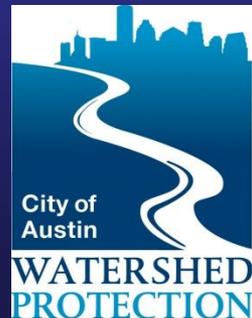




Emma Long Metropolitan Park Bulkhead Remediation

Andrew Clamann
Watershed Protection Department





Emma Long Metropolitan Park

WPD CIP Project 6660 (Water Quality Remediation and Restoration)

Subproject 6660.034 (Lake Austin Bulkhead Demonstration at Emma Long)

site plan and construction
by WPD

Project location:

Bulkhead between the
boat ramps

Problem: the vertical wooden pole bulkhead is falling apart, is non-compliant and has minimal environmental value



**Unstable,
eroding**



Vertical face reflects waves

**Poor
vegetative
cover**



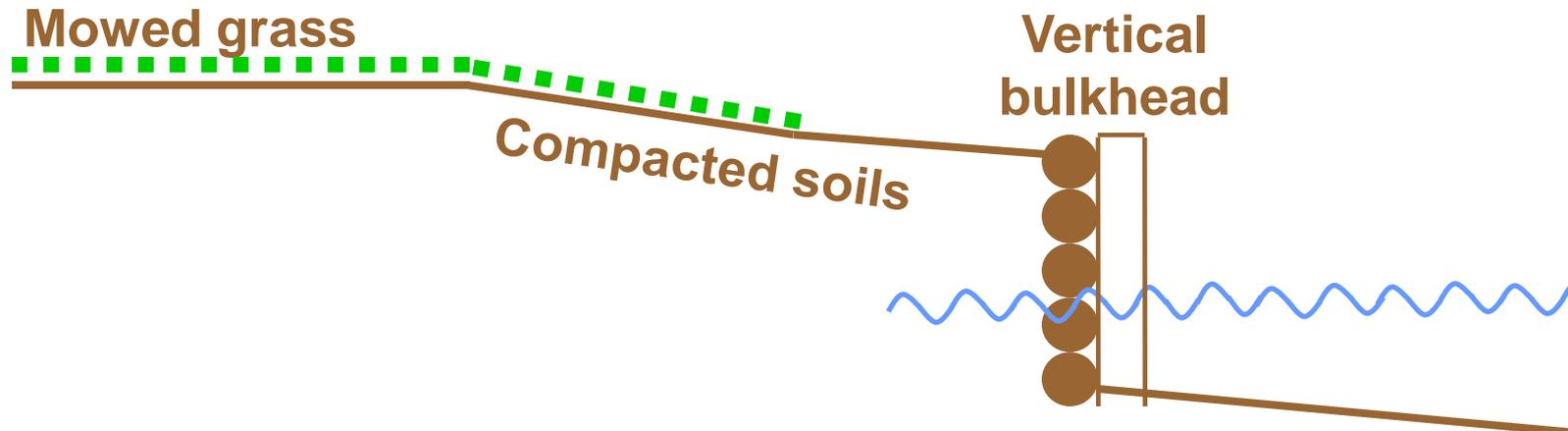
Existing Condition

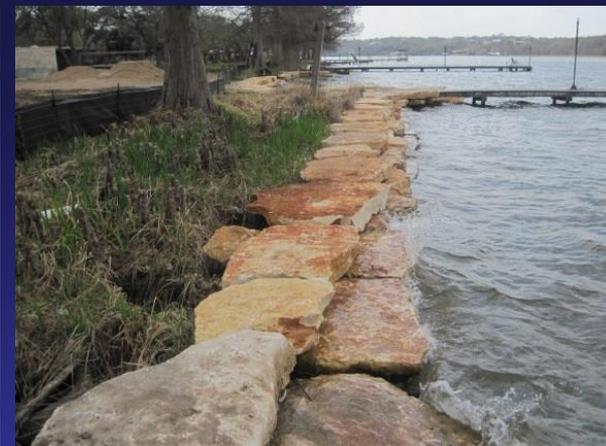
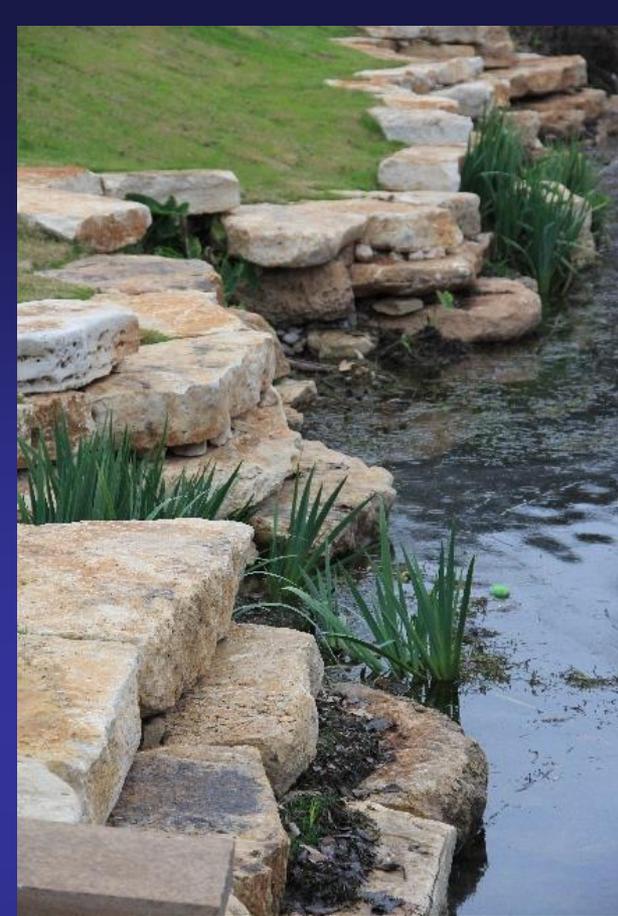
Project considerations

Construction Nov-Feb
(less recreation and waves)

Maintain public access to
ramps and docks during
construction

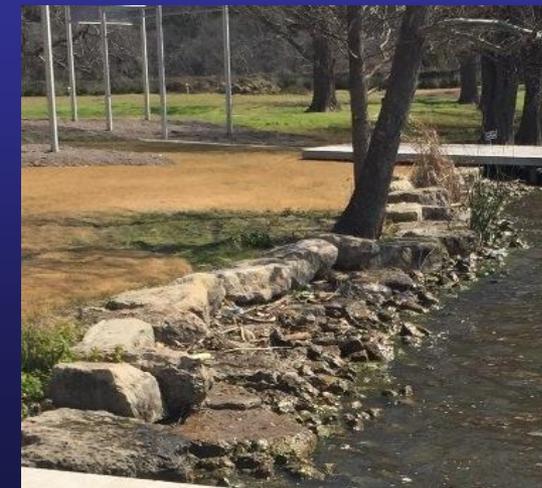
No variances requested



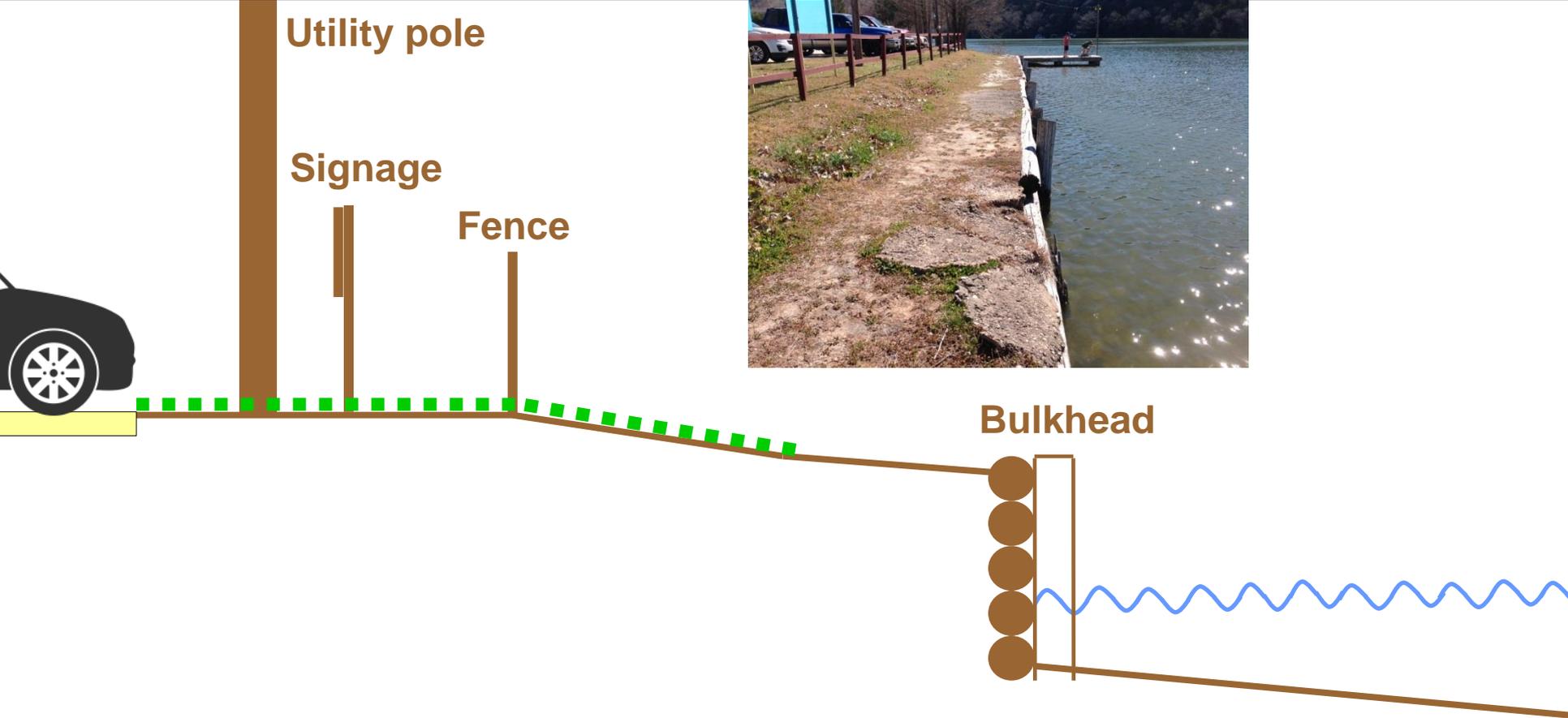


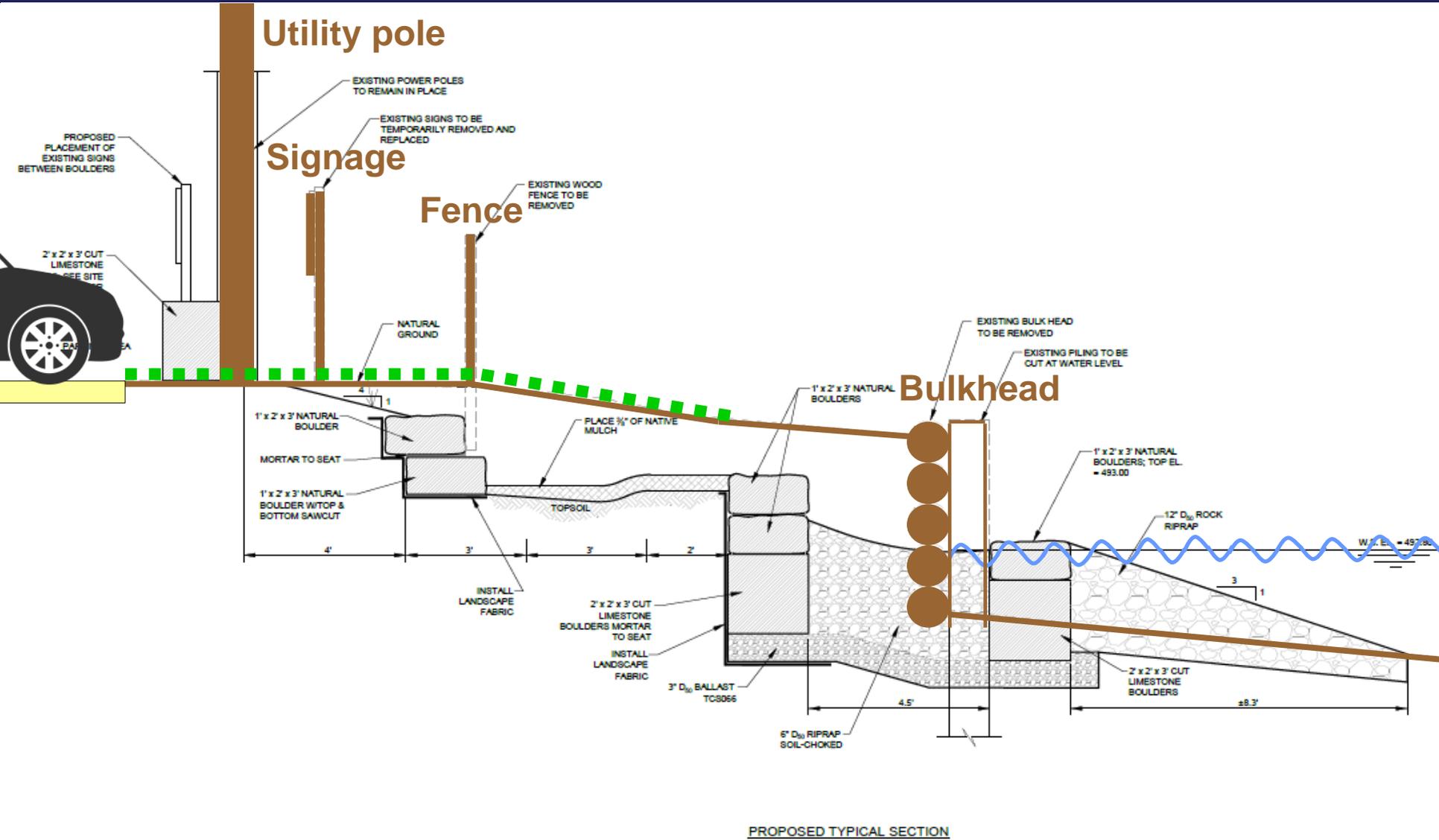
**Current Code
requires**

- Slope in the wave action zone**
- Vegetation near shoreline**
- Protection from scour**
- Exterior of natural materials**

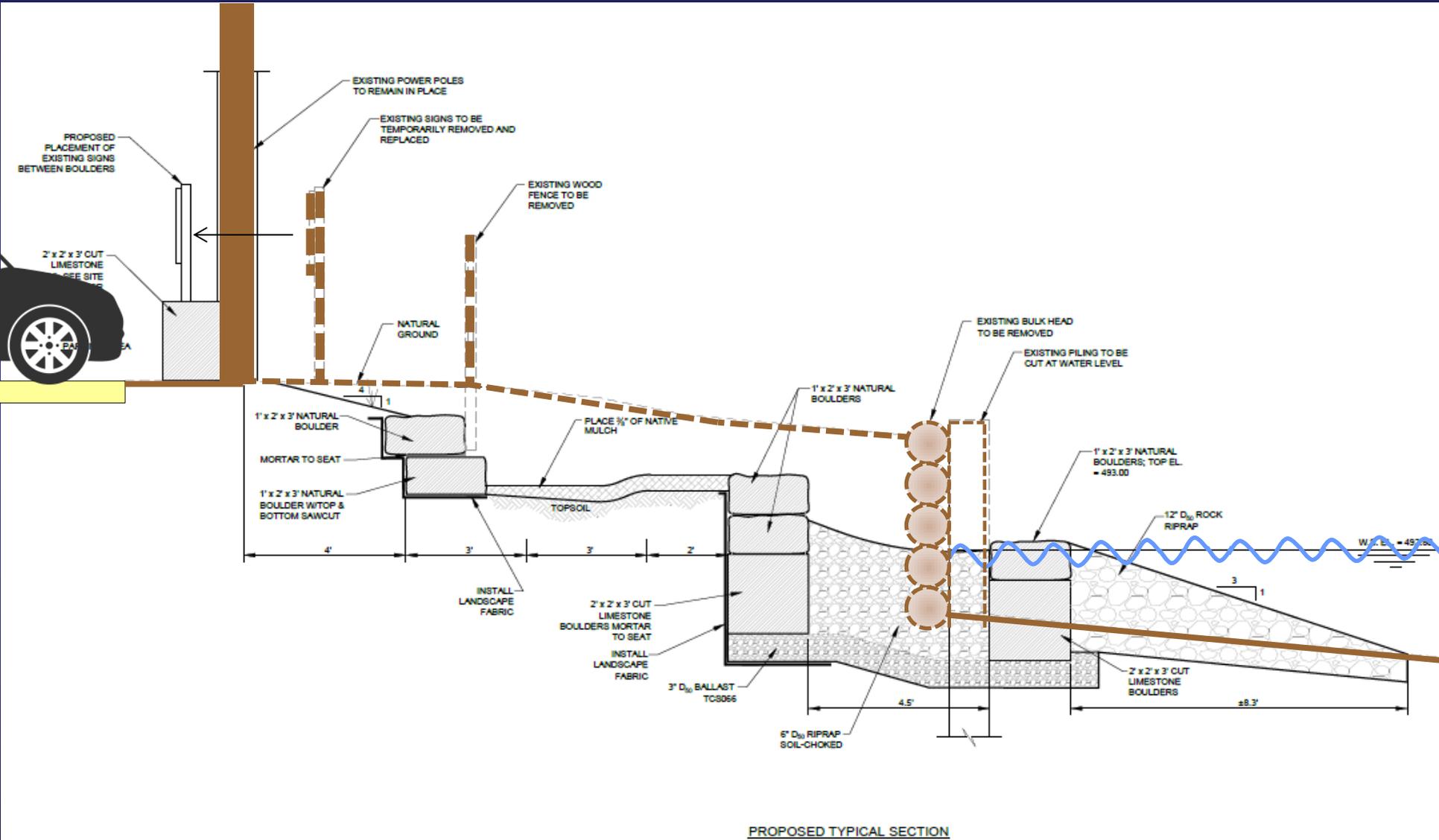


current bulkhead

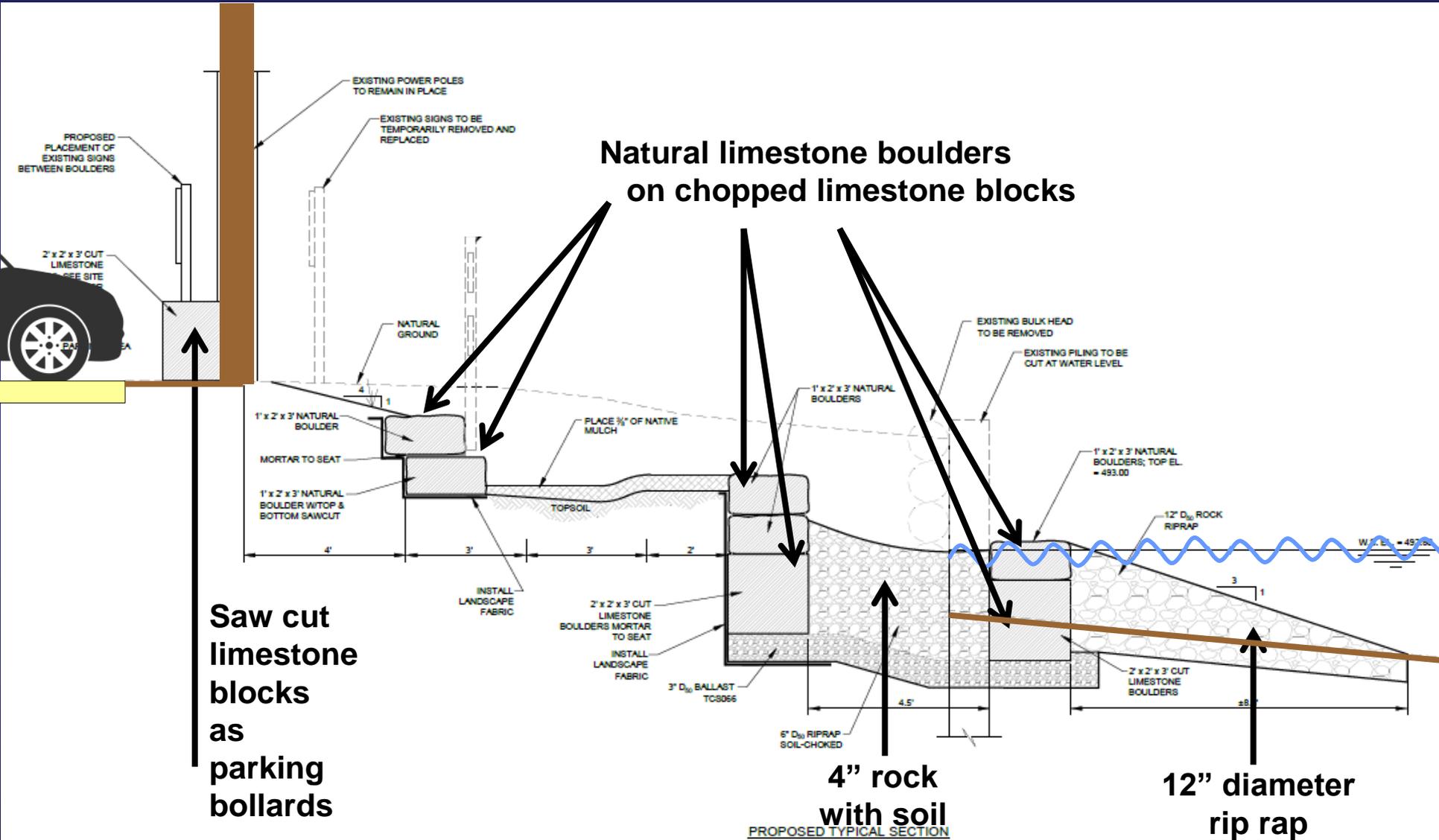




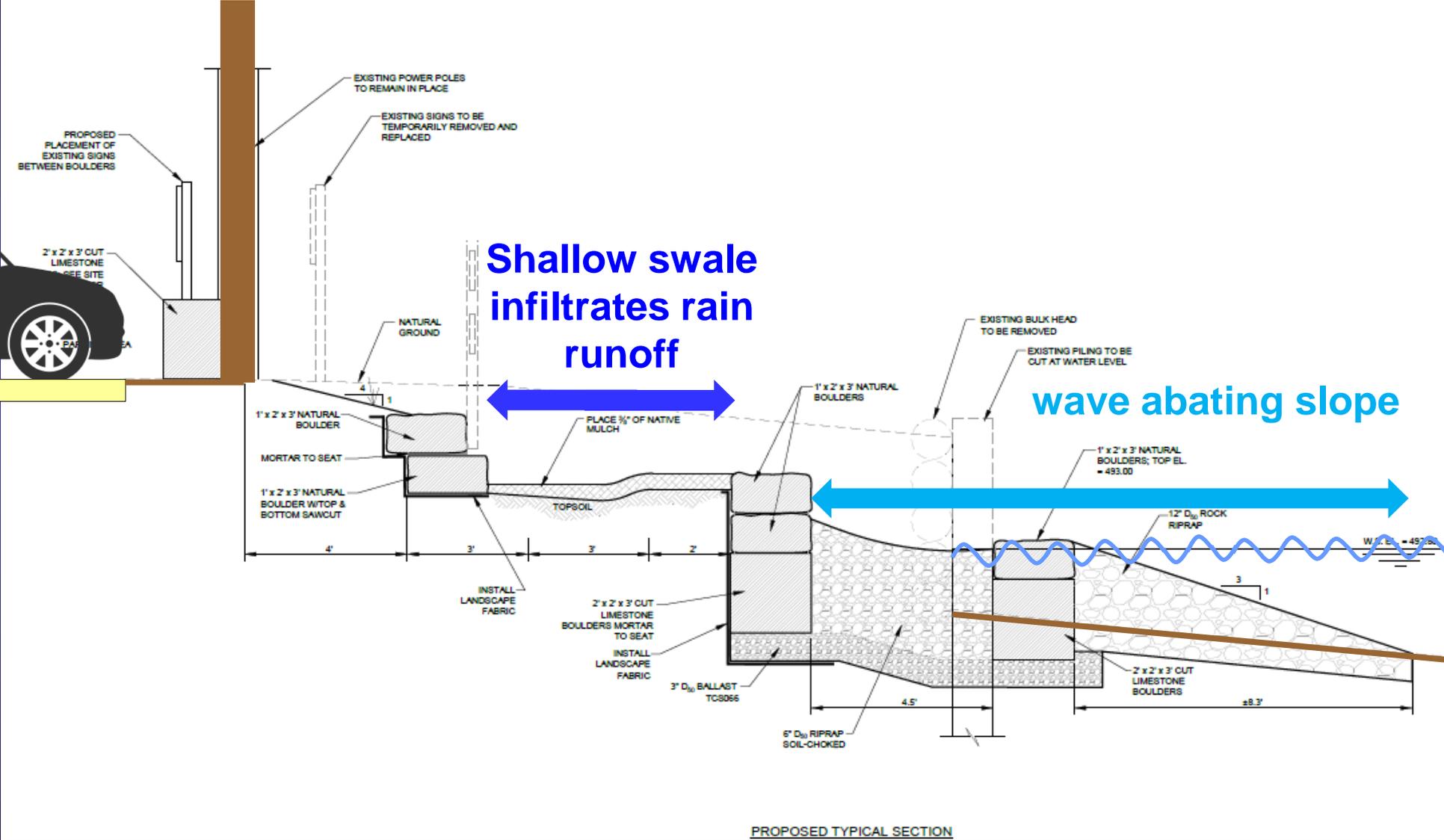
- Remove current bulkhead and fence,
- Move signage
- Terrace the bank



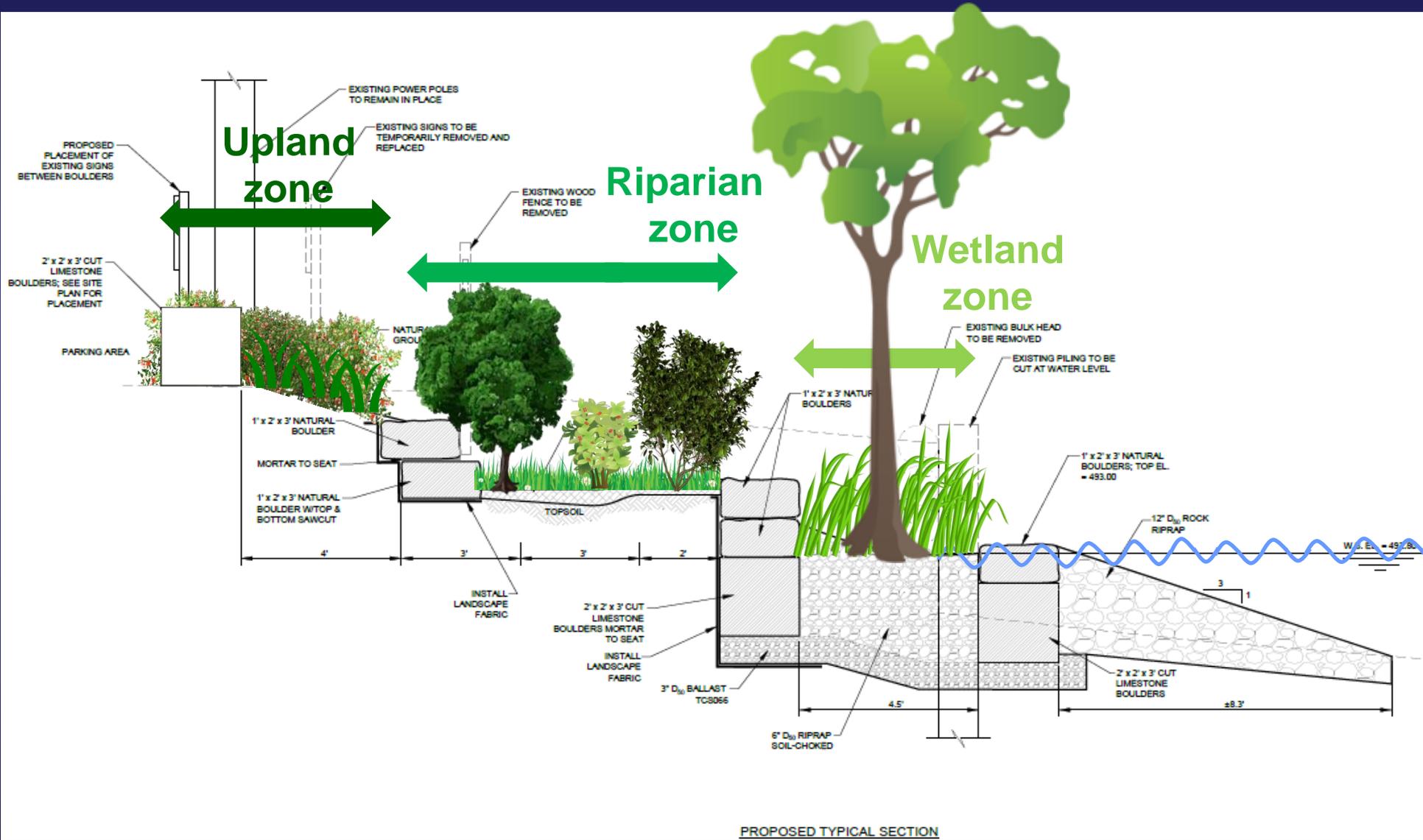
Proposed terrace bank and bulkhead (revetment)



Environmental Benefits



Proposed vegetated terraces and wetlands



Questions?

