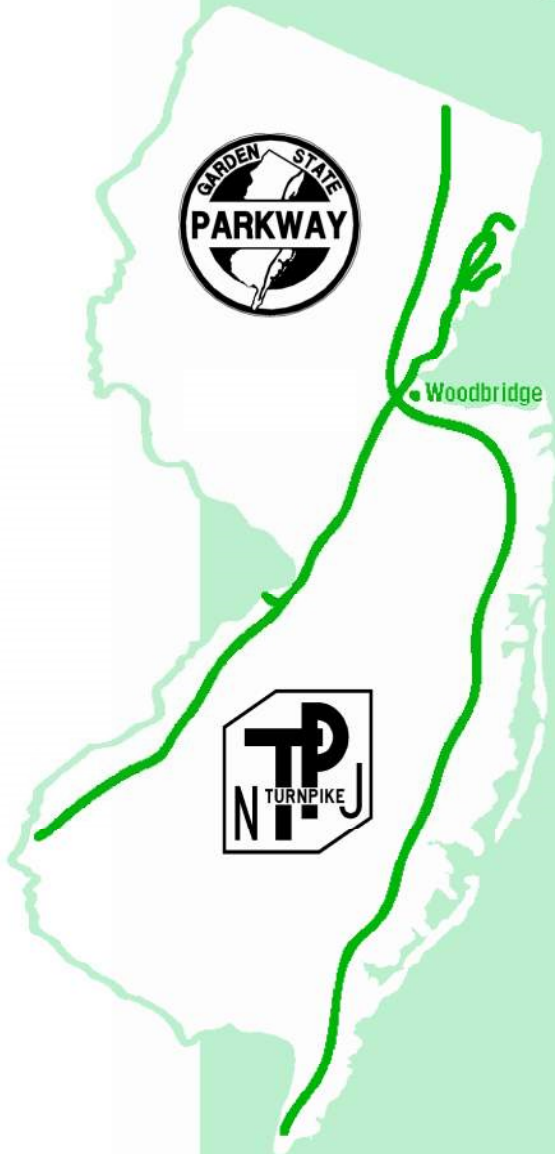


**NEW JERSEY TURNPIKE AUTHORITY
GARDEN STATE PARKWAY
NEW JERSEY TURNPIKE**



**BRIDGE INSPECTION
PROGRAM**

**MANUAL FOR
RETAINING WALL
AND NOISE BARRIER
INSPECTION**

**VERSION 2.0
JULY 2023**

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SUMMARY OF VERSION 2.0 REVISIONS (JULY 2023)

The Manual for Retaining Wall and Noise Barrier Inspection, Version 1.0, March 2017 has been updated to Version 2.0, July 2023. The major changes are as follows:

- Updated the entire format of the manual to be consistent with other recently created Authority manuals. Updates include the addition of the Purpose, Roles and Responsibilities, Inspection Planning and Preparation, MPT Requirements, Retaining Wall and Noise Barrier Inspection Procedures, Element Level Inspection, Quality Control and Quality Assurance, Reporting of Emergency Deficiencies, Sample Routine, Damage and Interim Report, Retaining Wall and Noise Barrier Inventory sections and Typical Retaining Wall and Noise Barrier Sketches.
- The Preface was removed from the manual, and information previously in that section was relocated to a new report section (Purpose), to be consistent with other Authority manuals.
- The Introduction section was removed.
- Updated Types of Retaining Wall and Noise Barrier section to include additional types of retaining wall and noise barriers.
- Updated the structure inventory based on AWI query as per 07.17.2023.
- Included a table to list the number of retaining walls and noise barriers, distinguishing between standalone and extensions from a bridge in Section Purpose.
- Expanded on the inventory criteria for the retaining wall in Section 4.
- Updated Section 7 to include the latest requirements for reviewing the TCC presentation slides and signing of the acknowledgement form.
- Expanded on example of Category A1 defects and deficiencies requiring more frequent monitoring (Category E) in Section 9.

Please review this entire manual for additional revisions not listed above but included as part of the Version 2.0 revisions.

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1. PURPOSE

The purpose of the New Jersey Turnpike Authority’s (Authority) Bridge Inspection Program is to inventory and document the physical characteristics, conditions and emergency/priority findings of all Authority owned structures including bridges, culverts, sign structures, retaining walls, noise barriers, high mast light poles (HMLP), and antenna towers. The data and information collected in the field during retaining wall and noise barrier inspections is utilized for the purpose of managing, maintaining, repairing, replacing, and monitoring the Authority’s retaining wall and noise barrier inventory.

Current Structures Included in the Authority’s Bridge Inspection Program		
New Jersey Turnpike Roadway		
Type	Standalone	Extension From Structure
Retaining Wall	92	262
Courtesy Retaining Wall	0	0
Noise Barrier	95	53
Courtesy Noise Barrier	1	0
<u>Wall Inspection Total</u>	503	
Garden State Parkway Roadway		
Type	Standalone	Extension From Structure
Retaining Wall	46	136*
Courtesy Retaining Wall	2	0
Noise Barrier	9	1
Courtesy Noise Barrier	0	0
<u>Wall Inspection Total</u>	194	

* Structure Nos. MP 128.0B GY NE and MP 128.0B GY NW are currently being constructed under Contract No. P100.579

This Manual for Retaining Wall and Noise Barrier Inspection provides guidance for performing structural condition inspections and documenting the Authority’s inventory of retaining walls and noise barriers. This manual provides general information and the objectives of the retaining wall and noise barrier inspection program as well as standard definitions of wall types, structure limits, non-qualified walls, naming conventions, types of inspection, MPT requirements, quality control and quality assurance, sample reports and current retaining wall and noise barrier inventories. This manual also details the procedure to properly document the inventory and inspection data utilizing the Authority’s standard inspection and report forms in Bentley’s AssetWise Inspection (AWI) database, supplemented by field notes and photographs, as required. This manual does not address safety and work zone control requirements which are specified in the Authority’s Manual for Traffic Control in Work Zones under and Standard TP Drawings (<https://www.njta.com/doing->

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[business/professional-services/publications/manuals/traffic-control](#)). Authority safety and work zone traffic control standards must be applied for all fieldwork which in turn must be performed by qualified and experienced engineering personnel and staff under an approved traffic permit and through the Authority's Lane Closing Application web-based program.

2. ROLES AND RESPONSIBILITIES

Refer to Section 4 of the Authority's Bridge Inspection Program Quality Management Plan (latest version) for specific roles and responsibilities of the Authority, the Bridge Inspection Program Technical Manager, and the Inspection Consultant, as they pertain to the inspection of retaining wall and noise barrier structures. Refer to Section 3 of this manual (Definitions) for the specific definitions, roles, and responsibilities of the Team Leader (TL) and Assistant Team Leader (ATL) performing inspection of the Authority's retaining wall and noise barrier structures.

3. DEFINITIONS

Refer to Section 3 of the Authority's Bridge Inspection Program Quality Management Plan (QMP) (latest version) for bridge inspection program definitions (https://www.njta.com/media/5606/2020-08-28-bi-program-quality-management-plan_v12-final.pdf).

The following definitions are specific to retaining wall and noise barrier structure inspections (and definitions for TL and ATL in QMP have been expanded upon):

Assistant Team Leader (ATL) – An individual of the Inspection Consultant assisting the Team Leader with planning, preparing and performing field inspection of a given retaining wall and/or noise barrier. (Refer to [New Jersey Turnpike Authority Bridge Inspection Program Qualifications of Key Bridge Inspection Personnel](#)).

Noise Barrier – A noise barrier is a structure designed to protect inhabitants of sensitive land use areas from noise pollution. Noise barriers are the most effective method of mitigating roadway noises during the passage of traffic. Noise barriers block the direct path of sound waves from the highway to homes and/or businesses along the highway. They do not eliminate noise; they only reduce the noise.

Non-Qualified Noise Barrier – A noise barrier measuring at least 8 feet in height and located within 25 feet from a bridge abutment, between the abutment joint and the first vertical construction joint, or constructed on a structure. Such noise barriers shall be associated with the nearby bridge and shall not be included in the Authority's noise barrier inventory. Non-Qualified Noise Barriers are inspected in conjunction with the nearby bridge and not as a standalone noise barrier, unless otherwise directed by the Authority. Refer to Section 4.D. for examples.

Non-Qualified Retaining Wall – Any retaining wall, with a maximum height of less than 4 feet measured from the existing grade to the top of the coping along the full length of the structure or located within 25 feet of a bridge abutment or between the abutment joint and the first vertical construction joint. Such walls shall be associated with the nearby bridge and shall not be included in the Authority's retaining wall inventory. Non-Qualified Retaining Walls are inspected in conjunction with the nearby bridge and not as a standalone retaining wall, unless otherwise directed by the Authority. Refer to Section 4.D. for examples.

Retaining Wall – A retaining wall is a structure designed to retain soil to a slope that it would not naturally keep to (typically a steep, near-vertical, or vertical slope). They are used to bound soils between two different elevations often in areas of terrain possessing undesirable slopes or in areas where the landscape needs to be shaped severely and engineered for more specific purposes such as roadway overpasses. Wall functions inventoried include fill walls, cut walls, switchback walls, bridge walls, and slope protection.

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Support Staff (SS) – An individual of the Inspection Consultant supporting the Team Leader with the field inspection of a given structure. The support staff assists the TL performing inspections and can assist in the following inspection related tasks: taking and logging photographs, retaining wall and noise barrier measurements and movement of various inspection equipment (TMA or bucket truck) but is not considered qualified to perform any inspections.

Team Leader (TL) – An individual of the Inspection Consultant trained and certified and in charge of an inspection team who is ultimately responsible for planning, preparing, and performing field inspections, and can accurately evaluate and document findings of a given retaining wall and/or noise barrier (Refer to [New Jersey Turnpike Authority Bridge Inspection Program Qualifications of Key Bridge Inspection Personnel](#)). During the inspections, the Team Leader must be accompanied by at least one other team member which may include an ATL or SS.

4. TYPES OF RETAINING WALLS AND NOISE BARRIERS

Qualifications for retaining walls and noise barriers that will be included in the inventory and inspection program are provided herein.

Retaining walls measuring at least 4 feet in height at any location on the exposed vertical face from finished grade to the top of coping shall be inspected in accordance with this manual. In addition, they must be outside of the limits of the bridge wall as defined in Section 4.C.

The following are additional considerations:

- The minimum and maximum wall heights should be measured from the toe of the wall to the intended height of earth retention. For locations where the wall has been disturbed and/or retained materials have eroded, the wall height should be measured to a projected height of retention
- Although during the Retaining Wall and Noise Barrier Inspection Program the condition assessment will only address that portion of the wall that can actually be seen, there may be walls which are important to the stability of the roadway but may otherwise not qualify based on exposed height alone and may be included in the inspection program.
- Features such as parapets or integral Jersey barriers, which extend above the intended retained earth height of the wall, should not be included in the determination of maximum height. These features are evaluated as 'secondary wall elements' during the condition assessment and will be further evaluated in the context of their role as traffic barriers
- If any section of the wall satisfies the height criterion, the entire length of the wall should be included in the inventory, not just the segment that meets the criterion.

Retaining walls are commonly utilized throughout the Turnpike and Parkway roadways, ramps, at interchanges, and service areas.

A. TYPES OF RETAINING WALLS

i. Mechanically Stabilized Earth (MSE)

A segmental block mechanically stabilized earth wall is a composite structure consisting of alternating layers of compacted backfill and soil reinforcement elements, fixed to a wall facing.

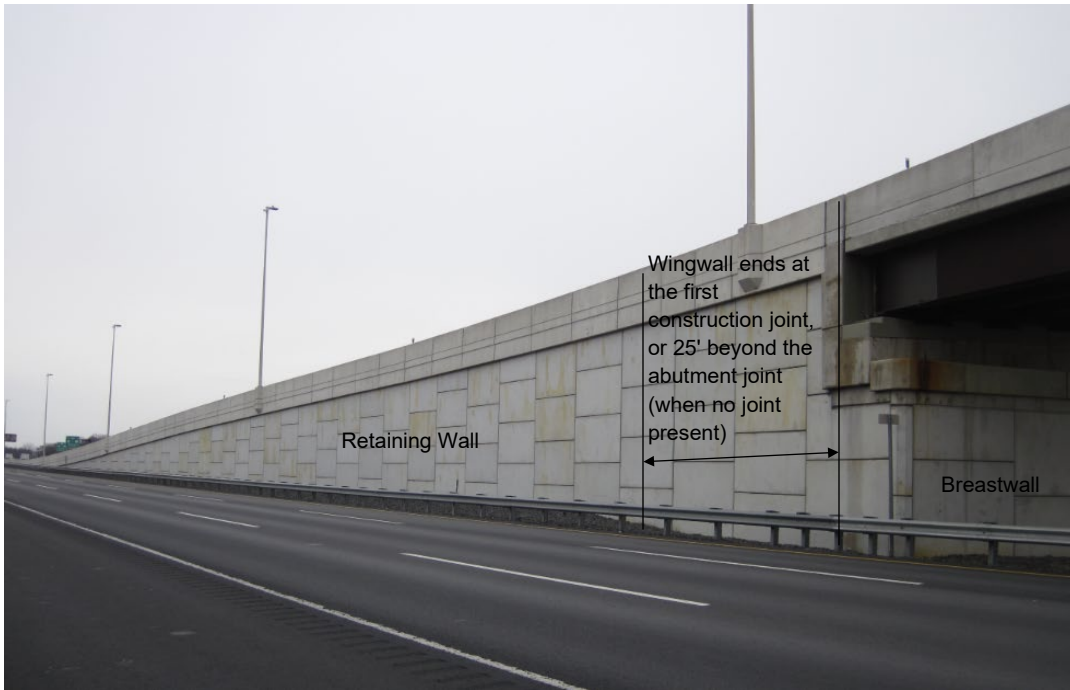


Photo 1 – Mechanically Stabilized Earth (MSE) Wall (Location – Turnpike SA7S Ramp NISA, MP 72.29NW)

ii. Reinforced Concrete

Reinforced Concrete wall is a cast-in-place (or precast) wall comprised of a reinforced concrete vertical stem cantilevered from a base slab.



Photo 2 – Reinforced Concrete Wall (Location – Turnpike SA8N Ramp SISA, MP 78.46SW)

iii. Steel Sheeting

Steel Sheeting wall consists of steel sheet piling structural sections with a vertical interlocking system that create a continuous wall. Sheet piles resist soil and water pressures by functioning as a beam spanning vertically between points of support.



Photo 3 – Steel Sheeting Wall (Location – Parkway S, MP 31.50S)

iv. Masonry

Masonry wall (Block Wall) consists of an assembly of masonry units joined together with mortar or grout.



Photo 4 – Masonry Wall (Block Wall) (Location – Parkway S, MP 131.10S)

v. Timber Sheeting

Timber Sheeting wall consists of timber structural sections fastened together with vertical tongue and groove boards, horizontal walers, piles, top cap boards, tie rods, and deadmen.



Photo 5 – Timber Sheeting Wall (Location – Parkway S, MP 2.4S NW)

vi. Plastic Sheeting

Plastic Sheeting wall consists of plastic sheet piling structural sections fastened together with timber horizontal walers, piles, top cap boards, tie rods, and deadmen.



Photo 6 – Plastic Sheeting Wall (Location – Parkway N, MP 0.5N SE)

vii. Cribwall

A cribwall is comprised of precast reinforced concrete logs (cribbing) that are assembled like a mini log cabin. Stretchers run parallel with the wall face, while headers run perpendicular to the wall face.



Photo 7 – Cribwall (Location – Parkway S, MP 149.4S)

viii. Gabion

Gabion walls are made up of gabions, or large cages or baskets, which are filled with rocks, gravel, concrete, or leftover construction materials. These large baskets can be stacked together and connected using heavy-duty wire.

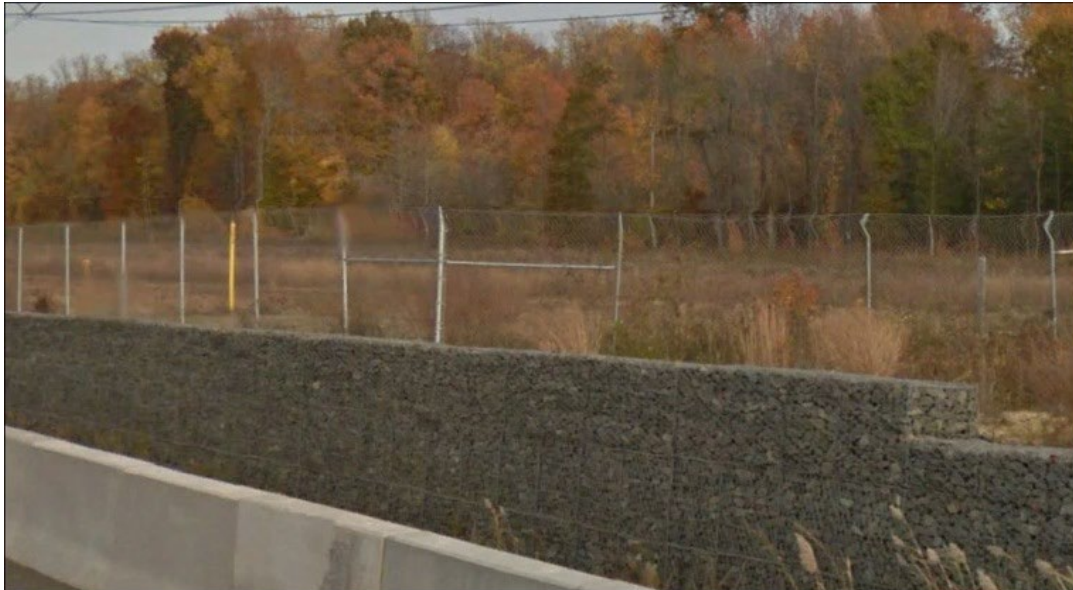


Photo 8 – Gabion Wall (Location – Turnpike SNO, MP 52.1NO)

ix. Post and Panel

A Post and Panel wall is a structurally engineered, prefabricated/precast reinforced concrete retaining wall system. The system utilizes concrete or steel posts to interlock with the reinforced concrete wall panels.



Photo 9 – Post and Panel Wall (Location – Turnpike Ramp ST, MP 53.75ST)

x. Other/Combination

Other/Combination wall includes unique types of retaining wall systems such as steel sheet pile with concrete facing, soldier pile wall, timber lagging and precast lagging panels, and prefabricated modular wall panels with barrier.



Photo 10 – Other/Combination Wall Soldier Pile Wall (Location – Turnpike SNO, MP 56.62NO)

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Photo 11 – Other/Combination Wall Evergreen Wall (Location – Parkway NBI, MP 124.10NI)



Photo 12 – Other/Combination Wall Steel Sheet Piling with Concrete Facing Retaining Wall (Location – Turnpike Interchange 7 Ramp NOT, MP 53.85NOT)

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***Photo 13 – Other/Combination Wall Timber Lagging with Concrete Facing Retaining Wall
(Location – Turnpike NSO, MP 69.3NO)***



***Photo 14 – Other/Combination Wall Prefabricated Modular Wall Panels with Barrier
(Location – Turnpike SA7S Ramp SAS, MP 71.72SAS)***

B. TYPES OF NOISE BARRIERS

Noise barriers measuring at least 8 feet in height along the exposed vertical face from grade (or base of noise barrier when mounted atop retaining walls) to top of barrier, shall be included as a structure in the Authority's inventory and inspection program.

See below for types of Authority noise barriers:

i. Post and Panel

A Post and Panel noise barrier is a structurally engineered, prefabricated system which consists of separate reinforced concrete panels placed between supporting columns or steel posts.



Photo 15 – Post and Panel Noise Barrier (Location – Turnpike SNO, MP 99.87NO)

ii. Reinforced Concrete

Reinforced Concrete noise barrier is a cast-in-place (or precast) noise barrier comprised of a reinforced concrete vertical stem cantilevered from a base slab.



Photo 16 – Reinforced Concrete Noise Barrier (Location – Turnpike SNO, MP 100.45NO NE)

iii. Other/Combination

Other/Combination noise barrier types include wall systems utilized together (i.e. noise barrier constructed on top of a retaining wall).



Photo 17 – Other/Combination Noise Barrier Post and Panel Noise Barrier on Top of the MSE Wall (Location – Turnpike NSO, MP 54.00SO SW)

C. STRUCTURE LIMITS AND CONSIDERATIONS

The Authority's wingwalls and retaining walls are typically constructed with contraction joints spaced at 30 feet and expansion joints spaced at 90 feet. Expansion joints typically exist between the end of the wingwall and the beginning of the retaining wall. The location of these expansion joints should be utilized to determine the start (or end) of the retaining wall. In some situations, a contraction joint may not be present to help determine the end of the wingwall and beginning of the retaining wall. Wingwall and retaining wall construction types that may lack a contraction joint may include but are not limited to reinforced concrete, MSE and other/combination wall types. The abutment footing is typically one foundation mat (with or without piles) supporting both the abutment wall (i.e. the breastwall) and the wingwalls whereas the retaining wall footing is typically constructed independent from the abutment footing. Since the footings are below grade and there is no visible joint, the end of wingwall and the start of the retaining wall shall be estimated at 25 feet beyond the abutment joint.

The Begin and End MP of the retaining wall or noise barrier are defined by direction of traffic.

The retaining walls shall be inventoried and inspected for the full length, as long as any exposed vertical face from grade to the top of the coping, meets or exceeds a minimum height of 4 feet.

All barriers constructed in front and/or on top of the retaining wall shall be inspected as an element of the retaining wall. All barriers constructed in front of the noise barrier shall be inspected as an element of the noise barrier.

The following guidelines shall be utilized to determine the limits (Begin and End) of an Authority retaining wall or noise barrier asset:

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1. When the retaining wall extends from the bridge substructure and the joint between the retaining wall and the bridge wingwall is visible, the limits of the retaining wall (Begin MP) shall be considered to start at that visible joint. The total length of the retaining wall shall be measured from the joint to the end of the wall [See Figure 1].

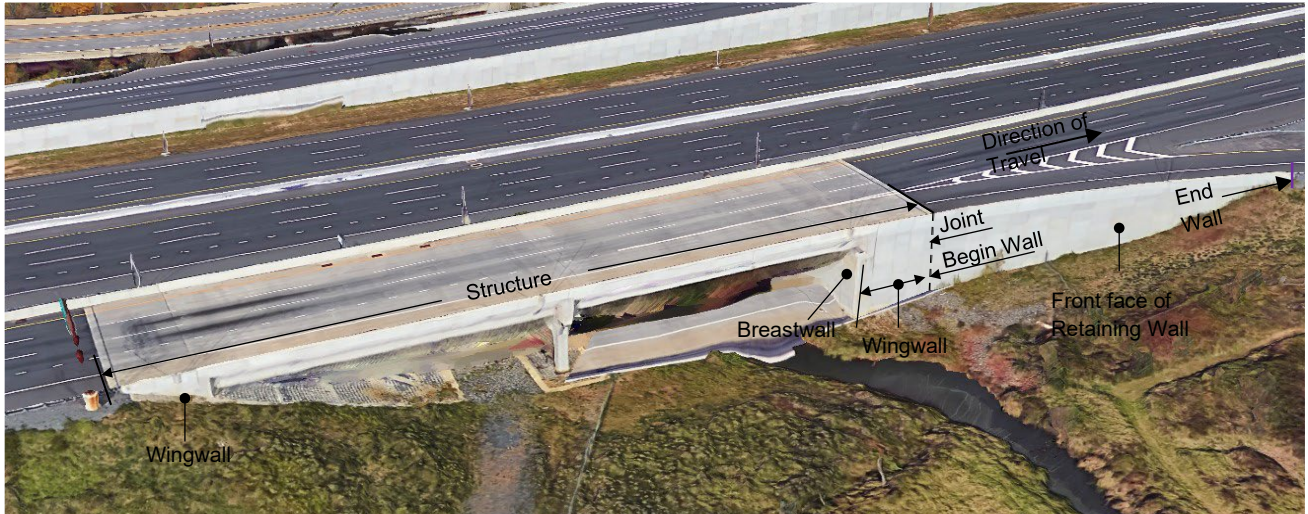


Figure 1-Begin and End of Retaining Wall (Visible Joint)

2. When the retaining wall extends from the bridge substructure and the joint between the retaining wall and the bridge wingwall is not visible, the retaining wall (Begin MP) shall be considered to start 25 feet from the abutment joint. The total length of the retaining wall is measured from the established beginning of the wall to the end of the wall. The initial 25 feet of the wall (considered as the wingwall) is included in the associated bridge or culvert inspection and should not be inventoried or inspected as a retaining wall. [See Figure 2].



Figure 2-Begin and End of Retaining Wall (No Visible Joint)

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3. When a retaining wall exists between two structures with no visible joints between the wingwalls and retaining wall, the retaining wall (Begin MP) shall start 25 feet from the abutment joint of Structure No. 1 and shall end (End MP) 25 feet from the abutment joint of Structure No. 2. [See Figure 3]

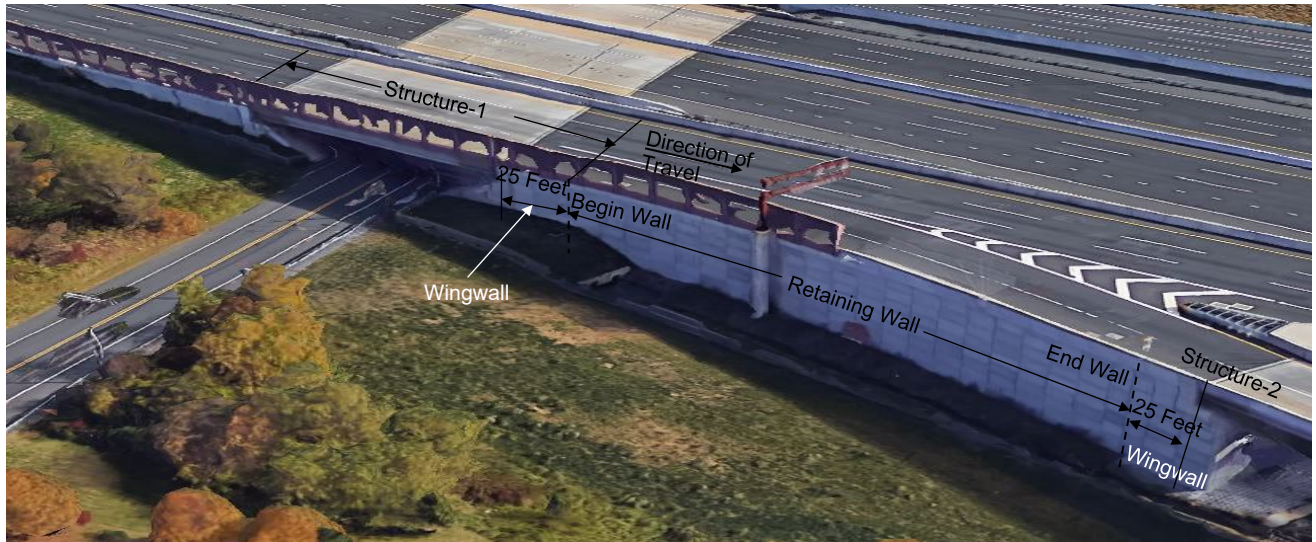


Figure 3-Begin and End of Retaining Wall Between Two Structures

4. When a standalone retaining wall is located along the Turnpike and Parkway roadways, the beginning of the retaining wall (Begin MP) shall be the first point encountered while traveling in the direction of traffic and the end of the wall shall be at the termination of the wall. [See Figure 4]



Figure 4-Standalone Retaining Wall (along Mainline shown)

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5. When a noise barrier and retaining wall are present, the retaining wall and noise barrier shall be inventoried and inspected as one combined structure and shall be designated a noise barrier. The beginning of a noise barrier is the first point encountered while travelling in the direction of traffic and the end of the noise barrier is at the termination of the noise barrier. **[See Figure 5]**

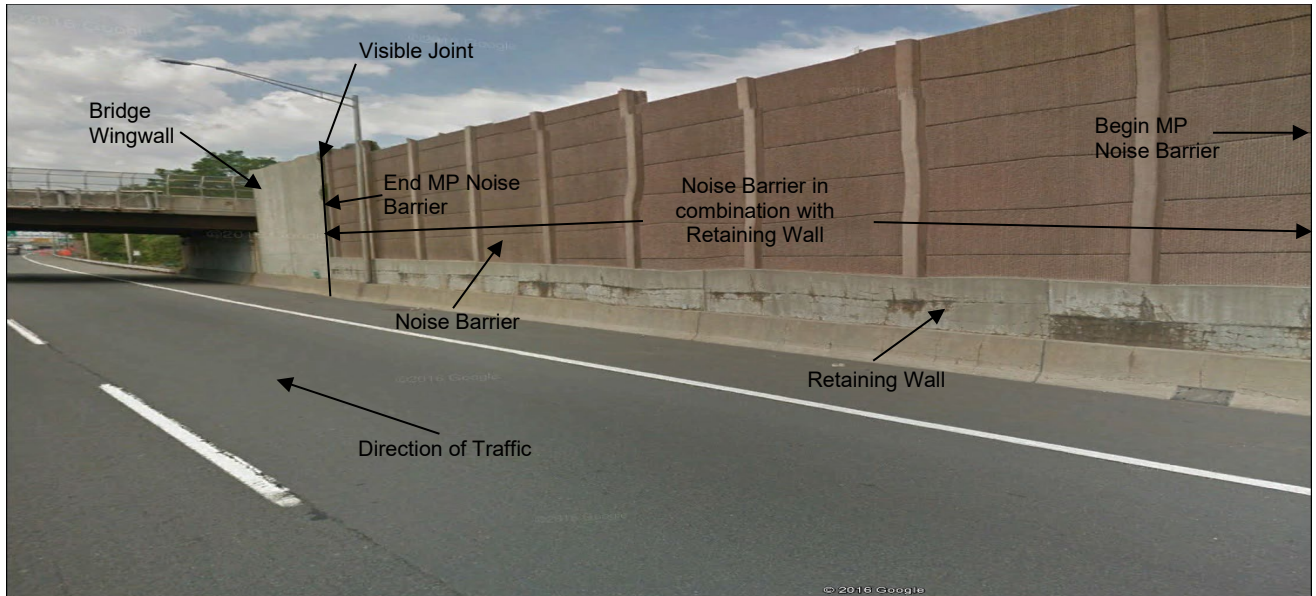


Figure 5-Combination of Noise Barrier and Retaining Wall

D. NON-QUALIFIED RETAINING WALLS OR NOISE BARRIERS

Non-Qualified retaining walls or noise barriers generally meet the geometric criteria for designation as a retaining wall or noise barrier, but due to their proximity to an adjacent bridge, are inspected under the Authority’s bridge inspection program. Refer to Section 3 for applicable definitions.

Following are examples of non-qualified retaining walls and noise barriers:

- Wingwall extending 25 feet from a bridge abutment shall be inspected with the bridge and therefore is considered a non-qualified retaining wall.
- Median barriers between adjacent roadways and walls or barriers in front of bridge abutments acting to retain soil shall be considered non-qualified retaining walls, shall be inspected with the bridge, and are considered non-qualified retaining walls. **[See Figure 6 and Figure 7]**
- Noise barriers on top of a wingwall that are located within 25 feet from bridge abutment joints shall be inspected with the bridge and are considered non-qualified noise barriers. **[See Figure 8]**

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Figure 6- Median Barrier Between Outer and Inner Roadways



Figure 7- Wall in Front of Abutment

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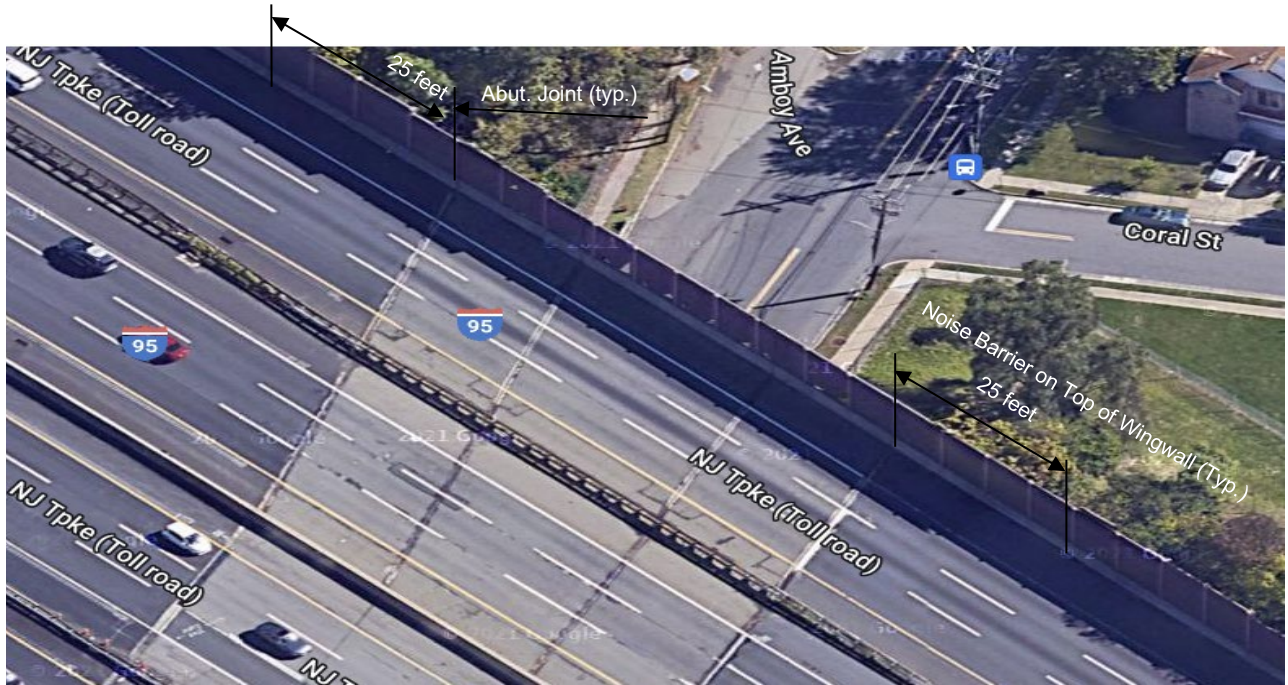


Figure 8- Noise Barrier on Top of Wingwall and Structure

E. STRUCTURE NUMBER (ASSET NAME) AND STRUCTURE NAME (ASSET CODE)

The Structure Number and Structure Name for retaining wall and noise barrier assets shall be determined based upon the following Authority requirements.

For mainline and ramp structures, the Structure Number for a standalone retaining wall or noise barrier shall be the beginning milepost of the structure in the direction of travel followed by the roadway (NS, NSO, NSI, SN, SNO, SNI, SBE, SBEA, NBX, NBE, NW, NE, SW, SE, SAN, etc.).

The Structure Name for a standalone retaining wall or noise barrier is the roadway designation and the Begin MP in direction of traffic documented to the hundredth of a mile (XX.XX). **[See Figures 9 and 10]**

For mainline, ramp, local roadway, service road, or pedestrian bridge, the Structure Number for a retaining wall or noise barrier extending from a bridge shall be the bridge structure number and shall include a directional reference (NE, SE, NW, SW) based on the corner of the bridge where the wall is located.

The Structure Name for the retaining wall or noise barrier which are extensions of a bridge structure shall include the roadway designation and the bridge structure number with a direction reference based on the corner of the bridge where the wall is located (NE, SE, NW, SE). **[See Figures 11 and 12]**

All roadway designations can be found in the NJTA Manual for Traffic Control in Work Zones: https://www.njta.com/media/1501/njta_traffic_control_manual_in_work-zones_122016.pdf

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Structure Number and Structure Name Examples:

1. The Structure Number (Asset Name) for a standalone noise barrier located along the Turnpike SNO Roadway at Begin MP 81.78 is MP 81.78NO. The corresponding Structure Name (Asset Code) for the noise barrier is Turnpike SNO MP 81.78. **[See Figure 9]**



Figure 9 – Noise Barrier Along Turnpike Mainline

2. The Structure Number (Asset Name) for a retaining wall or noise barrier on Ramp NBX at Interchange 10 with Begin MP of 9.62 is MP 9.62NBX. The corresponding Structure Name (Asset Code) for the retaining wall is Parkway Ramp 10NBX MP 9.62. **[See Figure 10]**



Figure 10 – Retaining Wall or Noise Barrier at Parkway Ramp

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3. The Structure Number (Asset Name) for a retaining wall extending from a bridge located along the Turnpike Mainline Roadway at Bridge No. 50.43SO and supporting the NSO Roadway at the northwest corner is MP 50.43SO NW. The corresponding Structure Name (Asset Code) for this retaining wall is Turnpike NSO MP 50.43SO NW. The retaining wall supports the fill for the Turnpike roadway. **[See Figure 11]**



Figure 11 – Retaining Wall at Extension of Mainline Bridge (Turnpike Shown)

4. The Structure Number (Asset Name) for a retaining wall or noise barrier extending from local road over bridge MP 71.26R, Cranbury-Half Acre Road at the northwest corner is MP 71.26R NW. The corresponding Structure Name (Asset Code) for the retaining wall is Cranbury-Half Acre Road MP 71.26R NW. **[See Figure 12]**



Figure 12 – Retaining Wall at Extension of Local Road Over Bridge

5. INSPECTION PLANNING AND PREPARATION

A. QUALIFICATIONS

Key project personnel shall possess relevant training and experience demonstrating:

- i. Successful completion of National Bridge Inspection Standards (NBIS) inspections of retaining walls and/or noise barriers, effective inspection scheduling, and report preparation and submission.
- ii. TLs performing retaining wall and noise barrier inspections must meet the following requirements for experience in addition to the requirements outlined in the document “Qualifications of Key Bridge Inspection Personnel” on the Authority’s website at <http://www.njta.com/doing-business/njta-bridge-inspect-program> under the heading “NJTA Bridge Inspection Program” and as summarized on the NJTA Bridge Inspection Qualification Summary Form QAF3 – Consultant Qualification Form.

TLs who are registered professional engineers shall have a minimum of one year of retaining wall and noise barrier inspection experience. A minimum of two years of prior inspection experience is required without a PE.

- iii. ATLs performing retaining wall and noise barrier inspections must meet the following requirements for experience in addition to the requirements outlined in the document within “Qualifications of Key Bridge Personnel” on the Authority’s website at <http://www.njta.com/doing-business/njta-bridge-inspect-program> under the heading “NJTA Bridge Inspection Program” and as summarized on the NJTA Bridge Inspection Qualification Summary Form QAF3 – Consultant Qualification Form.

ATLs shall have one year of prior retaining wall and noise barrier inspection experience.

- iv. There are no qualification requirements for SS.

B. TEAM COMPOSITION

All inspection teams must consist of a minimum two-person crew and include a TL, and an ATL and/or SS. An inspection team may consist of any of the following three combinations: TL with ATL, TL with ATL and SS, or TL with SS.

C. INSPECTION DOCUMENTATION REQUIREMENTS

A successful retaining wall and noise barrier inspection requires that the inspection team have on-hand all available design and inspection documents such as construction contract

plans (if available), and previous inspection reports related to the structure being inspected. These documents will aid the inspection team in determining as-built conditions and any changes in previously reported conditions or deficiencies. Refer to the standard retaining wall and noise barrier inspection forms and the sample report included in Section 12. These documents show the fields needed to collect data and information to be included in the inspection reports.

D. STANDARD RETAINING WALL AND NOISE BARRIER INSPECTION EQUIPMENT

The inspection team may be required to have any or all of the following equipment on hand when performing retaining wall and noise barrier inspections, depending on the details and location of the retaining wall and noise barrier being inspected:

- Refer to the work zone traffic control requirements which are specified in the Authority's Manual for Traffic Control in Work Zones (<https://www.njta.com/doing-business/professional-services/publications/manuals/traffic-control>) and includes discussion of the proper use of Truck Mounted Attenuators, signs, traffic cones and flags, flashing amber lights on vehicles on the roadway, and identification for vehicles located within the Authority's Right of Way
- Personal Protective Equipment including hard hats, reflective high visibility vests, eye protection, gloves, safety harnesses and lanyards
- Basic access equipment such as step ladders and extension ladders
- Tools for cleaning including whisk brooms, wire brushes, scrapers, shovels, and brooms
- Tools for inspection including sounding hammers, high power binoculars, and flashlights
- Tools for measuring including plumb bobs, protractors, levels, folding rulers, calipers, measuring tapes, or laser measuring devices
- Digital camera
- Marking utensils such as keel or lumber crayons
- First Aid kit

E. SCHEDULE MANAGEMENT

The inspection consultant shall submit a general schedule showing the dates for the milestone tasks in the project to the Authority at the beginning of the project. A comprehensive schedule (master inspection and report submission schedule) showing anticipated dates for inspection, data input, preliminary and final report submission, comments received, QA/QC dates along with additional comments shall be created by the inspection consultant and will be used to track the progress of the project. In addition, an updated version of the comprehensive schedule shall be submitted to the Authority and Bridge Inspection Program Technical Manager (BIPTM) monthly before the 7th day of each month.

F. ASSETWISE INSPECTION (AWI) ACCESS REQUEST FORMS

The inspection consultant shall complete the AssetWise Inspection (AWI) access request forms provided by the BIPTM via email and return to the BIPTM (AWI administrator) for project staff to obtain access to AWI.

G. PROJECT SPECIFIC QA/QC PLAN

A project specific QA/QC plan, as defined in the Authority's Bridge Inspection Program Quality Management Plan, shall be submitted to the Authority for review and approval.

6. TYPES OF INSPECTION

A. INVENTORY

The initial inspection cycle will include a visual inspection of all primary structural elements, secondary elements, and appurtenances comprising the retaining walls and noise barriers, including but not limited to wall facing / panel, foundation, anchorage and connection, vertical supports, joints, guide rail, barriers, roadways, and drainage elements, for deficiencies including ground settlement, roadway settlement, crack patterns, rutting, gaps at parapet asphalt interfaces, and vegetation growth in joints. If conditions are detected adversely affecting the safety of the public and/or the structure integrity of the wall, a hands-on inspection shall be performed. The initial inspection includes collecting structure inventory data which will be entered into the AssetWise Inspection (AWI) database. The required inventory items include but are not limited to the following: Begin and End Wall MP, GPS Coordinates, Length, Maximum and Minimum Heights, As-Built contract and Shop Drawing details, features in front, on top, and behind wall, and foundation and backfill details. Standard sketches shall be used to document the structure dimensions during the field inspection and will be available to download from AWI (NJTA Retaining Wall/Noise Barrier Field Sketch) via <https://njta-it.bentley.com/documentation.aspx> and refer to Section 14 of this manual.

B. ROUTINE

A routine inspection, performed at an approximate six-year frequency, includes a close visual inspection of all primary structural elements, secondary elements, and appurtenances of the retaining walls and noise barriers including but not limited to wall facing / panel, foundation, anchorage and connection, vertical supports, joints, guide rail, barriers, roadways, and drainage elements. This inspection consists of collecting and/or verifying the structure inventory items and entry into AWI. If a structure inventory error is found, the BIPTM shall be notified to review the error and approve the proposed change prior to the inventory update. The element defects must also be documented and assessed for repair needs. Prior notes of deficiency shall be reviewed and commented for changes (measured and quantified). A sketch depicting overall dimensions shall be field verified and updated if required.

C. SPECIAL

A special inspection is a unique inspection effort targeted at special situations or conditions and may be performed to study a unique or unusual structural feature in greater detail than would have normally occurred during a routine inspection. Special inspections encompass a 100% hands-on inspection of specific components, details, or deficiencies which need special monitoring and/or evaluation. In planning a special inspection, the TL shall understand the goal of the inspection to help determine the equipment and traffic control needed to obtain the necessary condition information for the elements requiring inspection. Examples of special inspections, and their definitions, include, but are not limited to the following:

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- *Post Storm Inspection*: Inspection of a structure subsequent to extreme weather conditions such as a hurricane or high wind events in order to determine the onset or advancement of any documented damage.
- *Structural Detail Inspections*: Inspection of structural details, components and/or materials that have been previously or recently identified to typically exhibit advanced displacement, spalling, cracking, or other signs of distress, which may result in potential failure and warrant additional inspections.

D. DAMAGE

This is an unscheduled inspection of a retaining wall and noise barrier that has been damaged by an event such as a motor vehicle accident (MVA), including but not limited to vehicular impact to a foundation, vertical supports, and wall panels.

E. INTERIM

This is an inspection scheduled at the discretion of the individual in responsible charge of retaining wall and noise barrier inspection activities. An Interim Inspection is used to monitor a particular known or suspected deficiency (e.g., foundation settlement or scour, member condition, etc.) and can be performed by a qualified person familiar with the retaining wall and noise barrier. The determination of an appropriate Interim Inspection frequency should consider the severity of the known deficiency.

7. MPT REQUIREMENTS

A. LANE/SHOULDER CLOSURE

All closures along the Turnpike and Parkway Roadways must be approved by the Authority's Operations Department. Retaining wall and noise barrier inspections performed along the Turnpike and Parkway Roadways shall be performed behind guide rail or other existing roadside barriers, where feasible. When work must be conducted in a closed lane or shoulder, the Inspection Consultant shall provide traffic control in accordance with the current edition of the Authority's Manual for Traffic Control in Work Zones. **The Inspection Consultant shall also provide traffic control on local and state roads in accordance with the governing agency's requirements.**

B. TRAFFIC PERMIT

A Traffic Permit is required for any work within the Authority Right of Way. The Traffic Permit Application form and instructions can be found online at the Authority's website: <https://www.njta.com/about/traffic-permits>. Applicants for the Traffic Permit are required to review the Temporary Traffic Control Safety Class presentation slides prepared by the State Police in conjunction with the Authority to become familiar with lane/shoulder closure and work zone procedures. After reviewing these slides, applicants must sign an acknowledgement form to confirm that they have completed the review and agree to abide by all rules and regulations pertaining to work on the New Jersey Turnpike and Garden State Parkway.

Note, the Authority requires that a daily lane or shoulder closing be installed by Maintenance or an approved vendor for any inspections which require more than 1-hour duration along the mainline and for any ramps. The Maintenance Department may accommodate a closing for up to 5 miles long depending on location and other work being performed on the roadway.

For additional information refer to the Authority's Manual for Traffic Control in Work Zones: https://www.njta.com/media/1501/njta_traffic_control_manual_in_work-zones_122016.pdf

C. DAILY LOCATION NOTIFICATION

In addition to submitting requests for lane or shoulder closures to the NJTA via the Lane Closure Request System (<https://tplc-v2.newjerseyturnpike.com/>). Team Leaders are required to email a Bridge Inspection Location (BILOC) notification to the BIPTM and the Authority daily and before commencing field work. The BILOC shall consist of the following information:

OPS: XXXX

Retaining Wall or Noise Barrier

Roadway: Parkway or Turnpike

MP (use exact Asset Name in anticipated order):

Team Leader last name:

Cell Phone:

MPT (indicate location where closing is and reason):

8. RETAINING WALL AND NOISE BARRIER INSPECTION PROCEDURE

The procedure for inspection of retaining walls and noise barriers is similar for all structure types and locations. The inspection shall include the wall panels, vertical supports, construction/expansion joints, visible foundations, anchorages, connections, guide rails, barriers, right of way security, and elements mounted on top of the asset, such as fences, lighting standards, and junction boxes.

The inspector shall perform a visual inspection of all visible components of the retaining wall or noise barrier. When defects are identified on the face of the retaining wall or noise barrier, the wall panels shall be sounded utilizing a ladder or bucket truck with TMA in a daily or short duration shoulder closure, if required for access. The retaining wall or noise barrier shall be inspected to ensure the plumbness of the wall. Document defects in the right-of-way fencing, roadway, guide rail, and barrier atop and along the wall, lighting standards and junction boxes, visible utilities, and identify potential drainage issues.

MINIMUM REQUIRED PHOTOGRAPHS

- General view of the front of the retaining wall and/or noise barrier (looking in direction of traffic)
- General view of the rear of the retaining wall and/or noise barrier or Top of roadway supported by the retaining wall
- Category A photos: A1, A2, A3, GR, Utility
- Equipment and MPT used for access/traffic control
- All Defect photos (in order of field notes)
- Work on-going or completed

9. INSPECTION ELEMENTS AND OVERALL RETAINING WALL AND NOISE BARRIER CONDITION ASSESSMENT

A. INSPECTION ELEMENTS

Based on the type of retaining wall or noise barrier, record the element defects, quantity, and location of defects along with a photo reference for all repairable defects (Category A or B) or defects requiring monitoring (Category E). Inspect the exposed front face of the retaining wall or noise barrier, vertical supports, exposed foundations, anchors, guide rail protection as well as barriers and/or fencing mounted to the wall.

Following is a general list of typical defects to be documented during the inspection of Reinforced Concrete, Post and Panel, and Mechanically Stabilized Earth Retaining Walls:

- Abrasion/Wear
- Alkali-Silica Reactivity (ASR)
- Bulging
- Cracking/Scaling/Fracture
- Debris Accumulation
- Delamination/Patched Area
- Distortion
- Efflorescence/Rust Staining
- Erosion
- Freeze-thaw Damage
- Grade Settlement Along the Wall
- Graffiti
- Horizontal Rotation
- Leaching
- Leakage
- Scour
- Separation
- Settlement
- Spalling with or without Exposed Rebar
- Vegetation Growth
- Vertical Rotation

Following is a general list of typical defects to be documented during the inspection of Steel Sheeting Retaining Walls:

- Abrasion/Wear
- Bulging
- Corrosion/Section Loss

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- Cracking
- Damage
- Debris Accumulation
- Distortion
- Erosion
- Grade Settlement Along the Wall
- Graffiti
- Horizontal Rotation
- Leakage
- Paint Peeling
- Scour
- Separation
- Settlement
- Vegetation Growth
- Vertical Rotation

Following is a general list of typical defects to be documented during the inspection of Timber Sheeting Retaining Walls:

- Abrasion/Wear
- Bulging
- Cracking
- Damage/Fire Damage
- Debris Accumulation
- Decay/Rot/Heart Rot
- Distortion
- Erosion
- Grade Settlement Along the Wall
- Graffiti
- Horizontal Rotation
- Insect Damage/Timber Borers
- Scour
- Separation
- Settlement
- Split/Checks/Shakes
- Vegetation Growth
- Vertical Rotation
- Weathering

Following is a general list of typical defects to be documented during the inspection of Masonry Retaining Walls and Cribwalls:

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- Bulging
- Cracking
- Damage
- Debris Accumulation
- Displacement
- Efflorescence/Rust Staining
- Freeze-thaw Damage
- Grade Settlement Along the Wall
- Graffiti
- Horizontal Rotation
- Leakage
- Mortar Breakdown/Missing Mortar
- Scour
- Separation
- Settlement
- Spall/Fractures
- Vegetation Growth
- Vertical Rotation

B. CONDITION ASSESSMENT OF ELEMENTS AND QUANTITY ESTIMATES

The deficiencies listed in Section 9.A. and Table 1 are provided in this manual for general understanding during inspection. The definitions are referenced from Chapter 7 (Materials, Material Deficiencies and Inspection Methods) of the Bridge Inspector’s Reference Manual. For the detailed description of each definition, it is recommended to refer to Chapter 7 (Materials, Material Deficiencies and Inspection Methods) of Bridge Inspector’s Reference Manual.

TABLE 1. DEFICIENCIES AND DEFINITIONS

Deficiency	Definition and Unit of Measurement
Abrasion/Wear	Abrasion damage is the result of external forces acting on the surface of concrete member and is similar to wear. Wear is the gradual removal of surface mortar due to friction and occurs to concrete surfaces. Advanced wear exhibits polished aggregate, which is potentially a safety hazard when the deck is wet. (PERCENTAGE)
Alkali-Silica Reactivity (ASR)	It is an expansive reaction forming a gel, which will result in the swelling and expansion of concrete. The process involves a reaction between potassium and sodium alkalis and silica. Alkali found in soils, deicers and chemical treatments could also contribute to ASR.
Bulging	A rounded protrusion or bend in a section of a wall. (INCH)

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TABLE 1. DEFICIENCIES AND DEFINITIONS

Deficiency	Definition and Unit of Measurement
Checks	Separation of the wood fibers, normally occurring across or through the annual growth rings, and generally parallel to the grain direction. (EACH)
Collision Damage	A vehicle, railroad car, and/or marine traffic strikes a structure. (LOCATION)
Connections	All connections should be closely inspected for tightness, cracks at fasteners connecting members and/or for missing connection. (EACH)
Corrosion	Corrosion is the primary cause of section loss in steel members and is most commonly caused by the wet-dry cycles of exposed steel. When deicing chemicals are present, the effect of corrosion is accelerated. (SQUARE FEET)
Cracking	A crack is a linear fracture in structural material. Structural cracks are caused by dead load and live load stresses. (LINEAR FEET)
Damage	A structural damage that occurs due to environmental factors or human actions.
Debris Accumulation	Accumulation of material including floating wood, trash, suspended sediment, or bed load moved by a flowing stream. (LOCATION)
Decay (Timber Section Loss)	Decay is the process of living fungi, which are plants feeding on the cell walls of wood. Decay is the primary cause of timber replacement. (EACH)
Delamination	Delamination occurs when layers of concrete separate at or near the level of the outermost layer of reinforcing steel. (SQUARE FEET)
Distortion	Alteration or deformation of the structural element from its original state can occur due to a variety of factors, not limited to overloads, material degradation, foundation issues, and possible as-built conditions.
Efflorescence	The process of cracking permits moisture absorption and increased flow within the concrete that is evidenced by dirty-white surface deposits called efflorescence. (SQUARE FEET)
Erosion	Wearing away of soil by flowing water. (CUBIC YARD)
Exfiltration	Exfiltration occurs when leaking joints allow water flowing through the wall to leak into supporting material. (PER LOCATION)
Fire Damage	Extreme heat will damage concrete. High temperatures will cause a weakening in the cement paste and lead to cracking.
Freeze-thaw Damage	Freeze-thaw is the freezing water within the capillaries and pores of cement paste and aggregate resulting in internal oversteering of the concrete, which leads to deterioration including cracking, scaling, and crumbling. (INCH)

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TABLE 1. DEFICIENCIES AND DEFINITIONS

Deficiency	Definition and Unit of Measurement
Graffiti	Any form of paint vandalism that is added to the wall after construction has been completed. (SQUARE FEET)
Gap	Space between the base of the parapet and adjacent pavement surface due to differential settlement of the parapet or asphalt, or erosion of the underlying soil. (INCH)
Horizontal Rotation	The movement of the wall where it is angled from a certain point length wise. (DEGREES)
Insect Damage/Marine Bores	Insects tunnel in and hollow out the insides of timber members for food or shelter. Marine borers are found in sea water and brackish water and cause severe damage to timber members in the area between high and low water, although damage may extend to the mud line. (LOCATION)
Infiltration	Infiltration occurs when water is flowing or seeping into the wall through open joints. (LOCATION)
Leaching	The action of removing substances from a material by passing water through it. (LOCATION)
Leakage	Evidence of water seepage through the joints or due to other defects such as cracking and spalling of concrete (PER LOCATION)
Marine Growth	Chemical secretions from rock-boring mollusks deteriorate stone causing marine growth.
Masonry Displacement	The moving of any type of masonry from its original as built position. (INCH)
Mortar Breakdown	The loss of material and leading to weakness of cement. (SQUARE FEET)
Paint-peeling	When the paint is starting to wear away, exposing the material underneath. (SQUARE FEET)
Rust Staining	An elimination of the protective coating of reinforcing steel by formation of iron oxide layer due to the intrusion of chlorides. (LOCATION)
Rutting	Formation of grooves or depressions in the ground surface in the vicinity of the wall due to factors such as soil movement, erosion, and / or vehicular traffic. (INCH)
Scaling	Scaling is the gradual and continuing loss of surface mortar and aggregate over an area due to the chemical breakdown of the cement bond. (SQUARE FEET)
Scour	The removal of sediment such as sand and rocks from around bridge abutments and piers caused by swiftly moving water. (SQUARE FEET)
Section Loss	Reduction of structural material reducing the load carrying capacity of structural member. (SQUARE FEET OR PERCENTAGE)

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TABLE 1. DEFICIENCIES AND DEFINITIONS

Deficiency	Definition and Unit of Measurement
Separation	A gap between the panels of wall. (INCH)
Settlement	Ground Settlement: Sinking or lowering of the ground surface in the immediate vicinity of the wall caused by a change in stress distribution in the soil due to the construction of the wall or loss of soil due to erosion. (INCH) Roadway Settlement: Sinking or displacement of the road surface adjacent to or atop the wall due to factors, such as poor initial compaction, erosion, and / or loading that exceeds design assumptions. (INCH)
Shakes	Separation of the wood fibers parallel to the grain which occurs between the annual growth rings. (LOCATION)
Spalling/Fractures	A spall is a depression in the concrete caused by corroding reinforcement, friction from thermal movement and overstress. Spalls result from the separation and removal of a portion of the surface concrete, revealing a fracture roughly parallel to the surface. (SQUARE FEET)
Splits	Advanced checks that extend completely through the piece of wood. A split is also known as a through check. (PER LOCATION)
Undermining	Scour can cause undermining which is the removal or scouring away of supporting foundation material from beneath the substructure unit when streams or rivers flow adjacent to them. (SQUARE FEET OR PERCENTAGE)
Vegetation Growth	Any vegetation growth, including trees or vines, that surrounds and/or grows on a structure, interfering with the visual inspections, should be removed by the inspector. If the vegetation is too extensive, coordination with the Authority's Maintenance Department is recommended for its removal.
Vertical Movement or Settlement	Vertical movement can occur in the form of uniform or differential settlement. Differential settlement can produce severe distress which varies in magnitude based upon the length of structure. Common causes of vertical movement are soil bearing failure, consolidation of soil and undermining causing the structure to drop deeper into the ground. (INCH)
Vertical Rotation	The vertical rotation can occur due to differential settlement, undermining, scour saturation of backfill, soil bearing failure, erosion of backfill along the sides of the abutment, and improper design. (DEGREES)
Weathering	Hard surfaces degenerate into small granules, giving stones a smooth, rounded look; mortar disintegrates. (SQUARE FEET)

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C. REPAIR CATEGORIES

Based on the degree of deterioration noted to the structural elements of the retaining wall or noise barrier, a repair Category is assigned for each element exhibiting details requiring a recommendation.

Repair categories which apply to retaining walls and/or noise barriers are as follows:

TABLE 2. REPAIR CATEGORIES

Category	Description
N/A	Contract repair has not been recommended
A	<p>Category A Deficiencies that require prioritized attention with prompt notification given to the Authority.</p> <p><u>Category A1 Emergency:</u></p> <ul style="list-style-type: none"> – Slope Failure due to excessive erosion of backfill material. – Substantial tilting of the Retaining Wall or Noise Barrier. – Major deterioration or other conditions which affect the stability of the Retaining Wall or Noise Barrier. – Failure of foundation elements. – Significant horizontal or vertical movement of a Retaining Wall or Noise Barrier. – Indication of tension cracks in the ground above/behind MSE walls and/or toe heave in front of the MSE wall. <p><u>Category A2 Priority:</u></p> <ul style="list-style-type: none"> – Wide crack in a Retaining Wall or Noise Barrier. – Large delaminations or spalls on concrete or masonry wall facing (may include cleaning of rebar). – Deterioration of primary structural elements in a Retaining Wall or Noise Barrier. – Leakage through expansion joint seals. – Erosion/scour holes around wall. <p><u>Category A3 Priority (Non-Structural):</u></p> <ul style="list-style-type: none"> – Issues noted which are recommended for repair before or within the next regularly scheduled contract as they pose a potential safety concern to the travelling public. <p><u>Guide Rail:</u></p> <ul style="list-style-type: none"> – Damage or significant corrosion noted to guide rail elements including attachments to structures, rail and posts and end terminals at Turnpike and Parkway structures, which require repair in the near future are reported by the issuance of a Guide Rail Type Category A Report. <p><u>Utility:</u></p> <ul style="list-style-type: none"> – Damage or significant corrosion noted to Authority and outside agency utility supports, pipes/conduits and connections at Turnpike and Parkway structures, which require repair in the near future are reported by the issuance of a Utility Type Category A Report.

TABLE 2. REPAIR CATEGORIES

Category	Description
B	Contract work Deficiencies noted that are recommended for repair by an annual Bridge Repair Contract or Specialized Repair Contract as part of the Authority's Capital Budget Program. – Repair/replacement of impact damaged panel(s) in retaining wall or noise barrier
E	Monitor Noted deficiencies or conditions that are considered actively developing and may be recommended for contract work, but require monitoring until the condition has been remedied. This monitoring would involve an increased inspection frequency and/or level of detail through routine or interim inspections. – Displacement, rotation, and settlement / differential settlement

Repair categories which apply to retaining walls and/or noise barriers are as follows:



For additional details refer to the Authority's Deficiency Category Document (ADCD) at <https://www.njta.com/media/5394/authority-deficiency-category-definitions-v20-6-2020.pdf> and Section 9.D. for details of MSE wall inspections.

D. OVERALL RETAINING WALL AND NOISE BARRIER CONDITION

The overall condition evaluation implemented for retaining walls and noise barriers was derived from the Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges (FHWA). Based on the inspection findings, the following four condition states are to be used when evaluating the overall condition of retaining walls and noise barriers.

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TABLE 3. OVERALL CONDITION RATING OF STRUCTURE

Rating	Description
Good	<p>Distress present does not significantly compromise the structure function, nor is there significant severe distress to major structural components.</p> <p>Ratings of Good indicate highly functioning structures that are only beginning to show the first signs of distress or weathering.</p>
Fair	<p>Distress present does not compromise structure function, but lack of treatment may lead to impaired function and/or elevated risk of structure failure in the near term.</p> <p>Ratings of Fair indicate functioning structures with specific distresses that need to be mitigated in the near term to avoid significant repairs or element replacement in the longer term.</p> <p>Repairs may be necessary.</p> <p>Examples of Defects:</p> <p>MSE – Bulging or deformation, cracking, drainage defects, slope erosion, wall panel displacement, vegetation growth, facing deterioration, loss of soil fill</p> <p>Concrete – spalling, cracking, leaching, scaling, delamination.</p> <p>Timber – weathering or splitting</p> <p>Steel – corrosion, paint failure, section loss, missing or loose connections</p> <p>Masonry – cracking, freeze-thaw</p> <p>MVA – Motor vehicle accident</p>

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Rating	Description
Poor	<p>Distress present threatens structure function, and strength is compromised and/or structural analysis is warranted.</p> <p>The structure condition does not pose an immediate threat to wall stability and closure is not necessary.</p> <p>Ratings of Poor indicate marginally functioning, severely distressed structures in jeopardy of failing without repair or replacement in the near term.</p> <p>Repair or replacement is required.</p> <p>Close monitoring is recommended at deteriorated structural elements until repairs are completed.</p> <p>Examples of Defects: MSE – Bulging or deformation, cracking, corrosion of reinforcements, inadequate drainage, soil erosion, wall panel displacement, vegetation growth, facing deterioration, loss of soil fill Concrete – spalling, cracking, leaching, scaling, delamination Timber – weathering, splitting, rot, decay Steel – corrosion, paint failure, section loss, missing or loose connections Masonry – cracking, freeze-thaw, mortar breakdown MVA – Motor vehicle accident</p>
Critical	<p>Structure is no longer serving intended function.</p> <p>Structure performance is threatening overall stability at the time of inspection.</p> <p>Ratings of Critical indicate a structure that is no longer functioning as intended, and is in danger of failing at any time.</p> <p>Requires Immediate repair or removal and the issuance of a Category A Report.</p> <p>Retaining walls supporting the roadway must be closely monitored and the roadway carrying traffic supported by the wall should be closed until repairs are completed.</p>

MSE WALLS – THRESHOLDS FOR ACTION

When defects are noted during the inspection of MSE walls which warrant more frequent monitoring (Category E) the following criteria should be used to trigger when long-term monitoring and repair procedures defined below should commence.

Defects	Description
Displacement	<ul style="list-style-type: none"> – Top of wall displacement in excess of 1.5% of the wall height or 4" max, whichever is less, determined by survey or using plumb bobs. – Bulging of the wall in excess of 1.5", determined by survey or using a 6' straight edge and ruler. – Changes in top of wall displacement from previous inspection (6-year cycle) of more than 0.5".
Rotation	<ul style="list-style-type: none"> – Wall rotation in excess of 0.5 degrees for walls taller than 25 feet or wall rotation in excess of 1.0 degree for walls 25 feet or less in height. Field measured using a clinometer to measure the inclination along a 6-foot straight edge or by survey. – Changes in wall rotation in excess of 0.2 degrees observed from the previous inspection (6-year cycle).
Settlement / Differential Settlement	<ul style="list-style-type: none"> – Post construction settlement in excess of 2". – Post construction differential settlement in excess 1/200 (AASHTO C11.11.3). – Review the existing soil borings to assess the likelihood of time dependent settlement (i.e., wall is underlain by clays or organic soils). – Look for indications of settlement such as differential facing joint openings or for signs of migration of soil from pipe, utility, or water flow. – If settlement is anticipated based on the two bullets above, perform baseline survey measurements during initial condition survey, with northing, easting, and elevation measured at top of wall, every 200 feet along the wall or a minimum of 3 locations, whichever is greater. – Resurvey the same points at each 6-year cycle to assess settlement and differential settlement. – The tolerable magnitude of settlement shall be assessed on an individual location basis considering adjacent bridge overhead clearances (i.e for MSE abutments).

Long Term Monitoring and Repair Procedures

The long-term monitoring and repair procedure defined below is to be performed as soon as possible, ideally within a 30 day time frame for monitoring, exploration, and analysis to be performed for MSE Walls. This shall include:

- **Monitoring**
 - Monitor the wall for rotation and temperature at a minimum interval of monthly for a six month period. If the wall continues to rotate (other than rotations which appear to be cyclical thermal fluctuations) during the six month period, install tiltmeters to continuously monitor the wall with data reported at a 15 minute increment. Equipment for monitoring wall rotation shall have an accuracy of ± 0.003 degrees within ± 5 degree tilt range or an accuracy of ± 0.010 degrees within a ± 15 degree tilt range.
 - Monitor the wall for settlement at a minimum interval of monthly for a six month period.
 - Install crack gauges on facing joints which have aperture of 1" or more and cracks which have aperture of 0.25" or more and monitor monthly for a period of 6 months.

- **Exploration**
 - If the MSE wall included metallic reinforcement (opposed to geosynthetics), perform exploratory test pits (minimum of 3 per wall, or every 250' along the wall, whichever is greater) to verify the condition of the reinforcement (corrosion loss)
 - Use geophysical survey methods to verify the reinforcement length

- **Analysis**
 - Perform limit equilibrium global stability analysis for the drained (long term) and undrained (short term) conditions considering circular and non-circular failure surfaces.
 - Perform MSE wall External Stability calculations including bearing resistance, sliding resistance, eccentricity, and settlement calculations in accordance with AASHTO LRFD BDS.
 - Perform MSE wall Internal Stability calculations considering tensile resistance of reinforcement and pullout resistance of reinforcement in accordance with AASHTO LRFD BDS.

- **Repair or Replacement**
 - Repair or replacement alternatives will be recommended if results of the analysis do not satisfy any of the following AASHTO requirements:
 - Resistance factor of 0.75 ($\sim FS=1.3$) for Global Stability
 - Resistance factor of 0.65 for Bearing Resistance
 - Resistance factor of 1.00 for Sliding Resistance

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- Resistance factor of 0.75 for strip reinforcement tensile resistance
- Resistance factor of 0.65 for grid reinforcement tensile resistance
- Resistance factor of 0.90 for Pullout Resistance
- Eccentricity as AASHTO LRFD BDS requirements
- Repair alternatives to be considered may include the following supplemental elements:
 - Soil nails through each panel or with a supplemental facing
 - Drilled and grouted tieback ground anchors (strand or bar) with walers and/or supplemental facing
 - Deadman with tie rods and walers or supplement facing
 - Rakers and walers
 - Underpinning
 - Toe wall in front of wall
 - Toe berm
 - Excavation and replacement with lightweight fill material
 - Drilled soldier pile and lagging or micropile and lagging wall in front

E. ELEMENT LEVEL INSPECTION

Retaining wall and noise barrier elements represent the primary structural components of a retaining wall and noise barrier necessary to determine the overall condition and safety state of the asset. The retaining wall and noise barrier inspection includes defining the elements and total quantities that exist at each asset. The condition of each element is determined by performing a field inspection and recording quantities of the element that have identified defects that correlate to the severity of the defects defined in the particular condition state. Inspectors should assign Condition States based on the overall condition of the element and its ability to function properly.

The following are the Agency Defined Elements (ADE's):

- 9100-NBRW.01 – Wall/Panel RC
- 9101-NBRW.02 – Wall/Panel Steel
- 9102-NBRW.03 – Wall/Panel Timber
- 9103-NBRW.04 – Wall/Panel Masonry
- 9104-NBRW.05 – Wall/Panel Other
- 9105-NBRW.06 – Vertical Support RC
- 9106-NBRW.07 – Vertical Support Steel
- 9107-NBRW.08 – Vertical Support Timber
- 9108-NBRW.09 – Vertical Support Masonry
- 9109-NBRW.10 – Vertical Support Other
- 9110-NBRW.11 – Construction/Expansion Joint
- 9111-NBRW.12 – Foundation (Exposed Portion)
- 9112-NBRW.13 – Barrier

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The following protective systems may be applicable in the inspection of a retaining wall and noise barrier:

- 515 – Steel Protective Coating
- 520 – Concrete Reinforcing Steel Protective Coating
- 521 – Concrete Protective Coating

Additionally, the following defects may be applicable in the inspection of a retaining wall and noise barrier:

- 1000 – Corrosion
- 1010 – Cracking
- 1020 – Connection
- 1080 – Delamination/Spall/Patched Area
- 1090 – Exposed Rebar
- 1120 – Efflorescence/Rust Staining
- 1130 – Cracking (RC and Other)
- 1140 – Decay/Section Loss
- 1150 – Check/Shake
- 1160 – Crack (Timber)
- 1170 – Split/Delamination
- 1180 – Abrasion/Wear (Timber)
- 1190 – Abrasion/Wear (PSC/RC)
- 1220 – Deterioration (Other)
- 1610 – Mortar Breakdown (Masonry)
- 1620 – Split/Spall (Masonry)
- 1630 – Patched Area (Masonry)
- 1640 – Masonry Displacement
- 1900 – Distortion
- 2210 – Movement
- 2220 – Alignment
- 2310 – Leakage
- 2320 – Seal Adhesion
- 2330 – Seal Damage
- 2340 – Seal Cracking
- 3410 – Chalking (Steel Protective Coating)
- 3420 – Pelling/Bubbling/Cracking (Steel Protective Coating)
- 3430 – Oxide Film Degradation Color/Texture Adherence (Steel Protective Coating)
- 3440 – Effectiveness (Steel Protective Coating)
- 3510 – Wear (Concrete Protective Coating)
- 3540 – Effectiveness (Concrete Protective Coating)

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- 3600 – Effectiveness – protective System (e.g. cathodic)
- 4000 – Settlement
- 6000 – Scour
- 7000 – Damage
- 8001 – Erosion/Undermining (Slope Protection)
- 9910 – Bulging
- 9920 – Vertical Rotation
- 9930 – Horizontal Rotation
- 9940 – Separation
- 9950 – Graffiti
- 9960 – Vegetation Growth
- 9990 – Freeze-thaw Damage

All elements have four defined condition states:

- Condition State 1 – Good
- Condition State 2 – Fair
- Condition State 3 – Poor
- Condition State 4 – Critical

Refer to Table 3 (Overall Condition Rating of Structure) for general descriptions of the condition states, and refer to the AASHTO Manual for Bridge Element Inspection (AMBEI) for detailed element guidance and condition state examples.

10. QUALITY CONTROL AND QUALITY ASSURANCE REVIEWS

Refer to Appendix A of the Authority's Bridge Inspection Program Quality Management Plan (QMP) for quality control and quality assurance reviews and Retaining Wall and Noise Barrier Inspection Checklists.

https://www.njta.com/media/5606/2020-08-28-bi-program-quality-management-plan_v12-final.pdf.

11. REPORTING OF EMERGENCY DEFICIENCIES

Refer to the Authority Deficiency Category Definitions document to identify the severity of deficiencies noted in retaining wall and noise barrier inspection reports which help in future planning of Maintenance and Contract Improvements.

<https://www.njta.com/media/5394/authority-deficiency-category-definitions-v20-6-2020.pdf>

12. SAMPLE ROUTINE, DAMAGE, AND INTERIM REPORTS

A. ROUTINE INSPECTION REPORT



**Retaining Wall/Noise Barrier
Inspection Report**

Structure No.

Cycle No.:

Prepared By:

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NEW JERSEY TURNPIKE AUTHORITY

CONTRACT HISTORY

TYPE	CONTRACT NO.	DESCRIPTION OF WORK	YEAR
------	--------------	---------------------	------

GENERAL INFORMATION

RETAINING WALL/NOISE BARRIER DATA:

STRUCTURE NAME:

STRUCTURE TYPE:

FEATURE IN FRONT OF WALL:

ADT (IF ROADWAY):

FEATURE AT REAR OF WALL:

ADT (IF ROADWAY):

FREESTANDING INDEPENDENT OF BRIDGE STRUCTURE:

EXTENSION OF STRUCTURE NO.:

BUILT BY CONTRACT NO.:

YEAR BUILT:

AS BUILT DRAWINGS AVAILABLE:

CONTRACT DRAWING WALL NUMBER:

DRAWING PAGE NUMBER(S):

SHOP DRAWINGS AVAILABLE:

WALL NO. FROM SHOP DRAWINGS

MANUFACTURER:

MP (BEGINNING):

MP (END):

LATITUDE (BEGINNING): Degrees

LONGITUDE (BEGINNING): Degrees

LATITUDE (END): Degrees

LONGITUDE (END): Degrees

LENGTH (L): Feet

TOP OF WALL WIDTH (W): Feet

WIDTH AT BASE (W): Feet

MINIMUM EXPOSED HEIGHT (H): Feet

MAXIMUM EXPOSED HEIGHT (H): Feet

FILL HEIGHT: Feet

REINFORCED BACKFILL TYPE:

OVERALL HEIGHT MINIMUM: Feet

OVERALL HEIGHT MAXIMUM: Feet

SLOPE IN FRONT OF WALL: Degrees

SLOPE BEHIND WALL: Degrees

AS-BUILT WALL BATTER: Degrees

EMBEDMENT DEPTH: Feet

PARAPET/BARRIER ALONG CAP:

PARAPET/BARRIER HEIGHT: Feet

OFFSET TO EDGE OF PAVEMENT: Feet

AS-BUILT DISTANCE TO STREAM: Feet

CONSTRUCTION/MATERIAL TYPE:

FOUNDATION TYPE: Soil Bearing:

Pile Bearing:

Tied Back/Anchored:

Drilled Caisson:

INSPECTION INFORMATION:

INSPECTION GROUP:

OPS NO.:

FIRM:

TEAM LEADER:

ASSISTANT TEAM LEADER:

SUPPORT STAFF:

SPECIAL EQUIPMENT USED:

PHOTO:

MPT:

PHOTO:

WEATHER:

TEMPERATURE:

°F

UNDERWATER INSPECTION REQUIRED:

NEW JERSEY TURNPIKE AUTHORITY

Str.

Date:

Cycle:

CONCLUSIONS

OVERALL RATING:

GENERAL REMARKS:

No contract repairs are recommended for this structure.

SCHEDULED/ONGOING OR COMPLETED WORK:

This structure has no scheduled, ongoing or work done since the previous inspection.

CATEGORY A:

If no items warrant discussion enter "N/A".

CATEGORY 'E' MONITORING:

There are no deficiencies which require monitoring at this time.

This legend relates to the overall rating of the components:

<i>Rating</i>	<i>Description</i>
1	<i>Good: Distress present does not significantly compromise the structure function, nor is there significant severe distress to major structural components. Ratings of Good indicate highly functioning structures that are only beginning to show the first signs of distress or weathering.</i>
2	<i>Fair: Distress present does not compromise structure function, but lack of treatment may lead to impaired function and/or elevated risk of structure failure in the near term. Ratings of Fair indicate functioning structures with specific distresses that need to be mitigated in the near term to avoid significant repair or replacement in the longer term.</i>
3	<i>Poor: Distress present threatens structure function, and strength is compromised and/or structural analysis is warranted. The structure condition does not pose an immediate threat to wall stability and closure is not necessary. Ratings of Poor indicate marginally functioning, severely distressed structures in jeopardy of failing without repair or replacement in the near term.</i>
4	<i>Critical: Structure is no longer serving intended function. Structure performance is threatening overall stability at the time of inspection. Ratings of Critical indicate a structure that is no longer functioning as intended, and is in danger of failing at any time.</i>

This legend relates to the site inspection section:

<i>Repair</i>	<i>Description</i>
<i>N/A:</i>	<i>Contract repair has not been recommended</i>
<i>A:</i>	<i>Category A</i>
<i>B/C:</i>	<i>Contract work</i>
<i>**</i>	<i>Defect recommended for repair</i>

NEW JERSEY TURNPIKE AUTHORITY

Str.:

Date:

Cycle:

WALL FACING/PANEL

MATERIAL:

WALL BATTER FIELD MEASURED (DEGREES):

DISTANCE TO STREAM FIELD MEASURED (FEET):

	N/A	A	B		QTY	PHOTO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SPALL/SCALE/DELAMINATION/PATCHED AREA		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CRACKING/EFFLORESCENCE/RUST STAINS		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TOTAL SETTLEMENT/DIFFERENTIAL SETTLEMENT/TILTING		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BULGING/BOWING/DISTORTION/DISPLACEMENT/LOOSE/ DETACHED FACING		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SEPARATION OF MEMBERS (GAPS)		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CORROSION/SECTION LOSS		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EROSION/SCOUR		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TIMBER WEATHERING/SPLITS/CHECKS/ROT		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	IMPACT DAMAGE		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OTHER		

Notes:

VERTICAL SUPPORT

MATERIAL:

DISTANCE TO STREAM FIELD MEASURED (FEET):

N/A A B

QTY PHOTO

SPALL/SCALE/DELAMINATION/PATCHED AREA

--	--

CRACKING/EFFLORESCENCE/RUST STAINS

--	--

ROTATION/SETTLEMENT

--	--

BULGING/DISTORTION/DISPLACEMENT

--	--

CORROSION/SECTION LOSS

--	--

EROSION/SCOUR

--	--

TIMBER WEATHERING/SPLITS/CHECKS/ROT

--	--

IMPACT DAMAGE

--	--

OTHER

--	--

Notes:

NEW JERSEY TURNPIKE AUTHORITY

Str.:

Date:

Cycle:

CONSTRUCTION/EXPANSION JOINT

N/A A B

FILLER DETERIORATED/MISSING

QTY	PHOTO

MORTAR BREAKDOWN

--	--

LEAKING/LEACHING

--	--

EXFILTRATION/INFILTRATION

--	--

OTHER

--	--

Notes:

FOUNDATION

SCOUR/EROSION PROTECTION PRESENT

TYPE:

N/A A B

SPALL/SCALE/DELAMINATION/PATCHED AREA

QTY	PHOTO

EROSION/SCOUR/UNDERMINING

--	--

SETTLEMENT

--	--

OTHER

--	--

Notes:

NEW JERSEY TURNPIKE AUTHORITY

Str.:

Date:

Cycle:

ANCHORAGE

MATERIAL/PROTECTIVE COATING:

N/A A B

SECTION LOSS/CORROSION

QTY	PHOTO

MISSING

--	--

OTHER

--	--

Notes

CONNECTION

N/A A B

MISSING/BROKEN/BENDING

QTY	PHOTO

CORROSION/SECTION LOSS

--	--

OTHER

--	--

Notes

NEW JERSEY TURNPIKE AUTHORITY

Str.:

Date:

Cycle:

ROADWAY CARRIED ABOVE WALL

N/A A B

CRACKS/SEPARATIONS

QTY	PHOTO

SPALLS/POTHOLES

--	--

SETTLEMENT/DEPRESSION/SAG

--	--

Notes:

ROADWAY ALONG FRONT OF WALL

N/A A B

CRACKS/SEPARATIONS

QTY	PHOTO

SPALLS/POTHOLES

--	--

SETTLEMENT/DEPRESSION/SAG

--	--

OTHER

--	--

Notes:

NEW JERSEY TURNPIKE AUTHORITY

Str.:

Date:

Cycle:

GUIDE RAIL LOWER ROAD/BASE OF WALL

N/A A B

UNANCHORED

QTY	PHOTO

RAIL/POST DAMAGE

--	--

CORROSION

--	--

OTHER

--	--

Notes:

GUIDE RAIL TOP OF ROAD/ROAD CARRIED

N/A A B

UNANCHORED

QTY	PHOTO

RAIL/POST DAMAGE

--	--

CORROSION

--	--

OTHER

--	--

Notes:

BARRIER LOWER ROAD/BASE OF WALL

N/A A B

SPALL/SCALE/DELAMINATION/PATCHED AREA

QTY PHOTO

--	--

CRACKING/ EFFLOESCENCE/RUST STAINS

--	--

ROTATION/SETTLEMENT

--	--

DAMAGE

--	--

OTHER

--	--

Notes:

BARRIER TOP OF ROAD/ROAD CARRIED

N/A A B

SPALL/SCALE/DELAMINATION/PATCHED AREA

QTY PHOTO

--	--

CRACKING/ EFFLOESCENCE/RUST STAINS

--	--

ROTATION/SETTLEMENT

--	--

DAMAGE

--	--

OTHER

--	--

Notes:

NEW JERSEY TURNPIKE AUTHORITY

Str.:

Date:

Cycle:

FENCE (ON TOP)

N/A A B

FABRIC

QTY	PHOTO

FRAMEWORK

--	--

CONNECTION

--	--

DAMAGE

--	--

OTHER

--	--

Notes:

LIGHTING STANDARDS AND JUNCTION BOXES

N/A A B

MISSING

QTY	PHOTO

HANDHOLE COVER

--	--

ANCHOR BOLT DETERIORATION

--	--

JUNCTION BOX

--	--

OTHER

--	--

Notes:

RIGHT OF WAY SECURITY

N/A A B

ROW FENCE DAMAGE

QTY PHOTO

--	--

MISSING/DAMAGED LOCK

--	--

Notes:

DRAINAGE

N/A A B

CLOGGING

QTY PHOTO

--	--

WATER ACCUMULATION AT TOP OF WALL

--	--

WATER ACCUMULATION AT BASE OF WALL

--	--

DRAINAGE PROBLEMS/ DEFECTS

--	--

BACKFILL SPILL OUT

--	--

OTHER

--	--

Notes:

UTILITIES

N/A A B

BROKEN LINES

QTY PHOTO

--	--

PIPE LEAKAGE

--	--

Notes:

HOUSEKEEPING

N/A A B

VEGETATION GROWTH

QTY	PHOTO

DEBRIS ACCUMULATION

--	--

PAINT VANDALISM

--	--

DUMPING/LITTERING

--	--

OTHER

--	--

Notes:



Report

Maintenance District:

Milepost: RW (MSE) form field additions 2023 update

Structure Name:

Status: Created

Type:

Created By: Hall,Suzanne

Created Date: 06/26/2023

Updated By:

Updated Date:

Observed By:

Date Observed:

Type of Damage:

Description:

- Beyond Resources of Maintenance Department
- Assigned to Maintenance Department IR Contractor

Maintenance Remarks:

- Responsibility of Outside Agency

Engineering Remarks:

Date Completed:

Inspector: Suzanne Hall

Structure Number: RW MSE

Inspection Date:

Facility Carried:

Retaining Wall / Noise Barrier Inspection Report

Pictures

Photographs

RW (MSE) form field additions 2023 update



07/17/2023

Photograph No. 1
Front Elevation, sample.



07/17/2023

Photograph No. 2
Rear Elevation, sample.

Photographs

RW (MSE) form field additions 2023 update



07/17/2023

Photograph No. 3
Retaining Wall Elevation, sample.



07/17/2023

Photograph No. 4
Roadway atop retaining wall, sample.

NEW JERSEY TURNPIKE AUTHORITY

Str.:

Date:

Cycle:

ELEMENT LEVEL INSPECTION

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
9100-NBRW.01 Wall/Panel RC	3 - Mod.	0	sq. ft.	0	0	0	0
1010-Cracking		0		0	0	0	0
1080-Delamination/Spall/Patched Area		0		0	0	0	0
1090-Exposed Rebar		0		0	0	0	0
1120-Efflorescence/Rust Staining		0		0	0	0	0
1190-Abrasion/Wear (PSC/RC)		0		0	0	0	0
1900-Distortion		0		0	0	0	0
2210-Movement		0		0	0	0	0
2220-Alignment		0		0	0	0	0
3510-Wear (Concrete Protective Coatings)		0		0	0	0	0
3540-Effectiveness (Concrete Protective Coatings)		0		0	0	0	0
4000-Settlement		0		0	0	0	0
6000-Scour		0		0	0	0	0
7000-Damage		0		0	0	0	0
9910-Bulging (RC RW/NB Panel)		0		0	0	0	0
9920-Vertical Rotation (RC RW/NB Panel)		0		0	0	0	0
9930-Horizontal Rotation (RC RW/NB Panel)		0		0	0	0	0
9940-Separation (RC RW/NB Panel)		0		0	0	0	0
9950-Graffiti (RC RW/NB Panel)		0		0	0	0	0
9960-Vegetation Growth (RC RW/NB Panel)		0		0	0	0	0
9990-Freeze-thaw Damage (RC RW/NB Panel)		0		0	0	0	0
520-Concrete Reinforcing Steel Protective System		0	sq. ft.	0	0	0	0
521-Concrete Protective Coating		0	sq. ft.	0	0	0	0
9101-NBRW.02 Wall/Panel Steel	3 - Mod.	0	sq. ft.	0	0	0	0
1000-Corrosion		0		0	0	0	0
1010-Cracking		0		0	0	0	0
1020-Connection		0		0	0	0	0
1900-Distortion		0		0	0	0	0
2210-Movement		0		0	0	0	0
2220-Alignment		0		0	0	0	0
3410-Chalking (Steel Protective Coatings)		0		0	0	0	0

NEW JERSEY TURNPIKE AUTHORITY

Str.:

Date:

Cycle:

ELEMENT LEVEL INSPECTION

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
3420-Peeling/Bubbling/Cracking (Steel Protective Coatings)		0		0	0	0	0
3430-Oxide Film Degradation Color/Texture Adherence(Steel Protective Coatings)		0		0	0	0	0
3440-Effectiveness (Steel Protective Coatings)		0		0	0	0	0
4000-Settlement		0		0	0	0	0
6000-Scour		0		0	0	0	0
7000-Damage		0		0	0	0	0
9920-Vertical Rotation (RC RW/NB Panel)		0		0	0	0	0
9930-Horizontal Rotation (RC RW/NB Panel)		0		0	0	0	0
9940-Separation (RC RW/NB Panel)		0		0	0	0	0
9950-Graffiti (RC RW/NB Panel)		0		0	0	0	0
9960-Vegetation Growth (RC RW/NB Panel)		0		0	0	0	0
515-Steel Protective Coating		0	sq. ft.	0	0	0	0
9102-NBRW.03 Wall/Panel Timber	3 - Mod.	0	sq. ft.	0	0	0	0
1140-Decay/Section Loss		0		0	0	0	0
1150-Check/Shake		0		0	0	0	0
1160-Crack (Timber)		0		0	0	0	0
1170-Split/Delamination (Timber)		0		0	0	0	0
1180-Abrasion/Wear (Timber)		0		0	0	0	0
1220-Deterioration (Other)		0		0	0	0	0
1900-Distortion		0		0	0	0	0
2210-Movement		0		0	0	0	0
2220-Alignment		0		0	0	0	0
4000-Settlement		0		0	0	0	0
9103-NBRW.04 Wall/Panel Masonry	3 - Mod.	0	sq. ft.	0	0	0	0
1120-Efflorescence/Rust Staining		0		0	0	0	0
1130-Cracking (RC and Other)		0		0	0	0	0
1610-Mortar Breakdown (Masonry)		0		0	0	0	0
1620-Split/Spall (Masonry)		0		0	0	0	0
1630-Patched Area (Masonry)		0		0	0	0	0
1640-Masonry Displacement		0		0	0	0	0
2210-Movement		0		0	0	0	0
2220-Alignment		0		0	0	0	0
4000-Settlement		0		0	0	0	0
6000-Scour		0		0	0	0	0

NEW JERSEY TURNPIKE AUTHORITY

Str.:

Date:

Cycle:

ELEMENT LEVEL INSPECTION

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
7000-Damage		0		0	0	0	0
9920-Vertical Rotation (RC RW/NB Panel)		0		0	0	0	0
9930-Horizontal Rotation (RC RW/NB Panel)		0		0	0	0	0
9940-Separation (RC RW/NB Panel)		0		0	0	0	0
9950-Graffiti (RC RW/NB Panel)		0		0	0	0	0
9960-Vegetation Growth (RC RW/NB Panel)		0		0	0	0	0
9990-Freeze-thaw Damage (RC RW/NB Panel)		0		0	0	0	0
9104-NBRW.05 Wall/Panel Other	3 - Mod.	0	sq. ft.	0	0	0	0
1010-Cracking		0		0	0	0	0
1130-Cracking (RC and Other)		0		0	0	0	0
1140-Decay/Section Loss		0		0	0	0	0
1220-Deterioration (Other)		0		0	0	0	0
1900-Distortion		0		0	0	0	0
2210-Movement		0		0	0	0	0
2220-Alignment		0		0	0	0	0
4000-Settlement		0		0	0	0	0
6000-Scour		0		0	0	0	0
7000-Damage		0		0	0	0	0
9910-Bulging (RC RW/NB Panel)		0		0	0	0	0
9920-Vertical Rotation (RC RW/NB Panel)		0		0	0	0	0
9930-Horizontal Rotation (RC RW/NB Panel)		0		0	0	0	0
9940-Separation (RC RW/NB Panel)		0		0	0	0	0
9950-Graffiti (RC RW/NB Panel)		0		0	0	0	0
9960-Vegetation Growth (RC RW/NB Panel)		0		0	0	0	0
9990-Freeze-thaw Damage (RC RW/NB Panel)		0		0	0	0	0
9105-NBRW.06 Vertical Support RC	3 - Mod.	0	each	0	0	0	0
1000-Corrosion		0		0	0	0	0
1010-Cracking		0		0	0	0	0
1020-Connection		0		0	0	0	0
1080-Delamination/Spall/Patched Area		0		0	0	0	0
1090-Exposed Rebar		0		0	0	0	0
1120-Efflorescence/Rust Staining		0		0	0	0	0
1130-Cracking (RC and Other)		0		0	0	0	0

NEW JERSEY TURNPIKE AUTHORITY

Str.:

Date:

Cycle:

ELEMENT LEVEL INSPECTION

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
1190-Abrasion/Wear (PSC/RC)		0		0	0	0	0
1220-Deterioration (Other)		0		0	0	0	0
1900-Distortion		0		0	0	0	0
2210-Movement		0		0	0	0	0
2220-Alignment		0		0	0	0	0
4000-Settlement		0		0	0	0	0
6000-Scour		0		0	0	0	0
7000-Damage		0		0	0	0	0
9920-Vertical Rotation (RC RW/NB Panel)		0		0	0	0	0
9950-Graffiti (RC RW/NB Panel)		0		0	0	0	0
9960-Vegetation Growth (RC RW/NB Panel)		0		0	0	0	0
520-Concrete Reinforcing Steel Protective System		0	sq. ft.	0	0	0	0
521-Concrete Protective Coating		0	sq. ft.	0	0	0	0
9106-NBRW.07 Vertical Support Timber	3 - Mod.	0	each	0	0	0	0
1140-Decay/Section Loss		0		0	0	0	0
1150-Check/Shake		0		0	0	0	0
1160-Crack (Timber)		0		0	0	0	0
1170-Split/Delamination (Timber)		0		0	0	0	0
1180-Abrasion/Wear (Timber)		0		0	0	0	0
1900-Distortion		0		0	0	0	0
2210-Movement		0		0	0	0	0
2220-Alignment		0		0	0	0	0
4000-Settlement		0		0	0	0	0
6000-Scour		0		0	0	0	0
7000-Damage		0		0	0	0	0
9107-NBRW.08 Vertical Support Steel	3 - Mod.	0	each	0	0	0	0
1000-Corrosion		0		0	0	0	0
1010-Cracking		0		0	0	0	0
1020-Connection		0		0	0	0	0
1900-Distortion		0		0	0	0	0
2210-Movement		0		0	0	0	0
2220-Alignment		0		0	0	0	0
3410-Chalking (Steel Protective Coatings)		0		0	0	0	0
3420-Peeling/Bubbling/Cracking (Steel Protective Coatings)		0		0	0	0	0

NEW JERSEY TURNPIKE AUTHORITY

Str.:

Date:

Cycle:

ELEMENT LEVEL INSPECTION

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
3430-Oxide Film Degradation Color/Texture Adherence(Steel Protective Coatings)		0		0	0	0	0
3440-Effectiveness (Steel Protective Coatings)		0		0	0	0	0
3600-Effectiveness - Protective System (e.g. cathodic)		0		0	0	0	0
4000-Settlement		0		0	0	0	0
6000-Scour		0		0	0	0	0
7000-Damage		0		0	0	0	0
9108-NBRW.09 Vertical Support Masonry	3 - Mod.	0	each	0	0	0	0
1610-Mortar Breakdown (Masonry)		0		0	0	0	0
1620-Split/Spall (Masonry)		0		0	0	0	0
1630-Patched Area (Masonry)		0		0	0	0	0
1640-Masonry Displacement		0		0	0	0	0
1900-Distortion		0		0	0	0	0
2210-Movement		0		0	0	0	0
2220-Alignment		0		0	0	0	0
4000-Settlement		0		0	0	0	0
6000-Scour		0		0	0	0	0
7000-Damage		0		0	0	0	0
9109-NBRW.10 Vertical Support Other	3 - Mod.	0	each	0	0	0	0
1000-Corrosion		0		0	0	0	0
1010-Cracking		0		0	0	0	0
1020-Connection		0		0	0	0	0
1130-Cracking (RC and Other)		0		0	0	0	0
1220-Deterioration (Other)		0		0	0	0	0
1900-Distortion		0		0	0	0	0
2210-Movement		0		0	0	0	0
2220-Alignment		0		0	0	0	0
4000-Settlement		0		0	0	0	0
6000-Scour		0		0	0	0	0
7000-Damage		0		0	0	0	0
9110-NBRW.11 Construction/Expansion Joint	3 - Mod.	0	ft.	0	0	0	0
1220-Deterioration (Other)		0		0	0	0	0
1610-Mortar Breakdown (Masonry)		0		0	0	0	0
2310-Leakage		0		0	0	0	0
2320-Seal Adhesion		0		0	0	0	0

NEW JERSEY TURNPIKE AUTHORITY

Str.:

Date:

Cycle:

ELEMENT LEVEL INSPECTION

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
2330-Seal Damage		0		0	0	0	0
2340-Seal Cracking		0		0	0	0	0
9960-Vegetation Growth (RC RW/NB Panel)		0		0	0	0	0
9111-NBRW.12 Foundation	3 - Mod.	0	sq. ft.	0	0	0	0
1080-Delamination/Spall/Patched Area		0		0	0	0	0
1090-Exposed Rebar		0		0	0	0	0
1120-Efflorescence/Rust Staining		0		0	0	0	0
1130-Cracking (RC and Other)		0		0	0	0	0
1900-Distortion		0		0	0	0	0
2210-Movement		0		0	0	0	0
2220-Alignment		0		0	0	0	0
3540-Effectiveness (Concrete Protective Coatings)		0		0	0	0	0
3600-Effectiveness - Protective System (e.g. cathodic)		0		0	0	0	0
4000-Settlement		0		0	0	0	0
6000-Scour		0		0	0	0	0
7000-Damage		0		0	0	0	0
8001-Erosion/Undermining (Slope Protection)		0		0	0	0	0
520-Concrete Reinforcing Steel Protective System		0	sq. ft.	0	0	0	0
521-Concrete Protective Coating		0	sq. ft.	0	0	0	0
9112-NBRW.13 Barrier	3 - Mod.	0	ft.	0	0	0	0
1000-Corrosion		0		0	0	0	0
1010-Cracking		0		0	0	0	0
1020-Connection		0		0	0	0	0
1080-Delamination/Spall/Patched Area		0		0	0	0	0
1090-Exposed Rebar		0		0	0	0	0
1120-Efflorescence/Rust Staining		0		0	0	0	0
1130-Cracking (RC and Other)		0		0	0	0	0
1900-Distortion		0		0	0	0	0
2210-Movement		0		0	0	0	0
2220-Alignment		0		0	0	0	0
4000-Settlement		0		0	0	0	0
7000-Damage		0		0	0	0	0
520-Concrete Reinforcing Steel Protective System		0	sq. ft.	0	0	0	0
521-Concrete Protective Coating		0	sq. ft.	0	0	0	0

NEW JERSEY TURNPIKE AUTHORITY

Str.:

Date:

Cycle:

REPORT CHECKLIST QCF 1.6 - RETAINING WALL/NOISE BARRIER CHECKLIST

CONSULTANT INSPECTECH REPORT QUALITY CONTROL REVIEW

QA/QC:

Date:

Number of most recent notification:

General

Contract History

Add list of construction contracts which have worked on the retaining wall or noise barrier.

Work Done

Check for work done on the retaining wall or noise barrier between inspection cycles. Go to the Maintenance tab for Category A's, the Asset Info Tab for History/Notes, and the Quick View for Contract Information.

Note: Only Open Category A Reports are shown on the Maintenance Tab you must check the box to show completed maintenance items and include any information for work completed since the previous inspection.

Photographs

Order of Photographs

General Photos: Elevation (2: Front Face and Rear Face for NB, or RW with fill/slope behind, Front Face and Top of Roadway for Retaining Wall Supporting Roadways)

Category A Photos: A1, A2, A3, GR, Utility

Defect Photos (In order of field notes): Wall Facing/Panel, Vertical Support, Construction/Expansion Joint, Foundation, Anchorage, Connection, Roadway Carried Above Wall, Roadway Along Front of Wall, Guide Rail, Barrier, Fence, Lighting Standards and Junction Boxes, ROW Security, Drainage, Utilities, Housekeeping

Work done photos are incorporated with defect photos by element.

Equipment and MPT Photos (If they have not already been included). It is preferred that equipment photo is taken while equipment is in use.

Defect Photos

Upload photos of all defects particularly those that require monitoring to the asset files. Only typical / representative defect photos need to be included in the Photographs Report Section. Photo references should be included in the field forms when a repair is recommended (A or B) else leave blank and include representative defect photo in photographs section only.

Report Sections

Category A Reports

Select to include all open Category A Reports and reports completed since last inspection with the current inspection report on the Category A report form.

Underwater Inspection Report/Soundings Survey

Add Underwater Inspection Report or Soundings Survey as a PDF attachment to the Report Sections.

File Uploads

Field Sketches

Upload Field Sketches to "File". Applicable only when the template for the field sketch is used to collect data during the inspection.

Working Files

Upload all working files to their own File Type. This includes: underwater inspection report or soundings survey, field sketches, etc.

Final Report

Upload the Final Report PDF to "NBIS Report".

Drawings

Upload As-Built contract drawings and Shop Drawings for MSE Walls to the "Drawing" file type.

B. INTERIM INSPECTION REPORT



**Interim Inspection Report
For**

Structure No.

over

Monitoring No.

**Prepared By:
HNTB**

TABLE OF CONTENTS

	PAGE NUMBER
INTERIM HISTORY	3
ANCILLARY INTERIM GENERAL INFORMATION	4
INTERIM INSPECTION FINDINGS	5
PHOTOGRAPHS	6
CATEGORY A REPORTS	7

NEW JERSEY TURNPIKE AUTHORITY

INTERIM INSPECTION HISTORY

MONITORING NO.	DATE	ELEMENT
----------------	------	---------

NEW JERSEY TURNPIKE AUTHORITY

Str.:

Date:

Monitoring No.:

INTERIM GENERAL INFORMATION

NAME:

over

STRUCTURE NO.:

OPS NO.:

FIRM:

HNTB

TEAM LEADER:

ASSISTANT TEAM LEADER:

SUPPORT STAFF:

PREVIOUS INSPECTION DATE:

WEATHER:

AIR TEMPERATURE:

DEGREES F

SPECIAL EQUIPMENT:

MPT:

NEW JERSEY TURNPIKE AUTHORITY

Str.:

Date:

Monitoring No.:

INTERIM INSPECTION FINDINGS

MONITORING NO.:

DATE OF INTERIM INSPECTION:

FREQUENCY OF INSPECTION:

MEMBERS REQUIRING INTERIM INSPECTION:

REASON FOR INTERIM INSPECTION:

FINDINGS:

CONCLUSIONS AND RECOMMENDATIONS:

Photographs

NEW JERSEY TURNPIKE AUTHORITY

Str.:

Date:

Monitoring No.:

REPORT CHECKLIST QCF 1.9 - INTERIM INSPECTION REPORT CHECKLIST

CONSULTANT INSPECTECH REPORT QUALITY CONTROL REVIEW

QA/QC:

Date:

General

Work Done

Check for work done on the structure between inspections. Go to the Maintenance tab for Category A's, the Asset Info Tab for History/Notes, and the Quick View for Contract Information.

Note: Only Open Category A Reports are shown on the Maintenance Tab you must check the box to show completed maintenance items and include any information for work completed since the previous inspection.

Attachment(s)

Additional report sections, as applicable, including but not limited to field notes, sketches, tables, plans, or other necessary documents to supplement the write up.

Structural Inventory & Appraisal Forms

To be edited / updated when Interim Inspection Date (Item 93C) is coded to reflect the most recent inspection date or a change in frequency of inspection (92C) is required.

Category A Report

To be included when the deficiency being monitored warrants prioritized repair. To be created once and updated during subsequent inspections to reflect changes in condition or memorialize work done.

Photographs

All photos taken should be uploaded to the Pics / Files page under Photographs. Select representative photos should be included in the report, the cover photo should reflect the typical element / deficiency.

Working Files

Upload all working files to their own File Type.

Final Report

Upload the Final Report PDF to "NBIS Report".

C. DAMAGE INSPECTION REPORT



Damage Inspection Report

05/03/2022

Structure No.

87.87NSO

Structure Type

Noise Barrier

Structure Location

NSO Roadway RSH MP 87.8



Prepared By:

PKB in association with HNTB Corporation

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NEW JERSEY TURNPIKE AUTHORITY

CONTRACT HISTORY

TYPE	CONTRACT NO.	DESCRIPTION OF WORK	YEAR
Other	R-1235A	Fabrication and Erection of Sound Barriers Mile 87 to Mile 88 - NSO	1997

NEW JERSEY TURNPIKE AUTHORITY

Str.: 87.87NSO

ANCILLARY STRUCTURE INVENTORY INFORMATION

STRUCTURE NO.: 87.87NSO
STRUCTURE TYPE: Noise Barrier
STRUCTURE LOCATION: NSO Roadway RSH MP 87.8
MAINTENANCE DISTRICT: Turnpike Maintenance District 5
YEAR BUILT: 1997
VERTICAL UNDERCLEARANCE: Feet

DAMAGE INSPECTION INFORMATION

DATE OF INCIDENT: 05/03/2022
TIME OF INCIDENT: 8:00 am +/-
DAMAGE TYPE: Vehicle Impact
IMPACT VEHICLE: Unknown
LOCATION/ROADWAY: NSO Roadway
LANE: RSH
ON-CALL MAINTENANCE ENGINEER: Richard T. Reuter, P.E. |
MAINTENANCE ENGINEER INSPECTION DATE: 05/03/2022

INITIAL NOTICE TO CONSULTANT

VIA: Email
FROM: (NJTA) Jean laird
TO: Suzanne Hall (HNTB)
DATE: 05/03/2022

PRELIMINARY INSPECTION FINDINGS

VIA: Email
FROM: (CONSULTANT) Suzanne Hall (HNTB)
TO: Bill Wilson (NJTA), Jean Laird (NJTA), King Lee (NJTA), Oleem O'Garro (NJTA), Prayag Sayani (NJTA), Frank Yao (NJTA), Mark Bernard (NJTA), Sheri Malloy (NJTA), Peter Singhofen (NJTA), Suzanne Hall (HNTB), Alexander Milza (HNTB), John Paul (PKB), Ana Tatoris (HNTB)

DATE:

NEW JERSEY TURNPIKE AUTHORITY

Str.: 87.87NSO

DAMAGE INSPECTION FINDINGS

INSPECTION CONSULTANT: PKB in association with HNTB Corporation

TEAM LEADER:

ASSISTANT TEAM LEADER:

SUPPORT STAFF:

INSPECTION DATE(S): 05/05/2022

WEATHER:

AIR TEMPERATURE: DEGREES F

SPECIAL EQUIPMENT: PHOTO NO(S):

MPT: PHOTO NO(S):

NJTA PERSONNEL PRESENT DURING INSPECTION:

None

SEQUENCE OF EVENTS:

Unknown vehicle struck parapet supporting noise barrier at MP 87.8 in the NSO Roadway.

INSPECTION FINDINGS:

Barrier Section 19 exhibits spalls with exposed rebar / delaminations / hollow sounding concrete (3'-2" H x 1'-5" W x up to 6" D and 6.5" L x 4.5" W x 2.5" D) and multiple fractures (up 3'-7" L x 1-1/2" W x up to 1'-4" D (max ruler penetration)) adjacent to Vertical Support Post 19 (DSCN5383, DSCN5392, DSCN5386, DSCN5390, DSCN5391).

Vertical Support Post 19 exhibits spalls, hollow sounding concrete and cracks (two areas – 2'-4" H x 11" W x 1" D and 10" H x 11" W x up to 1-1/2" D) on the north, south, and west faces on the backside of the post (DSCN5396, DSCN5397, DSCN5398).

The bottom noise barrier panel in section 19 is fractured (1'-11" L x 1/2" W) at the top north corner (DSCN5401).

RECOMMENDATIONS:

It is recommended that the damaged barrier section be replaced in kind. Once the noise barrier panels and parapet barrier section are removed, further inspection can be performed to determine if any repair is needed for Vertical Support Post 19. The small spall at the lowest noise barrier panel should also be repaired. Concrete debris along the right shoulder of the Turnpike NSO Roadway should be cleared by the Authority's Maintenance Department

MEMBERS REQUIRING INTERIM INSPECTION: None

FREQUENCY OF INTERIM INSPECTION: N/A

FINAL DAMAGE INSPECTION REPORT SENT TO:

Bill Wilson, Jean Laird, Mark Bernard, Oleem O'Garro, Sheri Malloy, Peter Singhofen, King Lee, Prayag Sayani, Frank Yao, Scott Cavanaugh, David Mykulak, Suzanne Hall, Brian Atkinson, Greg Lefrois, Alexander Lawrason, Stella Bustos, Lucy Pavlik, NJO_69953_NJTA-GCE_2021-2025@hntb.com, GCETechManager@HNTB.com

Photographs
MP 87.87SO



05/05/2022

Photograph No. 6



05/05/2022

Photograph No. 7

13. RETAINING WALL AND NOISE BARRIER INVENTORY

A. GARDEN STATE PARKWAY INVENTORY

New Jersey Turnpike Authority

Manual for Retaining Wall and Noise Barrier Inspection

Parkway Retaining Wall Inventory

No.	Milepost	Structure Name	Contract No.	Material Type
1	MP 0.5N NE	Parkway N MP 0.5N NE	84-1246	Plastic Sheeting
2	MP 0.5N SE	Parkway N MP 0.5N SE	84-1246	Plastic Sheeting
3	MP 0.5S NW	Parkway S MP 0.5S NW	84-1246	Plastic Sheeting
4	MP 0.5S SW	Parkway S MP 0.5S SW	84-1246	Plastic Sheeting
5	MP 2.4S NW	Parkway S MP 2.4S NW	178-34 (Att)	Timber Sheeting
6	MP 2.4S SW	Parkway S MP 2.4S SW	178-34 (Att)	Timber Sheeting
7	MP 8.4S NW	Parkway S MP 8.4S NW	P300.162	MSE Panel Single Stage
8	MP 8.4S SW	Parkway S MP 8.4S SW	P300.162	MSE Panel Single Stage
9	MP 9.62NBX	Parkway Ramp 10NBX MP 9.62	P300.162	MSE Panel Single Stage
10	MP 9.88S	Parkway S MP 9.88	P300.162	MSE Panel Single Stage
11	MP 10.0N	Parkway N MP 10.0N	P300.162	MSE Panel Single Stage
12	MP 10.97SBE	Parkway Ramp 11SBE MP 10.97	P300.162	MSE Panel Single Stage
13	MP 11.04N SE	Parkway N MP 11.04N SE	P300.162	MSE Panel Single Stage
14	MP 11.04S NW	Parkway S MP 11.04S NW	P300.162	MSE Panel Single Stage
15	MP 11.04S SW	Parkway S MP 11.04S SW	P300.162	MSE Panel Single Stage
16	MP 28.0SR SE	Parkway S MP 28.0SR SE	P100.251	MSE Panel Single Stage
17	MP 28.0SR SW	Parkway S MP 28.0SR SW	P100.251	MSE Panel Single Stage
18	MP 28.5SR NE	Parkway S MP 28.5SR NE	P100.251	MSE Panel Single Stage
19	MP 28.5SR NW	Parkway S MP 28.5SR NW	P100.251	MSE Panel Single Stage
20	MP 28.5SR SE	Parkway S MP 28.5SR SE	P100.251	MSE Panel Single Stage
21	MP 28.5SR SW	Parkway S MP 28.5SR SW	P100.251	MSE Panel Single Stage
22	MP 31.0R NE	Parkway N MP 31.0R NE	P100.132	MSE Panel Single Stage
23	MP 31.0R SW	Parkway S MP 31.0R SW	P100.132	MSE Panel Single Stage
24	MP 31.50S	Parkway S MP 31.50	P600.12F	Steel Sheeting
25	MP 31.6NR SW	Parkway N MP 31.6NR SW	P200.252	Reinforced Concrete
26	MP 31.6SR SE	Parkway N MP 31.6NR SE	P200.252	Reinforced Concrete
27	MP 32.0NR SW	Parkway N MP 32.0NR SW	P200.252	Reinforced Concrete
28	MP 32.0SR SE	Parkway N MP 32.0NR SE	P200.252	Reinforced Concrete
29	MP 33.4N	Parkway N MP 33.4	P200.252	Reinforced Concrete
30	MP 33.5NR SW	Parkway N MP 33.5NR SW	P200.252	Reinforced Concrete
31	MP 33.6SR SE	Parkway N MP 33.6SR SE	P200.252	Reinforced Concrete
32	MP 34.5NR NW	Parkway N 34.5NR NW	P200.252	Reinforced Concrete
33	MP 34.5NR SW	Parkway N 34.5NR SW	P200.252	Reinforced Concrete
34	MP 34.5SR NE	Parkway S 34.5SR NE	P200.252	Reinforced Concrete
35	MP 34.5SR SE	Parkway S 34.5SR SE	P200.252	Reinforced Concrete
36	MP 36.2R SE	Parkway N MP 36.2R SE	P300.253	MSE Panel Single Stage
37	MP 37.05SBEA	Parkway Ramp 37SBEA MP 37.05	P300.253	MSE Panel Single Stage
38	MP 37.13SBEA	Parkway Ramp 37SBEA MP 37.13	P300.253	MSE Panel Single Stage
39	MP 44.0S NE	Pomona Road MP 44.0S NE	P300.225	MSE Panel Single Stage
40	MP 44.0S SE	Pomona Road MP 44.0S SE	P300.225	MSE Panel Single Stage
41	MP 48.3R NW	Parkway Ramp 48SBX MP 48.3R NW	P200.134	MSE Panel Single Stage
42	MP 49.0N NE	Parkway N MP 49.0N NE	P100.024	MSE Panel Single Stage
43	MP 49.0N SE	Parkway N MP 49.0N SE	P100.024	MSE Panel Single Stage
44	MP 50.7R SE	Route 9 MP 50.7R SE	P200.134	MSE Panel Single Stage
45	MP 51.9N NE	Parkway N MP 51.9N NE	P100.130	MSE Panel Single Stage
46	MP 51.9N NW	Parkway N MP 51.9N NW	P100.130	MSE Panel Single Stage
47	MP 51.9N SE	Parkway N MP 51.9N SE	P100.130	MSE Panel Single Stage
48	MP 51.9N SW	Parkway N MP 51.9N SW	P100.130	MSE Panel Single Stage

New Jersey Turnpike Authority

Manual for Retaining Wall and Noise Barrier Inspection

Parkway Retaining Wall Inventory

No.	Milepost	Structure Name	Contract No.	Material Type
49	MP 67.79NBX	Parkway Ramp 67NBX MP 67.79	P300.043	Post and Panel
50	MP 77.09N	Parkway N MP 77.09	P200.044	Other / Combination
51	MP 77.54S	Parkway S MP 77.54	P600.102F	Steel Sheeting
52	MP 77.58NBE	Parkway Ramp 77NBE MP 77.58	P200.044	Other / Combination
53	MP 84.4SR SW	Parkway S MP 84.4SR SW	P200.199	MSE Panel Single Stage
54	MP 90.2 NE	CR 528 MP 90.2 NE	134-1209	MSE Panel Single Stage
55	MP 90.2 NW	CR 528 MP 90.2 NW	134-1209	MSE Panel Single Stage
56	MP 90.26 NE	Parkway Ramp 89NBE MP 90.26 NE	134-1209	MSE Panel Single Stage
57	MP 90.26 SE	Parkway Ramp 89NBE MP 90.26 SE	134-1209	MSE Panel Single Stage
58	MP 92.6R SE	Burnt Tavern Road MP 92.6R SE	Ocean CO. 06-063-0126	MSE Panel Single Stage
59	MP 92.6R SW	Burnt Tavern Road MP 92.6R SW	P200.200	MSE Panel Single Stage
60	MP 94.8N NW	Parkway N MP 94.8N NW	P200.201	MSE Panel Single Stage
61	MP 94.9S NE	Parkway S MP 94.9S NE	P200.201	MSE Panel Single Stage
62	MP 106.65SBX	Parkway Ramp 105SBX-Local MP 106.65	P300.271	MSE Panel Single Stage
63	MP 110.1A NE	Parkway Ramp 109NBE A MP 110.1A NE	P300.390	MSE Panel Single Stage
64	MP 110.1A SE	Parkway Ramp 109NBE A MP 110.1A SE	P300.390	MSE Panel Single Stage
65	MP 114.4NO NE	Parkway NBO MP 114.4NO NE	79D2-543	Reinforced Concrete
66	MP 114.4NO NW	Parkway NBO MP 114.4NO NW	79D2-543	Reinforced Concrete
67	MP 114.4NO SE	Parkway NBO MP 114.4NO SE	79D2-543	Reinforced Concrete
68	MP 120.20SAN	Parkway Ramp SAN MP 120.20	38-730-2	Other / Combination
69	MP 123.7SI	Parkway SBI MP 123.7	541	Reinforced Concrete
70	MP 123.8SO	Parkway SBO MP 123.8	79C-541	Reinforced Concrete
71	MP 124.10NI	Parkway NBI MP 124.10	38-730-2	Other / Combination
72	MP 125NBE	Parkway Ramp 125NBE MP 126.3	P300.229	MSE Panel Single Stage
73	MP 125SBX	Parkway Ramp 125SBX MP 126.3	P300.229	MSE Panel Single Stage
74	MP 126.3NR NW	Parkway N MP 126.3NR NW	P300.229	MSE Panel Single Stage
75	MP 126.3SR NE	Parkway S MP 126.3SR NE	P300.229	MSE Panel Single Stage
76	MP 126.3SR NW	Parkway S MP 126.3SR NW	P300.229	MSE Panel Single Stage
77	MP 126.8S	Parkway S MP 126.8S	P300.229	MSE Panel Single Stage
78	MP 127.2S SW	Parkway S MP 127.2S SW	P300.299	MSE Panel Single Stage
79	MP 127.95SBE	Parkway Ramp 127SBE (H) MP 127.95	104-1212	MSE Panel Single Stage
80	MP 128.0B GY NE	Parkway Ramps 127NBOX GY/GT MP 128.0NE	P100.579	Under construction
81	MP 128.0B GY NW	Parkway Ramps 127NBOX GY/GT MP 128.0NW	P100.579	Under construction
82	MP 128.7S SW	Parkway S MP 128.7S SW	62A-509	Reinforced Concrete
83	MP 129.45	Poplar Street MP 129.45	W-1002	Reinforced Concrete
84	MP 129.7A NE	Turnpike Int. 11 Ramp TPN MP 129.7A NE	Route 4 Section 1-B	Reinforced Concrete
85	MP 130.79S	Parkway S MP 130.79	Unknown	Other / Combination

New Jersey Turnpike Authority

Manual for Retaining Wall and Noise Barrier Inspection

Parkway Retaining Wall Inventory

No.	Milepost	Structure Name	Contract No.	Material Type
86	MP 131.10S	Parkway S MP 131.10	A600.102D	Masonry
87	MP 140.5 NW	Golf Drive MP 140.5 NW	Rt. 4 Sect. 9D	Reinforced Concrete
88	MP 140.5 SW	Golf Drive MP 140.5 SW	Rt. 4 Sect. 9D	Reinforced Concrete
89	MP 142.9 NW	Parkway Ramp 142NW-D MP 142.9 NW	NJDOT 052985450	MSE Panel / Reinforced Concrete
90	MP 142.9 SE	Parkway Ramp 142NW-D MP 142.9 SE	NJDOT 052985450	Reinforced Concrete
91	MP 142.9A NE	Parkway Ramp 142SE MP 142.9A NE	NJDOT 052985450	MSE Panel / Reinforced Concrete
92	MP 142.9A NW	Parkway Ramp 142SE MP 142.9A NW	NJDOT 052985450	MSE Panel / Reinforced Concrete
93	MP 142.9A SW	Parkway Ramp 142SE MP 142.9A SW	NJDOT 052985450	MSE Panel / Reinforced Concrete
94	MP 142.96SW-C	Parkway Ramp 142SW-C MP 142.96	NJDOT 052985450	Reinforced Concrete
95	MP 143.0A NE	Parkway Ramp 142B MP 143.0A NE	NJDOT 052985450	MSE Panel / Reinforced Concrete
96	MP 143.0A NW	Parkway Ramp 142B MP 143.0A NW	NJDOT 052985450	MSE Panel / Reinforced Concrete
97	MP 143.0A SW	Parkway Ramp 142B MP 143.0A SW	NJDOT 052985450	MSE Panel / Reinforced Concrete
98	MP 143.18 SE	Parkway Ramp 142SW-C MP 143.1D SE	NJDOT 052985450	MSE Panel / Reinforced Concrete
99	MP 143.2B NW	Parkway Ramp 142SW-C MP 143.2B NW	NJDOT 052985450	MSE Panel / Reinforced Concrete
100	MP 143.43	Union Pl. MP 143.43	15	Reinforced Concrete
101	MP 143.55S	Parkway S MP 143.55	15	Reinforced Concrete
102	MP 143.67S	Parkway S MP 143.67	15	Reinforced Concrete
103	MP 143.69	Krotik Place MP 143.69	15	Reinforced Concrete
104	MP 144.2 SW	Parkway Ramp 143BSBX MP 144.2 SW	15	Reinforced Concrete
105	MP 144.5 SE	Ball Street MP 144.5 SE	58	Reinforced Concrete
106	MP 144.7 NE	Clinton Avenue & Springfield Avenue (CR 603) MP 144.7 NE	58	Reinforced Concrete
107	MP 144.7 NW	Clinton Avenue & Springfield Avenue (CR 603) MP 144.7 NW	58	Reinforced Concrete
108	MP 144.87S	Parkway S MP 144.87	60	Reinforced Concrete
109	MP 145.0 SE	Eastern Parkway MP 145.0 SE	60	Reinforced Concrete
110	MP 145.0 SW	Eastern Parkway MP 145.0 SW	60	Reinforced Concrete
111	MP 145.5 NE	18th Avenue MP 145.5 NE	60	Reinforced Concrete
112	MP 145.5 NW	18th Avenue MP 145.5 NW	60	Reinforced Concrete
113	MP 145.5 SE	18th Avenue MP 145.5 SE	60	Reinforced Concrete
114	MP 145.5 SW	18th Avenue MP 145.5 SW	60	Reinforced Concrete
115	MP 146.04S	Parkway S MP 146.04	A600.102D	Steel Sheeting
116	MP 146.05N	Parkway N MP 146.05	A600.102D	Steel Sheeting
117	MP 146.1 NE	Parkway N MP 146.1 NE	63	Reinforced Concrete
118	MP 146.19S	Parkway S MP 146.19	63	Reinforced Concrete
119	MP 146.7R NE	Central Avenue (CR 508) MP 146.7R NE	63	Reinforced Concrete
120	MP 146.7R NW	Central Avenue (CR 508) MP 146.7R NW	440	Reinforced Concrete

New Jersey Turnpike Authority

Manual for Retaining Wall and Noise Barrier Inspection

Parkway Retaining Wall Inventory

No.	Milepost	Structure Name	Contract No.	Material Type
121	MP 146.7R SE	Central Avenue (CR 508) MP 146.7R SE	P300.433	Reinforced Concrete
122	MP 146.7R SW	Central Avenue (CR 508) MP 146.7R SW	63	Reinforced Concrete
123	MP 146.9 NW	Parkway S MP 146.9 NW	440	Reinforced Concrete
124	MP 147.0 SW	Parkway Ramp 145SBX MP 147.0 SW	440	Reinforced Concrete
125	MP 147.0B NW	S Oraton Parkway NB MP 147.0B NW	440	Reinforced Concrete
126	MP 147.0B SE	S Oraton Parkway NB MP 147.0B SE	440	Reinforced Concrete
127	MP 147.0D NW	S Oraton Parkway MP 147.0D NW	440	Reinforced Concrete
128	MP 147.0D SW	S Oraton Parkway MP 147.0D SW	440	Reinforced Concrete
129	MP 147.1 NW	Freeway Drive East MP 147.1 NW	NJDOT/LOCAL BUILT	Reinforced Concrete
130	MP 147.1 SW	Freeway Drive East MP 147.1 SW	440	Reinforced Concrete
131	MP 147.4 NE	North Oraton Parkway MP 147.4 NE	46	Reinforced Concrete
132	MP 147.4 SE	North Oraton Parkway MP 147.4 SE	46	Reinforced Concrete
133	MP 147.4 SW	North Oraton Parkway MP 147.4 SW	46	Reinforced Concrete
134	MP 147.7 NE	Parkway Drive MP 147.7 NE	46	Reinforced Concrete
135	MP 147.7 NW	Parkway Drive MP 147.7 NW	46	Reinforced Concrete
136	MP 147.7 SW	Parkway Drive MP 147.7 SW	46	Reinforced Concrete
137	MP 147.9 NW	Parkway Drive MP 147.9 NW	46	Reinforced Concrete
138	MP 147.9 SE	Parkway Drive MP 147.9 SE	46	Reinforced Concrete
139	MP 148.0 SW	Parkway Drive MP 148.0 SW	46	Reinforced Concrete
140	MP 148.1 NW	Parkway Drive MP 148.1 NW	46	Reinforced Concrete
141	MP 148.65N	Parkway N MP 148.65	96-645	Reinforced Concrete
142	MP 148.8 NE	Parkway N/S MP 148.8 NE	447	Reinforced Concrete
143	MP 148.8 NW	Parkway N/S MP 148.8 NW	46	Reinforced Concrete
144	MP 148.8 SE	Parkway N/S MP 148.8 SE	46	Reinforced Concrete
145	MP 148.8 SW	Parkway N/S MP 148.8 SW	46	Reinforced Concrete
146	MP 148.8N	JFK Drive N 148.8N	46	Crib Wall
147	MP 148.88S	Parkway S MP 148.88	46	Crib Wall
148	MP 148.9 NE	Parkway N/S and Ramp 148NBX MP 148.9 NE	447	Reinforced Concrete
149	MP 148.9 NW	Parkway N/S and Ramp 148NBX MP 148.9 NW	46	Reinforced Concrete
150	MP 149.03NBX	Parkway Ramp 148NBX MP 149.03	447	Reinforced Concrete
151	MP 149.1A SE	Parkway Ramp 148SBE MP 149.1A SE	46	Reinforced Concrete
152	MP 149.2A NE	JRK Driver N MP 149.2A NE	447	Reinforced Concrete
153	MP 149.2A SE	JFK Drive N MP 149.2A SE	447	Reinforced Concrete
154	MP 149.4 NE	Parkway N/S MP 149.4 NE	60	Reinforced Concrete
155	MP 149.4 NW	Parkway N/S MP 149.4 NW	60	Reinforced Concrete
156	MP 149.4 SE	Parkway N/S MP 149.4 SE	60	Reinforced Concrete
157	MP 149.4 SW	Parkway N/S MP 149.4 SW	60	Reinforced Concrete
158	MP 149.4S	Parkway S MP 149.4	60	Crib Wall

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Parkway Retaining Wall Inventory

No.	Milepost	Structure Name	Contract No.	Material Type
159	MP 149.56S	Parkway S MP 149.56	60	Crib Wall
160	MP 149.61N	Parkway N MP 149.61	60	Crib Wall
161	MP 149.7 NE	Montgomery Street MP 149.7 NE	60	Reinforced Concrete
162	MP 149.7 NW	Montgomery Street MP 149.7 NW	60	Reinforced Concrete
163	MP 149.7 SE	Montgomery Street MP 149.7 SE	60	Reinforced Concrete
164	MP 149.7 SW	Montgomery Street MP 149.7 SW	60	Reinforced Concrete
165	MP 149.73SBE	Parkway Ramp 148SBE MP 149.73	60	Reinforced Concrete
166	MP 149.9 SE	Hickory Street MP 149.9 SE	60	Reinforced Concrete
167	MP 150.01N	Parkway N MP 150.01	60	Reinforced Concrete
168	MP 150.2 NE	Parkway N MP 150.2 NE	60	Reinforced Concrete
169	MP 150.53S	Parkway S MP 150.53	30-489	Reinforced Concrete
170	MP 151.03	Summit Avenue MP 151.03	Unknown	Crib Wall
171	MP 152.8N	Parkway N MP 152.8	41-064	Reinforced Concrete
172	MP 152.87N	Parkway N MP 152.87	681	Reinforced Concrete
173	MP 155.66SBE	Parkway Ramp 154SBE MP 155.66	P300.202	Reinforced Concrete
174	MP 156.0MD7	Parkway MD7 Access Road 156.0	318	Crib Wall
175	MP 156.08MD7	Parkway MD7 Access Road 156.1	Unknown	Reinforced Concrete
176	MP 157.94N	Parkway N MP 157.94N	47	Gabion
177	MP 158.1A NE	Parkway Ramp 156NBX B MP 158.1A NE	No. 47	Reinforced Concrete
178	MP 160.2B NW	Parkway Ramp 159NBX MP 160.2B NW	23-410	Reinforced Concrete
179	MP 163.0S NW	Parkway S MP 163.0S NW	P300.236	MSE Panel / Reinforced Concrete
180	MP 163.1NR NE	Parkway N MP 163.1NR NE	P300.236	MSE Panel / Reinforced Concrete
181	MP 163.1NR SE	Parkway N MP 163.1NR SE	P300.236	MSE Panel / Reinforced Concrete
182	MP 163.3SR NW	Parkway S MP 163.3SR NW	P300.236	MSE Panel / Reinforced Concrete

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Parkway Courtesy Retaining Wall Inventory

No.	Milepost	Structure Name	Contract No.	Material Type
1	MP 154.21S M&J NJT wall	Parkway S MP 154.21	NJ TRANSIT BUILT and responsible for maintenance	MSE Panel / Reinforced Concrete
2	MP 154.3S M&J NJT wall	Parkway S MP 154.3	NJ TRANSIT BUILT and responsible for maintenance	MSE Panel / Reinforced Concrete

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Parkway Noise Barrier Inventory

No.	Milepost	Structure Name	Contract No.	Material Type
1	MP 84.91S	Parkway S MP 84.91	30-911	Post and Panel
2	MP 92.80N	Parkway N MP 92.80	Improvement to GSP Interchange 91	Post and Panel
3	MP 132.43S	Parkway S MP 132.43	1233-MIS	Post and Panel
4	MP 132.76N	Parkway N MP 132.76	1233-MIS	Post and Panel
5	MP 134.32N	Parkway N MP 134.32	1233-MIS Rt. 444 Sect and and 4A	Post and Panel
6	MP 134.52S	Parkway S MP 134.52	1233-MIS Rt. 444 Sect. 3D and 4A	Post and Panel
7	MP 141.15S	Parkway S MP 141.15	Rt. 444 Sect 4B	Post and Panel
8	MP 143.15SW-C	Parkway Ramp 142SW-C MP 143.15	NJDOT 052985450	Post and Panel
9	MP 143.2B NE	Parkway S MP 143.2B NE	NJDOT 052985450	Post and Panel
10	MP 160.50S	Parkway S MP 160.50	30-802	Post and Panel

B. NEW JERSEY TURNPIKE INVENTORY

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Turnpike Retaining Wall Inventory

No.	Milepost	Structure Name	Contract No.	Material Type
1	MP 49.73 NE	Turnpike SNO MP 49.73 NE	T869.120.102	MSE Panel Single Stage
2	MP 49.73 SE	Turnpike SNO MP 49.73 SE	T869.120.102	MSE Panel Single Stage
3	MP 50.43NO NE	Turnpike SNO MP 50.43NO NE	T869.120.103	MSE Panel Single Stage
4	MP 50.43NO SE	Turnpike SNO MP 50.43NO SE	T869.120.102	MSE Panel Single Stage
5	MP 50.43SO NW	Turnpike NSO MP 50.43SO NW	T869.120.103	MSE Panel Single Stage
6	MP 50.43SO SW	Turnpike NSO MP 50.43SO SW	T869.120.102	MSE Panel Single Stage
7	MP 50.88 SE	Turnpike Int. 6 Ramp SIT MP 50.88 SE	T869.120.103	MSE Panel Single Stage
8	MP 50.88 SW	Turnpike Int. 6 Ramp SIT MP 50.88 SW	T869.120.103	MSE Panel Single Stage
9	MP 50.91 SW	Turnpike Int. 6 Ramp SOT MP 50.91 SW	T869.120.103	MSE Panel Single Stage
10	MP 51.11 NE	Turnpike Int. 6 Ramp TNO MP 51.11 NE	T869.120.103	MSE Panel Single Stage
11	MP 51.16 NE	Turnpike Int. 6 Ramp NIT MP 51.16 NE	T869.120.103	MSE Panel Single Stage
12	MP 51.16 NW	Turnpike Int. 6 Ramp NIT MP 51.16 NW	T869.120.103	MSE Panel Single Stage
13	MP 51.17 NE	Turnpike Int. 6 Ramp TNI MP 51.17 NE	T869.120.103	MSE Panel Single Stage
14	MP 51.17 NW	Turnpike Int. 6 Ramp TNI MP 51.17 NW	T869.120.103	MSE Panel Single Stage
15	MP 51.32NOT	Turnpike Int. 6 Ramp NOT MP 51.32	T869.120.103	MSE Panel Single Stage
16	MP 51.4NOT	Turnpike Int. 6 Ramp NOT MP 51.4	T869.120.103	MSE Panel Single Stage
17	MP 51.42R NW	Mansfield Rd W MP 51.42R NW	T869.120.103	MSE Panel Single Stage
18	MP 51.67NO	Turnpike SNO MP 51.67	T869.120.101	MSE Panel Single Stage
19	MP 51.9SO	Turnpike NSO MP 51.9	T869.120.101	MSE Panel Single Stage
20	MP 52.09NO	Turnpike SNO MP 52.09	T869.120.101	MSE Panel Single Stage
21	MP 52.1NO	Turnpike SNO MP 52.1	T869.120.101	Gabion
22	MP 53.01NO NE	Turnpike SNO MP 53.01NO NE	T869.120.201	MSE Panel Single Stage
23	MP 53.01NO SW	Turnpike SNO MP 53.01NO SW	T869.120.201	MSE Panel Single Stage
24	MP 53.01SO NE	Turnpike NSO MP 53.01SO NE	T869.120.201	MSE Panel Single Stage
25	MP 53.01SO SW	Turnpike NSO MP 53.01SO SW	T869.120.201	MSE Panel Single Stage
26	MP 53.41A SW	Turnpike Int. 7 Ramp TE MP 53.41A SW	W-3303	Reinforced Concrete
27	MP 53.41NO NE	Turnpike SNO and Int. 7 Ramp SOT MP 53.41NO NE	T869.120.203	MSE Panel Single Stage
28	MP 53.41NO NW	Turnpike SNO and Int. 7 Ramp SOT MP 53.41NO NW	T869.120.203	MSE Panel Single Stage
29	MP 53.41NO SW	Turnpike SNO and Int. 7 Ramp SOT MP 53.41NO SW	T869.120.203	MSE Panel Single Stage
30	MP 53.46NO NE	Turnpike SNO and Int. 7 Ramp TNO MP 53.46NO NE	T869.120.203	MSE Panel Single Stage
31	MP 53.46NO SE	Turnpike Int. 7 Ramp TNO MP 53.46NO SE	T869.120.203	MSE Panel Single Stage
32	MP 53.46NO SW	Turnpike SNO MP 53.46NO SW	T869.120.203	MSE Panel Single Stage

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Turnpike Retaining Wall Inventory

No.	Milepost	Structure Name	Contract No.	Material Type
33	MP 53.65TSO	Turnpike Int. 7 Ramp TSO MP 53.65	T869.120.203	MSE Panel Single Stage
34	MP 53.66TSO	Turnpike Int. 7 Ramp TSO MP 53.66	T869.120.203	MSE Panel Single Stage
35	MP 53.74TNO	Turnpike Int. 7 Ramp TNO MP 53.74	T869.120.203	MSE Panel Single Stage
36	MP 53.75ST	Turnpike Ramp ST MP 53.75	T869.120.203	Post and Panel
37	MP 53.80SO SE	Turnpike NSO MP 53.80SO SE	T869.120.203	MSE Panel Single Stage
38	MP 53.85NOT	Turnpike Int. 7 Ramp NOT MP 53.85	T869.120.203	Other / Combination
39	MP 53.90NOT NW	Turnpike Int. 7 Ramp NOT MP 53.90NOT NW	T869.120.203	MSE Panel Single Stage
40	MP 53.93NIT	Turnpike Int. 7 Ramp NIT MP 53.93	Unknown	Reinforced Concrete
41	MP 54.00NO NE	Turnpike SNO MP 54.00NO NE	T869.120.203	MSE Panel Single Stage
42	MP 54.00NO SE	Turnpike SNO MP 54.00NO SE	T869.120.203	MSE Panel Single Stage
43	MP 54.00SO NE	Turnpike NSO MP 54.00SO NE	T869.120.203	Reinforced Concrete
44	MP 54.00SO SE	Turnpike NSO MP 54.00SO SE	T869.120.203	MSE Panel Single Stage
45	MP 54.49NO	Turnpike SNO MP 54.49	T869.120.203	MSE Panel Single Stage
46	MP 55.06SO	Turnpike NSO MP 55.06	T869.120.203	Other / Combination
47	MP 55.38NO	Turnpike SNO MP 55.38	T869.120.202	MSE Panel Single Stage
48	MP 56.0SO	Turnpike NSO MP 56.0	T869.120.202	MSE Panel Single Stage
49	MP 56.62NO	Turnpike SNO MP 56.62	T869.120.303	Other / Combination
50	MP 56.85U-Turn	Turnpike U-Turn NSO MP 56.85	T869.120.302	MSE Panel Single Stage
51	MP 56.92NO SE	Turnpike SNO MP 56.92NO SE	T869.120.302	MSE Panel Single Stage
52	MP 57.10R NE	South Broad Street MP 57.10R NE	T869.120.302	MSE Panel Single Stage
53	MP 57.10R NW	South Broad Street MP 57.10R NW	T869.120.302	MSE Panel Single Stage
54	MP 57.10R SE	South Broad Street MP 57.10R SE	T869.120.302	MSE Panel Single Stage
55	MP 57.10R SW	South Broad Street MP 57.10R SW	T869.120.302	MSE Panel Single Stage
56	MP 57.35NO	Turnpike SNO MP 57.35	T869.120.302	Reinforced Concrete
57	MP 57.46 SE	Turnpike SNO MP 57.46 SE	T869.120.302	MSE Panel Single Stage
58	MP 57.46SO NE	Turnpike NSO MP 57.46SO NE	T869.120.302	MSE Panel Single Stage
59	MP 57.46SO SW	Turnpike NSO MP 57.46SO SW	T869.120.302	MSE Panel Single Stage
60	MP 57.55NO SE	Turnpike SNO MP 57.55NO SE	T869.120.302	MSE Panel Single Stage
61	MP 57.78 NE	Turnpike SA6S Ramp SASI MP 57.78 NE	T869.120.302	MSE Panel Single Stage
62	MP 57.78 NW	Turnpike SA6S Ramp SASI MP 57.78 NW	T869.120.302	MSE Panel Single Stage
63	MP 57.78 SE	Turnpike SA6S Ramp SASI MP 57.78 SE	T869.120.302	MSE Panel Single Stage
64	MP 57.78 SW	Turnpike SA6S Ramp SASI MP 57.78 SW	T869.120.302	MSE Panel Single Stage
65	MP 57.95 NE	Turnpike SA6N Ramp SISA MP 57.95 NE	T869.120.302	MSE Panel Single Stage
66	MP 57.95 NW	Turnpike SA6N Ramp SISA MP 57.95 NW	T869.120.302	MSE Panel Single Stage
67	MP 57.95 SE	Turnpike SA6N Ramp SISA MP 57.95 SE	T869.120.302	MSE Panel Single Stage

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Turnpike Retaining Wall Inventory

No.	Milepost	Structure Name	Contract No.	Material Type
68	MP 57.95 SW	Turnpike SA6N Ramp SISA MP 57.95 SW	T869.120.302	MSE Panel Single Stage
69	MP 58.0SASO	Turnpike SA6S Ramp SASO MP 58.0	T869.120.302	MSE Panel Single Stage
70	MP 58.10R SE	Yardville-Allentown Road MP 58.10R SE	T869.120.302	MSE Panel Single Stage
71	MP 58.10R SW	Yardville-Allentown Road MP 58.10R SW	T869.120.302	MSE Panel Single Stage
72	MP 58.98SANO	Turnpike SA6N Ramp SANO MP 58.98	T869.120.302	MSE Panel Single Stage
73	MP 59.0SANO	Turnpike SA6N Ramp SANO MP 59.0	T869.120.302	MSE Panel Single Stage
74	MP 59.05 NE	Turnpike SA6N Ramp SANI MP 59.05 NE	T869.120.302	MSE Panel Single Stage
75	MP 59.05 NW	Turnpike SA6N Ramp SANI MP 59.05 NW	T869.120.302	MSE Panel Single Stage
76	MP 59.05 SW	Turnpike SA6N Ramp SANI MP 59.05 SW	T869.120.302	MSE Panel Single Stage
77	MP 59.08 NE	Turnpike SA6S Ramp NISA MP 59.08 NE	T869.120.302	MSE Panel Single Stage
78	MP 59.08 NW	Turnpike SA6S Ramp NISA MP 59.08 NW	T869.120.302	MSE Panel Single Stage
79	MP 59.08 SE	Turnpike SA6S Ramp NISA MP 59.08 SE	T869.120.302	MSE Panel Single Stage
80	MP 59.12NOSA	Turnpike SA6S Ramp NOSA MP 59.12	T869.120.302	MSE Panel Single Stage
81	MP 59.7SO	Turnpike NSO MP 59.7	T869.120.302	MSE Panel Single Stage
82	MP 59.93SO	Turnpike NSO MP 59.93	T869.120.402	MSE Panel Single Stage
83	MP 60.45TSO	Turnpike Int. 7A Ramp TSO MP 60.45	T869.120.402	MSE Panel Single Stage
84	MP 60.51E SE	Turnpike Int. 7A Ramp TSI MP 60.51E SE	T869.120.402	MSE Panel Single Stage
85	MP 60.51E SW	Turnpike Int. 7A Ramp TSI MP 60.51E SW	T869.120.402	MSE Panel Single Stage
86	MP 60.51F NW	Turnpike Int. 7A Ramp SIT MP 60.51F NW	T869.120.402	MSE Panel Single Stage
87	MP 60.51F SE	Turnpike Int. 7A Ramp SIT MP 60.51F SE	T869.120.402	MSE Panel Single Stage
88	MP 60.51F SW	Turnpike Int. 7A Ramp SIT MP 60.51F SW	T869.120.402	MSE Panel Single Stage
89	MP 60.51I NE	Turnpike Int. 7A Ramp TNI MP 60.51I NE	T869.120.402	MSE Panel Single Stage
90	MP 60.51I NW	Turnpike Int. 7A Ramp TNI MP 60.51I NW	T869.120.402	MSE Panel Single Stage
91	MP 60.51I SW	Turnpike Int. 7A Ramp TNI MP 60.51I SW	T869.120.402	MSE Panel Single Stage
92	MP 60.51J NE	Turnpike Int. 7A Ramp NIT MP 60.51J NE	T869.120.402	MSE Panel Single Stage
93	MP 60.51J NW	Turnpike Int. 7A Ramp NIT MP 60.51J NW	T869.120.402	MSE Panel Single Stage
94	MP 60.51J SE	Turnpike Int. 7A Ramp NIT MP 60.51J SE	T869.120.402	MSE Panel Single Stage
95	MP 61.17TNO	Turnpike Int. 7A Ramp TNO MP 61.17	T869.120.402	Reinforced Concrete
96	MP 63.32NO NE	Turnpike SNO MP 63.32NO NE	T869.120.502	MSE Panel Single Stage

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Turnpike Retaining Wall Inventory

No.	Milepost	Structure Name	Contract No.	Material Type
97	MP 63.32NO SE	Turnpike SNO MP 63.32NO SE	T869.120.502	MSE Panel Single Stage
98	MP 63.32SO NW	Turnpike NSO MP 63.32SO NW	T869.120.502	MSE Panel Single Stage
99	MP 63.32SO SW	Turnpike NSO MP 63.32SO SW	T869.120.502	MSE Panel Single Stage
100	MP 63.48NO	Turnpike SNO MP 63.48	T869.120.503	MSE Panel Single Stage
101	MP 63.54SO	Turnpike NSO MP 63.54	T869.120.503	MSE Panel Single Stage
102	MP 64.77SO	Turnpike NSO MP 64.77	T869.120.503	MSE Panel Single Stage
103	MP 64.98 NE	Turnpike SNO MP 64.98 NE	T869.120.503	Reinforced Concrete
104	MP 64.98 SE	Turnpike SNO MP 64.98 SE	T869.120.503	Other / Combination
105	MP 66.23 NE	Turnpike NSO/NSI/SNI/SNO MP 66.23 NE	T869.120.501	MSE Panel Single Stage
106	MP 66.23 NW	Turnpike NSO/NSI/SNI/SNO MP 66.23 NW	T869.120.501	MSE Panel Single Stage
107	MP 66.23 SW	Turnpike NSO/NSI/SNI/SNO MP 66.23 SW	T869.120.501	MSE Panel Single Stage
108	MP 66.7SO	Turnpike NSO MP 66.7	T869.120.501	MSE Panel Single Stage
109	MP 67.21TSO	Turnpike Int. 8 Ramp TSO MP 67.21	T869.120.605	Other / Combination
110	MP 67.27NO NE	Turnpike Int. 8 Ramp SOT MP 67.27NO NE	T869.120.605	MSE Panel Single Stage
111	MP 67.27SO SW	Turnpike Int. 8 Ramp TSO MP 67.27SO SW	T869.120.605	MSE Panel Single Stage
112	MP 67.47 SW	Turnpike Int. 8 Ramp NT MP 67.47 SW	T869.120.605	MSE Panel Single Stage
113	MP 67.47A SE	Turnpike Int. 8 Ramp SIT MP 67.47A SE	T869.120.605	MSE Panel Single Stage
114	MP 67.47A SW	Turnpike Int. 8 Ramp SIT MP 67.47A SW	T869.120.605	MSE Panel Single Stage
115	MP 67.47B NE	Turnpike Int. 8 Ramp TNI MP 67.47B NE	T869.120.605	MSE Panel Single Stage
116	MP 67.47B NW	Turnpike Int. 8 Ramp TNI MP 67.47B NW	T869.120.605	MSE Panel Single Stage
117	MP 67.47C SE	Turnpike Int. 8 Ramp TSI MP 67.47C SE	T869.120.605	MSE Panel Single Stage
118	MP 67.47C SW	Turnpike Int. 8 Ramp TSI MP 67.47C SW	T869.120.605	MSE Panel Single Stage
119	MP 67.47D NE	Turnpike Int. 8 Ramp NIT MP 67.47D NE	T869.120.605	MSE Panel Single Stage
120	MP 67.47D NW	Turnpike Int. 8 Ramp NIT MP 67.47D NW	T869.120.605	MSE Panel Single Stage
121	MP 67.47E NW	Turnpike U-Turn MP 67.47E NW	T869.120.601	MSE Panel Single Stage
122	MP 67.47G NE	Turnpike Int. 8 Ramps TW/WT MP 67.47G NE	T869.120.603	MSE Panel Single Stage
123	MP 67.47G NW	Turnpike Int. 8 Ramps TW/WT MP 67.47G NW	T869.120.603	MSE Panel Single Stage
124	MP 67.47G SE	Turnpike Int. 8 Ramps TW/WT MP 67.47G SE	T869.120.603	MSE Panel Single Stage
125	MP 67.47G SW	Turnpike Int. 8 Ramps TW/WT MP 67.47G SW	T869.120.603	MSE Panel Single Stage
126	MP 67.57TNO	Turnpike Int. 8 Ramp TNO MP 67.57	T869.120.605	MSE Panel Single Stage
127	MP 67.73NOT	Turnpike Int. 8 Ramp NOT MP 67.73	T869.120.605	MSE Panel Single Stage

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Turnpike Retaining Wall Inventory

No.	Milepost	Structure Name	Contract No.	Material Type
128	MP 67.79NOT	Turnpike Int. 8 Ramp NOT MP 67.79	T869.120.605	MSE Panel Single Stage
129	MP 67.85TW	Turnpike Int. 8 Ramp TW MP 67.85	T869.120.603	MSE Panel Single Stage
130	MP 67.89SO NW	Turnpike NSO MP 67.89SO NW	T869.120.605	MSE Panel Single Stage
131	MP 68.01NO NE	Turnpike SNO MP 68.01NO NE	T869.120.605	MSE Panel Single Stage
132	MP 68.01NO SE	Turnpike SNO MP 68.01NO SE	T869.120.605	MSE Panel Single Stage
133	MP 68.3NO	Turnpike SNO MP 68.3	T869.120.702	Other / Combination
134	MP 68.43NO	Turnpike SNO MP 68.43	T869.120.702	Other / Combination
135	MP 69.3NO	Turnpike SNO MP 69.3	T869.120.701	Other / Combination
136	MP 69.85NO NE	Turnpike SNO MP 69.85NO NE	T869.120.701	MSE Panel Single Stage
137	MP 69.85NO SE	Turnpike SNO MP 69.85NO SE	T869.120.701	MSE Panel Single Stage
138	MP 69.85SO NW	Turnpike NSO MP 69.85SO NW	T869.120.701	MSE Panel Single Stage
139	MP 69.85SO SW	Turnpike NSO MP 69.85SO SW	T869.120.701	MSE Panel Single Stage
140	MP 70.49NO	Turnpike SNO MP 70.49	T869.120.701 and T869.120.803	Other / Combination
141	MP 70.74NO NE	Turnpike SNO MP 70.74NO NE	T869.120.803	Steel Sheeting
142	MP 70.74NO SE	Turnpike SNO MP 70.74NO SE	T869.120.803	MSE Panel Single Stage
143	MP 70.74SO NW	Turnpike NSO MP 70.74SO NW	T869.120.803	MSE Panel Single Stage
144	MP 70.74SO SW	Turnpike NSO MP 70.74SO SW	T869.120.803	MSE Panel Single Stage
145	MP 70.76NO	Turnpike SNO MP 70.76	T869.120.803	MSE Panel Single Stage
146	MP 71.26R NW	Cranbury-Half Acre Road MP 71.26R NW	T869.120.802	MSE Panel Single Stage
147	MP 71.26R SW	Cranbury-Half Acre Road MP 71.26R SW	T869.120.802	Reinforced Concrete
148	MP 71.37 NE	Turnpike SA7S Ramp SASI MP 71.37 NE	T869.120.803	MSE Panel Single Stage
149	MP 71.37 SE	Turnpike SA7S Ramp SASI MP 71.37 SE	T869.120.803	MSE Panel Single Stage
150	MP 71.37 SW	Turnpike SA7S Ramp SASI MP 71.37 SW	T869.120.803	MSE Panel Single Stage
151	MP 71.4SASO	Turnpike SA7S Ramp SASO MP 71.4	T869.120.803	MSE Panel Single Stage
152	MP 71.46AR NW	Turnpike SA7S Ramps SSP/SPN MP 71.46AR NW	T869.120.802	MSE Panel Single Stage
153	MP 71.46SASO	Turnpike SA7S Ramp SASO MP 71.46	T869.120.803	MSE Panel Single Stage
154	MP 71.72SAS	Turnpike SA7S Ramp SAS MP 71.72	R-1190	Other / Combination
155	MP 71.87 NE	Turnpike NSO/NSI/SNI/SNO and SA7S Ramp SAS MP 71.87 NE	T869.120.803	Other / Combination
156	MP 71.87 NW	Turnpike NSO/NSI/SNI/SNO and SA7S Ramp SAS MP 71.87 NW	T869.120.803	Steel Sheeting
157	MP 71.87 SE	Turnpike NSO/NSI/SNI/SNO and SA7S Ramp SAS MP 71.87 SE	T869.120.803	MSE Panel Single Stage

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No.	Milepost	Structure Name	Contract No.	Material Type
158	MP 71.87 SW	Turnpike NSO/NSI/SNI/SNO and SA7S Ramp SAS MP 71.87 SW	T869.120.803	MSE Panel Single Stage
159	MP 72.11R NE	Prospect Plains Road MP 72.11R NE	T869.120.802	MSE Panel Single Stage
160	MP 72.11SO	Turnpike NSO MP 72.11	T869.120.803	MSE Panel Single Stage
161	MP 72.29 NE	Turnpike SA7S Ramp NISA MP 72.29 NE	T869.120.803	MSE Panel Single Stage
162	MP 72.29 NW	Turnpike SA7S Ramp NISA MP 72.29 NW	T869.120.803	MSE Panel Single Stage
163	MP 72.29 SE	Turnpike SA7S Ramp NISA MP 72.29 SE	T869.120.802	MSE Panel Single Stage
164	MP 72.35NOSA E	Turnpike SA7S Ramp NOSA MP 72.35 E	T869.120.803	MSE Panel Single Stage
165	MP 72.35NOSA W	Turnpike SA7S Ramp NOSA MP 72.35 W	T869.120.803	MSE Panel Single Stage
166	MP 73.10SO SW	Turnpike NSO MP 73.10SO SW	T869.120.803	MSE Panel Single Stage
167	MP 73.11NO	Turnpike SNO MP 73.11	W-4504	Reinforced Concrete
168	MP 73.60NO	Turnpike SNO MP 73.60NO	W-4503	Reinforced Concrete
169	MP 73.68A SE	Turnpike Int. 8A Ramp SIT MP 73.68A SE	W-4503	Reinforced Concrete
170	MP 73.68A SW	Turnpike Int. 8A Ramp SIT MP 73.68A SW	W-4503	Reinforced Concrete
171	MP 73.79A NE	Turnpike Int. 8A Ramp TSI MP 73.79A NE	W-4503	Reinforced Concrete
172	MP 73.79A NW	Turnpike Int. 8A Ramp TSI MP 73.79A NW	W-4503	Reinforced Concrete
173	MP 73.84 SE	Turnpike Int. 8A Ramp TSI MP 73.84 SE	T869.120.802	MSE Panel Single Stage
174	MP 73.84 SW	Turnpike Int. 8A Ramp TSI MP 73.84 SW	T869.120.802	MSE Panel Single Stage
175	MP 73.93A NE	Turnpike Int. 8A Ramp NIT MP 73.93A NE	W-4503	Reinforced Concrete
176	MP 74.31NO SE	Turnpike SNO MP 74.31NO SE	W-4501	Reinforced Concrete
177	MP 74.39NO NW	Turnpike SNO MP 74.39NO NW	W-4501	Reinforced Concrete
178	MP 77.8NO	Turnpike SNO MP 77.8	W-4204	Reinforced Concrete
179	MP 78.46 NW	Turnpike SA8N Ramp SISA 78.46 NW	W-4204	Reinforced Concrete
180	MP 78.46 SE	Turnpike SA8N Ramp SISA 78.46 SE	W-4204	Reinforced Concrete
181	MP 78.46 SW	Turnpike SA8N Ramp SISA 78.46 SW	W-4204	Reinforced Concrete
182	MP 79.04 NE	Turnpike SA8N Ramp SANI MP 79.04 NE	W-4204	Reinforced Concrete
183	MP 79.04 NW	Turnpike SA8N Ramp SANI MP 79.04 NW	W-4204	Reinforced Concrete
184	MP 79.04 SE	Turnpike SA8N Ramp SANI MP 79.04 SE	W-4204	Reinforced Concrete
185	MP 79.04 SW	Turnpike SA8N Ramp SANI MP 79.04 SW	W-4204	Reinforced Concrete
186	MP 79.98NO	Turnpike SNO MP 79.98	W-4102	Reinforced Concrete
187	MP 80.45R NW	Turnpike NSO MP 80.45R NW	W-4102	Reinforced Concrete
188	MP 80.76NO SE	Turnpike SNO MP 80.76NO SE	W-4102	Reinforced Concrete

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No.	Milepost	Structure Name	Contract No.	Material Type
189	MP 81.09R SW	Turnpike NSO MP 81.09R SW	W-4102	Reinforced Concrete
190	MP 81.2NO	Turnpike SNO MP 81.2	W-4101	Reinforced Concrete
191	MP 81.39NO	Turnpike SNO MP 81.39	W-4101	Reinforced Concrete
192	MP 81.66SI	Turnpike NSI MP 81.66	W-4101	Steel Sheeting
193	MP 81.88NO	Turnpike SNO MP 81.88	W-4101	Reinforced Concrete
194	MP 81.9SO	Turnpike NSO MP 81.9	W-4101	Reinforced Concrete
195	MP 82.15R NE	Sullivan Way MP 82.15R NE	W-4101	Reinforced Concrete
196	MP 82.15R NW	Sullivan Way MP 82.15R NW	W-4101	Reinforced Concrete
197	MP 82.15R SE	Sullivan Way MP 82.15R SE	W-4101	Reinforced Concrete
198	MP 82.15R SW	Sullivan Way MP 82.15R SW	W-4101	Reinforced Concrete
199	MP 83.25 SE	Turnpike Int. 9 SIT MP 83.25 SE	W-743	Reinforced Concrete
200	MP 83.25TE	Turnpike Int. 9 Ramp TE MP 83.25	T300.176	Reinforced Concrete
201	MP 83.30 SE	Turnpike Int. 9 TSI MP 83.30 SE	W-4100	Reinforced Concrete
202	MP 83.30 SW	Turnpike Int. 9 TSI MP 83.30 SW	W-4100	Reinforced Concrete
203	MP 83.36 NW	Turnpike Int. 9 TNI MP 83.36 NW	W-743	Reinforced Concrete
204	MP 83.72 NE	Turnpike Int. 9 NIT MP 83.72 NE	W-743	Reinforced Concrete
205	MP 83.72 NW	Turnpike Int. 9 NIT MP 83.72 NW	W-743	Reinforced Concrete
206	MP 84.88NO	Turnpike SNO MP 84.88	T600.102B	Steel Sheeting
207	MP 86.57SO	Turnpike NSO MP 86.57	R-1243	Gabion
208	MP 88.05AN NW	Turnpike Int. 10 Ramp SIT MP 88.05AN NW	R-240	Reinforced Concrete
209	MP 88.05AN SW	Turnpike Int. 10 Ramp SIT MP 88.05AN SW	R-240	Reinforced Concrete
210	MP 88.13AN NW	Turnpike Int. 10 Ramp TNI MP 88.13AN NW	R-240	Reinforced Concrete
211	MP 88.13AN SW	Turnpike Int. 10 Ramp TNI MP 88.13AN SW	R-240	Reinforced Concrete
212	MP 88.28AS NE	Turnpike Int. 10 Ramp TSI MP 88.28AS NE	W-700	Reinforced Concrete
213	MP 88.28AS SE	Turnpike Int. 10 Ramp TSI MP 88.28AS SE	W-700	Reinforced Concrete
214	MP 88.33AS SE	Turnpike Int. 10 Ramp NIT MP 88.33AS SE	R-246	Reinforced Concrete
215	MP 88.38AS NE	Turnpike Int. 10 Ramp NIT MP 88.33AS NE	R-246	Reinforced Concrete
216	MP 89.08NO	Turnpike SNO MP 89.08	T600.102B	Steel Sheeting
217	MP 89.25NO	Turnpike SNO MP 89.25	W-900	Reinforced Concrete
218	MP 90.21A SW	Parkway Ramp 129SBX (11 PNT) MP 90.21A SW	Route 4 Section 1-B	Reinforced Concrete
219	MP 90.99D SW	Turnpike Int. 11 Ramp TPS MP 90.99D SW	W-1002	Reinforced Concrete
220	MP 91.89 SE	Turnpike SNO MP 91.89 SE	W-5101	Reinforced Concrete
221	MP 92.69ANR NE	Turnpike SA10N Ramp SISA MP 92.69ANR NE	W-5102	MSE Panel
222	MP 92.69ANR NW	Turnpike SA10N Ramp SISA MP 92.69ANR NW	W-5102	Reinforced Concrete

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No.	Milepost	Structure Name	Contract No.	Material Type
223	MP 92.69ANR SE	Turnpike SA10N Ramp SISA MP 92.69ANR SE	W-1102	Reinforced Concrete
224	MP 92.69ANR SW	Turnpike SA10N Ramp SISA MP 92.69ANR SW	W-1102	Reinforced Concrete
225	MP 93.11ANR NE	Turnpike SA10N Ramp SANI MP 93.11ANR NE	W-1103	Reinforced Concrete
226	MP 93.11ANR NW	Turnpike SA10N Ramp SANI MP 93.11ANR NW	W-1103	Reinforced Concrete
227	MP 93.14ASR NE	Turnpike SA10S Ramp NISA MP 93.14ASR NE	W-5102	Reinforced Concrete
228	MP 93.14ASR NW	Turnpike SA10S Ramp NISA MP 93.14ASR NW	W-5102	Reinforced Concrete
229	MP 93.14ASR SW	Turnpike SA10S Ramp NISA MP 93.14ASR SW	W-5102	Reinforced Concrete
230	MP 93.81SO NW	Turnpike NSO MP 93.81SO NW	W-5201	Reinforced Concrete
231	MP 95.80 NE	Roosevelt Avenue MP 95.80 NE	R-1487	Reinforced Concrete
232	MP 95.80 SE	Roosevelt Avenue MP 95.80 SE	R-1487	MSE Panel / Reinforced Concrete
233	MP 95.89ANR NW	Turnpike Int. 12 Ramp SIT MP 95.89ANR NW	W-1107	Reinforced Concrete
234	MP 95.89ANR SW	Turnpike Int. 12 Ramp SIT MP 95.89ANR SW	W-1107	Reinforced Concrete
235	MP 95.91	Turnpike Int. 12 Service Road MP 95.91	R-1487	MSE Panel / Reinforced Concrete
236	MP 95.92B NE	Turnpike Int. 12 Ramp SOT MP 95.92B NE	R-1487	MSE Panel / Reinforced Concrete
237	MP 95.92B SE	Turnpike Int. 12 Ramp SOT MP 95.92B SE	W-1107	Reinforced Concrete
238	MP 95.92B SW	Turnpike Int. 12 Ramp SOT MP 95.92B SW	W-1107	Reinforced Concrete
239	MP 95.95A NW	Turnpike Int. 12 Ramps ET1/WT MP 95.95A NW	R-1487	MSE Panel / Reinforced Concrete
240	MP 95.95B NW	Turnpike Int. 12 Ramp WT MP 95.95B NW	R-1487	MSE Panel / Reinforced Concrete
241	MP 95.95A SE-1	Turnpike Int. 12 Ramps ET1/WT MP 95.95A SE-1	R-1487	MSE Panel / Reinforced Concrete
242	MP 95.95A SW-1	Turnpike Int. 12 Ramps ET1/WT MP 95.95A SW-1	R-1487	MSE Panel / Reinforced Concrete
243	MP 95.95A SE-2	Turnpike Int. 12 Ramps ET1/WT MP 95.95A SE-2	R-1487	MSE Panel / Reinforced Concrete
244	MP 95.95A SW-2	Turnpike Int. 12 Ramps ET1/WT MP 95.95A SW-2	R-1487	MSE Panel / Reinforced Concrete
245	MP 95.96ANI NE	Turnpike Int. 12 Ramp TNI MP 95.96ANI NE	W-5202	Reinforced Concrete
246	MP 95.96ANI NW	Turnpike Int. 12 Ramp TNI MP 95.96ANI NW	W-5202	Reinforced Concrete
247	MP 95.96ANO NE	Turnpike Int. 12 Ramp TNO MP 95.96ANO NE	W-5202	Reinforced Concrete
248	MP 95.96ANO NW	Turnpike Int. 12 Ramp TNO MP 95.96ANO NW	W-5202	Reinforced Concrete
249	MP 96.23NO	Turnpike SNO MP 96.23	Unknown	Reinforced Concrete
250	MP 96.23NO NE	Turnpike SNO MP 96.23NO NE	W-5301	Reinforced Concrete
251	MP 96.39 SE	Turnpike SNO MP 96.39 SE	W-5301	Reinforced Concrete

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No.	Milepost	Structure Name	Contract No.	Material Type
252	MP 96.55SO	Turnpike NSO MP 96.55	W-5301	Reinforced Concrete
253	MP 97.18A SE	Turnpike U-Turn SNO MP 97.18A SE	W-1101	Reinforced Concrete
254	MP 98.44SO	Turnpike NSO MP 98.44	W-5302	Reinforced Concrete
255	MP 98.59SO SW	Turnpike NSO MP 98.59SO SW	W-6101	Reinforced Concrete
256	MP 98.76SO	Turnpike NSO MP 98.76SO	W-6161	Crib Wall
257	MP 98.76SO SW	Turnpike NSO MP 98.76SO SW	W- 6101	Reinforced Concrete
258	MP 99.10A NE	Turnpike Int. 13 Ramp ST MP 99.10A NE	R-161	Reinforced Concrete
259	MP 99.13B SE	Turnpike Int. 13 Ramp TSO MP 99.13B SE	W-6101	Reinforced Concrete
260	MP 99.13B SW	Turnpike Int. 13 Ramp TSO MP 99.13B SW	W-6101	Reinforced Concrete
261	MP 99.35A NE	Turnpike Int. 13 Ramp TN MP 99.35A NE	R-162	Reinforced Concrete
262	MP 99.35A NW	Turnpike Int. 13 Ramp TN MP 99.35A NW	R-162	Reinforced Concrete
263	MP 99.67 SE	Turnpike Int. 13 Ramp NT MP 99.67 SE	W-1201	Reinforced Concrete
264	MP 99.70 SE	Turnpike Int. 13 Ramp TN MP 99.70 SE	W-1201	Reinforced Concrete
265	MP 99.70ANO NE	Turnpike Int. 13 Ramp TNO MP 99.70ANO NE	W-1201	Reinforced Concrete
266	MP 99.70ANO NW	Turnpike Int. 13 Ramp TNO MP 99.70ANO NW	W-1201	Reinforced Concrete
267	MP 100.05SO	Turnpike NSO MP 100.05	Unknown	Crib Wall
268	MP 100.76SO SW	Turnpike NSO MP 100.76SO SW	W-6103	Reinforced Concrete
269	MP 101.03NO NE	Turnpike SNO MP 101.03NO NE	W-6102	Reinforced Concrete
270	MP 101.1NO	Turnpike SNO MP 101.1	W-6102	Reinforced Concrete
271	MP 101.19SO	Turnpike NSO MP 101.19	W-1203	Crib Wall
272	MP 101.21SO NW	Turnpike NSO MP 101.21SO NW	W-6203	Reinforced Concrete
273	MP 101.21SO SW	Turnpike NSO MP 101.21SO SW	W-1302	Reinforced Concrete
274	MP 101.47ANR SE	Turnpike Int. 13A Ramp SIT MP 101.47ANR SE	W-6203	Reinforced Concrete
275	MP 101.53ASR SE	Turnpike Int. 13A Ramp TSI MP 101.53ASR SE	W-6201	Reinforced Concrete
276	MP 101.54A NE	Turnpike Int. 13A Ramp TN MP 101.54A NE	R-603	Reinforced Concrete
277	MP 101.65A SE	Turnpike Int. 13A Ramp SIT MP 101.65A SE	R-603	Reinforced Concrete
278	MP 101.68ASR NE	Turnpike Int. 13A Ramp NIT MP 101.68ASR NE	R-603	Reinforced Concrete
279	MP 101.68ASR NW	Turnpike Int. 13A Ramp NIT MP 101.68ASR NW	R-603	Reinforced Concrete
280	MP 102.1SO	Turnpike NSO MP 102.1	W-6201	Steel Sheeting
281	MP 104.0NO	Turnpike SNO MP 104.0	W-6300	Reinforced Concrete
282	MP 104.35SOT	Turnpike Int. 14 Ramp SOT MP 104.35	W-6300	Reinforced Concrete

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No.	Milepost	Structure Name	Contract No.	Material Type
283	MP 104.74A NE	Turnpike Int. 14 Ramp TNO MP 104.74A NE	W-1303	Reinforced Concrete
284	MP 104.88ST	Turnpike Int. 14 Ramp ST MP 104.88ST	W-6302	Reinforced Concrete
285	MP 104.90HLT	Turnpike Int. 14 Ramp HLT MP 104.90HLT	W-6302	Reinforced Concrete
286	MP 105.18 SE	Turnpike Int. 14 Ramp HN MP 105.18 SE	W-1303	Reinforced Concrete
287	MP 105.56NT NW	Turnpike Ramp NT-14 MP 105.56NT NW	W-6421	Reinforced Concrete
288	MP 105.56TN NE	Turnpike Ramp TN-14 MP 105.56TN NE	W-6421	MSE Panel / Reinforced Concrete
289	MP 105.56TN SE	Turnpike Ramp TN-14 MP 105.56TN SE	W-6421	MSE Panel / Reinforced Concrete
290	MP 105.79NT NW	Turnpike Ramp NT-14 MP 105.79NT NW	W-6421	MSE Panel / Reinforced Concrete
291	MP 105.79NT SW	Turnpike Ramp NT-14 MP 105.79NT SW	W-6421	MSE Panel / Reinforced Concrete
292	MP 105.79TN NE	Turnpike Ramp TN-14 MP 105.79TN NE	W-6421	MSE Panel / Reinforced Concrete
293	MP N3.00 NE	Turnpike HEW MP N3.00 NE	T300.311	MSE Panel / Reinforced Concrete
294	MP N3.39NE	Turnpike HWE/HEW MP N3.39 NE	N-12	Reinforced Concrete
295	MP N3.53D SW	Turnpike Int. 14A Ramp HTE MP N3.53D SW	N-II	Reinforced Concrete
296	MP N6.49 SE	Turnpike HWE MP N6.49 SE	R-1412	MSE Panel / Reinforced Concrete
297	MP N7.90E NE	Turnpike HWE MP N7.90E NE	N-26C	Reinforced Concrete
298	MP N7.93W NW	Turnpike HEW MP N7.93W NW	N-26C	Reinforced Concrete
299	MP E106.15A SW	Turnpike Ramp SNO-W MP E106.15A SW	W-6421	Reinforced Concrete
300	MP E106.57SNE SE	Turnpike SNE MP E106.57SNE SE	W-6421	Steel Sheeting
301	MP E106.62NE	Turnpike SNE MP E106.62	W1402	Crib Wall
302	MP E106.64NE	Turnpike SNE MP E106.64	W-6421	Steel Sheeting
303	MP E106.89A NW	Turnpike Int. 15E Ramp TNW MP E106.89A NW	W-1404	Reinforced Concrete
304	MP E110.35SET	Turnpike Int. 15X Ramp SET MP E110.35	SIP-103	MSE Panel / Reinforced Concrete
305	MP E110.66TSE	Turnpike Int. 15X Ramp TSE MP E110.66	SIP-103	Reinforced Concrete
306	MP E110.67A NE	Turnpike Int. 15X Ramp TNE MP E110.67A NE	SIP-103	MSE Panel / Reinforced Concrete
307	MP E110.67A SW	Turnpike Int. 15X Ramp TNE MP E110.67A SW	SIP-103	MSE Panel / Reinforced Concrete
308	MP E110.74SNE	Turnpike SNE MP E110.74	SIP-103	Reinforced Concrete
309	MP E110.80A NE	Turnpike Int. 15X Ramps ISENT/ISXT MP E110.80A NE	SIP-202	MSE Panel / Reinforced Concrete
310	MP E110.80A NW	Turnpike Int. 15X Ramps ISENT/ISXT MP E110.80A NW	SIP-202	MSE Panel / Reinforced Concrete
311	MP E110.80A SE	Turnpike Int. 15X Ramps ISENT/ISXT MP E110.80A SE	SIP-202	MSE Panel / Reinforced Concrete

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No.	Milepost	Structure Name	Contract No.	Material Type
312	MP E110.80A SW	Turnpike Int. 15X Ramps ISENT/ISXT MP E110.80A SW	SIP-202	MSE Panel / Reinforced Concrete
313	MP E110.80B NE	Turnpike Int. 15X Ramp WT/TW MP E110.80B NE	SIP-301	MSE Panel / Reinforced Concrete
314	MP E110.80B SE	Turnpike Int. 15X Ramp WT/TW MP E110.80B SE	SIP-201	MSE Panel / Reinforced Concrete
315	MP E110.80B SW	Turnpike Int. 15X Ramp WT/TW MP E110.80B SW	SIP-202	MSE Panel / Reinforced Concrete
316	MP E110.80C NE	Turnpike Int. 15X Ramp WT/TW MP E110.80C NE	SDE-401	MSE Panel / Reinforced Concrete
317	MP E110.80C NW	Turnpike Int. 15X Ramp WT/TW MP E110.80C NW	SDE-401	MSE Panel / Reinforced Concrete
318	MP E110.80C SE	Turnpike Int. 15X Ramp WT/TW MP E110.80C SE	SDE-401	MSE Panel / Reinforced Concrete
319	MP E110.80C SW	Turnpike Int. 15X Ramp WT/TW MP E110.80C SW	SDE-401	MSE Panel / Reinforced Concrete
320	MP E110.83 SE	Turnpike Int. 15X Ramp NET MP E110.83 SE	SIP-103	Reinforced Concrete
321	MP E110.85 NE	Turnpike NSE/SNE MP E110.85 NE	SIP-103	Steel Sheeting
322	MP E110.85 SE	Turnpike NSE/SNE MP E110.85 SE	SIP-103	Steel Sheeting
323	MP E111.92SE	Turnpike NSE MP E111.92	Unknown	Steel Sheeting
324	MP E111.93SE	Turnpike NSE MP E111.93	Unknown	Steel Sheeting
325	MP E112.19NE	Turnpike SNE MP E112.19	R-120	Crib Wall
326	MP E112.31SE	Turnpike NSE MP E112.31	R-1501	Reinforced Concrete
327	MP E112.55XBL	Turnpike Int. 16E Ramp XBL MP 112.55	R-120	Reinforced Concrete
328	MP E116.74AS SW	Turnpike Ramp NSW-95 MP E116.74AS SW	W-1706	Reinforced Concrete
329	MP W105.93NO NW	Turnpike Ramp SNO-W MP W105.93NO NW	W-6421	MSE Panel / Reinforced Concrete
330	MP W105.93NO SW	Turnpike Ramp SNO-W MP W105.93NO SW	W-6421	Reinforced Concrete
331	MP W106.26AR NW	Turnpike Ramp NET 14 MP W106.26AR NW	W-6422	MSE Panel / Reinforced Concrete
332	MP W106.39NSW-O	Turnpike NSW-O MP W106.39	W-6422	MSE Panel / Reinforced Concrete
333	MP W106.63NSW	Turnpike NSW MP W106.63	W-1402	MSE Panel / Reinforced Concrete
334	MP W106.67NSW	Turnpike NSW MP W106.67	W-6421	Crib Wall
335	MP W106.98A NE	Turnpike Int. 15E Ramp NET MP W106.98A NE	W-1404	Reinforced Concrete
336	MP 117.67NI NE	Turnpike SN80 MP 117.67NI NE	NJ-I-95-6-(8) 61	Reinforced Concrete
337	MP 117.67NO NW	Turnpike SN95 MP 117.67NO NW	NJ I-95-6-(8)61	Reinforced Concrete
338	MP 118.87 NE	Turnpike Ramp NS80X MP 118.87 NE	NJ-I-95-6(5)63	Reinforced Concrete
339	MP 118.93 SE	Turnpike SN 80 MP 118.93 SE	NJ-I-95-6 (5) 63	Reinforced Concrete
340	MP 118.93 SW	Turnpike SN 80 MP 118.93 SW	NJ-I-95-6 (5) 63	Reinforced Concrete
341	MP 119.07 NE	Turnpike NS MP 119.07 NE	NJ-I-95-6 (5) 63	Reinforced Concrete
342	MP 119.28 NE	Turnpike NS MP 119.28 NE	NJ-I-95-6 (5) 63	Reinforced Concrete
343	MP 119.28 SW	Turnpike NS MP 119.28 SW	NJ-I-95-6 (5) 63	Reinforced Concrete

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No.	Milepost	Structure Name	Contract No.	Material Type
344	MP 121.52ESL	Turnpike Int. 72 Ramp ESL MP 121.52	NJ-I-95-7(10)65	Reinforced Concrete
345	MP 121.55 NE	Turnpike SN95L MP 121.55 NE	NJ-I-95-7(10)65	Reinforced Concrete
346	MP 121.60 NE	Turnpike Int. 72 Ramp WNX MP 121.60 NE	Route 95, Section 1G	Reinforced Concrete
347	MP 121.60 NW	Turnpike Int. 72 Ramp WNX MP 121.60 NW	Route 95, Section 1G	Reinforced Concrete
348	MP 121.61ESL	Turnpike Int. 72 Ramp ESL MP 121.61	NJ-I-95-7(10)65	Crib Wall
349	MP 121.64ESL	Turnpike Int. 72 Ramp ESL MP 121.64	NJ-I-95-7(10)65	Reinforced Concrete
350	MP 121.66SN95L	Turnpike SN95L MP 121.66	IR-95-7(28)63	Reinforced Concrete
351	MP 121.68ESL	Turnpike Int. 72 Ramp ESL MP 121.68	Route 95, Section 1G	Reinforced Concrete
352	MP 121.82 SE	Turnpike Int. 72B Ramp ESL MP 121.82 SE	Route 95, Section 1G	Reinforced Concrete
353	MP 121.95WSL	Turnpike Int. 72 Ramp WSL MP 121.95	Route 95, Section 1G	Reinforced Concrete
354	MP 122.03 SE	Turnpike Int. 72 Ramp NLW MP 122.03 SE	Route 95, Section 1G	Reinforced Concrete

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No.	Milepost	Structure Name	Contract No.	Material Type
1	MP 38.90 SE	Turnpike SNO MP 38.90 SE	R-1425	Post and Panel
2	MP 38.91NO	Turnpike SNO MP 38.91	R-1425	Post and Panel
3	MP 54.00SO NW	Turnpike NSO MP 54.00SO NW	T869.120.203	Other / Combination
4	MP 54.00SO SW	Turnpike NSO MP 54.00SO SW	T869.120.203	Other / Combination
5	MP 54.2SO	Turnpike NSO MP 54.2	T869.120.203	Post and Panel
6	MP 54.47SO	Turnpike NSO MP 54.47	T869.120.203	Post and Panel
7	MP 54.71SO	Turnpike NSO MP 54.71	T869.120.203	Post and Panel
8	MP 55.05SO	Turnpike NSO MP 55.05	T869.120.203	Post and Panel
9	MP 60.91NT	Turnpike Int. 7A Ramp NT MP 60.91	T869.120.402	Post and Panel
10	MP 61.91SO	Turnpike NSO MP 61.91	T869.120.402	Post and Panel
11	MP 62.49SO	Turnpike NSO MP 62.49	T869.120.502	Post and Panel
12	MP 62.7SO	Turnpike NSO MP 62.7	T869.120.502	Post and Panel
13	MP 65.54SO	Turnpike NSO MP 65.54	T869.120.503	Post and Panel
14	MP 65.65SO	Turnpike NSO MP 65.65	T869.120.503	Post and Panel
15	MP 66.92NO	Turnpike SNO MP 66.92	T869.120.605	Post and Panel
16	MP 67.89NO NE	Turnpike SNO MP 67.89NO NE	T869.120.605	Other / Combination
17	MP 67.89NO SE	Turnpike SNO MP 67.89NO SE	T869.120.605	Post and Panel
18	MP 73.1NO	Turnpike SNO MP 73.1	W-4504	Post and Panel
19	MP 73.47NO	Turnpike SNO MP 73.47	T869.120.803	Post and Panel
20	MP 73.63SOT	Turnpike Int. 8A Ramp SOT MP 73.63	T869.120.803	Post and Panel
21	MP 73.68SOT	Turnpike Int. 8A Ramp SOT MP 73.68	T869.120.803	Post and Panel
22	MP 74.0NO	Turnpike SNO MP 74.0	T869.120.803	Post and Panel
23	MP 77.88NO	Turnpike SNO MP 77.88	W-4204	Post and Panel
24	MP 78.61NO	Turnpike SNO MP 78.61	W-4204	Post and Panel
25	MP 79.03NO	Turnpike SNO MP 79.03	T869.120.801	Post and Panel
26	MP 79.34NO	Turnpike SNO MP 79.34	W-4204	Post and Panel
27	MP 79.6NO	Turnpike SNO MP 79.6	W-4204	Post and Panel
28	MP 79.72NO	Turnpike SNO MP 79.72	W-4204	Post and Panel
29	MP 79.81NO	Turnpike SNO MP 79.81	W-4204	Post and Panel
30	MP 80.1NO	Turnpike SNO MP 80.1	W-4102	Post and Panel
31	MP 80.33 NW	Turnpike NSO MP 80.33 NW	W-4102	Post and Panel
32	MP 80.33 SW	Turnpike NSO MP 80.33 SW	W-4102	Post and Panel
33	MP 80.37 NE	Turnpike SNO MP 80.37 NE	W-4102	Post and Panel
34	MP 80.46SO	Turnpike NSO MP 80.46	W-4102	Post and Panel
35	MP 80.76SO	Turnpike NSO MP 80.76	W-4102	Post and Panel
36	MP 81.1SO	Turnpike NSO MP 81.1	R-1321	Post and Panel
37	MP 81.58NO NE	Turnpike SNO MP 81.58NO NE	W-4101	Post and Panel
38	MP 81.66 NE	Turnpike SNO MP 81.66 NE	W-4101	Post and Panel
39	MP 81.78NO	Turnpike SNO MP 81.78	W-4101	Post and Panel
40	MP 81.8SO	Turnpike NSO MP 81.8	W-4101	Post and Panel
41	MP 82.16NO	Turnpike SNO MP 82.16	W-4101	Post and Panel
42	MP 82.17SO	Turnpike NSO MP 82.17	W-4101	Post and Panel
43	MP 82.34NO	Turnpike SNO MP 82.34	W-4101	Post and Panel
44	MP 82.42SO	Turnpike NSO MP 82.42	W-4101	Post and Panel
45	MP 82.78SO	Turnpike NSO MP 82.78	W-4101	Post and Panel
46	MP 82.98SO	Turnpike NSO MP 82.98	W-4101	Post and Panel
47	MP 83.12TE	Turnpike Int. 9 Ramp TE MP 83.21	T300.176	Post and Panel

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No.	Milepost	Structure Name	Contract No.	Material Type
48	MP 83.16TE	Turnpike Int. 9 Ramp TE MP 83.16	T300.176	Post and Panel
49	MP 83.2TE	Turnpike Int. 9 Ramp TE MP 83.2	T300.176	Post and Panel
50	MP 83.27TE	Turnpike Int. 9 Ramp TE MP 83.27	T300.176	Post and Panel
51	MP 83.73NOT	Turnpike Int. 9 Ramp NOT MP 83.73	W-4102	Post and Panel
52	MP 84.09SO	Turnpike NSO MP 84.09	W-4102	Post and Panel
53	MP 85.53SO	Turnpike NSO MP 85.53	R-1321	Post and Panel
54	MP 85.77S NW	Turnpike NSO MP 85.77S NW	R-1392	Post and Panel
55	MP 85.77S SW	Turnpike NSO MP 85.77S SW	R-1392	Post and Panel
56	MP 85.93NO	Turnpike SNO MP 85.93	R-1243	Post and Panel
57	MP 86.36NO	Turnpike SNO MP 86.36	R-1243	Post and Panel
58	MP 86.55SO	Turnpike NSO MP 86.55	R-1243	Post and Panel
59	MP 86.62NO	Turnpike SNO MP 86.62	R-1179	Post and Panel
60	MP 87.27N NE	Turnpike SNO MP 87.27N NE	R-1235B	Post and Panel
61	MP 87.27N SE	Turnpike SNO MP 87.27N SE	R-1235B	Post and Panel
62	MP 87.55NO	Turnpike SNO MP 87.55	R-1235B	Post and Panel
63	MP 87.6SO	Turnpike NSO MP 87.6	R-1235A	Post and Panel
64	MP 87.87SO	Turnpike NSO MP 87.87	R-1235A	Post and Panel
65	MP 88.69S SW	Turnpike NSO MP 88.69S SW	R-1179	Post and Panel
66	MP 88.89N NE	Turnpike SNO MP 88.89N NE	R-1179	Post and Panel
67	MP 88.89N SE	Turnpike SNO MP 88.89N SE	R-1179	Post and Panel
68	MP 88.89S NW	Turnpike NSO MP 88.89S NW	R-1179	Post and Panel
69	MP 88.89S SW	Turnpike NSO MP 88.89S SW	R-1179	Post and Panel
70	MP 88.98NO	Turnpike SNO MP 88.98	R-1179	Post and Panel
71	MP 89.12SO	Turnpike NSO MP 89.12	R-1179	Post and Panel
72	MP 89.3NO	Turnpike SNO MP 89.3	R-1352	Post and Panel
73	MP 89.33SO	Turnpike NSO MP 89.33	R-1392	Post and Panel
74	MP 89.44SO	Turnpike NSO MP 89.44	R-1392	Post and Panel
75	MP 89.71NO	Turnpike SNO MP 89.71	R-1321	Post and Panel
76	MP 89.71SO	Turnpike NSO MP 89.71	R-1392	Post and Panel
77	MP 90.04NO	Turnpike SNO MP 90.04	R-1321	Post and Panel
78	MP 90.1SO	Turnpike NSO MP 90.1	R-1321	Post and Panel
79	MP 90.48SO	Turnpike NSO MP 90.48	R-1392	Post and Panel
80	MP 90.99TK	Turnpike Int. 11 Ramp TK MP 90.99	Unknown	Post and Panel
81	MP 91.3NO	Turnpike SNO MP 91.3	W-5101	Post and Panel
82	MP 91.57NO	Turnpike SNO MP 91.57	W-5101	Post and Panel
83	MP 91.63SO	Turnpike NSO MP 91.63	W-5101	Post and Panel
84	MP 91.81NO	Turnpike SNO MP 91.81	W-5101	Post and Panel
85	MP 91.83SO	Turnpike NSO MP 91.83	W-5101	Post and Panel
86	MP 91.88NO	Turnpike SNO MP 91.88	W-5101	Post and Panel
87	MP 91.89SO	Turnpike NSO MP 91.89	W-5101	Post and Panel
88	MP 92.06SO	Turnpike NSO MP 92.06	W-5101	Post and Panel
89	MP 92.39SO	Turnpike NSO MP 92.39	W-5103	Post and Panel
90	MP 92.48SO	Turnpike NSO MP 92.48	W-5103	Post and Panel
91	MP 92.65NISA	Turnpike SA10N Ramp NISA MP 92.65	W-5102	Post and Panel
92	MP 92.9SANO	Turnpike SA10N Ramp SANO MP 92.9	W-5102	Post and Panel
93	MP 93.3SO	Turnpike NSO MP 93.3	W-5102	Post and Panel

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Turnpike Noise Barrier Inventory

No.	Milepost	Structure Name	Contract No.	Material Type
94	MP 93.42SO	Turnpike NSO MP 93.42	W-5102	Post and Panel
95	MP 93.51NO	Turnpike SNO MP 93.51	W-5201	Post and Panel
96	MP 93.63SO	Turnpike NSO MP 93.63	W-5102	Post and Panel
97	MP 93.7NO	Turnpike SNO MP 93.7	W-5201	Post and Panel
98	MP 93.81NO NE	Turnpike SNO MP 93.81NO NE	W-5201	Post and Panel
99	MP 94.4NO	Turnpike SNO MP 94.4	W-5201	Post and Panel
100	MP 94.7NO	Turnpike SNO MP 94.7	W-5201	Post and Panel
101	MP 94.88NO	Turnpike SNO MP 94.88	W-5201	Post and Panel
102	MP 95.07NO	Turnpike SNO MP 95.07	W-5201	Post and Panel
103	MP 95.24NO	Turnpike SNO MP 95.24	W-5201	Post and Panel
104	MP 95.88SO	Turnpike NSO MP 95.88	W-5201	Post and Panel
105	MP 96.04SO	Turnpike NSO MP 96.04	W-5201	Post and Panel
106	MP 96.1SO	Turnpike NSO MP 96.1	W-5201	Post and Panel
107	MP 96.15SO	Turnpike NSO MP 96.15	W-5201	Post and Panel
108	MP 99.87NO	Turnpike SNO MP 99.87	W-6103	Post and Panel
109	MP 99.92NO	Turnpike SNO MP 99.92	W-6103	Post and Panel
110	MP 99.96SO	Turnpike NSO MP 99.96	W-6103	Post and Panel
111	MP 100.05NO NE	Turnpike SNO MP 100.05NO NE	W-6103	Reinforced Concrete
112	MP 100.05NO SE	Turnpike SNO MP 100.05NO SE	W-6103	Reinforced Concrete
113	MP 100.05SO SW	Turnpike NSO MP 100.05SO SW	W-6103	Post and Panel
114	MP 100.15NO NE	Turnpike SNO MP 100.15NO NE	W-6103	Reinforced Concrete
115	MP 100.15SO SW	Turnpike NSO MP 100.15SO SW	W-6103	Reinforced Concrete
116	MP 100.29NO NW	Turnpike SNO MP 100.29NO NW	W-6103	Reinforced Concrete
117	MP 100.29SO NW	Turnpike NSO MP 100.29SO NW	W-6103	Reinforced Concrete
118	MP 100.29SO SW	Turnpike NSO MP 100.29SO SW	W-6103	Reinforced Concrete
119	MP 100.40NO NE	Turnpike SNO MP 100.40NO NE	W-6103	Reinforced Concrete
120	MP 100.40NO SE	Turnpike SNO MP 100.40NO SE	W-6103	Reinforced Concrete
121	MP 100.40SO NW	Turnpike NSO MP 100.40SO NW	W-6103	Reinforced Concrete
122	MP 100.40SO SW	Turnpike NSO MP 100.40SO SW	W-6103	Reinforced Concrete
123	MP 100.45NO NE	Turnpike SNO MP 100.45NO NE	W-6103	Reinforced Concrete
124	MP 100.45SO NW	Turnpike NSO MP 100.45SO NW	W-6103	Reinforced Concrete
125	MP 100.50NO SE	Turnpike SNO MP 100.50NO SE	W-6103	Reinforced Concrete
126	MP 100.50SO NW	Turnpike NSO MP 100.50SO NW	W-6103	Reinforced Concrete
127	MP 100.50SO SW	Turnpike NSO MP 100.50SO SW	W-6103	Reinforced Concrete
128	MP 100.60NO NE	Turnpike SNO MP 100.60NO NE	W-3103	Reinforced Concrete

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Turnpike Noise Barrier Inventory

No.	Milepost	Structure Name	Contract No.	Material Type
129	MP 100.60NO SE	Turnpike SNO MP 100.60NO SE	W-6103	Reinforced Concrete
130	MP 100.65NO NE	Turnpike SNO MP 100.65NO NE	W-6103	Reinforced Concrete
131	MP 100.65SO SW	Turnpike NSO MP 100.65SO SW	W-6103	Reinforced Concrete
132	MP 100.76NO NE	Turnpike SNO MP 100.76NO NE	W-6103	Reinforced Concrete
133	MP 100.86NO NE	Turnpike SNO MP 100.86NO NE	W-6103	Reinforced Concrete
134	MP 100.86NO SE	Turnpike SNO MP 100.86NO SE	W-6103	Reinforced Concrete
135	MP 100.91NO NE	Turnpike SNO MP 100.91NO NE	W-6103	Reinforced Concrete
136	MP 101.13NO	Turnpike SNO MP 101.13	W-6203	Post and Panel
137	MP 101.21NO NE	Turnpike SNO MP 101.21NO NE	W-6203	Post and Panel
138	MP N2.91HWE	Turnpike HWE MP N2.91	R-1234	Post and Panel
139	MP N3.00 SE	Turnpike HWE MP N3.00 SE	R-1234	Post and Panel
140	MP N3.24 SE	Turnpike HWE MP N3.24 SE	R-1234	Post and Panel
141	MP E111.98SE	Turnpike NSE MP E111.98	R-1401	Post and Panel
142	MP 120.60 NE	Turnpike SN95L MP 120.60 NE	R-1228	Post and Panel
143	MP 120.83NS95L	Turnpike NS95L MP 120.83	R-1228	Post and Panel
144	MP 120.9 NE	Turnpike NS95L/NS95X/SN95X/SN95L MP 120.9 NE	R-1228	Post and Panel
145	MP 120.9 SE	Turnpike NS95L/NS95X/SN95X/SN95L MP 120.9 SE	R-1228	Post and Panel
146	MP 120.9 SW	Turnpike NS95L/NS95X/SN95X/SN95L MP 120.9 SW	R-1228	Post and Panel
147	MP 121.01SN95L	Turnpike SN95L MP 121.01	R-1228	Post and Panel
148	MP 121.25 NW	Turnpike NS95L MP 121.25 NW	R-1228	Post and Panel

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Manual for Retaining Wall and Noise Barrier Inspection

Turnpike Courtesy Noise Barrier Inventory

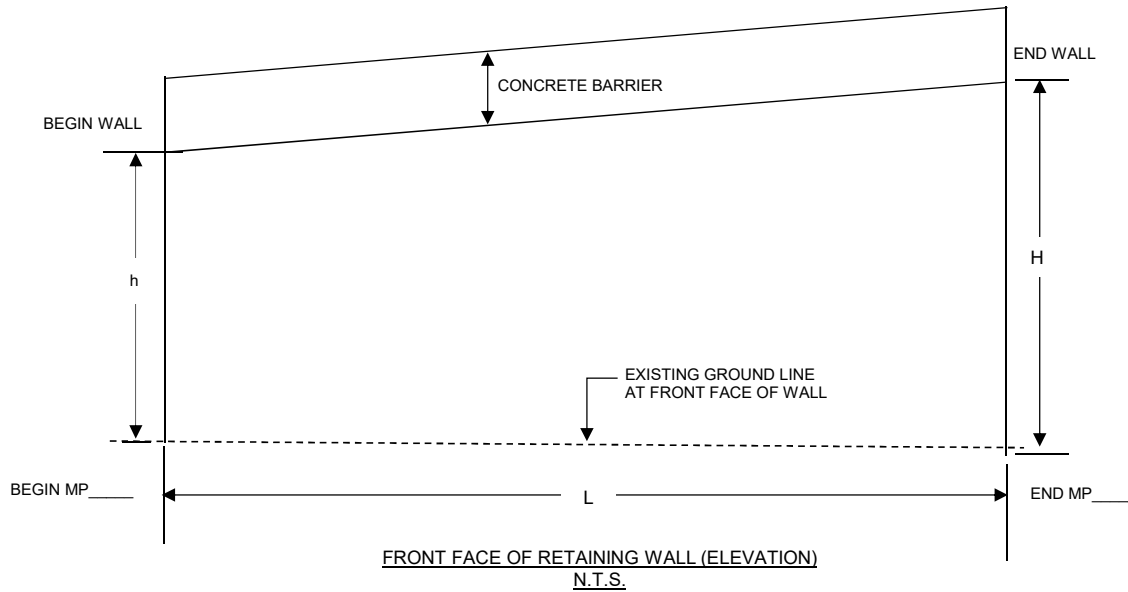
No.	Milepost	Structure Name	Contract No.	Material Type
1	MP 118.60NS80 NJDOT	NS80 MP 118.60 NOT NJTA WALL	Unknown	Post and Panel

14. TYPICAL RETAINING WALL AND NOISE BARRIER SKETCHES

FIELD SKETCH

TYPICAL RETAINING WALL AND NOISE BARRIER SKETCHES

STRUCTURE NUMBER: _____
 INSPECTION DATE: / /
 CYCLE NO: _____



MEASUREMENTS OF RETAINING WALL:

MAXIMUM HEIGHT (H) = ___ FEET MINIMUM HEIGHT (h) = ___ FEET
 LENGTH OF WALL (L) = ___ FEET CONCRETE BARRIER HEIGHT = ___ FEET

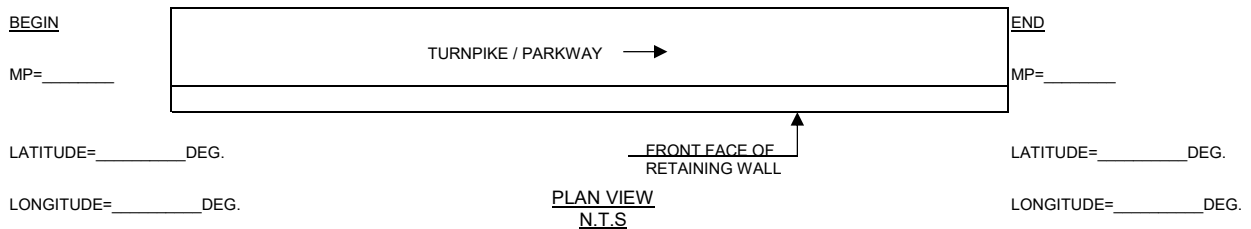
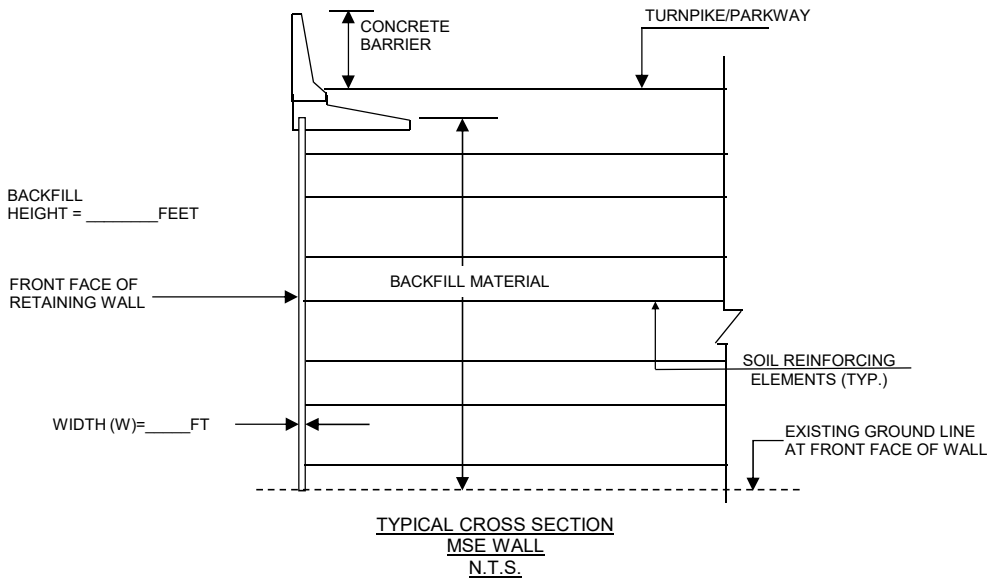
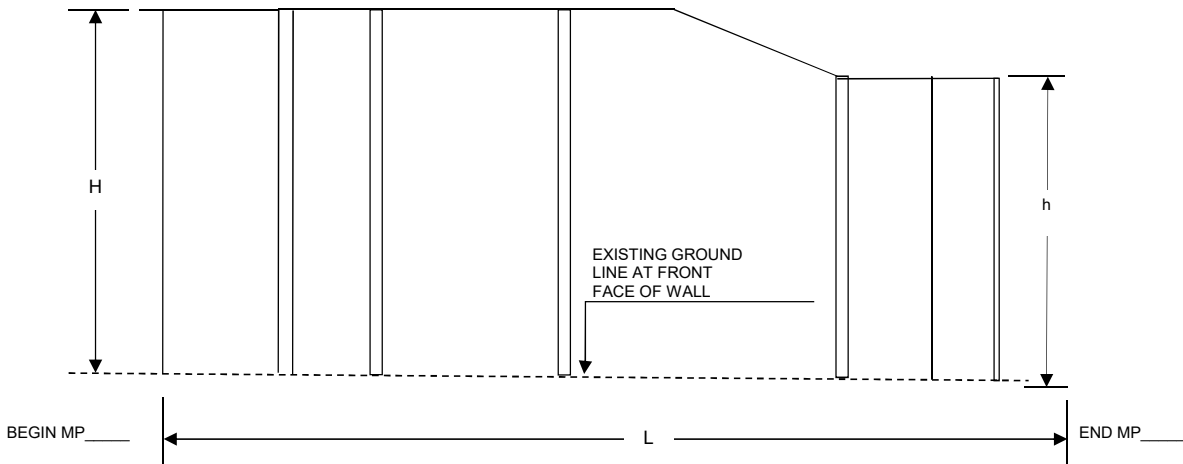


FIGURE 13-RETAINING WALL AT TURNPIKE AND PARKWAY MAINLINE

FIELD SKETCH

TYPICAL RETAINING WALL AND NOISE BARRIER SKETCHES

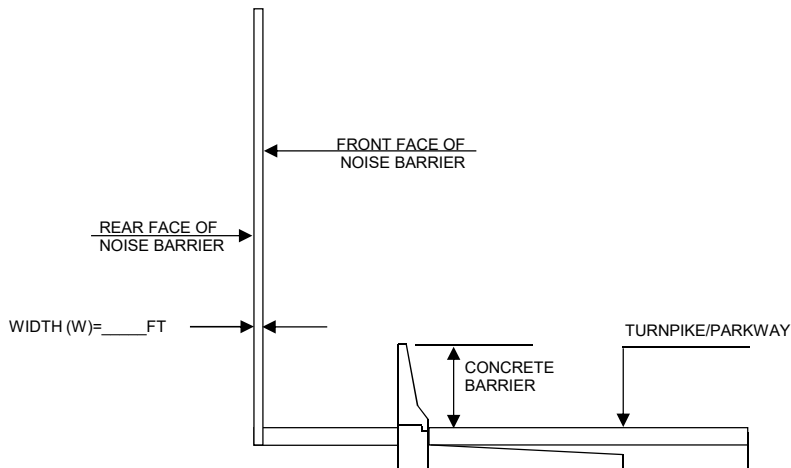
STRUCTURE NUMBER: _____
 INSPECTION DATE: __/__/____
 CYCLE NO: _____



MEASUREMENTS OF RETAINING WALL:

MAXIMUM HEIGHT (H) = _____ FEET MINIMUM HEIGHT (h) = _____ FEET
 LENGTH OF WALL (L) = _____ FEET

FRONT FACE OF NOISE BARRIER (ELEVATION)
 N.T.S.



TYPICAL CROSS SECTION
 N.T.S.

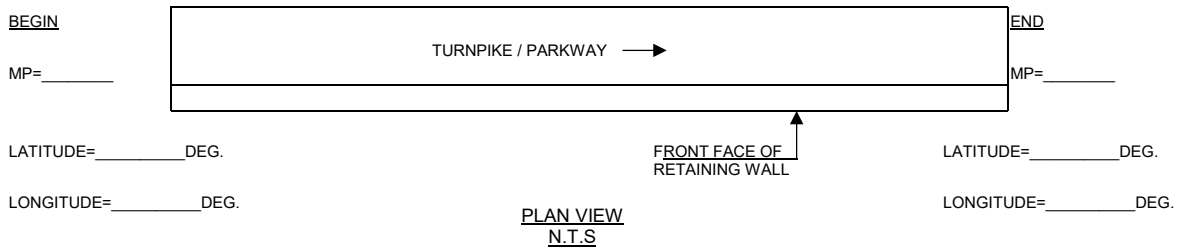
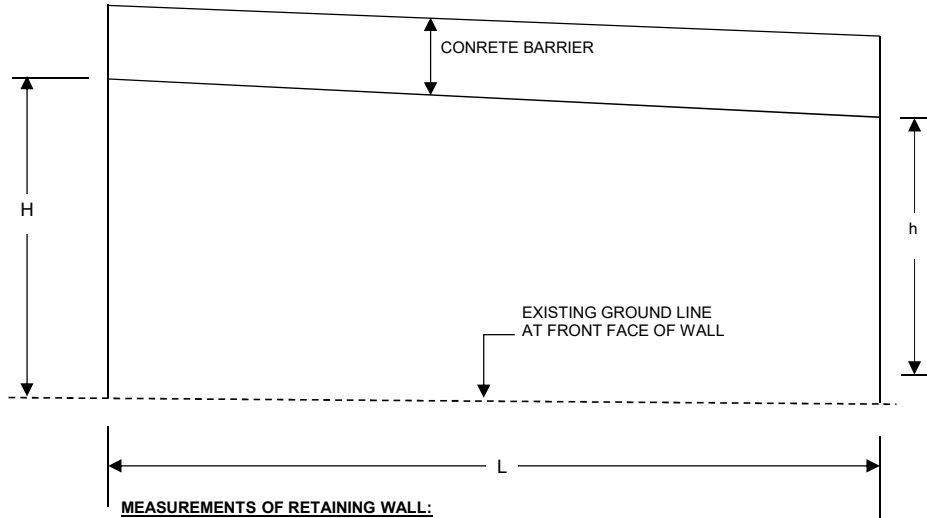


FIGURE 14-NOISE BARRIER AT TURNPIKE AND PARKWAY MAINLINE

FIELD SKETCH

TYPICAL RETAINING WALL AND NOISE BARRIER SKETCHES

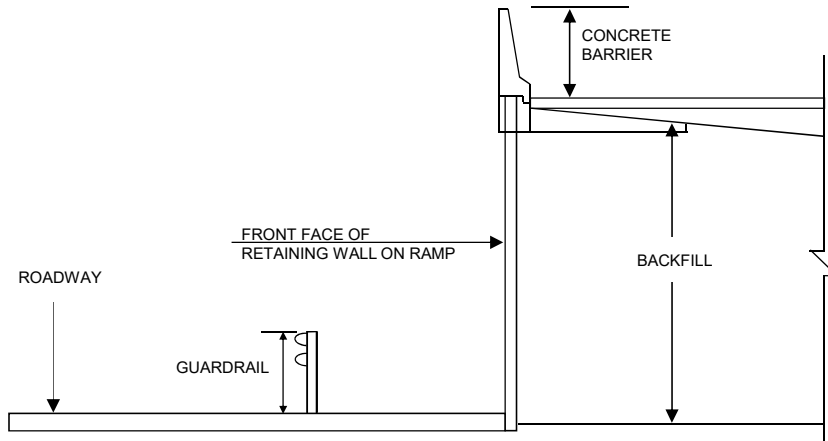
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 INSPECTION DATE: __/__/____
 CYCLE NO: _____



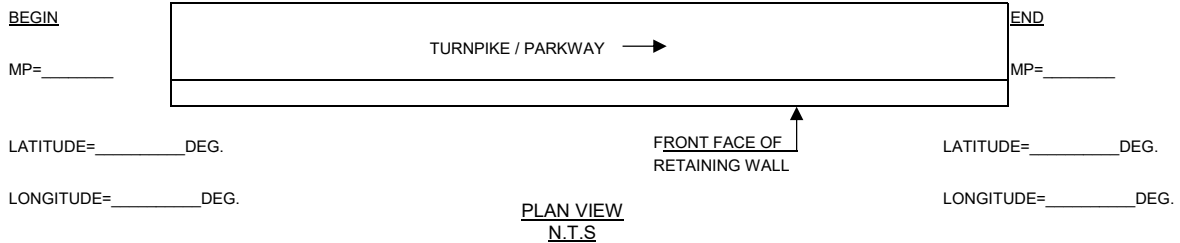
MEASUREMENTS OF RETAINING WALL:

MAXIMUM HEIGHT (H) = _____ FEET MINIMUM HEIGHT (h) = _____ FEET
 LENGTH OF WALL (L) = _____ FEET

FRONT FACE OF RETAINING WALL
(ELEVATION)
N.T.S.



TYPICAL CROSS SECTION
N.T.S.



PLAN VIEW
N.T.S.

FIGURE 15-RETAINING WALL AT TURNPIKE AND PARKWAY RAMP

15. REFERENCES

1. NJTA Standard Specifications, 2016
2. NJTA Design Manual, 2022
3. Bridge Inspector's Reference Manual (BIRM), 2022
4. NJTA Manual for Traffic Control in Work Zones, 2017
5. NJTA Bridge Inspection Program Quality Management Plan (QMP), 2022
6. NJTA Bridge Inspection Program Qualifications of Key Bridge Inspection Personnel
7. Authority Deficiency Category Definitions (ADCD), 2020
8. AASHTO Manual for Bridge Element Inspection, 2019
9. NYSDOT Retaining Wall Inventory and Inspection Program Manual, 2018
10. CDOT Retaining and Noise Wall Inspection and Structure Management Manual, 2016
11. CDOT Feasibility of Management System for Retaining Walls and Noise Barriers, 2003
12. USDOT Retaining Wall Inventory and Condition Assessment Program Manual, 2010
13. Guide To Structure Management of Earth Retaining Structures By NCHRP, 2009
14. Guide for Conducting a Visual Inspection of Concrete In Service, 2008, ACI 201.1R-08
15. FHWA Recording and Coding Guide for the Structure Inventory and Appraisal of the Nations' Bridge December 1995
16. Civil Engineering Reference Manual – Michael R. Lindeburg, P.E.
17. Guide to Structure Management of Earth Retaining Structures by NCHRP October 2009
18. Retaining Wall Inventory and Condition Assessment Program (WIP) National Park Service Procedure Manual – FHWA-CFL/TD-10-003 AUGUST 2010