The NYC to Albany HSR Corridor

- This HSR corridor has multiple roadway-grade crossings, which are too close to the existing railroad tracks, making it impossible to construct roadway overpasses. The sole solution is to build flyovers or tunnels for the HSR. The flyovers/tunnels allow for high curve radii, enabling HSR trains to run at high speeds while protecting the high-producing agricultural land, providing farmers with access to tend their fields, and allowing the passage of livestock and wildlife.

- The tunnels are needed to negotiate the hill contours, evade built-up residential/industrial areas, and provide a relatively straight HSR corridor passage. Tunnels longer than 4 miles will be in twin bores with cross-over escape connections and ventilation shafts.

- The in-cut/infills and on-ground segments along existing and new RR corridors will help to lower costs. Cuts help with tunnel approaches, and infills help reduce flyover lengths, thereby reducing construction costs.

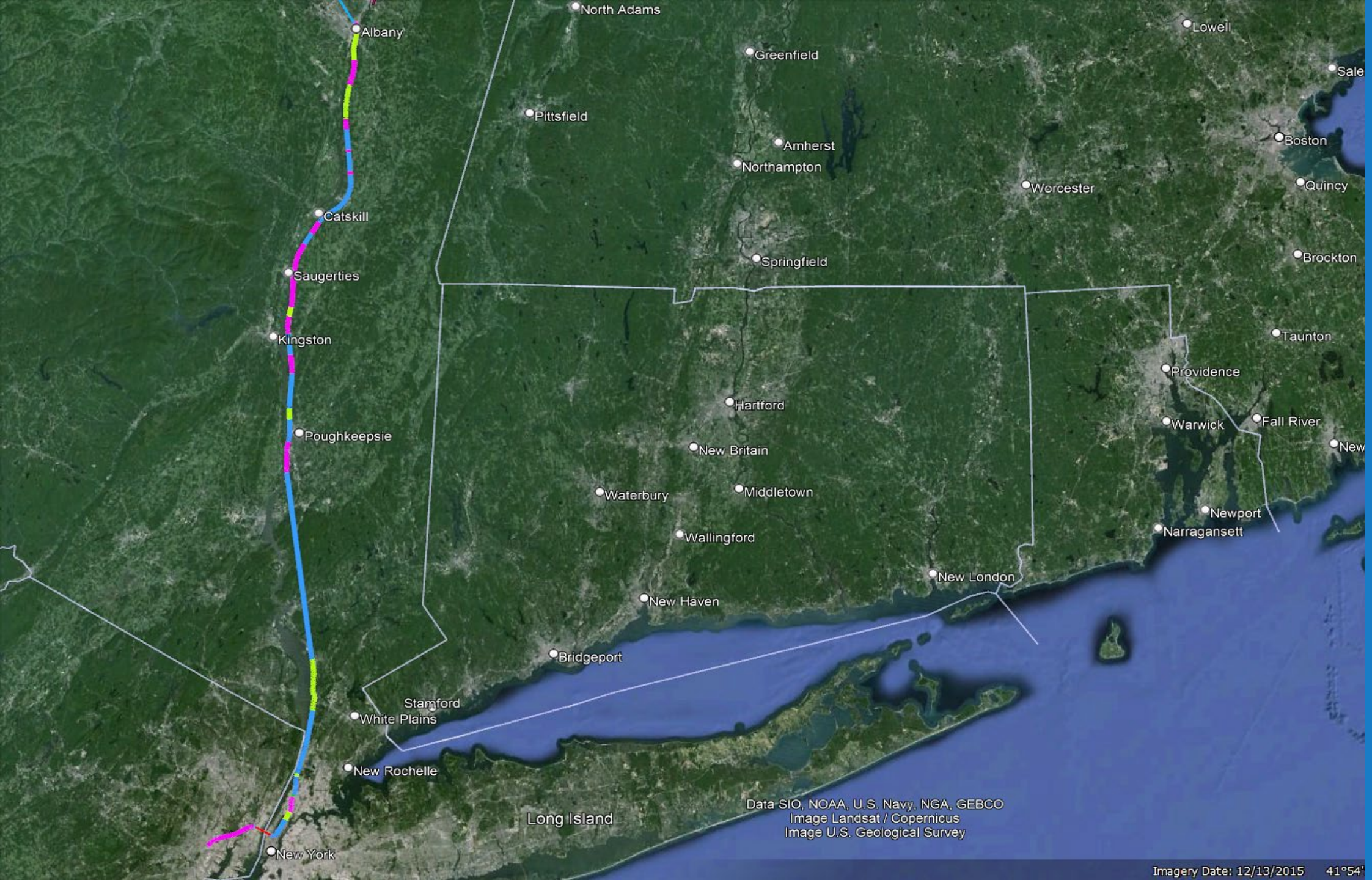
- The Hudson Corridor is challenging to construct, but the proposed design will provide HSR train speeds.

HSR NYC to Albany
Des by RN

Legend

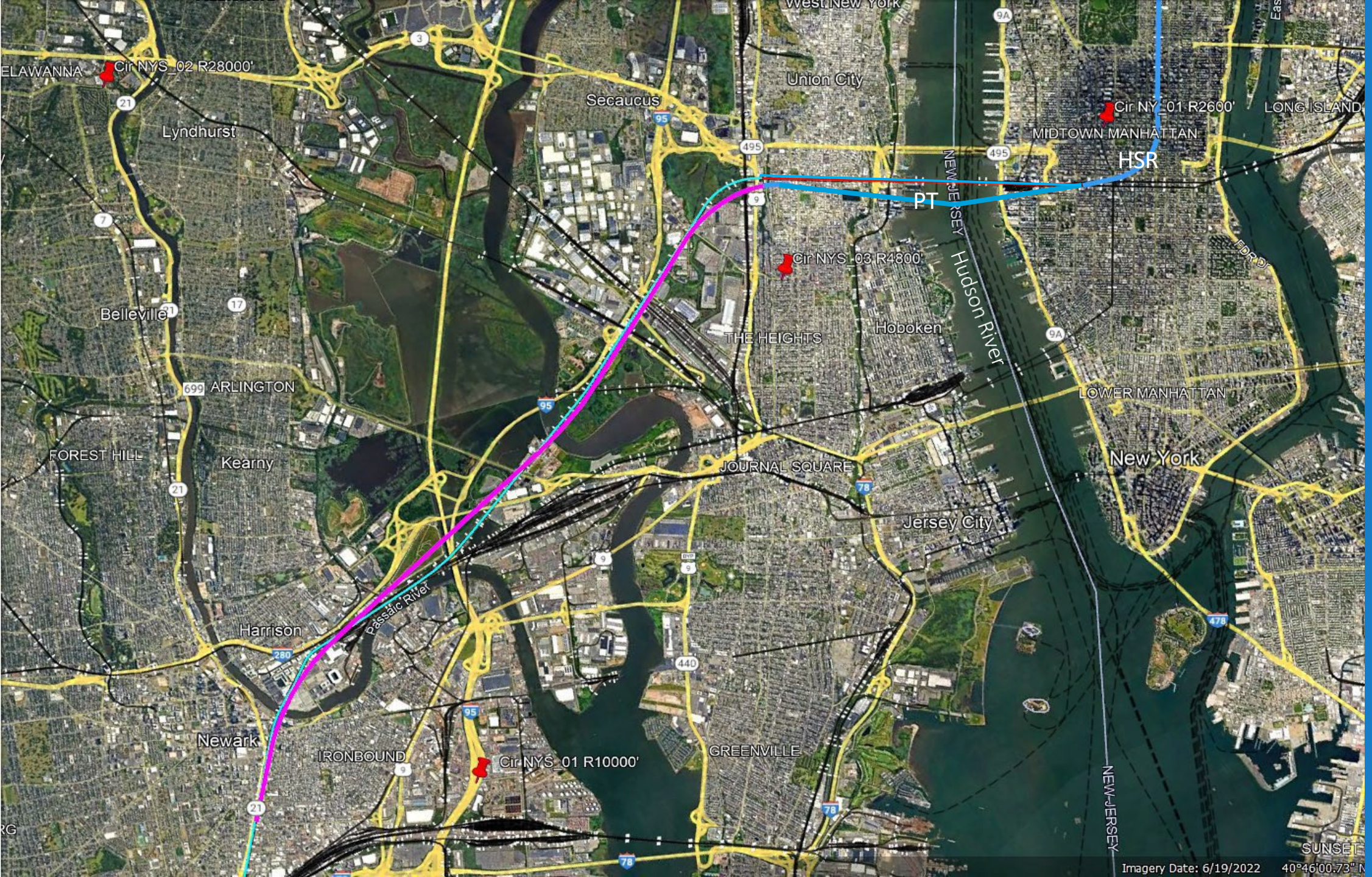
E = Ground elevation
EI = Constructed elevation

HSR Legend_09
Des by RN



General HSR Corridor Overview between NYC and Albany

This HSR corridor will allow a train speed of 220 mph in its entire length.



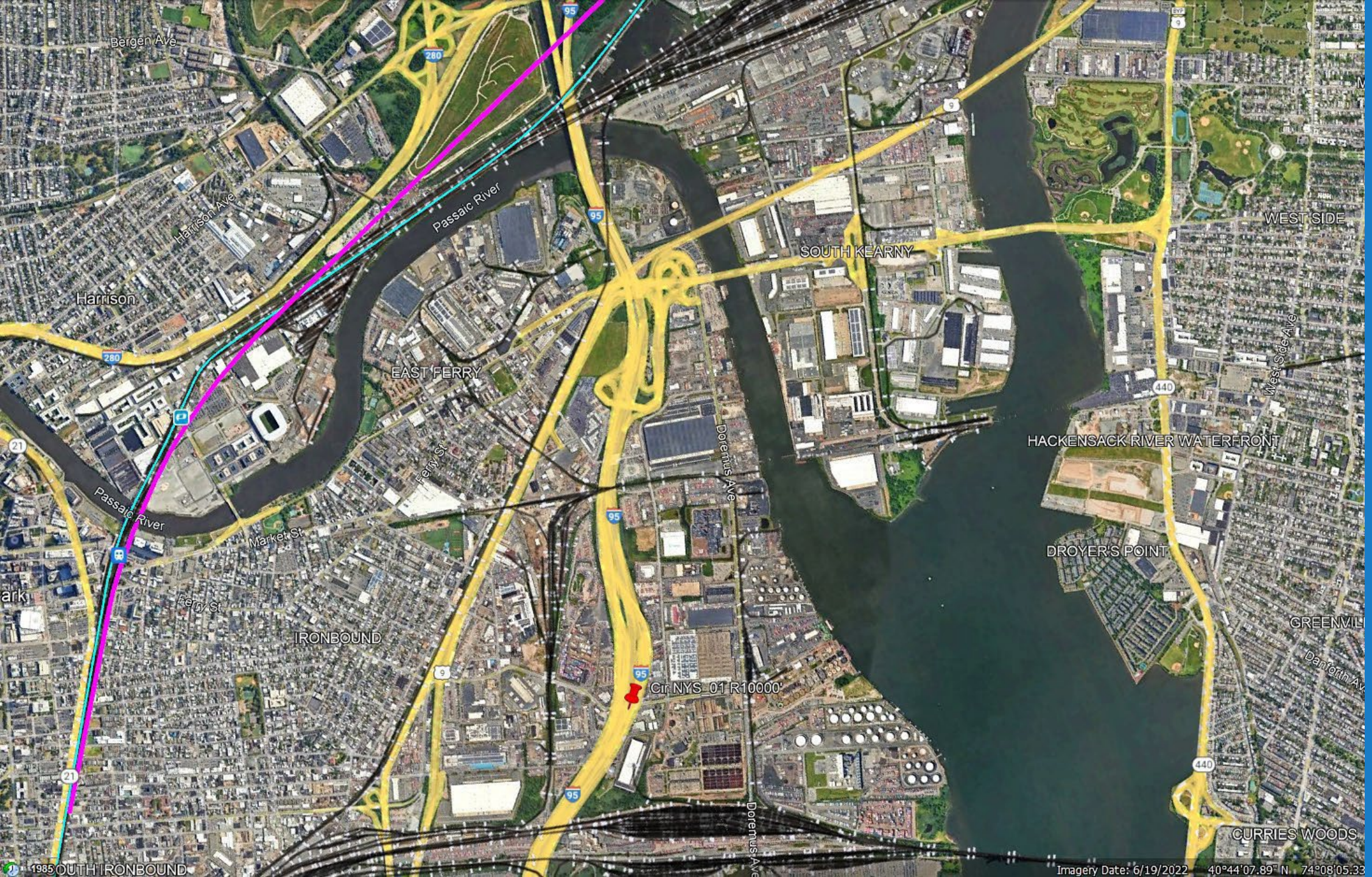
General HSR Overview between Newark, NJ, and Manhattan, NY

The new Hudson HSR tunnel enters Penn Station diagonally.

The flyovers on the NJ side eliminate all the swing and lift bridge closures.

PT = The new rail tunnel proposed by others.

HSR = Penn Station to Grand Central Station connector tunnel



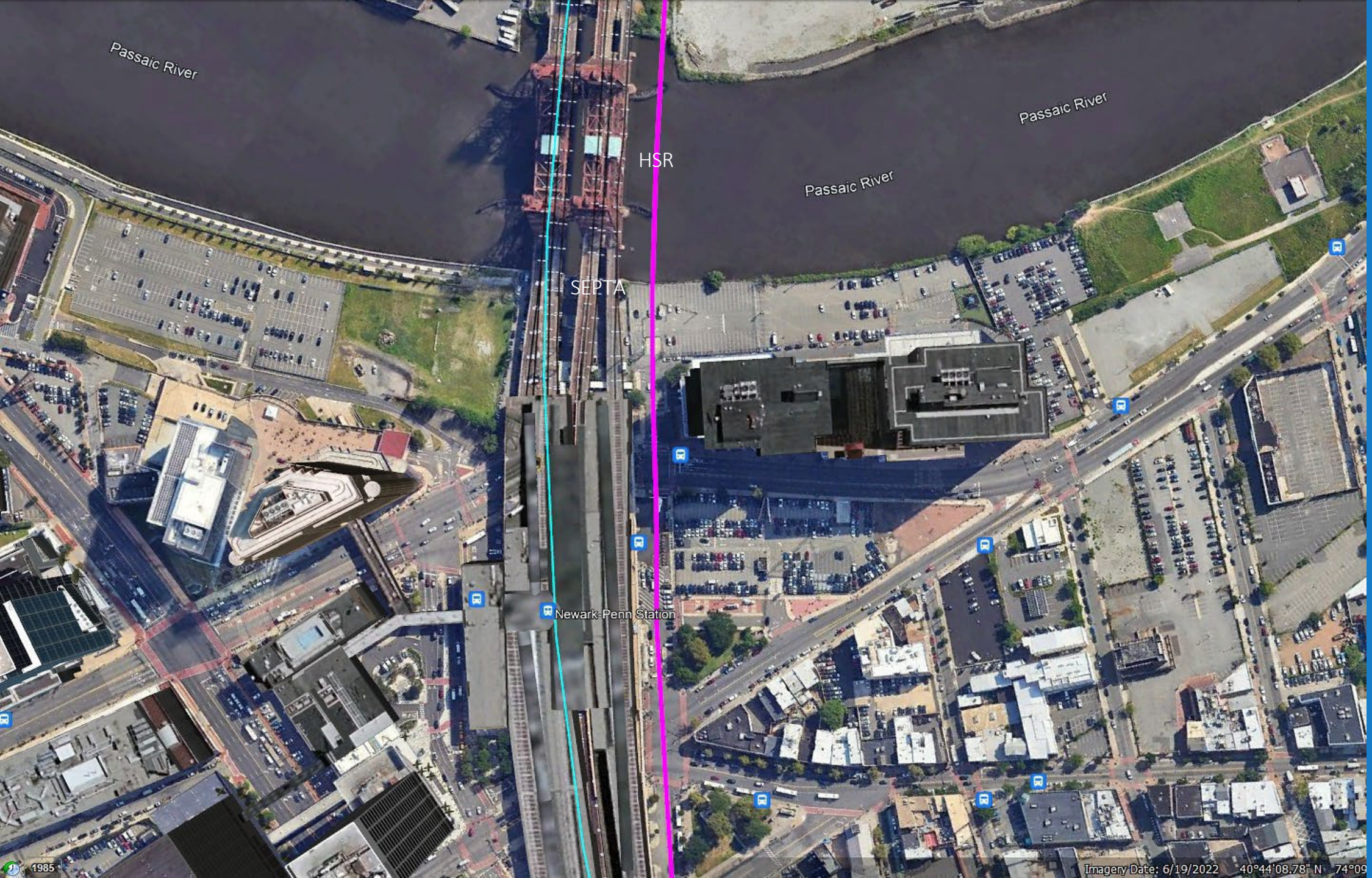
New HSR Corridor at Newark Penn Central Station

This new HSR corridor will be in addition to the existing Amtrac/NJ TRANSIT tracks. The HSR will fly over the existing tracks.

HSR at Newark Penn Station Area

The HSR will go into single tracks, fly over the existing SEPTA tracks south of Newark, and then intersect with the on-ground SETA corridor.

The westside HSR flyover radius is 4800’

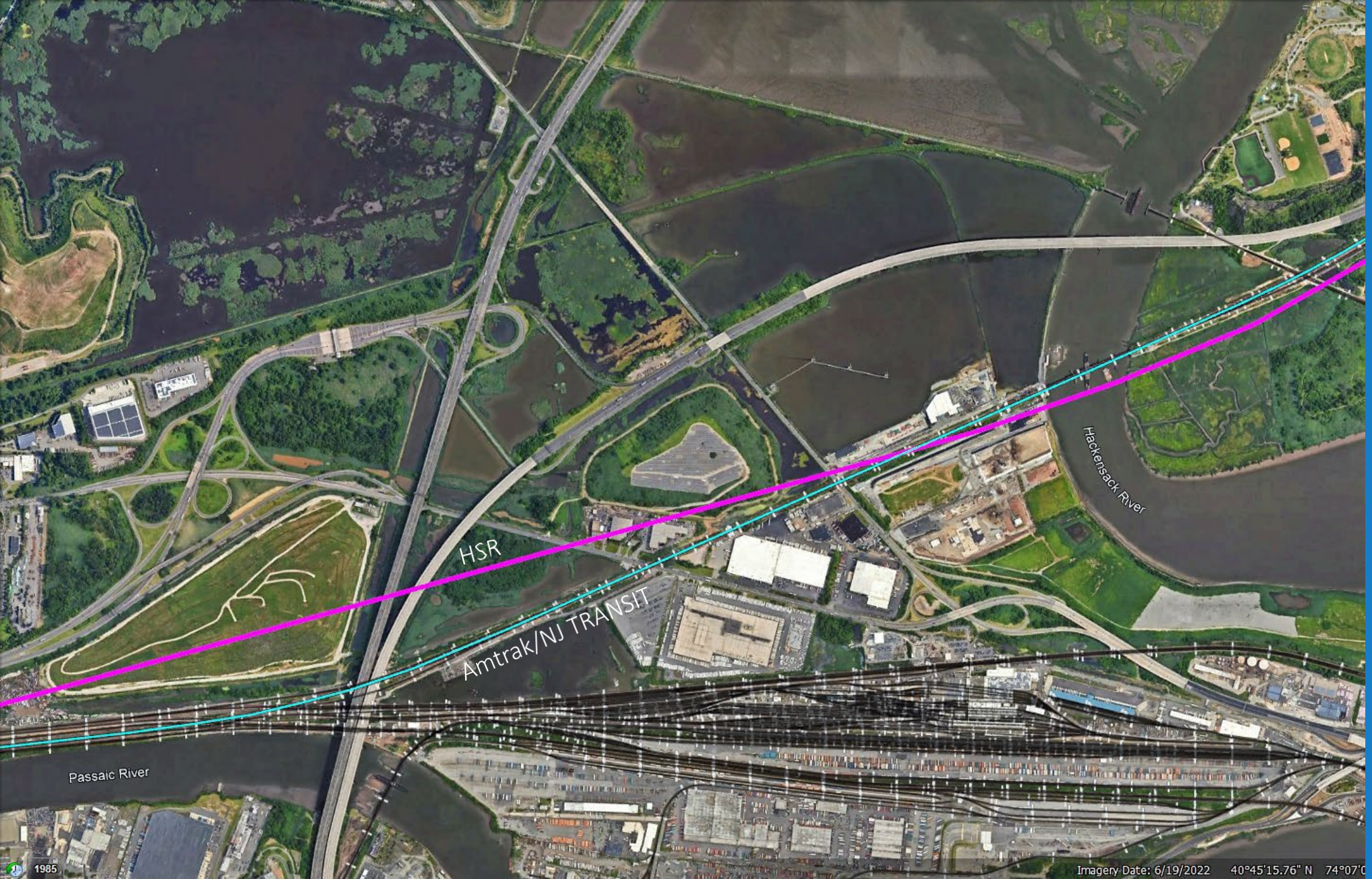


HSR at Newark Penn Station

Build the new HSR corridor first. Although the existing bridges may be upgraded and still used for commuter rail transit.

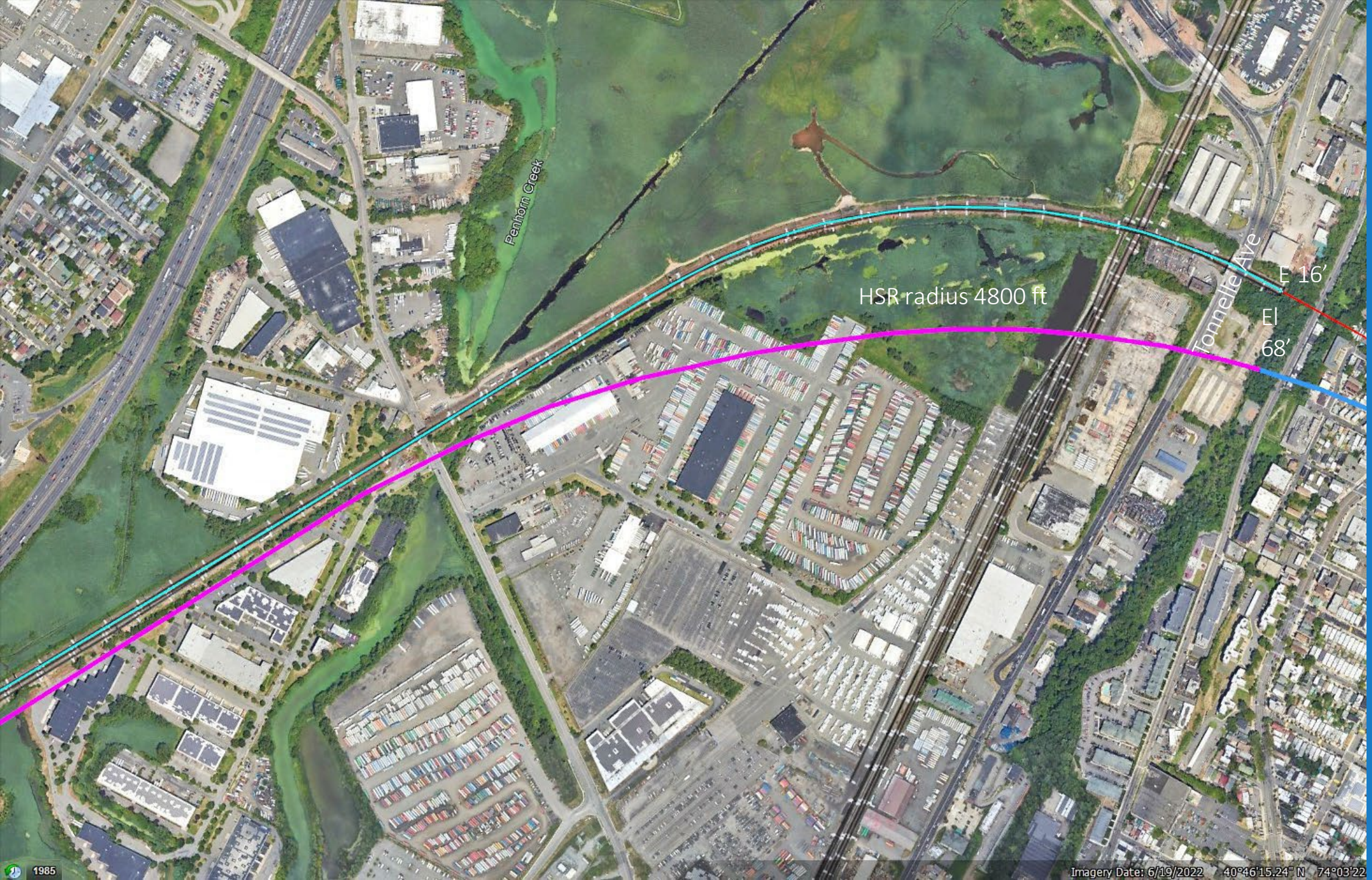
The HSR station is elevated with four tracks. Note the space between the 250 ft-high building.

The proposed HSR flyover is always open to train traffic, no bridge lifts!



HSR Crossing the Hackensack River

The HSR will again fly over the existing RR tracks. The enlarged radii will allow train speeds over 120 mph. This new corridor can be constructed while the existing rail service continues.

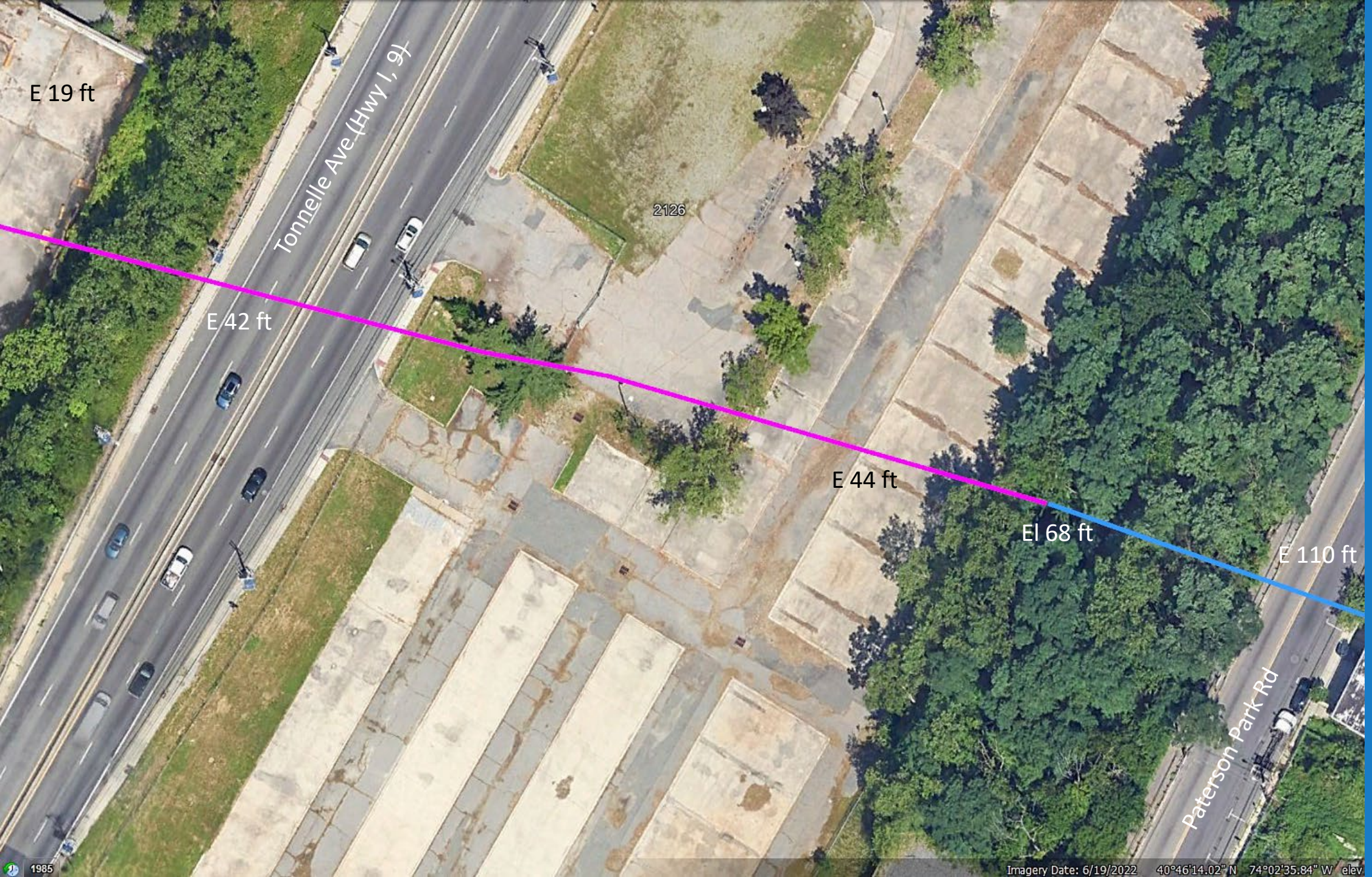


New HSR, Amtrak, and NJ TRANSIT Train Tunnel Entrances

The new tunnel entrance elevation for the HSR is 68 ft.
This elevation will prevent tunnel flooding during extreme storms.
The Amtrak commuter train tunnel entrance is at 16 ft.

The estimated rail grade to the Penn Central station is 1%.

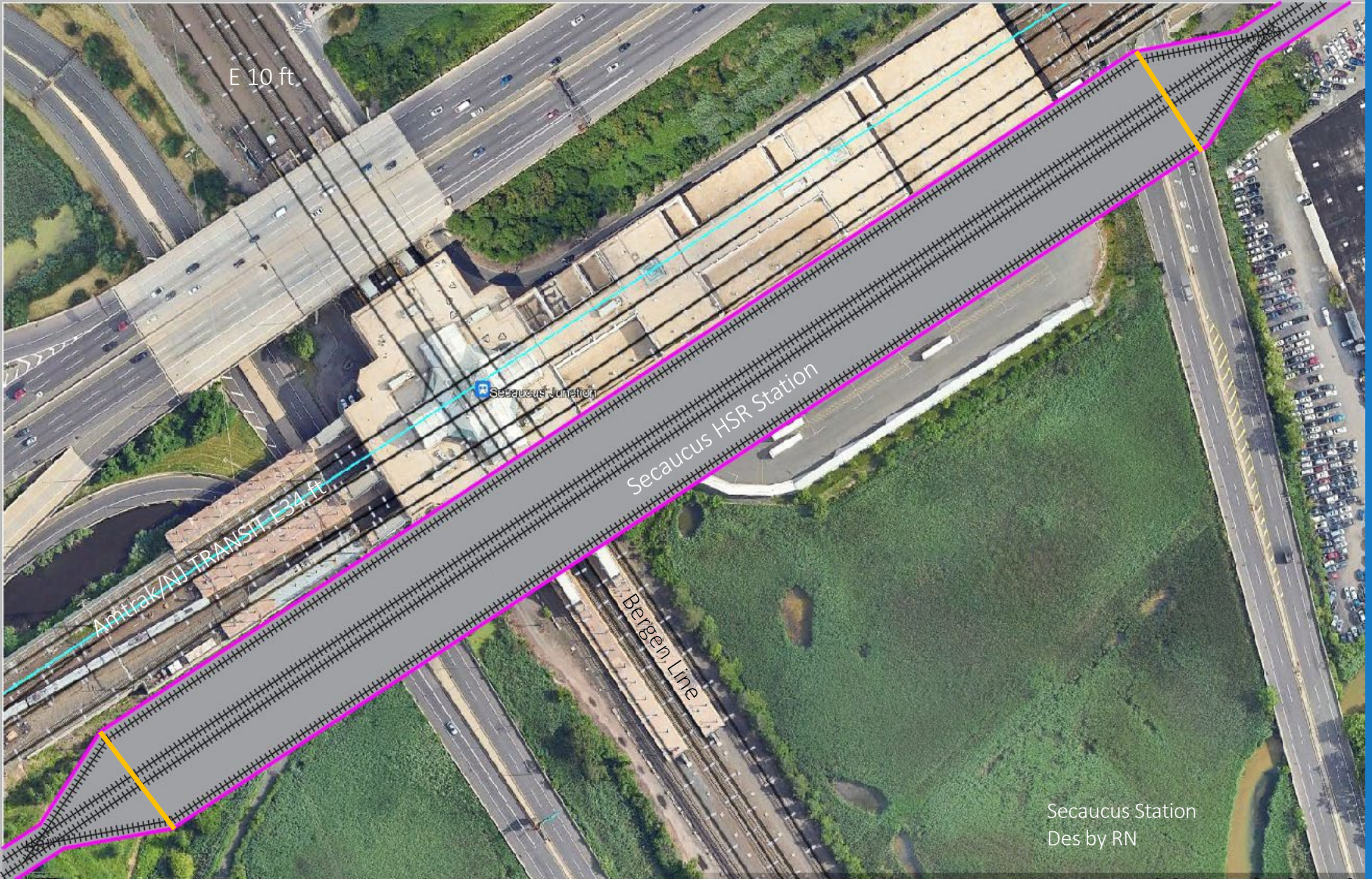
Build the new Penn Central tracks diagonally below the existing 21 tracks.
Platform lengths =1300’



New HSR Corridor between Tonnelle Ave and Paterson Park Rd

The HSR will fly over the Tonnelle Ave.

Instead of the flyover, we may infill some of this section with tunnel excavation material.

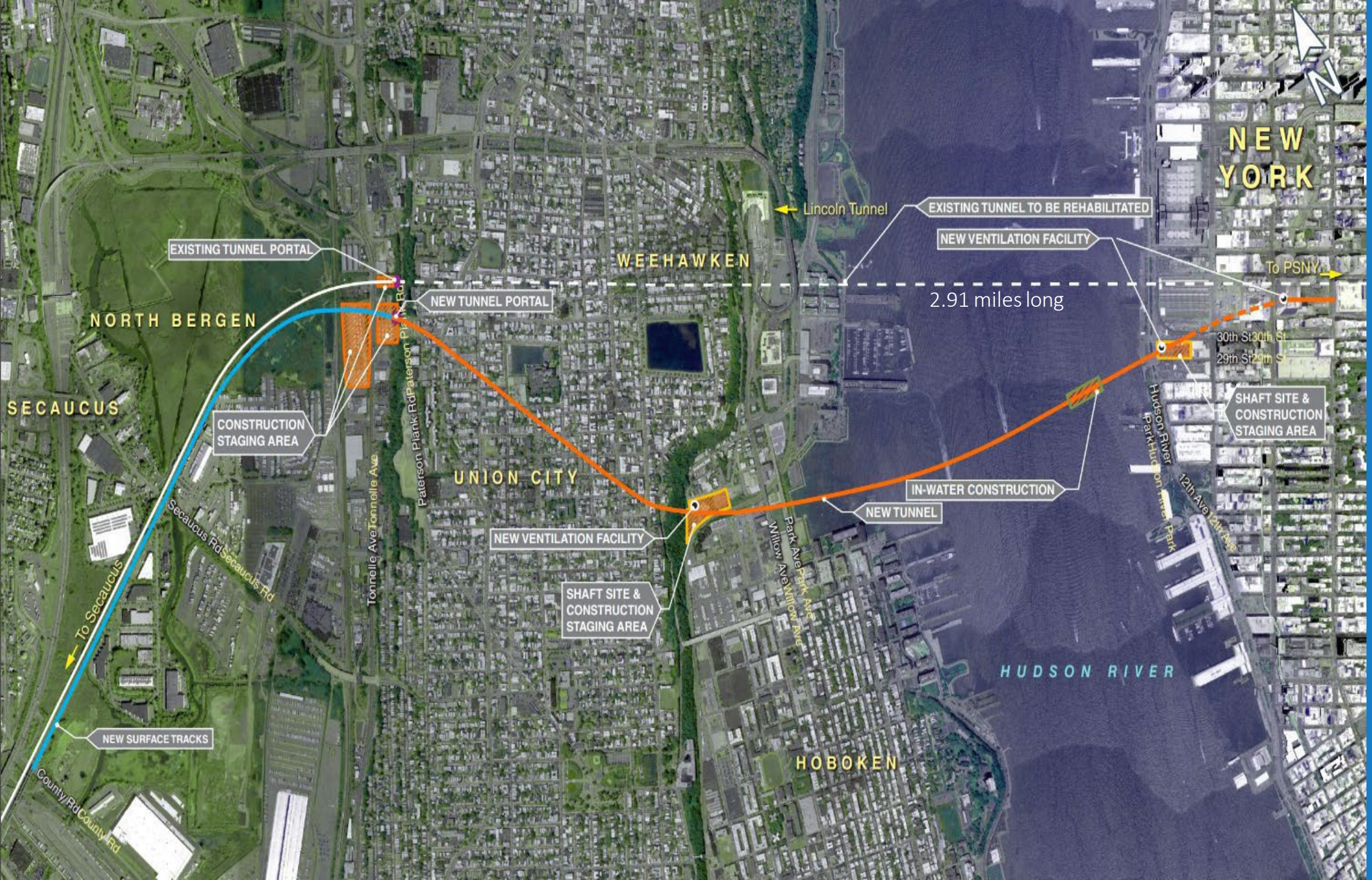


HSR at Secaucus Station

The new, elevated HSR station would be 82 ft. in elevation and connected to the existing stations below by stairs, elevators, and escalators.

The platform, offering ample space for passengers, is 1300 ft in length and 112 ft in width.
The train boarding platform is 20 ft wide.

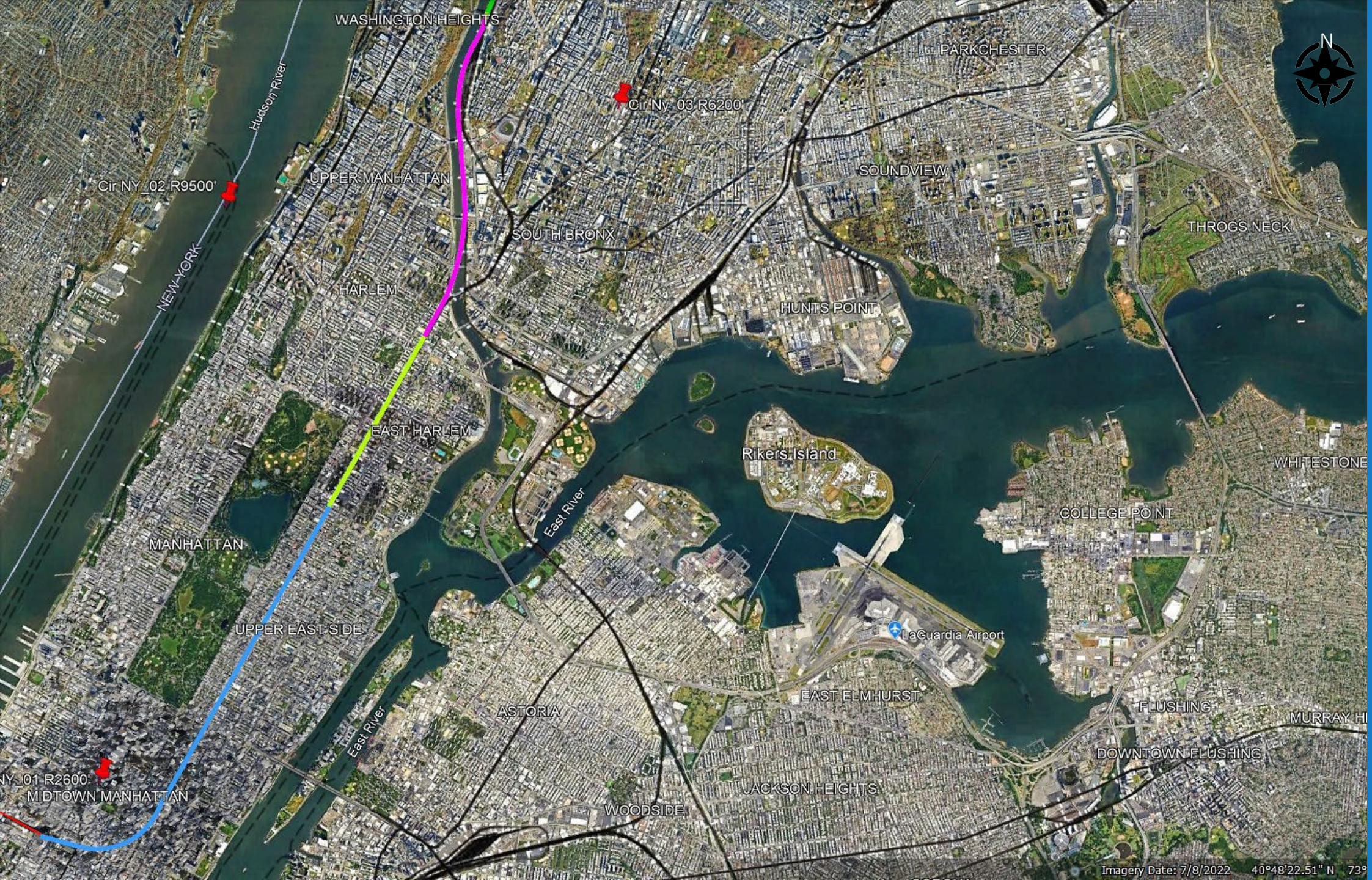
The rail corridors at this station are the Bergen Line, the Amtrak/NJ TRANSIT, and the new HSR.



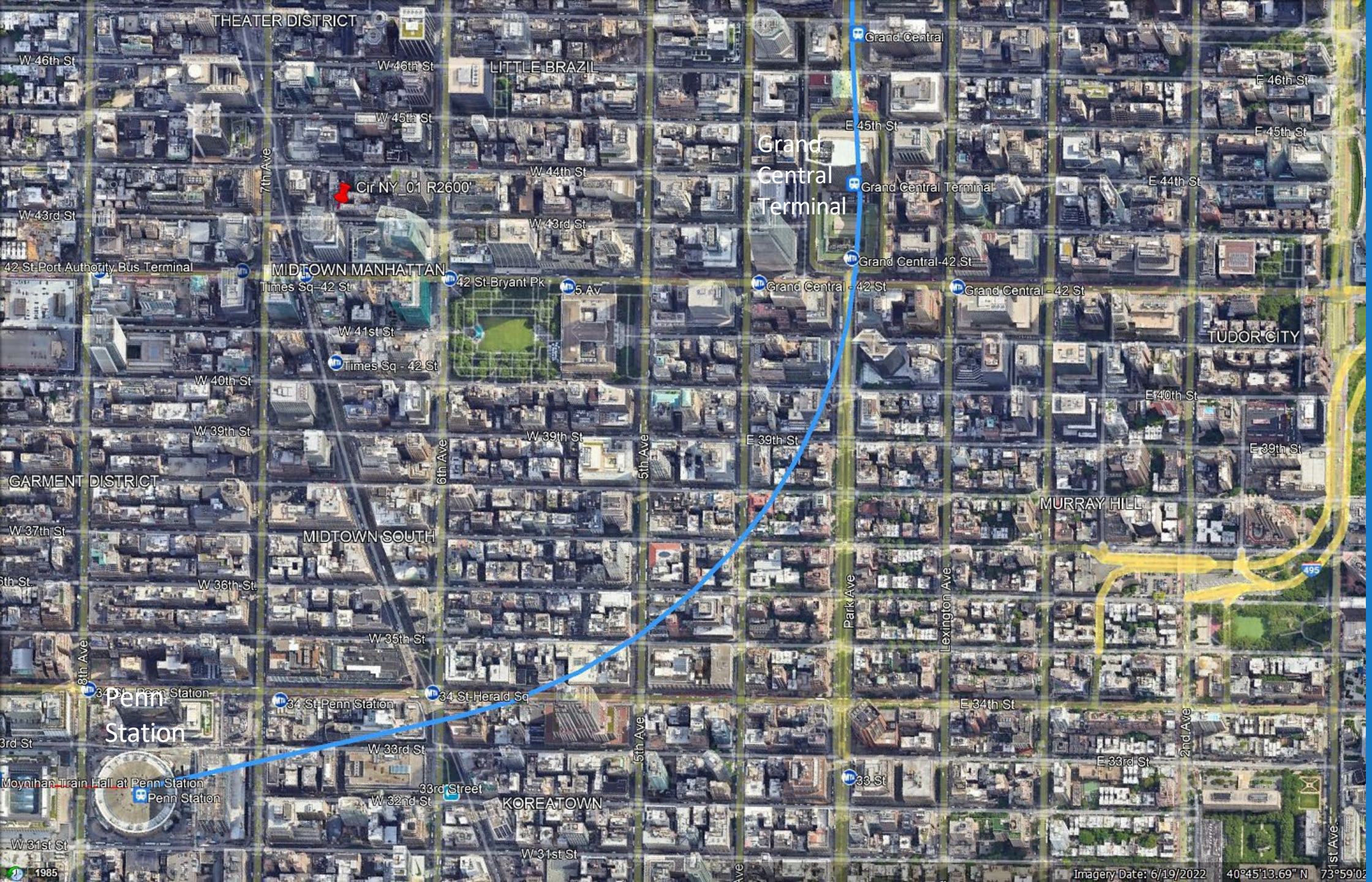
New HSR Tunnel Designed by Others

The length of the new Hudson tunnel has yet to be determined.

What is the new tunnel entrance elevation?



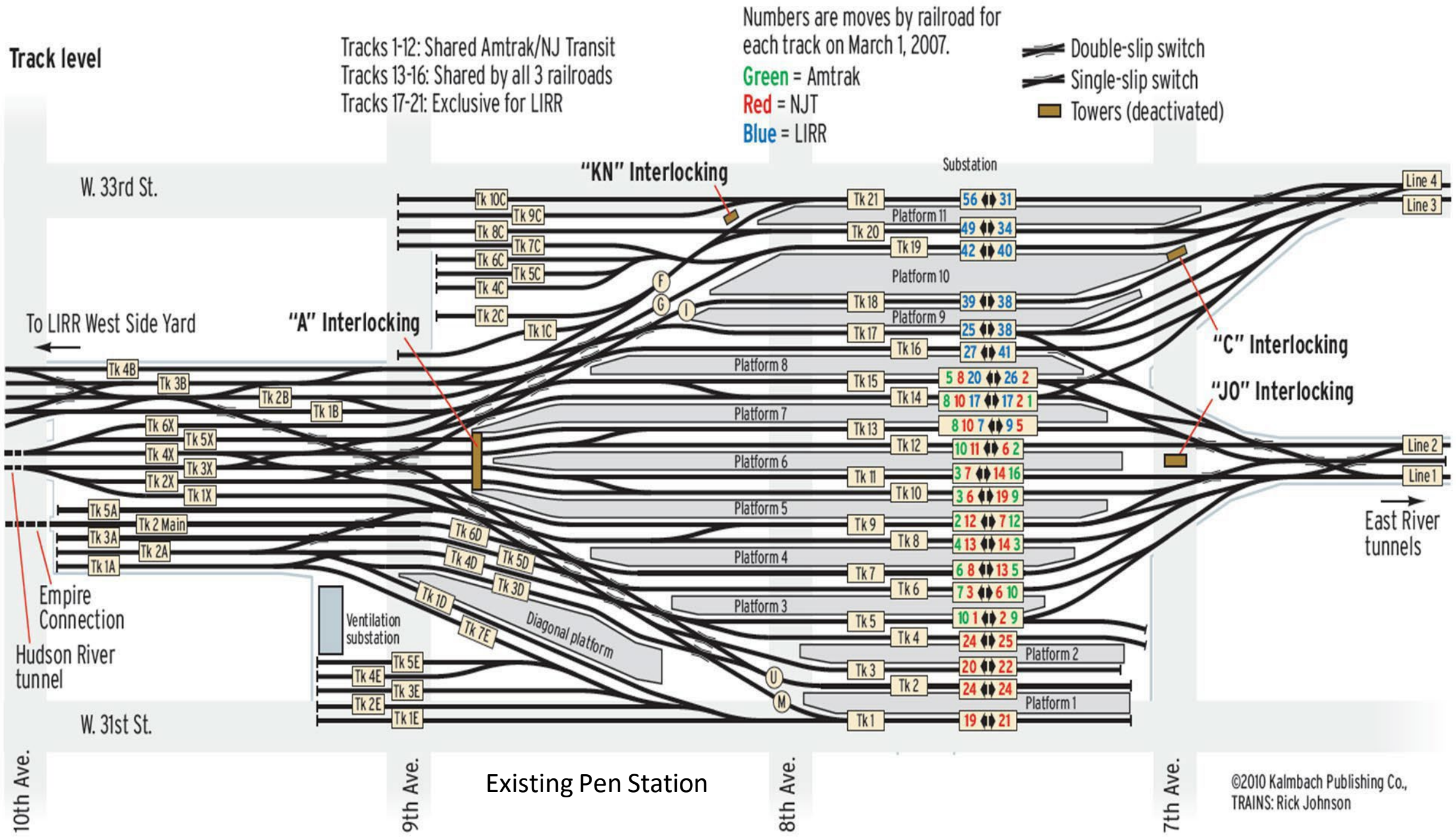
General HSR Corridor Overview between Manhattan and WASHINGTON HEIGHTS



Proposed HSR Connection between Penn Station and Grand Central Terminal

This extension tunnel will allow through trains to interlink with the former PRR and New York Central RR.

The HSR will be an independent rail transport system, not using the freight RR tracks.



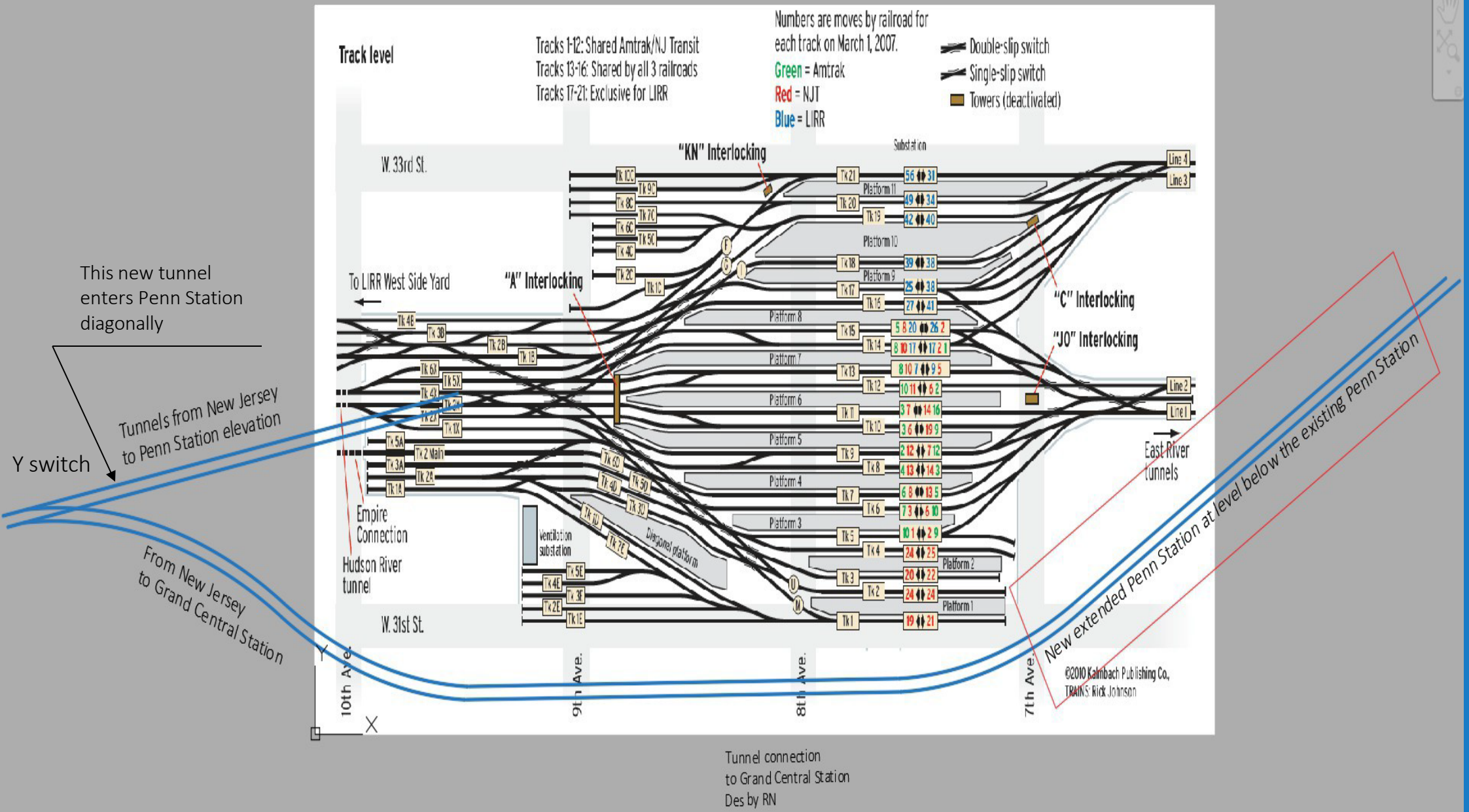
Existing Pen Station

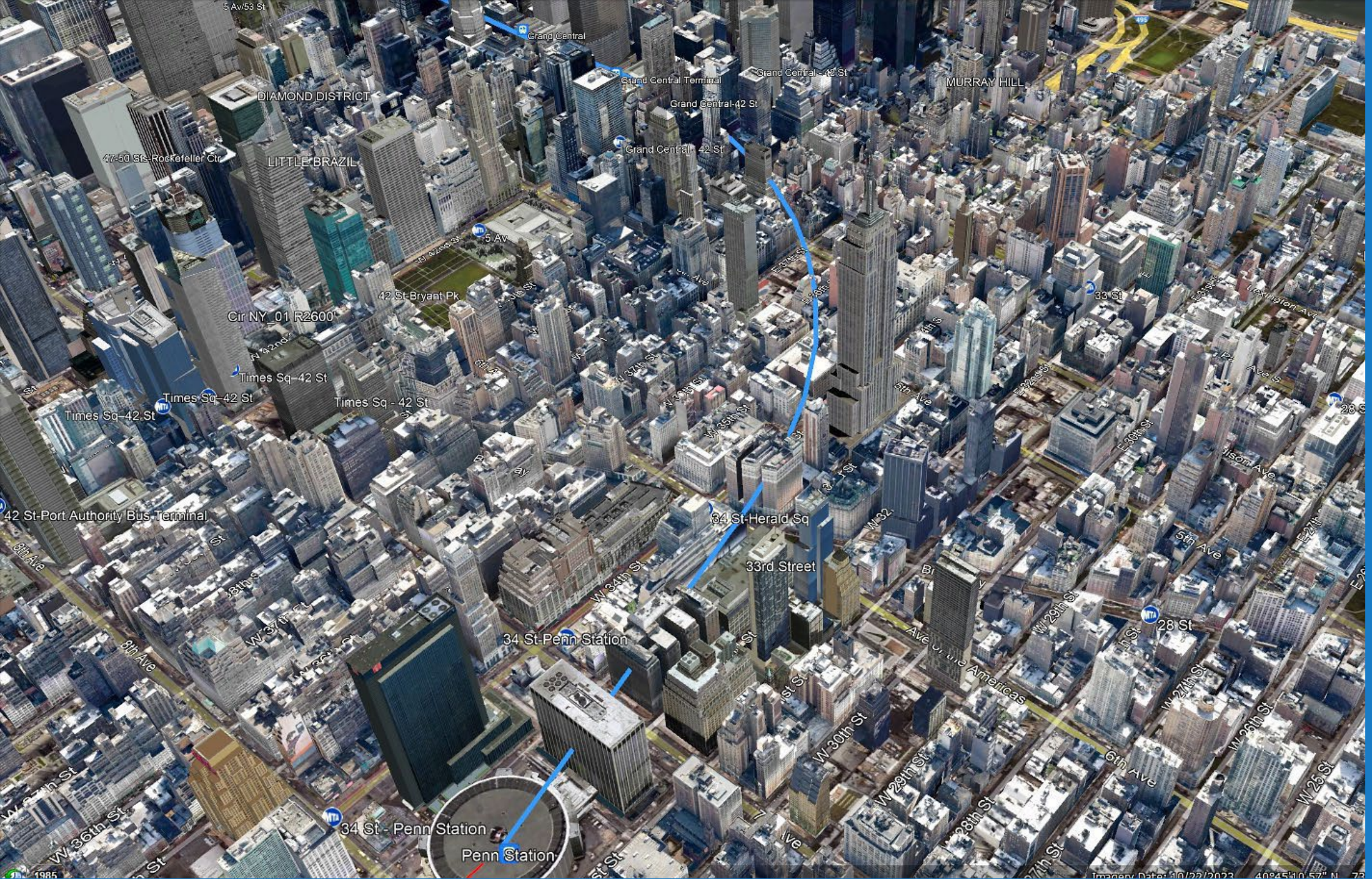
New HSR Penn Station

This expanded Penn station will have an underground Y switch, allowing an additional two-track connection to Grand Central Station.

The additional connecting tunnel to Grand Central Station will descend in elevation from the Y switch at the new Hudson to Penn Station. The new extended station will have 6 tracks.

The intent for this is to avoid conflict with high-rise building columns.

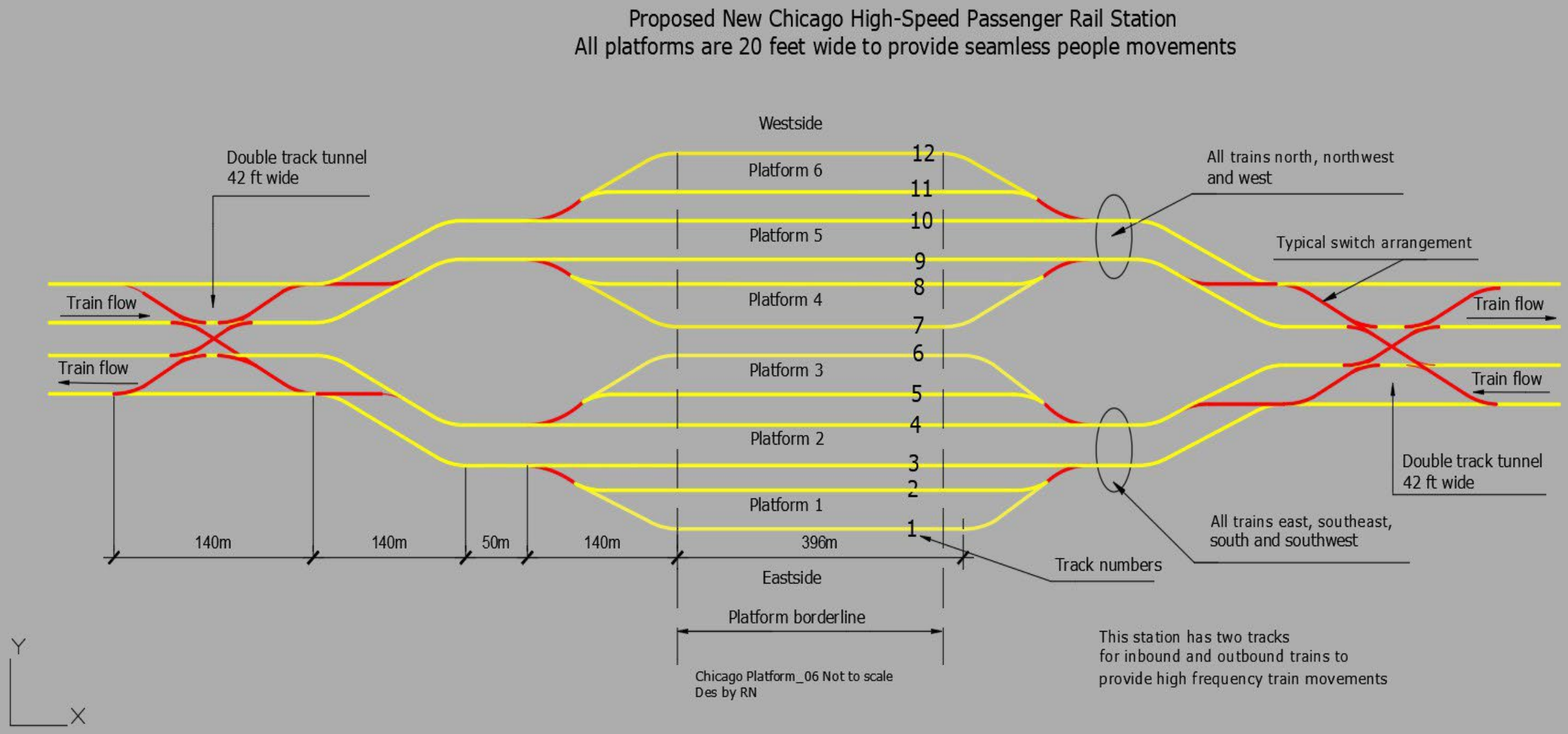




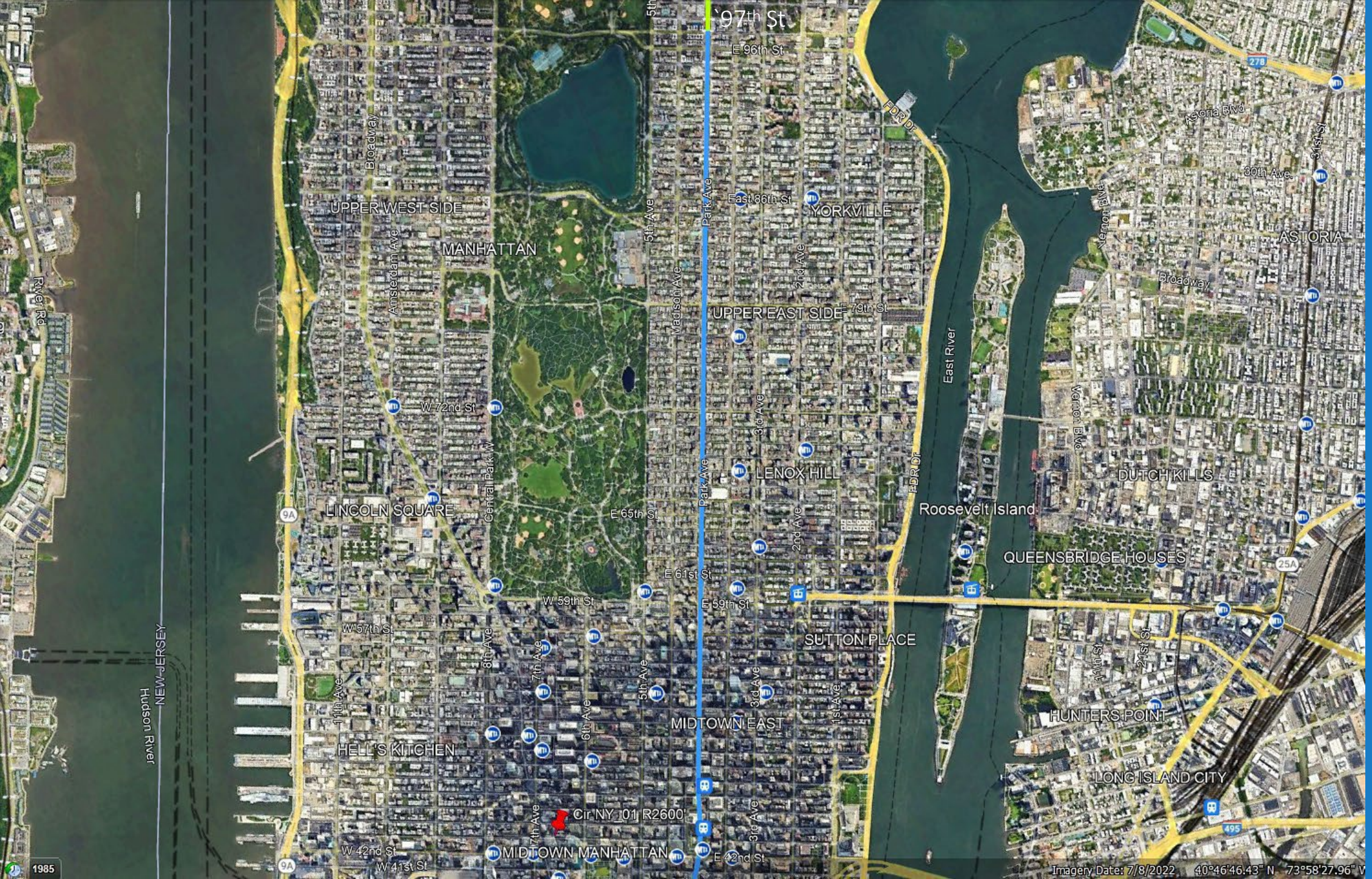
Proposed HSR Connection between Penn Station and Grand Central Terminal

This extension tunnel will miss the Empire State Building

The HSR will be an independent rail transport system, not using the freight RR tracks.



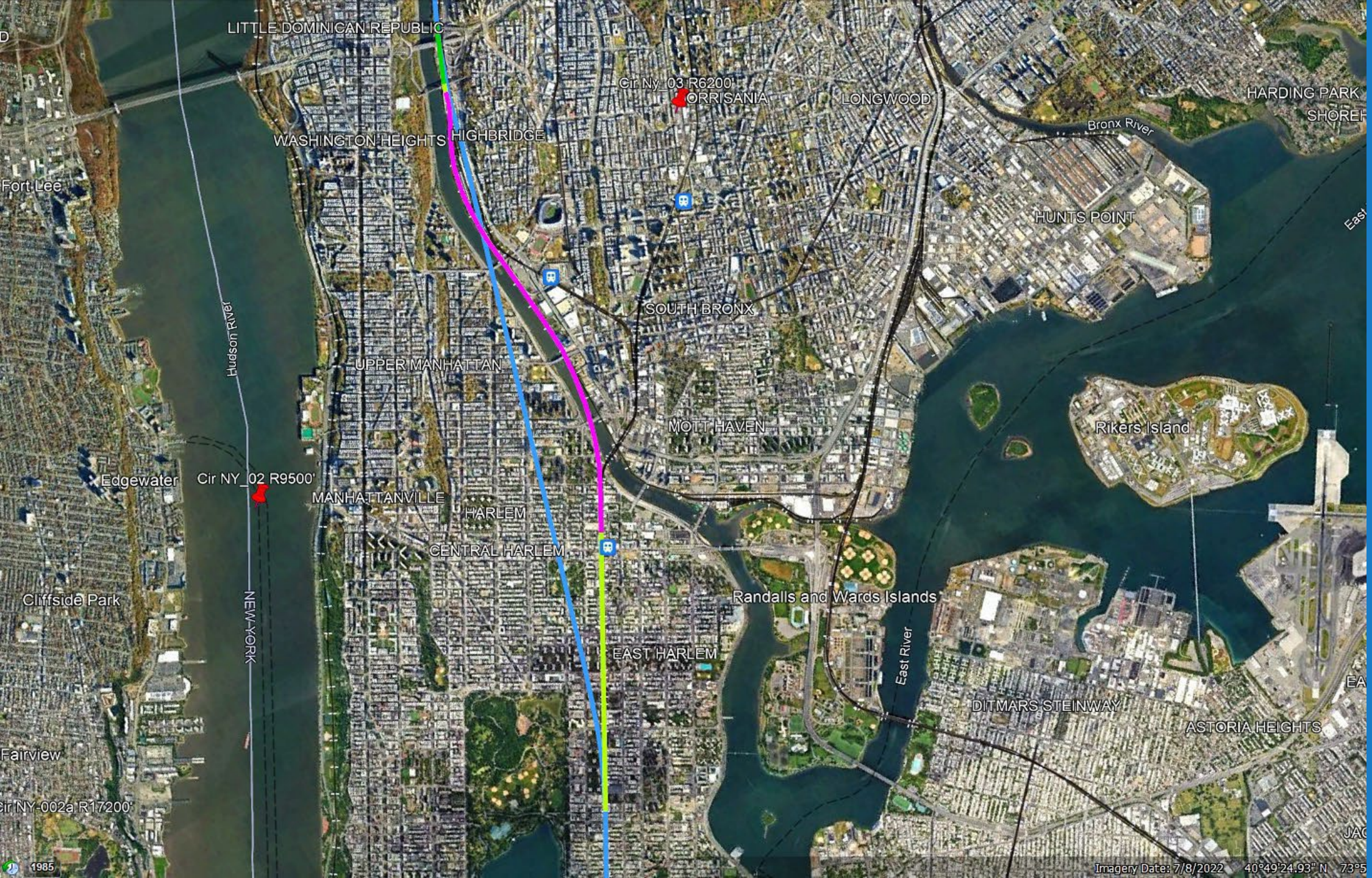
The existing Union Station can never handle the thousands of anticipated passengers with the proposed HSR corridor plan



HSR between Grand Central Terminal and 97th St

We suggest adding a two-track “Twin-Bore” tunnel below the existing CSX, “the former NY Central RR” tunnel corridor, to increase capacity.

The strong geological granite bedrock will allow this tunnel-boring application.



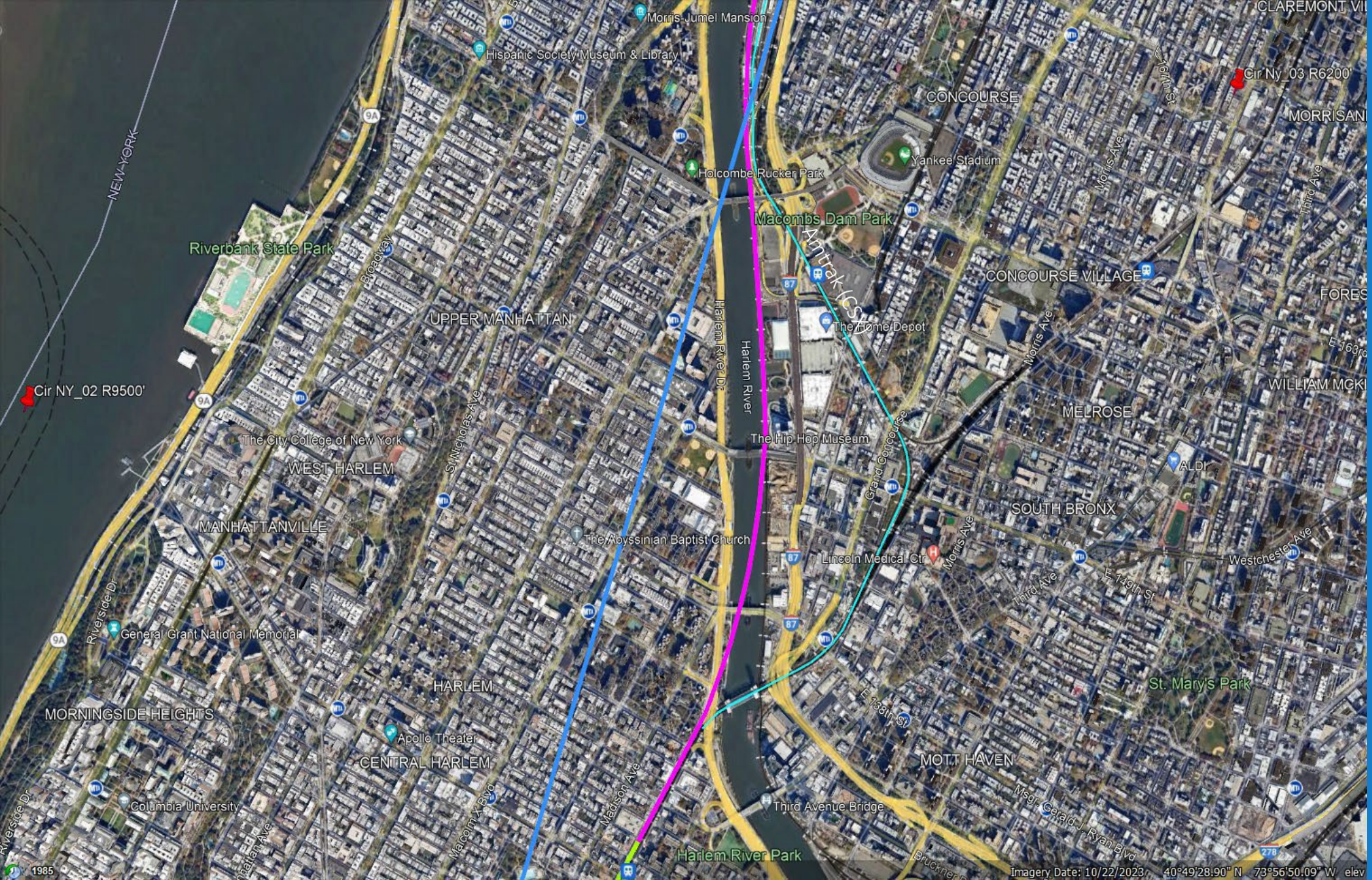
HSR, between 97th St and LITLE DOMINICAN REPUBLIC with Alternative Corridor

NYC is densely populated, so large-radius tunnels are the only way to construct an HSR corridor.

HSR between E 97th St and W 145th St

We have an option: We may still use the existing congested CSX freight corridor or the preferred new 4.34-mile-long HSR tunnel route. The tunnel crown is in granite rock below the building foundations.

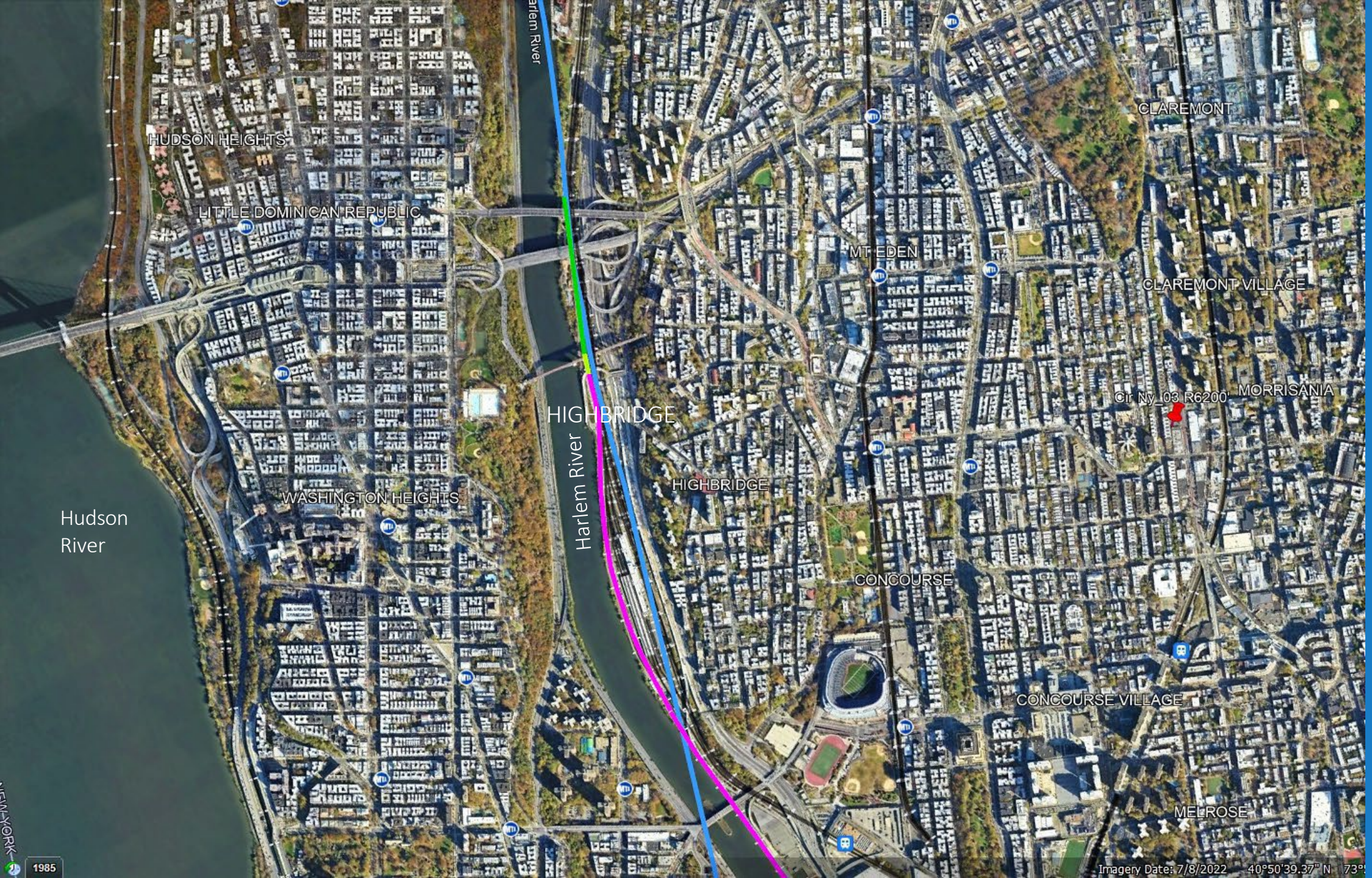
The new independent HSR tunnel is poised to revolutionize passenger transit, significantly increasing movements and enhancing the overall travel experience.



Enlarged Depiction

HSR corridor options and existing Amtrak.

The HSR tunnel option is out of sight and straight, while the flyover option, “the center-line” corridor, is above the Harlem River and more visible. The existing Amtrak corridor cannot handle HSR train speeds.

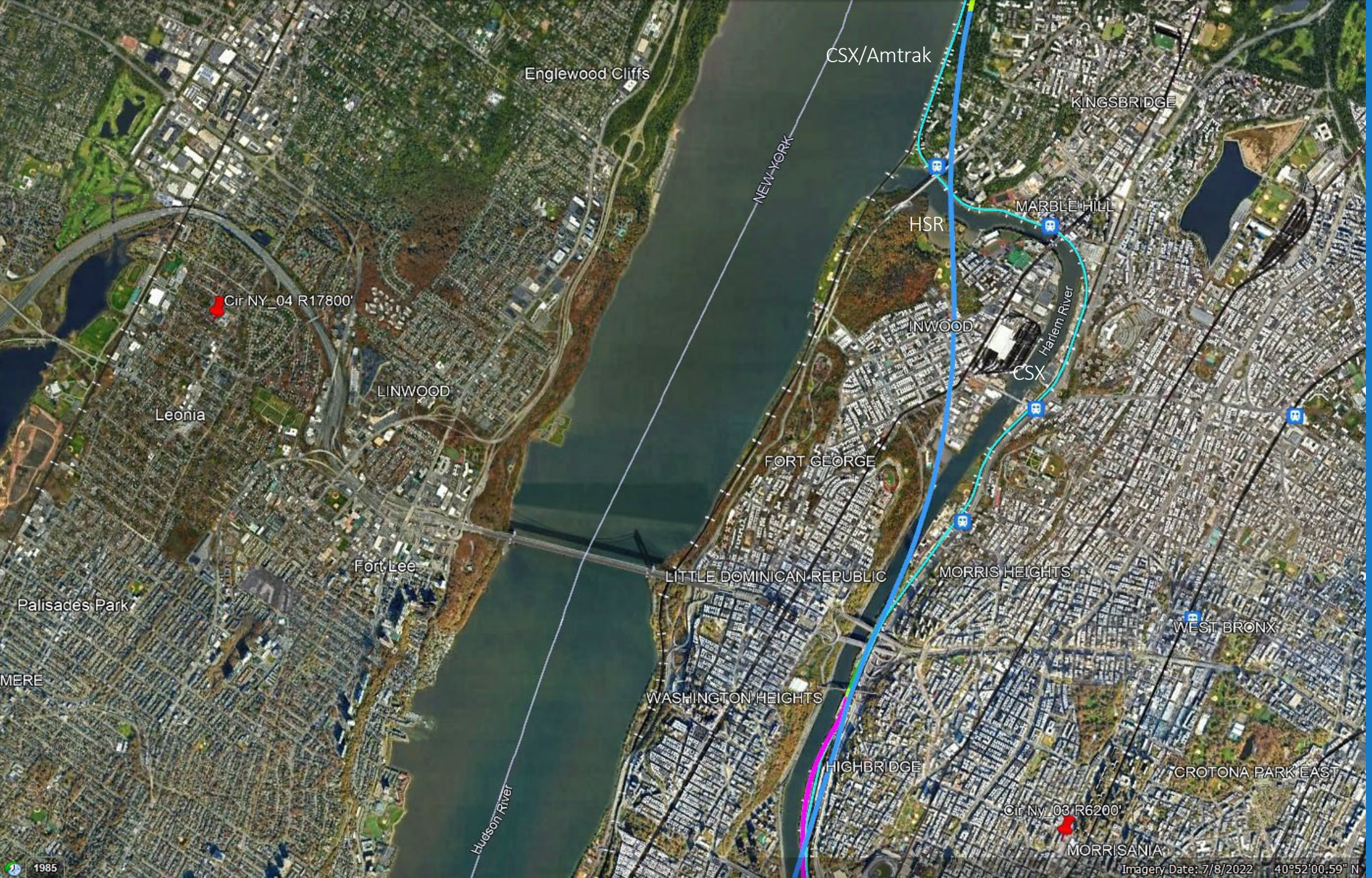


HSR between W 155th St and 0.5-mile North of the Washington Bridge

HIGHBRIDGE has the flyover or the tunnel option.

The tunnel option will not come to the surface.

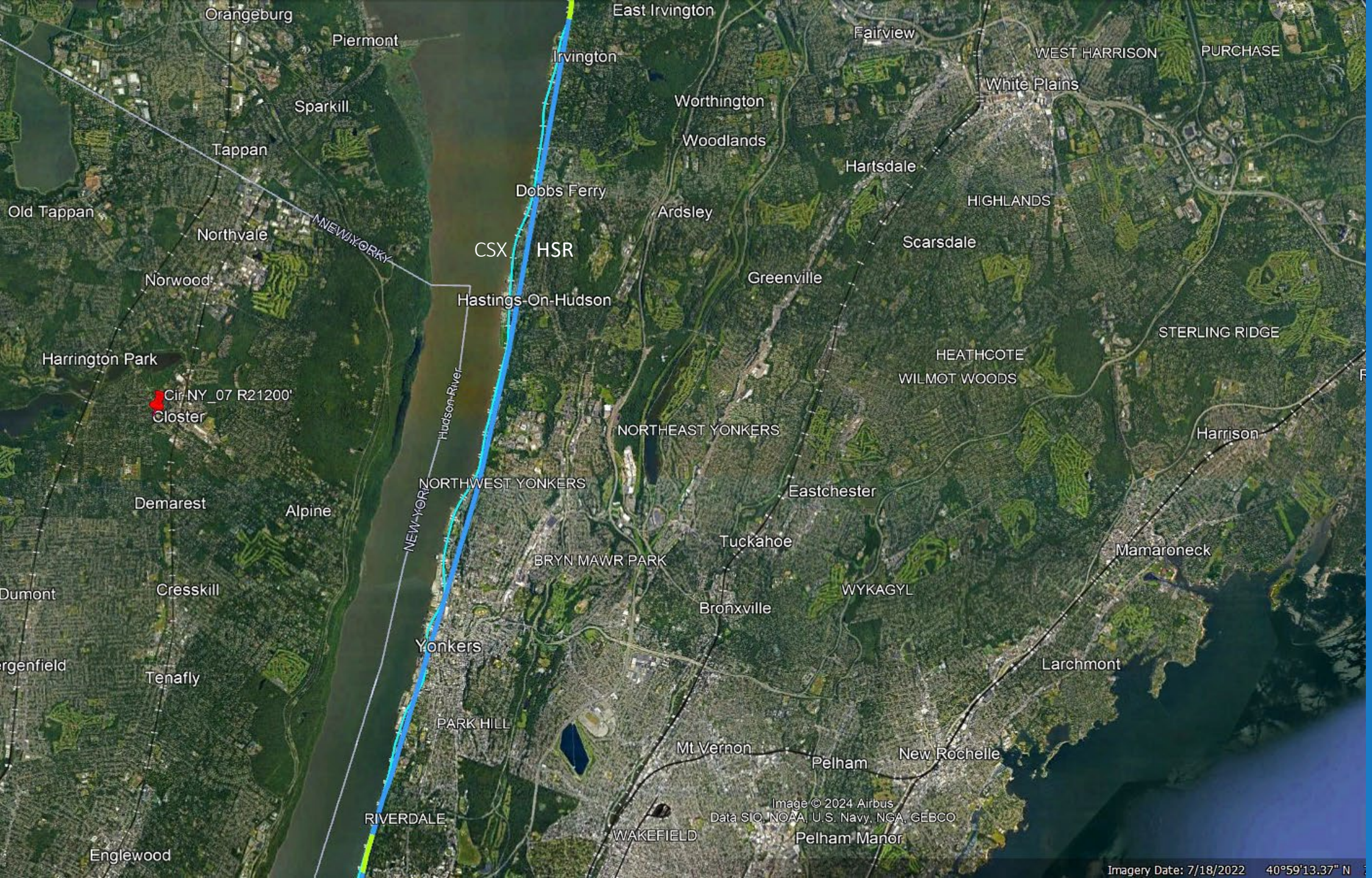
The CSX will continue to run frequent commuter stop trains.



HSR between HIGHBRIDGE and North of MARBLE HILL

The HSR will not use the existing CSX rail corridor, as the freight/ commuter corridor can't accommodate HSR train speeds.

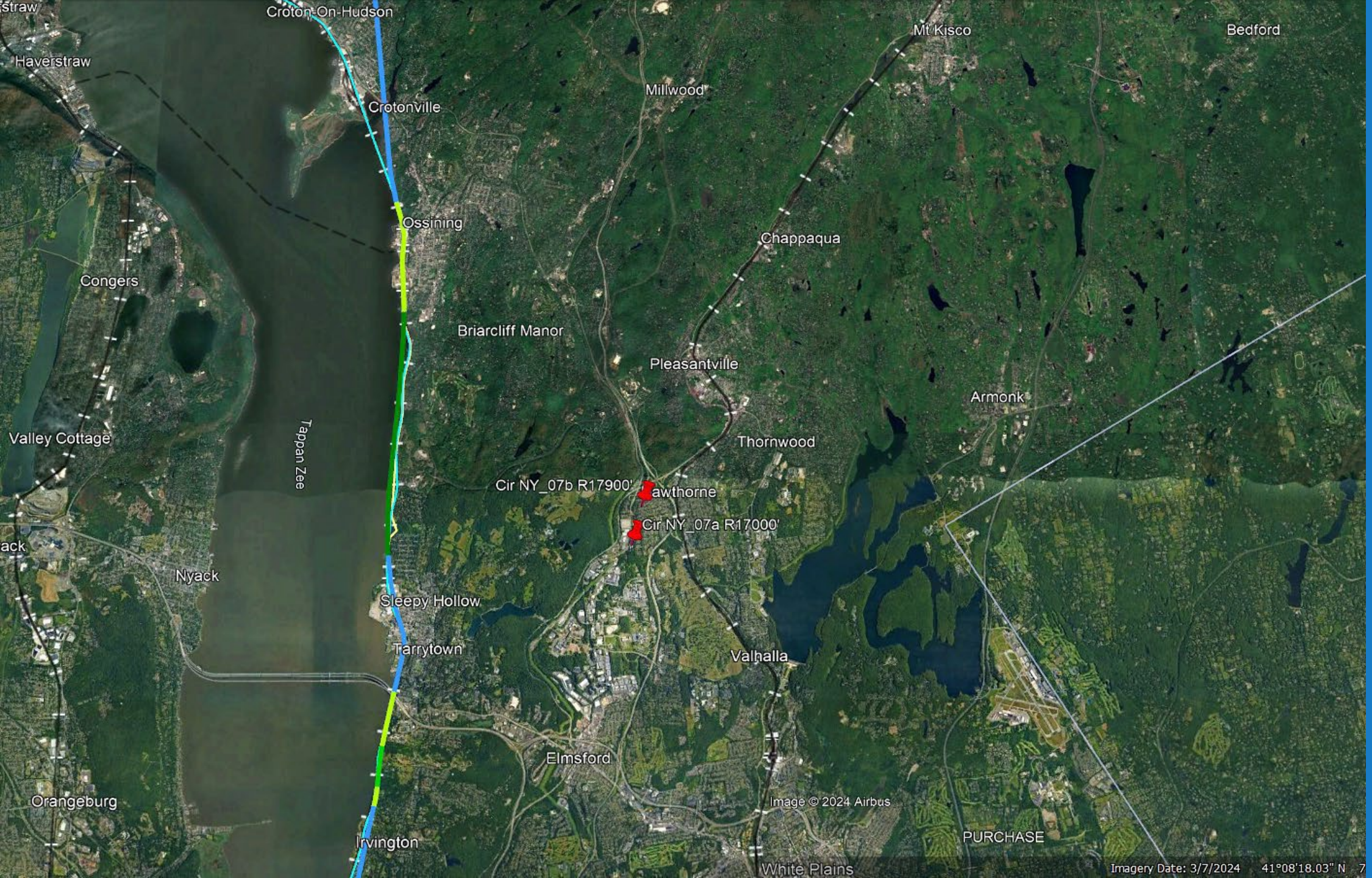
Note the proposed large HSR tunnel curve radius of 17800 ft.



HSR between RIVERDALE and Irvington

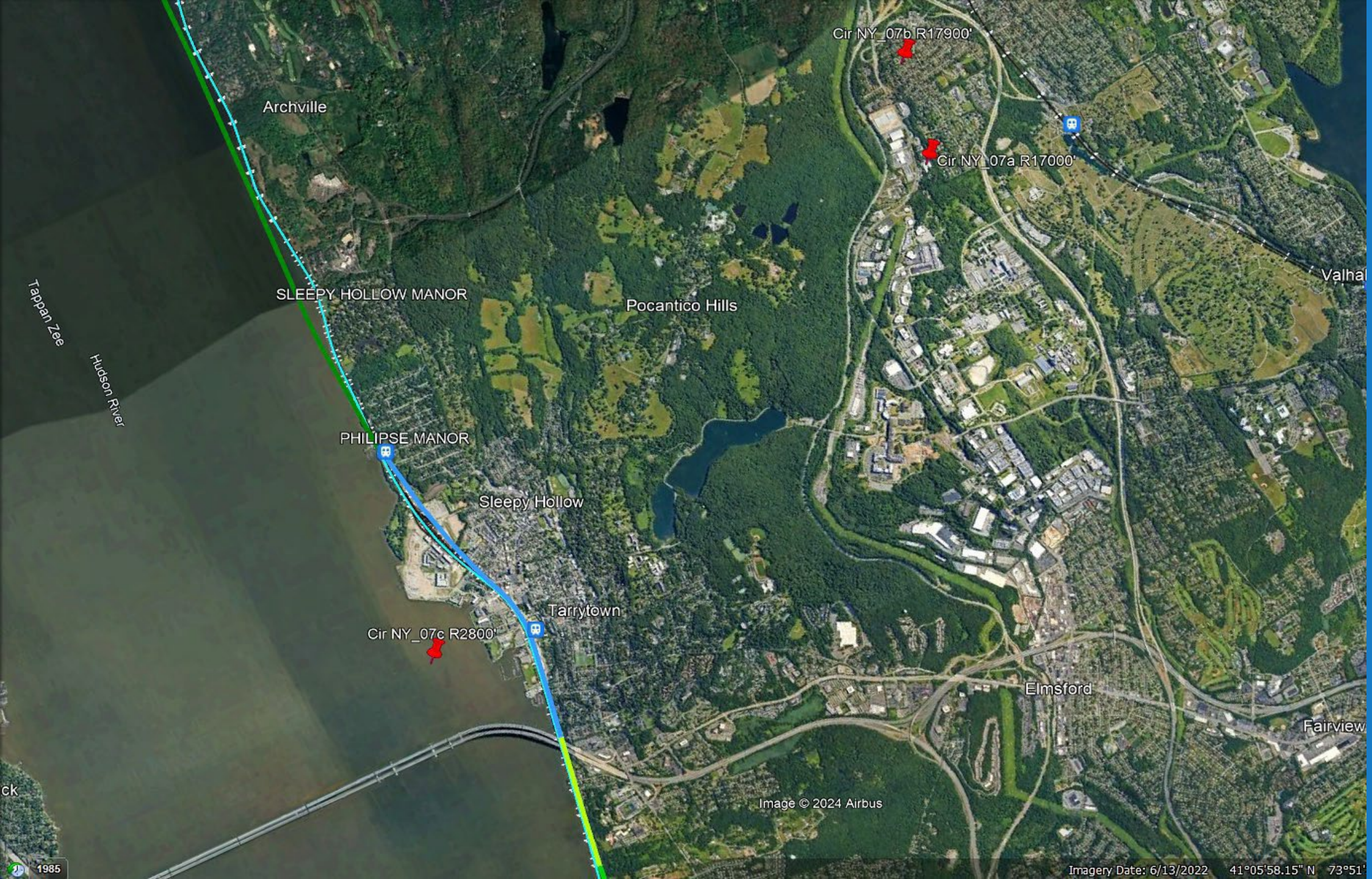
The HSR cannot use the existing CSX “Amtrak” corridor due to numerous speed-restricting curves.

That is why the HSR is in a 10.6-mile-long twin-bore tunnel.



HSR between Irvington and Croton-On-Hudson

All HSR trains will stop at Tarrytown.



HSR at Tarrytown with Under Ground Station

There is no room in Tarrytown to accommodate HSR tracks on the surface.

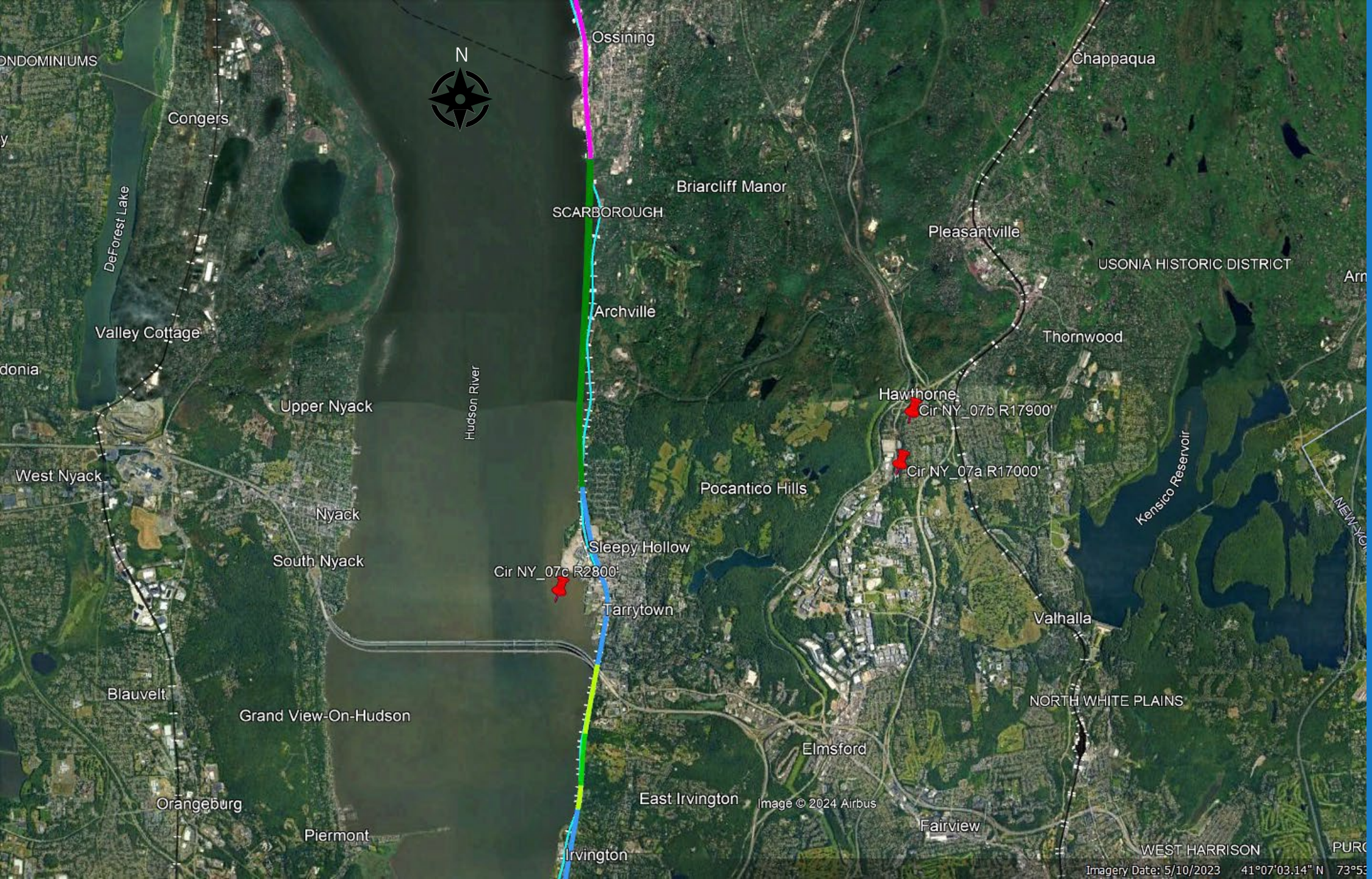
This station has four tracks to allow the pass-through of express HSR trains.

HSR at Tarrytown

This underground station has two tracks with platforms outside the center tracks.

The tunnel is a single bore hosting two tracks.

All trains stop at the Tarrytown station.

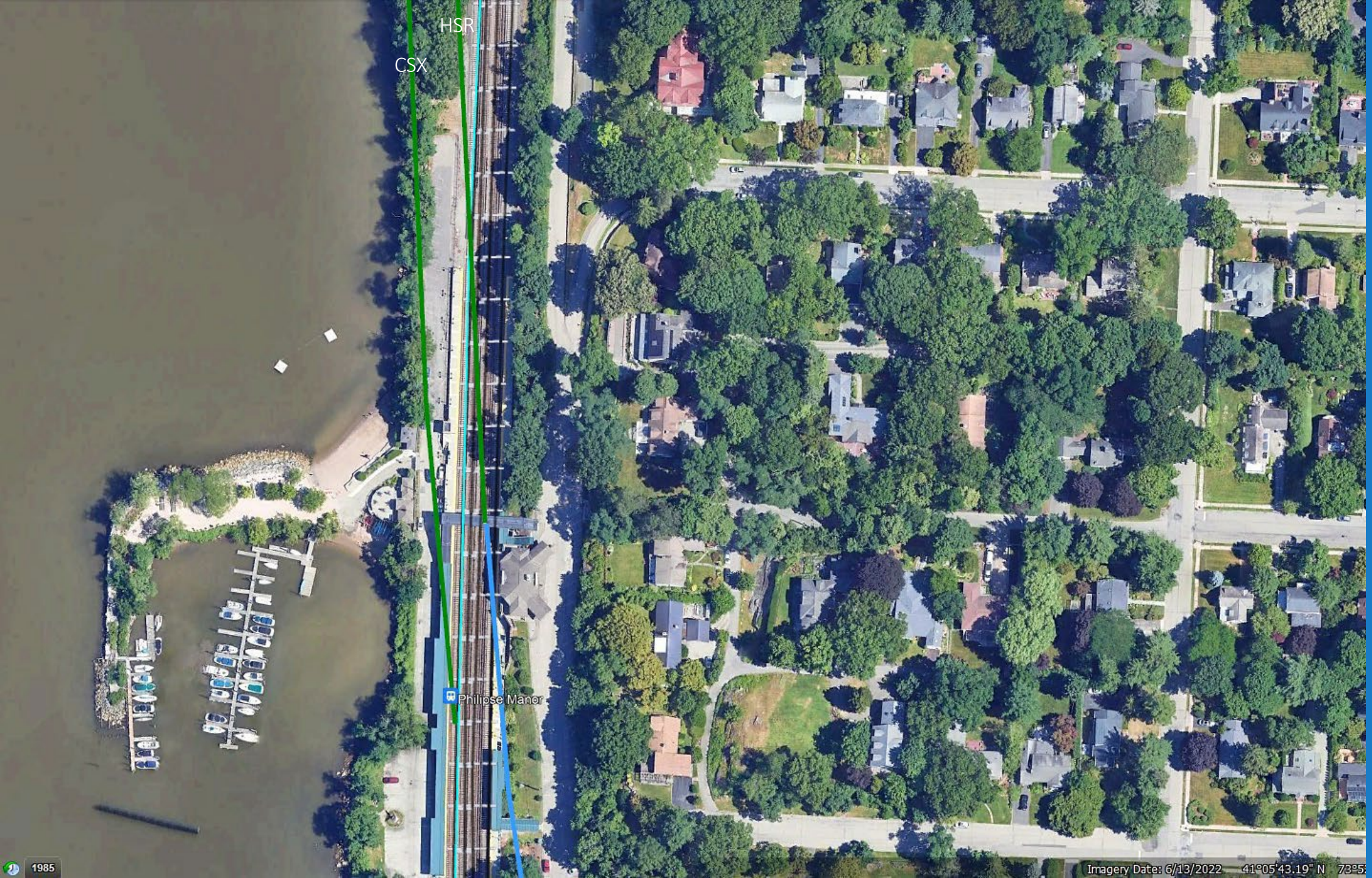


HSR between Irvington and Ossining

The HSR is on infill along the Hudson River.

The HSR tracks are on the east side, and the new CSX freight tracks are on the west.

Fill material will be barged and transported from tunnel excavations to the north along the corridor.



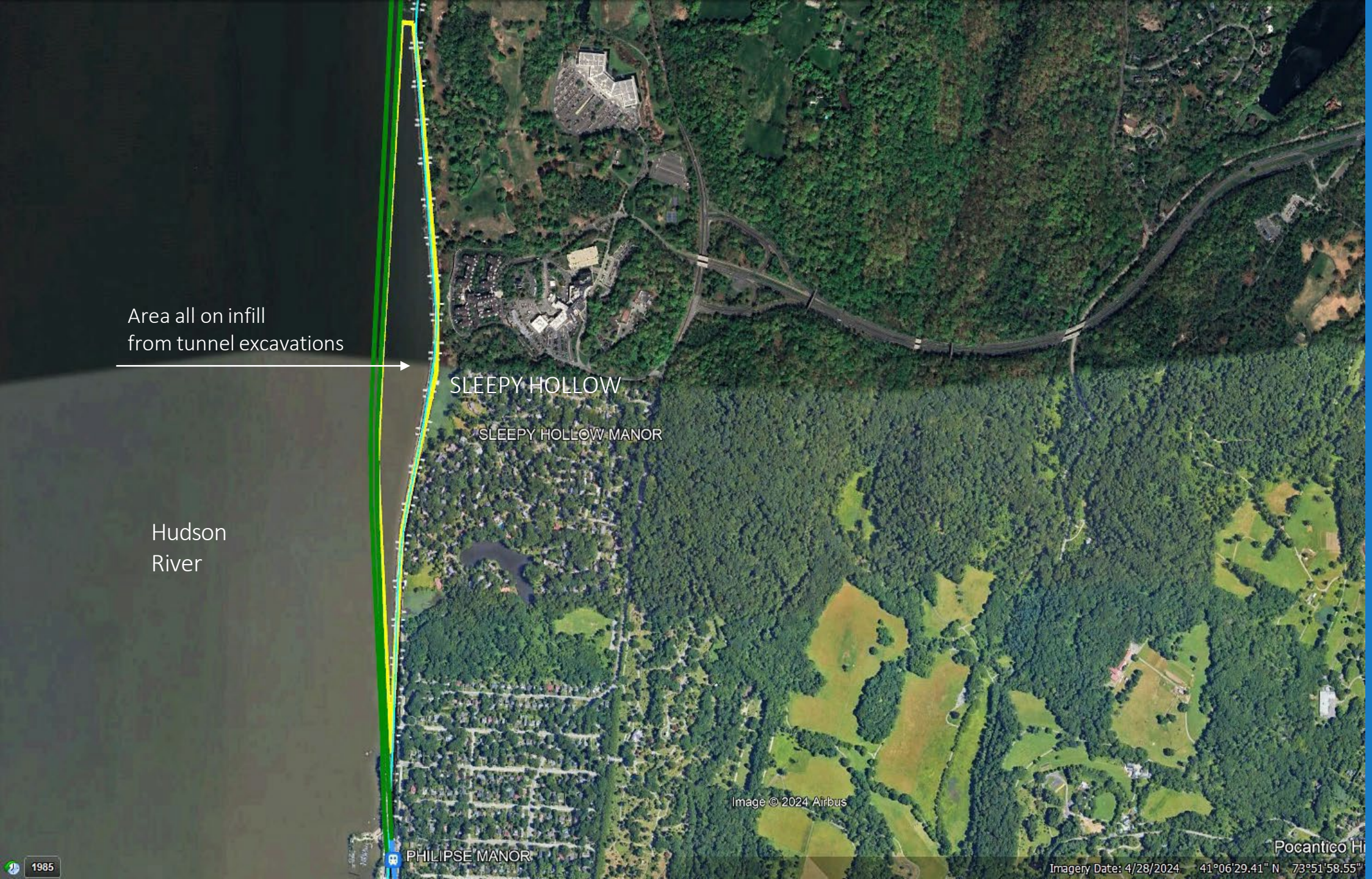
New CSX and HSR corridor at Philipse Manor

The CSX and the HSR will go on a causeway infill.

The CSX triple tracks are on the west side, and the HSR tracks are on the east.

The Causeway crest width is 100 ft>. The fill is from tunnel excavation and barged to the fill site with specially designed barges.

The existing CSX tracks will be eliminated.

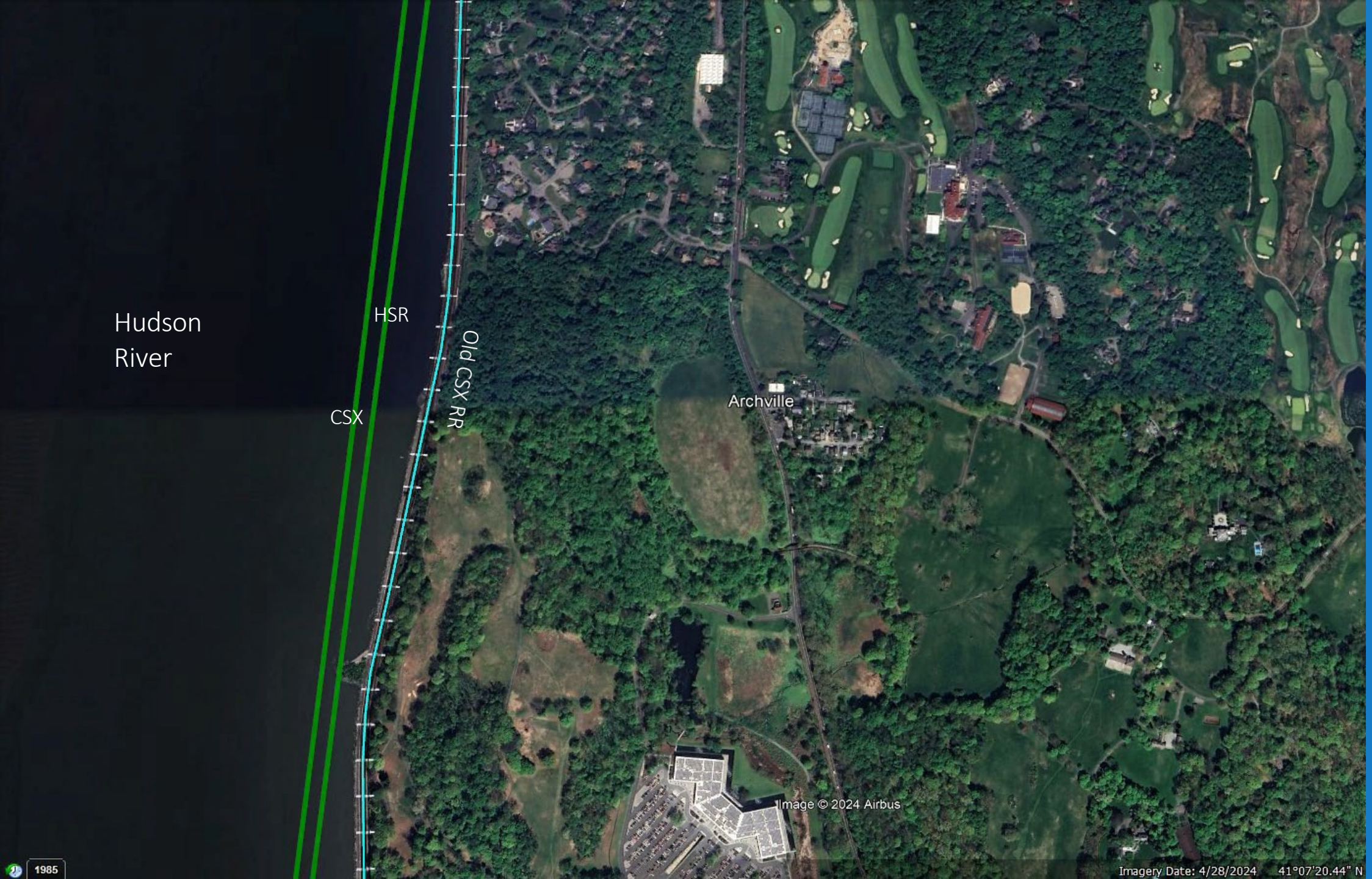


HSR at Philipse Manor and SLEEPY HOLLOW Yard

Our 49-acre HSR full-service train yard and storage, train wash, repair shops, and warehouses are here.

The existing two CSX tracks will remain in the service yard, and the east track will be transformed into a yard access road, enhancing the overall efficiency of our operations.

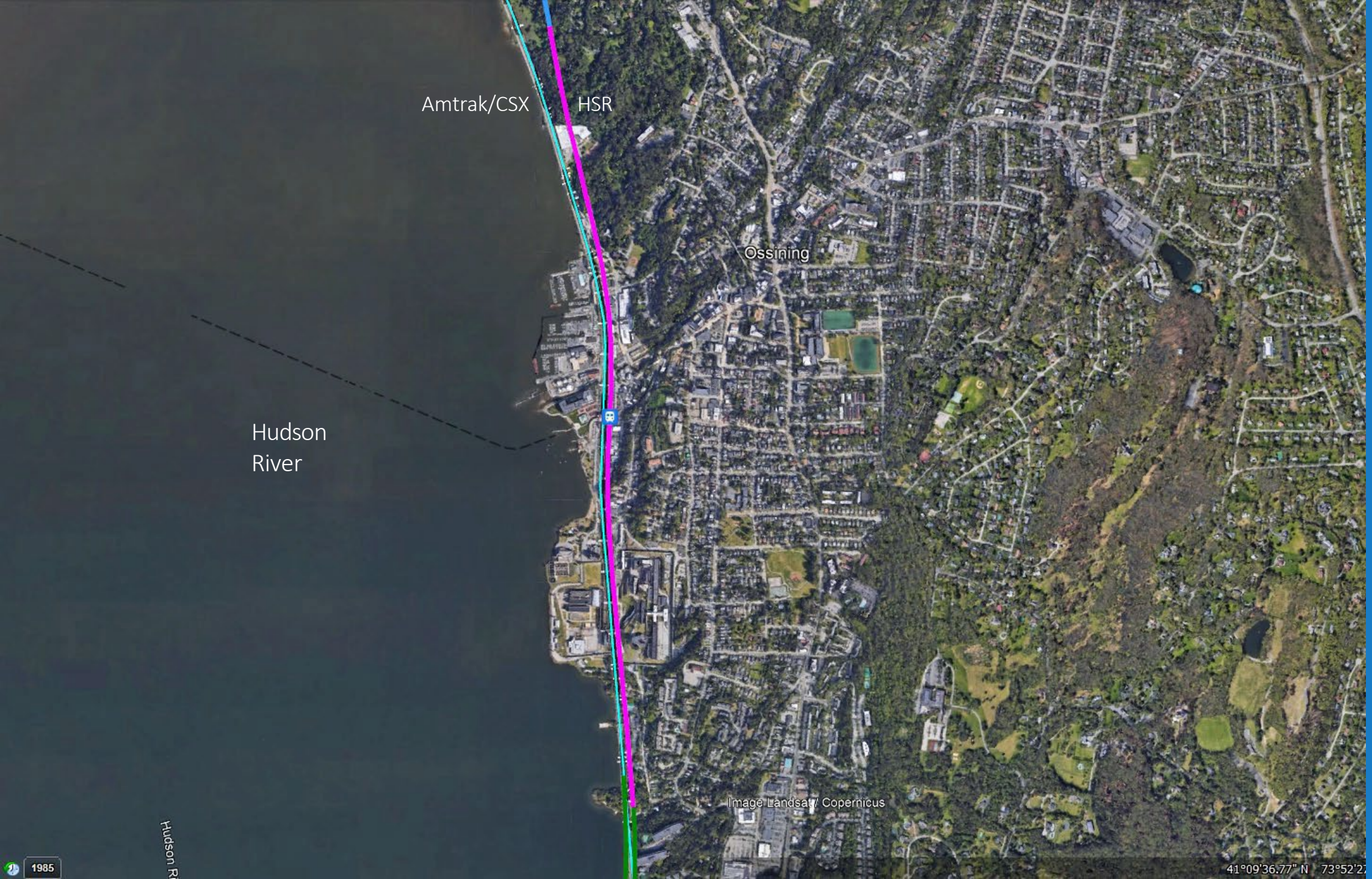
This yard is ± 25 miles north of Grand Central.



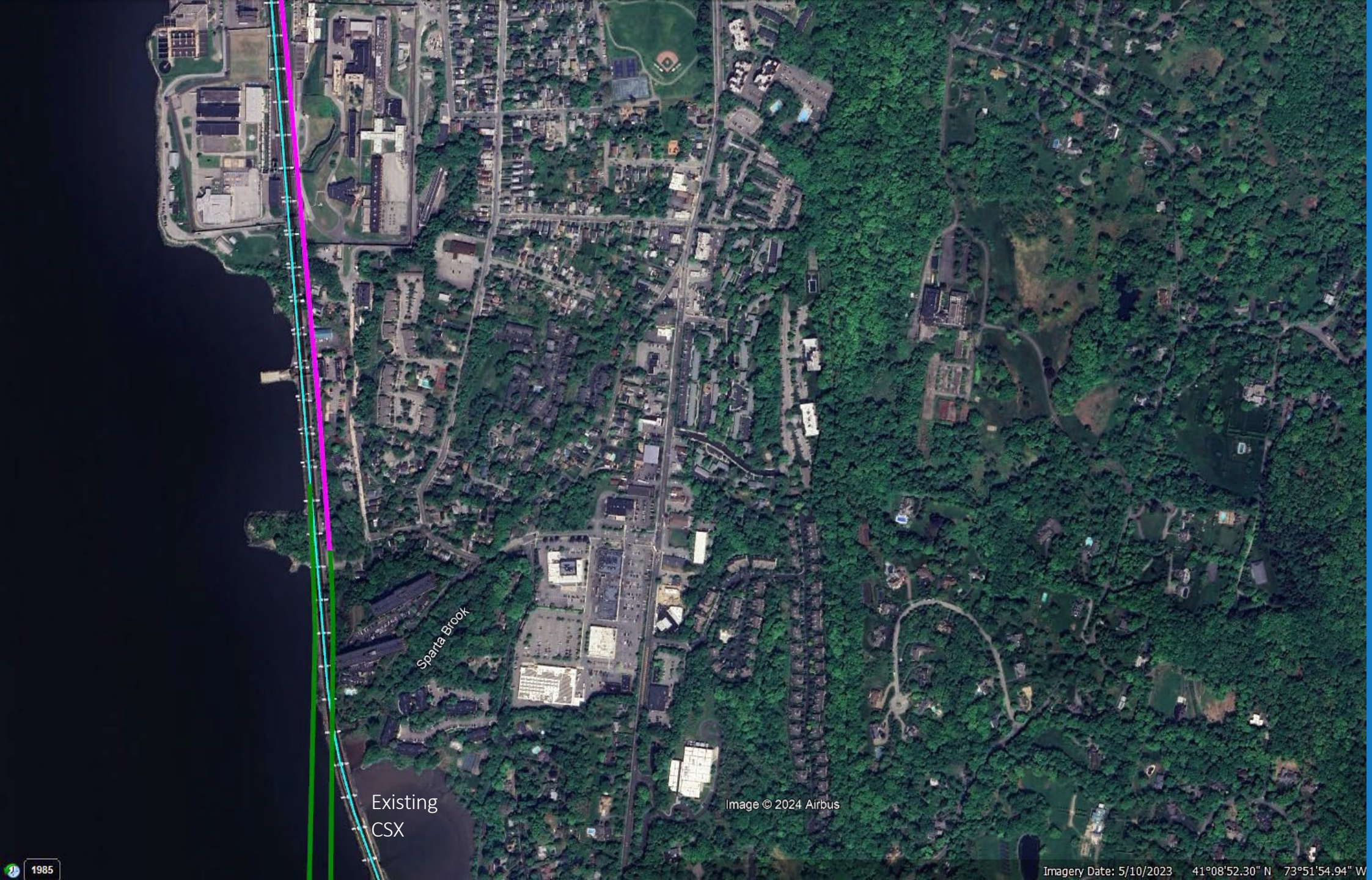
The new CSX and HSR Tracks are West of Archville and in the Hudson River infill.

The infill material is a Limestone type and can be compacted to support the dynamic train loads.

The existing CSX (Old CSX) will be closed between the SLEEPY HOLLOW Yard and south of Ossining.



Overview of HSR and Amtrak/ CSX at Ossining

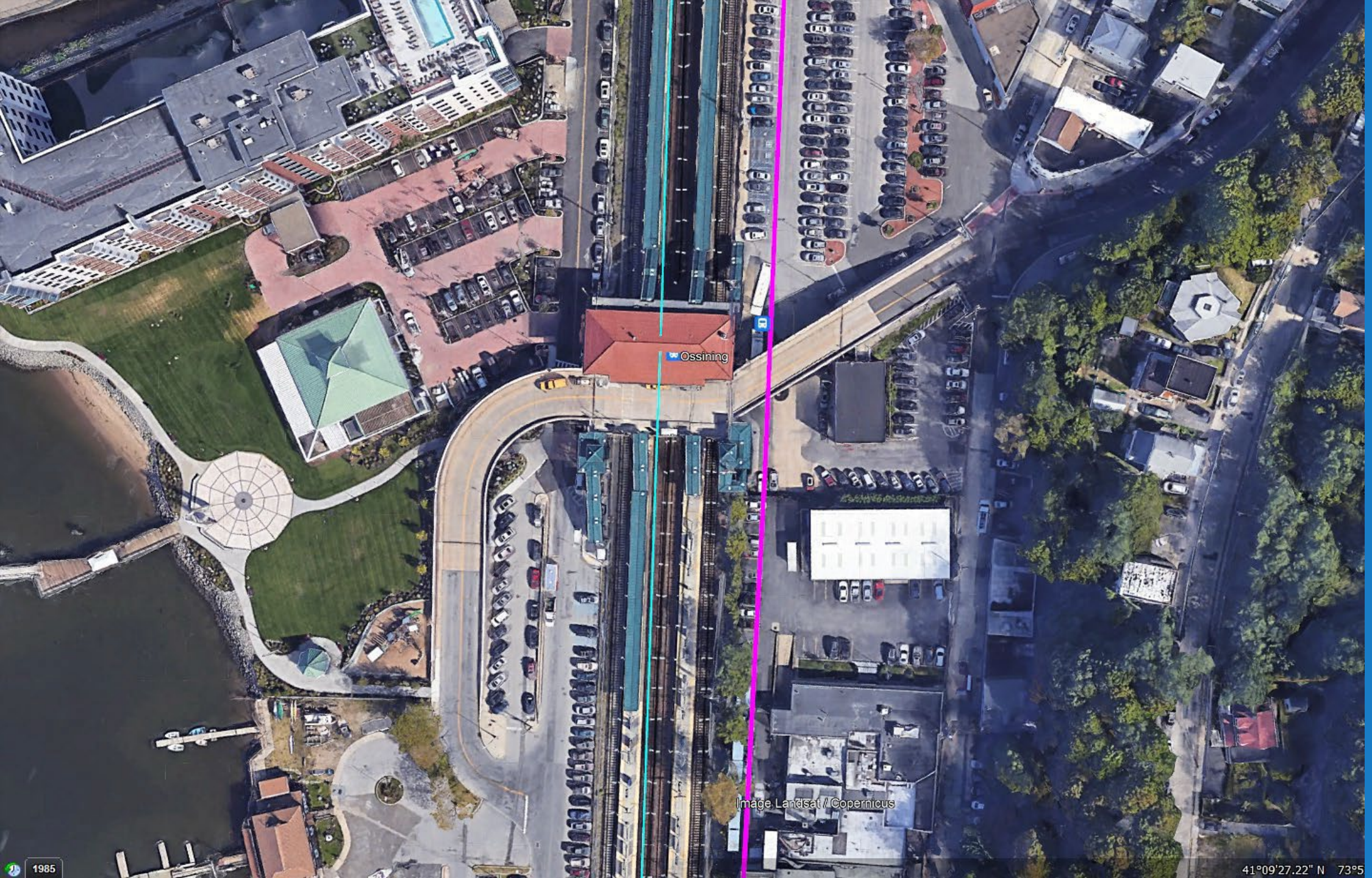


CSX and HSR Tracks South of Ossining

The CSX and the HSR tracks depart from the Causeway fill and intersect with the existing RR corridor.

The CSX will stay on the ground, and the HSR will be on a flyover.

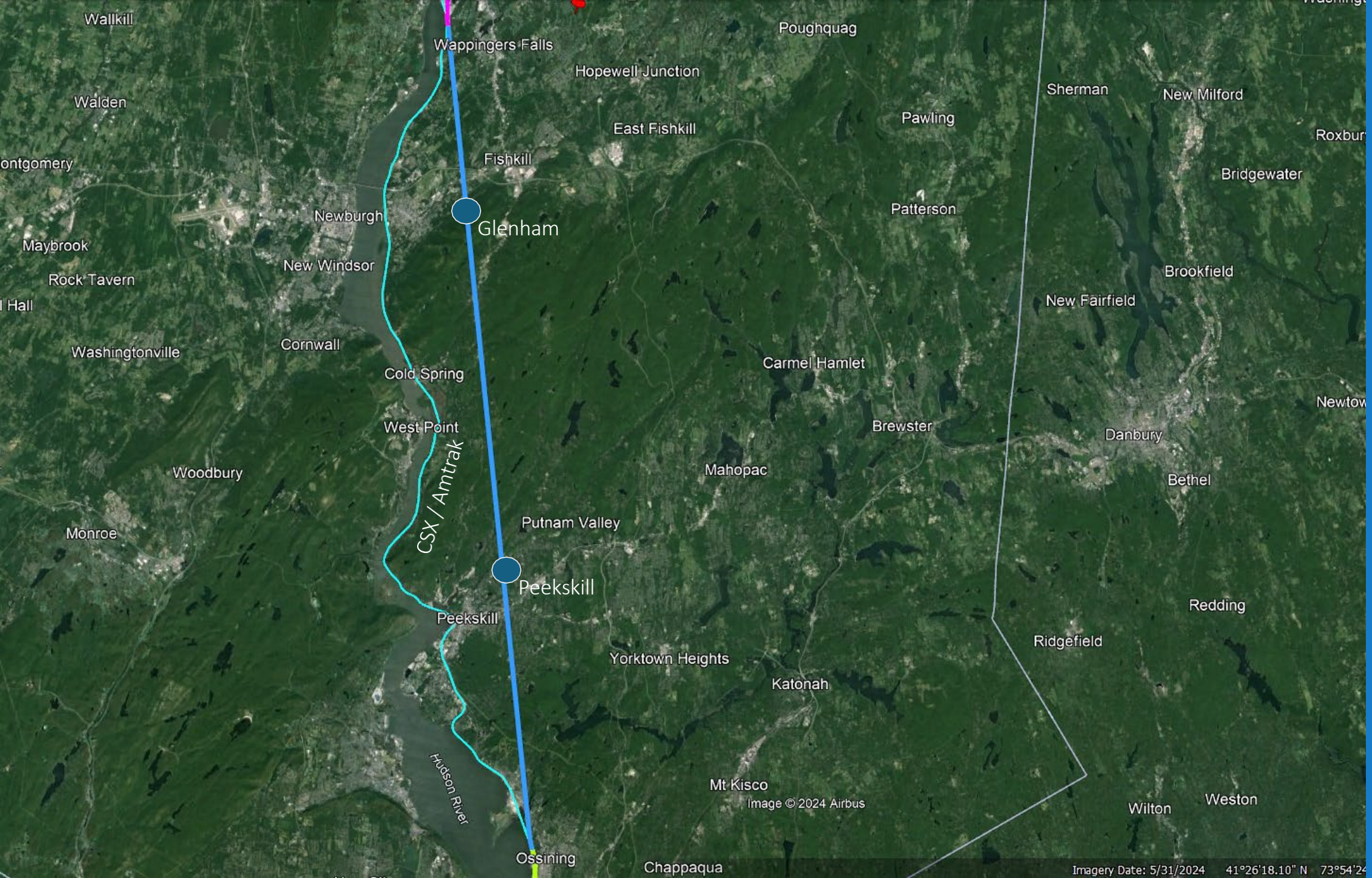
The existing CSX tracks will be eliminated.



HSR at Ossining Station

This station is elevated 48 ft.

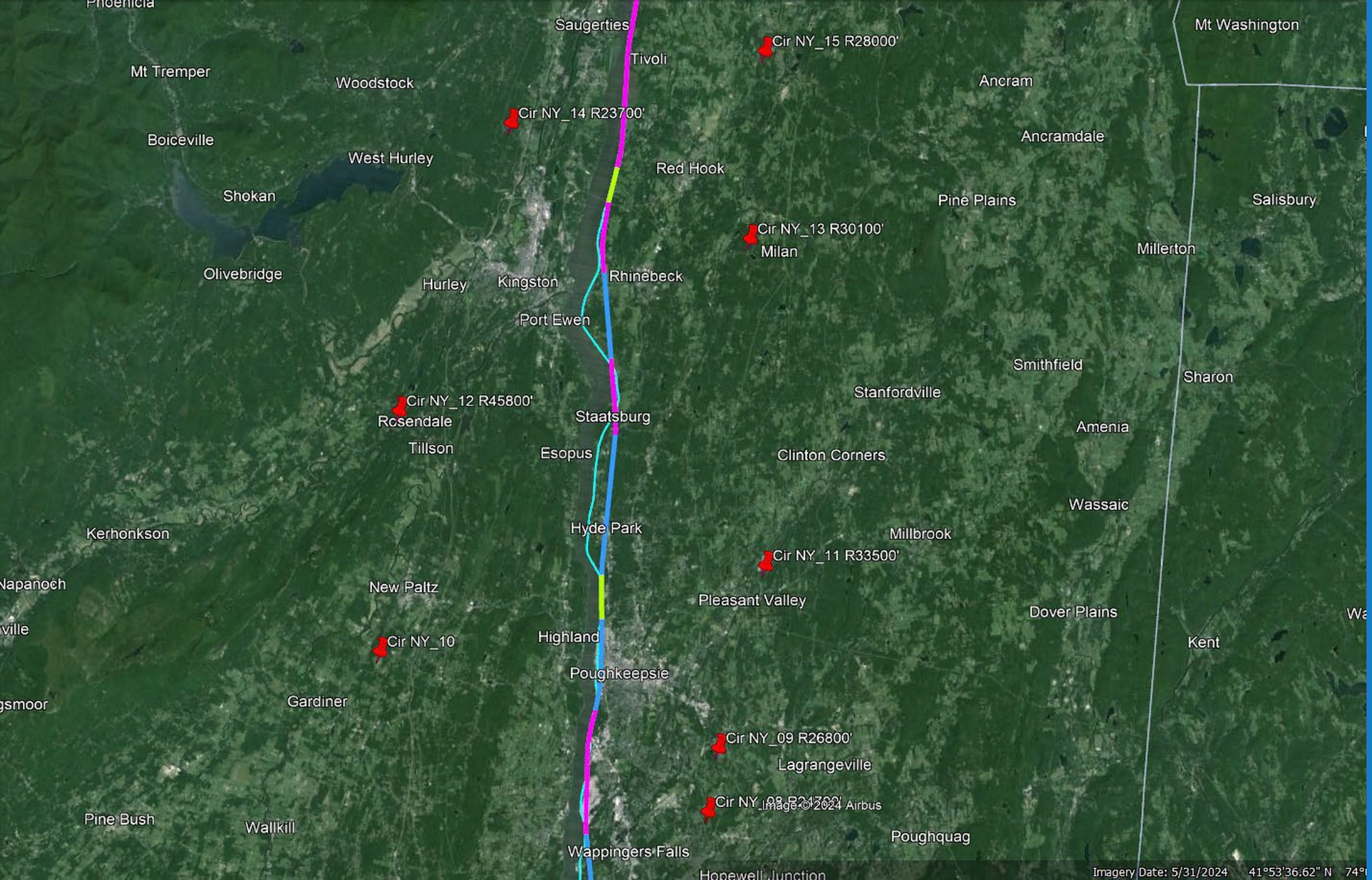
The platform has two tracks; no commuter trains stop on this flyover.



HSR between Ossining and Wappingers Falls

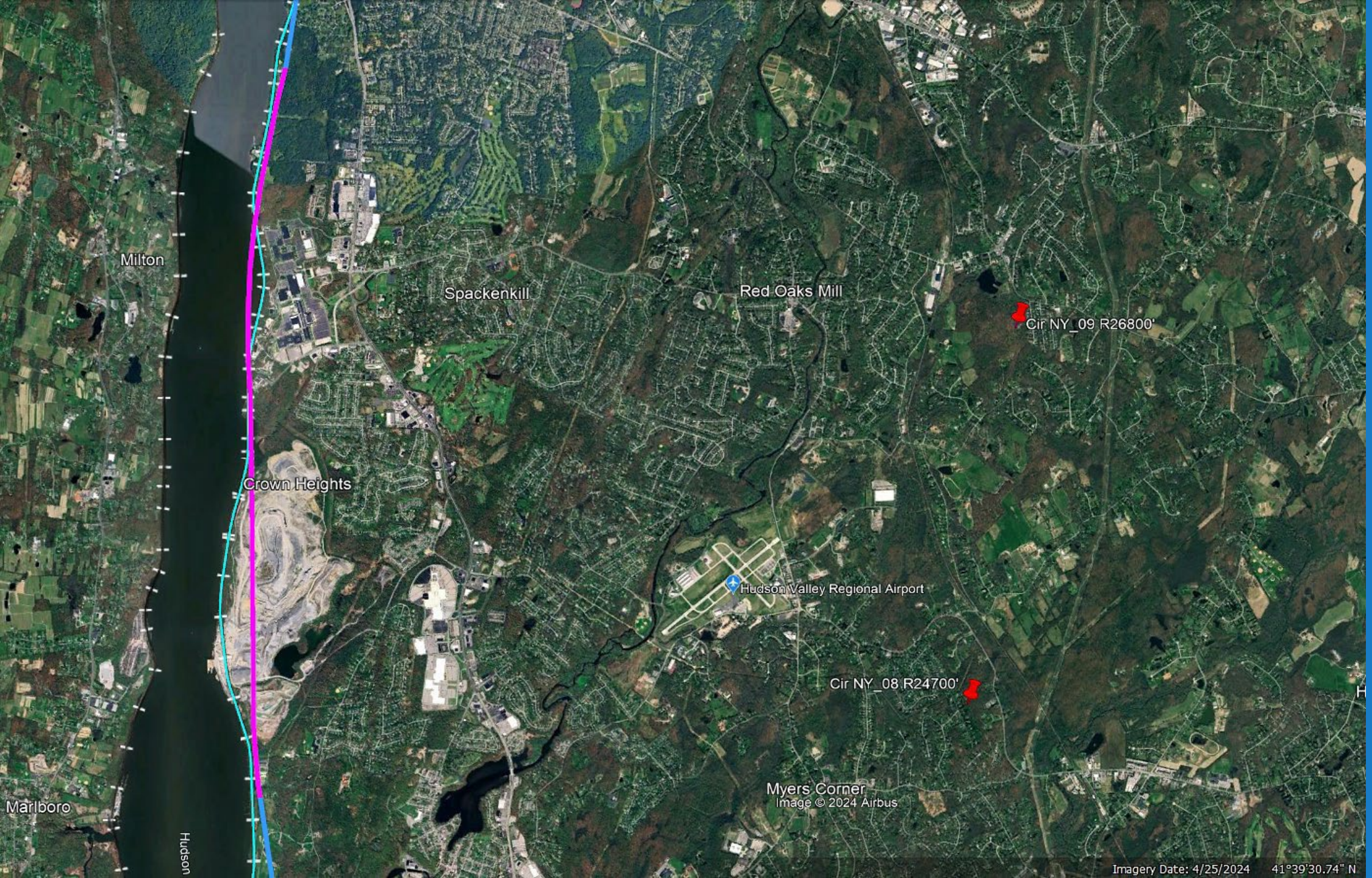
This tunnel has two vertical addits and ventilation shafts: one at Peekskill and the other at Glenham.

This tunnel eliminates all the CSX freight and Amtrak curves.



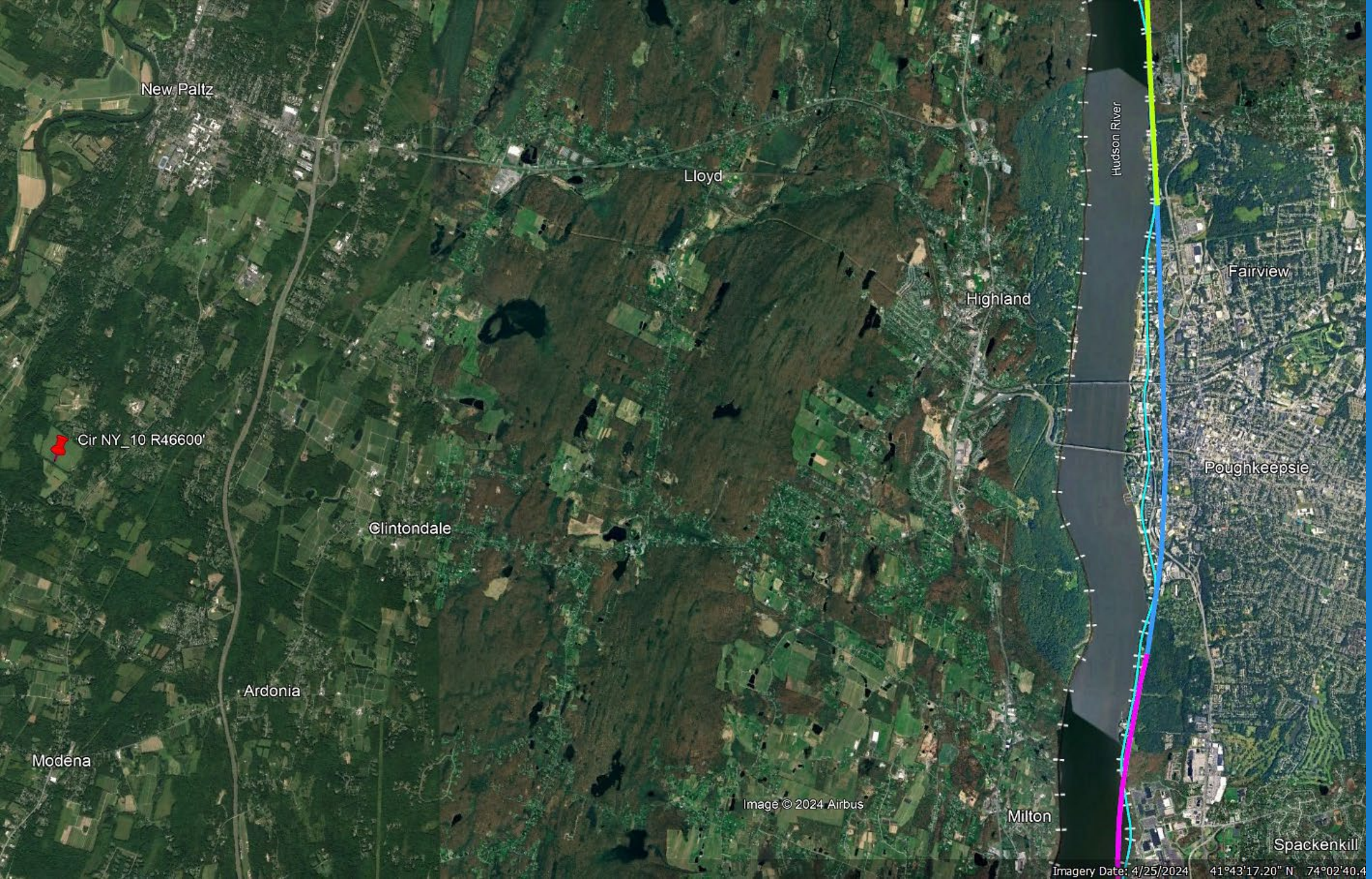
HSR between Wappingers Falls and Tivoli

The existing CSX and Amtrak corridors can not accommodate HSR train speeds.



HSR at Crown Heights

Here, the HSR will fly over the deep stone quarry pit.

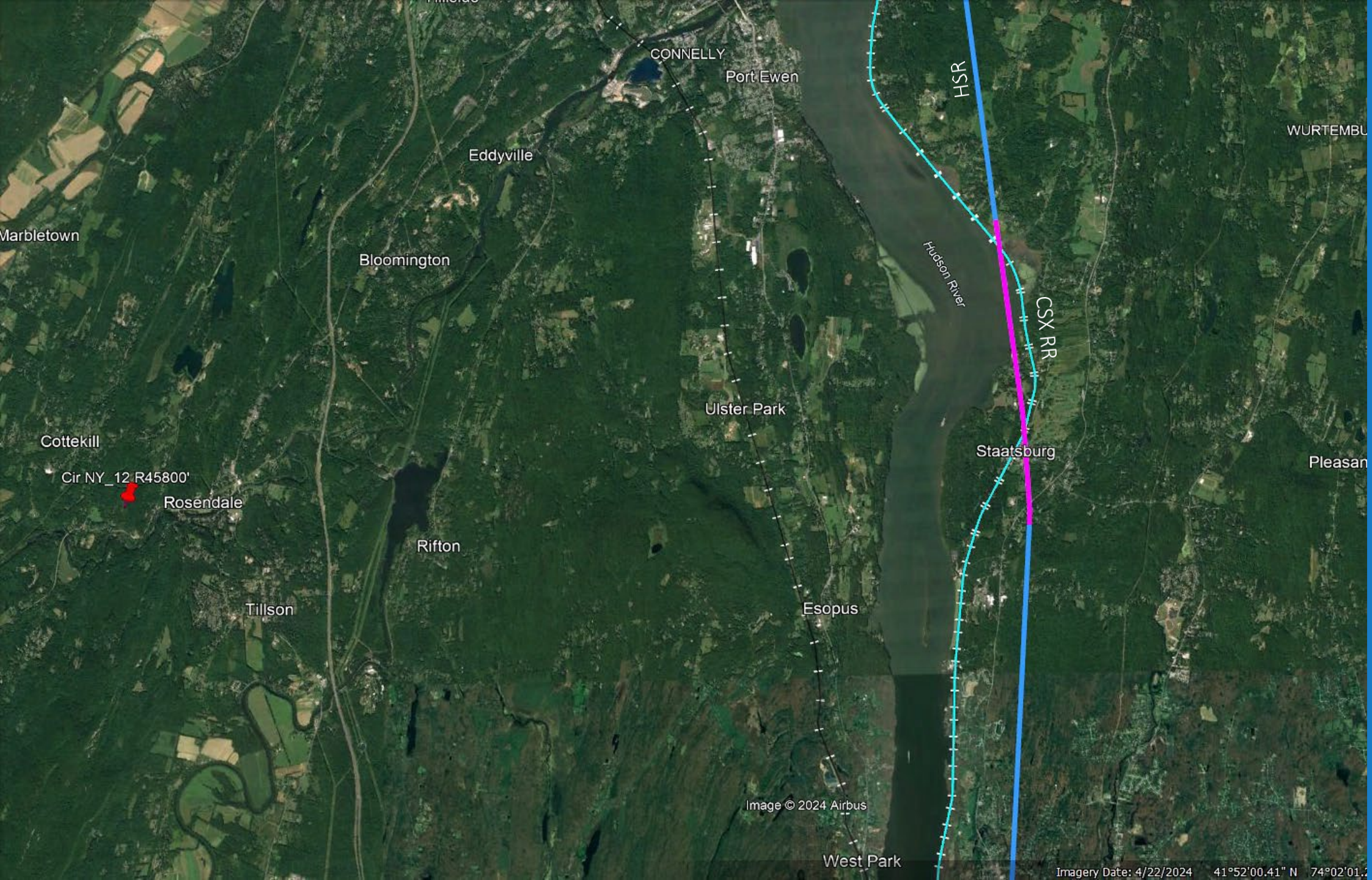


HSR at Poughkeepsie

The HSR will be in a tunnel to avoid all roadway crossings and the existing CSX corridor curves.

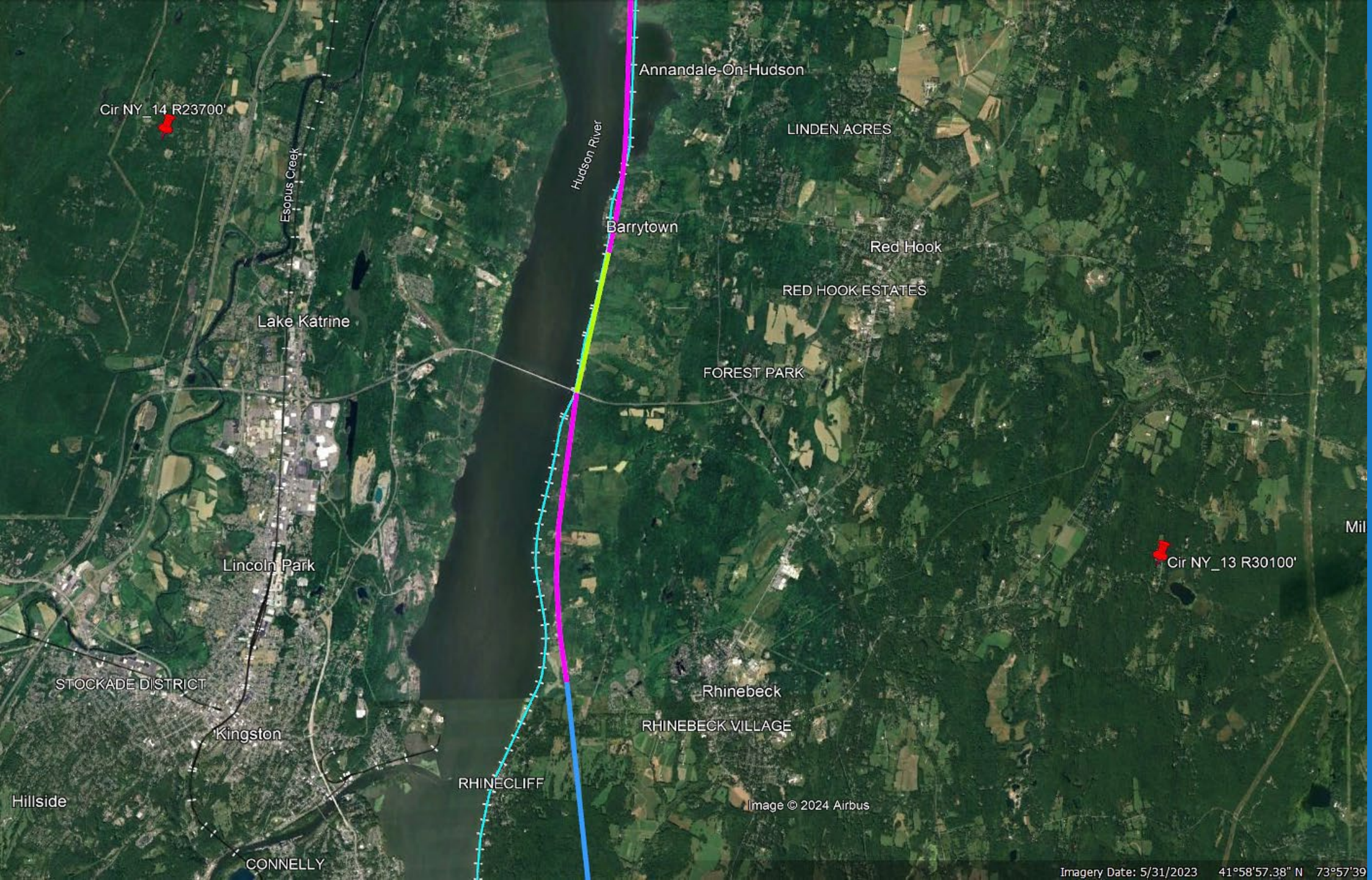
HSR at the Hyde Park Area

The HSR does avoid the many sharp CSX corridor curves.



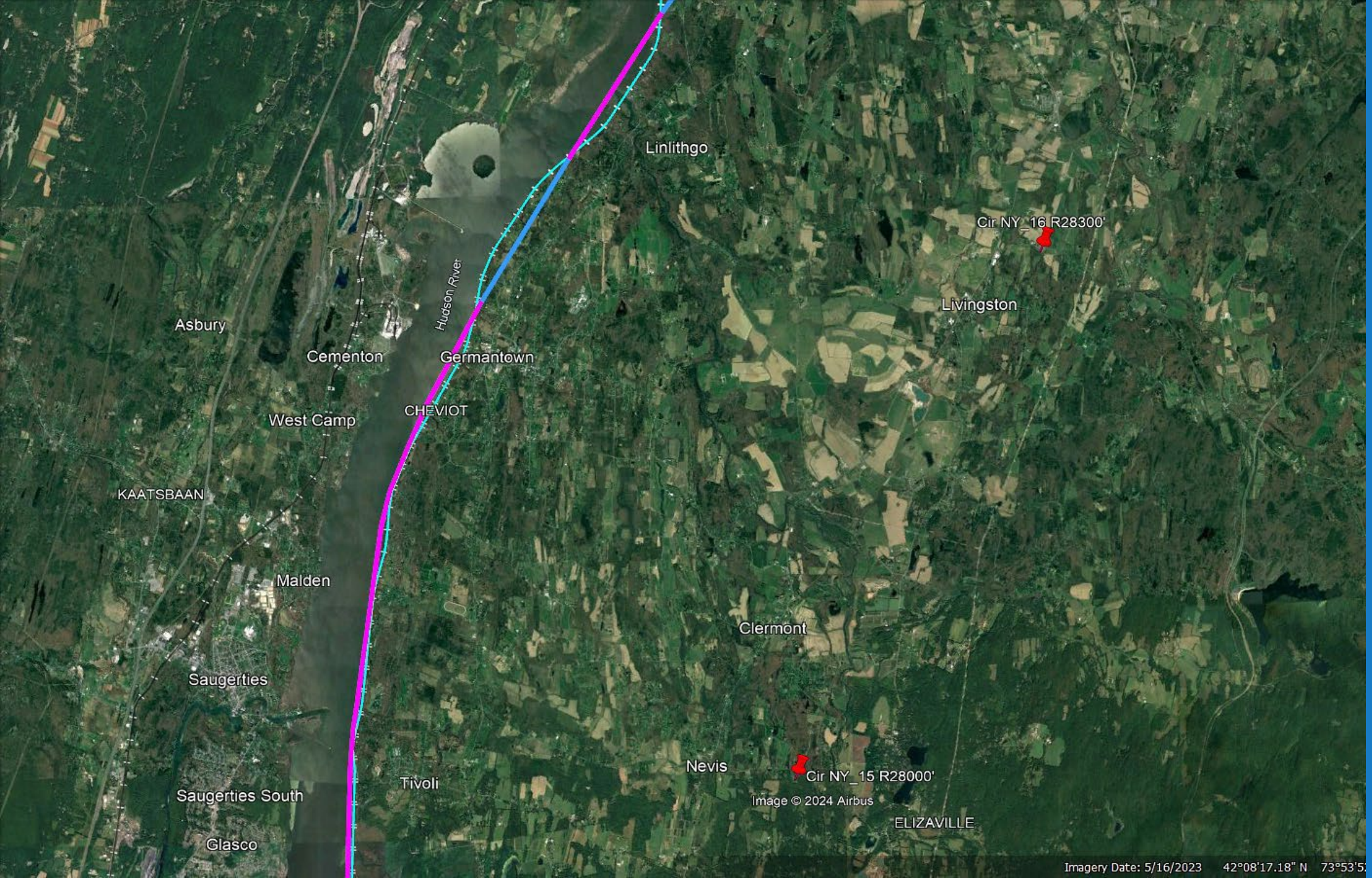
HSR at Staatsburg

The HSR will fly over the existing CSX corridor tracks in a vast curved radius.



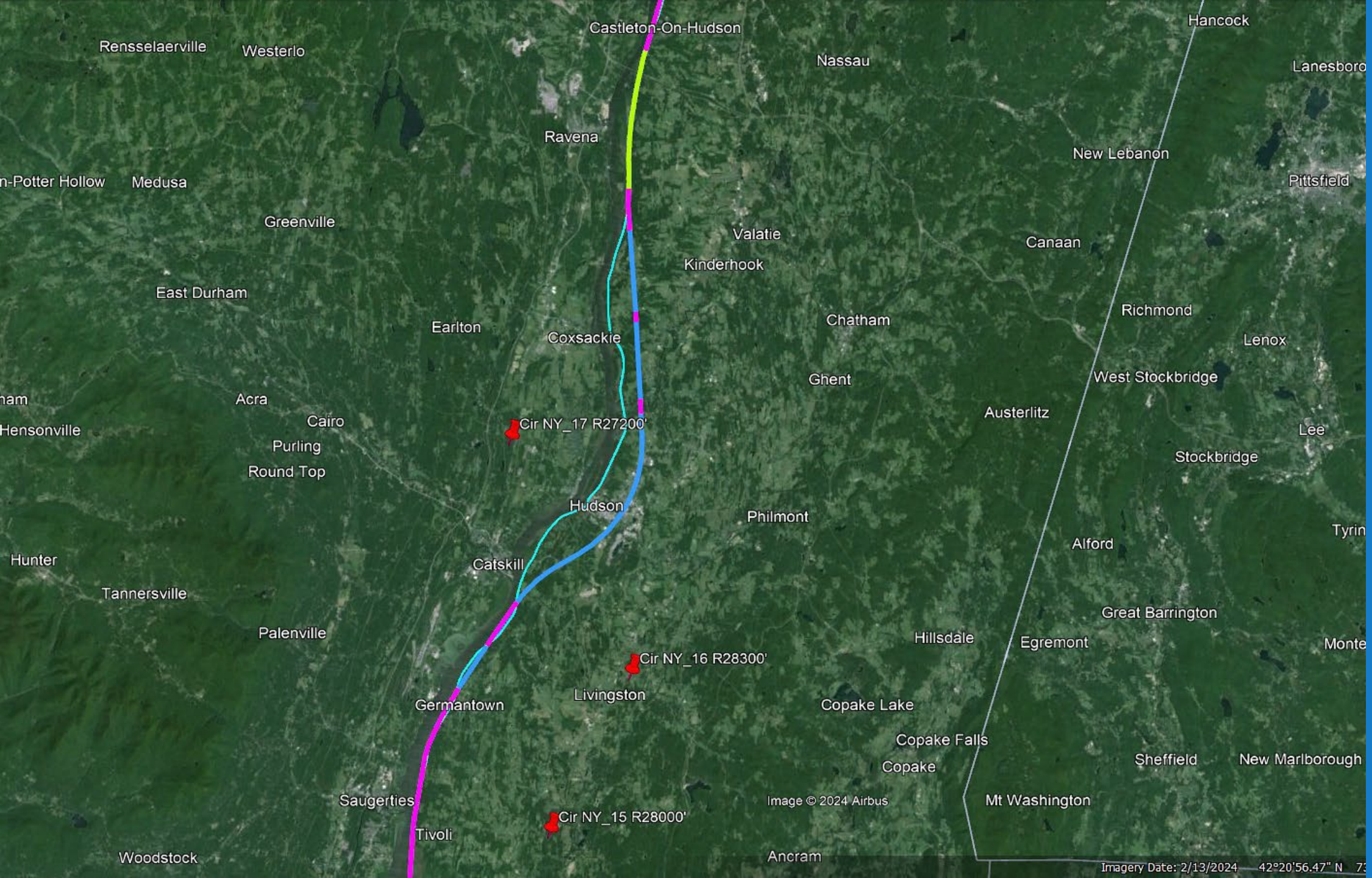
HSR in the Barrytown Area

The HSR is in vast curve radii. The CSX RR corridor cannot accommodate HSR train speeds.



HSR at the Germantown Area

Typical HSR corridor layout.

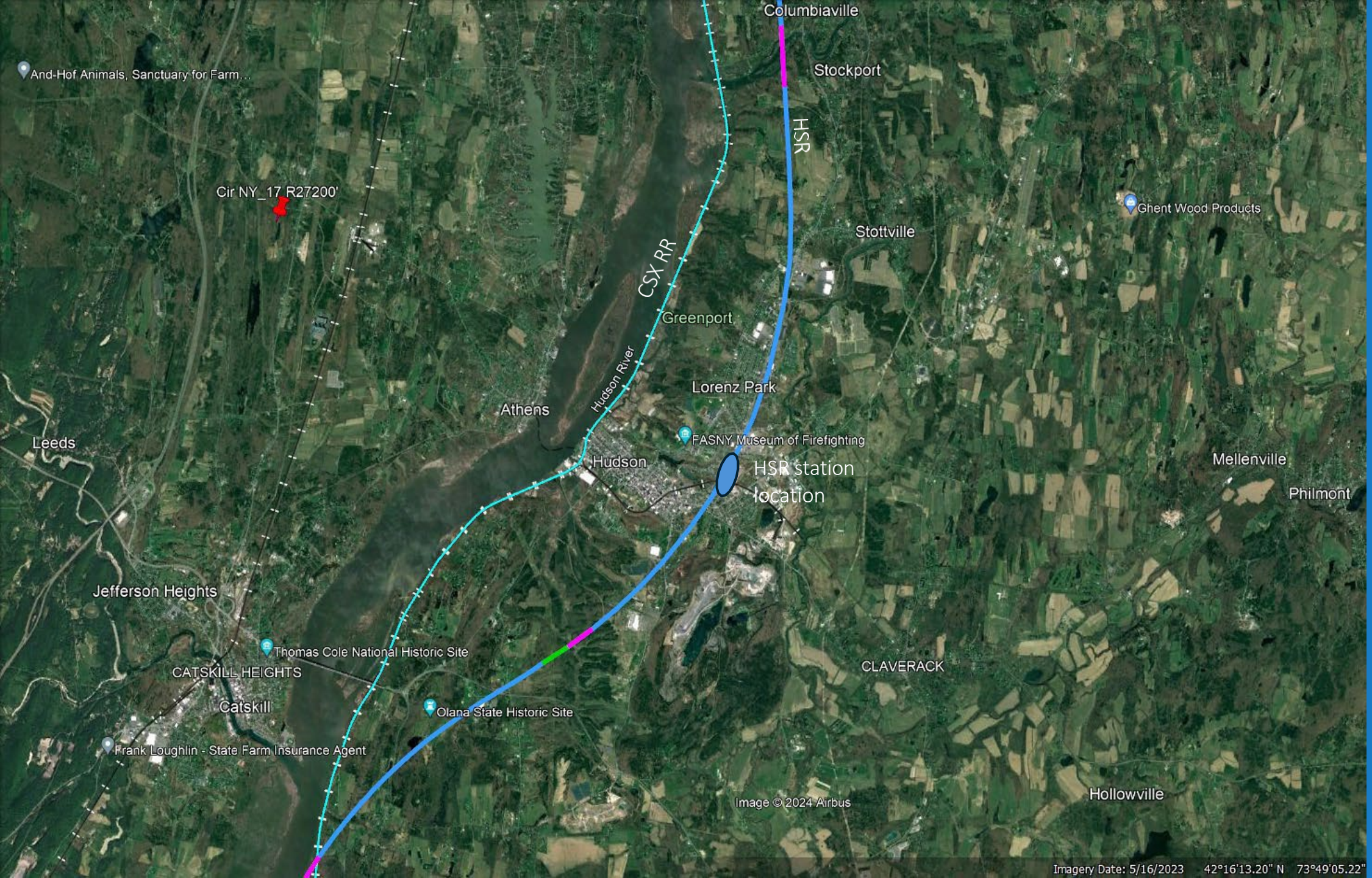


HSR between Tivoli and Castleton- On-Hudson

The HSR is on flyovers, tunnels, and on the ground.

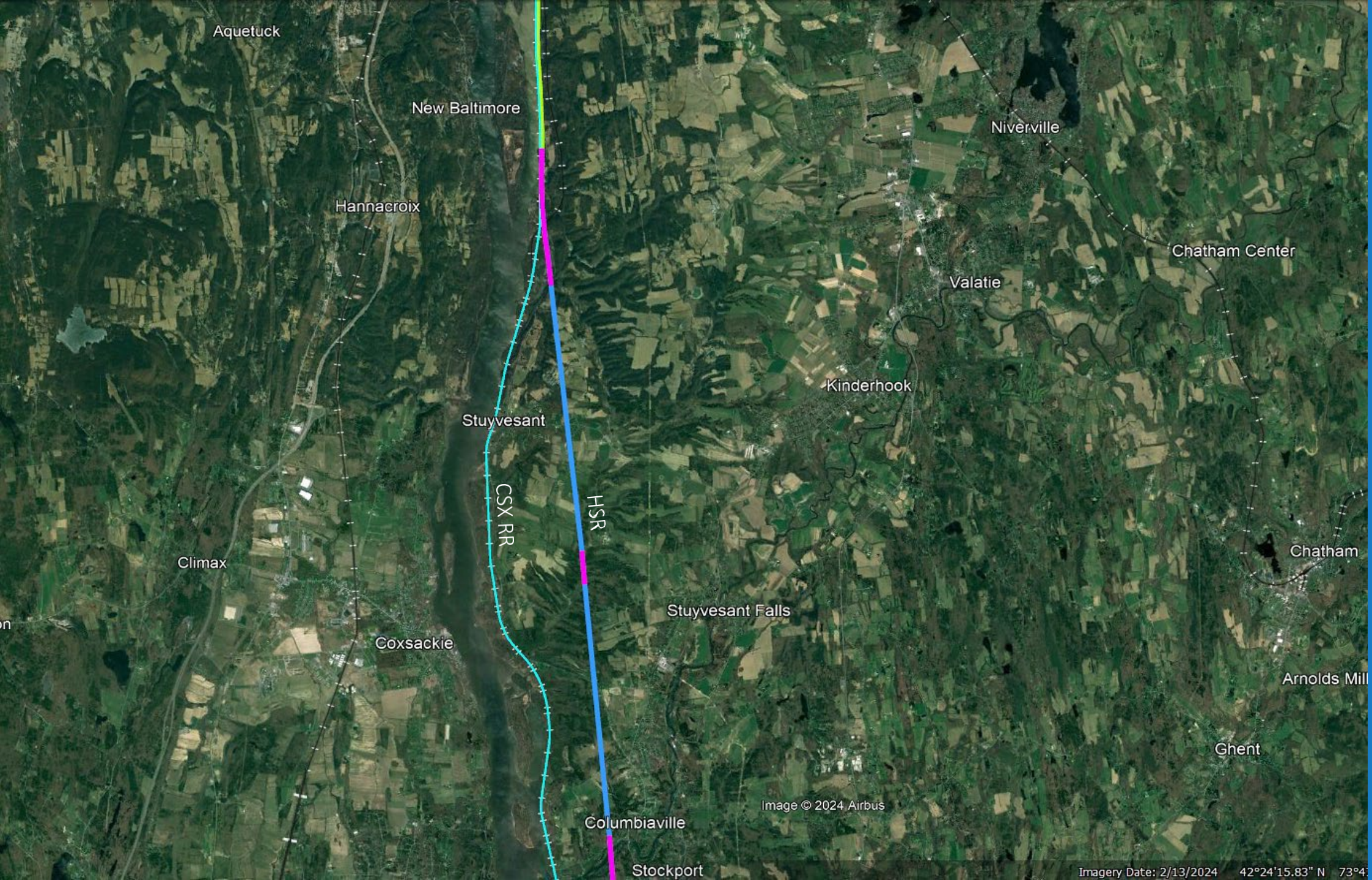
Note the large curve radii for the HSR corridor design.

The CSX corridor is not suitable for HSR train speeds.



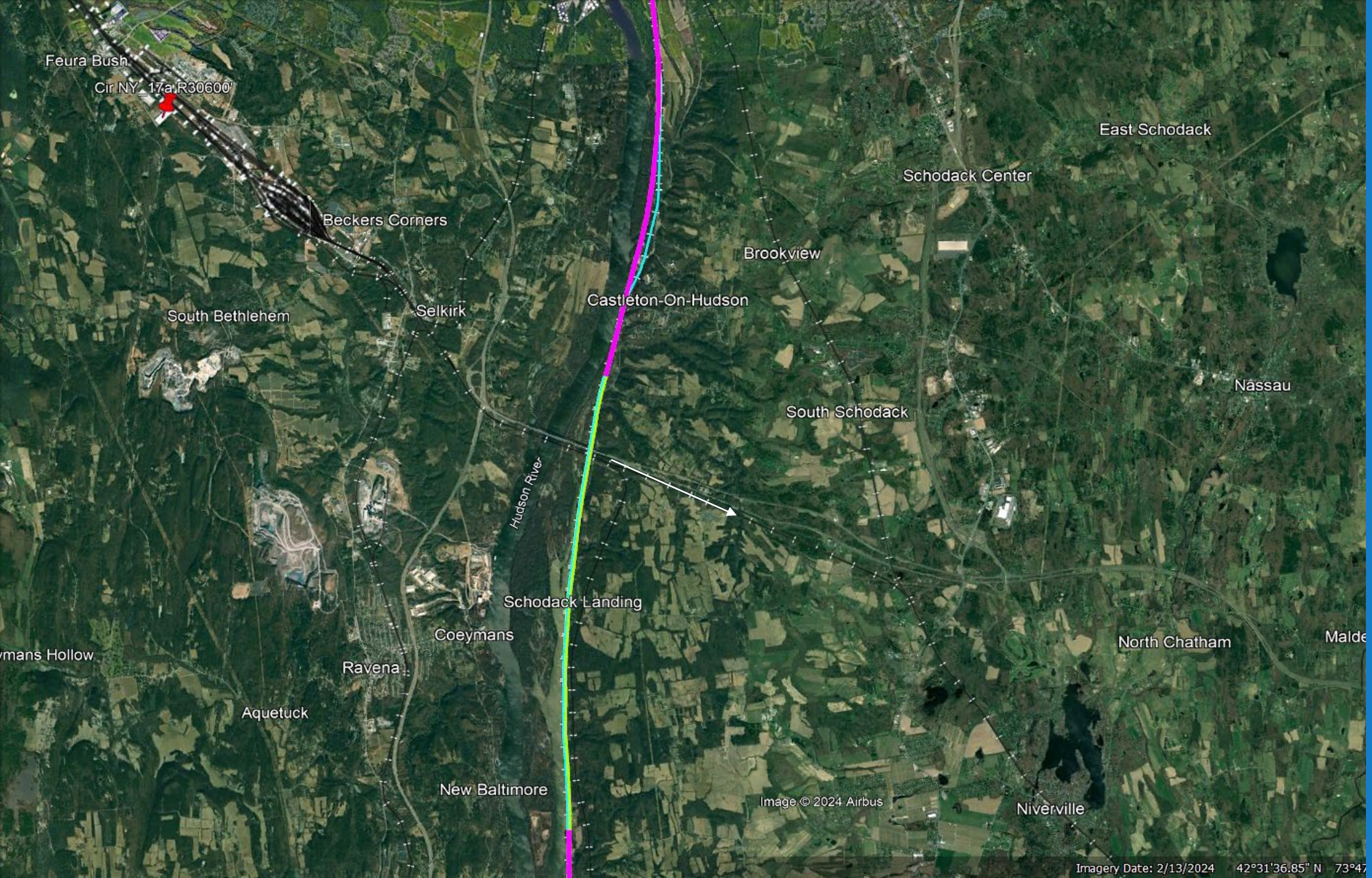
HSR at Hudson Area

Hudson may get an underground station.



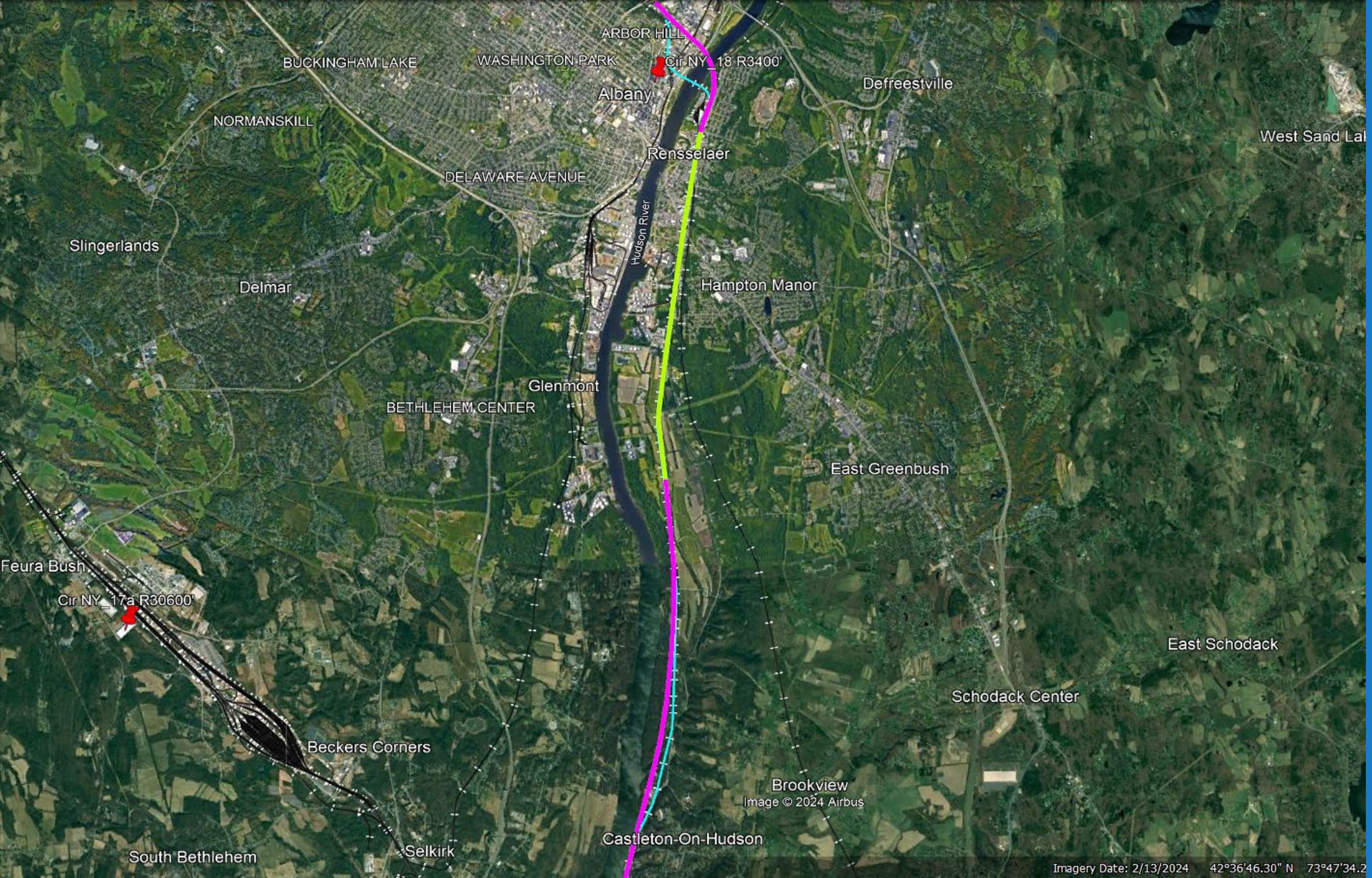
HSR between Stockport and New Baltimore

Note the straight HSR corridor and the curved CSX RR.



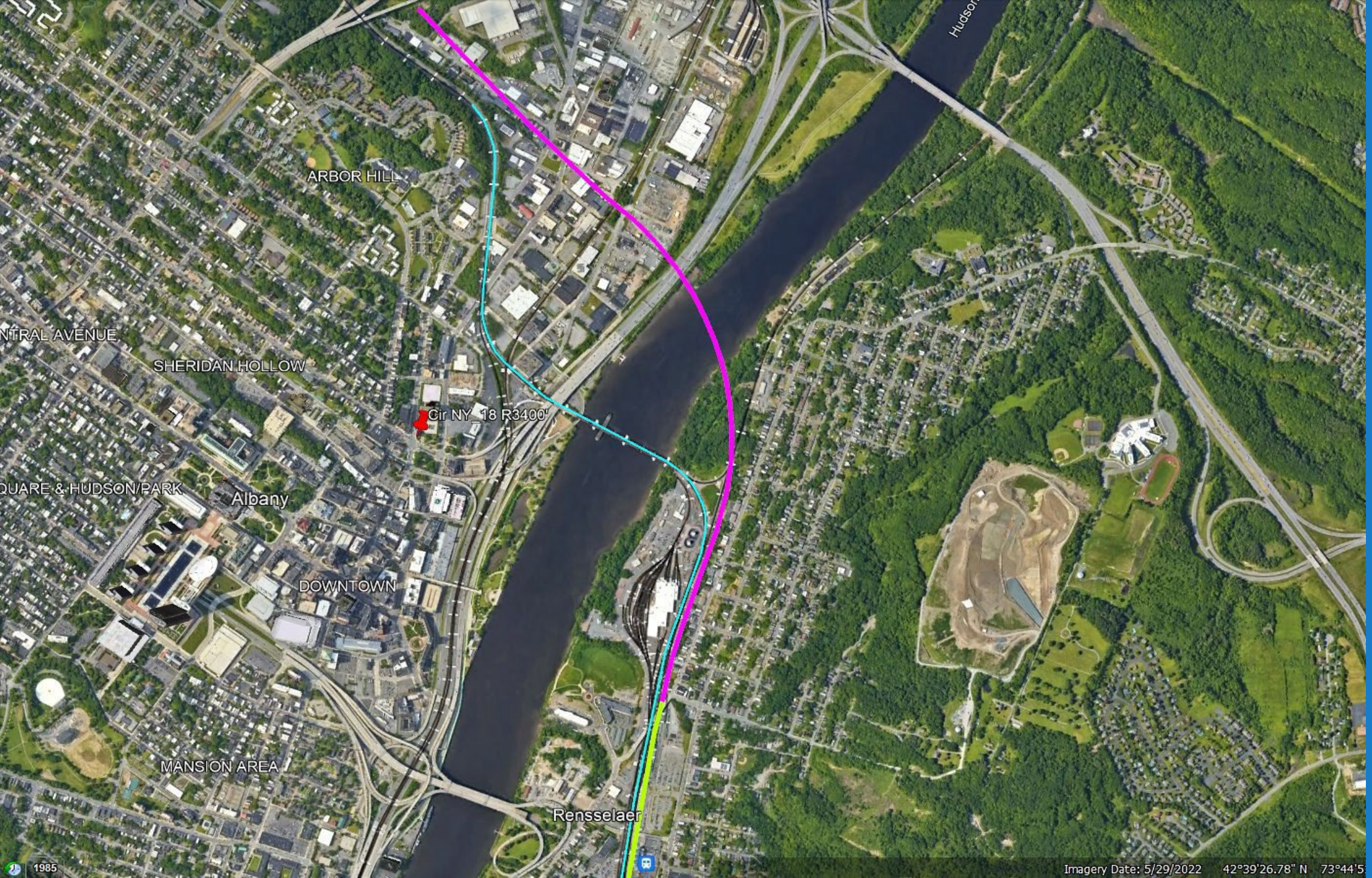
HSR at Castleton- On-Hudson

The arrow = future HSR corridor to Pittsville, MA, Springfield, and Boston.



HSR approaching Albany-Rensselaer

This area does not have an ideal location for a full HSR train service yard due to creek interference!



HSR at Rensselaer with New Flyover to Albany

HSR at the Amtrak Rensselaer Station

The HSR station may need to be a flyover due to insufficient space on the ground.

The frequently used HSR corridor must avoid interfering with CSX freight tracks.

HSR Miles between NYC and Albany, NY

On Ground	Cut/Fill	Flyover or Bridges	Tunnels or Underpass
0.50 Mi NY_010 CSX	0.54 Mi NY_012b new	1.81 Mi NY_013 new	0.31 Mi NY_001 new
0.25 Mi NY_012a CSX	0.73 Mi NY_012c CSX?	3.10 Mi NY_018 new	0.83 Mi NY_002 new
1.78 Mi NY_016 CSX	3.44 Mi NY_012e new	2.86 Mi NY_020 new	2.54 Mi NY_003 new?
1.44 Mi NY_021 CSX	5.00 Mi NY_014 new	10.6 Mi NY_022 new?	4.34 Mi NY_002a new
5.64 Mi NY_032 CSX		2.12 Mi NY_024 new	3.00 Mi NY_009 new
3.92 Mi NY_034 CSX		0.61 Mi NY_027 new	10.60 Mi NY_011 new
		0.41 Mi NY_029 new	1.89 Mi NY_012d new
		1.70 Mi NY_031 new	30.3 Mi NY_013a new
		4.92 Mi NY_033 new	3.68 Mi NY_015 new
		1.74 Mi NY_035 new	5.66 Mi NY_017 new
			3.47 Mi NY_019 new
			2.00 Mi NY_023 new
			2.58 Mi NY_025 new
			7.10 Mi NY_026 new
			3.10 Mi NY_028 new
			3.28 Mi NY_030 new
13.53 Miles	9.71 Miles	29.87 Miles	84.68 Miles
			Total 137.79 Miles HSR
			Total 141 Miles Amtrak

NYC- Tarrytown - Albany travel time 48 minutes HSR with one-stop

NYC – Croton/Harmon – Albany travel time 2 hours and 25 minutes with one-stop

The CSX corridor will still provide commuter train services