

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

Structure ID: 70M080

Inspection

DISTRICT: D5 - Deland

INSPECTION DATE: 3/18/2026 HHXN

BY:	Ayres Associates	STRUCTURE NAME:	US-1 (Washington Ave.) at SR-50 (Cheney Highway)
OWNER:	1 State Highway Agency	YEAR BUILT:	1997
MAINTAINED BY:	4 City/Municipal Hwy Agy	SECTION NO.:	70 020 000
STRUCTURE TYPE:	3 Steel - Traffic Signal Mast Arm	MP:	35.699
LOCATION:	2 Miles North of SR-405	ROUTE:	00001
SERV. TYPE ON:	Traffic Signal Mast Arm	FACILITY CARRIED:	US1 Washington Ave
SERV. TYPE UNDER:	1 Highway	FEATURE INTERSECTED:	SR-50 (Cheney Hwy)
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: 3/18/2026 UNDERWATER: N/A

SUFFICIENCY RATING: -1
HEALTH INDEX: 97.51

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BY: Ayres Associates

STRUCTURE NAME: US-1 (Washington Ave.) at SR-50
(Cheney Highway)

OWNER: 1 State Highway Agency

YEAR BUILT: 1997

MAINTAINED BY: 4 City/Municipal Hwy Agy

SECTION NO.: 70 020 000

STRUCTURE TYPE: 3 Steel - Traffic Signal Mast Arm

MP: 35.699

LOCATION: 2 Miles North of SR-405

ROUTE: 00001

SERV. TYPE ON: Traffic Signal Mast Arm

FACILITY CARRIED: US1 Washington Ave

SERV. TYPE UNDER: 1 Highway

FEATURE INTERSECTED: SR-50 (Cheney Hwy)

MAST ARM CODE: 2

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: 3/18/2026 UNDERWATER: N/A

OVERALL NBI RATINGS:

DECK: N N/A (NBI)

CHANNEL: N N/A (NBI)

SUPERSTRUCTURE: 3 Serious

CULVERT: N N/A (NBI)

SUBSTRUCTURE: 4 Poor

SUFF. RATING: -1

PERF. RATING: Performance Rating Not
applicable or not calculable.

HEALTH INDEX: 97.51

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

Howell, Tim - Bridge Inspector (CBI #00338) (lead)

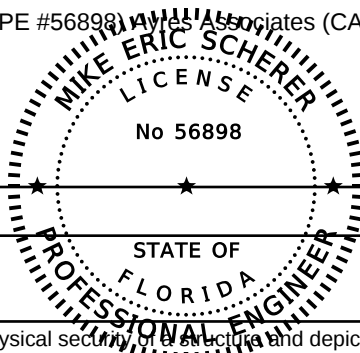
TPH

Vieau, Dick - Assistant Bridge Inspector

REVIEWING BRIDGE INSPECTION SUPERVISOR:

Maslyn, Rick - Bridge Inspector (CBI #00271)

RM

CONFIRMING REGISTERED PROFESSIONAL ENGINEER:Scherer, Michael - Professional Engineer (PE #56898) Ayres Associates (CA #4356)
8875 Hidden River Pkwy
Suite 200
Tampa FL 33637THIS ITEM HAS BEEN DIGITALLY
SIGNED AND SEALED BY

SIGNATURE: _____

DATE: _____

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
UNIT 0	8480 / 4	Mast Arm Foundation	0	.	0	.	0	.	3	100	3 (EA)
UNIT 0	1000 / 4	Corrosion	0	.	0	.	0	.	3	100	3 (EA)

Element Inspection Notes:

8480/4 This element consists of 3 foundations.

CS4 (1000):

F1 - The anchor bolt leveling nuts below the base plate have heavy corrosion with up to 29% section loss (previously noted as 25%). Original average nut outside diameter = 2.13 in. & minimum remaining nut diameter at Anchor Bolt #4 is 1.52 in. (previously noted as 1.60 in. at AB #1). INCREASE. Refer to Photos 1 and 2. REPAIR. (1 EA)

F1 - The foundation has radial cracks up to 1/64 in. wide isolated throughout the top surface. NO CHANGE.

F2 - The anchor bolt leveling nuts below the base plate have heavy corrosion with up to 26% section loss (previously noted as 22%). Original average nut outside diameter = 2.13 in. & minimum remaining nut diameter at Anchor Bolt #2 is 1.58 in. (previously noted as 1.67 in.). INCREASE. Refer to Photos 3 and 4. REPAIR. (1 EA)

F3 - The anchor bolt leveling nuts below the base plate have heavy corrosion with up to 22% section loss. Original average nut outside diameter = 2.13 in. & minimum remaining nut diameter at Anchor Bolt #4 is 1.67 in. NO CHANGE. Refer to Photos 5 and 6. REPAIR. (1 EA)

INCIDENTAL:

F1, F2 and F3 - There are portions of the old grout rings concrete below the base plate and around various anchor bolts. NO CHANGE.

F1, F2 and F3 - The wire screens are damaged, but are functioning as intended at each location at this time. NO CHANGE.

F1 - (2) of (6) anchor bolt covers are missing a bolt. NO CHANGE.

F3 - Portions of the original grout pad concrete are in place causing water to pond in the interior after rain (no standing water at time of 2026 Routine Inspection). DECREASE.

PREVIOUS CORRECTIVE ACTION EVALUATION:

F3 - Remove grout ring debris below base plate to allow for drainage. No repairs have been made since the 12/2025 Interim Inspection.

FOUNDATION MEASUREMENTS:

Wire Screens F1 = Yes; F2 = Yes; F3 = Yes

Base Plate Thickness: F1 = 1 3/4 in.; F2 = 2 in.; F3 = 2 in.

Bolt Diameter: F1 = 1 3/8 in.; F2 = 1 3/8 in.; F3 = 1 3/8 in.

Nut Height: F1 = 1 3/8 in.; F2 = 1 3/8 in.; F3 = 1 3/8 in.

Washer Thickness (Above & Below BP): F1 = 1/8 in.; F2 = 1/8 in.; F3 = 1/8 in.

Average Distance Bottom of Base Plate to Foundation: F1 = 2 in.; F2 = 2 1/8 in.; F3 = 2 in.

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Average Stand-Off Distance: F1 = 1/2 in.; F2 = 5/8 in.; F3 = 1/2 in.

1000/4 Refer to Parent Element

MISCELLANEOUS : Other Elements

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
UNIT 0	8481 / 4	Metal Mast Arm Vertical	0	.	0	.	0	.	3	100	3 (EA)
UNIT 0	1000 / 4	Corrosion	0	.	0	.	0	.	3	100	3 (EA)
UNIT 0	7000 / 4	Damage	0	.	1	100	0	.	0	.	1 (EA)
UNIT 0	8518 / 4	Galvanized Steel	815	99.03	0	.	0	.	8	0.97	823 sq.ft
UNIT 0	3440 / 4	Eff (Stl Protect Coat)	0	.	0	.	0	.	8	100	8 sq.ft

Element Inspection Notes:

8481/4 This element consists of 3 verticals.

NOTE: Each vertical has a properly connected ground wire.

CS4 (1000):

V1 - The interior of the pole has heavy to severe corrosion extending up +/- 5 in. high from the base plate and extending up to 22 in. wide around the column interior from Anchor Bolt #2 to Anchor Bolt #5 with up to 62% section loss. Original thickness = 0.265. & minimum remaining thickness = 0.100 in. (previously noted as 0.104 in.) behind Anchor Bolts #3 and #4.

Additionally, there are (2) holes on the east quadrant with 100% section loss 1 1/4 in. long x 1/2 in. high (previously 1 in. L) between Anchor Bolts #2 and #3 and 1 1/4 in. diameter (previously noted as 1 in.) between Anchor Bolts #3 & #4, both just above the base plate. INCREASE. Refer to Photos 7 thru 9. REPAIR. (1 EA)

V2 - The interior of the pole has moderate to heavy laminating corrosion extending up +/- 3 in. from the base plate and extending around the entirety of the pole interior with up to 60% section loss. Original thickness = 0.265 in. and minimum remaining thickness = 0.105 in. between Anchor Bolts #4 and #5 taken just above the base plate. The bottom 2 in. of the vertical within the base plate has 100% section loss between Anchor Bolts #2 and #3 and the remaining has heavy corrosion and section loss along the bottom column to base plate weld. INCREASE. Refer to Photos 10 thru 13. REPAIR. (1 EA)

V3 - The interior of the pole has heavy to severe corrosion extending up +/- 4 in. from the base plate and extending around the entirety of the pole with up to 63% section loss. Original thickness = 0.265 in. & minimum remaining thickness = 0.098 in. behind Anchor Bolt #4.

Additionally, there are (4) areas of 100% section loss between Anchor Bolts #2 and #4 (starting from Anchor Bolt #2). The sizes of the holes have increased with the overall area measuring 12 in. L x 1 in. H and should be treated as having 100% section loss. Hole sizes are as follows: INCREASE. Refer to Photos 13 and 14. REPAIR. (1 EA)

- 1 in. L x 1/2 in. H (previously noted as 1/4 in. dia.)
- 1 3/4 in. L x 3/4 in. H (previously noted as 1 1/4 in. L x 1/2 in. H)
- 3/4 in. L x 1/2 in. H (previously noted as 1/2 in. L x 3/16 in. H)
- 1 1/4 in. L x 1/2 in. H (previously noted as 1 in. L)

V3 - The pole has an impact dent in the south quadrant 28 in. above the base plate 13 in. H x 10 in. W x 5/8 in. D with associated scrapes. NO CHANGE. Refer to Photo 15.

V1, V2 and V3 - The base plate underside and vertical face have areas of moderate to heavy laminating corrosion and pitting up to 1/8 in. at each location. NO CHANGE. Refer to Photo

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16. REPAIR.

INCIDENTAL:

V3 - The pole cap has a 3/4 in. diameter corrosion hole allowing water intrusion. Hole was filled with caulk by the inspectors during the 12/2025 Interim Inspection. NO CHANGE.

PREVIOUS CORRECTIVE ACTION EVALUATION:

V1 V2 and V3 - Replace all TSMAs within 3 months. The structures have not been replaced since the 12/2025 Interim Inspection.

V3 - Replace the damaged cap with new a 14 in. diameter pole cap. The cap has not been replaced since the 12/2025 Interim Inspection.

The following original thickness measurements were taken below the access hatch:

V1= 0.265 in.

V2= 0.265 in.

V3= 0.265 in.

Length of mast arm vertical members in linear feet:

V1 - 22.0 ft.

V2 - 22.0 ft.

V3 - 22.0 ft.

1000/4 Refer to Parent Element

7000/4 Refer to Parent Element

8518/4 CS4 (3440):
V1, V2 and V3 - Failed: In areas of the lower columns and base plates with corrosion and section loss. NO CHANGE. (8 SF)

3440/4 Refer to Parent Element

MISCELLANEOUS : Other Elements

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
UNIT 0	8484 / 4	Metal Mast Arm Horizontal	2	66.67	1	33.33	0	.	0	.	3 (EA)
UNIT 0	1000 / 4	Corrosion	0	.	1	100	0	.	0	.	1 (EA)
UNIT 0	8518 / 4	Galvanized Steel	1317	99.85	0	.	0	.	2	0.15	1319 sq.ft
UNIT 0	3440 / 4	Eff (Stl Protect Coat)	0	.	0	.	0	.	2	100	2 sq.ft

Element Inspection Notes:

8484/4 This element consists of 3 horizontals.

V2/H2 - No deficiencies.

CS2 (1000):

V3/H3 - The horizontal arm interior in the bottom quadrant at the 6 o'clock position appears to have areas of light to moderate surface corrosion within 2 ft. of the moment connection and minor ponding water. D-meter readings at 3 in., 12 in. & 24 in. from the moment connection taken at the 5, 6 and 7 o'clock positions did not indicate any reduction

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in section at this time. NO CHANGE. Refer to Photo 17. (1 EA)

INCIDENTAL:

V1/H1 - The street sign is missing the facing on the south side. - NO CHANGE. Refer to Photo 18.

The following thickness measurements were taken on each horizontal member at the moment connection (four measurements were taken around the perimeter):

V1/H1 - 0.250 in.

V2/H2 - 0.250 in.

V3/H3 - 0.250 in.

Length of mast arm horizontal members in linear feet:

V1/H1 - 46.0 ft.

V2/H2 - 49.0 ft.

V3/H3 - 40.0 ft.

1000/4 Refer to Parent Element

8518/4 CS4 (3440):
V3/H3 - Failed: at the horizontal arm interior near the moment connection with light to moderate corrosion. NO CHANGE (2 SF)

CORRECTIVE ACTION TAKEN:

V2/H2 and V3/H3 - The previously noted moment connection plate discoloration was painted by the inspector during the 2026 Routine Inspection.

3440/4 Refer to Parent Element

Total Number of ADE Elements*: 3

*excluding defects/protective systems

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Inspector Recommendations

UNIT: UNIT 0MISCELLANEOUS**ELEMENT/ENV: 8481 / 4 Metal Mast Arm Vertical****ELEM CATEGORY: Other Elements**

CONDITION STATE			PRIORITY
4	MMS Quantity: 3 mh	Element Estimated Quantity: 3 (EA)	1

WORK ORDER RECOMMENDATION:

V1 V2 & V3 - Remove verticals within 1 month of PCA letter dated 04-02-2026.

Structure Notes

These structures are inventoried from south to north.

Maintaining Agency:

City of Titusville

Kevin Cook, P.E.
Public Works Director
2910 Garden Street
Titusville, FL 32780
321-567-3846
kevin.cook@titusville.com

Joseph M. Arena
Traffic/Electrical Maintenance Supervisor
101 N. Singleton Av.
Titusville FL, 32796
Ph. 321-567-3820
joey.arena@titusville.com

Plans are available at the District 5 Structures Maintenance office.

The year built was input as 1997 based on the fiscal design year found on plans for State Project #70020-3505 plus 1 year.

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INSPECTION NOTES: **HHXN** **3/18/2026**

A 40 ft. insulated bucket truck was utilized for this inspection.

NOTE: At the request of the FDOT additional ultrasonic testing was performed by NOVA Engineering and Environmental on 11/19/2024.

NBI Item (59) Superstructure Rating is coded a 3 - Serious due to severe corrosion with section loss on all (3) vertical interiors.

NBI Item (60) Substructure Rating is coded a 4 - Poor due to heavy corrosion with section loss on the anchor bolts and leveling nuts below the base plate at all (3) foundations.

The inspection frequency is set to 3-months to monitor corrosion on the verticals and anchor bolts. All 3 foundations and verticals require Prompt Corrective Action. The Prompt Corrective Action module has been completed in BMS. MES 04/27/2026.

A Prompt Corrective Action letter was sent to the FDOT on 04/02/2026 notifying of increased corrosion and section loss and with a recommendation to remove the structures within one month. The PCA Letter is included with this inspection report as an addendum.

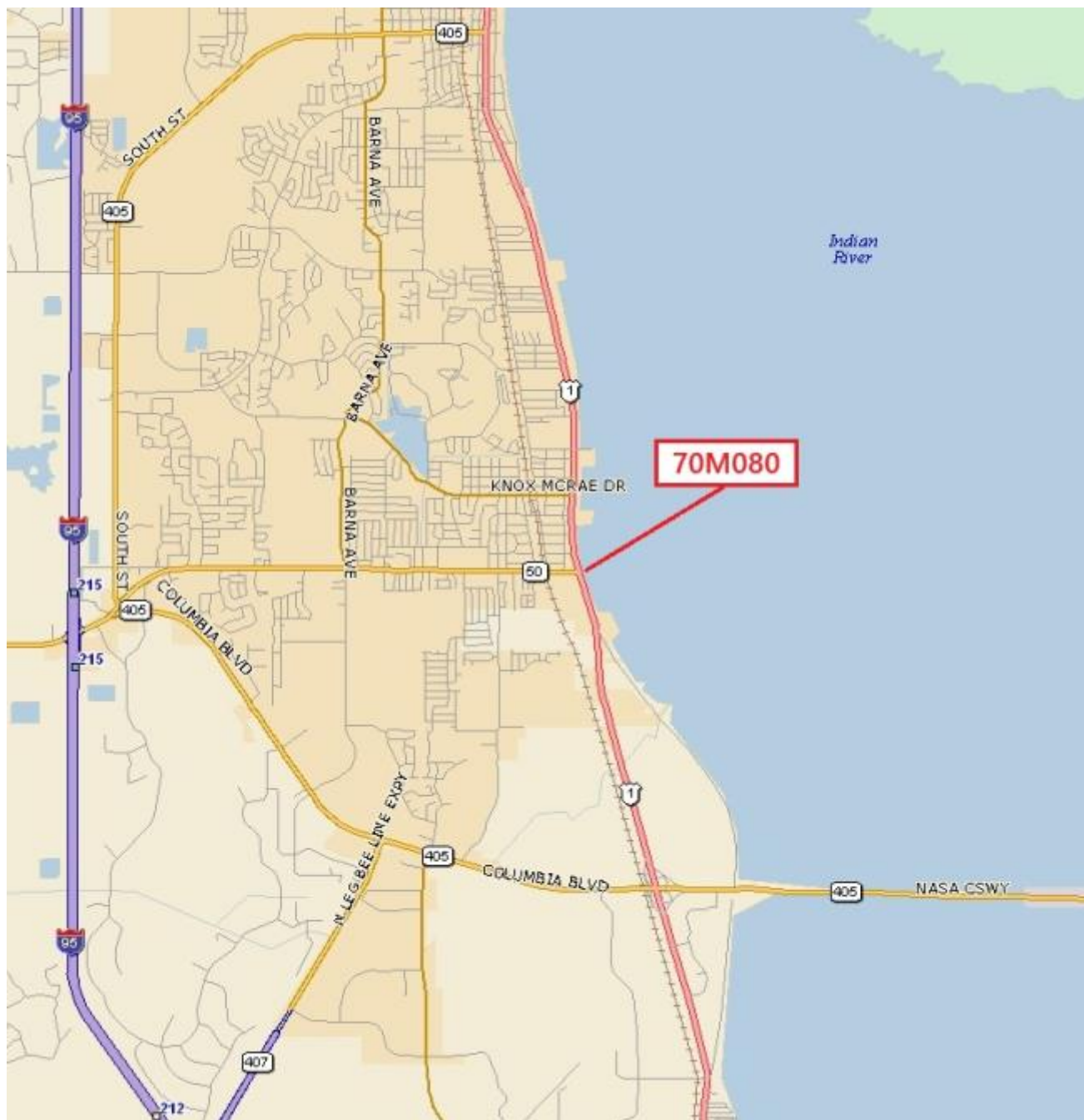
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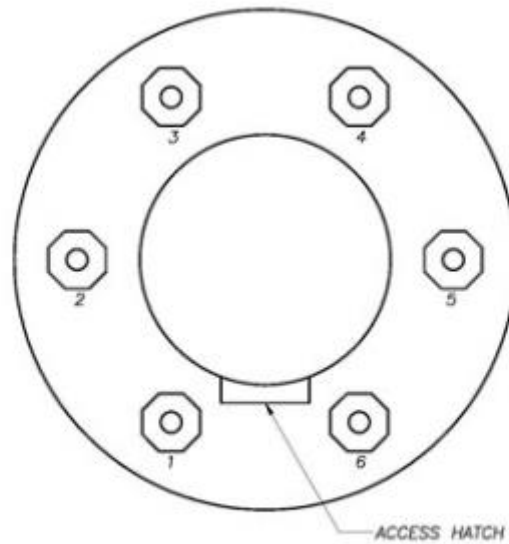
US-1 (Washington Ave.) at SR-50 (Cheney Hwy.) - 2 Miles North of SR-405

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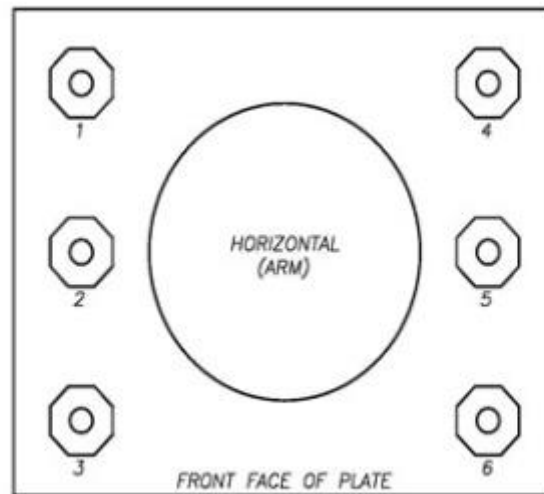
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TSM ANCHOR BOLT NUMBERING SCHEME



TSM MOMENT CONNECTION BOLT NUMBERING SCHEME

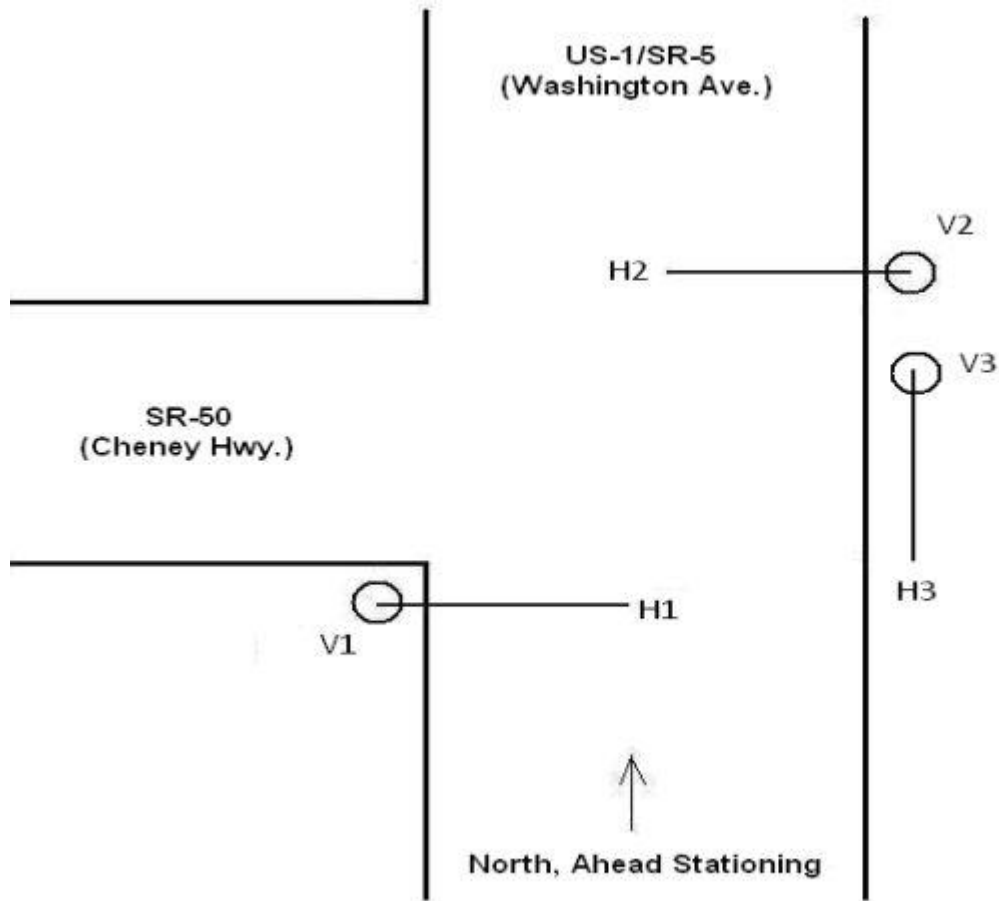
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Intersection Layout

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Intersection Overview (Looking North)

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Photo 1: Element 8480 / Mast Arm Foundation

F1 - Overview of anchor bolt #4 leveling nut below base plate remaining nut cross section measurement with caliber.

REPAIR RECOMMENDATION:

V1 V2 & V3 - Remove verticals within 1 month of PCA letter dated 04-02-2026.

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Photo 2: Element 8480 / Mast Arm Foundation

F1 - Close-up of typical anchor bolt leveling nut below base plate with corrosion & section loss (AB #4 shown).

REPAIR RECOMMENDATION:

V1 V2 & V3 - Remove verticals within 1 month of PCA letter dated 04-02-2026.

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Photo 3: Element 8480 / Mast Arm Foundation

F2 - Overview of anchor bolt #2 leveling nut below base plate remaining nut cross section measurement with caliber.

REPAIR RECOMMENDATION:

V1 V2 & V3 - Remove verticals within 1 month of PCA letter dated 04-02-2026.

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Photo 4: Element 8480 / Mast Arm Foundation

F2 - Close-up of typical anchor bolt leveling nut below base plate with corrosion & section loss (AB #2 shown).

REPAIR RECOMMENDATION:

V1 V2 & V3 - Remove verticals within 1 month of PCA letter dated 04-02-2026.

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Photo 5: Element 8480 / Mast Arm Foundation

F3 - Overview of anchor bolt #4 leveling nut below base plate remaining nut cross section measurement with caliper.

REPAIR RECOMMENDATION:

V1 V2 & V3 - Remove verticals within 1 month of PCA letter dated 04-02-2026.

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Photo 6: Element 8480 / Mast Arm Foundation

F3 - Close-up of typical anchor bolt leveling nut below base plate with corrosion & section loss (AB #4 shown).

REPAIR RECOMMENDATION:

V1 V2 & V3 - Remove verticals within 1 month of PCA letter dated 04-02-2026.

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Photo 7: Element 8481 / Mast Arm Vertical

V1 - Column interior view of corrosion and section loss holes.

REPAIR RECOMMENDATION:

V1 V2 & V3 - Remove verticals within 1 month of PCA letter dated 04-02-2026.

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Photo 8: Element 8481 / Mast Arm Vertical

V1 - Column exterior view of corrosion and section loss holes.

REPAIR RECOMMENDATION:

V1 V2 & V3 - Remove verticals within 1 month of PCA letter dated 04-02-2026.

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Photo 9: Element 8481 / Mast Arm Vertical

V1 - Column exterior view of section loss holes with D-meter remaining thickness readings behind anchor bolts #3 & 4.

REPAIR RECOMMENDATION:

V1 V2 & V3 - Remove verticals within 1 month of PCA letter dated 04-02-2026.

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Photo 10: Element 8481 / Mast Arm Vertical

V2 - Column interior view of corrosion and section loss.

REPAIR RECOMMENDATION:

V1 V2 & V3 - Remove verticals within 1 month of PCA letter dated 04-02-2026.

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Photo 11: Element 8481 / Mast Arm Vertical

V2 - Column interior view of corrosion with up to 100% section loss in bottom 2 in. between anchor bolts #3 & 4.

REPAIR RECOMMENDATION:

V1 V2 & V3 - Remove verticals within 1 month of PCA letter dated 04-02-2026.

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Photo 12: Element 8481 / Mast Arm Vertical

V2 - Column exterior view of section loss D-meter remaining thickness readings between anchor bolts #3 thru 5.

REPAIR RECOMMENDATION:

V1 V2 & V3 - Remove verticals within 1 month of PCA letter dated 04-02-2026.

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DISTRICT: D5 - Deland**

Inspection

INSPECTION DATE: 3/18/2026 HHXN



Photo 13: Element 8481 / Mast Arm Vertical

V3 - Column interior view of corrosion and section loss holes.

REPAIR RECOMMENDATION:

V1 V2 & V3 - Remove verticals within 1 month of PCA letter dated 04-02-2026.

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

Structure ID: 70M080
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Inspection

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Photo 14: Element 8481 / Mast Arm Vertical

V3 - Column exterior view of (4) section loss holes between anchor bolts #2 thru 4.

REPAIR RECOMMENDATION:

V1 V2 & V3 - Remove verticals within 1 month of PCA letter dated 04-02-2026.

FLORIDA DEPARTMENT OF TRANSPORTATION
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Photo 15: Element 8481 / Mast Arm Vertical

V3 - Impact related dent on south quadrant 28 in. above the base plate.

REPAIR RECOMMENDATION:

V1 V2 & V3 - Remove verticals within 1 month of PCA letter dated 04-02-2026.

**FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
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Structure ID: 70M080
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Photo 16: Element 8481 / Mast Arm Vertical

F1, F2 & F3 - Typical base plate underside and vertical face corrosion and section loss.

REPAIR RECOMMENDATION:

V1 V2 & V3 - Remove verticals within 1 month of PCA letter dated 04-02-2026.

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

**Structure ID: 70M080
DISTRICT: D5 - Deland**

Inspection

INSPECTION DATE: 3/18/2026 HHXN



Photo 17 Element 8484 / Mast Arm Horizontal

V3/H3 - Interior of horizontal arm with minor water accumulation and possible corrosion near moment connection.

REPAIR RECOMMENDATION:

V1 V2 & V3 - Remove verticals within 1 month of PCA letter dated 04-02-2026.

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

**Structure ID: 70M080
DISTRICT: D5 - Deland**

Inspection

INSPECTION DATE: 3/18/2026 HHXN



Photo 18: Element 8484 / Mast Arm Horizontal

V1/H1 Missing street sign facing on south side.

REPAIR RECOMMENDATION:
None.

April 2, 2026



To: Mr. Bobby McQuarrie
Florida Department of Transportation – District 5
1650 North Kepler Road
DeLand, FL 32724

From: Michael Scherer, P.E.
QA Engineer
8875 Hidden River Parkway, Suite 200
Tampa, Florida 33637

Project: FDOT District 5 Traffic Signal Mast Arm Inspection
Contract No. CAT71

Subject: **Prompt Corrective Action Advisory – V1, V2 & V3 Heavy to Severe Corrosion**
Routine TSMA Inspection – March 18, 2026
TSMA No. 70M080 – US-1 (Washington Ave.) at SR-50 (Cheney Highway)
City of Titusville

Copy to: Doug Shockley, Mario Bizzio, Jonathan Jastremsky, Rick Maslyn, Tricia Ballard, Jay Williams,
Kevin Marquez, Michael Sanders, Ray Marlin, Patrick White

Content: An Ayres Associates inspection team has recently inspected the above referenced intersection and observed the following deficiency noted below.

Summary: During the Routine Inspection performed on March 18, 2026, Verticals V1, V2, and V3 were observed to have heavy to severe corrosion with significant section loss. This intersection was originally placed on interim inspections due to corrosion back in March 2016. Corrosion has continued to increase and advance in severity since that time. Any continued increase in corrosion could result in sudden failure of the verticals at the intersection. Pertinent notes regarding corrosion are as follows:

V1 - The interior of the pole has heavy to severe corrosion extending up approximately 5 in. from the base plate and extending up to 22 in. wide around the east quadrant of the vertical with up to 62% section loss. Original thickness = 0.265. & minimum remaining thickness = 0.100 in. at circumferential distance 20 in. starting from Anchor Bolt #1. Additionally, there is an area of 100% section loss with a 1¼ in. diameter (previously 1 in.) hole on the east quadrant of the pole just above the base plate and a hole 1¼ in. long x 1/2 in. high (previously 1 in. x ½ in.) between Anchor Bolts #2 and #3. - INCREASE. Refer to Photos 1 and 2.

F1 - The anchor bolt leveling nuts have heavy corrosion with up to 29% section loss. Original nut outside diameter = 2.13 in. Minimum remaining nut diameter at Anchor Bolt #1 is 1.52 in. - INCREASE. Refer to Photo 3.

V2 - The interior of the pole has moderate to heavy laminating corrosion extending up approximately 3 in. from the base plate and extending around the entirety of the pole with up to 60% section loss. Original thickness = 0.265. & minimum remaining thickness = 0.105 in. between Anchor Bolts #4 and #5. The bottom 2 in. of the vertical within the baseplate has 100% section loss between Anchor Bolts 2 & 3 and the

TSMA No 70M080

Inspection Date: March 18, 2026

remaining has heavy corrosion and section loss along the bottom weld within the vertical. - INCREASE. Refer to Photos 4 thru 6.

F2 - The anchor bolt leveling nuts have heavy corrosion with up to 26% section loss. Original nut outside diameter = 2.13 in. Minimum remaining nut diameter at Anchor Bolt 2 is 1.58 in. - INCREASE. Refer to Photo 7.

V3 - The interior of the pole has heavy to severe corrosion extending up approximately 4 in. from the base plate and extending around the entirety of the pole with up to 63% section loss. Original thickness = 0.265 in. & minimum remaining thickness = 0.098 in. at circumferential distance 16 in. starting from Anchor Bolt #1. Additionally, there are (4) areas of 100% section loss between Anchor Bolts #2 and #4 (starting from Anchor Bolt #2). The sizes of the holes have increased and an area 12 in. L x 1 in. H area should be treated as having 100% section loss. Holes sizes are as follows – 1 in. L x ½ in. H (previously ¼ in. diameter), 1¾ in. L x ¾ in. H (previously 1¼ in. L x ½ in. H), ¾ in. L x ½ in. H (previously ½ in. L x 3/16 in. H) and 1¼ in. L x ½ in. H (previously 1 in. L x ½ in. H). - INCREASE. Refer to Photos 8 thru 10.

F3 - The anchor bolt leveling nuts have heavy corrosion with up to 22% section loss. Original nut outside diameter = 2.13 in. Minimum remaining nut diameter at Anchor Bolt 4 is 1.67 in. - NO CHANGE. Refer to Photo 11.

Recommendation: Remove Verticals V1, V2 and V3 within 1 month of the date of this advisory. Install temporary traffic signals until a permanent replacement is designed and constructed.

Sincerely,



Michael E. Scherer, P.E.
Structural Engineer
Ayres Associates

TSMA No 70M080

Inspection Date: March 18, 2026



Photo 1: V1– View of holes due to corrosion and thickness readings



Photo 2: V1 – View of holes due to corrosion and corrosion at base plate of vertical interior



Photo 3: F1 – View of corrosion on anchor bolts and leveling nuts beneath base plate



Photo 4: V2 – View of exterior of vertical and thickness readings

TSMA No 70M080

Inspection Date: March 18, 2026



Photo 5: V2 – View of corrosion and section loss at base plate of vertical interior



Photo 6: V2 – View of corrosion and section loss at base plate on vertical interior



Photo 7: F2 – View of corrosion on anchor bolts and leveling nuts beneath base plate



Photo 8: V3 – View of holes due to corrosion on vertical exterior



Photo 9: V3 – View of holes due to corrosion and corrosion at base plate of vertical interior



Photo 10: V3 – View of holes due to corrosion and corrosion at base plate of vertical interior

TSMA No 70M080

Inspection Date: March 18, 2026



Photo 11: F3 – View of corrosion on anchor bolts and leveling nuts beneath base plate

FLORIDA DEPARTMENT OF TRANSPORTATION BRIDGE MANAGEMENT SYSTEM

REPORT ID: INSP005

Inspection/CIDR Report with PDF attachment(s)

Structure ID: 70M080

TRAFFIC SIGNAL MAST ARM

DATE PRINTED: 4/27/2026

Description

Structure Unit Identification

Bridge/Unit Key: 70M080 1
 Structure Name: US-1 (Washington Ave.) at SR-50 (Cheney Highway)
 Description: TSMA
 Type: M - Main

Structure Identification

Admin Area: Space Coast
 District (2): D5 - Deland
 County (3): (70) Brevard
 Location (9): 2 Miles North of SR-405
 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): 1997
 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): 3 Serious
 Substructure (60): 4 Poor

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): 99.99 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: 03/18/2026
 Inspector: KNAAATH - Tim Howell
 Bridge Group: CAT71
 Alt. Bridge Group:
 Primary Type: Regular NBI
 Review Required: ☒

Next Inspection Date

Scheduled

NBI: 03/18/2031
 Element: 06/18/2026
 Other/Special: 06/18/2026
 Inventory Photo Update Due: 03/31/2036

Inspection Types Performed

NBI ☒ Element ☒ Other Special ☒

Inspection Intervals

Required (92)

Frequency (92)

Last Date (93)

Inspection Resources

Other Special	☒	3 mos	03/18/2026	Crew Hours:	2
NBI		60 mos (91)	03/18/2026 (90)	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: 70M080

TRAFFIC SIGNAL MAST ARM

DATE PRINTED: 4/27/2026

Elements

Inspection Date: 03/18/2026 HHXN

MISCELLANEOUS : Other Elements

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
UNIT 0	8480 / 4	Mast Arm Foundation	0	.	0	.	0	.	3	100	3 (EA)
UNIT 0	1000 / 4	Corrosion	0	.	0	.	0	.	3	100	3 (EA)

MISCELLANEOUS : Other Elements

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
UNIT 0	8481 / 4	Metal Mast Arm Vertical	0	.	0	.	0	.	3	100	3 (EA)
UNIT 0	1000 / 4	Corrosion	0	.	0	.	0	.	3	100	3 (EA)
UNIT 0	7000 / 4	Damage	0	.	1	100	0	.	0	.	1 (EA)
UNIT 0	8518 / 4	Galvanized Steel	815	99.03	0	.	0	.	8	0.97	823 sq.ft
UNIT 0	3440 / 4	Eff (Stl Protect Coat)	0	.	0	.	0	.	8	100	8 sq.ft

MISCELLANEOUS : Other Elements

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
UNIT 0	8484 / 4	Metal Mast Arm Horizontal	2	66.67	1	33.33	0	.	0	.	3 (EA)
UNIT 0	1000 / 4	Corrosion	0	.	1	100	0	.	0	.	1 (EA)
UNIT 0	8518 / 4	Galvanized Steel	1317	99.85	0	.	0	.	2	0.15	1319 sq.ft
UNIT 0	3440 / 4	Eff (Stl Protect Coat)	0	.	0	.	0	.	2	100	2 sq.ft

Total Number of ADE Elements*: 3

*excluding defects/protective systems

Inspection Information**Inspection Date:** 03/18/2026**Type:** Regular NBI**Inspector:** KNAAATH - Tim Howell**Inspection Notes:** A 40 ft. insulated bucket truck was utilized for this inspection.

NOTE: At the request of the FDOT additional ultrasonic testing was performed by NOVA Engineering and Environmental on 11/19/2024.

NBI Item (59) Superstructure Rating is coded a 3 - Serious due to severe corrosion with section loss on all (3) vertical interiors.

NBI Item (60) Substructure Rating is coded a 4 - Poor due to heavy corrosion with section loss on the anchor bolts and leveling nuts below the base plate at all (3) foundations.

The inspection frequency is set to 3-months to monitor corrosion on the verticals and anchor bolts. All 3 foundations and verticals require Prompt Corrective Action. The Prompt Corrective Action module has been completed in BMS. MES 04/27/2026.

A Prompt Corrective Action letter was sent to the FDOT on 04/02/2026 notifying of increased corrosion and section loss and with a recommendation to remove the structures within one month. The PCA Letter is included with this inspection report as an addendum.

**FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM**

REPORT ID: INSP005

Structure ID: 70M080

**Inspection/CIDR Report with PDF attachment(s)
TRAFFIC SIGNAL MAST ARM**DATE PRINTED: 4/27/2026

Structure Notes

These structures are inventoried from south to north.

Maintaining Agency:

City of Titusville

Kevin Cook, P.E.
Public Works Director
2910 Garden Street
Titusville, FL 32780
321-567-3846
kevin.cook@titusville.com

Joseph M. Arena
Traffic/Electrical Maintenance Supervisor
101 N. Singleton Av.
Titusville FL, 32796
Ph. 321-567-3820
joey.arena@titusville.com

Plans are available at the District 5 Structures Maintenance office.

The year built was input as 1997 based on the fiscal design year found on plans for State Project #70020-3505 plus 1 year.

Schedule Notes

FLORIDA DEPARTMENT OF TRANSPORTATION BRIDGE MANAGEMENT SYSTEM

REPORT ID: INSP005

Inspection/CIDR Report with PDF attachment(s)

Structure ID: 70M080

TRAFFIC SIGNAL MAST ARM

DATE PRINTED: 4/27/2026

Under Route Information

Roadway Identification

NBI Structure No (8): 70M080
 Position/Prefix (5): 2 - One 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): SR-50 (Cheney Hwy)
 Roadway Name: US-1 (Washington Ave)
 Mile Point (11): 35.699
 Latitude (16): 028d33'27.0" Long (17): 080d47'52.3"

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): 70 020 000 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: 70M080

TRAFFIC SIGNAL MAST ARM

DATE PRINTED: 4/27/2026

Under Route Information

Roadway Identification

NBI Structure No (8): 70M080
 Position/Prefix (5): B - 2nd Route Under
 Kind Hwy (Rte Prefix): 3 State Hwy
 Design Level of Service: 1 Mainline
 Route Number/Suffix: 00050 / 0 N/A (NBI)
 District (2): D5 - Deland
 County (3): (70) Brevard
 Place Code (4): Titusville
 Feature Intersect (6): SR-50 (Cheney Hwy)
 Roadway Name: Cheney Hwy
 Mile Point (11): 8.540
 Latitude (16): 028d33'27.0" Long (17): 080d47'52.3"

Roadway Traffic and Accidents

Lanes (28): 5 Medians: 1 Speed: 35 mph

Roadway Classification

Nat. Hwy Sys (104): 0 Not on NHS
 National base Net (12): 0 - Not on Base Network
 LRS Inventory Rte (13a): 70 110 000 Sub Rte (13b): 00
 Functional Class (26): 16 Urban Minor Arterial
 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)