



# Secondary Bridges

June 8, 2021

Laurel McKean, Project Director

# Bridge #A0861

## CRD100 over I-44 EB&WB

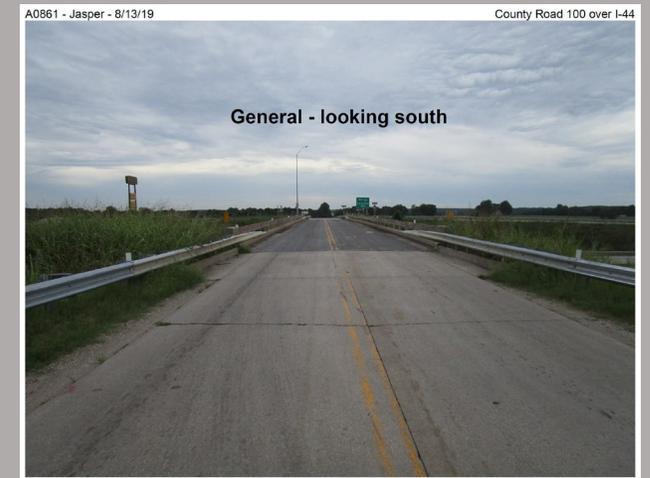
### Jasper County

- Joplin Regional Stockyards in NW quadrant
- Heaviest day for Stockyard is Saturdays
- RV businesses on each side of 44
- Steel company has yards on both sides of 44
- WB67 design critical
- Guardrail damaged on every corner
- Better striping at end of the ramps
- Concern with how to tie OR and entrances
- Sight distance at end of ramps crucial
- Already a bit of a sight distance issue at WB ramps seeing NB vehicles



#### Crash Information 2015-2021

- 5 total crashes
- 3 at EB Ramp – 1 angle, 1 driving too fast and unable to stop, 1 RE
- 2 at WB Ramp – 1 out of control due to driver not stopping at ramp, 1 swung too wide turning right and hit SB vehicle



<b>Mandatory:</b>	<b>N</b>	<b>AADT:</b>	<b>1198</b>
<b>Ratings:</b>	<b>4,4,7</b>	<b>Truck %:</b>	<b>10.9</b>
<b>Min Treatment:</b>	<b>Replacement</b>	<b>Existing Bridge Type:</b>	<b>Voided Concrete Slab</b>
<b>Potential Grade Change:</b>	<b>2'-3"+</b>	<b>I44 Incident Bypass Route:</b>	
<b>Crossing Type:</b>	<b>Interstate</b>		

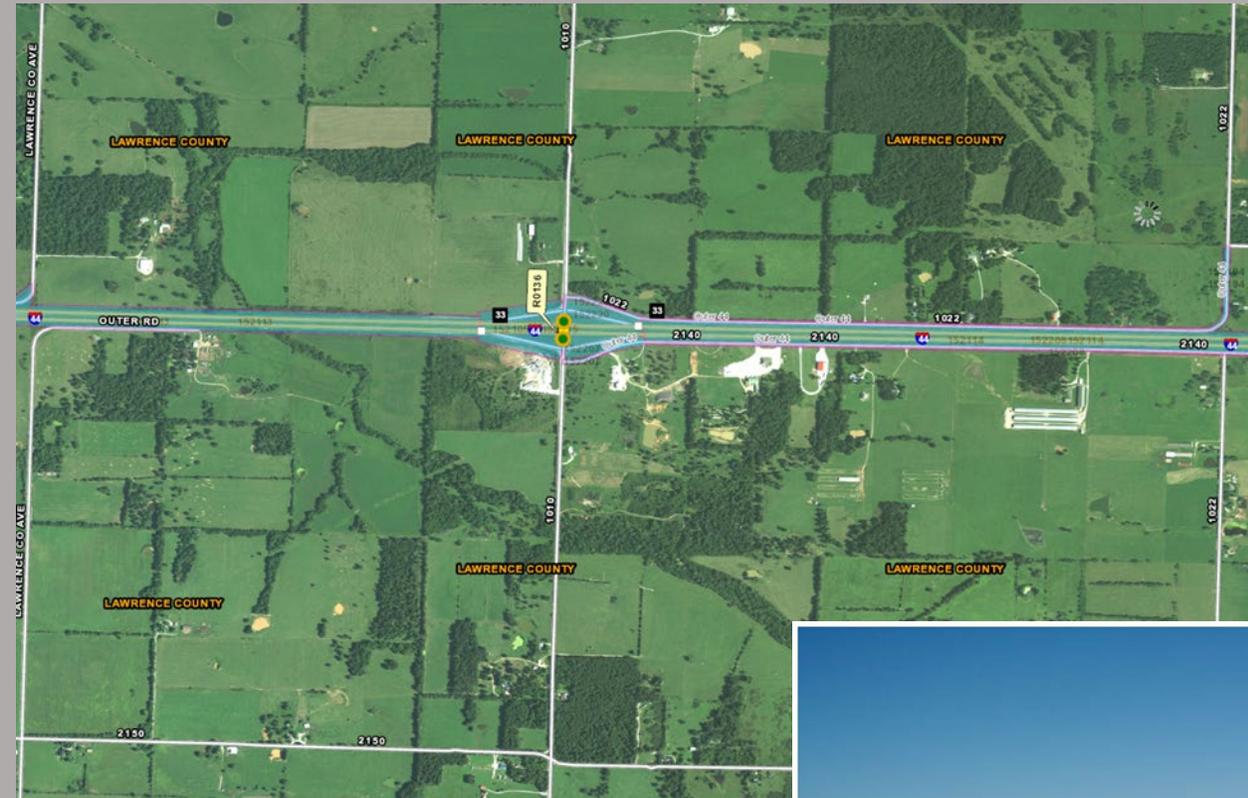
# Bridge #R0136

## CRD1010 over I-44 EB&WB

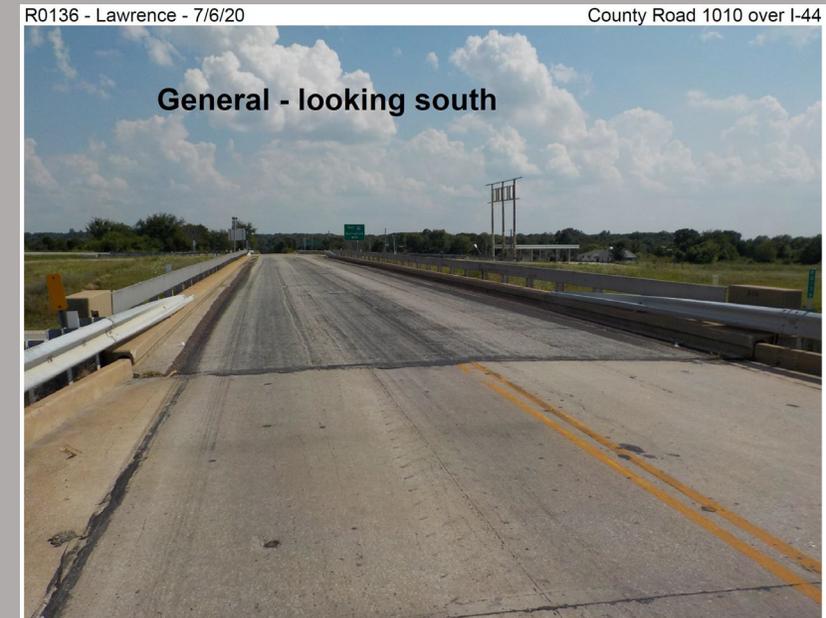
### Lawrence County

Mandatory:	N	AADT:	581
Ratings:	5,5,7	Truck %:	10.9
Min Treatment:	Replacement	Existing Bridge Type:	Voided Concrete Slab
Potential Grade Change:	2'-2"	I44 Incident Bypass Route:	No
Crossing Type:	Interstate		

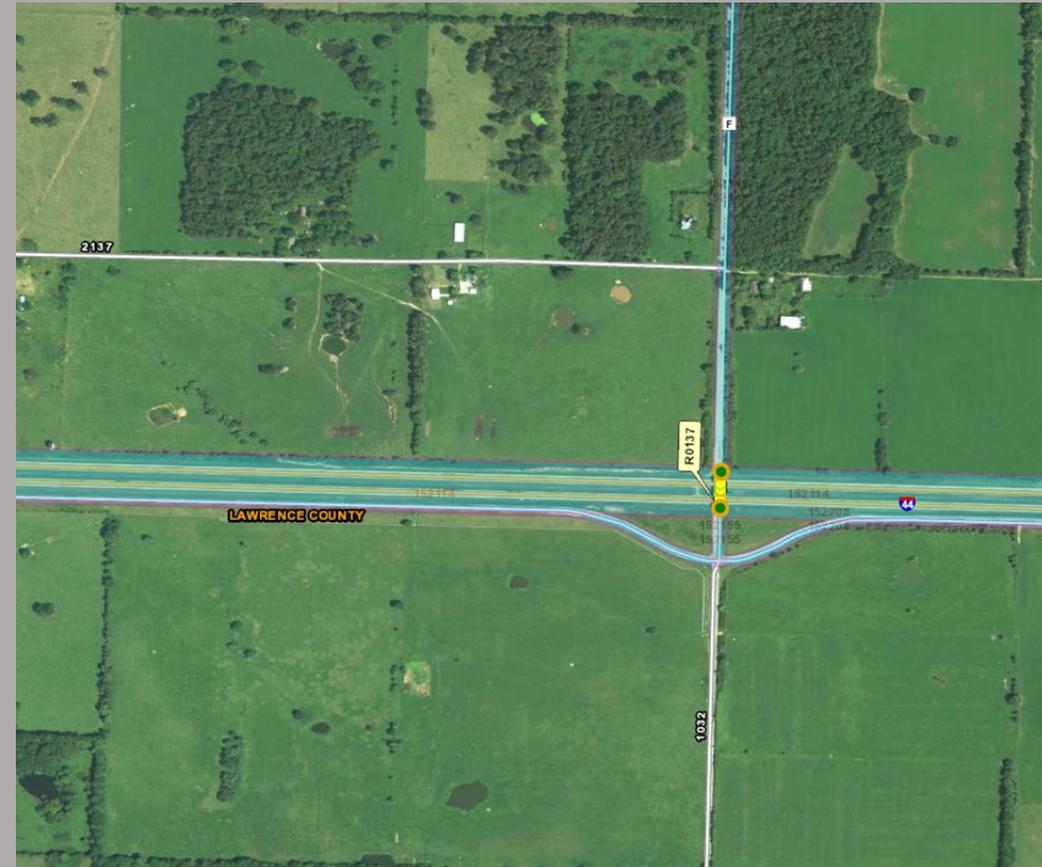
- Mainly farming around the area
- WB 67 design critical
- Potential truck stop being built in SW corner
- Down the OR is a truck was and a trailer sales business
- Sight distance concern when raise bridge
- Ditches are wet
- Guardrail damage all around



- 1 crash at S OR when tractor-trailer tried to turn and clipped front of car



**Bridge #R0137**  
**Route F over I-44 EB&WB**  
**Lawrence County**



- Mainly farming in the area
- Profile of road before and after bridge is not consistent
- Ditches along I44 full of water
- No crashes
- Visibility of Stop sign with raised bridge profile

R0137 - Lawrence - 7/6/20

Rt. F over I-44



<b>Mandatory:</b>	<b>N</b>	<b>AADT:</b>	<b>213</b>
<b>Ratings:</b>	<b>5,5,7</b>	<b>Truck %:</b>	<b>10.5</b>
<b>Min Treatment:</b>	<b>Replacement</b>	<b>Existing Bridge Type:</b>	<b>Voided Concrete Slab</b>
<b>Potential Grade Change:</b>	<b>2'-4"</b>	<b>I44 Incident Bypass Route:</b>	<b>No</b>
<b>Crossing Type:</b>	<b>Interstate</b>		

# Bridge #R0198

## CRD1100 over I-44 EB&WB

### Lawrence County

- Detour for local when other bridges are closed due to flooding
- Might need to extend guardrail
- Overhead powerline on East side
- Small airport South of bridge
- No crashes



R0198 Lawrence 1-21-2021  
County Rd. 1100 over I-44  
West Profile Looking North



R0198 Lawrence 1-21-2021  
County Rd. 1100 over I-44  
Sp. 1 Looking South - 23% Deck Patches

<b>Mandatory:</b>	<b>N</b>	<b>AADT:</b>	<b>210</b>
<b>Ratings:</b>	<b>4,6,7</b>	<b>Truck %:</b>	<b>4</b>
<b>Min Treatment:</b>	<b>Rehab</b>	<b>Existing Bridge Type:</b>	<b>Wide Flange Girder</b>
<b>Potential Grade Change:</b>	<b>2'-0"</b>	<b>I44 Incident Bypass Route:</b>	<b>No</b>
<b>Crossing Type:</b>	<b>Interstate</b>		



R0198 Lawrence 1-21-2021  
County Rd. 1100 over I-44  
Many Cracks S Abutment  
Slant Worn Thin



R0198 Lawrence 1-21-2021  
County Rd. 1100 over I-44  
Heavy Girder End Rust at North Abutment

# Bridge #J0619

## MO39 over Truitt Creek

### Lawrence County

J0619 - Lawrence - 7/8/20

MO 39 over Truitt Creek



J0619 - Lawrence - 7/8/20

MO 39 over Truitt Creek



### Crash History 2015 - 2021

- 1 alcohol involved lost control
- 1 came around curve, got in the gravel and lost control

- No known overtopping issues
- Clean drift once every 2 years
- Jackie Moore cattle trucks and feed trucks
- Fuel trucks and delivery trucks
- Might not be able to reduce width of road due to past history
- Curve on South side



Mandatory:	N	AADT:	3375
Ratings:	4,4,6	Truck %:	12.2
Min Treatment:	Replacement	Existing Bridge Type:	Concrete Deck Girder
Potential Grade Change:	0"	I44 Incident Bypass Route:	No
Crossing Type:	Water		

**Bridge #R0144**  
**Route N over I-44 EB&WB**  
**Lawrence County**



- Farming is the main use
- Subdivision in the NE side which has asked for full interchange multiple times
- Concern with OR tie-ins due to raise in profile of bridge



R0144 - Lawrence - 7/10/20

Rt. N over I-44



General - looking north

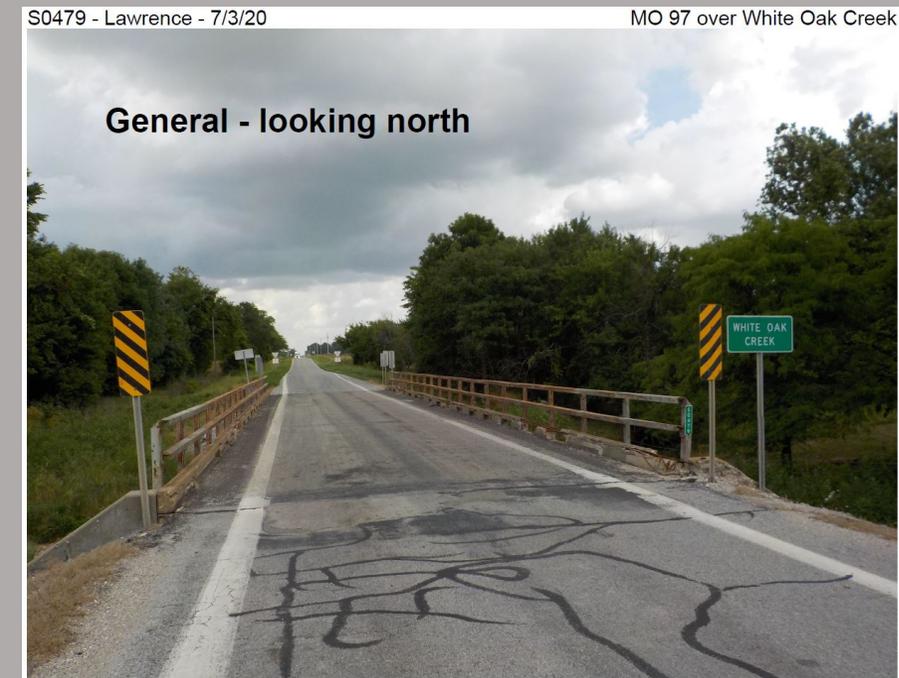
<b>Mandatory:</b>	<b>N</b>	<b>AADT:</b>	<b>376</b>
<b>Ratings:</b>	<b>5,5,6</b>	<b>Truck %:</b>	<b>11.5</b>
<b>Min Treatment:</b>	<b>Replacement</b>	<b>Existing Bridge Type:</b>	<b>Voided Concrete Slab</b>
<b>Potential Grade Change:</b>	<b>2'-2"</b>	<b>I44 Incident Bypass Route:</b>	<b>No</b>
<b>Crossing Type:</b>	<b>Interstate</b>		

# Bridge #S0479

## MO97 over N White Oak Creek

### Lawrence County

<b>Mandatory:</b>	<b>N</b>	<b>AADT:</b>	<b>1042</b>
<b>Ratings:</b>	<b>5,4,6</b>	<b>Truck %:</b>	<b>14.3</b>
<b>Min Treatment:</b>	<b>Replacement</b>	<b>Existing Bridge Type:</b>	<b>Wide Flange Girder</b>
<b>Potential Grade Change:</b>	<b>9"</b>	<b>I44 Incident Bypass Route:</b>	<b>No</b>
<b>Crossing Type:</b>	<b>Water</b>		



- No reported issues of water overtopping the road
- No reported issues of removing debris often
- Used by farming industry, grain trucks and trash trucks going to the landfill in Lamar, MO
- Channel trying to move toward N abutment
- FR2015 very close on S end
- Narrow R/W
- No crashes

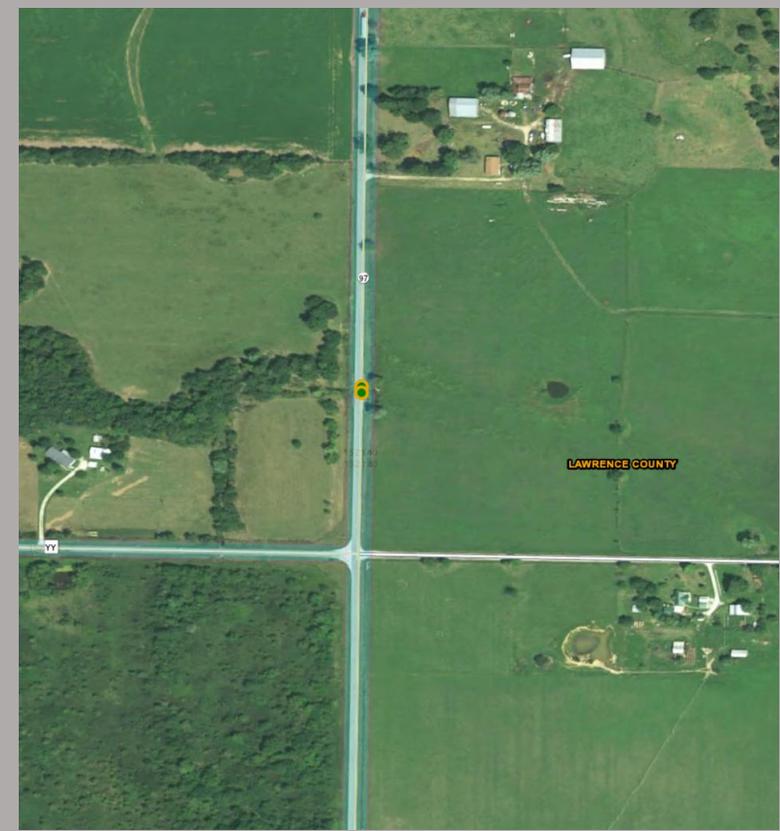


# Bridge #S0480

## MO97 over Dry Branch

### Lawrence County

- No reported issues of water overtopping the road
- No reported issues of drift being removed often
- Trash trucks hauling to Lamar Landfill
- S&H Farm Supply
- Grain and Feed trucks
- Farming
- Narrow
- East side property owner might have concerns
- Buried cable
- Water Sitting on both sides in ditch
- No crashes



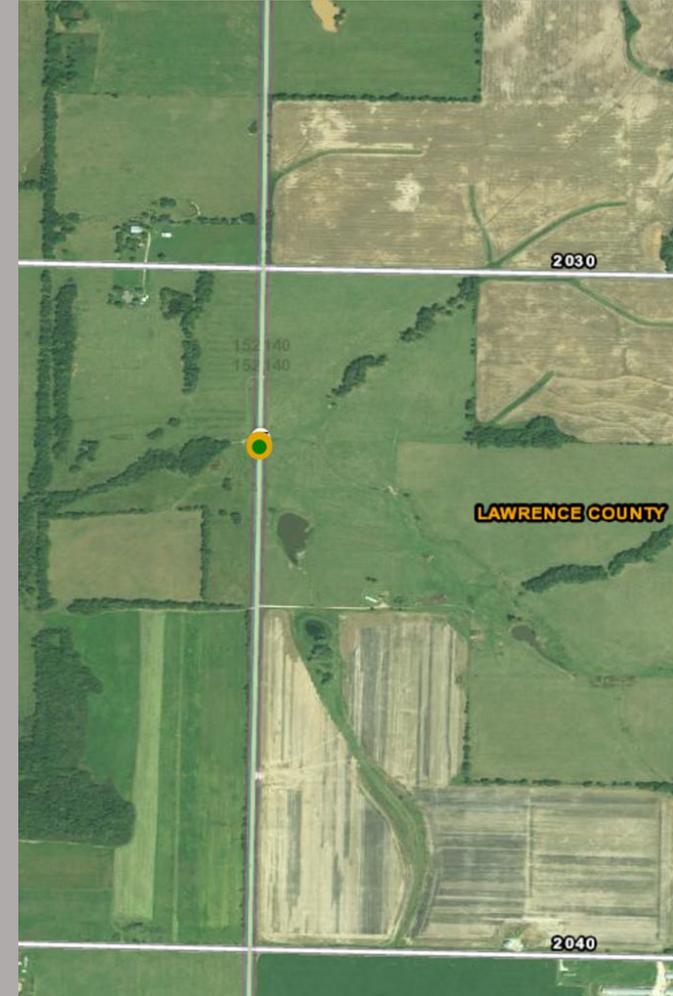
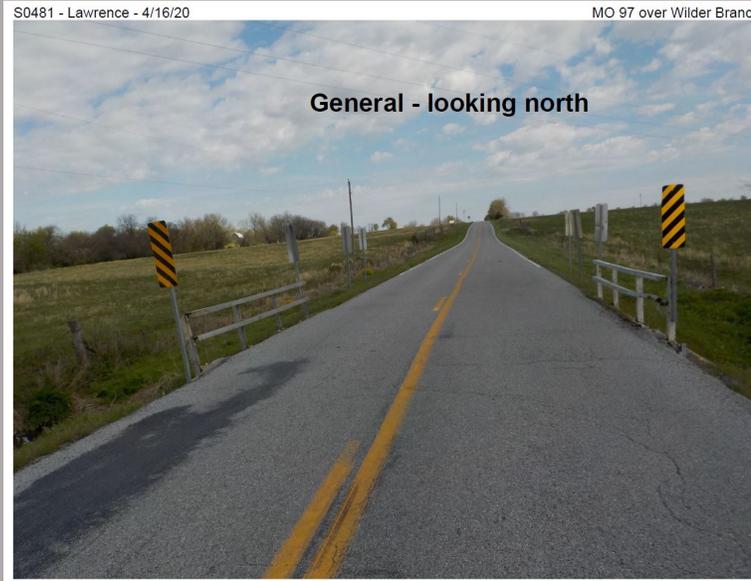
<b>Mandatory:</b>	<b>N</b>	<b>AADT:</b>	<b>1042</b>
<b>Ratings:</b>	<b>5</b>	<b>Truck %:</b>	<b>14.3</b>
<b>Min Treatment:</b>	<b>Replacement</b>	<b>Existing Bridge Type:</b>	<b>Concrete DBL Box Culvert</b>
<b>Potential Grade Change:</b>	<b>0"</b>	<b>44 Incident Bypass Route:</b>	<b>No</b>
<b>Crossing Type:</b>	<b>Water</b>		

# Bridge #S0481

## MO97 over Wilder Branch

### Lawrence County

- No reported issues of water overtopping
- No reported issues of removing debris often
- Used by farming industry, grain trucks and trash trucks going to the landfill in Lamar, MO
- Steep slopes
- Overhead transmission line 100' N of structure
- Narrow
- 1 crash – distracted driver lost control and hit end of structure



Mandatory:	N	AADT:	1030
Ratings:	4	Truck %:	14.4
Min Treatment:	Replacement	Existing Bridge Type:	Concrete DBL Box Culvert
Potential Grade Change:	0"	I44 Incident Bypass Route:	No
Crossing Type:	Water		

# Bridge #S0482

## MO97 over S White Oak Creek

### Lawrence County

Mandatory:	N	AADT:	1030
Ratings:	5	Truck %:	14.4
Min Treatment:	Replacement	Existing Bridge Type:	Concrete DBL Box Culvert
Potential Grade Change:	0"	I44 Incident Bypass Route:	No
Crossing Type:	Water		

S0482 - Lawrence - 4/6/21 MO 97 over White Oak Creek



- No reported issues of water overtopping
- No reported issues of removing debris often
- Used by farming industry, grain trucks and trash trucks going to the landfill in Lamar, MO
- Used to cross cattle
- No crashes



S0482 - Lawrence - 4/6/21 MO 97 over White Oak Creek



# Bridge #A0600

## Route O/Route Z over I-44 EB&WB

### Lawrence County

<b>Mandatory:</b>	<b>N</b>	<b>AADT:</b>	<b>305</b>
<b>Ratings:</b>	<b>5,5,7</b>	<b>Truck %:</b>	<b>11.3</b>
<b>Min Treatment:</b>	<b>Replacement</b>	<b>Existing Bridge Type:</b>	<b>Voided Concrete Slab</b>
<b>Potential Grade Change:</b>	<b>2'-2"</b>	<b>I44 Incident Bypass Route:</b>	<b>No</b>
<b>Crossing Type:</b>	<b>Interstate</b>		

- Weight restricted Pony Truss bridge on MO266 in Halltown is being replaced – potential detour impact
- Crash information provided on next slide
- WB67 consideration in design
- Cemetery in SE quadrant
- Gas station and large engine repair in SW quadrant
- Used by fuel trucks, semis and farming
- Will provide past AJR to shortlisted teams



A0600 - Lawrence - 7/10/20

Rt. D over I-44



# Bridge #A0600

## Route O/Route Z over I-44 EB&WB

### Lawrence County

County	Travelway	Log	Crash Class	Date	Severity Rating	Light Cond	Road Surf Cond	Weather Cond	Day Of Week	Time	Notes
LAWRENCE	RP IS44E TO RTO E	0.028	OUT OF CONTROL	7/10/2015	PROPERTY DAMAGE ONLY	DAYLIGHT	DRY	CLEAR	FRI	1630	V1 EB 44 Exit Ramp to RT O/Z - ran off left side and trailer overturned
LAWRENCE	RP IS44E TO RTO E	0.028	OUT OF CONTROL	9/25/2016	PROPERTY DAMAGE ONLY	DAYLIGHT	DRY	CLEAR	SUN	1045	V1 motorcycle - EB Exit Ramp to RT O/Z - ran off left side of the road and lost control
LAWRENCE	RT O S	0.162	LEFT TURN	8/21/2016	PROPERTY DAMAGE ONLY	DARK W/ STREET LIGHTS OFF	DRY	CLEAR	SUN	2035	Occurred on SB Route O. Vehicle 1 (Tractor Trailer) was traveling NB and Vehicle 2 was traveling SB. Vehicle 1 and Vehicle 2 met in a curve and Vehicle 1's trailer crossed the centerline and struck Vehicle 2.
LAWRENCE	RT O S	0.098	OUT OF CONTROL	5/24/2016	PROPERTY DAMAGE ONLY	DAYLIGHT	DRY	CLOUDY	TUE	1605	On the overpass bridge - Vehicle 1 was traveling SB when a NB vehicle crossed the centerline, Driver 1 tried to avoid the NB vehicle and struck a guardrail
LAWRENCE	RP IS44W TO RTZ S	0.019	OUT OF CONTROL	1/19/2021	PROPERTY DAMAGE ONLY	DARK W/ STREET LIGHTS OFF	DRY	CLEAR	TUE	1935	WB 44 Exit Ramp to RtO/Z - Vehicle 1 failed to negotiate a curve, traveled off the left side of the road and struck and embankment
LAWRENCE	RP IS44W TO RTZ S	0.017	OUT OF CONTROL	9/17/2017	DISABLING INJURY	DAYLIGHT	WET	CLOUDY	SUN	1452	WB 44 Exit Ramp to RtO/Z - Vehicle 1 (motorcycle) failed to negotiate a curve, traveled off the left side of the road and overturned
LAWRENCE	RP IS44W TO RTZ S	0.016	OUT OF CONTROL	7/14/2018	PROPERTY DAMAGE ONLY	DAYLIGHT	DRY	CLOUDY	SAT	1955	WB 44 Exit Ramp to RtO/Z - Vehicle 1 failed to negotiate a curve, traveled off the left side of the road and struck and embankment
LAWRENCE	RP IS44W TO RTZ S	0.015	OUT OF CONTROL	8/20/2017	PROPERTY DAMAGE ONLY	DARK W/ STREET LIGHTS OFF	DRY	CLOUDY	SUN	230	WB 44 Exit Ramp to RtO/Z - Vehicle 1 failed to negotiate a curve, traveled off the left side of the road and struck and embankment
LAWRENCE	RP IS44W TO RTZ S	0.047	OUT OF CONTROL	11/30/2018	PROPERTY DAMAGE ONLY	DAYLIGHT	WET	FOG/MIST	FRI	730	WB 44 Exit Ramp to RtO/Z - Vehicle 1 failed to negotiate a curve, traveled off the left side of the road and struck and embankment
LAWRENCE	RP IS44W TO RTZ S	0.008	OUT OF CONTROL	9/20/2020	FATAL	DARK W/ STREET LIGHTS OFF	DRY	CLEAR	SUN	215	WB 44 Exit Ramp to RtO/Z - Vehicle 1 failed to negotiate a curve, traveled off the left side of the road and struck and embankment
LAWRENCE	RP IS44W TO RTZ S	0.053	OUT OF CONTROL	7/10/2016	MINOR INJURY	DARK W/ STREET LIGHTS OFF	DRY	CLEAR	SUN	201	WB 44 Exit Ramp to RTO/Z - Vehicle 1 driving too fast and was unable to maneuver onto the exit ramp. Vehicle 1 left the left side of the roadway, before striking four road signs and overturning.
LAWRENCE	RP IS44W TO RTZ S	0.063	OUT OF CONTROL	8/5/2015	PROPERTY DAMAGE ONLY	DAYLIGHT	WET	CLOUDY	WED	1020	WB 44 Exit Ramp to RTO/Z - Vehicle 1 driving too fast and was unable to maneuver onto the exit ramp. Slid off left side of the roadway.
LAWRENCE	RT O S	0	LEFT TURN RIGHT ANGLE COLLISION	7/26/2016	PROPERTY DAMAGE ONLY	DAYLIGHT	DRY	CLEAR	TUE	1405	Vehicle 1 was taveling S on Route Z turning left onto the WB 44 Entrance ramp. Vehicle 1 turned left in front of Vehicle 2.

# Bridge #K0646

## Route F over Sac River Branch

### Greene County

<b>Mandatory:</b>	<b>N</b>	<b>AADT:</b>	<b>736</b>
<b>Ratings:</b>	<b>4,6,4</b>	<b>Truck %:</b>	<b>5.8</b>
<b>Min Treatment:</b>	<b>Replacement</b>	<b>Existing Bridge Type:</b>	<b>Cont Non Comp&amp;Simple Wide Flange</b>
<b>Potential Grade Change:</b>	<b>0"</b>	<b>I44 Incident Bypass Route:</b>	<b>No</b>
<b>Crossing Type:</b>	<b>Water</b>		

- No known knowledge of water overtopping
- Remove drift about every 10 years
- Farm equip. Grain and Milk trucks, fuel and delivery trucks; Seen several trash trucks cutting through this way; I-44 traffic to Ash Grove/Deliveries especially if issues on I44
- Narrow bridge
- County Rd 114 close to the N
- 2 crashes (2015-2021): 1 mirrors colliding when crossing, 1 out of control trying to avoid deer

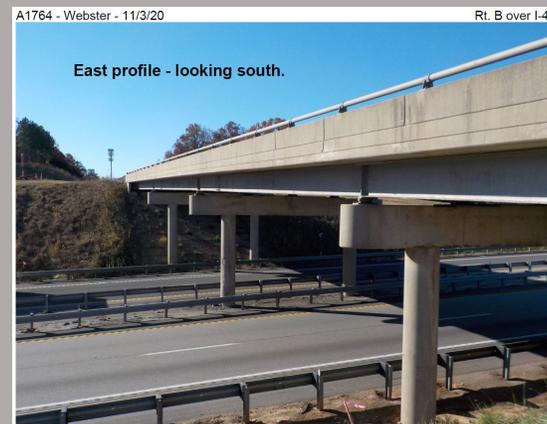
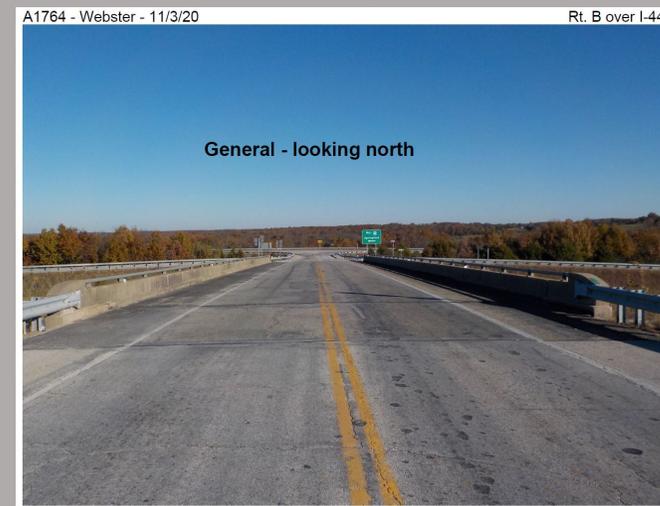
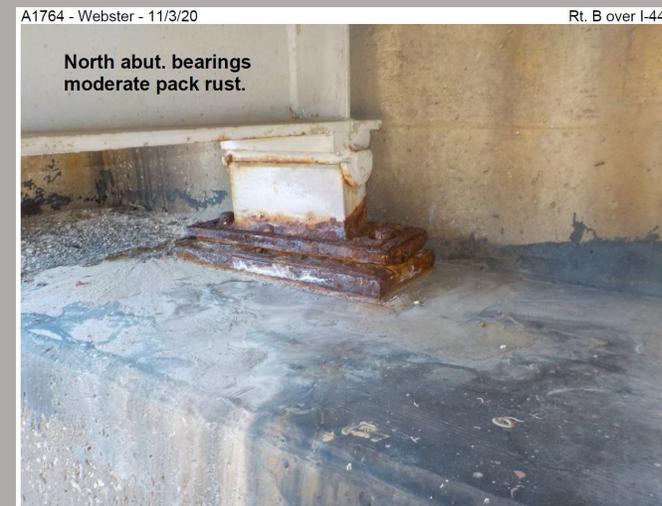


# Bridge #A1764

## Route B over I-44 EB&WB

### Webster County

<b>Mandatory:</b>	N	<b>AADT:</b>	1174
<b>Ratings:</b>	5,6,6	<b>Truck %:</b>	11.2
<b>Min Treatment:</b>	Redeck-Replace	<b>Existing Bridge Type:</b>	Wide Flange Girder
<b>Potential Grade Change:</b>	0'-10"	<b>I44 Incident Bypass Route:</b>	
<b>Crossing Type:</b>	Interstate		



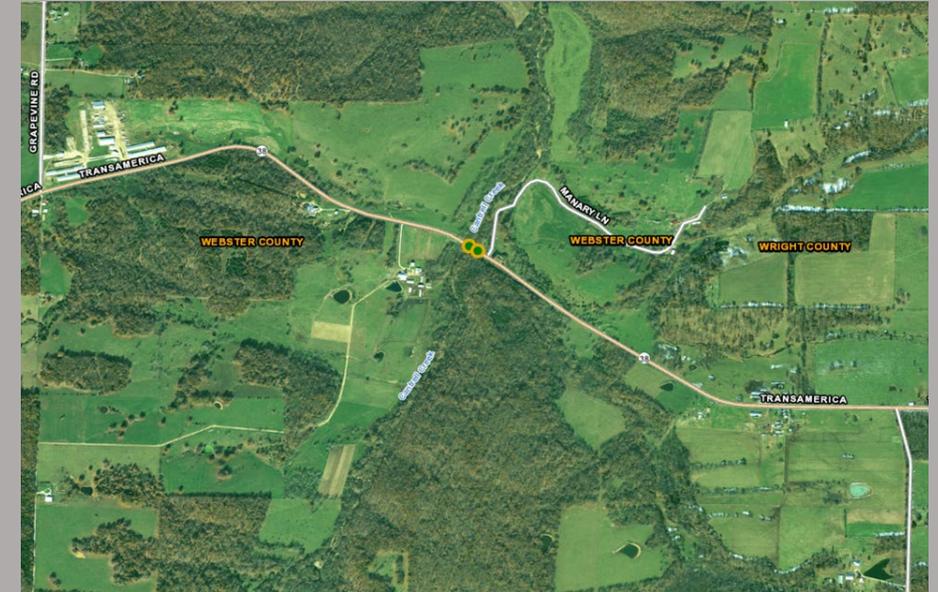
- Lile Quarry (with multiple contractors) and Rost ready mix cross this bridge multiple times daily.
- Guardrail damage consistent on the WB I-44 on Ramp due to tight radius for semi traffic.
- Also known as Northview bridge, we own gated lot on the NW side (on Evergreen pkwy) of this site if needed for site prep or storage area.
- Outer Roads go to MO125
- Be conscious of sight distance of ramp tie-ins if replaced
- 3 crashes typical of intersection angle and turning

# Bridge #T0125

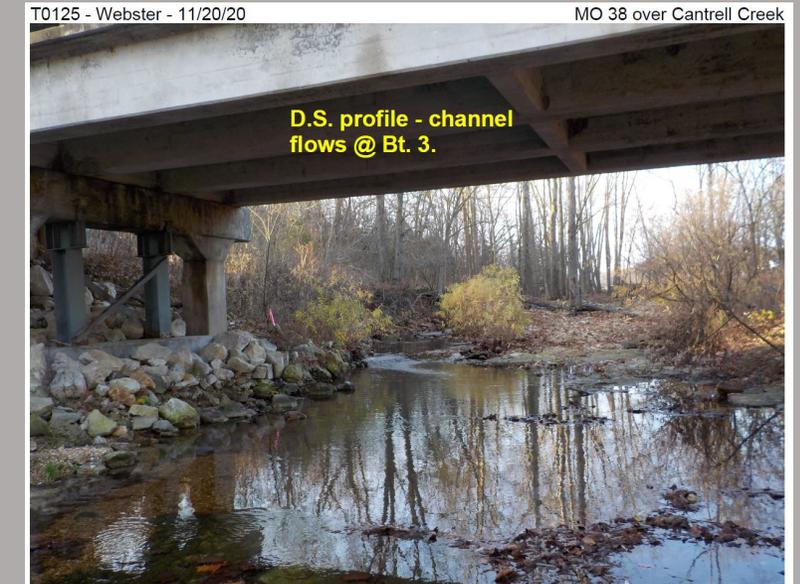
## MO38 over Cantrell Creek

### Webster County

<b>Mandatory:</b>	<b>N</b>	<b>AADT:</b>	<b>990</b>
<b>Ratings:</b>	<b>4,4,4</b>	<b>Truck %:</b>	<b>11.1</b>
<b>Min Treatment:</b>	<b>Replacement</b>	<b>Existing Bridge Type:</b>	<b>Concrete Deck Girder &amp; Solid Conc Slab</b>
<b>Potential Grade Change:</b>	<b>0.83'</b>	<b>I44 Incident Bypass Route:</b>	<b>No</b>
<b>Crossing Type:</b>	<b>Water</b>		



- No known issue of water overtopping
- No known issue of frequent debris removal
- Previous erosion issues on the east end bridge abutment, crews have performed slurry treatment in voids.
- Narrow bridge
- Overhead utilities on N side
- Shallow bedrock
- 2 crashes (2015-2021): 1 rear end when vehicle stopped to allow a large vehicle cross, 1 out of control when trailer started sliding and truck ended up on and hanging over the railing



# Bridge #T0244

## Route M over Niangua River

### Dallas County

Mandatory:	N	AADT:	487
Ratings:	4,5,6	Truck %:	13.6
Min Treatment:	Replacement	Existing Bridge Type:	Wide Flange Girder
Potential Grade Change:	0.04'	I44 Incident Bypass Route:	No
Crossing Type:	Water		

- No known issues of water overtopping
- Minor drift issues – hard to remove
- Farming/ dump trucks/trash trucks/grain trucks; Local/semi-local trucking transport & deliveries such as live poultry & livestock, milk, feed; regional trucking using Route M as a by-pass between I-44 and US 65, local farmers and equipment
- Undeveloped Conservation land underneath, public river access, boat ramp. No known established encampments.
- Powerline on N side
- Steep slopes
- No crashes



# Bridge #P0939

## Route W over Tributary of Givins Creek

### Webster County

Mandatory:	N	AADT:	439
Ratings:	4	Truck %:	11.4
Min Treatment:	Replacement	Existing Bridge Type:	Concrete Triple Box Culvert
Potential Grade Change:	4.17'	I44 Incident Bypass Route:	No
Crossing Type:	Low Water		

- Low water crossing
- Maybe once per year at the most that we know of and only during extremely heavy localized flash flooding events
- About how deep does the water get when it goes over? **2'**
- How far up the road from the bridge ends does the water reach when water over tops? **50 - 150'**
- Convenience store food service and fuel trucks, feed trucks, milk trucks, some logging trucks. No established industry other than farming.
- West (north) end of culvert approach is just at the base of a sharp, elevated curve with minimal sight distance for traffic. Driveway entrances immediately adjacent to the culvert.
- R/W tight
- Buggy traffic
- Overhead lines on N side

