



Latitude:35.84334, Longitude:-93.74322

Route:23 Section:08 Log:7.1

Arnold Road ID:44x23x8xA, Arnold Log mile:7.041

District 09, 87 - Madison County

Owner: 1 - State Highway Agency

Inspection Direction: 2 - S to N

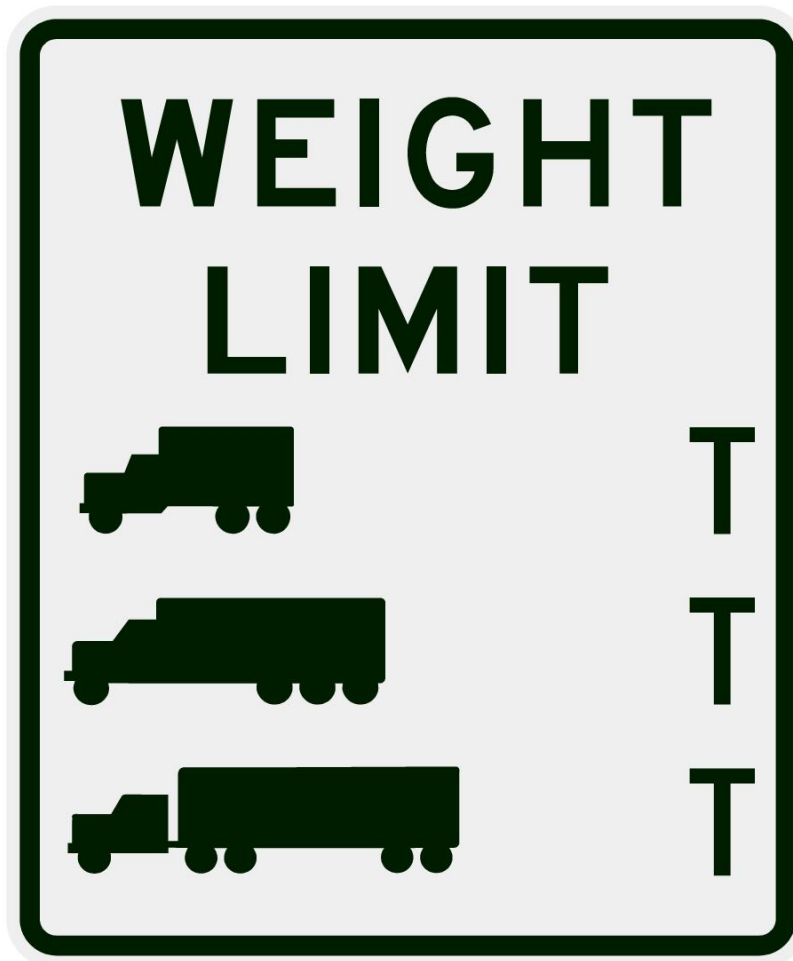
Bridge Posting Information

41 - Structure Open/Posted/Closed: A - Open, no restriction

70 - Bridge Posting: 5 - Equal to or above legal loads

Legal Load	Calculated Capacity	Beginning of Bridge Sign Current Value	End of Bridge Sign Current Value
Code 4 (22 Tons)	27		
Code 9 (31 Tons)	31		
Code 5 (40 Tons)	40		

If calculated Capacity is less than the Legal Load Listed, the Bridge Legally Requires Posting Signs to be installed by the Bridge Owner



30"x36" AR



35.84334, -93.74322



Asset #02946(Routine, Underwater type 2)

SH 23-Madison Co. over HAWKINS HOLLOW CR

Location: .01 S JCT OF SH 16

Team Lead: Nathan Rowland Inspection Date: 11/02/2023

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	02946
(5) Inventory Route	1
(2) Highway Agency District	09 - District 09
(3) County Code	87 - Madison County
(4) Place Code	0
(6) Features Intersected	HAWKINS HOLLOW CR
(7) Facility Carried	SH 23-Madison Co.
(9) Location	.01 S JCT OF SH 16
(11) Mile Point	7.1 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000023080
(16) Latitude	35.84334
(17) Longitude	-93.74322
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	11
Material	1 - Concrete
Type	1 - Slab
(44) Approach Structure Type	00
Material	0 - Other
Type	0 - Other
(45) No. of Spans in Main Unit	4
(46) No. of Approach Spans	0
(107) Deck Structure Type	1 - Concrete Cast-in-Place
(108) Wearing Surface/Protective System	
Type of Wearing Surface	6 - Bituminous
Type of Membrane	0 - None
Type of Deck Protection	0 - None
AGE AND SERVICE	
(27) Year Built	1955
(106) Year Reconstructed	0
(42) Type of Service	15
On	1 - Highway
Under	5 - Waterway
(28) Lane	
On	2
Under	0
(29) Average Daily Traffic	1198
(30) Year of ADT	2018
(109) Truck ADT	8 %
(19) Bypass, Detour Length	18 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	28 ft
(49) Structure Length	112 ft
(50) Curb or Sidewalk Width	
Left	1 ft
Right	1 ft
(51) Bridge Roadway Width Curb to Curb	24 ft
(52) Deck Width Out to Out	28.5 ft
(32) Approach Roadway Width (W/Shoulders)	22 ft
(33) Bridge Median	0 - No median
(34) Skew	30 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	25.9 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 ft
(54) Min Vert Underclear	0 ft
Ref:	
(55) Min Lat Underclear RT	99.9 ft
Ref:	
(56) Min Lat Underclear LT	0 ft
NAVIGATION DATA	
(38) Navigation Control	0 - No navigation control on w
(111) Pier Protection	1 - Navigation protection not
(39) Navigation Vertical Clearance	0 ft
(116) Vert-Lift Bridge Nav Min Vert Clear	0 ft
(40) Navigation Horizontal Clearance	0 ft

CLASSIFICATION	
(112) NBIS Bridge Length	Y
(104) Highway System	0
(26) Functional Class	6 - Rural Minor Arterial
(100) Defense Highway	0 - The inventory route is not
(101) Parallel Structure	N - No parallel structure exists
(102) Direction of Traffic	2 - way traffic
(103) Temporary Structure	
(105) Federal Lands Highways	0 - N/A
(110) Designated National Network	0 - The inventory route is not
(20) Toll	3 - On free road. The structure
(21) Maintain	1 - State Highway Agency
(22) Owner	1 - State Highway Agency
(37) Historical Significance	5 - Bridge is not eligible for
CONDITION	
(58) Deck	4
(59) Superstructure	4
(60) Substructure	4
(61) Channel & Channel Protection	7
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	2 - M 13.5 / H 15
(63) Operating Rating Method	1
(64) Operating Rating	
Type	1 - Load Factor(LF)
Rating	43
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	26
(70) Bridge Posting	5 - Equal to or above legal loads
(41) Structure Open/Posted/Closed	A - Open, no restriction
APPRAISAL	
(67) Structural Evaluation	
(68) Deck Geometry	4
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(72) Approach Roadway Alignment	7
(36A) Bridge Railings	0 - Inspected feature does not meet
(36B) Transitions	0 - Inspected feature does not meet
(36C) Approach Guardrail	0 - Inspected feature does not meet
(36D) Approach Guardrail Ends	0 - Inspected feature does not meet
(113) Scour Critical Bridges	8 - Bridge foundations determined to
PROPOSED IMPROVEMENTS	
(75) Type of Work	
(76) Length of Structure Improvement	0 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 0
(96) Total Project Cost	\$ 0
(97) Year of Improvement Cost Estimate	
(114) Future ADT	1139
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date	11/02/2023		
(91) Frequency	24		
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	No		
C: Other Special Inspection	No		
* The inspection date and frequency information in this box contains the current NBI date and frequency information. Please refer to the report header for the date this inspection was conducted.			



Asset #02946(Routine, Underwater type 2)
SH 23-Madison Co. over HAWKINS HOLLOW CR
Location: .01 S JCT OF SH 16

Team Lead: Nathan Rowland **Inspection Date:** 11/02/2023

General Observation

11/02/2023- WNR & DBM: Routine and Underwater type II inspections conducted this date. See element notes for documentation.

Logged South to North.



Asset #02946(Routine, Underwater type 2)

SH 23-Madison Co. over HAWKINS HOLLOW CR

Location: .01 S JCT OF SH 16

Team Lead: Nathan Rowland Inspection Date: 11/02/2023

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
38	RC Slab	SF	3192	132	672	2198	190
1080	Delamination/Spall/Patched Area	SF	190	0	0	0	190
1090	Exposed Rebar	SF	45	0	0	45	0
1120	Efflorescence/Rust Staining	SF	2825	0	672	2153	0
510	Wearing Surfaces	SF	2688	282	0	1550	856
3220	Crack (Wearing Surface)	SF	2406	0	0	1550	856
(38) 11/02/2023- WNR & DBM:							
Deck / Superstructure - The top of the deck is not visible due to an ACHM driving surface. The ACHM driving surface has map cracking throughout. -Asphalt wearing surface south bound lanes has almost rubblized due to traffic. -Maintenance forces have replaced the left concrete curb. The right curb has heavy concrete deterioration with spalling that exposes reinforcing steel the full length of curb. The majority of the undersurface of the deck has heavy map cracking with efflorescence in all spans. -The undersurface has areas of spalling with exposed primary reinforcing steel and numerous areas of delamination along the exterior sides. -The undersurface in span #2 has an area of spalling that exposes primary reinforcing steel along the left side that is approximately 8-1/2' long and approximately 3' wide at the widest point. -The undersurface of span #3 has spalling with exposed primary reinforcing steel on the left side adjacent to bent #3 and adjacent to the deck drains. -The exterior vertical faces of the deck / superstructure have heavy map cracking.							
205	Reinforced Concrete Column	EA	6	0	1	5	0
1080	Delamination/Spall/Patched Area	EA	1	0	1	0	0
1120	Efflorescence/Rust Staining	EA	5	0	0	5	0
(205) 11/02/2023- WNR & DBM:							
-Intermediate bent columns have map cracking with heavy efflorescence. -Bent #1, Column #1 has heavy map cracking with efflorescence and a delaminated area on the left face. -Columns at bents #2 and #3 have map cracking with heavy efflorescence and medium abrasion at the bases of columns.							
Substructure - Bents #2,#3 and #4 caps has efflorescence with soft deteriorate concrete with measurable section loss. Bent #4 is worst case with approximately 12' area of the undersurface of the cap spalled off with exposed reinforcing. (see photos)							
215	Reinforced Concrete Abutment	LF	67	62	4	1	0
1080	Delamination/Spall/Patched Area	LF	1	0	0	1	0
1090	Exposed Rebar	LF	4	0	4	0	0
(215) 11/02/2023- WNR & DBM:							
-End bent #1 left side has an area that has fractured efflorescence. -The vertical face of end bent #1 has 4 small shallow spalls that exposes reinforcing steel.							
234	Reinforced Concrete Pier Cap	LF	99	0	3	83	13
1080	Delamination/Spall/Patched Area	LF	33	0	2	18	13
1090	Exposed Rebar	LF	3	0	1	2	0

Location: .01 S JCT OF SH 16

Team Lead: Nathan Rowland **Inspection Date:** 11/02/2023

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
1120	Efflorescence/Rust Staining	LF	63	0	0	63	0
(234) 11/02/2023- WNR & DBM:							
-Intermediate bent caps have heavy efflorescence with map cracking. -Bent #1 cap has delaminated areas on the left and right sides of the back face side and above and adjacent to column #1 on the ahead face. The bottom portion of cap has a spall on the left side approximately 3' long with approximately 4" of concrete section loss. -Bent #2 cap has spalling with exposed reinforcing steel with delaminated areas on the left and right sides. -Bent #3 cap has an area of spalling with exposed reinforcing steel in the cap undersurface between columns that is approximately 13' long and is the full width of the cap.							
330	Metal Bridge Railing	LF	224	124	100	0	0
1010	Cracking	LF	100	0	100	0	0
515	Steel Protective Coating	SF	695	0	0	0	695
3440	Effectiveness (Steel Protective Coatings)	LF	695	0	0	0	695
(330) 11/02/2023- WNR & DBM:							
-The metal bridge railing has a failing paint system. -The Bottom of the concrete bridge railing posts have concrete deterioration with areas of spalling that exposes reinforcing steel. -Bridge railing post right side has minor spall from collision damage.							



Elevation looking west



View of abutment #1



Inventory looking north



Downstream view



Upstream view



General view of deck



Elevation looking east



View of span #4 undersurface efflorescence



View bent #3 spalling with steel exposed.



View of span #2 efflorescence and spalling with steel exposed



Bent #2 cap left side spalling with steel exposed



Typical Condition of caps



View of span #1



Typical condition of wearing surface.



Inventory looking north



Downstream view



Upstream view



General view of wearing surface.



Upstream view.



Downstream view.



Downstream view



Upstream view



Inventory looking north.



Inventory looking north



Elevation looking West



Downstream



General view of deck



Bent #3 cap underneath deep spalling with steel exposed.



Deck concrete curb right side.



General view of span #4 undersurface.



Typical cracking of asphalt wearing surface.



Asphalt wearing surface left lanes has almost rubblized due to traffic.



Bent #2 large tree drift accumulation.



Inventory looking North



Upstream



Bent #3 cap underneath deep spalling with steel exposed.



Span #2 typical view of efflorescence and cracking to undersurface of deck.



Bent #1 ahead side.



Span #2 left side typical steel exposed around deck drains and left edge



elevation looking east



View of span #4



View of span #1



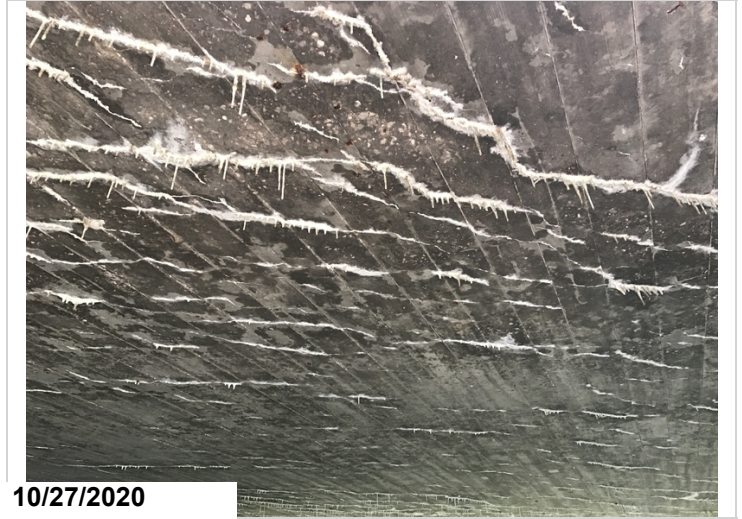
View of span #2



View of span #3



General view of deck



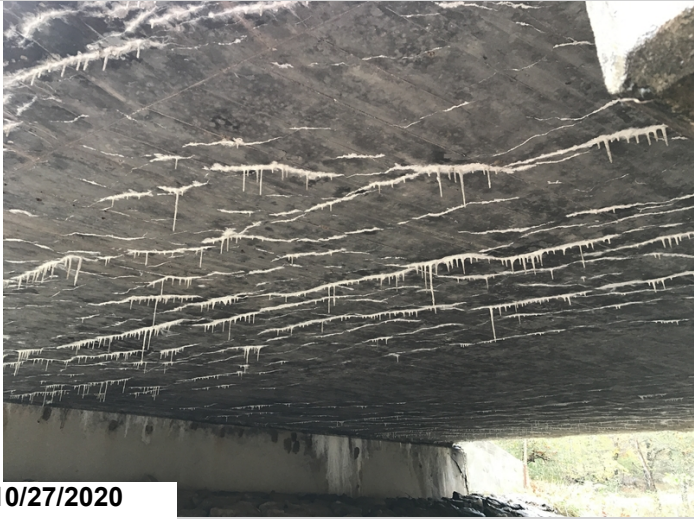
View of Span #4 undersurface.



Span #2 left side steel exposed around drains.



View of span #2 undersurface



10/27/2020

Span #1 undersurface



10/27/2020

General view of deck



10/27/2020

View of span #3 undersurface.



10/25/2021

View of bent #3 cap underneath steel exposed.



General view of left side of structure



View of bent #1 ahead side.



Bent #3 cap underneath deep spalling with steel exposed.



Bent #1 ahead side.



Bent #2 behind side.



View of bent #1 ahead side.

Maintenance Needs

Date Reported: 10/31/2011

Priority: C - Important

Type of Work: (Inactive) (Inactive) 9 - None

Status: Assigned

Component:

Deficiency Description

Intermediate bent caps - The intermediate bent caps have chloride contamination with heavy mapcracking and efflorescence with areas of spalling with exposed reinforcing steel and delaminated areas. The most extreme case is the undersurface of bent #3 cap which has soft and deteriorated concrete with a large area of spalling between the columns that is approximately 13' long and is the full width of the cap.

Remarks



Bent #1 ahead side.



Bent #2 left behind side spalling with steel exposed.



Bent #3 cap underneath deep spalling with steel exposed.



Bent #3 cap underneath deep spalling with steel exposed.



01/01/2020

Spalling with exposed reinforcing steel in cap.



01/01/2020

Bent #2 behind side Cracking with heavy efflorescence.

Maintenance Needs

Date Reported: 10/31/2011

Priority: C - Important

Type of Work: (Inactive) (Inactive) 9 - None

Status: Assigned

Component:

Deficiency Description

Deck / Superstructure -

The undersurface of the deck / superstructure has mapcracking with efflorescence throughout and concrete deterioration with spalling that exposes the primary reinforcing steel along exterior edges and around the deck drains.

Remarks



View of span #2 spalling with steel exposed



Span #2 left side typical steel exposed around deck drains and left edge



Soffit span 2 left - heavy cracking with efflorescence and spalling with exposed reinforcing steel around drain.



Span #2 cracking with efflorescence.



01/01/2020
Span #2 typical view of efflorescence and and cracking to
undersurface of deck.



01/01/2020
General view of span #4 undersurface.

Maintenance Needs

Date Reported: 10/31/2011

Priority: D- Routine

Type of Work: (Inactive) (Inactive) 9 - None

Status: Monitor

Component:

Deficiency Description

Concrete curb on right side has deterioration with spalling that exposes reinforcing steel the entire length of curb.

Remarks



Right curb at abut #1 has steel exposed and concrete has deteriorated away from steel leaving the steel completely exposed.



Right curb at abut #1 has steel exposed and concrete has deteriorated away from steel leaving the steel completely exposed.



Deck concrete curb right side.



Concrete curb right spalling with steel exposed.

Maintenance Needs

Date Reported: 10/26/2021

Priority: D- Routine

Type of Work: (Inactive) (Inactive) 1 - Clean

Status: Monitor

Component: Channel

Deficiency Description

Large tree at bent #2 ahead side.

Remarks

Madison Co.



Large tree at bent #2



Large tree at bent #2 ahead side.



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Location: .01 S JCT OF SH 16

Team Lead: Nathan Rowland Inspection Date: 11/02/2023

Routine Maintenance

Check Box Maintenance Items

Type of Maintenance	Is recommended?
A-54 - Sealable Deck Cracks	
A-55 - Deck Washing Needed	
A-56 - Joint Cleaning/Flushing Needed	
A-57 - Beam End and Bearing Paint Needed	
A-58 - Cap Cleaning/Flushing Needed	
A-59 - Joint Repair Needed	
A-60 - Full Beam Painting Needed	
A-61 - Polymer Overlay Advised	
A-62 - Hydro and LMC Advised	
A-63 - Missing/Incorrect Log Mile Signage	
A-64 - Vegetation Removal Requested	

A-54 - Sealable Deck Cracks

A-55 - Deck Washing Needed

A-56 - Joint Cleaning/Flushing Needed



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SH 23-Madison Co. over HAWKINS HOLLOW CR

Location: .01 S JCT OF SH 16

Team Lead: Nathan Rowland Inspection Date: 11/02/2023

A-57 - Girder End and Bearing Painting Needed

A-58 - Cap Cleaning/Flushing Needed

A-59 - Joint Repair Needed

A-60 - Full Girder Painting Needed

A-61 - Polymer Overlay Advised

A-62 - Hydro and LMC Advised

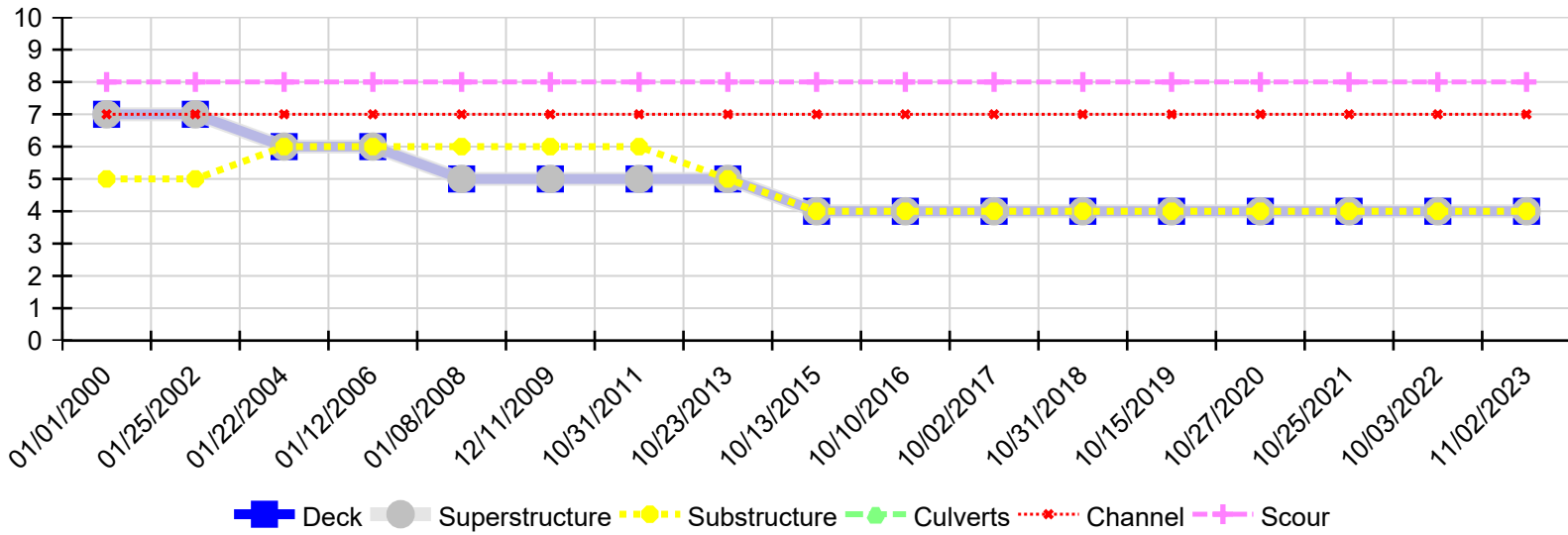
A-63 - Missing/Incorrect Log Mile Signage

A-64 - Vegetation Removal Requested



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Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
11/02/2023	4	4	4	N	7	8
10/03/2022	4	4	4	N	7	8
10/25/2021	4	4	4	N	7	8
10/27/2020	4	4	4	N	7	8
10/15/2019	4	4	4	N	7	8
10/31/2018	4	4	4	N	7	8
10/02/2017	4	4	4	N	7	8
10/10/2016	4	4	4	N	7	8
10/13/2015	4	4	4	N	7	8
10/23/2013	5	5	5	N	7	8
10/31/2011	5	5	6	N	7	8
12/11/2009	5	5	6	N	7	8
01/08/2008	5	5	6	N	7	8
01/12/2006	6	6	6	N	7	8
01/22/2004	6	6	6	N	7	8
01/25/2002	7	7	5	N	7	8
01/01/2000	7	7	5	N	7	8