The Metropolitan Transportation Authority
Acting By
The MTA Capital Construction Company

MTA CONTRACT #6240

DESIGN-BUILD SERVICES
FOR
LIRR EXPANSION PROJECT
FROM FLORAL PARK TO HICKSVILLE

CONFORMED DOCUMENTS

VOLUME 1 – DESIGN-BUILD AGREEMENT
EXHIBIT C – PART 5 (Book 9 of 9)

VOLUME 2: TECHNICAL

PACKAGE 3:

SCHEDULE AND CONSTRUCTION IMPACT MITIGATION

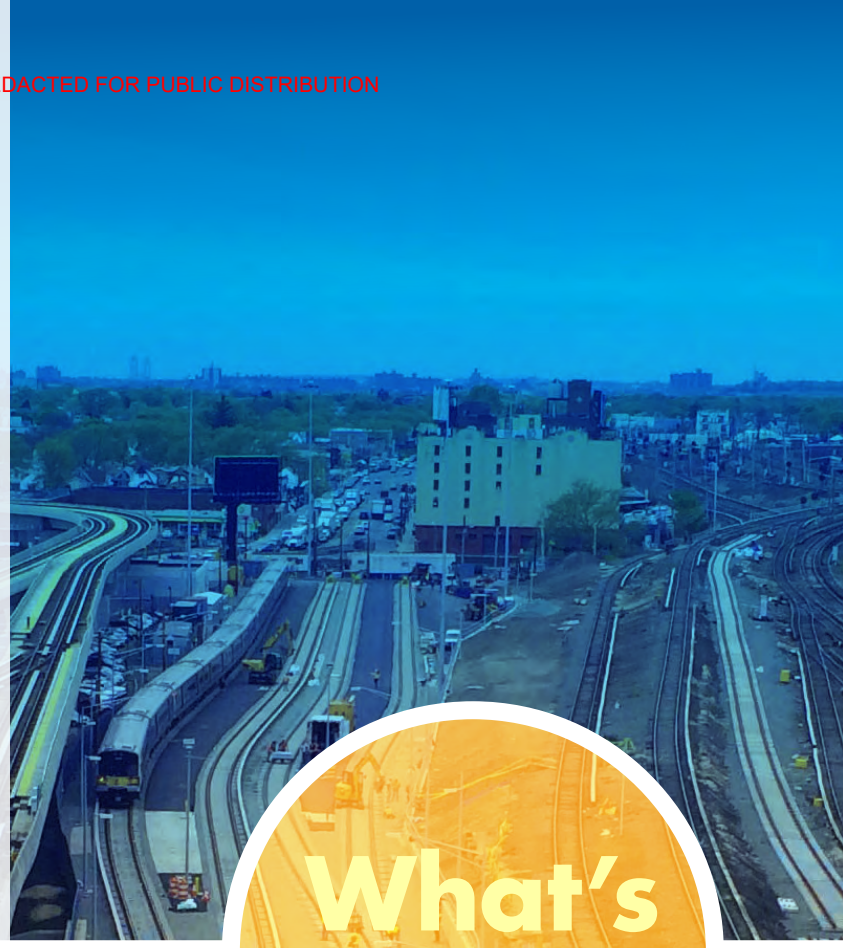
LIRR CONTRACT #6240

Design-Build Services for LIRR Expansion Project from Floral Park to Hicksville

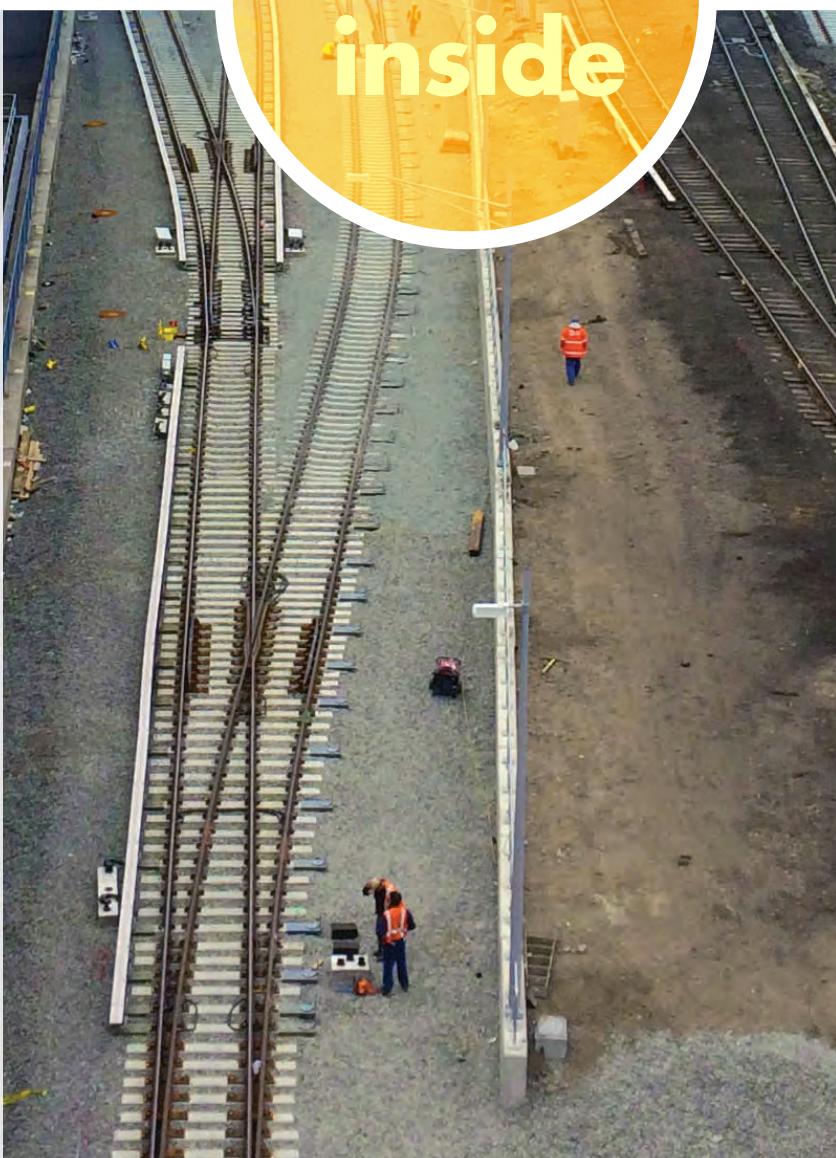
Long Island Rail Road

3rd TRACK CONSTRUCTORS
Picone | Dragados USA | CCA Civil | Halmar
In association with Stantec

VOLUME 2:
Package 3: Schedule and Construction Impact Mitigation



What's inside



3.1 Project-Wide Construction Approach

Volume 2 - Package 3: Schedule and Construction Impact Mitigation

3.1 Project-Wide Construction Approach

The LIRR Expansion Project (the Project) is an approximately 10-mile expansion of the existing LIRR line between the Hicksville and Floral Park Stations. The primary goal of this Project is to provide increased service and reliability annually to millions of people currently traveling between Nassau/Suffolk County and New York City's Penn Station and ultimately Grand Central Station. The Project will also help to reduce travel congestion and its associated emissions on Long Island while simultaneously improving safety for numerous Nassau County travelers.

3rd Track Constructors (3TC or Team) is a design-build joint venture (DBJV) of John P. Picone, Inc. (Picone); Dragados USA, Inc. (Dragados); CCA Civil, Inc. (CCA); and Halmar International LLC (Halmar), in association with our Lead Designer, Stantec Consulting Services, Inc. (Stantec). Our Team has the right combination of local Nassau County experience and large international design-build transit delivery, which gives us proven performance, capability, and knowledge to deliver a long-awaited commuter rail expansion that will set a new benchmark for the United States (US) public works projects in terms of value to the public, and most importantly, design, and construction.

Our overall construction approach is summarized in the table below:

CONSTRUCTION APPROACH	
Operation Constraints	Rail Road Operation requirements will always be met and prioritized: "Commuters first"
Community Impacts	Minimization of impacts and early community involvement for every construction activity. 3TC brings an individualized approach to its relationship with the Communities through the "ambassador" program proposed in the Outreach Management section.
Manpower	3TC will control peaks and valleys of the volume of construction forces that will be required in Nassau County.
Self-Performance	3TC's ability to self-perform a majority of the work strengthens the confidence we have in our schedule.
Fabrication	3TC will get a jump start on material fabrication to ensure schedule certainty especially from a Rail Road systems perspective. Main fabrication elements will be concrete precast (hybrid poles, retaining walls & sound walls), steel girders, and traction power substations.
Deliveries	Truck deliveries will be planned to prevent disruption to rush hour traffic nor will they be noisy in the later evening hours. We will maximize the use of the existing track to transport materials to and from the work sites.
Storage and Laydown Areas	3TC will take advantage of currently unused space and the espace created by the existing buildings demolition. A thorough list of potential places is shown in this document.)
Parking	3TC will shuttle workers from locations such as Source Mall or other underutilized locations. 3TC has made arrangements to use the former Nassau County Family Court building in Mineola for this purpose.
Work Blocks (Areas)	Block 1: Q3 – N1 Block 2: N1 – N3 Block 3: N3 – D1
Commuter Impacts	3TC will reduce number of outages that we will require and as a result shorter construction duration. Only one double track outage will be needed for each bridge superstructure full replacement and for each at-grade crossing elimination.

CONSTRUCTION APPROACH	
Tree Removal	Construction of the project will result in the removal of some trees within the ROW. Our Team will perform a selective tree assessment, minimizing the tree removal to the maximum extent possible and reducing the visual impacts.
Construction	Uniform temporary fence/barrier will create a barrier between our construction and the community. Neatly clad chain-link fences in uniform green tennis mesh or printed mesh with approved enhancements, such as photos or artwork, will be implemented.
Early Work	Design, borings, test pits, utilities, prefabrication of permanent materials
Construction Risk associated with each of the Project elements	Bridges, Grade Crossing closures, grade crossing separations, retaining walls, sound walls, stations, parking garages, track, RR systems, and utilities.

3.1.1. Overall Construction Approach

3TC's construction approach on the Project is based on the challenges to meet Rail Road Operation requirements and constraints with the goal of minimizing impacts to the adjacent communities and commuters, while at the same time reducing the number of lane closures and track outages from the ones prescribed in the RFP. These principles will drive every single construction activity.

3TC will divide the job limits into three areas following RFP Volume 3 Section 3.19.6 Staging and Tie-ins: Block 1 (from Queens (Q3) to Nassau 1 (N1)); Block 2 (from N1 to Nassau 3 (N3)); and Block 3 (from N3 to Divide 1 (D1)). These three Blocks will have specific management staff assigned in order to enhance the awareness and knowledge of each community and municipality and will enforce the requirement of consistency throughout every prevailing timetable for single track outages in any of the three blocks. Our strategy is to create a smaller area of responsibility for civil and structural works assigned to each Area Manager (Blocks 1 & 2 & 3), enabling a more effective approach to mitigating construction delays and community impacts. This strategy will also help in achieving a more efficient use of construction crews and material/equipment resources. The Station/ Facility Manager, the Railroad Infrastructure Manager, and the Systems Manager will directly coordinate with the three Area Managers on daily construction operations.

The ACS Group, which is Dragados and Picone's holding company, had revenues in excess of $39 billion in 2015 and has been consistently ranked No.1 on the ENR Top 250 International Contractors List over the last years. Dragados has also been ranked No. 7 on the 2017 ENR Top 50 Domestic Heavy Contractors in the US. Similarly, CSCEC, which is CCA's parent company, had revenues in excess of $115 billion in 2015 and has been ranked No. 1 on the ENR Top 250 Global Contractors List.

The Project will require a remarkable labor force to accomplish the goals of completion concurrently minimizing negative affect to the Rail Road operations. The acquisition of this significant quantity of skilled labor will be achievable with the completion of large projects in the area such at Tappan Zee Bridge and Goethals Bridge replacement projects.

As with all major projects, and certainly with this Project, many specialty subcontractors will be utilized. However, with the past experiences of the 3TC Team members, self-performance of most aspects of the Project will be achieved. 3TC has committed to specialty subcontractors:

- E-J Electric Installation Co. (E-J Electric) for all electrical and signal work
- J-Track, LLC (J-Track) for all track work

E-J Electric is New York's leading electrical contractor for transit work. E-J has delivered large scale and complex train signal work in recent years from Atlantic Yards Phases one through four, World Trade Center Path and Installation of ST Signal Aspects on the Lexington Avenue Line. Projects vary in size up to [redacted]. As a team member of the 3TC, E-J Electric is committed to bringing its top full-time and part-time dedicated, seasoned and experienced professionals.

J-Track provides comprehensive track and transit system construction services, encompassing track, concrete, excavation, signal and power work.

Structures rehabilitation, retaining walls, structural steel erection, precast construction at stations and excavations will be self-performed and make up the majority of the critical work on the Project.

The Project will require designs and material fabrications delivered to the Project on a timely basis. The nine-month design period, from Limited Notice to Proceed (LNTP) to Notice to Proceed (NTP), also known as the preconstruction period, will be used to finalize designs, produce and approve shop drawings and ultimately generate fabricated materials for the Project, in some instances, 5 months after the construction Notice to Proceed (NTP). 3TC recognizes and is committed to adequately staffing the Project during the Design Phase and the fabrication stages with seasoned personnel capable of efficiently managing the timely submittal of design deliverables and construction materials. The preconstruction period will also be utilized for the most critical utility relocation planning, including test pit work to clarify utility as-builts and aerial utility work.

Fabricated materials will be delivered directly to construction sites (i.e. bridge replacements, parking garage structures, retaining walls, or stations). Some materials will be stockpiled and stored at onsite laydown areas in commercial zones, away from residential neighborhoods. Truck traffic may increase from that which is present today during the Construction Phase; however it is 3TC's goal to avoid community impacts whenever possible. 3TC intends tentatively to use the following staging areas:

Laydown Areas

- [redacted]

Off Project

- [redacted]

Rail Road Sidings

- [redacted]

- [redacted]

Our approach to construction includes advanced planning on the maintenance of vehicular and pedestrian traffic. 3TC's detour plans and a detailed Initial Baseline Schedule (IBS) allowing for sufficient float to absorb unforeseen construction delays from the Project onset will result in a successful maintenance and protection of traffic (MPT). In addition to this, the proper handling of the Project workforce will be paramount for an effective MPT. 3TC will use parking areas and 3TC shuttles to serve the multiple worksites.

3TC is mindful of Project impacts on both Rail Road commuters and surrounding communities. To lessen these impacts, our Team has incorporated construction alternatives that reduce the need for track outages and neighborhood disturbances. The use of U-shape bridges (pre-constructed off site and jacked in place over a weekend timeframe) at the five grade-crossing elimination locations will drastically reduce track outages typically limiting service continuity. In addition, 3TC has implemented a new south track alignment (ATC #27) that shortens the construction schedule and reduces community impacts. The use of prefabricated components for the retaining wall, station, and bridge rehabilitation construction will only require single track outages. The sequencing of this work is on our priority list of critical processes that must meet Rail Road requirements and limitations.

The construction sequencing follows the previously-mentioned Project split by performing similar operations simultaneously in Blocks 1 & 3 first and then continues in Block 2. This sequence promotes Project schedule adherence and early completion, which are among the overall goals for 3TC, the Rail Road, and the Project stakeholders. In general, and as further detailed in our IBS (which follows the Critical Path Method-CPM), construction is divided into the following categories:

- Grade Crossing Eliminations:
  - Covert Avenue
  - Urban Avenue
  - School Street
  - Willis Avenue
  - New Hyde Park Road
  - Main Street (closure)
  - South 12th Street (closure)

The scope of this work includes the elimination of at-grade railroad crossings. This will be accomplished by depressing Covert Avenue, Urban Avenue, School Street, Willis Avenue, and New Hyde Park Road. These locations will be depressed below the Rail Road tracks using a new thru-girder structure. The thru-girder structure will be preassembled as a cast-in-place U-shaped structure constructed adjacent to the railroad. The structure will be jacked into place using one weekend of full track outage; no other disruptions to Rail Road operations will be required.

Stations and Garages

Five existing stations will be completely rebuilt (New Hyde Park, Merillon, Mineola, Carle Place and Westbury) with minor station reconstruction occurring at Floral Park. Due to the addition of the third track, one side of each of the five stations will be relocated approximately [redacted] farther from the existing tracks. New multi-level parking structures at Westbury, Mineola, and Hicksville will be sequentially constructed per the Contract Documents. Additionally, new pedestrian overpasses and underpasses will be installed at Westbury, Mineola and New Hyde Park, with elevators installed at Floral Park.

Retaining and Sound Walls

There are [redacted] of proposed retaining/sound wall on the Project. There are [redacted] walls on the Project of which [redacted] are retaining walls, where half are retaining walls with a sound wall attached to the top of them, and the remaining [redacted] retaining walls stand alone without a sound wall. Our track alignment ATC #27, allows us to reduce the quantity of wall to be built.

We anticipate utilizing multiple crews in the following manner to achieve the schedule for the retaining/sound wall installation:

- Crews #1 and #2 start at Station 512 (Urban Street Siding, South Side) and then go to [redacted]. From there simultaneously start at [redacted] and continue to [redacted]

[redacted]

3TC has identified the access, ingress and egress points shown in the table and sketch below to allow our crews get a quick and safe access to the jobsites:

	NORTH	SOUTH
[redacted]		

[redacted]

The retaining walls can be broken into 2 types; those that are considered to be fill areas, and those that are considered to be cut areas. There is approximately [redacted] linear feet of fill walls. These walls are distinct in that they are concentrated on the sections of rail that are raised above the surrounding streets and community. To construct the new third track, 3TC must add fill to the existing raised track areas, within the Rail Road Right of Way (ROW). There is approximately [redacted] linear feet of cut walls, which are distinct in that these walls are retaining the earth on the outside of the Rail Road ROW from falling on to the tracks. That means the ground outside the Rail Road ROW will be higher than the elevation of the proposed finished track elevation, where the tracks are sitting in a bowl. Both the cut retaining walls and the fill walls can have sound wall on top of them, generally where residential areas exist. Construction of retaining walls will be staged from the ROW with minimal disruption to private property.

Bridge Replacement

There are three types of bridge replacement/ modifications to accommodate the new third track. including:

- Full replacement of the existing bridge
- Widening of existing two track bridge to a three track bridge
- Constructing a new single track wide bridge along the existing double track bridge

Floral Park Viaduct

Requires widening of the existing Floral Park viaduct. This location will include new footings, concrete columns, and concrete deck and waterproofing, portions of which will be constructed under single track outages.

South Tyson Avenue

Requires the selective demolition of the existing Hempstead bridge and replacement with a variable width structure to accommodate the realigned Hempstead line and the new Third Track. The new structure will be built on a temporary tower system north of the existing Hempstead line and rolled into place on a single track outage. The new east abutment will be founded on drilled shafts and pile cap east of the existing retaining wall.

Plainfield Avenue

Requires the construction of a parallel single track bridge south of the existing bridge. This bridge will be founded on new drilled shafts and pile caps located behind the existing wing walls. The new bridge will be built in place using conventional construction methods.

Tanners Pond Road/Denton Avenue

Requires the replacement of the existing bridge. This bridge will be founded on new drilled shafts and pile caps located behind the existing masonry abutments. The new bridge will either be lifted into place or rolled into position by a Self-Propelled Modular Transporter (SPMT) under a double track weekend outage.

Nassau Boulevard

Requires the replacement of the existing bridge. The existing abutments and wing wall will be selectively demolished, abutments extended and new wing walls constructed. The existing abutment will be upgraded to E80 by the use of tiebacks. The new three track wide bridge will be constructed on temporary towers over the existing roadway. During a weekend double track outage the SPMT will position the existing bridge onto temporary towers on the south side of the bridge and the new bridge will be lifted off the temporary towers onto the previously reconfigured abutment.

Glen Cove Road

Requires the replacement of the existing bridge. The existing abutments and wing wall will be selectively demolished, abutments extended and new wing walls constructed. The existing abutment will be upgraded to E80 by the use of tiebacks. The new three track wide bridge will be constructed on temporary towers in a rented commercial parking lot north of the existing bridge. During a weekend double track outage the SPMT will position the existing bridge on temporary towers in rented commercial parking lot north of the bridge and the new bridge will be lifted off the temporary towers onto the previously reconfigured abutment.

Meadowbrook Parkway

The existing abutments and wing wall will be selectively demolished, abutments and center pier extended and new wing walls constructed. The existing abutments will be upgraded to E80 by the use of tiebacks. The existing

bridge will be widened with new girders and precast deck. This widening will be constructed under single track outages.

Cherry Lane

This structure requires the replacement of the existing bridge. The existing abutments and wing wall will be selectively demolished, abutments extended and new wing walls constructed. The existing abutment will be upgraded to E80 by the use of tiebacks. The new three track wide bridge will be constructed on temporary towers over the existing roadway. During a weekend double track outage the SPMT will position the existing bridge on temporary towers on the south side of the bridge and the new bridge will be lifted off the temporary towers onto the previously reconfigured abutment.

Track Work

The approach to track installation is absolutely tied to maintaining the existing Rail Road operations, the installation of the new system, and the commissioning of the new system prior to the existing system shutdown. As the existing N1 (N1) interlocking infrastructure interferes with the new third track and retaining wall installation, existing track turnouts/crossovers at new N1 will be the second order of installations only after the siding installation at Urban Avenue. Following N1 installation, track work will follow a general flow of construction of the other elements of the Project. The interlocking to interlocking track construction besides that mentioned above will be Floral Park to N1, then N3 (N3) to D1 (D1), and finally after Mineola Station reconstruction, N1 to N3.

The Project will include the construction of approximately 8.3 miles of concrete tie, continuous welded rail on ballast including third rail traction power. Rail will be delivered in two ways. Most of the rail will likely be delivered in 1,440' strings by rail. The delivery will be highly coordinated with the Rail Road, New York and Atlantic Railroad, and the construction team. New York and Atlantic (NYARR) will deliver the rail with their engines and will provide locomotive power during the unloading operation. The rail will be unloaded with the help of threader car on the tracks and an excavator at ground level. Two strings will be unloaded throughout the work area; these two strings will be the future running rail for the new track. Similarly, tie delivery will also be coordinated to be unloaded and set in place. To assist with this operation, we will utilize an excavator with a tie handler attachment which can pick up, spread, and set between 5 to 8 ties at once. Once the ties are set, we will follow by threading and clipping the rail into place with the help of an rail threader or MPR.

The work includes furnishing two major interlocks at N1 and 3, 2 crossovers at D1, and three turnouts for a siding and layup track. The existing crossovers for N1 and N3 will be removed. Major track raising and shifting is required to complete the third track system. This cut and throw work will be performed by the Rail Road Force Account (Rail Road FA) with assistance from 3TC.

The Rail Road FA work to accomplish the complete track installation can be summarized as follows:

a. Track raises at various locations
b. Track cut and throw at [redacted] shifts from 0 ft up to [redacted] where it shifts 13 ft)
c. Crossover installation on revenue tracks (approx. 12 turnouts)
    i. N1- N6
    ii. N3- N1
    iii. D1- D4
    iv. Floral Park Hempstead to third track

Rail Road Systems (traction power, signal, and communications)

The sequencing of the signal and Positive Train Control (PTC) installation and testing has been simplified by the implementation of ATC #27. The Signal Design Approach (Section 1.6.3) and the Testing and Commissioning (Item 16 of the Construction Approach) sections provide more extensive detail as to the process by which ATC #27 will be used to aid in the construction process, reduce the level of effort by Rail Road FA and expedite testing and commissioning of the signal system.

The specification requires that the MOW siding between D1 interlocking and Urban Avenue, the second track, will require changes to the existing D1 and Divide Tower Signal SCADA to incorporate the electric lock circuits that protect the siding. 3TC will be also installing the new north side track between D1 (connected at new switch 13E) west past Urban Avenue. The Rail Road FA can then cut and throw the existing #1 Track to connect to the newly built third track in parallel, incorporating the required tie-ins at D1 and D2 and the Divide Tower.

The first new interlocking to be installed will be N1 which will have two tracks commissioned to allow the retirement of existing N1. This move allows retaining wall and track construction to be installed from the west at Floral Park to the next station platform.

The balance of the signal locations can be installed and tested and readied for eventual commissioning from Floral Park to New N1 then from N1 to N3 including N2 and from N3 to D1. At any point in the process the connection from Floral Park to Hempstead can be made. As the process moves from interlocking to interlocking the plan is to have the new Master Locations and any Electric Locks in place so that all testing can be over the fiber network.

Prior to the arrival of the signal wired houses the electrical installer will prepare each area with appropriate foundations, trough, conduit, cables, switch machines, track circuit equipment and RSA signals to expedite the installation and testing process.

ATC #27 also simplifies and reduces the number of revisions necessary for PTC application to the Third Track area. PTC will be applied first to the existing two track configuration, then apply a small modification in the D1 Interlocking area to accommodate the MOW siding and the track cut and swing, a minor modification when new N1 replaces existing N1 in a two track configuration. Then the final application across the entire new territory following the signal commissioning sequence.

Running in advance of the signal system design and installation will be the new Signal SCADA System installation beginning 13-15 months after LNTP. The Signal SCADA install will sequence as follows:

a. JCC Control Center
b. Existing Nassau Interlocking Houses including Locust and new N1 Interlocking House
c. Existing Queens Interlocking Houses
d. Remainder follows signal sequencing above. D1 will be integrated with newly installed Divide Tower

A concentrated effort will be made to install the fiber optic cable necessary for the entire communications backbone, which initially will be needed to support the operation of the Signal SCADA in the Nassau area of the Project. Communication nodes will be placed at all 38 drop locations along the ROW, including the four existing Nassau signal locations. Getting the communications backbone and associated network equipment installed and functional as early in the process as possible is key to success to the signal, comm., and traction power construction sequences 3TC plans to implement. The material for the existing Nassau locations will be the focus of the design effort to support the Rail Road installation and testing, which will provide the control to the Jamaica Control Center (JCC).

The work breakdown and sequencing for each of the six new signal interlockings will be planned and executed in two separate and distinct segments: pre-house arrival and post house arrival. The work prior to the arrival will involve installing the local conduits and trough for the signal cables, building of the platforms for each of the signal houses, installing foundations and pulling local cables. In the interest of overall schedule compression, the pre-house work will be coordinated and integrated with track and underground work along the ROW. The post house delivery work will include the setting the signal houses, cable termination of all new devices including switch machines, signals and bond locations to the enclosure terminal boards leaving the final terminations of wayside equipment on the existing in-service track to the Rail Road. The sequence for delivery of signal locations will be driven by the need to utilize new crossovers to supplant existing Nassau locations that must be retired to progress third track construction. The order of design and delivery is discussed thoroughly in the Volume 2 Package 2 of this Technical Proposal.

Seven new traction power substations are to be provided to replace the existing substations that currently feed the new third track area. 3TC will provide new positive and negative feeder cable, conduit, connectors and termination materials to the Rail Road for installation at inservice substations to bolster the existing traction power distribution system in support of intended substation outages required to support 3TCs traction power construction sequencing. Only after this material is installed and tested by the Railroad at existing locations adjacent to each substation to be taken out of service, and the mobile substation is onsite can the planned substation replacement sequence be initiated. The referenced sequencing of substation replacements Will be initiated inaccordance with the limitations stipulated in the Technical Provisions. the result will be that substations will be replaced in five phases.

The new substation phasing is as follows:

- G-14, New Hyde Park and G-19, New Cassel and the 2 Mobile Substations
- G-15, Garden City and G-20, Hicksville
- G-16, Mineola
- G-17, Carle Place
- G-18, Westbury

The Mineola (G-16) substation cannot be decommissioned until the temporary substation is provided to the Rail Road for commissioning. The approach that will be taken with each substation is to remove the existing substation and return usable parts to the Rail Road and properly dispose of the balance of the material. Once removed the vault will then be demolished and replaced with a new one designed to support three track operations with the necessary number of positive and negative conduits. The underground network of conduits and manholes required to support the new substation will be installed before and concurrent with the new vault installation to the furthest extent possible in order to minimize substation construction duration to the extent possible given the limitations of ROW and substation site real estate.

When the new structure is available a new substation will be delivered, and reconstructed at the site. The new positive and negative cables will be connected to the substation and terminated to the new third track, while the cables to the existing in-service tracks will be terminated by the Rail Road. The substation will have a communication node from the fiber backbone installed to support TPSS, SCADA and the CCTVs that are required at each substation. The substation will be commissioned by the Rail Road FA. It is planned that G-14 and G-19 will be replaced in parallel in the first phase followed by G15 and G20 in the second phase and then G-17, G-18 and G-16 individually in phases 3, 4 and 5. G16 can only be replaced when the new temporary is available to power the OBB and during the entire process signal power must be maintained.

The communications network backbone will be installed as early as possible in the Project to support the installation of the Signal SCADA subsystem in the existing Nassau signal locations and will therefore be available when other nodes on the system need to be activated during commissioning. This intended approach will require a significant amount of temporary and transitional manipulation of the fiber nodes and conenctions to support the entire life cycle from initial install, support of existing facillitites and eventual transition to final configuration.

These backbone fiber cables as well as existing operational system cables require protection throughout the entire construction process (the process to protect these cables and other existing equipment will be described in Section 9 of this proposal). There are communications nodes in signal CILs, traction power substations, and underpasses, while a significant share of the work is concentrated in the stations and parking lots. Installation and commissioning of the communications node and peripheral equipment must be coordinated with the commissioning of new elements along the ROW.

3.1.2. Explain any unusual or innovative construction approaches proposed

South Track Alignment

3TC will incorporate the South Track Alignment into the Project. This ATC #27 eliminates the need to build tracks on the North side of the existing tracks between N3 interlocking and Westbury Station and from Sta. [redacted]. This change creates several important improvements to the original requirements.

- Rail Road FA work required to cut/throw, and/or shift existing tracks is substantially reduced
- ATC #27 substantially reduces the quantity of Hybrid Poles to be installed
  - Portion of track east of Urban Avenue, at the new MOW siding, has insufficient dimensions North ROW to South ROW (ATC or original alignment) to fit three tracks, one siding and PSE&G poles inside the ROW. 3TC will relocate the [redacted] wood pole line from Urban Avenue east [redacted] the ROW of Rail Road Avenue to [redacted] then cross the ROW and install new wood poles inside the south ROW line to Sta. 540 then cross the ROW to existing wood poles inside the North ROW line to the eastern circuit terminus, approximately Charlotte Avenue.

Jacking U-shaped Bridges

3TC proposes a very **innovative concept to construct the at grade crossing eliminations**. This idea has been developed under the three main

premises given by the Rail Road to approach this Project:

- Minimize the track outages (singles and doubles)
- Create the shortest and least disruptive schedule for the neighborhoods
- Ensure the work can be completed within the allotted time and reduce the number of critical activities, and minimize the risk of impacting Rail Road operations

Based on those three strong premises, our Team has designed a single U-shaped thru-girder bridge. This structure is constructed on a launch pad at a site adjacent to where it is to be installed. Based on the bridge geometry and the available room around the tracks at each grade crossing, the SOE and excavation is performed to allow the team to build the launching and reaction pad and the U-shaped thru-girder in the excavated site. After the U-shaped substructure is constructed and cured and the girders are installed, it is then thrust forward horizontally in a weekend double track outage - **the only track outage required** - using advanced jacking technology with full track removal and open trench excavation from inside the structure.

The major advantage of this unique process is its simplicity. Only the exact volume of earth that will be filled by the jacked structure is excavated. No intermediate ground supports are needed. The structure is built away from the roadway, in the clear, without the constraints of shoring and traffic controls. When the structure is ready, hydraulic jacks are installed behind, and the bridge is pushed into final position while simultaneously the earth is excavated from within. Once the bridge is in its final position, precast approach slabs are lifted and placed. Finally, ballast and track are reinstalled on the new bridge and approach slabs, leaving the crossing fully operational for trains again. This construction method **saves 2 months for each location** from the traditional top-down method.

A topographical survey is required to control, step by step, the proceeding of the bridge during its launch. The proposed typology of survey is very simple and should be performed during the entire jacking process. The methodology consists in the installation of some optical targets underneath of the steel girders (two in the front, two in the middle and two in the back and an external reference point).

The advancement of th e bridge is recorded every 3 feet of jacking. The six targets will give us the 3D position of the structure during the launch, and its progress, step by step. Correction, if needed, can be performed by controlling the excavation both on the sides and on the bottom of the structure and controlling the pushing force of the jacks.

3.1.3. Explain how the proposed construction approach can help accelerate the schedule, reduce construction impacts, or both

As noted above in Section 3.1.2), our South Alignment ATC #27 reduces Rail Road FA work to shift tracks and reduces the need to move/install new 69Kv poles and conductors. Both reductions have schedule enhancement value. Track shifting reduction proportionally minimizes the impacts to the Rail Road riders and service interruptions. Hybrid Pole reduction decreases work operations needed to ultimately install new third track.

The construction methods of jacking bridge sections into place accelerates the grade crossing location schedule by 2 months at each location. This is a direct reduction to local community vehicular traffic inconveniences utilizing detours around the closed roadways. The elimination of single track outages also reduces the schedule restrictions required with the Rail Road block and timetable limitations.

3.1.4. Outline extent and type of anticipated self-performed Work and Work by major subcontractors specifically for trackwork, signals and traction power

DBJV partners, Halmar and Picone, have local experience on previous projects self-performing similar work with similar constraints. Halmar has self-performed work on Metro North Rail Road's Yankee Stadium Station project, which required working around live traffic, as well as LIRR's Post Avenue project. Picone has self-performed similar construction activities on the LIRR Johnson Avenue Yard project.

Self-Performed Work includes: Pile Driving, Steel Sheeting, Drilling of Soldier Piles, Excavation, Backfilling, Retaining and Sound Walls, Final Bridge Installation and Drainage.

Subcontractor Work includes: Track Installation (J-Track), Electrical Installations (E-J Electric), Structural Steel Erection, Curbs and Sidewalks, Bridge Roll in SPMT, Reinforcing Steel installation, Asphalt Paving,

[redacted]

[redacted]

Landscaping, Striping, Utilities, Waterproofing, Vibration Monitoring, Existing Structure, Independent Construction QC, and Track Monitoring.

3.1.5. Project access, ingress and egress, construction laydown areas

The Project access, ingress and egress points have been defined to minimize local community impacts and avoid impacting residential properties. Table and graphic on the following page.

The general approach will be as follows:

- Work will commence from at grade locations and progress outwards to minimize impacts to the neighborhood.
- Stations will be accessed from the closed portion of the stations
- Garages will be accessed from local streets
- 3TC will use the following job site access points (sketch below):

Potential Laydown and Staging Area:

- At Grade Crossing: Covert, New Hyde Park, Willis, School and Urban
- Bridge Replacements: Floral Park
- Station Construction: New Hyde Park, Merillon, Mineola, Carle Place and Westbury
- Parking Garages: Westbury North, Westbury South, Hicksville North and Hicksville South and New Hyde Park.

3.1.6. Proposed field offices, laydown and staging areas and a timeline for use

Field Office

The main field office will be located in Mineola and it will house 3TC's executives, designers, reviewers, engineering, quality, safety, environmental, community outreach, and procurement personnel. This office, the backbone of 3TC's organization management will be in place 30 days after LNTP until Project Completion. In addition, 3TC will retain two remote offices, one in

Floral Park and one in or near to Hicksville to administer payroll, recruitment, hiring, training, subcontractor administration, cost control, and field engineering from NTP to Project Completion.

Off Project

- [redacted]

Rail Road Sidings

- [redacted]

3.1.7. Temporary location and layout for workforce and the Rail Road employee facilities

3TC workforce and Rail Road employees will have Conex box change shanties and equipment storage at each grade crossing location, station reconstruction, and parking garage structure along the Project ROW. Toilet facilities will be located at each work area with capacity to match crew sizes.

3.1.8. Material logistics including delivery, handling, storage and installation

Materials delivery handling and storage will be administered in two ways based on location; over the road deliveries and rail deliveries. Sensitive areas, schools, fire houses and hospital will be avoided to the extent possible.

Over the Road Deliveries

- **Structural Steel –** delivered to the structure location, preassembled within the ROW of the structure and installed in three types of construction as noted in Section 3.1.1 1)
- **Concrete -** delivered via transit mix trucks to deposition location and facilitated by concrete pumps and/or conveyors where required
- **Reinforcing Steel -** delivered to structure location and assembled in place
- **Soldier Piles, Foundation Piles and Retaining Wall Units -** delivered to structure locations and unloaded to foundation crew- in the case of mainline retaining walls see "Rail Delivery"
- **Precast Garage -** delivered to structure location and erected in place by erection crane
- **Precast Platforms-** delivered to station locations and erected in place by erection crane
- **Station and Garage Systems** (elevators, signage, lighting) delivered to station locations and installed by erection crane or by labor
- T**raction Power -** Substations delivered to station locations only after foundations are ready to receive them, and erected in place. Cable will be delivered to a storage facility for secure storage until needed
- **Signal –** all materials will be delivered and stored at a storage facility for secure storage until needed
- **Ballast and rail sticks** will be delivered by track

Rail Delivery

Track rail, ties, sub-ballast and ballast along with panelized switches will be loaded onto cars at transfer/laydown yards/sidings/stone suppliers and delivered to installation locations via train during night time single track outages.

Soldier piles, retaining wall units, lagging and select fill material will be delivered to the installation sites on the mainline via train cars during night time single track outages, where access cannot be gained from dead end streets along the ROW.

3.1.9. Protection of existing facilities

3TC goal is to maintain the integrity of the Rail Road's revenue facilities. 3TC will utilize an outside consultant for vibration and settlement monitoring of existing tracks and structures. Both warning and stop action thresholds will be determined and strictly adhered to.

All existing utilities will be located, surveyed and marked as not to disturb them and or to relocate them prior to construction, during the nine month period between LNTP and NTP. Our Team will perform test pits at critical utility locations.

For track settlement monitoring we will utilize prisms and total station's automated monitor setups at construction locations. Similarly, 3TC goal is to construct all new facilities for the Rail Road with little to no disruption to adjacent private property owners. As with Rail Road facilities, and where applicable, outside consultants will be utilized to document private property conditions pre- and post-construction and to monitor settlement and vibration when facilities are within influence limits, including the Floral Park pool. Affecting these facilities can have an impact on the traveling public, however we have already identified the existing facilities and plan to disturb them to the minimum extent possible.

3TC will schedule, coordinate, and support all electrical work involving existing railroad systems requiring manipulation and modification to support the 3TC construction sequence. Subcontractor EJ Electric will employ a disciplined approach to interface management and a clear delineation of responsibilities between contractor and the Rail Road used succesfully on past LIRR, PATH, MNRR, and NYCTA projects.

In addition, properly designed Support of Excavation (SOE) methods will be installed where deep excavations are close to existing Rail Road and private facilities, as identified in Volume 2 Package 2.

3.1.10. Long lead materials and equipment

The long lead materials and equipment (typically more than 6 months) requiring special attention for the Project are as follows:

- Traction power substations
- Signal equipment- Houses
- Hi-Tension [redacted] Cable
- Bridge structural steel and bearings
- Large section H-Pile soldier beams
- Precast lagging
- Precast garage elements
- Elevators
- SCADA software
- Switch machines
- Switches

Each of these material and equipment needs have been thoroughly reviewed by our Team in order to avoid unnecessary dependence on dispensable items. Equipment mobilization and long lead material production and site delivery have been properly built into the IBS to avoid schedule deviations. In addition to this, long lead materials will have a detailed fabrication schedule provided at the Purchase Order execution. Our Purchasing Manager will be responsible to follow up on a weekly basis with the fabricators to promote compliance with the original delivery date.

3.1.11. Components that require specialized transport and/or handling

Materials requiring specialized or oversized transport will be properly coordinated with the Rail Road and other Third Parties (i.e. Local Police Department) when applicable. 3TC envisions the following components needing a customized transport or handling treatment:

- Transformers
- Substation modular units
- Garage double tee elements
- Over-length soldier piles
- Track rail strings
- Panelized switches
- Structural steel thru girder bridges

3.1.12. Construction equipment proposed for major work elements including hi-rail and rail-bound equipment

The DBJV will leverage the extensive equipment inventory from its four DBJV team members in order to maximize the use of equipment owned in lieu of rental units. This certainty in the equipment availability will allow for a more reliable mobilization schedule. The following list describes the equipment units per scope of work that will be required during the Construction Phase:

- [redacted]

[redacted]

3.1.13. Maintenance and contingencies for sensitive operations

Prior to the commence of the constructions activities, 3TC will develop and implement a Construction Health and Safety Plan (CHASP) and Community Air Monitoring Plan, among a Noise and Dust Control Plan to avoid or mitigate potential negative effects on the Community and 3TC's workers. Implementation of a Stormwater Pollution Prevention Plan (SWPPP) and establish a Quality Control program to confirm compliance with environmental requirements will precede construction as well.

Sensitive operations would include:

- Night operations in residential areas:
  - Our Team will develop and follow a Noise Control Plan in accordance with RFP Volume 3 Section 2.21.5.1 and FEIS
  - Temporary lighting layout will be designed to




Cranes and Rail Based Equipment

Side Load Rail Car with Ditching Gondola and Excavator

Ballast Placement

reduce the amount of foot-candle put out by 3TC
- Noise and air pollution will be kept to a minimum at night time by reducing the type of work being conducted during those ours. Equipment volumes will be measured and kept to acceptable levels. Stand by equipment will be at the site in case any of our equipment fails the acceptable noise levels prior to work.

- Demolition work: 3TC will have a Dust Control Plan and a Demolition Plan in place to control dust generation, manage truck routing for material hauling from the Project, and limit high decibel hammer demolition to daytime whenever possible
- High noise construction operations: our Team will eliminate pile driving where and when possible, and limit vibratory sheet pile installation to daytime as much as possible. High noise construction operations will be regulated by the Noise Control Plan.
- Contingency plans for weekend shutdowns will include standby equipment to ensure the work is completed on time

3TC standard measures to minimize the construction impacts on Air Quality and to prevent Noise and vibrations in residential areas will be:

- Back-up alarms shall be either audible self-adjusting back-up alarms or manual adjustable alarms.
- Impact and drilling equipment will be equipped with a muffler.
- Use of electrically operated hoists and compressor plants unless otherwise permitted by the Resident Engineer.
- Maximum sized intake and exhaust mufflers on internal combustion engines.
- Gears on machinery designed to reduce noise to a minimum.
- Pre-auguring equipment to reduce the duration of impact or vibratory pile driving.
- The prohibition of the use of air or gasoline driven saws unless otherwise permitted by the Resident Engineer.
- Conducting the operation of dumping rock or other material and carrying it away in trucks so that noise is kept to a minimum.
- Routing of construction equipment and vehicles carrying rock, concrete, or other materials over streets that will cause the least disturbance to noise-sensitive locations.
- Earthmoving and stationary equipment will be noise attenuated.
- Silencers on air intakes and air exhaust of equipment.

- Mitigate noise from construction devices with internal combustion engines by ensuring that the engine doors are kept closed, and by using noise-insulating material mounted on the engine housing that does not interfere with the manufacturer guidelines and by operating the device at lower engine speeds to the maximum extent possible.
- Operate equipment to minimize banging, clattering, buzzing, and other annoying types of noises.
- Jackhammers shall be equipped with elongated effective muffler casing or bellows.
- Hoe rams shall be the smallest and quietest necessary. A noise shroud enclosure shall be wrapped around the head (i.e. chisel) of the hoe ram.
- Auger drill rigs shall be equipped with well-maintained and effective mufflers. All moving parts shall be well lubricated to avoid unnecessary noise squeaking parts. Debris from the drill bit shall be removed without quick twisting, jerking, or hammering the bit.
- Street plates shall be properly installed minimize vehicular tire impact on the plate and minimize noise.
- Use the local power grid to reduce the use of generators when possible

Additionally, 3TC will mitigate the construction impacts implementing the following standards:

- Keep construction sites clean and organized
- Safely store construction materials in piles/not haphazardly
- Ensure that construction fences are uniform and neat in material and appearance (neatly clad chain-link fences in uniform green tennis mesh or printed mesh with approved enhancements, such as photos or artwork)
- Entirely fence off all staging areas
- Prohibit littering and dispersion of personal debris (e.g., cups, cans, cigarettes) on construction site
- Provide covered trash receptacles that are emptied daily
- Perform street cleaning as appropriate to ensure construction debris and dirt will not affect the local community
- Install onsite/portable bathroom facilities that are unobtrusive to local communities
- Protect access to existing businesses
- Provide satellite parking for construction workers so as to keep personal construction worker vehicles off of residential streets
- Use existing track to transport materials to and from the work sites to the extent practical
- Schedule construction deliveries outside of school and commuter traffic peak hours to the extent practicable while school is in session

3.1.14. Construction safety adjacent to existing Rail Road operations

As per our Health and Safety Plan (HASP), working around railroads requires a higher level of safety and awareness. The HASP meets all safety requirements specified by the Rail Road including the Rail Road track training and 3TC additional track training. Our Team will install security/barrier fencing between ROW construction operations and Rail Road live tracks. When working within the ROW and within 15 feet of the centerline of any mainline track, we will provide flaggers on site to ensure the safety of our workers, as well as the Rail Road personnel. Rail Road power personnel will also be required to turn off traction power to third rail where necessary, when work takes place adjacent to third rail. When working with a crane we will make every effort to engineer the boom swing away from the tracks and not towards them. Management of bonding and negative return connections will be a key safety priority during track manipulation and installation.
Work on MV services will require permitting and LOTO coordination with utilities and the joint application and maintenance of grounds on circuits being worked on. Certain work activities will require the application of temporary insulating materials to existing transmission and distribution lines (this "rubbering up" will be performed only by qualified lineman). Additionally, 3TC management and safety personnel will monitor and ensure all pick plans are reviewed and approved prior to any lift. All cranes on the Project will have a 150% safety rating on all lifts. No equipment will be stored adjacent to the tracks or on the Rail Road property outside of the approved temporary easements or approved storage areas. According to the RFP, all outages will be planned six months in advance, providing the necessary time for Rail Road operations to adjust their timetables.

When working adjacent to existing Rail Road operations we will schedule all work with the Rail Road. These operations will be planned and discussed with the Rail Road Operations according to the Contract requirements. The construction method, specific equipment to be used, identification of possible hazards and safety work plans will be developed and administered prior to the start

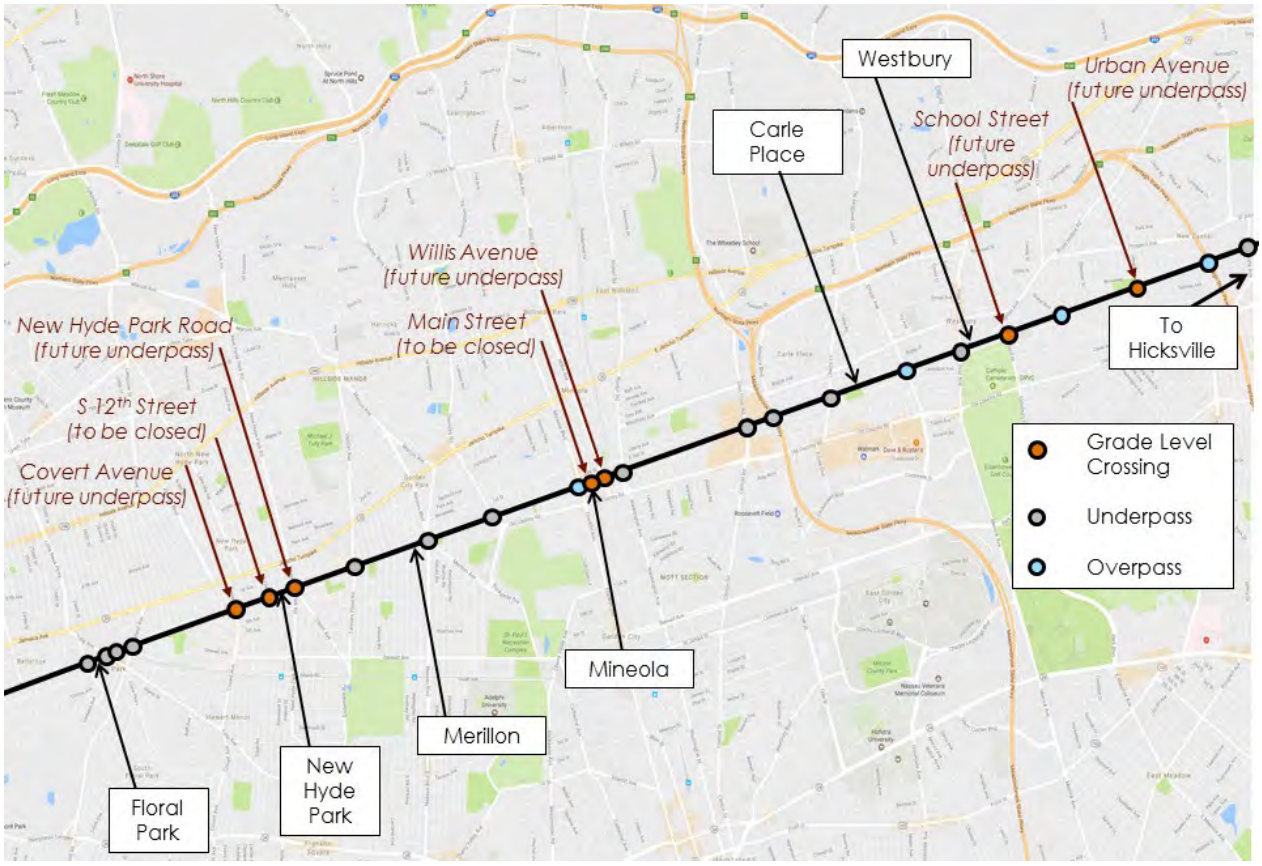
of work. Work can be accomplished using; Rail Road Flagging, Rail Road Flagging with foul time, and double and single track shutdowns.

3.1.15. Work zone traffic control

At Covert Avenue, Willis Avenue, School Street and Urban Avenue at-grade crossing eliminations, the RFP allows for a six month closure of the respective roads. Traffic will be detoured around the work zone. As much work as feasible will be performed under MPT prior to the full road closure. New Hyde Park Road will maintain one northbound and one southbound lane at all times. This will be accomplished by staged construction.

The bridge replacements will require daytime/night time single lane closures during the abutment and wing wall modifications as well as during tieback installation. During the weekend double track outage at Denton Ave/Tanner Pond Rd, Nassau Blvd, Glen Cove Rd, and Cherry Lane, traffic will be detoured around the work zone.

During the Design Phase, the Design Team will continue to the study, evaluation, and development of both geometric and MPT proposals, and will select those that provide effective and appropriate solutions while minimizing community impacts. This will be particularly important during development of schematic geometric design alternatives, when key issues or design influences that may conflict with each other must be identified and addressed. 3TC brings exceptional experience and knowledge of significant risks that can adversely affect Project progress and the necessary expertise in all planning and engineering design to identify appropriate solutions. Our approach, which continuously identifies key Project challenges, and effectively designs treatments that resolve them, will lead to the development of an MPT design that best balances the various engineering, environmental, and physical constraints. Our analyses of possible improvements for fatal flaws and deficiencies is key to achieving Project goals and objectives, resolving design challenges, and implementing effective, sensitive, and safe improvements for the traveling public and the community. It is, therefore, imperative at the beginning of the design process that the conceptual MPT and construction staging concepts be reviewed and developed in much greater detail, recognizing the specific contractor work zone requirements (to build the Rail Road grade crossings, widen pavements and install drainage systems, walls, bridges, etc.).



The graphic illustrates the area that will be affected by our MPT plans.

3TC, leveraging our experience from many other high-profile projects with sensitive environmental issues, difficult terrain, and constrained local road networks, will develop an MPT/Construction Sequencing Plan with the objectives to:

- Minimize and shorten the duration of construction requiring lane closures and/or traffic diversion;
- Minimize negative effects and impacts of detoured traffic on the local road network;
- Minimize the delays to local road users;
- Identify and evaluate possible detour alternatives and alternate routes;
- Obtain community and agency input and approval; and
- Minimize impacts of construction on the adjacent community and the environment.

Construction of a third track on the Rail Road ROW will require disruption of automobile and pedestrian traffic currently using the 24 vehicular crossings between the Floral Park and Hicksville train stations. Creating grade-separated crossings at some of the existing grade level crossings will increase the capacity of these roadways, by eliminating interruptions in traffic flow to allow for train traffic. At most of the crossings, train gates are down about 35%-45% of the time in the AM and PM peak hours. Despite the long-term increase in roadway capacity at Rail Road crossings, during construction, it will be necessary to reduce travel lanes and potentially close crossings for short periods of time. Minimizing the impacts of these capacity reductions or closures will be paramount to lessen the impact on local communities and the traveling public.
Along the Rail Road Mainline between the Floral Park and Hicksville train stations, there are 17 grade separated vehicular crossings and seven at-grade crossings. Of these seven at-grade crossings, five will be converted into grade separated crossings and two will be permanently closed.

During each closure of a crossing most traffic will divert to nearby crossings. Some other traffic will reconfigure their trips to destinations that do not require crossing the railroad. To minimize or alleviate congestion caused by diverted traffic, the following steps will be taken:

- Announcements: Construction activity will be well publicized to alert drivers, both in print and on social media
- Detours: Detours will be signed to follow the routes with the most additional capacity.
- Intersection improvements: Key intersections along the diversion routes will be evaluated for potential short term improvements.
- Protecting residential streets: Turn restrictions and other actions will be implemented to prevent drivers from diverting to residential streets.
- Parking: Train station parking will be evaluated to allow commuters to arrive and leave from their parking lot without driving over the tracks.

3.1.16. Commissioning and Testing

Testing and commissioning on a Project wide basis is the responsibility of 3TC working with the Rail Road personnel. Multiple systems and testable elements involve establishing a testing plan and criteria for each tested element (see Integration Design Approach Section 1.6.3 to see description of how the baseline for all testing documents will be constructed). For certain elements like vertical transportation, lighting, station electrical, parking payment systems, and Ticket Vending Machines (TVMs), the testing requirements and the performance of testing will be done by the product supplier or the 3TC test Team with witnessing and signoff of all the proper test forms by the tester and by the Rail Road. These elements will be tested, integrated and commissioned independent of the operation of the Rail Road.

Operational system elements (signaling, communication network, station communications, traction power and third rail, security, SCADA, both signal and TP, signal power and radio activated switch heaters and third rail heaters) all require interaction with moving trains and will need to be coordinated with system safety. Testing, integration and commissioning of these systems requires detailed planning, careful handling, and timing. The following Testing and Commissioning Table lists these critical systems with the responsibilities of the Rail Road and 3TC. Critical signal, traction power and communications vendor technical representatives will be managed by 3TC.

The table on the next page was derived from the requirements outlined in the Technical Provisions. It is apparent that 3TC will generate all testing plans and procedures to integrate, test and commission all the systems shown in the Table. In Volume 2 Section 1.6.3 of this Technical Proposal we described the methodology

and processes that would be used to manage the requirements and interfaces throughout the Project. A major benefit derived from using these processes is that we will already have the basis to develop all the test plans and test procedures needed for the entire system in one place. With requirements allocated to all design elements in the Requirements Management System the testing documents will be thorough and produced in less time, especially for systems that are so critical.

Additionally, 3TC has also simplified the integration, testing and commissioning of the signal system by implementing ATC #27. This is essential to accomplishing the schedule but also removes a significant amount of effort that would have fallen on the Rail Road FA. ATC #27 allows the new signal locations (except for new N1) to be installed and tested in the configuration that it was designed and tested in the factory. A minimum number of tie-in designs will need to be installed and tested, shortening the overall construction, testing and commissioning process. Additionally, the final integration, testing and commissioning can be performed from west to east, from interlocking to interlocking, allowing for a sequential availability of the new third track.

Another method that 3TC will use to expedite and simplify is to develop temporary test racks of Microlok II units including fiber network connections. These racks will be positioned in relay based Train Control Rooms (TCRs) that are being integrated with new processor based TCRs. Testing can then be performed over the

fiber network rather than trying to tie existing relay locations to processor locations by copper cable. The temporary rack will remain in service until the next relay interlocking is ready for in service testing. An example of this would be integrating N1 to N2 and N3. When new N1 (two track) is cutover a temporary Microlock II rack will be placed in N2 to connect the two by fiber. When new N2 is ready then a temporary rack will be added at N3 for testing and in-service ad so forth. This eliminates a tremendous amount of wiring in the existing relay locations as well as eliminating any changes in the new houses. This process will also allow new ML locations to be commissioned into service between the new interlockings. The temporary racks and the advantages of ATC #27 make the entire signal process flow more logically and with less chance for error.

However due to some practical limitations and schedule constraints, some commissioning can't be performed in a continuous flow throughout the system. As an example, the traction power system will be commissioned as the new substations are ready, which is due to contractually specified sequencing developed to maintain service during construction. Also, station platforms will, in some cases, need to be commissioned half of a platform at a time to allow for passenger access. In other words, new systems will have to be commissioned for the first new platform section while the balance of that equipment will be commissioned later in the process.

Final integration of the entire new system will occur as the third track and the signal system are commissioned which will complete the Project. The final Testing and Commissioning Plan for the Project will be structured in more detail based on the Contract Requirements and well documented interface requirements to allow for the needs of construction while maintaining current system availability.

Creation of test documentation comes from multiple sources and on this Project the major sources of input to those Plans and Procedures will be:

- Contract Requirements
- Design Interface Requirements
- Manufacturer Requirements and Best Practices
- Construction installation verification test documentation
- Approved design drawings and specifications relating to the procurement, installation or construction of systems equipment and facilities.
- Relevant test reports for all constructed civil and systems elements (static testing).
- MTA and Rail Road regulations.
- Federal Railway Administration (FRA) regulations.
- Commissioning and Maintenance Plan (CAMP)
- Failure Reporting, Analysis and Corrective Action System (FRACAS)

By utilizing the Requirements Verification Traceability Matrix (RVTM) maintained with the DOORS requirements management software tool the necessary items for testing will already be complicated for each design element. This continuous management of requirements makes life easier especially when it is time to create the testing, inspection or simulation processes that will validate the final product against the Rail Road requirements.

Testing and Commissioning Organization

Working with the Systems Integration Engineer (SIE) the 3TC Test, Integrate and Commission Team (TIC) (next page) can structure the test documents to ensure that all requirements are validated. The organization of the 3TC TIC is shown on the chart:

3TC TIC Team Interaction with Rail Road FA

The complexity of this Project combined with a tight schedule require that the TIC and the LIRR Force Account work very closely together to perform testing when needed to support the Rail Road operations or to maintain the flow of construction. The interface point for FA will be the 3TC Project Test Manager who will be involved with the Project schedule and the assignment of manpower to support the testing efforts. This position within the test team will also understand the requirements and the limitations of the Rail Road FA regarding personnel and equipment.
The TICs primary objectives working with the Rail Road FA will be:

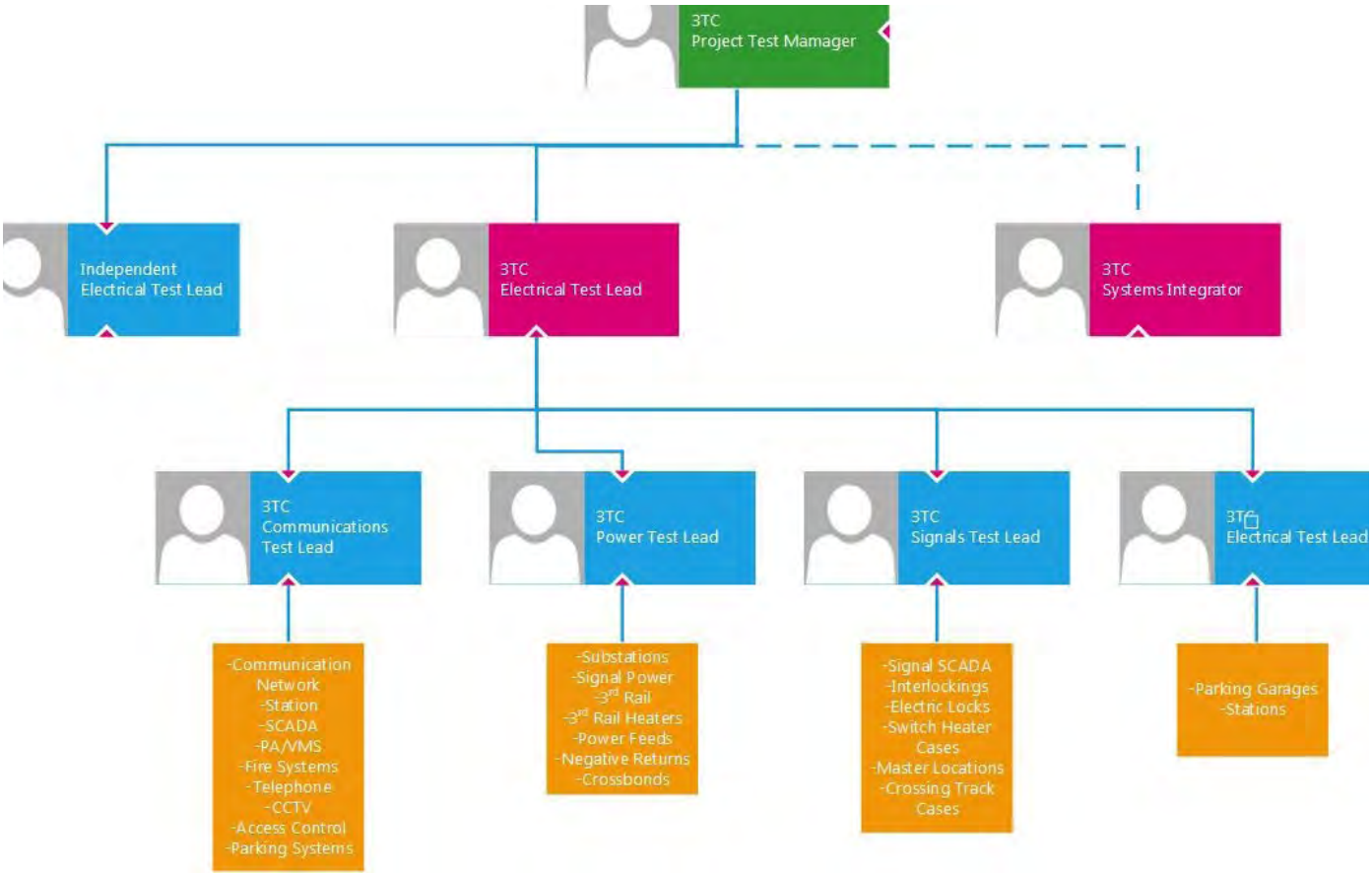
- To provide a plan and a schedule in which the Integrated System Testing for the Project will be implemented and conducted so that the Rail Road FA has reasonable understanding of the demands being imposed. Only working together, and through coordination can the plan be accomplished

- To provide an understanding of the requirements and scope of the integrated system testing activities so that each group understands its role and how to work together
- To provide a clear definition of the roles and responsibilities of each party
- To clearly define the Pass-Fail criteria which will be utilized on each test
- To ensure that discrepancy logs or punch lists of both entities are in agreement

System Integrated Test Process

The Systems Integrated Test Process is how the entire testing regimen is fused together and describes a clear and logical approach for managing and conducting the necessary integrated testing activities. The Program is presented in three parts:

- **Systems Integration Test Plan:** This Systems Integration Test Plan is a top-level document that describes the management plan for all phases of the Integrated Testing Program. It includes statements of the Program's objectives and scope, organizational roles and responsibilities, methodology, management approach and controls. It also includes summary test sheets which briefly describe each integration test, including the test number, test type, test name, test purpose, test description and other critical parameters.
- **Systems Integration Test Procedures:** The Systems Integration Test Plan will contain the specific test procedures as they are developed for the various levels of test to be performed. The procedures, in addition to the step-by-step activities that constitute the actual test, will identify information such as: test purpose, test location, pre-requisites, special test equipment, setup details and, of special note, the expected results and/or Pass/Fail Criteria for each test. Integrated Tests are performed to ensure that all components, assemblies, and systems of the Project functioned properly as an Integrated System.
- **Systems Integration Test Reports:** This Systems Integrated Test Plan will be the collection of all completed Test Reports. These reports will be collected as part of the Integrated Test "Folder" for the Safety Certification Program (may be duplicated, whichever is the most convenient and useful). This



collection will include the completed successful test report for each integrated test. These documents funnel back into the RVTM to provide proof that a requirement or set of requirements have been met. Some of this documentation is required to support the Safety Certification for the Rail Road.

Sample Detail Process

Each of the elements shown in the Testing and Commissioning Table will have very specific testing requirements based on the Project requirements and design discipline interfaces but the format of the field testing will be similar for each system and include the following steps:

1. Prerequisites (responsibility of 3TC)
   a. Material is installed properly
   b. QC inspection completed
   c. Cables tested and properly terminated
   d. QC Inspection
   e. Clean up QC and testing punch list

2. Pre-testing (responsibility of 3TC)
   a. Power up and ensure all systems are activated
   b. Perform static tests
   c. Perform testing with wayside mounted components
   d. QC Inspection
   e. Clean up QC and testing punch list

3. Final Testing (responsibility per Testing and Commissioning Table)
   a. Perform a full operational test live with all components connected
   b. Perform "negative" testing to ensure systems do not create unsafe situations
   c. Test all interfaces to existing operating systems or newly installed systems
   d. Prepare all test documentation
   e. Remove all test wire and temporary connections
   f. Complete all open QC and testing "punch list" items

4. Commissioning (responsibility of the Rail Road with 3TC support)
   a. Recheck all hookups
   b. Rerun operational tests
   c. Finalize all pre-commissioning checklists
   d. Initiate system

A special condition exists for the traction power substations which requires that once a new substation is commissioned it will need to have a 2 month (60 day) burn-in period prior to the removal of the next substation. To meet the four-year construction schedule there are multiple times that two substations require upgrade at the same time, therefore the burn-in period for the pair of substations will occur in parallel.

The need to perform out-of-sequence testing and integration (since the Project won't test east to west or west to east in its entirety) is a major reason the 3TC Team is heavily focused on the Systems Integration Engineer's role in the Project. As some systems (stations, substations) will already be in service during final systems integration and commissioning (during the signal system integration), the up-front planning and design involved and the careful definition of the interfaces will pay off by avoiding unnecessary late-in-the-game redesign.

3.1.17. Temporary facilities

3TC will secure an office space to co-locate together with the Rail Road personnel near Mineola station. In addition, temporary field offices will be initially installed at New Hyde Park Road, Covert Avenue, School Street, South 12th Street, and Willis Avenue. These portable facilities are subject to be relocated on an as needed basis. Temporary platforms stairs and ramps for station reconstruction will be utilized at New Hyde Park, Merillon, Mineola, Carle Place and Westbury Station. 3TC will maintain facility usage. Similarly, temporary power will be required for certain station reconstruction operations to maintain full usage.

3.2 Project-Wide Staging

3.2 Project-wide Staging

3.2.1) Overall construction staging

As described above 3TC Plans to divide the job into three blocks (Block 1, Block 2, Block 3). Block 1 starts at the beginning of the Project and extends to N1 interlock. This block is spaced to utilize single track outages. Early in the job our goal is to build the new N1 Control Instrument House (CIH) extending Block 1. Block 1 originally starts at Station [redacted] by building the new N1 Block 1 will now extend to approximately Station [redacted]. By increasing the size of block 1 we will be able to start construction on Merillon Station. Block 2 extends from N1 to N3 and Block 3 is comprised of all work from N3 to the end of the project.

Activities requiring single track outages can be done on weekdays, weeknights, or weekends, but have to be contiguous within a block and consistent throughout the prevailing timetable. This implies that if activities requiring single track outages within a block are completed at the beginning of a Prevailing Timetable (PTT). The activities for the next block might have to wait up to three months (4 PTT per year). To minimize PTT time impact when switching from block to block, the plan is to complete all work requiring single track outages prior to moving into the subsequent block.

Activities requiring a single-track outage are grouped and in Block 1, Block 2 and Block 3. For the construction schedule, it assumed that Block 1 and Block 3 can be worked on at the same time. Since the Covert Crossing elimination must be complete before New Hyde Park and South 12th Street, is located in Block 1 and will require single track outages, Block 1 activities have to be started first. Since, Urban Avenue Crossing Elimination has to be done prior to School Street which is located in Block 3 and will require single track outages, Block 3 activities have to be done at the same time as Block 1 activities. Block 2 will follow Block 1 and 3.

Additionally, the start of all work requiring traffic closure at Covert Avenue and Urban Avenue crossings is restrained by the specific NTP, and will be re-opened to traffic prior to December 31, 2019. Willis Avenue, may start any time after NTP and can be concurrent with other crossing elimination work except for Main Street. However, Willis Avenue is in Block 2, therefore Willis Avenue Crossing will start as soon as Block 2 starts.

New Hyde Park is located in block 1, this area of the project will be worked on first. The South 12th Street Crossing will be closed during construction of the New Hyde Park Station platform. As a result, Covert Avenue and New Hyde Park Road Crossings will be reopened to traffic before the start of the New Hyde Park Station reconstruction work.

Carle Place Station and Westbury Station are located in Block 3. Carle Place Station will close for reconstruction upon receipt of NTP. Carle Place Station will complete within 12 months after NTP. The North Platform at Westbury Station will start upon receipt of NTP. The South Platform at Westbury Station - will start after completion of the South Parking Structure exterior walls.

Mineola and Merillon Stations are located in Block 2. These 2 stations will be constructed at the same time. Both stations start as soon as Block 1 and Block 3 construction is complete.

Three parking structures will be completed 24 months after NTP. The three (3) parking structures include two (2) at Mineola (Mineola North and Mineola South) and Westbury South. The other two remaining parking structure are Westbury North and Hicksville 2. The construction of these two structures will follow the first three, but will not be completed within the first two years.

Outside of the construction activities within the 3 blocks, the other elements are the parking lot, traction power, grade crossing elimination, and all street level work. Those construction activities are able to be done outside of the 3 block construction phasing activities.

3.2.2) Overall approach to utilities approvals and implementation

Construction operations of the Project will affect, and require, relocation or protection of utility infrastructure that share space within the Project corridor. While utility relocations are controlled by permit, contractual, and legislative regulations, there are tools and procedures available that, when strategically employed, can assist the relocation process. 3TC will leverage the combined effort of world class contractors' and engineers' best practices to streamline and implement utility relocations.

3TC will utilize strategies and practices that will mitigate, as well as improve, the utility relocation process. These practices include:

- Early design involvement
- Preliminary field work allowed by the LNTP
- Fiscal incentives/disincentives for expedient relocation
- Incorporation of utility corridors
- Increased utilization of Subsurface Utility Engineering to promote utility avoidance
- Use of utility relocation management software
- Clearing ROW prior to utility relocations
- Enforcing the four C's (communication, cooperation, collaboration, coordination)
- Adopting trenchless technologies to expedite utility relocations
- Use of advanced sensing technologies to improve the accuracy of locating existing utility lines
- Development of utility conflict matrices
- Use of Civil Information Models for improved visualization of utility conflicts in 3D CAD models

Communication and Coordination

Communication and coordination are both central factors that impact whether a utility relocation occurs in a timely and seamless manner. Coordination among the utility companies, agencies and 3TC is necessary for utility relocation planning and identification of potential barriers or long lead efforts that might prevent or slow utility relocation. 3TC best practices relating to coordination and communication are:

1. Have frequent joint meetings with utility owners
2. Recognize the importance of long-range utility coordination
3. Provide utility companies and agencies with long range and short term look ahead schedules
4. Conduct on-site utility plan-in-hands meetings with the utility companies and agencies
5. Invite the utility companies and agencies to pre-construction meetings and encourage input

3TC acknowledges that insufficient communication, scheduling, and coordination in planning and construction phases can negatively impact the utility relocation process. These difficulties lead to scheduling delays and inconvenience to the traveling public. The most significant problem related to utility relocation is lack of cooperation, coordination, and communication among stakeholders. 3TC regard the "four C's" a high priority for a seamless utility relocation transition and make every effort to improve our coordination and seize opportunities to bolster communication between the parties involved. The coordination process is broken into two phases: preliminary coordination, which takes place during the Procurement Phase, and coordination, which occurs during the Construction Phase.

Preliminary Coordination

Where utility relocation is needed, 3TC's Lead Utility Coordinator will begin the relocation design effort. To involve the utility companies as early as possible, design plans are distributed to them so they can pinpoint conflicts with the onsite utilities. Meetings with the utility companies and agencies are scheduled during the conceptual phase, and conceptual plans are distributed and reviewed. Plans are again circulated when the design phase is approximately 30% complete. 3TC's Lead Utility Coordinator will again contact the utilities at this time. The objective of preliminary coordination is to resolve a need in a way that minimizes potential conflicts.

Coordination in Construction Phase

On large projects such as the Rail Road Expansion Project that has complex impacts on utilities, 3TC offers the utility companies and agencies an anticipated construction schedule. Once this has been circulated identifying significant utility issues a preconstruction meeting is scheduled to discuss and resolve any and all issues. Utility and agency representatives are invited to participate in progress meetings. Under such scenarios, coordination and usually daily communication is encouraged. Coordination seeks to alleviate the following complications: utility company and agency compliance with relocation schedules, schedule changes

due to the DBJV, and validity of resolutions to previously unknown conflicts.

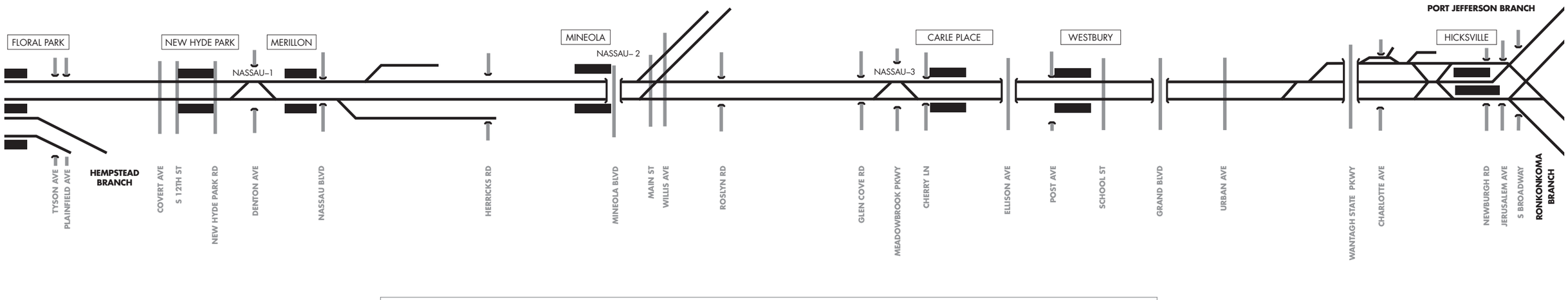
Experience

Utility networks are very complex. With an increasingly young and inexperienced workforce, many utility companies, agencies and contractors lack the skill set needed to implement a seamless utility relocation. 3TC has assembled a team of local, experienced engineers and contractors who understand the utility and agency needs, have been involved in successful major utility movement projects, and have a relationship with the local utility agencies.

Subsurface Utility Engineering

Subsurface utility engineering is an engineering process used to accurately identify the quality of subsurface information needed to develop the utility relocation plans, identify the ROW, and manage the design and construction aspects of the Project. The Rail Road is providing 3TC with plans that have identified the utility locations. To supplement the provided information, 3TC Team members are initiating pre-award utility company and agency meetings to confirm the provided information, inform the utility companies and agencies of our expertise and potential involvement with the Project, and confirm the utility relocation strategy.

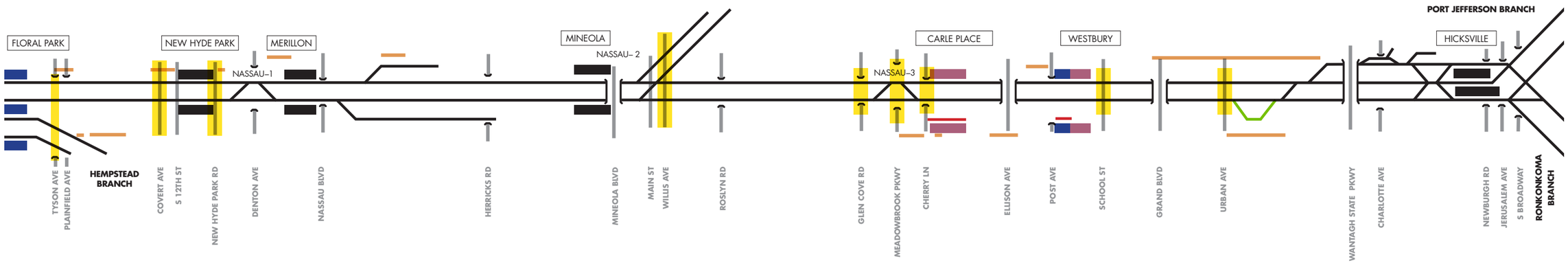
EXISTING PROJECT CORRIDOR



LEGEND:

- Existing Track
- New or Realigned Track
- Completed Track
- Existing Station
- In - Progress Station
- Completed Station
- Retaining Wall
- In - Progress Grade Elimination / Bridge Modification
- SAMPLE ST Completed Grade Elimination / Bridge Modification

Q2 2019 || Months 7-9



LEGEND:

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New or Realigned Track	In - Progress Station	In - Progress Grade Elimination / Bridge Modification
Completed Track	Completed Station	SAMPLE ST Completed Grade Elimination / Bridge Modification

Q3 2019 || Months 10-12

LEGEND:

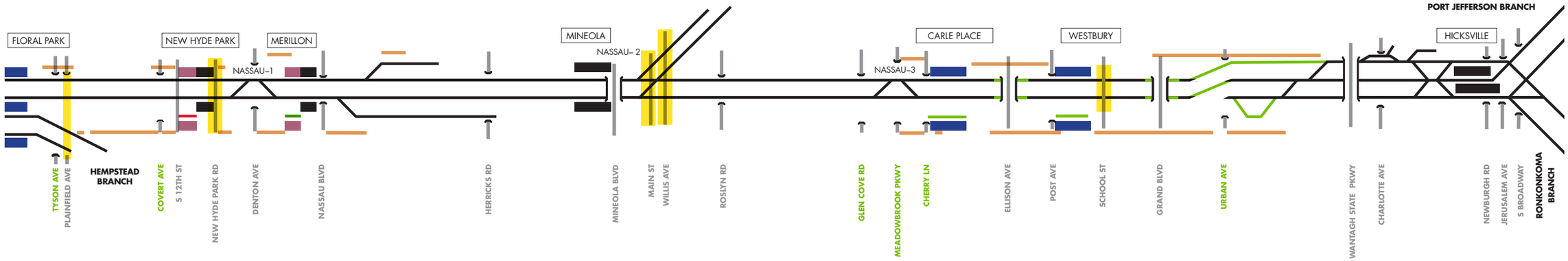
Existing Track	Existing Station	Retaining Wall
New or Realigned Track	In - Progress Station	In - Progress Grade Elimination / Bridge Modification
Completed Track	Completed Station	SAMPLE ST Completed Grade Elimination / Bridge Modification

Q4 2019 || Months 13-15

LEGEND:

- Existing Track
- New or Realigned Track
- Completed Track
- Existing Station
- In - Progress Station
- Completed Station
- Retaining Wall
- In - Progress Grade Elimination / Bridge Modification
- SAMPLE ST Completed Grade Elimination / Bridge Modification

Q1 2020 || Months 16-18



LEGEND:

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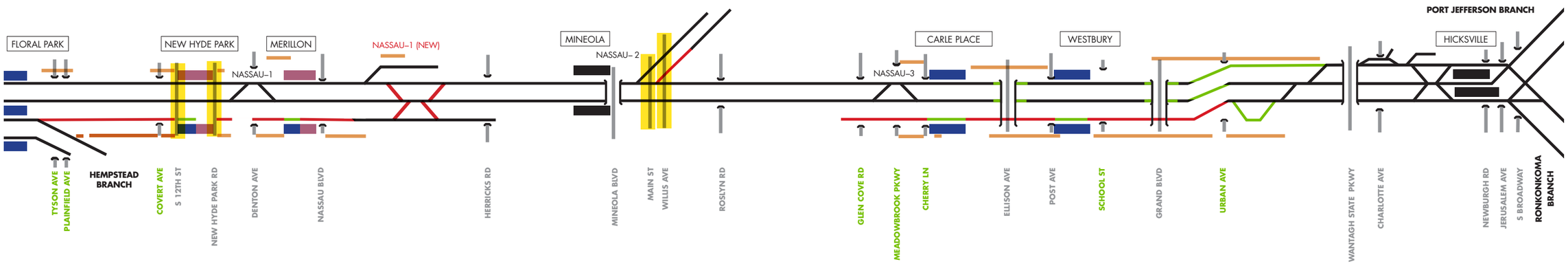
- New or Realigned Track
- Completed Track
- Existing Station
- In - Progress Station
- Completed Station
- Retaining Wall
- In - Progress Grade Elimination / Bridge Modification
- SAMPLE ST Completed Grade Elimination / Bridge Modification

Q2 2020 || Months 19-21



LEGEND:

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- Completed Track
- Existing Station
- In - Progress Station
- Completed Station
- Retaining Wall
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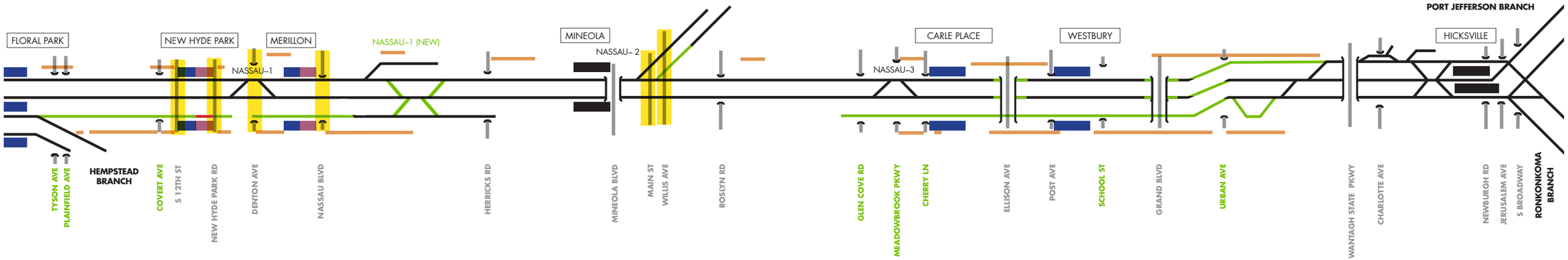
- SAMPLE ST Completed Grade Elimination / Bridge Modification

Q3 2020 || Months 22-24



LEGEND:

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- Completed Track
- Existing Station
- In - Progress Station
- Completed Station
- Retaining Wall
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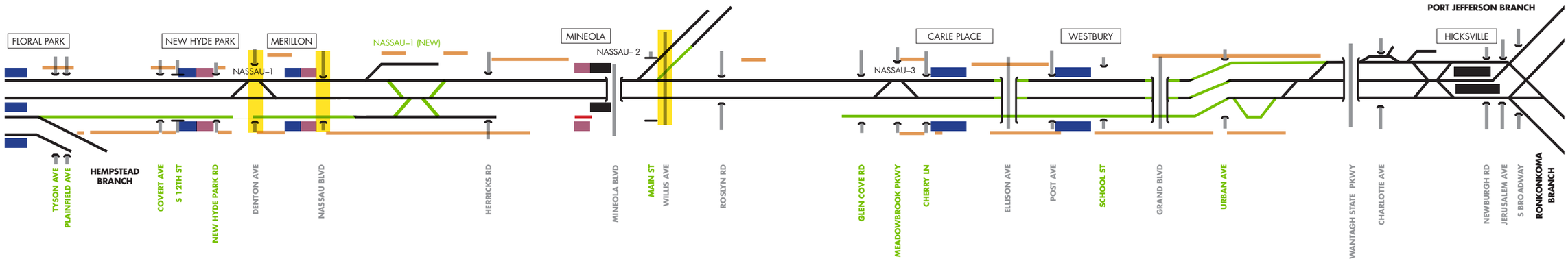
- SAMPLE ST Completed Grade Elimination / Bridge Modification

Q4 2020 || Months 25-27



LEGEND:

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- New or Realigned Track
- Completed Track
- Existing Station
- In - Progress Station
- Completed Station
- Retaining Wall
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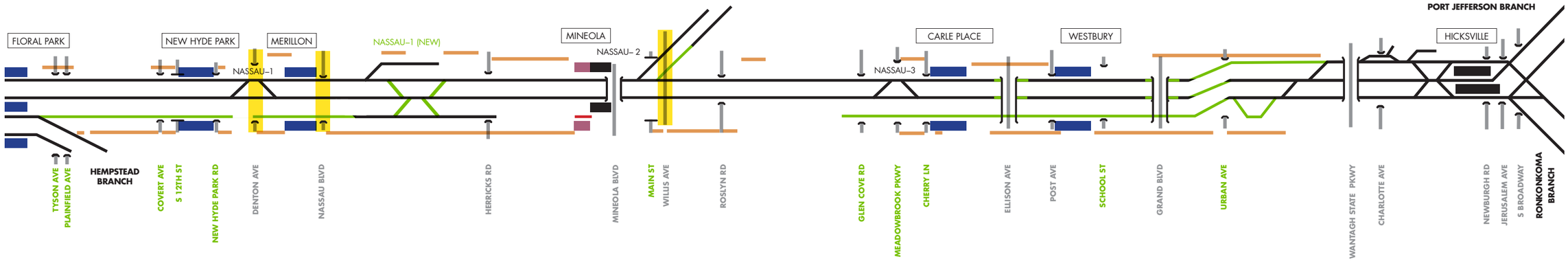
- SAMPLE ST Completed Grade Elimination / Bridge Modification

Q1 2021 || Months 28-30



LEGEND:

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- New or Realigned Track
- Completed Track
- Existing Station
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- Completed Station
- Retaining Wall
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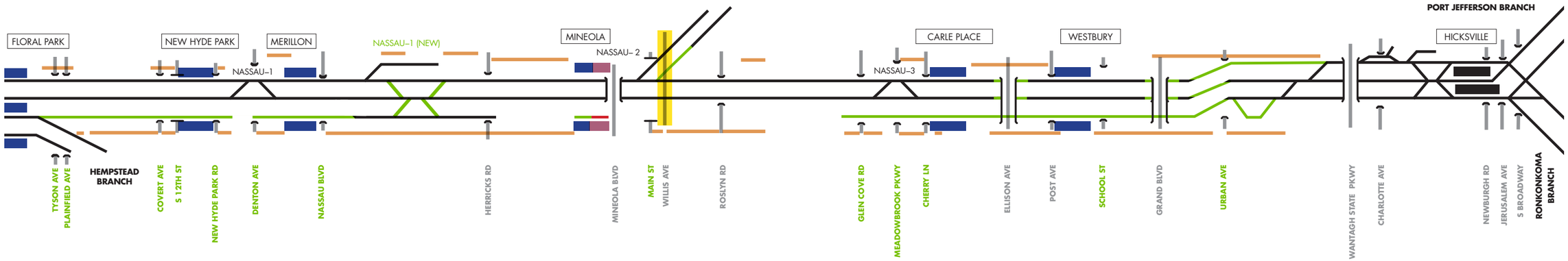
- SAMPLE ST Completed Grade Elimination / Bridge Modification

Q2 2021 || Months 31-33



LEGEND:

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- Completed Track
- Existing Station
- In - Progress Station
- Completed Station
- Retaining Wall
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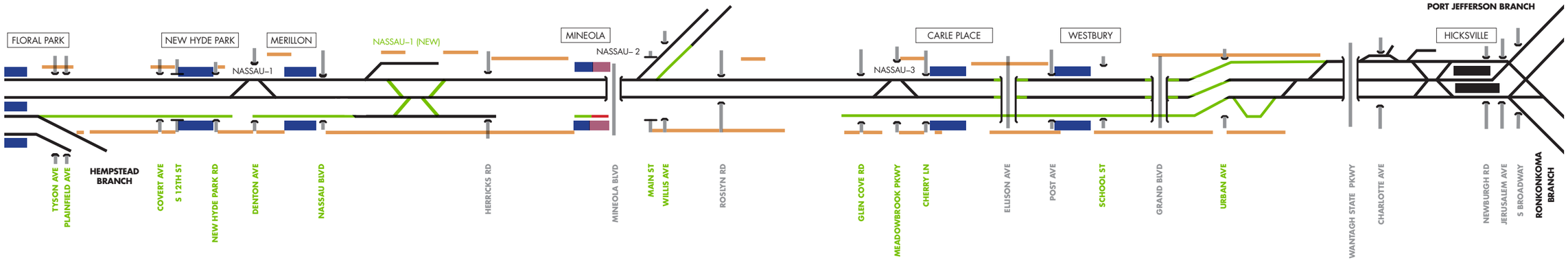
- SAMPLE ST Completed Grade Elimination / Bridge Modification

Q3 2021 || Months 34-36



LEGEND:

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- Completed Track
- Existing Station
- In - Progress Station
- Completed Station
- Retaining Wall
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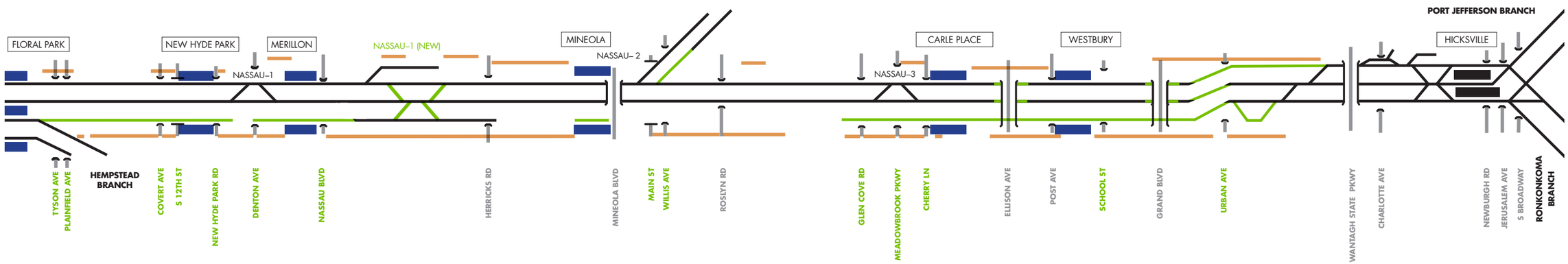
- SAMPLE ST Completed Grade Elimination / Bridge Modification

Q4 2021 || Months 37-39



LEGEND:

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- New or Realigned Track
- Completed Track
- Existing Station
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- Completed Station
- Retaining Wall
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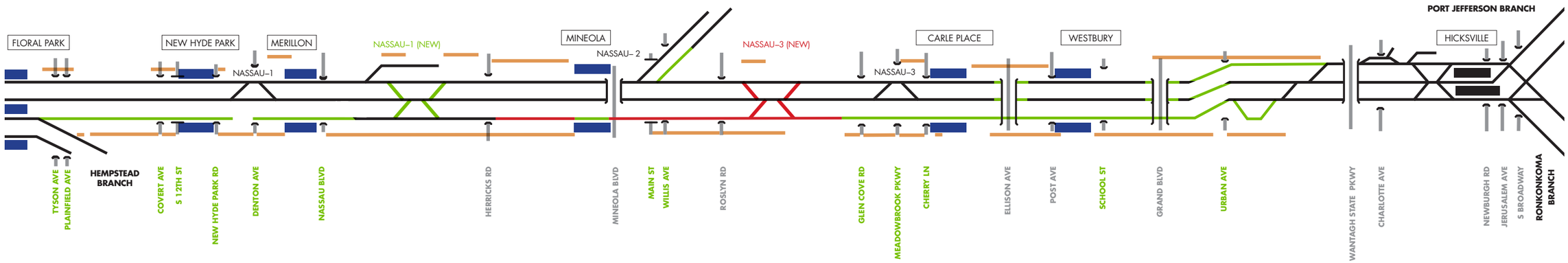
- SAMPLE ST Completed Grade Elimination / Bridge Modification

Q1 2022 || Months 40-42



LEGEND:

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- New or Realigned Track
- Completed Track
- Existing Station
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- Retaining Wall
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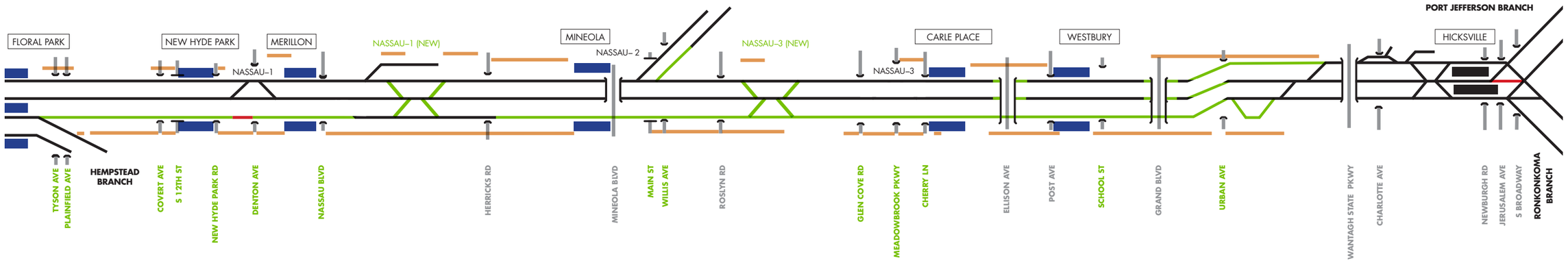
- SAMPLE ST Completed Grade Elimination / Bridge Modification

Q2 2022 || Months 43-45



LEGEND:

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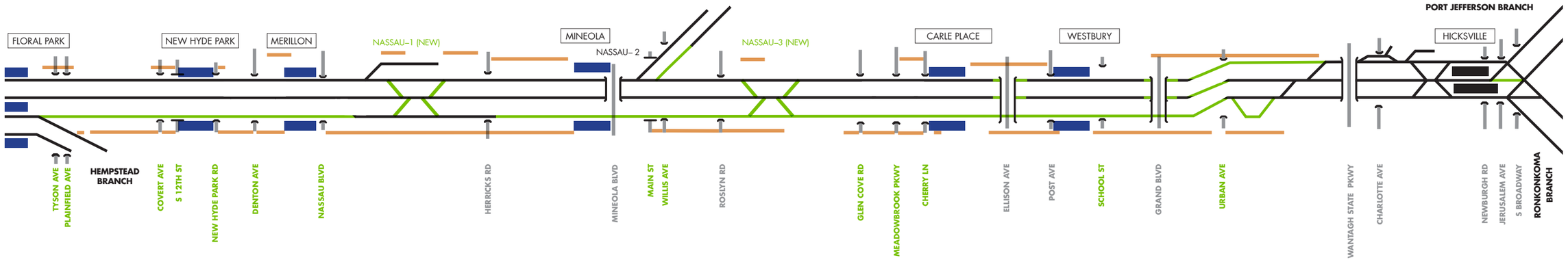
- New or Realigned Track
- Completed Track
- Existing Station
- In - Progress Station
- Completed Station
- Retaining Wall
- In - Progress Grade Elimination / Bridge Modification
- SAMPLE ST Completed Grade Elimination / Bridge Modification

Q3 2022 || Months 46-48
As–Built Condition



LEGEND:

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- New or Realigned Track
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- Existing Station
- In - Progress Station
- Completed Station
- Retaining Wall
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- SAMPLE ST Completed Grade Elimination / Bridge Modification

3.3 Project-Wide Construction Schedule

3.3 Project-wide Construction Schedule

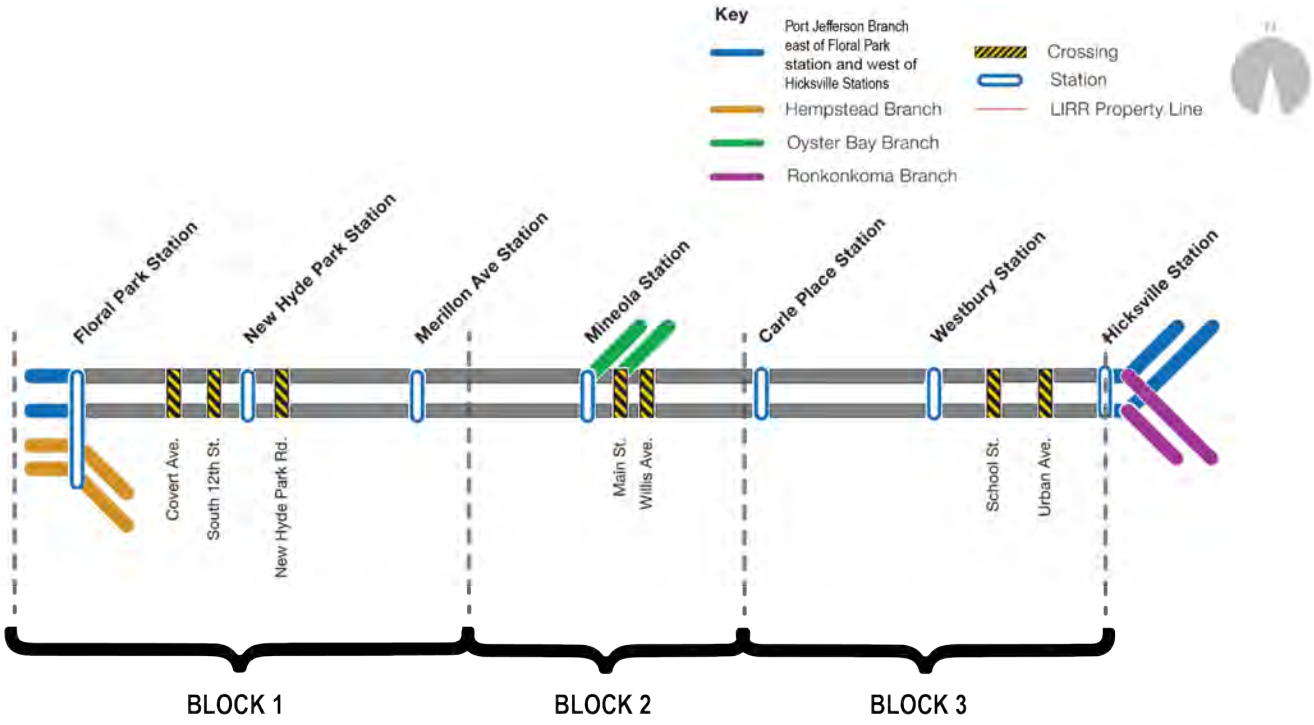
3.3.1) Provide a narrative outlining basis of the overall schedule. Include explanation basis of all assumptions specifically those associated with approvals, submittals and/or third parties.

The IBS is based on the most recent available project information. This includes the Final Impact Statement (FEIS), the directive drawings and Contract specifications, the estimate of quantities, and the design produced by the 3TC.
The IBS is broken down in two main categories: 1) design and procurement 2) construction. The design portion of the IBS is based on input from the Design Team and models the breakdown of design packages which will be required to complete the design. Generally, one package per structure will be submitted. Logic was based on time requirements to support the construction schedule and to optimize the use of the available resources. The construction schedule is based on the contract documents, the estimate of quantities and the 30% drawings. The construction schedule will be adjusted to model the design of each project element as soon as individual design packages are complete and approved.

Major Assumptions

Contract Administrations and major dates

- Notice of Award: October 1, 2017.
- 3 months period to execute the contract and submit all required bonds, insurance Documentation, Schedule and other administrative requirement prior to NTP.
- LNTP 3 Months after Award: December 31, 2017
- Design and Preparatory Work Period 9 Months
- NTP 9 months after LNTP: October 1. 2018
- NTP for Covert Avenue Crossing Elimination and Urban Avenue crossing elimination: 02 January 2019.
- Completion of Covert Avenue Crossing Elimination and Urban Avenue crossing elimination: no later than 31 December 2019.
- Completion of Crossing Elimination at New Hyde Park, Main Street, Willis Avenue, South 12th Street, and School Street no later than December 31, 2020.
- 3 Parking Structures completed 24 months after NTP. These will be the 2 parking structures at Mineola and the parking structure at Westbury South.
- Construction Completion (CC) – NTP01 October 2018 + construction duration 1446 cd : Construction Completion: September 15, 2022
- Substantial Completion (SC) 6 months, 180 days



after CC: March 14, 2023

- Final Completion 6 months, 180 days after SC: September 10, 2023

Note: Milestone Dates & Contract Durations will be tracked in the schedule using milestone activities and level of efforts activities. To facilitate a quick overview of the schedule, these activities will appear at the top of every detailed schedule.

Constraint date at the Project level see chart below:

Design

The design packages that do not require additional site survey, or geotechnical information will be progressed as soon as the Notice of Award is received. Submittals, Surveys, test pits, geotechnical reports and the remaining designs will start after receipt of the LNTP.
All design packages will be reviewed by the Rail Road individually as soon as they are submitted, for the clarity the proposal the review duration are integral to the submittal tasks. The Rail Road review time will be no longer than 21 calendar days. The Design Team

[10] ACTIVITIES WITH CONSTRAINTS

17 TOTAL ACTIVITIES WITH CONSTRAINTS

will progress the design of the subsequent submittal completion level (levels are 60%, 90% and RFC) as the Rail Road reviews the submittal.

Track Outages

All activities requiring track outages are identified with a specific activity code for single track outage and/or double track outage. Thus all work requiring outages can be quickly filtered out. This code is an efficient way to extract from the IBS all double track outages and the dates they will be needed.

Flagman

An activity code was created for all activities which may require flagmen. Additionally, a "Flagman" resource was created. With both of these, activities requiring flagmen can be sorted out, and the number of flagmen required per day can be easily analyzed.

Locations

For the purpose of coordinating all work and creating the Time / Distance Diagram, one system of distance coordinate had to be adopted. Since most of the new design relates all work with Track stationing all locations had to be converted to track stationing and the following assumptions were made:

- [redacted]
- Block 1: Queens Interlocking to Existing Nassau 1 interlocking: Station [redacted] to Station [redacted]
- Block 2: Existing Nassau 1 interlocking to existing Nassau 3 interlocking: Station [redacted] to Station [redacted]
- Block 3: Existing Nassau 3 interlocking to Divide interlocking: Station [redacted] to Station [redacted]

Prevailing Timetables (PTT)

Four Prevailing Timetables per year. However, one of the time tables should start when all work requiring a single track outage in Blocks 1 and 3 is complete. A milestone (activity number CB2.10) is included in the IBS to track this date and it will be set at the beginning of the project and tracked at each schedule update.

Construction Sequencing

Preparatory work will be performed during the nine months period between the LNTP and the NTP. All other field work will start after receipt of the NTP. The third track will be fully operational within 47 and ½ months after the NTP.

Activities requiring single track outages can be done on weekdays, weeknights, or weekends, but have to be contiguous within a block and consistent throughout the prevailing timetable. To minimize PTT time impact when switching from block to block, the plan is to complete all work requiring single track outages prior to moving into the subsequent block.

Restrictions on Work on Subsequent

BlocksActivities requiring a single track outage are grouped in Block 1, Block 2 or Block 3. For the construction schedule it assumed that Block1 and Block 3 can be worked on at the same time. Since the Covert Crossing elimination must be complete before New Hyde Park & South 12th Street, is located in Block 1 and will require single track outages, Block 1 activities have to be started first. Similarly, Urban Avenue Crossing Elimination has to be done prior to School Street which is located in Block 3 and will require single track outages, Block 3 activities have to be done at the same time as Block 1 activities. Block 2 will follow Block 1 & 3.

Additionally, the start of all work requiring traffic closure at Covert Avenue and Urban Avenue crossings are restrained by the specific Notice to Proceed no earlier than January 2, 2019, and will be re-opened to traffic prior to December 31, 2019. Willis Avenue, may start any time after NTP and can be concurrent with other crossing elimination work except for Main Street. However Willis Avenue is located in Block 2, therefore Willis Avenue Crossing will start as soon as Block 2 starts.

The maintenance of way siding East of Urban Avenue will be completed and available for use before Urban Avenue crossing is eliminated. This work will be started after NTP, on October 1, 2018.

Crossing eliminations at South 12th Street will start as soon as New Hyde Park Road crossing is opened to Traffic and completed prior to December 31, 2020.

New Hyde Park Station Reconstruction will start when South 12th Street can be closed.

Crossing elimination at School Street will start as soon as Urban Avenue is opened to traffic and be completed prior to December 31, 2020.

Crossing elimination at Main Street will start as soon as Willis Avenue is opened to traffic and be completed prior to December 31, 2020.

Parking Structures

Three parking structures will be completed 24 months after NTP. NTP is assumed to be October 1, 2018, therefore all three parking structures will be completed by October 1, 2020. The three parking structures include two at Mineola and Westbury South. The other two remaining parking structure are Westbury North and Hicksville 2. The construction of these two structures will follow the first three parkings.

Stations Sequencing

New Hyde Park is located in Block 1, this area of the project will be worked on first. The South 12th Street Crossing will be closed during construction of the New Hyde Park Station platform. As a result, Covert Avenue and New Hyde Park Road Crossings will be reopened to traffic before the start of the New Hyde Park Station reconstruction work.

Carle Place Station and Westbury Station are located in Block 3. Carle Place Station will close for reconstruction upon receipt of NTP. Carle Place Station will complete within 12 months after NTP. The North Platform at Westbury Station will start upon receipt of NTP. The South Platform at Westbury Station - will start after completion of the South Parking Structure exterior walls.

Mineola and Merillon Stations are located in Block 2. These two stations will be constructed at the same time. Both stations start as soon as Block 1 and Block 3 construction are complete (activity number CB2.10).

The Traction Power Substations will be replaced in the following order:

1. Substations G14 and G19 concurrently
2. Substations G15 and G20 concurrently
3. Temporary Substation G16 Concurrently with G15 & G20 (Temp G16 new)
4. Substation G16
5. Substation G17
6. Substation G18

Track Installation

The Rail Road FA will shift and raise existing track where required, in Block 1 and 3 concurrently and then Block 2 while other work is ongoing in each specific block or during the 9 months pre-construction work period. The third track will be installed as work progresses in Block 1 and 3 and then Block 2.

Signals and Controls installation will follow the track installation.

As the design is completed and the work of each elements is better define, the interfaces between areas and type of work will be refined and modeled in the schedule. The work will be organized to preserve the overall duration included in the proposal schedule.

Calendars and Work Periods

Calendars were created to model the many work restrictions associated with the different type of work. As required, calendars will be added once the design is complete and /or as requested by the Rail Road.

Calendar 1 – is a 5 day work week with holiday restrictions. Holidays as listed in Table 1 TP 2.21 Work Restrictions. This calendar will be used for all administrative work not impacted by weather conditions or additional track work restrictions.

Calendar 2 – is 7 day work week with no restriction- this will be used for any activities with Calendar day durations, such as contractual milestones, concrete curing activities etc.

Calendar 3 – Models a weekend work period for activities which require flagging, or track outages on the weekend. All activities requiring a double track outage are assigned to this calendar.

Calendar 4 – is similar to Calendar 1. It is a 5 day work week calendar with holiday embargo as listed in TP2.21 Table 1 with additional work restriction to model loss time weather days. In addition to the holidays, 2 days were designated as on-work in January, February, and March with 1 day designated as non-work in each of the remaining 9 months.

A analysis of the schedule task over time (see chart below) reveals that about 2/3 of the work will be competed by August 2020. This is the most efficient way to build this project in regards to the construction along the tracks and the most efficient way to end constrcution impacts in the largest area as soon as possible.

[redacted]

TASK COUNT HISTOGRAM

Project ID	Project Name	Data Date
LR-PBL-C11	Contract #6240 - LIRR Expansion Project - Floral Park to Hicksville	01-Oct-17

2,451 TOTAL TASKS DISTRIBUTED

EARLY LATE AVG

3.3.2) Provide an overall schedule for the Work. The schedule shall provide sufficient detail to demonstrate that the proposed schedule is achievable and that Work can be completed within the proposed completion times, which must not exceed the maximum durations stated in Section 9.0 of the Instructions to Proposers.

The proposed duration for Construction Completion shall take into account all requirements, restrictions and limitations set forth in the Contract Documents, including without limitation, the provisions allowing the Rail Road's cancellation of approved outages.

A detailed project schedule is provided in Appendix 1. A schematic representation of the project schedule and completion sequence is included below

3.3.3) Provide a time/distance diagram to show how work will be sequenced and performed along the corridor between Floral Park and Hicksville.

Please see the following page.

3.3.4) Provide a schedule of the duration of construction and periods allocated to Utility Owners for relocations or approvals. Include any documentation received from Utility Owners to corroborate the time periods allocated.

The following Utility Owners will perform their own facilities relocations: Altice (Formerly Cablevision); Verizon Business; Verizon; and National Grid.

3TC has met with these utility owners several times during the Procurement Phase and has received their input for pricing and schedule.

Altice (Formerly Cablevision)

Altice will relocate all facilities from Floral Park to Hicksville off the ROW. The schedule to perform this ROW relocation is as follows:

1. Permit acquisition – 1 month
2. Procure equipment and material – 1 month (coincides with permits)
3. Relocation of facilities – 8 months

Covert Ave. – Altice will reroute utilities running north and south on along Covert Ave. to one block west of Covert. This work requires the following:

1. Installation of 2 new poles or core drill – 1 month
2. Permits acquisition – 1month
3. Procurement of material and equipment – 1 month
4. Relocation of facilities – 3 months

New Hyde Park – This location requires relocation of aerial lines.

1. Installation of 2 new poles or core drill – 1 month
2. Procure equipment and material – 1 month (coincides with permits)
3. Relocation of facilities – 3 months

Cherry Lane – This location requires relocation of aerial lines.

1. Installation of 2 new poles or core drill – 1 month
2. Procure equipment and material – 1 month (coincides with permits)
3. Relocation of facilities – 3 months

Verizon Business will relocate all facilities from Floral Park to Hicksville off the ROW. The schedule to perform this ROW Relocation is as follows:

1. Permit acquisition – 1 month
2. Procure equipment and material – 1 month (coincides with permits)
3. Relocation of facilities – 8 months

Willis Ave and Main Street – Verizon Business will reroute all interferences one block east of Willis to avoid interferences with 3TC's work.

1. Permit acquisition – 1 month
2. Procure equipment and material – 1 month (coincides with permits)
3. Relocation of facilities – 8 months

Verizon

The work for Verizon will only be at the following intersections:

Covert Avenue - Verizon will relocate their facilities one block west of Covert Avenue.

1. Permit acquisitions – 1 month
2. Procure equipment and material – 1 month
3. Relocation of facilities - 6 months
4. 3TC to core drilling under ROW (4-4" duct)

School Street -Verizon will relocate facilities one block west of School Street.

1. Permit acquisition – 1 month
2. Procure equipment and material – 1 month (coincides with permits)
3. Relocation of facilities – 6 months

Urban Street – Verizon will reroute facilities one block west of School Street.
1. Permit acquisition – 1 month
2. Procure equipment and material – 1 month (coincides with permits)
3. Relocation of facilities – 6 months
4. 3TC required to core drill [redacted] ducts under the ROW

New Hyde Park – Verizon at this location needs to reroute a trunk line and remove a vault that interferes with the bridge expansion.
1. Permit acquisition – 1 month
2. Procure equipment and material – 1 month (coincides with permits)
3. Relocation of facilities – 11 months

Cherry Lane – Verizon might have to relocate an underground facility at this location.
1. Permit acquisition – 1 month
2. Test pit and design – 2 months
3. Procure equipment and material – 1 month
4. Relocate facilities – 2 months

All work to be performed by Verizon – Willis Ave only ancillary work might be required and can be completed as needed.

National Grid

Work and durations and pricing provided by National Grid are as follows:

Covert Avenue: There are no gas mains crossing the Rail Road R.O.W. Plan to Split services and move house services to side east and west sides of roadway. The total duration of work will be 25 days.

1. Permit and submittals- 1 month
2. Relocation of facilities- 25 days

Urban Avenue – There are no gas main crossing Rail Road R.O.W. Plan to relocate gas services to house connections as necessary.
1. Permits and Submittals- 1 month
2. Relocation of Facilities-1 month

New Hyde Park Road – Temporarily cut and cap [redacted] gas main- Following Underpass work before final pavement is constructed National Grid will restore 8" gas main under roadway
1. Permits and Submittals- 1 Month
2. Relocation of facilities- 6 weeks

Willis Avenue – Relocate main to the west side of the street
1. Permits and submittals- 1 month
2. Relocation of facilities- 2 months

School Street – Relocate main to east sidewalk to maintain local house services
1. Permits and Submittals- 1 month
2. Relocation of facilities- 1 month

Cherry Lane – Overpass- Relocate [redacted] mains [redacted] west of east abutment Ffundation.
1. Permits and submittals - 1 month
2. Relocation of Facilities - 1 week

3.3.5) Provide narrative and/or diagrams for both a typical and the most active work shift, including a schedule of activities, work headings and work crews on site with an accounting of activities requiring flagging and the number of flagging staff anticipated.

3TC will be working in various locations throughout the Project duration. A majority of our work will be done under the protection of a fence located between the active railroad and the work areas. This fence will protect our work force from entering the active railroad area and thus eliminating the need for flagging. Work at the stations will also be done behind an approved protection barricade that will allow the work there to be done without the need for flagging.

The requirement for flagging will be limited to operations that may have a fouling opportunity. These operations include large picks of precast concrete for platforms, structural steel, utility poles, retaining walls, sound walls and other similar operations. A typical work day may have a number of these activities working simultaneously. According to our schedule, a typical day would have three headings of retaining/sound wall installation crews working at the same time. Additionally, we will be installing station platforms and utility poles as well.

Since nearly all of these operations will take place on straight track areas, we anticipate that a crew of three flagmen will be required at each location.

A typical day, during the second year of the contract, will have six locations requiring flagmen working at one

time, with three flagmen assigned to each activity for a total of 18 flagmen.

During our most active period, we would have as many as 10 locations requiring flagging at the same time. This is only for a short period of time and is not typical of our everyday requirements.

These flagman quantities are dependent on the assumption that only three flagmen are required for any part of this project and that the barricade will completely eliminate the need for flagging except when there is a fouling possibility.

3.4 Maintenance of Railroad Operations

3.4 Maintenance Of Rail Road Operations

Detailed narrative, diagrams, plans and drawings describing:

3.4.1) Overall approach to interaction with the existing Rail Road operations and within Rail Road ROW.

3TC will have a dedicated team of individuals assigned to Railroad Operations (RO Team), led by the Railroad Coordinator/Operation Manager and supported by the Rail Operations Specialist, Vincent D'Alessandro. The function of the RO Team will be to schedule all Rail Road services, coordinate with the Chief Safety Officer and Safety Manager, and support all operations undertaken by 3TC. They will be given the authority to make all requests for flagmen, work trains and General Orders directly to the Rail Road. They will coordinate all 3TC work to make the most efficient use of Rail Road FA work.

The RO Team will attend all scheduled meetings to ensure that they have up to date information. They will coordinate with 3TC Project Management Team as well as subcontractors, vendors and third party entities. They will provide the Rail Road with requests for services in accordance with Rail Road procedures.

The RO Team will possess the required construction experience to manage the coordination effort necessary between the Rail Road and 3TC. This will require the RO Team to understand both the needs of 3TC's Construction Team as well as the requirements of the Rail Road operations. Each construction operation will need to be analyzed and understood by the RO Team so that proper and efficient use of the Rail Road services is made. All work on, in or around the ROW will fall under the RO Team's responsibility.

Coordination and full exchange of information between this Team, the Rail Road, and 3TC will be imperative to getting the work done efficiently and with the least impact to the riding public.

3.4.2) Approach to minimizing impacts on Rail Road service during construction.

3TC has developed a Work Plan for this Project that takes careful consideration of the active Rail Road operations and substantially reduces the number of double track outages. Additionally, we have developed ATCs that will minimize our impact on the operating Rail Road in other ways as well.

Below is list of our ATCs and ideas and their impact on the public during construction:

1. ATC #27 - Cut & Throw Elimination (South Alignment): This ATC will eliminate track work and reduce the number of switches installed on the east end of the Project. This will provide the following benefits to the Rail Road service operation:
   - Fewer single track outages for switch installations
   - Fewer single track outages for signal connections
   - Fewer single track outages for track throws
   - Fewer single track outages for utility pole installation
   - Fewer single track outages for utility installation/ relocation
   - Fewer overall flagman occasions

2. U shaped Bridge - The U shaped bridge construction will allow for the construction of the structures with no effect on the railroad until the unit is pushed into place during a double track outage. This will provide the following benefits to the Rail Road service operation:
   - Fewer double track outages for bridge installation
   - Fewer single track outages for foundation installation

3. Fencing and Barricades - The work areas will be separated from the Rail Road operations by means of fencing and approved barricades wherever possible to allow work to continue without affecting the operation of the Rail Road. This will provide the following benefits to the Rail Road service operation:
   - Fewer flagman occasions
   - Fewer off-hour railroad operations
   - Maximize progress of the work

Overall, it is our Team's intention to have the least effect on the Rail Road daily service operations and still progress the schedule safely and effectively.

3.4.3) How those portions of the Work to be conducted by the Rail Road are minimized and taken off the critical path

3TC is presenting a Proposal that minimizes drastically the Rail Road FA workload when compared with the indicative design. The cornerstone of such reduction is 3TC's ATC# 27, which reduces the "cut and through switch moves" up to only one, which is not in the Project critical path and can be performed at any time by the Rail Road FA.

Our innovative approach to perform the at-grade crossing eliminations is our second big reduction on the initially scheduled Rail Road FA participation. 3TC will perform the work of eliminating the current at-grade crossing by using just one double weekend outage per location. This approach, compared with the initial one, saves the Rail Road a substantial amount of time and effort and lessens the traffic congestion impact for the traveling public and Rail Road commuters.

3.4.4) Provide details on the use of up to six seasonal schedules in each year. Include details of where single block outage locations will vary by season and for day, night, and weekend activities within each season.

As explained in Question 3), creating at-grade crossing underpasses and the cut and throw switch moves are the most disruptive construction operations for the Rail Road traffic activities included in this Project schedule. Our Team has successfully found the way to virtually eliminate all adverse impacts of these construction activities. As it has been expressed during our Team One on One's meetings, 3TC has firmly commited to the Rail Road to avoid as much as possible any train schedule's disturbance, being ready to work with only 4 seasonal schedules instead the six offered. Retaining walls installation and bridge widening are the activities that could potentially be more impacted by the different schedules offered by Rail Road. 3TC can manage such activities by rotating its crews between day and night with no conflict. A detailed IBS has been provided in Section 3.3.2) of this Proposal showing the tentative dates for each of the above mentioned activities in which no impact for seasonal schedule is reflected.

3.4.5) Provide concept staging plans for Work within the Rail Road ROW.

Please refer to section 3.2.1

3.4.6) Provide a schedule outlining the duration and type of all construction Work within the Rail Road ROW including activities associated with poles, retaining walls, tracks, ballast, utilities, structures, traction power, substations, systems, signals, train control, communications and others that may affect Rail Road operations.

We have provided this in Appendix 2.

3.4.7) Provide individual schedules for installation of all trackwork at each individual crossover and interlocking.

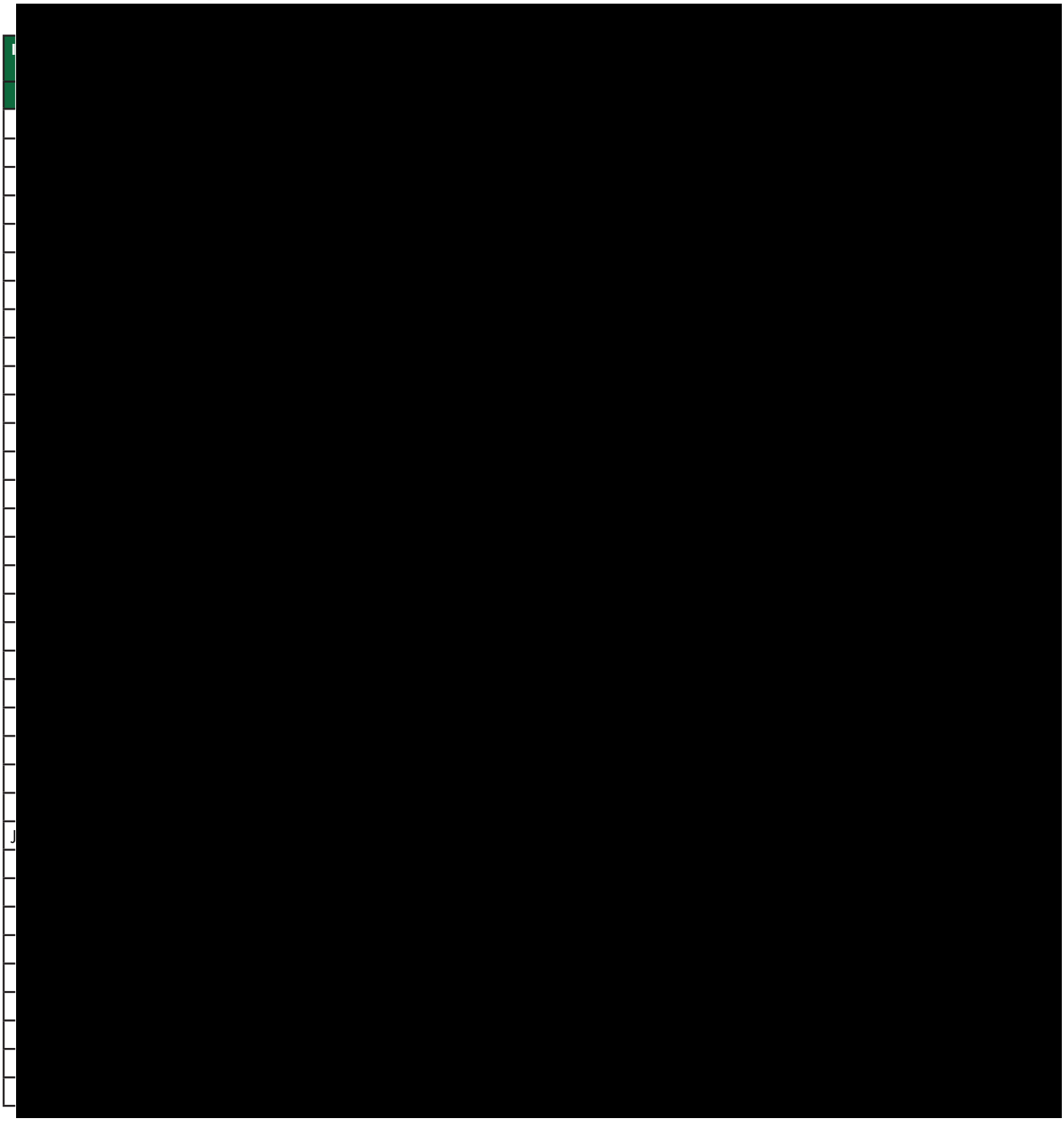
We have reviewed our schedule for all crossovers and interlocking work. The chart on the next page shows all switches, interlockings and crossovers, including the responsible party for installation. Additionally, the chart provides the scheduled start date and end date for each activity.

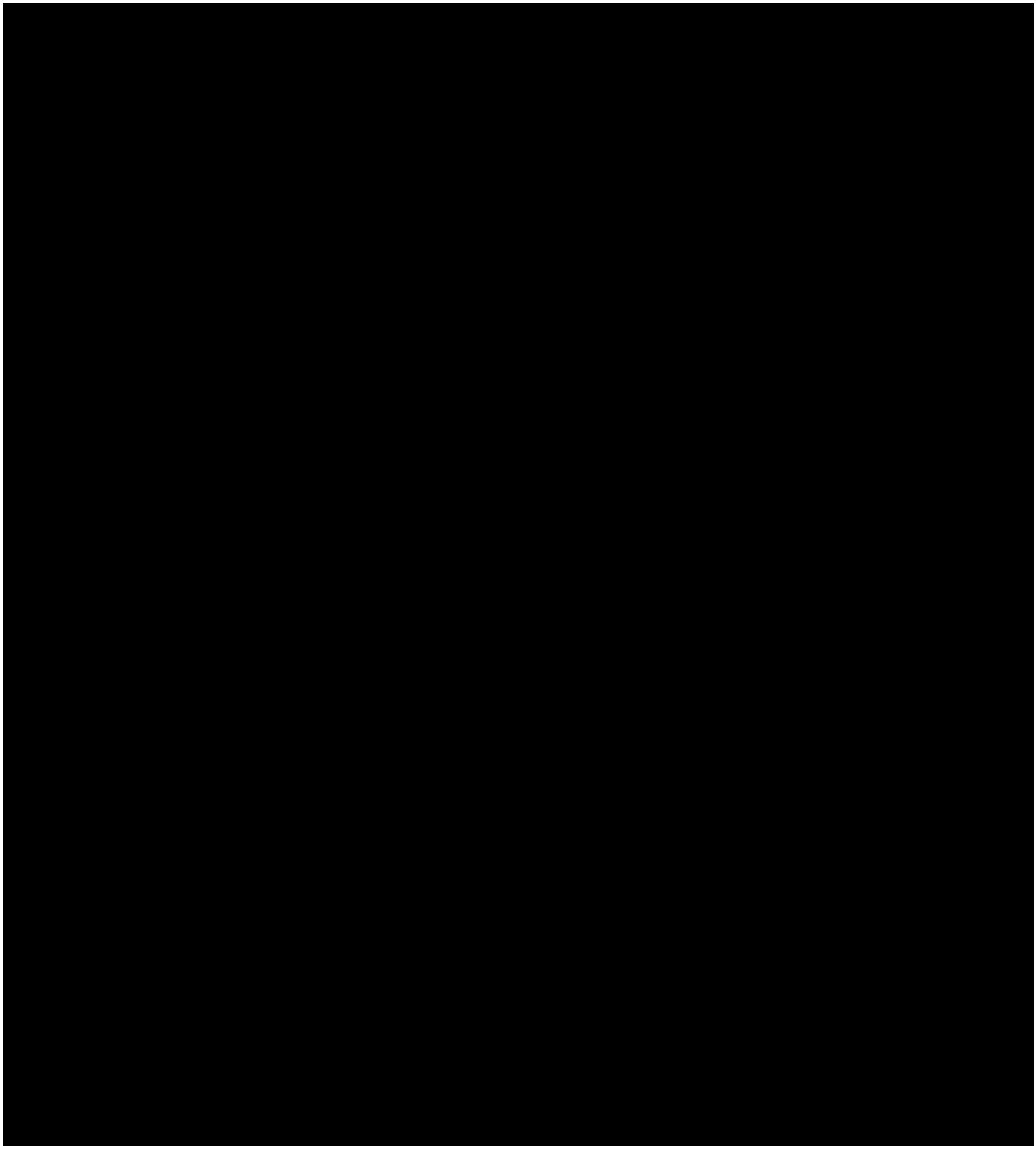
3.4.8) List all proposed track closures including track(s) or equipment affected and provide detail on type, locations, durations, extent and primary construction works to be conducted during closure.

We have provided this following the table of individual schedules for the installation of all track work.

3.4.9) Narrative on implications of loss or rescheduling of track closures and contingencies/flexibility included to overcome any disruption.

3TC will request track outages through the Track Outage Schedule. This schedule will include request for single track outages (weekday and weekend) 6 months prior to the actual outage and double track outages (weekend) 16 weeks prior to the actual outage. In order to prevent undesired schedule delays and cost overrun afterimplications associated with losing track outages, 3TC will enhance communication through weekly follow up meetings with the Rail Road to ensure all track outage details are provided and appropriate actions are taken to adequately schedule the construction operations during the track outages.

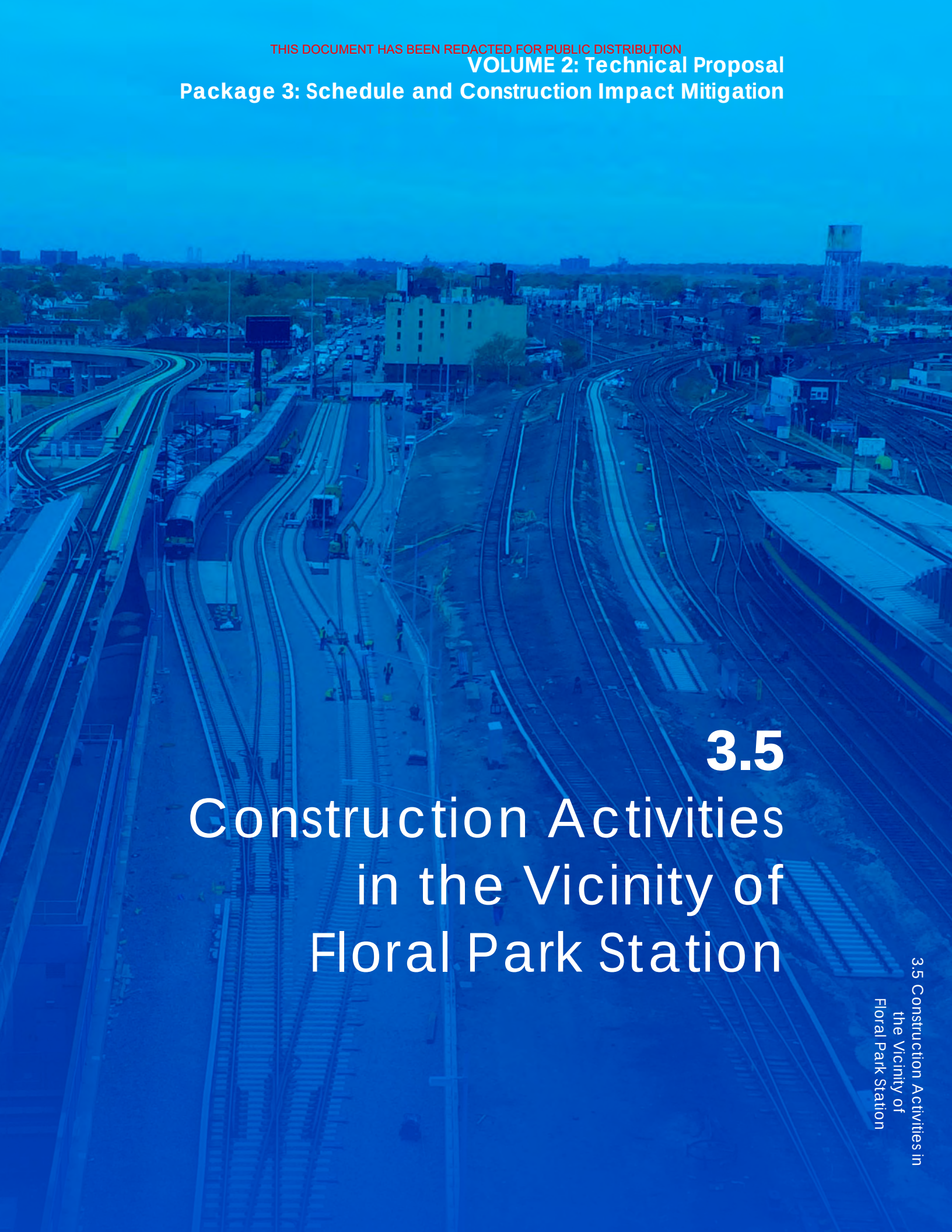




As an additional measure, 3TC will explore with the Rail Road the possibility of including one backup date for each track outage (approximately with one week lag between the original date and the backup) for each single and double track outage scheduled. This will allow for an "extra cushion" in the event 3TC or even the Rail Road run into any unforeseen event that precludes the track outage from taking place on the agreed upon date.

3.4.10) Identify all Work activities to be conducted by the Rail Road and provide a schedule of interactions indicating duration allocated for Rail Road to complete Work.

The chart on the following page contains all work to be done by the Rail Road FA. It also details the location, start date and finish date for each activity. This chart reflects ATC #27 Cut & Throw Elimination (South Alignment): which results in a substantial reduction in the required Rail Road FA required work.



3.5 Construction Activities in the Vicinity of Floral Park Station

3.5 Construction Activities in the Vicinity of Floral Park Station

Vicinity includes all activities between approx. mileposts 14.5 and 15.5, including the new Hempstead Branch Interlocking construction activities.

3.5.1) Provide a narrative of the sequence of major construction activities.

The scope of this work will involve the installation of ADA compliant elevators to each individual platform, widening of the Floral Park Viaduct and two new bridge structures to be built at Plainfield Avenue and South Tyson Avenue. Each elevator location will involve selective demolition to the Floral Park station platforms. There will also be minimal sidewalk and curb work near the base of the elevators that will require some MPT. The South Tyson Avenue Bridge will require selective demolition of the existing Hempstead Bridge and replacement with a variable width structure to accommodate the realigned Hempstead line and the third track. The new structure will be built on temporary towers north of the existing Hempstead line and rolled into place on a single-track outage. The new east abutment will be founded on drilled shafts and pile caps east of the existing retaining wall. The Plainfield Avenue Bridge will require the construction of a parallel single track bridge south of the existing bridge. This bridge will be founded on new drilled shafts and pile caps located behind the existing wing walls. The new bridge will be built in place using conventional construction methods.

Within the area noted, there will be installation of sound walls and retaining walls along the ROW. This work will generally be performed from the existing ROW with limited exposure to the local communities.

A new signal house and battery cabinet will be installed in addition to a new turnout between the new third track and the Hempstead branch. New Signals 2E and 2W will be installed. The existing G13 Traction Power Substation will be upgraded with new traction power equipment to support the installation of the new third track. Additionally, a new interlocking will be installed with new signal houses and signals for the Hempstead Interlocking.

3.5.2) Provide a schedule outlining the duration and type of all construction activities in this vicinity excluding all track, ballast or Rail Road systems Work that are conducted directly from the Rail Road ROW.

This work is all in Block 1.

Major work in the vicinity of Floral Park includes Floral Park Station elevators re-construction, Tyson Avenue Bridge and Floral park viaduct, Plainfield avenue Bridge, Installation of retaining walls and sound walls South and North of the rail Road tracks.

Floral Park Station elevator construction will start as soon as NTP is received on October 1, 2018. This work will be completed by January 2019. The impact of this work will be minimal since only one end of the platforms will be occupied by construction activities.

Some activities will require flagging and/or single track outages.

The Floral Park Viaduct construction will be started as soon as NTP is received and completed on February 15, 2019. This work will have minimal impact on the rail road, with some task requiring flagging and others requiring single track outages. The track for the Hempstead branch can be re-aligned any time after that.

The Tyson Avenue bridge extension will be started as soon as the Floral Park viaduct is complete, on February 26, 2019. This work will be completed on June 22, 2019. This work will require some single track outages, flagging and 1 double outage. Vehicular traffic will be affected. The impact to vehicular traffic will be minimized by working with partial lane closures as much as possible. The bridge extension will be assembled on the side and then rolled into place during a weekend double outage with a Self-Propelled Modular Transporter (SPMT).

The Plainfield Avenue Bridge will be built after the Tyson Avenue Bridge is complete on July 8, 2019. This work will be completed on October 3, 2019. Only single track outages and flagging will be needed to build this Bridge. Impact on vehicular traffic will be minimal. The most impact will occur when the bridge is set in place.

The sound wall and retaining wall construction north of the track in this area ([redacted]) will be started

on January 2019 and completed on August 2, 2019. This work will require single track outages and flagging. No traffic lane closures are anticipated for this work.

The sound wall and retaining wall construction south of the track in this area [redacted]) will be started on November 1, 2018 and completed on September 12, 2019. This work will require single track outages and flagging. No traffic lane closures are anticipated for this work.

In the area of Floral Park, milepost [redacted] construction impact will start when NTP is received. Impact to vehicular traffic should be over by October 2019. Impact to railroad operation should be over by September 2019. This excludes the installation of the new track signal and traction power which will all be completed concurrently with the completion of all retaining walls in Block 1 (February 2020).

3.5.3) Provide construction staging and work zone traffic control drawings sufficient to understand all potential construction impacts or potential disruptions to local community.

The potential impacts in the vicinity of Floral Park station include flagging at the base of the station, closure of South Tyson Avenue, and partial closures or flagging along Plainfield Avenue. Flagging at the base of the station will be minimal to limit the construction zone away from traffic. South Tyson Avenue will have to be closed to remove and jack the new bridge in place. Traffic will be diverted 250 feet west to Tulip Ave to minimize the amount of parking spaces taken during construction. The construction of the Plainfield Avenue Bridge will require some short-term closures. The structure will be built over Plainfield Avenue which will require some short-term closures when making large picks.

The Floral Park area contains four grade separated crossings that pass under the Long Island Rail Road. Carnation Avenue provides one lane in each direction, Tulip Avenue provides one lane in each direction, with

bridge support columns in a median, South Tyson Avenue provides one lane in each direction, with metered parking spaces on both sides of the roadway, and Plainfield Avenue provides a similar design. The Plainfield Avenue overpass is marked with a maximum clearance height of [redacted].

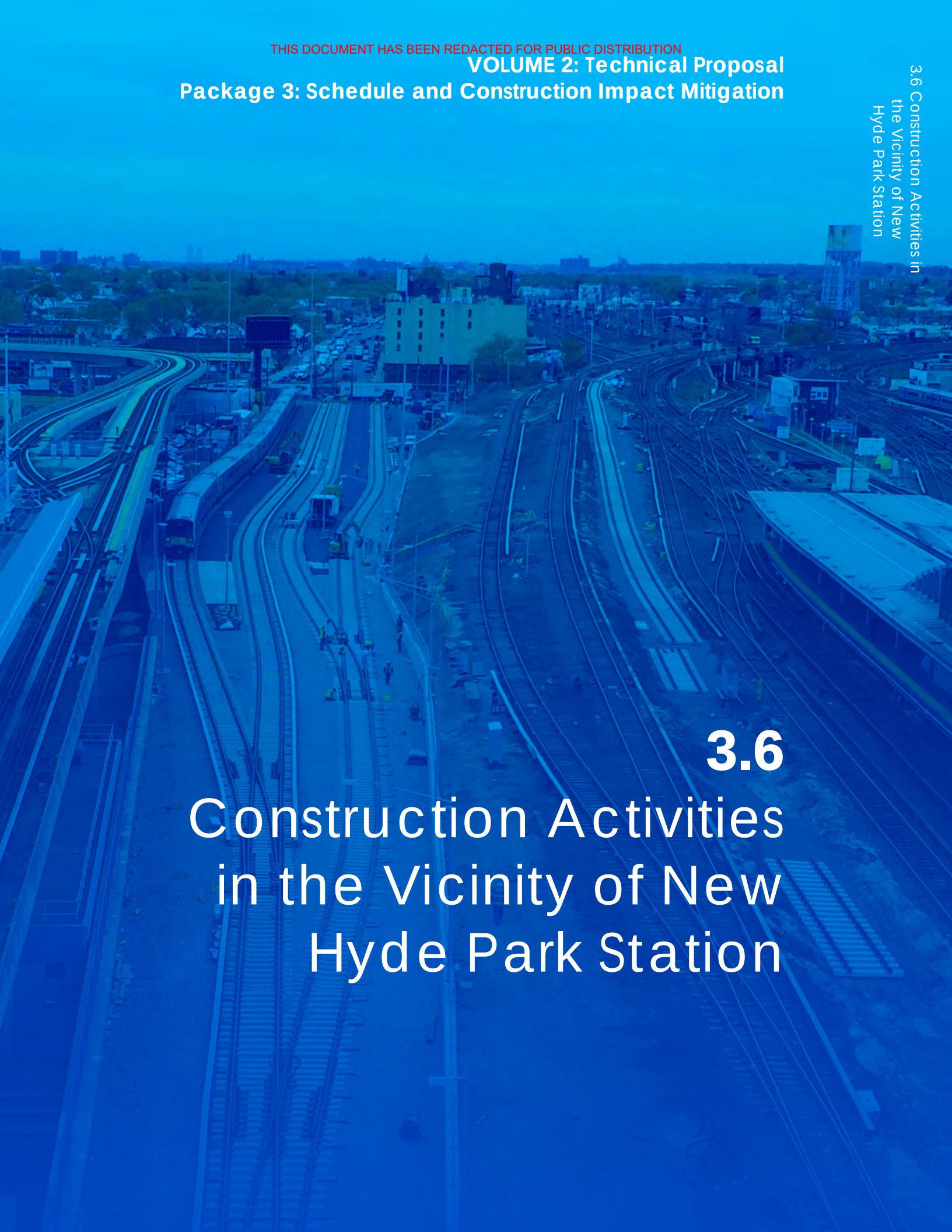
The Floral Park area, surrounding the train stations, is a mix of residential and commercial properties and parking lots. [redacted] school, is located about 0.1 miles north of the Rail Road, along South Tyson Avenue, and the Our Lady of Victory School, a [redacted] is located about 0.2 miles south along Plainfield Avenue. Floral Park High School is located about 0.8 miles south along Plainfield Avenue. The Floral Park Police and Fire departments are located just south of the Rail Road, between Carnation Avenue and Tulip Avenue.

3.5.4) Provide an assessment of the potential construction impacts and the measures to be incorporated to mitigate or eliminate.

The potential construction impacts in the Floral Park Station area include the installation of the two bridges described above. The impact will be during the erection of the bridges and will affect the parking area below the new structures. Additionally, the installation of the elevators will have minimal effect on the platform area in the immediate vicinity of the new elements. These areas will be closed off to the public by means of plywood partitions during all construction activity.

3.5.5) Provide details and durations of all road closures.

As shown in the IBS provided in Section 3.3.2), South Tyson Ave will be closed during one weekend to allow for the installation of the completed bridge structure.



3.6
Construction Activities in the Vicinity of New Hyde Park Station

3.6 Construction Activities In The Vicinity Of New Hyde Park Station

Vicinity includes all activities between mileposts at approx. [redacted] and [redacted] (at Denton Ave inclusive).

3.6.1) Provide a narrative of the sequence of major construction activities.

The New Hyde Park Station scope will involve the construction of new platform structure, elimination of at grade crossings, pedestrian underpass and the replacement of Denton Ave Bridge. The platform demolition and reconstruction will be staged to maintain the minimum of 8 car lengths at all times. The new eastbound platform will use temporary gangways to access the existing track while the third track is constructed. All work will be performed under flagging to limit the use of single track outages. Prior to any shutdown of any road, the utilities will be relocated and moved out of the way. The elimination of the Covert Avenue grade crossing will commence prior to the elimination of the New Hyde Park Road grade crossing. The closure of Covert Avenue will require six months full closure in order to construct and jack in the new Rail Road Bridge. Following the Covert Avenue work, the construction of New Hyde Park Road will follow with a nine month partial closure. Both Covert Avenue and New Hyde Park Road will require one double track outage each. Once the at-grade crossing in eliminated, South 12th Street will be closed. The pedestrian underpass work will be performed during a double track outage piggybacking from either the Covert Ave or New Hyde Park Road outage. Tanners Pond Road/Denton Avenue requires the replacement of the existing bridge. This bridge will be founded on new drilled shafts and pile caps located behind the existing masonry abutments. The new bridge will either be lifted into place or rolled into position by a SPMT under the double track weekend outage. Retaining walls and sound walls will be installed along the ROW.

Two signal Master Locations will be installed, one west of 2nd Avenue and one East of New Hyde Park Road (Not sure if both fall in between the listed mileposts. This must be verified). New G14 Traction Power Substation is installed, replacing the existing G14 substation. Grade crossing signal cases are installed to support the elimination of the grade crossing signals at South 12th Street and New Hyde Park Road. Additionally, the existing N1 Interlocking in this area will be decommissioned and removed once the new N1 Interlocking is installed, tested, commissioned and cut over by Rail Road FA.

3.6.2) Provide a schedule outlining the duration and type of all construction activities in this vicinity excluding all track, ballast or Rail Road systems Work that are conducted directly from the Rail Road ROW.

This area is partly in Block1 and partly in Block2. Block 1 is up to N1 interlock, Denton Avenue is in the center of this interlock.

Major work in the vicinity of New Hyde Park includes the work at New Hyde Park station, the South 12th Street crossing elimination, Covert Avenue crossing elimination, Substation G14, Denton Avenue Bridge which will be done as part of the Block 2 work, Retaining Wall / Sound Wall and installation of the third track.

Covert Avenue crossing elimination, will start as soon as NTP is received on October 1, 2018 with the construction of a temporary road and temporary pedestrian ramp to detour car and pedestrians. Covert Avenue will be closed to traffic and cars placed on the temporary roadway on January 2, 2019 per contract requirements. The crossing elimination work will be substantially complete and the ramp will be re-opened to traffic on May 7, 2019. Covert Avenue crossing elimination will be complete on June, 20 2019. This work will have minimal impact to the railroad operations and only require one double outage weekend shut down to set the new railroad bridge in place. Major construction impact to traffic and community will end on May, 7th 2019.

Installation of traction power substation G14 will start on October 21, 2019 and be completed on April 28, 2020. This work will have minimal impact to railroad operation and almost no impact to the neighborhood. The duct bank to carry power to the 3rd rail will be installed at the same time as other weekend shutdown for adjacent bridges or crossings.

New Hyde Park Crossing Elimination will start as soon as NTP is received on October 1, 2018 with demolition of existing building, the construction of a temporary

road and temporary pedestrian ramp to detour car and pedestrians. New Hyde Park road will be closed to traffic as soon as Covert Avenue crossing elimination is complete on Jun 24th 2019. New Hyde Park road will be reopened to traffic on December 23 2019. All work at this location will be complete on January 6th 2020. This work will have minimal impact to the railroad operations and only require one double outage weekend shut down to set the new railroad bridge in place. Major construction impact to traffic and community will end on December 23, 2019.

South 12th Street crossing elimination work will start on January 6, 2020 after New Hyde Park crossing elimination is complete. This work which includes setting a pedestrian tunnel will be completed on February, 26 2020. This work will have minimal impact to the railroad operations and only require one double outage weekend shut down to set the precast concrete box for the pedestrian tunnel. Major construction impact to traffic and community will end on December 18, 2020.

Construction work for New Hyde Park Station will start on September 26, 2019 after the Carle Place station work is complete. All work for both platform on the West side of the station will done first and commissioned, the east end platforms will follow. Note that 12th Street crossing has to be closed to accommodate the West end of the new platform. New Hyde Park Station will be complete on November 30, 2020. This work will impact Railroad operation since many task will have to be done during single track outages. Pedestrians will be affected as well since part of the existing platform will be closed to the public.

Denton Avenue Bridge work will start on August 26 2020 and be completed on December 28, 2020. This work will impact railroad operation since flagging, single track outage and one double track outage will be required for this work.

In the area of New Hyde Park, milepost [redacted]9, construction impact will start when NTP is received. Impact to vehicular traffic should be over by December 2020. Impact to railroad operation should be over by December 2020. This excludes the installation of the new track signal and traction power which will all be completed concurrently with the completion of all retaining walls in Block 1 (February 2020). And then in Block 2 October 2021.

3.6.3) Provide construction staging and work zone traffic control drawings sufficient to understand all potential construction impacts or potential disruptions to local community.

The construction at the New Hyde Park Station will involve limiting the westbound and eastbound to eight cars at a time. The platform work will be done in two phases effectively building the east half of both platforms and then switching to the west sides of each. Covert Avenue will experience a full closure for six months. The duration may be shortened by employing more efficient construction methods at the underpass. New Hyde Park Road will require a partial reduction to one lane in each direction for nine months. Denton Avenue will only be closed during a weekend double track outage. The construction of the bridge will be done during the week on private property.

The New Hyde Park Station area contains four crossings: Covert Avenue, South 12th Street, New Hyde Park Road, and Denton Avenue/Tanners Pond Road. The Covert Avenue, S. 12th Street, and New Hyde Park Road crossings are currently at grade level. The S. 12th Street crossing will be permanently closed and underpasses will be constructed at the other two grade crossings.

Covert Avenue provides one lane in each direction at a grade crossing over the Rail Road tracks, and connects residential areas as well as the parking lots for the New Hyde Park Station. The Holy Spirit School and a station for the New Hyde Park Fire Department are just south of Covert Avenue, north of the Rail Road. To the south, Covert Avenue leads to the Stewart Manor Elementary School and the Stewart Manor Fire Department. South 12th Street provides one lane in each direction, connecting mostly residential areas.

New Hyde Park Road provides two lanes in each direction at a grade crossing of the Rail Road. The road runs through mostly residential areas, with some commercial development near the Rail Road, and connects the Jericho Turnpike to Stewart Avenue. The New Hyde Park Train station and its associated parking lots are immediately adjacent to the crossing. Clinch Avenue also splits off and runs southeast from this crossing, through residential neighborhoods. A station for the New Hyde Park Fire Department is located on

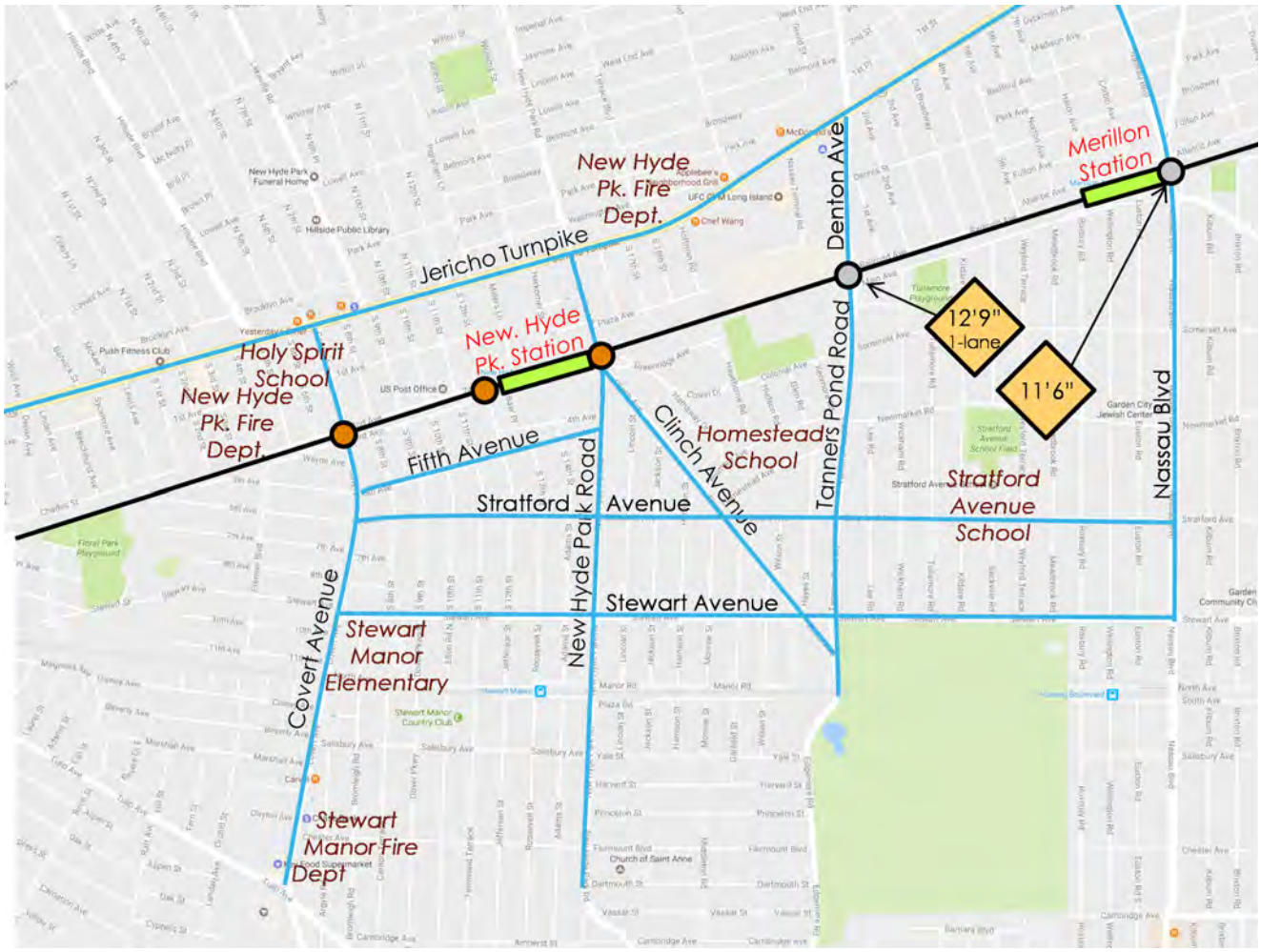
the Jericho Turnpike, near its intersection with New Hyde Park Road.

Tanners Pond Road/Denton Avenue provides a north-south crossing under the Rail Road tracks, using a narrow, one lane underpass. Rail Road Avenue and Main Avenue run to the east, parallel to the Rail Road tracks and intersect Tanners Pond Road immediately adjacent to the underpass. North of the Rail Road, the road is called Denton Avenue, and provides one lane in each direction through a mostly industrial area to Jericho Turnpike. Going south, one lane is provided in each direction through residential areas. The roadway passes the Garden City Country Club, and the Stafford Avenue School and the Homestead school are nearby. The Merillon Avenue station is approximately 0.5 miles east of the Tanners Pond Road underpass, and an approximately 100 car parking lot is provided on the north side of the tracks, and can be reached from Rail Road Avenue.

3.6.4) Provide an assessment of the potential construction impacts and the measures to be incorporated to mitigate or eliminate.

Impacts of Construction at Covert Avenue

While Covert Avenue is closed for construction, vehicles are expected to divert to the nearby crossings, mostly using South 12th Street and New Hyde Park Road. Just over 700 vehicles cross the Rail Road tracks on Covert Avenue northbound and about 400 vehicles use it southbound during the AM peak hour. Those vehicles are anticipated to divert to either the 12th Street crossing or the New Hyde Park Road crossing. Approximately 25% of those northbound crossing vehicles immediately turn right onto 2nd Avenue, and are likely local traffic that will use the South 12th Street crossing as an alternative. In the morning peak hour, we estimate, approximately 300 vehicles go north through the crossing and eventually turn right on the Jericho Turnpike. These will likely reroute to New Hyde Park Road. While New Hyde Park Road has relatively low volumes, the intersections



along it will require detailed capacity analysis to identify any adverse impacts and potential mitigations of this diverted volume. Approximately 180 vehicles turn onto 2nd Avenue from northbound Covert Avenue, and we anticipate these vehicles will divert onto 5th Avenue and use 12th Street to reach 2nd Avenue. Approximately 220 vehicles use the Covert Avenue crossing and then turn left on Jericho Turnpike. We anticipate most of these vehicles will use the 12th Street crossing. However, since 12th Street is a fairly low speed roadway, a portion of these vehicles may divert further north to New Hyde Park Road, which provides a wider roadway.

Just over 450 vehicles cross the Rail Road track on Covert Avenue northbound and about 750 use it southbound during the PM peak hour. We anticipate similar diversions as in the morning. Compared to the morning, fewer vehicles go north through the crossing and eventually turn right on the Jericho Turnpike. About 170 vehicles are expected to make this movement and divert to New Hyde Park Road. Approximately 60 vehicles turn onto 2nd Avenue from northbound Covert Avenue, and we anticipate these vehicles will divert onto 5th Avenue and use 12th Street to reach 2nd Avenue. The afternoon movement going from the Rail Road crossing to the westbound Jericho Turnpike is a similar volume as the morning peak hour. We anticipate similar diversions to 12th Street and New Hyde Park Road. In the PM Peak Hour, about 750 vehicles use the crossing. As with the morning, traffic is split evenly between coming from the east and coming from the west. We anticipate traffic coming from the west to divert to 12th Street and traffic from the east to divert to New Hyde Park Road. Traffic coming from 2nd Avenue will likely divert to 12th Street.

As diverted northbound traffic turns off Covert Avenue onto Stewart Avenue, the northbound right-turn movement at Stewart Avenue maybe adversely impacted during the AM and PM peak hours. The 3TC Team proposes to make an improvement by restriping the northbound Covert Avenue approach as one 10-foot through lane and two 10-foot right-turn lanes and by modifying the signal timing plan.

Because some traffic diverting from Covert Avenue will use the South 12th Street crossing, and will move through the intersection of Jericho Turnpike and South 12th Street, movements at that intersection may be adversely affected. The northbound and eastbound approaches may be adversely impacted during the AM peak hour and the northbound approach and westbound left-turn may be adversely impacted during the PM peak hour. The 3TC Team proposes to minimize these adverse impacts by prohibiting parking for 175 feet from the stop bar on the eastbound Jericho Turnpike approach and restriping the approach as two 10-foot through lanes and one 10-foot right-turn lane; prohibiting parking on the northbound South 12th Street approach for 75 feet from the stop bar and restriping the approach as one 13-foot left-turn lane and one 10-foot shared right-turn lane by shifting the centerline seven feet to the west and prohibiting parking on southbound South 12th Street for 100 feet from the intersection; and by modifying the traffic signal timing plan.

Some traffic will divert from Covert Avenue to New Hyde Park Road and flow through the intersection at Jericho Turnpike and New Hyde Park Road. The northbound approach and westbound left-turn lane at the intersection of Jericho Turnpike and New Hyde Park Road may be adversely impacted during the AM peak hour and the northbound shared through-right, the southbound left-turn, and the westbound left-turn movements may be adversely impacted during the PM peak hour. Aside from the northbound shared through-right movement in the AM peak hour, the 3TC Team proposes to minimize the adverse impacts by prohibiting parking on the eastbound and westbound Jericho Turnpike approaches and restriping the existing parking lanes as one 8-foot right-turn lane on those two approaches; and by modifying the signal timing plan. The northbound shared through-right movement could only be partially improved in the AM peak hour.

At New Hyde Park Road and Stewart Avenue, the 3TC Team proposes re-timing the signal to match the traffic patterns with the diverted traffic flowing through that intersection.

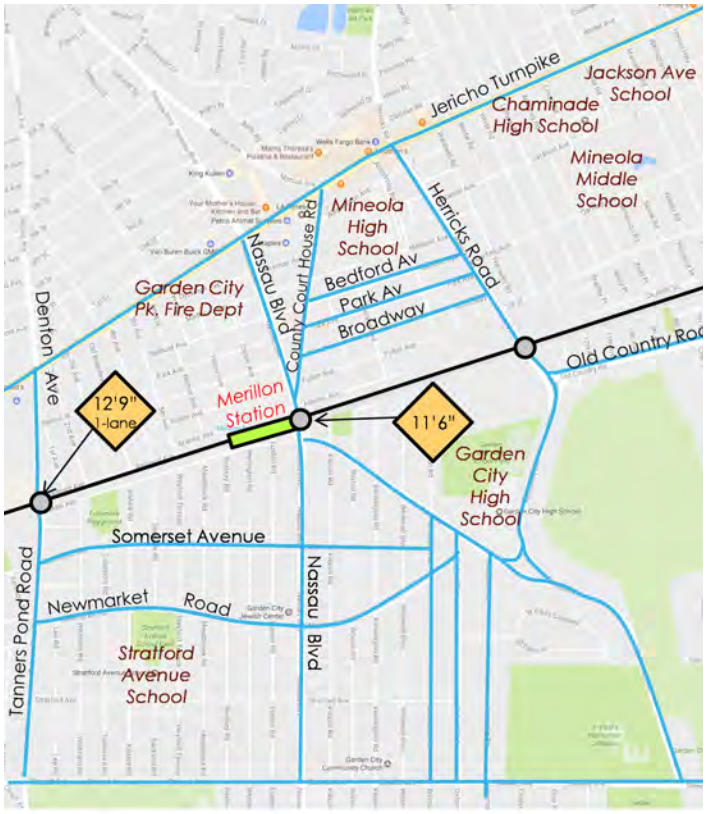
As traffic diverts to the from Covert Avenue to the 12th Street crossing, the northbound and southbound South 12th Street approaches at Stewart Avenue would be adversely impacted during both AM and PM peak hours. The 3TC Team proposes to minimize these adverse impacts by installing a temporary traffic signal at the intersection for the duration of construction.

Impacts of Construction at New Hyde Park Road

At New Hyde Park Road, in the morning peak hour, according to the EIS, approximately 1,030 vehicles use

this crossing northbound. In a partial closure, where the crossing is reduced to one lane in each direction, this volume likely could be accommodated, although some congestion may form, and traffic may divert to nearby crossings, at 12th Street or Tanners Pond Road. Southbound, in the morning peak hour, 546 vehicles are shown using the crossing. These vehicles can be accommodated in one lane.

In the afternoon peak hour, 510 vehicles use the crossing northbound. These vehicles can be accommodated with one lane. Almost 1,000 vehicles use the crossing southbound in the afternoon. One lane should accommodate these vehicles, however, with frequent gate closures, some congestion may occur, causing vehicles to divert to nearby crossings.



Based on the FEIS analysis of this analysis, we have assumed that northbound traffic on Clinch Avenue would divert to New Hyde Park Road primarily via Stewart Avenue and secondarily via Stratford Avenue. Southbound traffic on Clinch Avenue was assumed to divert to southbound New Hyde Park Road to eastbound Stewart Avenue or eastbound Stratford Avenue. Emergency vehicles that currently cross the Rail Road tracks on New Hyde Park Road could be expected to continue using New Hyde Park Road since one lane of traffic would be maintained in each direction. Emergency vehicles that currently access Clinch Avenue would divert using the same routes as general traffic.

New Hyde Park Road at the Rail Road grade crossing may be adversely impacted during the 9 months' construction period. The northbound approach of New Hyde Park Road at Stewart Avenue may be adversely impacted during the AM peak hour and the southbound approach of New Hyde Park Road at Stewart Avenue may be adversely impacted during the PM peak hour. The 3TC Team proposes to minimize these adverse impacts in the AM peak hour by modifying the signal timing plan and would remain unimproved in the PM peak hour.

Impacts of Construction at Tanners Pond Road/Denton Avenue Impacts

Traffic on Tanners Pond Road/Denton Avenue is light, according to a count conducted in October of 2015, with about 3,000 vehicles in each direction. In the morning, traffic peaks northbound, at about 420 vehicles from 8:00 to 9:00 AM. In the afternoon, it peaks from 5:00 to 6:00 PM with about 430 vehicles.

Since this is a narrow underpass, full closures will be necessary, and traffic is expected to divert to the adjacent crossings: New Hyde Park Road to the west and Nassau Boulevard to the east. Additionally, the connections to Rail Road Avenue and Main Avenue may be blocked. Traffic will likely divert through the street grid in the area to reach those streets. Traffic going to the Merillon Avenue station will use Nassau Boulevard to reach it, from the south, and from the north, they could use the street grid northeast of the crossing to reach the station.

3.6.5) Provide details and durations of all road closures.

New Hyde Park Road will be reduced to one lane of traffic in each direction for nine month duration. Efficient use of construction methods may result in the shortening of this duration. Covert Avenue will be closed completely for 6 months. Denton Ave will only require one weekend of full closure for the superstructure installation. Other roads in the area will see limited partial closures as required for street, sidewalk and associated construction activities.

There may be short term closures for large picks prior

to the weekend installation. Plainfield Ave will be closed only during the short time when a large pick is being made. These closures will last only 15 minutes. All other road closures will be on minimal nature for sidewalk, curb and utility installation. Installation of sound walls and retaining walls will be limited to the ROW as feasibly possible.

3.7
Construction Activities in the Vicinity of Merillon Station

3.7 Construction Activities in the Vicinity Of Merillon Station

Vicinity includes all activities from mileposts at approx. 16.9 (Denton Avenue) to approx. 17.9 (Herricks Road inclusive).

3.7.1) Provide a narrative of the sequence of major construction activities.

The Merillon Station scope will involve the construction of a new platform structure, relocation of utilities and the replacement of Nassau Blvd Bridge. The platform demolition and reconstruction will be staged so that there will always be access to a minimum of 6 car lengths. The new eastbound platform will use temporary gangways to access the existing track while the third track is constructed. All work will be performed under flagging to limit the use of single track outages. Nassau Blvd requires the replacement of the existing bridge. The existing abutments and wing wall will be selectively demolished, abutments extended and new wing walls constructed. The existing abutment will be upgraded to E80 by the use of tiebacks. The new three track wide bridge will be constructed on temporary towers over the existing roadway. During a weekend double track outage the SPMT will position the existing bridge on temporary towers on the south side of the bridge and the new bridge will be lifted off the temporary towers onto the previously reconfigured abutment. Along the ROW, retaining wall structures will be installed.

Work in this area also includes the installation of two signal Master Locations, removal of the remainder of existing N1 after the installation of the new N1 including the associated switches and signals. This area also includes a new G15 Traction Power Substation and associated cabling.

3.7.2) Provide a schedule outlining the duration and type of all construction activities in this vicinity excluding all track, ballast or Rail Road systems Work that are conducted directly from the Rail Road ROW.

This area is in Block 2.

Major work in the vicinity of Merillon Station includes the work at Merillon Station, traction power Substation G 15, Nassau Boulevard Bridge, New N1 Interlock & Control Instrument House (CIH), retaining wall / sound wall and installation of the third track.

Merillon Station construction will start as soon as Block 1 and Block 3 single track outage work is complete on or about August 26, 2020. This work will be phased with the west sides of the north and south platforms completing in August 2011. At that time, work will proceed on the east sides and completing in August 2021. The impact of this work will be minimal since only one end of the platforms will be occupied by construction activities. Some activities will require flagging and/or single track outages.

The Nassau Blvd Bridge will start as soon as the Denton Avenue Bridge construction is complete, in December, 2019. This work will be completed in May, 2021. This work will require some single track outages, flagging and 1 double outage. Vehicular traffic will be affected. The impact to vehicular traffic will be minimized by working with partial lane closures as much as possible. The bridge extension will be assembled on the side and then rolled into place during a weekend double outage with a SPMT.

The sound wall and retaining wall construction north of the track in this area (station 230 to 284) will start in September 2020 and complete in February, 2019. The sound wall and retaining wall construction south of the track in this area (station 228 to 279) start in November, 2020 and complete in July, 2021. This work will require single track outages and flagging.

In the area of Merillon Station, milepost 16.9 to 17.9, construction impact will start when Block 2 construction begins in August 2020. Impact to vehicular traffic should be over by September 2021. Impact to railroad operation should be over by September 2021. This exclude the installation of the new track signal and traction power which will all be completed concurrently with the completion of all retaining walls in Block 2 (June 2022).

3.7.3) Provide construction staging and work zone traffic control drawings sufficient to understand all potential construction impacts or potential disruptions to local community.

The construction at the station will involve limiting the westbound and eastbound to six cars. The eastbound platform may only experience the limitation for a

short period of time, while the westbound will have to be disturbed for twelve months. Nassau Blvd. will be closed during a weekend double track outage in order replace the bridge. The new bridge will be constructed over the road which will require short duration closure when making large picks.

There are three underpasses under the Rail Road track in the area of the Merillon Station. To the west, Tanners Pond Road provides a one-lane underpass, as described in the previous section. Nassau Boulevard provides an underpass immediately adjacent to the station, and Herricks Road provides an underpass to the east.

Nassau Boulevard provides an important crossing under the Rail Road tracks, connecting multiple roadways on each side of the Rail Road. One lane and a sidewalk are provided in each direction, with 11'6" of vertical clearance. To the south, Nassau Boulevard continues as a divided roadway with two lanes in each direction through residential neighborhoods. Merillon Avenue continues to the southeast, leading to the Garden City High School. To the northwest, Nassau Boulevard passes commercial and residential properties as a four-lane divided roadway, leading to the Jericho Turnpike. To the northeast, County Court House Road goes through residential areas, leading to Mineola High School. The Merillon Avenue station is immediately west of the crossing, and provides a parking lot for just over 100 vehicles.

Herricks Road provides two lanes in each direction, as well as sidewalks, under the Rail Road tracks. To the south, it ends at a junction of Old Country Road, a major roadway continuing to the east, and Rockaway Avenue, which continues to the south. To the north, it continues through a junction with the Jericho Turnpike. It is lined with commercial properties, and surrounded by residential areas. Northeast of the crossing, Chaminade High School, the Jackson Avenue School and Mineola Middle School have their campuses.

3.7.4) Provide an assessment of the potential construction impacts and the measures to be incorporated to mitigate or eliminate.

Impacts of Lane Closures at Nassau Boulevard

A count conducted south of the crossing, in October of 2015 shows northbound traffic peaking in the morning and southbound traffic peaking in the afternoon. In the morning, traffic peaks from 8:00 – 9:00 AM with 780 northbound vehicles, and 520 southbound vehicles. In the afternoon, the peak traffic occurs from 5:00 – 6:00 PM with 440 northbound vehicles and 990 southbound vehicles.

Between 7:00 AM and 3:30 PM, when lane closures are planned, and alternating traffic will be allowed to use the crossing, two-way hourly volumes vary between 900 and 1,300 vehicles. The roadway can likely

handle this volume with alternating closures, however, some congestion may form. Some vehicles are expected to divert to the nearby crossings at Herricks Road and Tanners Pond Road.

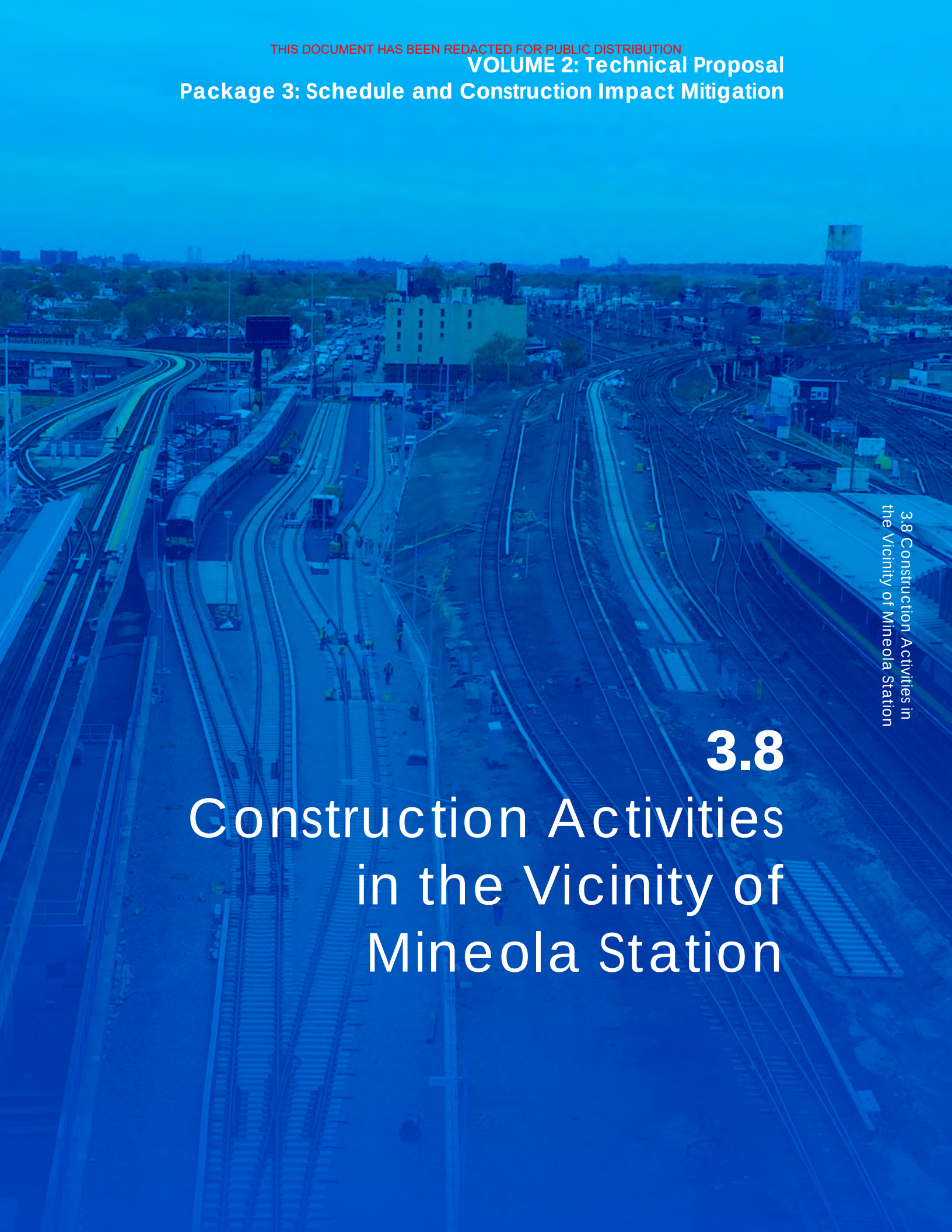
Impacts of Lane Closures at Herricks Road

A traffic count conducted in November of 2015 shows volumes peaking at about 1,150 vehicles northbound and 1,300 vehicles southbound. These volumes could be accommodated if one lane is provided in each direction.

3.7.5) Provide details and durations of all road closures.

There will be no long term closures of the roadway in this area. Nassau Blvd will be closed for one weekend for the installation for the superstructure bridge. There will be limited closures of 15 minutes each for large picks in the area.

Installation of sound walls and retaining walls will be generally limited to the ROW with minor effect on nearby roadways.



3.8
Construction Activities in the Vicinity of Mineola Station

3.8 Construction Activities in the Vicinity of Mineola Station

Vicinity includes all activities between mileposts at approx. 17.9 (Herricks Road) to 19.9 (Glen Cove Road inclusive).

3.8.1) Provide a narrative of the sequence of major construction activities.

The Mineola Station will involve the construction of new platform, the elimination of the Willis Ave and Main Streetat grade crossings, and the replacement of Glen Cove Road Bridge. The Main Street crossing will be permanently closed and underpasses will be constructed at Willis Avenue. The platform demolition and reconstruction will be staged so that there will access to a minimum of 8 car lengths. The new eastbound platform will use temporary gangways to access the existing track while the third track is constructed. All work will be performed under flagging to limit the use of single track outages. Willis Avenue will require a complete closure of 6 months to install a hybrid 292' underpass. This construction will involve the installation of retaining walls on local roads, relocation of drainage, top down construction of abutments and bridge construction. This work will require one double track outage for the Oyster Bay Line and the Main Line underpass installation. Glen Cove Road requires the replacement of the existing bridge. The existing abutments and wing walls will be selectively demolished, abutments extended and new wing walls constructed. The existing abutment will be upgraded to E80 by the use of tiebacks. The new three track wide bridge will be constructed on temporary towers on a rented commercial parking lot north of the existing bridge. During a weekend double track outage, the SPMT will position the existing bridge on temporary towers in the rented commercial parking lot north of the bridge and the new bridge will be lifted off the temporary towers onto the previously reconfigured abutment. Along the ROW, sound walls and retaining wall will be constructed.

Existing signal receivers will be removed at [redacted], and existing transmitter/receiver will be removed at [redacted]. Two new signal master locations and a new N2 interlocking will be installed. Existing N2 interlocking will be removed. Install signal cases at Main St and Willis Ave to support removal of existing crossing signals. New N3 interlocking will be removed and existing N3 interlocking will be removed.

3.8.2) Provide a schedule outlining the duration and type of all construction activities in this vicinity excluding all track, ballast or Rail Road systems Work that are conducted directly from the Rail Road ROW.

This area is in Block 2.

Major work in the vicinity of Mineola station includes: Mineola station, Traction Power Substation G16, Main Street crossing elimination, Willis Avenue crossing elimination, New Nassau 3 Interlock with Nassau 3 Control Instrument House (CIH). Retaining wall/sound wall and installation of third track.

Mineola Station construction will start in November 2020 when construction at New Hyde Park Station is complete. This is a necessary constraint in order to maintain the maximum allowable two concurrent station closures. The work is will be completed in September 2021. The impact of this work will be minimal since only one end of the platforms will be occupied by construction activities. Some activities will require flagging and/or single track outages.

Installation of traction power substation G16 will start in July, 2020 complete in August, 2022. This work will have minimal impact to railroad operation and almost no impact to the neighborhood. The duct bank to carry power to the third rail will be installed at the same time as other weekend shutdown for adjacent bridges or crossings.

Main Street crossing elimination will start as soon as adjacent properties are available for demolition on or about December 31, 2019 with the construction of protection of traffic and closure of Front Street. The crossing elimination work will be substantially complete and the ramp will be re-opened to traffic on or about February 26, 2020. This work will have minimal impact to the railroad operations and only require one single outage for 1 day to install the pedestrian bridge overpass on or about April 23, 2020.

The Willis Main Street crossing elimination will start when Urban Avenue, Broadway and Railroad Avenue is re-opened to traffic on or about June 19, 2019. This specific elimination will be carefully staged since

the work involves crossing 2 different Railroad line branches (Oyster Bay Branch and the mainline branch). Construction will be carefully coordinated in and around the north, south and between areas of the existing track, Main Line Bridge, Oyster Bay Line Bridge, Front Street Bridge and Hinck Way Access Bridge. The crossing elimination work will be substantially completed on or about January 7, 2020 (including the Willis Avenue pedestrian overpass). This work will require a double track outage for the removal/reinstallation of track adjacent to Front Street and Oyster Bay Branch on or about September 14/15, 2019. Additionally, there will be single track outage required for installing the Willis Avenue pedestrian bridge on or about October 4, 2019.

Glen Cove Road bridge work will start on May 10, 2021 upon completion of the Nassau Boulevard bridge construction and be completed on September 20, 2021. This work will impact railroad operation since flagging, single track outage and one double track outage will be required for this work.

The sound wall and retaining wall construction north of the track in this area (station 328 to 333) starts in August, 2020 and completes in December, 2020. This work will require single track outages and flagging.

3.8.3) Provide construction staging and work zone traffic control drawings sufficient to understand all potential construction impacts or potential disruptions to local community.

There are four crossings in the immediate area of the Mineola Station, as well another crossing approximately 1.2 miles east: Mineola Blvd provides two northbound lanes and one southbound lane and sidewalks over the Rail Road. Main Street provides one lane in each direction at a grade level crossing. Willis Avenue provides one lane in each direction at a grade level crossing. Roslyn Road provides an underpass with two lanes in each direction and sidewalks. The area around the crossings, in downtown Mineola, is a mix of commercial uses, parking garages and lots, government buildings, and a hospital.

To the north, Mineola Boulevard runs through commercial and residential areas, leading to the Jericho Turnpike. Main Street runs north for three blocks, past street level commercial businesses, and ends at a residential neighborhood north of Harrison Avenue. Willis Avenue crosses the Oyster Bay Branch of the Rail Road, and then passes mostly commercial properties, and the Willis Avenue School, leading to the Jericho Turnpike, approximately 0.6 miles to the north. Roslyn Road traverses a residential neighborhood to the north, with two lanes in each direction, near the Hampton Street School, leading to the Jericho Turnpike.

To the south, Mineola Boulevard leads past the Nassau County Legislature building. It widens to two lanes in each direction, and continues as Franklin Avenue, passing multiple large commercial buildings, offices, and government buildings. Main Street continues two blocks to the south, between large commercial buildings, and ends at Old Country Road. Willis Avenue continues and ends at Old Country Road. Roslyn Road becomes Washington Avenue south of Old Country Road and it continues with two lanes in each direction, with residential neighborhoods to its east, and the Nassau County government and court complex to its west.

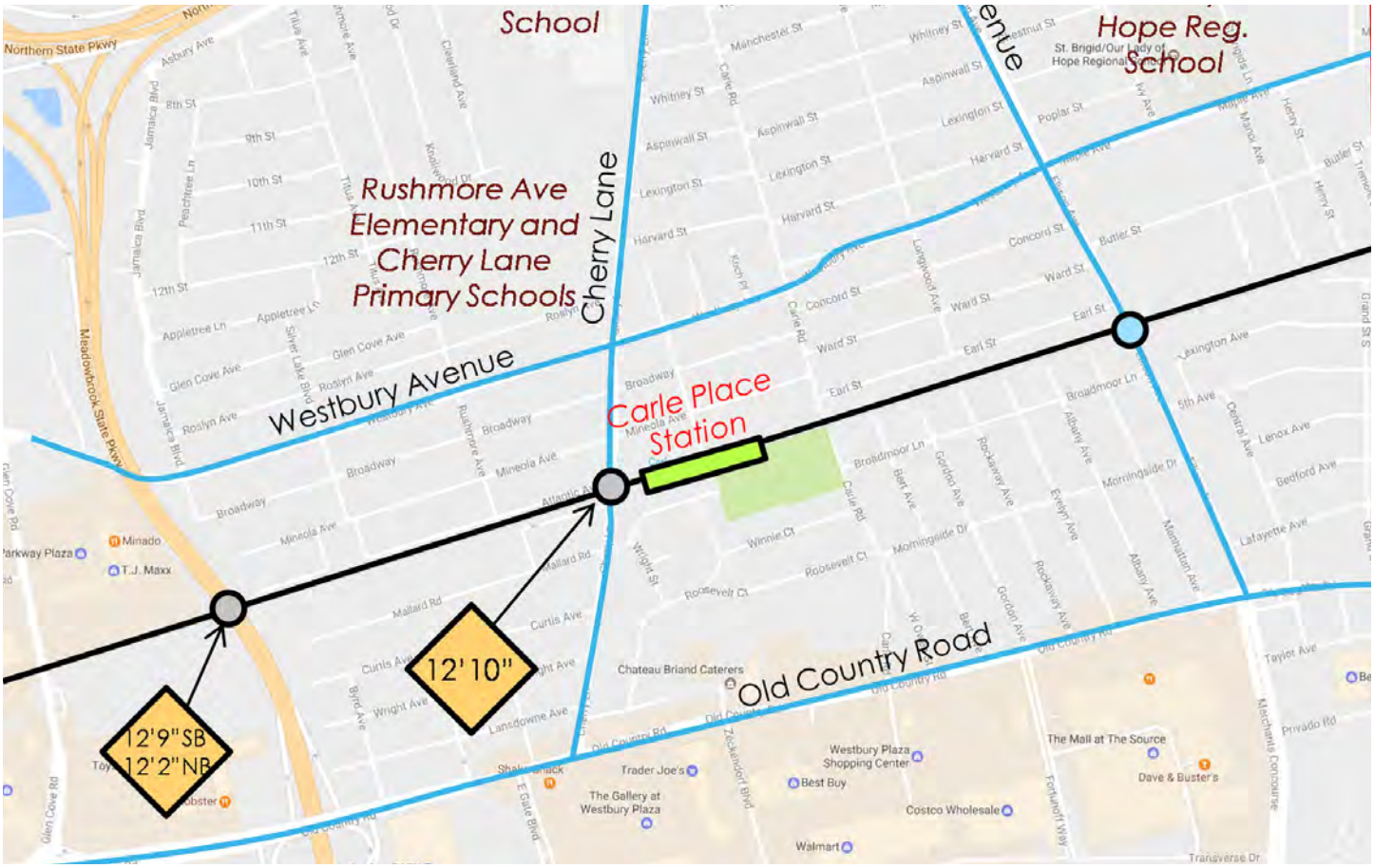
Glen Cove Road crosses the Rail Road approximately 1.2 miles east of the Mineola Station and provides two lanes in each direction and sidewalks under the Rail Road tracks. It runs through commercial areas, connecting commercial and residential areas near Old Country Road to the south, to residential areas and the Northern State Parkway to the north.

3.8.4) Provide an assessment of the potential construction impacts and the measures to be incorporated to mitigate or eliminate.

The construction at the station will involve limiting the westbound and eastbound to eight cars. The eastbound platform may only experience the limitation for a short period of time, while the westbound will have to be disturbed for twelve months. Glen Cove Road will be closed during a weekend double track outage in order replace the bridge. The new bridge will be constructed on private property. Willis Ave will be closed to traffic for a period of 6 months.

Impacts of Construction at Willis Avenue

Construction of the Rail Road third track will require a temporary closure at the Willis Avenue crossing, and a permanent closure at the Main Street crossing. The two grade level crossings are lightly used in the AM, Midday, and PM peak hours, and traffic using them will likely divert to nearby roadways.



Willis Avenue will be closed first, to construct an underpass. Traffic is expected to divert to the Main Street crossing. During the AM, Midday, and PM peak hours, traffic at both of those crossings could be accommodated by one crossing. According to the FEIS, at the Willis Avenue crossing, there are 275 vehicles in the morning peak hour, 415 in the midday, and 496 in the afternoon peak hour. At Main Street, the FEIS shows 135 vehicles in the morning peak hour, 183 vehicles in the midday peak hour, and 141 vehicles in the afternoon peak hour.

While the combined traffic at both crossings can be handled by one crossing, the network of one-way streets in the area may make routing difficult. During the closure of Willis Avenue, the one-way streets south of the Rail Road tracks may be re-directed to allow two-direction traffic. For example, Front Street runs westbound, but during construction access from Willis Avenue may be blocked, requiring two-way access to that short street.

The southbound Mineola Boulevard shared through-right movement at Second Street may be adversely impacted during AM and PM peak hours. 3TC proposes that this can be improved by modifying the traffic signal timing plan and by prohibiting parking on the westbound Second Street approach and restriping it as one 10-foot left-turn lane and one 10-foot shared through-right lane.

Due to traffic diverting from Willis Avenue to Mineola Boulevard, at Mineola Boulevard and First Street, the westbound approach may be adversely impacted during both the AM and PM peak hours; 3TC proposes making improvements by modifying the traffic signal timing plan.

The eastbound Second Street approach at Willis Avenue may be adversely impacted during the PM peak hour; 3TC proposes making improvement by modifying the traffic signal timing plan.

At the intersection of Roslyn Road and Second Street, the southbound approach and eastbound through-right movement may be adversely impacted during the AM and PM peak hours and the northbound left-turn movement may be adversely impacted during the AM peak hour. 3TC proposes making improvement

by restriping the eastbound approach as one 10-foot left-turn lane, one 10-foot through lane, and one 11-foot right-turn lane; and by modifying the traffic signal phasing and timing plan.

The northbound, southbound, and eastbound approaches at Main Street and Second Street may be adversely impacted during the PM peak hour; the 3TC Team proposes making improvements by installing a temporary traffic signal at the intersection for the duration of construction.

Impacts of Closing Main Street

Main Street would be closed to traffic in both directions during construction at the grade crossing; construction would commence after completion of the underpass at Willis Avenue. Existing traffic on Main Street would be expected to divert to parallel north-south routes, including Mineola Boulevard, Willis Avenue, and Roslyn Road. Emergency vehicles would similarly be expected to divert to these roads.

At Mineola Boulevard and Old Country Road, the westbound through and right-turn movements may be adversely impacted during the AM and PM peak hours and the eastbound left-turn movement may be adversely impacted during the PM peak hour. Adverse impacts could be fully improved in the AM peak hour and partially improved in the PM peak hour by restriping the westbound Old Country Road approach as one 10-foot left-turn lane, two 10 foot through lanes, and one 14-foot right-turn lanes; and by modifying the traffic signal timing plan. The westbound right-turn movement may be adversely impacted and deteriorate from LOS D to LOS F and would remain unimproved during the PM peak hour for the 6 to 9 months construction period.

At Mineola Boulevard and Second Street, the southbound Mineola Boulevard shared through-right movement may be adversely impacted in the AM peak hour and the westbound approach may be adversely impacted in the PM peak hour. These impacts could be improved by modifying the traffic signal timing plan.

The eastbound Second Street approach at Willis Avenue may be adversely impacted during the PM peak hour and could be improved by modifying the traffic signal timing plan.

At Old Country Road and Roslyn Road, the westbound Old Country Road movement may be adversely impacted during the AM peak hour and could be improved by modifying the traffic signal timing plan.

The southbound Roslyn Road approach at Second Street may be adversely impacted during the PM peak hour and could be improved by modifying the traffic signal timing plan.

Impacts of Construction at Glen Cove Road

At Glen Cove Road, according to a traffic count conducted in June 2013, the peak two-way volume occurred from 5:00 to 6:00 PM, with about 2,500 vehicles, balanced fairly evenly between northbound and southbound. During the time construction would take place, 7:00 AM to 3:30 PM, the heaviest hour was from 1:00 to 2:00 PM with about 2,300 vehicles recorded; 1,200 northbound and 1,100 southbound. If the road is reduced to one lane in each direction, this volume should still be accommodated.

3.8.5) Provide details and durations of all road closures.

Willis Ave will be closed for a duration not to exceed six months. Efficient use of construction methods may result in the shortening of this time. Glen Cove Road will require one double track diversion of service and a weekend road closure for the installation of the bridge superstructure. Other roads in the area will see limited partial closures as required for street, sidewalk and associated construction activities.

3.9 Construction Activities in the Vicinity of Carle Place Station

3.9 Construction Activities in the Vicinity of Carle Place Station

Vicinity includes all activities between mileposts 19.9 to 21.0 (Ellison Avenue inclusive).

3.9.1) Provide a narrative of the sequence of major construction activities.

The Carle Place Station will involve the construction of new platform, and the replacement of Meadowbrook Parkway and Cherry Lane. The platforms will be closed for a 12 month period. At the Meadowbrook Pkwy bridge, the existing abutments and wing walls will be selectively demolished, abutments and center pier extended and new wing walls constructed. The existing abutments will be upgraded to E80 by the use of tiebacks. The existing bridge will be widened with new girders and precast concrete deck. This widening will be constructed under single track outages. Cherry Lane bridge requires the replacement of the existing bridge. The existing abutments and wing wall will be selectively demolished, abutments extended and new wing walls constructed. The existing abutment will be upgraded to E80 by the use of tiebacks. The new three track wide bridge will be constructed on temporary towers over the existing roadway. During a weekend double track outage the SPMT will position the existing bridge on temporary towers on the south side of the bridge and the new bridge will be lifted off the temporary towers onto the previously reconfigured abutment. Retaining wall structures will be installed along the ROW with minor effect to the exiting area. Work in this area includes the installation of two new signal Master Locations and the removal of a signal CCP and an existing Master Location.

3.9.2) Provide a schedule outlining the duration and type of all construction activities in this vicinity excluding all track, ballast or Rail Road systems Work that are conducted directly from the Rail Road ROW.

This area is partly in Block 2 and partly in Block 3. Block 2 is up to N3 interlock, the Meadowbrook Parkway Bridge is in the center of N3 interlock.

Major work in the vicinity of Carle Place Station includes: the Meadowbrook Parkway Bridge, Traction Power Substation G17, Cherry Lane Bridge, Carle Place Station and retaining wall / sound wall and installation of third track.

The Meadowbrook Parkway Bridge work will start on February 19, 2019, after the completion of the Cherry Lane Bridge. The work for this Bridge will be complete on October 7, 2019. Railroad Operations will be minimally impacted, vehicular traffic will be impacted by temporary lane switch and reduction to a single traffic lane for some operations.

Installation of traction power substation G17 will start on June 11, 2021 and be completed on September 12, 2021. This work will have minimal impact to railroad operation and almost no impact to the neighborhood. The duct bank to carry power to the 3rd rail will be installed at the same time as other weekend shutdown for adjacent bridges or crossings.

Cherry Lane Bridge work will start on October 1 2018, as soon as NTPC is received. This Bridge work will be completed on February 15, 2019. This work will impact railroad operation since flagging, single track outage and one double track outage will be required for this work. Vehicular traffic will also be impacted, by some operation which will require single lane closures.

Carle Place Station, will be close for 1 year. The work will start as soon as NTP is received, on October 1, 2018. Both side of the station will be worked on at the same time. The station work will be completed on September 25, 2019. This work will impact railroad operations, because some of the work will require single track outages, and flagging. Impact to railroad operations and pedestrian will be over by September 2019.

In the area of Carle Place, milepost 19.9 to 21, construction impact will start when NTP is received. Impact to vehicular traffic should be over by October 2019. Impact to railroad operation should be over by October 2019. This exclude the installation of the new track signal and traction power which will all be completed concurrently with the completion of all retaining walls in Block 3 (November 2019). And then in Block 2 October 2021.

3.9.3) Provide construction staging and work zone traffic control drawings sufficient to understand all potential construction impacts or potential disruptions to local community.

There are three crossings of the Rail Road track in the area of the Carle Place Station: The Meadowbrook State Parkway, Cherry Lane, and Ellison Avenue. The Meadowbrook State Parkway is a major north-south roadway, linking the Long Island Expressway (I-495) and the Northern State Parkway to the Southern State Parkway and Jones Beach. At the Rail Road tracks, three lanes are provided in each direction, going under the Rail Road tracks. The roadway is restricted to non-commercial traffic. It provides interchanges at the major commercial and office areas, approximately 2 miles south of the Rail Road overpass, as well as the Nassau Colosseum.

At present, Cherry Lane provides one lane and sidewalks in each direction under the Rail Road tracks. The vehicular lanes are each almost 20 feet wide. The area around the crossing is a mix of residential and commercial properties, and the Carle Place station is immediately adjacent to the crossing.

At present, Ellison Avenue provides an overpass over the Rail Road tracks, with one lane and sidewalks in each direction. It runs between Old Country Road and the Jericho Turnpike, mostly through residential areas. The roadway also provides access to churches and schools and commercial development at Old Country Road.

3.9.4) Provide an assessment of the potential construction impacts and the measures to be incorporated to mitigate or eliminate.

The platforms at Carle Place Station will be closed for a 12 month period. Shuttle service will be available to the Westbury Station. Meadowbrook Parkway will have a partial closure while constructing the new bridge during single track outages. Cherry Lane will be closed during a weekend double track outage in order replace the bridge. The new bridge will be constructed over the road which will require a short duration closure when making large picks.

Impacts of Construction on the Meadowbrook State Parkway

Traffic on the Meadowbrook Parkway was counted in August of 2009 and shows traffic becoming heavy in both directions, in both the morning and afternoon. In the morning, traffic reaches its heaviest from 8:00 to 9:00 AM at about 4,400 vehicles northbound and 4,800 vehicles southbound. In the afternoon, traffic peaks from 5:00 to 6:00 PM at about 5,000 vehicles northbound and 5,300 vehicles southbound. Construction on the Meadowbrook Parkway would require full closures of the roadway for a short period of time (approx. 15 minutes) at night, when volumes are much lower. According to the Work Zone Traffic Control Checklist, a full closure is permitted between 10:00 PM and 5:00 AM northbound and between 11:00 PM and 5:00 AM southbound. According to the 2009 traffic count, between 11:00 PM and 5:00 AM, peak traffic is about 1,100 vehicles per hour. Volumes drop to under 350 vehicles per hour from 1:00 AM to 5:00 AM however; this increases rapidly after 5:00 AM.

While the 15-minue closures are not expected to create congestion problems on the Meadowbrook State Parkway, some traffic may divert to other roadways, if drivers become informed of the construction through traffic reports, routing and mapping apps, or other methods. Long distance drivers may use the Cross Island Parkway, approximately 6 miles to the west or the Wantagh State Parkway, 3 miles to the east. Local traffic might use surface roads as an alternate, depending on their origins and destinations. Another area of concern is that the Rail Road crossing is about 1,500 feet south of the interchange with the Northern State Parkway, and southbound traffic queuing into that interchange should be avoided. 1,500 feet should accommodate approximately 60 stopped vehicles per lane. Traffic volumes between 1:00 and 5:00 AM should be low enough that this condition will not occur.

Impacts of Construction at Cherry Lane

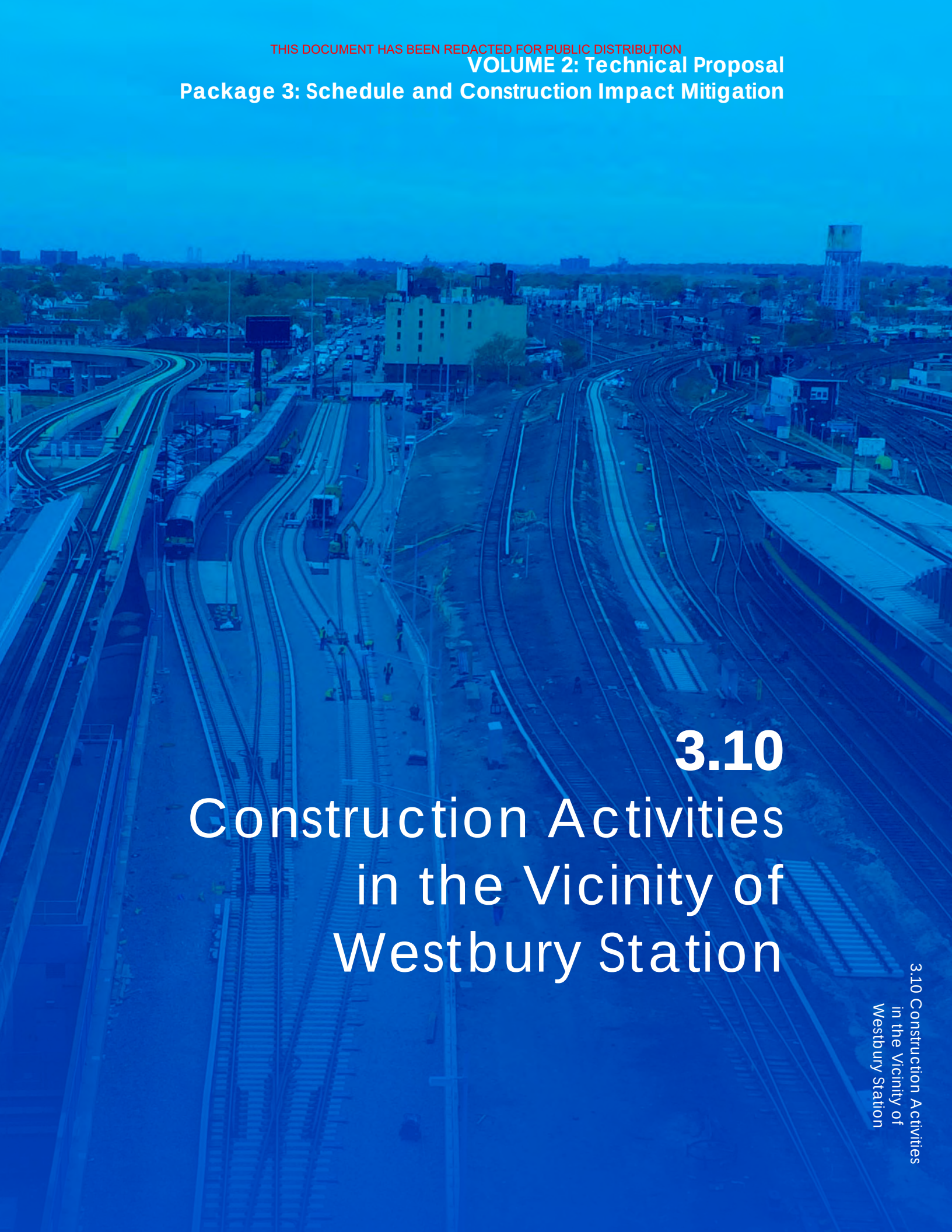
At Cherry Lane, according to a traffic count conducted in June 2013, traffic peaks in both directions in the afternoon, with each direction handling about 300 vehicles. Even with alternating lane closures, this volume can be handled by the roadway.

Impacts of Construction at Ellison Avenue

On Ellison Avenue, according to a traffic count conducted in June 2006, vehicular volumes peak in the afternoon in both directions, with about 1,000 vehicles counted going southbound and 600 vehicles counted going northbound. Between 7:00 AM and 4:00 PM, the highest volumes are recorded in the 3:00 to 4:00 PM hour, when about 600 vehicles go southbound and 500 northbound. Alternating lane closures could have some delays with these volumes, and some traffic is expected to divert to other roadways, as shown in the figure below. Generally, traffic is expected to use Old Country Road to reach Post Avenue or Cherry Avenue and one of those crossings.

3.9.5) Provide details and durations of all road closures.

The Meadowbrook Parkway will only be closed for short durations at night to facilitate the steel installation.
Cherry Lane will be closed for one weekend to allow for the installation of the bridge superstructure. There may be short periods of closure (15 minutes) for large picks.



3.10
Construction Activities in the Vicinity of Westbury Station

3.10 Construction Activities in the Vicinity of Westbury Station

Vicinity includes all activities between approx. mileposts 21.0 (Ellison Avenue) to 23.3 (at Wantagh Parkway)

3.10.1) Provide a narrative of the sequence of major construction activities.

The Westbury Station will involve the construction of new platforms and the elimination of the Urban Ave and School Street at grade crossings. The platform demolition and reconstruction will be staged so that there will always be access to a minimum of 6 car lengths. The new eastbound platform will use temporary gangways to access the existing track while the 3rd track is constructed. All work will be performed under flagging to limit the use of single track outages. Urban Avenue and School Street will be complete closures of six months each. This construction will involve the installation of retaining wall on local roads, relocation of drainage, and top down construction of abutments and bridge construction. A double track outage will be required at each location. Retaining wall structures will be installed along the ROW.

In this area, the existing signal CCP will be removed along with three existing signal Master Locations. New signal cases will be installed to support the elimination of School Street and Urban Avenue. Four new signal Master Locations will be installed in this area along with two new Electric Locks and Battery cases. New Divide-1 interlocking, with switches, signals, bonds, etc., will be installed and existing Divide-1 interlocking removed.

3.10.2) Provide a schedule outlining the duration and type of all construction activities in this vicinity excluding all track, ballast or Rail Road systems Work that are conducted directly from the Rail Road ROW.

This area is partly in Block 3.

Major work in the vicinity of Westbury Station includes: Westbury station, Traction Power Substation G18, School Street Crossing, Urban Avenue Crossing with Siding East of Urban Avenue, Traction Power Substation G19 and retaining wall / sound wall and installation of third track.

Urban Avenue crossing with Siding East of Urban Avenue, will start upon NTP on October 1, 2018. The work will be substantially complete on January 9, 2019. This work will have minimal impact to the railroad operations and will require flag protection.

School Street crossing elimination, will start upon completion of the Urban Avenue crossing elimination on June 20, 2019 with the additional closure of Railroad Avenue. Access to adjacent driveways will be accommodated. The crossing elimination work will be substantially complete and the ramp will be re-opened to traffic on December 31, 2019. This work will have minimal impact to the railroad operations and only require one double outage weekend shut down to set the new railroad bridge in place.

Installation of traction power substation G18 will start on October 26, 2021 and complete on June 4, 2022. This work will have minimal impact to railroad operation and almost no impact to the neighborhood. The duct bank to carry power to the 3rd rail will be installed at the same time as other weekend shutdown for adjacent bridges or crossings. Upon completion of this work will the commissioning process of the new third track will commence with the expected track opening on September 15, 2022.

Installation of traction power substation G19 will start on October 3, 2019 and complete on June27, 2020. This work will occur concurrently with construction of power substation G14. This work will have minimal impact to railroad operation and almost no impact to the neighborhood. The duct bank to carry power to the third rail will be installed at the same time as other weekend shutdown for adjacent bridges or crossings.

Construction work for Westbury Station will start on October 26, 2018 after the issuance of NTP and completion of the station construction design documents. The work will be performed in 4 stages. Stage 1 consists of work on the West side of the north platform from October 2018 to April 2019. Stage 2 consists of work on the East side of the North platform from April 2019 to August 2019. Stage 3 consists of the work on the West side of the South platform from August 2019 to January 2020. Stage 4 consists of the work on East Side of the South Platform from January 2020 to April 2020. The entire work for the Westbury Station lasts from October 2018 to April 2020. This includes construction

of the pedestrian overpass construction from October 2018 to October 2019.This work will impact Railroad operation since some tasks require single track outages. Pedestrians will be affected as well since part of the existing platform will be closed to the public.

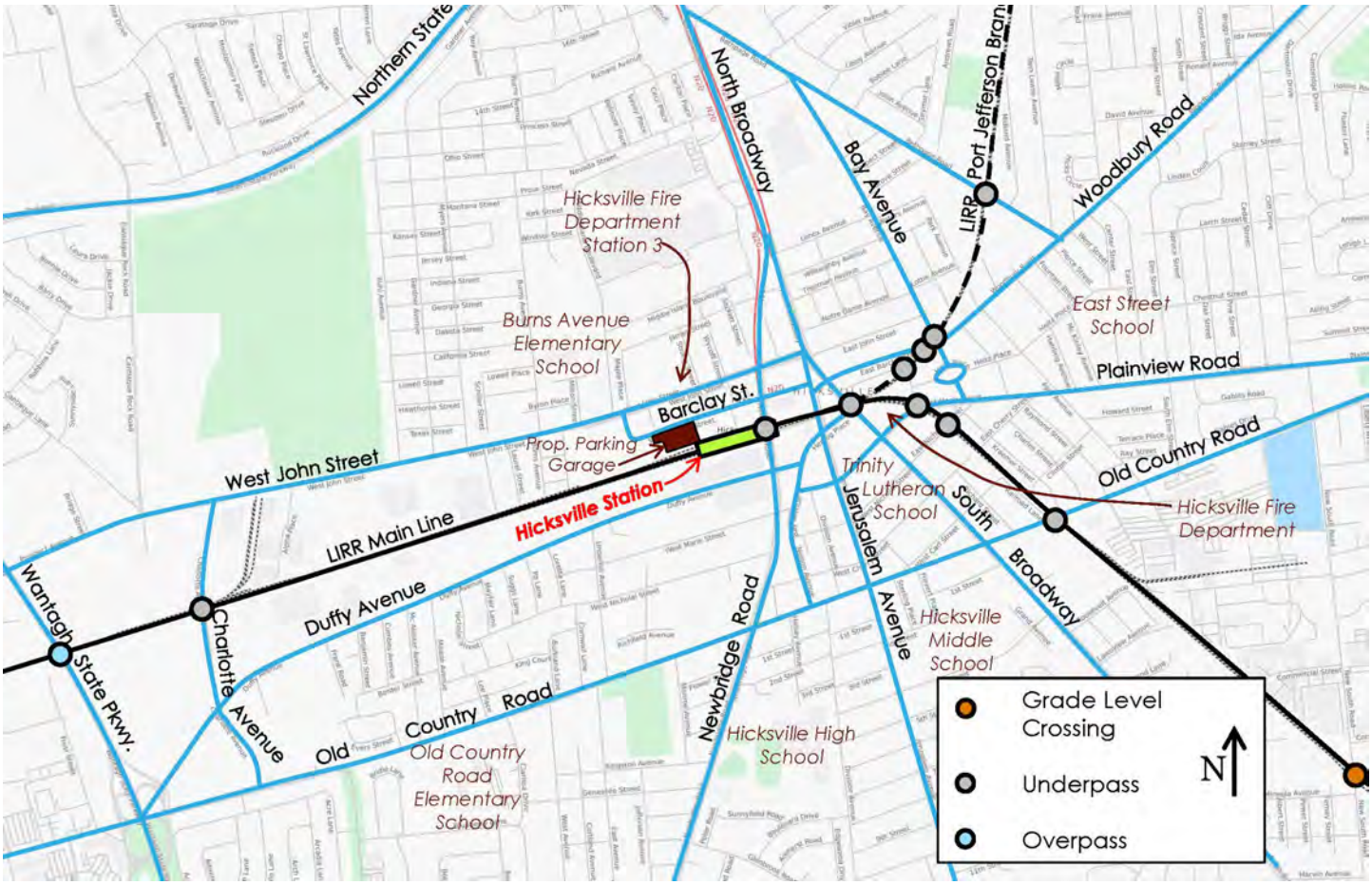
The sound wall and retaining wall construction north of the track in this area ([redacted]) will start in October, 2018 with Notice of Proceed and complete in September 2019. This work will require single track outages and flagging.

The sound wall and retaining wall construction south of the track in this area ([redacted]) will be performed in 2 stages. The first stage consists of retaining wall construction from station [redacted] from October 2018 to December 2018. While other retaining wall work continues in other areas, work will resume September 2019 at station [redacted] and continue through station [redacted] and completing on April 2010. This work will require single track outages and flagging.

3.10.3) Provide construction staging and work zone traffic control drawings sufficient to understand all potential construction impacts or potential disruptions to local community.

Five crossings of the Rail Road track are provided in the area of the Westbury Station: Post Avenue, School Street, Grand Boulevard, Urban Avenue, and the Wantagh State Parkway.

Post Avenue provides one lane in each direction, and a center turning lane, and sidewalks under the Rail Road tracks. It runs the main commercial district of Westbury to the north of the Rail Road tracks, and residential and commercial areas to the south of the Rail Road. A cemetery and church are to the south of the Rail Road, and the Westbury Rail Road station is immediately east of the crossing. Parking for the station is provided on both sides of the Rail Road and east of Post Avenue. Union Avenue and Rail Road Avenue intersect Post Avenue immediately adjacent to the Rail Road crossing, and they run to the east, parallel to the tracks, and provide access to train station parking.



School Street provides one lane in each direction, as well as sidewalks across the Rail Road tracks, at a grade crossing. The roadway runs through a mix of residential, commercial, and light industrial area. A cemetery and golf course are south of the Rail Road tracks, and the Westbury train station is approximately 0.3 miles west of the crossing. Parking for the station can be accessed using Union Avenue, which intersects School Street north of the Rail Road ROW and Rail Road Avenue, which intersects it south of the tracks. School Street leads to the Westbury Middle School, about 0.6 miles north of the crossing, and the Dryden Street Elementary School, about 0.1 miles east of crossing.

Grand Boulevard provides one lane in each direction, along with sidewalks, over the Rail Road tracks. The road runs northwest to southeast, and connects Union Avenue to Old Country Road. The road is lined with a mix of industrial, commercial, and residential uses.

Urban Avenue (facing page)provides one lane in each direction over the Rail Road tracks at a grade crossing. North of the tracks it runs through a residential neighborhood, leading to Prospect Avenue. Northwest of the crossing is a park with softball, tennis, and basketball facilities, along with a swimming pool. The North Hempstead "Yes We Can" Community Center is approximately 0.2 miles west of the crossing, on the north side of the tracks. South of the Rail Road, the road crosses mostly commercial and light industrial properties, leading to Old Country Road.

3.10.4) Provide an assessment of the potential construction impacts and the measures to be incorporated to mitigate or eliminate.

The construction at the station will involve limiting the westbound and eastbound to 6 cars at all times. Urban Ave and School Street will both have to be closed for six month duration.

Impacts of Construction on Post Avenue

On Post Avenue, traffic counts conducted in October of 2010 show traffic peaking in the afternoon between 5:00 and 7:00 PM, when about 900 vehicles per hour were counted in each direction. Between 7:00 AM and 3:30 PM, when single lane closures with alternating traffic are proposed, traffic volumes peak at over 700 vehicles per hour in each direction. This would likely create congestion with single lane closures, and some traffic is expected to divert to nearby crossings at Ellison Avenue, approximately 0.4 miles to the west, and School Street, approximately 0.4 miles to the east.

Additionally, construction activity may limit the connection to Union Avenue or Rail Road Avenue. If these connections are blocked, traffic will be re-routed via School Street, to reach these roadways.

Impacts of Construction on School Street

The Final EIS does not show heavy volumes using the School Street crossing. In the morning peak hour, 568 vehicles are shown using it and in the afternoon peak hour, 693 vehicles. These vehicles should mostly divert to the Post Avenue crossing, using Maple Avenue, Union Avenue, Rail Road Avenue, and Old Country Road. Some traffic, especially vehicles going to/from the Dryden Street School and its surrounding neighborhood area may divert to the Grand Boulevard crossing, since it would provide a more direct route to/from that area. Given the residential character of the surrounding area, and the nearby schools, it will be important to consider pedestrian connectivity during the construction.

The eastbound Old Country Road right-turn movement at School Street may be impacted during the PM peak hour; the 3TC Team proposes making improvements by modifying the traffic signal timing plan.

Impacts of Construction on Grand Boulevard

According to a traffic count on Grand Boulevard from October of 2006, traffic is relatively light, with the highest hourly volume being a northbound volume of 469 from 7:00 to 8:00 AM. Other hours were under 400 vehicles. One lane closure should not cause significant congestion, with these volumes.

Impacts of Construction on Urban Avenue

The Urban Avenue crossing has fairly light traffic. In the AM peak hour, the Final EIS shows 465 vehicles crossing in both directions, and in the afternoon peak hour, 766 vehicles. These vehicles can expect to divert to nearby crossings, depending on their origins and destinations. Grand Boulevard provides an alternate crossing 0.6 miles to the west and Charlotte Ave provides a crossing 0.8 miles to the east. The Wantagh State Parkway

also provides a crossing, however, connectivity to the parkway precludes diverted traffic from using it.

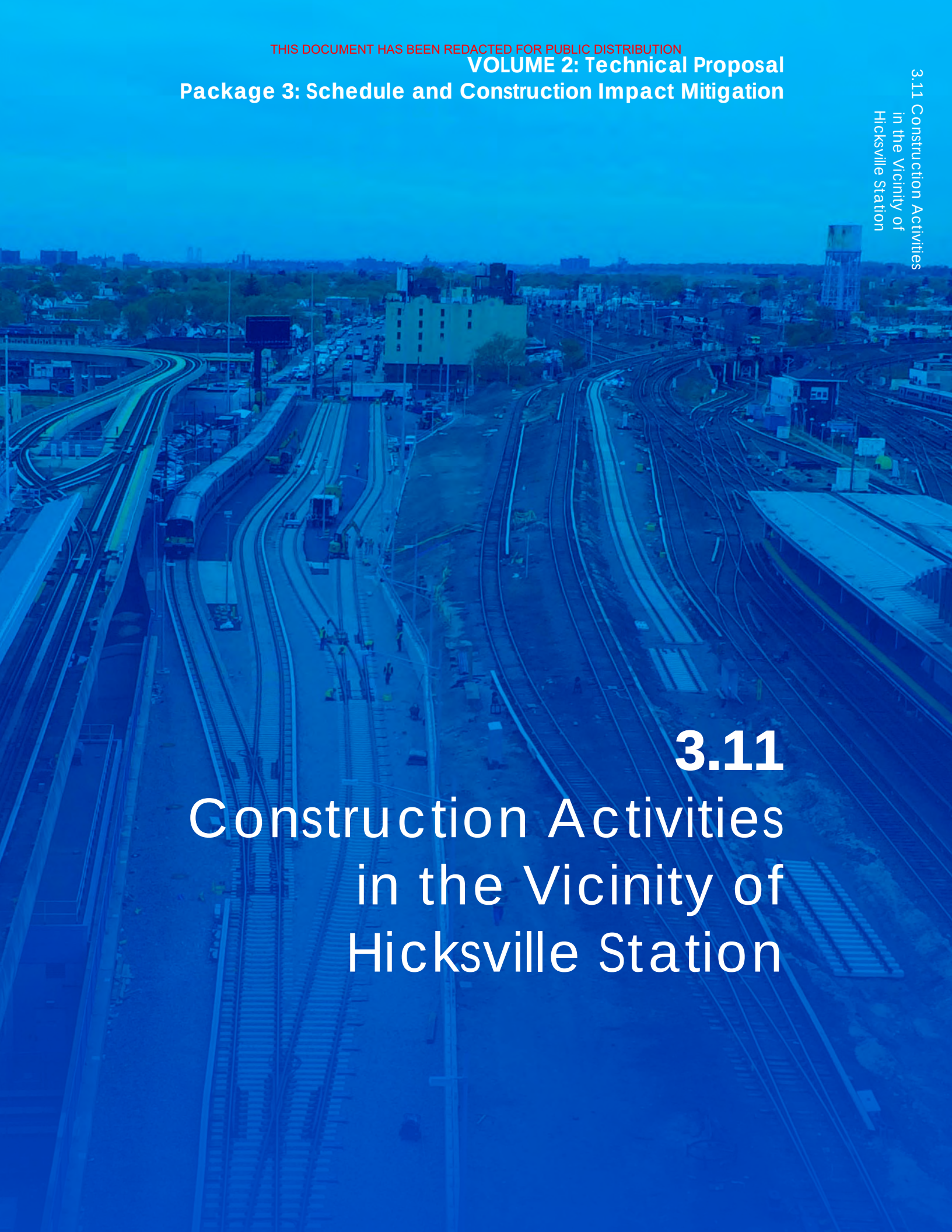
The southbound Post Avenue shared left-through movement at Union Avenue may be adversely impacted during the AM and PM peak hours and could be improved by modifying the traffic signal timing plan.

At Old Country Road and School Street, the eastbound left-turn movement may be adversely impacted during the AM and PM peak hours and could be improved by modifying the traffic signal timing plan.

At Old Country Road and Belmont Place/Merillon Avenue, the southbound left-turn movement may be adversely impacted during the PM peak hour and could be improved by modifying the traffic signal timing plan.

3.10.5) Provide details and durations of all road closures.

Urban Avenue and School Street will be closed for six months each. Efficient use of construction methods may result in the shortening of this time.



3.11
Construction Activities in the Vicinity of Hicksville Station

3.11 Construction Activities in the Vicinity of Hicksville Station

Vicinity includes all activities between approx. mileposts 23.3 (Wantagh Parkway) to eastern end of Project

3.11.1) Provide a narrative of the sequence of major construction activities.

Within the vicinity of the Hicksville Station there will be two new parking garages constructed. These garages will be staged so that one is done at a time to limit the effect on the existing available parking spaces.
In this area, the work includes the removal of existing signals in the Divide-1 interlocking with new signals and also the removal of existing signals no longer used. Existing signal bridges will be removed as well.

3.11.2) Provide a schedule outlining the duration and type of all construction activities in this vicinity excluding all track, ballast or Rail Road systems Work that are conducted directly from the Rail Road ROW.

This area is partly in Block 3.

Major work in the vicinity of Hicksville Station includes: Traction Power Substation G20, minor track work and minor signal work at Divide 3.

Installation of traction power substation G20 will start on June 11, 2020 and be completed on December 15, 2020. This work will have minimal impact to railroad operation and almost no impact to the neighborhood. The duct bank to carry power to the third rail will be installed at the same time as other weekend shutdown for adjacent bridges or crossings.

Work at Divide 1 will start on September 30, 2020 and be completed on February, 2021. This work will have little to no impact on railroad operation or the neighborhood.

In the area of Hicksville station the impact due to construction for the third track will be minimal, all work in this area should be over by February 2021.

3.11.3) Provide construction staging and work zone traffic control drawings sufficient to understand all potential construction impacts or potential disruptions to local community.

There will be very little staging or work zone traffic control required in this area.

3.11.4) Provide an assessment of the potential construction impacts and the measures to be incorporated to mitigate or eliminate.

The construction of the parking garages will be performed in stages to minimize the amount of space taken up during the construction.

3.11.5) Provide details and durations of all road closures.

This is not applicable at this location.

3.12 Potential Community Impacts

3.12 Potential Community Impacts

3.12.1) Provide an assessment of the overall approach taken to balance potential community impacts and schedule.

There are a number of communities and neighborhoods impacted to varying degrees along the Third Track Corridor. To achieve the adequate balance between community impacts and schedule requires daily communication among the Project's community affairs team (Outreach Management Team) led by the Outreach Program Manager (as described in Section 1.5 Outreach Management), the DBJV led by the Project Manager and the community stakeholders so that potential impacts are identified ahead of time and the corresponding mitigation activities are properly considered in the construction schedule (i.e., intrusive work on the eve of a holiday, a road closure that prevents a weekend street fair, etc.). Weekly Coordination Meetings will include a public affairs topic in the agenda and will serve to gather those unforeseen community impacts that will have to be mitigated. The schedule affections from these mitigation activities will be incorporated into the weekly construction schedule update.

In responding to extensive input from local communities, 3TC will use neighbor-friendly and innovative construction practices to keep the impact of construction as minimal as possible. This community-focused approach to construction includes:

- Pre-construction home inspections;
- Selective tree removal assessment;
- Satellite parking to keep workers' personal vehicles out of residential streets;
- Using existing track to transport materials to and from work sites;
- Advance notification of any disruptive work or road closures to residents, municipalities, school districts and first-responders;
- Scheduling construction deliveries outside of school and commuter traffic peak hours to the maximum extent practicable;
- Creating and implementing a community noise and vibration monitoring program;
- Implement a Construction Protection Plan (CPP) to protect historic architectural resources within 100 feet of the construction activities for the Proposed Project
- Implementing an air quality control plan to include dust control measures, ultra-low sulfur diesel fuel, the use of best available tailpipe technologies such as diesel particulate filters, and the utilization of newer equipment;
- Environmental monitoring consistent with a Construction Health and Safety Plan;
- Protecting access to existing businesses;
- Street cleaning as needed;
- Door-to-door outreach to residents;
- Regular online updates to the public;
- Staffing the Project Information Office with on-site supervision for rapid response to neighborhood concerns; and
- A 24/7 hotline assigned to a community outreach representative.

3TC's public outreach and community engagement process will keep local residents, communities and neighborhoods engaged and informed of the construction operations ahead of time.

In the event of unavoidable impacts, the stakeholders must not only be notified but also briefed on what, why and when these impacts are taking place. In addition to this, it will be important to communicate the duration of the impact, the crucial role that particular impact plays in Project Completion, and the timeline for the next significant impact need to be presented to the community through the mediums outlined in other sections of this report including the door-to-door Ambassador Program, social media, traditional media and mailings as required.

3.12.2) Provide a summary listing of anticipated community impacts during construction in each community.

The table on the following page represents the anticipated community impacts during construction that 3TC envision from NTP to Project Completion:

Impact and Construction Activity	Community (Anticipated Duration)
Noise – Installation of Support of Excavation	Covert Avenue Underpass (2 weekends)
	School Street Underpass (2 weekends)
	Urban Avenue Underpass (2 weekends)
	New Hyde Park Road Underpass (2 weekends)
	Willis Avenue Underpass (2 weekends)
	New Hyde Park Station Pedestrian Overpass (2 days)
	Merillon Station Pedestrian Overpass (2 days)
	Mineola Station Pedestrian Overpass (2 days)
	Carl Place Station Pedestrian Overpass (2 days)
	Westbury Station Pedestrian Overpass (2 days)
Noise – Night Work ROW Walls and Grade Crossing Elimination	All Project Length (15 days per 100' wall length)
	Covert Avenue Underpass (1 weekend double outage + 6 months road full closure)
	New Hyde Park Rd Underpass (1 weekend double outage + 9 months road partial closure 2 lines permanent detour))
	Willis Avenue Underpass (1 weekend double outage + 6 months road full closure)
	School Street Underpass (1 weekend double outage + 6 months road full closure
	Urban Avenue Underpass (1 weekenddouble outage + 6 months road full closure)
Dust – Excavation and Backfill	Covert Avenue Underpass (20 days)
	School Street Underpass (20 days)
	Urban Avenue Underpass (20 days)
Dust – Excavation and Backfill	New Hyde Park Road Underpass (20 days)
	Willis Avenue Underpass (20 days)
	Tyson Overpass (10 days)
	Plainfield Overpass (10 days)
	Nassau Overpass (10 days)
	Cherry Lane Overpass (10 days)
	Meadowbrook Overpass (10 days)
	Floral Park Overpass (10 days)
	Denton Overpass (10 days)
	Glen Cove Overpass (10 days)
	Hicksville Garage (8 months)
	Westbury Garage x2 (8 months each)
	Mineola x2 (8 months each)
	ROW (10 days per each 100 feet)
Dust – Demolition	Tyson Overpass (4 days)
	Plainfield Overpass (4 days)
	Nassau Overpass (4 days)
	Cherry Lane Overpass (4 days)
	Meadowbrook Overpass (4 days)
	Floral Park Overpass (4 days)
	Denton Overpass (4 days)
	Glen Cove Overpass (4 days)

Impact and Construction Activity	Community (Anticipated Duration)
	New Hyde Park Station Platforms (6 days per platform)
	Merillon Station Platforms (6 days per platform)
	Mineola Station Platforms (6 days per platform)
	Carl Place Station Platforms (6 days per platform)
	Westbury Station Platforms (6 days per platform)
Vibrations – Installation of Support of Excavation	Covert Avenue Underpass (12 days)
	School Street Underpass (12 days)
	Urban Avenue Underpass (12 days)
	New Hyde Park Road Underpass (12 days)
	Willis Avenue Underpass (12 days)
	Tyson Overpass (4 days)
	Plainfield Overpass (4 days)
	Nassau Overpass (4 days)
	Cherry Lane Overpass (4 days)
	Meadowbrook Overpass (4 days)
	Floral Park Overpass (4 days)
	Denton Overpass (4 days)
	Glen Cove Overpass (4 days)
	ROW Walls (2 days per each 100 feet)
Vibrations – Compaction	Covert Avenue Underpass (12 days)
	School Street Underpass (12 days)
	Urban Avenue Underpass (12 days)
	New Hyde Park Road Underpass (12 days)
	Willis Avenue Underpass (12 days)
Partial Lane Closures – Special Material Deliveries	Garage double Tee beams (1 months per location)
	G-14 New Hyde Park Traction Power Substation (2 weeks)
	G-15 Merillon Avenue Traction Power Substation (2 weeks
	G-16 Mineola Traction Power Substation (2 weeks)
	G-17 Carl Place Traction Power Substation (2 weeks)
	G-18 Westbury Traction Power Substation (2 weeks)
	G-19 New Cassel Traction Power Substation (2 weeks)
	G-20 Hicksville Traction Power Substation (2 weeks)
Station Parking Capacity Reduction – New and Renovated Parking Garages	Hicksville Garage (8 months)
	Westbury Garage x2 (8 months each)
	Mineola Hyde Park x2 (8 months each)

3.12.3) Outline why the approach taken is considered the best course of action for the local communities.

One of the most important elements in this overall approach taken to balance potential community impacts and schedule is "respect for the community." Dialogue, listening, personal engagement and continued explanations reflect how one would treat any equal partner in a project. These are essential in balancing potential community impacts and the world schedule. 3TC believes this approach is essential and a core component to why our strategy will meet the Rail Road criteria for an unprecedented level of effective community engagement. Identifying the impacts, being candid and truthful regarding their scope and duration, listening to requests for mitigation and complying wherever possible, and creating a sustained dialogue based on trust will reveal in word and deed the respect this Project has for those impacted.

In taking the best course of action to benefit local communities 3TC will incorporate the South Track Alignment into the Project. This ATC #27 eliminates the need to build tracks on the North side of the existing tracks between N3 interlocking and Westbury Station and from [redacted]. This change creates several most important changes to the original requirements.

- Rail Road FA work required to cut/throw, and/or shift existing tracks is reduced to a single location, station [redacted], cut and throw of the two existing tracks
  - Shifting starts at [redacted] and shifting ends at Sta [redacted] with total shift at this location of [redacted], both on the existing North and existing South Tracks.

- Reduction of Hybrid Pole installation-originally 120 required, with ATC 15 required
  - Portion of track east of Urban Avenue, at the new MOW siding, has insufficient dimensions North ROW to South ROW (ATC or Original alignment) to fit 3 tracks, 1 siding and PSEandG poles inside the ROW. 3TC will relocate the [redacted] wood pole line from Urban Avenue east into the ROW of Rail Road Avenue to Sta [redacted] then cross the ROW and install new wood poles inside the south ROW line to [redacted] then cross the ROW to existing wood poles inside the North ROW line to the eastern circuit terminus, approximately Charlotte Avenue.

In addition to this, 3TC will utilize "jacking into place" new three sided cast in place U-shaped sections with New Thru Girder structural steel bridge sections on top at all grade elimination crossings. This innovative approach to the structure requirements at these locations eliminates single track outage required for piling/ precast/sheeting installations (approx. 8 per location) which require "block" coordination and corresponding scheduling constraints. This construction method saves approximately 2 months at each location compared with the traditional "top-down" method.

3.12.4) Provide an assessment of any other overall approaches considered to balance community impacts and schedule and provide reasons why these directions were not adopted.

3TC considered providing the similar alignment plan as the indicative drawings showed. Our Team went through the exercise of following the original design in an effort to provide the Rail Road with a design that was familiar to the end user. It would also follow closely with the information provided to the local communities so that the construction work would be favorably met. However, through the extensive design work and hours studying the alignment, it was determined that the South Track Alignment (ATC #27) was a far superior design than the original. In fact it provides less disruption to the local neighborhoods and surrounding towns. It also decreases the amount of work the Rail Road would need to perform by a substantial amount. The largest impact to the communities may be the elimination of a substantial amount of additional utility poles required on the new South Track Alignment. This will substantially reduce the exposure to the communities of the heavy equipment and large cranes necessary for the installation of some of these poles and the subsequent pulling of the overhead wires.

3TC also considered the installation of the foundations for the bridges at the at-grade crossing locations using the top-down technique. This would have provided for piles and sheeting to be driven during single track weekend outages in an effort to prepare for the double track outage for the bridge installation. This technique would have followed a more conventional "means and methods" for foundation construction. However, after review of the precast jacking method, the Team realized that this method would eliminate the single track outages and also cut substantial time off the schedule. The precast jacking method would allow for construction to

be done without interrupting the regular operation of the Rail Road and have no effect on the ridership, except for the one double track outage. This method was chosen to shorten the schedule while affecting the public the least.

3.12.5) Provide narrative outlining the key performance indicators (KPI) that will be used to monitor and report potential construction impacts and indicate how these KPI will be used to improve performance.

3TC will leverage the vast resources provided by its Construction, Quality, Safety, and Community Outreach Teams to monitor and report potential construction impacts. The feedback received on a daily basis from community members, rail commuter users and traveling public will be collected by our Team through different means (on-site surveys, Project Information Coordination Center-PICC, 24/7 construction hotline) and discuss on the Weekly Progress Meetings to adjust both construction means and methods and the Project schedule in order to lessen the construction impacts on the surrounding communities.

The following KPIs will be considered, among others:

- Rail Road user satisfaction
- Adherence to construction schedule
- Time to address material non-conformance defects
- Reportable accidents on both traveling public and pedestrian neighbors within the Project ROW
- The above referenced KPIs will be part of the Weekly Progress Meeting agenda for discussion among the Project Management Team. The overall goal would be to consistently improve 3TC's performance, including the continuous reduction of construction impacts.

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3.13
Ingenuity

3.13 Ingenuity

3.13.1) Provide description of Technical Solution innovations and explain how they will contribute to improved implementation of the Project: a) Coordination Third Parties and Utility Owners; b) Construction means and methods to minimize construction impacts; and c) Program and interactions to keep the public informed.

a) Coordination Third Parties and Utility Owners

Transit infrastructure projects frequently involve coordination with outside entities not in a direct contractual relationship with the grantee, referred to as Third Parties. With regard to the Project, the Third Parties include utility companies, towns, villages and Nassau County. 3TC will utilize strategies and innovative practices that will contribute to improve the coordination with Third Parties and Utility Owners. These practices include:

1. Early design involvement
2. Fiscal incentives/disincentives for expedient relocation
3. Incorporation of utility corridors
4. Increased utilization of Subsurface Utility Engineering to promote utility avoidance
5. Use of utility relocation management software built into Civil 3D
6. Clearing ROW prior to utility relocations
7. Adopting trenchless technologies to expedite utility relocations
8. Use of advanced sensing technologies to improve the accuracy of locating existing utility lines
9. Development of utility conflict matrices to keep accurate utility tracking with the Utility Owners
10. Use of Civil Information Models for improved visualization of utility conflicts in 3D CAD models

The Third Parties either hold permit or require similar approval authority over an element of the Project and can be a source of delay to advancing the Project. The 3TC engage close coordination to ensure that the Third Parties act in a timely manner and share the urgency of the Rail Road in completing the Project as planned. However, close coordination may not be sufficient since many Third Parties have competing demands and might not offer the Rail Road Expansion Project the same level of priority as the Rail Road expects, or simply be non-responsive. In the absence of a contract that would bind the Third Party to actions, such as meeting milestones according to a prescribed schedule, the 3TC anticipate coordination with the Third Parties well in advance of the utility relocation need.

Timely coordination and resolution of issues with Third Party stakeholders will be critical to meeting the Project schedule. For this Project, we expect coordination with utility companies, Towns, Villages and Nassau County.

b) Construction means and methods to minimize construction impacts

3TC proposes a very innovative concept to construct the at grade crossing eliminations. This idea has been developed under the three main premises given by the Rail Road to approach this Project:

1. Minimize the track outages (singles and doubles)
2. Create the shortest and least disruptive schedule for the neighborhoods
3. Ensure the work can be completed within the allotted time and reduce the number of critical activities, and minimize the risk of impacting Rail Road operations

Based on those three strong concepts, our Team has designed a single U-shaped thru-girder bridge. This structure is constructed on a launch pad at a site adjacent to where it is to be installed. Based on the bridge geometry and the available room around the tracks at each grade crossing, the SOE and excavation is performed to allow the team to build the launching and reaction pad and the U-shaped thru-girder in the excavated site. After the U-shaped substructure is constructed and cured and the girders are installed, it is then thrust forward horizontally in a weekend double track outage - the only track outage required - using advanced jacking technology with full track removal and open trench excavation and excavation from inside the structure.

3TC will incorporate the South Track Alignment into the Project. This ATC #27 eliminates the need to build tracks on the North side of the existing tracks between N3 interlocking and Westbury Station and from Sta. [redacted]. This change creates several important improvements to the original requirements.

- Rail Road FA work required to cut/throw, and/or shift existing tracks is substantially reduced

- ATC #27 substantially reduces the quantity of Hybrid Poles to be installed: a portion of track east of Urban Avenue, at the new MOW siding, has insufficient dimensions North ROW to South ROW (ATC or Original alignment) to fit 3 tracks, 1 siding and PSE&G poles inside the ROW. 3TC will relocate the [redacted] wood pole line from Urban Avenue east [redacted] into the ROW of Rail Road Avenue to [redacted] then cross the ROW and install new wood poles inside the south ROW line to [redacted] then cross the ROW to existing wood poles inside the North ROW line to the eastern circuit terminus, approximately Charlotte Avenue.

In addition to the above, 3TC will use Agtek 3D software to minimize the excavation and embankment required in the third track construction. Through this 3D software (see adjacent views) our Team will be able to optimize the material and equipment resources required on the third track construction which will ultimately result in a reduction of material hauling, equipment noise and pollution, and vehicular traffic in the Project.

c) Program and interactions to keep the public informed

In responding to extensive input from local communities, 3TC will use neighbor-friendly and innovative construction practices to keep the impact of construction as minimal as possible. This community-focused approach to construction includes:

- **Movement Bureau:** All information gathered from work sessions with the Design and Construction Teams and the Rail Road Community Affairs staff will be centralized in a Project Information Coordinating Center (PICC). This would be the equivalent of the Rail Road's Movement Bureau.

  Physically located in the offices of Rubenstein Associates, dedicated space will include a teleconferencing office, a dedicated project computer server, a central location for digital media coordinators, and public information master planning. Data entered by the Rubenstein Digital Team will be available to all 3TC members with access on a 24/7 basis.

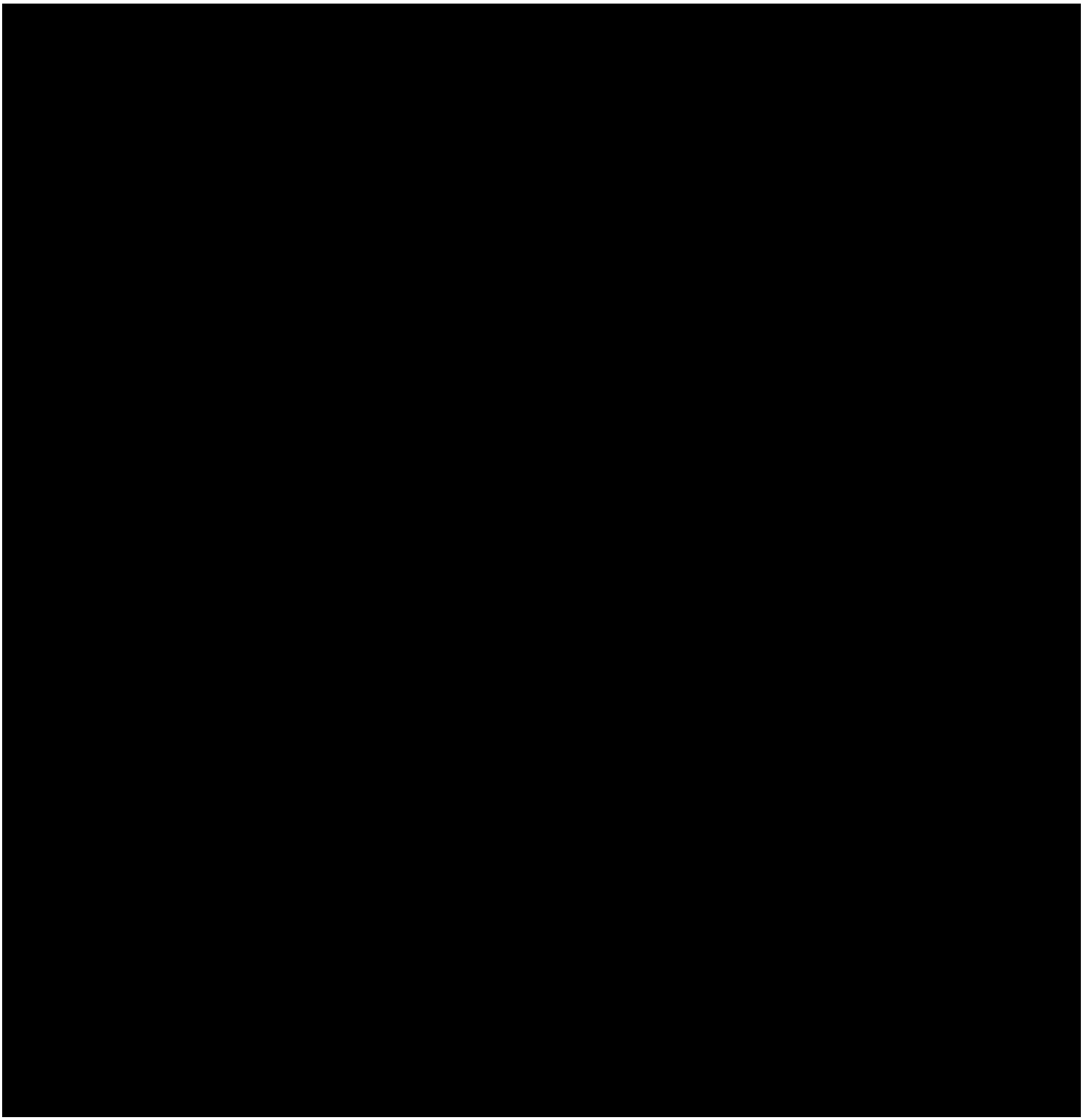
- **Website and Social Media:** The Community Outreach Team will create and maintain a web site, issuing and posting text and visual content reviewed and approved by the Rail Road. We have taken the liberty of acquiring the URL: Rail Road third track community as a means of testing a name that would reflect the direct and sustained commitment to the stakeholders.

- **Project Newsletter:** 3TC envisions producing a monthly update on construction milestones, community outreach programs, educational initiatives, and community tours of the work site, etc. "Bulletins" would be added as needed and in coordination with the Rail Road.

- **Ambassador Program:** The role of the Ambassadors will go beyond acting as gateways to distribute Project information to individual stakeholders and receive their feedback. They will have a presence within each Project municipality throughout the entire Construction Phase. For example, Ambassadors would be at the community's September street fair, attend the Chamber of Commerce meetings as a member, be seen at a Veterans Day ceremony or the annual firefighters tournament. The purpose is to create repeated opportunities for casual public engagement, reinforcing our commitment to be visible, accessible, and open to stakeholders. The Ambassador effort will include the staffing of a "Open Door" program. "Open Door" will find, as an example, an Ambassador on site on a weekend at a dedicated table at the Hillside Library in New Hyde Park or one of the community's fire houses with posted hours for residents to stop in, ask questions, voice concerns, and seek clarification.

- **Public Education Programs:** We believe there is a significant opportunity to engage young people all along the Project corridor regarding the technology and construction that will be employed during construction and, by doing so, build additional lines of communication to our stakeholders. Through the expertise of Cameron Engineering, we propose creating an age appropriate multidisciplinary educational curriculum that will allow 3TC's Community Outreach Team to reach an important age group and introduce them to the exciting world of Science, Technology, Engineering and Math ("STEM") careers.

3TC Community Outreach Team will be guided by the Governor's motto that reflects his Administration's philosophy, "Performance, Integrity, Pride – We Work for the People."



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VOLUME 2: TECHNICAL
PACKAGE 5:
DIVERSITY PRACTICES AND PLAN

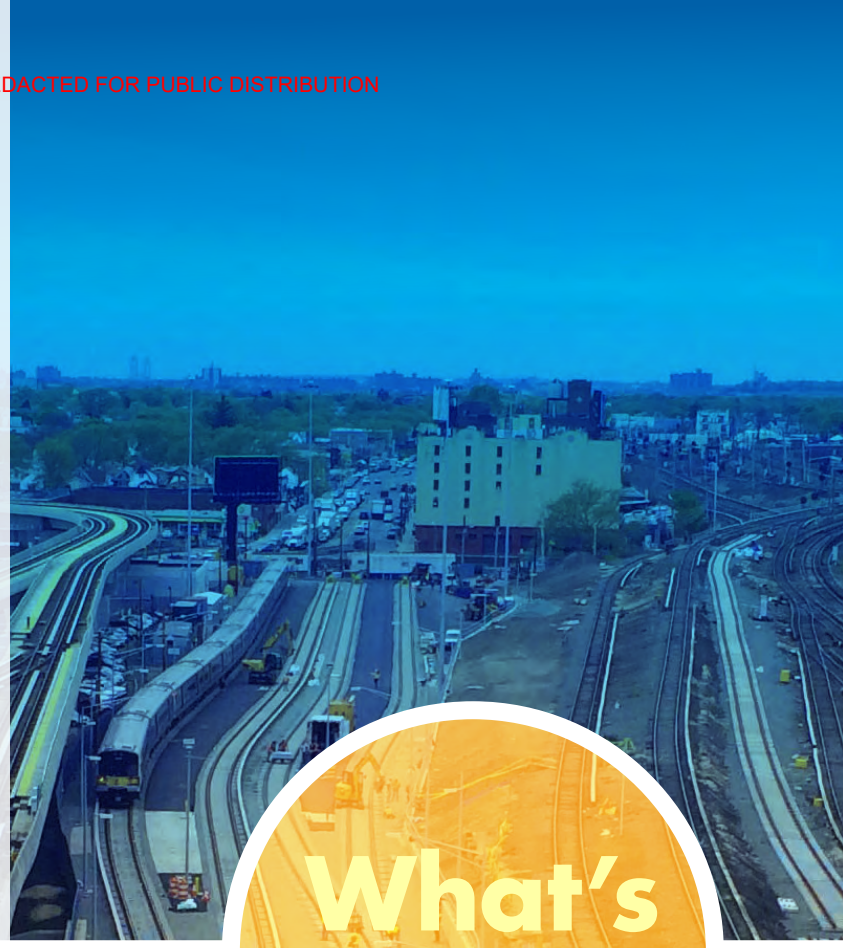
LIRR CONTRACT #6240

Design-Build Services for LIRR Expansion Project from Floral Park to Hicksville

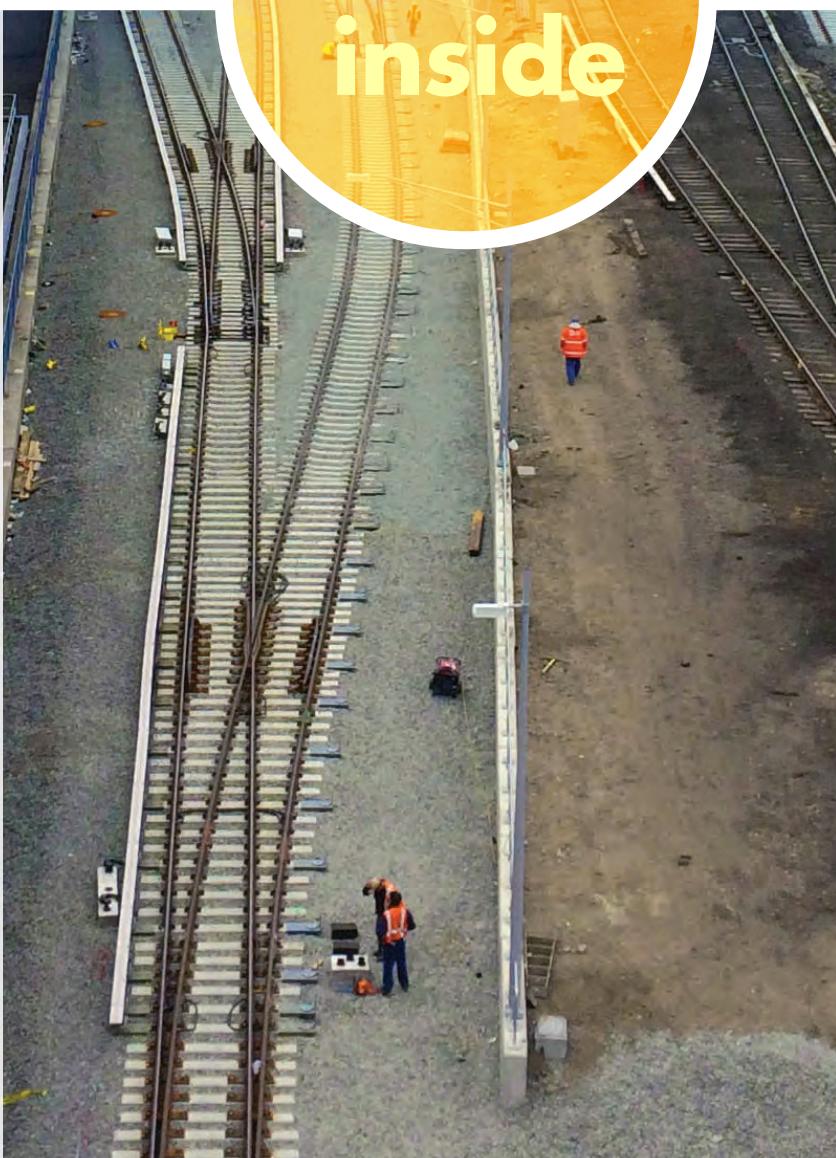
Long Island Rail Road

3rd TRACK CONSTRUCTORS
Picone | Dragados USA | CCA Civil | Halmar
In association with Stantec

VOLUME 2:
Package 5: Diversity Practices and Plan



What's inside



5.1 Diversity Practices

Volume 2 - Package 5: Diversity Practices And Plan

5.1 Diversity Practices

5.1.1) Submit Form MWDBE-21 (Schedule XXIV to be provided), Diversity Practices Questionnaire, for each Major Participant.

3rd Track Constructors (3TC or Team) is a design-build joint venture (DBJV) of John P. Picone, Inc. (Picone); Dragados USA, Inc. (Dragados); CCA Civil, Inc. (CCA); and Halmar International LLC (Halmar). With our Lead Designer, Stantec Consulting Services, Inc. (Stantec), we bring the proven performance, capability, and knowledge to deliver a long-awaited commuter rail expansion that will set a new benchmark for United States public works projects in terms of value to the public, design, and construction.

Our DBJV partners and Lead Designer have a solid track record meeting the M/WBE and SDVOB goals set out by the Owner. As such, our Team has already started the effort to meeting the MBE, WBE, and SDVOB goals established by the RFP. As shown in the M/WBE and SDVOB Utilization Plans, 19 M/WBEs and three SDVOBs have already been engaged for the Design-Build Phase, which show 3TC's unequivocal commitment to diversity inclusion.

Form M/WBE Form 15A.1 is provided later in this volume, and in Volume 2 Technical Proposal.

Our Team will use the same DBE/OJT approach used by Dragados on the [redacted] I-595 Corridor Roadway Improvements project, where they exceeded the 8.1% DBE goal for a final DBE participation of 13.6% and surpassed the OJT goal of 118 trainees with a final graduation of 164 trainees.

5.2
MBE/WBE Plan

5.2 MBE/WBE Plan

5.2.1) An interim MBE/WBE utilization plan identifying firms to be utilized as subcontractors and suppliers on the Project. Do not include price information in this interim plan.

MBE/WBE Utilization Plan table of firms we have already engaged to team with has been inserted at the end of this section.

5.2.2) A narrative description of the proposed plan for utilization of New York State-certified Minority and Women-Owned Business Enterprises in performance of the Work, including the Proposer's commitment, policies, organizational structures and planned practices for achieving the participation goals set forth in these Instructions.

3TC's policy with regard to Minority/Women Business Enterprises (M/WBEs) is to take all necessary and commercially reasonable steps to ensure that M/WBEs have the maximum opportunity to participate in this Contract, utilizing good faith efforts to meet the approved overall MWBE participation goals for the LIRR Expansion Project from Floral Park to Hicksville (the Project). The goals have been established by the Long Island Rail Road (the Rail Road) at fifteen percent (15%) for MBE firms and fifteen percent (15%) for WBE firms, of the Contract price, including change orders. This is inclusive of both construction and professional services and will remain in effect throughout the life of the Contract.

3TC is committed to the participation of M/WBEs in subcontracting and supplier opportunities in accordance with the provisions of Article 15-A of the NY Executive Law and Chapter XIV, Parts 140 to 145 of Title 5 New York Codes, Rules and Regulations (NYCRR), MTA Dept. of Diversity and Civil Rights, in addition to the Contract. It is our intent to create a level playing field where M/WBEs can compete fairly and be awarded contracts to supply materials and equipment, provide consulting services or perform as subcontractors in the field.

3TC's MWBE organizational structure will be comprised of the Project Manager, the Project Accountant, the Business Manager, the Construction Team and the MWBE/SDV Program Manager. This group will work collaboratively to ensure that MWBEs have the maximum practical opportunities:

1. **Project Manager** has overall management of MWDBE diversity efforts post-award. The Project Manager will supervise the activities of the MWBE/SDV-Outreach Program Manager and oversee the responsibilities of the Construction Team in monitoring MWBE activities on the project.

2. **MWBE/SDV Program Manager** is responsible for maintaining all Project level MWBE participation and oversight documentation. The MWBE/SDV Program Manager is responsible for ensuring that mandatory reports to the Rail Road are properly filed and the documenting of the project's Good Faith Efforts is accurate; assisting in identifying prospective MWBEs; monitoring 3TC's commercially useful functions; tracking prompt payment to MWBEs; and promoting outreach events throughout the duration of the Project.

3. **Project Accountant** is responsible for overseeing the processing of subcontractor payments. The Project Accountant will pursue that all required MWBE accounting information is reported to the MWBE/SDV Program Manager in a timely manner.

4. **Business Manager** is tasked with identification of potential scopes of work and providing the MWBE/SDV Program Manager with executed subcontracts, modifications, sublets, and any correspondence, email, phone minutes, or other documentation regarding communications with MWBE companies.

5. **Construction Team** will be designated by the Project Manager according to their respective roles on the Project (e.g. structures, earthworks, etc.) The Construction Team is responsible for assuring that MWBEs are properly monitored by personal observation in performing their scopes of work to ensure proper scope execution.

3TC'sapproach to meet the required MWBE participation goals includes a system of reporting and procedures in compliance with State, Agency and Contract documents. Our systems and procedures will document the method for identifying, soliciting, documenting, selecting and managing MWBE for contract and subcontract opportunities throughout the Project completion.

5.2.3) Provide details of tools and processes to be used during the Project.

State Directory

The MWBE/SDV Program Manager and the Business Manager will research both the NYS MWBE and the NYS OGS Directories to identify certified MWBE/SDV firms by the North American Industry Classification System (NAICS) code which classifies businesses by industry type. All interested MWBE/SDV bidders must be certified in the prospective Directory.

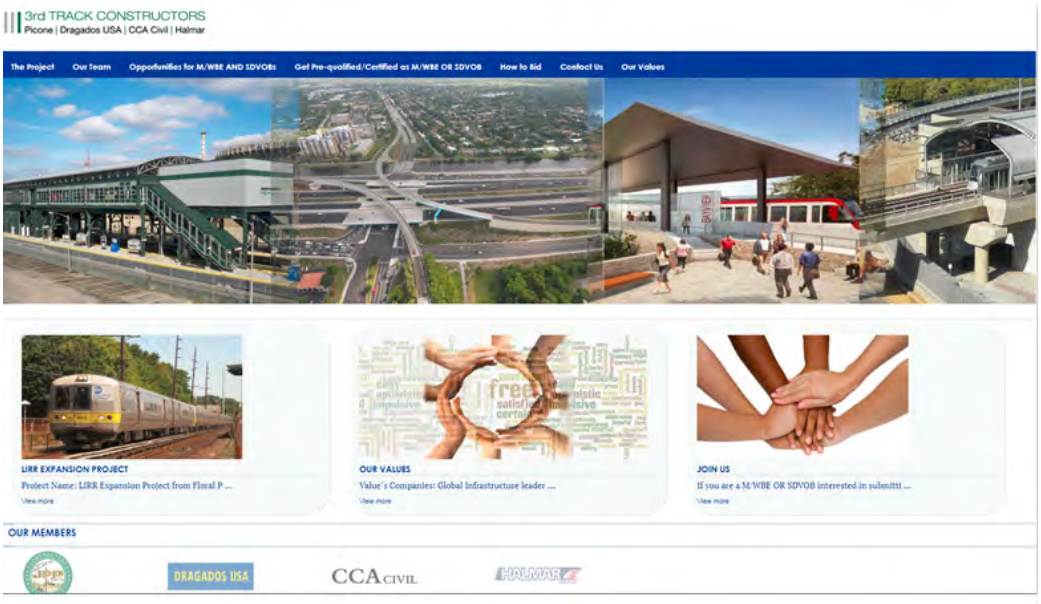
MWBE/SDV firms will only bid for work that corresponds to their NAICS codes that's listed on the NYS MWDBE and NYS OGS Directories. In addition, the MWBE/SDV firm's certification status must be verified prior to approval of contract/subcontract agreement and change orders.
Below is the internet website available for locating potential MWBE/SDV firms for the Project:

- Empire State Development Division of Minority and Women's Business: https://esd.ny.gov/
- New York State Contract System: https://ny.newnycontracts.com/
- NYS Office of General Services: https://ogs.ny.gov/Veterans/default.asp

Public Advertisement

The MWBE/SDV Program Manager will utilize local newspapers and trade publications to advertise the solicitations and packages of the various scopes of work throughout the life of the project. Leads for potential interested bidders responding to the advertisement will be documented and logged into iSqFt (subcontractor and MWBE/SDV bid tracking software). iSqFt, software will be utilized to assist 3TC with maximizing MWBE/SDV participation throughout the life of the Project.
The MWBE/SDV Program Manager will then monitor all MWBE/SDVs firms that are solicited and awarded subcontracts/purchase orders to perform services.

*In the event a non-certified firm is identified, 3TC is committed to forwarding them to MTA's Department of Diversity and Civil Rights to gain information regarding the certification process.



Website (www.3rdtc.com)

3TC's diversity website was implemented and launched right after SOQ Shortlist and has been active during the Procurement Phase to help 3TC in expanding its diversity outreach efforts. Upon Project Award the web will still be utilized to encourage MWBE/SDV participation and engage with prospective MWBE/SDV firms.

Outreach Events

Thus far, during the Procurement Phase, our Team has participated in and/or hosted three outreach events:

1. Information Networking Event for MWBE & SDVs held on Thursday, March 30, 2017, hosted by LIRR/MTA.
2. DMWBE One-on-One Networking Conference held on Friday, May 5, 2017, hosted by General Contractors Association (GCA)
3. MWBE/SDV Outreach Event held on Wednesday, May 17, 2017, hosted by 3TC

Some opportunities on the Project will allow for small scope meetings or community workshops to solicit specified types of firms throughout the course of the Project.

Other tolls and processes to be used may include, but not limited to, the following:

- Separate targeted MWBE/SDV outreach meetings with: 1) Vendors; 2) Consultants and/or professional service firms; 3) Design and engineering firms; 4) Contractors/subcontractors; and 5) Truckers, for each to gain an insight regarding upcoming opportunities on the Project.

- Stakeholder and joint meetings with minority and woman-owned business, small disabled veterans, and other organizations that represent a diverse pool of vendors and subcontractors.

- Provide assistance with supportive services by referring MWBE/SDV businesses to training and/or educational workshops sponsored by MTA and various organizations.

Sub-Contract Solicitation

3TC has implemented a best practice approach to notifying the MWBE/SDV subcontracting community regarding upcoming opportunities on the Project, by providing the actual RFP solicitations and Project documents via the iSqFt software. This software enables 3TC to effectively track and monitor MWDBE/SDV activity, serving as a tool to assist 3TC understand which scopes on the Project require additional focus in order to maximize MWBE/SDV participation on the Project.

The use of iSqFt further encourages MWBE/SDVOB participation by streamlining the procurement process. The software makes available all project related documents to be viewed as they are uploaded into the system, allowing full transparency to MWBE/SDVOB firms. It also functions as a preliminary vetting process, by prompting all subs to complete the Subcontractor Questionnaire, which entails company information that is used to determine the firm's capabilities.

3TC's prescribed steps to ensure maximum participation are as follows:

- Send communications and advertisements to the MWBE/SDV subcontractors/suppliers and construction industry stakeholder organizations in advance of RFP dates regarding scopes of work on the Project. These solicitations will be distributed via email through iSqFt. In the event the communication "bounces back", 3TC is notified and a fax is sent to the business or is forwarded via USPS.

- Follow-up with MWBE/SDVs within a specified period of time to ensure that they received the RFP, has access to the plans and specifications provided, or understand if there are any challenges the MWBE/SDV is facing that would prevent them from bidding the work.
  - Following-up with a MWBE/SDV can be in writing (iSQFt messaging, email, fax, or USPS), by telephone, or an in-person meeting at the office, in the field or at an outreach event.
  - All follow-up attempts shall be noted and kept in a log or file folder.
  - Best practices recommend no less than 3 attempts to contact a MWBE/SDV will be made before it is determined an MWBE/SDV firm is non-responsive to a solicitation or bid.

- Once the bidding window has ended, 3TC will evaluate all bids submitted by a comparative matrix to make a commercially reasonable decision. 3TC will use each bidder's price, experience, project references and capacity to perform to make a determination on the apparent best bidder for the selected scope of work.

- The Business Manager, with assistance from the MWBE/SDV Program Manager, will be responsible for checking and ensuring that MWBE/SDV firms are certified and qualified to perform a commercially useful function for which they are being solicited.

- In the case that a MWBE/SDV firm is the apparent best bidder, 3TC will award the MWBE firm a contract and explain all the Rail Road and NY State MWBE/SDV requirements to be met by the firm.

- In the case that a non-MWBE/SDV firm is the apparent best bidder, 3TC will negotiate with the non-MWBE/SDV firm, prior to award of the contract, to include MWBE/SDV participation as a flow-down provision of their Contract. Each scope of work will be evaluated on a case-by-case basis to determine if MWBE/SDV participation can be included at a minimum of 15% per classification, or less, depending on the opportunity for the non-MWBE/SDV firm to incorporate MWBE/SDV firms into their work.

- Due to the size, scope, complexity and schedule associated with each opportunity that will be let on the Project over the duration of the Contract, 3TC will evaluate each opportunity on a case-by-case basis. Every opportunity will not lend itself to the best practices steps outlined above.

MWBE/SDV Reporting

To monitor our efforts and goal, 3TC will submit reports to the MTA Department of Diversity and Civil Rights, Form 15A.3, (in addition to any other required forms) within the identified time frame, to document MWBE participation. Also it will submit to the MTA Department of Diversity and Civil Rights the SDV 101, (in addition to any other required forms) by the 10th of each month to document SDV participation.

In order to monitor the progress of the MWBE/SDV Program, the MWBE/SV Program Manager will be required to maintain a record keeping system which will identify and assess the MWBE/SDV contract awards, progress towards achieving MWBE/SDV subcontractor goals, and other MWBE good faith efforts. 3TC will maintain records showing:

- Procedures followed by 3TC and its contractors/subcontractors to identify and assess MWBE/SDV contract awards and progress in achieving prescribed goals;

- Specific efforts to identify and award contracts to MWBE/SDVs; and

- Amounts awarded, amounts paid and amounts claimed for each MWBE/SDV subcontractor or vendor participating on the Project and reported to Rail Road on a monthly basis.

The information to be maintained by 3TC, at a minimum, will include:

- A work schedule outlining when each MWBE/SDV subcontractor will commence and complete work;
- Updated subcontract agreements;
- The number of contracts awarded to MWBE/SDVs;
- A description of the general categories of contracts awarded to MWBE/SDVs;
- The dollar value of contracts awarded to MWBE/SDVs;
- The percentage of the dollar value of all contracts awarded to MWBE/SDVs; and
- An indication of whether and the extent of which the goal has been met.

Prompt Payment Provision/ Retainage

3TC agree to pay each subcontractor for satisfactory performance of its contract and/or agreement no later than seven calendar days from the receipt of each payment that 3TC receives from the MTA/LIRR Agency and to pay interest at the rate required by law if payment is not made with the aforesaid seven (7) calendar days.

Good Faith Efforts

The MWBE/SDV Program Manager will maintain all records required to demonstrate that procedures have been adopted and followed to ensure that MWBE/SDV

firms receive the maximum opportunity to participate on the project and to demonstrate 3TC good faith efforts to achieve the participation goals of fifteen percent (15%) for MBE, fifteen percent (15%) for WBE, and six percent (6%) for SDV, as set forth in the Contract.

In order to make a good faith effort, you must consider the quality, quantity, and intensity of the different kinds of efforts made to identify and solicit MWBE/SDVs. The following is a list that will entail our demonstration of good faith. This is not intended to be an exhaustive list.

- Efforts to secure participation by certified MWBE/SDV firms for work that they are listed to perform that is in the Contract. Only MWBE/SDVs certified by the State of New York will be used to fulfill the established goal on the Project.
- Soliciting through all reasonable and available means (e.g., attendance at pre-bid meetings, advertising and/or written notices, sponsoring contractor forums and/or workshops) the interest of all certified MWBE/SDVs who have the capability to perform the work of the contract. Providing evidence that advertisement were placed in general circulation, small business, diversity trade associations and other minority-focused publications, concerning the subcontracting and supply opportunities. 3TC will solicit this interest within sufficient time to allow MWBE/SDVs to respond to the solicitation. 3TC will determine with certainty if MWBE/SDVs are interested by taking appropriate steps to follow-up on initial solicitations.
- Selecting portions of the work to be performed by MWBE/SDVs in order to increase the probability of the MWBE/SDV goal will be met. This includes, where appropriate, either breaking down operations within the contract or combining like or related operations in the contract into logistically and economically feasible units to facilitate MWBE/SDV participation, even when the Team might otherwise prefer to perform these work items with its own forces.
- Providing interested MWBE/SDVs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation. Providing evidence that written notice were provided to a reasonable number of specific MWBE/SDVs identified from the NYS MWBE Directory and NYS OGS SDV Directory.
- Making efforts to assist interested MWBE/SDVs in obtaining bonding, lines of credit, or insurance required by MTA or the Contractor.
  - Effectively using the services of MTA Department of Diversity and Civil Rights, MWBE/SDV community organizations, associations, minority contractor groups, local, state, and federal minority business assistance offices, additional organizations identified by MWBE/SDV Program Manager and advocates for MWBE/SDV businesses that provide assistance in the recruitment and placement of MWBE/SDV firms.
- 3TC will keep records of efforts to solicit and negotiate with MWBE/SDVs. The records will include, but is not limited to:
  - MWBE/SDV Solicitation Log
  - MWBE/SDV Communication Log
  - All envelopes of solicitation inquiries that were returned as undeliverable
  - Any quotations submitted by MWBE/SDVs
  - Promptly executing an agreement with MWBE/SDV subcontractors/suppliers

3TC will utilize our best efforts to solicit bids from, and to contract with, MWBE Subcontractors to perform all types of work on the Project. Specific to scopes of work that is customarily self-performed, we have considered the possibility of additional opportunities to increase DBE participation by breaking-up self-perform work into economically-feasible units to facilitate higher MWBE achievement. We continue to maximize the effectiveness of our program by identifying size-appropriate scopes of work for MWBE/ SDVs.

Commercially Useful Function

3TC's Construction Team will foster that MWBE/SDV subcontractors are performing a Commercially Useful Function and will inform the MWBE/SDV Program Manager if this doesn't happen. The Construction Team will be knowledgeable about the schedule, areas of work for each subcontractor at all tiers, and will be the first set of eyes and ears for verifying that MWBE/SDVs firms are providing the management, labor and equipment to perform their work independently of the lead contractor and any non-MWBE/SDVs. MWBE/SDV compliance will be raised in toolbox talks. Commercially Useful Function checks in the field will be the responsibility of a designated field person who will conduct random site reviews of MWBE/SDV firms working in the field to ensure that these are performing accordingly.

It is the policy of 3TC to ensure there is no discrimination on the basis of race, color, sex or national origin in the award and administration of contracts and subcontracts on this Project.

To ensure 3TC is in compliance with the provisions of Article 15-A of the NY Executive Law, Chapter XIV, Parts 140 to 145 of Title 5 New York Codes, Article 17-B of the NY Executive Law, Rules and Regulations (NYCRR), MTA Department of Diversity and Civil Rights, in addition to the Contract requirements, a Corporate M/W/DBE Manager from one of the Lead Contractor partners will annually perform an internal audit of the MWBE/SDV program for compliance, as well as provide training to the Project staff.

3TC outreach will not stop after the award of the Contract. Our Community Outreach Team will continue to search for viable companies to help meet the goals after the work has begun. Maximizing the participation levels will allow for unforeseen issues that may arise during construction. Additional participation may be necessary as the work is completed, so the Community Outreach Team will be on the Project from start to completion.
3TC recognizes the importance of meeting the goals set forth in the Contract documents and will make every effort possible to meet or exceed them. Our Team has an excellent record on the previous projects performed and will put the same effort and determination into this endeavor in order to meet the goals.

5.3 SDVOB Plan

5.3.1) An interim SDVOB utilization plan identifying firms to be utilized as subcontractors or suppliers, as proteges or in other partnering and supporting roles on the Project.

The SDVOB Utilization Plan table has been inserted at the end of this section after the MBE/WBE Utilization Plan.

5.3.2) Provide a narrative description of the proposed plan for utilization of New York State-certified Service-Disabled Veteran-Owned Businesses in performance of the Work, including the Proposer's commitment, policies, organizational structures and planned practices for achieving the participation goal set forth in these Instructions.

3TC's will take all necessary and commercially reasonable steps to ensure that Service Disable Veteran-Owned Businesses (SDVOBs) have the maximum opportunity to participate in the performance of this Contract, utilizing good faith efforts to meet the approved overall SDVOB participation goals for this Project. The goals have been established by the Rail Road at six percent (6%) for SDVOB firms, of the Contract price. This is inclusive of both construction and professional services and will remain in effect throughout the life of the Contract.

3TC is committed to the participation of SDVOBs in subcontracting and supplier opportunities in accordance with the provisions of Article 17-B of the NY Executive Law and MTA Department of Diversity and Civil Rights, in addition to the Contract. As with the MWBE Plan, it is our intent to create a level playing field where SDVOBs can compete fairly and be awarded contracts to supply materials and equipment, provide consulting services or perform as subcontractors in the field.

It is proposed for 3TC to have the Project Manager, Project Accountant, Business Manager, Field Team and the MWBE/SDVOB-Outreach Program Manager work collaboratively to ensure that SDVOBs have the maximum practical opportunities.

1. **Project Manager** has overall management of MWDBE diversity efforts post-award. The Project Manager will supervise the activities of the MWBE/SDVOB-Outreach Program Manager and oversee the responsibilities of the Construction Team in monitoring SDVOB activities on the Project.

2. **MWBE/SDV Program Manager** is responsible for maintaining all Project level SDVOB participation and oversight documentation. The MWBE/SDVOB Program Manager is responsible for ensuring that mandatory reports to the Rail Road are properly filed and the documenting of the project's Good Faith Efforts is accurate; assisting in identifying prospective SDVs; monitoring 3TC's commercially useful functions; tracking prompt payment to SDV; and promoting outreach events throughout the duration of the Project.

3. **Project Accountant** is responsible for overseeing the processing of subcontractor payments. The Project Accountant will pursue all required MWBE accounting information is reported to the MWBE/SDVOB Program Manager in a timely manner.

4. **Business Manager** is tasked with identification of potential scopes of work and providing the MWBE/SDVOB Program Manager with executed subcontracts, modifications, sublets, and any correspondence, email, phone minutes, or other documentation regarding communications with SDVOB companies.

5. **Construction Team** will be designated by the Project Manager according to their respective roles on the Project (e.g. structures, earthworks, etc.). The Construction Team is responsible for assuring that SDVOBs are properly monitored by personal observation in performing their scopes of work to ensure proper scope execution.

3TC's approach to meet the required six percent (6%) SDVOB participation goals, includes a system of reporting and procedures in compliance with State, Agency and Contract documents. Our systems and procedures will document the methods for identifying, soliciting, recording, selecting and managing SDVOBs for contract and subcontract opportunities throughout the progression of the Project.

Please refer to Section 5.2.3) MWBE Plan to obtain 3TC's detailed tools and processes that will utilize throughout the Project to attain the SDVOB set goals.

MBE/WBE UTILIZATION PLAN FORM
(Form 15A.1)

CONTRACT NO. and TITLE LIRR CONTRACT #6240, LIRR Expansion Project TOTAL CONTRACT VALUE $

AMOUNT OF TOTAL CONTRACT PRICE THAT IS ATTRIBUTABLE TO WORK PERFORMED IN NEW YORK STATE $

INSTRUCTIONS: See Contract Documents for further information.

Name, Address, Telephone Number of MBE/WBE (including name of contact person Federal ID # or Social Security Number	Indicate if MBE or WBE	Description of Work, Products and/or Services to be provided	Agreed Dollar Amount of MBE/WBE Subcontract	MBE/WBE % of Work Performed in New York State	MBE/WBE Projected Start and Completion Date
Please see attachment 1	*Please see attachment 1*	*Please see attachment 1*	*Not to include according to RFP*	*Not to include according to RFP*	

If the Proposer/Bidder is a corporation, partnership, or joint venture, this form must be signed respectively, by the president of the corporation, a general partner, or the president/general partner of one of the joint ventures. If it is signed by anyone else, you must include appropriate proof (such as certified copy of the by-laws, partnership agreement or joint venture agreement), which confirms that the person signing this form is authorized to do so. By signing below, the Proposer/Bidder authorizes the Authority to verify all information provided on this form.

PROPOSER 3rd Track Constructors AUTHORIZED SIGNATURE: _____ TITLE: Jose Miguel Ibanez Authorized Representative

ADDRESS: 810 Seventh Avenue, 9th Floor, New York, NY 10019 TELEPHONE NUMBER: (212) 779-0900

FEDERAL IDENTIFICATION NUMBER: N/A DATE: July 17, 2017

MBE/WBE Utilization Plan - page 2

MBE/WBE UTILIZATION PLAN (Form 15A.1)
Attachment 1

Name - Address - Telephone Number - Contact Name - Federal ID# or SS#	MBE or WBE	Description of work, Products and /or Services to be provided	Agreed Dollar Amount of MBE/WBE	MWBE/MBE % of Work Performed in NYS	MBW/WBE Projected Start and Completion Date
M & J Engineering, PC 2003 Jerico Turmpike New Hyde Park, NY 11040 Maqsood Malik [redacted]	MBE	Independent Construction QC	Not to include according to the RFP	Not to include according to the RFP	
DeAngelo Rail Services, LLC 1944 North Port Crt. Grapevine, Tx 76051 Susan DeAngelo [redacted]	WBE	Independent Construction QC	Not to include according to the RFP	Not to include according to the RFP	
Epoch 5 Marketing, Inc. 755 New York Ave. Ste. 400 Huntington, NY 11743 Katherine Heaviside [redacted]	WBE	Community Outreach	Not to include according to the RFP	Not to include according to the RFP	
CJ2 Communications Strategies, LLC 12 Little Neck Rd. Suite 201 Centerport, NY 11721 Judith White [redacted]	WBE	Community Outreach	Not to include according to the RFP	Not to include according to the RFP	
Titanium Linx Consulting, Inc. Uniondale, NY Margo Cargill [redacted]	MBE/WBE (Pending) [redacted]	Community Outreach	Not to include according to the RFP	Not to include according to the RFP	
AmerCom Corp 1259 Rt. 46 East Building #1 Parsippany, NJ 07054 Ralph Rios, PE [redacted]	MBE	Geotechnical Design & Pedestrian Bridges	Not to include according to the RFP	Not to include according to the RFP	
AB Consulting Bharat Patel 34 Scandia Rd. Congers, NY 10920-1773 Bharat Patel [redacted]	MBE	Vertical Transportation	Not to include according to the RFP	Not to include according to the RFP	
AWA Lighting Designers, Inc. 61 Greenpoint Ave. Ste. 306 Brooklyn, NY 11222 Abhay Wadhwa [redacted]	MBE	Lighting Electrical	Not to include according to the RFP	Not to include according to the RFP	
Chrysalis Archaeological Consultants, Inc. 4110 Quentin Rd. Brooklyn, NY 11234 Alyssa Loorya [redacted]	WBE	Architectural/Archaeological Tasks	Not to include according to the RFP	Not to include according to the RFP	
CSA Group, Inc. 17 Battery Place Ste. 100 New York, NY 10004 George Rupp [redacted]	MBE	General Support	Not to include according to the RFP	Not to include according to the RFP	

MBE/WBE Utilization Plan - page 3

EnTech Engineering, PC 11 Broadway, 21st Fl New York, NY 10004 Soudabeh Bayat [redacted]	WBE	Environmental	Not to include according to the RFP	Not to include according to the RFP	
Environmental Planning & Management, Inc. 1983 Marcus Ave., Ste. 109 Lake Success, NY 11040 Anastasia Gogos [redacted]	WBE	Hazardous Materials (lead and asbestos abatement)	Not to include according to the RFP	Not to include according to the RFP	
Gayron De Bruin Land Surveying & Engineering PC 11 Union Ave. Bethpage, NY 11714 Christine Gayron [redacted]	WBE	Survey and ROW	Not to include according to the RFP	Not to include according to the RFP	
Munoz Engineering, PC 505 Eighth Ave. Ste. 2100 New York, NY 10018 Patricio Munoz [redacted]	MBE	Land Surveying and MPT	Not to include according to the RFP	Not to include according to the RFP	
PK Engineering, PC 149 Madison Ave, 10th fl New York, NY 10016 Peter Kim [redacted]	MBE	Structures	Not to include according to the RFP	Not to include according to the RFP	
Radin Consulting, Inc. 193 West Hobard Gap Rd. Livingston, NJ 07039 Chitra Radin [redacted]	MBE/WBE	Federal Compliance, Environmental Analysis & Public Outreach	Not to include according to the RFP	Not to include according to the RFP	
Vibranalysis, Inc. 79 Alexander Ave. 6th Fl. Bronx, NY 10454 Linda Socquet [redacted]	WBE	Noise and Vibration	Not to include according to the RFP	Not to include according to the RFP	
W. Allen Engineering, PLLC 2934 Hering Ave. Bronx, NY 10469 Wayne Lee Allen [redacted]	MBE	Lignting Distribution, MEP svcs for elevators, Radiant heat for platforms, Fire Alarm Design, Other MEP services.	Not to include according to the RFP	Not to include according to the RFP	
WXY Architecture 224 Centre St., 5th Fl New York, NY 10013 Claire Weisz [redacted]	WBE	Architecture	Not to include according to the RFP	Not to include according to the RFP	

5.3
SDVOB Plan

5.3 SDVOB Plan

5.3.1) An interim SDVOB utilization plan identifying firms to be utilized as subcontractors or suppliers, as proteges or in other partnering and supporting roles on the Project.

The SDVOB Utilization Plan table has been inserted at the end of this section after the MBE/WBE Utilization Plan.

5.3.2) Provide a narrative description of the proposed plan for utilization of New York State-certified Service-Disabled Veteran-Owned Businesses in performance of the Work, including the Proposer's commitment, policies, organizational structures and planned practices for achieving the participation goal set forth in these Instructions.

3TC's will take all necessary and commercially reasonable steps to ensure that Service Disable Veteran-Owned Businesses (SDVOBs) have the maximum opportunity to participate in the performance of this Contract, utilizing good faith efforts to meet the approved overall SDVOB participation goals for this Project. The goals have been established by the Rail Road at six percent (6%) for SDVOB firms, of the Contract price. This is inclusive of both construction and professional services and will remain in effect throughout the life of the Contract.

3TC is committed to the participation of SDVOBs in subcontracting and supplier opportunities in accordance with the provisions of Article 17-B of the NY Executive Law and MTA Department of Diversity and Civil Rights, in addition to the Contract. As with the MWBE Plan, it is our intent to create a level playing field where SDVOBs can compete fairly and be awarded contracts to supply materials and equipment, provide consulting services or perform as subcontractors in the field.

It is proposed for 3TC to have the Project Manager, Project Accountant, Business Manager, Field Team and the MWBE/SDVOB-Outreach Program Manager work collaboratively to ensure that SDVOBs have the maximum practical opportunities.

1. **Project Manager** has overall management of MWDBE diversity efforts post-award. The Project Manager will supervise the activities of the MWBE/SDVOB-Outreach Program Manager and oversee the responsibilities of the Construction Team in monitoring SDVOB activities on the Project.

2. **MWBE/SDV Program Manager** is responsible for maintaining all Project level SDVOB participation and oversight documentation. The MWBE/SDVOB Program Manager is responsible for ensuring that mandatory reports to the Rail Road are properly filed and the documenting of the project's Good Faith Efforts is accurate; assisting in identifying prospective SDVs; monitoring 3TC's commercially useful functions; tracking prompt payment to SDV; and promoting outreach events throughout the duration of the Project.

3. **Project Accountant** is responsible for overseeing the processing of subcontractor payments. The Project Accountant will pursue all required MWBE accounting information is reported to the MWBE/SDVOB Program Manager in a timely manner.

4. **Business Manager** is tasked with identification of potential scopes of work and providing the MWBE/SDVOB Program Manager with executed subcontracts, modifications, sublets, and any correspondence, email, phone minutes, or other documentation regarding communications with SDVOB companies.

5. **Construction Team** will be designated by the Project Manager according to their respective roles on the Project (e.g. structures, earthworks, etc.). The Construction Team is responsible for assuring that SDVOBs are properly monitored by personal observation in performing their scopes of work to ensure proper scope execution.

3TC's approach to meet the required six percent (6%) SDVOB participation goals, includes a system of reporting and procedures in compliance with State, Agency and Contract documents. Our systems and procedures will document the methods for identifying, soliciting, recording, selecting and managing SDVOBs for contract and subcontract opportunities throughout the progression of the Project.

Please refer to Section 5.2.3) MWBE Plan to obtain 3TC's detailed tools and processes that will utilize throughout the Project to attain the SDVOB set goals.

SDVOB Utilization Plan

SERVICE-DISABLED VETERAN-OWNED BUSINESS FORMS

SDVOB UTILIZATION PLAN

☒ Initial Plan ☐ Revised plan Contract/Solicitation #_____

INSTRUCTIONS: This Utilization Plan must contain a detailed description of the supplies and/or services to be provided by each NYS Certified Service-Disabled Veteran-Owned Business (SDVOB) under the contract. By submission of this Plan, the Bidder/Contractor commits to making good faith efforts in the utilization of SDVOB subcontractors and suppliers as required by the SDVOB goals contained in the Solicitation/Contract. Making false representations or providing information that shows a lack of good faith as part of, or in conjunction with, the submission of a Utilization Plan is prohibited by law and may result in penalties including, but not limited to, termination of a contract for cause, loss of eligibility to submit future bids, and/or withholding of payments. Firms that do not perform commercially useful functions may not be counted toward SDVOB utilization. Attach additional sheets if necessary.

BIDDER/CONTRACTOR INFORMATION		SDVOB Goals In Contract
Bidder/Contractor Name: 3rd Track Constructors	NYS Vendor ID: N/A	6 %
Bidder/Contractor Address (Street, City, State and Zip Code): 810 Seventh Avenue, 9th Floor, New York, NY 10019		
Bidder/Contractor Telephone Number: (212) 779-0900	Contract Work Location/Region: Long Island, NY	
Contract Description/Title: Design-Build Services for LIRR Expansion Project, LIRR Contract #6240		

CONTRACTOR INFORMATION			
Prepared by (Signature):	Name and Title of Preparer:	Telephone Number:	Date:
Email Address:			

If unable to meet the SDVOB goals set forth in the solicitation/contract, bidder/contractor must submit a request for waiver on the SDVOB Waiver Form.

SDVOB Subcontractor/Supplier Name:	DCS Infrastructure, LLC	
Please identify the person you contacted: Donald Stout, PE	Federal Identification No.:	Telephone No.: (631) 320-1706
Address: 3249 Rt. 112 Ste 1B, Medford, NY 11763	Email Address: Dstout@DCSLLC.info	
Detailed description of work to be provided by subcontractor/supplier: Engineering Design Support		
Dollar Value of subcontracts/supplies/services (When $ value cannot be estimated, provide the estimated % of contract work the SDVOB will perform): $_____ or _____%		

SDVOB Subcontractor/Supplier Name:	Hayduk Engineering, LLC	
Please identify the person you contacted: Stephen Hayduk, PE	Federal Identification No.:	Telephone No.: (631) 476-0600
Address: 1010 Rt. 112 Ste 310, Port Jefferson, NY 11776	Email Address: shayduk@haydukengineering.com	
Detailed Description of work to be provided by subcontractor/supplier: Engineering Design Support		
Dollar Value of subcontracts/supplies/services (When $ value cannot be estimated, provide the estimated % of contract work the SDVOB will perform): $_____ or _____%		

FOR LIRR USE ONLY				
LIRR Authorized Signature:		☐ Accepted	☐ Accepted as Noted	☐ Notice of Deficiency
NAME (Please Print):	SDVOB %/$ ____	____	Date Received:	Date Processed:
Comments:				

NYS CERTIFIED SDVOB SUBCONTRACTOR/SUPPLIER INFORMATION: The directory of New York State Certified SDVOBs can be viewed at: http://ogs.ny.gov/Core/docs/CertifiedNYS_SDVOB.pdf

Note: All listed Subcontractors/Suppliers will be contacted and verified by LIRR.

SDVOB Utilization Plan – SDVOB 100 (9/16)

SDVOB Utilization Plan - page 2

ADDITIONAL SHEET

Bidder/Contractor Name:		Contract/Solicitation #
SDVOB Subcontractor/Supplier Name:	W. Allen Engineering	
Please identify the person you contacted: William Lee Allen	Federal Identification No.:	Telephone No.: (917) 295-8275
Address: 2934 Hering Avenue, Bronx, NY 10469	Email Address: info@wallenengineering.com	
Detailed Description of work to be provided by subcontractor/supplier: Light Distribution, MEP Services, Radiant Heat, Fire Alarm Design		
Dollar Value of subcontracts/supplies/services (When $ value cannot be estimated, provide the estimated % of contract work the SDVOB will perform): $______ or ______%		
SDVOB Subcontractor/Supplier Name:		
Please identify the person you contacted:	Federal Identification No.:	Telephone No.:
Address:	Email Address:	
Detailed Description of work to be provided by subcontractor/supplier:		
Dollar Value of subcontracts/supplies/services (When $ value cannot be estimated, provide the estimated % of contract work the SDVOB will perform): $______ or ______%		
SDVOB Subcontractor/Supplier Name:		
Please identify the person you contacted:	Federal Identification No.:	Telephone No.:
Address:	Email Address:	
Detailed Description of work to be provided by subcontractor/supplier:		
Dollar Value of subcontracts/supplies/services (When $ value cannot be estimated, provide the estimated % of contract work the SDVOB will perform): $______ or ______%		
SDVOB Subcontractor/Supplier Name:		
Please identify the person you contacted:	Federal Identification No.:	Telephone No.:
Address:	Email Address:	
Detailed Description of work to be provided by subcontractor/supplier:		
Dollar Value of subcontracts/supplies/services (When $ value cannot be estimated, provide the estimated % of contract work the SDVOB will perform)): $______ or ______%		
SDVOB Subcontractor/Supplier Name:		
Please identify the person you contacted:	Federal Identification No.:	Telephone No.:
Address:	Email Address:	
Detailed Description of work to be provided by subcontractor/supplier:		
Dollar Value of subcontracts/supplies/services (When $ value cannot be estimated, provide the estimated % of contract work the SDVOB will perform): $______ or ______%		

SDVOB Utilization Form extra (9/16)

5.4 Employment Opportunity Policy Statement

5.4 Employment Opportunity Policy Statement

5.4.1) Submit Form MWDBE-4 (Schedule XXV to be provided) Employment Opportunity Policy Statement.

Provided later in this volume, in Volume 2 Technical Proposal, and in Volume 1: Legal/Administrative.

Schedule XXIV - Form MWDBE-21 Diversity Practices Questionnaire

Schedule XXIV
Form MWDBE-21 Diversity
Practices Questionnaire

SCHEDULE XXIV – FORM MWDBE-21 DIVERSITY PRACTICES QUESTIONNAIRE

Diversity Practices Questionnaire

I, Mario Serrano Villate, as Chief Operating Officer (title) of John P. Picone Inc. firm or company (hereafter referred to as the company), swear and/or affirm under penalty of perjury that the answers submitted to the following questions are complete and accurate to the best of my knowledge:

1. Does your company have a Chief Diversity Officer or other individual who is tasked with supplier diversity initiatives? Yes

If Yes, provide the name, title, description of duties assigned to the position and evidence of initiatives performed by this individual or individuals.

[redacted]

2. What percentage of your company's gross revenues (from your prior fiscal year) was paid to New York State certified minority and/or women-owned business enterprises as subcontractors, suppliers, joint-venturers, partners or other similar arrangement for the provision of goods or services to your company's clients or customers?

[redacted]

3. What percentage of your company's overhead (i.e. those expenditures that are not directly related to the provision of goods or services to your company's clients or customers) or non-contract-related expenses (from your prior fiscal year) was paid to New York State certified minority- and women-owned business enterprises as suppliers/contractors?[1]

[redacted]

[1] Do not include onsite project overhead.

4. Does your company provide technical training[2] to minority- and women-owned business enterprises? Yes or No

If Yes, provide a description of such training which should include, but not be limited to, the date the program was initiated, the names and the number of minority- and women-owned business enterprises participating in such training, the number of years such training has been offered and the number of hours per year for which such training occurs.

[redacted]

5. Is your company participating in a government approved minority- and women-owned business enterprises focused mentor protégé program?

If Yes, identify the governmental mentoring program in which your company participates and provide evidence demonstrating the extent of your company's commitment to the governmental mentoring program.

[redacted]

6. Does your company include specific quantitative goals for the utilization of minority- and women-owned business enterprises in its non-government procurements? Yes or No

If Yes, provide a description of such non-government procurements (including time period, goal, scope and dollar amount) and indicate the percentage of the goals that were attained.

[redacted]

[2] Technical training is the process of teaching employees how to more accurately and thoroughly perform the technical components of their jobs. Training can include technology applications, products, sales and service tactics, and more. Technical skills are job-specific as opposed to soft skills, which are transferable.

7. Does your company have a formal minority- and women-owned business enterprises supplier diversity program? Yes or No

If Yes, provide documentation of program activities and a copy of policy or program materials.

[redacted]

8. Does your company plan to enter into partnering or subcontracting agreements with New York State certified minority- and women-owned business enterprises if selected as the successful respondent? Yes or No

If Yes, complete the attached Utilization Plan

[redacted]

All information provided in connection with the questionnaire is subject to audit and any fraudulent statements are subject to criminal prosecution and debarment.

Signature of Owner/Official	
Printed Name of Signatory	Mario Serrano Villate
Title	Chief Operating Officer
Name of Business	John P. Picone Inc.
Address	31 Garden Lane
City, State, Zip	Lawrence, NY 11559

STATE OF New York)

COUNTY OF Nassau) ss:

On the 6th day of July, 2017, before me, the undersigned, a Notary Public in and for the State of New York, personally appeared Mario Serrano Villate, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to this certification and said person executed this instrument.

Maureen Tolfree
Notary Public

MAUREEN TOLFREE
NOTARY PUBLIC-STATE OF NEW YORK
No. 01TO6284406
Qualified in Nassau County
My Commission Expires June 17, 2021

SCHEDULE XXIV – FORM MWDBE-21 DIVERSITY PRACTICES QUESTIONNAIRE

Diversity Practices Questionnaire

I, Rafael de la Barreda, as Exec. Vice President (title) of Dragados USA, Inc. firm or company (hereafter referred to as the company), swear and/or affirm under penalty of perjury that the answers submitted to the following questions are complete and accurate to the best of my knowledge:

1. Does your company have a Chief Diversity Officer or other individual who is tasked with supplier diversity initiatives? Yes or No [redacted]

If Yes, provide the name, title, description of duties assigned to the position and evidence of initiatives performed by this individual or individuals.

[redacted]

2. What percentage of your company's gross revenues (from your prior fiscal year) was paid to New York State certified minority and/or women-owned business enterprises as subcontractors, suppliers, joint-venturers, partners or other similar arrangement for the provision of goods or services to your company's clients or customers? [redacted]

3. What percentage of your company's overhead (i.e. those expenditures that are not directly related to the provision of goods or services to your company's clients or customers) or non-contract-related expenses (from your prior fiscal year) was paid to New York State certified minority- and women-owned business enterprises as suppliers/contractors?[1] [redacted]

[1] Do not include onsite project overhead.

4. Does your company provide technical training[2] to minority- and women-owned business enterprises? Yes or No [redacted]

If Yes, provide a description of such training which should include, but not be limited to, the date the program was initiated, the names and the number of minority- and women-owned business enterprises participating in such training, the number of years such training has been offered and the number of hours per year for which such training occurs.

5. Is your company participating in a government approved minority- and women-owned business enterprises focused mentor protégé program? [redacted]

If Yes, identify the governmental mentoring program in which your company participates and provide evidence demonstrating the extent of your company's commitment to the governmental mentoring program.

[redacted]

[2] Technical training is the process of teaching employees how to more accurately and thoroughly perform the technical components of their jobs. Training can include technology applications, products, sales and service tactics, and more. Technical skills are job-specific as opposed to soft skills, which are transferable.

[redacted]

6. Does your company include specific quantitative goals for the utilization of minority- and women-owned business enterprises in its non-government procurements? Yes or No – [redacted]

If Yes, provide a description of such non-government procurements (including time period, goal, scope and dollar amount) and indicate the percentage of the goals that were attained.

7. Does your company have a formal minority- and women-owned business enterprises supplier diversity program? Yes or No - [redacted]

If Yes, provide documentation of program activities and a copy of policy or program materials.

8. Does your company plan to enter into partnering or subcontracting agreements with New York State certified minority- and women-owned business enterprises if selected as the successful respondent? Yes or No - [redacted]

If Yes, complete the attached Utilization Plan

All information provided in connection with the questionnaire is subject to audit and any fraudulent statements are subject to criminal prosecution and debarment.

Signature of Owner/Official	
Printed Name of Signatory	Rafael de la Barreda
Title	Executive Vice President
Name of Business	Dragados USA, Inc.
Address	810 Seventh Ave. 9th Floor
City, State, Zip	New York, NY 10019

STATE OF New York)

COUNTY OF New York) ss:

On the 17th day of July, 2017, before me, the undersigned, a Notary Public in and for the State of New York, personally appeared Rafael de la Barreda, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to this certification and said person executed this instrument.

Notary Public

ALISON G PORT
Notary Public - State of New York
NO. 01PO6286652
Qualified in New York County
My Commission Expires Jul 29, 2017

SCHEDULE XXIV – FORM MWDBE-21 DIVERSITY PRACTICES QUESTIONNAIRE

Diversity Practices Questionnaire

I, Chris Larsen, as Principal (title) of Halmar International LLC firm or company (hereafter referred to as the company), swear and/or affirm under penalty of perjury that the answers submitted to the following questions are complete and accurate to the best of my knowledge:

1. Does your company have a Chief Diversity Officer or other individual who is tasked with supplier diversity initiatives? [redacted]

If Yes, provide the name, title, description of duties assigned to the position and evidence of initiatives performed by this individual or individuals.

Name: Dennis Capolino
Title: Vice President

Description of Duties:
Mr. Capolino is involved in all of the company's projects from pre-construction to final completion with Direct P&L Responsibility. He supervises estimates, budgets and bid preparation, as well as the procurement and closeout of the vendors and subcontractors on all projects. He is also responsible for the M/W/DBE solicitations, negotiations, good faith efforts, participation plans, and compliance reviews. Mr. Capolino is responsible for the pre-bid and post-bid selection of vendors and subcontractors for every project. He negotiates and signs all major subcontracts, purchase orders, service agreements, hauling agreements, change orders, and contract amendments.

Evidence of Initiatives:
M/WBE Conferences:

- MTA Sandy Recovery and Resiliency Conference, April 29, 2016
  Schomburg Center for Research in Black Culture, New York, NY
- GCA M/WBE Networking Event, September 15, 2016
  Club 101, New York, NY

Please see attachment for:

- M/WBE Ads Sample
- Letters Sent to M/WBE Organizations Sample
- Searches on NYS M/WBE Website Sample
- Invitation Transmittal Log Sample
- Call Log Sample

2. What percentage of your company's gross revenues (from your prior fiscal year) was paid to New York State certified minority and/or women-owned business enterprises as subcontractors, suppliers, joint-venturers, partners or other similar arrangement for the provision of goods or services to your company's clients or customers? 18%

3. What percentage of your company's overhead (i.e. those expenditures that are not directly related to the provision of goods or services to your company's clients or customers) or non-contract-related

expenses (from your prior fiscal year) was paid to New York State certified minority- and women-owned business enterprises as suppliers/contractors?[1] [redacted]

4. Does your company provide technical training[2] to minority- and women-owned business enterprises? [redacted]

If Yes, provide a description of such training which should include, but not be limited to, the date the program was initiated, the names and the number of minority- and women-owned business enterprises participating in such training, the number of years such training has been offered and the number of hours per year for which such training occurs. [redacted]

5. Is your company participating in a government approved minority- and women-owned business enterprises focused mentor protégé program? [redacted]

If Yes, identify the governmental mentoring program in which your company participates and provide evidence demonstrating the extent of your company's commitment to the governmental mentoring program.

6. Does your company include specific quantitative goals for the utilization of minority- and women-owned business enterprises in its non-government procurements? [redacted]

If Yes, provide a description of such non-government procurements (including time period, goal, scope and dollar amount) and indicate the percentage of the goals that were attained.

Project Title: One Vanderbilt Off-Site Improvements Phase I
Time Period: August 2016 – June 30, 2017
Goal: 0%
Scope: Improvements for pedestrian access in the 42nd Street Subway Station
Dollar Amount: [redacted]
Percentage of Goals Attained: [redacted]

7. Does your company have a formal minority- and women-owned business enterprises supplier diversity program? [redacted]

If Yes, provide documentation of program activities and a copy of policy or program materials. [redacted]

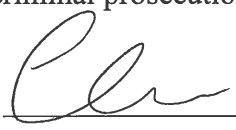
8. Does your company plan to enter into partnering or subcontracting agreements with New York State certified minority- and women-owned business enterprises if selected as the successful respondent? [redacted]

If Yes, complete the attached Utilization Plan

[1] Do not include onsite project overhead.

[2] Technical training is the process of teaching employees how to more accurately and thoroughly perform the technical components of their jobs. Training can include technology applications, products, sales and service tactics, and more. Technical skills are job-specific as opposed to soft skills, which are transferable.

All information provided in connection with the questionnaire is subject to audit and any fraudulent statements are subject to criminal prosecution and debarment.

Signature of Owner/Official	
Printed Name of Signatory	Chris Larsen
Title	Principal
Name of Business	Halmar International LLC
Address	421 East Route 59
City, State, Zip	Nanuet, NY 10954

STATE OF New York)

COUNTY OF Rockland) ss:

On the 13th day of July, 2017, before me, the undersigned, a Notary Public in and for the State of New York, personally appeared Chris Larsen, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to this certification and said person executed this instrument.

Sharon L Sabo
Notary Public

SHARON L SABO
Notary Public, State of New York
Registration #01SA6342528
Qualified In Dutchess County
Commission Expires May 23, 2020

SCHEDULE XXIV – FORM MWDBE-21 DIVERSITY PRACTICES QUESTIONNAIRE

Diversity Practices Questionnaire

I, Charles J. Montalbano, as President (title) of CCA Civil, Inc. firm or company (hereafter referred to as the company), swear and/or affirm under penalty of perjury that the answers submitted to the following questions are complete and accurate to the best of my knowledge:

1. Does your company have a Chief Diversity Officer or other individual who is tasked with supplier diversity initiatives? [redacted]

If Yes, provide the name, title, description of duties assigned to the position and evidence of initiatives performed by this individual or individuals.

2. What percentage of your company's gross revenues (from your prior fiscal year) was paid to New York State certified minority and/or women-owned business enterprises as subcontractors, suppliers, joint-venturers, partners or other similar arrangement for the provision of goods or services to your company's clients or customers? [redacted]

3. What percentage of your company's overhead (i.e. those expenditures that are not directly related to the provision of goods or services to your company's clients or customers) or non-contract-related expenses (from your prior fiscal year) was paid to New York State certified minority- and women-owned business enterprises as suppliers/contractors?[1] [redacted]

4. Does your company provide technical training[2] to minority- and women-owned business enterprises? [redacted]

If Yes, provide a description of such training which should include, but not be limited to, the date the program was initiated, the names and the number of minority- and women-owned business enterprises participating in such training, the number of years such training has been offered and the number of hours per year for which such training occurs.

5. Is your company participating in a government approved minority- and women-owned business enterprises focused mentor protégé program? [redacted]

If Yes, identify the governmental mentoring program in which your company participates and provide evidence demonstrating the extent of your company's commitment to the governmental mentoring program.

6. Does your company include specific quantitative goals for the utilization of minority- and women-owned business enterprises in its non-government procurements? [redacted]

If Yes, provide a description of such non-government procurements (including time period, goal, scope and dollar amount) and indicate the percentage of the goals that were attained.

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[1] Do not include onsite project overhead.

[2] Technical training is the process of teaching employees how to more accurately and thoroughly perform the technical components of their jobs. Training can include technology applications, products, sales and service tactics, and more. Technical skills are job-specific as opposed to soft skills, which are transferable.

7. Does your company have a formal minority- and women-owned business enterprises supplier diversity program? [redacted]

If Yes, provide documentation of program activities and a copy of policy or program materials.

8. Does your company plan to enter into partnering or subcontracting agreements with New York State certified minority- and women-owned business enterprises if selected as the successful respondent? [redacted]

If Yes, complete the attached Utilization Plan

All information provided in connection with the questionnaire is subject to audit and any fraudulent statements are subject to criminal prosecution and debarment.

Signature of Owner/Official	
Printed Name of Signatory	Charles J. Montalbano
Title	President
Name of Business	CCA Civil, Inc.
Address	445 South Street, Ste. 310
City, State, Zip	Morristown, NJ 07960

STATE OF New Jersey)

COUNTY OF Morris) ss:

On the 13th day of July, 2017, before me, the undersigned, a Notary Public in and for the State of NJ, personally appeared Charles J. Montalbano, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to this certification and said person executed this instrument.

Anamaria Pichardo
Notary Public

ANAMARIA PICHARDO
NOTARY PUBLIC OF NEW JERSEY
Comm. # 50053303
My Commission Expires 1/23/2022

SCHEDULE XXIV – FORM MWDBE-21 DIVERSITY PRACTICES QUESTIONNAIRE

Diversity Practices Questionnaire

I, Stuart E. Lerner, as Sr. Vice President (title) of Stantec Consulting Services Inc firm or company (hereafter referred to as the company), swear and/or affirm under penalty of perjury that the answers submitted to the following questions are complete and accurate to the best of my knowledge:

1. Does your company have a Chief Diversity Officer or other individual who is tasked with supplier diversity initiatives? [redacted]

If Yes, provide the name, title, description of duties assigned to the position and evidence of initiatives performed by this individual or individuals.

Please see attached

2. What percentage of your company's gross revenues (from your prior fiscal year) was paid to New York State certified minority and/or women-owned business enterprises as subcontractors, suppliers, joint-venturers, partners or other similar arrangement for the provision of goods or services to your company's clients or customers? [redacted]

3. What percentage of your company's overhead (i.e. those expenditures that are not directly related to the provision of goods or services to your company's clients or customers) or non-contract-related expenses (from your prior fiscal year) was paid to New York State certified minority- and women-owned business enterprises as suppliers/contractors?[3] [redacted]

4. Does your company provide technical training[4] to minority- and women-owned business enterprises? [redacted]

If Yes, provide a description of such training which should include, but not be limited to, the date the program was initiated, the names and the number of minority- and women-owned business enterprises participating in such training, the number of years such training has been offered and the number of hours per year for which such training occurs.

5. Is your company participating in a government approved minority- and women-owned business enterprises focused mentor protégé program? [redacted]

If Yes, identify the governmental mentoring program in which your company participates and provide evidence demonstrating the extent of your company's commitment to the governmental mentoring program.

6. Does your company include specific quantitative goals for the utilization of minority- and women-owned business enterprises in its non-government procurements? [redacted]

If Yes, provide a description of such non-government procurements (including time period, goal, scope and dollar amount) and indicate the percentage of the goals that were attained.

[3] Do not include onsite project overhead.

[4] Technical training is the process of teaching employees how to more accurately and thoroughly perform the technical components of their jobs. Training can include technology applications, products, sales and service tactics, and more. Technical skills are job-specific as opposed to soft skills, which are transferable.

7. Does your company have a formal minority- and women-owned business enterprises supplier diversity program? [redacted]

If Yes, provide documentation of program activities and a copy of policy or program materials.

Please see attached

8. Does your company plan to enter into partnering or subcontracting agreements with New York State certified minority- and women-owned business enterprises if selected as the successful respondent? [redacted]

If Yes, complete the attached Utilization Plan

See attached

All information provided in connection with the questionnaire is subject to audit and any fraudulent statements are subject to criminal prosecution and debarment.

Signature of Owner/Official _____

Printed Name of Signatory Stuart E. Lerner, PE, ENV SP

Title Senior Vice President

Name of Business Stantec Consulting Services Inc.

Address 475 Fifth Avenue, 12th Floor

City, State, Zip New York, New York, 10017

STATE OF New York)

COUNTY OF New York) ss:

On the 13th day of July, 2017, before me, the undersigned, a Notary Public in and for the State of New York, personally appeared Stuart E. Lerner, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to this certification and said person executed this instrument.

Ahirini Deb. 07.10.201

Notary Public

AHIRINI DEB
Notary Public, State of New York
No. 01DE6344540
Qualified in Queens County
Commission Expires 07/05/2020

Stantec

Supplier Diversity Program Overview

In response to the U.S. Federal Government and commercial clients' Small and Disadvantaged Business Participation goals, Stantec has implemented a comprehensive Supplier Diversity Program. Our program consists of a small/diverse subcontractor utilization policy, internal evaluation, reporting and benchmarking, online vendor profile registration, development and implementation of strategic teaming partnerships, and ongoing training for Staff and Management. Stantec believes that small businesses are an economic engine of growth and can help us support our clients' needs. Stantec's policy is to include subcontracting opportunities, when practical, for our small and diverse business partners for meaningful roles on independent tasks that help build their technical capacity and enhance their prospects for growth.

Stantec selects sub consultants based on qualifications, capability, safety performance and capacity, and proximity to the project location. We work with vendors of all sizes but encourage small business participation to meet our client's goals.

Registration and Certification

Stantec has implemented a self-reporting supplier profile inventory consisting of the following elements:

- A supplier portal to enable subconsultants and suppliers to download a business information and socioeconomic certification form which is submitted to a dedicated email account – supplierdiversity@stantec.com .
- Registration instructions are sent to all new subconsultants and suppliers; non-responders are followed-up on after 30 days.
- Subcontractors are requested to update their profile annually, and when their status changes. The registration process requires them to self-certify their disadvantaged classification and provide confirmation of other information contained in their profile. Stantec does not currently conduct supplier performance evaluations associated with the Supplier Registration program.
- SDB teaming partners on specific federal proposals are required to provide documentation of their status and register on our central vendor database.

Compliance Monitoring and Reporting

- Stantec maintains reporting systems that provide for contract-specific subcontractor utilization as well as company-wide utilization for both direct and indirect transactions by socioeconomic classification.
- Routine analysis of contract/client specific SDB compliance and reporting requirements.

Our Supplier Diversity group has formal systems to identify, track, report, and recognize small and disadvantaged businesses. Stantec subcontractors range from small local businesses, to large regional or national suppliers.

Stantec commits to develop and implement a Supplier Diversity Program consistent with client requirements, In addition, Stantec aggressively looks for opportunities to engage diverse business partners on each and every project it is awarded.

Personnel

- **Jim Schaefer, Small & Disadvantaged Program Manager, Federal Services**
  Strategic teaming partnerships, training, program certifications and overall program questions or concerns
  [redacted]@stantec.com
- **Cathy Finnie, Federal Compliance Lead-CCRT**
  Source lists, supplier registrations, contract reporting assistance, and benchmarking
  [redacted]@stantec.com
- **Michelle Bunyon, Administrator**
  Supplier registration and administrative support
  [redacted]@stantec.com

MBE/WBE UTILIZATION PLAN FORM
(Form 15A.1)

CONTRACT NO. and TITLE LIRR Contract #6240, Design-Build Services for LIRR Expansion Project from Floral Park to Hicksville

TOTAL CONTRACT VALUE $ approximately $2B

AMOUNT OF TOTAL CONTRACT PRICE THAT IS ATTRIBUTABLE TO WORK PERFORMED IN NEW YORK STATE $ 100%

INSTRUCTIONS: See Contract Documents for further information.

Name, Address, Telephone Number of MBE/WBE (including name of contact person Federal ID # or Social Security Number	Indicate if MBE or WBE	Description of Work, Products and/or Services to be provided	Agreed Dollar Amount of MBE/WBE Subcontract	MBE/WBE % of Work Performed in New York State	MBE/WBE Projected Start and Completion Date
Please see attached					

If the Proposer/Bidder is a corporation, partnership, or joint venture, this form must be signed respectively, by the president of the corporation, a general partner, or the president/general partner of one of the joint ventures. If it is signed by anyone else, you must include appropriate proof (such as certified copy of the by-laws, partnership agreement or joint venture agreement), which confirms that the person signing this form is authorized to do so. By signing below, the Proposer/Bidder authorizes the Authority to verify all information provided on this form.

PROPOSER Stantec Consulting Services Inc. AUTHORIZED SIGNATURE: [signature] TITLE: Senior Vice President

ADDRESS: 475 Fifth Avenue, 12th Floot, New York, New York 10017 TELEPHONE NUMBER: (212) 366-5600

FEDERAL IDENTIFICATION NUMBER: 11-2167170 DATE: July 13, 2017

Schedule XXV - Form MWDBE-4 Employment Opportunity Policy Statement

SCHEDULE XXV – FORM MWDBE-4 EMPLOYMENT OPPORTUNITY POLICY STATEMENT

FORM A

MINORITY AND WOMEN-OWNED BUSINESS ENTERPRISES – EQUAL EMPLOYMENT OPPORTUNITY POLICY STATEMENT

M/WBE AND EEO POLICY STATEMENT

I, 3rd Track Constructors, the (awardee/Consultant) awardee agree to adopt the following policies with respect to the project being developed or services rendered at LIRR Contract #6240 Design-Build Services fro LIRR Expansion Project

M/WBE This organization will and will cause its Consultants and subcontractors to take good faith actions to achieve the M/WBE contract participations goals set by the State for that area in which the State-funded project is located, by taking the following steps:

(1) Actively and affirmatively solicit bids for contracts and subcontracts from qualified State certified MBEs or WBEs, including solicitations to M/WBE Consultant associations.
(2) Request a list of State-certified M/WBEs from AGENCY and solicit bids from them directly.
(3) Ensure that plans, specifications, request for proposals and other documents used to secure bids will be made available in sufficient time for review by prospective M/WBEs.
(4) Where feasible, divide the work into smaller portions to enhanced participations by M/WBEs and encourage the formation of joint venture and other partnerships among M/WBE Consultants to enhance their participation.
(5) Document and maintain records of bid solicitation, including those to M/WBEs and the results thereof. The Consultant will also maintain records of actions that its subcontractors have taken toward meeting M/WBE contract participation goals.
(6) Ensure that payments to M/WBEs are made on a timely basis so that undue financial hardship is avoided, and that bonding and other credit requirements are waived or appropriate alternatives developed to encourage M/WBE participation, if feasible.

EEO (a) This organization will not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability or marital status, will undertake or continue existing programs of affirmative action to ensure that minority group members are afforded equal employment opportunities without discrimination, and shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force on state contracts.

(b) This organization shall state in all solicitation or advertisements for employees that in the performance of the State contract all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex disability or marital status.

(c) At the request of the contracting agency, this organization shall request each employment agency, labor union, or authorized representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of this organization's obligations herein.

(d) The Consultant shall comply with the provisions of the Human Rights Law, all other State and Federal statutory and constitutional non-discrimination provisions. The Consultant and subcontractors shall not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.

(e) This organization will include the provisions of sections (a) through (d) of this agreement in every subcontract in such a manner that the requirements of the subdivisions will be binding upon each subcontractor as to work in connection with the State contract

Agreed to this 13 day of July, 2017
By _____
Print: Jose Miguel Ibanez Title: Authorized Representative

Kylie Baierlein is designated as the Minority Business Enterprise Liaison responsible for
(Name of Designated Liaison)
administering the Minority and Women-Owned Business Enterprises- Equal Employment Opportunity (M/WBE-EEO) program.

M/WBE Contract Goals

_____30% Minority and Women's Business Enterprise Participation
_____% Minority Business Enterprise Participation
_____% Women's Business Enterprise Participation

SCHEDULE XXV – FORM MWDBE-4 EMPLOYMENT OPPORTUNITY POLICY STATEMENT

FORM A

MINORITY AND WOMEN-OWNED BUSINESS ENTERPRISES – EQUAL EMPLOYMENT OPPORTUNITY POLICY STATEMENT

M/WBE AND EEO POLICY STATEMENT

I, Stuart E, Lerner, the (awardee/Consultant) Stantec Consulting Services, Inc. agree to adopt the following policies with respect to the project being developed or services rendered at Long Island Rail Road

M/WBE This organization will and will cause its Consultants and subcontractors to take good faith actions to achieve the M/WBE contract participations goals set by the State for that area in which the State-funded project is located, by taking the following steps:

(1) Actively and affirmatively solicit bids for contracts and subcontracts from qualified State certified MBEs or WBEs, including solicitations to M/WBE Consultant associations.
(2) Request a list of State-certified M/WBEs from AGENCY and solicit bids from them directly.
(3) Ensure that plans, specifications, request for proposals and other documents used to secure bids will be made available in sufficient time for review by prospective M/WBEs.
(4) Where feasible, divide the work into smaller portions to enhanced participations by M/WBEs and encourage the formation of joint venture and other partnerships among M/WBE Consultants to enhance their participation.
(5) Document and maintain records of bid solicitation, including those to M/WBEs and the results thereof. The Consultant will also maintain records of actions that its subcontractors have taken toward meeting M/WBE contract participation goals.
(6) Ensure that payments to M/WBEs are made on a timely basis so that undue financial hardship is avoided, and that bonding and other credit requirements are waived or appropriate alternatives developed to encourage M/WBE participation, if feasible.

EEO (a) This organization will not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability or marital status, will undertake or continue existing programs of affirmative action to ensure that minority group members are afforded equal employment opportunities without discrimination, and shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force on state contracts.

(b) This organization shall state in all solicitation or advertisements for employees that in the performance of the State contract all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex disability or marital status.

(c) At the request of the contracting agency, this organization shall request each employment agency, labor union, or authorized representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of this organization's obligations herein.

(d) The Consultant shall comply with the provisions of the Human Rights Law, all other State and Federal statutory and constitutional non-discrimination provisions. The Consultant and subcontractors shall not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.

(e) This organization will include the provisions of sections (a) through (d) of this agreement in every subcontract in such a manner that the requirements of the subdivisions will be binding upon each subcontractor as to work in connection with the State contract

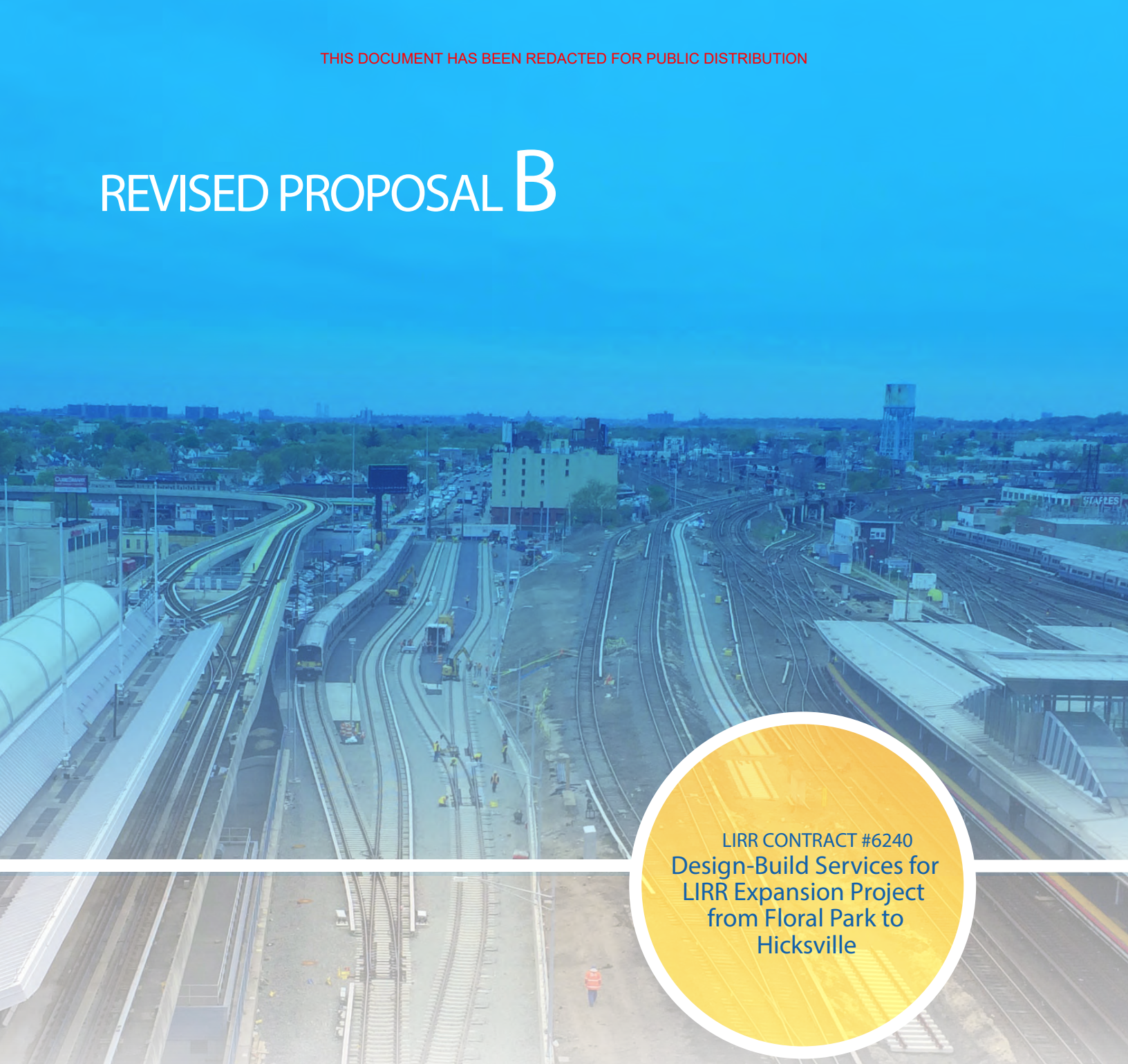
Agreed to this 13th day of July, 2017
By _____
Print: Stuart E. Lerner, PE, ENV SP Title: Senior Vice President

Carla Artis is designated as the Minority Business Enterprise Liaison responsible for
(Name of Designated Liaison)
administering the Minority and Women-Owned Business Enterprises- Equal Employment Opportunity (M/WBE-EEO) program.

M/WBE Contract Goals

____ % Minority and Women's Business Enterprise Participation
15 % Minority Business Enterprise Participation
15 % Women's Business Enterprise Participation

REVISED PROPOSAL B

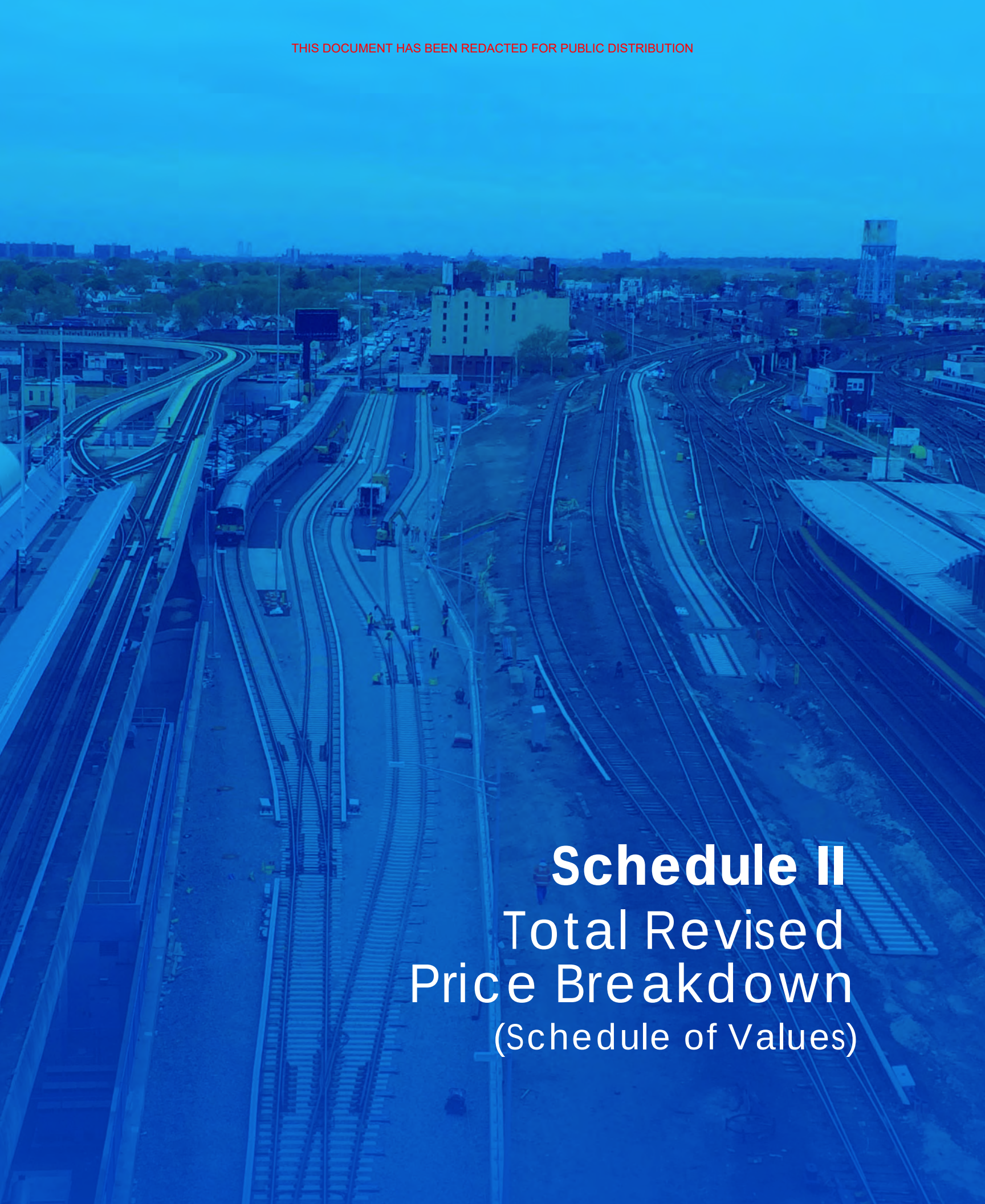


LIRR CONTRACT #6240

Design-Build Services for LIRR Expansion Project from Floral Park to Hicksville

Long Island Rail Road

3rd TRACK CONSTRUCTORS
Picone | Dragados USA | CCA Civil | Halmar
In association with Stantec



Schedule II
Total Revised Price Breakdown
(Schedule of Values)

Schedule III
Steel Components

SCHEDULE III – STEEL COMPONENTS

Pursuant to the provisions of Section 2603-a of the New York Public Authorities Law relating to domestic and foreign steel, the Proposer shall state in the space provided below, that part of the Proposal, if any, which represents the cost of domestic steel components and that part of the Proposal, if any, which represents the cost of foreign steel components.

Cost of Domestic Steel Components:

100% complete
(price in numbers)

3TC will use One Percent domestic steel for the Base Work of the Project
_____ complete
(price in words)

Cost of Foreign Steel Components:

_____ complete
(price in numbers)

_____ complete
(price in words)

If the Proposer fails to provide the pricing data required above, the Railroad will assume that the Proposal is based on the use of domestic steel products. IN SUCH CASE, IF SUCH PROPOSER IS AWARDED THE CONTRACT, IT WILL BE REQUIRED TO FURNISH DOMESTIC STEEL PRODUCTS AT THE PRICE PROPOSED.

Date October 11, 2017

Signature _____

Title Jose Miguel Ibanez, Authorized Representative of the Joint Venture

Company Name 3rd Track Constructors

Note: The Proposer shall complete and submit a separate Schedule III for each of the Base Contract Work, the Parking Structure Option Work, and the Completion Option Work.

SCHEDULE III – STEEL COMPONENTS

Pursuant to the provisions of Section 2603-a of the New York Public Authorities Law relating to domestic and foreign steel, the Proposer shall state in the space provided below, that part of the Proposal, if any, which represents the cost of domestic steel components and that part of the Proposal, if any, which represents the cost of foreign steel components.

Cost of Domestic Steel Components:

100% complete
(price in numbers)

3TC will use One Percent domestic steel for the Completion Option Work of the Project

_____ complete
(price in words)

Cost of Foreign Steel Components:

_____ complete
(price in numbers)

_____ complete
(price in words)

If the Proposer fails to provide the pricing data required above, the Railroad will assume that the Proposal is based on the use of domestic steel products. IN SUCH CASE, IF SUCH PROPOSER IS AWARDED THE CONTRACT, IT WILL BE REQUIRED TO FURNISH DOMESTIC STEEL PRODUCTS AT THE PRICE PROPOSED.

Date October 11, 2017

Signature _____

Title Jose Miguel Ibanez, Authorized Representative of the Joint Venture

Company Name 3rd Track Constructors

Note: The Proposer shall complete and submit a separate Schedule III for each of the Base Contract Work, the Parking Structure Option Work, and the Completion Option Work.

SCHEDULE III – STEEL COMPONENTS

Pursuant to the provisions of Section 2603-a of the New York Public Authorities Law relating to domestic and foreign steel, the Proposer shall state in the space provided below, that part of the Proposal, if any, which represents the cost of domestic steel components and that part of the Proposal, if any, which represents the cost of foreign steel components.

Cost of Domestic Steel Components:

100% complete
(price in numbers)

3TC will use One Percent domestic steel for all of the Parking Structure Option Work of the Project
_____ complete
(price in words)

Cost of Foreign Steel Components:

_____ complete
(price in numbers)

_____ complete
(price in words)

If the Proposer fails to provide the pricing data required above, the Railroad will assume that the Proposal is based on the use of domestic steel products. IN SUCH CASE, IF SUCH PROPOSER IS AWARDED THE CONTRACT, IT WILL BE REQUIRED TO FURNISH DOMESTIC STEEL PRODUCTS AT THE PRICE PROPOSED.

Date October 11, 2017

Signature _____

Title Jose Miguel Ibanez, Authorized Representative of the Joint Venture

Company Name 3rd Track Constructors

Note: The Proposer shall complete and submit a separate Schedule III for each of the Base Contract Work, the Parking Structure Option Work, and the Completion Option Work.