

# **CORPUS CHRISTI – NORTH BEACH**

## Drainage Improvement Project Plan and Phase 1 Implementation

# Drainage Improvement Project Plan



## Tidal Flooding Reduction

**—** Elevate key infrastructure.  
Varies <6" to 4'

**■** Install backflow devices to  
prevent backflow to low lying  
areas.\*

**—** Install Coastal Barrier  
(dunes).




\* Established areas of  
development **■**, will require  
long-term backflow prevention.

Areas available for future  
development **■**, could be  
elevated during development to  
eliminate need for long-term  
backflow prevention

# Drainage Improvement Project Plan



## Rainfall Flooding Reduction

-  Install new open channel conveyance system, integrated within linear open space amenity.\*
-  Install new piped conveyance system, were
-  Install pump stations to provide drainage of low-lying infrastructure during high tides.



# Drainage Improvement Project Plan



- Comprehensive improvement plan will be implemented in phases
- Phasing will be determined based on timing of funding availability and bridge progress

# Drainage Improvements Integration with Overall North Beach Revitalization



# Drainage Improvements Integration with Overall North Beach Revitalization





# Drainage Improvements Integration with Overall North Beach Revitalization

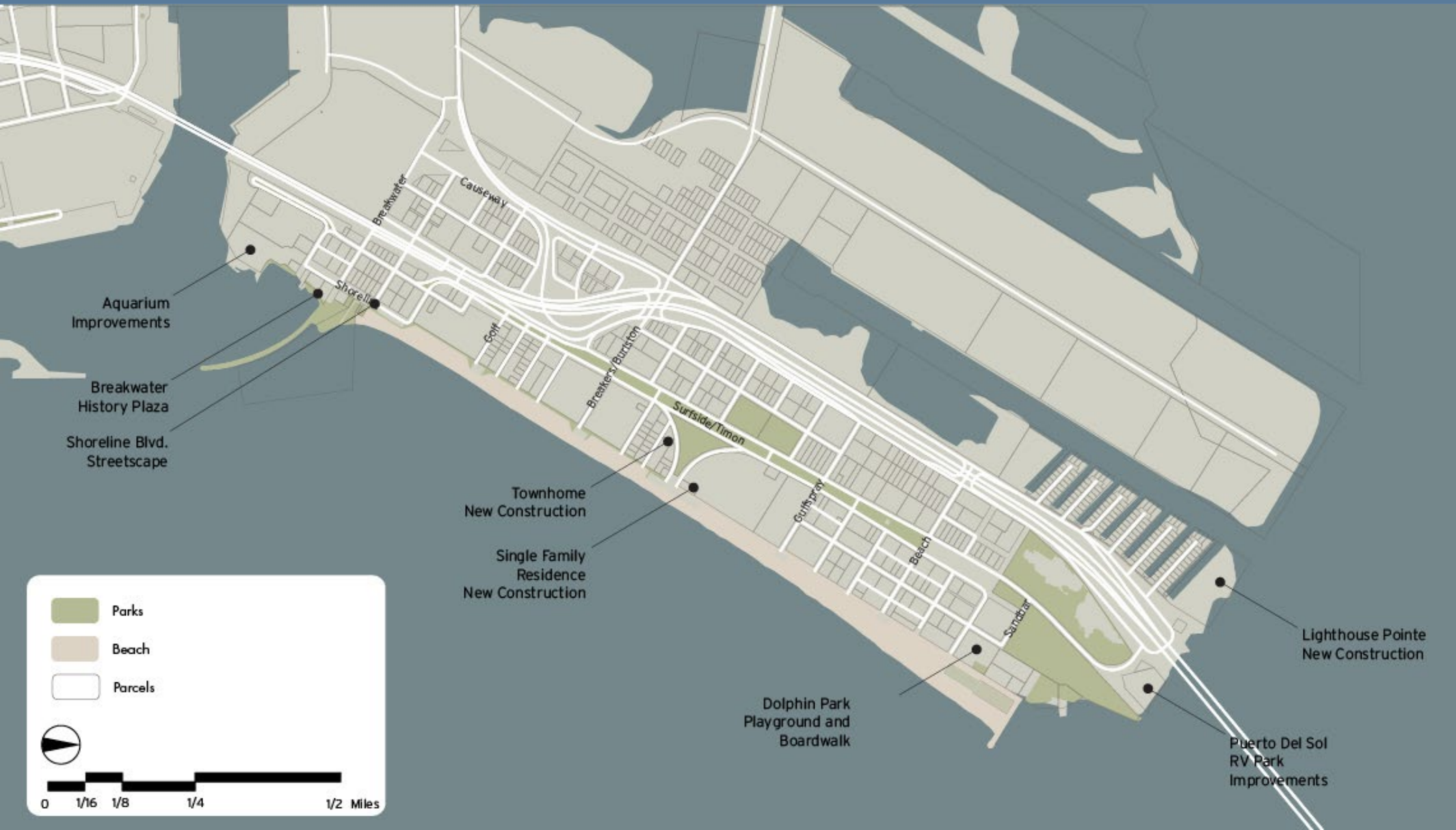


# Drainage Improvements Integration with Overall North Beach Revitalization





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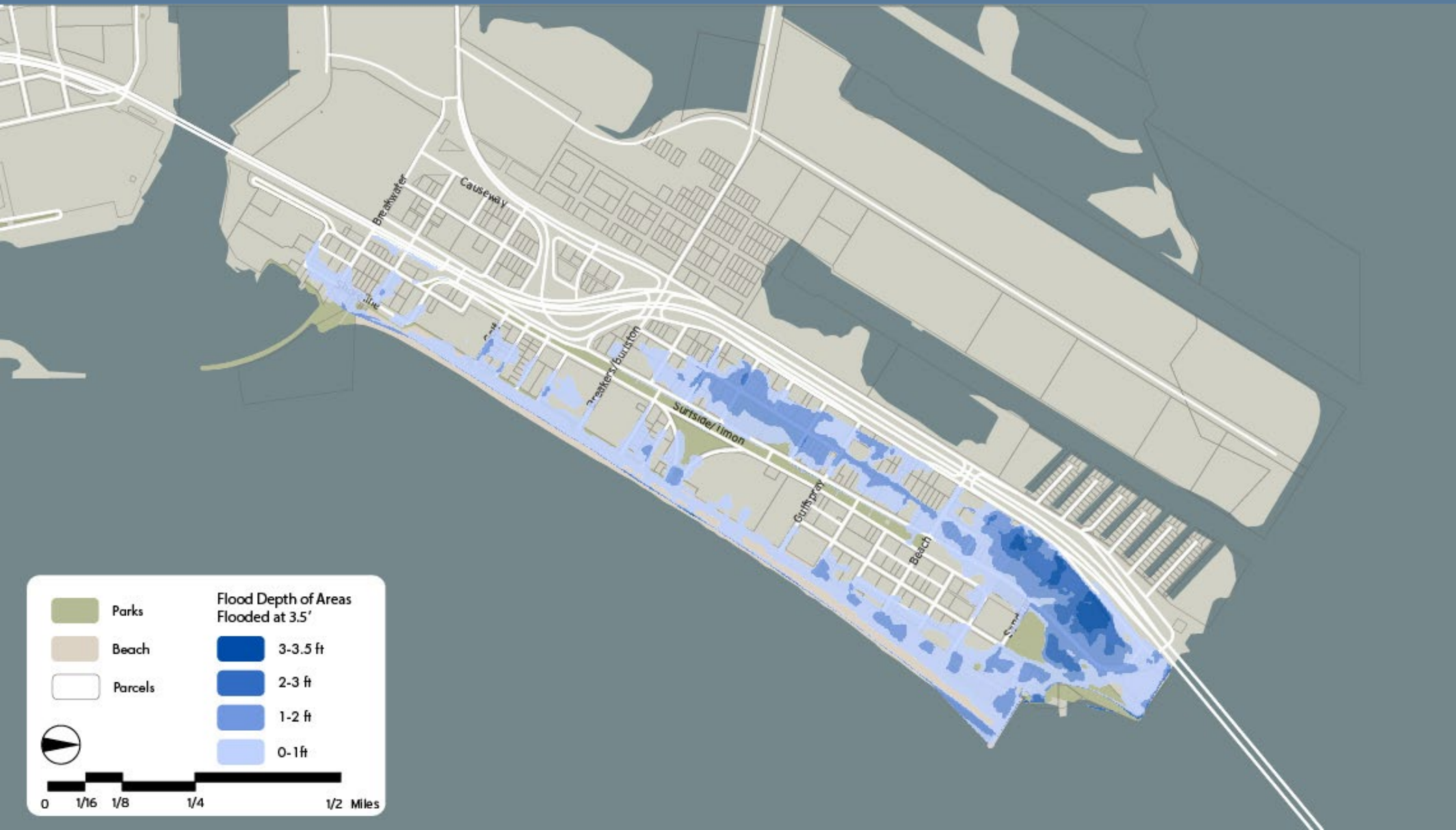


# Drainage Improvements Integration with Overall North Beach Revitalization





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# What We've Heard So Far

## Design Guidelines for Build Out of Flooding Reduction Improvements

- Increase pedestrian connectivity to the beach, closing gaps in missing sidewalks
- Coordinate with overall North Beach multi-modal connectivity buildout
- Provide interest and attraction at varying tidal levels
- Accommodate water-based recreation, e.g. kayaking and paddle boats
- Coordinate to ensure design that does not preclude future expansion of the open channel
- Maintain water quality



# Linear Open Space + Open Channel





# Linear Park Inspiration





# Linear Park Inspiration





# Linear Park Inspiration





# Linear Park Inspiration





# Linear Park Inspiration





# Phase 1 Projects



\$4.5M

**Surfside Park Improvements:**  
Elevating parking, restroom and active park areas

- Design-Build RFQ – Oct. 2021
- Design-Build Contract Award – Mar. 2022
- Design-Build Const. Start – Mar. 2023



# Phase 1 Projects



\$3.5M

**Gulfstream and Beach**  
**Reconstruction:** Elevating roadways,  
elevating parking and pedestrian  
improvements

- Design RFQ – Est. Nov. 2022
- Design Contract Award – Est. Apr. 2023
- Construction RFB – Est. Mar. 2024
- Construction Start – Est. Aug. 2024

# Phase 1 Projects



\$6M

**Linear Open Space and Channel:** Elevating roadways, creating open channel, installing new northern outfall to Eco Park, temporary channel aeration/circulation system, redirect existing Gulfbreeze piped conveyance to linear open space channel with backflow prevention, linear open space activation improvements, pedestrian improvements

- Design RFQ – Est. Nov. 2022
- Design Contract Award – Est. Apr. 2023
- Construction RFB – Est. Jun. 2024
- Construction Start – Est. Oct. 2024

\*Phase to include stakeholder outreach regarding level of protection trade-offs (elevation and conveyance sizing), long-term multi-modal transportation build-out, linear park design standards. Phase to include sediment monitoring and maintenance plan recommendations.



# Initial Funding Plan

## Available Budget: \$14.05M

Bond 2020/2023	\$4.50M
ARPA	\$5.00M
Bond 2018 - Beach Avenue	\$1.00M
Bond 2018 - GulfSpray Pedestrian Access	\$0.30M
Bond 2018 - NB Primary Access Project (To be redirected to GulfSpray and Beach)	\$1.25M
FY 2023 General Fund	\$2.00M

# Future Phase Projects



\$14M

Elevating roadways, creating open channel, installing new southern outfall at Pearl Ave, temporary channel aeration/circulation system, new piped conveyance in Shoreline Blvd and adjoining streets with backflow prevention, linear open space activation improvements, pedestrian improvements

\$6M

Elevating roadways, competition of open channel, redirect existing piped conveyance to open channel with backflow prevention, complete linear open space activation improvements, pedestrian improvements

\$11M

Elevate roadways, construct coastal barrier, install pump stations



# Recommendation

Staff recommends City Council adopt the North Beach Drainage Improvement Project, approve the Phase 1 construction of the proposed strategy, and repeal Ordinance No. 031970.