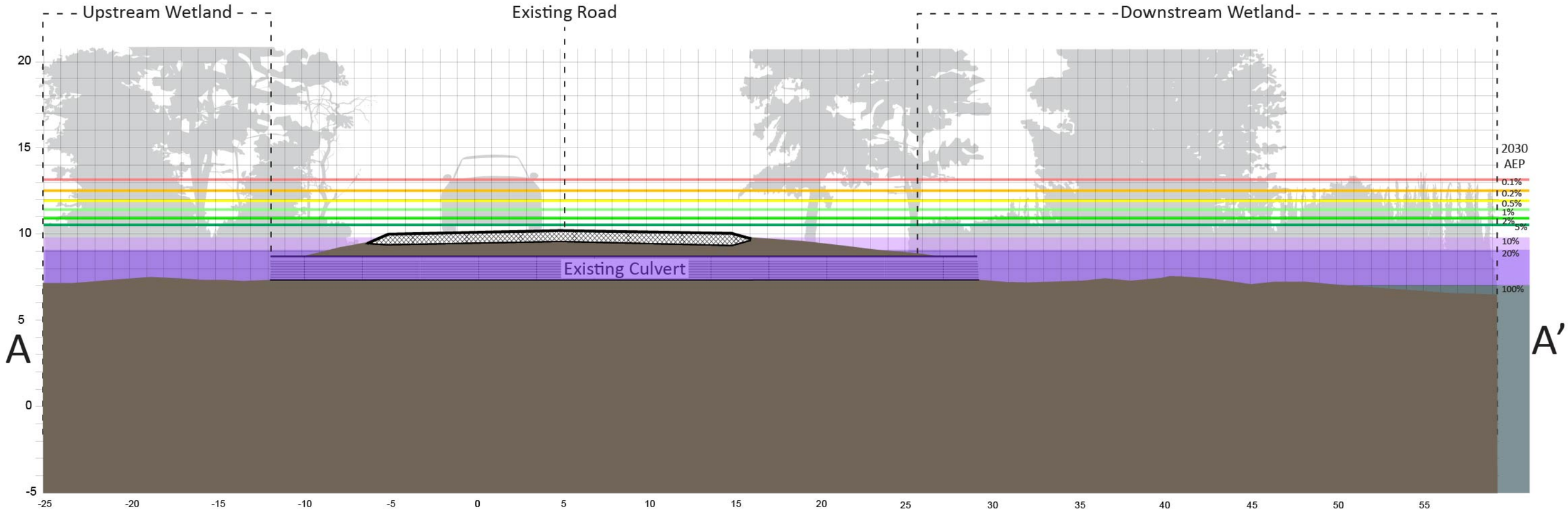
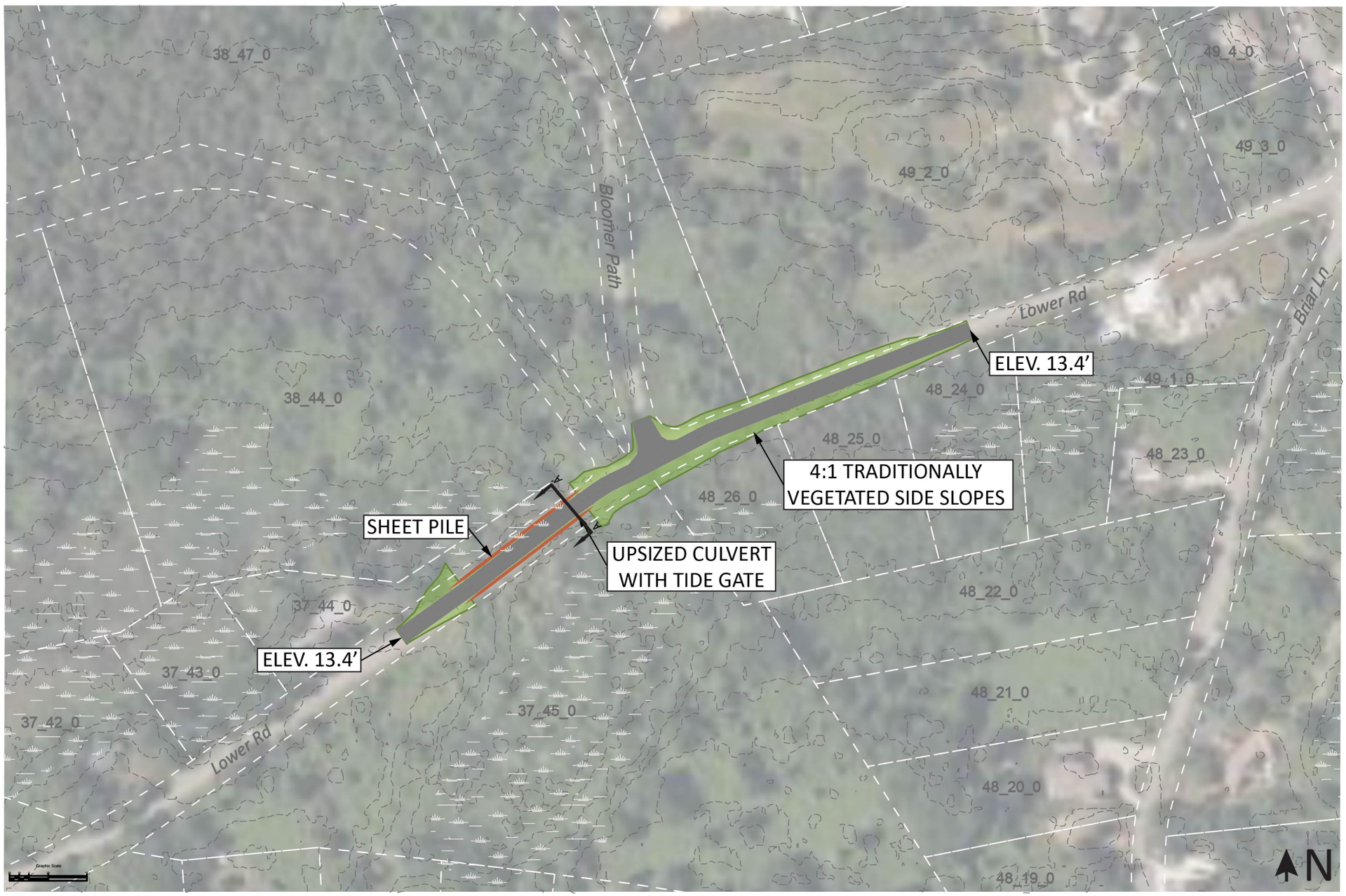


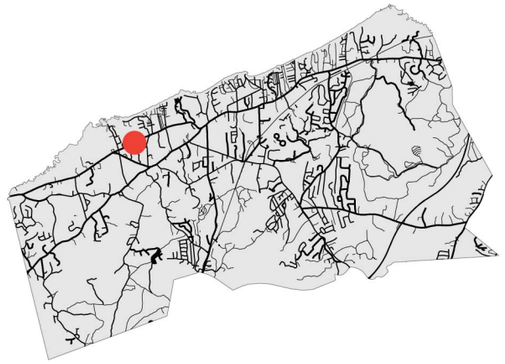
EXISTING CONDITIONS

Lower Road, Brewster

WOODS HOLE GROUP
A GEI COMPANY



Note: Project overlap with wetland areas, rights of way and property lines is approximate and needs confirmation with a site survey

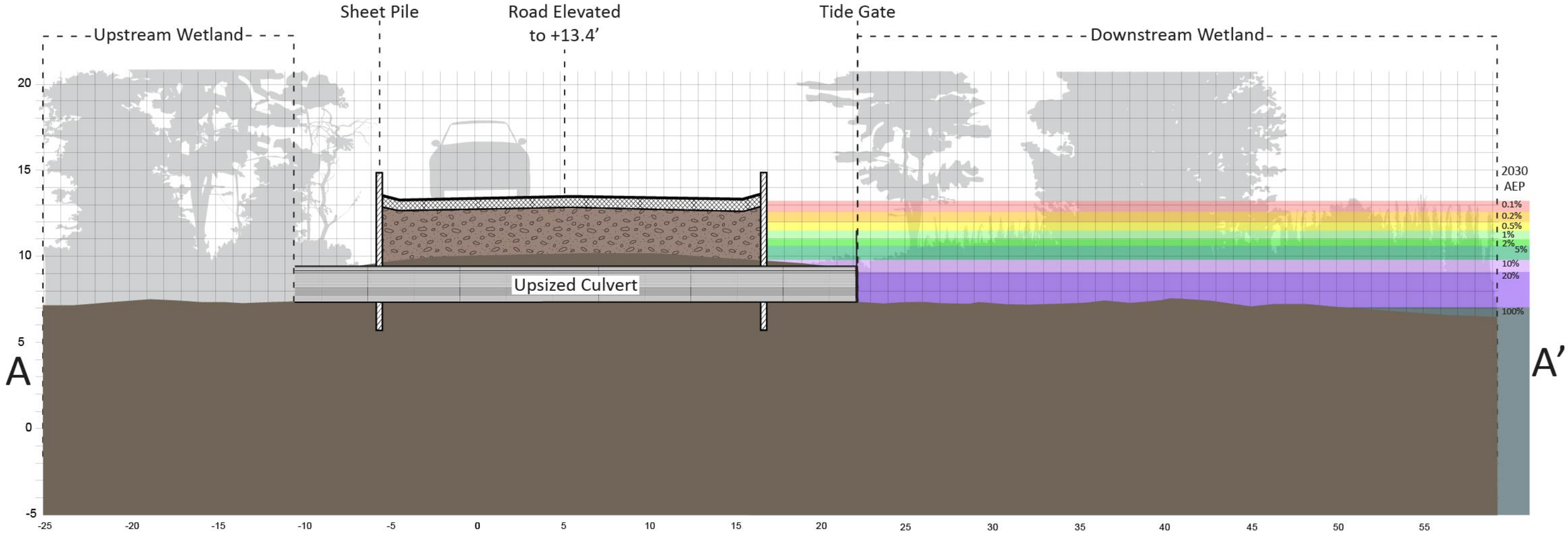


Lower Road
BREWSTER

ALTERNATIVE 1: GRAY

781 linear feet of road are elevated to 13.4 feet using sheet pile and traditionally vegetated 4:1 side slopes. The culvert is increased in size, and a tide gate is added to cut off a potential long-term flood pathway.

WOODS HOLE GROUP
A CLS COMPANY



ALTERNATIVE 1: GRAY

Lower Road, Brewster

WOODS HOLE GROUP
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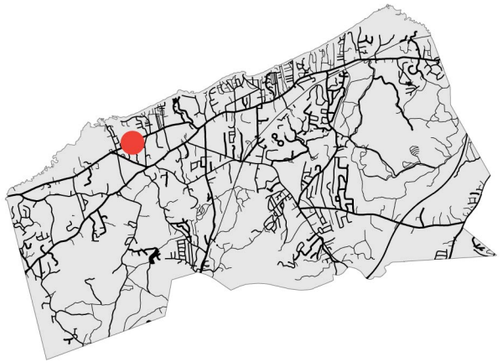


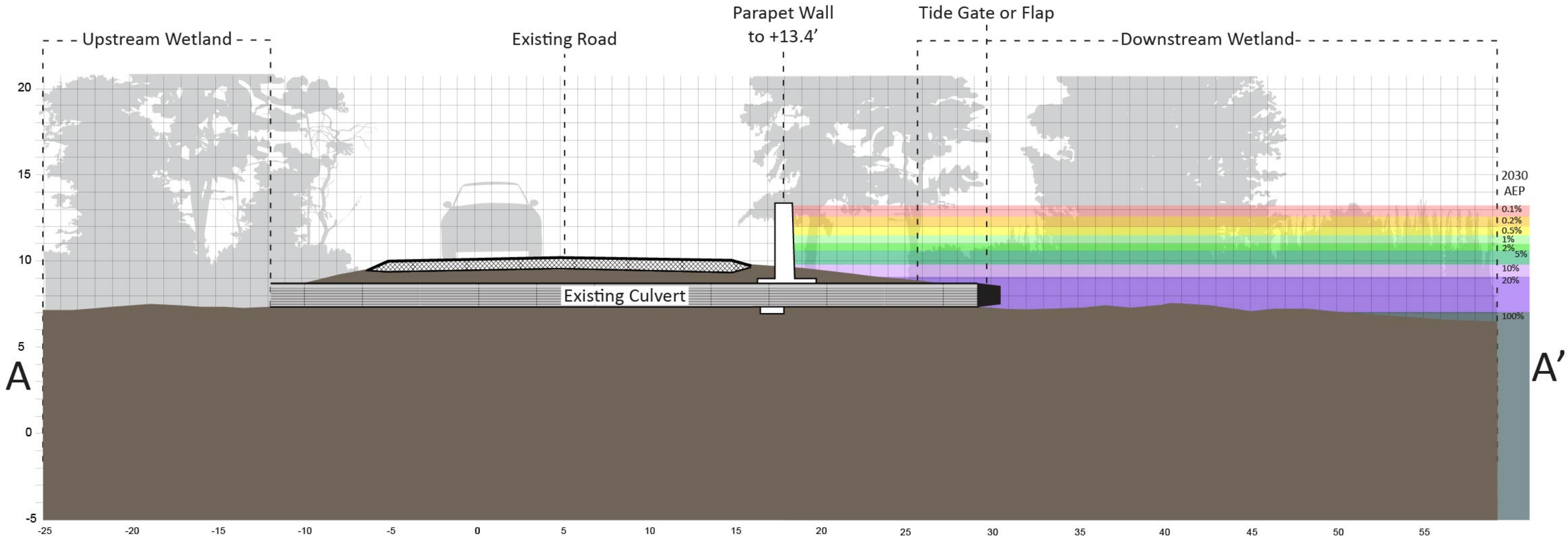
Lower Road
BREWSTER

ALTERNATIVE 2: HYBRID

A berm and parapet wall to 13.4 feet are constructed along Lower Road and in an unused right of way next to Bloomer Path. The berm is vegetated with native plants, and a tide flap is added to the existing culvert to prevent flanking.

Note: Project overlap with wetland areas, rights of way and property lines is approximate and needs confirmation with a site survey

WOODS HOLE GROUP
A CLS COMPANY



ALTERNATIVE 2: HYBRID

Lower Road, Brewster

WOODS HOLE GROUP
A GEI COMPANY

LOWER ROAD, BREWSTER

Summary of alternatives

	Description	Critical Elevation	Annual Exceedance Probability			Vulnerable to Tidal Flooding	Impacts to Resource Area(s)	Impacts to Private Property	Estimated Cost*
			2030	2050	2070				
EXISTING	A segment of 20 foot wide road with a culvert crossing.	10.2 feet	5%	20%	100%	N/A	N/A	N/A	N/A
ALTERNATIVE 1: GRAY	781 linear feet of road are elevated to 13.4 feet using sheet pile and traditionally vegetated 4:1 side slopes. The culvert is increased in size, and a tide gate is added to cut off a potential long-term flood pathway.	13.4 feet	0%	0.5%	5%	N/A	Minimal	Minor	$868,000
ALTERNATIVE 2: HYBRID	A berm and parapet wall to 13.4 feet are constructed along Lower Road and in an unused right of way next to Bloomer Path. The berm is vegetated with native plants, and a tide flap is added to the existing culvert to prevent flanking.	13.4 feet	0%	0.5%	5%	N/A	Minimal	Minor	$218,000

*2023 installed material cost +40% escalation (through 2029) and 15% contingency. Excludes design, permitting, mobilization, stormwater and wastewater infrastructure, and site controls. Costs based on experienced contractor opinion and MassDOT costing data.