



LOSSAN

Coastal Rail Corridor

San Diego Segment

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Del Mar Bluffs Stabilization Update

Del Mar City Council
February 3, 2020

KeepSanDiegoMoving.com

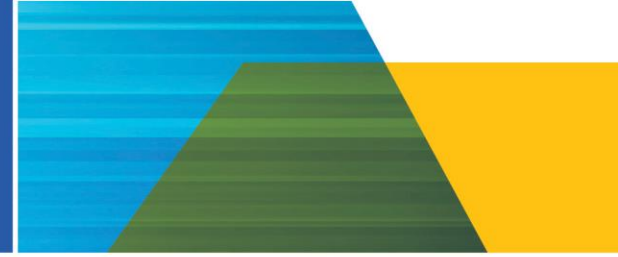
Del Mar Bluffs Project Area



Coast Boulevard

Torrey Pines Overhead Bridge

Del Mar Bluffs (DMB) Stabilization



1. Del Mar Bluffs 4 Update

- i. Scope of Work
- ii. Access

2. Emergency Project Update

3. Future Projects

- i. Del Mar Bluffs 5
- ii. Del Mar Bluffs 6
- iii. Long Term Solution



Del Mar Bluffs Stabilization 4

Improvements

- Repair existing drainage structures
- Use piles to stabilize slopes

Project budget

- Increased to \$5.78 million

Status

- Environmental clearance in April 2018
- Permits received spring 2019
- Construction bids received August 2019
 - Low Bid \$2.739m, Second Bid \$3.825m
 - NOITA issued to Blue Pacific Eng & Constr. Nov 21, 2019
- Notice to Proceed to be issued February 4, 2020



Del Mar Bluffs 4

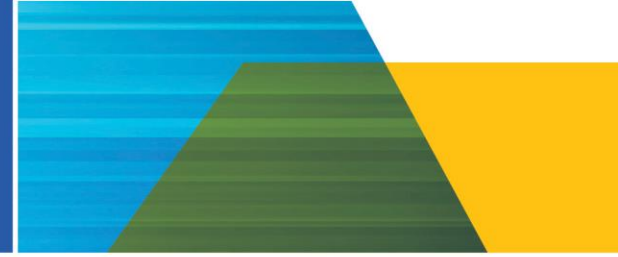
Stabilize Headwall MP 244.3



Replace headwall with rockscaped structure with soil nail tiebacks

Del Mar Bluffs 4

New Piling at Sea Walls



New supports for existing bluff toe protection walls.

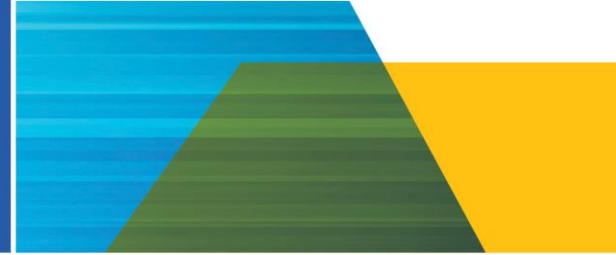
Del Mar Bluffs 4

Storm Chute below 12th Street



Stabilize outfall with concrete

Del Mar Bluffs 4 10th Street Wall Repairs



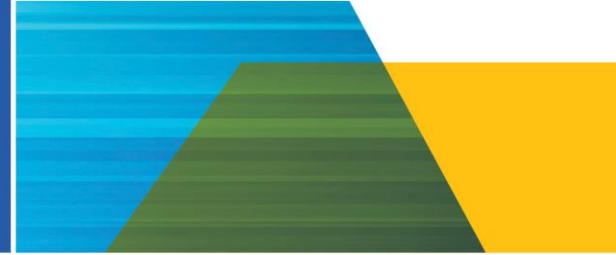
CIDH piles and lagging wall to support drainage channel

Del Mar Bluffs 4 9th Street Timber Wall Repair



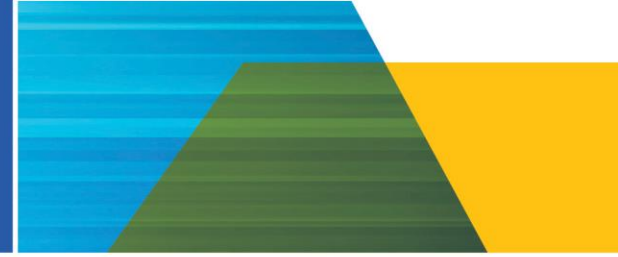
Timber posts and lagging to repair flood wall

Del Mar Bluffs 4 New Drainage Channel 6th to 8th St.



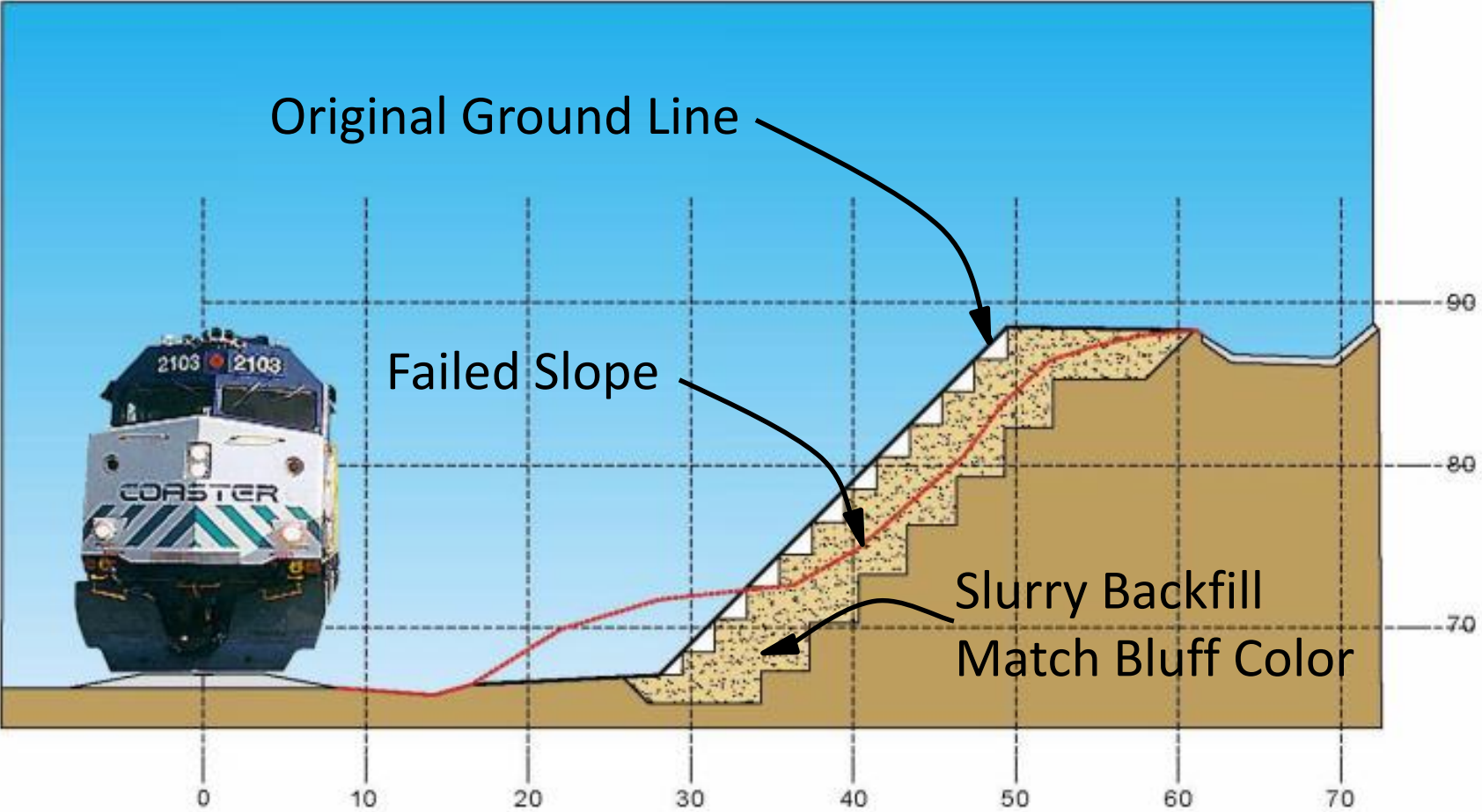
New concrete drainage channel to replace existing structure

Del Mar Bluffs 4 Grade Upper Bluff 6th to 8th St.



Add Stabilized Decomposed Granite Surfacing to Drain Water into Channel

Del Mar Bluffs 4 Slope Stabilization at 7th Street



Del Mar Bluffs 4 Anderson Canyon Stabilization



CIDH piles and lagging wall to support access road

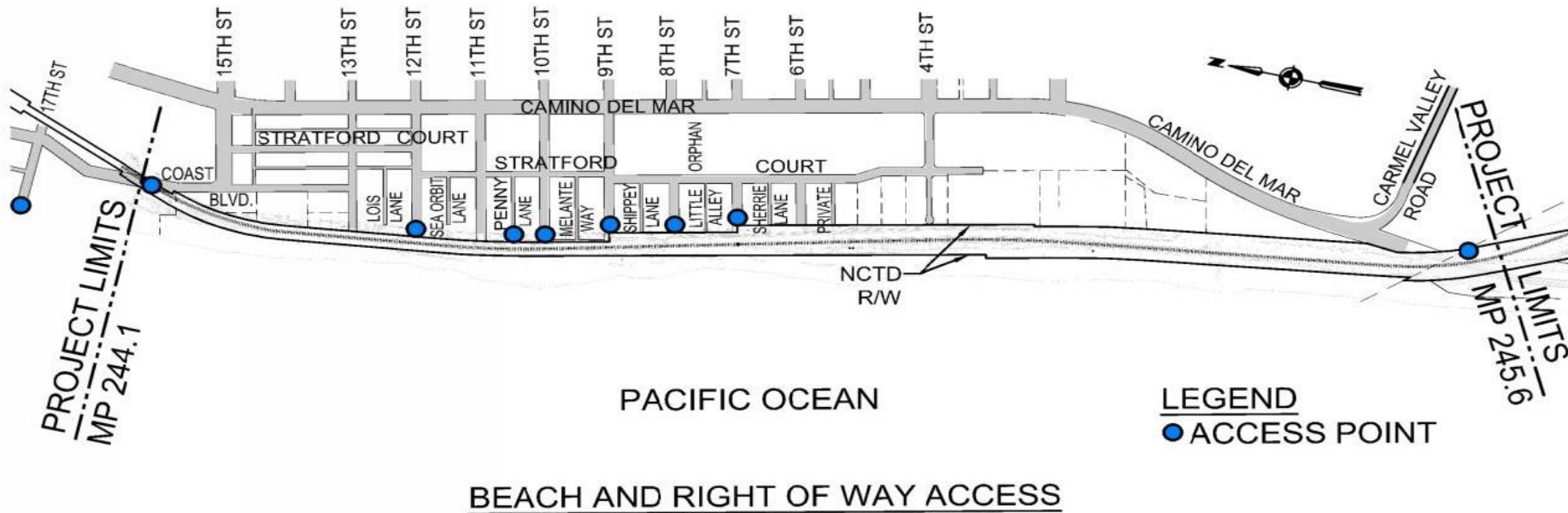
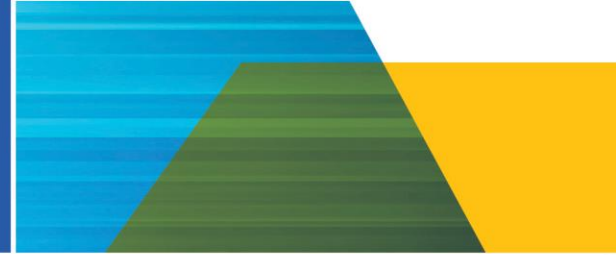
Del Mar Bluffs 4 Additional Work



- Remove Hydro-auger Debris
- Install Lighting Bollards at Powerhouse Park
- Repair Erosion Gully at Carmel Valley Rd



Del Mar Bluffs 4 Construction Staging and Access



Beach Access

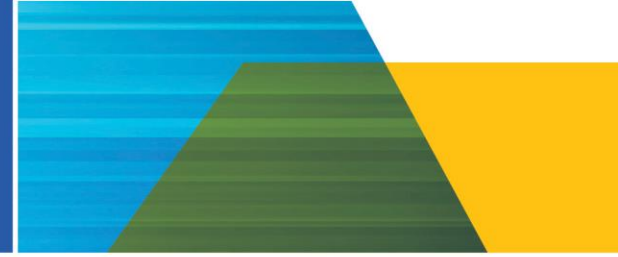
- Life Guard Tower (17th Street)
- State Park

Right of Way

- Coast Boulevard
- State Park
- 12th Street
- Penny Lane
- 10th Street
- 9th Street
- 8th Street
- 7th Street

Del Mar Bluffs 4

Construction Impacts



- Work days/hours
 - Monday through Friday
 - 7 a.m. – 7 p.m.
- Noise
- Lights
 - Only if night work is necessary
- Beach/bluffs access near work areas
- Parking
 - Contractor is working on traffic control/parking plan

Del Mar Bluffs 4 Construction Outreach

- City Council updates
- Postcards
- Door-to-Door
- Eblasts
- Social media
- Media outreach
- Third-party outreach
- Pop-ups



Connect with Us:

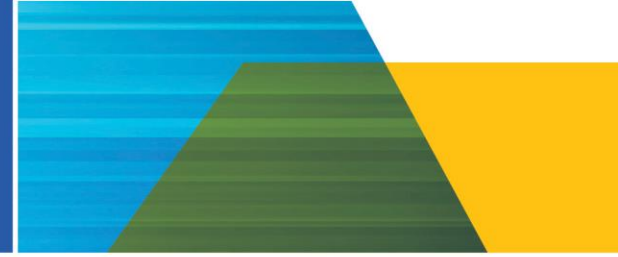
Website: KeepSanDiegoMoving.com/DelMarBluffs

Email: LOSSANRail@KeepSanDiegoMoving.com

Hotline: (858) 549-Rail

Del Mar Bluffs 4

Next Steps



- Contractor will:
 - Obtain NCTD Right of Entry Permit
 - Obtain Del Mar Business License
 - Prepare Traffic Control Plans and Obtain Encroachment Permit
 - Mobilize and Begin Work
- SANDAG will keep public and stakeholders informed of construction activities and impacts



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Del Mar Bluffs Emergency Project

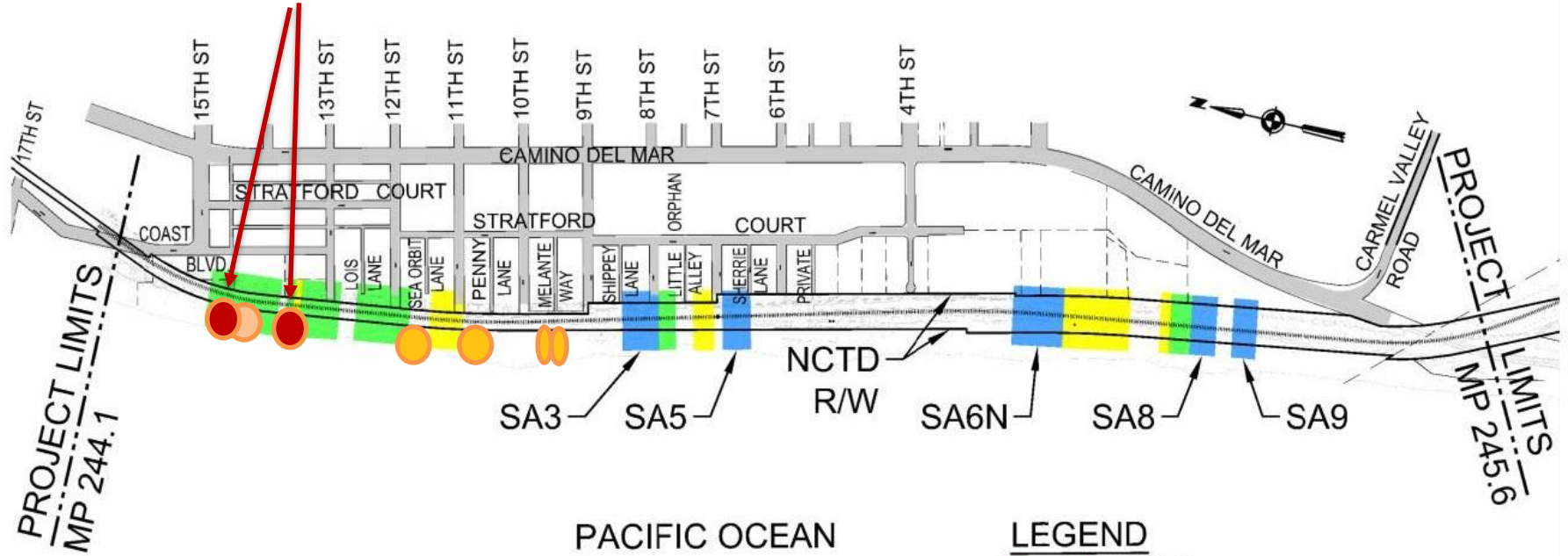
November 2019

KeepSanDiegoMoving.com

Del Mar Bluffs Emergency Project November 2019 Erosion



DMB Emergency Project: 14th-15th Street in 2019

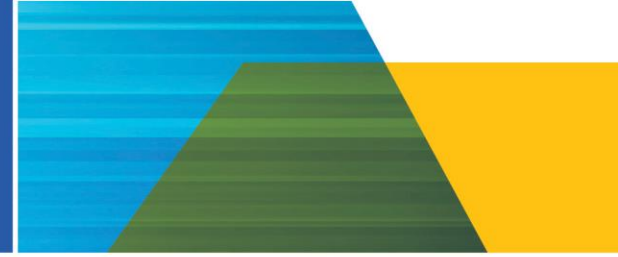


Del Mar Bluffs 2 and 3 – installed 230 piles and made drainage improvements

- LEGEND**
- DMB 2
 - DMB 3
 - DMB FUTURE
 - RETREAT EVENTS 2018
 - BLUFF EROSION NOV 2019
 - SA STABILIZATION AREA

DMB Emergency Project

Storm Damage west of 14th Street



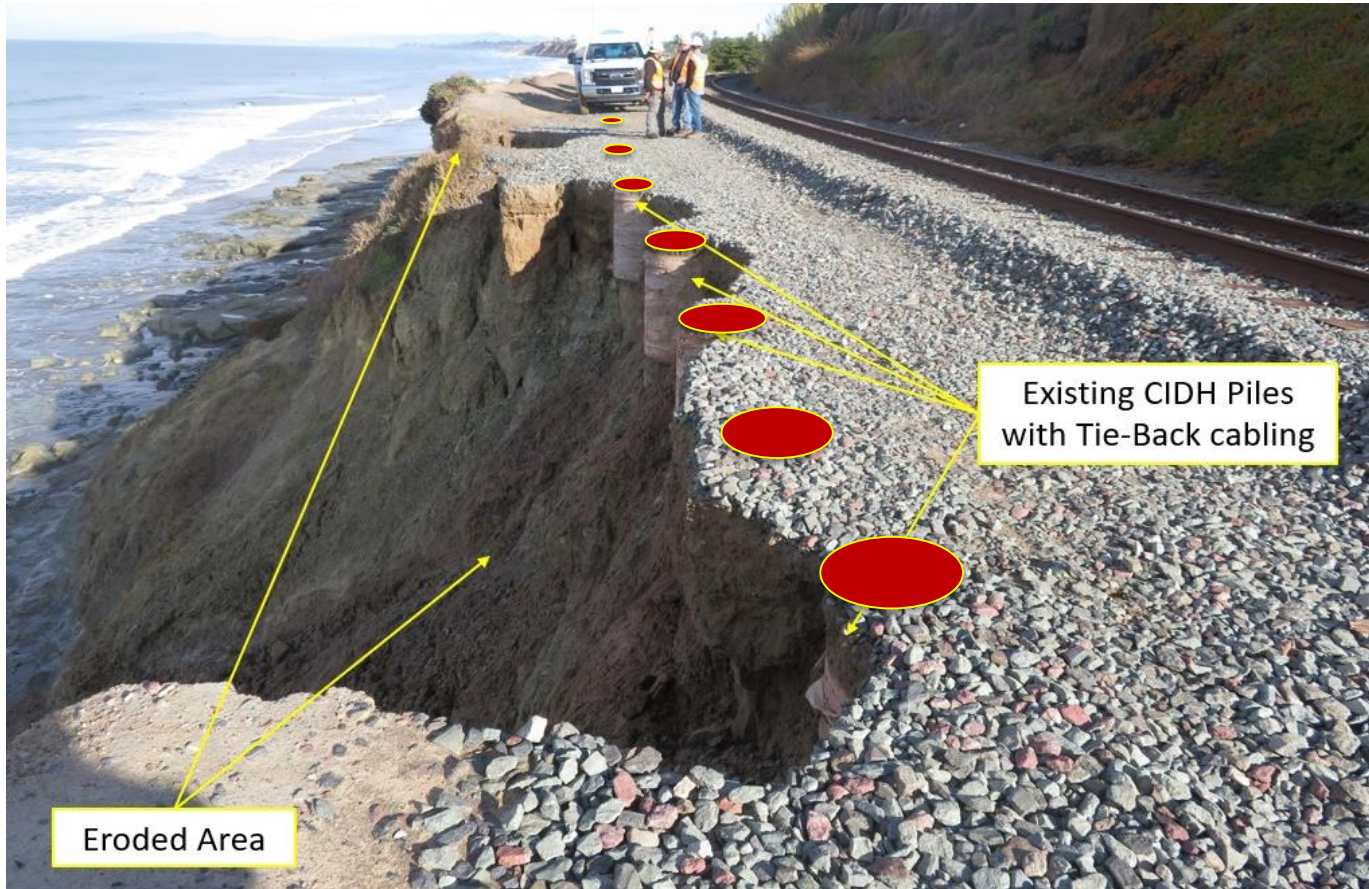
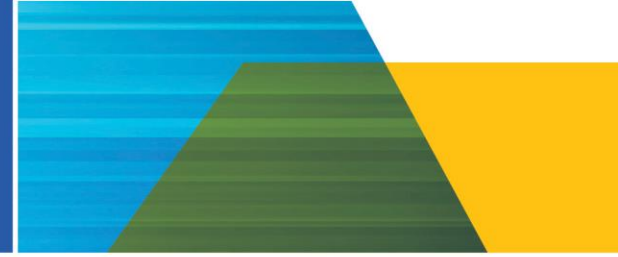
November 28-29, 2019

DMB Emergency Project Repairs

14th Street, Dec. 1, 2019



DMB Emergency Project Storm Damage 15th Street, December 1, 2019



Water running over bluff exposed the piles that are 3ft. in diameter and 40 to 60 ft. deep with 45 ft. long tie-back anchors. Piles designed to support track in case of bluff face slide or erosion

DMB Emergency Project Repairs

15th Street December 14 – 15, 2019



DMB Emergency Project

Completed Repair 15th Street





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Future Del Mar Bluffs Projects

Del Mar Bluffs Phase 5

Design started January 2020

- Reevaluate track stabilization needs for extending design life
- Review past assumptions on bluff retreat
- Reevaluate drainage capacity and needs

Scope will include

- More piles and tie backs
- Adding ground beam at top of piles
- Installing new drainage structures

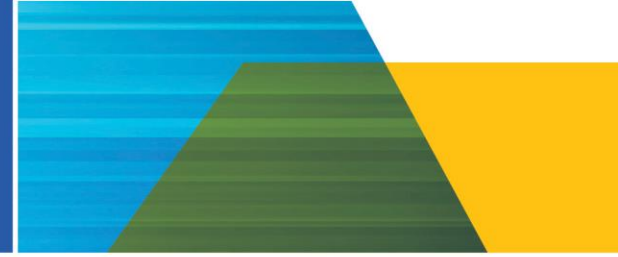
Design Estimate

- \$3.4 million and funded

Construction Estimate

- ROM \$24 million, unfunded





With continued bluff retreat and sea level rise, additional stabilization measures will be needed:

Del Mar Bluffs 6

- Alternatives analysis
- Consider bluff toe protection
- Stabilize bluff face and install lagging
- Considering coastal access

Rough Order of Magnitude Estimates

- Del Mar Bluffs 6 design \$7 million
- Construction \$60 to \$70 million



Bluff Alternative Alignments

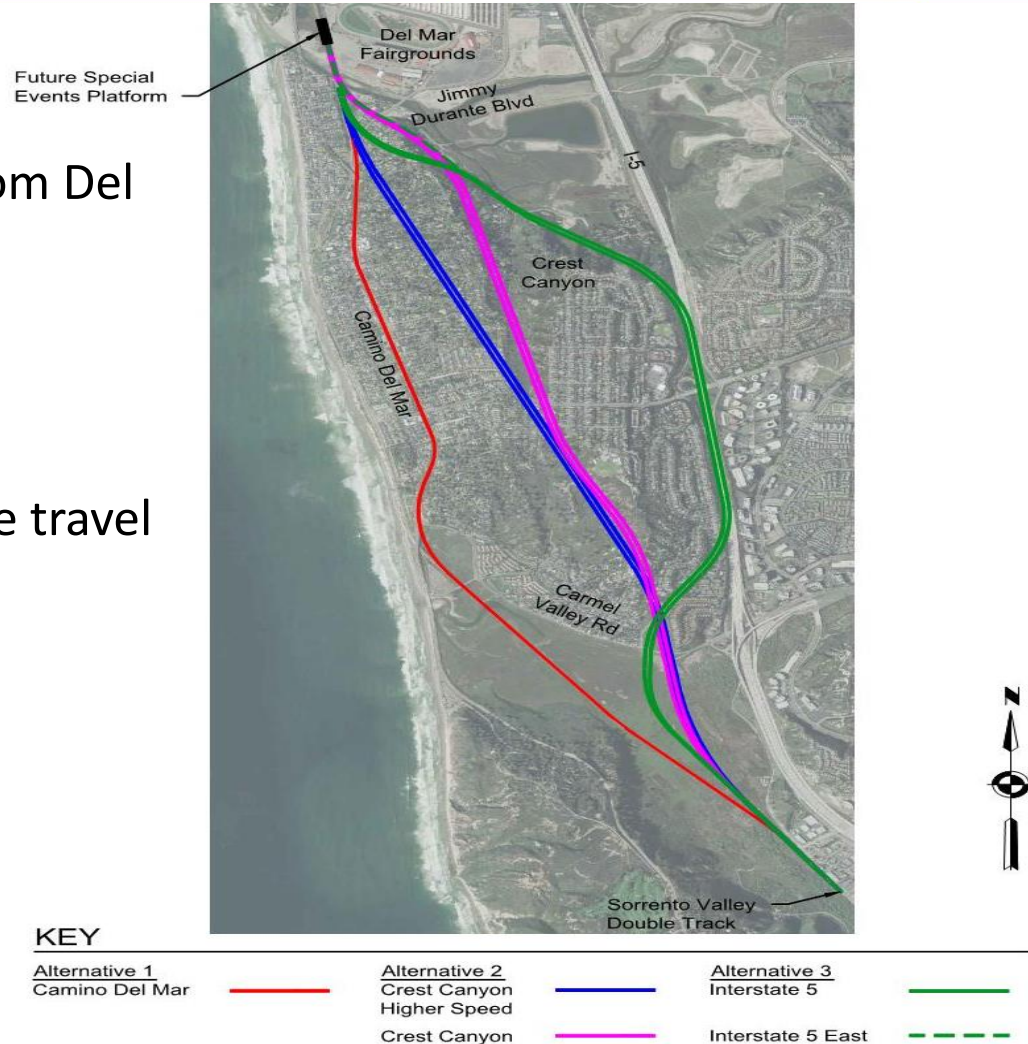
Advanced Planning Preliminary Concepts

Past Studies

- In 2017 we studied 5 alignments from Del Mar Fairgrounds to Sorrento Valley

Next Steps

- Eventually will need double track
- Focus on increasing speed to reduce travel time
- Reduce alternatives



QUESTIONS?

Project Contacts

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