

# Pompton Lake Study Area Traffic Control Plan

Prepared For:



Prepared by:



**April 2016**

# TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION.....</b>	<b>1</b>
<b>2.0</b>	<b>PROJECT SCOPE.....</b>	<b>1</b>
2.1	SEQUENCE OF MAJOR ACTIVITIES .....	1
<b>3.0</b>	<b>PURPOSE.....</b>	<b>2</b>
<b>4.0</b>	<b>EXISTING CONDITIONS .....</b>	<b>3</b>
<b>5.0</b>	<b>PRE-MOBILIZATION .....</b>	<b>3</b>
<b>6.0</b>	<b>GENERAL SITE LAYOUT AND PROCEDURES.....</b>	<b>4</b>
6.1	SITE ACCESS.....	4
6.2	WORK HOURS .....	5
6.3	TRUCKING RESTRICTIONS .....	5
6.4	PARKING.....	5
6.5	HEAVY VEHICLE DISPATCH.....	6
6.6	EMERGENCY VEHICLES.....	6
6.7	INSPECTIONS AND MAINTENANCE .....	6
<b>7.0</b>	<b>SIGNAGE AND ROUTES .....</b>	<b>6</b>
7.1	PEDESTRIAN .....	6
7.1.1	Signage.....	6
7.1.2	Route .....	7
7.2	HAUL ROUTES .....	7
7.2.1	Signage.....	7
7.2.2	Safety Measures .....	9
7.2.3	Route .....	11
<b>8.0</b>	<b>CONSTRUCTION TRAFFIC TABLE.....</b>	<b>13</b>
<b>9.0</b>	<b>REFERENCES.....</b>	<b>15</b>

## **Figures:**

Figure 1 – Site Location Map

Figure 2 – Primary and Alternate Pedestrian Route

Figure 3 – 2 Lanes, Undivided, Lane Closing with Flagging

Figure 4 – Sign Layout Map

Figure 5 – Temporary Inertial Barrier System, 9 Modules

Figure 6 – Inertial Barrier System Layout Map

Figure 7 – Haul Truck, PLW Materials Truck Route, and Pedestrian Routes

# TRAFFIC CONTROL PLAN

## PLAN IDENTIFICATION

Report Title: Traffic Control Plan

Project Title: Pompton Lakes Study Area

Project Location: Pompton Lakes, New Jersey

Prepared By: Severson Environmental Services, Inc.

Date Prepared: 4/1/16

Revision No.: 01

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# TRAFFIC CONTROL PLAN

## 1.0 INTRODUCTION

Sevenson Environmental Services, Inc. (Sevenson) has prepared this plan in conjunction with AECOM and Parsons to define the means and methods for Traffic Control for the Pompton Lakes Study Area (PLSA) Remediation Project in Pompton Lakes, New Jersey. This work plan has been developed as required by the contract documents.

Elements of this Traffic Control Plan represent recommendations previously provided by the Borough of Pompton Lake Police Department, the Borough Engineer, and the Passaic County Engineer. Additional consultation with these representatives is expected prior to project implementation and, as such, slight revisions to Traffic Control Plan elements may result from additional official input and recommendations. The discussion contained herein is of a general nature and is based on existing studies and counts, observations taken in the field, basic research regarding the operation of the Pompton Lakes School District, and general traffic engineering judgment.

## 2.0 PROJECT SCOPE

The project includes remediation that will be performed in a portion in Pompton Lake (i.e., lake sediments) termed the “Delta” or ABD (Delta Area), the portion of Pompton Lake (i.e., lake sediments) outside of the delta between Lakeside Avenue Bridge and the Pompton Dam (Lake Area A and Island Area), and the uplands portion defined as the soils and wetland areas between Lakeside Avenue and the water’s edge (i.e., full pool lake elevation) along the lake (Uplands Area) (Figure 1). The constituents driving remediation include mercury in the sediment and copper, lead, mercury, and zinc in the uplands soils.

The planned project timeframe overlaps multiple construction seasons between summer 2016 and fall 2018. Scheduled project shutdowns will be implemented during winter months. In general, the project will be secured and shut down between mid-December and mid-March annually.

### 2.1 Sequence of Major Activities

Major construction activities as they may relate to traffic control, will proceed as follows:

- Mobilization
  - Includes equipment and material deliveries at the beginning of every construction season. Approximate duration is one month.
- Site Preparation
  - Includes general project setup at the beginning of every construction season. Rotary Park on Lakeside Avenue will serve as the primary site for setup and support activities. Approximate duration is one month overlapping mobilization efforts.

## TRAFFIC CONTROL PLAN

- Uplands Soil Removal Area Remediation
  - Includes excavation, material disposal, backfill and stabilization of the Uplands Area including Rotary Park for use as a material processing area during subsequent phases of the project. This activity is anticipated to take place over two months in the first construction season.
- Lake Area A and Island Area Remediation
  - Includes mechanical excavation (using floating barge mounted equipment), material stabilization at Rotary Park, off-site disposal, ecological-layer backfill, and restoration of the Island Area. This activity is anticipated to take place over three months in the first construction season subsequent to the Uplands remediation effort.
- Delta Area Hydraulic Dredging
  - Includes Delta Area containment installation, processing and water treatment equipment mobilization and setup, hydraulic dredging, material processing and disposal. This activity is anticipated to take place over 10 months in the second construction season.
- Delta Area Ecological-Layer Placement
  - Includes Delta Area containment installation, equipment mobilization and setup, and ecological-layer placement. This activity is anticipated to take place over eight months in the third construction season.
- Site Restoration
  - Includes Upland Area site restoration and wetland restoration. This activity is anticipated to take place over three months in the third construction season concurrent with completion of the ecological-layer placement activities.
- Demobilization
  - Includes equipment removal and general project closeout at the end of every construction season. Approximate duration is one month.

### 3.0 PURPOSE

The purpose of this Traffic Control Plan is to detail procedures and protocols to be implemented to safely manage traffic during site remediation transportation activities. Use and impacts to public roadways and sidewalks during the project are discussed.

All major construction activities will include a traffic control component. Several different types of vehicles are needed to safely transport workers, deliver equipment and materials, and transport sediment to disposal facilities. Traffic control is an important aspect of safe and efficient completion of each major activity. Specifics of the traffic control procedures and protocols are discussed in the following sections.

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## TRAFFIC CONTROL PLAN

### 4.0 EXISTING CONDITIONS

Lakeside Avenue is a two-lane undivided municipal roadway, classified as an Urban Collector. The length of the roadway is 0.86 miles, beginning at the intersection of Colfax Avenue (MP 0.0) and ending at the intersection of Jefferson Avenue (MP 0.86). The pavement width ranges from 26 feet curb to curb from Colfax Avenue to just west (approx. MP 0.35) of Lambert Street to 29 feet curb to curb east thereafter. There are no shoulders along the roadway, and the posted speed limit is 25 miles per hour (mph). Sidewalks exist along both sides of the roadway from Colfax Avenue to Mandeville Street (MP 0.56), and thereafter only along the south side (lake side) terminating at Lakeside Park, across from Chalen Court (MP 0.67). Crosswalks exist at all intersections from Colfax Avenue to Lambert Street, inclusive.

There are no signalized intersections along Lakeside Avenue; all intersections are two-way stop controlled along the minor streets except the intersection of Van Avenue, which is four-way stop controlled. Additionally, the Lakeside Avenue stop signs at Van Avenue are equipped with perimeter flashing beacon lights for added visibility. Southbound access from Lakeside Avenue to Van Avenue is prohibited during school start and dismissal times, and pedestrian traffic is directed by a crossing guard.

Street-side parking is prohibited along the majority of Lakeside Avenue except for intermittent spaces in front of the Post Office and points west. Numerous residential and commercial driveways abut Lakeside Avenue, including access points to the Pompton Lakes High School and the athletic field of the Lakeside Middle School.

Overhead utilities exist primarily along the north side of Lakeside Avenue, with a notable section in the vicinity of Lakeside Park and the public boat ramp that is on the south side. Drainage inlets exist along both sides of Lakeside Avenue.

The single structural element located on Lakeside Avenue is the bridge over Acid Brook. The bridge is an 11 feet long three-sided box culvert, built in 1937. Passaic County does not have a Structural Inventory and Appraisal (3 SI&A) sheet for the structure. There are no existing truck limitations posted on Lakeside Avenue or the bridge. Conversations with the Pompton Lakes Police Department and Passaic County have established that traffic volumes along Lakeside Avenue are generally low, with peak periods during school district start and dismissal times. Pedestrian traffic alternates between light and medium. Field observations confirmed both of these assessments.

### 5.0 PRE-MOBILIZATION

Information regarding traffic control and pedestrian circulation will be made available as the project progresses. The primary methods of communication with the community are summarized below. Additional activities/measures may be implemented to support specific traffic control elements.

# TRAFFIC CONTROL PLAN

## 6.0 GENERAL SITE LAYOUT AND PROCEDURES

The project location encompasses portions of two adjacent land parcels: Block 6600, Lot 5 and Block 12600, Lot 1 commonly known as Rotary Park and the surrounding park and Delta Area bounded by the Lakeside Middle School Athletic Field, Lakeside Avenue, the Pompton Lake boat ramp adjacent to Chalen Court, and Pompton Lake (Figure 1).

Sevenson will also use available space at Pompton Lakes Works (PLW) at 2000 Cannonball Road in Pompton Lakes, New Jersey for project support infrastructure, equipment and material storage and employee parking.

The following figure shows the general site location.

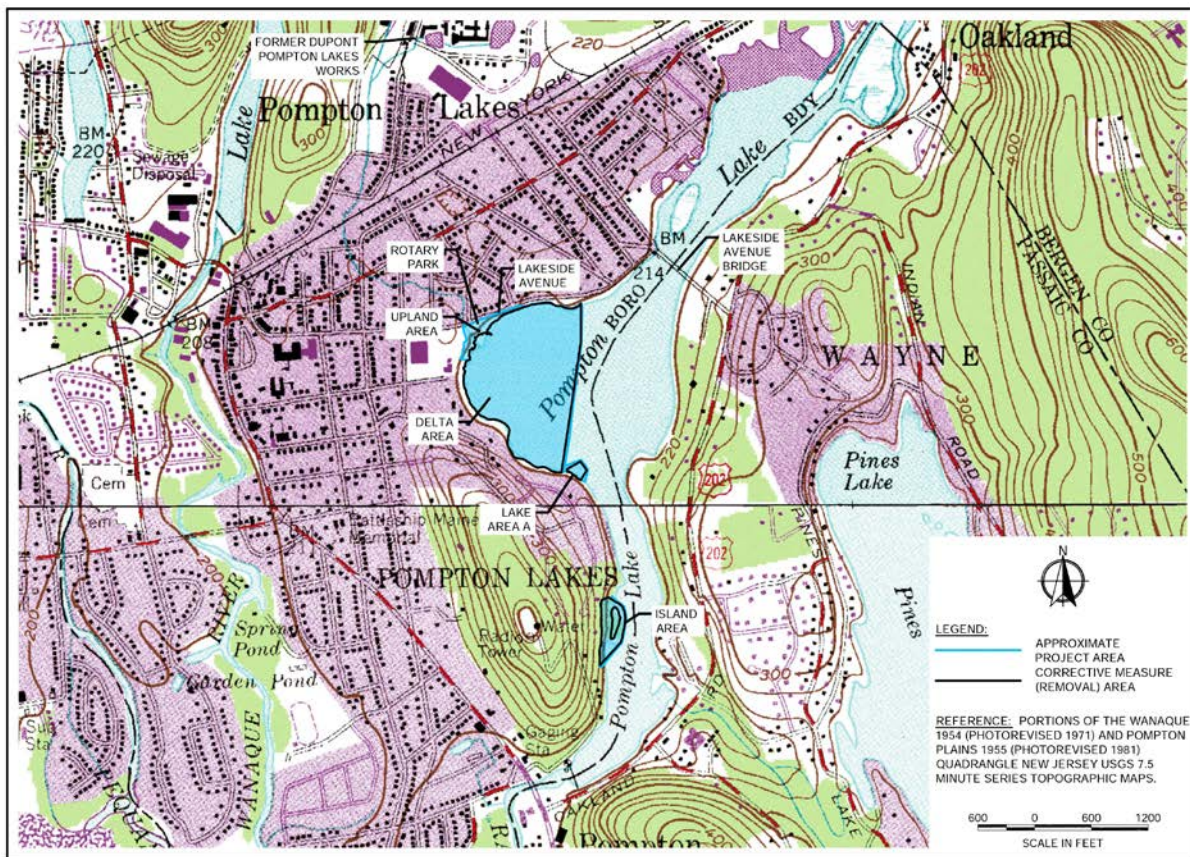


Figure 1. Site Location Map

## 6.1 Site Access

Upon mobilization to Rotary Park, Sevenson will secure the site to restrict unauthorized access and protect the public from the remedial construction activities. Perimeter fencing and gates will be installed and relocated as necessary to facilitate the remediation efforts and ensure the site is secure. Signage will be placed on the perimeter fence notifying the public that construction is in progress and trespassing on the site is prohibited.

## TRAFFIC CONTROL PLAN

If at any time it becomes necessary to remove a portion of the perimeter fencing due to remediation activities, the fencing will be replaced by barricades and temporary fence panels as necessary to ensure the site remains enclosed and secure at all times.

### 6.2 Work Hours

Remediation work at the site is proposed to be completed on weekdays (Monday through Friday) with equipment maintenance on Saturday. If weather delays, equipment malfunctions or any other production delays exist, some Saturdays may be used as “make-up” production days to maintain the overall schedule. Work is proposed for the following operation hours:

- Weekdays (Monday through Friday):
  - Daily Setup 7:00 AM – 8:00 AM
  - Work 8:00 AM – 6:00 PM
  - Daily Cleanup 6:00 PM – 7:00 PM
- Weekends (Saturday Only):
  - Daily Setup 7:00 AM – 8:00 AM
  - Work 8:00 AM – 6:00 PM
  - Daily Cleanup 6:00 PM – 7:00 PM

### 6.3 Trucking Restrictions

Restrictions are placed on the time periods when heavy vehicles may travel to and from the project site. These were developed based on the operating schedules of the five schools operating within one mile of the site and are summarized in the next section.

Schools in the vicinity of the project area begin between 8:00 and 8:30 AM, and are dismissed between 2:40 and 3:05 PM. Students likely travel to school along Lakeside Avenue up to approximately 30 minutes before classes begin or after school is dismissed. To avoid coinciding with heavy pedestrian and vehicular traffic associated with start and dismissal times, the hauling of material to or from the remediation site will be prohibited between 7:45 AM – 8:30 AM, and again between 2:30 PM – 3:15 PM.

### 6.4 Parking

The PLW Site will be used for employee parking and a shuttle bus will transport workers to the work zone. The PLW Site will be arranged to maximize safe and efficient traffic flow.

Parking at Rotary Park will be restricted to Sevenson’s management personnel and other authorized personnel on the project team. Parking will be limited at Rotary Park and will be coordinated amongst team members regularly.

Sevenson will implement a strict 5 mph speed limit for all on-site traffic at either the PLW Site or in Rotary Park including delivery and site vehicles. Flagmen will be utilized as necessary to facilitate vehicles entering and exiting the site in a safe and proficient manner, and to minimize any impedence on normal traffic flow around the site.



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## TRAFFIC CONTROL PLAN

### 6.5 Heavy Vehicle Dispatch

Due to the limited size of the temporary work area at Rotary Park, at most only a few trucks at a time can be on-site to receive loads of material for off-site transport. Severson will coordinate with the subcontracted trucking company to facilitate efficient use of heavy vehicles and prevent vehicles from idling or queuing within the Borough of Pompton Lakes during the hauling of material to or from the project area. Severson will maintain communication with the trucking company's dispatcher to facilitate the dispatching of trucks to the site on an as-needed basis.

### 6.6 Emergency Vehicles

The speedy and unimpeded movement of emergency vehicles to and from all destinations at all times is of paramount importance to preserve the safety and well-being of the public. There will be no full road closure of Lakeside Avenue, with the exception of very brief times when larger trucks enter or exit the site with aid of flaggers, and the single lane closure discussed later in this plan will allow for the passage of emergency vehicles. The haul roads are already in use by heavy vehicles, and the additional traffic from this project will not impede the movement of emergency vehicles.

### 6.7 Inspections and Maintenance

Severson will conduct visual inspections on all perimeter fencing, gates, temporary fence panels and barricades for signs of damage and/or wear. Damaged fence or fence panels will be repaired or replaced as needed immediately after discovery to ensure the site remains secure.

All signs utilized on-site for direction of vehicle and pedestrian traffic will also be visually inspected to ensure their effectiveness.

## 7.0 SIGNAGE AND ROUTES

Traffic impacts are anticipated to be limited to the major activities listed in Section 2.1 above. Additionally, there will be an impact to the existing pedestrian traffic due to the location of the fencing around the site in relation to existing sidewalks.

### 7.1 Pedestrian

#### 7.1.1 Signage

Prior to beginning any other mobilization or pre-construction activities, Severson will install temporary means for the safe circulation of pedestrians around the project site during remediation activities. Advance signing will be erected on both sides of the closed section of sidewalk along the south side of Lakeside Avenue. Appropriate guide signs will be installed to direct pedestrians around the proposed work area.

# TRAFFIC CONTROL PLAN

## 7.1.2 Route

There are two possible routes for pedestrians along Lakeside Avenue – a primary route crossing Lakeside Avenue at Mandeville Street where pedestrians can continue along the northern side of Lakeside Avenue using the existing sidewalk or the alternate route shown in Figure 2.

In addition to the signing proposed herein, Severson will have flaggers on-site at all times, and will provide traffic control during school opening and closing times.

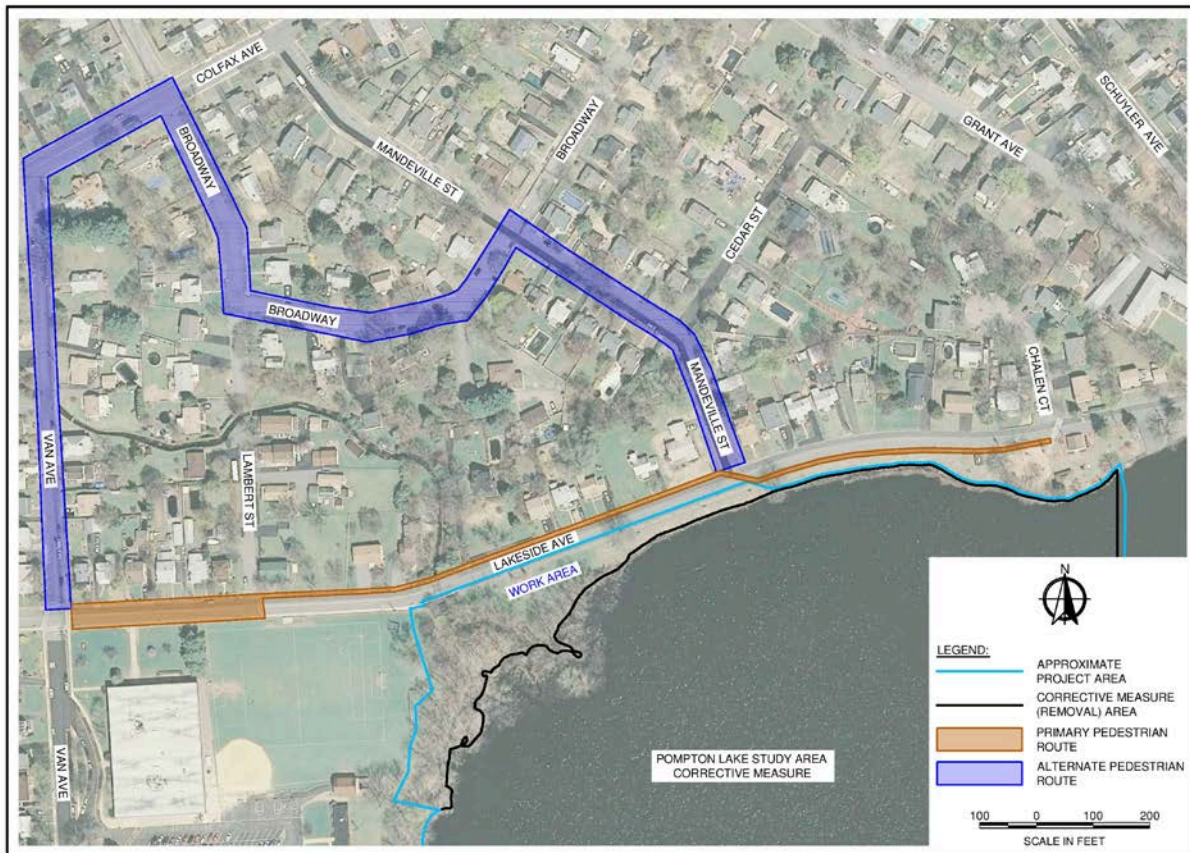


Figure 2. Primary and Alternate Pedestrian Route

## 7.2 Haul routes

### 7.2.1 Signage

Following the installation of the crosswalks, Severson will install all signing associated with the standard work zone protection plan for a Two-Lane Undivided Lane Closing (Figures 3 and 4).

# TRAFFIC CONTROL PLAN

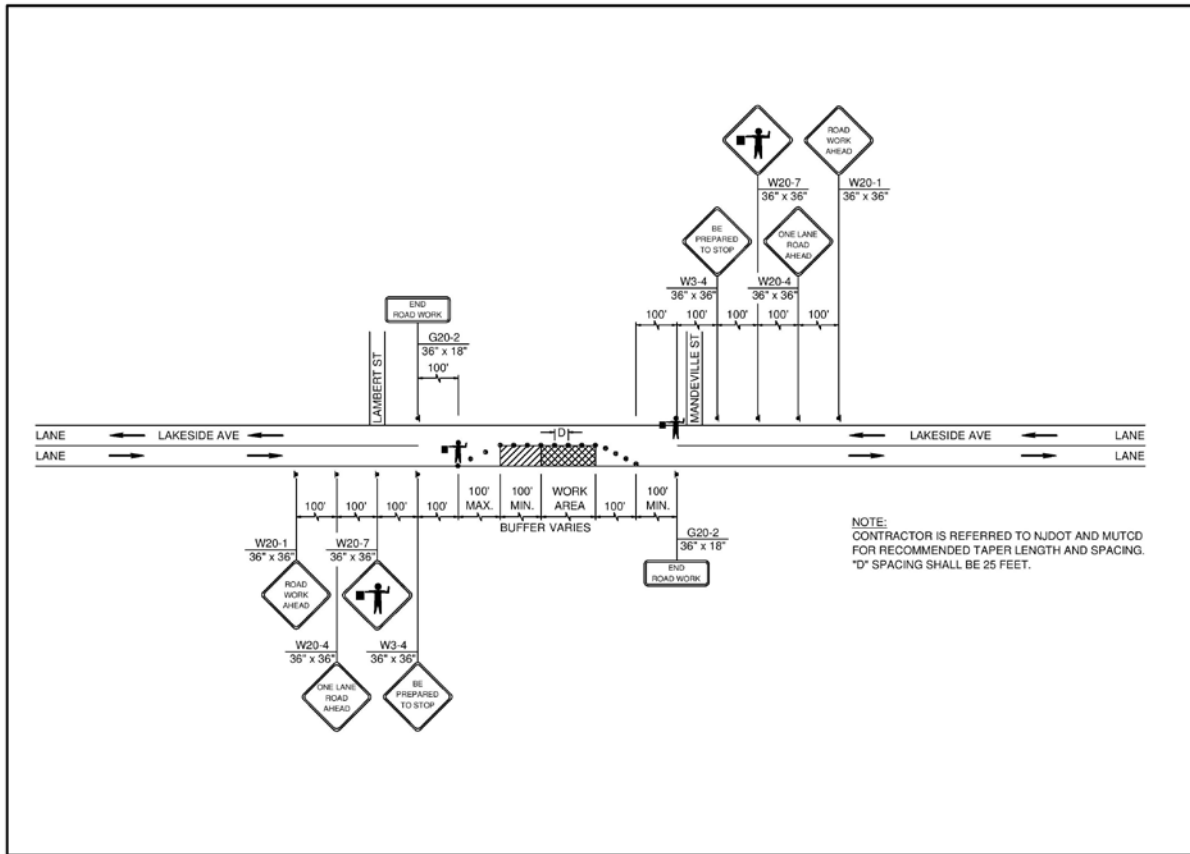


Figure 3. 2 Lanes, Undivided, Lane Closing with Flagging

Signing will remain in place for the duration of the construction period, and will be shrouded for all periods when it is not in use. Severson will also keep the additional equipment (drums, flags, etc.) necessary to implement the lane closure plan on-site at all times. This will allow Severson to have a lane closure system available at all times, thus reducing delays or issues in the event of an unexpected need for lane closure(s).

Severson will give ample notice to the Pompton Lakes Police Department prior to any lane closures, so that two officers may be dispatched to direct traffic at either end of the closed section (Figure 4).

# TRAFFIC CONTROL PLAN

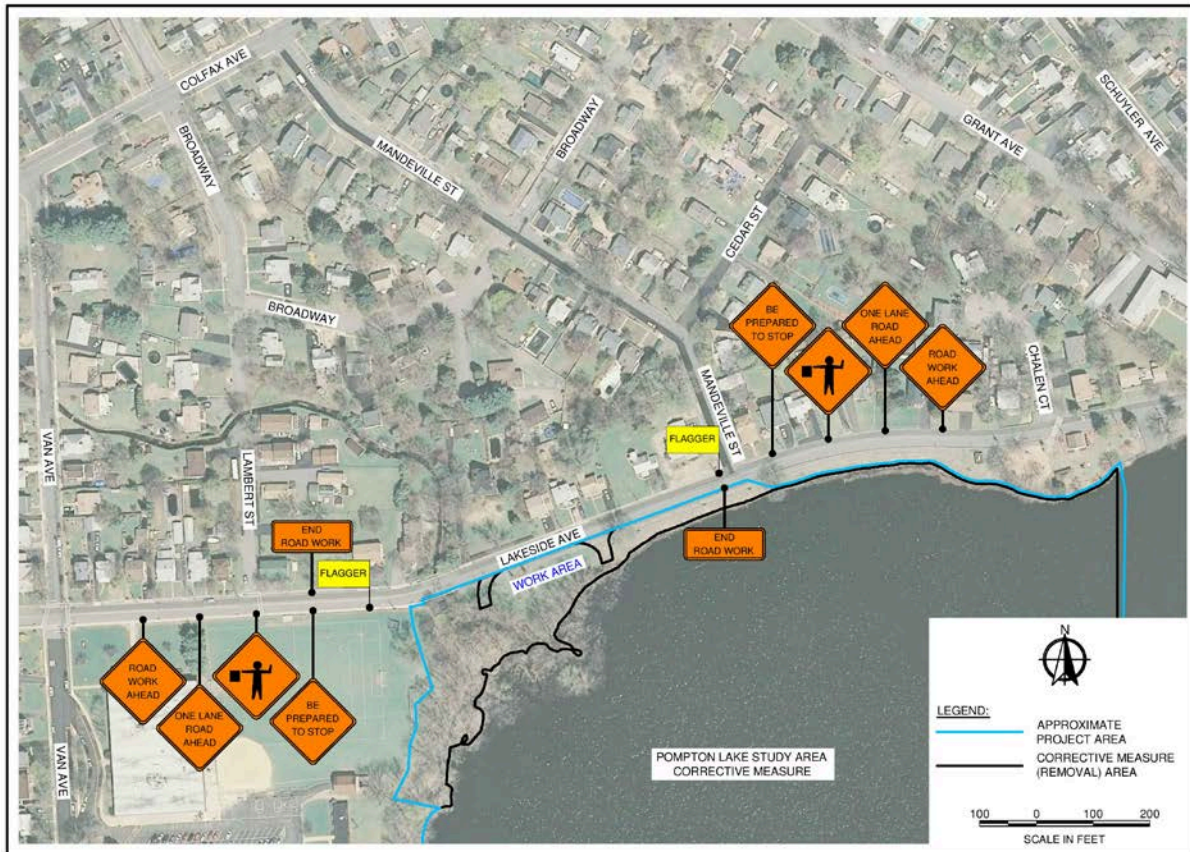


Figure 4. Sign Layout Map  
2 Lanes, Undivided, Lane Closing with Flagging

## 7.2.2 Safety Measures

Sections of guide rail east of the Acid Brook bridge will need to be removed to establish the construction access. Removed guide rail sections will be replaced with new guide rail conforming to current standards during the restoration phase.

Precast concrete curb construction barriers (construction barriers) will be installed where guide rail sections have been removed to provide continuous positive protection for drivers and workers. Exposed ends of remaining guide rail to the east and the installed construction barriers will receive an anchorage end treatment that will provide additional protection for drivers and workers. The end treatments (inertial barrier systems) are designed for the posted speed of 25 mph (Figure 5). Installation of the inertial barrier will occur immediately following removal of guide rail sections and installation of the construction barriers (Figure 6).

# TRAFFIC CONTROL PLAN

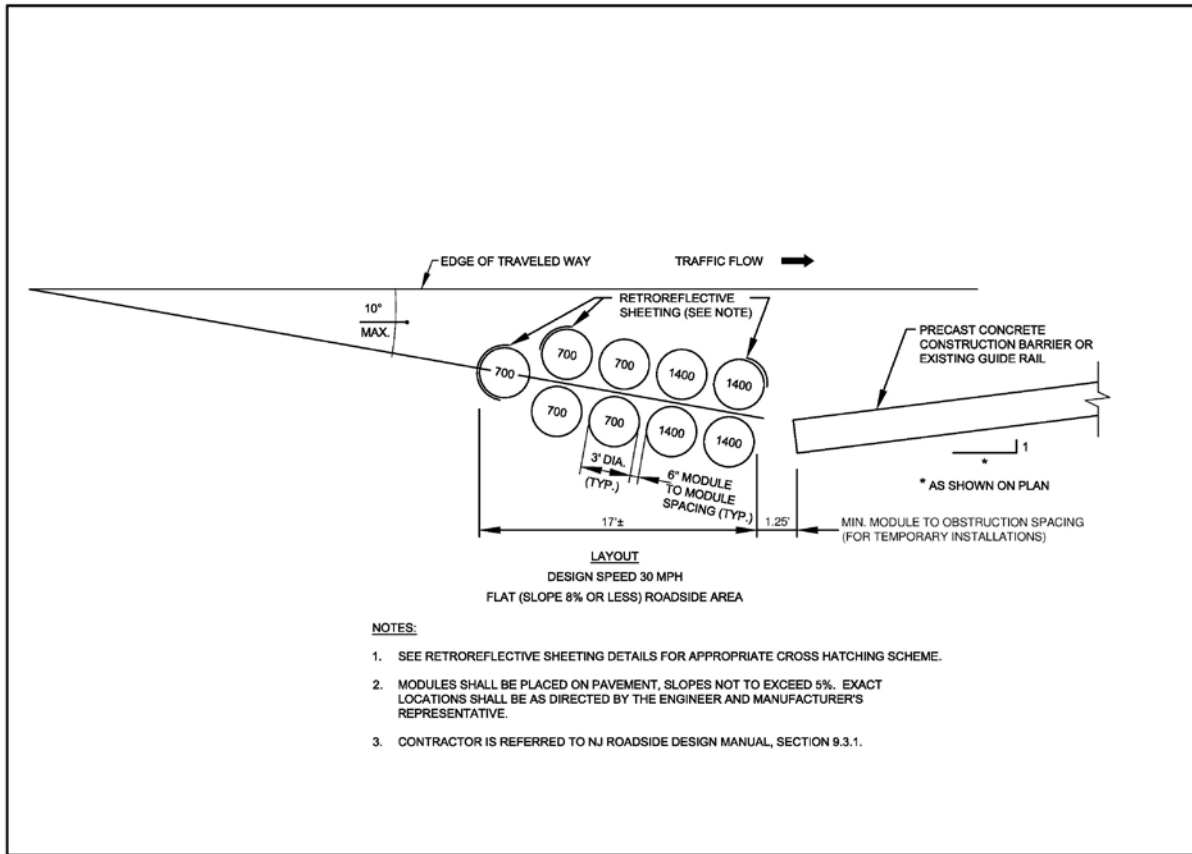


Figure 5. Temporary Inertial Barrier System, 9 Modules

# TRAFFIC CONTROL PLAN

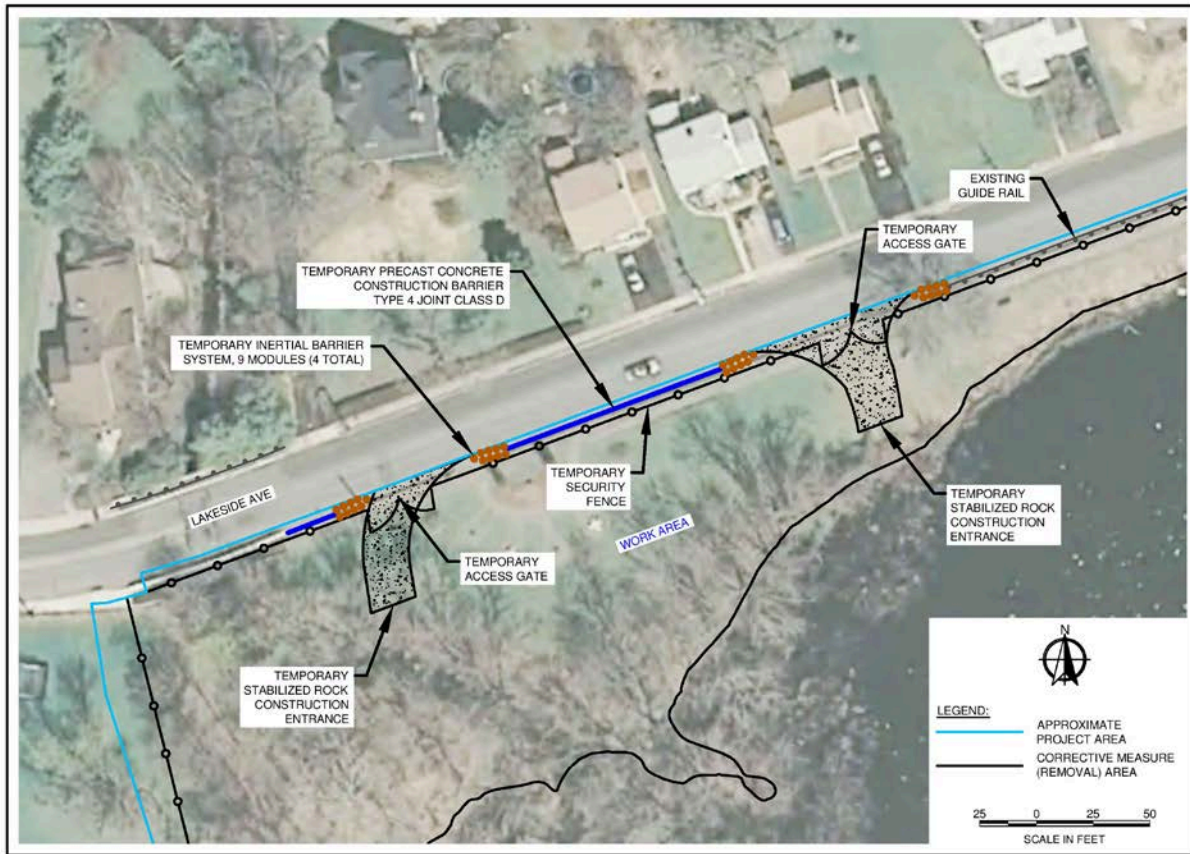


Figure 6. Inertial Barrier System Layout Map  
Temporary Inertial Barrier System, 9 Modules

### 7.2.3 Route

Due to the location of the project site within a residential area, it is crucial that the impact of heavy vehicles be minimized for residents. All trucks that provide transport service for this project will follow the Haul Routes shown in this section. This will apply to both loaded and empty trucks that deliver materials, supplies or equipment to the site and trucks that transport materials from the site. As such, the PLW Materials Haul Route and the Haul Route are described in this section and are delineated on the attached figure (Figure 7).

## TRAFFIC CONTROL PLAN

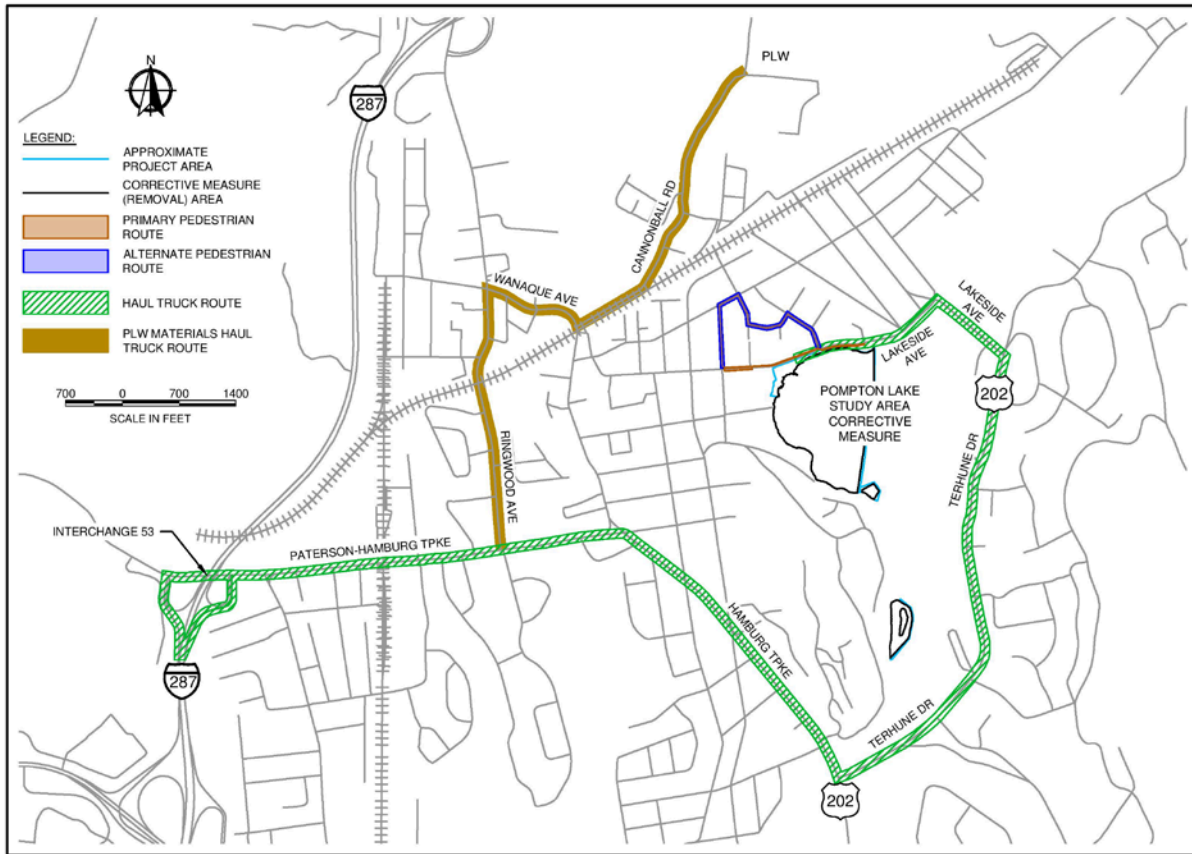


Figure 7. Haul Truck, PLW Materials Truck Route, and Pedestrian Routes

Trucks traveling to or from the PLW Site to the Lakeside Avenue site during sheet pile installation will use the PLW Materials Haul Route. That route is as follows:

- South along Cannonball Road
- West along Wanaque Avenue
- South along Ringwood Avenue
- East along Paterson-Hamburg Turnpike to Terhune Drive (US 202)
- North on Terhune Drive (US 202) to Lakeside Avenue
- West on Lakeside Avenue over the bridge
- West on Lakeview Avenue to the site entrance

Presently, no materials, supplies, or equipment (aside from sheet pile) is expected to be stored at the PLW Site. The following route is provided in the unlikely event that such activity is required. Trucks that deliver materials, supplies or equipment to the PLW Site will use the following route:

- From I-287 Interchange 53 east on Paterson-Hamburg Turnpike
- North along Ringwood Avenue

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## TRAFFIC CONTROL PLAN

- East along Wanaque Avenue
- North along Cannonball Road to the PLW Site

The Haul Route is designated for delivery of materials, equipment and clean fill to the Lakeside Avenue site and the removal of remediated material from the site. The proposed outbound route is as follows:

- East on Lakeside Avenue to the stop at the bridge
- East on Lakeside Avenue over the bridge to Terhune Avenue (US 202)
- South on Terhune Avenue (US 202) to Paterson-Hamburg Turnpike
- North on Paterson-Hamburg Turnpike
- West on Paterson-Hamburg Turnpike to I-287 Interchange 53

This routing was previously agreed upon by Borough and County representatives to be the most suitable for its purpose.

The inbound route will be the reverse.

Worker parking will be situated at the PLW Site, and workers will be shuttled to the project site to condense trips to and from the site. The inbound route for the shuttle will be south along Cannonball Road, left onto Wanaque Avenue, left onto Lakeside Avenue, left onto Colfax Avenue, right onto Jefferson Avenue and right onto Lakeside Avenue to the site. The outbound route will be the reverse. Workers will be shuttled to and from the site using a shuttle bus, the use of which is consistent with the character of the neighborhood.

The intersection of Lakeside Avenue with Terhune Drive (US 202) presents some unique challenges for heavy truck traffic due to the regularly observed traffic at that intersection, the grade of the road coupled with the stop sign, and possible visual obstructions from road curvature and vegetation. The Passaic County Engineer has recommended the use of County or Wayne Township police to direct heavy vehicle traffic at this intersection. Severson will coordinate site-related heavy vehicle traffic with the Borough of Pompton Lakes and Township of Wayne police departments and Passaic County Sheriff's Office to ensure proper oversight is employed at that intersection at all times. Severson will also provide signage for this intersection in consultation with the Passaic County Engineer prior to initiation of work. Additional vegetation clearing may also be needed for this intersection, and Severson will perform this clearing in coordination with the Passaic County Engineer.

### **8.0 CONSTRUCTION TRAFFIC TABLE**

The following table provides additional detail regarding frequency of trucks and traffic impacts.



## TRAFFIC CONTROL PLAN

<b>Work Phase</b>	<b>Approx. Duration (months)</b>	<b>Backfill Delivery</b>	<b>Material Transport for Disposal or Recycling</b>	<b>Worker Parking and Traffic</b>	<b>Materials, Supplies, Equipment, Fuels Delivery</b>	<b>Lakeside Ave. Lane Closure</b>
Mobilization	1	N/A	N/A	Daily shuttle between PLW parking lot and Rotary Park area.	Daily delivery of equipment and supplies. Typically 10 trucks per day.	Close one-lane during equipment off-loading. Close for part of day several times per week.
Site Preparation	1	Periodic delivery of gravel and asphalt from Exit 53 to Lakeside.	Limited trucks to disposal sites via Lakeside to Exit 53. Typically 1 or 2 per work day.	Daily shuttle between PLW parking lot and Rotary Park area.	Periodic delivery of supplies from Exit 53 to Lakeside. Typically 1 or 2 trucks per day	Close one lane during initial temporary facility construction. Close for part of day several times per week.
Uplands Soil Removal	2	Daily trucks via Exit 53 to Lakeside. Typically 20 to 30 trucks per work day.	Daily trucks to landfill via Lakeside to Exit 53. Typically 20 to 30 trips per work day.	Daily shuttle between PLW parking lot and Rotary Park area.	Periodic delivery of supplies from Exit 53 to Lakeside. Typically 2 to 5 trucks per day	Close one lane during remediation along Lakeside at east end of Rotary Park. Possible periodic closures.
Lake Area A and Island Area	3	Daily trucks via Exit 53 to Lakeside. Typically 20 to 30 trucks per work day.	Daily trucks to landfill via Lakeside to Exit 53. Typically 25 to 35 trips per work day.	Daily shuttle between PLW parking lot and Rotary Park area.	Periodic delivery of supplies from Exit 53 to Lakeside. Typically 2 to 5 trucks per day.	No closures needed for routine operations. May be occasional closures.
Delta Area Hydraulic Dredging	10	N/A	Daily trucks to landfill via Lakeside to Exit 53. Typically 25 to 30 trips per work day.	Daily shuttle between PLW parking lot and Rotary Park area.	Periodic delivery of supplies from Exit 53 to Lakeside. Typically 2 to 5 trucks per day.	Same as Lake Area A and Island Area.
Delta Area Ecological-layer Placement	8	Daily trucks via Exit 53 to Lakeside. Typically 30 to 40 trips per work day.	Limited trucks to disposal sites via Lakeside to Exit 53. Typically 1 or 2 per work day.	Daily shuttle between PLW parking lot and Rotary Park area.	Periodic delivery of supplies from Exit 53 to Lakeside. Typically 2 to 5 trucks per day.	Same as Lake Area A and Island Area.

## TRAFFIC CONTROL PLAN

<b>Work Phase</b>	<b>Approx. Duration (months)</b>	<b>Backfill Delivery</b>	<b>Material Transport for Disposal or Recycling</b>	<b>Worker Parking and Traffic</b>	<b>Materials, Supplies, Equipment, Fuels Delivery</b>	<b>Lakeside Ave. Lane Closure</b>
Site Restoration	3	Periodic delivery of topsoil.	Limited trucks to disposal sites via Lakeside to Exit 53. Typically 1 or 2 per work day.	Same as above.	Periodic delivery of supplies from Exit 53 to Lakeside. Typically 2 to 5 trucks per day.	Same as Lake Area A and Island Area.
Demobilization	1	N/A	Limited trucks to disposal sites via Lakeside to Exit 53. Typically 1 or 2 per work day.	Same as above.	Periodic delivery of supplies from Exit 53 to Lakeside. Typically 2 to 5 trucks per day.	Close one-lane during equipment loading. Close for part of day several times per week.

### 9.0 REFERENCES

Federal Highway Administration. 2009. Manual on Uniform Traffic Control Devices. 23 Code of Federal Regulations (CFR), Part 655, Subpart F. Available on line at: <http://mutcd.fhwa.dot.gov/> and <http://edocket.access.gpo.gov/2009/pdf/E9-28322.pdf> (PDF, 716KB).

Highway & Traffic Design & Design Document Management. 2009. The State of New Jersey Department of Transportation Roadway Design Manual. Available on line at <http://www.state.nj.us/transportation/eng/documents/RDM/>