West Trail Living Shoreline Project

Progress Update

San Mateo County Harbor District
Board of Harbor Commissioners Meeting
August 2020



Progress

Data Collection

Concept Design

Engineering

DRAFT FINAL
PLANS, SPECS & ESTIMATE
(August 2020)

Permitting

SUBMITTED
(July 2020)

Construction

(Fall / Winter 2020)

Shoreline Protection – Design Goals

- Protect trail from chronic erosion
- Use nature-based techniques, minimize hardscape
- Accommodate sea level rise

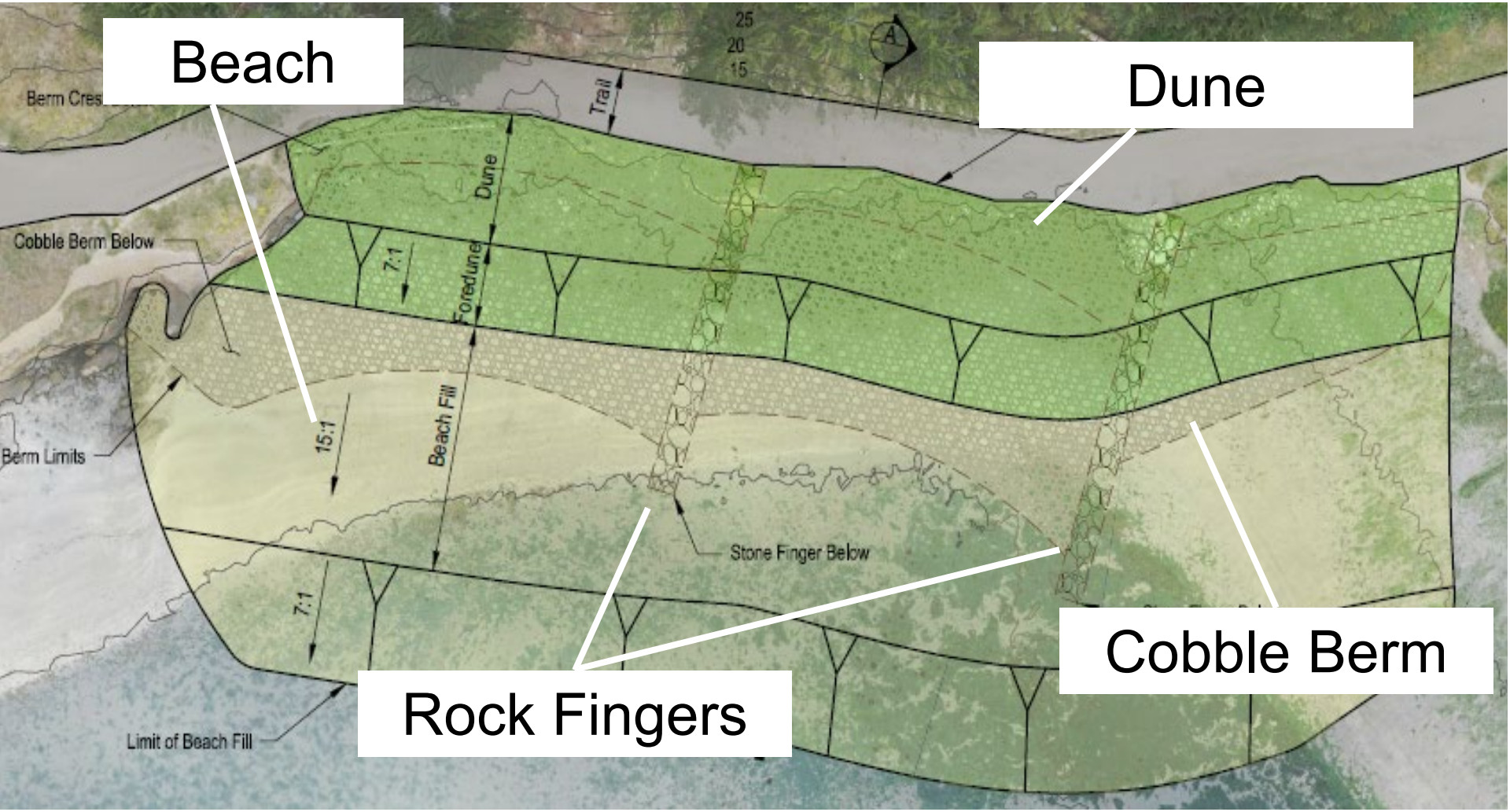
Stormwater Improvements – Design Goals

- Improve aesthetics and function
- Water quality and ecological enhancements

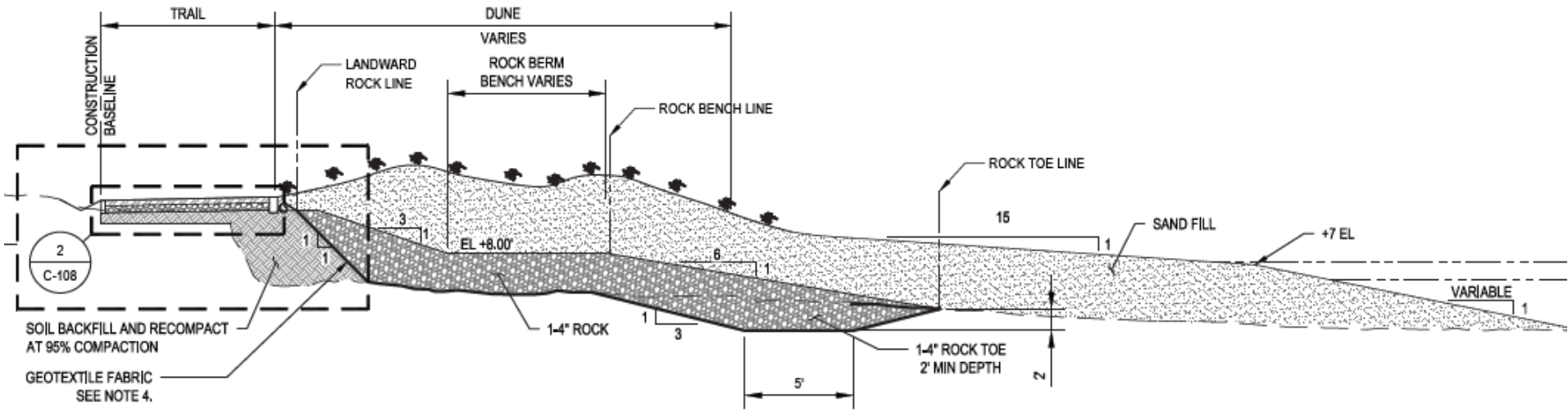
SHORELINE PROTECTION

(Photo: SMCHD 2020)

LIVING SHORELINE & TRAIL – PLAN VIEW



LIVING SHORELINE & TRAIL – TYPICAL SECTION



Mixed Sand / Cobble Beach Analog

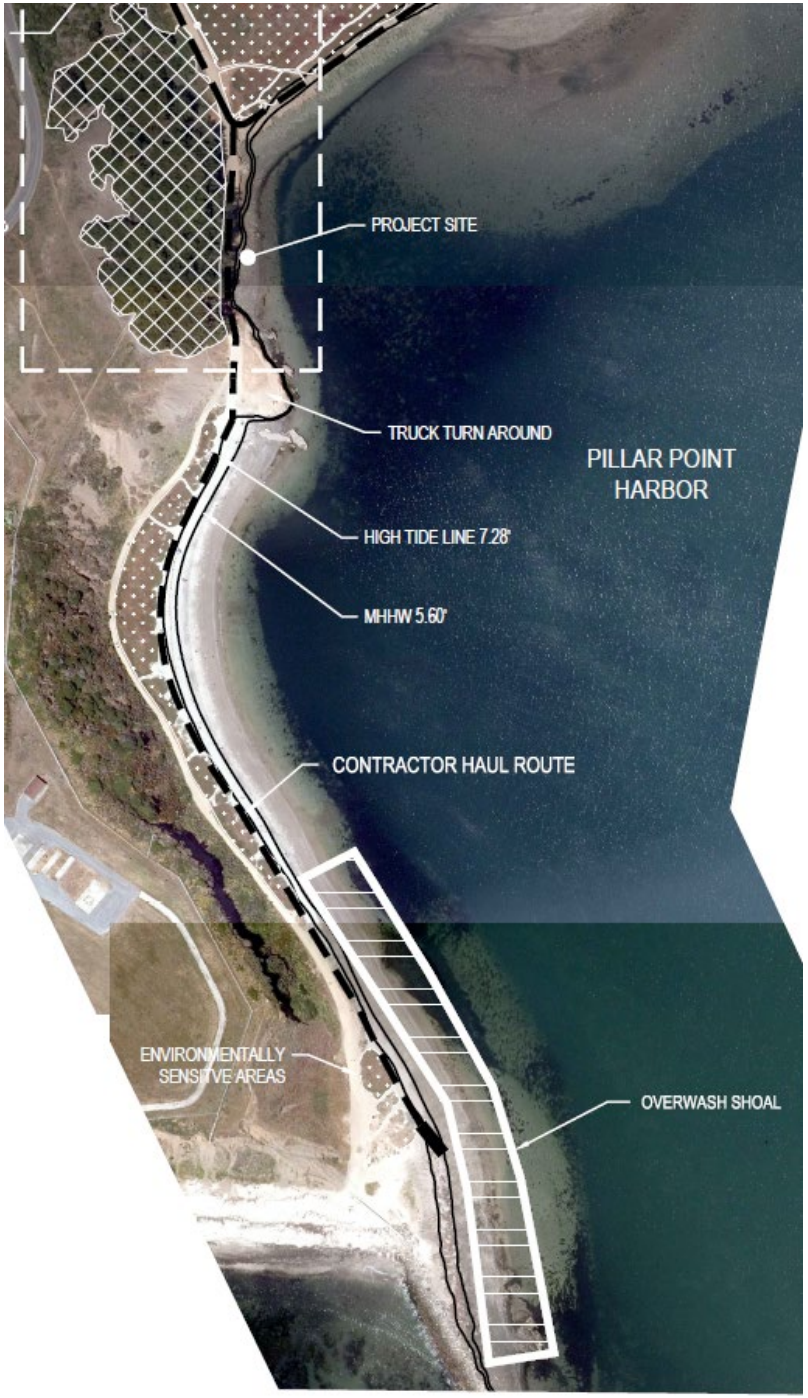
Surfer's Point, Ventura, CA

SAND SOURCES

Need = 7,000 CY

Sources:

- Overwash Shoal – 5,400 CY
- Airport Stockpile – 1,600 CY

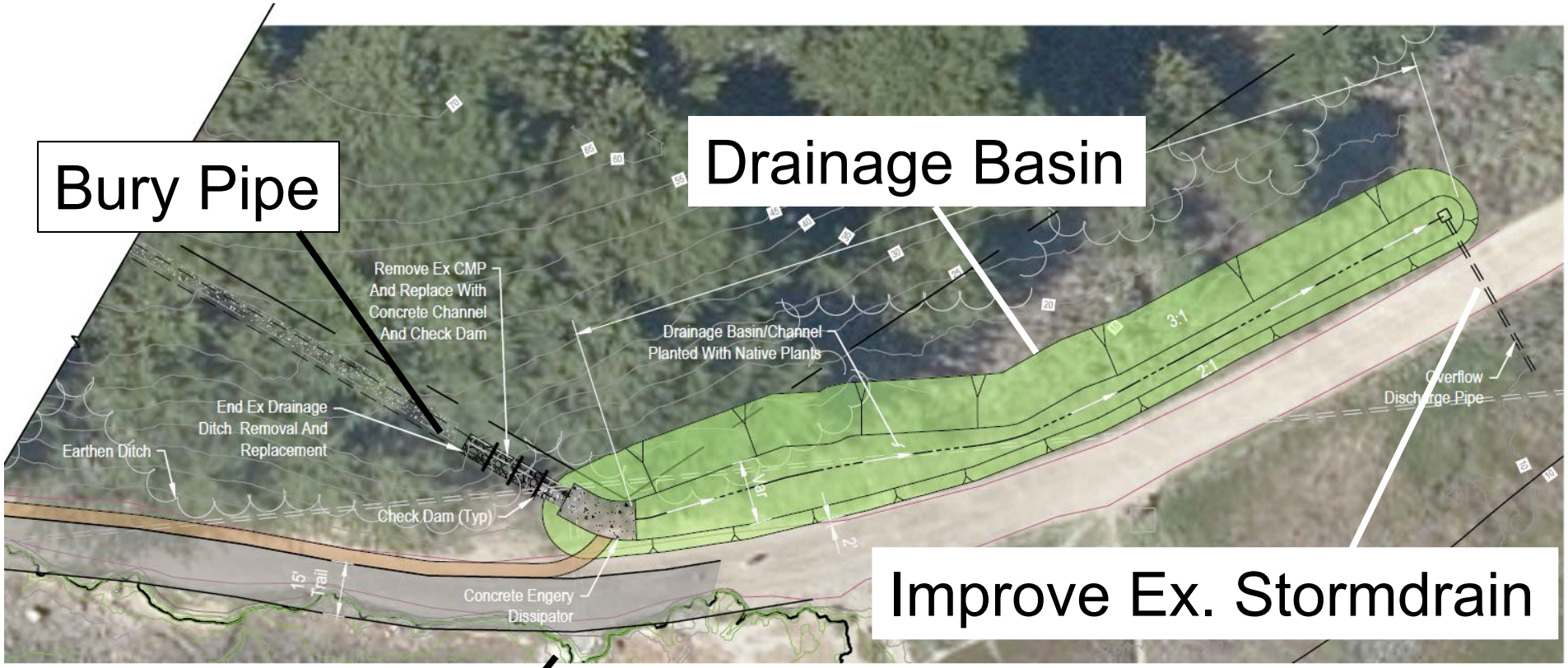


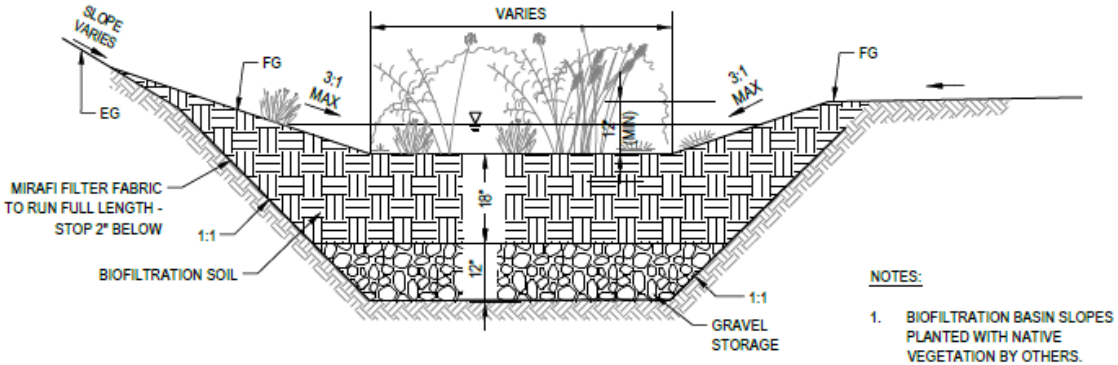
ROCK SOURCES

- 1-4” Rock - Need 4,500 CY
- 4-10 Ton Rock – Need 500 CY

Source: Re-use and Quarry

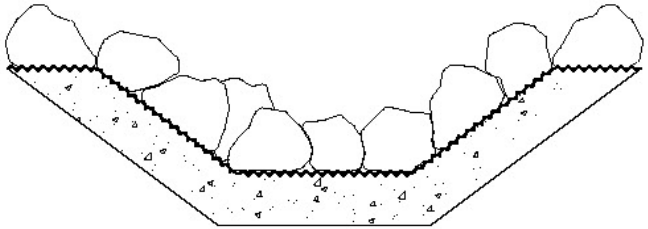
STORMWATER IMPROVEMENTS


Bury Pipe
Drainage Basin
Remove Ex CMP
And Replace With
Concrete Channel
And Check Dam
Drainage Basin/Channel
Planted With Native Plants
3:1
2:1
Overflow
Discharge Pipe
End Ex Drainage
Ditch Removal And
Replacement
Earthen Ditch
Check Dam (Typ)
15' Trail
Concrete Engery
Dissipator
Improve Ex. Stormdrain
Remove Existing Outfall

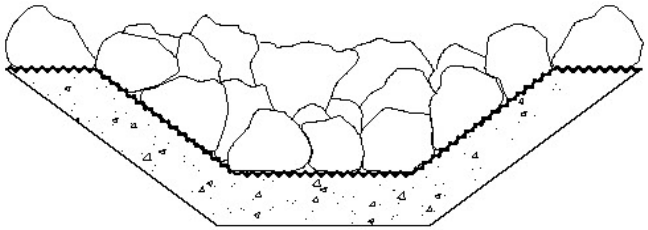


C - TYPICAL BIOFILTRATION CROSS-SECTION

NOT TO SCALE



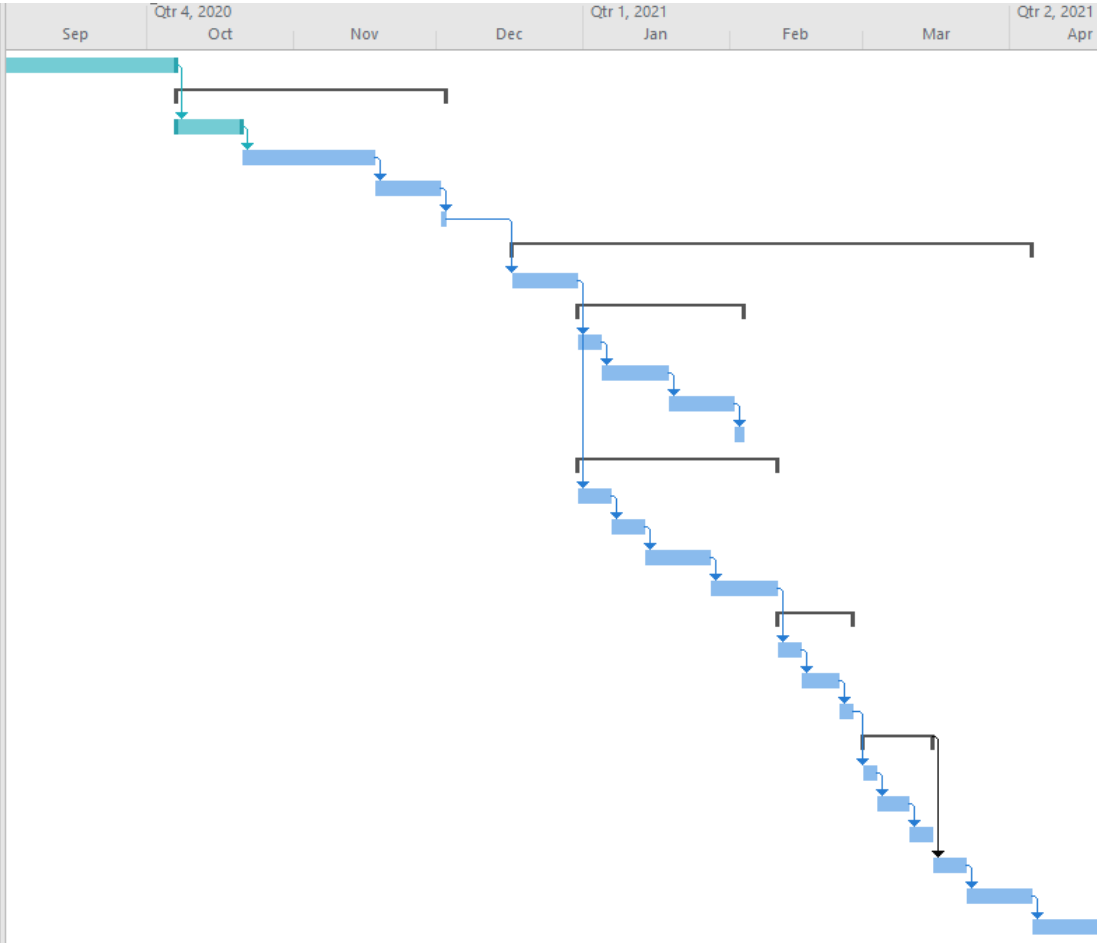
Rock-lined Channel



Check Dam

Construction Schedule

Task Name	Duration	Start	Finish
CEQA & Permits	60 edays	Sat 8/8/20	Wed 10/7/20
Bid Phase	**41 days**	**Wed 10/7/20**	**Wed 12/2/20**
Bid Package Final Edits	2 wks	Wed 10/7/20	Tue 10/20/20
Bid Period	4 wks	Wed 10/21/20	Tue 11/17/20
Bid Assessment	2 wks	Wed 11/18/20	Tue 12/1/20
Bid Award	1 day	Wed 12/2/20	Wed 12/2/20
Construction	**78 days**	**Thu 12/17/20**	**Mon 4/5/21**
Mobilization	2 wks	Thu 12/17/20	Wed 12/30/20
Storm Drain on Hillside	**25 days**	**Thu 12/31/20**	**Wed 2/3/21**
Demolition	3 days	Thu 12/31/20	Mon 1/4/21
24" Concrete Pipe & Inlet	2 wks	Tue 1/5/21	Mon 1/18/21
Concrete Channel	2 wks	Tue 1/19/21	Mon 2/1/21
Energy Dissipator	2 days	Tue 2/2/21	Wed 2/3/21
New Shoreline	**30 days**	**Thu 12/31/20**	**Wed 2/10/21**
Clear and Stockpile Native Material	1 wk	Thu 12/31/20	Wed 1/6/21
Rock Fingers	1 wk	Thu 1/7/21	Wed 1/13/21
1"-4" Rock	2 wks	Thu 1/14/21	Wed 1/27/21
Sand	2 wks	Thu 1/28/21	Wed 2/10/21
Biofiltration Basin	**12 days**	**Thu 2/11/21**	**Fri 2/26/21**
Excavate	3 days	Thu 2/11/21	Mon 2/15/21
Fill	6 days	Tue 2/16/21	Tue 2/23/21
Storm Drainage	3 days	Wed 2/24/21	Fri 2/26/21
New Path	**11 days**	**Mon 3/1/21**	**Mon 3/15/21**
Grading and Swale	3 days	Mon 3/1/21	Wed 3/3/21
Concrete and Timber Headers	5 days	Thu 3/4/21	Wed 3/10/21
DG Pavement	3 days	Thu 3/11/21	Mon 3/15/21
Site Cleanup & Demobilize	1 wk	Tue 3/16/21	Mon 3/22/21
Non-Working/Weather Days Allowance	10 days	Tue 3/23/21	Mon 4/5/21
Planting Dune and Biofiltration Basin	2 wks	Tue 4/6/21	Mon 4/19/21



Construction & Monitoring – Anticipated Costs

Hard costs:

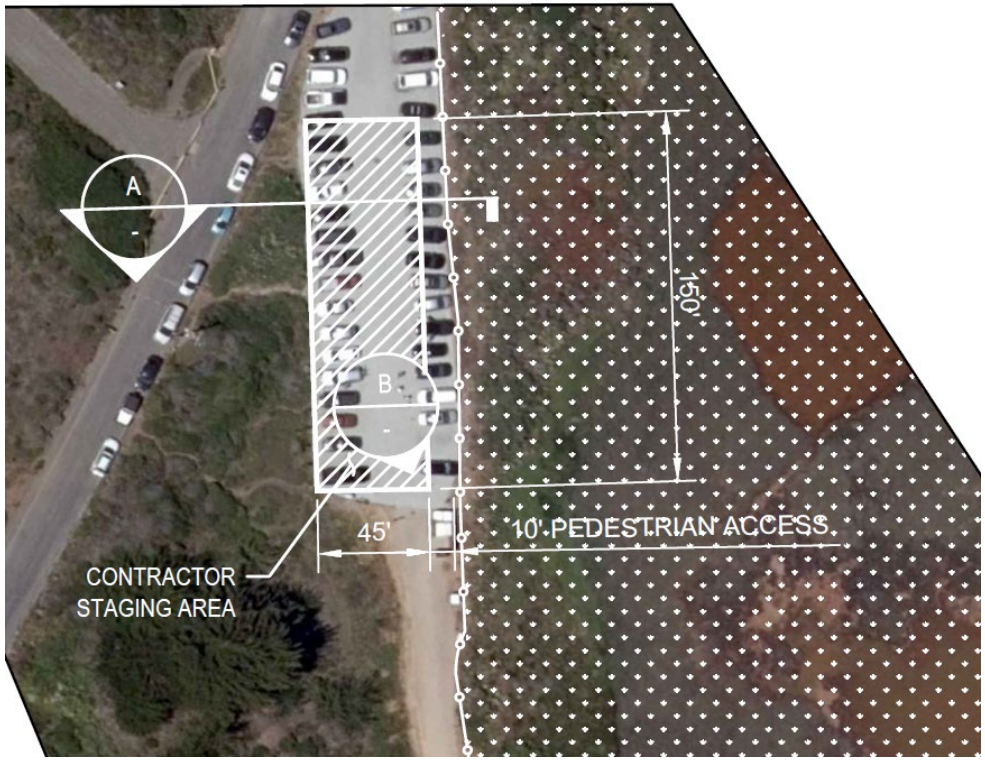
- ~$2.0M with 20% Contingency
- Native Planting & Maintenance

Soft costs:

- Restoration plan
- Construction management
- Biological monitoring
  - Eelgrass
  - Listed species
- Physical monitoring
- Renourishment?

CONSTRUCTION DETAILS

- Import of Sand & Gravel
- West Point Parking Lot
- Night work requested to Minimize Impacts



Grants & Permitting

Grant Funding Investigations

- Grant opportunities were researched and explored throughout Project planning.
- National Fish and Wildlife Foundation Grant applied for, late 2019.
- Honda Foundation Grant.

Permitting and Agency Consultation

Multiple Permits Required:

- *U.S. Army Corps of Engineers*—Individual Permit CWA Section 404; RHA Section 10.
- *Regional Water Quality Control Board*—Section 401 Water Quality Certification/Waste Discharge Requirement.
- *Coastal Commission/County*—Consolidated Coastal Development Permit.

Consultations: U.S. EPA; NOAA Fisheries (NMFS); Cal Department of Fish and Wildlife

US Army Corps of Engineers®

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

NOAA FISHERIES

CALIFORNIA COASTAL COMMISSION

CALIFORNIA DEPARTMENT OF FISH & WILDLIFE

CALIFORNIA WATER BOARDS San Francisco Bay - R2

GHD

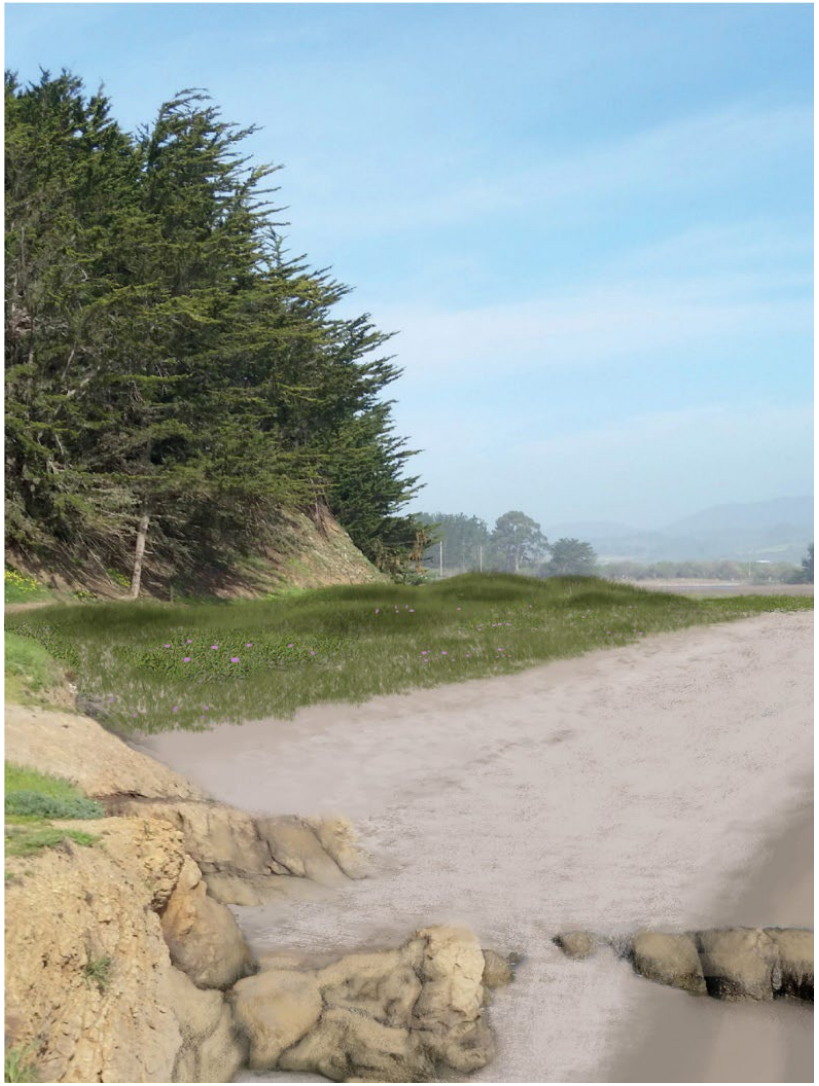
Permitting and Environmental Approvals

- CEQA Draft MND - Public comment thru August 21

- Permitting
  - Applications submitted in July 2020, currently under review by agencies.
  - Anticipate permits by Fall 2020.
  - Monitoring and reporting required during and after construction.

Next Steps

- Bidding Process – 40 days (October 2020)
- CEQA & Permits (Fall 2020)
- Mobilization – 14 days (November 2020)
- Construction – 120 days (March 2021 completion)
- Dune and Biofiltration planting (Spring 2021)



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