



PURPOSE OF THE CEEES JUNIOR CLASS ANNUAL FIELD TRIP: To expose students to some of the biggest and most innovative infrastructure design and construction efforts going on in the United States; to provide an opportunity to see first-hand that the need to rebuild our often failing infrastructure is huge; to learn about the complexity of the structural, transportation, water resources, and environmental projects that keep our nation productive, efficient and healthy; and to interact one on one with project and design engineers. These trips help students see the wide range of opportunities available to become innovative leaders and also help connect the classroom to the outside world.

Wednesday, September 30

5:00am Bus to **NYC**, meet at Eck Visitor Center bus stop (by bookstore)
11 hour drive, 1 - 2 hours of stops, maybe 1 1/2 hours of traffic



7:30pm Dinner at [Katz's Delicatessen](#)
205 E. Houston Street, New York, NY 10002
Founded in 1888, one of New York's oldest kosher-style delis, each week serves 10,000 pounds of pastrami, 5,000 pounds of corned beef, 2,000 pounds of salami and 12,000 hot dogs. Yes, the deli in When Harry Met Sally...

9:00pm Walk to [Brooklyn Bridge](#) (35 minute walk) and walk to midway point of bridge for views of Manhattan and to see this iconic bridge up close

10:30pm Pick up by bus on Brooklyn side of bridge, corner of Centre and Chambers Streets (just north of the promenade entrance), ride to hotel

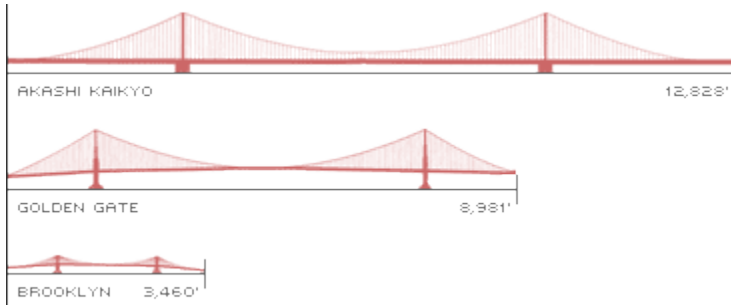


BROOKLYN BRIDGE

Considered a brilliant feat of 19th-century engineering, the Brooklyn Bridge was a bridge of many firsts. It was the first suspension bridge to use steel for its cable wire. It was the first bridge to use

explosives in a dangerous underwater device called a caisson. At the time it was built, the 3,460-foot Brooklyn Bridge was also crowned the longest suspension bridge in the world.

But the Brooklyn Bridge was plagued with its share of problems. Before construction even began, the bridge's chief engineer, John A. Roebling, died from tetanus which resulted from a construction site accident. The project was taken over and seen to its completion



by his son, Washington Roebling. Three years later, Roebling developed a crippling illness called caisson's disease, known today as "the bends." Bedridden but determined to stay in charge, Roebling used a telescope to keep watch over the bridge's progress. He dictated instructions to his wife, Emily, who passed on his orders to the

workers. During this time, an unexpected blast damaged one caisson, a fire damaged another, and a cable snapped from its anchorage and crashed into the river. Despite these problems, construction continued at a feverish pace.

By 1883, 14 years after it began, Roebling successfully guided the completion of one of the most famous bridges in the world -- without ever leaving his apartment. Although he was physically able to leave his apartment, Washington Roebling refused to attend the opening celebration honoring his remarkable achievement. The bridge opened to the public on May 24, 1883, at 2:00 p.m. A total of 150,300 people crossed the bridge on opening day. Each person was charged one cent to cross. The bridge opened to vehicles on May 24, 1883, at 5:00 p.m. A total of 1,800 vehicles crossed on the first day. Vehicles were charged five cents to cross. Today, the Brooklyn Bridge is the second busiest bridge in New York City. One hundred forty-four thousand vehicles cross the bridge every day.

<http://www.pbs.org/wgbh/buildingbig/wonder/structure/brooklyn.html>



11:00pm

Check-in [Hilton Garden Inn New York/West 35th Street](#)

63-67 W. 35th Street, New York, NY 10001

(Bus driver to stay at the Hilton Meadowlands, Two Meadowlands Plaza, East Rutherford, NJ 201-896-0500 – all items must be taken off of the bus)

Thursday, October 1

(Construction attire today until dinner time, raingear/umbrella if needed)

6:30am-8:00am Breakfast is available in hotel

8:15am Meet in lobby for walk to [Empire State Building](#) (5 minute walk) – **need valid photo ID for security entrance to ESB**

8:30am Check-in and escort up to [HNTB](#) offices



HNTB
100
YEARS OF
INFRASTRUCTURE
SOLUTIONS

Ted Zoli, PE
National Bridge Chief
Engineer, HNTB Corporation

9:00am-noon

[HNTB](#) Design offices

HNTB Corporation is an architecture, engineering, planning, civil engineering consulting management firm that was founded in 1914. We will learn about what they do and how they do it and learn about some current projects.

A very small sampling of their many, many projects:



San Diego Convention Center Expansion

Tres Rios Ecosystem Restoration and Flood Control Project

Minneapolis St. Paul International Airport Light Rail

Florida Citrus Bowl Reconstruction

Mary Ave Bicycle Footbridge, Cupertino CA



San Francisco BART Station

Interstate 465 Reconstruction, Indiana

Leonard Zakim Bunker Hill Memorial Bridge, Boston

Tacoma Narrows Bridge

Washington Dulles International Airport Tunnel

lunch Au Bon Pain box lunches in HNTB offices

noon Bus to Kiewit's Queen's offices of the [Kosciuszko Bridge](#) construction project 35-18 Laurel Hill Boulevard, Maspeth NY 11378 (some GPSs will direct one onto 1278, which is the bridge above the office trailer complex. Best to use the intersection of Laurel Hill Boulevard and 56th Road, Maspeth, NY 11378 for GPS directions)

THE OLD



The Old: The **Kosciuszko Bridge** is a **truss bridge** that spans Newtown Creek between Brooklyn and Queens. It is also known as the Brooklyn Queens Expressway or BQE. The bridge opened in 1939, and was named after a volunteer in the American Revolutionary

War. The current bridge has six lanes and no room for bikes or pedestrians and is on the list of most troubled state-owned elevated roadways, with an estimated lifetime of only three more years. According to *The New York Times*, the Kosciuszko Bridge is “**perhaps the city’s most notorious (bridge), hated and feared by drivers and synonymous in traffic reports with bottlenecks, stop-and-go and general delay.**” (Feb. 18, 210, Andy Newman “A Tired Old Bridge Gets a New Look”)

THE NEW



The New: With a joint venture of [Skanska](#), [Kiewit](#), and [HNTB](#) as lead design firm, the first stage of the replacement is underway, a \$544 million **cable-stayed bridge**, building an eastbound viaduct to be completed in 2016. The existing eastbound structure will then be demolished. The westbound viaduct will be replaced in a future project, ultimately adding three lanes, bike path and walkway. This is the largest single contract ever awarded by the NY State Department of Transportation

1:00pm-4:00pm [K Bridge](#) Site visit, both the Queen's side and Brooklyn side



4:00pm Bus back to hotel

5:00pm-7:30pm Free time

7:30pm Meet in lobby for walk to dinner
(15 minute walk)

8:00pm **Dinner at [John's of Times Square](#)**
all you can eat NY pizza and calzones
260 W. 44th Street New York, NY 10036



Friday, October 2

(Construction attire today until dinner time, business casual for dinner, raingear/umbrella if needed)

6:30am-8:00am Breakfast available

8:15am Meet in lobby

8:30am Walk to 347 Madison Ave., [MTA headquarters](#), between 44th and 45th, 6th floor
(15 minute walk) for beginning of East Side Access tour



[East Side Access](#) is one of the largest transportation infrastructure projects currently underway in the United States with a history that reaches back to the 1950's when discussions were first held regarding regional transportation planning. The project encompasses work in multiple locations in Manhattan, Queens and the Bronx and includes more than 11 miles of tunneling.

The East Side Access project is being undertaken by the Metropolitan Transportation Authority (MTA) and is designed to bring the Long Island Rail Road (LIRR) into a new East Side station to be built below, and incorporated into, Grand Central terminal. The new connection will increase the LIRR's capacity into Manhattan, dramatically shorten travel times to Long Island and eastern Queens, and will provide easier access to JFK airport from Grand Central Terminal.

9:00am – 11:00am

[Grand Central Terminal East Side Access tour](#)

Guided tour through the GCT caverns and Manhattan and Queens tunnels



When completed, East Side Access will serve approximately 162,000 customers a day, providing a faster and easier commute from Long Island and Queens to the east side of Manhattan in a new 8-track terminal and concourse below Grand Central Terminal.

11:30am

Pick-up by bus (347 Madison Ave. is between 44th and 45th Streets. The bus driver will pick up on one of the cross streets. We will stay together as group to meet bus.

Box lunches on way to [Goethals Bridge](#)

11:30am – 12:30pm

Bus to 137 Bayway Avenue, Elizabeth, NJ – [Kiewit](#) complex – [Goethals Bridge](#)
(approx. 1 hour drive)

1:00pm – 4:00pm

Tour [Goethals Bridge](#)



The [Goethals Bridge](#) is one of three Staten Island bridges linking New York and New Jersey. The current bridge, a steel truss cantilever, opened in 1928, and was named in memory of Major General George W. Goethals, builder of the Panama Canal and the first consulting engineer for the Port Authority. It has two ten foot wide lanes in each direction, short of the twelve foot

requirement of modern highway design, and there are no shoulders for emergency traffic or for pedestrian or bike traffic. [Kiewit Weeks Massman](#) AJV is building the new cable-stayed bridge, three twelve foot lanes in each direction, a twelve foot outer shoulder and a five foot inner shoulder in each direction, and a ten foot walkway/bikeway. The area between the eastbound and westbound roadways will be capable of accommodating a possible future mass transit link.



4:00pm	Bus back into hotel (<i>approx. 1 hour drive</i>)
5:00pm-7:00pm	Free time
7:00pm	Meet in lobby for walk to dinner (<i>10 minute walk</i>)
7:30pm	Dinner at The Capital Grille Chrysler Center 155 East 42nd Street New York, NY 10017



Saturday, October 3

(Casual clothes, comfortable walking shoes, raingear/umbrella if needed)

7:00am-9:15am Breakfast available in hotel

9:30am Meet in lobby for bus ride to the [High Line](#) (15 minute ride), Gansevoort & Washington Streets

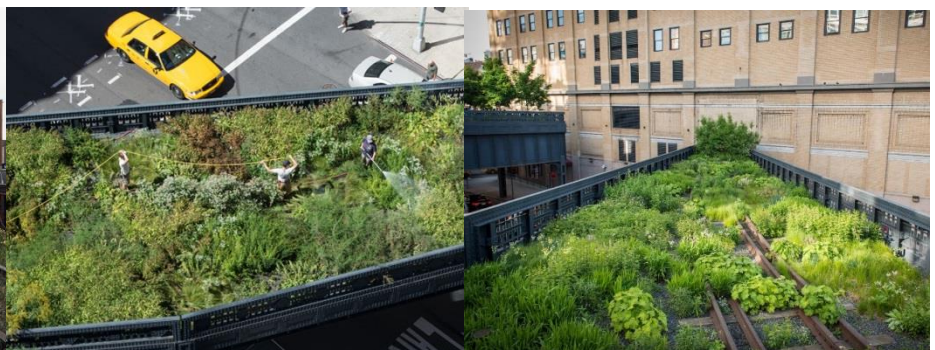


History of The [High Line](#): Out of Use Railroad Trestle to Public Landscape (from [thehighline.org](#))

1934 As part of the West Side Improvement Project, the High Line opens to trains. It runs from 34th Street to St John's Park Terminal, at Spring Street. It is designed to go through the center of blocks, rather than over the avenue, carrying goods to and from Manhattan's largest industrial district.

1980s Following decades-long growth in the interstate trucking industry, the last train runs on the High Line in 1980, pulling three carloads of frozen turkeys. A group of property owners lobbies for demolition while Peter Obletz, a Chelsea resident, activist, and railroad enthusiast, challenges demolition efforts in court.

1999-2014 From conception by two residents of the High Line neighborhood, Joshua David and Robert Hammond, to planning studies, to ideas competition, to design selection, to ownership transfer to the City, to groundbreaking, and finally development in four stages/sections, the dream becomes a reality.

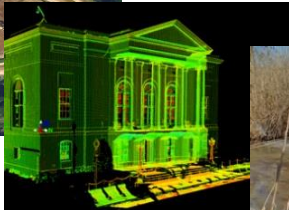


10:00am-11:15am Guided tour of the [High Line](#) – meet at the Gansevoort entrance on the High Line. Walking from street level, we can take either the elevator or stairs at the park entrance on Gansevoort and Washington Streets, finish at West 30th and 10th Ave.



11:30am – 1:00pm Walk to and presentation at [LANGAN](#), 21 Penn Plaza, 360 West 31st Street, 8th floor about their work on the [High Line](#) and [Hudson Yards](#) projects, [Saint Patrick's Cathedral renovation](#), and other projects in the city.

New York bagels!



LANGAN

ENGINEERING & ENVIRONMENTAL SERVICES



[LANGAN](#), an engineering and environmental consulting firm, was founded as a geotechnical specialty firm in 1970, and is

now in its 45th year. Their projects include airports, brownfield redevelopment, colleges and universities, energy, environmental remediation, environmental compliance, hospitals and healthcare, infrastructure, residential, renewable energy, tall buildings, waterfront and marinas, among others. The company provides service in Site/Civil, Geotechnical, Environmental, Earthquake/Seismic, Demolition, Traffic and Transportation, Surveying and 3D Scanning, Information Management, Landscape Architecture and Planning, Environmental Planning, Natural Resources and Permitting.

1:00pm-7:30pm

Time to explore NYC (15 minute walk back to hotel from LANGAN, if you want, or here are some suggestions of places you might like to visit this afternoon.)

A Few Places You Might Consider Visiting

<p>Staten Island Ferry to see the Statue of Liberty</p> 	<p>Boat tours of the harbor – check out https://www.circline42.com/</p> 	<p>One World Trade Center (amazing observation deck)</p> 	<p>World Trade Center PATH station</p> 	<p>National September 11 Memorial and Museum</p> 
<p>Metropolitan Museum of Art</p>  <p>or Museum of Modern Art</p> 	<p>Walk through Central Park</p> 	<p>Skinny high rise buildings that Jon Galsworthy talked about in Challenges: 432 Park Avenue and 111 West 57th Street</p> 	<p>Top of the Rock – spectacular views – 3 levels – you can see St. Patrick’s Cathedral, Yankee Stadium, WTC, Brooklyn Bridge, Central Park – civil engineering in every direction!</p> 	<p>The Newtown Creek Digester Eggs and nature walk, Greenpoint, Brooklyn</p>  
<p>Bryant Park – called the most beautiful four acres in Manhattan</p> 	<p>American Museum of Natural History</p> 	<p>New York’s Catholic Heritage: St. Peter’s Roman Catholic Church, St. Elizabeth Ann Seton Shrine, Tammany Hall, Lower East Side Tenement Museum</p> 	<p>New York Public Library</p> 	<p>Battery Park City</p> 

7:30pm Meet at hotel for walk to [Public House](#) for game watch and dinner (15 minute walk)

8pm [Public House NYC](#)
140 E 41st St, New York, NY 10017
(212) 682-3710



Notre Dame Club of NY Game Watch at the [Public House](#)



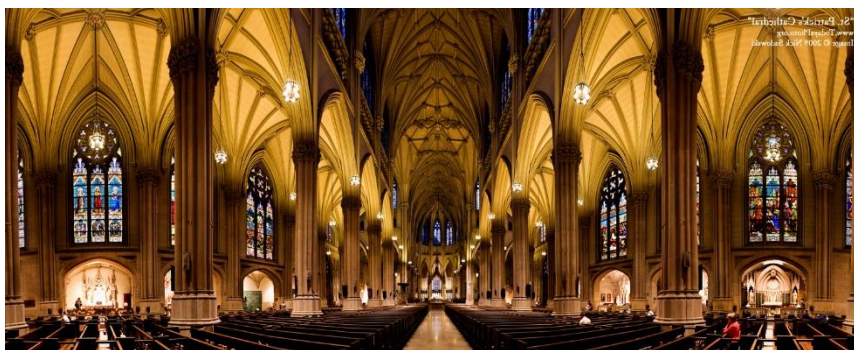
Sunday, October 4

(clothes for Mass)

7am – 8:00am Breakfast available

8:15am Meet in lobby **with all luggage – checking out of hotel** to board bus for St. Patrick's Cathedral (15 minute drive)

9am Mass at [St. Patrick's Cathedral](#) – the scaffolding is down!



10am Drive back to Notre Dame (11 ½ hour drive without stops, but we will be stopping)

Trip Coordinators: Diane Westerink, 574-286-9696; Joannes Westerink, 574-532-3160