

TIRZ No. 2 - North Padre Island

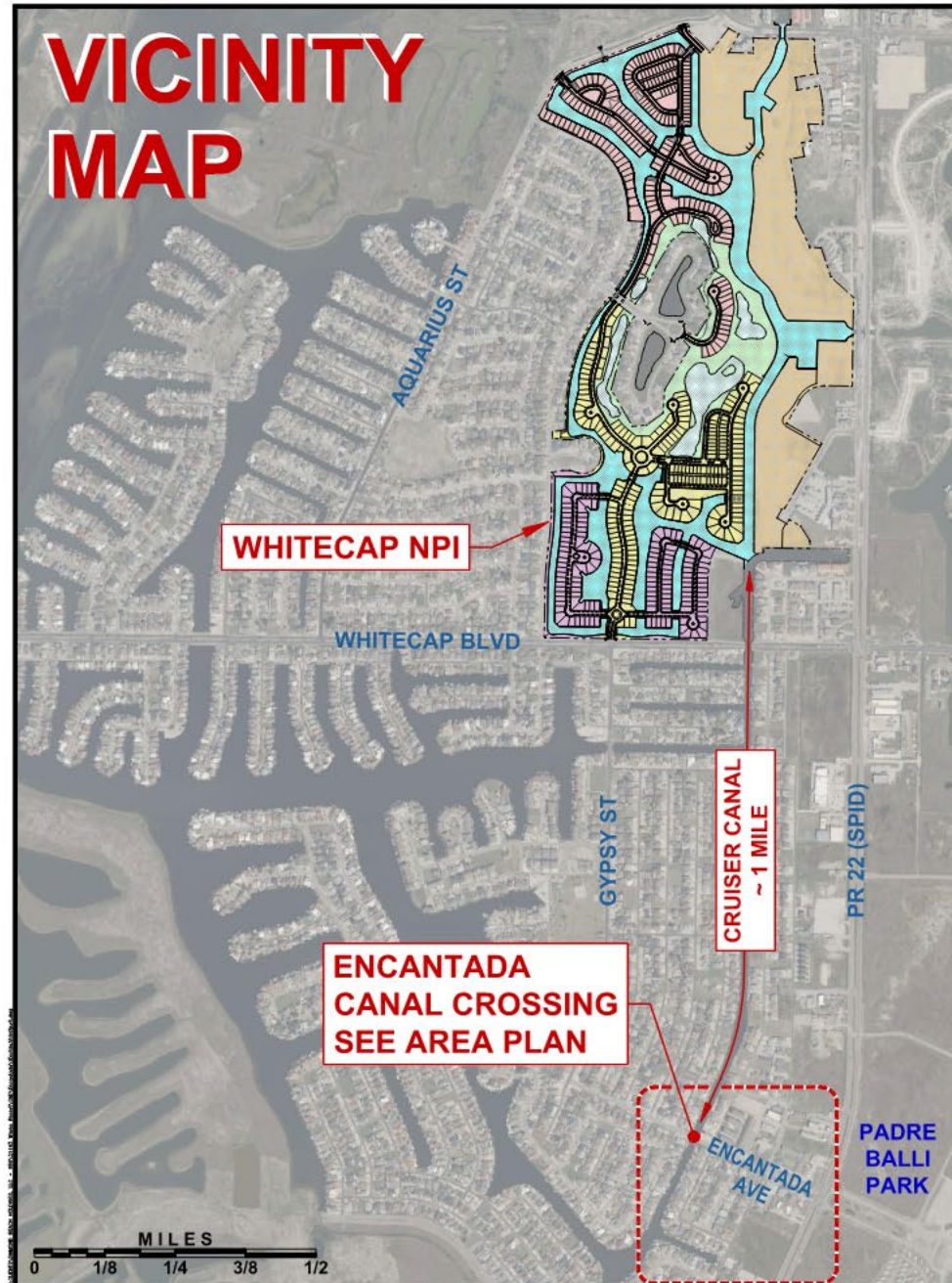
# Encantada Water Exchange Evaluation



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# VICINITY MAP



# AREA PLAN

## Existing Conditions:

- 2 – 36” RCP Culverts (2/3 Silt Blockage)

## Alternative Options:

- Option 1

**Clean** Existing Dual 36” RCP Culverts and Provide **Minor Dredging**

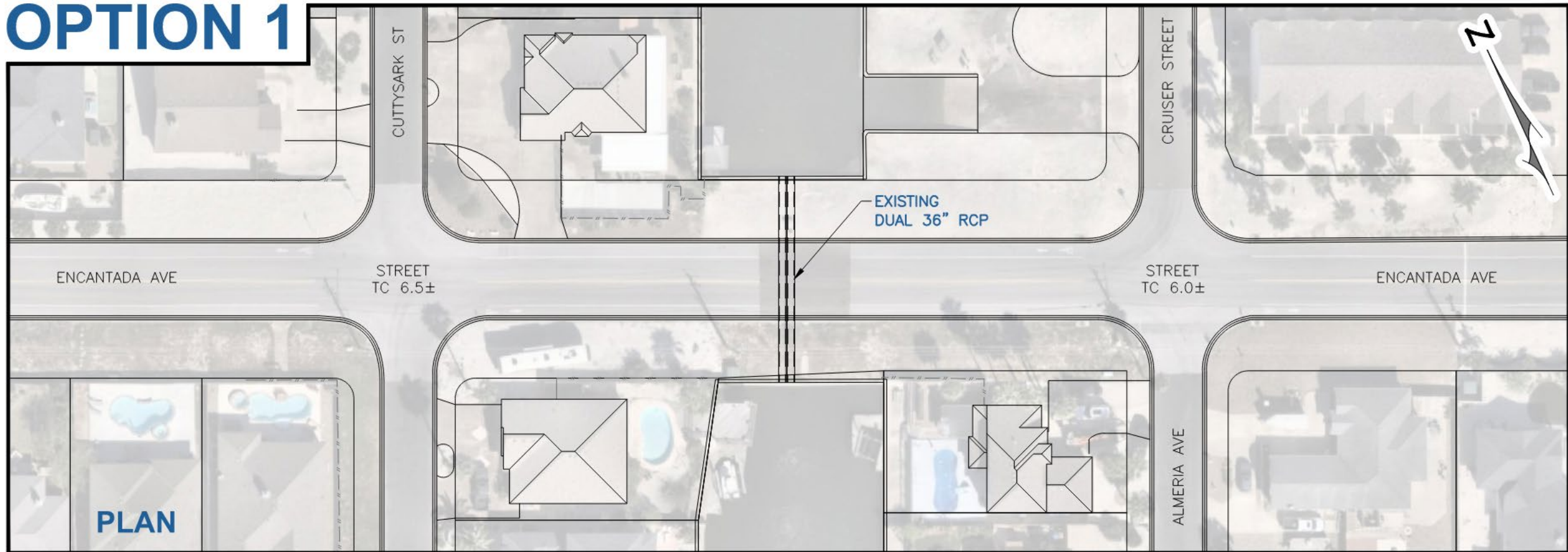
- Option 2

Remove Existing Pipe Culverts and Replace with **Box Culverts** to Increase Circulation

- Option 3

Remove Existing Pipe Culverts and Replace with a **Bridge Structure** to Increase Circulation and Allow Boat Passage

# OPTION 1

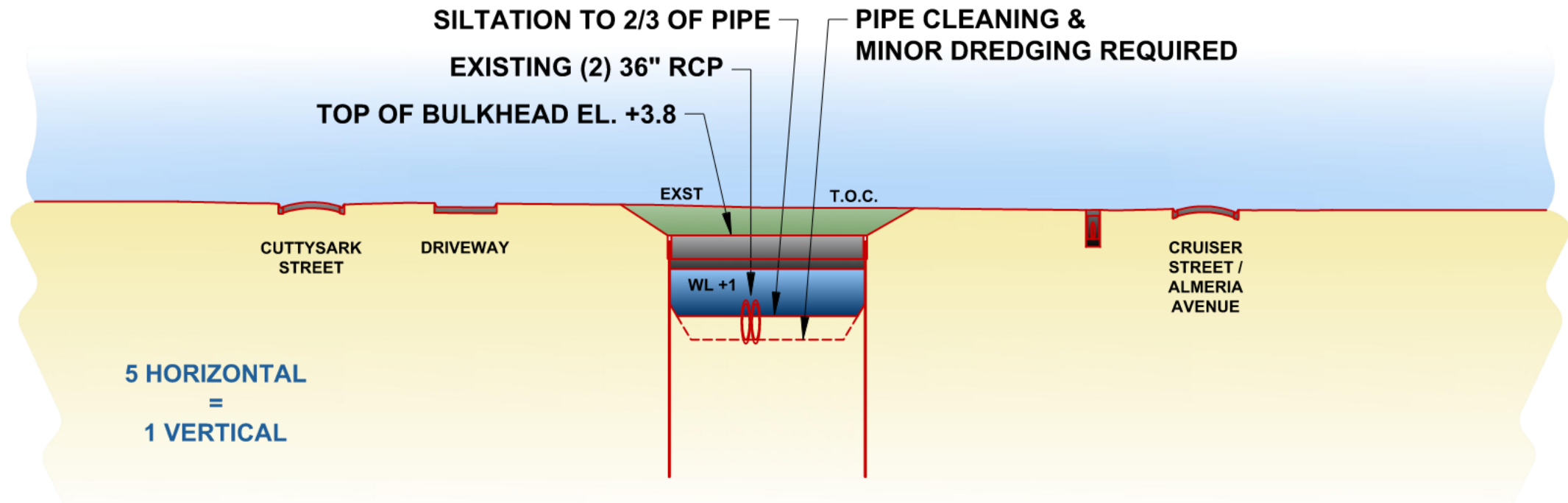


## EXISTING DUAL 36-IN RCP

# OPTION 1

## 5 : 1 EXPANDED ELEVATION

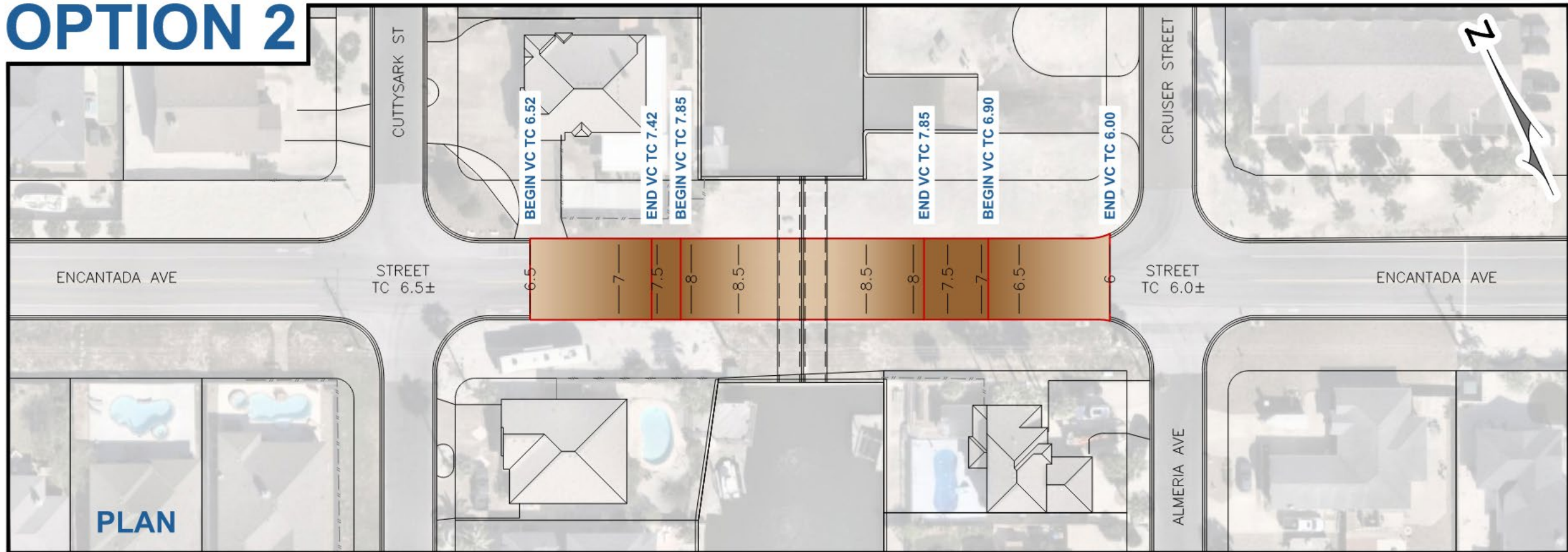
EXISTING DUAL 36-INCH CULVERTS,  
2/3 OF WHICH BLOCKED WITH SILTATION,  
REQUIRING CLEANING AND MINOR DREDGING



AIR DRAFT  
NONE

EXISTING DUAL 36-IN RCP

# OPTION 2

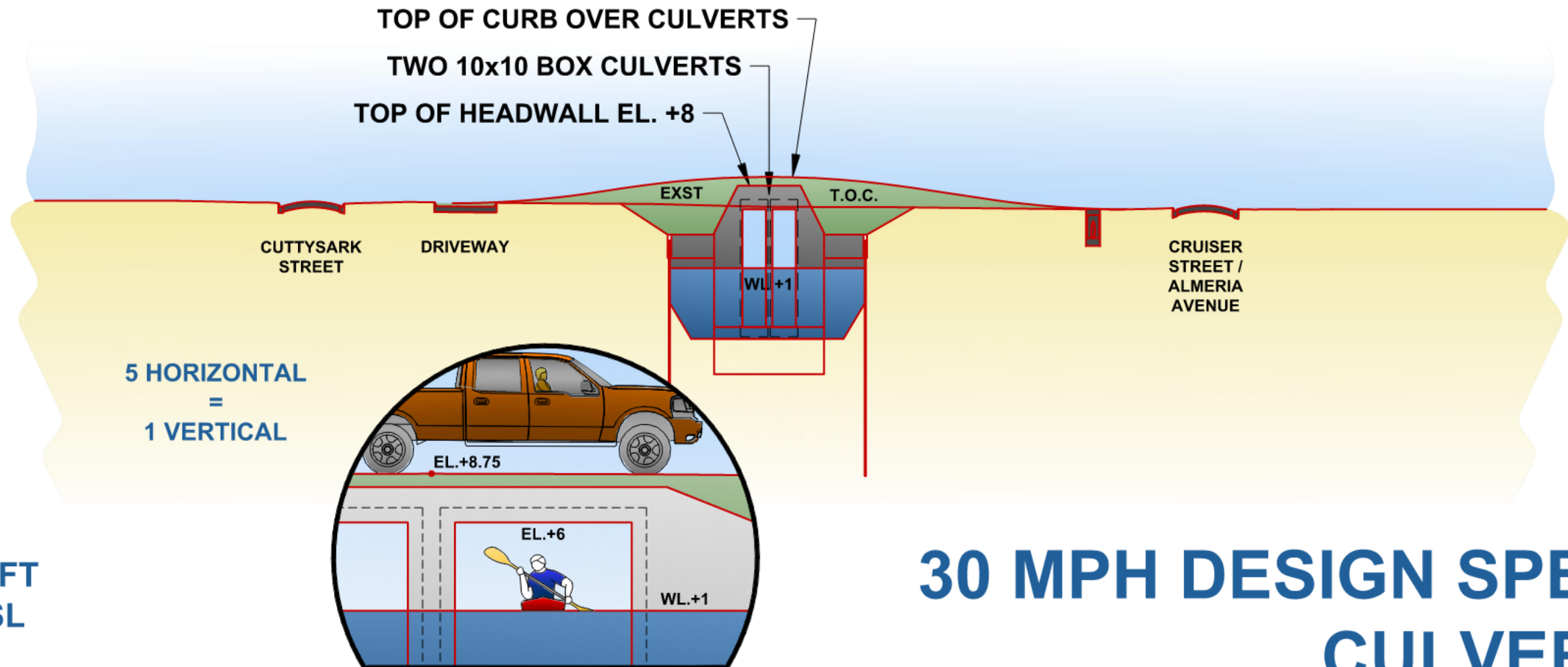


**30 MPH DESIGN SPEED  
CULVERTS**

# OPTION 2

## 5 : 1 EXPANDED ELEVATION

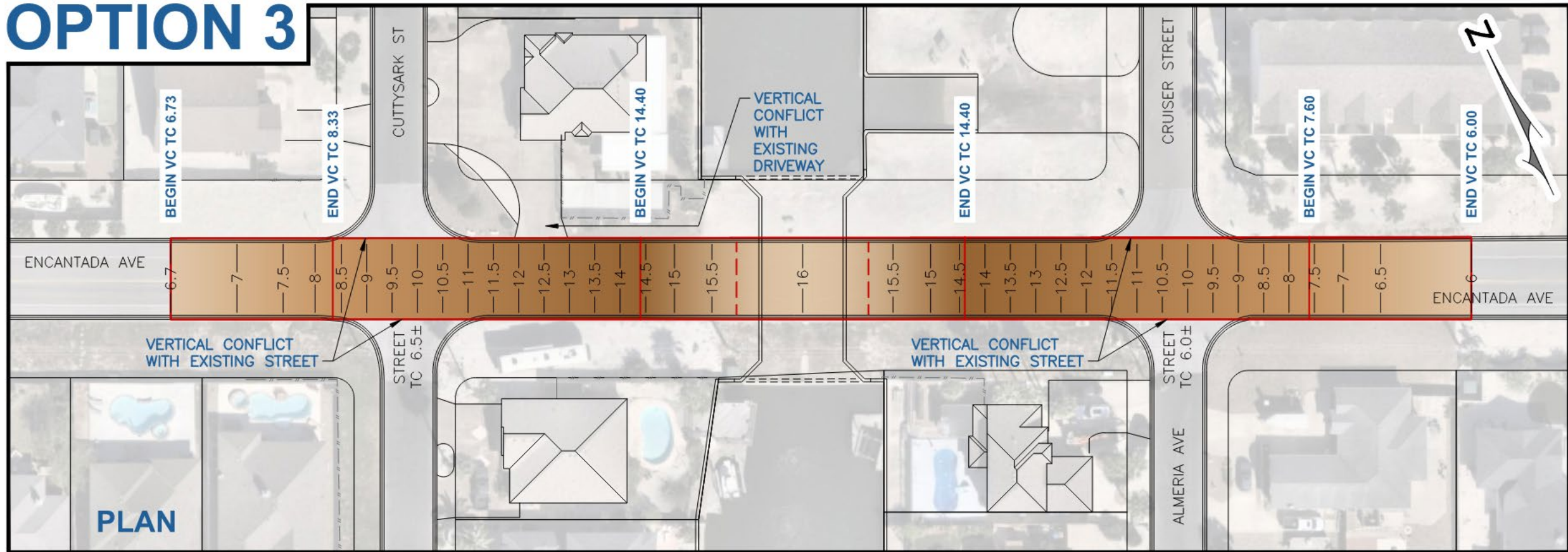
10x10 CULVERTS ALLOW THE PASSAGE OF KAYAKS & CANOES. LOWER STREET CROSSING ALLOWS 30 MPH DESIGN SPEED AND SAFE SIGHTLINES



AIR DRAFT  
5.4 @ MSL

30 MPH DESIGN SPEED  
CULVERTS

# OPTION 3

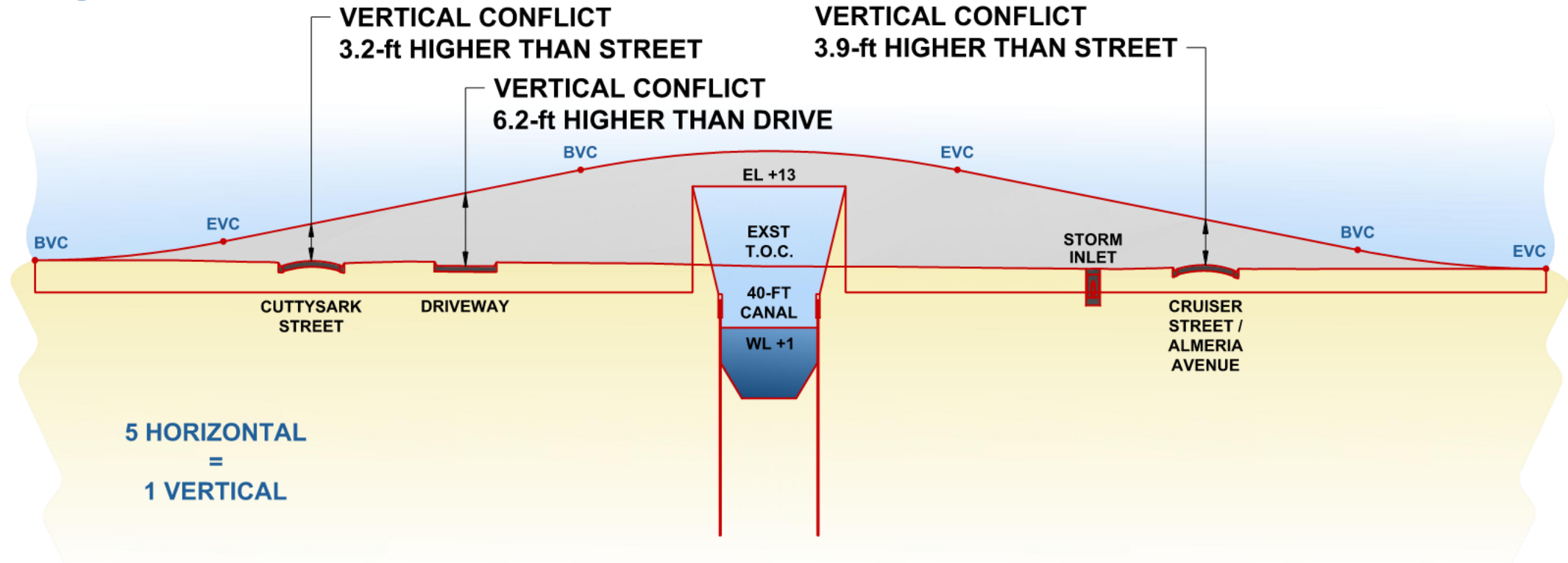


## 30 MPH DESIGN SPEED BRIDGE

# OPTION 3

## 5 : 1 EXPANDED ELEVATION

REQUIRED LENGTH FOR 30 MPH  
DESIGN SPEED DOES NOT ALLOW  
CONNECTION TO ADJACENT  
STREETS AND DRIVEWAYS  
DUE TO VERTICAL CONFLICTS



AIR DRAFT 12.4 @ MSL  
TO MATCH WHITECAP BLVD. BRIDGE CLEARANCE

30 MPH DESIGN SPEED  
BRIDGE

# PROS / CONS

WATER CIRCULATION  
POSTED 30 MPH SPEED LIMIT  
SAFE SIGHT DISTANCE  
BOAT PASSAGE ALLOWED  
KAYAK PASSAGE ALLOWED  
CONNECTS TO CUTTYSARK  
CONNECTS TO CRUISER  
CONNECTS TO DRIVEWAY  
CONSTRUCTION COST  
CONSTRUCTION DIFFICULTY  
ACCESSIBILITY FOR PUBLIC  
(DURING CONSTRUCTION)

OPTION 1  
CLEAN & DREDGE

LIMITED  
ALLOWED



X

X



LOWEST

EASY

NO IMPACT

OPTION 2  
BOX CULVERTS

IMPROVED  
ALLOWED



X



MEDIUM

MEDIUM

CLOSED TO VEHICLES  
OPEN TO PEDS / CARTS

OPTION 3  
BRIDGE  
STRUCTURE

IMPROVED  
ALLOWED

X



X (3'Δ)

X (4'Δ)

X (6'Δ)

HIGHEST

HIGHEST

CLOSED TO  
ALL TRAFFIC