

# Maintenance Rating Program Monroe Expressway

Quarter 2 MRP Assessment



August 2022

## CONSULTANT CERTIFICATION OF COMPLETION

August 4, 2022

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NCTA Monroe By-Pass Roadway Maintenance Performance Rating Program; Q2, FY 2022 Rating

This is to certify that I, Ken M. McEntire, PE am an authorized official representative of the company Mott MacDonald I&E, LLC, a subconsultant to HNTB North Carolina, P.C. Collaboratively; we are working as the Monroe By-Pass Roadway and Facility Maintenance Performance Rating Program Consultants.

I know of my own personal knowledge, and do hereby certify, that the work of the contract described above has been independently performed in accordance with, and in conformity to, the *NCTA Roadway and Facility Maintenance Performance Standards*.

Sincerely,

Mott MacDonald I&E, LLC

A handwritten signature in blue ink, appearing to read "KM McEntire".

Ken M. McEntire, PE

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## 1.0 Executive Summary

The North Carolina Turnpike Authority (NCTA) Maintenance Rating Program (MRP) is a maintenance evaluation program for all roadway features and toll facilities on the Monroe Expressway. This report presents results from the 2022 Second Quarter Assessment of the Monroe Expressway.

The overall 2022 second quarter rating of the Monroe Expressway was 95.4. This score is above the target rating score of 90 for the overall system. 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 2022 Second Quarter Assessment**

Element	MRP Rating	Target Rating
Road Surface	94.5	85.0
Unpaved Shoulders and Ditches	98.4	85.0
Drainage	98.8	85.0
Roadside	92.9	85.0
Traffic Control Devices	94.4	85.0
<b>Overall MRP Performance Rating</b>	<b>95.4</b>	<b>90.0</b>

This report also provides a rolling rating of the latest three quarterly inspections of the Monroe Expressway. As presented in **Table 2**, the rolling maintenance rating of the Monroe Expressway was 96.3.

**Table 2: MRP Rolling Element Results**

Element	Q3 2021 Rating	Q4 2021 Rating	Q1 2022 Rating	Q2 2022 Rating	Rolling Rating
Road Surface	100.0	97.5	94.3	94.5	97.2
Unpaved Shoulders and Ditches	96.4	99.1	99.3	98.4	97.6
Drainage	94.7	94.7	100.0	98.8	97.5
Roadside	96.8	96.0	95.0	92.9	95.2
Traffic Control Devices	94.9	93.7	96.7	94.4	94.9
<b>Overall MRP Performance Rating</b>	<b>96.7</b>	<b>95.9</b>	<b>96.6</b>	<b>95.4</b>	<b>96.3</b>

All the element ratings were above the desired rating of 85, and one characteristic scored below the minimum 80 rating. It is important to note that these results are only representative of the second quarter sample, one of four quarterly surveys annually that provide an intermediate snapshot of seasonal conditions. Therefore, these results are not yet a statistically valid representation of the assets; only the total of all four quarterly inspections reported as a rolling rating, provides a 95% confidence level in statistical sampling.

## 2.0 Introduction

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. It is a comprehensive planning, measuring, and managing process that provides a means for communicating to managers, stakeholders, and key 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 survey results are rated against established threshold criteria. The program analysis is accomplished by implementing sampling procedures that capture the level of service being provided for individual asset features. Over time, these ratings will be charted to identify work needs and subsequent necessary actions. The evaluations are based on the establishment of "threshold" conditions that quantify the maximum defect allowed to exist for a characteristic before it is considered unacceptable.

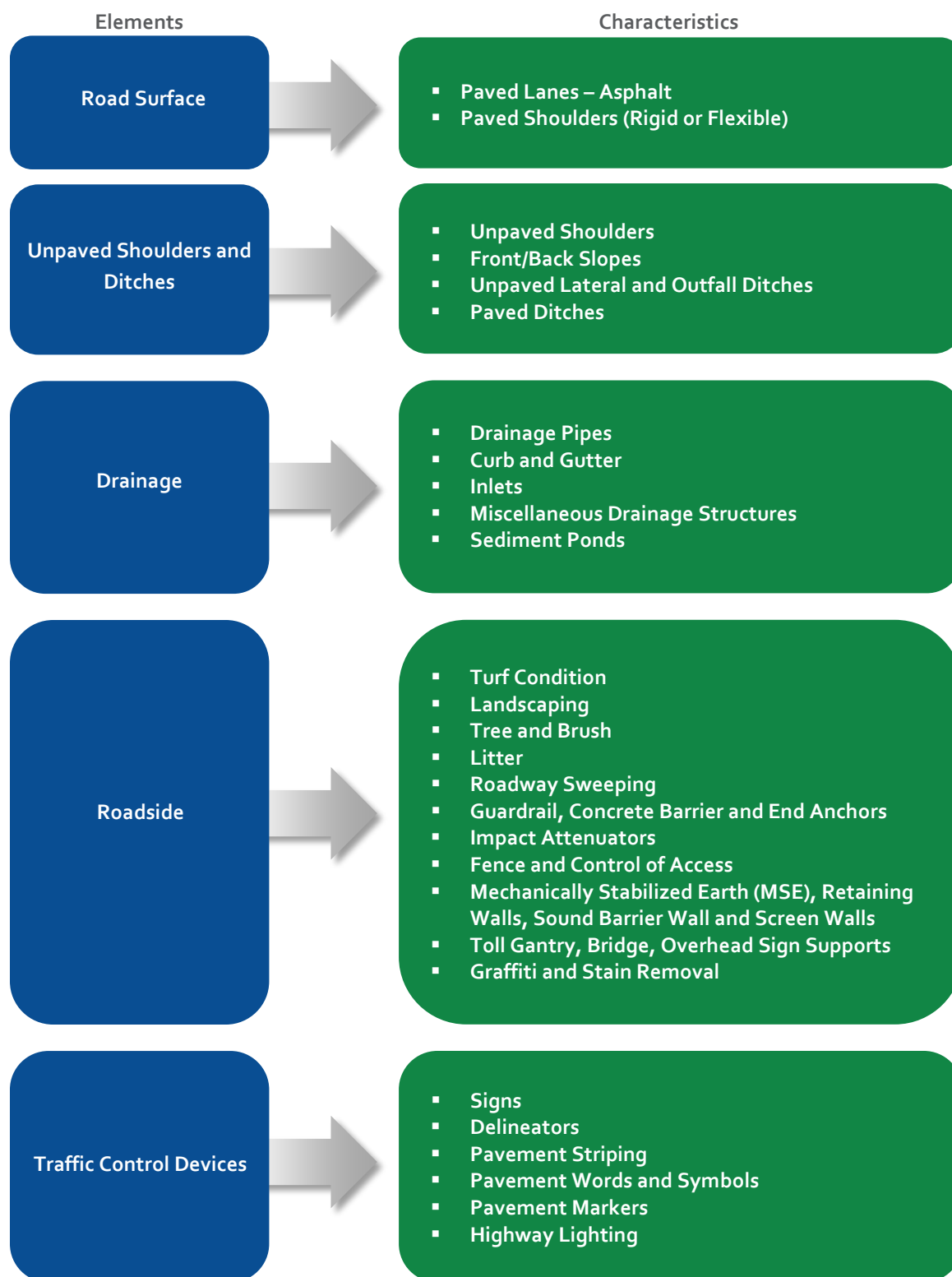
The NCTA performance standards, threshold criteria, and maintenance rating program were developed through a collaborative effort by NCTA managers, NCDOT maintenance staff, and consultants.

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

## 3.0 MRP Survey Procedure

Per the NCTA Roadway and Facility Maintenance Performance Standards, roadway assets on NCTA facilities have been grouped into characteristics which are categorized into 5 elements. These elements and their characteristics can be seen in **Figure 1** below:

Figure 1: Maintenance Elements and Characteristics



Because some roadway characteristics are of greater importance than others, a weighting system is applied to enable rational calculation of an overall level of service rating. Although one set of weighting factors for all characteristics could serve this purpose, a more useful system consists of two sets of weighting factors: one set that accounts for the importance of individual characteristics within a given maintenance element (1-9), and another set that accounts for the importance of the maintenance elements to the total rating (by % of score). This two-set system reveals deficiencies among characteristics and shows which maintenance elements are deficient.

The program analysis is accomplished using statistically valid, random sampling procedures that capture the level of service for individual assets with a 95% confidence level in sampling. Inspections are performed during the months of February, May, August, and November to account for dynamic changes in assets during the various seasons, such as vegetation growth. Each maintenance characteristic is evaluated and recorded according to the criteria developed by the NCTA performance standards. This inventory was completed with electronic data collection tablets and programs for accurate GPS coordinates of each transportation asset.

The evaluations are based on established "threshold" conditions that quantify the maximum defect allowed to exist for a characteristic before it is considered unacceptable. The ratings are done by comparing existing field conditions to the "threshold" value. If the characteristic meets or exceeds the "threshold", it is coded as YES to meeting the criteria. If it does not meet the criteria, it is coded as a NO. When the survey is complete, the number of YES's and NO's are totaled, and a composite number (using from 1 to 100 scale) is produced, which represents the level of maintenance currently being provided.

For any given asset, the number assigned as the target level of service represents the percentage of random samples in which the maintenance condition standard corresponding to the activity is to be met or exceeded. For instance, an activity with a level of service rating of 83 means that 83 percent of the sites met the condition standards.

The NCTA's overall target rating score is 90, with each element level scoring at or above 85 and every characteristic at or above 80.

## 4.0 Monroe Expressway Description

The Monroe Expressway extends for approximately 18.5 miles between the U.S. 74 interchange to the west and U.S. 74 near Marshville to the east. The Monroe Expressway consists of eight interchanges and seven all-electronic toll collection zones. A map of the Monroe Expressway can be seen in **Figure 2** below:

Figure 2: Monroe Expressway Map



## 5.0 Survey Results

The overall Q2 2022 MRP rating for the Monroe Expressway is 95.4. This score is above the target rating score of 90 for the overall system. All the element ratings were above the desired rating of 85, and one characteristic scored below the minimum 80 rating. Individual characteristic ratings will be discussed in detail in the analysis section of this report.

**Appendix A** shows each of the individual assets that failed the MRP criteria. **Appendix B** includes maps of each of the individual asset locations that failed to meet the criteria displayed in the tables below. The MRP rating value designated to each element and feature refers to the percentage of elements or features that pass the asset's particular threshold criteria. After developing an inventory by recording the total number of instances of a particular feature, each feature is analyzed based on threshold criteria and a pass/fail result is designated and recorded for each to determine the percentage of the sample passed. The passing samples and sample totals are then multiplied by their weighted value, which are designated to each element based on importance to determine the actual and available rating points. Lastly, an MRP Performance Rating is calculated for each asset and element group based on the ratio of the actual points over the available points.

The overall MRP Performance rating results of the survey are presented in **Tables 3 and 4**.

**Table 3: Element Results for Q2 2022**

Element	MRP Rating
Road Surface	94.5
Unpaved Shoulders	98.4
Drainage	98.8
Roadside	92.9
Traffic Control Devices	94.4
<b>Overall MRP Performance Rating</b>	<b>95.4</b>

The overall score is determined by summing the elements multiplied by weighted factors as follows: Road Surface (25%), Unpaved Shoulders (13%), Drainage (15%), Roadside (17%), Traffic Control Devices (30%).

Table 4: Characteristic Results for Q2 2022

Road Surface	Sample Passed	Sample Total	Weighted Values	Actual PTS	Available PTS	Quarter Rating
Paved Lanes Asphalt	28	30	9	252	270	93
Paved Shoulder	29	30	5	145	150	97
<b>Element Total</b>				<b>397</b>	<b>420</b>	<b>94.5</b>
Unpaved Shoulders & Ditches	Sample Passed	Sample Total	Weighted Values	Actual PTS	Available PTS	Quarter Rating
Unpaved Shoulder	30	30	9	270	270	100
Front/Back Slopes	29	30	6	174	180	97
Lateral and Outfall Ditches, Unpaved	30	30	6	180	180	100
Ditches, Paved	12	13	5	60	65	92
<b>Element Total</b>				<b>684</b>	<b>695</b>	<b>98.4</b>
Drainage	Sample Passed	Sample Total	Weighted Values	Actual PTS	Available PTS	Quarter Rating
Drainage Pipes	32	32	7	224	224	100
Curb and Gutter	24	24	6	144	144	100
Inlets	33	33	7	231	231	100
Misc. Drainage Structure	16	18	4	64	72	89
Sediment Pond	2	2	7	14	14	100
<b>Element Total</b>				<b>677</b>	<b>685</b>	<b>98.8</b>
Roadside	Sample Passed	Sample Total	Weighted Values	Actual PTS	Available PTS	Quarter Rating
Turf Condition	32	43	7	224	301	74
Landscaping	13	13	4	52	52	100
Trees and Brush	15	15	4	60	60	100
Litter	30	30	4	120	120	100
Roadway Sweeping	30	30	5	150	150	100

# Maintenance Rating Program for the Monroe Expressway

2022 Second Quarter (April - June)

Guardrail, Concrete Barrier and End Anchors	30	30	9	270	270	100
Impact Attenuators	6	6	9	54	54	100
Fence, Control Access	23	25	7	161	175	92
Retaining Walls and Sound Barrier Walls	12	14	5	60	70	86
Decorative Supports	10	10	5	50	50	100
Graffiti and Stain Removal	30	30	4	120	120	100
<b>Element Total</b>				<b>1321</b>	<b>1422</b>	<b>92.9</b>

<b>Traffic Control Devices</b>	<b>Sample Passed</b>	<b>Sample Total</b>	<b>Weighted Values</b>	<b>Actual PTS</b>	<b>Available PTS</b>	<b>Quarter Rating</b>
Signs	57	63	7	399	441	90
Object Markers and Delineators	28	30	3	84	90	93
Pavement Striping/Marking	28	30	8	224	240	93
Words and Symbols	33	33	7	231	231	100
Pavement Markers	29	30	9	261	270	97
Highway Lighting	4	4	6	24	24	100
<b>Element Total</b>				<b>1223</b>	<b>1296</b>	<b>94.4</b>



## 6.0 Analysis & Recommendations

### MRP Elements

All elements exceeded the NCTA minimum threshold criteria of 85.

### MRP Characteristics

Most characteristics exceeded the NCTA minimum threshold criteria of 80. This section identifies characteristics that did not achieve the minimum targeted score.

#### Turf

Turf scored a 74 in the survey. Deficiencies of the turf were directly related to bare ground. The MRP Maintenance and Evaluation Standards V7 are below.

Roadside Mowing – This characteristic is the control of planted or natural grasses and vegetation for protection of soil shoulders and slopes, safety, and aesthetics purposes.

Turf Condition – Turf is grass or other vegetation considered desirable for the particular roadside location. Properly maintained and desired vegetation provides a pleasing appearance but primarily presents less chance of shoulder and slope defects (ruts, washouts, wash boarding), providing a safe recovery area for motoring traffic.

Undesirable Vegetation - The presence of broadleaf weeds in roadside turfgrass can be aesthetically undesirable and can also prevent the desired turfgrass from becoming readily established.

Noxious Weeds – Noxious weeds can be any plant in any stage of development, including parasitic plants, whose presence, whether direct or indirect, is detrimental to crops or other desirable plants, livestock, land, or other property, or is injurious to the public health. The top noxious weeds are as follows:

- 1) Blessed Thistle Cornflower (Ragged Robin)
- 2) Cocklebur Texas Panicum
- 3) Spurred Anoda Bracted Plantain
- 4) Velvetleaf Buckhorn Plantain
- 5) Corn Cockle Curly Dock
- 6) Wild Radish Dodder
- 7) Purple Nutsedge Giant Foxtail
- 8) Yellow Nutsedge Horsenettle
- 9) Canada Thistle Quackgrass
- 10) Field Bindweed Wild Mustard
- 11) Hedge Bindweed

Maintenance and Evaluation Standards: Turf Grass does not meet the maintenance standards when any of the following criteria is observed:

- 1) More than 2% of the vegetation exceeds a uniform height of 12 inches. Minimum height of no less than 4 inches. (Performance standard may not apply once the mowing frequency and patterns have been established as meeting the threshold condition on a routine basis)
- 2) Noxious weeds are present.

- 3) More than 50 continuous square feet (SF) of any one area or 10% of the cumulative turf evaluation area has bare ground.

Seeding and fertilizing efforts were last performed in the Spring of 2022. Seeding and fertilizer applications are conducted biannually in both the spring and fall months. Consistent application of this schedule will continue to improve turf conditions on a quarterly basis.

## 7.0 Current Rolling MRP Rating

The rolling maintenance rating of the Monroe Expressway was 96.3, exceeding NCTA's overall target rating of 90. All elements exceeded NCTA's rolling rating threshold criteria of 85. All characteristic ratings met or exceeded the target rating of 80.

The 2021/2022 results are presented in **Exhibit 1** and **Table 5**. These results are a collection of the baseline assessment conducted in 2020 and the three quarterly inspections conducted in the last year.

**Exhibit 1: MRP Element Results for 2021/2022**

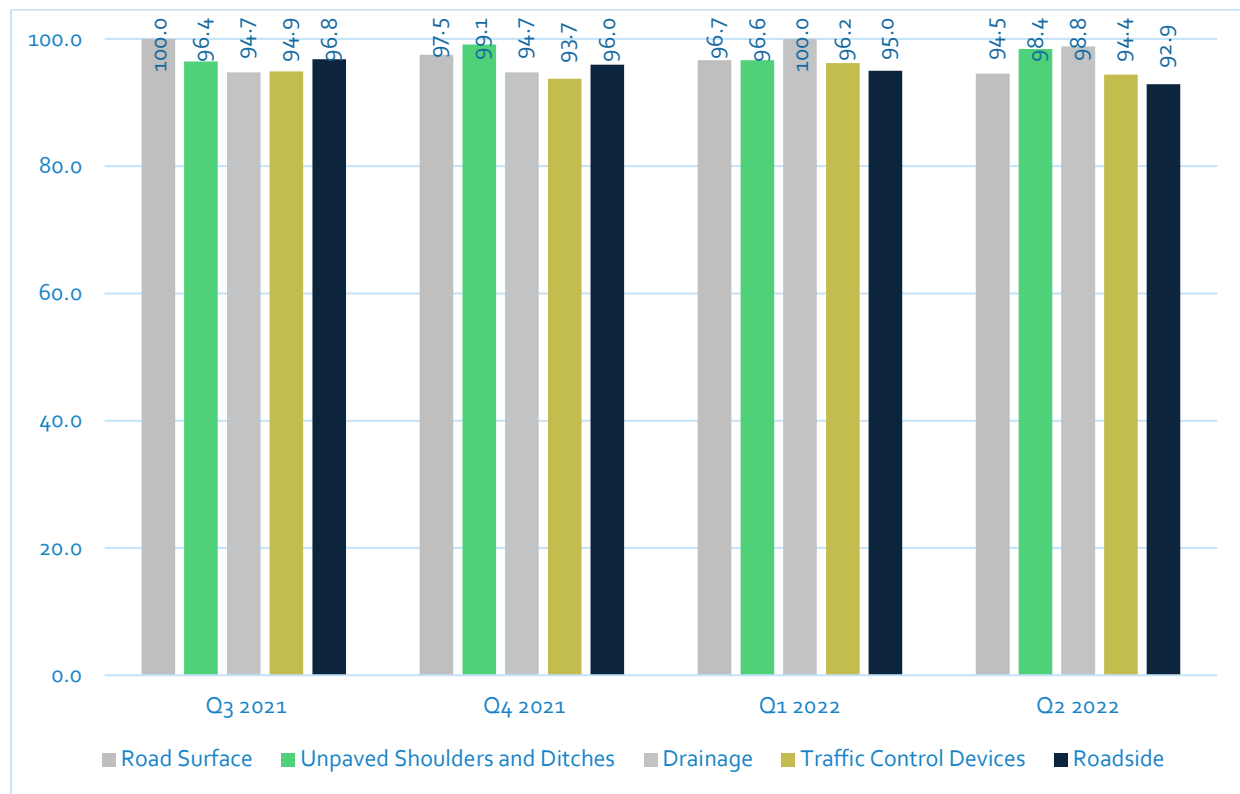


Table 5: MRP Rolling Element Results

Road Surface	Q3 2021 Rating	Q4 2021 Rating	Q1 2022 Rating	Q2 2022 Rating	Rolling Rating
Paved Lanes Asphalt	100	96	97	93	97
Paved Shoulder	100	100	97	97	98
<b>Element Total</b>					<b>97.2</b>
Unpaved Shoulders and Ditches	Q3 2021 Rating	Q4 2021 Rating	Q1 2022 Rating	Q2 2022 Rating	Rolling Rating
Unpaved Shoulder	100	100	93	100	98
Front/Back Slopes	100	100	100	97	99
Lateral and Outfall Ditches, Unpaved	100	100	100	100	100
Ditches, Paved	50	86	91	92	80
<b>Element Total</b>					<b>97.6</b>
Drainage	Q3 2021 Rating	Q4 2021 Rating	Q1 2022 Rating	Q2 2022 Rating	Rolling Rating
Drainage Pipes	100	100	100	100	100
Curb and Gutter	100	91	100	100	98
Inlets	87	94	100	100	96
Sediment Basins	100	100	100	100	100
Misc. Drainage Structure	95	93	100	89	94
<b>Element Total</b>					<b>97.5</b>
Roadside	Q3 2021 Rating	Q4 2021 Rating	Q1 2022 Rating	Q2 2022 Rating	Rolling Rating
Turf Condition	90	89	77	74	83
Landscaping	100	93	100	100	98
Trees and Brush	100	100	100	100	100
Litter	100	100	100	100	100
Roadway Sweeping	100	100	100	100	100
Guardrail, Concrete Barrier, and End Anchors	100	100	100	100	100
Impact Attenuators	100	100	100	100	100
Fence, Control Access	97	96	97	92	95
Retaining Walls and Sound Barrier Walls	94	92	100	86	93
Decorative Supports	100	100	100	100	100
Graffiti and Stain Removal	100	100	100	100	100
<b>Element Total</b>					<b>95.2</b>
Traffic Control Devices	Q3 2021 Rating	Q4 2021 Rating	Q1 2022 Rating	Q2 2022 Rating	Rolling Rating
Signs	76	65	90	90	85
Delineators	100	100	100	93	98
Pavement Striping/Marking	100	100	100	93	98
Words and Symbols	98	97	97	100	98
Pavement Markers	100	100	100	97	99
Highway Lighting	100	100	100	100	100
<b>Element Total</b>					<b>94.9</b>

## 8.o Conclusion

This report presents the 2022 second quarter assessment of the Monroe 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 second quarter 2022 overall rating was 95.4 and the rolling rating was 96.3, both ratings met the target rating of 90.

All element ratings were above the target ratings for the quarter and rolling assessment. During the second quarter assessment, all but one characteristic met or exceeded the target rating of 80.

The maintenance provider is encouraged to continue using asset management principles and a performance management approach to work planning.

## **Appendix A**

**Monroe Expressway 2022 Second Quarter Table Results of Assets Failing  
MRP**

## Appendix A: Monroe Expressway 2022 Second 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 of 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.

All assets and their respective prefixes are listed below:

Guardrail, Concrete Barrier and End Anchors (BR).....	1
Curb and Gutter (CG).....	2
Toll Gantry Supports (DS) .....	3
Drainage Pipes (DP).....	4
Misc. Drainage Structure (MDP) .....	5
Fence and Control of Access (FN) .....	6
Graffiti (GR).....	7
Highway Lighting (HL) .....	8
Impact Attenuators (IA).....	9
Inlets (IN).....	10
Landscaping (PB).....	11
Paved Lanes – Asphalt (LS) .....	12
Paved Shoulders (LS) .....	13
Unpaved Shoulders (LS) .....	14
Front/Back Slopes (LS) .....	15
Unpaved Lateral and Outfall Ditches (LS) .....	16
Litter (LS).....	17
Roadway Sweeping (LS).....	18
Pavement Striping (LS) .....	19
Pavement Markers (LS) .....	20
Delineators (LS).....	21
Paved Ditches (PD).....	22
Pavement Words and Symbols (PS) .....	23
Signs (SN) .....	24
Signs (SN) .....	25
Tree and Brush (TB).....	26
Turf Condition (TF) .....	27
Turf Condition (TF) .....	28
Turf Condition (TF) .....	29
Turf Condition (TF) .....	30
MSE/Retaining Walls, Sound Barrier Walls and Screen Walls (WL) .....	31
Sediment Basins(SB) .....	32

## 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.

**Toll Gantry 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	Concrete	MDD_91	Part Missing		B8
2	Concrete	MDD_112	Part Missing		B15 & B16

## Fence and Control of Access (FN)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
1	Woven	FN_287	Hole		B4
2	Woven	FN_448	Hole		B12

## 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
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This asset did not produce any failures.

## Impact Attenuators (IA)

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



## Inlets (IN)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
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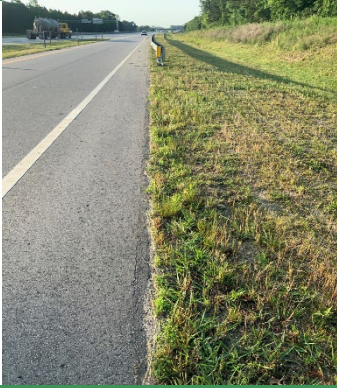

This asset did not produce any failures.

## Landscaping (PB)


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

## Paved Lanes – Asphalt (LS)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
1	Asphalt	LS_254	Cracking		B7
2	Asphalt	LS_665	Rutting		B4

## Paved Shoulders (LS)


#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
1	Asphalt	LS_335	Rumble Strip		B10 & B11

## 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
1	Turf	LS_304	Elevation Deviation		B9

## 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
1	Asphalt	LS_388	Visibility		B14
2	Asphalt	LS_721	Line Missing		B1

## 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
1	Concrete	PD_41	Cracking		B9

## Pavement Words and Symbols (PS)

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

## Signs (SN)

#	Sign Type	Object ID	Failure Type	Photo	GIS Reference Page
1	Merge	SN_57	Sign Support		B1
2	Road Sign	SN_150	Sign Support		B6
3	Merge	SN_296	Sign Support		B9

## Signs (SN)

#	Sign Type	Object ID	Failure Type	Photo	GIS Reference Page
4	Stop	SN_414	Sign Support		B7
5	Roundabout	SN_864	Height		B22
6	Road Sign	SN_1052	Sign Support		B14






Tree and Brush (TB)

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

## Turf Condition (TF)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
1	Turf	TF_138	Bare Ground		B1
2	Turf	TF_215	Bare Ground		B4
3	Turf	TF_371	Bare Ground		B20



## Turf Condition (TF)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
4	Turf	TF_386	Bare Ground		B22 & B23
5	Turf	TF_513	Bare Ground		B7
6	Turf	TF_656	Bare Ground		B15 & B16



## Turf Condition (TF)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
7	Turf	TF_671	Bare Ground		B16 & B17
8	Turf	TF_760	Bare Ground		B21 & B22
9	Turf	TF_790	Bare Ground		B22

## Turf Condition (TF)

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
10	Turf	TF_831	Bare Ground		B25
11	Turf	TF_847	Bare Ground		B5

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

#	Material Type	Object ID	Failure Type	Photo	GIS Reference Page
1	MSE Wall	WL_82	Crack		B11
2	MSE Wall	WL_90	Crack		B12

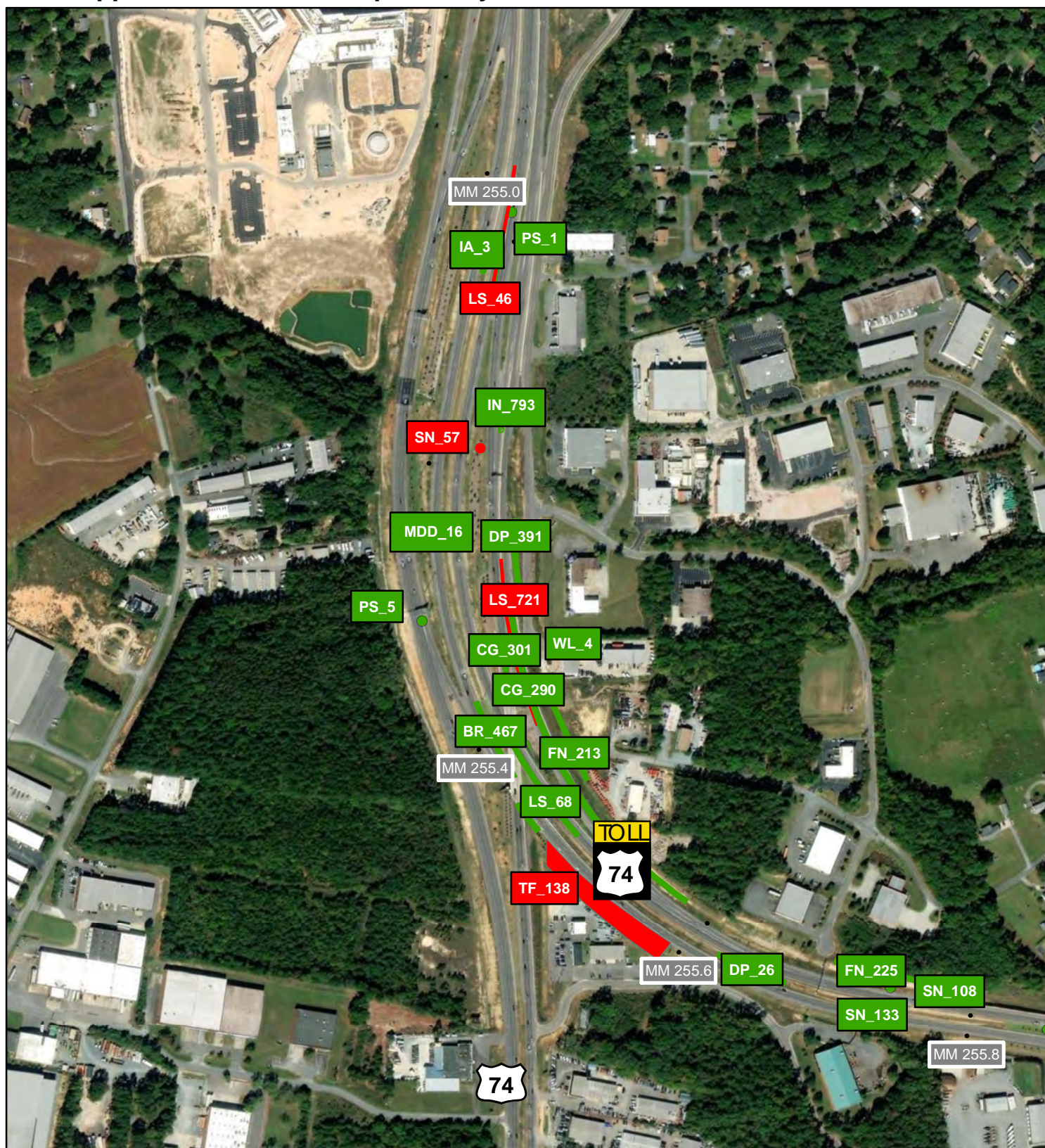
## Sediment Basins(SB)

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



## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



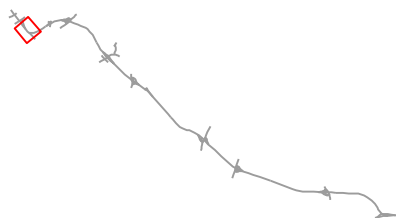
### Legend



Failing Asset



Passing Asset





## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



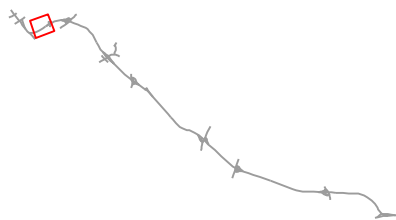
### Legend



Failing Asset



Passing Asset





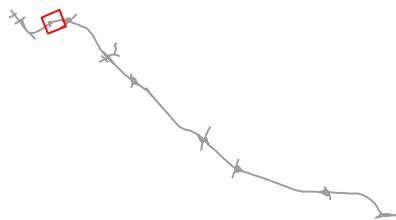


## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



### Legend

-  Failing Asset
-  Passing Asset





## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



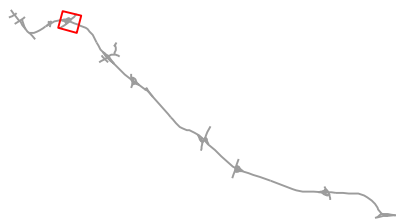
### Legend



Failing Asset

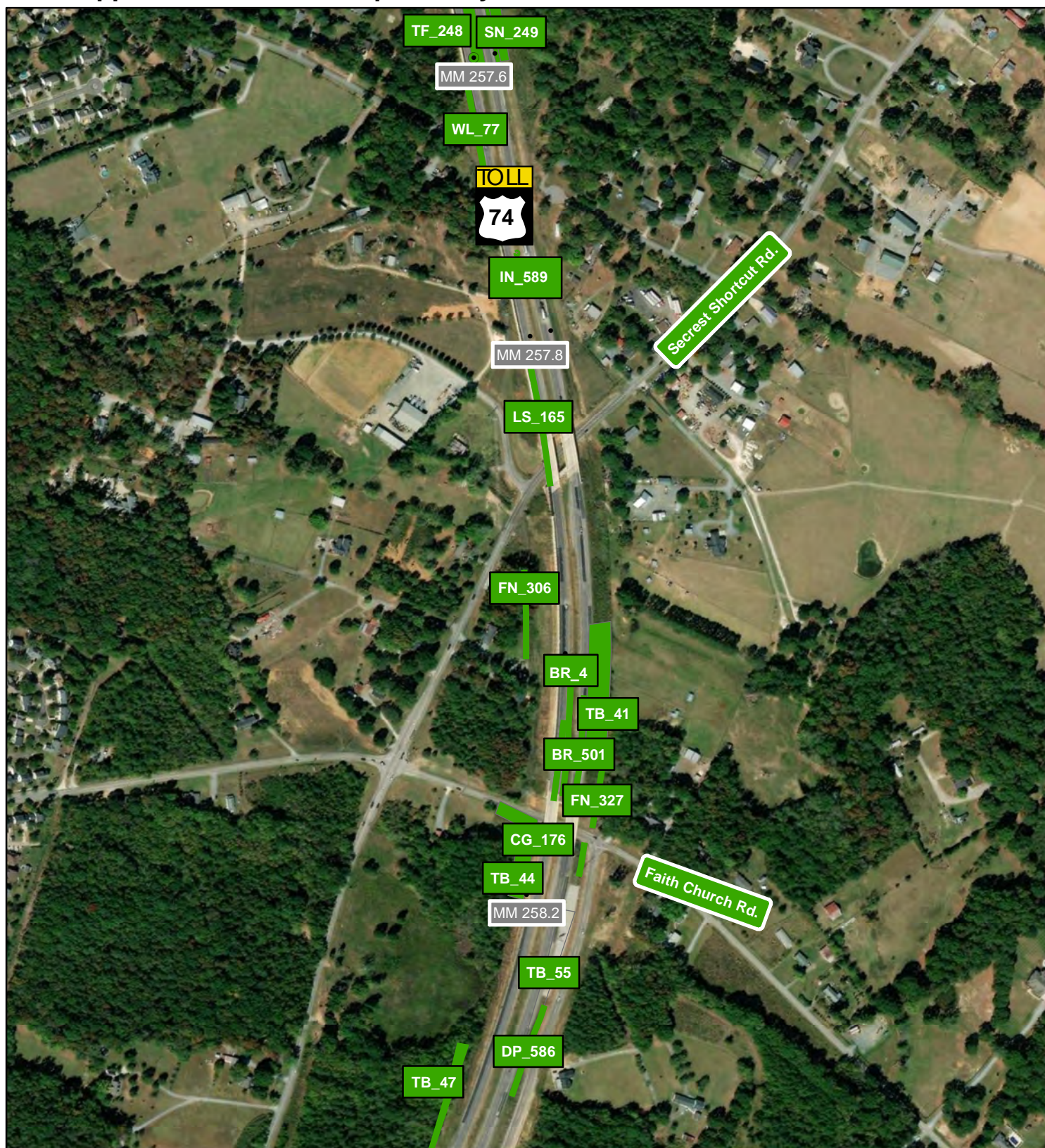


Passing Asset





## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



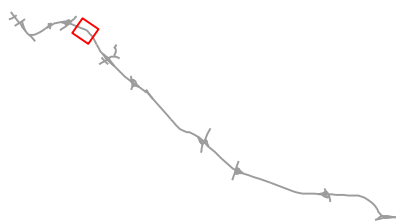
### Legend



Failing Asset

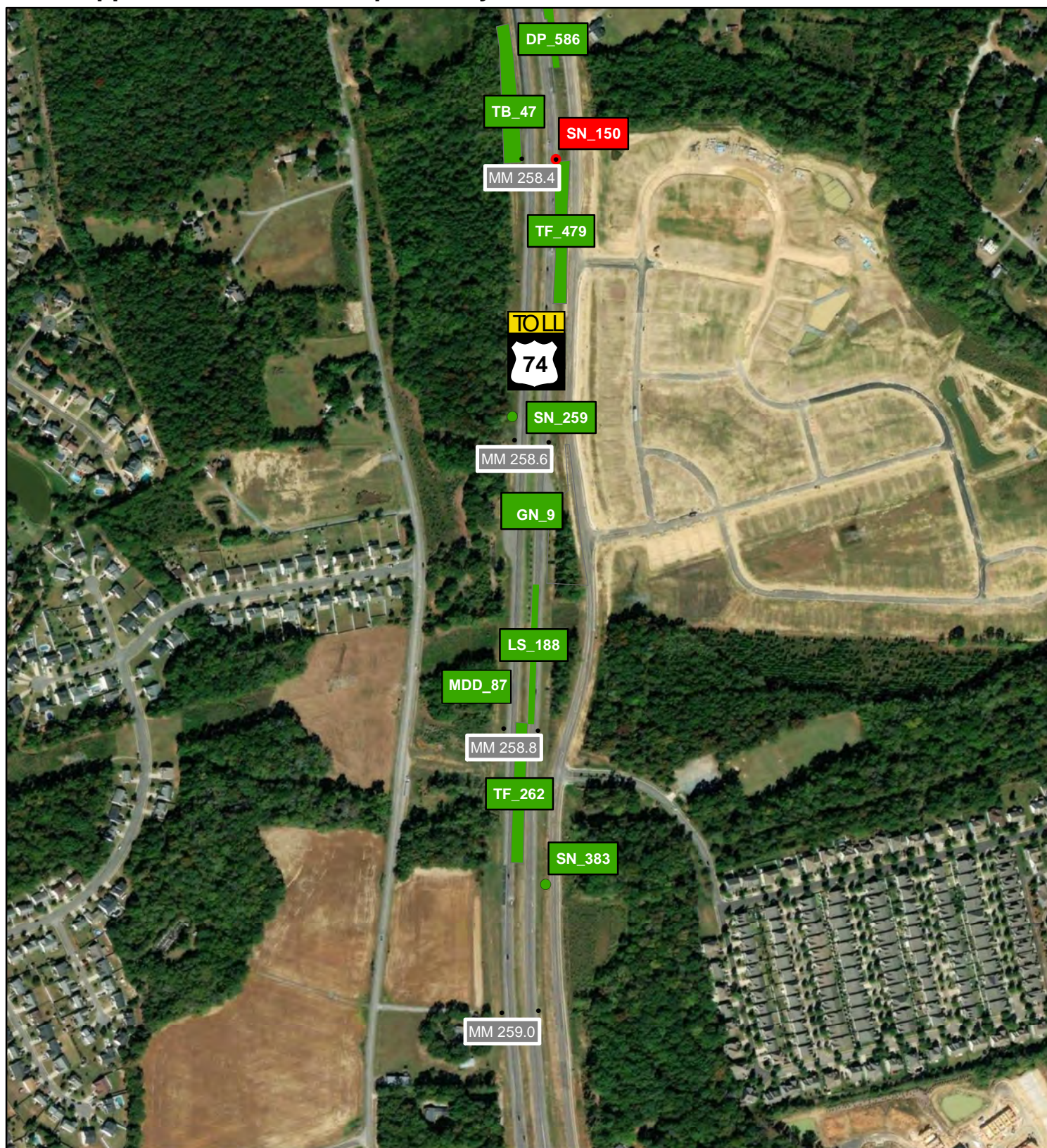


Passing Asset





## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



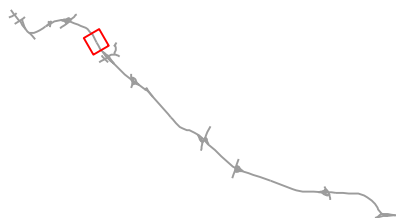
### Legend



Failing Asset

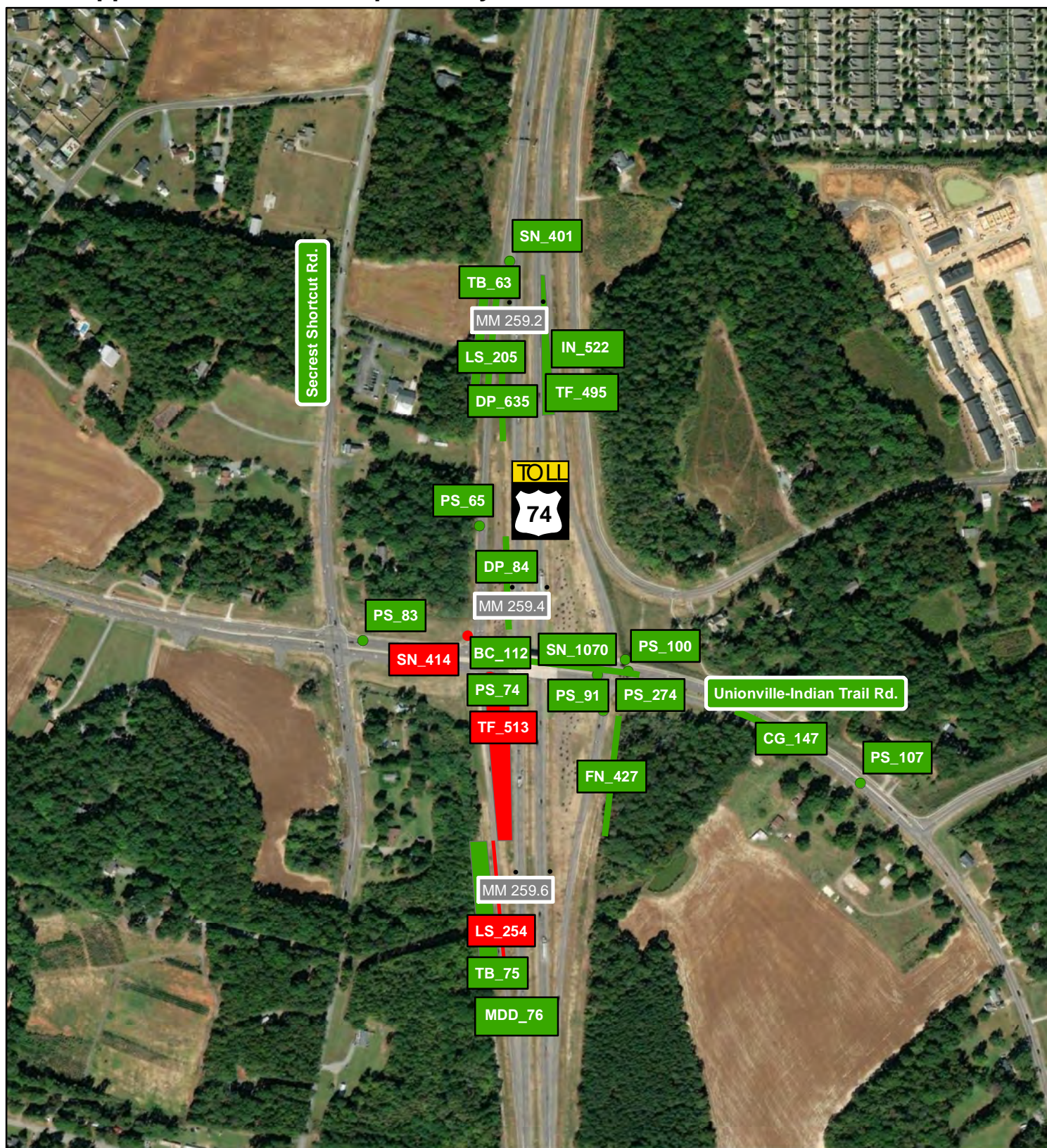


Passing Asset





## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



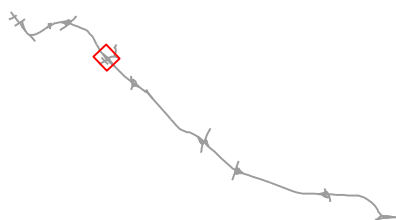
### Legend



Failing Asset



Passing Asset





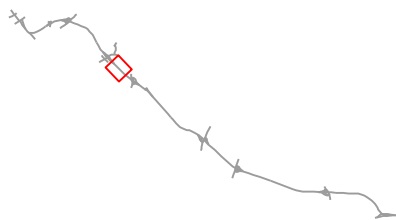


## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



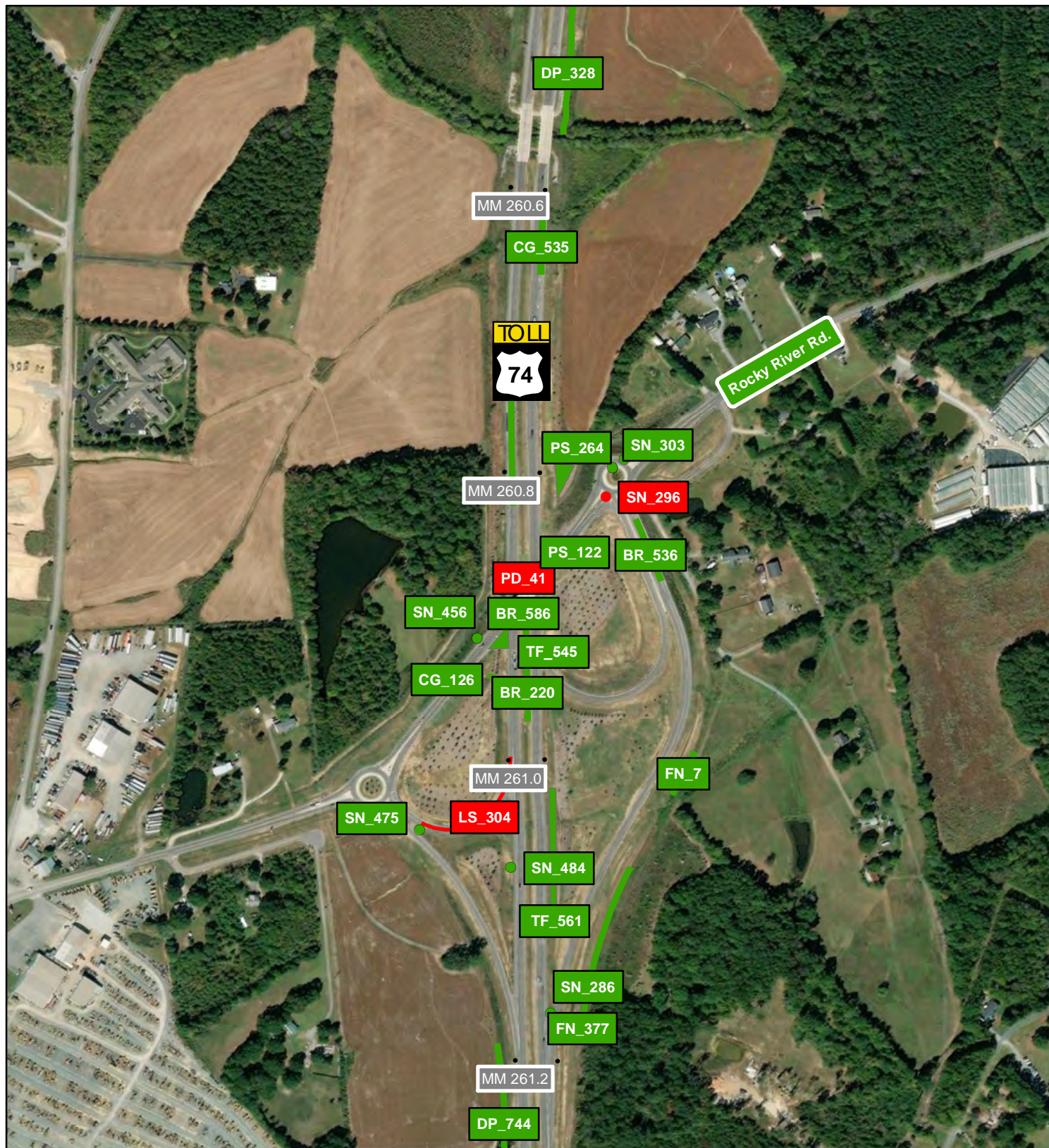
### Legend

-  Failing Asset
-  Passing Asset





## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



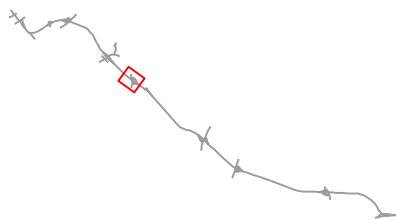
### Legend



Failing Asset

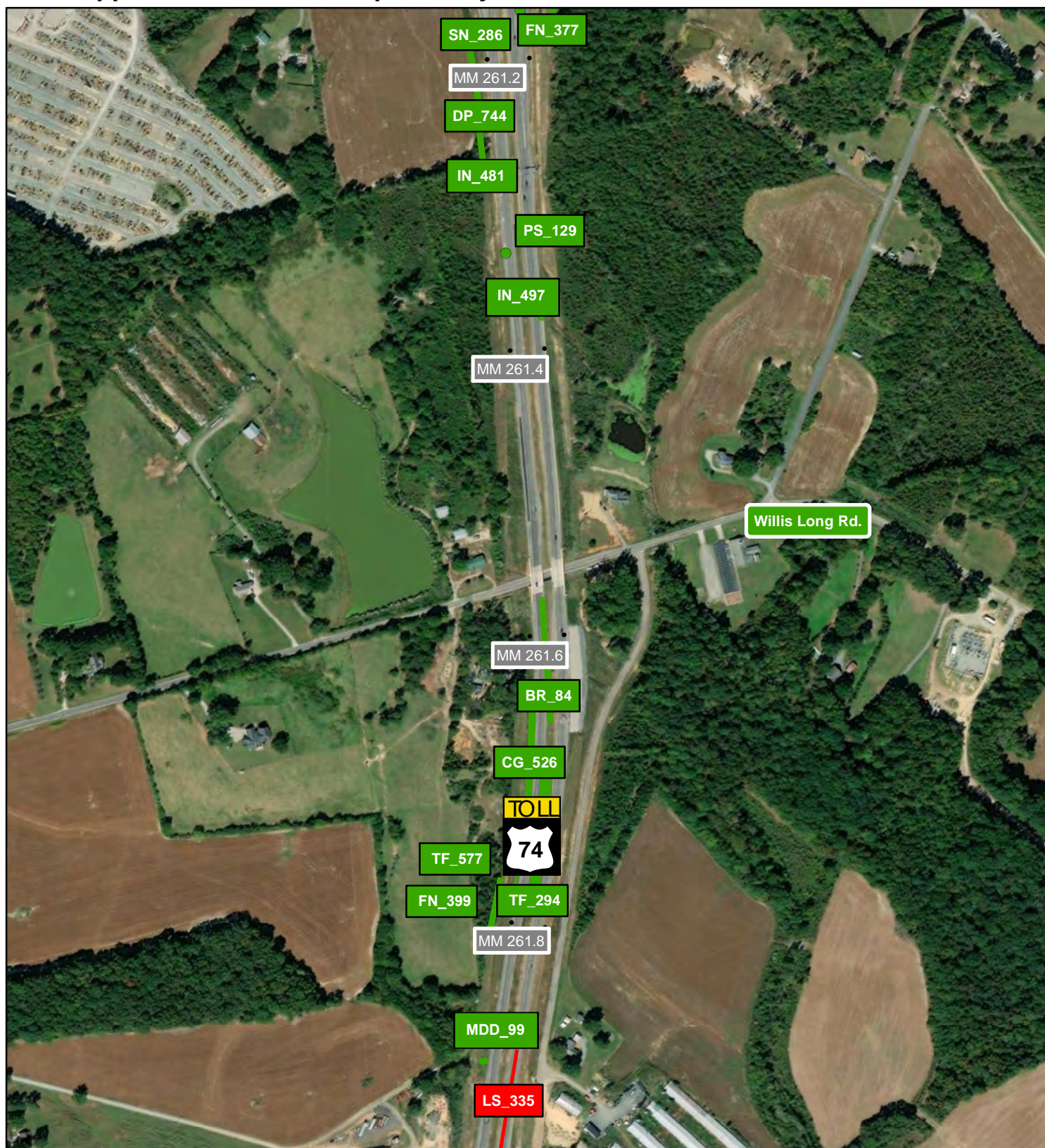


Passing Asset





## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



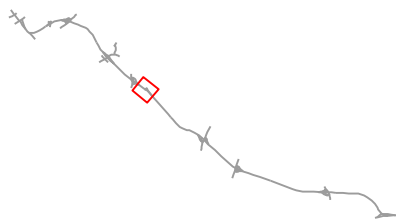
### Legend



Failing Asset

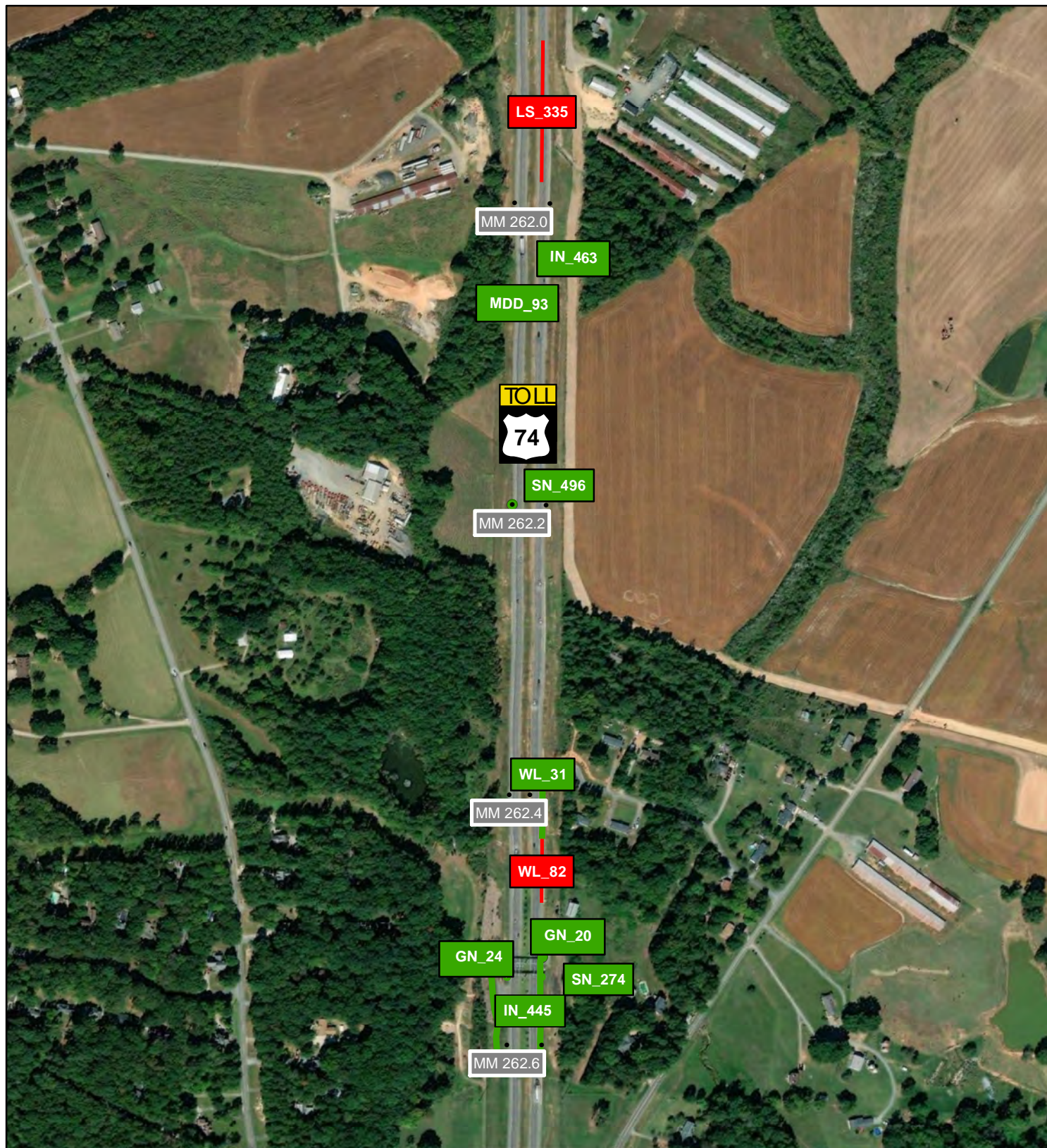


Passing Asset





## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



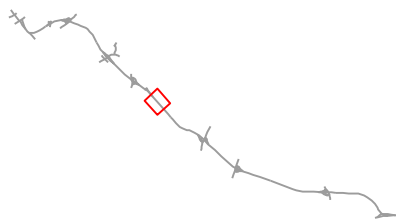
### Legend



Failing Asset

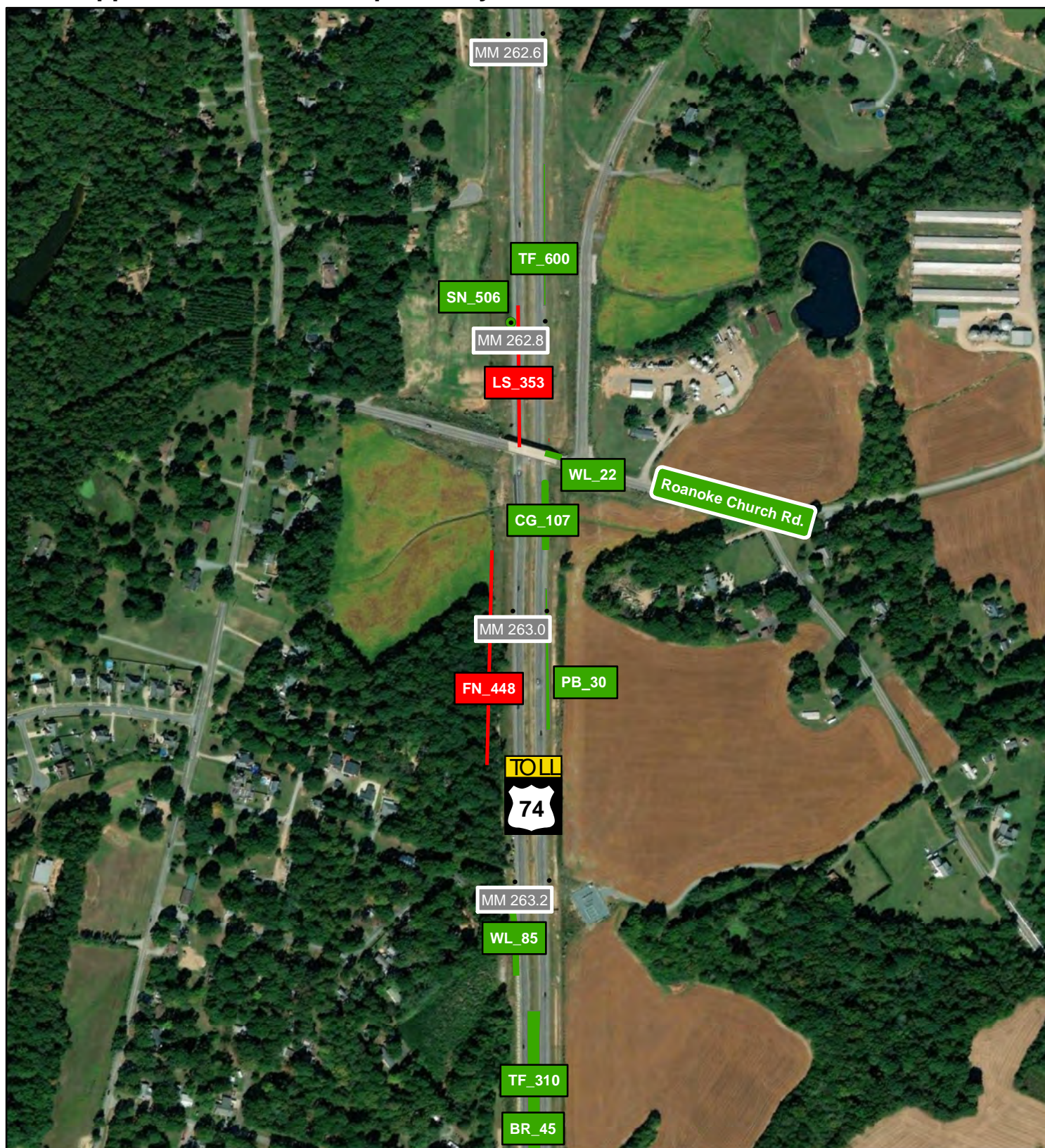


Passing Asset





## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



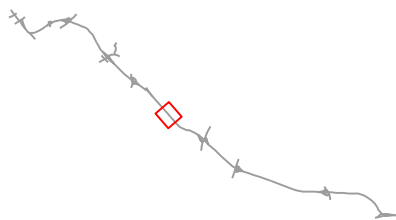
### Legend



Failing Asset



Passing Asset





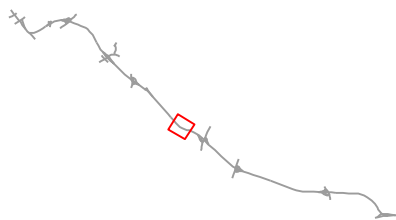


## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



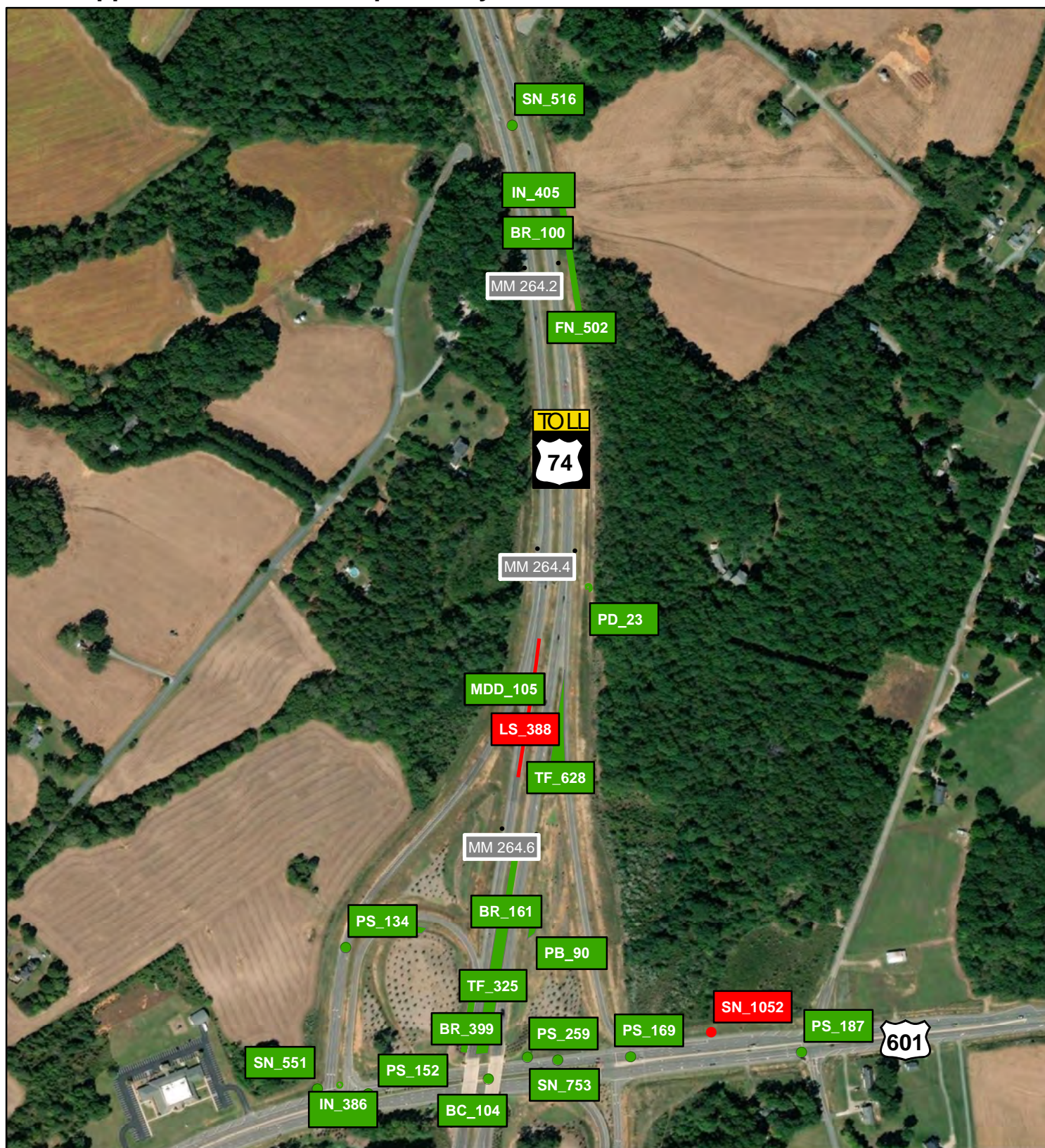
### Legend

-  Failing Asset
-  Passing Asset





## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



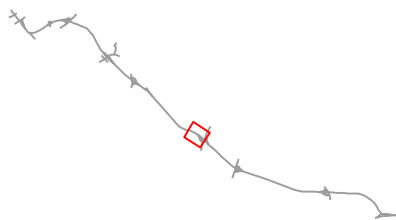
### Legend



Failing Asset

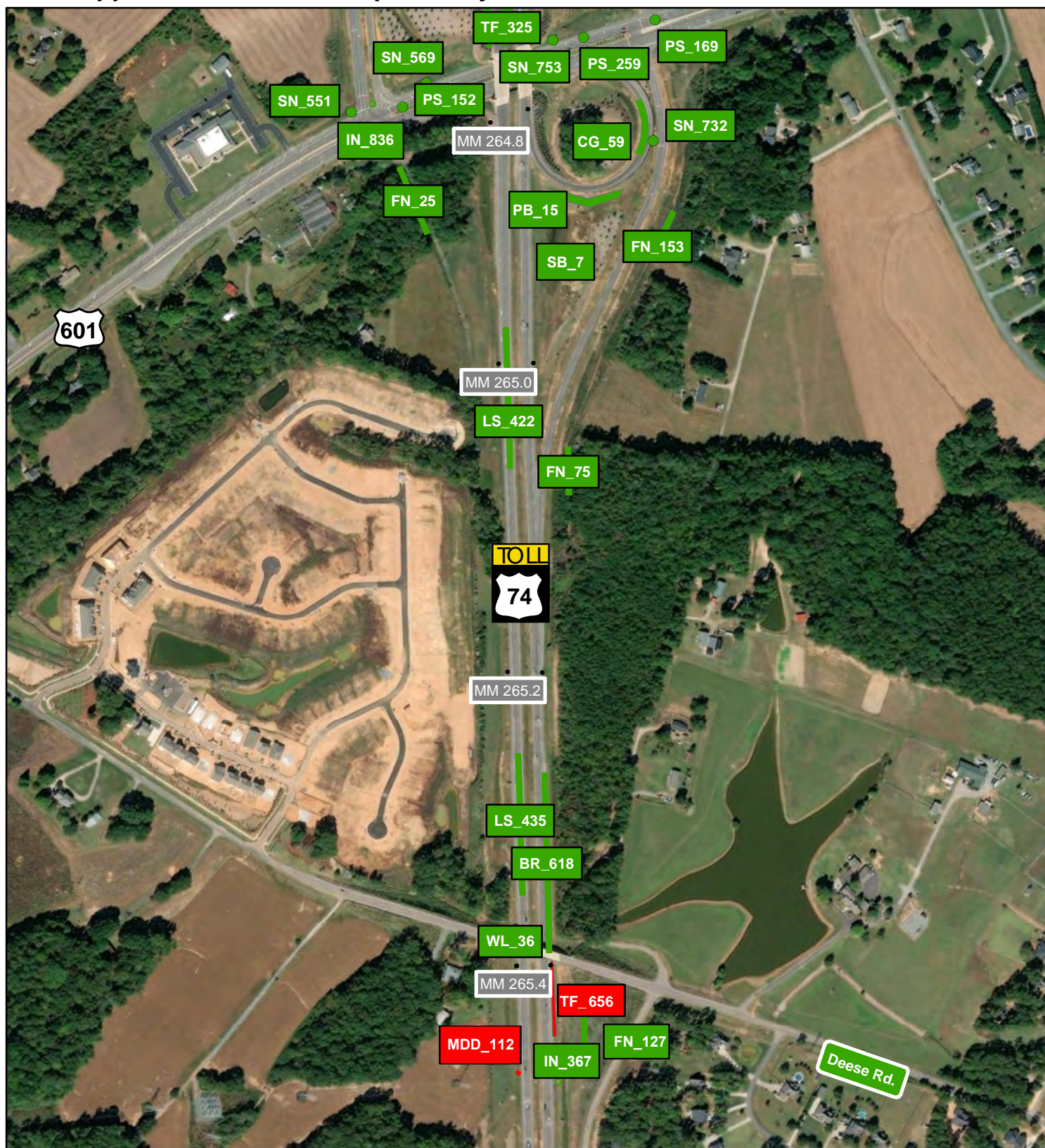


Passing Asset



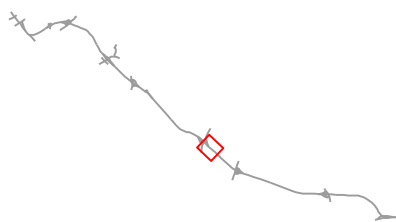


## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



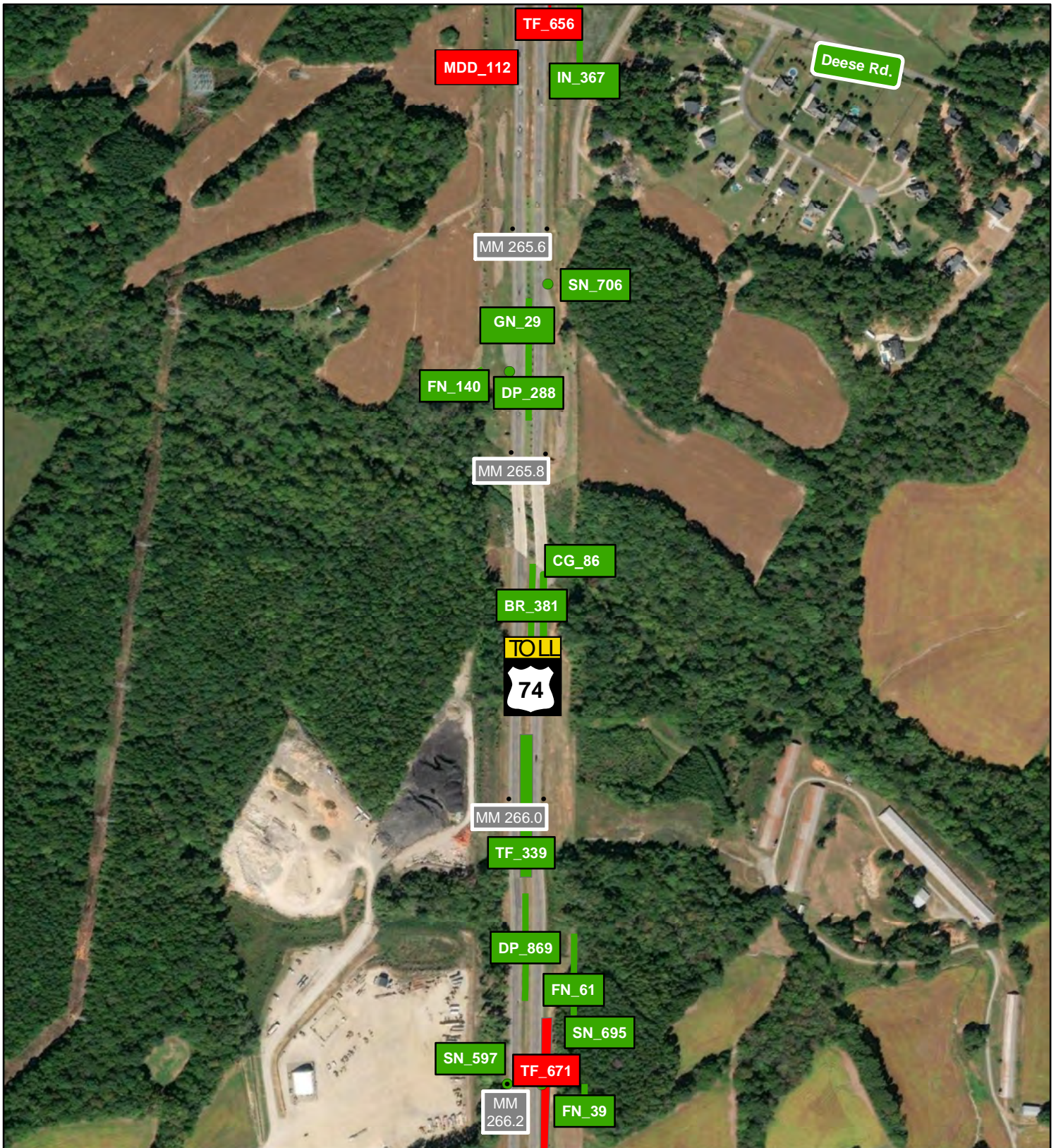
### Legend

- Failing Asset
- Passing Asset





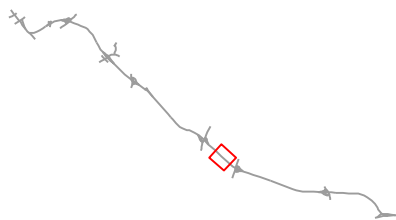


## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



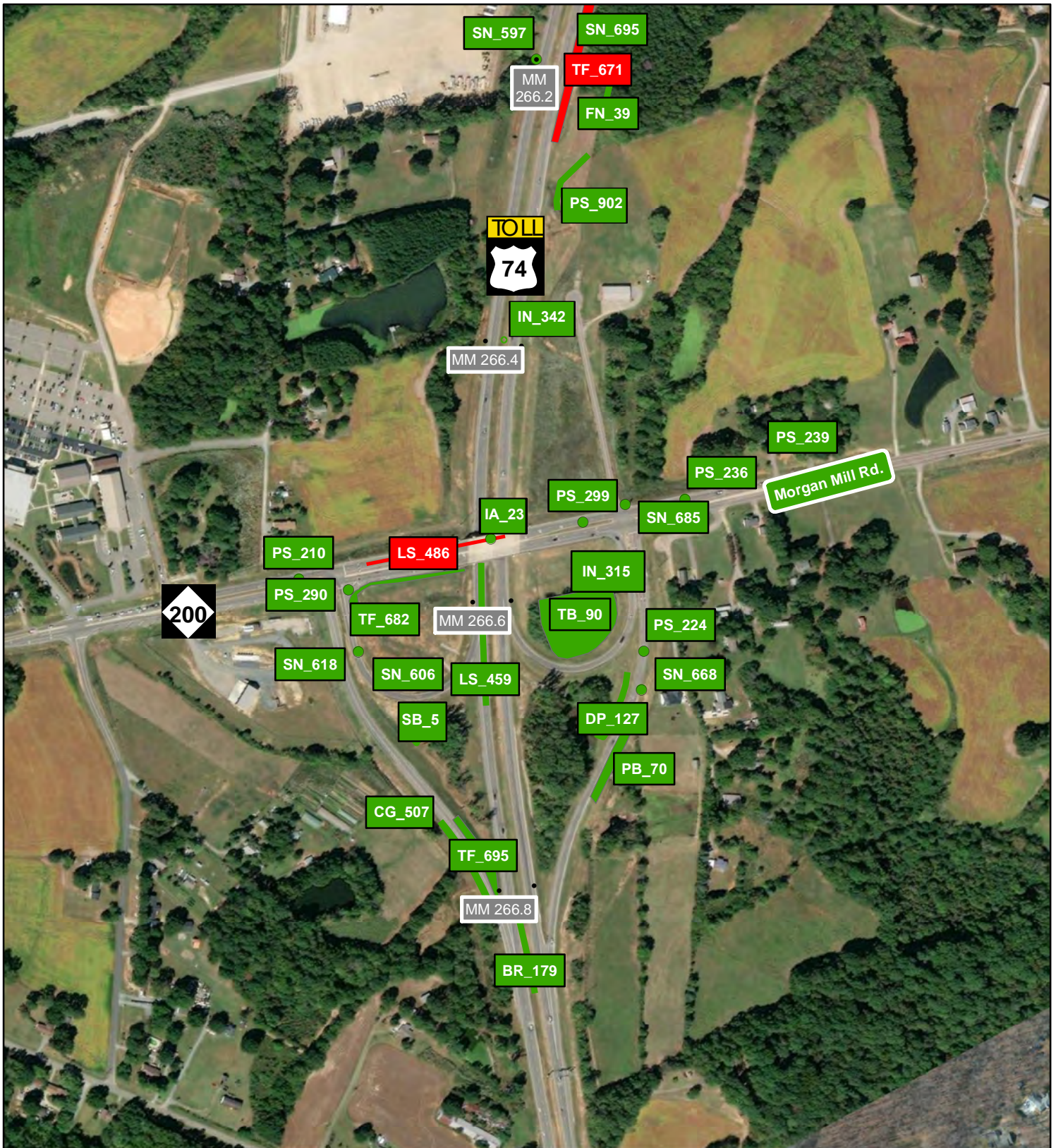
### Legend

-  Failing Asset
-  Passing Asset



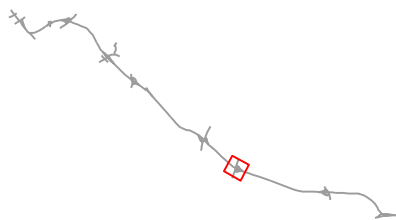


## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



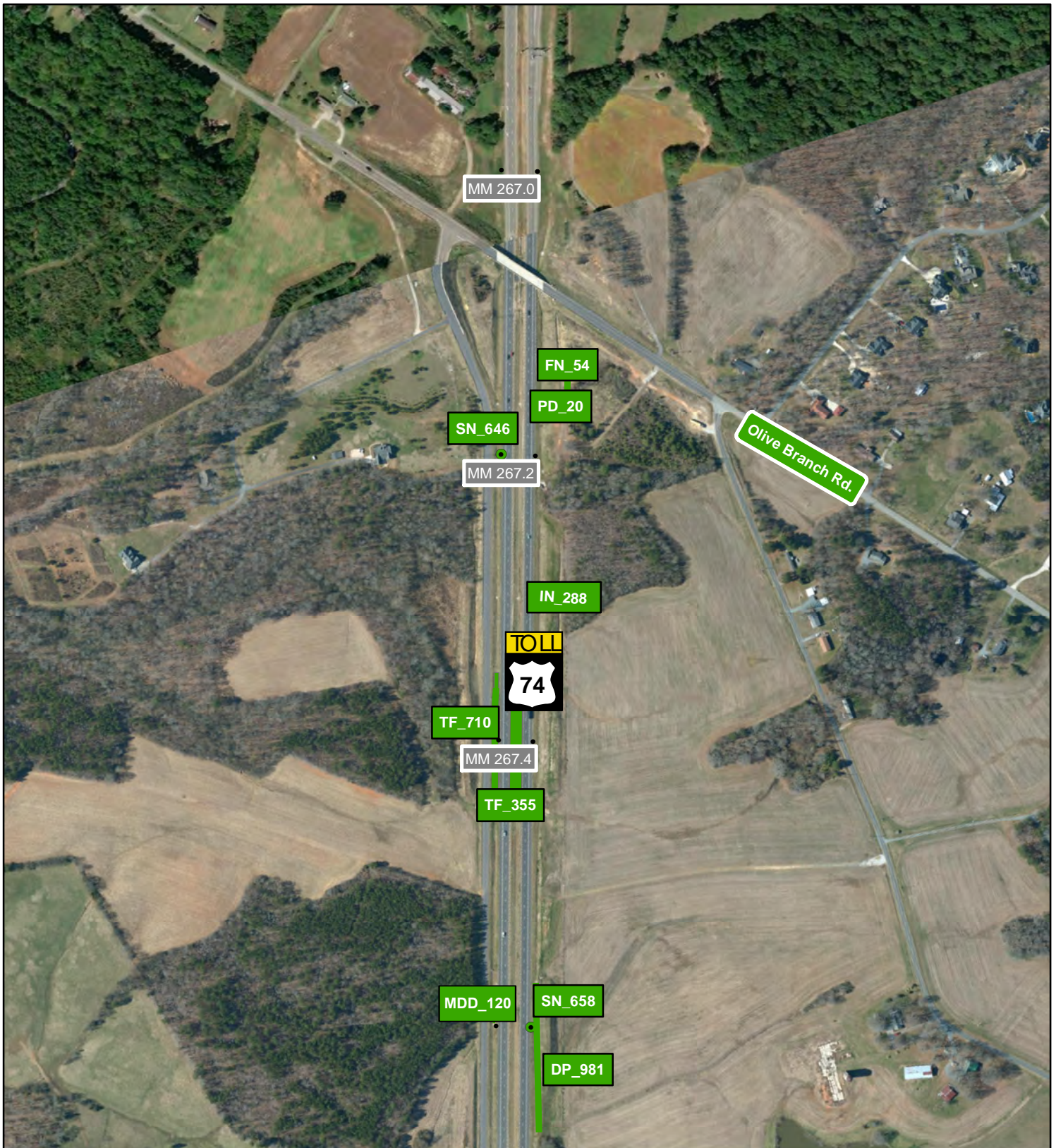
### Legend

- Failing Asset
- Passing Asset





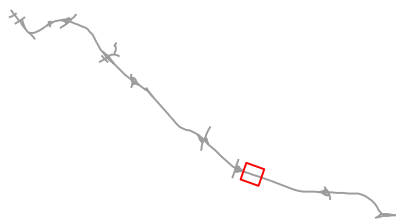


## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



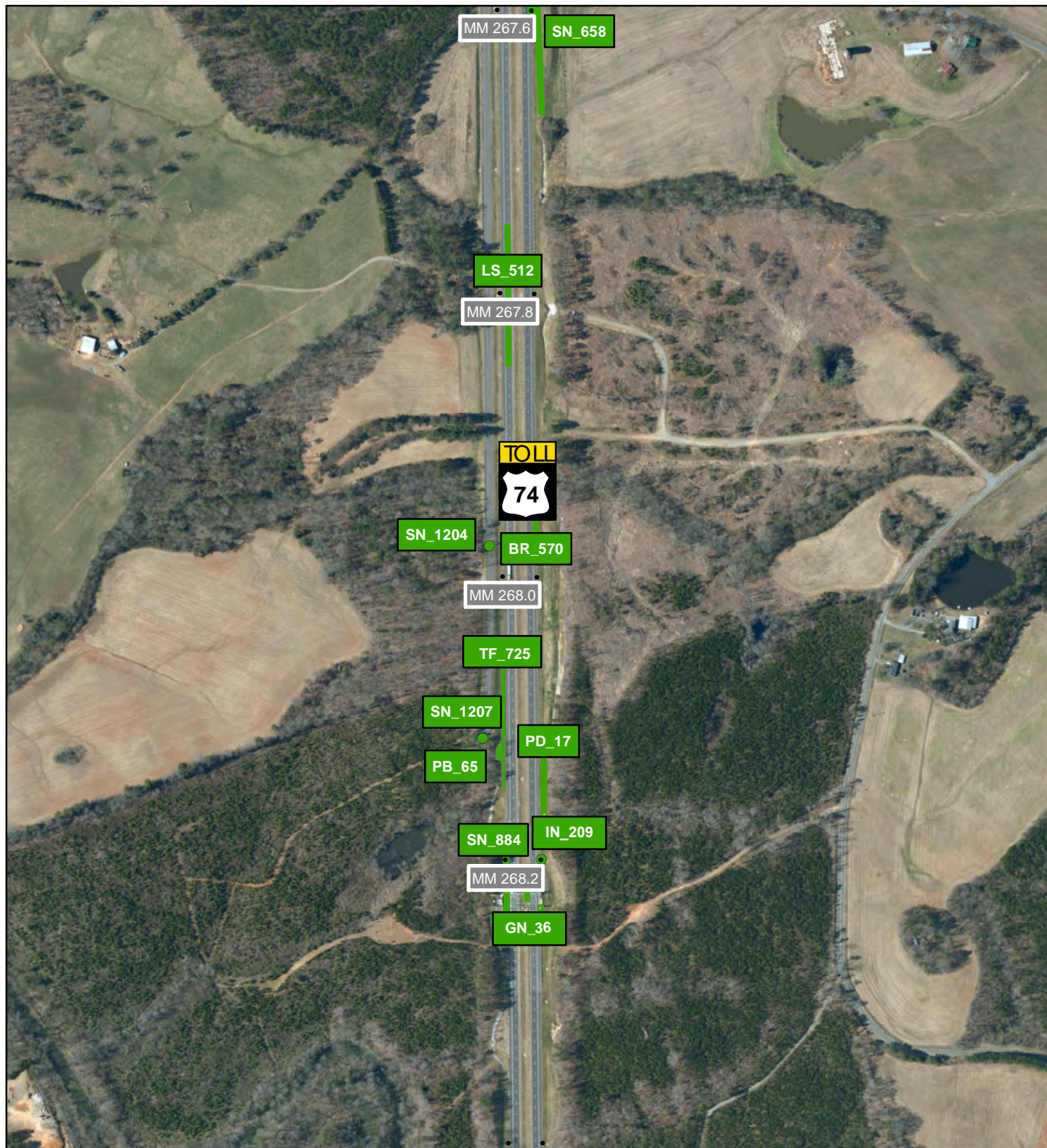
### Legend

-  Failing Asset
-  Passing Asset





## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



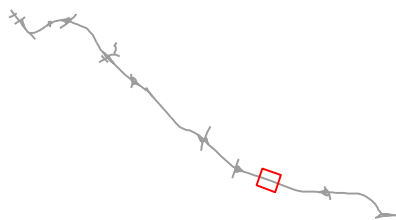
### Legend



Failing Asset

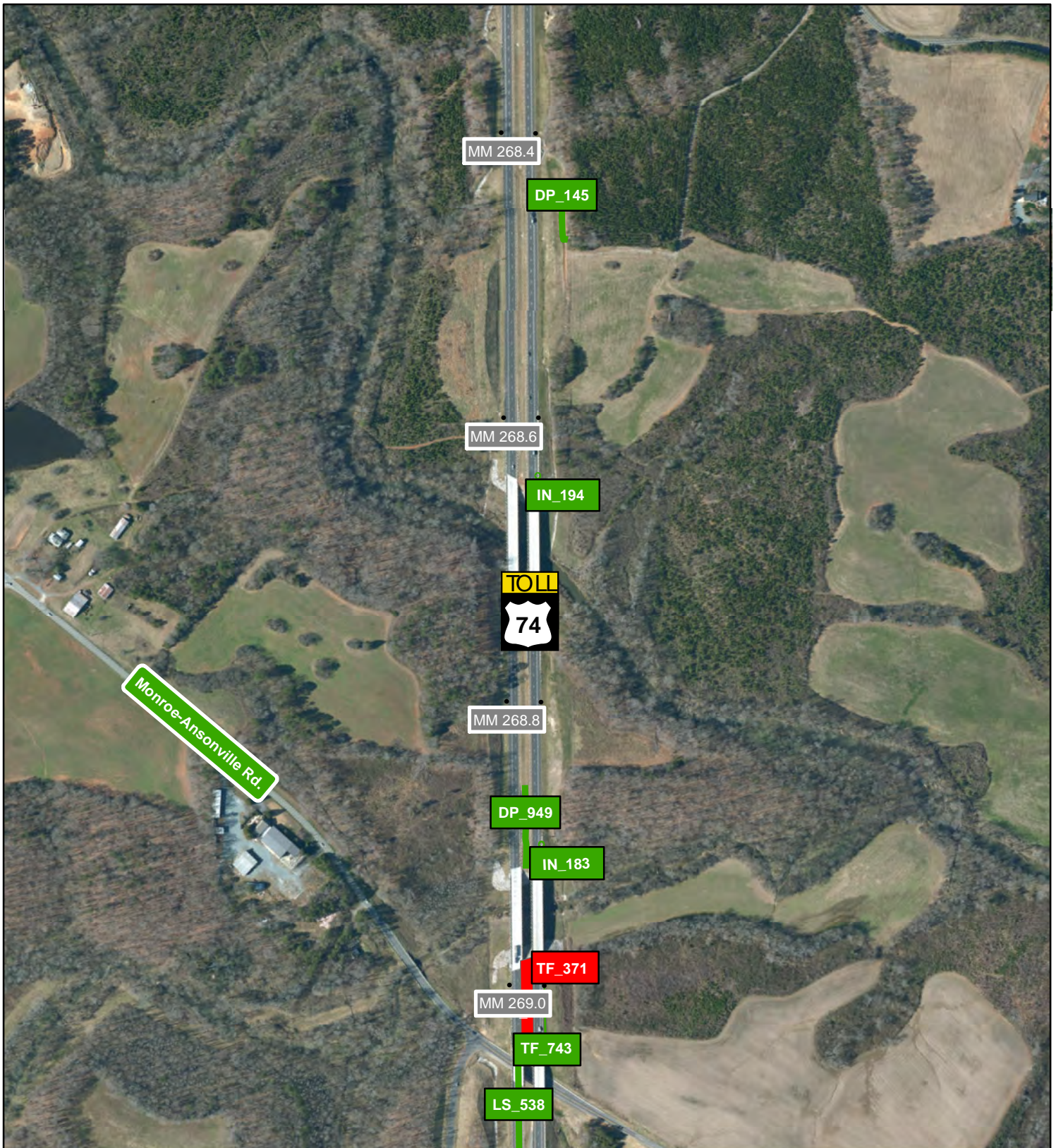


Passing Asset





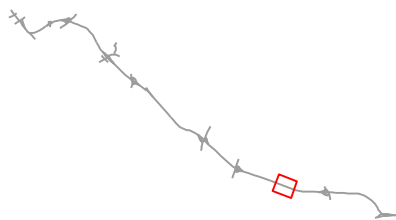


## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



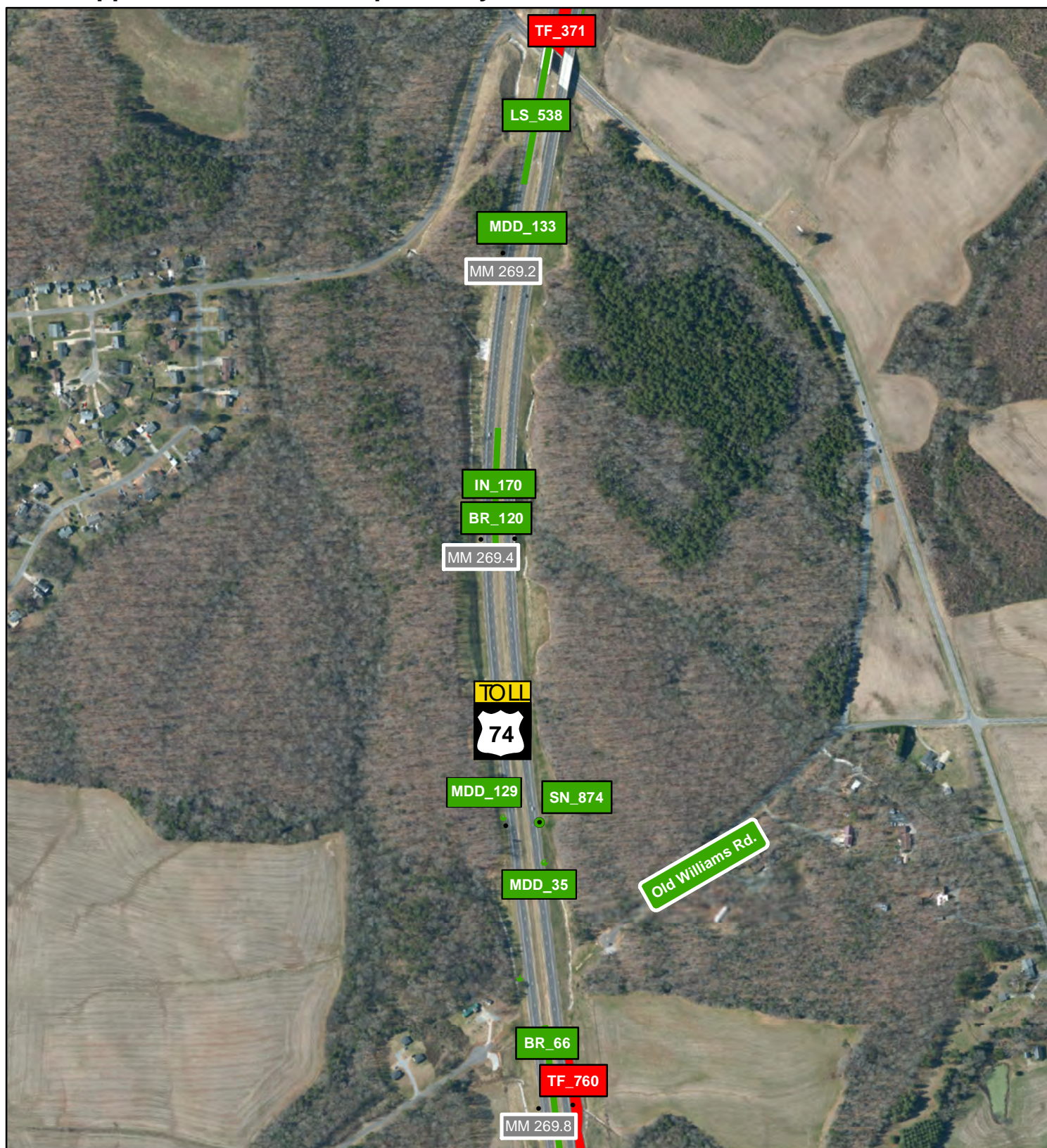
### Legend

-  Failing Asset
-  Passing Asset





## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



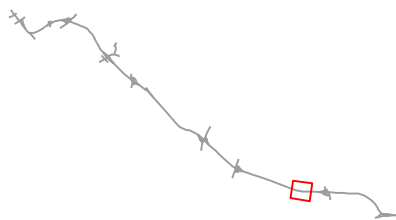
### Legend



Failing Asset

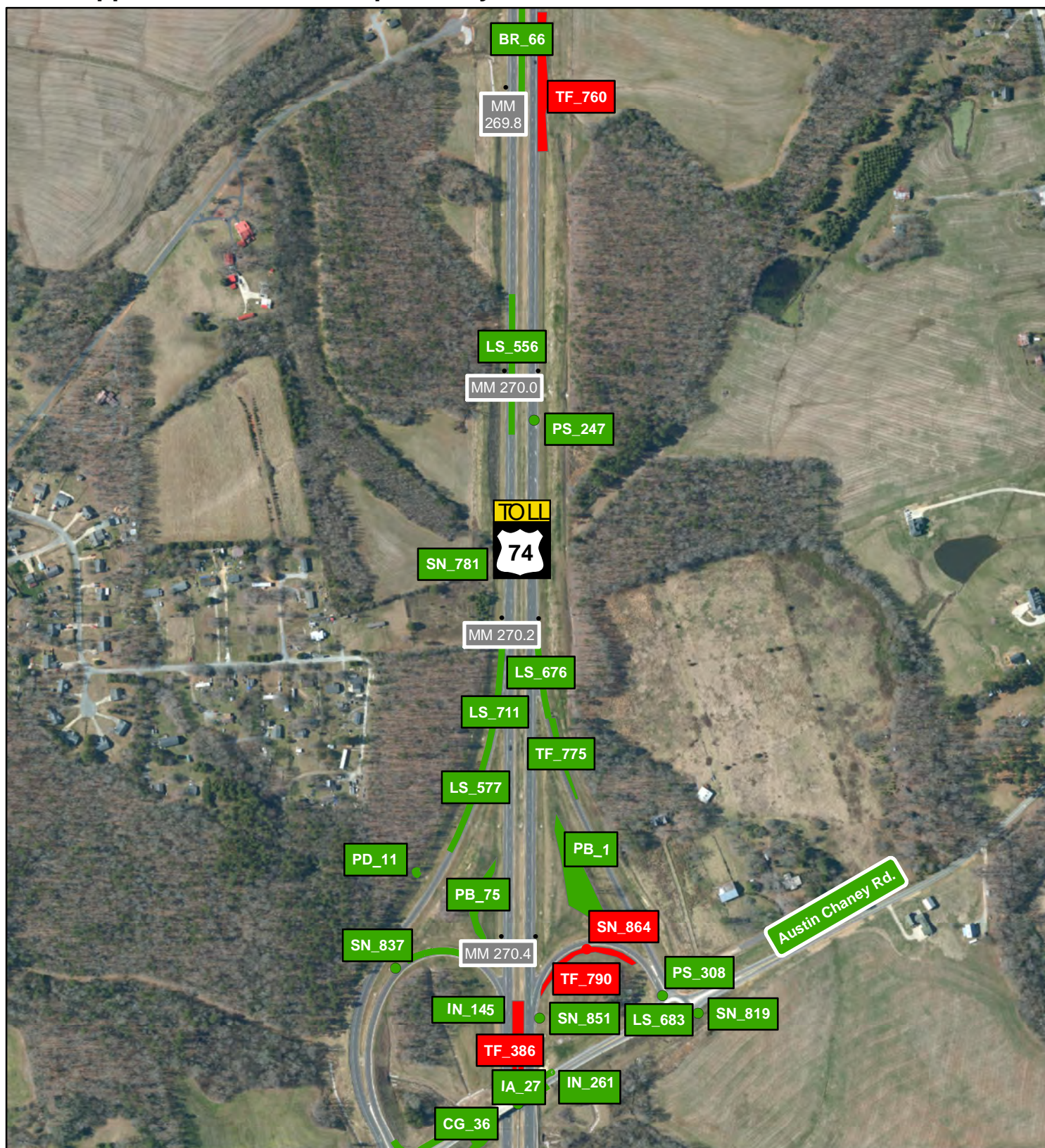


Passing Asset





## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



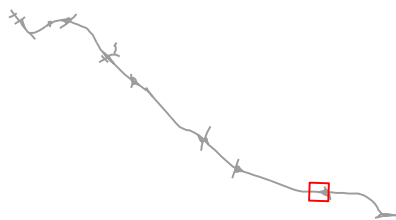
### Legend



Failing Asset

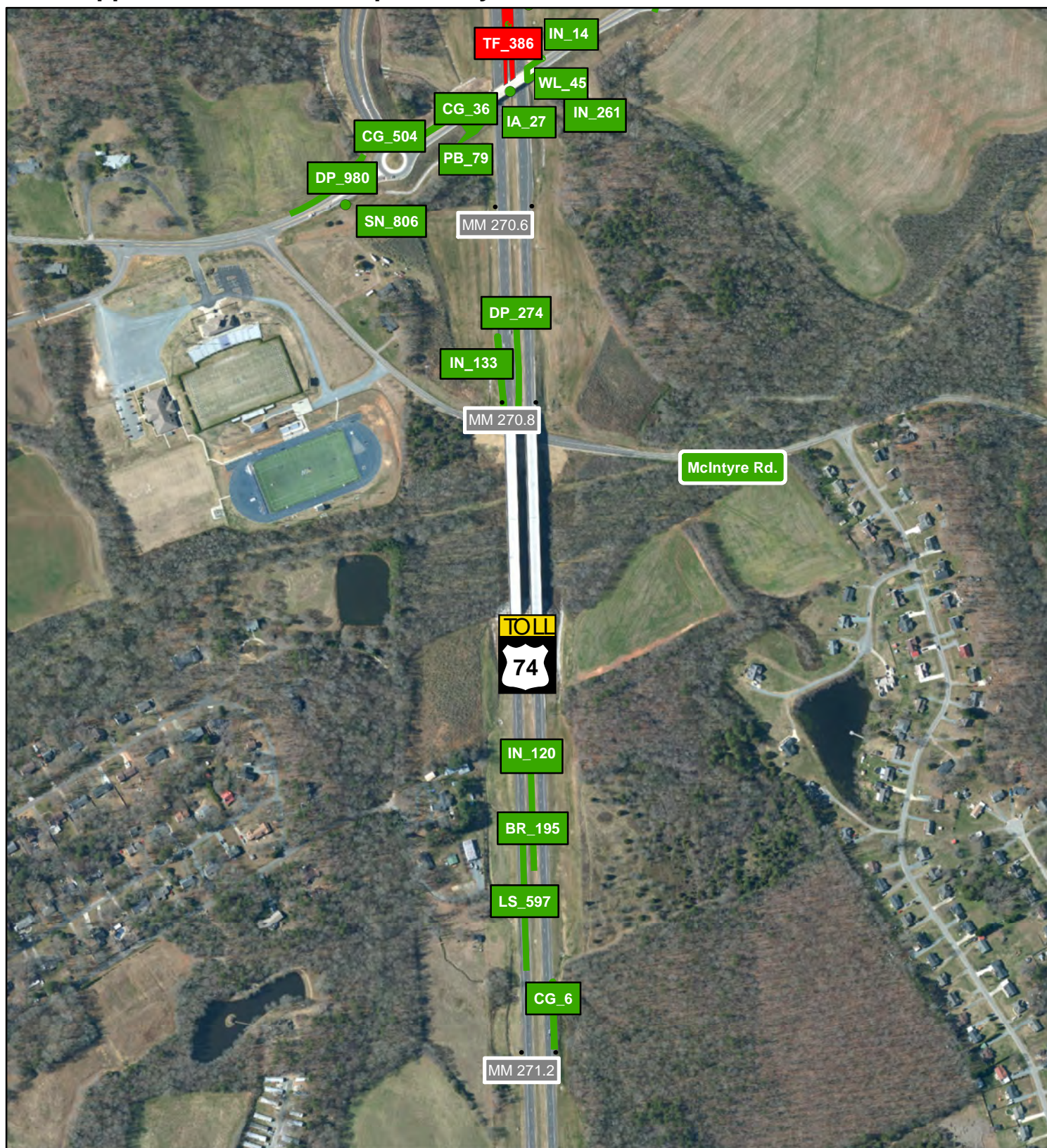


Passing Asset





## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



### Legend



Failing Asset

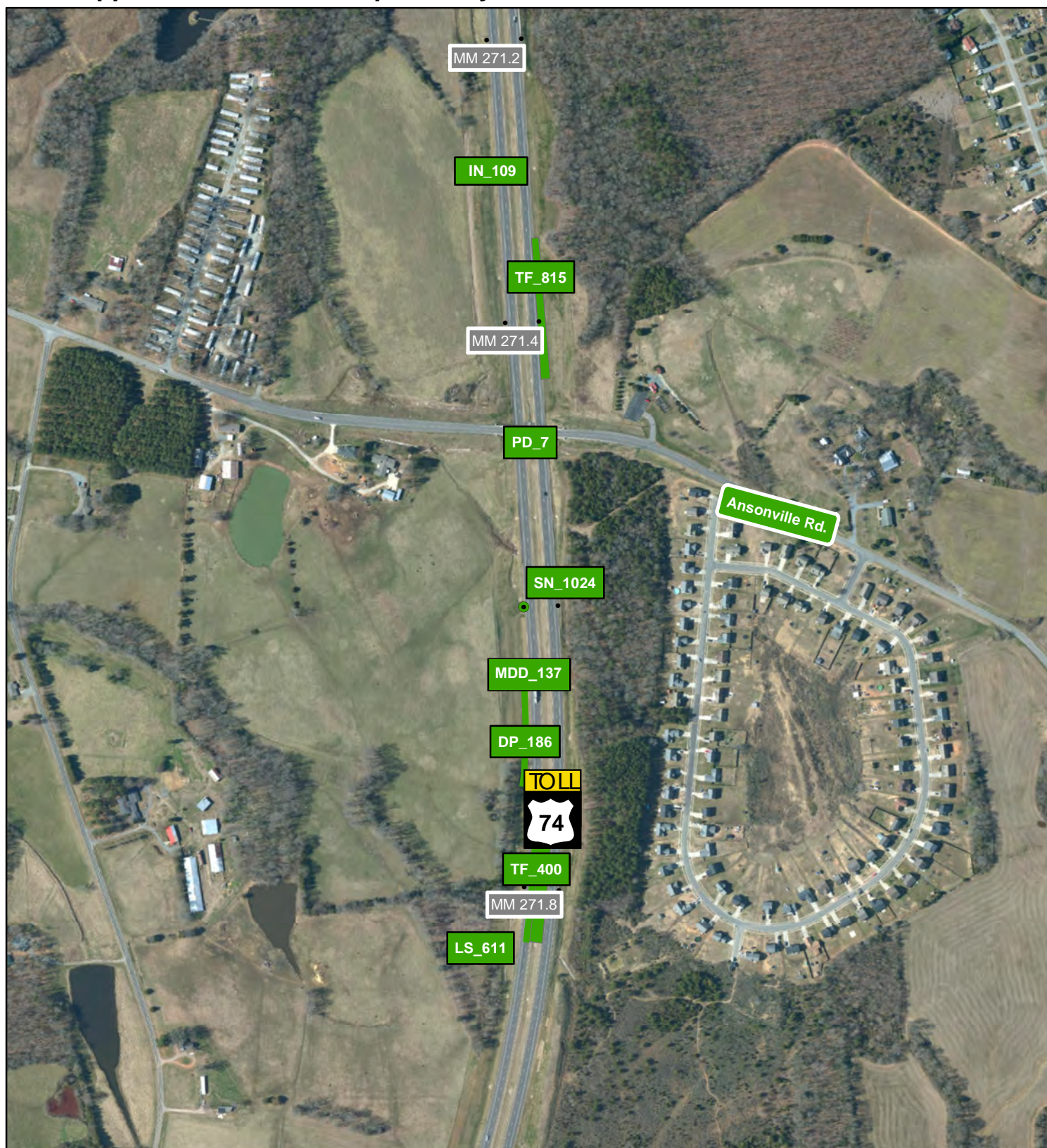


Passing Asset





## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



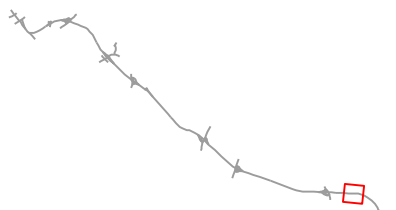
### Legend



Failing Asset

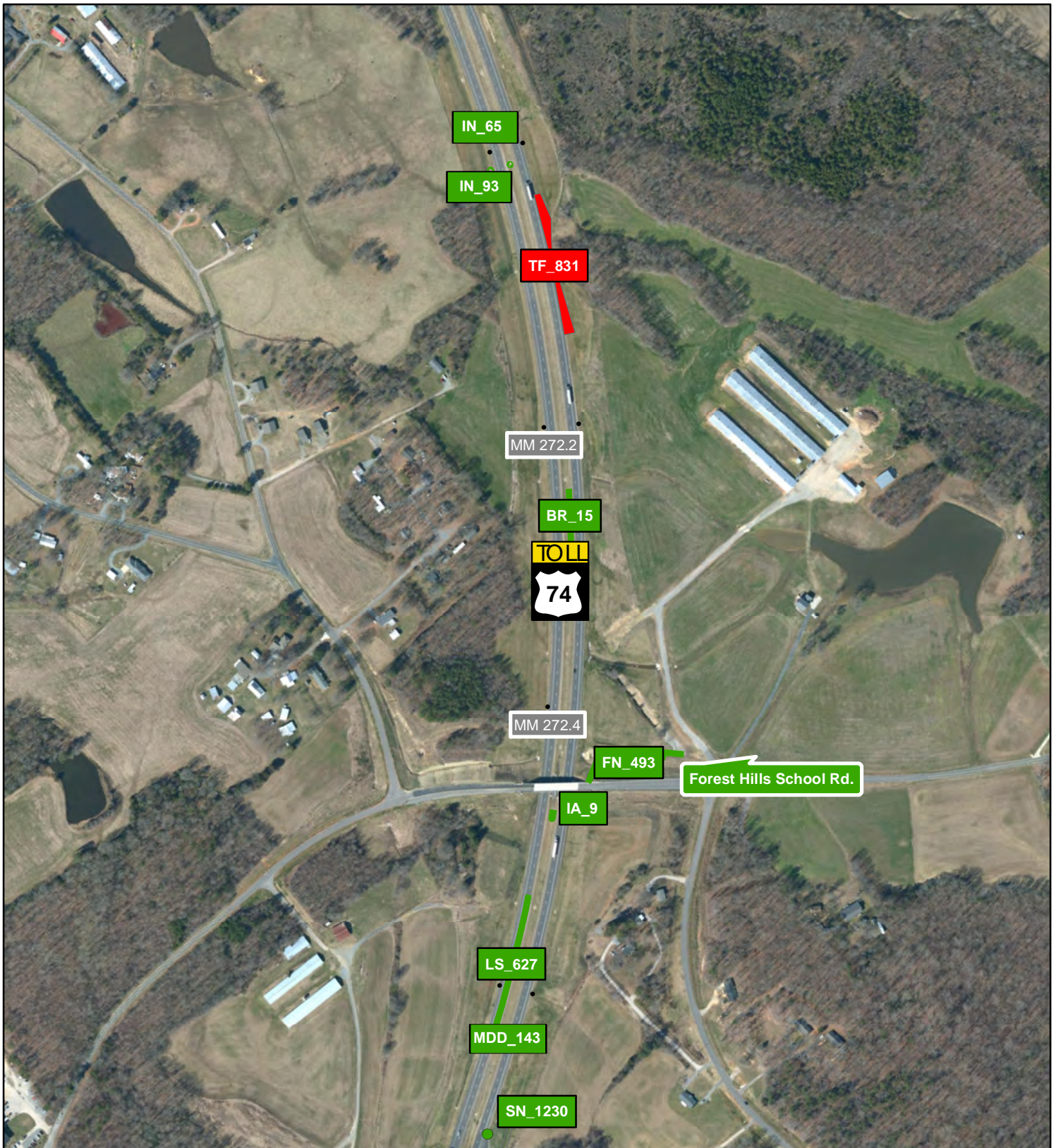


Passing Asset





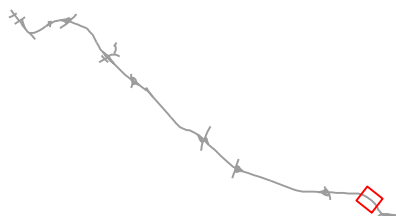


## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



### Legend

-  Failing Asset
-  Passing Asset





## Appendix B: Monroe Expressway Q2 2022 Asset Assessment Locations



### Legend



Failing Asset



Passing Asset

