

West 17th Street Flood Mitigation and Construction

PUBLIC INFORMATION CENTER

November 13, 2021



Michael Baker
INTERNATIONAL



- **Purpose of the PIC**
- **Project Background**
- **Project Overview**
- **Environmental Permitting**
- **Benefits of Improvements**
- **Construction Phases and Schedule**
- **Contact Information**
- **Questions and Comments**



**Inform the public of
the proposed project**

**Provide a project
overview**

**Obtain feedback from
the public**





Site Description

- Project is in a low – lying residential area of Ocean City prone to chronic flooding
- Both tidal and rain events contribute to the flooding issues

Upcoming Construction Projects within the Site

- Concept Flood Improvements Study Completed in 2017
Design Completed in 2021
- NJAW Sewer Pump Station Relocation and Utility Replacements (out for bid)
- SJ Gas Utility Replacements (in design phase)



The area is drained by the existing storm sewer system that is under capacity and allows groundwater infiltration. Water overtops/infiltrates through the bulkheads. Existing roadway grades create ponding issues.

The Flood Improvement project proposes a flood mitigation and drainage improvement strategy to reduce frequency and duration of flooding within the project area.

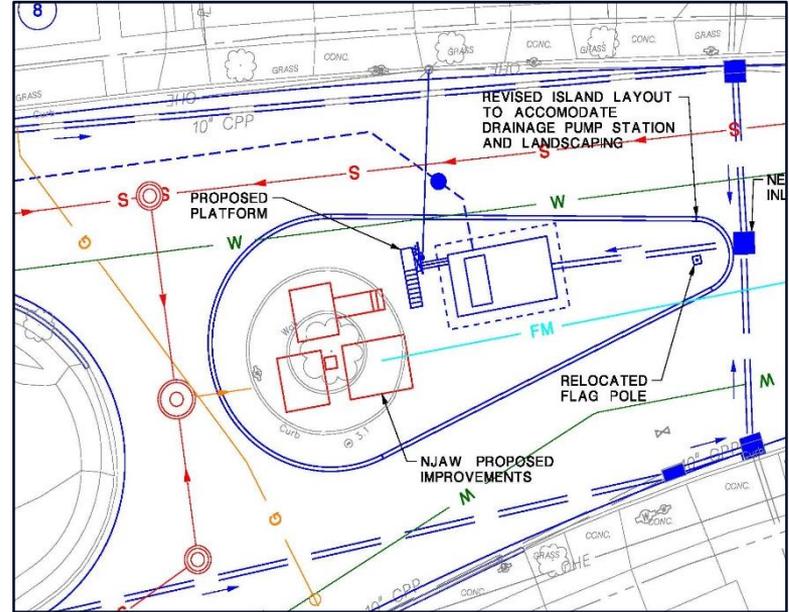


Existing Conditions: Collection (gravity) System to 3 Stormwater Outfalls



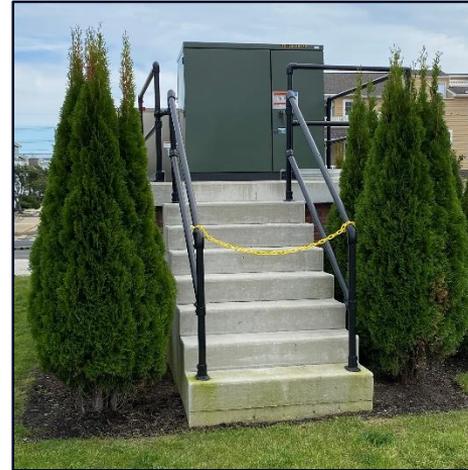
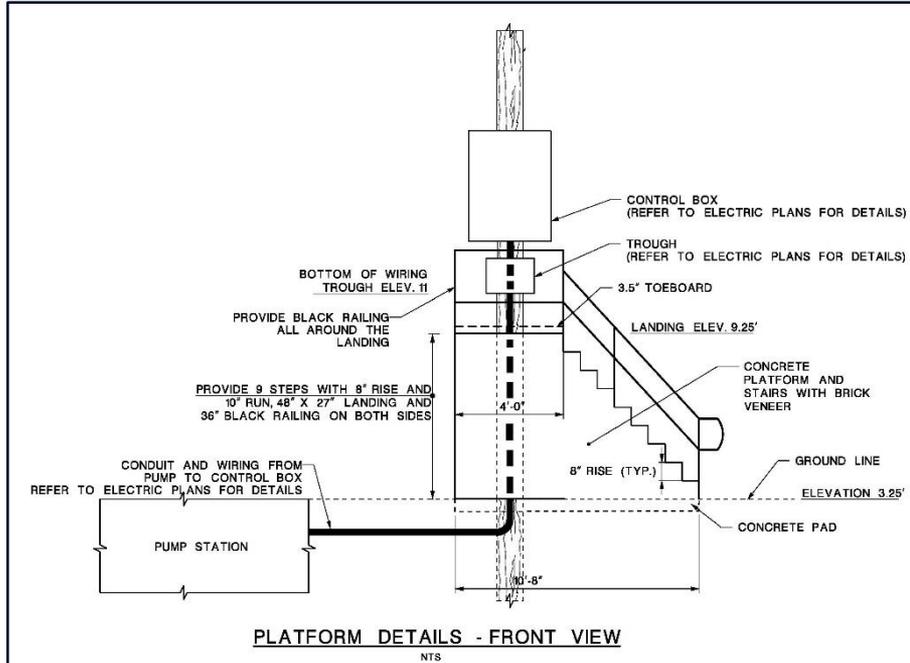


Install a new stormwater pump station (underground chamber with 2 - 15hp pumps) located in an existing traffic island area





Platform and Landscaping Details



Pump Station and cabinet
at 30th and Haven Ave., OC



Control panel at Pump Station
6th Street near Bay, OC- North End Project



Platform and Landscaping Details



LEGEND:

-  MUHLENBERGIA CAPILLARIS
PINK MUHLY GRASS
-  ROSA X 'PINK KNOCKOUT'
PINK KNOCKOUT ROSE
-  CALAMAGROSTIS X 'KARL FORES'
FEATHER REED GRASS
-  MYRICA PENNSYLVANICA
NORTHERN BAYBERRY
-  THUJA OCCIDENTALIS
EASTERN ARBORVITAE
-  JUNIPERUS HORIZONTALIS 'BLUE CHIP'
BLUE CHIP CREEPING JUNIPER
-  SALVIA X SYLVESTRIS 'MAY NIGHT'
MAY NIGHT SAGE
-  LAWN
-  ROSE PINK GRAVEL
-  BOULDERS
-  LAGERSTROEMIA IDICA
PINK CRAPE MYRTLE

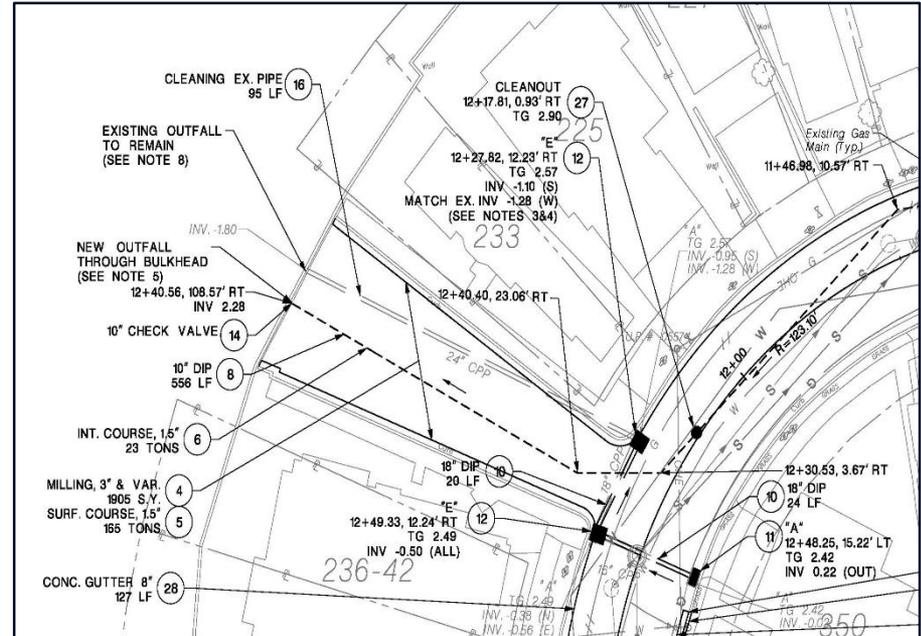
Pump Station and cabinet at 30th and Haven Ave, OC

PLANT SCHEDULE						
KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
ORNAMENTAL TREES						
LI	3	<i>LAGERSTROEMIA IDICA 'TUSCARORA'</i>	PINK CRAPE MYRTLE	8-10' HT	B&B	MULTI-STEM
EVERGREEN TREES						
TO	14	<i>THUJA OCCIDENTALIS</i>	EASTERN ARBORVITAE	6-7' HT	B&B	
EVERGREEN SHRUBS						
MP	12	<i>MYRICA PENNSYLVANICA</i>	NORTHERN BAYBERRY	36" HT	CONTAINER	
DECIDUOUS SHRUBS						
RK	16	<i>ROSA X 'PINK KNOCKOUT'</i>	PINK KNOCKOUT ROSE	24" HT	CONTAINER	PINK BLOSSOMS
GROUNDCOVERS						
JH	15	<i>JUNIPERUS HORIZONTALIS 'BLUE CHIP'</i>	BLUE CHIP CREEPING JUNIPER	2 GAL. 24" MIN. SPREAD	CONTAINER	SPACED 36" O.C.
ORNAMENTAL GRASSES						
KF	22	<i>CALAMAGROSTIS X 'KARL FORESTER'</i>	FEATHER REED GRASS	2 GAL.	CONTAINER	
MC	9	<i>MUHLENBERGIA CAPILLARIS</i>	PINK MUHLY GRASS	1 GAL.	CONTAINER	
PERENNIALS						
SM	10	<i>SALVIA X SYLVESTRIS 'MAY NIGHT'</i>	MAY NIGHT SAGE	1 GAL.	CONTAINER	SPACED 18" O.C.

PROJECT OVERVIEW – Proposed



Install ~800 Linear Feet of Ductile Iron Pipe for discharge system from the pump station to new Outfall at Outfall #3 Bulkhead





Reduce Nuisance Flooding

- Replace existing drainage system with inlets and pipes to increase capacity, improve flow and limit ground infiltration.
- New Inlets and increased pipe slopes at gravity Outfall #3 will improve capacity for daily events.
- Roadway grading, curb and gutter improvements will get water to collection inlets faster and eliminate local ponding.





1. NJDEP CAFRA Individual Permit

Permit required due to pump station (i.e public development) located within 150' of MHWL in CAFRA Zone – application to be submitted

2. NJDEP Waterfront Development In- Water Individual Permit

Permit required due to new outfall at bulkhead – application to be submitted

3. NJDEP Flood Hazard Area Permit-by rule

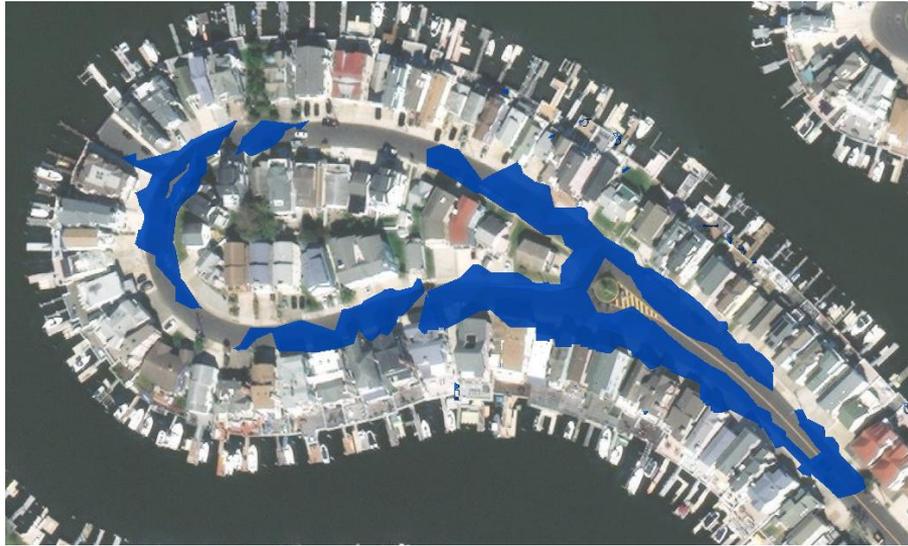
Permit required for proposed work within the tidal flood hazard area – no formal application required

4. Cape-Atlantic Soil Erosion and Sediment Control Certification

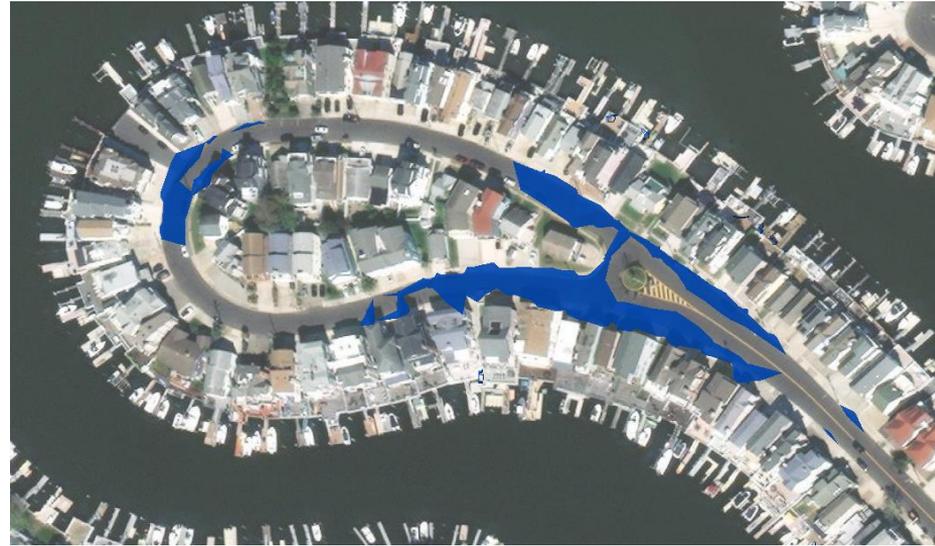
Permit application to be submitted

Drainage improvements will reduce frequency and duration of the Nuisance Flooding

- 10-year Storm Event (5.3" of rainfall, 24-hour duration)
- High tide (El. 5') and peak rainfall at the same time
- Ground elevations achieved from LiDAR data (3-foot cell)



Significant Flooding Area - Existing
Flooding Time ~ 10 hours



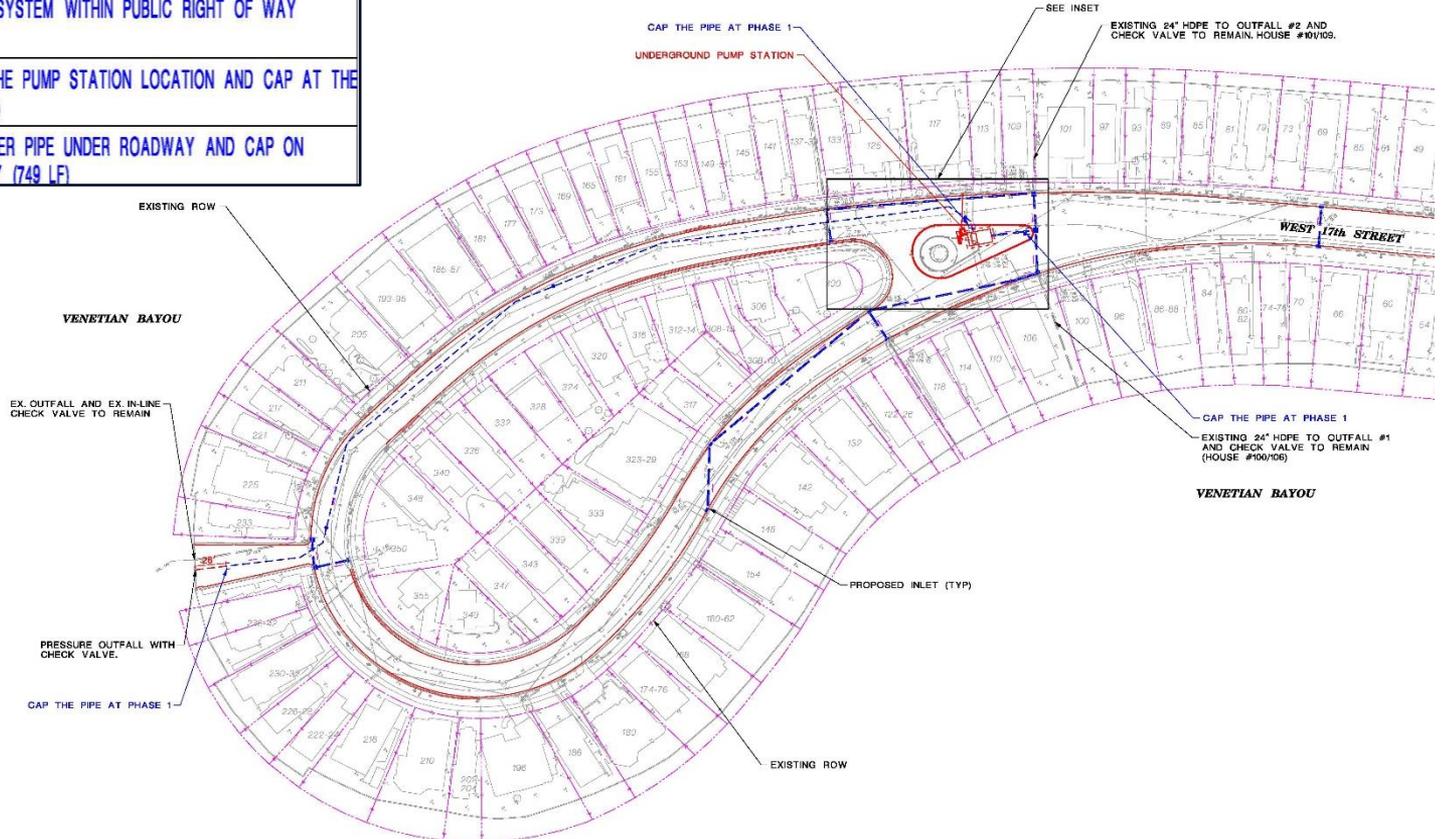
Significant Flooding Area - Proposed
Flooding Time ~ 1 hour

Construction Phases & Schedule



PHASE 1	INSTALL THE NEW 8" STORMWATER PIPE UNDER ROADWAY TO THE EXISTING INLET, WITHIN THE PUBLIC RIGHT OF WAY (30 LF)
	REPLACING THE EXISTING STORM SEWER SYSTEM WITHIN PUBLIC RIGHT OF WAY (613 LF)
	INSTALL NEW STORM SEWER PIPES TO THE PUMP STATION LOCATION AND CAP AT THE END, WITHIN PUBLIC RIGHT OF WAY (95 LF)
	INSTALL THE NEW PRESSURE STORM SEWER PIPE UNDER ROADWAY AND CAP ON BOTH SIDES, WITHIN PUBLIC RIGHT OF WAY (749 LF)

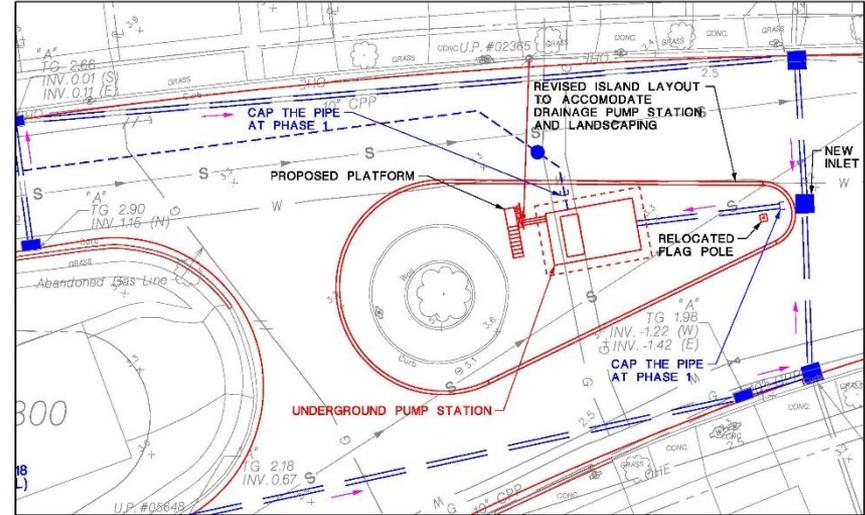
Phase 1 Work (Blue)



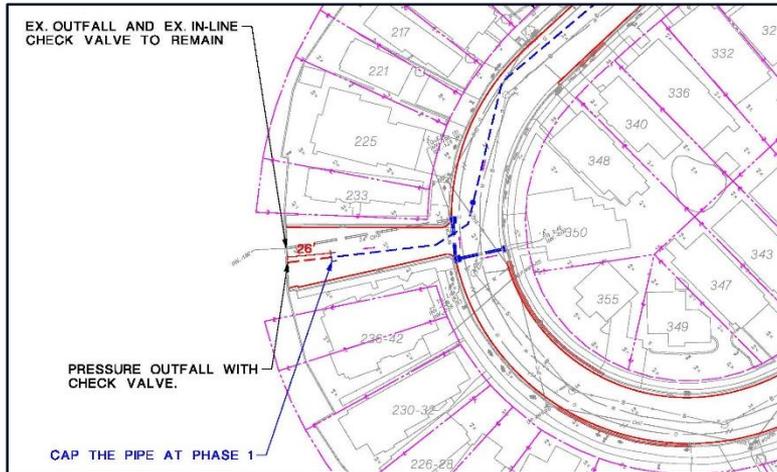


PHASE 2	EXTEND THE PRESSURE STORM SEWER PIPE TO BULKHEAD (26 LF), AND INSTALL CHECK VALVE
	INSTALLING THEN UNDERGROUND PUMP STATION (UNDERGROUND CHAMBER, WITH ONLY ELECTRICAL DEVICE AND ACCESS ABOVE DFHA ELEVATION)
	REPLACE CURB AND INSTALL CONCRETE GUTTERS AT MULTIPLE LOCATIONS, WITHIN RIGHT OF WAY
	REPLACE DRIVEWAYS WHERE NECESSARY, WITHIN RIGHT OF WAY
	ROADWAY REPAVING WITH MINOR SLOPE CORRECTION
	LANDSCAPING

Phase 2 Work (Red)



INSET:
ISLAND LAYOUT
N.T.S.



Note: After all utility work is complete, the roadway will be resurfaced.



Schedule:

Phase 1: February/March 2022

Phase 2: March/April/May - excluding curb and final paving
(Pending Receipt of Permits)

Substantial Completion: Prior to Memorial Day



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Questions & Comments

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