

SKANSKA

ROCKAWAY BOARDWALK



PROJECT INFORMATIONAL SESSION
Phase 5A Construction Logistics
August 24, 2015

Construction Phases



Phase:
Phase 5A

Start:
Fall 2015

Completion:
Memorial Day 2016

Phase 5A Coordination Items

- All work contained within fully enclosed work areas.
- All work areas surrounded by a construction fence.
- Work will be performed primarily from the north side of boardwalk.
- Existing beach access locations will be closed at the conclusion of 2015 beach season in order to allow the work to progress. Access will remain at B38th St.
- Construction staging near B 53rd St.

Phase 5A Coordination Items

- All construction materials, equipment, and delivery trucks will be contained within the fenced work areas.
- Flagmen to be utilized when construction equipment and deliveries are crossing an active beach access.
- Work Hours will be Monday – Friday, 7:00 AM – 4:00 PM
Extended work hours are between 4:00 PM – 6:00 PM.
Saturday are reserved as makeup days in case of inclement weather.

Phase 5A Coordination Items

- Vibration Monitoring:
Ocean and Coastal Consultants (OCC): **Shomari Johnson, EIT**
 - Conducting standard vibration monitoring and analysis of the site prior to and during all pile driving phases of the boardwalk construction
- Watchmen Service for Work Areas:
 - Site monitoring of construction areas during off work hours will be provided.

Phase 5A Coordination Items

- Skanska Offices:
 - Storefront
 - Site Trailer @ B73rd St and Shorefront Pkwy
- NYCEDC Primary Contact:

Keith Dumanski

Email: kdumanski@nycedc.com

Phone: 212-312-3819



Pre-Construction Visual Surveys Information Gathering

Surveys conducted are for homes and buildings only within 200 feet of construction pile driving operations

Cursory Visual Survey to Quantify and Categorize Structures

- Residential Homes and Building Complexes
- General external condition documentation



Structure Proximity to Boardwalk Construction

Phase 5A – Structure Proximity Proximity Plan



Pre-Construction Visual Surveys Visual Condition Documentation

Structures within 200 feet  Yellow Zone

External visual survey to document pre-existing conditions.

- Special focus on:
 - Foundation
 - Perimeter Walls
 - Penetrations (e.g., Windows)
 - Chimneys
 - Roofs



Pre-Construction Visual Surveys Visual Condition Documentation

Structures within 100 feet  Green Zone

External and Internal visual survey to document pre-existing conditions.

- Special focus on:
 - Foundation
 - Basement Walls
 - Stairways
 - Attics
 - Penetrations (e.g. Windows and Doorways)
 - Perimeter Walls
 - Chimneys
 - Roofs



Pre-Construction Visual Surveys Coordination & Scheduling

Effort Will Be Made to Contact Property Owners and Schedule Surveys at the Owner's Convenience

- Skanska to hand deliver and send letters by US Mail to residents.
- Owners reserve the right to refuse survey.
- Visual surveys intended to document existing conditions, only. They are not structural assessments.

Pre-Construction Visual Surveys Coordination & Scheduling

Contact Info:

- Point of Contact: Shomari Johnson, EIT (OCC)
- Phone Number for Inspection Requests Inquires will go to the Construction Vibration Monitoring Team (CVMIT):
646-844-5007
- Construction Vibration Monitoring Team (CVMIT)
Email address: **RockawayBoardwalks@gmail.com**

Pre-Construction Visual Surveys Coordination & Scheduling

- Surveys will be conducted on a rolling schedule that coincide with the geographic location of pile driving operations.
- Surveys will be conducted within three to six months prior to commencement of pile driving for structures located within 200 feet of pile driving operations



Pre-Construction Visual Surveys Coordination & Scheduling

- Surveys to be offered daily, Monday through Friday, between the hours of 8:00 AM to 3:30 PM
- Surveys will be scheduled to occur within a 3 hours time frame, and typically take between 15 to 30 minutes
- CVMT representative will be discreet and respectful of owner privacy

Pre-Construction Visual Surveys Coordination & Scheduling

- Surveys will NOT require movement of the furniture or other special preparations by the owner
- CVMIT representative will coordinate with building management to survey vacant units in building complexes compared to units with residents



Construction Vibration Monitoring Approach

Prudent Approach to Pile Driving Sequencing

- Systematic driving operations, moving longitudinally, to minimize vibration durations.

Anticipated Vibration Based Upon Analysis

- Typical vibration data acquired during Phase 1 and Phase 2 Construction

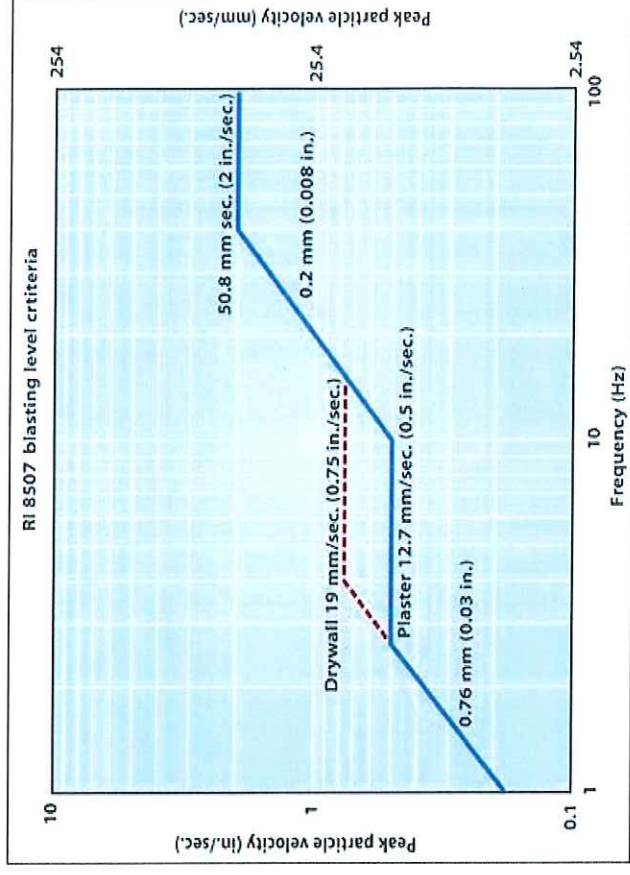


Construction Vibration Monitoring Approach

Anticipated Vibration Based Upon Analysis

Effect of construction vibrations are based upon vibration velocity (in/s) and frequency (Hz)

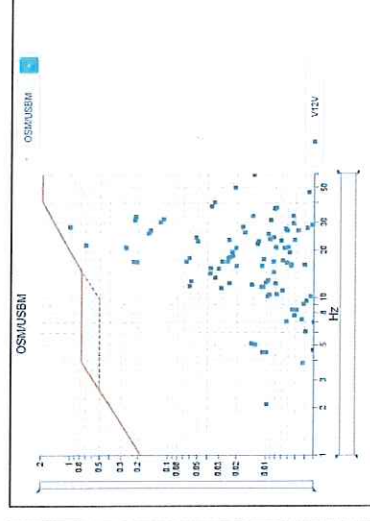
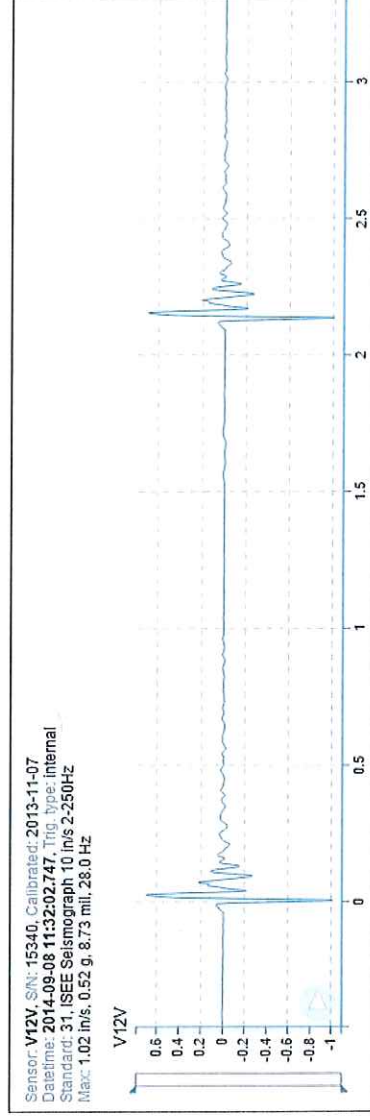
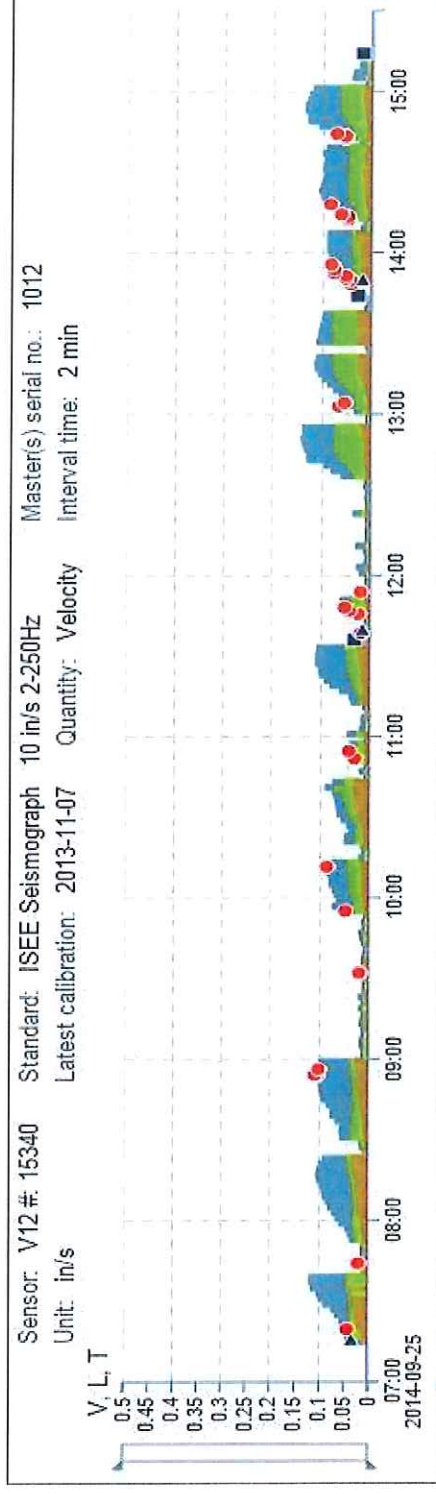
- Acceptable vibration levels are based up USBM Criteria (RI 8057)
 - Minimum threshold: 0.5 in/s
 - Maximum threshold: 2.0 in/s
- Anticipated vibration levels in building foundations were analyzed during a test pile program conducted in July 2014.
 - 20 ft from pile driving: 0.38 in/s
 - 33 ft from pile driving: 0.19 in/s



Construction Vibration Monitoring Approach

Live Data is Continuously Transmitted for Remote Monitoring in Comprehensive Data Plots

Excessive Vibrations and Potentially Aberrant Data is Available for Immediate Analysis



Construction Vibration Monitoring Approach

Continuous Monitoring During Pile Driving Operations

- OCC CVMIT on-site during construction
- Remote monitoring capabilities with programmed alert system
- Specialized monitoring equipment mounted to exterior of building and complexes with the 100 foot zone



Construction Vibration Monitoring Equipment

Specialized Monitoring Equipment & Software.
Equipment is calibrated annually, and can be mounted in a variety of ways to structure foundations



Construction Noise Mitigation Approach

Noise Mitigation Plan to be developed by Contractors to reduce noise emissions during construction

- Typical ambient (non-construction) daytime noise levels peak between 75 dB and 85 dB.
- DEP permits up to a 15 dB increase in ambient noise levels during construction.
- DEP specifies 95 db as an acceptable Lmax value for impact pile drivers measured 50 ft from the source.
- Noise mitigation measures are used to maintain noise levels within permissible thresholds.

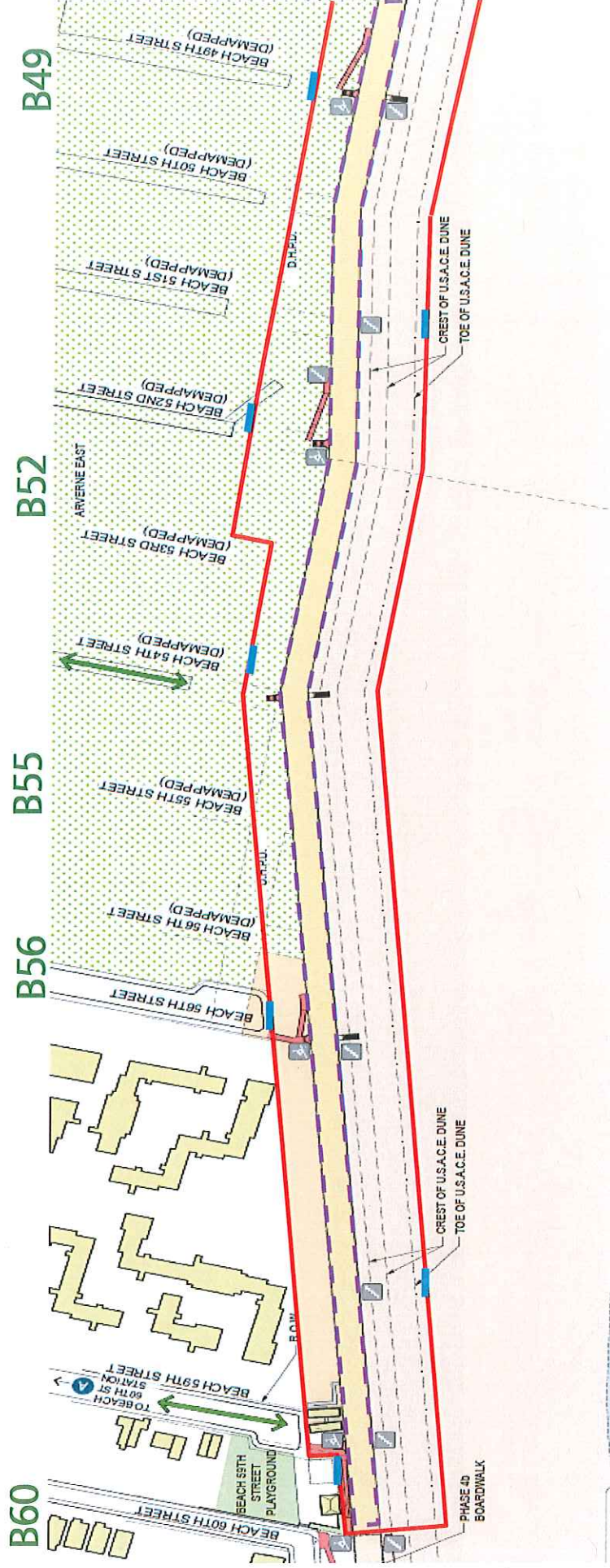
Post-Construction Visual Surveys Coordination, Scheduling and Documentation

Surveys to be conducted within three months of conclusion of construction pile driving

- OCC CVMT to coordinate scheduling and survey
- Survey coordination effort and level of detail comparable to Pre-Construction Surveys
- Survey to update status of existing conditions.



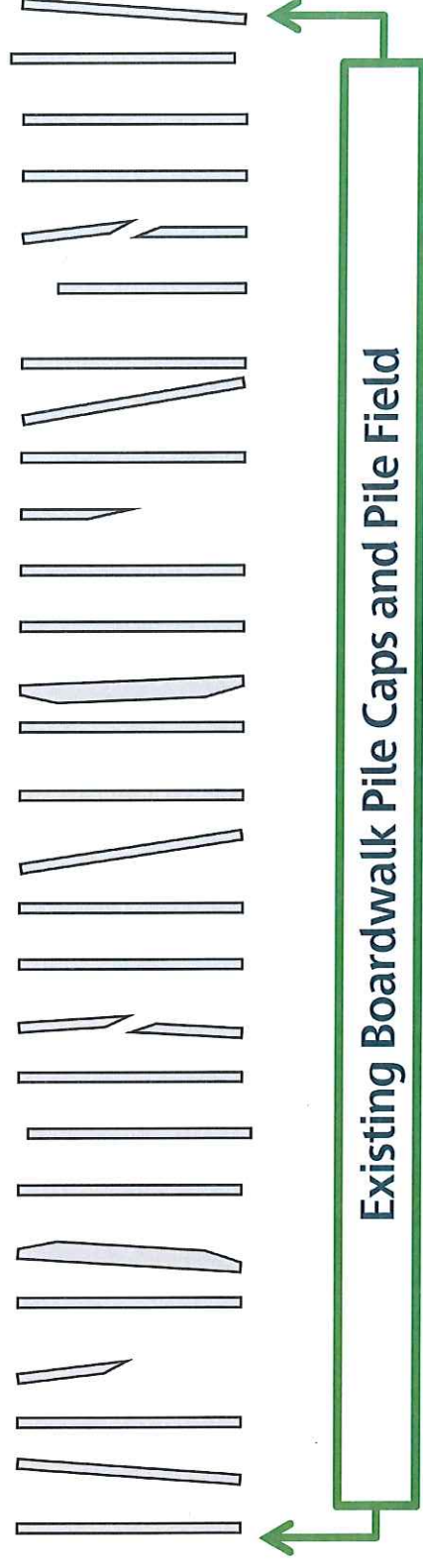
Phase 5A: B60-B49



- Chain Link Construction Fence
- Temporary Movable Construction Fence (during Removals)
- Construction Gates



Existing Conditions



REMOVALS:

1. Remove Concrete Pile Caps
2. Remove Concrete Piles
3. Salvage Wood Planks and Other Materials on Boardwalk

Removals Work



Excavator



Excavator with Hammer



Excavator with Shear



Pile Driving



1. Steel Pipe Piles for Boardwalk
2. Steel H Piles for Sand Retaining Wall

Sand Retaining Wall



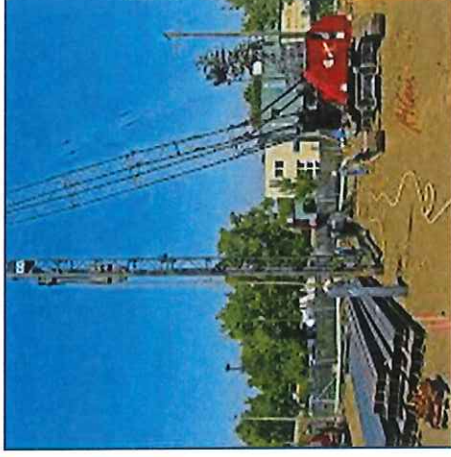
1. Precast Concrete Sand Retaining Wall



Pile Driving Work



Vibratory Hammer



Impact Hammer



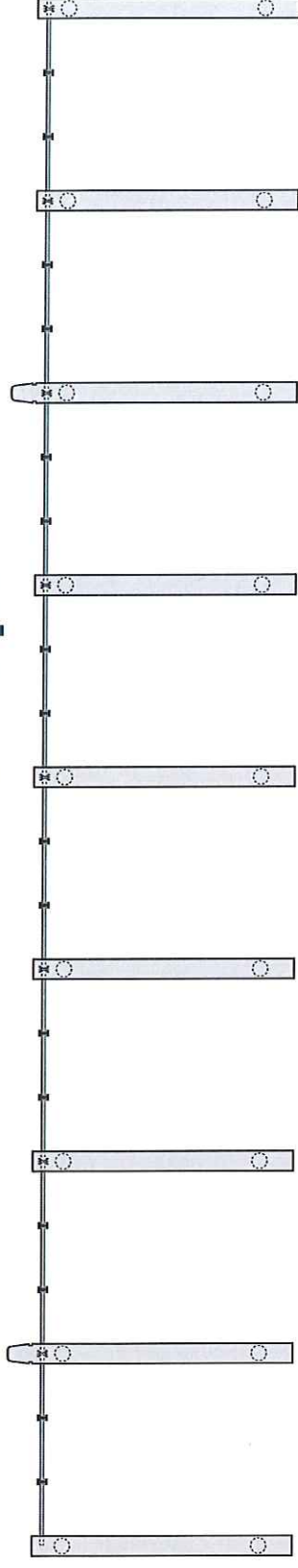
Impact Hammer



Impact Hammer

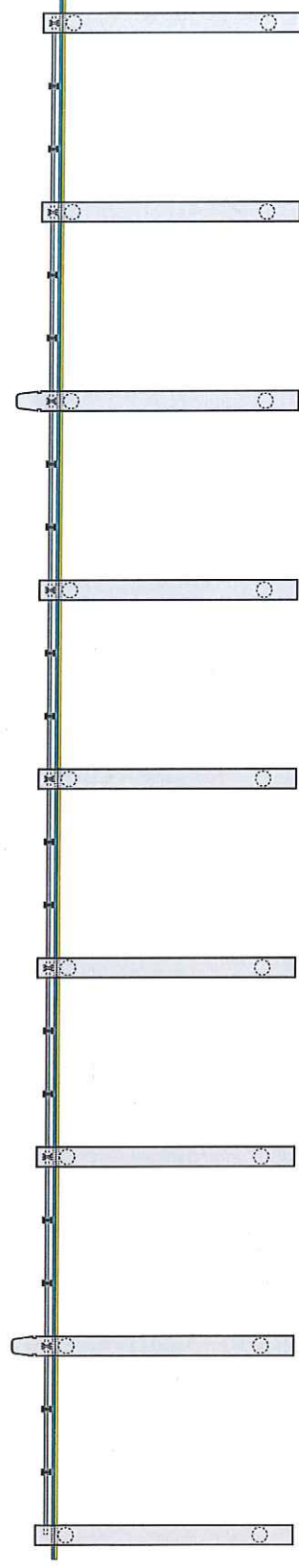


Precast Concrete Pile Caps



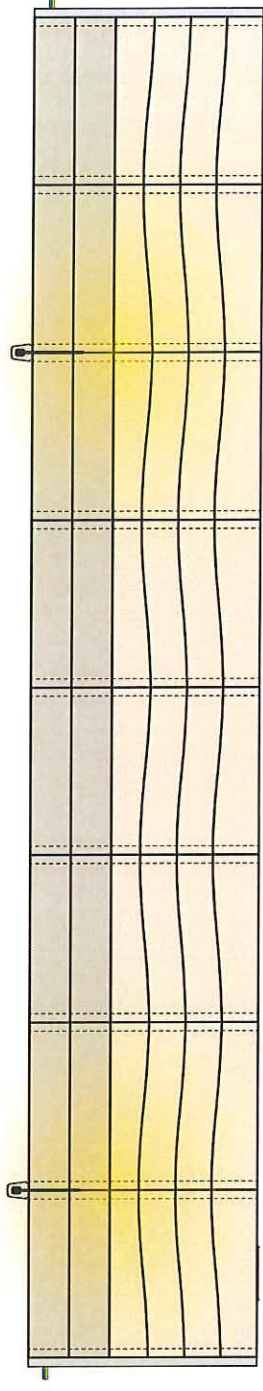
1. Precast Concrete Pile Caps

Utilities



1. Sand Fill
2. Plumbing Pipe and Electrical Conduits

Precast Concrete Planks / Boardwalk Access



1. Precast Concrete Planks
2. Light Poles
3. Railings
4. Site Furnishings
5. Access Ramps
6. Site Work



Questions?

