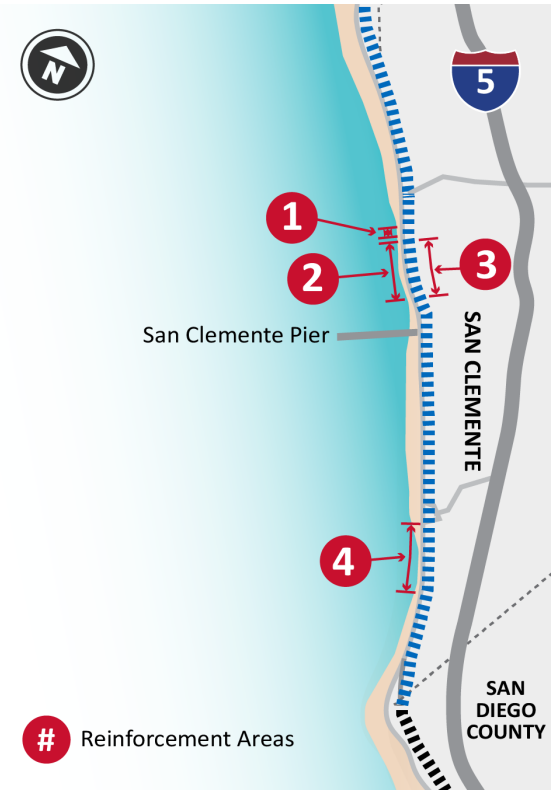
Multi-Benefit Solution: Provide necessary reinforcement to protect and preserve rail infrastructure, which includes sand nourishment to offset potential impacts.

Coastal Rail Resiliency Study - Initial Assessment

- Four reinforcement areas were identified in January 2024
- Potential solutions evaluated at a conceptual level considering different materials, performance, costs, methods, and schedule

Area	Location (MP)	Challenge	Potential Solutions*
1	203.80 – 203.90	Ongoing deterioration of existing riprap protection	Rock (repair existing riprap) and sand nourishment
2	204.00 – 204.40	Erosion - no beach at high tide and direct wave attack damaging existing riprap protection	Rock (repair existing riprap) and sand nourishment
3	204.00 – 204.50	Steep bluffs with high potential for failure that could impact the rail infrastructure	Catchment wall
4	206.00 - 206.67	Near San Clemente State Beach - erosion exposing areas of limited to no riprap protection	Engineered rock revetment and sand nourishment

*Additional solutions to be developed with Alternative Analysis.



Preliminary concepts; assumptions are subject to change as more information becomes available.

MP – Mile Post

Reinforcement Areas 1 through 4

Areas 1 & 2

Area 3

Area 4

Current Activities - Initial Assessment

- State and federal regulatory permitting agencies ***requiring non-emergency permitting process***
- Submitted regulatory permit applications
- Initiating environmental and design work for reinforcement area solutions
- Assessing alternatives to minimize project footprint and maximize sand nourishment
- Working with state on long-term rail adaptation strategies
- Continuing to seek grant funding opportunities

Reinforcement Areas Projects and CRRS Development

Coastal Rail Resiliency Study

PURPOSE & NEED/ EVALUATION CRITERIA

- Draft: spring ’24
- Informed by listening session feedback ★

DRAFT CONCEPT DEVELOPMENT

- Draft concepts: spring to fall ’24
- Obtain feedback from public, stakeholders and interest groups: fall ’24

REFINEMENT OF CONCEPTS

- Refined concepts: spring ’25
- Obtain feedback from public, stakeholders and interest groups: spring ’25

DRAFT FEASIBILITY STUDY REPORT

- Draft report: spring to summer ’25
- Obtain feedback from public, stakeholders and interest groups

FINAL FEASIBILITY STUDY REPORT

- Final report: fall ’25
- Present to Board / publish final report: fall ’25

Reinforcement Areas Projects

PLANNING

- Identified immediate reinforcement areas to maintain rail operations
- Develop Alternatives Analysis and select Preferred Alternative for four sites ★
- Environmental biological and cultural surveys

DESIGN

- Develop 30% design for all four areas based on preferred alternative
- Coordinate with environmental team and advance early agency discussions about permitting

ENVIRONMENTAL

- Environmental technical studies; CEQA and NEPA clearance
- Permitting: USACE, CCC, SLC, RWQCB
- Obtain alternatives feedback from expert panel, public, and Board

PROCUREMENT

- Develop Request for Qualifications for Design-Builder
- Award Design-Build Contract

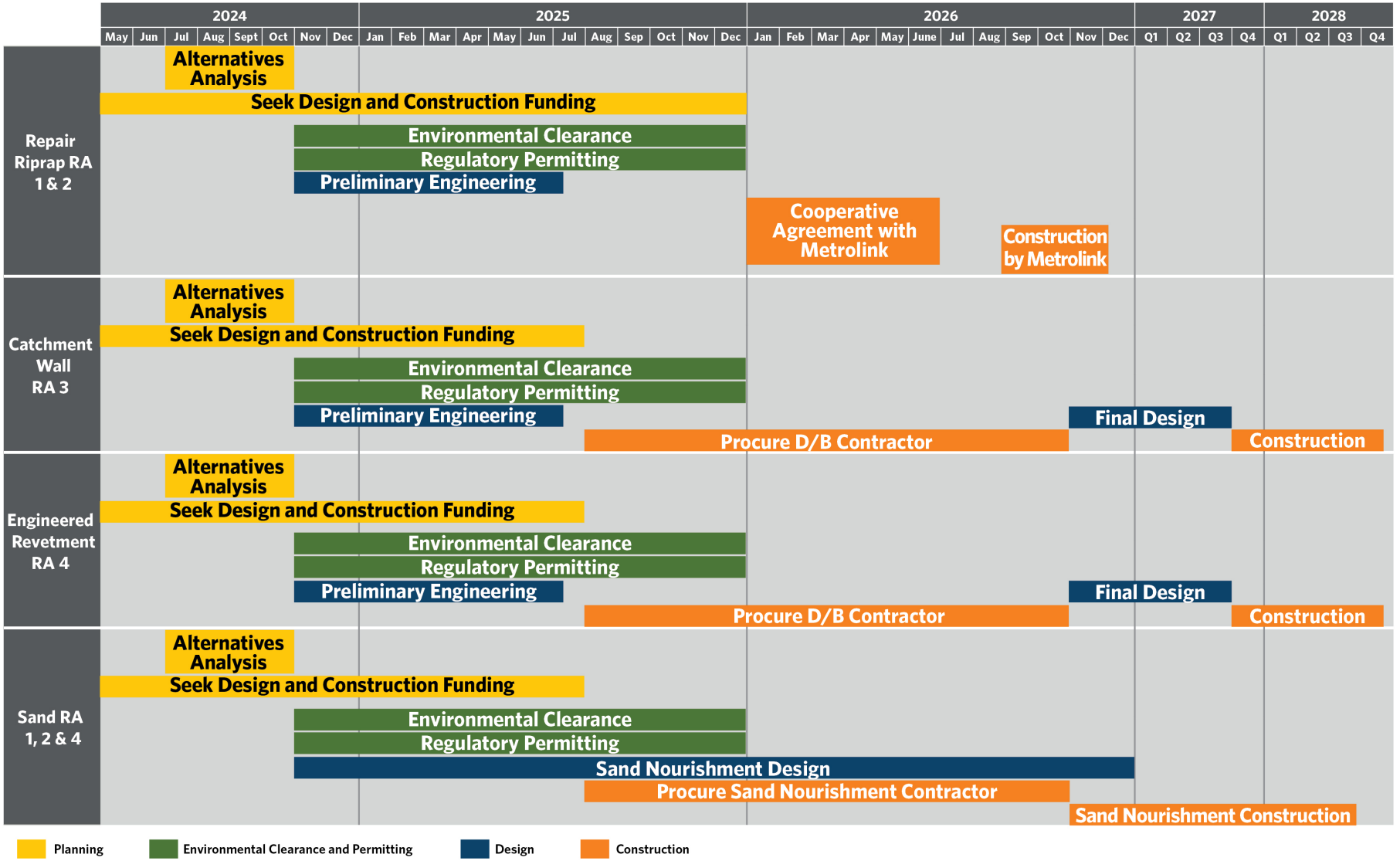
FINAL DESIGN & CONSTRUCTION

- Complete final design
- Construct improvements
- Construction close-out

CRRS: Coastal Rail Resiliency Study CEQA: California Environmental Quality ACT NEPA: National Environmental Policy Act

★ – Current Phase Board – Board of Directors USACE – Army Corps of Engineers CCC – California Coastal Commission SLC – State Lands Commission RWQCB - Regional Water Quality Control Board

Project Development Process*



*Subject to change, based on information available as of August 2024

Environmental Approach

- Perform environmental technical studies and surveys
- Identify appropriate CEQA level of documentation
- Identify NEPA lead agency and level of documentation
- Engage stakeholders consistent with requirements specific to CEQA/NEPA level of documentation

Regulatory Agencies Coordination

- Continue coordination with:
  - California Coastal Commission
  - United States Army Corps of Engineers
  - San Diego Regional Water Quality Control Board
  - State Lands Commission
- Ongoing discussion related to:
  - Existing challenges with the railroad
  - OCTA supportive of regional sand nourishment efforts
  - Expedited permitting process to protect critical rail infrastructure and recreational resources
  - Technical processes/guidance

CALIFORNIA COASTAL COMMISSION

CALIFORNIA WATER BOARDS San Diego - R9

US Army Corps of Engineers®

CALIFORNIA STATE LANDS COMMISSION

Project Cost Estimate

Construction	Armoring Cost Estimate ($1,000's)	Sand Nourishment Cost Estimate ($1,000's)
Reinforcement Area 1 – Maintain Riprap + Sand	$6,100 – $6,600	$5,200 – $11,800
Reinforcement Area 2 – Maintain Riprap + Sand	$29,800 – $31,600	$25,700 – $58,300
Reinforcement Area 3 – Catchment Wall	$62,200 – $66,300	-
Reinforcement Area 4 – Engineered Revetment + Sand	$84,900 – $90,500	$33,100 – $74,900
Subtotal	**$183,000 – $195,000**	**$64,000 – $145,000**
PROJECT TOTAL*	**$247,000 – $340,000**	

**Year of Estimate: 2024*

Funding Sources

Secured Funding	Grant Pursuits for Final Design and Construction
Project Approval / Environmental Document	Mega/INFRA grant – $180M (submitted May 6)
LTCAP 2023 - $3.82M (CTC allocation Aug 16)	CRISI – $100M (submitted May 28)
Local - $0.96M (highlighted state/local)	Advance TCEP – $80M (submitted July 3)
Final Design, Right-of-Way and Construction	TIRCP – $125M (submitted July 23)
SB 125 Transit Program - $50M	LTCAP 2024 – $25M (due August 30)
	TCEP 2024 – $80M (planned November)*
	LPP 2024 – $20M - $25M (planned November)
	PROTECT 2024 – $100M (TBD)

*Only required if Advance TCEP is not successful

CTC – California Transportation Commission CRISI – Consolidated Rail Infrastructure and Safety Improvements Mega - National Infrastructure Project Assistance grants
INFRA – Infrastructure for Rebuilding America LTCAP – Local Transportation Climate Adaptation Program TCEP – Trade Corridor Enhancement Program TIRCP – Transit and Intercity Rail Capital Program
LPP – Local Partnership Program SB 125 – Senate Bill 125 PROTECT – Promoting Resiliency Operations and Transformative, Efficient, and Cost-Saving Transportation

Delivery Risks

- Development of project preferred alternatives, which are acceptable to multiple permitting resource agencies
- Identification and permitting of a sufficient sand replenishment source location
- Developing and securing a timely sand transport and delivery method
- Coordination, approvals, and permitting required for additional revetment
- Obtaining sufficient funding for selected alternatives, sand delivery, and other mitigation
- Potential additional bluff failures during the project development process requiring emergency measures and rescoping of plans being developed

Next Steps

- Conduct preliminary engineering
- Perform environmental technical studies and surveys
- Identify NEPA lead agency
- Identify appropriate CEQA and NEPA level of documentation
- Engage stakeholders consistent with requirements specific to CEQA/NEPA level of documentation
- Continue to work with regulatory agencies to expedite permitting processes
- Continue to refine scope and cost estimate
- Continue to seek funding opportunities