

Tidewater Site Remedy Presentation

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THE TIDEWATER SITE



Image courtesy of Google Professional

CURRENT CONDITIONS - TIDEWATER SITE



**Former Wharf
Central Portion of Site**



**Granite Stone Block Wall
and Steel Sheeting**



**Granite Stone Block Walls
Northern Portion of Site**



**Manmade Earthen Riverbank
Southern Portion of the Site**



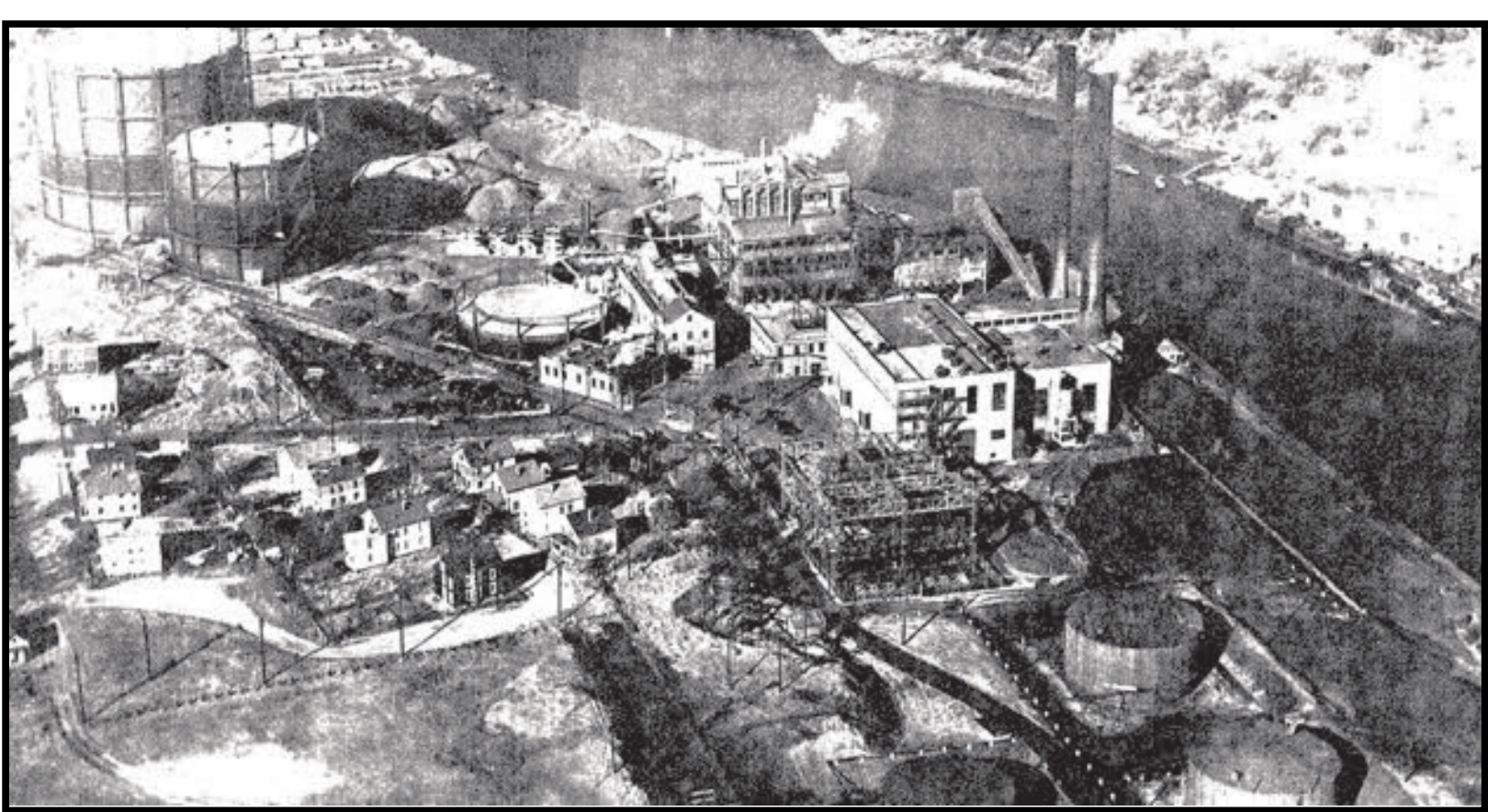
**Chain Link Fencing
Northwest Portion of the Site**



**Chain Link Fencing
Southwest Portion of the Site**

SITE HISTORY

The Tidewater Site has a long History of industrial use dating back to at least 1881. Site operations, including the historic Manufactured Gas Plant (MGP), provided essential electric and gas service to the community for over 130 years. Large areas of the site are currently vacant. Current operations include a natural gas regulation facility, electrical transmission facilities and an electrical switch and substation facility.



- 1881

The Pawtucket Gas Company constructs the Tidewater Manufactured Gas Plant (MGP) to produce manufactured gas from coal and oil using industrial processes.
- 1908

Blackstone Valley Gas and Electric Company (BVG&E) purchases the Pawtucket Gas Company.
- 1938

The Great Hurricane of 1938 causes significant damage to the MGP and power plant.
- 1961

Valley Gas Company (VGC) acquires the MGP from BVG&E.
- 1962

The transmission towers are first evident in historical records for the power plant.
- 1975

The power plant is officially decommissioned.
- 1986

Site investigations begin.
- 2000

National Grid acquires the Rhode Island electric utility and the electric portion of the Tidewater Site.
- 2006

National Grid acquires the Rhode Island gas utility and the gas portion of the Tidewater Site.
- 2017

Performance of Limited Design Investigation
- 2019

RAWP Addendum submitted to RIDEM

Period of MGP Operations

National Grid Ownership of the Former Gas Plant Area and the North Fill Area

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Period of Active Power Plant Operations

National Grid Ownership of the Former Power Plant Area and the South Fill Area

- 1890

Pawtucket Gas Company constructs the power plant.
- 1923

Power plant changes its primary fuel from coal to oil.
- 1954

Majority of MGP operations ceases, though oil gas is produced on an as-needed basis to supplement available natural gas supply until approximately 1968.
- 1968

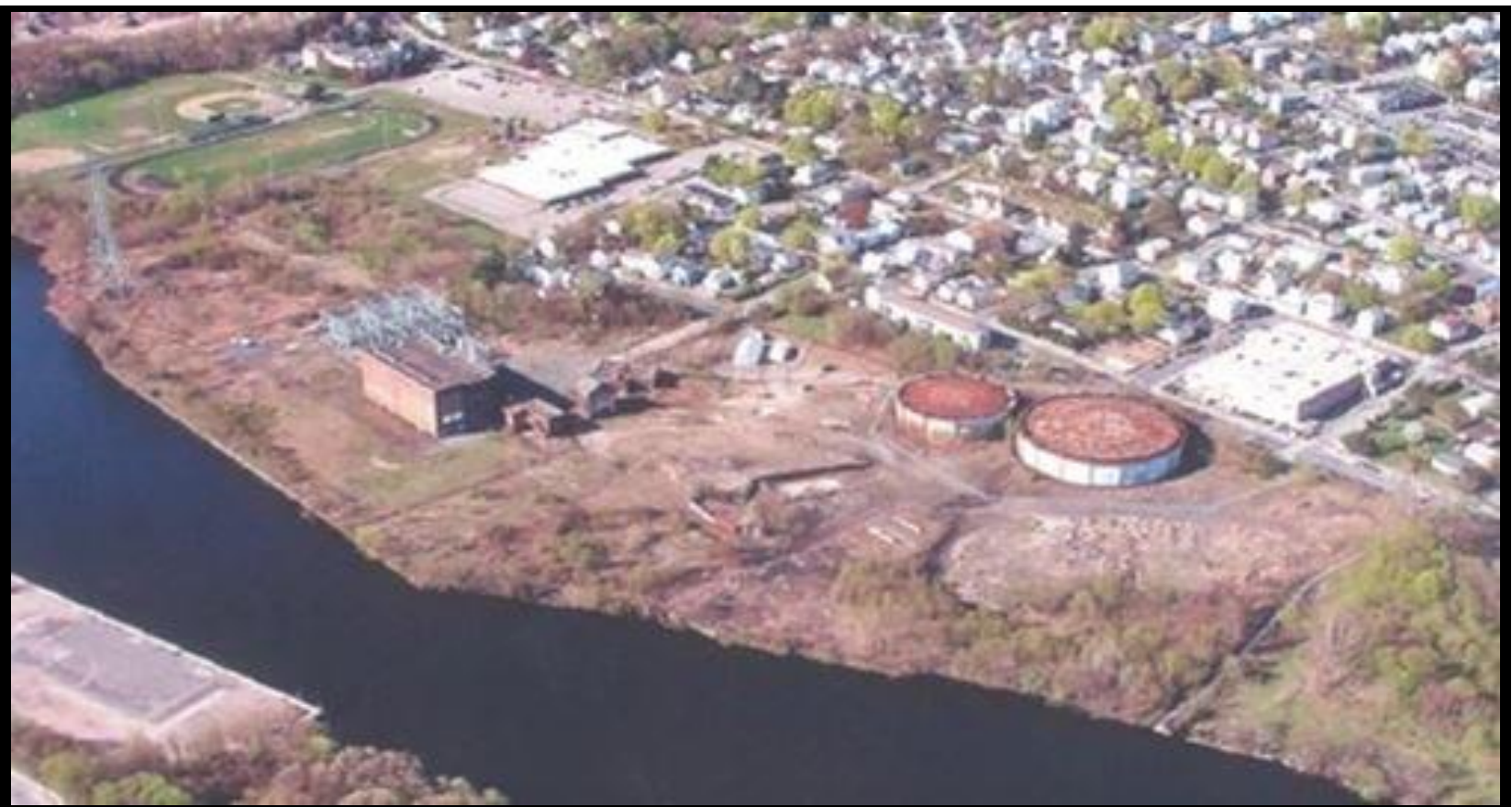
The Blackstone Valley Electric Company (BVEC) acquires the power plant from BVG&E. The MGP is officially decommissioned. The City of Pawtucket acquires portions of the southernmost section.
- 1995

Rhode Island Department of Environmental Management (RIDEM) issues a Letter of Responsibility to BVEC and VGC.
- 2009-2016

Facility upgrades include:
 - Natural Gas Regulating Station upgrades
 - Gasholders Nos. 7 and 8 decommissioned and demolished
 - Pawtucket No.1 Substation and Switching Station modifications
 - Former gas buildings demolished
 - Repair of the south washout area
- 2018

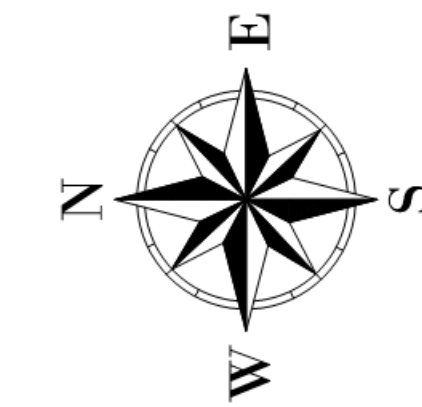
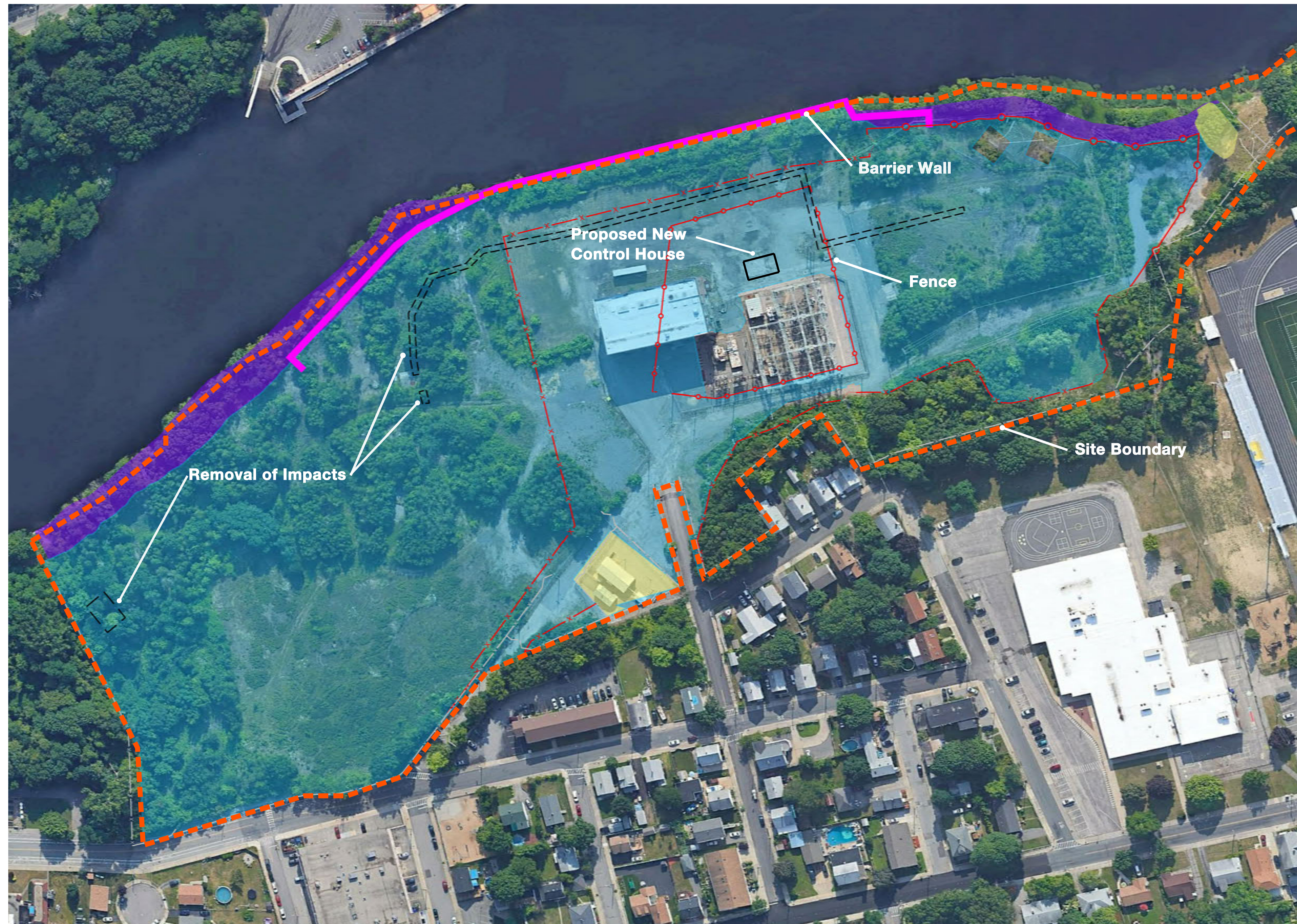
Remedial Action Work Plan Submitted to RIDEM
- 2020

RIDEM Issued Order of Approval



REMEDIAL LAYOUT PLAN

The remedy for the Site consists of targeted removal of certain impacts, installation of a subsurface barrier wall designed to protect the Seekonk River and the use of engineered caps to isolate impacts. This remedy was selected based on its ability to address Site impacts while minimizing community disturbance during implementation.



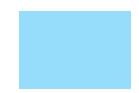
LEGEND	
	Engineered Cap Cap
	Previously Capped Areas
	Rip Rap Cap
	Substation Fencing
	Perimeter Fencing

Image courtesy of Google Professional

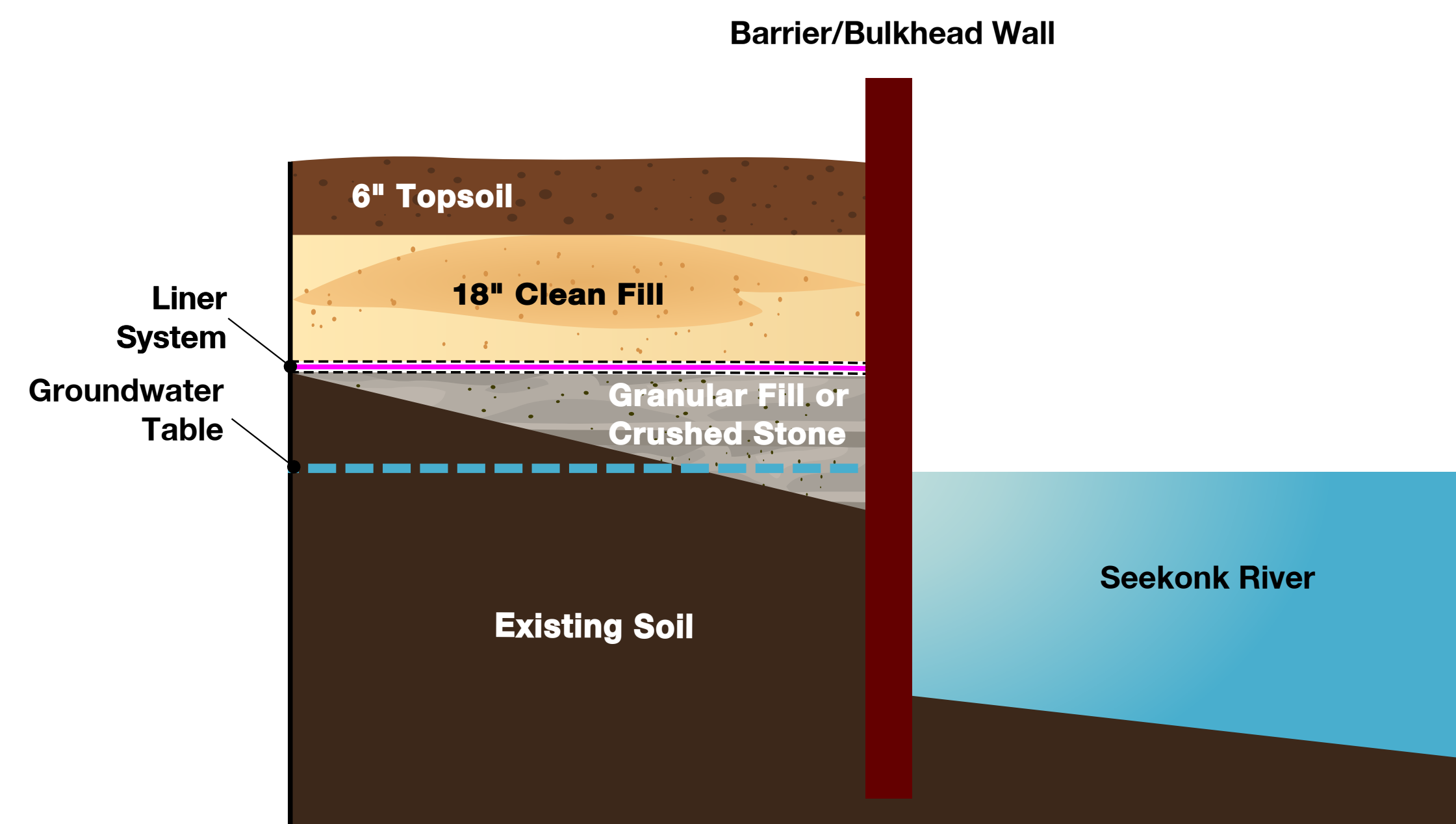
FOR MORE INFORMATION, PLEASE VISIT WWW.TIDEWATERSITE.COM

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BARRIER WALL DETAILS

A subsurface barrier wall, installed along the Seekonk River, will prevent the migration of impacted groundwater and non-aqueous phase liquids (NAPLs)

BARRIER/BULKHEAD WALL

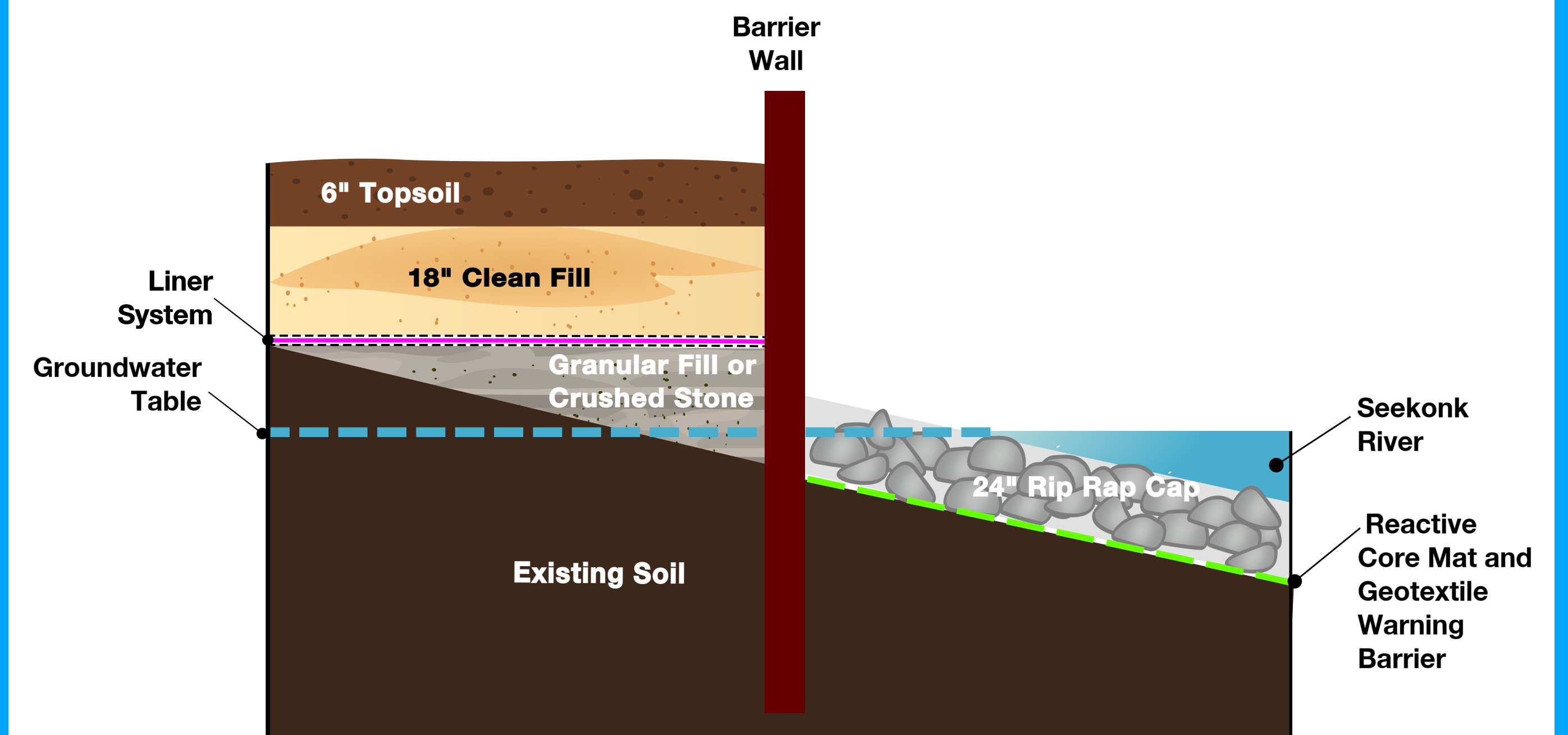


WHAT TO EXPECT
Examples from other projects



Construction of Barrier Wall - Sheet Pile Installation

BARRIER WALL WITH RIP RAP RETAINING SLOPE



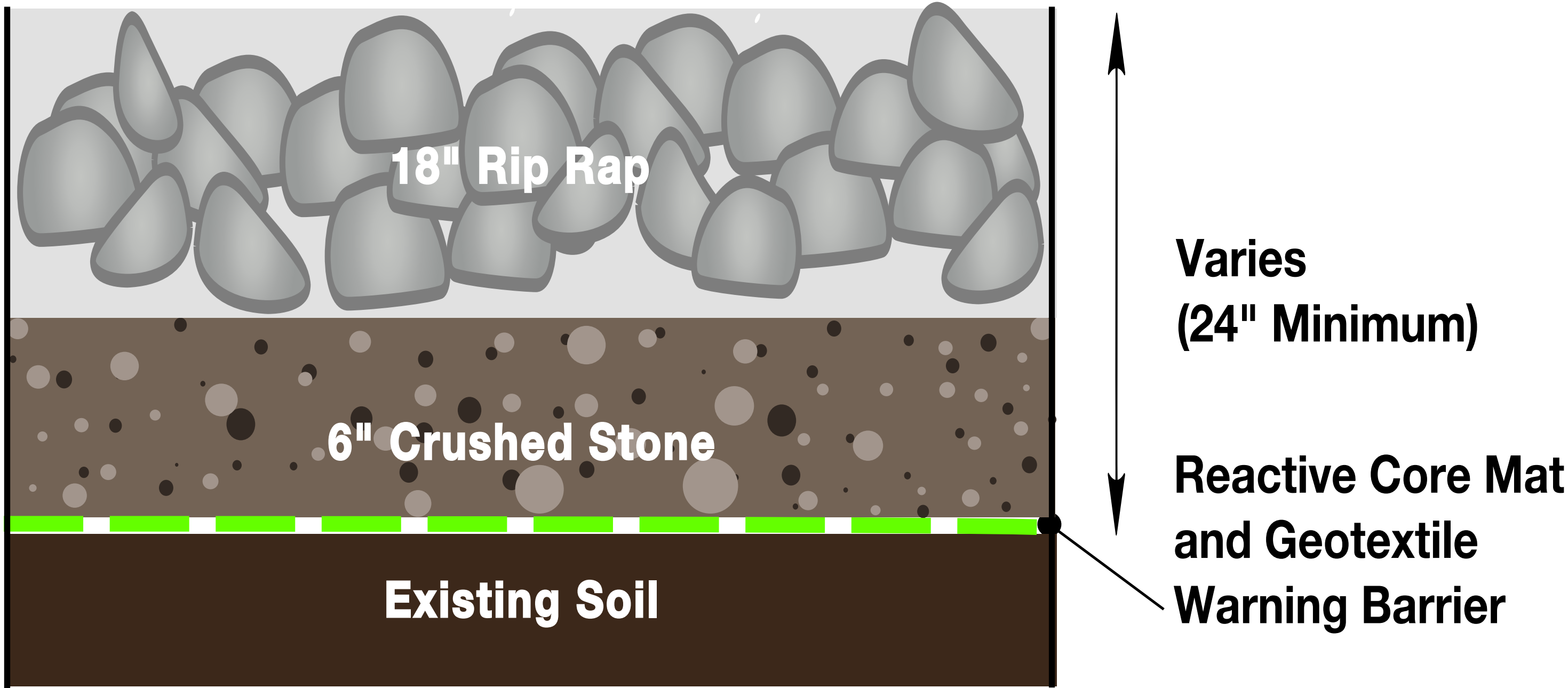
WHAT TO EXPECT
Examples from other projects



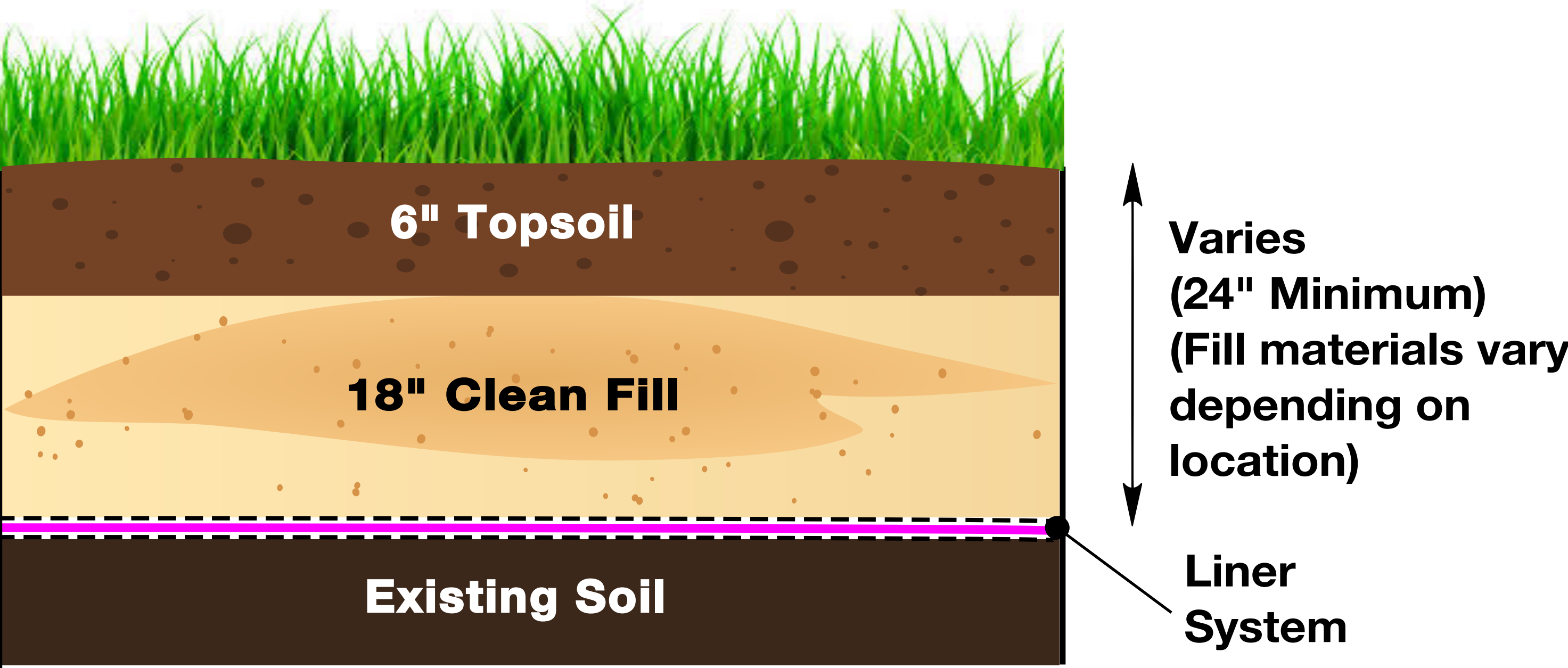
Shoreline Improvement

ENGINEERED CAP DETAILS

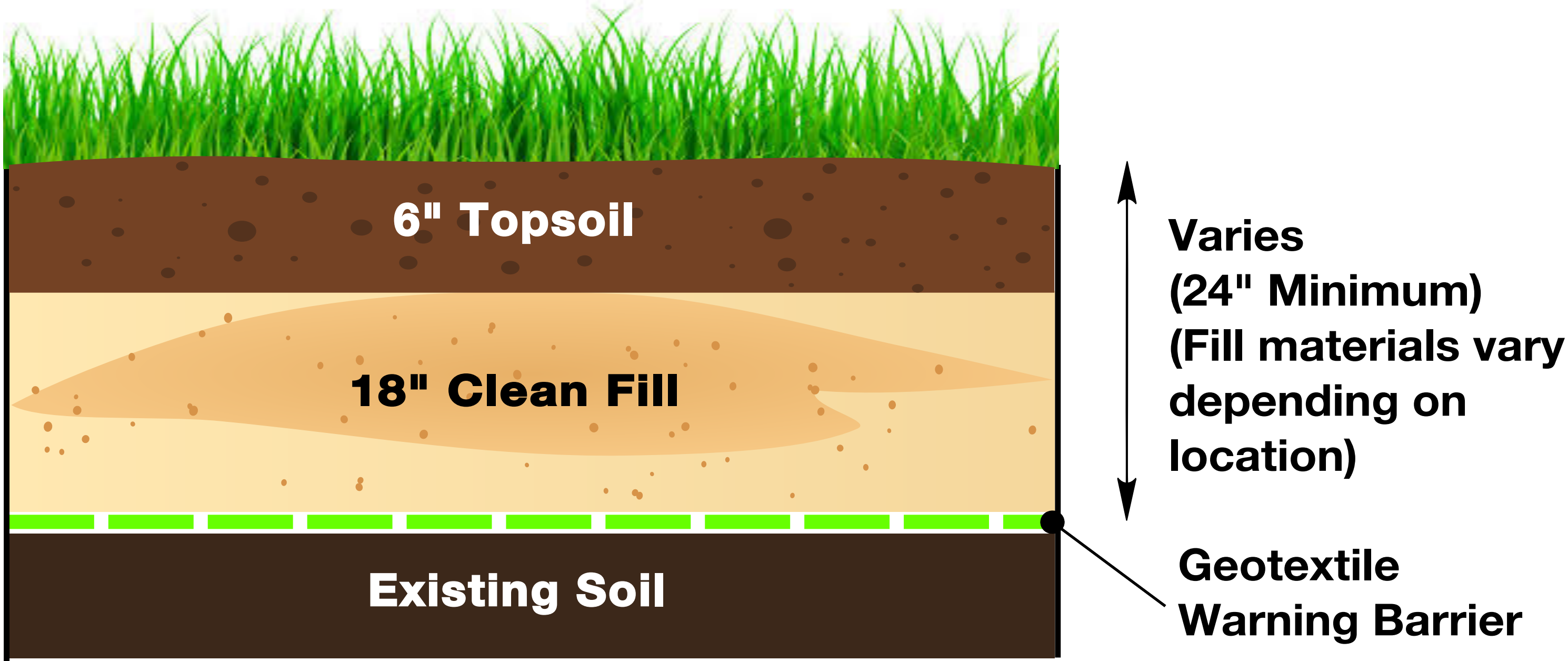
Rip Rap Cap



Impermeable Cap



Permeable Cap



MATERIAL IMPORT AND DISPOSAL

The Tidewater Site remedy includes excavation and disposal of targeted impacted areas,as well as the installation of an engineered cap to prevent direct contact with Site materials and protect groundwater. In order to install the engineered cap and minimize the amount of materials needed to be transported offsite, National Grid will re-grade the Tidewater Site. Clean fill materials will be transported onto the Site to construct the cap.



ROUTES

From Site to I-95N:
Taft Street to Roosevelt Avenue Extension
Roosevelt Avenue Extension to Main Street
Main Street to I-95N On-Ramp

From Site to I-95S:
Taft Street to Jenks Way
Jenks Way to Pleasant Street
Pleasant Street to Grace Street
Grace Street to George Street
George Street to Cedar Street
Cedar Street to I-95S On-Ramp

From I-95N to Site
Marrin Street to Grace Street
Grace Street to Pleasant Street
Pleasant Street to Jenks Way
Jenks Way to Taft Street
Taft Street to Tidewater Street

From I-95S to Site
Cedar Street to George Street
Geirge Street to Grace Street
Grace Street to Pleasant Street
Pleasant Street to Jenks Way
Jenks Way to Taft Street
Taft Street to Tidewater Street

WHAT TO EXPECT DURING REMEDY CONSTRUCTION

National Grid regularly completes work similar to what is outlined in the Remedial Action Plan (RAWP) for the Tidewater Site. These images from other similar projects show the type of activities the community can expect to see during construction of the remedy.

DUST & ODOR CONTROL



Water Truck Control Dust

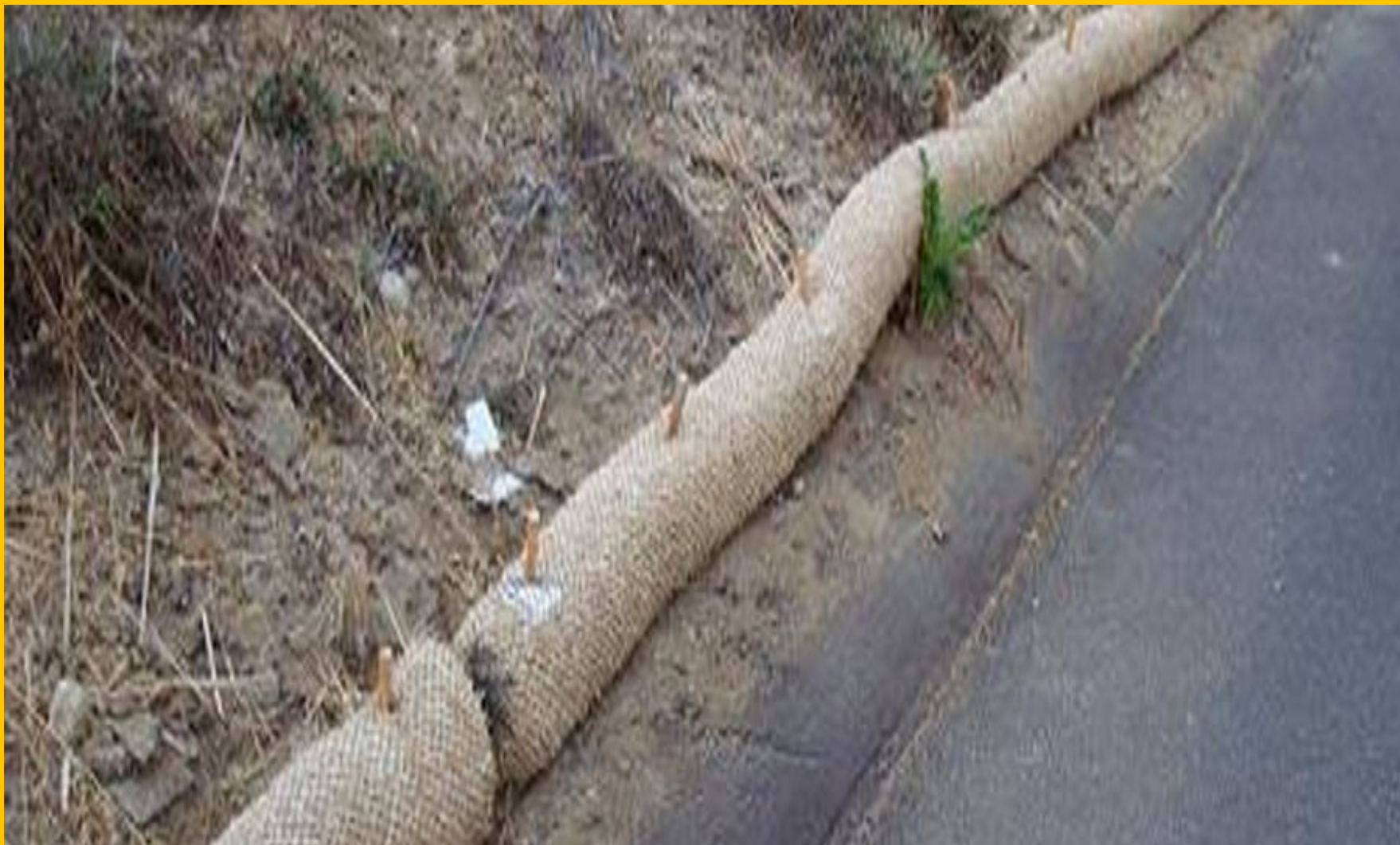


Covered Stockpiles Control Dust and Odors



Foam Addresses Any Odors

SEDIMENT & EROSION CONTROL



Straw Wattles Limit Erosion



Turbidity Curtains Prevent Sediments From Migrating Away From Site

OFFSITE TRACKING CONTROL



Tracking Pad Prevents Offsite Tracking of Material

AIR MONITORING PROGRAM

Throughout construction of the remedy, National Grid will deploy a robust, multi-tier air monitoring program to protect both onsite workers and community.



LEGEND

Air Monitoring Station - Solar Light Units
(Organic Vapors and Fugitive Dust)

Full Air Monitoring Station - Classic Units
(Organic Vapors, Fugitive Dust and Benzene)

TIER 1 - REAL-TIME MONITORING

SITE PERIMETER

Classic Units

Solar Lite Units

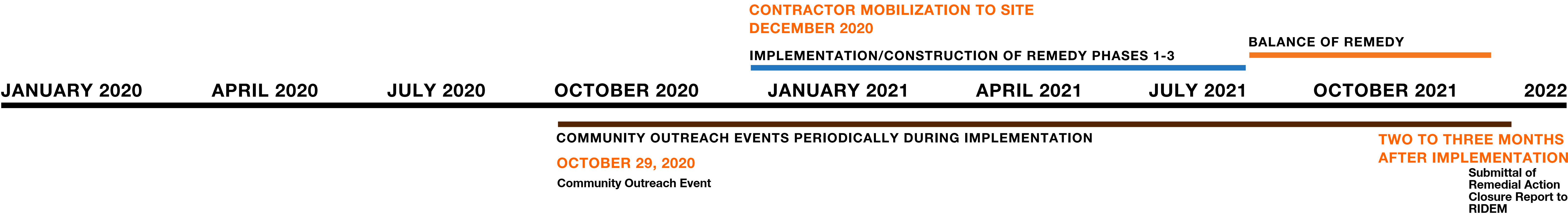
Handheld Equipment

TIER 2 - AIR SAMPLE COLLECTION FOR LABORATORY TESTING

TIME-INTEGRATED SAMPLING

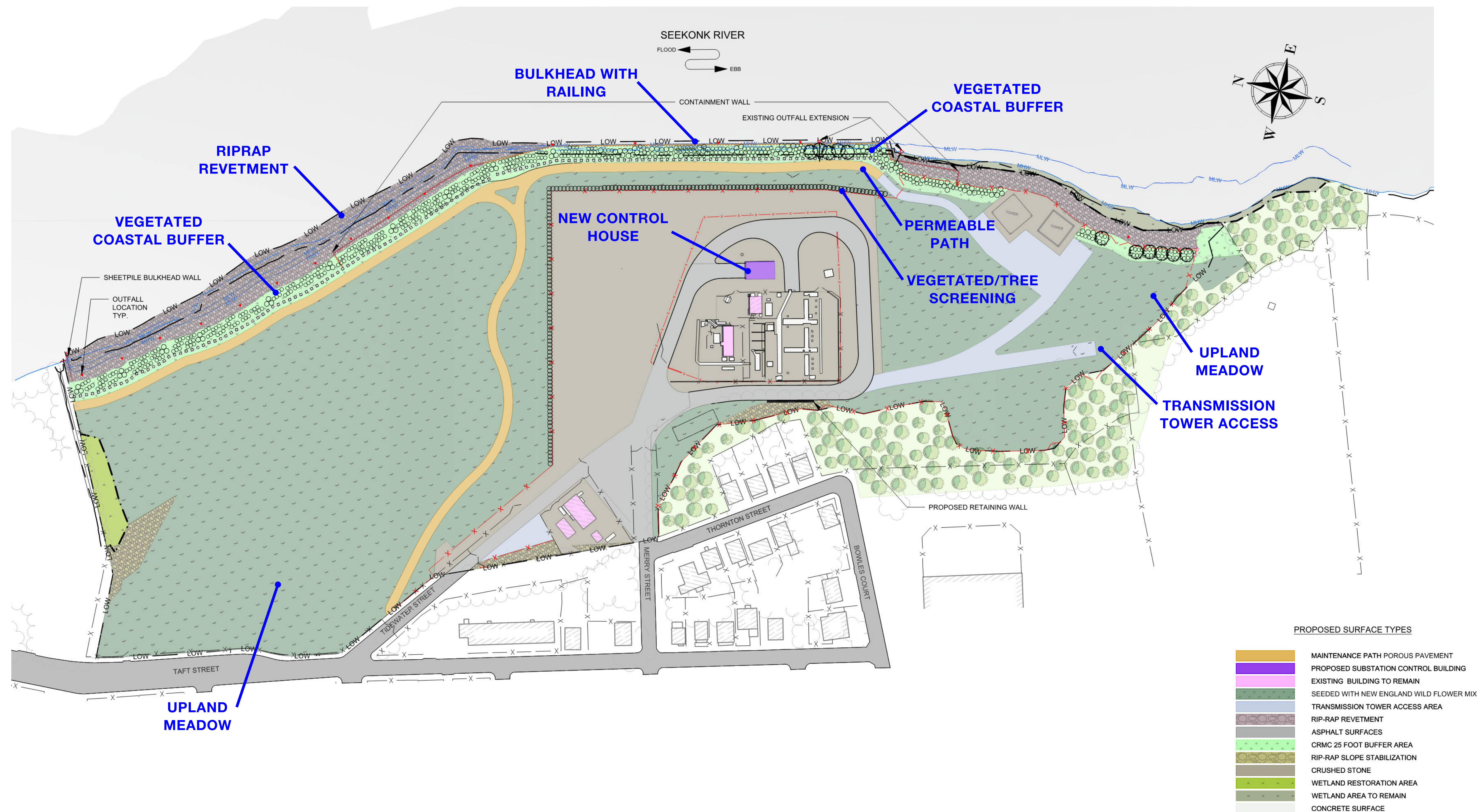
Summa Cannister

ANTICIPATED REMEDY CONSTRUCTION SCHEDULE



Images of National Grid's work at other sites.

SITE CONDITIONS AFTER IMPLEMENTATION OF REMEDY TIDEWATER SITE



EXAMPLES OF SITE CONDITIONS AFTER IMPLEMENTATION OF REMEDY FROM OTHER PROJECTS



Example of Bulkhead



Example of Bulkhead Railing System



Example of River Bike Path



Example of Bike Path with Adjacent Revetment



Example of a Riprap Revetment



Example of Vegetated Coastal Buffer

ADDITIONAL INFORMATION - TIDEWATER SITE

1. Pawtucket Public Library

2. National Grid's Tidewater Website
www.tidewatersite.com

3. RIDEM Tidewater Website
<http://www.dem.ri.gov/programs/benviron/waste/tide.htm>

Email or Mailing Distribution Lists

Submit request to: Kenneth.lento@nationalgrid.com

Phone Alert System

Submit request to: Kenneth.lento@nationalgrid.com

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