2023

South Shore Drive Flood Mitigation

Project

TOWN OF SURF CITY

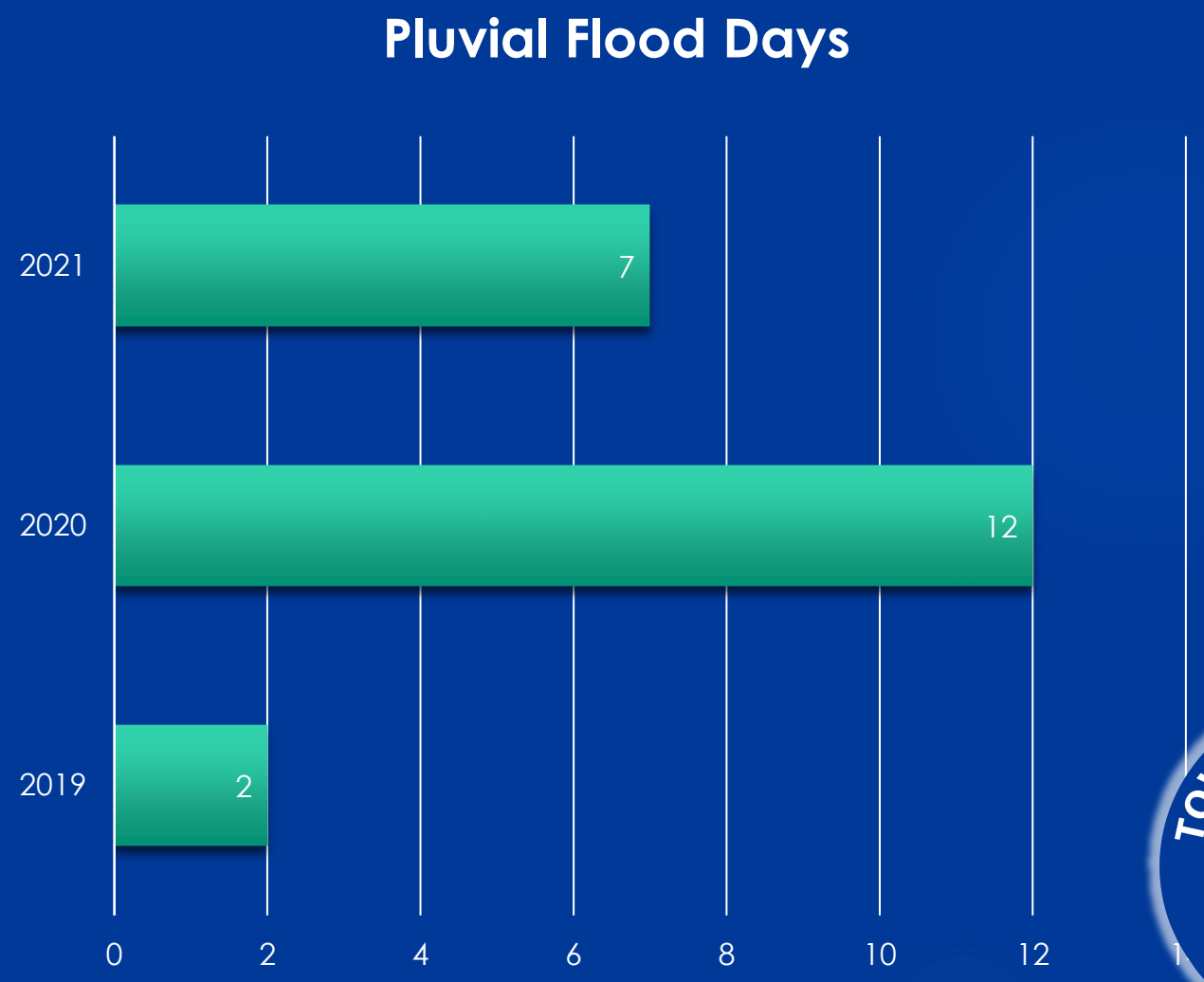
1949

STEP 1: Problem Identification

Problem Identification

STEP 2: Research & Analysis

Pluvial Flood Days



Impacts

- Risks for Motoring Safety

Impacts

Damage to:

- Homes
- Vehicles
- Real Property

Impacts

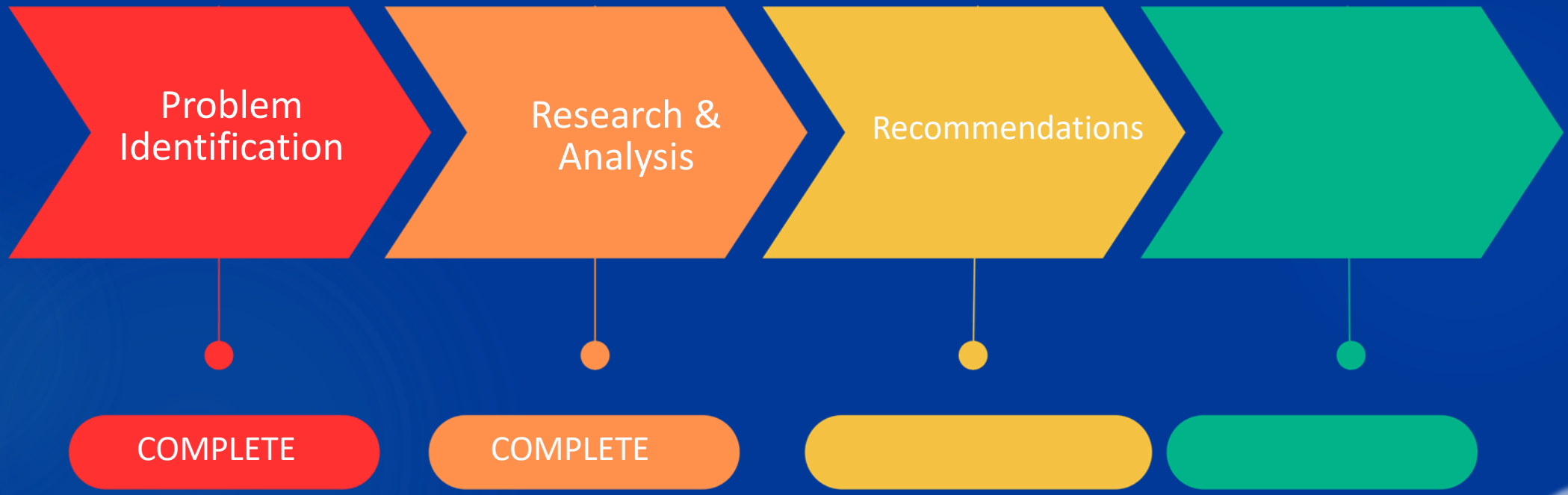
- Unsafe Travel for Emergency Vehicles

- Delayed Emergency Response Time

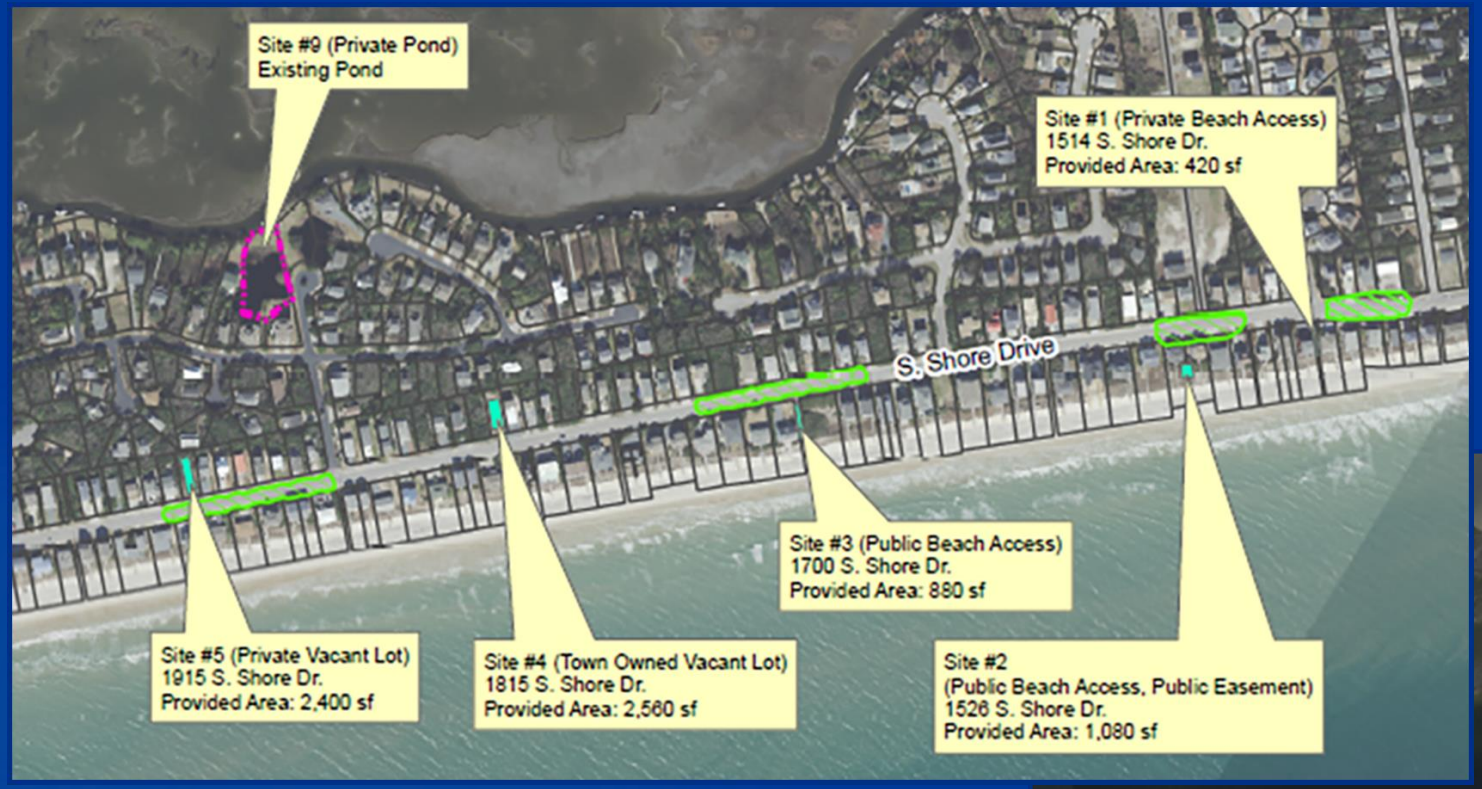
Impacts

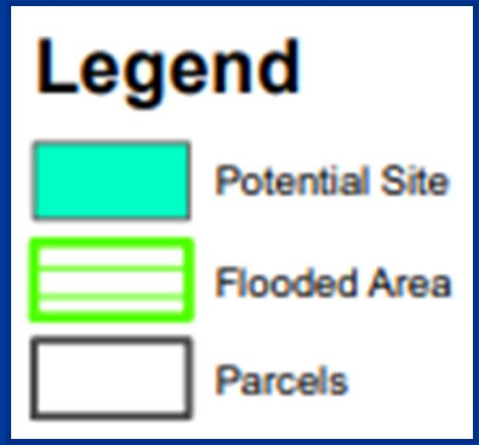
- Roadways- degradation of road structure, fatigue cracking and potholes
- Sidewalks- weight fatigue and slippage from motor vehicle use during flooding
- Utility Infrastructure- damage to water valves/meters

STEP 3: Recommendations



Critical Flooding Areas





Site #4


Legend
Stormwater Pump Station
Proposed Manhole
Proposed Inlet
Proposed Storm Drain
Proposed Force Main
Infiltration Chambers
Ponded Water
Contours (2 ft)
Parcels
Approximately
2560 square feet

Site #6


Legend
Proposed Manhole
Proposed Inlet
Proposed Storm Drain
Infiltration Chambers
Ponded Water
Contours (2 ft)
Parcels
Approximately
,400 square feet
14
12
10
12
10
8
6
4
10

STEP 4: Identify & Secure Funding

Funding

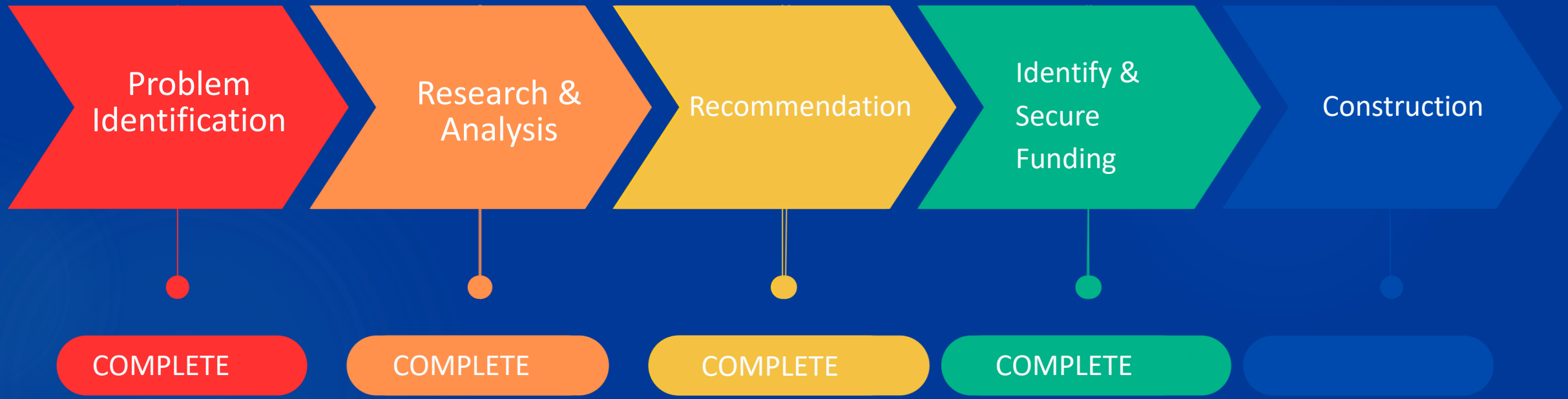
$250,000

Golden LEAF FOUNDATION

Funding

$520,100

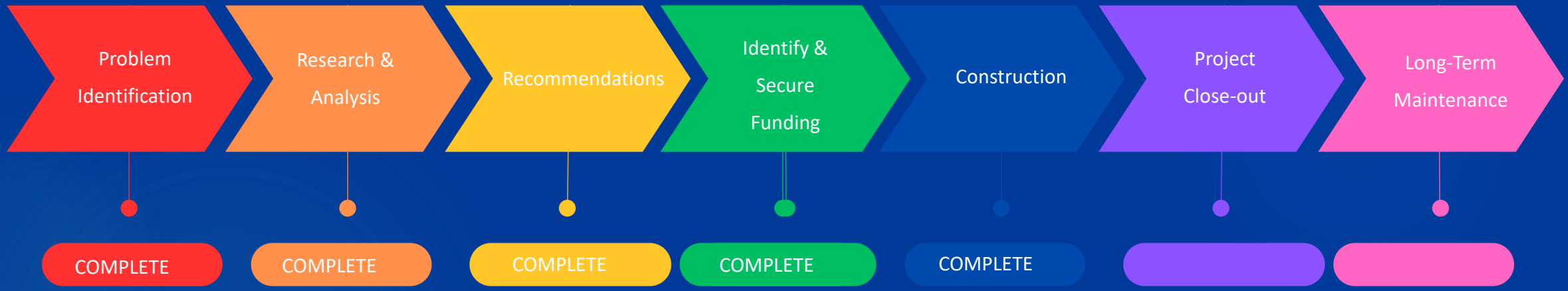
STEP 5: Construction



STEPS 6 & 7:

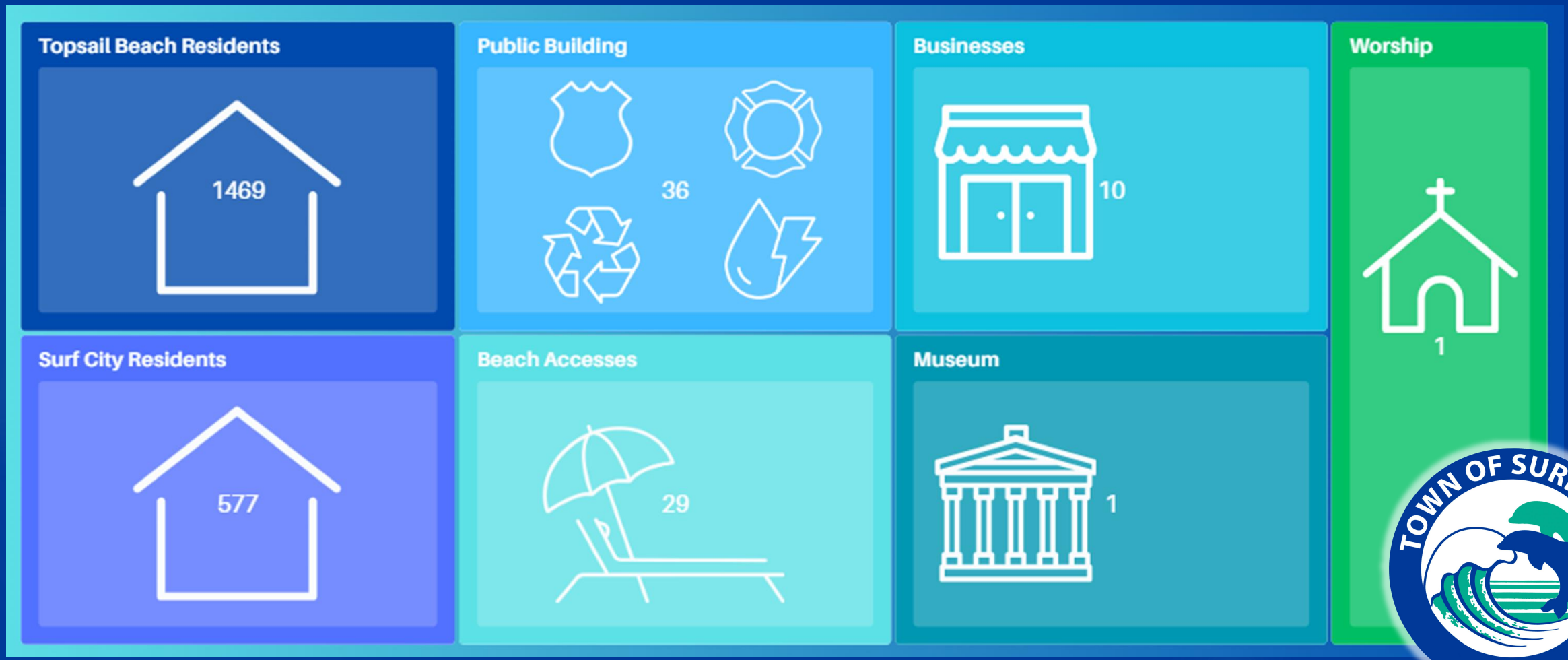
2024 COMPLETION

SITE #4 & SITE #6



Results

- Accessibility to residents, public buildings, businesses, emergency services, utility infrastructure, etc.



Results

- Reduction of damage to homes, vehicles & real property.
- Reduce emergency response times
- Reduce the maintenance impact

TOWN OF SURF CITY
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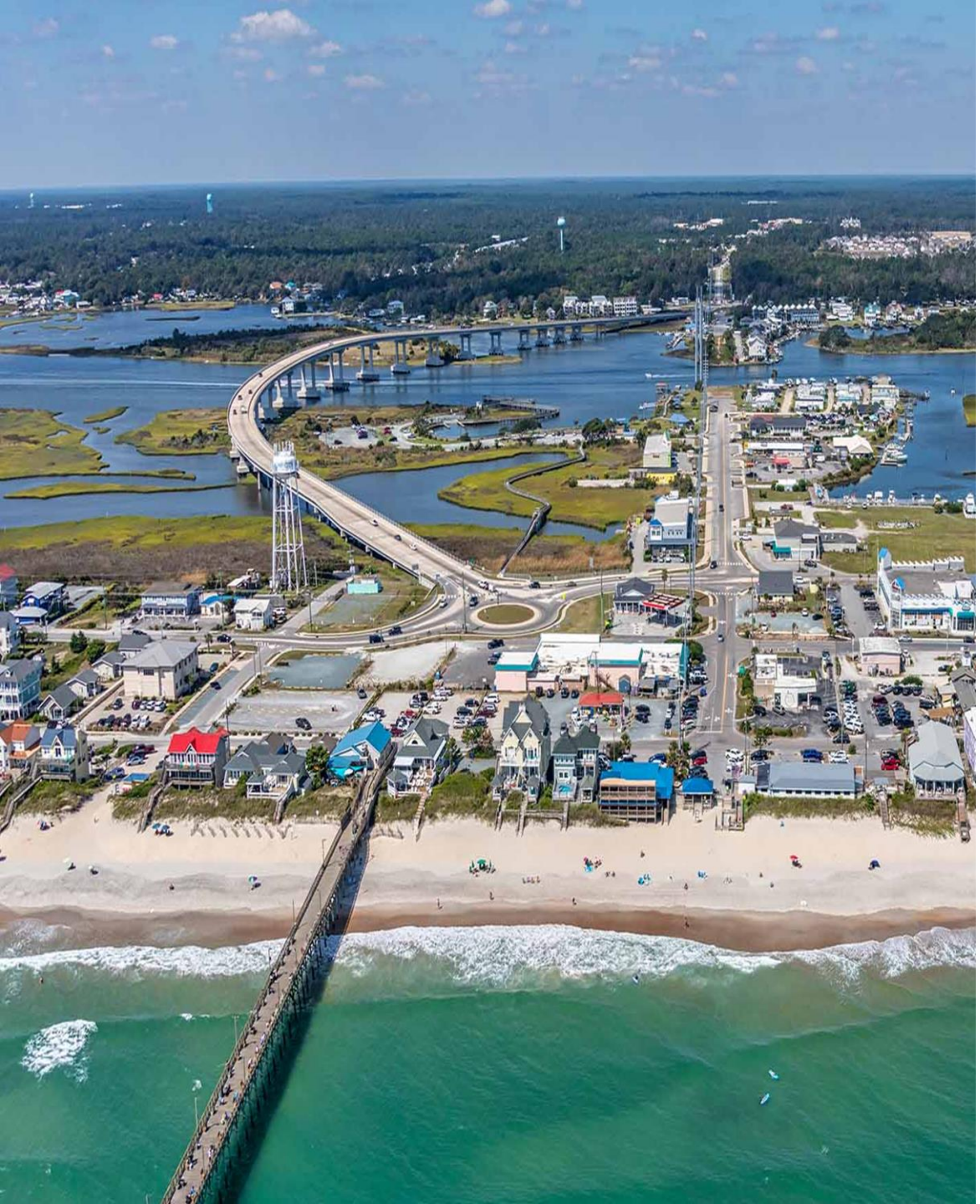

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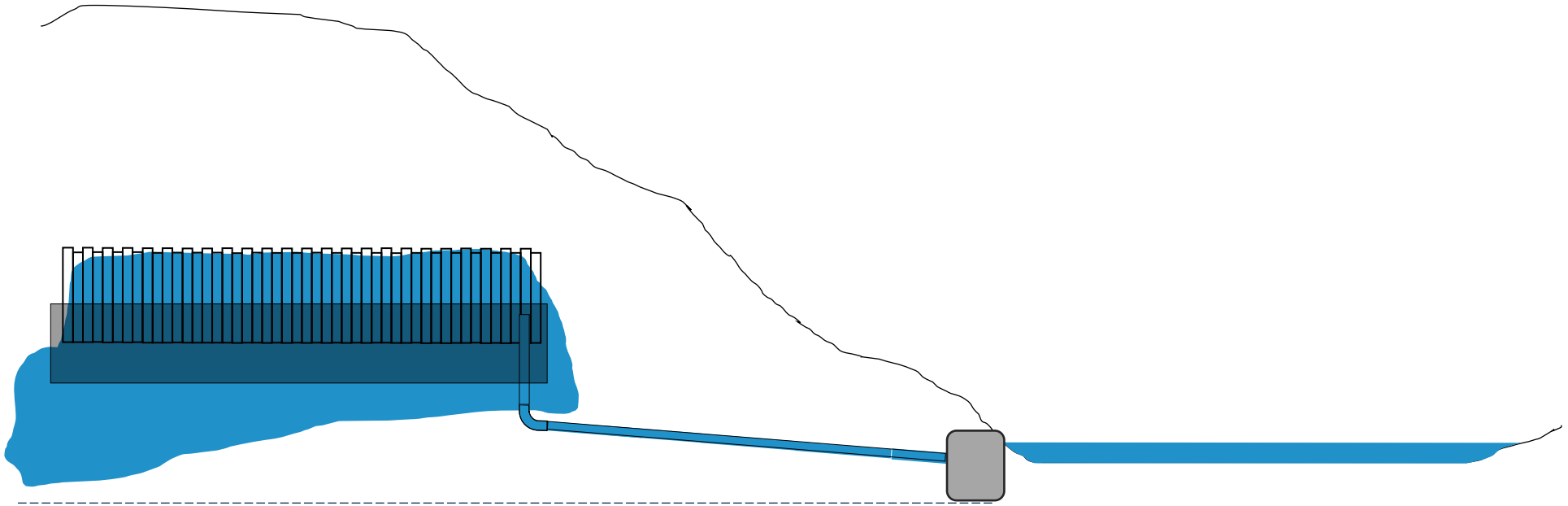
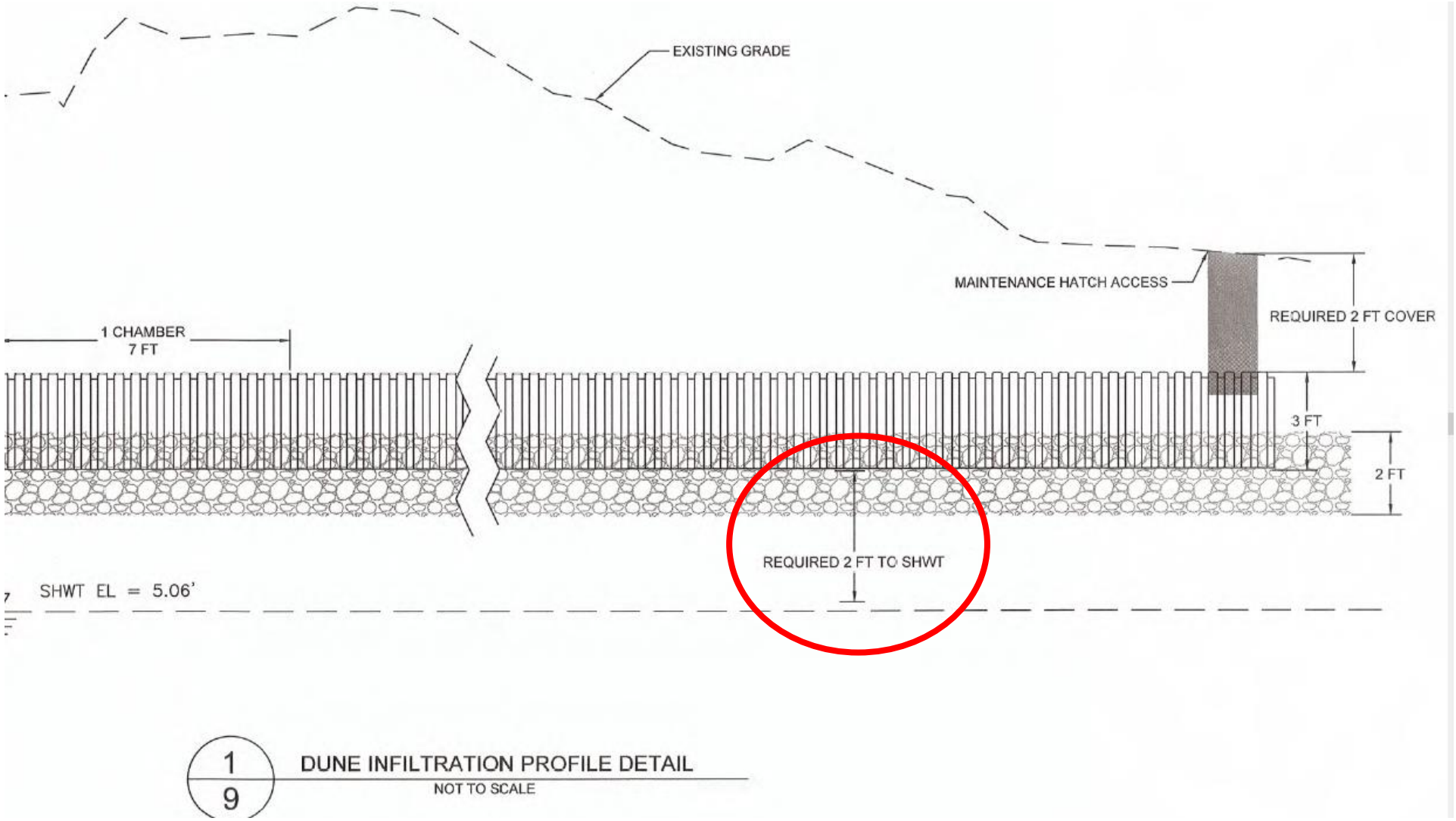
HOW IT WORKS

South Shore Drive Infiltration System

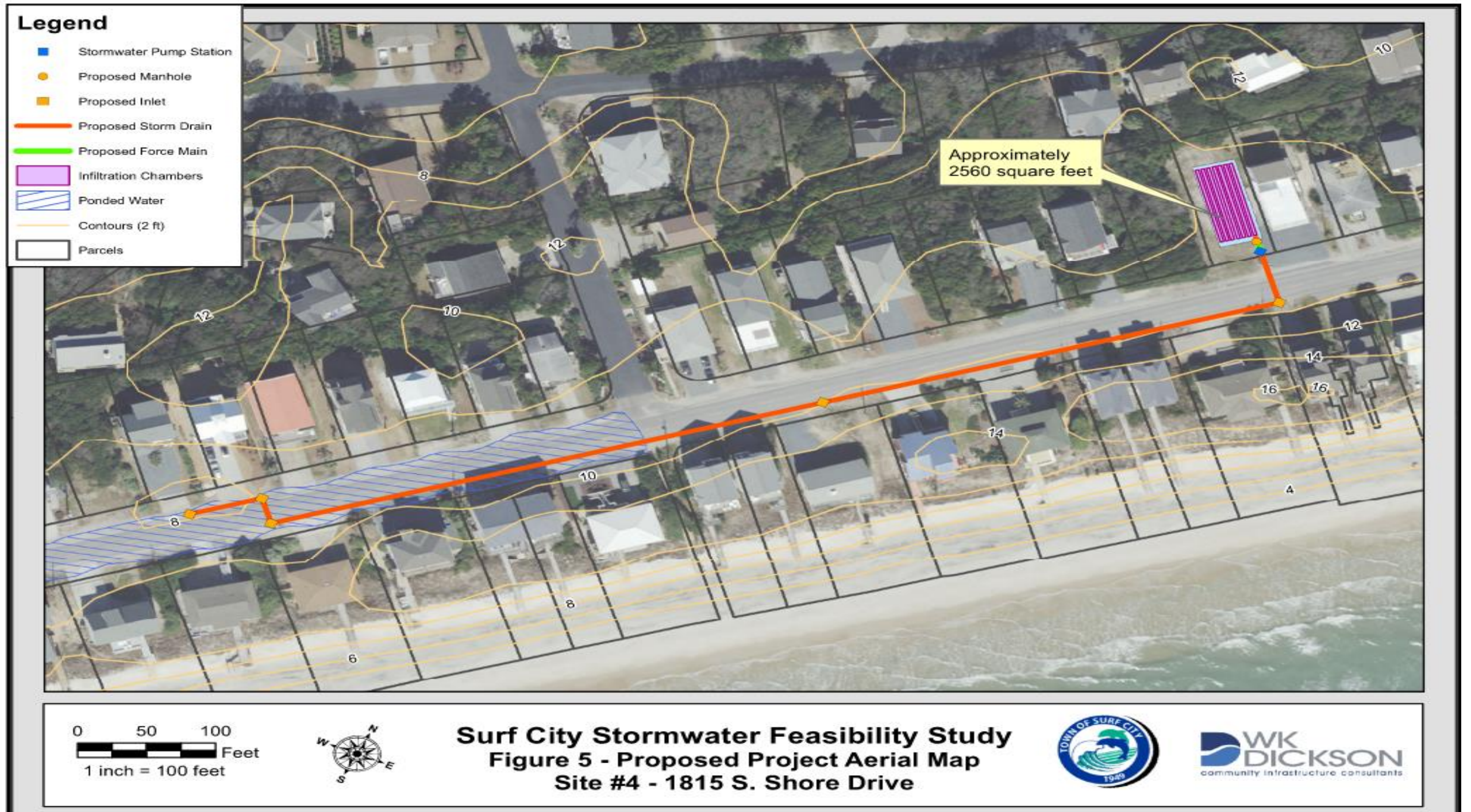


Seasonally high-water table

CONSIDERATIONS



1/9 DUNE INFILTRATION PROFILE DETAIL
NOT TO SCALE



Surf City Stormwater Feasibility Study

Figure 5 - Proposed Project Aerial Map

Site #4 - 1815 S. Shore Drive

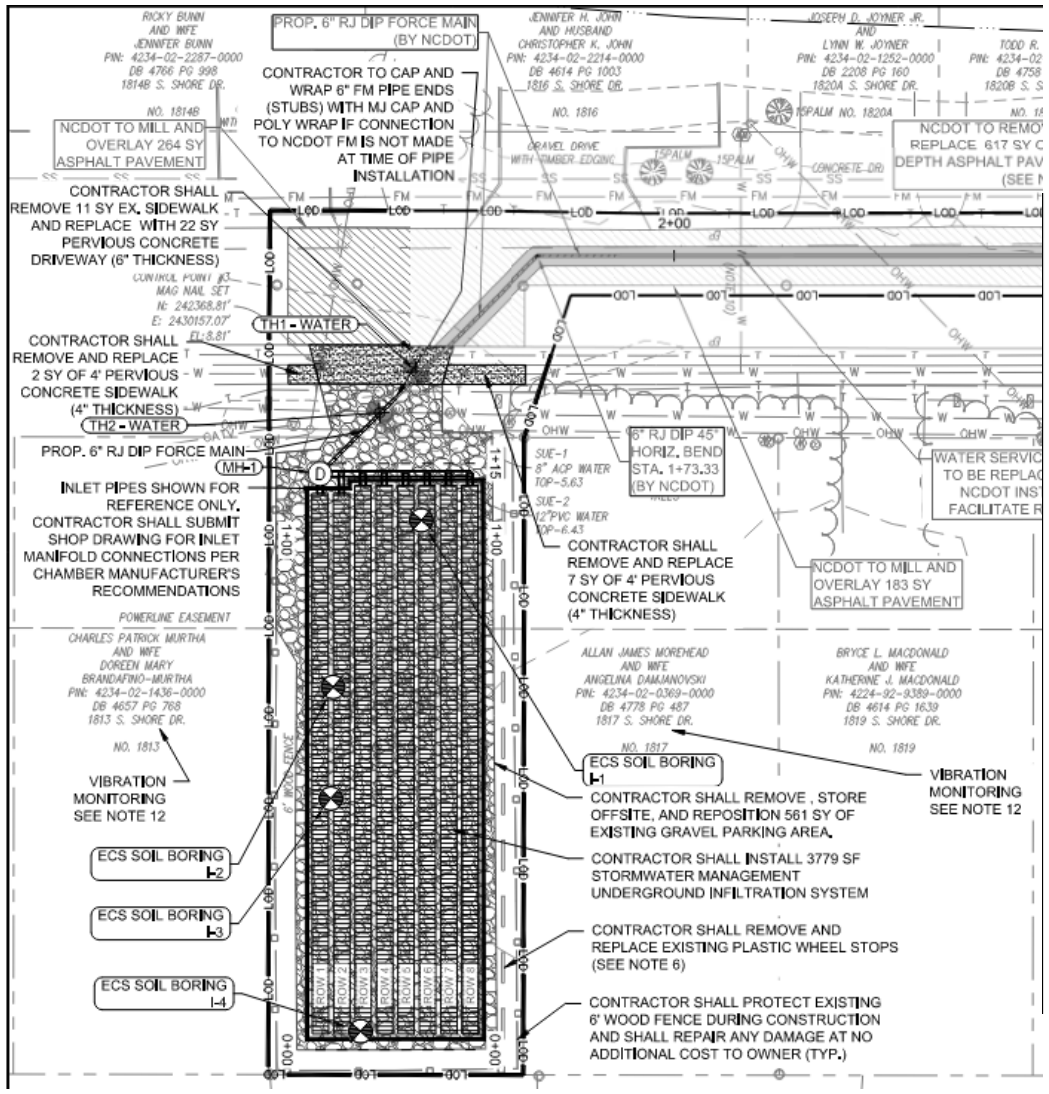
WK DICKSON
community infrastructure consultants

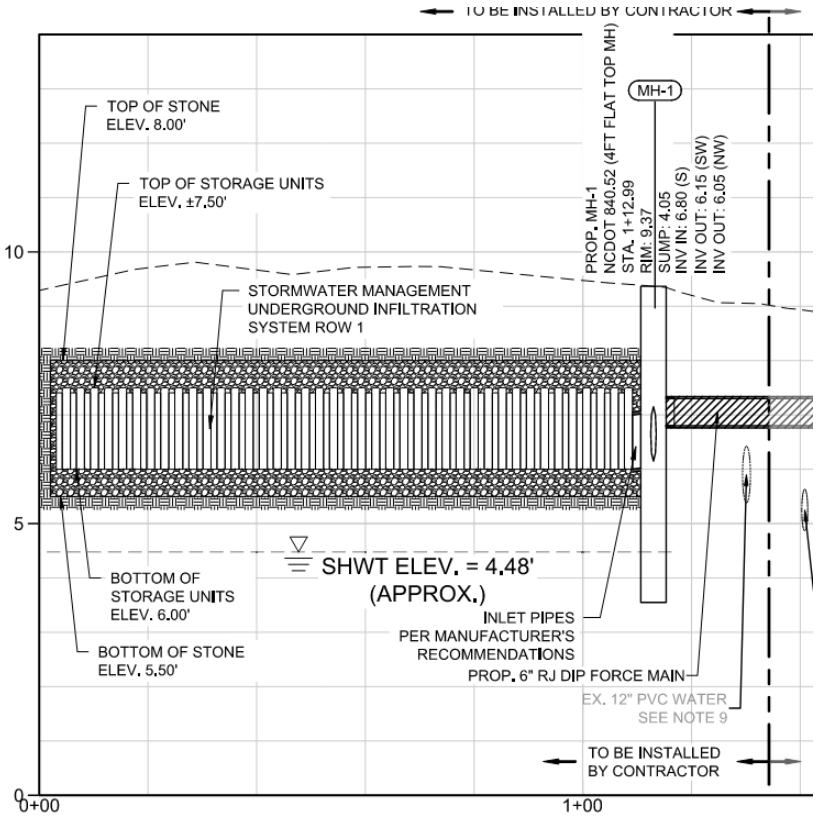
1815 SOILS

Location	Inches/ hour
I-1	24.61
I-2	20.94
I-3	26.18
I-4	26.98

The SHWT and groundwater elevation was estimated at the boring locations below the existing grade elevation. A summary of the findings are as follows:

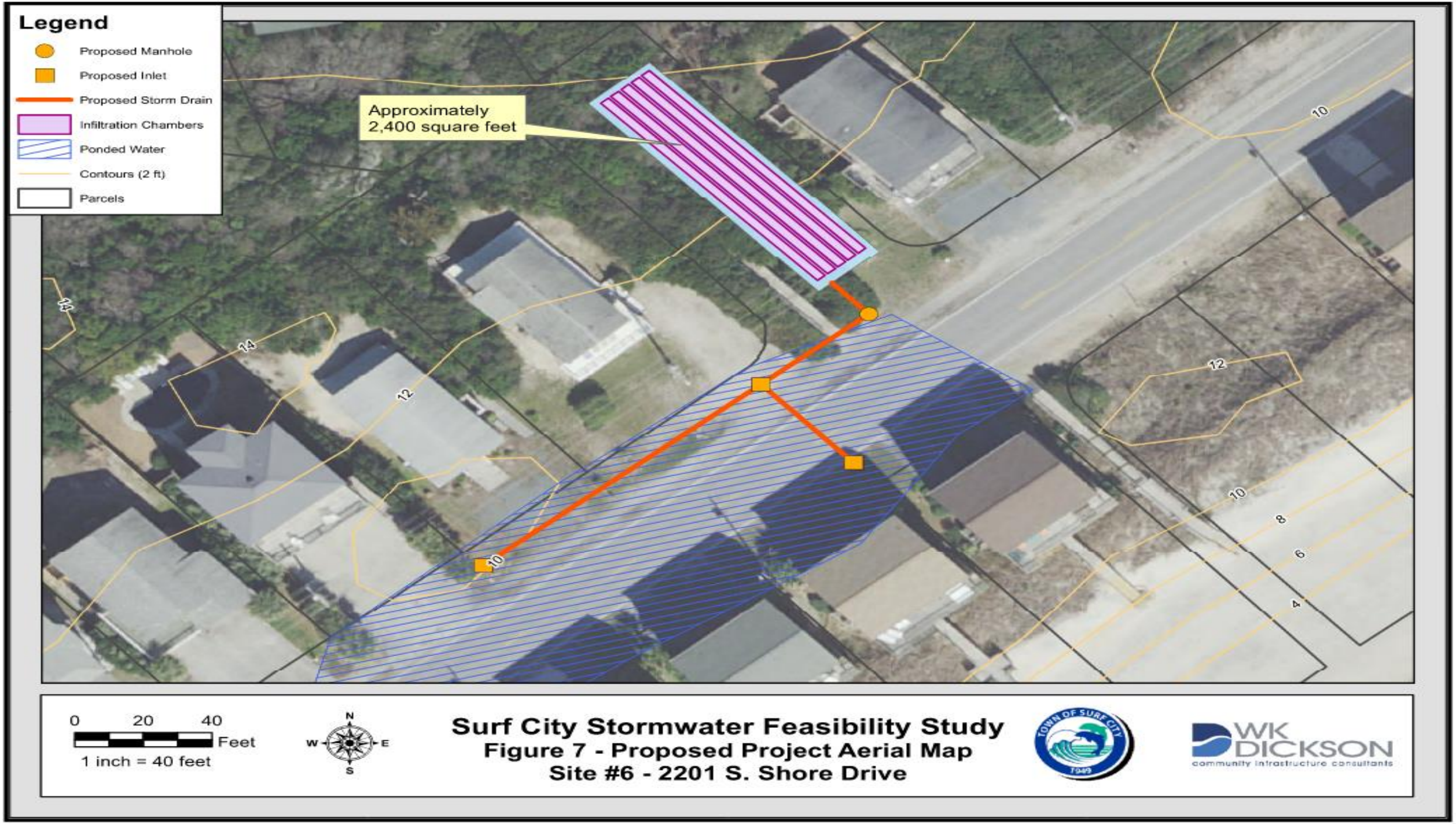
Location	SHWT	Groundwater
I-1	64 inches	74 inches
I-2	66 inches	74 inches
I-3	64 inches	74 inches
I-4	60 inches	70 inches





Inflow capacity: 880 gpm

3,779 square feet = Street should be dry within 4.5 hours



Surf City Stormwater Feasibility Study

Figure 7 - Proposed Project Aerial Map

Site #6 - 2201 S. Shore Drive

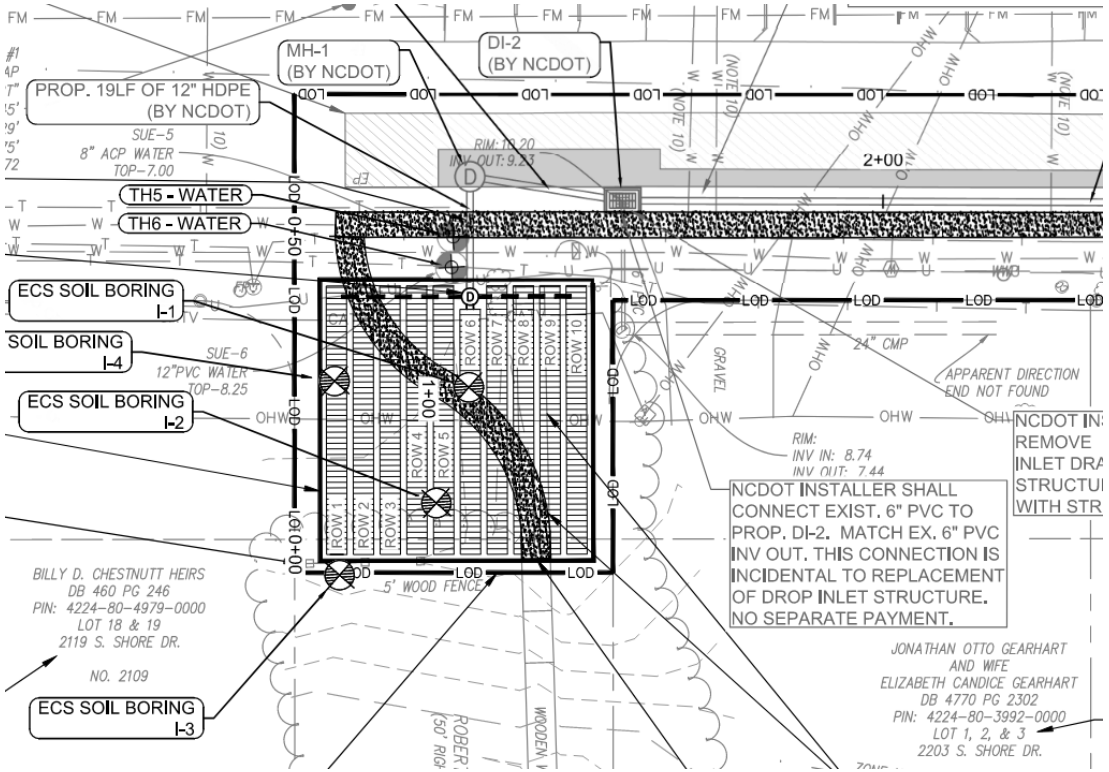
WK DICKSON
community infrastructure consultants

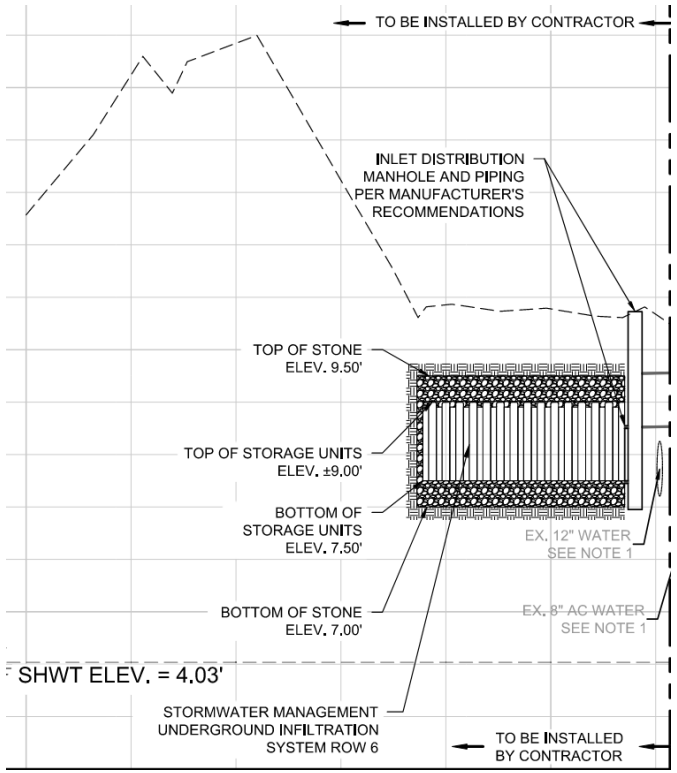
2201 SOILS

Location	Inches/ hour
I-1	29.92
I-2	26.17
I-3	25.84
I-4	26.55

The SHWT and groundwater elevation was estimated at the boring locations below the existing grade elevation. A summary of the findings are as follows:

Location	SHWT	Groundwater
I-1	74 inches	102 inches
I-2	82 inches	110 inches
I-3	82 inches	110 inches
I-4	74 inches	102 inches

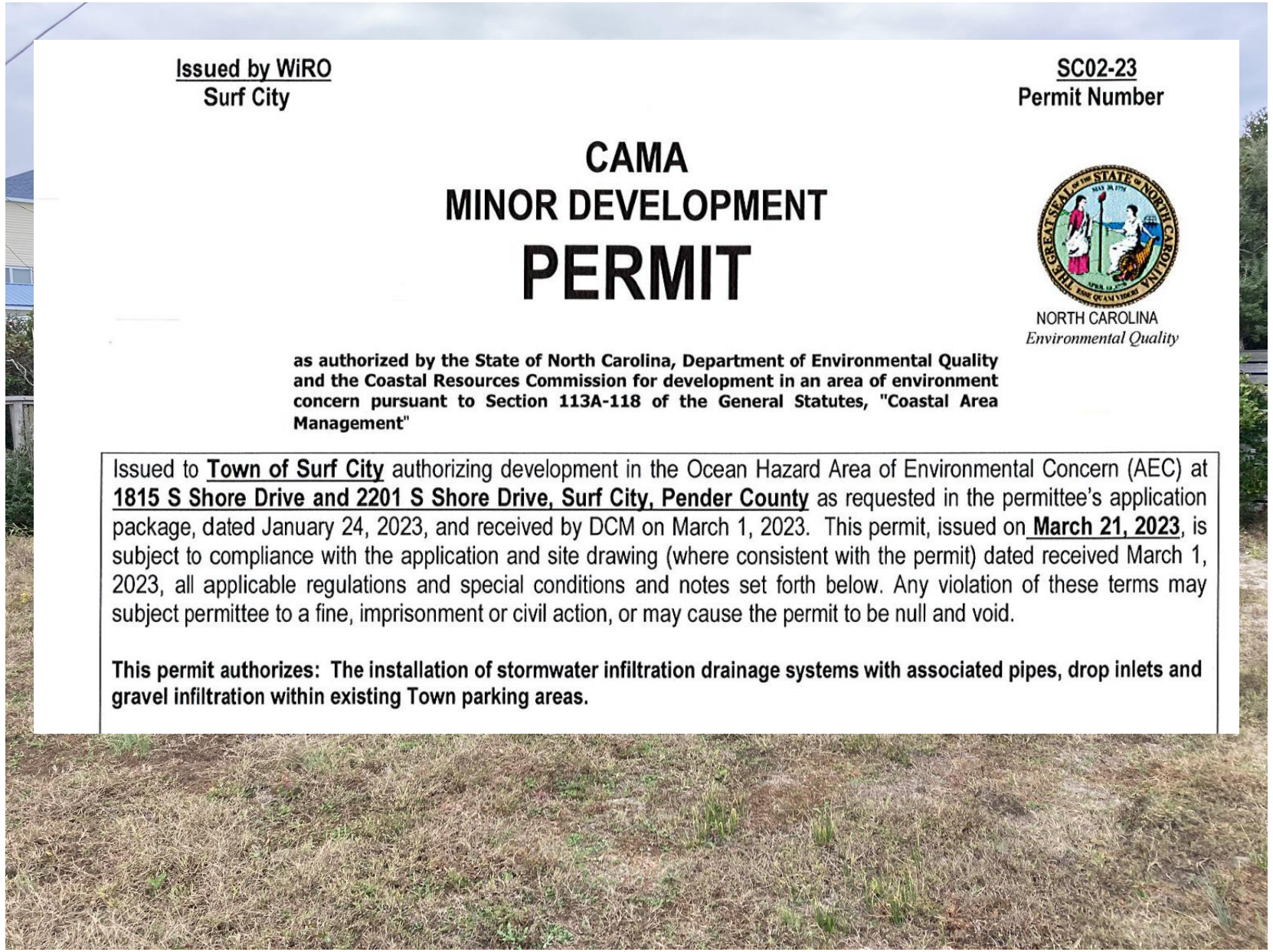




Inflow capacity: 380 gpm

1,895 square feet = Street should be dry within 5.6 hours

CAMA MINOR PERMIT



Issued by WiRO
Surf City

SC02-23
Permit Number

CAMA
MINOR DEVELOPMENT
PERMIT

NORTH CAROLINA
Environmental Quality

as authorized by the State of North Carolina, Department of Environmental Quality and the Coastal Resources Commission for development in an area of environment concern pursuant to Section 113A-118 of the General Statutes, "Coastal Area Management"

Issued to **Town of Surf City** authorizing development in the Ocean Hazard Area of Environmental Concern (AEC) at **1815 S Shore Drive and 2201 S Shore Drive, Surf City, Pender County** as requested in the permittee's application package, dated January 24, 2023, and received by DCM on March 1, 2023. This permit, issued on **March 21, 2023**, is subject to compliance with the application and site drawing (where consistent with the permit) dated received March 1, 2023, all applicable regulations and special conditions and notes set forth below. Any violation of these terms may subject permittee to a fine, imprisonment or civil action, or may cause the permit to be null and void.

This permit authorizes: The installation of stormwater infiltration drainage systems with associated pipes, drop inlets and gravel infiltration within existing Town parking areas.

Construction

Construction

Construction

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

TOWN OF SURF CITY
1949

South Shore Paving