

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR Report with PDF attachment(s)
(TRAFFIC SIGNAL MAST ARM INSPECTION REPORT)

Structure ID: 70M132

Inspection

DISTRICT: D5 - Deland

INSPECTION DATE: 11/1/2021 EGID

BY: FIT Engineering	STRUCTURE NAME: US-1 at Country Club Drive
OWNER: 1 State Highway Agency	YEAR BUILT: 2013
MAINTAINED BY: 4 City/Municipal Hwy Agy	SECTION NO.: 70 030 000
STRUCTURE TYPE: 3 Steel - Traffic Signal Mast Arm	MP: 1.326
LOCATION: 1.3 Miles N. of SR-50	ROUTE: 00001
SERV. TYPE ON: Traffic Signal Mast Arm	FACILITY CARRIED: US-1 (SR-5)
SERV. TYPE UNDER: 1 Highway	FEATURE INTERSECTED: Country Club Drive
MAST ARM CODE: 2	MAST ARM DESCRIPTION: Mast arm is inside the mast arm boundary area

☐ FUNCTIONALLY OBSOLETE☐ STRUCTURALLY DEFICIENT

TYPE OF INSPECTION: Regular NBI

DATE FIELD INSPECTION WAS PERFORMED: ABOVE WATER: 11/1/2021 UNDERWATER: N/A

SUFFICIENCY RATING: -1
HEALTH INDEX: 100

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MP: 1.326
ROUTE: 00001
FACILITY CARRIED: US-1 (SR-5)
FEATURE INTERSECTED: Country Club Drive
MAST ARM DESCRIPTION: Mast arm is inside the mast arm boundary area

- ☐ THIS BRIDGE CONTAINS FRACTURE CRITICAL COMPONENTS
☐ THIS BRIDGE IS SCOUR CRITICAL
☐ THIS REPORT IDENTIFIES DEFICIENCIES WHICH REQUIRE PROMPT CORRECTIVE ACTION
☐ FUNCTIONALLY OBSOLETE ☐ STRUCTURALLY DEFICIENT

TYPE OF INSPECTION: Regular NBI

DATE FIELD INSPECTION WAS PERFORMED: ABOVE WATER: 11/1/2021 UNDERWATER: N/A

OVERALL NBI RATINGS:

DECK: N N/A (NBI) CHANNEL: N N/A (NBI)
SUPERSTRUCTURE: 8 Very Good CULVERT: N N/A (NBI)
SUBSTRUCTURE: 7 Good SUFF. RATING: -1
PERF. RATING: Performance Rating Not applicable or not calculable. HEALTH INDEX: 100

FIELD PERSONNEL / TITLE / NUMBER:**INITIALS**

Watts, Sanya - Professional Engineer (P.E. #72297) (lead)
Burditt, Robert – Assistant Bridge Inspector

SW

REVIEWING BRIDGE INSPECTION SUPERVISOR:

Maslyn, Rick - Bridge Inspector (CBI #00271)

RM

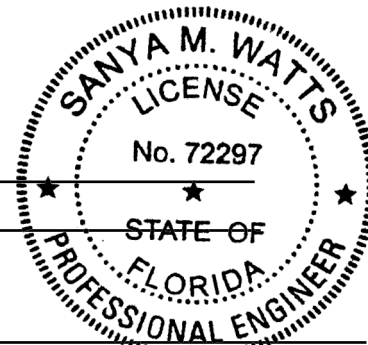
CONFIRMING REGISTERED PROFESSIONAL ENGINEER:

Watts, Sanya - Professional Engineer (P.E. #72297) FIT Engineering
219 NW Melanie Way
Registry No. 30738
Lake City FL 32055

SIGNATURE: _____

DATE: _____

This item has been digitally signed and sealed by Sanya Watts on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



This report contains information relating to the physical security of a structure and depictions of the structure. This information is confidential and exempt from public inspection pursuant to sections 119.071(3)(a) and 119.071(3)(b), Florida Statutes. Only the cover page of this report may be inspected and copied.

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All Elements

MISCELLANEOUS : Other Elements

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
Structure Unit 1	8480 / 4	Mast Arm Foundation	2	100	0	.	0	.	0	.	2 (EA)

Element Inspection Notes:

8480/4 This element consists of 2 foundations.

Previous Comments:

CS1:

F1 - Anchor Bolt 5 is skewed, resulting in a partial gap up to 3/16 in. between the nuts and washers above and below the base plate; the bolt is tight.

INCIDENTAL:

F1 & F2 - There is a light amount of sand and debris below the base plate at each location.

F2 - The foundation is 4 in. below grade. Refer to Photo 1.

New Comment:

CS1:

F2 - Anchor Bolts 2 and 4 are slightly skewed, resulting in less than full bearing; the nuts are tight.

Repair Recommendation:

F2 - Re-grade or install shoring around the foundation. P=3

Previous Repair Recommendations:

F1 & F2 - Replace the vermin guards in accordance with FDOT Spec. 649-6. - Completed.

F1 & F2 - Remove the accumulation of sand, dirt and debris below the base plates & clean and paint anchors as needed. - Completed but reoccurring as noted above.

F2 - Regrade area around foundation. - Not completed.

Foundation Measurements:

Grout Pad: F1 = No (Wire Screen); F2 = No (Wire Screen)

Base Plate Thickness: F1 = 2 1/2 in.; F2 = 2 1/2 in.

Bolt Diameter: F1 = 2 in.; F2 = 2 in.

Nut Height: F1 = 2 in.; F2 = 2 in.

Washer Thickness (Above & Below Base Plate): F1 = 3/8 in.; F2 = 3/8 in.

Average Distance from Bottom of Base Plate to Foundation: F1 = 3 1/8 in. (previously noted as 3 3/4 in.); F2 = 3 in.

Average Standoff Distance: F1 = 3/4 in. (previously noted as 1 in.); F2 = 5/8 in. (previously noted as 1/4 in.)

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DISTRICT: D5 - Deland

INSPECTION DATE: 11/1/2021 EGID

MISCELLANEOUS : Other Elements

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
Structure Unit 1	8481 / 4	Metal Mast Arm Vertical	2	100	0	.	0	.	0	.	2 (EA)
Structure Unit 1	8518 / 4	Galvanized Steel	254	100	0	.	0	.	0	.	254 sq.ft

Element Inspection Notes:

8481/4 This element consists of 2 verticals.

Note: Both verticals have a properly connected ground wire.

Previous Repair Recommendation:

V2 - Replace the missing street sign. - Completed.

The following thickness measurements were taken below the access hatch and below the moment connection:

V1 - AH = 0.377 in., MC = 0.379 in.

V2 - AH = 0.397 in., MC = 0.396 in.

Length of mast arm vertical members in linear feet:

V1 - 24.0 ft.

V2 - 24.0 ft.

8518/4 Refer to Parent Element

MISCELLANEOUS : Other Elements

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
Structure Unit 1	8484 / 4	Metal Mast Arm Horizontal	2	100	0	.	0	.	0	.	2 (EA)
Structure Unit 1	8518 / 4	Galvanized Steel	387	100	0	.	0	.	0	.	387 sq.ft

Element Inspection Notes:

8484/4 This element consists of 2 horizontals.

Previous Comment:

INCIDENTAL:

V1/H1 - Utility cables are rubbing on the top and bottom of the horizontal arm. Refer to Photo 2.

New Comment:

CS1:

V2/H2 - A bird nest is present in the horizontal arm, visible through the drain hole near the moment connection. Refer to Photo 3.

Repair Recommendations:

V1/H1 - Sleeve or relocate the utility cables to eliminate contact with the horizontal arm. P=3

V2/H2 - Remove the bird nest from the horizontal arm near the moment connection and install screening. P=3

Previous Repair Recommendation:

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V1/H1 - Sleeve the utility lines to prevent damage. - Not completed.

The following thickness measurements were taken on each horizontal member at the moment connection:

V1/H1 - 0.377 in.

V2/H2 - 0.376 in.

Length of mast arm horizontal members in linear feet:

V1/H1 - 70.5 ft.

V2/H2 - 60.0 ft.

Minimum vertical clearance:

V1/H1 - 18.7 ft. (west signal)

V2/H2 - 19.5 ft. (east signal)

8518/4 Refer to Parent Element

Total Number of ADE Elements*: 3

*excluding defects/protective systems

Structure Notes

Maintaining Agency:

Kevin Cook, Public Works Director
City of Titusville
445 S. Washington Ave.
Titusville, FL 32796
(321) 383-5746
kevin.cook@titusville.com

Plans are available at the District 5 Structures Maintenance office.

The year built was input as 2013 based on the fiscal design year found on plans for FIN Project ID #414975-1-52-01 plus 1 year.

INSPECTION NOTES: **EGID** **11/1/2021**

A 42ft. insulated bucket truck was utilized for this inspection.

The NBI rating for Item 60 Substructure was lowered from an 8 - Very Good to a 7 - Good to better reflect current conditions.

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Inspection

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Photo 1

Element 8480 / Foundation – Foundation below grade at F2

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Photo 2

Element 8484 / Horizontal – Utility cables rubbing the top and bottom of the horizontal arm at V1/H1

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DISTRICT: D5 - Deland

Inspection

INSPECTION DATE: 11/1/2021 EGID



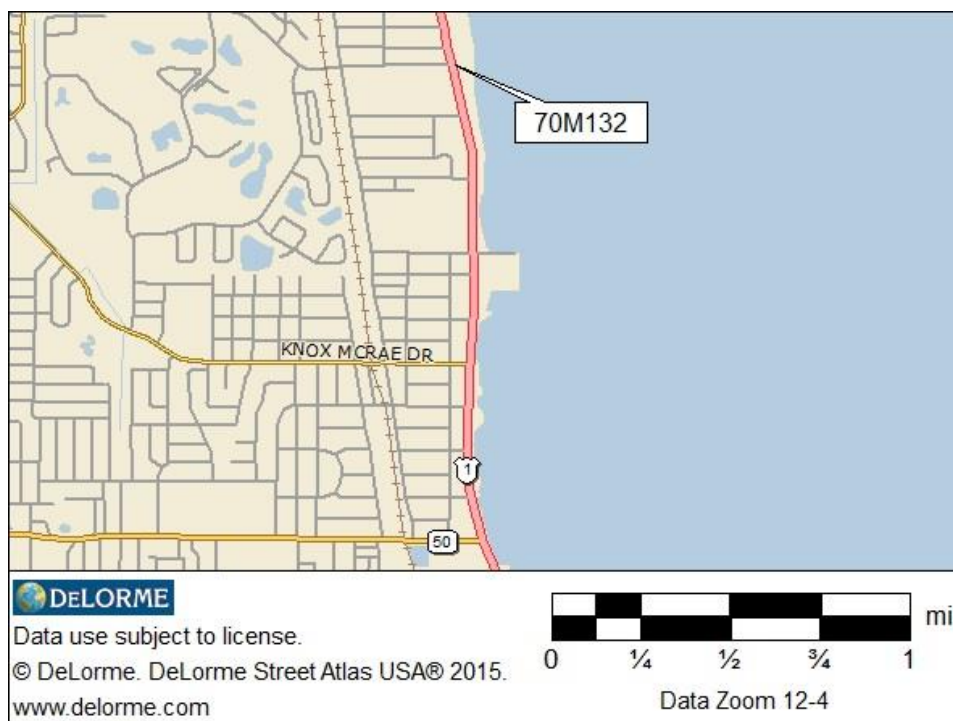
Photo 3

Element 8484 / Horizontal – Bird nest inside the horizontal arm at V2/H2

FLORIDA DEPARTMENT OF TRANSPORTATION BRIDGE MANAGEMENT SYSTEM APPENDIX

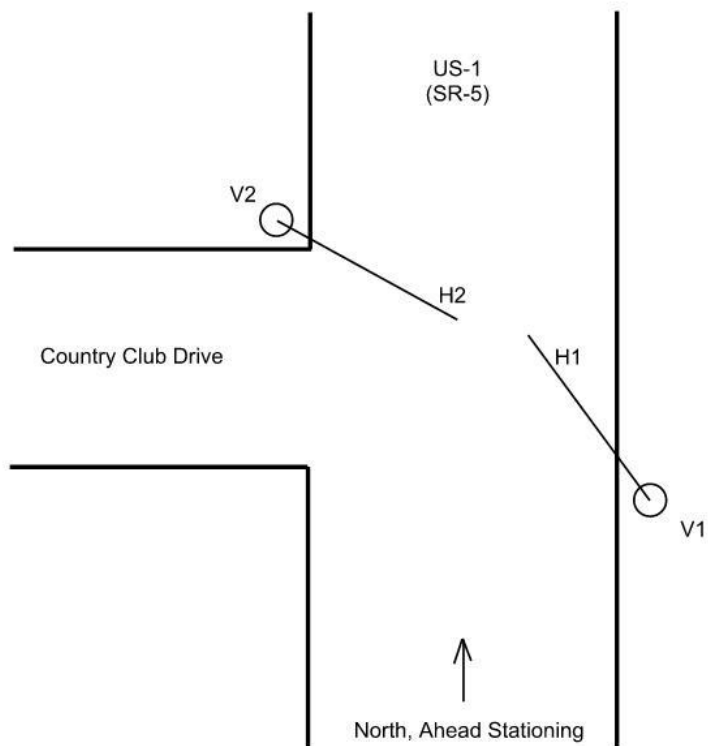
Mast Arm Structure No: 70M132Inspection Date: 11/1/2021Location: US-1 (SR-5) at Country Club DriveType of Inspection: Routine

Structure Inventory Photo



Location Map

FLORIDA DEPARTMENT OF TRANSPORTATION BRIDGE MANAGEMENT SYSTEM APPENDIX

Mast Arm Structure No: 70M132Inspection Date: 11/1/2021Location: US-1 (SR-5) at Country Club DriveType of Inspection: Routine

Intersection Layout

FLORIDA DEPARTMENT OF TRANSPORTATION BRIDGE MANAGEMENT SYSTEM APPENDIX

Mast Arm Structure No: 70M132Inspection Date: 11/1/2021Location: US-1 (SR-5) at Country Club DriveType of Inspection: Routine

V2/H2 –
Bird nest inside horizontal arm

V1/H1 –
Utility cables rubbing
the horizontal arm

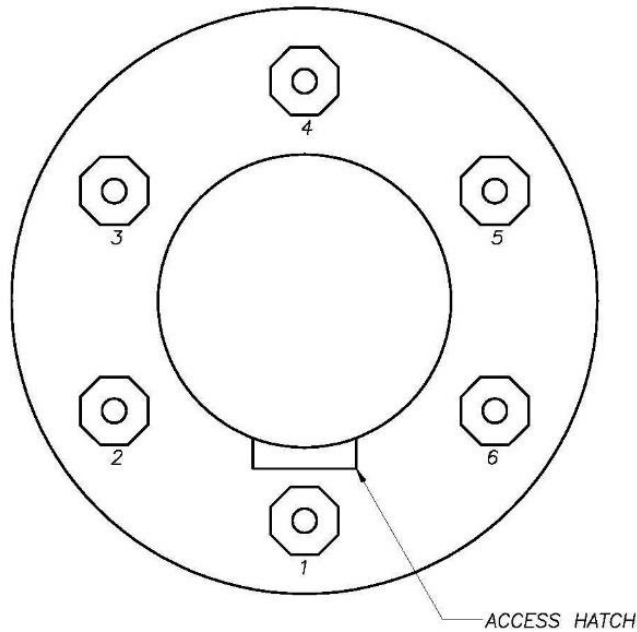
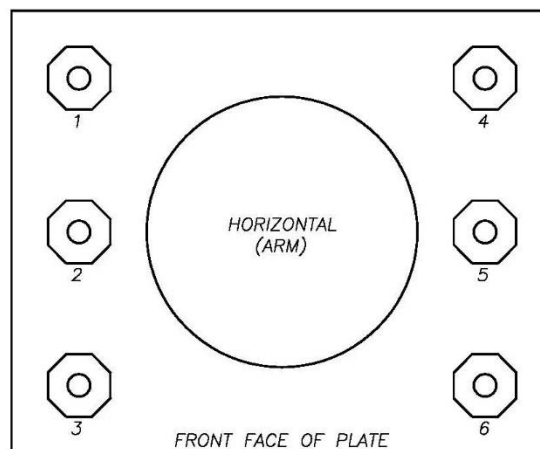


Deficiency Location Photo

F2 –
Foundation
below grade

Preventative Repair Responsibilities
Local Agency: City of Titusville

FLORIDA DEPARTMENT OF TRANSPORTATION BRIDGE MANAGEMENT SYSTEM APPENDIX

Mast Arm Structure No: 70M132Inspection Date: 11/1/2021Location: US-1 (SR-5) at Country Club DriveType of Inspection: RoutineTSMA ANCHOR BOLT NUMBERING SCHEMETSMA MOMENT CONNECTION BOLT NUMBERING SCHEME

FLORIDA DEPARTMENT OF TRANSPORTATION BRIDGE MANAGEMENT SYSTEM

REPORT ID: INSP005

Inspection/CIDR Report with PDF attachment(s)

Structure ID: 70M132

TRAFFIC SIGNAL MAST ARM

DATE PRINTED: 12/9/2021

Description

Structure Unit Identification

Bridge/Unit Key: 70M132 1
 Structure Name: US-1 at Country Club Drive
 Description: TSMA
 Type: M - Main

Structure Identification

Admin Area: Space Coast
 District (2): D5 - Deland
 County (3): (70)Brevard
 Location (9): 1.3 Miles N. of SR-50
 FIPS State/Region (1): 12 Florida Region 4-Atlanta
 NBIS Bridge Len (112): N - Does not meet NBI Length
 Maint. Resp. (21): 4 City/Municipal Hwy Agcy
 Owner (22): 1 State Highway Agency
 Previous Structure:
 2nd Previous Structure:
 Replacement Structure:

Age and Service

Year Built (27): 2013
 Year Reconstructed (106): 0
 Type of Service On (42a): Traffic Signal Mast Arm
 Under (42b): 1 Highway

Structure Type and Material

Main Span Material (43A): 3 Steel
 Main Span Design (43B): Traffic Signal Mast Arm

NBI Rating

Superstructure (59): 8 Very Good
 Substructure (60): 7 Good

General Structure Information

Electrical Devices: Traffic control sys only
 Maintenance Yard: 590-Cocoa (590)

Mast Arm Managing Agency ID:
 Mast Arm Code: 2
 Mast Arm Description: Mast arm is inside the mast arm boundary area

Appraisal

Minimum Vertical Clearance

Over Structure (53): 99.9 ft
 Under (reference) (54a): H Hwy beneath struct
 Under (54b): 0 ft

Minimum Lateral Underclearance

Reference (55a): H Hwy beneath struct
 Right Side (55b): 0 ft
 Left Side (56): 0 ft

Schedule

Current Inspection

Inspection Date: 11/01/2021
 Inspector: KNFITJS - Sanya Watts
 Bridge Group: CA523
 Alt. Bridge Group:
 Primary Type: Regular NBI
 Review Required: ☒

Next Inspection Date

Scheduled

NBI: 11/01/2026
 Element: 11/01/2026
 Other/Special:
 Inventory Photo Update Due: 11/30/2026

Inspection Types Performed

NBI ☒ Element ☒ Other Special ☐

Inspection Intervals

Required (92)

Frequency (92)

Last Date (93)

Inspection Resources

Other Special ☐
 NBI

mos
 60 mos (91) 11/01/2021 (90)

Crew Hours: 1
 Flagger Hours: 0
 Helper Hours: 0
 Snooper Hours: 0

FLORIDA DEPARTMENT OF TRANSPORTATION BRIDGE MANAGEMENT SYSTEM

REPORT ID: INSP005

Inspection/CIDR Report with PDF attachment(s)

Structure ID: 70M132

TRAFFIC SIGNAL MAST ARM

DATE PRINTED: 12/9/2021

Elements

Inspection Date: 11/01/2021 EGID

MISCELLANEOUS : Other Elements

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
Structure Unit 1	8480 / 4	Mast Arm Foundation	2	100	0	.	0	.	0	.	2 (EA)

MISCELLANEOUS : Other Elements

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
Structure Unit 1	8481 / 4	Metal Mast Arm Vertical	2	100	0	.	0	.	0	.	2 (EA)
Structure Unit 1	8518 / 4	Galvanized Steel	254	100	0	.	0	.	0	.	254 sq.ft

MISCELLANEOUS : Other Elements

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
Structure Unit 1	8484 / 4	Metal Mast Arm Horizontal	2	100	0	.	0	.	0	.	2 (EA)
Structure Unit 1	8518 / 4	Galvanized Steel	387	100	0	.	0	.	0	.	387 sq.ft

Total Number of ADE Elements*: 3

*excluding defects/protective systems

Inspection Information**Inspection Date:** 11/01/2021**Type:** Regular NBI**Inspector:** KNFITJS - Sanya Watts**Inspection Notes:** A 42ft. insulated bucket truck was utilized for this inspection.

The NBI rating for Item 60 Substructure was lowered from an 8 - Very Good to a 7 - Good to better reflect current conditions.

Structure Notes

Maintaining Agency:

Kevin Cook, Public Works Director
City of Titusville
445 S. Washington Ave.
Titusville, FL 32796
(321) 383-5746
kevin.cook@titusville.com

Plans are available at the District 5 Structures Maintenance office.

The year built was input as 2013 based on the fiscal design year found on plans for FIN Project ID #414975-1-52-01 plus 1 year.

Schedule Notes

**FLORIDA DEPARTMENT OF TRANSPORTATION
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REPORT ID: INSP005

Inspection/CIDR Report with PDF attachment(s)

Structure ID: 70M132

TRAFFIC SIGNAL MAST ARM

DATE PRINTED: 12/9/2021

Under Route Information**Roadway Identification**

NBI Structure No (8): 70M132
Position/Prefix (5): A - 1st Route Under
Kind Hwy (Rte Prefix): 2 U.S. Numbered Hwy
Design Level of Service: 1 Mainline
Route Number/Suffix: 00001 / 0 N/A (NBI)
District (2): D5 - Deland
County (3): (70)Brevard
Place Code (4): Titusville
Feature Intersect (6): Country Club Drive
Roadway Name: US-1 (SR-5)
Mile Point (11): 1.326
Latitude (16): 028d34'35.7" Long (17): 080d47'56.8"

Roadway Traffic and Accidents

Lanes (28): 5 Medians: 1 Speed: 45 mph

Roadway Classification

Nat. Hwy Sys (104): 1 On the NHS
National base Net (12): 1 - On Base Network
LRS Inventory Rte (13a): 70 030 000 Sub Rte (13b): 00
Functional Class (26): 14 Urban Other Princ
Federal Aid System: ON
Defense Hwy (100): 0 Not a STRAHNET hwy
Direction of Traffic (102): 2 2-way traffic
Emergency: ☒

Roadway Clearances

Vertical (10): 0 ft
Horiz. (47): 0 ft Roadway (51): 0 ft
Truck Network (110): 0 Not part of natl netwo
Toll Facility (20): 3 On free road
Fed. Lands Hwy (105): 0 N/A (NBI)

**FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM**

REPORT ID: INSP005

Inspection/CIDR Report with PDF attachment(s)

Structure ID: 70M132

TRAFFIC SIGNAL MAST ARM

DATE PRINTED: 12/9/2021

Under Route Information**Roadway Identification**

NBI Structure No (8): 70M132
Position/Prefix (5): B - 2nd Route Under
Kind Hwy (Rte Prefix): 4 County Hwy
Design Level of Service: 1 Mainline
Route Number/Suffix: 00000 / 0 N/A (NBI)
District (2): D5 - Deland
County (3): (70)Brevard
Place Code (4): Titusville
Feature Intersect (6): Country Club Drive
Roadway Name: Country Club Dr.
Mile Point (11): 2.153
Latitude (16): 028d34'35.7" Long (17): 080d47'56.8"

Roadway Traffic and Accidents

Lanes (28): 3 Medians: 0 Speed: 25 mph

Roadway Classification

Nat. Hwy Sys (104): 0 Not on NHS
National base Net (12): 0 - Not on Base Network
LRS Inventory Rte (13a): 70 000 013 Sub Rte (13b): 00
Functional Class (26): 17 Urban Collector
Federal Aid System: ON
Defense Hwy (100): 0 Not a STRAHNET hwy
Direction of Traffic (102): 2 2-way traffic
Emergency: ☐

Roadway Clearances

Vertical (10): 0 ft
Horiz. (47): 0 ft Roadway (51): 0 ft
Truck Network (110): 0 Not part of natl netwo
Toll Facility (20): 3 On free road
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