



Second Avenue Subway Construction Progress Update

**Presented by
S3 Tunnel Constructors
AND
MTACCC
June 29, 2009**

Topics Covered

- **Progress update (March to June)**
- **Launch Box Update**
 - **Secant Wall: completed**
 - **Slurry Wall: completed**
 - **Removal of Slurry Mixture silos**
 - **Concrete Decking: in progress**
- **Shaft Site work at 69th St. and 72nd St.**
- **Upcoming Work**



Launch Box Update

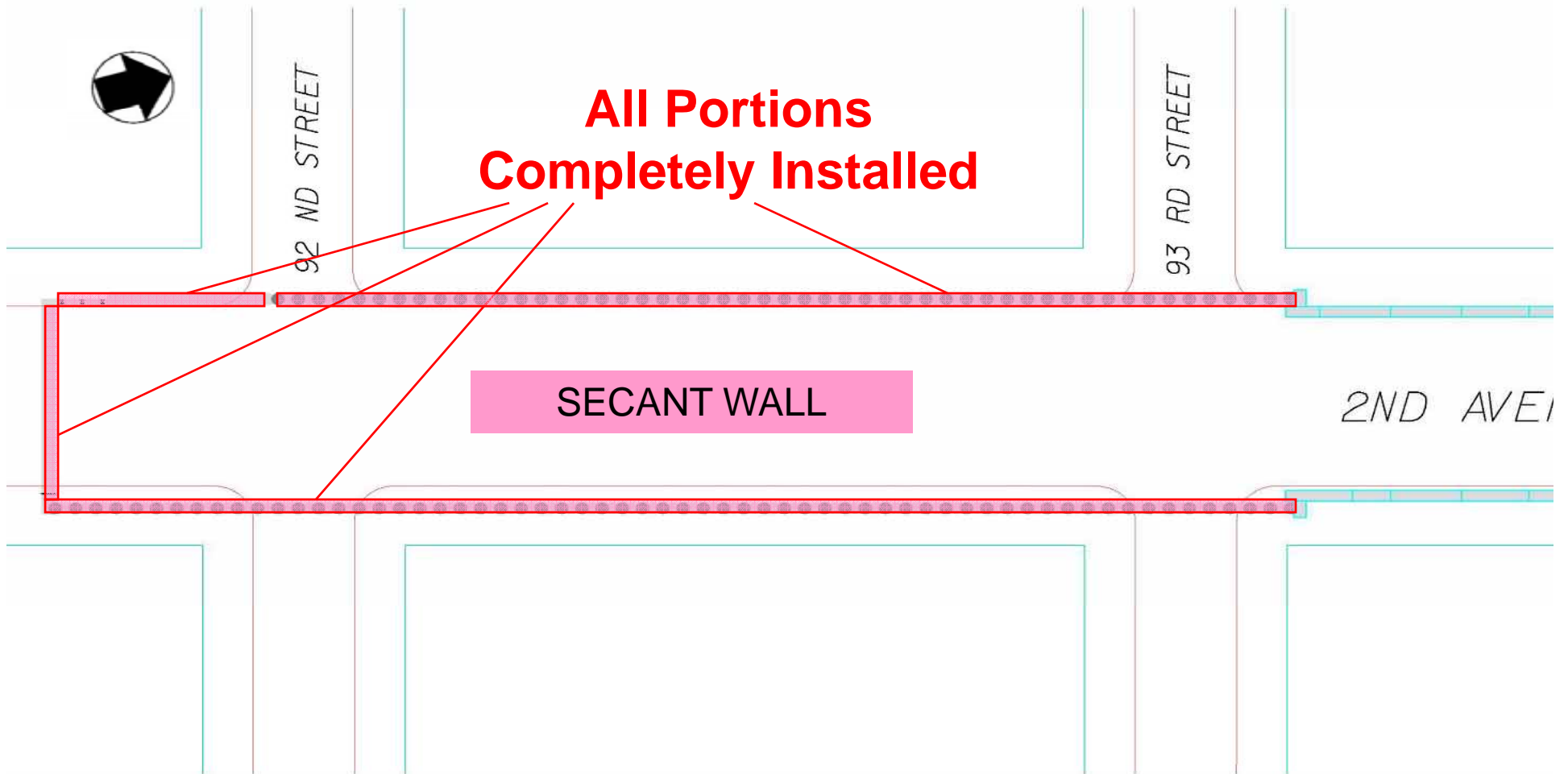
Secant Pile Wall
Construction
Between
91st and 93rd Street

Secant Pile Wall Construction- 91st to 93rd St. Current Status

- **Secant Wall Construction on West Side Completed**
- **Secant Wall Construction on East Side Completed**



Location of Secant Walls



Secant Pile Wall Construction- 91st to 93rd St.



Launch Box Update

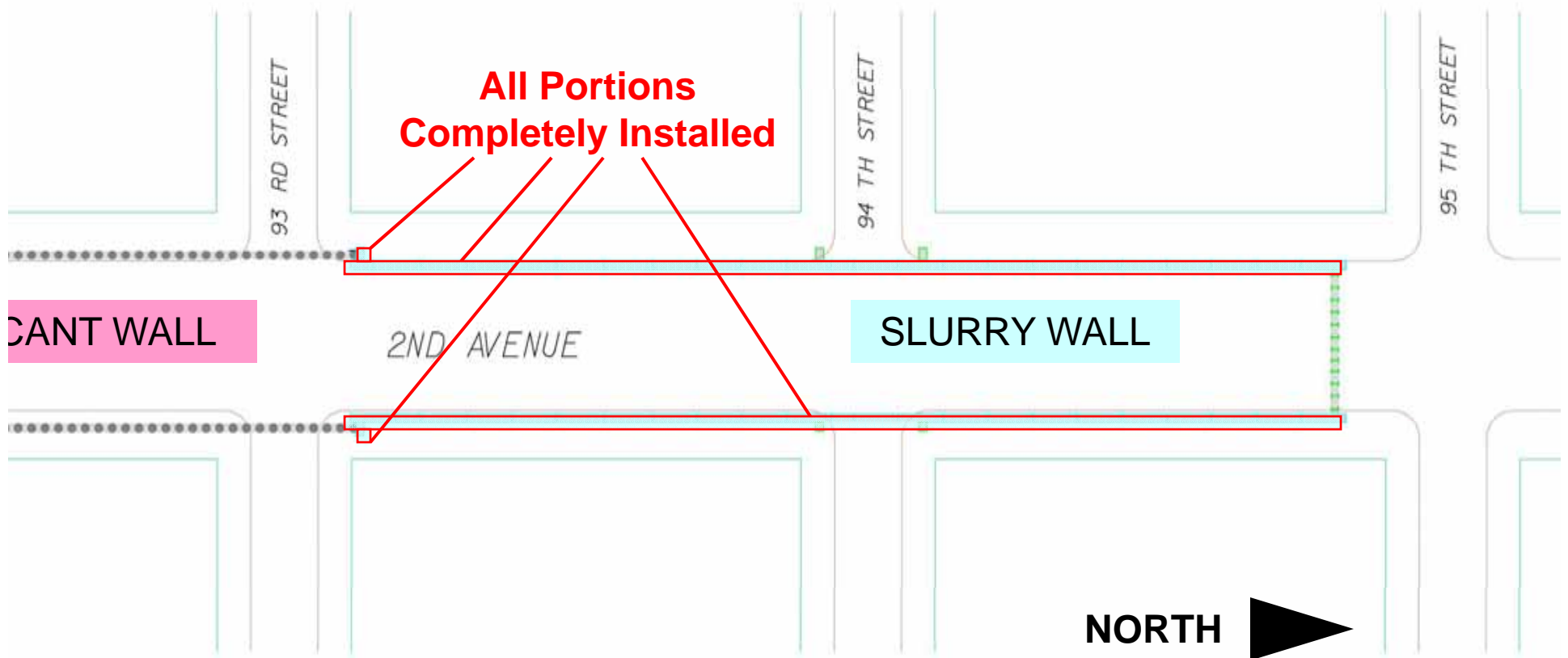
Slurry Wall Construction
Between
93rd and 95th Street

Slurry Wall Construction- 93rd to 95th St. Current Status

- **Slurry Wall on West Side Completed**
- **Slurry Wall on East Side Completed**



Location for Slurry walls



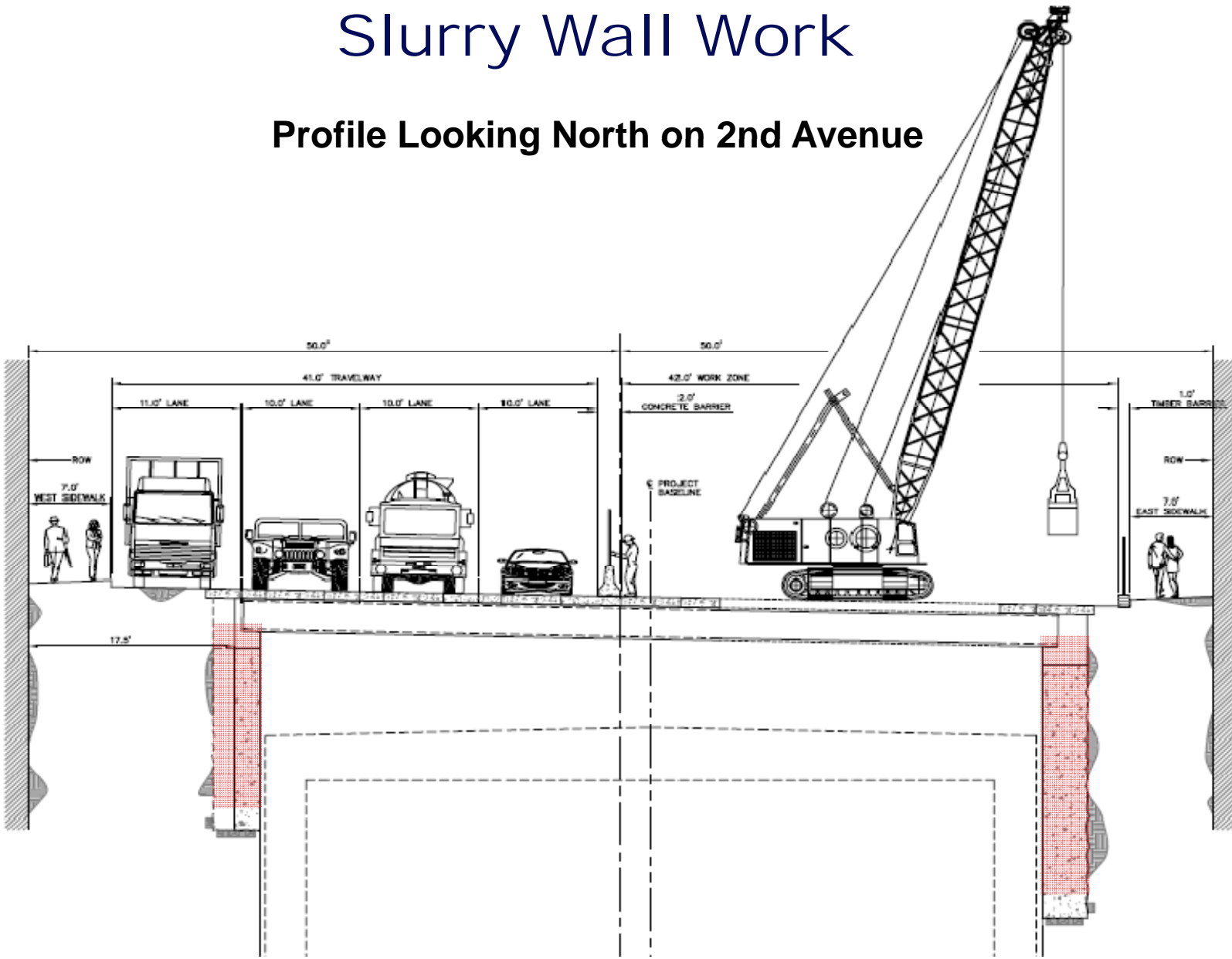
Slurry Wall

Installation of Rebar Cages



Slurry Wall Work

Profile Looking North on 2nd Avenue



Removal of Slurry Mixture Silos at 96th St. Yard



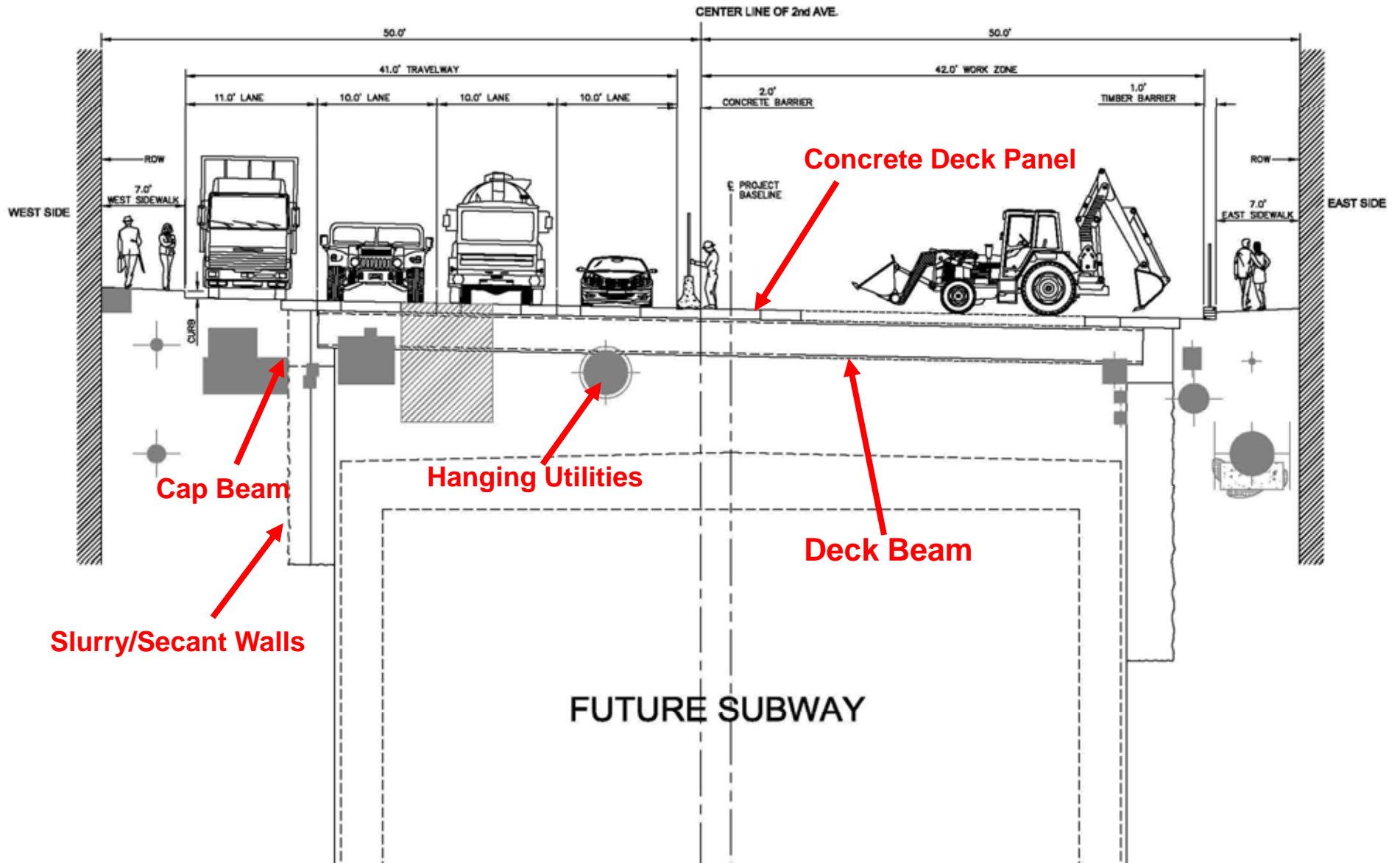
Launch Box Update

Concrete Decking Plan



Completed Concrete Decking Plan

Profile Looking North on 2nd Avenue





Concrete Decking Plan Current Status

West Side:

- All Cap Beams are Installed
- All Deck Beams are Installed
- All Concrete Deck Panels are Installed

East Side:

- Cap Beam Installation in progress
- Deck Beam Installation in progress
- Concrete Deck Panel Installation in progress
- Continuing Utility Relocation & Work Under
Concrete Decking

Estimated Decking Completion Date: end of July

Concrete Decking Construction

Installation of Cap Beams on East side between 93rd and 94th St.



Concrete Decking Construction

Deck Beam placement on SE corner of 94th St. and 2nd Ave



Concrete Decking Construction

Concrete Deck Panel Installation on SE corner of 93rd St. and 2nd Ave



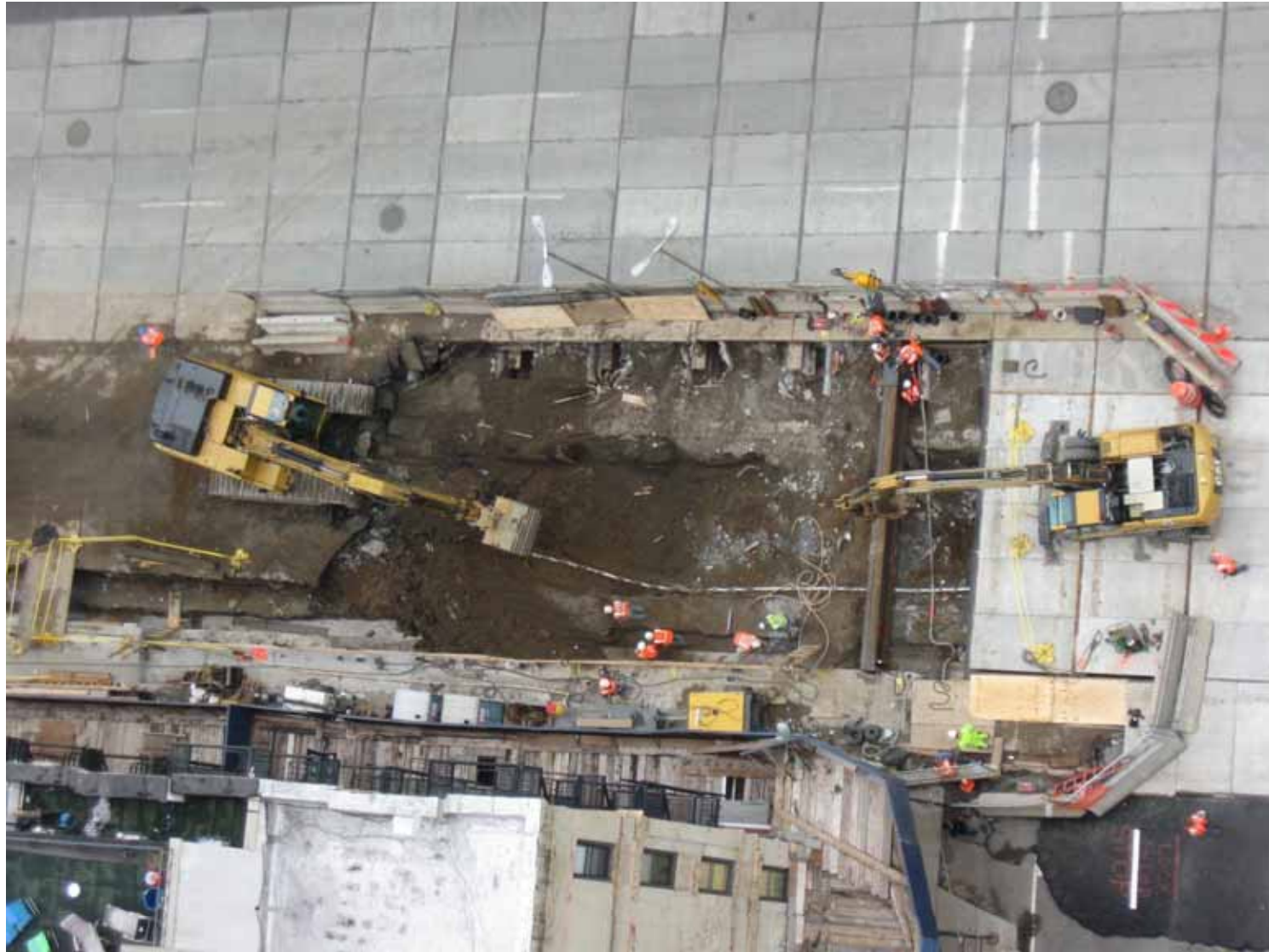
Concrete Decking Construction

Utility Relocation on East side of 2nd Ave



Concrete Decking Construction

Aerial View of 94th St. and 2nd Ave



Concrete Decking Construction

Current Decking Progress viewed from above of 2nd Avenue



Concrete Decking Construction

Current Decking Progress viewed from above of 2nd Avenue



Upcoming Work

Launch Box:

- Complete placement of Cap Beams, Deck Beams, and Concrete Deck Panels on the East Side
- Complete Utility Work Under the Deck on East Side

Estimated Completion Date: end of July

- Start Excavation Underneath Decking
- Controlled Rock Blasting and Removal

Controlled Rock Blasting and Removal

- The **safety** of the public and our workers is the MTA's **top priority**.
- Controlled Blasting Plans have been **designed by a Specialty Blasting Consulting Expert**.
- The Blasting Plans are under review and **must be approved by FDNY Explosives Unit**.
- All blasting work will be **monitored by FDNY Explosives Unit**.

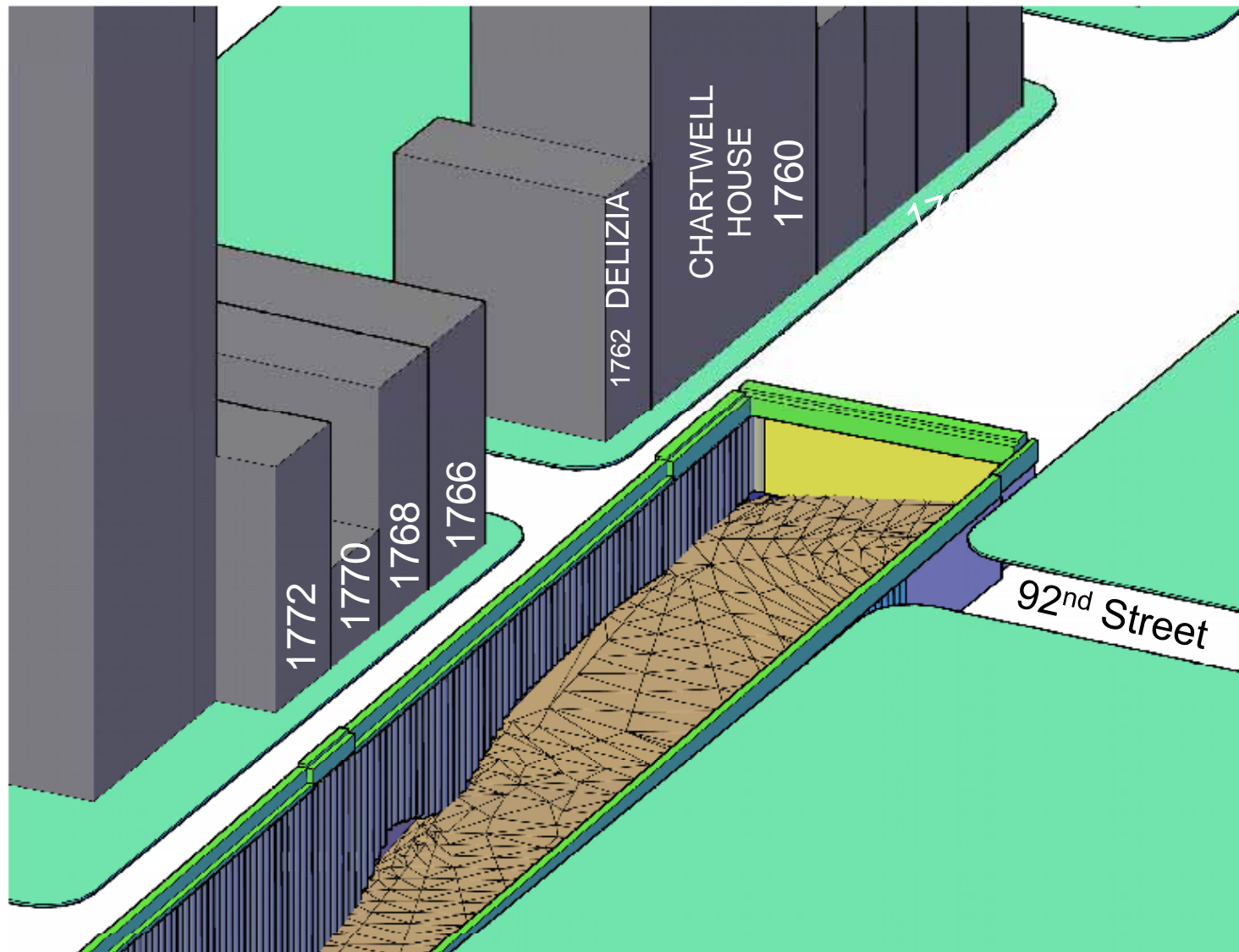
Controlled Rock Blasting and Removal

- **Buildings** adjacent to the blasting area **are being inspected** before this work begins by:
 - The Department of Buildings; and
 - An independent engineer and specialty consultant with experience in old brick masonry.
- **Blasting Vibration Monitoring Equipment** has been installed in buildings within the blasting area.
- The **allowable vibrations** caused by controlled blasting have been **set at levels that are lower than the standard** for similar building types.

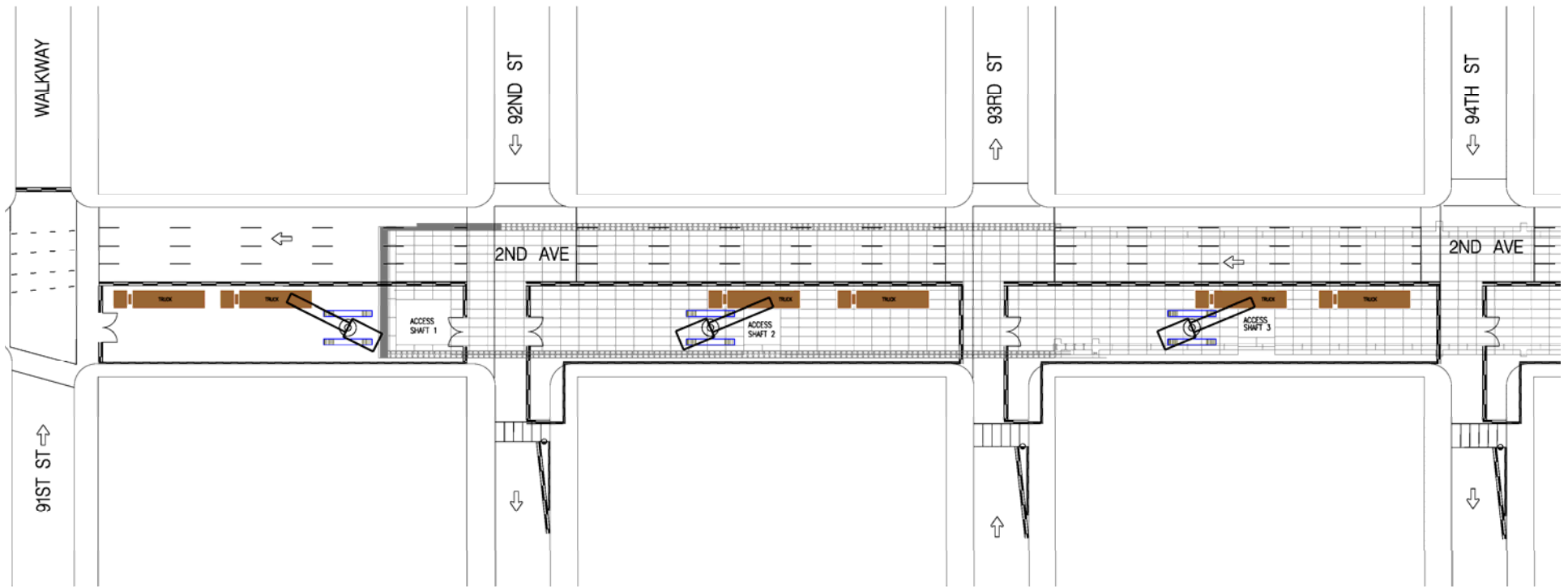
Construction Scheduling

Construction Activity	Work Hours
Surface Work for Launch Box	<ul style="list-style-type: none">• 5 days/week: 7:00am to 10:00pm• Saturday: 10:00 am to 7:00 pm
Underground Work	24 hours, 7 days/week
Trucking & Deliveries	<ul style="list-style-type: none">• 5 days/week: 7:00am to 10:00pm• Some night deliveries for large equipment• Saturday: 10:00am to 7:00pm

3-D Conceptual View of Launch Box Blasting Zone (SE)



Loading Scheme and MPT Plan For Launch Box Excavation



Shaft Site Work at 69th St. and 72nd St.



Shaft Site work at 69th St. and 72nd St.

Current Status

- Traffic and MPT Successfully Redirected to West Side
- Continuing Utility Relocation on East Side
- Preparing Roadway for Traffic Shift to East Side to Begin Remaining Utility Work on West Side

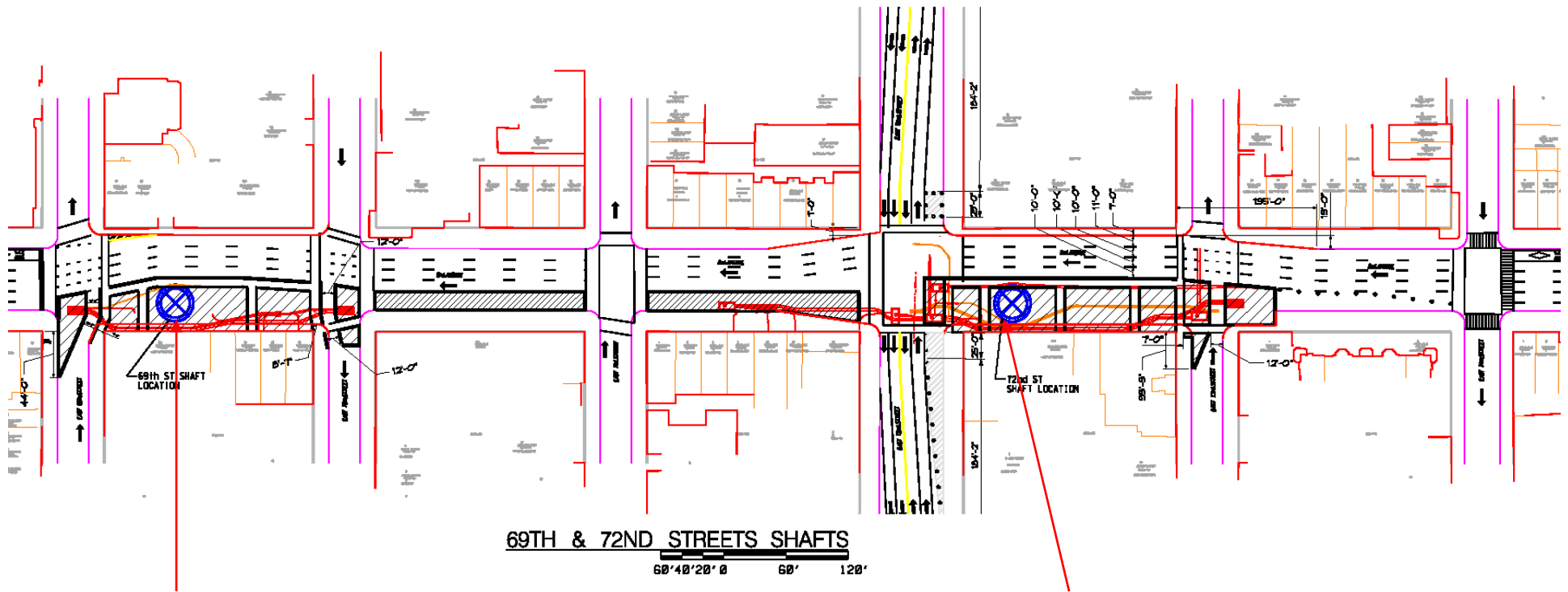
Estimated Date of Traffic Switch: mid July

- Preparing to Excavate Shaft Area

Estimated Start of Excavation: mid October

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Shaft Area Current Construction Plan



69th St. Shaft

72nd St. Shaft

Utility Relocation Work Around Shafts



Utility Relocation Work Around Shafts

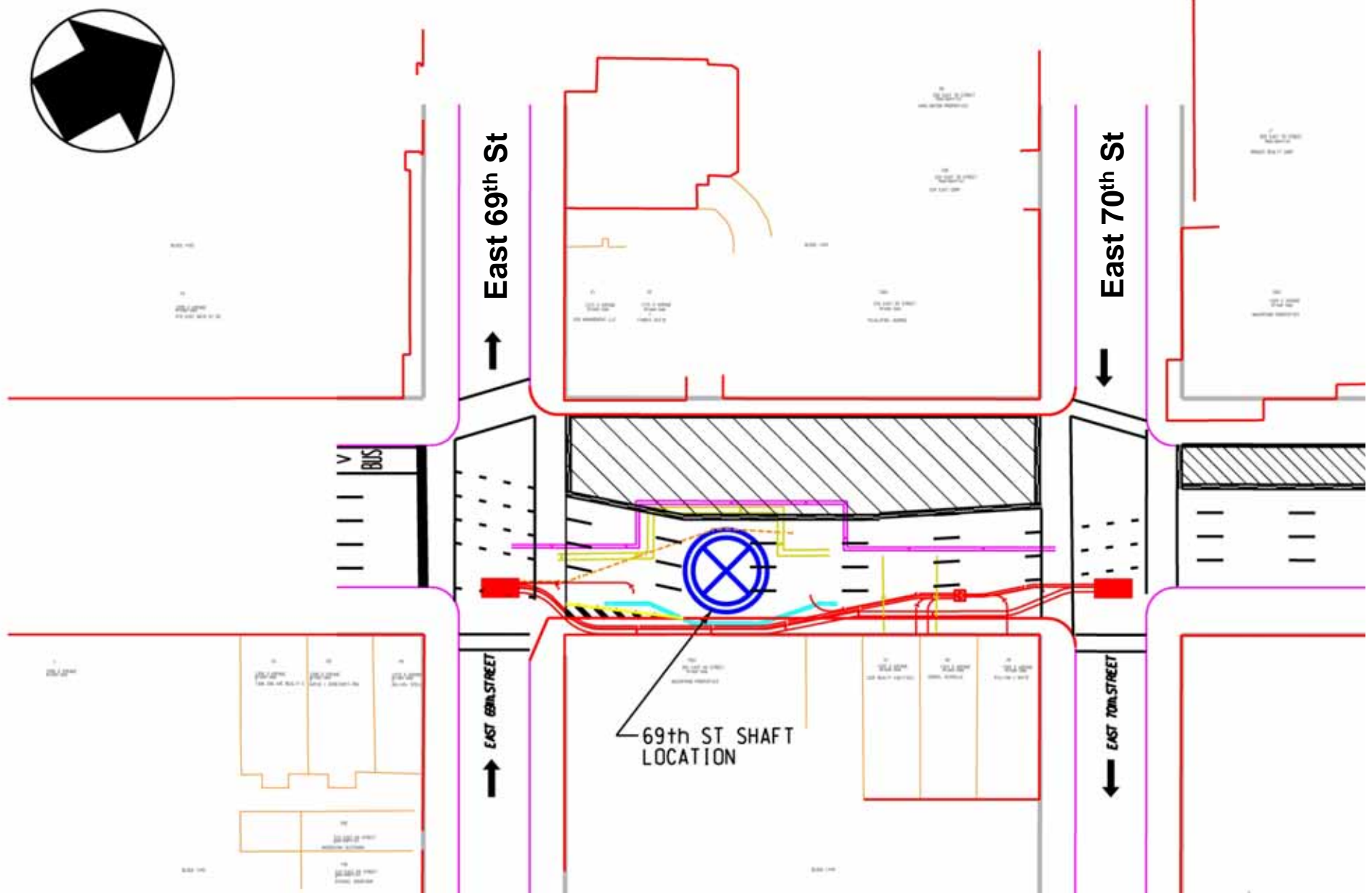


Construction of New Traffic Lane on East Side



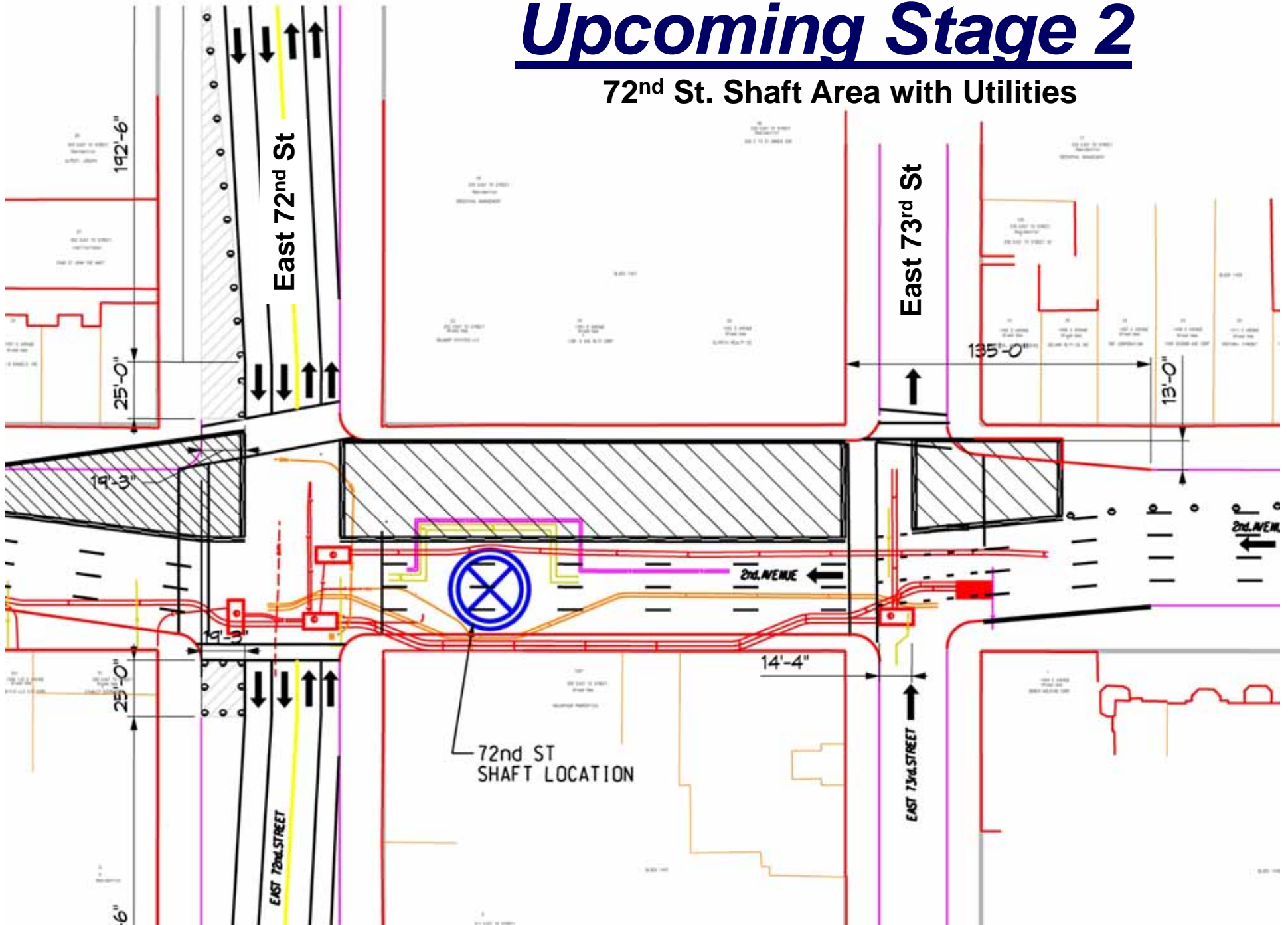
Upcoming Stage 2

69th St. Shaft Area with Utilities



Upcoming Stage 2

72nd St. Shaft Area with Utilities



Upcoming Work

Shaft Area 69th Street to 72nd Street:

- **Complete Relocation of Electric and Telephone Utilities on East Side**
- **Complete Relocation of Gas Main, Steam Main, and Water Main Relocation on East Side**
- **Switch Traffic to the East Side to begin Utility Work on West Side**

Estimated Date of Traffic Switch: mid July

Questions and Answers

