

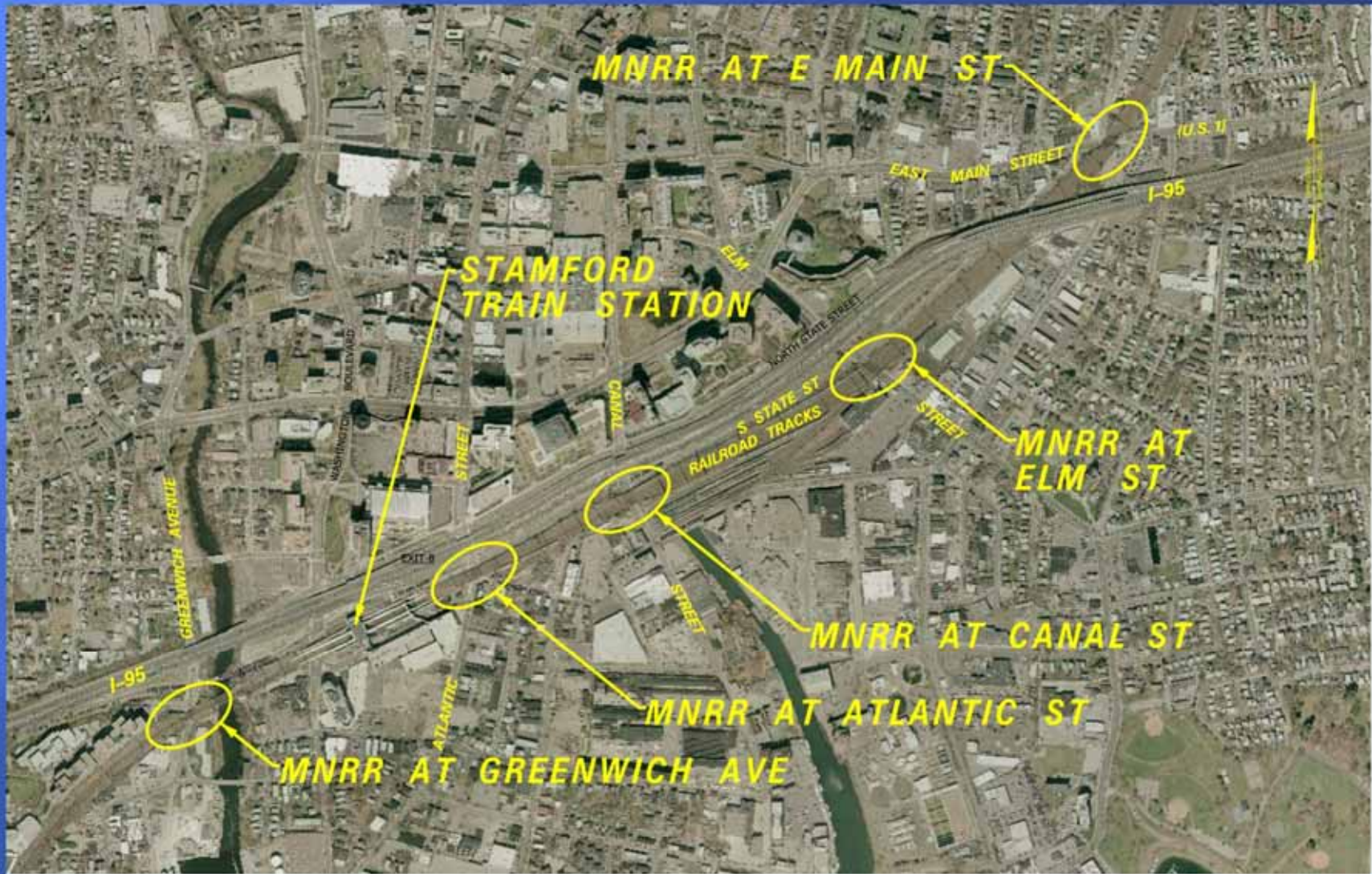
SOUTH STAMFORD
ACCESSIBILITY & MNRR
BRIDGE REPLACEMENT
FEASIBILITY STUDY

Presentation of the Preliminary
Engineering Report

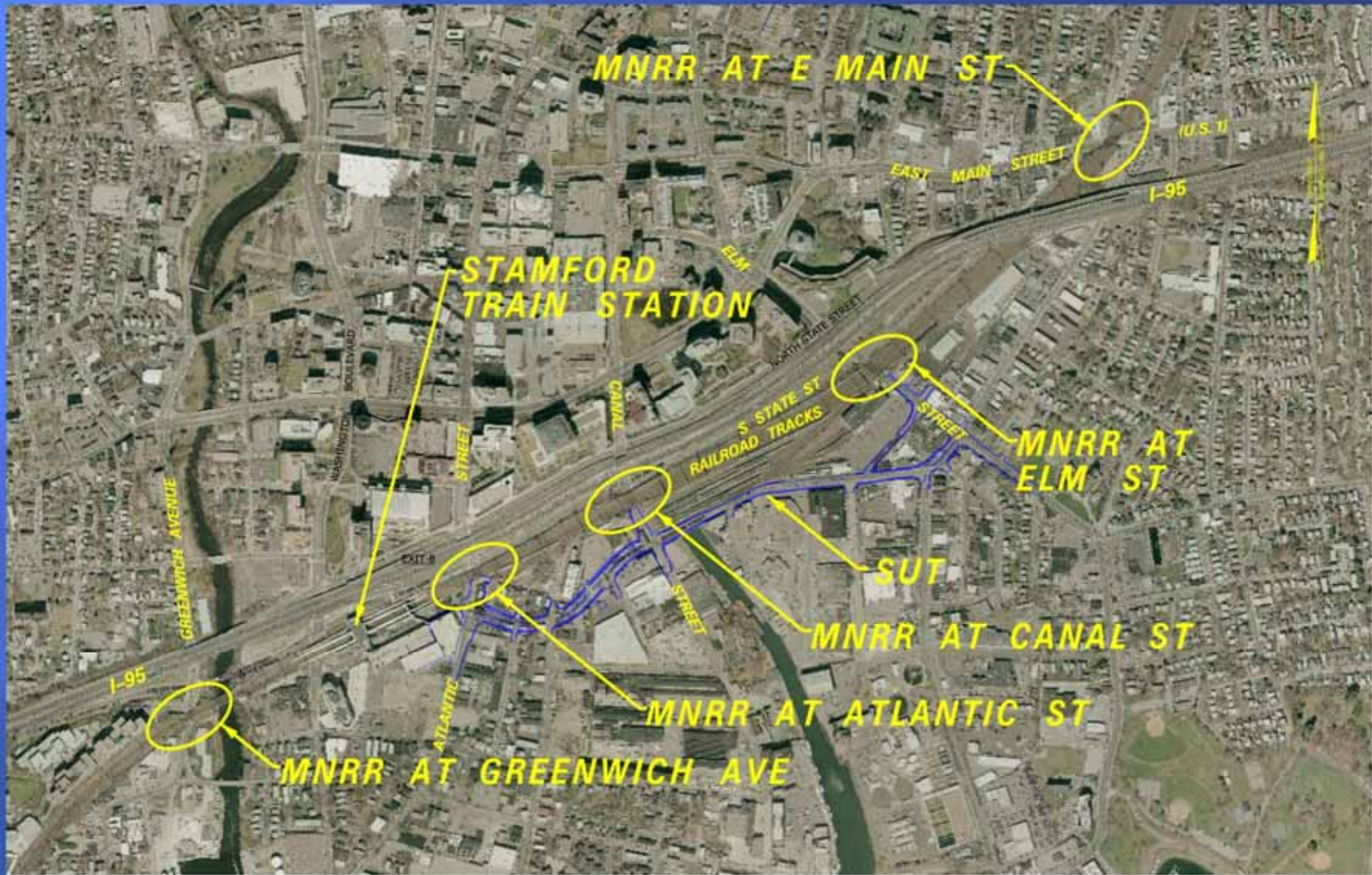
Background and Need

- ▣ Stamford Intermodal Transportation Center
- ▣ Development of the South End
- ▣ Complete Streets and Transit Access Projects
- ▣ Stamford Urban Transitway
- ▣ Transit Studies
 - BRT and Streetcar
- ▣ Potential MNRR Track 7 Extension
- ▣ Stamford Station Parking Garage
- ▣ Potential I-95 Operational Lane
 - Northbound Exits 8 – 10

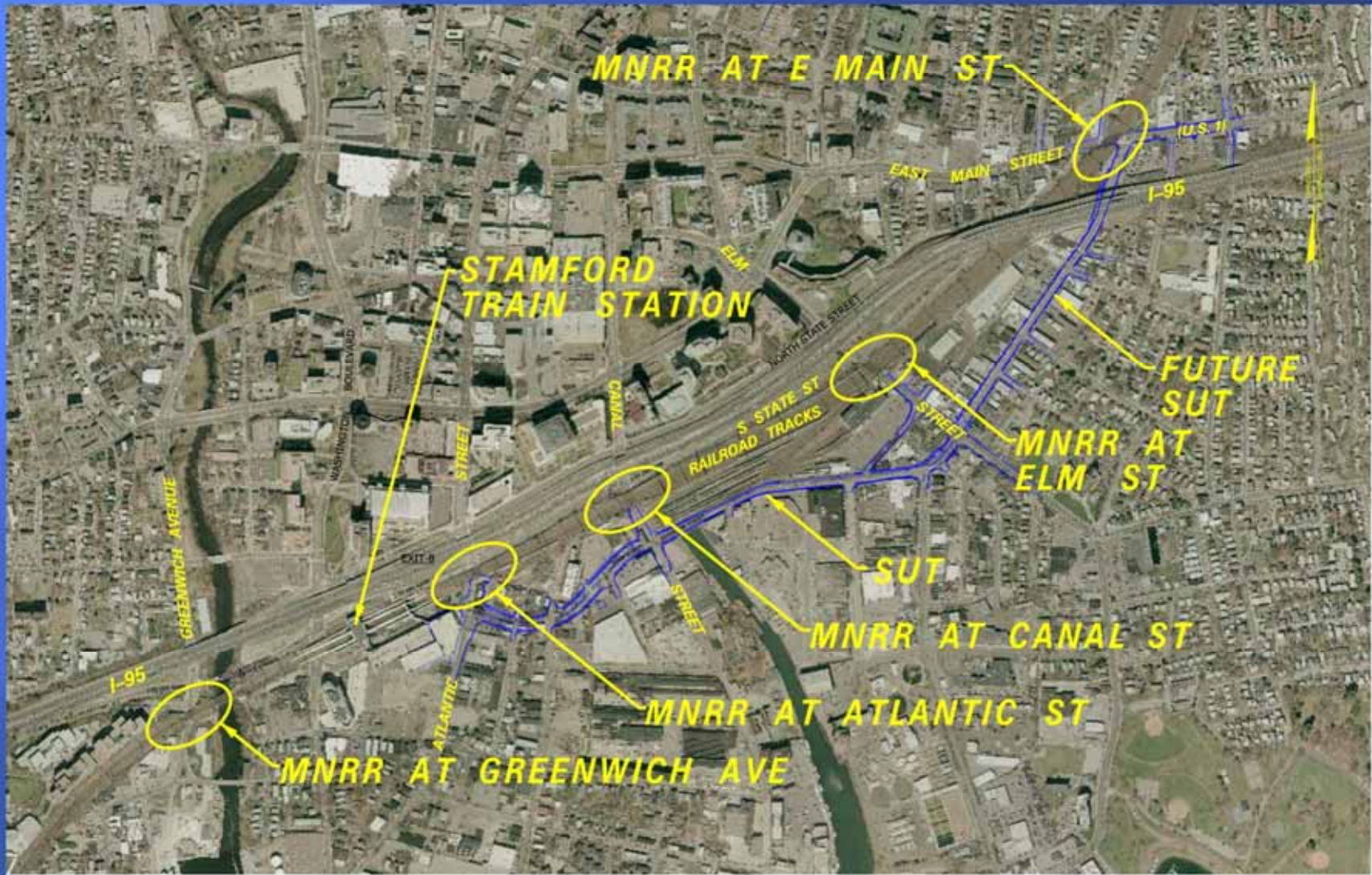
Project Area



Project Area



Project Area



Purpose for the Project

- ▣ Improve accessibility from the South End to the Stamford Train Station, Central Business District and I-95
- ▣ Add lanes under the bridges to improve traffic operations
- ▣ Increase vertical clearances
- ▣ Improve pedestrian safety and accessibility to Stamford Train Station
 - From the south side of the RR tracks to the northbound side platform of Stamford Station
 - A continuous sidewalk along South State Street connecting Atlantic Street with the north side of Stamford Station
- ▣ Replace aging railroad bridges

Construction Impacts on Local Streets

- ▣ Traffic will be maintained with reduced lanes at all locations with the exception of Atlantic Street
 - Atlantic Street will be closed to traffic during construction (approximately 2 ½ years)
 - I-95 N.B. Exit 8 ramp will be closed to traffic for approximately 6 months, Exit 7 will be the designated detour
 - Elm Street will be one lane in one direction during construction (approximately 3 ½ years)
- ▣ A Traffic Management Plan will be developed as the project design progresses
 - Pedestrian detours will be developed whenever a sidewalk under a bridge is closed

Construction Impacts to Metro-North

- ▣ MNRR tracks will be taken out of service during bridge replacement, one track at a time
- ▣ The Stamford Station platforms will be impacted during the replacement of the Greenwich Avenue and Atlantic Street bridges
 - The normal routing of trains into the station will need to be adjusted
 - Platforms will still be accessible via bridge plates
- ▣ Noroton Heights, Darien and Rowayton Station platforms will be impacted during the replacement of Elm Street and East Main Street bridges
 - Platforms will still be accessible via bridge plates
- ▣ Rail grades and alignments to remain unchanged

Construction Costs¹

| | <u>Costs (2011)</u> | <u>Costs (2016)²</u> |
|--------------------|---------------------|---------------------------------|
| ▣ Atlantic Street | \$58,200,000 | \$74,300,000 |
| ▣ East Main Street | \$54,100,000 | \$69,100,000 |
| ▣ Elm Street | \$47,800,000 | \$61,000,000 |
| ▣ Canal Street | \$42,900,000 | \$54,800,000 |
| ▣ Greenwich Avenue | \$29,300,000 | \$37,400,000 |
| | <hr/> | <hr/> |
| ▣ Total | \$232,300,000 | \$296,600,000 |

1. Not including environmental or R.O.W. costs.

2. 2016 is the mid-point of construction for an assumed construction start date of 2014.

Phase 1 Construction

Construct Atlantic, Elm and East Main Street Bridges together in one package

- ▣ These bridges represent the biggest pinch-points in the City
- ▣ These bridges work well together for MNRR Rail Operations
- ▣ Concurrent construction minimizes disruption to traveling public
- ▣ Cost savings realized with concurrent construction
- ▣ Diminishing value of fixed funding over time

Phase 1 Construction Costs¹

| | <u>Costs (2011)</u> | <u>Costs (2016)²</u> |
|--------------------------------------|---------------------|---------------------------------|
| ▣ Atlantic Street | \$58,200,000 | \$74,300,000 |
| ▣ East Main Street | \$54,100,000 | \$69,100,000 |
| ▣ Elm Street | <u>\$47,800,000</u> | <u>\$61,000,000</u> |
| ▣ Total | \$160,100,000 | \$204,400,000 |
| ▣ Constructing all 3 Bridges at once | | |
| | \$150,000,000 | \$191,400,000 |
| ▣ Net Savings | \$ 10,100,000 | \$ 13,000,000 |

1. Not including environmental or R.O.W. costs.

2. 2016 is the mid-point of construction for an assumed construction start date of 2014.

Benefits

| Beneficial Improvements | Greenwich Avenue | Atlantic Street | Canal Street | Elm Street | U.S. Rte. 1 (East Main St) |
|--|------------------|-----------------|--------------|------------|----------------------------|
| Increases Capacity | X | X | X | X | X |
| Reduces Queuing and Congestion | X | X | X | X | X |
| Improves Safety | X | X | X | X | X |
| Improves Vertical Clearance | X | X | X | X | X |
| Complements the SUT | | X | X | X | X |
| Eliminates a Structurally Deficient Bridge | X | X | X | X | X |
| Provides Geometric Improvements at Intersecting Streets | | X | | | |
| Improves Pedestrian Access to the Train Station | | X | | | |
| Key Component to a Future Streetcar System | | X | | | |
| Accommodates a Potential Future Extension of MNRR Track 7 | | X | | | |
| Atlantic Street Alternate 2 Improves I-95 N.B. Interchange 8 Geometry & Capacity | | X | | | |
| Provides Designated Bike Lanes | X | | | | X |
| Complements Stamford Complete Streets Project | | X | X | | |
| Allows for Potential Operational Lanes on I-95 N.B. | | X | | | |

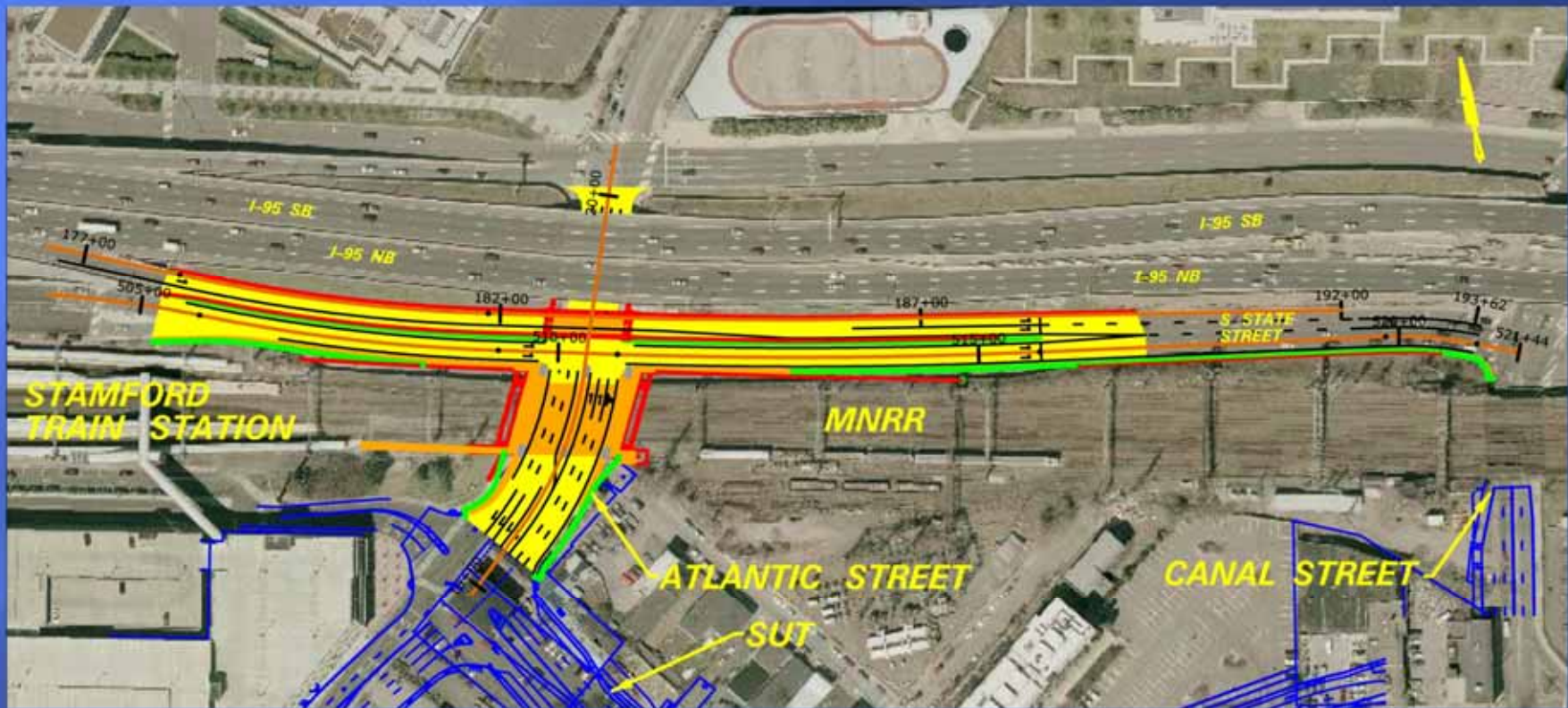
Atlantic Street Overview



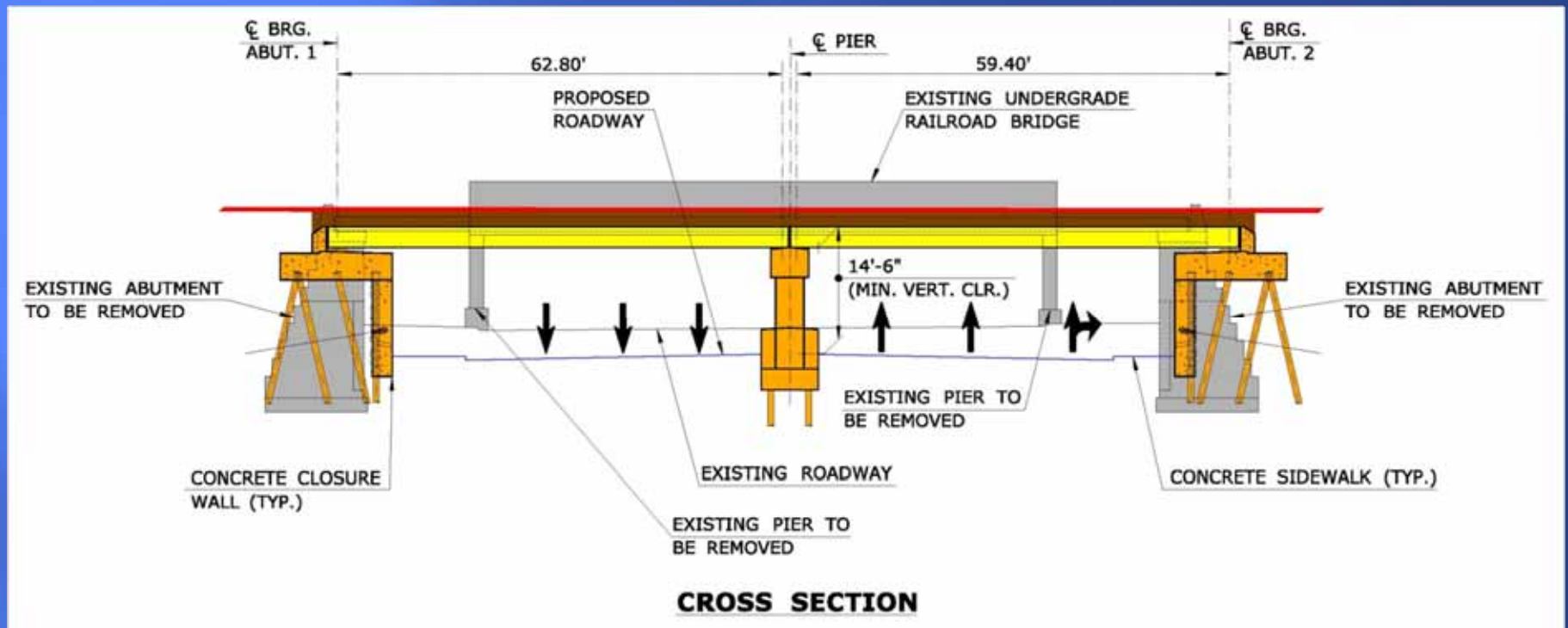
Atlantic Street Overview



Atlantic Street Proposed Improvements



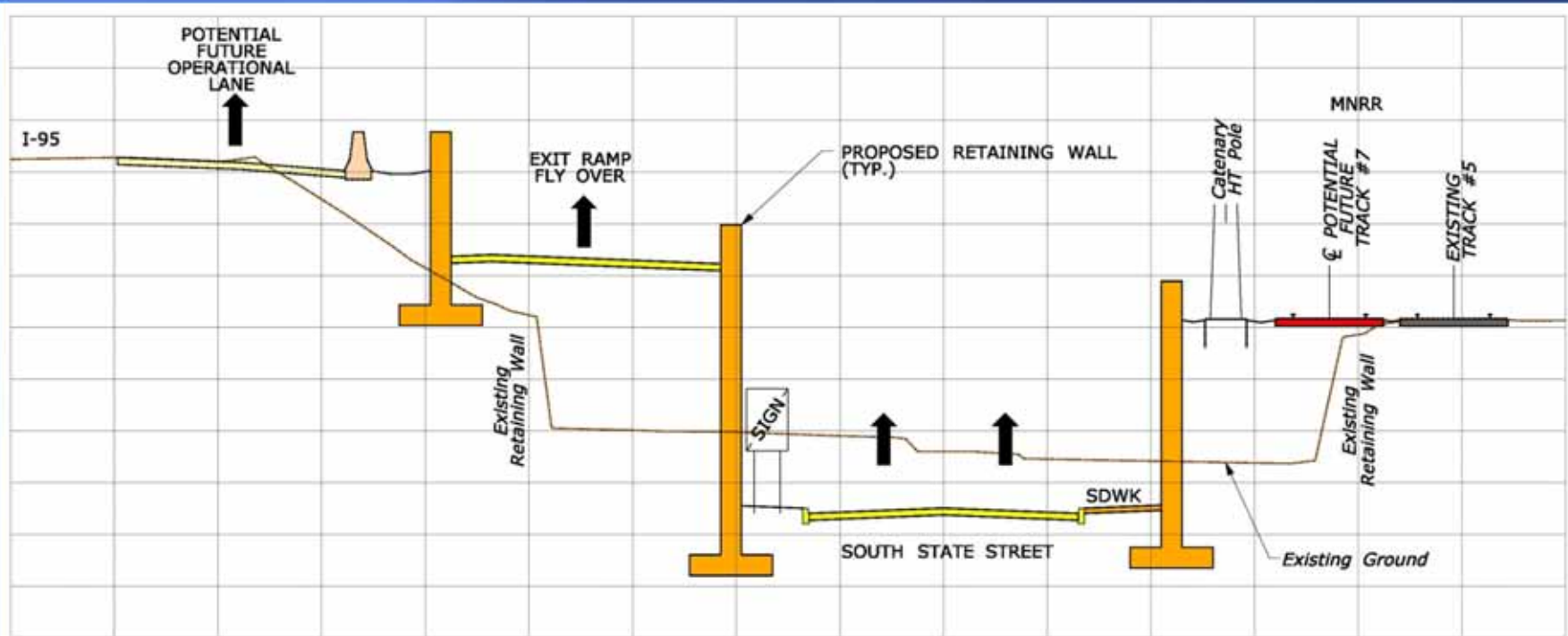
Atlantic Street Cross Section



Proposed Improvements

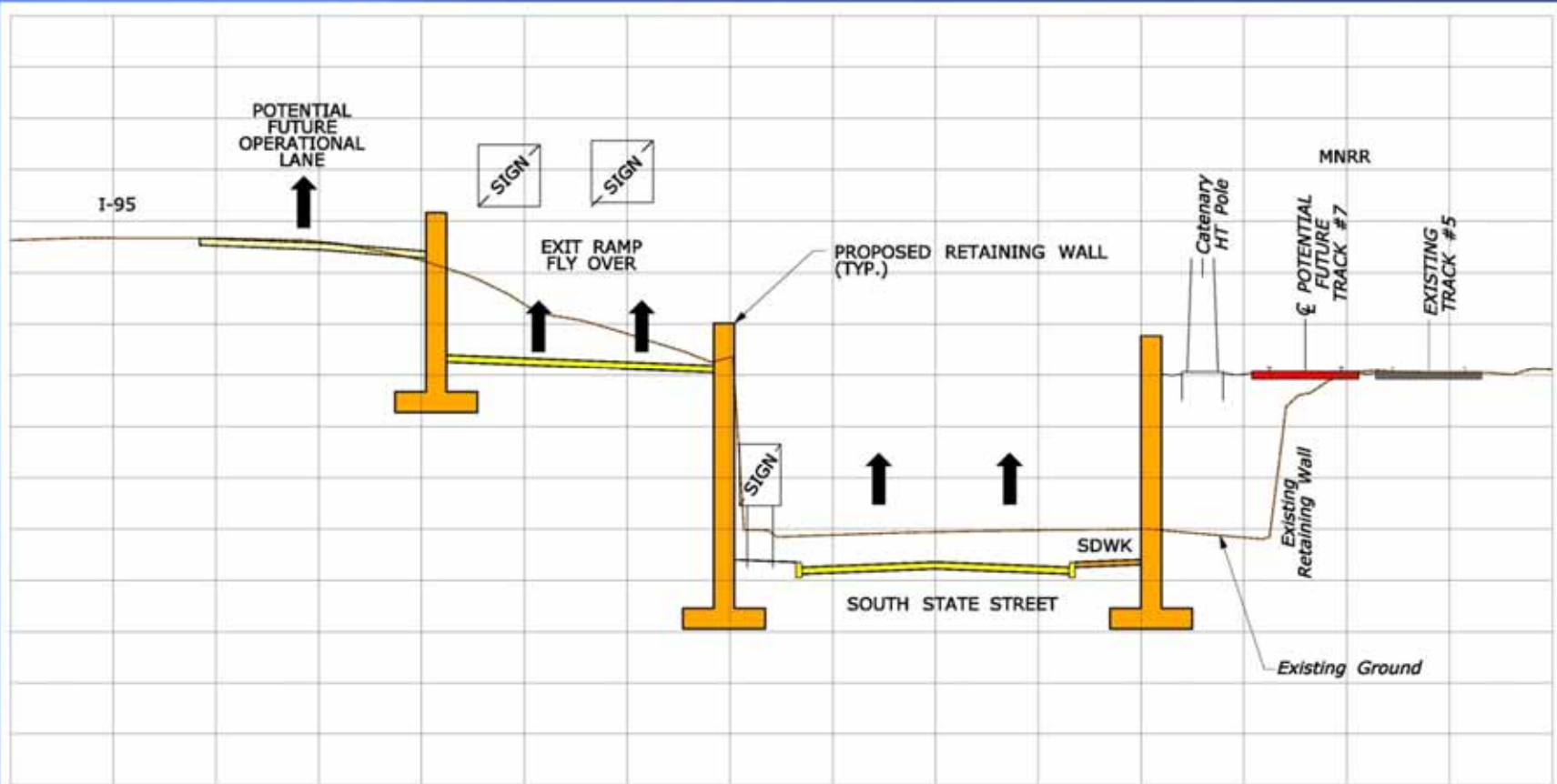
- ❑ 3 – 11' wide N.B. lanes (2 through lanes, 1 multi-purpose lane)
- ❑ 3 – 11' wide S.B. lanes (2 through lanes, 1 multi-purpose lane)
- ❑ 2' shoulders (inside and outside)
- ❑ 8' sidewalks (both sides)

State Street Cross Section



CRITICAL CROSS SECTION
STATION 509+00

State Street Cross Section



CRITICAL CROSS SECTION
STATION 511+50

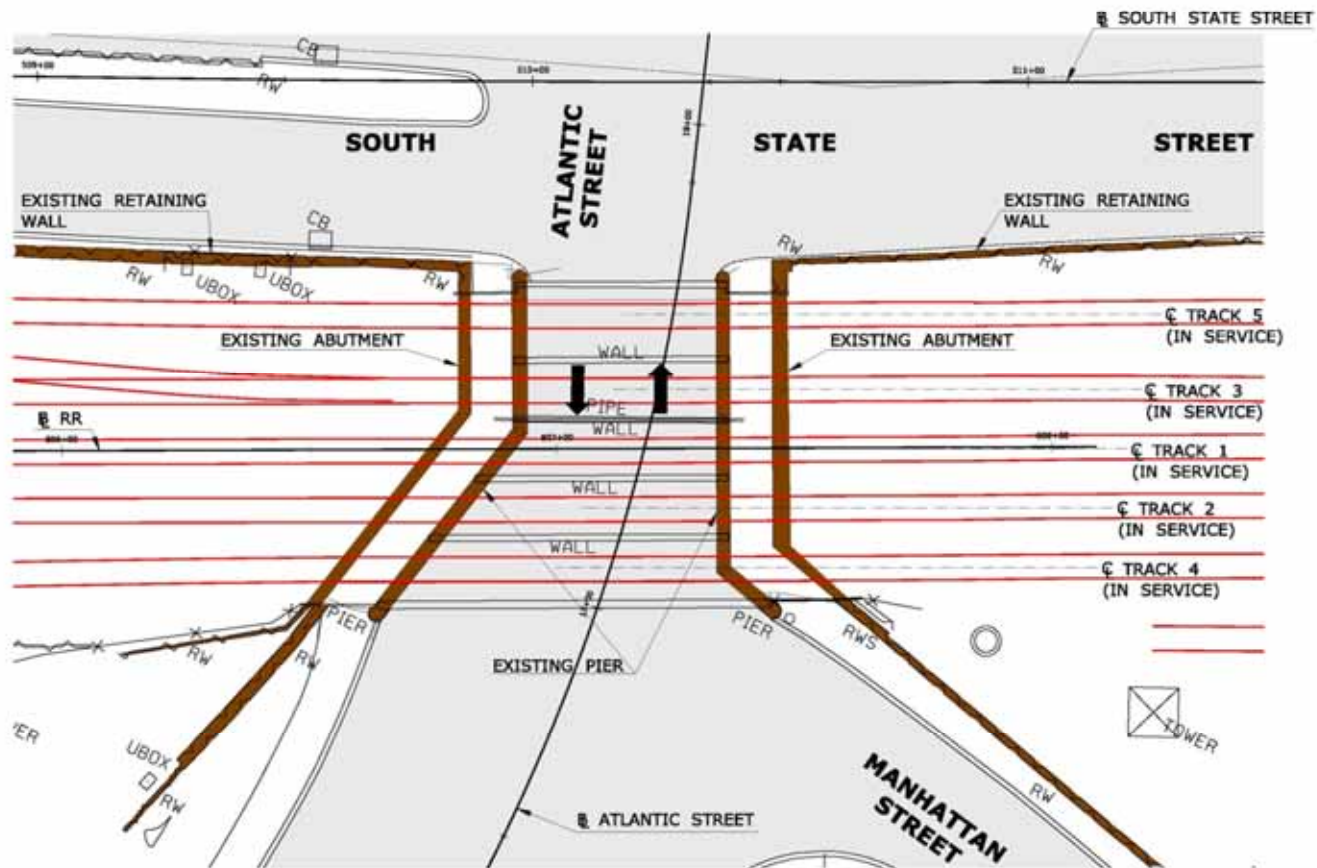
Atlantic Street Construction Schedule

- ▣ 3 years total construction time
- ▣ 2 ½ year closure of Atlantic Street
- ▣ 5 month durations for each phase (per track)

Why Atlantic Street needs to be closed during Construction

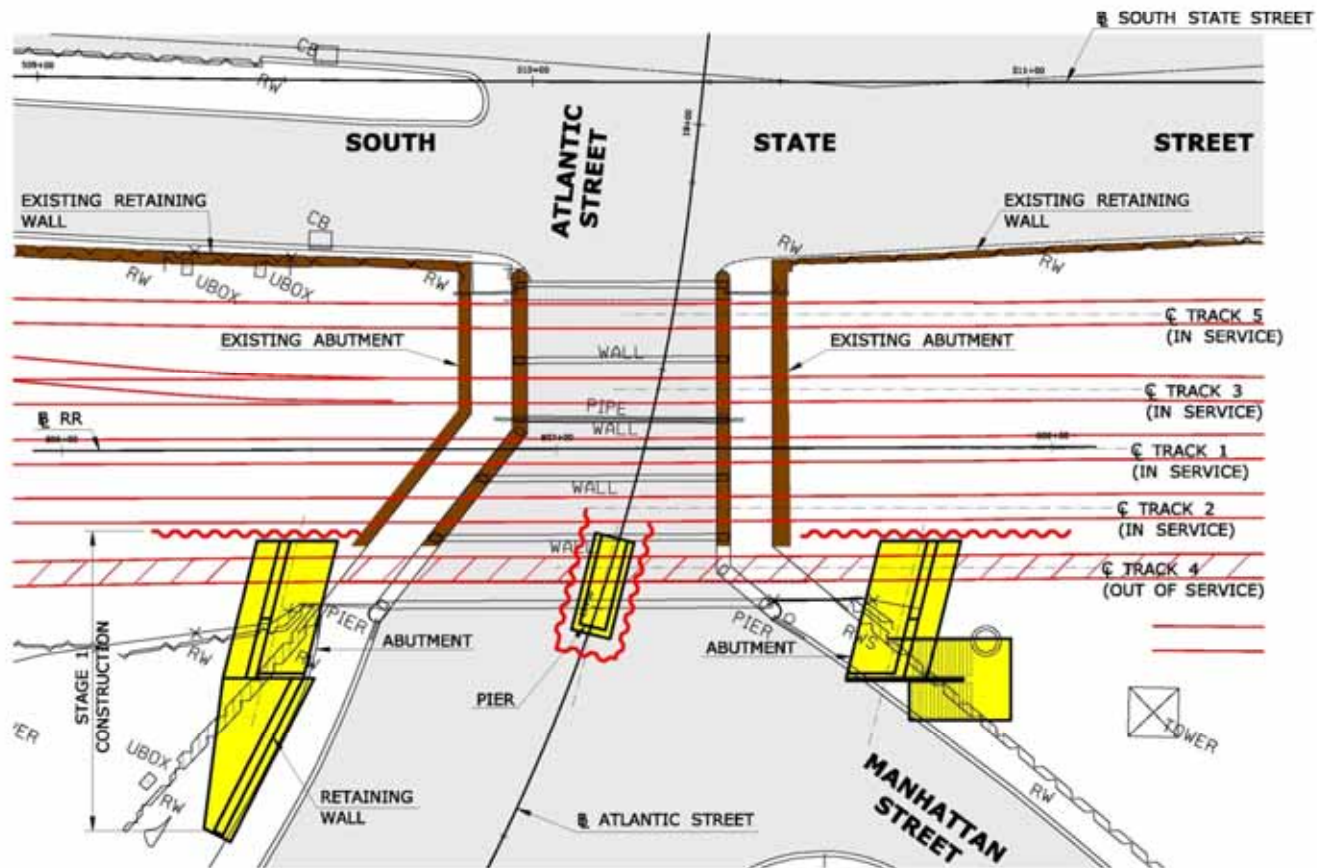
- ▣ The proposed geometric alignment of Atlantic Street is skewed to the existing bridge
- ▣ The proposed bridge utilizes a center pier
 - reduces the superstructure depth
 - minimizes the lowering of the roadway
- ▣ The proposed pier is skewed along the alignment
 - The skewed pier occupies a wider section of existing roadway than if it were not skewed
 - The required work zone does not allow adequate space to maintain a lane during construction
- ▣ Closure will
 - reduce construction duration and project cost
 - improve safety during construction

Atlantic Street Existing Conditions



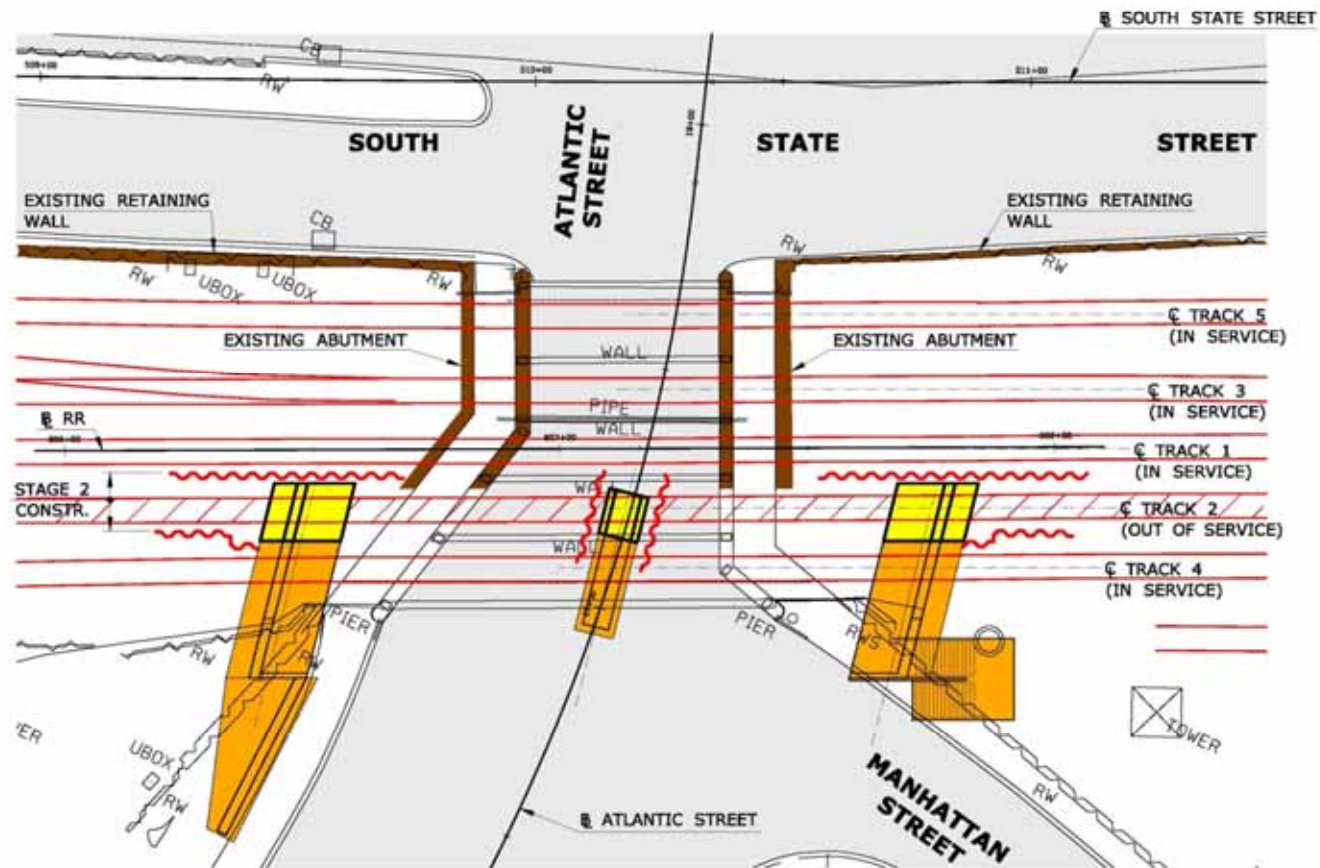
EXISTING CONDITION

Atlantic Street Stage 1 Construction



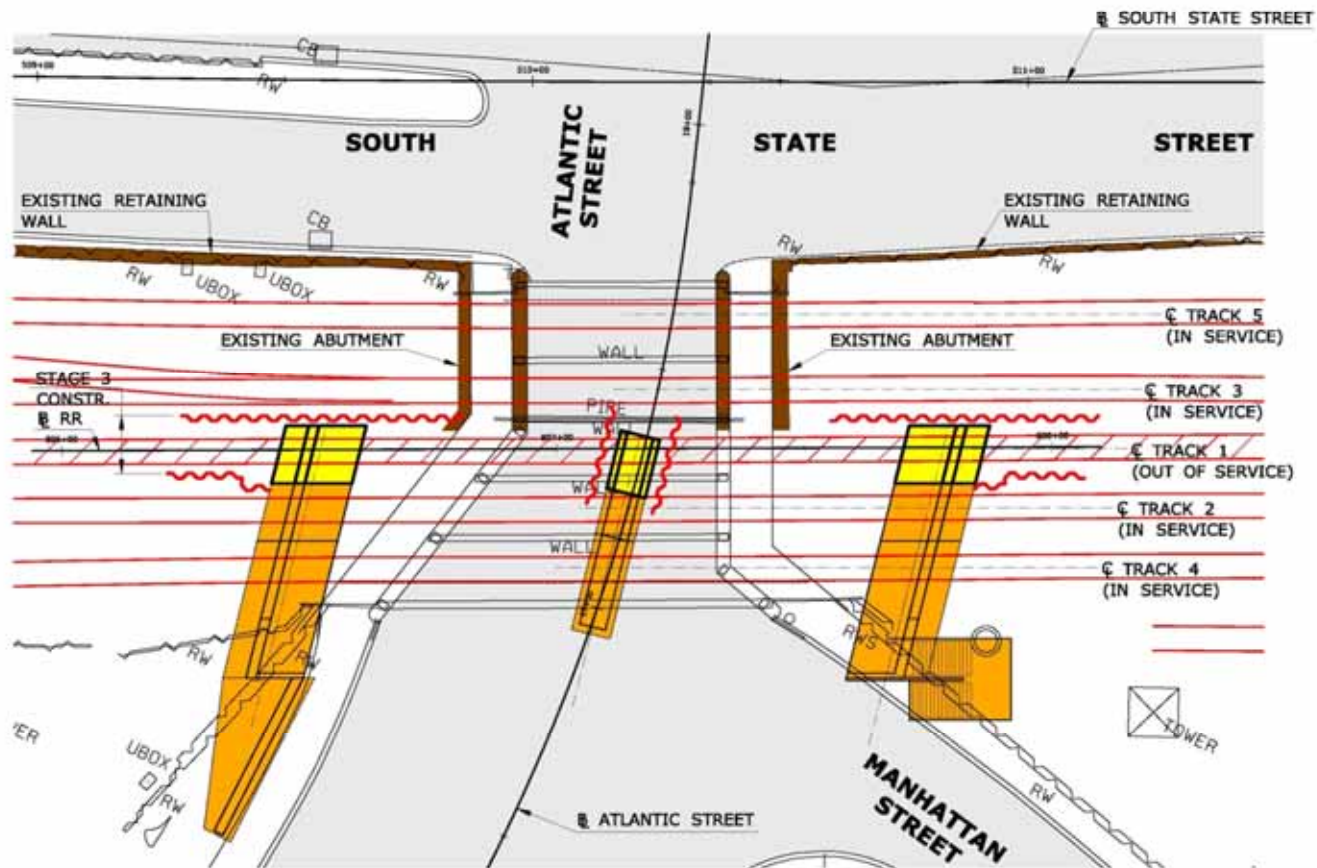
STAGE 1 CONSTRUCTION PLAN

Atlantic Street Stage 2 Construction



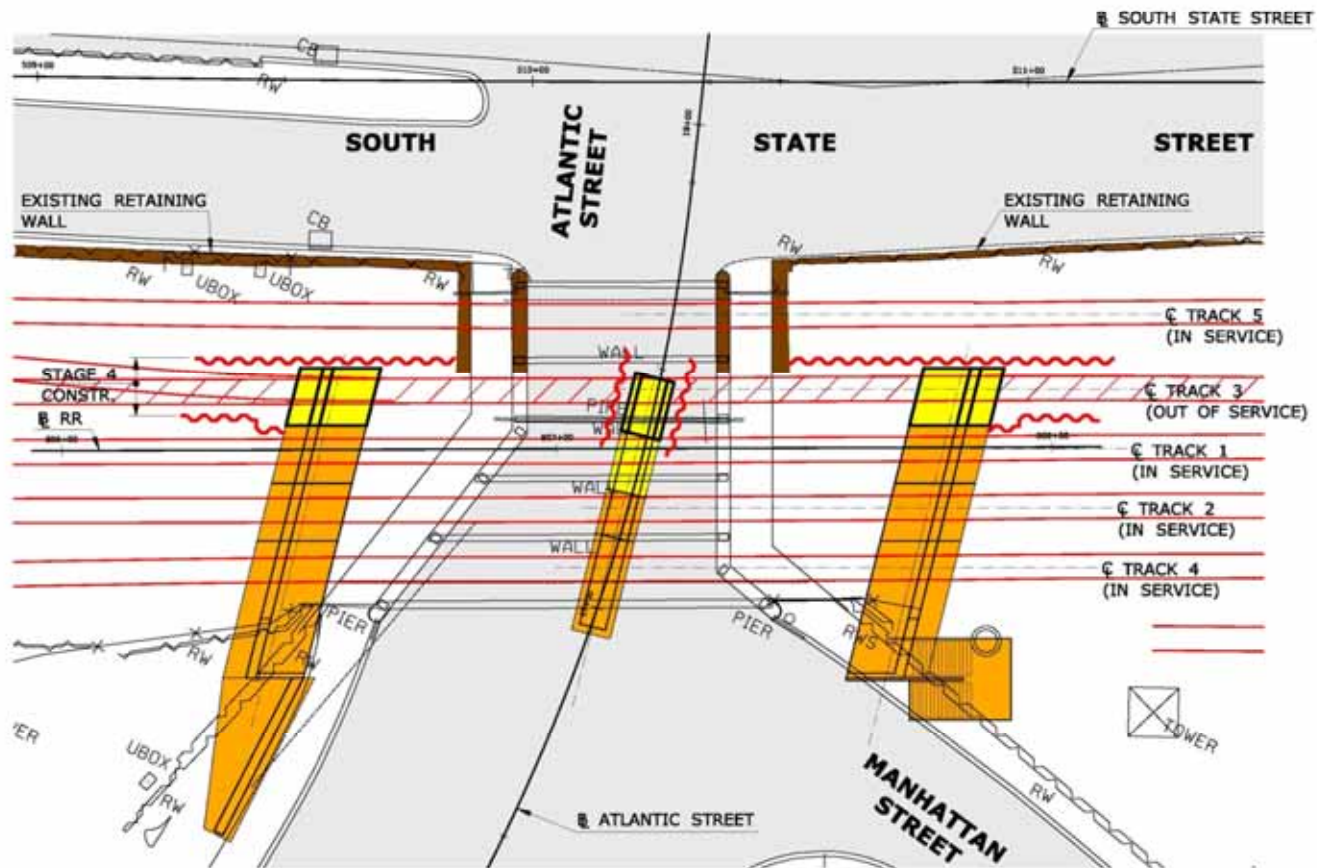
STAGE 2 CONSTRUCTION PLAN

Atlantic Street Stage 3 Construction



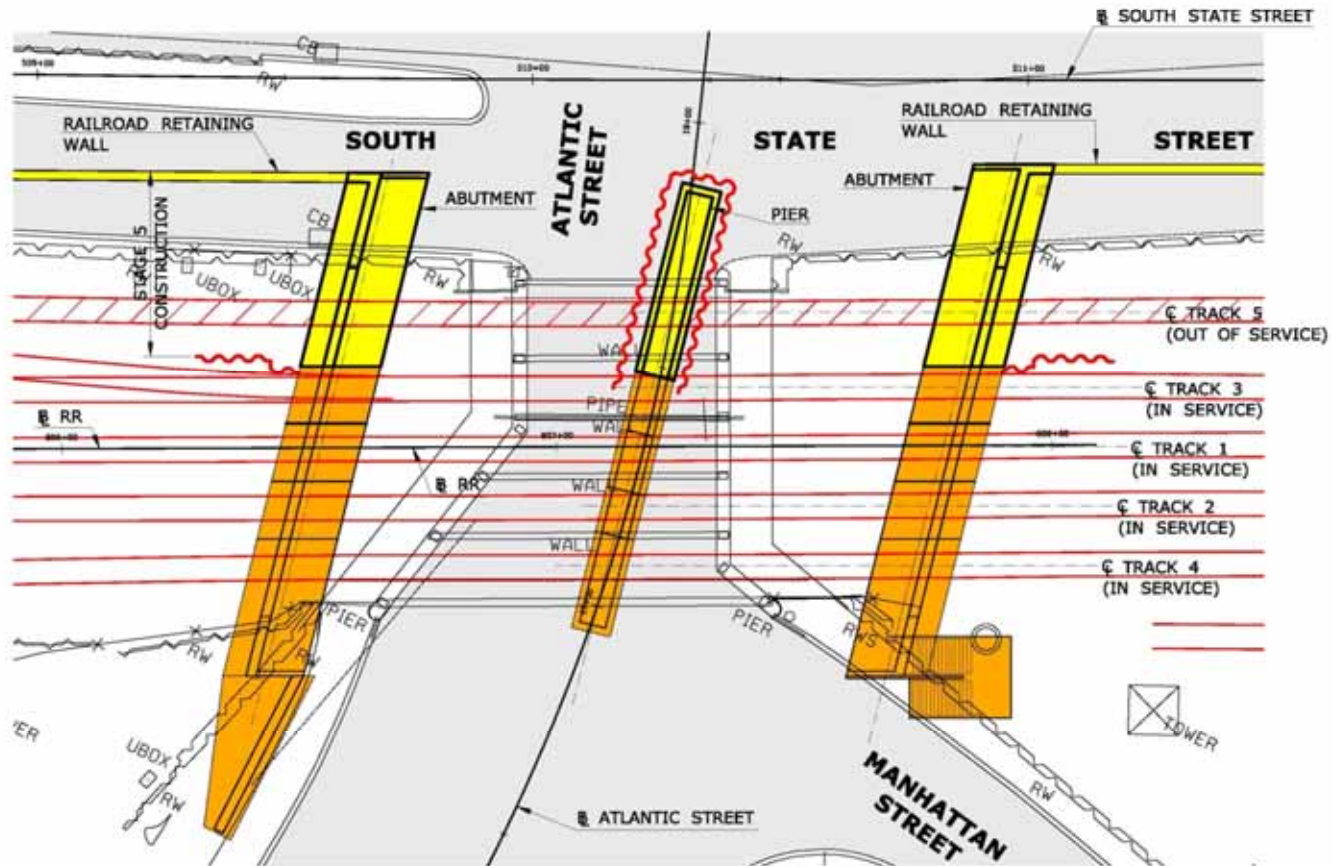
STAGE 3 CONSTRUCTION PLAN

Atlantic Street Stage 4 Construction



STAGE 4 CONSTRUCTION PLAN

Atlantic Street Stage 5 Construction

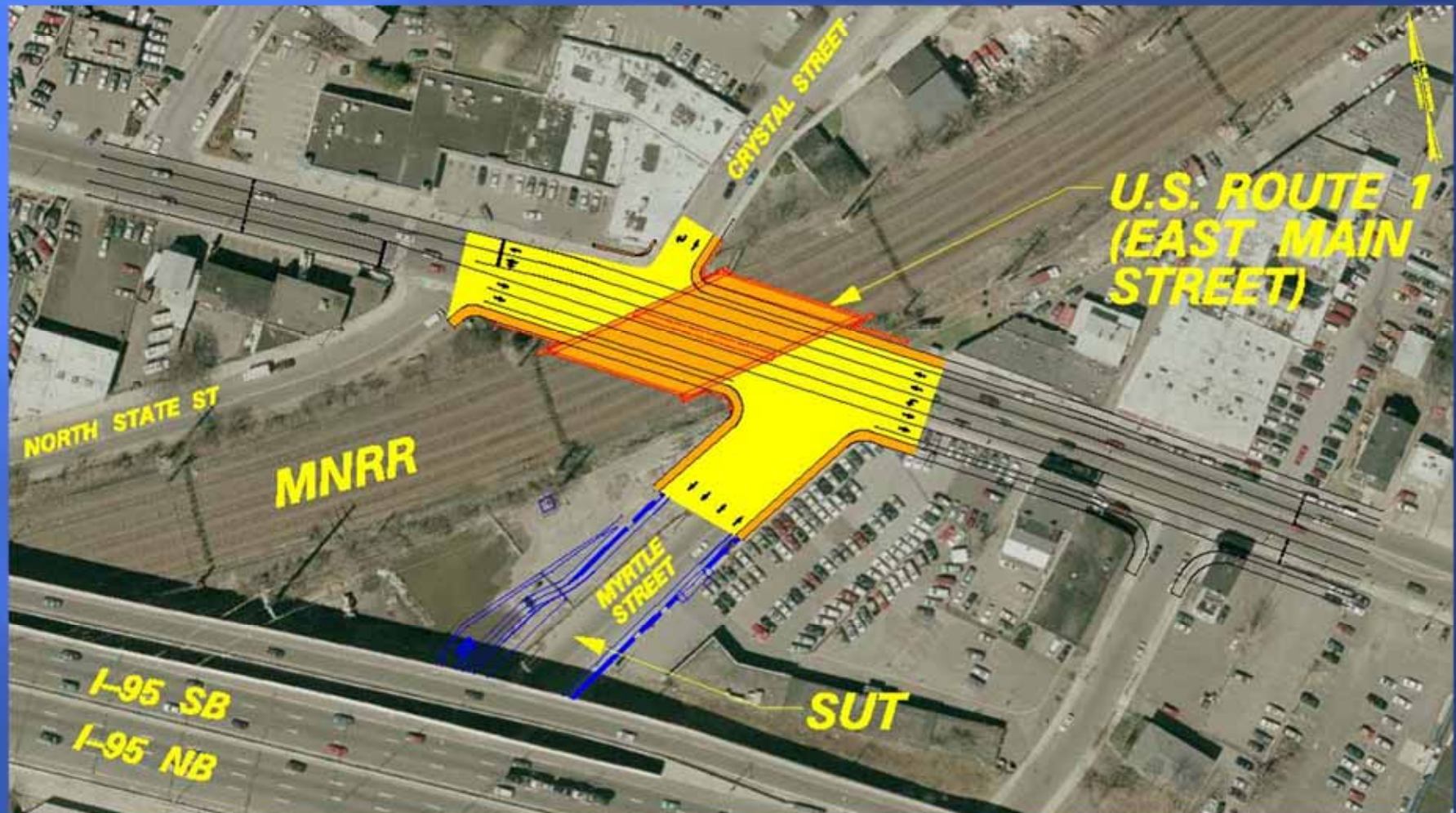


STAGE 5 CONSTRUCTION PLAN

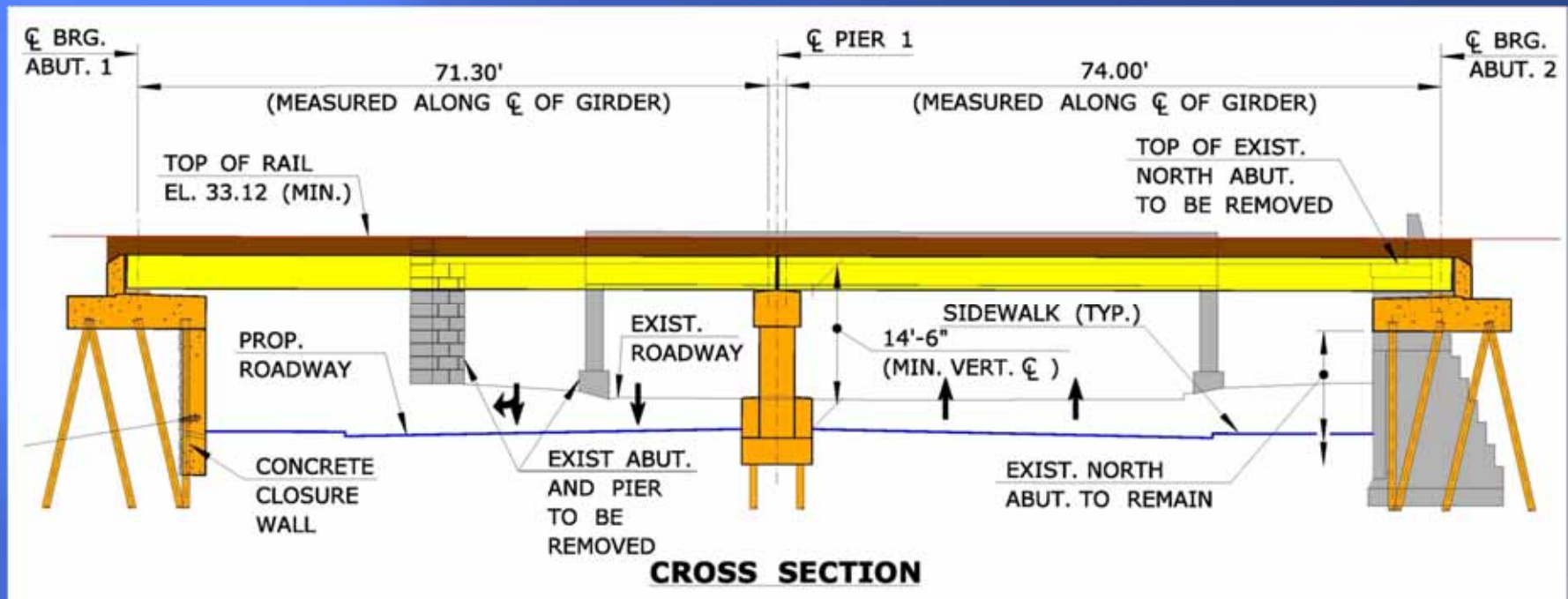
East Main Street Overview



East Main Street Proposed Improvements



East Main Street Cross Section



Proposed Improvements

- ❑ 2 – 11' wide N.B. lanes (2 through lanes)
- ❑ 2 – 11' wide S.B. lanes (2 through lanes)
- ❑ 2' shoulders (inside and outside)
- ❑ 5' bike lanes (both sides)
- ❑ 8' sidewalks (both sides)

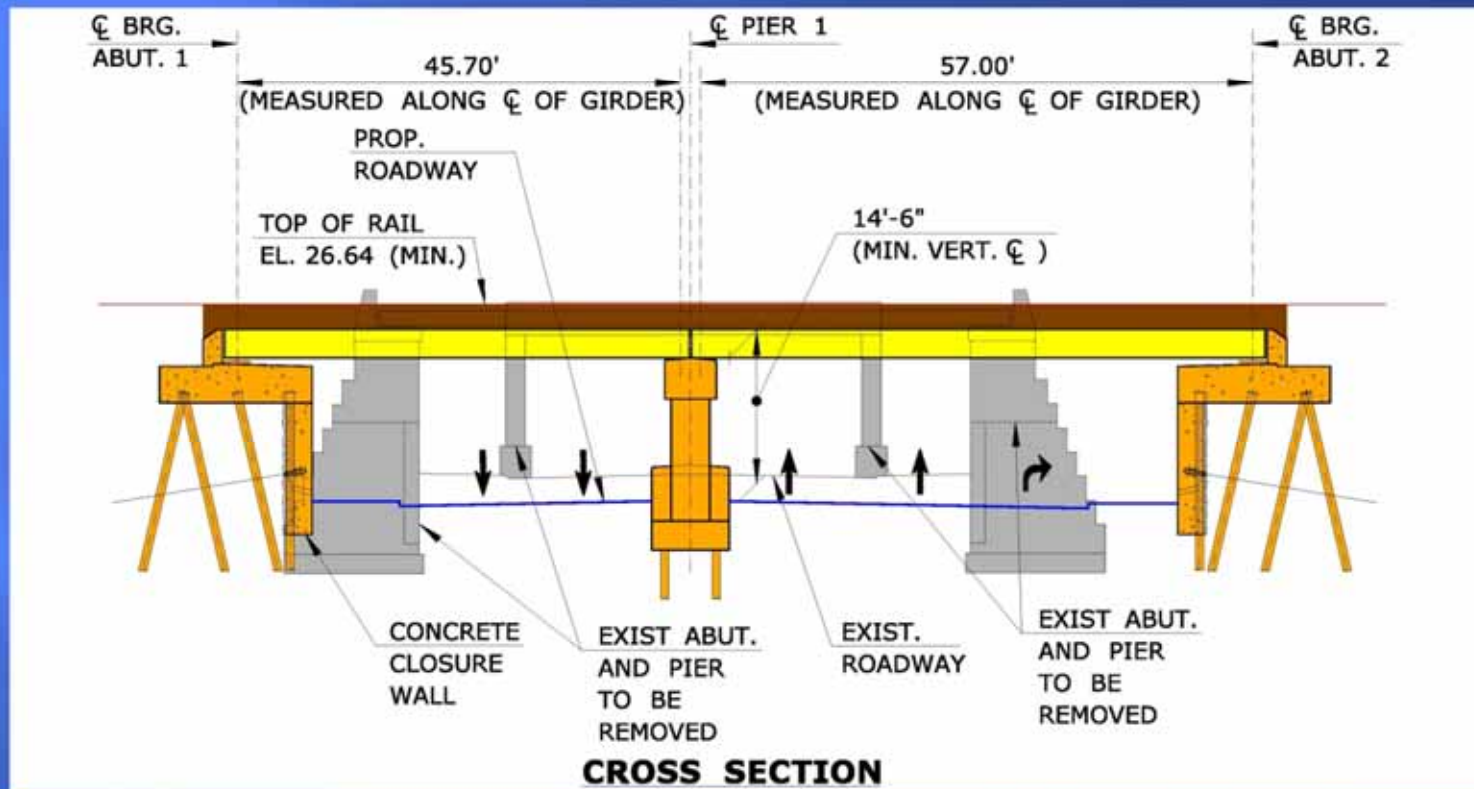
Elm Street Overview



Elm Street Proposed Improvements



Elm Street Cross Section



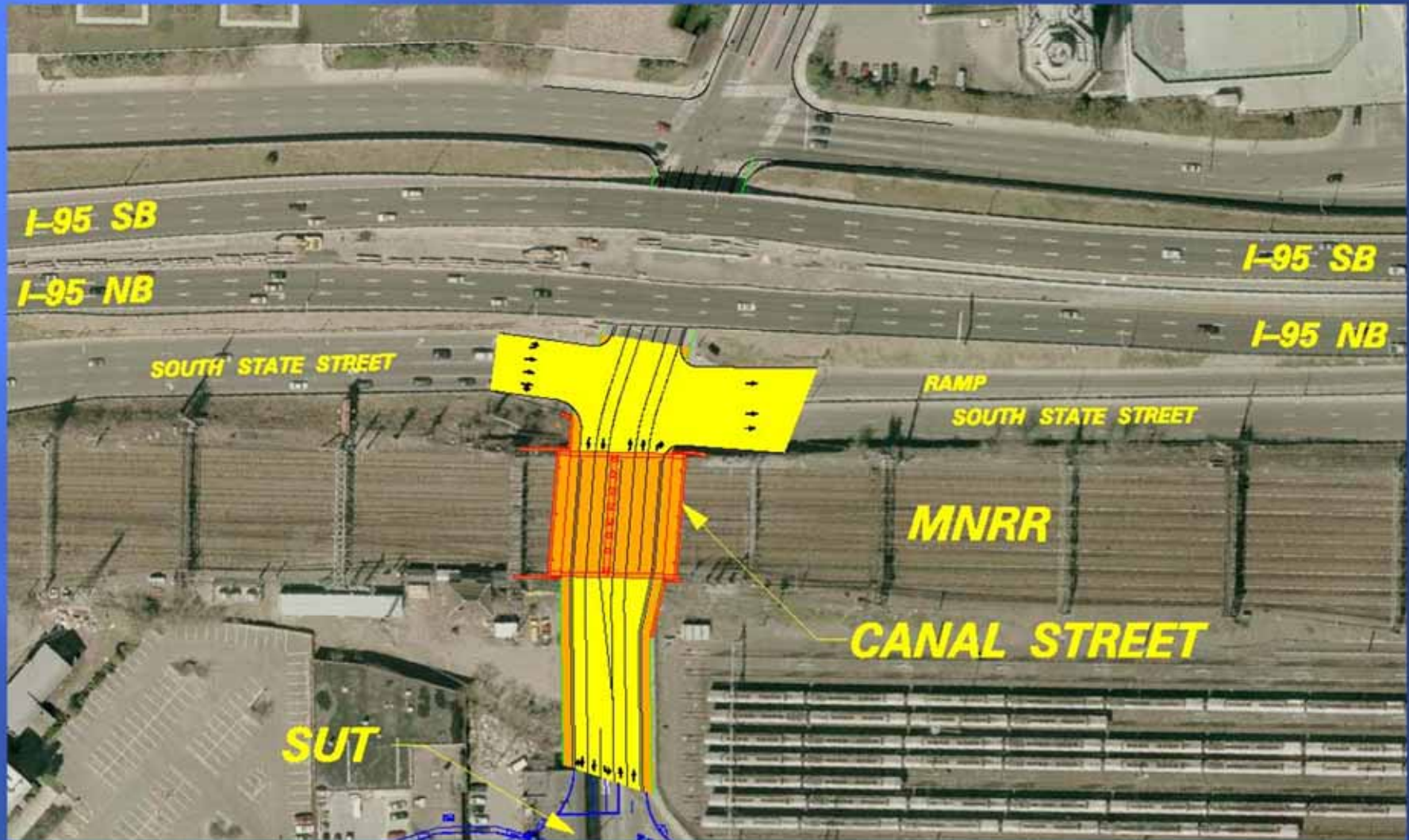
Proposed Improvements

- 3 – 11' wide N.B. lanes (2 through lanes, 1 right-turn lane)
- 2 – 11' wide S.B. lanes (2 through lanes)
- 2' shoulders (inside and outside)
- 8' sidewalks (both sides)

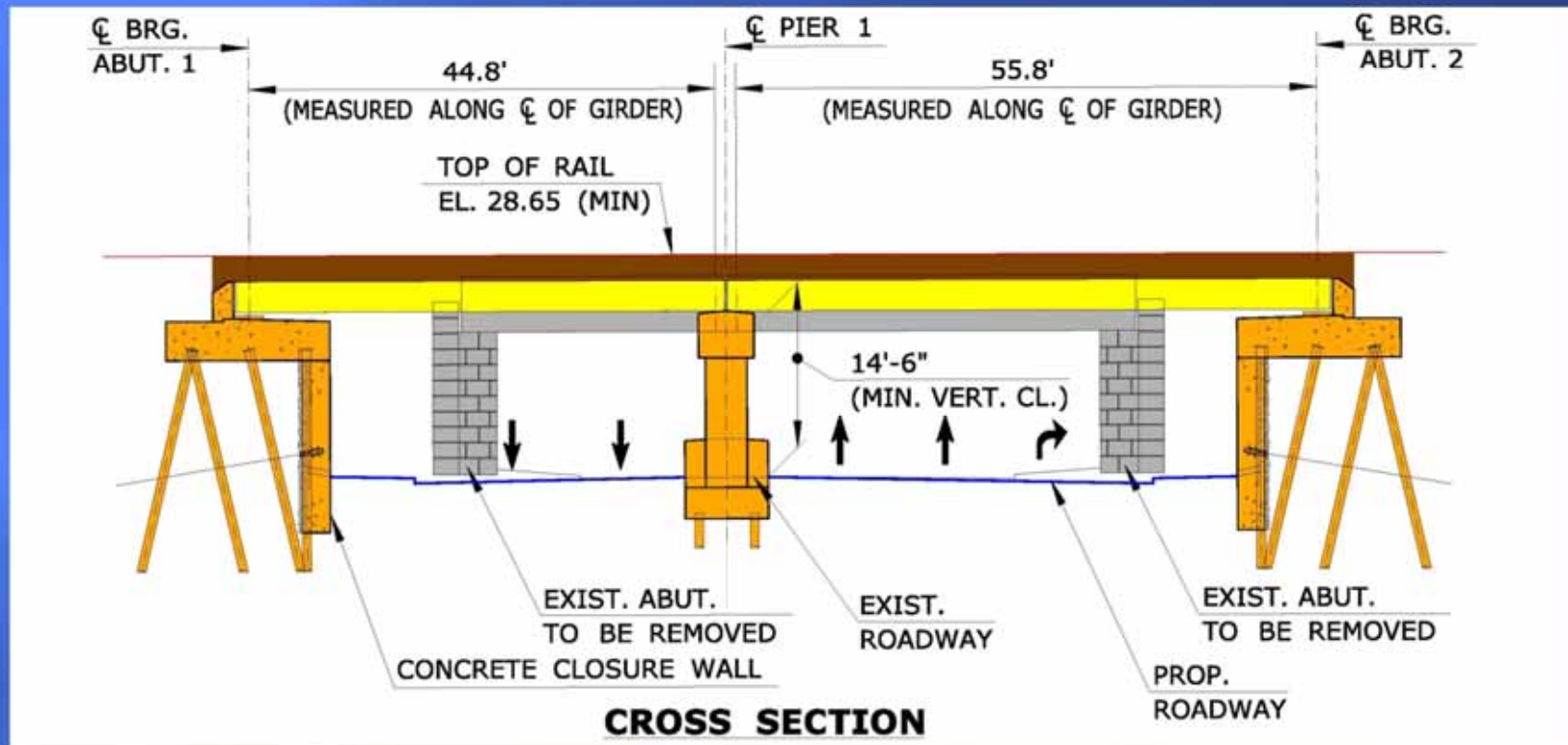
Canal Street Overview



Canal Street Proposed Improvements



Canal Street Cross Section



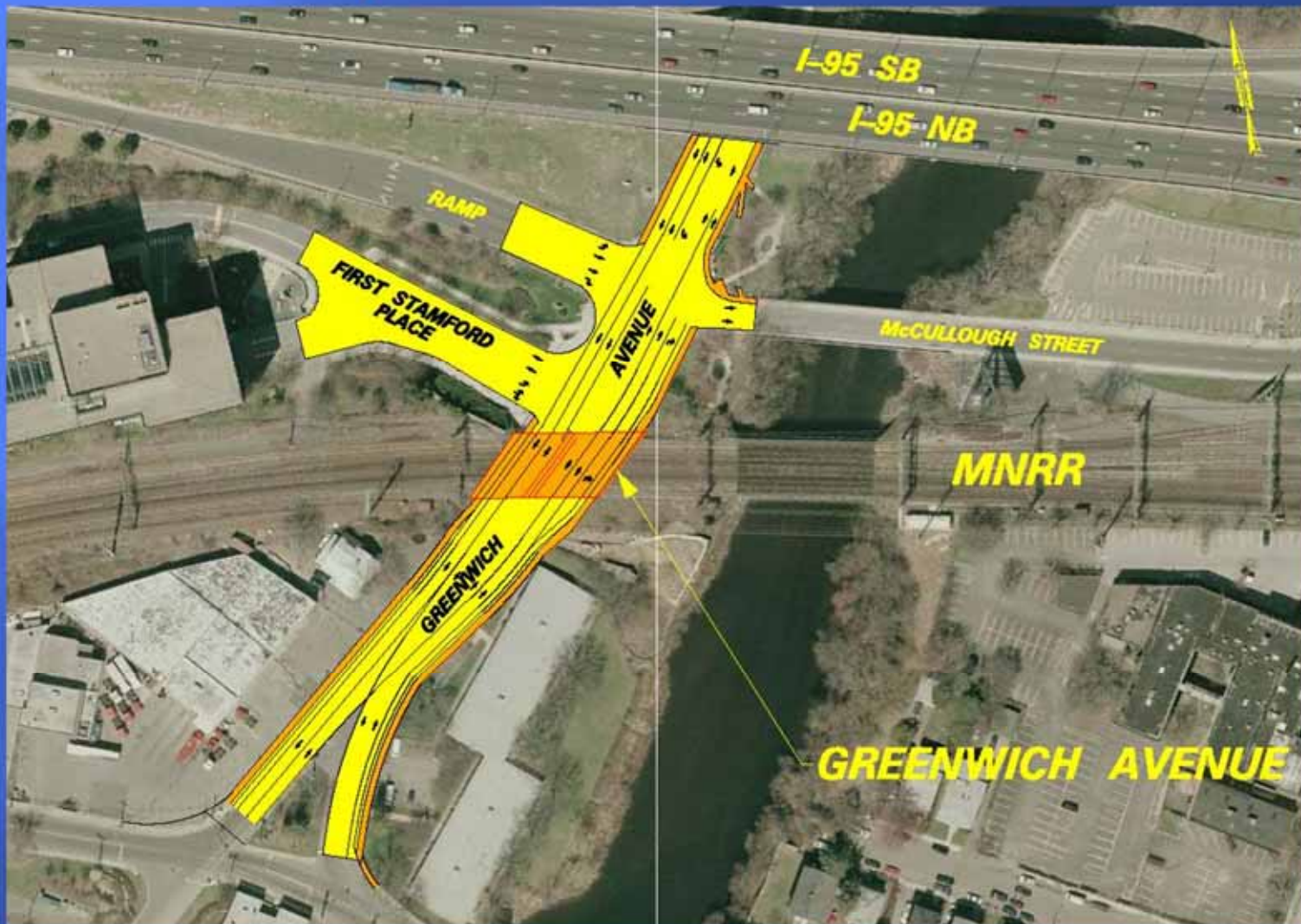
Proposed Improvements

- 3 – 11' wide N.B. lanes (2 through lanes, 1 right-turn lane)
- 2 – 11' wide S.B. lanes (2 through lanes)
- 2' shoulders (inside and outside)
- 8' sidewalks (both sides)

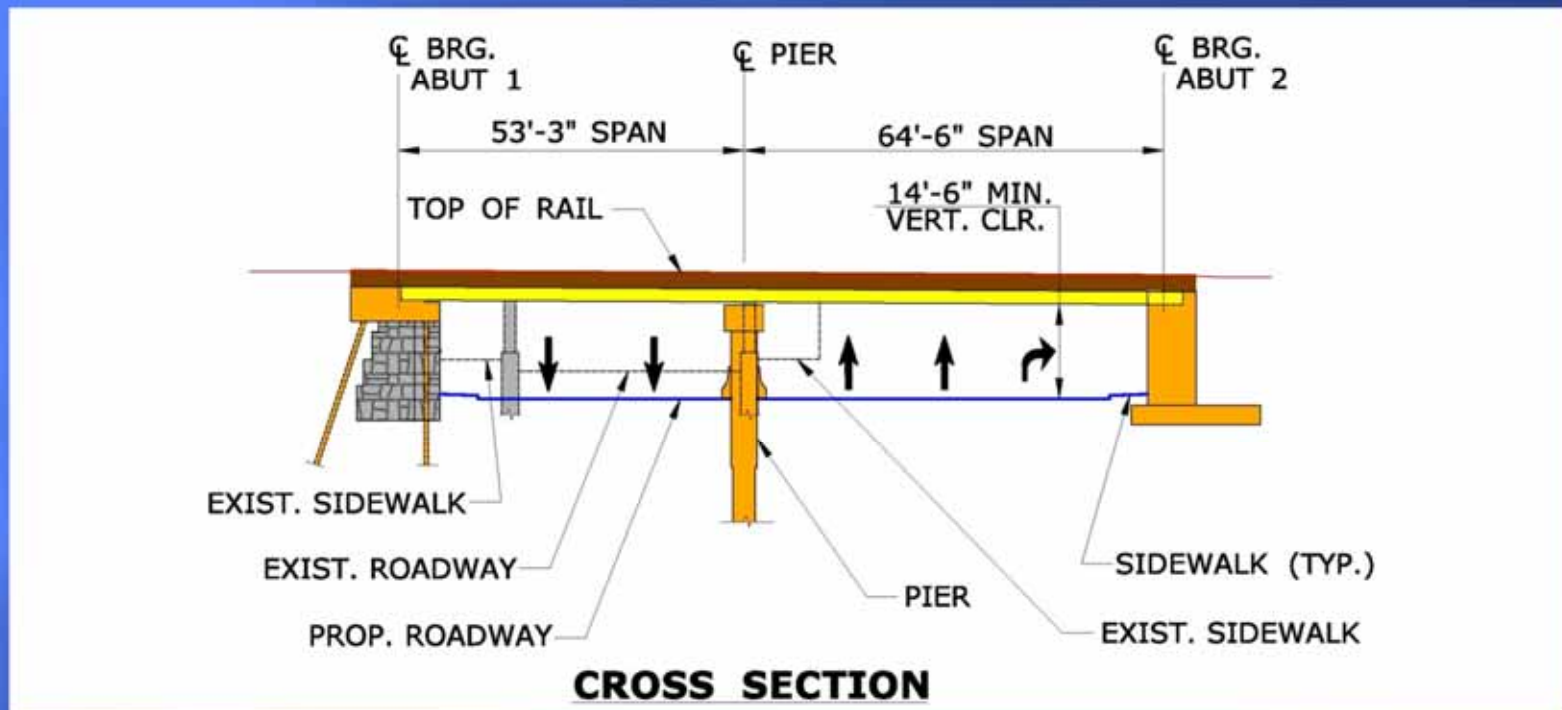
Greenwich Avenue Overview



Greenwich Avenue Proposed Improvements



Greenwich Avenue Cross Section



Proposed Improvements

- ❑ 3 – 11' wide N.B. lanes (2 through lanes, 1 right-turn lane)
- ❑ 2 – 11' wide S.B. lanes (2 through lanes)
- ❑ 2' shoulders (inside and outside)
- ❑ 5' bike lane (S.B. side)
- ❑ 8' sidewalks (both sides)

Photos of Similar Project Details

Amtrak over Farmington Ave., Berlin



Photos of Similar Project Details

MNRR over Arch St., Greenwich



Photos of Similar Project Details

MNRR over Arch St., Greenwich



Questions?