



Latitude:36.24236, Longitude:-94.48714

Route:59 Section:01 Log:20.75

Arnold Road ID:4x59x1xA, Arnold Log mile:20.706

District 09, 7 - Benton County

Owner: 1 - State Highway Agency

Inspection Direction: 1 - N to S

Bridge Posting Information

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

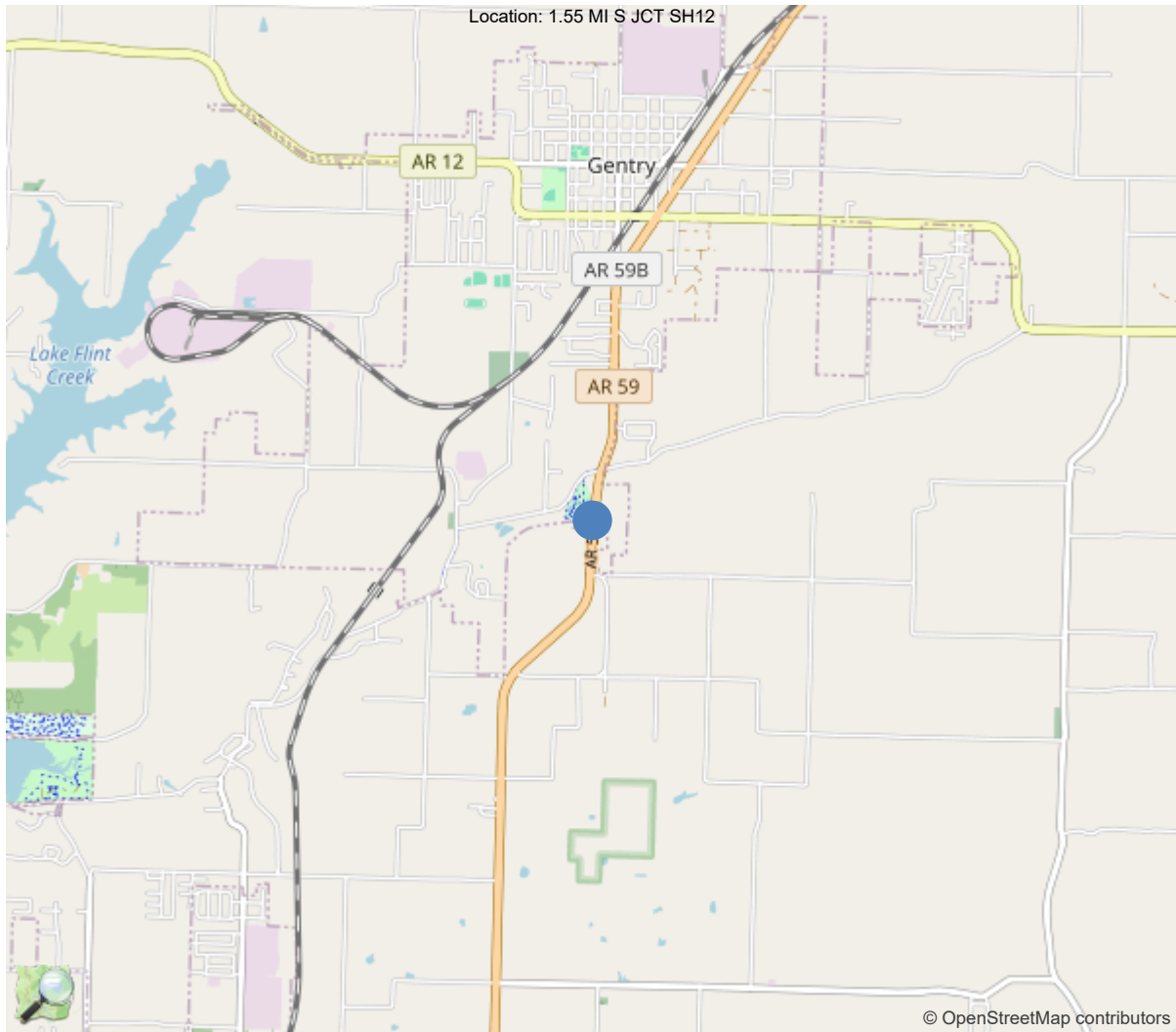
70 - Bridge Posting: 5 - Equal to or above legal loads

Legal Load	Calculated Capacity	Beginning of Bridge Sign Current Value	End of Bridge Sign Current Value
Code 4 (22 Tons)	40		
Code 9 (31 Tons)	50		
Code 5 (40 Tons)	60		

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



36.24236, -94.48714



Asset #07062(Routine, Underwater type 2)

Benton SH 59 over FLINT CREEK

Location: 1.55 MI S JCT SH12

Team Lead: Nathan Rowland Inspection Date: 07/10/2023

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	07062
(5) Inventory Route	1
(2) Highway Agency District	09 - District 09
(3) County Code	7 - Benton County
(4) Place Code	0
(6) Features Intersected	FLINT CREEK
(7) Facility Carried	Benton SH 59
(9) Location	1.55 MI S JCT SH12
(11) Mile Point	20.75 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	36.242359
(17) Longitude	-94.487137
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	12
Material	1 - Concrete
Type	2 - Stringer/Multi-beam or girder
(44) Approach Structure Type	00
Material	0 - Other
Type	0 - Other
(45) No. of Spans in Main Unit	3
(46) No. of Approach Spans	0
(107) Deck Structure Type	1 - Concrete Cast-in-Place
(108) Wearing Surface/Protective System	
Type of Wearing Surface	1 - Monolithic Concrete (concurrently pl
Type of Membrane	0 - None
Type of Deck Protection	1 - Epoxy Coated Reinforcing
AGE AND SERVICE	
(27) Year Built	2007
(106) Year Reconstructed	0
(42) Type of Service	15
On	1 - Highway
Under	5 - Waterway
(28) Lane	
On	5
Under	0
(29) Average Daily Traffic	17000
(30) Year of ADT	2018
(109) Truck ADT	10 %
(19) Bypass, Detour Length	9 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	65 ft
(49) Structure Length	168 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	74.8 ft
(52) Deck Width Out to Out	78.1 ft
(32) Approach Roadway Width (W/Shoulders)	59.1 ft
(33) Bridge Median	0 - No median
(34) Skew	0 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	76.1 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	16 - Urban 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	7
(59) Superstructure	7
(60) Substructure	7
(61) Channel & Channel Protection	6
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	5 - MS 18 / HS 20
(63) Operating Rating Method	1
(64) Operating Rating	
Type	1 - Load Factor(LF)
Rating	60
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	36
(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	6
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	9
(72) Approach Roadway Alignment	9
(36A) Bridge Railings	1 - Inspected feature meets current
(36B) Transitions	1 - Inspected feature meets current
(36C) Approach Guardrail	1 - Inspected feature meets current
(36D) Approach Guardrail Ends	1 - Inspected feature meets current
(113) Scour Critical Bridges	8 - Bridge foundations determined t
PROPOSED IMPROVEMENTS	
(75) Type of Work	
(76) Length of Structure Improvement	ft
(94) Bridge Improvement Cost	\$
(95) Roadway Improvement Cost	\$
(96) Total Project Cost	\$
(97) Year of Improvement Cost Estimate	
(114) Future ADT	12975
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date	07/10/2023		
(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 #07062(Routine, Underwater type 2)

Benton SH 59 over FLINT CREEK

Location: 1.55 MI S JCT SH12

Team Lead: Nathan Rowland **Inspection Date:** 07/10/2023

General Observation

07/10/2023 WNR & DBM: Routine and Underwater type II inspections conducted this date. See element notes for documentation.

Logged North to South and is accessible with a small extension ladder.

No bat activity was noted.

58 - Deck (7 - GOOD CONDITION - some minor problems.)

see bridge pictures of scour Bent # 3 left column (Per Plans) & drift @ Bent # 2. Upstream channel has aligned toward Bent # 2. More horizontal & transverse deck cracks have appeared since last inspection, will continue to monitor. See inventory photos and channel soundings dated 7/18/2011. Scour has occurred @ Bent # 3 left column. Changed logmile from 20.811 to 20.75 per straight line from Tech Services dated 7/2008. DMH 8/4/2011 See plans Job #090154 Station 333+42 Stage #1 construction. Structure opened to traffic on 08/02/2007. See digital photos dated 07/31/2007 of deck at end [per plans], last 12 feet 6 inches long and 42 feet wide showing deck was removed due to batch plant error, also cracking in deck and concrete approach slab that have been sealed by contractor. Final stage construction complete, see inventory photos dated 4/8/2009. Construction Plans and route log stationing is reversed. Contractor installed telephone cable on 1/2012 attached to left side overhang (per route log) right side (per Plans) see attached sheets. Inserted 7/18/2011 inspection file.

A-15 - Late Reason

Heavy Work Load

A-54 - Sealable Deck Cracks (Y)

See maintenance needs and element notes

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	12583	10741	1842	0	0
1120	Efflorescence/Rust Staining	SF	21	0	21	0	0
1130	Cracking (RC and Other)	SF	1821	0	1821	0	0
(12) 07/10/2023 WNR & DBM: -Driving surface-The deck has a tined finish with numerous full length unsealed longitudinal cracks in all lanes that appear to be along the top flanges of the beams. -The deck has numerous full width un sealed transverse cracks in all spans with short duration diagonal cracks in some locations. Undersurface- the left and right deck overhang has a heavy grout application with a few transverse cracks with and without efflorescence. The sip forms in bay #4 have corrosion in all 3 spans at the joint area.							
107	Steel Open Girder/Beam	LF	1503	1481	22	0	0
1000	Corrosion	LF	22	0	22	0	0
515	Steel Protective Coating	SF	16050	16028	0	22	0
3430	Oxide Film Degradation Color/Texture Adherence(Steel Protective Coatings)	LF	22	0	0	22	0
(107) 07/10/2023 WNR & DBM: 9 beam weathering steel system. The protective coating total includes the diaphragms. Span #1- No noteworthy deficiencies at this inspection. Span #2- beam #1 has 22' of corrosion on the bottom flange near mid span. Span #3- No noteworthy deficiencies at this inspection.							
205	Reinforced Concrete Column	EA	6	4	2	0	0
6000	Scour	EA	2	0	2	0	0
(205) 07/10/2023 WNR & DBM: Bent #1: -Heavy streambed material accumulation under span #2 has directed the channel flow into bent #1 causing localized scour at the bases of columns #2 and #3 and eroding the North embankment. Bent #2: -The channel has moderate drift accumulation at bent #2. -Large tree bent #2 column #3.							
215	Reinforced Concrete Abutment	LF	196	115	81	0	0
1120	Efflorescence/Rust Staining	LF	3	0	3	0	0
1130	Cracking (RC and Other)	LF	30	0	30	0	0
1190	Abrasion/Wear (PSC/RC)	LF	48	0	48	0	0
(215) 07/10/2023 WNR & DBM: -The top of abutment #1 (North abutment) has 17 transverse cracks visible from the driving surface. The vertical cracks extend down the vertical face of breastwall in locations. -The top of abutment backwall has light abrasion in the wheel paths of the Northbound lanes.							

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
- Embankment erosion exists at the base of the abutment #1 slope. The width from bank is 14' 3" to column #3 at bent #1 measurement taken under beam #8. -The top of abutment #2 (South abutment) has 13 transverse cracks visible from the driving surface. The cracks extend down the vertical face of abutment in locations, in some of these locations exists CS efflorescence. -The top of the abutment backwall has light abrasion in the wheel paths of the Northbound lanes. -The beams are cast into the abutment and hairline cracking is propagating from the bottom flange in locations.							
234	Reinforced Concrete Pier Cap	LF	154	154	0	0	0
(234) 07/10/2023 WNR & DBM: Bent #1 cap- No noteworthy deficiencies at this inspection. Bent #2 cap- No noteworthy deficiencies at this inspection.							
301	Pourable Joint Seal	LF	150	118	0	32	0
2350	Debris Impaction	LF	32	0	0	32	0
(301) 07/10/2023 WNR & DBM: - The pourable joint sealant has debris impaction on the left and right shoulders at both bridge ends.							
310	Elastomeric Bearing	EA	18	18	0	0	0
(310) 07/10/2023 WNR & DBM: No noteworthy deficiencies at this inspection. The bearings are concealed at abutments #1,2.							
321	Reinforced Concrete Approach Slab	SF	3696	2936	760	0	0
1130	Cracking (RC and Other)	SF	476	0	476	0	0
1190	Abrasion/Wear (PSC/RC)	SF	284	0	284	0	0
(321) 07/10/2023 WNR & DBM: -The North approach slab has longitudinal, transverse and diagonal cracking. The approach slab has light abrasion in the wheel paths adjacent to abutment. -The South approach slab has transverse, longitudinal cracking with map cracking in the Southbound lanes. The wheel paths have light abrasion.							
331	Reinforced Concrete Bridge Railing	LF	336	228	108	0	0
1130	Cracking (RC and Other)	LF	108	0	108	0	0
(331) 07/10/2023 WNR & DBM: -The concrete parapets have vertical cracks that correspond with the sawn joints and in other random locations. -The lower portion of parapets have areas of longitudinal and map cracking in several locations. Approach railing-The left ending metal approach railing has one area of impact damage.							



Elevation looking east



Inventory looking south



General view of abutment #2



Span #2 View of superstructure



Downstream view



Typical debris in gutterline



Upstream view



Typical view of deck cracking



General view of deck



Elevation looking west.



Inventory looking South.



Upstream view



06/03/2021

Downstream view.



06/03/2021

Vertical cracking at abutment #2.



06/03/2021

Vertical cracking with efflorescence at abutment #2.



06/03/2021

View of bent #2 ahead side.



Large tree bent #2 column #3.



View of abutment #2.



View of span #2 superstructure



View of span #1 superstructure



View of abutment #1



View of failing repairs in North abutment



View of north approach



Typical view of longitudinal cracking.



Typical view of longitudinal cracking.



General view of deck



View of north approach



Pourable joint seal condition at the abutments.



Sip corrosion in bay #4 at abutment #1. Typical of all 3 spans.



Embankment erosion at the abutment #1 slope. The width from bank is 14' 3" to column #3 at bent #1.



Bridge plate.



Upstream channel view.



Approach view in direction of log mile.



Bearing condition at bent #2. Typical of all 9 at this location.



Bearing condition at bent #1. Typical of all 9 at this location.



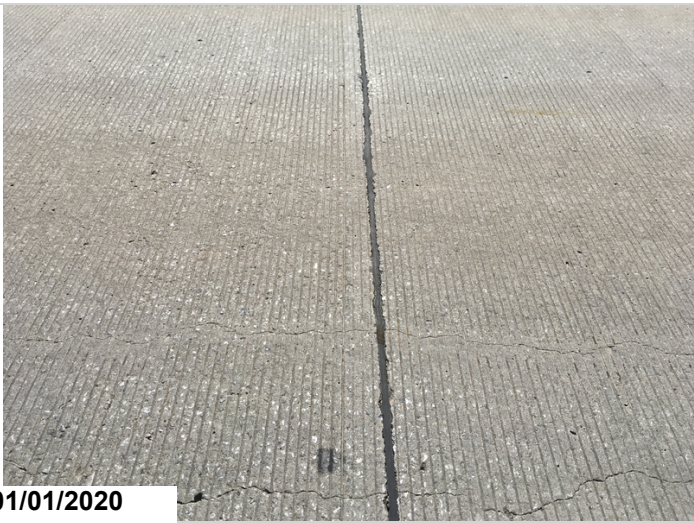
General view of abutment #1 embankment erosion.



General view of abutment #2.



Typical view of the undersurface.



Porable construction joint seal condition.



Drift accumulation at the upstream side of bent #2.



Typical view of the bents.



Typical view of driving surface. Note the longitudinal cracking.



Elevation view. Log mile from left to right.



General view of abutment #1.



Downstream channel view.

Maintenance Needs

Date Reported: 07/18/2011

Priority: D- Routine

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

Status: Monitor

Component:

Deficiency Description

Channel:

- The channel has moderate drift accumulation at bent #2.
- Large tree bent #2 column #3.

Remarks



Bent #2 upstream large tree and drift is causing localized scour



Channel-Drift accumulation at bent #2.



Heavy drift accumulation at bent #2



Large tree bent #2 column #3.

Maintenance Needs

Date Reported: 07/05/2017

Priority: D- Routine

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

Status: Monitor

Component:

Deficiency Description

Deck / approach slabs - The driving surface of the deck has numerous full length longitudinal cracking in all spans and full width transverse cracking in several locations throughout.

The North and South approach slabs have sealable transverse and longitudinal cracking. The South approach slab has mapcracking in the Southbound lanes.

Remarks

06/03/2021 WNR: This deficiency still exists as of this inspection.



South approach slab, Southbound lanes-Mapcracking.



Longitudinal cracking inside Southbound lane.



Span #3-Deck cracking.



North approach slab-Transverse cracking.



Asset #07062(Routine, Underwater type 2)

Benton SH 59 over FLINT CREEK

Location: 1.55 MI S JCT SH12

Team Lead: Nathan Rowland Inspection Date: 07/10/2023

Routine Maintenance

Check Box Maintenance Items

Type of Maintenance	Is recommended?
A-54 - Sealable Deck Cracks	Yes
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 (Yes)

See maintenance needs and element notes

A-55 - Deck Washing Needed

A-56 - Joint Cleaning/Flushing Needed



Asset #07062(Routine, Underwater type 2)

Benton SH 59 over FLINT CREEK

Location: 1.55 MI S JCT SH12

Team Lead: Nathan Rowland Inspection Date: 07/10/2023

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

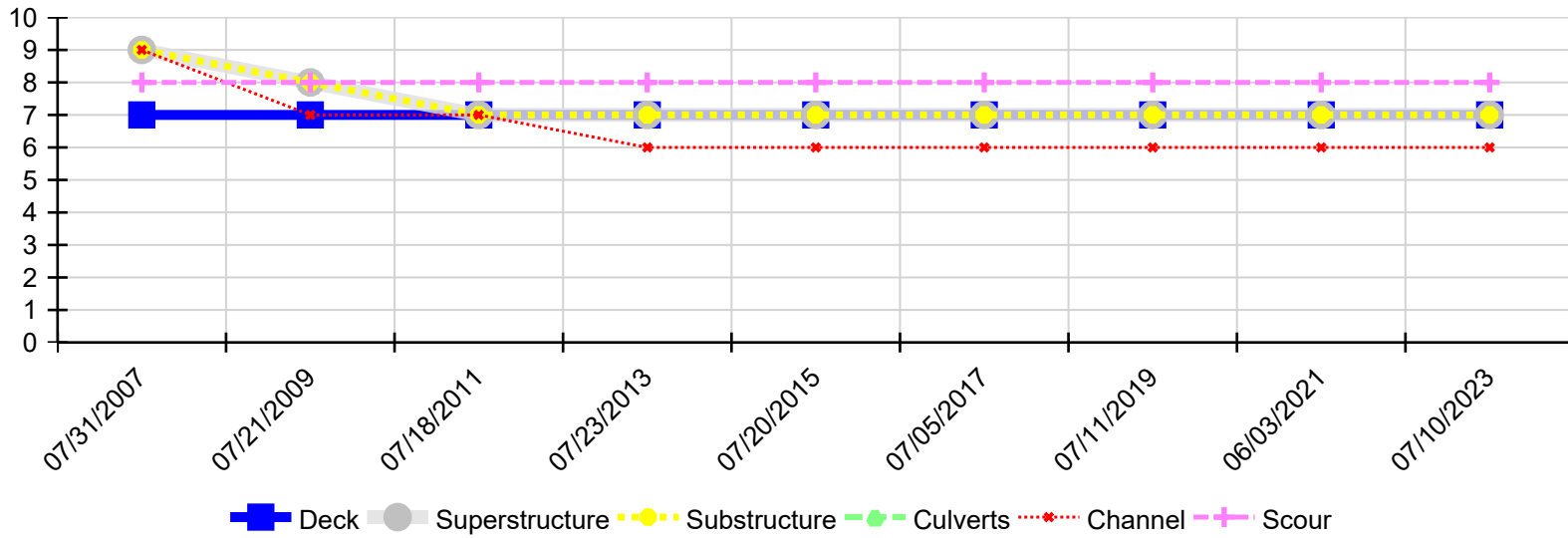
A-61 - Polymer Overlay Advised

A-62 - Hydro and LMC Advised

A-63 - Missing/Incorrect Log Mile Signage

A-64 - Vegetation Removal Requested

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
07/10/2023	7	7	7	N	6	8
06/03/2021	7	7	7	N	6	8
07/11/2019	7	7	7	N	6	8
07/05/2017	7	7	7	N	6	8
07/20/2015	7	7	7	N	6	8
07/23/2013	7	7	7	N	6	8
07/18/2011	7	7	7	N	7	8
07/21/2009	7	8	8	N	7	8
07/31/2007	7	9	9	N	9	8