

Eden Isle Flood Risk Reduction Project

Feasibility Report Overview

Project Overview



LOCATION

- Eden Isle neighborhood in Slidell, LA
- Northeastern rim of Lake Pontchartrain

PURPOSE

Provide Eden Isle Estates with structural risk reduction to +11 ft.

MAIN FEATURES

- Lakeview Drive
- Harbor Drive
- Grand Lagoon

LOCAL CRITICAL PATH ITEMS

- Parish and STLD CD revenue plan
- Agreement with DOTD to elevate Hwy 11 to +11 feet risk reduction

Preferred Alternatives Identification

CPRA

Share findings from the feasibility study with St. Tammany Parish Government and STLDCD

- **Clearly and transparently state positives and negatives to each alternative**
- **Present findings to STLDCD in a public setting**
- **Host public meeting for information sharing only**
- **Assist STLDCD in sharing public information and gathering feedback, as desired by STLDCD**
- **Provide outreach materials for distribution**

St. Tammany Parish & STLDCD

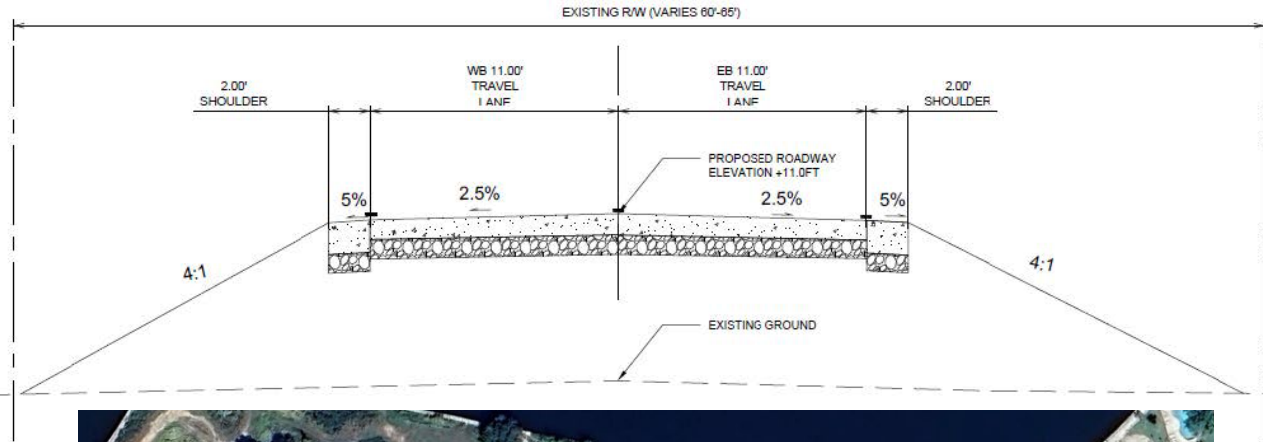
Determine a mutually agreed-upon path forward based on the findings in the feasibility study

- **Understand all alternatives based on the findings in the feasibility study**
- **Determine how best to engage the public in the decision-making process**
- **Jointly present CPRA with the preferred alternative from the feasibility study**
- **Develop revenue plan to fund construction and long-term O&M**
- **Engage DOTD to elevate Hwy 11**

Harbor Drive Elevation



Harbor Drive Elevation



3 ALTERNATIVES TO RAISE HARBOR DRIVE TO +11.0 FT

1. Raising Harbor Drive (\$4.0 million)
2. Levee (\$1.3 million – \$9.6 million)
3. Replace Existing Bulkhead (\$19.6 million)

Total estimated cost

\$1.3-19.6 million

Grand Lagoon Floodgate





Max Option: 90-ft. wide

- Sill elevation of approximately –10 ft
- Navigable barge-gate flood control structure across Grand Lagoon
- Gate remains open under normal conditions and closes in advance of storm events
- Paired with ten 5-ft-diameter culverts to manage interior drainage when the gate is closed

Total estimated construction cost

\$36 – 44 million

Floodgate Example



Lakeview Drive



Alternative A – 2 Lane

OVERVIEW

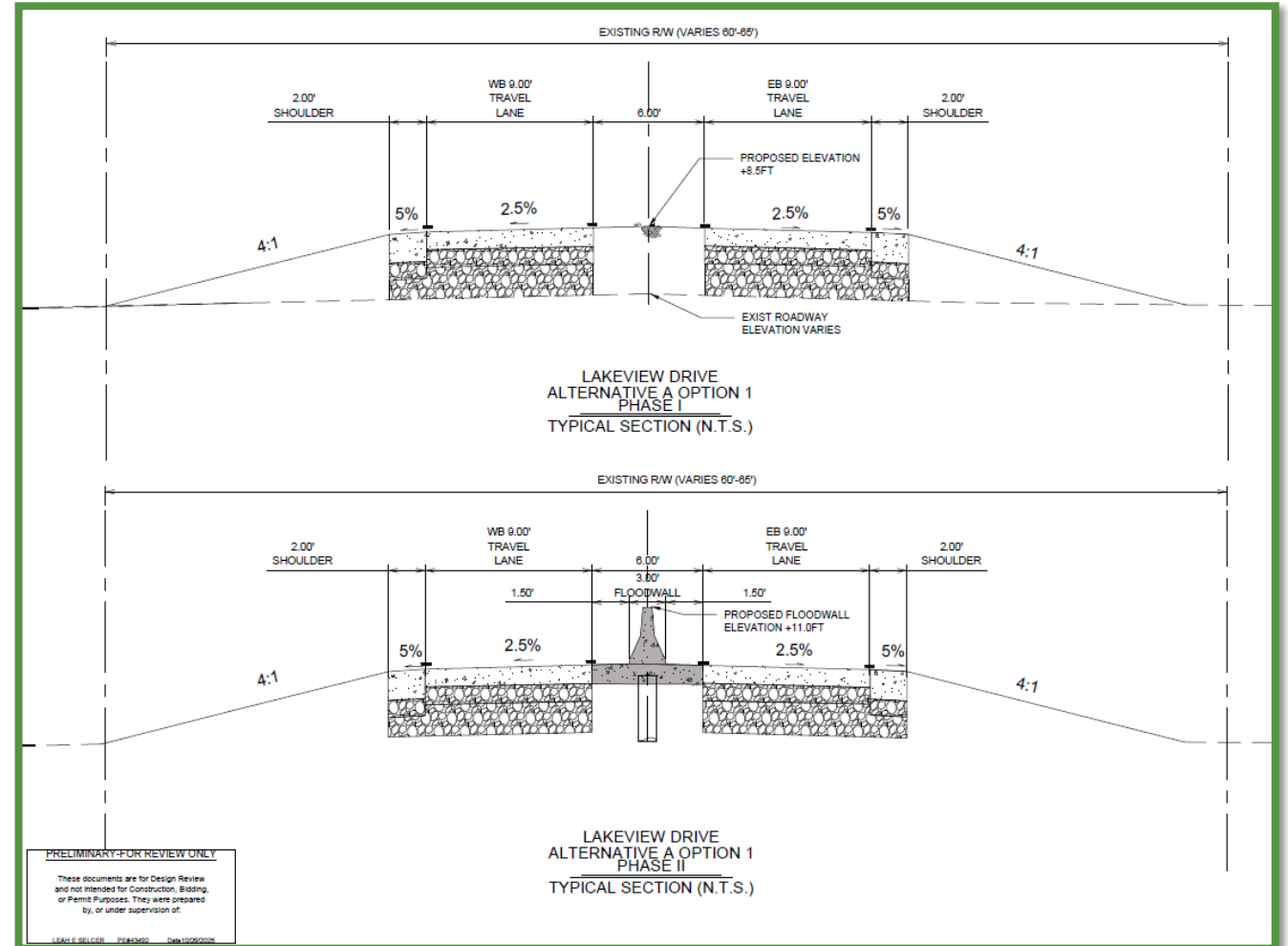
Raises Lakeview Drive in place as a two-lane roadway with one lane on each side of a centerline barrier

Constructed in two phases:

Phase 1 roadway elevation to +8.5 ft

Phase 2 installs a centerline floodwall to reach +11.0 ft

Total estimated cost
\$43–54 million



Alternative A – 2 Lane

CONSIDERATIONS

Minimally intrusive on homeowners and right of way

Roadway size and wall limit normal traffic functions

Construction may require:

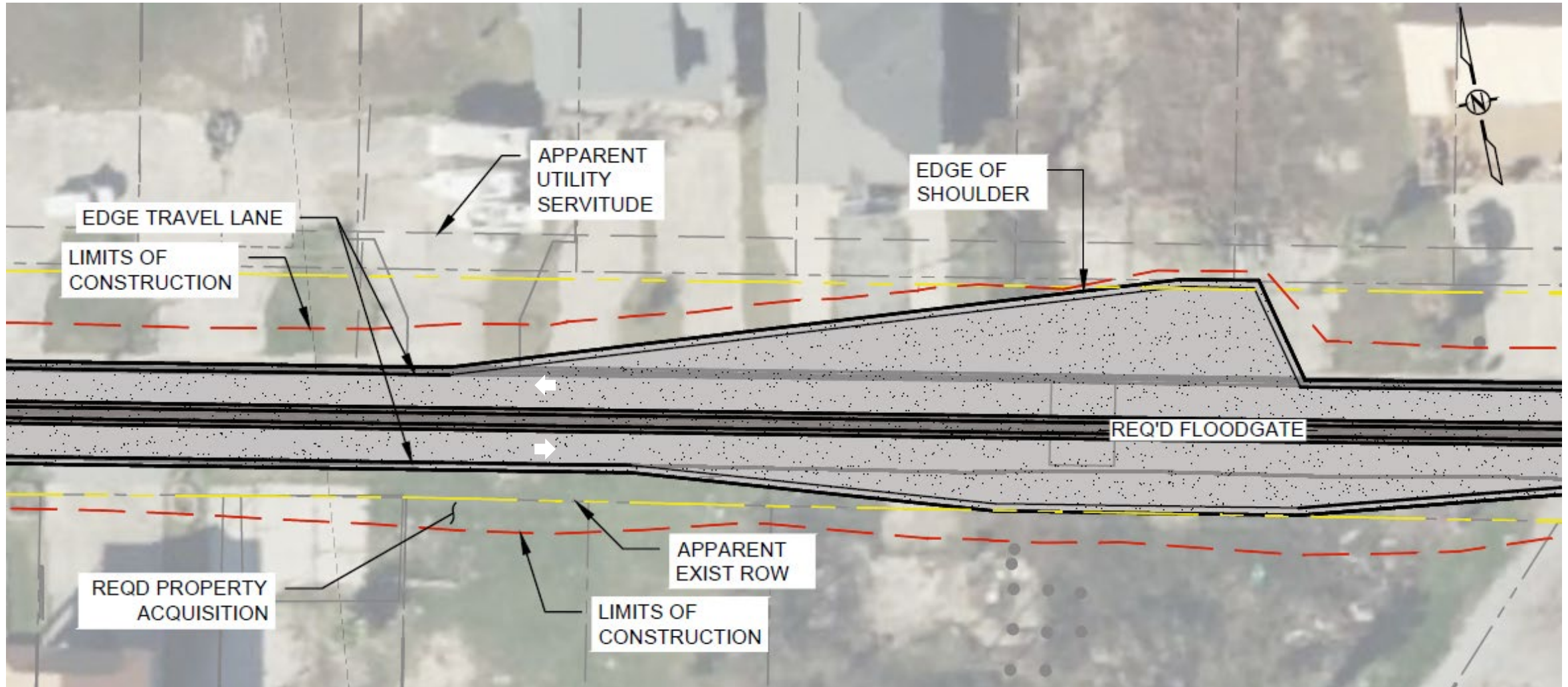
- Utility relocation

- Steeper incline for driveways

Minor limitation of lakefront view (2.5' wall)



Alternative A – 2 Lane



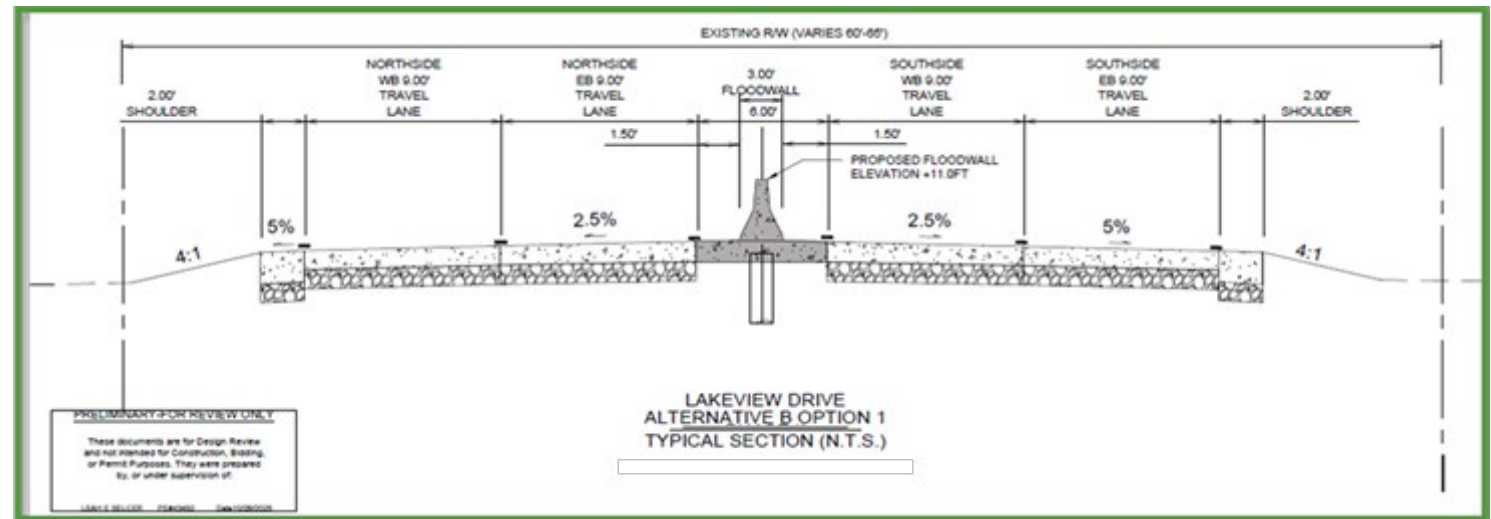
Alternative B – 4 Lane

OVERVIEW

Raises Lakeview Drive to +6.0 ft. as a four-lane divided roadway with two travel lanes on each side of a centerline barrier

Installs a centerline floodwall to reach +11.0 ft

Total estimated cost
\$63–69 million



Alternative B – 4 Lane

CONSIDERATIONS

More available roadway for normal traffic functions

Construction may require:

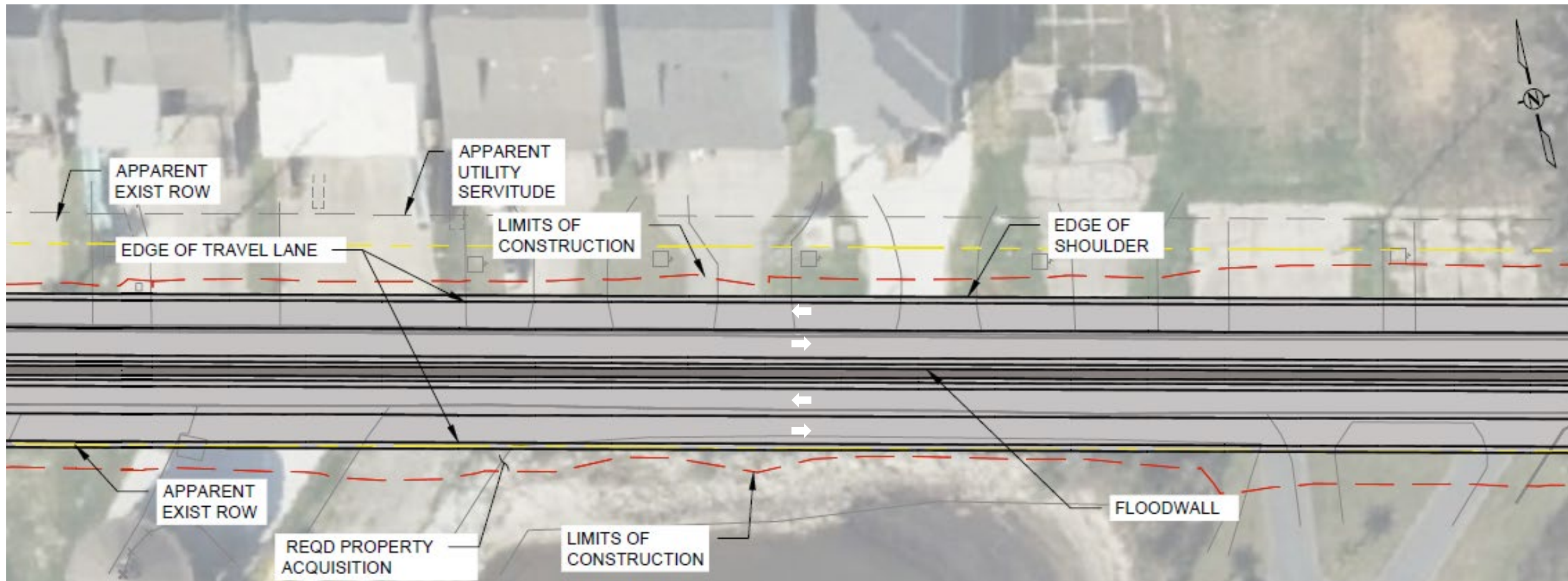
Utility relocation

Requires acquisition of driveway space

Limits lakefront view (5' wall)



Alternative B – 4 Lane



Alternative C – Floodbreak

OVERVIEW

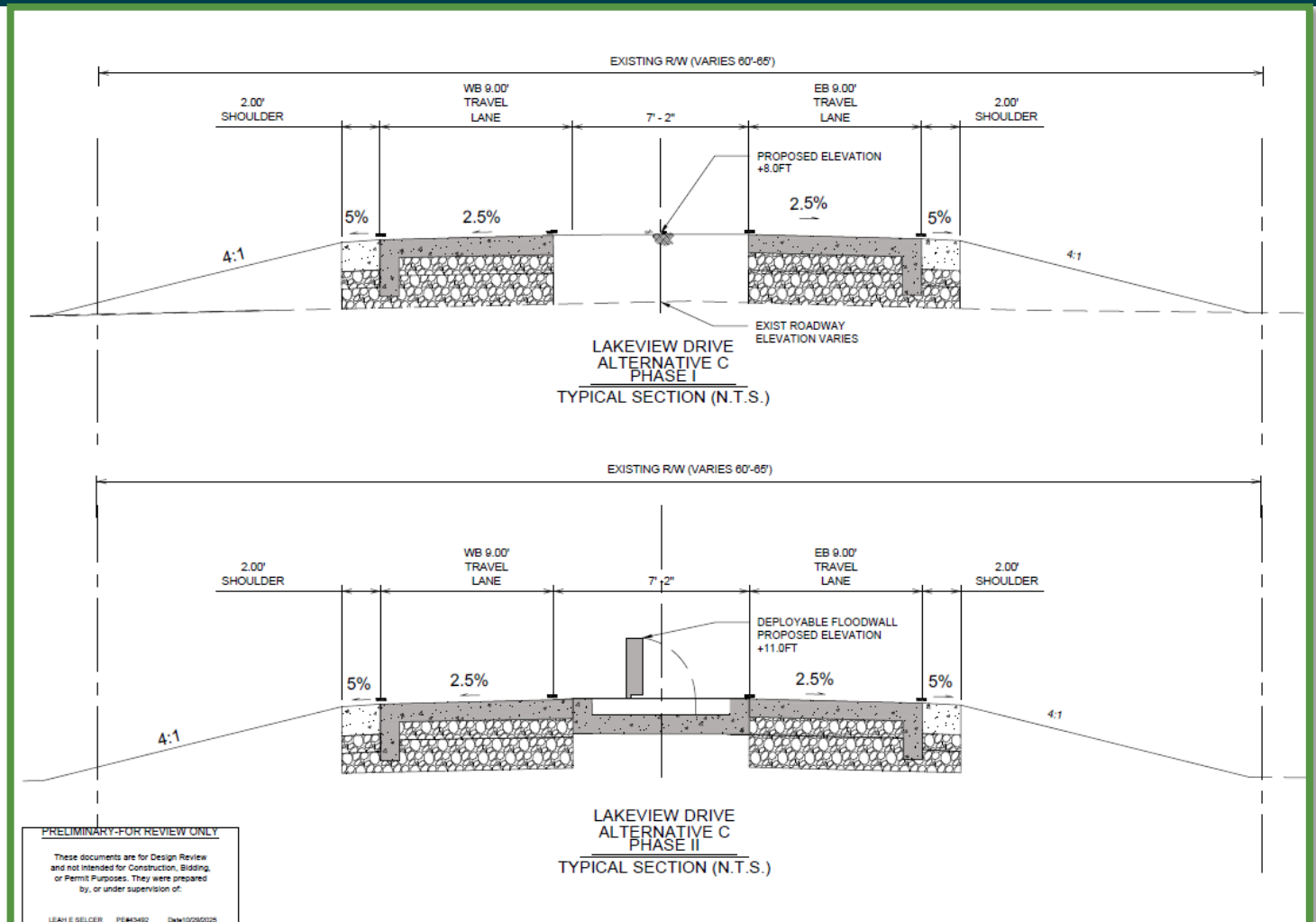
Raises Lakeview Drive in place as a two-lane roadway with automated risk reduction

Constructed in two phases:

Phase 1 roadway elevation to +8.0 ft

Phase 2 installs self-deploying flood barriers to reach +11.0 ft

Total estimated cost
\$143 million



Alternative C – Floodbreak

CONSIDERATIONS

Floodwall deploys & retracts automatically

Minimally intrusive on homeowners, right of way, traffic flow, and lakefront view

Dependent on floodwall operation and clear opening path; potential for:

- Technical malfunction

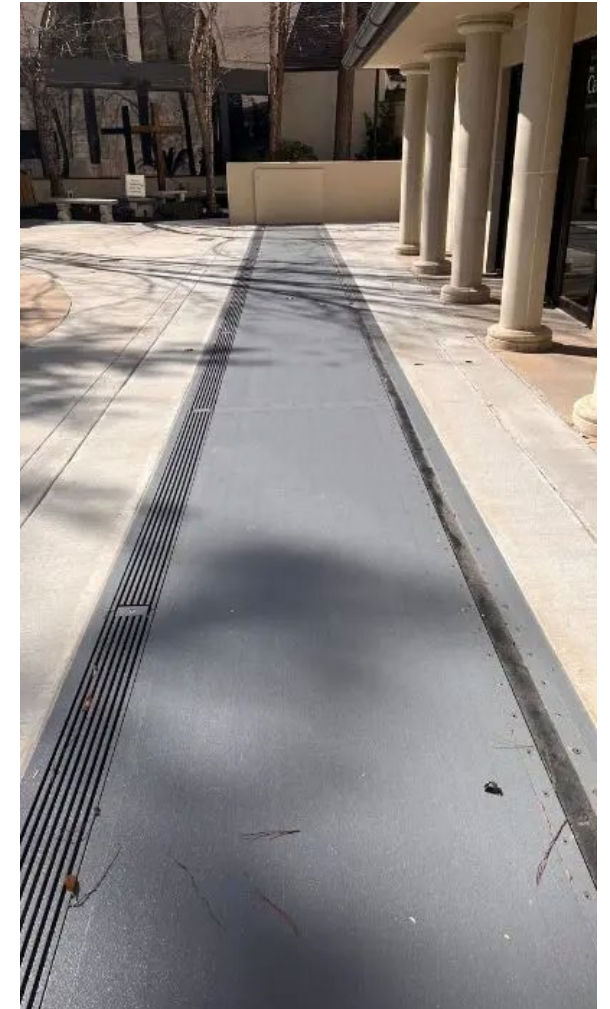
- Vehicles parked on floodwall

Permanent floodwall still required for curves and non-continuous sections (~25% of total length)

Annual maintenance required at \$550-600k / year



Floodbreak Examples



Alternative D – Levee

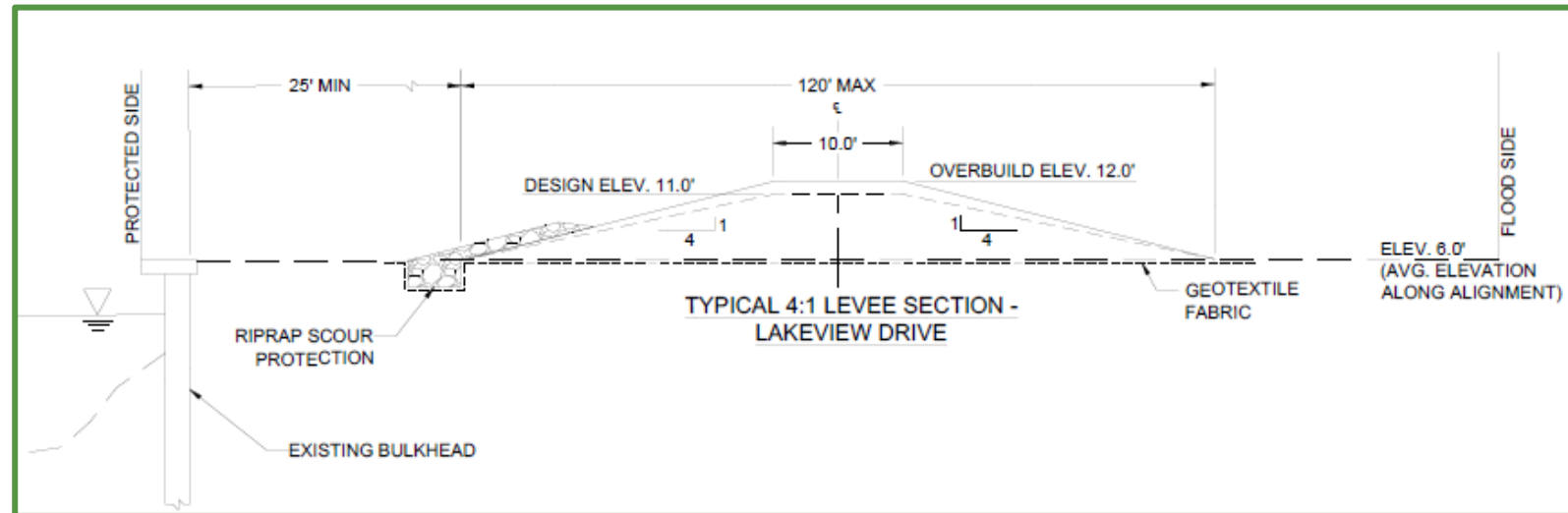
OVERVIEW

Constructs a continuous earthen levee north of Lakeview Drive in lieu of roadway elevation

Constructed in a single phase to +11.0 ft level of protection

Requires acquisition of properties and removal of homes north of Lakeview Drive

Total estimated cost
\$58-59 million



Alternative D – Levee

CONSIDERATIONS

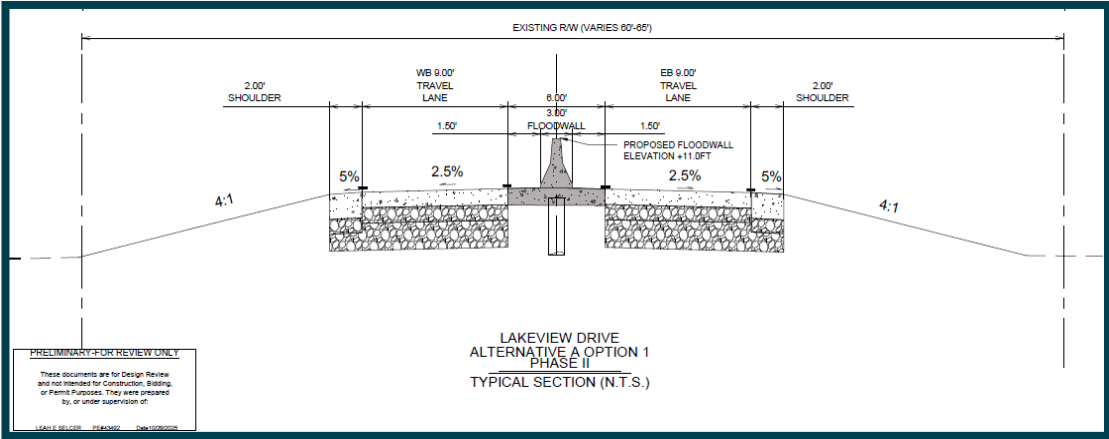
- Only earthwork required, does not affect existing roadway
- Expected community pushback
- Minimal utility relocation if outside right of way
- Additional cost for acquiring, demolishing, and removing lots/homes
- Requires filling in section with earthen material (1 location)



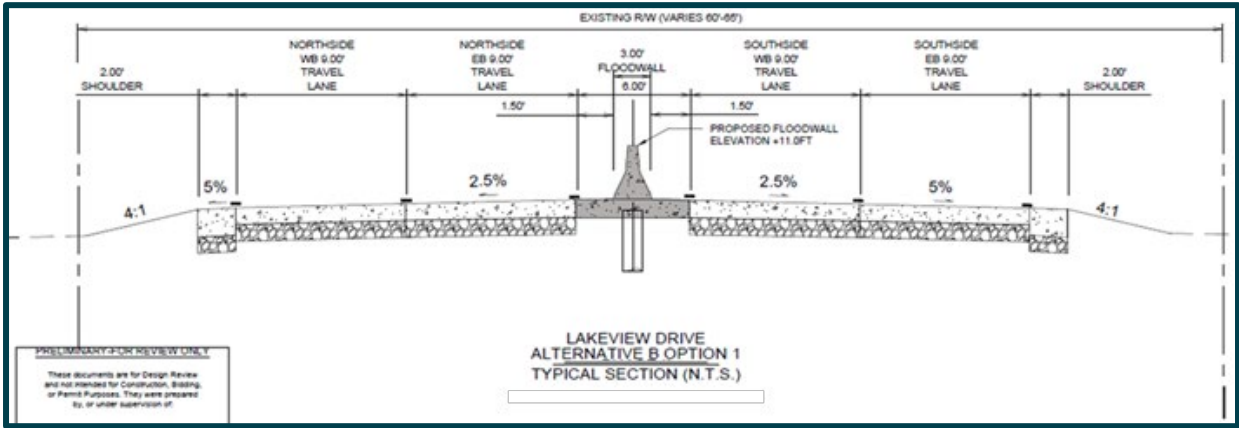
Lakeview Drive Alternatives

	Alternative	Description	Costs
Road Raise with Floodwall	Alternative A	Phase 1 Roadway Raising to +8.5 ft	\$23 Million
		Phase 2 Floodwall to +11.0 ft	\$20 – 31 Million
		Total:	\$43 – 54 Million
	Alternative B	Roadway Raising, Floodwall to +11.0 ft	\$62 – 68 Million
		Total:	\$62 – 68 Million
Self-Deploying Floodwall	Alternative C	Phase 1 PCC Roadway Raising to +8.0 ft	\$22 Million
		Phase 2 Floodbreak to +11.0 ft	\$120 Million
		Total:	\$143 Million
Earthen Levee + Buyout	Alternative D	Levee +11.0'	\$19 – 22 Million
		Real Estate Acquisitions	\$35 – 39 Million
		Total:	\$58 – 59 Million

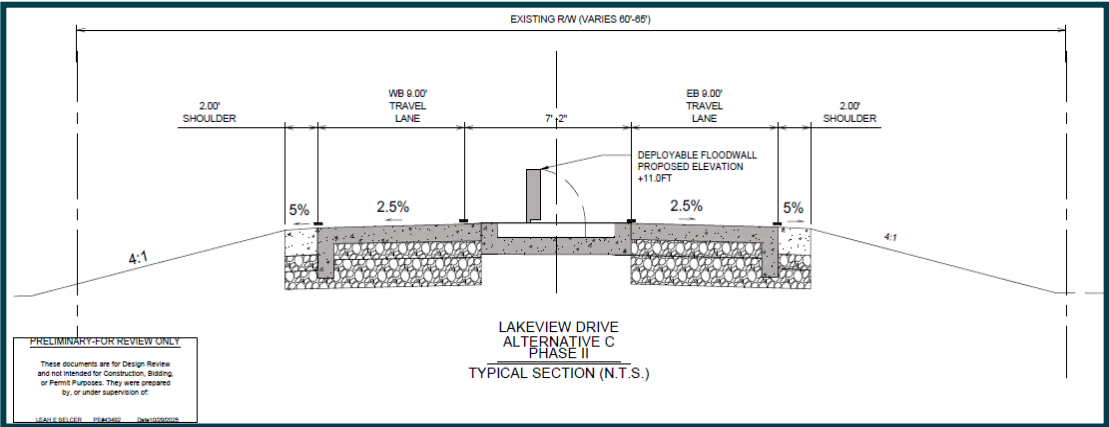
Alternative A - 2 Lane Road
\$43–54 million



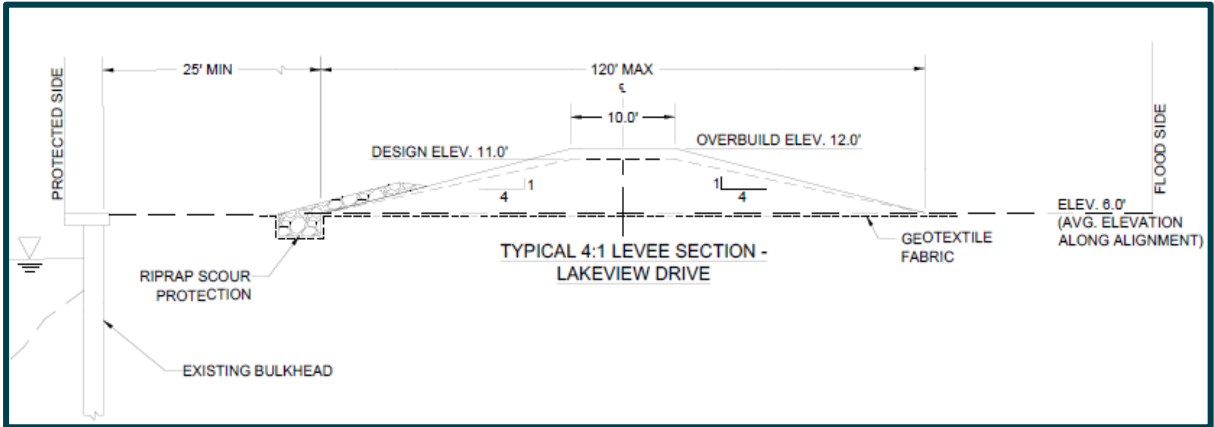
Alternative B - 4 Lane Road
\$63–69 million



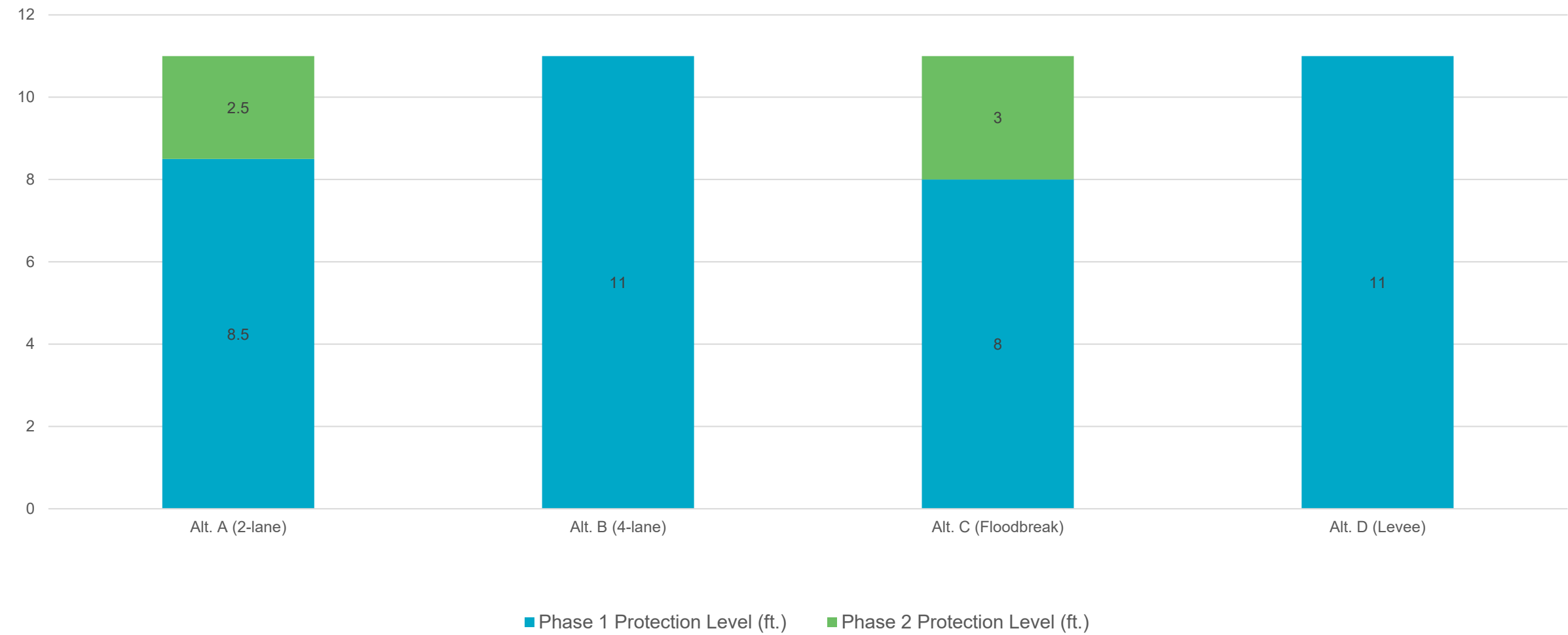
Alternative C - Floodbreak
\$143 million



Alternative D - Levee
\$58–59 million



Protection Levels By Phase

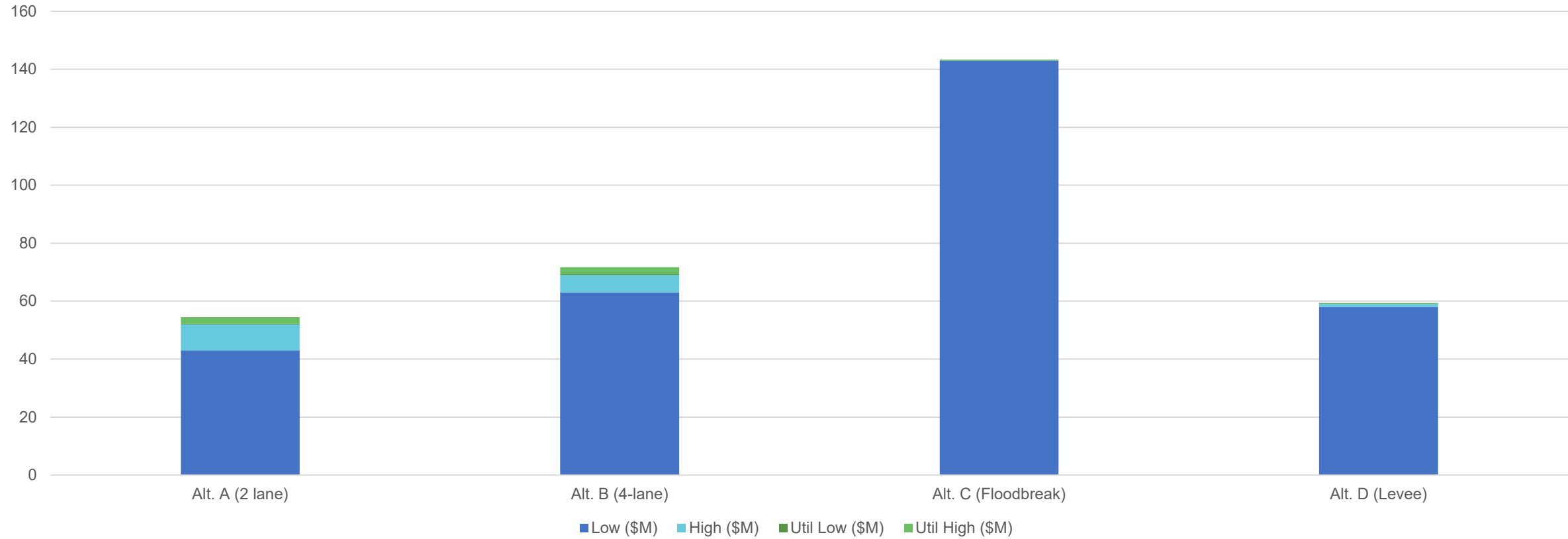


Acquisitions and Impacts

Alternative	Land Acquisition	Traffic Impacts	Homeowner Impacts
Alt. A <i>2 Lane Road</i>	Minimal Driveways	Significant Roadway size and wall limit normal traffic function; requires turnaround installations	Moderate Steep incline required for driveways; minor impact to lakefront view (2.5' wall)
Alt. B <i>4 Lane Road</i>	Partial Driveways	Moderate Two-lanes on either side of the floodwall allow more normal traffic flow	Significant Limited space between homes and roadway; limits lakefront view (5' wall)
Alt. C <i>FloodBreak</i>	Partial Driveways	Minimal Traffic will be able to cross the floodwall when retracted	Minimal Steep incline required for driveways
Alt. D 1 <i>Levee</i>	Yes All property north of Lakeview Drive	None	Significant Buyout required for all property north of Lakeview Drive

Alternatives By Total Costs

Lakeview Drive Alternatives: Estimated Cost Range x Utility Relocation Cost Range



Next Steps

CPRA: share Feasibility Report with St. Tammany Parish, STLDCD, and legislators

CPRA: coordinate stakeholder engagement with the Parish and STLDCD

St. Tammany Parish and STLDCD: agree upon a preferred alternative in writing

St. Tammany Parish and STLDCD: develop revenue plan for construction and long-term O&M

St. Tammany Parish and STLDCD: coordinate with DOTD to elevate Hwy 11