AGENDA

• Construction Updates
  • Demolition and abatement
  • Sitework and Central Utility Plant (CUP)
  • First Academic Building (FAB)
• Trucking & Barging Plan
DEMOLITION UPDATE

Andrew Winters

Cornell Tech
PROGRESS UPDATE

Phase II work ongoing through June 2015. Phase I complete.
PHASE 1 COMPLETION
DEMOLITION WORK THROUGH JUNE 2015

Building E – Complete in May 2015

Building A – Complete in March 2015

Building G – Demolition complete

Building B – Complete in May 2015

Building J – Demolition complete
PHASE II – BUILDING E
PHASE II – BUILDING G
PHASE II – BUILDING A
PHASE II – BUILDING J
DEMO BARGING UPDATE

As of February 1, 2015, approximately 16,250 tons of waste have been removed by barge.
DEMO BARGING UPDATE

Including mobilization, approximately 3,775 – 4,050 trucks had been avoided as of February 1, 2015. This translates to 7,550 – 8,100 truck trips.
SITE UTILITY WORK

John Di Capua

Tishman Construction
SITE UTILITY WORK

OVERALL SITE PLAN
SITE UTILITY WORK
CENTRAL UTILITY PLANT
CUP WORK

4/2015 - 7/2015
PUBLIC ACCESS
SECURITY

SITE EXIT GATE
(Relocated Gate #2)

EXISTING SITE FENCE

TEMP. POWER FOR CUP 4/2015

TISHMAN FIELD OFFICES

CORPORATE CO-LOCATION
START: MAY

RESI.
START: APRIL

ESPLANADE

GATE #1
SECURITY
CUP & VAULT: LOOKAHEAD

February 2015
• Mobilization

March 2015
• Excavation starts

April 2015
• Start foundation walls
FIRST ACADEMIC BUILDING (FAB)

Tom LePage
Keith Stanisce

Barr & Barr
Following installation of Shoring, Excavation progresses from North to South. Foundations to follow. Section 1 Foundations begin as Section 1 Excavation completes.
TRUCKING & BARGING PLAN

Andrew Winters

Cornell Tech
CORNELL TECH CAMPUS PLAN
ULURP COMMITMENT

As part of the ULURP process, Cornell committed to “reduce the number of construction vehicles along Main Street by approximately 40% from the numbers included in the EIS for the project.”

(Letter to Council-member Jessica Lappin, May 2, 2013)

Specific commitments include:

- “Building Material not re-used on the Project Site will be removed by barge”
- “Nearly all bulk materials will be delivered and removed by barge”
- “Heavy materials such as steel, curtain wall, and large equipment will also be delivered by barge”
FEIS Projection

FEIS projected 34,258 trucks over 4 years
- Average of 37/day
- Peak of 67/day

<table>
<thead>
<tr>
<th>Project</th>
<th>FEIS Projection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demolition, Sitework &amp; Civil</td>
<td>8,914</td>
</tr>
<tr>
<td>Site Deliveries</td>
<td>2,921</td>
</tr>
<tr>
<td>Central Utility Building</td>
<td>2,208</td>
</tr>
<tr>
<td>First Academic Building</td>
<td>4,270</td>
</tr>
<tr>
<td>Co-location Building</td>
<td>4,210</td>
</tr>
<tr>
<td>Residential Building</td>
<td>6,385</td>
</tr>
<tr>
<td>Executive Education Center</td>
<td>5,350</td>
</tr>
<tr>
<td>TOTAL</td>
<td>34,258</td>
</tr>
</tbody>
</table>

A 40% reduction would result in 20,554 trucks
- Approximate average of 22/day
- Approximate peak of 40/day
FEIS Projection

Average Daily Number of Trucks

<table>
<thead>
<tr>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>80</td>
<td>70</td>
<td>60</td>
<td>50</td>
<td>40</td>
<td>30</td>
<td>20</td>
<td>10</td>
</tr>
</tbody>
</table>

Average: 37

2014 | 2015 | 2016 | 2017
BACKGROUND TRAFFIC

EIS Traffic Count on Main Street
• Average weekday vehicles/day: 3,708 northbound
• Manhattan single-lane average is 6,000 – 8,000/day

Percentage increase by Cornell-related trucks, per EIS
• Peak of 67 trucks per day: 1.8% increase
• Average of 37 trucks per day: 1.0% increase

Traffic estimate at former Goldwater Hospital
• Daily truck deliveries: 10 (approx./per HHC)
• Daily parked vehicles: 500 (approx./per HHC)
STRATEGIES FOR REDUCING VEHICLE NUMBERS AND IMPACT

- Re-use crushed demolition materials on-site
- Re-use soils on-site
- Work with contractors to reduce overall project deliveries
- Implement aggressive and ‘easy-to-use’ barging plan
- Incentivize efficient loading of barges
- Align peak barging period with peak construction period
- Reduce early morning peaks
PRELIMINARY BARGING PLAN

- Implement an 18-month barging plan, starting in October 2015
- Each barge can hold approximately ten large trucks
- Align peak barging period with peak construction period
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1 per day
2015: Q4
PRELIMINARY BARGING PLAN

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- Each barge can hold approximately ten large trucks
- Align peak barging period with peak construction period

1 per day
2015: Q4

2 per day
2016
PRELIMINARY BARGING PLAN

- Implement an 18-month barging plan, starting in October 2015
- Each barge can hold approximately ten large trucks
- Align peak barging period with peak construction period

1 per day  
2015: Q4

2 per day  
2016

1 per day  
2017: Q1
STRATEGIES FOR REDUCING IMPACT

Large/heavy vehicles will be prioritized for barging.
MANAGEMENT PLAN

- Tishman Construction, in the role of Site Logistics Manager, will work with each contractor to coordinate delivery schedules.
- Cornell meets with RIOC weekly and discusses work underway and access issues.
- A communication protocol has been established with RIOC for any unique circumstances such as oversize loads, escort vehicles, off-hours trucking due to DOT requirements, etc.
- Cornell is aware of school locations and hours, and will work with RIOC to ensure safe street crossing.
- Access to the construction site is controlled, and the guards check each vehicle against the delivery schedule.
- Access to the parks at the south end of the island will be maintained.
CURRENT OVERALL TRUCKING PROJECTION

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<td>8,914</td>
<td>10,518</td>
<td>+1,604</td>
</tr>
<tr>
<td>Site Deliveries</td>
<td>2,921</td>
<td>1,862</td>
<td>-1,059</td>
</tr>
<tr>
<td>Central Utility Building</td>
<td>2,208</td>
<td>1,372</td>
<td>-836</td>
</tr>
<tr>
<td>First Academic Building</td>
<td>4,270</td>
<td>3,666</td>
<td>-604</td>
</tr>
<tr>
<td>Co-location Building</td>
<td>4,210</td>
<td>3,400</td>
<td>-810</td>
</tr>
<tr>
<td>Residential Building</td>
<td>6,385</td>
<td>4,825</td>
<td>-1,560</td>
</tr>
<tr>
<td>Executive Education Center</td>
<td>5,350</td>
<td>4,547</td>
<td>-803</td>
</tr>
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<td>TOTAL</td>
<td>34,258</td>
<td>30,190</td>
<td>-4,068</td>
</tr>
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TRUCK MITIGATION

Cornell and its contractors have worked to reduce overall truck projections by more than 4,000 trucks compared to the EIS (an approximate 12% reduction).

This was achieved through:
• Design modifications to certain buildings
• Providing lay-down space on-site to allow for more efficient deliveries
• Incentivizing efficient deliveries by making the contractor partially responsible for the added cost of barging
• When feasible, sharing equipment between projects (i.e. excavation testing equipment shared by CUP and FAB)
DELIVERY NEEDS PER PROJECT

- Assumes all deliveries are made by truck
- Excludes demolition

<table>
<thead>
<tr>
<th>Building</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
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<tbody>
<tr>
<td></td>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
</tr>
<tr>
<td>First Academic Building (FAB)</td>
<td>100</td>
<td>220</td>
<td>210</td>
</tr>
<tr>
<td>Co-Location Building (CoLo)</td>
<td>0</td>
<td>70</td>
<td>200</td>
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<td>Central Utility Plant (CUP)</td>
<td>30</td>
<td>150</td>
<td>330</td>
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<tr>
<td>Residential Building</td>
<td>0</td>
<td>85</td>
<td>395</td>
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<td>Sitework, Utilities, &amp; Roadwork</td>
<td>0</td>
<td>170</td>
<td>540</td>
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<tr>
<td>Total Deliveries per Quarter</td>
<td>130</td>
<td>695</td>
<td>1675</td>
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<tr>
<td>Average Road Deliveries per Day</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>without Barging</td>
<td>2</td>
<td>11</td>
<td>26</td>
</tr>
<tr>
<td>Average Road Deliveries per Day</td>
<td></td>
<td></td>
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Cornell has not yet determined the development schedule for the Executive Education Center, however the project is expected to account for approximately 4,500 trucks in total.
### DELIVERY NEEDS PER PROJECT

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- Excludes demolition

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| Average Road Deliveries per Day without Barging | 2   | 11  | 26  | 39  | 50  | 42  | 43  | 39  | 36  | 17  | 1   | 0   |
| Average Road Deliveries per Day with Barging    | 2   | 11  | 26  | 29  | 39  | 30  | 32  | 28  | 28  | 17  | 1   | 0   |

**FEIS construction peak**

Cornell has not yet determined the development schedule for the Executive Education Center, however the project is expected to account for approximately 4,500 trucks in total.
## DELIVERY NEEDS PER PROJECT

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CURRENT PROJECTION

Average Number of Required Deliveries per Day

Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4

2015 | 2016 | 2017

- Trucks via roadway

* Excludes demolition
* Excludes Exec. Education Center
CURRENT PROJECTION

Average Number of Required Deliveries per Day

* Excludes demolition
* Excludes Exec. Education Center
OVERALL PROJECTION

Average Number of Required Deliveries per Day

* Includes demolition
* Excludes Exec. Education Center
Meeting the 40% Commitment

• FEIS projection is 34,258

• 40% FEIS reduction allows 20,554 trucks

• 13,703 trucks must be removed from the roadway

• Traffic mitigation work with the contractors has achieved a reduction of 4,000 trucks

• An additional 9,650 trucks must be eliminated
  • Approximately 6,000 trucks will have been eliminated during demolition
  • Minimum of 3,650 trucks will be eliminated during construction

• Goal is to barge approximately 10,000 trucks