

Maintenance Rating Program

Triangle Expressway

February 2025

2024 Fourth Quarter Report

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1.0 Executive Summary

The North Carolina Turnpike Authority (NCTA) Maintenance Rating Program (MRP) is a maintenance evaluation program for roadway features and toll facilities on the NCTA system. This report presents results from the 2024 Fourth Quarter Assessment of the Triangle Expressway.

The overall 2024 fourth quarter maintenance rating of the Triangle Expressway was **96.2**, above the NCTA target rating of 90. As shown in **Table 1**, all five elements assessed achieved a rating greater than the target rating of 85.

Table 1: MRP Element Results for the 2024 Fourth Quarter Assessment

Element	MRP Rating	Target Rating
Road Surface	98.0	85.0
Unpaved Shoulders and Ditches	100.0	85.0
Drainage	97.0	85.0
Roadside	96.9	85.0
Traffic Control Devices	92.2	85.0
Overall MRP Performance Rating	96.2	90.0

This report also provides a rolling rating of the latest four quarterly inspections of the Triangle Expressway. As presented in **Table 2**, the rolling maintenance rating of the Triangle Expressway was **95.1**.

Table 2: MRP Rolling Element Results

Element	Q1 2024 Rating	Q2 2024 Rating	Q3 2024 Rating	Q4 2024 Rating	Rolling Rating
Road Surface	96.7	98.9	100.0	98.0	98.3
Unpaved Shoulders and Ditches	95.2	98.8	100.0	100.0	97.8
Drainage	89.6	93.9	92.5	97.0	94.4
Roadside	92.6	94.4	96.7	96.9	94.0
Traffic Control Devices	87.2	93.3	87.8	92.2	92.3
Overall MRP Performance Rating	91.9	95.7	94.6	96.2	95.1

In addition, the report provides findings of the Green Level Historic District signs inspection. This quarter, two signs were inspected. One of the signs was in good physical condition, while the other has been struck and is down. The landscaped area around the two signs was maintained in accordance with NCTA MRP standards.

2.0 Introduction

The NCTA MRP is a comprehensive planning, measuring, and managing process that provides a means for communicating to managers, stakeholders, and customers the impacts of policy and budget decisions on program service delivery.

Using outcome-based performance measures and the service level scale (0 through 100), the inspection results are rated against established threshold criteria. The program analysis is accomplished using sampling procedures that capture the level of service being provided for individual assets. The evaluation procedure is based on the establishment of threshold conditions that quantify the maximum defect allowed on assets. Over time, the results can be charted to identify work needs and subsequent necessary actions.

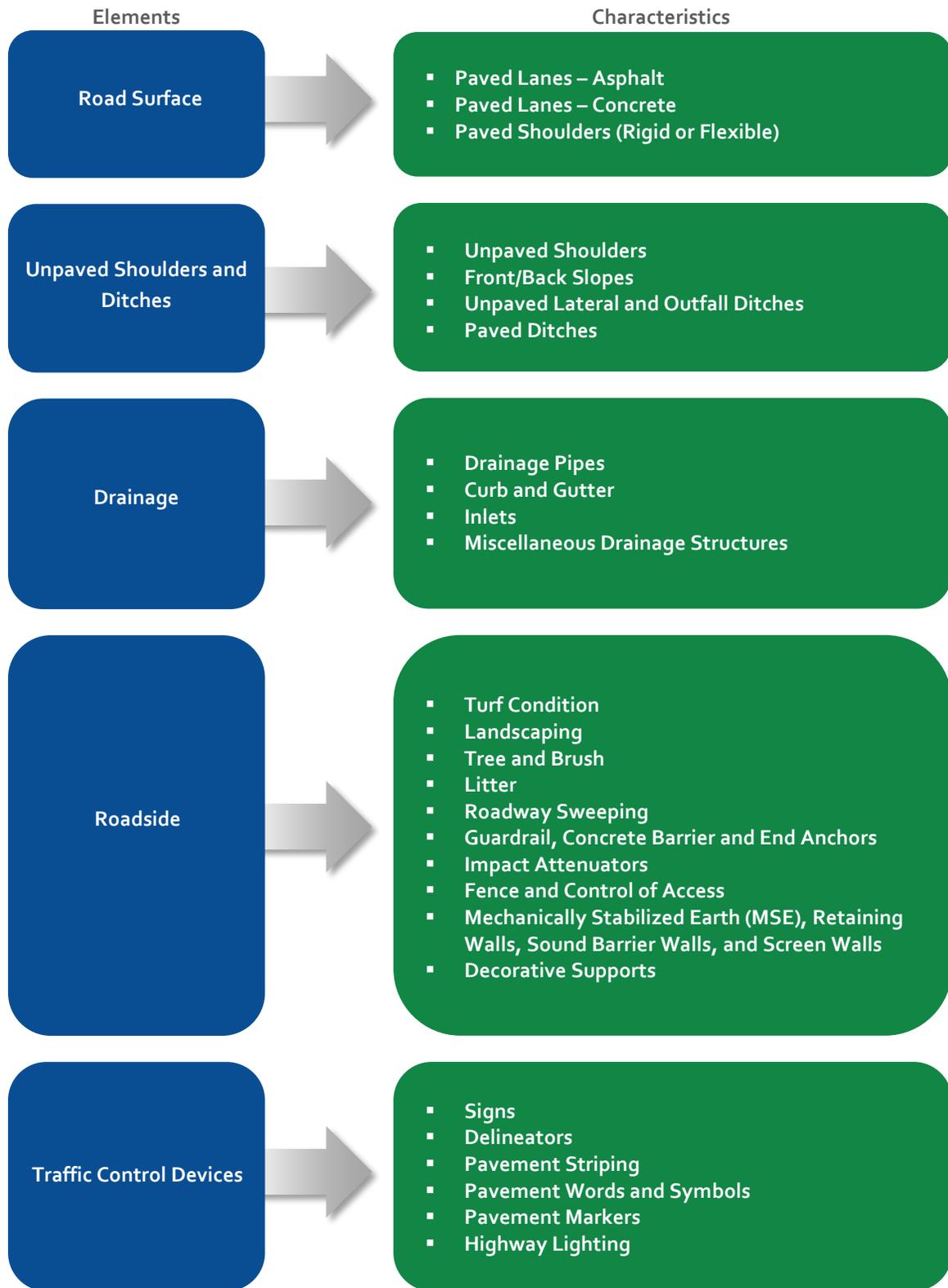
The NCTA performance standards, threshold criteria, and maintenance rating program were developed through a collaborative effort by NCTA managers, NCDOT maintenance staff, and consultants.

Using field survey information, a maintenance matrix can be developed to show the ties between maintenance activities and the characteristics of various roadway features. The purpose of this evaluation is to provide information that can be used to schedule and prioritize routine maintenance activities and provide uniform maintenance conditions that meet established objectives.

3.0 MRP Procedure

Per the *NCTA Roadway and Facility Maintenance Performance Standards V7*, roadway assets or characteristics on NCTA facilities have been grouped into elements. These elements and corresponding characteristics are shown in **Figure 1**:

Figure 1: Maintenance Elements and Characteristics



A weighting system has been established to identify the importance of each element and characteristic. This system consists of two weighting factors: one that accounts for the importance of individual characteristics within a given maintenance element (1-9), and one that accounts for the importance of the maintenance elements to the total rating (by % of score). This two-factor system reveals deficiencies among characteristics and elements.

The program analysis is accomplished using statistically valid, random sampling procedures that capture the level of service for individual characteristics, with a 95% confidence level in sampling. The sample characteristics selected are evaluated during quarterly inspections, which are performed during the months of February, May, August, and November to account for dynamic changes in assets during the various seasons. The evaluation process is completed using electronic data collection tablets and is based on established threshold conditions described in the NCTA Roadway and Facility Maintenance Standards V7. Those characteristics that meet or exceed the threshold are coded as PASSING; those that do not meet the threshold are coded as NOT PASSING.

When the evaluation process is completed, the number of PASSING samples and total sample are multiplied by the weighted values (1-9) to determine the actual and possible rating points for characteristics and elements. MRP ratings for elements and characteristics are then calculated as the ratio of the actual rating points to possible rating points. The MRP ratings represent the maintenance level of service currently being provided, as they define the percent of characteristics and elements that meet the maintenance condition standard. For instance, an MRP rating of 83 signifies that 83 percent of the inspected elements/characteristics met the standard.

The overall MRP rating is determined by calculating the sum of the elements' ratings multiplied by the following weighted factors:

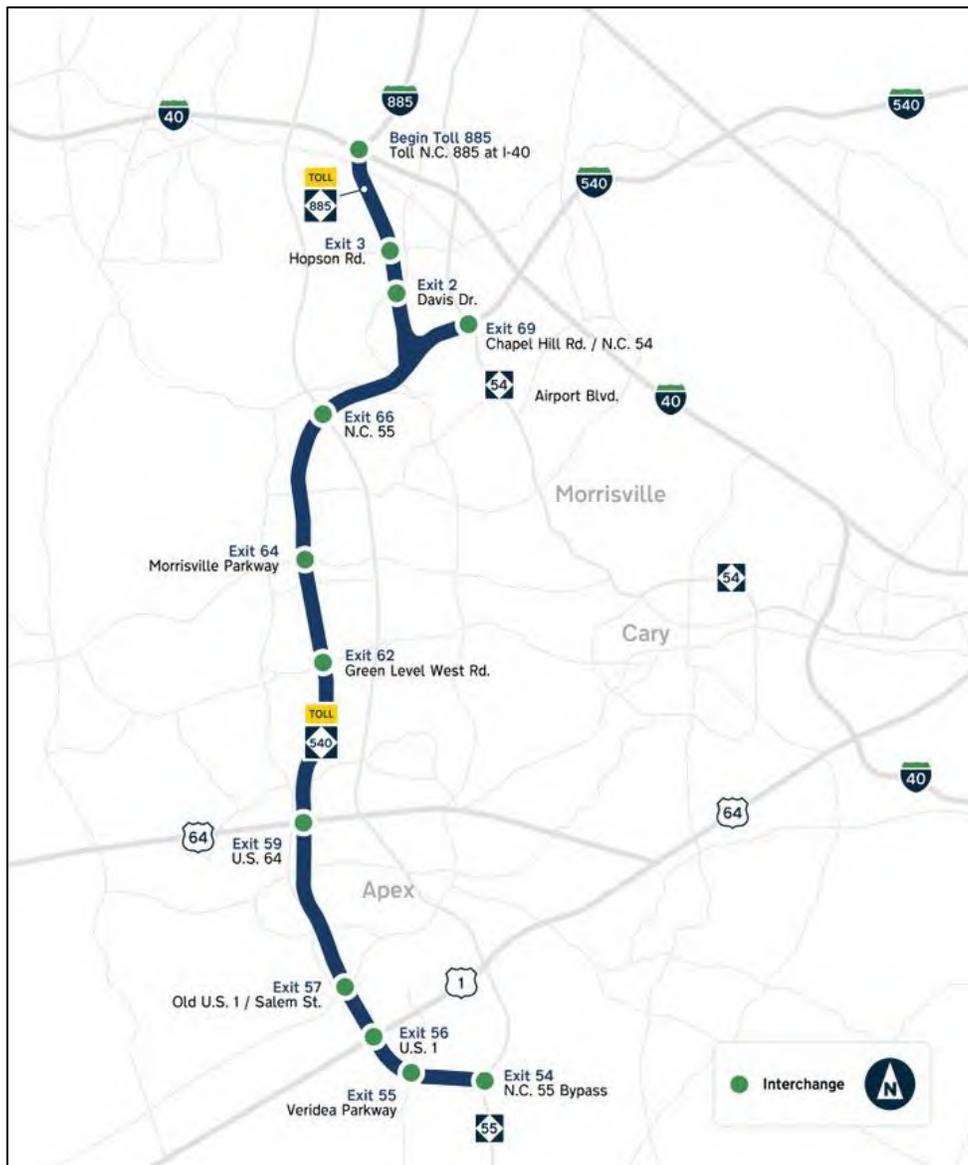
Road Surface =	25%
Unpaved Shoulders =	13%
Drainage =	15%
Roadside =	17%
Traffic Control Devices =	30%
<hr/>	
Total	100%

The NCTA's overall target rating is 90, with elements scoring 85 or higher, and characteristics 80 or higher. In addition to quarterly ratings, the cumulative rolling annual rating is calculated each quarter. This rating is obtained by adding the ratings of the latest four quarterly inspections to compensate for the likelihood of uneven sample sizes.

4.0 Triangle Expressway Description

The Triangle Expressway extends for approximately 37 miles from the interchange of I-40 and Toll NC-885 in Durham to an eastern connection with I-40 / U.S. 70 near Garner. It includes a one-mile segment on Toll NC-540 extending north from the Toll NC-540 / Toll NC-885 interchange to the NC-54 interchange. The Triangle Expressway consists of twelve interchanges and twenty-two all-electronic toll collection zones. The newest section from N.C. 55 Bypass to I-40/US 70 near Garner opened to traffic and started toll collection on September 25, 2024. This section includes interchanges at Holly Springs Road, Bells Lake Road, U.S. 401, Old Stage Road, and N.C. 50 before connecting with I-40 and U.S. 70. While the newly opened extension is now open to traffic, this report will only summarize the data for the pre-existing roadway. (*Figure 2*).

Figure 2: Triangle Expressway Map



5.0 Triangle Expressway Asset Inventory Update

Through normal day-to-day maintenance activities and the construction of special projects, roadside assets are continuously being added or modified on the roadway. NCTA coordinates closely with NCDOT Division 5 Maintenance and conducts routine field visits to maintain an accurate asset inventory and ensure the validity of the MRP survey.

Prior to this quarter assets on Toll NC 540 exit ramps to and from NC-55 Bypass were removed from the inventory due to the Complete 540 construction project. **Table 3** presents the updated number of assets that are currently available for inspections.

Table 3: Asset Inventory

Assets	Total Inventory	2024 Eligible Inventory
Barriers	801	616
Curb and Gutter	428	391
Decorative Supports	305	298
Drainage	1179	1127
Misc. Drainage	218	202
Fences	508	483
Highway Lighting	435	430
Impact Attenuators	48	46
Inlets	1129	1075
Linear Segments	795	755
Plant Beds	266	257
Paved Ditches	2	2
Pavement Symbols	652	591
Signs	1224	1168
Tree and Brush	603	567
Turf	1074	1011
Walls	88	84

6.0 MRP Fourth Quarter Assessment

6.1 Quarterly Results

The overall 2024 Fourth quarter maintenance rating of the Triangle Expressway was 96.2, above NCTA's target overall rating of 90. All elements assessed achieved quarter ratings above the target rating of 85 established for element groups.

It is important to note that these results are only representative of the fourth quarter sample, one of the four surveys to provide an intermediate snapshot of seasonal conditions. Therefore, they are not a statistically valid representation of the assets; only the total of all four quarterly inspections, reported as the rolling rating, provides a 95% confidence level in statistical sampling. The Fourth quarter MRP performance ratings for elements and characteristics are presented in *Table 4* and *Table 5*, respectively.

Table 4: MRP Element Results for Q4 2024

Element	MRP Rating
Road Surface	98.0
Unpaved Shoulders and Ditches	100.0
Drainage	97.0
Roadside	96.9
Traffic Control Devices	92.2
Overall MRP Performance Rating	96.2

Table 5: MRP Characteristics Results for Q4 2024

Road Surface	Sample Passed	Sample Total	Weighted Values	Actual Pts	Available Pts	Q4 Rating
Paved Lanes Asphalt	9	9	9	81	81	100
Paved Lanes Concrete	23	24	9	207	216	96
Paved Shoulder	32	32	5	160	160	100
Element Total				448	457	98.0
Unpaved Shoulders and Ditches	Sample Passed	Sample Total	Weighted Values	Actual Pts	Available Pts	Q4 Rating
Unpaved Shoulder	32	32	9	288	288	100
Front/Back Slopes	32	32	6	192	192	100
Lateral and Outfall Ditches, Unpaved	32	32	6	192	192	100
Ditches, Paved	2	2	5	10	10	100
Element Total				682	682	100.0
Drainage	Sample Passed	Sample Total	Weighted Values	Actual Pts	Available Pts	Q4 Rating
Drainage Pipes	34	34	7	238	238	100
Curb and Gutter	28	28	6	168	168	100
Inlets	32	34	7	224	238	94
Misc. Drainage Structure	21	23	4	84	92	91
Element Total				714	736	97.0
Roadside	Sample Passed	Sample Total	Weighted Values	Actual Pts	Available Pts	Q4 Rating
Turf Condition	32	33	7	224	231	97
Landscaping	23	25	4	92	100	92
Trees and Brush	29	31	4	116	124	94
Litter	32	32	4	128	128	100
Roadway Sweeping	32	32	5	160	160	100
Guardrail, Concrete Barrier, and End Anchors	31	31	9	279	279	100
Impact Attenuators	8	9	9	72	81	89
Fence, Control Access	27	30	7	189	210	90
Retaining Walls and Sound Barrier Walls	14	14	5	70	70	100
Decorative Supports	26	26	5	130	130	100
Graffiti and Stain Removal	44	44	4	176	176	100
Element Total				1636	1689	96.9
Traffic Control Devices	Sample Passed	Sample Total	Weighted Values	Actual Pts	Available Pts	Q4 Rating
Signs	33	34	7	231	238	97
Delineators	32	32	3	96	96	100
Pavement Striping/Marking	32	32	8	256	256	100
Words and Symbols	23	31	7	161	217	74
Pavement Markers	32	32	9	288	288	100
Highway Lighting	23	29	6	138	174	79
Element Total				1170	1269	92.2

Additionally, **Appendix A** includes maps that present the location of all assets assessed during the fourth quarter. **Appendix B** includes a list of the individual assets that did not achieve their target ratings.

6.2 Quarterly Analysis and Recommendations

Elements

During the Fourth quarter, all elements exceeded NCTA's quarter score threshold criteria of 85.

Road Surface (98.0) experienced a 2.0-point decrease from the previous quarter's rolling rating. Paved Lanes Concrete (96.0) quarter rating decreased by 4 points. All characteristics within this element continued scoring above 90 for last four quarters.

Unpaved Shoulders and Ditches (100.0) experienced an increase in rolling rating. The rating for this element was on par with the previous quarter's rolling rating. All characteristics within this element continued scoring above 90.

Drainage (97.0) rolling rating increased by 4.5 points from the previous quarter rolling rating. Inlets (94) rolling rating showed great improvement with an increase of 9 points from last quarter.

Roadside (96.9) rolling rating increased by 0.2 points from the previous quarter rolling rating. Fence, Control Access (90) was an improved characteristic with a score increase of 2.0 points from the previous quarter's rolling rating.

Traffic Control Devices (92.2) experienced an increase in rolling rating of 4.4 points from the previous quarter. Highway Lighting (79) improved by 14 points in rolling rating but will still require attention with an element characteristic score below target of 80. Similarly, Word and Symbols (74) will need improvement with a decrease in rolling rating of 15 points.

Recommendations to improve specific critical characteristic ratings are provided in the following sections.

Characteristics

This quarter, all but two element characteristics, Words and Symbols (74) and Highway Lighting (79), exceeded NCTA's quarter score threshold criteria of 80. A description of the characteristic's conditions and future work planning recommendations are provided below. Pictures of all characteristic failures are included in **Appendix B**.

Pavement Words and Symbols (74 rating – 23 of the 31 assets passed): Many of the pavement symbols that did not pass inspections were due to poor reflectivity and were not visible at night.

To maintain/improve the condition ratings, it is recommended that markings that are fading, chipping and/or showing signs of aging be prioritized for attention as appropriate in the capital budget.

Maintenance Program:

- 1) Words and symbols are observed daily and inspected every 4 months for compliance to the standard.
- 2) Worn or missing words or symbols are evaluated for compliance annually, and generally are scheduled on a 5-8 year replacement cycle depending on the material.

Maintenance and Evaluation Standards: Pavement symbols do not meet the maintenance standards when any of the following criteria is observed:

- 1) More than 30% of the symbol area is worn, missing or not visible.
- 2) More than 30% of symbol area is not reflective for a distance of 160 feet using low beam headlights during nighttime observation. (N)

Highway Lighting (79 rating – 23 of the 29 assets passed): Each of the highway lights that did not pass inspection either were not functioning properly (out at night) or were damaged/completely down.

To maintain/improve the condition ratings, it is recommended that highway lighting be regularly inspected for functionality after dark, and maintenance completed as planned in the capital budget. Solar and battery powered backup may help cover temporary down time between repairs.

Maintenance Program:

- 1) Perform night patrol once a month and identify any outages. A monthly "Lighting Outage Report" shall be submitted by the maintenance provider to the NCTA by the 30th of each month. All bulb outages must be replaced within 48 hours.
- 2) Perform cleaning of glassware at the same time as any routine maintenance function or diagnostic action is performed.
- 3) Replace any light poles damaged by traffic within 5 days or within 14 days if any foundations needed pouring.

Maintenance and Evaluation Standards: Highway and Sign Lighting do not meet the maintenance standards when any of the following criteria is observed:

- 1) Any electrical inspection plate, access panel cover, exposed electrical wire or pull box cover are not properly secured in place.
- 2) The luminaries are not functioning during nighttime observation. (N)
- 3) Any pole is damaged, leaning or missing.
- 4) Rodent screen protection is not in place, where applicable.

7.1 Annual Results

The 2024 annual rolling maintenance rating of the Triangle Expressway was **95.1**, exceeding NCTA's target overall rating of 90. All elements exceeded NCTA's rolling rating threshold criteria of 85. Twenty-six of the twenty-eight characteristic ratings met or exceeded the target rating of 80.

The 2024 results are presented in *Exhibit 1* and *Table 6*. These results are a collection of the four quarterly inspections conducted in the last year.

Exhibit 1: MRP Element Results for 2024

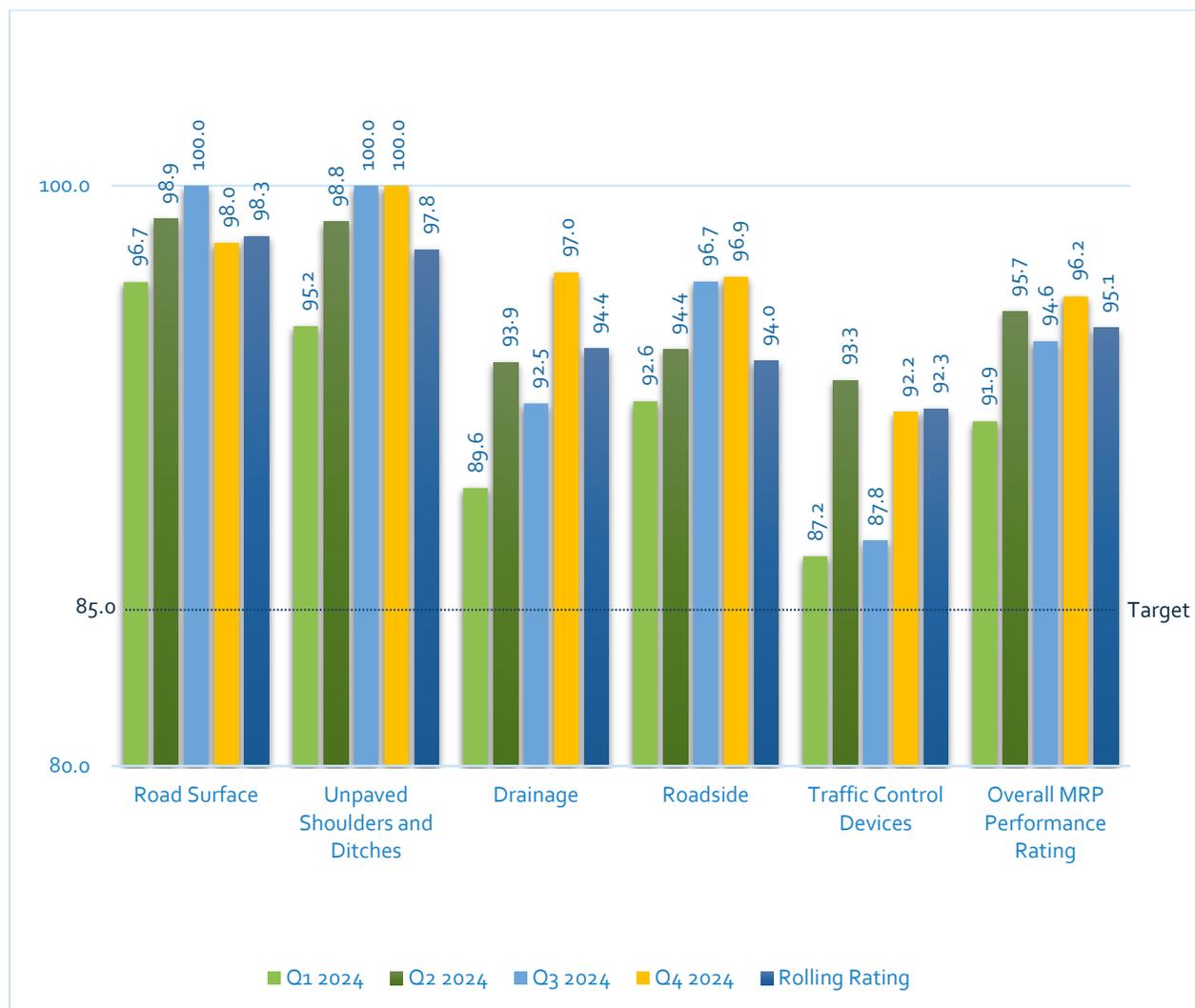


Table 6: MRP Rolling Element Results

Road Surface	Q1 2024 Rating	Q2 2024 Rating	Q3 2024 Rating	Q4 2024 Rating	Rolling Rating
Paved Lanes Asphalt	100	95	100	100	98
Paved Lanes Concrete	93	100	100	96	98
Paved Shoulder	97	100	100	100	99
Element Total	96.7	98.9	100.0	98.0	98.3
Unpaved Shoulders and Ditches	Q1 2024 Rating	Q2 2024 Rating	Q3 2024 Rating	Q4 2024 Rating	Rolling Rating
Unpaved Shoulder	91	98	100	100	96
Front/Back Slopes	97	100	100	100	99
Lateral and Outfall Ditches, Unpaved	100	98	100	100	99
Ditches, Paved	100	100	100	100	100
Element Total	95.2	98.8	100.0	100.0	97.8
Drainage	Q1 2024 Rating	Q2 2024 Rating	Q3 2024 Rating	Q4 2024 Rating	Rolling Rating
Drainage Pipes	82	92	98	100	93
Curb and Gutter	96	96	97	100	98
Inlets	94	97	85	94	96
Misc. Drainage Structure	88	88	88	91	88
Element Total	89.6	93.9	92.5	97.0	94.4
Roadside	Q1 2024 Rating	Q2 2024 Rating	Q3 2024 Rating	Q4 2024 Rating	Rolling Rating
Turf Condition	85	90	91	97	89
Landscaping	95	96	100	92	94
Trees and Brush	100	94	100	94	97
Litter	91	100	100	100	97
Roadway Sweeping	100	100	100	100	99
Guardrail, Concrete Barrier, and End Anchors	100	90	100	100	95
Impact Attenuators	100	100	90	89	97
Fence, Control Access	82	91	88	90	88
Retaining Walls and Sound Barrier Walls	72	78	100	100	79
Decorative Supports	96	100	100	100	99
Graffiti and Stain Removal	100	100	100	100	100
Element Total	92.6	94.4	96.7	96.9	94.0
Traffic Control Devices	Q1 2024 Rating	Q2 2024 Rating	Q3 2024 Rating	Q4 2024 Rating	Rolling Rating
Signs	91	98	89	97	95
Delineators	75	96	100	100	92
Pavement Striping/Marking	91	96	97	100	97
Words and Symbols	87	88	89	74	87
Pavement Markers	88	95	97	100	95
Highway Lighting	83	83	65	79	83
Element Total	87.2	93.3	87.8	92.2	92.3

7.0 Green Level Historic District Signs

Green Level Historic District signs and surrounding landscaped areas were installed as part of the Triangle Expressway construction project. Currently, NCDOT is maintaining the Green Level Historic District Signs and the Town of Cary is providing maintenance to the landscaped areas surrounding these signs.

8.1 Analysis and Recommendations

As part of each quarterly inspection, an assessment team visits the two remaining Green Level Historic District signs to conduct a visual inspection of each sign and ensure they are in good standing. One of the two signs included in the inspection inventory was found to be in good condition, while the other has been stuck, damaged and in need of repair. *Figure 4* shows the two signs assessed.

Figure 4: Green Level West Historic District Signs, Landscape Areas



8.0 Conclusion

This report presents the 2024 fourth quarter assessment of the Triangle Expressway. The NCTA's target ratings are 90 for the rolling rating, 90 for the overall quarter rating, 85 for elements, and 80 for characteristics. The Fourth quarter 2024 overall rating was 96.2 and the rolling rating was 95.1, both ratings met the target rating of 90.

All element ratings were above the target ratings for the quarter and rolling assessment. During the Fourth quarter assessment, all but two characteristics met or exceeded the target rating of 80. The characteristics that received a quarter score less than 80 were Words and Symbols (74) and Highway Lighting (79). To maintain/improve the condition ratings, it is recommended that both pavement words and symbols and highway lighting be routinely inspected for functionality after dark along with routine maintenance being completed as planned in the capital budget.

This quarter, one of the two Green Level Historic District signs inspected was found to be in good condition, and the other will need to be repaired. The landscaped areas surrounding the signs were found to be well maintained.

Appendix A: Triangle Expressway 2024 Fourth Quarter Asset Assessment Locations

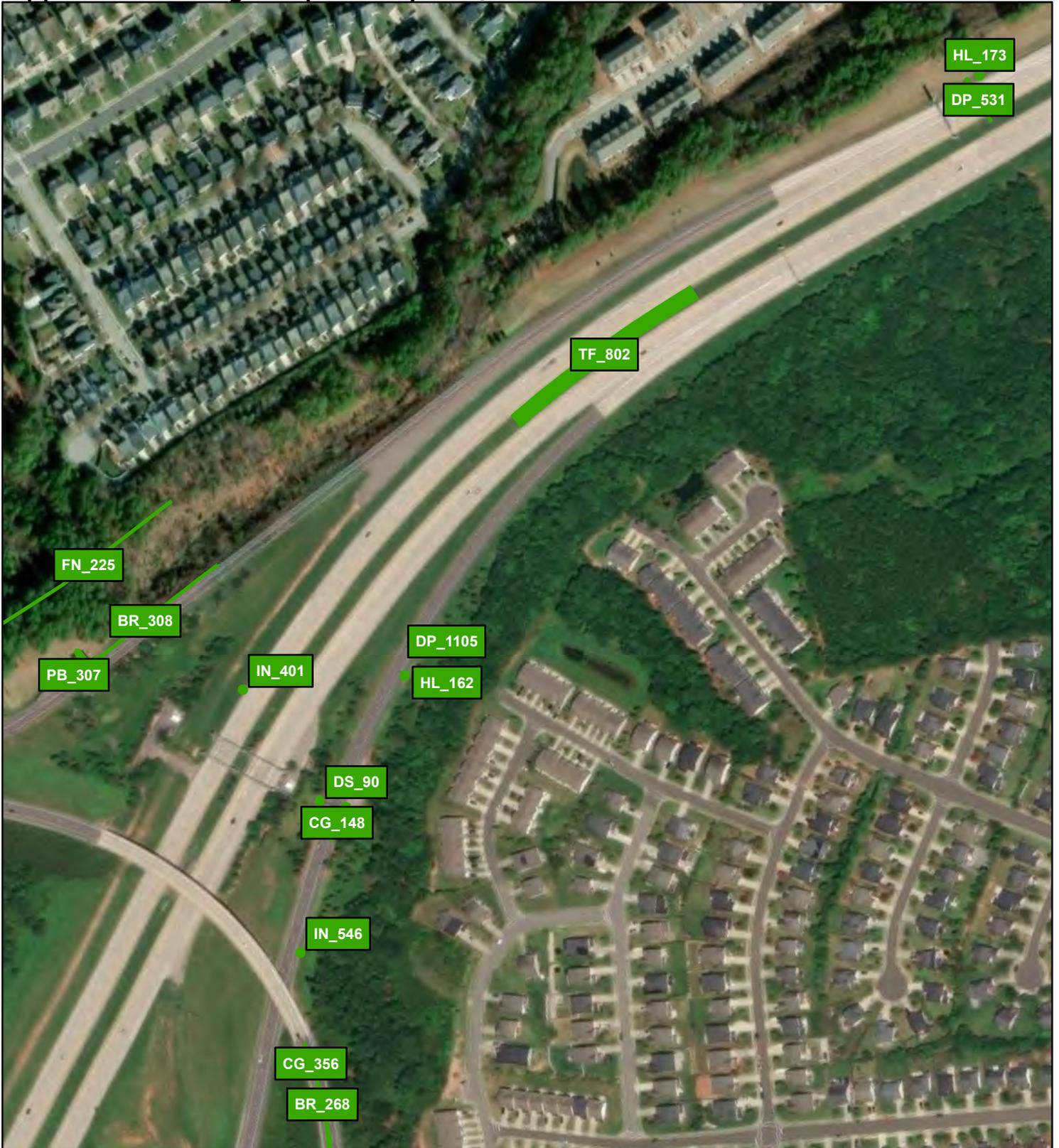


Legend

- Failing Asset
- Passing Asset



Appendix A: Triangle Expressway 2024 Fourth Quarter Asset Assessment Locations



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-  Failing Asset
-  Passing Asset



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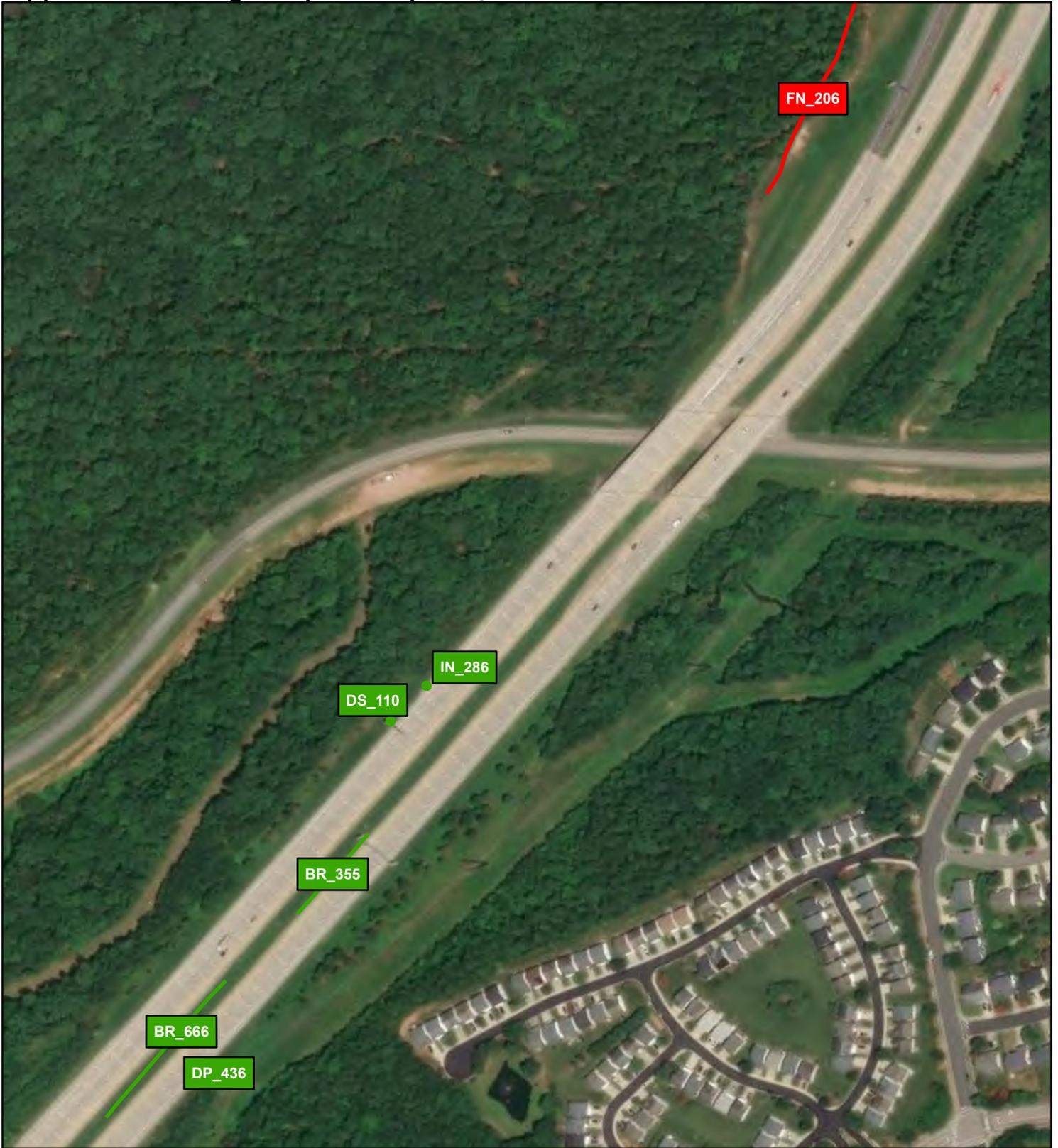


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-  Passing Asset



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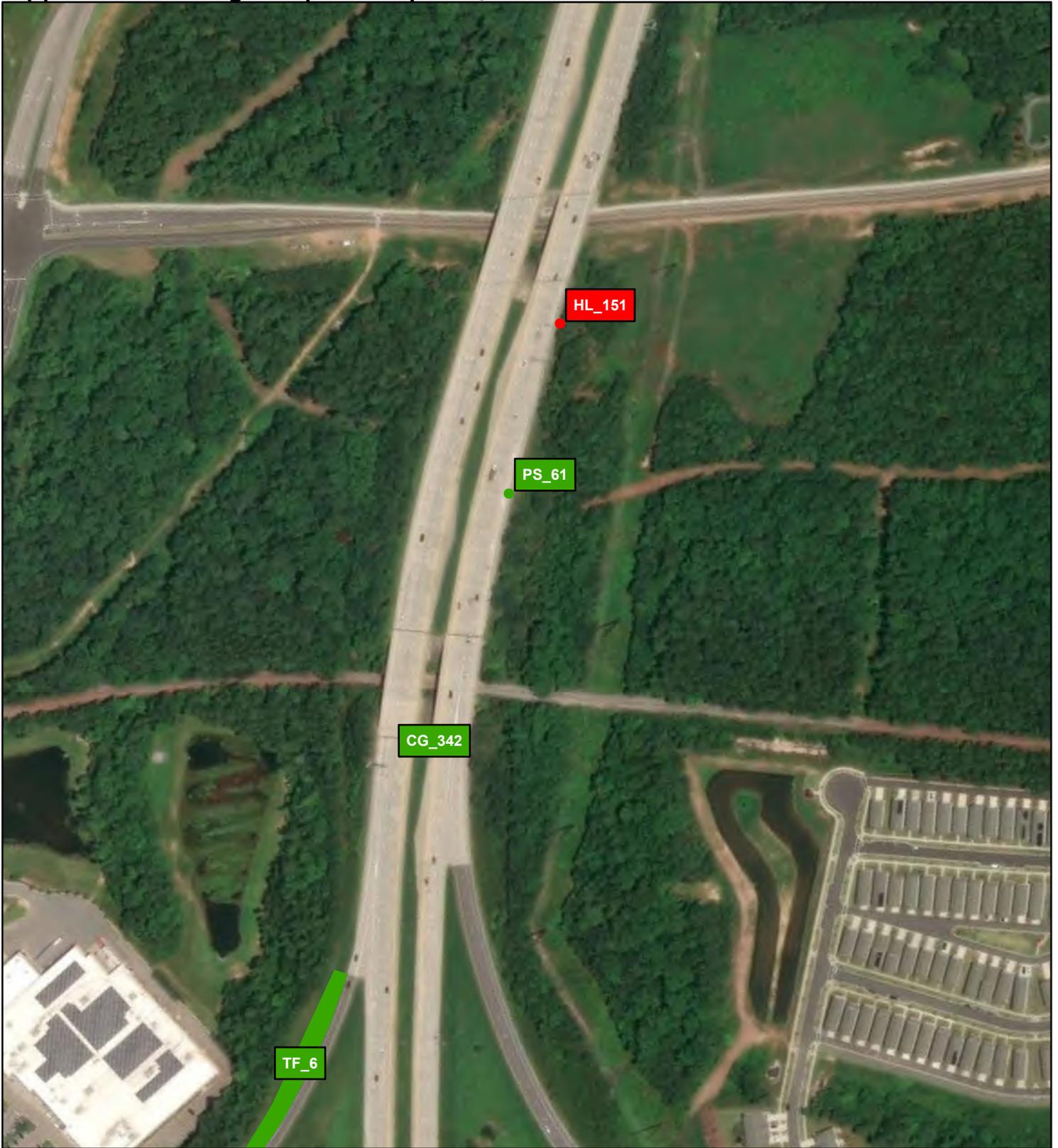


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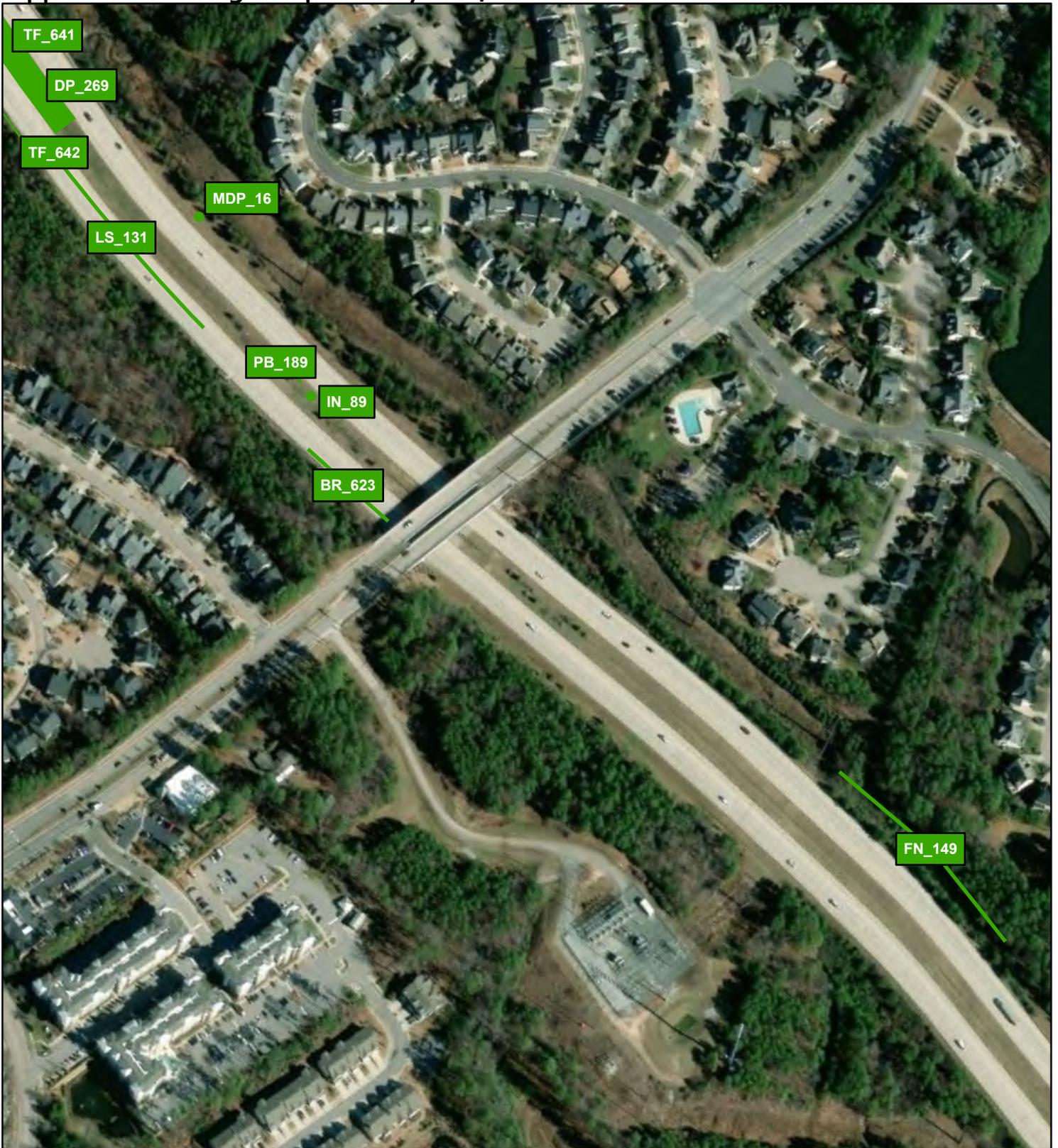


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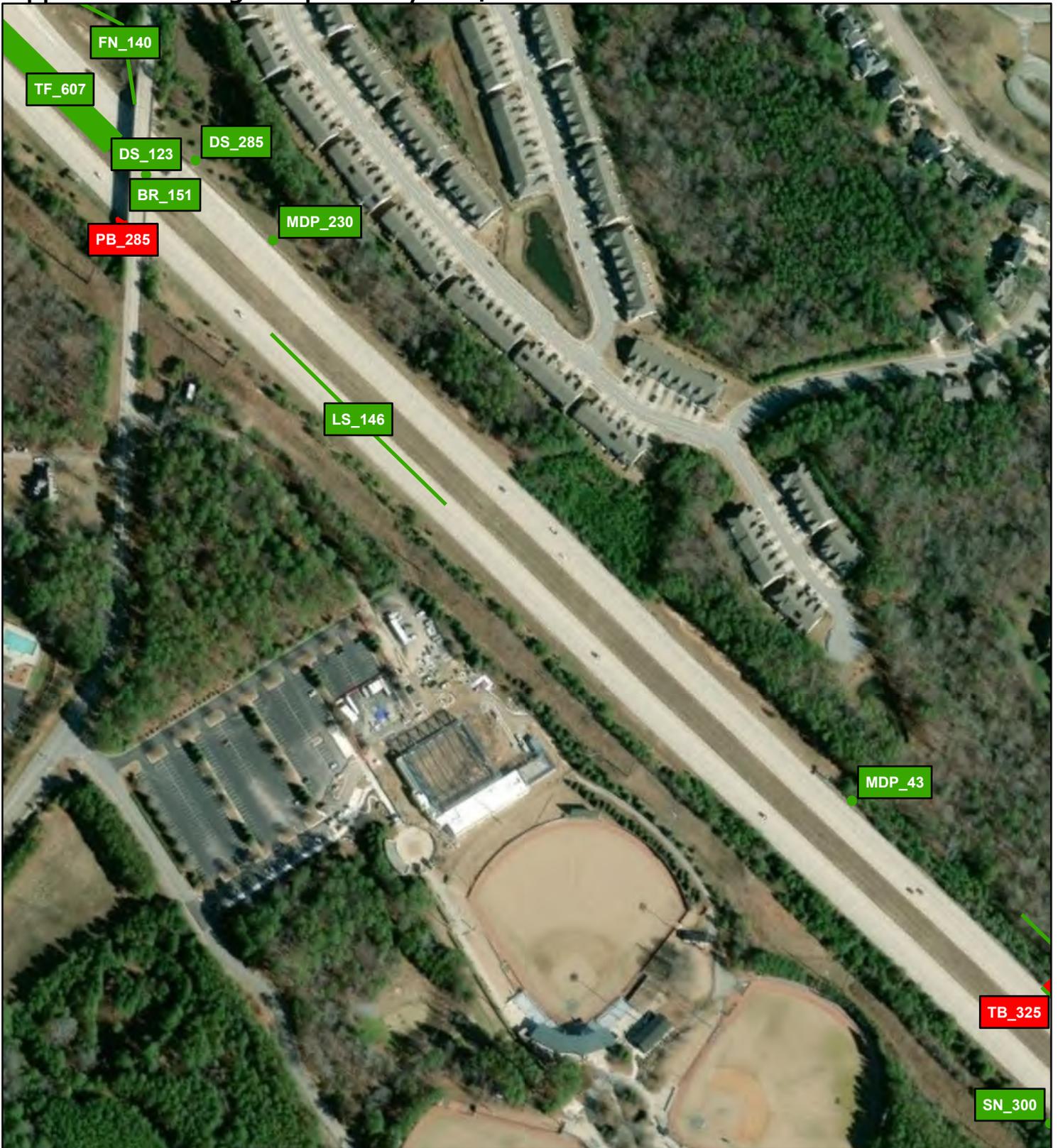


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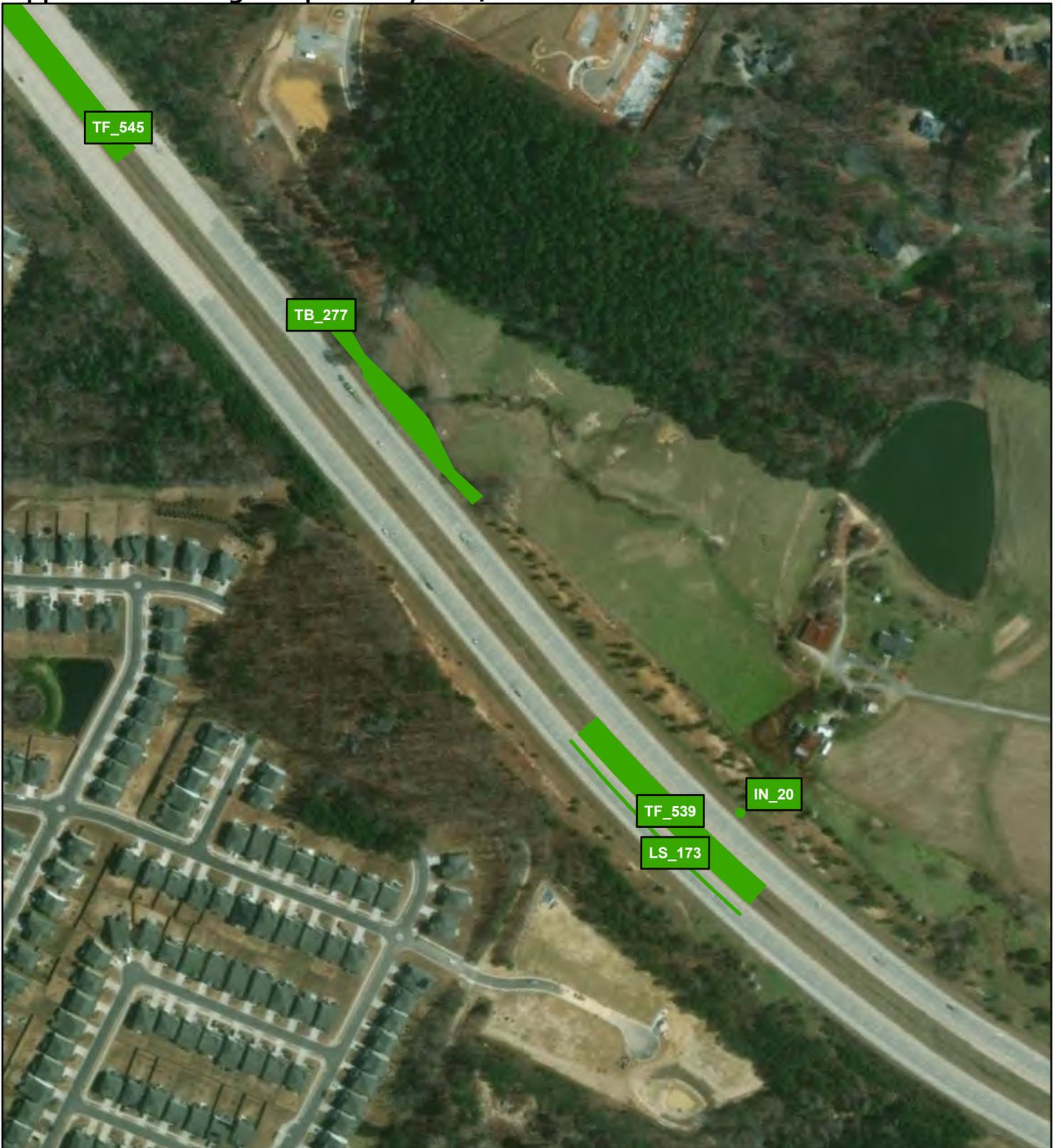


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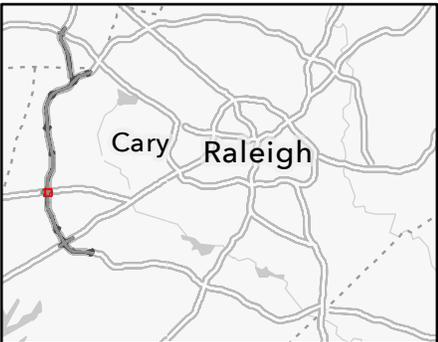


Appendix A: Triangle Expressway 2024 Fourth Quarter Asset Assessment Locations



Legend

- Failing Asset
- Passing Asset



The logo for the North Carolina Turnpike Authority is displayed, featuring a stylized road graphic and the text "NORTH CAROLINA Turnpike Authority". A north arrow is also present above the logo.

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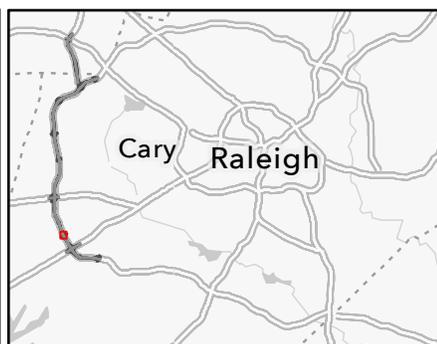


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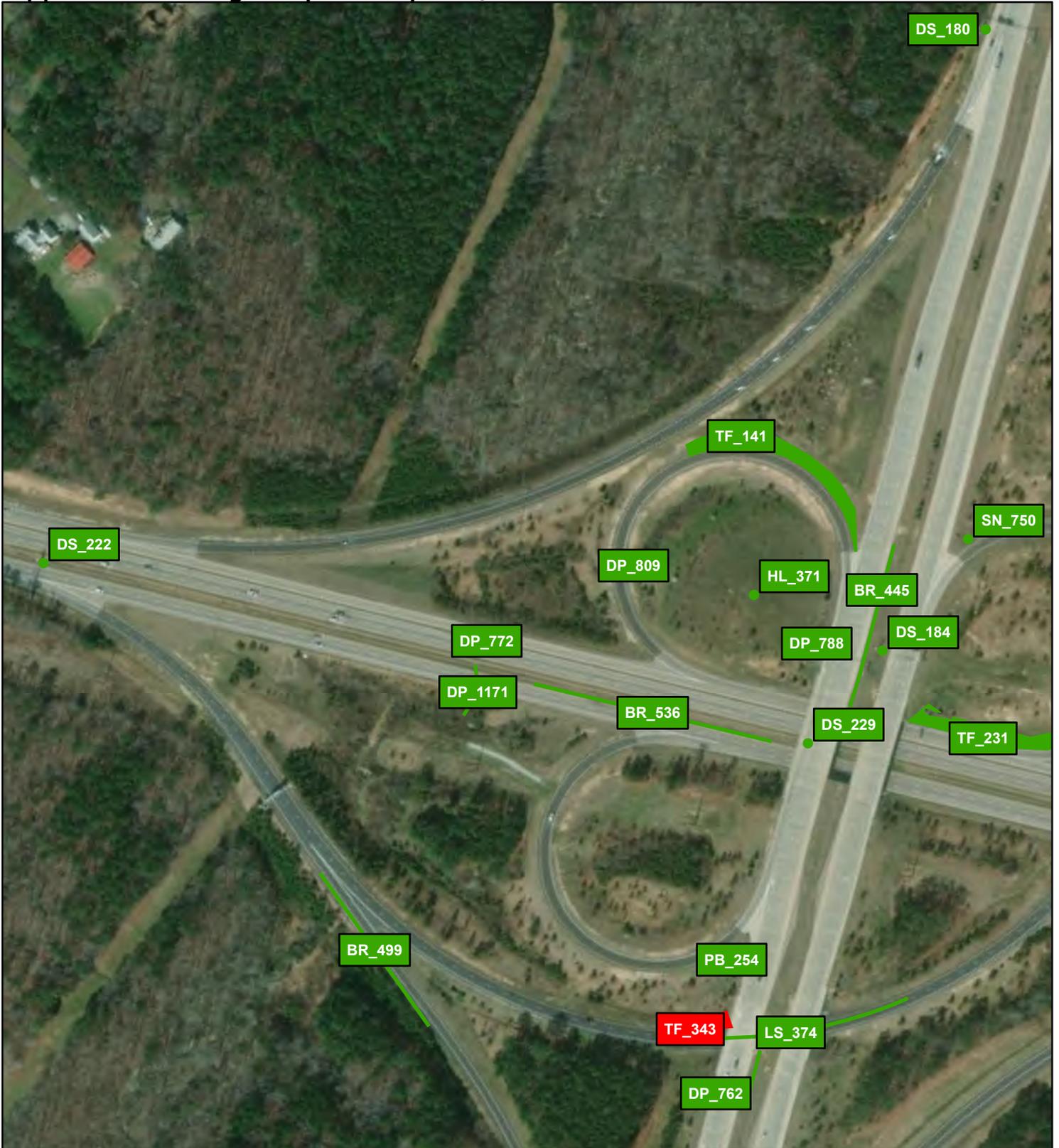


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Appendix A: Triangle Expressway 2024 Fourth Quarter Asset Assessment Locations



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Appendix A: Triangle Expressway 2024 Fourth Quarter Asset Assessment Locations



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Appendix A: Triangle Expressway 2024 Fourth Quarter Asset Assessment Locations



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Appendix A: Triangle Expressway 2024 Fourth Quarter Asset Assessment Locations



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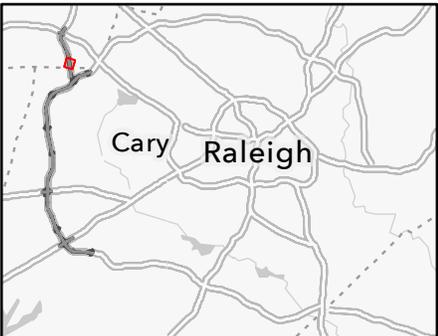


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Appendix A: Triangle Expressway 2024 Fourth Quarter Asset Assessment Locations



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Appendix B

Triangle Expressway 2024 Fourth Quarter Table Results of Assets Failing MRP

Provided below are a series of tables outlining the existing failures that occurred throughout the facility. Assets are defined by an Inventory ID, which is a unique identifier given to each individual asset. The components that make up the Inventory ID are an asset specific prefix along with a number, such as LS_1. The Inventory ID and GIS Reference Page number correspond to the provided map packets and allow for quick location of particular asset failures. Photos of failures were provided when applicable.

*ORA – Outside Recorded Area

All assets and their respective prefixes are listed below:

Guardrail, Concrete Barrier and End Anchors (BR)	B1
Curb and Gutter (CG).....	B2
Decorative Supports (DS)	B3
Drainage Pipes (DP).....	B4
Misc. Drainage Structure (MDP)	B5
Fence and Control of Access (FN)	B6
Graffiti (GR).....	B7
Highway Lighting (HL).....	B8
Impact Attenuators (IA).....	B9
Inlets (IN).....	B10
Landscaping (PB).....	B11
Paved Lanes – Asphalt (LS).....	B12
Paved Lanes – Concrete (LS).....	B12
Paved Shoulders (LS).....	B13
Unpaved Shoulders (LS)	B13
Front/Back Slopes (LS).....	B14
Unpaved Lateral and Outfall Ditches (LS)	B14
Litter (LS)	B15
Roadway Sweeping (LS)	B16
Pavement Striping (LS).....	B17
Pavement Markers (LS)	B18
Delineators (LS).....	B19
Paved Ditches (PD).....	B20
Pavement Words and Symbols (PS).....	B21
Signs (SN).....	B23
Tree and Brush (TB).....	B24
Turf Condition (TF)	B25
MSE/Retaining Walls, Sound Barrier Walls, and Screen Walls (WL)	B26

Guardrail, Concrete Barrier, and End Anchors (BR)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
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This asset did not produce any failures.

Curb and Gutter (CG)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
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This asset did not produce any failures.

Decorative Supports (DS)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
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This asset did not produce any failures.

Drainage Pipes (DP)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
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This asset did not produce any failures.

Misc. Drainage Structure (MDP)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
1	Shoulder Drain	MDP_70	Rodent Screen		A14
2	Shoulder Drain	MDP_93	Rodent Screen		A18

Fence and Control of Access (FN)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
1	Woven	FN_76	Hole Height		A14
2	Woven	FN_206	Fence Hole		A4
3	Woven	FN_290	Hole Height		A32

Graffiti (GR)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
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This asset did not produce any failures.

Highway Lighting (HL)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
1	Double Roadway	HL_4	Functional Damage (Out at Night)	No Photo Provided	*ORA
2	Single Roadway	HL_53	Functional Damage (Out at Night)	No Photo Provided	*ORA
3	Single Roadway	HL_151	Functional Damage (Out at Night)	No Photo Provided	A5
4	High Mast	HL_202	Rodent Screen	No Photo Provided	A30
5	Single Roadway	HL_301	Functional Damage (Down/Removed)	No Photo Provided	A16
6	Single Roadway	HL_406	Functional Damage (Out at Night)	No Photo Provided	A7

Impact Attenuators (IA)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
1	Gating Attenuator	IA_44	Nighttime Reflectivity	No Photo Provided	A30

Inlets (IN)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
1	Drop Inlet	IN_3	Eroded Area / Surface Damage		A6
2	Drop Inlet	IN_1066	Obstruction		A6

Landscaping (PB)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
1	Plant Bed	PB_143	Overgrown		A12
2	Tree	PB_285	Overgrown		A11

Paved Lanes – Asphalt (LS)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
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This asset did not produce any failures.

Paved Lanes – Concrete (LS)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
1	Pavement - Concrete	LS_478	Pothole		A27

Paved Shoulders (LS)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
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This asset did not produce any failures.

Unpaved Shoulders (LS)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
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This asset did not produce any failures.

Front/Back Slopes (LS)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
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This asset did not produce any failures.

Unpaved Lateral and Outfall Ditches (LS)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
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This asset did not produce any failures.

Litter (LS)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
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This asset did not produce any failures.

Roadway Sweeping (LS)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
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This asset did not produce any failures.

Pavement Striping (LS)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
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This asset did not produce any failures.

Pavement Markers (LS)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
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This asset did not produce any failures.

Delineators (LS)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
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This asset did not produce any failures.

Paved Ditches (PD)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
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This asset did not produce any failures.

Pavement Words and Symbols (PS)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
1	Merge Left	PS_219	Nighttime Reflectivity	No Photo Provided	*ORA
2	Thru Lane	PS_254	Daytime Assessment (Symbol Missing)	No Photo Provided	A21
3	Thru Lane	PS_444	Daytime Assessment / Nighttime Reflectivity	No Photo Provided	A6
4	Stop Bar	PS_465	Nighttime Reflectivity	No Photo Provided	A6
5	Ped Xing	PS_499	Daytime Assessment / Nighttime Reflectivity		A1
6	Ped Xing	PS_529	Daytime Assessment / Nighttime Reflectivity		A30

Pavement Words and Symbols (PS)

7	Thru Lane	PS_546	Daytime Assessment (Symbol Missing)		A34
8	Thru Lane	PS_584	Daytime Assessment / Nighttime Reflectivity		A26

Signs (SN)

#	Sign Type	Object ID	Failure Type	Photo	GIS Reference Page
1	NC Route	SN_1235	Missing Parts / Damaged		A19

Tree and Brush (TB)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
1	Tree and Brush	TB_32	Vertical Clearance (15 ft)	No Photo Provided	A21
2	Tree and Brush	TB_325	Barrier Clearance (10ft)		A11

Turf Condition (TF)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
1	Turf	TF_343	Bare Ground		A23

MSE/Retaining Walls, Sound Barrier Walls, and Screen Walls (WL)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
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This asset did not produce any failures.