PRESS-IN PILING
PROJECT ACHIEVEMENTS
in North America

- Drainage Channels
- Seawalls
- Roads, Railroads, and Bridges
- Private Sector
- Emergencies
**Project Name**

East Garden Grove-Wintersburg Channel Improvement Project

**Purpose of Project**

Flood Protection

**Location**

Huntington Beach, CA, U.S.A

**Employer**

County of Orange Public Works Flood Division

**Duration**

March 2013 to September 2013

**Press-in Machinery**

SCZ-675WMG & ECO1400S

**Pile Section & Length**

2 Sheet Pile P2026, L=45.0 ft (13.7m)

**Features & Remarks**

The Press-in Method was specified by the Orange County Public Works Flood Division in California to install a double sheet pile floodwall to minimize environmental impacts to the surrounding residential areas.

2-3 Silent Pilars were utilized simultaneously to reduce the duration & operating costs of the project.
### Trabuco Creek Levee Protection

**Project Name:** Trabuco Creek Channel Levee Protection Phase 7  
**Purpose of Project:** Levee Protection  
**Location:** San Juan Capistrano, CA, U.S.A.  
**Employer:** County of Orange Public Works Department  
**Duration:** September 2013 to October 2014  
**Press-in Machinery:** Silent Piler GV-ECO1400S  
**Pile Section & Length:** Z Sheet Pile AZ25 & AZ19, L=35.0 ft (10.6 m) & 54.0 ft (16.4 m)  
**Features & Remarks:** The Press-in Method was specified by the Orange County Public Works Department in California to install a sheet pile wall in order to effectively minimize the chance of levee breaches due to flooding and erosion. Due to the hard ground conditions along the channel, the Crush Auger System was required to install the sheets within limited space.

### J Street Drain Improvement Phase 1

**Project Name:** J Street Drain Improvement Phase 1  
**Purpose of Project:** Drain Improvement  
**Location:** Oxnard, CA, U.S.A.  
**Employer:** County of Ventura Watershed Protection Zone 2  
**Duration:** December 2013 to November 2014  
**Press-in Machinery:** Silent Piler GV-ECO1400S  
**Pile Section & Length:** Z Sheet Pile PZC19, L=35.0 ft (10.6 m)  
**Features & Remarks:** The Press-in Method was specified by the City of Ventura Watershed Protection District in California to minimize noise & vibration impacts to adjacent apartments & homes while installing a retaining wall system. An existing sewer line located just 12 inches away from the sheet pile line was another reason for the specification of the Press-in Method.
## Wintersburg Channel C05 Improvement

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<tr>
<th>Project Name</th>
<th>Purpose of Project</th>
<th>Location</th>
<th>Employer</th>
<th>Duration</th>
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<th>Pile Section &amp; Length</th>
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<tr>
<td>Wintersburg Channel C05 Improvement</td>
<td>Channel Improvements</td>
<td>Huntington Beach, CA, U.S.A.</td>
<td>County of Orange Public Works Flood Division</td>
<td>January to February 2008</td>
<td>Super Crush Z Piler SCZ-675WM, 10-ton Clamp Crane, Unit Runner, Pile Runner</td>
<td>Z Sheet Pile P2355, L=45.0 ft (13.7 m)</td>
<td>The GRB system was specified by the owner to install an emergency flood control wall to minimize environmental impact and install the wall as quickly as possible working 24 hours each day.</td>
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## Booker Creek Storm Drainage Improvements

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<tr>
<th>Project Name</th>
<th>Purpose of Project</th>
<th>Location</th>
<th>Employer</th>
<th>Duration</th>
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<th>Pile Section &amp; Length</th>
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<td>Booker Creek Storm Drainage Improvements</td>
<td>Road Retaining Wall Improvement</td>
<td>St. Petersburg, Florida, U.S.A.</td>
<td>City of St Petersburg</td>
<td>January to February 2007</td>
<td>Super Crush Z Piler SCZ-675WM</td>
<td>Z Sheet Pile P235 &amp; P2C18, L=25.0 ft (7.6 m) &amp; 35.0 ft (10.7 m)</td>
<td>The owner specified the Super Crush system for this project due to very difficult soil conditions and the close proximity to existing homes. Conventional pile driving equipment could not penetrate into the hard soils.</td>
</tr>
</tbody>
</table>
### Secondary Activated Sludge Facility 2 at Plant No.1

**Project Name:** Secondary Activated Sludge Facility 2 at Plant No.1  
**Purpose of Project:** New Sludge Plant Construction  
**Location:** Fountain Valley, CA, U.S.A.  
**Employer:** County of Orange Public Works Flood Division  
**Duration:** August 2007  
**Press-in Machinery:** Super Crush Z Piler SCZ-675WM  
**Pile Section & Length:** Z Sheet Pile AZ26 L=40.0 ft (12.1m)  
**Features & Remarks:** The Press-in Method was specified by the owner to install a temporary sheet pile shoring system within 12in of an existing 96in force main without any settlement. Previous attempts using conventional shoring systems caused settlement of the force main resulting in costly repairs.

### Gardere Canal Improvements

**Project Name:** Gardere Canal Improvements  
**Purpose of Project:** Canal Improvements  
**Location:** New Orleans, LA, U.S.A.  
**Employer:** US Army Corps of Engineers  
**Duration:** March 2007  
**Press-in Machinery:** Super Crush Z Piler SCZ-675WM (2 Units)  
**Pile Section & Length:** Z Sheet Pile PZ35, L=38.0 ft (11.6 m) & 43.0 ft (13.1 m)  
**Features & Remarks:** The Press-in Method was specified by the US Army Corps of Engineers to minimize disruption to nearby homes and businesses in the community. In addition, the utilization of two Super Crush Z Piler SCZ-675WM Silent Pilers significantly reduced the duration of the pile driving activities that ultimately helped reduce the project duration.
Connemara / Sea Dunes Seawall

Project Name: Connemara / Sea Dunes Seawall
Purpose of Project: Seawall Expansion
Location: Singer Island, FL, U.S.A.
Employer: Sea Dunes Condominium
Duration: September to October 2006
Press-in Machinery: Super Crush Z Piler SCZ-675WM
Pile Section & Length: 2. Sheet Pile AZ26, L= 25.0 ft (7.6 m) & 30.0 ft (9.1 m)

Features & Remarks: The Super Crush system was used to install 100% of the design length of sheet pile into dense coquina to create a benched retaining wall system to protect a 15-story condominium from eminent failure due to erosion.
### Project Name
Lantana Emergency Seawall

### Purpose of Project
Erosion Control

### Location
Lantana, FL, U.S.A.

### Employer
Town of Lantana

### Duration
January to February 2009

### Press-in Machinery
Silent Piler GV-ECO1400S

### Pile Section & Length
Z Sheet Pile PZC26, L=35.0 ft (10.7 m)

### Features & Remarks
The Town of Lantana specified the Press-in Method with the Crush Auger System to penetrate into very difficult soil conditions, minimize the risk of settlement of nearby existing structures, and reduce noise & vibration impacts to keep from disturbing restaurant patrons & park visitors.

### Project Name
Naples Island Seawall Repair Phase 1

### Purpose of Project
Seawall Repair

### Location
Long Beach, CA, U.S.A.

### Employer
City of Long Beach Department of Public Works

### Duration
January to March 2015

### Press-in Machinery
Silent Piler GV-ECO1400S

### Pile Section & Length
Z Sheet Pile A228, L=42.0 ft (12.8 m)

### Features & Remarks
The Press-in Method was specified by the City of Long Beach, CA to minimize noise & vibration impacts to adjacent homes and sensitive existing structures while installing new steel sheet pile flood walls in front of the existing failing walls with the Giken Silent Piler. Concrete capping was applied to the finished sheet pile walls afterwards.

Before Construction

Under Construction

After Completion
Long Island Expressway Road Retaining Wall

Road Widening and Bridge Replacement
Queens, NY, U.S.A.
New York State Department of Transportation
February to August 2001, January to May 2002
Super Crush Tubular Piler SCP260
Tubular Sheet Pile
Φ 36 in (914 mm), wt=1 in, L=80.0 ft (24.3 m)

Features & Remarks
Fully cantilevered 35ft wall constructed on steep slope with difficult soil conditions. Compact and mobile machines were required for limited access adjacent to active traffic. Lane closures, temporary staging, and earthwork were not required for piling activities with the Giken system.
## I-495 Washington Capital Beltway

- **Project Name**: I-495 Washington Capital Beltway
- **Purpose of Project**: Erosion Control
- **Location**: Bethesda, MD, U.S.A.
- **Employer**: State of Maryland Department of Transportation
- **Duration**: December 2004 to May 2005
- **Press-in Machinery**: Super Crush Z Piler SCZ-675SM, 10-ton Clamp Crane
- **Pile Section & Length**: Z Sheet Pile PZ22, L=26.0 ft (7.9 m) & 30.0 ft (9.1 m)
- **Features & Remarks**: Installation of piles adjacent to Beltway without disrupting traffic. Use of the GRB system to penetrate rocky soil in a confined space between the Beltway and a river without damaging existing structures.

## CSX and MD450

- **Project Name**: CSX and MD450
- **Purpose of Project**: Railroad Grade Separation
- **Location**: Bladensburg, MD, U.S.A.
- **Employer**: Balfour Beatty, CSX, State of Maryland Department of Transportation
- **Duration**: June to August 2005
- **Press-in Machinery**: Super Crush Z Piler SCZ-675SM
- **Pile Section & Length**: Z Sheet Pile Z226 & CZ19, L=26.0 ft (7.9 m)
- **Features & Remarks**: Silent and non-vibratory operation adjacent to historical buildings. Safe and secure operation while maintaining regular rail services.
### West Toronto Diamond Grade Separation

**Project Name**: West Toronto Diamond Grade Separation  
**Purpose of Project**: Construction of Semi-subterranean Subway Rail  
**Location**: Toronto, ON, CANADA  
**Employer**: Go Transit  
**Duration**: September 2009 to September 2010  
**Press-in Machinery**: Tubular Piler SCP260  
**Pile Section & Length**: Tubular Sheet Pile Φ36 in (914 mm), PT Interlock, wt=0.75 in, L=82.0 ft (25.0 m)  
**Features & Remarks**:  
- No negative impact to neighbors and nearby commercial facility.  
- Sheet piling work at the silt layer with gravel with SPT N-value over 160.  
- Safety piling work without disturbing active railway service.  
- Press-in piling carried out 6.5 ft from an existing building.

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### CSX Bridge Concrete Pier Repair

**Project Name**: CSX Bridge Concrete Pier Repair  
**Purpose of Project**: Concrete Pier Repair  
**Location**: Columbus, OH, U.S.A.  
**Employer**: CSX  
**Duration**: April to August 2015  
**Press-in Machinery**: SCZ675SMG, UP150  
**Pile Section & Length**: Z Sheet Pile PZ18 & U Sheet Pile SX27, L=25.0 ft (7.6 m)  
**Features & Remarks**: The Press-in Pile Driving Method was utilized for this emergency bridge pier repair on the Scioto River in Columbus. OH since conventional pile driving equipment may have caused more damage to the actively sinking bridge pier. In addition, the smallest Giken Silent Piler in the U.S. was used for this project due to the project’s limited vertical clearance. Piling work proceeded on a 24-hour basis due to the Silent Piler’s non-vibratory and minimal noise characteristics. The Silent Piler’s power pack was able to elude the river’s increasing and decreasing water levels during its 24-hour operation since the power pack is remote-controlled and equipped with a crawler.
Theme Park Causeway in Orlando

Purpose of Project: Stormwater Retention
Location: Orlando, FL, U.S.A.
Employer: Theme Park in Orlando, FL
Duration: February to April 2014
Press-in Machinery: Silent Piler GV-ECO1400S
Pile Section & Length: Z Sheet Pile AZ26, L=45.0 ft (13.7 m)

The Press-in Method was utilized to install a steel sheet pile cofferdam in Orlando, FL with a Giken Silent Piler press-in pile driver in order to minimize noise & vibration impacts for the theme park visitors. Due to its accurate functions, the Silent Piler was also used to overcome very tight pile line tolerances on the project site since pre-cast concrete panels were to be installed after sheet pile installation was complete. The entire length of this causeway was designed based on a predetermined radius. The pressed-in sheet piles were designed to carry the entire bridge load.
**Project Name**
Evo Condominiums Lot 114

**Purpose of Project**
Underground Car Parking Structure

**Location**
Los Angeles, CA, U.S.A.

**Employer**
Howards Wright Construction Co

**Duration**
February to April 2006

**Press-in Machinery**
Super Crush Z Piler SCZ-675SM x 2 units

**Pile Section & Length**
Z Sheet Pile AZ36, L=50.0 ft (15.2 m)

**Features & Remarks**
Installation into very dense coarse sand with gravel and cobbles. (Max. SPT value was more than 500)

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**Project Name**
SeaWorld Bayside Stadium Stage Expansion

**Purpose of Project**
Stage Expansion (Seawall)

**Location**
Orlando, FL, U.S.A.

**Employer**
SeaWorld Orlando

**Duration**
August 2008

**Press-in Machinery**
Super Crush Z Piler SCZ-675SM

**Pile Section & Length**
Z Sheet Pile PZC18, L=15.0 ft (4.5 m) & 30.0 ft (9.1 m)

**Features & Remarks**
The owner and general contractor selected the Press-in system to install the steel sheet pile bulkhead wall for their stadium expansion. The Press-in system was selected to minimize temporary falsework as well as minimize the environmental impact to the operations of the animal theme park.
**EMERGENCIES**

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**Woodhill Sinkhole**

- **Purpose of Project**: Rescue Method (protecting structures from sinkhole)
- **Location**: Orlando, FL, U.S.A.
- **Employer**: The Wilson Company
- **Duration**: June to July 2002
- **Press-in Machinery**: Super Crush Tubular Piler SCP260
- **Pile Section & Length**: Tubular Sheet Pile Ø36 in (914 mm), PT Interlock, w=0.47 in, L=50.0 ft (15.2 m)
- **Features & Remarks**: Narrow and laterally limited working area. Piling close to the existing structures. Risk of damage to buildings significantly reduced while piling. Safety consideration to the building foundations and the unstable ground itself.
Massive Drainage Collapse

- **ProjectName**: Massive Drainage Collapse
- **Purpose of Project**: Drainage Work
- **Location**: Meridian, MS, U.S.A.
- **Employer**: City of Meridian
- **Duration**: November 2015
- **Press-in Machinery**: Silent Piler GV-ECO1400S
- **Pile Section & Length**: Z Sheet Pile JZ112, 120, & 127; L=53.0 ft (16.1 m)

Emergency repair work was performed at a ditch collapse incident that happened on November 7, 2015 in Meridian, MS. Sheet pile driving was necessary for the emergency project. However, due to the risk of a secondary disaster occurring at an adjacent building by using a vibratory hammer, the Silent Piler was chosen to press in the sheet piles.

Carpet N’ Drapes Culvert Rehabilitation

- **ProjectName**: Carpet N’ Drapes Culvert Rehabilitation
- **Purpose of Project**: Culvert Rehabilitation
- **Location**: Jacksonville, FL, U.S.A.
- **Employer**: Clay County
- **Duration**: October 2007
- **Press-in Machinery**: Super Crush SCZ-675WM
- **Pile Section & Length**: Z Sheet Pile PZC18; L=35.0 ft (10.6 m)

Due to heavy rain, a storm drain culvert collapsed, resulting in the above ground to collapse as well. In consideration of the risk of a secondary disaster occurring at an adjacent building by using a vibratory hammer, the Silent Piler was chosen to press in the sheet piles.
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